

Assessment Report for 2005 Mount Klappan Anthracite Coal Project Liard Mining Division

**Fortune Coal Limited
148 Fullarton Street, Suite 1600
London, Ontario N6A 5P3**

Mines Act Permit Number:	C-160
Mine Number:	0200025
Coal Tenure:	389292
Approval #:	05-0200025-0928
NTS Map Sheet:	104H02 and 104H07
Latitude/Longitude:	57.2410° N, 128.8923° W
Author:	Golder Associates, Inc.
Date:	February 7, 2013

Date and Signature Page

I, Edward H. Minnes, P.E., do hereby certify that:

1. I am a Senior Consultant and a Mining Practice Leader of:
Golder Associates Inc.
44 Union Boulevard, Suite 300,
Lakewood, Colorado 80228 USA
2. I graduated with a Bachelor of Applied Science – Mining Engineering, from Queen's University, Kingston, Ontario, in 1984.
3. I am licensed as a professional engineer in Missouri, USA and registered member of the Society for Mining, Metallurgy, and Exploration.
4. I have worked as a mining engineer for a total of 27 years since graduation from Queen's University.
5. I consent to filing of this Assessment Report, and I have reviewed the drilling data and I believe it is representative of the work done. Fortune Minerals provided the cost of the program and related work.

Dated this 7th day of February 2013.



Edward H. Minnes, P.E.
Associate and Mining Practice Leader

Effective Date of Report: February 7, 2013

Signature Date of Report: February 7, 2013

Table of Contents

1.0	INTRODUCTION.....	1
2.0	SITE DESCRIPTION AND LOCATION	2
3.0	PROJECT HISTORY	4
4.0	2005 EXPLORATION WORK	6
5.0	SUMMARY OF COSTS	7

List of Tables

Table 1	Coal Licenses.....	3
Table 2	Summary of Intrusive Exploration.....	5
Table 3	Summary of Exploration Boreholes	6
Table 4	Summary of Costs.....	7

List of Figures

Figure 1	Property Location
Figure 2	Project Exploration and Coal License Areas
Figure 3	Drill Hole Locations and Ultimate Pit Extents

List of Appendices

Appendix A	Technical Report on the 2012 Update of the Arctos Anthracite Project Mine Feasibility Study
Appendix B	Corehole Lithologic Logs
Appendix C	Proximal and Distal Analytical Results
Appendix D	ARD and Metal Leaching Results
Appendix E	Resume of Project Exploration Supervising Geologist

1.0 INTRODUCTION

This report is provided in fulfilment of the Coal Mine Regulations regarding the filing of an Assessment Report for exploration work conducted in 2005. The report draws on an NI43-101 compliant report by Golder Associates Limited entitled “Technical Report on the 2012 Update of the Arctos Anthracite Project Mine Feasibility Study” dated November 28, 2012. This report was filed on SEDAR on November 28, 2012. This report is included in its entirety as Appendix A.

Edward H. Minnes, P.E. (Missouri), is the Qualified Person responsible for the preparation of the above noted report. He is a professional mining engineer registered in Missouri, USA. He graduated from Queen's University at Kingston, Ontario in 1984 with a B.Sc. – Mining Engineering and has 27 years of experience in coalmine geology, geologic modelling and engineering, modelling, reserve estimating, mine design and planning.

Mr. Minnes did not directly supervise the drilling program but was involved in the project and worked with Mr. Paul Oldaker, the site geologist for the drilling program. Mr. Minnes has reviewed the drilling data and he believes it is representative of the work done.

Pertinent technical data including borehole and geophysical logs from the 2005 drilling program are provided in Appendix B. Proximate and ultimate analyses were conducted on drill hole samples and the results are included in Appendix C. Testing was also conducted on the drill hole samples to characterize acid rock drainage (ARD) and metal leaching (ML) and the results of these tests are included in Appendix D. Additionally, the resume of Mr. Paul Oldaker who was the site exploration geologist responsible for overseeing the drilling program is attached in Appendix E.

2.0 SITE DESCRIPTION AND LOCATION

The site is located in northwestern British Columbia, approximately 160 kilometres (km) northeast of Stewart and 300 km northwest of Smithers, as shown on Figure 1, in the Liard Mining District and Bulkley-Cassiar Forest District between 57°06'N and 57°23'N latitude and 128°37'W and 129°15'W longitude, NTS Map Reference 104H 020-022.

Ground access to the property is via a connector road from Stewart-Cassiar Highway 37 to the BC Railway sub-grade, which functions as a road and passes through the coal license area. The site is accessible by air to via 1,000-metre gravel airstrip built on the railway sub-grade, which is suitable for landing fixed-wing aircraft.

The mineral rights comprise 61 contiguous coal licenses, listed in Table 1, with a combined area of 16,411 hectares located on and around the north side of Mount Klappan as shown on Figure 2.

Table 1 Coal Licenses

License No.	Mapsheet	Area (ha)	License No.	Mapsheet	Area (ha)
417160	104H026	281	417209	104H027	280
417161	104H026	491	417210	104H027	280
417180	104H017	281	417211	104H027	211
417181	104H017	281	417212	104H027	280
417182	104H027	276	417213	104H026	280
417183	104H027	281	417214	104H026	280
417184	104H027	281	417215	104H026	280
417185	104H027	205	417216	104H026	280
417186	104H027	280	417217	104H027	247
417187	104H027	280	417218	104H026	279
417188	104H017	281	417219	104H026	280
417189	104H027	281	417220	104H026	280
417190	104H026	281	417221	104H026	280
417191	104H026	281	417222	104H026	58
417192	104H027	280	417223	104H026	104
417193	104H026	280	417224	104H026	149
417194	104H026	280	417225	104H026	280
417195	104H026	280	417226	104H026	280
417196	104H026	280	417227	104H026	280
417197	104H016	281	417228	104H026	280
417198	104H016	281	417229	104H025	280
417199	104H016	281	417230	104H026	280
417200	104H026	281	417231	104H026	280
417201	104H026	281	417232	104H026	280
417202	104H026	281	417233	104H026	280
417203	104H026	281	417234	104H025	280
417204	104H026	280	417235	104H026	202
417205	104H026	280	417236	104H026	280
417206	104H026	280	417237	104H026	280
417207	104H026	280	417238	104H025	280
417208	104H027	173			

Note: Mapsheet references are to BC Geographic Survey.

3.0 PROJECT HISTORY

In 1901, V.H. Dupont reported a coal outcrop near Mount Klappan in a Canadian government railway survey report. The Geological Survey of Canada (GSC) issued reports on the area in 1912 and 1914, based on work conducted in 1911 and 1912 by G.S. Malloch. Malloch's work was subsequently followed by GSC Reports by Buckham and Latour (1950) and Richards and Gilchrist (1979). The GSC's C.A. Evenchick, G.M. Green, and others have performed numerous studies and mapping of the Bowser Basin from 1985 to the present.

In 1978, Esso Resources Ltd. and Petrofina Ltd. acquired the first coal licenses at the current project location but allowed the licenses to lapse in 1980. Based on Esso's report from a summer geological mapping program, Gulf acquired its licenses between 1981 and 1987 covering an area much greater than the current license area.

Between 1981 and 1988, Gulf conducted annual exploration programs to refine its knowledge of the regional geology, seam occurrences, and physical characteristics, and quality attributes of the anthracite resources. These programs were comprehensive and included rotary and core drilling, adits, trenching and outcrop sampling, and quality testing.

In 1985 and 1986, Gulf developed a trial cargo pit on top of Lost Ridge and constructed a pilot processing plant near the railway bed access road for bulk testing and to produce sample shipments for potential customers. Anthracite mined from the trial cargo pit (was hauled to the pilot plant where it was processed in a heavy media bath and water-only cyclones to separate coal from the rock. The clean coal products were then trucked to the Port of Stewart and shipped via ocean vessels to potential overseas customers.

In February 1992, Gulf surrendered several coal licenses north (in the Little Klappan Valley), south (in the Skeena/Spatsizi Valley) and west (in the Nass/Klappan Valley) of the current license block. In 1994, Gulf performed its last major technical study, which was an analysis of producing a single anthracite product for use in steelmaking.

A summary of Gulf's exploration work is as follows. Gulf's exploration work commenced in all areas with geologic mapping at 1:10,000 scale. In the Lost-Fox Area, ground control surveys established control points in 1984 and 1985, and aerial photography, orthophotographs, and topographic mapping were produced at 1:5,000 and 1:2,000 scales. All geologic mapping, drilling, sampling, and other exploration work was tied into a local system of survey control, which was later translated to the UTM coordinate system (North American Datum of 1983, Zone 9).

Gulf's exploration drilling programs included the compilation of detailed drillers' logs of lithology and geophysical logging of nearly all drill holes. Geophysical logs included gamma ray, neutron, sidewall

density, caliper, focused beam resistivity, and directional deviation in some angled drill holes. Table 2 is a summary of intrusive exploration by Gulf in the 1980s:

Table 2 Summary of Intrusive Exploration

Exploration Program	1980-1988 (Historical, Gulf)	2005 (Fortune)	Total
Adits	4	None	4
Diamond Drill Holes	159 (22,752 m)	12 (2,109 m)	171 (24,861 m)
Rotary Drill Holes	23 (1517 m)	None	23 (1517 m)
Mechanical Trenches	210 (2304 m)	None	210 (2304 m)
Hand Trenches	357 (1999 m)	None	357 (1999 m)
Measured Sections	64 (8818 m)	None	64 (8818 m)

In July 2001, Conoco acquired Gulf's remaining coal licenses through acquisition of the company. In 2002, Fortune Coal Limited acquired these coal licenses and Gulf's comprehensive technical database and archives of supporting documents from Conoco Canada Ltd.

4.0 2005 EXPLORATION WORK

Between September and November 2005, Fortune and its consultants undertook fieldwork consisting of a 12-hole diamond-drilling program.

The program was designed to collect rock samples for geotechnical characterization and to provide confirmation for previous resource estimates and to potentially increase resources. Tracked drilling equipment was used to access to the drill sites and the existing roads were mainly used to minimize the impact on the environment. Frozen surface conditions and snow cover at the site also minimized the impact of equipment. Other activities in 2005 included minor grading of the Ealue Lake road and rail subgrade, establishing an 18 person camp facility and a 50-metre square sewage lagoon at the east end of the existing airstrip (which is on the BC Rail right-of-way).

Boreholes were drilled vertically in selected areas for a total of 2109.9 metres. The locations of these boreholes are shown on Figure 3 and copies of the borehole logs are provided in Appendix B. Table 3, below, provides a summary of the drilling program.

From the time of completion of drilling until August 2012 the drill cores were located in a shipping container at the north end of the airstrip on site (57° 16.7' N, 128° 54.7'W). Since August 2012, the drill cores are now located in a shipping container located at Bandstra Transportation, 3394 Hwy 16 E., Smithers, BC (54° 46.6' N, 127° 09.4' W).

Table 3 Summary of Exploration Boreholes

Borehole	UTM Coordinates		Elevation (masl)	Depth (metres)
	Easting	Northing		
05 001	506665	6344581	1758	361.3
05 002	506984	6344141	1654	209.2
05 006	507314	6344052	1621	120.4
05 009	507190	6343912	1610	160.0
05 014	508109	6346236	1630	150.9
05 015	508501	6346428	1433	130.5
05 016	508832	6346347	1633	150.9
05 019	507757	6345115	1465	103.9
05 ARD1	506270	6345019	1653	230.5
05 ARD3	507974	6344882	1510	211.8
05 ARD4	505556	6343186	1677	175.3
05 P4	505876	6343876	1701	105.2

5.0 SUMMARY OF COSTS

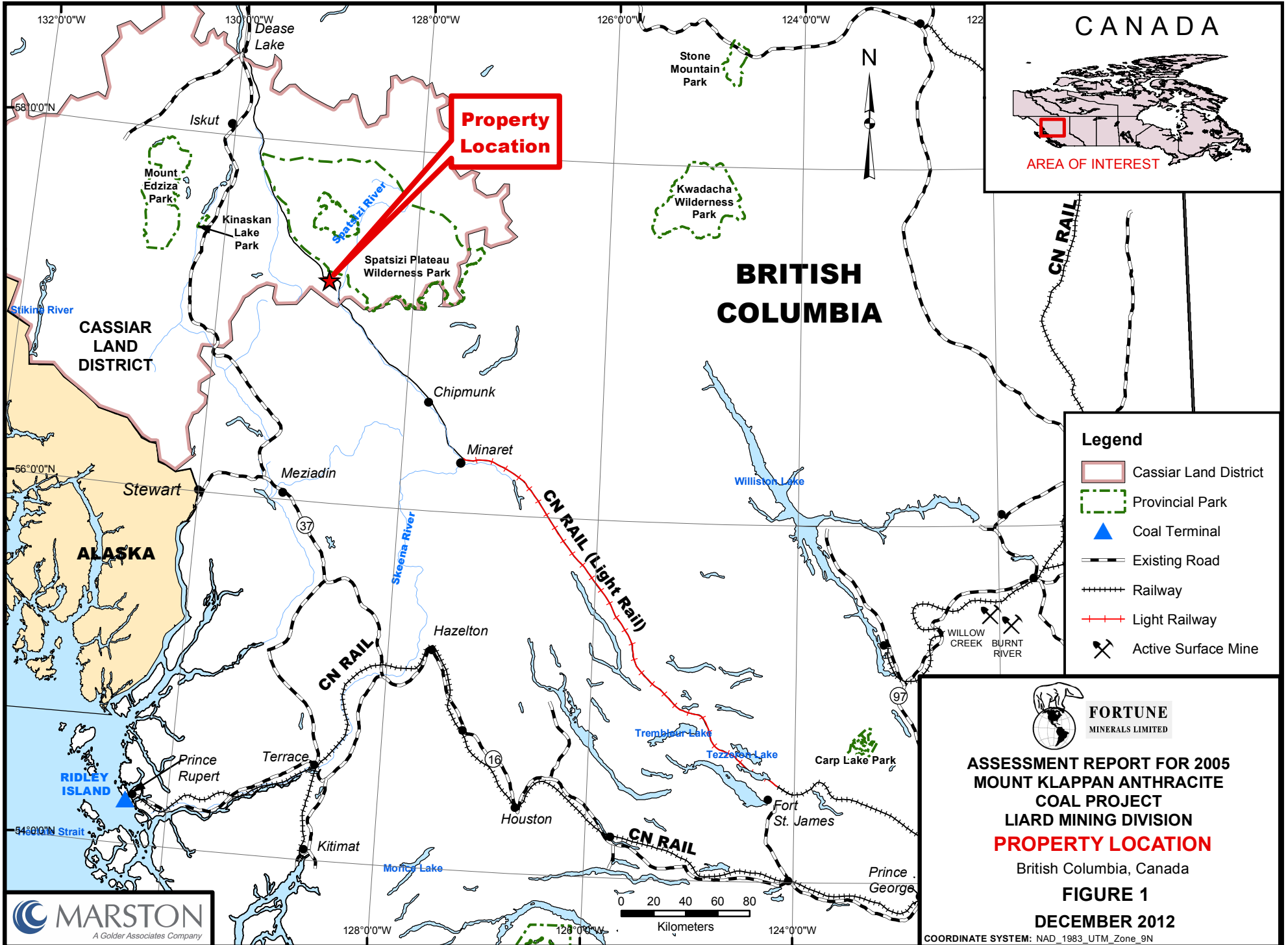
Table 4 provides a summary of costs associated with the completion of this 2005 borehole exploration program, as provided by Fortune Minerals.

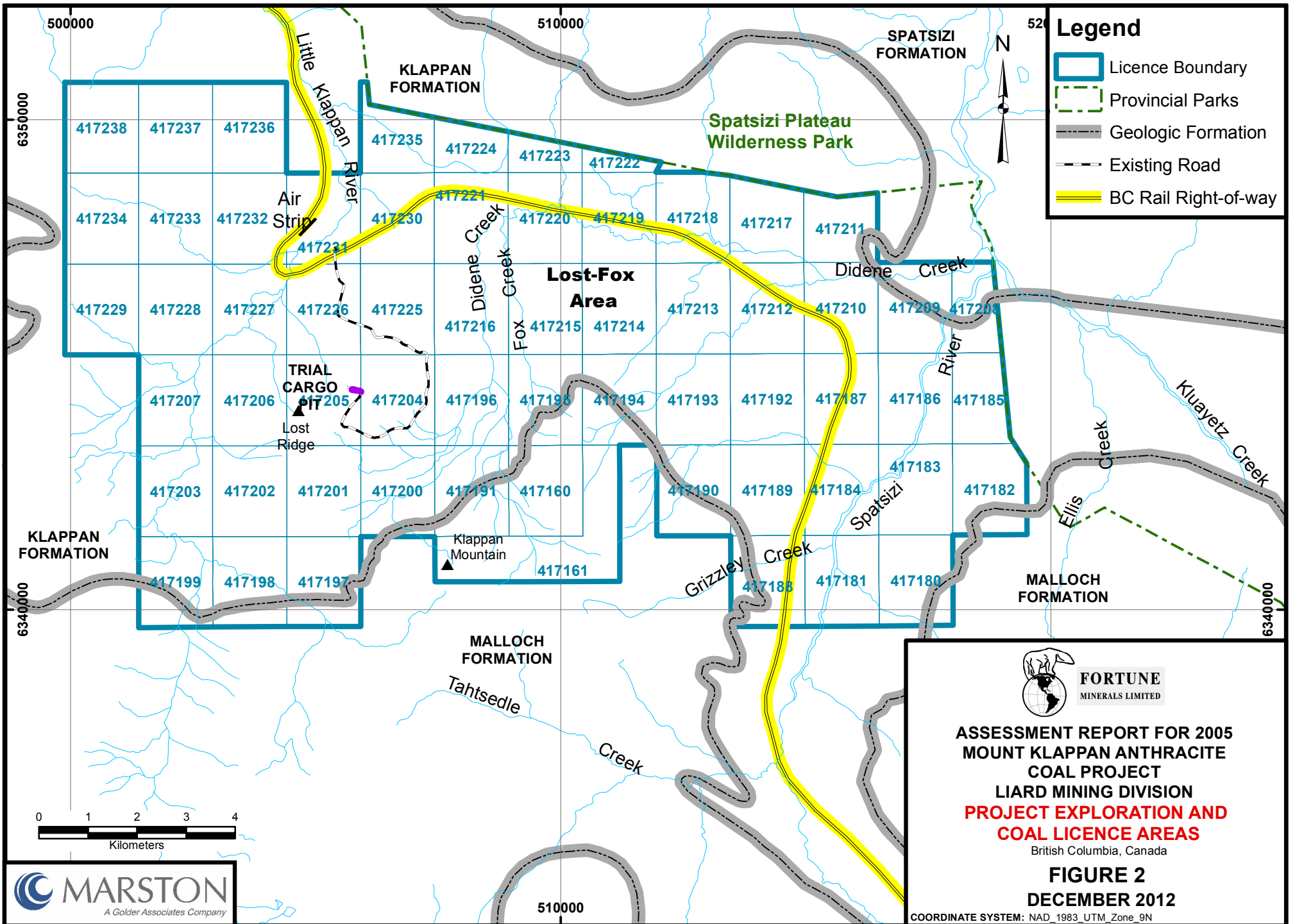
Table 4 Summary of Costs

Core Drilling Costs (2,143 metres of drilling, 12 holes)	\$528,056
Mapping and Surveying Costs	\$323,085
Equipment Rental, Repair & Fuel Costs	\$65,094
Travel Costs, includes helicopters to site and internal costs related to travel to and from British Columbia	\$359,073
Engineering & Feasibility Study Costs	\$890,198
Ground Freight Costs	\$14,937
Geologists/Geophysicists (internal and external costs)	\$98,879
Project Management (site and head office, includes internal costs)	\$160,364
Miscellaneous Camp Costs (food, supplies, site preparation, safety, etc.)	\$476,657
Total Exploration Costs Related to 2005 Drilling Program and Related Studies	\$2,916,342






Source: Fortune Minerals

FIGURES





Legend

-  Licence Boundary
-  Provincial Parks
-  Geologic Formation
-  Existing Road
-  BC Rail Right-of-way



FORTUNE
MINERALS LIMITED

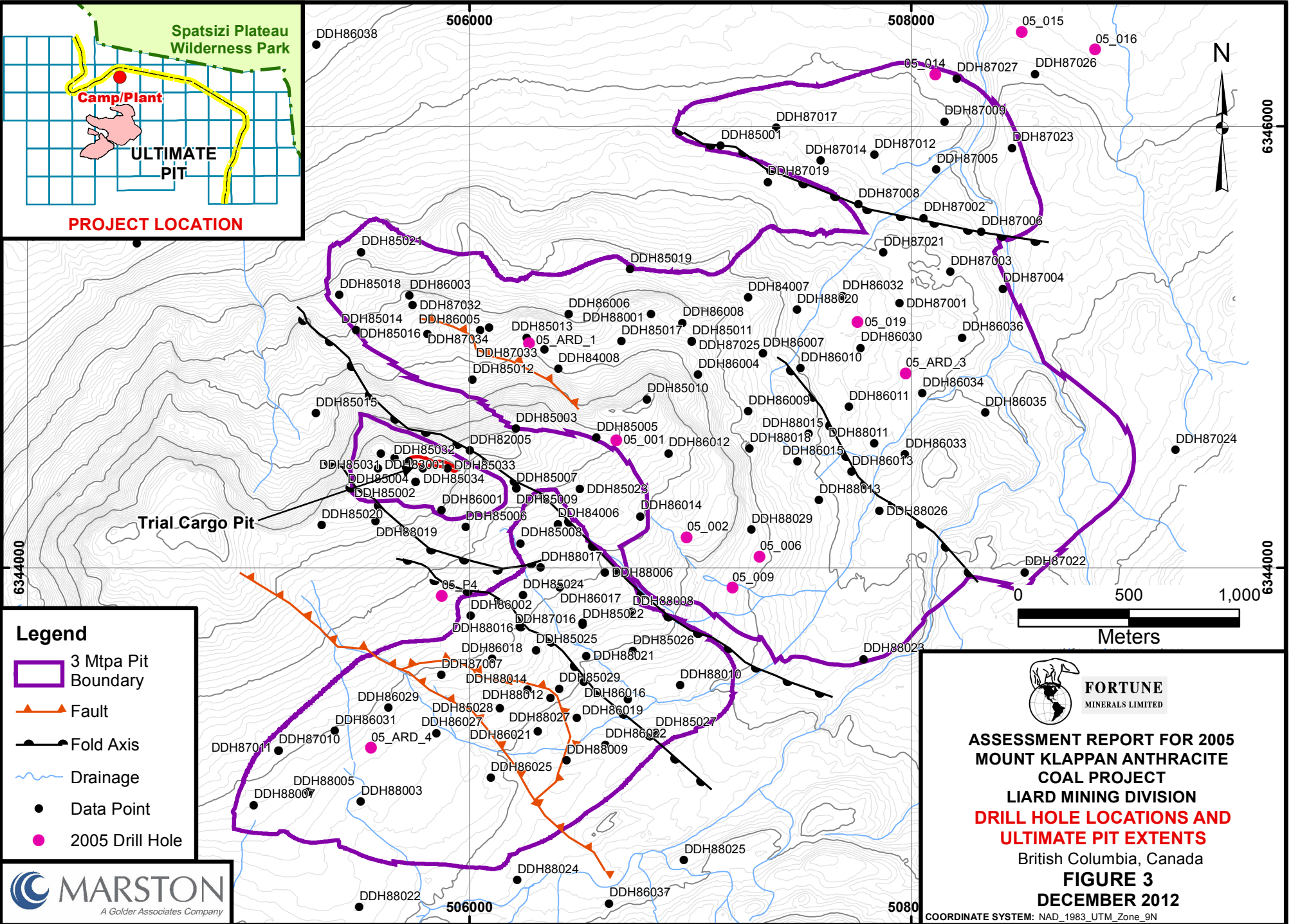
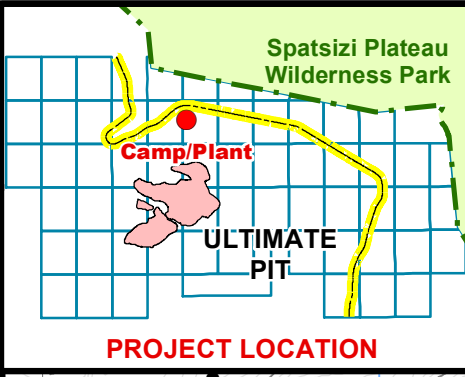
**ASSESSMENT REPORT FOR 2005
MOUNT KLAPPAN ANTHRACITE
COAL PROJECT
LIARD MINING DIVISION
PROJECT EXPLORATION AND
COAL LICENCE AREAS**

British Columbia, Canada

**FIGURE 2
DECEMBER 2012**

COORDINATE SYSTEM: NAD_1983_UTM_Zone_9N





Legend

- 3 Mtpa Pit Boundary
- Fault
- Fold Axis
- Drainage
- Data Point
- 2005 Drill Hole



**ASSESSMENT REPORT FOR 2005
MOUNT KLAPPAN ANTHRACITE
COAL PROJECT
LIARD MINING DIVISION
DRILL HOLE LOCATIONS AND
ULTIMATE PIT EXTENTS**
British Columbia, Canada
**FIGURE 3
DECEMBER 2012**

COORDINATE SYSTEM: NAD_1983_UTM_Zone_9N

**APPENDIX A
TECHNICAL REPORT ON THE
2012 UPDATE OF THE ARCTOS ANTHRACITE PROJECT
MINE FEASIBILITY STUDY**

REPORT

TECHNICAL REPORT ON THE 2012 UPDATE OF THE ARCTOS ANTHRACITE PROJECT MINE FEASIBILITY STUDY



Submitted To: ANTHRACITE JOINT VENTURE
148 Fullarton Street, Suite 1600
London, Ontario N6A 5P3 Canada

Submitted By: Golder Associates Inc.
44 Union Boulevard, Suite 300
Lakewood, Colorado 80228 USA

A world of
capabilities
delivered locally

November 28, 2012

12-135-40007

TITLE PAGE

Title of Report

Technical Report on the 2012 Update Arctos Anthracite Project Mine Feasibility Study

Project Location

The Arctos Anthracite Property (Property) is located in northwestern British Columbia, approximately 160 kilometres (km) northeast of Stewart and 300 km northwest of Smithers; see Figure 1.1, Property Location. A British Columbia Railway right-of-way runs between Minaret and the Project. Ground access to the Property is via a connector road from Stewart-Cassiar Highway 37 to the BC Railway sub-grade. The property is accessible by air to a 1,000-metre (m) graveled airstrip built on the sub-grade, which is suitable for landing fixed-wing aircraft.

Author

The author of the report is Golder Associates (Golder-Marston), an employee-owned, global company providing consulting, design, and construction services in earth, environment, and related areas of energy based in Calgary, Alberta, Canada and registered to practice engineering under the Association of Professional Engineers and Geoscientists of Alberta (APEGA) Permit No. P-05122. Golder-Marston's address is at 102, 2535 – 3rd Avenue S.E., Calgary, Alberta, Canada T2A 7W5.

Effective Date of the Report

November 28, 2012

DATE AND SIGNATURE PAGE

I, Edward H. Minnes, P.E., do hereby certify that:

1. I am a Senior Consultant and a Mining Practice Leader of:
Golder Associates Inc.
44 Union Blvd, Suite 300,
Lakewood, CO, USA 80228
2. I graduated with a Bachelor of Applied Science – Mining Engineering, from Queen’s University, Kingston, Ontario, in 1984.
3. I am licensed as a professional engineer in Missouri, USA and registered member of the Society for Mining, Metallurgy, and Exploration.
4. I have worked as a mining engineer for a total of 27 years since graduation from Queen’s University.
5. I have read the definition of “qualified person” as defined in National Instrument 43-101 (“NI 43-101”) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a “qualified person” for the purposes of NI 43-101.
6. I am responsible for the preparation of Items 1 through 27 of the technical report titled Technical Report on the Arctos Anthracite Feasibility Study for Arctos Anthracite Joint Venture (Technical Report). I visited this property in October 2004 for two days.
7. I have had prior direct involvement with the property that is the subject of the Technical Report. The nature of my prior involvement is as a mining engineer and consultant during the preparation of previous mine planning and feasibility studies prepared for Gulf Canada Resources, Ltd., the prior owner of the Property.
8. I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, the omission to disclose which makes the Technical Report misleading.
9. I am independent of the issuer applying all of the tests in section 1.5 of NI 43-101.
10. I have read NI 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.
11. I consent to filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files on their websites accessible by the public, of the Technical Report.

Dated this 28th day of November 2012.



Edward H. Minnes, P.E.
Associate and Mining Practice Leader

Effective Date of Report: November 28, 2012

Signature Date of Report: November 28, 2012

TABLE OF CONTENTS

Title Page	
Date and Signature Page	
Item 1	Summary 1-1
Item 2	Introduction 2-1
Item 3	Reliance on Other Experts 3-1
Item 4	Property Description and Location 4-1
Item 5	Accessibility, Climate, Local Resources, Infrastructure, and Physiography 5-1
Item 6	History..... 6-1
Item 7	Geological Setting and Mineralization 7-1
Item 8	Deposit Types..... 8-1
Item 9	Exploration..... 9-1
Item 10	Drilling..... 10-1
Item 11	Sample Preparation, Analyses & Security..... 11-1
Item 12	Data Verification 12-1
Item 13	Mineral Processing and Metallurgical Testing..... 13-1
Item 14	Mineral Resource Estimates..... 14-1
Item 15	Mineral Reserves..... 15-1
Item 16	Mining Methods 16-1
Item 17	Recovery Methods..... 17-1
Item 18	Project Infrastructure 18-1
Item 19	Market Studies and Contracts 19-1
Item 20	Environmental Studies, Permitting and Social or Community Impact..... 20-1
Item 21	Capital and Operating Costs 21-1
Item 22	Economic Analysis 22-1
Item 23	Adjacent Properties 23-1
Item 24	Other Relevant Data and Information..... 24-1
Item 25	Interpretation and Conclusions..... 25-1
Item 26	Recommendations..... 26-1
Item 27	References 27-1

LIST OF ILLUSTRATIONS

Figure 1.1	Property Location 1-5
Figure 4.1	Project Exploration and Coal License Areas 4-1
Figure 5.1	Proposed Mine Access..... 5-4
Figure 5.2	Mine Facilities Area Layout and Location Plan 5-5
Figure 5.3	Rail Transportation Route..... 5-6
Figure 5.4	Pit Status Map End of Year 25 5-7
Figure 7.1	Regional Geology 7-5
Figure 7.2	Generalized Stratigraphic Column 7-6
Figure 7.3	Local Geology Map..... 7-7
Figure 7.4	Modeled Coal Seam Outcrops 7-8
Figure 7.5	Geological Section with Observed Outcrop Information 7-9
Figure 7.6	Typical Geological Cross Section..... 7-10
Figure 10.1	Drill Hole Locations and Coal Seam Outcrop Map..... 10-3
Figure 13.1	Simplified Solids Flowsheet..... 13-6
Figure 15.1	3 Mtpa Ultimate Pit Design 15-2
Figure 16.1	Pit Status Map End of Year 3 16-3
Figure 18.1	Overall Mine Site Facilities Layout and Location Plan 18-2

LIST OF TABLES

Table 1.1	Lost-Fox Area Estimated Anthracite Resources	1-3
Table 1.2	Lost-Fox Area Anthracite Reserves	1-4
Table 4.1	Arctos Anthracite Project Coal Licenses	4-1
Table 6.1	Arctos Anthracite Project Exploration History.....	6-3
Table 6.2	Exploration Activities by Year and Area	6-5
Table 6.3	Mount Klappan Resource Estimates in GSC 88-21 Format from 2004 Block Model of Gulf Data.....	6-7
Table 10.1	Summary of Gulf Geological Results for Lost-Fox Area	10-2
Table 11.1	Projected Raw Coal Proximate Analyses for Lost-Fox Area Anthracite Resources	11-1
Table 11.2	Sample Locations	11-2
Table 13.1	Typical Coal Intercept Washability Data.....	13-2
Table 13.2	Raw Coal Size Distribution	13-3
Table 13.3	Projected Clean Coal Quality – 10% Ash Product	13-5
Table 14.1	Measured and Indicated Anthracite Resource Estimates	14-1
Table 15.1	Lost-Fox Area Anthracite Reserves	15-1
Table 15.2	Anthracite Seam Data from 2012 FS Geologic Model	15-3
Table 16.1	Arctos Anthracite Production Forecast.....	16-2
Table 17.1	Target ROM Specifications.....	17-1
Table 21.1	Capital Expenditure Summary(\$1,000's).....	21-1
Table 21.2	Operating Cost Summary	21-1
Table 22.1	Estimated Cash Flow Summary	22-2
Table 22.2	Sensitivity Analyses for Various Rail Investment Levels.....	22-3
Table 22.3	Sensitivity Analyses to Changes in Price, OPEX & CAPEX	22-3

Item 1 Summary

The Arctos Anthracite Property (Property), formerly known as the Mount Klappan Coal Project, comprises approximately 16,411 hectares (ha) located in northwestern British Columbia that are licensed for coal exploration and development by Arctos Anthracite Joint Venture (Arctos). Gulf Canada Resources Ltd. (Gulf) originally licensed and explored the Property during the 1980s and commenced development of the Arctos Anthracite Project (Project) to explore for and produce anthracite from the Property. Conoco Canada Resources Ltd. (Conoco) later acquired Gulf, and in 2002, Fortune Minerals Ltd., a majority partner in Arctos, purchased the Project from Conoco.

The anthracite deposits at the Property are part of the Klappan Coalfield at the northern end of the Bowser Basin of British Columbia. During the late Jurassic and early Cretaceous periods, the Bowser Basin was filled with sediments deposited from eroding mountains. At the northern end of the Basin, the Klappan Formation was deposited in a deltaic environment that was conducive to peat forming. Buried deeply after millions of years, the ancient peat bogs became anthracite coal. Approximately 1,100 m in thickness, the Klappan Formation contains 33 identified coal horizons of up to 11.8 m in true thickness interbedded with primarily mudstone, siltstone and sandstone. The Klappan Formation and surrounding beds were later deformed during a period of uplifting that caused compression in a northeast-southwest direction and created folds varying from relatively flat to overturned. In some areas of steep folds, reverse faulting has also occurred.

The uplifting and subsequent erosion have resulted in near-surface occurrences and anthracite outcrops at and near the Property, which Gulf grouped into four different exploration sub-areas named Lost-Fox, Hobbit-Broatch, Summit and Skeena. Gulf later released its licenses over the Skeena Area and significant portions of the Summit Area.

Gulf's drilling and sampling programs to delineate resources focused primarily on the Lost-Fox Area. Between 1982 and 1988, Gulf conducted a series of summer field programs and geologic studies. The fieldwork consisted of surveys and trenching to map near-surface anthracite sub-crops, drilling and logging to locate anthracite seams at depth and collection of core samples for analysis, and driving adits to collect bulk samples from two of the thickest seams. In addition, in 1985 and 1986, Gulf excavated a test pit and mined and processed bulk samples from the I Seam for pilot plant analysis and potential customer test shipments. Gulf's major field programs ended in 1988.

Gulf's field and geological work culminated in several mining project feasibility studies of the Lost-Fox Area completed during 1987 – 1990. Gulf staff and consultants including Golder-Marston completed geologic interpretation, resource estimates, open pit mining plans, coal processing and infrastructure plans, and transportation and market studies. Gulf published two major feasibility studies, in 1987 and in 1990, with numerous concept and alternative studies developed during the intervening period. Gulf continued to examine alternative development concepts for the Project through 1994.

In 2002, Fortune acquired the Project and is currently performing geologic, environmental, and mine planning studies to develop the Lost-Fox Area. Fortune has continued this work with a drilling program in the Lost-Fox Area in 2005. As part of the 2002 acquisition due diligence and subsequent block modeling in early 2004 of Gulf's data and geological work, Golder-Marston verified and reported Gulf's resource estimates for the Project under Paper 88-21 of the Geological Survey of Canada, entitled "A Standardized Coal Resource/Reserve Reporting System for Canada" (GSC 88-21).

In 2012, Arctos commissioned Golder-Marston to prepare an update to the 2005 feasibility study to produce anthracite from the Lost-Fox Area of the Project. The title of this study is the "2010 Update of the Mount Klappan Anthracite Project Lost-Fox Area Mine Feasibility Study" (2012 FS). Part of the 2012 FS scope of work was to incorporate new 2005 drilling data, and produce an updated geologic model for use in the 2012 FS.

After a thorough review of the geological data and aerial photographs of the Lost-Fox Area, Golder-Marston concluded that large portions of the area are of a Moderate geology type as defined in GSC 88-21. However, areas of steep dips, overturned structures and significant reverse faults were characterized as Complex geology type. The Measured and Indicated resource estimates were developed applying the different GSC 88-21 standards required for the two geology types.

Resources for the Lost-Fox Area were disclosed in a document titled "Technical Report on the Update to the 2010 Update to the 2005 Lost-Fox Area Feasibility Study." In that report, Marston reported, under GSC 88-21, Measured and Indicated resources of 143.3 Mt, and 15.7 Mt of Inferred resources.

These resources were based on a conceptual pit design with a cut-off strip ratio of 15:1 bcm/tonne of product for a 50 mm x 0 mm sized product with an average ash content of 10 percent on air dried basis (adb).

This Technical Report (Report) presents resource and reserve estimates based on the completed 2012 Feasibility Study. The 2012 FS was based on producing a 10 percent ash product that is standard for the PCI markets. Based on this assumption, the 20:1 conceptual pit developed for the 2012 FS was used to define the limits of in situ resources for the Lost Fox Area. The resource estimates are classified as Measured, Indicated and Inferred according to the CIM Definition Standards on Mineral Resources and Mineral Reserves (CIMDS) prepared by the CIM Standing Committee on Reserve Definitions. These were adopted by the CIM Council on November 14, 2004 and updated November 22, 2010, and are incorporated by reference in National Instrument 43-101 (NI 43-101). For coal resource estimates, the CIMDS incorporates by reference the guidelines of GSC 88-21.

Golder-Marston's Measured and Indicated anthracite resource estimates in the 2012 FS Report are presented in Table 1.1 below. The Measured and Indicated Mineral Resources are inclusive of those Mineral Resources modified to produce mineral Reserves.

Table 1.1 Lost-Fox Area Estimated Anthracite Resources

In Situ Tonnes (Mt)	
Measured	Indicated
172.4	20.4

Note: Conceptual Pit at 20 bcm per 10% Ash, adb Product Tonne Cut-off Strip Ratio

In addition to the measured and indicated resource, there were 12.1 Mt of inferred coal resources identified in the Lost Fox Area.

CIMDS defines Mineral Reserves as “the economically mineable part of a Measured or Indicated Mineral Resource demonstrated by at least a Preliminary Feasibility Study. This study must include adequate information on mining, processing, metallurgical, economic, and other relevant factors that demonstrate, at the time of reporting, that economic extraction can be justified. A Mineral Reserve includes diluting materials and allowances for losses that may occur when the material is mined.”

In accordance with CIMDS, Golder-Marston estimated Lost-Fox anthracite reserves based on a 25-year mine plan and associated economic studies. The reserves were estimated within an ultimate pit designed on the economics developed for the 2012 FS. For initial pit designs, Golder-Marston used Lerchs-Grossmann (LG) pit optimization tools, which are a standard in the mining industry. A series of nested pits were developed based on a range of commodity prices and estimated unit costs for mining, processing, and transporting coal to port.

The nested LG pits were then used as a guide to design a series of phased mining pits and develop a mining sequence to maximize NPV over the life of the current project. The reserves within the ultimate pit were used to develop a 25-year mine life at a nominal production rate of 3 million tonnes per annum (Mtpa). The resulting mining sequence and detailed annual production statistics were used to develop detailed operating and infrastructure cost estimates. For a range of assumed anthracite sales prices, annual cash flows were estimated to calculate internal rates of return. At Arctos’ estimated price of US\$175 per tonne FOBT over the mine life, the pre-tax net present value (NPV) of the project at 8% discount rate is \$616 million with an internal rate of return (IRR) of 17%. The ultimate pit is shown in, Figure 15.1, 3 Mtpa Ultimate Pit Design. All dollar values are reported in Canadian Dollars unless otherwise stated.

Lost-Fox Area anthracite reserve estimates are based on the 2012 FS. In accordance with CIMDS, the reserve estimates include adjustments to the in situ coal estimates for mining losses, out of seam dilution, and changes in moisture for run-of-mine (ROM) coal. In order to provide a more thorough understanding of the mine economics, the plant yield and clean coal reserves are included. These Lost-Fox anthracite reserve estimates are shown below in Table 1.2.

Table 1.2 Lost-Fox Area Anthracite Reserves

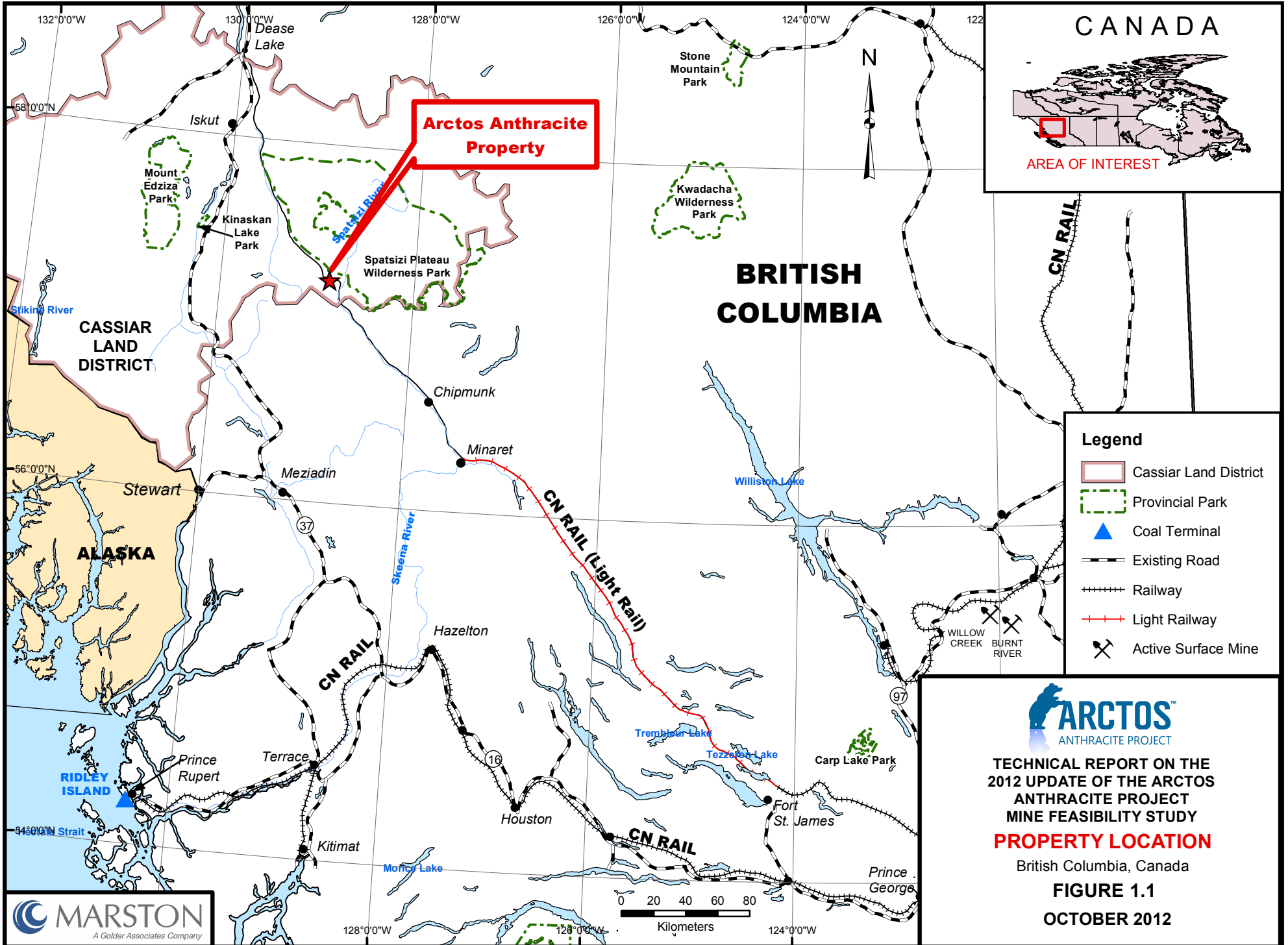
ROM Tonnes (Proven & Probable) (Mt)	Yield %	10% Ash (Adb) Clean Coal Reserves (Mt)			Waste (Mbcm)	Clean Coal Strip Ratio (Bcm/tonne)
		Proven	Probable	Total		
124.9	55.4	64.4	4.8	69.2	780.8	11.3

Based on the 2012 FS, Golder-Marston concludes the following:

1. If favorable markets continue for metallurgical coal the 2012 FS indicates that the Lost-Fox Mine can be a viable mining operation assuming all environmental, permitting and financing hurdles can be overcome.
2. The 2012 FS indicates that the Lost-Fox Mine contain Proven and Probable Reserves of 124.9 million ROM tonnes that, at an average plant yield of 55.4 percent, will produce 69.2 million tonnes of marketable coal at 10 percent ash (adb).
3. The Lost-Fox Area contains Measured and Indicated Resources of 192.8 million tonnes that include the Proven and Probable Reserves.

Recommendations

1. Golder-Marston recommends that Arctos perform a field testing program to identify any sources of ground water, permafrost or other conditions that may impact the stability of the proposed rock placement strategy and perform additional drilling to provide data for testing and stability analysis of the proposed rock storage piles.
2. Golder-Marston recommends that Arctos commence further gathering and examination of geotechnical data in areas of planned ultimate pit walls as well as employ safe mining practices to ensure a greater degree of certainty regarding slope stability. The exposure of permafrost or bentonite may have a negative impact on slope stability and must be taken into account.
3. Arctos should engage in discussions with the federal and provincial government, and other potential users of the rail line for the purposes of investing in the rail facilities to reduce Arctos' share of the capital costs of upgrading the rail.
4. Arctos should commence bulk testing designed to provide further information on large size fraction yields and middlings re-crush yields. Testing should also be performed to confirm the product quality of the 15% ash sinter product and to optimize the yield and economics of the two products.
5. Golder-Marston recommends that Arctos commence with the Project assuming that the strong low-volatile PCI coal market outlook continues and that all permits can be obtained.



Item 2 Introduction

In 2002 Fortune, a publicly listed natural resource development company based in London, Ontario, purchased certain properties containing significant anthracite resources in northwestern British Columbia from Conoco, the successor to Gulf. In 2011, Fortune entered into a joint venture agreement with POSCO Canada (POSCAN), a Canadian subsidiary of the world's third-largest steelmaker, South Korean-based Pohang Iron and Steel Company (Posco). The partnership is known as the Arctos Anthracite Joint Venture (Arctos); Fortune is an 80% owner and POSCO Canada is a 20% owner. Collectively, the Lost-Fox Area and adjacent anthracite-bearing exploration areas comprise the Arctos Anthracite Project (Project).

Arctos commissioned Golder-Marston to develop a mining feasibility study (2012 FS) to produce anthracite from the Lost-Fox Area, which Gulf had explored and studied extensively from 1982 – 1990. The 2012 FS included:

- A comprehensive review of Gulf's geological data and coal seam interpretations within the Lost-Fox Area
- The development of an updated geologic model incorporating additional drilling performed in 2005
- In-pit resource estimates for a conceptual pit design at a maximum strip ratio of 20:1 bcm/tonne
- The development of a life of mine plan from an economically based ultimate pit designed to produce 3.0 Mtpa of 10% ash (adb) clean coal
- The associated infrastructure required to support the project

This Report presents the conceptual in-pit anthracite resource and reserves estimates for the 2012 FS. All of the work described in this Report is based on information provided by Arctos, vendors and other technical sources and references outlined in Item 27. This includes primarily the Gulf Geological Reports and Appendices produced each year from 1982 to 1988; Gulf aerial photographs produced around 1985; Fortune's electronic databases of Gulf's drill holes; the data collected during the 2005 drilling program completed by Fortune, trench, mapping and analytical data; the geologic cross sections developed by Gulf for its feasibility studies; Gulf geotechnical reports; rail road and road evaluations performed by various individuals or corporations; and cost information from various vendors and manufacturers. Long-term price estimates for metallurgical grade coal and US-Canadian exchange rates were provided by Arctos.

Additional supporting information was provided by third parties and reviewed by Golder-Marston. These sources are described below.

CDG Engineers Inc. (CDG) provided Golder-Marston with onsite infrastructure specifications and designs to meet a nominal 3 Mtpa clean coal production rate. These facilities included the work camp complex, water and power distribution systems, maintenance and administrative buildings, and coal handling facilities. CDG also provided capital cost estimates for these infrastructure

items. CDG is a full service, multidisciplinary engineering professional services organization with experience in civil, structural, mechanical, and electrical engineering as well as architecture.

Golder-Marston relied on Terracon Geotechnique for a preliminary analysis of the ultimate pit slope stability. Terracon is a geotechnical engineering company located in Calgary, Alberta with extensive experience in the area of geotechnical engineering and geosciences.

Golder relied on Taggart Global LLC for the design of the coal preparation plant. Taggart Global LLC is an international engineering and construction company with expertise in turnkey design, supply, construction and commissioning of coal preparation plants and material handling systems.

Edward H. Minnes, P.E. (Missouri), the Qualified Person responsible for the preparation of this Report, visited the Property in October 2004. He observed the site, Gulf's exploration activities including drill hole, trench and adit locations, and Gulf's test pit. He also worked in modeling the Lost-Fox coal seams in 1987 in preparation for mine design and planning as part of Gulf's 1987 feasibility study. Mr. Minnes spent considerable time directing and working on the development of the 2004 resource estimate, the 2005 FS, 2007 pre-feasibility study for supplying a combination of thermal and metallurgical coal products, the 2008 and 2010 FS Updates, and the 2012 FS through all stages of data verification, estimation of resources and reserves, infrastructure development, costing and production of the final report.

Golder-Marston commissioned John K. (Kip) Alderman to devise a method for estimating plant yield for sample data points without washability. Kip Alderman is president of Advanced Coal Technology in Castle Rock, Colorado. Kip is a graduate of West Virginia University and has worked on coal preparation projects around the world since 1975. He has numerous published works on a wide range of topics in coal preparation, including a book on coal preparation published by the Coal Preparation Society of America. Kip is a past president of the Coal Preparation Society of America and is a professional member of SME (Society for Mining, Metallurgy, and Exploration).

Item 3 Reliance on Other Experts

For this Report, Golder-Marston has relied on the following information concerning legal, environmental, political or other relevant issues and factors.

Arctos provided all information on its coal lease, coal licenses and Property boundary, and also on its current environmental and other work related to the Property. This information applies to all portions of this Report that reference the Property. In Item 4, Golder-Marston relied specifically on Fortune's 2005 Annual Reclamation Report on Permit C-160 to the BC Ministry of Mines and Energy and information supplied by Fortune regarding additional acquisitions in 2005.

All information in this Report related to acquisitions and transfers of Property ownership are also based on Arctos' statements, public news announcements, and similar records. This information applies primarily to Items 1 and 6.

Arctos provided a long-term projected coal price of \$175 USD per tonne and a long-term exchange rate projection of US\$1.00 = C\$0.95 to be used in the 2012 FS.

Item 4 Property Description and Location

The Arctos Anthracite Property (Property) consists of approximately 16,411 ha of contiguous coal licenses located in the Bulkley-Cassiar District of northwestern British Columbia, Canada between 57°06'N and 57°23'N latitudes and 128°37'W and 129°15'W longitudes, see Figure 1.1, Property Location. The Property is near the northern extremity of the Skeena Mountains at the headwaters of the northerly flowing Little Klappan River, Klappan and Spatsizi rivers, as well as the southerly flowing Nass and Skeena rivers.

Arctos' coal licenses are listed in Table 4.1, Arctos Anthracite Project Coal Licenses. Although ground control surveys have tied the Property to the NAD27 UTM grid, Golder-Marston is not aware of a legal survey of the Property boundary.

Figure 4.1, Project Exploration and Coal License Areas, shows the project exploration and coal license areas considered for the 2012 FS.

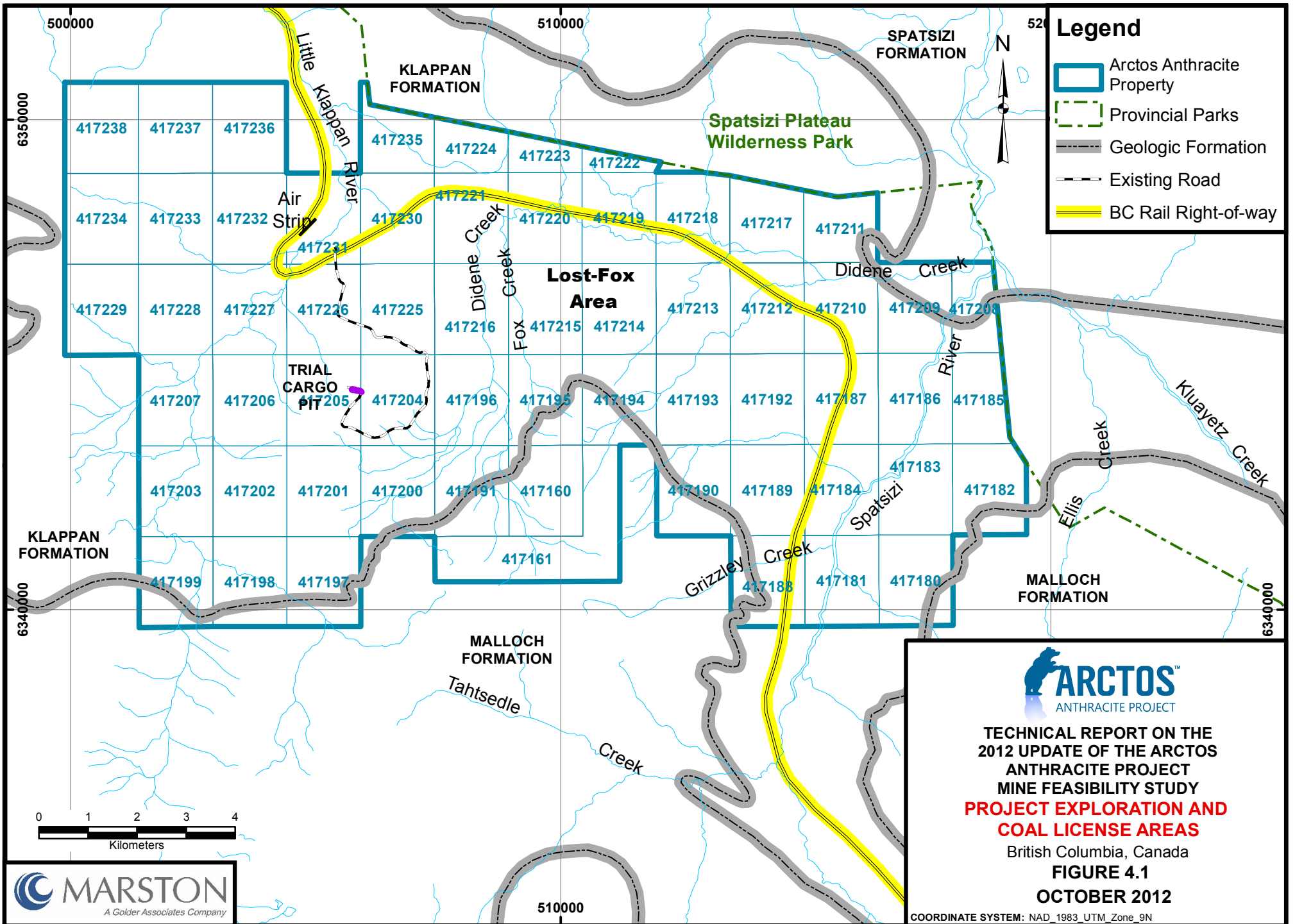
In addition to Crown royalties on coal production, all tonnes sold from the Property are subject to a production royalty of \$1.00 per tonne payable to ConocoPhillips. No other encumbrances on the Property have been reported to Golder-Marston.

Arctos' environmental liabilities known to be associated with the Property are for reclamation of about 6 ha of haul road that Gulf used to transport mined coal from a test pit to a process plant site. Arctos intends to use this road for further work at the Property. As of November 2005, Fortune has incurred additional liability of \$189,900 for activities associated with collecting baseline environmental data and exploration drilling. Reportedly, all disturbed areas associated with Gulf's 1981 – 1988 work, with the exception of the aforementioned laydown area and haul road, were satisfactorily reclaimed prior to Fortune's acquisition of the Property. This work included drill hole, trench and adit sites, bulk test pit and rock storage pile, coal processing site and coal haulage and access roads, except as described above. In addition, oil and gas companies have actively explored areas within the Property, and BC Rail established a rail grade on the Property. Arctos requires permits to conduct further exploration work and to develop and mine the Property. These include permits, licenses, and approvals from the BC Ministry of Energy and Mines, BC Ministry of Sustainable Resource Management, BC Ministry of Water, Land and Air Protection, BC Ministry of Forests, BC Ministry of Health Services and regional and local agencies.

Table 4.1 Arctos Anthracite Project Coal Licenses

Lease/License #	BCGS Mapsheet	Area (ha)
417160	104H026	281
417161	104H026	491
417180	104H017	281
417181	104H017	281
417182	104H027	276
417183	104H027	281
417184	104H027	281
417185	104H027	205
417186	104H027	280
417187	104H027	280
417188	104H017	281
417189	104H027	281
417190	104H026	281
417191	104H026	281
417192	104H027	280
417193	104H026	280
417194	104H026	280
417195	104H026	280
417196	104H026	280
417197	104H016	281
417198	104H016	281
417199	104H016	281
417200	104H026	281
417201	104H026	281
417202	104H026	281
417203	104H026	281
417204	104H026	280
417205	104H026	280
417206	104H026	280
417207	104H026	280
417208	104H027	173
417209	104H027	280
417210	104H027	280
417211	104H027	211
417212	104H027	280
417213	104H026	280
417214	104H026	280
417215	104H026	280
417216	104H026	280
417217	104H027	247
417218	104H026	279
417219	104H026	280
417220	104H026	280
417221	104H026	280
417222	104H026	58
417223	104H026	104
417224	104H026	149
417225	104H026	280
417226	104H026	280
417227	104H026	280

Lease/License #	BCGS Mapsheet	Area (ha)
417228	104H026	280
417229	104H025	280
417230	104H026	280
417231	104H026	280
417232	104H026	280
417233	104H026	280
417234	104H025	280
417235	104H026	202
417236	104H026	280
417237	104H026	280
417238	104H025	280
Total		16,411



**TECHNICAL REPORT ON THE
2012 UPDATE OF THE ARCTOS
ANTHRACITE PROJECT
MINE FEASIBILITY STUDY
PROJECT EXPLORATION AND
COAL LICENSE AREAS**

British Columbia, Canada
FIGURE 4.1
OCTOBER 2012

COORDINATE SYSTEM: NAD_1983_UTM_Zone_9N



Item 5 Accessibility, Climate, Local Resources, Infrastructure, and Physiography

The Property may be accessed by vehicle or aircraft. Gulf constructed a gravel road about 150 km in length from the Stewart-Cassiar Highway (Provincial Highway 37) to the Property. See Figure 5.1, Proposed Mine Access.

About 125 km of the road is constructed on a BC Rail right-of-way and sub-grade that was constructed in the early 1970s, but was never utilized as a railway. Gulf also refurbished a 1,000-m graveled airstrip on the Property, which was initially constructed for the railway project, which was refurbished again during the summer of 2004 by an oil and gas company exploring in the area. Arctos has surface rights to the Property by virtue of its coal licenses.

The Property has a sub-arctic highland/cold forest climate that is characterized by relatively short summers and long, severe winters with precipitation occurring throughout the year. Mean temperatures during the summers vary between 6°C and 10°C; winter temperatures generally vary between -5°C and -20°C. Precipitation averages 300 millimetres (mm) to 400 mm per year. Generally, over half the precipitation is rainfall occurring in summer and early fall. The remainder is snow during winter and spring, with maximum snow accumulation of about 1.5 m each year. To date, operating seasons for exploration generally begin regionally after the spring thaw and break-up of river ice, and end once significant snowfall requires maintenance to keep the Property access road clear of snow. For mining, operating seasons may be year-round.

The nearest community to the Property is Iskut, which is approximately 100 km to the northwest and situated on Highway 37. Larger towns include Stewart, Terrace and Smithers, which are 150 km to 300 km south of the Property, and Prince George, which is 530 km southeast of the Property. The nearest large city, Vancouver, is approximately 930 km south of the Property. Transport to the Property is by commercial airline to Smithers, B.C. or Terrace, B.C. and then by charter plane or vehicle to the site.

The BC Rail right-of-way traverses the Property near its northeastern boundary. See Figure 1.1, Property Location. The right-of-way connects Fort St. James to the southeast with Dease Lake to the northwest. Rail is installed on the right-of-way from Fort St. James to Minaret, B.C., which is about 150 km southeast of the Property. A 57-km section from Minaret to Chipmunk had rail on it until a few years ago. Other than the access road to the site and the airstrip, no other significant infrastructure is located on the Property.

The Property is located at the northern end of the Skeena Mountain Range in British Columbia's Northern Boreal Mountains Ecoprovince. The local terrain is mountainous, with topography changing from 1,100 m in valley floors to over 2,200 m along mountain and ridge crests. The Property drains to the Klappan and Spatsizi watersheds. Vegetation consists of willow-birch shrub lands in low valleys with muskeg and black spruce in low, poorly drained areas. Lower mountain slopes have stands of white spruce and sub-alpine fir with the tree line occurring at approximately 1,500 m elevation. Above the tree line, alpine grasslands and dwarf shrubs prevail

in flatter areas, while peaks are barren rock with patches of lichen, moss and other mat-vegetation.

On-site infrastructure proposed in the 2012 FS includes personnel camp facilities, security and first-aid facilities, mine dry, mine shops, warehouse, preventative maintenance facilities, ready line, fueling facilities, coal processing and handling facilities, explosives magazine, main office, main water supply and distribution, sewage disposal, power supply and air strip. The main facilities are shown on Figure 5.2, Mine Facilities Area Layout and Location Plan.

The Lost-Fox Mine will require significant off-site infrastructure to facilitate the efficient transport of coal to the Ridley Terminal at Prince Rupert, B.C. Efficient transport of the coal by rail will require significant upgrades to the existing rail infrastructure from the mine to Fort St. James. The northern section of the proposed rail line, which is controlled by BC Rail, is approximately 153 km in length and runs from the mine at milepost 370 to just north of Minaret at milepost 275. This section requires substantial work including the construction or refurbishing of several bridges. Grade work was completed for the majority of this section but ballast, ties and track were never installed on the 98 km running from Chipmunk to the mine. The remaining 57 km from Chipmunk to Minaret was never used commercially and required upgrading to become serviceable. The track and ties on this portion of the roadbed were removed several years ago. The proposed upgrades to the track and rail bed are shown in Figure 5.3, Rail Transportation Route.

The southern section of rail is operated by CN Railway and runs from milepost 275 to Fort St. James – a distance of approximately 322 km. This section was built in the 1970s with light rail and has seen little use. In order to make this section of rail serviceable, the light rail will need to be replaced and slopes, ditches, culverts, ties, ballast and bridges will need to be fixed or replaced.

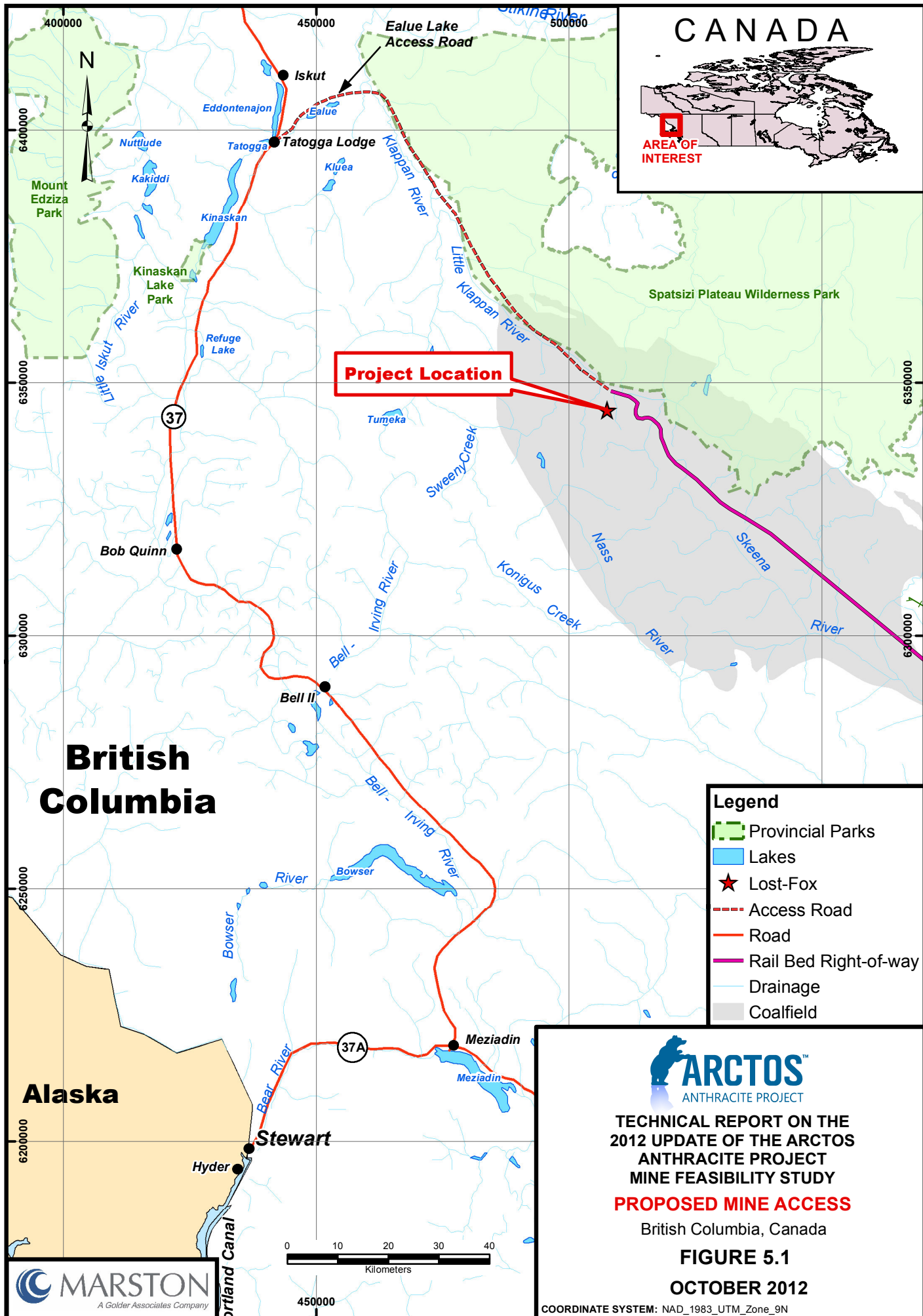
The total cost of the railroad infrastructure is estimated at C\$330 million. The 2012 FS is based on the assumption that Arctos is the 100 percent equity owner of the Project and the costs are included in the capital for the project.

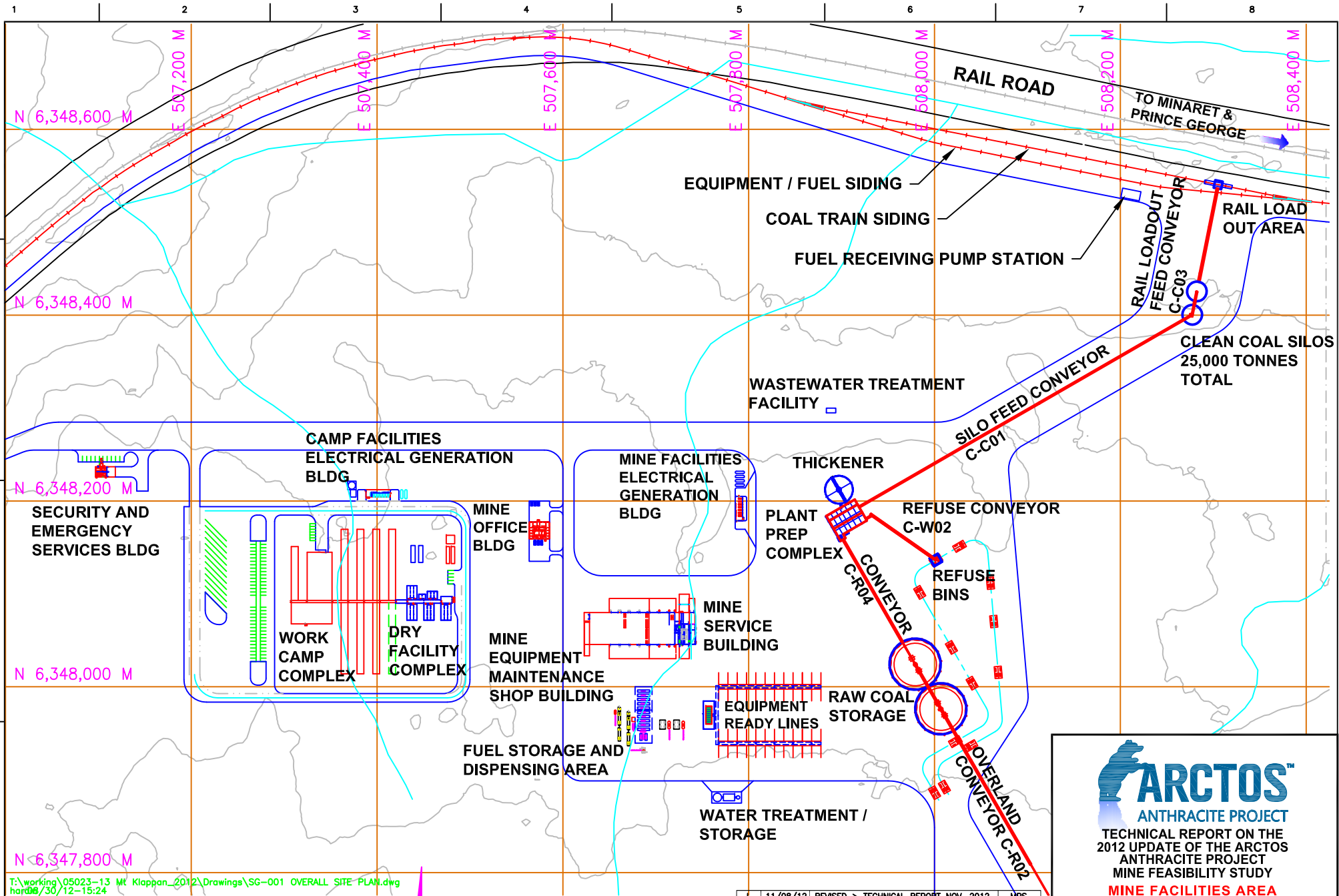
Water sources include several rivers located on the Property including the Little Klappan River and the Didene Creek. Groundwater sources are plentiful and recharged due to the significant precipitation in the area. The proposed water source in the 2012 FS is a fresh water reservoir with a capacity of approximately 600,000 cubic metres. The reservoir will be charged with water from precipitation and runoff, and the remainder sourced from the Little Klappan River.

Mining personnel are expected to be recruited primarily from First Nation members living in the region, and from nearby towns such as Stewart, Terrace, and Smithers. The mine facilities will include a work camp and airstrip, which will attract and facilitate labour from a wider geographic region.

Coal rejects will consist of coarse rejects and filtered fines, which will be stored near the processing plant site in a designated coal rejects storage area. Mine rock and overburden from

mining operations will be hauled to rock storage piles and in-pit fill. See Figure 5.4, Pit Status Map End of Year 25.





T:\working\05023-13 Mt Klappan_2012\Drawings\SG-001 OVERALL SITE PLAN.dwg
hard06/30/12-15:24

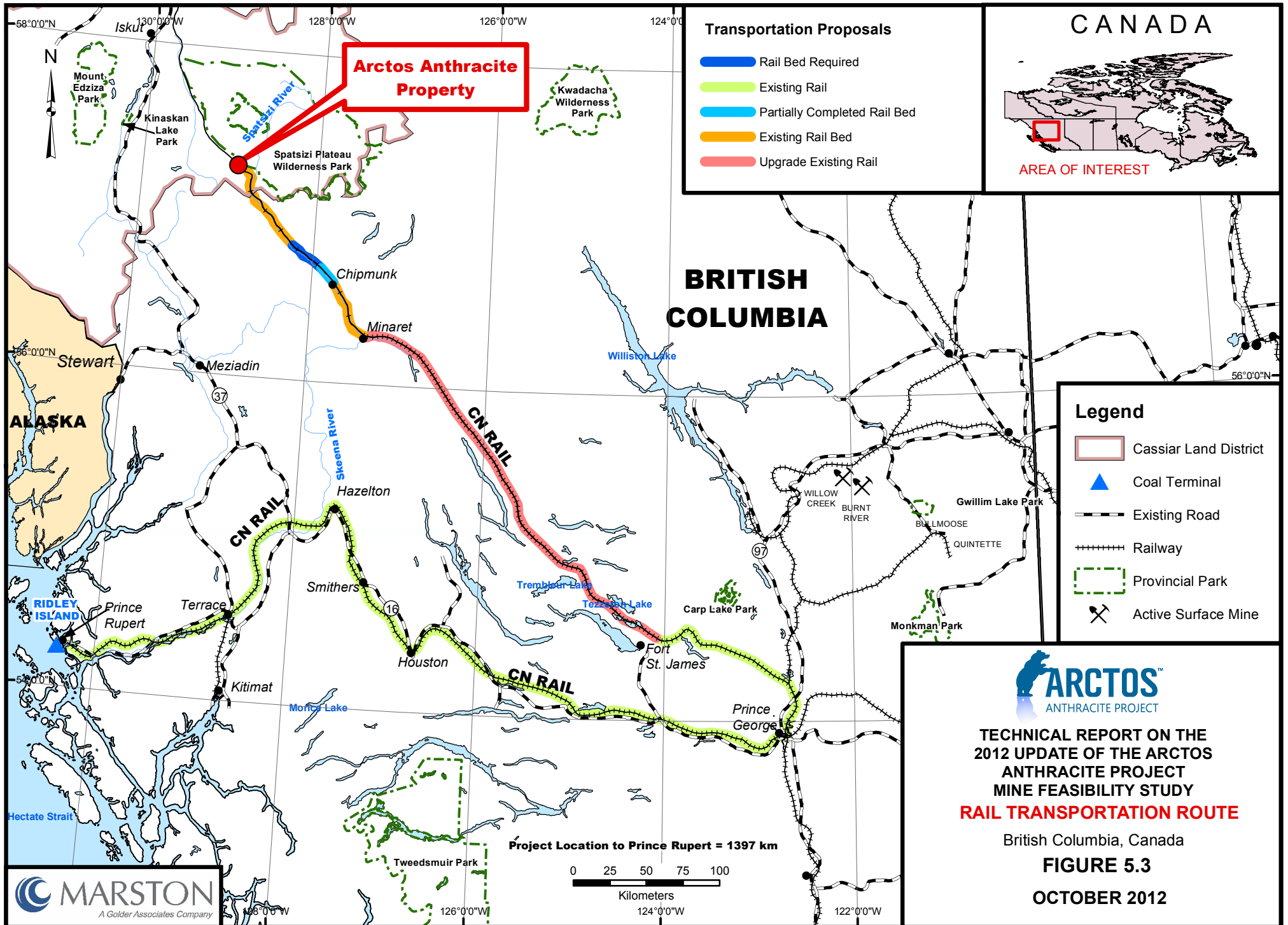


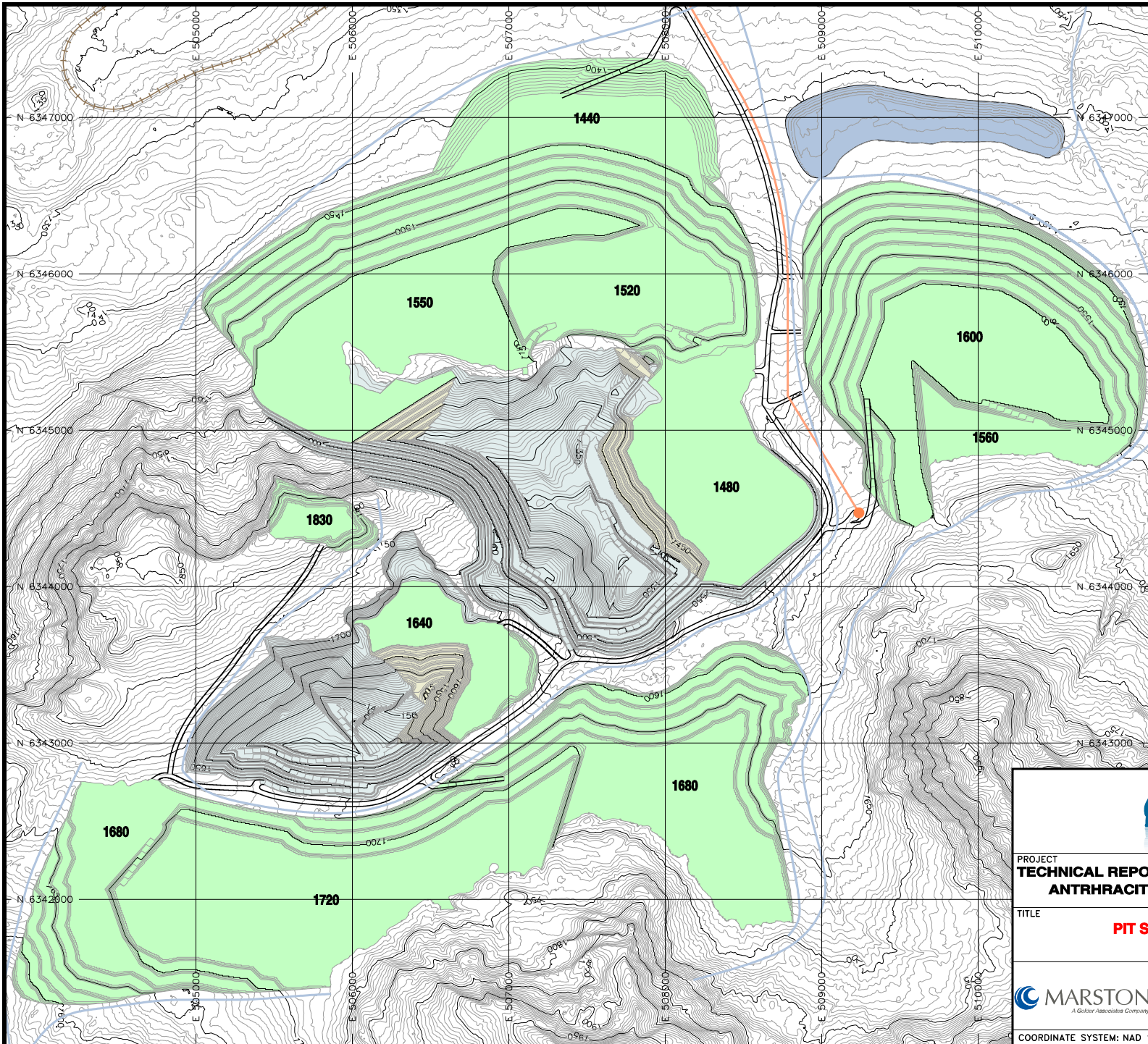
PLAN - MINE FACILITIES AREA

0 50 100

REV.	DATE	DESCRIPTION	APPROVED
L	11/08/12	REVISED > TECHNICAL REPORT NOV. 2012	MPS
K	08/30/12	REVISED > MINE FEASIBILITY STUDY 2012	MPS
J	07/24/12	MOVED FACILITIES CLOSER TO RAIL	MPS
I	10/20/10	REVISED - RESTORED OLC/RAIL LOADOUT	MPS
H	06/03/08	DELETED - OLC/RAIL LOADOUT	MPS

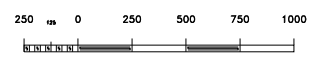
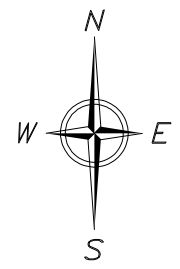
ARCTOSTM
ANTHRACITE PROJECT
TECHNICAL REPORT ON THE
2012 UPDATE OF THE ARCTOS
ANTHRACITE PROJECT
MINE FEASIBILITY STUDY
**MINE FACILITIES AREA
LAYOUT AND LOCATION PLAN**
British Columbia, Canada
FIGURE 5.2
OCTOBER 2012





LEGEND

- MAJOR TOPOGRAPHY CONTOUR (50m)
- MINOR TOPOGRAPHY CONTOUR (5m)
- PIT
- ACTIVE ROCK STORAGE PILE
- RECLAIMED ROCK STORAGE PILE
- COAL REJECTS STORAGE PILE
- GROWTH MEDIA STORAGE PILE
- HAULROAD
- DRAINAGE DITCH
- SEDIMENTATION POND
- - - PROPOSED RAILWAY
- ROM COAL CONVEYOR
- ROM COAL TRUCK DUMP



PROJECT
TECHNICAL REPORT ON THE 2012 UPDATE OF THE ARCTOS ANTHRACITE PROJECT MINE FEASIBILITY STUDY

TITLE
PIT STATUS MAP END OF YEAR 25

BRITISH COLUMBIA, CANADA

PROJECT No. 1213540007	DATE 07-Nov-12
DESIGN LH	SCALE AS DRAWN
GIS WJS	FIGURE 5.4
CHECK TM	
REVIEW RM	

COORDINATE SYSTEM: NAD 1983 UTM ZONE 9 NORTH METERS

Item 6 History

In 1901, V.H. Dupont reported a coal outcrop near the Arctos Anthracite Property (Property) in a Canadian government railway survey report. From 1903 to 1913, prospectors and promoters performed relatively intensive exploration and sampling work about 30 km to 35 km southeast in the Groundhog Coalfield. The Geological Survey of Canada (GSC) issued reports on the area in 1912 and 1914 based on work conducted in 1911 and 1912 by G.S. Malloch. Malloch's work was subsequently followed by GSC Reports in 1950 (Buckham and Latour) and 1979 (Richards and Gilchrist). Most recently, the GSC's C.A. Evenchick, G.M. Green and others have performed numerous studies and mapping of the Bowser Basin from 1985 to the present.

Mining companies again became actively interested in the Groundhog Coalfield in 1966 when Coastal Coal Ltd. acquired licenses and conducted exploration until the end of 1968. A second joint venture group consisting of National Coal Corp, Quintana Mineral Development and Placer Development Co. explored the area in 1970. In 1978, Esso Resources Ltd. and Petrofina Ltd. acquired the first licenses at the Property. Esso and Petrofina allowed the licenses to lapse in 1980. In 1981, based on Esso's report from a summer geological mapping program, Gulf acquired its first licenses for the Property.

By 1987, Gulf had extended the Property to nearly 52,000 ha divided into four contiguous exploration areas named Summit, Lost-Fox, Hobbit-Broatch and Skeena. Between 1981 and 1988, Gulf conducted annual exploration programs to refine its knowledge of the regional geology, seam occurrences and physical characteristics, and quality attributes of the anthracite resources. These programs were comprehensive and included rotary and diamond core drilling, adits, trenching and outcrop sampling, and quality testing.

In 1985 and 1986, Gulf developed a trial cargo pit and constructed a pilot processing plant for bulk testing and to produce sample shipments for potential customers. Sample shipments of various anthracite products were hauled by truck to Stewart and shipped via ocean bulk carriers to customers worldwide. The trial cargo pit was developed in the I Seam at the peak of Lost Ridge in the Lost-Fox Area. Mined anthracite was hauled to the pilot plant located near the Property access road.

Through the end of 1987, Gulf also performed numerous environmental studies in support of Stage I and Stage II Environmental Assessments submitted for regulatory review.

By late 1990 Gulf had completed several iterations of preliminary assessments, pre-feasibility and feasibility studies. A 1982 study was performed of production from the Hobbit-Broatch Area. All later studies focused on the Lost-Fox Area, which became Gulf's primary target for open pit mining. In February 1992, Gulf surrendered licenses for all units comprising the Skeena Area, significant portions of the Nass and Summit Areas and for relatively slight boundary adjustments in the Lost-Fox and Hobbit-Broatch Areas. The Property currently consists of contiguous coal licenses over 16,411 ha, see Item 4 and Table 4.1.

In 1994, Gulf performed its last major technical study, which was an analysis of producing a single anthracite product for use in steelmaking.

In July 2001, Conoco acquired the Property through its acquisition of Gulf. In November 2001, Conoco and Phillips Petroleum Co. announced a merger that was completed in August 2002. In the interim, Fortune acquired the Property from Conoco Canada Ltd., a Conoco subsidiary.

Since acquiring the Property in 2002, Fortune has conducted several site visits to the Property and has commenced fieldwork related to environmental applications. In October 2004, Fortune applied to the British Columbia Environmental Assessment Office for a review and permit to mine at the Property. Fortune completed a field exploration and testing program in 2005, the results of which have been included in the 2012 FS.

Exploration Work

In total, Gulf issued 13 reports detailing exploration activities and results on the Arctos Anthracite Property between 1981 and 1988, see Item 23, References. Each of the exploration programs included various mapping, drilling, and sampling efforts, see Table 6.1, Arctos Anthracite Project Exploration History.

Table 6.1 Arctos Anthracite Project Exploration History

Description	Year							
	1982	1983	1984	1985	1986	1986	1987	2005
Geological Mapping	✓	✓	✓	✓	✓	✓	✓	
Cartography	✓	✓	✓	✓	✓	✓	✓	
Aerial Photography	✓		✓					
LiDar Survey								✓
Outcrop Sampling	✓				✓	✓		
Trenching - Mechanical, Hand	✓	✓	✓	✓	✓	✓	✓	
Diamond Drilling	✓	✓	✓	✓	✓	✓	✓	✓
Stratigraphic Logging	✓	✓	✓	✓	✓	✓	✓	✓
Geophysical Logging	✓	✓	✓	✓	✓	✓	✓	✓
Adits		✓			✓			
Trial Pit and Test Shipments				✓	✓			
Paleontology - Sedimentology	✓	✓	✓	✓	✓	✓	✓	
Flora And Fauna Identification				✓	✓	✓	✓	
Fault and Cleavage Study					✓	✓		
Bentonite Study					✓	✓	✓	

Gulf's exploration work commenced in all areas with geologic mapping at 1:10,000 scale. In the Lost-Fox Area, ground control surveys established control points in 1984 and 1985, and aerial photography, orthophotographs and topographic mapping were produced at 1:5,000 and 1:2,000 scales. All geologic mapping, drilling, sampling and other exploration work was tied into a local system of survey control, which was later translated to the UTM coordinate system (North American Datum of 1983, Zone 9).

Gulf's exploration drilling programs included the compilation of detailed drillers' logs of lithology and geophysical logging of nearly all drill holes. Geophysical logs included gamma ray, neutron, sidewall density, caliper, focused beam resistivity, and directional deviation in some angled drill holes.

Gulf also conducted detailed studies of flora and fauna fossils to age the rocks and aid in understanding the stratigraphic sequence and the paleoenvironment of deposition, and analyses of bentonite layers to provide markers to aid in seam correlation.

In total, Gulf's exploration on the Property included 159 diamond drill holes with nearly 25 km of drilling, see Table 6.2, Exploration Activities by Year and Area. An additional 1.5 km of drill data was obtained from rotary drill holes and 3.7 km of trench data.

By 1984, the majority of Gulf's fieldwork was focused on the Lost-Fox Area; see Table 6.2. In the Lost-Fox Area, Gulf's programs were designed to collect sufficient data to establish the geologic controls and extent of the anthracite resources sufficient to support mining project feasibility studies. In other exploration areas, the geologic fieldwork was exploratory in nature and designed to extend Gulf's knowledge of regional structures and seam correlation to determine better the extent of potential anthracite resources.

Table 6.2 Exploration Activities by Year and Area

Exploration Work	Year									Totals	Area		
	1981	1982	1983	1984	1985	1986	1987	1988	2005		Lost-Fox (LF)	Hobbit-Broatch (HB)	Summit
Adits													
Quantity						4				4	4		
Tonnes						*				*	*		
Diamond Drill Holes													
Quantity (HQ Size)		7	3	8	34	38	34	29	12	165	154	9	2
Total Meters		1,286	541	1,507	6,164	5,550	4,931	4,756	2,109	26,844	25,182	1,339	323
Quantity (AIX Size)			6							6	6		
Total Meters			126							126	126		
Rotary Drill Holes													
Quantity				17	6					23	23		
Total Meters				897	620					1,517	1,517		
Mechanical Trenches													
Quantity				128			53	29		210	170	40	
Total Meters				1,298			700	306		2,304	1,814	490	
Hand Trenches													
Quantity	24	50	93	94	45	35	13	3		357	184	55	118
Total Meters	89	284	527	751	178	95	58	17		1,999	862	252	885
Measured Sections													
Quantity				13	19	6	25	1		64	28		8
Total Meters				2,736	3,347	745	1,951	39		8,818	2,793		562
Geological Mapping													
1:2000 Scale						LF	LF	LF		1986-1988	1986-1988		
1:2500 Scale				HB,LF	LF					1984-1985	1984-1985	1984	
1:5000 Scale			HB	HB,LF	LF	LF	LF	LF,S		1984-1988	1984-1988	1983-1984	1988
1:10000 Scale	HB,LF	HB,LF	HB,LF					S		1981-1988	1981-1983	1981-1983	1988

*to be determined

Historical Resource Estimates

Gulf's exploration programs culminated with estimates of anthracite resources in each of the exploration areas. In the Lost-Fox and Hobbit-Broatch areas, Gulf implemented a local mine grid and developed geologic cross sections through the deposits in those areas. Coal seams were interpreted on the sections and together with drill hole true thickness and apparent specific gravity data, the Gulf geologists used the sections to estimate Measured, Indicated and Inferred resources by seam in these areas.

In June 2002, as part of Fortune's acquisition process, Marston Canada Ltd. (Marston) completed a due diligence review of Gulf's statements of the anthracite resources in each of the exploration areas and concluded that Gulf's estimates were reasonable. See Marston Canada Ltd., "Due Diligence Review of Mount Klappan Anthracite Resources," June 2002 (2002 Review). Gulf's resource estimates were prepared prior to GSC 88-21 and therefore do not comply with the standards of CIMDS or NI 43-101. However, Gulf's estimates do conform to the generally accepted predecessor to Paper 88-21, which is Energy, Mines and Resources Report ER79-9, "Coal Resources and Reserves of Canada," and were determined using a methodology that was standard industry practice at the time of Gulf's estimates.

In early 2004, Marston created solids and block models of Gulf's geological cross sections to verify Gulf's resource estimates and perform preliminary open pit designs. Although Gulf's resource estimates were substantially verified as a result of this work, Marston recommended a more thorough review and revision of certain areas of the previous geological interpretation and correlation work prior to performing the mine planning required as part of a feasibility study.

As part of the 2002 Review and the July 2004 block modeling and verification work, Marston re-stated Gulf's resource estimates using the formats specified in GSC 88-21, see Table 6.3, Mount Klappan Resource Estimates in GSC 88-21 Format from 2004 Block Model of Gulf Data. The resource estimates of "Immediate Interest" on Table 6.3 are the in-pit anthracite resources estimated for Gulf's 1990 feasibility study and reflect an average clean coal strip ratio of 8.5 bcm of mine rock per product tonne. Cut-off ratios for Gulf's 1990 pits were not reported, but are estimated to be between 12 bcm/tonne and 15 bcm/tonne.

In 2012 Golder-Marston, per the scope of the 2012 feasibility study (FS), incorporated the 2005 drilling results and completed a thorough review under the supervision of a senior geologist of the previous geological interpretations. In some cases, the prior geological interpretations were revised. The updated geological interpretations were then used to create the seam solids and block model for the updated 2012 resource estimates and optimized pit design.

Table 6.3 Mount Klappan Resource Estimates in GSC 88-21 Format from 2004 Block Model of Gulf Data

Mining Method/ Area	ASTM Coal Rank	Resource of Immediate Interest (Mt, adb)			Resource of Future Interest (Mt, adb)		
		Measured	Indicated	Inferred	Measured	Indicated	Inferred
Surface							
Lost-Fox	Anthracite	40.5	10.9	0.8	16.8	24.6	22.7
Hobbit-Broatch	Anthracite					3.4	64.6
Summit	Anthracite						2.4
Underground							
Lost-Fox	Anthracite				16.8	24.6	22.7
Hobbit-Broatch	Anthracite					3.4	64.6
Summit	Anthracite						2.4
Non-Conventional							
Lost-Fox	Anthracite				33.7	49.3	45.4
Hobbit-Broatch	Anthracite					6.8	129.2
Summit	Anthracite						4.8
Sterilized		There are no sterilized resources of immediate or future interest					

The historical and 2005 Marston reporting of resource estimates for the Lost-Fox Area has been superseded by the estimates presented in Item 19 of this Report.

As of November 2004, the CIMDS reporting format replaces the GSC 88-21 format. The key differences are that CIMDS does not recognize the “Immediate Interest,” “Future Interest,” “Surface,” “Underground,” and “Non-Conventional” categories, nor the “Speculative Resources” classification. Under NI 43-101, resource estimates classified other than CIMDS’ “Measured,” “Indicated” and “Inferred” may be reported as possible deposits.

Historical Production

In 1984 – 1985 Gulf mined 21,000 tonnes of coal from a test pit in the Hobbit-Broatch Area. In 1985 and 1986, Gulf mined about 200,000 tonnes of coal from the I Seam trial cargo pit on Lost Ridge. This coal was processed in a pilot plant equipped with a heavy media bath and water-only cyclones. The products were hauled by truck to the port at Stewart, B.C. and shipped via ocean vessels to potential overseas customers.

Item 7 Geological Setting and Mineralization

Regional Geology

The regional geology of the Arctos Anthracite area has been the subject of numerous geological studies, including coal, oil and gas exploration, British Columbia and Canadian Geological Survey studies (Evenchick et al) and university degree theses, and it is reasonably well understood. The geology is well described by Innis, MacLeod and Swanbergson in their report for Gulf (Gulf 1988).

The anthracite deposits at the Property are part of significant coal measures within the Bowser Basin; see Figure 7.1, Regional Geology. This ancient basin formed and filled with sediments eroded from surrounding high land during the late Jurassic to early Cretaceous periods. Two distinct areas containing coal are recognized: the Klappan Coalfield in the northwest (Koo, 1986) and the Groundhog Coalfield in the southeastern end of the coal measures (Malloch, 1912, Innis et al, 1988).

The Bowser Basin formed during and after a period of mountain building associated with the Columbian and Pacific Orogens. As shown in Figure 7.1, the basin is part of a large-scale geological structure that exists from the British Columbia coastline and inland for more than 450 km to the east, past Williston Lake in northeastern British Columbia. This structure shows a general northwest-southeast trend caused by tectonic forces acting in a northeast-southwest direction. These forces created uplift of the Coastal Plutonic Complex and the Omineca Crystalline Belt, which compressed the intervening Bowser Basin and the sediments within it.

Under this compression, the Beirnes Syncline formed in the Bowser Basin. This significant geologic structure occurs 10 km southwest of the Property. With a core of massive conglomerates, this syncline acted as a buttress against which the sediments to the southwest and northeast were compressed by the tectonic forces acting in a southwest-northeast direction. This buttress caused weaker beds east and west of the syncline to fold and overturn. See Richards and Gilchrist, 1979. Where these folds occur, they are overturned eastward to the east of the syncline and westward to the west of the syncline (Innis, 1988). This eastward folding is evident in the structure of the Klappan Coalfield.

The southern end of the Beirnes Syncline plunges to the north so that the syncline forms a basinal structure. The Groundhog Coalfield strata are brought to the surface by the reversal of plunge in the south. The Groundhog Coalfield strata have not been correlated with Klappan strata. There may be a depositional link between the Klappan and Groundhog strata; however, they are believed to be separate coalfields.

Local Geology

This general description of the Klappan Coalfield and Lost-Fox Area geology is based on Gulf fieldwork and the Gulf 1988 report, Golder-Marston's evaluation of the drilling and trenching documentation, its staff field visits to the Property, and review of documentation and the annual geology reports prepared by Gulf. Golder-Marston has used the stratigraphy as described in Gulf

1988 and has not changed any of the stratigraphic sequence proposed in that report. Golder-Marston has reinterpreted some drill hole seam correlations or seam identifications, and the changes conform to the Gulf 1988 stratigraphic sequence. The Gulf 1988 report is quoted and paraphrased in this description of the general stratigraphy. The contribution of the report authors and Gulf is acknowledged.

Stratigraphy

At the Property, the anthracite resources are contained in the Klappan Formation, which is composed of mudstone, siltstone, sandstone and some conglomerate and 33 anthracite seams that were deposited in a cyclic deltaic shoreline sequence. The Klappan Formation is approximately 1,100 metres thick and the anthracite seams occur in the central 600 metres of the formation. A stratigraphic column of the coal bearing section, showing the Klappan Formation and the location and thickness of the coal seams and the lithologic units between them, is shown in Figure 7.2, Generalized Stratigraphic Column.

The Klappan Formation sediments are interpreted to have been deposited in a regional, shallow gradient, stable coastal delta (Gulf 1988). The environments of deposition cycled between fluvio-deltaic and marine. The coal seam deposition is an extreme of the cycles, with an average of 20 to 30 metres of mudstone, siltstone and sandstone separating the coal seams. The interburden lithology generally consists of laminated mudstone, siltstone and fine-grained sandstone. Occasional deposition of coarse sandstone and conglomerate occurs. A relatively continuous coarse sandstone/conglomerate commonly occurs below the I Seam in the Klappan Coalfield. This generally averages 10 metres in thickness and is likely to be hard thus requiring particular consideration in mine planning and operations.

Seven distinct marker horizons occur in the Klappan Formation and are very useful for stratigraphic correlation. These marker horizons are indicated in Figure 7.2, Generalized Stratigraphic Column. The two most distinctive markers in drill core and geophysical logs are thin layers of bentonite, one of which occurs above the I Seam and one between the N and O seams.

The Klappan Formation is part of the Bowser Lake Group. It is underlain by the Spatsizi Formation and overlain by the Malloch Formation; see Figure 7.2, Generalized Stratigraphic Column. Gulf extensively mapped the formations throughout the Property; see Figure 7.3, Local Geology Map. There is some debate as to the proper nomenclature of the formations and sequences but Golder-Marston has chosen to name the Spatsizi Formation as lying directly under the Klappan Formation. As shown in Figure 7.3, the Spatsizi Formation, which is the oldest, subcrops in the northeast and to the south is overlain by the Klappan Formation coal measures, which are in turn overlain by the Malloch Formation. The Spatsizi Formation also protrudes through the Klappan Formation in the northwest of the map area due to an anticline or anticlinorium with a regional northwest-southeast axis. Similarly, the Klappan Formation protrudes through the Malloch sediments in the east, southeast and southwest of the map area, again due to the presence of anticlinal structures above which the Malloch Formation has been eroded.

Because the entire Klappan Formation sequence is present, coal seams have been identified throughout the central part of the Property over most of its east-west extent. Three areas of interest have been identified. The areas of most interest are the Lost-Fox and Hobbit Broatch.

The coal seams outcrop or subcrop throughout the Lost-Fox Area. The coal sequence considered for mining in the Lost-Fox Area is the upper 400 metres of the coal measures with the lowest seam being the GU Seam. The seams of primary interest, which are the thickest and contain the majority of the coal are the PH, H, I, K, KL, L, and M seams. Of these, the best seams are the H, I, K and KL which make up approximately 80 percent of the coal resource.

The coal seam outcrop traces over the Lost-Fox Area are shown in Figure 7.4, Modeled Coal Seam Outcrops. The H Seam outcrop and subcrop reflects the broad synclinal and anticlinal geological structure prevalent in the Lost-Fox Area. The trace of the H Seam outcrop and subcrop, which effectively follows the northwestern outline of the potential mining pits, indicates that to the northwest seams below the H Seam will come to the sub-surface. The overall dip of the sequence of mineable seams trends to the southeast under the Malloch Formation.

Structural Geology

The Klappan Formation sequence of generally weaker rocks was compressed into a series of folds with northwest-southeast axes. Northeast of the Beirnes Syncline and prevalent in the Arctos Anthracite Area, the folds tend to be overturned to the northeast. Where the rocks were folded beyond the breaking point, stress was relieved along reverse/thrust fault planes. In places, reverse and thrust faulting occurs at the axes of folds where the stress is greatest; thrust faults may also occur on the fold limbs. The series of folds are separated by flat-lying zones that are structurally relatively undisturbed.

In the Lost-Fox Area, this structural style is clearly illustrated by the attitude of the coal and rock beds. A photograph provided in Gulf's Mount Klappan documentation shows the cliff face of Lost Ridge, looking to the southeast and on which is evident a major fold and steeply dipping beds that form a central geological structure of the Area.

The components of this structure are shown on Figure 7.5, Geological Section with Observed Outcrop Information. In this figure, the face of Lost Ridge is compared to a geologic cross section oriented northeast-southwest and located in the approximate area of Lost Ridge. The section is cut looking southeast, as that of the photograph, and shows an overturned synclinal fold pair. On the photograph at the top of Figure 7.5, the bedding planes have been highlighted in red. The overturned anticlinal structure between the synclines can be clearly seen at the right center of the plate and on the cross section. Two outcrop areas of shallow dipping beds at the lower left of the plate are part of the southeast dipping limb of the large syncline. A number of trenches and core holes confirm the structure. A reverse fault with an upthrow to the northeast occurs in the lower limb of the lower syncline. The Gulf trial cargo site location, which was not yet excavated at the date of the photograph, is the flat area at the right center of the cliff top. The trial cargo was taken from the flat area of I Seam under shallow overburden.

The geologic structure of the Lost-Fox Area was interpreted using Gulf's previous work including maps and cross sections, stereographic aerial photographs, orthophotographs, and the mapping, drilling, and trenching exploration carried out by Gulf. See Figure 7.6, Typical Geological Cross Section. This section illustrates the interpreted geological structure, the coal seams in the Lost-Fox Area and the geology type designations. The Lost-Fox Area includes broad areas of Moderate geology type that are separated by relatively narrow zones of Complex geology type. The Complex zones are associated with the steeply dipping strata of overturned folds and in one area with a fault system and overthrust block.

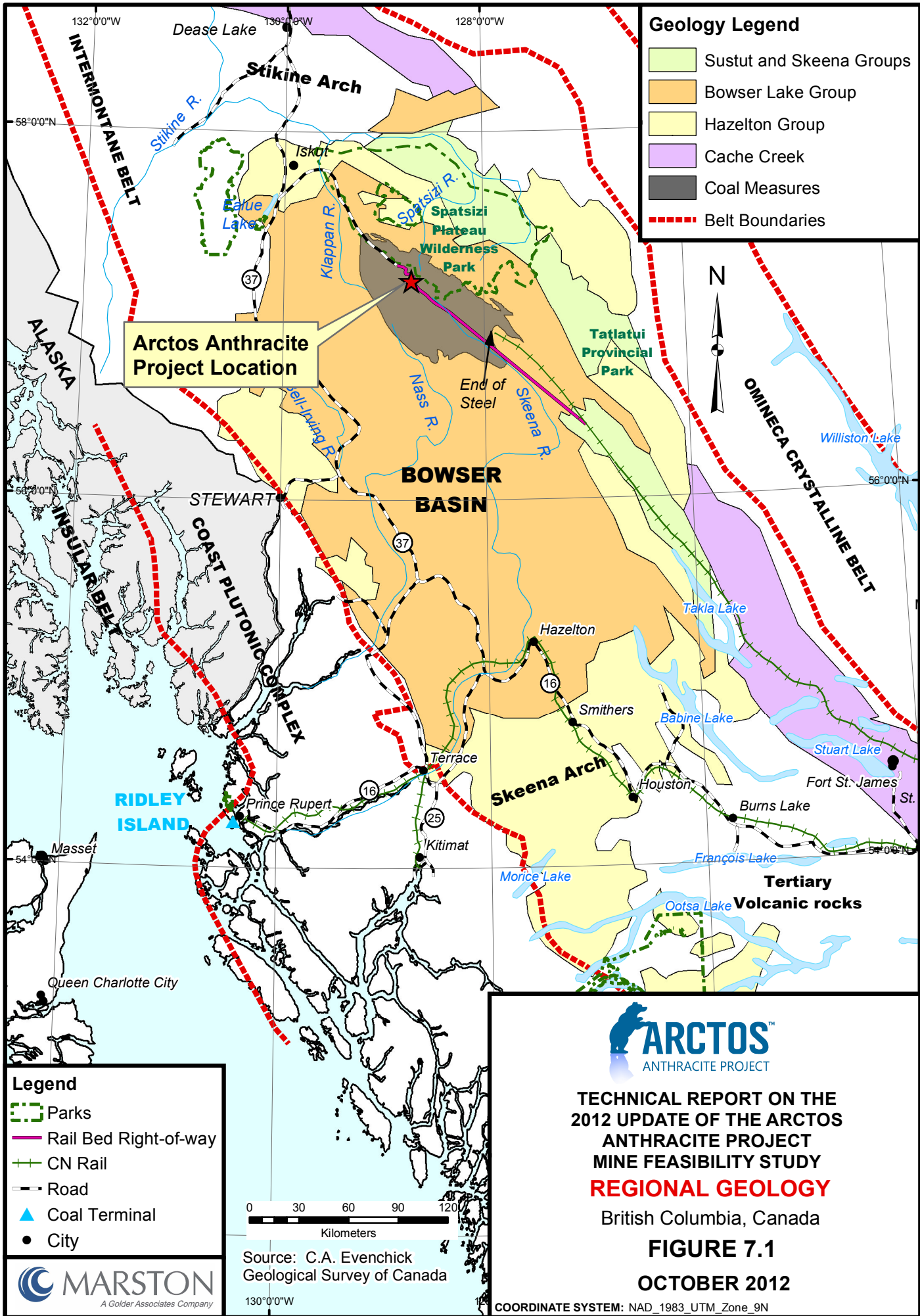
Mineralization

Anthracite seams are encountered on the Arctos Anthracite Property. Anthracite is the highest-rank coal under international coal classification standards. Anthracite on the Property occurs in 33 identified seams with individual seam true thickness of up to 11 metres; 28 of the seams have an average true thickness of at least 0.50 metres and contain at least 50 percent coal, see Figure 7.2, Generalized Stratigraphic Column.

The anthracite deposits are geologically controlled by the size of the depositional basin, the depositional environment, and post-depositional events such as uplift and compression, and erosion. Anthracite seams of some number and with varying thicknesses and depths are likely to underlay the entire Property area of about 16,411 ha. Gulf geologists and others have discovered seam outcrops and Klappan Formation rocks in all exploration areas on the Property. Multiple seams have been discovered at depths of up to 250 metres through drilling in the Lost-Fox and Hobbit-Broatch Areas.

The anthracite seams are relatively continuous across the Lost-Fox Area, which has had the most exploration to date. Discontinuities are due primarily to geologic structures such as faulting or changes in depositional environment that constrained or prevented peat formation.

Environment of deposition also affects the in situ characteristics of the anthracite and is directly related to the amount and composition of partings, which are rock bands within the seams. For most seams on the Property, partings must be removed from the mined anthracite through processing to produce a marketable product.



Arctos Anthracite Project Location

BOWSER BASIN

Geology Legend

- Sustut and Skeena Groups
- Bowser Lake Group
- Hazelton Group
- Cache Creek
- Coal Measures
- Belt Boundaries

- Legend**
- Parks
 - Rail Bed Right-of-way
 - CN Rail
 - Road
 - Coal Terminal
 - City



TECHNICAL REPORT ON THE 2012 UPDATE OF THE ARCTOS ANTHRACITE PROJECT MINE FEASIBILITY STUDY REGIONAL GEOLOGY

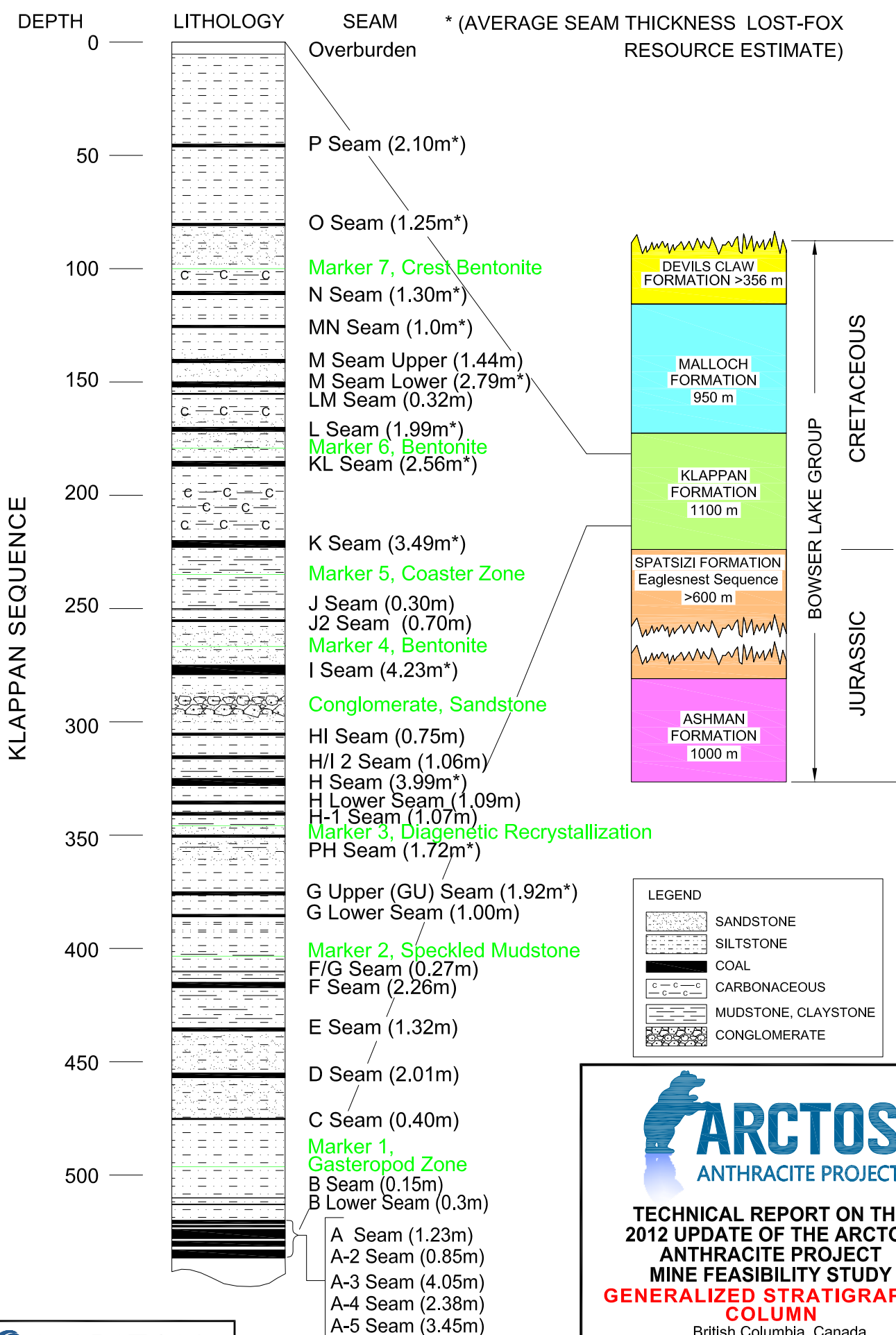
British Columbia, Canada
FIGURE 7.1
OCTOBER 2012

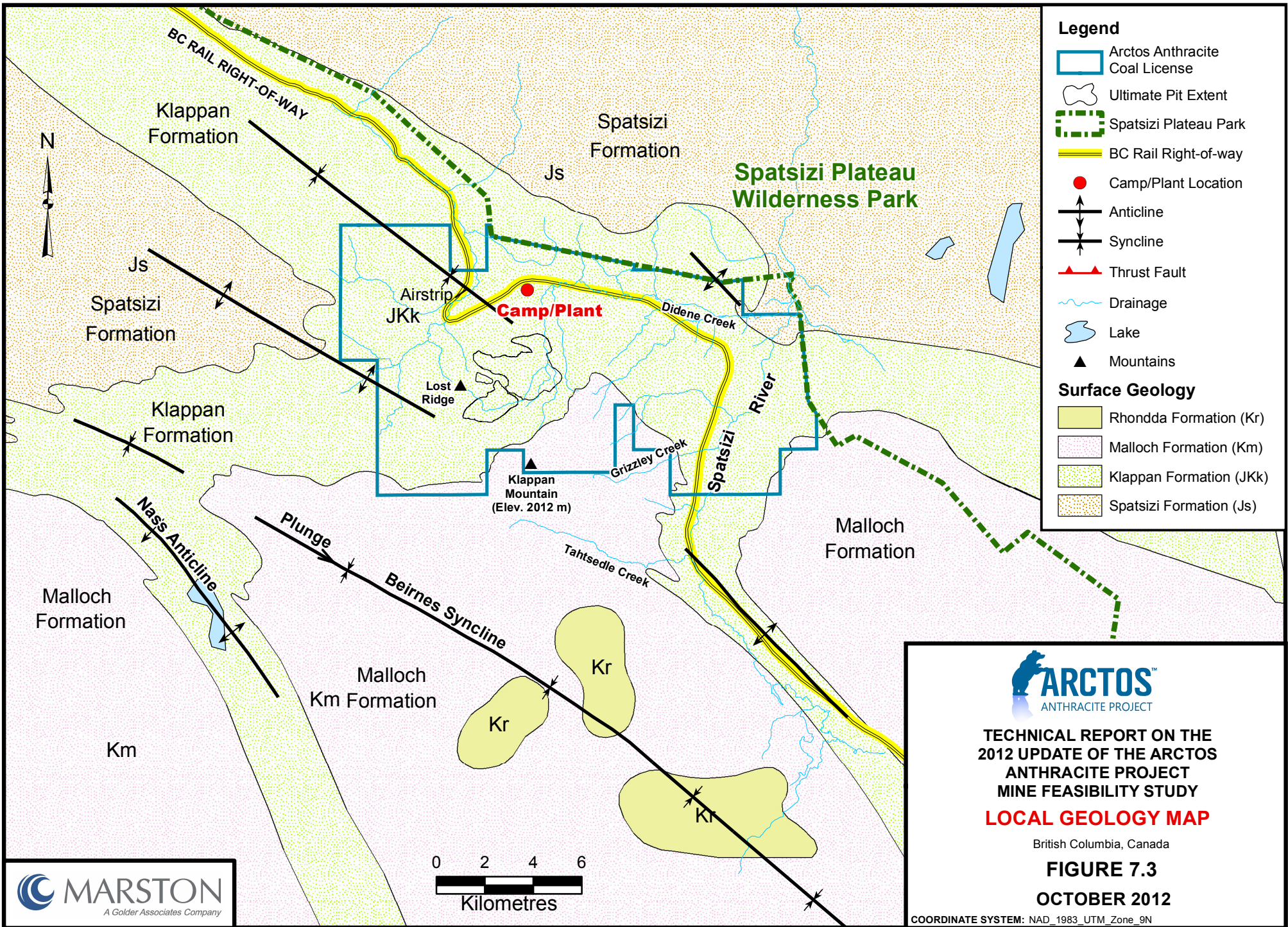
COORDINATE SYSTEM: NAD_1983_UTM_Zone_9N



Source: C.A. Evenchick Geological Survey of Canada

130°0'0"W





**TECHNICAL REPORT ON THE
2012 UPDATE OF THE ARCTOS
ANTHRACITE PROJECT
MINE FEASIBILITY STUDY
LOCAL GEOLOGY MAP**

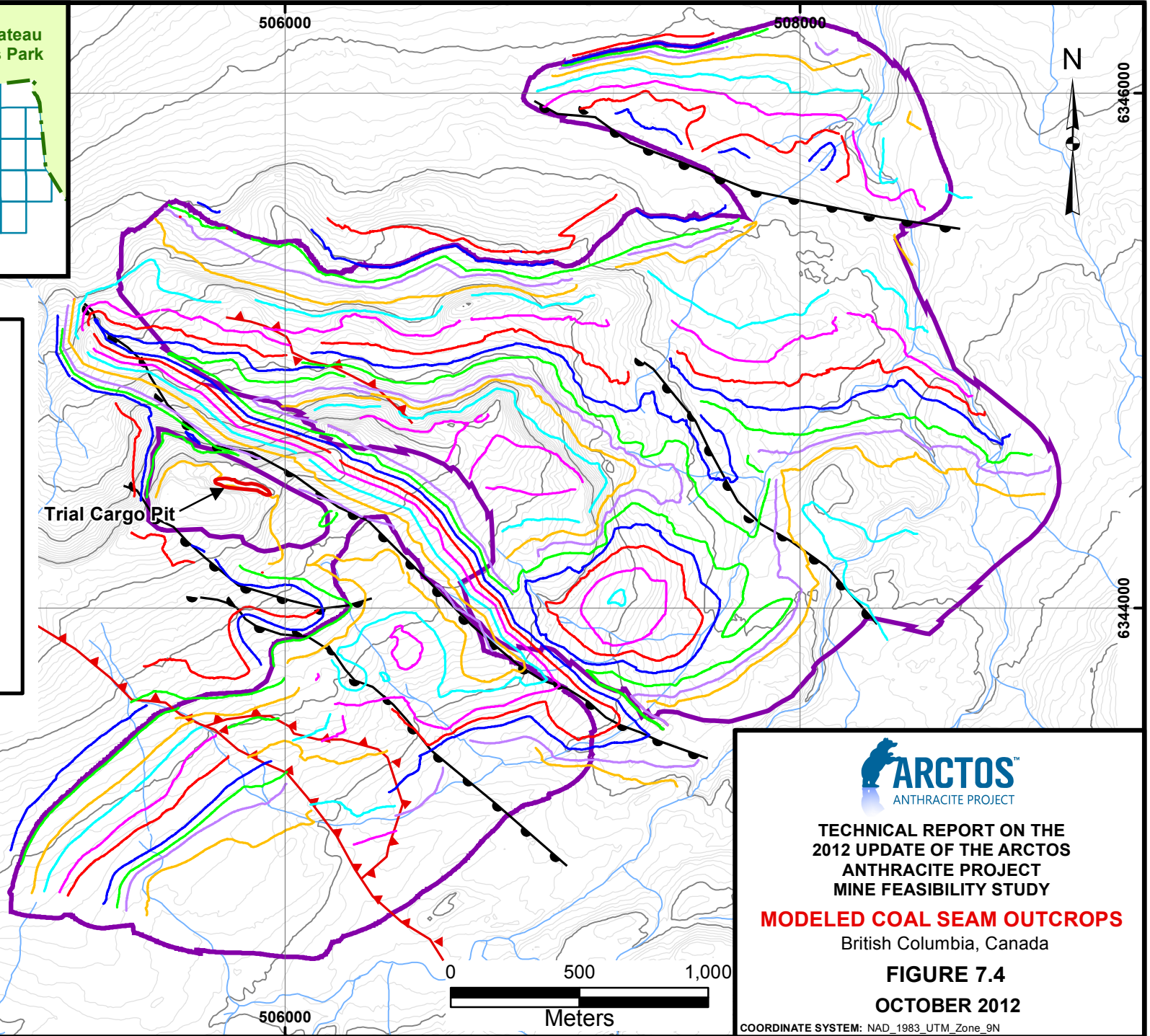
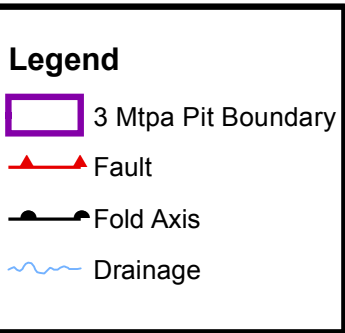
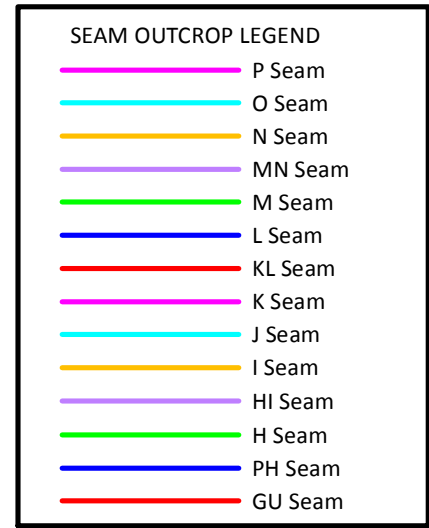
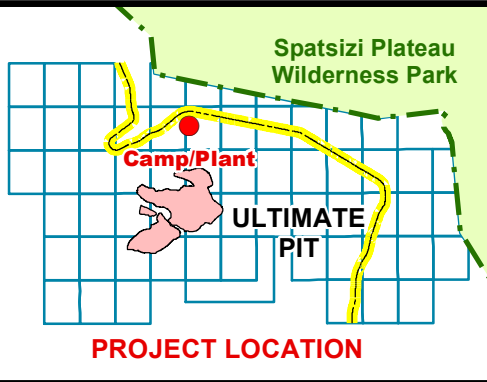
British Columbia, Canada

FIGURE 7.3

OCTOBER 2012

COORDINATE SYSTEM: NAD_1983_UTM_Zone_9N





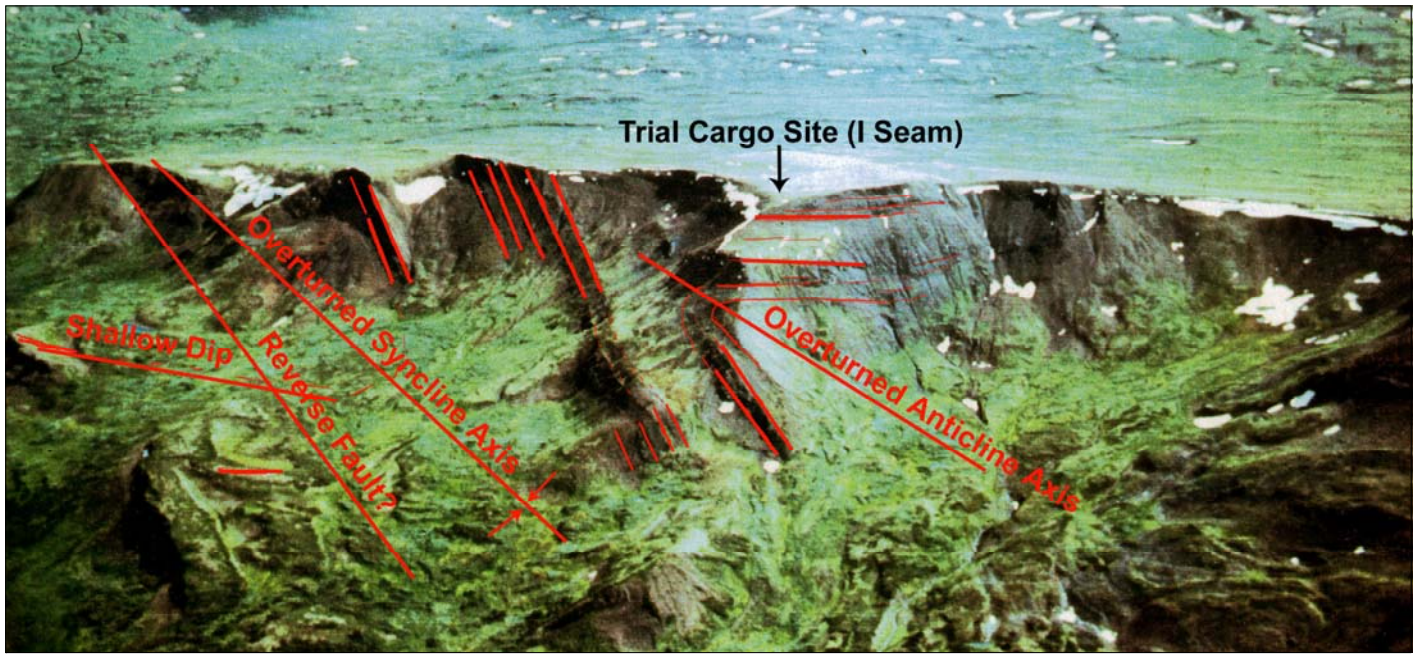
ARCTOS™
ANTHRACITE PROJECT

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2012 UPDATE OF THE ARCTOS
ANTHRACITE PROJECT
MINE FEASIBILITY STUDY

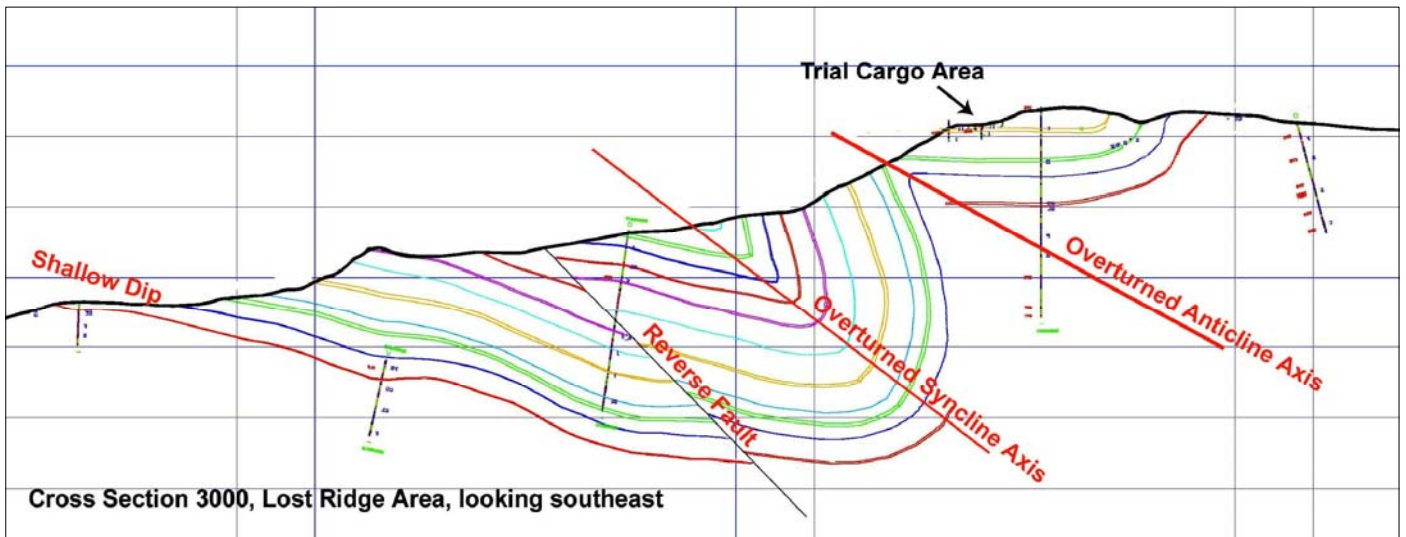
MODELED COAL SEAM OUTCROPS
British Columbia, Canada

FIGURE 7.4
OCTOBER 2012

COORDINATE SYSTEM: NAD_1983_UTM_Zone_9N



**Lost Ridge Area - Looking Southeast
(bedding planes highlighted in red)**



Geologic Model Cross Section 3000



TECHNICAL REPORT ON THE
2012 UPDATE OF THE ARCTOS
ANTHRACITE PROJECT
MINE FEASIBILITY STUDY

**GEOLOGICAL SECTION WITH
OBSERVED OUTCROP INFORMATION**

British Columbia, Canada

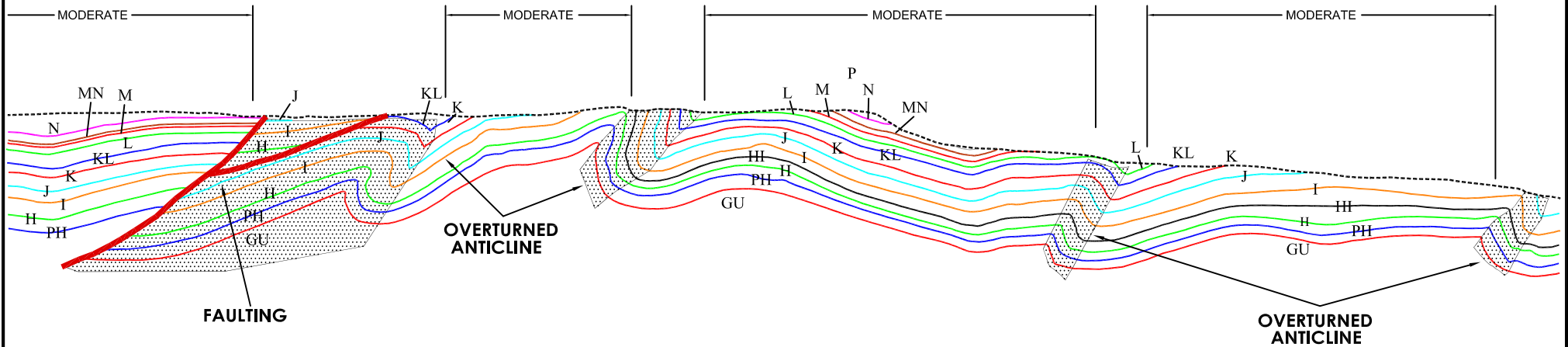
FIGURE 7.5

OCTOBER 2012

SW

Typical Lost-Fox Area SW - NE Cross Section 1600 (Looking Northwest)

NE

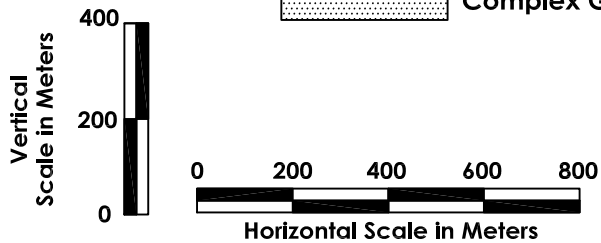


LEGEND

- Existing Topography
- Fault
- Complex Geology Type

SEAM LEGEND

- P Seam
- O Seam
- N Seam
- MN Seam
- M Seam
- L Seam
- KL Seam
- K Seam
- J Seam
- I Seam
- HI Seam
- H Seam
- PH Seam
- GU Seam



TECHNICAL REPORT ON THE
2012 UPDATE OF THE ARCTOS
ANTHRACITE PROJECT
MINE FEASIBILITY STUDY

TYPICAL GEOLOGICAL CROSS-SECTION

British Columbia, Canada

FIGURE 7.6

OCTOBER 2012

Item 8 Deposit Types

The mineral deposit types being investigated at the Arctos Anthracite Property are numerous anthracite coal seams deposited as layers in sedimentary rock formations. The coal seams were deposited in a deltaic, fluvial environment and therefore vary in thickness and coal quality.

The rock formations on the Property are faulted and folded due to post-depositional tectonic activity. Folds vary from broad and open to tight and overturned. A very few significant reverse faults occur in areas of tight folding; minor faults with less than 3 metres of displacement are likely to be prevalent over the Property.

Under GSC 88-21, the geology types for the deposits on the Property include Complex and Moderate portions. Complex geology type occurs in areas of tight folds with one or more steeply dipping limbs, and where faults have significantly displaced beds vertically or laterally. Moderate geology type occurs primarily as the limbs of broad, open folds with dips of up to 30 degrees. See Figure 7.6, Typical Geological Cross Section, which shows a cross sectional view of the anthracite seams and different geology types in the Lost-Fox Area.

The geologic model being applied in the investigation is similar to any bedded sedimentary deposit model. The anthracite seams are prevalent and continuous in the Klappan Formation of rocks. The Klappan Formation was formed over a relatively local basin at the northern end of the Bowser Basin and was later subjected to folding and faulting due to compressive tectonic forces. Within the Klappan Formation, certain marker beds have been identified including flora and fauna fossils and bentonitic clays associated with volcanic activity. See Figure 7.2, Generalized Stratigraphic Column. Combined with seam characteristics, these markers assist with the correlation of individual seams between drill holes and outcrops.

Surface mapping and aerial photography are used to define regional and local structures controlling the Klappan Formation and its coal seams. Drill holes and geophysical logging are used to verify and measure the thickness and characteristics of the seams at depth.

Item 9 Exploration

Fortune completed the 2005 Exploration Drilling Program for the Lost-Fox Area. This program included holes for exploration, rock storage pile condemnation, groundwater testing, acid rock drainage, and geotechnical drilling for pit wall and soil stability. The 2005 drilling results have been integrated into the updated geologic model for the 2012 FS, see Table 6.2, Exploration Activities by Year and Area. For a description of Gulf's extensive exploration of the area during 1981 – 1988, see Item 6 of this Report, Marston's 2002 Review and the references listed in Item 27.

Item 10 Drilling

Fortune completed the 2005 Exploration Drilling Program for the Lost-Fox Area. This program included 12 drill holes for exploration equating to approximately 2100 metres. The drilling program also provided data for rock stockpile condemnation, groundwater testing, acid rock drainage, and geotechnical drilling for pit wall and mine rock dump and soil stability. The complete results of the 2005 program have been incorporated into the updated 2012 FS. Fourteen seams were modeled in the updated 2012 geologic model, twelve of the fourteen seams contribute to the 2012 demonstrated and inferred resource estimates.

Gulf drilled 182 diamond core and rotary holes on the Arctos Anthracite Property. See Table 6.2. Of this total, 171 holes were drilled in the Lost-Fox Area, with nearly 26.8 km of the total metres drilled. Of the 171 holes drilled in the Lost-Fox Area, 152 were diamond core holes, 19 were rotary holes, and five were winkie holes.

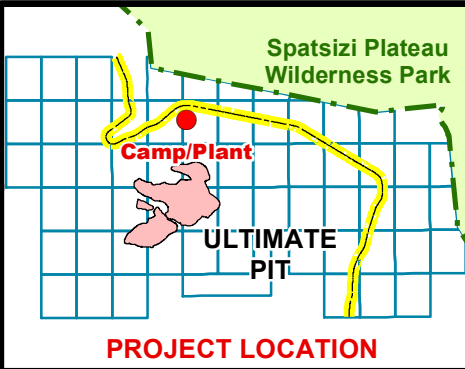
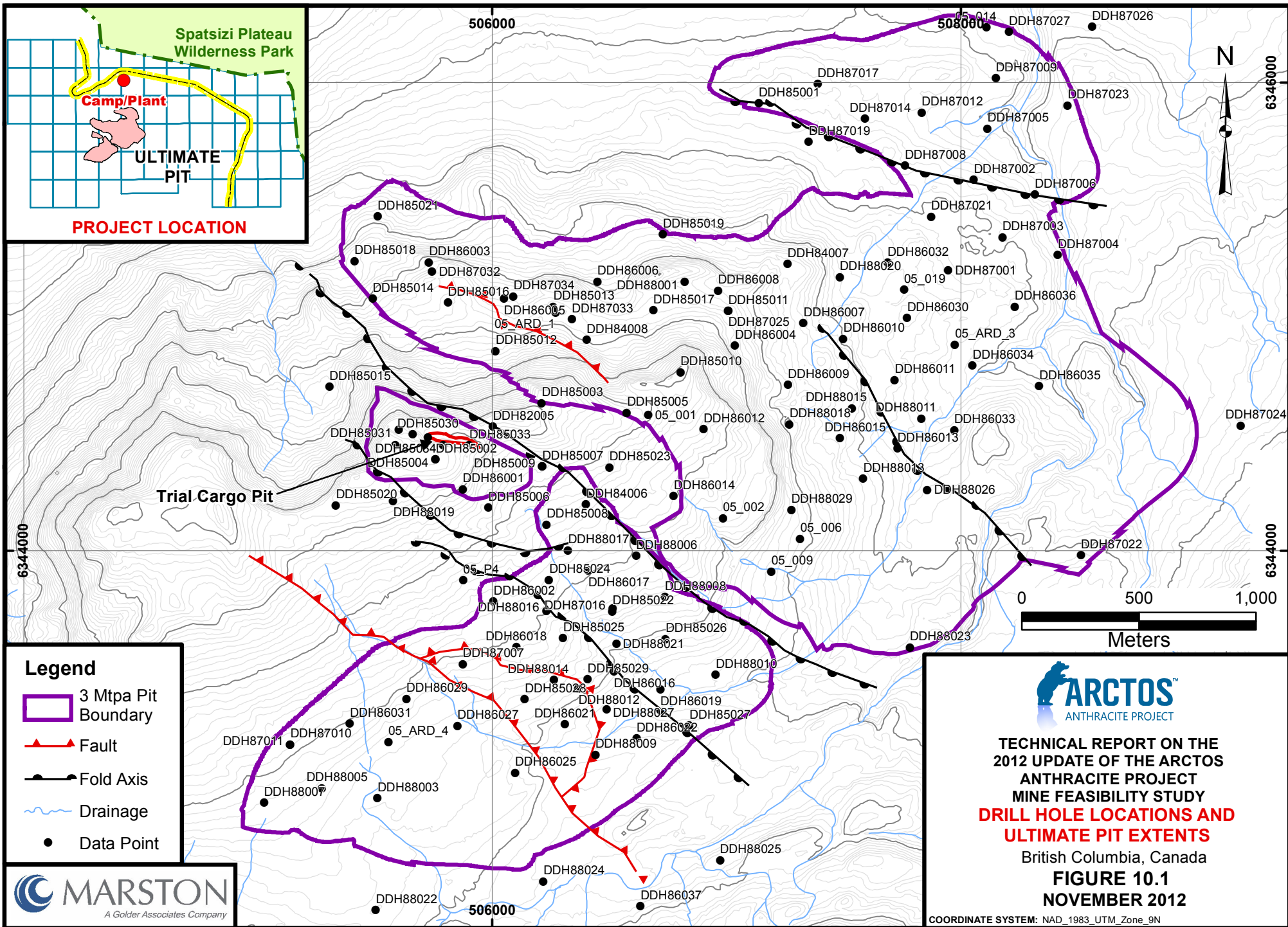
Gulf's results for the Lost-Fox Area are presented on Table 10.1, Summary of Gulf Geological Results for Lost-Fox Area. Gulf identified 12 principal seams with undisturbed seam intersections having a true thickness of 0.5 metres or greater. The principal seams were reported to have an average seam true thickness of 2.4 metres and an aggregate average coal plus rock true thickness of 29 metres.

Fourteen seams were modeled in the updated 2012 geologic model, 12 seams of which contribute to the 2012 demonstrated and inferred resource estimates.

The drill hole locations in the Lost-Fox area are shown in Figure 10.1, Drill Hole Locations and Coal Seam Outcrop Map.

Table 10.1 Summary of Gulf Geological Results for Lost-Fox Area

Seam	Number of Undisturbed Intersections	Primary Seams	Average True Thickness (m)		% Coal	S.G. (adb)
			(Coal)	(Coal + Rock)		
P	3		1.3	1.3	96.2	1.55
O	16	•	0.8	1.1	75	1.73
N	18	•	1.2	1.4	84.3	1.65
M/N	11	•	0.8	1	74.8	1.85
M Upper	2		1.4	1.6	88.9	
M	25	•	2.2	2.9	76.2	1.72
L/M	1		0.3	0.4	80	
L	37	•	1.8	2.3	77.9	1.66
K/L	37	•	2.1	2.9	73.5	1.7
K	54	•	2.8	3.4	82.1	1.63
J	63		0.3	0.8	37	1.61
J2	1		0.7	0.7	98.6	
I	97	•	4.2	4.6	90.5	1.54
H/I	21		0.8	1.6	47.8	1.74
H/I2	3		1.1	1.2	89.1	1.72
H	66	•	3	3.8	79	1.66
H Lower	1		1.1	1.2	94	
H-1	1		1.1	1.3	81.7	1.94
Phantom	33		0.7	2.5	28.3	1.79
G	29		1.3	2.4	56.8	1.92
G Lower	11	•	1	1.3	75.2	1.85
F/G	4		0.3	0.5	54	1.86
F	14	•	2.3	3	75.6	1.72
E	11	•	1.3	1.4	95	1.55
D	5		2	2.5	81.7	1.75
C	5		0.4	0.8	50.6	1.68
B	2		0.2	1.3	11.2	
B Lower	1		0.3	0.3	100	
A	6		1.2	1.9	65.4	1.53
A-2	1		0.9	1	83.3	
A-3	1		4.1	5	81.3	
A-4	1		2.4	3.1	76.5	
A-5	1		3.5	4.7	73.6	
Totals	33	12	48.5	65	74.6	1.66



- Legend**
- 3 Mtpa Pit Boundary
 - ▲ Fault
 - Fold Axis
 - ~ Drainage
 - Data Point



**TECHNICAL REPORT ON THE
2012 UPDATE OF THE ARCTOS
ANTHRACITE PROJECT
MINE FEASIBILITY STUDY
DRILL HOLE LOCATIONS AND
ULTIMATE PIT EXTENTS**

British Columbia, Canada
FIGURE 10.1
NOVEMBER 2012

COORDINATE SYSTEM: NAD_1983_UTM_Zone_9N

Item 11 Sample Preparation, Analyses & Security

Gulf's procedures for coal sampling and analyses are described in detail in Gulf's Field Exploration Manual and the Gulf Geological Reports. In general, Gulf geologists prepared all anthracite samples or supervised sampling by Gulf technicians. All coal samples were logged and bagged for shipment to independent coal laboratories. Gulf geologists identified and logged all sample intervals. Gulf personnel issued directions to the labs on the intervals to analyze and the tests to perform on each interval. Following a review of initial washability testing, Gulf personnel then issued directions to composite specified samples for further washability testing for product yield and quality.

Typically, test work on all coal samples included proximate analyses, ultimate analyses, ash mineral analyses, and washability tests. See Table 11.1 for Gulf's Projected Raw Coal Proximate Analyses. All tests were performed using American Society for Testing and Materials (ASTM) standard test methods. All test work was performed in independent coal laboratories familiar with coal testing and subject to the quality control measures of each lab. Golder-Marston is not aware of the specific measures or checks of quality control employed by the labs at the time of the test work. Loring Laboratories of Calgary, Alberta; Birtley Engineering Ltd. (now GWIL Industries) of Calgary, Alberta; and Cyclone Engineering Sales Ltd. of Edmonton, Alberta, performed coal testing.

Gulf's sampling, sample preparation, security and analytical procedures are reasonable. This opinion is based on: a) the materials reviewed and data verification process conducted in the preparation of this Report; b) the observations of Richard Marston and other Marston personnel during their site visits of Gulf field personnel and sampling methods and procedures at the time; and, c) Gulf's use of laboratories recognized for coal analytical work and high standards.

For the drilling program completed in 2005, Fortune used the same sampling procedures as Gulf's procedures, which are outlined above. See Table 11.2, Sample Locations, at the end of this section, which shows sample locations at the Arctos Anthracite Property. Core samples were taken of numerous anthracite seams intercepted at depth in the diamond core holes, but only the drill hole collar elevation is shown on the table.

Table 11.1 contains coal quality data and remains confidential under the terms of the *Coal Act Regulation*, Section 2(1). It has been removed from the public version.

http://www.bclaws.ca/EPLibraries/bclaws_new/document/ID/free/10_251_2004#section2

Table 11.2 Sample Locations

ID NO.	SEAMS SAMPLED																	Totals	
	D	E	F	G	GU	H	HI	I	J	K	K/L	L	M	M/N	N	O	P		PH
Adit Samples																			
ADT86101						1													1
ADT86103						1													1
ADT86104						1													1
ADT86105						1													1
Diamond Drill Holes																			
DDH82005								1	1	1	1	1							5
DDH83001		1	1		1	1		1										1	6
DDH84005				1															1
DDH84006						1	2	1	1										5
DDH84007		2	1		1	1		1	1									1	8
DDH84008					1	1	1	1	1	1		1						1	8
DDH85001					1	1	1	1	1									1	6
DDH85002						1		1											2
DDH85003													1	1	2				4
DDH85004		2	1		1	1		1										1	7
DDH85005										1	1	1	2			2			7
DDH85006		1	1		1	1					1	1	1			2		1	5
DDH85007								1											1
DDH85008			1																1
DDH85008						1	1											1	3
DDH85009							1	1	1	2	1								6
DDH85010								1	1	1	1	1	1	1	1				6
DDH85011							1	1	1	1									4
DDH85012							1	1	1	2	1	1							7
DDH85013			2		1	1		1	1	1								1	8
DDH85014			1			1		1	1	1									5
DDH85015		1	1		1														4
DDH85016	1	1	1		1	1		1	1									1	8
DDH85017		1	1		1	1		1	1										6
DDH85018	1		1		1	1		1	1									1	7
DDH85019			1		1														2
DDH85020	1	1																	2
DDH85021		1	1		1			1	1										5
DDH85022					1	1		1	1									1	5
DDH85023										1		1	3						5
DDH85024						1		1										1	3
DDH85025						1		1										1	3
DDH85026						1		1	1										3
DDH85027						1		1	1	1	1	1	1	1	1	1			10
DDH85028						1		1	1										3
DDH85029									1										1
DDH85030									1										1
DDH85031									1										1
DDH85032									1										1
DDH85033									1										1
DDH85034									1										1
DDH86001						1		1											2
DDH86002						1												1	2
DDH86003						1		1											2
DDH86004						1		1	1	1	1	1	1						7
DDH86005						1		1	1										3
DDH86006						1		1											2
DDH86007						1		1	1										3
DDH86008						1		1		1								1	4
DDH86009						1		1	1	1	1	1							6
DDH86010						1		1	1	1									4
DDH86011											1	1							2
DDH86012															1	1	1		3
DDH86013								2	1	1	1								5

ID NO.	SEAMS SAMPLED																	Totals	
	D	E	F	G	GU	H	HI	I	J	K	K/L	L	M	M/N	N	O	P		PH
DDH86014										1		1		1					3
DDH86015										1	1	1	1						4
DDH86016						2		1	1										4
DDH86017						1		1	1										3
DDH86018						1		1										1	3
DDH86019								1	1	1	1	1	1	1					7
DDH86020																			0
DDH86021								2	1	1									4
DDH86022								2	1	1	1	1	1						7
DDH86025								2	2	1	1	1	1		1				9
DDH86027								1	1	1	1	1	1						6
DDH86028	1																		1
DDH86029						1		1	1	1								2	6
DDH86030						1		1	1									1	4
DDH86031					1	1		1	1									1	5
DDH86032						1		1											2
DDH86033										1	1	1	1						4
DDH86034								1	1	1	1								4
DDH86035						1	1	1	1	1	1	1	1						8
DDH86036						1	1	1	1	1									5
DDH86037															1	1			2
DDH87001						1	1	1											3
DDH87002						1	1	3											5
DDH87003						1	1	1											3
DDH87004						1	1	1										1	4
DDH87005						1	1	1	1	1	1								6
DDH87006						1	1	1											3
DDH87007					1	2		1											4
DDH87008								3											3
DDH87009						1	1	1										1	4
DDH87010						1													1
DDH87011						1												1	2
DDH87012						1	1	1	1	1									5
DDH87013						1		1	1									1	4
DDH87014						1	1	1	1	1									5
DDH87015						1			1	1									2
DDH87016								1	1										2
DDH87017						1	1	1		1								1	5
DDH87019						1	1	1											3
DDH87020											1	1	1	1					4
DDH87021						1		1											2
DDH87022													1	1	1	1	1		5
DDH87023					2													2	4
DDH87024											1	1	1	1	1	1			6
DDH87025								1	1	1									3
DDH87026												2		1					3
DDH87027					2	1												2	5
DDH87028										1	1	1	1	1	1	1			7
DDH87029													1	3	2				6
DDH87030										1	1	1	1						4
DDH87031										1	1	2	1						5
DDH87032								2											2
DDH87033								1	1	1									3
DDH87034								1											1
DDH88001						1		1	1										3
DDH88002								1											1
DDH88003									1	1	1	1	1						5
DDH88004						2		1	1										4
DDH88005								1	1	1	1								4
DDH88006						1												3	4
DDH88007						1												1	2
DDH88008																		1	1

ID NO.	SEAMS SAMPLED																	Totals	
	D	E	F	G	GU	H	HI	I	J	K	K/L	L	M	M/N	N	O	P		PH
DDH88009						1		1	1	1	1	1							6
DDH88010						1		1	1	1	1	1	1						7
DDH88011						1		1	1	1	1	2	1						8
DDH88012								3	1	1									5
DDH88013						1		1	1	1	1	1	1						7
DDH88014						1		1	1	1									4
DDH88015						1		1	1	1	1	1							6
DDH88016						1		1											2
DDH88017						1	1												2
DDH88018						1		1	1	1	1	1	1	1				1	9
DDH88019					3														3
DDH88020						1		1	1										3
DDH88021						1		1										1	3
DDH88023																1	1		2
DDH88024												1	1						2
DDH88026								1	1	1	1	1							5
DDH88027								2	1	1	1	1							6
DDH88028													1	2	2	1			6
DDH88029					1	1		2	1	1									6
05_001						1		1	1	1	1	1						1	7
05_002						1	1	1	1	1	1	1						1	7
05_006						1	1	7											9
05_009								1	1									1	3
05_014*																			
05_015*																			
05_016*																			
05_019						1		1											2
05_ARD_1						1		1		1								1	4
05_ARD_3					1	1				1									3
05_ARD_4						1		1		1	1								4
05_P4					1	1												1	3
Rotary Drill Holes																			
RDH84001								1											1
RDH84002								1											1
RDH84003								1	1										2
RDH84007						1		1											2
RDH84008								1											1
RDH84012						1		1											2
RDH84014												1							1
RDH84015											1	1							2
RDH84016										1	1	1							3
RDH84017					1														1
Trenches																			
TRC82031													1						1
TRC82032											1								1
TRC82036																1			1
TRC82043								1											1
TRC82045					1														1
TRC83005															1				1
TRC83042															1				1
TRC83047					1														1
TRC83092								1											1
TRC83093								1											1
TRC84200								1											1
TRC84202								1											1
TRC84203								1											1
TRC84204										1									1
TRC84209					1														1
TRC84210						1													1
TRC84212										1									1
TRC84213												1							1
TRC84215													1						1

ID NO.	SEAMS SAMPLED																	Totals	
	D	E	F	G	GU	H	HI	I	J	K	K/L	L	M	M/N	N	O	P		PH
TRC84216												1							1
TRC84217										1									1
TRC84218										1									1
TRC84220						1													1
TRC84221						1													1
TRC84224								1											1
TRC84225								1											1
TRC84226								1											1
TRC84227								1											1
TRC84228								1											1
TRC84233								1											1
TRC84235								1											1
TRC84237								1											1
TRC84240								1											1
TRC84241					1														1
TRC84260										1									1
TRC84265											1								1
TRC84267												1					1		1
TRC84269																	1		1
TRC84272																	1		1
TRC84274																	1		1
TRC84281								1											1
TRC84290																1			1
TRC84295								1											1
TRC84297								1											1
TRC84298										1									1
TRC84299													1						1
TRC84314					1														1
TRC84335					1														1
TRC85007														1					1
TRC85030								1											1
TRC85034								1											1
TRC85037								1											1
TRC85038								1											1
TRC85039								1											1
TRC85041								1											1
TRC85042								1											1
TRC85049								1											1
TRC85050								1											1
TRC86002													1						1
TRC86003													1						1
TRC86005									1										1
TRC86006												1							1
TRC86007															1				1
TRC87100					1														1
TRC87102					1														1
TRC87103					1														1
TRC87104					1														1
TRC87106					1														1
TRC87115					1														1
TRC87118								1											1
TRC87122								1											1
TRC87123					1														1
TRC88100								1											1
TRC88102								1											1
TRC88103								1											1
TRC88106								1											1
TRC88107								1											1
TRC88108									1										1
TRC88109								1											1
TRC88110								1											1
TRC88111								1											1

ID NO.	SEAMS SAMPLED																	Totals	
	D	E	F	G	GU	H	HI	I	J	K	K/L	L	M	M/N	N	O	P		PH
TRC88112								1											1
TRC88117					1														1
TRC88119					1														1
TRC88122					1														1
TRC88123					1														1
Winkie Holes																			
WKD83002								1											1
WKD83003								1											1
WKD83004								1											1
WKD83005								1											1
WKD83006								1											1
TOTALS	4	11	14	1	44	92	24	168	67	66	40	43	37	13	19	14	7	42	706

*outside modeling area

Item 12 Data Verification

For the resource estimates in this Report, Golder-Marston has relied on 2010 updated LIDAR digital data of topography and geological and analytical data provided by Fortune. For primary data verification, Golder-Marston reviewed all of the electronic data with the same data printed in Gulf's 1982 – 1988 Mount Klappan Project Geological Reports. The appendices to the Gulf Reports include computer printouts of lithologic logs and analytical data, copies of geophysical logs of all drill holes, and cross sections and geological mapping generated during and from each field program. Golder-Marston reviewed all down-hole geophysical logs and compared the lithologic picks with the Gulf geologist's lithologic logs. Golder-Marston agreed with the majority of Gulf's coal seam interpretations; however, in some cases, seam identification was changed and therefore Golder-Marston geologists and engineers reviewed the logs, as well as those from surrounding holes to approve the change.

In 2005, Fortune completed the first drilling program on the property in over 15 years. This program was designed to provide data on water quality, acid rock drainage, geotechnical conditions, and to verify previous drilling and sampling programs. The completed results from the drilling program have been included in the updated 2012 FS.

Although original core samples no longer exist from Gulf's exploration programs, except for a few holes stored in the B.C. Government core library in Prince George, original geologist's logs and photographs are available for nearly all core samples from drill holes, and selections were reviewed and compared with the Gulf Report data. Samples sent by Gulf for laboratory analyses during Gulf's 1981 – 1988 field programs reportedly were also discarded some time ago, although some 50 barrels of samples still exist from Gulf's pilot processing test work and trial shipments. Also, the sample analyses data in the Reports could not be verified with the original lab analyses sheets that were transcribed into Gulf's coal database and printed out for the Geological Reports. The original lab sheets, possibly lost, could not be located in the information on file with Fortune.

Richard Marston, P.E., and other Golder-Marston employees observed Gulf's field activities in the Lost-Fox Area in 1986 and 1987 and worked closely with Gulf geologists and engineering personnel in reviewing the data and geologic work related to those programs. Trenches and drill sites were observed on Gulf's aerial photographs prepared in 1984 and 1985, and compared with the survey coordinates provided in the Gulf Reports. Surveyed elevations of drill hole collars were compared with Gulf's 1:2000 scale topography prepared from the aerial photographs. Concerning any field programs and sample collections that were not observed during site visits or on the aerial photographs, Golder-Marston's review of contemporaneous records and notes indicates that Gulf conducted all of its exploration and sampling programs thoroughly and in a reasonable, professional manner.

Item 13 Mineral Processing and Metallurgical Testing

Gulf planned to process all mined anthracite to separate rock and lower the product ash content and to produce different product sizes. As the basis for processing plant design, Gulf performed over 700 coal washability analyses on drill core samples from all seams. Additionally, the coal processing test work included extensive pilot processing and sampling of the I Seam coal from the trial cargo pit and some H Seam coal from adits. Gulf planned to produce four separate products of different sizes and ash contents using standard coal processing methods and planned to use heavy media vessels and cyclones for coarse coal (35 mm x 6 mm) and water – only cyclones and froth flotation for fine and very fine coals.

Golder-Marston's 2012 FS was developed based on producing a single 10 percent ash (adb) product. The raw washability data developed by Gulf was the basis for the development of the 10 percent ash (adb) wash characteristics. This raw data consisted of sink float analysis on a variety of size fractions depending on the year the samples were prepared and the potential markets Gulf was evaluating. Data for a coal intercept, typical of I Seam coal, is included as Table 13.1, Typical Coal Intercept Washability Data.

Drilling programs were conducted in the Arctos Anthracite resource area every year from 1982 through 1988. The FS incorporated washability data obtained from 1985 through 1988. Earlier washability data from 1982 through 1984 was excluded because the top size of the washability tests was performed at 10 mm. The fine particle size used in this testing may cause overstatement of the product yield.

The following criteria were used in determining the drill cores that would be used from the 1985, 1986, 1987, and 1988 drilling programs:

- The core or seam recovery was greater than 70 percent
- The undiluted specific gravity of the core was less than 2.0
- Mineable thickness was greater than 0.6 metres

Table 13.1 Typical Coal Intercept Washability Data

Drill hole ID	Seam	From	To	Sample ID	Composite Number	Wash ID	Analysis Type	Size Fraction	Weight Percent	Ash Percent	S.G. or Flot Time	Incr. Yield	Incr. Ash	Cum. Flt. Yld.	Cum. Flt. Ash	Cum. Sink Yld.	Cum. Sink Ash
DDH88001	I	66.57	70.81	10411	1	WA1	float	35.00x6.00	65.85	26.1	1.40	2.07	2.12	2.07	2.12	97.93	25.71
DDH88001	I	66.57	70.81	10411	1	WA1	float	35.00x6.00	65.85	26.1	1.45	31.08	6.22	33.15	5.96	66.85	34.78
DDH88001	I	66.57	70.81	10411	1	WA1	float	35.00x6.00	65.85	26.1	1.50	24.96	10.78	58.11	8.03	41.89	49.08
DDH88001	I	66.57	70.81	10411	1	WA1	float	35.00x6.00	65.85	26.1	1.55	4.27	17.27	62.38	8.66	37.62	52.69
DDH88001	I	66.57	70.81	10411	1	WA1	float	35.00x6.00	65.85	26.1	1.60	4.14	18.06	66.52	9.25	33.48	56.97
DDH88001	I	66.57	70.81	10411	1	WA1	float	35.00x6.00	65.85	26.1	1.70	7.46	28.20	73.98	11.16	26.02	65.22
DDH88001	I	66.57	70.81	10411	1	WA1	float	35.00x6.00	65.85	26.1	1.80	0.47	33.90	74.45	11.30	25.55	65.79
DDH88001	I	66.57	70.81	10411	1	WA1	float	35.00x6.00	65.85	26.1	2.00	2.37	41.67	76.82	12.24	23.18	68.26
DDH88001	I	66.57	70.81	10411	1	WA1	float	35.00x6.00	65.85	26.1	2.60	23.18	68.26	100.00	25.23	0.00	0.00
DDH88001	I	66.57	70.81	10411	1	WA1	float	6.00x0.50	25.08	21.77	1.40	20.66	1.83	20.66	1.83	79.34	26.25
DDH88001	I	66.57	70.81	10411	1	WA1	float	6.00x0.50	25.08	21.77	1.45	28.31	5.29	48.97	3.83	51.03	37.87
DDH88001	I	66.57	70.81	10411	1	WA1	float	6.00x0.50	25.08	21.77	1.50	11.31	9.92	60.28	4.97	39.72	45.83
DDH88001	I	66.57	70.81	10411	1	WA1	float	6.00x0.50	25.08	21.77	1.55	4.32	13.74	64.60	5.56	35.40	49.75
DDH88001	I	66.57	70.81	10411	1	WA1	float	6.00x0.50	25.08	21.77	1.60	4.35	16.34	68.95	6.24	31.05	54.43
DDH88001	I	66.57	70.81	10411	1	WA1	float	6.00x0.50	25.08	21.77	1.70	7.34	21.04	76.29	7.66	23.71	64.77
DDH88001	I	66.57	70.81	10411	1	WA1	float	6.00x0.50	25.08	21.77	1.80	3.00	27.28	79.29	8.41	20.71	70.20
DDH88001	I	66.57	70.81	10411	1	WA1	float	6.00x0.50	25.08	21.77	2.00	3.22	39.49	82.51	9.62	17.49	75.85
DDH88001	I	66.57	70.81	10411	1	WA1	float	6.00x0.50	25.08	21.77	2.60	17.49	75.85	100.00	21.20	0.00	0.00
DDH88001	I	66.57	70.81	10411	1	WA1	float	0.50x0.15	5.54	22.01	1.40	24.72	1.67	24.72	1.67	75.28	27.65
DDH88001	I	66.57	70.81	10411	1	WA1	float	0.50x0.15	5.54	22.01	1.45	19.73	3.00	44.45	2.26	55.55	36.41
DDH88001	I	66.57	70.81	10411	1	WA1	float	0.50x0.15	5.54	22.01	1.50	11.91	6.07	56.36	3.07	43.64	44.69
DDH88001	I	66.57	70.81	10411	1	WA1	float	0.50x0.15	5.54	22.01	1.55	4.02	8.57	60.38	3.43	39.62	48.35
DDH88001	I	66.57	70.81	10411	1	WA1	float	0.50x0.15	5.54	22.01	1.60	4.49	10.94	64.87	3.95	35.13	53.13
DDH88001	I	66.57	70.81	10411	1	WA1	float	0.50x0.15	5.54	22.01	1.70	8.58	15.85	73.45	5.34	26.55	65.18
DDH88001	I	66.57	70.81	10411	1	WA1	float	0.50x0.15	5.54	22.01	1.80	4.02	24.36	77.47	6.33	22.53	72.46
DDH88001	I	66.57	70.81	10411	1	WA1	float	0.50x0.15	5.54	22.01	2.00	3.00	38.89	80.47	7.54	19.53	77.62
DDH88001	I	66.57	70.81	10411	1	WA1	float	0.50x0.15	5.54	22.01	2.60	19.53	77.62	100.00	21.23	0.00	0.00
DDH88001	I	66.57	70.81	10411	1	WA1	froth	0.15x0.00	3.53	25.01	240.00	0.00	25.01	100.00	0.00	0.00	0.00

Two methods for estimating the plant yield are detailed in this section. The methods are as follows:

Method A – Used when washability data is available

Method B – Uses proximate (ash) data and adjacent float sink data to estimate washability based on ash.

Method A

Step 1

The laboratory washability data was first adjusted for the difference between the as-tested size distribution and the predicted as-mined size distribution. Table 13.2 below shows the raw coal size distribution used.

Table 13.2 Raw Coal Size Distribution

Size Fraction	Incremental Weight (percent)	Cumulative Weight (percent)
50 mm x 6 mm	45.2	45.2
6 mm x 0.5 mm	42.0	87.2
0.5 mm x 0.15 mm	7.8	95.0
0.15 mm x 0 mm	5.0	100.0

Step 2

The amount of dilution was then calculated for each ply. A total of 0.1 metre of out-of-seam dilution was added to the core data and 0.1 metre of coal was removed as coal lost during the mining process. If the seam was sampled as multiple plies, dilution was applied at the rock contacts only. The out-of-seam material was assumed to have a specific gravity of 2.3. The total calculated dilution was then distributed across the raw coal in proportion to the predicted raw coal size distribution.

Step 3

The core hole washabilities were then fed into a spreadsheet-based coal process simulation program, as on the solids flowsheet of Figure 13.1, Simplified Solids Flowsheet, it adds the required out-of-seam dilution and calculates the predicted yield and ash at various specific gravities. Plant efficiencies were applied based on partition curves generated for each type of separation process. This was done for each of the three fractions that were modeled using the washability data. The froth flotation yield was calculated for the 0.15 mm x 0 mm fraction using the ash balance method assuming a 10 percent product ash and a tailings ash of 52.73 percent.

Step 4

The three process streams were then blended to determine the separating specific gravity that produced the optimum product yield at the 10 percent ash limit.

Step 5

Since the process flowsheet includes a middlings recovery circuit associated with the coarse coal heavy media bath circuit (plus 6 mm), the middlings materials were crushed, reprocessed in the appropriate fine coal circuit, and mathematically combined with the clean coal products using the ash balance method. This produced the overall yield for the individual core sample.

In the 2005 study, the out-of-seam material was assumed to be a constant 2.30 specific gravity, however, specific gravity varies with ash, and there is no basis to assume the dilution ash% is constant across the resource, and for different seams.

Data points for the yield estimations are shown in Table 11.1. These data points were then used to calculate the estimated yield by seam for coal blocks in the resource model. See Item 19. Product quality was developed for a 10 percent ash (adb) product by Gulf as described in Item 14. Estimated clean coal quality is included as Table 13.3, Projected Clean Coal Quality – 10% Ash Product. Estimated raw coal seam quality and yield is included in Table 13.2.

Recommended future work is as follows:

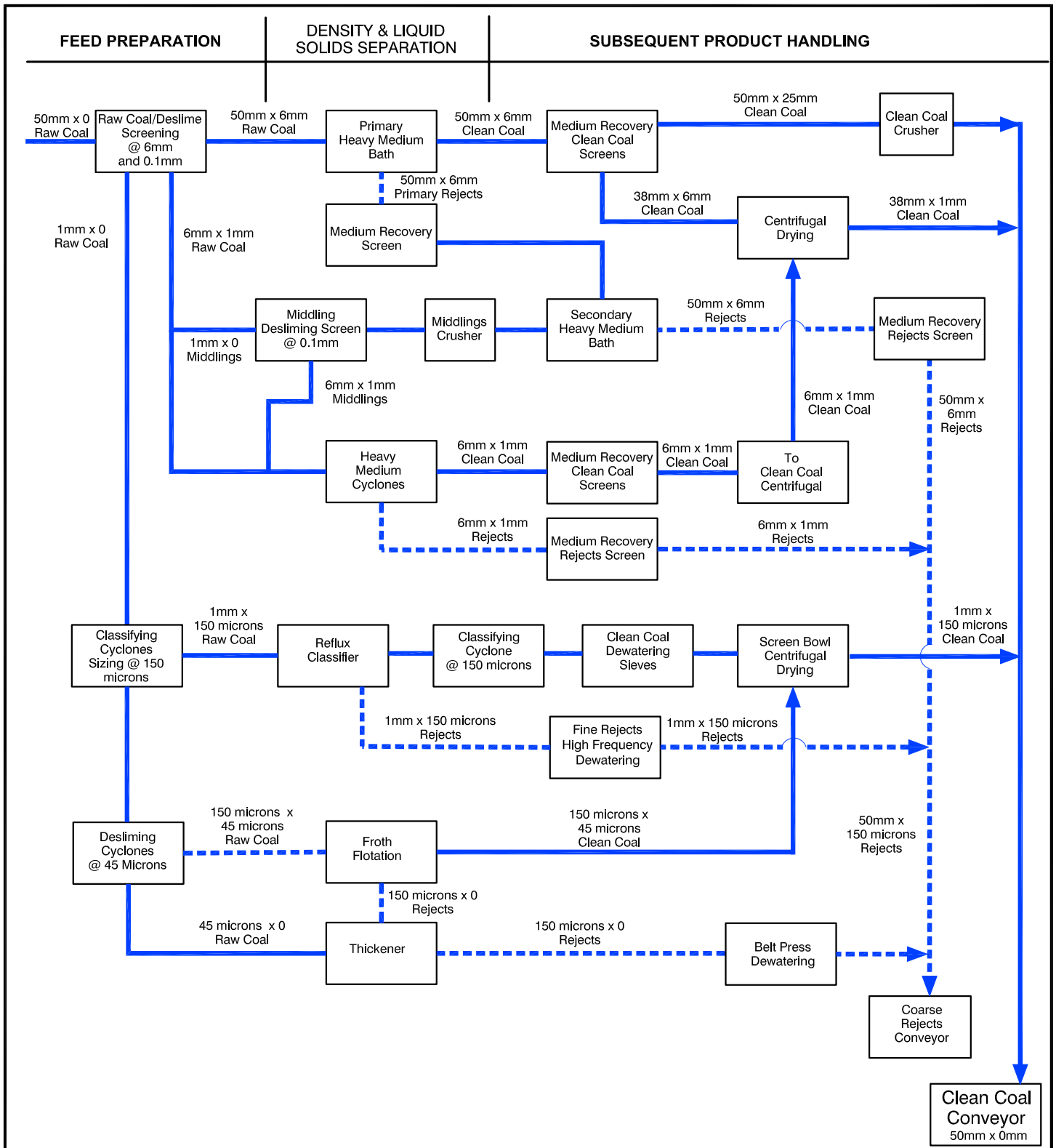
1. Collection of a representative bulk sample(s) for the major seams in proportions consistent with the mining area to confirm the flowsheet parameters and the benefits of the coarse middlings circuit. This would include studies to: a) determine the top size of the feed into the plant; and, b) determine the top and bottom size to the heavy media cyclone circuit.
2. Optimise the design and dewatering of the minus 0.5 mm clean coal products to assure maximum recovery and minimum product moisture with additional flotation and dewatering testing.

Table 13.3 Projected Clean Coal Quality – 10% Ash Product

Clean Coal Specification	Units	Air-dried basis (adb)				
		Mean	Max.	Min.	Mean Dev.	% Mean Dev.
Residual Moisture	wt. %	0.9	2.0	0.4	0.18	19.5
Ash	wt. %	10.0	18.7	7.4	0.79	7.9
Volatile Matter	wt. %	6.5	8.8	4.0	0.48	7.4
Fixed Carbon	wt. %	82.6	85.9	72.9	0.98	1.2
Sulphur	wt. %	0.52	1.74	0.00	0.06	12.1
Gross Calorific Value	GJ/t	31.1	32.6	17.4	0.54	1.7
Gross Calorific Value	kcal/kg	7,423	7,789	4,166	129	1.7
Gross Calorific Value	btu/lb.	13,352	14,011	7,494	232	1.7
HGI		40-45				
Size	mm		50	0		

Ash Chemistry	Units	Air-dried basis (adb)				
		Mean	Max.	Min.	Mean Dev.	% Mean Dev.
SiO ₂	wt. %	52.94	67.5	31.88	5.33	10.1
Al ₂ O ₃	wt. %	23.28	29.73	15.5	2.08	8.9
FE ₂ O ₃	wt. %	4.55	14.39	1.59	1.31	28.9
CaO	wt. %	4.81	13.61	1.04	1.91	39.6
MgO	wt. %	2.47	6.35	0.97	0.55	22.1
TiO ₂	wt. %	1.79	5.5	0.49	0.45	25
Na ₂ O	wt. %	1.95	2.75	0.57	0.26	13.3
K ₂ O	wt. %	1.02	2.09	0.44	0.22	21.4
SO ₃	wt. %	1.48	6.07	0.15	0.58	39.2
P ₂ O ₅	wt. %	2.55	7.64	0.18	1.52	59.9
P in Coal (Calculated from P ₂ O ₅)	wt. %	0.11	0.45	0.01	0.06	59.7
Sulphur (dry basis)	wt. %	0.53	1.76	0	0.06	12
Non-combustible Sulphur	wt. %	0.07	0.35	0	0.03	37.4
Combustible Sulphur	wt. %	0.45	1.67	-0.1	0.07	15.4

Note: From Gulf Canada Resources Coal Quality Handbook



**TECHNICAL REPORT ON THE
2012 UPDATE OF THE ARCTOS
ANTHRACITE PROJECT
MINE FEASIBILITY STUDY
SIMPLIFIED SOLIDS FLOWSHEET**

British Columbia, Canada

**FIGURE 13.1
NOVEMBER 2012**

Method B

Step 1

Locate the target cell (without washability) on the map and identify the closest core hole with both washability data and acceptable core recovery (over 70%). Use that data as a reference.

Step 2

If there is more than one ply for the reference sample, perform a weight-average composite for all of the plies. The mass values of the plies were estimated using the interval thickness and an estimate of the ply specific gravity based upon the equation:

$$\text{Specific Gravity} = 1.3622 + 0.0141 * \text{ash\%} - 0.00004 * \text{ash\%}^2$$

Ash for each ply is calculated from the washability data.

Step 3

Develop a plant yield model for the known washability data. The model is based upon separate processes for the plus 6 mm, 6 mm x 0.5 mm, 0.5 mm x 0.15 mm, and minus 0.15 mm. The process efficiencies used were as follow:

- plus 6 mm 98%
- 6 mm x 0.5 mm 98%
- 0.5 mm x 0.15 mm 94%

Froth flotation yield was estimated using ash balance assuming a 10% product ash, a 52.73% tailings ash, and the reported minus 0.15 mm raw ash from the washability data. The assumptions for product ash% and tailings ash% were taken from the 2005 Marston Report.

Step 4

Estimate the specific gravity of the out-of-seam dilution using the composite value for the > 2.00 sink ash and the equation shown in Step 2 above.

Step 5

Estimate the change in ROM ash% based upon losing 0.1 mm of in-seam coal and gaining 0.1 mm of out-of-seam dilution. It is necessary to calculate the specific gravity of the in-seam

coal, calculate the mass of the in-seam coal less 0.1 mm, and calculate the weight-average ash for the adjusted in-seam coal plus dilution.

Step 6

Input the data for seam thickness and in-seam ash in the process model. The model is set-up to adjust the in-seam recovery for differences in seam thickness and differences for in-seam ash%. For example, 0.1 mm dilution has a lesser impact on ash% for thicker seams than thinner seams. Higher in-seam ash reduces in-seam recovery. The recovery of in-seam coal based on ash differences is calculated using the assumption that differences in in-seam ash reflect differences in in-seam dilution, and the ash and specific gravity of in-seam dilution is the same as out-of-seam dilution.

Step 7

Interpolate theoretical recovery from the washability data using LaGrange interpolation, a method suitable for non-linear data plots. The cut-points used for the interpolation were up to 1.80 for the plus 6 mm size fraction, up to 1.90 for the 6 mm x 0.5 mm size fraction, and 1.80 for the 0.5 mm x 0.15 mm size fraction. The cut-points for the plus 0.5 mm size fractions were taken from previous Marston work on the Project and are the highest possible realistic values for those sizes using dense medium separation.

Step 8

Model plant yield at 10% ash. For the I-Seam, the maximum cut-points were typically utilized due to the low washed-ash content, however for the other seams, the washed-ash for the plus 6 mm was usually set at 11.5%, and the cut-point for the 6 mm x 0.5 mm size fraction was adjusted to produce a combined ash content of 10%. This is done using the Goal Seek tool in Excel.

Item 14 Mineral Resource Estimates

Golder-Marston estimated mineral resources within the conceptual pit designed for the 2012 FS; they were estimated for a conceptual pit using a cut-off clean coal strip ratio of 20 bcm per product tonne. Coal yield estimates were for a 50 mm x 0 mm product with an average ash content of 10 percent, adb.

This Report presents resource and reserve estimates based on the completed 2012 FS. The 2012 FS was based on producing a 10 percent ash product that is standard for PCI markets. The resource estimates are classified as Measured, Indicated and Inferred according to the CIMDS prepared by the CIM Standing Committee on Reserve Definitions and updated by CIM Council, November 22, 2010, which are incorporated by reference in NI 43-101. For coal resource estimates, the CIMDS incorporates by reference the guidelines of GSC 88-21.

Table 14.1 Measured and Indicated Anthracite Resource Estimates

Seam	In Situ Tonnes (kt)		10% Ash (adb) Product Tonnes (kt)	
	Measured	Indicated	Measured	Indicated
GU	2,705	131	1,291	52
PH	6,680	568	3,279	254
H	41,914	3,366	22,295	1,665
HI	3,570	683	689	160
I	43,265	4,585	32,426	2,848
J	5,192	295	1,464	63
K	25,374	3,150	14,977	1,737
KL	15,394	1,606	5,898	588
L	10,391	2,064	4,699	880
M	10,661	1,787	4,847	723
MN	2,888	1,753	951	589
N	3,087	459	1,633	275
O	1,164	0	582	0
P	184	0	100	0
Totals	172,470	20,447	95,130	9,835

Notes: 20:1 bcm/product tonne cutoff strip ratio limit
 The Measured and Indicated Mineral Resources are inclusive of those Mineral Resources modified to produce the Mineral Reserves.

Table 14.1 shows the Measured, and Indicated anthracite resource estimates for the Lost-Fox Area by seam. At a 20:1 bcm/product tonne cut-off strip ratio, the estimated Measured and Indicated in-situ anthracite resources total 192.5 Mt. There are an additional 12.1Mt of inferred in-situ resources.

Item 15 Mineral Reserves

A portion of the resources delineated in the 20:1 conceptual pit were classified as reserves. Estimates of reserves were calculated from the same geologic model used for resource estimation developed by Golder-Marston.

CIMDS defines a mineral reserve as “the economically mineable part of a Measured or Indicated Mineral Resource demonstrated by at least a Preliminary Feasibility Study. This study must include adequate information on mining, processing, metallurgical, economic, and other relevant factors that demonstrate, at the time of reporting, that economic extraction can be justified. A mineral Reserve includes diluting materials and allowances for losses that may occur when the material is mined.”

The anthracite reserves for the Lost-Fox Area are shown below in Table 15.1:

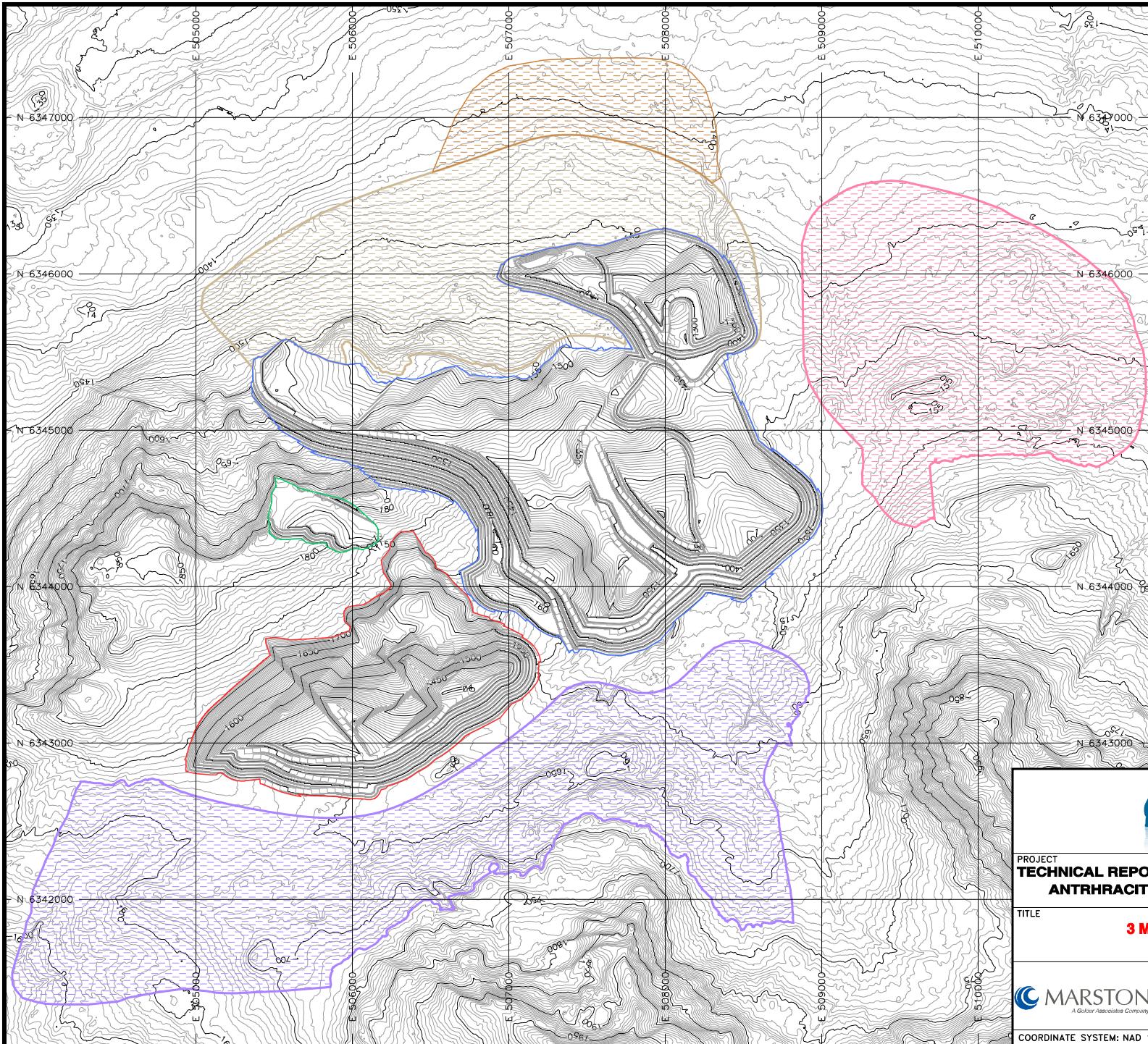
Table 15.1 Lost-Fox Area Anthracite Reserves

ROM Tonnes (Proven & Probable) (Mt)	Yield %	10% Ash (Adb) Clean Coal Reserves (Mt)			Waste (Mbcm)	Clean Coal Strip Ratio (Bcm/tonne)
		Proven	Probable	Total		
124.9	55.4	64.4	4.8	69.2	780.8	11.3

The reserves were developed by targeting the lowest cost coal to sustain a 25-year mining operation at a rate of 3.0 Mtpa. The resulting economic pit limits are shown in Figure 15.1, 3 Mtpa Ultimate Pit Design.

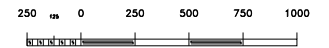
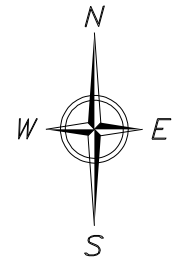
Qualified Person

Edward H. Minnes, P.E. (Missouri), is the Qualified Person responsible for the preparation of this Report. He is a professional mining engineer registered in Missouri, USA. He graduated from Queen’s University at Kingston, Ontario in 1984 with a B.Sc. – Mining Engineering and has 27 years of experience in coal mine geology, geologic modeling and engineering, modeling, reserve estimating, mine design and planning. He was assisted in the preparation of this report by employees of Golder-Marston.



LEGEND

- MAJOR TOPOGRAPHY CONTOUR (50m)
- MINOR TOPOGRAPHY CONTOUR (5m)
- ULTIMATE PIT EXTENTS (731 HA)
- ▭ SOUTH ROCK STORAGE PILE (538 ha)
- ▭ NORTHWEST ROCK STORAGE PILE (290 ha)
- ▭ NORTHEAST ROCK STORAGE PILE (336 ha)
- ▭ COAL REJECTS STORAGE PILE (102 ha)
- ▭ GROWTH MEDIA STORAGE PILE (31 HA)



PROJECT
TECHNICAL REPORT ON THE 2012 UPDATE OF THE ARCTOS ANTHRACITE PROJECT MINE FEASIBILITY STUDY

TITLE
3 MTPA ULTIMATE PIT DESIGN

BRITISH COLUMBIA, CANADA



PROJECT No.	1213540007
DESIGN	LH
GIS	WJS
CHECK	TM
REVIEW	RM

DATE	07-Nov-12
SCALE	AS DRAWN

Figure 15.1

COORDINATE SYSTEM: NAD 1983 UTM ZONE 9 NORTH METERS

Page 15-3 contains coal quality data and remains confidential under the terms of the *Coal Act Regulation*, Section 2(1). It has been removed from the public version.

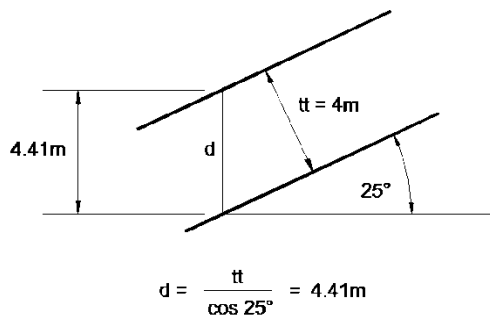
http://www.bclaws.ca/EPLibraries/bclaws_new/document/ID/free/10_251_2004#section2

drawn onto the image in a photo editor were then transformed to UTM coordinates by digitally drafting onto the draped image.

The Lost-Fox Area anthracite resource model was developed using a combination of gridding, solids modeling and block modeling controlled by topography and the interpreted geological structures from aerial photographs and drill hole and trench data. The model was separated into nine areas of Moderate geology type, and six areas of Complex geology type. In the Lost-Fox Area, the coal deposits are either Moderate or Complex geology types as the terms are defined in GSC 88-21, see Item 10 of this Report.

In the Moderate areas, drill hole and trench data were used to construct top of seam elevation grids. Seam dip at each grid node was derived from the top of seam grids; for each seam, true thickness grids were interpolated from Gulf's drill hole data using inverse distance squared weighting. To determine the bottom of each coal seam, apparent seam thickness was determined at each grid node location as follows.

Vertical displacement from seam roof = seam true thickness (tt) / cosine (dip of coal bed)
as shown on the following diagram.



Removable partings of 0.6 metre or greater were excluded from the seam true thickness prior to calculating the seam bottom. The resulting seam tops and bottoms were pieced together to form solids. A solid herein means a closed triangulation for modeling a solid object. All solids carry a seam designation for identification.

In Complex areas, coal structure was further controlled by creating a series of closed polygons on sections spaced 50 metres apart. Additional sections were added where necessary to control complex structures. The use of these polygons ensured that the model closely followed geological interpretation. The sectional polygons were then extruded between sections to create solids of the coal seams in Complex areas.

Seam structure modeling was an iterative process to ensure that the solid models conformed to the geological structures interpreted from the aerial photography, seam correlations and drill hole seam elevation and thickness data. Cross sections were created at a spacing of 100 metres through the model and at the same locations to allow a comparison with Gulf sections. Significant changes from the Gulf sections in seam correlation or geological structures were

thoroughly reviewed and revised as necessary to conform to Golder-Marston's overall structural interpretation for the Lost-Fox Area.

A block model was created using the solid models to code seam identification into the blocks. A variable size block model was utilized. The model was created with a parent block size (maximum block size) of 25 m x 25 m x 10 m and a smallest sub-block size of 1 m x 1 m x 1 m. The solids and the topographic surface define the creation of the blocks in the model. Sub-blocks were created along the boundaries as required to honor the contact and the resolution of 1 metre. The blocks were coded with the seam identification assigned to the solid as they were created. A sub-blocked model defines resolution by the smallest block, and accordingly blocks are coded as completely coal or completely waste.

In-situ coal seam density was estimated based on apparent specific gravity measurements included in Gulf's analytical data. Because apparent specific gravity is used, the resource estimates are designated as air-dried, which reflects the sample condition in the standard apparent specific gravity measurement. After mining and processing, the actual density of mined and product coal will differ from apparent specific gravity depending on the coal's actual pore volume and surface moisture. Standard industry practice uses apparent specific gravity measurements as a starting point for in-situ coal resource estimates and applies any adjustments for density changes due to mining and processing to reserve estimates.

Coal seam density is a function of ash content because of the influence of in-seam rock partings on the average density of the seam. Because apparent specific gravity measurements were available for about half of the data points, Golder-Marston developed a function of apparent specific gravity versus air-dried ash content for all representative sample intervals. Based on that function, the following expression was developed to estimate in-situ coal seam density for the Lost-Fox Area.

$$\text{Estimated in situ coal seam density} = \text{Ash Content (wt. \%, adb)} / 86.313 + 1.251$$

Based on the expression above, in-situ coal seam density was estimated for each coal seam data point with a representative ash content measurement. For each block in the Lost-Fox block model, a three-dimensional search was used to find density data that matched the seam coded into the block. An inverse distance squared weighting was applied to the data points to interpolate the estimated in situ coal seam density for each block. The resulting interpolated densities were used to estimate in-situ coal tonnes as the product of estimated density and calculated block volume.

The completed block model was used to estimate in-pit resources. As described above, areas of Complex and Moderate geology types were identified in the geologic model, and Measured, Indicated and Inferred resources were estimated for each geology type as follows:

Moderate Geology Type Areas

- Seam Dip Bedding inclinations generally less than 30 degrees
- Structure Characterized by broad open folds greater than 1.5 km; faulting is uncommon with displacements generally less than 10 m.
- All Resource Estimates Minimum seam thickness – 0.6 m
- Measured Resources: Data point distance – Zero to 450 m
- Indicated Resources: Data point distance – 450 to 900 m
- Inferred Resources: Data point distance – 900 to 2,400 m

Complex Geology Type Areas

- Seam Dip Bedding inclinations are steeply dipping or overturned
- Structure Faults are present with large displacements
- All Resource Estimates Minimum seam thickness – 0.6 m
- Measured Resources: Minimum seam thickness – 0.6 m
Section spacing of 150 m
Maximum data point spacing along section 200 m
Maximum mean spacing along section 100 m
- Indicated Resources: Section spacing of 300 m
Maximum data point spacing along section 400 m
Maximum mean spacing along section 200 m
- Inferred Resources: Within the area modeled with the solids methodology, data and understanding, all areas not Measured or Indicated were classified as Inferred resources.

The Complex designation was based on an examination of each seam in section and on plan. Areas were designated as Complex if faulting caused multiple occurrences of the seam vertically, the area was tightly folded, was overturned or had significant areas of coal dipping greater than 30 degrees.

Conceptual pit shells used for resource estimates were developed using an average pit wall angle of 45 degrees and Lerchs-Grossmann pit design tools in the Vulcan software. This method of targeting resources delineates coal meeting the pit slope and ratio constraints but does not account for access. Application of practical pit designs will result in increased stripping and/or reduced resources.

Reserve estimates were based on detailed pit designs with a maximum overall slope angle of 45 degrees. These designs incorporated access and were designed to allow the logical mining of the deposit from low to high strip ratio.

ROM tonnages were calculated using a mining loss of 5 centimetres at the coal/rock contact and dilution of 5 centimetres at the coal/rock contact multiplied by the estimated dilution specific

gravity of 2.3 grams/cc. The resulting tonnage was adjusted by the addition of moisture from 3 percent in situ to 6 percent ROM.

Product tonnes were calculated as the ROM tonnage times yield with a 2 percent moisture adjustment for an 8 percent moisture product.

Discussion on Material Effects of Issues on Mineral Resource and Reserve Estimates

A basic assumption of this Report is that the estimated in-pit anthracite resources for the Lost-Fox Area have a reasonable prospect for development under existing circumstances and assuming a reasonable outlook for all issues that may materially affect the mineral resource estimates.

Failure to achieve reasonable outcomes in the following areas could result in significant changes to reserves and or resources.

- Arctos must obtain the necessary permits to develop the Lost-Fox Area. The permitting process will require extensive updating of fieldwork, applications and approvals process time.
- The reserves are based on the future projected price of US\$ 175 per tonne.
- The 2012 FS has been completed. Development of the property is dependent on financing.
- Significant upgrades to existing access or rail roadbeds are required for anthracite transportation, and other significant infrastructure will be necessary to produce anthracite from the Arctos Anthracite Project. Financing of these improvements will likely depend on government and other approvals and the outcome of the feasibility study.

Item 16 Mining Methods

Mining Operations

The mine plan and production schedule is based on an ultimate pit shell, which was derived using Lerchs-Grossman optimization and a price of \$150/tonne for PCI coal. The design pit slope highwall of 45° was used to ensure all material was properly accounted for outward from the coal block at depth and is consistent with and based on a geotechnical analysis of the final pit slopes. The footwall followed the floor of the lowest coal seamed mined with dips varying from approximately 15° to 45°.

Rock storage piles were developed to minimize haulage and associated costs as well as to minimize their weight per unit area for stability purposes. The overall angle of the external rock storage piles is 14° (4:1) with 54-meter benches provided at 20-meter intervals.

The ultimate pit has been schedule to produce up to 3Mtpa of clean coal product. The operation is planned to use surface open-pit mining methods using shovels, truck, and ancillary equipment. The mine uses standard open-pit mining equipment that is diesel powered. The equipment includes hydraulic shovels and backhoes for mine rock removal and coal mining, rotary drillings for drilling and blasting, rear-dump off-highway mine trucks and standard auxiliary equipment such as dozers, graders, fuel and lube trucks, maintenance trucks and other items.

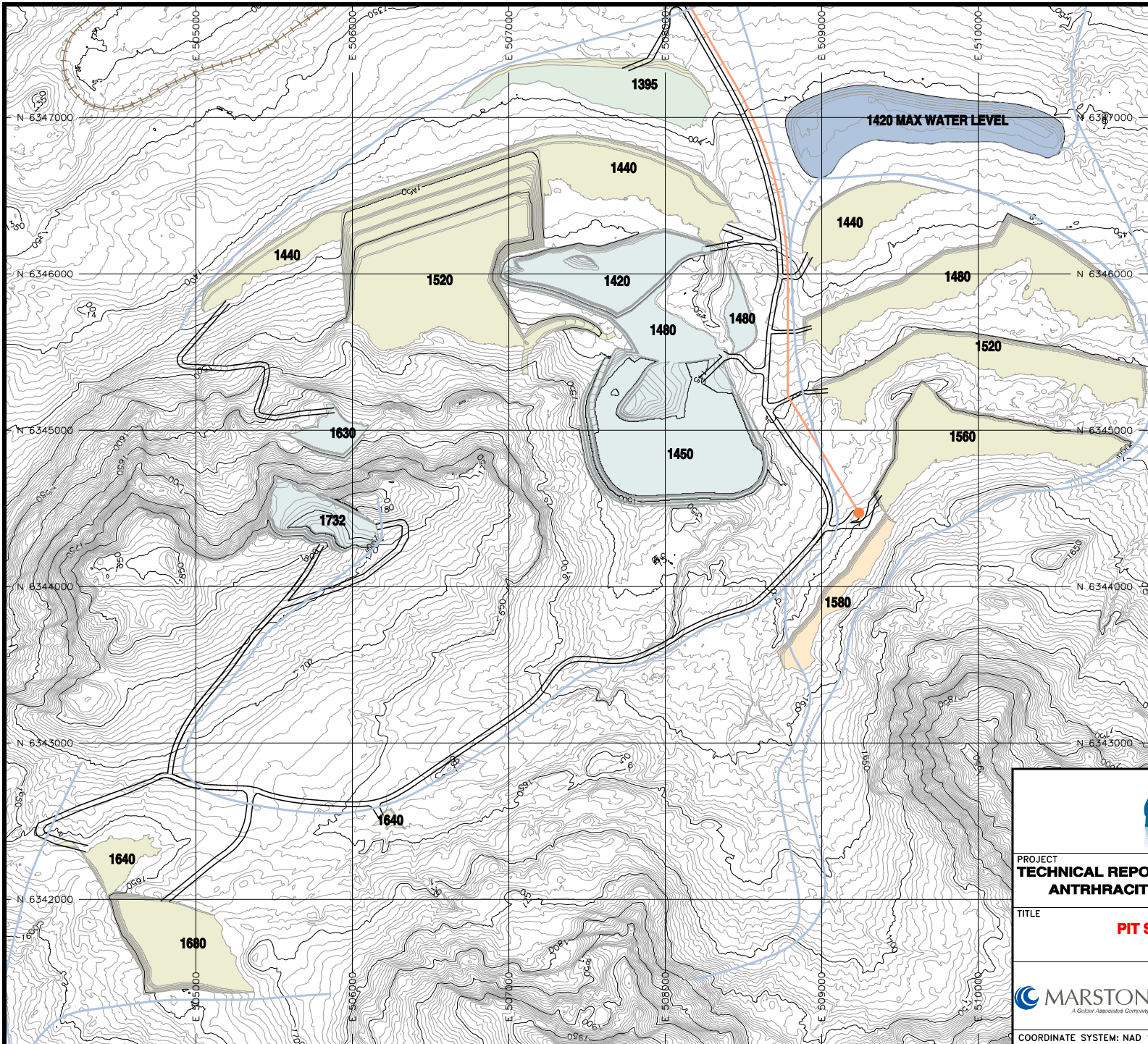
A summary of the proposed production schedule is shown in Table 16.1, Arctos Anthracite Production Forecast. The production period spans a 25 year mine life with construction operations beginning in Year -1 and mining operations continuing until the reserve is depleted in Year 25. The Arctos Anthracite Project is scheduled to produce approximately 69.2M clean coal tonnes over the mine of life. The average clean coal-stripping ratio is 11.3 bcm of mine rock per clean coal product tonne.

Table 16.1 Arctos Anthracite Production Forecast

<i>Mine Year</i>	Total Stripping Volume (000s bcm)	ROM Coal Production (000s tonnes)	<i>ROM Stripping Ratio (bcm/ ROM tonne)</i>	Product Coal Tonnage (000s tonnes)	<i>Product Stripping Ratio (bcm/ product tonne)</i>
Year -1	3,026	55	55.1	0	0.0
Year 1	9,376	708	13.2	0	0.0
Year 2	27,329	3,895	7.0	2,780	9.8
Year 3	29,525	4,803	6.1	3,004	9.8
Year 4	33,744	4,732	7.1	3,009	11.2
Year 5	31,024	4,563	6.8	3,012	10.3
Year 6	32,806	5,096	6.4	3,008	10.9
Year 7	32,491	4,929	6.6	3,020	10.8
Year 8	34,832	5,714	6.1	3,004	11.6
Year 9	33,480	5,909	5.7	3,027	11.1
Year 10	34,692	5,916	5.9	2,928	11.8
Year 11	35,178	5,917	5.9	2,982	11.8
Year 12	35,015	5,397	6.5	3,010	11.6
Year 13	34,981	5,206	6.7	3,003	11.6
Year 14	34,577	5,779	6.0	3,007	11.5
Year 15	35,005	5,148	6.8	3,011	11.6
Year 16	35,052	5,334	6.6	3,000	11.7
Year 17	35,428	5,705	6.2	2,942	12.0
Year 18	35,096	5,832	6.0	2,875	12.2
Year 19	35,018	5,725	6.1	3,048	11.5
Year 20	35,175	5,562	6.3	2,959	11.9
Year 21	34,171	5,580	6.1	3,006	11.4
Year 22	32,246	5,898	5.5	3,065	10.5
Year 23	30,597	5,470	5.6	3,029	10.1
Year 24	27,012	5,191	5.2	3,008	9.0
Year 25	3,555	984	3.6	505	7.0
TOTAL	780,428	125,049	6.2	69,242	11.3

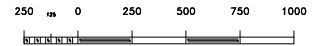
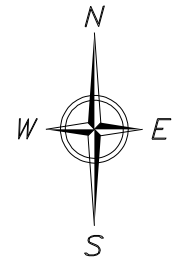
A life of mine production plan is scheduled with the goal of developing the ultimate pit logically from lower cost areas to higher cost areas in order to maximize NPV. In addition to minimizing upfront mining costs, it is desirable to maximize the backfilling of mined-out phases to minimize the impact of ex-pit rock storage piles on the surrounding area. Backfilling also reduces haulage costs and results in rock storage piles with lower vertical profiles and improved hauling efficiency. The proposed initial mine development is shown in Figure 16.1, Pit Status Map End of Year 3. The proposed end of mine life status map is shown in Item 5, Figure 5.4, Pit Status Map End of Year 25.

There are multiple dipping coal and overturned coal seams, which will require proper sequencing of various operations crucial to the success of the mine plan. Mining equipment has been selected to carry out unit operations that are designed to minimize coal loss and dilution. Coal wedge removal, contact cleaning and excavation are to be performed with hydraulic backhoes operating in modes that are designed to minimize blasting or dozing of the coal seams. Coal recovery methods will vary based on seam dips.



LEGEND

- MAJOR TOPOGRAPHY CONTOUR (50m)
- MINOR TOPOGRAPHY CONTOUR (5m)
- PIT
- ACTIVE ROCK STORAGE PILE
- RECLAIMED ROCK STORAGE PILE
- COAL REJECTS STORAGE PILE
- GROWTH MEDIA STORAGE PILE
- HAULROAD
- DRAINAGE DITCH
- SEDIMENTATION POND
- PROPOSED RAILWAY
- ROM COAL CONVEYOR
- ROM COAL TRUCK DUMP



PROJECT
TECHNICAL REPORT ON THE 2012 UPDATE OF THE ARCTOS ANTHRACITE PROJECT MINE FEASIBILITY STUDY

TITLE
PIT STATUS MAP END OF YEAR 3

BRITISH COLUMBIA, CANADA



PROJECT No. 1213540007	DATE 07-Nov-12
DESIGN LH	SCALE AS DRAWN
GIS WJS	
CHECK TM	
REVIEW RM	

FIGURE 16.1

COORDINATE SYSTEM: NAD 1983 UTM ZONE 9 NORTH METERS

Item 17 Recovery Methods

Coal recovery varies by seam, and in general are thickness based; thinner seams experience lower recoveries via losses at the roof and floor. The proposed production plan mines approximately 125 million ROM tonnes of the total reserve at an average ration of 11.3:1 bcm mine rock per tonne of clean coal. The ROM coal reports to the coal preparation plant where it is crushed and processed to reduce the ash content to 10% adb. The preparation plant uses a heavy media bath for coarse coal (50mm x 0), froth flotation for ultra-fine (-150 micron) material as well as a middlings regrind circuit. The processing method is standard and typical for the coal industry. Based on the washability analysis the projected average is estimated at 55.4%. The processing plant flowsheet is shown in Item 13, Figure 13.1, Simplified Solids Flowsheet.

The preparation plant utilizes a gravity based separation process that removes rock and non-carbonaceous material from ROM coal. The preparation plant is designed to use standard coal washing technology to produce a clean metallurgical coal product with an average of 10% ash on an air-dried basis and 8% total moisture.

Target specifications for the final product are shown below in Table 17.1:

Table 17.1 Target ROM Specifications

<i>Mine Year</i>	<i>Clean Coal</i>	<i>Rom_Coal</i>	<i>Yield %</i>	<i>SG</i>	<i>Ash %</i>	<i>Sulfur %</i>	<i>Calorific Value (kcal/kg)</i>	<i>Volatile Matter %</i>	<i>Fixed Carbon %</i>
1	441,577	763,040	57.9%	1.41	26.8	0.50	20.0	7.1	52.8
2	2,338,302	3,895,374	60.0%	1.57	28.0	0.45	23.6	7.3	62.5
3	3,003,712	4,803,173	62.5%	1.55	31.1	0.49	20.7	7.4	55.0
4	3,009,160	4,731,806	63.6%	1.49	28.9	0.53	20.9	7.3	55.4
5	3,013,007	4,564,499	66.0%	1.53	28.4	0.57	22.5	7.3	59.2
6	3,008,122	5,096,853	59.0%	1.59	31.7	0.55	21.2	7.2	57.6
7	3,020,164	4,929,459	61.3%	1.44	27.3	0.46	20.7	6.8	54.9
8	3,002,690	5,712,084	52.6%	1.66	35.3	0.47	20.9	7.4	55.9
9	3,031,035	5,917,629	51.2%	1.53	29.2	0.51	21.8	7.1	58.0
10	2,931,461	5,922,897	49.5%	1.64	35.0	0.68	20.5	7.4	54.9
11	2,981,424	5,915,370	50.4%	1.66	36.7	0.84	20.1	7.3	53.8
12	3,009,744	5,397,474	55.8%	1.65	35.0	0.60	20.7	7.6	55.5
13	3,003,027	5,206,462	57.7%	1.56	29.9	0.61	22.1	7.3	59.1
14	3,007,156	5,778,959	52.0%	1.62	32.9	0.65	21.5	7.7	57.6
15	3,011,114	5,148,076	58.5%	1.61	30.9	0.53	22.4	7.7	60.5
16	3,000,461	5,333,941	56.3%	1.63	33.2	0.59	21.6	7.5	58.4
17	2,942,293	5,705,019	51.6%	1.61	34.8	0.69	19.7	7.5	52.9
18	2,875,442	5,832,168	49.3%	1.65	36.0	0.82	19.9	7.4	54.2
19	3,047,786	5,724,590	53.2%	1.67	36.3	0.89	20.7	7.8	54.6
20	2,958,706	5,562,183	53.2%	1.65	34.5	0.59	21.3	7.8	56.4
21	3,005,693	5,580,308	53.9%	1.65	34.8	0.53	20.9	7.9	56.1
22	3,065,371	5,898,177	52.0%	1.66	35.9	0.49	20.8	7.9	54.5
23	3,029,373	5,470,045	55.4%	1.63	33.9	0.45	21.4	7.5	56.5
24	3,007,652	5,190,658	57.9%	1.62	34.8	0.40	20.2	7.1	54.1
25	504,964	983,998	51.3%	1.69	39.1	0.41	18.6	7.4	51.4
TOTAL	69,249,439	125,064,240	55.4%	1.60	32.8	0.57	21.0	7.4	56.1

Coarse and fine rejects from the coal preparation plant are transported to a designated rejects storage pile where they will be capped. Average projected clean coal yield from ROM production is estimated to be 55.4%. The processing method is standard and typical for beneficiating coal from non-coal materials. See Item 13 for additional information.

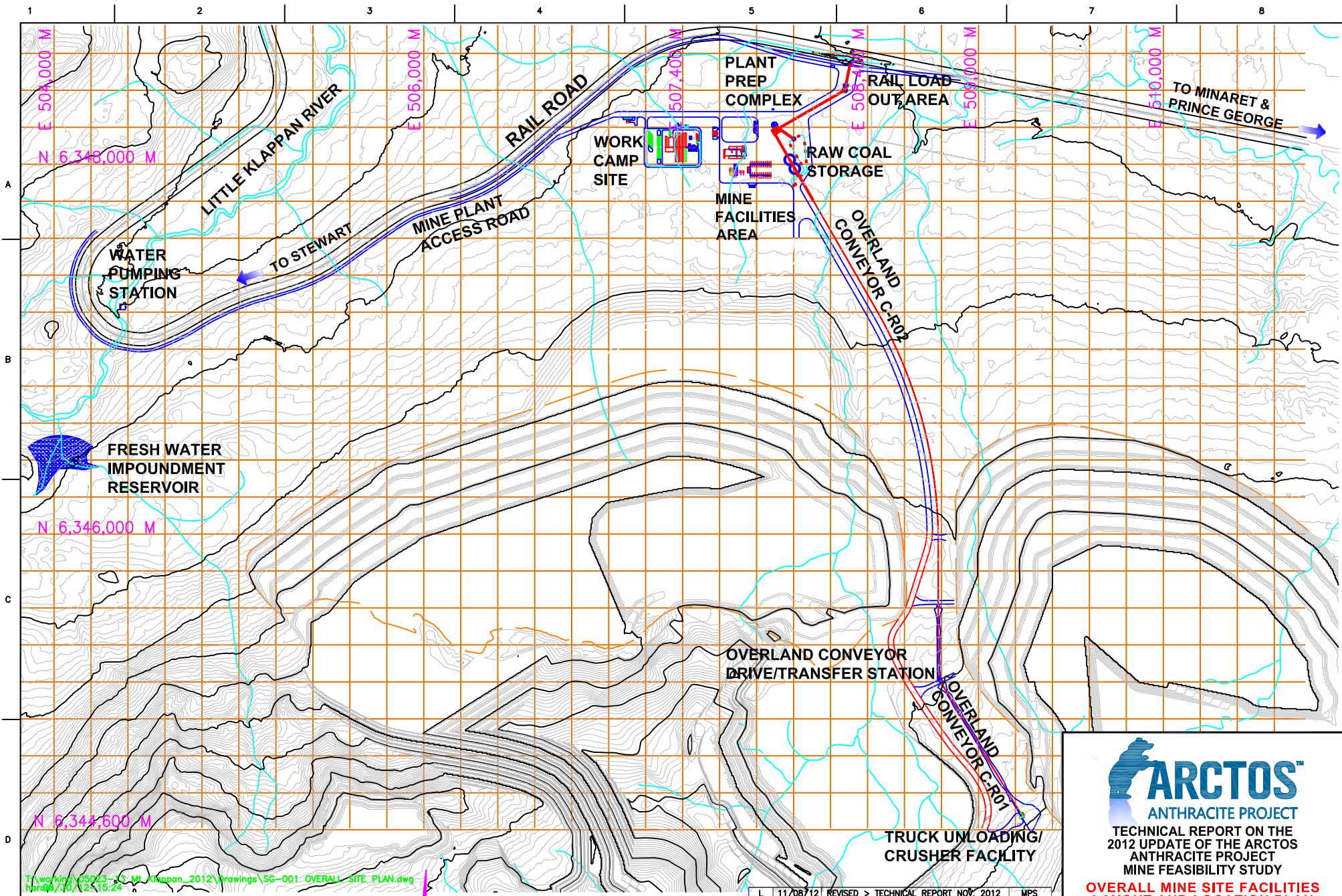
Item 18 Project Infrastructure

The Arctos Anthracite project is accessible by road and rail. Arctos will develop the infrastructure necessary to support mine development and operations, and the transportation of anthracite coal to world markets.

The road access route to the mine for over-the-road vehicles carrying workers, materials and supplies will be the Ealue Lake Road and the Dease Lake Extension railroad grade on the northern side of the project location, as shown in Item 5, Figure 5.1, Proposed Mine Access.

The access route by rail to the property location will undergo a series of upgrades to existing track as well as the construction of track in some areas. The rail right of way extends from the end of the existing rail at Minaret, through the northern end of the Property and on towards the town of Dease Lake. The sub-grade for this right-of-way has been completed, except for a 24 km section north of the Kluatantan River and a similar distance north of the Stikine River. Clean coal will be transported by rail 1,390 km from the mine site to the Ridley Coal Terminal at Prince Rupert where it will be able to be shipped to international markets. The details for the required track infrastructure is shown in Item 5, Figure 5.3, Rail Transportation Route.

The proposed on-site mine infrastructure includes a work camp complex, coal processing plant, train loadout, administration, and maintenance facilities. The processing plant has a capacity of 3.0 Mtpa clean coal. Clean coal will be loaded onto trains by a rail loadout facility capable of loading a 12,500-tonne unit train in less than six hours. Details of major on-site mine facilities infrastructure can be seen in Item 5, Figure 5.2, Mine Facilities Area Layout and Location Plan and Figure 18.1, Overall Mine Site Facilities Layout and Location Plan.



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PLAN - OVERALL MINE SITE FACILITIES

REV.	DATE	DESCRIPTION	APPROVED
L	11/08/12	REVISED > TECHNICAL REPORT NOV. 2012	MPS
K	08/30/12	REVISED > MINE FEASIBILITY STUDY 2012	MPS
J	07/24/12	MOVED FACILITIES CLOSER TO RAIL	MPS
I	10/20/10	REVISED - RESTORED OLC/RAIL LOADOUT	MPS
H	06/03/08	DELETED - OLC/RAIL LOADOUT	MPS



**TECHNICAL REPORT ON THE
 2012 UPDATE OF THE ARCTOS
 ANTHRACITE PROJECT
 MINE FEASIBILITY STUDY**
**OVERALL MINE SITE FACILITIES
 LAYOUT AND LOCATION PLAN**
 British Columbia, Canada
FIGURE 18.1
 OCTOBER 2012

Item 19 Market Studies and Contracts

Markets for the Arctos Anthracite Coal

Arctos plans to produce up to 3 Mtpa of 10% ash on an air-dried basis (adb) anthracite product for sale primarily to steelmakers in international markets. Anthracite is used in blast furnaces for PCI and as a direct charge, for sintering iron ore, and as blend coal in making metallurgical coke. Currently, Arctos plans to develop rail from the Project to Ridley Terminal at Prince Rupert, British Columbia. See Item 5, Figure 5.3, Rail Transportation Route. Ridley is a world-class port and coal terminal.

Arctos' partner POSCAN is also potentially interested in receiving a 15% sinter ash product equivalent to 20% of the annual production. Golder-Marston retained Advance Coal Technology to determine the incremental plant recovery at 15% ash. Based on the analysis Golder-Marston believes that the production of the 15% ash product could be achieved.

Contracts

Currently, there are no contracts for the proposed Lost-Fox production. In export markets, metallurgical coal is typically sold under annual contracts after commercial production has commenced.

Item 20 Environmental Studies, Permitting and Social or Community Impact

Environmental Considerations

Arctos has provided all information on environmental and permitting related to the Project. The environmental studies by Arctos to date have been primarily desktop studies and environmental baseline studies in support of requisite environmental assessment approvals and permits from the British Columbia (BC) and Federal Governments.

Progressive rehabilitation will be performed during the normal course of mining operations. These activities include the final grading of rock storage piles, replacement of stockpiled topsoil, and re-vegetation. Mine closure reclamation includes the removal of infrastructure, re-grading and re-vegetation of disturbed lands.

Where present, topsoil will be removed from areas to be affected by mining, stockpiled and used for progressive and final reclamation. Overburden material will be removed during mining operations and will be placed in out-of-pit (ex-pit) rock storage piles and, where scheduling permits, backfilled into the mined out pits. The outside faces of the rock storage piles will be graded to 14 degrees (4:1) to support re-vegetation and meet BC regulations. The areas affected by the rock storage piles will be cleared, and any topsoil will be stockpiled. Sediment controls for the disturbed area will also be established.

Coal preparation plant rejects will consist of coarse coal reject material and filtered fine coal reject material that will be commingled during the disposal operation. Coal rejects will be transported from the preparation plant by conveyor belt and haulage trucks, and placed in a containment area. In addition to the containment area, coal rejects may also be disposed of within the rock storage piles. Rock storage piles will be located above drainage levels and any water table levels. Rejects will not be placed at the perimeter of the rock storage piles to maintain adequate cover over the rejects and to minimize the potential for slope stability problems.

Arctos will utilize the hydrological, hydrogeological and geochemical data to systematically identify potentially acid generating material that is excavated from the mine. The mine rock will also be characterized for potential metal leaching issues (for instance, selenium) that may need to be addressed. A comprehensive management plan will be developed that will address potential acid rock drainage and metal leaching issues in order to implement an effective strategy for avoidance, reduction or mitigation during the mine development, operations and closure. Comprehensive monitoring plans will also be established that will adhere to the *Guidelines for Metal Leaching and Acid Rock Drainage at Minesites in British Columbia* (BC MEM, 1998).

Runoff and snowmelt from areas affected by the mining operation will be directed to sediment ponds prior to discharging to the receiving stream. Collector ditches will be constructed around mining areas, rock and soil storage piles, facility areas and roads to direct the water to the sediment ponds. Sediment ponds are designed to treat the runoff from outlier magnitudes of precipitation events. The criteria used in the design ensures the ability to treat a 10-year, 24-hour

rainfall event and to safely pass a 200-year rainfall event. Areas affected by the mining operation will require reclamation either when they are no longer needed to facilitate the mining operation or at final mine closure. Some areas of the rock storage piles will be completed and progressively rehabilitated prior to mine closure. All facility areas will be reclaimed at mine closure.

The open pit mining operation at this site will result in large open pits remaining at the time of mine closure. Areas that lie below the surrounding drainage elevations will be allowed to fill with water to create water impoundments.

The highwalls and endwalls of the open pits will be constructed during the mining operation and will consist of 10 metre benches, double or triple-benched, with catchments at 20 or 30-meter intervals. When these benches are in competent rock, the rock benches will remain as part of the final wall configuration. Highwall and endwall slopes that are not in competent rock will be graded to 2:1 slopes, covered with 30 centimeters of growth media and revegetated.

Item 21 Capital and Operating Costs

Mine Capital and Operating Cost Estimates

Golder-Marston prepared capital cost estimates for the mine equipment based on budget quotations from mining equipment suppliers. Golder-Marston compiled all other capital cost estimates for infrastructure and facilities from independent engineering firm, CDG Engineers Inc. Estimated capital expenditures are summarized in Table 21.1, Capital Expenditure Summary.

Table 21.1 Capital Expenditure Summary(\$1,000's)

	Initial	Sustaining	Total
Mine	\$ 192,044	\$ 589,186	\$ 781,230
Off site Transportation	\$ 330,410	\$ -	\$ 330,410
On site Infrastructure ⁽¹⁾	\$ 259,598	\$ 3,804	\$ 263,402
Other ⁽²⁾	\$ 6,559	\$ 39,980	\$ 46,539
Total	\$ 788,611	\$ 632,970	\$ 1,421,581

Notes:

1. Water Management
2. Mine Facility General Maintenance & Prep Plant Sustaining Capital

Production costs and capital requirements were estimated assuming all mining, coal processing and coal handling functions are directly performed by Arctos using company-owned equipment and company employees. Ex-mine coal transportation costs would be paid by Arctos using Canadian National (CN) Rail services. For the purpose of cost estimates, the camp operation, employee transport, and vessel loading services were assumed to be provided by contractors or other third parties. The operational costs reflect updated 2012 Feasibility Study budgetary prices. Ridley Terminal does not require capital investment to begin shipping coal.

Table 21.2 Operating Cost Summary

COST COMPONENT	Year -1	Year 1	Year 2	Year 3	Year 4	Year 5	Avg. (6-10)	Avg. (11-15)	Avg. (16-19)	Avg. (20-25)	TOTAL
PRODUCTION STATISTICS											
Growth Media Volume (000s bcm)	800	250	250	750	250	800	350	440	313	250	9,800
Overburden & Interburden Volume (000s bcm)	2,226	9,126	27,079	28,775	33,494	30,224	33,310	34,511	34,836	26,876	770,628
Total Stripping Volume (000s bcm)	3,026	9,376	27,329	29,525	33,744	31,024	33,660	34,951	35,148	27,126	780,428
ROM Coal Production (000s tonnes)	55	708	3,895	4,803	4,732	4,563	5,513	5,489	5,649	4,781	125,049
ROM Stripping Ratio (bcm / ROM tonne)	55.1	13.2	7.0	6.1	7.1	6.8	6.1	6.4	6.2	5.4	6.2
Product Coal Tonnage (000s tonnes)	0	0	2,780	3,004	3,009	3,012	2,997	3,003	2,966	2,595	69,242
Product Stripping Ratio (bcm / product ton)	0.0	0.0	9.8	9.8	11.2	10.3	11.2	11.6	11.9	10.0	11.3
Productivity (ROM tonnes/total man-hour)	0.2	2.0	4.8	5.3	5.0	4.9	5.1	4.7	4.9	4.7	4.8
DIRECT MINING COSTS (\$000s)											
Drilling & Blasting	\$2,324	\$7,087	\$22,222	\$24,343	\$27,747	\$24,557	\$27,428	\$28,380	\$29,735	\$23,971	\$650,085
Cost Per ROM tonne (\$/tonne)	\$42.31	\$10.01	\$5.70	\$5.07	\$5.86	\$5.38	\$5.01	\$5.18	\$5.26	\$4.74	\$5.20
Cost Per Total bcm Stripped (\$/bcm)	\$0.768	\$0.756	\$0.813	\$0.825	\$0.822	\$0.792	\$0.816	\$0.812	\$0.846	\$0.875	\$0.833
Stripping & Growth Media Removal	\$10,112	\$24,373	\$60,782	\$73,529	\$77,413	\$77,720	\$95,552	\$105,845	\$98,128	\$79,114	\$2,198,109
Cost Per ROM tonne (\$/tonne)	\$184.10	\$34.42	\$15.60	\$15.31	\$16.36	\$17.03	\$17.49	\$19.33	\$17.36	\$16.08	\$17.58
Cost Per Total bcm Stripped (\$/bcm)	\$3.342	\$2.600	\$2.224	\$2.490	\$2.294	\$2.505	\$2.846	\$3.028	\$2.793	\$3.023	\$2.817
Coal Loading & Haulage	\$215	\$2,073	\$9,328	\$11,412	\$12,567	\$12,876	\$15,423	\$19,013	\$18,453	\$14,609	\$382,115
Cost Per ROM tonne (\$/tonne)	\$3.92	\$2.93	\$2.39	\$2.38	\$2.66	\$2.82	\$2.79	\$3.46	\$3.27	\$3.15	\$3.06
Maintenance	\$1,669	\$3,995	\$10,659	\$12,295	\$13,162	\$12,798	\$15,080	\$16,429	\$16,061	\$12,866	\$353,561
Cost Per ROM tonne (\$/tonne)	\$30.38	\$5.64	\$2.74	\$2.56	\$2.78	\$2.80	\$2.75	\$3.00	\$2.84	\$2.66	\$2.83
Operations Support & Interim Reclamation	\$4,083	\$7,065	\$19,625	\$20,534	\$21,283	\$20,788	\$24,625	\$25,383	\$26,643	\$22,755	\$586,517
Cost Per ROM tonne (\$/tonne)	\$74.33	\$9.98	\$5.04	\$4.27	\$4.50	\$4.56	\$4.48	\$4.63	\$4.72	\$5.20	\$4.69
Coal Processing Costs	\$0	\$0	\$28,088	\$28,540	\$28,378	\$27,996	\$30,147	\$30,094	\$30,455	\$26,282	\$693,846
Cost Per ROM tonne (\$/tonne)	\$0.00	\$0.00	\$7.21	\$5.94	\$6.00	\$6.14	\$5.49	\$5.49	\$5.39	\$5.67	\$5.55
Supervision & Administration	\$7,271	\$7,304	\$8,181	\$8,226	\$8,223	\$8,214	\$8,262	\$8,261	\$8,269	\$8,106	\$211,742
Cost Per ROM tonne (\$/tonne)	\$132.38	\$10.31	\$2.10	\$1.71	\$1.74	\$1.80	\$1.51	\$1.51	\$1.47	\$2.48	\$1.69
TOTAL DIRECT MINING COSTS (\$000s)	\$25,798	\$51,896	\$158,886	\$178,879	\$188,773	\$184,949	\$216,517	\$233,404	\$227,745	\$187,702	\$5,075,975
Cost Per ROM tonne (\$/tonne)	\$469.69	\$73.29	\$60.73	\$37.24	\$39.89	\$40.53	\$39.50	\$42.60	\$40.31	\$39.99	\$40.59
Cost Per Product tonne (\$/tonne)	n/a	n/a	\$85.10	\$59.55	\$62.73	\$61.40	\$72.27	\$77.74	\$76.80	\$74.41	\$73.31
EX-MINE COAL TRANSPORTATION (\$000)	\$0	\$0	\$93,512	\$101,019	\$101,221	\$101,303	\$100,807	\$100,986	\$99,771	\$87,286	\$2,328,817
Cost Per Product tonne (\$/tonne)	n/a	n/a	\$33.64	\$33.63	\$33.64	\$33.63	\$33.63	\$33.63	\$33.63	\$33.64	\$33.63
COAL TERMINAL & PORT CHARGES	\$0	\$0	\$25,019	\$27,033	\$27,082	\$27,110	\$26,976	\$27,024	\$26,698	\$23,358	\$623,181
Cost Per Product tonne (\$/tonne)	n/a	n/a	\$9.00	\$9.00	\$9.00	\$9.00	\$9.00	\$9.00	\$9.00	\$9.00	\$9.00
MINE OVERHEAD COSTS (\$000s)	\$4,096	\$6,132	\$7,095	\$7,314	\$6,858	\$6,680	\$6,051	\$5,040	\$3,811	\$2,681	\$124,957
Cost Per Product tonne (\$/tonne)	n/a	n/a	\$6.23	\$2.44	\$2.28	\$2.22	\$2.02	\$1.68	\$1.29	\$1.14	\$1.80
ON-SITE INFRASTRUCTURE COST (\$000)	\$4,462	\$5,402	\$9,136	\$9,885	\$10,224	\$10,078	\$11,196	\$11,853	\$11,680	\$9,912	\$270,625
Cost Per Product tonne (\$/tonne)	n/a	n/a	\$6.83	\$3.29	\$3.40	\$3.35	\$3.74	\$3.95	\$3.94	\$4.17	\$3.91
COAL PRODUCTION ROYALTIES	\$0	\$0	\$7,138	\$7,577	\$7,402	\$7,497	\$9,415	\$20,508	\$21,945	\$21,994	\$398,977
Cost Per Product tonne (\$/tonne)	n/a	n/a	\$2.57	\$2.52	\$2.46	\$2.49	\$3.16	\$6.83	\$7.39	\$8.01	\$5.76
SELLING, GENERAL, & ADMIN, COSTS	\$536	\$536	\$536	\$536	\$536	\$536	\$536	\$536	\$536	\$469	\$13,543
Cost Per Product tonne (\$/tonne)	n/a	n/a	\$0.58	\$0.18	\$0.18	\$0.18	\$0.18	\$0.18	\$0.18	\$0.19	\$0.20
TOTAL INDIRECT COSTS (\$000s)	\$9,094	\$12,070	\$142,436	\$153,365	\$153,323	\$153,203	\$154,982	\$165,947	\$164,443	\$145,699	\$3,760,101
Cost Per Product tonne (\$/tonne)	n/a	n/a	\$58.85	\$51.06	\$50.95	\$50.86	\$51.73	\$55.26	\$55.43	\$56.14	\$54.30
FOB VESSEL CASH COST (\$000)	\$34,892	\$63,966	\$301,321	\$332,243	\$342,096	\$338,152	\$371,499	\$399,351	\$392,188	\$333,400	\$8,836,076
Cost Per Product tonne (\$/tonne)	n/a	n/a	\$143.96	\$110.61	\$113.69	\$112.26	\$124.00	\$133.01	\$132.23	\$130.55	\$127.61
COST DEPRECIATION (\$000s)	\$21,518	\$38,549	\$49,792	\$53,051	\$55,035	\$57,154	\$66,381	\$62,926	\$66,986	\$29,609	\$1,367,231
Cost Per Product tonne (\$/tonne)	n/a	n/a	\$39.52	\$17.66	\$18.29	\$18.97	\$22.15	\$20.96	\$22.60	\$14.71	\$19.75
TOTAL COST OF MINING (\$000s)	\$56,411	\$102,515	\$351,113	\$385,294	\$397,131	\$395,306	\$437,880	\$462,277	\$459,174	\$363,010	\$10,203,307
Cost Per Product tonne (\$/tonne)	n/a	n/a	\$183.48	\$128.27	\$131.97	\$131.23	\$146.15	\$153.96	\$154.83	\$145.26	\$147.36

Item 22 Economic Analysis

Economic Model and Sensitivity Analysis

The cash flow for the Project is presented in Table 22.1, Estimated Cash Flow Summary. The cash flow was calculated on an annual basis using proven and probable mineral reserves only. The cost and cash flow estimate is on a 100 % equity basis and does not include interest payments or other financing charges. The NPV at an 8 % discount rate was estimated at \$615.9 million before tax and \$405.8 million after tax with an IRR of 17.0 % before tax and 14.7 % after tax, respectively.

Table 22.1 Estimated Cash Flow Summary

Item	Year -1	Year 1	Year 2	Year 3	Year 4	Year 5	Avg. (6-10)	Avg. (11-15)	Avg. (16-19)	Avg. (20-25)	TOTAL
TONNES SOLD (kt)	0	0	2,780	3,004	3,009	3,012	2,997	3,003	2,966	2,595	69,242
SALES PRICE (\$/t)	184	184	184	184	184	184	184	184	184	184	
REVENUE	-	-	512,083	553,315	554,319	554,883	552,133	553,117	546,460	478,080	12,755,169
<u>Cash Costs</u>											
Direct Operating	25,798	51,896	158,886	178,879	188,773	184,949	216,517	233,404	227,745	187,702	5,075,975
Mine Overhead	4,096	6,132	7,095	7,314	6,858	6,680	6,051	5,040	3,811	2,681	124,957
Onsite Infrastructure	4,462	5,402	9,136	9,885	10,224	10,078	11,196	11,853	11,680	9,912	270,625
Coal Transportation	-	-	93,512	101,019	101,221	101,303	100,807	100,986	99,771	87,286	2,328,817
Terminal Cost	-	-	25,019	27,033	27,082	27,110	26,976	27,024	26,698	23,358	623,181
Selling, G&A	536	536	536	536	536	536	536	536	536	469	13,543
Royalties	-	-	7,138	7,577	7,402	7,497	9,415	20,508	21,945	21,994	398,977
TOTAL CASH COSTS	34,892	63,966	301,321	332,243	342,096	338,152	371,499	399,351	392,188	333,400	8,836,076
Cash Cost Per Tonne (\$/t)	\$0.00	\$0.00	\$108.39	\$110.61	\$113.69	\$112.26	\$124.00	\$133.01	\$132.23	\$130.55	\$127.61
EBITDA	(34,892)	(63,966)	210,762	221,072	212,223	216,731	180,634	153,766	154,272	144,680	3,919,093
EBITDA per Tonne	\$0.00	\$0.00	\$75.82	\$73.60	\$70.53	\$71.95	\$60.21	\$51.20	\$51.98	\$53.66	\$53.03
CAPITAL EXPEND.	372,428	308,546	107,638	30,258	13,698	12,843	30,495	39,615	30,225	17,453	1,421,581
WORKING CAPITAL CHANGE	250	-	21,337	1,718	42	24	(129)	127	70	(3,253)	4,126
Pre-tax Cash Flow	(407,570)	(372,512)	81,787	189,096	198,483	203,865	150,267	114,024	123,976	130,479	2,493,386
Cumulative	(407,570)	(780,082)	(698,295)	(509,198)	(310,716)	(106,851)	353,141	957,500	1,532,481	2,183,394	2,493,386
<u>Income Taxes</u>											
Federal Taxes	-	-	-	-	-	-	(22,122)	(17,487)	(18,755)	(17,984)	(380,968)
Provincial Tax	-	-	-	-	-	-	(14,748)	(11,658)	(12,504)	(11,989)	(253,979)
TOTAL INCOME TAX	-	-	-	-	-	-	(36,869)	(29,145)	(31,259)	(29,974)	(634,947)
After-Tax Cash Flow	(407,570)	(372,512)	81,787	189,096	198,483	203,865	113,398	84,879	92,717	100,506	1,858,439
Cumulative	(407,570)	(780,082)	(698,295)	(509,198)	(310,716)	(106,851)	244,085	691,570	1,121,755	1,615,042	1,858,439

Note: All figures are in \$000's unless otherwise stated.

Table 22.2 shows the sensitivity analyses for various rail investment levels; Table 22.3 shows the sensitivity analyses to changes in price, Opex and Capex. The tables provide sensitivity analyses with variants in prices, exchange rates, capital costs and operating costs. Changes in coal grades or ranks would affect sales prices.

Table 22.2 Sensitivity Analyses for Various Rail Investment Levels

Pre-Tax Internal Rate of Return and NPV (C\$ Millions) at 8% discount factor

Fortune Rail Capital Expenditure	Product Sales Prices (US\$/t)					
	US\$150/t		US\$175/t		US\$200/t	
	IRR	NPV 8%	IRR	NPV 8%	IRR	NPV 8%
100 percent	7.5%	-31M	17.0%	616M	24.8%	1246M
75 percent	8.9%	47M	19.1%	688M	27.7%	1326M
50 percent	9.5%	120M	21.7%	758M	31.0%	1394M

After-Tax Internal Rate of Return and NPV (C\$ Millions) at 8% discount factor

Fortune Rail Capital Expenditure	Sales Price (US\$/t)					
	US\$150/t		US\$175/t		US\$200/t	
	IRR	NPV 8%	IRR	NPV 8%	IRR	NPV 8%
100 percent	6.3%	-94M	14.7%	406M	21.5%	883M
75 percent	7.5%	-28M	16.5%	466M	24.0%	949M
50 percent	8.9%	38M	18.7%	525M	26.8%	1004M

Table 22.3 Sensitivity Analyses to Changes in Price, OPEX & CAPEX

% Change		Pre Tax			After Tax		
		IRR	NPV (8%)	NPV (10%)	IRR	NPV (8%)	NPV (10%)
Price	-10	10.6%	\$166,698	\$34,889	9.1%	\$60,450	(\$46,129)
		17.0%	\$615,935	\$411,940	14.7%	\$405,771	\$246,197
	+10	22.6%	\$1,062,342	\$784,869	19.6%	\$744,243	\$530,297
Opex	-10	20.8%	\$916,526	\$663,516	18.1%	\$634,867	\$439,058
		16.9%	\$615,935	\$411,940	14.7%	\$405,771	\$246,197
	+10	12.3%	\$320,351	\$163,825	11.1%	\$178,438	\$53,738
Capex	-10	19.0%	\$701,801	\$493,764	16.5%	\$476,228	\$314,534
		16.9%	\$615,935	\$411,940	14.7%	\$405,771	\$246,197
	+10	15.0%	\$530,083	\$329,936	13.1%	\$334,876	\$177,216

Payback

As shown in the economic model section, on a 100 % equity basis with no interest charges, the payback period for the Lost-Fox Project under the 3 Mtpa case is approximately 7.7 years on an after-tax basis at an 8% discount rate.

Mine Life

The mine life of the Lost-Fox operation is approximately 25 years with the reserves currently delineated. Additional exploration potential exists in the Hobbit-Broatch area.

Item 23 Adjacent Properties

This Technical Report does not contain information concerning an adjacent property.

Item 24 Other Relevant Data and Information

There is no other relevant data and information required to make this Technical Report understandable and not misleading.

Item 25 Interpretation and Conclusions

It is Golder-Marston's opinion that the data provided through various exploration and bulk sampling programs combined with detailed washability, infrastructure development, and cost analysis, is sufficient to support the feasibility level study and associated reserves, which were released by Fortune on October 15, 2012. This data confirms the property's ability to produce a washed anthracite coal with indicative qualities consistent with those currently being sold to overseas steel makers. The data is of sufficient density and reliability to support the mineral resource and reserve definitions under CIMDS and NI 43-101.

Golder-Marston recommends that additional drilling be performed to solidify the geological interpretation in selected areas as well as additional geotechnical drilling to confirm the suitability of rock stockpile locations. Even so, Gulf's exploration programs in the Lost-Fox Area were sufficient to provide the base data necessary for a project feasibility study.

Gulf's geological and sampling program met its original objective, which was to delineate sufficient resources in the Lost-Fox Area to perform mining feasibility studies.

Item 26 Recommendations

Golder-Marston proposed a drilling program to be completed prior to development that included exploration holes to increase confidence in selected areas, geotechnical holes, groundwater holes, and holes to test for potentially acid-generating material.

Additional drilling should be done to confirm some areas of localized uncertainty. These include drill intercepts that were not used due to inconsistencies and further refinement of a zone where the I Seam coal was repeated in the 2005 drilling resulting in the modeling of a “perched” I Seam.

During its next field program, Arctos should collect from trenches representative bulk samples of various seams in the proportions generally planned for mining and processing. The bulk samples should be tested to verify or improve the yield predictions used in the 2012 FS.

Golder-Marston recommends that Arctos perform a field testing program to identify any sources of ground water, permafrost, and clay or bentonite or other conditions that may impact the stability of the proposed rock and coal reject placement strategy or the stability of the proposed pit walls. Arctos should perform additional drilling to provide data for testing and stability analysis of the proposed rock and coal reject stockpiles.

Item 27 References

- Alderman. K John, Procedure for Estimating Recoveries for Corehole Samples without Washabilities. 7/2/2012. Advanced Coal Technologies. Lakewood, Colorado.
- Aplin & Martin Consultants, LTD. 2005. District of Stewart Official Community Plan Land Use Schedule.
- Bowser and Sustut Basins, State of Knowledge and New Initiatives, C. A. Evenchick, Geological Survey of Canada: Vancouver, B.C.; cevenchi@nrcan.gc.ca.
- Buckham, A.F., and B.A. Latour. 1950. The Groundhog Coalfield, British Columbia. Geological Survey of Canada, Bulletin 16, pp. 82.
- Bustin, R.M., and I.W. Moffat. 1983. Groundhog Coalfield, Central British Columbia: Reconnaissance Stratigraphy and Structure. Bulletin of Canadian Petroleum Geology, v. 31, pp. 231-245.
- Carabetta, D.G., and J.C. Leighton. 1984. British Columbia Railway: Preliminary Railway Route Study for Mt. Klappan Coal Development, M.
- Delcan Consulting Engineers and Planners. 1988. Mount Klappan Resource Standard Access Road (maps and text), May.
- Dupont, V.H. 1901. Report of an exploration on the upper part of the Stikine River to ascertain the feasibility of a railway. Department of Railways and Canals, Canada, Annual Report July 1, 1899, to June 30, 1900, Part 1, pp. 152-155.
- Esso Minerals Canada Proposal for Coal Handling for the Mount Klappan Project. 1986. March.
- Ferri, F., K. Osadetz, and C.A. Evenchick. Petroleum Source Rock Potential of Lower to Middle Jurassic Clastics, Intermontane Basins, British Columbia; http://www.em.gov.bc.ca/dl/Oilgas/COG/2004/ferri_osadetz_evenchick.pdf Stratigraphic and Structural Overview of the Bowser and Sustut Basins by C. A. Evenchick, Geological Survey of Canada: Pacific, 101 - 605 Robson Street, Vancouver, B.C. V6B 5J3.
- Fortune Minerals Limited. 2012. Arctos Anthracite Project, Lost Fox Preparation Plant, Taggart Global Project Number 4220, Revision A. August 24.
- Gulf Canada Resources Inc. 1994. Mount Klappan Anthracite Coal Quality Handbook.
- Gulf Canada Resources Inc., Coal Division. 1982. Field Manual Goal Exploration.
- Gulf Canada Resources Limited, Mount Klappan Anthracite Project, Single Product Study. 1994. Kilborn Engineering Pacific LTD. May.
- Gulf Canada Resources Limited. 1989. Mount Klappan Phase II, Volume 2, Anthracite Preparation Plan. Kilborn Engineers. January,
- Gulf Canada. 1990. Mount Klappan Project Revised Phase I Study 450,000 TPY Clean Coal. Kilborn. January.

Gulf Canada. 1990. Mount Klappan Project Revised Phase II Study 1,700,000 TPY Clean Coal. Kilborn. July.

Gulf Geological Reports:

Mount Klappan Anthracite Project Geologic Report Lost-Fox Area, 1986
Mount Klappan Anthracite Project Geologic Report Lost-Fox Area, 1987
Mount Klappan Anthracite Project Geologic Report Lost-Fox, Summit, Skeena Areas, 1988
Mount Klappan Anthracite Project Geologic Report Summit, Nass, Skeena Areas, 1986
Mount Klappan Anthracite Project Geologic Report Summit, Nass, Skeena Areas, 1987
Mount Klappan Coal Project Geologic Report, 1981
Mount Klappan Coal Project Geologic Report, 1982
Mount Klappan Coal Project Geologic Report, 1983
Mount Klappan Coal Project Geologic Report Hobbit-Broatch Area, 1984
Mount Klappan Coal Project Geologic Report Lost-Fox Area, 1984
Mount Klappan Coal Project Geologic Report Lost-Fox Area, 1985
Mount Klappan Coal Project Geologic Report Summit, Nass Areas, 1985
Mount Klappan Coal Project Geologic Report Summit, Nass, Skeena Areas, 1984

Gulf. 1989. Project Summary Report, Mount Klappan Anthracite Project 1,500,000 T/A Mine. April.

Gulf. 1997. Mount Klappan Lost-Fox Feasibility Study. Volume IV, Coal Processing, Appendix A, Monenco Consultants & Norton Hambleton Inc. March.

Gulf. 1997. Mount Klappan Lost-Fox Feasibility Study. Volume IV, Coal Processing, Appendix B, Monenco Consultants & Norton Hambleton Inc. March.

Gulf. 1997. Mount Klappan Lost-Fox Feasibility Study. Volume IV, Coal Processing, Monenco Consultants & Norton Hambleton Inc. March.

<http://wlapwww.gov.bc.ca/bcparks/explore/parkpgs/spatsizi/spatsizi.pdf>

http://wlapwww.gov.bc.ca/bcparks/explore/regional_maps/stewart.htm

Malloch, G.S. 1912. Reconnaissance on the Upper Skeena River, between Hazelton and the Groundhog Coal-Field, British Columbia. Geological Survey of Canada, Summary Report 1911, pp. 72-90.

Malloch, G.S. 1914. The Groundhog Coal-Field, B.C. Geological Survey of Canada, Summary Report 1912, pp. 69-101.

Marston & Marston, Inc. 1987. Mt. Klappan Lost-Fox Feasibility Study, Volumes 1-7.

Marston & Marston, Inc. 1990. An Update of the Lost-Fox Mine Feasibility Study, Phase II.

Marston & Marston, Inc. 1990. Mt. Klappan Anthracite Project, Lost-Fox Mine, Mine Plan. October.

Moffat, I.W., and R.M. Bustin. 1984. Superposed Folding in the Northern Groundhog Coalfield; Evidence for Polyphase Deformation in the Northeastern Corner of the Bowser Basin. Geological Survey of Canada, Paper 84-1B, pp. 255-261.

Mount Klappan Anthracite Project. 1986. Report on Geotechnical Conditions and Recommendations Pertaining to Open Pits, Waste Dumps and Other Infrastructure Elements – Hardy Associates. April.

- Mount Klappan Anthracite Project. 1987. Report on Geotechnical Conditions and Recommendations Pertaining to Open Pits, Waste Dumps and Other Site Infrastructure Elements, Hardy BBT Ltd. December.
- Mount Klappan. 1984. Geotechnical Report, Gulf Canada Resources Inc. December.
- Mount Klappan. 1985. Geotechnical Data Report, Gulf Canada Resources. July.
- Preliminary Geotechnical Overview for Pit and Waste Dump Areas of Gulf Klappan Coal Project. 1985. Hardy Associates. April.
- Proskin, Samuel A. 2012. Geotechnical Review of Revised Open Pit Design, File No. 122690, August 30.
- Rebagliati, Peter. 2005. DRAFT Mt. Klappan Coal Project: Transportation Infrastructure Feasibility Study: Cost Estimate, Track Construction and Rehab, Dease Lake Extension. July.
- Richards, T.A., and R.D. Gilchrist. 1979. Groundhog Coal Area, British Columbia. Geological Survey of Canada, Paper 79-1B, pp. 411-414.
- Robertson, Scott, Fraser Scott and Gardner Toby. Water Management Conceptual Design Klappan Feasibility Study. September 5, 2012. Ontario Canada.
- Tompson, W.D., D.M. Jenkins, and M.W. Roper. 1970. Exploration of the Groundhog Coalfield, Upper Skeena River area, British Columbia. Report to Joint Venture: National Coal Corporation Ltd., Placer Development Ltd., Quintana Minerals Corporation. Open File: British Columbia Ministry of Energy, Mines and Petroleum Resources. Victoria, British Columbia.
- Waters, B., and B.D. Vincent. 1979. Mt. Klappan Property Groundhog Coalfield Northwest British Columbia NTS 104 H/2, Field Geology Report for Exxon Minerals Ltd. Coal Department.

**APPENDIX B
COREHOLE LITHOLOGIC LOGS**



COREHOLE LITHOLOGIC LOG

PROJECT	Mount Klappan	COREHOLE NUMBER	05 01 (ARD Hole 2, #018)
CLIENT	Fortune Minerals/Marston	WELL NUMBER	Piezometer 2
GPS LOCATION			
NAD83	506,665 6,344,581	DATE	Begin Drilling 2005 Sep 29, Logging on 30th, Completed 2005 Oct 4
CONTRACTOR	Connors Drilling, Kamloops, BC, CA	LOGGED BY	Paul Oldaker
DRILLER(S)	Mitch Burtnick & Henry Hogan	CHECKED BY	GPS ELEVATION= 1,758 m
METHOD	HQ Core Fluid Rotary	SHEET 1 OF	

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
0.00	10.00			Rotary through surface soils, Set surface HWC, 0-10 ft
10.00	21.83	HQ Core, Box 1	Core Elongating	Sandstone, hard, very fine grain, gray-dark gray, salt and pepper.
			Markers at 10 ft, 15 ft	Highly fractured in vertical, horizontal, and angular directions.
				Bright orange rust stains with dark brown manganese stains in all open fractures.
				Calcite, white, in all closed fractures.
				Rare pyrite on fracture faces.
21.83	26.28	HQ Core, Box 1 & 2	Core Elongating	Sandstone, very fine grain, gray-dark gray, darker with depth, with dark gray and dark brown hard laminations
			Marker at 25 ft	Highly fractured in vertical, horizontal, and angular directions.
				Bright orange rust stains with dark brown manganese stains in all open fractures.
				Calcite, white, in all closed fractures.
26.28	31.89	HQ Core, Box 2	Core Elongating	Sandstone, very fine grain, gray-dark gray, lighter with depth, with dark gray and dark brown hard laminations
				Highly fractured in vertical, horizontal, and angular directions.
				Rare rust stains with rare dark brown manganese stains in some open fractures.
				More closed fractures with calcite

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
31.89	32.22	HQ Core, Box 2	Core Elongating	Clay and chip mixture, gray
				On high angle fracture
				Bright orange rust stains with dark brown manganese stains in the open fracture.
				Drilling fill or fault filling?
32.22	36.58	HQ Core, Box 2	Core Elongating	Sandstone, fine grain, gray-dark gray, salt and pepper
			35 ft marker versus 35.83 ft	Highly fractured in vertical, horizontal, and angular directions.
				Bright orange rust stains with dark brown manganese stains in the open fractures.
				Closed fractures have calcite
36.58	39.75	HQ Core, Box 3	Core Elongating	Sandstone, very fine grain, gray-dark gray, lighter with depth, with dark gray hard laminations, massive
				Highly fractured in vertical, horizontal, and angular directions.
				Rare rust stains with rare dark brown manganese stains in some open fractures.
				More closed fractures with calcite
39.75	44.33	HQ Core, Box 3	Core Elongating	Sandstone, fine grain, gray-dark gray, salt and pepper
				Highly fractured in vertical, horizontal, and angular directions.
				Bright orange rust stains with dark brown manganese stains in the open fractures. Some white powder stain, bicarbonate?
				Closed fractures have calcite
44.33	51.83	HQ Core, Box 3 & 4	Core Elongating	Sandstone, fine grain, gray-dark gray, lighter with depth, with dark gray hard laminations, massive
			45 ft marker versus 48.58 ft	Highly fractured in vertical, horizontal, and angular directions.
				Rare rust stains with rare dark brown manganese stains in some open fractures.
				Closed fractures have calcite
51.83	54.58	HQ Core, Box 4	Core Elongating	Shale, dark brown, moderately hard

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				Fissile along bedding planes
				Some rust stains with rare dark brown manganese stains along bedding.
				No calcite
54.58	54.83	HQ Core, Box 4	Core Elongating	Shale, dark brown, moderately hard
				Fissile along bedding planes
				Some rust stains with rare dark brown manganese stains along bedding.
				Abundant calcite along bedding
54.83	56.41	HQ Core, Box 4	Core Elongating	Shale, dark brown, moderately hard
				Fissile along bedding planes
				Some rust stains with rare dark brown manganese stains along bedding.
				No calcite
56.41	57.74	HQ Core, Box 4	Core Elongating	Sandstone (as above) and shale (as above) interbedding
				Fissile along bedding planes
				Rare rust stains with rare dark brown manganese stains in some open fractures.
				Closed fractures have calcite
57.74	64.45	HQ Core, Box 4	Core Elongating	Sandstone, fine grain, gray-dark gray, lighter with depth, with dark gray hard laminations, massive
			55 ft marker versus 60.87 ft	Highly fractured in vertical, horizontal, and angular directions.
				Rare rust stains with rare dark brown manganese stains in some open fractures.
				Closed fractures have calcite
64.45	67.28	HQ Core, Box 5	Core Elongating	Shale, dark gray, with carbonaceous, iron, and calcite layers
				Fissile along bedding planes and fractured
				Rare rust stains with rare dark brown manganese stains in some open fractures.
				Closed fractures have calcite
67.28	67.70	HQ Core, Box 5	Core Elongating	Coal, bright, lustrous, and vitrainous, with one split
				Fissile and cleated
				No iron or manganese stains

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				Calcite in cleats
67.70	69.95	HQ Core, Box 5 & 6	Core Elongating	Siltstone, gray, not carbonaceous
			65 ft Marker versus 69.45 ft	Moderately fissile
				No iron or manganese stains
				No calcite
69.95	127.16	HQ Core, Box 6, 7, 8, & 9	Core Elongating	Sandstone, very fine grain, gray-dark gray, with dark gray hard laminations and turbidites, massive
			105 ft marker versus 110.78 ft	Lightly fractured in vertical, horizontal, and angular directions.
			115 ft marker versus 121.41 ft	Rare rust stains with rare dark brown manganese stains in some open fractures.
				Rare calcite in closed fractures
127.16	128.79	HQ Core, Box 9	Core Elongating	Calcite, intense calcification, almost white with dark gray sandstone host rock in streaks
				Intensely fractured in vertical, horizontal, and angular directions.
				Rust stains over the calcite in some open fractures.
				Intense calcification, almost white
128.79	131.71	HQ Core, Box 9	Core Elongating	Sandstone, very fine grain, gray-dark gray, with dark gray hard laminations and turbidites, massive
			125 ft marker versus 131.71 ft	Lightly fractured in vertical, horizontal, and angular directions.
				Rare rust stains with rare dark brown manganese stains in some open fractures.
				Rare calcite in closed fractures
131.71	133.88	HQ Core, Box 10	Core Elongating	Siltstone, gray to dark gray, very sandy
				Lightly fractured in vertical, horizontal, and angular directions.
				Rare rust stains with rare dark brown manganese stains in some open fractures.
				Rare calcite in closed fractures
131.71	133.04	HQ Core, Box 10	Core Elongating	Siltstone, gray to dark gray, very sandy, heavily calcified
				Heavily fractured in vertical, horizontal, and angular directions.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				Rare rust stains with rare dark brown
				Heavily calcified
133.88	144.55	HQ Core, Box 10	Core Elongating	Siltstone, gray to dark gray, very sandy
			135 ft marker versus 142.96 ft	Lightly fractured in vertical, horizontal, and angular directions.
				Rare rust stains with rare dark brown manganese stains in some open
				Rare calcite in closed fractures
				Rare pyrite on fracture faces and within host rock
144.55	158.38	HQ Core, Box 11	Core Elongating	Siltstone, gray to dark gray, sandy
			145 ft marker versus 152.47 ft	Lightly fractured in vertical, horizontal, and angular directions. Some slickensides on faces
				Rare rust stains with rare dark brown manganese stains in some open fractures.
				Rare calcite in closed fractures
158.38	165.80	HQ Core, Box 12	Core Elongating	Siltstone, gray to dark gray, sandy
			155 ft marker versus 164.13 ft	Moderately fractured in vertical, horizontal, and angular directions.
				Rare rust stains with rare dark brown manganese stains in some open fractures.
				Rare calcite in closed fractures
				Rare pyrite on fracture faces and dissiminated within host rock
165.80	175.88	HQ Core, Box 12 & 13	Core Elongating	Mudstone, dark gray, slick
			165 ft marker versus 175.88 ft	Moderately fractured in vertical, horizontal, and angular directions. With slickensides
				No rust or manganese stains
				Rare calcite in closed fractures
				Rare pyrite on fracture faces commonly dissiminated within host rock
175.88	186.21	HQ Core, Box 13	Core Elongating	Siltstone, gray to dark gray, sandy, with carbonaceous laminations
				Moderately fractured in vertical, horizontal, and angular directions.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				Rare rust stains with rare dark brown manganese stains in some open fractures.
				Rare calcite in closed fractures
				Rare pyrite on fracture faces and disseminated within host rock
186.21	191.13	HQ Core, Box 14	Core Elongating	Siltstone, gray to dark gray, and mudstone, very dark gray, gradational interbeds
			175 ft marker versus 187.29 ft	Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes
				No iron or manganese stains
				Calcite in closed fractures
191.13	191.71	HQ Core, Box 14	Core Elongating	Calcite and sand, gray, very fine, poorly cemented
				Moderately fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Calcite in closed fractures
191.71	230.00	HQ Core, Box 14, 15, 16, & 17	Core Elongating	Siltstone, gray to dark gray, and mudstone, very dark gray, gradational interbeds
			185 ft marker versus 197.96 ft	Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes
			195 ft marker versus 209.13 ft	No iron or manganese stains
			205 ft marker versus 220.84 ft	Calcite in closed fractures
230.00	230.33	HQ Core, Box 17	Core Elongating	Coaly zone, bright, lustrous, vitrainous
				Not cleated. Lightly fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Calcite in closed fractures
230.33	232.83	HQ Core, Box 17	Core Elongating	Siltstone, gray to dark gray, and mudstone, very dark gray, gradational interbeds
			215 ft marker versus 231.75 ft	Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				No iron or manganese stains
				Calcite in closed fractures
232.38	232.88	HQ Core, Box 17	Core Elongating	Coaly zone, bright, lustrous, vitrainous
				Not cleated. Lightly fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Calcite in closed fractures
232.88	233.21	HQ Core, Box 17	Core Elongating	Siltstone, gray to dark gray, and mudstone, very dark gray, gradational interbeds, turbidite
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes
				No iron or manganese stains
				Calcite in closed fractures
233.21	233.46	HQ Core, Box 17	Core Elongating	Coaly zone, bright, lustrous, vitrainous
				Not cleated. Lightly fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Calcite in closed fractures
233.46	236.79	HQ Core, Box 17	Core Elongating	Siltstone, gray to dark gray, and mudstone, very dark gray, gradational interbeds
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes
				No iron or manganese stains
				Calcite in closed fractures
236.79	238.29	HQ Core, Box 17	Core Elongating	Coaly zone, bright, lustrous, vitrainous
				Not cleated. Lightly fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Calcite in closed fractures
238.29	240.12	HQ Core, Box 17	Core Elongating	Siltstone, gray to dark gray, and mudstone, very dark gray, gradational interbeds

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes
				No iron or manganese stains
				Calcite in closed fractures
240.12	242.04	HQ Core, Box 17	Core Elongating	Coaly zone, bright, lustrous, vitrainous
		Coal Sampled from 219.33 feet to 223.83 feet in One Bag		Not cleated. Lightly fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Calcite in closed fractures
242.04	261.50	HQ Core, Box 17, 18, & 19	Core Elongating	Siltstone, gray to dark gray, and mudstone, very dark gray, gradational interbeds, coal laminations
			235 ft marker versus 253.58 ft	Heavily fractured in vertical, horizontal, and angular directions. Fissile along bedding planes
				No iron or manganese stains
				Heavy calcite in closed fractures
261.50	263.00	HQ Core, Box 19	Core Elongating	Coaly zone, bright, lustrous, vitrainous, very broken up
			245 ft marker versus 263.00 ft	Not cleated. Lightly fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Calcite in closed fractures
263.00	299.46	HQ Core, Box 17, 18, 19, 20, & 21	Core Elongating	Siltstone, gray to dark gray, and mudstone, very dark gray, gradational interbeds, coal laminations
			255 ft marker versus 273.17 ft	Heavily fractured in vertical, horizontal, and angular directions. Fissile along bedding planes
			265 ft marker versus 285.5 ft	No iron or manganese stains
			275 ft marker versus 295.79 ft	Heavy calcite in closed fractures
299.46	337.75	HQ Core, Box 22, 23, & 24	Core Elongating	Siltstone, gray to dark gray, carbonaceous laminations

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
			285 ft marker versus 306.63 ft	Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes
			295 ft marker versus 317.79 ft	No iron or manganese stains
			305 ft marker versus 327.88 ft	Heavy calcite in closed fractures
			315 ft marker versus 337.75 ft	
337.75	341.17	HQ Core, Box 24	Core Elongating	Siltstone, gray to dark gray, and mudstone, very dark gray, gradational interbeds, coal laminations
				Heavily fractured in vertical,
				No iron or manganese stains
				Heavy calcite in closed fractures
341.17	368.59	HQ Core, Box 25 & 26	Core Elongating	Siltstone, gray to dark gray, and mudstone, very dark gray, gradational interbeds, carbonaceous to coal lenses
			325 ft marker versus 345.92 ft	Heavily fractured in vertical, horizontal, and angular directions. Fissile along bedding planes. Very broken
			330 ft marker versus 349.92 ft	No iron or manganese stains
			335 ft marker versus 353.59 ft	Calcite in closed fractures
			345 ft marker versus 363.67 ft	
368.59	410.05	HQ Core, Box 27, 28, & 29	Core Elongating	Siltstone, gray to dark gray, and mudstone, very dark gray, gradational interbeds, carbonaceous lenses
			355 ft marker versus 373.80 ft	Moderately fractured in vertical, horizontal, and angular directions. Fissile along bedding planes. Very broken
			365 ft marker versus 384.05 ft	No iron or manganese stains
			375 ft marker versus 393.63 ft	Calcite in closed fractures

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
			385 ft marker versus 403.88 ft	
410.05	442.22	HQ Core, Box 30, 31, & 32	Core Elongating	Siltstone, gray to dark gray, and mudstone, very dark gray, gradational interbeds, carbonaceous to coal laminations
			395 ft marker versus 414.30 ft	Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
			405 ft marker versus 425.13 ft	No iron or manganese stains
			415 ft marker versus 434.97 ft	Calcite in closed fractures and coal laminations
				Dissiminated pyrite
442.22	448.80	HQ Core, Box 32	Core Elongating	Coal, mudstone, and calcite interbeds. Coal, bright, shiny, lustrous, and vitrainous. Mudstone, dark gray.
			425 ft marker versus 448.80 ft	Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes. No cleat.
				No iron or manganese stains
				Calcite in closed fractures and coal laminations
				Dissiminated pyrite
448.80	461.47	HQ Core, Box 32 & 33	Core Elongating	Siltstone, gray to dark gray, and mudstone, very dark gray, gradational interbeds, carbonaceous laminations
			435 ft marker versus 456.97 ft	Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in closed fractures and carbonaceous laminations
				Dissiminated pyrite
461.47	467.72	HQ Core, Box 33	Core Elongating	Coal, mudstone, and calcite interbeds. Coal, bright, shiny, lustrous, and vitrainous. Mudstone, dark gray.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
			445 ft marker versus 467.72 ft	Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes. No cleat.
				No iron or manganese stains
				Calcite in closed fractures and coal laminations
				Dissiminated pyrite
467.72	480.22	HQ Core, Box 34 & 35	Core Elongating	Siltstone, gray to dark gray, and mudstone, very dark gray, gradational interbeds, carbonaceous laminations
			455 ft marker versus 478.55 ft	Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in closed fractures and carbonaceous laminations
480.22	484.39	HQ Core, Box 35	Core Elongating	Coal, mudstone, and calcite interbeds. Coal, bright, shiny, lustrous, and vitrainous. Mudstone, dark gray.
			465 Marker missing	Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes. Rare cleat.
				No iron or manganese stains
				Calcite in closed fractures and coal laminations
				Dissiminated pyrite
484.39	508.31	HQ Core, Box 35, 36, & 37	Core Elongating	Siltstone, gray to dark gray, and mudstone, very dark gray, gradational interbeds, Coal and carbonaceous lenses
			475 ft marker versus 499.39 ft	Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in closed fractures and carbonaceous laminations
508.31	512.02	HQ Core, Box 37	Core Elongating	Coal, dull to bright & shiny, vitrainous, dirty with mudstone lenses

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
			485 ft marker versus 510.06 ft	Poor to fair cleating. Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
				Dissiminated pyrite
512.02	512.77	HQ Core, Box 37	Core Elongating	Possible hard intrusive with coal and calcite.
				Lightly fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Calcite in closed fractures and coal laminations
512.77	514.40	HQ Core, Box 37	Core Elongating	Coal and mudstone interbed, dull to bright & shiny, vitrainous in coal
				Poor to fair cleating. Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding
				No iron or manganese stains
				Calcite in cleat and closed fractures
				Dissiminated pyrite
514.40	548.48	HQ Core, Box 37, 38, 39 & 40	Core Elongating	Siltstone, gray to dark gray, and mudstone, very dark gray, gradational to defined interbeds, Coal, carbonaceous, and sandstone (light gray) lenses
			495 ft marker versus 520.90 ft	Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
			505 ft marker missing	No iron or manganese stains
			515 ft marker versus 532.23 ft	Calcite in closed fractures and carbonaceous laminations. Some gray clay fracture fill
			525 ft marker versus 542.15 ft	Dissiminated pyrite. Pyrite crystals in clay fracture fill
548.48	551.15	HQ Core, Box 40 & 41	Core Elongating	Coal dull to bright & shiny, vitrainous.
				Friable with fair cleating. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				Dissiminated pyrite
551.15	654.23	HQ Core, Box 41, 42, 43, 44, 45, 46, 47 & 48	Core Elongating	Siltstone, gray to dark gray, and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous lenses
			535 ft marker versus 552.40 ft	Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
			545 ft marker versus 561.15	No iron or manganese stains
			555 ft marker versus 571.32 ft	Calcite in closed fractures and carbonaceous laminations.
			565 ft marker versus 582.40 ft	Rare dissiminated pyrite.
			575 ft marker versus 592.65 ft	
			585 ft marker versus 602.65 ft	
			595 ft marker versus 613.07 ft	
			605 ft marker versus 623.23 ft	
			615 ft marker versus 633.23 ft	
			625 ft marker versus 644.82 ft	
654.23	656.06	HQ Core, Box 48	Core Elongating	Coal dull to bright & shiny, vitrainous.
			635 ft marker versus 656.06 ft	Friable with fair cleating. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
656.06	657.98	HQ Core, Box 48 & 49	Core Elongating	Mudstone, very dark gray to black, carbonaceous to very carbonaceous
				Rarely fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in closed fractures and carbonaceous laminations.
657.98	658.65	HQ Core, Box 49	Core Elongating	Coal dull to bright & shiny, vitrainous.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				Friable with fair cleating. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
658.65	663.61	HQ Core, Box 49	Core Elongating	Mudstone, very dark gray to black, carbonaceous to very carbonaceous
				Rarely fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in closed fractures and
663.61	665.36	HQ Core, Box 49	Core Elongating	Coal dull to bright & shiny, vitrainous.
				Friable with fair cleating. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
665.36	666.19	HQ Core, Box 49	Core Elongating	Mudstone, very dark gray to black, carbonaceous to very carbonaceous
				Rarely fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Calcite in closed fractures and
666.19	666.94	HQ Core, Box 49	Core Elongating	Coal dull to bright & shiny, vitrainous.
			645 ft marker versus 666.94 ft	Friable with fair cleating. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
666.94	673.69	HQ Core, Box 50	Core Elongating	Mudstone, very dark gray to black, carbonaceous to very carbonaceous
				Rarely fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Calcite in closed fractures and
				Pyrite nodule at 672.11 ft, some disseminated pyrite

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
673.69	702.23	HQ Core, Box 50 51 & 52	Core Elongating	Siltstone, gray to dark gray, and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous lenses, Light gray sandstone (very fine grain) layers with depth
			655 ft marker versus 675.82 ft	Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
			665 ft marker versus 686.23 ft	No iron or manganese stains
			675 ft marker missing	Calcite in closed fractures and carbonaceous laminations.
702.23	765.65	HQ Core, Box 52, 53, 54, 55 & 56	Core Elongating	Sandstone, light gray to gray, very fine to fine grained
			685 ft marker versus 706.65 ft	Light to moderately fractured in vertical, horizontal, and angular directions.
			695 ft marker versus 716.73 ft	No iron or manganese stains
			705 ft marker versus 727.06 ft	Calcite in closed fractures
			715 ft marker versus 737.23 ft	
			725 ft marker missing No markers in Box 55	
			735 ft marker versus 756.65 ft	
765.65	775.90	HQ Core, Box 57	Core Elongating	Siltstone, gray to dark gray, and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous lenses
			745 ft marker versus 766.57 ft	Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in closed fractures and carbonaceous laminations.
775.90	783.07	HQ Core, Box 57 & 58	Core Elongating	Coal and mudstone interbed, coal dull to bright & shiny, vitrainous. Mudstone dark gray to black, carbonaceous.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
			755 ft marker versus 776.23 ft	Friable with fair cleating. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
783.07	812.40	HQ Core, Box 58 & 59	Core Elongating	Siltstone, gray to dark gray, and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous lenses
			765 ft marker versus 785.65 ft	Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
			775 ft marker versus 795.99 ft	No iron or manganese stains
			785 ft marker versus 804.65 ft	Calcite in closed fractures and carbonaceous laminations.
812.40	855.57	HQ Core, Box 60, 61, 62, & 63	Core Elongating	Siltstone, gray to dark gray, and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous lenses, Light gray sandstone (very fine grain) layers with depth
			795 ft marker versus 814.82 ft	Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
			805 ft marker versus 824.15 ft	No iron or manganese stains
			815 ft marker versus 835.23 ft	Calcite in closed fractures and carbonaceous laminations.
			825 ft marker versus 844.23 ft	
			835 ft marker versus 854.48 ft	
855.57	856.99	HQ Core, Box 63	Core Elongating	Mudstone, very dark gray to black, carbonaceous to very carbonaceous
				Rarely fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in closed fractures and carbonaceous laminations.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
856.99	858.82	HQ Core, Box 63	Core Elongating	Coal and mudstone interbed, coal dull to bright & shiny, vitrainous. Mudstone dark gray to black, carbonaceous.
				Friable with fair cleating. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
858.82	859.65	HQ Core, Box 63	Core Elongating	Mudstone, very dark gray to black, carbonaceous to very carbonaceous
				Rarely fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Calcite in closed fractures and carbonaceous laminations.
859.65	860.73	HQ Core, Box 64	Core Elongating	Coal and mudstone interbed, coal dull to bright & shiny, vitrainous. Mudstone dark gray to black, carbonaceous.
				Friable with fair cleating. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
860.73	862.81	HQ Core, Box 63	Core Elongating	Mudstone, very dark gray to black, carbonaceous to very carbonaceous
				Rarely fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Calcite in closed fractures and carbonaceous laminations.
862.81	875.39	HQ Core, Box 64	Core Elongating	Siltstone, gray to dark gray, and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous lenses, Light gray sandstone (very fine grain) layers with depth
			845 ft marker versus 864.39 ft	Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
			855 ft marker versus 874.73 ft	No iron or manganese stains
				Calcite in closed fractures and carbonaceous laminations.
875.39	886.14	HQ Core, Box 65	Core Elongating	Sandstone, light gray to gray, very fine to fine grained

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
			865 ft marker versus 884.64 ft	Light to moderately fractured in vertical, horizontal, and angular
				No iron or manganese stains
				Calcite in closed fractures
886.14	906.31	HQ Core, Box 66 & 67	Core Elongating	Siltstone, gray to dark gray, and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous lenses, Light gray sandstone (very fine grain) layers with depth
			875 ft marker versus 893.47 ft	Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
			885 ft marker versus 903.39 ft	No iron or manganese stains
				Calcite in closed fractures and carbonaceous laminations.
906.31	907.81	HQ Core, Box 67	Core Elongating	Sandstone, light gray to gray, very fine to medium grained
				Light to moderately fractured in vertical, horizontal, and angular
				No iron or manganese stains
				Calcite in closed fractures
907.81	915.56	HQ Core, Box 66, 67 & 68	Core Elongating	Siltstone, gray to dark gray, and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous lenses, Light gray sandstone (very fine grain) layers with depth
			895 ft marker versus 913.64 ft	Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in closed fractures and carbonaceous laminations.
915.56	916.31	HQ Core, Box 68	Core Elongating	Sandstone, light gray to gray, very fine to medium grained
				Light to moderately fractured in vertical, horizontal, and angular directions. Clay and siltstone fracture filling
				No iron or manganese stains
				Calcite in closed fractures

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
916.31	918.48	HQ Core, Box 68	Core Elongating	Siltstone, gray to dark gray, and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous lenses, Light gray sandstone (very fine grain) layers with depth
				Lightly fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Calcite in closed fractures and carbonaceous laminations.
918.48	922.90	HQ Core, Box 68	Core Elongating	Sandstone, light gray to gray, very fine to coarse grained. Mudstone laminations. Numerous clay clasts
Possible marker bed				Light to moderately fractured in vertical, horizontal, and angular directions. Clay and siltstone fracture filling
				No iron or manganese stains
				Calcite in closed fractures
922.90	994.48	HQ Core, Box 68, 69, 70, 71, 72, & 73	Core Elongating	Siltstone, gray to dark gray, and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous lenses, Light gray sandstone (very fine grain) layers with depth
			905 ft marker versus 923.82 ft	Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
			915 ft marker versus 933.65 ft	No iron or manganese stains
			925 ft marker versus 944.07 ft	Calcite in closed fractures and carbonaceous laminations.
			935 ft marker versus 954.32 ft	
			945 ft marker versus 964.73 ft	
			955 ft marker versus 974.15 ft	
			965 ft marker versus 984.40 ft	
			975 ft marker versus 994.48 ft	

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
994.48	1,009.06	HQ Core, Box 74 & 75	Core Elongating	Siltstone, gray to dark gray, and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous lenses
			985 ft marker versus 1,003.40 ft	Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in closed fractures and carbonaceous laminations.
1,009.06	1,010.56	HQ Core, Box 75	Core Elongating	Large vertical fracture, one side is sandstone, light gray to gray, fine grained. Other side is mudstone and calcite
				Large vertical fracture
				No iron or manganese stains
				Calcite in closed fractures
1,010.56	1,025.14	HQ Core, Box 75 & 76	Core Elongating	Siltstone, gray to dark gray, and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous lenses, Light gray sandstone (very fine grain) layers with depth
			995 ft marker versus 1,013.81 ft	Highly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
			1,005 ft marker versus 1,025.14	No iron or manganese stains
				Calcite in closed fractures and carbonaceous laminations.
1,025.14	1,025.89	HQ Core, Box 76	Core Elongating	Mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous laminations
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in closed fractures and carbonaceous laminations.
				Pyrite nodule

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
1,025.89	1,035.94	HQ Core, Box 76	Core Elongating	Siltstone, gray to dark gray, and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous lenses, Light gray sandstone (very fine grain) layers with depth
			1,015 ft marker versus 1,035.14 ft	Highly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in closed fractures and carbonaceous laminations.
1,035.94	1,038.11	HQ Core, Box 77	Core Elongating	Siltstone, gray to dark gray, and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous lenses, Light gray sandstone (very fine grain) layers with depth
				Highly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in closed fractures and carbonaceous laminations.
1,038.11	1,042.03	HQ Core, Box 77	Core Elongating	Coal and mudstone interbed, coal dull to bright & shiny, vitrainous. Mudstone dark gray to black, carbonaceous.
				Friable with fair cleating. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
1,042.03	1,077.03	HQ Core, Box 77, 78 & 79	Core Elongating	Siltstone, gray to dark gray, and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous lenses
			1,025 ft marker versus 1,045.86 ft	Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
			1,035 ft marker versus 1,055.20	No iron or manganese stains
			1,045 ft marker versus 1,065.70	Calcite in closed fractures and carbonaceous laminations.
			1,055 ft marker versus 1,075.28	

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
1,077.03	1,078.28	HQ Core, Box 80	Core Elongating	Coal and mudstone interbed, coal dull to bright & shiny, vitrainous. Mudstone dark gray to black, carbonaceous.
				Friable with good cleating. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
1,078.28	1,078.53	HQ Core, Box 80	Core Elongating	Siltstone dark gray, carbonaceous.
				Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
				Pyrite nodules
1,078.53	1,082.70	HQ Core, Box 80	Core Elongating	Coal and mudstone interbed, coal dull to bright & shiny, vitrainous. Mudstone dark gray to black, carbonaceous.
				Friable with good cleating. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
1,082.70	1,084.20	HQ Core, Box 80	Core Elongating	Siltstone, gray to dark gray, and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous lenses
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in closed fractures and
1,084.20	1,084.78	HQ Core, Box 80	Core Elongating	Coal, dull to bright & shiny, vitrainous.
				Friable with good cleating. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
1,084.78	1,085.36	HQ Core, Box 80	Core Elongating	Mudstone dark gray to black, carbonaceous.
			1,065 ft marker versus 1,085.36	Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
1,085.36	1,085.69	HQ Core, Box 80	Core Elongating	Coal, dull to bright & shiny, vitrainous.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				Friable with good cleating. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
1,085.69	1,089.77	HQ Core, Box 80	Core Elongating	Mudstone dark gray to black, carbonaceous.
				Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
1,089.77	1,092.52	HQ Core, Box 80	Core Elongating	Coal and mudstone interbed, coal dull to bright & shiny, vitrainous. Mudstone dark gray to black, carbonaceous.
				Friable with good cleating. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
1,092.52	1,094.27	HQ Core, Box 80	Core Elongating	Mudstone dark gray to black, carbonaceous.
				Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
1,094.27	1,118.35	HQ Core, Box 81 & 82	Core Elongating	Siltstone, gray to dark gray, and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous lenses, Light gray sandstone (very fine grain) layers with depth
			1,075 ft marker versus 1,098.77 ft	Moderately fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
			1,085 ft marker versus 1,109.35 ft	No iron or manganese stains
				Calcite in closed fractures and carbonaceous laminations.
1,118.35	1,121.18	HQ Core, Box 82	Core Elongating	Sandstone, light gray to gray, very fine to fine grained
			1,095 ft marker versus 1,119.43 ft	Light fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Calcite in closed fractures

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
1,121.18	1,126.26	HQ Core, Box 82 & 83	Core Elongating	Siltstone, gray to dark gray, and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous lenses, Light gray sandstone (very fine grain) layers with depth
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in closed fractures and carbonaceous laminations.
1,126.26	1,128.51	HQ Core, Box 83	Core Elongating	Sandstone, light gray to gray, very fine to fine grained
				Light fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Calcite in closed fractures
1,128.51	1,129.84	HQ Core, Box 83	Core Elongating	Siltstone, gray to dark gray, and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous lenses, Light gray sandstone (very fine grain) layers with depth
			1,105 ft marker versus 1,129.84 ft	Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in closed fractures and carbonaceous laminations.
1,129.84	1,130.84	HQ Core, Box 83	Core Elongating	Sandstone, light gray to gray, very fine to fine grained
				Light fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Calcite in closed fractures
1,130.84	1,182.17	HQ Core, Box 83, 84, 85, 86 & 87	Core Elongating	Siltstone, gray to dark gray, and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous lenses, Light gray sandstone (very fine grain) layers with depth
			1,115 ft marker versus 1,139.76 ft	Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
			1,125 ft marker versus 1,149.59 ft	No iron or manganese stains
			1,135 ft marker versus 1,159.59 ft	Calcite in closed fractures and carbonaceous laminations.
			1,145 ft marker versus 1,169.59 ft	
			1,155 ft marker versus 1,180.34 ft	
1,182.17	1,184.67	HQ Core, Box 87	Core Elongating	Coal and mudstone interbed, coal dull to bright & shiny, vitrainous. Mudstone dark gray to black, carbonaceous.
				Friable with good cleating. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
1,184.67	1,192.67	HQ Core, Box 87 & 88	Core Elongating	Siltstone, gray to dark gray, and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous lenses, Light gray sandstone (very fine grain) layers with depth
			1,165 ft marker versus 1,191.42	Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in closed fractures and carbonaceous laminations.
1,192.67	1,193.50	HQ Core, Box 88	Core Elongating	Coal, dull to bright & shiny, vitrainous.
				Friable with good cleating. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
1,193.50	1,201.33	HQ Core, Box 88	Core Elongating	Siltstone, gray to dark gray, and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous lenses, Light gray sandstone (very fine grain) layers with depth

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in closed fractures and carbonaceous laminations.
				Possible disseminated pyrite
1,201.33	1,202.00	HQ Core, Box 88	Core Elongating	Clay, gray to dark gray
			1,175 ft marker versus 1,201.75	Plastic, possible fracture filling
				No iron or manganese stains
				No calcite
1,202.00	1,211.67	HQ Core, Box 88 & 89	Core Elongating	Siltstone, gray to dark gray, and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous lenses, Light gray sandstone (very fine grain) layers with depth
	361.28049		1,185 ft marker versus 1,211.67	Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in closed fractures and carbonaceous laminations.
TOTAL DEPTH= 1,185 ft= 361.28 m				

Drilling began on 2005 Sep 29

Completed as piezometer using IPS=2.5 inch. OD=2.875 inch
Schedule 40 wall thickness=0.203 inch , ID=2.469 inch

Pipe perforated by drilling 1/16" holes in pipe

Bottom of perforations= 1,185 ft

Top of perforations= 685 ft

10 feet of bentonite grout from surface to 10 feet

Well Completed= 2005 Oct 4

TIME PER FOOT= 7,200 min/ 1,185 ft= 6.08 min/ft



COREHOLE LITHOLOGIC LOG

PROJECT	<u>Mount Klappan</u>	COREHOLE NUMBER	<u>05 02 (#010)</u>
CLIENT	<u>Fortune Minerals/Marston</u>	WELL NUMBER	
GPS			
LOCATION			<u>Begin Drilling 2005 Oct 4, Completed 2005</u>
NAD83	<u>506,984 6,344,141</u>	DATE	<u>Oct 8</u>
CONTRACTOR	<u>Connors Drilling, Kamloops, BC, CA</u>	LOGGED BY	<u>Paul Oldaker</u>
DRILLER(S)	<u>Mitch Burtnick & Henry Hogan</u>	CHECKED BY	<u>GPS ELEVATION=1,654 m</u>
METHOD	<u>HQ Core Fluid Rotary</u>	SHEET 1 OF	

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
0.00	11.00			Rotary through surface soils, Set surface HWC, 0-11 ft
Each box logged alone. Green line between boxes. All measurements from core markers in box.				
20.17	21.50	HQ Core, Box 1		Clay, dark gray, very muddy Plastic to semi-hard Clay mud coating all core No Calcite
21.50	27.58	HQ Core, Box 1	Marker at 26 ft	Siltstone, gray to dark gray, and mudstone, very dark gray, gradational interbeds Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes Clay mud coating all core No Calcite
27.58	28.08	HQ Core, Box 1		Siltstone, gray to dark gray, and gradational interbeds Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes Clay mud coating all core No Calcite
28.08	29.08	HQ Core, Box 1		Clay, dark gray, very muddy Plastic to semi-hard Clay mud coating all core No Calcite
29.08	33.66	HQ Core, Box 1	Marker at 36 ft versus 32.16 ft	Siltstone, gray to dark gray, and mudstone, very dark gray, gradational interbeds

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes
				Clay mud coating all core
				No Calcite
42.25	46.00	HQ Core, Box 2	Marker at 46 ft	Clay, dark gray, very muddy, carbonaceous lenses
				Plastic to semi-hard
				Clay mud coating all core
				No Calcite
46.00	55.67	HQ Core, Box 2		Siltstone, gray to dark gray, mudstone, very dark gray, gradational interbeds, with carbonaceous lenses
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes
				Clay mud coating all core
				No Calcite
55.00	56.00	HQ Core, Box 3	Marker at 56 ft	Clay, dark gray, very muddy, carbonaceous, siltstone and mudstone lenses
				Plastic to semi-hard
				Clay mud coating all core
				No Calcite
56.00	64.58	HQ Core, Box 3	Marker at 56 ft	Clay, dark gray, very muddy, carbonaceous, siltstone and mudstone lenses
			Marker at 66 ft versus 61.92 ft	Plastic to semi-hard
			Note: Ground up 0.6 ft of core	Clay mud coating all core
				Heavy Calcite
64.58	68.91	HQ Core, Box 3		Clay, siltstone, mudstone, coal, dark gray, very muddy, carbonaceous, and oxidized
				Plastic to hard
				Clay mud coating all core
				Heavy Calcite
71.00	76.00	HQ Core, Box 4	5 ft washed away marker & 76 ft marker	

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
76.00	80.17	HQ Core, Box 4		Siltstone, gray to dark gray, and mudstone, very dark gray, gradational interbeds, carbonaceous lenses
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes
				No iron or manganese stains
				Calcite in closed fractures
80.17	80.92	HQ Core, Box 4		Coal, bright, lustrous, and vitrainous
				Fissile and cleated
				No iron or manganese stains
				Calcite in cleats
80.92	87.34	HQ Core, Box 4	Marker at 86 ft versus 86.08 ft	Siltstone, gray to dark gray, and mudstone, very dark gray, gradational interbeds, carbonaceous lenses
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes
				No iron or manganese stains
				Calcite in closed fractures
87.34	88.42	HQ Core, Box 4		Siltstone, light gray, carbonaceous lenses
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes
				No iron or manganese stains
				Calcite in closed fractures
88.42	90.17	HQ Core, Box 4		Siltstone, gray to dark gray, and mudstone, very dark gray, gradational interbeds, carbonaceous lenses
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes
				No iron or manganese stains
				Calcite in closed fractures
91.50	93.00	HQ Core, Box 5, Coal Sampled 91.50 ft to 100.67 ft, 2 bags		Coal, dull to bright & shiny, vitrainous.
				Friable with good cleating. Fissile along bedding planes.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				No iron or manganese stains
				Calcite in cleat and closed fractures
93.00	93.33	HQ Core, Box 5, Coal Sampled 91.50 ft to 100.67 ft, 2 bags		Mudstone dark gray to black, carbonaceous.
				Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
93.33	93.83	HQ Core, Box 5, Coal Sampled 91.50 ft to 100.67 ft, 2 bags		Coal, dull to bright & shiny, vitrainous.
				Friable with good cleating. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
93.83	94.00	HQ Core, Box 5, Coal Sampled 91.50 ft to 100.67 ft, 2 bags		Mudstone dark gray to black, carbonaceous.
				Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
94.00	94.42	HQ Core, Box 5, Coal Sampled 91.50 ft to 100.67 ft, 2 bags		Coal, dull to bright & shiny, vitrainous.
				Friable with good cleating. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
94.42	96.00	HQ Core, Box 5, Coal Sampled 91.50 ft to 100.67 ft, 2 bags	Marker at 96.00 ft	Siltstone, gray to dark gray, and mudstone, very dark gray, gradational interbeds, carbonaceous lenses
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes
				No iron or manganese stains
				Calcite in closed fractures

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
96.00	97.00	HQ Core, Box 5, Coal Sampled 91.50 ft to 100.67 ft, 2 bags		Coal, dull to bright & shiny, vitrainous.
				Friable with good cleating. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
97.00	97.67	HQ Core, Box 5, Coal Sampled 91.50 ft to 100.67 ft, 2 bags		Siltstone, gray to dark gray, and mudstone, very dark gray, gradational interbeds, carbonaceous lenses
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes
				No iron or manganese stains
				Calcite in closed fractures
97.67	100.67	HQ Core, Box 5, Coal Sampled 91.50 ft to 100.67 ft, 2 bags		Coal, dull to bright & shiny, vitrainous.
				Friable with good cleating. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
Marker of Sand & Mud				
	106.00	HQ Core, Box 5	Marker at 106.00 ft versus 100.67 ft	
106.00	109.17	HQ Core, Box 5, Coal Sampled 106.00 ft to 110.67 ft, 1 bag		Coal, dull to bright & shiny, vitrainous.
				Friable with good cleating. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
109.17	110.67	HQ Core, Box 5, Coal Sampled 106.00 ft to 110.67 ft, 1 bag		Coal and mudstone interbed, coal dull to bright & shiny, vitrainous. Mudstone dark gray to black, carbonaceous. Vertical coal faces in the mudstone

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				Friable with good cleating. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
110.67	110.75	HQ Core, Box 6		Coal, dull to bright & shiny, vitrainous.
Depth Continued from 110 ft Mark in Box 5				Friable with good cleating. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
110.75	111.17	HQ Core, Box 6		Mudstone dark gray to black, carbonaceous.
				Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
111.17	111.34	HQ Core, Box 6		Coal, dull to bright & shiny, vitrainous.
				Friable with good cleating. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
111.34	111.84	HQ Core, Box 6		Mudstone dark gray to black, carbonaceous.
				Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
111.84	112.59	HQ Core, Box 6		Coal, dull to bright & shiny, vitrainous.
				Friable with good cleating. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
Sand & Mud Mark				
Mark at 116 feet				
116.58	125.75	HQ Core, Box 6, Coal Sampled 116.58 ft to 125.75 ft, 2 bags		Coal, dull to bright & shiny, vitrainous, very ground up possibly wash from above
Measured from Mark at 126 ft				Friable with good cleating. Fissile along bedding planes.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				No iron or manganese stains
				Calcite in cleat and closed fractures
125.75	128.33	HQ Core, Box 6, Coal Sampled 91.50 ft to 100.67 ft, 2 bags	Marker at 126.00 ft	Siltstone, gray to dark gray, and mudstone, very dark gray, gradational interbeds, carbonaceous lenses
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes
				No iron or manganese stains
				Calcite in closed fractures
128.08	129.66	HQ Core, Box 7		Siltstone, gray to dark gray, and mudstone, very dark gray, gradational interbeds, carbonaceous lenses
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes
				No iron or manganese stains
				Calcite in closed fractures
129.66	131.74	HQ Core, Box 8, Coal Sampled 129.66 ft to 142.15 ft, 3 bags		Coal, dull to bright & shiny, vitrainous, very ground up possibly wash from above
				Friable with good cleating. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
131.74	132.41	HQ Core, Box 8, Coal Sampled 129.66 ft to 142.15 ft, 3 bags		Mudstone dark gray to black, carbonaceous.
				Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
132.41	133.66	HQ Core, Box 8, Coal Sampled 129.66 ft to 142.15 ft, 3 bags		Coal, dull to bright & shiny, vitrainous, very ground up possibly wash from above
				Friable with good cleating. Fissile along bedding planes.
				No iron or manganese stains

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				Calcite in cleat and closed fractures
133.66	133.99	HQ Core, Box 8, Coal Sampled 129.66 ft to 142.15 ft, 3 bags		Mudstone dark gray to black, carbonaceous.
				Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
133.99	137.07	HQ Core, Box 8, Coal Sampled 129.66 ft to 142.15 ft, 3 bags	Marker at 136 ft	Coal, dull to bright & shiny, vitrainous, very ground up possibly wash from above
				Friable with good cleating. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
137.07	137.32	HQ Core, Box 8, Coal Sampled 129.66 ft to 142.15 ft, 3 bags		Mudstone dark gray to black, carbonaceous.
				Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
137.32	141.65	HQ Core, Box 8, Coal Sampled 129.66 ft to 142.15 ft, 3 bags	Marker at 136 ft	Coal, dull to bright & shiny, vitrainous, very ground up possibly wash from above
				Friable with good cleating. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
141.65	142.15	HQ Core, Box 8, Coal Sampled 129.66 ft to 142.15 ft, 3 bags	Marker at 136 ft	Coal, dull to bright & shiny, vitrainous, very ground up possibly wash from above
Measured from 136 ft Marker				Friable with good cleating. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
143.00	144.00	HQ Core, Box 8		Mudstone dark gray to black, carbonaceous.
				Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
144.00	146.00	HQ Core, Box 8, Coal Sampled 144.00 ft to 146.00 ft, 1 bag	Marker at 136 ft	Coal, dull to bright & shiny, vitrainous
				Friable with good cleating. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
146.00	150.92	HQ Core, Box 8		Mudstone dark gray to black, carbonaceous.
				Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
150.92	151.67	HQ Core, Box 8, Coal Sampled 150.92 ft to 164.33 ft, 3 bags		Coal, dull to bright & shiny, vitrainous
				Friable with good cleating. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
151.67	156.34	HQ Core, Box 8, Coal Sampled 150.92 ft to 164.33 ft, 3 bags		Coal and mudstone interbed, coal dull to bright & shiny, vitrainous. Mudstone dark gray to black, carbonaceous.
				Friable with good cleating. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
Mark at 156 ft				
156.00	164.33	HQ Core, Box 9, Coal Sampled 150.92 ft to 164.33 ft, 3 bags		Coal and mudstone interbed, coal dull to bright & shiny, vitrainous. Mudstone dark gray to black, carbonaceous.
				Friable with good cleating. Fissile along bedding planes.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				No iron or manganese stains
				Calcite in cleat and closed fractures
				Some pyrite in mudstone
164.33	165.41	HQ Core, Box 9		Mudstone dark gray to black, carbonaceous.
				Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
165.41	166.83	HQ Core, Box 9	Mark at 166 ft versus 166.83 ft	Mudstone dark gray to black, carbonaceous with coal lenses
				Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
166.83	169.91	HQ Core, Box 9		Mudstone dark gray to black, carbonaceous.
				Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
167.08	168.50	HQ Core, Box 10		Mudstone dark gray to black, carbonaceous.
Measured from 176 ft Mark				Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
168.50	168.83	HQ Core, Box 10		Clay, dark gray, very muddy
				Plastic to semi-hard
				No fractures
				No Calcite
168.50	173.17	HQ Core, Box 10		Mudstone dark gray to black, carbonaceous.
				Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
173.17	181.50	HQ Core, Box 10	Marker at 176 ft versus 175.67	Sandstone, light gray to gray, very fine to fine grained
				Lightly fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Moderate calcite in closed fractures

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
181.92	189.42	HQ Core, Box 11	Marker at 186 ft	Sandstone, light gray to gray, very fine to fine grained
				Lightly fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Light calcite in closed fractures
189.42	189.67	HQ Core, Box 11, Coal Sampled 189.42 ft to 200.17 ft, 3 bags		Coal, dull to bright & shiny, vitrainous
				Friable with good cleating. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
189.67	190.09	HQ Core, Box 11, Coal Sampled 189.42 ft to 200.17 ft, 3 bags		Mudstone dark gray to black, carbonaceous.
				Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
190.09	191.34	HQ Core, Box 11, Coal Sampled 189.42 ft to 200.17 ft, 3 bags		Coal, dull to bright & shiny, vitrainous
				Friable with good cleating. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
191.34	191.59	HQ Core, Box 11, Coal Sampled 189.42 ft to 200.17 ft, 3 bags		Mudstone dark gray to black, carbonaceous.
				Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
191.59	194.26	HQ Core, Box 11, Coal Sampled 189.42 ft to 200.17 ft, 3 bags		Coal, dull to bright & shiny, vitrainous
				Friable with good cleating. Fissile along bedding planes.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				No iron or manganese stains
				Calcite in cleat and closed fractures
194.26	195.09	HQ Core, Box 11, Coal Sampled 189.42 ft to 200.17 ft, 3 bags		Mudstone dark gray to black, carbonaceous.
				Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
195.09	195.59	HQ Core, Box 11, Coal Sampled 189.42 ft to 200.17 ft, 3 bags		Coal, dull to bright & shiny, vitrainous
				Friable with good cleating. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
195.59	195.92	HQ Core, Box 11, Coal Sampled 189.42 ft to 200.17 ft, 3 bags		Mudstone dark gray to black, carbonaceous.
				Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
195.92	196.50	HQ Core, Box 12, Coal Sampled 189.42 ft to 200.17 ft, 3 bags	Marker at 196 ft	Coal, dull to bright & shiny, vitrainous
				Friable with good cleating. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
196.50	196.92	HQ Core, Box 12, Coal Sampled 189.42 ft to 200.17 ft, 3 bags		Mudstone dark gray to black, carbonaceous.
				Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
196.92	197.67	HQ Core, Box 12, Coal Sampled 189.42 ft to 200.17 ft, 3 bags		Coal, dull to bright & shiny, vitrainous
				Friable with good cleating. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
197.67	198.92	HQ Core, Box 12, Coal Sampled 189.42 ft to 200.17 ft, 3 bags		Mudstone dark gray to black, carbonaceous.
				Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
198.92	200.17	HQ Core, Box 12, Coal Sampled 189.42 ft to 200.17 ft, 3 bags		Coal, dull to bright & shiny, vitrainous
				Friable with good cleating. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
200.17	200.92	HQ Core, Box 12		Mudstone dark gray to black, carbonaceous.
				Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
200.92	205.00	HQ Core, Box 12	Marker at 206.00 ft versus 205.00 ft	Mudstone dark gray to black, carbonaceous lenses
				Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
209.25	223.17	HQ Core, Box 13	Marker at 216 ft	Siltstone, gray to dark gray, and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous lenses, Light gray sandstone (very fine grain) layers

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				Very lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Rare calcite in closed fractures and carbonaceous laminations.
223.17	236.50	HQ Core, Box 14	Marker at 226 ft. Marker at 236 ft versus 236.17 ft	Siltstone, gray to dark gray, and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous lenses, Light gray sandstone (very fine grain) layers
				Very lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Rare calcite in closed fractures and carbonaceous laminations.
236.50	250.50	HQ Core, Box 15	Marker at 246 ft	Siltstone, gray to dark gray, and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous lenses, Light gray sandstone (very fine grain) layers
				Very lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Rare calcite in closed fractures and carbonaceous laminations.
250.50	262.75	HQ Core, Box 16	Marker at 256 ft	Siltstone, gray to dark gray, and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous lenses, Light gray sandstone (very fine grain) layers
				Very lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Rare calcite in closed fractures and carbonaceous laminations.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
262.75	264.42	HQ Core, Box 16		Siltstone, gray to dark gray, and mudstone, very dark gray, gradational interbeds, carbonaceous lenses
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes
				No iron or manganese stains
				Calcite in closed fractures
264.17	276.75	HQ Core, Box 17	Marker at 266 ft. Marker at 276 ft versus 276.09 ft	Siltstone, gray to dark gray, and mudstone, very dark gray, gradational interbeds, carbonaceous lenses
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes
				No iron or manganese stains
				Calcite in closed fractures
276.75	277.75	HQ Core, Box 17, Coal Sampled 276.75 ft to 286.08 ft, 3 bags		Coal, dull to bright & shiny, vitrainous
				Friable with good cleating. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
277.33	279.08	HQ Core, Box 18, Coal Sampled 276.75 ft to 286.08 ft, 3 bags		Coal, dull to bright & shiny, vitrainous
				Friable with good cleating. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
279.08	279.25	HQ Core, Box 18, Coal Sampled 276.75 ft to 286.08 ft, 3 bags		Mudstone dark gray to black, carbonaceous lenses
				Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
279.25	285.42	HQ Core, Box 18, Coal Sampled 276.75 ft to 286.08 ft, 3 bags		Coal, dull to bright & shiny, vitrainous
				Friable with good cleating. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
285.42	285.75	HQ Core, Box 18, Coal Sampled 276.75 ft to 286.08 ft, 3 bags		Mudstone dark gray to black, carbonaceous lenses
				Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
285.75	286.08	HQ Core, Box 18, Coal Sampled 276.75 ft to 286.08 ft, 3 bags	Mark at 286 ft	Coal, dull to bright & shiny, vitrainous
				Friable with good cleating. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
286.08	287.58	HQ Core, Box 18		Mudstone dark gray to black, carbonaceous lenses
				Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
287.58	287.66	HQ Core, Box 18		Coal, dull to bright & shiny, vitrainous
				Friable with good cleating. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
287.66	288.08	HQ Core, Box 18		Mudstone dark gray to black, carbonaceous lenses
				Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
288.08	288.33	HQ Core, Box 18		Clay, dark brown

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				Plastic
				No fractures
				No Calcite
288.33	291.08	HQ Core, Box 18		Mudstone dark gray to black, carbonaceous lenses
				Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
290.50	304.25	HQ Core, Box 19	Marker at 296 ft	Siltstone, gray to dark gray, and mudstone, very dark gray, gradational interbeds, carbonaceous lenses
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes
				No iron or manganese stains
				Calcite in closed fractures
304.17	312.25	HQ Core, Box 20	Marker at 306 ft	Siltstone, gray to dark gray, and mudstone, very dark gray, gradational interbeds, carbonaceous lenses
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes
				No iron or manganese stains
				Calcite in closed fractures
312.25	312.58	HQ Core, Box 20		Siltstone, gray to dark gray, and mudstone, very dark gray, gradational interbeds, carbonaceous lenses
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes
				No iron or manganese stains
				More calcite in closed fractures
				Dissiminated pyrite
312.58	313.91	HQ Core, Box 20		Siltstone, gray to dark gray, and mudstone, very dark gray, gradational interbeds, carbonaceous lenses
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes
				No iron or manganese stains

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				Calcite in closed fractures
313.91	317.91	HQ Core, Box 20	Marker at 316.00 ft versus 316.24 ft	Siltstone, gray to dark gray, and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous lenses, Light gray sandstone (very fine grain) layers
				Very lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Rare calcite in closed fractures and carbonaceous laminations.
317.91	331.99	HQ Core, Box 21	Marker at 326 ft	Siltstone, gray to dark gray, and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous lenses, Light gray sandstone (very fine grain) layers
				Very lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Rare calcite in closed fractures and carbonaceous laminations.
331.99	345.57	HQ Core, Box 22	Marker at 336 ft. Marker at 346 ft versus 345.57 ft	Siltstone, gray to dark gray, and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous lenses, Light gray sandstone (very fine grain) layers
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in closed fractures and carbonaceous laminations.
345.08	359.00	HQ Core, Box 23	Marker at 356 ft	Siltstone, gray to dark gray, and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous lenses, Light gray sandstone (very fine grain) layers

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in closed fractures and carbonaceous laminations.
358.92	372.17	HQ Core, Box 24	Marker at 366 ft	Siltstone, gray to dark gray, and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous lenses, Light gray sandstone (very fine grain) layers
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in closed fractures and carbonaceous laminations.
372.25	377.83	HQ Core, Box 25	Marker at 376 ft. Marker at 386 ft versus	Siltstone, gray to dark gray, and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous lenses, Light gray sandstone (very fine grain) layers
				Moderately fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Moderate calcite in closed fractures and carbonaceous laminations.
377.83	377.91	HQ Core, Box 25		Clay, dark brown, Fracture fill?
				Plastic
				No fractures
				No Calcite
377.91	386.08	HQ Core, Box 25	Marker at 376 ft. Marker at 386 ft versus 386.08 ft	Siltstone, gray to dark gray, and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous lenses, Light gray sandstone (very fine grain) layers
				Moderately fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				Moderate calcite in closed fractures and carbonaceous laminations.
376.25	377.58	HQ Core, Box 26		Siltstone, gray to dark gray, and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous lenses, Light gray sandstone (very fine grain) layers
				Moderately fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Moderate calcite in closed fractures and carbonaceous laminations.
377.58	377.75	HQ Core, Box 26		Coal, dull to bright & shiny, vitrainous
				Friable with good cleating. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
377.75	378.42	HQ Core, Box 26		Mudstone dark gray to black, very carbonaceous
				Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
378.42	379.00	HQ Core, Box 26		Coal, dull to bright & shiny, vitrainous
				Friable with good cleating. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
379.00	379.25	HQ Core, Box 26		Clay, dark brown
				Plastic
				No fractures
				No Calcite
379.25	381.08	HQ Core, Box 26, Coal Sampled 379.25 ft to 385.58 ft, 2 bags		Coal, dull to bright & shiny, vitrainous
				Friable with good cleating. Fissile along bedding planes.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				No iron or manganese stains
				Calcite in cleat and closed fractures
381.08	385.58	HQ Core, Box 26, Coal Sampled 379.25 ft to 385.58 ft, 2 bags		Coal and mudstone interbed, coal dull to bright & shiny, vitrainous. Mudstone dark gray to black, carbonaceous.
				Friable with good cleating. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
385.58	386.00	HQ Core, Box 26	Marker at 386 ft	Mudstone dark gray to black, very carbonaceous
				Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
386.00	389.17	HQ Core, Box 26		Mudstone dark gray to black, very carbonaceous lenses
				Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
389.17	389.75	HQ Core, Box 26		Coal, dull to bright & shiny, vitrainous
				Friable with good cleating. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
389.75	389.92	HQ Core, Box 26		Mudstone dark gray to black, very carbonaceous lenses
				Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
389.92	390.09	HQ Core, Box 26		Coal, dull to bright & shiny, vitrainous
				Friable with good cleating. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
390.09	390.34	HQ Core, Box 26		Mudstone dark gray to black, very carbonaceous lenses
				Fissile along bedding planes.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				No iron or manganese stains
				Calcite in cleat and closed fractures
399.33	401.41	HQ Core, Box 27		Mudstone dark gray to black, very carbonaceous lenses
				Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
401.41	401.99	HQ Core, Box 27		Coal, dull to bright & shiny, vitrainous
				Friable with good cleating. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
401.99	403.41	HQ Core, Box 27		Mudstone dark gray to black, very carbonaceous lenses
				Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
403.41	403.66	HQ Core, Box 27		Coal, dull to bright & shiny, vitrainous
				Friable with good cleating. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
403.66	404.08	HQ Core, Box 27		Mudstone dark gray to black, very carbonaceous lenses
				Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
404.08	404.58	HQ Core, Box 27		Mudstone dark gray to black
				Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
404.58	404.91	HQ Core, Box 27		Coal, dull to bright & shiny, vitrainous
				Friable with good cleating. Fissile along bedding planes.
				No iron or manganese stains

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				Calcite in cleat and closed fractures
404.91	405.08	HQ Core, Box 27		Mudstone dark gray to black
				Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
405.08	405.83	HQ Core, Box 27		Coal, dull to bright & shiny, vitrainous
				Friable with good cleating. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
405.83	406.00	HQ Core, Box 27	Marker at 406 ft	Mudstone dark gray to black
				Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
406.00	406.17	HQ Core, Box 27		Clay, dark brown
				Plastic
				No fractures
				No Calcite
406.17	413.34	HQ Core, Box 27	Marker at 306 ft	Siltstone, gray to dark gray, and mudstone, very dark gray, gradational interbeds, carbonaceous lenses
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes
				No iron or manganese stains
				Calcite in closed fractures
413.17	427.09	HQ Core, Box 28	Marker at 416 ft. Marker at 426 ft versus 425.84 ft	Siltstone, gray to dark gray, and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous lenses, Light gray sandstone (very fine grain) layers
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Rare calcite in closed fractures and carbonaceous laminations.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
427.42	441.25	HQ Core, Box 29	Marker at 436 ft	Siltstone, gray to dark gray, and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous lenses, Light gray sandstone (very fine grain) layers
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Rare calcite in closed fractures and carbonaceous laminations.
441.25	455.58	HQ Core, Box 30	Marker at 446 ft	Siltstone, gray to dark gray, and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous lenses, Light gray sandstone (very fine grain) layers
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Rare calcite in closed fractures and carbonaceous laminations.
455.67	469.17	HQ Core, Box 31	Marker at 456 ft. Marker at 466 ft versus 465.84	Siltstone, gray to dark gray, and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous lenses, Light gray sandstone (very fine grain) layers
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Rare calcite in closed fractures and carbonaceous laminations.
469.25	477.50	HQ Core, Box 32	Marker at 476 ft	Siltstone, gray to dark gray, and mudstone, very dark gray, gradational interbeds, carbonaceous lenses
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes
				No iron or manganese stains

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				Rare calcite in closed fractures
477.50	478.42	HQ Core, Box 32, Coal Sampled 477.50 ft to 484.50 ft, 2 bags		Coal, dull to bright & shiny, vitrainous
				Friable with good cleating. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
478.42	483.00	HQ Core, Box 32, Coal Sampled 477.50 ft to 484.50 ft, 2 bags		Coal and mudstone interbed, coal dull to bright & shiny, vitrainous. Mudstone dark gray to black, carbonaceous.
				Friable with good cleating. Fissile along bedding planes.
				No iron or manganese stains
				Common calcite in cleat and closed fractures
481.58	484.50	HQ Core, Box 33, Coal Sampled 477.50 ft to 484.50 ft, 2 bags		Coal, dull to bright & shiny, vitrainous
				Friable with good cleating. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
484.50	488.33	HQ Core, Box 33	Marker at 486 ft	Siltstone, gray to dark gray, and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous lenses, Light gray sandstone (very fine grain) layers
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Rare calcite in closed fractures and carbonaceous laminations.
488.33	488.66	HQ Core, Box 33		Calcite filled high angle fracture
				Heavily fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Heavy calcite in closed fractures

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
488.66	495.49	HQ Core, Box 33		Siltstone, gray to dark gray, and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous lenses, Light gray sandstone (very fine grain) layers
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Rare calcite in closed fractures and carbonaceous laminations.
Marker for 496 ft				
496.00	509.83	HQ Core, Box 34	Marker at 496 ft. Marker at 506 ft versus 506.00 ft	Siltstone, gray to dark gray, and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous lenses, Light gray sandstone (very fine grain) layers
				Heavily fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Heavy calcite in closed fractures and carbonaceous laminations.
509.67	523.17	HQ Core, Box 35	Marker at 516 ft	Siltstone, gray to dark gray, and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous lenses, Light gray sandstone (very fine grain) layers
				Heavily fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Heavy calcite in closed fractures and carbonaceous laminations.
523.33	536.66	HQ Core, Box 36	Marker at 526 ft. Marker at 536 ft versus 535.00 ft	Siltstone, gray to dark gray, and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous lenses, Light gray sandstone (very fine grain) layers

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				Heavily fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Heavy calcite in closed fractures and carbonaceous laminations.
536.42	550.09	HQ Core, Box 37	Marker at 546 ft	Siltstone, gray to dark gray, and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous lenses, Light gray sandstone (very fine grain) layers
				Heavily fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Heavy calcite in closed fractures and carbonaceous laminations.
548.08	561.58	HQ Core, Box 38	Marker at 556 ft	Siltstone, gray to dark gray, and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous lenses, Light gray sandstone (very fine grain) layers
				Heavily fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Heavy calcite in high angle bedding plane, closed fractures and carbonaceous laminations.
561.08	574.08	HQ Core, Box 39	Marker at 566 ft	Siltstone, gray to dark gray, and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous lenses, Light gray sandstone (very fine grain) layers
				Heavily fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Heavy calcite in high angle bedding plane, closed fractures and carbonaceous laminations.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
573.58	578.41	HQ Core, Box 40	Marker at 576 ft	Siltstone, gray to dark gray, and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous lenses, Light gray sandstone (very fine grain) layers
				Heavily fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Heavy calcite in high angle bedding plane, closed fractures and carbonaceous laminations.
578.41	587.08	HQ Core, Box 40	Marker at 576 ft. Marker at 586 ft versus 586.49	Sandstone, light gray to gray, very fine to fine grained
				Highly fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Heavy calcite in closed fractures
585.83	587.83	HQ Core, Box 41		Sandstone, light gray to gray, very fine to fine grained
				Highly fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Heavy calcite in closed fractures
587.83	588.25	HQ Core, Box 41		Mudstone dark gray to black
				Highly fractured. Fissile along bedding planes.
				No iron or manganese stains
				Heavy calcite in cleat and closed fractures
588.25	589.17	HQ Core, Box 41		Coal, dull to bright & shiny, vitrainous
				Friable with good cleating. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
589.17	591.75	HQ Core, Box 41		Mudstone dark gray to black
				Highly fractured. Fissile along bedding planes.
				No iron or manganese stains
				Heavy calcite in cleat and closed fractures

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
591.75	595.50	HQ Core, Box 41, Coal Sampled 591.75 ft to 595.25 ft, 1 bag		Coal, dull to bright & shiny, vitrainous
				Friable with good cleating. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
595.50	596.25	HQ Core, Box 41		Mudstone dark gray to black
				Highly fractured. Fissile along bedding planes.
				No iron or manganese stains
				Heavy calcite in cleat and closed fractures
596.25	599.92	HQ Core, Box 41	Marker at 596 ft	Siltstone, gray to dark gray, and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous lenses
				Heavily fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Heavy calcite in closed fractures and carbonaceous laminations.
599.00	601.58	HQ Core, Box 42		Mudstone dark gray to black
				Highly fractured. Fissile along bedding planes.
				No iron or manganese stains
				Heavy calcite in cleat and closed fractures
601.58	612.00	HQ Core, Box 42	Marker at 606 ft	Siltstone, gray to dark gray
				Moderately fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Moderate calcite in closed fractures and carbonaceous laminations.
611.92	616.00	HQ Core, Box 43	Marker at 616 ft	Siltstone, gray to dark gray, and sandstone, light gray, gradational to defined interbeds, Coal and carbonaceous lenses

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				Moderately fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Moderate calcite in closed fractures and carbonaceous laminations.
624.75	637.92	HQ Core, Box 44	Marker at 626 ft. Marker at 636 ft versus 636.17 ft	Siltstone, gray to dark gray, and sandstone, light gray, gradational to defined interbeds, Coal and carbonaceous lenses
				Moderately fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Heavy calcite in closed fractures and carbonaceous laminations.
637.17	646.00	HQ Core, Box 45	Marker at 646 ft	Siltstone, gray to dark gray, and sandstone, light gray, gradational to defined interbeds, Coal and carbonaceous lenses
				Moderately fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Heavy calcite in closed fractures and carbonaceous laminations.
650.00	663.42	HQ Core, Box 46	Marker at 656 ft	Siltstone, gray to dark gray, and sandstone, light gray, gradational to defined interbeds, Coal and carbonaceous lenses
				Moderately fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Heavy calcite in closed fractures and carbonaceous laminations.
663.00	676.83	HQ Core, Box 47	Marker at 666 ft	Siltstone, gray to dark gray, and sandstone, light gray, gradational to defined interbeds, Coal and carbonaceous lenses

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				Heavily fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Very heavy calcite in closed fractures and carbonaceous laminations.
675.50	686.50	HQ Core, Box 48	Marker at 676 ft. Marker 686 ft versus 686.50 ft	Siltstone, gray to dark gray, and sandstone, light gray, gradational to defined interbeds, Coal and carbonaceous lenses
				Moderately fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Moderate calcite in closed fractures and carbonaceous laminations.
TOTAL DEPTH= 686 ft= 209.15 m				

Drilling began on 2005 Oct 4

Completed as piezometer using IPS=2.5 inch. OD=2.875 inch,
Schedule 40 wall thickness=0.203 inch, ID=2.469 inch

Pipe perforated by drilling 1/16" holes in pipe

Bottom of perforations= 686 ft

Top of perforations= 386 ft

10 feet of bentonite grout from surface to 10 feet

Well Completed= 2005 Oct 8

TIME PER FOOT= 5,786 min/ 686 ft= 8.40 min/ft





COREHOLE LITHOLOGIC LOG

PROJECT	<u>Mount Klappan</u>	COREHOLE NUMBER	<u>05 006</u>
CLIENT	<u>Fortune Minerals/Marston</u>	WELL NUMBER	<u>Pump Test Observation Well</u>
GPS LOCATION			<u>Begin Drilling 2005 Oct 10, Completed 2005 Oct 12</u>
NAD83	<u>507,314 6,344,052</u>	DATE	<u>Oct 12</u>
CONTRACTOR	<u>Connors Drilling, Kamloops, BC, CA</u>	LOGGED BY	<u>Paul Oldaker</u>
DRILLER(S)	<u>Mitch Burtneck & Henry Hogan</u>	CHECKED BY	<u>GPS ELEVATION=1,621 m</u>
METHOD	<u>HQ Core Fluid Rotary</u>	SHEET 1 OF	<u></u>

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
10.00	23.50	HQ Core, Box 1	Marker at 10 feet. Marker at 15 feet versus 15.08 feet	Siltstone, gray to dark gray, carbonaceous lenses and laminations
				Weathered and oxidized
				No iron or manganese stains
				Rare calcite in closed fractures and carbonaceous laminations
22.50	25.00	HQ Core, Box 2	Marker at 25 feet.	Siltstone, gray to dark gray, carbonaceous lenses and laminations
				Weathered and oxidized
				No iron or manganese stains
				Rare calcite in closed fractures and carbonaceous laminations
25.00	27.00	HQ Core, Box 2		Siltstone, gray to dark gray, carbonaceous lenses and laminations
				Rubble
				No iron or manganese stains
				Heavy calcite in closed fractures and carbonaceous laminations
27.00	32.17	HQ Core, Box 2		Siltstone, gray to dark gray, carbonaceous lenses and laminations
				Weathered and oxidized
				No iron or manganese stains
				Rare calcite in closed fractures and carbonaceous laminations

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
32.17	35.92	HQ Core, Box 2		Sandstone, very fine to fine, light gray to darkgray, Siltstone, gray to brown, Coal and carbonaceous lenses, and laminations
				Moderately fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Moderate calcite in closed fractures and carbonaceous laminations
35.08	40.33	HQ Core, Box 3		Sandstone, very fine to fine, light gray to darkgray, Siltstone, gray to brown, Coal and carbonaceous lenses, and laminations
				Moderately fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Moderate calcite in closed fractures and carbonaceous laminations
40.33	44.08	HQ Core, Box 3		Mudstone, gray to dark gray, Coal and very carbonaceous lenses and laminations
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations
44.08	45.00	HQ Core, Box 3	Marker at 45 feet	Coal, dull to bright
				Some cleat
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations
45.00	48.42	HQ Core, Box 3		Mudstone, gray to dark gray, Coal and very carbonaceous lenses and laminations
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
47.50	52.00	HQ Core, Box 4		Mudstone, gray to dark gray, Coal and very carbonaceous lenses and laminations
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations
52.00	52.58	HQ Core, Box 4		Coal, dull to bright
				Some cleat
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations
52.58	59.50	HQ Core, Box 4		Mudstone, gray to dark gray, Coal and very carbonaceous lenses and laminations
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations
60.75	61.00	HQ Core, Box 5		Coal, dull to bright
				Some cleat
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations
61.00	62.33	HQ Core, Box 5		Mudstone, gray to dark gray, Coal and very carbonaceous lenses and laminations
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations
62.33	65.50	HQ Core, Box 5, Coal sampled 62.33 feet to 74.83 feet in 3 bags	Marker at 65 feet	Coal, dull to bright
				Cleated
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
65.50	65.75	HQ Core, Box 5, Coal sampled 62.33 feet to 74.83 feet in 3 bags		Mudstone, gray to dark gray, Coal and very carbonaceous lenses and laminations
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations
65.75	66.25	HQ Core, Box 5, Coal sampled 62.33 feet to 74.83 feet in 3 bags		Coal, dull to bright
				Some cleat
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations
66.25	66.58	HQ Core, Box 5, Coal sampled 62.33 feet to 74.83 feet in 3 bags		Mudstone, gray to dark gray, Coal and very carbonaceous lenses and laminations
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations
66.58	67.66	HQ Core, Box 5, Coal sampled 62.33 feet to 74.83 feet in 3 bags		Coal, dull to bright
				Some cleat
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations
67.66	68.08	HQ Core, Box 5, Coal sampled 62.33 feet to 74.83 feet in 3 bags		Siltstone, gray to brown, Coal and very carbonaceous lenses and laminations

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations
68.08	74.83	HQ Core, Box 5, Coal sampled 62.33 feet to 74.83 feet in 3 bags		Coal, dull to bright
				Cleated
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations
74.42	76.50	HQ Core, Box 6	Marker at 75 feet	Mudstone, gray to dark gray, Coal and very carbonaceous lenses and laminations
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations
76.50	88.17	HQ Core, Box 6, Coal sampled 76.50 feet to 92.83 feet in 4 bags	Marker at 85 feet versus 87.42 feet	Coal, dull to bright
				Cleated
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations
86.58	92.83	HQ Core, Box 7, Coal sampled 76.50 feet to 92.83 feet in 4 bags		Coal, dull to bright
				Cleated
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations
92.83	95.58	HQ Core, Box 7	Marker at 95 feet	Mudstone, gray to dark gray, Coal and very carbonaceous lenses and laminations

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations
95.58	100.41	HQ Core, Box 7, Coal sampled 95.58 feet to 104.33 feet in 2 bags		Coal, dull to bright
				Cleated
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations
99.50	103.42	HQ Core, Box 8, Coal sampled 95.58 feet to 104.33 feet in 2 bags		Coal, dull to bright
				Cleated
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations
103.42	104.42	HQ Core, Box 8		Mudstone, gray to dark gray, Coal and very carbonaceous lenses and laminations
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations
104.42	108.50	HQ Core, Box 8, Coal sampled 104.42 feet to 115.25 feet in 3 bags	Marker at 105 feet	Coal, dull to bright
				Cleated
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
108.50	108.83	HQ Core, Box 8, Coal sampled 104.42 feet to 115.25 feet in 3 bags		Mudstone, gray to dark gray, Coal and very carbonaceous lenses and laminations
				Moderate fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Very heavy calcite in closed fractures and carbonaceous laminations
108.83	113.16	HQ Core, Box 8, Coal sampled 104.42 feet to 115.25 feet in 3 bags		Coal, dull to bright
				Cleated, Almost vertical bedding
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations
111.25	113.33	HQ Core, Box 9, Coal sampled 104.42 feet to 115.25 feet in 3 bags		Coal, dull to bright
				Cleated
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations
113.33	114.66	HQ Core, Box 9		Mudstone, gray to dark gray, Coal and very carbonaceous lenses and laminations
				Moderate fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Very heavy calcite in closed fractures and carbonaceous laminations
114.66	115.33	HQ Core, Box 9	Marker at 115 feet	Coal, dull to bright
				Cleated
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
115.33	119.91	HQ Core, Box 9		Mudstone, gray to dark gray, Coal and very carbonaceous lenses and laminations
				Moderate fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Very heavy calcite in closed fractures and carbonaceous laminations
				Large accumulation of pyrite
119.91	120.66	HQ Core, Box 9		Mudstone, gray to dark gray, Coal and very carbonaceous lenses and laminations
				Moderate fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations
120.66	121.91	HQ Core, Box 9		Coal, dull to bright
				Cleated
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations
121.91	123.24	HQ Core, Box 9		Mudstone, gray to dark gray, Coal and very carbonaceous lenses and laminations
				Moderate fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations
123.24	124.57	HQ Core, Box 9, Coal sampled from 122.92 feet to 129.42 feet in 2 bags		Coal, dull to bright
				Cleated
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
124.25	129.42	HQ Core, Box 10, Coal sampled from 122.92 feet to 129.42 feet in 2 bags	Marker at 125 feet	Coal, dull to bright
				Cleated
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations
129.42	130.75	HQ Core, Box 10		Mudstone, gray to dark gray, Coal and very carbonaceous lenses and laminations
				Moderate fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations
130.75	131.25	HQ Core, Box 10		Coal, dull to bright
				Cleated
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations
131.25	133.00	HQ Core, Box 10		Mudstone, gray to dark gray, Coal and very carbonaceous lenses and laminations
				Moderate fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations
133.00	133.50	HQ Core, Box 10		Mudstone, gray to dark gray, carbonaceous lenses and laminations
				Moderate fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations
133.50	134.83	HQ Core, Box 10	Marker at 135 feet versus 134.83 feet	Coal, dull to bright
				Cleated
				No iron or manganese stains

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				Light calcite in closed fractures and carbonaceous laminations
134.83	136.33	HQ Core, Box 10		Mudstone, gray to dark gray, carbonaceous lenses and laminations
				Moderate fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations
136.33	137.58	HQ Core, Box 10		Coal, dull to bright
				Cleated
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations
134.75	139.08	HQ Core, Box 11		Mudstone, gray to dark gray, very carbonaceous lenses and laminations
				Moderate fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations
139.08	139.33	HQ Core, Box 11		Coal, dull to bright
				Cleated
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations
139.33	140.33	HQ Core, Box 11		Mudstone, gray to dark gray, carbonaceous lenses and laminations
				Moderate fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations
140.33	140.41	HQ Core, Box 11		Coal, dull to bright
				Cleated
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
140.41	140.66	HQ Core, Box 11		Mudstone, gray to dark gray, very carbonaceous lenses and laminations
				Moderate fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations
140.66	148.24	HQ Core, Box 11, Coal Sampled 140.67 feet to 148.25 feet in 2 bags		Coal, dull to bright
				Cleated
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations
148.92	149.17	HQ Core, Box 12		Mudstone, gray to dark gray, carbonaceous lenses and laminations
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations
149.17	149.50	HQ Core, Box 12		Coal, dull to bright
				Cleated
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations
149.50	152.50	HQ Core, Box 12		Mudstone, gray to dark gray, carbonaceous lenses and laminations
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations
152.50	152.67	HQ Core, Box 12		Coal, dull to bright
				Cleated
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
152.67	153.75	HQ Core, Box 12		Mudstone, gray to dark gray, carbonaceous lenses and laminations
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations
153.75	163.08	HQ Core, Box 12, Coal sampled from 153.75 feet and 162.92 feet in 3 bags	Marker at 155 feet	Coal, dull to bright
				Cleated
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations
162.08	162.92	HQ Core, Box 13, Coal sampled from 153.75 feet and 162.92 feet in 3 bags		Coal, dull to bright
				Cleated
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations
162.92	166.92	HQ Core, Box 13	Marker at 165 feet	Mudstone, gray to dark gray, carbonaceous lenses and laminations
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations
166.92	167.67	HQ Core, Box 13		Coal, dull to bright
				Cleated
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations
167.67	175.67	HQ Core, Box 13	Marker at 175 feet versus 175.67 feet	Mudstone, gray to dark gray, carbonaceous lenses and laminations

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations
174.50	178.75	HQ Core, Box 14		Mudstone, gray to dark gray, carbonaceous lenses and laminations
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations
178.75	180.00	HQ Core, Box 14		Coal, dull to bright
				Cleated
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations
180.00	185.00	HQ Core, Box 14	Marker at 185 feet	Mudstone, gray to dark gray, carbonaceous lenses and laminations
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations
185.00	188.17	HQ Core, Box 14		Mudstone, gray to dark gray, and Siltstone, gray to brown, carbonaceous lenses and laminations, gradational to defined interbeds
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations
188.42	193.58	HQ Core, Box 15		Mudstone, gray to dark gray, and Siltstone, gray to brown, carbonaceous lenses and laminations, gradational to defined interbeds

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations
193.58	193.75	HQ Core, Box 15		Coal, dull to bright
				Cleated
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations
193.75	195.00	HQ Core, Box 15	Marker at 195 feet	Mudstone, gray to dark gray, and Siltstone, gray to brown, carbonaceous lenses and laminations, gradational to defined interbeds
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations
195.00	196.67	HQ Core, Box 15		Mudstone, gray to dark gray, and Siltstone, gray to brown, carbonaceous lenses and laminations, gradational to defined interbeds
				Moderately fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Moderate calcite in closed fractures and carbonaceous laminations
196.67	198.67	HQ Core, Box 15, Coal sampled from 196.67 feet to 198.67 feet		Coal, dull to bright
				Cleated
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations
198.67	199.59	HQ Core, Box 15		Mudstone, gray to dark gray, and Siltstone, gray to brown, carbonaceous lenses and laminations, gradational to defined interbeds

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				Moderately fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Moderate calcite in closed fractures and carbonaceous laminations
201.08	201.58	HQ Core, Box 16		Mudstone, gray to dark gray, and Siltstone, gray to brown, carbonaceous lenses and laminations, gradational to defined interbeds
				Moderately fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Moderate calcite in closed fractures and carbonaceous laminations
201.58	202.75	HQ Core, Box 16		Coal, dull to bright, Mudstone laminations
				Cleated
				No iron or manganese stains
				Heavy calcite in closed fractures and carbonaceous laminations
202.75	203.08	HQ Core, Box 16		Siltstone, gray to brown, carbonaceous lenses and laminations
				Moderately fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Heavy calcite in closed fractures and carbonaceous laminations
203.08	204.00	HQ Core, Box 16		Coal, dull to bright, Mudstone laminations
				Cleated
				No iron or manganese stains
				Heavy calcite in closed fractures and carbonaceous laminations
204.00	205.00	HQ Core, Box 14	Marker at 205 feet	Mudstone, gray to dark gray, carbonaceous lenses and laminations
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				Light calcite in closed fractures and carbonaceous laminations
205.00	214.50	HQ Core, Box 16		Mudstone, gray to dark gray, and Siltstone, gray to brown, carbonaceous lenses and laminations, gradational to defined interbeds
				Moderately fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Moderate calcite in closed fractures and carbonaceous laminations
214.17	227.67	HQ Core, Box 17	Marker at 215 feet. Marker at 225 feet versus 225.00 feet	Sandstone, very fine to fine, gray to dark gray, Siltstone, gray to brown, Mudstone, gray to dark gray, and carbonaceous lenses and laminations, gradational to defined interbeds
				Moderately fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Moderate calcite in closed fractures and carbonaceous laminations
226.83	239.67	HQ Core, Box 18	Marker at 235 feet.	Sandstone, very fine to fine, gray to dark gray, Siltstone, gray to brown, Mudstone, gray to dark gray, and carbonaceous lenses and laminations, gradational to defined interbeds
				Moderately fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Moderate calcite in closed fractures and carbonaceous laminations
240.17	253.33	HQ Core, Box 19	Marker at 245 feet.	Sandstone, very fine to fine, gray to dark gray, Siltstone, gray to brown, Mudstone, gray to dark gray, and carbonaceous lenses and laminations, gradational to defined interbeds

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations
253.25	266.50	HQ Core, Box 20	Marker at 255 feet. Marker at 265 feet versus 265.17 feet	Sandstone, very fine to fine, gray to dark gray, Siltstone, gray to brown, Mudstone, gray to dark gray, and carbonaceous lenses and laminations, gradational to defined interbeds
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations
266.17	279.92	HQ Core, Box 21	Marker at 275 feet.	Sandstone, very fine to fine, gray to dark gray, Siltstone, gray to brown, Mudstone, gray to dark gray, and carbonaceous lenses and laminations, gradational to defined interbeds
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations
280.83	287.92	HQ Core, Box 22	Marker at 285 feet.	Sandstone, very fine to fine, gray to dark gray, Siltstone, gray to brown, Mudstone, gray to dark gray, and carbonaceous lenses and laminations, gradational to defined interbeds
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations
287.92	288.09	HQ Core, Box 22		Coal, dull to bright Cleated

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations
288.09	292.09	HQ Core, Box 22		Siltstone, gray to brown, Mudstone, gray to dark gray, and carbonaceous lenses and laminations, gradational to defined interbeds
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations
292.09	293.84	HQ Core, Box 22		Mudstone, dark gray to black, carbonaceous, gradational to defined interbeds
				Heavily fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Heavy calcite in closed fractures and carbonaceous laminations
293.84	294.59	HQ Core, Box 22, Coal sampled from 292.33 feet and 304.67 feet in 3 bags. Measured from 295 feet marker		Coal, dull to bright
				Cleated
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations
293.08	294.33	HQ Core, Box 23, Coal sampled from 292.33 feet and 304.67 feet in 3 bags. Measured from 295 feet marker		Coal, dull to bright
				Cleated
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
294.33	294.41	HQ Core, Box 23, Coal sampled from 292.33 feet and 304.67 feet in 3 bags. Measured from 295 feet marker		Mudstone, dark gray to black, carbonaceous, gradational to defined interbeds
				Heavily fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Heavy calcite in closed fractures and carbonaceous laminations
294.41	297.49	HQ Core, Box 23, Coal sampled from 292.33 feet and 304.67 feet in 3 bags. Measured from 295 feet marker	Marker at 295 feet	Coal, dull to bright
				Cleated
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations
297.49	297.74	HQ Core, Box 23, Coal sampled from 292.33 feet and 304.67 feet in 3 bags. Measured from 295 feet marker		Mudstone, dark gray to black, carbonaceous, gradational to defined interbeds
				Heavily fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Heavy calcite in closed fractures and carbonaceous laminations
297.74	299.57	HQ Core, Box 23, Coal sampled from 292.33 feet and 304.67 feet in 3 bags. Measured from 295 feet marker		Coal, dull to bright
				Cleated
				No iron or manganese stains

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				Light calcite in closed fractures and carbonaceous laminations
299.57	299.74	HQ Core, Box 23, Coal sampled from 292.33 feet and 304.67 feet in 3 bags. Measured from 295 feet marker		Mudstone, dark gray to black, carbonaceous, gradational to defined interbeds
				Heavily fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Heavy calcite in closed fractures and carbonaceous laminations
299.74	304.66	HQ Core, Box 23, Coal sampled from 292.33 feet and 304.67 feet in 3 bags. Measured from 295 feet marker		Coal, dull to bright
				Cleated
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations
304.66	306.66	HQ Core, Box 23, Coal sampled from 292.33 feet and 304.67 feet in 3 bags. Measured from 295 feet marker	Marker at 305 feet	Mudstone, dark gray to black, carbonaceous, gradational to defined interbeds
				Heavily fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Heavy calcite in closed fractures and carbonaceous laminations
306.67	317.50	HQ Core, Box 24	Marker at 315 feet	Siltstone, gray to brown, Mudstone, gray to dark gray, and carbonaceous lenses and laminations, gradational to defined interbeds

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				Moderately fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Moderate calcite in closed fractures and carbonaceous laminations
317.50	317.58	HQ Core, Box 24		Clay, dark brown, plastic
				No fractures
				No iron or manganese stains
				No calcite
317.58	320.00	HQ Core, Box 24		Siltstone, gray to brown, Mudstone, gray to dark gray, and carbonaceous lenses and laminations, gradational to defined interbeds
				Moderately fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Moderate calcite in closed fractures and carbonaceous laminations
319.42	333.17	HQ Core, Box 25	Marker at 325 feet.	Sandstone, very fine to fine, gray to dark gray, Siltstone, gray to brown, Mudstone, gray to dark gray, and carbonaceous lenses and laminations, gradational to defined interbeds
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations
332.75	346.58	HQ Core, Box 26	Marker at 335 feet. Marker at 345 feet versus 344.83 feet.	Siltstone, gray to brown, Mudstone, gray to dark gray, and carbonaceous lenses and laminations, gradational to defined interbeds
				Moderately fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Moderate calcite in closed fractures and carbonaceous laminations

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
346.75	351.50	HQ Core, Box 27		Sandstone, very fine to fine, gray to dark gray
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations
351.50	361.08	HQ Core, Box 27	Marker at 355 feet.	Siltstone, gray to brown, Mudstone, gray to dark gray, and carbonaceous lenses and laminations, gradational to defined interbeds
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations
361.50	375.50	HQ Core, Box 28	Marker at 365 feet.	Sandstone, very fine to fine, gray to dark gray, Siltstone, gray to brown, Mudstone, gray to dark gray, and carbonaceous lenses and laminations, gradational to defined interbeds
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations
374.08	388.00	HQ Core, Box 29	Marker at 375 feet. Marker at 385 feet versus 385.17 feet	Sandstone, very fine to fine, gray to dark gray, Siltstone, gray to brown, Mudstone, gray to dark gray, and carbonaceous lenses and laminations, gradational to defined interbeds
				Rarely fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Rare calcite in closed fractures and carbonaceous laminations

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
388.00	395.00	HQ Core, Box 30	Marker at 395 feet.	Sandstone, very fine to fine, gray to dark gray, Siltstone, gray to brown, Mudstone, gray to dark gray, and carbonaceous lenses and laminations, gradational to defined interbeds
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations

TOTAL DEPTH= 395 ft= 120.43 m

Drilling began on 2005 Oct 10

**Completed as piezometer using IPS=2.5 inch. OD=2.875 inch
Schedule 40 wall thickness=0.203 inch , ID=2.469 inch**

Pipe perforated by drilling 1/16" holes in pipe

Bottom of perforations= 395 ft

Top of perforations= 195 ft

10 feet of bentonite grout from surface to 10 feet

Well Completed= 2005 Oct 12

TIME PER FOOT= 2,880 min/ 395 ft= 7.29 min/foot



COREHOLE LITHOLOGIC LOG

PROJECT	<u>Mount Klappan</u>	COREHOLE NUMBER	<u>05 009</u>
CLIENT	<u>Fortune Minerals/Marston</u>	WELL NUMBER	<u>Pump Test Observation Piezometer</u>
GPS LOCATION			<u>Begin Drilling 2005 Oct 8, Completed 2005 Oct 10</u>
NAD83	<u>507,190 6,343,912</u>	DATE	<u>10</u>
CONTRACTOR	<u>Connors Drilling, Kamloops, BC, CA</u>	LOGGED BY	<u>Paul Oldaker</u>
DRILLER(S)	<u>Mitch Burtneck & Henry Hogan</u>	CHECKED BY	<u>GPS ELEVATION=1,610 m</u>
METHOD	<u>HQ Core Fluid Rotary</u>	SHEET 1 OF	

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
0.00	10.00			Rotary through surface soils, Set surface HWC, 0-10 ft
13.33	14.58	HQ Core, Box 1		Sandstone, light gray to gray, very fine to fine grained Light fractured in vertical, horizontal, and angular directions. No iron or manganese stains Calcite in closed fractures
14.58	14.83	HQ Core, Box 1	Marker at 15 ft	Coal, mostly dull to bright & shiny, vitrainous, oxidized Friable with good cleating. Fissile along bedding planes. No iron or manganese stains Calcite in cleat and closed fractures
14.83	15.16	HQ Core, Box 1		Clay, gray to dark gray Plastic No iron or manganese stains No calcite
15.16	15.49	HQ Core, Box 1	Marker at 15 ft	Coal, mostly dull to bright & shiny, vitrainous, oxidized Friable with good cleating. Fissile along bedding planes. No iron or manganese stains Calcite in cleat and closed fractures
15.49	15.57	HQ Core, Box 1		Mudstone dark gray to black, carbonaceous. Fissile along bedding planes. No iron or manganese stains Calcite in cleat and closed fractures
15.57	15.65	HQ Core, Box 1		Coal, mostly dull to bright & shiny, vitrainous, oxidized

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				Friable with good cleating. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
15.65	15.82	HQ Core, Box 1		Mudstone dark gray to black, carbonaceous.
				Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
15.82	16.07	HQ Core, Box 1		Coal, mostly dull to bright & shiny, vitrainous, oxidized
				Friable with good cleating. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
16.07	16.65	HQ Core, Box 1		Mudstone dark gray to black, carbonaceous.
				Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
16.65	17.07	HQ Core, Box 1		Clay, gray to dark gray
				Plastic
				No iron or manganese stains
				No calcite
17.07	25.82	HQ Core, Box 1	Marker at 25 ft versus 22.15 ft	Siltstone, gray to dark gray, and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous lenses, Light gray sandstone (very fine grain) layers with depth
				Moderately fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in closed fractures and carbonaceous laminations.
29.83	30.75	HQ Core, Box 2		Siltstone, gray to dark gray, and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous lenses, Light gray sandstone (very fine grain) layers with depth
				Moderately fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				Calcite in closed fractures and carbonaceous laminations.
30.75	43.50	HQ Core, Box 2	Marker at 35 ft	Sandstone, light gray to gray, very fine to coarse grained. Numerous clay clasts
Possible marker bed				Light to moderately fractured in vertical, horizontal, and angular directions. Clay and siltstone fracture filling
				No iron or manganese stains
				Calcite in closed fractures
43.25	48.75	HQ Core, Box 3	Marker at 45 ft.	Sandstone, light gray to gray, very fine to coarse grained. Numerous clay clasts
Possible marker bed				Light to moderately fractured in vertical, horizontal, and angular directions. Clay and siltstone fracture filling
				No iron or manganese stains
				Calcite in closed fractures
48.75	57.00	HQ Core, Box 3	Marker at 45 ft. Marker at 55 ft versus 55.08 ft	Sandstone, light gray to gray, very fine to coarse grained. Some conglomeratic. Sub angular to well rounded. Numerous clay clasts
Possible marker bed				Light to moderately fractured in vertical, horizontal, and angular directions. Clay and siltstone fracture filling
				No iron or manganese stains
				Calcite in closed fractures
56.75	70.33	HQ Core, Box 4	Marker at 65 ft	Sandstone, light gray to gray, very fine to coarse grained. Some conglomeratic. Sub angular to well rounded. Numerous clay clasts
Possible marker bed				Light to moderately fractured in vertical, horizontal, and angular directions. Clay and siltstone fracture filling
				No iron or manganese stains
				Calcite in closed fractures
69.08	76.25	HQ Core, Box 5	Marker at 75 ft	Sandstone, light gray to gray, very fine to coarse grained. Some conglomeratic. Sub angular to well rounded. Numerous clay clasts

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
Possible marker bed				Light to moderately fractured in vertical, horizontal, and angular directions. Clay and siltstone fracture filling
				No iron or manganese stains
				Calcite in closed fractures
76.25	83.08	HQ Core, Box 5		Sandstone, light gray to gray, very fine to fine grained
				Moderately fractured in vertical, horizontal, and angular directions. Some very broken
				No iron or manganese stains
				Moderate to heavy calcite in closed fractures
82.08	95.00	HQ Core, Box 6	Marker at 85 ft	Sandstone, light gray to gray, very fine to fine grained
				Moderately fractured in vertical, horizontal, and angular directions. Some very broken
				No iron or manganese stains
				Moderate to heavy calcite in closed fractures
95.00	108.50	HQ Core, Box 7	Marker at 95 ft. Marker at 105 ft versus 106.17 ft	Sandstone, light gray to gray, very fine to fine grained
				Moderately fractured in vertical, horizontal, and angular directions. Some very broken
				No iron or manganese stains
				Moderate to heavy calcite in closed fractures
106.83	108.17	HQ Core, Box 8		Sandstone, light gray to gray, very fine to fine grained
				Moderately fractured in vertical, horizontal, and angular directions. Some very broken
				No iron or manganese stains
				Moderate to heavy calcite in closed fractures

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
108.17	120.05	HQ Core, Box 8		Siltstone, gray to dark gray, and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous lenses, Light gray sandstone (very fine grain) layers with depth
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in closed fractures and carbonaceous laminations.
119.92	133.67	HQ Core, Box 9	Marker at 125 ft	Siltstone, gray to dark gray, and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous lenses, Light gray sandstone (very fine grain) layers with depth
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in closed fractures and carbonaceous laminations.
133.67	133.75	HQ Core, Box 9		Clay, dark gray
				Plastic
				No iron or manganese stains
				No calcite
133.75	134.08	HQ Core, Box 9		Siltstone, gray to dark gray, and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous lenses, Light gray sandstone (very fine grain) layers with depth
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in closed fractures and carbonaceous laminations.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
134.00	147.00	HQ Core, Box 10	Marker at 135 ft. Marker at 145 ft versus 145.00 ft	Siltstone, gray to dark gray, and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous lenses, Light gray sandstone (very fine grain) layers with depth
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in closed fractures and carbonaceous laminations.
147.25	155.58	HQ Core, Box 11	Marker at 155 ft	Siltstone, gray to dark gray, and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous lenses, Light gray sandstone (very fine grain) layers with depth
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in closed fractures and carbonaceous laminations.
155.58	155.66	HQ Core, Box 11		Clay, dark gray
				Plastic
				No iron or manganese stains
				No calcite
155.66	161.08	HQ Core, Box 11		Siltstone, gray to dark gray, and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous lenses, Light gray sandstone (very fine grain) layers with depth
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in closed fractures and carbonaceous laminations.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
162.08	165.67	HQ Core, Box 12		Siltstone, gray to dark gray, and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous lenses, Light gray sandstone (very fine grain) layers with depth
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in closed fractures and carbonaceous laminations.
165.67	166.00	HQ Core, Box 12		Coal, dull to bright & shiny, vitrainous.
				Friable with good cleating. Fissile along bedding planes. Almost a slurry
				No iron or manganese stains
				Calcite in cleat and closed fractures
166.00	166.83	HQ Core, Box 12		Mudstone dark gray to black, carbonaceous.
				Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
166.83	167.08	HQ Core, Box 12		Coal, dull to bright & shiny, vitrainous.
				Friable with good cleating. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
167.08	168.75	HQ Core, Box 12	Marker at 175 ft versus 167.91	Mudstone dark gray to black, carbonaceous.
				Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
175.83	176.08	HQ Core, Box 12		Mudstone dark gray to black, very carbonaceous.
				Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
176.08	176.33	HQ Core, Box 12		Mudstone dark gray to black, carbonaceous.
				Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
176.33	177.50	HQ Core, Box 12		Mudstone dark gray to black, very carbonaceous.
				Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
177.50	179.33	HQ Core, Box 12		Mudstone dark gray to black, carbonaceous.
				Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
179.33	179.58	HQ Core, Box 12, Coal Sampled 179.33 ft to 182.67 ft in 1 bag		Coal, dull to bright & shiny, vitrainous.
				Friable with good cleating. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
179.58	180.00	HQ Core, Box 12, Coal Sampled 179.33 ft to 182.67 ft in 1 bag		Mudstone dark gray to black, carbonaceous.
				Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
180.00	180.42	HQ Core, Box 12, Coal Sampled 179.33 ft to 182.67 ft in 1 bag		Coal, dull to bright & shiny, vitrainous.
				Friable with good cleating. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
180.42	180.67	HQ Core, Box 12, Coal Sampled 179.33 ft to 182.67 ft in 1 bag		Mudstone dark gray to black, carbonaceous.
				Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
180.67	181.50	HQ Core, Box 12, Coal Sampled 179.33 ft to 182.67 ft in 1 bag		Coal, dull to bright & shiny, vitrainous.
				Friable with good cleating. Fissile along bedding planes.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				No iron or manganese stains
				Calcite in cleat and closed fractures
181.50	182.67	HQ Core, Box 13, Coal Sampled 179.33 ft to 182.67 ft in 1 bag		Coal, dull to bright & shiny, vitrainous.
				Friable with good cleating. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
First depth continued from Box 12. Other depth measurements from 185 ft mark				
182.75	184.67	HQ Core, Box 13		Mudstone dark gray to black, carbonaceous.
				Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
184.67	186.42	HQ Core, Box 13, Coal Sampled 184.67 ft to 195.59 ft in 3 bags	Marker at 185 ft	Coal, dull to bright & shiny, vitrainous.
				Friable with good cleating. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
186.42	187.92	HQ Core, Box 13, Coal Sampled 184.67 ft to 195.59 ft in 3 bags		Coal and mudstone interbed, coal dull to bright & shiny, vitrainous. Mudstone dark gray to black, carbonaceous.
				Friable with good cleating. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
187.92	189.00	HQ Core, Box 13, Coal Sampled 184.67 ft to 195.59 ft in 3 bags		Coal, dull to bright & shiny, vitrainous.
				Friable with good cleating. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
189.00	189.17	HQ Core, Box 13, Coal Sampled 184.67 ft to 195.59 ft in 3 bags		Mudstone dark gray to black, carbonaceous.
				Fissile along bedding planes.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				No iron or manganese stains
				Calcite in cleat and closed fractures
189.17	191.34	HQ Core, Box 13, Coal Sampled 184.67 ft to 195.59 ft in 3 bags		Coal, dull to bright & shiny, vitrainous.
				Friable with good cleating. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
191.34	192.42	HQ Core, Box 13, Coal Sampled 184.67 ft to 195.59 ft in 3 bags		Mudstone dark gray to black, carbonaceous.
				Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
192.42	193.42	HQ Core, Box 13, Coal Sampled 184.67 ft to 195.59 ft in 3 bags		Coal, dull to bright & shiny, vitrainous.
				Friable with good cleating. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
193.42	193.84	HQ Core, Box 13, Coal Sampled 184.67 ft to 195.59 ft in 3 bags		Mudstone dark gray to black, carbonaceous.
				Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
193.84	195.59	HQ Core, Box 13, Coal Sampled 184.67 ft to 195.59 ft in 3 bags	Marker at 195 ft versus 194.84 ft	Coal, dull to bright & shiny, vitrainous.
				Friable with good cleating. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
196.00	210.17	HQ Core, Box 14	Marker at 205 ft	Siltstone, gray to dark gray, and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous lenses

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Rare calcite in closed fractures and carbonaceous laminations.
210.58	215.00	HQ Core, Box 15	Marker at 215 ft	Siltstone, gray to dark gray, and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous lenses
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Rare calcite in closed fractures and carbonaceous laminations.
224.42	238.25	HQ Core, Box 16	Marker at 225 ft. Marker at 235 ft versus 235.33 ft	Siltstone, gray to dark gray, and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous lenses
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Rare calcite in closed fractures and carbonaceous laminations.
238.42	252.42	HQ Core, Box 17	Marker at 245 ft	Siltstone, gray to dark gray, and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous lenses
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Rare calcite in closed fractures and carbonaceous laminations.
252.33	265.50	HQ Core, Box 18	Marker at 255 ft. Marker at 265 ft versus 264.75 ft	Siltstone, gray to dark gray, and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous lenses
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				No iron or manganese stains
				Rare calcite in closed fractures and carbonaceous laminations.
265.42	267.08	HQ Core, Box 19		Siltstone, gray to dark gray, and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous lenses
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Rare calcite in closed fractures and carbonaceous laminations.
267.08	277.08	HQ Core, Box 19, Coal Sampled 267.08 ft to 277.08 ft in 3 bags	Marker at 275 ft	Coal, dull to bright & shiny, vitrainous.
				Friable with good cleating. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
277.08	279.58	HQ Core, Box 19		Siltstone, gray to dark gray, and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous lenses
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Rare calcite in closed fractures and carbonaceous laminations.
				One pyrite lense
279.67	280.33	HQ Core, Box 20		Siltstone, gray to dark gray, and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous lenses
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Rare calcite in closed fractures and carbonaceous laminations.
280.33	280.91	HQ Core, Box 20		Coal, dull to bright & shiny, vitrainous.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				Friable with good cleating. Fissile along bedding planes.
				No iron or manganese stains
				Calcite in cleat and closed fractures
280.91	293.83	HQ Core, Box 20		Mudstone, very dark gray, siltstone, gray to dark gray, and sandstone (very fine grain), light gray to gray, gradational to defined interbeds, Coal and carbonaceous lenses
				Moderately fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Moderate calcite in closed fractures and carbonaceous laminations.
293.75	307.58	HQ Core, Box 21	Marker at 295 ft. Marker at 305 ft versus 305.00 ft	Mudstone, very dark gray, siltstone, gray to dark gray, and sandstone (very fine grain), light gray to gray, gradational to defined interbeds, Coal and carbonaceous lenses
				Moderately fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Moderate calcite in closed fractures and carbonaceous laminations.
307.83	321.92	HQ Core, Box 22	Marker at 315 ft	Mudstone, very dark gray, siltstone, gray to dark gray, and sandstone (very fine grain), light gray to gray, gradational to defined interbeds, Coal and carbonaceous lenses
				Moderately fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Moderate calcite in closed fractures and carbonaceous laminations.
321.92	335.58	HQ Core, Box 23	Marker at 325 ft. Marker at 335 ft versus 335.17 ft	Mudstone, very dark gray, siltstone, gray to dark gray, and sandstone (very fine grain), light gray to gray, gradational to defined interbeds, Coal and carbonaceous lenses

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				Moderately fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Moderate calcite in closed fractures and carbonaceous laminations.
335.33	349.33	HQ Core, Box 24	Marker at 345 ft	Mudstone, very dark gray and siltstone, gray to dark gray, gradational to defined interbeds, Coal and carbonaceous lenses
				Moderately fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Moderate calcite in closed fractures and carbonaceous laminations.
348.75	362.67	HQ Core, Box 25	Marker at 355 ft	Mudstone, very dark gray and siltstone, gray to dark gray, gradational to defined interbeds, Coal and very carbonaceous lenses
				Heavily fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Heavy calcite in closed fractures and carbonaceous laminations.
361.17	362.58	HQ Core, Box 26		Mudstone, very dark gray and siltstone, gray to dark gray, gradational to defined interbeds, Coal and very carbonaceous lenses
				Heavily fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Heavy calcite in closed fractures and carbonaceous laminations.
362.58	365.91	HQ Core, Box 26, Coal Sampled from 362.58 ft to 365.91 ft, 1 bag	Marker at 365 ft	Coal, dull to bright & shiny, vitrainous.
				Friable with good cleating. Fissile along bedding planes.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				No iron or manganese stains
				Calcite in cleat and closed fractures
365.91	373.91	HQ Core, Box 26		Mudstone, very dark gray and siltstone, gray to dark gray, gradational to defined interbeds, Coal and very carbonaceous lenses
				Heavily fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Heavy calcite in closed fractures and carbonaceous laminations.
373.91	374.08	HQ Core, Box 26		Clay, gray
				Not plastic, almost varved
				No iron or manganese stains
				No calcite
374.08	375.08	HQ Core, Box 26		Mudstone, very dark gray and siltstone, gray to dark gray, gradational to defined interbeds, Coal and very carbonaceous lenses
				Heavily fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Heavy calcite in closed fractures and carbonaceous laminations.
373.83	385.67	HQ Core, Box 27	Marker at 375 ft. Marker at 385 ft versus 384.83 ft	Mudstone, very dark gray, siltstone, gray to dark gray, and sandstone (very fine grain), light gray to gray, gradational to defined interbeds, Coal and carbonaceous lenses
				Heavily fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Heavy calcite in closed fractures and carbonaceous laminations.
385.67	385.75	HQ Core, Box 27		Clay, gray
				Not plastic, almost varved
				No iron or manganese stains
				No calcite

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
385.75	387.75	HQ Core, Box 27		Mudstone, very dark gray and siltstone, gray to dark gray, gradational to defined interbeds, Coal and very carbonaceous lenses
				Heavily fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Heavy calcite in closed fractures and carbonaceous laminations.
387.00	400.67	HQ Core, Box 28	Marker at 395 ft	Mudstone, very dark gray and siltstone, gray to dark gray, gradational to defined interbeds, Coal and very carbonaceous lenses
				Very heavily fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Very heavy calcite in closed fractures and carbonaceous laminations.
400.67	401.00	HQ Core, Box 28		Mudstone, very dark gray and siltstone, gray to dark gray, gradational to defined interbeds, Coal and very carbonaceous lenses
				Very heavily fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Four inches of calcite in active fracture. Old calcite is opaque. Newer calcite is clear in sheets and crystals. Sample removed to office
400.50	414.42	HQ Core, Box 29	Marker at 405 ft	Mudstone, very dark gray and siltstone, gray to dark gray, gradational to defined interbeds, Coal and very carbonaceous lenses
				Very heavily fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				Very heavy calcite in closed fractures and carbonaceous laminations.
414.25	427.83	HQ Core, Box 30	Marker at 415 ft. Marker at 425 ft versus 425.67 ft	Mudstone, very dark gray and siltstone, gray to dark gray, gradational to defined interbeds, Coal and very carbonaceous lenses
				Heavily fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Heavy calcite in closed fractures and carbonaceous laminations.
425.67	430.83	HQ Core, Box 31		Mudstone, very dark gray and siltstone, gray to dark gray, gradational to defined interbeds, Coal and very carbonaceous lenses
				Moderately fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Moderate calcite in closed fractures and carbonaceous laminations.
430.83	431.75	HQ Core, Box 31		Mudstone, very dark gray, very carbonaceous
				Moderately fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Moderate calcite in closed fractures and carbonaceous laminations.
431.75	433.17	HQ Core, Box 31		Mudstone, very dark gray
				Moderately fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Moderate calcite in closed fractures and carbonaceous laminations.
433.17	435.67	HQ Core, Box 31	Marker at 435.00 ft	Mudstone, very dark gray, very carbonaceous
				Moderately fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				No iron or manganese stains
				Moderate calcite in closed fractures and carbonaceous laminations.
435.67	438.75	HQ Core, Box 31		Mudstone, very dark gray
				Moderately fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Moderate calcite in closed fractures and carbonaceous laminations.
438.75	439.08	HQ Core, Box 31	Marker at 435.00 ft	Mudstone, very dark gray, very carbonaceous
				Moderately fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Moderate calcite in closed fractures and carbonaceous laminations.
438.00	451.33	HQ Core, Box 32	Marker at 445 ft	Mudstone, very dark gray
				Not fractured
				No iron or manganese stains
				No calcite
441.17	454.75	HQ Core, Box 33	Marker at 455 ft	Mudstone, very dark gray
				Not fractured
				No iron or manganese stains
				Disseminated calcite
464.33	475.00	HQ Core, Box 34	Marker at 465 ft. Marker at 475 ft versus 475.00 ft	Mudstone, very dark gray
				Not fractured
				No iron or manganese stains
				Disseminated calcite
477.50	491.08	HQ Core, Box 35	Marker at 485 ft	Mudstone, very dark gray and siltstone, gray to dark gray, gradational to defined interbeds, Coal and very carbonaceous lenses
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
490.92	504.83	HQ Core, Box 36	Marker at 495 ft	Mudstone, very dark gray and siltstone, gray to dark gray, gradational to defined interbeds, Coal and very carbonaceous lenses
			\	Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations.
505.00	518.83	HQ Core, Box 37	Marker at 505 ft. Marker at 515 ft versus 514.92 ft	Mudstone, very dark gray and siltstone, gray to dark gray, gradational to defined interbeds, Coal and very carbonaceous lenses
			\	Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations.
519.08	525.00	HQ Core, Box 38	Marker at 505 ft	Mudstone, very dark gray and siltstone, gray to dark gray, gradational to defined interbeds, Coal and very carbonaceous lenses
			\	Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations.
TOTAL DEPTH= 525 ft= 160 m				

Drilling began on 2005 Oct 8

Completed as piezometer using IPS=2.5 inch. OD=2.875 inch
Schedule 40 wall thickness=0.203 inch , ID=2.469 inch

Pipe perforated by drilling 1/16" holes in pipe

Bottom of perforations= 525 ft

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
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Top of perforations= 275 ft

10 feet of bentonite grout from surface to 10 feet

Well Completed= 2005 Oct 10

TIME PER FOOT= 2,880 min/ 525 ft= 2.43 min/ft



COREHOLE LITHOLOGIC LOG

PROJECT	<u>Mount Klappan</u>	COREHOLE NUMBER	<u>05 014</u>
CLIENT	<u>Fortune Minerals/Marston</u>	WELL NUMBER	_____
GPS LOCATION		Begin Drilling	<u>2005 Oct 26, Completed Drilling</u>
NAD83	<u>508,109 6,346,236</u>	DATE	<u>2005 Oct 27</u>
CONTRACTOR	<u>Connors Drilling, Kamloops, BC, CA</u>	LOGGED BY	<u>Bill Hanson (Oct 27 - 29, 2005)</u>
DRILLER(S)	<u>Mitch Burtneck & Henry Hogan</u>	CHECKED BY	<u>GPS ELEVATION=1,630 m</u>
METHOD	<u>HQ Core Fluid Rotary</u>	SHEET 1 OF	_____

Note 1: Dilute (10%) HCl was used for mineral identification during logging of this core. The relative scale of fracture intensity and fracture-filling mineral is four-fold: no comment means not observed; lt means light; med or mod indicates significant but intermediate amount which is obvious at a glance and volumetrically significant; heavy or hvy means abundant, pervasive mineralization which is volumetrically significant and obvious from a distant glance and dominates the aspect of the core.

Note 2: ms means mudstone; ss means sandstone; slt or siltst means siltstone; sf means shear fracture. Note that in a weathered outcrop some or many of the lithologies logged as mudstone might exhibit fissility and thereby be called shale. Tr means trace. Py means pyrite or other iron sulfide.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
14.42	15.00	HQ Core, Box 1	Marker at 15 feet.	Gravel and muddy gravel.
15.00	24.50			Glacial drift: boulders to pebbles in dk ol gy sandy clay.
25.00	30.33		Marker at 25 feet.	Same as above.
		HQ Core, Box 2	Marker at 35 feet.	All glacial drift as above.
			Marker at 45 feet.	All glacial drift as above.
38.33	41.83	HQ Core, Box 3	Marker at 55 feet.	All glacial drift as above.
54.33	68.92	HQ Core, Box 4	Marker at 65 feet.	Glacial drift as above.
75.00	76.50		Marker at 75 feet.	Glacial drift or colluvium; coal flakes in basal 2 inches.
76.50	77.75			Weathered coal with qtz pebbles and veins.
				Quartz.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
77.75	80.17		Sampled coal from 77.75 feet to 80.17 feet in 1 bag.	Weathered coal. Approximately 60 degrees dip.
80.50	83.83	HQ Core, Box 5	Marker at 85 feet. Coal sampled from 80.50 to 83.83 feet in 1 bag.	Weathered coal.
83.83	85.00			Muddy siltstone: dk gy; hard; very pyritic w vertical qtz veins. Pyrite and quartz.
85.00	86.00			Rubble. Weathered coal. Pyrite nodule. Pyrite.
86.00	86.75			Claystone: ol brn; plastic.
86.75	93.25			Sandstone: med lt gy; hard; ~ 60 degrees dip; fractures w qtz fill. Quartz.
95.00	96.08		Marker at 95 feet vs 93.25 feet.	Ss: as above. ~ 60 degrees dip; qtz-filled veins. Quartz.
95.92	105.00	HQ Core, Box 6	Marker at 105.00 feet vs 105.16 feet.	SS: vf to f-gr; ~ 60 degrees dip; med frac; lt cement is cream dolomite. Dolomite fracture fill.
105.00	109.17			Rubble. SS as above. Hvy frac & med fracture fill is dolomite and qtz. Dolomite fracture fill. Quartz fracture fill.
107.42	112.00	HQ Core, Box 7	Marker at 115 feet.	SS: f-gr; weathered; some is rubble; med frac & med dol; some dol is 1 cm thick. Dolomite fracture fill up to 1 cm thick.
112.00	113.33			Rubble. Sltst & ss.
113.33	115.00			Ss: vf-gr; ~ 60 degrees dip.
115.00	116.33			SS: steep dip.
116.33	117.92			Rubble. Sltst & Ms.
117.92	118.25			Ms: dk ol brn; plastic; steep dip.
118.25	121.33			Sltst: dk ol brn; ~ 60 degrees dip.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
120.83	125.58	HQ Core, Box 8	Marker at 125 feet.	Sltst: dk ol brn & med gy; grades down into dk ol gy sltst. ~ 50 degrees dip.
125.58	125.83			Carb sh: blk; weathered.
125.83	126.83		Samples from 125.83 to 126.83 in bag 1 of 2.	Coal: weathered rubble.
126.83	127.92			Rubble. Blk claystone.
127.92	130.08		Samples from 127.92 to 130.08 in bag 2 of 2.	Rubble. Coal, weathered.
130.08	132.00			Rubble. Black coaly to very carb ms and small amount of coal.
132.00	134.42			Ms: carb & slightly coaly; rubble and chunks; root churned = under clay or seat earth; ~ 60 degrees dip.
133.58	134.50	HQ Core, Box 9	Marker at 135 feet vs 135.84 feet.	Rubble. Carb ms; root churned; "under clay"; ~ 60 degrees dip.
134.50	135.00			SS: vf- to f-gr; sl calc and sl carb w ms streaks; grad lower contact; root churned w anomalous coarse cream chalky grains; could be kaolinite. This is a seat earth / underclay.
135.00	137.08			Rubble. SS: med lt gy; f- gr; Lt frac & lt cmt as wh dol.
				White dolomite fracture fill.
137.08	141.75			SS: med lt gy; f- to med-gr; tr carb partings; ~ no fracture; ~ 60 degrees dip.
141.75	144.83		Marker at 145 feet vs 144.83 feet.	SS: f-gr; similar to above; more carb partings; x-bed; thin to med bed; measured 60 degrees dip.
144.83	146.25			SS: as above; carb partings; ~ 60 degrees dip.
146.17	156.63	HQ Core, Box 10	Marker at 155 feet vs 155.08.	SS: med lt brn gy; f- to med-gr; upper part lam w carb partings; lower is structureless; lt frac & no cmt; ~ 60 degrees dip. Sharp base.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
156.63	160.13			SS: vf gr coarsens down to f-gr; xlam; ~ 60 degrees dip.
160.42	168.83	HQ Core, Box 11	Marker at 165 feet vs 164.71.	SS in upper part: f-gr; med lt brn gy; grades down into vf-gr xlam w carb & mud partings; vf-gr xlam ss + sltst in lower part; lt frac & lt cmt is chalky white. ~ 60 degrees dip throughout .
168.83	173.25			SS: rubble & cylinders; f- to vf-gr; hvy frac & no cmt?
172.92	174.17	HQ Core, Box 12	Marker at 175 feet vs 175.33 feet.	Brecciated ss as above. Intensely fractured; lt dol in some fracs.
174.17	182.25			Rubble and brecciated ss as above. V hvy frac & lt dol cmt in fracs; dol is tan to chalky wh and is sheared; med fizz when crushed.
				Dolomite in fracs.
182.25	185.92		Marker at 185 feet vs 182.25 ft.	SS: vf-gr; w abund thin lam & xlam; sltst as lam and v thin beds; med frac & lt cmt; ~ 60 degrees dip.
193.92	195.00	HQ Core, Box 13	Marker at 195 feet.	Sltst: med brn gy; xlam & lam; ~ 60 degrees dip.
195.00	199.33			Rubble. Xlam gy sltst; silty ms looks rooted.
199.33	199.75			Silty ms: med gy; lt frac & lt cmt as crm dol & vug-lining euhedra.
				Dolomite frac fill & vug-lining xtls.
199.75	205.83		Marker at 205 feet vs 205.83 feet.	Sltst: xlam & lam; muddy; rooted? Lt frac & lt dol; ~ 60 degrees dip.
				Dolomite.
205.92	214.17	HQ Core, Box 14	Marker at 215 feet.	Sltst + ss: grades down into vf-gr ss w slt lam & xlam; sharp base; 1 inch thick dol fracture fill; ~ 60 degrees dip.
				1 inch thick dolomite fracture fill.
214.17	215.00			Muddy sltst: med gy; churned.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
215.00	219.67			Muddy sltst: lam & xlam; grade down into churned sl carb muddy sltst; dip ~ 60 degrees.
219.17	232.83	HQ Core, Box 15	Marker at 225 feet vs 224.5.	Sltly ms: dk gy; coal flakes & coal lam; root churned; grades down into some lam muddy sltst. Med to lt frac & lt cmt. Dip ~ 60 degrees.
232.83	238.08	HQ Core, Box 16	Marker at 235 feet.	Muddy sltst: med gy; in lower part some contorted bedding.
238.08	241.75			Muddy sltst: med gy; mottled; coal flake & irreg coal mass w qtz selvage in base; grades down into carb clayst.
				Qtz
245.00	245.92		Marker at 245 feet vs 241.75 feet.	Clayst: dk gy; coaly; coal lens.
245.88	247.63	HQ Core, Box 17	Marker at 255 feet vs 255.04 feet.	Same as above.
247.63	249.54			Ms w slt lam; med gy; root? churned in lower part.
249.54	250.04			Sltly clayst: dk gy; thin coal lens in lower part.
250.04	250.25			Coal: intense qtz mineralization as 3D network.
				Quartz.
250.25	250.50			Carb sh: blk becoming plastic in lower part.
250.50	251.00			Coal: rubble; sheared.
251.00	255.00			Carb clayst: dk gy; rubble in lower part.
255.00	259.17			Sltly ms; dk gy; grades down into muddy sltst; med frac & lt powdery to pasty cmt.
258.83	267.58	HQ Core, Box 18	Marker at 265 feet vs 265.34 feet.	Sltst: med brn gy to lt gy; lam to churned (rooted); grad lower contact; coaly lens w qtz selvage; med frac w thick qtz layers & chalky mineral (dol?). 50 degrees dip.
				Quartz, thick veins.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
267.58	271.00			SS: lt brn gy; vf-gr; xlam & lam; med frac & lt cmt.
271.00	272.58			Ss: f-gr; sl carb & mottled; hvy frac & med dol frac fill.
				Dolomite fracture fill.
272.17	275.00	HQ Core, Box 19	Marker at 275 feet vs 275.41 feet.	SS: aa grading down into lt gy f-gr ss; faint lam; churned in middle; lt frac & lt dol.
				Dolomite.
275.00	276.67			SS aa. Grades down into rubble of silty brn gy ms; hvy frac & med qtz.
				Quartz.
276.67	279.08			Rubble. Vf ss + sltst; thin bedded; hvy frac.
279.08	282.75			SS: vf-gr; brn gy; root mottled; sl carb grading to sandy-silty clay in base. Rubble at base. Med gfrac & lt cmt.
282.75	282.92			Rubble. Coal.
282.92	285.75		Marker at 285 feet vs 285.75 feet.	SS: dk brn; vf-gr; carb; grading to carb claystone. Brecciated & rubble; lt cmt.
283.92	286.42	HQ Core, Box 20	Marker at 295 feet.	Fault gouge of brnish sltst + clayst with angular sltst clasts grades down into brecciated brnish clayey sltst w hvy qtz veins.
				Hvy quartz veins.
286.42	288.50			Brecciated clayey sltst aa with 1.3 inches thick dol vein near base.
				Dolomite + quartz.
288.50	295.00			SS: vf- to f-gr; lt gy; rubble and brecciated; intense fracture & hvy qtz. SF contact at base.
				Heavy quartz fracture fill.
295.00	297.08			Sltst: brn gy; hvy frac & hvy qtz.
				Heavy quartz fracture fill.
297.79	299.38	HQ Core, Box 21	Marker at 305 feet.	SS: brn-gy; vf-gr; lam & xlam; small fault; lt frac & lt qtz. Note dip change; lower dip.
				Quartz.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
299.38	301.42			SS: brn-gy; f-gr; med frac & med dol; horiz slickensides on dol frac fill.
				Dolomite.
301.42	302.00			Quartz vein: white; complex texture w cross-cutting relationships.
302.00	302.67			Coal: rubble & dust.
302.67	303.25			Clayst: blk; carb; white veins; shear contact at base.
303.25	305.00			Sltly ms: med gy; lt frac & no min.
305.00	308.92			Sltst: med brn-gy; w thin f-gr ss bed; lt frac.
308.92	309.75			Clayst: lt gy; clac; lam in lower part. ~ 25 degrees dip.
				Calcite.
299.38	300.13			Carb sh: brn gy; thin coaly partings & plant frags. 25 degrees dip.
310.17	318.50	HQ Core, Box 22	Marker at 315 feet.	Carb claystone: med gy; w calc concretionary layers; rubble in lower part; lt frac & tr cmt; ~ 25 degrees dip.
				Calcareous concretions.
318.50	319.33			Fault gouge. Brecciated claystone & soft dol veins.
				Dolomite veins.
319.33	324.08			Sltst: brn gy; lam; lt frac & no cmt; ~ 30 degrees dip. Fault contact at top.
323.83	330.00	HQ Core, Box 23	Marker at 325 feet vs 325.25 feet.	Brecciated siltst and rubble aa; med frac & lt dolomite. Basal 2 inches looks like fault gouge; fault zone?
				Dolomite.
330.00	335.25			SS: vf- to f-gr; lt gy; xlam in part; med frac & med dol.
				Dolomite.
335.25	336.92		Marker at 335 feet vs 335.25 feet.	SS: aa w fault gouge & brecciated in lower part; hvy frac & hvy dol + qtz. Fault contact at base.
				Hvy dolomite & quartz.
336.92	337.08			Sltly ms: dk brn blk; carb.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
336.83	337.92	HQ Core, Box 24	Marker at 345 feet vs 345.25 feet.	Carb claystone: dk gy; med frac.
337.92	341.17			Claystone: blk;carb to coaly; lt frac.
341.17	344.50		Coal sampled from 341.17 to 344.50 in 1 bag.	Rubble. Coal frags , dust; chunks; bri & friable.
344.50	345.00			Carb claystone: blk.
345.00	345.67			Coal aa.
345.67	346.42			Clayst: blk; v carb; coal lam; slickensides.
346.42	346.58			Coal frags; semi-bright.
346.58	347.42			Claystone: brn; w thin ss & coaly layer.
347.42	347.67			Impure (bone) coal.
347.67	349.00		Coal sampled in 1 bag is marked 348.50 to 349.83 feet sample 2/2.	Coal: rubble.
349.00	350.67	HQ Core, Box 25	Marker at 355 feet. Coal sampled is marked 349.50 to 351.50 in bag 1/2.	V carb blk sh w thin coal layers; ~ 20% coal; low dip ~ 10 degrees.
350.67	351.42			Coal: bri; grades down into coal w intense qtz mineralization; bone coal w pyrite nodule in base.
				Pyrite nodule.
				Intense quartz mineralization.
351.42	354.92		Marker at 355 feet vs 354.92 feet.	Ms: blk; carb; silty & sandy in part.
354.92	356.00			Ms: dk gy; vertical slaty cleavage.
356.00	357.83			Ms: med gy; silty.
357.83	362.50			Thin bed to lam heterolithic unit; 60% vf ss +slt+ms; some xlam. ~ 30 degrees dip.
362.00	365.79	HQ Core, Box 26	Marker at 365 feet vs 365.50	SS: lt gy; f- to vf-gr; small mos clasts; lam; sharp base; hvy frac & lt cmt.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
365.79	371.63			80% sltst interbedded w thin vf-gr ss; sand-filled burrows; small fault; lt frac & lt cmt.
371.63	375.13			SS: f-gr; large ms clasts; thin sltst beds; small fault; lt frac & lt cmt.
375.13	375.92		Marker at 375 feet vs 375.13 feet.	Sltst: laminated.
375.92	377.50	HQ Core, Box 27	Marker at 385 feet vs 385.50 feet.	sltst: brn-gy; lam; brecciated; med frac Lt pastey prob dol cmt. Low dip.
377.50	379.92			SS: vf-gr; lam, xlam; sharp base.
379.92	380.42			Rubble. Sltst.
380.42	382.25			Ss: vf-gr; lam; grade down into f-gr ss; sharp base.
382.25	389.17			SS: brn-gy; vf-gr; lam, xlam; med frac & lt cmt.
389.17	391.25	HQ Core, Box 28	Marker at 395 feet vs 395.598 feet.	Two beds silty ms: grade down into xbed & lam vf-gr ss; shapr bases; v lt frac.
391.25	402.25			Silty ms: med to dk gy; 10% lam slt & vf ss; lam & xlam; no fractures; 18 degrees dip.
403.00	409.75	HQ Core, Box 29	marker at 405 feet vs 404.25 feet.	Silty ms aa. Wood fragments; gradational base.
409.75	416.50		Marker at 415 feet vs 414.92 feet.	Ms: dk gy less silty than above; small pelecypods; tr fractures.
416.42	421.33	HQ Core, Box 30	Marker at 425 feet vs 425.08.	Ms: dk gy; abund minute gastropods; robust pelecypods in base; med frac & tr min.
421.33	421.83			Black coaly ms; carbonized wood frags.
421.83	422.08			Rubble. Coal.
422.08	425.00			Clayst: blk; coaly; grades down into coal; med wh min. Pyrite lens.
				Pyrite.
425.00	425.92			Rubble. Coal powder, frags; friable.
425.92	426.42			Coaly clayst: blk; py lens & qtz veins.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				Pyrite & quartz.
426.42	430.25			Claystone: blk; abund wood frags & large coalified roots? Grades down into med gy silty ms; lt frac & tr min.
430.25	430.75	HQ Core, Box 31	Marker at 435 feet vs 435.88 feet	Dk gy silty ms aa.
430.75	432.00			Calc ms: med lt gy; concretionary; robust pelecypods. Becomes silty in lower part.
				Calcareous.
432.00	432.13			Coal with hvy qtz mineralization.
				Quartz.
432.13	434.21			Ms: med dk gy; sheared.
434.21	435.54			Muddy carb ss: sheared; root churned.
435.54	435.88			Silty gy ms: carb; rooted & churned; med frac.
435.88	439.29			Sandy silty ms: root mottled; sheared; hvy frac & no cmt.
439.29	443.13			SS: f-gr; muddy; root churned; carb; coalified roots; med frac & no cmt.
443.13	446.04	HQ Core, Box 32	Marker at 445 feet vs 446.04 feet.	SS: lt gy mottled to banded; f-gr; muddy; ms lam & root mottled; carb roots; lt frac & lt dol.
				Dolomite.
446.04	448.13			SS: f-gr to vf-gr; thin-bedded to lam; tr carb roots; sharp base.
448.13	450.88			Ms: med gy; slaty cleavage; py nodule; med sf Y no min; grad base.
				Pyrite.
450.88	452.96			Ms: dk gy; w irreg coal lam & lens; med frac.
452.96	456.29			Carb claystone: dk gy; med frac & no cmt.
456.29	456.50	HQ Core, Box 33	Marker at 455 feet vs 456.50 feet.	As above.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
456.50	457.83			Rubble. Blk carb clayst & coaly clayst w large py nodules & dissem py & qtz. Pyrite & quartz.
457.83	458.58			Rubble. Coal frags & dust; friable.
458.58	460.50			Bone coal to v carb ms;pervasive network of qtz veins in rectilinear to wavy patterns.
466.42	475.00	HQ Core, Box 34	Marker at 475 feet. Marker at 465 feet not recorded.	SS: med gy; f- to vf-gr; xbed; muddy; py nodule; med frac & lt dol; burrows; grad base. Slaty cleavage. Dolomite. Pyrite.
475.00	477.25			Sltst: med gy; grades to vf ss at base; sharp base.
477.25	479.83			Sltst: lt gy; grdes down into vf ss; ms ripups; irreg ms lam; med sf & tr dol. Low dip.
479.58	485.00	HQ Core, Box 35	Marker at 485 feet vs 485.25 feet.	Ss: lt gy; vf-gr; faint lam locally grading to f-gr at base; lt frac & lt dol. Light dolomite fracture fill.
485.00	489.33			SS: aa; f-gr; faint lam; sltst thin beds; med frac & lt cmt; 1 cm thick dol + qtz layer; sharp base. Dolomite. Quartz.
489.33	493.33			Sltst & vf ss: tr burrows & ms partings; lam to thin lam; lt frac & lt dol. 15 degrees dip. Dolomite.
493.50	495.00	HQ Core, Box 36	Marker at 495 feet vs 495.17 feet. EOH at 495 feet.	Sltst & vf ss: med gy; ms lam in middle.

Drilling began on 2005 Oct 26

Completed as piezometer using IPS=2.5 inch. OD=2.875 inch
Schedule 40 wall wthickness=0.203 inch, ID=2.469 inch

Pipe perforated by drilling 1/16" hole in pipe

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
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Bottom of perforations = 446 feet

Top of perforations = 198 feet

10 feet of bentonite grout from surface to 10 feet

Well completed 2005 Oct 27

TIME PER FOOT= 2880 min/495 ft=

5.82 min/ft



COREHOLE LITHOLOGIC LOG

PROJECT Mount Klappan COREHOLE NUMBER 05 015
 CLIENT Fortune Minerals/Marston WELL NUMBER _____
 LOCATION NAD83, not final 508,501 6,346,428 DATE Begin Drilling 2005 Oct 29, Logging on 30th, Completed 2005 Nov 1
 CONTRACTOR Connors Drilling, Kamloops, BC, CA LOGGED BY Paul Oldaker
 DRILLER(S) Mitch Burtnick & Henry Hogan CHECKED BY _____
 METHOD HQ Core Fluid Rotary SHEET 1 OF _____

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
9.00	10.83	HQ Core, Box 1		Sandstone, gray to dark gray, very fine to fine grained, iron stained
				Broken and subangular
				Iron stained
				No calcite
10.83	22.50	HQ Core, Box 1	Marker at 15 feet	Colluvium, clay to cobble, gray to brown
				Unconsolidated, subangular to angular, poorly sorted
				Some iron stains
				Some fragments have calcite with weak reaction to 10% HCl
22.08	35.50	HQ Core, Box 2	Marker at 25 feet, Marker at 35 feet versus 35.00 ft	Colluvium, clay to cobble, gray to brown
				Unconsolidated, subangular to angular, poorly sorted
				Some iron stains
				Some fragments have calcite with weak reaction to 10% HCl
38.08	51.83	HQ Core, Box 3	Marker at 45 feet	Colluvium, clay to cobble, gray to brown
				Unconsolidated, subangular to angular, poorly sorted
				Some iron stains
				Some fragments have calcite with weak reaction to 10% HCl
51.42	60.42	HQ Core, Box 4	Marker at 55 feet	Colluvium, clay to cobble, gray to brown
				Unconsolidated, subangular to angular, poorly sorted
				Some iron stains
				Some fragments have calcite with weak reaction to 10% HCl

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
60.42	63.67	HQ Core, Box 4	Marker at 65 feet versus 63.67 feet	Colluvium, clay to cobble, gray to brown, wet
				Unconsolidated, subangular to angular, poorly sorted
				Some iron stains
				Some fragments have calcite with weak reaction to 10% HCl
63.67	64.67	HQ Core, Box 4		Siltstone, dark gray to black, carbonaceous
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				No calcite
69.83	75.00	HQ Core, Box 5, Coal Sampled from 69.83 feet to 79.08 feet in 2 bags	Marker at 75 feet	Coal, bright & shiny, vitrainous.
				Broken and rubbled
				No iron or manganese stains
				No calcite
75.00	77.42	HQ Core, Box 5, Coal Sampled from 69.83 feet to 79.08 feet in 2 bags		Coal, bright & shiny, vitrainous.
				Solid core, well cleated
				No iron or manganese stains
				No calcite
77.42	77.75	HQ Core, Box 5, Coal Sampled from 69.83 feet to 79.08 feet in 2 bags		Mudstone, black, carbonaceous.
				Fissile along bedding planes.
				No iron or manganese stains
				No calcite
77.75	79.08	HQ Core, Box 5, Coal Sampled from 69.83 feet to 79.08 feet in 2 bags		Coal, bright & shiny, vitrainous.
				Solid core, well cleated
				No iron or manganese stains
				No calcite
79.08	83.66	HQ Core, Box 5		Mudstone, black, carbonaceous.
				Broken, Fissile along bedding planes.
				No iron or manganese stains
				No calcite

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
84.33	91.58	HQ Core, Box 6	Marker at 85 feet	Mudstone, dark gray to black, carbonaceous. Fissile along bedding planes. No iron or manganese stains Rare calcite, weak HCl reaction
91.58	93.16	HQ Core, Box 6		Mudstone, dark gray to black, very carbonaceous. Fissile along bedding planes. No iron or manganese stains Heavy calcite, weak HCl reaction
93.16	94.08	HQ Core, Box 6, Coal Sampled from 93.16 feet to 98.25 feet in 2 bags		Coal, dull Rubbled and mushy No iron or manganese stains No calcite
94.08	95.00	HQ Core, Box 6, Coal Sampled from 93.16 feet to 98.25 feet in 2 bags		Coal, bright & shiny, vitrainous. Well cleated No iron or manganese stains No calcite
95.00	96.08	HQ Core, Box 6, Coal Sampled from 93.16 feet to 98.25 feet in 2 bags	Marker at 95 feet versus 96.08 feet	Coal, dull Rubbled and mushy No iron or manganese stains No calcite
96.08	97.58	HQ Core, Box 6, Coal Sampled from 93.16 feet to 98.25 feet in 2 bags		Coal, dull to bright & shiny Rubbled and mushy No iron or manganese stains No calcite
94.42	96.17	HQ Core, Box 7, Coal Sampled from 93.16 feet to 98.25 feet in 2 bags		Coal, dull to bright & shiny Rubbled and mushy No iron or manganese stains No calcite
96.17	108.25	HQ Core, Box 7		Mudstone, dark gray

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				Fissile along bedding planes.
				No iron or manganese stains
				No calcite
107.50	118.00	HQ Core, Box 8	Marker at 115 feet	Siltstone, gray to dark gray, and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous lenses
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Rare calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
118.00	119.50	HQ Core, Box 8, Coal Sampled from 118.00 feet to 130.00 feet in 3 bags		Coal, dull on outside of core to bright & shiny on inside of core
				Poorly cleated
				No iron or manganese stains
				No calcite
119.50	121.25	HQ Core, Box 8, Coal Sampled from 118.00 feet to 130.00 feet in 3 bags		Coal, dull to some bright & shiny
				Rubbed and mushy
				No iron or manganese stains
				No calcite
120.33	125.00	HQ Core, Box 9, Coal Sampled from 118.00 feet to 130.00 feet in 3 bags	Marker at 125 feet	Coal, dull to some bright & shiny
				Rubbed, mushy, more cleat
				No iron or manganese stains
				No calcite
125.00	126.83	HQ Core, Box 9, Coal Sampled from 118.00 feet to 130.00 feet in 3 bags		Coal, bright & shiny
				Well cleated
				No iron or manganese stains
				No calcite
126.83	127.00	HQ Core, Box 9, Coal Sampled from 118.00 feet to 130.00 feet in 3 bags		Mudstone, black, very carbonaceous.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				Fissile along bedding planes.
				No iron or manganese stains
				No calcite
127.00	130.00	HQ Core, Box 9, Coal Sampled from 118.00 feet to 130.00 feet in 3 bags		Coal, bright & shiny
				Well cleated
				No iron or manganese stains
				No calcite
130.00	131.33	HQ Core, Box 9		Mudstone, black, very carbonaceous.
				Fissile along bedding planes.
				No iron or manganese stains
				Heavy calcite with weak HCl reaction
131.33	134.00	HQ Core, Box 9		Mudstone, dark gray
				Fissile along bedding planes.
				No iron or manganese stains
				Some calcite with weak HCl reaction
133.42	133.83	HQ Core, Box 10		Mudstone, dark gray
				Fissile along bedding planes.
				No iron or manganese stains
				Some calcite with weak HCl reaction
133.83	137.41	HQ Core, Box 10	Marker at 135 feet	Sandstone, gray to brown, very fine to fine grained, Siltstone, dark gray to brown, and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Some calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
137.41	137.74	HQ Core, Box 10		Clay, dark gray
				Plastic
				No iron or manganese stains
				No calcite
137.74	147.41	HQ Core, Box 10	Marker at 145 feet versus 144.99 feet	Sandstone, gray to brown, very fine to fine grained, Siltstone, dark gray to brown, and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous laminations and lenses

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Some calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
147.50	156.75	HQ Core, Box 11	Marker at 155 feet	Sandstone, gray to brown, very fine to fine grained, Siltstone, dark gray to brown, and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Some calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
156.75	157.08	HQ Core, Box 11		Mudstone, black, very carbonaceous.
				Fissile along bedding planes.
				No iron or manganese stains
				Some calcite with weak HCl reaction
157.08	159.25	HQ Core, Box 11		Sandstone, gray to brown, very fine to fine grained, Siltstone, dark gray to brown, and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Some calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
159.25	160.00	HQ Core, Box 11		Coal, dull to bright & shiny
				Rubbed
				No iron or manganese stains
				No calcite
160.00	160.17	HQ Core, Box 11		Mudstone, black, very carbonaceous.
				Fissile along bedding planes.
				No iron or manganese stains
				Some calcite with weak HCl reaction
160.17	160.50	HQ Core, Box 11		Coal, bright & shiny
				Well cleated
				No iron or manganese stains

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				No calcite
160.50	161.25	HQ Core, Box 11		Mudstone, black, very carbonaceous.
				Fissile along bedding planes.
				No iron or manganese stains
				Some calcite with weak HCl reaction
160.25	173.75	HQ Core, Box 12		Sandstone, gray to brown, very fine to fine grained, Siltstone, dark gray to brown, and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Some calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
173.50	187.08	HQ Core, Box 13	Marker at 175 feet, Marker at 185 feet versus 185.67 feet	Sandstone, light gray to dark gray, very fine to fine grained, Siltstone, dark gray to brown, and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Some calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
185.92	195.33	HQ Core, Box 14	Marker at 195 feet	Sandstone, light gray to dark gray, very fine to fine grained, Siltstone, dark gray to brown, and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Some calcite in closed fractures and carbonaceous laminations with weak HCl reaction.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
195.33	200.16	HQ Core, Box 14		Sandstone, light gray to dark gray, very fine to fine grained, Siltstone, dark gray to brown, and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Moderately fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Heavy calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
199.50	200.25	HQ Core, Box 15		Sandstone, light gray to dark gray, very fine to fine grained, Siltstone, dark gray to brown, and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Moderately fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Heavy calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
200.25	200.50	HQ Core, Box 15		Breccia or conglomeratic, clay to sandstone, clay to gravel size, angular
				Highly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Heavy calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
200.50	201.92	HQ Core, Box 15		Sandstone, light gray to dark gray, very fine to fine grained, Siltstone, dark gray to brown, and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Heavily fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				Moderate calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
201.92	208.59	HQ Core, Box 15	Marker at 205 feet	Sandstone, light gray to dark gray, very fine to fine grained, Siltstone, dark gray to brown, and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Moderately fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Heavy calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
208.59	208.67	HQ Core, Box 15, Coal sampled from 208.58 feet to 214.41 feet in 2 bags		Coal, bright & shiny
				Well cleated
				No iron or manganese stains
				Some calcite with weak HCl reaction
208.67	209.59	HQ Core, Box 15, Coal sampled from 208.58 feet to 214.41 feet in 2 bags		Coal and mudstone interbed, coal dull to bright & shiny, vitrainous. Mudstone dark gray to black, carbonaceous.
				Friable with good cleating. Fissile along bedding planes.
				No iron or manganese stains
				No calcite
209.59	209.67	HQ Core, Box 15, Coal sampled from 208.58 feet to 214.41 feet in 2 bags		Coal and mudstone interbed, coal dull to bright & shiny, vitrainous. Mudstone dark gray to black, carbonaceous.
				Friable with good cleating. Fissile along bedding planes.
				No iron or manganese stains
				Heavy calcite with weak HCl reaction
209.67	210.09	HQ Core, Box 15, Coal sampled from 208.58 feet to 214.41 feet in 2 bags		Coal, bright & shiny
				Well cleated
				No iron or manganese stains

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				Some calcite with weak HCl reaction
210.09	210.42	HQ Core, Box 11		Mudstone, black, very carbonaceous.
				Fissile along bedding planes.
				No iron or manganese stains
				Some calcite with weak HCl reaction
210.42	213.25	HQ Core, Box 15, Coal sampled from 208.58 feet to 214.41 feet in 2 bags		Coal, dull to bright & shiny
				Cleated
				No iron or manganese stains
				Rare calcite with weak HCl reaction
211.33	211.83	HQ Core, Box 16, Coal sampled from 208.58 feet to 214.41 feet in 2 bags		Coal and mudstone interbed, coal dull to bright & shiny, vitrainous. Mudstone dark gray to black, carbonaceous.
				Friable with good cleating. Fissile along bedding planes.
				No iron or manganese stains
				Light calcite with weak HCl reaction
211.83	212.50	HQ Core, Box 16, Coal sampled from 208.58 feet to 214.41 feet in 2 bags		Coal, dull
				Cleated
				No iron or manganese stains
				No calcite
212.50	214.00	HQ Core, Box 16		Siltstone, dark gray to brown, and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Some calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
214.00	215.00	HQ Core, Box 16	Marker at 215 feet	Siltstone, dark gray to brown, and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous laminations and lenses

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				Rubble
				No iron or manganese stains
				Some calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
215.00	217.08	HQ Core, Box 16		Sandstone, light gray to dark gray, very fine to fine grained, Siltstone, dark gray to brown, and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Moderately fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Moderate calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
217.08	218.25	HQ Core, Box 16		Sandstone, light gray to dark gray, very fine to fine grained, Siltstone, dark gray to brown, and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Rubble
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
218.25	219.00	HQ Core, Box 16		Siltstone, dark gray to brown, and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
219.00	220.75	HQ Core, Box 16		Breccia or conglomeratic, clay to sandstone, clay to gravel size, angular
				Highly fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				Moderate calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
220.75	223.75	HQ Core, Box 16		Sandstone, light gray to dark gray, very fine to fine grained, and Siltstone, dark gray to brown, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Highly fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Moderate calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
223.50	227.83	HQ Core, Box 17	Marker at 225 feet	Sandstone, light gray to dark gray, very fine to fine grained, Siltstone, dark gray to brown, and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Highly fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Moderate calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
227.83	236.66	HQ Core, Box 17	Marker at 235 feet versus 235.41 feet	Sandstone, light gray to dark gray, very fine to fine grained, and Siltstone, dark gray to brown, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Moderately fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Moderate calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
235.92	237.42	HQ Core, Box 18		Sandstone, light gray to dark gray, very fine to fine grained, and Siltstone, dark gray to brown, gradational to defined interbeds, Coal and carbonaceous laminations and lenses

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				Moderately fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Moderate calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
237.42	247.50	HQ Core, Box 18		Sandstone, light gray to dark gray, very fine to medium grained, and Siltstone, dark gray to brown, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Highly fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Very heavy calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
247.50	248.83	HQ Core, Box 18		Siltstone, gray to dark gray and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				No calcite
248.83	249.50	HQ Core, Box 18		Siltstone, gray to dark gray and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Rubble
				No iron or manganese stains
				No calcite
249.17	257.00	HQ Core, Box 19	Marker at 255 feet	Siltstone, gray to dark gray and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				No calcite

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
257.00	257.17	HQ Core, Box 19		Siltstone, gray to dark gray and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Heavy calcite with weak HCl reaction
257.17	262.42	HQ Core, Box 19		Siltstone, gray to dark gray and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				No calcite
262.42	262.59	HQ Core, Box 19		Siltstone, gray to dark gray and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Heavy calcite with weak HCl reaction
262.59	262.84	HQ Core, Box 19		Siltstone, gray to dark gray and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				No calcite
261.92	262.92	HQ Core, Box 20		Mudstone, black, carbonaceous.
				Fissile along bedding planes.
				No iron or manganese stains
				Some calcite with weak HCl reaction
262.92	264.00	HQ Core, Box 20		Coal, bright & shiny
				Cleated
				No iron or manganese stains
				Heavy calcite with weak HCl reaction

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
264.00	264.17	HQ Core, Box 20		Mudstone, black, carbonaceous. Fissile along bedding planes. No iron or manganese stains Some calcite with weak HCl reaction
264.17	264.59	HQ Core, Box 20		Coal, bright & shiny Cleated No iron or manganese stains Heavy calcite with weak HCl reaction
264.59	265.42	HQ Core, Box 20	Marker at 265 feet	Mudstone, black, very carbonaceous, rare coaly zones Fissile along bedding planes. No iron or manganese stains Some calcite with weak HCl reaction
265.42	270.09	HQ Core, Box 20		Siltstone, gray to dark gray and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous laminations and lenses Moderately fractured in vertical, horizontal, and angular directions. Fissile along bedding planes. No iron or manganese stains Moderate calcite with weak HCl reaction
270.09	270.42	HQ Core, Box 20		Siltstone, gray to dark gray, Coal and carbonaceous laminations and lenses Moderately fractured in vertical, horizontal, and angular directions. Fissile along bedding planes. No iron or manganese stains Heavy calcite with weak HCl reaction
270.42	270.75	HQ Core, Box 20		Siltstone, gray to dark gray, Coal and carbonaceous laminations and lenses Moderately fractured in vertical, horizontal, and angular directions. Fissile along bedding planes. No iron or manganese stains Moderate calcite with weak HCl reaction
270.75	271.42	HQ Core, Box 20		Siltstone, gray to dark gray, very carbonaceous, Coal and carbonaceous laminations and lenses Moderately fractured in vertical, horizontal, and angular directions. Fissile along bedding planes. No iron or manganese stains

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				Heavy calcite with weak HCl reaction
271.42	271.59	HQ Core, Box 20		Mudstone, black, very carbonaceous, rare coaly zones
				Mushy
				No iron or manganese stains
				Some calcite with weak HCl reaction
271.59	272.09	HQ Core, Box 20		Siltstone, gray to dark gray, very carbonaceous, Coal and carbonaceous laminations and lenses
				Moderately fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Heavy calcite with weak HCl reaction
272.09	272.42	HQ Core, Box 20		Coal, dull
				Cleated
				No iron or manganese stains
				No calcite
272.42	272.92	HQ Core, Box 20		Siltstone, gray to dark gray, very carbonaceous, Coal and carbonaceous laminations and lenses
				Moderately fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Heavy calcite with weak HCl reaction
272.92	273.50	HQ Core, Box 20		Coal, bright & shiny
				Cleated
				No iron or manganese stains
				Some calcite with weak HCl reaction
273.50	275.25	HQ Core, Box 20		Siltstone, gray to dark gray and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Moderately fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Moderate calcite with weak HCl reaction

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
275.00	280.25	HQ Core, Box 21	Marker at 275 feet	Siltstone, gray to dark gray and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Light calcite with weak HCl reaction
280.25	280.75	HQ Core, Box 21		Coal, dull to bright
				Poorly cleated
				No iron or manganese stains
				No calcite
280.75	281.42	HQ Core, Box 21		Siltstone, gray to dark gray and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Light calcite with weak HCl reaction
281.42	282.59	HQ Core, Box 21		Coal, dull to bright
				Poorly cleated
				No iron or manganese stains
				Some calcite with weak HCl reaction
282.59	283.59	HQ Core, Box 21		Siltstone, gray to dark gray and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Light calcite with weak HCl reaction
283.59	284.26	HQ Core, Box 21		Coal, dull to bright
				Poorly cleated
				No iron or manganese stains
				No calcite
284.26	285.76	HQ Core, Box 21	Marker at 285 feet versus 285.43 feet	Siltstone, gray to dark gray and mudstone, very dark gray, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Rubble and cuttings wash
				No iron or manganese stains

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				Light calcite with weak HCl reaction
285.76	288.09	HQ Core, Box 21		Siltstone, gray to dark gray and mudstone, very dark gray, gradational to defined interbeds
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Light calcite with weak HCl reaction
287.33	301.25	HQ Core, Box 22	Marker at 295 feet	Sandstone, light gray to dark gray, very fine to fine grained, Siltstone, dark gray to brown, Mudstone, dark gray to black, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Moderately fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Moderate calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
300.83	305.00	HQ Core, Box 23	Marker at 305 feet	Sandstone, light gray to dark gray, very fine to fine grained, Siltstone, dark gray to brown, Mudstone, dark gray to black, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Very heavily fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Very heavy calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
305.00	305.33	HQ Core, Box 23		Clay, dark gray
				Plastic
				No iron or manganese stains
				No calcite
305.33	314.83	HQ Core, Box 23		Sandstone, light gray to dark gray, very fine to fine grained, Siltstone, dark gray to brown, Mudstone, dark gray to black, gradational to defined interbeds, Coal and carbonaceous laminations and lenses

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				Very heavily fractured in vertical, horizontal, and angular directions. Some rubble.
				No iron or manganese stains
				Very heavy calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
313.75	327.42	HQ Core, Box 24	Marker at 315 feet. Marker at 325 feet versus 325.08 feet	Sandstone, light gray to dark gray, very fine to fine grained, Siltstone, dark gray to brown, Mudstone, dark gray to black, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Very heavily fractured in vertical, horizontal, and angular directions. Some rubble.
				No iron or manganese stains
				Very heavy calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
327.17	341.00	HQ Core, Box 25	Marker at 335 feet.	Sandstone, light gray to dark gray, very fine to fine grained, Siltstone, dark gray to brown, Mudstone, dark gray to black, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Heavy fractured in vertical, horizontal, and angular directions. Some rubble.
				No iron or manganese stains
				Heavy calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
340.75	341.75	HQ Core, Box 26		Sandstone, light gray to dark gray, very fine to fine grained, Siltstone, dark gray to brown, Mudstone, dark gray to black, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Heavy fractured in vertical, horizontal, and angular directions. Some rubble.
				No iron or manganese stains

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				Heavy calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
341.75	342.25	HQ Core, Box 26		Crystal, light green, secondary mineralization and/or fracture filling. Travertine?
				Heavy fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Possible associated calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
342.25	346.58	HQ Core, Box 26	Marker at 345 feet	Sandstone, light gray to dark gray, very fine to fine grained, Siltstone, dark gray to brown, Mudstone, dark gray to black, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Heavy fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Heavy calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
346.58	354.25	HQ Core, Box 26		Sandstone, light gray to dark gray, very fine to coarse grained, Coal and carbonaceous laminations and lenses
				Heavy fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Heavy calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
354.25	365.33	HQ Core, Box 27	Marker at 355 feet. Marker at 365 feet versus 364.50 feet	Sandstone, light gray to dark gray, very fine to fine grained, Siltstone, dark gray to brown, Mudstone, dark gray to black, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Heavy fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Heavy calcite in closed fractures and carbonaceous laminations with weak HCl reaction.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
365.33	365.50	HQ Core, Box 27		Sandstone, light gray to dark gray, very fine to fine grained, Siltstone, dark gray to brown, Mudstone, dark gray to black, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Heavy fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Heavy calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
				Pyrite nodules
365.50	367.42	HQ Core, Box 27, Coal sampled from 366.00 feet to 367.92 feet in 1 bags		Coal, dull to bright
				Well cleated
				No iron or manganese stains
				Some calcite with weak HCl reaction
367.42	367.84	HQ Core, Box 27		Siltstone, dark gray to brown, Mudstone, dark gray to black, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Heavy fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Heavy calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
367.92	368.00	HQ Core, Box 28		Coal, dull to bright
				Poorly cleated
				No iron or manganese stains
				Some calcite with weak HCl reaction
368.00	368.25	HQ Core, Box 28		Mudstone, dark gray to black, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Lightly fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
368.25	368.33	HQ Core, Box 28		Coal, dull to bright
				Poorly cleated
				No iron or manganese stains

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				Some calcite with weak HCl reaction
368.33	370.16	HQ Core, Box 28		Mudstone, dark gray to black, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Lightly fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
370.16	381.74	HQ Core, Box 28	Marker at 375 feet	Sandstone, light gray to dark gray, very fine to fine grained, Siltstone, dark gray to brown, Mudstone, dark gray to black, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Heavy fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Heavy calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
381.67	383.25	HQ Core, Box 29		Sandstone. conglomeratic, light gray to dark gray, very fine to pebble grained, Siltstone, dark brown, clasts, laminations and lenses
				Lightly fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
383.25	385.00	HQ Core, Box 29		Siltstone, dark brown
				Lightly fractured in vertical, horizontal, and angular directions. Some slickensides
				No iron or manganese stains
				Heavy calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
385.00	395.75	HQ Core, Box 29	Marker at 385 feet. Marker at 395 feet versus 395.25 feet	Sandstone, light gray to dark gray, very fine to fine grained, Siltstone, dark gray to brown, Mudstone, dark gray to black, gradational to defined interbeds, Coal and carbonaceous laminations and lenses

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				Lighty fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
395.58	409.58	HQ Core, Box 30	Marker at 405 feet.	Sandstone, light gray to dark gray, very fine to fine grained, Siltstone, dark gray to brown, Mudstone, dark gray to black, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Lighty fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
409.17	423.08	HQ Core, Box 31	Marker at 415 feet.	Sandstone, light gray to dark gray, very fine to fine grained, Siltstone, dark gray to brown, Mudstone, dark gray to black, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Moderatey fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Moderate calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
422.50	425.00	HQ Core, Box 32	Marker at 425 feet.	Sandstone, light gray to dark gray, very fine to fine grained, Siltstone, dark gray to brown, Mudstone, dark gray to black, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Moderatey fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Moderate calcite in closed fractures and carbonaceous laminations with weak HCl reaction.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
425.00	426.08	HQ Core, Box 32		Sandstone, light gray to dark gray, very fine to fine grained, Siltstone, dark gray to brown, Mudstone, dark gray to black, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Large slickenside
				No iron or manganese stains
				Heavy calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
426.08	428.58	HQ Core, Box 32	Marker at 428 feet.	Sandstone, light gray to dark gray, very fine to fine grained, Siltstone, dark gray to brown, Mudstone, dark gray to black, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Moderately fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Moderate calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
Rods stopped rotating, pull out and TD hole.				
TOTAL DEPTH= 428 ft= 130.49 m				

Drilling began on 2005 Oct 29

Completed as piezometer using IPS=2.5 inch. OD=2.875 inch
Schedule 40 wall thickness=0.203 inch , ID=2.469 inch

Pipe perforated by drilling 1/16" holes in pipe

Bottom of perforations= 110 ft

Top of perforations= 10 ft

Cannot wash PVC past 110 feet

10 feet of bentonite grout from surface to 10 feet

Well Completed= 2005 Nov 1

TIME PER FOOT= 4,320 min/ 428 ft= 10.09 min/ft





COREHOLE LITHOLOGIC LOG

PROJECT	<u>Mount Klappan</u>	COREHOLE NUMBER	<u>05 016</u>
CLIENT	<u>Fortune Minerals/Marston</u>	WELL NUMBER	_____
GPS LOCATION	_____	DATE	<u>Begin Drilling 2005 Nov 1, Logging on 1st, Completed 2005 Nov 2</u>
NAD83	<u>508,832 6,346,347</u>	DATE	_____
CONTRACTOR	<u>Connors Drilling, Kamloops, BC, CA</u>	LOGGED BY	<u>Paul Oldaker</u>
DRILLER(S)	<u>Mitch Burtnick & Henry Hogan</u>	CHECKED BY	<u>GPS ELEVATION=1,633 m</u>
METHOD	<u>HQ Core Fluid Rotary</u>	SHEET 1 OF	_____

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
11.17	24.75	HQ Core, Box 1	Marker at 15 feet	Sandstone, light gray to dark gray, very fine to fine grained, Siltstone, dark gray to brown, Mudstone, dark gray to black, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Heavily fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Rare calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
22.58	36.58	HQ Core, Box 2	Marker at 25 feet	Sandstone, light gray to dark gray, very fine to fine grained, Siltstone, dark gray to brown, Mudstone, dark gray to black, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Heavily fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Rare calcite in closed fractures and carbonaceous laminations with weak HCl reaction.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
34.67	38.25	HQ Core, Box 3	Marker at 35 feet	Sandstone, light gray to dark gray, very fine to fine grained, Siltstone, dark gray to brown, Mudstone, dark gray to black, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Heavily fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Rare calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
38.25	38.92	HQ Core, Box 3	Marker at 45 feet versus 38.92 feet	Sandstone, light gray to dark gray, very fine to fine grained, Siltstone, dark gray to brown, Mudstone, dark gray to black, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Soft and plastic
				No iron or manganese stains
				Rare calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
38.92	40.50	HQ Core, Box 3		Mudstone, dark gray to black, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Lightly fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Rare calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
40.50	42.92	HQ Core, Box 3, Coal sampled from 46.92 ft to 49.34 ft, in 1 bag		Coal, dull to bright
				Poorly to well cleated
				No iron or manganese stains
				Moderate calcite with weak HCl reaction

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
42.92	43.50	HQ Core, Box 3		Mudstone, dark gray to black, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Lightly fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Rare calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
43.50	44.83	HQ Core, Box 3		Mudstone, dark gray to black, gradational to defined interbeds, Coal and carbonaceous laminations and lenses. Imbedded with siltstone chips, brecciated?
				Lightly fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Rare calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
44.83	45.75	HQ Core, Box 3		Siltstone, dark gray to brown, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Heavily fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Heavy calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
45.75	48.08	HQ Core, Box 3		Siltstone, dark gray to brown, gradational to defined interbeds, carbonaceous
				Heavily fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Heavy calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
50.42	54.83	HQ Core, Box 4	Marker 55 feet	Siltstone, dark gray to brown, gradational to defined interbeds, carbonaceous
				Soft
				No iron or manganese stains

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				Moderate calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
54.83	55.08	HQ Core, Box 4		Mudstone, dark gray to black, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Soft
				No iron or manganese stains
				Moderate calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
55.08	55.33	HQ Core, Box 4		Coal, dull
				Poorly cleated
				No iron or manganese stains
				Moderate calcite with weak HCl reaction
55.33	55.58	HQ Core, Box 4		Mudstone, dark gray to black, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Soft
				No iron or manganese stains
				Moderate calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
55.58	55.83	HQ Core, Box 4		Coal, dull
				Poorly cleated, Mushy
				No iron or manganese stains
				Moderate calcite with weak HCl reaction
55.83	59.16	HQ Core, Box 4		Siltstone, dark gray to brown, gradational to defined interbeds, carbonaceous
				Lightly fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Rare calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
59.16	63.74	HQ Core, Box 4	Marker 65 feet versus 62.99 feet	Siltstone, dark gray to brown, gradational to defined interbeds, carbonaceous

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				Lightly fractured in vertical, horizontal, and angular directions. Some rubble.
				No iron or manganese stains
				Rare calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
65.25	69.25	HQ Core, Box 5		Siltstone, dark gray to brown, gradational to defined interbeds, carbonaceous
				Lightly fractured in vertical, horizontal, and angular directions. Some rubble.
				No iron or manganese stains
				Rare calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
69.25	69.83	HQ Core, Box 5		Coal, dull
				Poorly cleated, Mushy
				No iron or manganese stains
				Moderate calcite with weak HCl reaction
69.83	74.41	HQ Core, Box 5		Sandstone, light gray to dark gray, very fine to fine grained, Siltstone, dark gray to brown, Mudstone, dark gray to black, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Lightly fractured in vertical, horizontal, and angular directions. Some rubble.
				No iron or manganese stains
				Rare calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
74.41	76.66	HQ Core, Box 5	Marker at 75 feet versus 74.99 feet	Mudstone, dark gray to black, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Soft, some plastic
				No iron or manganese stains
				Moderate calcite in closed fractures and carbonaceous laminations with weak HCl reaction.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
76.66	78.91	HQ Core, Box 5, Coal sampled 76.67 feet to 79.50 feet, in 1 bag		Coal, dull, Mudstone, dark gray to black
				Poorly cleated
				No iron or manganese stains
				Moderate calcite with weak HCl reaction
78.50	79.08	HQ Core, Box 6, Coal sampled 76.67 feet to 79.50 feet, in 1 bag		Coal, dull, Mudstone, dark gray to black
				Poorly cleated
				No iron or manganese stains
				Moderate calcite with weak HCl reaction
79.08	80.08	HQ Core, Box 6		Mudstone, dark gray to black, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Soft, some plastic
				No iron or manganese stains
				Moderate calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
80.08	92.33	HQ Core, Box 6		Sandstone, light gray to dark gray, very fine to fine grained, Siltstone, dark gray to brown, Mudstone, dark gray to black, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Highly fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Rare calcite in closed fractures and carbonaceous laminations with weak HCl reaction.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
91.33	95.67	HQ Core, Box 7	Marker at 95 feet	Sandstone, light gray to dark gray, very fine to fine grained, Siltstone, dark gray to brown, Mudstone, dark gray to black, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Moderately fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Moderate calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
95.67	95.92	HQ Core, Box 7		Clay, gray, plastic
				Fill in high angle fraacture
				No iron or manganese stains
				No calcite
95.92	96.34	HQ Core, Box 7		Sandstone, light gray to dark gray, very fine to fine grained, Siltstone, dark gray to brown, Mudstone, dark gray to black, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Rubble
				No iron or manganese stains
				Moderate calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
96.34	96.42	HQ Core, Box 7		Clay, gray, with siltstone chips
				Plastic fill in high angle fracture
				No iron or manganese stains
				No calcite
96.42	104.17	HQ Core, Box 7		Sandstone, light gray to dark gray, very fine to fine grained, Siltstone, dark gray to brown, Mudstone, dark gray to black, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Heavily fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				Moderate calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
103.92	112.83	HQ Core, Box 8		Sandstone, light gray to dark gray, very fine to fine grained, Siltstone, dark gray to brown, Mudstone, dark gray to black, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Heavily fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Moderate calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
112.83	113.08	HQ Core, Box 8		Clay, dark gray to brown
				Plastic
				No iron or manganese stains
				No calcite
113.08	113.41	HQ Core, Box 8		Sandstone, very light gray to dark gray, very fine to coarse grained
				Heavily fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Heavy calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
113.33	113.83	HQ Core, Box 8		Siltstone, dark gray to brown, carbonaceous laminations and lenses
				Lightly fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Rare calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
113.83	117.75	HQ Core, Box 8	Marker at 115 feet versus 115.08 feet	Sandstone, very light gray to dark gray, very fine to coarse grained
				Heavily fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				Heavy calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
117.83	121.33	HQ Core, Box 9		Sandstone, very light gray to dark gray, very fine to coarse grained
				Heavily fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Heavy calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
121.33	121.66	HQ Core, Box 9		Clay, white to light gray, possible tonstein
				Not plastic, flaky
				No iron or manganese stains
				Some calcite
121.66	122.41	HQ Core, Box 9		Sandstone, very light gray to dark gray, very fine to coarse grained
				Heavily fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Heavy calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
122.41	122.99	HQ Core, Box 9		Siltstone, brown, carbonaceous laminations and lenses
				Lightly fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Rare calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
122.99	128.41	HQ Core, Box 9	Marker at 125 feet versus 124.99 feet	Sandstone, very light gray to dark gray, very fine to coarse grained
				Heavily fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Heavy calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
128.41	128.58	HQ Core, Box 9		Clay, brown
				Not plastic, flaky
				No iron or manganese stains
				No calcite

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
128.58	130.41	HQ Core, Box 9		Sandstone, very light gray to dark gray, very fine to coarse grained
				Heavily fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Heavy calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
131.08	140.83	HQ Core, Box 10		Sandstone, very light gray to dark gray, very fine to coarse grained, with siltstone clasts
				Heavily fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Heavy calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
140.83	142.75	HQ Core, Box 10		Siltstone, brown, carbonaceous laminations and lenses
				Very heavily fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Very heavy calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
142.75	144.83	HQ Core, Box 10		Sandstone, light gray to dark gray, very fine to fine grained, Siltstone, dark gray to brown, Mudstone, dark gray to black, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Heavily fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Moderate calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
144.50	145.00	HQ Core, Box 11	Marker at 145 feet	Siltstone, brown, carbonaceous laminations and lenses
				Very heavily fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				Very heavy calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
145.00	145.83	HQ Core, Box 11		Clay, white to light gray, possible tonstein
				Not plastic, flaky
				No iron or manganese stains
				Some calcite
145.83	157.41	HQ Core, Box 11	Marker at 155 feet mark versus 155.08 feet	Sandstone, light gray to dark gray, very fine to fine grained, Siltstone, dark gray to brown, some in clasts, Mudstone, dark gray to black, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Heavily fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Moderate calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
157.08	166.58	HQ Core, Box 12		Sandstone, very light gray to dark gray, very fine to coarse grained
				Heavily fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Heavy calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
166.58	166.83	HQ Core, Box 12		Mudstone, dark gray to black, Very carbonaceous laminations and lenses
				Heavily fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Heavy calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
166.83	167.33	HQ Core, Box 12		Sandstone, very light gray to dark gray, very fine to coarse grained
				Heavily fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				Heavy calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
167.33	170.50	HQ Core, Box 12		Sandstone, very light gray to dark gray, very fine to coarse grained, some siltstone
				Rubble
				No iron or manganese stains
				Some calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
170.92	181.08	HQ Core, Box 13		Sandstone, very light gray to dark gray, very fine to coarse grained, Siltstone, dark gray
				Heavily fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Heavy calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
181.08	181.83	HQ Core, Box 13		Clay, brown
				Plastic
				No iron or manganese stains
				Heavy calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
181.83	184.25	HQ Core, Box 13		Sandstone, very light gray to dark gray, very fine to coarse grained, Siltstone, dark gray
				Heavily fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Heavy calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
184.08	185.00	HQ Core, Box 14	Marker at 185 feet	Siltstone, gray to dark gray, carbonaceous laminations and lenses
				Very heavily fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Very heavy calcite in closed fractures and carbonaceous laminations with weak HCl reaction.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
185.00	189.25	HQ Core, Box 14		Sandstone, very light gray to dark gray, very fine to coarse grained, Siltstone, dark gray
				Heavily fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Heavy calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
189.25	190.42	HQ Core, Box 14		Clay, brown
				Plastic
				No iron or manganese stains
				Very heavy calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
190.42	191.59	HQ Core, Box 14		Sandstone, very light gray to dark gray, very fine to coarse grained, Siltstone, dark gray
				Heavily fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Heavy calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
191.59	191.76	HQ Core, Box 14		Clay, dark gray
				Plastic
				No iron or manganese stains
				Very heavy calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
191.76	196.09	HQ Core, Box 14	Marker at 195 feet versus 196.09 feet	Sandstone, very light gray to dark gray, very fine to medium grained
				Heavily fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Heavy calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
196.08	204.00	HQ Core, Box 15		Sandstone, very light gray to dark gray, very fine to medium grained
				Very heavily fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				Very heavy calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
204.00	204.50	HQ Core, Box 15		Sandstone, very light gray to dark gray, conglomeratic, very fine to pebble grained, Rare coal laminations
				Very heavily fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Very heavy calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
204.50	207.58	HQ Core, Box 15		Sandstone, very light gray to dark gray, very fine to medium grained, Rare coal laminations
				Very heavily fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Very heavy calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
207.58	208.08	HQ Core, Box 15		Crystal, light green, travertine? Fracture fill
				Very heavily fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
208.08	209.91	HQ Core, Box 15		Sandstone, very light gray to dark gray, very fine to medium grained, Rare coal laminations
				Very heavily fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Very heavy calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
213.25	218.25	HQ Core, Box 16	Marker at 215 feet	Sandstone, very light gray to dark gray, very fine to coarse grained, Rare carbonaceous laminations

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				Very heavily fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Very heavy calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
218.25	219.75	HQ Core, Box 16		Siltstone, gray to dark gray, carbonaceous laminations and lenses
				Very heavily fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Very heavy calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
219.75	223.00	HQ Core, Box 16	Marker at 215 feet	Sandstone, very light gray to dark gray, very fine to coarse grained, Rare carbonaceous laminations
				Very heavily fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Very heavy calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
223.00	223.42	HQ Core, Box 16		Clay, dark gray
				Plastic
				No iron or manganese stains
				Heavy calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
223.42	227.00	HQ Core, Box 16	Marker at 225 feet versus 226.17 feet	Sandstone, very light gray to dark gray, very fine to coarse grained, Rare carbonaceous laminations
				Very heavily fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Very heavy calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
224.25	238.00	HQ Core, Box 17	Marker at 235 feet	Sandstone, very light gray to black, very fine to coarse grained, Rare carbonaceous laminations

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				Moderately fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Moderate calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
232.50	245.00	HQ Core, Box 18	Marker at 245 feet	Sandstone, dark gray to black, very fine to fine grained, Siltstone, dark gray to brown, some in clasts, Mudstone, dark gray to black, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Heavily fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Heavy calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
245.00	249.42	HQ Core, Box 18		Sandstone, dark gray to black, very fine to fine grained, Siltstone, dark gray to brown, some in clasts, Mudstone, dark gray to black, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Very heavily fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Very heavy calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
249.92	252.25	HQ Core, Box 19		Sandstone, dark gray to black, very fine to fine grained, Siltstone, dark gray to brown, some in clasts, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Very heavily fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				Very heavy calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
252.25	252.42	HQ Core, Box 19		Coal, dull to bright
				Poorly cleated
				No iron or manganese stains
				Some calcite with weak HCl reaction
252.42	263.50	HQ Core, Box 19		Sandstone, dark gray to black, very fine to fine grained, Siltstone, dark gray to brown, some in clasts, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Very heavily fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Very heavy calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
263.25	268.25	HQ Core, Box 20	Marker at 265 feet	Sandstone, dark gray to black, very fine to fine grained, Siltstone, dark gray to brown, some in clasts, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Very heavily fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Very heavy calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
268.25	271.25	HQ Core, Box 20		Siltstone, gray to dark gray, carbonaceous laminations and lenses
				Very heavily fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Very heavy calcite in closed fractures and carbonaceous laminations with weak HCl reaction.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
271.25	271.75	HQ Core, Box 20		Siltstone, gray to dark gray, very carbonaceous laminations and lenses
				Very heavily fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Very heavy calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
271.75	272.42	HQ Core, Box 20, Coal sampled from 271.75 feet to 274.42 feet in 1 bag		Coal, dull to bright
				Poorly cleated
				No iron or manganese stains
				Some calcite with weak HCl reaction
272.42	272.92	HQ Core, Box 20, Coal sampled from 271.75 feet to 274.42 feet in 1 bag		Coal, dull
				Poorly cleated
				No iron or manganese stains
				Some calcite with weak HCl reaction
272.92	274.42	HQ Core, Box 20, Coal sampled from 271.75 feet to 274.42 feet in 1 bag		Coal, bright
				Fair cleat
				No iron or manganese stains
				Some calcite with weak HCl reaction
274.42	275.42	HQ Core, Box 20		Siltstone, gray to dark gray, very carbonaceous laminations and lenses
				Very heavily fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				Very heavy calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
275.42	276.84	HQ Core, Box 20	Marker at 275 feet versus 276.17 feet	Sandstone, dark gray to black, very fine to fine grained, Siltstone, dark gray to brown, some in clasts, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Heavily fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Heavy calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
274.75	276.67	HQ Core, Box 21		Siltstone, black, very carbonaceous laminations and lenses
				Moderately fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Moderate calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
276.67	276.84	HQ Core, Box 21		Clay, dark gray
				Plastic
				No iron or manganese stains
				No calcite
276.84	288.51	HQ Core, Box 21	Marker at 285 feet	Sandstone, dark gray to black, very fine to fine grained, Siltstone, dark gray to brown, some in clasts, Mudstone, dark gray to black, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Moderately fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Moderate calcite in closed fractures and carbonaceous laminations with weak HCl reaction.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
289.25	293.67	HQ Core, Box 22		Sandstone, dark gray to black, very fine to fine grained, Coal and carbonaceous laminations and lenses
				Moderately fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Moderate calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
293.67	302.75	HQ Core, Box 22	Marker at 295 feet	Sandstone, dark gray to black, very fine to fine grained, Siltstone, dark gray to brown, some in clasts, Mudstone, dark gray to black, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Moderately fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Moderate calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
299.42	313.25	HQ Core, Box 23	Marker at 295 feet	Sandstone, dark gray to black, very fine to fine grained, Siltstone, dark gray to brown, some in clasts, Mudstone, dark gray to black, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Moderately fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Moderate calcite in closed fractures and carbonaceous laminations with weak HCl reaction.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
313.08	319.75	HQ Core, Box 24	Marker at 315 feet	Sandstone, dark gray to black, very fine to fine grained, Siltstone, dark gray to brown, some in clasts, Mudstone, dark gray to black, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Lightly fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
319.75	319.83	HQ Core, Box 24		Sandstone, dark gray to black, very fine to fine grained, Siltstone, dark gray to brown, some in clasts, Mudstone, dark gray to black, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Lightly fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
				Pyrite layer
319.83	324.00	HQ Core, Box 24		Sandstone, dark gray to black, very fine to fine grained, Siltstone, dark gray to brown, some in clasts, Mudstone, dark gray to black, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Moderately fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Moderate calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
324.00	325.50	HQ Core, Box 24, Coal sampled from 323.67 feet to 327.25 feet in 1 bag	Marker at 325 feet versus 325.33 feet	Coal, bright

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				Cleated
				No iron or manganese stains
				Some calcite with weak HCl reaction
325.50	326.33	HQ Core, Box 24, Coal sampled from 323.67 feet to 327.25 feet in 1 bag		Coal, bright, Mudstone, black, very carbonaceous, interbedded
				Cleated
				No iron or manganese stains
				Some calcite with weak HCl reaction
326.33	326.83	HQ Core, Box 24, Coal sampled from 323.67 feet to 327.25 feet in 1 bag		Coal, bright
				Cleated
				No iron or manganese stains
				Some calcite with weak HCl reaction
325.50	326.25	HQ Core, Box 25, Coal sampled from 323.67 feet to 327.25 feet in 1 bag		Coal, bright
				Cleated
				No iron or manganese stains
				Some calcite with weak HCl reaction
326.25	338.75	HQ Core, Box 25	Marker at 335 feet	Sandstone, light gray to dark gray, very fine to medium grained, Siltstone, dark gray to brown, some in clasts, Mudstone, dark gray to black, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Lightly fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations with weak HCl reaction.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
337.50	351.42	HQ Core, Box 26		Sandstone, light gray to dark gray, very fine to medium grained, Siltstone, dark gray to brown, some in clasts, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Heavily fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Moderate calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
350.92	364.50	HQ Core, Box 27		Sandstone, light gray to dark gray, very fine to medium grained, Siltstone, dark gray to brown, some in clasts, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Lightly fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Moderate calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
364.25	375.67	HQ Core, Box 28	Marker at 365 feet. Marker at 375 feet versus 374.75 feet	Sandstone, light gray to dark gray, very fine to medium grained, Siltstone, dark gray to brown, some in clasts, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Lightly fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations with weak HCl reaction.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
375.67	375.69	HQ Core, Box 28		Sandstone, light gray to dark gray, very fine to medium grained, Siltstone, dark gray to brown, some in clasts, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Lightly fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
				0.25 inch Pyrite layer
375.69	377.69	HQ Core, Box 28		Sandstone, light gray to dark gray, very fine to medium grained, Siltstone, dark gray to brown, some in clasts, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Lightly fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
377.67	381.42	HQ Core, Box 29, Coal sampled from 377.67 feet to 381.42 feet in 1 bag		Coal, dull to bright, some siltstone, black, interbedded
				Cleated, hard
				No iron or manganese stains
				Some calcite with weak HCl reaction
381.42	385.00	HQ Core, Box 29	Marker at 385 feet	Sandstone, light gray to dark gray, very fine to medium grained, Siltstone, dark gray to brown, some in clasts, Mudstone, dark gray to black, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Lightly fractured in vertical, horizontal, and angular directions.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
385.00	390.83	HQ Core, Box 29		Sandstone, light gray to dark gray, very fine to medium grained, Siltstone, dark gray to brown, some in clasts, Mudstone, dark gray to black, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Rubble
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
390.58	404.25	HQ Core, Box 30	Marker at 395 feet	Sandstone, light gray to dark gray, very fine to medium grained, Siltstone, dark gray to brown, some in clasts, Mudstone, dark gray to black, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Lightly fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
404.17	418.17	HQ Core, Box 31	Marker at 405 feet. Marker at 415 feet versus 415.08 feet	Sandstone, light gray to dark gray, very fine to medium grained, Siltstone, dark gray to brown, some in clasts, Mudstone, dark gray to black, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Moderately fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				Moderate calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
418.33	432.17	HQ Core, Box 32	Marker at 425 feet.	Siltstone, dark gray to brown, Mudstone, dark gray to black, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Lightly fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
431.83	436.92	HQ Core, Box 33	Marker at 435 feet.	Sandstone, light gray to dark gray, very fine to medium grained, Siltstone, dark gray to brown, some in clasts, Mudstone, dark gray to black, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Lightly fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
436.92	440.75	HQ Core, Box 33		Coal, dull to bright, Mudstone, black, very carbonaceous, interbedded
				Cleated
				No iron or manganese stains
				Some calcite with weak HCl reaction
440.75	442.92	HQ Core, Box 33, Coal sampled from 440.75 feet to 444.00 feet in 1 bag		Coal, dull to bright
				Cleated
				No iron or manganese stains
				Some calcite with weak HCl reaction

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
442.92	443.00	HQ Core, Box 33, Coal sampled from 440.75 feet to 444.00 feet in 1 bag		Mudstone, black, very carbonaceous
				Cleated
				No iron or manganese stains
				Some calcite with weak HCl reaction
443.00	443.17	HQ Core, Box 33, Coal sampled from 440.75 feet to 444.00 feet in 1 bag		Coal, dull to bright
				Cleated
				No iron or manganese stains
				Some calcite with weak HCl reaction
443.17	443.50	HQ Core, Box 33, Coal sampled from 440.75 feet to 444.00 feet in 1 bag		Mudstone, black, very carbonaceous
				Cleated
				No iron or manganese stains
				Some calcite with weak HCl reaction
443.50	444.00	HQ Core, Box 33, Coal sampled from 440.75 feet to 444.00 feet in 1 bag		Coal, dull to bright
				Cleated
				No iron or manganese stains
				Some calcite with weak HCl reaction
444.00	445.33	HQ Core, Box 33		Siltstone, dark gray to brown, Coal and carbonaceous laminations and lenses
				Lightly fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations with weak HCl reaction.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
444.50	454.17	HQ Core, Box 34	Marker at 445 feet. Marker at 455 feet versus 451.25 feet	Sandstone, light gray to dark gray, very fine to medium grained, Siltstone, dark gray to brown, some in clasts, Mudstone, dark gray to black, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Lightly fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
457.42	471.17	HQ Core, Box 35	Marker at 465 feet.	Sandstone, light gray to dark gray, some black, very fine to medium grained, Siltstone, dark gray to brown, some in clasts, Mudstone, dark gray to black, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Lightly fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
470.67	484.42	HQ Core, Box 36	Marker at 475 feet.	Sandstone, light gray to dark gray, some black, very fine to medium grained, Siltstone, dark gray to brown, some in clasts, Mudstone, dark gray to black, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Lightly fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations with weak HCl reaction.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
484.17	485.00	HQ Core, Box 37	Marker at 485 feet	Sandstone, light gray to dark gray, some black, very fine to medium grained, Siltstone, dark gray to brown, some in clasts, Mudstone, dark gray to black, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Lightly fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
485.00	495.08	HQ Core, Box 37	Marker at 495 feet versus 495.08 feet	Sandstone, light gray to dark gray, some black, very fine to coarse grained, Siltstone, dark gray to brown, some in clasts, Mudstone, dark gray to black, gradational to defined interbeds, Coal and carbonaceous laminations and lenses
				Lightly fractured in vertical, horizontal, and angular directions.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations with weak HCl reaction.
TOTAL DEPTH= 495 ft= 150.91 m				

Drilling began on 2005 Nov 1

Completed as piezometer using IPS=2.5 inch. OD=2.875 inch
Schedule 40 wall thickness=0.203 inch , ID=2.469 inch

Pipe perforated by drilling 1/16" holes in pipe

Bottom of perforations= 495 ft

Top of perforations= 247.5 ft

10 feet of bentonite grout from surface to 10 feet

Well Completed= 2005 Nov 2

TIME PER FOOT= 2,880 min/ 495 ft= 5.82 min/ft

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
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COREHOLE LITHOLOGIC LOG

PROJECT	<u>Mount Klappan</u>	COREHOLE NUMBER	<u>05 019</u>
CLIENT	<u>Fortune Minerals/Marston</u>	WELL NUMBER	_____
GPS LOCATION	_____	Begin Drilling	<u>2005 Oct 24, Completed Drilling</u>
NAD83	<u>507,757 6,345,115</u>	DATE	<u>2005 Oct 25</u>
CONTRACTOR	<u>Connors Drilling, Kamloops, BC, CA</u>	LOGGED BY	<u>Bill Hanson (Oct 26 - 27, 2005)</u>
DRILLER(S)	<u>Mitch Burtnick & Henry Hogan</u>	CHECKED BY	<u>GPS ELEVATION=1,465 m</u>
METHOD	<u>HQ Core Fluid Rotary</u>	SHEET 1 OF	_____

Note 1: Dilute (10%) HCl was used for mineral identification during logging of this core. The relative scale of fracture intensity and fracture-filling mineral is four-fold: no comment means not observed; lt mean light; med or mod indicates significant but intermediate amount which is obvious at a glance and volumetrically significant; heavy or hvy means abundant, pervasive mineralization which is volumetrically significant and obvious from a distant glance and dominates the aspect of the core.

Note 2: ms means mudstone; ss means sandstone; slt or siltst means siltstone; sf means shear fracture. Note that in a weathered outcrop some or many of the lithologies logged as mudstone might exhibit fissility and thereby be called shale. Tr means trace. Py means pyrite or other iron sulfide.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
10.00	13.00	HQ Core, Box 1	Marker at 10 feet for HW casing.	Glacial drift: gravel & cobbles of ss & qtz plus boulders of ss in sand & clay.
15.00	24.50		Marker at 15 feet.	Glacial drift: ss pebbles; pebble & boulders in plastic clay.
25.00	26.17		Marker at 25 feet.	Glacial drift: plastic clay
25.50	39.83	HQ Core, Box 2	Marker at 35 feet.	Glacial drift: Pebbles to boulders in sandy clay.
38.33	41.83	HQ Core, Box 3	Marker at 45 feet.	Glacial drift: sandy (plastic) clay w few pebbles.
41.83	50.42			Weathered siltstone & sandy clay w pebbles.
50.42	52.42			Weathered siltstone: v dk ol gy; qtz vein, sf (shear fracture) and carb. wood frag.
				Quartz.
51.42	51.54	HQ Core, Box 4	Marker at 55 feet.	Weathered ms: dk ol gy; carbonized plant frags.
51.54	61.71			Weathered ss: dk ol gy to med ol gy; vf- to f-gr; lam, xlam, ripple lam. 1 sf, horizontal qtz vein.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				Bedding parallel Qtz vein.
64.75	78.75	HQ Core, Box 5	Marker at 75 feet. (Marker 65 not noted but probably was at top of box.)	SS + siltst: dk ol gy weathered; vf-gr; well sort; micro-micaceous; lam, xlam.
78.25	87.67	HQ Core, Box 6	Marker at 85 feet.	Ms: blk to dk ol gy, weathered; plant fossils and coal lam in lower part.
87.67	90.58		Coal sampled from 87.67 to 90.58 in 1 bag.	Coal: rubble; weathered; friable; ~30% thin carb ms partings.
90.79	91.42	HQ Core, Box 7	Marker at 95 feet. Coal sampled from 90.79 to 91.42 in 1 bag.	Coal: weathered & wet; 35% bri; 65% semi-bri or ms partings.
91.42	92.25			Carb Ms & dk brn claystone: soft to firm.
92.25	94.75		Coal sampled from 92.25 to 96.17 in 1 bag.	Coal: rubble to chunks; banded; fri to hard.
94.75	94.92			Coal: impure or bone coal.
94.92	95.00			Carb ms.
95.00	96.17			Coal: 90% semi-bri includes 2 inch claystone.
96.17	96.38			Carb ms.
96.38	96.71			Rubble coal and carb ms.
96.71	97.54		Marker at 105 feet vs 97.21 feet with note: "sand and mud washed away".	Rubble carb ms.
97.54	100.96			Ms: gy.
100.96	103.21			SS: f- to vf-gr; w ms partings and ms clasts.
103.21	103.63			Rubble: silty ms; plant frags.
103.63	103.96			Ss: dk ol gy; burrow; plant fossils.
112.00	115.00	HQ Core, Box 8	Marker at 115 feet.	SS: f-gr; thin beds w ms lam; ms chips; carb frags; lt frac & lt cmt.
115.00	117.75			SS: med lt gy; f-gr; ms partings & ms clasts; sharp base.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
117.75	125.17		Marker at 125 feet vs 125.17 feet.	Silty ms to siltstone: w thin ss beds; lt frac & lt cmt.
124.50	135.00	HQ Core, Box 9	Marker at 135 feet.	SS: vf-gr; ~ 70% lam w thin ms-slt interbeds; lt frac & lt dol fill; sheared gy dol frac fill. Mod fizz when crushed.
				Dolomite fracture fill.
135.00	138.38			SS: vf-gr; v thin beds to lam w ~ 40% silty ms partings. Lt frac & lt cmt aa.
				Dolomite fracture fill.
137.58	145.00	HQ Core, Box 10	Marker at 145 feet.	Rubble and chunks of Ms: silty; dk gy; plant frags; med frac & lt powdery dol? cmt.
				Prob dolomite cmt.
145.00	151.33			Ms: dk gy; small pelecypods; Med frac & lt cmt. Bull qtz veins & white powdery cmt prob. Dol.
				Quartz & prob dol mineralization.
151.33	155.67	HQ Core, Box 11	Marker at 155 feet vs 155.67 feet.	Ms: dk gy; uniform; small wood frags in upper part; small pelecypods in middle & larger delicate, distinctive pelecypods in lower part.
155.67	160.83			Ms: aa; w the delicate pelecypods in upper part; med gy siltst in middle and dk gy ms w wood frags in lower part.
160.83	161.00			Siltst & ms: coal lens, large wood frag.
161.00	161.08			Pyritic coaly siltstone.
				Pyrite.
161.08	161.58			Rubble: coal; thin py layer at top.
				Pyrite.
161.58	162.00			Coal: bri, friable.
162.00	162.83			Coal: dull impure "bone coal"; w vitrain lam.
162.83	163.17			Rubble: blk very carb ms.
163.17	163.46			Plastic clay; dk gy.
163.46	164.29			Blk carb sh w ~ 50% coal lam & v thin beds
164.29	165.08			Blk coaly sh.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
164.42	166.08	HQ Core, Box 12	Marker at 165 feet.	Blk coaly sh aa.
166.08	167.00			Siltst: med gy.
167.00	168.71			SS: med gy; vf-gr; lam; grad upper & lower contacts; med frac & no cmt.
168.71	171.04		Marker at 175 feet vs 171.04 feet.	Siltst: lam; grading down to coaly claystone.
171.04	173.04			Rubble and chunks: coaly claystone & silty ms; mod frac & no cmt.
173.04	176.04			Siltst: dk gy; w coal lens & wood frags.
176.04	177.29			Ss: vf-gr; w 50% siltst lam to thin beds.
176.92	185.00	HQ Core, Box 13	Marker at 185 feet.	8 repetitive beds of vf SS grading upward into lam ms-slt; sharp bases; local ms rip ups chips; lt frac & lt min.
185.00	189.92			Repetitive bed sets aa; lt frac & lt mineral which is qtz.
				Quartz in fractures.
189.92	195.00	HQ Core, Box 14	Marker at 195 feet.	SS: vf- to f-gr; thin beds muddy ss in top part; large wood frag.
195.00	202.42			Fractured rubble. SS: med gy to lt gy; faint lam; hvy frac & lt cement; Cmt is calcite = strong fizz.
				Lt calcite fracture fill.
201.50	205.00	HQ Core, Box 15	Marker at 205 feet.	Shear fracture rubble: SS: lt gy; f-gr; round ms clasts; med frac & wh dol cmt.
				Dolomite fracture fill.
205.00	206.50			SS: aa; med frac w qtz fracture fill. Sharp base.
				Quartz fracture fill.
206.50	207.33			Rubble. Coal and blk carb claystone.
207.33	211.75			Coaly claystone: blk.
211.75	212.33			Rubble. Blk coaly claystone.
212.33	212.75			Coal: rubble, sheared; dull.
212.75	213.67			Rubble. Coal & blk coaly clayst.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
213.67	214.08			Claystone: blk; hard, v coaly w complex hvy qtz mineralization.
				Hvy qtz mineralization.
214.08	215.25			Rubble. Blk coaly shale.
214.75	215.00	HQ Core, Box 16	Marker at 215 feet.	Siltst: blk; carb; muddy.
215.00	218.83			Rubble. Muddy siltst: med gy; hvy frac & no min.
218.83	218.96			Siltst: aa; lt frac w lt wh powdery cmt, prob carbonate.
218.96	219.17			Fault gouge. Sheared siltst, soft.
219.17	220.67			Siltst & siltst rubble. Lt frac w powdery wh cmt.
220.67	226.25			Rubble. Intensely fractured ss: med gy; vf-gr grading to f-gr at base; hvy fracture and med cmt is wh dolomite with incomplete fill with vugs.
				Dolomite fracture fill.
226.25	226.83		Marker at 225 feet vs 226.25 feet.	SS: aa; sf w dolomite.
				Dolomite fracture fill.
227.50	230.92	HQ Core, Box 17	Marker at 235 feet.	SS: f-gr; hvy sf w med dol cmt & vugs in fractures.
				Dolomite fracture fill.
230.92	233.00			Rubble. SS aa. Hvy sf w dol cmt.
				Dolomite fracture fill.
233.00	235.00			Rubble. Ss and siltst.
235.00	240.75			SS: f-gr; round ms clasts; lt sf & lt dol cmt filling fractures.
				Lt dolomite fracture-filling cmt. Both white continuous dolomite and dispersed gy-brn rhombs.
240.58	241.33	HQ Core, Box 18	Marker at 245 feet.	Rubble. SS aa. Dol cmt.
				Dolomite.
241.33	248.50			SS: lt gy; f- to vf-gr; some lam; lt frac & lt dol cmt. Vugs in fractures.
				Dolomite fracture fill.
248.50	249.42			Rubble. Ms: sheared. Qtz vein parallel bedding.
				Quartz.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
249.42	253.92			Sltst + ms: dk brn gy; hvy frac & lt cmt.
253.25	260.17	HQ Core, Box 19	Marker at 255 feet.	Silty ms: dk brn-gy; med frac & lt cmt. Grades down into black sh.
260.17	260.25			Dolomite.
260.25	262.38		Coal sampled from 260.25 to 262.38 in 1 bag.	Soft clayey siltst; dk brn-blk. Coal: rubble. Very small frags & dust. Some brn-blk ms aa.
262.38	265.01			Blk clayst grades down into v dk gy silty ms.
265.01	266.76		Marker at 265 feet vs 265.01 feet.	Siltst: med gy.
266.76	269.84	HQ Core, Box 20	Marker at 275 feet.	Silty ms: med gy; grading down into ms w lam to v thin lam vf ss; burrows & xlam in ss. 20% ss at base. SS layers have sharp contacts.
269.84	271.42			SS: 60% thin beds vf-gr ss w ms rip ups & sharp contacts. 40% med gy ms interbeds. Sharp base.
271.42	272.51			Ms: med gy; small pelecypods.
272.51	273.63			Dolomite / concretion. Micritic. Med gy. Small pelecypods aa. Dispersed pyrite xls. Sharp base is sf contact.
273.63	275.05			Dolomite & fine pyrite.
275.05	276.88		Marker at 275 feet vs 275.05 feet.	Sandy ms: mottled = bioturbate grading down into ss w irreg. ms partings.
276.88	277.34			Ss: vf-gr; w irreg ms partings; burrows.
277.34	280.42			Dolomite / concretion: micritic; med gy; faint lam.
280.25	280.67	HQ Core, Box 21	Marker at 285 feet.	SS + ms aa; thin beds 50% ss, 50% ms.
				SS: vf- to f-gr; well sorted; thin beds; similar to above; sharp bases, faint lam, rippled tops.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
280.67	286.58			Ms: dk gy; w 20% thin ss-slt beds & lam; tr burrows; thin xbed; lt fracture.
286.58	294.33			Ms: aa w 5% ss-slt thin beds; lam, xlam. Lt fracture.
294.46	300.58	HQ Core, Box 22	Marker at 295 feet.	Sltly ms: dk gy; lt fracture..
300.58	300.88			Ms: lt gy; calcareous.
				Calcareous ms.
300.88	302.92			Sltly ms: dk gy floating coarse grains of dolomite are probably altered shell hash; very pyritic; pelecypod valves; large carbonized wood frags.
				Pyrite & dolomite.
302.92	308.08		Marker at 305 feet vs 305.25 feet.	Ms: dk gy to blk grading to claystone in lower part. Hvy to med frac & no cmt. Slt lam in lower part.
307.29	308.46	HQ Core, Box 23	Marker at 315 feet.	Clayst: dk gy w slt lam, burrows. Hvy fracture is prob a small fault.
308.46	310.88			Ms + slt + ss: lam, xlam.
310.88	311.88			Rubble. SS: vf-gr; mvy frac & lt powdery cmt.
311.88	315.00			SS: med lt gy; f-gr; lam to x bed; irreg ms partings & lam; lt frac.
315.00	316.33			SS: aa, med frac & wht cmt.
316.33	318.08		Coal sampled from 316.33 to 318.08 in 1 bag.	Coal: rubble and chunks. Bri & fri to semi-bri. Pyritic layer.
				Pyrite.
318.08	319.75			Blk coaly sh: soft.
319.75	320.13			Coal: semi-bri.
320.13	320.79			Blk coaly shale.
321.00	322.17	HQ Core, Box 24	Marker at 325 feet.	Rubble. Coaly blk ms, v carb. Qtz mineralization.
322.17	325.00			Ms: blk; carb; profuse delicate plant frags.
325.00	326.83			Sltly ms: similar to above. 0.5 inch lens fossil hash; calcite, pyrite.
				Pyrite.
				Calcite.
326.83	327.75			Sltst w ms lam; prob burrowed.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
327.75	330.83			Fracture rubble. SS: vf- to f-gr; hvy sf & lt cmt.
330.83	333.67			SS: med lt gy; f-gr; med frac & lt cmt is probably dolomite.
333.67	334.92			Rubble. Ss: aa hvy fracture.
334.92	335.33	HQ Core, Box 25	Marker not noted. Measured from 325 feet marker.	Rubble. Ss aa.
335.33	336.50			Ss: med to f-gr.
336.50	340.92		EOH. Base of core measured at 340.92 vs reported 340 feet.	Rubble: ss.

Drilling began on 2005 Oct 24

Completed as piezometer using IPS=2.5 inch. OD=2.875 inch
Schedule 40 wall wthickness=0.203 inch, ID=2.469 inch

Pipe perforated by drilling 1/16" hole in pipe

Bottom of perforations = 340 feet

Top of perforations = 170 feet

10 feet of bentonite grout from surface to 10 feet

Well completed 2005 Oct 25

TIME PER FOOT= 2880 min/340 ft=

8.47 min/ft



COREHOLE LITHOLOGIC LOG

PROJECT	Mount Klappan	COREHOLE NUMBER	ARD1
CLIENT	Fortune Minerals/Marston	WELL NUMBER	
GPS LOCATION		DATE	Begin Drilling 2005 Oct 17, Logging on 18th, Completed Drilling 2005 Oct 19
NAD83	506,270 6,345,019		
CONTRACTOR	Connors Drilling, Kamloops, BC, CA	LOGGED BY	Bill Hanson (Oct 18 - 23, 2005)
DRILLER(S)	Mitch Burtneck & Henry Hogan	CHECKED BY	GPS ELEVATION=1,653 m
METHOD	HQ Core Fluid Rotary	SHEET 1 OF	

Note 1: during logging of this core on Oct 19, 2005, dilute HCl became available for use beginning at depth of approximately 266 feet. Prior to this time, all descriptions of fracture filling minerals (white mineral) were called calcite following the onsite training. After use of dilute HCl, it appears that quartz and dolomite or dolomitic calcite are the prevalent fracture filling minerals. All descriptions of calcite prior to Oct 19 at depth of 266 feet are to be considered as generic descriptions of white fracture-filling mineralization subject to confirmation of the actual mineral type. The relative scale of fracture intensity and fracture-filling mineral is four-fold: no comment means not observed; It mean light; med or mod indicates significant but intermediate amount which is obvious at a glance; heavy or hvy means abundant mineralization which is volumetrically significant and obvious from a distant glance and dominates the aspect of the core. Note 2: ms means mudstone; sf means shear fracture. Note that in a weathered outcrop some or many of the lithologies logged as mudstone might exhibit fissility and thereby be called shale. Tr means trace. Py means pyrite or other iron sulfide.

This corehole is located on the northeast end of Lost Ridge on a high bench above the main road.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
15.33	16.67	HQ Core, Box 1	Marker at 16 feet.	Glacial drift: plastic clay with hard gy ss boulders, cht peb cgl cobble, cht peb, hard sltst
				Unconsolidated, subrounded to angular, poorly sorted
26.00	27.17		Marker at 26 feet.	Glacial drift: plastic clay with hard gy ss boulders, cht peb
36.00	36.08		Marker at 36 feet.	Frag hard gy silty ms
46.00	46.08		Marker at 46 feet.	frags hard ss and plastic clay
56.00	60.33		Marker at 56 feet.	Glacial drift: dk ol gy plastic clay
66.00	70.33		Marker at 66 feet.	Glacial drift: clay aa w wh qtz peb, soft dk gy ms
74.33	76.00	HQ Core, Box 2	Marker at 76 feet	Soft earthy ms.
76.83	88.33		Marker at 86 feet	Soft earthy ms aa; Weathered Calcite in med gy plastic clay; dk brn-gy soft earthy ms.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
89.00	103.25	HQ Core, Box 3	Marker at 96 feet	Ms aa weathered calcite in lower part. Lower part more firm than above.
102.75	114.67	HQ Core, Box 4	Marker at 106 feet	Soft earthy ms aa.
114.67	116.33		Coal sample in 1 bag.	Weathered bri coal.
116.33	116.58			Blk carb ms w coal lam.
116.00	118.25	HQ Core, Box 5. Coal sampled from 116.00 to 126.75 in 3 bags	Marker at 116 feet vs 116.58 ft	Coal rubble and soft, plastic black shale detailed in notes. Tr cal.
118.25	118.42			Coal: hard, dull, earthy impure = "bone coal"
118.42	123.42		Marker at 126 vs 123.42	Coal: 90% bri, fri banded; 10% dull and "bone coal"; tr cal? in cleat
126.00	126.75			Coal rubble & thinly bedded Co and carb sh.
126.75	127.08			V carb shale rubble; soft, earthy, carbonized plant frags
127.08	127.25	Coal sampled from 127.08 to 129.16 in 1 bag.		Coal: small frags.
127.25	127.58			Carb ms: dk brn-blk; hard to soft, plastic. Plant frags.
127.58	129.16			Coal: sheared rubble and frags; mostly bri w 10% carb ms hard to soft.
129.16	130.83			Ms: dk brn-gy to med gy. Sl soft.
133.08	135.63	HQ Core, Box 6	Marker at 136 feet.	Ms: med gy, silty; rubble and unbroken.
135.63	137.21			Coal: 90% bri, banded. Rubble and unbroken. Tr cal?
137.21	137.38			Carb ms: dk brn-blk; sf.
137.38	137.71			Coal: bri, fri, small fragments.
137.71	145.63			Ms: med to lt ol gy; silty; sl carb; plant frags; root traces and "root churned"

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
144.58	156.00	HQ Core, Box 7	Marker at 156 feet. Note: did not record position of Marker 146.	Ms: dk ol-gy; soft, clayey, silty, plastic; rubble and sf.
156.00	157.33			SS: rubble; med gy; f-gr; med frac; small amount carbonate rhombs on sf.
157.33	158.25			SS: vf-gr; med gy; sltst & ms lam.
158.17	160.25	HQ Core, Box 8	Marker at 166.	Ms: silty, rooted aa; rubble in lower part; Tr cal?
160.25	161.00			SS: med gy; med-gr; rubble; lt cal?
161.00	171.33			SS: med gy; f- to vf-gr; lt rooting at top; med sf; lt cal?
170.08	171.00	HQ Core, Box 9	Marker at 176.	Ss aa.
171.00	173.00			Ms rubble. Sf, lt cal.
173.00	176.00			Silty ms: med sf; lt cal? Chalky cal?
176.00	184.17			Ms: med gy; sparse plant fossils; med frac; lt cal?
				Tr vf xln Py on some frags
183.50	189.00	HQ Core, Box 10	Marker at 186 feet.	Sh: dk gy; hard; varved; tr cal? Tr sf.
189.00	191.75			Sh rubble aa: med frac; lt cal or dol; lt py on sf.
191.75	192.50			Sh: aa, unbroken.
192.50	193.75			Rubble. Ss: f-gr; sh:aa. Med frac; lt cal?; root trace.
193.75	197.25			Ss+slt+sh: med-gy; thin bedded; lt cal? Med to lt frac.
196.00	200.00	HQ Core, Box 11	Marker at 196 feet.	Ms: med gy; w 20% vf ss lam & xlam;
				tr py; tr cal?
200.00	209.08			Sh: dk gy; lam to varved; tr plant frag; "Cochlichnus" trace fossil.
207.67	221.00	HQ Core, Box 12	Marker at 216 feet.	Varved sh aa. Lower part is rubble; lt frac; lt cal? tr vf-xln py on frac.
221.92	224.42	HQ Core, Box 13	Marker at 226 feet.	Varved sh aa.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
224.42	226.00			Blk carb sh; sheared coal; plastic black clay.
226.00	227.75			Sh: blk; carb; lt sf; tr cal?
227.75	228.00			Ol brn plastic clay.
228.00	228.50			Coal: bri, fri w py and cal?
228.50	229.17			Ms: med gy.
229.17	229.25			Clay: ol brn; plastic.
229.25	230.00			Coal: thin beds bone coal w vit bands; fri bri coal; granular bri coal w lt to med cal?
230.00	234.58			Ms: blk, v carb some grading to bone coal; 5% fri vit lam.
234.50	236.00	HQ Core, Box 14	Marker at 236 feet.	Ms: dk gy; carb, plant frags; 5 mm vit band w cal?
236.00	237.92			Ms: med to dk gy; silty; rooted to lam w thin vf-gr ss beds
237.92	248.17		Marker at 246 feet.	Ms: med to dk gy; silty; rooted to lam w thin slt & ss beds; plant frags
247.00	253.58	HQ Core, Box 15	Marker at 256 feet.	Ss +ms: 60% ss; thin beds, lam to contorted, rooted, plant frags, small ms clasts. Lt frac & lt cal?
253.58	257.75			Ms + sltst: med gy; lam to mottled, rooted?, xbed. Lt frac & Lt cal?
257.75	262.25			SS: med gy; vf to f-gr; carb; ms lam; local ms clasts; lt sf & tr cal?
261.08	271.92	HQ Core, Box 16. See Note 1 above concerning use of 10% HCl beginning at this point.	Marker at 266 feet.	Ss: Med gy; f-gr; faint carb partings; Med to lt frac (sf).
271.92	272.00			SS rubble w 5 mm white qtz frac fill
272.00	274.75			Ss: vf-gr; sparse carb partings; 2 sf; white mineral. No fizz.
274.00	283.00	HQ Core, Box 17.	Marker at 276 feet.	Ss: vf gr; sparse carb lam; 1 inch ms in upper part. Lt frac in lower part.
283.92	288.50		Marker at 286 feet.	Ss aa w ms clasts & rounded ms clasts.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
287.33	301.08	HQ Core, Box 18.	Marker at 296 feet.	SS: med gy; f- to vf-gr; few round ms clasts; lt frac & min fill is dolomite wk fizz
301.25	314.50	HQ Core, Box 19.	Marker at 306 feet.	SS: aa; local carb partings; lt frags vary from open to dol fill; strong sf in lower part w 0.5 mm dol xls and vuggy pores, wk fizz.
314.00	316.00	HQ Core, Box 20.	Marker at 316 feet.	SS: f-gr; gy; hard; lt frac & lt dol (white dol has wk fizz on crush).
				Note that use of dilute HCl and knife blade shows that most of the white fracture-fill in sandstone and mudstone that was previously reported as calcite is probably dolomite. The dolomite has a weak fizz only when crushed to a powder.
316.00	318.25			SS: rubble as above. Hvy sf & fault gouge. Med dol frac fill.
318.25	321.42			SS aa but less broken. Med frac & med dol. Incomplete fracture fill leaves some vuggy porosity. Minor sheared carb ms lam.
321.42	322.67			SS: vf-gr; abund. Carb lam & partings; lt frac & lt dol.
322.67	325.50			SS: shaley with root traces.
325.50	325.92			Rooted claystone; paleosol.
325.92	327.08		Marker at 326 feet vs 326.34.	SS: vf-gr; tr carb partings; rooted.
326.08	326.92	HQ Core, Box 21.	Marker at 336 feet.	SS: vf-gr; sl carb partings; tr sf & tr dol.
326.92	328.25			Rubble ss & gy ms; lt dol on frags.
328.25	330.00			Silty ms + siltst: lt frac & lt dol.
330.00	339.17			SS: vf-gr; 30% w carb lam; tr frac lt dol.
339.21	343.79	HQ Core, Box 22.	Marker at 346 feet.	SS: vf-gr; aa, tr ms clasts & xlam; ~60% w carb lam. No frags.
343.79	343.96			Siltst: lt gy.
343.96	345.63			Clayst: lt gy; waxy; grades down into med gy sl carb clayst.
345.63	345.67			Clay: lt gy; soft.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
345.67	352.50			Silty ms: med gy; lam to platy; mod to lt sf.
352.58	356.67	HQ Core, Box 23.	Marker at 356 feet.	Ms: med to dk gy; lam aa; part homogeneous root chrned zones w plant frags.
356.67	357.00	Coal sample from 356.67 to 362.25 in 2? Bags.		Coal: bri, fri.
357.00	357.17			Ms: blk; carb, earthy.
357.17	362.25			Coal: 95% bri, fri, banded; qtz & dol in cleat.
362.25	363.08			Sh: drk brn-blk; carb, sharp base.
363.08	366.25	Coal sample from 363.08 to 366.25 in 1 bag.	Marker at 366 feet.	Coal: dom bri, fri; 2 inch parting 10 inches below top; 1 inch parting 30 inches below top; qtz in cleat. Lower part is rubble.
366.75	369.42	HQ Core, Box 24. Coal samples from 366.75 to 376.13 in 3? Bags.		Coal: rubble and frags; 90% bri, fri.
369.42	369.83			Carb ms & coal; sheared.
369.83	376.00			Coal: rubble; bri, friable.
376.00	376.13			Coal: bri, hard; white dol cmt in cleat.
376.13	377.96			Ms: dk gy; v carb; 1% thin lent vitrain lam w white mineral in cleat.
378.92	383.50	HQ core, box 25.	Marker at 386 feet.	SS: med gy; f- and vf-gr; thin beds alternate w v thin beds to lam of ms; xlam; burrows w meniscate back fill; fecal pellets; upper part med sf.
383.50	387.75			SS: vf-gr; mudddy; burrowed to bioturbate.
387.75	392.50			Ms: med gy; silty lam and flaser bedded w vf ss to sltst; lam, xlam, burrows.
392.58	393.33	HQ core, box 26.	Marker at 396 feet.	Ms + 20% vf ss: flaser bedded; lt frac; lt dol.
393.33	395.75			SS: vf to f-gr; med frac; lt cmt.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
395.75	397.42			Ss + ms thin beds; flaser bedded. 30% ms in lower part.
397.42	406.42			Ms 60% flaser bedded w slt & vf ss; grades downward into dk gy ms. Lt frac & no fill.
406.00	408.00	HQ core, box 27.	Marker at 416 feet.	Ms: dk gy.
408.00	409.17			Ss: vf- to f-gr; muddy; bioturbate.
409.17	419.75			Flaser bedded ms: 30% to 10% vf-ss & slt lam; lightly burrowed; <i>Teichichnus?</i> Lt to no frac.
419.67	421.33	HQ core, box 28.	Marker at 426 feet.	Silty mudstone: gy; w thin ss beds and lam; flaser bedded; 80% ms.
421.33	432.67			Silty mudstone: gy; w thin ss beds and lam; flaser bedded; 90% ms (10% ss+slt) grading downward to 60% ms.
432.67	433.25			SS: f- to med-gr; thin beds with coal inclusions; rounded ms clasts; ms interbeds; faint stylolites.
433.25	433.50			Ms w f-gr ss lam and sand-filled burrows.
433.38	433.75	HQ core, box 29.	Marker at 436 feet.	Ms aa.
433.75	436.00			SS: vf-gr; lam & xlam; walled burrows, fecal pellets.
436.00	439.67			SS 70% + ms-slt; burrowed to not burrowed.
439.67	441.00			Ms - sltst: 70% w vf ss flaser bedding.
441.00	441.50			Sandy ms: bioturbate.
441.50	441.63			50% ms w flaser ss-slt.
441.63	445.38		Marker at 446 feet vs 445.38 feet.	SS 50%: thin beds; xlam to not; large sand-fill burrows; c-gr ss layer; white mineralized layer. 50% ms.
447.00	447.58	HQ core, box 30.	Marker at 456 feet.	SS: 60%, thin beds; c- to vf-gr; 40% ms; burrows, 1 small pelecypod.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
447.58	451.75			Ms, vf-ss, sltst: bioturbate to burrowed.
451.75	456.25			SS: 90%; f- to vf-gr; lam & xlam; 10% ms-slt. Bioturbate; small pelecypods; burrows.
456.25	459.67			SS: 60%; f- to vf-gr; flaser bedded burrowed to not burrowed. 40% ms + slt: dk gy. Lt sf, tr wh mineral.
459.67	461.00			Ss: med to lt gy; f-gr; well sorted; lam.
460.92	466.00	HQ core, box 31.	Marker at 466 feet.	SS: aa; ms clasts to 3.5 cm; 5% ms lam.
466.00	467.25			SS: figr; 80%; one bed w sharp base & load cast; contains some coarse grains = dolomitized shell frags?. 20% ms. 1 vert. sf w horiz. Slickensides.
467.25	474.25			Ms: silty, sandy; burrowed to bioturbate; 40% not burrowed.
474.25	474.67			SS: f-gr; lightly burrowed.
475.25	476.00	HQ core, box 32.	Marker at 476 feet.	SS: 80%; + ms-slt; burrowed to not burrowed.
476.00	482.92			SS: 40%; f- to vf-gr; thin beds to lam, xlam; 60% ms + slt; burrowed to bioturbate. 1 sf, no cmt.
482.92	488.00		Marker at 486 feet vs 485.92.	SS: 85-95%; w 15-5% ms-slt partings. Burrowed to not burrowed. Lt frac, no fill.
487.75	496.00	HQ core, box 33.	Marker at 496 feet.	Ss: 70%; f- to vf-gr; 30% ms-slt; flaser to burrowed and bioturbate. No fractures.
496.00	498.75			Ss: 60% aa. Ms-slt 40% aa. No fracture.
498.75	501.75			Ss: vf-gr; 40%; w 60% ms-slt flaser bed to bioturbate. No fracture.
501.67	503.50	HQ core, box 34.	Marker at 506 feet.	Ss: 95%; uf- to vf-gr; ms 5%; flaser to burrowed; lt frac, lt dol; incomplete fill.
503.50	506.00			Ms: 80%; w 20% vf ss-slt flaser beds; burrows. Lt frac, lt dol frac fill.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
506.00	515.17			Ss: 60%;vf- to f-gr; 40% ms-slt; flaser to burrowed and bioturbate.
515.17	517.50	HQ core, box 35.	Marker at 516 feet.	Ms: 95%; carb with aligned plant frags; vert burrowes to bioturbate; flaser ss-slt lam.
				1.5 x 1 cm Py concretion.
517.50	518.42			SS: 80%; f-gr; bioturbate to burrowed.
518.42	519.08			Ms: 80%; flaser-bedded to bioturbate.
519.08	521.33			SS: 80% grading down to 50% ss. Biotubate to burrowed aa.
521.33	529.25		Marker at 526 feet vs 525.58.	Ms: 95%; flaser to lt burrowed; carb w abund wood frags.
529.25	535.92	HQ core, box 36.	Marker at 536 feet vs 536.29 feet.	Ms: dk gy; 60%. Flaser to thin beds vf-gr ss 40%; sl burrowed. Carb. Lt frac, tr fill.
535.92	538.29			Ms: dk gy; carb, w silty lam; in lower part is 2 cm side qtz-filled fracture or fault dips 70degrees. Some white chalky and green mineral on slickensides.
538.29	542.38			Ms aa, carbonaceous.
542.33	544.50	HQ core, box 37.	Marker at 546 feet.	Ms: dk gy; carb.
544.50	546.00			Ms: black; carb.
546.00	547.00			Ms: black; carb. Intense fractures to brecciated. SF w thick with qtz cmt; Hvy frac & hvy qtz.
547.00	552.50			Ms: black; carb, wood frag; coal lam.
				Py nodules and py lam in lower part.
552.50	553.00		Coal sampled from 552.50 to 556.21 in 2 bags.	Boney coal w white mineralization; prob qtz.
553.00	553.13			Coal: bright.
553.13	553.54			Coal: shaley & sheared.
553.54	556.21			Coal: bright; friable.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
555.58	555.75	HQ core, box 38.	Marker at 556 feet. Coal sampled from 555.58 feet to 568.08 feet in 4 bags.	Ms: carb; dk brn black; earthy.
555.75	557.00			Coal: bri; some qtz in cleat.
557.00	557.67			Ms: dk brn; earthy; tonstein? Some vug-filling qtz in frac.
557.67	558.00			Coal: semi-bright.
558.00	562.08			Coal: bri; fri; 2- 1 cm ms partings.
562.08	562.25			Sh: dk brn; waxy to earthy.
562.25	562.42			Coal: hard; tr white mineral.
562.42	562.58			Sh: dk brn; waxy to earthy.
562.58	566.00		Marker at 566 feet.	Coal: bri, fri; 10% hard semi-bri; 20% frags & dust.
566.00	567.08			Coal: bri; mostly well-cleated.
567.08	567.42			Ms: dk brn; earthy.
568.21	568.25	HQ core, box 39.	Marker at 576 feet.	Sh: soft; dark brn.
568.25	569.67		Coal sampled from 569.63 to 571.04 feet. However, bags are labeled 567.37 to 568.79 feet continuous with samples above.	Coal: 60% semi-bri; 40% bri. White mineral in cleat.
569.67	572.50			Sh: black; v carb w thin coal layers & white mineral layers; plant frags.
572.50	576.00			Ms: dk gy; pyritic. Minor mineralized (white) coal lam.
				Large py concretions to 6 cm and py lens.
576.00	578.67			Ms; med gy; silty; becoming sandy w thin ss beds in lower part.
578.67	582.00			SS: vf- to f-gr; med lt gy; ms lam. Lt frac & lt mineral fill.
581.83	582.42	HQ core, box 40.	Marker at 586 feet.	SS: med lt gy f-gr.
582.42	582.79			Ms: silty; med lt gy; sf.
582.79	586.00			SS: med lt gy; vf-gr; lt frac; lt dol.
586.00	586.50			Ms: dk gy.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
586.50	587.67			SS: brn-gy; vf-gr; lam; 5% ms lam.
587.67	595.83			SS: med lt gy; vf to f-gr; lam; ms clasts and ms lam.
595.33	596.00	HQ core, box 41.	Marker at 596 feet.	SS: aa but no lam.
596.00	600.67			SS: med to lt gy; vf- to f-gr and med-gr in lwer part; faint lam & carb lam in lower part; one thin bed of pebbly ss w granules to fine pebs of round ms, qtz, cht. SF in lower part.
600.67	605.25			SS: med lt gy; f- to med-gr; pebbly in middle w f- to med peb of ms, cht, rounded to subA; 11 cm ms clast in lower part. Locally with stylolites, and brecciated & mineralized: v hvy SF and v hvy qtz fracture fill. SF have thick qtz fill, euhedral qtz xtls and less dolomite. Basal contact is sharp sf or fault.
				Spectacular qtz & dolomite fracture fill.
605.25	606.17		Marker at 606 feet vs 606.17.	Ms: med dk gy; silty; hvy sf & med cmt.
606.17	608.83			Ms: dk ol gy; sl carb; hard.
608.50	613.83	HQ core, box 42.	Marker at 616 feet.	Silty ms: dk brn-gy; partly lam; sandy in basal part.
613.83	616.00			Muddy ss: med brn gy; ms clasts; sl carb; mottled.
616.00	617.50			SS: f-gr; muddy; carb.
617.50	622.17			SS: med lt gy; f-gr; well sort; faint lam; abund fecal pellets; lt frac w spotty cal & qtz
				Tr qtz plus cal = strong fizz.
621.75	626.00	HQ core, box 43.	Marker at 626 feet.	SS: med brn-gy; f-gr; 25% thin ms beds; lt frac & lt cmt. Faint lam in base; 1 ms clast. Dol fracture fill is incomplete with vugs along fractures. Stylolites.
626.00	634.92			SS: vf-gr; lam w 30% thin ms beds and few ms clasts; lt frac & tr cmt.
634.92	635.58			Silty ms: grad upper contact.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
635.92	642.58	HQ core, box 44.	Marker at 646 vs 646.00 feet. Marker at 636 not noted.	SS: vf-gr; lam w 25% thin beds ms; v lt frac is short open fractures in siliceous ms layers.
642.58	646.00			Ms: dk brn gy; sandy in upper part; lam; sparse burrows.
646.00	649.83			Ms: dk gy; silty.
650.00	657.50	HQ core, box 45.	Marker at 656 feet.	Ms: dk brn-gy; slt lam in upper part; vf carb flakes; lt frac & lt dol.
663.50	666.00	HQ core, box 46.	Marker at 666 feet.	Ms: dk gy; silty; homogeneous; tr small wood frags; possible dolomitized crushed mollusk frags; med frac & lt cmt.
666.00	673.58			Silty ms to argill siltstone: ol gy; tr small plant frags; varies from homogeneous to 10% lam to burrowed. Top 1 cm has unusual thin-walled pelecypoda.
				1 small py lens; med frac & lt cal cmt.
673.58	674.42			Silty ms: dk gy; v carb; med frac & lt cmt.
674.42	674.58			Coal: sheared.
674.58	674.92			Black carb ms w white mineralization.
674.92	675.13			Coal.
675.13	675.33			Black carb sh w sf.
675.33	676.08		Marker at 676 feet vs 676.08.	Coal: banded; bri & semi-bri; mineralized w med amount white mineral; prob qtz.
676.08	676.75			Coal & bone coal: sf w white cmt.
676.75	677.75	HQ core, box 47.	Marker at 686 feet.	Sh: blk; carb grading to bone coal. Sheared Py lens at base.
				Py lens at base.
677.75	680.59		Sampled from 677.75 to 680.59 with 1 sample.	Coal and sheared coal; minor bone coal. 35% bri & 65% semi-bri.
680.59	682.51			Ms: blk; v carb w large carbonized roots, coal partings.
682.51	684.67		Sampled from 682.51 to 684.67 in 1 sample.	Coal: banded dull & bri in upper part and sheared coal powder, frags & rubble in lower part.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
684.67	685.17			Blk ms: v carb; sheared rubble.
685.17	685.67			Coal: sheared powder and frags.
685.67	686.84			Rubble sheared gy ms. Hvy frac w sheared dol cmt.
686.84	688.17			SS: med gy; muddy in top; root mottled; med frac & lt cmt as gy dol rhombs & white powder (sheared dol?) med fizz when scraped.
688.00	696.00	HQ core, box 48.	Marker at 696 feet.	SS: f- to vf-gr; lt to med gy; mostly structureless w mnor lam; lt frac & lt cmt.
696.00	701.50			SS: aa but med sf and lt cmt. Frac fill cmt is white f-xln dol and gy dol euhedra ~ 0.5 mm. Med fizz when crushed.
701.83	711.75	HQ core, box 49.	Marker not noted; depths plotted from underlying marker at 716 feet.	SS: aa. Sheared rubble. Brecciated. Hvy sf & med cmt.
711.75	712.50			Ss: aa but muddy & ms clasts. Lt frac; coal parting at base.
712.50	713.75			Sltst: brn gy; weak and anomalous; grades down into clayst w plant frags.
713.75	715.00			Carb ms: dk gy; thin coal layer at top; carbonized roots.
715.00	716.00	HQ core, box 50.	Marker at 716 feet.	Ms: dk brn-gy; carb roots; mineralized in lower part w white bands and small kink folds + shear. White mineral is dol which has wk fizz and med fizz when crushed.
716.00	716.08			Coal rubble.
716.08	717.00			Ms: aa. Carbonized roots. Sf w lt mineral.
717.00	717.08			Coal rubble.
717.08	725.00			SS: muddy; gy; root churned top; grades down into ss w irreg. ms lam & ms clasts; sharp base. Lt frac.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
725.00	726.17		Marker at 726 vs 726.17 feet.	Sltst w root trace.
726.17	728.17			Sltst: med gy aa w root mottle.
727.83	728.50	HQ core, box 51.	Marker at 736 feet.	Siltst to silty ms aa w thin beds vf ss.
728.50	729.00			Silty ms.
729.00	730.33			Ms: dk gy; faint lam; delicate carb plant frags similar to conifer needles.
730.33	732.58			Ms: blk; carb; irreg coal (large roots) & thin coal lens; some claystone & contorted coaly lam; lt sf & lt mineral.
732.58	736.00			Claystone: v dk gy; grades down into gy silty ms; coalified roots and root mottled.
736.00	737.67			Ms: silty; v dk gy; delicate plant frags aa. Coal lam & wh min layers in base.
742.00	742.83	HQ core, box 52.	Marker at 746 feet vs 741.67 feet compared to above marker.	Coal: mostly bri & fri but partly moderately mineralized and hard; min is white qtz?
742.83	745.08			Ms: dk gy; coal at top & base; carb plant material.
745.08	746.00			Coal: aa some ms partings; sheared.
746.00	747.25			Claystone or cannel coal? Dk gy; v carb; shared; waxy to earthy w vit lam.
747.25	747.83			Ms: gy; sheared, mineralized. Large wh pygmatic folded mineral veins of qtz. Hvy qtz.
747.83	755.58			Muddy mottled ss w mud drapes & carb ms grades down into faintly lam med dk gy sltst to silty ms. Hvy sf, lt min.
Total Depth = 756 feet = 230.5 meters.				

Drilling began on 2005 Oct 17

Completed as piezometer using IPS=2.5 inch. OD=2.875 inch
Schedule 40 wall thickness=0.203 inch , ID=2.469 inch

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
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Pipe perforated by drilling 1/16" holes in pipe

Bottom of perforations= 756 ft

Top of perforations= 378 ft

10 feet of bentonite grout from surface to 10 feet

Well Completed= 2005 Oct 19

TIME PER FOOT= 3600 min/ 756 ft= 4.76 min/ft

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
68.71	74.21			Ms: aa; lt sf & lt cmt. Coal partings. Cmt does not fizz in dil HCl.
74.21	74.37			Soft gy clayey ms.
74.37	75.29		Marker at 75 feet.	Ms: aa; gy; homogeneous.
75.29	75.71			Ms: aa; gy; homogeneous.
75.71	75.92			Soft clayey ms & weathered ms.
75.92	76.67	Coal sampled from 75.92 to 77.33 in 1 bag.		Coal: dull w vitrain lam; white qtz layer in top.
76.67	77.34	Coal sampled from 75.92 to 77.33 in 1 bag.		Coal and coal rubble. 60% hard impure coal with bri, fri coal; white qtz layers w small limonitic spots. Sl. weathered.
				Quartz.
77.34	82.58	HQ Core, Box 6 Coal sampled from 77.34 to 82.58 in bags 1/3 & 2/3.		Coal: banded; bri & semi-bri; fri to hard; 1 inch parting at 13 inches below top is brn-gy earthy ms; some of coal is powder fragments.
82.58	83.00	Included in samples below.		Ms: brn-gy; & bone coal w 0.5 inch coal in middle.
83.00	85.00	Coal sampled from 83.00 to 85.00 in bag 3/3.	Marker at 85 feet.	Coal: banded bri & semi-bri; irreg cleat cmt. Frags & powder near base.
85.00	91.67	Coal sampled from 85.00 to 91.67 in two bags.		Coal: aa; cleat filled w qtz near base; "cleat screens".
				Quartz.
91.67	91.84	HQ Core, Box 7		Claystone: soft, friable; v carb.
91.84	94.59	Coal sampled from 91.84 to 94.59 in two bags.		Coal: banded, bri & semi-bri; qtz in some cleat.
				Quartz.
94.59	97.67		Marker at 95.00 feet	Ms: v carb; dk brn-gy, plant impressions.
97.67	98.01			60% v carb ms aa; 40% bri coal; hvq qtz mineral bands.
				Quartz.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
98.01	101.25	Coal sampled from 98.00 to 101.25 in 1 bag.		Coal: as above.
				Quartz.
101.25	102.75			V carb sh w coal lam & 1 inch clayey layer.
102.75	102.79			Pyrite? Yellow-green lens.
102.79	104.96		Marker at 105.00 feet vs 104.96 feet.	Ms: carb; v dk gy w coal lam; grades down into gy carb siltst.
105.08	108.67	HQ Core, Box 8	Marker at 115 feet.	Ms: gy; slty; root mottled, root traces; grades down into v silty ms; lt sf & lt min fill.
108.67	111.17			SS: gy; vf- to f-gr; lt frac & lt qtz; sharp base.
111.17	115.00			Ms: silty; gy; v hard, root mottled; lt frac.
115.00	115.92			Silty ms grades down into vf-gr lam to xlam ss.
115.92	118.17			SS: vf- to f-gr; faint lam & xlam; lt frac & lt min.
118.25	123.67	HQ Core, Box 9	Marker at 125 feet.	SS: f-gr; sharp base; med sf & med white dolomite. Good example of dolomite.
				Dolomite. Good example.
123.67	126.58			Ms: root mottled to lam; slt lam.
126.58	128.50			Siltst + ss + ms: root mottled to lam; v thin beds.
128.50	131.50			SS: vf- to f-gr; lt frac & lt dol?
131.83	135.00	HQ Core, Box 10	Marker at 135 feet.	SS: f- to vf-gr; lt frac & lt dolomite. Dol strong fizz when crushed; sharp base.
				Dolomite fracture fill. V good example.
135.00	140.50			Siltst + vf ss + ms: thin bedded to lam & xlam.
140.50	145.17			SS: grades down from vf- to f-gr; lt frac & lt dol.
				Dolomite.
144.75	147.42	HQ Core, Box 11	Marker at 145 feet.	SS: gy; vf-gr grades to f-gr at base; sm ms chips; sharp base; lt frac w wh dol.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				Dolomite.
147.42	149.67			Ms+ sltst + vf ss: thin bedded.
149.67	158.50		Marker at 155 feet vs 154.92 feet.	Sltly ms: med gy; lam to non-lam; lt frac.
158.42	172.00	HQ Core, Box 12	Marker at 165 feet.	Ms: med gy; hard; lam to varved; all varved in lower part.
172.17	186.00	HQ Core, Box 13	Marker at 175 feet. Marker at 185 feet.	Ms: aa; varved; 3 thin horizontal qtz veins in middle.
				Quartz.
186.38	187.21	HQ Core, Box 14	Marker at 195 feet.	Ms: similar to above. V thin lam & xlam become sl carb at base.
187.21	188.38			Coal: bri & semi-bri; rubble; qtz fracture fill.
				Quartz
188.38	188.63			Claystone: dk brn; plant frags.
188.63	188.92			Coal: dull w large pyrite mass.
				Pyrite.
188.92	189.67			Coal: bri & friable; white qtz in base.
				Quartz.
189.67	195.00			Ms: blk to dk gy; v carb w thin coal layers; root mottling wh qtz layers.
				Quartz.
195.00	196.79			Muddy ss: root mottled and contorted.
196.79	200.13			Ms: v dk by; carb; w thin coal partings.
200.08	210.92	HQ Core, Box 15	Marker at 205 feet vs 205.05 feet.	Ms: dk gy; faint lam.
210.92	213.83			Vf ss + sltst + ms; thin beds; xlam.
213.92	214.83	HQ Core, Box 16	Marker at 215 feet.	Vf ss + sltst: thin beds.
214.83	228.38		Marker at 225 feet vs 225.75 feet.	Ms: dk gy; slity; slt lam; sandy in upper part.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
228.38	233.88	HQ Core, Box 17	Marker at 235 feet vs 235.88 feet.	Ms: dk gy; silty; flaser bedded.
233.88	236.46			Sltst + vf ss + ms: dk gy; lam, contorted lam. Flaser bedded.
236.46	242.21			SS: vf-gr; thin beds w mud drapes & silt lam; xlam. Flaser bedded.
242.21	255.54	HQ Core, Box 18	Marker at 245 feet vs 245.63 feet. Marker at 255 feet vs 255.54 feet.	All flaser bedded. Sltst + ms + vf ss: lam & xlam.
255.54	269.29	HQ Core, Box 19	Marker at 265 feet vs 265.25 feet.	Shale and silty sh: med to dk gy; thinly lam & xlam.
269.29	275.29	HQ Core, Box 20	Marker at 275 feet vs 275.29 feet.	Siltstone: med lt gy; thinly lam & xlam.
275.29	283.33			As above but coarsens down to vf-gr ss with lam & xlam.
282.83	294.17	HQ Core, Box 21	Marker at 285 feet.	SS: med lt gy; thinly lam & xlam; repetitive thin cycles.
294.17	296.17		Marker at 295 feet vs 294.17 feet.	As above grading to siltst in lower part.
296.79	299.50	HQ Core, Box 22	Marker at 305 feet.	Siltst: as above.
299.50	300.83			Siltst: lt brn-gy; wasy; thin calcareous layer at top.
				Calcareous.
300.83	305.00			Siltst: med lt gy; lam; plant frag becomes hard ol gy clayst in lower part.
305.00	306.25			Clayst: med ol gy; gradational base.
306.25	306.75			Waxy bentonite: lt ol gy.
306.75	310.08			Claystone: med to dk ol gy; well preserved carbonized plant fossils.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
310.08	311.17	HQ Core, Box 23	Marker at 315 feet vs 315.38 feet.	Ms: blk; v carb; shite mineral bands and cleat fill. Quartz & dolomite.
				Quartz & dolomite.
311.17	312.00	Coal sampled from 311.17 to 315.00 in bag 1/3. Depths are marked 311.29 to 315.00 feet.		Coal: bri to semi-bri; friable except for mineralized parts; med amount of white mineralization as above.
312.00	312.13	Included in coal sample.		Sh: dk brn blk; carb.
312.13	315.38	Coal sampled from 311.17 to 315.38 in bag 1/3. Depths are marked 311.29 to 315.00 feet.		Coal: bri & semi-bri; some rubble hard to friable.
315.38	316.54	Coal sampled from 315.38 to 324.33 in bags 2 & 3/3.		Coal: rubble; mostly semi-bri and mod hard.
316.54	316.96	Included in coal sample bag 2/3.		Claystone: dk brn; soft to firm; sharp top & base.
316.96	318.21	Coal sampled from 315.38 to 324.33 in bags 2 & 3 of 3.		Coal: 50% bri; 50% semi-bri & dull or shaley coal.
318.21	320.29	Coal sampled from 315.38 to 324.33 in bags 2 & 3 of 3.		Coal: mostly rubble. Bri & friable.
320.29	324.33	Coal sampled from 315.38 to 324.33 in bags 2 & 3 of 3.		Coal: 50% bri & friable; 3 partings < 1 inch thick; minor cleat cement is quartz.
				Quartz.
324.33	325.00	HQ Core, Box 24. Coal sampled from 324.33 to 330.75 in 1 bag.	Marker at 325 feet.	Coal: bri; minor cleat cmt; quartz.
				Quartz.
325.00	330.75	Coal sampled from 324.33 to 330.75 in 1 bag.		Coal: rubble & short cylinders; 90% bri & friable.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
330.75	333.75			Ms: v carb; coalified roots in upper part; grades down into sandy ms.
333.75	335.66		Marker at 335 feet vs 335.66 feet.	Muddy ss: vf-gr; grades down into lam to xlam f-gr rooted ss.
335.66	338.16			SS: med gy; lt frac & lt cmt.
338.16	344.66	HQ Core, Box 25.	Marker at 345 feet vs 345.91 ft.	SS: vf-gr; muddy top coarsen down to f-gr ss w 5 inch thick ms clast cgl at base and some lam.
344.66	351.50			SS: f-gr; with isolated ms clasts & 3 inch chert pebble ss bed (matrix support), near base.
351.50	354.16	HQ Core, Box 26.	Marker not noted for this core box.	SS: gy; med- and f-gr; w ms clasts, small cht pebs, ms clast cgl at sharp base.
354.16	354.33			Sltst: lt gy.
354.33	355.91			Ss & med gy ms: thin beds; ms clasts.
355.91	356.25			Ms: med gy; silty; plant frags.
356.25	358.91			Vf ss 40% + med gy ms 60%; flaser bedded, v thin lam to v thin beds; xlam, lam & tr burrows.
358.91	362.25			Silty ms: homogeneous med gy; grades down into flaser beds w ~10% sltst layers. Base is probable fault contact w 60 degree dip.
362.25	364.16			Brecciated slty ms w sharp base ~ 45 degree dip.
364.16	364.83			SS: muddy, med gy.
364.83	366.41	HQ Core, Box 27.	Marker at 365 feet vs 366.41 ft.	Brecciated ss w sltst & ms as above.
366.41	369.83			Silty gy ms w med frac to fault gouge at base; fault contact?
369.83	375.16			Ms: med gy; aa becoming sandy at base.
375.16	377.08		Marker at 375 feet vs 377.08	Muddy ss: coarse sand-size shell? frags; ms lam, burrows.
377.08	378.66			SS: vf-gr; thin beds w ms; xlam, burrows, lower part has 2 thin beds w vf peb cgl w med-gr ss.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
378.66	387.16	HQ Core, Box 28.	Marker at 385 feet vs 387.16 feet.	SS: 90%; vf to med gr w shell? hash; burrows in upper part, lam, xlam, ms interbeds.
387.16	388.41			SS: 60% ~ flaser bedded; vf- to med-gr; fossil hash in ss? Xlam, burrows & locally brecciated.
390.58	395.00	HQ Core, Box 29.	Marker at 395 feet.	Same as above w distinctive burrows.
395.00	395.42			SS & ms thin beds w large burrows.
395.42	396.25			SS: med-gr to granule; round ms clasts in lower part; sharp base.
396.25	397.83			Flaser sequence. 60% ms
397.83	404.58			Flaser sequence. 70% ss: f- to vf-gr; in thin to med beds; 30% ms partings & thin bioturbate beds.
404.50	405.00	HQ Core, Box 30.	Marker at 405 feet vs 405.08 ft.	SS: f-gr.
405.00	405.50			Sandy ms.
405.50	407.00			Flaser beds. 80% vf-gr ss, lam, xlam w thin ms interbeds.
407.00	408.00			Silty claystone. Qtz layer 0.5 cm thick in top, large pyrite at base is 2 cm thick.
				Pyrite.
				Quartz.
408.00	409.25			Coaly ms: dk gy to blk; thin coal.
409.25	415.00		Marker at 415 feet.	Ms: blk; coaly at top; carbonaceous, homogeneous.
415.00	417.92			Ms: sl silty; v dk gy.
417.92	422.75	HQ Core, Box 31.	Marker at 425 feet vs 425.75 feet.	Claystone: dk ol gy; waxy to resinous in part; plant fossils; rubble in middle part.
422.75	425.75			Sh: dk gy; coal lam & plant fossils.
425.75	431.67			Sh: dk ol gy to dk gy; silty; plant fossils; faint lam or xlam.
431.67	436.25	HQ Core, Box 32.	Marker at 435 feet vs 435.75 feet.	Silty sh: aa; grades down into heterolithic strata comprised of lam to thin bed ms + slt w lam, xlam & mottled. Bottom 6 inches is rubble.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
436.25	445.50			Heterolithic strata similar to above. Grades downward to 60% SS: dusky ol gy; vf-gr; well sorted; xlam, thin lam; alternating w ms partings w profuse plant frags.
445.50	447.75	HQ Core, Box 33.	Marker at 455 feet vs 456.25 feet.	SS: dusky ol gy; vf- to f-gr; well sorted; mud drapes, plant frags, xlam, sm ms clasts. Thin ms-sltst interbeds in lower part.
447.75	459.17			Similar to above. 95% ss: xlam, lam, plant frags in mud drapes; fecal pellets in upper part.
459.17	465.33	HQ Core, Box 34.	Marker at 465 feet vs 466.24 feet.	SS: dusky ol gy; aa; minor thin slty ms beds, clay drapes, sharp base.
465.33	465.42			Quartz cemented zone: some sm vugs w qtz euhedra.
465.42	473.08			SS: aa; vf- to f-gr; xlam ss + slt + ms; mud rip ups; probable fecal pellets.
473.08	475.17	HQ Core, Box 35.	Marker at 475 feet vs 476.33 feet.	Heterolithic zone. 80% ss: v thin to thin beds; f- to vf-gr; alternate w dk gy ms lam to v thin beds; sharp contacts. Xlam, carb flakes, deformed ms chips.
475.17	475.38			White bull quartz. Small vugs w euhedral prisms.
475.38	485.00		Marker at 485 feet vs 486 feet.	Heterolithic zone. ~ 60% ss aa w thinner ms beds; sharp contacts, few burrows, ms chips, carb flakes and loading into ms.
485.00	485.67			~ 90% Ms: dk gy; w vf ss-sltst lam, xlam; burrows.
485.67	486.83	HQ Core, Box 36.	Marker at 495 feet vs 495.16 ft.	50% thin ss beds, xlam, carb flakes; 50% gy ms beds.
486.83	489.00			Ms: faint sltst thin lam.
489.00	492.17			SS: f- to vf-gr; xlam, carb partings; in xlam; sharp base.
492.17	494.33			Ms: dk gy; silty.
494.33	494.58			Rubble aa.
494.58	495.00			Ms: dk gy; rooted.
495.00	495.63			Sh: blk; carb w coal lam.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
495.63	496.71	Coal sampled from 495.63 to 498.87 in 1 bag.		Coal: bri, fri.
496.71	496.79	Included in coal sample.		Clayst: blk; carb.
496.79	498.88	Coal sampled from 495.63 to 498.87 in 1 bag.		Coal: 80% impure coal & carb ms; w bri fri coal and mineralized (quartz) coal.
				Quartz.
498.88	505.88	HQ Core, Box 37. Coal sampled from 498.88 to 505.88 in bags 1&2 of 3. On bags, base of interval is marked as 505.00 feet.	Marker at 505 feet vs 505.88 feet.	Coal: 50% rubble; mostly bri & v friable.
505.88	506.88	Coal sampled from 505.00 feet to 513.00 feet in bag 3 of 3.		Coal: rubble as above.
506.88	507.88	Coal sampled from 505.00 feet to 513.00 feet in bag 3 of 3.		Coal: bri, friable; locally white mineral, qtz?
507.88	508.04	Sampled w coal.		Carb sh: blk; vitreous; sheared.
508.04	514.50	Coal sampled from 505.00 feet to 513.00 feet in bag 3 of 3.	3.96 ft coal core lost?	Coal: mostly dull; 30% bri & fri; vf-xln py lens and vertical qtz veins w coarse py xtls.
				Pyrite and quartz.
514.50	516.50		Marker at 515 feet vs 511.04 feet.	Ms: blk; v carb w coal flakes.
516.50	520.50	HQ Core, Box 38.	Marker at 525 feet vs 525.29 feet.	Ms: blk to v dk gy; carb; plant frags, root mottling; gradational base.
520.50	521.08			SS w irreg ms from root churning; grades down into thin ss beds w ms lam.
521.08	523.88			SS: med lt gy; f-gr; faint mud lam.
523.88	525.29			SS: aa. Rubble, hvy sf & tr wh chalky mineral.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
525.29	528.04			Rubble. SS: med lt gy; f-gr; lt frac & lt dol cmt.
				Dolomite.
528.04	530.29	HQ Core, Box 39.	Marker at 535 feet.	SS: med lt gy; f-gr; few ms lam; sharp base w ms rip ups; hvy sf w lt wh chalky dolomite fracture fill.
				Dolomite.
530.29	533.00			Ms: med gy; w sltst lam; med frac & tr wh chalky cmt.
533.00	533.67			Sheared ms: ~ 60 degree sf top & base.
533.67	537.08			Ms: silty; rooted mottled.
537.08	537.92			Sheared muddy ss & slty ms: aa; sharp sf base.
537.92	540.92			SS: dusky ol gy; vf-gr; lam & xlam; well sort; carb matter on lam; lt frac & tr chalky cmt.
540.92	545.33	HQ Core, Box 40.	Marker at 545 feet vs 545.34.	SS & sltst: dusky ol gy; vf-gr to sltst; well sorted; lam, xlam, carb partings; tr burrows & root mottle. Lt frac & lt min.
545.33	554.83			SS & sltst: aa. Grade down into same w 30% silty ms interbeds.
554.83	555.46	HQ Core, Box 41.	Marker at 555 feet vs 55.46 feet.	Slty ms + sltst: aa.
555.46	564.88			As above grading down into dk gy silty ms.
564.88	568.21		Marker at 565 feet vs 564.88 feet.	Slty ms: dk gy; lt frac & no min.
568.25	582.08	HQ Core, Box 42.	Marker at 575 feet.	Ms: dk gy; silty; faint lam; no fracture. Note: in outcrop this would probably be a shale.
582.08	596.04	HQ Core, Box 43.	Marker at 585 feet. Marker at 595 feet vs 596.04.	Ms: dk gy; sl pyritic; large (4 cm) delicate pelecypods & small pelecypods; some wood frags.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
596.04	598.96	HQ Core, Box 44.	Marker at 605 feet vs 605.38 feet.	Silty ms: dk gy; faint wavy lam; gradational base.
598.96	600.38			Ms: blk; v carb; coal, impure coal w pervasive cleat cmt; 3D polygonal cleats.
600.38	600.54			Clay: blk, carb; soft, plastic.
600.54	606.00			Ms: blk, v carb w <10% coal lam & lenses in upper part; lt frac & lt cmt. Gradational base into coaly ms w extensive wh cleat cmt.
606.00	608.83	No samples noted. ?		Coal: banded bri & semi bri; friable to strong.
608.83	609.58			Coaly ms: blk; sf at base.
609.58	610.25	HQ Core, Box 45.	Marker at 615 feet vs 615.83	Rubble. Ms: v dk gy; carb; plant material.
610.25	612.00			Coal: 40% bri, friable.
612.00	615.83			Ms: blk; carb & <10% coal?
615.83	617.50			Rubble. Clayst: dk gy; carb w profuse plant frags; sf.
617.50	621.17			Ms: gy, silty; carb; grade down into vf ss + slt + ms w lam & xlam.
621.17	622.17			SS: med gy; vf- to f-gr.
621.83	625.00	HQ Core, Box 46.	Marker at 625 feet.	SS: med gy; vf- to f-gr w ~ 10% lam to thin beds irreg ms - loaded & scoured?
625.00	635.00		Marker at 635 feet not noted.	SS: aa; w thin irreg ms & sltst beds aa; ms rip ups; xlam & ripple lam in sltst.
635.00	645.00	HQ Core, Box 47.	Marker at 645 feet.	SS: med gy; f- to vf-gr; few ms rip ups; & 5% thin dk gy slty ms beads & lam; sharp base on ss beds; ms loaded & scoured; no frags.
645.00	648.54			SS: similar to above w xbeds. ~ 2% irreg ms partings; loaded or burrowed tops.
648.96	650.38	HQ Core, Box 48.	Marker at 655 feet.	SS: aa; vf-gr; ~ 10% irreg ms lam.
650.38	650.96			Rubble. Ss + ms aa & sf.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
650.96	655.00			SS: vf-gr; similar to above w ~ 30% irreg ms lam. Small fault is brecciated & gouge.
655.00	661.71			SS + ms: aa becoming lam & xlam. Extensively brecciated; fault zone?
661.71	666.08	HQ Core, Box 49.	Marker at 665 feet.	Ms + slt: lam, xlam.
666.08	671.04			As above. Partly brecciated = intense shear fracs.
671.04	671.62	Coal sampled from 671.04 to 674.08 in 1 bag.		Coal: bri; wh min veins.
671.62	672.00	Sampled w coal.		Sh: blk; v carb.
672.00	674.08	Coal sampled from 671.04 to 674.08 in 1 bag.		Coal: banded semi-bri & bri.
674.08	675.33		Marker at 675 feet.	Ms: blk; v carb; 1 cm py concretion.
				Pyrite.
675.33	675.58	HQ Core, Box 50.	Marker at 685 feet.	Coal: semi bri.
675.58	676.42			Sh: blk; carb w coal lam.
676.42	676.92			Sheared blk shale w white mineralization.
676.92	677.42	Coal sampled from 676.92 to 682.17 in 2 bags. Top of interval marked on bags is incorrect 674.91 feet.		Coal.
677.42	677.75	Sampled w coal.		Sh: blk; v carb.
677.75	681.67	Coal sampled from 676.92 to 682.17 in 2 bags. Top of interval marked on bags is incorrect 674.91 feet.		Coal: rubble; includes 3 inch carb ms.
681.67	681.96	Sampled w coal.		Sh: blk; v carb.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
681.96	682.17	Coal sampled from 676.92 to 682.17 in 2 bags. Top of interval marked on bags is incorrect 674.91 feet.		Coal.
682.17	685.00			Sh: blk; v carb; grades down into dk carb slty ms; med sf & fault?
685.00	687.42			Sltst + ms: hvy sf.
687.42	695.00	HQ core,Box 51.	Marker not noted.	Sltly ms: dkg to med gy; small pelecypods & wood frags; hvy sf w wh powdery min.
			EOH at 695 feet.	

Attempt to wash down PVC casing. Cannot wash down past 30 feet. Hit solid. Ream or redrill to 60 feet. Abandon hole. No casing.

Well Completed= 2005 Oct 22

TIME PER FOOT= 3,600 min/ 6958 ft= 5.18 min/ft





COREHOLE LITHOLOGIC LOG

PROJECT	<u>Mount Klappan</u>	COREHOLE NUMBER	<u>05 ARD4</u>
CLIENT	<u>Fortune Minerals/Marston</u>	WELL NUMBER	
LOCATION			
NAD83, not final	<u>505,556</u> <u>6,343,186</u>	DATE	Begin Drilling 2005 Oct 14 Completed 2005 Oct 15
CONTRACTOR	<u>Connors Drilling, Kamloops, BC, CA</u>	LOGGED BY	<u>Bill Hanson Oct 15 - 18, 2005</u>
DRILLER(S)	<u>Mitch Burtneck & Henry Hogan</u>	CHECKED BY	
METHOD	<u>HQ Core Fluid Rotary</u>	SHEET 1 OF	

Note: this core was logged prior to use of dilute HCl to test for carbonate minerals. White mineral within fracture apertures is common in this core as it is in the other cores logged by this worker in this project. All of the white fracture-filling mineral was generically logged as calcite in the hand-written records but will be referred to in the descriptions given below as *mineral*, *min*, *cmt* or *cement* indicating the occurrence of white mineral but that the mineral was not tested at the time of logging. Subsequently, work on other DDH cores in this area revealed the existence of dolomite, quartz and calcite in fractures.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
9.50	23.25	HQ Core, Box 1	Marker at 15 feet	Mudstone & siltst: med gy; slightly weathered; lam; light frac & no mineral in fracs.
23.25	30.08	HQ Core, Box 2	Marker at 25 feet vs 25.25 feet.	Ms + siltst aa: sl weathered; no mineral in fractures.
30.08	30.67			Clay: med gy; plastic.
30.67	37.00		Marker at 35 feet vs 36.50 feet	Ms + siltst aa: laminated; sl weathered; no mineral in fractures.
37.00	39.00	HQ Core, Box 3		Ms + siltst: dk gy; sl weathered; v carb; includes 1 inch ss and 0.5 inch coal.
39.00	40.58			Rubble. Ms + siltst: med dk gy; v carb; sl weath; lt frac.
40.58	42.33			Ms: v carb; med dk gy; lt mineral; soft rubble at base.
42.33	45.42	Coal sampled from 42.33 to 50.17 but marked on bags as 41.90 to 49.75.	Marker at 45 feet vs 45.42.	Coal and coal rubble. Bri banded; 20% thin sh partings; earthy. Lt frac & lt min.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
45.42	50.17	Coal sampled from 42.33 to 50.17 but marked on bags as 41.90 to 49.75.		Coal: mostly banded bri & dull w thin carb sh partings; lt frac & lt cmt.
51.33	51.58	HQ Core, Box 4. Coal sampled from 50.17 (marked as 49.75 feet) to 59.92 feet as marked on bags.	Marker at 55 feet.	Coal: hard; thinly banded; bri & dull.
51.58	55.00	HQ Core, Box 4. Coal sampled from 50.17 (marked as 49.75 feet) to 59.92 feet as marked on bags.		Coal: mostly bri w 5% carb sh in 2 layers; lt frac & mod min.
55.00	59.92	HQ Core, Box 4. Coal sampled from 50.17 (marked as 49.75 feet) to 59.92 feet as marked on bags.		Coal: mostly banded bri & dull w thin carb sh partings; lt frac & lt cmt.
59.92	62.75			Ms: v carb; dk y to blk; w coal lam; lt frac & lt min.
62.75	62.92			Coal: bright.
62.92	64.00			Ms: dk gy to blk; v carb w 40% coal lam.
64.00	64.67			Ms: med gy; carb; earthy.
64.67	64.92	HQ Core, Box 5.	Marker at 65 feet vs 65.75 feet.	Clayst: med gy; carb hard.
64.92	65.58			Ms: dk gy; carb w coal lam.
65.58	65.75			Coal and carb ms; med min in coal.
65.75	77.00			Ms: dk gy; v carb, earthy; plant frags; no frac & no min.
77.00	77.50			SS: med gy; f-gr; plant frags; tr min.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
77.50	77.75	HQ Core, Box 6.	Marker at 85 feet vs 85.50.	SS: as above.
77.75	89.00			Ms w minor siltst lam; med gy;carb; 1 frac & no min; 1 inch plastic clay at 13 inches from top.
89.00	89.42			Ms: soft; med dk gy.
89.42	90.25			Ms: med dk gy; silty.
90.75	97.92	HQ Core, Box 7.	Marker at 95 feet.	Ms as above. No frac & no min.
97.92	97.96			Ms: med gy; carb; earthy.
97.96	98.63			Soft lt gy mineral layer.
98.63	100.46			SS: med dk gy; vf- to med-gr; poorly sorted; round clayst clasts.
104.33	114.17	HQ Core, Box 8.	Marker at 105 feet.	Ms: med gy; carb; earthy.
114.17	114.83			SS: med gy; f-gr; mod sort; lam to thin beds w rounded to angular ms clasts.
114.83	117.83		Marker at 115 vs 114.83 feet.	SS: as above.
117.83	131.67	HQ Core, Box 9.	Marker at 125 feet vs 125.91 feet.	SS: as above; lt frac & lt cmt.
131.67	133.58	HQ Core, Box 10.		SS: as above; sharp base.
133.58	138.92	Coal sampled from 133.58 to 138.92 as marked on bags.	Marker at 135 feet vs 135.75.	Coal and coal rubble. 90% bright; lt frac & lt min.
138.92	139.92			Coal, Bone coal, soft clay: thin beds; lt min.
139.92	144.17	Coal sampled from 139.92 to 144.17 as marked on bags.		Coal and coal rubble. ~ 50% bright; lt frac & lt min; 2 inch carb ms parting in this interval.
144.17	145.25		Marker at 145 feet vs 144.42.	Carb ms: dk gy.
145.25	145.42			Silty ms: med gy; hard.
145.83	148.50	HQ Core, Box 11.	Marker at 155 feet.	Ms w siltst lam: med dk gy; hard; no frac.
148.50	148.75			Clay: med dk gy; plastic.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
148.75	155.00			Ms w siltst lam: med dk gy; hard; no frac.
155.00	155.83			Silty ms w lent lam; med gy; hard, no frac.
155.83	156.33			SS: med gy; vf-gr; lam.
156.33	157.00			Silty ms w lent lam; med gy; hard, no frac.
157.00	158.17			SS: med gy; vf-gr; lam.
158.17	159.67			Silty ms: sl carb; contorted lam in base w plant frags.
159.67	163.33	HQ Core, Box 12.	Marker at 165 vs 165.25 feet.	Ms w siltst lam: med gy; hard; no frac & no min.
163.33	165.25			Ms + sltst + vf-gr ss: hard.
165.25	165.42			Ms: med gy.
165.42	166.58			SS + sltst: med gy; 1 frac; lt min.
166.58	168.42			SS: med gy; hard; normally graded f to vf; sharp base; lt frac w min fill.
168.42	168.50			Silty ms.
168.50	170.08			SS: as above. Lt frac & lt min.
170.08	173.08			Sltst + ms + ss: thin beds; lt frac & lt min.
173.25	175.00	HQ Core, Box 13.	Marker at 175 feet.	Ss + sltst: hard; 2 mineral-filled fractures.
175.00	175.33			SS: silty.
175.33	176.00			Ms w siltst lam: med dk gy; hard.
176.00	179.17			SS: f-gr; w siltst lam; no frac & no min.
179.17	184.00			Silty ms + sltst + vf-gr ss: laminated; 2 fracs w mineral fill.
184.00	184.58			SS: f- to vf-gr; ms clasts.
184.58	185.25		Marker at 185 feet vs 185.25.	Ms + sltst.
185.25	187.17			SS: med gy; f- to vf-gr; hard; laminated. No frac.
187.17	187.50	HQ Core, Box 14.	Marker at 195 feet vs 195.34.	SS: f- to vf-gr.
187.50	192.50			SS + sltst + ms: thin beds: 1 frac w min fill.
192.50	194.00			Ms + sltst.
194.00	194.50			SS: f- to vf-gr; 1 frac w min fill.
194.50	196.08			Silty ms + sltst.
196.08	201.00			SS: med gy; f- to vf-gr; hard; 1 frac w min fill.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
201.00	205.33	HQ Core, Box 15.	Marker at 205 feet vs 205.33 ft.	SS: med lt gy; vf- to f-gr; lam; lower part has silty lam and shear fractured w mineral fill.
205.33	205.50			SS: rubble as above.
205.50	207.00			Silty ms w sltst & ss lam.
207.00	207.92			SS: med lt gy; f- to vf-gr; no frac & no min.
207.92	213.67			Silty ms w sltst & ss lam.
213.67	214.92			SS: as above.
215.92	217.75	HQ Core, Box 16.	Marker at 215 feet not noted.	SS: vf- f-gr; lam w some slt lam. Fractures w min.
217.75	226.92		Marker at 225 feet.	Silty ms +sltst + ss: med gy; lam to thin bed. Fracs w min fill.
226.92	229.83			Silty ms: med dk gy; lam.
229.83	236.58	HQ Core, Box 17.	Marker at 235 feet vs 236.58 feet.	Silty ms: med dk gy; lam to varved in lower part; 3 sf (shear fractures) w min.
236.58	243.75			Varved ms as above; spectacular. Lt sf in upper part.
242.25	253.50	HQ Core, Box 18.	Marker at 245 feet vs 246.50 feet.	Varved ms as above. No fractures.
253.50	255.83		Marker at 255 feet vs 255.50 feet.	Sh: dk gy; w 7 1 cm white mineral layers along bedding.
255.83	256.33	HQ Core, Box 19.	Marker at 265 feet vs 265.50 ft.	Sh: dk gy; carb; + med gy soft clayst; thin beds.
256.33	256.75			Coal & carb ms: mod fracture filling mineral.
256.75	263.25			Silty carb ms: med dk gy to med gy; local plant frags & lam; no frac & no min.
263.25	263.42			Carb ms w coal lam; dk gy.
263.42	265.50		Marker at 265 feet vs 265.50 ft.	Silty carb ms as above + carb clayst; dk gy; hard; lt frac & lt min.
265.50	269.75			Ms w coal lam: dk gy; grading to silty ms w plant frags; no frac & tr min.
269.33	273.08	HQ Core, Box 20.		Carb ms: as above; root mottled in lower part; tr white mineral.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
273.08	275.83		Marker at 275 feet vs 275.40 feet.	Silty ms + sltst: lam to thin bedded.
275.83	278.42			Silty ms + sltst + carb ms w coal lens: lt frac & lt min.
278.42	282.58			Carb ms + sltst + vf SS: lam to v thin bed; locally root mottled.
282.75	284.17	HQ Core, Box 21.		Silty ms w slt lam at base: med gy; hard; lam.
284.17	284.33			SS: med lt gy; f-gr.
284.33	285.75		Marker at 285 feet.	Silty ms + sltst.
285.75	287.33			SS: vf-gr; ms lam and sltst. No frac & no min.
287.33	288.33			Rubble. SS: med lt gy; hard; f-gr.
288.33	290.67			SS: med lt gy; f-gr.
290.67	291.33			Rubble. SS: med lt gy; hard; f-gr.
291.33	293.92			SS: med lt gy; f-gr.
293.92	294.25			Rubble. SS: med lt gy; hard; f-gr.
294.25	295.00		Marker at 295 feet.	SS: as above.
295.00	295.67			SS: as above w carb partings.
295.67	297.00	HQ Core, Box 22.		SS: med lt gy; hard; f-gr.
297.00	298.08			SS + sltst + ms lam.
298.08	299.92			SS: med lt gy; hard; f-gr w minor sltst + ms lam.
299.92	306.08		Marker at 305 vs 306.08 feet.	SS: f-gr; w sparse carb partings; lt frac & lt min.
306.08	308.42			SS: as above; rubble in middle part; med frac & lt mineral; ~ horizontal slickensides on shear fractures; chalky mineral on fractures is probably sheared carbonate.
308.42	317.42	HQ Core, Box 23.		SS: med gy; f-gr; med frac & lt min.
317.42	320.17		marker at 315 feet vs 317.42 feet.	SS: as above; w few ms clasts; med frac & lt min.
320.17	321.42			SS: vf-gr; w ms lam; lt frac & lt min.
321.42	324.33	HQ Core, Box 24.		SS: f- to vf-gr; sparse thin lam of ms; 1 frac w min fill.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
324.33	326.33			Rubble. SS as above. Med frac & no min.
326.33	327.83		Marker at 325 feet vs 327.83.	SS: f- to vf-gr; sparse thin lam of ms; some root mottle; med sf & tr min.
327.83	333.92			SS: vf-gr; minor ms lam & clasts; med frac & lt min.
333.92	334.33	HQ Core, Box 25.		Rubble. SS as above.
334.33	338.92		Marker at 335 feet vs 338.58 feet.	SS: med gy; hard; f- to vf-gr; 6 inch layer w ms clasts; 1 sf & no min.
338.92	339.00			Silty ms.
339.00	348.00			SS: as above. 1 sf w min fill.
348.00	357.33	HQ Core, Box 26.	Marker at 345 feet vs 348.57 feet.	SS: med -gy; vf-gr; hard; heavy sf w carbonate rhombohedra (~0.5 mm) on frac surfaces; some dolomite frac fill.
				Dolomite.
357.33	358.50			Rubble. SS as above.
358.50	359.50			SS: med gy; vf-gr; hard; heavy fracture & med mineral probably dolomite. Sharp base.
359.50	361.67			Silty ms: med dk gy; lt frac & no min.
361.67	369.17	HQ Core, Box 27.	Marker at 365 feet vs 369.17 feet.	Silty ms: med dk gy; rubble in upper part.
369.17	369.42			Ms + ss + sltst: thin beds.
369.42	374.58			Silty ms: med dk gy.
374.58	388.75	HQ Core, Box 28.	Marker at 375 feet vs 379.25 feet.	Ms: dk gy; hard; uniform; tr frags & no min.
388.75	399.58	HQ Core, Box 29.	Marker at 385 feet vs 389.25 feet.	Silty ms: med dk gy; lt sf & tr min.
399.58	400.50		Marker at 395 feet vs 399.58 feet.	Silty ms: v carb at base w coal lenses (coalified roots) & lt mineralization.
400.50	400.67			Coal: mineral filled fractures.
400.67	401.00			Sh: dk gy; v carb w coal lam.
401.00	401.50			Coal: bright.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
401.50	401.67			Carb sh: dk brn gy; soft.
401.67	403.00	HQ Core, Box 30.		Coal: 80% bri; 20% bone coal; It min in cleat.
403.00	403.50			Carb sh: blk.
403.50	403.71			Bone coal.
403.71	406.04	Coal sampled from 403.71 to 406.04 w depths marked on bag as 399.76 to 402.09 feet.		Coal: ~ 90% bri; It min in cleat.
406.04	406.63			Carb sh: brn blk; soft, earthy.
406.63	407.13			Coal: bri & dull; It min in cleat.
407.13	407.54			Bone coal.
407.54	408.96	Coal sampled from 407.54 to 415.13 feet w depths marked on bags as 403.59 to 411.18 feet.		Coal: 70% bright.
408.96	411.46	Coal sampled from 407.54 to 415.13 feet w depths marked on bags as 403.59 to 411.18 feet.	Marker at 405 feet vs 408.96 feet.	Coal rubble.
411.46	411.88	Coal sampled from 407.54 to 415.13 feet w depths marked on bags as 403.59 to 411.18 feet.		Coal: 50% bright.
411.88	412.04	Coal sampled from 407.54 to 415.13 feet w depths marked on bags as 403.59 to 411.18 feet.		Coal: bri & fri.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
412.04	412.46	Coal sampled from 407.54 to 415.13 feet w depths marked on bags as 403.59 to 411.18 feet.		Coal +carb sh + bone coal.
412.46	415.13	Coal sampled from 407.54 to 415.13 feet w depths marked on bags as 403.59 to 411.18 feet.		Coal rubble. Bri & friable.
415.13	415.88	HQ Core, Box 31. Coal sampled from 415.13 to 415.88 but marked on bag as 413.92 to 414.67 ft.		Coal: rubble. Frags & powder includes some carb sh.
415.88	416.21		Marker at 415 feet vs 416.21 feet.	Carb sh: blk; soft.
416.21	416.71			Carb ms: v dk gy; plant frags.
416.71	416.79			Coal: bri; banded.
416.79	417.00			Carb ms: v dk gy; plant frags.
417.00	418.33			Carb ms: brecciated; prob fault zone; tr mineral.
418.33	418.75			Sltly ms: dk gy; lam.
418.75	419.00			Rubble. Ms: med gy; hard; pyrite concretion ~ 3 mm x 2 cm.
				Pyrite.
419.00	420.33			SS: lt gy; f- to vf; minor sh lam.
420.33	423.33			SS: as above but intensely sheared; 0.5 to 2 cm thick dolomite? Layers; hvy frac & hvy min.
				Dolomite?
423.33	423.42			Carb sh: sheared.
423.42	427.42		Marker at 425 feet vs 425.92 feet.	SS: rubble. Intense shear fractures; carbonate mineral as small rhombs in fractures.
				Dolomite?

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
427.42	428.17	HQ Core, Box 32.		SS: f- to vf-gr.
428.17	428.75			SS + ms: thin beds; mineral layers.
428.75	436.83		Marker at 435 feet vs 436.25.	SS: med lt gy; f- to vf-gr; hard w ms clasts; lt frac & lt min.
436.83	437.58			SS + ms: thin beds.
437.58	440.33			Ms w sltst lam: dk gy; lt frac & lt min.
440.33	444.83	HQ Core, Box 33.		Ms: dk gy; sheared and fractured; med frac & no min.
444.83	445.50		Marker at 445 feet vs 445.50 feet.	Fault gouge. Sheared & brecciated ss + ms.
445.50	448.92			SS: f-gr; w ms & sltst lam; root traces; med frac & lt min.
448.92	453.33			SS: f- to vf-gr; lt sf & lt min.
453.33	457.58	HQ Core, Box 34.	Marker at 455 feet vs 455.42 feet.	SS: as above w sltst lam; lt frac & lt min.
457.58	460.75			Siltstone w thin ss beds: burrows; lt frac.
460.75	461.17			SS: vf-gr; 1 sf.
461.17	462.33			VF ss + ms + sltst: thin beds; burrows; thin beds. Med frac & lt min.
462.33	464.17			As above w lt fracture.
464.17	466.00		Marker at 465 feet vs 466 feet.	Rubble. SS + sltst + ms: thin beds; hvy frac & lt min.
466.00	466.58			Sltstone: med gy; med frac & lt mineral; probable dolomite xtls on frac surface.
				Dolomite.
466.58	476.17	HQ Core, Box 35.	Marker at 475 feet vs 476.17.	Silty ms: dk gy w lam & lent lam sltst & vf ss; locally sheared. Med frac & no cmt?
476.17	476.63			Sltstone: lt gy; hard; v small burrows.
476.63	478.46			Silty ms: dk gy; w lam & swirls of silt.
479.00	485.00	HQ Core, Box 36.	Marker at 485 feet.	Silty ms: dk gy; hard; lt frac; plant frags.
485.00	492.83			Ms: dk gy; uniform; vf pyrite xtls & plant frags.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				Pyrite. Dispersed 0.5 mm xtls.
494.17	495.00	HQ Core, Box 37.	Marker at 495 feet.	Sheared pyritic ms: pervasive dispersed 0.5 mm equant xtls in ms.
				Pyrite. Dispersed 0.5 mm xtls.
495.00	498.00			Ms: dk gy w 5% siltst lam & silt-filled burrows.
498.00	499.17			Pyritic ms as above; heavy frac & no mineral fill.
				Pyrite. Dispersed 0.5 mm xtls.
499.17	500.08			Sandy ms grades down into ss: f-gr.
500.08	502.58			Ms: dk gy; silty; flaser bedded w 10% vf ss + siltst lam & lent lam; xlam.
502.58	505.50			Ms: dk gy; rubble. Med frac.
505.50	506.92		Marker at 505 feet vs 506.33 feet.	Ms: dk gy.
506.92	511.75	HQ Core, Box 38.		Ms: dk gy; uniform; lt frac.
511.75	515.42		Marker at 515 feet vs 515.08 ft.	Sheared dk gy ms + slty ms: brecciated in upper part w 2 sheared mineral veins.
515.42	520.67			Ms: dk gy; w siltst lam; med frac & no min.
520.67	526.42	HQ Core, Box 39.	Marker at 525 feet vs 526.08 feet.	Ms: as above. Lt frac & no mineral except for 5 inch fault gouge w sheared carbonate fracture fill in lower 1/3.
526.42	533.58			Ms: dk gy; w thin zones of disseminated vf pyrite xtls; lt frac & lt min in fracture.
				Disseminated pyrite.
533.58	534.42			Ms: as above w hvy shear fracture & hvy mineral in fractures. Pyrite aa.
				Disseminated pyrite.
534.42	535.25	HQ Core, Box 40.	Marker at 535 feet vs 535.25 ft.	Ms: as above. Hvy fracture w hvy min. 4 inch thick very pyritic layer.
				4 inch pyritic layer.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
535.25	540.83	Coal sampled from 535.25 to 540.83 in 2 bags marked 535.00 to 540.58 feet.		Coal: mostly bri & fri w min on cleat.
540.83	541.58			Claystone: dk ol gy.
541.58	545.42	Coal sampled from 541.58 to 545.42 feet in 2 bags marked 541.33 to 545.17 feet.		Coal: as above.
545.42	545.75		Marker at 545 feet vs 545.75 ft.	Claystone & carb ms.
545.75	547.75	Coal sampled from 545.75 to 547.75 feet in 1 bag marked 545.00 to 547.00 feet.		Coal: rubble. Bri & friable w min on cleat. 3 inch soft clay parting.
547.75	549.17	HQ Core, Box 41. Coal sampled from 547.75 to 549.17 in 1 bag marked 547.00 to 548.42 feet.		Coal rubble.
549.17	549.58			V carb blk clay & coal: sheared. Clay is plastic.
549.58	551.00	Coal sampled from 549.58 to 551.00 in one bag marked 549.33 to 550.75 feet.		Coal as above w some plastic clay.
551.00	551.50			Black plastic carb clay & coal: sheared. Soft.
551.50	558.25	Coal sampled from 551.50 to 558.25 in bags marked 551.25 to 558.00 feet		Coal: rubble. Bri & fri; 1 inch blk carb sh in lower part; some min on cleat.
558.25	561.08			Sh: blk; silty; abund pyrite concretions 1x4 cm; mineral layers & fracture fill.
				Pyrite.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
561.08	565.25	HQ Core, Box 42.		Black ms: v carb; v. silty; pyrite as vf disseminated xtls & micro lam; at 18 inches is 1 inch sheared coal cemented by white mineral. Lt frac & lt min. Pyrite.
565.25	568.58			Carb ms aa grading down into siltst. Thickness not in notes but inferred from markers.
568.58	569.66			SS: vf-gr; w silt + ms lam.
569.66	574.00			SS: vf- to f-gr; hard; silt & ms lam; small ms clasts in lower part; lt frac.
574.00	575.00	HQ Core, Box 43.	Marker at 575 feet bottom of hole.	SS: as above. Laminated.
TOTAL DEPTH= 575 ft= 175 m				

Drilling began on 2005 Oct 14

PVC Lost in Hole

10 feet of bentonite grout from surface to 10 feet

Well Completed= 2005 Oct 15

TIME PER FOOT= 4,320 min/ 428 ft= 10.09 min/ft



COREHOLE LITHOLOGIC LOG

PROJECT	<u>Mount Klappan</u>	COREHOLE NUMBER	<u>05 P4</u>
CLIENT	<u>Fortune Minerals/Marston</u>	WELL NUMBER	<u>Piezometer 4</u>
GPS LOCATION		DATE	<u>Begin Drilling 2005 Oct 12, Completed 2005 Oct 13</u>
NAD83	<u>505,876 6,343,876</u>		
CONTRACTOR	<u>Connors Drilling, Kamloops, BC, CA</u>	LOGGED BY	<u>Paul Oldaker</u>
DRILLER(S)	<u>Mitch Burtnick & Henry Hogan</u>	CHECKED BY	<u>GPS ELEVATION=1,701 m</u>
METHOD	<u>HQ Core Fluid Rotary</u>	SHEET 1 OF	

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
10.00	23.25	HQ Core, Box 1	Marker at 10 feet. Marker at 15 feet versus 15.75 feet	Siltstone, gray to dark gray, Mudstone, very dark gray, to clay gradational to defined interbeds, Coal and very carbonaceous lenses
				Weathered and oxidized, some mush
				No iron or manganese stains
				Rare calcite in closed fractures and carbonaceous laminations
22.58	26.92	HQ Core, Box 2	Marker at 25 feet	Siltstone, gray to dark gray, Mudstone, very dark gray, to clay gradational to defined interbeds, Coal and very carbonaceous lenses
				Weathered and oxidized, some mush, rare fractures
				No iron or manganese stains
				Rare calcite in closed fractures and carbonaceous laminations
26.92	28.09	HQ Core, Box 2, Coal Sampled from 26.92 feet to 31.33 feet, 1 bag		Coal, dull, weathered and oxidized, rare bright
				Mushy
				No iron or manganese stains
				Rare calcite in cleat and closed fractures

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
28.09	28.26	HQ Core, Box 2, Coal Sampled from 26.92 feet to 31.33 feet, 1 bag		Mudstone, very dark gray, Coal and very carbonaceous lenses
				Weathered and oxidized, some mush, rare fractures
				No iron or manganese stains
				Rare calcite in closed fractures and carbonaceous laminations
28.26	28.84	HQ Core, Box 2, Coal Sampled from 26.92 feet to 31.33 feet, 1 bag		Coal, dull, weathered and oxidized, rare bright
				Mushy
				No iron or manganese stains
				Rare calcite in cleat and closed fractures
28.84	29.01	HQ Core, Box 2, Coal Sampled from 26.92 feet to 31.33 feet, 1 bag		Mudstone, very dark gray, Coal and very carbonaceous lenses
				Weathered and oxidized, some mush, rare fractures
				No iron or manganese stains
				Rare calcite in closed fractures and carbonaceous laminations
29.01	31.34	HQ Core, Box 2, Coal Sampled from 26.92 feet to 31.33 feet, 1 bag		Coal, dull, weathered and oxidized, rare bright
				Mushy
				No iron or manganese stains
				Rare calcite in cleat and closed fractures
31.34	35.92	HQ Core, Box 2	Marker at 35 feet versus 32.92 feet	Mudstone, very dark gray, Coal and very carbonaceous lenses
				Weathered and oxidized, some mush, rare fractures
				No iron or manganese stains
				Rare calcite in closed fractures and carbonaceous laminations
37.67	45.00	HQ Core, Box 3	Marker at 45 feet	Mudstone, very dark gray, Coal and very carbonaceous lenses
				Weathered and oxidized, some mush, rare fractures

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				No iron or manganese stains
				Rare calcite in closed fractures and carbonaceous laminations
45.00	47.08	HQ Core, Box 3		Siltstone, gray to dark gray, Coal and carbonaceous lenses
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Rare calcite in closed fractures and carbonaceous laminations
				Two pyrite layers
47.08	51.08	HQ Core, Box 3		Sandstone, very fine to fine grain, light gray to gray, Coal and carbonaceous lenses
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Rare calcite in closed fractures and carbonaceous laminations.
52.42	60.08	HQ Core, Box 4	Marker at 55 feet	Sandstone, very fine to fine grain, light gray to gray, Mudstone, Siltstone, Coal and carbonaceous clasts, lenses, and laminations
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations.
60.08	62.33	HQ Core, Box 4		Mudstone, gray to dark gray, very carbonaceous
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations
62.33	66.33	HQ Core, Box 4	Marker at 65 feet versus 65.66 feet	Sandstone, very fine to fine grain, light gray to gray, Mudstone, Siltstone, Coal and carbonaceous clasts, lenses, and laminations
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations.
65.83	69.17	HQ Core, Box 5		Sandstone, very fine to fine grain, light gray to gray, Mudstone, Siltstone, Coal and carbonaceous clasts, lenses, and laminations
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations.
69.17	69.50	HQ Core, Box 5		Siltstone, gray to dark gray, very carbonaceous
				Moderately fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Moderate calcite in closed fractures and carbonaceous laminations
69.50	70.33	HQ Core, Box 5		Sandstone, very fine to fine grain, light gray to gray, Mudstone, Siltstone, Coal and carbonaceous clasts, lenses, and laminations
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations.
70.33	72.91	HQ Core, Box 5		Sandstone, very fine to fine grain, light gray to gray, Mudstone, Siltstone, Coal and very carbonaceous clasts, lenses, and laminations
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations.
72.91	78.83	HQ Core, Box 5	Marker at 75 feet	Sandstone, very fine to fine grain, light gray to gray, Mudstone, Siltstone, Coal and carbonaceous clasts, lenses, and laminations

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations.
78.83	79.92	HQ Core, Box 6		Sandstone, very fine to coarse grain, light gray to gray, Mudstone, Siltstone, Coal and carbonaceous clasts, lenses, and laminations
				Moderately fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Moderate calcite in closed fractures and carbonaceous laminations.
79.92	80.42	HQ Core, Box 6		Sandstone, very fine to coarse grain, light gray to gray, Mudstone, Siltstone, Coal and very carbonaceous clasts, lenses, and laminations
				Moderately fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Moderate calcite in closed fractures and carbonaceous laminations.
80.42	87.67	HQ Core, Box 6	Marker at 85 feet	Sandstone, very fine to coarse grain, light gray to gray, Mudstone, Siltstone, Coal and carbonaceous clasts, lenses, and laminations
				Moderately fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Moderate calcite in closed fractures and carbonaceous laminations.
87.67	92.42	HQ Core, Box 6		Conglomerate, very fine to pea grain size, light gray to dark gray, subrounded to well rounded, some carbonaceous clasts, lenses, and laminations
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				Light calcite in closed fractures and carbonaceous laminations.
92.25	92.83	HQ Core, Box 7		Conglomerate, very fine to pea grain size, light gray to dark gray, subrounded to well rounded, some carbonaceous clasts, lenses, and laminations
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations.
92.83	95.50	HQ Core, Box 7	Marker at 95 feet	Sandstone, very fine to coarse grain, light gray to gray, Mudstone, Siltstone, Coal and carbonaceous clasts, lenses, and laminations
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations.
95.50	95.58	HQ Core, Box 7		Clay, dark gray
				Plastic
				No iron or manganese stains
				No calcite
95.58	97.00	HQ Core, Box 7		Sandstone, very fine to coarse grain, light gray to gray, Mudstone, Siltstone, Coal and carbonaceous clasts, lenses, and laminations
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations.
97.00	103.58	HQ Core, Box 7	Marker at 105 feet versus 103.42 feet	Siltstone, gray to dark gray, Mudstone, gray to dark gray
				Moderately fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Moderate calcite in closed fractures and carbonaceous laminations

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
105.17	109.83	HQ Core, Box 8		Siltstone, gray to dark gray, Mudstone, gray to dark gray
				Moderately fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Moderate calcite in closed fractures and carbonaceous laminations
109.83	109.91	HQ Core, Box 8		Clay, dark gray
				Plastic
				No iron or manganese stains
				No calcite
109.91	114.66	HQ Core, Box 8		Siltstone, gray to dark gray, Mudstone, gray to dark gray
				Moderately fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Moderate calcite in closed fractures and carbonaceous laminations
114.66	119.41	HQ Core, Box 8	Marker at 115 feet	Sandstone, very fine to fine grain, light gray to gray, Mudstone, gray to black, Siltstone, gray to brown, Coal and carbonaceous lenses, and laminations
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations.
119.25	125.08	HQ Core, Box 9	Marker at 125 feet	Sandstone, very fine to fine grain, light gray to gray, Mudstone, gray to black, Siltstone, gray to brown, Coal and carbonaceous lenses, and laminations
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations.
125.08	125.16	HQ Core, Box 9		Clay, dark gray
				Plastic
				No iron or manganese stains

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				No calcite
125.16	125.99	HQ Core, Box 9		Sandstone, very fine to fine grain, light gray to gray, Mudstone, gray to black, Siltstone, gray to brown, Coal and carbonaceous lenses, and laminations
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations.
125.99	126.07	HQ Core, Box 9		Clay, dark gray
				Plastic in high angle fracture
				No iron or manganese stains
				No calcite
126.07	132.90	HQ Core, Box 9		Sandstone, very fine to fine grain, light gray to gray, Mudstone, gray to black, Siltstone, gray to brown, Coal and carbonaceous lenses, and laminations
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations.
133.08	146.92	HQ Core, Box 10	Marker at 135 feet. Marker at 145 feet versus 145.33 feet	Sandstone, very fine to fine grain, light gray to gray, Mudstone, gray to black, Siltstone, gray to brown, Coal and carbonaceous lenses, and laminations
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations.
146.92	154.67	HQ Core, Box 11	Marker at 135 feet. Marker at 145 feet versus 145.33 feet	Mudstone, gray to black, Siltstone, gray to brown, Coal and carbonaceous lenses, and laminations
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations.
154.67	158.00	HQ Core, Box 11, Coal Sampled from 154.67 feet to 160.75 feet, 2 bags	Marker at 155 feet	Coal, dull to bright
				Well cleated
				No iron or manganese stains
				Calcite in cleat and closed fractures
158.00	158.08	HQ Core, Box 11, Coal Sampled from 154.67 feet to 160.75 feet, 2 bags		Mudstone, gray to black, Coal and carbonaceous lenses, and laminations
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations.
158.08	159.66	HQ Core, Box 11, Coal Sampled from 154.67 feet to 160.75 feet, 2 bags		Coal, dull to bright
				Well cleated
				No iron or manganese stains
				Calcite in cleat and closed fractures
159.66	159.74	HQ Core, Box 11, Coal Sampled from 154.67 feet to 160.75 feet, 2 bags		Mudstone, gray to black, Coal and carbonaceous lenses, and laminations
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations.
159.74	160.74	HQ Core, Box 11, Coal Sampled from 154.67 feet to 160.75 feet, 2 bags		Coal, dull to bright

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				Well cleated
				No iron or manganese stains
				Calcite in cleat and closed fractures
160.67	174.25	HQ Core, Box 12		Sandstone, very fine to fine grain, light gray to gray, Mudstone, gray to black, Siltstone, gray to brown, Coal and carbonaceous lenses, and laminations
				Moderately fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Moderate calcite in closed fractures and carbonaceous laminations.
174.67	188.25	HQ Core, Box 13	Marker at 175 feet. Marker at 185 feet versus 185.33 feet	Sandstone, very fine to fine grain, light gray to gray, Mudstone, gray to black, Siltstone, gray to brown, Coal and carbonaceous lenses, and laminations
				Moderately fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Moderate calcite in closed fractures and carbonaceous laminations.
187.50	200.50	HQ Core, Box 14	Marker at 195 feet	Sandstone, very fine to fine grain, light gray to gray, Mudstone, gray to black, Siltstone, gray to brown, Coal and carbonaceous lenses, and laminations
				Moderately fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Moderate calcite in closed fractures and carbonaceous laminations.
200.50	201.58	HQ Core, Box 14, Coal Sampled from 200.58 feet to 203.25 feet, 1 bag		Coal, dull to bright
				Well cleated
				No iron or manganese stains
				Calcite in cleat and closed fractures

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
201.67	203.25	HQ Core, Box 15, Coal Sampled from 200.58 feet to 203.25 feet, 1 bag		Coal, dull to bright
				Well cleated
				No iron or manganese stains
				Calcite in cleat and closed fractures
203.25	205.00		Marker at 205 feet	Mudstone, gray to black, Coal and carbonaceous lenses, and laminations
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations.
205.00	206.33	HQ Core, Box 15, Coal Sampled from 205.00 feet to 208.33 feet, 1 bag		Coal, dull to bright
				Well cleated
				No iron or manganese stains
				Calcite in cleat and closed fractures
206.33	206.66	HQ Core, Box 15, Coal Sampled from 205.00 feet to 208.33 feet, 1 bag		Mudstone, gray to black, Coal and carbonaceous lenses, and laminations
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations.
206.66	208.33	HQ Core, Box 15, Coal Sampled from 205.00 feet to 208.33 feet, 1 bag		Coal, dull to bright
				Well cleated
				No iron or manganese stains
				Calcite in cleat and closed fractures

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
208.33	213.83	HQ Core, Box 15	Marker at 215 feet versus 213.33 feet	Mudstone, gray to black, Siltstone, gray to brown, Coal and carbonaceous lenses, and laminations
				Lightly fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations.
213.83	214.58	HQ Core, Box 15		Mudstone, gray to black, Siltstone, gray to brown, Coal and carbonaceous lenses, and laminations
				Heavily fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Heavy calcite in closed fractures and carbonaceous laminations.
215.17	220.42	HQ Core, Box 16		Mudstone, gray to black, Siltstone, gray to brown, Coal and carbonaceous lenses, and laminations
				Heavily fractured in vertical, horizontal, and angular directions. Fissile along bedding planes. Some rubble.
				No iron or manganese stains
				Heavy calcite in closed fractures and carbonaceous laminations.
220.42	225.00	HQ Core, Box 16	Marker at 225 feet	Sandstone, very fine to fine grain, light gray to gray, Coal and carbonaceous lenses, and laminations
				Moderately fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Moderate calcite in closed fractures and carbonaceous laminations.
225.00	228.83	HQ Core, Box 16		Sandstone, very fine to fine grain, light gray to gray, Coal and carbonaceous lenses, and laminations

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				Heavily fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Heavy calcite in closed fractures and carbonaceous laminations.
227.00	240.83	HQ Core, Box 17	Marker at 235 feet	Sandstone, very fine to fine grain, light gray to gray, Mudstone, gray to black, Siltstone, gray to brown, Coal and carbonaceous lenses, and laminations
				Heavily fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Heavy calcite in closed fractures and carbonaceous laminations.
240.33	254.25	HQ Core, Box 18	Marker at 245 feet	Sandstone, very fine to fine grain, light gray to gray, Mudstone, gray to black, Siltstone, gray to brown, Coal and carbonaceous lenses, and laminations
				Moderately fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Moderate calcite in closed fractures and carbonaceous laminations.
254.42	267.92	HQ Core, Box 19	Marker at 255 feet. Marker at 265 feet versus 265.25 feet	Sandstone, very fine to fine grain, light gray to gray, Mudstone, gray to black, Siltstone, gray to brown, Coal and carbonaceous lenses, and laminations
				Moderately fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Moderate calcite in closed fractures and carbonaceous laminations.
266.33	267.25	HQ Core, Box 20		Mudstone, gray to black, Coal and carbonaceous lenses, and laminations

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				Heavily fractured in vertical, horizontal, and angular directions. Fissile along bedding planes. Some rubble.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations.
267.25	268.25	HQ Core, Box 20		Mudstone, gray to black, Coal and very carbonaceous lenses, and laminations
				Heavily fractured in vertical, horizontal, and angular directions. Fissile along bedding planes. Some rubble.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations.
268.25	269.25	HQ Core, Box 20		Mudstone, gray to black, Coal and carbonaceous lenses, and laminations
				Heavily fractured in vertical, horizontal, and angular directions. Fissile along bedding planes. Some rubble.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations.
269.25	270.92	HQ Core, Box 20		Mudstone, gray to black, Coal and very carbonaceous lenses, and laminations
				Heavily fractured in vertical, horizontal, and angular directions. Fissile along bedding planes. Some rubble.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations.
270.92	275.00	HQ Core, Box 20		Mudstone, gray to black, Coal and very carbonaceous lenses, and laminations
				Rubble
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations.

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
275.00	280.25	HQ Core, Box 20		Mudstone, gray to black, Coal and very carbonaceous lenses, and laminations
				Heavily fractured in vertical, horizontal, and angular directions. Fissile along bedding planes. Some rubble.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations.
252.50	261.17	HQ Core, Box 21	Marker at 285 feet	Mudstone, gray to black, Coal and carbonaceous lenses, and laminations
				Moderately fractured in vertical, horizontal, and angular directions. Fissile along bedding planes. Some rubble.
				No iron or manganese stains
				Moderate calcite in closed fractures and carbonaceous laminations.
261.17	262.09	HQ Core, Box 21		Mudstone, gray to black, Coal and very carbonaceous lenses, and laminations
				Moderately fractured in vertical, horizontal, and angular directions. Fissile along bedding planes. Some rubble.
				No iron or manganese stains
				Moderate calcite in closed fractures and carbonaceous laminations.
262.09	263.09	HQ Core, Box 21		Sandstone, very fine to medium, light gray to gray, Mudstone, gray to black, Siltstone, gray to brown, Coal and carbonaceous lenses, and laminations
				Moderately fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Moderate calcite in closed fractures and carbonaceous laminations.
				One pyrite nodule
263.09	263.34	HQ Core, Box 9		Clay, gray
				Not plastic
				No iron or manganese stains
				No calcite

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
263.34	264.26	HQ Core, Box 21		Mudstone, gray to black, Coal and carbonaceous lenses, and laminations
				Moderately fractured in vertical, horizontal, and angular directions. Fissile along bedding planes. Some rubble.
				No iron or manganese stains
				Moderate calcite in closed fractures and carbonaceous laminations.
264.26	265.34	HQ Core, Box 21		Siltstone, gray to dark gray
				Moderately fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Moderate calcite in closed fractures and carbonaceous laminations
265.34	265.84	HQ Core, Box 21		Mudstone, gray to black, Coal and very carbonaceous lenses, and laminations
				Moderately fractured in vertical, horizontal, and angular directions. Fissile along bedding planes. Some rubble.
				No iron or manganese stains
				Moderate calcite in closed fractures and carbonaceous laminations.
291.75	294.75	HQ Core, Box 22		Mudstone, gray to black, Coal and very carbonaceous lenses, and laminations
				Moderately fractured in vertical, horizontal, and angular directions. Fissile along bedding planes. Some rubble.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations
294.75	294.83	HQ Core, Box 22		Coal, dull to bright
				Well cleated
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations
294.83	295.00	HQ Core, Box 22	Marker at 295 feet	Mudstone, gray to black, Carbonaceous lenses, and laminations

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				Moderately fractured in vertical, horizontal, and angular directions. Fissile along bedding planes. Some rubble.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations
295.00	296.25	HQ Core, Box 22		Mudstone, gray to black, Coal lenses, and laminations
				Moderately fractured in vertical, horizontal, and angular directions. Fissile along bedding planes. Some rubble.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations
296.25	300.92	HQ Core, Box 22		Mudstone, gray to black, Siltstone, gray to brown, Coal and carbonaceous lenses, and laminations
				Moderately fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations
300.92	305.50	HQ Core, Box 22	Marker at 305 feet versus 305.50 feet	Sandstone, very fine to medium, light gray to gray, Siltstone, gray to brown, Coal and carbonaceous lenses, and laminations
				Moderately fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations
304.92	309.00	HQ Core, Box 23		Mudstone, gray to black, Rare Siltstone, gray to brown, and sandstone, gray, Coal and carbonaceous lenses, and laminations
				Moderately fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				Light calcite in closed fractures and carbonaceous laminations
309.00	309.58	HQ Core, Box 23		Mudstone, gray to black, Carbonaceous lenses, and laminations
				Moderately fractured in vertical, horizontal, and angular directions. Fissile along bedding planes. Some rubble.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations
309.58	310.50	HQ Core, Box 23		Mudstone, gray to black, Coal and carbonaceous lenses, and laminations
				Moderately fractured in vertical, horizontal, and angular directions. Fissile along bedding planes. Some rubble.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations
310.50	312.33	HQ Core, Box 23		Siltstone, gray to brown, Coal and carbonaceous lenses, and laminations
				Moderately fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations
312.33	315.00	HQ Core, Box 23, Coal sampled from 312.33 feet to 315.00 feet in 1 bag	Marker at 315 feet	Coal, dull to bright
				Well cleated
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations
315.00	318.25	HQ Core, Box 23		Sandstone, very fine to medium, light gray to gray, Mudstone, gray to black, Siltstone, gray to brown, Coal and carbonaceous lenses, and laminations

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				Moderately fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Light calcite in closed fractures and carbonaceous laminations
320.67	326.42	HQ Core, Box 24	Marker at 325 feet	Mudstone, gray to dark gray, Coal and carbonaceous lenses, and laminations
				Soft and mushy
				No iron or manganese stains
				Moderate calcite in closed fractures and carbonaceous laminations
326.42	326.50	HQ Core, Box 24		Coal, dull to bright
				Well cleated
				No iron or manganese stains
				Moderate calcite in closed fractures and carbonaceous laminations
326.50	334.33	HQ Core, Box 24		Sandstone, very fine to fine, light gray to gray, carbonaceous lenses, and laminations
				Heavily fractured in vertical, horizontal, and angular directions. Fissile along bedding planes.
				No iron or manganese stains
				Moderate calcite in closed fractures and carbonaceous laminations
330.33	332.83	HQ Core, Box 25		Sandstone, very fine to medium, light gray to gray, Siltstone, gray to brown, carbonaceous lenses, and laminations
				Rubble
				No iron or manganese stains
				Moderate calcite in closed fractures and carbonaceous laminations
332.83	335.00	HQ Core, Box 25	Marker at 335 feet	Siltstone, gray to dark gray, carbonaceous lenses, and laminations
				Breccia and rubble
				No iron or manganese stains
				Moderate calcite in closed fractures and carbonaceous laminations
335.00	335.67	HQ Core, Box 25		Half breccia and half coal, dull to bright
				High angle fracture contact

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description
				No iron or manganese stains
				Moderate calcite in closed fractures and carbonaceous laminations
335.67	341.92	HQ Core, Box 25, Coal sample 335.67 feet to 341.92 feet		Coal, dull to bright
				Very small closely spaced cleat, friable
				No iron or manganese stains
				Moderate calcite in closed fractures and carbonaceous laminations
341.92	344.34	HQ Core, Box 25		Siltstone, gray to dark gray, Sandstone, gray to dark gray
				Breccia and rubble, fault? Heavily fractured
				No iron or manganese stains
				Heavy calcite in closed fractures and carbonaceous laminations
		HQ Core, Box 26		Siltstone, gray to dark gray, Sandstone, gray to dark gray
				Breccia and rubble, fault? Heavily fractured, Rubble rounded by the drill.
				No iron or manganese stains
				Heavy calcite in closed fractures and carbonaceous laminations
TOTAL DEPTH= 345 ft= 105.18 m				

Drilling began on 2005 Oct 12

Completed as piezometer using IPS=2.5 inch. OD=2.875 inch
Schedule 40 wall thickness=0.203 inch , ID=2.469 inch

Pipe perforated by drilling 1/16" holes in pipe

Bottom of perforations= 345 ft

Top of perforations= 195 ft

10 feet of bentonite grout from surface to 10 feet

Well Completed= 2005 Oct 13

TIME PER FOOT= 2,880 min/ 345 ft= 8.35 min/ft

Depth ft	Depth ft	Sample Type	Recovery	Lithologic Description



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NEUTRON - GAMMA-DENSITY

05 001 (018)

COMPANY	FORTUNE MINERALS	OTHER SERVICES:
WELL	05 001 (018)	9067
FIELD	MOUNT KLAPPAN	9068
COUNTY	:	
STATE	BRITISH COLUMBIA	

LOCATION	:506,665 6,344,581 FROM GPS, NAD83	
SECTION	:	
TOWNSHIP	:	
RANGE	:	
API NO.	:	
UNIQUE WELL ID.	:	
PERMANENT DATUM	:	ELEVATION KB NONE
LOG MEASURED FROM	:0	ELEVATION DF NONE
DRL MEASURED FROM	:	ELEVATION GL :1758

DATE	:11/13/05
DEPTH DRILLER	:361.19
BIT SIZE	:9.60
LOG TOP	:0.25
LOG BOTTOM	:363.06
CASING OD	:7.30
CASING BOTTOM	:361.19
CASING TYPE	:PVC
BOREHOLE FLUID	:WATER
RM TEMPERATURE	:
MUD RES	:
MUD WEIGHT	:

RECORDED BY : J. SINKWICH

REMARKS 1 : HQ CORE WATER LEVEL: 86M

REMARKS 2 : MEASUREMENTS IN CENTIMETERS & METERS

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

GAMMA - NEUTRON - GAMMA-DENSITY 05 001 (018) 11/13/05

LOG PARAMETERS

MATRIX DENSITY : 2.65

NEUTRON MATRIX : SANDSTONE

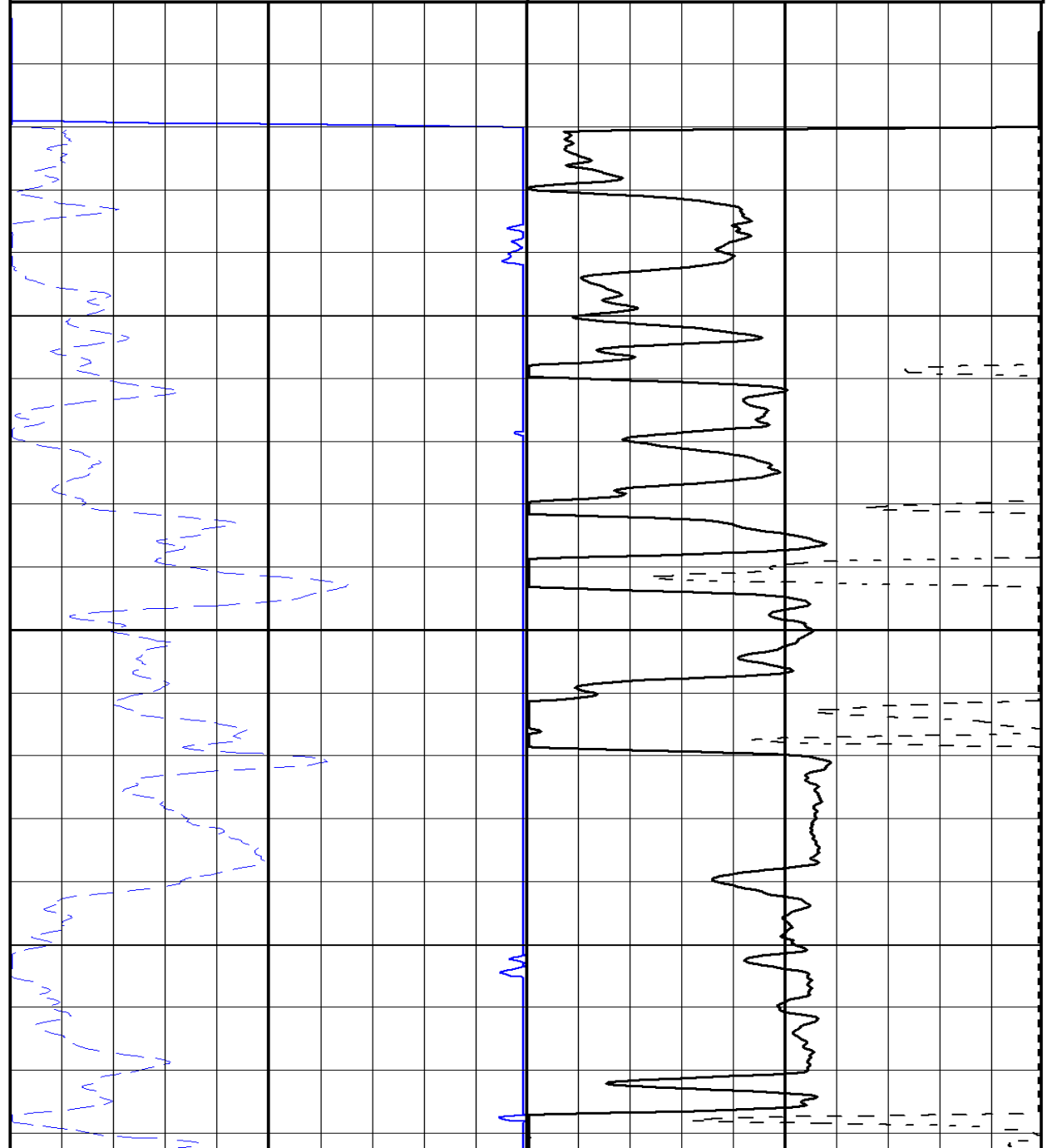
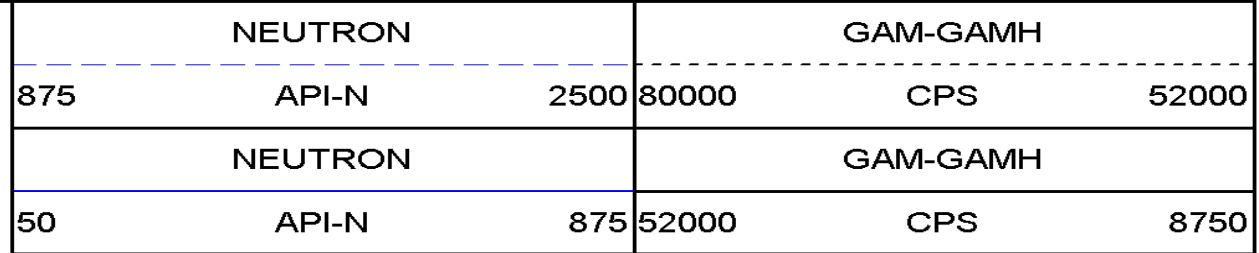
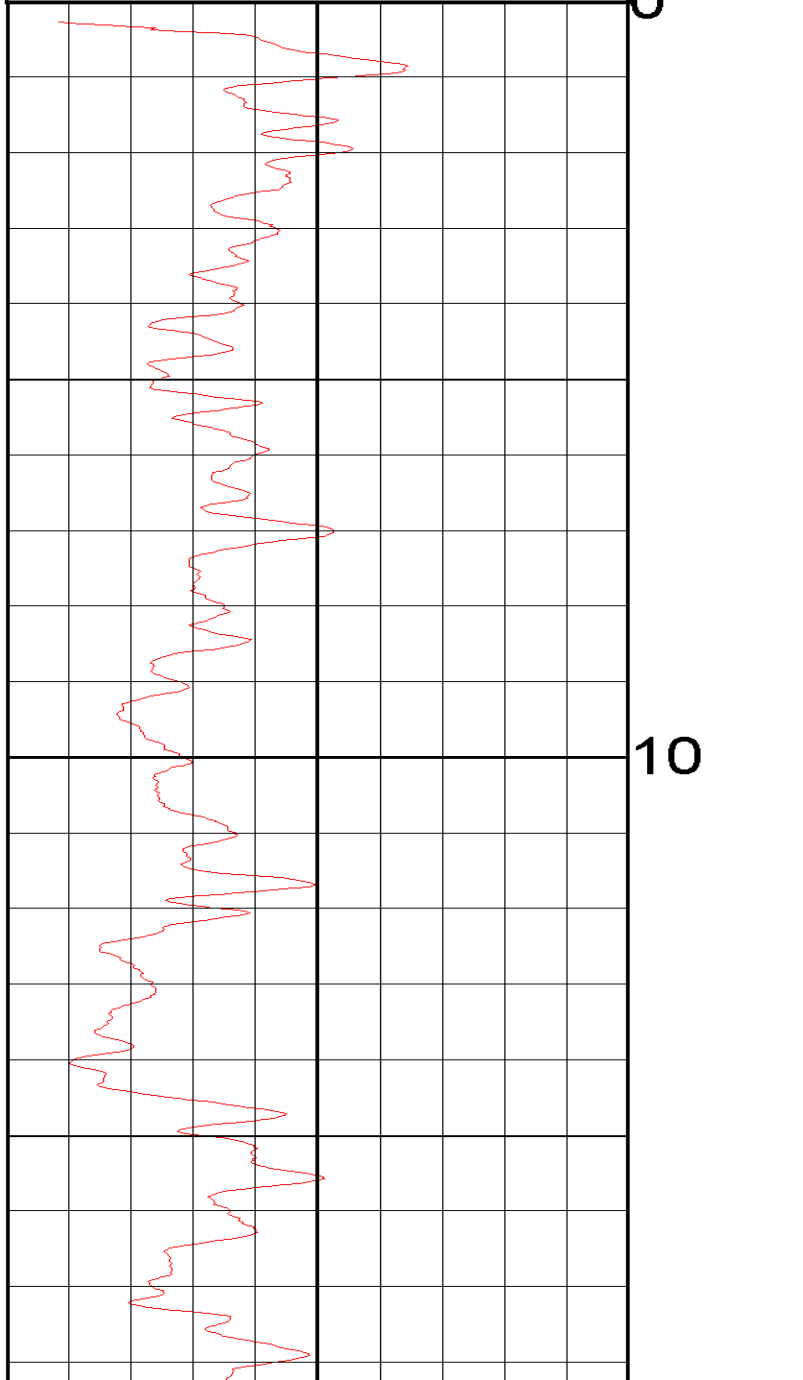
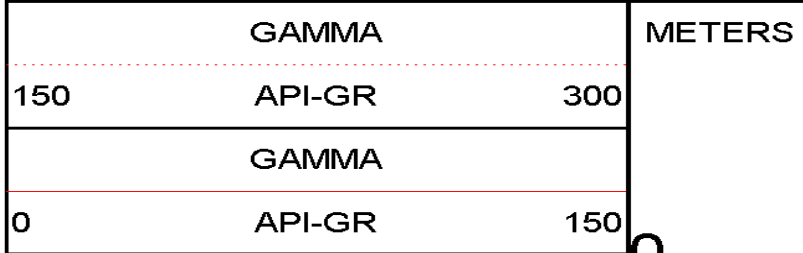
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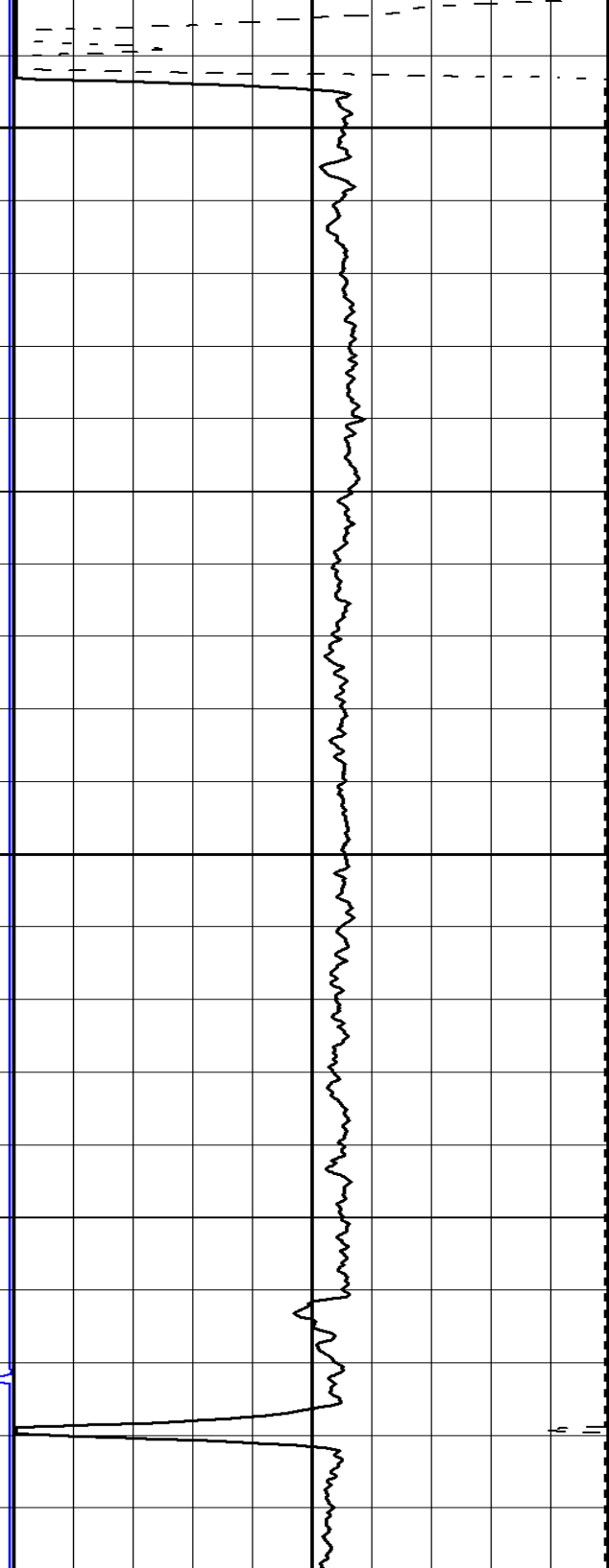
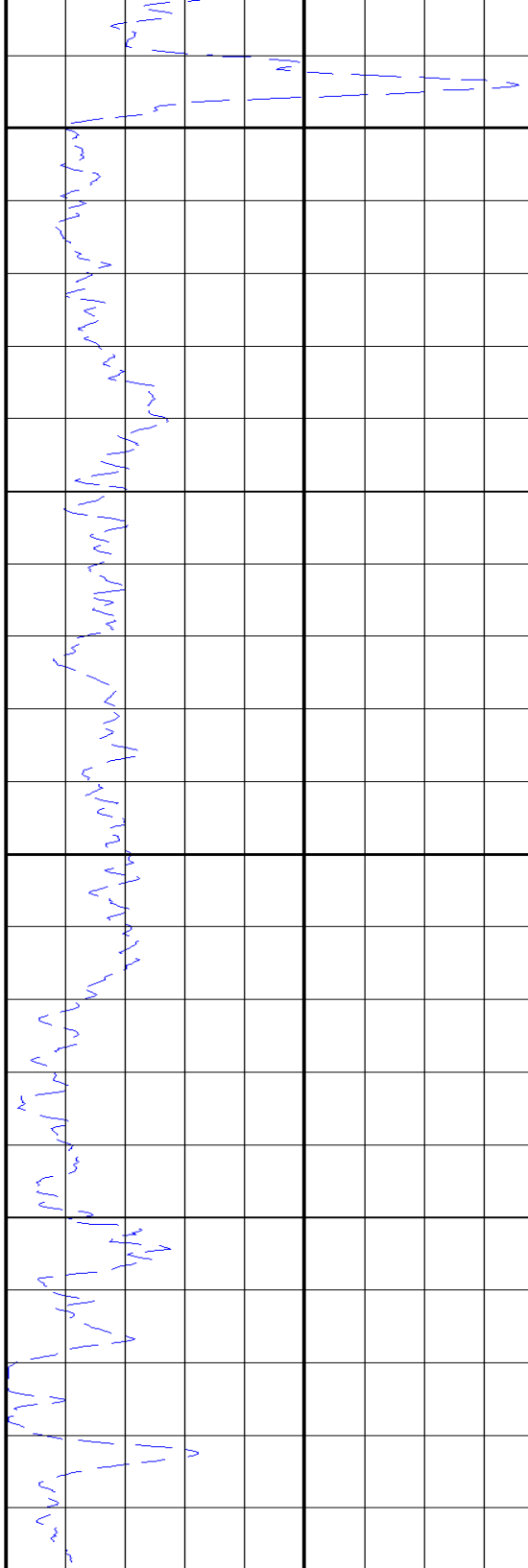
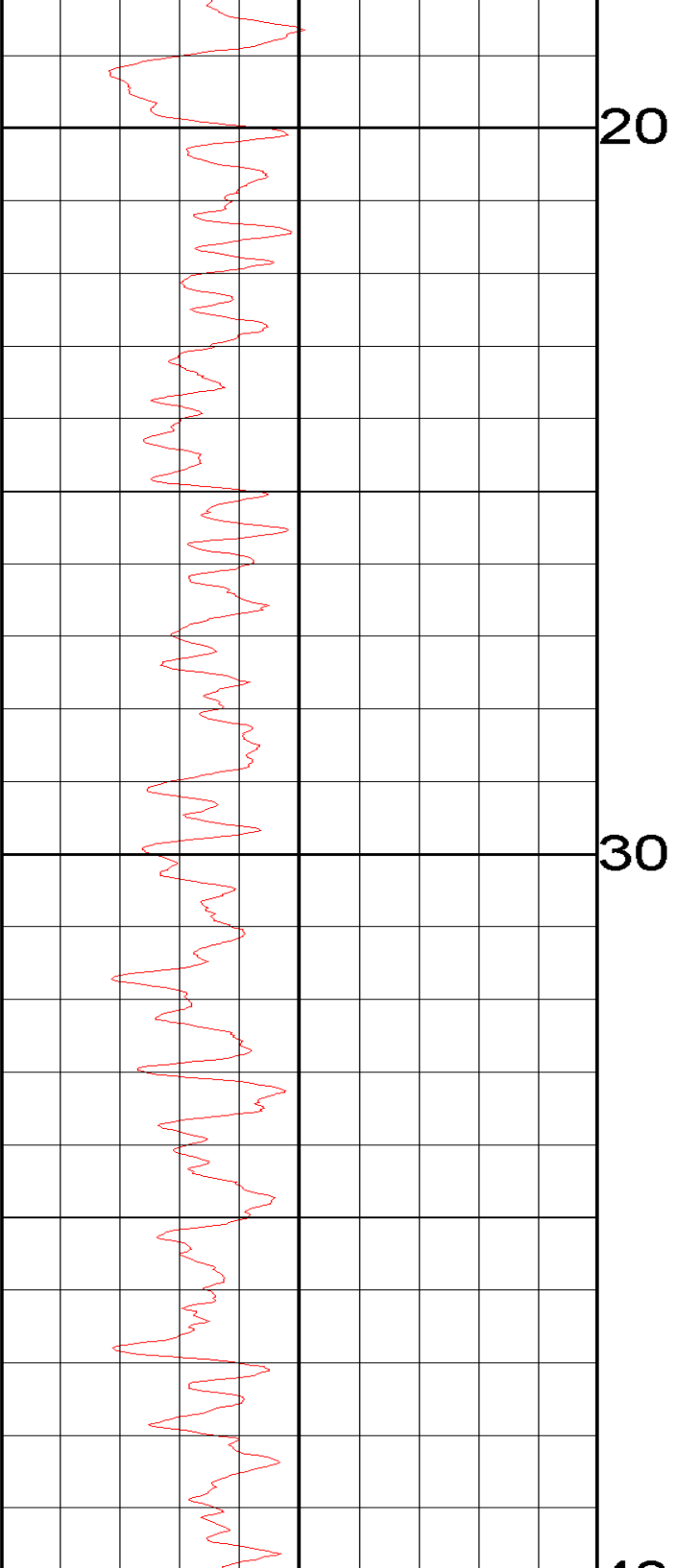
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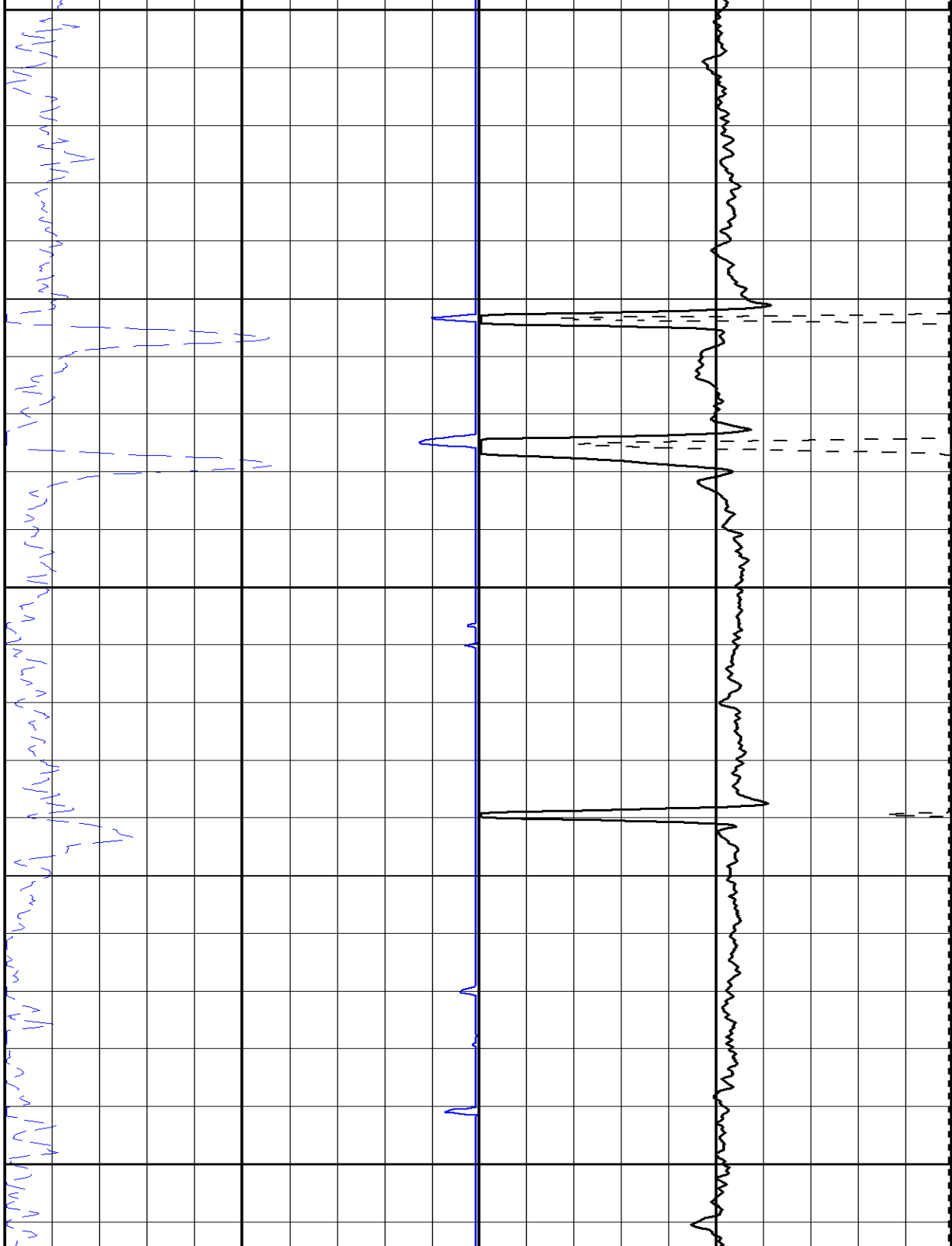
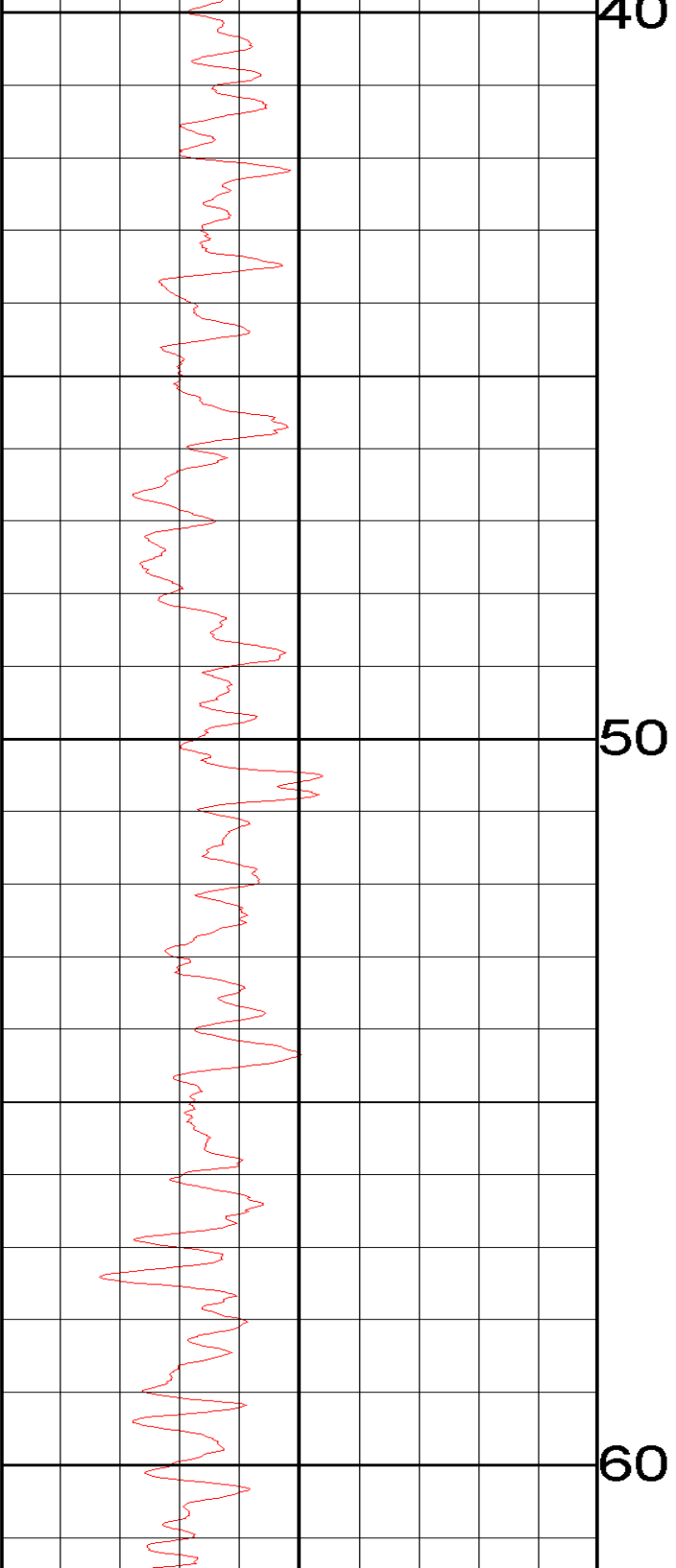
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BIT SIZE : 9.60

PRESENTATION NAME/DATE = 9068A-9067A_fort.0 11/15/2005



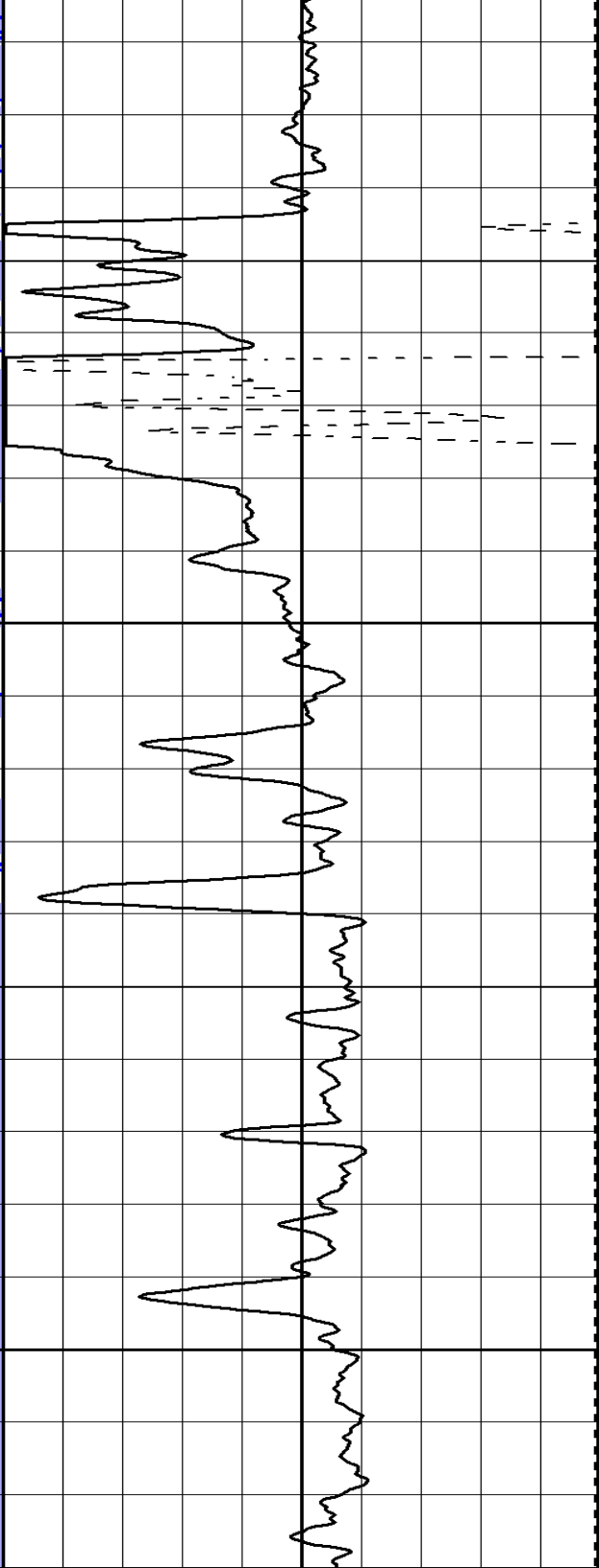
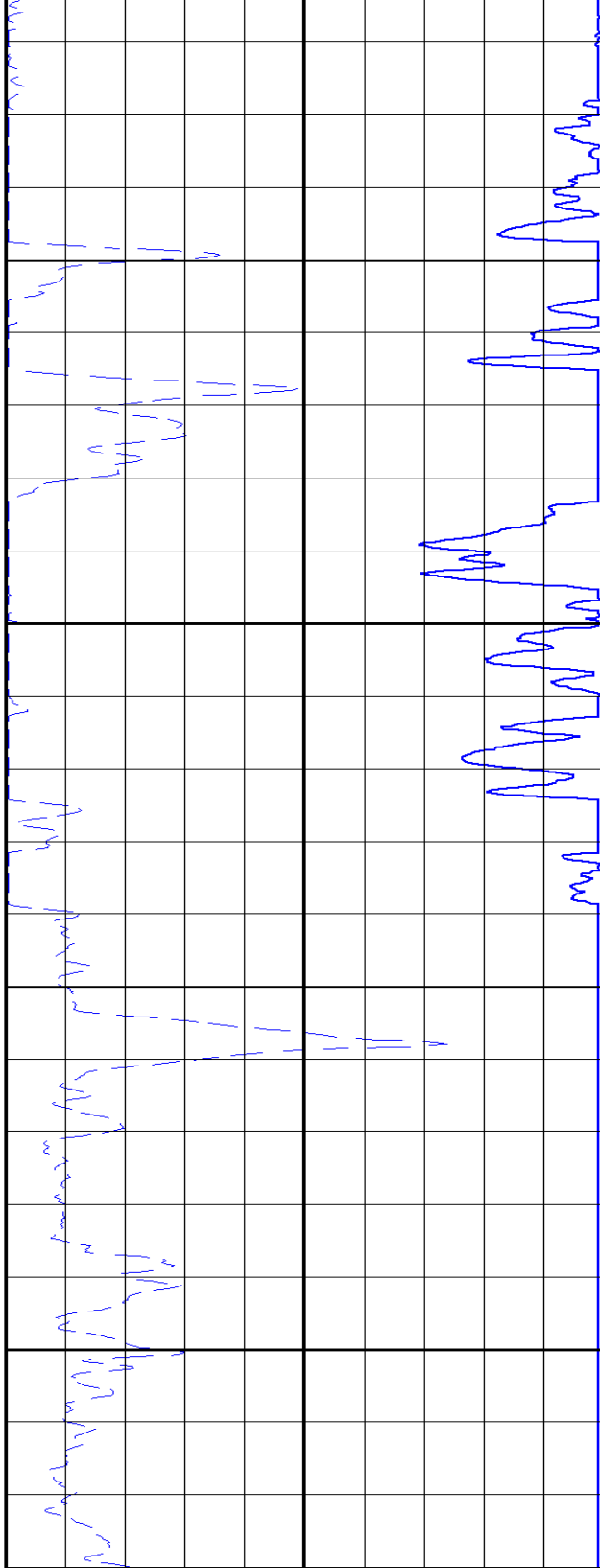


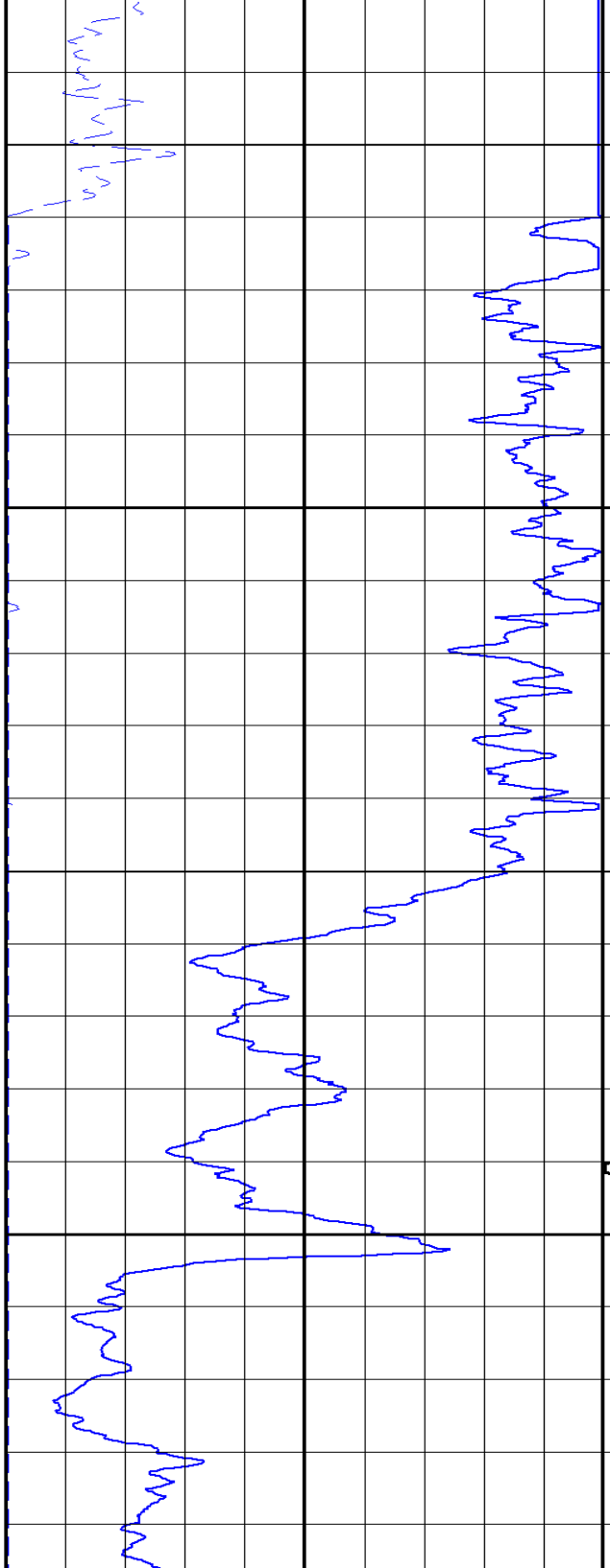
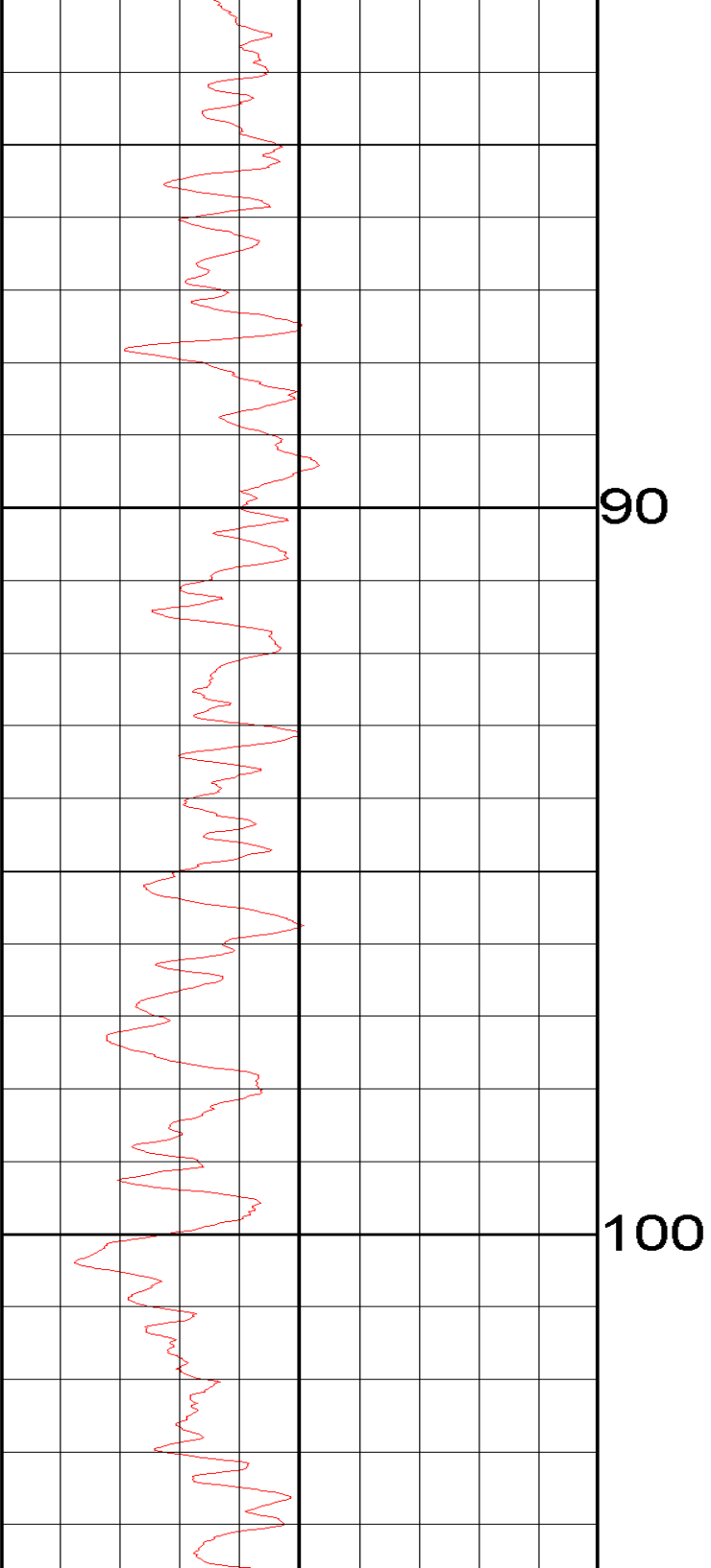


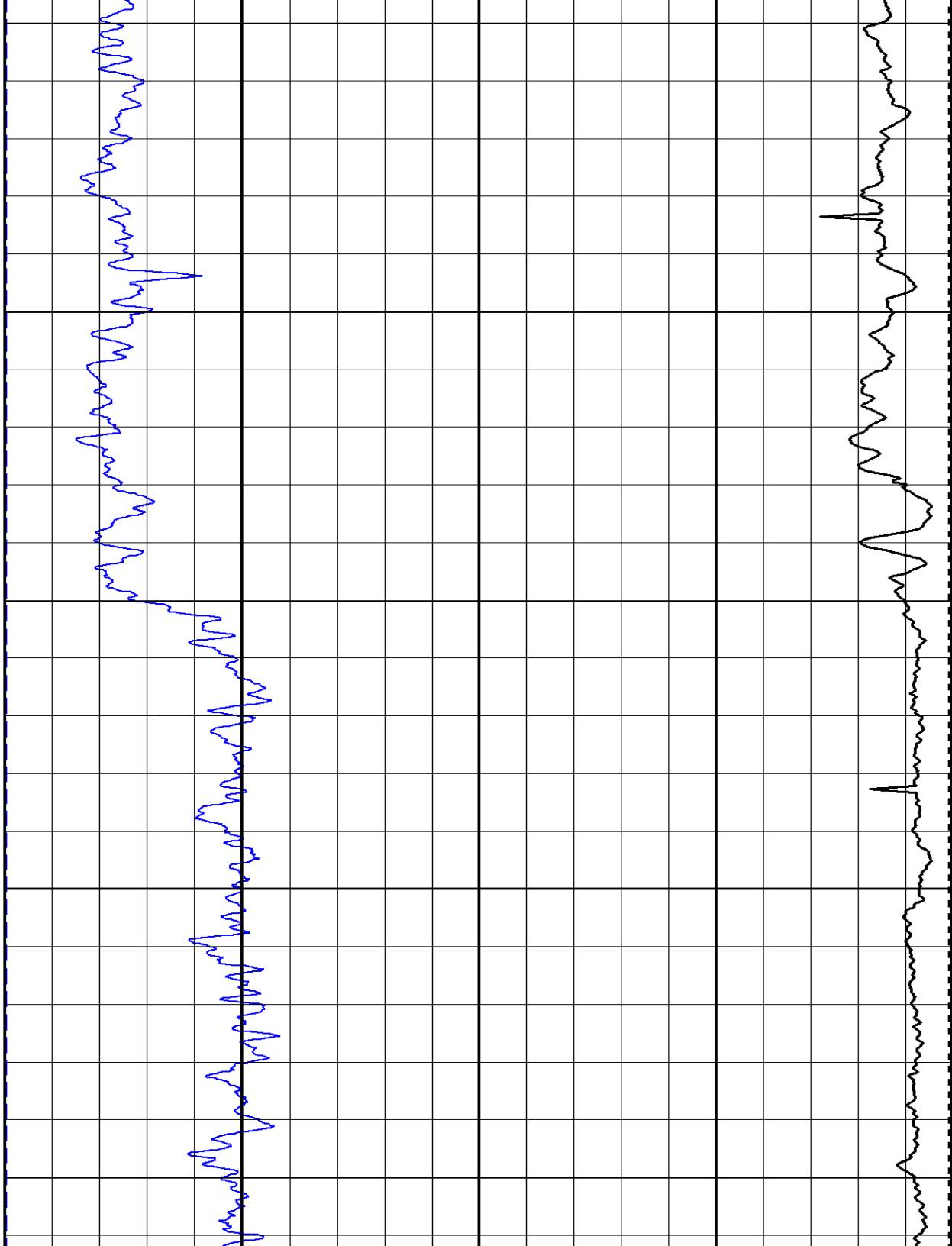
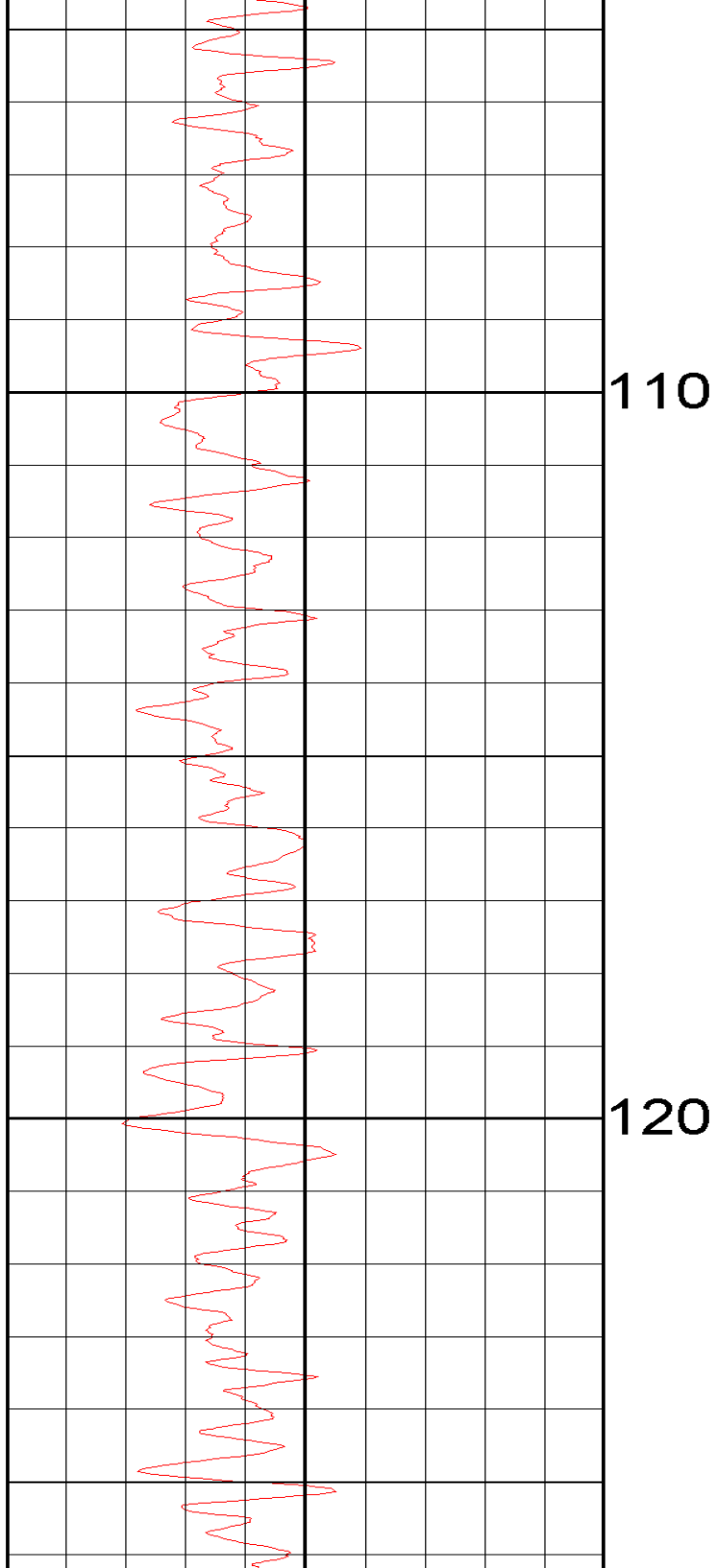


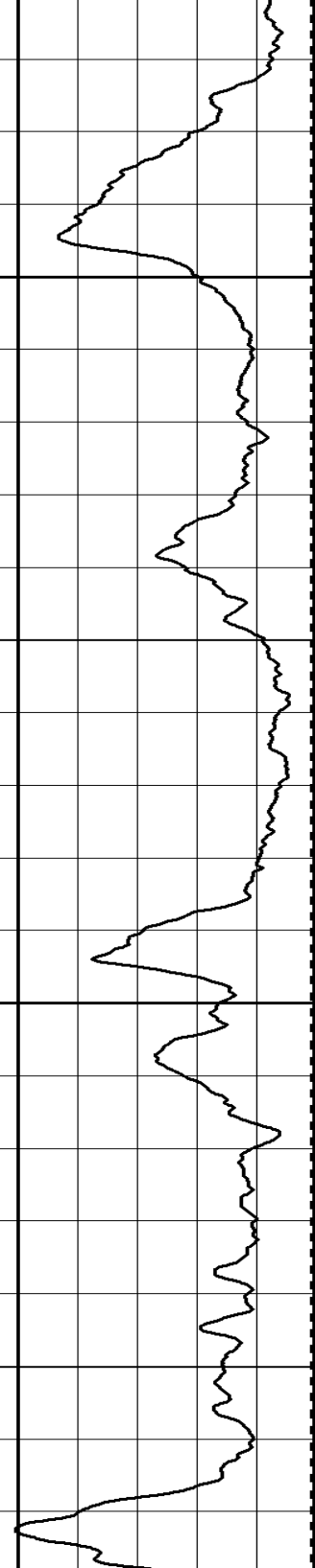
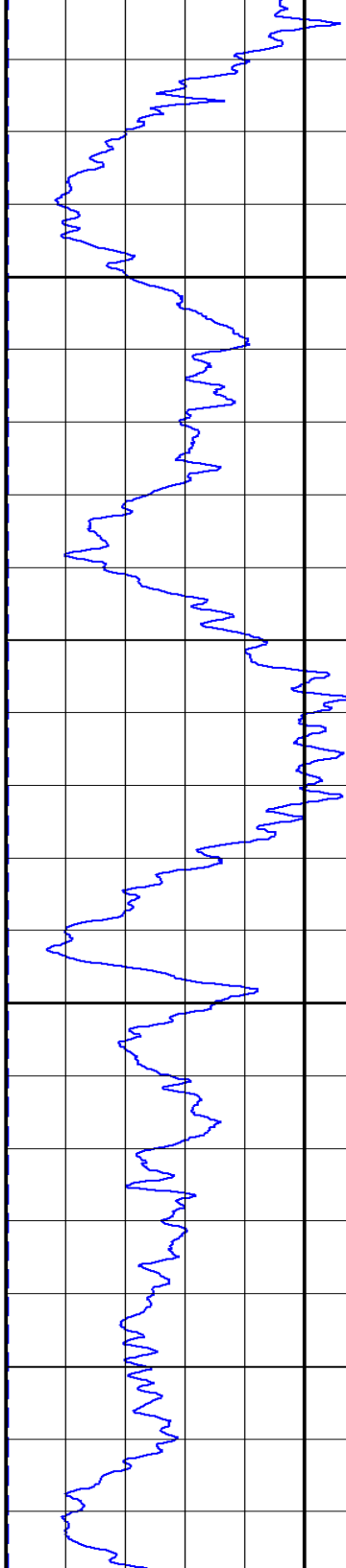
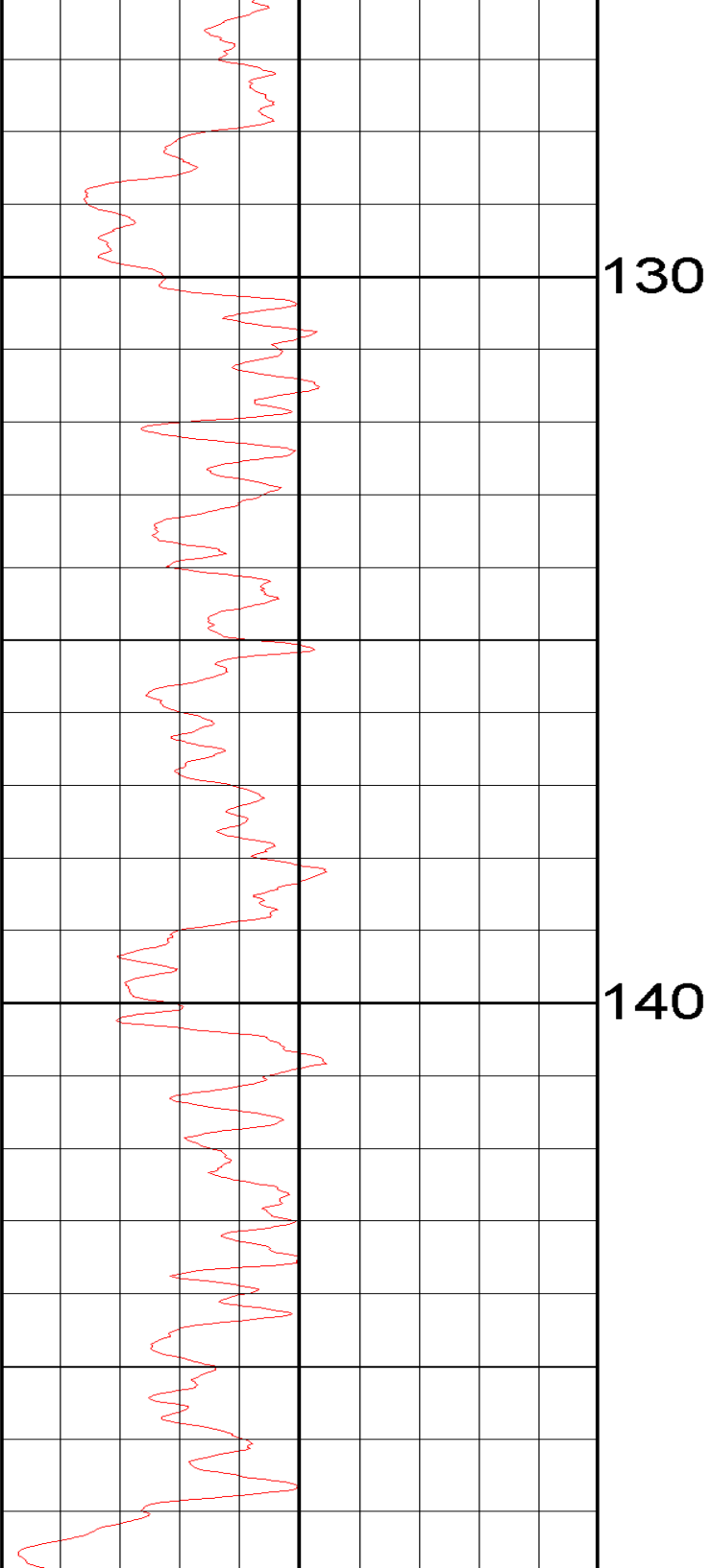
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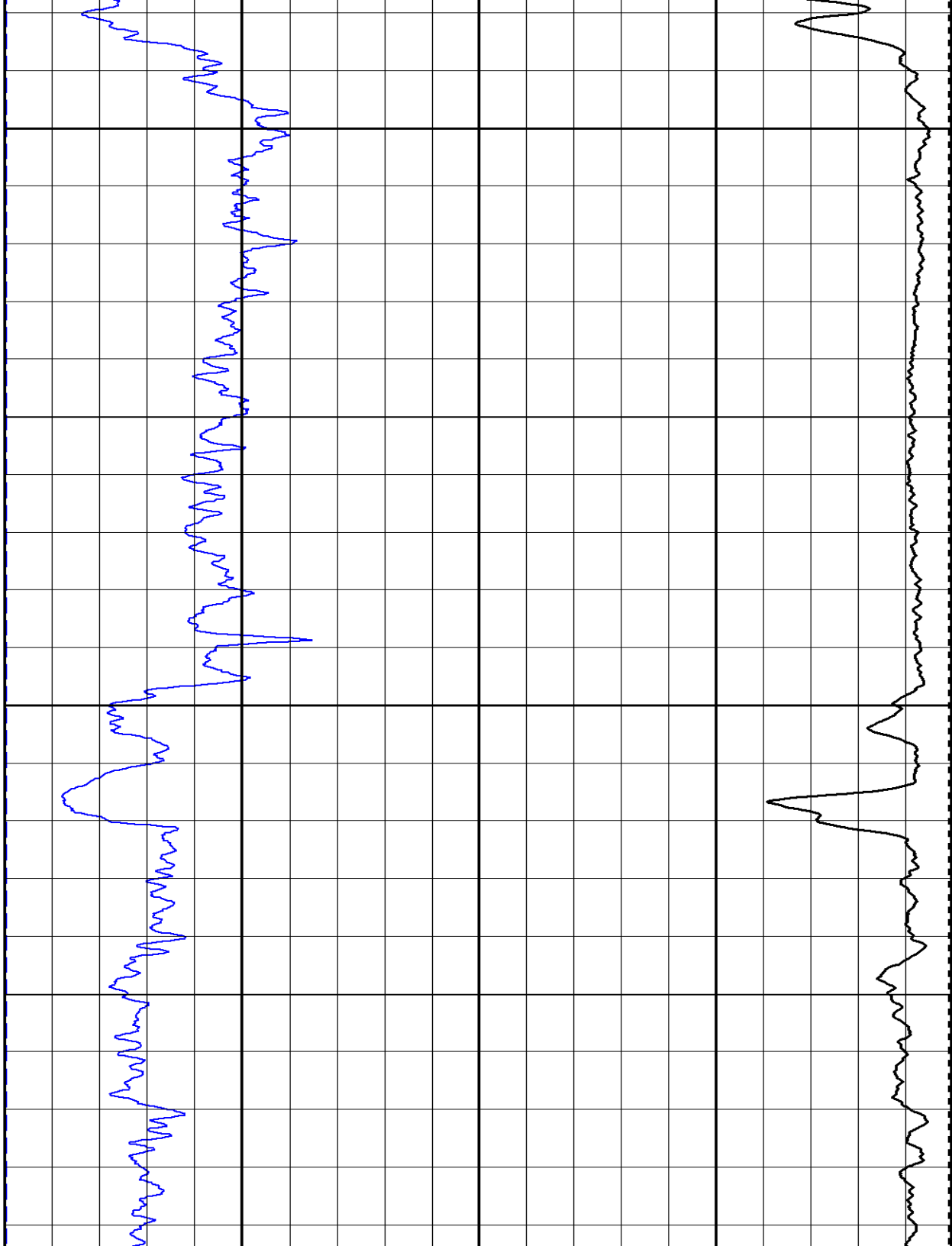
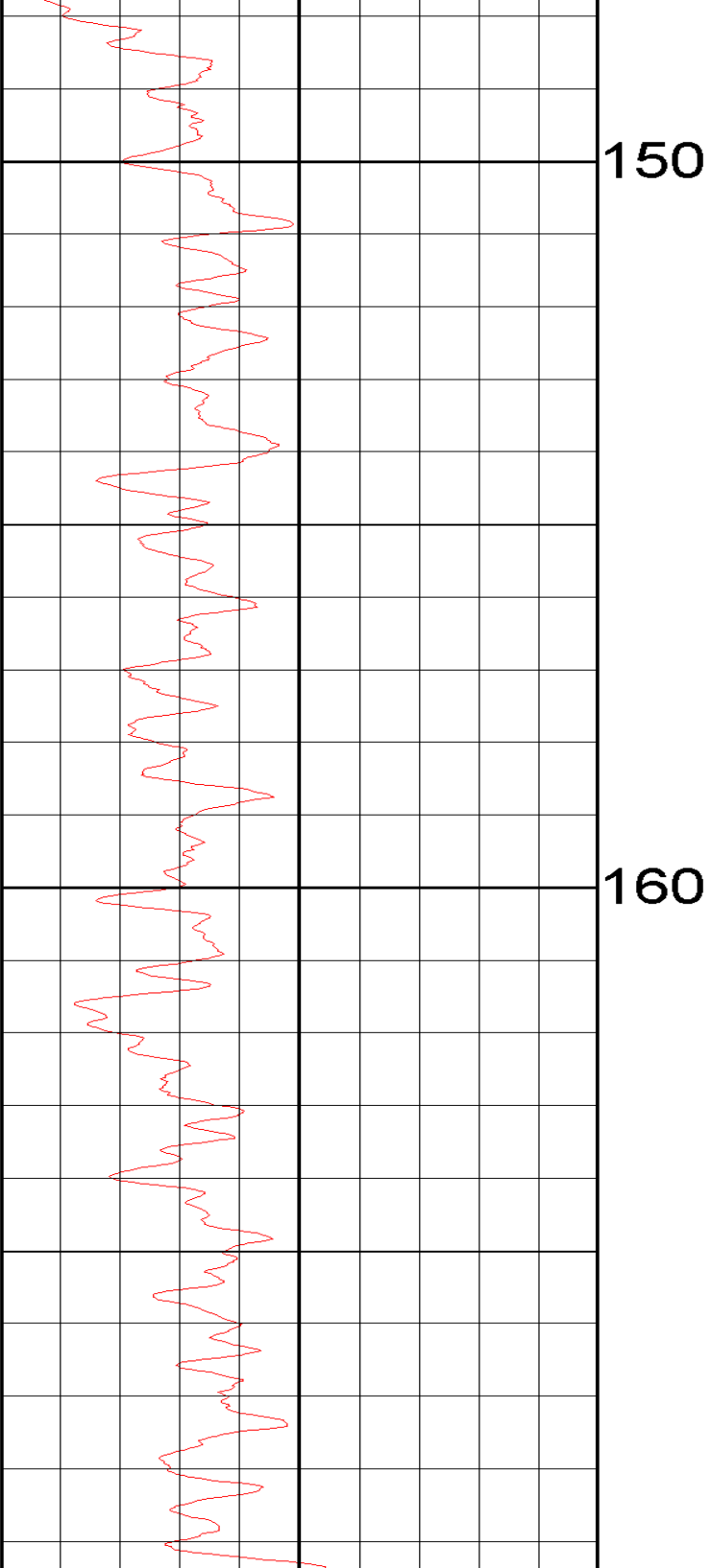
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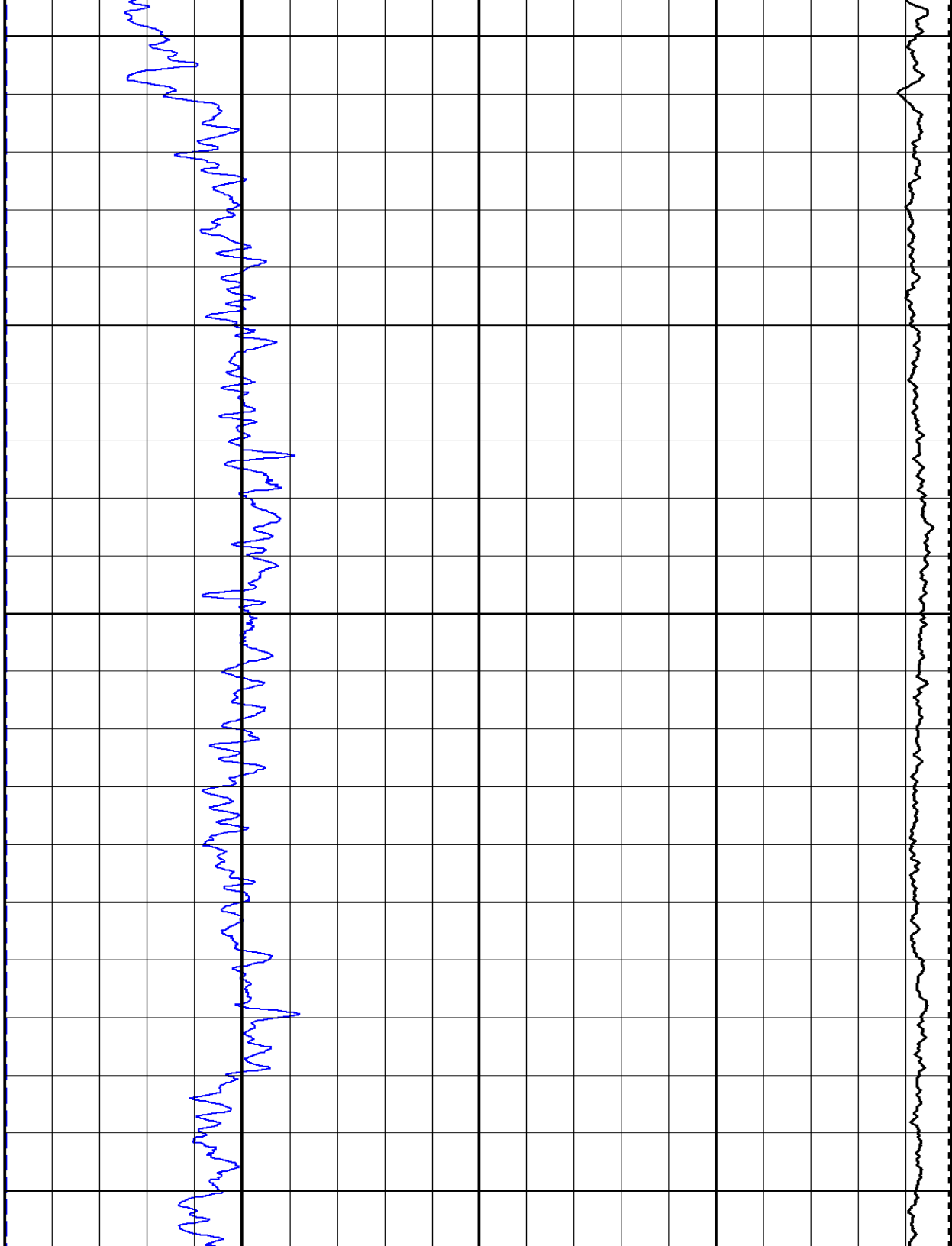
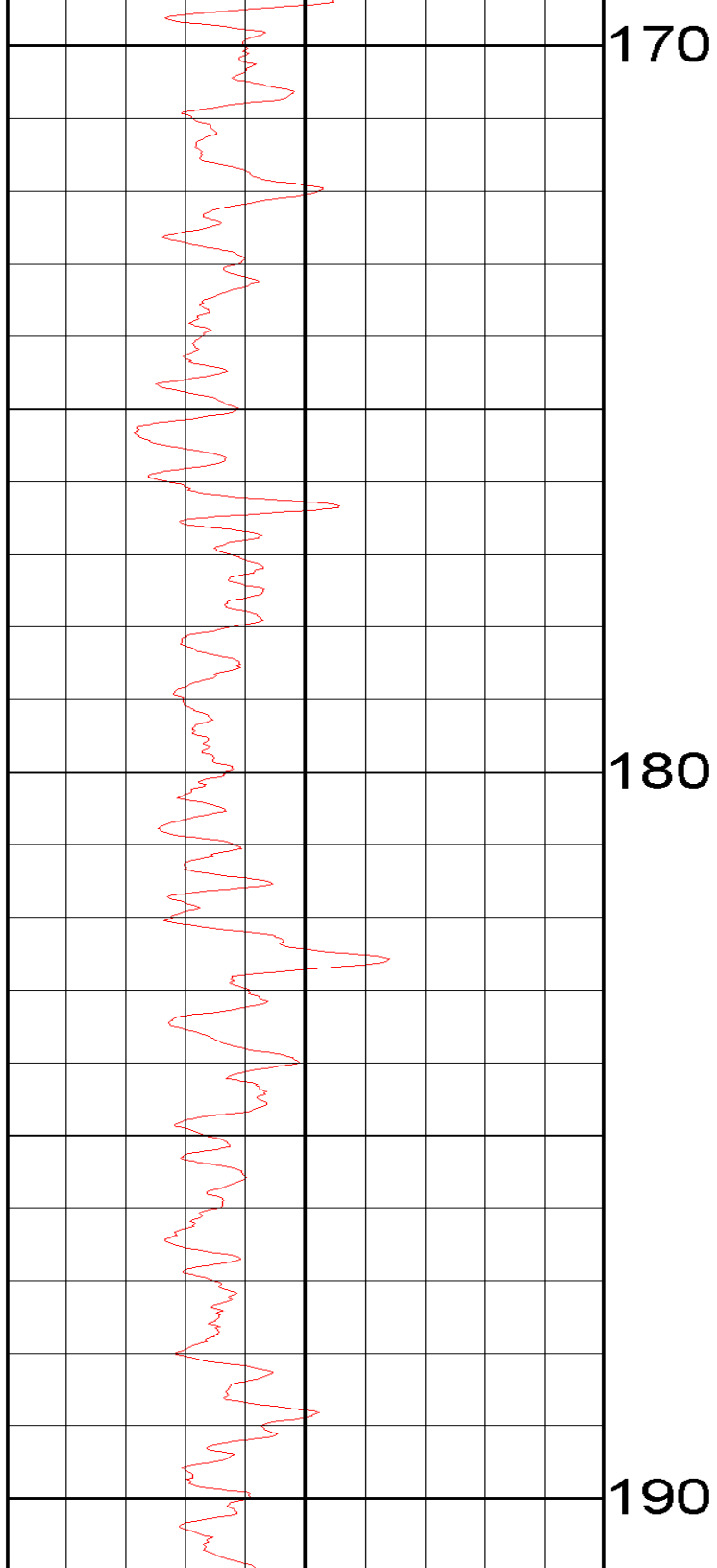


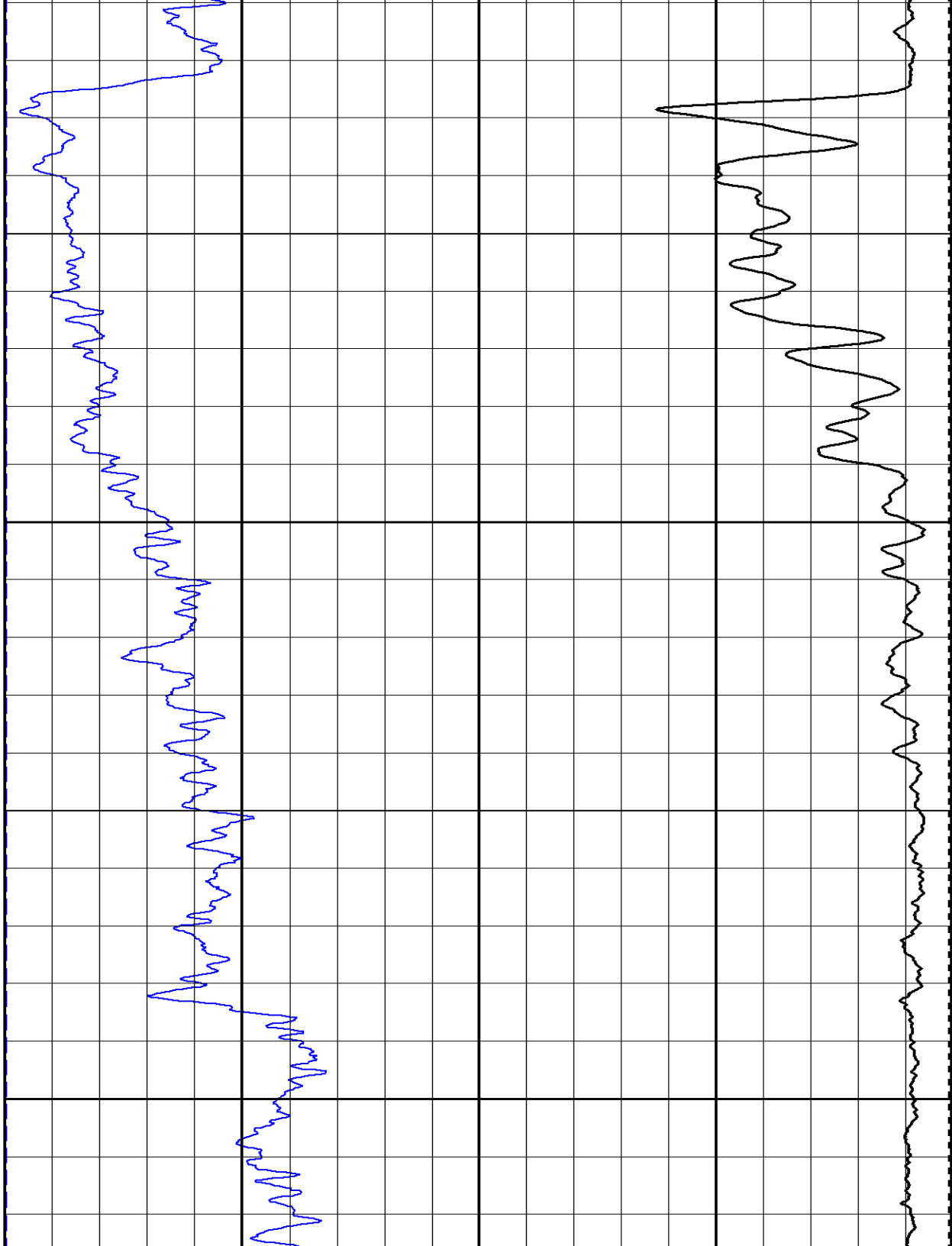
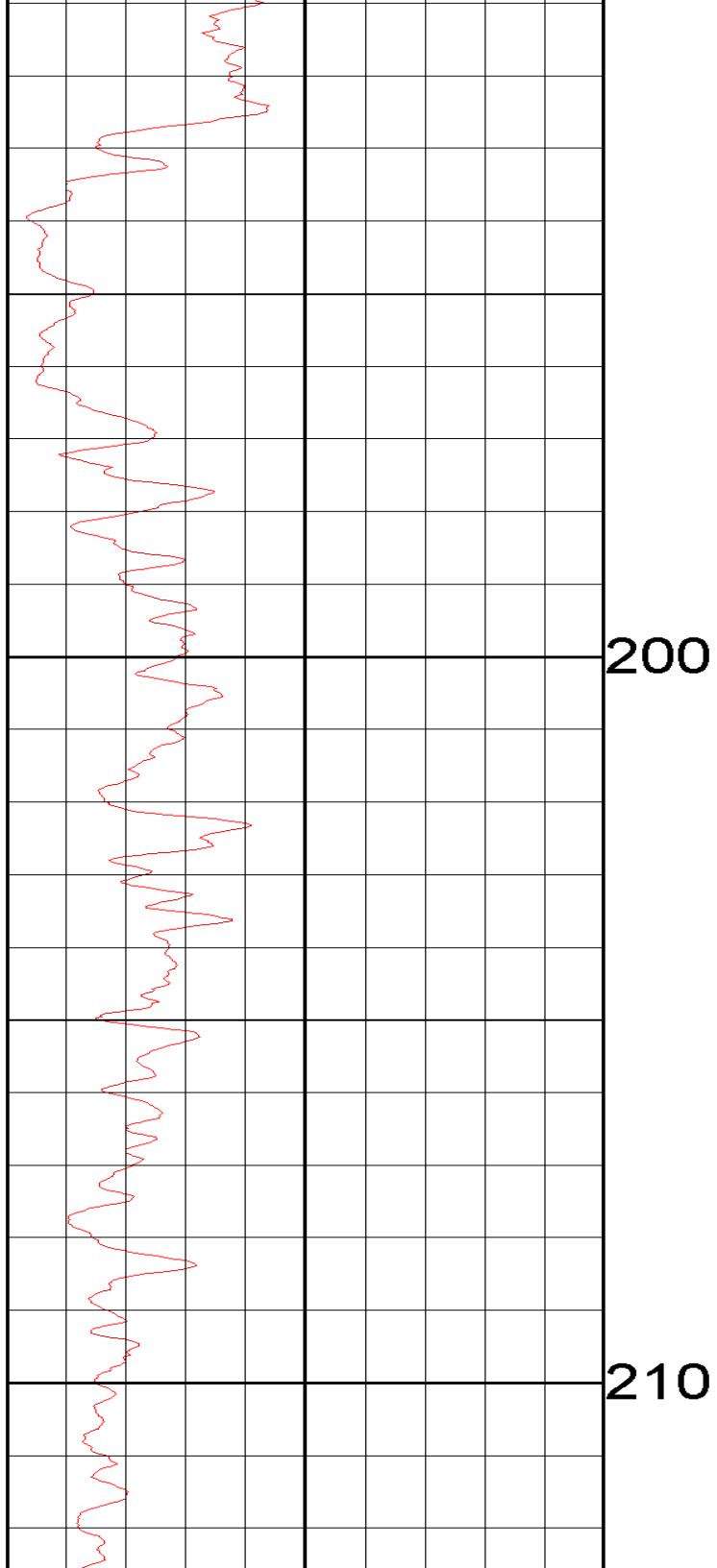


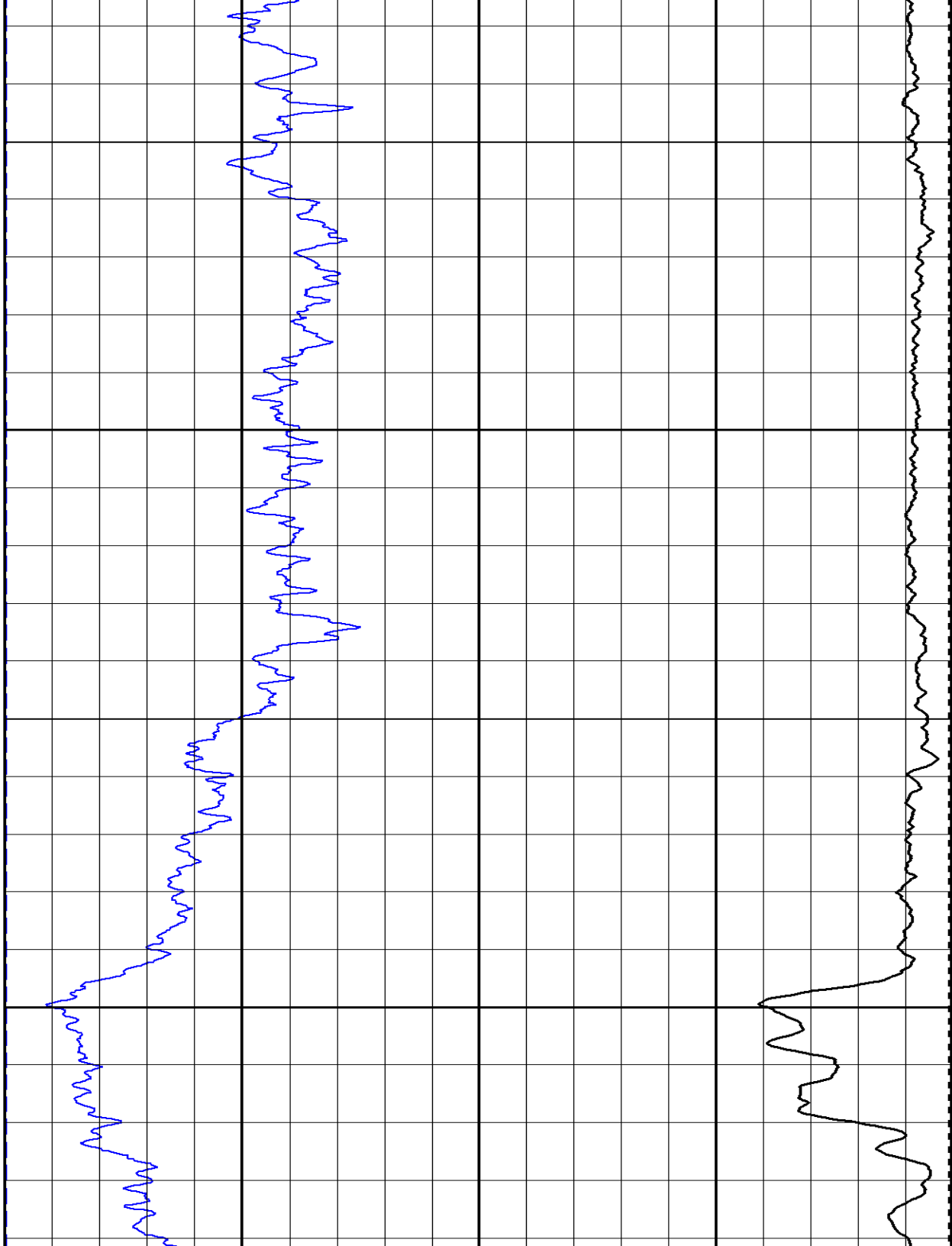
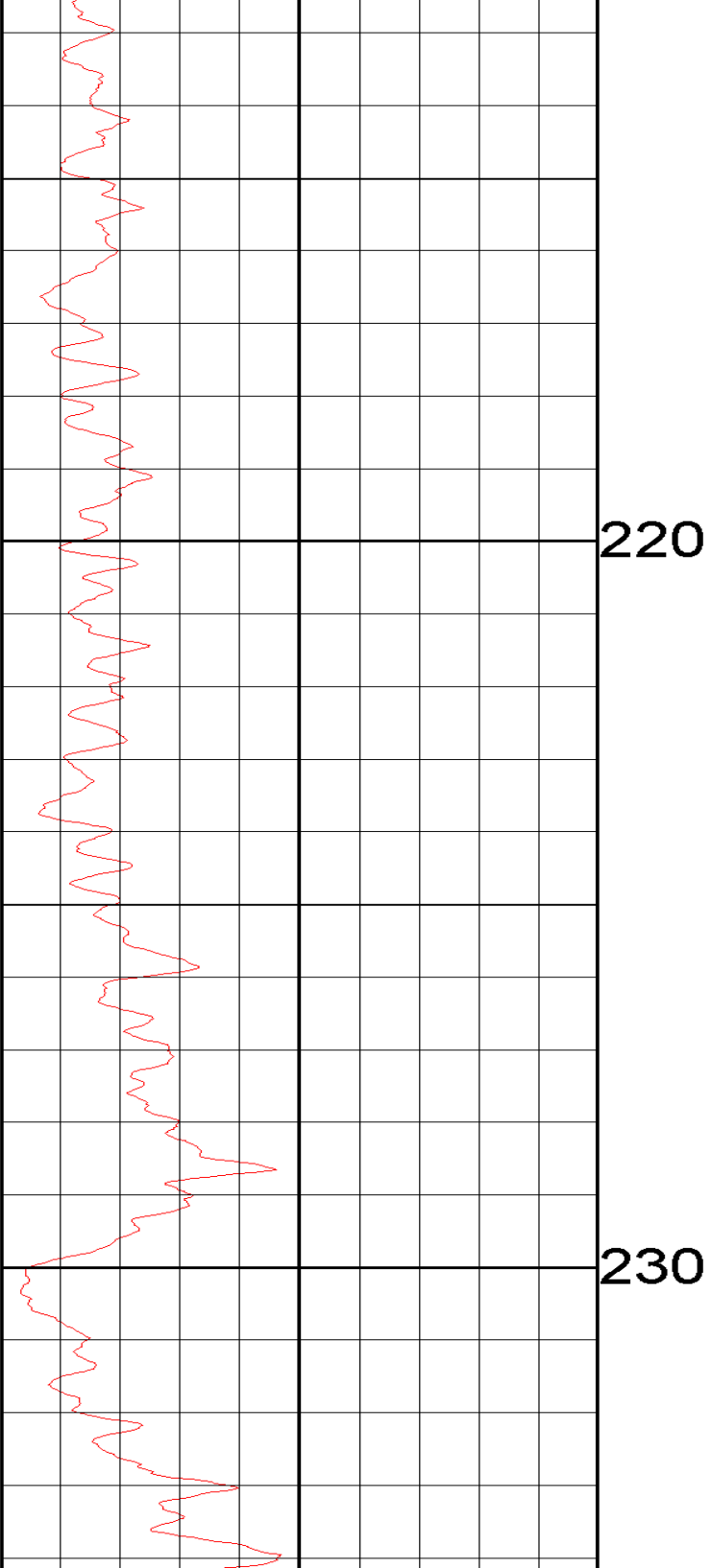


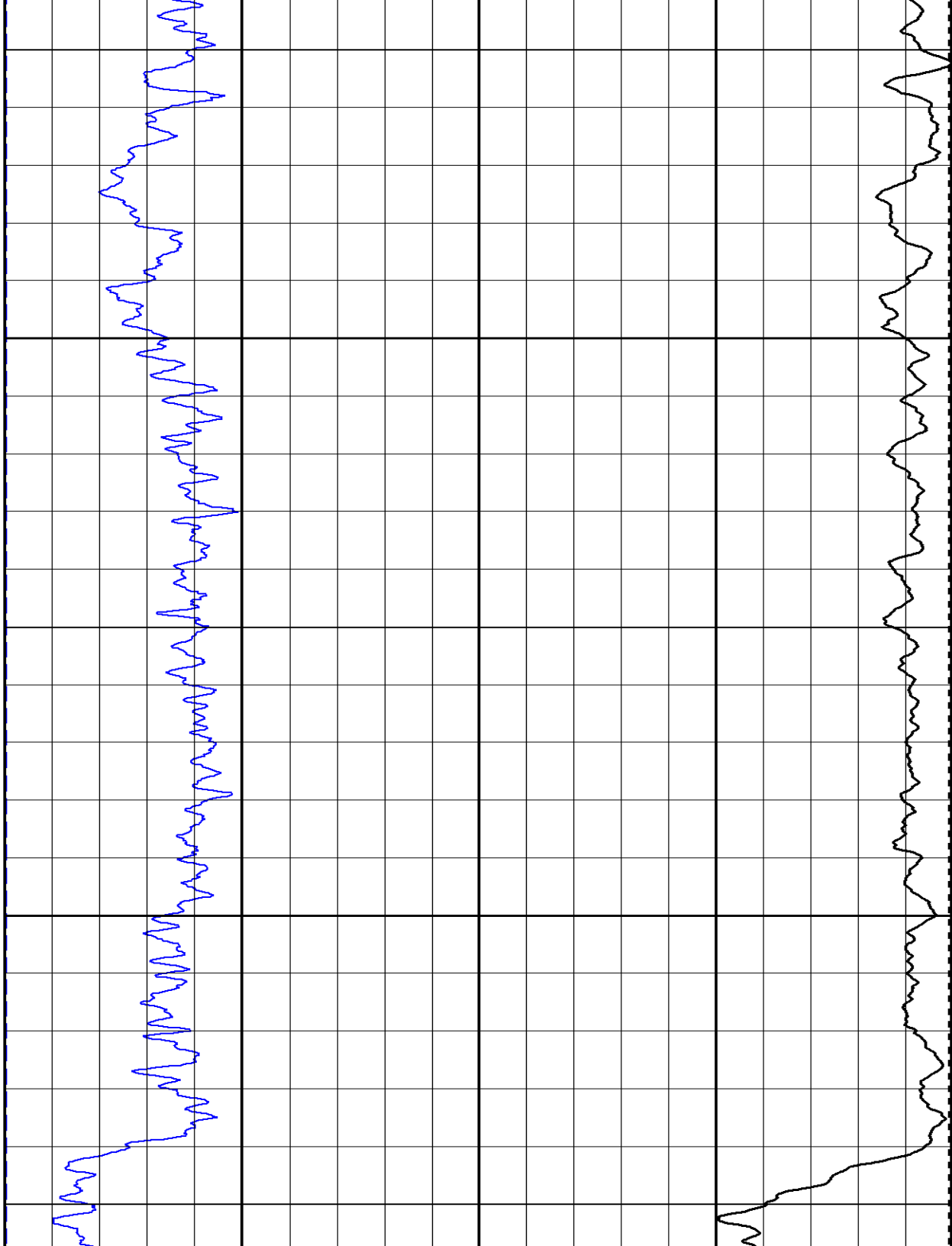
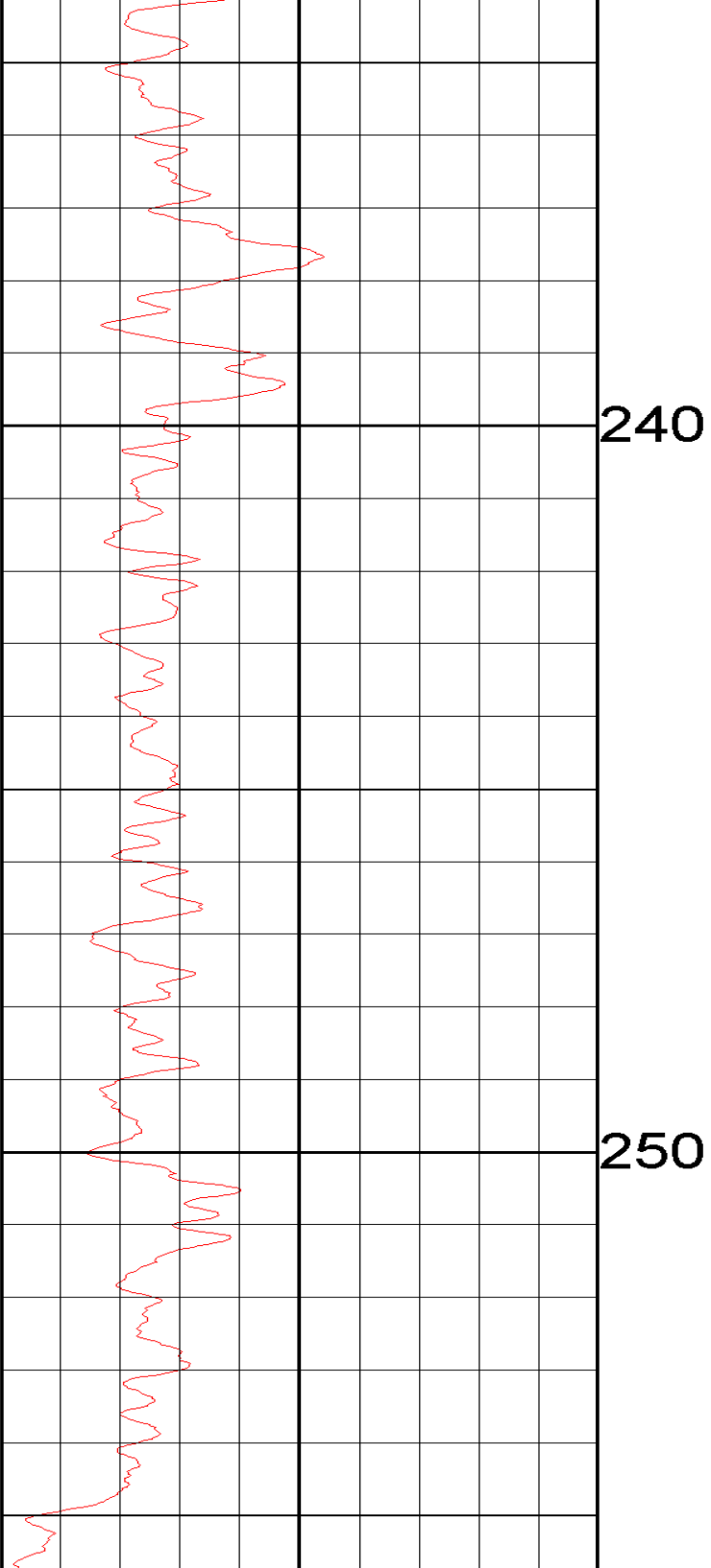


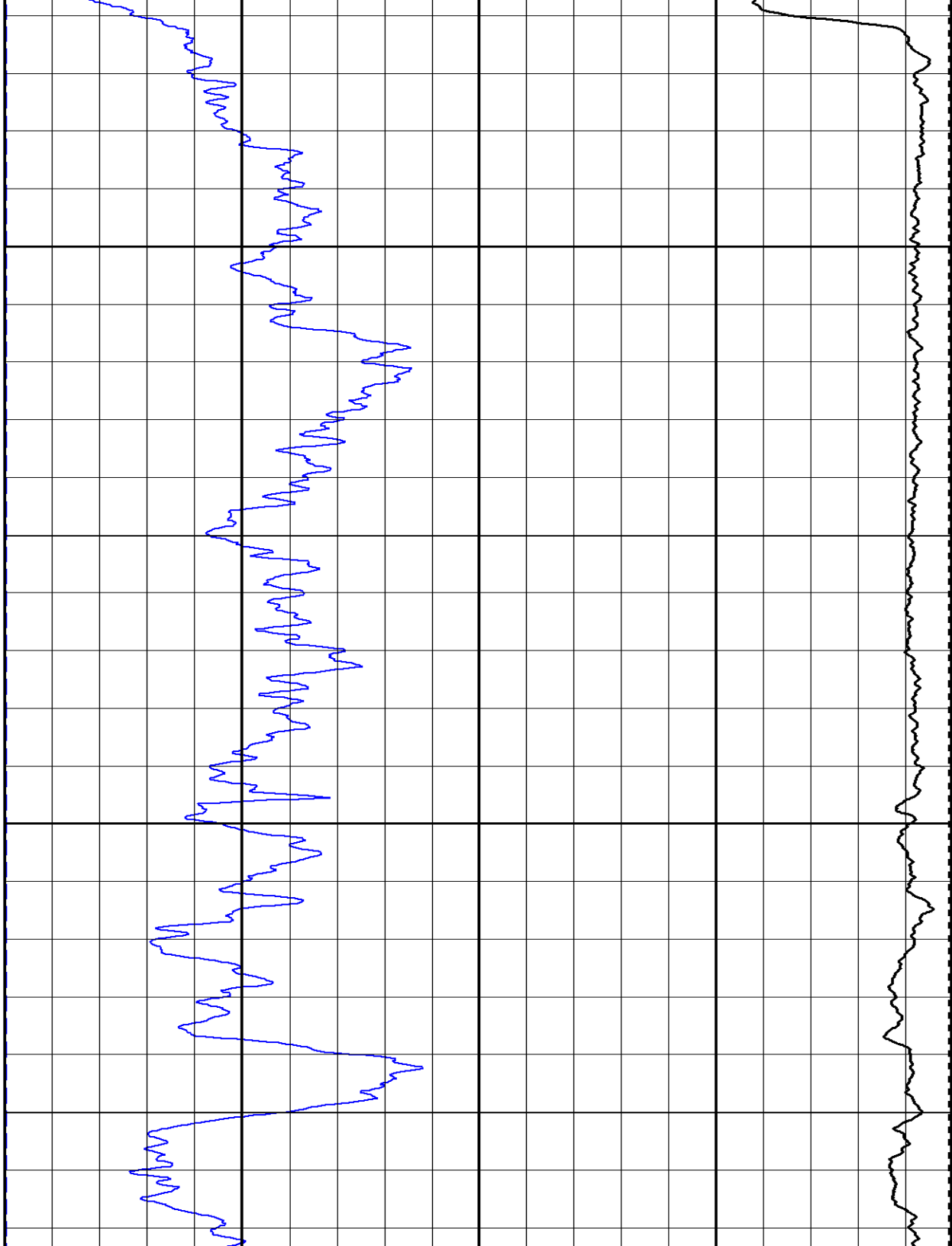
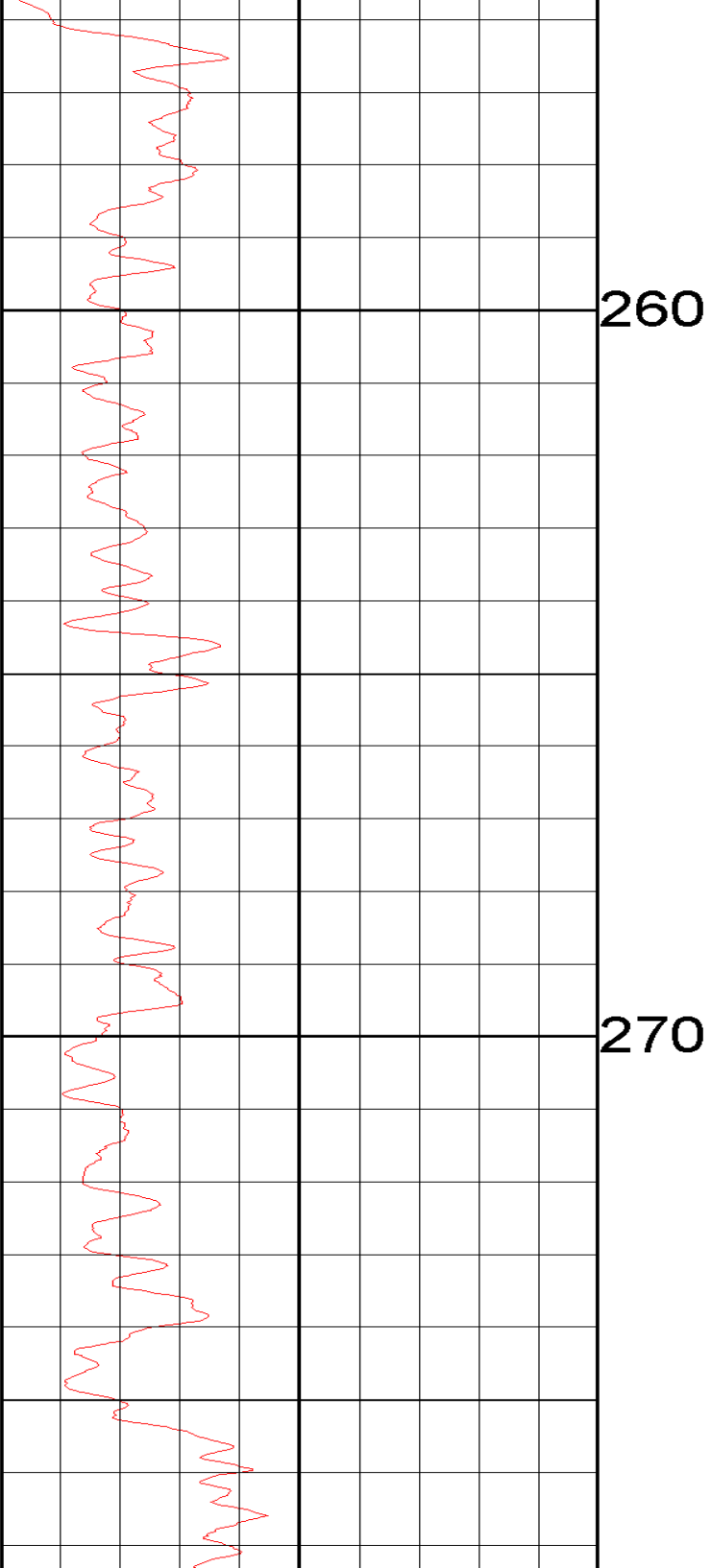


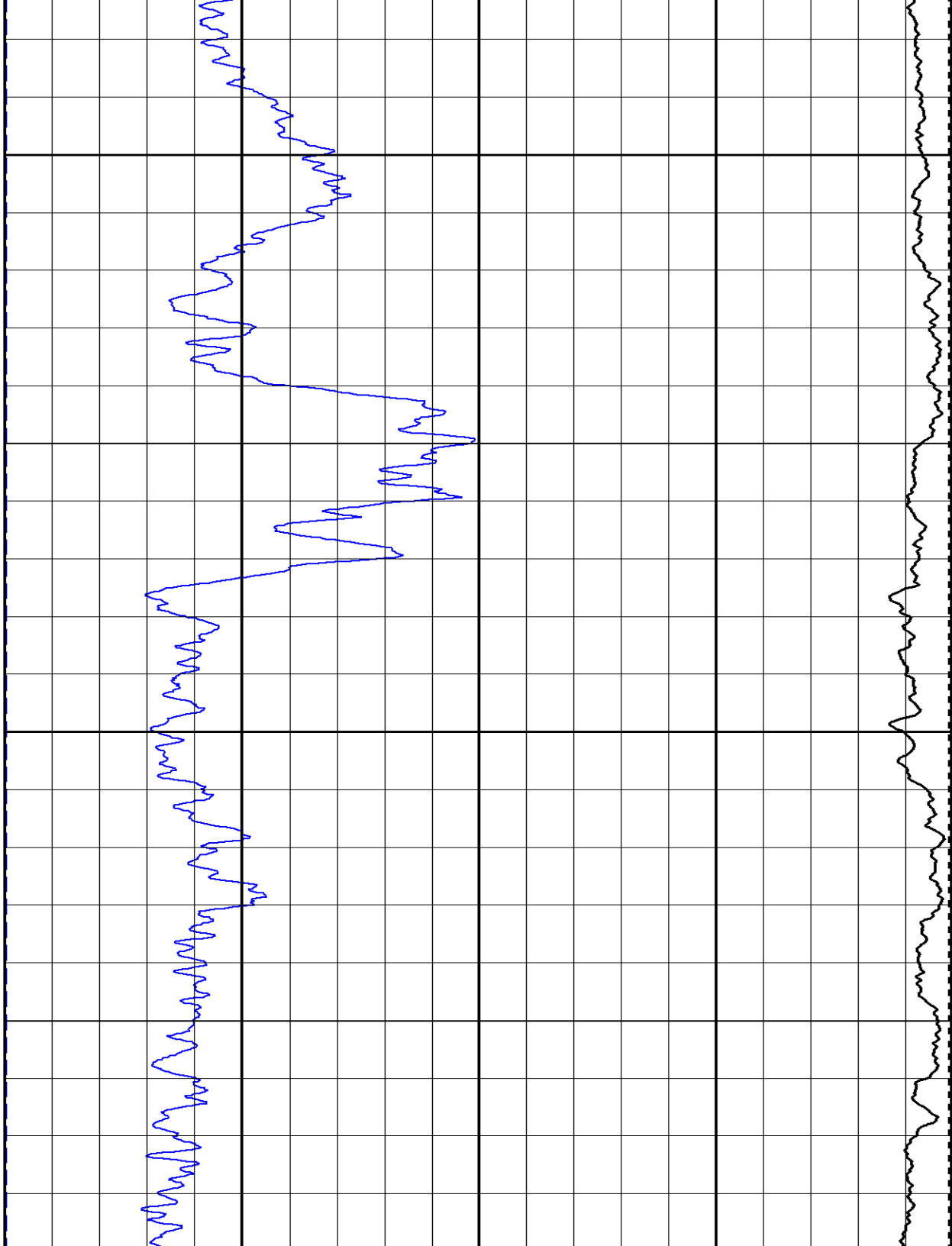
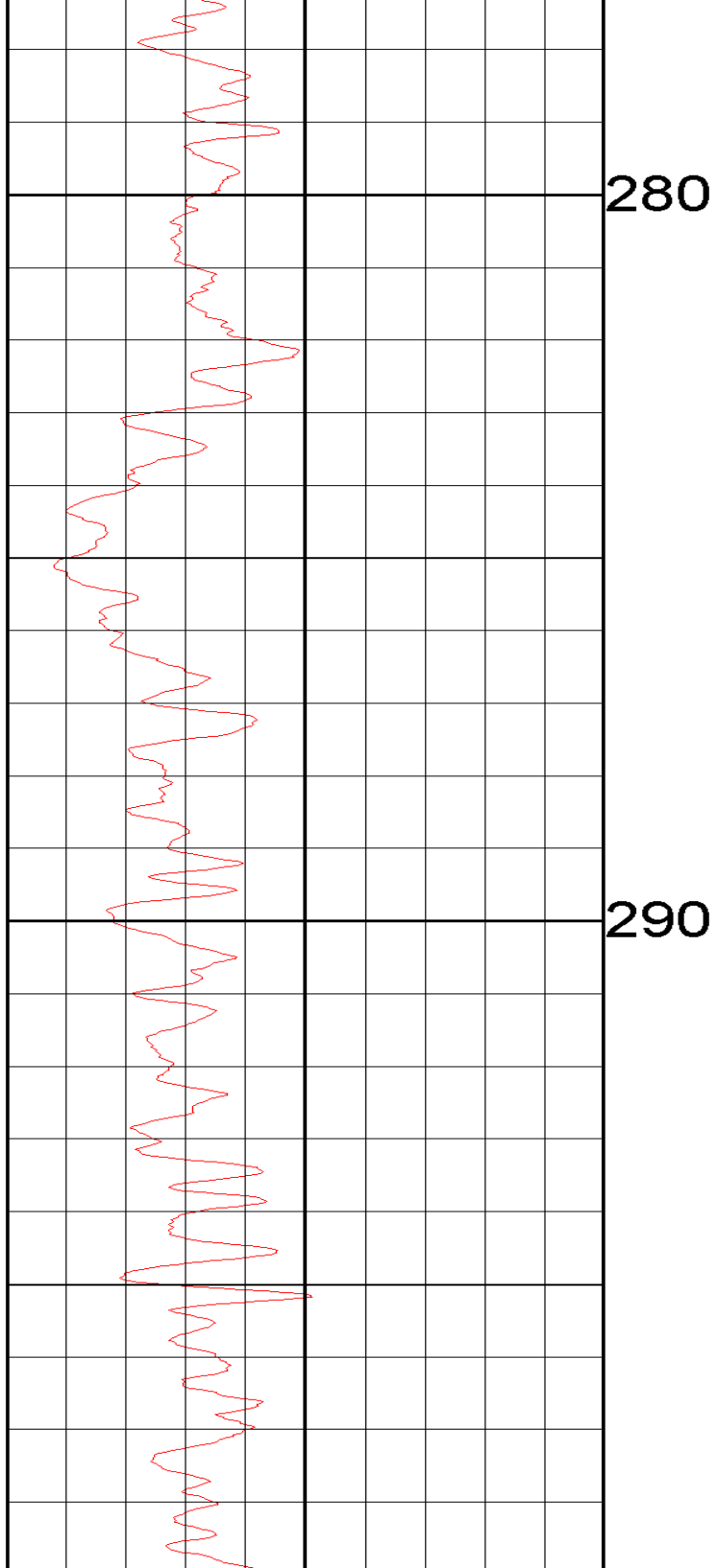


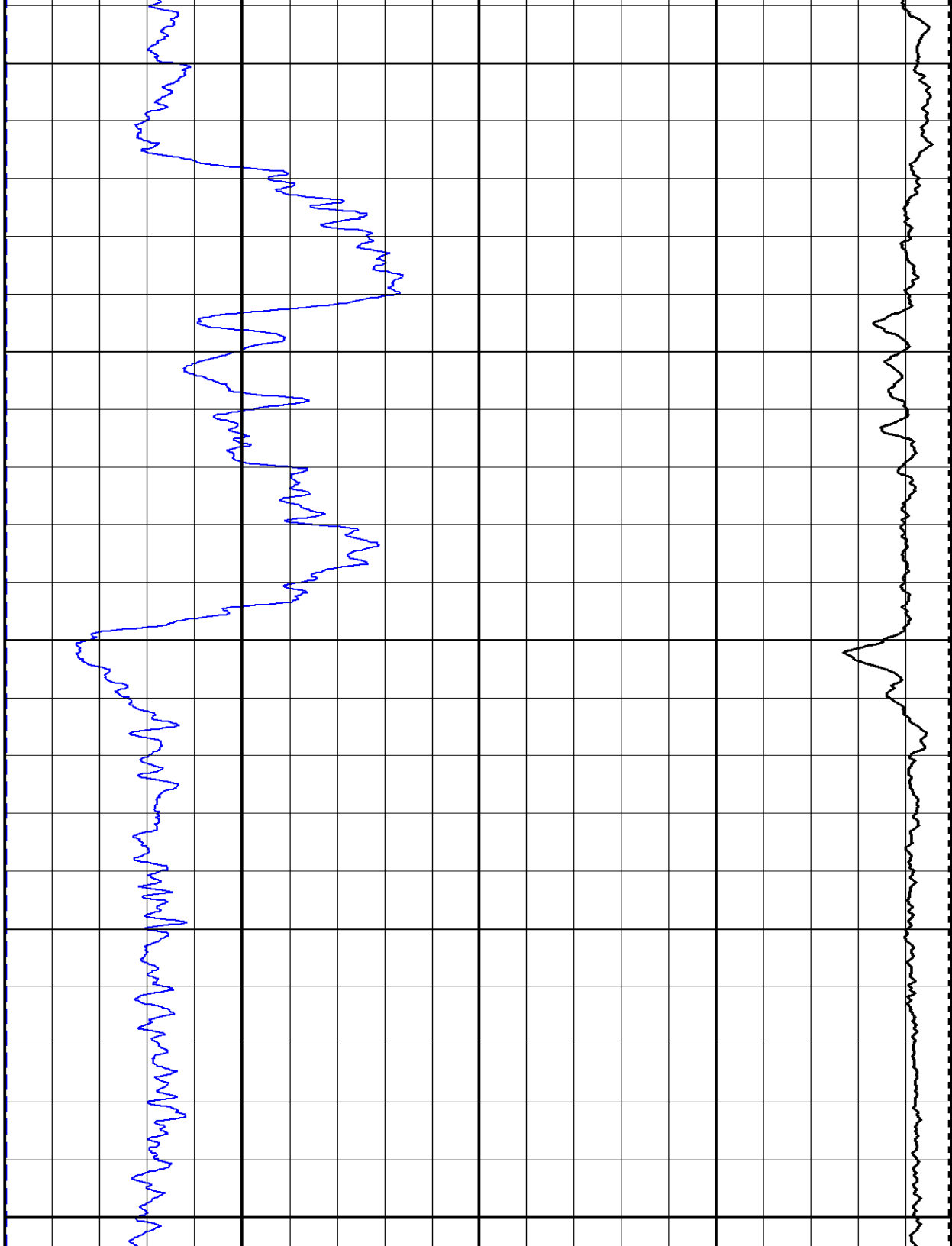
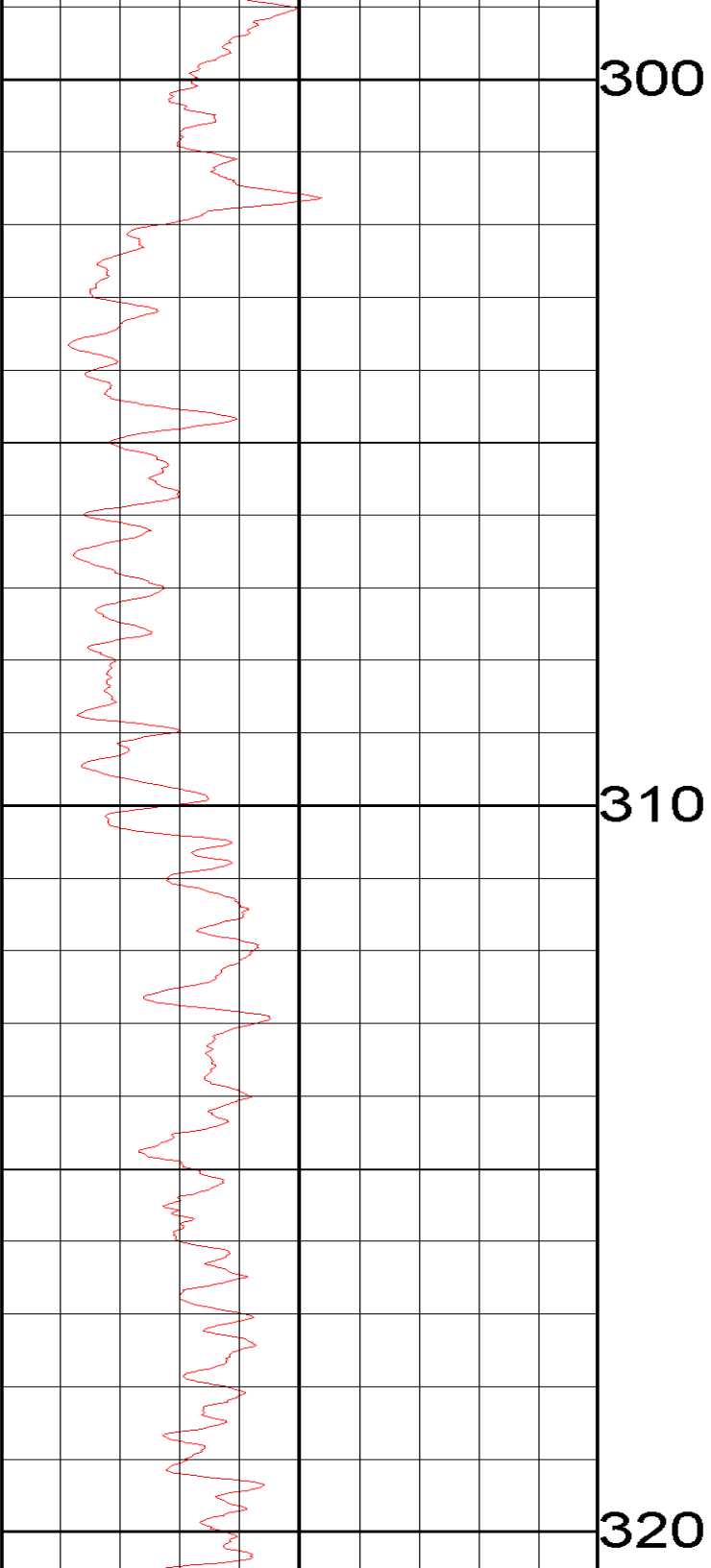


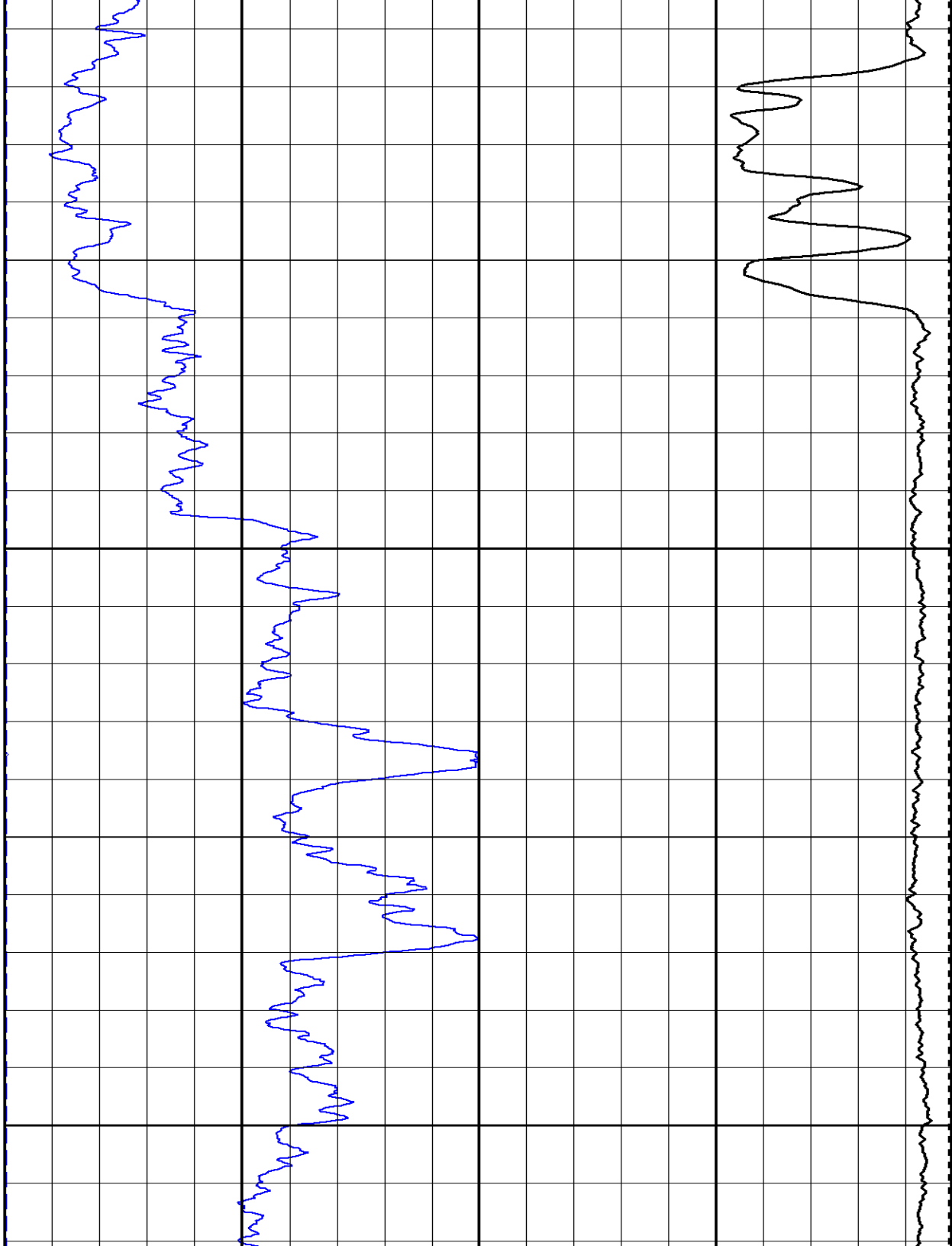
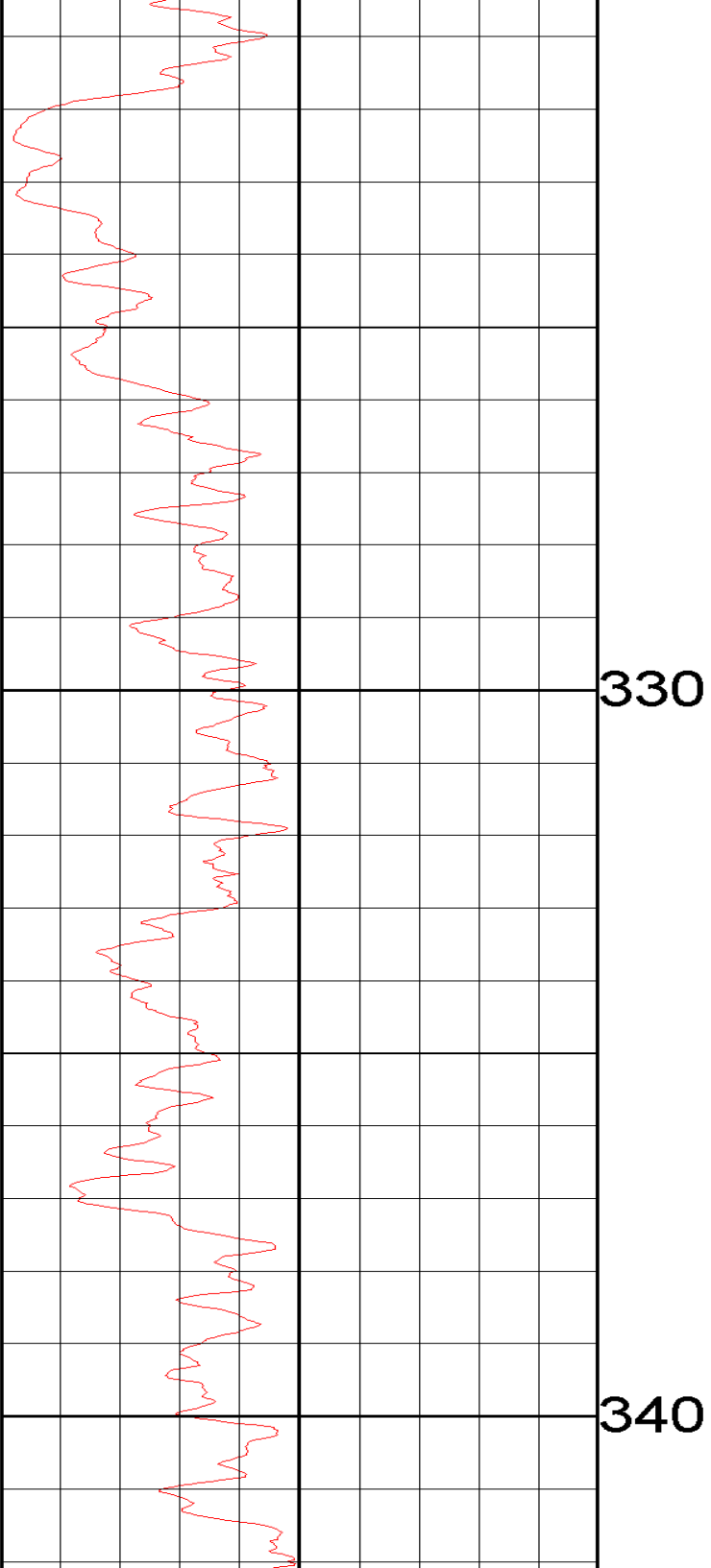


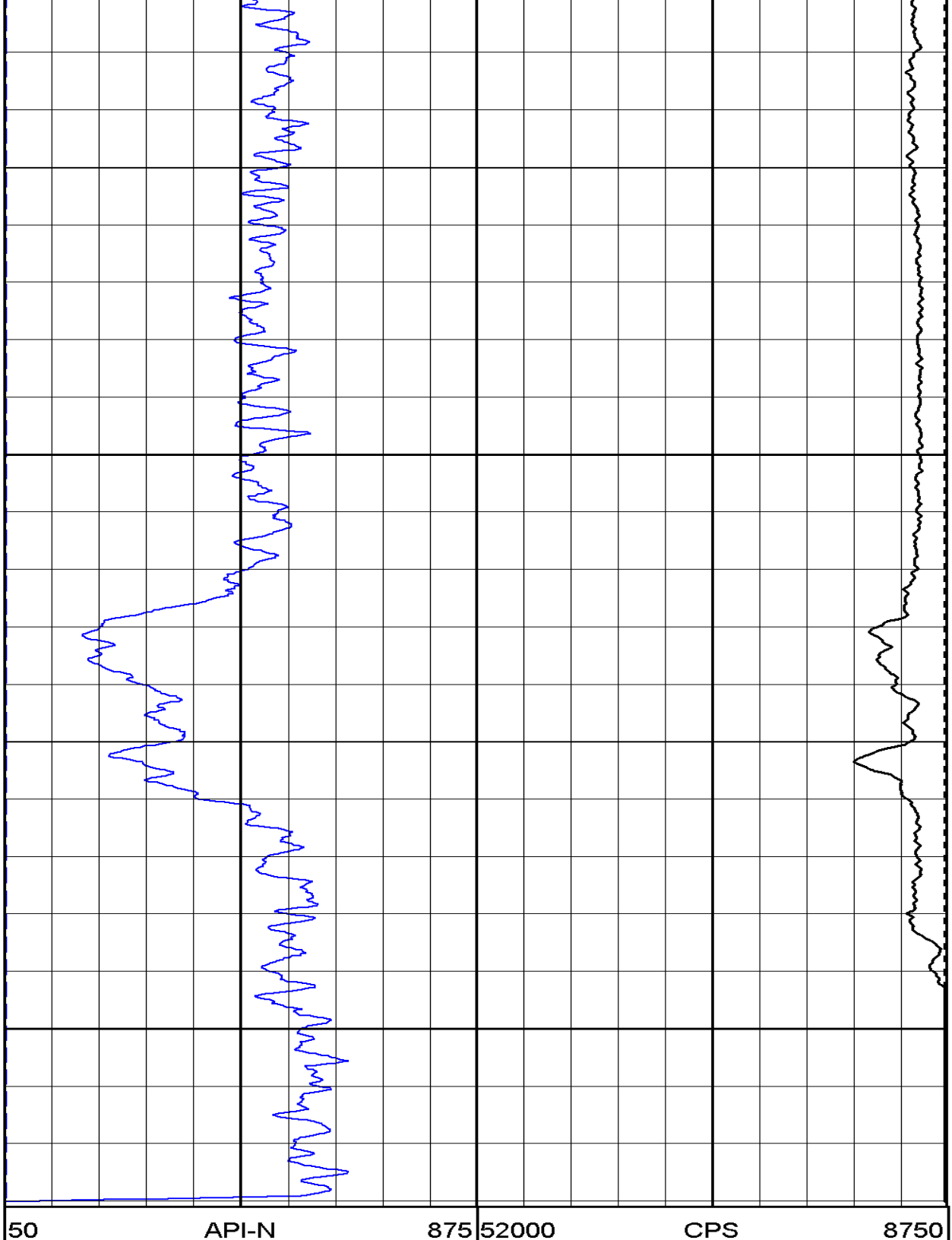
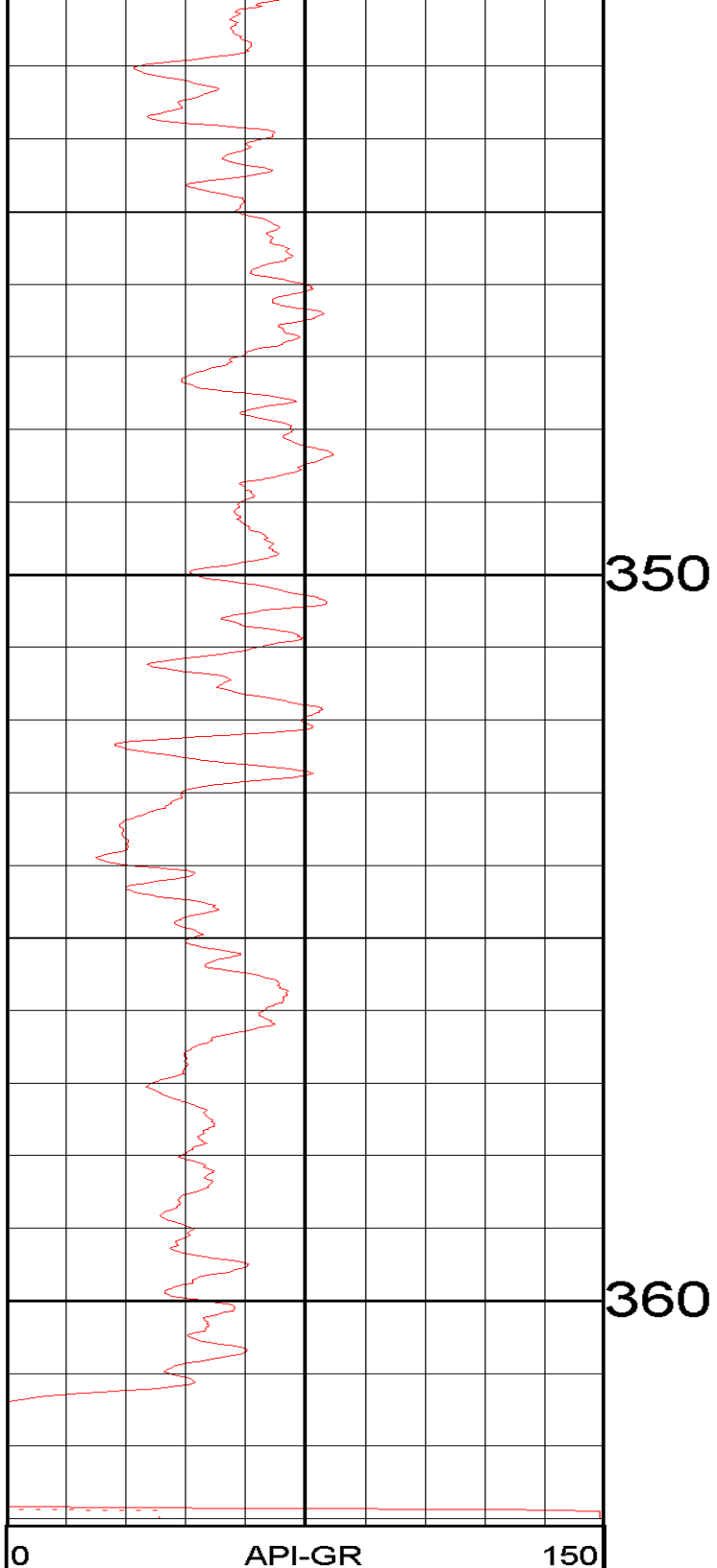












GAMMA			NEUTRON			GAM-GAMH		
150	API-GR	300	875	API-N	2500	80000	CPS	52000
GAMMA			NEUTRON			GAM-GAMH		

METERS

GAMMA - NEUTRON - GAMMA-DENSITY 05 001 (018) 11/13/05

LOG PARAMETERS

MATRIX DENSITY : 2.65

NEUTRON MATRIX : SANDSTONE

MATRIX DELTA T : 140

MAGNETIC DECL : 23

ELECT. CUTOFF : 50000

BIT SIZE : 9.60

PRESENTATION NAME/DATE = 9068A-9067A_fort.0 11/15/2005

TOOL CALIBRATION 05 001 (018) 11/13/05 17:06
 TOOL 9067A TM VERSION 3200
 SERIAL NUMBER 529

	DATE	TIME	SENSOR	STANDARD	RESPONSE
1	Mar01,02	22:09:58	GAMMA	Default [CPS]	Default [CPS]
	Mar01,02	22:09:58	GAMMA	105.000 [API-GR]	53.00 [CPS]
2	Feb22,06	16:07:12	NEUTROI	Default [CPS]	Default [CPS]
	Feb22,06	16:07:12	NEUTROI	Default [CPS]	Default [CPS]



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NEUTRON - GAMMA-DENSITY

05 002 (010)

COMPANY : FORTUNE MINERALS

WELL : 05 002 (010)

FIELD : MOUNT KLAPPAN

COUNTY :

STATE : BRITISH COLUMBIA

OTHER SERVICES:

9067

9068

LOCATION : 506,984 6,344,141 FROM GPS, NAD83

SECTION :

TOWNSHIP :

RANGE :

API NO. :

UNIQUE WELL ID. :

PERMANENT DATUM : ELEVATION KB : NONE

LOG MEASURED FROM: 0 ELEVATION DF : NONE

DRL MEASURED FROM: ELEVATION GL : 1654

DATE : 11/13/05

DEPTH DRILLER : 209.09

BIT SIZE : 9.60

LOG TOP : 0.14

LOG BOTTOM : 208.38

CASING OD : 7.30

CASING BOTTOM : 209.09

CASING TYPE : PVC

BOREHOLE FLUID : WATER

RM TEMPERATURE :

MUD RES :

MUD WEIGHT :

RECORDED BY : J. SINKWICH

REMARKS 1 : HQ CORE WATER LEVEL: 6M

REMARKS 2 : MEASUREMENTS IN CENTIMETERS AND METERS

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

GAMMA - NEUTRON - GAMMA-DENSITY 05 002 (010) 11/13/05

LOG PARAMETERS

MATRIX DENSITY : 2.65

NEUTRON MATRIX : SANDSTONE

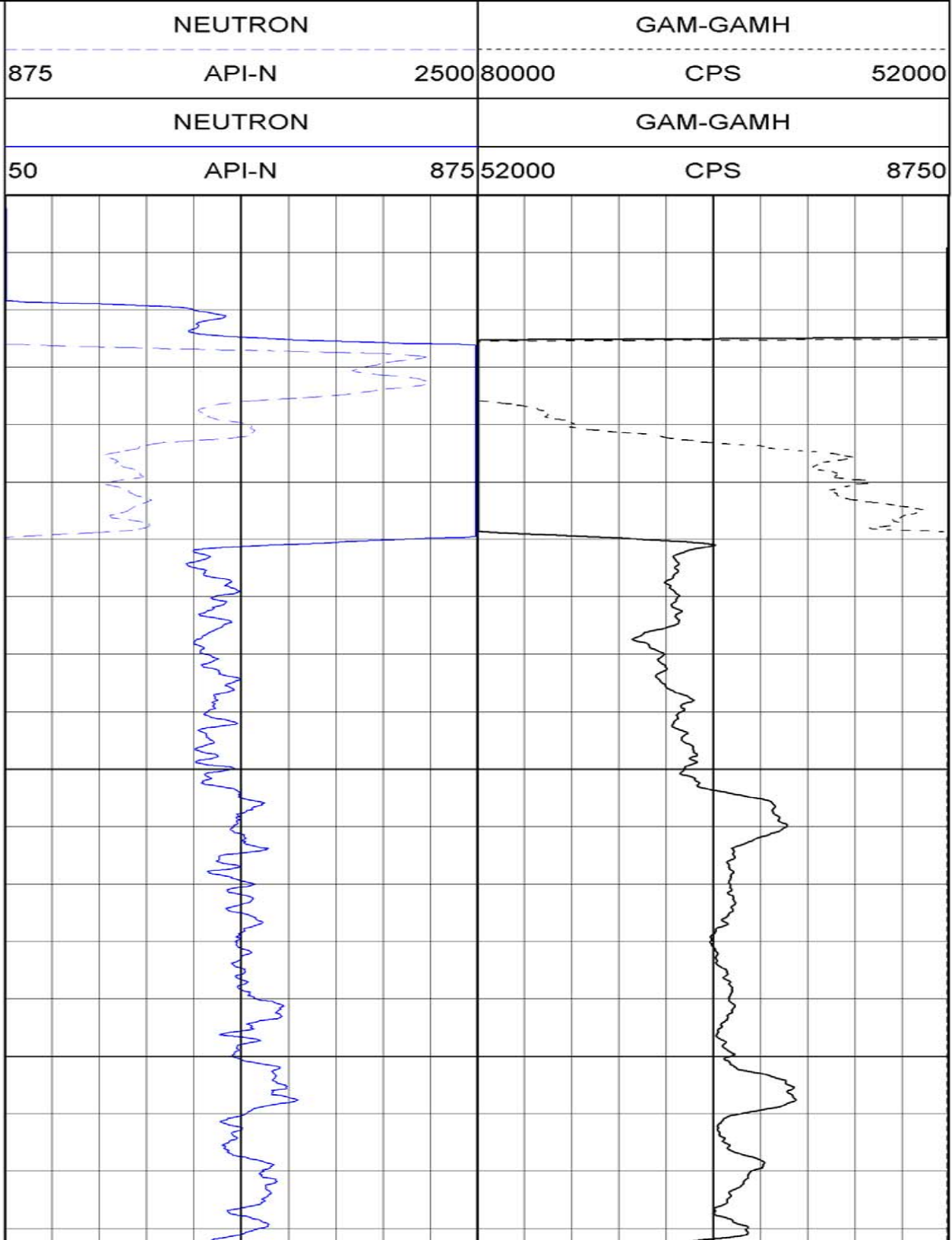
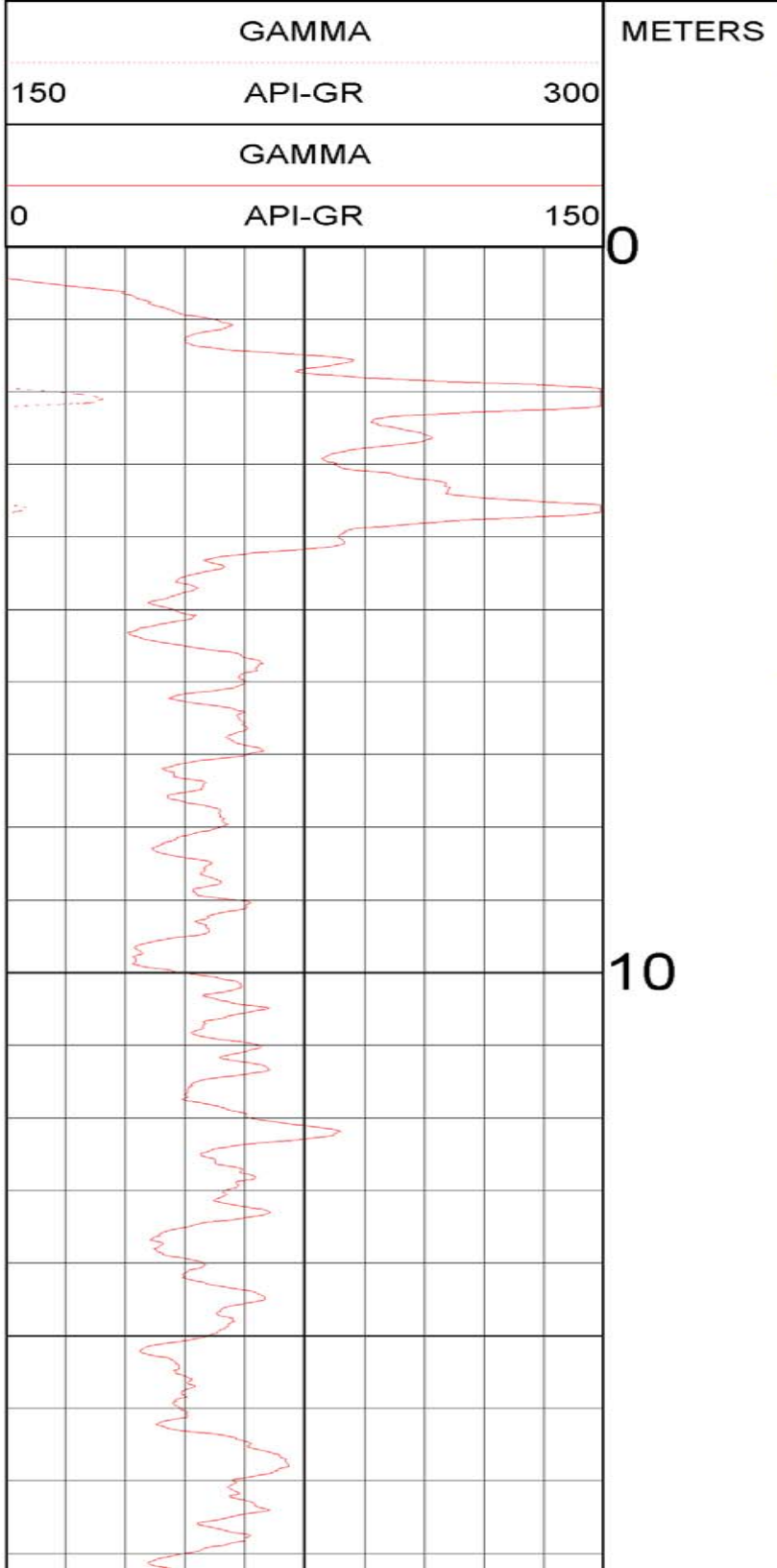
MATRIX DELTA T : 140

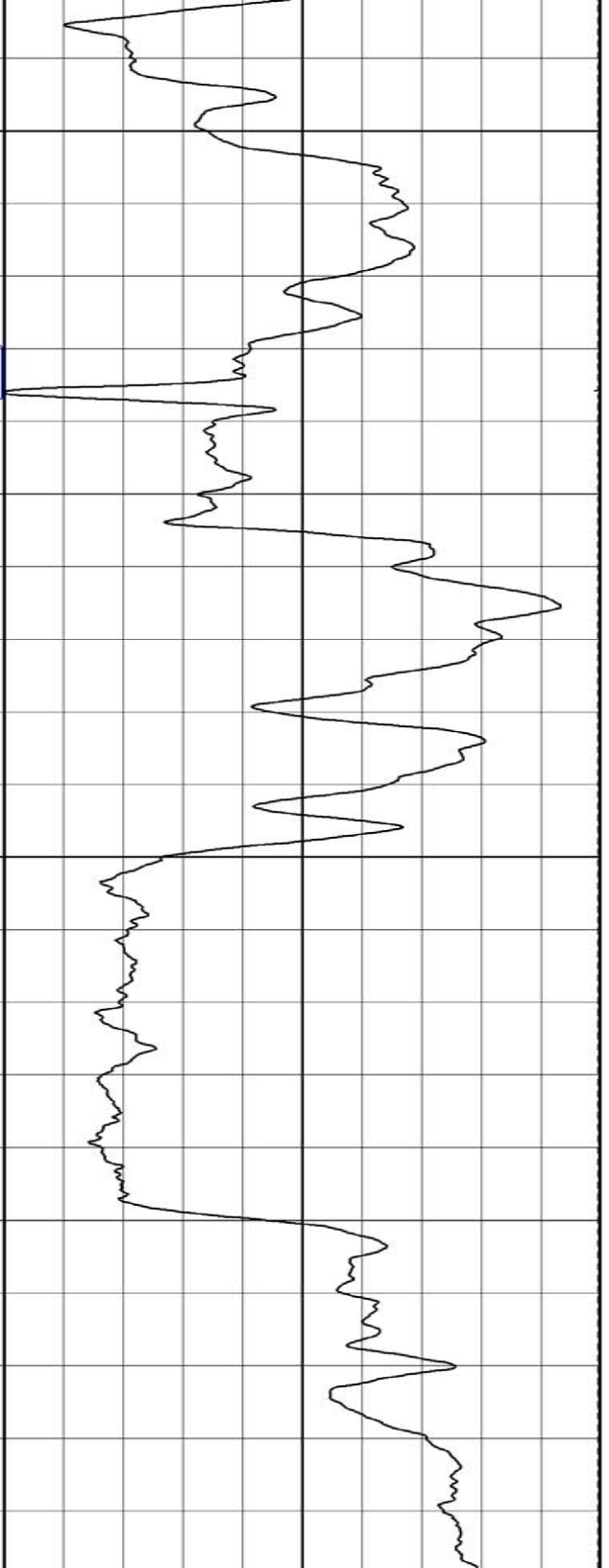
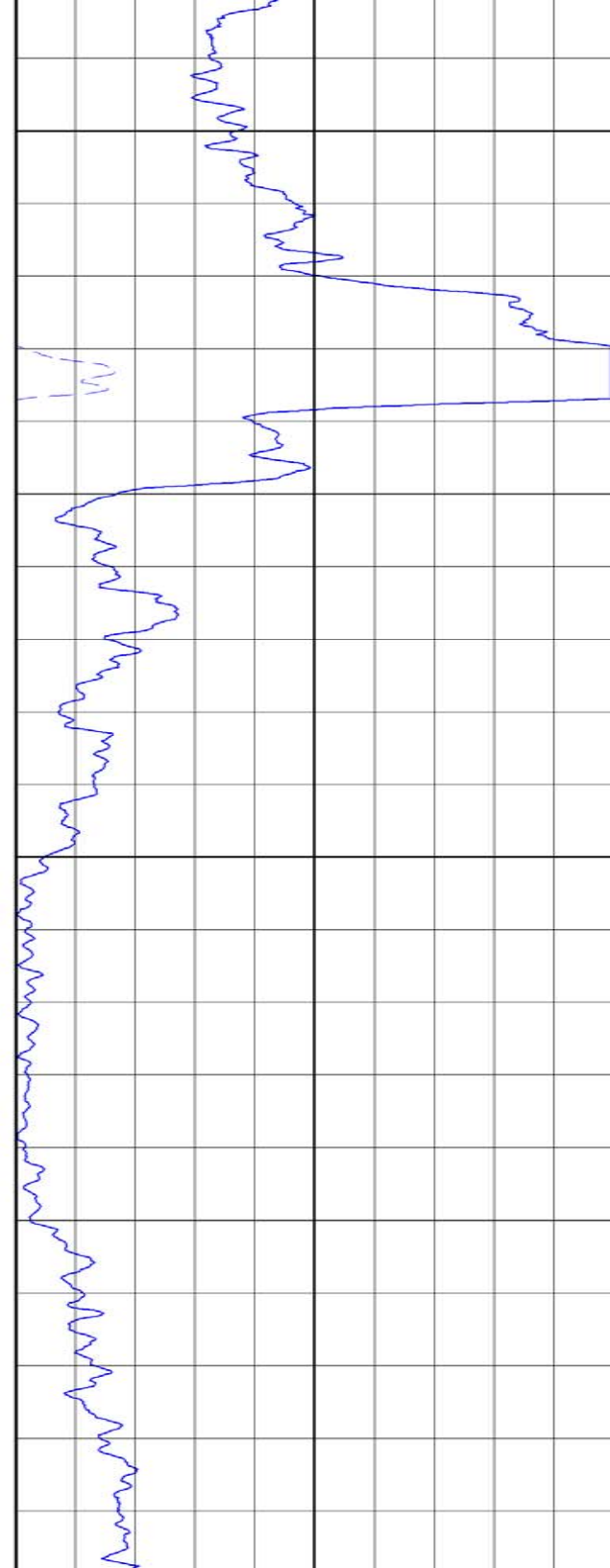
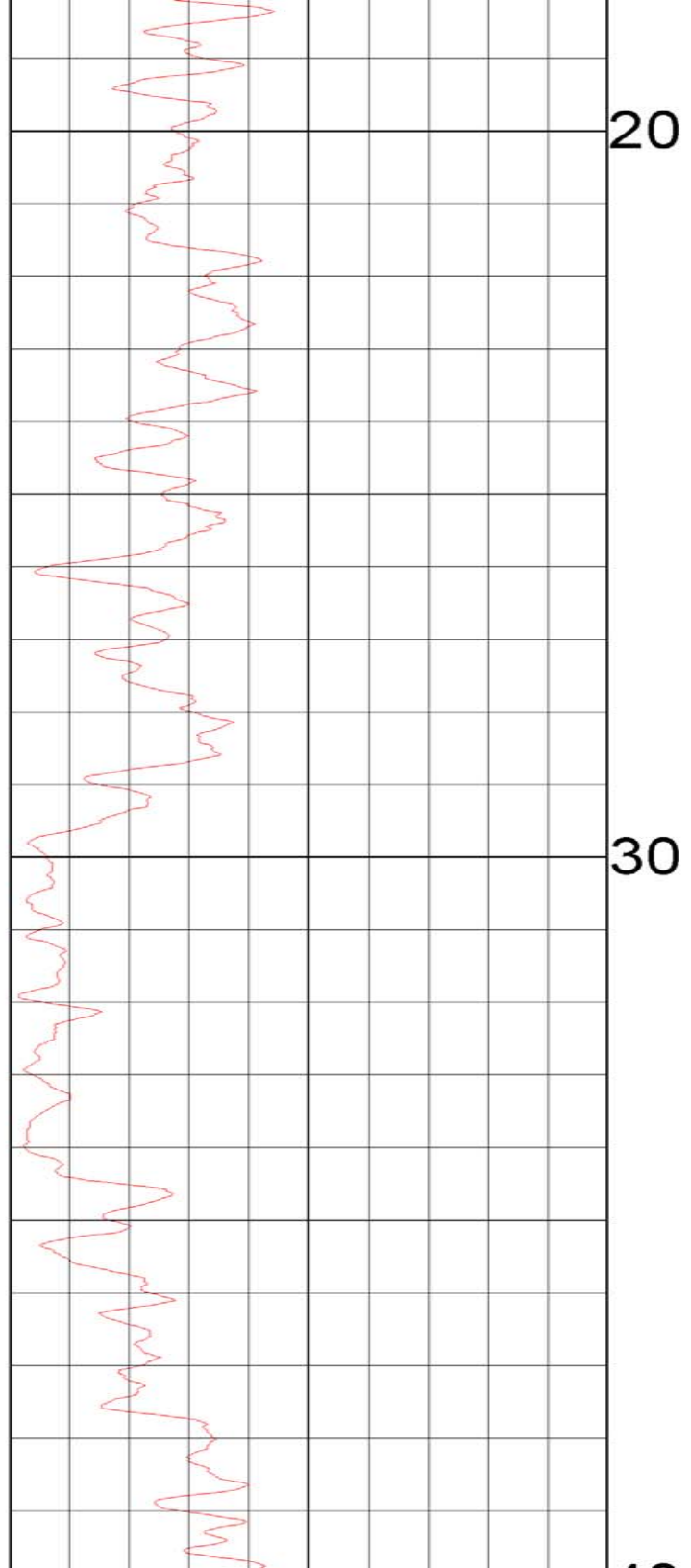
MAGNETIC DECL : 23

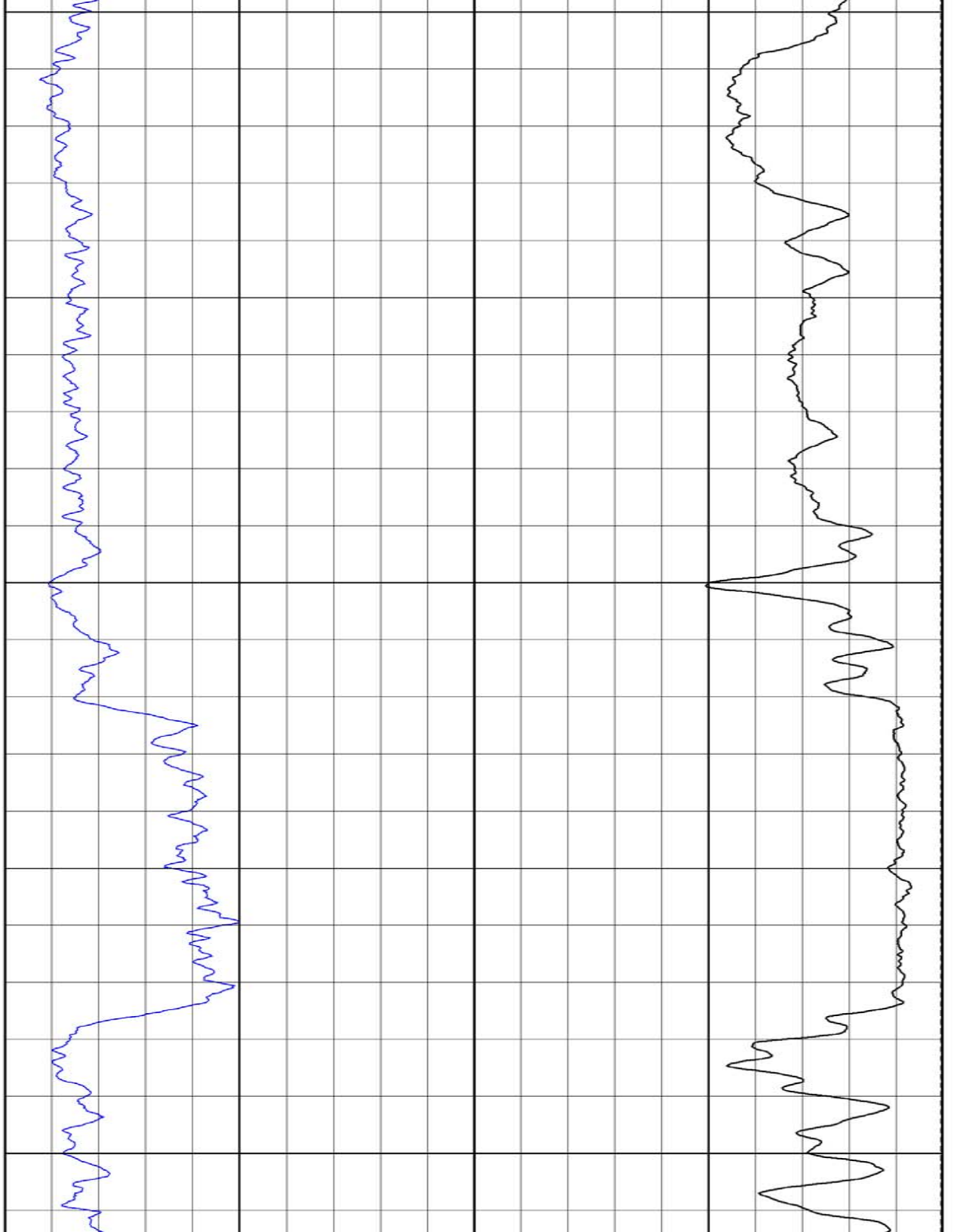
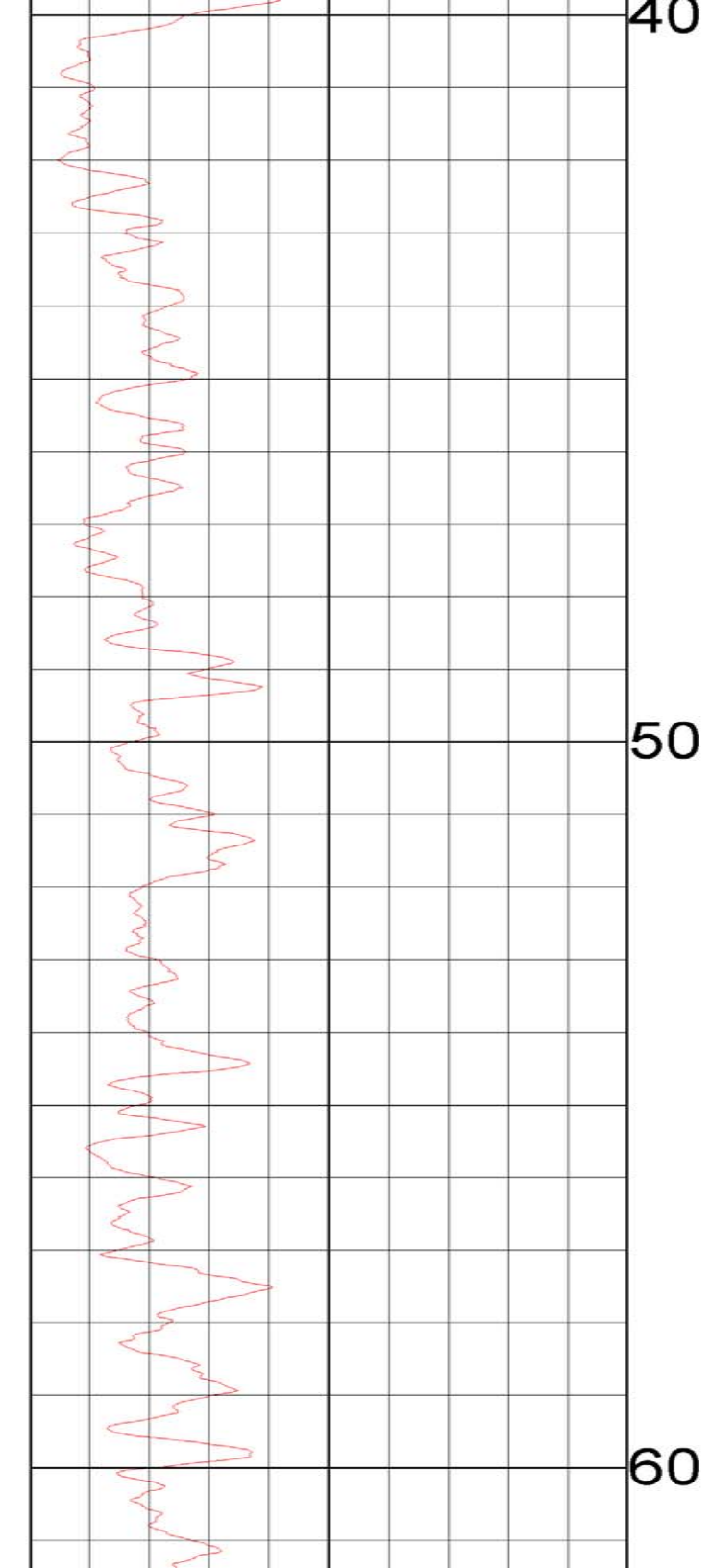
ELECT. CUTOFF : 50000

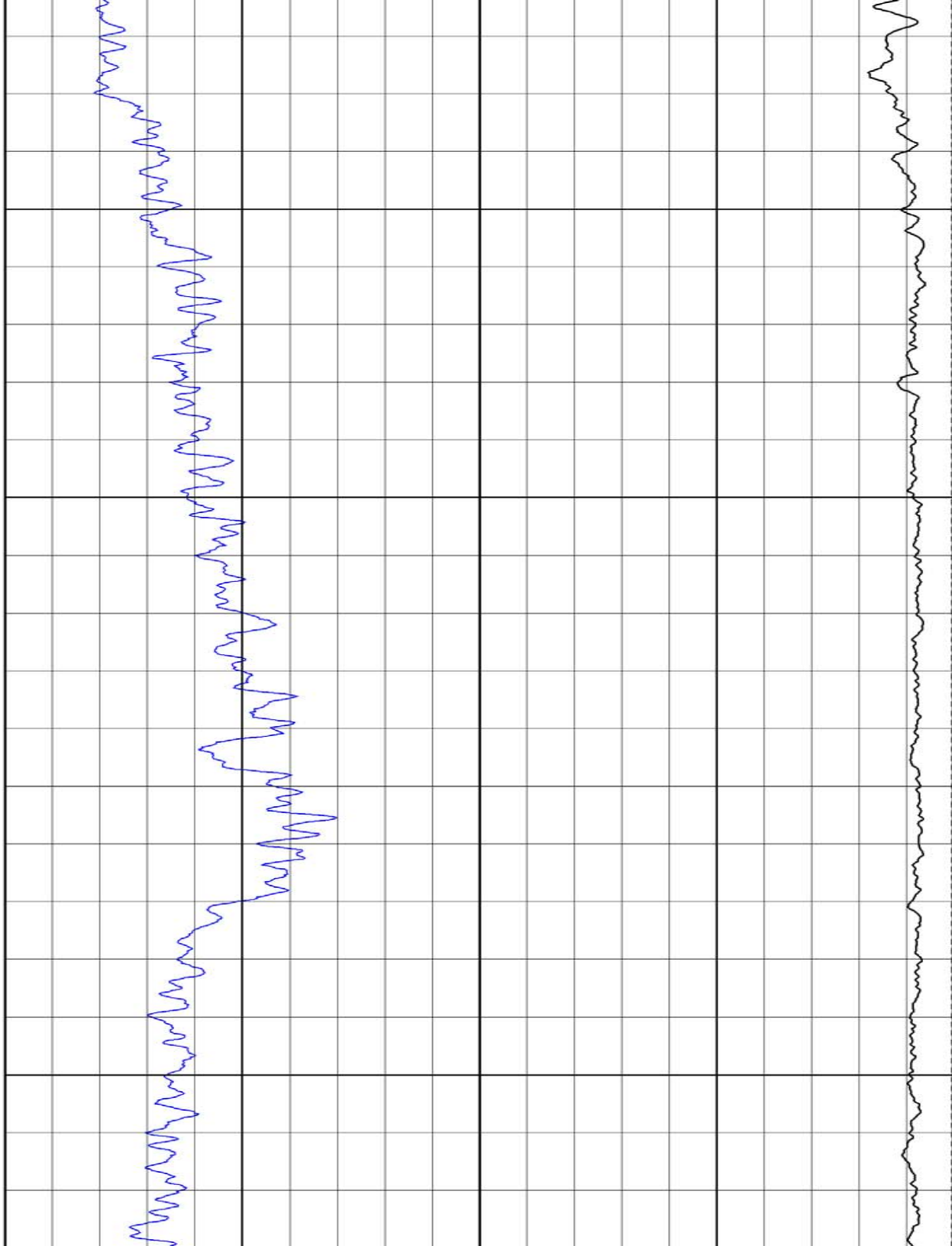
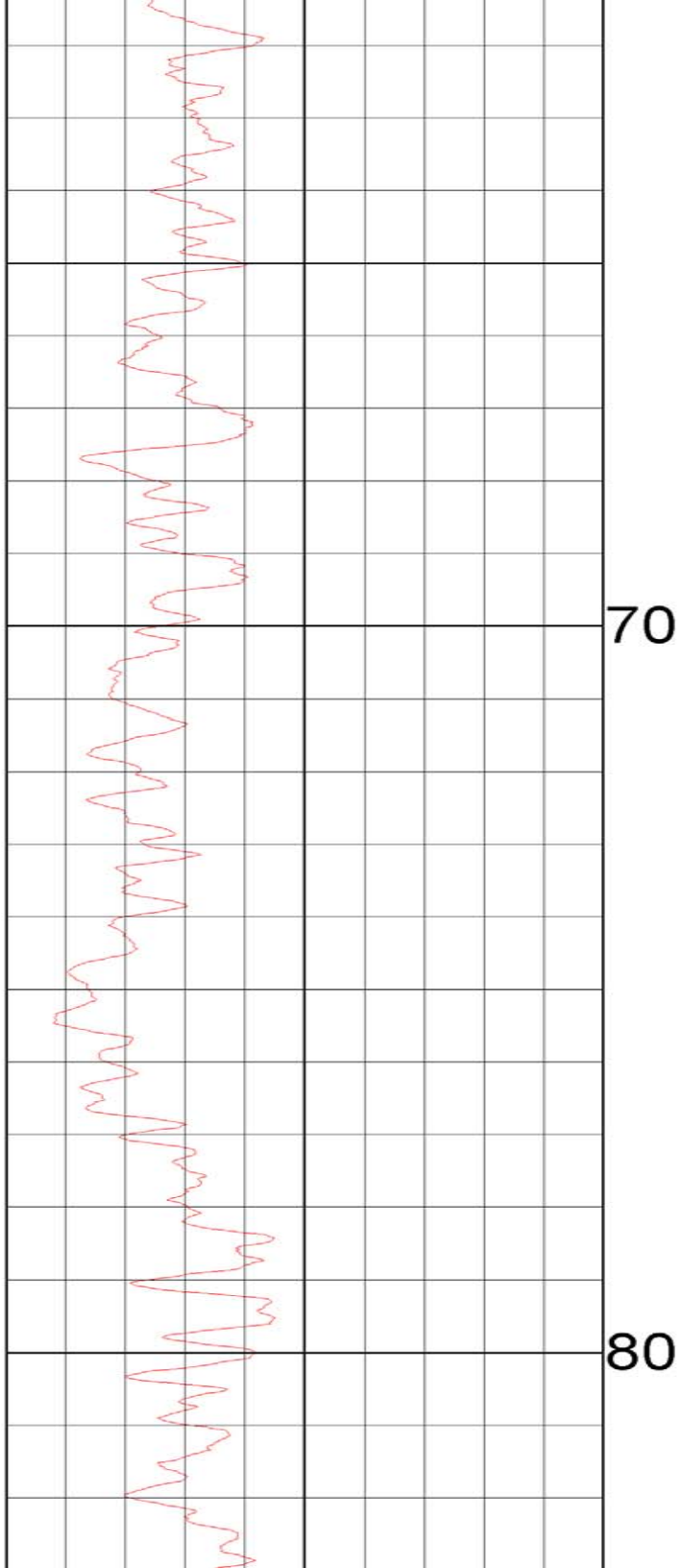
BIT SIZE : 9.60

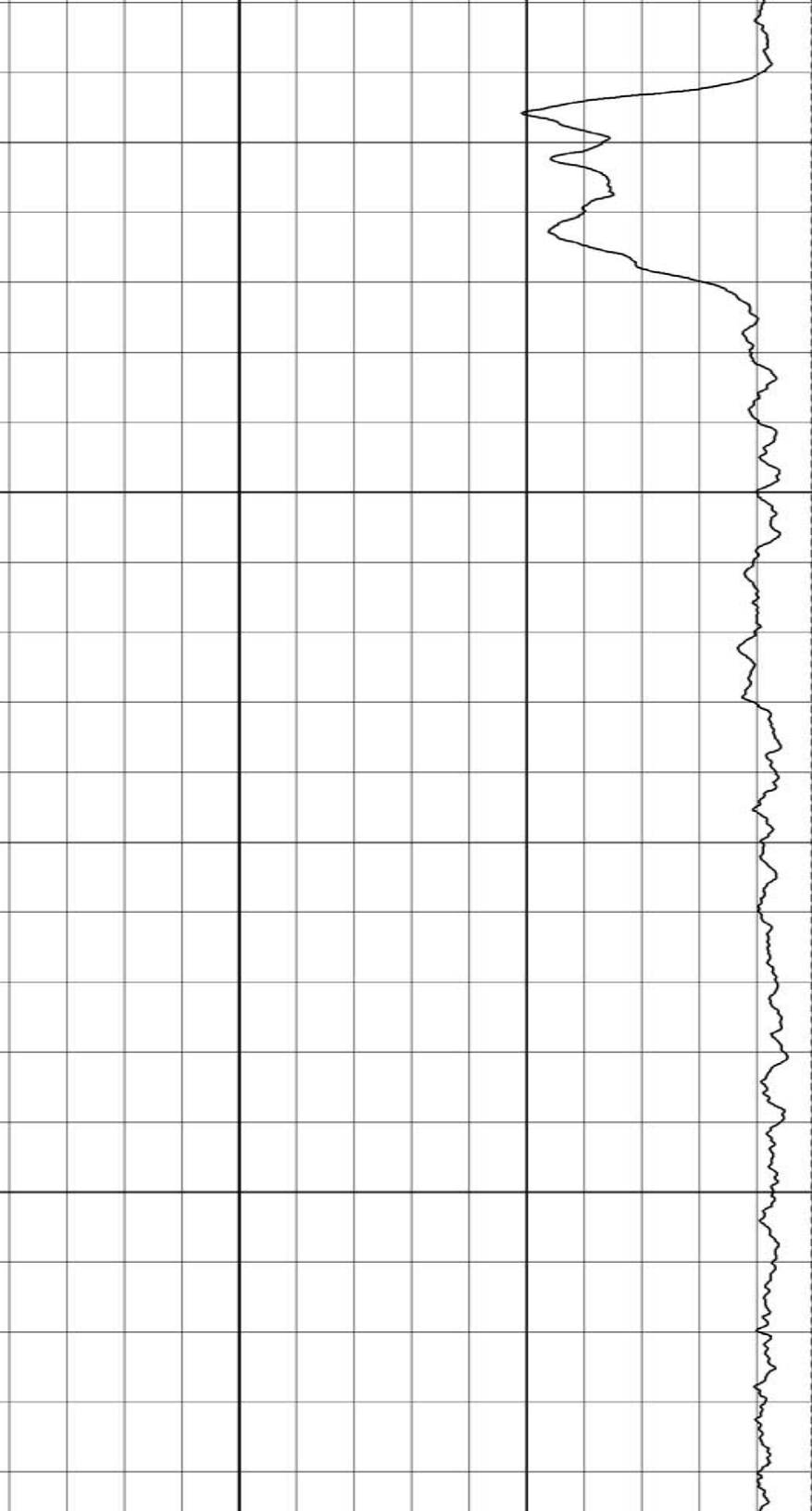
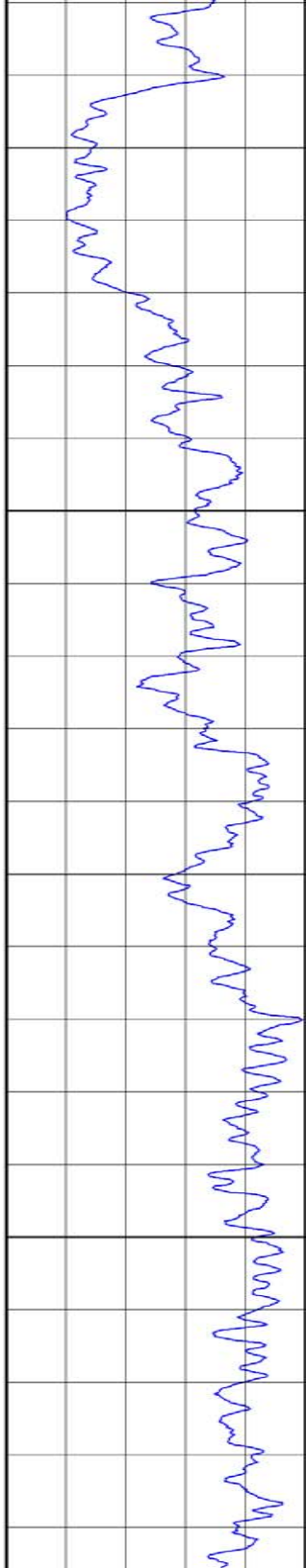
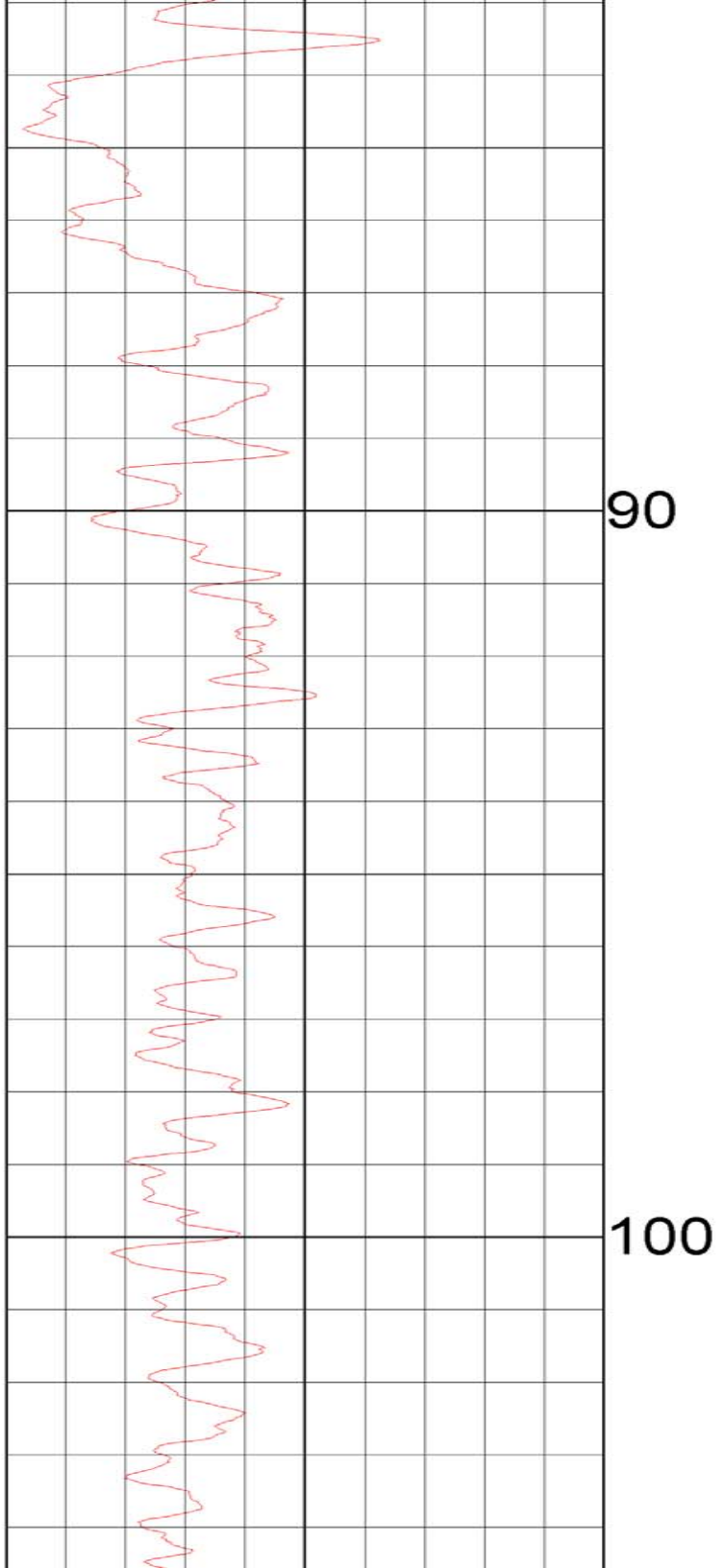
PRESENTATION NAME/DATE = 9068A-9067A_fort.0 11/15/2005

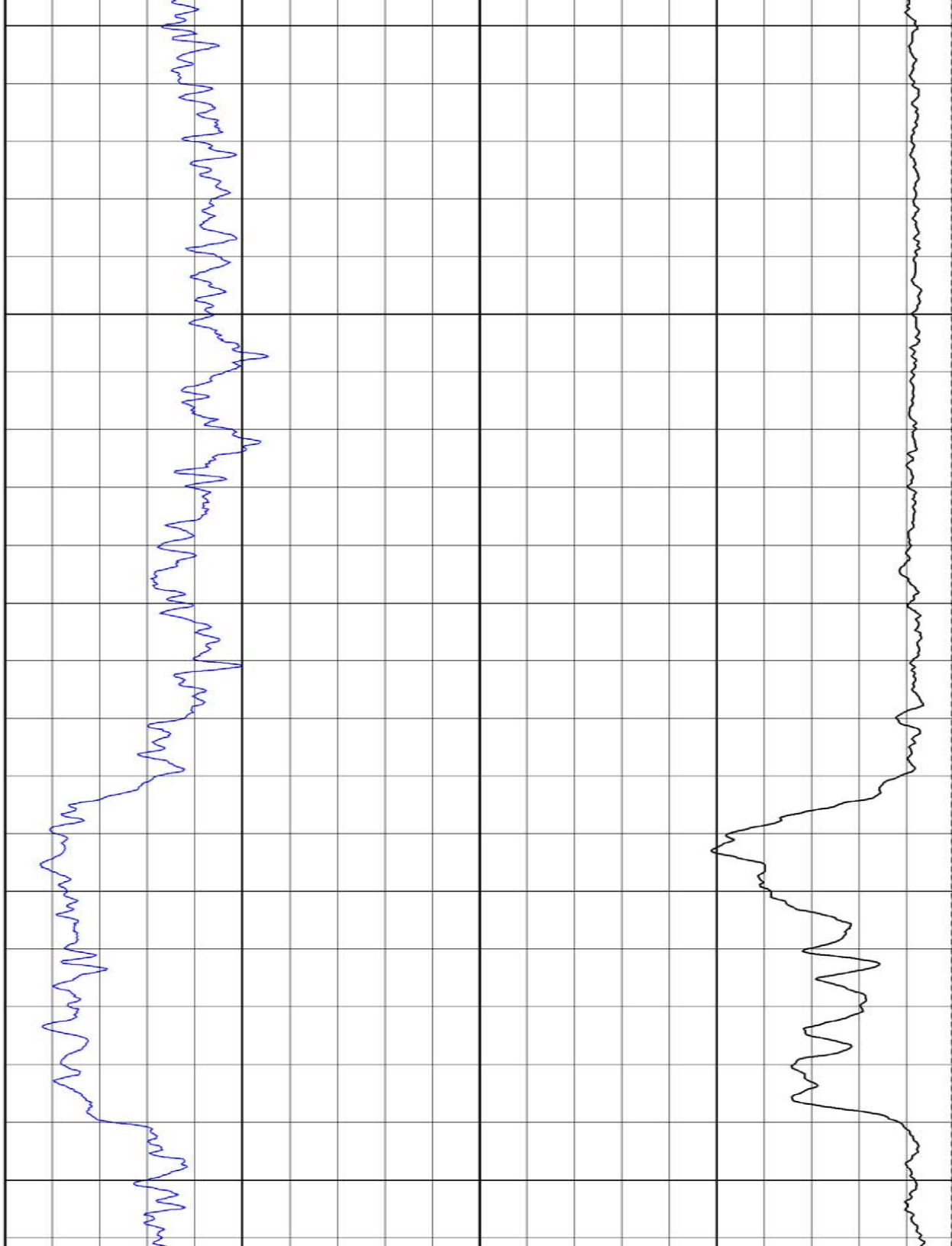
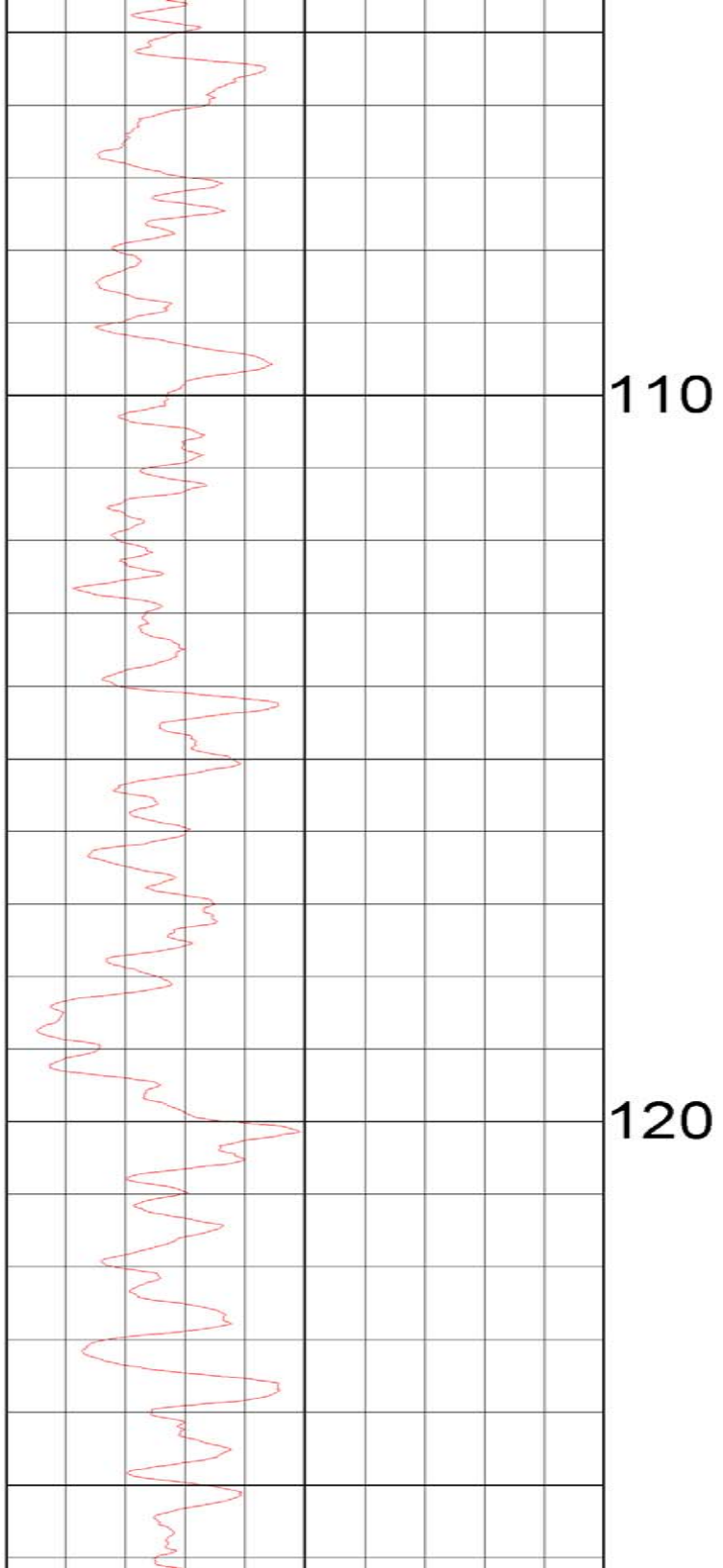


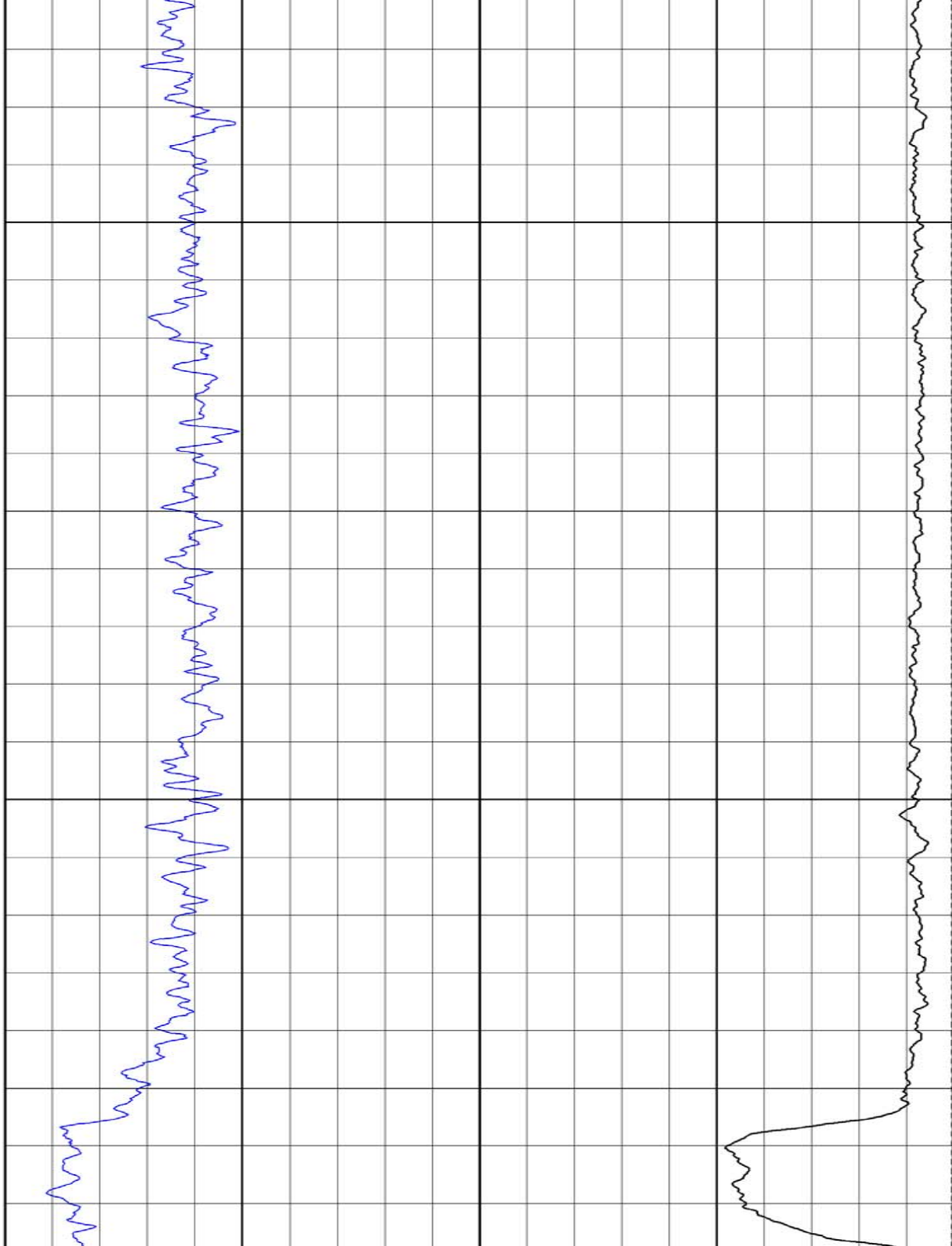
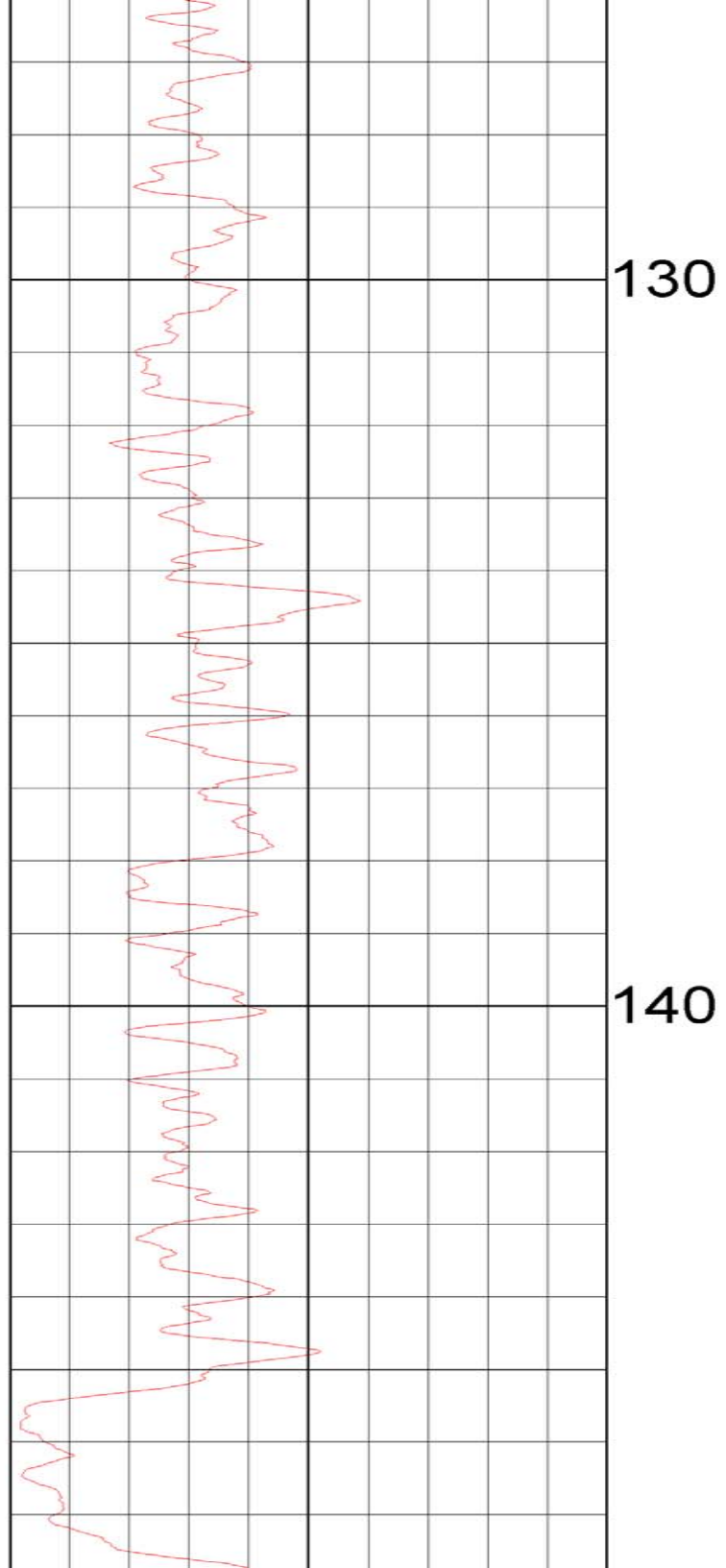


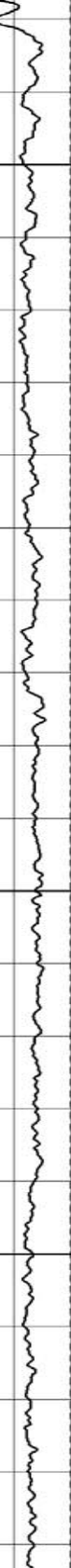
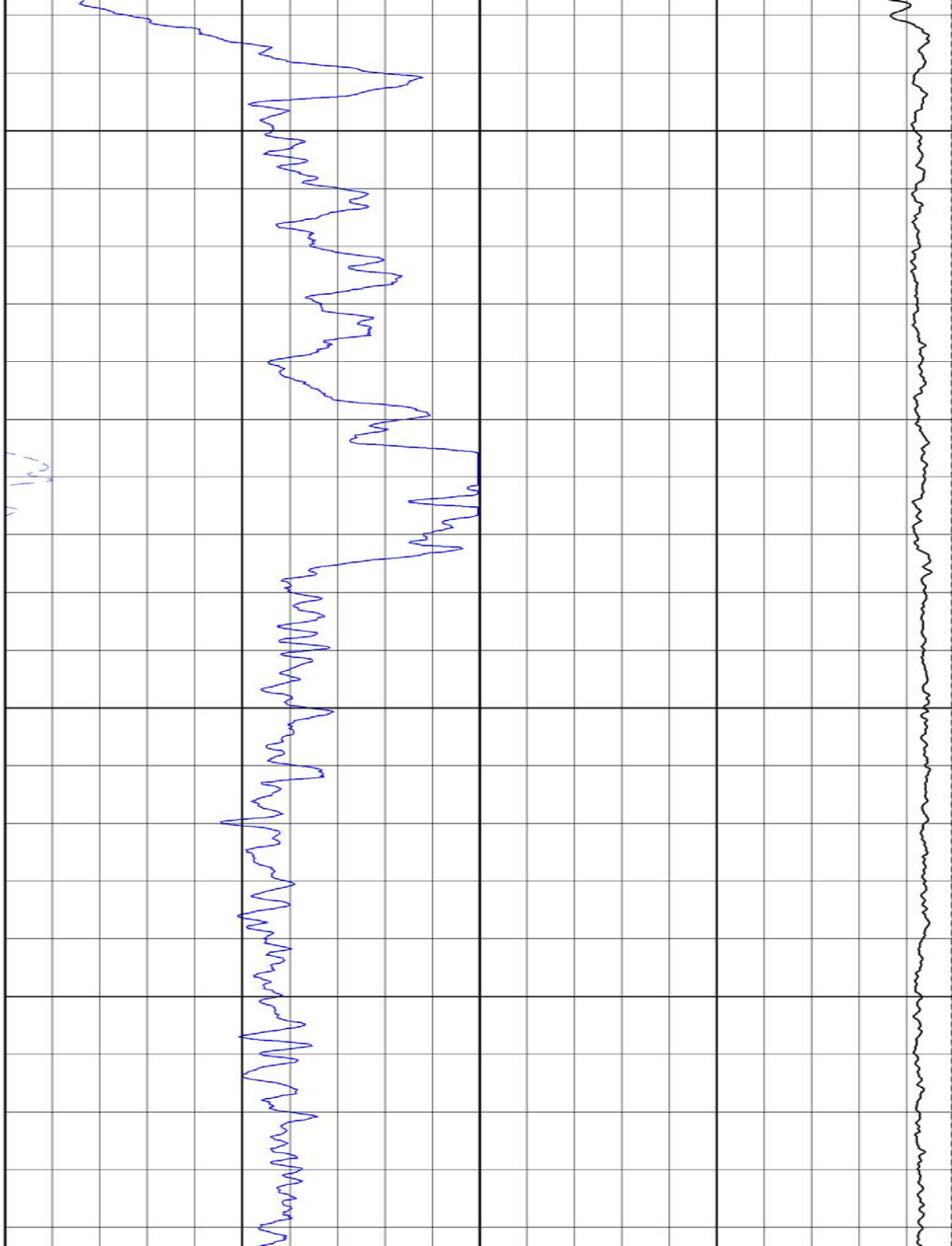
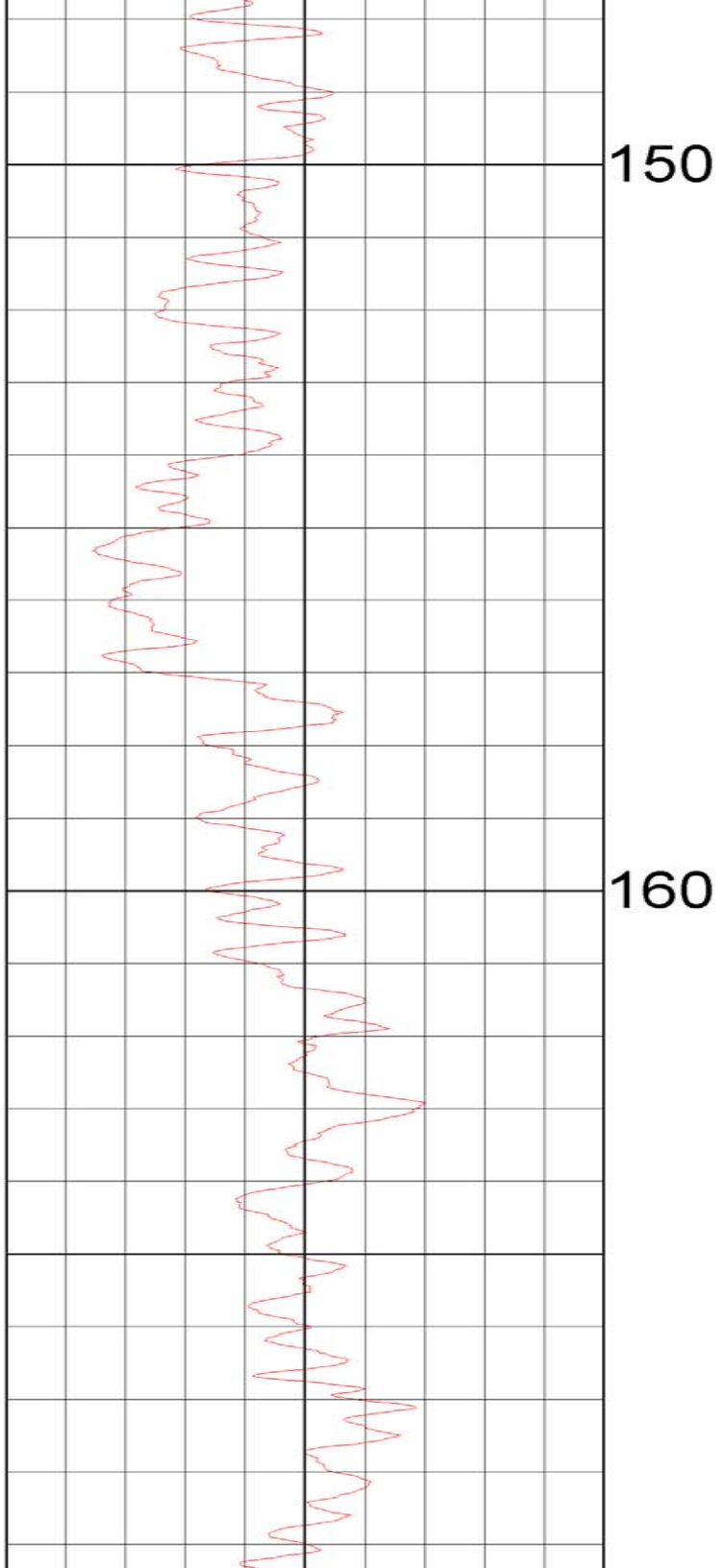


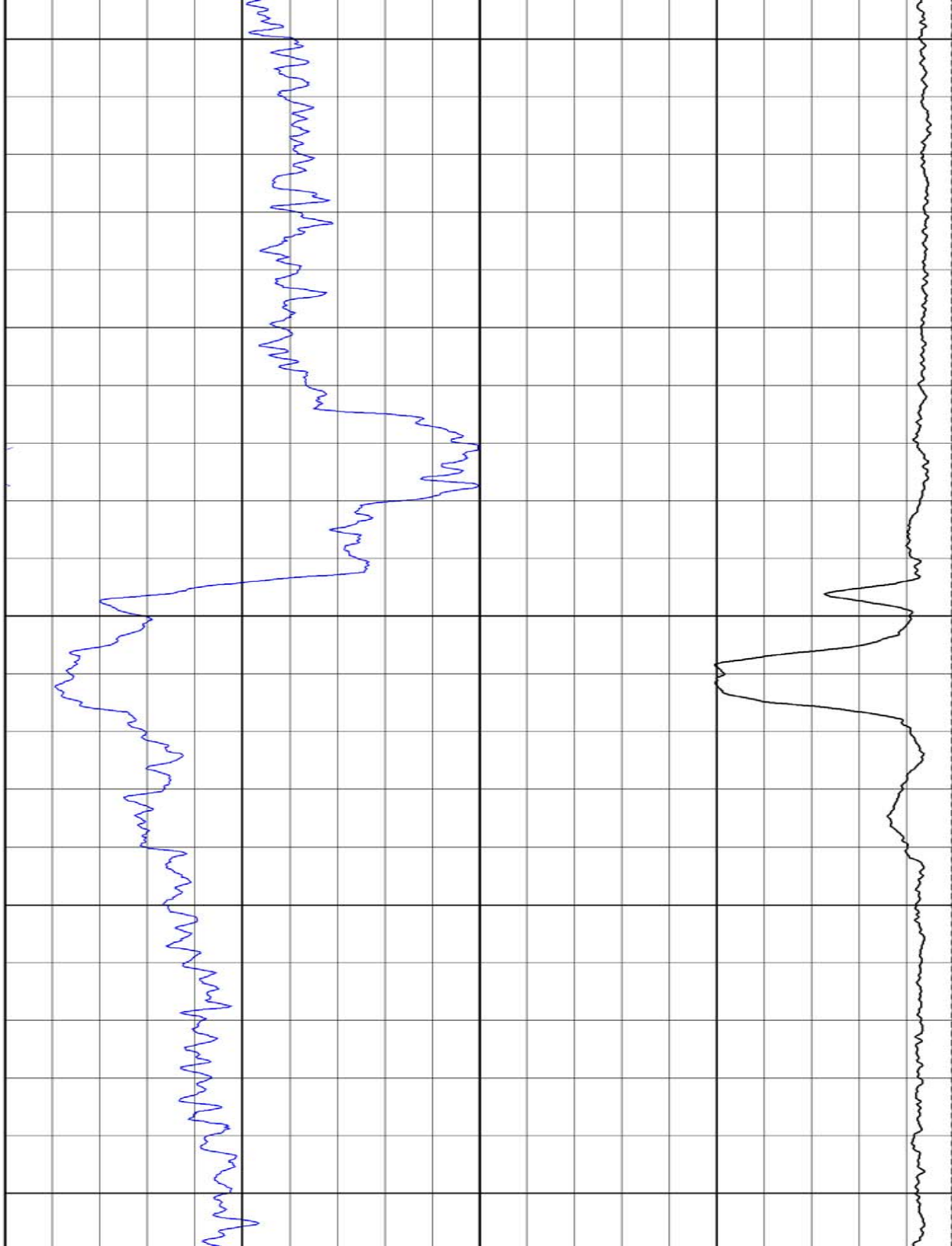
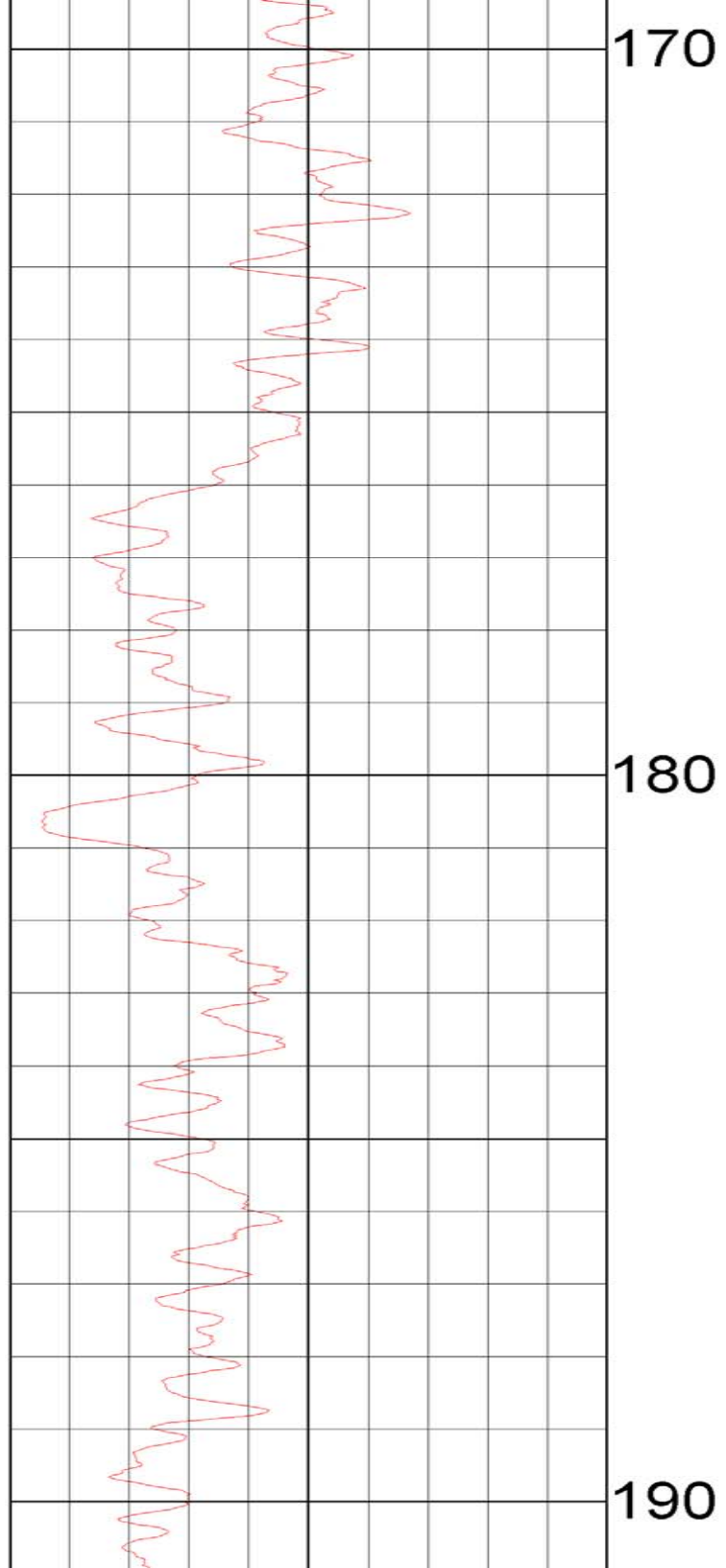


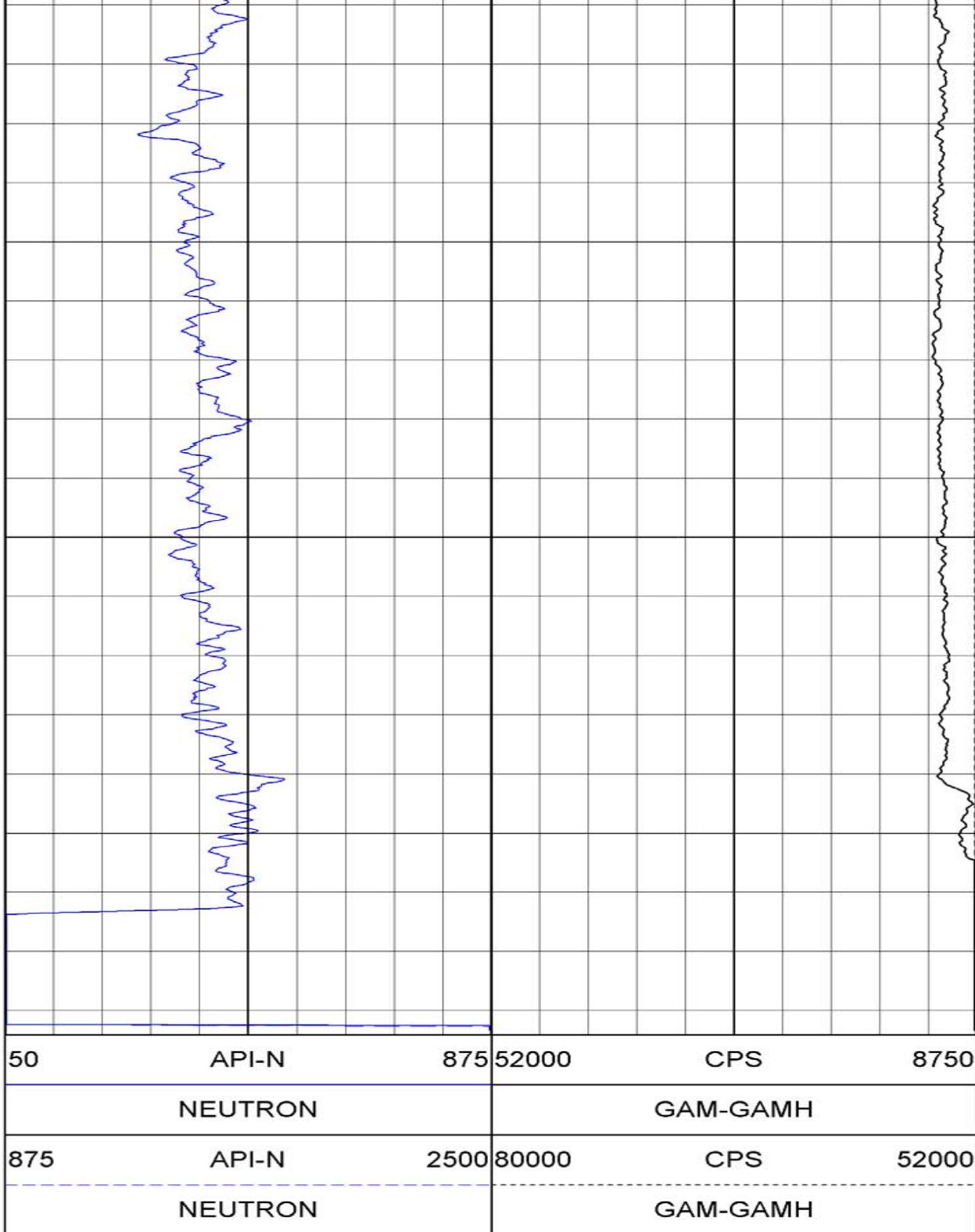
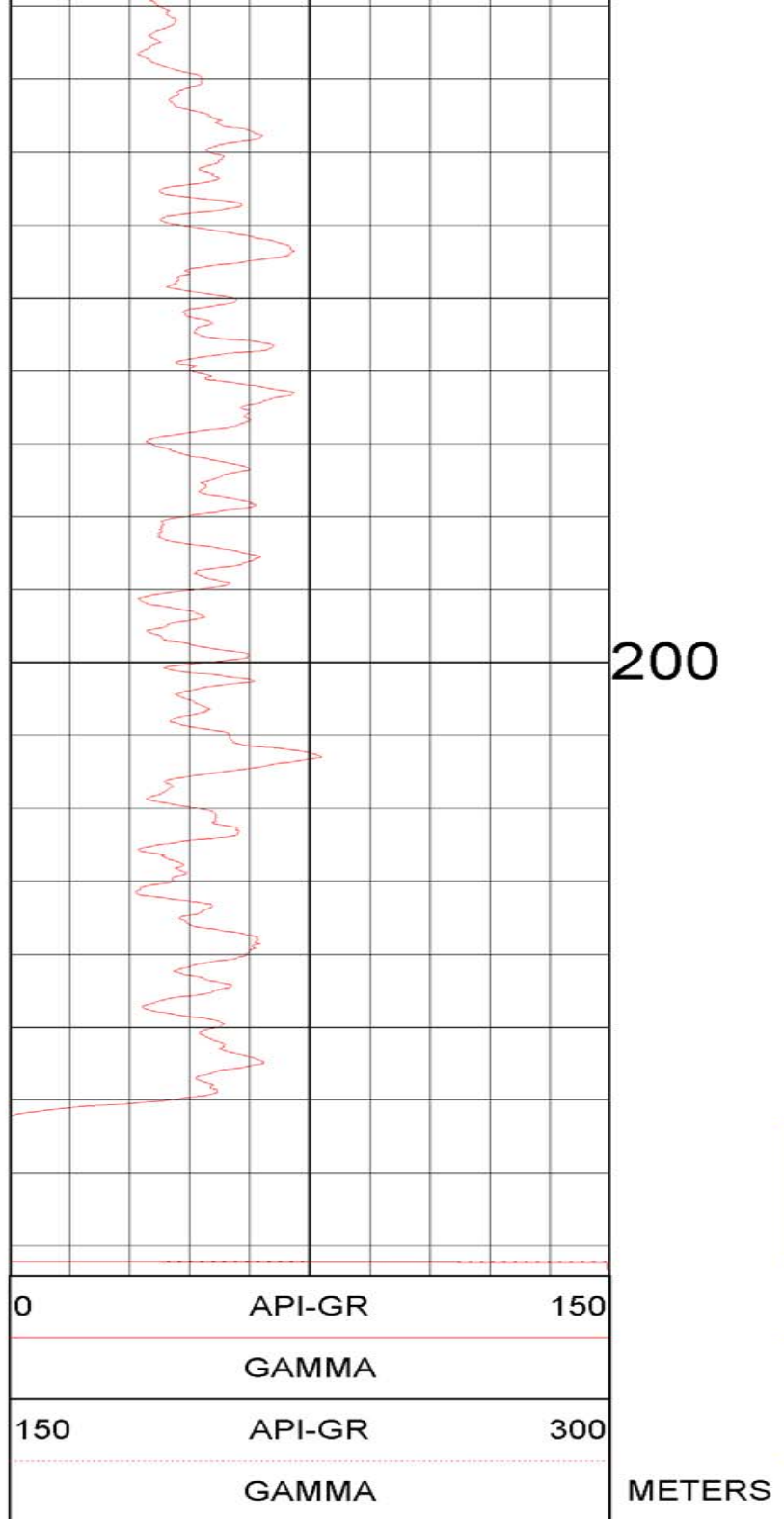












LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 140
 MAGNETIC DECL : 23 ELECT. CUTOFF : 50000 BIT SIZE : 9.60
 PRESENTATION NAME/DATE = 9068A-9067A_for.0 11/15/2005

TOOL CALIBRATION 05 002 (010) 11/13/05 14:29
 TOOL 9068A TM VERSION 3200
 SERIAL NUMBER 640

	DATE	TIME	SENSOR	STANDARD	RESPONSE
1	Mar06,02	18:27:22	GAMMA	Default [CPS]	Default [CPS]
	Mar06,02	18:27:22	GAMMA	105.000 [API-GR]	46.00 [CPS]



NEUTRON - GAMMA-DENSITY

05 006

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COMPANY	: FORTUNE MINERALS	OTHER SERVICES:
WELL	: 05 006	9068
FIELD	: MOUNT KLAPPAN	9067
COUNTY	:	
STATE	: BRITISH COLUMBIA	
LOCATION	: 507,314 6,344,052 FROM GPS, NAD83	
SECTION	:	
TOWNSHIP	:	
RANGE	:	
API NO.	:	
UNIQUE WELL ID.	:	
PERMANENT DATUM	:	ELEVATION KB : NONE
LOG MEASURED FROM: 0	:	ELEVATION DF : NONE
DRL MEASURED FROM:	:	ELEVATION GL : 1621

DATE	: 11/13/05
DEPTH DRILLER	: 120.396
BIT SIZE	: 9.60
LOG TOP	: 0.38
LOG BOTTOM	: 120.55
CASING OD	: 7.30
CASING BOTTOM	: 120.396
CASING TYPE	: PVC
BOREHOLE FLUID	: WATER
RM TEMPERATURE	:
MUD RES	:
MUD WEIGHT	:
RECORDED BY	: J. SINKWICH
REMARKS 1	: HQ CORE
REMARKS 2	: MEASUREMENTS IN CENTIMETERS & METERS
ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS	

GAMMA - NEUTRON - GAMMA-DENSITY 05 006 11/13/05

LOG PARAMETERS

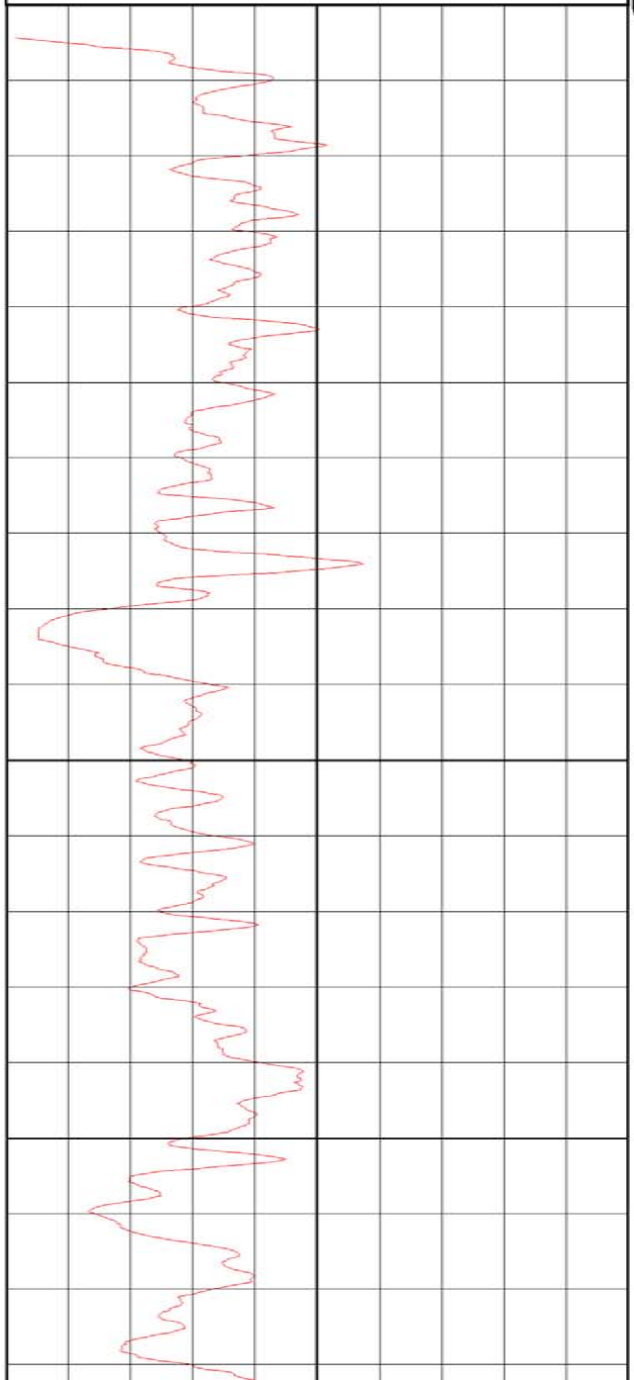
MATRIX DENSITY : 2.65	NEUTRON MATRIX : SANDSTONE	MATRIX DELTA T : 140
MAGNETIC DECL : 23	ELECT. CUTOFF : 50000	BIT SIZE : 9.60
PRESENTATION NAME/DATE = 9068A-9067A_fort.0 11/15/2005		

GAMMA		
150	API-GR	300
GAMMA		
0	API-GR	150

METERS

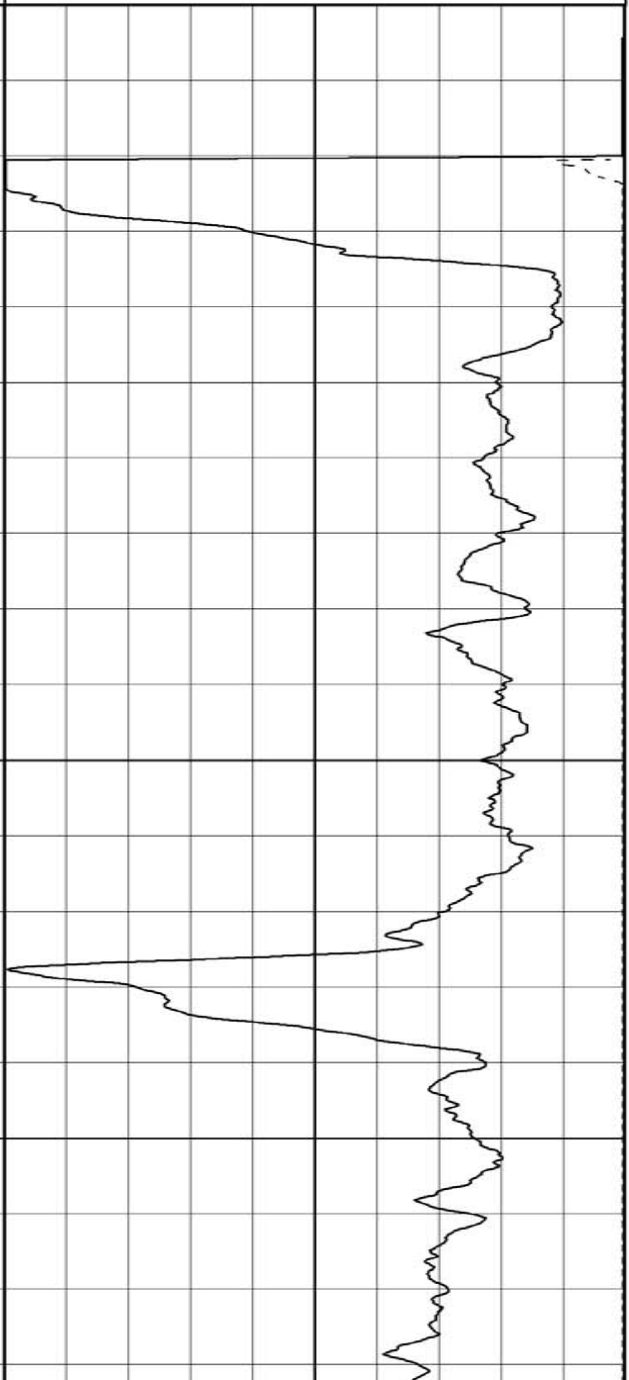
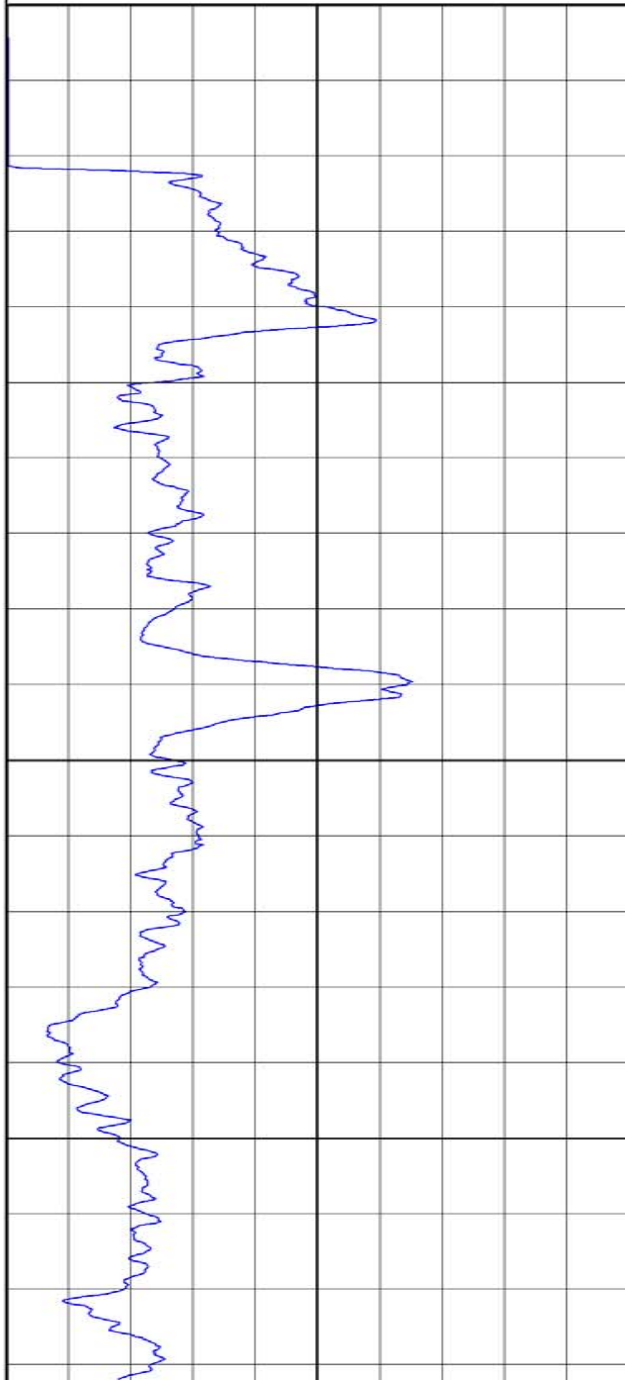
NEUTRON		
875	API-N	2500
NEUTRON		
50	API-N	875

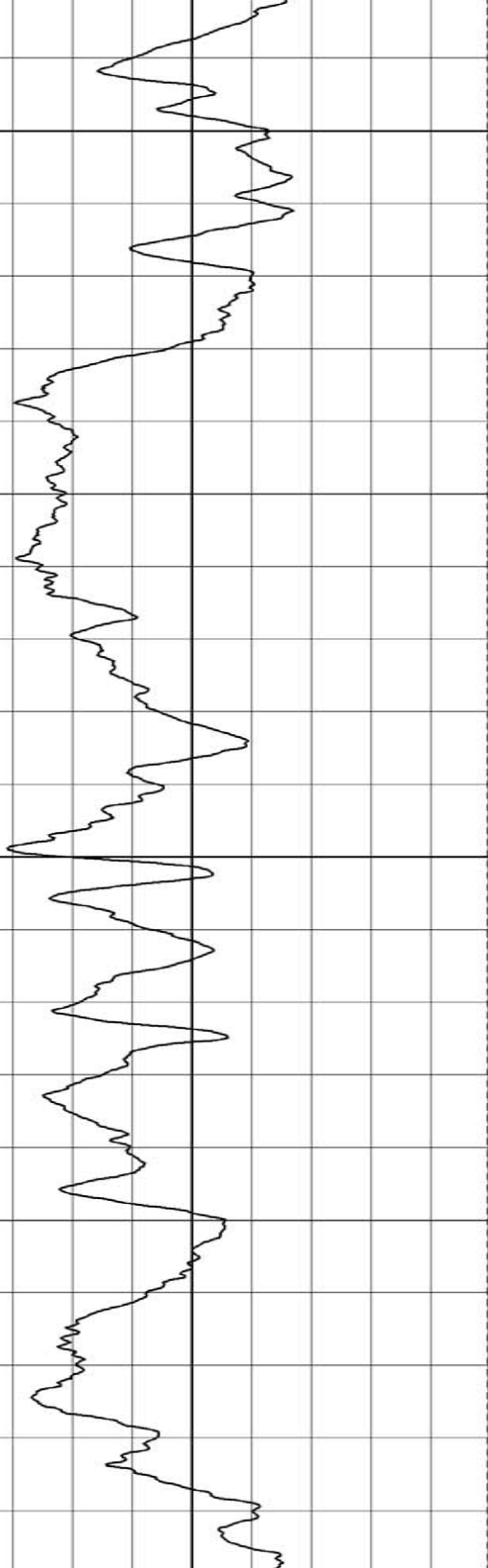
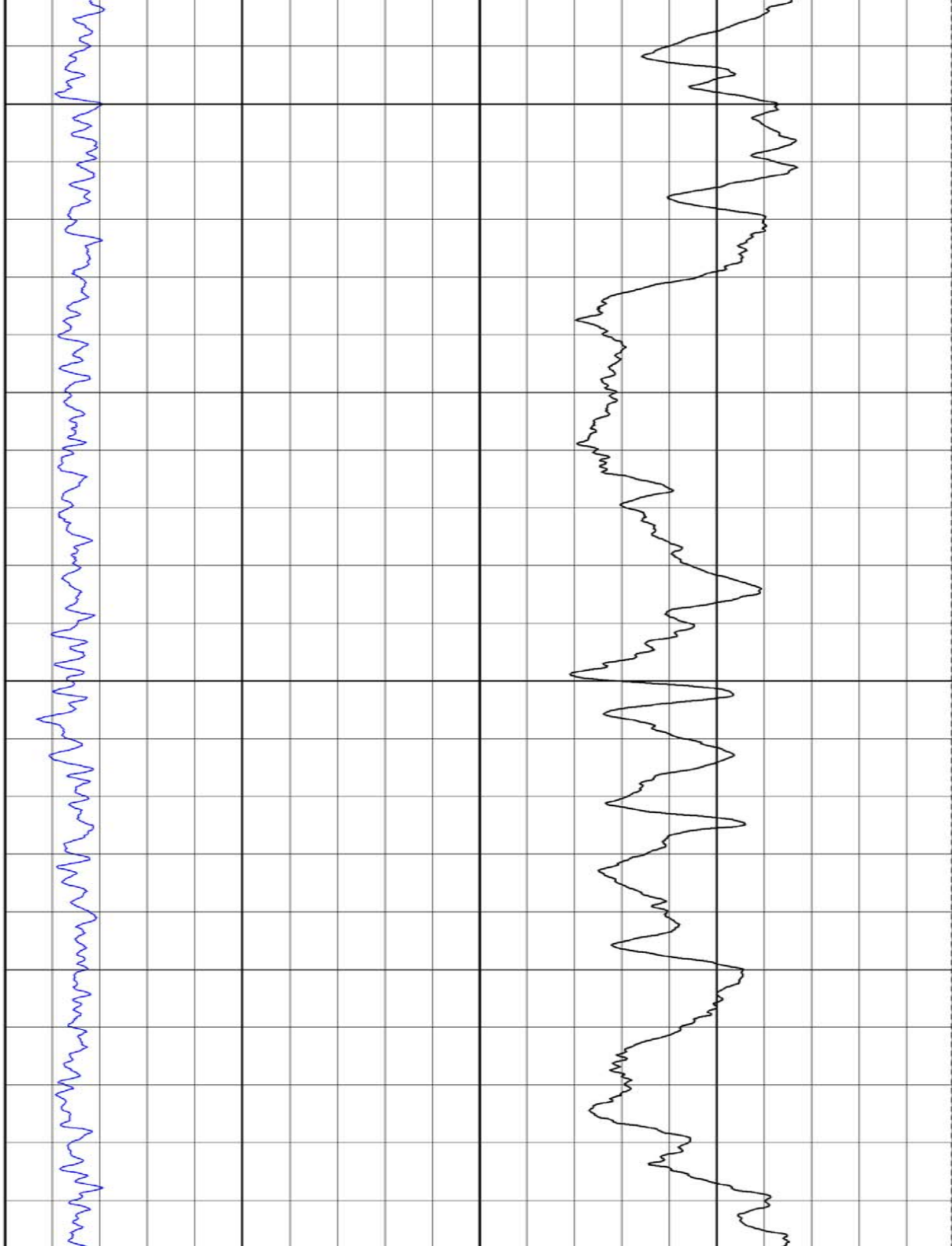
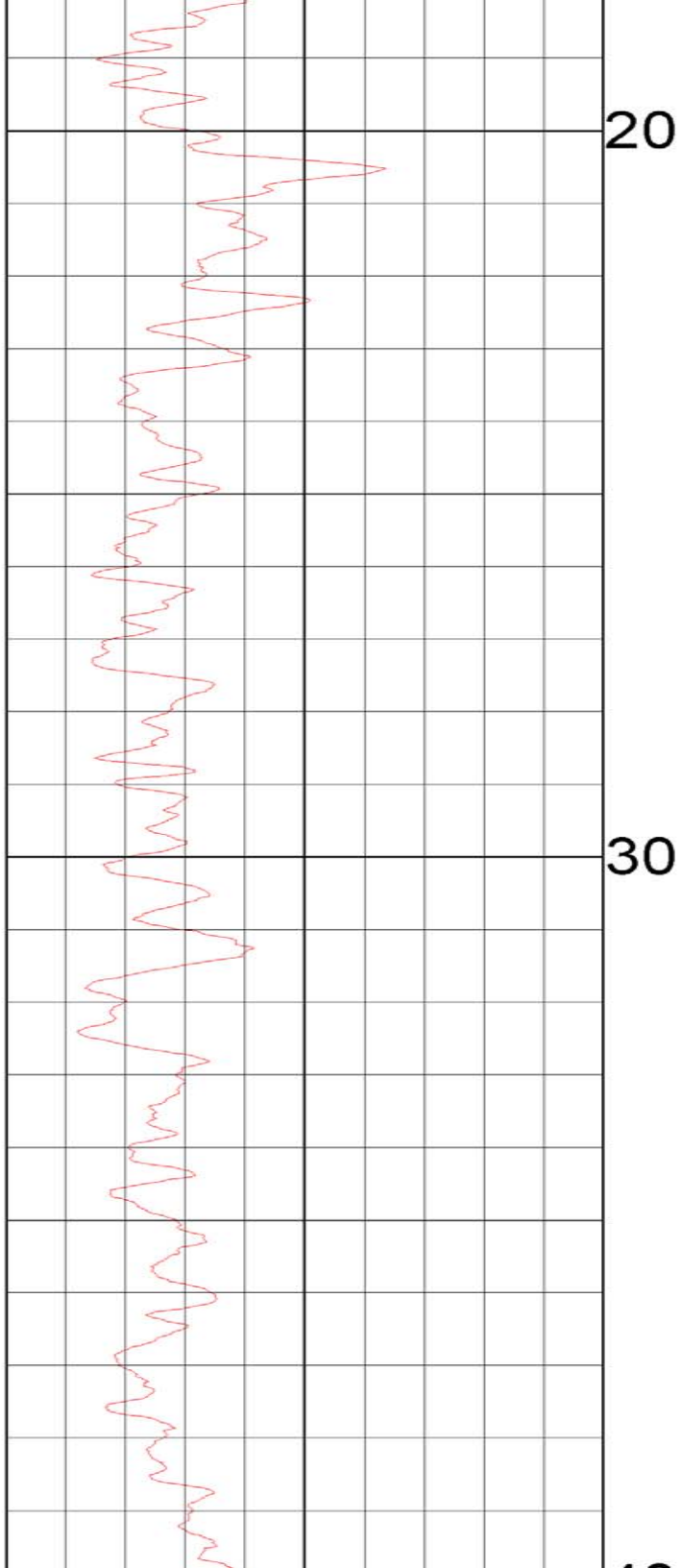
GAM-GAMH		
80000	CPS	33000
GAM-GAMH		
33000	CPS	8750

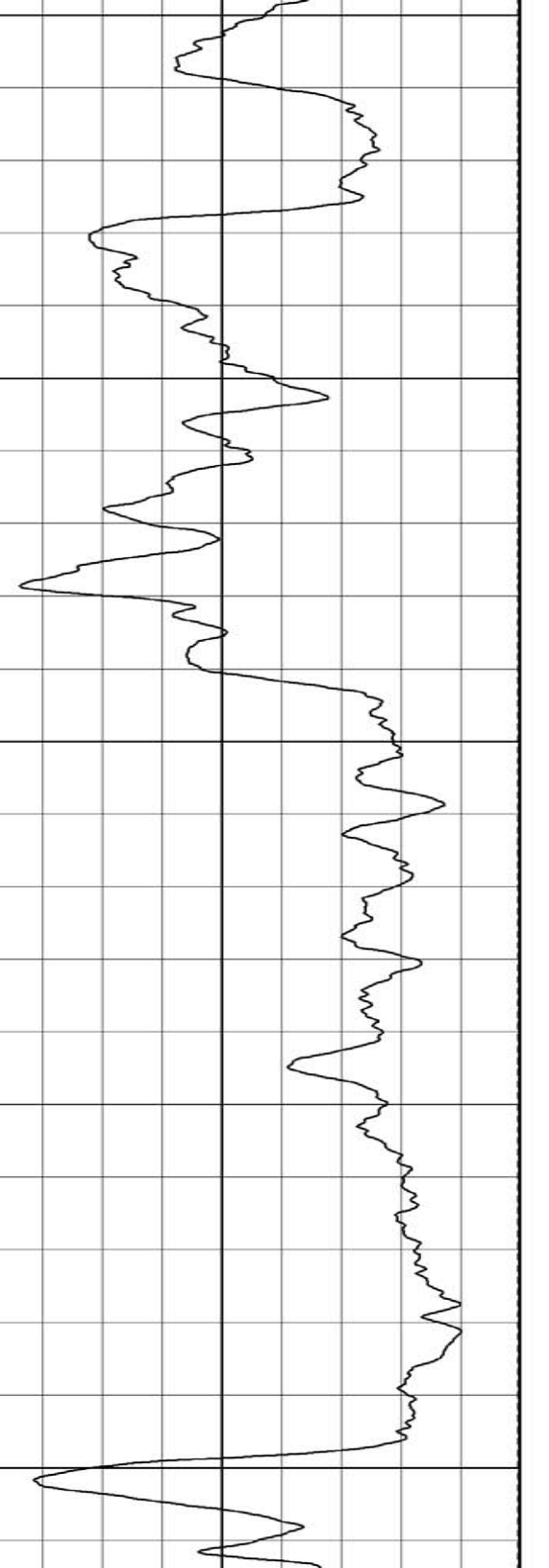
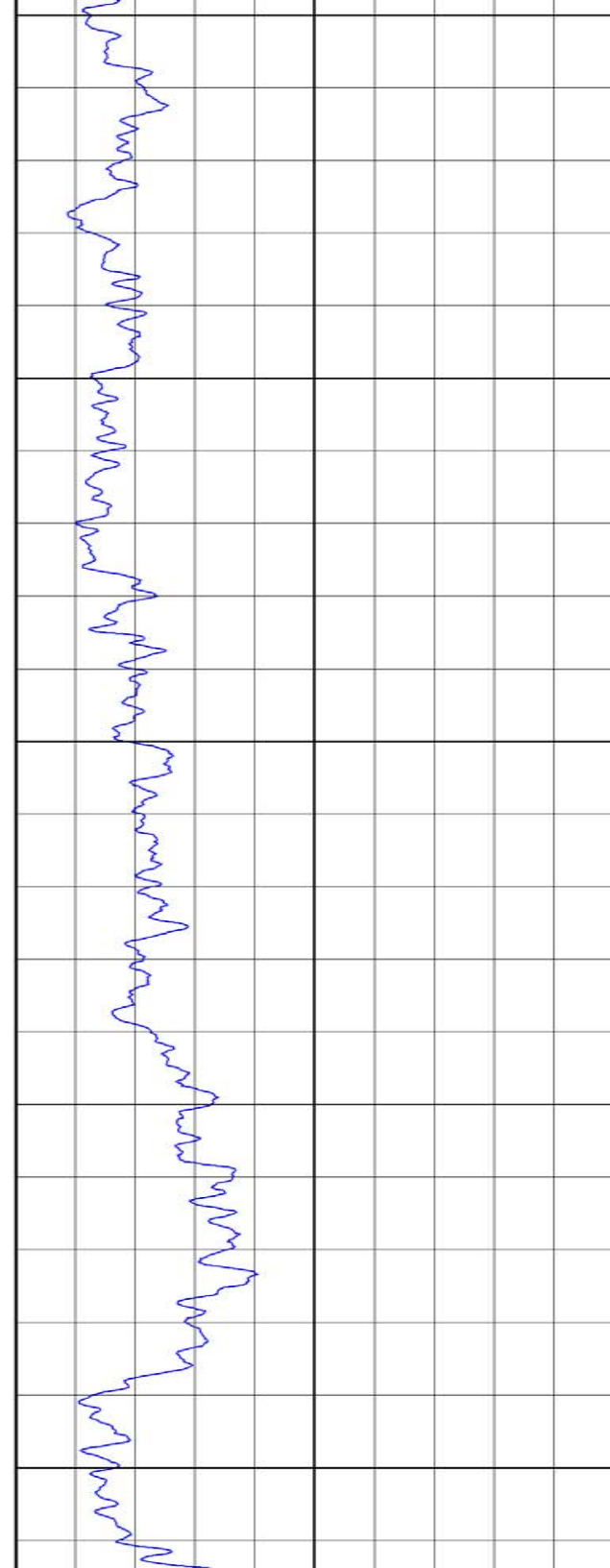
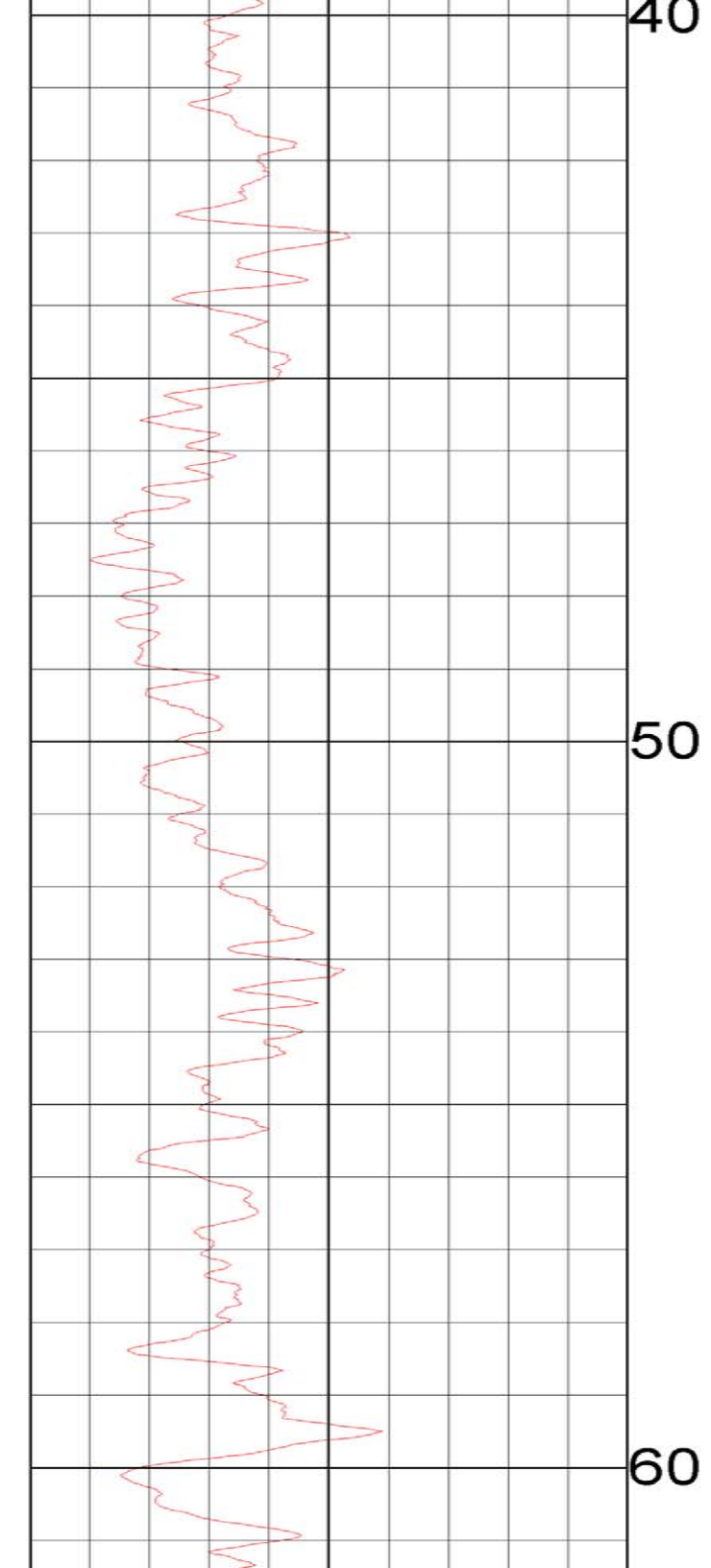


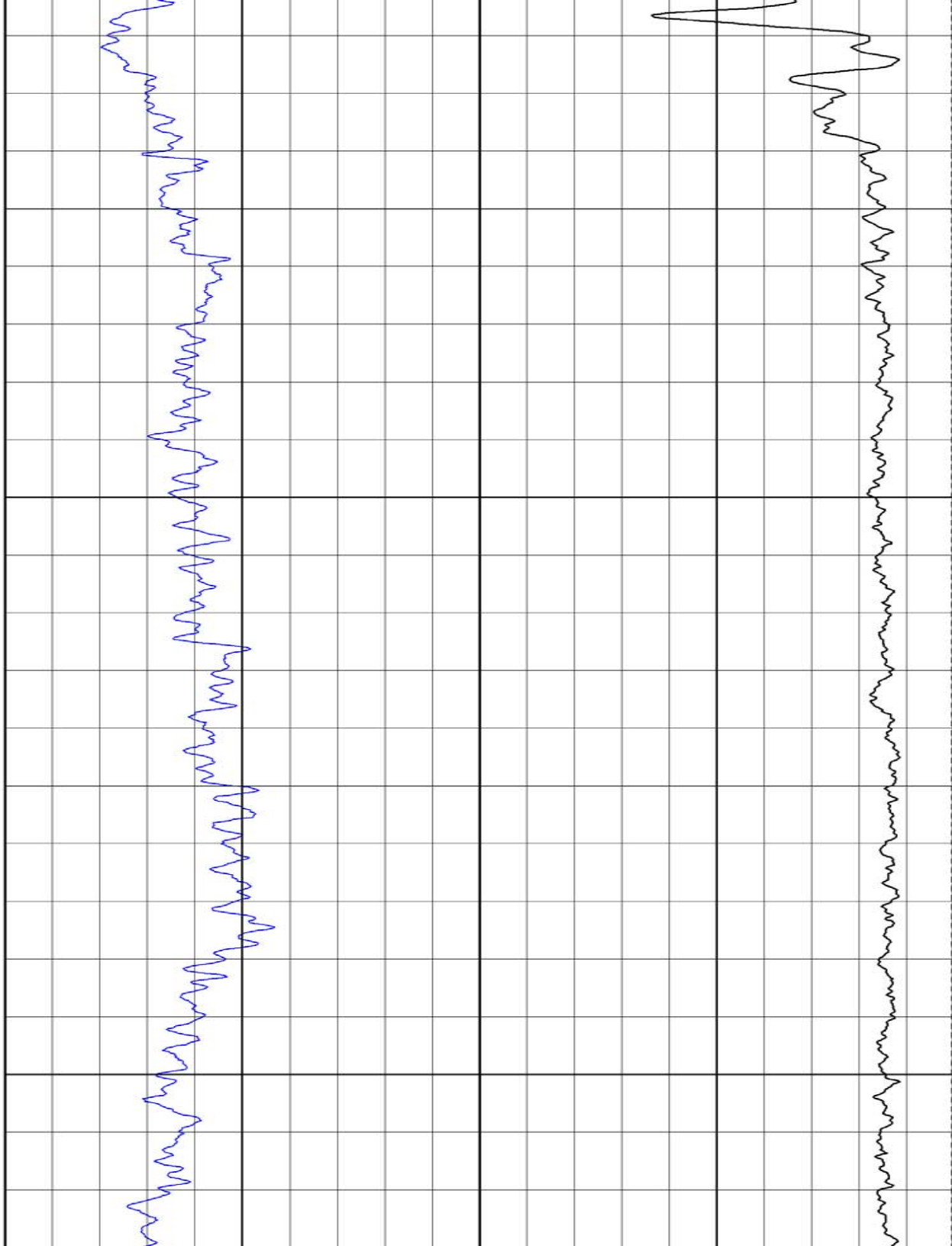
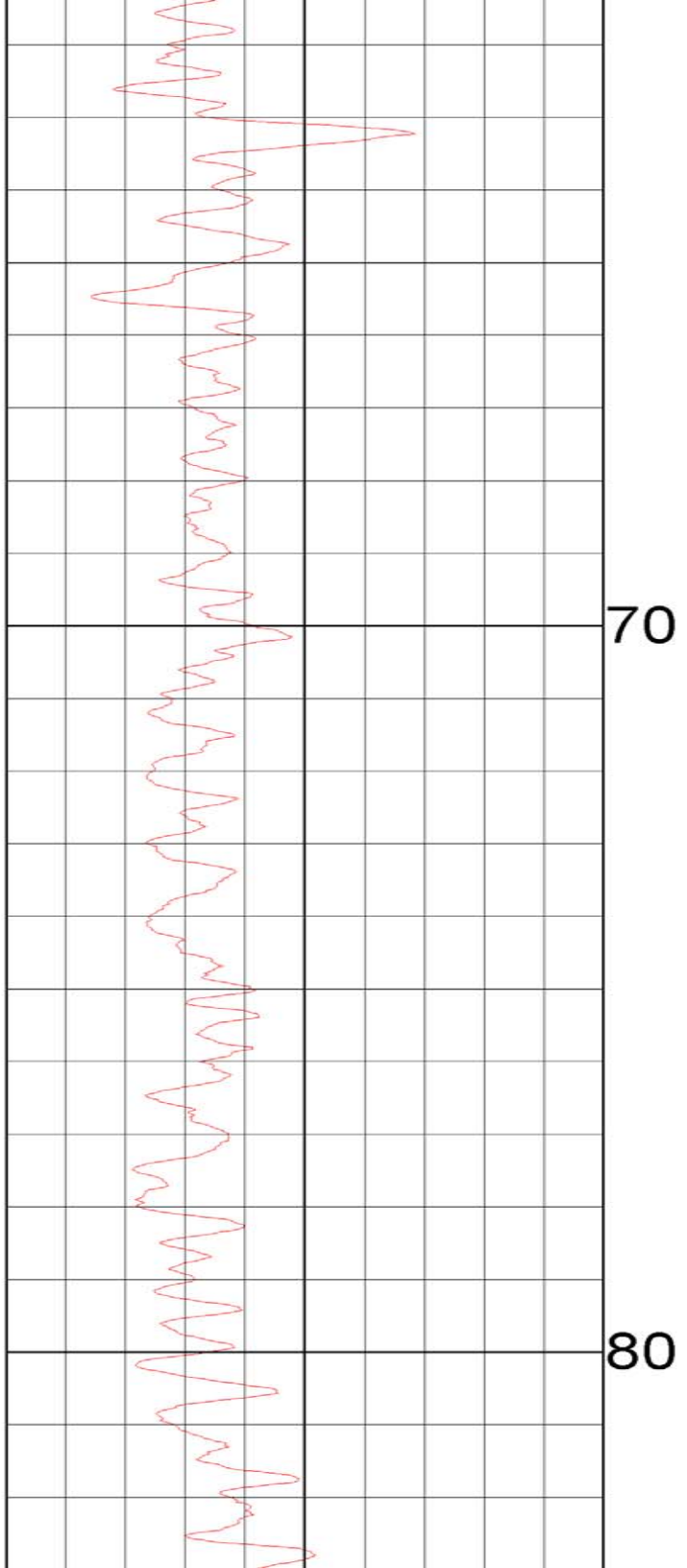
0

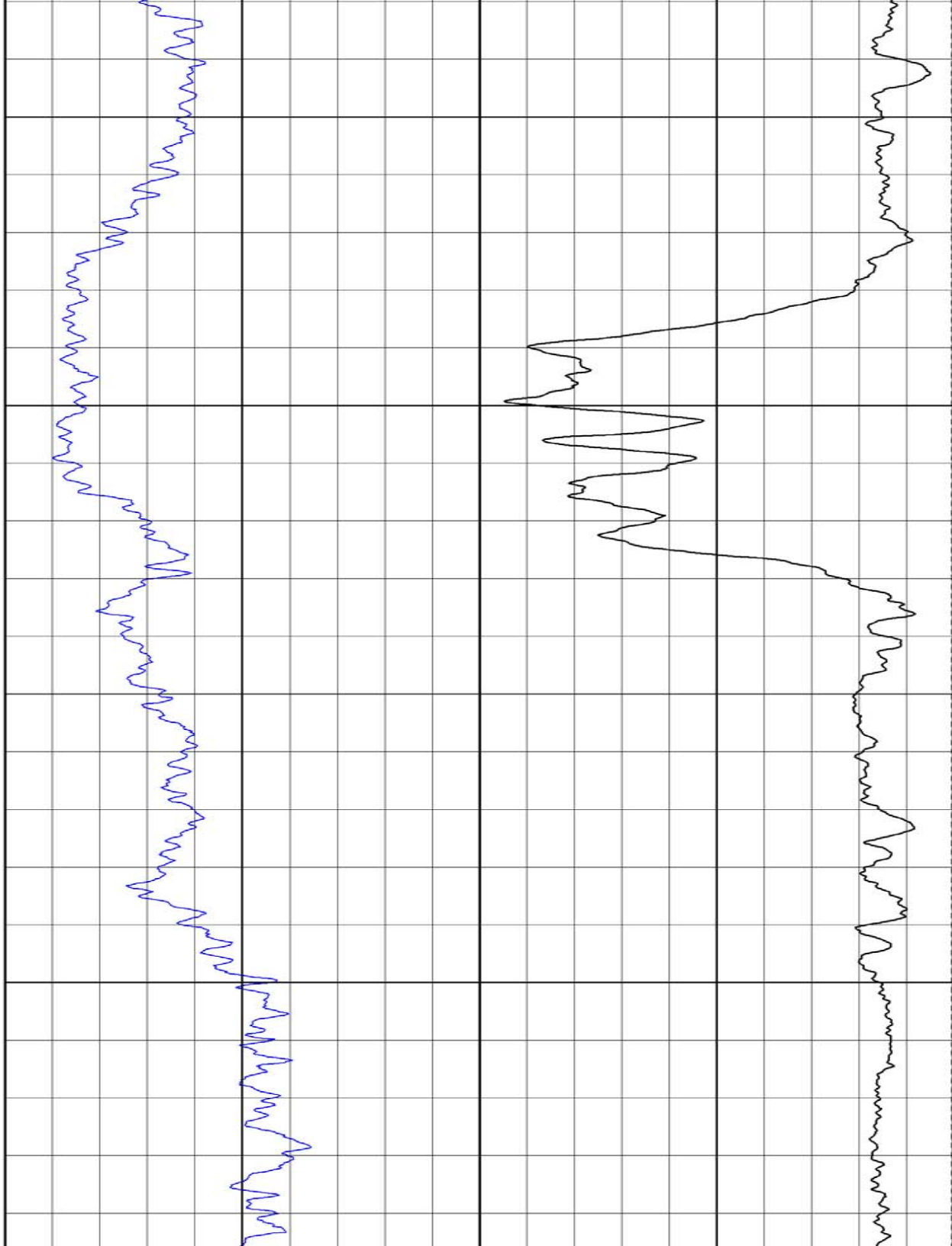
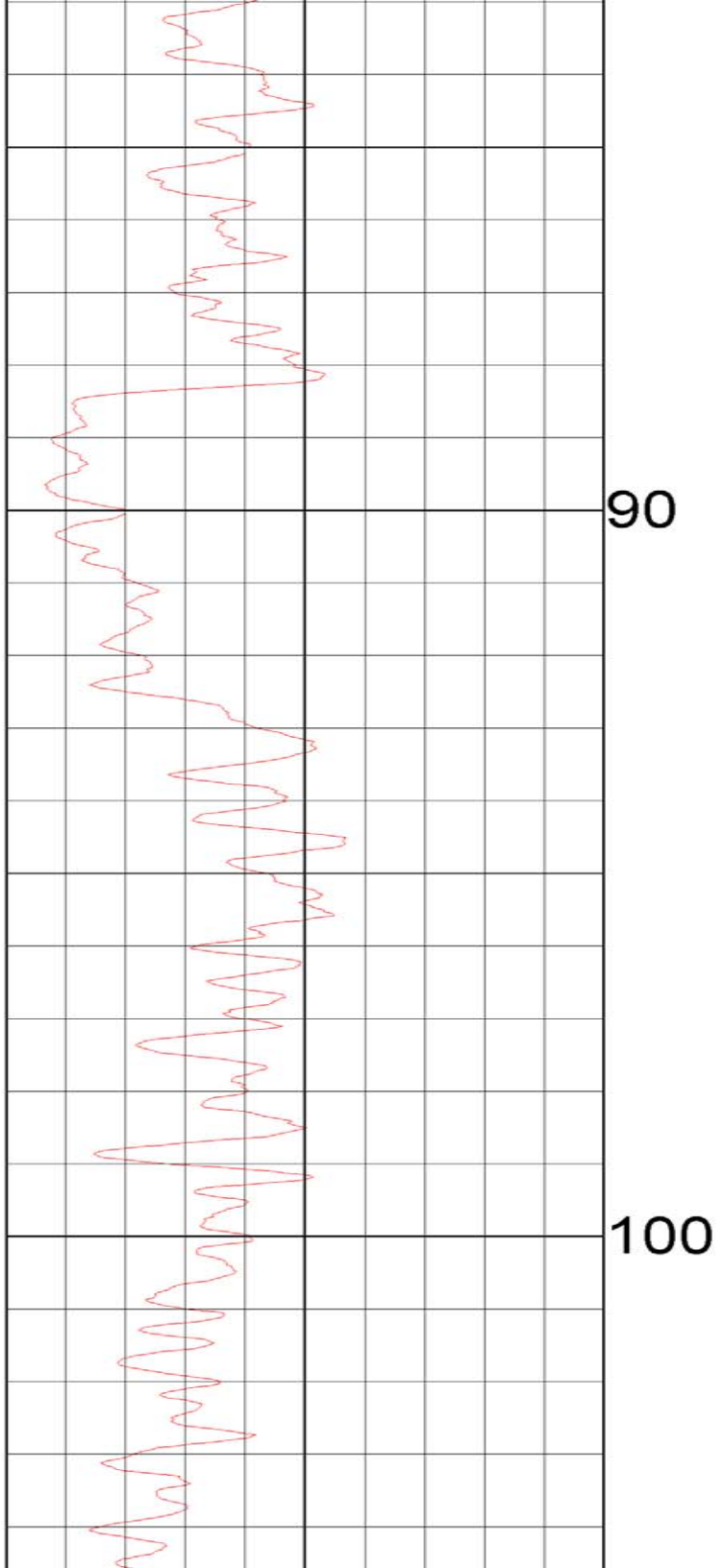
10

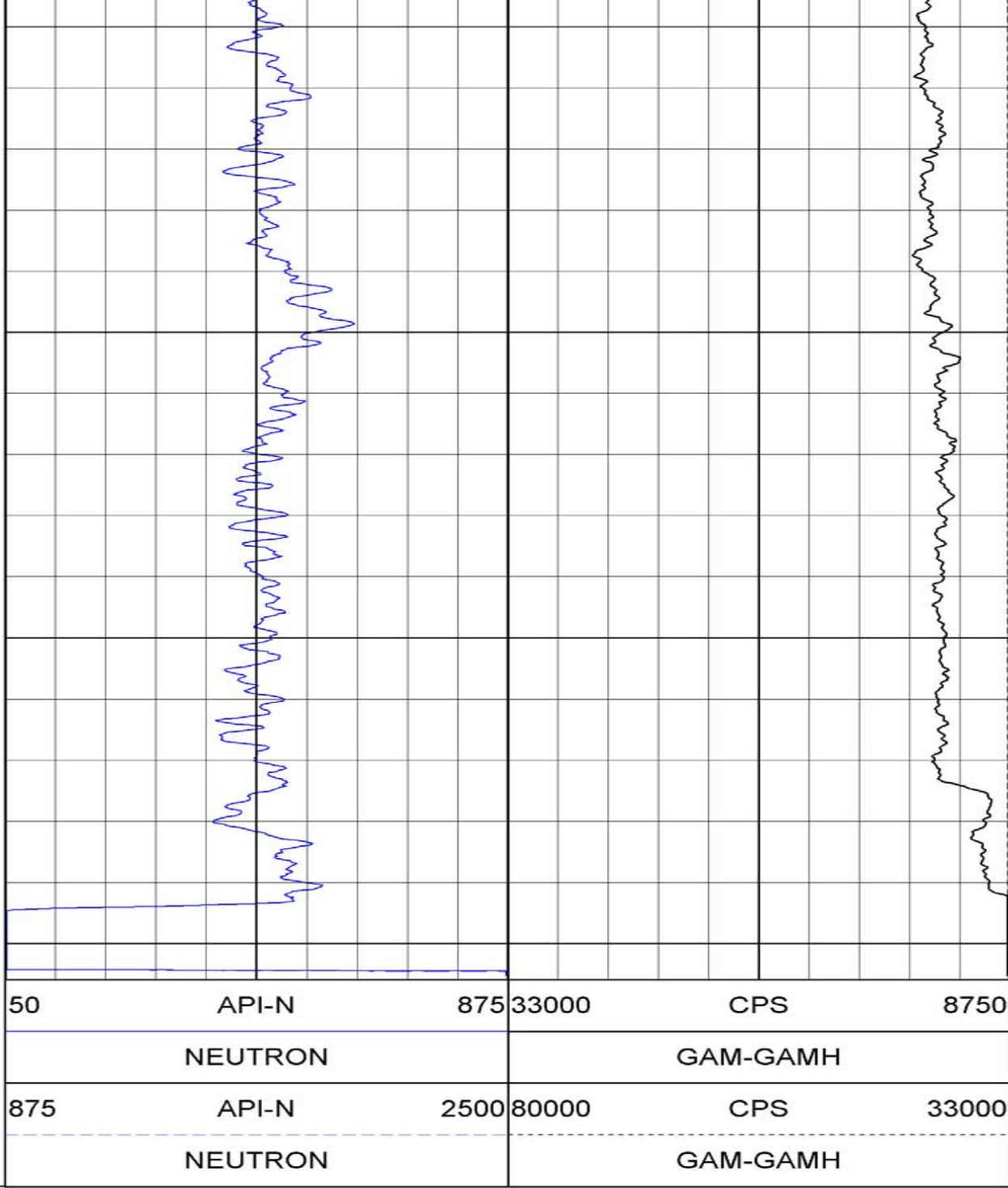
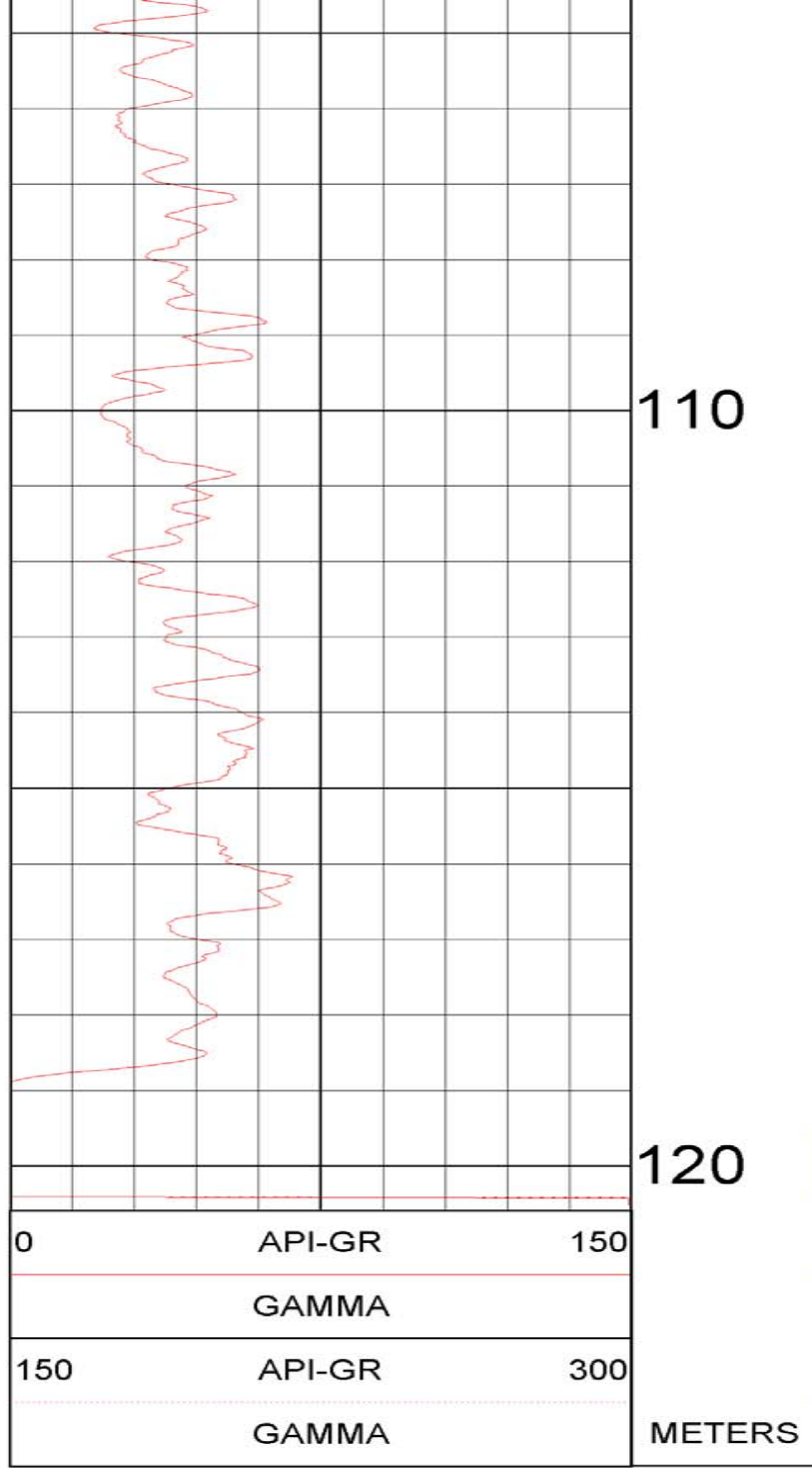












LOG PARAMETERS

MATRIX DENSITY : 2.65

NEUTRON MATRIX : SANDSTONE

MATRIX DELTA T : 140

MAGNETIC DECL : 23

ELECT. CUTOFF : 50000

BIT SIZE : 9.60

PRESENTATION NAME/DATE = 9068A-9067A_for.0 11/15/2005

TOOL CALIBRATION 05 006 11/13/05 10:58

TOOL 9068A TM VERSION 3200

SERIAL NUMBER 640

	DATE	TIME	SENSOR	STANDARD	RESPONSE
1	Mar06,02	18:27:22	GAMMA Default	[CPS]	Default [CPS]
	Mar06,02	18:27:22	GAMMA 105.000	[API-GR]	46.00 [CPS]
2	Feb22,06	16:07:12	NEUTROI Default	[CPS]	Default [CPS]
	Feb22,06	16:07:12	NEUTROI Default	[CPS]	Default [CPS]



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NEUTRON - GAMMA-DENSITY

05 009

COMPANY : FORTUNE MINERALS

WELL : 05 009

FIELD : MOUNT KLAPPAN

COUNTY :

STATE : BRITISH COLUMBIA

OTHER SERVICES:

9067

9068

LOCATION : 507,190 6,343,912 FROM GPS, NAD83

SECTION :

TOWNSHIP :

RANGE :

API NO. :

UNIQUE WELL ID. :

PERMANENT DATUM : ELEVATION KB : NONE

LOG MEASURED FROM: 0 ELEVATION DF : NONE

DRL MEASURED FROM: ELEVATION GL : 1610

DATE : 11/13/05

DEPTH DRILLER : 160.0

BIT SIZE : 9.60

LOG TOP : 0.32

LOG BOTTOM : 158.78

CASING OD : 7.30

CASING BOTTOM : 160.0

CASING TYPE : PVC

BOREHOLE FLUID : WATER

RM TEMPERATURE :

MUD RES :

MUD WEIGHT :

RECORDED BY : J. SINKWICH

REMARKS 1 : HQ CORE WATER LEVEL: 6M

REMARKS 2 : MEASUREMENTS IN CENTIMETERS & METERS

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

GAMMA - NEUTRON - GAMMA-DENSITY 05 009 11/13/05

LOG PARAMETERS

MATRIX DENSITY : 2.65

NEUTRON MATRIX : SANDSTONE

MATRIX DELTA T : 140

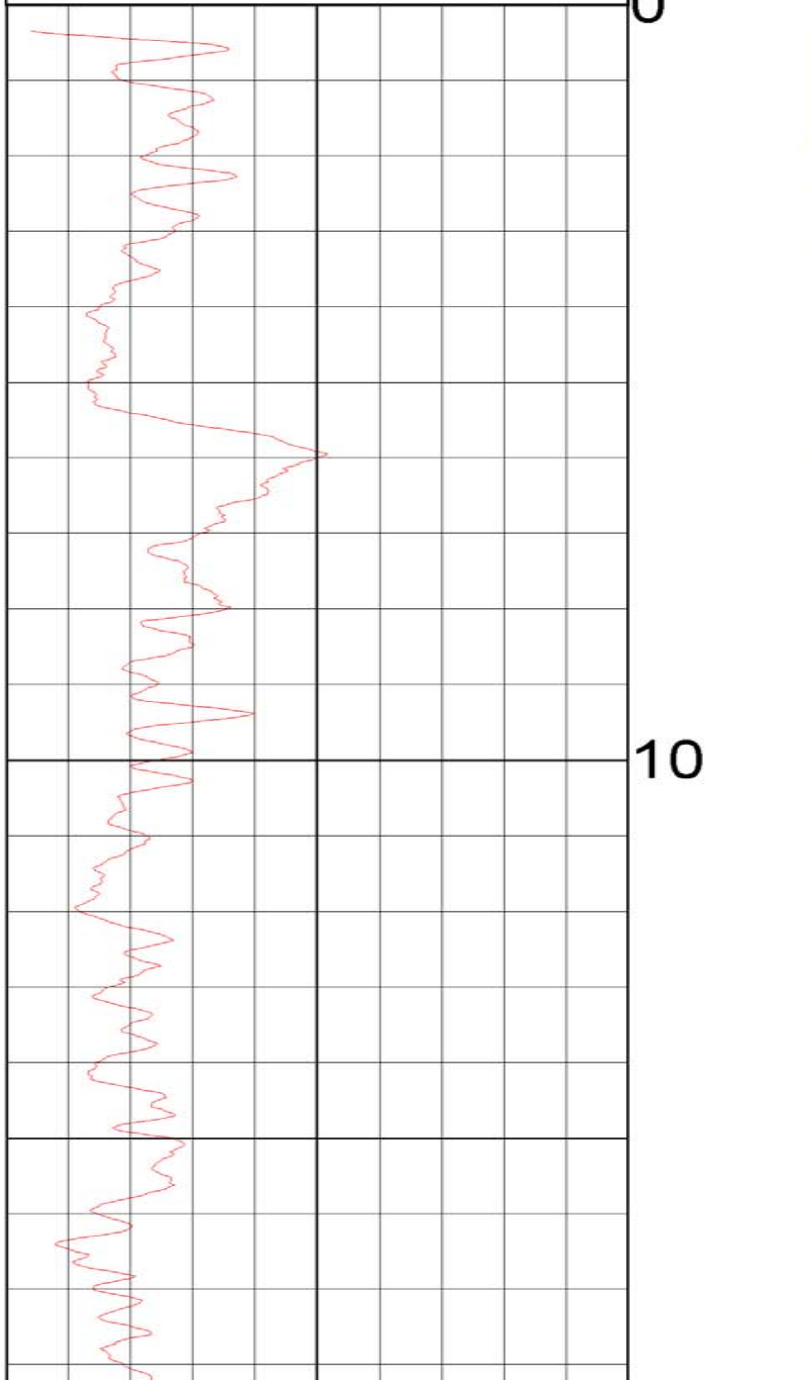
MAGNETIC DECL : 23

ELECT. CUTOFF : 50000

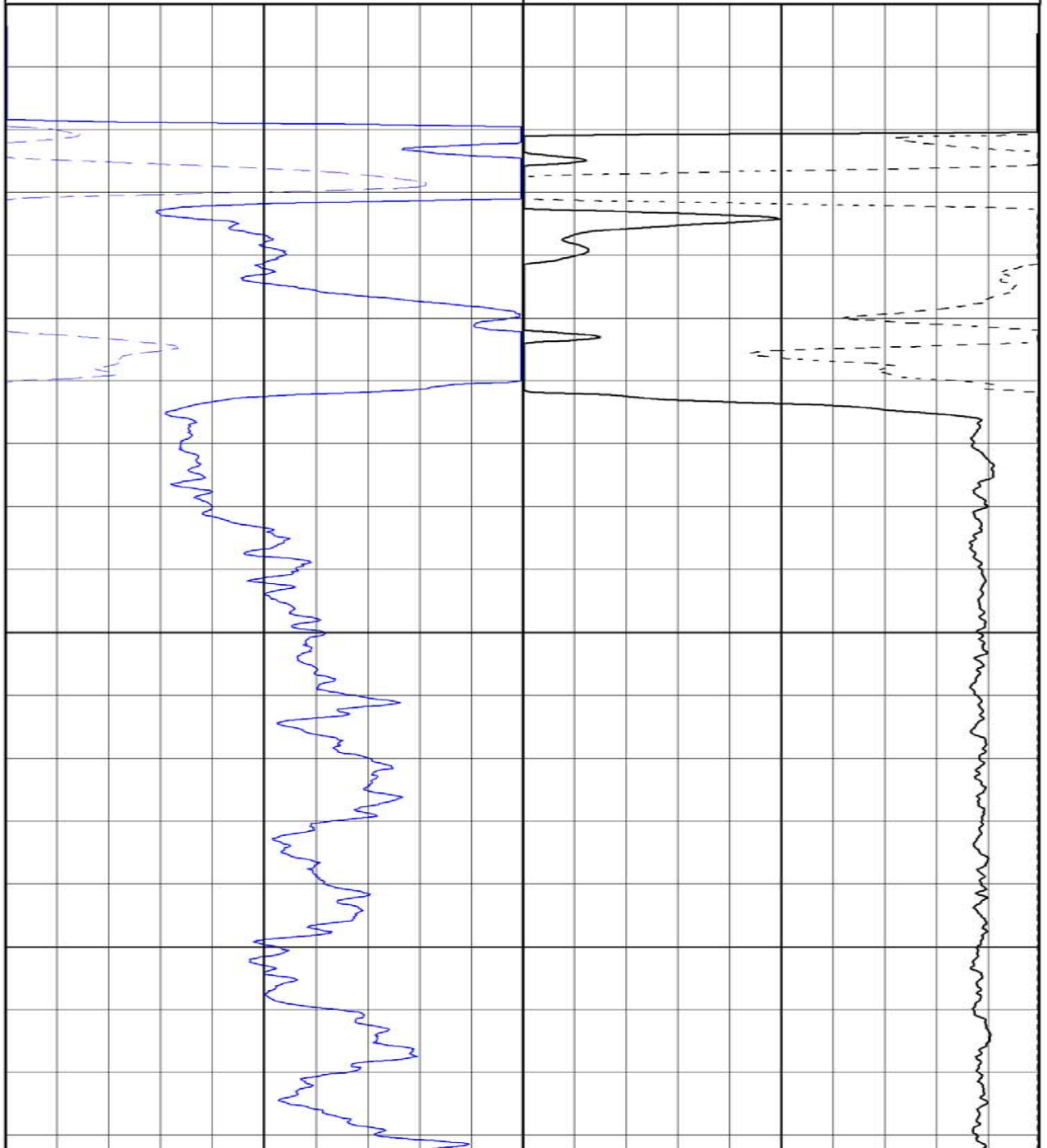
BIT SIZE : 9.60

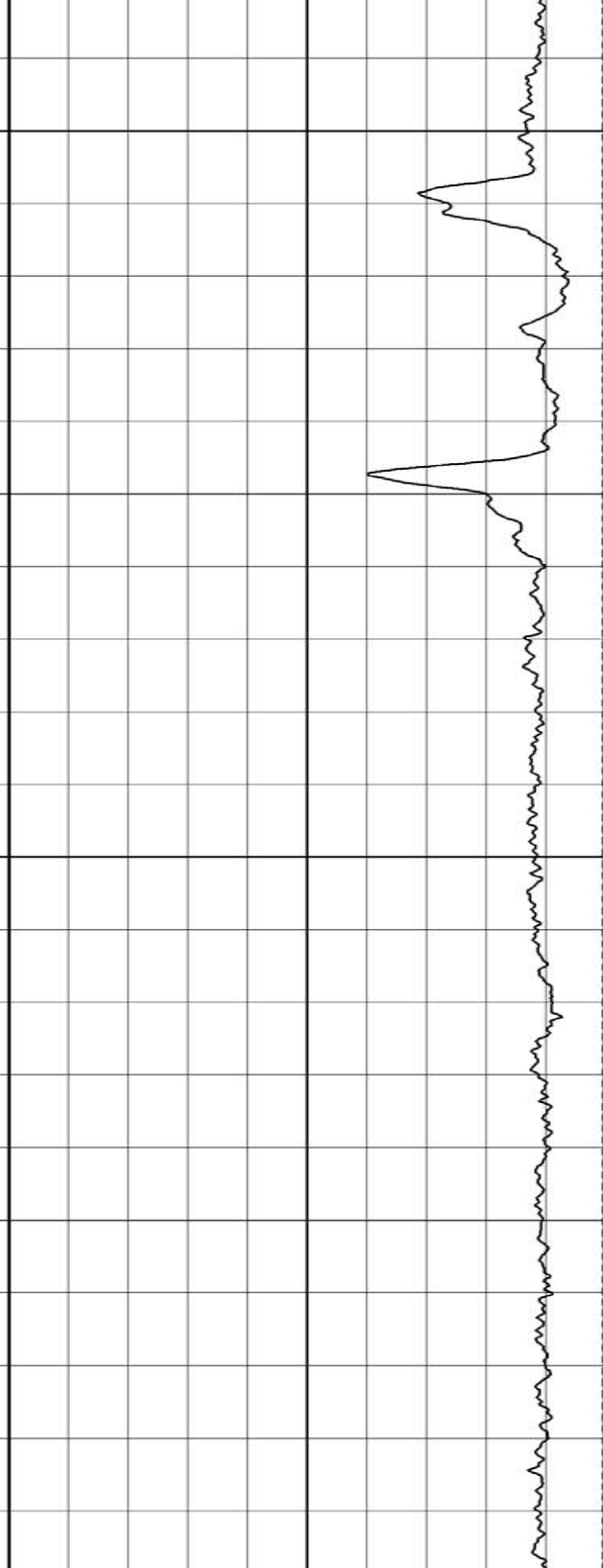
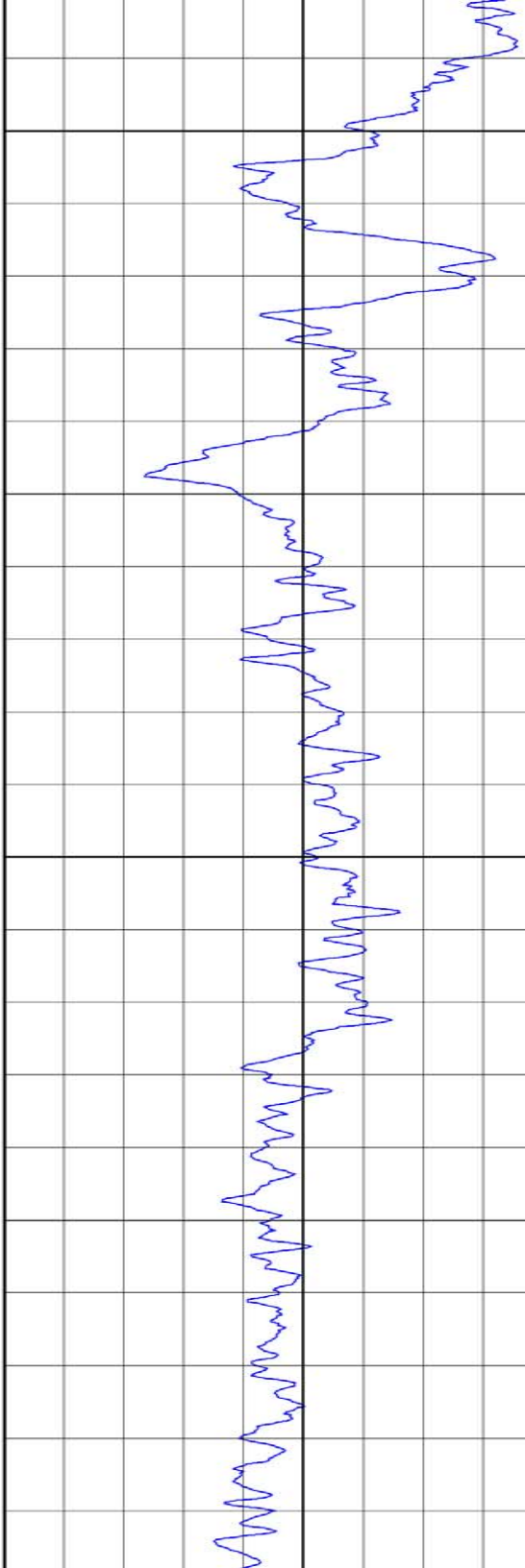
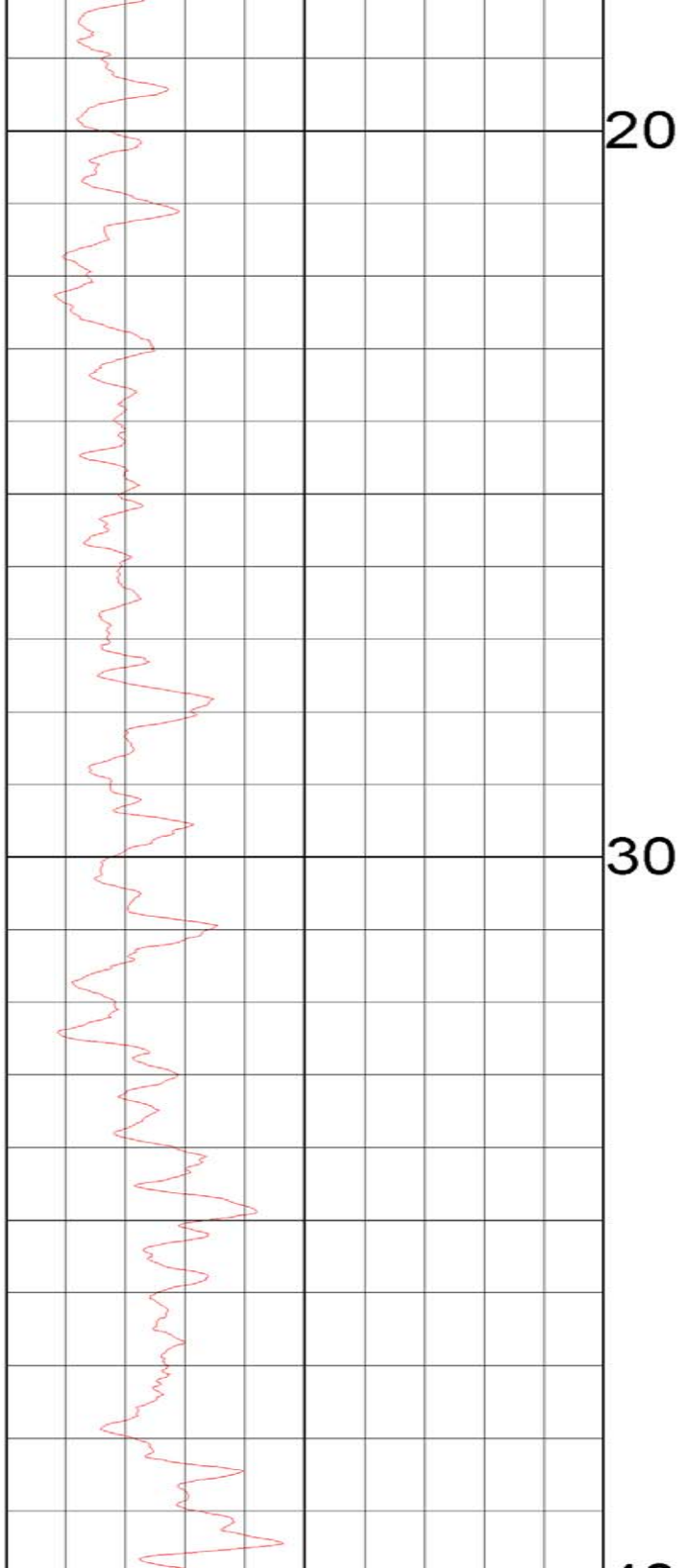
PRESENTATION NAME/DATE = 9068A-9067A_fort.0 11/15/2005

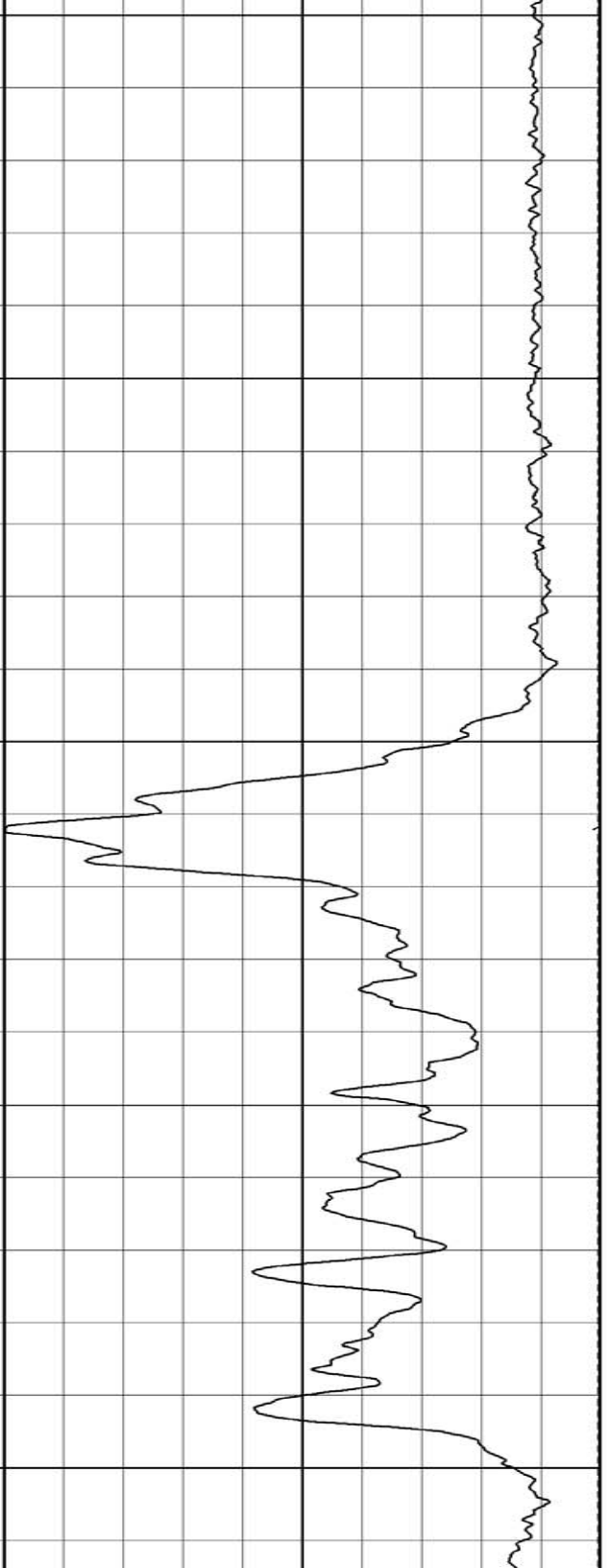
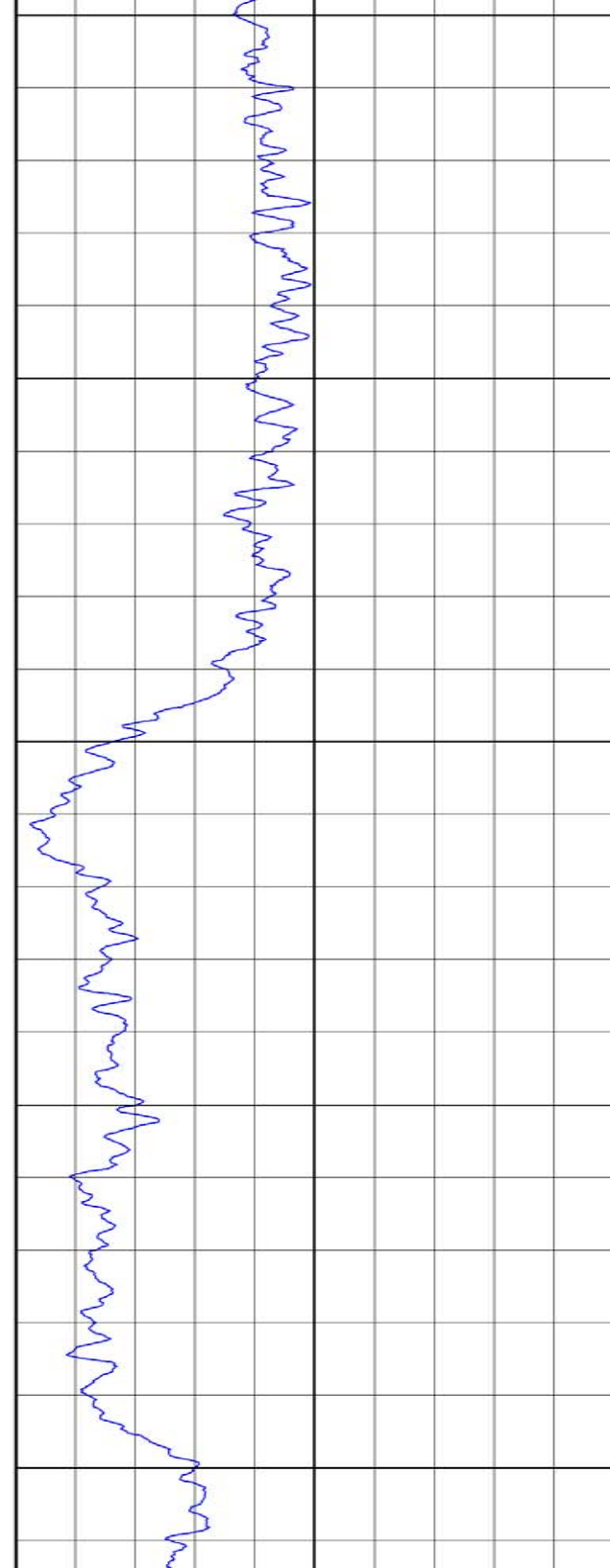
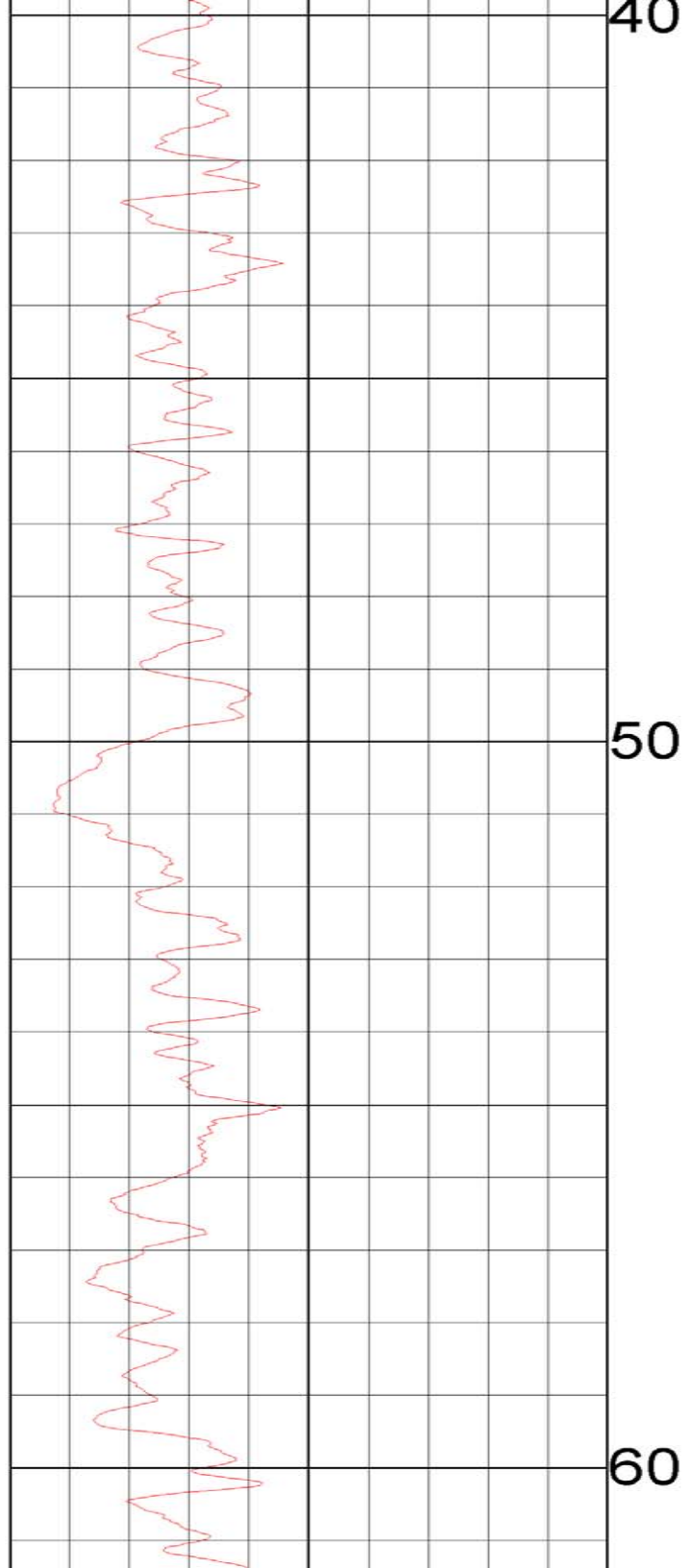
	GAMMA		METERS
150	API-GR	300	
	GAMMA		
0	API-GR	150	

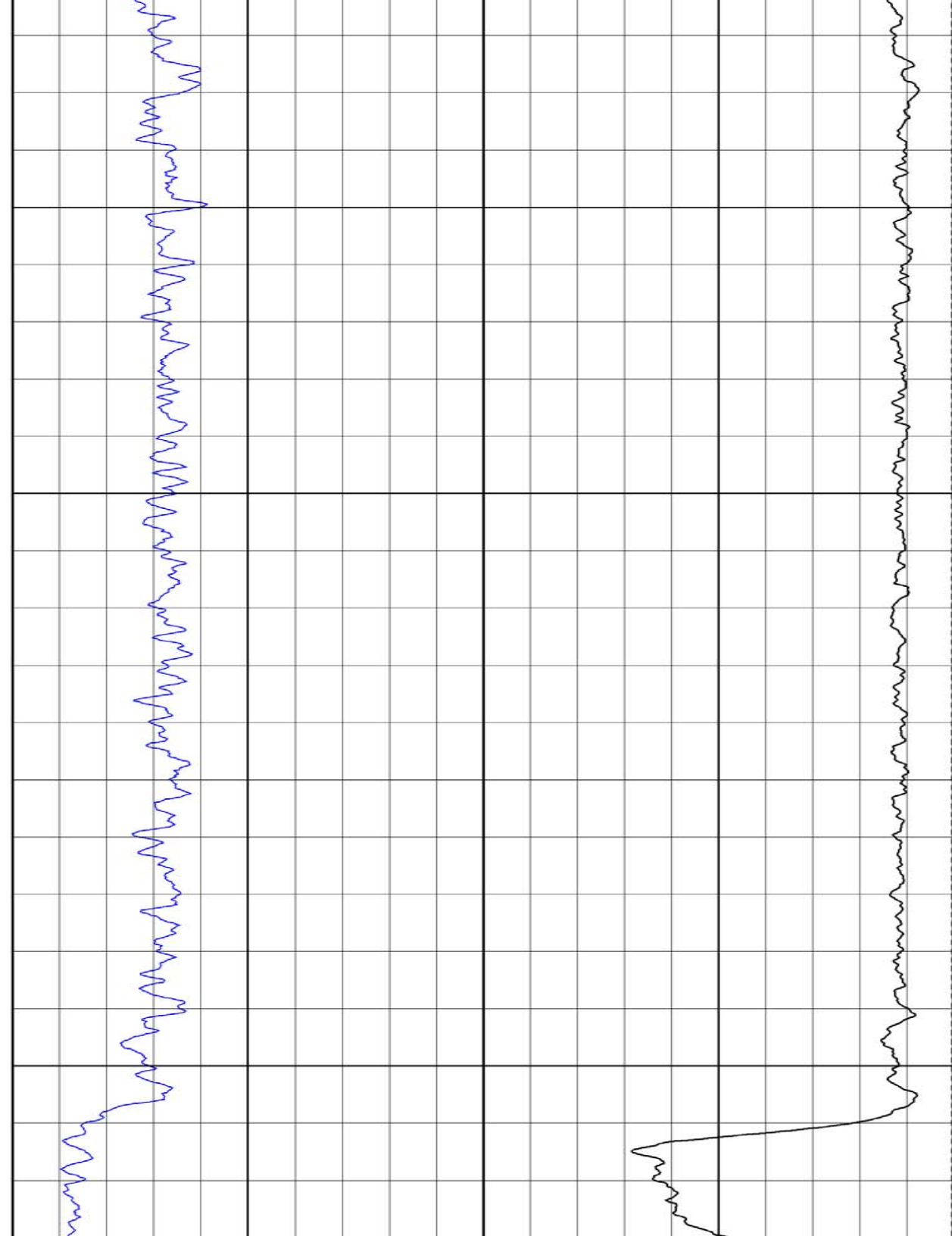
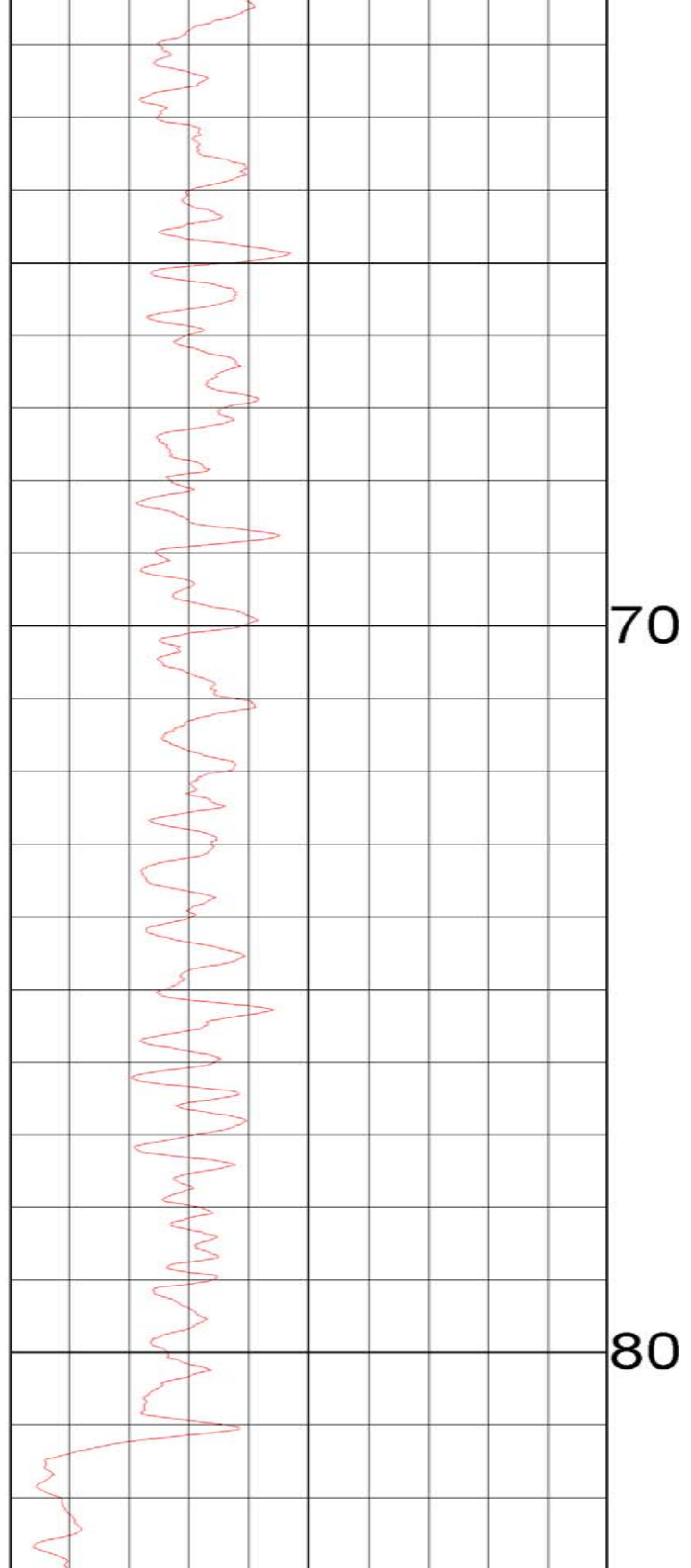


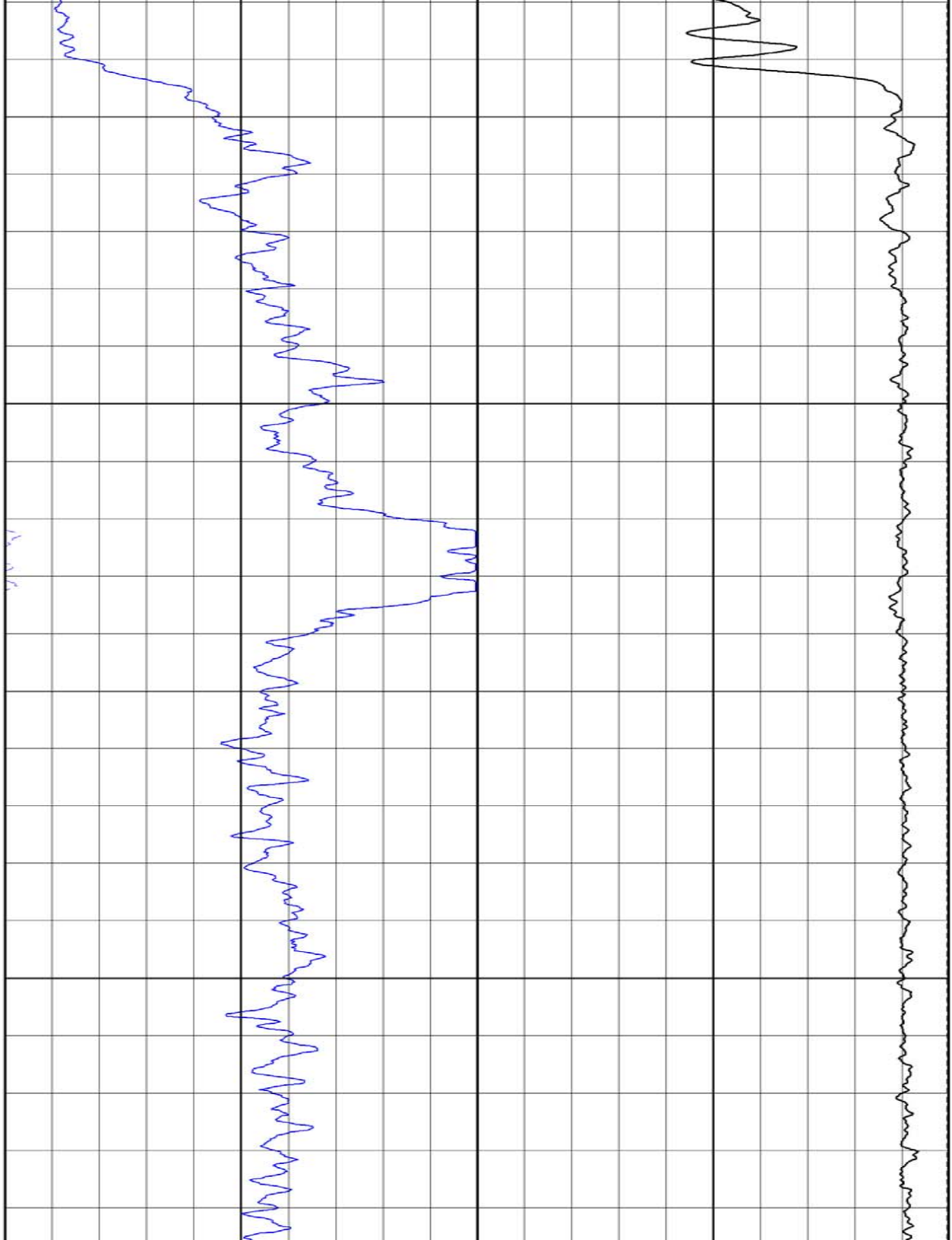
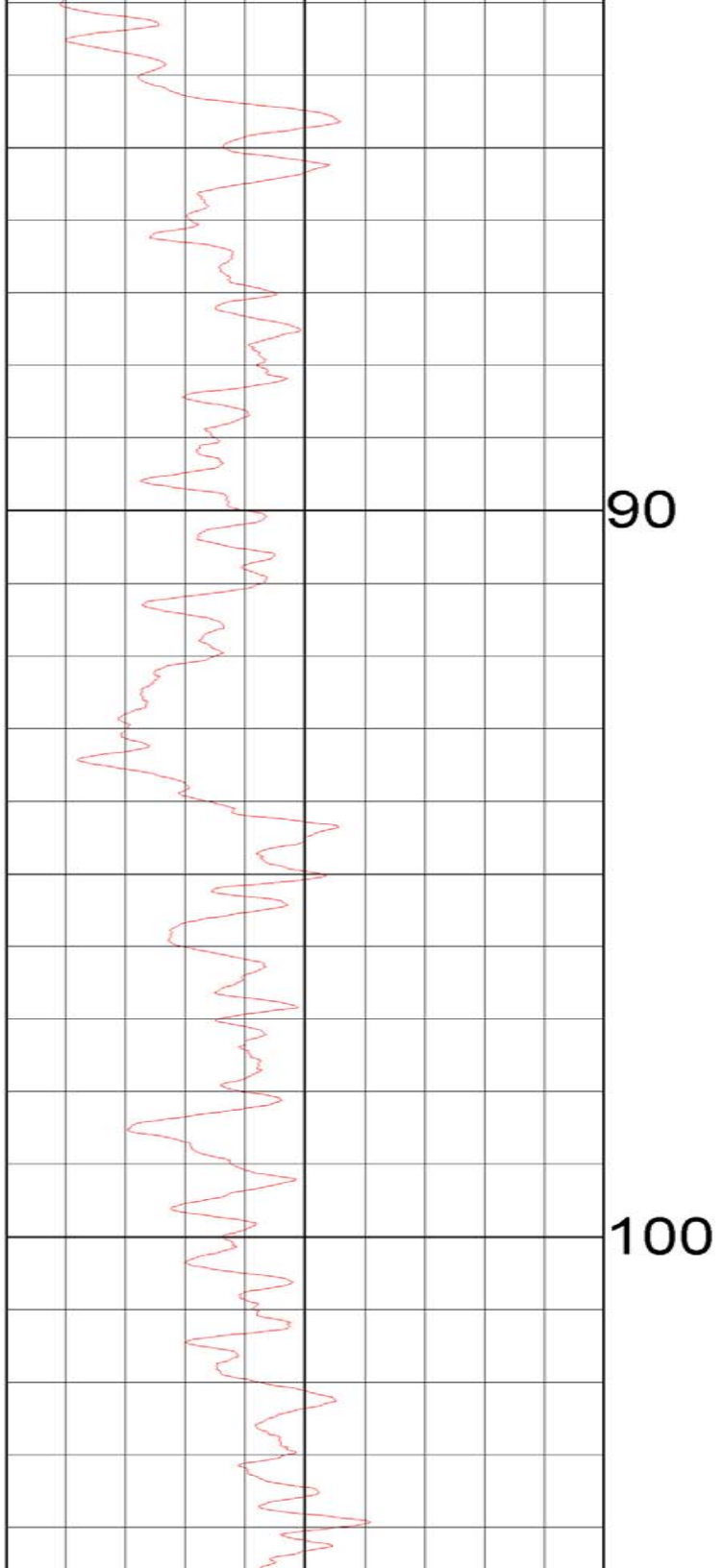
	NEUTRON		GAM-GAMH
875	API-N	2500	80000
	NEUTRON		GAM-GAMH
50	API-N	875	41000
			CPS
			8750

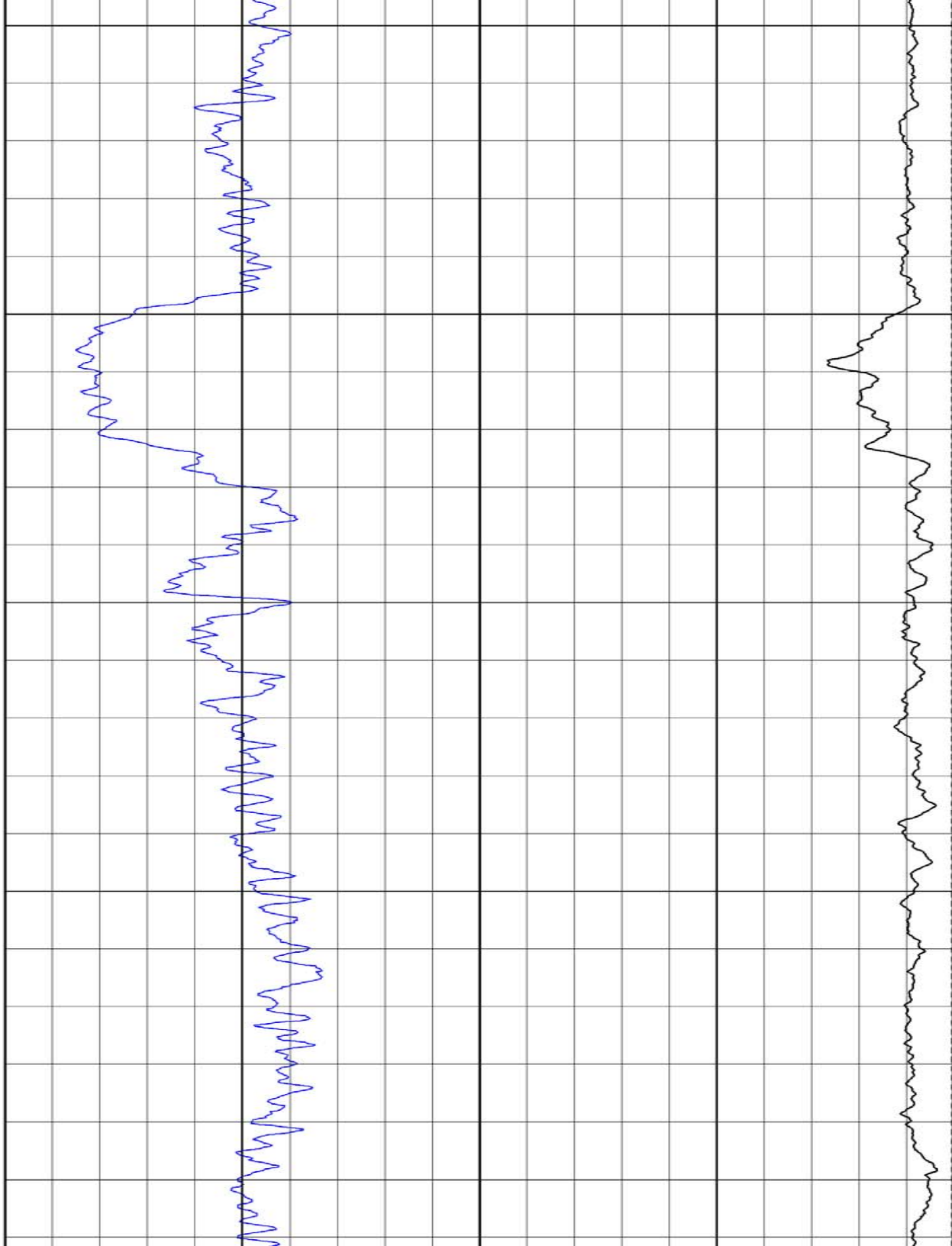
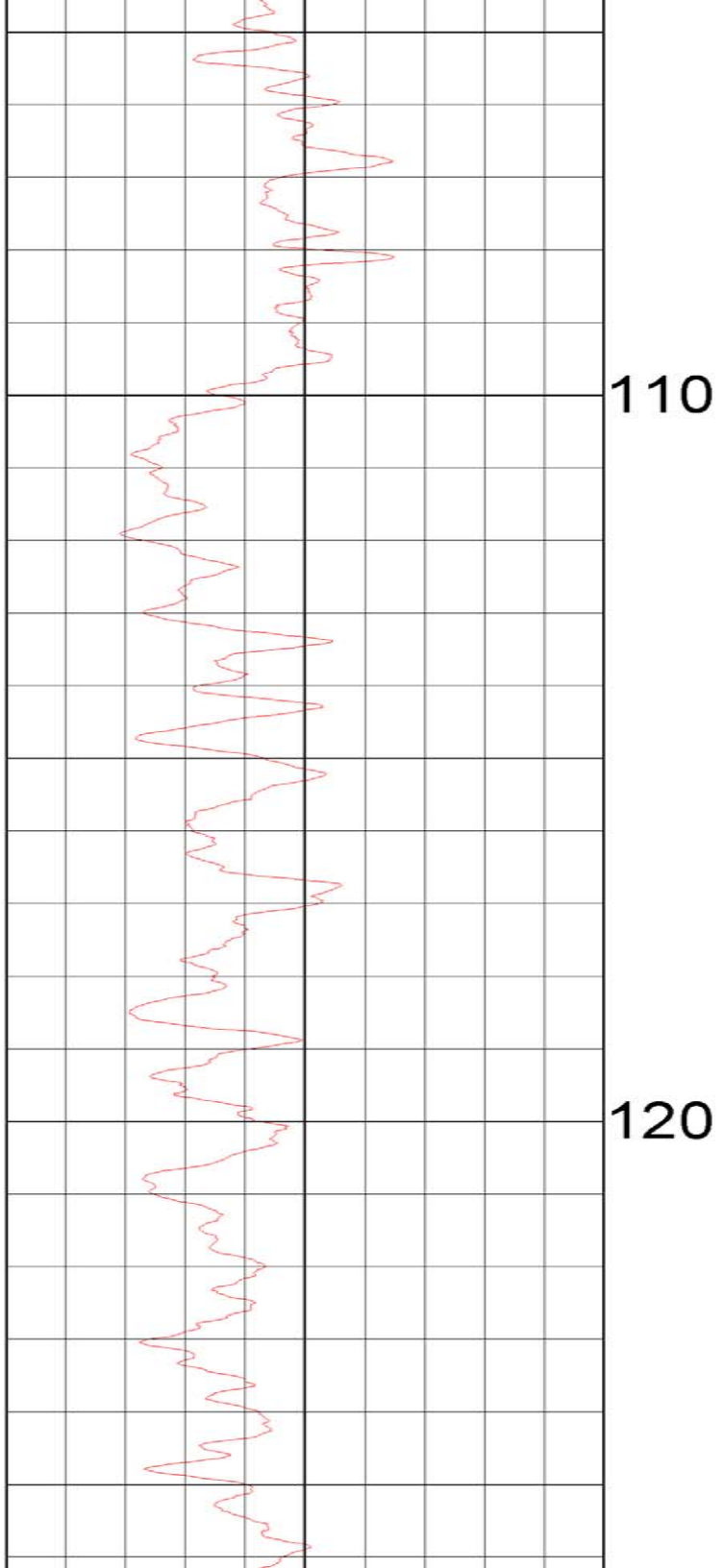


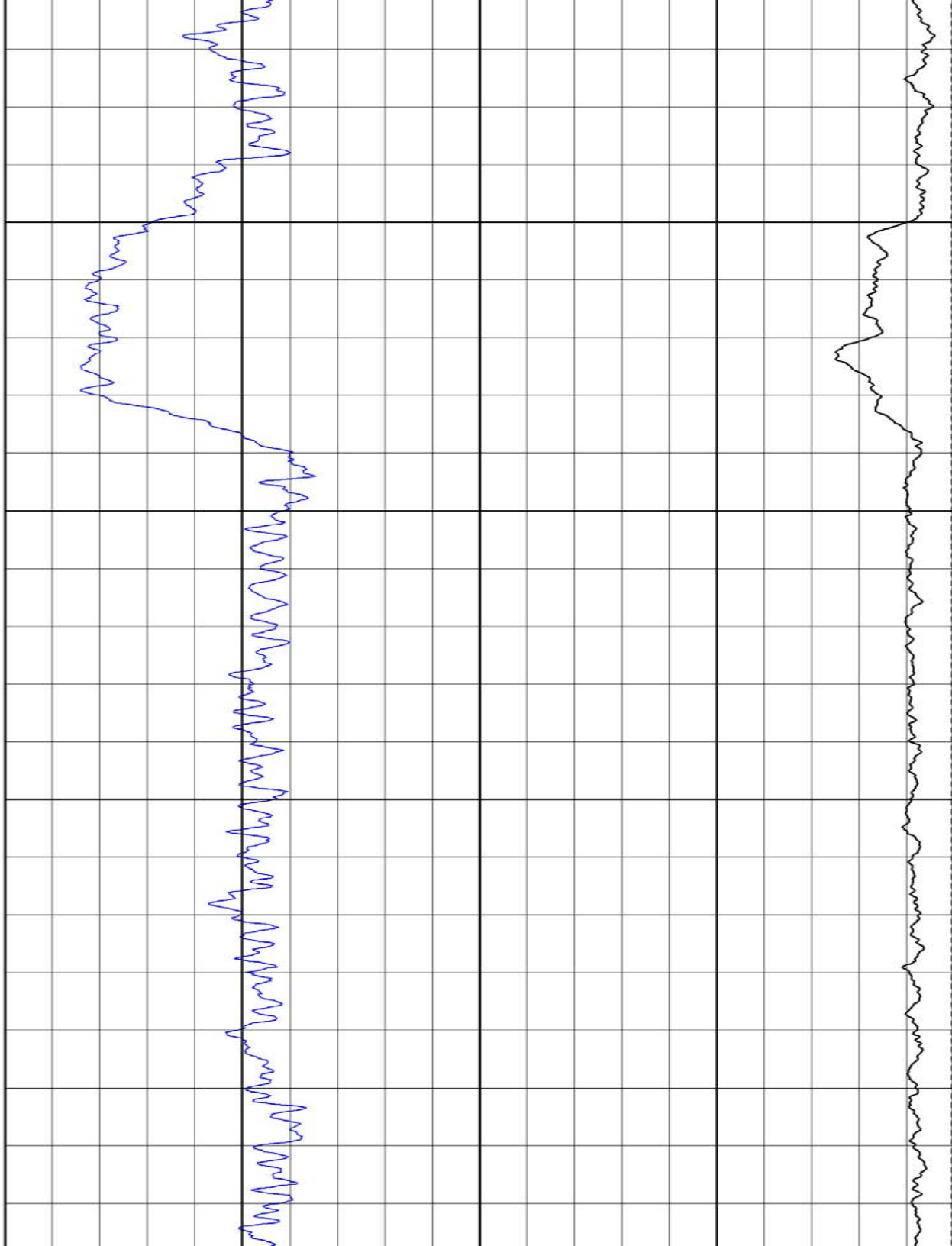
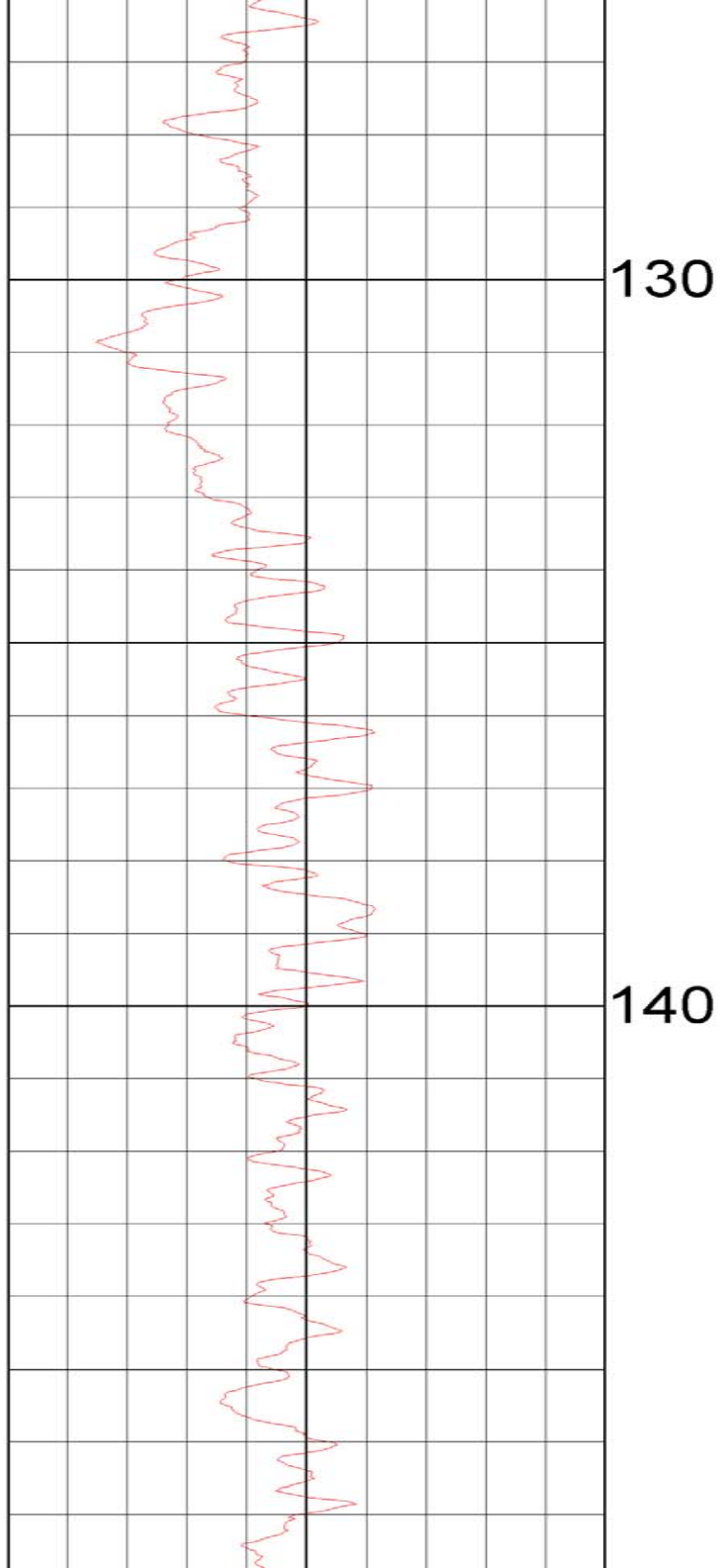


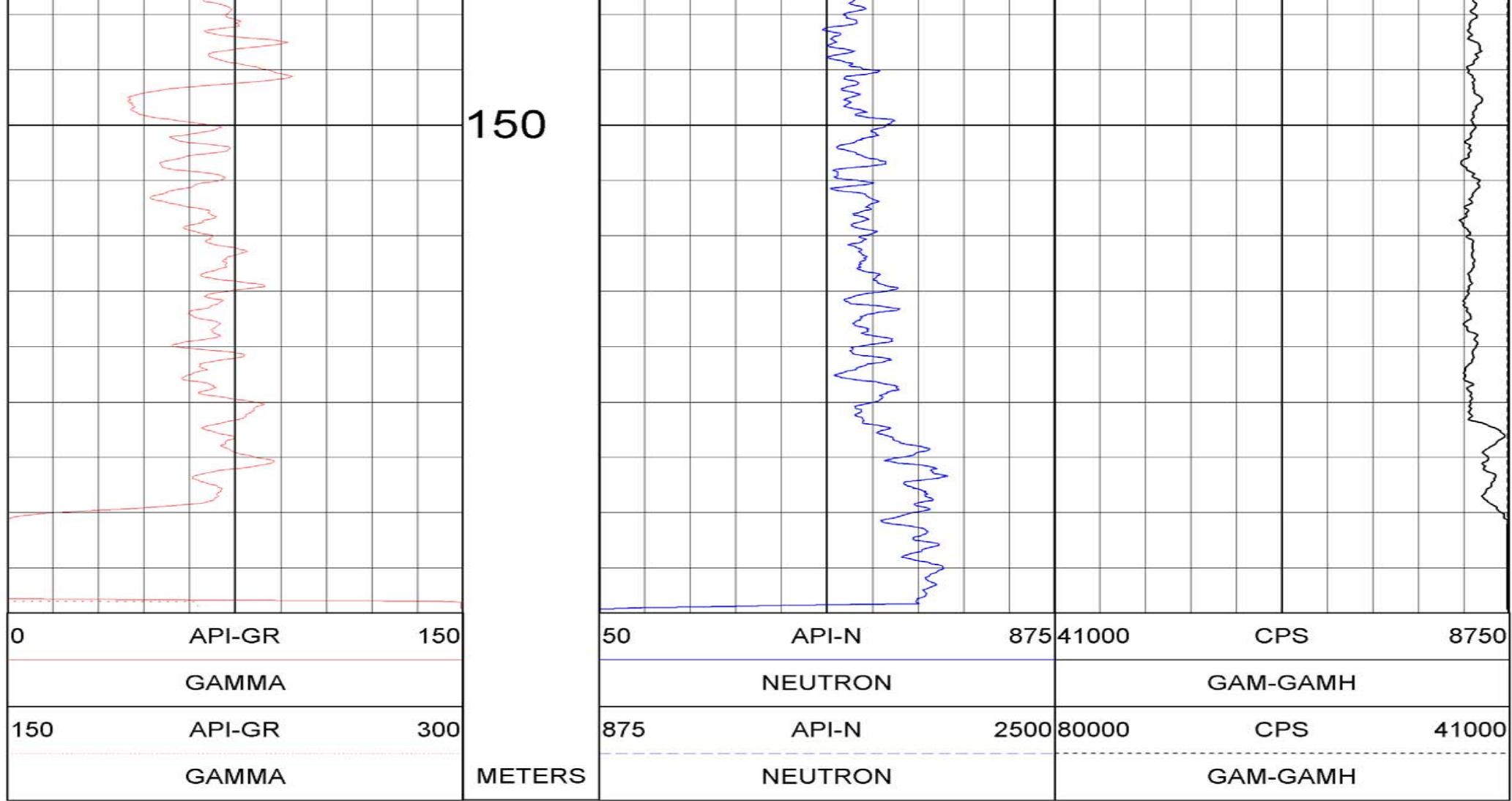












GAMMA - NEUTRON - GAMMA-DENSITY 05 009 11/13/05

LOG PARAMETERS

MATRIX DENSITY : 2.65

NEUTRON MATRIX : SANDSTONE

MATRIX DELTA T : 140

MAGNETIC DECL : 23

ELECT. CUTOFF : 50000

BIT SIZE : 9.60

PRESENTATION NAME/DATE = 9068A-9067A_for.0 11/15/2005

TOOL CALIBRATION 05 009 11/13/05 11:59

TOOL 9067A TM VERSION 3200

SERIAL NUMBER 529

	DATE	TIME	SENSOR	STANDARD	RESPONSE
1	Mar01,02	23:09:58	GAMMA	Default [CPS]	Default [CPS]
	Mar01,02	22:09:58	GAMMA	105.000 [API-GR]	53.00 [CPS]
2	Feb22,06	16:07:12	NEUTROI	Default [CPS]	Default [CPS]
	Feb22,06	16:07:12	NEUTROI	Default [CPS]	Default [CPS]



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NEUTRON - GAMMA-DENSITY

05 014

COMPANY : FORTUNE MINERALS OTHER SERVICES:

WELL : 05 014

FIELD : MOUNT KLAPPAN

COUNTY : STATE : BRITISH COLUMBIA

9067
9068

STATE : BRITISH COLUMBIA

LOCATION : 508,109 6,346,236 FROM GPS, NAD83

SECTION :

TOWNSHIP :

RANGE :

API NO. :

UNIQUE WELL ID. :

PERMANENT DATUM : ELEVATION KB : NONE

LOG MEASURED FROM: 0 ELEVATION DF : NONE

DRL MEASURED FROM: ELEVATION GL : 1630

DATE : 11/14/05

DEPTH DRILLER : 150.88

BIT SIZE : 9.60

LOG TOP : 0.00

LOG BOTTOM : 138.03

CASING OD : 7.30

CASING BOTTOM : 150.88

CASING TYPE : PVC

BOREHOLE FLUID : WATER

RM TEMPERATURE :

MUD RES :

MUD WEIGHT :

RECORDED BY : J. SINKWICH

REMARKS 1 : HQ CORE

REMARKS 2 : MEASUREMENTS IN CENTIMETERS & METERS

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

GAMMA - NEUTRON - GAMMA-DENSITY 05 014 11/14/05

LOG PARAMETERS

MATRIX DENSITY : 2.65

NEUTRON MATRIX : SANDSTONE

MATRIX DELTA T : 140

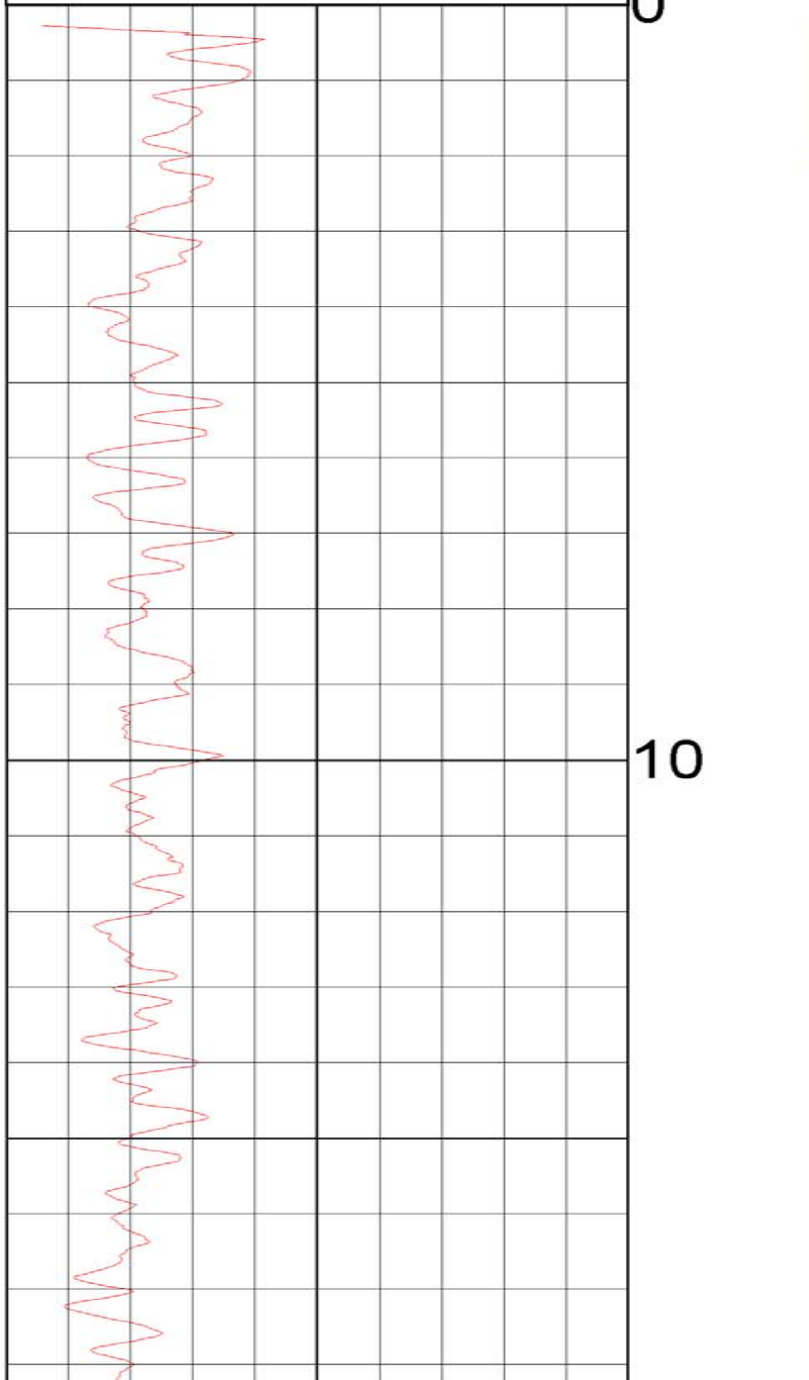
MAGNETIC DECL : 23

ELECT. CUTOFF : 50000

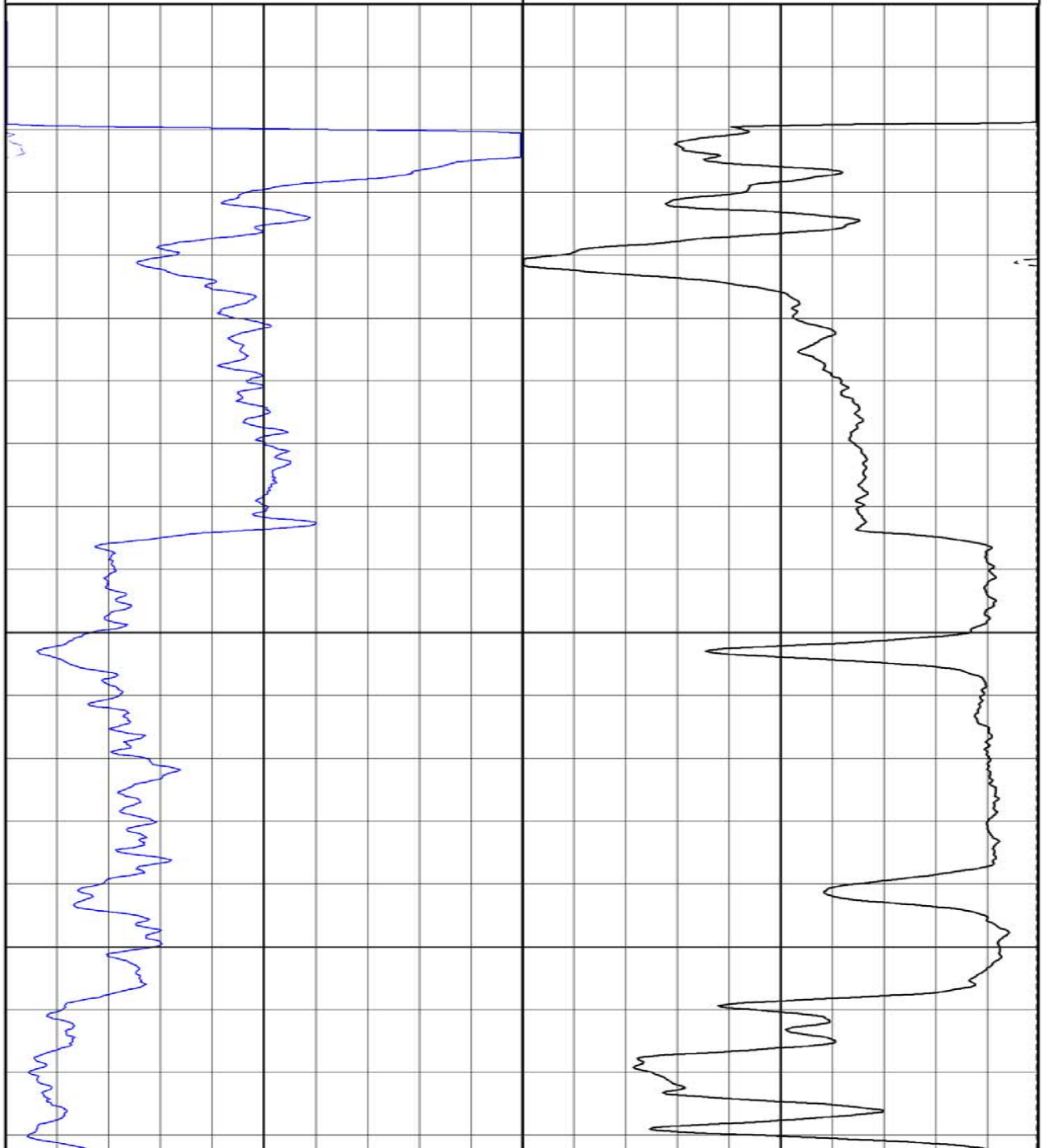
BIT SIZE : 9.60

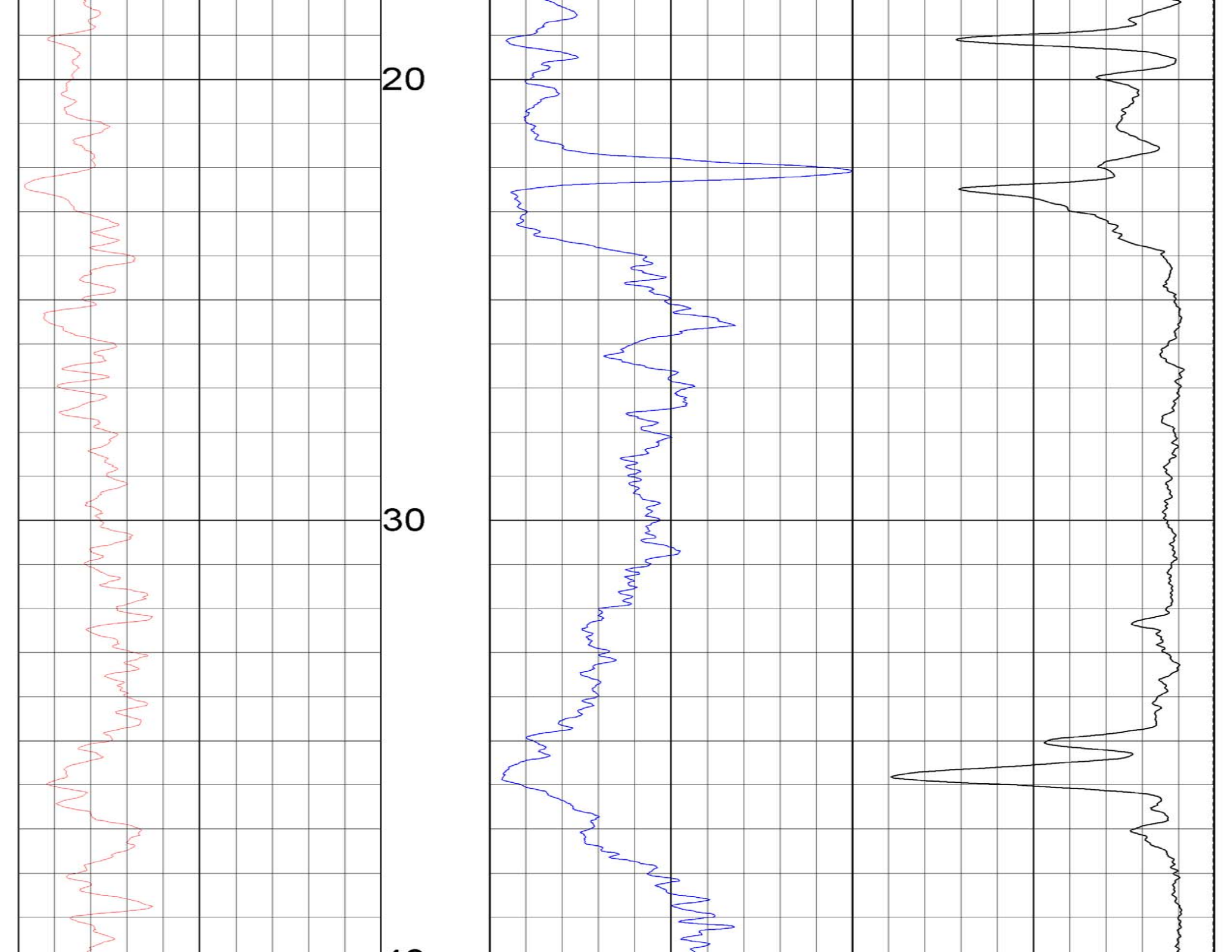
PRESENTATION NAME/DATE = 9068A-9067A_fort.0 11/15/2005

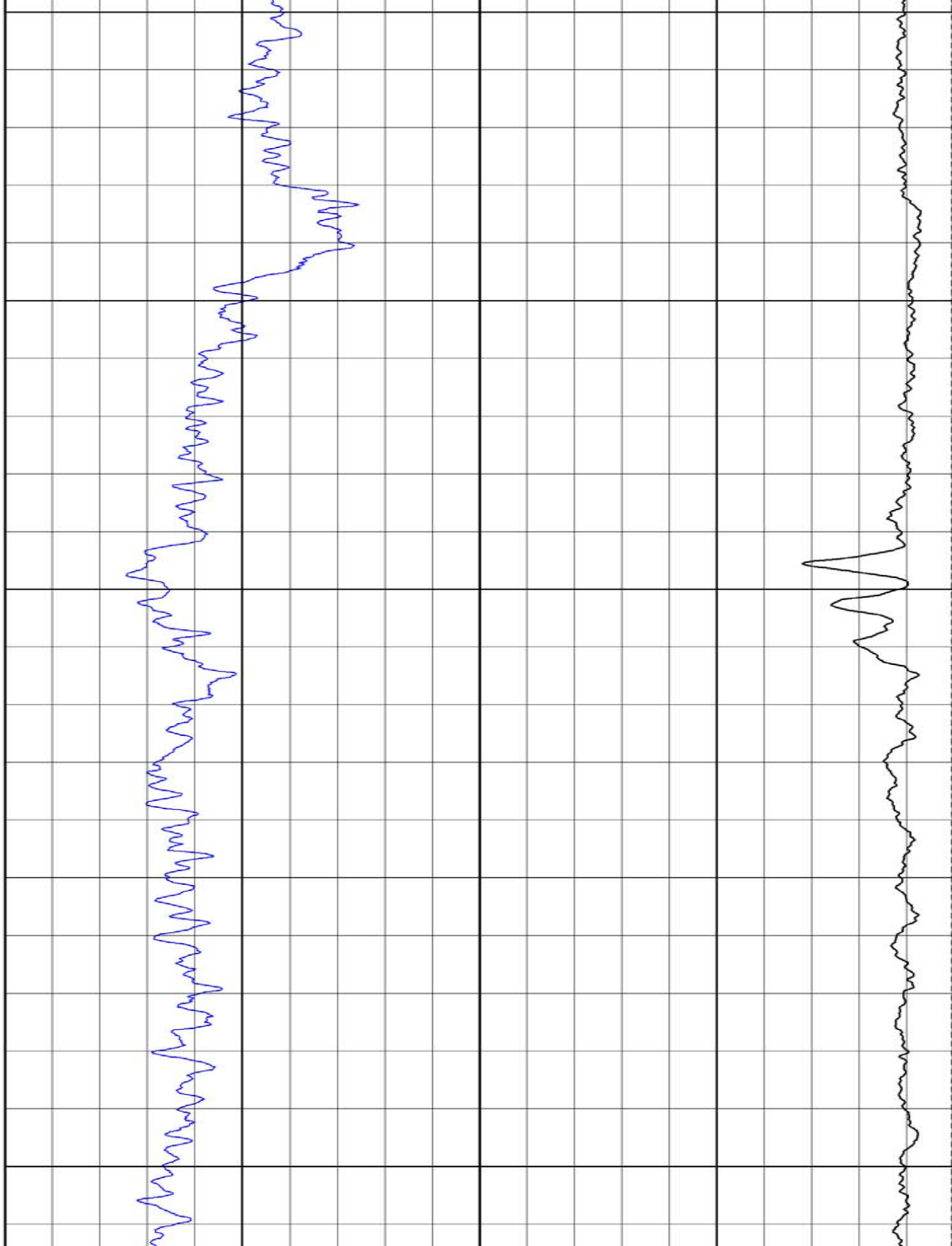
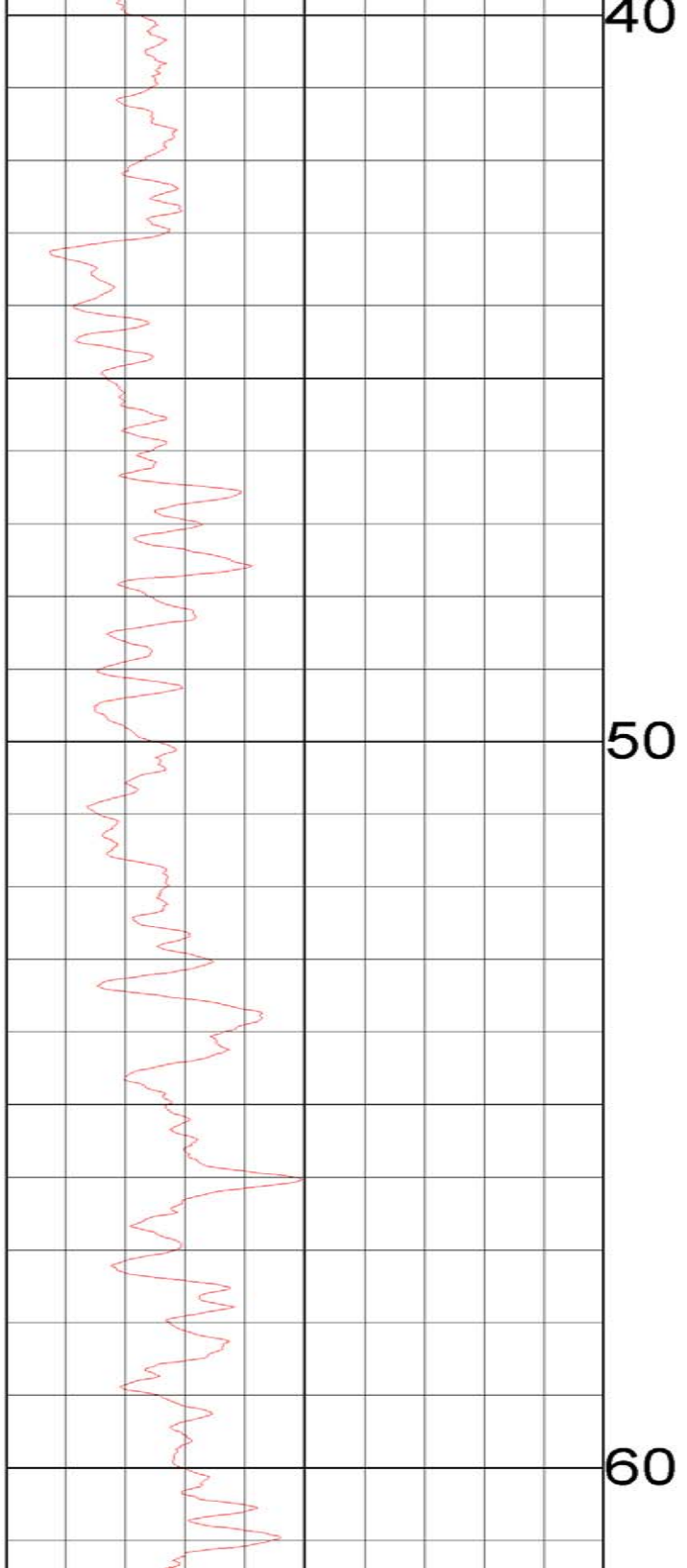
GAMMA		METERS
150	API-GR	300
GAMMA		
0	API-GR	150

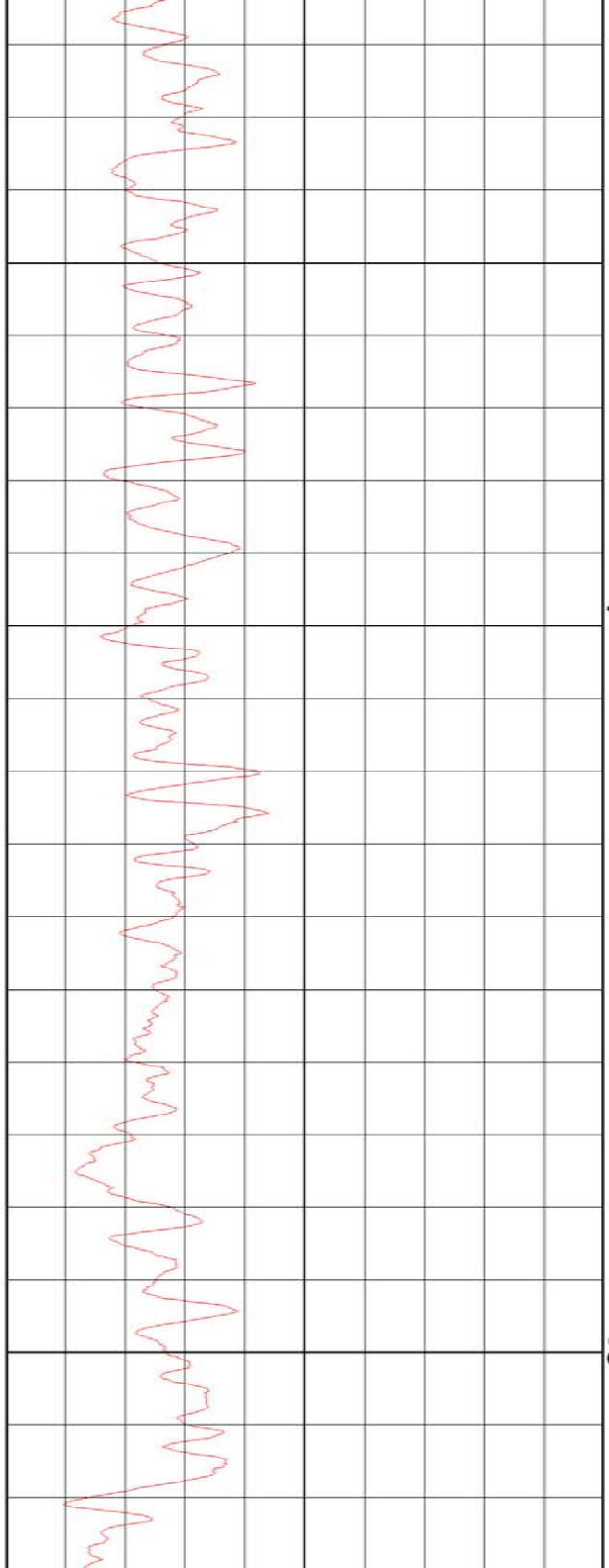


NEUTRON			GAM-GAMH		
875	API-N	2500	80000	CPS	45000
NEUTRON			GAM-GAMH		
50	API-N	875	45000	CPS	8750



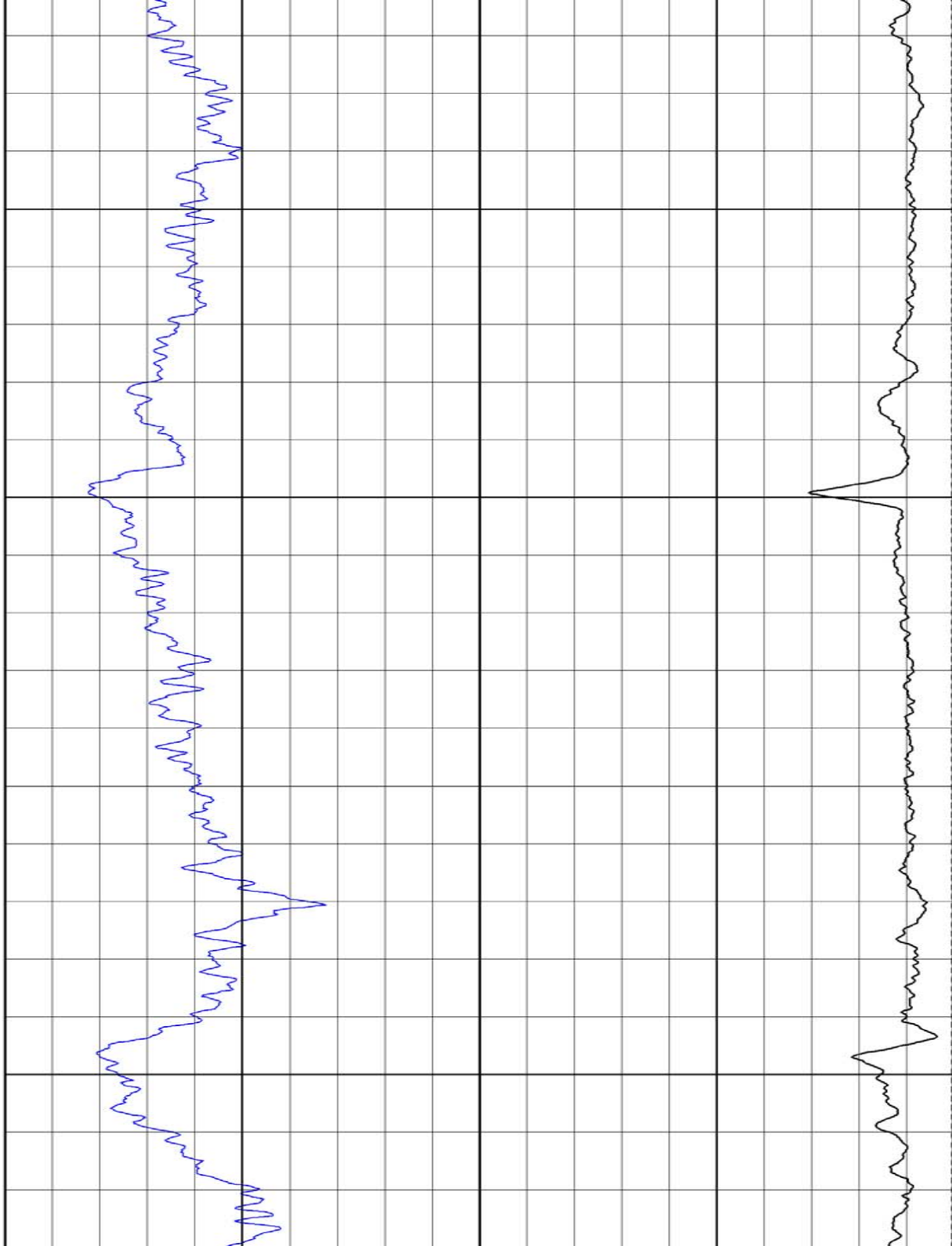


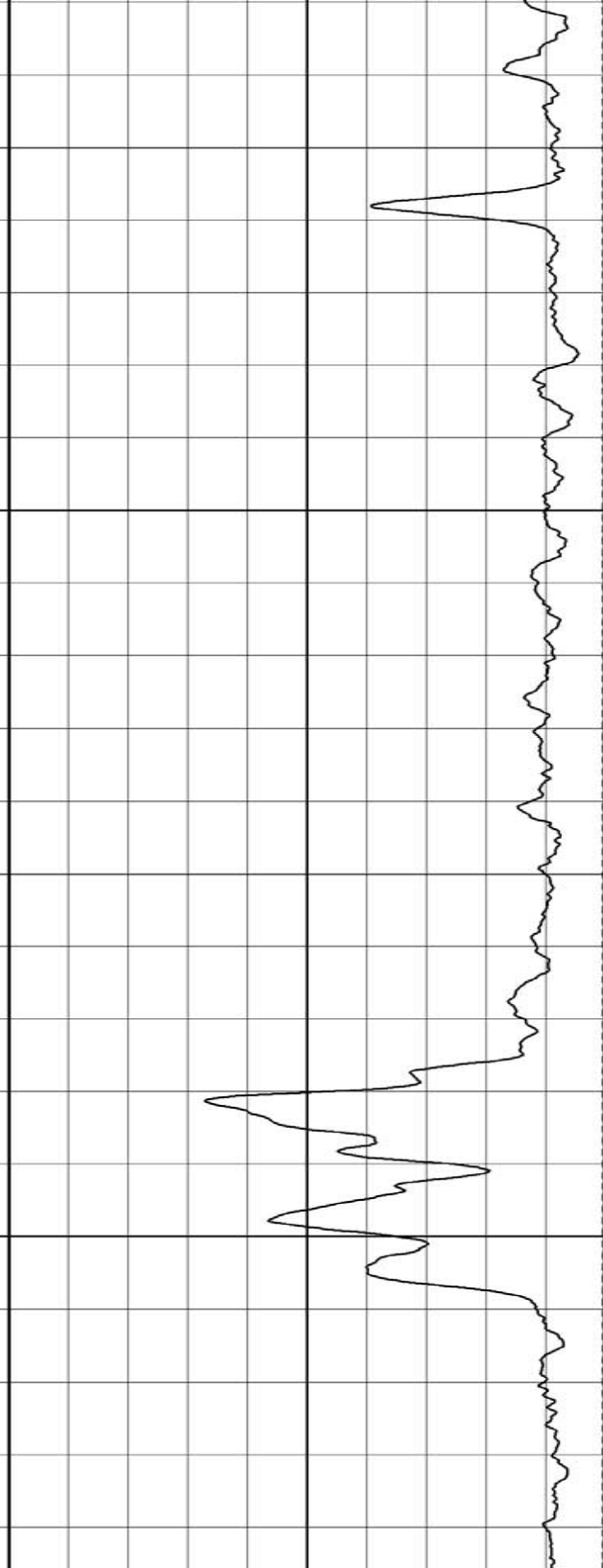
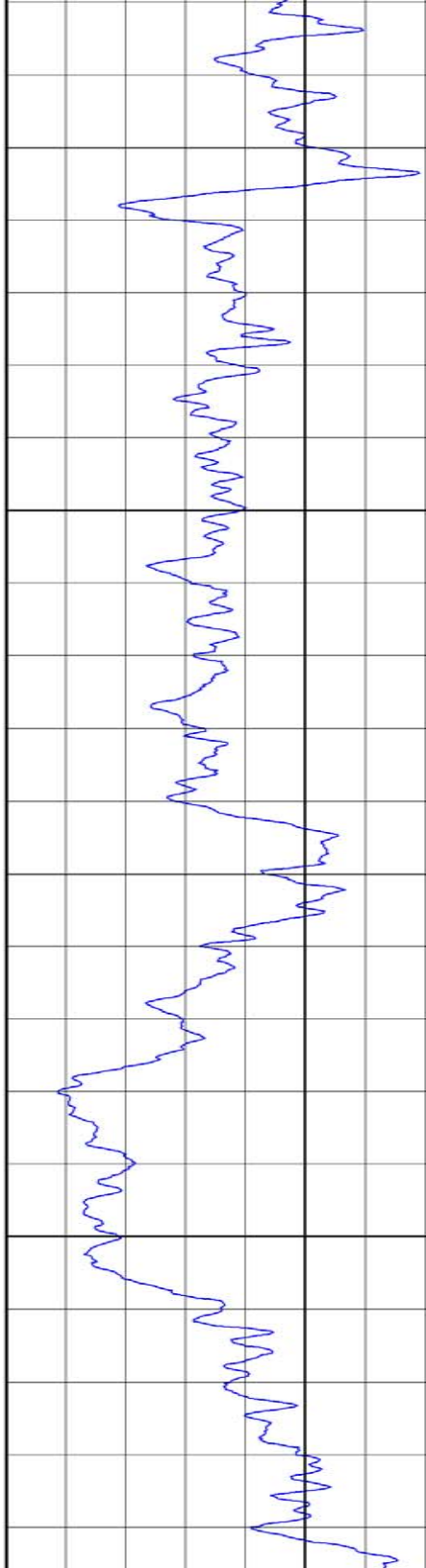
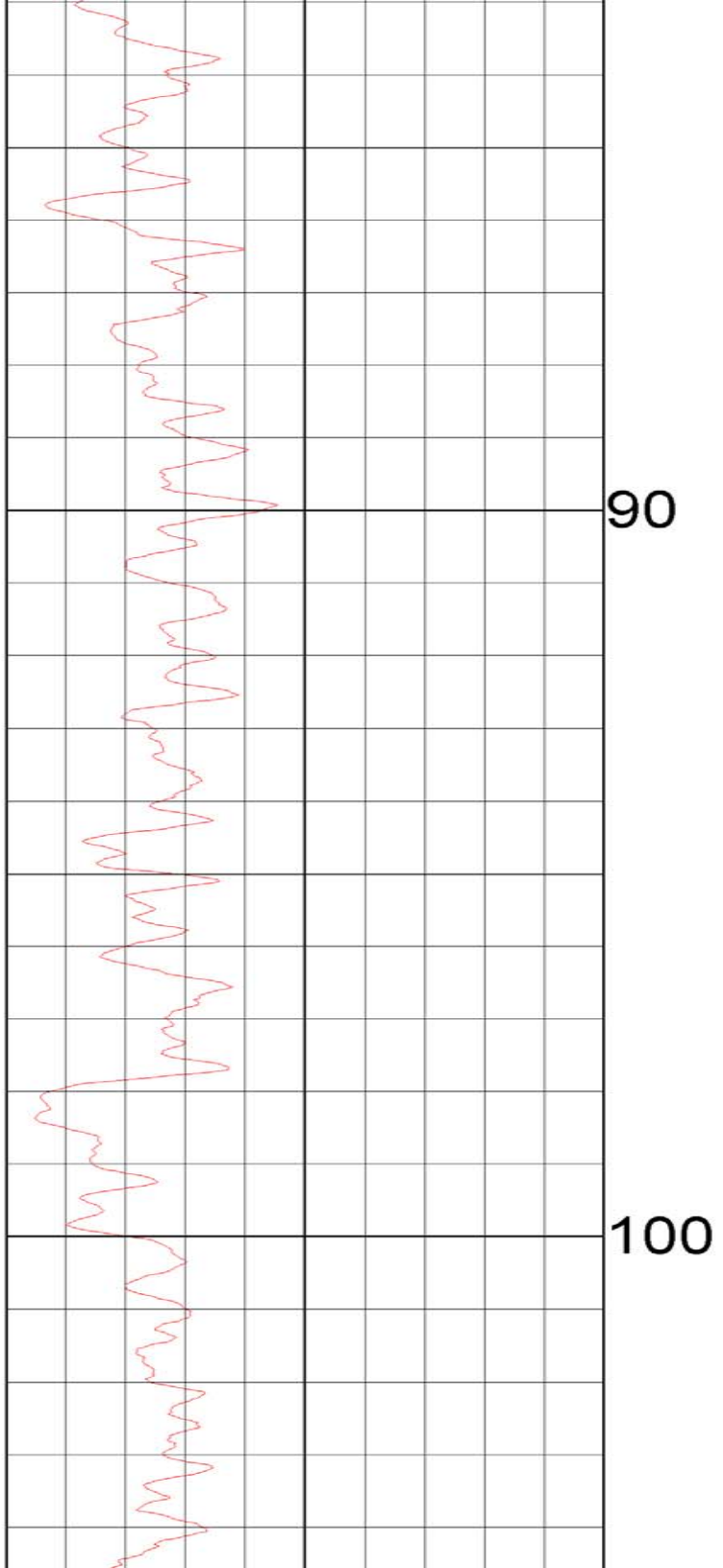


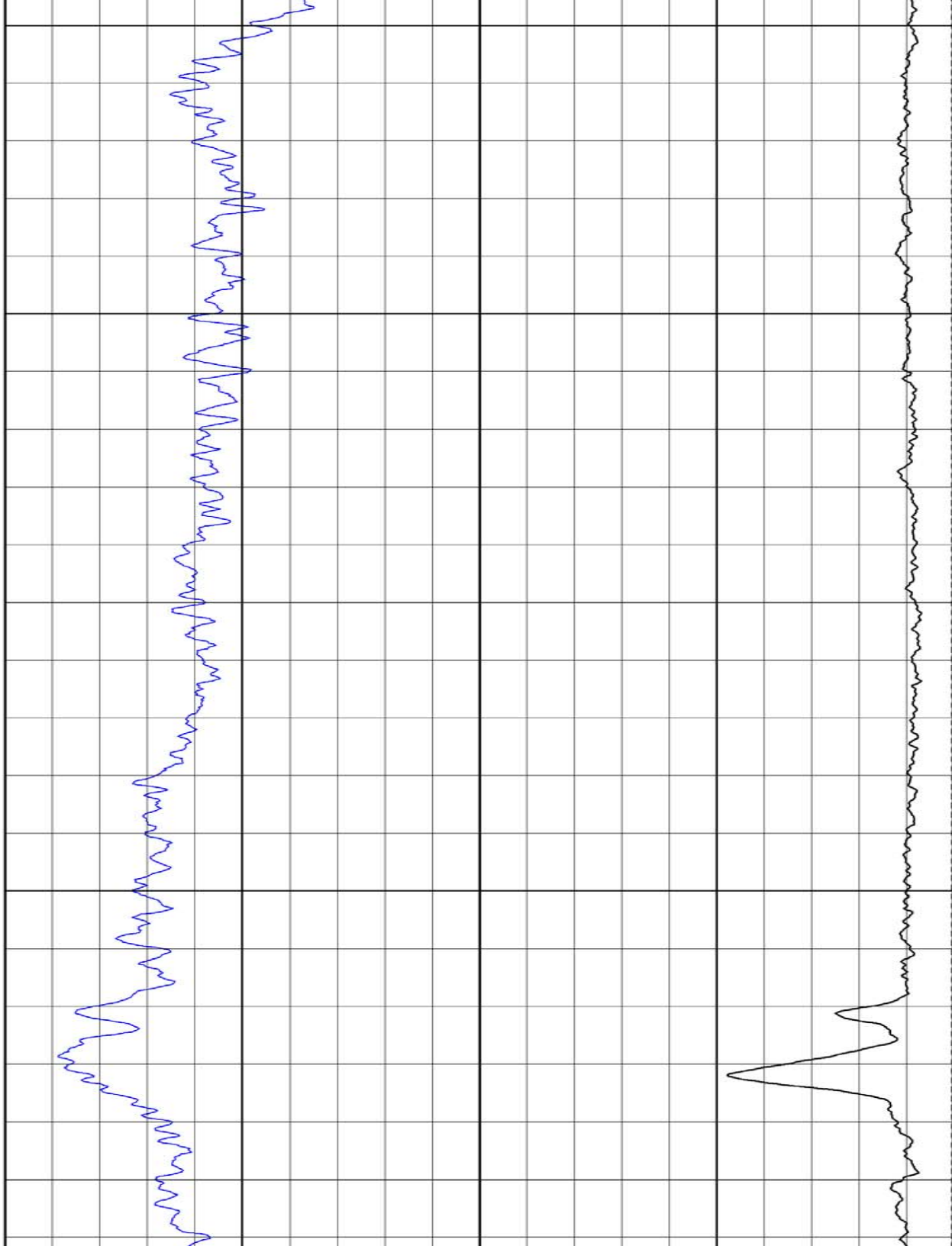
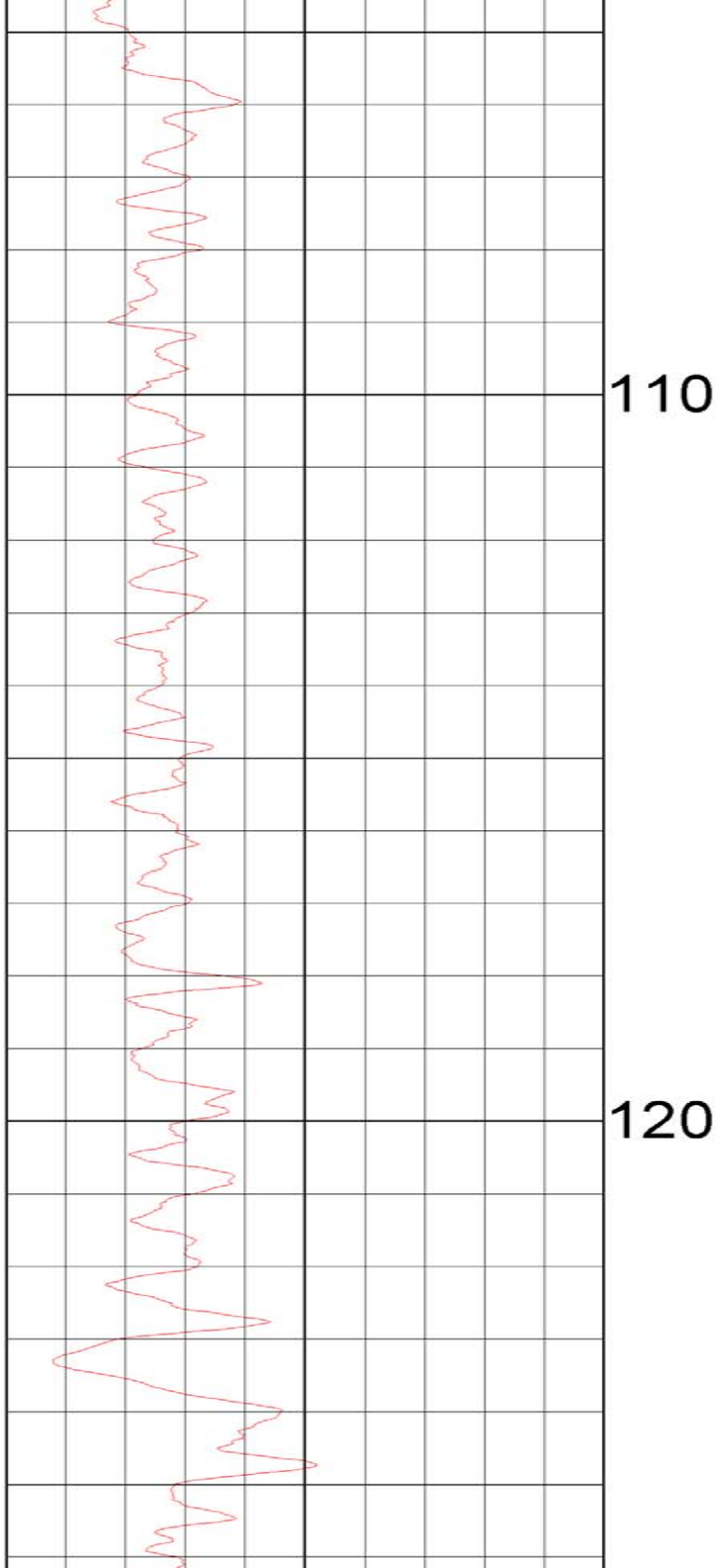


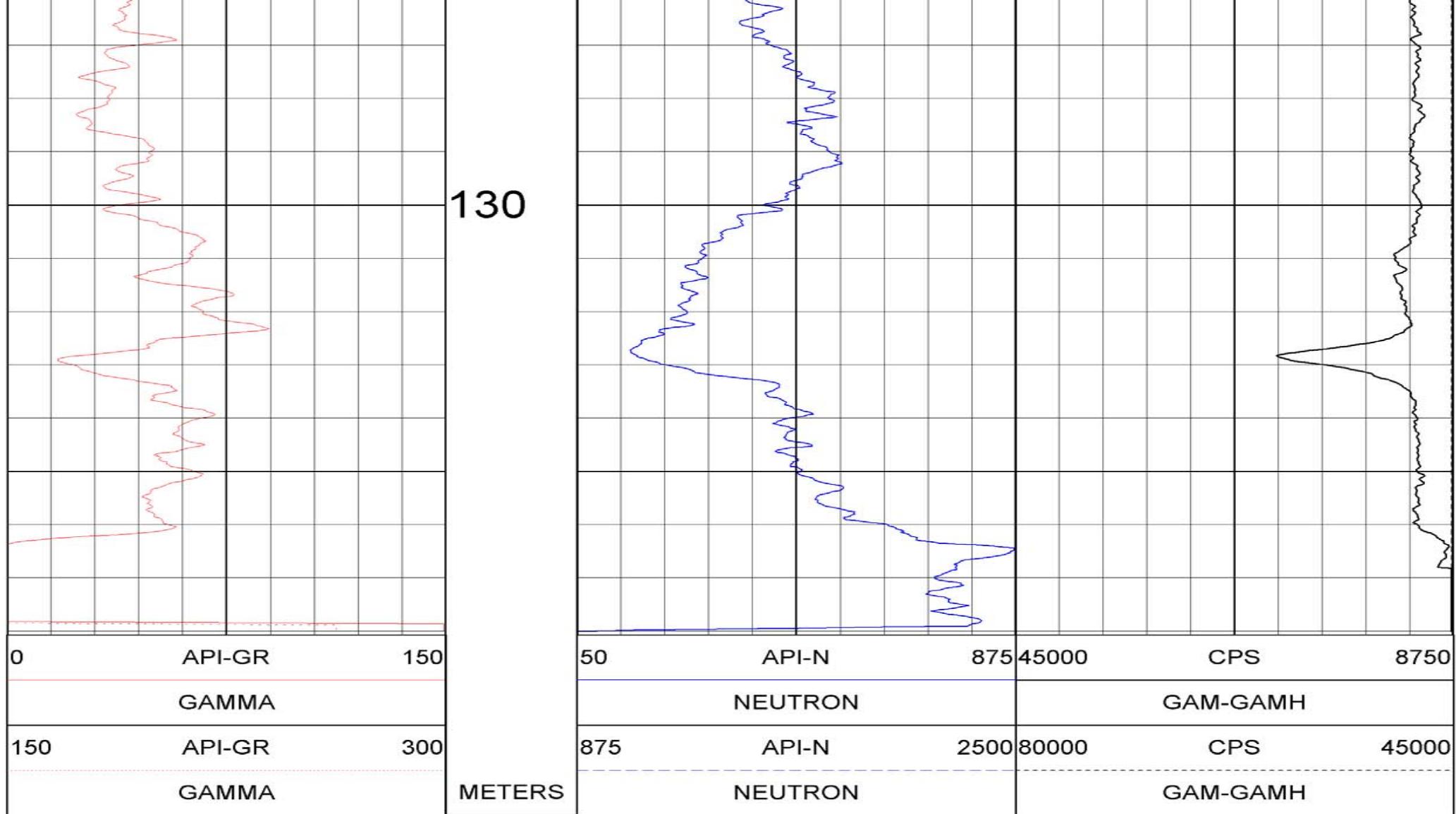
70

80









▲ GAMMA - NEUTRON - GAMMA-DENSITY 05 014 11/14/05 ▲

LOG PARAMETERS

MATRIX DENSITY : 2.65

NEUTRON MATRIX : SANDSTONE

MATRIX DELTA T : 140

MAGNETIC DECL : 23

ELECT. CUTOFF : 50000

BIT SIZE : 9.60

PRESENTATION NAME/DATE = 9068A-9067A_fort.0 11/15/2005

TOOL CALIBRATION 05 014 11/14/05 15:46

TOOL 9068A TM VERSION 3200

SERIAL NUMBER 640

	DATE	TIME	SENSOR	STANDARD	RESPONSE
1	Mar06,02	18:27:22	GAMMA Default	[CPS]	Default [CPS]
	Mar06,02	18:27:22	GAMMA 105.000	[API-GR]	46.00 [CPS]
2	Feb22,06	16:07:12	NEUTROI Default	[CPS]	Default [CPS]
	Feb22,06	16:07:12	NEUTROI Default	[CPS]	Default [CPS]



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NEUTRON - GAMMA-DENSITY

05 016

COMPANY : FORTUNE MINERALS OTHER SERVICES:

WELL : 05 016

FIELD : MOUNT KLAPPAN

COUNTY : STATE : BRITISH COLUMBIA

9067
9068

STATE : BRITISH COLUMBIA

LOCATION : 508,832 6,346,347 FROM GPS, NAD83

SECTION :

TOWNSHIP :

RANGE :

API NO. :

UNIQUE WELL ID. :

PERMANENT DATUM : ELEVATION KB : NONE

LOG MEASURED FROM: 0 ELEVATION DF : NONE

DRL MEASURED FROM: ELEVATION GL : 1633

DATE : 11/14/05

DEPTH DRILLER : 150.88

BIT SIZE : 9.60

LOG TOP : 0.27

LOG BOTTOM : 148.45

CASING OD : 7.30

CASING BOTTOM : 150.88

CASING TYPE : PVC

BOREHOLE FLUID : WATER

RM TEMPERATURE :

MUD RES :

MUD WEIGHT :

RECORDED BY : J. SINKWICH

REMARKS 1 : HQ CORE

REMARKS 2 : MEASUREMENTS IN CENTIMETERS & METERS

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

GAMMA - NEUTRON - GAMMA-DENSITY 05 016 11/14/05

LOG PARAMETERS

MATRIX DENSITY : 2.65

NEUTRON MATRIX : SANDSTONE

MATRIX DELTA T : 140

MAGNETIC DECL : 23

ELECT. CUTOFF : 50000

BIT SIZE : 9.60

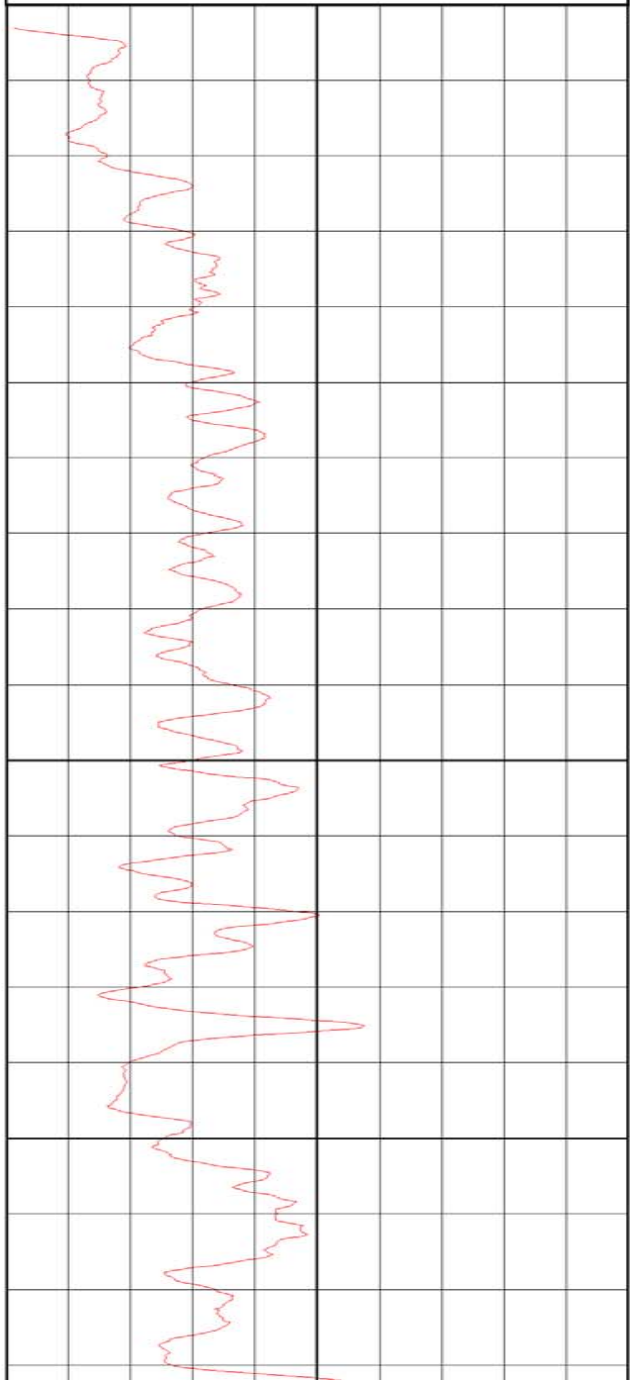
PRESENTATION NAME/DATE = 9068A-9067A_fort.0 11/15/2005

GAMMA		
150	API-GR	300
GAMMA		
0	API-GR	150

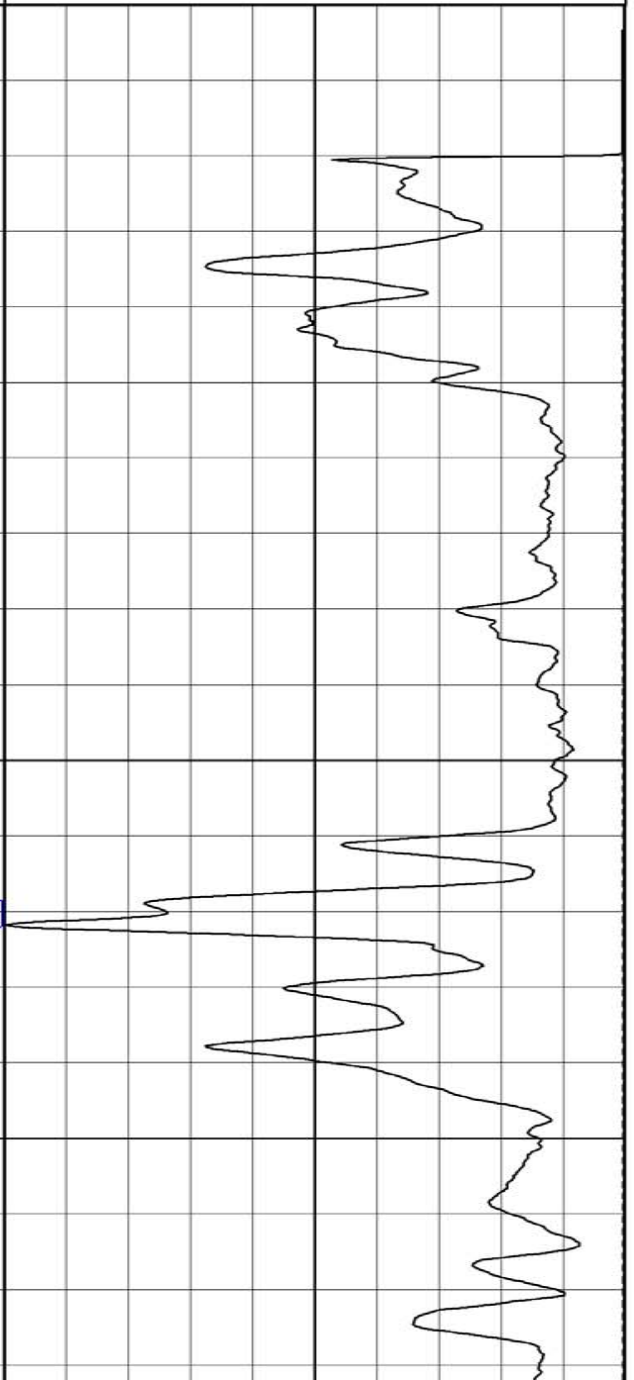
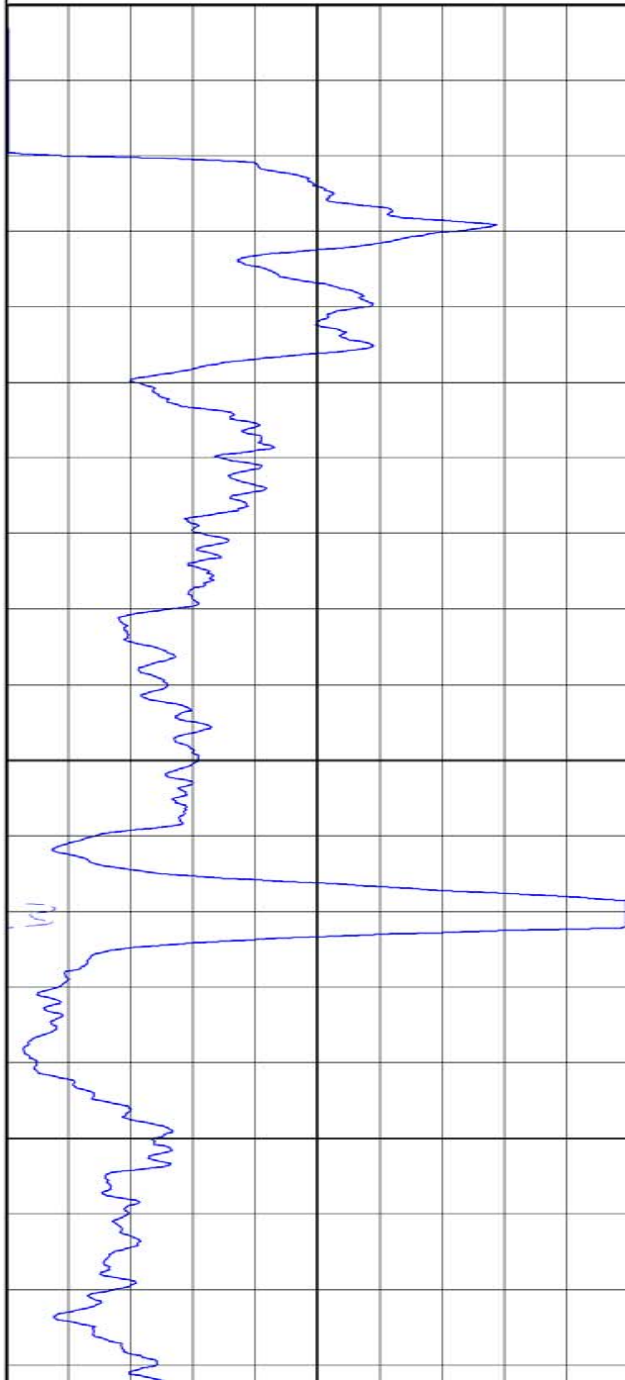
METERS

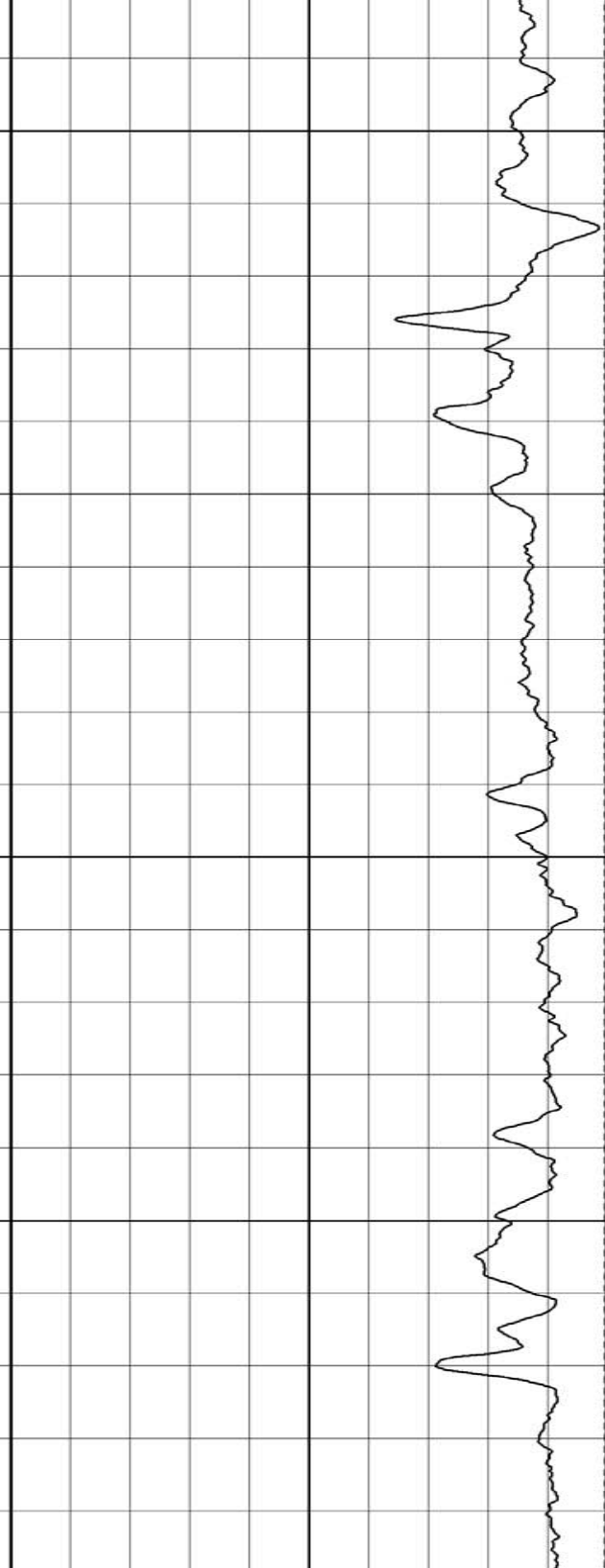
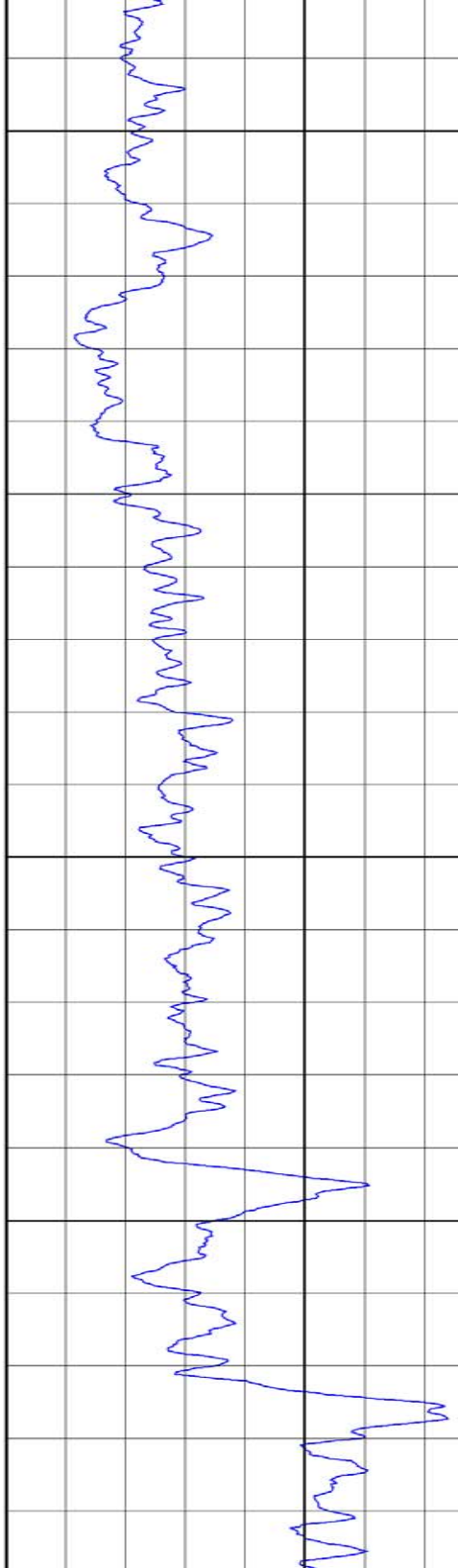
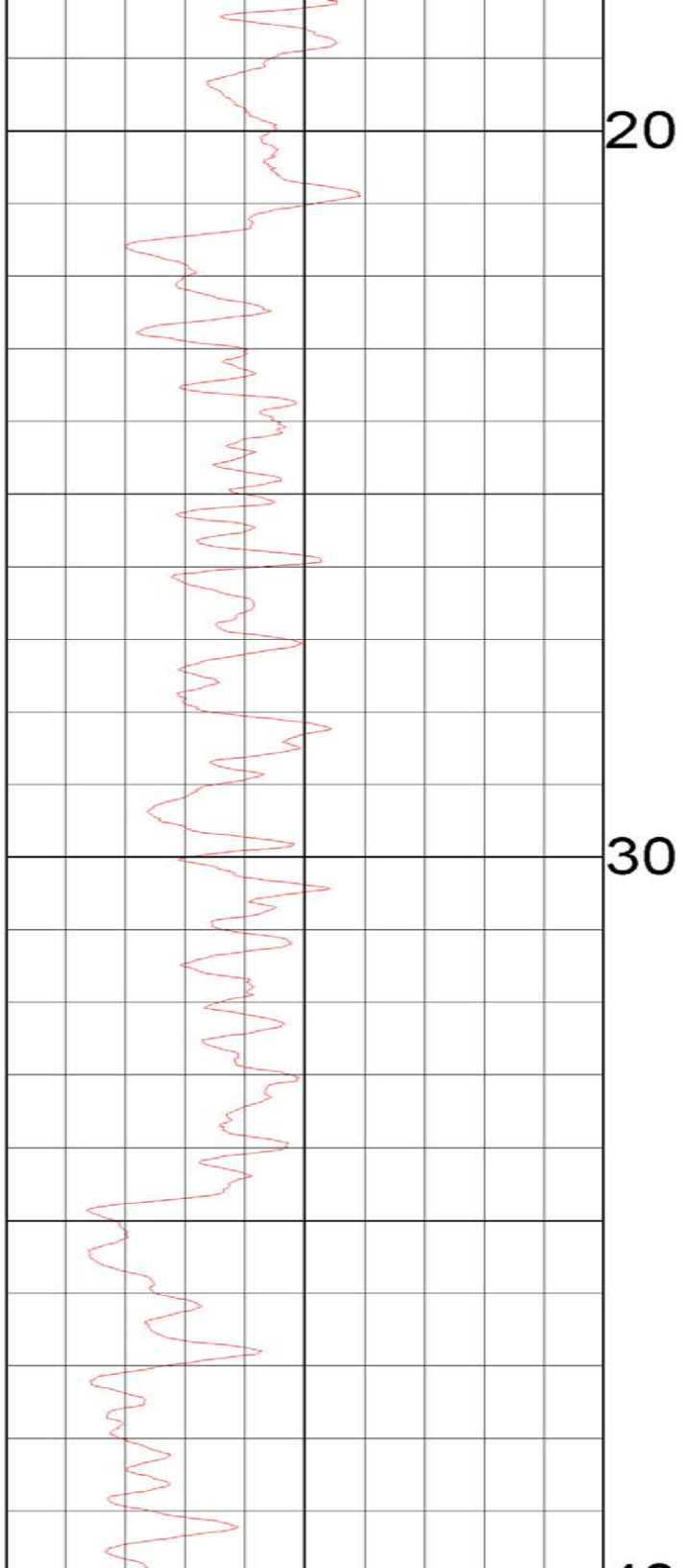
NEUTRON		
875	API-N	2500
NEUTRON		
50	API-N	875

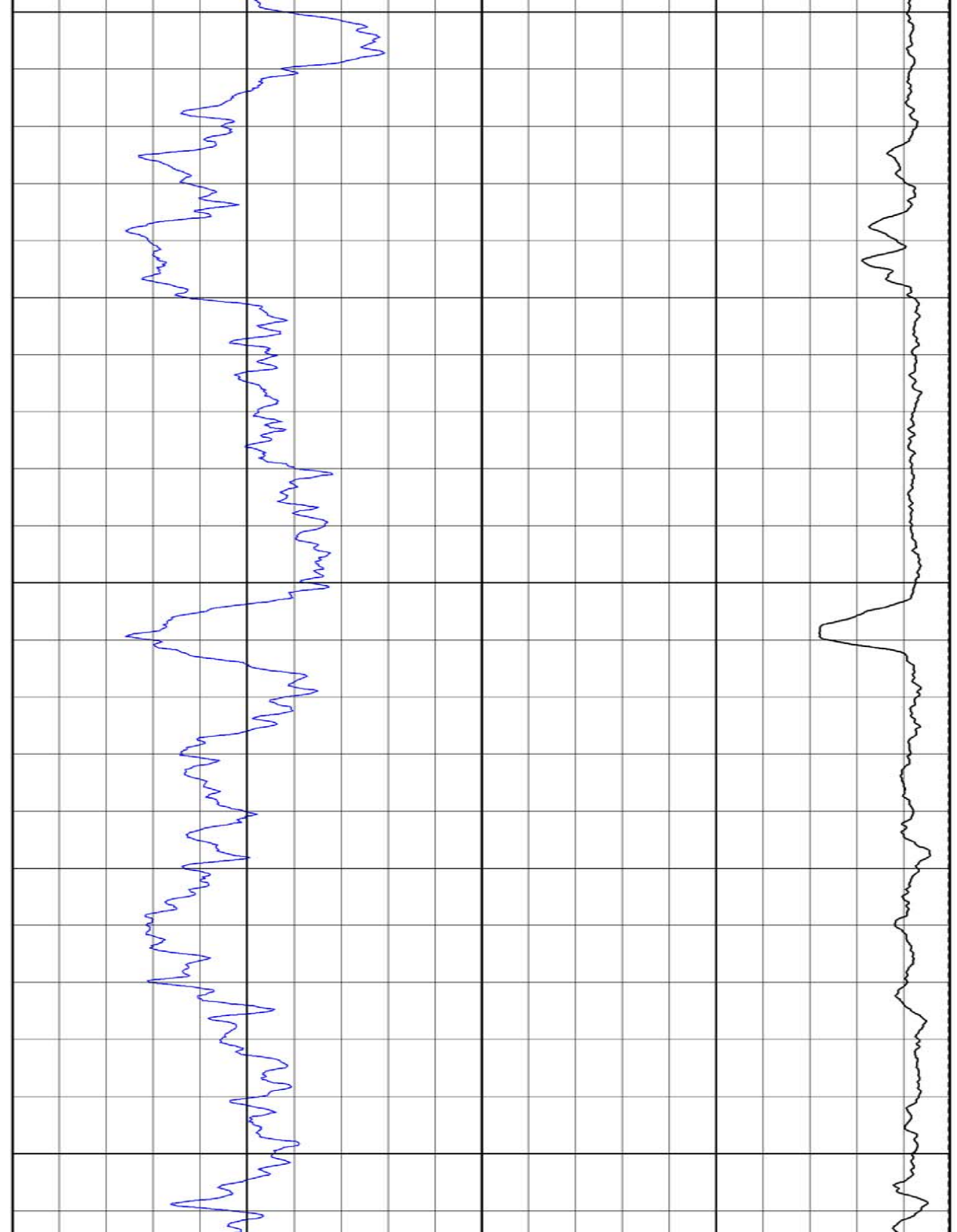
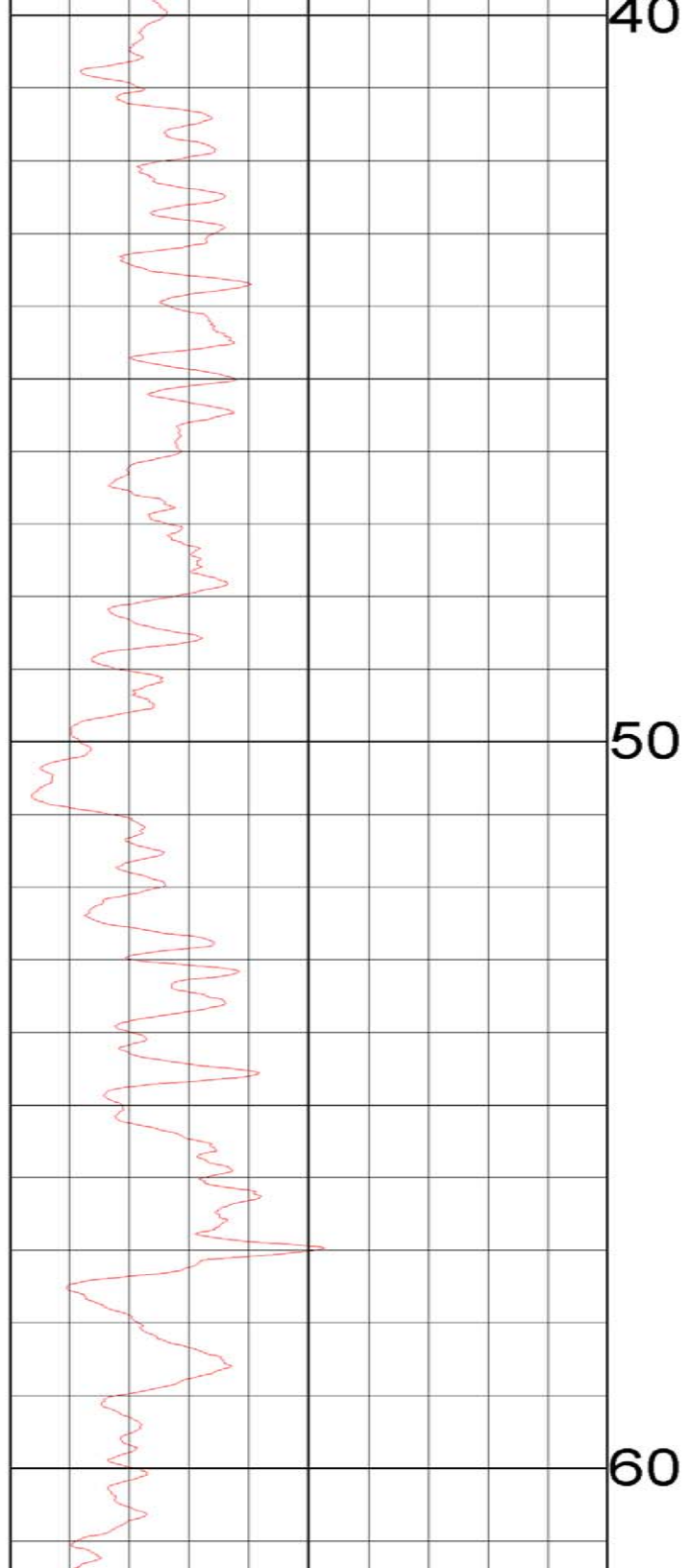
GAM-GAMH		
80000	CPS	53000
GAM-GAMH		
53000	CPS	8750

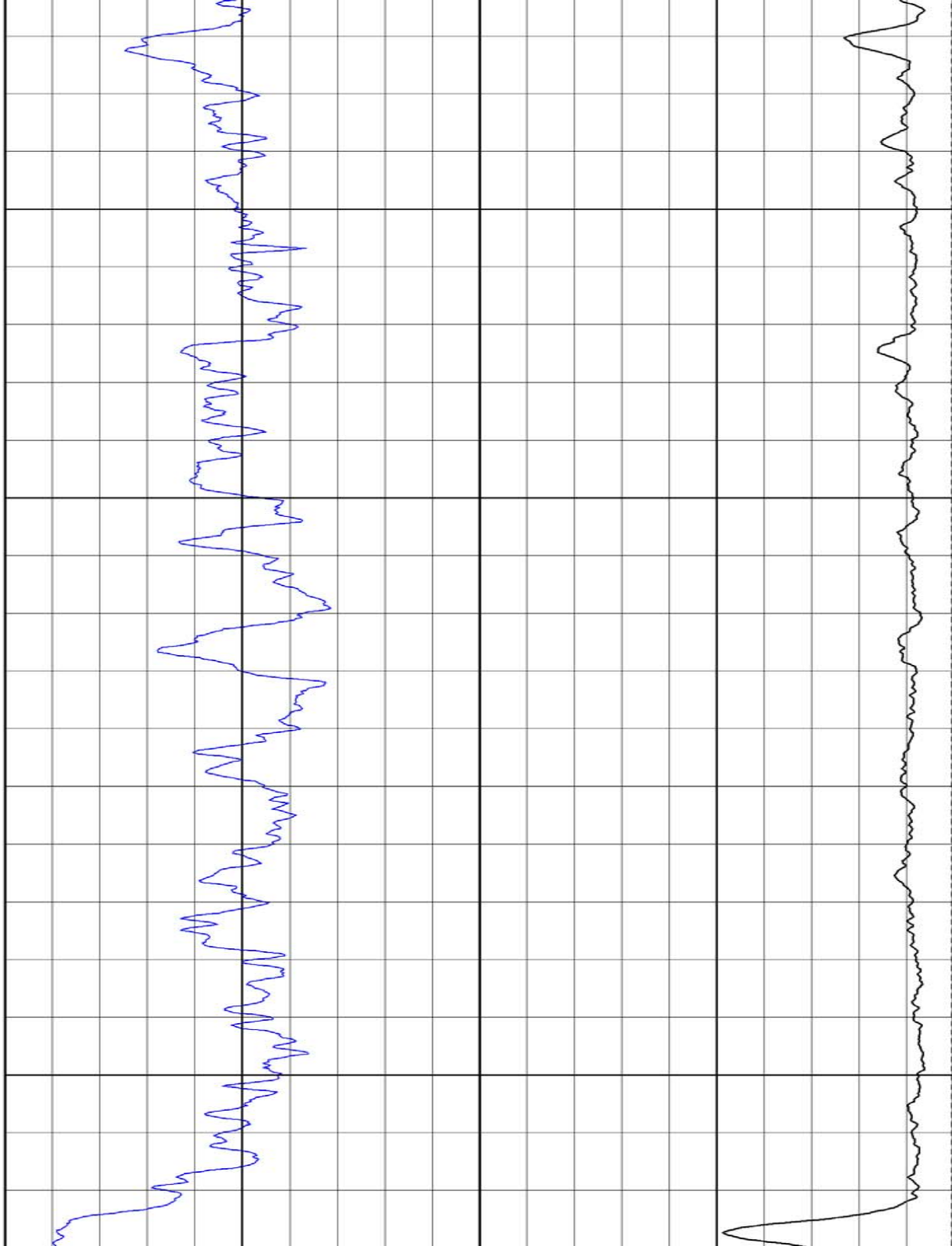
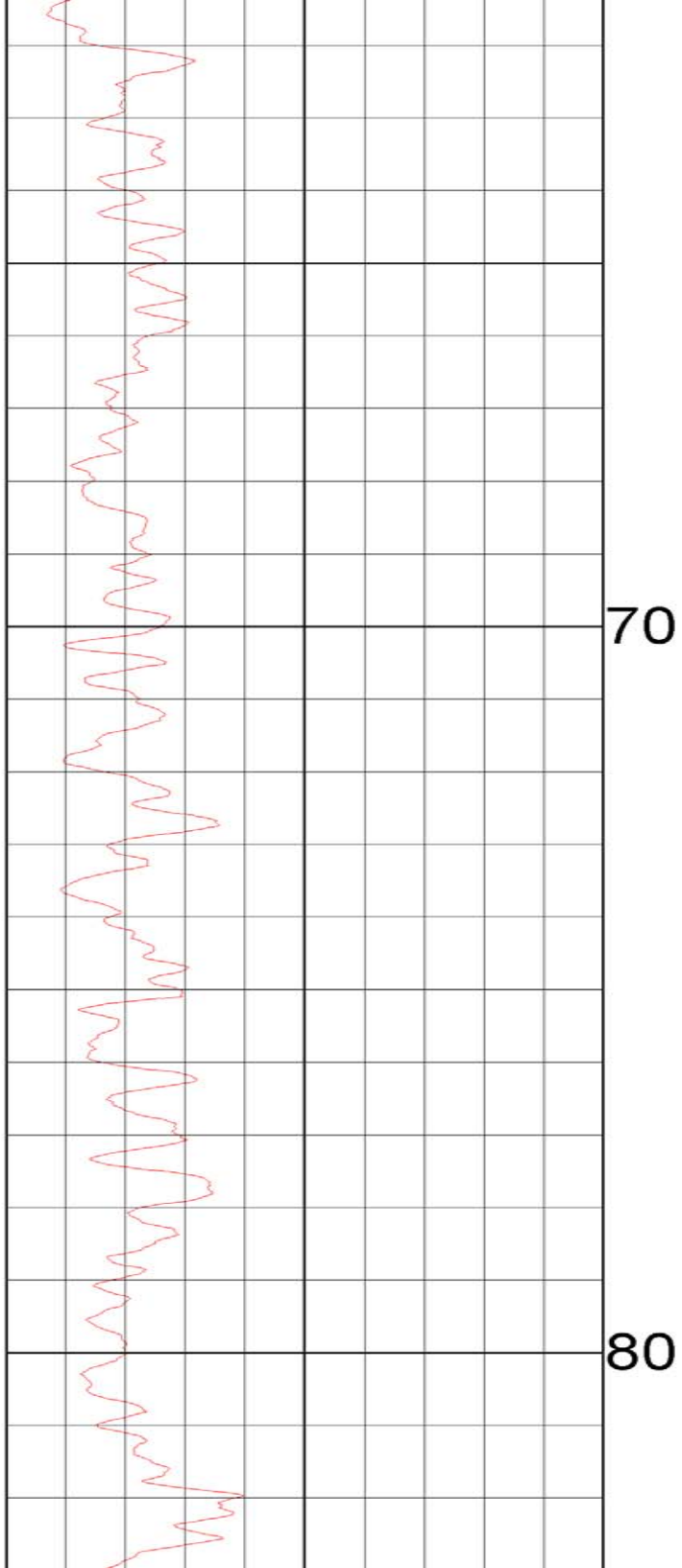


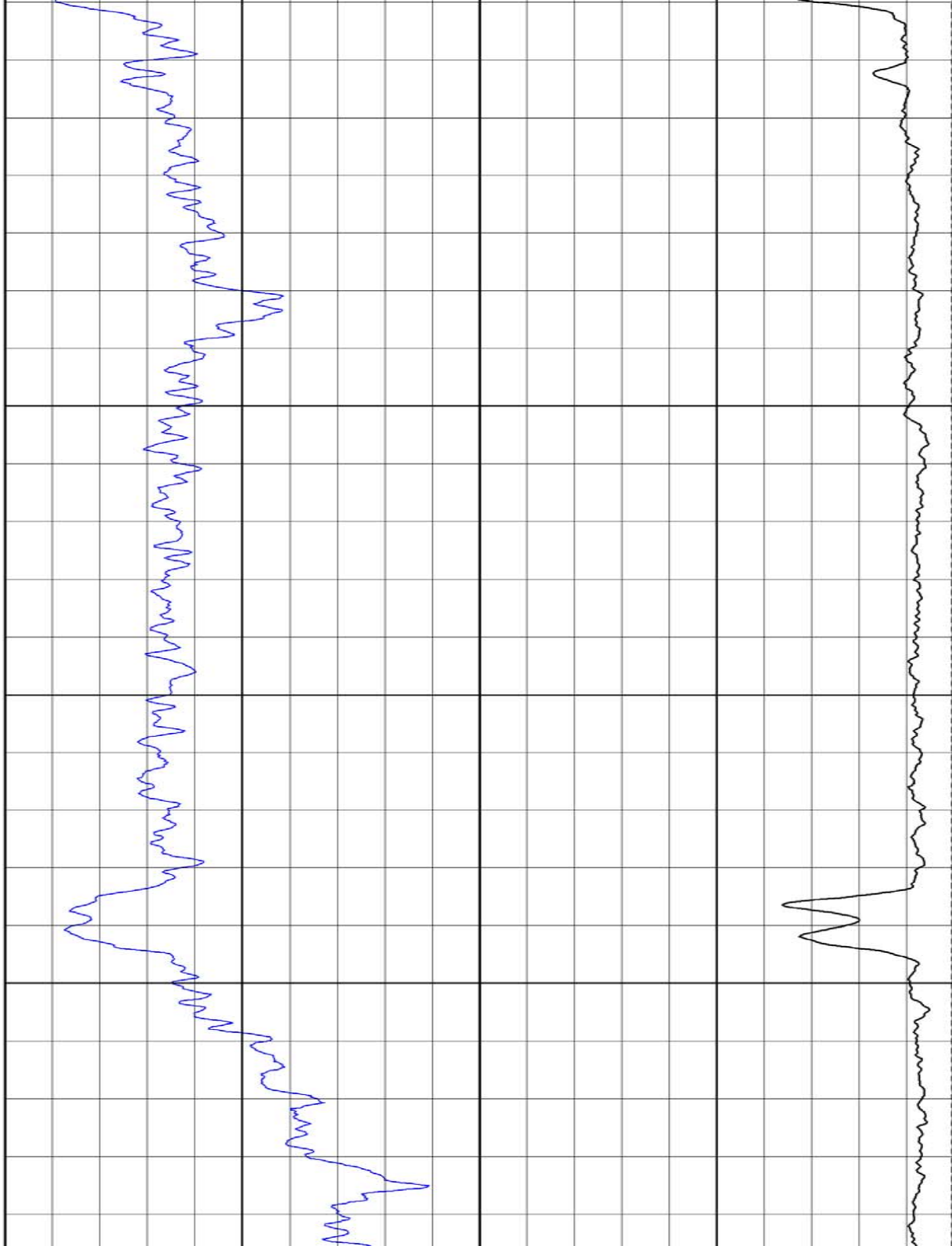
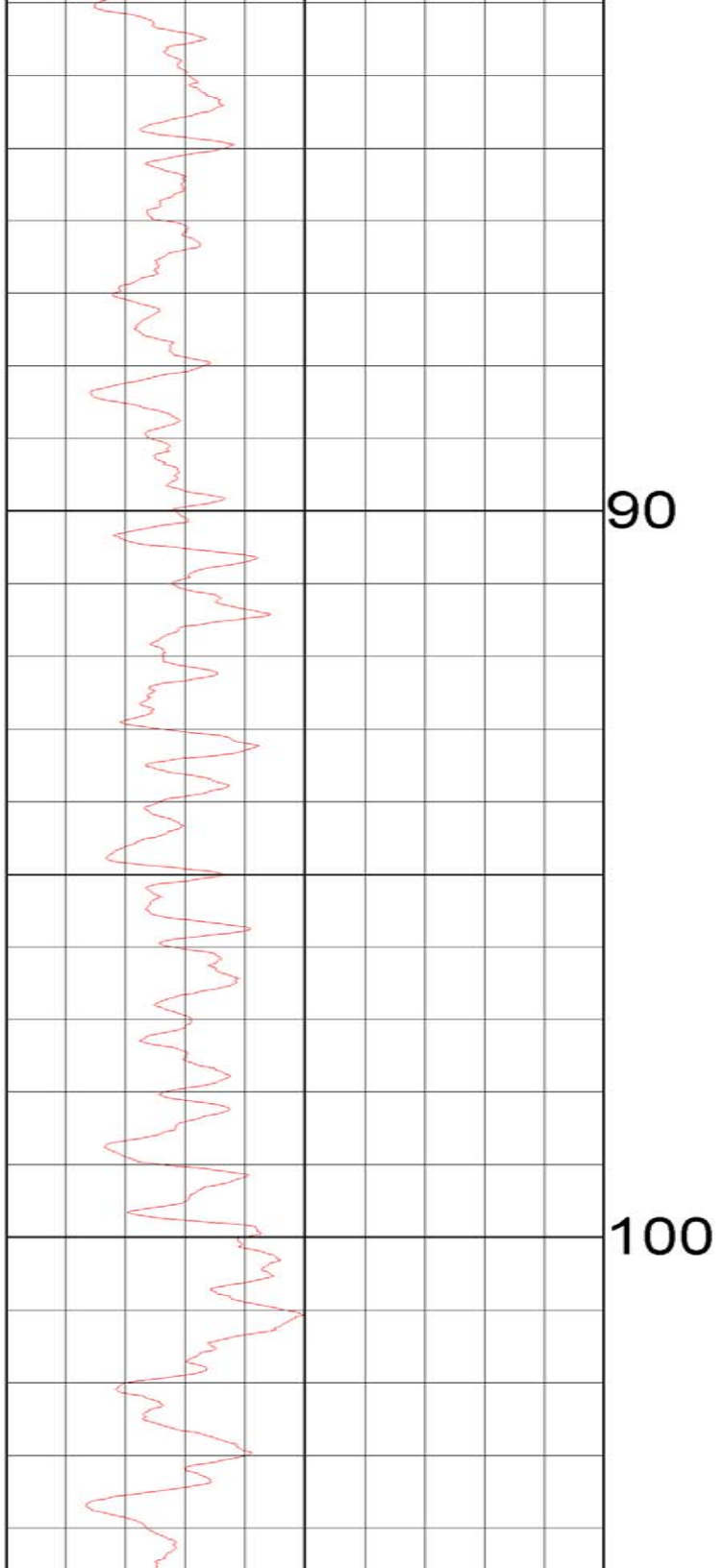
0
10

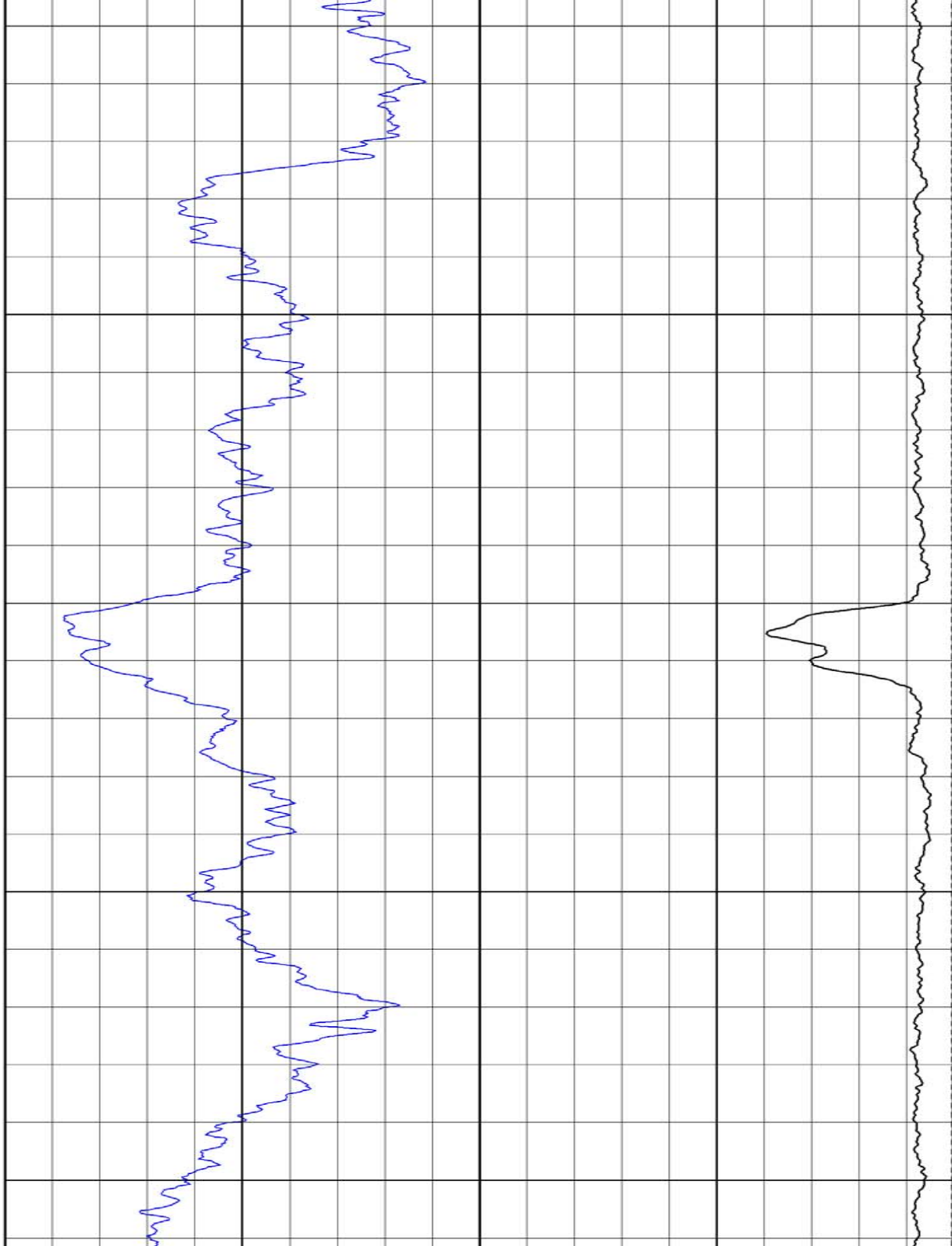
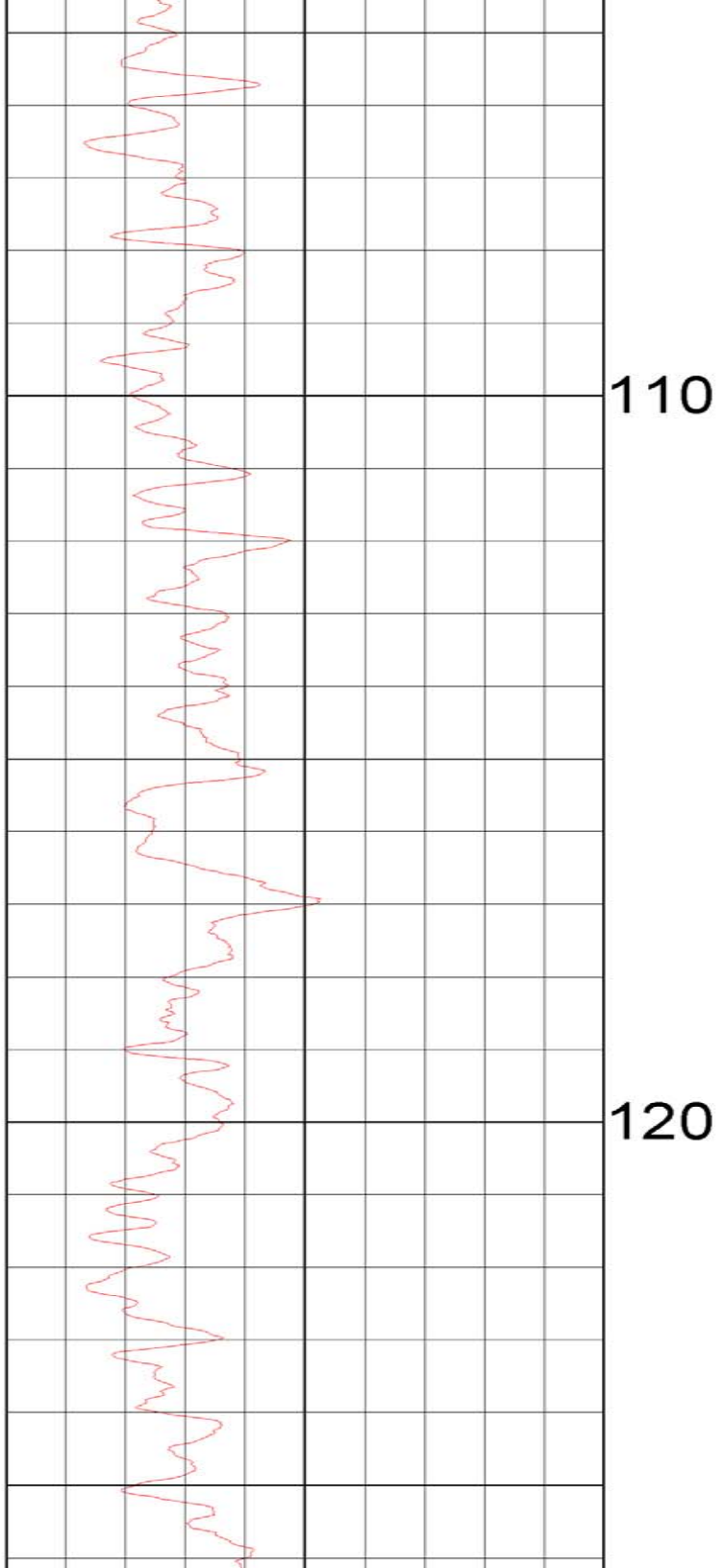


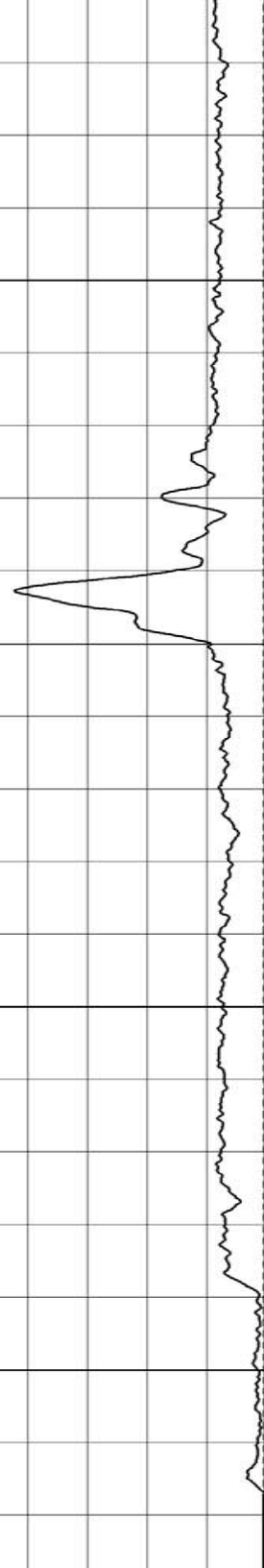
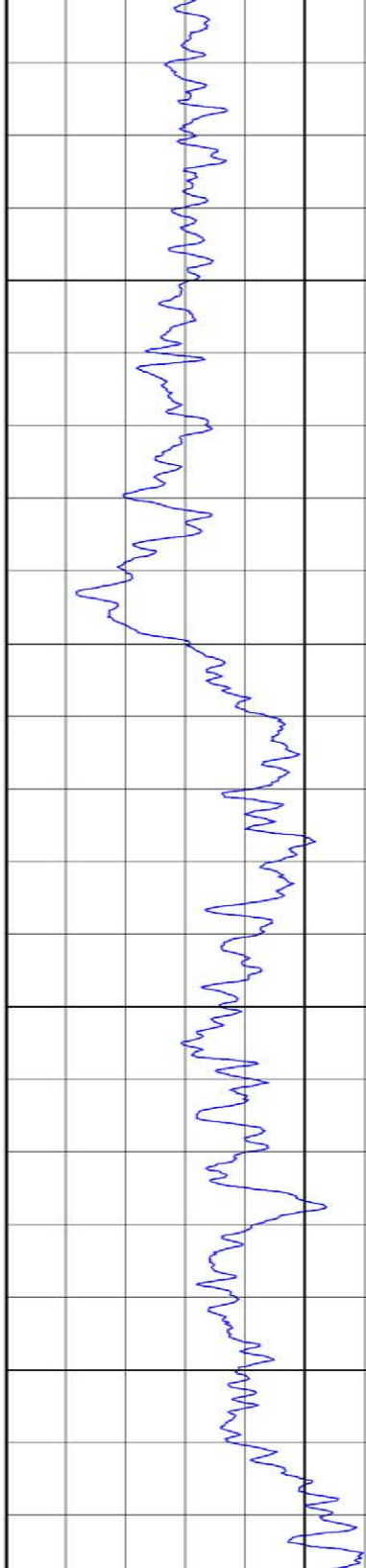
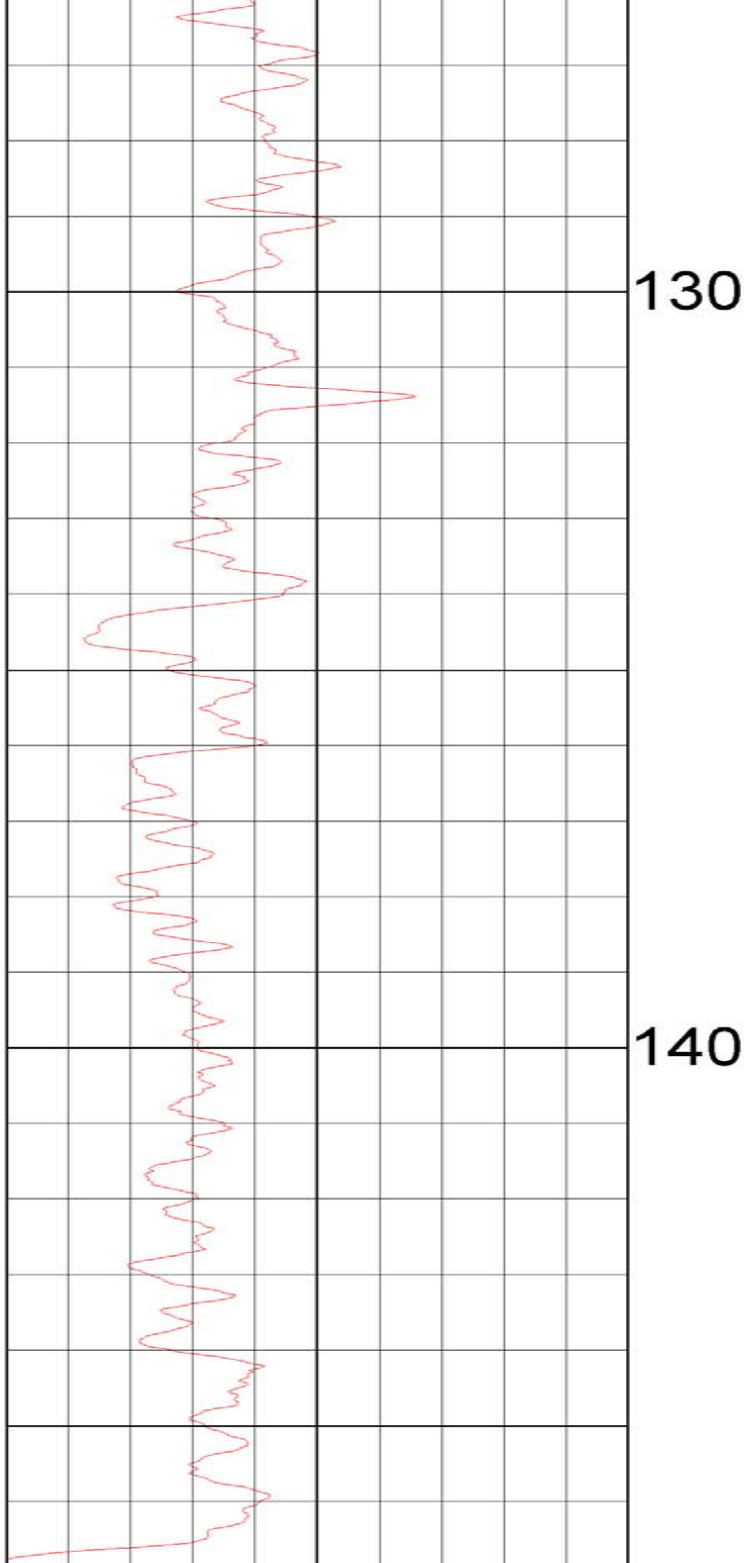












0	API-GR	150	50	API-N	875	53000	CPS	8750
	GAMMA			NEUTRON			GAM-GAMH	
150	API-GR	300	875	API-N	2500	80000	CPS	53000
	GAMMA			NEUTRON			GAM-GAMH	

METERS

▲ GAMMA - NEUTRON - GAMMA-DENSITY 05 016 11/14/05 ▲

LOG PARAMETERS

MATRIX DENSITY : 2.65

NEUTRON MATRIX : SANDSTONE

MATRIX DELTA T : 140

MAGNETIC DECL : 23

ELECT. CUTOFF : 50000

BIT SIZE : 9.60

PRESENTATION NAME/DATE = 9068A-9067A_for.0 11/15/2005

TOOL CALIBRATION 05 016 11/14/05 13:44
 TOOL 9067A TM VERSION 3200
 SERIAL NUMBER 529

	DATE	TIME	SENSOR	STANDARD	RESPONSE
1	Mar01,02	22:09:58	GAMMA Default	[CPS]	Default [CPS]
	Mar01,02	22:09:58	GAMMA 105.000	[API-GR]	53.00 [CPS]
2	Feb22,06	16:07:12	NEUTROI Default	[CPS]	Default [CPS]
	Feb22,06	16:07:12	NEUTROI Default	[CPS]	Default [CPS]



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NEUTRON - GAMMA-DENSITY

05 019

COMPANY : FORTUNE MINERALS OTHER SERVICES:

WELL : 05 019

FIELD : MOUNT KLAPPAN

COUNTY : STATE : BRITISH COLUMBIA

9067
9068

STATE : BRITISH COLUMBIA

LOCATION : 507,757 6,346,115 FROM GPS, NAD83

SECTION :

TOWNSHIP :

RANGE :

API NO. :

UNIQUE WELL ID. :

PERMANENT DATUM : ELEVATION KB : NONE

LOG MEASURED FROM: 0 ELEVATION DF : NONE

DRL MEASURED FROM: ELEVATION GL : 1465

DATE : 11/14/05

DEPTH DRILLER : 103.63

BIT SIZE : 9.60

LOG TOP : 0.26

LOG BOTTOM : 101.13

CASING OD : 7.30

CASING BOTTOM : 103.63

CASING TYPE : PVC

BOREHOLE FLUID : WATER

RM TEMPERATURE :

MUD RES :

MUD WEIGHT :

RECORDED BY : J. SINKWICH

REMARKS 1 : HQ CORE WATER LEVEL: 7M

REMARKS 2 : MEASUREMENTS IN CENTIMETERS & METERS

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

GAMMA - NEUTRON - GAMMA-DENSITY 05 019 11/14/05

LOG PARAMETERS

MATRIX DENSITY : 2.65

NEUTRON MATRIX : SANDSTONE

MATRIX DELTA T : 140

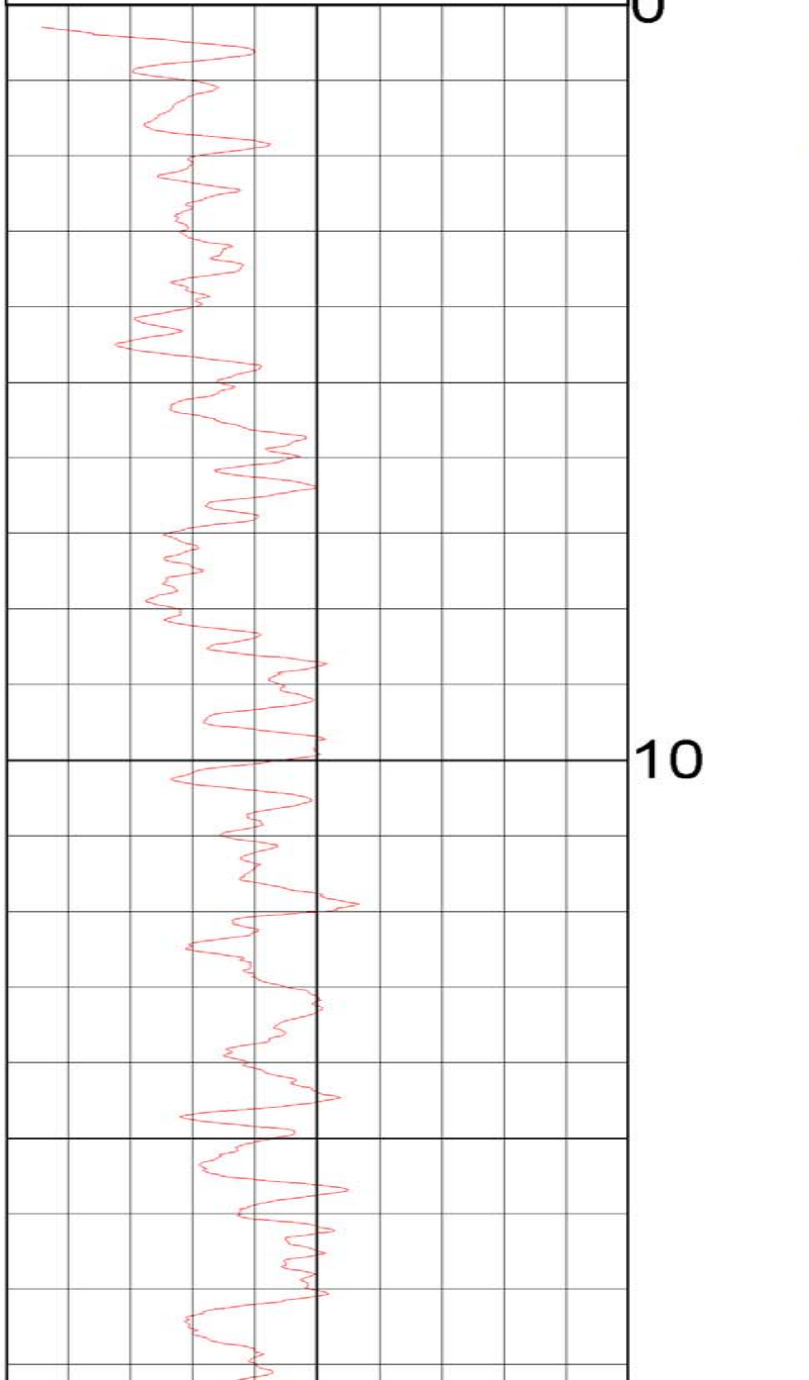
MAGNETIC DECL : 23

ELECT. CUTOFF : 50000

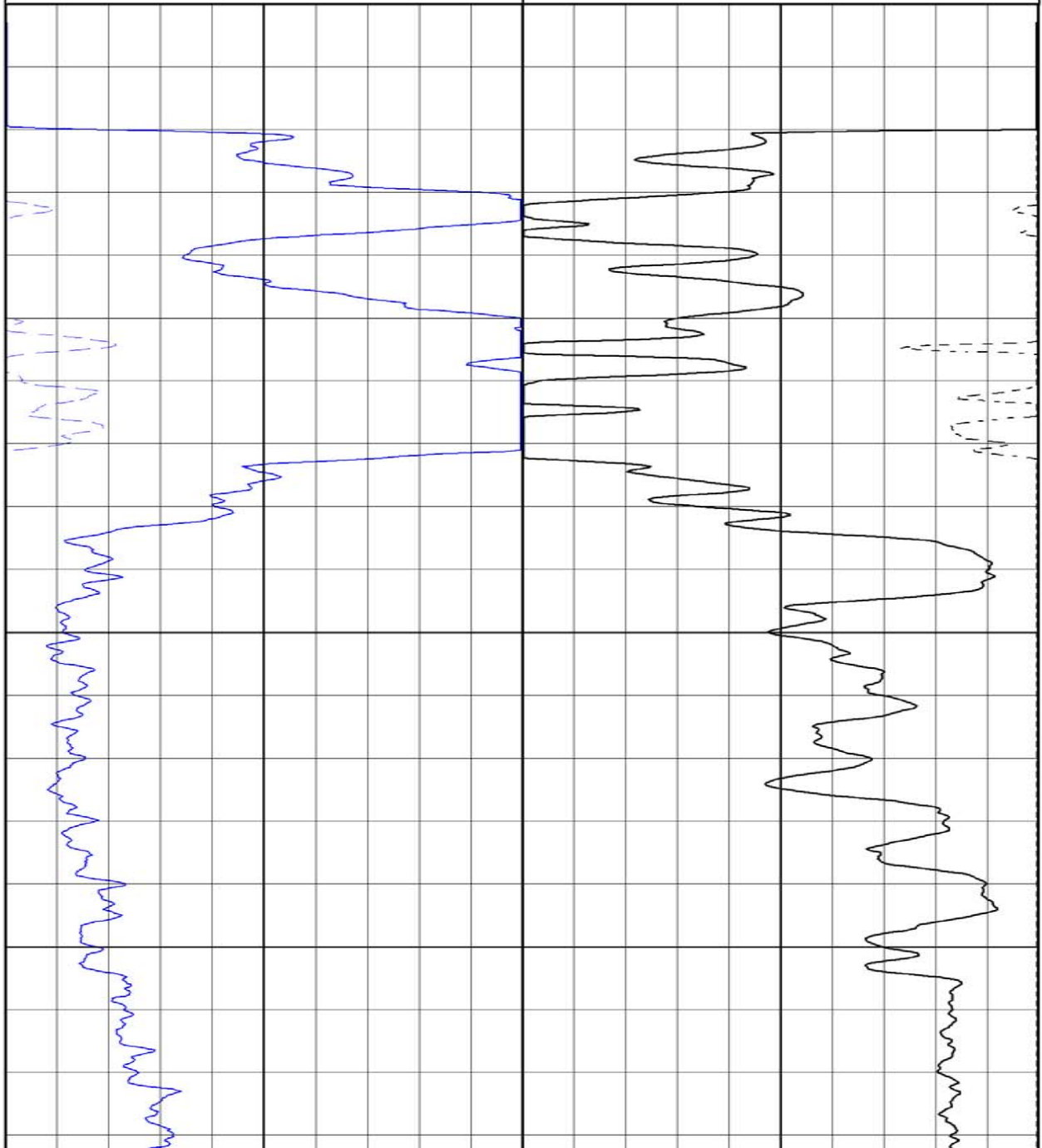
BIT SIZE : 9.60

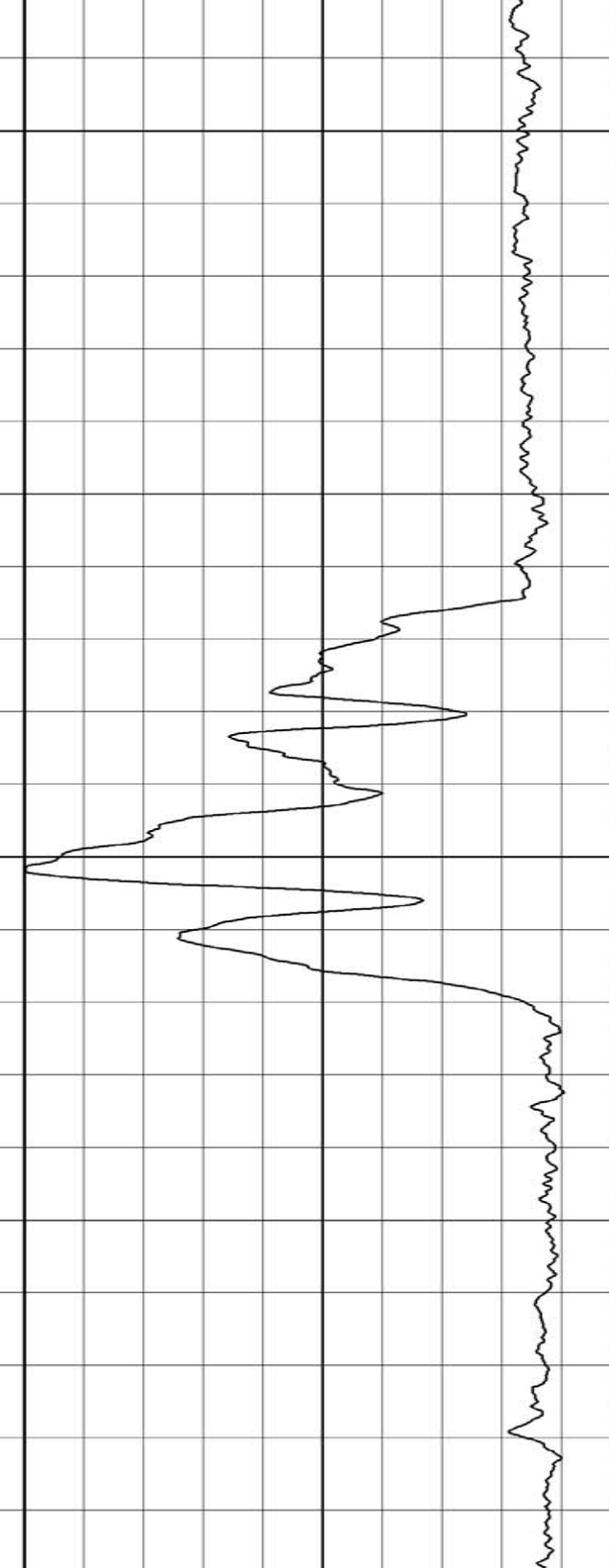
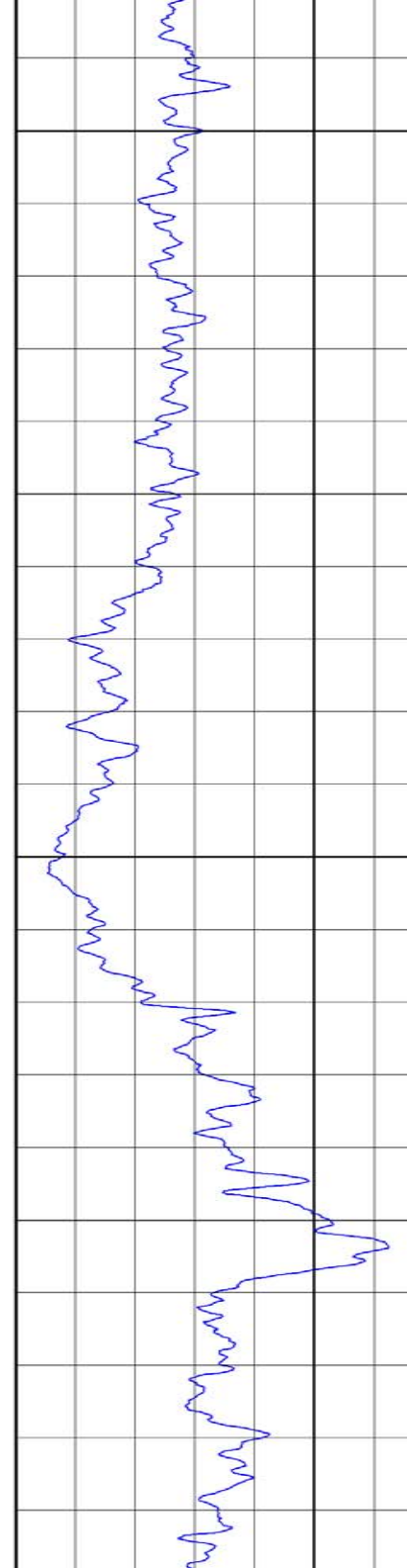
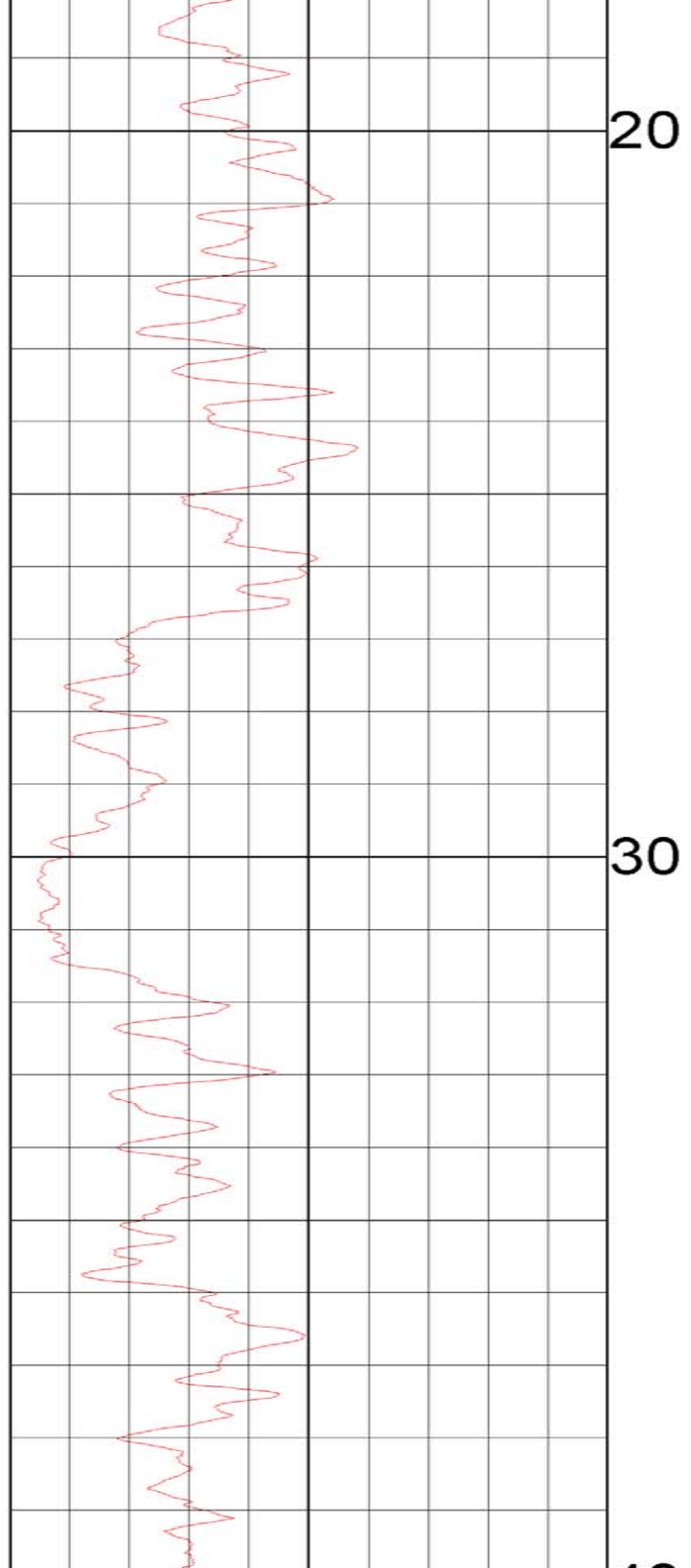
PRESENTATION NAME/DATE = 9068A-9067A_fort.0 11/15/2005

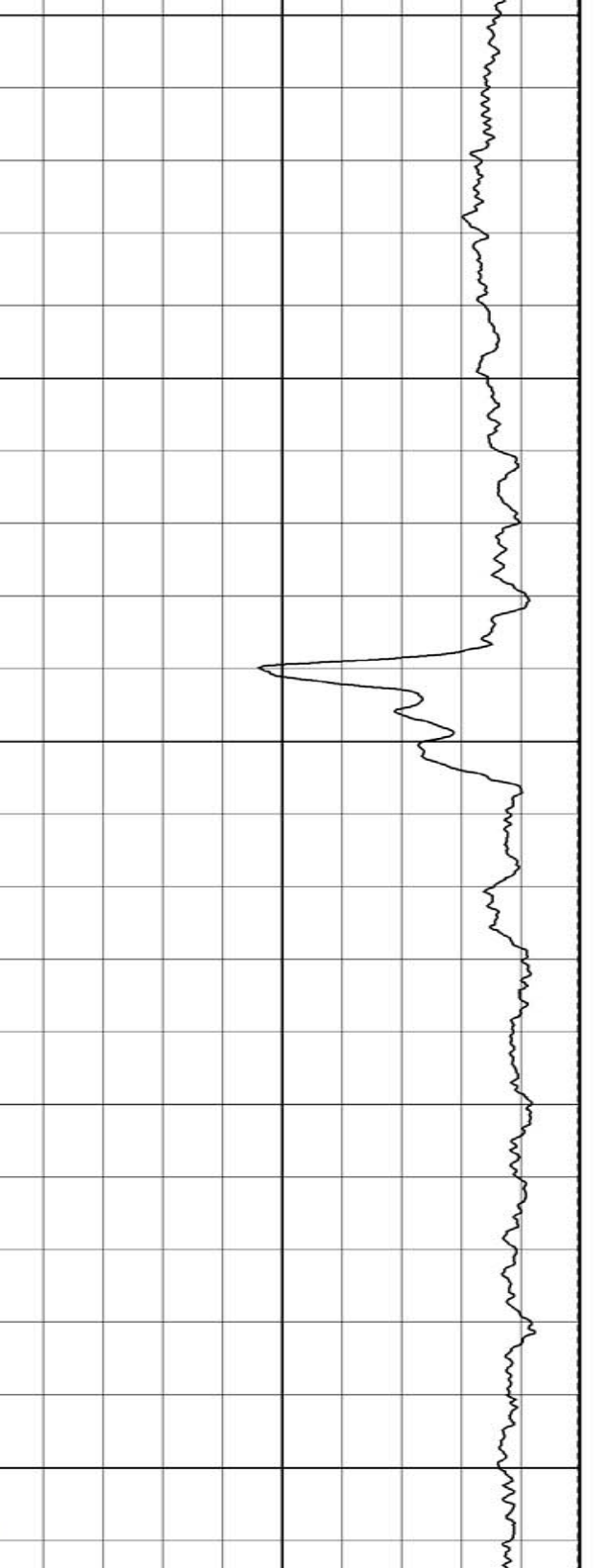
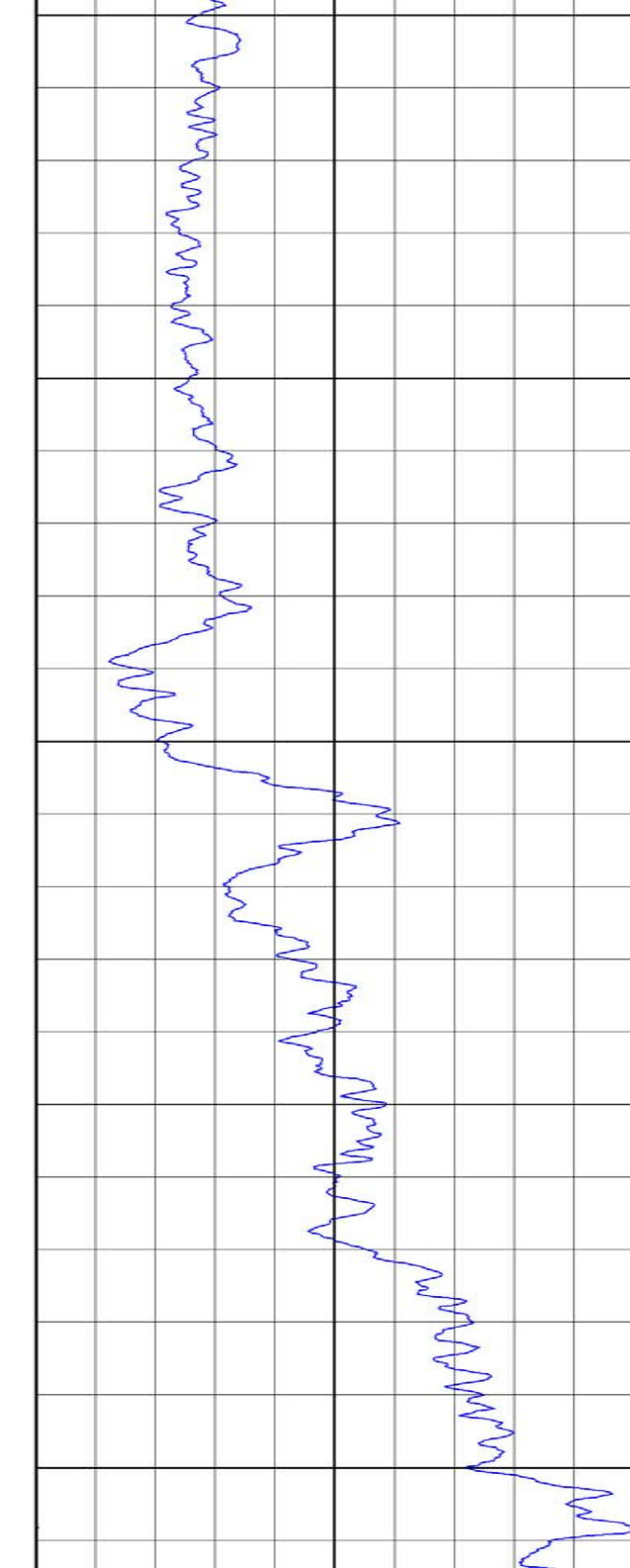
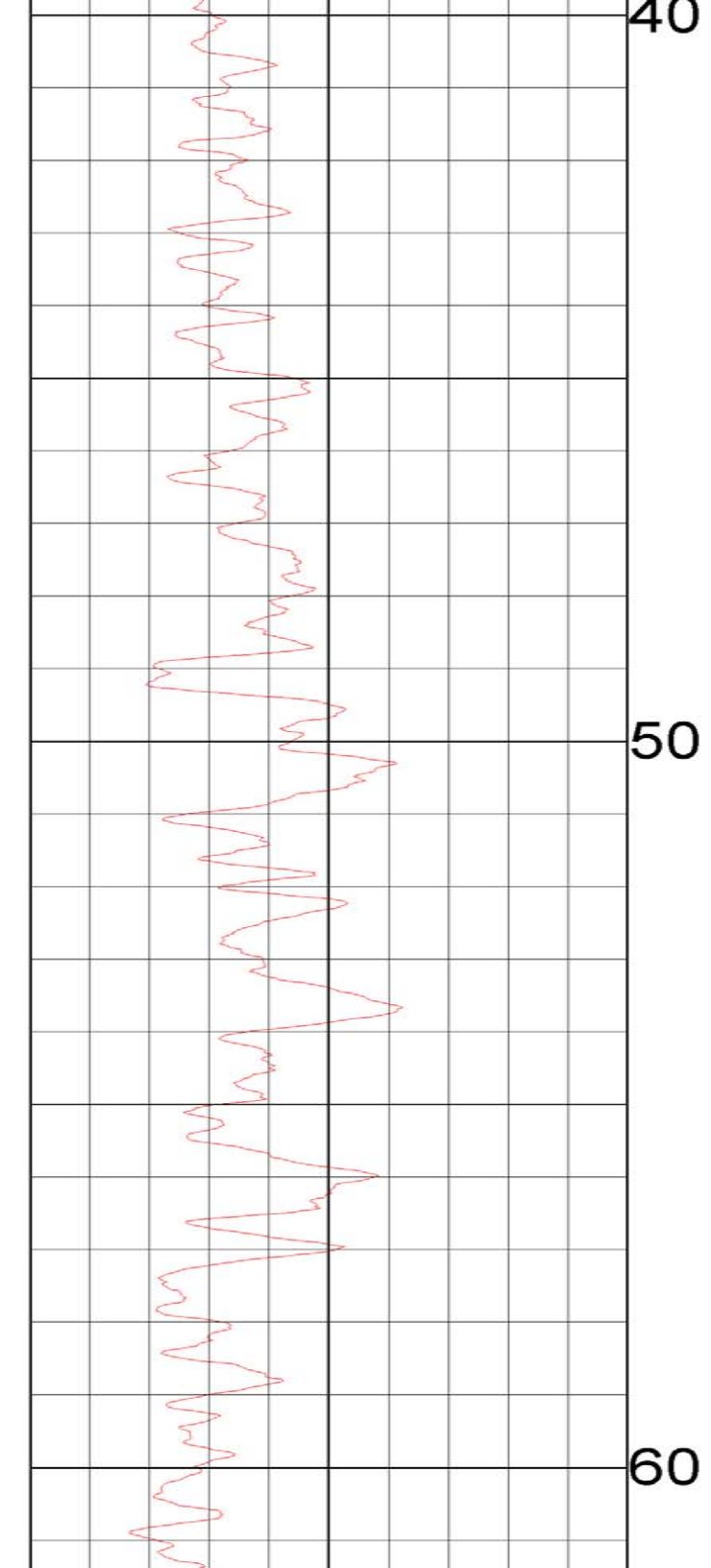
GAMMA		METERS
150	API-GR	300
GAMMA		
0	API-GR	150

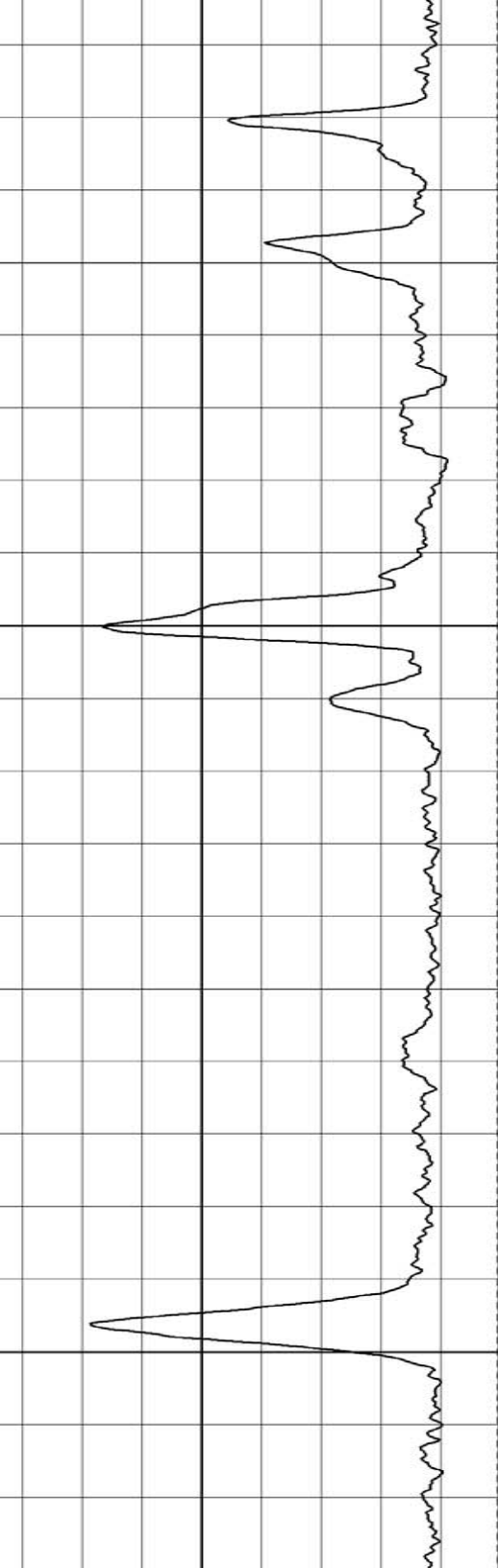
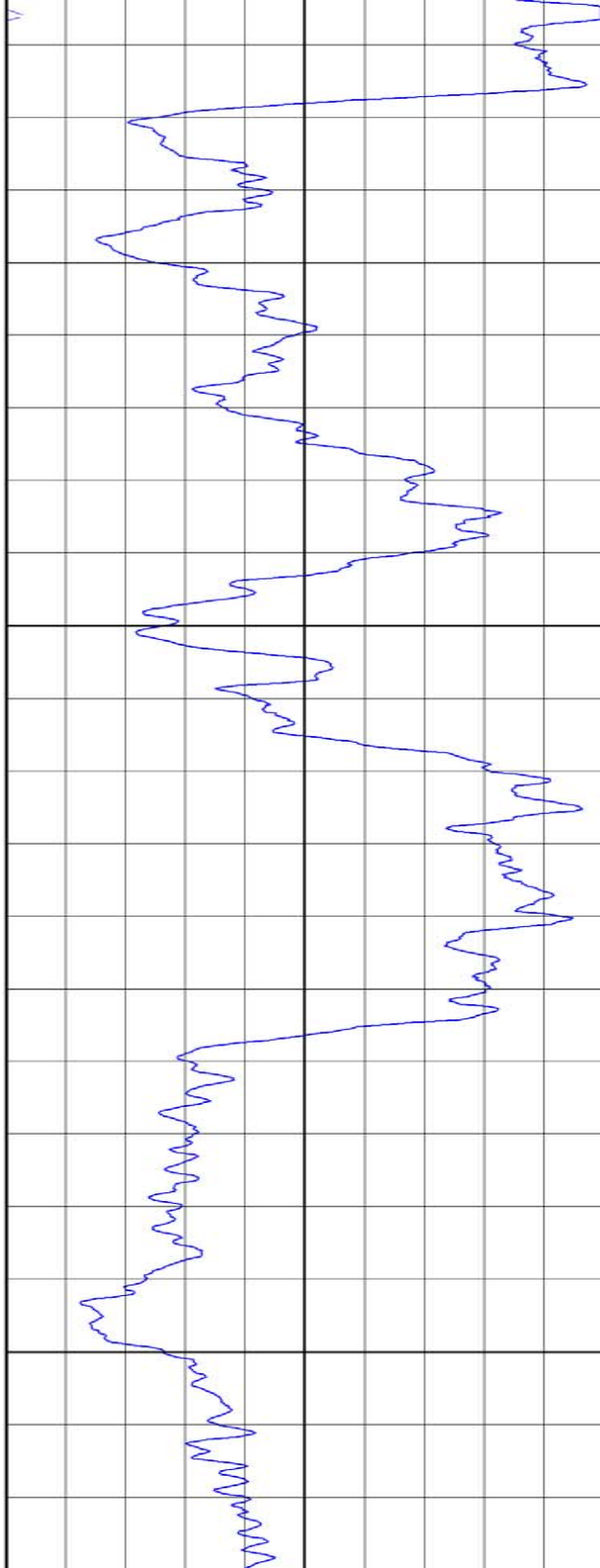
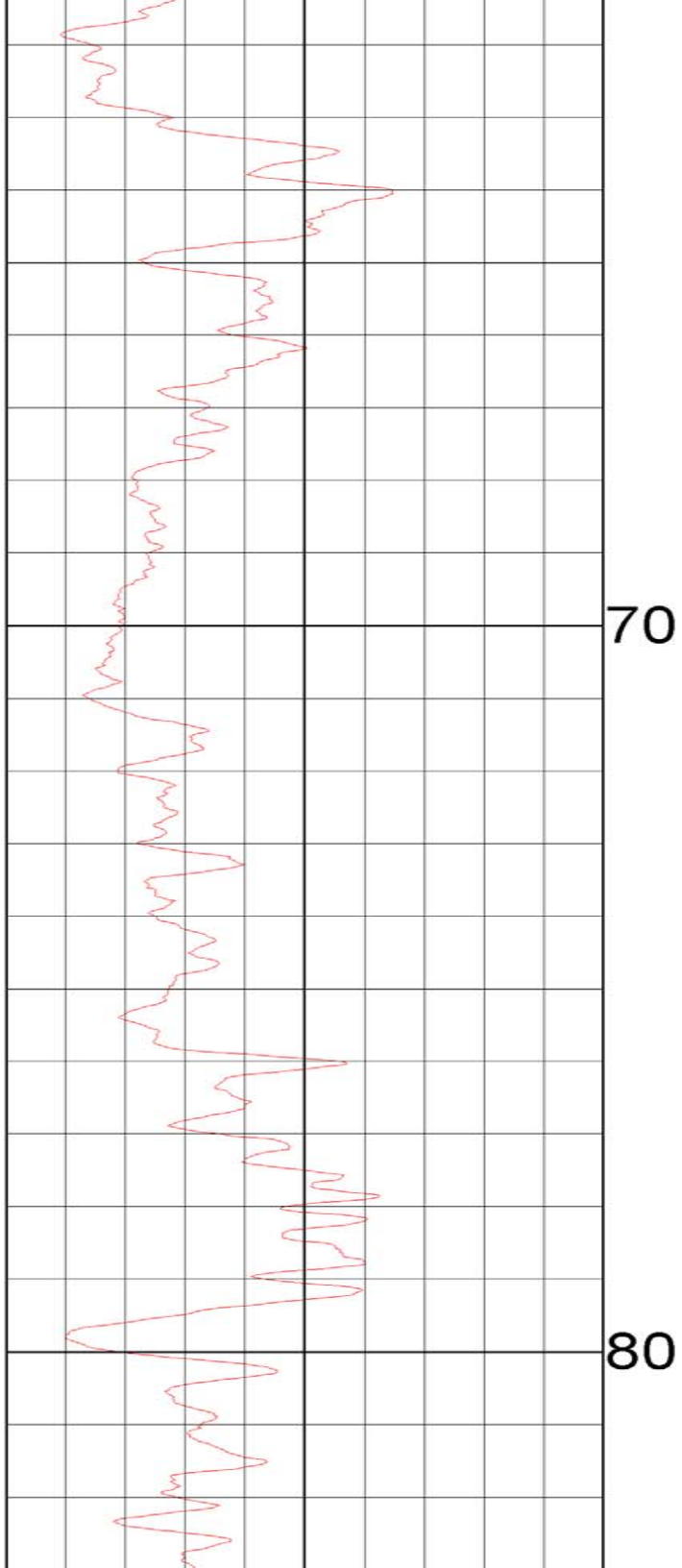


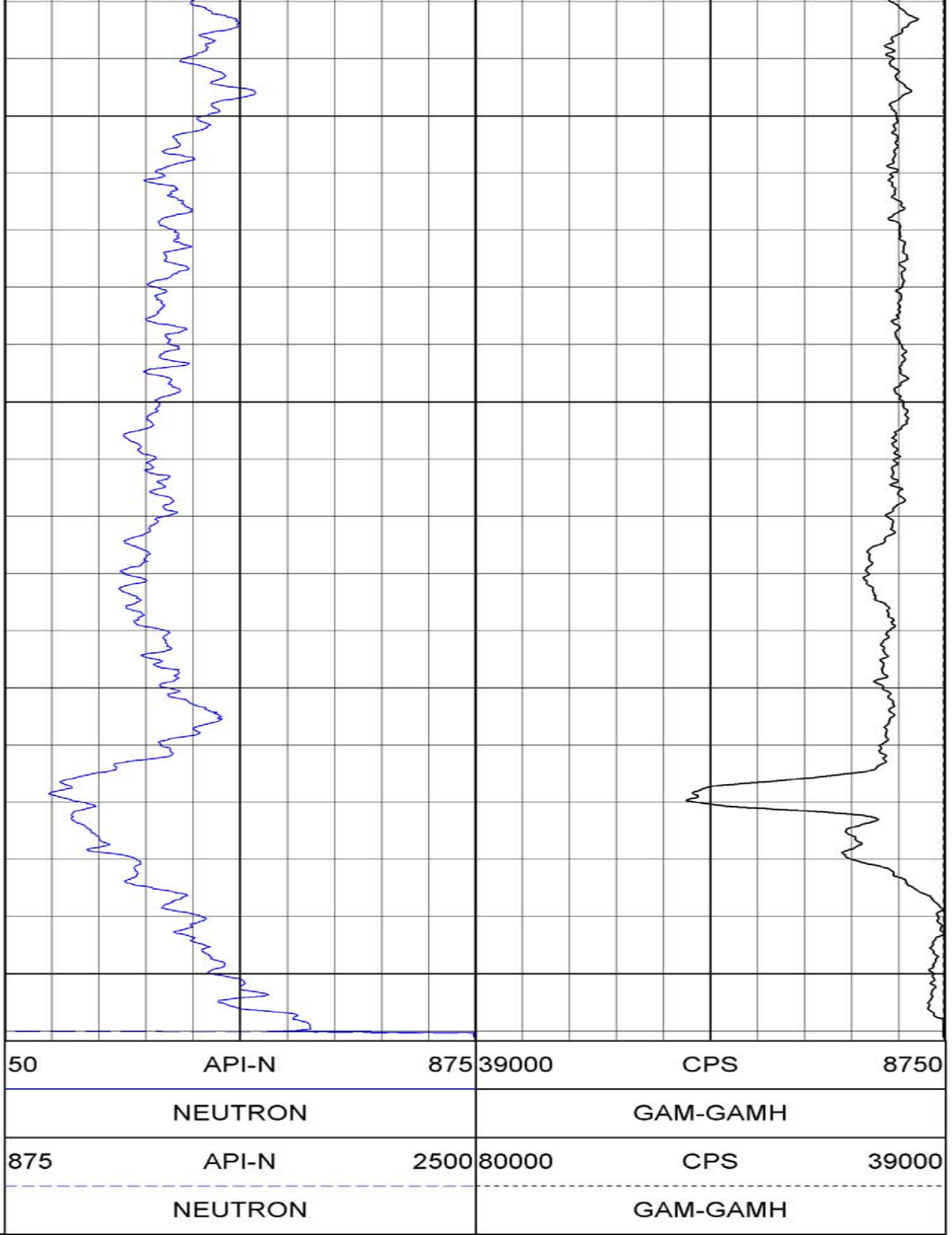
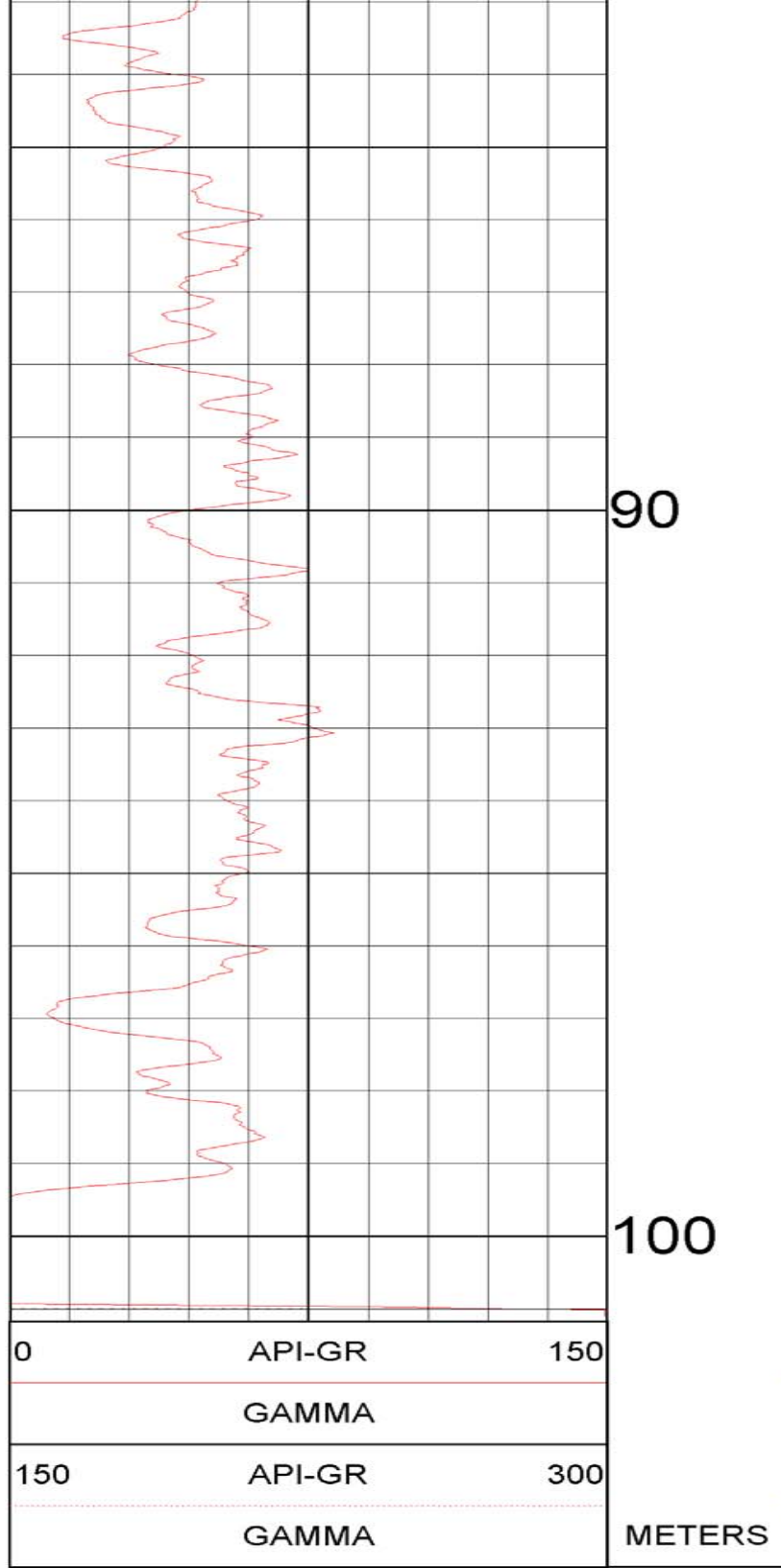
NEUTRON		GAM-GAMH	
875	API-N	2500	80000
NEUTRON		GAM-GAMH	
50	API-N	875	39000
		CPS	8750











LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 140
 MAGNETIC DECL : 23 ELECT. CUTOFF : 50000 BIT SIZE : 9.60
 PRESENTATION NAME/DATE = 9068A-9067A_for.0 11/15/2005

TOOL CALIBRATION 05 019 11/14/05 16:36
 TOOL 9068A TM VERSION 3200
 SERIAL NUMBER 640

	DATE	TIME	SENSOR	STANDARD	RESPONSE
1	Mar06,02	18:27:22	GAMMA Default	[CPS]	Default [CPS]
	Mar06,02	18:27:22	GAMMA 105.000	[API-GR]	46.00 [CPS]
2	Feb22,06	16:07:12	NEUTROI Default	[CPS]	Default [CPS]
	Feb22,06	16:07:12	NEUTROI Default	[CPS]	Default [CPS]



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NEUTRON - GAMMA-DENSITY

05 ARD 1 (P1)

COMPANY : FORTUNE MINERALS

WELL : 05 ARD 1 (P1)

FIELD : MOUNT KLAPPAN

COUNTY :

STATE : BRITISH COLUMBIA

OTHER SERVICES:

9067

9068

LOCATION : 506,270 6,345,019 FROM GPS, NAD83

SECTION :

TOWNSHIP :

RANGE :

API NO. :

UNIQUE WELL ID. :

PERMANENT DATUM : ELEVATION KB : NONE

LOG MEASURED FROM: 0 ELEVATION DF : NONE

DRL MEASURED FROM: ELEVATION GL : 1653

DATE : 11/15/05

DEPTH DRILLER : 230.43

BIT SIZE : 9.60

LOG TOP : 0.29

LOG BOTTOM : 228.69

CASING OD : 7.30

CASING BOTTOM : 230.43

CASING TYPE : PVC

BOREHOLE FLUID : WATER

RM TEMPERATURE :

MUD RES :

MUD WEIGHT :

RECORDED BY : J. SINKWICH

REMARKS 1 : HQ CORE WATER LEVEL: 36M

REMARKS 2 : MEASUREMENTS IN CENTIMETERS & METERS

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

GAMMA - NEUTRON - GAMMA-DENSITY 05 ARD 1 (P1) 11/15/05

LOG PARAMETERS

MATRIX DENSITY : 2.65

NEUTRON MATRIX : SANDSTONE

MATRIX DELTA T : 140

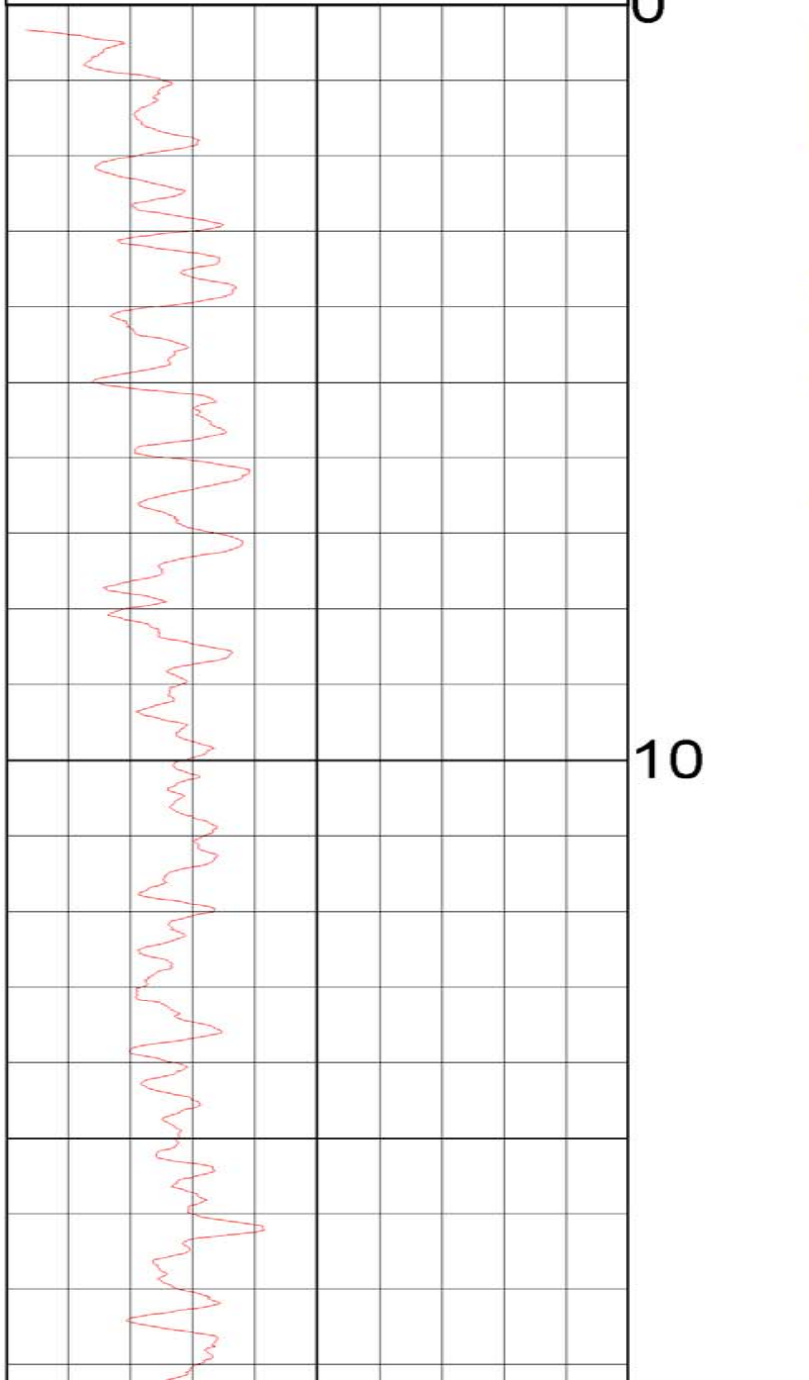
MAGNETIC DECL : 23

ELECT. CUTOFF : 50000

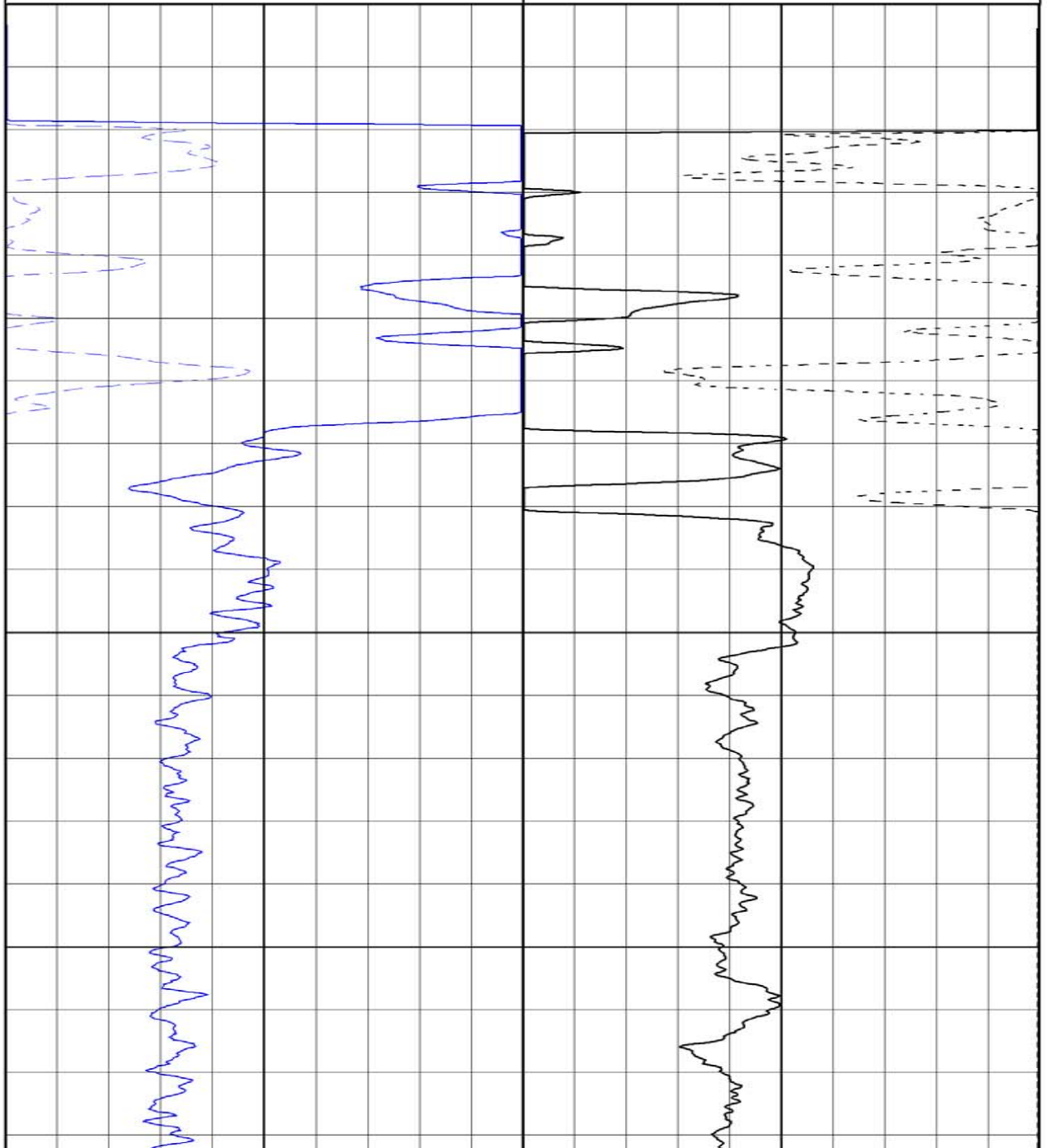
BIT SIZE : 9.60

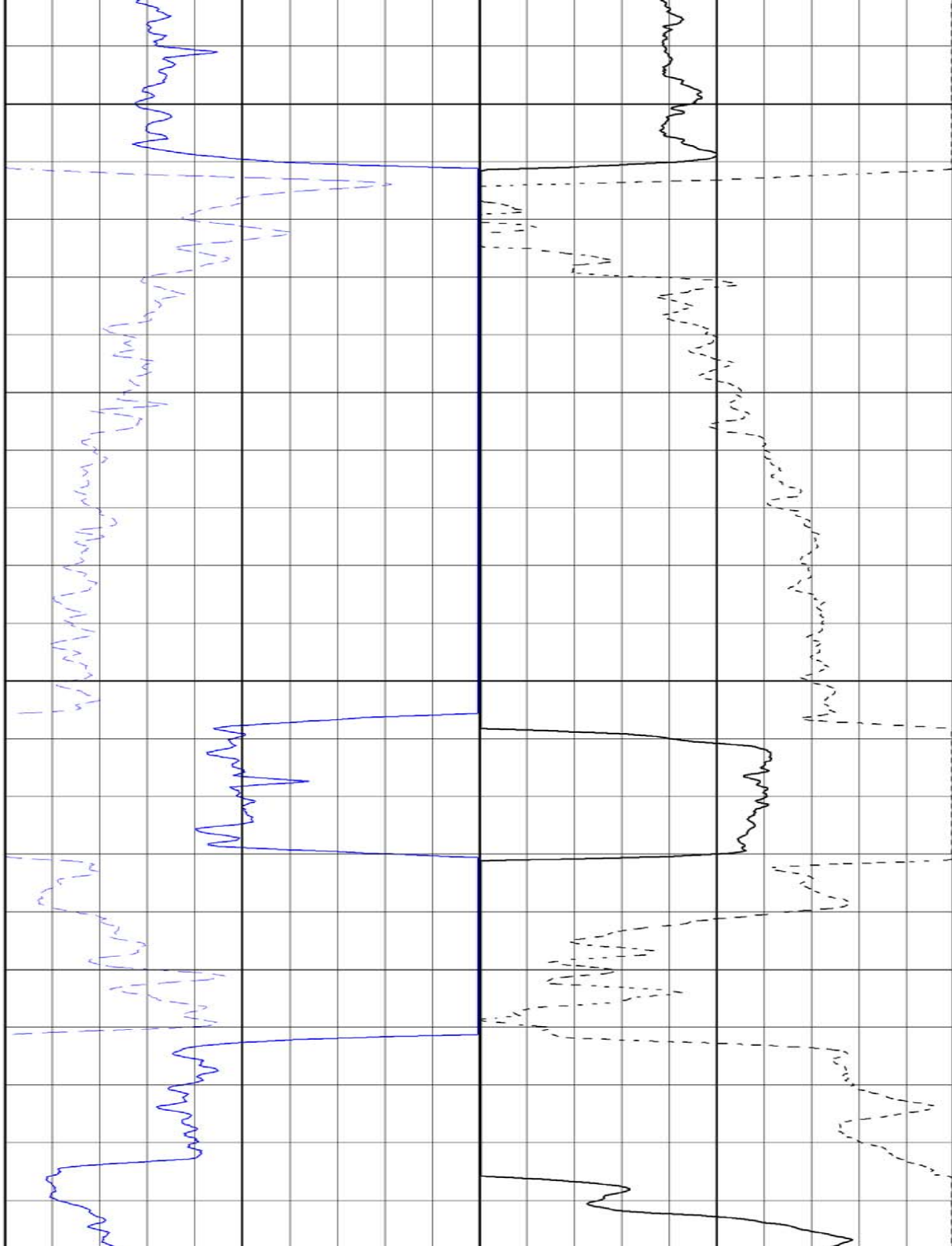
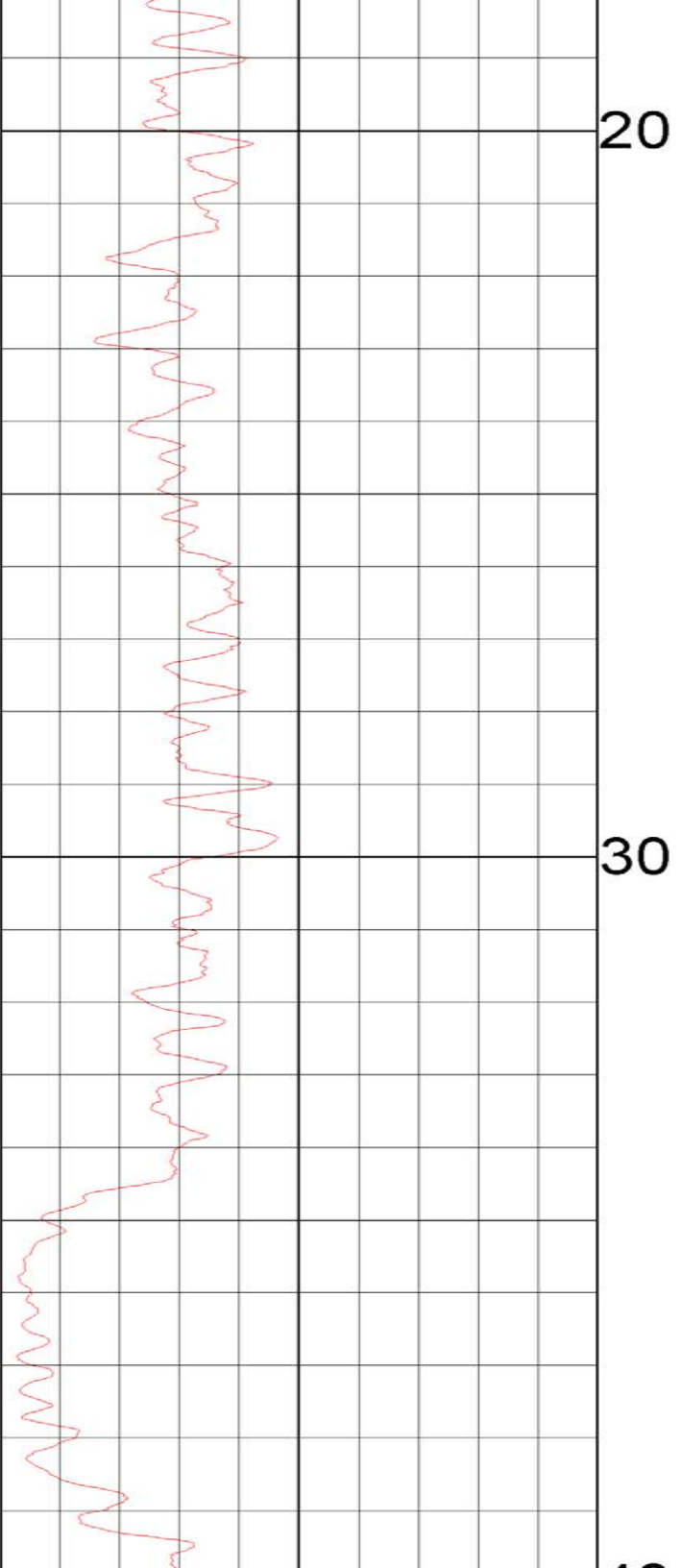
PRESENTATION NAME/DATE = 9068A-9067A_fort.0 11/15/2005

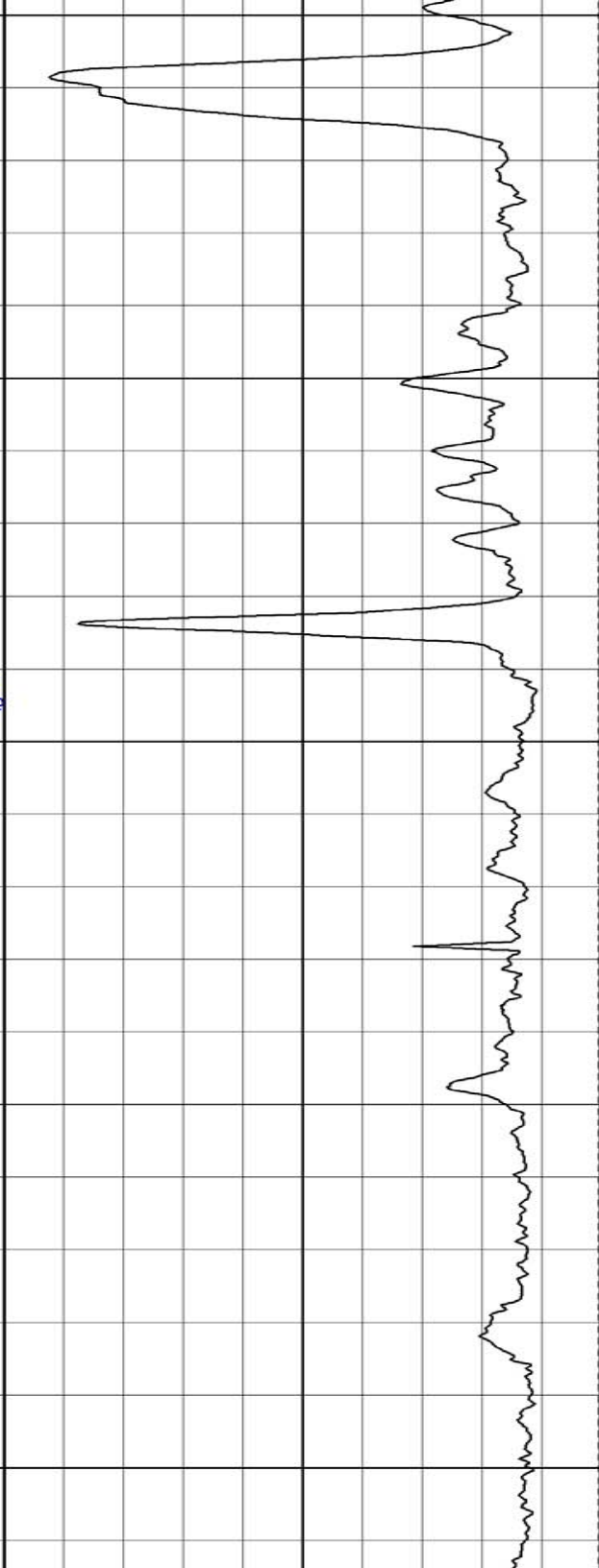
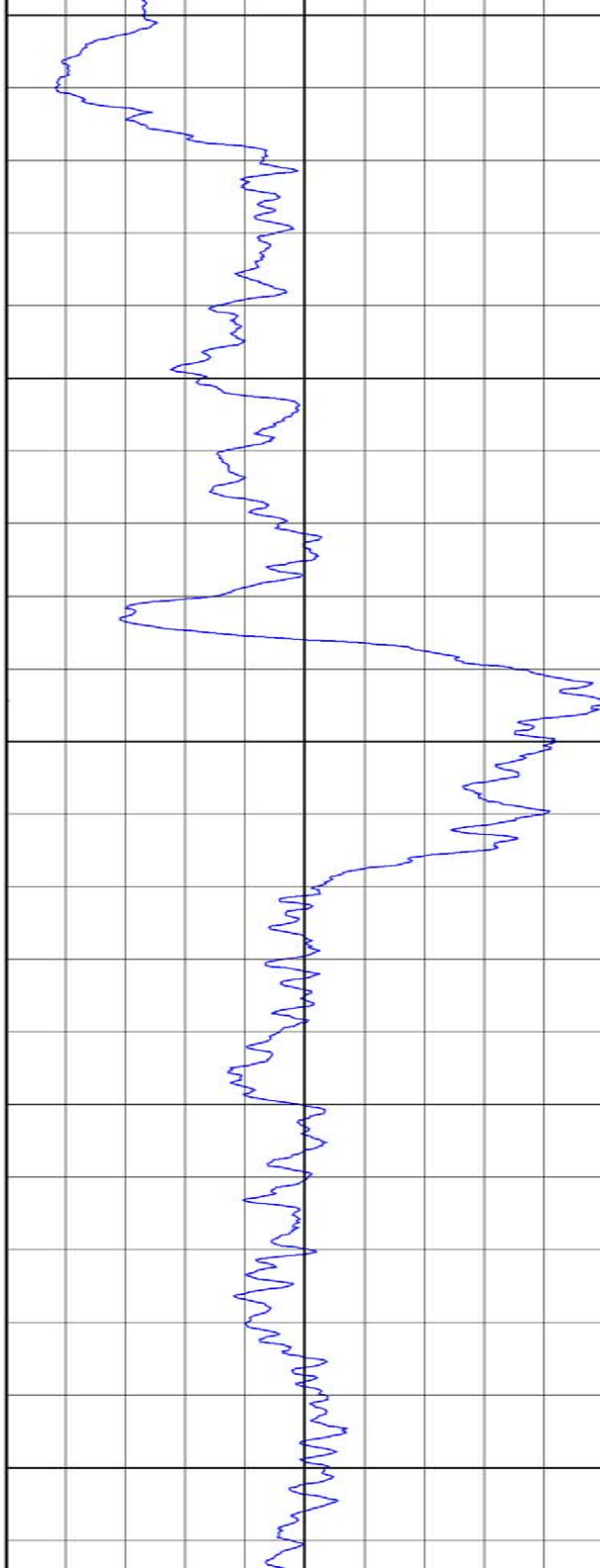
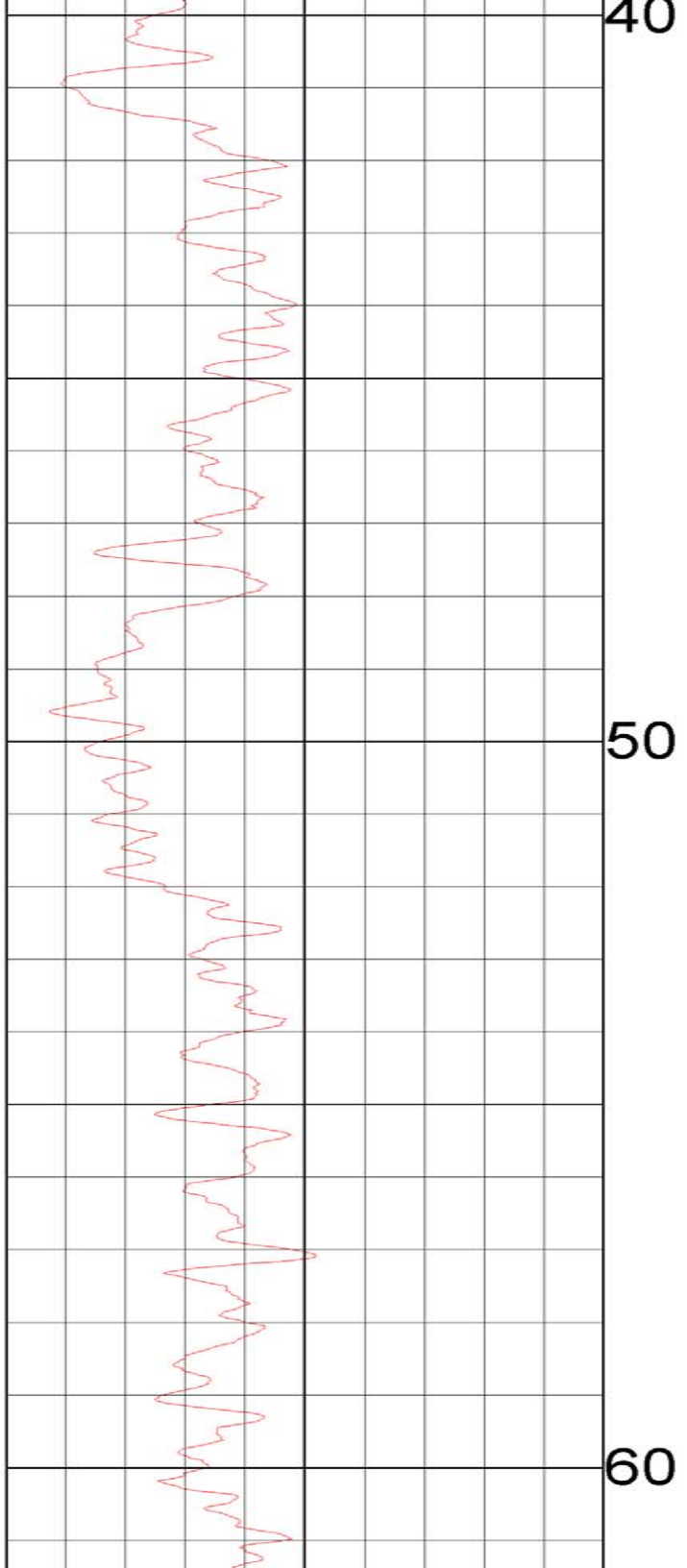
GAMMA		METERS
150	API-GR	300
GAMMA		
0	API-GR	150

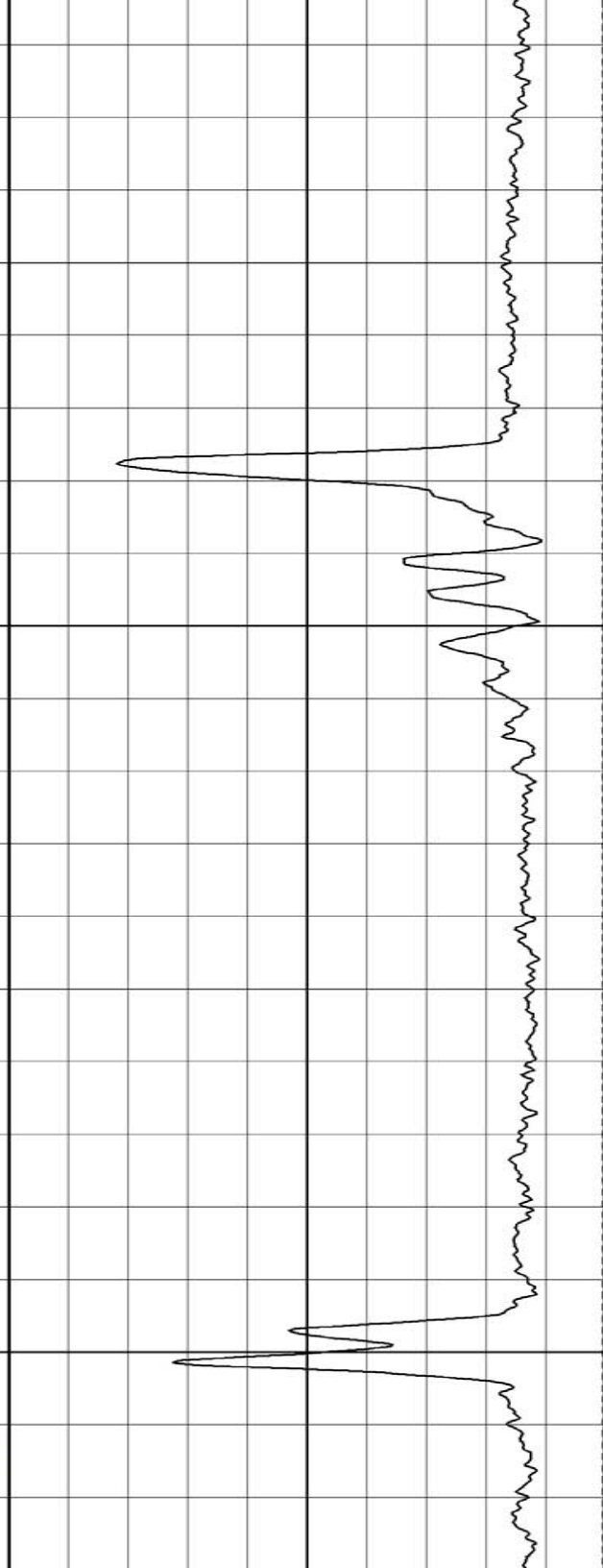
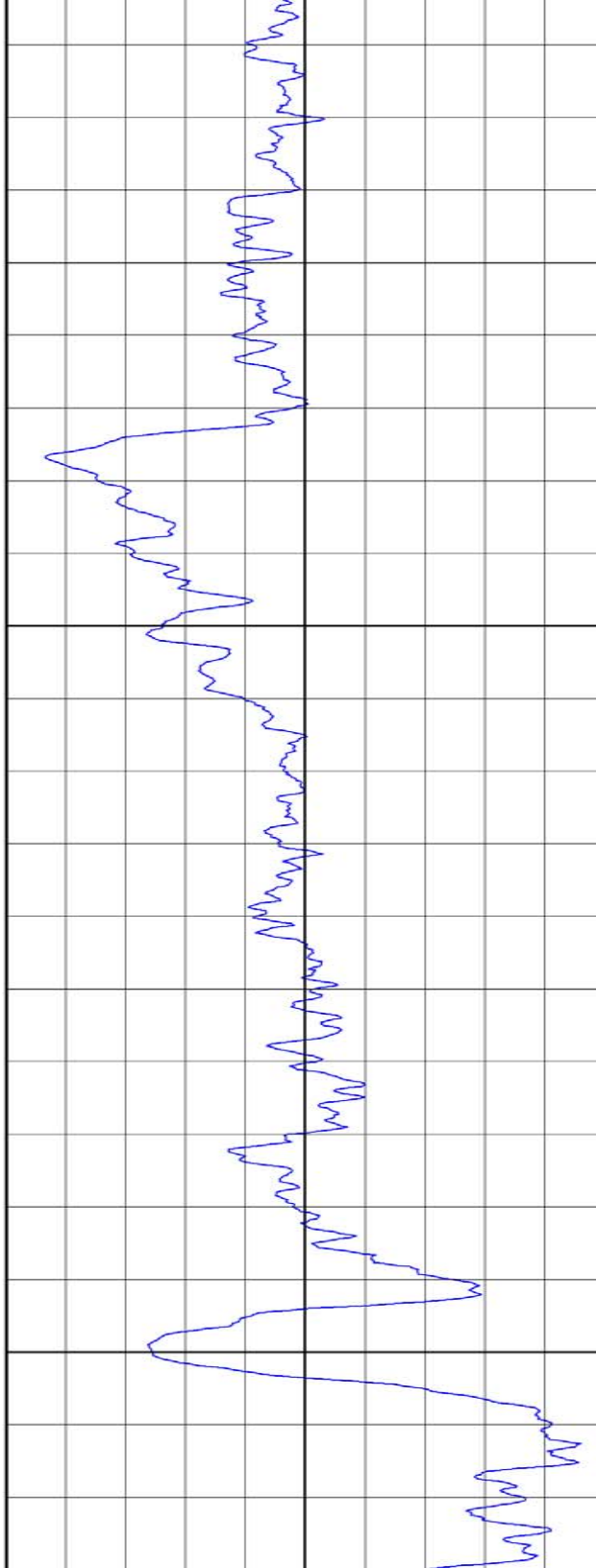
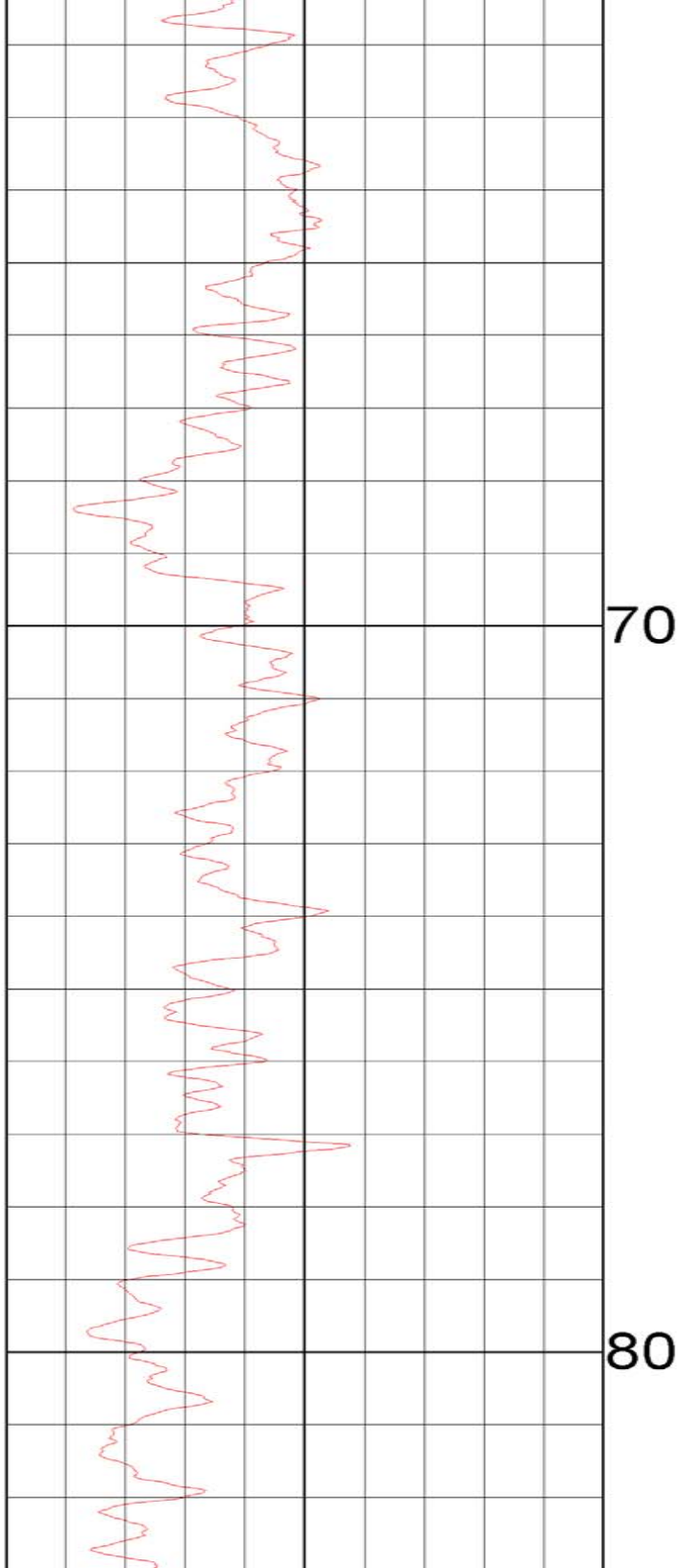


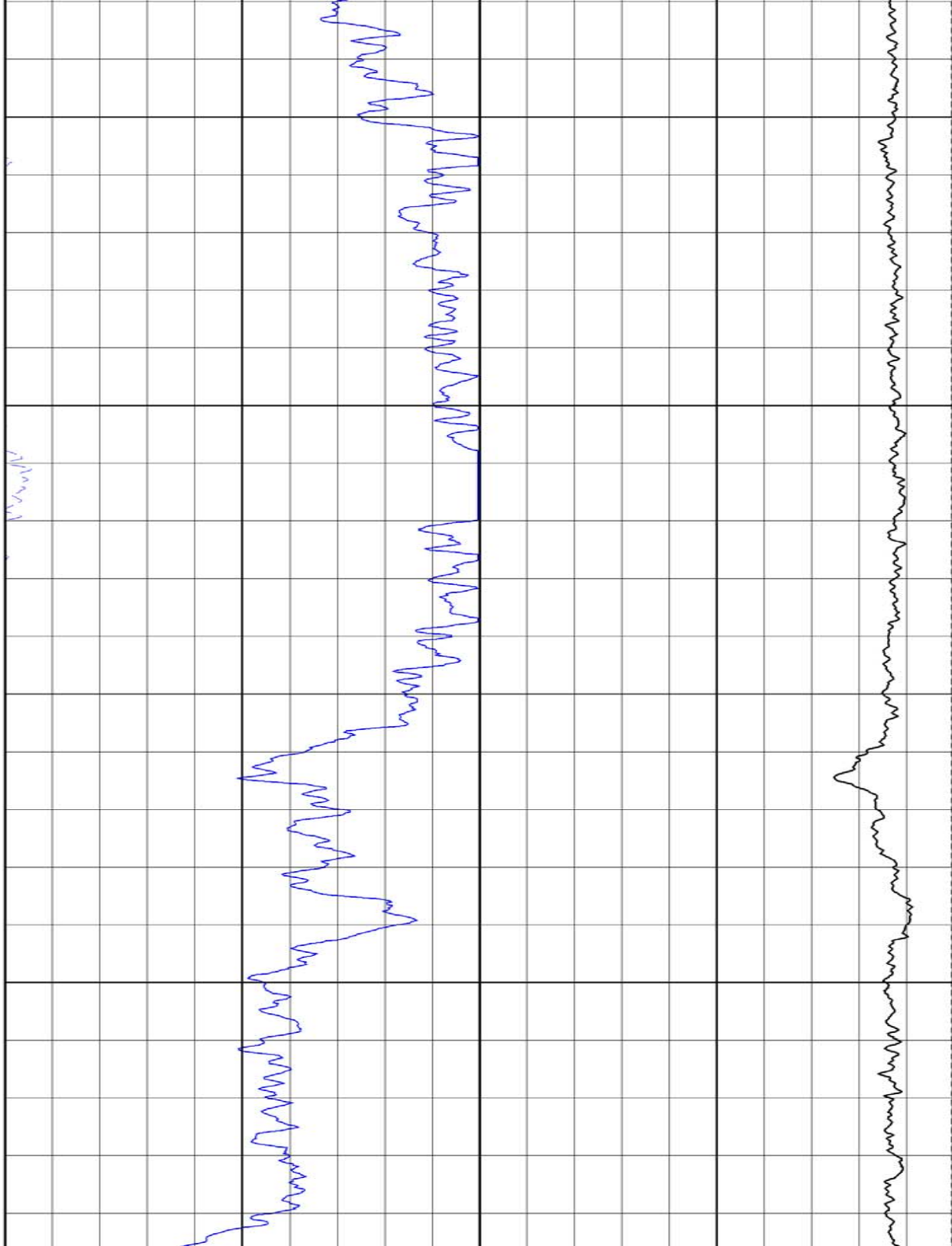
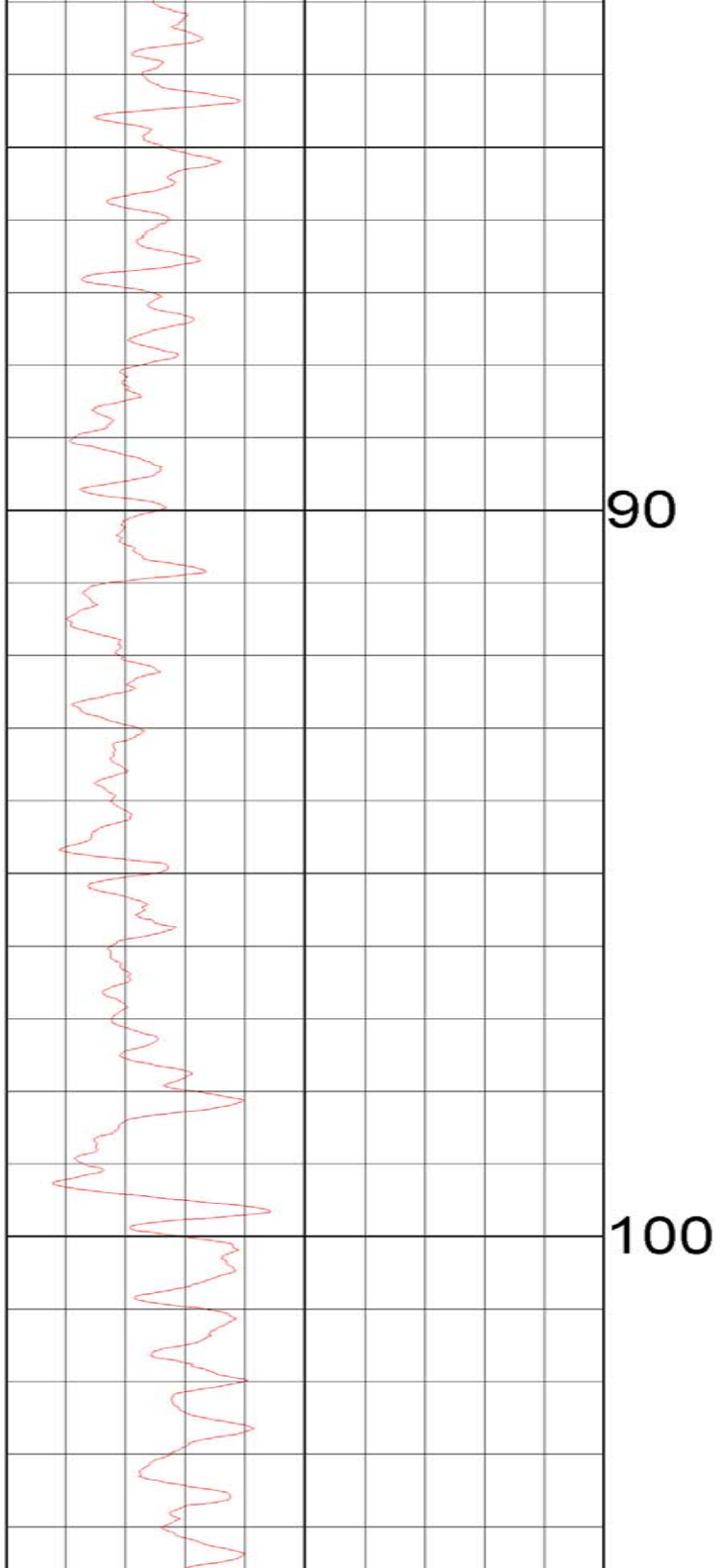
NEUTRON		GAM-GAMH	
875	API-N	2500	80000
NEUTRON		GAM-GAMH	
50	API-N	875	35000
		CPS	
		8750	

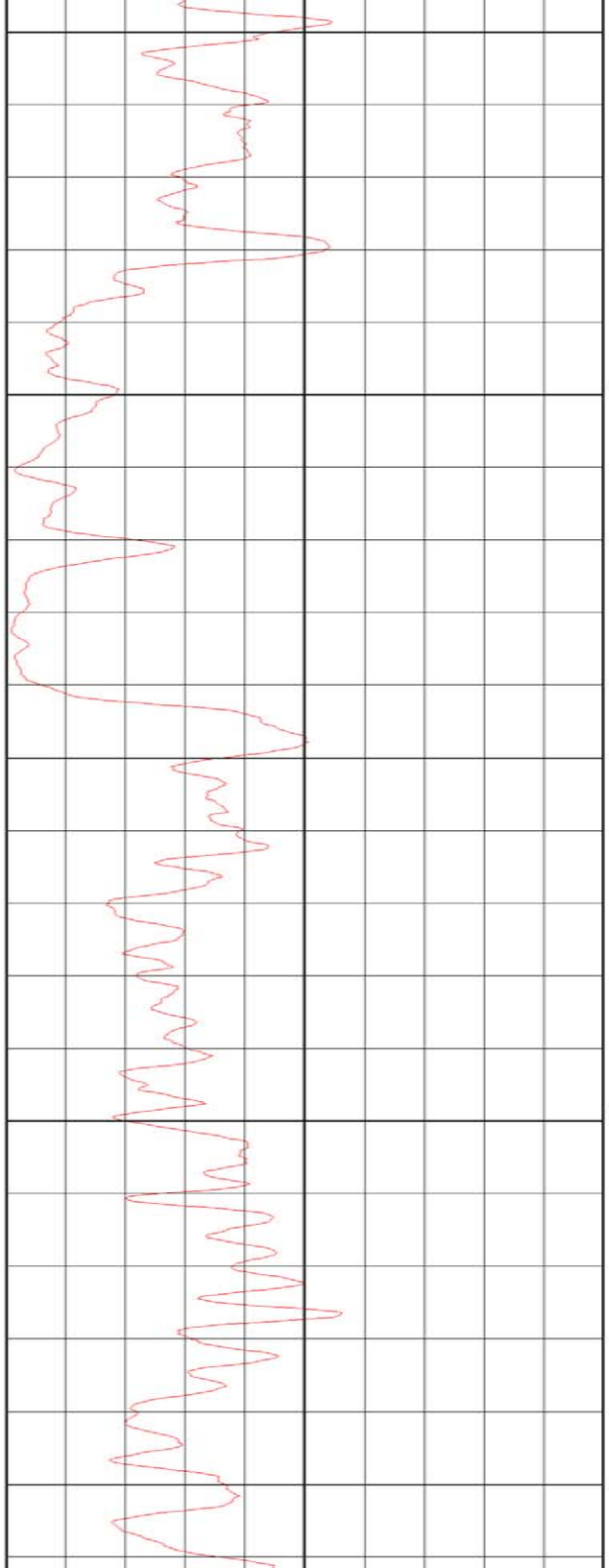






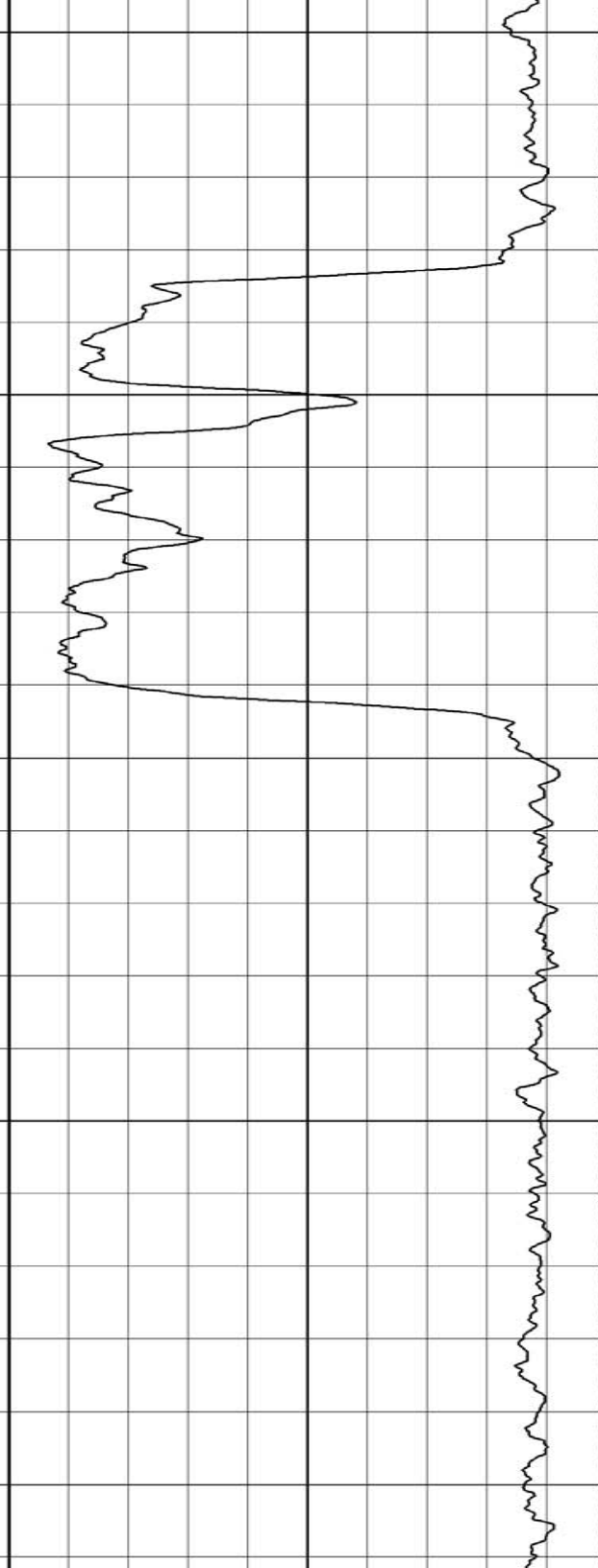
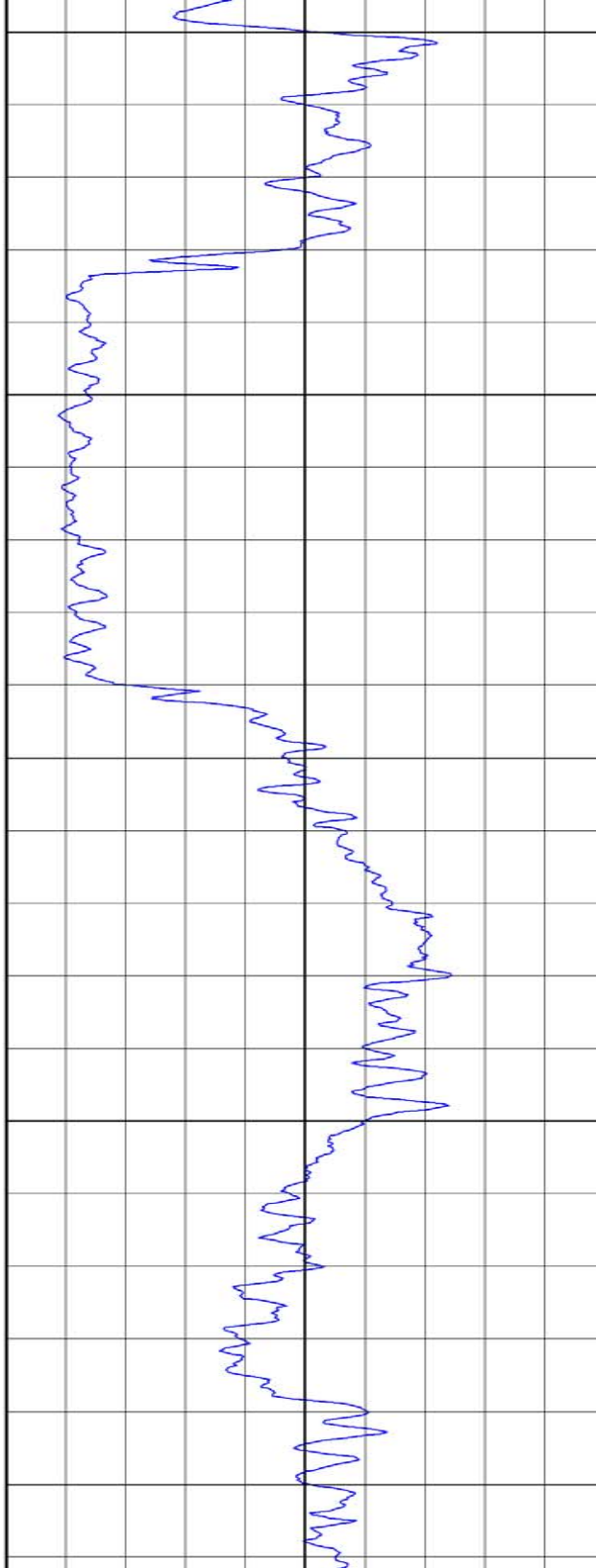


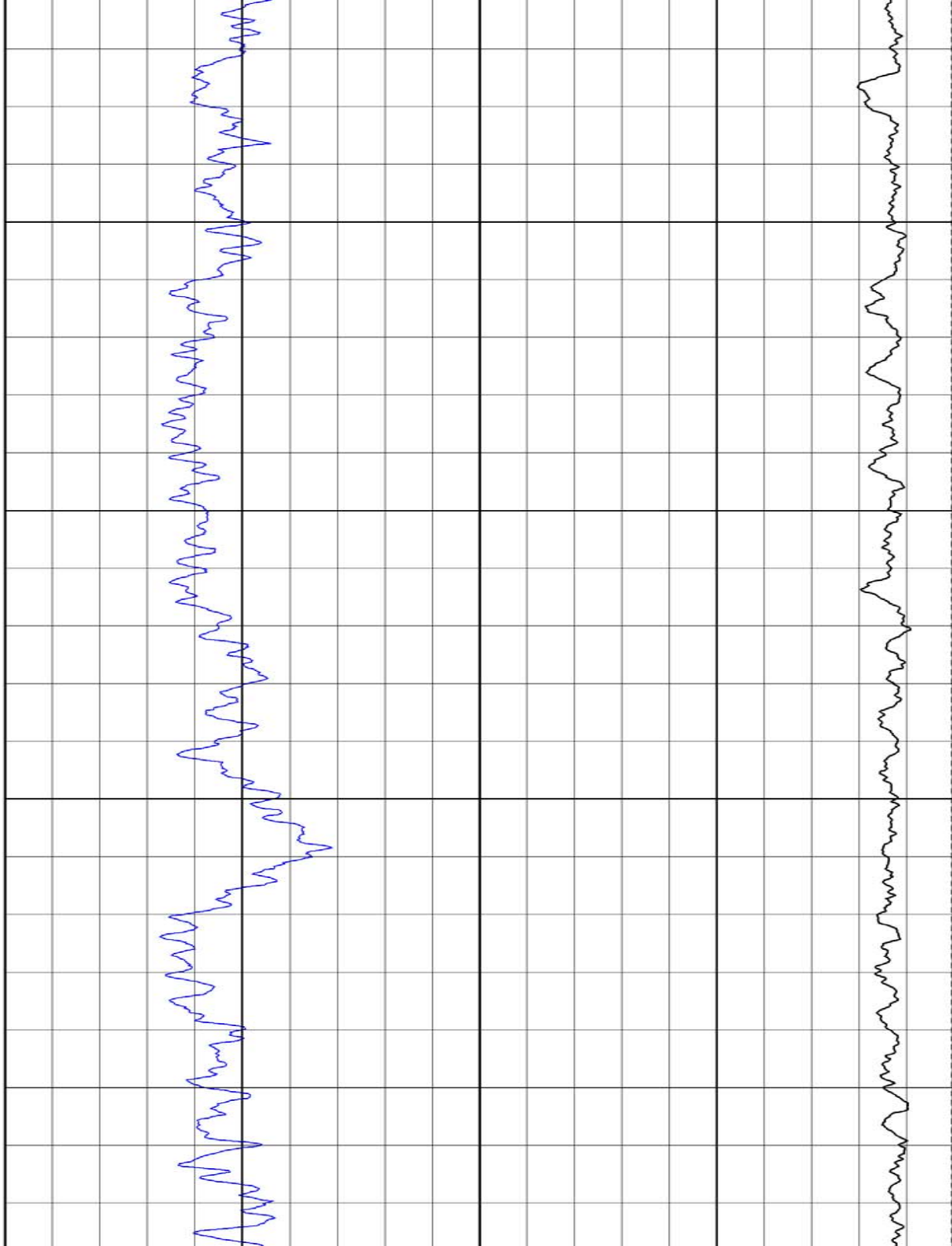
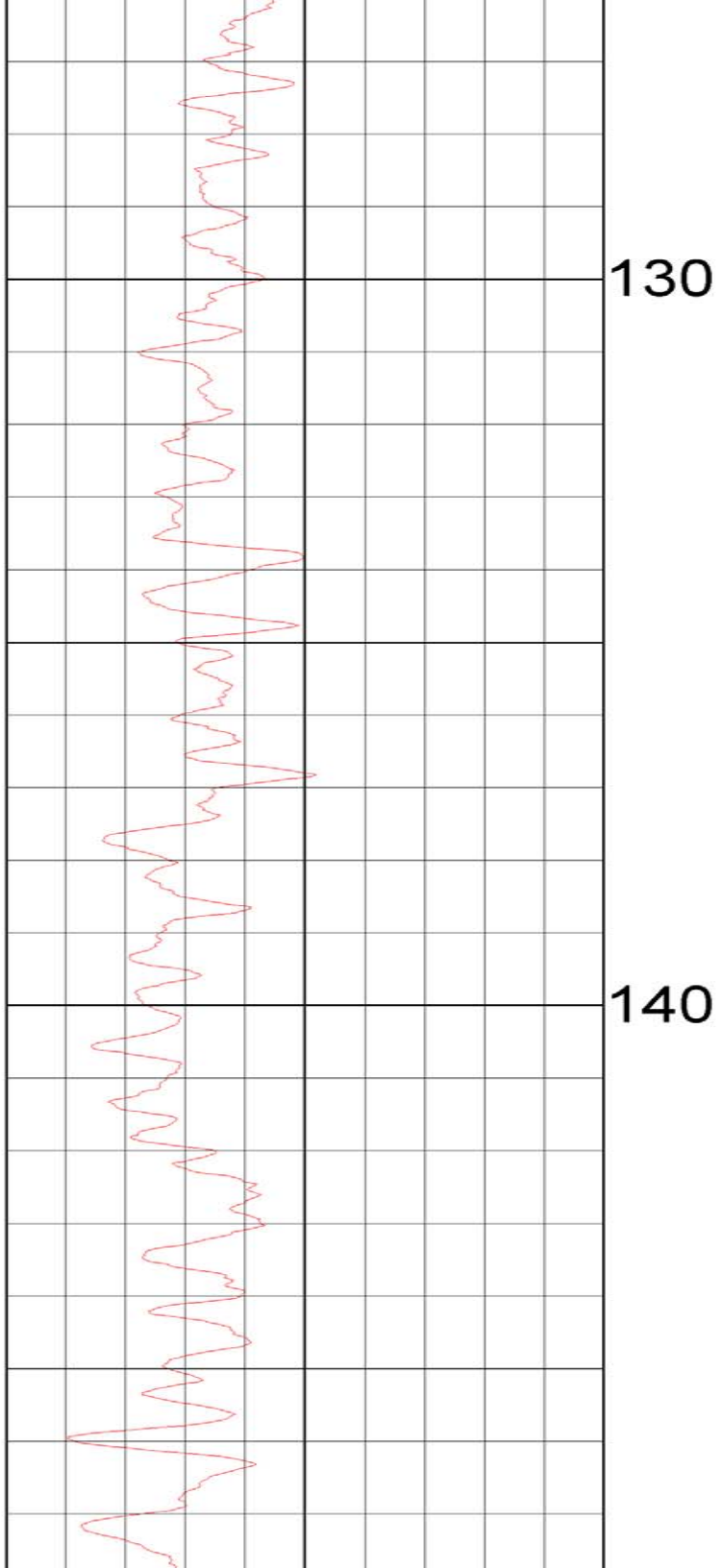


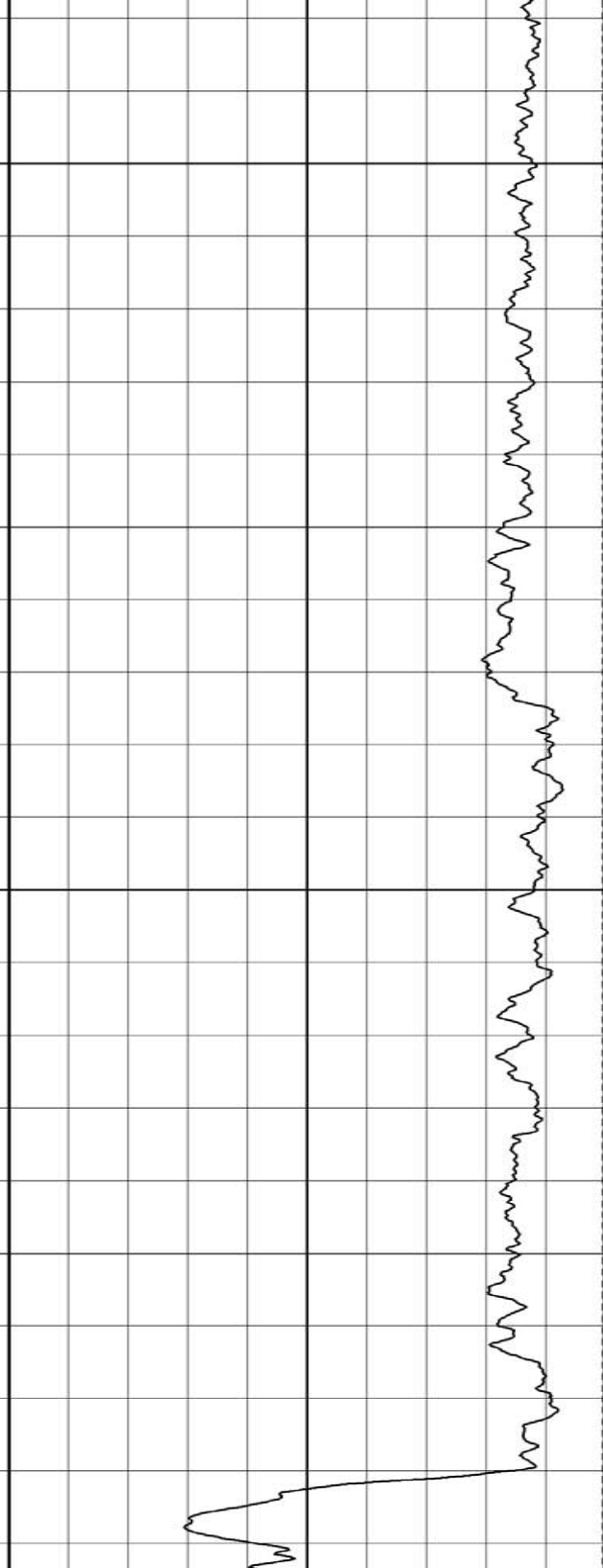
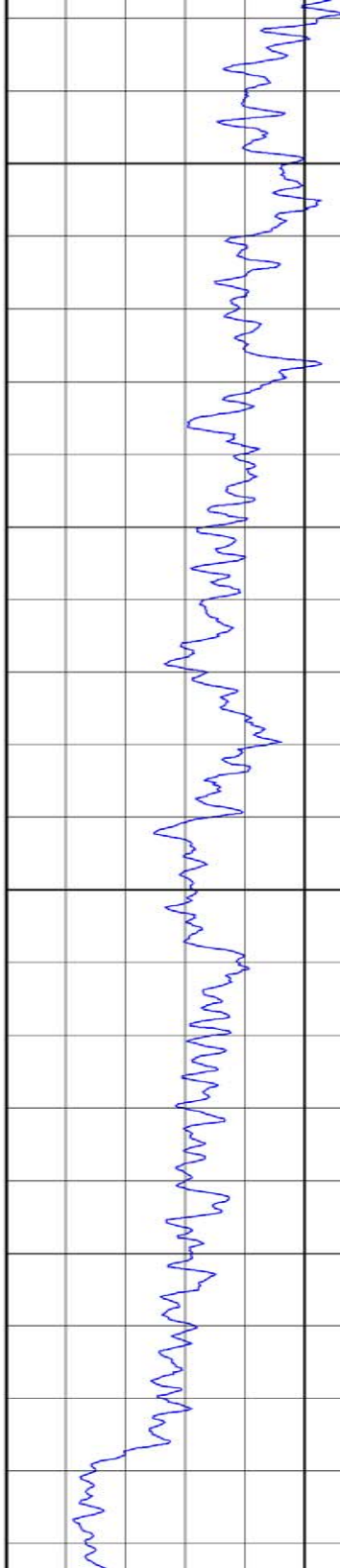
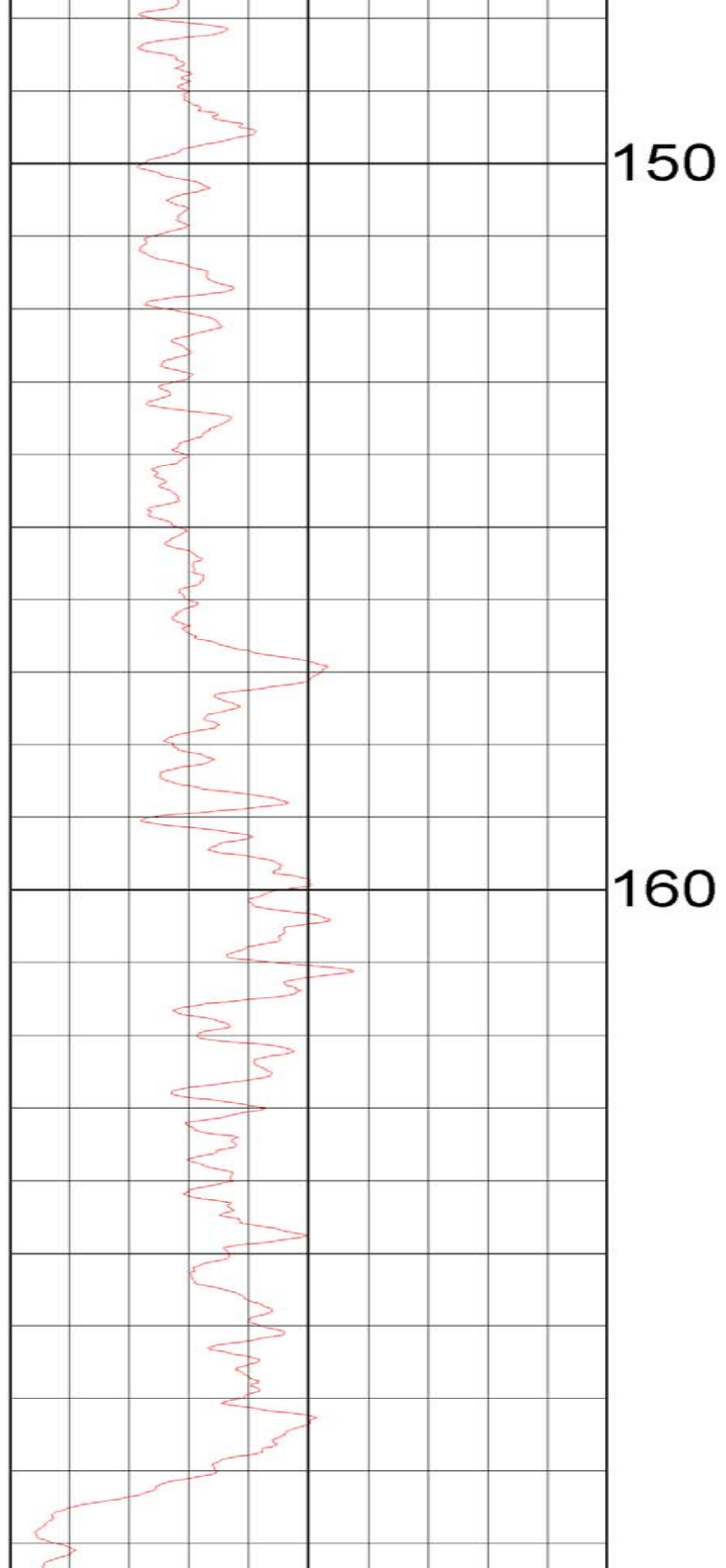


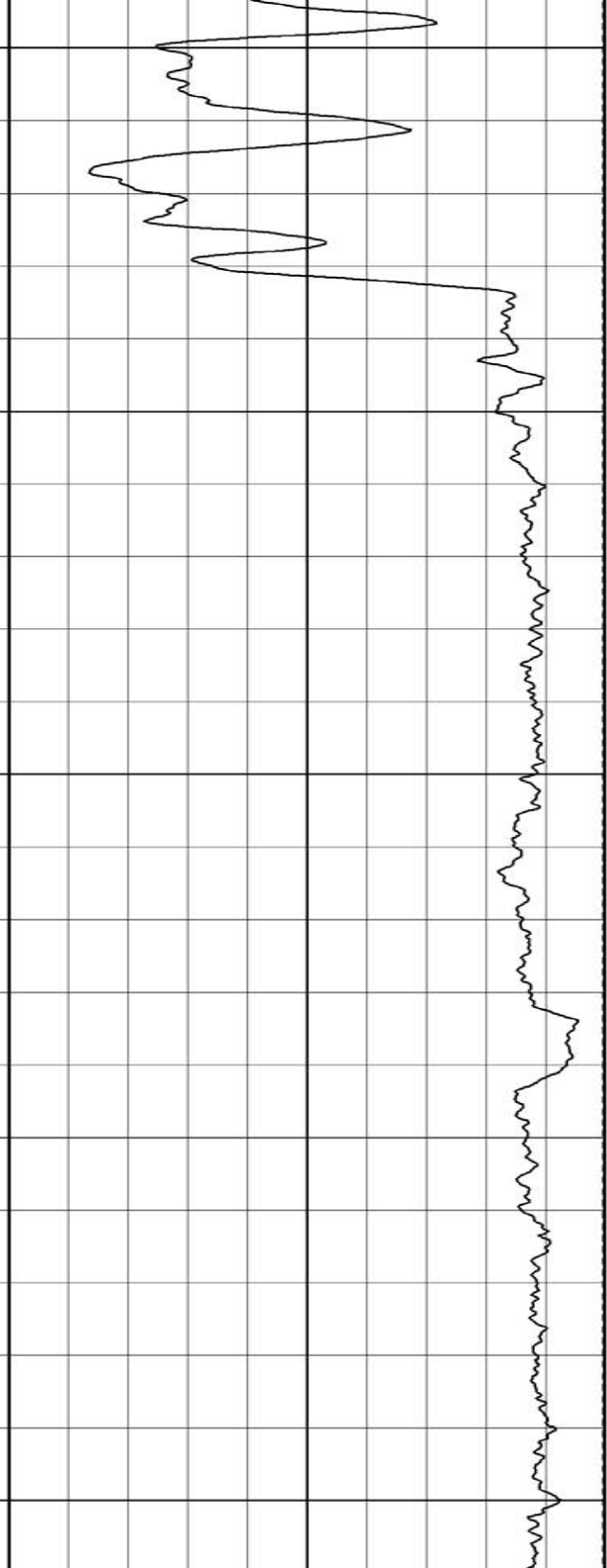
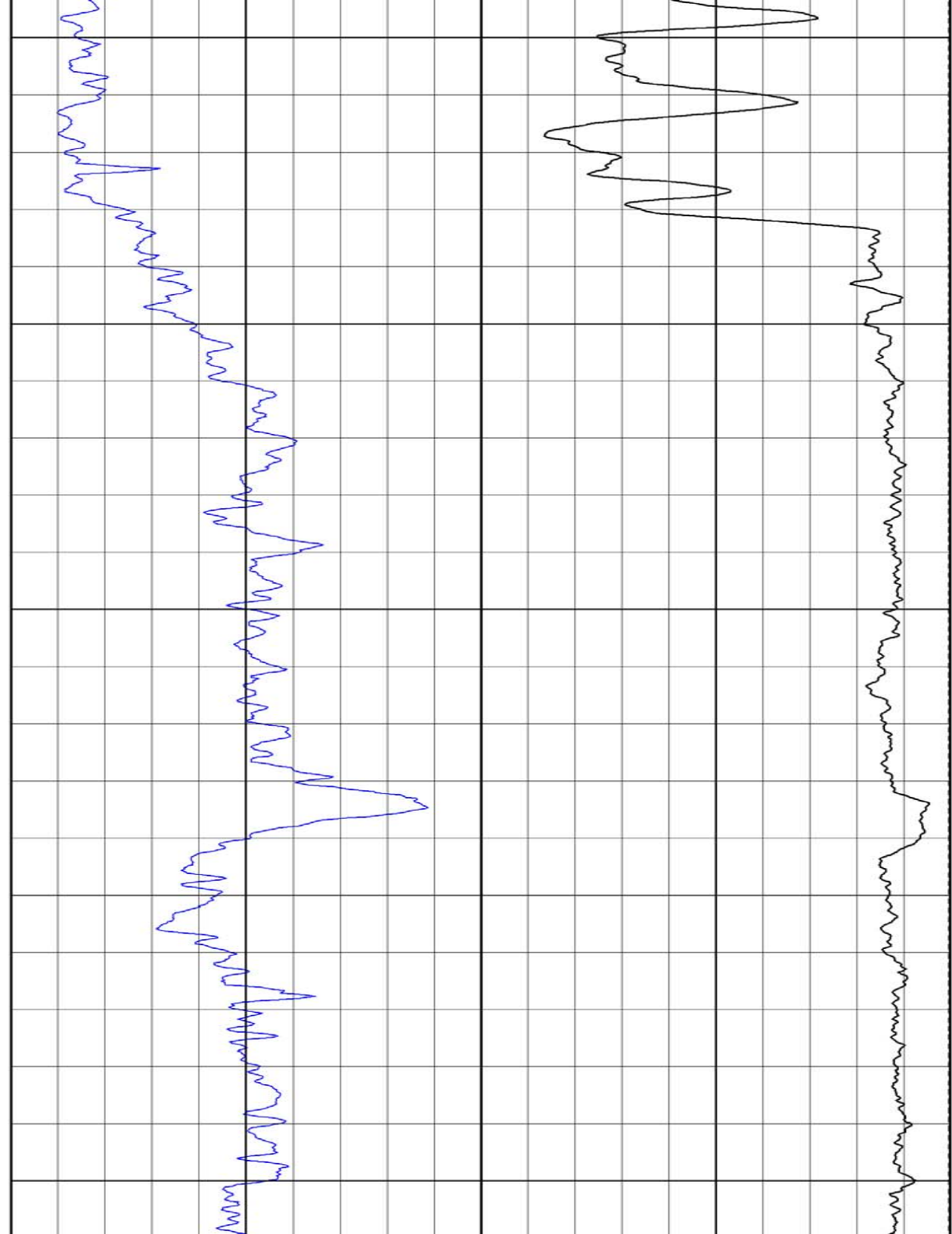
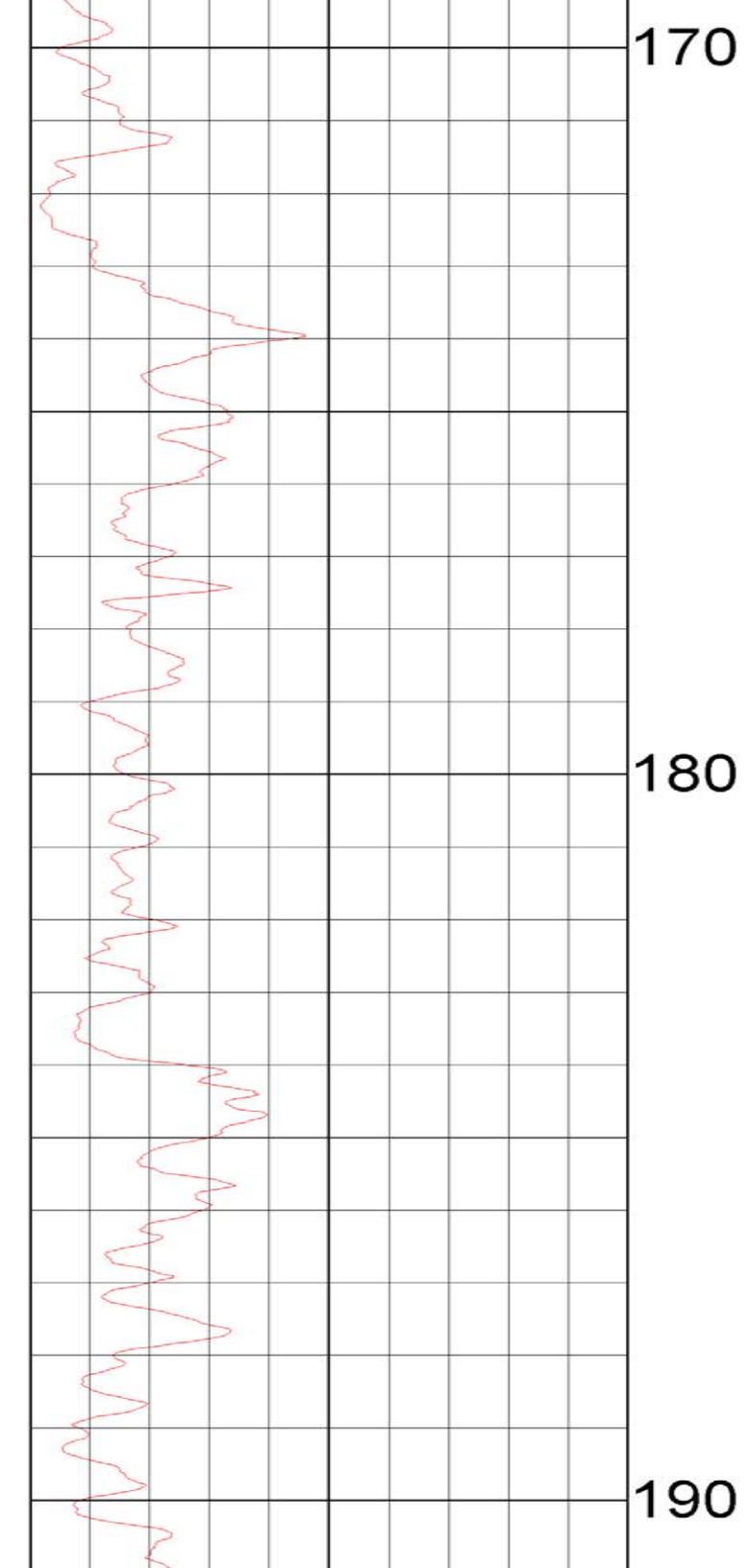
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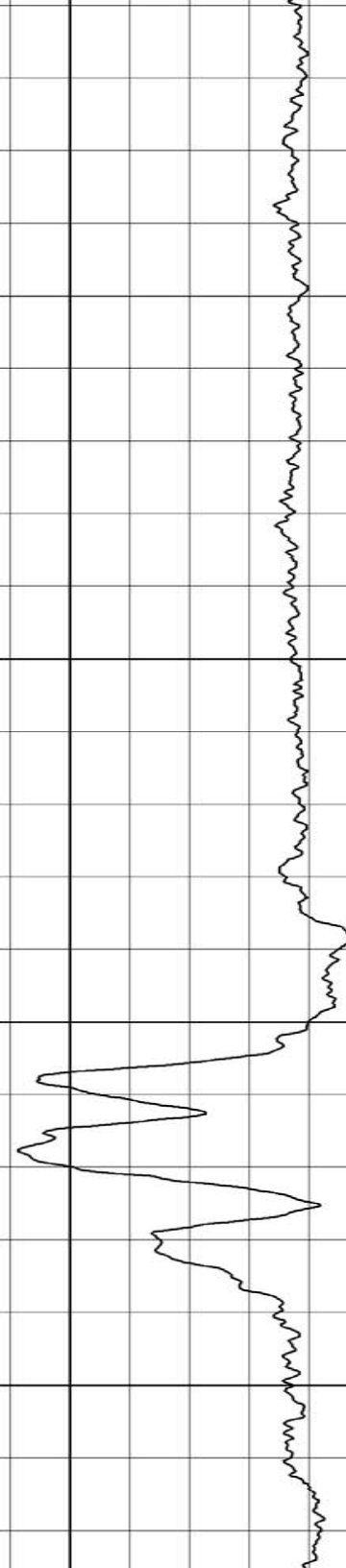
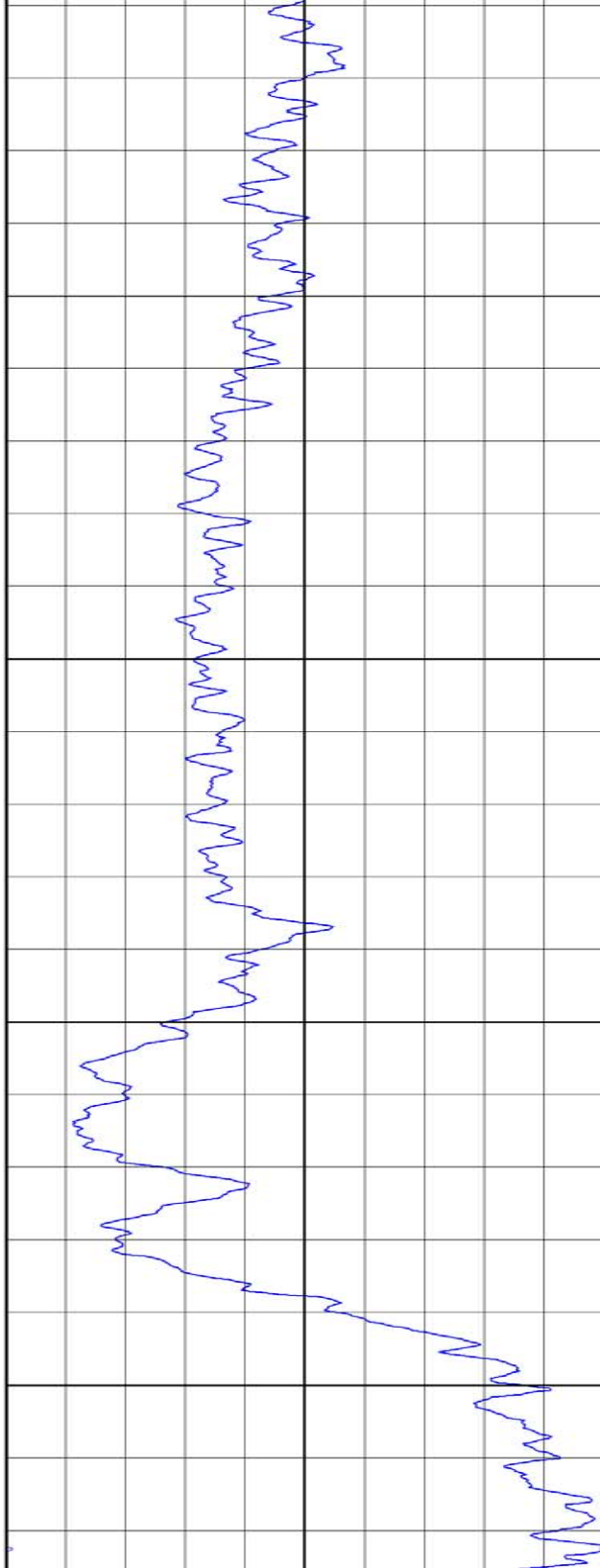
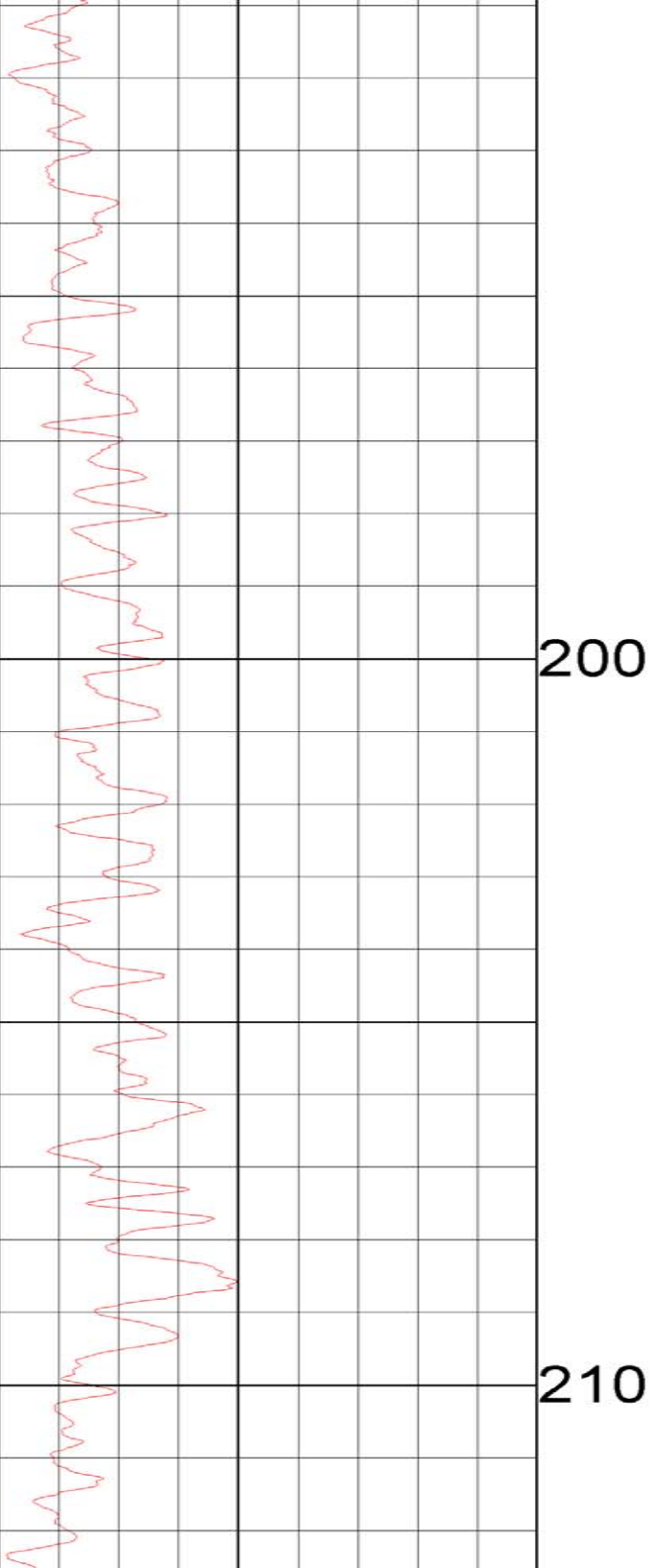
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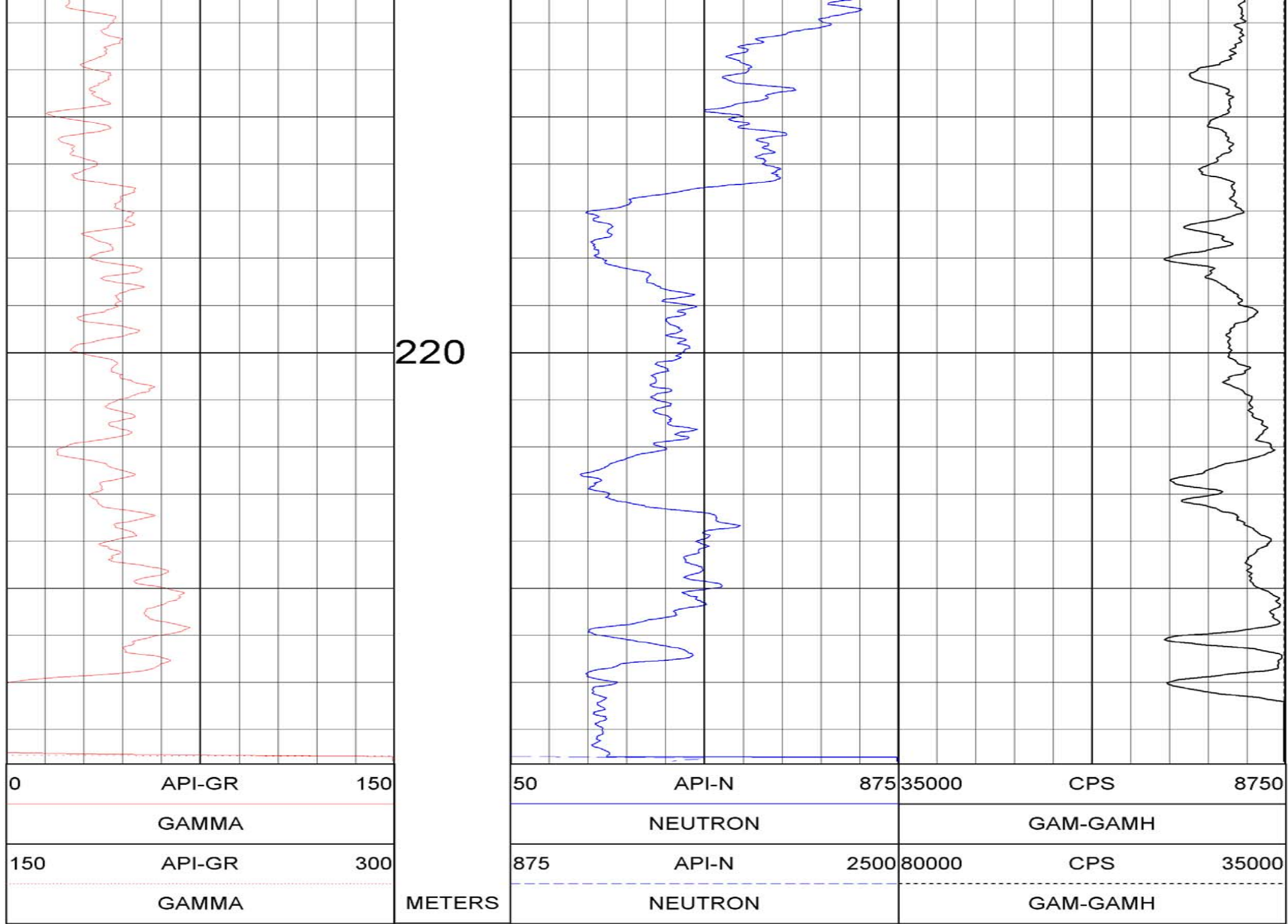












LOG PARAMETERS

MATRIX DENSITY : 2.65

NEUTRON MATRIX : SANDSTONE

MATRIX DELTA T : 140

MAGNETIC DECL : 23

ELECT. CUTOFF : 50000

BIT SIZE : 9.60

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TOOL 9067A TM VERSION 3200

SERIAL NUMBER 529

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2	Feb22,06	16:07:12	NEUTROI Default	[CPS]	Default [CPS]
	Feb22,06	16:07:12	NEUTROI Default	[CPS]	Default [CPS]



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NEUTRON - GAMMA-DENSITY

05 P4 (002)

COMPANY : FORTUNE MINERALS

WELL : 05 P4 (002)

FIELD : MOUNT KLAPPAN

COUNTY :

STATE : BRITISH COLUMBIA

OTHER SERVICES:

9067

9068

LOCATION : 505,876 6,343,395 FROM GPS, NAD83

SECTION :

TOWNSHIP :

RANGE :

API NO. :

UNIQUE WELL ID. :

PERMANENT DATUM : ELEVATION KB : NONE

LOG MEASURED FROM: 0 ELEVATION DF : NONE

DRL MEASURED FROM: ELEVATION GL : 1701

DATE : 11/14/05

DEPTH DRILLER : 105.16

BIT SIZE : 9.60

LOG TOP : 0.22

LOG BOTTOM : 106.43

CASING OD : 7.30

CASING BOTTOM : 105.16

CASING TYPE : PVC

BOREHOLE FLUID : WATER

RM TEMPERATURE :

MUD RES :

MUD WEIGHT :

RECORDED BY : J. SINKWICH

REMARKS 1 : HQ CORE

REMARKS 2 : MEASUREMENTS IN CENTIMETERS & METERS

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

GAMMA - NEUTRON - GAMMA-DENSITY 05 P4 (002) 11/14/05

LOG PARAMETERS

MATRIX DENSITY : 2.65

NEUTRON MATRIX : SANDSTONE

MATRIX DELTA T : 140

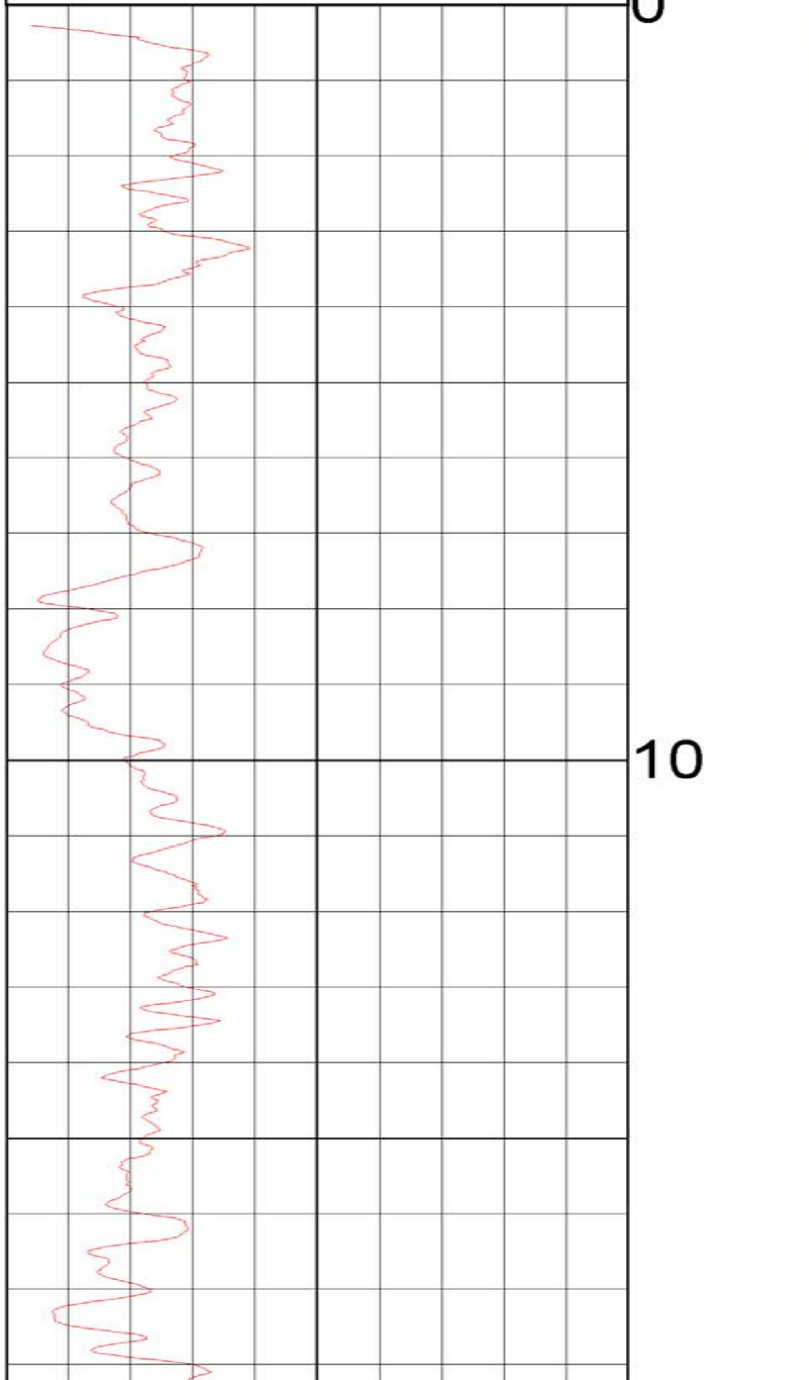
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ELECT. CUTOFF : 50000

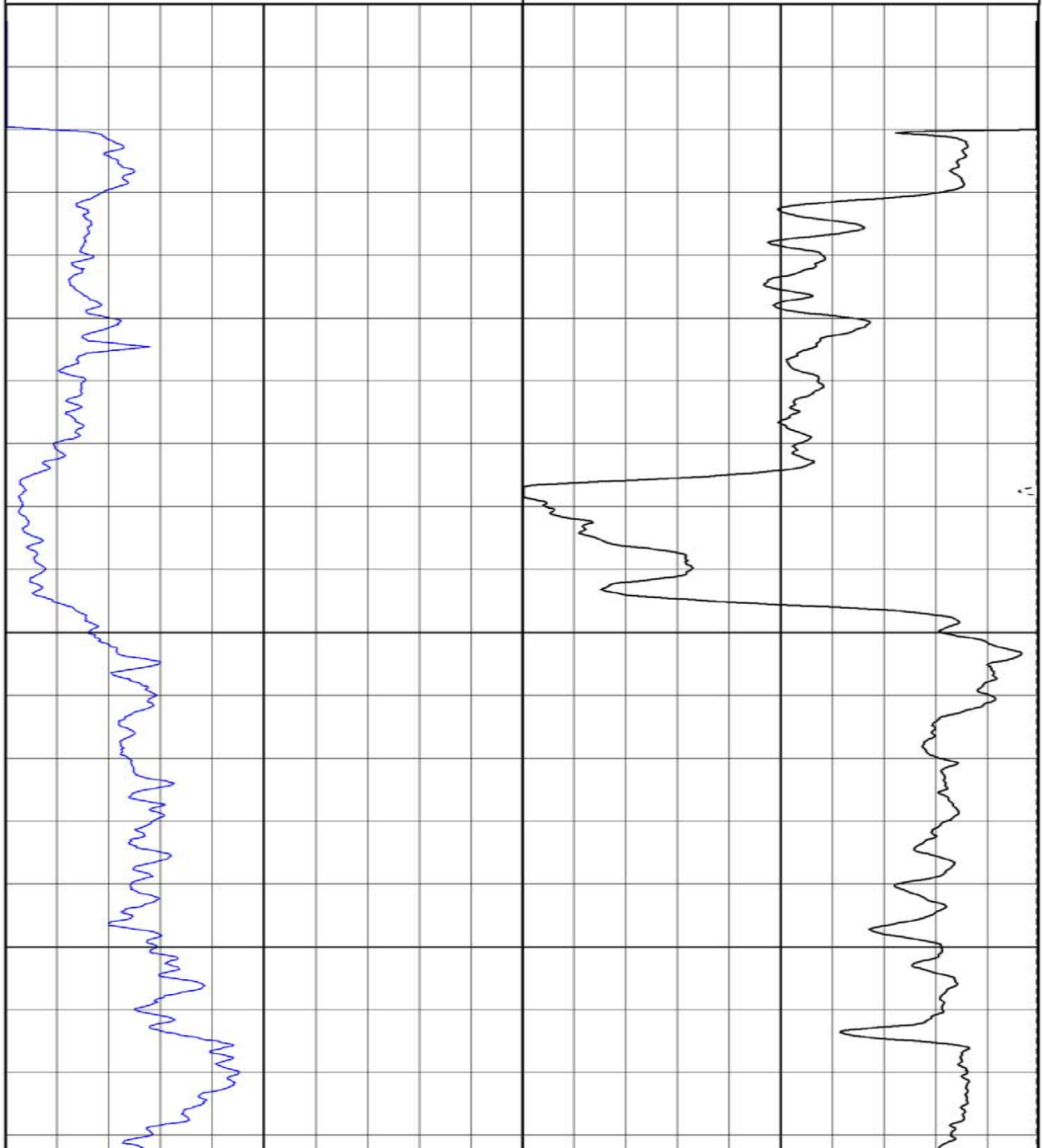
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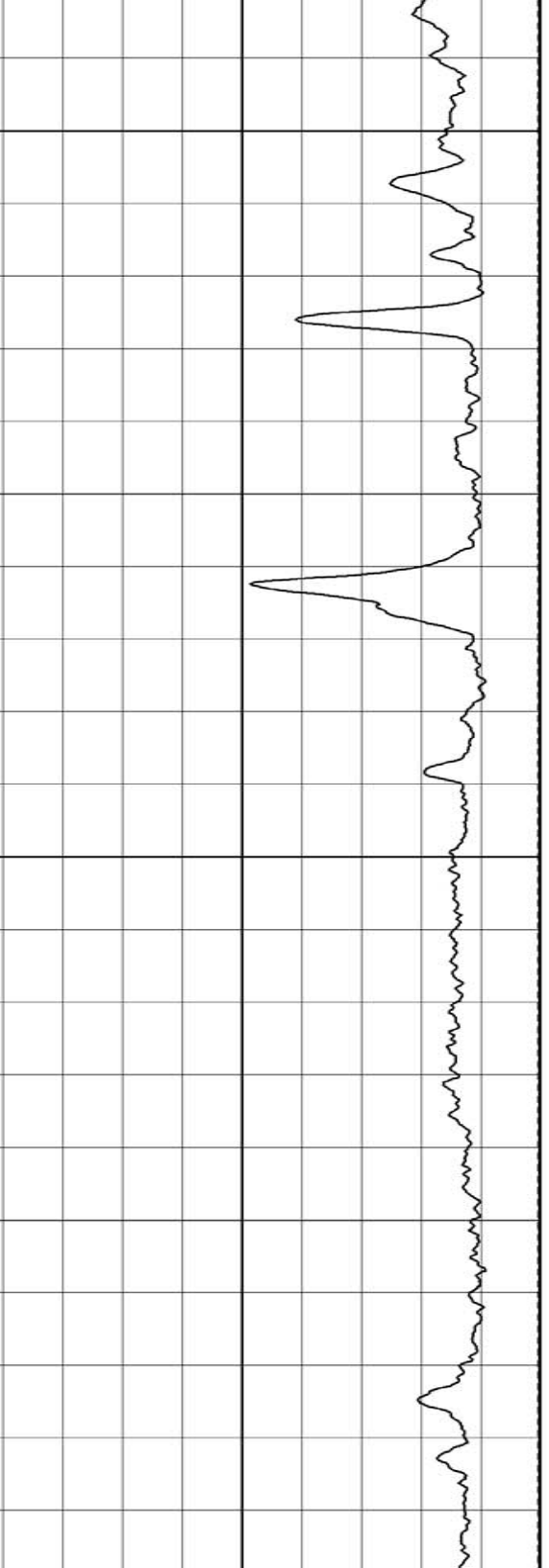
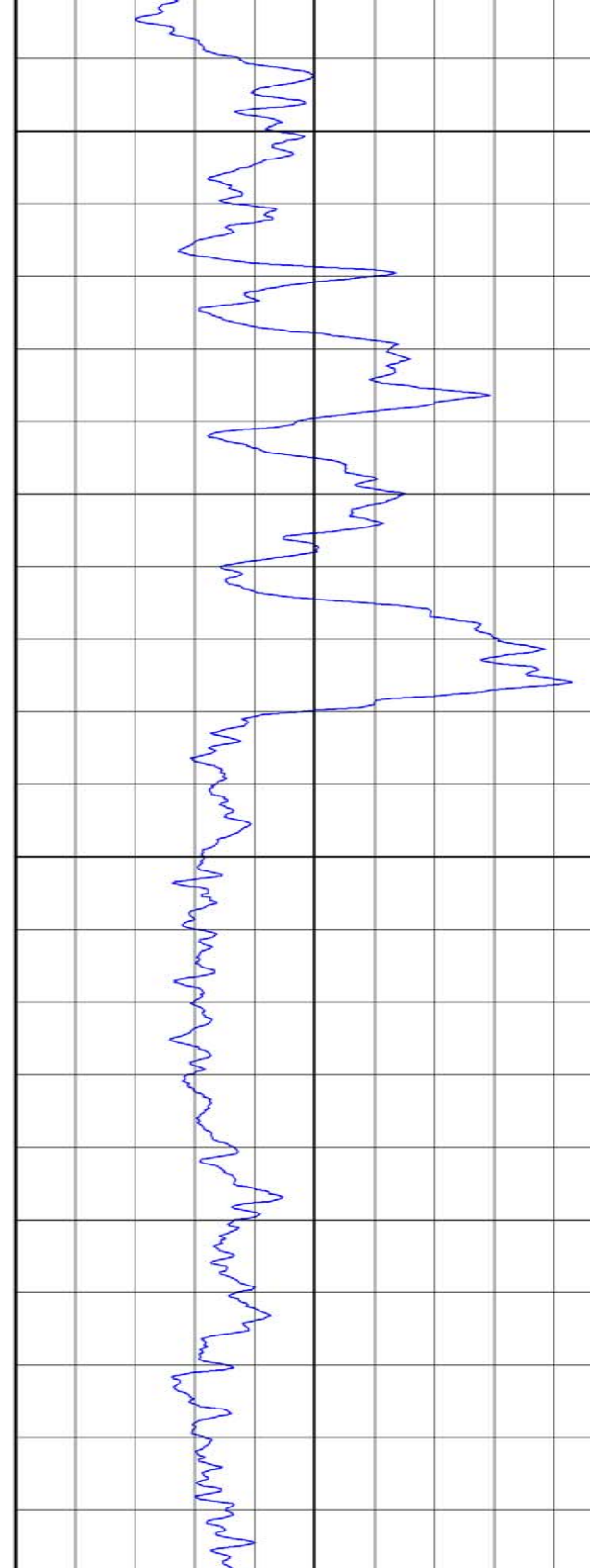
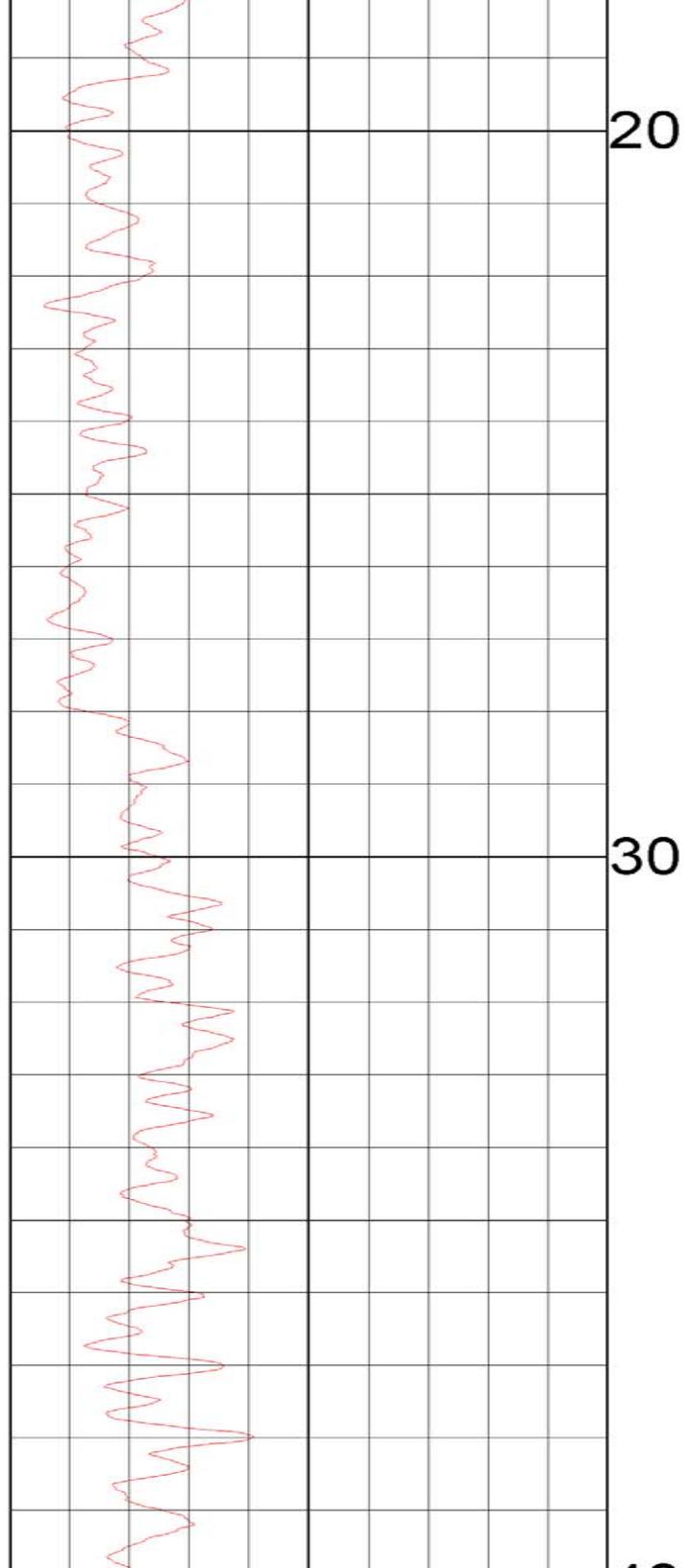
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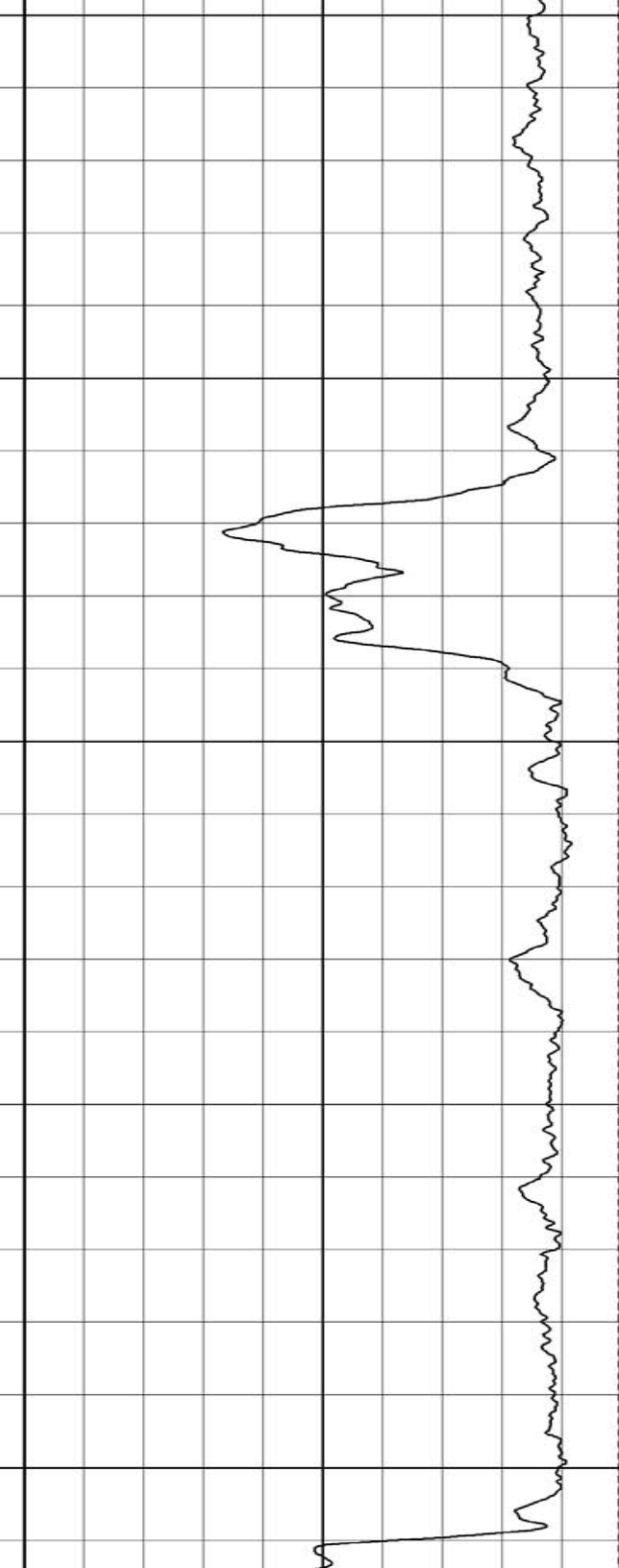
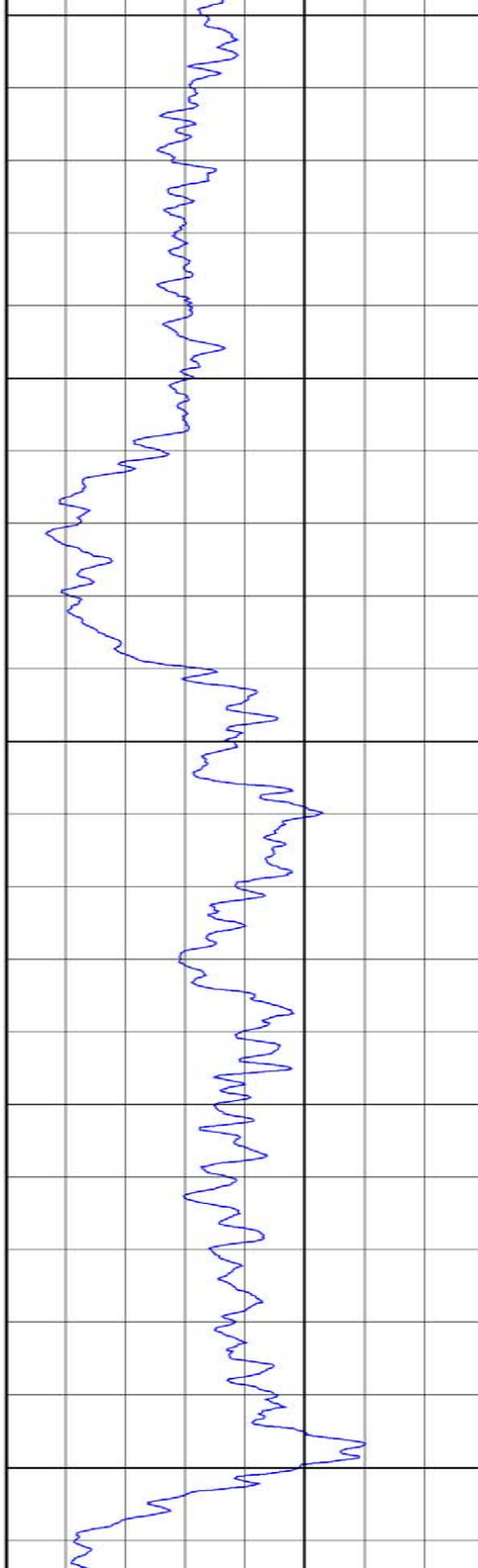
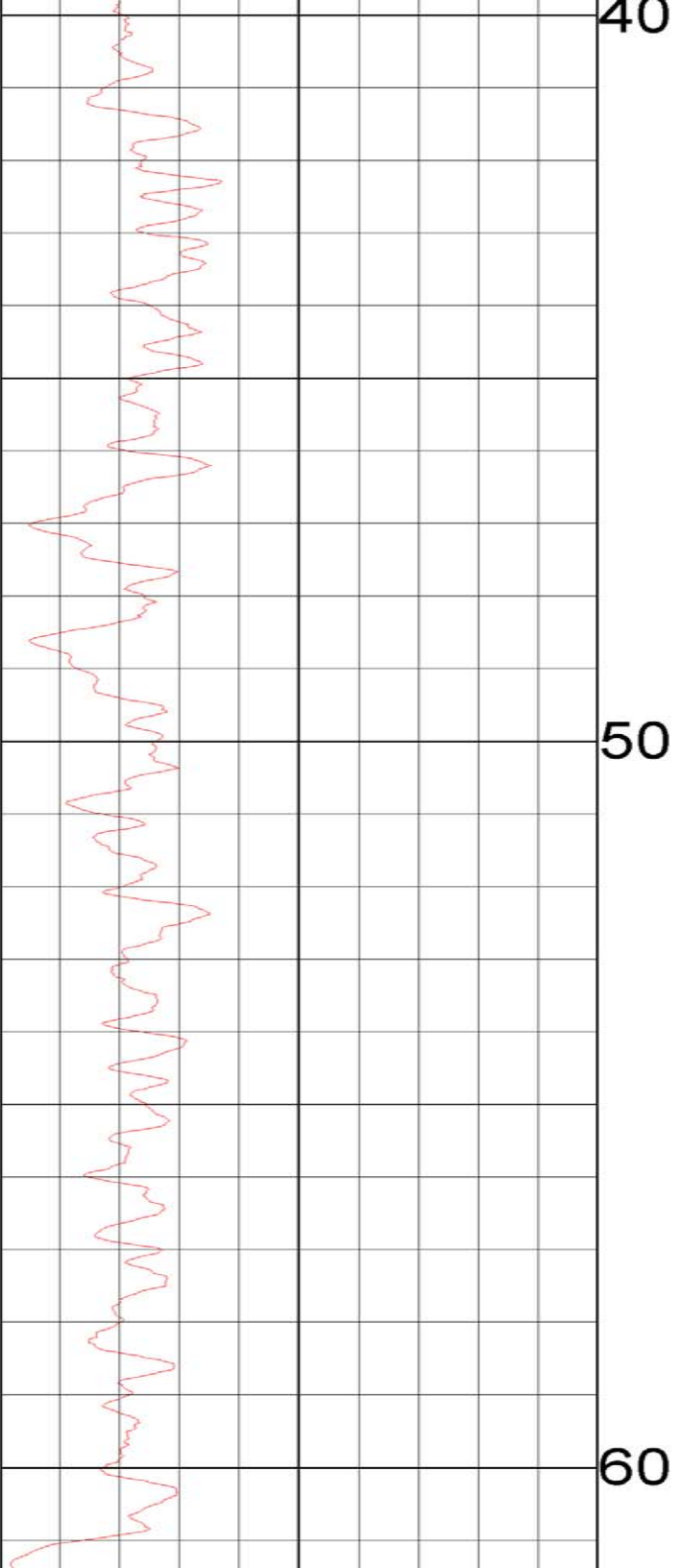
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150	API-GR	300
GAMMA		
0	API-GR	150

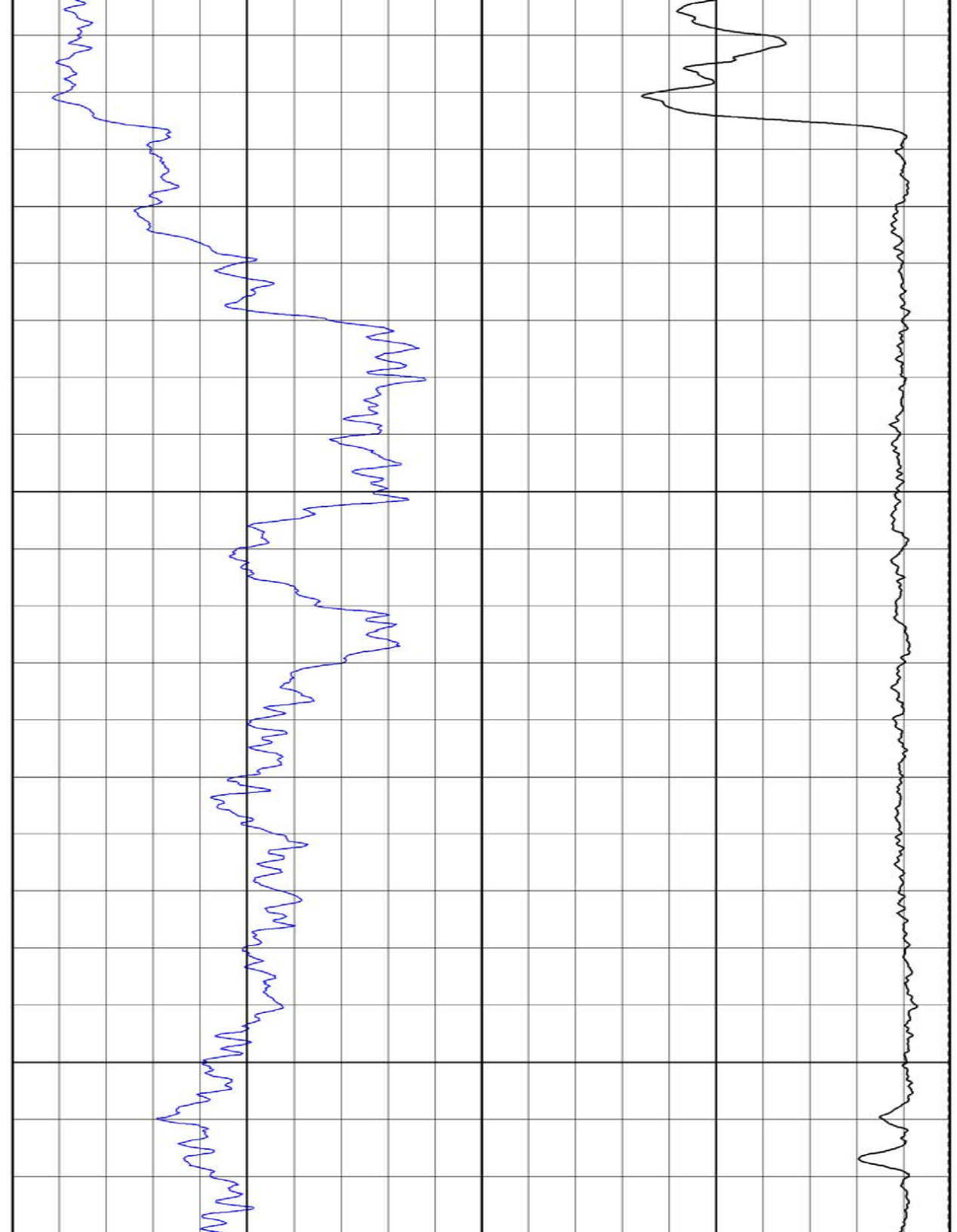
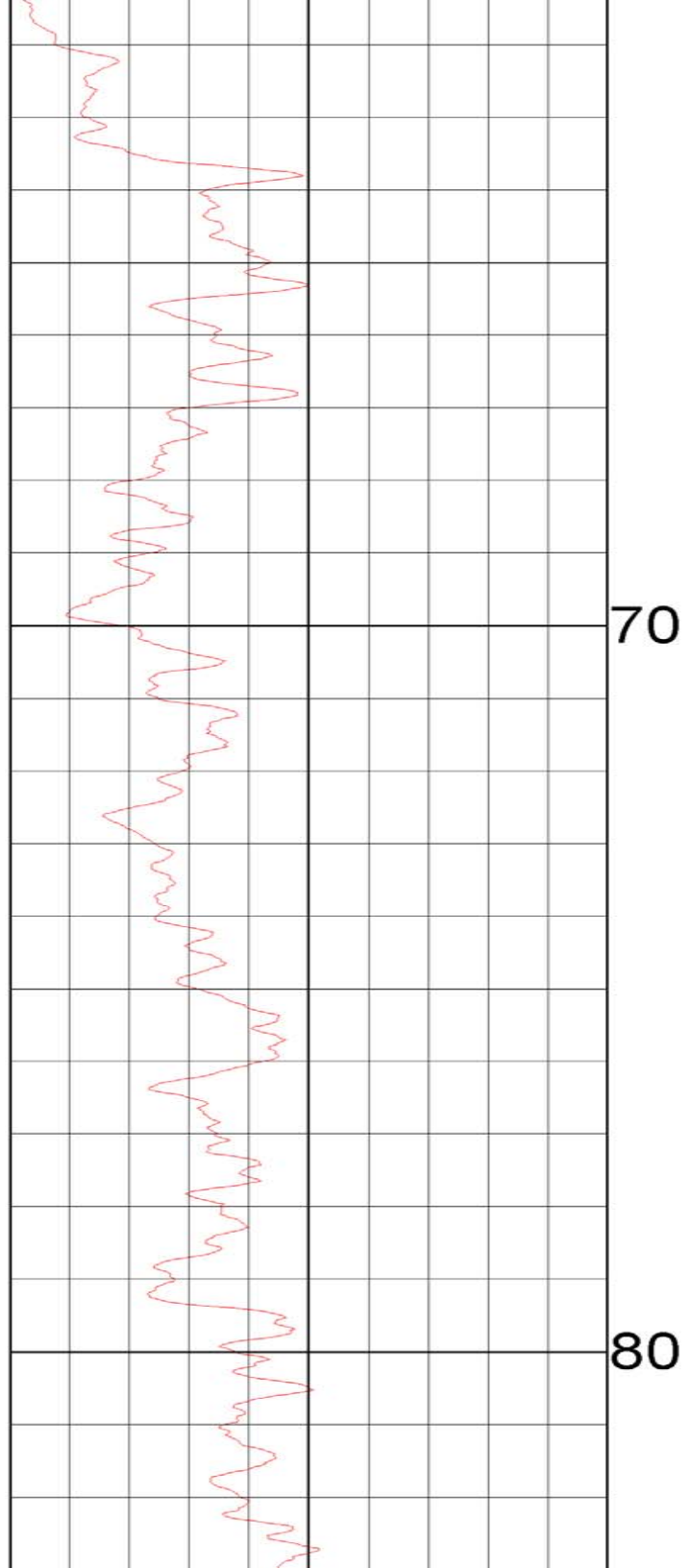


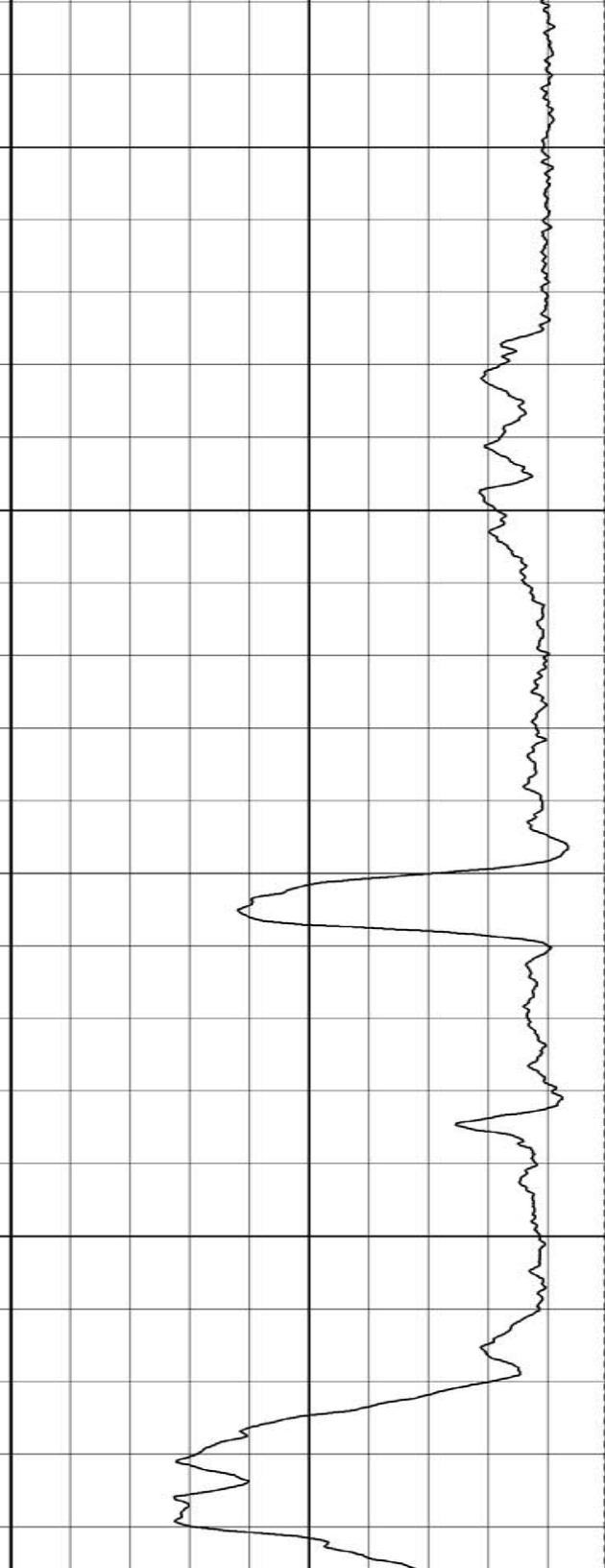
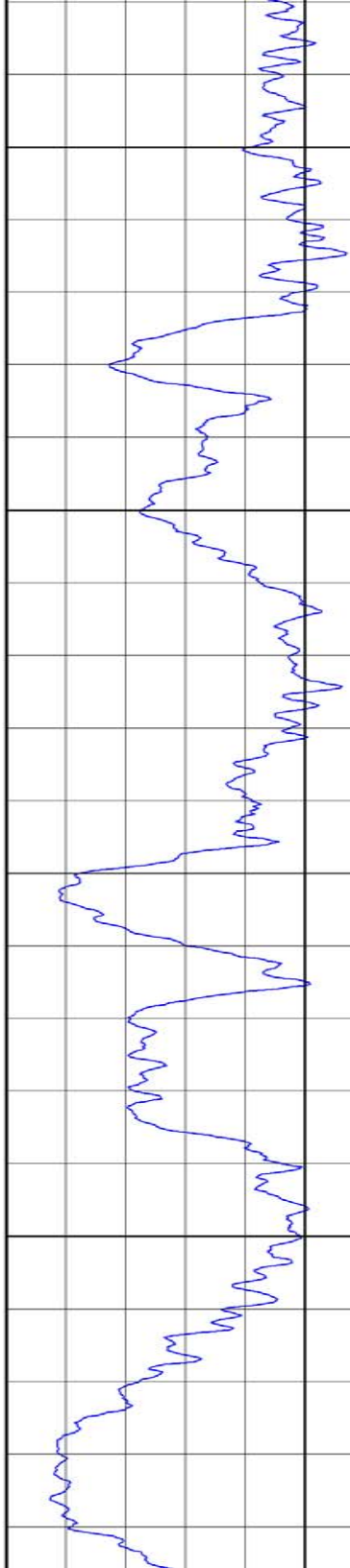
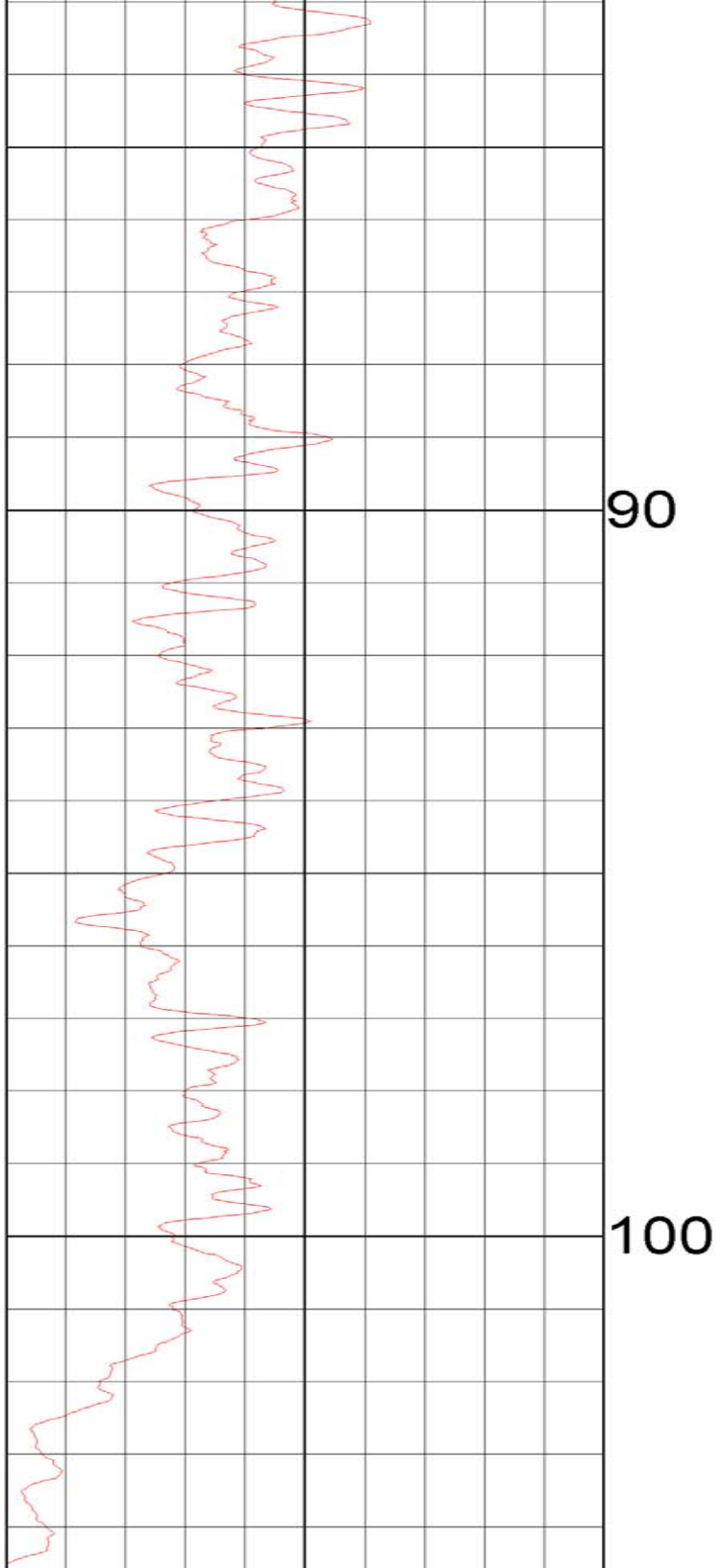
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		CPS	8750

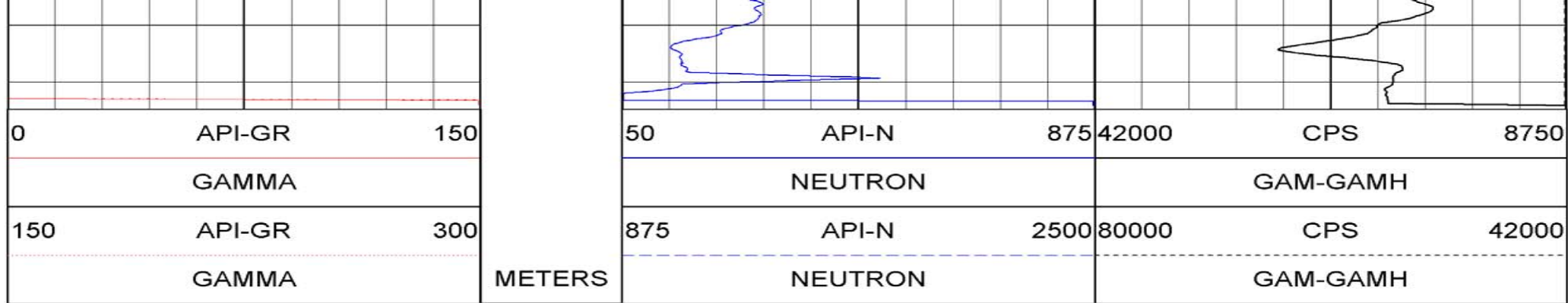












GAMMA - NEUTRON - GAMMA-DENSITY 05 P4 (002) 11/14/05

LOG PARAMETERS

MATRIX DENSITY : 2.65

NEUTRON MATRIX : SANDSTONE

MATRIX DELTA T : 140

MAGNETIC DECL : 23

ELECT. CUTOFF : 50000

BIT SIZE : 9.60

PRESENTATION NAME/DATE = 9068A-9067A_fort.0 11/15/2005

TOOL CALIBRATION 05 P4 (002) 11/14/05 10:31

TOOL 9067A TM VERSION 3200

SERIAL NUMBER 529

	DATE	TIME	SENSOR	STANDARD	RESPONSE
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	Mar01,02	22:09:58	GAMMA	105.000 [API-GR]	53.00 [CPS]
2	Feb22,06	16:07:12	NEUTROI	Default [CPS]	Default [CPS]
	Feb22,06	16:07:12	NEUTROI	Default [CPS]	Default [CPS]

APPENDIX C
PROXIMAL AND DISTAL ANALYTICAL RESULTS

Appendix C contains coal quality data and remains confidential under the terms of the *Coal Act Regulation*, Section 2(1). It has been removed from the public version.

http://www.bclaws.ca/EPLibraries/bclaws_new/document/ID/free/10_251_2004#section2

List of ASTM Procedures used for the Fortune Coal Project 2005-2007

PARAMETER	LAB METHOD
Preparation of Coal Samples	ASTM D 2013
Air Dried Moisture Loss%	ASTM D 3302
Residual Moisture wt%	ASTM D 3173
Ash wt%	ASTM D 3174
Volatile wt%	ASTM D 3175
Sulphur wt%	ASTM D 4239
Specific Gravity	ISO 1014 (modified)
Calorific Value (Btu/lb)	ASTM D 5865
Carbon, Hydrogen, Nitrogen wt%	ASTM D 5373
Hardgrove Grindability Index	ASTM D 409

APPENDIX D
ARD AND METAL LEACHING RESULTS

Compiled Acid-Base Accounts and Total-Element Analyses for the Mount Klappan Coal Project

Project: Mount Klappan
Client: Rescan Environmental
Data: Sample Information

Comments: Rock units designated by Gulf.

Gulf samples taken from "Acid Generation Potential Mount Klappan Project Addendum to Stage 1 Studies", by Norecol Environmental Consultants, March 1986 and "Stage 1 Acid Generation Potential Studies for the Mount Klappan Project", by Norecol Environmental Consultants, March 1985.

Sample Id.	Date Sampled	Sampled By	Area	Sample Condition	Sample Type	Location	Relative Organic Carbon Content	Hole Name	Interval		Interval Length (m)	Possible Nearest Lettered Coal Seam
									From (m)	To (m)		
04-SR-01	2005	Rescan	Lost Fox	Fresh	Core		1	A-911/104-H-2 (Shell)	74.04	74.09	0.05	J
04-SR-02	2005	Rescan	Lost Fox	Fresh	Core		3	A-911/104-H-2 (Shell)	76.44	76.50	0.06	J
04-SR-03	2005	Rescan	Lost Fox	Fresh	Core		1	A-911/104-H-2 (Shell)	79.70	79.75	0.05	J
04-SR-04	2005	Rescan	Lost Fox	Fresh	Core		2	A-911/104-H-2 (Shell)	83.70	83.73	0.03	J
04-SR-05	2005	Rescan	Lost Fox	Fresh	Core		1	A-911/104-H-2 (Shell)	86.10	86.15	0.05	J
86-035-01	2005	Rescan (Charlie Lake)	Lost Fox	Weathered	Core		3	86-035	11.49	11.53	0.04	M
86-035-02	2005	Rescan (Charlie Lake)	Lost Fox	Weathered	Core		1	86-035	46.69	46.72	0.03	L
86-035-03	2005	Rescan (Charlie Lake)	Lost Fox	Weathered	Core		1	86-035	55.81	55.84	0.03	L
86-035-04	2005	Rescan (Charlie Lake)	Lost Fox	Weathered	Core		2	86-035	67.95	67.98	0.03	KL
86-035-13	2005	Rescan (Charlie Lake)	Lost Fox	Weathered	Core		1	86-035	78.00	78.05	0.05	KL
86-035-05	2005	Rescan (Charlie Lake)	Lost Fox	Weathered	Core		1	86-035	89.70	90.00	0.30	K
86-035-10	2005	Rescan (Charlie Lake)	Lost Fox	Weathered	Core		3	86-035	122.44	122.50	0.06	J
86-035-06	2005	Rescan (Charlie Lake)	Lost Fox	Weathered	Core		1	86-035	134.82	134.86	0.04	J
86-035-07	2005	Rescan (Charlie Lake)	Lost Fox	Weathered	Core		1	86-035	157.40	157.43	0.03	I
86-035-07 (HC)	2005	Rescan (Charlie Lake)	Lost Fox	Weathered	Core		1	86-035	157.40	157.43	0.03	I
86-035-08	2005	Rescan (Charlie Lake)	Lost Fox	Weathered	Core		1	86-035	158.82	158.87	0.05	I
86-035-12	2005	Rescan (Charlie Lake)	Lost Fox	Weathered	Core		1	86-035	159.78	159.80	0.02	I
86-035-11	2005	Rescan (Charlie Lake)	Lost Fox	Weathered	Core		1	86-035	179.11	179.15	0.04	I
86-035-09	2005	Rescan (Charlie Lake)	Lost Fox	Weathered	Core		2	86-035	197.03	197.09	0.06	H
86-035-09 (HC)	2005	Rescan (Charlie Lake)	Lost Fox	Weathered	Core		1	86-035	197.03	197.09	0.06	H
85-027-01	2005	Rescan (Charlie Lake)	Lost Fox	Weathered	Core		1	85-027	6.60	6.70	0.10	O
85-027-02	2005	Rescan (Charlie Lake)	Lost Fox	Weathered	Core		1	85-027	41.85	41.90	0.05	O
85-027-02 (HC)	2005	Rescan (Charlie Lake)	Lost Fox	Weathered	Core		1	85-027	41.85	41.90	0.05	O
85-027-03	2005	Rescan (Charlie Lake)	Lost Fox	Weathered	Core		1	85-027	44.00	44.06	0.06	O
85-027-04	2005	Rescan (Charlie Lake)	Lost Fox	Weathered	Core		1	85-027	45.95	46.00	0.05	O
85-027-27	2005	Rescan (Charlie Lake)	Lost Fox	Weathered	Core		1	85-027	73.13	73.20	0.07	N
85-027-05	2005	Rescan (Charlie Lake)	Lost Fox	Weathered	Core		1	85-027	75.20	75.26	0.06	N
85-027-06	2005	Rescan (Charlie Lake)	Lost Fox	Weathered	Core		2	85-027	77.68	78.65	0.97	N
85-027-25	2005	Rescan (Charlie Lake)	Lost Fox	Weathered	Core		1	85-027	100.94	101.00	0.06	M
85-027-21	2005	Rescan (Charlie Lake)	Lost Fox	Weathered	Core		1	85-027	123.26	123.30	0.04	L
85-027-07	2005	Rescan (Charlie Lake)	Lost Fox	Weathered	Core		1	85-027	127.00	127.50	0.50	L
85-027-08	2005	Rescan (Charlie Lake)	Lost Fox	Weathered	Core		1	85-027	129.30	129.35	0.05	L
85-027-09	2005	Rescan (Charlie Lake)	Lost Fox	Weathered	Core		1	85-027	143.00	143.05	0.05	KL
85-027-10	2005	Rescan (Charlie Lake)	Lost Fox	Weathered	Core		1	85-027	147.70	147.75	0.05	KL
85-027-11	2005	Rescan (Charlie Lake)	Lost Fox	Weathered	Core		1	85-027	151.73	151.80	0.07	KL
85-027-20	2005	Rescan (Charlie Lake)	Lost Fox	Weathered	Core		1	85-027	152.56	152.62	0.06	KL
85-027-12	2005	Rescan (Charlie Lake)	Lost Fox	Weathered	Core		2	85-027	163.75	163.80	0.05	K
85-027-13	2005	Rescan (Charlie Lake)	Lost Fox	Weathered	Core		1	85-027	164.95	165.00	0.05	K
85-027-23	2005	Rescan (Charlie Lake)	Lost Fox	Weathered	Core		1	85-027	177.85	177.88	0.03	K
85-027-14	2005	Rescan (Charlie Lake)	Lost Fox	Weathered	Core		1	85-027	190.58	190.60	0.02	K
85-027-28	2005	Rescan (Charlie Lake)	Lost Fox	Weathered	Core		2	85-027	192.33	192.40	0.07	I
85-027-15	2005	Rescan (Charlie Lake)	Lost Fox	Weathered	Core		1	85-027	215.96	216.04	0.08	I
85-027-16	2005	Rescan (Charlie Lake)	Lost Fox	Weathered	Core		1	85-027	221.55	221.60	0.05	I
85-027-17	2005	Rescan (Charlie Lake)	Lost Fox	Weathered	Core		1	85-027	231.21	231.29	0.08	I
85-027-17 (HC)	2005	Rescan (Charlie Lake)	Lost Fox	Weathered	Core		1	85-027	231.21	231.29	0.08	I
85-027-24	2005	Rescan (Charlie Lake)	Lost Fox	Weathered	Core		1	85-027	244.33	244.37	0.04	H
85-027-24 (HC)	2005	Rescan (Charlie Lake)	Lost Fox	Weathered	Core		1	85-027	244.33	244.37	0.04	H
85-027-18	2005	Rescan (Charlie Lake)	Lost Fox	Weathered	Core		1	85-027	265.47	265.50	0.03	H

Project:

Client: Rescan Environmental

Data: Sample Information

Comments: Rock units designated by Gulf.

Mount Klappan

Rescan Environmental

Sample Information

Rock units designated by Gulf.

Gulf samples taken from "Acid Generation Potential Mount Klappan Project Addendum to Stage 1 Studies", by Norecol Environmental Consultants, March 1986 and "Stage 1 Acid Generation Potential Studies for the Mount Klappan Project", by Norecol Environmental Consultants, March 1985.

Sample Id.	Date Sampled	Sampled By	Area	Sample Condition	Sample Type	Location	Relative Organic Carbon Content	Hole Name	Interval		Interval Length (m)	Possible Nearest Lettered Coal Seam
									From (m)	To (m)		
85-027-19	2005	Rescan (Charlie Lake)	Lost Fox	Weathered	Core		2	85-027	268.50	268.55	0.05	H
85-016-02	2005	Rescan (Charlie Lake)	Lost Fox	Weathered	Core		1	85-016	38.00	38.10	0.10	I
85-016-01	2005	Rescan (Charlie Lake)	Lost Fox	Weathered	Core		1	85-016	42.00	42.05	0.05	I
85-016-05	2005	Rescan (Charlie Lake)	Lost Fox	Weathered	Core		1	85-016	64.18	64.26	0.08	I
85-016-03	2005	Rescan (Charlie Lake)	Lost Fox	Weathered	Core		1	85-016	80.68	80.73	0.05	I
85-016-04	2005	Rescan (Charlie Lake)	Lost Fox	Weathered	Core		1	85-016	86.41	86.44	0.03	I
85-016-06	2005	Rescan (Charlie Lake)	Lost Fox	Weathered	Core		1	85-016	104.01	104.07	0.06	I
85-016-07	2005	Rescan (Charlie Lake)	Lost Fox	Weathered	Core		1	85-016	116.06	116.10	0.04	H
85-016-07 (HC)	2005	Rescan (Charlie Lake)	Lost Fox	Weathered	Core		1	85-016	116.06	116.10	0.04	H
85-016-08	2005	Rescan (Charlie Lake)	Lost Fox	Weathered	Core		1	85-016	127.08	127.12	0.04	H
85-016-09	2005	Rescan (Charlie Lake)	Lost Fox	Weathered	Core		1	85-016	134.35	134.43	0.08	H
85-016-10	2005	Rescan (Charlie Lake)	Lost Fox	Weathered	Core		1	85-016	135.50	135.55	0.05	H
85-016-12	2005	Rescan (Charlie Lake)	Lost Fox	Weathered	Core		1	85-016	149.25	149.28	0.03	PH
85-016-11	2005	Rescan (Charlie Lake)	Lost Fox	Weathered	Core		1	85-016	167.93	168.00	0.07	GU
85-016-13	2005	Rescan (Charlie Lake)	Lost Fox	Weathered	Core		2	85-016	182.27	182.30	0.03	GU
G-85-015-7525	1986	Gulf	Lost Fox	Fresh	Core		4	85-015				E
G-85-013-7493	1986	Gulf	Lost Fox	Fresh	Core		4	85-013	146.55	150.96	4.41	H
G-85-010-7383	1986	Gulf	Lost Fox	Fresh	Core		4	85-010				N
G-85-009-7458	1986	Gulf	Lost Fox	Fresh	Core		4	85-009				K
G-85-009-7465	1986	Gulf	Lost Fox	Fresh	Core		4	85-009				M
G-85-006-116	1986	Gulf	Lost Fox	Fresh	Core		4	85-006	19.2	19.5	0.30	H
G-85-006-117	1986	Gulf	Lost Fox	Fresh	Core		4	85-006	22	22.3	0.30	H
G-85-006-141	1986	Gulf	Lost Fox	Fresh	Core		4	85-006	23	23.3	0.30	H
G-85-006-142	1986	Gulf	Lost Fox	Fresh	Core		4	85-006	25.7	26	0.30	H
G-85-006-118	1986	Gulf	Lost Fox	Fresh	Core		4	85-006	27.2	27.5	0.30	H
G-85-006-119	1986	Gulf	Lost Fox	Fresh	Core		4	85-006	37.4	37.6	0.20	H
G-85-006-120	1986	Gulf	Lost Fox	Fresh	Core		4	85-006	44	44.2	0.20	H
G-85-006-121	1986	Gulf	Lost Fox	Fresh	Core		4	85-006	50.6	50.8	0.20	H
G-85-006-122	1986	Gulf	Lost Fox	Fresh	Core		4	85-006	53.6	53.9	0.30	H
G-85-006-123	1986	Gulf	Lost Fox	Fresh	Core		4	85-006	59	59.2	0.20	GU
G-85-006-101	1986	Gulf	Lost Fox	Fresh	Core		4	85-006	68	68.2	0.20	GU
G-85-006-102	1986	Gulf	Lost Fox	Fresh	Core		4	85-006	78.3	78.5	0.20	GU
G-85-006-143	1986	Gulf	Lost Fox	Fresh	Core		4	85-006	83.1	83.4	0.30	GU
G-85-006-144	1986	Gulf	Lost Fox	Fresh	Core		4	85-006	87.4	87.9	0.50	GU
G-85-006-103	1986	Gulf	Lost Fox	Fresh	Core		4	85-006	93.4	93.6	0.20	GU
G-85-006-104	1986	Gulf	Lost Fox	Fresh	Core		4	85-006	96.6	96.8	0.20	GU
G-85-006-105	1986	Gulf	Lost Fox	Fresh	Core		4	85-006	102.7	102.9	0.20	GU
G-85-006-106	1986	Gulf	Lost Fox	Fresh	Core		4	85-006	107	107.2	0.20	GU
G-85-006-107	1986	Gulf	Lost Fox	Fresh	Core		4	85-006	112.9	113.1	0.20	GU
G-85-006-108	1986	Gulf	Lost Fox	Fresh	Core		4	85-006	114.3	114.5	0.20	GU
G-85-006-109	1986	Gulf	Lost Fox	Fresh	Core		4	85-006	117.4	117.5	0.10	GU
G-85-006-110	1986	Gulf	Lost Fox	Fresh	Core		4	85-006	126.3	126.5	0.20	F
G-85-006-111	1986	Gulf	Lost Fox	Fresh	Core		4	85-006	129.5	129.8	0.30	F
G-85-006-112	1986	Gulf	Lost Fox	Fresh	Core		4	85-006	136.3	136.5	0.20	F
G-85-006-113	1986	Gulf	Lost Fox	Fresh	Core		4	85-006	139.3	139.5	0.20	F
G-85-006-114	1986	Gulf	Lost Fox	Fresh	Core		4	85-006	143.5	143.7	0.20	F
G-85-006-115	1986	Gulf	Lost Fox	Fresh	Core		4	85-006	151.5	151.7	0.20	F
G-85-006-124	1986	Gulf	Lost Fox	Fresh	Core		4	85-006	153.3	153.5	0.20	F

Project:**Mount Klappan**

Client:

Rescan Environmental

Data:**Sample Information**

Comments:

Rock units designated by Gulf.

Gulf samples taken from "Acid Generation Potential Mount Klappan Project Addendum to Stage 1 Studies", by Norecol Environmental Consultants, March 1986 and "Stage 1 Acid Generation Potential Studies for the Mount Klappan Project", by Norecol Environmental Consultants, March 1985.

Sample Id.	Date Sampled	Sampled By	Area	Sample Condition	Sample Type	Location	Relative Organic Carbon Content	Hole Name	Interval		Interval Length (m)	Possible Nearest Lettered Coal Seam
									From (m)	To (m)		
G-85-006-125	1986	Gulf	Lost Fox	Fresh	Core		4	85-006	157	157.3	0.30	F
G-85-006-126	1986	Gulf	Lost Fox	Fresh	Core		4	85-006	169.8	170	0.20	E
G-85-006-127	1986	Gulf	Lost Fox	Fresh	Core		4	85-006	175.9	176.1	0.20	E
G-85-006-145	1986	Gulf	Lost Fox	Fresh	Core		4	85-006	177	177.4	0.40	E
G-85-006-128	1986	Gulf	Lost Fox	Fresh	Core		4	85-006	180	180.3	0.30	E
G-85-006-129	1986	Gulf	Lost Fox	Fresh	Core		4	85-006	186.3	186.5	0.20	E
G-85-006-130	1986	Gulf	Lost Fox	Fresh	Core		4	85-006	197.2	197.4	0.20	E
G-85-006-131	1986	Gulf	Lost Fox	Fresh	Core		4	85-006	203.4	203.6	0.20	E
G-85-006-132	1986	Gulf	Lost Fox	Fresh	Core		4	85-006	206.2	206.4	0.20	E
G-85-006-133	1986	Gulf	Lost Fox	Fresh	Core		4	85-006	215.3	215.5	0.20	E
G-85-006-134	1986	Gulf	Lost Fox	Fresh	Core		4	85-006	221.6	221.8	0.20	E
G-85-006-135	1986	Gulf	Lost Fox	Fresh	Core		4	85-006	227.5	227.7	0.20	E
G-85-006-136	1986	Gulf	Lost Fox	Fresh	Core		4	85-006	239.7	239.9	0.20	E
G-85-006-137	1986	Gulf	Lost Fox	Fresh	Core		4	85-006	244.7	244.9	0.20	E
G-85-006-138	1986	Gulf	Lost Fox	Fresh	Core		4	85-006	248.5	248.7	0.20	E
G-85-006-139	1986	Gulf	Lost Fox	Fresh	Core		4	85-006	254.8	255.1	0.30	E
G-85-006-140	1986	Gulf	Lost Fox	Fresh	Core		4	85-006	261.6	261.9	0.30	E
G-85-005-01	1986	Gulf	Lost Fox	Fresh	Core		4	85-005	6.8	7	0.20	O
G-85-005-02	1986	Gulf	Lost Fox	Fresh	Core		4	85-005	13	13.3	0.30	O
G-85-005-03	1986	Gulf	Lost Fox	Fresh	Core		4	85-005	13.9	14	0.10	O
G-85-005-04	1986	Gulf	Lost Fox	Fresh	Core		4	85-005	22	22.3	0.30	O
G-85-005-05	1986	Gulf	Lost Fox	Fresh	Core		4	85-005	26	26.3	0.30	O
G-85-005-31	1986	Gulf	Lost Fox	Fresh	Core		4	85-005	26.7	26.9	0.20	O
G-85-005-7541	1986	Gulf	Lost Fox	Fresh	Core		4	85-005	26.9	30.1	3.20	O
G-85-005-32	1986	Gulf	Lost Fox	Fresh	Core		4	85-005	30.2	30.4	0.20	O
G-85-005-06	1986	Gulf	Lost Fox	Fresh	Core		4	85-005	34.2	34.4	0.20	O
G-85-005-07	1986	Gulf	Lost Fox	Fresh	Core		4	85-005	44.6	44.9	0.30	O
G-85-005-08	1986	Gulf	Lost Fox	Fresh	Core		4	85-005	49.1	49.3	0.20	O
G-85-005-33	1986	Gulf	Lost Fox	Fresh	Core		4	85-005	51.3	51.6	0.30	O
G-85-005-34	1986	Gulf	Lost Fox	Fresh	Core		4	85-005	53.3	53.5	0.20	O
G-85-005-09	1986	Gulf	Lost Fox	Fresh	Core		4	85-005	68.3	68.5	0.20	O
G-85-005-10	1986	Gulf	Lost Fox	Fresh	Core		4	85-005	77.8	77.8	0.00	O
G-85-005-11	1986	Gulf	Lost Fox	Fresh	Core		4	85-005	82	82.2	0.20	N
G-85-005-12	1986	Gulf	Lost Fox	Fresh	Core		4	85-005	87.4	87.6	0.20	N
G-85-005-13	1986	Gulf	Lost Fox	Fresh	Core		4	85-005	96.1	96.3	0.20	N
G-85-005-35	1986	Gulf	Lost Fox	Fresh	Core		4	85-005	98.3	98.6	0.30	N
G-85-005-14	1986	Gulf	Lost Fox	Fresh	Core		4	85-005	105.9	106.1	0.20	N
G-85-005-36	1986	Gulf	Lost Fox	Fresh	Core		4	85-005	111.9	112.4	0.50	N
G-85-005-15	1986	Gulf	Lost Fox	Fresh	Core		4	85-005	128.4	128.6	0.20	N
G-85-005-16	1986	Gulf	Lost Fox	Fresh	Core		4	85-005	142.2	142.4	0.20	N
G-85-005-17	1986	Gulf	Lost Fox	Fresh	Core		4	85-005	154.4	154.7	0.30	MN
G-85-005-18	1986	Gulf	Lost Fox	Fresh	Core		4	85-005	169.4	169.6	0.20	MN
G-85-005-19	1986	Gulf	Lost Fox	Fresh	Core		4	85-005	176.9	177.1	0.20	MN
G-85-005-20	1986	Gulf	Lost Fox	Fresh	Core		4	85-005	185	185.3	0.30	MN
G-85-005-21	1986	Gulf	Lost Fox	Fresh	Core		4	85-005	202.2	202.4	0.20	M
G-85-005-37	1986	Gulf	Lost Fox	Fresh	Core		4	85-005	210.6	210.9	0.30	M
G-85-005-22	1986	Gulf	Lost Fox	Fresh	Core		4	85-005	211.9	212.1	0.20	M
G-85-005-7328	1986	Gulf	Lost Fox	Fresh	Core		4	85-005	211.91	214.17	2.26	M

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Mount Klappan

Rescan Environmental

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									From (m)	To (m)		
G-85-005-23	1986	Gulf	Lost Fox	Fresh	Core		4	85-005	215.4	215.6	0.20	M
G-85-005-24	1986	Gulf	Lost Fox	Fresh	Core		4	85-005	230.4	230.6	0.20	L/M
G-85-005-25	1986	Gulf	Lost Fox	Fresh	Core		4	85-005	239	239.2	0.20	L/M
G-85-005-26	1986	Gulf	Lost Fox	Fresh	Core		4	85-005	243.3	243.5	0.20	L/M
G-85-005-27	1986	Gulf	Lost Fox	Fresh	Core		4	85-005	248.5	248.7	0.20	L/M
G-85-005-28	1986	Gulf	Lost Fox	Fresh	Core		4	85-005	251.8	252	0.20	L/M
G-85-005-29	1986	Gulf	Lost Fox	Fresh	Core		4	85-005	255.5	256	0.50	L/M
G-85-005-30	1986	Gulf	Lost Fox	Fresh	Core		4	85-005	259.7	259.9	0.20	L/M
G-85-005-38	1986	Gulf	Lost Fox	Fresh	Core		4	85-005	267.3	267.5	0.20	L/M
G-85-005-39	1986	Gulf	Lost Fox	Fresh	Core		4	85-005	275.8	276.1	0.30	L/M
G-85-005-40	1986	Gulf	Lost Fox	Fresh	Core		4	85-005	282.2	282.4	0.20	K
G-85-005-41	1986	Gulf	Lost Fox	Fresh	Core		4	85-005	297.3	297.5	0.20	K
G-85-005-42	1986	Gulf	Lost Fox	Fresh	Core		4	85-005	306.6	306.8	0.20	K
G-85-005-47	1986	Gulf	Lost Fox	Fresh	Core		4	85-005	315.8	316	0.20	K
G-85-005-48	1986	Gulf	Lost Fox	Fresh	Core		4	85-005	316	316.4	0.40	K
G-85-005-43	1986	Gulf	Lost Fox	Fresh	Core		4	85-005	327.7	328	0.30	K
G-85-005-44	1986	Gulf	Lost Fox	Fresh	Core		4	85-005	331.8	332.1	0.30	K
G-85-005-45	1986	Gulf	Lost Fox	Fresh	Core		4	85-005	337.1	337.4	0.30	K
G-85-005-46	1986	Gulf	Lost Fox	Fresh	Core		4	85-005	346.9	347.2	0.30	K
G-85-004-7300	1986	Gulf	Lost Fox	Fresh	Core		4	85-004	160.32	165.35	5.03	GU
G-85-003-7287	1986	Gulf	Lost Fox	Fresh	Core		4	85-003			0.00	N
G-85-002-7267	1986	Gulf	Lost Fox	Fresh	Core		4	85-002	59.45	62.68	3.23	I
G-85-001-7264	1986	Gulf	Lost Fox	Fresh	Core		4	85-001	214.7	215.64	0.94	GU
G-84-007-01	1985	Gulf	Lost Fox	Fresh	Core		4	84-007	53.90	54.10	0.20	I
G-84-007-02	1985	Gulf	Lost Fox	Fresh	Core		4	84-007	56.40	56.52	0.12	I
G-84-007-89	1985	Gulf	Lost Fox	Fresh	Core		4	84-007	56.52	63.7	7.18	I
G-84-007-03	1985	Gulf	Lost Fox	Fresh	Core		4	84-007	63.70	64.10	0.40	I
G-84-007-04	1985	Gulf	Lost Fox	Fresh	Core		4	84-007	67.30	67.80	0.50	I
G-84-007-05	1985	Gulf	Lost Fox	Fresh	Core		4	84-007	72.97	73.20	0.23	I
G-84-007-06	1985	Gulf	Lost Fox	Fresh	Core		4	84-007	82.11	82.30	0.19	I
G-84-007-07	1985	Gulf	Lost Fox	Fresh	Core		4	84-007	93.57	93.61	0.04	H
G-84-007-08	1985	Gulf	Lost Fox	Fresh	Core		4	84-007	104.08	104.13	0.05	H
G-84-007-85	1985	Gulf	Lost Fox	Fresh	Core		4	84-007	104.13	109.65	5.52	H
G-84-007-10	1985	Gulf	Lost Fox	Fresh	Core		4	84-007	109.65	110.06	0.41	H
G-84-007-11	1985	Gulf	Lost Fox	Fresh	Core		4	84-007	114.91	115.18	0.27	H
G-84-007-12	1985	Gulf	Lost Fox	Fresh	Core		4	84-007	125.28	125.58	0.30	PH
G-84-007-13	1985	Gulf	Lost Fox	Fresh	Core		4	84-007	129.30	129.65	0.35	PH
G-84-007-14	1985	Gulf	Lost Fox	Fresh	Core		4	84-007	139.29	139.48	0.19	PH
G-84-007-15	1985	Gulf	Lost Fox	Fresh	Core		4	84-007	150.98	151.45	0.47	GU
G-84-007-16	1985	Gulf	Lost Fox	Fresh	Core		4	84-007	156.57	156.77	0.20	GU
G-84-007-17	1985	Gulf	Lost Fox	Fresh	Core		4	84-007	161.03	161.28	0.25	GU
G-84-007-18	1985	Gulf	Lost Fox	Fresh	Core		4	84-007	167.64	167.92	0.28	GU
G-84-007-19	1985	Gulf	Lost Fox	Fresh	Core		4	84-007	171.96	172.21	0.25	GU
G-84-007-20	1985	Gulf	Lost Fox	Fresh	Core		4	84-007	178.36	178.61	0.25	GU
G-84-007-21	1985	Gulf	Lost Fox	Fresh	Core		4	84-007	183.55	183.78	0.23	GU
G-84-007-22	1985	Gulf	Lost Fox	Fresh	Core		4	84-007	190.38	190.80	0.42	GU
G-84-007-23	1985	Gulf	Lost Fox	Fresh	Core		4	84-007	210.18	210.30	0.12	E
G-84-007-24	1985	Gulf	Lost Fox	Fresh	Core		4	84-007	218.21	218.54	0.33	E

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Rescan Environmental

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									From (m)	To (m)		
G-84-007-25	1985	Gulf	Lost Fox	Fresh	Core		4	84-007	227.39	227.69	0.30	E
G-84-007-26	1985	Gulf	Lost Fox	Fresh	Core		4	84-007	229.20	229.45	0.25	E
G-84-007-27	1985	Gulf	Lost Fox	Fresh	Core		4	84-007	240.04	240.24	0.20	E
G-84-007-28	1985	Gulf	Lost Fox	Fresh	Core		4	84-007	252.12	252.38	0.26	D
G-84-007-29	1985	Gulf	Lost Fox	Fresh	Core		4	84-007	253.44	253.75	0.31	D
G-84-007-30	1985	Gulf	Lost Fox	Fresh	Core		4	84-007	260.50	260.82	0.32	D
G-84-007-31	1985	Gulf	Lost Fox	Fresh	Core		4	84-007	268.62	268.89	0.27	C
G-84-007-32	1985	Gulf	Lost Fox	Fresh	Core		4	84-007	271.42	271.68	0.26	C
G-84-007-33	1985	Gulf	Lost Fox	Fresh	Core		4	84-007	272.76	273.06	0.30	C
G-84-007-34	1985	Gulf	Lost Fox	Fresh	Core		4	84-007	273.06	282.59	9.53	C
G-84-007-34	1985	Gulf	Lost Fox	Fresh	Core		4	84-007	282.59	282.93	0.34	C
G-84-007-35	1985	Gulf	Lost Fox	Fresh	Core		4	84-007	288.13	288.38	0.25	C
05-ARD4-09	2005	Rescan	Lost Fox	Fresh	Core		1	05-ARD4	33.10	34.10	1.00	K
05-ARD4-10	2005	Rescan	Lost Fox	Fresh	Core		1	05-ARD4	47.24	48.24	1.00	K
05-ARD4-03	2005	Rescan	Lost Fox	Fresh	Core		1	05-ARD4	70.63	71.01	0.38	K
05-ARD4-04	2005	Rescan	Lost Fox	Fresh	Core		2	05-ARD4	76.77	77.76	0.99	K
05-ARD4-06	2005	Rescan	Lost Fox	Fresh	Core		1	05-ARD4	80.17	81.20	1.03	K
05-ARD4-05	2005	Rescan	Lost Fox	Fresh	Core		1	05-ARD4	90.53	90.96	0.43	H
05-ARD4-07-1	2005	Rescan	Lost Fox	Fresh	Core		1	05-ARD4	105.05	105.16	0.10	H
ARD4-2006A	2006	Rescan	Lost Fox	Fresh	Core		1	05-ARD4	119.8	120.39	0.59	H
05-ARD4-08	2005	Rescan	Lost Fox	Fresh	Core		1	05-ARD4	126.49	127.63	1.14	H
ARD4-2006B	2006	Rescan	Lost Fox	Fresh	Core		1	05-ARD4	129.33	129.54	0.21	H
05-ARD4-02	2005	Rescan	Lost Fox	Fresh	Core		1	05-ARD4	161.54	162.64	1.10	PH
ARD4-2006C	2006	Rescan	Lost Fox	Fresh	Core		2	05-ARD4	162.86	163.07	0.21	PH
05-ARD4-01	2005	Rescan	Lost Fox	Fresh	Core		2	05-ARD4	170.08	170.94	0.86	PH
05-ARD3-01A	2005	Rescan	Lost Fox	Fresh	Core		1	05-ARD3 (05004)	21.16	22.14	0.98	K
05-ARD3-02B	2005	Rescan	Lost Fox	Fresh	Core		2	05-ARD3 (05004)	30.91	32.00	1.09	K
05-ARD3-16	2005	Rescan	Lost Fox	Fresh	Core		1	05-ARD3 (05004)	40.05	41.15	1.10	K
05-ARD3-03A	2005	Rescan	Lost Fox	Fresh	Core		1	05-ARD3 (05004)	43.79	44.96	1.17	J
05-ARD3-04A	2005	Rescan	Lost Fox	Fresh	Core		3	05-ARD3 (05004)	57.00	58.19	1.19	J
05-ARD3-05A	2005	Rescan	Lost Fox	Fresh	Core		1	05-ARD3 (05004)	63.17	64.59	1.42	J
05-ARD3-07A	2005	Rescan	Lost Fox	Fresh	Core		1	05-ARD3 (05004)	82.80	83.73	0.93	I
05-ARD3-07B (HC)	2005	Rescan	Lost Fox	Fresh	Core		1	05-ARD3 (05004)	82.80	83.73	0.93	I
ARD3-2006B	2005	Rescan	Lost Fox	Fresh	Core		2	05-ARD3 (05004)	94.51	94.84	0.33	I
ARD3-2006C	2005	Rescan	Lost Fox	Fresh	Core		1	05-ARD3 (05004)	100.55	101.24	0.69	I
05-ARD3-06A	2005	Rescan	Lost Fox	Fresh	Core		1	05-ARD3 (05004)	108.20	109.17	0.97	I
05-ARD3-08A	2005	Rescan	Lost Fox	Fresh	Core		2	05-ARD3 (05004)	123.44	124.56	1.12	I
05-ARD3-08B (HC)	2005	Rescan	Lost Fox	Fresh	Core		1	05-ARD3 (05004)	123.44	124.56	1.12	I
05-ARD3-09A	2005	Rescan	Lost Fox	Fresh	Core		1	05-ARD3 (05004)	126.49	127.67	1.18	H
ARD3-2006A	2005	Rescan	Lost Fox	Fresh	Core		1	05-ARD3 (05004)	150.38	150.88	0.50	H
05-ARD3-10A	2005	Rescan	Lost Fox	Fresh	Core		1	05-ARD3 (05004)	156.36	157.45	1.09	H
05-ARD3-15A	2005	Rescan	Lost Fox	Fresh	Core		1	05-ARD3 (05004)	158.55	159.65	1.10	H
05-ARD3-12A	2005	Rescan	Lost Fox	Fresh	Core		1	05-ARD3 (05004)	160.63	161.70	1.07	H
05-ARD3-11A	2005	Rescan	Lost Fox	Fresh	Core		1	05-ARD3 (05004)	163.86	164.67	0.81	H
05-ARD3-14A	2005	Rescan	Lost Fox	Fresh	Core		3	05-ARD3 (05004)	182.37	183.39	1.02	PH
05-ARD3-14B (HC)	2005	Rescan	Lost Fox	Fresh	Core		3	05-ARD3 (05004)	182.37	183.39	1.02	PH
05-ARD3-13A	2005	Rescan	Lost Fox	Fresh	Core		3	05-ARD3 (05004)	184.62	185.48	0.86	PH
05-ARD2-04	2005	Rescan	Lost Fox	Fresh	Core		1	05-ARD2	6.98	8.25	1.27	P

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									From (m)	To (m)		
05-ARD2-08	2005	Rescan	Lost Fox	Fresh	Core		1	05-ARD2	36.70	38.07	1.37	P
05-ARD2-07	2005	Rescan	Lost Fox	Fresh	Core		1	05-ARD2	53.04	54.13	1.09	O
05-ARD2-07 (HC)	2005	Rescan	Lost Fox	Fresh	Core		1	05-ARD2	53.04	54.13	1.09	O
05-ARD2-13	2005	Rescan	Lost Fox	Fresh	Core		3	05-ARD2	65.53	65.63	0.10	O
05-ARD2-12	2005	Rescan	Lost Fox	Fresh	Core		2	05-ARD2	69.04	70.10	1.07	O
05-ARD2-12 (HC)	2005	Rescan	Lost Fox	Fresh	Core		3	05-ARD2	69.04	70.10	1.07	O
05-ARD2-16	2005	Rescan	Lost Fox	Fresh	Core		3	05-ARD2	102.51	103.71	1.19	MN
05-ARD2-11	2005	Rescan	Lost Fox	Fresh	Core		1	05-ARD2	127.30	127.36	0.06	MN
05-ARD2-09	2005	Rescan	Lost Fox	Fresh	Core		1	05-ARD2	174.75	175.51	0.76	M
05-ARD2-02	2005	Rescan	Lost Fox	Fresh	Core		1	05-ARD2	190.50	191.70	1.20	L
05-ARD2-10A	2005	Rescan	Lost Fox	Fresh	Core		2	05-ARD2	198.42	199.44	1.02	L
05-ARD2-14	2005	Rescan	Lost Fox	Fresh	Core		1	05-ARD2	208.38	209.04	0.66	L
05-ARD2-06	2005	Rescan	Lost Fox	Fresh	Core		1	05-ARD2	226.62	227.53	0.91	KL
05-ARD2-01A	2005	Rescan	Lost Fox	Fresh	Core		2	05-ARD2	232.64	233.45	0.81	KL
05-ARD2-15	2005	Rescan	Lost Fox	Fresh	Core		1	05-ARD2	252.53	253.37	0.84	K
05-ARD2-05	2005	Rescan	Lost Fox	Fresh	Core		1	05-ARD2	270.48	271.53	1.04	K
ARD2-2006A	2006	Rescan	Lost Fox	Fresh	Core		3	05-ARD2	321.55	322.4	0.85	I
ARD2-2006B	2006	Rescan	Lost Fox	Fresh	Core		1	05-ARD2	326.76	327.66	0.90	I
05-ARD2-03	2005	Rescan	Lost Fox	Fresh	Core		1	05-ARD2	333.60	334.52	0.91	I
05-ARD1-11	2005	Rescan	Lost Fox	Fresh	Core		3	05-ARD1 (05003)	41.00	41.91	0.91	KL
05-ARD1-15	2005	Rescan	Lost Fox	Fresh	Core		1	05-ARD1 (05003)	49.50	50.60	1.10	KL
05-ARD1-15 (HC)	2005	Rescan	Lost Fox	Fresh	Core		1	05-ARD1 (05003)	49.50	50.60	1.10	KL
05-ARD1-13	2005	Rescan	Lost Fox	Fresh	Core		1	05-ARD1 (05003)	57.27	58.27	1.00	J
05-ARD1-14	2005	Rescan	Lost Fox	Fresh	Core		1	05-ARD1 (05003)	59.74	60.66	0.91	J
05-ARD1-12	2005	Rescan	Lost Fox	Fresh	Core		1	05-ARD1 (05003)	93.27	94.27	1.00	I
05-ARD1-08	2005	Rescan	Lost Fox	Fresh	Core		1	05-ARD1 (05003)	96.93	98.15	1.22	I
05-ARD1-03	2005	Rescan	Lost Fox	Fresh	Core		1	05-ARD1 (05003)	108.71	109.27	0.56	I
05-ARD1-01	2005	Rescan	Lost Fox	Fresh	Core		1	05-ARD1 (05003)	114.64	115.74	1.09	I
05-ARD1-02	2005	Rescan	Lost Fox	Fresh	Core		1	05-ARD1 (05003)	118.52	119.66	1.14	I
05-ARD1-07	2005	Rescan	Lost Fox	Fresh	Core		1	05-ARD1 (05003)	143.28	144.39	1.10	H
05-ARD1-07 (HC)	2005	Rescan	Lost Fox	Fresh	Core		1	05-ARD1 (05003)	143.28	144.39	1.10	H
05-ARD1-07-2	2005	Rescan	Lost Fox	Fresh	Core		1	05-ARD1 (05003)	144.34	144.39	0.05	H
05-ARD1-06	2005	Rescan	Lost Fox	Fresh	Core		1	05-ARD1 (05003)	157.02	158.09	1.07	H
05-ARD1-06 (HC)	2005	Rescan	Lost Fox	Fresh	Core		1	05-ARD1 (05003)	157.02	158.09	1.07	H
ARD1-2006A	2005	Rescan	Lost Fox	Fresh	Core		1	05-ARD1 (05003)	166.41	167.31	0.90	H
05-ARD1-09	2005	Rescan	Lost Fox	Fresh	Core		1	05-ARD1 (05003)	174.47	175.56	1.09	H
05-ARD1-10	2005	Rescan	Lost Fox	Fresh	Core		1	05-ARD1 (05003)	176.28	177.04	0.76	H
05-ARD1-04	2005	Rescan	Lost Fox	Fresh	Core		1	05-ARD1 (05003)	184.58	185.52	0.94	H
05-ARD1-05	2005	Rescan	Lost Fox	Fresh	Core		1	05-ARD1 (05003)	208.91	209.79	0.88	GU
05-019-08	2005	Rescan	Lost Fox	Fresh	Core		1	05-019	12.57	13.72	1.14	HI
05-019-03	2005	Rescan	Lost Fox	Fresh	Core		1	05-019	22.86	23.86	1.00	HI
05-019-01	2005	Rescan	Lost Fox	Fresh	Core		2	05-019	26.19	27.25	1.07	HI
05-019-13	2005	Rescan	Lost Fox	Fresh	Core		1	05-019	32.00	33.10	1.10	HI
05-019-2006A	2006	Rescan	Lost Fox	Fresh	Core		1	05-019	34.15	35.05	0.90	HI
05-019-16	2005	Rescan	Lost Fox	Fresh	Core		1	05-019	42.70	43.59	0.89	PH
05-019-14	2005	Rescan	Lost Fox	Fresh	Core		3	05-019	48.79	49.10	0.30	PH
05-019-15	2005	Rescan	Lost Fox	Fresh	Core		2	05-019	50.96	51.64	0.68	PH
05-019-10	2005	Rescan	Lost Fox	Fresh	Core		1	05-019	55.33	56.39	1.06	PH

Project:**Mount Klappan**

Client:

Rescan Environmental

Data:**Sample Information**

Comments:

Rock units designated by Gulf.

Gulf samples taken from "Acid Generation Potential Mount Klappan Project Addendum to Stage 1 Studies", by Norecol Environmental Consultants, March 1986 and "Stage 1 Acid Generation Potential Studies for the Mount Klappan Project", by Norecol Environmental Consultants, March 1985.

Sample Id.	Date Sampled	Sampled By	Area	Sample Condition	Sample Type	Location	Relative Organic Carbon Content	Hole Name	Interval		Interval Length (m)	Possible Nearest Lettered Coal Seam
									From (m)	To (m)		
05-019-11	2005	Rescan	Lost Fox	Fresh	Core		1	05-019	61.48	62.48	1.00	PH
05-019-09	2005	Rescan	Lost Fox	Fresh	Core		1	05-019	67.58	68.58	1.00	PH
05-019-07	2005	Rescan	Lost Fox	Fresh	Core		1	05-019	74.68	75.73	1.05	GU
05-019-06	2005	Rescan	Lost Fox	Fresh	Core		1	05-019	80.19	81.30	1.11	GU
05-019-05	2005	Rescan	Lost Fox	Fresh	Core		1	05-019	83.06	84.07	1.01	GU
05-019-04	2005	Rescan	Lost Fox	Fresh	Core		1	05-019	86.87	87.92	1.05	GU
05-019-02	2005	Rescan	Lost Fox	Fresh	Core		1	05-019	91.69	92.49	0.80	GU
05-019-02 (HC)	2005	Rescan	Lost Fox	Fresh	Core		1	05-019	91.69	92.49	0.80	GU
05-019-12	2005	Rescan	Lost Fox	Fresh	Core		1	05-019	99.67	100.71	1.04	GU
05-006-08	2005	Rescan	Lost Fox	Fresh	Core		1	05-006	7.87	8.62	0.75	L
05-006-09	2005	Rescan	Lost Fox	Fresh	Core		1	05-006	9.50	10.60	1.10	L
05-006-11	2005	Rescan	Lost Fox	Fresh	Core		3	05-006	13.72	14.82	1.10	L
05-006-13	2005	Rescan	Lost Fox	Fresh	Core		2	05-006	16.76	17.36	0.60	L
05-006-10	2005	Rescan	Lost Fox	Fresh	Core		3	05-006	35.15	36.33	1.18	L
05-006-12	2005	Rescan	Lost Fox	Fresh	Core		2	05-006	42.24	43.39	1.15	K
05-006-01	2005	Rescan	Lost Fox	Fresh	Core		1	05-006	58.44	59.44	1.00	K
05-006-04	2005	Rescan	Lost Fox	Fresh	Core		1	05-006	65.53	66.58	1.05	K
05-006-03	2005	Rescan	Lost Fox	Fresh	Core		1	05-006	70.63	71.63	1.00	K
05-006-02	2005	Rescan	Lost Fox	Fresh	Core		1	05-006	74.68	75.73	1.05	K
05-006-07	2005	Rescan	Lost Fox	Fresh	Core		3	05-006	89.10	90.12	1.02	J
05-006-06	2005	Rescan	Lost Fox	Fresh	Core		1	05-006	100.37	101.42	1.05	J
05-006-05	2005	Rescan	Lost Fox	Fresh	Core		1	05-006	107.15	108.20	1.05	J
DUMP 2.5M	2005	Rescan	Lost Fox	Weathered	Grab	Wash Plant Dump (Historic)	3	Existing Dump	2.50	3.00	0.50	
DUMP-2.5M (HC)	2005	Rescan	Lost Fox	Weathered	Grab	Wash Plant Dump (Historic)	3	Existing Dump	2.50	3.00	0.50	
DUMP SURFACE	2005	Rescan	Lost Fox	Weathered	Grab	Wash Plant Dump (Historic)	3	Existing Dump	0	0	0.00	
TAILINGS-1	2006	Rescan	Lost Fox	Submerged	Grab	Existing Tailings	3	Tailings	0	0	0.00	
TAILINGS-2	2006	Rescan	Lost Fox	Submerged	Grab	Existing Tailings	3	Tailings	0	0	0.00	

Project:

Client:
Data:
Comments:

Mount Klappan

Rescan Environmental

Sample Information

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Sample Id.	Estimated Min Distance to Nearest Lettered Coal	Estimated Max Distance to Nearest Lettered Coal	Relative Distance	Rock Unit Code*	Dominant Rock Unit *	Summarized Geological Description
	Seam Contact/Centre (m)	Seam Contact/Centre (m)	from Lettered Coal Seam			Description
04-SR-01	12.1	12.1	2	4	Mudstone	mst (carb, below coal)
04-SR-02	9.7	9.7	2	4	Mudstone	coaly interval @ base of mst
04-SR-03	6.4	6.5	2	5	Sandstone	sst
04-SR-04	2.4	2.5	1	4	Mudstone	mst w. coal lens
04-SR-05	0.0	0.1	1	4	Mudstone	mst unit above coal
86-035-01	0.0	0.0	1	1	Coal	M seam coal
86-035-02	4.5	4.6	1	5	Sandstone	sst/slst (gryw) above L seam
86-035-03	-4.5	-4.6	1	4	Mudstone	carb mst below L
86-035-04	0.0	0.0	1	1	Coal	py band in KL seam (not pure coal)
86-035-13	-10.0	-10.1	2	4	Mudstone	mst (massive unit)
86-035-05	4.0	4.3	1	4	Mudstone	mst above K seam
86-035-10	0.0	0.0	1	1	Coal	J seam
86-035-06	-12.4	-12.4	2	4	Mudstone	Fe-ox CO3 in mst
86-035-07	0.7	0.8	1	4	Mudstone	mst above I seam
86-035-07 (HC)	0.7	0.8	1	4	Mudstone	mst above I seam
86-035-08	0.0	-0.7	1	4	Mudstone	carb mst below I seam
86-035-12	-1.6	-1.7	1	4	Mudstone/Sandstone (Greywacke)	1 m below I seam (mst/sst)
86-035-11	-21.0	-21.0	2	5	Sandstone	sst
86-035-09	0.0	0.1	1	5	Sandstone	sst above H seam
86-035-09 (HC)	0.0	0.1	1	5	Sandstone	sst above H seam
85-027-01	38.3	38.4	2	5	Sandstone	Fe-ox stain; sst
85-027-02	3.1	3.2	1	4	Mudstone	py, mst
85-027-02 (HC)	3.1	3.2	1	4	Mudstone	py, mst
85-027-03	0.9	1.0	1	5	Sandstone	sst above O, coal lam
85-027-04	-0.9	-1.0	1	4	Mudstone	mst below O
85-027-27	3.3	3.3	1	5	Sandstone	ox'd sst 1m above N seam
85-027-05	1.2	1.3	1	5	Sandstone	sst above N
85-027-06	-1.2	-2.2	1	4	Mudstone	mst below N
85-027-25	9.3	9.3	2	3	Siltstone	ox'd sltst
85-027-21	5.1	5.1	2	4	Mudstone	Fe-ox CO3 in mst
85-027-07	0.9	1.4	1	4	Mudstone	mst above L
85-027-08	-0.9	-0.9	1	4	Mudstone	mst below L
85-027-09	6.7	6.7	2	3	Siltstone	Fe-ox CO3
85-027-10	2.0	2.0	1	4	Mudstone	mst above KL
85-027-11	-2.0	-2.1	1	5	Sandstone	sst below KL
85-027-20	-2.8	-2.9	1	5	Sandstone	sst below KL
85-027-12	0.6	0.6	1	4	Mudstone	mst above K
85-027-13	-0.6	-0.6	1	4	Mudstone	mst below K
85-027-23	-13.5	-13.5	2	4	Siltstone (Greywacke)	Fe-ox slst (gryw)
85-027-14	-26.2	-26.2	2	3	Siltstone	1cm py band, sltst
85-027-28	26.4	26.5	2	1	Coal	coal lens, py, mst
85-027-15	2.8	2.8	1	4	Mudstone (Greywacke)	msdt/gryw above I
85-027-16	-2.8	-2.8	1	4	Mudstone	mst below I
85-027-17	-12.4	-12.5	2	7	Conglomerate	cgl
85-027-17 (HC)	-12.4	-12.5	2	7	Conglomerate	cgl
85-027-24	22.6	22.7	2	5	Sandstone	"fresh" sst
85-027-24 (HC)	22.6	22.7	2	5	Sandstone	"fresh" sst
85-027-18	1.5	1.5	1	4	Mudstone	mst above H

Project:

Client:

Data:

Comments:

Mount Klappan

Rescan Environmental

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Sample Id.	Estimated Min Distance	Estimated Max Distance	Relative Distance	Rock Unit Code*	Dominant Rock Unit *	Summarized Geological Description
	to Nearest Lettered Coal Seam Contact/Centre (m)	to Nearest Lettered Coal Seam Contact/Centre (m)				
85-027-19	-1.5	-1.6	1	4	Mudstone	mst below H
85-016-02	45.5	45.6	2	5	Sandstone	"fresh" sst
85-016-01	41.5	41.6	2	5	Sandstone	Fe-ox, CO3
85-016-05	19.3	19.4	2	5	Sandstone	ox'd sst
85-016-03	2.8	2.9	1	4	Mudstone (Greywacke)	mdst, grywk above l
85-016-04	-2.8	-2.9	1	4	Mudstone (Greywacke)	mdst below l
85-016-06	-20.4	-20.5	2	5	Sandstone	Fe-ox'd sst
85-016-07	14.6	14.7	2	3	Siltstone	sst (py in log)
85-016-07 (HC)	14.6	14.7	2	3	Siltstone	sst (py in log)
85-016-08	3.6	3.7	1	4	Mudstone	mst above H
85-016-09	-3.6	-3.7	1	4	Mudstone	Fe-ox CO3 in mst below H
85-016-10	-4.8	-4.8	1	4	Mudstone	mst (no CO3) 1m from H
85-016-12	-6.1	-6.2	2	4	Mudstone	mst (massive unit)
85-016-11	15.2	15.3	2	5	Sandstone	sst (massive, minor ox)
85-016-13	0.9	0.9	1	4	Mudstone	sh/mst (coaly, carb)
G-85-015-7525	0.0	0.0	1	1	Coal	
G-85-013-7493	0.0	0.0	1	1	Coal	
G-85-010-7383	0.0	0.0	1	1	Coal	
G-85-009-7458	0.0	0.0	1	1	Coal	
G-85-009-7465	0.0	0.0	1	1	Coal	
G-85-006-116	6.4	6.7	2	5	Sandstone	
G-85-006-117	3.6	3.9	1	2	Claystone	
G-85-006-141	2.6	2.9	1	2	Claystone	
G-85-006-142	0.0	0.0	1	1	Coal/Claystone	
G-85-006-118	-1.4	-1.7	1	2	Claystone	
G-85-006-119	-11.6	-11.8	2	5	Sandstone	
G-85-006-120	-18.2	-18.4	2	3	Siltstone	
G-85-006-121	-24.8	-25.0	2	2	Claystone	
G-85-006-122	-27.8	-28.1	2	3	Siltstone	
G-85-006-123	26.2	26.4	2	5	Sandstone	
G-85-006-101	17.2	17.4	2	5	Sandstone	
G-85-006-102	6.9	7.1	2	3	Siltstone	
G-85-006-143	2.0	2.3	1	2	Claystone	
G-85-006-144	-2.0	-2.5	1	2	Claystone	
G-85-006-103	-8.0	-8.2	2	2	Claystone	
G-85-006-104	-11.2	-11.4	2	3	Siltstone	
G-85-006-105	-17.3	-17.5	2	2	Claystone	
G-85-006-106	-21.6	-21.8	2	5	Sandstone	
G-85-006-107	-27.5	-27.7	2	2	Claystone	
G-85-006-108	-28.9	-29.1	2	2	Claystone	
G-85-006-109	-32.0	-32.1	2	3	Siltstone	
G-85-006-110	28.8	29.0	2	5	Sandstone	
G-85-006-111	25.5	25.8	2	3	Siltstone/Claystone	
G-85-006-112	18.8	19.0	2	5	Sandstone	
G-85-006-113	15.8	16.0	2	3	Siltstone	
G-85-006-114	11.6	11.8	2	2	Claystone	
G-85-006-115	3.6	3.8	1	2	Claystone	
G-85-006-124	1.8	1.9	1	2	Claystone	

Project:

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Data:

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Mount Klappan

Rescan Environmental

Sample Information

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Sample Id.	Estimated Min Distance to Nearest Lettered Coal	Estimated Max Distance to Nearest Lettered Coal	Relative Distance from Lettered Coal Seam	Rock Unit Code*	Dominant Rock Unit *	Summarized Geological Description
	Seam Contact/Centre (m)	Seam Contact/Centre (m)				
G-85-006-125	-1.8	-2.1	1	2	Claystone	
G-85-006-126	8.7	8.9	2	5	Sandstone	
G-85-006-127	2.6	2.8	1	5	Sandstone	
G-85-006-145	1.3	1.7	1	2	Claystone	
G-85-006-128	-1.3	-1.6	1	2	Claystone	
G-85-006-129	-7.6	-7.8	2	5	Sandstone	
G-85-006-130	-18.5	-18.7	2	3	Siltstone	
G-85-006-131	-24.7	-24.9	2	3	Siltstone	
G-85-006-132	-27.5	-27.7	2	2	Claystone	
G-85-006-133	-36.6	-36.8	2	5	Sandstone/Claystone	
G-85-006-134	-42.9	-43.1	2	3	Siltstone	
G-85-006-135	-48.8	-49.0	2	3	Siltstone	
G-85-006-136	-61.0	-61.2	2	3	Siltstone	
G-85-006-137	-66.0	-66.2	2	2	Claystone	
G-85-006-138	-69.8	-70.0	2	2	Claystone	
G-85-006-139	-76.1	-76.4	2	3	Siltstone	
G-85-006-140	-82.9	-83.2	2	5	Sandstone	
G-85-005-01	21.5	21.7	2	5	Sandstone	
G-85-005-02	15.2	15.5	2	5	Sandstone	
G-85-005-03	14.5	14.6	2	5	Sandstone	
G-85-005-04	6.2	6.5	2	3	Siltstone	
G-85-005-05	2.2	2.5	1	2	Claystone	
G-85-005-31	1.6	1.8	1	2	Claystone	
G-85-005-7541	0.0	0.0	1	1	Coal	
G-85-005-32	-1.7	-1.9	1	2	Claystone	
G-85-005-06	-5.7	-5.9	2	2	Claystone	
G-85-005-07	7.6	7.9	2	2	Claystone	
G-85-005-08	3.2	3.4	1	3	Siltstone	
G-85-005-33	0.9	1.2	1	3	Siltstone	
G-85-005-34	-0.8	-1.1	1	2	Claystone	
G-85-005-09	-15.9	-16.1	2	3	Siltstone	
G-85-005-10	-25.4	-25.4	2	3	Siltstone	
G-85-005-11	26.8	27.0	2	7	Clay	
G-85-005-12	21.4	21.6	2	3	Siltstone	
G-85-005-13	12.7	12.9	2	3	Siltstone	
G-85-005-35	10.4	10.7	2	2	Claystone	
G-85-005-14	2.9	3.1	1	2	Claystone	
G-85-005-36	-2.9	-3.4	1	2	Claystone	
G-85-005-15	-19.4	-19.6	2	3	Siltstone/Claystone	
G-85-005-16	-33.2	-33.4	2	3	Siltstone	
G-85-005-17	22.3	22.6	2	2	Claystone	
G-85-005-18	7.4	7.6	2	2	Claystone	
G-85-005-19	0.0	0.0	1	1	Coal	
G-85-005-20	-8.0	-8.3	2	2	Claystone	
G-85-005-21	11.3	11.5	2	3	Siltstone	
G-85-005-37	2.8	3.1	1	2	Claystone	
G-85-005-22	1.6	1.8	1	2	Claystone	
G-85-005-7328	0.0	0.0	1	1	Coal	

Project:
Client:
Data:
Comments:

Mount Klappan
 Rescan Environmental
Sample Information

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Sample Id.	Estimated Min Distance to Nearest Lettered Coal	Estimated Max Distance to Nearest Lettered Coal	Relative Distance from Lettered Coal Seam	Rock Unit Code*	Dominant Rock Unit *	Summarized Geological Description
	Seam Contact/Centre (m)	Seam Contact/Centre (m)				
G-85-005-23	-1.8	-1.9	1	2	Claystone	
G-85-005-24	15.4	15.6	2	5	Sandstone	
G-85-005-25	6.8	7.0	2	5	Sandstone	
G-85-005-26	2.5	2.7	1	2	Claystone	
G-85-005-27	-2.5	-2.7	1	2	Claystone	
G-85-005-28	-5.8	-6.0	2	2	Claystone	
G-85-005-29	-9.5	-10.0	2	3	Siltstone/Sandstone	
G-85-005-30	-13.7	-13.9	2	2	Claystone	
G-85-005-38	-21.3	-21.5	2	5	Sandstone	
G-85-005-39	-29.8	-30.1	2	5	Sandstone	
G-85-005-40	33.5	33.7	2	5	Sandstone	
G-85-005-41	18.4	18.6	2	3	Siltstone	
G-85-005-42	9.1	9.3	2	5	Sandstone	
G-85-005-47	0.0	0.1	1	2	Coal/Claystone	
G-85-005-48	-0.1	-0.5	1	2	Claystone	
G-85-005-43	-11.8	-12.1	2	2	Claystone	
G-85-005-44	-15.9	-16.2	2	5	Sandstone	
G-85-005-45	-21.2	-21.5	2	3	Siltstone	
G-85-005-46	-31.0	-31.3	2	2	Claystone	
G-85-004-7300	0.0	0.0	1	1	Coal	
G-85-003-7287	0.0	0.0	1	1	Coal	
G-85-002-7267	0.0	0.0	1	1	Coal	
G-85-001-7264	0.0	0.0	1	1	Coal	
G-84-007-01	0.0	0.1	1	5	Sandstone	
G-84-007-02	-2.4	-2.5	1	3	Siltstone	
G-84-007-89	0.0	0.0	1	1	Coal	
G-84-007-03	-9.7	-10.1	2	4	Mudstone	
G-84-007-04	-13.3	-13.8	2	5	Sandstone	
G-84-007-05	-19.0	-19.2	2	4	Mudstone	
G-84-007-06	-28.1	-28.3	2	5	Sandstone	
G-84-007-07	13.3	13.3	2	4	Mudstone	
G-84-007-08	2.8	2.8	1	4	Mudstone	
G-84-007-85	0.0	0.0	1	1	Coal	
G-84-007-10	-2.8	-3.2	1	4	Mudstone	
G-84-007-11	-8.0	-8.3	2	3	Siltstone	
G-84-007-12	1.9	2.2	1	4	Mudstone	
G-84-007-13	-1.9	-2.2	1	4	Mudstone	
G-84-007-14	-11.9	-12.0	2	5	Sandstone	
G-84-007-15	2.6	3.0	1	3	Siltstone	
G-84-007-16	-2.6	-2.8	1	3	Siltstone	
G-84-007-17	-7.0	-7.3	2	5	Sandstone	
G-84-007-18	-13.6	-13.9	2	4	Mudstone	
G-84-007-19	-18.0	-18.2	2	5	Sandstone	
G-84-007-20	-24.4	-24.6	2	4	Mudstone	
G-84-007-21	-29.5	-29.8	2	5	Sandstone	
G-84-007-22	-36.4	-36.8	2	3	Siltstone	
G-84-007-23	18.1	18.3	2	5	Sandstone	
G-84-007-24	9.9	10.2	2	5	Sandstone	

Project:

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Data:

Comments:

Mount Klappan

Rescan Environmental

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Sample Id.	Estimated Min Distance to Nearest Lettered Coal	Estimated Max Distance to Nearest Lettered Coal	Relative Distance from Lettered Coal Seam	Rock Unit Code*	Dominant Rock Unit *	Summarized Geological Description
	Seam Contact/Centre (m)	Seam Contact/Centre (m)				
G-84-007-25	0.8	1.1	1	3	Siltstone	
G-84-007-26	-0.8	-1.0	1	4	Mudstone	
G-84-007-27	-11.6	-11.8	2	3	Siltstone/Sandstone	
G-84-007-28	0.5	0.8	1	4	Mudstone	
G-84-007-29	-0.5	-0.8	1	4	Mudstone	
G-84-007-30	-7.6	-7.9	2	3	Siltstone	
G-84-007-31	8.9	9.2	2	5	Sandstone	
G-84-007-32	6.1	6.4	2	4	Mudstone	
G-84-007-33	4.8	5.1	2	4	Mudstone	
G-84-007-84	0.0	4.8	1	1	Coal	
G-84-007-34	-4.8	-5.1	2	4	Mudstone	
G-84-007-35	-10.3	-10.6	2	3	Siltstone	
05-ARD4-09	6.6	7.6	2	5	Sandstone	sst
05-ARD4-10	-3.3	-4.3	1	6	Greywacke	greywacke
05-ARD4-03	-26.7	-27.1	2	4	Mudstone	mudstone
05-ARD4-04	-32.8	-33.8	2	4	Mudstone	carbonate
05-ARD4-06	-36.3	-37.3	2	4	Mudstone	carbonate w. carbonaceous lenses
05-ARD4-05	31.1	31.5	2	6	Greywacke	greywacked w. diss py
05-ARD4-07-1	16.9	17.0	2	5	Sandstone	sandstone w. carbonate
ARD4-2006A	1.7	2.3	1	4	Mudstone	
05-ARD4-08	0.0	-0.6	1	4	Mudstone	py nodules
ARD4-2006B	-2.6	-2.8	1	5	Sandstone	
05-ARD4-02	0.5	1.6	1	4	Mudstone	PY
ARD4-2006C	0.1	0.3	1	4	Mudstone	
05-ARD4-01	0.0	-0.8	1	4	Mudstone	PY
05-ARD3-01A	1.0	2.0	1	4	Mudstone	mst above coal seam
05-ARD3-02B	0.0	-1.1	1	4	Mudstone	carb sh w. coal lam
05-ARD3-16	-9.2	-10.3	2	5	Sandstone	carbonate (in sst)
05-ARD3-03A	12.1	13.3	2	5	Sandstone	sandstone
05-ARD3-04A	0.0	0.0	1	1	Coal	PY in thin coal seam
05-ARD3-05A	-5.4	-6.8	2	6	Greywacke	greywacke
05-ARD3-07A	11.1	12.0	2	3	Siltstone	siltstone
05-ARD3-07B (HC)	11.1	12.0	2	3	Siltstone	siltstone
ARD3-2006B	0.0	0.3	1	4	Mudstone	
ARD3-2006C	0.0	-0.4	1	4	Mudstone with 2 cm band of sandstone	
05-ARD3-06A	-7.4	-8.4	2	6	Greywacke	greywacke
05-ARD3-08A	-22.6	-23.7	2	2	Claystone	pyrite in grywk
05-ARD3-08B (HC)	-22.6	-23.7	2	2	Claystone	pyrite in grywk
05-ARD3-09A	23.4	24.6	2	4	Mudstone	mudstone
ARD3-2006A	0.2	0.7	1	4	Mudstone	
05-ARD3-10A	0.0	-1.1	1	4	Mudstone	below coal (PY)
05-ARD3-15A	-2.2	-3.3	1	6	Greywacke	grywk/dirty sst
05-ARD3-12A	-4.2	-5.3	2	5	Sandstone	carbonate (in sst)
05-ARD3-11A	-7.5	-8.3	2	5	Sandstone	sandstone
05-ARD3-14A	1.3	2.3	1	4	Mudstone	PY in mdst w. coal lenses
05-ARD3-14B (HC)	1.3	2.3	1	4	Mudstone	PY in mdst w. coal lenses
05-ARD3-13A	0.0	0.0	1	1	Coal	thin coal seam
05-ARD2-04	12.2	13.5	2	6	Greywacke	Fe oxidation

Project:

Client: Rescan Environmental

Data: **Sample Information**

Comments: Rock units designated by Gulf.

Mount Klappan

Rescan Environmental

Sample Information

Rock units designated by Gulf.

Gulf samples taken from "Acid Generation Potential Mount Klappan Project Addendum to Stage 1 Studies", by Norecol Environmental Consultants, March 1986 and

"Stage 1 Acid Generation Potential Studies for the Mount Klappan Project", by Norecol Environmental Consultants, March 1985.

Sample Id.	Estimated Min Distance to Nearest Lettered Coal	Estimated Max Distance to Nearest Lettered Coal	Relative Distance from Lettered Coal Seam	Rock Unit Code*	Dominant Rock Unit *	Summarized Geological Description
	Seam Contact/Centre (m)	Seam Contact/Centre (m)				Description
05-ARD2-08	-16.0	-17.4	2	6	Greywacke	carbonate
05-ARD2-07	16.0	17.1	2	6	Greywacke	siltstone
05-ARD2-07 (HC)	16.0	17.1	2	6	Greywacke	siltstone
05-ARD2-13	0.0	0.0	1	1	Coal	PY nodule w. calcite
05-ARD2-12	0.0	0.0	1	1	Coal	thin coal w. PY
05-ARD2-12 (HC)	0.0	0.0	1	1	Coal	thin coal w. PY
05-ARD2-16	0.0	0.0	1	1	Coal	thin coal seam
05-ARD2-11	7.4	7.5	2	3	Siltstone	PY
05-ARD2-09	-6.7	-7.5	2	6	Greywacke	greywacke
05-ARD2-02	7.7	8.9	2	6	Greywacke	greywacke
05-ARD2-10A	0.0	1.0	1	4	Mudstone	PY
05-ARD2-14	-5.1	-5.8	2	5	Sandstone	sst w. calcite, poss PY
05-ARD2-06	9.0	9.9	2	6	Greywacke	above coal
05-ARD2-01A	3.1	3.9	1	6	Greywacke	below coal
05-ARD2-15	7.9	8.7	2	6	Greywacke	mdst/silst
05-ARD2-05	-8.2	-9.2	2	6	Greywacke	greywacke
ARD2-2006A	-3.0	-3.9	1	4	mudstone	
ARD2-2006B	0.6	1.5	1	4	mudstone	
05-ARD2-03	-0.6	-1.5	1	5	Sandstone	sandstone
05-ARD1-11	0.0	0.0	1	1	Coal	thin coal seam
05-ARD1-15	-6.4	-7.5	2	5	Sandstone	carbonate + sst
05-ARD1-15 (HC)	-6.4	-7.5	2	5	Sandstone	carbonate + sst
05-ARD1-13	10.2	11.2	2	4	Mudstone	py
05-ARD1-14	7.6	8.5	2	6	Greywacke	greywacke w. poss diss py
05-ARD1-12	13.4	14.4	2	5	Sandstone	sandstone
05-ARD1-08	9.4	10.6	2	5	Sandstone	carbonate
05-ARD1-03	0.0	0.0	1	4	Mudstone	above coal seam
05-ARD1-01	0.0	-1.1	1	4	Mudstone	below coal seam
05-ARD1-02	-3.9	-5.0	1	5	Sandstone	sst
05-ARD1-07	22.9	24.0	2	6	Greywacke	greywacke
05-ARD1-07 (HC)	22.9	24.0	2	6	Greywacke	greywacke
05-ARD1-07-2	24.0	24.0	2	6	Greywacke	grywk w. CO3
05-ARD1-06	9.2	10.3	2	4	Mudstone	pyrite
05-ARD1-06 (HC)	9.2	10.3	2	4	Mudstone	pyrite
ARD1-2006A	4.2	5.1	2	4	mudstone	
05-ARD1-09	0.0	-0.8	1	4	Mudstone	pyrite - below seam
05-ARD1-10	-1.9	-2.7	1	6	Greywacke	greywacke
05-ARD1-04	-10.1	-11.0	2	4	Mudstone	mudstone
05-ARD1-05	0.0	-0.8	1	4	Mudstone	carbonate
05-019-08	13.1	14.2	2	7	Glacial till	glacial drift (no coal above)
05-019-03	2.9	3.9	1	5	Sandstone	sst
05-019-01	0.0	0.5	1	4	Mudstone	below coal
05-019-13	-2.7	-3.8	1	6	Greywacke	greywacke/mudstone
05-019-2006A	-4.8	-5.7	2	3	Siltstone grading to sandstone	
05-019-16	5.5	6.4	2	4	Mudstone	carbonate (in mudstone)
05-019-14	0.0	0.3	1	1	Coal	thin coal
05-019-15	-0.9	-1.6	1	4	Mudstone	coal & carbonaceous lenses (in shale)
05-019-10	-5.2	-6.3	2	6	Greywacke	greywacke

Project:
Client:
Data:
Comments:

Mount Klappan
 Rescan Environmental
Sample Information

Rock units designated by Gulf.

Gulf samples taken from "Acid Generation Potential Mount Klappan Project Addendum to Stage 1 Studies", by Norecol Environmental Consultants, March 1986 and "Stage 1 Acid Generation Potential Studies for the Mount Klappan Project", by Norecol Environmental Consultants, March 1985.

Sample Id.	Estimated Min Distance	Estimated Max Distance	Relative Distance	Rock Unit Code*	Dominant Rock Unit *	Summarized Geological Description
	to Nearest Lettered Coal Seam Contact/Centre (m)	to Nearest Lettered Coal Seam Contact/Centre (m)				
05-019-11	-11.4	-12.4	2	5	Sandstone	sst
05-019-09	-17.5	-18.5	2	5	Sandstone	Carbonate w. diss py
05-019-07	20.7	21.7	2	5	Sandstone	carbonate
05-019-06	15.1	16.2	2	6	Greywacke	greywacke
05-019-05	12.3	13.3	2	6	Greywacke	greywacke w. py
05-019-04	8.5	9.5	2	6	Greywacke	mst/slst
05-019-02	3.9	4.7	1	4	Mudstone	pyrite w. carbonate
05-019-02 (HC)	3.9	4.7	1	4	Mudstone	pyrite w. carbonate
05-019-12	-2.8	-3.8	1	6	Greywacke	carbonate w. poss diss py
05-006-08	4.9	5.6	2	3	Siltstone	sltst/mdst w. carbonate
05-006-09	2.8	3.9	1	6	Greywacke	sltst/sst = greywacke
05-006-11	0.0	-1.1	1	4	Mudstone	mst w. coal/carbonaceous lenses
05-006-13	-0.7	-1.3	1	4	Mudstone	mst w. coal/carbonaceous lenses
05-006-10	0.0	-1.2	1	4	Mudstone	pyrite
05-006-12	0.0	0.6	1	4	Mudstone	mudstone w. carbonate
05-006-01	0.5	1.5	1	4	Mudstone	mudstone
05-006-04	-3.4	-4.4	1	6	Greywacke	greywacke
05-006-03	-8.5	-9.5	2	6	Greywacke	carbonate
05-006-02	-12.6	-13.6	2	6	Greywacke	diss py
05-006-07	0.0	0.5	1	4	Mudstone	above coal
05-006-06	-7.6	-8.6	2	6	Greywacke	greywacke
05-006-05	-14.3	-15.3	2	5	Sandstone	sandstone
DUMP 2.5M			3	7	Existing Wash-Plant Dump	
DUMP-2.5M (HC)			3	7	Existing Wash-Plant Dump	
DUMP SURFACE			3	7	Existing Wash-Plant Dump	
TAILINGS-1			3	7	Existing Tailings	
TAILINGS-2			3	7	Existing Tailings	

Project: Mount Klappan
Client: Rescan Environmental
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 Gulf samples taken from "Acid Generation Potential Mount Klappan Project Addendum to Stage 1 Studies", by Norecol Environmental Consultants, March 1986 and "Stage 1 Acid Generation Potential Studies for the Mount Klappan Project", by Norecol Environmental Consultants, March 1985.

Sample Id.	Description
04-SR-01	directly below coal seam, carbonaceous
04-SR-02	coal laminations
04-SR-03	med grey, minor powdered CO3
04-SR-04	dark grey with coal lenses (CO3 filled cleats)
04-SR-05	above coal with CO3 vein (strong fizz)
86-035-01	M seam, powdered coal
86-035-02	above L seam, reddish grains, ~ 4 m above
86-035-03	below L seam, carbonaceous, minor CO3 powder, Fe-stain
86-035-04	pyrite band in KL seam, minor CO3
86-035-13	relatively unoxidized,
86-035-05	above K seam, minor Fe-stain, minor CO3
86-035-10	J seam
86-035-06	4 cm vein of Fe-stained CO3 (strong fizz)
86-035-07	above I seam, minor CO3 (Fe stained)
86-035-07 (HC)	above I seam, minor CO3 (Fe stained)
86-035-08	carbonaceous, Fe-stained CO3 and laminations
86-035-12	below I seam, orange coloured laminations, ms/ss interbeds, CO3 (Fe stain, strong fizz)
86-035-11	very coarse grain, qtz vein, fe-staining
86-035-09	above H seam, orange stained grains, minor CO3, coal laminations
86-035-09 (HC)	above H seam, orange stained grains, minor CO3, coal laminations
85-027-01	<u>Intense Fe stain</u> , core fractured vertically
85-027-02	dark grey, contains very fg <u>pyrite</u> ; rubbled; no Fe stain
85-027-02 (HC)	dark grey, contains very fg <u>pyrite</u> ; rubbled; no Fe stain
85-027-03	light fracture, minor coal laminations with Fe-stained CO3 (mod fizz); directly above O seam
85-027-04	cleated coal/carbonaceous laminations; Fe-stained beds and CO3; light fracturing parallel to bedding; directly below O seam
85-027-27	oxidized at outside of core, fractured & broken along bedding plane; 1 m above N seam;
85-027-05	CO3 matrix (Fe-stained at surface only); med grain, directly above N seam
85-027-06	rubbled & crumbly, coal laminations with CO3 (Fe-stain) filled cleats; dark to med grey, below seam
85-027-25	weathered, Fe-stain, crumbly;
85-027-21	Fe-stained CO3; weak fizz
85-027-07	rubbled; med to dark grey, orange-brown weathering; above L seam
85-027-08	rubbled; med to dark grey, minor Fe-stained CO3 (weak fizz), below L seam
85-027-09	Fe-stained CO3 pervasive (strong fizz), oxidation outside of core only
85-027-10	med grey; rubbled with fractures; coal laminations; minor orange-brown weather; above KL seam
85-027-11	broken and clay-like texture; light to med grey; fractured, no visible oxidation, below KL seam
85-027-20	below KL seam, funny oxidation colour (burgundy) at CO3
85-027-12	above K seam, dark grey with powdered CO3 (Fe-stained); rubbled; carbonaceous laminations
85-027-13	below K seam; med to dark grey; very rubbled, possible disseminated pyrite, minor coal & carbonaceous laminations
85-027-23	SiS-Ms; localized Fe-stained lamellae;
85-027-14	<u>pyrite</u> band (~1cm thick); rubbled; med grey
85-027-28	coal lenses in sst, cleats filled with CO3 (Fe-stained); pyrite blebs & disseminations
85-027-15	above I seam, competent (not rubbled), localized oxidation, med- dark grey; Fe-stained CO3 fracture fill
85-027-16	below I seam; rubbled & crumbly; no Fe staining; carbonaceous
85-027-17	med gry, broken; fractures perpendicular to bedding; some qtz veining, Fe-stained CO3 (weak fizz)
85-027-17 (HC)	med gry, broken; fractures perpendicular to bedding; some qtz veining, Fe-stained CO3 (weak fizz)
85-027-24	relatively unoxidized; minor coal; med grey, med grain
85-027-24 (HC)	relatively unoxidized; minor coal; med grey, med grain
85-027-18	med-dark grey; rubbled & crumbly; minor Fe stain; minor powdered CO3, above H seam

Project: Mount Klappan
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Sample Id.	Description
85-027-19	below H seam; dark grey; rubbled & crumbly; minor carbonaceous and coal-type flecks
85-016-02	relatively unoxidized, coarse grain, minor coal/carbonaceous laminations,
85-016-01	<u>Fe-stain CO3</u> with strong fizz
85-016-05	Fe-stain grains within, competent with minor fracturing
85-016-03	above I seam, oxidized, weathered, SIS interbeds
85-016-04	below I seam, rubbled, minor coal laminations, minor visible Fe-stain
85-016-06	very red-orange Fe-stain, rubbled with minor mst;
85-016-07	Fe-stain, pyrite in log but not visible, fractured with minor rubbling
85-016-07 (HC)	Fe-stain, pyrite in log but not visible, fractured with minor rubbling
85-016-08	above H seam, minor coal laminations
85-016-09	below H seam, heavy CO3 fracture fill
85-016-10	1 m below H seam, minor CO3 (vs. 85-016-09), vertical fractures
85-016-12	below PH seam, massive ms unit (all rubbled)
85-016-11	massive unit, minor Fe stain
85-016-13	thin coal and carbonaceous laminations, CO3 fracture (Fe-stain)
G-85-015-7525	E
G-85-013-7493	H
G-85-010-7383	N
G-85-009-7458	K
G-85-009-7465	M
G-85-006-116	
G-85-006-117	
G-85-006-141	Roof H
G-85-006-142	Seam H, with pyrite
G-85-006-118	Floor H
G-85-006-119	
G-85-006-120	
G-85-006-121	
G-85-006-122	
G-85-006-123	
G-85-006-101	
G-85-006-102	
G-85-006-143	Roof G
G-85-006-144	Floor G
G-85-006-103	
G-85-006-104	
G-85-006-105	
G-85-006-106	
G-85-006-107	
G-85-006-108	
G-85-006-109	
G-85-006-110	
G-85-006-111	
G-85-006-112	
G-85-006-113	
G-85-006-114	
G-85-006-115	
G-85-006-124	Roof F

Project:

Client:

Data:

Comments:

Mount Klappan

Rescan Environmental

Sample Information

Rock units designated by Gulf.

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Sample Id.	Description
G-85-006-125	Floor F
G-85-006-126	
G-85-006-127	
G-85-006-145	Roof E
G-85-006-128	Floor E
G-85-006-129	
G-85-006-130	
G-85-006-131	
G-85-006-132	
G-85-006-133	
G-85-006-134	
G-85-006-135	
G-85-006-136	
G-85-006-137	Pyrite (0.7m) vein in sample
G-85-006-138	
G-85-006-139	
G-85-006-140	
G-85-005-01	
G-85-005-02	
G-85-005-03	
G-85-005-04	
G-85-005-05	
G-85-005-31	Roof Seam O (overturned)
G-85-005-7541	O
G-85-005-32	Floor Seam O (overturned)
G-85-005-06	
G-85-005-07	
G-85-005-08	
G-85-005-33	Roof O (upright)
G-85-005-34	Floor O (upright)
G-85-005-09	
G-85-005-10	
G-85-005-11	Bentonite
G-85-005-12	Contains disseminated pyrite
G-85-005-13	
G-85-005-35	Roof N (Upper)
G-85-005-14	Roof N
G-85-005-36	Floor N
G-85-005-15	
G-85-005-16	(calcite vein inclusion)
G-85-005-17	
G-85-005-18	
G-85-005-19	Coal Stringer
G-85-005-20	
G-85-005-21	
G-85-005-37	Roof M
G-85-005-22	
G-85-005-7328	M

Project:
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Mount Klappan
Rescan Environmental
Sample Information

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Gulf samples taken from "Acid Generation Potential Mount Klappan Project Addendum to Stage 1 Studies", by Norecol Environmental Consultants, March 1986 and "Stage 1 Acid Generation Potential Studies for the Mount Klappan Project", by Norecol Environmental Consultants, March 1985.

Sample Id.	Description
G-85-005-23	Floor M
G-85-005-24	
G-85-005-25	
G-85-005-26	Roof L/M
G-85-005-27	Floor L/M
G-85-005-28	
G-85-005-29	
G-85-005-30	
G-85-005-38	
G-85-005-39	
G-85-005-40	
G-85-005-41	
G-85-005-42	
G-85-005-47	Roof K
G-85-005-48	Floor K
G-85-005-43	
G-85-005-44	
G-85-005-45	
G-85-005-46	
G-85-004-7300	G
G-85-003-7287	N
G-85-002-7267	I
G-85-001-7264	G
G-84-007-01	
G-84-007-02	Roof I Seam
G-84-007-89	Seam I
G-84-007-03	Floor Seam I
G-84-007-04	
G-84-007-05	
G-84-007-06	
G-84-007-07	
G-84-007-08	Roof H Seam
G-84-007-85	Seam H
G-84-007-10	Floor H Seam
G-84-007-11	
G-84-007-12	Roof Phantom Seam
G-84-007-13	Floor Phantom Seam
G-84-007-14	
G-84-007-15	Pyritic Sample, Seam G Upper
G-84-007-16	Floor Seam G
G-84-007-17	
G-84-007-18	Seam G Lower
G-84-007-19	
G-84-007-20	
G-84-007-21	
G-84-007-22	
G-84-007-23	
G-84-007-24	

Project: Mount Klappan
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 Gulf samples taken from "Acid Generation Potential Mount Klappan Project Addendum to Stage 1 Studies", by Norecol Environmental Consultants, March 1986 and "Stage 1 Acid Generation Potential Studies for the Mount Klappan Project", by Norecol Environmental Consultants, March 1985.

Sample Id.	Description
G-84-007-25	Roof Seam E
G-84-007-26	Floor Seam E
G-84-007-27	
G-84-007-28	Roof Seam D
G-84-007-29	Floor
G-84-007-30	
G-84-007-31	
G-84-007-32	
G-84-007-33	Pyritic Roof Seam C
G-84-007-34	Seam C
G-84-007-35	Floor Seam C
05-ARD4-09	fine-coarse grain; light-dark grey; gradational; mud clasts; minor carbonate fracture fill parallel to bedding (weak fizz) and bands (1 cm)
05-ARD4-10	silty mdst grading to sst; slst laminations; med grey; hard; no fracture
05-ARD4-03	med dark grey, silty
05-ARD4-04	dark grey; carbonaceous; 6- 1 cm bands of carbonate (strong fizz)
05-ARD4-06	silty with coal & carbonaceous lenses; carbonate fracture fill, often in cleats of coal
05-ARD4-05	sst, slst, mst interbeds
05-ARD4-07-1	fine grain, med grey; hard; no fractures
ARD4-2006A	- dark grey to black - no fractures - occasional 0.5cm carbonate lenses with Fe stain (2 cm total) - no visible py
05-ARD4-08	dark grey , hard, with pyrite (disseminations & 1cmx2cm nodules); rubbled and fractured; white mineral (no fizz)
ARD4-2006B	- sample previously taken (coal?) from 126.49 m depth to 127.61 m - med grey - weathered grains (orange) - med to coarse grained - fractured at all angles - minor fracture fill --> carbonates
05-ARD4-02	dark grey; laminated; cleated coal (carbonate filled) & carbonaceous laminations;pyrite bands and many fine grain disseminations;heavy carbonate (mod fizz)
ARD4-2006C	- black - CO ₃ is marbled with Fe stain - localized section of disseminated py (1.5 x 6 cm) --> fresh, unoxidized - minor cleated coal veinlets (mm's) with carbonate infill - very minor fracturing
05-ARD4-01	bands of disseminated pyrite (0.5-1 cm); heavy carbonate marbling and 1 cm fracture fill (strong fizz); cleated coal laminations; ABA sample is concentrated in pyrite
05-ARD3-01A	dark grey to black, minor shear fracture, coal partings, minor cement (no fizz). Above K Seam*.
05-ARD3-02B	PYRITE LENS, carbonaceous, very dark grey with coal laminations, Below K Seam*
05-ARD3-16	Fine-v. fine grain (gradational decrease downwards); light-med grey; carbonate frac fill (strong fizz)
05-ARD3-03A	med grey, grades downwards from v. fine grain to fine grain, minor fractures, carbonate fracture fill (no fizz)
05-ARD3-04A	(both dull & bright; friable): thin seam with PYRITE (1 cm) carbonate cleating (slight fizz)
05-ARD3-05A	thin beds and laminations of sst, slst, mst; no fracturing, no carbonate; dark grey
05-ARD3-07A	light to med grey; thin laminations and cross laminations; vert fracture filled with white mineral (no fizz)
05-ARD3-07B (HC)	light to med grey; thin laminations and cross laminations; vert fracture filled with white mineral (no fizz)
ARD3-2006B	- no visible py - carbonate lenses - 1 x 1 cm and also minor - cleated coal laminations (mm's) with carbonate infill - carbonate is Fe stained - no fracturing in rock
ARD3-2006C	- dark grey to black - minor CO ₃ --> sheared --> 2 x 0.75 cm CO ₃ veins interbedded with 1.5cm section of cleated coal - sandstone has red oxidized grains within - coal flecks throughout
05-ARD3-06A	interbedded sst and mst; med grey with mst clasts; no fractures; carbonaceous
05-ARD3-08A	with PYRITE (2 cm, localized at surface), coaly mst and some claystone; no fizz; carbonaceous
05-ARD3-08B (HC)	with PYRITE (2 cm, localized at surface), coaly mst and some claystone; no fizz; carbonaceous
05-ARD3-09A	v. dk grey; slightly silty; very fractured; no fizz;
ARD3-2006A	- dark grey to black - no visible py - powdered CO ₃ - minor coal (dull) specks and laminations - very fractured --> starting to rubble in coal rich areas
05-ARD3-10A	black, v. carbonaceous with coal "flakes", coal cleats filled with carbonate (weak fizz); directly below coal seam w. PYRITE at base;
05-ARD3-15A	dirty sst with thin mdst laminations; light grey; pervasive carbonate (med fizz); strong vert fracture
05-ARD3-12A	med-light grey, fine grain; mst laminations; carbonate frac filling (slight fizz)
05-ARD3-11A	fine grain; med grey; laminations and x-laminations w. carbonaceous matter; light fractures; traces of chalky mineral (no fizz)
05-ARD3-14A	black, carbonaceous, impure coal (<10%), scattered patches of diss PY, also few lathes (5 cm); carbonate fracture fill (slight fizz)
05-ARD3-14B (HC)	black, carbonaceous, impure coal (<10%), scattered patches of diss PY, also few lathes (5 cm); carbonate fracture fill (slight fizz)
05-ARD3-13A	Thin coal seam: banded; bright & semi-bright; friable to strong
05-ARD2-04	vfg; med-dark grey; dark grey/brown hard laminations; Fe staining; 1mm carbonate filled (weak fizz) and voided fracture; very fractured in vert, horiz and angular directions

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 Gulf samples taken from "Acid Generation Potential Mount Klappan Project Addendum to Stage 1 Studies", by Norecol Environmental Consultants, March 1986 and "Stage 1 Acid Generation Potential Studies for the Mount Klappan Project", by Norecol Environmental Consultants, March 1985.

Sample Id.	Description
05-ARD2-08	alternating sst and mst laminations; 12 cm interval of CARBONATE moderate-strong fizz); rare Fe staining on rock and carbonate; slight fracture in vertical, horizontal and angular directions; carbonaceous
05-ARD2-07	med-dark grey slst and mdst; pervasive 1-3 mm carbonate fracture fill (moderate fizz); vertical and angular fractures; below visible extent of Fe-oxidation;
05-ARD2-07 (HC)	med-dark grey slst and mdst; pervasive 1-3 mm carbonate fracture fill (moderate fizz); vertical and angular fractures; below visible extent of Fe-oxidation;
05-ARD2-13	Thin coal seam: Duplicate of same horizon as 05-ARD2-12; large PYRITE nodule (5 cm) intermixed with carbonate (weak fizz)
05-ARD2-12	Thin coal seam: interbedded with slst & mdst; 3x1 cm PYRITE nodules; carbonate fracture fill (weak fizz); carbonaceous; dark grey, slight fracture; directly above coal seam
05-ARD2-12 (HC)	Thin coal seam: interbedded with slst & mdst; 3x1 cm PYRITE nodules; carbonate fracture fill (weak fizz); carbonaceous; dark grey, slight fracture; directly above coal seam
05-ARD2-16	Thin coal seam (friable) with coaly to carbonaceous mdst & slst; carbonate marbling (mod fizz); possible disseminate pyrite; heavily fractured & broken
05-ARD2-11	med to dark grey with minor mudstone; carbonaceous & coal laminations; carbonate fracture fill (v. weak fizz); above coal seam; Disseminated PYRITE;
05-ARD2-09	med-dark grey slst & mdst; CARBONATE (mod fizz); moderate fracturing
05-ARD2-02	med-dark grey; slst, mdst, coal & carbonaceous lenses; carbonate fracture fill (mod fizz); partially rubble core
05-ARD2-10A	~15 nodules (1-2 cm) and disseminated PYRITE; v. dark grey to black; carbonaceous laminations; rare fractures in vert, horiz & angular directions; carbonate fracture fill (weak fizz)
05-ARD2-14	with carbonate fracture fill with Fe stain (mod to high fizz); light-med grey; fine grain; possible disseminate pyrite
05-ARD2-06	med-dark grey slst & dark grey mst w. coal & carbonaceous lenses; slight fracturing in horiz, very & angular directions; carbonate filled fractures & marbled carbonate (weak fizz). Above coal (K*) seam
05-ARD2-01A	Slst & mst; carbonaceous lenses; black to dk grey; carbonate fracture fill (weak fizz); very fractured; Below coal seam.
05-ARD2-15	mdst/slst with minor carbonate (v. weak fizz); med-dark grey; minor coal laminations; moderate fracturing
05-ARD2-05	med-dark grey slst/mdst w. coal and carbonaceous lenses; carbonate (v. weak fizz)
ARD2-2006A	- 15 cm of bright coal - carbonaceous with coal lenses (mm's to 1-1.5cm) coal lenses are cleated with white mineral infill (no fizz) - localized py lenses --> oxidized - dark grey to black - minor fracturing parallel to coal lenses
ARD2-2006B	- dark grey to black - minor siltstone laminations - carbonaceous (slightly) without sheen - no visible py - trace carbonates
05-ARD2-03	light to med grey; v.fine to fine grained; slight fracturing; high angle carbonate fracture fill (weak to mod fizz)
05-ARD1-11	<u>Thin coal seam:</u> bright coal, rubble friable with minor carbonate; some carbonaceous mudstone.
05-ARD1-15	carbonate fracture fill with vugs (strong fizz); light-med grey; fine-med grain;
05-ARD1-15 (HC)	carbonate fracture fill with vugs (strong fizz); light-med grey; fine-med grain;
05-ARD1-13	Dark grey/black; broken along planes; minor carbonate (weak fizz); trace <u>disseminated pyrite</u>
05-ARD1-14	med-dark grey, med-coarse grain sst interbedded with mdst
05-ARD1-12	med/coarse grain; light-med grey; angular carbonate fracture filling and carbonate powder (weak fizz); carbonaceous lenses
05-ARD1-08	med grey; coarse grained, carbonaceous with minor mdst laminations; pervasive <u>carbonate</u> fracture fill (up to 1cm) with minor vugs & also discrete xtals (strong fizz);
05-ARD1-03	dark grey; carbonaceous laminations; 1 cm interval of carbonate (weak fizz); above coal seam
05-ARD1-01	dark grey; carbonaceous w. coal laminations (cleated); no fractures; thin white laminations (no fizz)with some sst interbeds. <u>Below coal seam</u>
05-ARD1-02	fine to coarse interbedded; light to med grey; mdst lenses; minor carbonate (v. weak fizz)
05-ARD1-07	interbeds of med-dark grey sst and dark grey mdst; white mineral fracture fill (no fizz, not quartz)
05-ARD1-07 (HC)	interbeds of med-dark grey sst and dark grey mdst; white mineral fracture fill (no fizz, not quartz)
05-ARD1-07-2	as above, but with calcite vein
05-ARD1-06	dark grey with <u>PYRITE</u> nodules (sparse, 2mm-2cm) and minor disseminations; carbonaceous & sandy laminations
05-ARD1-06 (HC)	dark grey with <u>PYRITE</u> nodules (sparse, 2mm-2cm) and minor disseminations; carbonaceous & sandy laminations
ARD1-2006A	- dark grey to black - highly fractured and starting to rubble - coal (bright) laminations (mm's) - localized carbonate marbling in 5 cm section - no visible py - carbonaceous
05-ARD1-09	dark grey, carbonaceous with <u>PYRITE</u> (laminated bands & lenses of disseminations & 5.5 x 3 cm bleb); minor coal laminations with carbonate filled cleats; slight fracturing; below coal seam
05-ARD1-10	dark grey mst with sst laminations & lenses; med grey med/coars grain sst with mdst laminations & lenses; minor carbonate fracture fill
05-ARD1-04	med to dark grey; carbonate fracture fill (weak fizz); minor beds of slst & sst verging on greywacke
05-ARD1-05	dark grey with <u>carbonate</u> cement, fracture fill & powder (weak fizz); grades downwards to sst
05-019-08	weathered slst with few pebbles & clayey matrix; black; very fractured
05-019-03	very fine grain; laminations and x-lams; well sorted; med grey
05-019-01	silty; black; coal laminations and lenses; carbonate fracture fill (weak fizz); <u>Above coal seam.</u>
05-019-13	<u>dark grey mst with fine grain sst and carbonaceous laminations: minor carbonate (weak fizz)</u>
05-019-2006A	- this sample is below the I-seam - shiny, carbonaceous - cross cutting fractures with carbonate (no fizz) infill with slight red staining at edge --> minor fracturing - carbonaceous verging on coal - med to dark grey - no visible py - lenses of mudstone
05-019-16	dark grey; <u>carbonate powder (weak fizz)</u> ; moderate fracture/partially rubble
05-019-14	<u>Thin coal (ABA only):</u> 2.5 cm lenh of diss pyrite/coal/slst; ~15 cm rubble, brittle, friable coal; ~13cm bright, friable coal
05-019-15	dark grey with carbonate filled <u>cleated coal and carbonaceous lenses (0.5 mm - 2 cm) and laminations</u>
05-019-10	med-dark grey; fine-med grey w. mdst laminations; thin carbonate fracture filling (weak fizz)

Project:
Client:
Data:
Comments:

Mount Klappan
Rescan Environmental
Sample Information

Rock units designated by Gulf.

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Sample
Id.

Description

05-019-11	light-med grey; fine-med grain; carbonate fracture fill (mod fizz); mdst clasts & laminations
05-019-09	med grey; heavily fractured with <u>carbonate</u> fill (mod to strong fizz) and vugs; <u>minor v. fine grain disseminated pyrite</u> ; Fe staining
05-019-07	med grey with mdst laminations; mdst clasts; 2mm - 1cm carbonate filled fractures (strong fizz) with vugs
05-019-06	slst/mdst; v. dark grey; white powdered mineral (no fizz); carbonaceous; carbonate fracture fill (weak fizz)
05-019-05	alternating laminations of 1) fine grey, light grey sst and dark grey mst; minor carbonate fracture fill (weak fizz); poss <u>diss pyrite</u>
05-019-04	mst/slst with sst interbeds & laminations; slight fractures
05-019-02	dark grey; disseminated <u>pyrite with carbonate</u> xtals & powder (weak fizz); carbonaceous
05-019-02 (HC)	dark grey; disseminated <u>pyrite with carbonate</u> xtals & powder (weak fizz); carbonaceous
05-019-12	mst/sst with <u>abundant carbonate (strong fizz)</u> fracture fill; <u>minor disseminated pyrite</u>
05-006-08	<u>interbedded with abundant carbonate</u> qtz fracture fill; minor fracturing; rubbing down core; minor fine grain disseminate pyrite
05-006-09	slst/sst; light-med grain; moderate fracturing; minor carbonate (weak fizz); partially rubbled
05-006-11	<u>dark grey; slst lenses; moderate fracturing; fissile; carbonate fracture fill (strong fizz) - heavy in localized areas; coal (bright) and carbonaceous laminations & lenses; carbonate filled coal cleats</u>
05-006-13	dark grey; carbonate fracture fill; very fractured; <u>coal and carbonaceous lenses & laminations</u>
05-006-10	<u>coal lenses; carbonaceous; pyrite band of disseminated pyrite; white powdery mineral (no fizz)</u>
05-006-12	dark grey; minor fractures with powdered white mineral (weak fizz); carbonaceous; minor cleated coal lenses
05-006-01	dark grey; carbonaceous; minor carbonate filled fracturing (moderate fizz); minor slst laminations; very fractured and rubbled, difficult to get a measurement
05-006-04	mst/slst with cleated coal (minor) with carbonate cleat fill; minor fracturing
05-006-03	med grey; fine-med grey sst with mst/slst laminations; <u>moderate carbonate (weak fizz)</u>
05-006-02	med grain sst with mdst, slst lenses and laminations; <u>minor v. fine grain disseminated pyrite</u> ; trace white powder (no fizz)
05-006-07	coal lenses with carbonate filled cleats; prevalent carbonate (mod fizz); <u>Directly above coal seam.</u>
05-006-06	med grey with flecks of yellow; fine-med grain; gradational; slst/mdst laminations & lenses; 0.5 cm blebs of carbonate (weak fizz); minor coal laminations possible trace very fine grain disseminated pyrite; minor fracturing
05-006-05	med grey; fine-med grey with thin slst/mdst laminations; minor carbonate fracture fill (weak fizz); possible v. fine grain disseminated pyrite
DUMP 2.5M	Weathered; consistent grind (pebbles); mst, slst, coal; very black; localized 1-2 cm sized particles of Fe oxidation
DUMP-2.5M (HC)	Weathered; consistent grind (pebbles); mst, slst, coal; very black; localized 1-2 cm sized particles of Fe oxidation
DUMP SURFACE	Weathered; consistent grind (pebbles); mst, slst, coal; very black; trace amounts of visible Fe oxidation
TAILINGS-1	
TAILINGS-2	

Project: Mount Klappan
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Sample Id.	Weight Received (kg)	Rinse pH Unity	Paste pH Unity	S (Total) (% Leco)	S (Sulphide) (% Leco)	S (Sulphide) (% Calc)	S (Sulphide) + S (del) (% Leco/Calc)	Carbonate Leach S (Sulphate) (%)	HCl Leachable S (Sulphate) (%)	S (Sulphate) (% HCl/Carb)	S (BaSO ₄) (%)	S (del _{actual}) (%)	S (del) (%)	TAP (kg CaCO ₃ /t)	SAP (kg CaCO ₃ /t)
Method	WEI-21	OA-ELE08	OA-ELE07	S-IR08	S-CAL07	S-CAL06		S-GRA06	S-GRA06a		Calculated	Calculated	Calculated	Calculated	Calculated
MDL		0.1	0.1	0.01	0.01	0.01		0.01	0.01						
04-SR-01	0.68		9.1	0.05	0.04	0.05	0.04	0.02	0.005	0.01	0.017	-0.012	0.000	1.6	1.3
04-SR-02	0.3		9.2	0.48	0.43	0.47	0.46	0.005	0.01	0.01	0.007	0.033	0.033	15.0	14.5
04-SR-03	1		9.5	0.04	0.04	0.04	0.04	0.005	0.005	0.01	0.014	-0.019	0.000	1.3	1.3
04-SR-04	0.42		9.4	0.16	0.16	0.15	0.16	0.005	0.01	0.01	0.016	-0.026	0.000	5.0	5.0
04-SR-05	0.9		9.6	0.06	0.05	0.05	0.05	0.005	0.01	0.01	0.019	-0.019	0.000	1.9	1.6
86-035-01	0.4		2.7	2.59	1.99	2.18	2.18	0.38	0.41	0.41	0.002	0.188	0.188	80.9	68.1
86-035-02	0.24		8.9	0.08	0.07	0.08	0.07	0.005	0.005	0.01	0.018	-0.013	0.000	2.5	2.2
86-035-03	0.3		9.1	0.02	0.02	0.02	0.02	0.005	0.005	0.01	0.014	-0.019	0.000	0.6	0.6
86-035-04	0.44		6.9	24.6	23.5	24.43	24.43	0.18	0.17	0.17	0.001	0.929	0.929	768.8	763.4
86-035-13	0.24		8.7	0.06	0.05	0.05	0.05	0.01	0.01	0.01	0.020	-0.020	0.000	1.9	1.6
86-035-05	0.3		8.6	0.11	0.1	0.10	0.10	0.01	0.01	0.01	0.021	-0.021	0.000	3.4	3.1
86-035-10	0.26		9.1	0.48	0.48	0.48	0.48	0.005	0.005	0.01	0.010	-0.015	0.000	15.0	15.0
86-035-06	0.44		8.9	0.05	0.03	0.04	0.04	0.005	0.01	0.01	0.002	0.008	0.008	1.6	1.2
86-035-07	0.36		8.9	0.08	0.06	0.08	0.06	0.005	0.005	0.01	0.030	-0.015	0.000	2.5	1.9
86-035-07 (HC)	2.96		9.1	0.04	0.03	0.04	0.03	0.01	0.005	0.01	0.014	-0.009	0.000	1.3	0.9
86-035-08	0.3		8.9	0.05	0.04	0.04	0.04	0.01	0.01	0.01	0.016	-0.016	0.000	1.6	1.3
86-035-12	0.44		9.3	0.04	0.05	0.03	0.05	0.005	0.01	0.01	0.012	-0.032	0.000	1.3	1.6
86-035-11	0.44		8.4	0.09	0.07	0.08	0.07	0.01	0.01	0.01	0.017	-0.007	0.000	2.8	2.2
86-035-09	0.48		7.5	1.54	1.28	1.41	1.40	0.13	0.13	0.13	0.008	0.122	0.122	48.1	43.8
86-035-09 (HC)	3.96		9.2	0.15	0.1	0.15	0.13	0.02	0.005	0.01	0.019	0.026	0.026	4.7	3.9
85-027-01	0.42		8	0.06	0.04	0.05	0.04	0.005	0.01	0.01	0.019	-0.009	0.000	1.9	1.3
85-027-02	0.54		8.4	0.86	0.85	0.85	0.85	0.01	0.01	0.01	0.027	-0.027	0.000	26.9	26.6
85-027-02 (HC)	2.48		8.4	0.38	0.28	0.38	0.34	0.02	0.005	0.01	0.033	0.062	0.062	11.9	10.7
85-027-03	0.52		6.2	2.07	1.71	1.76	1.76	0.24	0.31	0.31	0.005	0.045	0.045	64.7	54.9
85-027-04	0.36		8.9	0.12	0.1	0.11	0.10	0.02	0.01	0.01	0.020	-0.010	0.000	3.8	3.1
85-027-27	0.64		9.1	0.04	0.04	0.04	0.04	0.005	0.005	0.01	0.018	-0.023	0.000	1.3	1.3
85-027-05	0.86		9.1	0.15	0.05	0.13	0.11	0.005	0.02	0.02	0.019	0.061	0.061	4.7	3.5
85-027-06	0.52		8.8	0.07	0.07	0.06	0.07	0.005	0.01	0.01	0.028	-0.038	0.000	2.2	2.2
85-027-25	0.58		8.9	0.03	0.02	0.03	0.02	0.005	0.005	0.01	0.020	-0.015	0.000	0.9	0.6
85-027-21	0.38		9.4	0.03	0.02	0.02	0.02	0.005	0.01	0.01	0.004	-0.004	0.000	0.9	0.6
85-027-07	0.88		9.1	0.03	0.03	0.02	0.03	0.005	0.01	0.01	0.018	-0.028	0.000	0.9	0.9
85-027-08	0.54		9.7	0.01	0.02	0.01	0.02	0.005	0.005	0.01	0.005	-0.020	0.000	0.3	0.6
85-027-09	0.64		8.5	0.07	0.06	0.05	0.06	0.005	0.02	0.02	0.023	-0.033	0.000	2.2	1.9
85-027-10	0.6		8.9	0.04	0.04	0.03	0.04	0.005	0.01	0.01	0.022	-0.032	0.000	1.3	1.3
85-027-11	0.62		9.1	0.07	0.06	0.06	0.06	0.005	0.01	0.01	0.019	-0.019	0.000	2.2	1.9
85-027-20	0.5		9.4	0.06	0.05	0.05	0.05	0.005	0.01	0.01	0.011	-0.011	0.000	1.9	1.6
85-027-12	0.56		7.3	0.74	0.6	0.63	0.61	0.11	0.11	0.11	0.018	0.012	0.012	23.1	19.1
85-027-13	0.54		8.1	0.12	0.08	0.12	0.08	0.005	0.005	0.01	0.036	-0.001	0.000	3.8	2.5
85-027-23	0.3		9.3	0.07	0.06	0.06	0.06	0.01	0.01	0.01	0.023	-0.023	0.000	2.2	1.9
85-027-14	0.2		4.1	25.7	24.7	25.31	25.31	0.35	0.39	0.39	0.004	0.606	0.606	803.1	790.8
85-027-28	0.54		8.1	3.85	3.78	3.79	3.79	0.06	0.06	0.06	0.004	0.006	0.006	120.3	118.3
85-027-15	0.62		8.9	0.08	0.08	0.07	0.08	0.005	0.01	0.01	0.028	-0.038	0.000	2.5	2.5
85-027-16	0.46		8	0.09	0.07	0.08	0.07	0.005	0.01	0.01	0.031	-0.021	0.000	2.8	2.2
85-027-17	0.72		8.1	0.12	0.1	0.11	0.10	0.01	0.01	0.01	0.007	0.003	0.003	3.8	3.2
85-027-17 (HC)	2.22		9	0.1	0.06	0.10	0.09	0.02	0.005	0.01	0.007	0.028	0.028	3.1	2.7
85-027-24	0.38		9.2	0.05	0.05	0.05	0.05	0.01	0.005	0.01	0.015	-0.020	0.000	1.6	1.6
85-027-24 (HC)	4.6		9.5	0.05	0.05	0.05	0.05	0.01	0.005	0.01	0.011	-0.016	0.000	1.6	1.6
85-027-18	0.48		4.3	2.36	1.82	1.91	1.90	0.48	0.45	0.45	0.006	0.084	0.084	73.8	59.5

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Sample Id.	Weight Received (kg)	Rinse pH Unity	Paste pH Unity	S (Total) (% Leco)	S (Sulphide) (% Leco)	S (Sulphide) (% Calc)	S (Sulphide) + S (del) (% Leco/Calc)	Carbonate Leach S (Sulphate) (%)	HCl Leachable S (Sulphate) (%)	S (Sulphate) (% HCl/Carb)	S (BaSO ₄) (%)	S (del _{actual}) (%)	S (del) (%)	TAP (kg CaCO ₃ /t)	SAP (kg CaCO ₃ /t)
Method	WEI-21	OA-ELE08	OA-ELE07	S-HR08	S-CAL07	S-CAL06		S-GRA06	S-GRA06a		Calculated	Calculated	Calculated	Calculated	Calculated
MDL		0.1	0.1	0.01	0.01	0.01		0.01	0.01						
G-84-007-25				2.98										93.1	
G-84-007-26				0.02										0.6	
G-84-007-27				0.06										1.9	
G-84-007-28				0.16										5.0	
G-84-007-29				0.26										8.1	
G-84-007-30				0.09										2.8	
G-84-007-31				0.06										1.9	
G-84-007-32				0.10										3.1	
G-84-007-33				11.30										353.1	
G-84-007-84				0.38										11.9	
G-84-007-34				0.07										2.2	
G-84-007-35				0.06										1.9	
05-ARD4-09	0.72		9	0.05	0.05	0.03	0.05	0.005	0.02	0.02	0.016	-0.036	0.000	1.6	1.6
05-ARD4-10	0.8		8	0.05	0.04	0.04	0.04	0.005	0.01	0.01	0.020	-0.020	0.000	1.6	1.3
05-ARD4-03	0.68		8.6	0.1	0.09	0.08	0.09	0.005	0.02	0.02	0.028	-0.038	0.000	3.1	2.8
05-ARD4-04	0.74		8.9	0.21	0.18	0.15	0.18	0.005	0.06	0.06	0.029	-0.059	0.000	6.6	5.6
05-ARD4-06	0.98		8.5	0.22	0.14	0.20	0.17	0.005	0.02	0.031	0.029	0.029	0.029	6.9	5.3
05-ARD4-05	0.82		8.1	0.04	0.02	0.03	0.02	0.005	0.01	0.01	0.021	-0.011	0.000	1.3	0.6
05-ARD4-07-1	0.8		7.9	0.04	0.03	0.03	0.03	0.005	0.01	0.01	0.027	-0.027	0.000	1.3	0.9
ARD4-2006A	4.3		8.4	0.06	0.05	0.05	0.05	0.005	0.01	0.01	0.032	-0.032	0.000	1.9	1.6
05-ARD4-08	0.68		8.1	0.35	0.34	0.32	0.34	0.005	0.03	0.03	0.014	-0.034	0.000	10.9	10.6
ARD4-2006B	4.84		9.3	0.04	0.03	0.04	0.03	0.01	0.005	0.01	0.011	-0.006	0.000	1.3	0.9
05-ARD4-02	0.52		7.5	2.6	2.35	2.57	2.56	0.05	0.03	0.03	0.007	0.213	0.213	81.3	80.1
ARD4-2006C	1.96		7.5	10.3	8.9	10.20	10.20	0.01	0.1	0.10	0.001	1.299	1.299	321.9	318.7
05-ARD4-01	0.7		6.7	9.86	9.23	9.80	9.80	0.08	0.06	0.06	0.003	0.567	0.567	308.1	306.2
05-ARD3-01A	0.92		8.8	0.06	0.05	0.05	0.05	0.005	0.01	0.01	0.015	-0.015	0.000	1.9	1.6
05-ARD3-02B	1.04		6.5	8.4	7.98	8.39	8.39	0.04	0.01	0.01	0.002	0.408	0.408	262.5	262.1
05-ARD3-16	0.56		9.1	0.06	0.03	0.02	0.03	0.005	0.04	0.04	0.014	-0.024	0.000	1.9	0.9
05-ARD3-03A	0.82		9.2	0.05	0.05	0.05	0.05	0.005	0.005	0.01	0.017	-0.022	0.000	1.6	1.6
05-ARD3-04A	0.5		8.8	0.63	0.61	0.62	0.61	0.01	0.01	0.01	0.019	-0.009	0.000	19.7	19.1
05-ARD3-05A	0.84		8.7	0.79	0.79	0.77	0.79	0.01	0.02	0.02	0.025	-0.045	0.000	24.7	24.7
05-ARD3-07A	0.72		9.1	0.07	0.07	0.05	0.07	0.005	0.02	0.02	0.018	-0.038	0.000	2.2	2.2
05-ARD3-07B (HC)	8		9.6	0.08	0.06	0.07	0.06	0.005	0.01	0.01	0.029	-0.019	0.000	2.5	1.9
ARD3-2006B	2.34		9.4	0.14	0.1	0.13	0.10	0.01	0.01	0.01	0.027	0.003	0.003	4.4	3.2
ARD3-2006C	5.2		8.8	0.21	0.15	0.21	0.18	0.01	0.005	0.01	0.021	0.034	0.034	6.6	5.7
05-ARD3-06A	0.76		8.6	0.12	0.1	0.11	0.10	0.005	0.01	0.01	0.014	-0.004	0.000	3.8	3.1
05-ARD3-08A	0.48		5	10.75	9.74	10.67	10.67	0.12	0.08	0.08	0.004	0.926	0.926	335.9	333.3
05-ARD3-08B (HC)	6.16		8.4	1.38	1.38	1.36	1.38	0.02	0.02	0.02	0.020	-0.040	0.000	43.1	43.1
05-ARD3-09A	0.68		8.7	0.1	0.11	0.08	0.11	0.005	0.02	0.02	0.025	-0.055	0.000	3.1	3.4
ARD3-2006A	3.3		8.8	0.06	0.06	0.06	0.06	0.01	0.005	0.01	0.028	-0.033	0.000	1.9	1.9
05-ARD3-10A	0.86		8.9	0.11	0.08	0.10	0.08	0.01	0.01	0.01	0.017	0.003	0.003	3.4	2.6
05-ARD3-15A	0.94		9	0.05	0.03	0.05	0.04	0.005	0.005	0.01	0.010	0.005	0.005	1.6	1.1
05-ARD3-12A	0.64		9.4	0.05	0.04	0.01	0.04	0.02	0.04	0.04	0.008	-0.038	0.000	1.6	1.3
05-ARD3-11A	0.86		8.9	0.1	0.06	0.07	0.06	0.01	0.03	0.03	0.013	-0.003	0.000	3.1	1.9
05-ARD3-14A	0.58		7	6.54	5.72	6.50	6.50	0.06	0.04	0.04	0.002	0.778	0.778	204.4	203.1
05-ARD3-14B (HC)	4.56		9.2	0.66	0.58	0.64	0.63	0.01	0.02	0.02	0.011	0.049	0.049	20.6	19.7
05-ARD3-13A	0.5		9.3	0.41	0.41	0.38	0.41	0.005	0.03	0.03	0.001	-0.031	0.000	12.8	12.8
05-ARD2-04	0.66		7.4	0.01	0.01	0.01	0.01	0.005	0.005	0.01	0.020	-0.025	0.000	0.3	0.3

Project: Mount Klappan
Client: Rescan Environmental
Data: ABA Data
Comments: Rock units designated by Gulf.

"Stage 1 Acid Generation Potential Studies for the Mount Klappan Project", by Norecol Environmental Consultants, March 1985.

Sample Id.	Weight Received (kg)	Rinse pH Unity	Paste pH Unity	S (Total) (% Leco)	S (Sulphide) (% Leco)	S (Sulphide) (% Calc)	S (Sulphide) + S (del) (% Leco/Calc)	Carbonate Leach S (Sulphate) (%)	HCl Leachable S (Sulphate) (%)	S (Sulphate) (% HCl/Carb)	S (BaSO ₄) (%)	S (del _{actual}) (%)	S (del) (%)	TAP (kg CaCO ₃ /t)	SAP (kg CaCO ₃ /t)
Method	WEI-21	OA-ELE08	OA-ELE07	S-IR08	S-CAL07	S-CAL06		S-GRA06	S-GRA06a		Calculated	Calculated	Calculated	Calculated	Calculated
MDL		0.1	0.1	0.01	0.01	0.01		0.01	0.01						
05-ARD2-08	0.76		7.9	0.2	0.14	0.18	0.16	0.005	0.02	0.02	0.020	0.020	0.020	6.3	5.0
05-ARD2-07	0.64		7.8	0.29	0.21	0.27	0.25	0.01	0.02	0.02	0.020	0.040	0.040	9.1	7.8
05-ARD2-07 (HC)	7.16		8	0.29	0.26	0.28	0.26	0.02	0.01	0.01	0.022	-0.002	0.000	9.1	8.1
05-ARD2-13	0.64		7.1	16.05	15.3	15.98	15.98	0.11	0.07	0.07	0.001	0.679	0.679	501.6	499.4
05-ARD2-12	0.7		7.5	17.65	17.35	17.57	17.57	0.07	0.08	0.08	0.000	0.220	0.220	551.6	549.0
05-ARD2-12 (HC)	5.28		7.7	8.53	8.52	8.48	8.52	0.06	0.05	0.05	0.002	-0.042	0.000	266.6	266.3
05-ARD2-16	0.58		8.9	0.28	0.3	0.28	0.30	0.005	0.005	0.01	0.012	-0.037	0.000	8.8	9.4
05-ARD2-11	0.5		8.6	0.06	0.05	0.05	0.05	0.005	0.01	0.01	0.031	-0.031	0.000	1.9	1.6
05-ARD2-09	0.58		8.9	0.03	0.03	0.03	0.03	0.005	0.005	0.01	0.022	-0.027	0.000	0.9	0.9
05-ARD2-02	0.68		9.2	0.05	0.03	0.04	0.03	0.005	0.01	0.01	0.021	-0.011	0.000	1.6	0.9
05-ARD2-10A	0.62		9.2	1.25	1.24	1.25	1.24	0.01	0.005	0.01	0.007	-0.002	0.000	39.1	38.8
05-ARD2-14	0.56		9.3	0.06	0.04	0.06	0.04	0.01	0.005	0.01	0.013	0.002	0.002	1.9	1.3
05-ARD2-06	0.78		8.9	0.06	0.04	0.06	0.04	0.005	0.005	0.01	0.023	-0.008	0.000	1.9	1.3
05-ARD2-01A	0.88		9.2	0.06	0.06	0.05	0.06	0.005	0.01	0.01	0.013	-0.023	0.000	1.9	1.9
05-ARD2-15	0.44		8.7	0.06	0.06	0.05	0.06	0.005	0.01	0.01	0.019	-0.029	0.000	1.9	1.9
05-ARD2-05	0.62		9.1	0.13	0.09	0.13	0.12	0.07	0.005	0.01	0.008	0.027	0.027	4.1	3.7
ARD2-2006A	4.88		9.1	0.83	0.73	0.81	0.79	0.01	0.02	0.02	0.018	0.062	0.062	25.9	24.8
ARD2-2006B	6.9		8.9	0.09	0.06	0.09	0.06	0.005	0.005	0.01	0.040	-0.015	0.000	2.8	1.9
05-ARD2-03	0.86		9.4	0.06	0.05	0.06	0.05	0.01	0.005	0.01	0.014	-0.009	0.000	1.9	1.6
05-ARD1-11	0.32		9.3	0.56	0.56	0.56	0.56	0.005	0.005	0.01	0.001	-0.006	0.000	17.5	17.5
05-ARD1-15	0.54		8.8	0.05	0.02	0.05	0.03	0.01	0.005	0.01	0.015	0.010	0.010	1.6	0.9
05-ARD1-15 (HC)	7.8		9.2	0.06	0.04	0.05	0.04	0.01	0.01	0.01	0.014	-0.004	0.000	1.9	1.3
05-ARD1-13	0.8		8.1	0.05	0.04	0.04	0.04	0.005	0.01	0.01	0.028	-0.028	0.000	1.6	1.3
05-ARD1-14	0.74		8.1	0.1	0.06	0.09	0.06	0.005	0.01	0.01	0.032	-0.002	0.000	3.1	1.9
05-ARD1-12	0.66		8.7	0.04	0.02	0.00	0.02	0.005	0.04	0.04	0.012	-0.032	0.000	1.3	0.6
05-ARD1-08	0.62		8.6	0.06	0.05	0.04	0.05	0.005	0.02	0.02	0.014	-0.024	0.000	1.9	1.6
05-ARD1-03	0.54		8.3	0.05	0.04	0.04	0.04	0.005	0.01	0.01	0.034	-0.034	0.000	1.6	1.3
05-ARD1-01	1.12		8.7	0.05	0.05	0.05	0.05	0.005	0.005	0.01	0.018	-0.023	0.000	1.6	1.6
05-ARD1-02	0.42		8.8	0.08	0.06	0.07	0.06	0.005	0.01	0.01	0.017	-0.007	0.000	2.5	1.9
05-ARD1-07	0.44		8.2	0.22	0.17	0.21	0.19	0.005	0.01	0.01	0.023	0.017	0.017	6.9	5.8
05-ARD1-07 (HC)	8.12		8.6	0.3	0.24	0.29	0.27	0.01	0.01	0.01	0.020	0.030	0.030	9.4	8.4
05-ARD1-07-2	1.02		8.5	0.03	0.02	0.01	0.02	0.005	0.02	0.02	0.015	-0.025	0.000	0.9	0.6
05-ARD1-06	0.92		8.2	0.71	0.68	0.70	0.68	0.01	0.01	0.01	0.021	-0.001	0.000	22.2	21.3
05-ARD1-06 (HC)	7.32		8.8	0.53	0.52	0.51	0.52	0.01	0.02	0.02	0.021	-0.031	0.000	16.6	16.3
ARD1-2006A	6.36		7.1	1.78	1.55	1.73	1.71	0.05	0.05	0.05	0.018	0.162	0.162	55.6	53.5
05-ARD1-09	0.76		6.4	12.35	11.05	12.33	12.33	0.04	0.02	0.02	0.001	1.279	1.279	385.9	385.3
05-ARD1-10	0.68		9.2	0.31	0.21	0.30	0.29	0.005	0.01	0.01	0.015	0.075	0.075	9.7	8.9
05-ARD1-04	0.7		8.4	0.08	0.07	0.08	0.07	0.005	0.005	0.01	0.020	-0.015	0.000	2.5	2.2
05-ARD1-05	0.66		8.4	0.07	0.06	0.06	0.06	0.005	0.01	0.01	0.018	-0.018	0.000	2.2	1.9
05-019-08	0.82		8.2	0.06	0.04	0.05	0.04	0.005	0.01	0.01	0.021	-0.011	0.000	1.9	1.3
05-019-03	0.82		8.6	0.07	0.05	0.07	0.05	0.005	0.005	0.01	0.022	-0.007	0.000	2.2	1.6
05-019-01	0.56		8.6	0.12	0.11	0.07	0.11	0.005	0.05	0.05	0.020	-0.060	0.000	3.8	3.4
05-019-13	0.54		8.5	0.09	0.07	0.08	0.07	0.005	0.01	0.01	0.021	-0.011	0.000	2.8	2.2
05-019-2006A	6.92		9.2	0.08	0.07	0.08	0.07	0.01	0.005	0.01	0.018	-0.013	0.000	2.5	2.2
05-019-16	0.8		8.5	0.35	0.29	0.33	0.31	0.005	0.02	0.02	0.022	0.018	0.018	10.9	9.6
05-019-14	1.34		7.5	4.68	4.42	4.65	4.65	0.05	0.03	0.03	0.001	0.229	0.229	146.3	145.3
05-019-15	0.56		8.3	0.3	0.27	0.28	0.27	0.005	0.02	0.02	0.021	-0.011	0.000	9.4	8.4
05-019-10	0.92		8.6	0.02	0.02	0.02	0.02	0.005	0.005	0.01	0.015	-0.020	0.000	0.6	0.6

Project: Mount Klappan
Client: Rescan Environmental
Data: ABA Data
Comments: Rock units designated by Gulf.

"Stage 1 Acid Generation Potential Studies for the Mount Klappan Project", by Norecol Environmental Consultants, March 1985.

Sample Id.	Weight Received (kg)	Rinse pH Unity	Paste pH Unity	S (Total) (% Leco)	S (Sulphide) (% Leco)	S (Sulphide) (% Calc)	S (Sulphide) + S (del) (% Leco/Calc)	Carbonate Leach S (Sulphate) (%)	HCl Leachable S (Sulphate) (%)	S (Sulphate) (% HCl/Carb)	S (BaSO ₄) (%)	S (del _{actual}) (%)	S (del) (%)	TAP (kg CaCO ₃ /t)	SAP (kg CaCO ₃ /t)
Method	WEI-21	OA-ELE08	OA-ELE07	S-IR08	S-CAL07	S-CAL06		S-GRA06	S-GRA06a		Calculated	Calculated	Calculated	Calculated	Calculated
MDL		0.1		0.01	0.01	0.01		0.01							
05-019-11	1.02		8.8	0.07	0.05	0.05	0.05	0.005	0.02	0.02	0.009	-0.009	0.000	2.2	1.6
05-019-09	0.72		8.9	0.02	0.02	0.02	0.02	0.005	0.005	0.01	0.009	-0.014	0.000	0.6	0.6
05-019-07	0.72		8.9	0.03	0.03	0.01	0.03	0.005	0.02	0.02	0.011	-0.031	0.000	0.9	0.9
05-019-06	0.98		8.6	0.36	0.31	0.34	0.32	0.01	0.02	0.02	0.022	0.008	0.008	11.3	9.9
05-019-05	0.72		9	0.24	0.2	0.22	0.22	0.005	0.02	0.02	0.004	0.016	0.016	7.5	6.7
05-019-04	0.84		8.8	0.09	0.07	0.09	0.07	0.005	0.005	0.01	0.021	-0.006	0.000	2.8	2.2
05-019-02	0.74		8.6	1.76	1.56	1.75	1.74	0.01	0.01	0.01	0.007	0.183	0.183	55.0	54.5
05-019-02 (HC)	6.8		9.1	1.24	1.16	1.23	1.21	0.02	0.01	0.01	0.024	0.046	0.046	38.8	37.7
05-019-12	0.68		8.8	0.04	0.03	0.02	0.03	0.005	0.02	0.02	0.016	-0.026	0.000	1.3	0.9
05-006-08	0.76		9.3	0.01	0.01	0.00	0.01	0.005	0.02	0.02	0.002	-0.022	0.000	0.3	0.3
05-006-09	0.7		9	0.02	0.02	0.01	0.02	0.005	0.01	0.01	0.015	-0.025	0.000	0.6	0.6
05-006-11	0.6		8.4	0.25	0.23	0.24	0.23	0.005	0.01	0.01	0.017	-0.007	0.000	7.8	7.2
05-006-13	1.1		8.4	0.16	0.16	0.15	0.16	0.005	0.01	0.01	0.023	-0.033	0.000	5.0	5.0
05-006-10	6.8		9	3.01	2.78	2.97	2.97	0.02	0.04	0.04	0.005	0.185	0.185	94.1	92.7
05-006-12	0.66		8.5	0.35	0.32	0.30	0.32	0.02	0.05	0.05	0.028	-0.048	0.000	10.9	10.0
05-006-01	0.58		8.3	0.03	0.03	0.01	0.03	0.005	0.02	0.02	0.023	-0.043	0.000	0.9	0.9
05-006-04	0.7		8.5	0.1	0.07	0.09	0.07	0.01	0.01	0.01	0.019	0.001	0.001	3.1	2.2
05-006-03	1.1		8.8	0.05	0.03	0.03	0.03	0.005	0.02	0.02	0.013	-0.013	0.000	1.6	0.9
05-006-02	0.7		8.8	0.05	0.04	0.04	0.04	0.005	0.01	0.01	0.018	-0.018	0.000	1.6	1.3
05-006-07	0.72		9.1	0.18	0.18	0.17	0.18	0.005	0.01	0.01	0.018	-0.028	0.000	5.6	5.6
05-006-06	0.78		9.1	0.14	0.11	0.11	0.11	0.01	0.03	0.03	0.018	-0.018	0.000	4.4	3.4
05-006-05	0.88		8.8	0.03	0.03	0.02	0.03	0.005	0.01	0.01	0.018	-0.028	0.000	0.9	0.9
DUMP 2.5M	11.24	7.3	7.1	0.16	0.14	0.15	0.14	0.005	0.01	0.01	0.019	-0.009	0.000	5.0	4.4
DUMP-2.5M (HC)	7.28		7.2	0.18	0.17	0.16	0.17	0.005	0.02	0.02	0.017	-0.027	0.000	5.6	5.3
DUMP SURFACE	2.88	7.3	7	0.2	0.18	0.20	0.18	0.005	0.005	0.01	0.019	-0.004	0.000	6.3	5.6
TAILINGS-1	0.64	6.3	6.6	0.39	0.32	0.38	0.38	0.005	0.01	0.01		0.060	0.060	12.2	11.9
TAILINGS-2	0.5	6.2	6.3	0.39	0.3	0.37	0.37	0.005	0.02	0.02		0.070	0.070	12.2	11.6

Project: Mount Klappan
Client: Rescan Environmental
Data: ABA Data
Comments: Rock units designated by Gulf.

"Stage 1 Acid Generation Potential Studies for the Mount Klappan Project", by Norecol Environmental Consultants, March 1985.

Sample Id.	Weight Received (kg)	Rinse pH Unity	Paste pH Unity	S (Total) (% Leco)	S (Sulphide) (% Leco)	S (Sulphide) S-CAL07 (% Calc)	S (Sulphide) + S (del) (% Leco/Calc)	Carbonate Leach S (Sulphate) (%)	HCl Leachable S (Sulphate) (%)	S (Sulphate) (% HCl/Carb)	S(BaSO ₄) (%)	S(del _{actual}) (%)	S(del) (%)	TAP (kg CaCO ₃ /t)	SAP (kg CaCO ₃ /t)
Method	WEI-21	OA-ELE08	OA-ELE07	S-IR08	S-CAL07	S-CAL06		S-GRA06	S-GRA06a		Calculated	Calculated	Calculated	Calculated	Calculated
MDL		0.1	0.1	0.01	0.01	0.01		0.01	0.01						
Maximum		7.3	9.7	25.7	24.7	25.3	25.3	0.48	0.45	0.45	0.04	1.3	1.3	803	791
Minimum		6.2	2.7	0.01	0.01	0	0.01	0.005	0.005	0.005	0.00047	-0.06	0	0.31	0.31
Mean		6.78	8.42	0.96	1.09	1.15	1.14	0.024	0.028	0.028	0.017	0.043	0.057	30.1	35.8
Standard Deviation		0.61	1.03	3.02	3.5	3.65	3.65	0.061	0.063	0.063	0.0086	0.2	0.2	94.3	114
10 Percentile		6.23	7.13	0.03	0.03	0.022	0.03	0.005	0.005	0.005	0.0042	-0.035	0	0.94	0.94
25 Percentile		6.28	8.13	0.05	0.04	0.045	0.04	0.005	0.005	0.005	0.011	-0.025	0	1.56	1.25
Median		6.80	8.70	0.09	0.07	0.08	0.07	0.005	0.010	0.010	0.018	-0.012	0	2.81	2.2
75 Percentile		7.30	9.10	0.35	0.30	0.33	0.32	0.010	0.020	0.020	0.021	0.0078	0.0078	10.9	9.98
90 Percentile		7.30	9.27	2.1	1.67	1.76	1.75	0.05	0.05	0.05	0.028	0.081	0.081	65.6	54.7
Interquartile Range (IQR) ¹		1.03	0.98	0.30	0.26	0.28	0.28	0.005	0.015	0.015	0.011	0.033	0.0078	9.38	8.73
Variance		0.37	1.07	9.11	12.2	13.3	13.3	0.0037	0.0039	0.0039	0.000074	0.041	0.039	8896	13024
Skewness		-0.023	-2.51	5.25	4.78	4.67	4.67	5.12	5	5	-0.029	4.45	4.58	5.25	4.67
Coefficient of Variation (CoV) ²		0.09	0.12	3.14	3.22	3.19	3.19	2.54	2.21	2.21	0.51	4.75	3.43	3.14	3.19
Count		4	174	315	174	174	174	174	174	174	172	174	174	315	174

Total
 NPR < 1.0 or NPR = 1.0
 1.0 < NPR < 2.0
 NPR > 2.0 or NPR =2.0

% NPR < 1.0 or NPR = 1.0 of Total
 % 1.0 < NPR < 2.0 of Total
 % NPR > 2.0 or NPR =2.0 of Total

¹ Interquartile Range (IQR) = 75th percentile minus 25th percentile

² Coefficient of Variation (CoV) = standard deviation divided by mean

NOTE: If data was reported as < detection limit half the detection limit is shown in italics and was used in subsequent calculations.

NOTE: If data was reported as > detection limit the detection limit is shown in bold and was used in subsequent calculations.

% S (Sulphide) (calc) = % S (Total) - % S (Sulphate) Carbonate Leach

%S(BaSO₄) = Ba (ppm) * 0.0001 * 32.06 / 137.37

% S (del_{actual}) = %S(Total) - %S(Sulphide) Leco - %S(Sulphate) Carbonate Leach - %S(BaSO₄)

% S (del) = % S (del_{actual}) unless < 0, then 0

TAP = % S (Total) * 31.25

SAP = % S (Sulphide + del) * 31.25

Project: Mount Klappan
Client: Rescan Environmental
Data: ABA Data
Comments: Rock units designated by Gulf.

Gulf samples taken from "Acid Generation Potential Mount Klappan Project Addendum to Stage 1 Studies", by Norecol Environmental Consultants, March 1986 and "Stage 1 Acid Generation Potential Studies for the Mount Klappan Project", by Norecol Environmental Consultants, March 1985.

Sample Id.															Comparison			
	NP (kg CaCO ₃ /t) OA-VOL08	Total C (% Lecco) C-R07	Inorganic CO ₂ (%) C-GAS05	Organic C (%) Calculated	Total CaNP (kg CaCO ₃ /t) Calculated	Inorganic CaNP (kg CaCO ₃ /t) Calculated	(Ca) CaNP (kg CaCO ₃ /t) Calculated	(Ca+Mg) CaNP (kg CaCO ₃ /t) Calculated	TNNP (kg CaCO ₃ /t) Calculated	Adjusted TNNP (kg CaCO ₃ /t) Calculated	SNNP (kg CaCO ₃ /t) Calculated	Adjusted SNNP (kg CaCO ₃ /t) Calculated	TNPR Calculated	Adjusted TNPR	SNPR Calculated	Adjusted SNPR	Fizz Rating Unity OA-VOL08	of Fizz & NP Rating
04-SR-01	53	5.06	14.6	1.08	421.7	332.0	28.2	115.9	51.4	41.4	51.8	41.8	33.920	27.520	42.400	34.400	2	Agree
04-SR-02	29	50	4	50	4166.9	91.0	28.5	57.3	14.0	4.0	14.5	4.5	1.933	1.267	2.002	1.312	1	Agree
04-SR-03	119	1.9	5.6	0.37	158.3	127.4	53.9	125.6	117.8	107.8	117.8	107.8	95.200	87.200	95.200	87.200	3	Agree
04-SR-04	56	19.2	15.5	14.97	1600.1	352.5	11.2	228.6	51.0	41.0	51.0	41.0	11.200	9.200	11.200	9.200	2	Agree
04-SR-05	249	4.23	12.8	0.74	352.5	291.1	119.6	255.5	247.1	237.1	247.4	237.4	132.800	127.467	159.360	152.960	3	Agree
86-035-01	8	50	0.8	50	4166.9	18.2	15.0	22.4	-72.9	-82.9	-60.1	-70.1	0.099	0.001	0.118	0.001	1	Agree
86-035-02	66	3.02	7	1.11	251.7	159.2	33.0	112.8	63.5	53.5	63.8	53.8	26.400	22.400	30.171	25.600	2	Agree
86-035-03	163	3.4	10.9	0.43	283.4	247.9	30.7	145.2	162.4	152.4	162.4	152.4	260.800	244.800	260.800	244.800	3	Agree
86-035-04	155	12.5	8.6	10.16	1041.7	195.6	109.4	174.8	-613.8	-623.8	-608.4	-618.4	0.202	0.189	0.203	0.190	3	Agree
86-035-13	63	3.05	6.9	1.17	254.2	156.9	38.0	102.6	61.1	51.1	61.4	51.4	33.600	28.267	40.320	33.920	2	Agree
86-035-05	82	3.07	7	1.16	255.9	159.2	36.0	93.2	78.6	68.6	78.9	68.9	23.855	20.945	26.240	23.040	3	Disagree
86-035-10	85	50	4.8	50	4166.9	109.2	67.2	117.0	70.0	60.0	70.0	60.0	5.667	5.000	5.667	5.000	2	Agree
86-035-06	705	9.15	33.3	0.07	762.6	757.3	370.8	667.3	703.4	693.4	703.8	693.8	451.200	444.800	598.958	590.462	4	Agree
86-035-07	31	1.63	3.3	0.73	135.8	75.1	10.0	56.9	28.5	18.5	29.1	19.1	12.400	8.400	16.533	11.200	2	Disagree
86-035-07 (HC)	48	2.94	6.1	1.28	245.0	138.7	18.7	78.0	46.8	36.8	47.1	37.1	38.400	30.400	51.200	40.533	2	Disagree
86-035-08	41	3.61	10.9	0.64	300.9	247.9	8.2	90.6	39.4	29.4	39.8	29.8	26.240	19.840	32.800	24.800	2	Disagree
86-035-12	235	6.18	18.5	1.14	515.0	420.7	61.9	219.2	233.8	223.8	233.4	223.4	188.000	180.000	150.400	144.000	3	Agree
86-035-11	15	0.78	0.8	0.56	65.0	18.2	8.5	33.2	12.2	2.2	12.8	2.8	5.333	1.778	6.857	2.286	1	Agree
86-035-09	61	6.41	3.4	5.48	534.2	77.3	42.2	91.2	12.9	2.9	17.2	7.2	1.268	1.060	1.392	1.164	2	Agree
86-035-09 (HC)	61	2.21	4.3	1.04	184.2	97.8	39.0	110.2	56.3	46.3	57.1	47.1	13.013	10.880	15.452	12.919	2	Agree
85-027-01	28	2.1	4.9	0.76	175.0	111.4	8.2	102.9	26.1	16.1	26.8	16.8	14.933	9.600	22.400	14.400	1	Agree
85-027-02	29	3.07	6	1.43	255.9	136.5	13.5	105.7	2.1	-7.9	2.4	-7.6	1.079	0.707	1.092	0.715	1	Agree
85-027-02 (HC)	26	2.42	1.9	1.90	201.7	43.2	8.0	90.3	14.1	4.1	15.3	5.3	2.189	1.347	2.434	1.498	1	Agree
85-027-03	31	3.14	1.8	2.65	261.7	40.9	40.0	91.0	-33.7	-43.7	-23.9	-33.9	0.479	0.325	0.565	0.383	1	Agree
85-027-04	111	4.47	6	2.83	372.5	136.5	43.7	129.3	107.3	97.3	107.9	97.9	29.600	26.933	35.520	32.320	3	Agree
85-027-27	68	2.79	6.3	1.07	232.5	143.3	43.5	109.7	66.8	56.8	66.8	56.8	54.400	46.400	54.400	46.400	2	Agree
85-027-05	111	2.44	6.3	0.72	203.3	143.3	65.7	132.8	106.3	96.3	107.5	97.5	23.680	21.547	31.907	29.033	3	Agree
85-027-06	31	6.81	4.5	5.58	567.5	102.3	17.5	92.4	28.8	18.8	28.8	18.8	14.171	9.600	14.171	9.600	1	Agree
85-027-25	58	2.74	6.7	0.91	228.3	152.4	23.5	88.1	57.1	47.1	57.4	47.4	61.867	51.200	92.800	76.800	2	Agree
85-027-21	387	5.44	19.2	0.20	453.4	436.7	219.8	365.9	386.1	376.1	386.4	376.4	412.800	402.133	619.200	603.200	3	Agree
85-027-07	31	4.1	10.5	1.24	341.7	238.8	35.5	130.6	30.1	20.1	30.1	20.1	33.067	22.400	33.067	22.400	1	Agree
85-027-08	390	5.87	20.2	0.36	489.2	459.4	234.5	399.2	389.7	379.7	389.4	379.4	1248.000	1216.000	624.000	608.000	3	Agree
85-027-09	59	3.3	6.2	1.61	275.0	141.0	32.5	102.0	56.8	46.8	57.1	47.1	26.971	22.400	31.467	26.133	2	Agree
85-027-10	129	4.01	7.9	1.86	334.2	179.7	51.4	113.6	127.8	117.8	127.8	117.8	103.200	95.200	103.200	95.200	3	Agree
85-027-11	67	2.92	4.1	1.80	243.3	93.2	42.2	103.1	64.8	54.8	65.1	55.1	30.629	26.057	35.733	30.400	2	Agree
85-027-20	311	6.38	18.5	1.34	531.7	420.7	63.9	199.0	309.1	299.4	309.4	299.4	165.867	160.533	199.040	192.640	3	Agree
85-027-12	53	8.72	3.2	7.85	726.7	72.8	38.7	95.9	29.9	19.9	33.9	23.9	2.292	1.859	2.772	2.249	2	Agree
85-027-13	20	4.17	2.3	3.54	347.5	52.3	3.7	55.2	16.3	6.3	17.5	7.5	5.333	2.667	8.000	4.000	1	Agree
85-027-23	134	2.64	6.6	0.84	220.0	150.1	62.7	158.6	131.8	121.8	132.1	122.1	61.257	56.686	71.467	66.133	3	Agree
85-027-14	5	0.78	0.6	0.62	65.0	13.6	4.5	23.0	-798.1	-808.1	-785.8	-795.8	0.006	0.001	0.006	0.001	1	Agree
85-027-28	290	23.4	16.3	18.96	1950.1	370.7	142.8	316.2	169.7	159.7	171.7	161.7	2.410	2.327	2.451	2.366	3	Agree
85-027-15	20	2.74	6.6	0.94	228.3	150.1	11.0	98.7	17.5	7.5	17.5	7.5	8.000	4.000	8.000	4.000	1	Agree
85-027-16	10	1.89	0.8	1.67	157.5	18.2	3.0	45.0	7.2	-2.8	7.8	-2.2	3.556	0.001	4.571	0.001	1	Agree
85-027-17	23	0.54	1.3	0.19	45.0	29.6	14.7	38.6	19.3	9.3	19.8	9.8	6.133	3.467	7.162	4.048	2	Disagree
85-027-17 (HC)	43	0.82	2	0.27	68.3	45.5	25.5	56.8	39.9	29.9	40.3	30.3	13.760	10.560	15.637	12.001	2	Disagree
85-027-24	19	1.46	1.9	0.94	121.7	43.2	10.2	78.6	17.4	7.4	17.4	7.4	12.160	5.760	12.160	5.760	1	Agree
85-027-24 (HC)	154	2.69	7.2	0.73	224.2	163.7	81.2	184.9	152.4	142.4	152.4	142.4	98.560	92.160	98.560	92.160	3	Agree
85-027-18	-3	2.68	0.1	2.65	223.3	2.3	3.2	38.2	-76.8	-86.8	-62.5	-72.5	0.001	0.001	0.001	0.001	1	Agree

Project:
Client:
Data:
Comments:

Mount Klappan
 Rescan Environmental
ABA Data

Rock units designated by Gulf.

Gulf samples taken from "Acid Generation Potential Mount Klappan Project Addendum to Stage 1 Studies", by Norecol Environmental Consultants, March 1986 and "Stage 1 Acid Generation Potential Studies for the Mount Klappan Project", by Norecol Environmental Consultants, March 1985.

Sample Id.	NP (kg CaCO ₃ /t) OA-VOL08	Total C (% Lecco) C-IR07	Inorganic CO ₂ (%) C-GAS05	Organic C (%) Calculated	Total CaNP (kg CaCO ₃ /t) Calculated	Inorganic CaNP (kg CaCO ₃ /t) Calculated	(Ca) CaNP (kg CaCO ₃ /t) Calculated	(Ca+Mg) CaNP (kg CaCO ₃ /t) Calculated	TNNP (kg CaCO ₃ /t) Calculated	Adjusted TNNP (kg CaCO ₃ /t) Calculated	SNNP (kg CaCO ₃ /t) Calculated	Adjusted SNNP (kg CaCO ₃ /t) Calculated	TNPR Calculated	Adjusted TNPR Calculated	SNPR Calculated	Adjusted SNPR Calculated	Fizz Rating Unity OA-VOL08	Comparison
																		of Fizz Rating & NP
85-027-19	10	5.5	0.5	5.36	458.4	11.4	6.5	44.0	5.3	-4.7	5.9	-4.1	2.133	0.001	2.462	0.001	1	Agree
85-016-02	45	2.14	5.7	0.59	178.3	129.6	17.5	117.9	43.8	33.8	44.1	34.1	36.000	28.000	48.000	37.333	2	Disagree
85-016-01	335	6.56	17.1	1.90	546.7	388.9	186.0	346.2	333.8	323.8	334.1	324.1	268.000	260.000	357.333	346.667	3	Agree
85-016-05	159	2.65	8.2	0.41	220.8	186.5	78.9	179.8	158.1	148.1	158.1	148.1	169.600	158.933	169.600	158.933	3	Agree
85-016-03	28	2.44	4.2	1.29	203.3	95.5	13.0	77.2	24.6	14.6	25.5	15.5	8.145	5.236	11.200	7.200	2	Disagree
85-016-04	6	1.84	0.7	1.81	153.3	2.3	3.5	30.7	4.8	-5.3	5.1	-4.9	4.800	0.001	6.400	0.001	1	Agree
85-016-06	220	4.63	5.1	3.24	385.9	116.0	51.4	163.4	218.8	208.8	218.8	208.8	176.000	168.000	176.000	168.000	3	Agree
85-016-07	109	3.9	8.3	1.64	325.0	188.8	10.0	93.2	98.1	88.1	98.4	88.4	9.966	9.051	10.259	9.318	3	Agree
85-016-07 (HC)	39	3.66	3.8	2.62	305.0	86.4	13.5	74.4	32.4	22.4	33.2	23.2	5.943	4.419	6.681	4.968	2	Disagree
85-016-08	3	4.17	0.3	4.09	347.5	6.8	3.5	29.0	-19.2	-29.2	-11.7	-21.7	0.135	0.001	0.204	0.001	1	Agree
85-016-09	115	3.4	6.3	1.68	283.4	143.3	70.9	143.4	100.9	90.9	105.0	95.0	8.178	7.467	11.485	10.486	3	Agree
85-016-10	29	2.12	3.5	1.17	176.7	79.6	15.2	67.1	24.9	14.9	25.6	15.6	7.138	4.677	8.436	5.527	1	Agree
85-016-12	10	1.84	1.9	1.32	153.3	43.2	4.2	43.8	7.8	-2.2	7.8	-2.2	4.571	0.001	4.571	0.001	1	Agree
85-016-11	8	0.47	0.6	0.31	39.2	13.6	4.0	28.3	6.8	-3.3	7.1	-2.9	6.400	0.001	8.533	0.001	1	Agree
85-016-13	5	16.4	0.2	16.35	1366.8	4.5	1.0	25.7	2.2	-7.8	1.9	-8.1	1.778	0.001	1.600	0.001	1	Agree
G-85-015-7525	94.72								77.5	67.5			5.511	4.929			2	Agree
G-85-013-7493	82.36								68.0	58.0			5.729	5.034			2	Agree
G-85-010-7383	55.57								45.3	35.3			5.389	4.419			2	Agree
G-85-009-7458	68.62								57.4	47.4			6.100	5.211			2	Agree
G-85-009-7465	106.40								79.5	69.5			3.959	3.587			3	Agree
G-85-006-116	126.30								123.8	113.8			50.520	46.520			3	Agree
G-85-006-117	100.20								90.8	80.8			10.688	9.621			3	Agree
G-85-006-141	99.53								84.2	74.2			6.500	5.847			2	Agree
G-85-006-142	87.85								-10.9	-20.9			0.890	0.788			2	Agree
G-85-006-118	111.90								90.3	80.3			5.190	4.726			3	Agree
G-85-006-119	101.60								100.0	90.0			65.024	58.624			2	Disagree
G-85-006-120	82.35								77.7	67.7			17.568	15.435			2	Agree
G-85-006-121	89.91								73.3	63.3			5.429	4.825			2	Agree
G-85-006-122	54.20								46.1	36.1			6.671	5.440			2	Agree
G-85-006-123	15.22								10.5	0.5			3.247	1.114			1	Agree
G-85-006-101	203.85								202.9	192.9			217.440	206.773			3	Agree
G-85-006-102	76.18								74.0	64.0			34.825	30.254			2	Agree
G-85-006-143	104.34								101.5	91.5			37.099	33.543			3	Agree
G-85-006-144	47.33								38.0	28.0			5.049	3.982			2	Disagree
G-85-006-103	66.56								65.6	55.6			70.997	60.331			2	Agree
G-85-006-104	97.47								94.7	84.7			34.656	31.100			2	Agree
G-85-006-105	102.90								98.8	88.8			25.329	22.868			2	Disagree
G-85-006-106	121.50								120.3	110.3			97.200	89.200			2	Disagree
G-85-006-107	135.20								133.3	123.3			72.107	66.773			3	Agree
G-85-006-108	26.72								25.8	15.8			28.501	17.835			2	Disagree
G-85-006-109	45.95								45.0	35.0			49.013	38.347			2	Disagree
G-85-006-110	39.08								37.8	27.8			31.264	23.264			2	Disagree
G-85-006-111	79.61								74.3	64.3			14.985	13.103			2	Agree
G-85-006-112	63.12								61.9	51.9			50.496	42.496			2	Agree
G-85-006-113	86.48								84.6	74.6			46.123	40.789			2	Agree
G-85-006-114	93.35								64.3	54.3			3.212	2.868			2	Agree
G-85-006-115	90.60								87.5	77.5			28.992	25.792			2	Agree
G-85-006-124	80.98								56.6	46.6			3.322	2.912			2	Agree

Project: Mount Klappan
Client: Rescan Environmental
Data: ABA Data
Comments: Rock units designated by Gulf.

Gulf samples taken from "Acid Generation Potential Mount Klappan Project Addendum to Stage 1 Studies", by Norecol Environmental Consultants, March 1986 and "Stage 1 Acid Generation Potential Studies for the Mount Klappan Project", by Norecol Environmental Consultants, March 1985.

Comparison

Sample Id.	NP (kg CaCO ₃ /t) OA-VOL08	Total C (% Leco) C-IR07	Inorganic CO ₂ (%) C-GAS05	Organic C (%) Calculated	Total CaNP (kg CaCO ₃ /t) Calculated	Inorganic CaNP (kg CaCO ₃ /t) Calculated	(Ca) CaNP (kg CaCO ₃ /t) Calculated	(Ca+Mg) CaNP (kg CaCO ₃ /t) Calculated	TNNP (kg CaCO ₃ /t) Calculated	Adjusted TNNP (kg CaCO ₃ /t) Calculated	SNNP (kg CaCO ₃ /t) Calculated	Adjusted SNNP (kg CaCO ₃ /t) Calculated	TNPR Calculated	Adjusted TNPR Calculated	SNPR Calculated	Adjusted SNPR Calculated	Fizz Rating Unity OA-VOL08	of Fizz Rating & NP
MDL	1	0.01	0.2															
G-85-006-125	62.44								49.0	39.0			4.647	3.903			2	Agree
G-85-006-126	88.54								87.0	77.0			56.666	50.266			2	Agree
G-85-006-127	274.00								273.1	263.1			292.267	281.600			3	Agree
G-85-006-145	41.14								40.2	30.2			43.883	33.216			2	Disagree
G-85-006-128	21.10								-62.3	-72.3			0.253	0.133			1	Agree
G-85-006-129	88.40								86.5	76.5			47.147	41.813			2	Agree
G-85-006-130	65.20								62.7	52.7			26.080	22.080			2	Agree
G-85-006-131	102.90								101.0	91.0			54.880	49.547			3	Agree
G-85-006-132	100.20								94.3	84.3			16.876	15.192			3	Agree
G-85-006-133	87.16								60.9	50.9			3.320	2.939			2	Agree
G-85-006-134	72.74								67.7	57.7			14.548	12.548			2	Agree
G-85-006-135	82.36								75.5	65.5			11.980	10.525			2	Agree
G-85-006-136	140.60								138.7	128.7			74.987	69.653			3	Agree
G-85-006-137	238.90								-101.7	-111.7			0.701	0.672			3	Agree
G-85-006-138	73.43								70.6	60.6			26.108	22.553			3	Disagree
G-85-006-139	114.60								112.4	102.4			52.389	47.817			3	Agree
G-85-006-140	83.73								75.6	65.6			10.305	9.074			2	Agree
G-85-005-01	40.70								40.4	30.4			130.240	98.240			2	Disagree
G-85-005-02	119.60								118.7	108.7			127.573	116.907			3	Agree
G-85-005-03	104.90								104.0	94.0			111.893	101.227			3	Agree
G-85-005-04	126.60								125.7	115.7			135.040	124.373			3	Agree
G-85-005-05	37.95								36.1	26.1			20.240	14.907			2	Disagree
G-85-005-31	89.05								85.6	75.6			25.905	22.996			2	Agree
G-85-005-7541	39.08								26.3	16.3			3.050	2.270			2	Disagree
G-85-005-32	26.90								23.5	13.5			7.825	4.916			2	Disagree
G-85-005-06	49.69								-32.8	-42.8			0.602	0.481			2	Disagree
G-85-005-07	88.36								22.1	12.1			1.334	1.183			2	Agree
G-85-005-08	91.82								84.9	74.9			13.356	11.901			2	Agree
G-85-005-33	52.45								-190.7	-200.7			0.216	0.175			2	Agree
G-85-005-34	51.76								42.4	32.4			5.521	4.454			2	Agree
G-85-005-09	154.70								152.5	142.5			70.720	66.149			3	Agree
G-85-005-10	115.90								102.5	92.5			8.625	7.881			3	Agree
G-85-005-11	449.50								448.3	438.3			359.600	351.600			4	Disagree
G-85-005-12	112.60								-234.3	-244.3			0.325	0.296			3	Agree
G-85-005-13	90.44								11.1	1.1			1.139	1.013			3	Disagree
G-85-005-35	118.70								86.8	76.8			3.724	3.410			3	Agree
G-85-005-14	110.50								78.3	68.3			3.433	3.122			3	Agree
G-85-005-36	51.07								47.0	37.0			12.571	10.110			2	Agree
G-85-005-15	101.50								99.6	89.6			54.133	48.800			3	Agree
G-85-005-16	288.10								287.2	277.2			307.307	296.640			3	Agree
G-85-005-17	94.50								93.3	83.3			75.600	67.600			2	Agree
G-85-005-18	71.10								66.1	56.1			14.220	12.220			2	Agree
G-85-005-19	118.10								109.0	99.0			13.032	11.928			3	Agree
G-85-005-20	131.90								131.3	121.3			211.040	195.040			3	Agree
G-85-005-21	60.80								58.9	48.9			32.427	27.093			2	Agree
G-85-005-37	40.50								37.7	27.7			14.400	10.844			2	Disagree
G-85-005-22	58.40								56.8	46.8			37.376	30.976			2	Agree
G-85-005-7328	102.90								95.1	85.1			13.171	11.891			3	Agree

Project: Mount Klappan
Client: Rescan Environmental
Data: ABA Data
Comments: Rock units designated by Gulf.

Gulf samples taken from "Acid Generation Potential Mount Klappan Project Addendum to Stage 1 Studies", by Norecol Environmental Consultants, March 1986 and "Stage 1 Acid Generation Potential Studies for the Mount Klappan Project", by Norecol Environmental Consultants, March 1985.

Comparison

Sample Id.	NP (kg CaCO ₃ /t)	Total C (% Leco)	Inorganic CO ₂ (%)	Organic C (%)	Total CaNP (kg CaCO ₃ /t)	Inorganic CaNP (kg CaCO ₃ /t)	(Ca) CaNP (kg CaCO ₃ /t)	(Ca+Mg) CaNP (kg CaCO ₃ /t)	TNNP (kg CaCO ₃ /t)	Adjusted TNNP (kg CaCO ₃ /t)	SNNP (kg CaCO ₃ /t)	Adjusted SNNP (kg CaCO ₃ /t)	TNPR Calculated	Adjusted TNPR	SNPR Calculated	Adjusted SNPR	Fizz Rating Unity OA-VOL08	of Fizz Rating & NP
Method	OA-VOL08	C-IR07	C-GAS05	Calculated	Calculated	Calculated	Calculated	Calculated	Calculated	Calculated	Calculated	Calculated	Calculated		Calculated			
MDL	1	0.01	0.2															
G-85-005-23	108.00								105.2	95.2			38.400	34.844			3	Agree
G-85-005-24	114.60								114.0	104.0			183.360	167.360			3	Agree
G-85-005-25	113.90								112.7	102.7			91.120	83.120			3	Agree
G-85-005-26	41.40								40.2	30.2			33.120	25.120			2	Disagree
G-85-005-27	48.31								37.1	27.1			4.294	3.405			2	Disagree
G-85-005-28	140.80								139.9	129.9			150.187	139.520			3	Agree
G-85-005-29	168.60								167.7	157.7			179.840	169.173			3	Agree
G-85-005-30	238.90								232.0	222.0			34.749	33.295			4	Disagree
G-85-005-38	147.68								146.7	136.7			157.525	146.859			3	Agree
G-85-005-39	55.47								54.8	44.8			88.752	72.752			2	Agree
G-85-005-40	51.26								49.1	39.1			23.433	18.862			2	Agree
G-85-005-41	98.16								96.9	86.9			78.528	70.528			2	Agree
G-85-005-42	17.11								16.8	6.8			54.752	22.752			2	Disagree
G-85-005-47	66.71								54.5	44.5			5.474	4.653			2	Agree
G-85-005-48	27.41								-58.8	-68.8			0.318	0.202			1	Agree
G-85-005-43	98.16								96.9	86.9			78.528	70.528			3	Disagree
G-85-005-44	105.70								104.1	94.1			67.648	61.248			3	Agree
G-85-005-45	89.22								87.3	77.3			47.584	42.251			3	Disagree
G-85-005-46	100.30								99.4	89.4			106.987	96.320			3	Agree
G-85-004-7300	57.63								44.5	34.5			4.391	3.629			2	Agree
G-85-003-7287	37.02								-35.8	-45.8			0.508	0.371			1	Agree
G-85-002-7267	18.48								6.3	-3.7			1.516	0.696			1	Agree
G-85-001-7264	57.63								47.6	37.6			5.763	4.763			2	Agree
G-84-007-01	69.97								69.3	59.3			111.952	95.952			2	Agree
G-84-007-02	35.94								35.3	25.3			57.504	41.504			2	Disagree
G-84-007-89	29.23								20.5	10.5			3.341	2.198			2	Disagree
G-84-007-03	22.70								14.0	4.0			2.594	1.451			1	Agree
G-84-007-04	15.72								13.5	3.5			7.186	2.615			1	Agree
G-84-007-05	183.39								181.8	171.8			117.370	110.970			3	Agree
G-84-007-06	49.50								44.8	34.8			10.560	8.427			2	Disagree
G-84-007-07	31.26								30.9	20.9			100.032	68.032			2	Disagree
G-84-007-08	34.76								34.1	24.1			55.616	39.616			2	Disagree
G-84-007-85	78.02								67.7	57.7			7.566	6.596			2	Agree
G-84-007-10	68.19								-42.1	-52.1			0.618	0.528			2	Agree
G-84-007-11	29.93								29.6	19.6			95.776	63.776			2	Disagree
G-84-007-12	16.18								14.6	4.6			10.355	3.955			1	Agree
G-84-007-13	55.33								-102.8	-112.8			0.350	0.287			2	Agree
G-84-007-14	51.94								51.3	41.3			83.104	67.104			2	Agree
G-84-007-15	43.95								-136.1	-146.1			0.244	0.189			2	Disagree
G-84-007-16	36.95								36.0	26.0			39.413	28.747			2	Disagree
G-84-007-17	42.03								40.8	30.8			33.624	25.624			2	Disagree
G-84-007-18	37.30								32.6	22.6			7.957	5.824			2	Disagree
G-84-007-19	112.12								100.6	90.6			9.697	8.832			3	Agree
G-84-007-20	42.15								35.6	25.6			6.423	4.899			2	Disagree
G-84-007-21	74.39								73.5	63.5			79.349	68.683			2	Agree
G-84-007-22	23.66								23.0	13.0			37.856	21.856			1	Agree
G-84-007-23	35.28								35.0	25.0			112.896	80.896			2	Disagree
G-84-007-24	51.46								49.9	39.9			32.934	26.534			2	Agree

Project: Mount Klappan
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Data: ABA Data
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Gulf samples taken from "Acid Generation Potential Mount Klappan Project Addendum to Stage 1 Studies", by Norecol Environmental Consultants, March 1986 and "Stage 1 Acid Generation Potential Studies for the Mount Klappan Project", by Norecol Environmental Consultants, March 1985.

Sample Id.	NP (kg CaCO ₃ /t) OA-VOL08	Total C (% Lecco) C-IR07	Inorganic CO ₂ (%) C-GAS05	Organic C (%) Calculated	Total CaNP (kg CaCO ₃ /t) Calculated	Inorganic CaNP (kg CaCO ₃ /t) Calculated	(Ca) CaNP (kg CaCO ₃ /t) Calculated	(Ca+Mg) CaNP (kg CaCO ₃ /t) Calculated	TNNP (kg CaCO ₃ /t) Calculated	Adjusted TNNP (kg CaCO ₃ /t) Calculated	SNNP (kg CaCO ₃ /t) Calculated	Adjusted SNNP (kg CaCO ₃ /t) Calculated	TNPR Calculated	Adjusted TNPR	SNPR Calculated	Adjusted SNPR	Fizz Rating Unity OA-VOL08	Comparison	
																		of Fizz Rating & NP	
G-84-007-25	73.20								-19.9	-29.9			0.786	0.679				2	Agree
G-84-007-26	27.77								27.1	17.1			44.432	28.432				1	Agree
G-84-007-27	176.38								174.5	164.5			94.069	88.736				3	Agree
G-84-007-28	42.50								37.5	27.5			8.500	6.500				2	Disagree
G-84-007-29	51.69								43.6	33.6			6.362	5.131				2	Agree
G-84-007-30	58.94								56.1	46.1			20.956	17.401				2	Agree
G-84-007-31	50.98								49.1	39.1			27.189	21.856				2	Agree
G-84-007-32	44.38								41.3	31.3			14.202	11.002				2	Disagree
G-84-007-33	6.29								-346.8	-356.8			0.018	0.001				1	Agree
G-84-007-84	42.07								30.2	20.2			3.543	2.701				2	Disagree
G-84-007-34	33.80								31.6	21.6			15.451	10.880				2	Disagree
G-84-007-35	58.71								56.8	46.8			31.312	25.979				2	Agree
05-ARD4-09	132	3.24	7.5	1.20	270.0	170.6	52.4	121.2	130.4	120.4	130.4	120.4	84.480	78.080	84.480	78.080		3	Agree
05-ARD4-10	28	1.35	3.1	0.50	112.5	70.5	6.7	59.9	26.4	16.4	26.8	16.8	17.920	11.520	22.400	14.400		2	Disagree
05-ARD4-03	44	2.17	5.4	0.70	180.8	122.8	8.7	95.6	40.9	30.9	41.2	31.2	14.080	10.880	15.644	12.089		2	Disagree
05-ARD4-04	259	12.75	14.6	8.77	1062.6	332.0	89.7	244.9	252.4	242.4	253.4	243.4	39.467	37.943	46.044	44.267		3	Agree
05-ARD4-06	13	3.35	1.8	2.86	279.2	40.9	3.5	57.0	6.1	-3.9	7.7	-2.3	1.891	0.436	2.455	0.567		1	Agree
05-ARD4-05	32	1.42	4.1	0.30	118.3	93.2	5.2	62.9	30.8	20.8	31.4	21.4	25.600	17.600	51.200	35.200		2	Disagree
05-ARD4-07-1	26	1	2.8	0.24	83.3	63.7	5.5	51.6	24.8	14.8	25.1	15.1	20.800	12.800	27.733	17.067		2	Disagree
ARD4-2006A	19	2.36	3.9	1.30	196.7	88.7	5.7	66.7	17.1	7.1	17.4	7.4	10.133	4.800	12.160	5.760		1	Agree
05-ARD4-08	48	4.7	15.5	0.47	391.7	352.5	12.0	157.7	37.1	27.1	37.4	27.4	4.389	3.474	4.518	3.576		2	Disagree
ARD4-2006B	55	1.26	3.4	0.33	105.0	77.3	30.5	81.5	53.8	43.8	54.1	44.1	44.000	36.000	58.667	48.000		2	Agree
05-ARD4-02	7	4.01	0.4	3.90	334.2	9.1	2.7	27.9	-74.3	-84.3	-73.1	-83.1	0.086	0.001	0.087	0.001		1	Agree
ARD4-2006C	88	7.34	8.1	5.13	611.7	184.2	80.9	151.7	-233.9	-243.9	-230.7	-240.7	0.273	0.242	0.276	0.245		2	Agree
05-ARD4-01	44	6.99	3	6.17	582.5	68.2	25.5	62.9	-264.1	-274.1	-262.2	-272.2	0.143	0.110	0.144	0.111		2	Disagree
05-ARD3-01A	155	4.86	9.9	2.16	405.0	225.2	36.5	108.1	153.1	143.1	153.4	143.4	82.667	77.333	99.200	92.800		3	Agree
05-ARD3-02B	10	10	0.9	9.75	833.4	20.5	2.5	28.0	-252.5	-262.5	-252.1	-262.1	0.038	0.001	0.038	0.001		1	Agree
05-ARD3-16	36	0.94	2.5	0.26	78.3	56.9	17.7	54.0	34.1	24.1	35.1	25.1	19.200	13.867	38.400	27.733		2	Disagree
05-ARD3-03A	210	3.61	10.6	0.72	300.9	241.1	89.9	204.8	208.4	198.4	208.4	198.4	134.400	128.000	134.400	128.000		3	Agree
05-ARD3-04A	95	37.5	5.2	36.08	3125.2	118.3	47.4	104.3	75.3	65.3	75.9	65.9	4.825	4.317	4.984	4.459		3	Disagree
05-ARD3-05A	49	6.18	6.7	4.35	515.0	152.4	12.7	91.8	24.3	14.3	24.3	14.3	1.985	1.580	1.985	1.580		2	Disagree
05-ARD3-07A	113	2.39	7.4	0.37	199.2	168.3	14.7	58.8	110.8	100.8	110.8	100.8	51.657	47.086	51.657	47.086		3	Agree
05-ARD3-07B (HC)	58	2.12	5.2	0.70	176.7	118.3	23.2	83.7	55.5	45.5	56.1	46.1	23.200	19.200	30.933	25.600		2	Agree
ARD3-2006B	43	6.07	2.4	5.42	505.9	54.6	22.7	60.2	38.6	28.6	39.8	29.8	9.829	7.543	13.309	10.214		2	Disagree
ARD3-2006C	11	4.64	0.4	4.53	386.7	9.1	5.2	34.1	4.4	-5.6	5.3	-4.7	1.676	0.152	1.916	0.174		1	Agree
05-ARD3-06A	19	1.35	1.5	0.94	112.5	34.1	5.7	26.7	15.3	5.3	15.9	5.9	5.067	2.400	6.080	2.880		2	Disagree
05-ARD3-08A	18	19.1	0.3	19.02	1591.8	6.8	39.2	56.9	-317.9	-327.9	-315.3	-325.3	0.054	0.024	0.054	0.024		1	Agree
05-ARD3-08B (HC)	19	3.11	2.2	2.51	259.2	50.0	8.2	45.3	-24.1	-34.1	-24.1	-34.1	0.441	0.209	0.441	0.209		1	Agree
05-ARD3-09A	24	2.76	3.6	1.78	230.0	81.9	5.0	42.9	20.9	10.9	20.6	10.6	7.680	4.480	6.982	4.073		2	Disagree
ARD3-2006A	6	1.94	0.3	1.86	161.7	6.8	1.7	20.7	4.1	-5.9	4.1	-5.9	3.200	0.001	3.200	0.001		1	Agree
05-ARD3-10A	50	4.47	5.7	2.92	372.5	129.6	19.2	77.7	46.6	36.6	47.4	37.4	14.545	11.636	19.233	15.386		2	Agree
05-ARD3-15A	42	1.58	4	0.49	131.7	91.0	21.5	93.9	40.4	30.4	40.9	30.9	26.880	20.480	37.936	28.903		2	Disagree
05-ARD3-12A	59	1.56	4.2	0.41	130.0	95.5	32.0	104.4	57.4	47.4	57.8	47.8	37.760	31.360	47.200	39.200		2	Agree
05-ARD3-11A	58	2.05	4.9	0.71	170.8	111.4	30.2	91.6	54.9	44.9	56.1	46.1	18.560	15.360	30.933	25.600		2	Agree
05-ARD3-14A	48	39.8	2.9	39.01	3316.9	66.0	28.0	59.7	-156.4	-166.4	-155.1	-165.1	0.235	0.186	0.236	0.187		2	Disagree
05-ARD3-14B (HC)	50	38.3	2.8	37.54	3191.9	63.7	27.7	59.8	29.4	19.4	30.3	20.3	2.424	1.939	2.543	2.034		2	Agree
05-ARD3-13A	49	50	3.6	50	4166.9	81.9	3.0	4.6	36.2	26.2	36.2	26.2	3.824	3.044	3.824	3.044		2	Disagree
05-ARD2-04	11	0.65	0.2	0.60	54.2	4.5	6.5	51.8	10.7	0.7	10.7	0.7	35.200	3.200	35.200	3.200		1	Agree

Project: Mount Klappan
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Gulf samples taken from "Acid Generation Potential Mount Klappan Project Addendum to Stage 1 Studies", by Norecol Environmental Consultants, March 1986 and "Stage 1 Acid Generation Potential Studies for the Mount Klappan Project", by Norecol Environmental Consultants, March 1985.

Sample Id.																	Comparison	
	NP (kg CaCO ₃ /t) OA-VOL08	Total C (% Lecco) C-R07	Inorganic CO ₂ (%) C-GAS05	Organic C (%) Calculated	Total CaNP (kg CaCO ₃ /t) Calculated	Inorganic CaNP (kg CaCO ₃ /t) Calculated	(Ca) CaNP (kg CaCO ₃ /t) Calculated	(Ca+Mg) CaNP (kg CaCO ₃ /t) Calculated	TNNP (kg CaCO ₃ /t) Calculated	Adjusted TNNP (kg CaCO ₃ /t) Calculated	SNNP (kg CaCO ₃ /t) Calculated	Adjusted SNNP (kg CaCO ₃ /t) Calculated	TNPR Calculated	Adjusted TNPR	SNPR Calculated	Adjusted SNPR	Fizz Rating Unity OA-VOL08	of Fizz Rating & NP
MDL	1	0.01	0.2															
05-ARD2-08	116	3.03	6.2	1.34	252.5	141.0	30.2	112.6	109.8	99.8	111.0	101.0	18.560	16.960	23.245	21.241	3	Agree
05-ARD2-07	54	2.58	6	0.94	215.0	136.5	20.2	88.6	44.9	34.9	46.2	36.2	5.959	4.855	6.914	5.634	2	Agree
05-ARD2-07 (HC)	62	2.63	5.8	1.05	219.2	131.9	31.0	110.8	52.9	42.9	53.9	43.9	6.841	5.738	7.631	6.400	2	Agree
05-ARD2-13	116	26.1	5.1	24.71	2175.1	116.0	61.4	101.4	-385.6	-395.6	-383.4	-393.4	0.231	0.211	0.232	0.212	3	Agree
05-ARD2-12	170	17.2	8.2	14.96	1433.4	186.5	100.9	181.6	-381.6	-391.6	-379.0	-389.0	0.308	0.290	0.310	0.291	3	Agree
05-ARD2-12 (HC)	165	36.4	7.8	34.27	3033.5	177.4	106.6	183.2	-101.6	-111.6	-101.3	-111.3	0.619	0.581	0.620	0.582	3	Agree
05-ARD2-16	41	35.2	3.3	34.30	2933.5	75.1	16.2	63.2	32.3	22.3	31.6	21.6	4.686	3.543	4.373	3.307	2	Disagree
05-ARD2-11	7	4.6	0.1	4.57	383.4	2.3	3.0	33.9	5.1	-4.9	5.4	-4.6	3.733	0.001	4.480	0.001	1	Agree
05-ARD2-09	46	1.92	3.9	0.86	160.0	88.7	15.7	76.7	45.1	35.1	45.1	35.1	49.067	38.400	49.067	38.400	2	Disagree
05-ARD2-02	150	3.17	7.6	1.10	264.2	172.8	50.2	153.5	148.4	138.4	149.1	139.1	96.000	89.600	160.000	149.333	3	Agree
05-ARD2-10A	160	18.7	10	15.97	1558.4	227.4	67.4	146.5	120.9	110.9	121.3	111.3	4.096	3.840	4.129	3.871	3	Agree
05-ARD2-14	101	1.87	6	0.23	155.8	136.5	38.0	93.1	99.1	89.1	99.7	53.867	48.533	76.661	69.070	3	Agree	
05-ARD2-06	60	4.25	12.5	0.84	354.2	284.3	33.7	122.2	58.1	48.1	58.8	48.8	32.000	26.667	48.000	40.000	2	Agree
05-ARD2-01A	217	9.26	12.4	5.88	771.7	282.0	59.7	174.1	215.1	205.1	215.1	205.1	115.733	110.400	115.733	110.400	3	Agree
05-ARD2-15	137	3.22	8	1.04	268.4	181.9	24.0	97.3	135.1	125.1	135.1	125.1	73.067	67.733	73.067	67.733	3	Agree
05-ARD2-05	64	2.25	4.7	0.97	187.5	106.9	38.5	73.5	59.9	49.9	60.3	50.3	15.754	13.292	17.495	14.761	2	Agree
ARD2-2006A	79	25.9	5.3	24.45	2158.5	120.5	54.7	114.0	53.1	43.1	54.2	44.2	3.046	2.660	3.191	2.787	2	Agree
ARD2-2006B	19	2.53	4.6	1.28	210.8	104.6	6.7	79.2	16.2	6.2	17.1	7.1	6.756	3.200	10.133	4.800	1	Agree
05-ARD2-03	118	1.9	5.6	0.37	158.3	127.4	57.7	117.0	116.1	106.1	116.4	106.4	62.933	57.600	75.520	69.120	3	Agree
05-ARD1-11	40	5.0	1.9	5.0	4166.9	43.2	2.7	4.4	22.5	12.5	22.5	12.5	2.286	1.714	2.286	1.714	2	Disagree
05-ARD1-15	317	4.31	15.1	0.19	359.2	343.4	163.6	311.8	315.4	305.4	316.1	306.1	202.880	196.480	340.114	329.385	4	Disagree
05-ARD1-15 (HC)	267	3.84	12.9	0.32	320.0	293.4	137.3	262.9	265.1	255.1	265.8	255.8	142.400	137.067	213.600	205.600	3	Agree
05-ARD1-13	46	2.51	6	0.87	209.2	136.5	8.5	102.8	44.4	34.4	44.8	34.8	29.440	23.040	36.800	28.800	2	Disagree
05-ARD1-14	51	2.87	5.6	1.34	239.2	127.4	16.2	129.0	47.9	37.9	49.1	39.1	16.320	13.120	27.200	21.867	2	Agree
05-ARD1-12	101	2.46	5.3	1.01	205.0	120.5	18.0	103.2	99.8	89.8	100.4	90.4	80.800	72.800	161.600	145.600	3	Agree
05-ARD1-08	107	5.02	4.5	3.79	418.4	102.3	27.5	124.2	105.1	95.1	105.4	95.4	57.067	51.733	68.480	62.080	3	Agree
05-ARD1-03	6	1.24	0.2	1.19	103.3	4.5	3.5	31.9	4.4	-5.6	4.8	-5.3	3.840	0.001	4.800	0.001	1	Agree
05-ARD1-01	43	4.08	9.9	1.38	340.0	225.2	12.2	114.3	41.4	31.4	41.4	31.4	27.520	21.120	27.520	21.120	2	Disagree
05-ARD1-02	23	1.4	1.8	0.91	116.7	40.9	8.7	47.4	20.5	10.5	21.1	11.1	9.200	5.200	12.267	6.933	2	Disagree
05-ARD1-07	8	2.19	0.3	2.11	182.5	6.8	3.2	25.9	1.1	-8.9	2.2	-7.8	1.164	0.001	1.370	0.001	1	Agree
05-ARD1-07 (HC)	17	1.97	1.9	1.45	164.2	43.2	5.5	42.1	7.6	-2.4	8.6	-1.4	1.813	0.747	2.015	0.830	1	Agree
05-ARD1-07-2	49	1.37	3.3	0.47	114.2	75.1	25.0	77.7	48.1	38.1	48.4	38.4	52.267	41.600	78.400	62.400	2	Disagree
05-ARD1-06	14	3.67	2.2	3.07	305.9	50.0	4.5	42.8	-8.2	-18.2	-7.3	-17.3	0.631	0.180	0.659	0.188	1	Agree
05-ARD1-06 (HC)	18	2.71	0.7	2.52	225.8	15.9	7.7	44.8	1.4	-8.6	1.8	-8.3	1.087	0.483	1.108	0.492	1	Agree
ARD1-2006A	12	4.21	1.3	3.86	350.9	29.6	5.0	34.2	-43.6	-53.6	-41.5	-51.5	0.216	0.036	0.224	0.037	1	Agree
05-ARD1-09	14	3.6	0.9	3.35	300.0	20.5	8.5	31.5	-371.9	-381.9	-371.3	-381.3	0.036	0.010	0.036	0.010	1	Agree
05-ARD1-10	137	3.03	8.1	0.82	252.5	184.2	36.5	123.7	127.3	117.3	128.1	118.1	14.142	13.110	15.367	14.245	3	Agree
05-ARD1-04	39	2.42	4.9	1.08	201.7	111.4	10.7	89.0	36.5	26.5	36.8	26.8	15.600	11.600	17.829	13.257	2	Disagree
05-ARD1-05	23	1.2	1.5	0.79	100.0	34.1	9.2	54.9	20.8	10.8	21.1	11.1	10.514	5.943	12.267	6.933	2	Disagree
05-019-08	35	2.84	5.6	1.31	236.7	127.4	6.5	52.2	33.1	23.1	33.8	23.8	18.667	13.333	28.000	20.000	2	Disagree
05-019-03	41	2.43	5.3	0.98	202.5	120.5	15.7	66.8	38.8	28.8	39.4	29.4	18.743	14.171	26.240	19.840	2	Disagree
05-019-01	15	15.55	2.6	14.84	1295.9	59.1	3.7	38.3	11.3	1.3	11.6	1.6	4.000	1.333	4.364	1.455	1	Agree
05-019-13	33	2.65	4.2	1.50	220.8	95.5	8.2	51.9	30.2	20.2	30.8	20.8	11.733	8.178	15.086	10.514	2	Disagree
05-019-2006A	52	2.56	4.7	1.28	213.3	106.9	31.7	90.6	49.5	39.5	49.8	39.8	20.800	16.800	23.771	19.200	2	Agree
05-019-16	44	3.03	5.1	1.64	252.5	116.0	15.7	80.0	33.1	23.1	34.4	24.4	4.023	3.109	4.578	3.537	2	Disagree
05-019-14	65	5.0	3.9	5.0	4166.9	88.7	7.5	12.4	-81.3	-91.3	-80.3	-90.3	0.444	0.376	0.447	0.379	2	Agree
05-019-15	9	16.3	0.2	16.25	1358.4	4.5	3.0	43.3	-0.4	-10.4	0.6	-9.4	0.960	0.001	1.067	0.001	1	Agree
05-019-10	51	1.4	3.9	0.34	116.7	88.7	28.0	80.7	50.4	40.4	50.4	40.4	81.600	65.600	81.600	65.600	2	Agree

Project:
Client:
Data:
Comments:

Mount Klappan
 Rescan Environmental
ABA Data

Rock units designated by Gulf.

Gulf samples taken from "Acid Generation Potential Mount Klappan Project Addendum to Stage 1 Studies", by Norecol Environmental Consultants, March 1986 and "Stage 1 Acid Generation Potential Studies for the Mount Klappan Project", by Norecol Environmental Consultants, March 1985.

Comparison

Sample Id.	NP (kg CaCO ₃ /t) OA-VOL08	Total C (% Lecco) C-R07	Inorganic CO ₂ (%) C-GAS05	Organic C (%) Calculated	Total CaNP (kg CaCO ₃ /t) Calculated	Inorganic CaNP (kg CaCO ₃ /t) Calculated	(Ca) CaNP (kg CaCO ₃ /t) Calculated	(Ca+Mg) CaNP (kg CaCO ₃ /t) Calculated	TNNP (kg CaCO ₃ /t) Calculated	Adjusted TNNP (kg CaCO ₃ /t) Calculated	SNNP (kg CaCO ₃ /t) Calculated	Adjusted SNNP (kg CaCO ₃ /t) Calculated	TNPR Calculated	Adjusted TNPR Calculated	SNPR Calculated	Adjusted SNPR Calculated	Fizz Rating Unity OA-VOL08	of Fizz Rating & NP
Method MDL	1	0.01	0.2															
05-019-11	116	2.28	7	0.37	190.0	159.2	38.0	94.8	113.8	103.8	114.4	104.4	53.029	48.457	74.240	67.840	3	Agree
05-019-09	422	5.81	20.6	0.19	484.2	468.5	227.3	392.8	421.4	411.4	421.4	411.4	675.200	659.200	675.200	659.200	4	Disagree
05-019-07	94	1.53	4.7	0.25	127.5	106.9	41.0	88.3	93.1	83.1	93.1	83.1	100.267	89.600	100.267	89.600	3	Disagree
05-019-06	51	2.62	5.6	1.09	218.3	127.4	24.5	88.7	39.8	29.8	41.1	31.1	4.533	3.644	5.135	4.128	2	Agree
05-019-05	463	6.43	22.1	0.40	535.9	502.6	236.5	427.5	455.5	445.5	456.3	446.3	61.733	60.400	68.731	67.247	4	Disagree
05-019-04	129	2.48	6.8	0.63	206.7	154.6	42.2	117.1	126.2	116.2	126.8	116.8	45.867	42.311	58.971	54.400	3	Agree
05-019-02	130	2.56	6.2	0.87	213.3	141.0	44.2	118.7	75.0	65.0	75.5	65.5	2.364	2.182	2.386	2.203	3	Agree
05-019-02 (HC)	50	3.06	3.1	2.21	255.0	70.5	25.5	90.5	11.3	1.3	12.3	2.3	1.290	1.032	1.327	1.062	2	Agree
05-019-12	55	1.61	4.8	0.30	134.2	109.2	29.5	92.0	53.8	43.8	54.1	44.1	44.000	36.000	58.667	48.000	2	Agree
05-006-08	744	11.55	33.6	2.39	962.6	764.1	360.9	749.9	743.7	733.7	743.7	733.7	2380.800	2348.800	2380.800	2348.800	4	Agree
05-006-09	181	3.07	10.1	0.32	255.9	229.7	74.2	159.4	180.4	170.4	180.4	170.4	289.600	273.600	289.600	273.600	3	Agree
05-006-11	18	23.5	2.4	22.85	1958.5	54.6	5.2	48.1	10.2	0.2	10.8	0.8	2.304	1.024	2.504	1.113	1	Agree
05-006-13	21	16.55	2.8	15.79	1379.3	63.7	8.5	50.1	16.0	6.0	16.0	6.0	4.200	2.200	4.200	2.200	1	Agree
05-006-10	69	34.7	5.2	33.28	2891.9	118.3	48.7	96.5	-25.1	-35.1	-23.7	-33.7	0.734	0.627	0.745	0.637	2	Agree
05-006-12	8	11.15	0.5	11.01	929.2	11.4	2.7	27.5	-2.9	-12.9	-2.0	-12.0	0.731	0.001	0.800	0.001	1	Agree
05-006-01	12	1.32	1.4	0.94	110.0	31.8	4.5	28.4	11.1	1.1	11.1	1.1	12.800	2.133	12.800	2.133	1	Agree
05-006-04	60	2.49	6.1	0.83	207.5	138.7	30.7	87.5	56.9	46.9	57.8	47.8	19.200	16.000	27.187	22.655	2	Agree
05-006-03	57	2.86	9.8	0.19	238.3	222.9	27.5	94.2	55.4	45.4	56.1	46.1	36.480	30.080	60.800	50.133	2	Agree
05-006-02	71	2.29	6.4	0.54	190.8	145.6	42.2	99.8	69.4	59.4	69.8	59.8	45.440	39.040	56.800	48.800	2	Agree
05-006-07	73	23.4	4.4	22.20	1950.1	100.1	56.7	112.3	67.4	57.4	67.4	57.4	12.978	11.200	12.978	11.200	2	Agree
05-006-06	159	2.67	8.1	0.46	222.5	184.2	74.7	152.1	154.6	144.6	155.6	145.6	36.343	34.057	46.255	43.345	3	Agree
05-006-05	44	1.81	4.3	0.64	150.8	97.8	22.0	70.6	43.1	33.1	43.1	33.1	46.933	36.267	46.933	36.267	2	Disagree
DUMP 2.5M	12	25	0.4	24.89	2083.5	9.1	7.0	33.3	7.0	-3.0	7.6	-2.4	2.400	0.400	2.743	0.457	1	Agree
DUMP-2.5M (HC)	10	27.5	0.4	27.39	2291.8	9.1	5.7	29.2	4.4	-5.6	4.7	-5.3	1.778	0.001	1.882	0.001	1	Agree
DUMP SURFACE	12	29.5	0.6	29.34	2458.5	13.6	7.5	34.7	5.8	-4.3	6.4	-3.6	1.920	0.320	2.133	0.356	1	Agree
TAILINGS-1	6	50	0.1	50	4166.9	2.3			-6.2	-16.2	-5.9	-15.9	0.492	0.001	0.505	0.001	1	Agree
TAILINGS-2	4	50	0.1	50	4166.9	2.3			-8.2	-18.2	-7.6	-17.6	0.328	0.001	0.346	0.001	1	Agree

Project:
Client:
Data:
Comments:

Mount Klappan
 Rescan Environmental
ABA Data

Rock units designated by Gulf.

Gulf samples taken from "Acid Generation Potential Mount Klappan Project Addendum to Stage 1 Studies", by Norecol Environmental Consultants, March 1986 and "Stage 1 Acid Generation Potential Studies for the Mount Klappan Project", by Norecol Environmental Consultants, March 1985.

Comparison

Sample Id.	NP (kg CaCO ₃ /t) OA-VOL08	Total C (% Lecco) C-IR07	Inorganic CO ₂ (%) C-GAS05	Organic C (%) Calculated	Total CaNP (kg CaCO ₃ /t) Calculated	Inorganic CaNP (kg CaCO ₃ /t) Calculated	(Ca) CaNP (kg CaCO ₃ /t) Calculated	(Ca+Mg) CaNP (kg CaCO ₃ /t) Calculated	TNNP (kg CaCO ₃ /t) Calculated	Adjusted TNNP (kg CaCO ₃ /t) Calculated	SNNP (kg CaCO ₃ /t) Calculated	Adjusted SNNP (kg CaCO ₃ /t) Calculated	TNPR Calculated	Adjusted TNPR Calculated	SNPR Calculated	Adjusted SNPR Calculated	Fizz Rating Unity OA-VOL08	of Fizz Rating & NP
Method MDL	1	0.01	0.2															
Maximum	744	50	33.6	50	4167	764	371	750	744	734	744	734	2381	2349	2381	2349	4	
Minimum	-3	0.47	0.1	0.07	39.2	2.27	1	4.39	-798	-808	-786	-796	0.001	0.001	0.001	0.001	1	
Mean	84	8.41	5.81	6.85	701	132	39.1	108	53.9	43.9	49	39	53.5	48.6	64.8	59.8	2.12	
Standard Deviation	90.2	12.3	5.45	12.6	1023	124	56.2	98.9	131	131	160	160	165	162	207	204	0.74	
10 Percentile	15	1.43	0.5	0.34	119	11.4	3.77	31.6	-15.9	-25.9	-23.8	-33.8	0.66	0.19	0.46	0.001	1	
25 Percentile	34.3	2.28	2.23	0.72	190	50.6	8.18	52.1	18.4	8.38	10.7	0.72	3.9	2.51	2.51	1.07	2	
Median	58	3.09	4.8	1.3	258	109	23.3	90.6	47.9	37.9	39.8	29.8	14.5	11.6	13.7	10.4	2	
75 Percentile	105	6.4	7	4.5	534	159	42.5	117	94.9	84.9	89.5	79.5	50.5	41.7	50.7	42.6	3	
90 Percentile	159	25.6	12.5	24.6	2136	284	80.7	183	151	141	169	159	112	96.2	129	123	3	
Interquartile Range (IQR) ¹	70.3	4.12	4.78	3.77	343	109	34.3	65.2	76.5	76.5	78.8	78.8	46.6	39.2	48.2	41.6	1	
Variance	8140	151	29.7	159	1047299	15365	3155	9784	17260	17260	25467	25467	27320	26335	42689	41427	0.55	
Skewness	3.52	2.34	2.24	2.4	2.34	2.24	3.48	3.46	-0.62	-0.62	-0.45	-0.45	10.5	10.6	8.75	8.83	0.13	
Coefficient of Variation (CoV) ²	1.07	1.46	0.94	1.84	1.46	0.94	1.44	0.92	2.44	2.99	3.26	4.1	3.09	3.34	3.19	3.4	0.35	
Count	315	174	174	174	174	174	172	172	315	315	174	174	315	315	174	174	315	
Total																		
NPR < 1.0 or NPR = 1.0													38	57	24	43		
1.0 < NPR < 2.0													16	15	10	8		
NPR > 2.0 or NPR =2.0													261	243	140	123		
% NPR < 1.0 or NPR = 1.0 of Total													12.06	18.10	13.79	24.71		
% 1.0 < NPR < 2.0 of Total													5.08	4.76	5.75	4.60		
% NPR > 2.0 or NPR =2.0 of Total													82.86	77.14	80.46	70.69		

¹ Interquartile Range (IQR) = 75th percentile minus 25th percentile

² Coefficient of Variation (CoV) = standard deviation divided by mean

NOTE: If data was reported as < detection limit half the detection limit is shown in italics and was used in subsequent calculations.

NOTE: If data was reported as > detection limit the detection limit is shown in bold and was used in subsequent calculations.

Total CaNP = % C * 10 * 100.09 / 12.01

Inorganic CaNP = % CO₂ * 10 * 100.09 / 44.01

(Ca) CaNP = (Ca(ppm) * 100.09 / 40.08) / 1000

(Ca+Mg) CaNP = ((Ca(ppm) * 100.09 / 40.08) + (Mg(ppm) * 100.09 / 24.31)) / 1000

TNNP = NP - TAP

Adjusted TNNP = (NP - 10) - TAP

SNNP = NP - SAP

Adjusted SNNP = (NP - 10) - SAP

TNPR = NP / TAP

Note: If % S(Total) < 0.01 then TNPR = 200

Note: If % S(Total) > 0.01 and NP <= 0 then TNPR = 0.001

Adjusted TNPR = (NP-10) / TAP

Note: If % S(Total) < 0.01 then Adjusted TNPR = 200

Note: If % S(Total) > 0.01 and (NP - 10) <= 0 then Adjusted TNPR = 0.001

SNPR = NP / SAP

Note: If % S(Sulphide + del) < 0.01 then SNPR = 200

Note: If % S(Sulphide + del) > 0.01 and NP <= 0 then SNPR = 0.001

Adjusted SNPR = (NP-10) / SAP

Note: If % S(Sulphide + del) < 0.01 then Adjusted SNPR = 200

Note: If % S(Sulphide + del) > 0.01 and (NP - 10) <= 0 then Adjusted SNPR = 0.001

Project:

Mount Klappan

Client: Rescan Environmental

Data: ICP Metals Data

Comments: Rock units designated by Gulf.

Ba, Cr, Sn, Ta, Ti, W, and Zr may not be totally soluble in the 4-acid digestion MS61 method.

The ICP metals for samples 04-Sr-02, 86-035-01, and 86-035-10 were done by aqua regia digestion instead of 4-acid digestion.

Al, B, Ba, Be, Ca, Ce, Cr, Cs, Ga, Ge, Hf, In, K, La, Li, Mg, Na, Nb, Rb, Re, S, Sb, Sc, Sn, Sr, Ta, Te, Th, Ti, W, Y, and Zr may not be totally soluble in the aqua regia digestion MS41 method.

Sample Id.	Silver Ag (ppm)	Aluminum Al (ppm)	Arsenic As (ppm)	Boron B (ppm)	Barium Ba (ppm)	Beryllium Be (ppm)	Bismuth Bi (ppm)	Calcium Ca (ppm)	Cadmium Cd (ppm)	Cerium Ce (ppm)	Cobalt Co (ppm)	Chromium Cr (ppm)	Cesium Cs (ppm)	Copper Cu (ppm)	Iron Fe (ppm)	Gallium Ga (ppm)	Germanium Ge (ppm)
Method	ME-MS61	ME-MS61	ME-MS61	ME-MS41	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
MDL	0.01	100	0.2	10	10	0.05	0.01	100	0.02	0.01	0.1	1	0.05	0.2	100	0.05	0.05
Crustal Abundance: From	0.037	4200	1		0.4	1	0.007	5100	0.035	11.5	0.1	2	0.4	4	3800	4	0.2
Crustal Abundance: To	0.11	88000	13		2300	3	0.01	312400	0.42	345	74	170	6	250	86500	30	8
04-SR-01	0.11	66900	2		730	1.01	0.1	11300	0.43	31.8	20.4	59	3.07	35.8	113000	14.95	0.15
04-SR-02	0.02	2900	2	10	280	0.14	0.04	11400	0.05	2.54	2.1	2	0.36	9.6	32400	0.81	0.09
04-SR-03	0.13	41400	2.4		600	0.79	0.09	21600	0.36	20.8	10.1	153	1.22	29.8	23700	9.91	0.05
04-SR-04	0.18	39400	3.9		670	0.91	0.11	4500	0.64	31.1	18.8	85	2.19	55.8	113000	10.05	0.12
04-SR-05	0.16	52600	6.7		820	0.91	0.11	47900	0.49	24.7	13.8	181	1.95	49.1	40900	11.5	0.07
86-035-01	0.17	3800	12	10	70	0.18	0.16	6000	0.14	1.63	14.2	3	0.68	29.5	22100	1.07	0.05
86-035-02	0.1	76800	3.7		760	1.2	0.12	13200	0.34	31.7	21.5	201	3.41	50.1	53400	16.4	0.08
86-035-03	0.09	71300	3.5		620	1.04	0.12	12300	0.3	32.2	8.2	115	2.71	49.6	75000	16.05	0.1
86-035-04	1.66	12200	405		40	0.19	0.07	43800	0.37	12.2	54.7	40	0.73	45.8	251000	2.96	0.5
86-035-13	0.14	89000	4.3		840	1.17	0.16	15200	0.56	31	32	144	3.74	67.3	38400	19.85	0.15
86-035-05	0.17	92600	6.7		920	1.48	0.19	14400	0.56	36.1	23.2	129	4.42	71	45600	21.2	0.09
86-035-10	0.1	6900	3.3	10	420	0.35	0.05	26900	0.11	2.51	4.1	6	0.53	31.1	9900	1.63	0.06
86-035-06	0.07	8100	5		100	0.11	0.04	148500	0.19	4.35	4.7	15	0.21	9.6	50900	1.76	0.06
86-035-07	0.19	71900	15.8		1300	1.64	0.15	4000	0.75	40.5	16.2	193	3.15	64.6	27100	17.5	0.07
86-035-07 (HC)	0.17	52000	6.4		580	0.98	0.17	7500	0.42	26.3	14.1	218	2.09	47.7	56000	12.2	0.08
86-035-08	0.2	55600	2.6		700	1.38	0.12	3300	0.54	31.3	17.3	173	2.74	58.6	92500	13.45	0.12
86-035-12	0.04	43700	0.5		510	0.79	0.07	24800	0.09	28.4	4.6	55	1.82	22.7	150000	9.72	0.25
86-035-11	0.08	85900	4.2		740	1.42	0.07	3400	0.26	39.9	9.7	113	2.41	16.3	21100	18.4	0.05
86-035-09	0.16	74000	13.8		350	0.94	0.05	16900	0.13	30.6	29.8	220	3.15	17.3	33500	15.35	0.06
86-035-09 (HC)	0.11	79500	4.6		800	1.04	0.15	15600	0.09	27.1	14.8	229	3.54	17.4	41300	15.65	0.08
85-027-01	0.19	58800	1.8		820	1.36	0.16	3300	0.73	35.5	15.4	179	2.77	69.4	46100	14.9	0.09
85-027-02	0.22	69900	15.6		1160	1.58	0.2	5400	0.16	36.9	14	98	4.51	56.9	58000	17.25	0.11
85-027-02 (HC)	0.26	81200	12.3		1420	1.49	0.24	3200	0.19	37.1	14.3	114	4.94	74.5	43100	19.65	0.09
85-027-03	0.12	65600	41.2		200	1.18	0.07	16000	0.15	42.6	17	114	2.62	20.4	37600	14.7	0.09
85-027-04	0.28	65300	6.2		870	1.44	0.16	17500	0.72	39.9	46.9	160	3.61	68.2	43400	15.7	0.09
85-027-27	0.07	76600	1.9		780	1.1	0.07	17400	0.22	26.7	14.6	222	2	36.1	38900	15.6	0.06
85-027-05	0.04	79400	4.7		800	1.24	0.07	26300	0.3	26.8	14.6	316	2.06	39.8	27000	17.95	0.07
85-027-06	0.22	73400	11.3		1220	1.53	0.18	7000	0.79	38.8	29.9	153	4.03	82.3	41300	18.85	0.09
85-027-25	0.12	79900	3		860	1.18	0.14	9400	0.45	36	16.9	163	2.92	59.6	51300	17.4	0.1
85-027-21	0.05	19600	1.6		150	0.18	0.04	88000	0.22	5.67	6.9	41	0.36	18	49200	4.04	0.08
85-027-07	0.08	57100	1		760	1.13	0.13	14200	0.27	36.4	12.9	89	2.99	41	90800	12.8	0.15
85-027-08	0.06	35200	1.8		220	0.32	0.06	93900	0.17	12.2	4.6	19	0.74	22.6	51700	6.04	0.07
85-027-09	0.17	87700	5.7		990	1.27	0.18	13000	0.49	38.4	21.7	159	3.93	72.5	54600	20.2	0.13
85-027-10	0.15	84900	2.6		940	1.45	0.18	20600	0.59	36	22.5	153	4.22	73.8	43400	19.55	0.13
85-027-11	0.18	77300	11.6		820	1.05	0.09	16900	0.42	30.4	17.5	197	3.2	39.5	35600	16.15	0.1
85-027-20	0.1	35600	5.6		450	0.63	0.06	25600	0.24	18.25	12.2	63	1.64	24.4	163000	7.76	0.25
85-027-12	0.35	68100	30.8		780	0.91	0.12	15500	0.54	31.5	38.1	107	3.01	56.3	36300	15.1	0.11
85-027-13	0.27	92000	7.5		1550	1.4	0.18	1500	0.48	38.1	42.7	137	4.78	70.9	27800	20.4	0.16
85-027-23	0.27	66400	10.7		1000	1.27	0.14	25100	0.95	36	24.5	211	2.67	67.8	33000	15.75	0.09
85-027-14	1.16	53700	183		190	0.5	0.05	1800	0.33	7.91	95.5	3	1.54	136	233000	12	0.89
85-027-28	0.69	31300	92.4		150	0.59	0.08	57200	0.22	18.35	20	55	2.36	35.2	104000	8.65	0.16
85-027-15	0.23	60900	4.2		1200	1.44	0.19	4400	0.62	35.7	18.3	127	3	67.5	64700	15.3	0.24
85-027-16	0.13	86600	1		1310	1.95	0.13	1200	0.49	37.4	7.1	141	5.29	83.4	20200	21	0.16
85-027-17	0.21	25400	5.1		310	0.49	0.09	5900	0.19	14.9	6.9	71	0.68	27.6	10100	6.13	0.07
85-027-17 (HC)	0.2	25000	7.3		300	0.45	0.12	10200	0.18	15	8.6	38	0.71	33.4	11400	5.91	0.025
85-027-24	0.17	64800	2.8		640	1.19	0.09	4100	0.85	30.1	18.4	315	2.27	54.5	26800	15.45	0.07
85-027-24 (HC)	0.12	47900	4.3		460	0.84	0.09	32500	0.3	21.5	13.7	215	1.5	35.3	26500	10.15	0.07
85-027-18	0.27	94600	14.4		260	1.39	0.2	1300	0.13	35.8	23.7	120	4.62	60.9	35400	21.2	0.16

Project:

Client:

Data:

Comments:

Mount Klappan

Rescan Environmental

ICP Metals Data

Rock units designated by Gulf.

Ba, Cr, Sn, Ta, Ti, W, and Zr may not be totally soluble in the 4-acid digestion MS61 method.

The ICP metals for samples 04-Sr-02, 86-035-01, and 86-035-10 were done by aqua regia digestion instead of 4-acid digestion.

Al, B, Ba, Be, Ca, Ce, Cr, Cs, Ga, Ge, Hf, In, K, La, Li, Mg, Na, Nb, Rb, Re, S, Sb, Sc, Sn, Sr, Ta, Te, Th, Ti, Tl, W, Y, and Zr may not be totally soluble in the aqua regia digestion MS41 method.

Sample Id.	Silver Ag (ppm)	Aluminum Al (ppm)	Arsenic As (ppm)	Boron B (ppm)	Barium Ba (ppm)	Beryllium Be (ppm)	Bismuth Bi (ppm)	Calcium Ca (ppm)	Cadmium Cd (ppm)	Cerium Ce (ppm)	Cobalt Co (ppm)	Chromium Cr (ppm)	Cesium Cs (ppm)	Copper Cu (ppm)	Iron Fe (ppm)	Gallium Ga (ppm)	Germanium Ge (ppm)
Method	ME-MS61	ME-MS61	ME-MS61	ME-MS41	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
MDL	0.01	100	0.2	10	10	0.05	0.01	100	0.02	0.01	0.1	1	0.05	0.2	100	0.05	0.05
Crustal Abundance: From	0.037	4200	1		0.4	1	0.007	5100	0.035	11.5	0.1	2	0.4	4	3800	4	0.2
Crustal Abundance: To	0.11	88000	13		2300	3	0.01	312400	0.42	345	74	170	6	250	86500	30	8

- G-85-006-125
- G-85-006-126
- G-85-006-127
- G-85-006-145
- G-85-006-128
- G-85-006-129
- G-85-006-130
- G-85-006-131
- G-85-006-132
- G-85-006-133
- G-85-006-134
- G-85-006-135
- G-85-006-136
- G-85-006-137
- G-85-006-138
- G-85-006-139
- G-85-006-140
- G-85-005-01
- G-85-005-02
- G-85-005-03
- G-85-005-04
- G-85-005-05
- G-85-005-31
- G-85-005-7541
- G-85-005-32
- G-85-005-06
- G-85-005-07
- G-85-005-08
- G-85-005-33
- G-85-005-34
- G-85-005-09
- G-85-005-10
- G-85-005-11
- G-85-005-12
- G-85-005-13
- G-85-005-35
- G-85-005-14
- G-85-005-36
- G-85-005-15
- G-85-005-16
- G-85-005-17
- G-85-005-18
- G-85-005-19
- G-85-005-20
- G-85-005-21
- G-85-005-37
- G-85-005-22
- G-85-005-7328

Project:

Client:

Data:

Comments:

Mount Klappan

Rescan Environmental

ICP Metals Data

Rock units designated by Gulf.

Ba, Cr, Sn, Ta, Ti, W, and Zr may not be totally soluble in the 4-acid digestion MS61 method.

The ICP metals for samples 04-Sr-02, 86-035-01, and 86-035-10 were done by aqua regia digestion instead of 4-acid digestion.

Al, B, Ba, Be, Ca, Ce, Cr, Cs, Ga, Ge, Hf, In, K, La, Li, Mg, Na, Nb, Rb, Re, S, Sb, Sc, Sn, Sr, Ta, Te, Th, Ti, W, Y, and Zr may not be totally soluble in the aqua regia digestion MS41 method.

Sample Id.	Silver Ag (ppm)	Aluminum Al (ppm)	Arsenic As (ppm)	Boron B (ppm)	Barium Ba (ppm)	Beryllium Be (ppm)	Bismuth Bi (ppm)	Calcium Ca (ppm)	Cadmium Cd (ppm)	Cerium Ce (ppm)	Cobalt Co (ppm)	Chromium Cr (ppm)	Cesium Cs (ppm)	Copper Cu (ppm)	Iron Fe (ppm)	Gallium Ga (ppm)	Germanium Ge (ppm)
Method	ME-MS61	ME-MS61	ME-MS61	ME-MS41	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
MDL	0.01	100	0.2	10	10	0.05	0.01	100	0.02	0.01	0.1	1	0.05	0.2	100	0.05	0.05
Crustal Abundance: From	0.037	4200	1		0.4	1	0.007	5100	0.035	11.5	0.1	2	0.4	4	3800	4	0.2
Crustal Abundance: To	0.11	88000	13		2300	3	0.01	312400	0.42	345	74	170	6	250	86500	30	8

- G-85-005-23
- G-85-005-24
- G-85-005-25
- G-85-005-26
- G-85-005-27
- G-85-005-28
- G-85-005-29
- G-85-005-30
- G-85-005-38
- G-85-005-39
- G-85-005-40
- G-85-005-41
- G-85-005-42
- G-85-005-47
- G-85-005-48
- G-85-005-43
- G-85-005-44
- G-85-005-45
- G-85-005-46
- G-85-004-7300
- G-85-003-7287
- G-85-002-7267
- G-85-001-7264
- G-84-007-01
- G-84-007-02
- G-84-007-89
- G-84-007-03
- G-84-007-04
- G-84-007-05
- G-84-007-06
- G-84-007-07
- G-84-007-08
- G-84-007-85
- G-84-007-10
- G-84-007-11
- G-84-007-12
- G-84-007-13
- G-84-007-14
- G-84-007-15
- G-84-007-16
- G-84-007-17
- G-84-007-18
- G-84-007-19
- G-84-007-20
- G-84-007-21
- G-84-007-22
- G-84-007-23
- G-84-007-24

Project:

Client:

Data:

Comments:

Mount Klappan

Rescan Environmental

ICP Metals Data

Rock units designated by Gulf.

Ba, Cr, Sn, Ta, Ti, W, and Zr may not be totally soluble in the 4-acid digestion MS61 method.

The ICP metals for samples 04-Sr-02, 86-035-01, and 86-035-10 were done by aqua regia digestion instead of 4-acid digestion.

Al, B, Ba, Be, Ca, Ce, Cr, Cs, Ga, Ge, Hf, In, K, La, Li, Mg, Na, Nb, Rb, Re, S, Sb, Sc, Sn, Sr, Ta, Te, Th, Ti, W, Y, and Zr may not be totally soluble in the aqua regia digestion MS41 method.

Sample Id.	Silver Ag (ppm)	Aluminum Al (ppm)	Arsenic As (ppm)	Boron B (ppm)	Barium Ba (ppm)	Beryllium Be (ppm)	Bismuth Bi (ppm)	Calcium Ca (ppm)	Cadmium Cd (ppm)	Cerium Ce (ppm)	Cobalt Co (ppm)	Chromium Cr (ppm)	Cesium Cs (ppm)	Copper Cu (ppm)	Iron Fe (ppm)	Gallium Ga (ppm)	Germanium Ge (ppm)
Method	ME-MS61	ME-MS61	ME-MS61	ME-MS41	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
MDL	0.01	100	0.2	10	10	0.05	0.01	100	0.02	0.01	0.1	1	0.05	0.2	100	0.05	0.05
Crustal Abundance: From	0.037	4200	1		0.4	1	0.007	5100	0.035	11.5	0.1	2	0.4	4	3800	4	0.2
Crustal Abundance: To	0.11	88000	13		2300	3	0.01	312400	0.42	345	74	170	6	250	86500	30	8
G-84-007-25																	
G-84-007-26																	
G-84-007-27																	
G-84-007-28																	
G-84-007-29																	
G-84-007-30																	
G-84-007-31																	
G-84-007-32																	
G-84-007-33																	
G-84-007-84																	
G-84-007-34																	
G-84-007-35																	
05-ARD4-09	0.12	64100	7.1		680	0.88	0.06	21000	0.33	26.4	19.6	135	2.06	26.1	36400	14.25	0.1
05-ARD4-10	0.23	55600	4.2		870	1.16	0.14	2700	0.75	32.2	19.3	235	2.64	56.1	26800	14.2	0.09
05-ARD4-03	0.33	64900	5.7		1220	1.56	0.22	3500	0.84	40.4	21.9	102	3.68	81.8	36900	17.55	0.12
05-ARD4-04	0.39	71000	4.1		1240	1.01	0.16	35900	0.32	34.4	16.9	25	3.01	57.5	57200	17.05	0.15
05-ARD4-06	0.29	68400	4.6		1310	1.7	0.2	1400	0.84	41.8	10.4	119	5.62	65.7	20400	18.45	0.11
05-ARD4-05	0.15	56500	2.9		910	1.28	0.09	2100	0.38	30.6	16.2	193	2.09	37.1	31000	14.25	0.1
05-ARD4-07-1	0.14	64700	2.6		1150	1.4	0.1	2200	0.31	36	20.1	135	2.42	42.9	22100	16.7	0.08
ARD4-2006A	0.24	72900	13.5		1370	1.37	0.16	2300	0.91	41.8	26.7	186	3.81	75.3	40700	16.95	0.11
05-ARD4-08	0.18	53000	3.4		590	1.15	0.12	4800	0.29	29.6	20.7	121	2.61	48.2	119000	13.15	0.19
ARD4-2006B	0.13	47900	5.6		470	0.9	0.06	12200	0.25	23.5	11.8	223	1.91	32.5	19300	10.7	0.06
05-ARD4-02	0.27	92000	12.6		300	1.56	0.19	1100	0.19	40	19.9	125	5.08	56.9	28900	22.5	0.17
ARD4-2006C	1.3	61400	69.4		30	0.86	0.11	32400	0.21	22.6	12.4	69	3.77	71.8	103500	13.85	0.17
05-ARD4-01	0.3	79500	23.4		130	1.33	0.1	10200	0.43	26.6	13.4	161	3.46	53.7	95100	17.7	0.24
05-ARD3-01A	0.15	69600	2.9		640	1	0.1	14600	0.42	41.5	35.8	128	2.77	55.3	69500	15.8	0.2
05-ARD3-02B	1.52	57500	259		100	1.22	0.17	1000	1.09	25.8	24.7	115	3.98	109.5	79100	14.85	0.23
05-ARD3-16	0.13	41200	4.4		620	0.73	0.07	7100	0.32	19.5	9.5	141	1.27	31.3	15000	10	0.11
05-ARD3-03A	0.18	46900	3.9		720	0.96	0.08	36000	0.43	21.6	15	196	1.61	42.7	44700	11.15	0.13
05-ARD3-04A	0.07	71200	1.8		820	0.77	0.09	19000	0.1	17.4	3.8	7	1.67	25.7	29600	12.95	0.12
05-ARD3-05A	0.32	70500	23.9		1080	1.44	0.15	5100	0.92	39.5	41.8	166	3.59	82.6	50200	17.55	0.19
05-ARD3-07A	0.1	38000	2.3		760	0.85	0.06	5900	0.32	22.2	11.6	92	1.25	32.3	28300	9.52	0.11
05-ARD3-07B (HC)	0.15	64800	10		1240	1.48	0.12	9300	0.56	39.3	19	150	2.2	51.3	36800	16.85	0.17
ARD3-2006B	0.23	62500	9		1140	1.88	0.16	9100	0.91	37.1	22.6	111	5.3	69.4	15500	14.9	0.07
ARD3-2006C	0.23	75100	8.5		910	1.63	0.17	2100	0.67	40.7	35.5	192	4.84	83.9	17300	18.25	0.08
05-ARD3-06A	0.16	50600	1.5		580	0.93	0.08	50600	0.31	21.2	14.9	123	2.01	48.3	12600	11.9	0.1
05-ARD3-08A	0.69	77600	158.5		180	1.32	0.1	15700	0.34	30.6	33.8	92	2.96	115.5	105500	17.45	0.24
05-ARD3-08B (HC)	0.21	90500	25.8		870	1.76	0.1	3300	0.27	35.2	22.5	126	3.82	43	42600	21.5	0.17
05-ARD3-09A	0.16	98300	4		1080	1.67	0.15	2000	0.64	42.4	19	105	5.16	55.5	37300	23.6	0.15
ARD3-2006A	0.1	105000	4.7		1180	2.1	0.19	700	0.55	42.2	8.4	73	7.14	47.3	9800	24.7	0.07
05-ARD3-10A	0.07	77100	2.6		720	1.3	0.15	7700	0.45	30.7	15.8	137	3.4	63.3	34400	18	0.15
05-ARD3-15A	0.07	71200	2.1		410	0.89	0.04	8600	0.23	24.1	12.8	276	1.65	26.2	28700	16	0.12
05-ARD3-12A	0.08	66200	2.6		340	0.73	0.04	12800	0.23	24.4	13.8	226	1.32	21.5	24600	14.9	0.11
05-ARD3-11A	0.1	79500	6.3		560	1.06	0.05	12100	0.14	29.1	21.6	190	2.25	26.4	30700	17.65	0.15
05-ARD3-14A	0.75	26800	36.2		70	0.46	0.05	11200	0.19	19.2	18.2	37	1.33	51.3	66300	7.22	0.17
05-ARD3-14B (HC)	0.16	53100	5.8		460	1.04	0.13	11100	0.43	33.4	8.6	46	4.05	62.4	14600	13.85	0.13
05-ARD3-13A	0.005	2500	0.3		40	0.07	0.005	1200	0.04	2.08	0.2	2	0.26	3.2	1500	0.74	0.05
05-ARD2-04	0.23	66100	3		850	1.32	0.13	2600	0.54	36.1	23	217	2.42	63.1	37900	15.95	0.13

Project: Mount Klappan
Client: Rescan Environmental
Data: ICP Metals Data
Comments: Rock units designated by Gulf.

Ba, Cr, Sn, Ta, Ti, W, and Zr may not be totally soluble in the 4-acid digestion MS61 method.

The ICP metals for samples 04-Sr-02, 86-035-01, and 86-035-10 were done by aqua regia digestion instead of 4-acid digestion.

Al, B, Ba, Be, Ca, Ce, Cr, Cs, Ga, Ge, Hf, In, K, La, Li, Mg, Na, Nb, Rb, Re, S, Sb, Sc, Sn, Sr, Ta, Te, Th, Ti, W, Y, and Zr may not be totally soluble in the aqua regia digestion MS41 method.

Sample Id.	Silver Ag (ppm)	Aluminum Al (ppm)	Arsenic As (ppm)	Boron B (ppm)	Barium Ba (ppm)	Beryllium Be (ppm)	Bismuth Bi (ppm)	Calcium Ca (ppm)	Cadmium Cd (ppm)	Cerium Ce (ppm)	Cobalt Co (ppm)	Chromium Cr (ppm)	Cesium Cs (ppm)	Copper Cu (ppm)	Iron Fe (ppm)	Gallium Ga (ppm)	Germanium Ge (ppm)
Method	ME-MS61	ME-MS61	ME-MS61	ME-MS41	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
MDL	0.01	100	0.2	10	10	0.05	0.01	100	0.02	0.01	0.1	1	0.05	0.2	100	0.05	0.05
Crustal Abundance: From	0.037	4200	1		0.4	1	0.007	5100	0.035	11.5	0.1	2	0.4	4	3800	4	0.2
Crustal Abundance: To	0.11	88000	13		2300	3	0.01	312400	0.42	345	74	170	6	250	86500	30	8
05-ARD2-08	0.18	70900	5.1		870	1.18	0.13	12100	0.21	36.7	15.8	138	2.93	55.2	40100	16.35	0.15
05-ARD2-07	0.23	64600	5.4		860	1.14	0.12	8100	0.15	30.8	20.2	120	2.74	48.3	40800	14.45	0.15
05-ARD2-07 (HC)	0.19	75400	11		960	1.41	0.14	12400	0.15	36.5	18.1	130	3.35	52.2	42900	18.2	0.15
05-ARD2-13	0.07	26200	20.5		30	0.39	0.01	24600	0.09	8.27	5.6	37	0.75	16.8	116000	5.65	0.18
05-ARD2-12	0.12	32300	45.1		20	0.38	0.02	40400	0.09	10.2	8.5	56	0.79	30.1	174000	7.18	0.27
05-ARD2-12 (HC)	0.08	32400	46.3		70	0.62	0.04	42700	0.09	15.2	7.7	37	0.93	25.4	86800	8.03	0.17
05-ARD2-16	0.28	51300	0.6		510	0.71	0.1	6500	0.55	18.05	5.5	50	3.54	38.2	25100	12.45	0.09
05-ARD2-11	0.2	84500	1.9		1330	1.75	0.15	1200	1.43	56.6	5.7	109	6.52	91.9	10200	21.8	0.14
05-ARD2-09	0.24	70700	2.2		950	1.32	0.14	6300	0.74	34.6	25.4	131	3.04	72.2	30800	16.95	0.15
05-ARD2-02	0.28	70100	6.8		900	1.32	0.14	20100	0.74	33.1	18.8	144	3.27	68	47000	16.15	0.14
05-ARD2-10A	0.33	70000	16.6		310	1	0.15	27000	0.45	25.3	39	83	5.05	95	64600	15.35	0.17
05-ARD2-14	0.11	62500	4.1		550	0.77	0.03	15200	0.17	20.4	16.4	147	1.18	19	30300	13.2	0.1
05-ARD2-06	0.15	73400	1.5		970	1.35	0.1	13500	0.32	34.1	21.9	119	3.22	56.4	80900	16.8	0.19
05-ARD2-01A	0.12	58900	1.6		570	0.95	0.1	23900	0.41	27.7	22.2	89	2.53	51.3	79500	13.1	0.18
05-ARD2-15	0.12	80500	5.9		800	1.2	0.13	9600	0.48	31.4	18	148	3.33	60.8	68100	18.25	0.17
05-ARD2-05	0.11	44600	6.1		340	0.52	0.08	15400	0.21	19.1	11.2	101	0.67	11.8	21900	8.15	0.09
ARD2-2006A	0.11	79200	83.1		760	0.92	0.12	21900	0.23	31.8	17.3	49	5.52	29.2	35500	17.05	0.1
ARD2-2006B	0.13	89500	14.7		1700	1.48	0.15	2700	0.53	42.4	21.1	165	4.92	65.3	40800	20.9	0.1
05-ARD2-03	0.15	37100	5.8		580	0.69	0.07	23100	0.26	17.4	10	102	1.11	28.2	17600	8.43	0.1
05-ARD1-11	0.005	2400	0.7		40	0.05	0.005	1100	0.01	1.54	0.5	3	0.12	3.4	600	0.55	0.06
05-ARD1-15	0.14	35700	1.4		650	0.74	0.06	65500	0.26	15.75	9.3	85	1.06	25.6	22500	8.17	0.08
05-ARD1-15 (HC)	0.13	37900	5.5		610	0.8	0.07	55000	0.27	17.5	10.9	112	1.19	28.5	20300	9.55	0.11
05-ARD1-13	0.27	63000	8.5		1210	1.51	0.18	3400	0.79	34.3	14.4	111	3.42	83.6	45000	17	0.15
05-ARD1-14	0.42	72100	4		1370	1.52	0.21	6500	1.13	46.8	33.2	175	3.35	95.4	56700	19.1	0.18
05-ARD1-12	0.17	42600	7.9		530	0.92	0.09	7200	0.41	21.9	17.7	167	1.31	39.8	29600	10.5	0.1
05-ARD1-08	0.22	50000	11		610	1.05	0.08	11000	0.89	25.4	18	251	1.49	68.6	31900	11.1	0.1
05-ARD1-03	0.39	75200	5.4		1460	2.01	0.21	1400	1.33	41.3	66.2	142	5.27	91.8	10200	19.6	0.12
05-ARD1-01	0.21	65700	1.4		760	1.54	0.21	4900	0.81	38.3	27.7	154	3.28	92.9	90700	16.15	0.16
05-ARD1-02	0.22	72000	5.2		740	1.47	0.17	3500	0.59	29.7	39.2	250	3.08	84.8	24000	18.2	0.1
05-ARD1-07	0.09	97900	6.7		990	2.2	0.18	1300	0.35	38.6	8.2	91	5.15	63.6	12900	24.1	0.13
05-ARD1-07 (HC)	0.15	94000	10.4		860	1.84	0.09	2200	0.28	33.7	19.8	127	3.88	38.1	32700	21.9	0.13
05-ARD1-07-2	0.12	40700	10.5		640	0.9	0.09	10000	0.37	20.2	12.5	160	1.44	37.1	25100	10	0.11
05-ARD1-06	0.27	91400	7.2		900	1.84	0.16	1800	0.42	39	22.2	113	5.49	64.8	42100	22	0.14
05-ARD1-06 (HC)	0.21	93800	11.2		880	1.78	0.11	3100	0.29	34.6	19.5	114	4.55	45.3	37300	21.9	0.14
ARD1-2006A	0.17	93500	18.9		780	1.68	0.21	2000	0.21	47.3	19.4	115	6.54	59.2	34600	22	0.11
05-ARD1-09	0.27	79100	26.6		50	1.31	0.13	3400	0.2	28.2	17	176	3.91	73.5	120500	17.25	0.23
05-ARD1-10	0.08	74900	3		630	1.2	0.12	14600	0.35	29.4	14.4	194	3.07	51	47300	16.95	0.12
05-ARD1-04	0.11	85400	2.7		850	1.7	0.16	4300	0.37	35	16.9	176	3.67	63.8	45300	20	0.14
05-ARD1-05	0.26	69600	4.3		770	1.59	0.13	3700	0.83	32.6	22.7	267	2.8	70.5	34400	17.15	0.12
05-019-08	0.15	80400	2.5		920	1.49	0.15	2600	0.45	36.6	18.9	101	4.13	43.9	47500	18.7	0.12
05-019-03	0.14	85100	9.7		960	1.54	0.12	6300	0.41	35.4	12.9	114	4.07	38	49300	19.25	0.11
05-019-01	0.12	77600	2		850	1.46	0.15	1500	0.49	32.4	5.8	55	5.23	41.5	29700	18.6	0.09
05-019-13	0.13	74300	3.9		920	1.32	0.16	3300	0.27	33.2	13.6	149	3.35	57.4	37200	16.75	0.1
05-019-2006A	0.11	74800	9.4		750	1	0.05	12700	0.29	32.8	19.8	265	2.75	30	40400	15.5	0.09
05-019-16	0.13	75200	12.2		960	1.22	0.16	6300	0.14	33.1	18.6	138	3.5	60.3	48000	18.4	0.2
05-019-14	0.02	2800	1.6		30	0.07	0.01	3000	0.01	1.74	3	2	0.08	2.2	10000	0.69	0.025
05-019-15	0.17	66500	3.2		900	1.73	0.21	1200	0.9	40.9	10	118	6.47	72.8	20100	18.5	0.1
05-019-10	0.16	53800	3.2		640	1.02	0.1	11200	0.5	23.4	14	201	1.96	41	29900	12.25	0.08

Project:**Mount Klappan**

Client:

Rescan Environmental

Data:

ICP Metals Data

Comments:

Rock units designated by Gulf.

Ba, Cr, Sn, Ta, Ti, W, and Zr may not be totally soluble in the 4-acid digestion MS61 method.

The ICP metals for samples 04-Sr-02, 86-035-01, and 86-035-10 were done by aqua regia digestion instead of 4-acid digestion.

Al, B, Ba, Be, Ca, Ce, Cr, Cs, Ga, Ge, Hf, In, K, La, Li, Mg, Na, Nb, Rb, Re, S, Sb, Sc, Sn, Sr, Ta, Te, Th, Ti, Ti, W, Y, and Zr may not be totally soluble in the aqua regia digestion MS41 method.

Sample Id.	Silver Ag (ppm)	Aluminum Al (ppm)	Arsenic As (ppm)	Boron B (ppm)	Barium Ba (ppm)	Beryllium Be (ppm)	Bismuth Bi (ppm)	Calcium Ca (ppm)	Cadmium Cd (ppm)	Cerium Ce (ppm)	Cobalt Co (ppm)	Chromium Cr (ppm)	Cesium Cs (ppm)	Copper Cu (ppm)	Iron Fe (ppm)	Gallium Ga (ppm)	Germanium Ge (ppm)
Method	ME-MS61	ME-MS61	ME-MS61	ME-MS41	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
MDL	0.01	100	0.2	10	10	0.05	0.01	100	0.02	0.01	0.1	1	0.05	0.2	100	0.05	0.05
Crustal Abundance: From	0.037	4200	1		0.4	1	0.007	5100	0.035	11.5	0.1	2	0.4	4	3800	4	0.2
Crustal Abundance: To	0.11	88000	13		2300	3	0.01	312400	0.42	345	74	170	6	250	86500	30	8
Maximum	1.66	105000	405	10	1700	2.2	0.27	148500	1.43	56.6	149	316	10.3	136	251000	25.7	0.89
Minimum	0.005	1600	0.3	10	20	0.05	0.005	400	0.01	0.52	0.2	2	0.06	2.2	600	0.33	0.025
Mean	0.21	62853	15	10	715	1.14	0.12	15647	0.41	28.9	19	129	3.01	51.1	46151	14.8	0.12
Standard Deviation	0.22	23027	41.6	0	368	0.45	0.054	22492	0.26	10.6	15.6	66.2	1.7	24.1	36719	5.48	0.081
10 Percentile	0.08	31490	1.8	10	180	0.5	0.05	1510	0.14	15.1	6.92	41.5	0.8	22.1	15560	7.39	0.061
25 Percentile	0.11	51125	2.9	10	468	0.9	0.08	3275	0.22	23.5	11.5	85	1.87	32.5	26475	11.9	0.08
Median	0.15	68500	5.15	10	760	1.16	0.12	9350	0.33	31	16.9	124	2.95	50.7	36850	15.9	0.11
75 Percentile	0.22	78500	11	10	920	1.46	0.16	17025	0.54	36	21.6	173	3.91	66.1	50375	18.3	0.15
90 Percentile	0.3	88870	23.3	10	1209	1.7	0.19	32320	0.79	40.5	33.1	217	5.17	83.3	90790	21	0.18
Interquartile Range (IQR) ¹	0.11	27375	8.1	0	453	0.57	0.08	13750	0.32	12.6	10.2	88	2.04	33.7	23900	6.48	0.07
Variance	0.049	530244845	1734	0	135099	0.2	0.003	505890927	0.07	112	244	4382	2.87	580	1348311169	30	0.0066
Skewness	4.34	-0.84	6.76	NA	-0.029	-0.36	0.12	3.48	1.23	-0.72	4.48	0.23	0.76	0.41	2.66	-0.73	5.73
Coefficient of Variation (CoV) ²	1.08	0.37	2.77	0	0.51	0.4	0.45	1.44	0.65	0.36	0.82	0.51	0.56	0.47	0.8	0.37	0.66
Count	172	172	172	3	172	172	172	172	172	172	172	172	172	172	172	172	172

NOTE: if data is boxed, then data is

3 times the maximum crustal abundance.

Crustal abundance data taken from Price, 1997, Appendix 3, Table 1 excluding ultrabasic values.

¹ Interquartile Range (IQR) = 75th percentile minus 25th percentile² Coefficient of Variation (CoV) = standard deviation divided by mean*NOTE: If data was reported as < detection limit half the detection limit is shown in italics and was used in subsequent calculations.**NOTE: If data was reported as > detection limit the detection limit is shown in bold and was used in subsequent calculations.*

Project: Mount Klappan
 Client: Rescan Environmental
 Data: ICP Metals Data
 Comments: Rock units designated by Gulf.

Ba, Cr, Sn, Ta, Ti, W, and Zr may not be totally soluble in the 4-acid digestion MS61 method.

The ICP metals for samples 04-Sr-02, 86-035-01, and 86-035-10 were done by aqua regia digestion instead of 4-acid digestion.

Al, B, Ba, Be, Ca, Ce, Cr, Cs, Ga, Ge, Hf, In, K, La, Li, Mg, Na, Nb, Rb, Re, S, Sb, Sc, Sn, Sr, Ta, Te, Th, Ti, Tl, W, Y, and Zr may not be totally soluble in the aqua regia digestion MS41 method.

Sample Id.	Hafnium (ppm)	Mercury (ppm)	Indium (ppm)	Potassium (ppm)	Lanthanum (ppm)	Lithium (ppm)	Magnesium (ppm)	Manganese (ppm)	Molybdenum (ppm)	Sodium (ppm)	Niobium (ppm)	Nickel (ppm)	Phosphorus (ppm)	Lead (ppm)	Rubidium (ppm)	Rhenium (ppm)
Method	Hf (ppm)	Hg (ppm)	In (ppm)	K (ppm)	La (ppm)	Li (ppm)	Mg (ppm)	Mn (ppm)	Mo (ppm)	Na (ppm)	Nb (ppm)	Ni (ppm)	P (ppm)	Pb (ppm)	Rb (ppm)	Re (ppm)
MDL	0.1	0.01	0.005	100	0.5	0.2	100	5	0.05	100	0.1	0.2	10	0.5	0.1	0.002
Crustal Abundance: From	0.3	0.03	0.01	40	10	5	1600	390	0.2	400	0.3	2	170	1	0.2	NA
Crustal Abundance: To	11	0.4	0.26	48000	115	66	47000	6700	27	40400	35	225	1500	80	170	NA
04-SR-01	2.3	0.05	0.072	9500	15.3	15.1	21300	2230	1.22	7800	4.5	39.6	1200	7.3	35.8	0.002
04-SR-02	0.02	0.01	0.012	300	1	4.2	7000	455	0.38	600	0.05	2.4	3700	2.6	1.4	0.001
04-SR-03	1.2	0.1	0.035	8200	10.4	20.1	17400	449	0.88	7500	4.3	77.6	440	4.3	32.9	0.002
04-SR-04	2.1	0.05	0.049	10600	15.2	15.8	52800	2110	4.15	4000	7.9	167.5	590	7.5	40.7	0.003
04-SR-05	1.6	0.06	0.044	12500	12.3	19.9	33000	1555	2.2	9800	5.7	99.7	570	7.2	44.7	0.003
86-035-01	0.04	0.26	0.024	500	0.7	11.6	1800	55	1.92	600	0.05	48.6	1260	16	2.5	0.001
86-035-02	1.2	0.07	0.059	11500	15.4	14.8	19400	959	1.26	12300	5	151.5	1020	4.7	39.5	0.002
86-035-03	2.2	0.05	0.06	8900	15	23.8	27800	1290	0.83	8800	4.4	154	520	3.7	35.1	0.002
86-035-04	0.4	3.38	0.016	1500	6.3	9.4	15900	924	5.91	1000	0.7	148	1240	136.5	8	0.002
86-035-13	1.3	0.07	0.061	11700	14.3	14.6	15700	787	2.55	12900	5.4	176.5	920	7.2	41.2	0.003
86-035-05	1.6	0.1	0.078	10600	16.4	15.4	13900	931	2.01	13100	5.7	121	1200	8.2	41	0.002
86-035-10	0.02	0.07	0.03	900	0.9	9.5	12100	253	3.03	800	0.05	13.9	3190	3.4	2.8	0.002
86-035-06	0.4	0.04	0.012	1600	2.1	24.9	72000	2020	0.41	900	1	26.2	210	17.8	5.6	0.002
86-035-07	2.3	0.11	0.07	17600	18.9	17.1	11400	516	3.89	12300	8	140.5	580	10.1	60.8	0.003
86-035-07 (HC)	1.5	0.17	0.045	11000	13.6	34.7	14400	903	1.87	6800	5.4	144.5	550	5.1	41.1	0.002
86-035-08	2	0.13	0.064	14200	15.5	15.6	20000	1580	2.58	6000	6.2	138	590	6.1	55.5	0.002
86-035-12	1.3	0.04	0.029	9600	14.5	16.2	38200	1775	0.43	3200	2.6	64.3	1200	1.6	33.8	0.002
86-035-11	2	0.11	0.039	13500	19.5	151.5	6000	137	1.03	19700	6.3	25.2	390	5.3	48	0.002
86-035-09	1.9	1.87	0.049	10800	14.8	24.1	11900	243	1.36	15400	4.7	173.5	570	14.3	40.6	0.002
86-035-09 (HC)	1.4	0.13	0.044	11600	13.6	29.3	17300	449	0.66	15000	4.6	106	680	4.2	39.9	0.001
85-027-01	1.7	0.05	0.061	13300	18	25.5	23000	613	3	9300	7.4	151.5	580	7.9	48.5	0.004
85-027-02	1.6	0.25	0.073	20100	18.6	18	22400	524	1.87	7000	6	81.2	1020	9.8	66.6	0.003
85-027-02 (HC)	2.3	0.16	0.085	23100	17.5	28.5	20000	403	2.2	8300	6.9	105	780	9.9	78.6	0.003
85-027-03	1.4	1.87	0.045	14600	22.6	20	12400	249	2.48	10100	4	70.5	4250	6.4	49.4	0.004
85-027-04	2.2	0.14	0.063	14100	20.2	22.7	20800	681	7.64	11000	7.5	259	600	14.2	53.5	0.005
85-027-27	1.4	0.09	0.051	10200	13.1	22.4	16100	630	0.87	17700	4.3	102.5	610	3.6	32.3	0.002
85-027-05	1.2	0.27	0.06	9700	12.9	21.9	16300	442	1.27	21000	5.4	83.9	880	3.8	23.3	0.002
85-027-06	1.8	0.14	0.081	16600	18.7	36.3	18200	935	2.37	11100	7.4	155.5	750	12	57.8	0.003
85-027-25	1.7	0.09	0.07	11700	16.9	10.3	15700	1040	1.78	14500	5.1	122	700	8.8	43.8	0.002
85-027-21	0.6	0.03	0.025	1900	2.7	39.5	35500	1630	0.43	3400	1	78.3	240	20.6	6	0.002
85-027-07	1.1	0.12	0.057	10000	19.7	7	23100	1675	1.37	9000	2.9	90.5	4600	4.4	36.1	0.002
85-027-08	0.9	0.04	0.025	2800	5.6	35	40000	1955	0.32	8600	1.5	38.8	280	14.7	8.3	0.002
85-027-09	1.5	0.2	0.084	12800	18.4	10	16900	986	1.63	16200	5.4	142	1220	8.2	47.1	0.002
85-027-10	1.9	0.14	0.09	10800	16.5	16	15100	1000	2.2	14800	5.3	115	630	6.8	34.9	0.002
85-027-11	1.2	0.46	0.054	9100	15	19	14800	633	0.87	14800	4.3	113.5	650	6.2	31.9	0.002
85-027-20	0.9	0.06	0.038	4300	8.9	14.1	32800	3820	1.25	5200	2.2	90.5	1180	4.3	15.5	0.002
85-027-12	1.3	0.74	0.059	9500	15.4	23	13900	591	2.32	12800	3.9	141.5	2390	22.4	33.5	0.002
85-027-13	2.1	0.2	0.08	19800	17.8	32.3	12500	457	4.07	11000	5.9	164	570	7.7	68.2	0.002
85-027-23	1.5	0.06	0.062	15400	17.8	29.1	23300	732	3.73	9400	7.4	188.5	940	12.5	55.4	0.006
85-027-14	0.7	0.4	0.055	12600	2.7	6.9	4500	282	5.68	8000	1	245	260	171	39.8	0.002
85-027-28	1.8	1.68	0.031	6800	9.6	25.4	42100	2520	5.86	2400	6.4	130.5	800	35.3	30.9	0.006
85-027-15	2.2	0.08	0.064	15800	17.8	22	21300	1430	2.2	8500	7.4	133.5	870	9.3	62.6	0.003
85-027-16	2.2	0.22	0.081	24100	17.9	20.3	10200	158	1.16	9400	8	96.9	510	7.2	96.3	0.002
85-027-17	0.9	0.08	0.023	4400	7.3	27.2	5800	113	1.11	5200	2.8	56.8	310	5.3	18.7	0.002
85-027-17 (HC)	0.9	0.07	0.025	4300	7.7	27.2	7600	148	1.21	4900	2.7	59.8	280	4.4	16.8	0.001
85-027-24	1.7	0.07	0.055	11200	15.3	36.1	16600	248	2.42	11000	7.2	184	640	5.8	46.7	0.003
85-027-24 (HC)	1.3	0.05	0.039	8000	10.6	31.2	25200	402	1.52	7800	4.7	122	580	4.8	29.9	0.002
85-027-18	1.7	0.86	0.088	19400	16.4	30.6	8500	153	1.51	11000	6.1	119	490	17.2	71	0.002

Project:

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Mount Klappan

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The ICP metals for samples 04-Sr-02, 86-035-01, and 86-035-10 were done by aqua regia digestion instead of 4-acid digestion.

Al, B, Ba, Be, Ca, Ce, Cr, Cs, Ga, Ge, Hf, In, K, La, Li, Mg, Na, Nb, Rb, Re, S, Sb, Sc, Sn, Sr, Ta, Te, Th, Ti, Ti, W, Y, and Zr may not be totally soluble in the aqua regia digestion MS41 method.

Sample Id.	Hafnium Hf (ppm)	Mercury Hg (ppm)	Indium In (ppm)	Potassium K (ppm)	Lanthanum La (ppm)	Lithium Li (ppm)	Magnesium Mg (ppm)	Manganese Mn (ppm)	Molybdenum Mo (ppm)	Sodium Na (ppm)	Niobium Nb (ppm)	Nickel Ni (ppm)	Phosphorus P (ppm)	Lead Pb (ppm)	Rubidium Rb (ppm)	Rhenium Re (ppm)
Method	ME-MS61	Hg-CV41	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
MDL	0.1	0.01	0.005	100	0.5	0.2	100	5	0.05	100	0.1	0.2	10	0.5	0.1	0.002
Crustal Abundance: From	0.3	0.03	0.01	40	10	5	1600	390	0.2	400	0.3	2	170	1	0.2	NA
Crustal Abundance: To	11	0.4	0.26	48000	115	66	47000	6700	27	40400	35	225	1500	80	170	NA

- G-85-006-125
- G-85-006-126
- G-85-006-127
- G-85-006-145
- G-85-006-128
- G-85-006-129
- G-85-006-130
- G-85-006-131
- G-85-006-132
- G-85-006-133
- G-85-006-134
- G-85-006-135
- G-85-006-136
- G-85-006-137
- G-85-006-138
- G-85-006-139
- G-85-006-140
- G-85-005-01
- G-85-005-02
- G-85-005-03
- G-85-005-04
- G-85-005-05
- G-85-005-31
- G-85-005-7541
- G-85-005-32
- G-85-005-06
- G-85-005-07
- G-85-005-08
- G-85-005-33
- G-85-005-34
- G-85-005-09
- G-85-005-10
- G-85-005-11
- G-85-005-12
- G-85-005-13
- G-85-005-35
- G-85-005-14
- G-85-005-36
- G-85-005-15
- G-85-005-16
- G-85-005-17
- G-85-005-18
- G-85-005-19
- G-85-005-20
- G-85-005-21
- G-85-005-37
- G-85-005-22
- G-85-005-7328

Project:

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Mount Klappan

Rescan Environmental

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The ICP metals for samples 04-Sr-02, 86-035-01, and 86-035-10 were done by aqua regia digestion instead of 4-acid digestion.

Al, B, Ba, Be, Ca, Ce, Cr, Cs, Ga, Ge, Hf, In, K, La, Li, Mg, Na, Nb, Rb, Re, S, Sb, Sc, Sn, Sr, Ta, Te, Th, Ti, Tl, W, Y, and Zr may not be totally soluble in the aqua regia digestion MS41 method.

Sample Id.	Hafnium Hf (ppm)	Mercury Hg (ppm)	Indium In (ppm)	Potassium K (ppm)	Lanthanum La (ppm)	Lithium Li (ppm)	Magnesium Mg (ppm)	Manganese Mn (ppm)	Molybdenum Mo (ppm)	Sodium Na (ppm)	Niobium Nb (ppm)	Nickel Ni (ppm)	Phosphorus P (ppm)	Lead Pb (ppm)	Rubidium Rb (ppm)	Rhenium Re (ppm)
Method	ME-MS61	Hg-CV41	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
MDL	0.1	0.01	0.005	100	0.5	0.2	100	5	0.05	100	0.1	0.2	10	0.5	0.1	0.002
Crustal Abundance: From	0.3	0.03	0.01	40	10	5	1600	390	0.2	400	0.3	2	170	1	0.2	NA
Crustal Abundance: To	11	0.4	0.26	48000	115	66	47000	6700	27	40400	35	225	1500	80	170	NA

- G-85-005-23
- G-85-005-24
- G-85-005-25
- G-85-005-26
- G-85-005-27
- G-85-005-28
- G-85-005-29
- G-85-005-30
- G-85-005-38
- G-85-005-39
- G-85-005-40
- G-85-005-41
- G-85-005-42
- G-85-005-47
- G-85-005-48
- G-85-005-43
- G-85-005-44
- G-85-005-45
- G-85-005-46
- G-85-004-7300
- G-85-003-7287
- G-85-002-7267
- G-85-001-7264
- G-84-007-01
- G-84-007-02
- G-84-007-89
- G-84-007-03
- G-84-007-04
- G-84-007-05
- G-84-007-06
- G-84-007-07
- G-84-007-08
- G-84-007-85
- G-84-007-10
- G-84-007-11
- G-84-007-12
- G-84-007-13
- G-84-007-14
- G-84-007-15
- G-84-007-16
- G-84-007-17
- G-84-007-18
- G-84-007-19
- G-84-007-20
- G-84-007-21
- G-84-007-22
- G-84-007-23
- G-84-007-24

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The ICP metals for samples 04-Sr-02, 86-035-01, and 86-035-10 were done by aqua regia digestion instead of 4-acid digestion.

Al, B, Ba, Be, Ca, Ce, Cr, Cs, Ga, Ge, Hf, In, K, La, Li, Mg, Na, Nb, Rb, Re, S, Sb, Sc, Sn, Sr, Ta, Te, Th, Ti, W, Y, and Zr may not be totally soluble in the aqua regia digestion MS41 method.

Sample Id.	Hf (ppm) ME-MS61	Mercury Hg (ppm) Hg-CV41	Indium In (ppm) ME-MS61	Potassium K (ppm) ME-MS61	Lanthanum La (ppm) ME-MS61	Lithium Li (ppm) ME-MS61	Magnesium Mg (ppm) ME-MS61	Manganese Mn (ppm) ME-MS61	Molybdenum Mo (ppm) ME-MS61	Sodium Na (ppm) ME-MS61	Niobium Nb (ppm) ME-MS61	Nickel Ni (ppm) ME-MS61	Phosphorus P (ppm) ME-MS61	Lead Pb (ppm) ME-MS61	Rubidium Rb (ppm) ME-MS61	Rhenium Re (ppm) ME-MS61
Method	ME-MS61	Hg-CV41	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
MDL	0.1	0.01	0.005	100	0.5	0.2	100	5	0.05	100	0.1	0.2	10	0.5	0.1	0.002
Crustal Abundance: From	0.3	0.03	0.01	40	10	5	1600	390	0.2	400	0.3	2	170	1	0.2	NA
Crustal Abundance: To	11	0.4	0.26	48000	115	66	47000	6700	27	40400	35	225	1500	80	170	NA
G-84-007-25																
G-84-007-26																
G-84-007-27																
G-84-007-28																
G-84-007-29																
G-84-007-30																
G-84-007-31																
G-84-007-32																
G-84-007-33																
G-84-007-84																
G-84-007-34																
G-84-007-35																
05-ARD4-09	1.3	0.08	0.044	6900	13.4	15	16700	677	1.27	13600	3.8	116	650	6.2	27.8	0.002
05-ARD4-10	1.5	0.14	0.058	11800	16.4	26.2	12900	459	4.11	8300	6.6	158	620	6.5	56.3	0.004
05-ARD4-03	2	0.1	0.074	17400	19.8	19.8	21100	792	4.48	5700	8.7	119.5	830	12	72.2	0.008
05-ARD4-04	2.3	0.13	0.089	17500	14.6	33.5	37700	1300	2.32	3100	2.9	34.8	560	21.2	58.2	0.007
05-ARD4-06	2.3	0.11	0.076	19300	20.8	21.8	13000	226	2.62	7800	7.9	92.9	420	12.2	86.1	0.005
05-ARD4-05	1.5	0.07	0.046	12400	15.6	23.2	14000	443	2.56	9600	6.4	118.5	480	6.6	50.4	0.002
05-ARD4-07-1	2	0.07	0.05	15400	18.5	21.3	11200	291	2.32	8800	8.3	129.5	410	7.2	56.2	0.002
ARD4-2006A	2.4	0.55	0.072	17500	21.2	23.4	14800	908	5.34	9000	8.6	154.5	640	10.6	68.8	0.006
05-ARD4-08	1.7	0.25	0.051	10300	14.8	18.8	35400	1930	2.97	6200	5	142.5	530	6.4	44.8	0.002
ARD4-2006B	1.6	0.23	0.04	8900	12	27.9	12400	313	0.91	9400	4.9	109	730	5.3	36.5	0.001
05-ARD4-02	2	1.08	0.084	19600	16.7	30.1	6100	152	1.88	11100	5.6	110	410	15.4	77.9	0.002
ARD4-2006C	1.6	2.77	0.057	11700	10	18.2	17200	414	3.73	6700	3.8	86.7	320	26.8	47.6	0.002
05-ARD4-01	2.2	2.63	0.063	14200	11.9	20.6	9100	228	2.87	12600	3.4	115.5	320	9.4	44.4	0.003
05-ARD3-01A	2	0.09	0.058	7600	17	15	17400	1450	2.31	9500	4.3	180	600	10	27.4	0.002
05-ARD3-02B	2.2	2.27	0.055	15400	11.4	21.9	6200	314	6.94	5900	7.1	268	390	81.2	69.5	0.005
05-ARD3-16	1.2	0.05	0.032	8700	9.9	26.4	8800	237	0.82	7000	4.1	101	630	4.2	32.2	0.001
05-ARD3-03A	1.1	0.05	0.036	11400	10.9	17.7	27900	911	1.64	6600	4.6	113.5	390	4.7	37.7	0.004
05-ARD3-04A	2.4	0.49	0.034	11000	7.4	52.8	13800	695	3.51	7900	1.3	9.9	1250	4.1	27.3	0.002
05-ARD3-05A	1.9	0.19	0.065	19200	16.6	20.4	19200	1145	5.27	10000	8	224	790	11.2	73.2	0.003
05-ARD3-07A	2.1	0.05	0.037	9400	10.3	6.7	10700	615	2.55	6100	3.6	105	300	7.2	28.5	0.001
05-ARD3-07B (HC)	2.9	0.05	0.07	15500	17.8	10.9	14700	817	3.94	10900	6.2	165	500	11.3	51.9	0.003
ARD3-2006B	2.2	0.67	0.066	15000	18.3	20.2	9100	290	2.91	11100	8.1	121.5	340	13.6	66	0.005
ARD3-2006C	2.7	0.33	0.073	19100	20.4	25.7	7000	140	6.03	7700	8.9	237	420	12.4	77.1	0.005
05-ARD3-06A	1.4	0.1	0.04	12000	10.5	16.6	5100	138	2.1	5600	4.9	105.5	490	5.9	42.6	0.002
05-ARD3-08A	2.9	2.24	0.068	14200	13.5	66.6	4300	323	5.38	8600	6.2	289	7280	134	46.6	0.003
05-ARD3-08B (HC)	1.8	0.65	0.068	17800	16.8	29.7	9000	418	1.42	11500	5.4	88.7	770	19.4	67.7	0.002
05-ARD3-09A	2.5	0.06	0.079	21500	18.5	32.3	9200	657	1.26	10500	6.9	56.7	600	10	83.9	0.002
ARD3-2006A	3.9	0.07	0.106	24500	20.5	31.8	4600	84	1.25	11400	7.8	34.5	230	12.7	87.4	0.002
05-ARD3-10A	1.6	0.15	0.063	12700	14.9	29.6	14200	577	1.97	11800	4.7	125	610	3.6	46.4	0.002
05-ARD3-15A	1.1	0.07	0.043	6500	12	47.5	17600	393	0.66	11100	4.5	149.5	760	2.6	24	0.001
05-ARD3-12A	1.1	0.05	0.038	5900	11.9	51.1	17600	291	0.64	9900	4	118	640	2.6	21.6	0.001
05-ARD3-11A	1.3	0.16	0.049	10400	14	36.6	14900	356	1.6	13300	4.7	135	650	6.9	34.9	0.001
05-ARD3-14A	1.9	2.77	0.023	3500	11.2	25	7700	210	7.39	3000	4.9	190.5	320	75.9	14.4	0.002
05-ARD3-14B (HC)	2.2	0.14	0.06	8700	14.9	73.6	7800	125	3.36	5900	4.9	49.5	100	8.1	47.7	0.004
05-ARD3-13A	0.2	0.02	0.0025	700	1	2.5	400	56	0.08	300	0.3	1.2	90	0.25	3.2	0.001
05-ARD2-04	1.9	0.04	0.054	13700	16.4	30.5	11000	816	2.36	9100	7.2	160	750	7.8	55.9	0.003

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Al, B, Ba, Be, Ca, Ce, Cr, Cs, Ga, Ge, Hf, In, K, La, Li, Mg, Na, Nb, Rb, Re, S, Sb, Sc, Sn, Sr, Ta, Te, Th, Ti, W, Y, and Zr may not be totally soluble in the aqua regia digestion MS41 method.

Sample Id.	Hafnium Hf (ppm)	Mercury Hg (ppm)	Indium In (ppm)	Potassium K (ppm)	Lanthanum La (ppm)	Lithium Li (ppm)	Magnesium Mg (ppm)	Manganese Mn (ppm)	Molybdenum Mo (ppm)	Sodium Na (ppm)	Niobium Nb (ppm)	Nickel Ni (ppm)	Phosphorus P (ppm)	Lead Pb (ppm)	Rubidium Rb (ppm)	Rhenium Re (ppm)
Method	ME-MS61	Hg-CV41	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
MDL	0.1	0.01	0.005	100	0.5	0.2	100	5	0.05	100	0.1	0.2	10	0.5	0.1	0.002
Crustal Abundance: From	0.3	0.03	0.01	40	10	5	1600	390	0.2	400	0.3	2	170	1	0.2	NA
Crustal Abundance: To	11	0.4	0.26	48000	115	66	47000	6700	27	40400	35	225	1500	80	170	NA
Maximum	3.9	3.38	0.11	24500	25.3	152	94500	3820	63	21000	9.4	451	7280	171	106	0.014
Minimum	0.02	0.01	0.0025	200	0.25	2.5	400	11	0.08	200	0.05	1.2	10	0.25	0.7	0.001
Mean	1.63	0.34	0.056	11789	14	26.8	16681	648	2.74	8890	4.98	116	808	12.2	45.6	0.0026
Standard Deviation	0.63	0.61	0.021	5551	5.03	16.1	11688	544	5.08	3934	2.07	62.8	948	20.5	22.4	0.0018
10 Percentile	0.9	0.04	0.026	4030	7.52	14	6110	138	0.75	3430	2.51	40.5	300	3.7	14.5	0.001
25 Percentile	1.2	0.06	0.04	8675	11.4	17.9	9375	288	1.22	6800	3.8	77	450	5.2	32.3	0.002
Median	1.7	0.11	0.059	11550	14.9	24.3	14550	507	1.88	8800	5	115	590	7.65	43.9	0.002
75 Percentile	2.03	0.25	0.07	15400	17	32.3	20000	852	2.64	11000	6.4	147	763	11.5	58.9	0.003
90 Percentile	2.3	0.85	0.081	19400	19.7	40.6	27800	1309	4.62	13300	7.5	188	1200	17.6	77	0.005
Interquartile Range (IQR) ¹	0.83	0.19	0.03	6725	5.63	14.4	10625	564	1.42	4200	2.6	69.5	313	6.33	26.7	0.001
Variance	0.39	0.37	0.00046	30808357	25.3	258	136610682	296151	25.8	15475913	4.27	3942	898053	421	501	0.0000032
Skewness	-0.18	2.98	-0.26	-0.00077	-0.81	3.41	2.86	2.07	10.1	0.051	-0.37	1.18	4.44	5.7	0.13	2.62
Coefficient of Variation (CoV) ²	0.38	1.81	0.38	0.47	0.36	0.6	0.7	0.84	1.86	0.44	0.41	0.54	1.17	1.68	0.49	0.69
Count	172	174	172	172	172	172	172	172	172	172	172	172	172	172	172	172

NOTE: if data is boxed, then data is

3 times the maximum crustal abundance.

Crustal abundance data taken from Price, 1997, Appendix 3, Table 1 excluding ultrabasic values.

¹ Interquartile Range (IQR) = 75th percentile minus 25th percentile² Coefficient of Variation (CoV) = standard deviation divided by mean*NOTE: If data was reported as < detection limit half the detection limit is shown in italics and was used in subsequent calculations.**NOTE: If data was reported as > detection limit the detection limit is shown in bold and was used in subsequent calculations.*

Project: Mount Klappan
Client: Rescan Environmental
Data: ICP Metals Data
Comments: Rock units designated by Gulf.

Ba, Cr, Sn, Ta, Ti, W, and Zr may not be totally soluble in the 4-acid digestion MS61 method.

The ICP metals for samples 04-Sr-02, 86-035-01, and 86-035-10 were done by aqua regia digestion instead of 4-acid digestion.

Al, B, Ba, Be, Ca, Ce, Cr, Cs, Ga, Ge, Hf, In, K, La, Li, Mg, Na, Nb, Rb, Re, S, Sb, Sc, Sn, Sr, Ta, Te, Th, Ti, Tl, W, Y, and Zr may not be totally soluble in the aqua regia digestion MS41 method.

Sample Id.	Sulphur S (ppm)	Antimony Sb (ppm)	Scandium Sc (ppm)	Selenium Se (ppm)	Tin Sn (ppm)	Strontium Sr (ppm)	Tantalum Ta (ppm)	Tellurium Te (ppm)	Thorium Th (ppm)	Titanium Ti (ppm)	Thallium Tl (ppm)	Uranium U (ppm)	Vanadium V (ppm)	Tungsten W (ppm)	Yttrium Y (ppm)	Zinc Zn (ppm)	Zirconium Zr (ppm)
Method	ME-MS61	ME-MS61	ME-MS41	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
MDL	100	0.05	0.1	1	0.2	0.2	0.05	0.05	0.2	50	0.02	0.1	1	0.1	0.1	2	0.5
Crustal Abundance: From	240	0.1		0.05	0.5	1	0.8	NA	0.004	300	0.16	0.45	20	0.6	20	16	19
Crustal Abundance: To	2400	1.5		0.6	6	2000	4.2	NA	17	13800	2.3	3.7	250	2.2	90	165	500
04-SR-01	400	0.76		1	0.8	162.5	0.28	0.07	3.1	3650	0.31	1.7	144	0.5	17.8	128	83.7
04-SR-02	100	0.17	3.7	0.3	0.2	237	0.01	0.02	0.3	50	0.02	0.15	7	0.1	7.56	21	0.7
04-SR-03	500	0.63		1	0.8	158	0.28	0.05	2.7	1970	0.25	1	81	0.6	9.4	66	37.5
04-SR-04	1500	1.55		2	0.7	89.8	0.27	0.07	2.6	2120	0.36	1.6	191	0.5	19.2	104	83
04-SR-05	700	1.18		2	0.9	679	0.37	0.05	3.1	2900	0.33	1.4	105	0.6	12.8	91	51.4
86-035-01	21200	1.23	2.3	1.8	0.2	113	0.01	0.07	0.6	50	0.02	0.24	8	0.05	5.11	34	0.9
86-035-02	800	0.89		1	0.9	162	0.33	0.09	2.7	4440	0.3	0.9	162	0.5	14.1	110	45.6
86-035-03	200	0.39		1	1	178.5	0.27	0.06	2.9	3820	0.26	1.2	156	0.5	14.9	90	77.1
86-035-04	100000	51.1		65	0.3	665	0.05	0.17	0.7	440	4.27	0.4	33	0.2	21.4	63	14.4
86-035-13	700	1.4		3	1.3	180	0.39	0.12	2.9	5210	0.39	1	152	0.6	11.6	130	45
86-035-05	1200	1.31		2	1.3	183.5	0.38	0.12	3.3	5170	0.37	1.1	157	0.6	13.5	140	48.1
86-035-10	500	0.51	5.3	0.5	0.2	685	0.01	0.04	0.2	50	0.02	0.08	20	0.05	8.3	43	0.7
86-035-06	700	0.43		3	0.2	3380	0.09	0.05	0.7	340	0.05	0.3	18	0.1	10	36	9.5
86-035-07	800	1.35		2	1.7	155.5	0.52	0.05	4.2	3850	0.51	1.4	111	0.9	14.9	139	66.5
86-035-07 (HC)	400	0.67		1	1	170	0.37	0.06	3.3	2880	0.3	1.4	124	0.7	11.5	95	53
86-035-08	500	0.73		2	1	110.5	0.41	0.06	3.7	3220	0.37	1.7	137	0.7	15.5	125	63.3
86-035-12	400	0.22		2	0.6	307	0.18	0.05	1.8	2140	0.22	0.8	131	0.3	19.9	56	62.9
86-035-11	1000	0.91		1	1	186.5	0.42	0.05	3.8	3320	0.34	1.5	97	0.7	12.6	77	59.8
86-035-09	16700	4.28		3	0.9	197.5	0.31	0.05	2.5	3570	0.58	1.1	99	0.5	12.9	138	58.8
86-035-09 (HC)	1800	0.53		0.5	1	193.5	0.31	0.025	2.5	3930	0.32	0.9	112	0.6	11.4	102	47.1
85-027-01	600	0.39		3	1.3	105.5	0.51	0.07	4.6	3600	0.34	2	142	0.7	15.5	117	50.3
85-027-02	8900	1.56		3	1.3	132	0.42	0.1	4.1	4060	0.52	1.3	145	0.6	13.6	137	52.3
85-027-02 (HC)	4000	1.14		1	1.5	137	0.46	0.12	4.7	4850	0.58	1.5	182	0.9	15.4	160	75.8
85-027-03	21500	2.35		3	0.9	202	0.32	0.05	3.2	2890	0.79	2	77	0.5	26.2	89	45.1
85-027-04	1300	0.74		3	1.3	200	0.54	0.08	4.9	3890	0.38	2.2	135	0.8	13.7	129	73.1
85-027-27	400	0.48		1	0.9	225	0.29	0.05	2.6	4020	0.24	0.9	124	0.4	11.9	90	42.1
85-027-05	1600	0.58		2	1.1	255	0.36	0.05	2.5	5360	0.24	0.9	134	0.5	13	106	38.5
85-027-06	700	1.2		3	1.3	239	0.53	0.15	4.4	4660	0.54	1.7	169	0.8	15	174	52.6
85-027-25	400	0.91		2	1.1	174.5	0.34	0.08	3.5	4460	0.37	1.2	147	0.7	13.3	107	54.9
85-027-21	300	0.46		2	0.4	861	0.06	0.05	0.7	750	0.07	0.2	25	0.1	15.4	62	16.1
85-027-07	300	0.45		3	0.9	145.5	0.24	0.06	2.5	3200	0.29	1	149	0.4	24.2	73	48.4
85-027-08	100	0.34		3	0.5	1020	0.11	0.05	1.3	1570	0.08	0.4	38	0.2	9.8	43	23.9
85-027-09	800	1.41		3	1.4	190	0.38	0.12	3.7	5150	0.48	1.3	160	0.7	13.2	112	49.2
85-027-10	400	0.7		3	1.4	194	0.39	0.14	3.6	5020	0.36	1.3	145	0.8	13.5	126	57.3
85-027-11	700	1.89		3	1	178	0.31	0.05	2.8	3750	0.33	1	117	0.5	12.8	104	39.7
85-027-20	600	0.56		1	0.4	142.5	0.15	0.09	1.3	1880	0.18	0.6	81	0.3	12.8	75	33.8
85-027-12	8300	8.08		4	1	349	0.27	0.09	2.6	3900	0.62	0.9	106	0.5	17.3	112	50.2
85-027-13	1200	2.54		2	1.3	124.5	0.44	0.13	3.9	5330	0.61	1.2	166	0.7	13.2	131	66.3
85-027-23	800	1.63		3	1.2	206	0.49	0.08	4	3560	0.45	1.6	119	0.8	19.6	141	46.5
85-027-14	100000	25.6		123	0.7	77.1	0.06	0.34	0.4	3640	1.29	0.3	130	0.3	8.6	207	16.2
85-027-28	49300	14.25		17	0.6	406	0.19	0.08	1.8	1500	3.14	1.1	115	0.4	20.5	68	68.7
85-027-15	1200	1.2		2	1.3	99.2	0.49	0.09	4.5	3400	0.51	1.9	153	1	15.8	127	70.7
85-027-16	1000	0.57		2	1.6	117.5	0.58	0.05	5.1	4790	0.62	1.7	195	1	13.1	164	62.6
85-027-17	1400	0.98		2	0.7	124.5	0.19	0.05	2	1150	0.13	0.8	43	0.4	6	40	27.6
85-027-17 (HC)	1100	0.93		0.5	0.7	173	0.2	0.025	2	1150	0.13	0.8	43	0.4	5.9	38	30
85-027-24	600	0.59		2	1	125	0.46	0.05	3.9	3510	0.28	1.6	136	0.6	13.3	129	53.1
85-027-24 (HC)	500	0.6		0.5	0.9	183.5	0.33	0.025	2.7	2570	0.2	1.1	98	0.5	9.9	81	42.8
85-027-18	24700	2.12		2	1.4	183.5	0.41	0.11	3.8	5250	0.54	0.9	161	0.6	11.4	128	50.7

Project:

Client:

Data:

Comments:

Mount Klappan

Rescan Environmental

ICP Metals Data

Rock units designated by Gulf.

Ba, Cr, Sn, Ta, Ti, W, and Zr may not be totally soluble in the 4-acid digestion MS61 method.

The ICP metals for samples 04-Sr-02, 86-035-01, and 86-035-10 were done by aqua regia digestion instead of 4-acid digestion.

Al, B, Ba, Be, Ca, Ce, Cr, Cs, Ga, Ge, Hf, In, K, La, Li, Mg, Na, Nb, Rb, Re, S, Sb, Sc, Sn, Sr, Ta, Te, Th, Ti, Tl, W, Y, and Zr may not be totally soluble in the aqua regia digestion MS41 method.

Sample Id.	Sulphur S (ppm)	Antimony Sb (ppm)	Scandium Sc (ppm)	Selenium Se (ppm)	Tin Sn (ppm)	Strontium Sr (ppm)	Tantalum Ta (ppm)	Tellurium Te (ppm)	Thorium Th (ppm)	Titanium Ti (ppm)	Thallium Tl (ppm)	Uranium U (ppm)	Vanadium V (ppm)	Tungsten W (ppm)	Yttrium Y (ppm)	Zinc Zn (ppm)	Zirconium Zr (ppm)
Method	ME-MS61	ME-MS61	ME-MS41	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
MDL	100	0.05	0.1	1	0.2	0.2	0.05	0.05	0.2	50	0.02	0.1	1	0.1	0.1	2	0.5
Crustal Abundance: From	240	0.1		0.05	0.5	1	0.8	NA	0.004	300	0.16	0.45	20	0.6	20	16	19
Crustal Abundance: To	2400	1.5		0.6	6	2000	4.2	NA	17	13800	2.3	3.7	250	2.2	90	165	500

- G-85-006-125
- G-85-006-126
- G-85-006-127
- G-85-006-145
- G-85-006-128
- G-85-006-129
- G-85-006-130
- G-85-006-131
- G-85-006-132
- G-85-006-133
- G-85-006-134
- G-85-006-135
- G-85-006-136
- G-85-006-137
- G-85-006-138
- G-85-006-139
- G-85-006-140
- G-85-005-01
- G-85-005-02
- G-85-005-03
- G-85-005-04
- G-85-005-05
- G-85-005-31
- G-85-005-7541
- G-85-005-32
- G-85-005-06
- G-85-005-07
- G-85-005-08
- G-85-005-33
- G-85-005-34
- G-85-005-09
- G-85-005-10
- G-85-005-11
- G-85-005-12
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- G-85-005-35
- G-85-005-14
- G-85-005-36
- G-85-005-15
- G-85-005-16
- G-85-005-17
- G-85-005-18
- G-85-005-19
- G-85-005-20
- G-85-005-21
- G-85-005-37
- G-85-005-22
- G-85-005-7328

Project:

Client:

Data:

Comments:

Mount Klappan

Rescan Environmental

ICP Metals Data

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The ICP metals for samples 04-Sr-02, 86-035-01, and 86-035-10 were done by aqua regia digestion instead of 4-acid digestion.

Al, B, Ba, Be, Ca, Ce, Cr, Cs, Ga, Ge, Hf, In, K, La, Li, Mg, Na, Nb, Rb, Re, S, Sb, Sc, Sn, Sr, Ta, Te, Th, Ti, Tl, W, Y, and Zr may not be totally soluble in the aqua regia digestion MS41 method.

Sample Id.	Sulphur S (ppm)	Antimony Sb (ppm)	Scandium Sc (ppm)	Selenium Se (ppm)	Tin Sn (ppm)	Strontium Sr (ppm)	Tantalum Ta (ppm)	Tellurium Te (ppm)	Thorium Th (ppm)	Titanium Ti (ppm)	Thallium Tl (ppm)	Uranium U (ppm)	Vanadium V (ppm)	Tungsten W (ppm)	Yttrium Y (ppm)	Zinc Zn (ppm)	Zirconium Zr (ppm)
Method	ME-MS61	ME-MS61	ME-MS41	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
MDL	100	0.05	0.1	1	0.2	0.2	0.05	0.05	0.2	50	0.02	0.1	1	0.1	0.1	2	0.5
Crustal Abundance: From	240	0.1		0.05	0.5	1	0.8	NA	0.004	300	0.16	0.45	20	0.6	20	16	19
Crustal Abundance: To	2400	1.5		0.6	6	2000	4.2	NA	17	13800	2.3	3.7	250	2.2	90	165	500

- G-85-005-23
- G-85-005-24
- G-85-005-25
- G-85-005-26
- G-85-005-27
- G-85-005-28
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- G-85-005-39
- G-85-005-40
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- G-85-005-42
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- G-85-005-43
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- G-85-005-46
- G-85-004-7300
- G-85-003-7287
- G-85-002-7267
- G-85-001-7264
- G-84-007-01
- G-84-007-02
- G-84-007-89
- G-84-007-03
- G-84-007-04
- G-84-007-05
- G-84-007-06
- G-84-007-07
- G-84-007-08
- G-84-007-85
- G-84-007-10
- G-84-007-11
- G-84-007-12
- G-84-007-13
- G-84-007-14
- G-84-007-15
- G-84-007-16
- G-84-007-17
- G-84-007-18
- G-84-007-19
- G-84-007-20
- G-84-007-21
- G-84-007-22
- G-84-007-23
- G-84-007-24

Project:

Client: Rescan Environmental

Data: ICP Metals Data

Comments:

Mount Klappan

Rescan Environmental

ICP Metals Data

Rock units designated by Gulf.

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The ICP metals for samples 04-Sr-02, 86-035-01, and 86-035-10 were done by aqua regia digestion instead of 4-acid digestion.

Al, B, Ba, Be, Ca, Ce, Cr, Cs, Ga, Ge, Hf, In, K, La, Li, Mg, Na, Nb, Rb, Re, S, Sb, Sc, Sn, Sr, Ta, Te, Th, Ti, Tl, W, Y, and Zr may not be totally soluble in the aqua regia digestion MS41 method.

Sample Id.	Sulphur S (ppm)	Antimony Sb (ppm)	Scandium Sc (ppm)	Selenium Se (ppm)	Tin Sn (ppm)	Strontium Sr (ppm)	Tantalum Ta (ppm)	Tellurium Te (ppm)	Thorium Th (ppm)	Titanium Ti (ppm)	Thallium Tl (ppm)	Uranium U (ppm)	Vanadium V (ppm)	Tungsten W (ppm)	Yttrium Y (ppm)	Zinc Zn (ppm)	Zirconium Zr (ppm)
Method	ME-MS61	ME-MS61	ME-MS41	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
MDL	100	0.05	0.1	1	0.2	0.2	0.05	0.05	0.2	50	0.02	0.1	1	0.1	0.1	2	0.5
Crustal Abundance: From	240	0.1		0.05	0.5	1	0.8	NA	0.004	300	0.16	0.45	20	0.6	20	16	19
Crustal Abundance: To	2400	1.5		0.6	6	2000	4.2	NA	17	13800	2.3	3.7	250	2.2	90	165	500
G-84-007-25																	
G-84-007-26																	
G-84-007-27																	
G-84-007-28																	
G-84-007-29																	
G-84-007-30																	
G-84-007-31																	
G-84-007-32																	
G-84-007-33																	
G-84-007-84																	
G-84-007-34																	
G-84-007-35																	
05-ARD4-09	500	1.05		2	1	215	0.29	0.025	2.5	2950	0.25	0.9	93	0.5	12.5	68	47.6
05-ARD4-10	500	0.94		2	1.3	90.3	0.49	0.08	3.9	3250	0.44	1.6	115	0.7	12.6	99	50.5
05-ARD4-03	1000	1.43		3	1.7	128.5	0.64	0.12	5.4	3760	0.63	2	141	1.1	15.6	126	69.9
05-ARD4-04	2000	3.96		5	1.4	450	0.25	0.19	2.6	3610	0.56	0.7	123	0.3	13.9	100	73.8
05-ARD4-06	2000	2.65		3	1.7	118	0.66	0.07	5.9	3850	0.72	2.2	137	1.1	13.1	138	73.5
05-ARD4-05	300	0.79		2	1.2	113	0.47	0.05	3.4	2980	0.38	1.2	97	0.7	10.7	77	52.5
05-ARD4-07-1	300	0.73		2	1.3	128.5	0.67	0.025	4.2	3450	0.45	1.5	110	0.7	10.8	81	68.6
ARD4-2006A	600	1.32		2	1.4	137.5	0.6	0.09	4.6	4110	0.58	2.2	152	0.9	14.6	141	68.1
05-ARD4-08	3600	0.77		3	1	127	0.37	0.08	3.2	2920	0.32	1.3	142	0.6	14.4	87	59.1
ARD4-2006B	500	0.49		1	1	137	0.35	0.025	2.8	2430	0.23	1.2	88	0.7	10.5	71	47.1
05-ARD4-02	23800	3.62		3	1.5	188	0.39	0.14	4	5330	0.6	1	168	0.7	13.2	130	57.5
ARD4-2006C	100000	5.79		6	1.2	338	0.25	0.07	2.4	2780	0.77	1.1	108	0.4	10.8	97	52.3
05-ARD4-01	97900	1.15		5	1.1	184.5	0.28	0.08	2.9	4050	1.02	1.1	94	0.4	14.3	104	60.2
05-ARD3-01A	500	1.12		2	1	170	0.28	0.09	2.6	3980	0.27	1.1	160	0.5	15.1	87	67.3
05-ARD3-02B	77200	28.8		13	1.3	81.8	0.38	0.13	3.5	3250	3.17	1.9	177	0.7	13.9	134	106.5
05-ARD3-16	600	0.72		1	1	115	0.27	0.025	2.8	2050	0.28	1	71	0.6	9.9	63	34
05-ARD3-03A	600	0.95		1	0.9	178.5	0.3	0.025	2.9	2520	0.34	1	126	0.6	9.8	83	34.2
05-ARD3-04A	5500	0.79		3	0.8	308	0.17	0.05	3.4	2230	0.36	1.2	45	0.4	11.4	40	37.1
05-ARD3-05A	7500	3.57		5	1.3	128.5	0.5	0.11	4.2	4330	0.69	1.6	147	1	12.9	132	56
05-ARD3-07A	500	0.92		1	1.1	99.1	0.23	0.025	2.4	1870	0.29	0.9	53	0.6	12.6	66	59.5
05-ARD3-07B (HC)	700	1.46		2	1.8	162.5	0.41	0.09	3.9	2850	0.45	1.4	91	1	22.8	100	97.2
ARD3-2006B	1300	1.84		2	1.2	133	0.53	0.08	4.2	3380	0.64	2	152	1.2	11.1	132	74.4
ARD3-2006C	2100	1.84		2	1.4	138.5	0.6	0.11	4.5	4500	0.62	2.2	173	0.9	15.6	136	80.1
05-ARD3-06A	800	0.43		2	1	99.4	0.32	0.06	2.9	2880	0.32	1.1	97	0.6	8.8	93	42
05-ARD3-08A	100000	25.1		8	1.2	288	0.23	0.09	2.3	4710	2.79	1	220	0.5	31.1	120	147
05-ARD3-08B (HC)	13900	4.56		4	1.3	202	0.39	0.07	3.8	4020	0.68	1.3	125	0.7	16.1	116	57.9
05-ARD3-09A	800	0.97		2	1.7	218	0.45	0.1	5.3	5140	0.68	1.7	158	1	14.3	138	73.7
ARD3-2006A	500	0.6		1	1.8	221	0.56	0.11	5.5	5700	0.73	2.4	156	0.9	15.9	147	96.2
05-ARD3-10A	900	0.47		1	1.2	192.5	0.33	0.12	3.3	4210	0.36	1	140	0.6	11.8	107	49.3
05-ARD3-15A	500	0.35		1	0.9	154	0.29	0.025	2.4	3590	0.18	0.8	103	0.5	9.6	92	34.9
05-ARD3-12A	500	0.34		1	0.9	144.5	0.27	0.025	2.3	3150	0.17	0.7	100	0.5	8.8	74	34.2
05-ARD3-11A	1000	0.81		1	1.1	213	0.31	0.025	2.9	3760	0.28	0.8	106	0.5	10	99	39.6
05-ARD3-14A	63500	5.52		8	1.2	147	0.14	0.06	1.5	1700	0.35	0.5	73	0.4	6.5	96	132
05-ARD3-14B (HC)	5800	0.88		3	1.2	155	0.3	0.11	3.4	2230	0.38	1.2	90	0.7	12.6	68	83.7
05-ARD3-13A	50	0.025		1	0.1	14.8	0.025	0.025	0.3	180	0.02	0.1	4	0.1	1.3	5	5.8
05-ARD2-04	100	0.46		1	1.2	98.8	0.49	0.07	4.3	3970	0.36	1.5	142	0.8	13	126	62.8

Project:

Client: Rescan Environmental

Data: ICP Metals Data

Comments:

Mount Klappan

Rescan Environmental

ICP Metals Data

Rock units designated by Gulf.

Ba, Cr, Sn, Ta, Ti, W, and Zr may not be totally soluble in the 4-acid digestion MS61 method.

The ICP metals for samples 04-Sr-02, 86-035-01, and 86-035-10 were done by aqua regia digestion instead of 4-acid digestion.

Al, B, Ba, Be, Ca, Ce, Cr, Cs, Ga, Ge, Hf, In, K, La, Li, Mg, Na, Nb, Rb, Re, S, Sb, Sc, Sn, Sr, Ta, Te, Th, Ti, Tl, W, Y, and Zr may not be totally soluble in the aqua regia digestion MS41 method.

Sample Id.	Sulphur S (ppm)	Antimony Sb (ppm)	Scandium Sc (ppm)	Selenium Se (ppm)	Tin Sn (ppm)	Strontium Sr (ppm)	Tantalum Ta (ppm)	Tellurium Te (ppm)	Thorium Th (ppm)	Titanium Ti (ppm)	Thallium Tl (ppm)	Uranium U (ppm)	Vanadium V (ppm)	Tungsten W (ppm)	Yttrium Y (ppm)	Zinc Zn (ppm)	Zirconium Zr (ppm)
Method	ME-MS61	ME-MS61	ME-MS41	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
MDL	100	0.05	0.1	1	0.2	0.2	0.05	0.05	0.2	50	0.02	0.1	1	0.1	0.1	2	0.5
Crustal Abundance: From	240	0.1		0.05	0.5	1	0.8	NA	0.004	300	0.16	0.45	20	0.6	20	16	19
Crustal Abundance: To	2400	1.5		0.6	6	2000	4.2	NA	17	13800	2.3	3.7	250	2.2	90	165	500
05-ARD2-08	2000	1.02		1	1.2	211	0.42	0.09	4.3	3860	0.41	1.2	142	0.7	12.1	126	52.3
05-ARD2-07	2700	1.02		2	1.1	211	0.34	0.08	3.7	3380	0.37	1.1	123	1	13.2	108	51.9
05-ARD2-07 (HC)	2900	1.02		3	1.2	218	0.42	0.11	4.1	3890	0.4	1.1	139	0.8	14.2	121	57.9
05-ARD2-13	100000	5.79		4	0.5	532	0.07	0.025	0.8	1270	1.27	0.3	34	0.2	9.2	18	35.1
05-ARD2-12	100000	6.51		6	0.7	504	0.1	0.025	1.2	1640	1.16	0.4	49	0.3	8.6	44	46.1
05-ARD2-12 (HC)	86900	8.46		5	0.6	803	0.11	0.06	1.2	1660	1.07	0.4	66	0.4	11.2	31	69.6
05-ARD2-16	2100	1.6		2	0.9	150	0.21	0.025	2.3	2660	0.42	0.7	146	0.5	7.8	98	142.5
05-ARD2-11	400	0.82		2	1.6	133	0.54	0.025	5.2	4490	0.85	1.9	138	1.2	12.6	182	61.2
05-ARD2-09	400	1.06		2	1.3	215	0.52	0.08	4.7	3910	0.52	1.8	138	1	14.8	129	62.2
05-ARD2-02	600	1.34		2	1.3	825	0.47	0.08	4.5	3810	0.49	1.7	142	0.8	14.7	134	54.4
05-ARD2-10A	13100	8.31		5	1	219	0.23	0.19	2.6	3830	1.37	0.9	140	0.5	10.9	102	46.2
05-ARD2-14	600	1.23		1	0.8	181	0.2	0.025	2	3230	0.23	0.7	85	0.4	10.1	69	37.7
05-ARD2-06	600	0.78		1	1.1	188.5	0.27	0.07	3	4070	0.37	1.1	149	0.6	16.9	84	67.7
05-ARD2-01A	600	0.8		1	0.8	212	0.22	0.1	2.3	3310	0.26	0.6	161	0.4	17	104	51.4
05-ARD2-15	500	0.68		2	1.2	184.5	0.31	0.1	3.4	4370	0.35	1.1	154	0.6	10.8	111	40.7
05-ARD2-05	1300	1.3		1	0.6	182	0.18	0.025	2	1610	0.14	0.8	50	0.3	10.7	42	36.5
ARD2-2006A	9100	1.7		3	1.2	221	0.35	0.11	2.7	4310	1.79	1.1	105	0.6	13.6	95	71.7
ARD2-2006B	800	1.64		1	1.5	170	0.47	0.11	3.8	5200	0.71	1.4	161	0.8	15.1	124	68.4
05-ARD2-03	700	0.97		1	0.8	310	0.24	0.025	2.3	1690	0.25	0.9	63	0.5	9.7	57	27.7
05-ARD1-11	200	0.1		2	0.1	10.4	0.025	0.025	0.1	150	0.01	0.1	11	0.1	0.9	5	7.9
05-ARD1-15	700	0.45		1	0.7	469	0.23	0.025	2.2	1560	0.23	0.8	69	0.5	8	55	29.4
05-ARD1-15 (HC)	600	0.52		2	0.7	351	0.26	0.025	2.3	1660	0.22	0.8	68	0.5	8.3	58	31
05-ARD1-13	500	0.95		4	1.4	73.9	0.58	0.12	4.6	3750	0.63	2	162	1.1	15.9	140	67.8
05-ARD1-14	1300	1.81		3	1.6	111	0.62	0.12	5.8	4330	0.7	2.2	178	1.2	17.2	157	66.9
05-ARD1-12	500	1.09		2	0.9	109	0.28	0.05	2.8	2020	0.24	1.1	88	0.6	9.1	81	42.4
05-ARD1-08	700	1.73		3	0.8	380	0.3	0.07	2.8	2450	0.25	1.3	115	0.6	10.8	106	56.5
05-ARD1-03	500	2.19		4	1.5	119	0.65	0.12	5.6	4440	0.77	2.3	176	1.3	14.4	209	78
05-ARD1-01	600	0.69		4	1.2	116.5	0.47	0.1	4.4	3600	0.41	1.8	167	0.8	17.3	190	67
05-ARD1-02	900	0.97		3	1.3	123	0.51	0.09	4.5	4250	0.4	1.7	146	0.9	11.9	171	61.9
05-ARD1-07	2200	0.63		3	1.6	191.5	0.46	0.12	4.9	4270	0.57	1.9	126	0.8	16	110	90.2
05-ARD1-07 (HC)	2900	1.18		2	1.3	188.5	0.4	0.07	3.9	4540	0.45	1.3	134	0.7	12.2	127	60.8
05-ARD1-07-2	400	0.9		2	0.8	169	0.27	0.05	2.6	1910	0.27	0.9	79	0.5	8.7	84	35.4
05-ARD1-06	7500	1.4		4	1.4	171.5	0.42	0.1	4.5	4720	0.73	1.5	155	0.7	13.7	141	74.1
05-ARD1-06 (HC)	5800	1.18		2	1.3	179	0.4	0.07	4.2	4670	0.59	1.3	138	0.8	12.4	127	61.9
ARD1-2006A	17500	2.16		1	1.6	188.5	0.5	0.12	4.6	5210	0.67	1.5	165	0.8	14.2	132	78.9
05-ARD1-09	100000	1.26		6	1.2	164	0.3	0.1	2.7	4130	0.78	1.1	124	0.5	16.6	148	59.9
05-ARD1-10	3100	0.58		2	1	188	0.35	0.08	3	3940	0.3	1	138	0.5	12.2	105	49.7
05-ARD1-04	900	0.52		2	1.3	192	0.42	0.11	3.6	4740	0.39	1.2	155	0.7	13.7	126	63.6
05-ARD1-05	900	1.31		3	1.3	137.5	0.49	0.08	4.2	3900	0.4	1.7	146	0.9	13.2	146	60.6
05-019-08	500	0.93		2	1.4	181.5	0.43	0.09	4.5	4370	0.45	1.6	140	0.7	12.3	106	72.4
05-019-03	600	1.1		2	1.4	184.5	0.43	0.06	4	4280	0.46	1.5	137	0.7	13.4	105	68.4
05-019-01	800	0.41		2	1.5	157.5	0.42	0.07	4.6	4210	0.5	1.5	143	0.7	10.6	102	96.1
05-019-13	900	0.64		2	1.2	175.5	0.37	0.09	3.2	4200	0.34	1	137	0.5	10.2	98	49.4
05-019-2006A	800	0.9		1	1.1	203	0.37	0.05	2.7	3780	0.29	1.1	117	0.6	13.8	94	63.6
05-019-16	3400	0.78		2	1.3	204	0.42	0.11	3.5	4400	0.41	1	150	0.6	12.1	106	55.1
05-019-14	3300	0.35		2	0.1	25.2	0.025	0.025	0.2	160	0.08	0.1	6	0.1	1.8	5	7.3
05-019-15	2600	0.64		3	1.7	141	0.6	0.09	4.9	3990	0.69	1.9	138	1.1	14.3	132	85.6
05-019-10	300	0.62		2	1.1	203	0.39	0.05	3.2	2830	0.3	1.3	104	0.7	10.3	91	49.3

Project:**Mount Klappan**

Client:

Rescan Environmental

Data:

ICP Metals Data

Comments:

Rock units designated by Gulf.

Ba, Cr, Sn, Ta, Ti, W, and Zr may not be totally soluble in the 4-acid digestion MS61 method.

The ICP metals for samples 04-Sr-02, 86-035-01, and 86-035-10 were done by aqua regia digestion instead of 4-acid digestion.

Al, B, Ba, Be, Ca, Ce, Cr, Cs, Ga, Ge, Hf, In, K, La, Li, Mg, Na, Nb, Rb, Re, S, Sb, Sc, Sn, Sr, Ta, Te, Th, Ti, W, Y, and Zr may not be totally soluble in the aqua regia digestion MS41 method.

Sample Id.	Sulphur S (ppm)	Antimony Sb (ppm)	Scandium Sc (ppm)	Selenium Se (ppm)	Tin Sn (ppm)	Strontium Sr (ppm)	Tantalum Ta (ppm)	Tellurium Te (ppm)	Thorium Th (ppm)	Titanium Ti (ppm)	Thallium Tl (ppm)	Uranium U (ppm)	Vanadium V (ppm)	Tungsten W (ppm)	Yttrium Y (ppm)	Zinc Zn (ppm)	Zirconium Zr (ppm)
Method	ME-MS61	ME-MS61	ME-MS41	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
MDL	100	0.05	0.1	1	0.2	0.2	0.05	0.05	0.2	50	0.02	0.1	1	0.1	0.1	2	0.5
Crustal Abundance: From	240	0.1		0.05	0.5	1	0.8	NA	0.004	300	0.16	0.45	20	0.6	20	16	19
Crustal Abundance: To	2400	1.5		0.6	6	2000	4.2	NA	17	13800	2.3	3.7	250	2.2	90	165	500
Maximum	100000	51.1	5.3	123	1.8	3380	0.67	0.34	5.9	5860	4.27	2.4	220	1.3	36.7	209	147
Minimum	50	0.025	2.3	0.3	0.1	10.4	0.01	0.02	0.1	50	0.01	0.05	3	0.05	0.3	5	0.7
Mean	8714	2.36	3.77	3.65	1.09	235	0.35	0.078	3.18	3388	0.51	1.18	118	0.61	12.8	100	55.6
Standard Deviation	23158	5.65	1.5	10.6	0.37	292	0.15	0.045	1.28	1371	0.53	0.51	44.2	0.25	4.39	39.3	23.8
10 Percentile	310	0.45	2.58	1	0.6	111	0.14	0.025	1.32	1506	0.17	0.51	50.3	0.3	8.6	48.3	29.5
25 Percentile	500	0.63	3	2	0.9	137	0.27	0.05	2.5	2508	0.28	0.9	94	0.5	10.6	73.8	42.7
Median	850	0.97	3.7	2	1.1	180	0.35	0.07	3.2	3755	0.38	1.1	131	0.6	12.6	102	54.2
75 Percentile	2750	1.56	4.5	3	1.3	211	0.44	0.1	4.1	4370	0.57	1.5	147	0.7	14.5	127	68.1
90 Percentile	17500	3.62	4.98	4	1.5	351	0.53	0.12	4.6	5014	0.77	1.9	166	0.9	16.9	141	77.9
Interquartile Range (IQR) ¹	2250	0.93	1.5	1	0.4	73.6	0.17	0.05	1.6	1863	0.3	0.6	53	0.2	3.88	53.3	25.4
Variance	536309417	31.9	2.25	111	0.14	85173	0.022	0.002	1.63	1878717	0.28	0.26	1958	0.063	19.2	1542	564
Skewness	3.35	5.79	0.2	9.75	-0.62	7.87	-0.2	1.75	-0.31	-0.64	4.29	0.094	-0.76	0.081	1.31	0.013	0.76
Coefficient of Variation (CoV) ²	2.66	2.4	0.4	2.89	0.34	1.24	0.43	0.57	0.4	0.4	1.04	0.43	0.37	0.41	0.34	0.39	0.43
Count	172	172	3	172	172	172	172	172	172	172	172	172	172	172	172	172	172

NOTE: if data is boxed, then data is

3 times the maximum crustal abundance.

Crustal abundance data taken from Price, 1997, Appendix 3, Table 1 excluding ultrabasic values.

¹ Interquartile Range (IQR) = 75th percentile minus 25th percentile² Coefficient of Variation (CoV) = standard deviation divided by mean*NOTE: If data was reported as < detection limit half the detection limit is shown in italics and was used in subsequent calculations.**NOTE: If data was reported as > detection limit the detection limit is shown in bold and was used in subsequent calculations.*

Project: Mount Klappan
Client: Rescan Environmental
Data: Whole Rock by XRF
Comments: Rock units designated by Gulf.

Sample Id.	Al ₂ O ₃ (%)	BaO (%)	CaO (%)	Cr ₂ O ₃ (%)	Fe ₂ O ₃ (%)	K ₂ O (%)	MgO (%)	MnO (%)	Na ₂ O (%)	P ₂ O ₅ (%)	SiO ₂ (%)	SrO (%)	TiO ₂ (%)	LOI (%)	Total (%)
Method	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06
MDL	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
04-SR-01	12.82	0.09	1.64	0.005	17.03	1.22	3.79	0.3	1.09	0.29	43.11	0.02	0.68	17.1	99.19
04-SR-02	6.64	0.16	3.6	0.005	8.4	0.2	2.21	0.08	0.3	1.78	18.68	0.08	0.14	56.8	99.08
04-SR-03	7.41	0.06	2.94	0.02	3.45	0.97	2.88	0.06	1.13	0.1	71.47	0.02	0.37	7.4	98.28
04-SR-04	7.33	0.08	0.61	0.01	16.31	1.34	8.78	0.3	0.47	0.13	31.77	0.01	0.37	32.5	100.01
04-SR-05	9.56	0.09	6.69	0.03	6.26	1.44	5.52	0.21	1.51	0.13	51.52	0.07	0.52	14.7	98.25
86-035-01	12.13	0.07	1.4	0.005	4.54	0.79	0.87	0.005	0.49	0.45	23.88	0.04	0.7	53.1	98.47
86-035-02	14.39	0.08	1.87	0.03	8.13	1.42	3.34	0.13	1.71	0.21	54.61	0.01	0.78	11.5	98.21
86-035-03	12.7	0.06	1.67	0.01	10.87	1.08	4.56	0.16	1.18	0.1	52.78	0.02	0.65	12.9	98.74
86-035-04	2.33	0.02	5.53	0.005	35.57	0.19	2.66	0.12	0.1	0.25	18.64	0.06	0.1	33.4	98.98
86-035-13	16.56	0.1	2.16	0.02	5.81	1.45	2.49	0.1	1.77	0.19	55.13	0.02	0.93	11.75	98.48
86-035-05	16.62	0.1	1.98	0.02	6.71	1.26	2.32	0.11	1.7	0.26	54.65	0.02	0.88	11.65	98.28
86-035-10	8.91	0.23	6.05	0.005	1.84	0.91	3.35	0.02	0.46	1.06	23.3	0.13	0.61	52.6	99.48
86-035-06	1.44	0.01	16.1	0.005	7.7	0.14	12.18	0.26	0.27	0.04	27.61	0.34	0.05	32.8	98.95
86-035-07	13.73	0.15	0.54	0.02	4.1	2.17	2.02	0.06	1.76	0.13	66.31	0.02	0.72	6.67	98.40
86-035-07 (HC)	9.94	0.07	1.03	0.03	8.33	1.35	2.43	0.11	1.06	0.12	64.2	0.02	0.53	9.67	98.89
86-035-08	10.9	0.08	0.5	0.02	14.25	1.84	3.58	0.22	0.88	0.14	52.84	0.01	0.59	12.9	98.75
86-035-12	8.11	0.06	3.39	0.005	22.03	1.15	6.08	0.24	0.42	0.24	36.62	0.03	0.37	21	99.75
86-035-11	16.66	0.09	0.5	0.02	3.21	1.71	1.05	0.01	2.89	0.07	66.51	0.02	0.66	4.79	98.19
86-035-09	13.42	0.09	2.28	0.03	4.85	1.3	1.97	0.02	2.15	0.12	58.94	0.02	0.64	13.05	98.88
86-035-09 (HC)	14.7	0.11	2.07	0.03	6.16	1.41	2.77	0.05	2.23	0.15	60.39	0.02	0.67	9.27	100.03
85-027-01	11.58	0.1	0.48	0.03	7.35	1.65	4	0.08	1.39	0.15	61.98	0.01	0.66	8.72	98.18
85-027-02	13.89	0.15	0.8	0.01	8.95	2.6	3.88	0.07	1.02	0.23	55.12	0.02	0.72	11.6	99.06
85-027-02 (HC)	16.35	0.16	0.45	0.01	6.48	2.93	3.34	0.05	1.2	0.17	57.68	0.01	0.85	9.57	99.25
85-027-03	12.23	0.12	2.22	0.02	5.52	1.78	2.04	0.03	1.47	0.93	61.85	0.02	0.52	10.1	98.85
85-027-04	11.84	0.09	2.36	0.02	6.23	1.67	3.35	0.09	1.65	0.14	58.8	0.02	0.65	11.55	98.46
85-027-27	14.34	0.09	2.51	0.03	6.02	1.24	2.71	0.08	2.38	0.14	58.42	0.02	0.71	9.96	98.65
85-027-05	15.95	0.08	3.63	0.06	3.96	1.17	2.72	0.05	2.82	0.2	58.84	0.03	0.98	9.56	100.05
85-027-06	15.32	0.14	1.01	0.02	6.12	2.11	3.05	0.13	1.54	0.17	53.99	0.02	0.81	14.6	99.03
85-027-25	14.54	0.09	1.28	0.02	7.53	1.43	2.53	0.13	1.89	0.15	57.61	0.02	0.78	10.75	98.75
85-027-21	3.52	0.02	11.99	0.005	7.33	0.21	5.74	0.23	0.58	0.05	50.09	0.08	0.14	18.75	98.74
85-027-07	11.19	0.09	2.11	0.01	13.97	1.28	3.95	0.26	1.18	1.03	50.34	0.01	0.59	14	100.01
85-027-08	6.1	0.03	12.4	0.005	7.6	0.32	6.32	0.27	1.27	0.07	45.11	0.1	0.27	19.25	99.12
85-027-09	16.47	0.1	1.83	0.02	8.1	1.55	2.83	0.13	2.25	0.26	53.71	0.02	0.9	11.55	99.72
85-027-10	17.53	0.1	3.09	0.02	6.8	1.37	2.59	0.13	1.99	0.15	51.82	0.02	0.91	13.45	99.97
85-027-11	14.19	0.09	2.34	0.03	5.36	1.08	2.43	0.08	1.95	0.13	60.32	0.02	0.66	9.83	98.51
85-027-20	7.11	0.05	3.79	0.005	23.84	0.58	5.88	0.57	0.69	0.27	35.57	0.02	0.36	21.1	99.84
85-027-12	12.64	0.1	2.08	0.01	5.3	1.11	2.25	0.07	1.82	0.49	56.4	0.04	0.7	16	99.01
85-027-13	18.21	0.18	0.22	0.01	4.27	2.52	2.2	0.06	1.67	0.14	58.85	0.01	0.97	10.5	99.81
85-027-23	12.2	0.12	3.48	0.03	4.97	1.82	3.94	0.09	1.28	0.21	60.3	0.02	0.68	9.17	98.31
85-027-14	11.13	0.12	0.28	0.005	32.58	1.75	0.84	0.03	1.01	0.06	30.46	0.01	0.71	21.1	100.09
85-027-28	5.64	0.06	7.17	0.005	14.5	0.82	6.65	0.37	0.3	0.16	26.54	0.05	0.25	35.7	98.22
85-027-15	11.69	0.14	0.64	0.01	9.74	1.97	3.72	0.19	1.35	0.19	59.43	0.01	0.62	9.99	99.69
85-027-16	16.56	0.15	0.19	0.02	3.02	3.01	1.81	0.01	1.44	0.12	64.49	0.02	0.88	6.78	98.50
85-027-17	4.65	0.03	0.83	0.01	1.45	0.53	0.99	0.005	0.91	0.06	86.39	0.02	0.22	2.42	98.52
85-027-17 (HC)	4.67	0.04	1.35	0.005	1.67	0.51	1.24	0.01	0.82	0.07	84.81	0.02	0.19	3.29	98.70
85-027-24	11.81	0.06	0.57	0.05	3.82	1.34	2.85	0.02	1.56	0.14	69.84	0.02	0.7	5.95	98.73
85-027-24 (HC)	8.96	0.06	4.5	0.05	4.16	1.01	4.26	0.05	1.27	0.15	63.89	0.02	0.47	10.35	99.20
85-027-18	18.58	0.16	0.19	0.01	5.29	2.47	1.48	0.01	1.57	0.11	57.42	0.02	0.97	11.15	99.43

Project: Mount Klappan
Client: Rescan Environmental
Data: Whole Rock by XRF
Comments: Rock units designated by Gulf.

Sample Id.	Al ₂ O ₃ (%)	BaO (%)	CaO (%)	Cr ₂ O ₃ (%)	Fe ₂ O ₃ (%)	K ₂ O (%)	MgO (%)	MnO (%)	Na ₂ O (%)	P ₂ O ₅ (%)	SiO ₂ (%)	SrO (%)	TiO ₂ (%)	LOI (%)	Total (%)
Method	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06
MDL	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
G-84-007-25															
G-84-007-26															
G-84-007-27															
G-84-007-28															
G-84-007-29															
G-84-007-30															
G-84-007-31															
G-84-007-32															
G-84-007-33															
G-84-007-84															
G-84-007-34															
G-84-007-35															
05-ARD4-09	12.49	0.07	2.98	0.02	5.72	0.94	2.88	0.09	2.04	0.15	61.16	0.02	0.53	10.3	99.39
05-ARD4-10	11.63	0.1	0.41	0.04	4.46	1.68	2.49	0.06	1.29	0.16	69.74	0.01	0.64	6.1	98.81
05-ARD4-03	12.67	0.14	0.51	0.02	5.67	2.37	3.75	0.11	0.9	0.16	63.73	0.02	0.73	8.65	99.43
05-ARD4-04	13.98	0.15	4.91	0.01	8.78	2.39	6.64	0.19	0.45	0.14	35.38	0.05	0.7	26.2	99.97
05-ARD4-06	14.49	0.16	0.21	0.01	3.26	2.66	2.41	0.02	1.28	0.1	65.69	0.01	0.74	8.17	99.21
05-ARD4-05	11.69	0.12	0.32	0.03	5.07	1.72	2.71	0.06	1.47	0.12	68.32	0.01	0.58	6.53	98.75
05-ARD4-07-1	13.51	0.14	0.33	0.06	3.64	2.05	2.06	0.04	1.37	0.09	69.5	0.01	0.64	5.91	99.35
ARD4-2006A	13.47	0.16	0.32	0.03	6.02	2.29	2.54	0.12	1.38	0.14	62.49	0.03	0.78	8.74	98.51
05-ARD4-08	10.12	0.07	0.65	0.03	18.09	1.37	6	0.26	0.86	0.12	45.07	0.01	0.52	16.65	99.82
ARD4-2006B	8.62	0.05	1.77	0.04	2.89	1.07	2.09	0.05	1.48	0.18	73.77	0.02	0.43	5.76	98.22
05-ARD4-02	19.65	0.13	0.16	0.01	4.66	2.57	1.15	0.01	1.61	0.09	57.98	0.02	1.03	10.7	99.77
ARD4-2006C	11.85	0.09	4.74	0.01	15.82	1.6	3.12	0.07	1.03	0.09	38.45	0.04	0.57	22.2	99.68
05-ARD4-01	15.67	0.13	1.46	0.02	14.23	1.75	1.66	0.02	1.69	0.06	43.79	0.02	0.77	18.75	100.02
05-ARD3-01A	14.14	0.08	2.24	0.01	11.32	1.02	3.27	0.2	1.37	0.12	50.76	0.03	0.82	14.65	100.03
05-ARD3-02B	12.07	0.13	0.15	0.01	12.29	2.04	1.17	0.03	0.9	0.09	51.4	0.01	0.64	19.05	99.98
05-ARD3-16	8.17	0.09	1.08	0.03	2.49	1.09	1.63	0.03	1.12	0.13	77.99	0.01	0.39	3.89	98.14
05-ARD3-03A	8.65	0.08	5.12	0.03	7.02	1.35	4.88	0.12	0.98	0.09	58.41	0.02	0.47	11.6	98.82
05-ARD3-04A	14.64	0.19	2.57	0.005	4.44	1.45	2.39	0.1	1.23	0.3	29	0.05	0.42	43.3	100.09
05-ARD3-05A	14.69	0.17	0.77	0.02	8.28	2.6	3.59	0.16	1.61	0.17	52.65	0.02	0.85	14	99.58
05-ARD3-07A	11.45	0.12	1.32	0.03	6.93	1.81	2.97	0.12	1.47	0.12	63.53	0.02	0.54	8.75	99.18
05-ARD3-07B (HC)	12.38	0.15	1.33	0.03	5.6	1.97	2.62	0.1	1.48	0.11	63.9	0.02	0.55	8.32	98.56
ARD3-2006B	12.03	0.14	1.37	0.01	2.46	1.97	1.6	0.04	1.83	0.09	65.27	0.02	0.6	10.9	98.33
ARD3-2006C	14.88	0.11	0.32	0.02	2.67	2.53	1.26	0.02	1.23	0.1	65.62	0.03	0.87	9.68	99.34
05-ARD3-06A	15.31	0.09	0.52	0.05	3.06	2.36	1.44	0.02	1.33	0.17	68.54	0.01	0.83	5.63	99.36
05-ARD3-08A	14.72	0.09	2.02	0.01	14.32	1.67	0.73	0.04	1.06	1.5	31.85	0.03	0.81	30.7	99.55
05-ARD3-08B (HC)	17.28	0.1	0.5	0.03	6.3	2.32	1.67	0.05	1.59	0.17	58.14	0.02	0.78	9.9	98.85
05-ARD3-09A	19.98	0.14	0.29	0.01	5.97	2.76	1.72	0.08	1.5	0.13	56.68	0.03	0.99	9.69	99.97
ARD3-2006A	21.22	0.13	0.11	0.005	1.5	3.13	0.86	0.01	1.76	0.07	61.93	0.03	1	8.19	99.95
05-ARD3-10A	16.43	0.09	1.23	0.02	5.83	1.64	2.66	0.08	1.8	0.14	57.34	0.02	0.82	11.9	100.00
05-ARD3-15A	14.41	0.05	1.3	0.05	4.71	0.87	3.17	0.04	2.04	0.18	64.19	0.01	0.7	7.39	99.11
05-ARD3-12A	13.43	0.05	2.02	0.05	4.23	0.76	3.26	0.04	1.46	0.17	65.4	0.02	0.6	7.46	98.95
05-ARD3-11A	15.94	0.06	1.8	0.03	5.01	1.3	2.66	0.04	1.94	0.14	61.46	0.03	0.72	8.79	99.92
05-ARD3-14A	5.03	0.04	1.35	0.01	8.75	0.42	1.12	0.02	0.39	0.07	31.3	0.02	0.28	49.8	98.60
05-ARD3-14B (HC)	10.45	0.06	1.59	0.005	2.01	1.14	1.46	0.01	0.84	0.03	35.09	0.02	0.4	45.3	98.41
05-ARD3-13A	8.03	0.08	1.6	0.005	2.88	0.91	1.07	0.15	0.72	0.27	21.34	0.03	0.38	62.5	99.97
05-ARD2-04	13.47	0.11	0.39	0.03	6.05	1.75	2.02	0.1	1.43	0.17	67.8	0.01	0.8	5.3	99.43

Project: Mount Klappan
Client: Rescan Environmental
Data: Whole Rock by XRF
Comments: Rock units designated by Gulf.

Sample Id.	Al ₂ O ₃ (%)	BaO (%)	CaO (%)	Cr ₂ O ₃ (%)	Fe ₂ O ₃ (%)	K ₂ O (%)	MgO (%)	MnO (%)	Na ₂ O (%)	P ₂ O ₅ (%)	SiO ₂ (%)	SrO (%)	TiO ₂ (%)	LOI (%)	Total (%)
Method	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06
MDL	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
05-ARD2-08	14.91	0.11	1.9	0.03	6.86	2	3.81	0.06	1.23	0.19	56.91	0.02	0.78	10.65	99.46
05-ARD2-07	14.07	0.1	1.3	0.02	7.3	1.79	3.44	0.05	1.21	0.18	59.42	0.03	0.71	9.91	99.53
05-ARD2-07 (HC)	14.31	0.12	1.73	0.02	6.47	1.89	3.32	0.05	1.19	0.2	58.73	0.02	0.67	10.15	98.87
05-ARD2-13	7.26	0.06	4.17	0.02	21.24	0.39	2.22	0.03	0.64	1.1	19.33	0.09	0.33	43.2	100.08
05-ARD2-12	6.68	0.04	5.48	0.01	25.54	0.46	3.46	0.06	0.49	0.29	20.21	0.06	0.33	36.8	99.91
05-ARD2-12 (HC)	5.81	0.04	6	0.005	11.42	0.43	3.1	0.04	0.45	0.69	19.97	0.07	0.27	49.8	98.10
05-ARD2-16	10.02	0.08	0.88	0.005	3.48	0.88	1.89	0.03	0.71	0.05	39.51	0.03	0.56	41.4	99.53
05-ARD2-11	18.34	0.17	0.19	0.02	1.71	2.76	1.52	0.005	1.54	0.12	62.97	0.02	0.94	9.09	99.40
05-ARD2-09	14	0.11	0.93	0.03	5.04	2.01	2.77	0.07	1.5	0.15	64.73	0.02	0.77	7.31	99.44
05-ARD2-02	12.79	0.1	2.65	0.02	7.12	1.62	4.24	0.15	1.22	0.23	58.01	0.09	0.66	11.05	99.95
05-ARD2-10A	13.48	0.11	3.81	0.01	10.04	1.67	3.43	0.16	1.17	0.1	35.05	0.03	0.72	30.2	99.98
05-ARD2-14	11.93	0.06	2.21	0.03	4.85	0.9	2.37	0.08	2.34	0.16	66.48	0.02	0.6	7.72	99.75
05-ARD2-06	14.5	0.11	2	0.01	12.83	1.55	3.88	0.2	1.5	0.19	47.7	0.02	0.77	14.75	100.01
05-ARD2-01A	11.71	0.06	3.52	0.02	12.92	0.99	4.93	0.19	1.17	0.26	42.32	0.02	0.61	21.2	99.92
05-ARD2-15	16.16	0.08	1.42	0.02	10.77	1.34	3.19	0.19	1.71	0.15	51.64	0.02	0.83	12.55	100.07
05-ARD2-05	9.04	0.04	2.36	0.02	3.62	0.52	1.62	0.05	1.81	0.16	72.68	0.02	0.35	6.4	98.69
ARD2-2006A	14.51	0.14	2.9	0.005	4.89	1.7	2.3	0.07	1.2	0.27	35.68	0.03	0.73	35.4	99.83
ARD2-2006B	17.86	0.2	0.39	0.02	6.2	2.53	3.11	0.12	1.61	0.16	55.47	0.02	0.95	10.9	99.54
05-ARD2-03	7.23	0.08	3.41	0.02	2.87	0.88	2.64	0.05	1.33	0.2	72.92	0.04	0.31	6.53	98.51
05-ARD1-11	5.95	0.12	1.32	0.01	0.76	0.63	0.71	0.02	0.42	0.02	15.49	0.03	0.31	72.6	98.39
05-ARD1-15	6.41	0.07	9.25	0.01	3.5	0.85	6.09	0.08	1.09	0.1	56.62	0.05	0.28	14.25	98.65
05-ARD1-15 (HC)	7.06	0.07	7.99	0.02	3.06	0.92	5.2	0.06	1.04	0.1	58.6	0.04	0.31	13.7	98.17
05-ARD1-13	12.41	0.15	0.49	0.02	6.9	2.3	4.09	0.13	0.8	0.18	62.26	0.01	0.68	9.66	100.08
05-ARD1-14	12.74	0.14	0.86	0.02	8.03	2.24	4.43	0.16	1.09	0.21	58.65	0.01	0.74	10.65	99.97
05-ARD1-12	7.94	0.07	1.01	0.03	4.43	0.97	3.56	0.05	1.47	0.07	71.58	0.01	0.35	7.44	98.98
05-ARD1-08	9.29	0.09	1.55	0.03	4.84	1.13	4.02	0.05	1.52	0.08	65.32	0.04	0.45	11.05	99.46
05-ARD1-03	14.49	0.15	0.19	0.02	1.45	2.62	1.17	0.005	1.54	0.13	73	0.02	0.82	4.48	100.09
05-ARD1-01	11.81	0.08	0.62	0.01	12.47	1.91	4.05	0.16	0.86	0.13	54.04	0.01	0.63	12.75	99.53
05-ARD1-02	12.68	0.08	0.46	0.04	3.34	1.77	1.54	0.03	1.47	0.13	71.3	0.01	0.71	5.26	98.82
05-ARD1-07	20.4	0.11	0.19	0.01	1.95	2.93	1.03	0.005	1.81	0.09	62.99	0.02	1	7.26	99.80
05-ARD1-07 (HC)	18.03	0.1	0.34	0.02	4.91	2.36	1.64	0.03	1.83	0.1	60.52	0.02	0.84	7.9	98.64
05-ARD1-07-2	7.2	0.07	1.34	0.02	3.58	0.98	2.01	0.04	1.17	0.08	76.78	0.02	0.32	5.08	98.69
05-ARD1-06	18.36	0.1	0.25	0.02	6.28	2.58	1.7	0.03	1.51	0.13	57.06	0.02	0.95	10.35	99.34
05-ARD1-06 (HC)	18.32	0.1	0.42	0.02	5.65	2.39	1.63	0.03	1.76	0.13	58.92	0.02	0.83	9	99.22
ARD1-2006A	19.32	0.12	0.29	0.01	5.33	2.72	1.31	0.03	1.67	0.12	56.09	0.03	0.97	11.9	99.91
05-ARD1-09	14.9	0.1	0.47	0.03	16.62	1.5	0.95	0.01	1.76	0.07	47.38	0.02	0.74	15.25	99.80
05-ARD1-10	14.74	0.07	2.16	0.03	7.3	1.43	3.72	0.1	1.93	0.14	56.99	0.02	0.71	10.7	100.04
05-ARD1-04	16.54	0.1	0.58	0.02	6.6	1.82	3.2	0.07	1.77	0.15	58.67	0.02	0.84	9.71	100.09
05-ARD1-05	12.7	0.1	0.5	0.04	4.9	1.83	1.91	0.05	1.3	0.12	70.45	0.02	0.72	5.57	100.21
05-019-08	24.18	0.11	0.37	0.01	6.99	1.88	2.12	0.12	1.28	0.14	51.03	0.02	0.81	11	100.06
05-019-03	17.22	0.11	0.9	0.02	7.57	1.92	2.25	0.11	1.49	0.18	56.72	0.02	0.81	10.15	99.47
05-019-01	17.31	0.1	0.22	0.005	4.78	1.85	1.57	0.05	1.29	0.05	49.26	0.02	0.82	22.7	100.03
05-019-13	15.36	0.12	0.48	0.02	5.97	1.62	1.94	0.08	1.49	0.13	61.98	0.02	0.78	9.29	99.28
05-019-2006A	13.31	0.09	1.75	0.04	5.77	1.16	2.31	0.08	1.52	0.16	61.36	0.03	0.69	9.84	98.11
05-019-16	16.56	0.11	0.95	0.02	7.8	1.77	2.94	0.06	1.36	0.15	55.98	0.03	0.9	11	99.63
05-019-14	5.03	0.04	2.51	0.005	8.43	0.3	1.5	0.07	0.29	0.95	12.53	0.03	0.18	68.1	99.97
05-019-15	14.08	0.13	0.17	0.01	3.06	2.18	1.72	0.005	1.03	0.07	54.7	0.02	0.77	21.6	99.55
05-019-10	10.7	0.08	1.68	0.04	4.94	1.37	2.36	0.08	1.13	0.12	69.16	0.02	0.53	6.52	98.73

Project: Mount Klappan
Client: Rescan Environmental
Data: Whole Rock by XRF
Comments: Rock units designated by Gulf.

Sample Id.	Al ₂ O ₃ (%)	BaO (%)	CaO (%)	Cr ₂ O ₃ (%)	Fe ₂ O ₃ (%)	K ₂ O (%)	MgO (%)	MnO (%)	Na ₂ O (%)	P ₂ O ₅ (%)	SiO ₂ (%)	SrO (%)	TiO ₂ (%)	LOI (%)	Total (%)
Method	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06
MDL	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
05-019-11	6.07	0.04	2.26	0.01	7.18	0.74	2.48	0.14	0.75	0.1	69.97	0.02	0.26	8.14	98.16
05-019-09	5.79	0.06	12.63	0.02	7.84	0.82	6.77	0.21	0.52	0.11	42.85	0.09	0.27	21.8	99.78
05-019-07	8.18	0.06	2.58	0.03	4.49	1.06	2.22	0.07	1.2	0.12	71.8	0.02	0.4	6.45	98.68
05-019-06	16.08	0.11	1.46	0.01	7.22	1.88	2.89	0.07	1.37	0.15	56.6	0.03	0.92	10.2	98.99
05-019-05	6.28	0.02	13.74	0.01	13.95	0.32	7.87	0.18	0.32	0.14	32.09	0.03	0.3	23.4	98.65
05-019-04	14.78	0.1	2.47	0.03	7.58	1.71	3.24	0.08	1.28	0.21	56.4	0.02	0.76	10.6	99.26
05-019-02	12.99	0.1	2.53	0.02	10.48	1.26	3.25	0.09	1.2	0.1	55.85	0.02	0.53	10.55	98.97
05-019-02 (HC)	16.31	0.12	1.41	0.02	7.47	1.68	2.78	0.05	1.41	0.15	55.82	0.02	0.78	10.15	98.17
05-019-12	14.4	0.08	1.66	0.04	5.89	1.13	2.73	0.07	1.49	0.12	62.39	0.02	0.68	8.49	99.19
05-006-08	0.23	0.005	21.18	0.005	1.22	0.04	15.86	0.02	0.13	0.13	24.39	0.02	0.02	35.4	98.65
05-006-09	14.89	0.08	4.32	0.04	7.38	1.09	3.67	0.11	1.65	0.3	52.7	0.02	0.84	13.05	100.14
05-006-11	16.22	0.1	0.29	0.02	3.85	1.42	1.87	0.02	1.32	0.05	43.5	0.02	0.92	30.3	99.90
05-006-13	18.39	0.13	0.5	0.01	3.66	1.94	1.8	0.03	1.4	0.04	47.04	0.02	0.91	23.9	99.77
05-006-10	6.86	0.07	2.68	0.02	7.13	1.11	1.98	0.07	0.34	0.5	37.16	0.02	0.3	40.3	98.54
05-006-12	20.99	0.14	0.14	0.01	2.5	2.44	1.1	0.005	1.62	0.05	52.23	0.02	1.04	17.25	99.54
05-006-01	20.65	0.13	0.27	0.03	2.12	1.82	1.1	0.01	2.28	0.09	63.42	0.02	1.13	6.69	99.76
05-006-04	18.43	0.12	1.9	0.02	5.57	1.5	2.53	0.07	2.24	0.15	55.85	0.02	0.96	10.2	99.56
05-006-03	14.19	0.07	1.62	0.02	7.85	1.16	2.91	0.11	1.78	0.13	58.43	0.02	0.72	10.5	99.51
05-006-02	17.88	0.09	2.54	0.04	5.23	1.51	2.57	0.08	2.34	0.15	56.73	0.02	1	9.8	99.98
05-006-07	12.57	0.08	2.47	0.02	2.69	0.97	1.77	0.04	1.51	0.11	46.44	0.03	0.68	30.7	100.08
05-006-06	15.49	0.09	4.23	0.04	5.39	1.5	3.28	0.08	2.09	0.15	55.08	0.02	0.8	11	99.24
05-006-05	16.12	0.1	1.22	0.03	4.76	1.29	1.99	0.07	2.74	0.15	62.68	0.02	0.77	7.76	99.70
DUMP 2.5M	11.98	0.12	0.39	0.01	4.14	1.41	1.07	0.05	1.13	0.17	46.29	0.03	0.61	32.3	99.70
DUMP-2.5M (HC)	10.96	0.08	0.34	0.01	4.17	1.32	1.13	0.04	0.91	0.13	43.43	0.02	0.51	35.4	98.45
DUMP SURFACE	11.48	0.12	0.43	0.01	4.32	1.29	1.15	0.05	1.03	0.17	42.49	0.02	0.56	35.2	98.32
TAILINGS-1	5.59	0.05	0.58	0.005	1.69	0.37	0.58	0.01	0.37	0.18	15.71	0.03	0.23	73.9	99.30
TAILINGS-2	5.56	0.04	0.56	0.005	1.68	0.38	0.6	0.01	0.38	0.19	15.82	0.02	0.22	74.4	99.87

Project: Mount Klappan
Client: Rescan Environmental
Data: Whole Rock by XRF
Comments: Rock units designated by Gulf.

Sample Id.	Al ₂ O ₃ (%)	BaO (%)	CaO (%)	Cr ₂ O ₃ (%)	Fe ₂ O ₃ (%)	K ₂ O (%)	MgO (%)	MnO (%)	Na ₂ O (%)	P ₂ O ₅ (%)	SiO ₂ (%)	SrO (%)	TiO ₂ (%)	LOI (%)	Total (%)	
Method	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06
MDL	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Maximum	24.2	0.23	21.2	0.06	35.6	3.13	15.9	0.57	2.89	1.78	86.4	0.34	1.13	74.4		
Minimum	0.23	0.005	0.06	0.005	0.76	0.04	0.58	0.005	0.1	0.01	12.5	0.01	0.02	2.42		
Mean	12.6	0.097	2.22	0.02	7.03	1.52	2.9	0.086	1.31	0.2	53.9	0.028	0.64	16.7		
Standard Deviation	4.38	0.039	3	0.013	5.29	0.7	1.92	0.078	0.53	0.25	14.8	0.03	0.24	14.4		
10 Percentile	6.32	0.05	0.25	0.005	2.55	0.55	1.11	0.01	0.48	0.07	31.4	0.01	0.29	6.47		
25 Percentile	9.75	0.07	0.49	0.01	4.11	1.06	1.71	0.03	1.03	0.1	47.5	0.02	0.48	8.73		
Median	13.2	0.1	1.35	0.02	5.7	1.45	2.56	0.07	1.33	0.14	57.2	0.02	0.68	10.9		
75 Percentile	15.6	0.12	2.51	0.03	7.78	1.96	3.44	0.12	1.61	0.18	62.9	0.03	0.81	19		
90 Percentile	17.9	0.15	4.67	0.04	14	2.53	4.84	0.19	1.94	0.27	69.4	0.047	0.93	35.4		
Interquartile Range (IQR) ¹	5.87	0.05	2.02	0.02	3.67	0.9	1.73	0.09	0.58	0.08	15.4	0.01	0.33	10.3		
Variance	19.2	0.0015	9	0.00016	28	0.49	3.68	0.0062	0.28	0.063	218	0.00092	0.056	208		
Skewness	-0.33	0.28	3.31	0.98	2.48	0.14	2.92	2.26	0.044	4.18	-0.91	6.99	-0.47	2.17		
Coefficient of Variation (CoV) ²	0.35	0.4	1.35	0.63	0.75	0.46	0.66	0.91	0.41	1.27	0.27	1.1	0.37	0.86		
Count	174	174	174	174	174	174	174	174	174	174	174	174	174	174		

¹ Interquartile Range (IQR) = 75th percentile minus 25th percentile

² Coefficient of Variation (CoV) = standard deviation divided by mean

NOTE: If data was reported as < detection limit half the detection limit is shown in italics and was used in subsequent calculations.

Project:

Client: Rescan Environmental

Data:

Comments:

Mount Klappan

Rescan Environmental

QA/QC Data - Comparison on ICP Metals and Whole Rock Analyses

Rock units designated by Gulf.

Ba, Cr, Sn, Ta, Ti, W, and Zr may not be totally soluble in the 4-acid digestion MS61 method.

The ICP metals for samples 04-Sr-02, 86-035-01, and 86-035-10 were done by aqua regia digestion instead of 4-acid digestion.

Al, B, Ba, Be, Ca, Ce, Cr, Cs, Ga, Ge, Hf, In, K, La, Li, Mg, Na, Nb, Rb, Re, S, Sb, Sc, Sn, Sr, Ta, Te, Th, Ti, Ti, W, Y, and Zr may not be totally soluble in the aqua regia digestion MS41 method.

Sample Id.	Whole Rock			ICP			Whole Rock			ICP			Whole Rock			ICP		
	Al *	Al	Difference	Ba *	Ba	Difference	Ca *	Ca	Difference	Cr *	Cr	Difference	Fe *	Fe	Difference			
	(ppm)	(ppm)	(%) ³	(ppm)	(ppm)	(%) ³	(ppm)	(ppm)	(%) ³	(ppm)	(ppm)	(%) ³	(ppm)	(ppm)	(%) ³			
04-SR-01	67847	66900	-1.40	806	730	-9.44	11721	11300	-3.59	34	59	72.46	119114	113000	-5.13			
04-SR-02	35141	2900	-91.75	1433	280	-80.46	25729	11400	-55.69	34	2	-94.15	58753	32400	-44.85			
04-SR-03	39216	41400	5.57	537	600	11.65	21012	21600	2.80	137	153	11.81	24131	23700	-1.78			
04-SR-04	38792	39400	1.57	717	670	-6.49	4360	4500	3.22	68	85	24.23	114078	113000	-0.95			
04-SR-05	50594	52600	3.96	806	820	1.73	47813	47900	0.18	205	181	-11.82	43785	40900	-6.59			
86-035-01	64195	3800	-94.08	627	70	-88.84	10006	6000	-40.03	34	3	-91.23	31754	22100	-30.40			
86-035-02	76156	76800	0.85	717	760	6.07	13365	13200	-1.23	205	201	-2.08	56864	53400	-6.09			
86-035-03	67212	71300	6.08	537	620	15.37	11935	12300	3.05	68	115	68.08	76029	75000	-1.35			
86-035-04	12331	12200	-1.06	179	40	-77.67	39523	43800	10.82	34	40	16.92	248790	251000	0.89			
86-035-13	87640	89000	1.55	896	840	-6.21	15437	15200	-1.54	137	144	5.23	40637	38400	-5.51			
86-035-05	87958	92600	5.28	896	920	2.72	14151	14400	1.76	137	129	-5.73	46932	45600	-2.84			
86-035-10	47154	6900	-85.37	2060	420	-79.61	43239	26900	-37.79	34	6	-82.46	12870	9900	-23.07			
86-035-06	7621	8100	6.29	90	100	11.65	115066	148500	29.06	34	15	-56.15	53857	50900	-5.49			
86-035-07	72663	71900	-1.05	1343	1300	-3.24	3859	4000	3.64	137	193	41.04	28677	27100	-5.50			
86-035-07 (HC)	52605	52000	-1.15	627	580	-7.49	7361	7500	1.88	205	218	6.21	58263	56000	-3.88			
86-035-08	57686	55600	-3.62	717	700	-2.31	3573	3300	-7.65	137	173	26.42	99670	92500	-7.19			
86-035-12	42920	43700	1.82	537	510	-5.10	24228	24800	2.36	34	55	60.77	154086	150000	-2.65			
86-035-11	88169	85900	-2.57	806	740	-8.20	3573	3400	-4.85	137	113	-17.42	22452	21100	-6.02			
86-035-09	71022	74000	4.19	806	350	-56.58	16295	16900	3.71	205	220	7.18	33923	33500	-1.25			
86-035-09 (HC)	77796	79500	2.19	985	800	-18.80	14794	15600	5.45	205	229	11.56	43085	41300	-4.14			
85-027-01	61285	58800	-4.05	896	820	-8.45	3431	3300	-3.80	205	179	-12.79	51409	46100	-10.33			
85-027-02	73510	69900	-4.91	1343	1160	-13.66	5718	5400	-5.55	68	98	43.23	62600	58000	-7.35			
85-027-02 (HC)	86529	81200	-6.16	1433	1420	-0.91	3216	3200	-0.50	68	114	66.62	45323	43100	-4.91			
85-027-03	64724	65600	1.35	1075	200	-81.39	15866	16000	0.84	137	114	-16.69	38609	37600	-2.61			
85-027-04	62660	65300	4.21	806	870	7.93	16867	17500	3.75	137	160	16.92	43575	43400	-0.40			
85-027-27	75891	76600	0.93	806	780	-3.24	17939	17400	-3.00	205	222	8.15	42106	38900	-7.61			
85-027-05	84412	79400	-5.94	717	800	11.65	25943	26300	1.37	411	316	-23.03	27698	27000	-2.52			
85-027-06	81078	73400	-9.47	1254	1220	-2.71	7218	7000	-3.03	137	153	11.81	42806	41300	-3.52			
85-027-25	76950	79900	3.83	806	860	6.69	9148	9400	2.75	137	163	19.12	52668	51300	-2.60			
85-027-21	18629	19600	5.21	179	150	-16.26	85692	88000	2.69	34	41	19.85	51269	49200	-4.03			
85-027-07	59221	57100	-3.58	806	760	-5.72	15080	14200	-5.84	68	89	30.08	97711	90800	-7.07			
85-027-08	32283	35200	9.04	269	220	-18.12	88622	93900	5.96	34	19	-44.46	53157	51700	-2.74			
85-027-09	87164	87700	0.62	896	990	10.53	13079	13000	-0.60	137	159	16.19	56654	54600	-3.63			
85-027-10	92774	84900	-8.49	896	940	4.95	22084	20600	-6.72	137	153	11.81	47562	43400	-8.75			
85-027-11	75097	77300	2.93	806	820	1.73	16724	16900	1.05	205	197	-4.03	37490	35600	-5.04			
85-027-20	37628	35600	-5.39	448	450	0.48	27087	25600	-5.49	34	63	84.15	166746	163000	-2.25			
85-027-12	66894	68100	1.80	896	780	-12.91	14866	15500	4.27	68	107	56.38	37070	36300	-2.08			
85-027-13	96372	92000	-4.54	1612	1550	-3.86	1572	1500	-4.60	68	137	100.23	29866	27800	-6.92			
85-027-23	64566	66400	2.84	1075	1000	-6.96	24871	25100	0.92	205	211	2.79	34762	33000	-5.07			
85-027-14	58903	53700	-8.83	1075	190	-82.32	2001	1800	-10.05	34	3	-91.23	227876	233000	2.25			
85-027-28	29848	31300	4.86	537	150	-72.09	51244	57200	11.62	34	55	60.77	101418	104000	2.55			
85-027-15	61867	60900	-1.56	1254	1200	-4.30	4574	4400	-3.80	68	127	85.62	68125	64700	-5.03			
85-027-16	87640	86600	-1.19	1343	1310	-2.49	1358	1200	-11.63	137	141	3.04	21123	20200	-4.37			
85-027-17	24609	25400	3.21	269	310	15.37	5932	5900	-0.54	68	71	3.77	10142	10100	-0.41			
85-027-17 (HC)	24715	25000	1.15	358	300	-16.26	9648	10200	5.72	34	38	11.08	11681	11400	-2.40			
85-027-24	62502	64800	3.68	537	640	19.09	4074	4100	0.64	342	315	-7.92	26718	26800	0.31			
85-027-24 (HC)	47419	47900	1.01	537	460	-14.40	32161	32500	1.05	342	215	-37.15	29097	26500	-8.92			
85-027-18	98330	94600	-3.79	1433	260	-81.86	1358	1300	-4.27	68	120	75.38	37000	35400	-4.32			

Project:

Mount Klappan

Client:

Rescan Environmental

Data:

QA/QC Data - Comparison on ICP Metals and Whole Rock Analyses

Comments:

Rock units designated by Gulf.

Ba, Cr, Sn, Ta, Ti, W, and Zr may not be totally soluble in the 4-acid digestion MS61 method.

The ICP metals for samples 04-Sr-02, 86-035-01, and 86-035-10 were done by aqua regia digestion instead of 4-acid digestion.

Al, B, Ba, Be, Ca, Ce, Cr, Cs, Ga, Ge, Hf, In, K, La, Li, Mg, Na, Nb, Rb, Re, S, Sb, Sc, Sn, Sr, Ta, Te, Th, Ti, Ti, W, Y, and Zr may not be totally soluble in the aqua regia digestion MS41 method.

Sample Id.	Whole Rock			ICP			Whole Rock			ICP			Whole Rock			ICP		
	Al *	Al	Difference	Ba *	Ba	Difference	Ca *	Ca	Difference	Cr *	Cr	Difference	Fe *	Fe	Difference			
	(ppm)	(ppm)	(%) ³	(ppm)	(ppm)	(%) ³	(ppm)	(ppm)	(%) ³	(ppm)	(ppm)	(%) ³	(ppm)	(ppm)	(%) ³			
G-84-007-25																		
G-84-007-26																		
G-84-007-27																		
G-84-007-28																		
G-84-007-29																		
G-84-007-30																		
G-84-007-31																		
G-84-007-32																		
G-84-007-33																		
G-84-007-34																		
G-84-007-35																		
05-ARD4-09	66100	64100	-3.03	627	680	8.46	21298	21000	-1.40	137	135	-1.35	40008	36400	-9.02			
05-ARD4-10	61549	55600	-9.67	896	870	-2.86	2930	2700	-7.86	274	235	-14.13	31195	26800	-14.09			
05-ARD4-03	67053	64900	-3.21	1254	1220	-2.71	3645	3500	-3.98	137	102	-25.46	39658	36900	-6.95			
05-ARD4-04	73986	71000	-4.04	1343	1240	-7.70	35091	35900	2.30	68	25	-63.46	61411	57200	-6.86			
05-ARD4-06	76685	68400	-10.80	1433	1310	-8.59	1501	1400	-6.72	68	119	73.92	22802	20400	-10.53			
05-ARD4-05	61867	56500	-8.67	1075	910	-15.33	2287	2100	-8.18	205	193	-5.97	35461	31000	-12.58			
05-ARD4-07-1	71499	64700	-9.51	1254	1150	-8.29	2358	2200	-6.72	411	135	-67.12	25459	22100	-13.20			
ARD4-2006A	71287	72900	2.26	1433	1370	-4.40	2287	2300	0.57	205	186	-9.38	42106	40700	-3.34			
05-ARD4-08	53558	53000	-1.04	627	590	-5.90	4646	4800	3.33	205	121	-41.05	126528	119000	-5.95			
ARD4-2006B	45619	47900	5.00	448	470	4.95	12650	12200	-3.56	274	223	-18.52	20214	19300	-4.52			
05-ARD4-02	103993	92000	-11.53	1164	300	-74.23	1144	1100	-3.80	68	125	82.69	32594	28900	-11.33			
ARD4-2006C	62713	61400	-2.09	806	30	-96.28	33876	32400	-4.36	68	69	0.85	110651	103500	-6.46			
05-ARD4-01	82930	79500	-4.14	1164	130	-88.84	10435	10200	-2.25	137	161	17.65	99530	95100	-4.45			
05-ARD3-01A	74833	69600	-6.99	717	640	-10.68	16009	14600	-8.80	68	128	87.08	79176	69500	-12.22			
05-ARD3-02B	63878	57500	-9.98	1164	100	-91.41	1072	1000	-6.72	68	115	68.08	85961	79100	-7.98			
05-ARD3-16	43238	41200	-4.71	806	620	-23.09	7719	7100	-8.02	205	141	-31.31	17416	15000	-13.87			
05-ARD3-03A	45778	46900	2.45	717	720	0.48	36592	36000	-1.62	205	196	-4.51	49100	44700	-8.96			
05-ARD3-04A	77479	71200	-8.10	1702	820	-51.81	18368	19000	3.44	34	7	-79.54	31055	29600	-4.69			
05-ARD3-05A	77743	70500	-9.32	1523	1080	-29.07	5503	5100	-7.33	137	166	21.31	57913	50200	-13.32			
05-ARD3-07A	60597	38000	-37.29	1075	760	-29.29	9434	5900	-37.46	205	92	-55.18	48471	28300	-41.61			
05-ARD3-07B (HC)	65518	64800	-1.10	1343	1240	-7.70	9505	9300	-2.16	205	150	-26.92	39168	36800	-6.05			
ARD3-2006B	63666	62500	-1.83	1254	1140	-9.09	9791	9100	-7.06	68	111	62.23	17206	15500	-9.92			
ARD3-2006C	78749	75100	-4.63	985	910	-7.64	2287	2100	-8.18	137	192	40.31	18675	17300	-7.36			
05-ARD3-06A	81025	50600	-37.55	806	580	-28.05	3716	2300	-38.11	342	123	-64.05	21403	12600	-41.13			
05-ARD3-08A	77902	77600	-0.39	806	180	-77.67	14437	15700	8.75	68	92	34.46	100159	105500	5.33			
05-ARD3-08B (HC)	91450	90500	-1.04	896	870	-2.86	3573	3300	-7.65	205	126	-38.62	44064	42600	-3.32			
05-ARD3-09A	105740	98300	-7.04	1254	1080	-13.87	2073	2000	-3.50	68	105	53.46	41756	37300	-10.67			
ARD3-2006A	112302	105000	-6.50	1164	1180	1.34	786	700	-10.96	34	73	113.38	10492	9800	-6.59			
05-ARD3-10A	86952	77100	-11.33	806	720	-10.68	8791	7700	-12.41	137	137	0.12	40777	34400	-15.64			
05-ARD3-15A	76262	71200	-6.64	448	410	-8.45	9291	8600	-7.44	342	276	-19.32	32943	28700	-12.88			
05-ARD3-12A	71075	66200	-6.86	448	340	-24.08	14437	12800	-11.34	342	226	-33.94	29586	24600	-16.85			
05-ARD3-11A	84359	79500	-5.76	537	560	4.21	12864	12100	-5.94	205	190	-7.44	35042	30700	-12.39			
05-ARD3-14A	26620	26800	0.68	358	70	-80.46	9648	11200	16.08	68	37	-45.92	61201	66300	8.33			
05-ARD3-14B (HC)	55304	53100	-3.99	537	460	-14.40	11364	11100	-2.32	34	46	34.46	14059	14600	3.85			
05-ARD3-13A	42497	2500	-94.12	717	40	-94.42	11435	1200	-89.51	34	2	-94.15	20144	1500	-92.55			
05-ARD2-04	71287	66100	-7.28	985	850	-13.73	2787	2600	-6.72	205	217	5.72	42316	37900	-10.44			

Project:

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Data:

Comments:

Mount Klappan

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Al, B, Ba, Be, Ca, Ce, Cr, Cs, Ga, Ge, Hf, In, K, La, Li, Mg, Na, Nb, Rb, Re, S, Sb, Sc, Sn, Sr, Ta, Te, Th, Ti, Tl, W, Y, and Zr may not be totally soluble in the aqua regia digestion MS41 method.

Sample Id.	Whole Rock			ICP			Whole Rock			ICP			Whole Rock			ICP		
	Al *	Al	Difference	Ba *	Ba	Difference	Ca *	Ca	Difference	Cr *	Cr	Difference	Fe *	Fe	Difference			
	(ppm)	(ppm)	(%) ³	(ppm)	(ppm)	(%) ³	(ppm)	(ppm)	(%) ³	(ppm)	(ppm)	(%) ³	(ppm)	(ppm)	(%) ³			
05-ARD2-08	78908	70900	-10.15	985	870	-11.70	13579	12100	-10.89	205	138	-32.77	47981	40100	-16.43			
05-ARD2-07	74462	64600	-13.24	896	860	-3.98	9291	8100	-12.82	137	120	-12.31	51059	40800	-20.09			
05-ARD2-07 (HC)	75732	75400	-0.44	1075	960	-10.68	12364	12400	0.29	137	130	-5.00	45254	42900	-5.20			
05-ARD2-13	38422	26200	-31.81	537	30	-94.42	29803	24600	-17.46	137	37	-72.96	148560	116000	-21.92			
05-ARD2-12	35352	32300	-8.63	358	20	-94.42	39165	40400	3.15	68	56	-18.15	178636	174000	-2.60			
05-ARD2-12 (HC)	30748	32400	5.37	358	70	-80.46	42882	42700	-0.42	34	37	8.15	79876	86800	8.67			
05-ARD2-16	53029	51300	-3.26	717	510	-28.82	6289	6500	3.35	34	50	46.15	24340	25100	3.12			
05-ARD2-11	97060	84500	-12.94	1523	1330	-12.65	1358	1200	-11.63	137	109	-20.35	11960	10200	-14.72			
05-ARD2-09	74092	70700	-4.58	985	950	-3.58	6647	6300	-5.22	205	131	-36.18	35252	30800	-12.63			
05-ARD2-02	67688	70100	3.56	896	900	0.48	18939	20100	6.13	137	144	5.23	49800	47000	-5.62			
05-ARD2-10A	71340	70000	-1.88	985	310	-68.54	27230	27000	-0.84	68	83	21.31	70223	64600	-8.01			
05-ARD2-14	63137	62500	-1.01	537	550	2.35	15795	15200	-3.77	205	147	-28.38	33923	30300	-10.68			
05-ARD2-06	76738	73400	-4.35	985	970	-1.55	14294	13500	-5.55	68	119	73.92	89738	80900	-9.85			
05-ARD2-01A	61972	58900	-4.96	537	570	6.07	25157	23900	-5.00	137	89	-34.96	90367	79500	-12.03			
05-ARD2-15	85523	80500	-5.87	717	800	11.65	10149	9600	-5.41	137	148	8.15	75329	68100	-9.60			
05-ARD2-05	47842	44600	-6.78	358	340	-5.10	16867	15400	-8.70	137	101	-26.19	25320	21900	-13.51			
ARD2-2006A	76791	79200	3.14	1254	760	-39.39	20726	21900	5.66	34	49	43.23	34202	35500	3.79			
ARD2-2006B	94520	89500	-5.31	1791	1700	-5.10	2787	2700	-3.13	137	165	20.58	43365	40800	-5.92			
05-ARD2-03	38263	37100	-3.04	717	580	-19.05	24371	23100	-5.22	137	102	-25.46	20074	17600	-12.32			
05-ARD1-11	31489	2400	-92.38	1075	40	-96.28	9434	1100	-88.34	68	3	-95.62	5316	600	-88.71			
05-ARD1-15	33923	35700	5.24	627	650	3.67	66109	65500	-0.92	68	85	24.23	24480	22500	-8.09			
05-ARD1-15 (HC)	37363	37900	1.44	627	610	-2.71	57104	55000	-3.68	137	112	-18.15	21403	20300	-5.15			
05-ARD1-13	65677	63000	-4.08	1343	1210	-9.94	3502	3400	-2.91	137	111	-18.88	48261	45000	-6.76			
05-ARD1-14	67424	72100	6.94	1254	1370	9.26	6146	6500	5.75	137	175	27.88	56165	56700	0.95			
05-ARD1-12	42021	42600	1.38	627	530	-15.47	7218	7200	-0.25	205	167	-18.64	30985	29600	-4.47			
05-ARD1-08	49165	50000	1.70	806	610	-24.33	11078	11000	-0.70	205	251	22.28	33853	31900	-5.77			
05-ARD1-03	76685	75200	-1.94	1343	1460	8.67	1358	1400	3.10	137	142	3.77	10142	10200	0.57			
05-ARD1-01	62502	65700	5.12	717	760	6.07	4431	4900	10.58	68	154	125.08	87220	90700	3.99			
05-ARD1-02	67106	72000	7.29	717	740	3.28	3288	3500	6.46	274	250	-8.65	23361	24000	2.73			
05-ARD1-07	107962	97900	-9.32	985	990	0.48	1358	1300	-4.27	68	91	33.00	13639	12900	-5.42			
05-ARD1-07 (HC)	95420	94000	-1.49	896	860	-3.98	2430	2200	-9.46	137	127	-7.19	34342	32700	-4.78			
05-ARD1-07-2	38104	40700	6.81	627	640	2.08	9577	10000	4.42	137	160	16.92	25040	25100	0.24			
05-ARD1-06	97166	91400	-5.93	896	900	0.48	1787	1800	0.74	137	113	-17.42	43925	42100	-4.15			
05-ARD1-06 (HC)	96954	93800	-3.25	896	880	-1.75	3002	3100	3.27	137	114	-16.69	39518	37300	-5.61			
ARD1-2006A	102247	93500	-8.55	1075	780	-27.43	2073	2000	-3.50	68	115	68.08	37280	34600	-7.19			
05-ARD1-09	78855	79100	0.31	896	50	-94.42	3359	3400	1.22	205	176	-14.26	116246	120500	3.66			
05-ARD1-10	78008	74900	-3.98	627	630	0.48	15437	14600	-5.42	205	194	-5.49	51059	47300	-7.36			
05-ARD1-04	87534	85400	-2.44	896	850	-5.10	4145	4300	3.73	137	176	28.62	46163	45300	-1.87			
05-ARD1-05	67212	69600	3.55	896	770	-14.03	3573	3700	3.54	274	267	-2.44	34272	34400	0.37			
05-019-08	127967	80400	-37.17	985	920	-6.62	2644	2600	-1.68	68	101	47.62	48891	47500	-2.84			
05-019-03	91133	85100	-6.62	985	960	-2.56	6432	6300	-2.06	137	114	-16.69	52947	49300	-6.89			
05-019-01	91609	77600	-15.29	896	850	-5.10	1572	1500	-4.60	34	55	60.77	33433	29700	-11.17			
05-019-13	81289	74300	-8.60	1075	920	-14.40	3431	3300	-3.80	137	149	8.88	41756	37200	-10.91			
05-019-2006A	70440	74800	6.19	806	750	-6.96	12507	12700	1.54	274	265	-3.17	40357	40400	0.11			
05-019-16	87640	75200	-14.19	985	960	-2.56	6790	6300	-7.21	137	138	0.85	54556	48000	-12.02			
05-019-14	26620	2800	-89.48	358	30	-91.63	17939	3000	-83.28	34	2	-94.15	58962	10000	-83.04			
05-019-15	74515	66500	-10.76	1164	900	-22.70	1215	1200	-1.23	68	118	72.46	21403	20100	-6.09			
05-019-10	56627	53800	-4.99	717	640	-10.68	12007	11200	-6.72	274	201	-26.56	34552	29900	-13.46			

Project:**Mount Klappan**

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The ICP metals for samples 04-Sr-02, 86-035-01, and 86-035-10 were done by aqua regia digestion instead of 4-acid digestion.

Al, B, Ba, Be, Ca, Ce, Cr, Cs, Ga, Ge, Hf, In, K, La, Li, Mg, Na, Nb, Rb, Re, S, Sb, Sc, Sn, Sr, Ta, Te, Th, Ti, Tl, W, Y, and Zr may not be totally soluble in the aqua regia digestion MS41 method.

Sample Id.	Whole Rock			ICP			Whole Rock			ICP			Whole Rock			ICP		
	Al *	Al	Difference	Ba *	Ba	Difference	Ca *	Ca	Difference	Cr *	Cr	Difference	Fe *	Fe	Difference			
	(ppm)	(ppm)	(%) ³	(ppm)	(ppm)	(%) ³	(ppm)	(ppm)	(%) ³	(ppm)	(ppm)	(%) ³	(ppm)	(ppm)	(%) ³			
05-019-11	32124	30300	-5.68	358	380	6.07	16152	15200	-5.89	68	72	5.23	50220	44400	-11.59			
05-019-09	30642	31400	2.47	537	380	-29.29	90266	91000	0.81	137	99	-27.65	54836	51300	-6.45			
05-019-07	43291	38200	-11.76	537	470	-12.54	18439	16400	-11.06	205	173	-15.72	31405	26400	-15.94			
05-019-06	85100	77700	-8.70	985	950	-3.58	10435	9800	-6.08	68	141	106.08	50499	46200	-8.51			
05-019-05	33235	32900	-1.01	179	190	6.07	98199	94700	-3.56	68	68	-0.62	97571	86500	-11.35			
05-019-04	78220	74300	-5.01	896	890	-0.63	17653	16900	-4.27	205	154	-24.97	53017	48300	-8.90			
05-019-02	68747	67000	-2.54	896	290	-67.62	18082	17700	-2.11	137	81	-40.81	73301	65500	-10.64			
05-019-02 (HC)	86317	84700	-1.87	1075	1040	-3.24	10077	10200	1.22	137	100	-26.92	52248	50900	-2.58			
05-019-12	76209	74200	-2.64	717	670	-6.49	11864	11800	-0.54	274	239	-12.67	41197	38500	-6.55			
05-006-08	1217	1600	31.45	45	80	78.64	151372	144500	-4.54	34	7	-79.54	8533	7400	-13.28			
05-006-09	78802	72700	-7.74	717	630	-12.08	30875	29700	-3.80	274	207	-24.37	51618	45700	-11.47			
05-006-11	85841	72800	-15.19	896	720	-19.61	2073	2100	1.32	137	108	-21.08	26928	24900	-7.53			
05-006-13	97325	84400	-13.28	1164	970	-16.69	3573	3400	-4.85	68	99	44.69	25599	23700	-7.42			
05-006-10	36305	33700	-7.18	627	200	-68.10	19154	19500	1.81	137	51	-62.73	49870	49000	-1.74			
05-006-12	111085	94900	-14.57	1254	1190	-5.10	1001	1100	9.94	68	117	71.00	17486	16100	-7.93			
05-006-01	109285	94500	-13.53	1164	990	-14.97	1930	1800	-6.72	205	133	-35.21	14828	12900	-13.00			
05-006-04	97537	86500	-11.32	1075	830	-22.78	13579	12300	-9.42	137	174	27.15	38959	34400	-11.70			
05-006-03	75097	68700	-8.52	627	570	-9.09	11578	11000	-4.99	137	162	18.38	54906	49500	-9.85			
05-006-02	94626	83900	-11.33	806	770	-4.48	18153	16900	-6.90	274	237	-13.40	36581	32000	-12.52			
05-006-07	66524	78300	17.70	717	750	4.67	17653	22700	28.59	137	83	-39.35	18815	22700	20.65			
05-006-06	81977	77400	-5.58	806	760	-5.72	30232	29900	-1.10	274	211	-22.90	37700	34700	-7.96			
05-006-05	85311	83200	-2.47	896	750	-16.26	8719	8800	0.93	205	213	3.77	33293	31900	-4.18			
DUMP 2.5M	63401	56800	-10.41	1075	820	-23.71	2787	2800	0.46	68	84	22.77	28957	27300	-5.72			
DUMP 2.5M (HC)	58003	53300	-8.11	717	740	3.28	2430	2300	-5.35	68	76	11.08	29166	28200	-3.31			
DUMP SURFACE	60755	54100	-10.95	1075	810	-24.64	3073	3000	-2.38	68	73	6.69	30216	27600	-8.66			
TAILINGS-1	29584			448			4145			34			11820					
TAILINGS-2	29425			358			4002			34			11751					

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Al, B, Ba, Be, Ca, Ce, Cr, Cs, Ga, Ge, Hf, In, K, La, Li, Mg, Na, Nb, Rb, Re, S, Sb, Sc, Sn, Sr, Ta, Te, Th, Ti, Tl, W, Y, and Zr may not be totally soluble in the aqua regia digestion MS41 method.

Sample Id.	Whole Rock			Whole Rock			Whole Rock			Whole Rock			Whole Rock		
	Al *	ICP Al	Difference (%) ³	Ba *	ICP Ba	Difference (%) ³	Ca *	ICP Ca	Difference (%) ³	Cr *	ICP Cr	Difference (%) ³	Fe *	ICP Fe	Difference (%) ³
	(ppm)	(ppm)		(ppm)	(ppm)		(ppm)	(ppm)		(ppm)	(ppm)		(ppm)	(ppm)	
Maximum			31.40			78.60			29.10			125.00			20.60
Minimum			-94.10			-96.30			-89.50			-95.60			-92.60
Mean			-6.53			-17.00			-4.28			3.74			-8.29
Standard Deviation			18.0			29.9			14.4			43.8			13.1
10 Percentile			-12.80			-77.70			-9.99			-44.10			-13.50
25 Percentile			-8.20			-18.90			-6.24			-21.50			-10.50
Median			-3.26			-6.96			-2.35			1.82			-6.09
75 Percentile			1.36			-0.35			1.42			27.30			-2.91
90 Percentile			4.8			6.1			3.8			66.3			0.2
Interquartile Range (IQR) ¹			9.56			18.50			7.66			48.90			7.55
Variance			324			896			207			1917			171
Skewness			-3.68			-1.33			-3.75			0.12			-4.27
Coefficient of Variation (CoV) ²			-2.76			-1.76			-3.36			11.70			-1.58
Count			172			172			172			172			172

¹ Interquartile Range (IQR) = 75th percentile minus 25th percentile² Coefficient of Variation (CoV) = standard deviation divided by mean³ Difference (%) = (ICP - Whole Rock) * 100 / Whole Rock

* Element calculated from Whole Rock XRF analysis

Al (Whole Rock) = $(Al_2O_3 * 2 * 10000 * 26.98) / (2 * 26.98 + 3 * 16)$

Ba (Whole Rock) = $(BaO * 10000 * 137.34) / (137.34 + 16)$

Ca (Whole Rock) = $(CaO * 10000 * 40.08) / (40.08 + 16)$

Cr (Whole Rock) = $(Cr_2O_3 * 2 * 10000 * 52.00) / (2 * 52.00 + 3 * 16)$

Fe (Whole Rock) = $(Fe_2O_3 * 2 * 10000 * 55.85) / (2 * 55.85 + 3 * 16)$

Project:

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Al, B, Ba, Be, Ca, Ce, Cr, Cs, Ga, Ge, Hf, In, K, La, Li, Mg, Na, Nb, Rb, Re, S, Sb, Sc, Sn, Sr, Ta, Te, Th, Ti, Ti, W, Y, and Zr may not be totally soluble in the aqua regia digestion MS41 method.

Sample Id.	Whole Rock			ICP			Whole Rock			ICP			Whole Rock			ICP		
	K *	K	Difference	Mg *	Mg	Difference	Mn *	Mn	Difference	Na *	Na	Difference	P *	P	Difference			
	(ppm)	(ppm)	(%) ³	(ppm)	(ppm)	(%) ³	(ppm)	(ppm)	(%) ³	(ppm)	(ppm)	(%) ³	(ppm)	(ppm)	(%) ³			
04-SR-01	10127	9500	-6.19	22857	21300	-6.81	2323	2230	-4.02	8086	7800	-3.54	1266	1200	-5.18			
04-SR-02	1660	300	-81.93	13328	7000	-47.48	620	455	-26.56	2226	600	-73.04	7768	3700	-52.37			
04-SR-03	8052	8200	1.84	17369	17400	0.18	465	449	-3.37	8383	7500	-10.53	436	440	0.83			
04-SR-04	11124	10600	-4.71	52950	52800	-0.28	2323	2110	-9.18	3487	4000	14.72	567	590	4.00			
04-SR-05	11954	12500	4.57	33290	33000	-0.87	1626	1555	-4.39	11202	9800	-12.52	567	570	0.48			
86-035-01	6558	500	-92.38	5247	1800	-65.69	39	55	42.03	3635	600	-83.49	1964	1260	-35.84			
86-035-02	11788	11500	-2.44	20143	19400	-3.69	1007	959	-4.75	12686	12300	-3.04	916	1020	11.30			
86-035-03	8965	8900	-0.73	27500	27800	1.09	1239	1290	4.11	8754	8800	0.53	436	520	19.16			
86-035-04	1577	1500	-4.90	16042	15900	-0.88	929	924	-0.58	742	1000	34.80	1091	1240	13.66			
86-035-13	12037	11700	-2.80	15017	15700	4.55	774	787	1.62	13131	12900	-1.76	829	920	10.96			
86-035-05	10459	10600	1.34	13991	13900	-0.65	852	931	9.28	12611	13100	3.87	1135	1200	5.76			
86-035-10	7554	900	-88.09	20203	12100	-40.11	155	253	63.34	3413	800	-76.56	4626	3190	-31.04			
86-035-06	1162	1600	37.67	73455	72000	-1.98	2014	2020	0.32	2003	900	-55.07	175	210	20.31			
86-035-07	18013	17600	-2.30	12182	11400	-6.42	465	516	11.05	13057	12300	-5.79	567	580	2.24			
86-035-07 (HC)	11207	11000	-1.84	14655	14400	-1.74	852	903	6.00	7864	6800	-13.53	524	550	5.03			
86-035-08	15274	14200	-7.03	21590	20000	-7.37	1704	1580	-7.27	6528	6000	-8.09	611	590	-3.43			
86-035-12	9546	9600	0.56	36667	38200	4.18	1859	1775	-4.50	3116	3200	2.70	1047	1200	14.58			
86-035-11	14195	13500	-4.90	6332	6000	-5.25	77	137	76.90	21440	19700	-8.11	305	390	27.67			
86-035-09	10791	10800	0.08	11881	11900	0.16	155	243	56.88	15950	15400	-3.45	524	570	8.85			
86-035-09 (HC)	11705	11600	-0.89	16705	17300	3.56	387	449	15.95	16543	15000	-9.33	655	680	3.88			
85-027-01	13697	13300	-2.90	24123	23000	-4.66	620	613	-1.06	10312	9300	-9.81	655	580	-11.39			
85-027-02	21583	20100	-6.87	23399	22400	-4.27	542	524	-3.34	7567	7000	-7.49	1004	1020	1.63			
85-027-02 (HC)	24322	23100	-5.03	20143	20000	-0.71	387	403	4.07	8902	8300	-6.76	742	780	5.14			
85-027-03	14776	14600	-1.19	12303	12400	0.79	232	249	7.17	10905	10100	-7.38	4058	4250	4.72			
85-027-04	13863	14100	1.71	20203	20800	2.95	697	681	-2.30	12241	11000	-10.13	611	600	-1.79			
85-027-27	10293	10200	-0.91	16343	16100	-1.49	620	630	1.68	17656	17700	0.25	611	610	-0.15			
85-027-05	9712	9700	-0.13	16404	16300	-0.63	387	442	14.14	20920	21000	0.38	873	880	0.83			
85-027-06	17515	16600	-5.23	18394	18200	-1.05	1007	935	-7.13	11425	11100	-2.84	742	750	1.10			
85-027-25	11871	11700	-1.44	15258	15700	2.90	1007	1040	3.30	14021	14500	3.42	655	700	6.94			
85-027-21	1743	1900	8.99	34617	35500	2.55	1781	1630	-8.49	4303	3400	-20.98	218	240	10.00			
85-027-07	10625	10000	-5.89	23822	23100	-3.03	2014	1675	-16.82	8754	9000	2.81	4495	4600	2.34			
85-027-08	2656	2800	5.41	38114	40000	4.95	2091	1955	-6.51	9422	8600	-8.72	305	280	-8.34			
85-027-09	12867	12800	-0.52	17067	16900	-0.98	1007	986	-2.07	16692	16200	-2.95	1135	1220	7.53			
85-027-10	11373	10800	-5.03	15620	15100	-3.33	1007	1000	-0.67	14763	14800	0.25	655	630	-3.75			
85-027-11	8965	9100	1.50	14655	14800	0.99	620	633	2.17	14466	14800	2.31	567	650	14.58			
85-027-20	4815	4300	-10.69	35461	32800	-7.50	4414	3820	-13.47	5119	5200	1.59	1178	1180	0.15			
85-027-12	9214	9500	3.10	13569	13900	2.44	542	591	9.02	13502	12800	-5.20	2138	2390	11.77			
85-027-13	20919	19800	-5.35	13268	12500	-5.79	465	457	-1.65	12389	11000	-11.21	611	570	-6.70			
85-027-23	15108	15400	1.93	23761	23300	-1.94	697	732	5.02	9496	9400	-1.01	916	940	2.58			
85-027-14	14527	12600	-13.26	5066	4500	-11.17	232	282	21.38	7493	8000	6.77	262	260	-0.70			
85-027-28	6807	6800	-0.10	40105	42100	4.98	2865	2520	-12.06	2226	2400	7.84	698	800	14.58			
85-027-15	16353	15800	-3.38	22434	21300	-5.06	1471	1430	-2.82	10015	8500	-15.13	829	870	4.93			
85-027-16	24986	24100	-3.55	10916	10200	-6.56	77	158	104.01	10683	9400	-12.01	524	510	-2.61			
85-027-17	4400	4400	0.01	5970	5800	-2.85	39	113	191.82	6751	5200	-22.97	262	310	18.40			
85-027-17 (HC)	4234	4300	1.57	7478	7600	1.63	77	148	91.10	6083	4900	-19.45	305	280	-8.34			
85-027-24	11124	11200	0.69	17188	16600	-3.42	155	248	60.11	11573	11000	-4.95	611	640	4.76			
85-027-24 (HC)	8384	8000	-4.58	25691	25200	-1.91	387	402	3.81	9422	7800	-17.21	655	580	-11.39			
85-027-18	20504	19400	-5.38	8926	8500	-4.77	77	153	97.56	11647	11000	-5.56	480	490	2.08			

Project:**Mount Klappan**

Client:

Rescan Environmental

Data:

QA/QC Data - Comparison on ICP Metals and Whole Rock Analyses

Comments:

Rock units designated by Gulf.

Ba, Cr, Sn, Ta, Ti, W, and Zr may not be totally soluble in the 4-acid digestion MS61 method.

The ICP metals for samples 04-Sr-02, 86-035-01, and 86-035-10 were done by aqua regia digestion instead of 4-acid digestion.

Al, B, Ba, Be, Ca, Ce, Cr, Cs, Ga, Ge, Hf, In, K, La, Li, Mg, Na, Nb, Rb, Re, S, Sb, Sc, Sn, Sr, Ta, Te, Th, Ti, Ti, W, Y, and Zr may not be totally soluble in the aqua regia digestion MS41 method.

Sample Id.	Whole Rock	ICP	Difference (%) ³	Whole Rock	ICP	Difference (%) ³	Whole Rock	ICP	Difference (%) ³	Whole Rock	ICP	Difference (%) ³	Whole Rock	ICP	Difference (%) ³
	K ⁺ (ppm)	K (ppm)		Mg ⁺ (ppm)	Mg (ppm)		Mn ⁺ (ppm)	Mn (ppm)		Na ⁺ (ppm)	Na (ppm)		P ⁺ (ppm)	P (ppm)	
G-84-007-25															
G-84-007-26															
G-84-007-27															
G-84-007-28															
G-84-007-29															
G-84-007-30															
G-84-007-31															
G-84-007-32															
G-84-007-33															
G-84-007-34															
G-84-007-35															
05-ARD4-09	7803	6900	-11.57	17369	16700	-3.85	697	677	-2.87	15134	13600	-10.13	655	650	-0.70
05-ARD4-10	13946	11800	-15.39	15017	12900	-14.10	465	459	-1.22	9570	8300	-13.27	698	620	-11.20
05-ARD4-03	19674	17400	-11.56	22615	21100	-6.70	852	792	-7.03	6677	5700	-14.63	698	830	18.88
05-ARD4-04	19840	17500	-11.79	40044	37700	-5.85	1471	1300	-11.65	3338	3100	-7.14	611	560	-8.34
05-ARD4-06	22081	19300	-12.59	14534	13000	-10.56	155	226	45.91	9496	7800	-17.86	436	420	-3.75
05-ARD4-05	14278	12400	-13.15	16343	14000	-14.34	465	443	-4.66	10905	9600	-11.97	524	480	-8.34
05-ARD4-07-1	17017	15400	-9.50	12423	11200	-9.85	310	291	-6.06	10163	8800	-13.41	393	410	4.39
ARD4-2006A	19010	17500	-7.94	15318	14800	-3.38	929	908	-2.30	10238	9000	-12.09	611	640	4.76
05-ARD4-08	11373	10300	-9.43	36185	35400	-2.17	2014	1930	-4.15	6380	6200	-2.82	524	530	1.21
ARD4-2006B	8882	8900	0.20	12604	12400	-1.62	387	313	-19.17	10979	9400	-14.39	785	730	-7.06
05-ARD4-02	21334	19600	-8.13	6935	6100	-12.05	77	152	96.27	11944	11100	-7.06	393	410	4.39
ARD4-2006C	13282	11700	-11.91	18816	17200	-8.59	542	414	-23.63	7641	6700	-12.32	393	320	-18.52
05-ARD4-01	14527	14200	-2.25	10011	9100	-9.10	155	228	47.20	12537	12600	0.50	262	320	22.22
05-ARD3-01A	8467	7600	-10.24	19721	17400	-11.77	1549	1450	-6.39	10163	9500	-6.53	524	600	14.58
05-ARD3-02B	16934	15400	-9.06	7056	6200	-12.13	232	314	35.15	6677	5900	-11.63	393	390	-0.70
05-ARD3-16	9048	8700	-3.85	9830	8800	-10.48	232	237	2.01	8309	7000	-15.75	567	630	11.05
05-ARD3-03A	11207	11400	1.73	29430	27900	-5.20	929	911	-1.97	7270	6600	-9.22	393	390	-0.70
05-ARD3-04A	12037	11000	-8.61	14414	13800	-4.26	774	695	-10.26	9125	7900	-13.42	1309	1250	-4.52
05-ARD3-05A	21583	19200	-11.04	21650	19200	-11.32	1239	1145	-7.60	11944	10000	-16.27	742	790	6.49
05-ARD3-07A	15025	9400	-37.44	17911	10700	-40.26	929	615	-33.82	10905	6100	-44.06	524	300	-42.71
05-ARD3-07B (HC)	16353	15500	-5.22	15801	14700	-6.97	774	817	5.49	10979	10900	-0.72	480	500	4.16
ARD3-2006B	16353	15000	-8.27	9649	9100	-5.69	310	290	-6.39	13576	11100	-18.24	393	340	-13.43
ARD3-2006C	21002	19100	-9.06	7599	7000	-7.88	155	140	-9.61	9125	7700	-15.61	436	420	-3.75
05-ARD3-06A	19591	12000	-38.75	8684	5100	-41.27	155	138	-10.91	9867	5600	-43.24	742	490	-33.95
05-ARD3-08A	13863	14200	2.43	4402	4300	-2.33	310	323	4.27	7864	8600	9.36	6546	7280	11.22
05-ARD3-08B (HC)	19259	17800	-7.57	10071	9000	-10.64	387	418	7.95	11795	11500	-2.50	742	770	3.79
05-ARD3-09A	22911	21500	-6.16	10373	9200	-11.31	620	657	6.04	11128	10500	-5.64	567	600	5.76
ARD3-2006A	25983	24500	-5.71	5186	4600	-11.31	77	84	8.46	13057	11400	-12.69	305	230	-24.71
05-ARD3-10A	13614	12700	-6.71	16042	14200	-11.48	620	577	-6.87	13353	11800	-11.63	611	610	-0.15
05-ARD3-15A	7222	6500	-10.00	19118	17600	-7.94	310	393	26.86	15134	11100	-26.65	785	760	-3.24
05-ARD3-12A	6309	5900	-6.48	19660	17600	-10.48	310	291	-6.06	10831	9900	-8.60	742	640	-13.73
05-ARD3-11A	10791	10400	-3.63	16042	14900	-7.12	310	356	14.92	14392	13300	-7.59	611	650	6.39
05-ARD3-14A	3486	3500	0.39	6754	7700	14.00	155	210	35.58	2893	3000	3.69	305	320	4.76
05-ARD3-14B (HC)	9463	8700	-8.07	8805	7800	-11.41	77	125	61.40	6232	5900	-5.32	131	100	-23.61
05-ARD3-13A	7554	700	-90.73	6453	400	-93.80	1162	56	-95.18	5341	300	-94.38	1178	90	-92.36
05-ARD2-04	14527	13700	-5.69	12182	11000	-9.70	774	816	5.36	10608	9100	-14.22	742	750	1.10

Project:

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Data:

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Mount Klappan

Rescan Environmental

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Al, B, Ba, Be, Ca, Ce, Cr, Cs, Ga, Ge, Hf, In, K, La, Li, Mg, Na, Nb, Rb, Re, S, Sb, Sc, Sn, Sr, Ta, Te, Th, Ti, Ti, W, Y, and Zr may not be totally soluble in the aqua regia digestion MS41 method.

Sample Id.	Whole Rock			ICP			Whole Rock			ICP			Whole Rock			ICP		
	K *	K	Difference (%) ³	Mg *	Mg	Difference (%) ³	Mn *	Mn	Difference (%) ³	Na *	Na	Difference (%) ³	P *	P	Difference (%) ³			
	(ppm)	(ppm)		(ppm)	(ppm)		(ppm)	(ppm)		(ppm)	(ppm)		(ppm)	(ppm)				
05-ARD2-08	16602	14600	-12.06	22977	20000	-12.96	465	485	4.37	9125	8000	-12.33	829	780	-5.92			
05-ARD2-07	14859	13000	-12.51	20746	16600	-19.98	387	402	3.81	8976	7400	-17.56	785	760	-3.24			
05-ARD2-07 (HC)	15689	15800	0.71	20022	19400	-3.11	387	416	7.43	8828	8600	-2.58	873	950	8.85			
05-ARD2-13	3237	2400	-25.87	13388	9700	-27.55	232	156	-32.86	4748	3800	-19.96	4800	3610	-24.79			
05-ARD2-12	3819	3600	-5.72	20866	19600	-6.07	465	432	-7.03	3635	4100	12.79	1266	1320	4.31			
05-ARD2-12 (HC)	3569	3600	0.85	18695	18600	-0.51	310	359	15.89	3338	3700	10.83	3011	3490	15.91			
05-ARD2-16	7305	7200	-1.44	11398	11400	0.02	232	315	35.58	5267	4300	-18.36	218	220	0.83			
05-ARD2-11	22911	20600	-10.09	9167	7500	-18.18	39	63	62.69	11425	9400	-17.72	524	510	-2.61			
05-ARD2-09	16685	15400	-7.70	16705	14800	-11.40	542	529	-2.42	11128	9700	-12.83	655	670	2.36			
05-ARD2-02	13448	14800	10.05	25570	25100	-1.84	1162	1220	5.02	9051	8100	-10.50	1004	1060	5.61			
05-ARD2-10A	13863	12800	-7.67	20686	19200	-7.18	1239	1135	-8.40	8680	8100	-6.68	436	440	0.83			
05-ARD2-14	7471	7200	-3.63	14293	13400	-6.25	620	632	2.01	17359	15400	-11.29	698	610	-12.63			
05-ARD2-06	12867	12000	-6.74	23399	21500	-8.12	1549	1500	-3.16	11128	11000	-1.15	829	790	-4.72			
05-ARD2-01A	8218	7700	-6.30	29732	27800	-6.50	1471	1280	-13.01	8680	7700	-11.29	1135	1180	4.00			
05-ARD2-15	11124	10600	-4.71	19238	17800	-7.48	1471	1445	-1.80	12686	12100	-4.62	655	680	3.88			
05-ARD2-05	4317	4000	-7.33	9770	8500	-13.00	387	398	2.78	13428	11000	-18.08	698	670	-4.04			
ARD2-2006A	14112	13400	-5.04	13871	14400	3.82	542	472	-12.93	8902	8000	-10.13	1178	1180	0.15			
ARD2-2006B	21002	19200	-8.58	18756	17600	-6.16	929	870	-6.39	11944	10600	-11.25	698	690	-1.18			
05-ARD2-03	7305	7100	-2.81	15921	14400	-9.55	387	424	9.50	9867	8200	-16.89	873	890	1.97			
05-ARD1-11	5230	400	-92.35	4282	400	-90.66	155	11	-92.90	3116	200	-93.58	87	10	-88.54			
05-ARD1-15	7056	7300	3.46	36727	36000	-1.98	620	586	-5.42	8086	7800	-3.54	436	460	5.41			
05-ARD1-15 (HC)	7637	7400	-3.10	31360	30500	-2.74	465	523	12.55	7715	8200	6.28	436	460	5.41			
05-ARD1-13	19093	18600	-2.58	24666	22900	-7.16	1007	1005	-0.18	5935	4900	-17.44	785	830	5.67			
05-ARD1-14	18595	19700	5.95	26716	27400	2.56	1239	1290	4.11	8086	8100	0.17	916	1100	20.03			
05-ARD1-12	8052	7900	-1.89	21470	20700	-3.58	387	396	2.27	10905	10000	-8.30	305	310	1.48			
05-ARD1-08	9380	9800	4.47	24244	23500	-3.07	387	455	17.50	11276	10200	-9.54	349	350	0.26			
05-ARD1-03	21749	22000	1.15	7056	6900	-2.21	39	90	132.42	11425	10600	-7.22	567	530	-6.57			
05-ARD1-01	15855	16400	3.44	24425	24800	1.54	1239	1310	5.72	6380	7100	11.29	567	590	4.00			
05-ARD1-02	14693	15700	6.85	9287	9400	1.21	232	286	23.10	10905	10600	-2.80	567	670	18.10			
05-ARD1-07	24322	18700	-23.12	6212	5500	-11.46	39	60	54.95	13428	12200	-9.14	393	420	6.94			
05-ARD1-07 (HC)	19591	19400	-0.97	9890	8900	-10.01	232	230	-1.01	13576	12800	-5.72	436	430	-1.46			
05-ARD1-07-2	8135	9100	11.86	12122	12800	5.59	310	433	39.78	8680	8500	-2.07	349	360	3.12			
05-ARD1-06	21417	20000	-6.62	10252	9300	-9.29	232	286	23.10	11202	10700	-4.48	567	540	-4.81			
05-ARD1-06 (HC)	19840	19400	-2.22	9830	9000	-8.44	232	262	12.77	13057	11700	-10.39	567	580	2.24			
ARD1-2006A	22579	19800	-12.31	7900	7100	-10.13	232	209	-10.04	12389	10500	-15.25	524	490	-6.43			
05-ARD1-09	12452	12200	-2.02	5729	5600	-2.26	77	178	129.84	13057	13900	6.46	305	340	11.30			
05-ARD1-10	11871	11400	-3.96	22434	21200	-5.50	774	775	0.07	14318	13100	-8.51	611	590	-3.43			
05-ARD1-04	15108	15000	-0.72	19298	19000	-1.55	542	631	16.39	13131	13000	-1.00	655	660	0.83			
05-ARD1-05	15191	15400	1.38	11519	11100	-3.64	387	440	13.63	9644	9000	-6.68	524	600	14.58			
05-019-08	15606	13700	-12.21	12785	11100	-13.18	929	989	6.42	9496	8300	-12.59	611	530	-13.25			
05-019-03	15938	13700	-14.04	13569	12400	-8.62	852	831	-2.45	11054	10000	-9.53	785	760	-3.24			
05-019-01	15357	12800	-16.65	9468	8400	-11.28	387	386	-0.32	9570	8200	-14.31	218	180	-17.50			
05-019-13	13448	11700	-13.00	11700	10600	-9.40	620	585	-5.58	11054	9300	-15.86	567	550	-3.05			
05-019-2006A	9629	9500	-1.34	13931	14300	2.65	620	596	-3.80	11276	10200	-9.54	698	730	4.55			
05-019-16	14693	13200	-10.16	17730	15600	-12.02	465	478	2.87	10089	9500	-5.84	655	630	-3.75			
05-019-14	2490	200	-91.97	9046	1200	-86.73	542	42	-92.25	2151	300	-86.06	4146	530	-87.22			
05-019-15	18096	15700	-13.24	10373	9800	-5.52	39	72	85.94	7641	6300	-17.55	305	300	-1.79			
05-019-10	11373	10100	-11.19	14233	12800	-10.07	620	546	-11.87	8383	7500	-10.53	524	440	-15.98			

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Al, B, Ba, Be, Ca, Ce, Cr, Cs, Ga, Ge, Hf, In, K, La, Li, Mg, Na, Nb, Rb, Re, S, Sb, Sc, Sn, Sr, Ta, Te, Th, Ti, Ti, W, Y, and Zr may not be totally soluble in the aqua regia digestion MS41 method.

Sample Id.	Whole Rock			ICP			Whole Rock			ICP			Whole Rock			ICP		
	K *	K	Difference	Mg *	Mg	Difference	Mn *	Mn	Difference	Na *	Na	Difference	P *	P	Difference			
	(ppm)	(ppm)	(%) ³	(ppm)	(ppm)	(%) ³	(ppm)	(ppm)	(%) ³	(ppm)	(ppm)	(%) ³	(ppm)	(ppm)	(%) ³			
05-019-11	6143	5400	-12.09	14956	13800	-7.73	1084	955	-11.92	5564	4800	-13.73	436	440	0.83			
05-019-09	6807	6700	-1.57	40828	40200	-1.54	1626	1470	-9.61	3858	3100	-19.64	480	470	-2.09			
05-019-07	8799	7400	-15.90	13388	11500	-14.10	542	500	-7.77	8902	6500	-26.98	524	500	-4.52			
05-019-06	15606	13600	-12.85	17429	15600	-10.49	542	551	1.64	10163	8700	-14.40	655	630	-3.75			
05-019-05	2656	2100	-20.94	47462	46400	-2.24	1394	1195	-14.28	2374	1800	-24.18	611	580	-5.06			
05-019-04	14195	12600	-11.24	19540	18200	-6.86	620	636	2.65	9496	8800	-7.33	916	870	-5.06			
05-019-02	10459	9200	-12.04	19600	18100	-7.65	697	716	2.72	8902	8500	-4.52	436	470	7.70			
05-019-02 (HC)	13946	13200	-5.35	16766	15800	-5.76	387	437	12.85	10460	10300	-1.53	655	640	-2.23			
05-019-12	9380	8700	-7.25	16464	15200	-7.68	542	617	13.81	11054	10600	-4.10	524	480	-8.34			
05-006-08	332	200	-39.77	95648	94500	-1.20	155	124	-19.94	964	500	-48.15	567	580	2.24			
05-006-09	9048	7800	-13.80	22133	20700	-6.47	852	842	-1.16	12241	11100	-9.32	1309	1280	-2.23			
05-006-11	11788	9800	-16.86	11278	10400	-7.78	155	220	42.03	9792	8300	-15.24	218	240	10.00			
05-006-13	16104	13600	-15.55	10855	10100	-6.96	232	289	24.39	10386	9100	-12.38	175	160	-8.34			
05-006-10	9214	7700	-16.43	11941	11600	-2.85	542	426	-21.42	2522	2300	-8.81	2182	2160	-1.00			
05-006-12	20255	17400	-14.09	6634	6000	-9.55	39	82	111.76	12018	10800	-10.13	218	230	5.41			
05-006-01	15108	13000	-13.95	6634	5800	-12.57	77	144	85.94	16914	14400	-14.86	393	370	-5.79			
05-006-04	12452	10800	-13.26	15258	13800	-9.55	542	571	5.33	16617	15800	-4.92	655	600	-8.34			
05-006-03	9629	8600	-10.69	17550	16200	-7.69	852	808	-5.15	13205	12400	-6.10	567	520	-8.34			
05-006-02	12535	10900	-13.04	15499	14000	-9.67	620	608	-1.87	17359	16200	-6.68	655	630	-3.75			
05-006-07	8052	8900	10.53	10674	13500	26.47	310	386	24.60	11202	12300	9.80	480	640	33.33			
05-006-06	12452	11400	-8.45	19781	18800	-4.96	620	615	-0.74	15505	15300	-1.32	655	630	-3.75			
05-006-05	10708	9800	-8.48	12001	11800	-1.68	542	588	8.46	20327	19500	-4.07	655	610	-6.81			
DUMP 2.5M	11705	10300	-12.00	6453	6400	-0.82	387	380	-1.87	8383	7100	-15.30	742	730	-1.60			
DUMP-2.5M (HC)	10957	9700	-11.48	6815	5700	-16.36	310	357	15.24	6751	6000	-11.12	567	560	-1.29			
DUMP SURFACE	10708	9300	-13.15	6935	6600	-4.84	387	368	-4.97	7641	6800	-11.01	742	700	-5.64			
TAILINGS-1	3071			3498			77			2745			785					
TAILINGS-2	3154			3618			77			2819			829					

Project:**Mount Klappan**

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Sample Id.	Whole Rock	ICP	Difference (%) ³	Whole Rock	ICP	Difference (%) ³	Whole Rock	ICP	Difference (%) ³	Whole Rock	ICP	Difference (%) ³	Whole Rock	ICP	Difference (%) ³
	K *	K		Mg *	Mg		Mn *	Mn		Na *	Na		P *	P	
	(ppm)	(ppm)		(ppm)	(ppm)		(ppm)	(ppm)		(ppm)	(ppm)		(ppm)	(ppm)	
Maximum			37.70			26.50			192.00			34.80			37.50
Minimum			-92.40			-93.80			-95.20			-94.40			-92.40
Mean			-8.62			-7.75			10.60			-11.40			-1.19
Standard Deviation			17.6			14.5			36.6			17.4			17.0
10 Percentile			-15.30			-12.90			-12.00			-19.60			-12.50
25 Percentile			-11.30			-9.58			-6.06			-14.30			-5.06
Median			-5.37			-5.51			1.66			-9.18			0.20
75 Percentile			-0.96			-1.66			13.90			-3.94			5.41
90 Percentile			1.7			1.2			60.1			1.5			14.6
Interquartile Range (IQR) ¹			10.30			7.92			20.00			10.40			10.50
Variance			308			209			1342			301			289
Skewness			-3.41			-3.89			1.45			-2.71			-2.52
Coefficient of Variation (CoV) ²			-2.04			-1.87			3.47			-1.52			-14.30
Count			172			172			172			172			172

¹ Interquartile Range (IQR) = 75th percentile minus 25th percentile² Coefficient of Variation (CoV) = standard deviation divided by mean³ Difference (%) = (ICP - Whole Rock) * 100 / Whole Rock

* Element calculated from Whole Rock XRF analysis

$$K \text{ (Whole Rock)} = (K_2O * 2 * 10000 * 39.09) / (39.09 * 2 + 16)$$

$$Mg \text{ (Whole Rock)} = (MgO * 10000 * 24.31) / (24.31 + 16)$$

$$Mn \text{ (Whole Rock)} = (MnO * 10000 * 54.94) / (54.94 + 16)$$

$$Na \text{ (Whole Rock)} = (Na_2O * 2 * 10000 * 22.99) / (22.99 * 2 + 16)$$

$$P \text{ (Whole Rock)} = (P_2O_5 * 2 * 10000 * 30.97) / (2 * 30.97 + 5 * 16)$$

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Al, B, Ba, Be, Ca, Ce, Cr, Cs, Ga, Ge, Hf, In, K, La, Li, Mg, Na, Nb, Rb, Re, S, Sb, Sc, Sn, Sr, Ta, Te, Th, Ti, Tl, W, Y, and Zr may not be totally soluble in the aqua regia dig

Sample Id.	Whole Rock			ICP			Leco S (Total)**			ICP S			Whole Rock Ti		
	Si * (ppm)	Si (ppm)	Difference (%) ²	Sr * (ppm)	Sr (ppm)	Difference (%) ²	S (ppm)	S (ppm)	Difference (%) ²	Ti * (ppm)	Ti (ppm)	Difference (%) ²			
04-SR-01	201524			169	163	-3.91	500	400	-20.00	4077	3650	-10.46			
04-SR-02	87323			676	237	-64.97	4800	100	-97.92	839	50	-94.04			
04-SR-03	334098			169	158	-6.57	400	500	25.00	2218	1970	-11.19			
04-SR-04	148514			85	90	6.20	1600	1500	-6.25	2120	2120	-4.42			
04-SR-05	240838			592	679	14.71	600	700	16.67	3117	2900	-6.97			
86-035-01	111631			338	113	-66.59	25900	21200	-18.15	4196	50	-98.81			
86-035-02	255283			85	162	91.58	800	800	0.00	4676	4440	-5.05			
86-035-03	246728			169	179	5.55	200	200	0.00	3897	3820	-1.97			
86-035-04	87136			507	665	31.07	246000	100000	-59.35	599	440	-26.61			
86-035-13	257714			169	180	6.43	600	700	16.67	5575	5210	-6.55			
86-035-05	255470			169	184	8.50	1100	1200	9.09	5276	5170	-2.00			
86-035-10	108919			1099	685	-37.69	4800	500	-89.58	3657	50	-98.63			
86-035-06	129067			2875	3380	17.57	500	700	40.00	300	340	13.43			
86-035-07	309976			169	156	-8.05	800	800	0.00	4316	3850	-10.81			
86-035-07 (HC)	300113			169	170	0.52	400	400	0.00	3177	2880	-9.36			
86-035-08	247009			85	111	30.68	500	500	0.00	3537	3220	-8.96			
86-035-12	171186			254	307	21.02	400	400	0.00	2218	2140	-3.52			
86-035-11	310911			169	187	10.28	900	1000	11.11	3957	3320	-16.09			
86-035-09	275524			169	198	16.78	15400	16700	8.44	3837	3570	-6.95			
86-035-09 (HC)	282302			169	194	14.42	1500	1800	20.00	4017	3930	-2.16			
85-027-01	289735			85	106	24.77	600	600	0.00	3957	3600	-9.01			
85-027-02	257667			169	132	-21.95	8600	8900	3.49	4316	4060	-5.94			
85-027-02 (HC)	269634			85	137	62.02	3800	4000	5.26	5096	4850	-4.82			
85-027-03	289127			169	202	19.44	20700	21500	3.86	3117	2890	-7.29			
85-027-04	274870			169	200	18.26	1200	1300	8.33	3897	3890	-0.17			
85-027-27	273093			169	225	33.04	400	400	0.00	4256	4020	-5.56			
85-027-05	275057			254	255	0.52	1500	1600	6.67	5875	5360	-8.77			
85-027-06	252385			169	239	41.32	700	700	0.00	4856	4660	-4.04			
85-027-25	269307			169	175	3.18	300	400	33.33	4676	4460	-4.62			
85-027-21	234153			676	861	27.28	300	300	0.00	839	750	-10.64			
85-027-07	235322			85	146	72.07	300	300	0.00	3537	3200	-9.53			
85-027-08	210874			846	1020	20.63	100	100	0.00	1619	1570	-3.01			
85-027-09	251076			169	190	12.35	700	800	14.29	5395	5150	-4.55			
85-027-10	242241			169	194	14.71	400	400	0.00	5455	5020	-7.98			
85-027-11	281975			169	178	5.25	700	700	0.00	3957	3750	-5.22			
85-027-20	166277			169	143	-15.74	600	600	0.00	2158	1880	-12.89			
85-027-12	263651			338	349	3.18	7400	8300	12.16	4196	3900	-7.07			
85-027-13	275103			85	125	47.23	1200	1200	0.00	5815	5330	-8.34			
85-027-23	281882			169	206	21.81	700	800	14.29	4077	3560	-12.67			
85-027-14	142390			85	77	-8.82	257000	100000	-61.09	4256	3640	-14.48			
85-027-28	124065			423	406	-3.97	38500	49300	28.05	1499	1500	0.08			
85-027-15	277815			85	99	17.31	800	1200	50.00	3717	3400	-8.53			
85-027-16	301468			169	118	-30.52	900	1000	11.11	5276	4790	-9.20			
85-027-17	403843			169	125	-26.38	1200	1400	16.67	1319	1150	-12.81			
85-027-17 (HC)	396457			169	173	2.30	1000	1100	10.00	1139	1150	0.96			
85-027-24	326478			169	125	-26.09	500	600	20.00	4196	3510	-16.36			
85-027-24 (HC)	298664			169	184	8.50	500	500	0.00	2818	2570	-8.79			
85-027-18	268419			169	184	8.50	23600	24700	4.66	5815	5250	-9.72			

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Al, B, Ba, Be, Ca, Ce, Cr, Cs, Ga, Ge, Hf, In, K, La, Li, Mg, Na, Nb, Rb, Re, S, Sb, Sc, Sn, Sr, Ta, Te, Th, Ti, Tl, W, Y, and Zr may not be totally soluble in the aqua regia dig

Sample Id.	Whole Rock Si * (ppm)	ICP Si (ppm)	Difference (%) ³	Whole Rock Sr * (ppm)	ICP Sr (ppm)	Difference (%) ³	Leco S (Total)** (ppm)	ICP S (ppm)	Difference (%) ³	Whole Rock Ti * (ppm)	ICP Ti (ppm)	Difference (%) ³
G-84-007-25												
G-84-007-26												
G-84-007-27												
G-84-007-28												
G-84-007-29												
G-84-007-30												
G-84-007-31												
G-84-007-32												
G-84-007-33												
G-84-007-84												
G-84-007-34												
G-84-007-35												
05-ARD4-09	285902			169	215	27.13	500	500	0.00	3177	2950	-7.16
05-ARD4-10	326010			85	90	6.79	500	500	0.00	3837	3250	-15.29
05-ARD4-03	297916			169	129	-24.02	1000	1000	0.00	4376	3760	-14.08
05-ARD4-04	165389			423	450	6.43	2100	2000	-4.76	4196	3610	-13.98
05-ARD4-06	307078			85	118	39.55	2200	2000	-9.09	4436	3850	-13.22
05-ARD4-05	319372			85	113	33.63	400	300	-25.00	3477	2980	-14.30
05-ARD4-07-1	324889			85	129	51.96	400	300	-25.00	3837	3450	-10.08
ARD4-2006A	292119			254	138	-45.80	600	600	0.00	4676	4110	-12.11
05-ARD4-08	210687			85	127	50.19	3500	3600	2.86	3117	2920	-6.33
ARD4-2006B	344849			169	137	-18.99	400	500	25.00	2578	2430	-5.74
05-ARD4-02	271036			169	188	11.17	26000	23800	-8.46	6175	5330	-13.68
ARD4-2006C	179740			338	338	-0.07	103000	100000	-2.91	3417	2780	-18.65
05-ARD4-01	204703			169	185	9.10	98600	97900	-0.71	4616	4050	-12.26
05-ARD3-01A	237285			254	170	-32.99	600	500	-16.67	4916	3980	-19.04
05-ARD3-02B	240277			85	82	-3.26	84000	77200	-8.10	3837	3250	-15.29
05-ARD3-16	364576			85	115	36.00	600	600	0.00	2338	2050	-12.32
05-ARD3-03A	273047			169	179	5.55	500	600	20.00	2818	2520	-10.56
05-ARD3-04A	135565			423	308	-27.15	6300	5500	-12.70	2518	2230	-11.43
05-ARD3-05A	246121			169	129	-24.02	7900	7500	-5.06	5096	4330	-15.03
05-ARD3-07A	296981			169	99	-41.40	700	500	-28.57	3237	1870	-42.24
05-ARD3-07B (HC)	298710			169	163	-3.91	800	700	-12.50	3297	2850	-13.56
ARD3-2006B	305115			169	133	-21.36	1400	1300	-7.14	3597	3380	-6.03
ARD3-2006C	306751			254	139	-45.40	2100	2100	0.00	5216	4500	-13.72
05-ARD3-06A	320401			85	99	17.55	1200	800	-33.33	4976	2880	-42.12
05-ARD3-08A	148888			254	288	13.53	107500	100000	-6.98	4856	4710	-3.01
05-ARD3-08B (HC)	271784			169	202	19.44	13800	13900	0.72	4676	4020	-14.03
05-ARD3-09A	264959			254	218	-14.06	1000	800	-20.00	5935	5140	-13.40
ARD3-2006A	289501			254	221	-12.88	600	500	-16.67	5995	5700	-4.92
05-ARD3-10A	268045			169	193	13.83	1100	900	-18.18	4916	4210	-14.36
05-ARD3-15A	300066			85	154	82.12	500	500	0.00	4196	3590	-14.45
05-ARD3-12A	305722			169	145	-14.56	500	500	0.00	3597	3150	-12.43
05-ARD3-11A	287304			254	213	-16.03	1000	1000	0.00	4316	3760	-12.89
05-ARD3-14A	146317			169	147	-13.08	65400	63500	-2.91	1679	1700	1.27
05-ARD3-14B (HC)	164034			169	155	-8.35	6600	5800	-12.12	2398	2230	-7.01
05-ARD3-13A	99757			254	15	-94.17	4100	50	-98.78	2278	180	-92.10
05-ARD2-04	316942			85	99	16.84	100	100	0.00	4796	3970	-17.22

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Sample Id.	Whole Rock			ICP			Leco			ICP			Whole Rock		
	Si * (ppm)	Si (ppm)	Difference (%) ³	Sr * (ppm)	Sr (ppm)	Difference (%) ³	S (Total)** (ppm)	S (ppm)	Difference (%) ³	Ti * (ppm)	Ti (ppm)	Difference (%) ³			
05-ARD2-08	266035			169	211	24.77	2000	2000	0.00	4676	3860	-17.45			
05-ARD2-07	277768			254	211	-16.82	2900	2700	-6.90	4256	3380	-20.59			
05-ARD2-07 (HC)	274542			169	218	28.90	2900	2900	0.00	4017	3890	-3.15			
05-ARD2-13	90361			761	532	-30.09	160500	100000	-37.69	1978	1270	-35.81			
05-ARD2-12	94475			507	504	-0.66	176500	100000	-43.34	1978	1640	-17.10			
05-ARD2-12 (HC)	93353			592	803	35.66	85300	86900	1.88	1619	1660	2.55			
05-ARD2-16	184696			254	150	-40.87	2800	2100	-25.00	3357	2660	-20.77			
05-ARD2-11	294363			169	133	-21.36	600	400	-33.33	5635	4490	-20.32			
05-ARD2-09	302590			169	215	27.13	300	400	33.33	4616	3910	-15.30			
05-ARD2-02	271177			761	825	8.41	500	600	20.00	3957	3810	-3.71			
05-ARD2-10A	163847			254	219	-13.67	12500	13100	4.80	4316	3830	-11.27			
05-ARD2-14	310771			169	181	7.03	600	600	0.00	3597	3230	-10.20			
05-ARD2-06	222981			169	189	11.46	600	600	0.00	4616	4070	-11.83			
05-ARD2-01A	197831			169	212	25.36	600	600	0.00	3657	3310	-9.49			
05-ARD2-15	241399			169	185	9.10	600	500	-16.67	4976	4370	-12.18			
05-ARD2-05	339754			169	182	7.62	1300	1300	0.00	2098	1610	-23.27			
ARD2-2006A	166792			254	221	-12.88	8300	9100	9.64	4376	4310	-1.52			
ARD2-2006B	259303			169	170	0.52	900	800	-11.11	5695	5200	-8.70			
05-ARD2-03	340876			338	310	-8.35	600	700	16.67	1858	1690	-9.06			
05-ARD1-11	72410			254	10	-95.90	5600	200	-96.43	1858	150	-91.93			
05-ARD1-15	264679			423	469	10.93	500	700	40.00	1679	1560	-7.07			
05-ARD1-15 (HC)	273935			338	351	3.77	600	600	0.00	1858	1660	-10.68			
05-ARD1-13	291044			85	74	-12.61	500	500	0.00	4077	3750	-8.01			
05-ARD1-14	274168			85	111	31.27	1000	1300	30.00	4436	4330	-2.40			
05-ARD1-12	334612			85	109	28.90	400	500	25.00	2098	2020	-3.73			
05-ARD1-08	305348			338	380	12.35	600	700	16.67	2698	2450	-9.18			
05-ARD1-03	341250			169	119	-29.63	500	500	0.00	4916	4440	-9.68			
05-ARD1-01	252618			85	117	37.77	500	600	20.00	3777	3600	-4.68			
05-ARD1-02	333303			85	123	45.46	800	900	12.50	4256	4250	-0.15			
05-ARD1-07	294456			169	192	13.23	2200	2200	0.00	5995	4270	-28.77			
05-ARD1-07 (HC)	282910			169	189	11.46	3000	2900	-3.33	5036	4540	-9.85			
05-ARD1-07-2	358920			169	169	-0.07	300	400	33.33	1918	1910	-0.44			
05-ARD1-06	266736			169	172	1.41	7100	7500	5.63	5695	4720	-17.12			
05-ARD1-06 (HC)	275431			169	179	5.84	5300	5800	9.43	4976	4670	-6.15			
ARD1-2006A	262201			254	189	-25.69	17800	17500	-1.69	5815	5210	-10.41			
05-ARD1-09	221485			169	164	-3.03	123500	100000	-19.03	4436	4130	-6.90			
05-ARD1-10	266409			169	188	11.17	3100	3100	0.00	4256	3940	-7.43			
05-ARD1-04	274262			169	192	13.53	800	900	12.50	5036	4740	-5.87			
05-ARD1-05	329329			169	138	-18.70	700	900	28.57	4316	3900	-9.65			
05-019-08	238548			169	182	7.32	600	500	-16.67	4856	4370	-10.01			
05-019-03	265146			169	185	9.10	700	600	-14.29	4856	4280	-11.86			
05-019-01	230273			169	158	-6.87	1200	800	-33.33	4916	4210	-14.36			
05-019-13	289735			169	176	3.77	900	900	0.00	4676	4200	-10.18			
05-019-2006A	286837			254	203	-19.98	800	800	0.00	4137	3780	-8.62			
05-019-16	261687			254	204	-19.58	3500	3400	-2.86	5395	4400	-18.45			
05-019-14	58573			254	25	-90.07	46800	3300	-92.95	1079	160	-85.17			
05-019-15	255704			169	141	-16.63	3000	2600	-13.33	4616	3990	-13.56			
05-019-10	323299			169	203	20.03	200	300	50.00	3177	2830	-10.93			

Project: Mount Klappan
Client: Rescan Environmental
Data: QA/QC Data - Comparison on ICP Metals and Whole Rock Analyses
Comments: Rock units designated by Gulf.
 Ba, Cr, Sn, Ta, Ti, W, and Zr may not be totally soluble in the 4-acid digestion MS61 method.
 The ICP metals for samples 04-Sr-02, 86-035-01, and 86-035-10 were done by aqua regia digestion instead of 4-acid digestion.
 Al, B, Ba, Be, Ca, Ce, Cr, Cs, Ga, Ge, Hf, In, K, La, Li, Mg, Na, Nb, Rb, Re, S, Sb, Sc, Sn, Sr, Ta, Te, Th, Ti, W, Y, and Zr may not be totally soluble in the aqua regia dig

Sample Id.	Whole Rock			Whole Rock			Leco S (Total)**			Whole Rock		
	Si * (ppm)	ICP Si (ppm)	Difference (%) ²	Sr * (ppm)	ICP Sr (ppm)	Difference (%) ²	S (ppm)	ICP S (ppm)	Difference (%) ²	Ti * (ppm)	ICP Ti (ppm)	Difference (%) ²
05-019-11	327086			169	172	1.41	700	700	0.00	1559	1370	-12.11
05-019-09	200309			761	862	13.27	200	300	50.00	1619	1500	-7.33
05-019-07	335640			169	140	-17.51	300	300	0.00	2398	1890	-21.18
05-019-06	264585			254	209	-17.61	3600	3600	0.00	5515	4390	-20.40
05-019-05	150010			254	290	14.32	2400	2600	8.33	1798	1690	-6.03
05-019-04	263651			169	214	26.54	900	1000	11.11	4556	4140	-9.13
05-019-02	261079			169	193	14.12	17600	17500	-0.57	3177	3010	-5.27
05-019-02 (HC)	260939			169	211	24.77	12400	11900	-4.03	4676	3970	-15.10
05-019-12	291652			169	208	22.99	400	400	0.00	4077	3860	-5.31
05-006-08	114015			169	201	18.85	100	100	0.00	120	70	-41.62
05-006-09	246354			169	206	21.81	200	200	0.00	5036	4600	-8.65
05-006-11	203347			169	131	-22.54	2500	1800	-28.00	5515	4810	-12.79
05-006-13	219896			169	149	-12.19	1600	1400	-12.50	5455	4680	-14.21
05-006-10	173710			169	119	-29.93	30100	30900	2.66	1798	1490	-17.15
05-006-12	244157			169	145	-14.26	3500	3300	-5.71	6235	5560	-10.82
05-006-01	296467			169	164	-3.32	300	300	0.00	6774	5800	-14.38
05-006-04	261079			169	175	3.48	1000	1000	0.00	5755	4960	-13.82
05-006-03	273140			169	163	-3.62	500	500	0.00	4316	3960	-8.26
05-006-02	265193			169	193	14.12	500	500	0.00	5995	5270	-12.09
05-006-07	217091			254	253	-0.27	1800	1700	-5.56	4077	4550	11.61
05-006-06	257480			169	214	26.54	1400	1600	14.29	4796	4460	-7.01
05-006-05	293007			169	175	3.48	300	300	0.00	4616	4370	-5.33
DUMP 2.5M	216390			254	178	-29.83	1600	1100	-31.25	3657	3260	-10.85
DUMP-2.5M (HC)	203020			169	137	-18.99	1800	1100	-38.89	3057	2740	-10.38
DUMP SURFACE	198626			169	198	17.08	2000	1300	-35.00	3357	2970	-11.53
TAILINGS-1	73439			254			3900			1379		
TAILINGS-2	73953			169			3900			1319		

Project:

Client:

Data:

Comments:

Mount Klappan

Rescan Environmental

QA/QC Data - Comparison on ICP Metals and Whole Rock Analyses

Rock units designated by Gulf.

Ba, Cr, Sn, Ta, Ti, W, and Zr may not be totally soluble in the 4-acid digestion MS61 method.

The ICP metals for samples 04-Sr-02, 86-035-01, and 86-035-10 were done by aqua regia digestion instead of 4-acid digestion.

Al, B, Ba, Be, Ca, Ce, Cr, Cs, Ga, Ge, Hf, In, K, La, Li, Mg, Na, Nb, Rb, Re, S, Sb, Sc, Sn, Sr, Ta, Te, Th, Ti, Ti, W, Y, and Zr may not be totally soluble in the aqua regia dig

Sample Id.	Whole Rock			ICP			Leco			ICP		
	Si *	Si	Difference	Sr *	Sr	Difference	S (Total)**	S	Difference	Ti *	Ti	Difference
	(ppm)	(ppm)	(%) ³	(ppm)	(ppm)	(%) ³	(ppm)	(ppm)	(%) ³	(ppm)	(ppm)	(%) ³
Maximum			0.00			91.60			50.00			13.40
Minimum			0.00			-95.90			-98.80			-98.80
Mean			#DIV/0!			3.77			-2.37			-13.30
Standard Deviation			#DIV/0!			27.8			23.8			17.0
10 Percentile			#NUM!			-26.40			-25.00			-20.20
25 Percentile			#NUM!			-12.90			-7.02			-14.10
Median			#NUM!			6.61			0.00			-9.93
75 Percentile			#NUM!			18.40			8.36			-6.03
90 Percentile			#NUM!			31.2			20.0			-3.2
Interquartile Range (IQR) ¹			#NUM!			31.30			15.40			8.07
Variance			#DIV/0!			774			567			290
Skewness			#DIV/0!			-0.45			-1.64			-3.75
Coefficient of Variation (CoV) ²			#DIV/0!			7.38			-10.10			-1.28
Count			0			172			172			172

¹ Interquartile Range (IQR) = 75th percentile minus 25th percentile² Coefficient of Variation (CoV) = standard deviation divided by mean³ Difference (%) = (ICP - Whole Rock) * 100 / Whole Rock

* Element calculated from Whole Rock XRF analysis

$$\text{Si (Whole Rock)} = (\text{SiO}_2 * 10000 * 28.09) / (28.09 + 2 * 16)$$

$$\text{Sr (Whole Rock)} = (\text{SrO} * 10000 * 87.62) / (87.62 + 16)$$

$$\text{Ti (Whole Rock)} = (\text{TiO}_2 * 10000 * 47.9) / (47.9 + 2 * 16)$$

**S (Total) = S (Leco %) * 10000

Project	Mt. Klappan Cycle #36	Water Analysis											
Report to	Rescan Environmental Services												
ALS File No.	Z6372												
Date Recieved	12/29/2006												
Date	1/22/2007												
RESULTS OF ANALYSIS													
Sample ID	85-027- 17-36	85-027- 24-36					86-035- 07-36					86-035- 09-36	
Date Sampled	12/29/2006	12/29/2006					12/29/2006					12/29/2006	
Time Sampled													
ALS Sample ID	3	4					5					6	
Nature	Water	Water					Water					Water	
		Units	DI		Units	DI		Units	DI		Units	DI	
Dissolved Metals													
Aluminum D-Al	0.049	mg/L	0.01	0.064	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	
Antimony D-Sb	0.0018	mg/L	0.001	0.0011	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Arsenic D-As	0.0015	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Barium D-Ba	0.0186	mg/L	0.001	0.0519	mg/L	0.001	0.213	mg/L	0.001	0.343	mg/L	0.001	
Beryllium D-Be	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	
Bismuth D-Bi	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	
Boron D-B	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	
Cadmium D-Cd	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	
Calcium D-Ca	7.53	mg/L	0.05	8.7	mg/L	0.05	9.71	mg/L	0.05	12.8	mg/L	0.05	
Chromium D-Cr	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	
Cobalt D-Co	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Copper D-Cu	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Iron D-Fe	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	
Lead D-Pb	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Lithium D-Li	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	0.018	mg/L	0.01	
Magnesium D-Mg	3.88	mg/L	0.05	6.11	mg/L	0.05	18.1	mg/L	0.05	12.2	mg/L	0.05	
Manganese D-Mn	<0.0010	mg/L	0.001	0.0059	mg/L	0.001	<0.0010	mg/L	0.001	0.0026	mg/L	0.001	
Mercury D-Hg	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Molybdenum D-Mo	0.0034	mg/L	0.001	0.0048	mg/L	0.001	0.0033	mg/L	0.001	<0.0010	mg/L	0.001	
Nickel D-Ni	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	
Phosphorus D-P	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	
Potassium D-K	<0.50	mg/L	0.5	0.67	mg/L	0.5	1.78	mg/L	0.5	4.33	mg/L	0.5	
Selenium D-Se	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	
Silicon D-Si	1.21	mg/L	0.05	1.23	mg/L	0.05	0.639	mg/L	0.05	0.665	mg/L	0.05	
Silver D-Ag	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	
Sodium D-Na	0.407	mg/L	0.05	0.582	mg/L	0.05	1.39	mg/L	0.05	17.1	mg/L	0.05	
Strontium D-Sr	0.166	mg/L	0.001	0.29	mg/L	0.001	0.65	mg/L	0.001	0.616	mg/L	0.001	
Thallium D-Tl	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Tin D-Sn	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Titanium D-Ti	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	
Uranium D-U	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	
Vanadium D-V	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	
Zinc D-Zn	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	
Physical Tests													
Conductivity (uS/cm)	69.6	uS/cm	2	94.6	uS/cm	2	189	uS/cm	2	235	uS/cm	2	
pH	7.72	pH	0.1	7.97	pH	0.1	8.25	pH	0.1	8.3	pH	0.1	
Sample Preparation													
Total Volume - In (mL)	500	mL	0	500	mL	0	500	mL	0	500	mL	0	
Total Volume - Out (mL)	515	mL	0	485	mL	0	475	mL	0	460	mL	0	
Dissolved Anions													
Acidity (to pH 8.3) CaCO3	1.7	mg/L	1	1.6	mg/L	1	1.1	mg/L	1	<1.0	mg/L	1	
Alkalinity-Total CaCO3	33.9	mg/L	1	49	mg/L	1	105	mg/L	1	125	mg/L	1	
Sulphate SO4	2.28	mg/L	0.5	1.38	mg/L	0.5	3.85	mg/L	0.5	9.33	mg/L	0.5	

Project	Mt. Klappan Cycle #41	Water Analysis																	
Report to	Rescan Environmental Services																		
ALS File No.	Z6371																		
Date Recieved	12/29/2006																		
Date	1/24/2007																		
RESULTS OF ANALYSIS																			
Sample ID	ARD3-08B -41	ARD3-14B -41				ARD1-15 -41				ARD2-12 -41				ARD2-07 -41				DUMP-2.5 M-41	
Date Sampled	12/29/2006	12/29/2006				12/29/2006				12/29/2006				12/29/2006				12/29/2006	
Time Sampled																			
ALS Sample ID	2	3				4				5				9				10	
Nature	Water	Water				Water				Water				Water				Water	
		Units	DI		Units	DI		Units	DI		Units	DI		Units	DI		Units	DI	
Dissolved Metals																			
Aluminum D-Al	0.014	mg/L	0.01	<0.010	mg/L	0.01	0.077	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	0.013	mg/L	0.01	
Antimony D-Sb	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	0.0021	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Arsenic D-As	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	0.0039	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Barium D-Ba	0.02	mg/L	0.001	0.173	mg/L	0.001	0.0797	mg/L	0.001	0.027	mg/L	0.001	0.0579	mg/L	0.001	0.0079	mg/L	0.001	
Beryllium D-Be	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	
Bismuth D-Bi	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	
Boron D-B	0.14	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	
Cadmium D-Cd	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	
Calcium D-Ca	23.2	mg/L	0.05	17.6	mg/L	0.05	9.36	mg/L	0.05	69.9	mg/L	0.05	11	mg/L	0.05	4.52	mg/L	0.05	
Chromium D-Cr	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	
Cobalt D-Co	0.0027	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Copper D-Cu	<0.0040	mg/L	0.004	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Iron D-Fe	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	
Lead D-Pb	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Lithium D-Li	0.16	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	
Magnesium D-Mg	28	mg/L	0.05	9.33	mg/L	0.05	5.9	mg/L	0.05	25.6	mg/L	0.05	29.2	mg/L	0.05	13	mg/L	0.05	
Manganese D-Mn	0.506	mg/L	0.001	0.0087	mg/L	0.001	0.0024	mg/L	0.001	0.0315	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Mercury D-Hg	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Molybdenum D-Mo	<0.0010	mg/L	0.001	0.0087	mg/L	0.001	0.0058	mg/L	0.001	<0.0010	mg/L	0.001	0.0051	mg/L	0.001	<0.0010	mg/L	0.001	
Nickel D-Ni	0.0221	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	
Phosphorus D-P	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	
Potassium D-K	5.92	mg/L	0.5	1.6	mg/L	0.5	<0.50	mg/L	0.5	<0.50	mg/L	0.5	1.81	mg/L	0.5	<0.50	mg/L	0.5	
Selenium D-Se	0.018	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	
Silicon D-Si	1.22	mg/L	0.05	0.715	mg/L	0.05	1.47	mg/L	0.05	0.214	mg/L	0.05	0.724	mg/L	0.05	1.02	mg/L	0.05	
Silver D-Ag	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	
Sodium D-Na	340	mg/L	2	3.43	mg/L	0.05	0.435	mg/L	0.05	0.209	mg/L	0.05	0.429	mg/L	0.05	0.246	mg/L	0.05	
Strontium D-Sr	2.46	mg/L	0.001	0.955	mg/L	0.001	0.155	mg/L	0.001	0.712	mg/L	0.001	0.599	mg/L	0.001	0.039	mg/L	0.001	
Thallium D-Tl	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Tin D-Sn	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Titanium D-Ti	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	
Uranium D-U	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	0.00016	mg/L	0.0001	<0.00010	mg/L	0.0001	
Vanadium D-V	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	
Zinc D-Zn	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	
Physical Tests																			
Conductivity (uS/cm)	1690	uS/cm	2	186	uS/cm	2	95.5	uS/cm	2	465	uS/cm	2	282	uS/cm	2	120	uS/cm	2	
pH	7.99	pH	0.1	7.96	pH	0.1	7.9	pH	0.1	8.07	pH	0.1	8.13	pH	0.1	8.07	pH	0.1	
Sample Preparation																			
Total Volume - In (mL)	500	mL	0	500	mL	0	500	mL	0	500	mL	0	500	mL	0	500	mL	0	
Total Volume - Out (mL)	410	mL	0	475	mL	0	470	mL	0	485	mL	0	520	mL	0	435	mL	0	
Dissolved Anions																			
Acidity (to pH 8.3) CaCO3	3.4	mg/L	1	2.4	mg/L	1	1.7	mg/L	1	2.2	mg/L	1	1.5	mg/L	1	1.6	mg/L	1	
Alkalinity-Total CaCO3	97.7	mg/L	1	54.5	mg/L	1	44.2	mg/L	1	92.4	mg/L	1	89.9	mg/L	1	69.9	mg/L	1	
Sulphate SO4	738	mg/L	2.5	38.4	mg/L	0.5	4.72	mg/L	0.5	173	mg/L	0.5	64	mg/L	0.5	<0.50	mg/L	0.5	

Project	Mt. Klappan Cycle #35	Water Analysis											
Report to	Rescan Environmental Services												
ALS File No.	Z6287												
Date Recieved	12/21/2006												
Date	1/11/2007												
RESULTS OF ANALYSIS													
Sample ID	85-027- 17-35	85-027- 24-35					86-035- 07-35					86-035- 09-35	
Date Sampled	12/21/2006	12/21/2006					12/21/2006					12/21/2006	
Time Sampled													
ALS Sample ID	3	4					5					6	
Nature	Water	Water					Water					Water	
		Units	DI		Units	DI		Units	DI		Units	DI	
Dissolved Metals													
Aluminum D-Al	0.043	mg/L	0.01	0.072	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	
Antimony D-Sb	0.0018	mg/L	0.001	0.001	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Arsenic D-As	0.0012	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Barium D-Ba	0.0195	mg/L	0.001	0.0528	mg/L	0.001	0.219	mg/L	0.001	0.279	mg/L	0.001	
Beryllium D-Be	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	
Bismuth D-Bi	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	
Boron D-B	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	
Cadmium D-Cd	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	
Calcium D-Ca	7.56	mg/L	0.05	8.12	mg/L	0.05	10.4	mg/L	0.05	10.8	mg/L	0.05	
Chromium D-Cr	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	
Cobalt D-Co	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Copper D-Cu	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Iron D-Fe	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	
Lead D-Pb	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Lithium D-Li	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	0.017	mg/L	0.01	
Magnesium D-Mg	4.17	mg/L	0.05	5.96	mg/L	0.05	19.1	mg/L	0.05	10.6	mg/L	0.05	
Manganese D-Mn	<0.0010	mg/L	0.001	0.0043	mg/L	0.001	<0.0010	mg/L	0.001	0.0024	mg/L	0.001	
Mercury D-Hg	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Molybdenum D-Mo	0.0038	mg/L	0.001	0.005	mg/L	0.001	0.0045	mg/L	0.001	<0.0010	mg/L	0.001	
Nickel D-Ni	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	
Phosphorus D-P	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	
Potassium D-K	<0.50	mg/L	0.5	0.66	mg/L	0.5	1.97	mg/L	0.5	4.25	mg/L	0.5	
Selenium D-Se	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	
Silicon D-Si	1.2	mg/L	0.05	1.2	mg/L	0.05	0.653	mg/L	0.05	0.647	mg/L	0.05	
Silver D-Ag	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	
Sodium D-Na	0.486	mg/L	0.05	0.603	mg/L	0.05	1.66	mg/L	0.05	19.7	mg/L	0.05	
Strontium D-Sr	0.18	mg/L	0.001	0.289	mg/L	0.001	0.706	mg/L	0.001	0.538	mg/L	0.001	
Thallium D-Tl	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Tin D-Sn	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Titanium D-Ti	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	
Uranium D-U	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	
Vanadium D-V	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	
Zinc D-Zn	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	
Physical Tests													
Conductivity (uS/cm)	70.7	uS/cm	2	89.6	uS/cm	2	193	uS/cm	2	219	uS/cm	2	
pH	7.93	pH	0.1	8.21	pH	0.1	8.21	pH	0.1	8.28	pH	0.1	
Sample Preparation													
Total Volume - In (mL)	500	mL	0	500	mL	0	500	mL	0	500	mL	0	
Total Volume - Out (mL)	475	mL	0	520	mL	0	450	mL	0	460	mL	0	
Dissolved Anions													
Acidity (to pH 8.3) CaCO3	4.2	mg/L	1	3.5	mg/L	1	4	mg/L	1	3.7	mg/L	1	
Alkalinity-Total CaCO3	33.2	mg/L	1	44.2	mg/L	1	114	mg/L	1	122	mg/L	1	
Sulphate SO4	2.14	mg/L	0.5	1.03	mg/L	0.5	3.73	mg/L	0.5	5.91	mg/L	0.5	

Project	Mt. Klappan Cycle #40	Water Analysis																					
Report to	Rescan Environmental Services																						
ALS File No.	Z6286																						
Date Recieved	12/21/2006																						
Date	1/11/2007																						
RESULTS OF ANALYSIS																							
Sample ID	ARD3-07B -40	ARD3-14B -40				ARD1-15 -40				ARD2-12 -40				019-02 -40				ARD2-07 -40				DUMP-2.5 M-40	
Date Sampled	12/21/2006	12/21/2006				12/21/2006				12/21/2006				12/21/2006				12/21/2006				12/21/2006	
Time Sampled																							
ALS Sample ID	1	3				4				5				6				9				10	
Nature	Water	Water				Water				Water				Water				Water				Water	
		Units	DI		Units	DI		Units	DI		Units	DI		Units	DI		Units	DI		Units	DI		
Dissolved Metals																							
Aluminum D-Al	1.21 mg/L	0.01	<0.010	mg/L	0.01	0.087	mg/L	0.01	<0.010	mg/L	0.01	0.6	mg/L	0.01	<0.010	mg/L	0.01	0.019	mg/L	0.01			
Antimony D-Sb	0.0114 mg/L	0.001	<0.0010	mg/L	0.001	0.002	mg/L	0.001	<0.0010	mg/L	0.001	0.0014	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001			
Arsenic D-As	0.0319 mg/L	0.001	<0.0010	mg/L	0.001	0.0049	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001			
Barium D-Ba	0.0432 mg/L	0.001	0.188	mg/L	0.001	0.0807	mg/L	0.001	0.0217	mg/L	0.001	0.0275	mg/L	0.001	0.0618	mg/L	0.001	0.008	mg/L	0.001			
Beryllium D-Be	<0.0050 mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005			
Bismuth D-Bi	<0.0050 mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005			
Boron D-B	<0.10 mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1			
Cadmium D-Cd	<0.00050 mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005			
Calcium D-Ca	0.195 mg/L	0.05	18.3	mg/L	0.05	8.67	mg/L	0.05	86.1	mg/L	0.05	1.12	mg/L	0.05	12.1	mg/L	0.05	4.29	mg/L	0.05			
Chromium D-Cr	<0.0050 mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005			
Cobalt D-Co	0.0027 mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001			
Copper D-Cu	0.0025 mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	0.0014	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001			
Iron D-Fe	0.246 mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	0.101	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03			
Lead D-Pb	0.0011 mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001			
Lithium D-Li	0.03 mg/L	0.01	0.011	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	0.063	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01			
Magnesium D-Mg	0.272 mg/L	0.05	10.1	mg/L	0.05	5.75	mg/L	0.05	31.9	mg/L	0.05	1.37	mg/L	0.05	33	mg/L	0.05	13.6	mg/L	0.05			
Manganese D-Mn	0.0021 mg/L	0.001	0.01	mg/L	0.001	0.0012	mg/L	0.001	0.0496	mg/L	0.001	0.0012	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001			
Mercury D-Hg	<0.0010 mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001			
Molybdenum D-Mo	0.161 mg/L	0.001	0.0105	mg/L	0.001	0.0066	mg/L	0.001	<0.0010	mg/L	0.001	0.0228	mg/L	0.001	0.0069	mg/L	0.001	0.0011	mg/L	0.001			
Nickel D-Ni	0.0188 mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005			
Phosphorus D-P	<0.30 mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3			
Potassium D-K	0.92 mg/L	0.5	1.7	mg/L	0.5	<0.50	mg/L	0.5	<0.50	mg/L	0.5	1.54	mg/L	0.5	2.01	mg/L	0.5	<0.50	mg/L	0.5			
Selenium D-Se	0.011 mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01			
Silicon D-Si	2.92 mg/L	0.05	0.728	mg/L	0.05	1.49	mg/L	0.05	0.215	mg/L	0.05	1.74	mg/L	0.05	0.761	mg/L	0.05	1.02	mg/L	0.05			
Silver D-Ag	<0.00010 mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001			
Sodium D-Na	78.8 mg/L	2	4.29	mg/L	0.05	0.395	mg/L	0.05	0.21	mg/L	0.05	181	mg/L	2	0.555	mg/L	0.05	0.278	mg/L	0.05			
Strontium D-Sr	0.0174 mg/L	0.001	1.06	mg/L	0.001	0.156	mg/L	0.001	0.901	mg/L	0.001	0.12	mg/L	0.001	0.692	mg/L	0.001	0.0399	mg/L	0.001			
Thallium D-Tl	<0.0010 mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001			
Tin D-Sn	<0.0010 mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001			
Titanium D-Ti	0.011 mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	0.012	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01			
Uranium D-U	<0.00010 mg/L	0.0001	0.00011	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	0.00037	mg/L	0.0001	0.0002	mg/L	0.0001	<0.00010	mg/L	0.0001			
Vanadium D-V	<0.010 mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01			
Zinc D-Zn	0.0085 mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005			
Physical Tests																							
Conductivity (uS/cm)	331 uS/cm	2	193 uS/cm	2	89 uS/cm	2	551 uS/cm	2	777 uS/cm	2	305 uS/cm	2	117 uS/cm	2									
pH	9.13 pH	0.1	8 pH	0.1	7.59 pH	0.1	7.98 pH	0.1	8.98 pH	0.1	8.05 pH	0.1	7.9 pH	0.1									
Sample Preparation																							
Total Volume - In (mL)	500 mL	0	500 mL	0	500 mL	0	500 mL	0	500 mL	0	500 mL	0	500 mL	0									
Total Volume - Out (mL)	405 mL	0	475 mL	0	470 mL	0	470 mL	0	420 mL	0	450 mL	0	490 mL	0									
Dissolved Anions																							
Acidity (to pH 8.3) CaCO3	<1.0 mg/L	1	2.3 mg/L	1	2.1 mg/L	1	3.1 mg/L	1	<1.0 mg/L	1	4.7 mg/L	1	3.6 mg/L	1									
Alkalinity-Total CaCO3	155 mg/L	1	59.9 mg/L	1	38.2 mg/L	1	104 mg/L	1	282 mg/L	1	93.7 mg/L	1	69 mg/L	1									
Sulphate SO4	22.2 mg/L	0.5	36.1 mg/L	0.5	3.93 mg/L	0.5	221 mg/L	0.5	108 mg/L	0.5	69.2 mg/L	0.5	<0.50 mg/L	0.5									

Project	Mt. Klappan Cycle #34	Water Analysis																			
Report to	Rescan Environmental Services																				
ALS File No.	Z6162																				
Date Recieved	12/14/2006																				
Date	1/4/2007																				
RESULTS OF ANALYSIS																					
Sample ID	85-016- 07-34	85-027- 02-34				85-027- 17-34				85-027- 24-34				86-035- 07-34				86-035- 09-34			
Date Sampled	12/14/2006	12/14/2006				12/14/2006				12/14/2006				12/14/2006				12/14/2006			
Time Sampled																					
ALS Sample ID	1	2				3				4				5				6			
Nature	Water	Water				Water				Water				Water				Water			
		Units	DI		Units	DI		Units	DI		Units	DI		Units	DI		Units	DI			
Dissolved Metals																					
Aluminum D-Al	0.017	mg/L	0.01	0.699	mg/L	0.01	0.054	mg/L	0.01	0.081	mg/L	0.01	<0.010	mg/L	0.01	0.013	mg/L	0.01			
Antimony D-Sb	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	0.002	mg/L	0.001	0.0013	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001			
Arsenic D-As	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	0.0015	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001			
Barium D-Ba	0.224	mg/L	0.001	0.068	mg/L	0.001	0.0194	mg/L	0.001	0.054	mg/L	0.001	0.221	mg/L	0.001	0.249	mg/L	0.001			
Beryllium D-Be	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005			
Bismuth D-Bi	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005			
Boron D-B	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1			
Cadmium D-Cd	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005			
Calcium D-Ca	6.02	mg/L	0.05	1.71	mg/L	0.05	7.14	mg/L	0.05	9.53	mg/L	0.05	10.1	mg/L	0.05	9.09	mg/L	0.05			
Chromium D-Cr	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005			
Cobalt D-Co	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001			
Copper D-Cu	<0.0010	mg/L	0.001	0.0013	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001			
Iron D-Fe	<0.030	mg/L	0.03	0.058	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03			
Lead D-Pb	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001			
Lithium D-Li	0.067	mg/L	0.01	0.039	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	0.017	mg/L	0.01			
Magnesium D-Mg	13	mg/L	0.05	7.63	mg/L	0.05	3.66	mg/L	0.05	6.4	mg/L	0.05	17.4	mg/L	0.05	8.2	mg/L	0.05			
Manganese D-Mn	<0.0010	mg/L	0.001	0.0021	mg/L	0.001	<0.0010	mg/L	0.001	0.0062	mg/L	0.001	0.0033	mg/L	0.001	0.0028	mg/L	0.001			
Mercury D-Hg	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001			
Molybdenum D-Mo	<0.0010	mg/L	0.001	0.0174	mg/L	0.001	0.0037	mg/L	0.001	0.0051	mg/L	0.001	0.0043	mg/L	0.001	<0.0010	mg/L	0.001			
Nickel D-Ni	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005			
Phosphorus D-P	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3			
Potassium D-K	3.57	mg/L	0.5	3.04	mg/L	0.5	<0.50	mg/L	0.5	0.7	mg/L	0.5	1.92	mg/L	0.5	3.92	mg/L	0.5			
Selenium D-Se	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01			
Silicon D-Si	0.71	mg/L	0.05	1.78	mg/L	0.05	1.31	mg/L	0.05	1.32	mg/L	0.05	0.675	mg/L	0.05	0.648	mg/L	0.05			
Silver D-Ag	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001			
Sodium D-Na	126	mg/L	2	77.8	mg/L	2	0.493	mg/L	0.05	0.653	mg/L	0.05	1.77	mg/L	0.05	23	mg/L	0.05			
Strontium D-Sr	0.78	mg/L	0.001	0.313	mg/L	0.001	0.166	mg/L	0.001	0.33	mg/L	0.001	0.703	mg/L	0.001	0.467	mg/L	0.001			
Thallium D-Tl	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001			
Tin D-Sn	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001			
Titanium D-Ti	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01			
Uranium D-U	0.00014	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001			
Vanadium D-V	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01			
Zinc D-Zn	<0.0050	mg/L	0.005	0.0051	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005			
Physical Tests																					
Conductivity (uS/cm)	600	uS/cm	2	376	uS/cm	2	66.7	uS/cm	2	99.8	uS/cm	2	190	uS/cm	2	209	uS/cm	2			
pH	8.5	pH	0.1	8.42	pH	0.1	7.11	pH	0.1	7.61	pH	0.1	8.08	pH	0.1	8.18	pH	0.1			
Sample Preparation																					
Total Volume - In (mL)	500	mL	0	500	mL	0	500	mL	0	500	mL	0	500	mL	0	500	mL	0			
Total Volume - Out (mL)	510	mL	0	355	mL	0	375	mL	0	425	mL	0	450	mL	0	440	mL	0			
Dissolved Anions																					
Acidity (to pH 8.3) CaCO3	<1.0	mg/L	1	<1.0	mg/L	1	1.6	mg/L	1	<1.0	mg/L	1	1.1	mg/L	1	<1.0	mg/L	1			
Alkalinity-Total CaCO3	301	mg/L	1	149	mg/L	1	30.5	mg/L	1	53.4	mg/L	1	110	mg/L	1	118	mg/L	1			
Sulphate SO4	30.3	mg/L	0.5	46.6	mg/L	0.5	3.05	mg/L	0.5	1.98	mg/L	0.5	4.73	mg/L	0.5	6.62	mg/L	0.5			

Project	Mt. Klappan Cycle #39	Water Analysis															
Report to	Rescan Environmental Services																
ALS File No.	Z6161																
Date Recieved	12/14/2006																
Date	1/4/2007																
RESULTS OF ANALYSIS																	
Sample ID	ARD3-14B -39	ARD1-15 -39				ARD2-12 -39				ARD2-07 -39				DUMP-2.5 M-39			
Date Sampled	12/14/2006	12/14/2006				12/14/2006				12/14/2006				12/14/2006			
Time Sampled																	
ALS Sample ID	3	4				5				9				10			
Nature	Water	Water				Water				Water				Water			
		Units	DI		Units	DI		Units	DI		Units	DI		Units	DI		
Dissolved Metals																	
Aluminum D-Al	0.011	mg/L	0.01	0.085	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	0.023	mg/L	0.01		
Antimony D-Sb	<0.0010	mg/L	0.001	0.0025	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001		
Arsenic D-As	<0.0010	mg/L	0.001	0.0052	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001		
Barium D-Ba	0.186	mg/L	0.001	0.086	mg/L	0.001	0.0205	mg/L	0.001	0.0734	mg/L	0.001	0.0077	mg/L	0.001		
Beryllium D-Be	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005		
Bismuth D-Bi	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005		
Boron D-B	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1		
Cadmium D-Cd	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005		
Calcium D-Ca	17.6	mg/L	0.05	9.42	mg/L	0.05	91.6	mg/L	0.05	12.5	mg/L	0.05	4.24	mg/L	0.05		
Chromium D-Cr	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005		
Cobalt D-Co	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001		
Copper D-Cu	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001		
Iron D-Fe	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03		
Lead D-Pb	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001		
Lithium D-Li	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01		
Magnesium D-Mg	9.13	mg/L	0.05	5.88	mg/L	0.05	36.6	mg/L	0.05	32.2	mg/L	0.05	12.6	mg/L	0.05		
Manganese D-Mn	0.0128	mg/L	0.001	0.0022	mg/L	0.001	0.0537	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001		
Mercury D-Hg	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001		
Molybdenum D-Mo	0.0108	mg/L	0.001	0.0065	mg/L	0.001	<0.0010	mg/L	0.001	0.0082	mg/L	0.001	0.001	mg/L	0.001		
Nickel D-Ni	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005		
Phosphorus D-P	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3		
Potassium D-K	1.68	mg/L	0.5	<0.50	mg/L	0.5	<0.50	mg/L	0.5	2.04	mg/L	0.5	<0.50	mg/L	0.5		
Selenium D-Se	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01		
Silicon D-Si	0.783	mg/L	0.05	1.69	mg/L	0.05	0.237	mg/L	0.05	0.831	mg/L	0.05	1.07	mg/L	0.05		
Silver D-Ag	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001		
Sodium D-Na	5.09	mg/L	0.05	0.387	mg/L	0.05	0.241	mg/L	0.05	0.508	mg/L	0.05	0.244	mg/L	0.05		
Strontium D-Sr	0.992	mg/L	0.001	0.166	mg/L	0.001	0.991	mg/L	0.001	0.696	mg/L	0.001	0.0381	mg/L	0.001		
Thallium D-Tl	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001		
Tin D-Sn	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001		
Titanium D-Ti	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01		
Uranium D-U	0.00011	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	0.0002	mg/L	0.0001	<0.00010	mg/L	0.0001		
Vanadium D-V	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01		
Zinc D-Zn	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005		
Physical Tests																	
Conductivity (uS/cm)	187	uS/cm	2	94	uS/cm	2	621	uS/cm	2	308	uS/cm	2	114	uS/cm	2		
pH	7.87	pH	0.1	7.38	pH	0.1	8.01	pH	0.1	7.88	pH	0.1	7.68	pH	0.1		
Sample Preparation																	
Total Volume - In (mL)	500	mL	0	500	mL	0	500	mL	0	500	mL	0	500	mL	0		
Total Volume - Out (mL)	375	mL	0	435	mL	0	425	mL	0	435	mL	0	450	mL	0		
Dissolved Anions																	
Acidity (to pH 8.3) CaCO3	1.7	mg/L	1	1.6	mg/L	1	1.6	mg/L	1	1.5	mg/L	1	1.5	mg/L	1		
Alkalinity-Total CaCO3	60.4	mg/L	1	42	mg/L	1	99.5	mg/L	1	94.4	mg/L	1	64.6	mg/L	1		
Sulphate SO4	38.2	mg/L	0.5	5.3	mg/L	0.5	284	mg/L	0.5	75.8	mg/L	0.5	0.76	mg/L	0.5		

Project	Mt. Klappan Cycle #33	Water Analysis											
Report to	Rescan Environmental Services												
ALS File No.	Z5992												
Date Recieved	12/7/2006												
Date	12/22/2006												
RESULTS OF ANALYSIS													
Sample ID	85-027- 17-33	85-027- 24-33					86-035- 07-33					86-035- 09-33	
Date Sampled	12/7/2006	12/7/2006					12/7/2006					12/7/2006	
Time Sampled													
ALS Sample ID	3	4					5					6	
Nature	Water	Water					Water					Water	
		Units	DI		Units	DI		Units	DI		Units	DI	
Dissolved Metals													
Aluminum D-Al	0.051	mg/L	0.01	0.091	mg/L	0.01	<0.010	mg/L	0.01	0.021	mg/L	0.01	
Antimony D-Sb	0.0019	mg/L	0.001	0.0013	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Arsenic D-As	0.0012	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Barium D-Ba	0.0196	mg/L	0.001	0.0546	mg/L	0.001	0.212	mg/L	0.001	0.23	mg/L	0.001	
Beryllium D-Be	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	
Bismuth D-Bi	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	
Boron D-B	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	
Cadmium D-Cd	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	
Calcium D-Ca	7.37	mg/L	0.05	9.22	mg/L	0.05	9.49	mg/L	0.05	8.06	mg/L	0.05	
Chromium D-Cr	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	
Cobalt D-Co	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Copper D-Cu	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Iron D-Fe	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	
Lead D-Pb	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Lithium D-Li	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	0.018	mg/L	0.01	
Magnesium D-Mg	3.93	mg/L	0.05	6.58	mg/L	0.05	17.2	mg/L	0.05	7.9	mg/L	0.05	
Manganese D-Mn	<0.0010	mg/L	0.001	0.0063	mg/L	0.001	0.0076	mg/L	0.001	0.0021	mg/L	0.001	
Mercury D-Hg	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Molybdenum D-Mo	0.0034	mg/L	0.001	0.0051	mg/L	0.001	0.004	mg/L	0.001	<0.0010	mg/L	0.001	
Nickel D-Ni	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	
Phosphorus D-P	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	
Potassium D-K	<0.50	mg/L	0.5	0.73	mg/L	0.5	1.91	mg/L	0.5	3.89	mg/L	0.5	
Selenium D-Se	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	
Silicon D-Si	1.14	mg/L	0.05	1.27	mg/L	0.05	0.624	mg/L	0.05	0.62	mg/L	0.05	
Silver D-Ag	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	
Sodium D-Na	0.464	mg/L	0.05	0.676	mg/L	0.05	1.94	mg/L	0.05	27.4	mg/L	2	
Strontium D-Sr	0.179	mg/L	0.001	0.333	mg/L	0.001	0.667	mg/L	0.001	0.418	mg/L	0.001	
Thallium D-Tl	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Tin D-Sn	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Titanium D-Ti	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	
Uranium D-U	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	
Vanadium D-V	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	
Zinc D-Zn	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	
Physical Tests													
Conductivity (uS/cm)	68	uS/cm	2	97.7	uS/cm	2	177	uS/cm	2	213	uS/cm	2	
pH	7.49	pH	0.1	7.91	pH	0.1	8.22	pH	0.1	8.3	pH	0.1	
Sample Preparation													
Total Volume - In (mL)	500	mL	0	500	mL	0	500	mL	0	500	mL	0	
Total Volume - Out (mL)	520	mL	0	430	mL	0	445	mL	0	455	mL	0	
Dissolved Anions													
Acidity (to pH 8.3) CaCO3	1.4	mg/L	1	<1.0	mg/L	1	<1.0	mg/L	1	<1.0	mg/L	1	
Alkalinity-Total CaCO3	32.4	mg/L	1	48.9	mg/L	1	95.3	mg/L	1	114	mg/L	1	
Sulphate SO4	2.38	mg/L	0.5	1.8	mg/L	0.5	4.03	mg/L	0.5	5.93	mg/L	0.5	

Project	Mt. Klappan Cycle #38		Water Analysis																					
Report to	Rescan Environmental Services																							
ALS File No.	Z5991																							
Date Recieved	12/7/2006																							
Date	12/22/2006																							
RESULTS OF ANALYSIS																								
Sample ID	ARD3-08B -38				ARD3-14B -38				ARD1-15 -38				ARD2-12 -38				ARD2-07 -38				DUMP-2.5 M-38			
Date Sampled	12/7/2006				12/7/2006				12/7/2006				12/7/2006				12/7/2006							
Time Sampled																								
ALS Sample ID	2				3				4				5				9				10			
Nature	Water				Water				Water				Water				Water							
		Units	DI			Units	DI			Units	DI			Units	DI			Units	DI					
Dissolved Metals																								
Aluminum D-Al	0.061	mg/L	0.01	<0.010	mg/L	0.01	0.086	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	0.018	mg/L	0.01						
Antimony D-Sb	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	0.0025	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010					
Arsenic D-As	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	0.0048	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010					
Barium D-Ba	0.0167	mg/L	0.001	0.171	mg/L	0.001	0.0881	mg/L	0.001	0.0194	mg/L	0.001	0.08	mg/L	0.001	0.008	mg/L	0.001	0.008					
Beryllium D-Be	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050					
Bismuth D-Bi	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050					
Boron D-B	0.1	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10					
Cadmium D-Cd	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050					
Calcium D-Ca	4.04	mg/L	0.05	16.1	mg/L	0.05	9.19	mg/L	0.05	98.3	mg/L	0.05	11.2	mg/L	0.05	4.44	mg/L	0.05	4.44					
Chromium D-Cr	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050					
Cobalt D-Co	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010					
Copper D-Cu	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010					
Iron D-Fe	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030					
Lead D-Pb	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010					
Lithium D-Li	0.102	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010					
Magnesium D-Mg	5.07	mg/L	0.05	8.63	mg/L	0.05	5.96	mg/L	0.05	37.4	mg/L	0.05	29.7	mg/L	0.05	13.4	mg/L	0.05	13.4					
Manganese D-Mn	0.0723	mg/L	0.001	0.0129	mg/L	0.001	0.0024	mg/L	0.001	0.0548	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010					
Mercury D-Hg	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010					
Molybdenum D-Mo	<0.0010	mg/L	0.001	0.0108	mg/L	0.001	0.0062	mg/L	0.001	<0.0010	mg/L	0.001	0.008	mg/L	0.001	0.0011	mg/L	0.001	0.0011					
Nickel D-Ni	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050					
Phosphorus D-P	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30					
Potassium D-K	3.06	mg/L	0.5	1.65	mg/L	0.5	<0.50	mg/L	0.5	<0.50	mg/L	0.5	1.98	mg/L	0.5	<0.50	mg/L	0.5	<0.50					
Selenium D-Se	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010					
Silicon D-Si	1.1	mg/L	0.05	0.751	mg/L	0.05	1.55	mg/L	0.05	0.226	mg/L	0.05	0.804	mg/L	0.05	1.01	mg/L	0.05	1.01					
Silver D-Ag	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010					
Sodium D-Na	226	mg/L	2	6.02	mg/L	0.05	0.467	mg/L	0.05	0.222	mg/L	0.05	0.496	mg/L	0.05	0.237	mg/L	0.05	0.237					
Strontium D-Sr	0.465	mg/L	0.001	0.961	mg/L	0.001	0.171	mg/L	0.001	1.09	mg/L	0.001	0.694	mg/L	0.001	0.0407	mg/L	0.001	0.0407					
Thallium D-Tl	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010					
Tin D-Sn	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010					
Titanium D-Ti	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010					
Uranium D-U	<0.00010	mg/L	0.0001	0.00011	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	0.00017	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010					
Vanadium D-V	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010					
Zinc D-Zn	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050					
Physical Tests																								
Conductivity (uS/cm)	1020	uS/cm	2	180	uS/cm	2	95.6	uS/cm	2	660	uS/cm	2	280	uS/cm	2	119	uS/cm	2	119					
pH	8.11	pH	0.1	8.02	pH	0.1	7.85	pH	0.1	8.08	pH	0.1	8.15	pH	0.1	8.03	pH	0.1	8.03					
Sample Preparation																								
Total Volume - In (mL)	500	mL	0	500	mL	0	500	mL	0	500	mL	0	500	mL	0	500	mL	0	500					
Total Volume - Out (mL)	510	mL	0	520	mL	0	470	mL	0	440	mL	0	495	mL	0	435	mL	0	435					
Dissolved Anions																								
Acidity (to pH 8.3) CaCO3	<1.0	mg/L	1	1.3	mg/L	1	1.4	mg/L	1	<1.0	mg/L	1	<1.0	mg/L	1	1.2	mg/L	1	1.2					
Alkalinity-Total CaCO3	105	mg/L	1	63.7	mg/L	1	41.4	mg/L	1	106	mg/L	1	94.6	mg/L	1	65.4	mg/L	1	65.4					
Sulphate SO4	349	mg/L	2.5	32.7	mg/L	0.5	4.99	mg/L	0.5	290	mg/L	0.5	58.6	mg/L	0.5	0.56	mg/L	0.5	0.56					

Project	Mt. Klappan Cycle #32	Water Analysis										
Report to	Rescan Environmental Services											
ALS File No.	Z5874											
Date Recieved	11/30/2006											
Date	12/12/2006											
RESULTS OF ANALYSIS												
Sample ID	85-027- 17-32			85-027- 24-32				86-035- 07-32				86-035- 09-32
Date Sampled	11/30/2006			11/30/2006				11/30/2006				11/30/2006
Time Sampled												
ALS Sample ID	3			4				5				6
Nature	Water			Water				Water				Water
		Units	DI		Units	DI			Units	DI		
Dissolved Metals												
Aluminum D-Al	0.049	mg/L	0.01	0.072	mg/L	0.01	<0.010	mg/L	0.01	0.02	mg/L	0.01
Antimony D-Sb	0.0022	mg/L	0.001	0.0014	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Arsenic D-As	0.0013	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Barium D-Ba	0.0228	mg/L	0.001	0.0593	mg/L	0.001	0.255	mg/L	0.001	0.213	mg/L	0.001
Beryllium D-Be	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Bismuth D-Bi	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Boron D-B	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1
Cadmium D-Cd	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005
Calcium D-Ca	7.8	mg/L	0.05	9.43	mg/L	0.05	11.1	mg/L	0.05	6.95	mg/L	0.05
Chromium D-Cr	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Cobalt D-Co	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Copper D-Cu	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Iron D-Fe	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03
Lead D-Pb	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Lithium D-Li	<0.010	mg/L	0.01	<0.010	mg/L	0.01	0.011	mg/L	0.01	0.018	mg/L	0.01
Magnesium D-Mg	4.59	mg/L	0.05	7.01	mg/L	0.05	20.3	mg/L	0.05	7.19	mg/L	0.05
Manganese D-Mn	<0.0010	mg/L	0.001	0.0057	mg/L	0.001	0.014	mg/L	0.001	0.0023	mg/L	0.001
Mercury D-Hg	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Molybdenum D-Mo	0.0041	mg/L	0.001	0.0055	mg/L	0.001	0.0036	mg/L	0.001	<0.0010	mg/L	0.001
Nickel D-Ni	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Phosphorus D-P	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3
Potassium D-K	<0.50	mg/L	0.5	0.8	mg/L	0.5	2.21	mg/L	0.5	3.92	mg/L	0.5
Selenium D-Se	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01
Silicon D-Si	1.4	mg/L	0.05	1.41	mg/L	0.05	0.831	mg/L	0.05	0.684	mg/L	0.05
Silver D-Ag	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001
Sodium D-Na	0.521	mg/L	0.05	0.748	mg/L	0.05	2.48	mg/L	0.05	34.8	mg/L	0.05
Strontium D-Sr	0.2	mg/L	0.001	0.35	mg/L	0.001	0.797	mg/L	0.001	0.372	mg/L	0.001
Thallium D-Tl	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Tin D-Sn	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Titanium D-Ti	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01
Uranium D-U	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001
Vanadium D-V	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01
Zinc D-Zn	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Physical Tests												
Conductivity (uS/cm)	78	uS/cm	2	108	uS/cm	2	218	uS/cm	2	233	uS/cm	2
pH	7.66	pH	0.1	7.98	pH	0.1	8.31	pH	0.1	8.37	pH	0.1
Sample Preparation												
Total Volume - In (mL)	500	mL	0	500	mL	0	500	mL	0	500	mL	0
Total Volume - Out (mL)	410	mL	0	400	mL	0	410	mL	0	410	mL	0
Dissolved Anions												
Acidity (to pH 8.3) CaCO3	<1.0	mg/L	1	<1.0	mg/L	1	<1.0	mg/L	1	<1.0	mg/L	1
Alkalinity-Total CaCO3	36.5	mg/L	1	57.6	mg/L	1	121	mg/L	1	133	mg/L	1
Sulphate SO4	3.11	mg/L	0.5	2.11	mg/L	0.5	4.7	mg/L	0.5	6.89	mg/L	0.5

Project	Mt. Klappan Cycle #37	Water Analysis																								
Report to	Rescan Environmental Services																									
ALS Fle No.	Z5873																									
Date Recieved	11/30/2006																									
Date	12/13/2006																									
RESULTS OF ANALYSIS																										
Sample ID	ARD3-07B -37				ARD3-14B -37				ARD1-15 -37				ARD2-12 -37				019-02 -37				ARD2-07 -37				DUMP-2.5 M-37	
Date Sampled	11/30/2006				11/30/2006				11/30/2006				11/30/2006				11/30/2006				11/30/2006				11/30/2006	
Time Sampled																										
ALS Sample ID	1				3				4				5				6				9				10	
Nature	Water				Water				Water				Water				Water				Water				Water	
		Units	DI		Units	DI		Units	DI		Units	DI		Units	DI		Units	DI		Units	DI					
Dissolved Metals																										
Aluminum D-Al	3.67	mg/L	0.01	0.012	mg/L	0.01	0.076	mg/L	0.01	<0.010	mg/L	0.01	2.71	mg/L	0.01	<0.010	mg/L	0.01	0.16	mg/L	0.01					
Antimony D-Sb	0.012	mg/L	0.001	<0.0010	mg/L	0.001	0.0027	mg/L	0.001	<0.0010	mg/L	0.001	0.0015	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001					
Arsenic D-As	0.0289	mg/L	0.001	<0.0010	mg/L	0.001	0.0048	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001					
Barium D-Ba	0.108	mg/L	0.001	0.176	mg/L	0.001	0.105	mg/L	0.001	0.02	mg/L	0.001	0.0521	mg/L	0.001	0.0871	mg/L	0.001	0.0081	mg/L	0.001					
Beryllium D-Be	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005					
Bismuth D-Bi	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005					
Boron D-B	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1					
Cadmium D-Cd	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005					
Calcium D-Ca	0.202	mg/L	0.05	14.7	mg/L	0.05	10.2	mg/L	0.05	95.7	mg/L	0.05	0.737	mg/L	0.05	10.9	mg/L	0.05	2.9	mg/L	0.05					
Chromium D-Cr	0.0105	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005					
Cobalt D-Co	0.0044	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001					
Copper D-Cu	0.0034	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	0.0025	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001					
Iron D-Fe	0.343	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	0.291	mg/L	0.03	<0.030	mg/L	0.03	0.056	mg/L	0.03					
Lead D-Pb	0.0017	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001					
Lithium D-Li	0.037	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	0.058	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01					
Magnesium D-Mg	0.4	mg/L	0.05	8.17	mg/L	0.05	7.17	mg/L	0.05	38.6	mg/L	0.05	1.03	mg/L	0.05	30.5	mg/L	0.05	9.95	mg/L	0.05					
Manganese D-Mn	0.0035	mg/L	0.001	0.0146	mg/L	0.001	0.0017	mg/L	0.001	0.0625	mg/L	0.001	0.0028	mg/L	0.001	<0.0010	mg/L	0.001	0.0011	mg/L	0.001					
Mercury D-Hg	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001					
Molybdenum D-Mo	0.164	mg/L	0.001	0.0117	mg/L	0.001	0.0069	mg/L	0.001	<0.0010	mg/L	0.001	0.0223	mg/L	0.001	0.0103	mg/L	0.001	<0.0010	mg/L	0.001					
Nickel D-Ni	0.0315	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005					
Phosphorus D-P	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3					
Potassium D-K	1.71	mg/L	0.5	1.64	mg/L	0.5	<0.50	mg/L	0.5	<0.50	mg/L	0.5	1.77	mg/L	0.5	2.1	mg/L	0.5	<0.50	mg/L	0.5					
Selenium D-Se	0.01	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01					
Silicon D-Si	3.31	mg/L	0.05	0.801	mg/L	0.05	1.86	mg/L	0.05	0.253	mg/L	0.05	2.42	mg/L	0.05	0.887	mg/L	0.05	1.11	mg/L	0.05					
Silver D-Ag	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001					
Sodium D-Na	91.6	mg/L	2	7.41	mg/L	0.05	0.463	mg/L	0.05	0.229	mg/L	0.05	174	mg/L	2	0.614	mg/L	0.05	0.255	mg/L	0.05					
Strontium D-Sr	0.0215	mg/L	0.001	0.911	mg/L	0.001	0.201	mg/L	0.001	1.13	mg/L	0.001	0.0912	mg/L	0.001	0.737	mg/L	0.001	0.0292	mg/L	0.001					
Thallium D-Tl	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001					
Tin D-Sn	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001					
Titanium D-Ti	0.011	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	0.016	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01					
Uranium D-U	0.00015	mg/L	0.0001	0.00012	mg/L	0.0001	0.00011	mg/L	0.0001	<0.00010	mg/L	0.0001	0.00033	mg/L	0.0001	0.00021	mg/L	0.0001	<0.00010	mg/L	0.0001					
Vanadium D-V	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01					
Zinc D-Zn	0.0122	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	0.0059	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005					
Physical Tests																										
Conductivity (uS/cm)	353	uS/cm	2	185	uS/cm	2	111	uS/cm	2	668	uS/cm	2	697	uS/cm	2	298	uS/cm	2	91.9	uS/cm	2					
pH	9.29	pH	0.1	8.05	pH	0.1	7.93	pH	0.1	8.15	pH	0.1	9.09	pH	0.1	8.17	pH	0.1	8.16	pH	0.1					
Sample Preparation																										
Total Volume - In (mL)	500	mL	0	500	mL	0	500	mL	0	500	mL	0	500	mL	0	500	mL	0	500	mL	0					
Total Volume - Out (mL)	405	mL	0	435	mL	0	375	mL	0	425	mL	0	350	mL	0	370	mL	0	430	mL	0					
Dissolved Anions																										
Acidity (to pH 8.3) CaCO3	<1.0	mg/L	1	1.6	mg/L	1	1.5	mg/L	1	1.9	mg/L	1	<1.0	mg/L	1	1.4	mg/L	1	1.4	mg/L	1					
Alkalinity-Total CaCO3	167	mg/L	1	55.4	mg/L	1	49.3	mg/L	1	95.2	mg/L	1	244	mg/L	1	103	mg/L	1	47.4	mg/L	1					
Sulphate SO4	26.2	mg/L	0.5	34.8	mg/L	0.5	5.02	mg/L	0.5	296	mg/L	2.5	96.5	mg/L	0.5	65	mg/L	0.5	<0.50	mg/L	0.5					

Project	Mt. Klappan Cycle #31	Water Analysis																			
Report to	Rescan Environmental Services																				
ALS File No.	Z5747																				
Date Recieved	11/23/2006																				
Date	12/11/2006																				
	RESULTS OF ANALYSIS																				
Sample ID	85-016- 07-31			85-027- 02-31				85-027- 17-31					85-027- 24-31				86-035- 07-31			86-035- 09-31	
Date Sampled	11/23/2006			11/23/2006				11/23/2006					11/23/2006				11/23/2006			11/23/2006	
Time Sampled																					
ALS Sample ID	1			2				3					4				5			6	
Nature	Water			Water				Water					Water				Water			Water	
		Units	DI		Units	DI			Units	DI				Units	DI			Units	DI		
Dissolved Metals																					
Aluminum D-Al	0.018	mg/L	0.01	0.877	mg/L	0.01		0.058	mg/L	0.01		0.075	mg/L	0.01	<0.010	mg/L	0.01		0.02	mg/L	0.01
Antimony D-Sb	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001		0.0018	mg/L	0.001		0.0013	mg/L	0.001	<0.0010	mg/L	0.001		<0.0010	mg/L	0.001
Arsenic D-As	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001		0.0014	mg/L	0.001		<0.0010	mg/L	0.001	<0.0010	mg/L	0.001		<0.0010	mg/L	0.001
Barium D-Ba	0.196	mg/L	0.001	0.0648	mg/L	0.001		0.0188	mg/L	0.001		0.0562	mg/L	0.001	0.217	mg/L	0.001		0.177	mg/L	0.001
Beryllium D-Be	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005		<0.0050	mg/L	0.005		<0.0050	mg/L	0.005	<0.0050	mg/L	0.005		<0.0050	mg/L	0.005
Bismuth D-Bi	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005		<0.0050	mg/L	0.005		<0.0050	mg/L	0.005	<0.0050	mg/L	0.005		<0.0050	mg/L	0.005
Boron D-B	<0.10	mg/L	0.1	<0.10	mg/L	0.1		<0.10	mg/L	0.1		<0.10	mg/L	0.1	<0.10	mg/L	0.1		<0.10	mg/L	0.1
Cadmium D-Cd	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005		<0.00050	mg/L	0.0005		<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005		<0.00050	mg/L	0.0005
Calcium D-Ca	4.38	mg/L	0.05	1.44	mg/L	0.05		6.43	mg/L	0.05		9.05	mg/L	0.05	9.94	mg/L	0.05		5.93	mg/L	0.05
Chromium D-Cr	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005		<0.0050	mg/L	0.005		<0.0050	mg/L	0.005	<0.0050	mg/L	0.005		<0.0050	mg/L	0.005
Cobalt D-Co	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001		<0.0010	mg/L	0.001		<0.0010	mg/L	0.001	<0.0010	mg/L	0.001		<0.0010	mg/L	0.001
Copper D-Cu	<0.0010	mg/L	0.001	0.0019	mg/L	0.001		<0.0010	mg/L	0.001		<0.0010	mg/L	0.001	<0.0010	mg/L	0.001		<0.0010	mg/L	0.001
Iron D-Fe	<0.030	mg/L	0.03	0.091	mg/L	0.03		<0.030	mg/L	0.03		<0.030	mg/L	0.03	<0.030	mg/L	0.03		<0.030	mg/L	0.03
Lead D-Pb	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001		<0.0010	mg/L	0.001		<0.0010	mg/L	0.001	<0.0010	mg/L	0.001		<0.0010	mg/L	0.001
Lithium D-Li	0.075	mg/L	0.01	0.042	mg/L	0.01		<0.010	mg/L	0.01		<0.010	mg/L	0.01	<0.010	mg/L	0.01		0.02	mg/L	0.01
Magnesium D-Mg	10.3	mg/L	0.05	6.83	mg/L	0.05		3.67	mg/L	0.05		6.43	mg/L	0.05	17.1	mg/L	0.05		5.78	mg/L	0.05
Manganese D-Mn	<0.0010	mg/L	0.001	0.0026	mg/L	0.001		<0.0010	mg/L	0.001		0.0076	mg/L	0.001	0.0136	mg/L	0.001		0.0018	mg/L	0.001
Mercury D-Hg	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001		<0.0010	mg/L	0.001		<0.0010	mg/L	0.001	<0.0010	mg/L	0.001		<0.0010	mg/L	0.001
Molybdenum D-Mo	<0.0010	mg/L	0.001	0.0186	mg/L	0.001		0.0036	mg/L	0.001		0.0049	mg/L	0.001	0.0032	mg/L	0.001		<0.0010	mg/L	0.001
Nickel D-Ni	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005		<0.0050	mg/L	0.005		<0.0050	mg/L	0.005	<0.0050	mg/L	0.005		<0.0050	mg/L	0.005
Phosphorus D-P	<0.30	mg/L	0.3	<0.30	mg/L	0.3		<0.30	mg/L	0.3		<0.30	mg/L	0.3	<0.30	mg/L	0.3		<0.30	mg/L	0.3
Potassium D-K	3.28	mg/L	0.5	2.96	mg/L	0.5		<0.50	mg/L	0.5		0.75	mg/L	0.5	2.04	mg/L	0.5		3.46	mg/L	0.5
Selenium D-Se	<0.010	mg/L	0.01	<0.010	mg/L	0.01		<0.010	mg/L	0.01		<0.010	mg/L	0.01	<0.010	mg/L	0.01		<0.010	mg/L	0.01
Silicon D-Si	0.778	mg/L	0.05	2.14	mg/L	0.05		1.28	mg/L	0.05		1.32	mg/L	0.05	0.747	mg/L	0.05		0.675	mg/L	0.05
Silver D-Ag	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001		<0.00010	mg/L	0.0001		<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001		<0.00010	mg/L	0.0001
Sodium D-Na	143	mg/L	0.05	84.7	mg/L	2		0.493	mg/L	0.05		0.731	mg/L	0.05	2.26	mg/L	0.05		36.4	mg/L	0.05
Strontium D-Sr	0.58	mg/L	0.001	0.262	mg/L	0.001		0.16	mg/L	0.001		0.313	mg/L	0.001	0.677	mg/L	0.001		0.299	mg/L	0.001
Thallium D-Tl	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001		<0.0010	mg/L	0.001		<0.0010	mg/L	0.001	<0.0010	mg/L	0.001		<0.0010	mg/L	0.001
Tin D-Sn	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001		<0.0010	mg/L	0.001		<0.0010	mg/L	0.001	<0.0010	mg/L	0.001		<0.0010	mg/L	0.001
Titanium D-Ti	<0.010	mg/L	0.01	0.013	mg/L	0.01		<0.010	mg/L	0.01		<0.010	mg/L	0.01	<0.010	mg/L	0.01		<0.010	mg/L	0.01
Uranium D-U	0.00019	mg/L	0.0001	0.00012	mg/L	0.0001		<0.00010	mg/L	0.0001		<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001		<0.00010	mg/L	0.0001
Vanadium D-V	<0.010	mg/L	0.01	<0.010	mg/L	0.01		<0.010	mg/L	0.01		<0.010	mg/L	0.01	<0.010	mg/L	0.01		<0.010	mg/L	0.01
Zinc D-Zn	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005		<0.0050	mg/L	0.005		<0.0050	mg/L	0.005	<0.0050	mg/L	0.005		<0.0050	mg/L	0.005
Physical Tests																					
Conductivity (uS/cm)	661	uS/cm	2	405	uS/cm	2		62.6	uS/cm	2		96.4	uS/cm	2	183	uS/cm	2		230	uS/cm	2
pH	8.59	pH	0.1	8.56	pH	0.1		6.93	pH	0.1		7.83	pH	0.1	8.01	pH	0.1		8.24	pH	0.1
Sample Preparation																					
Total Volume - In (mL)	500	mL	0	500	mL	0		500	mL	0		500	mL	0	500	mL	0		500	mL	0
Total Volume - Out (mL)	445	mL	0	375	mL	0		400	mL	0		425	mL	0	430	mL	0		430	mL	0
Dissolved Anions																					
Acidity (to pH 8.3) CaCO3	<1.0	mg/L	1	<1.0	mg/L	1		1.5	mg/L	1		1.5	mg/L	1	<1.0	mg/L	1		<1.0	mg/L	1
Alkalinity-Total CaCO3	327	mg/L	1	152	mg/L	1		28.5	mg/L	1		47	mg/L	1	100	mg/L	1		120	mg/L	1
Sulphate SO4	25.6	mg/L	0.5	44.2	mg/L	0.5		2.75	mg/L	0.5		1.95	mg/L	0.5	4.26	mg/L	0.5		5.92	mg/L	0.5

Project	Mt. Klappan Cycle #36	Water Analysis													
Report to	Rescan Environmental Services														
ALS File No.	Z5746														
Date Recieved	11/23/2006														
Date	12/11/2006														
RESULTS OF ANALYSIS															
Sample ID	ARD3-14B -36			ARD1-15 -36				ARD2-12 -36				ARD2-07 -36			DUMP-2.5 M-36
Date Sampled	11/23/2006			11/23/2006				11/23/2006				11/23/2006			11/23/2006
Time Sampled															
ALS Sample ID	3			4				5				9			10
Nature	Water			Water				Water				Water			Water
		Units	DI		Units	DI			Units	DI			Units	DI	
Dissolved Metals															
Aluminum D-Al	<0.010	mg/L	0.01	0.086	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	0.02	mg/L	0.01
Antimony D-Sb	<0.0010	mg/L	0.001	0.0022	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Arsenic D-As	<0.0010	mg/L	0.001	0.005	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Barium D-Ba	0.168	mg/L	0.001	0.0826	mg/L	0.001	0.0206	mg/L	0.001	0.0884	mg/L	0.001	0.0076	mg/L	0.001
Beryllium D-Be	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Bismuth D-Bi	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Boron D-B	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1
Cadmium D-Cd	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005
Calcium D-Ca	14.9	mg/L	0.05	9.14	mg/L	0.05	91	mg/L	0.05	10.1	mg/L	0.05	4.14	mg/L	0.05
Chromium D-Cr	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Cobalt D-Co	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Copper D-Cu	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Iron D-Fe	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03
Lead D-Pb	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Lithium D-Li	0.012	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01
Magnesium D-Mg	7.92	mg/L	0.05	5.84	mg/L	0.05	35	mg/L	0.05	26.1	mg/L	0.05	12.5	mg/L	0.05
Manganese D-Mn	0.0154	mg/L	0.001	0.0036	mg/L	0.001	0.0526	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Mercury D-Hg	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Molybdenum D-Mo	0.0114	mg/L	0.001	0.0061	mg/L	0.001	<0.0010	mg/L	0.001	0.0093	mg/L	0.001	0.0011	mg/L	0.001
Nickel D-Ni	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Phosphorus D-P	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3
Potassium D-K	1.62	mg/L	0.5	<0.50	mg/L	0.5	<0.50	mg/L	0.5	1.91	mg/L	0.5	<0.50	mg/L	0.5
Selenium D-Se	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01
Silicon D-Si	0.787	mg/L	0.05	1.74	mg/L	0.05	0.25	mg/L	0.05	0.825	mg/L	0.05	1.09	mg/L	0.05
Silver D-Ag	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001
Sodium D-Na	8.65	mg/L	0.05	0.367	mg/L	0.05	0.196	mg/L	0.05	0.474	mg/L	0.05	0.204	mg/L	0.05
Strontium D-Sr	0.865	mg/L	0.001	0.16	mg/L	0.001	1.03	mg/L	0.001	0.62	mg/L	0.001	0.0358	mg/L	0.001
Thallium D-Tl	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Tin D-Sn	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Titanium D-Ti	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01
Uranium D-U	0.00012	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	0.00015	mg/L	0.0001	<0.00010	mg/L	0.0001
Vanadium D-V	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01
Zinc D-Zn	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Physical Tests															
Conductivity (uS/cm)	183	uS/cm	2	92.4	uS/cm	2	628	uS/cm	2	260	uS/cm	2	115	uS/cm	2
pH	7.91	pH	0.1	7.12	pH	0.1	7.94	pH	0.1	7.89	pH	0.1	7.37	pH	0.1
Sample Preparation															
Total Volume - In (mL)	500	mL	0	500	mL	0	500	mL	0	500	mL	0	500	mL	0
Total Volume - Out (mL)	430	mL	0	425	mL	0	420	mL	0	430	mL	0	420	mL	0
Dissolved Anions															
Acidity (to pH 8.3) CaCO3	1.6	mg/L	1	<1.0	mg/L	1	1.8	mg/L	1	1.5	mg/L	1	1.4	mg/L	1
Alkalinity-Total CaCO3	57.3	mg/L	1	41.7	mg/L	1	100	mg/L	1	85.9	mg/L	1	61.4	mg/L	1
Sulphate SO4	31.6	mg/L	0.5	4.63	mg/L	0.5	263	mg/L	0.5	44.9	mg/L	0.5	0.51	mg/L	0.5

Project	Mt. Klappan Cycle #30	Water Analysis										
Report to	Rescan Environmental Services											
ALS File No.	Z5573											
Date Recieved	11/16/2006											
Date	11/30/2006											
RESULTS OF ANALYSIS												
Sample ID	85-027- 17-30			85-027- 24-30				86-035- 07-30				86-035- 09-30
Date Sampled	11/16/2006			11/16/2006				11/16/2006				11/16/2006
Time Sampled												
ALS Sample ID	3			4				5				6
Nature	Water			Water				Water				Water
		Units	DI		Units	DI			Units	DI		
Dissolved Metals												
Aluminum D-Al	0.057	mg/L	0.01	0.067	mg/L	0.01	<0.010	mg/L	0.01	0.029	mg/L	0.01
Antimony D-Sb	0.0017	mg/L	0.001	0.0012	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Arsenic D-As	0.0012	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Barium D-Ba	0.0196	mg/L	0.001	0.0586	mg/L	0.001	0.208	mg/L	0.001	0.163	mg/L	0.001
Beryllium D-Be	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Bismuth D-Bi	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Boron D-B	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1
Cadmium D-Cd	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005
Calcium D-Ca	6.82	mg/L	0.05	8.82	mg/L	0.05	9.74	mg/L	0.05	5.25	mg/L	0.05
Chromium D-Cr	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Cobalt D-Co	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Copper D-Cu	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Iron D-Fe	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03
Lead D-Pb	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Lithium D-Li	<0.010	mg/L	0.01	<0.010	mg/L	0.01	0.01	mg/L	0.01	0.022	mg/L	0.01
Magnesium D-Mg	3.77	mg/L	0.05	6.35	mg/L	0.05	16.4	mg/L	0.05	5.08	mg/L	0.05
Manganese D-Mn	<0.0010	mg/L	0.001	0.0076	mg/L	0.001	0.0146	mg/L	0.001	0.0023	mg/L	0.001
Mercury D-Hg	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Molybdenum D-Mo	0.0034	mg/L	0.001	0.0048	mg/L	0.001	0.0035	mg/L	0.001	<0.0010	mg/L	0.001
Nickel D-Ni	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Phosphorus D-P	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3
Potassium D-K	<0.50	mg/L	0.5	0.75	mg/L	0.5	2.09	mg/L	0.5	3.45	mg/L	0.5
Selenium D-Se	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01
Silicon D-Si	1.24	mg/L	0.05	1.32	mg/L	0.05	0.753	mg/L	0.05	0.694	mg/L	0.05
Silver D-Ag	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001
Sodium D-Na	0.463	mg/L	0.05	0.685	mg/L	0.05	2.61	mg/L	0.05	46	mg/L	0.05
Strontium D-Sr	0.165	mg/L	0.001	0.313	mg/L	0.001	0.666	mg/L	0.001	0.276	mg/L	0.001
Thallium D-Tl	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Tin D-Sn	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Titanium D-Ti	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01
Uranium D-U	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001
Vanadium D-V	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01
Zinc D-Zn	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Physical Tests												
Conductivity (uS/cm)	64.2	uS/cm	2	93.8	uS/cm	2	180	uS/cm	2	246	uS/cm	2
pH	7.03	pH	0.1	7.64	pH	0.1	8.19	pH	0.1	8.39	pH	0.1
Sample Preparation												
Total Volume - In (mL)	500	mL	0	500	mL	0	500	mL	0	500	mL	0
Total Volume - Out (mL)	505	mL	0	495	mL	0	450	mL	0	460	mL	0
Dissolved Anions												
Acidity (to pH 8.3) CaCO3	<1.0	mg/L	1	1.2	mg/L	1	<1.0	mg/L	1	<1.0	mg/L	1
Alkalinity-Total CaCO3	28.8	mg/L	1	46.4	mg/L	1	99.1	mg/L	1	134	mg/L	1
Sulphate SO4	1.76	mg/L	0.5	1.27	mg/L	0.5	3.81	mg/L	0.5	6.69	mg/L	0.5

Project	Mt. Klappan Cycle #35	Water Analysis																	
Report to	Rescan Environmental Services																		
ALS File No.	Z5572																		
Date Recieved	11/16/2006																		
Date	12/4/2006																		
RESULTS OF ANALYSIS																			
Sample ID	ARD3-08B -35	ARD3-14B -35				ARD1-15 -35				ARD2-12 -35				ARD2-07 -35				DUMP-2.5 M-35	
Date Sampled	11/16/2006	11/16/2006				11/16/2006				11/16/2006				11/16/2006				11/16/2006	
Time Sampled																			
ALS Sample ID	2	3				4				5				9				10	
Nature	Water	Water				Water				Water				Water				Water	
		Units	DI		Units	DI		Units	DI		Units	DI		Units	DI		Units	DI	
Dissolved Metals																			
Aluminum D-Al	0.097	mg/L	0.01	<0.010	mg/L	0.01	0.085	mg/L	0.01	<0.010	mg/L	0.01	0.03	mg/L	0.01	0.058	mg/L	0.01	
Antimony D-Sb	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	0.0023	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Arsenic D-As	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	0.005	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Barium D-Ba	0.0187	mg/L	0.001	0.16	mg/L	0.001	0.0801	mg/L	0.001	0.0194	mg/L	0.001	0.0899	mg/L	0.001	0.0076	mg/L	0.001	
Beryllium D-Be	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	
Bismuth D-Bi	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	
Boron D-B	0.1	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	
Cadmium D-Cd	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	
Calcium D-Ca	2.76	mg/L	0.05	14.3	mg/L	0.05	9.1	mg/L	0.05	95.9	mg/L	0.05	9.96	mg/L	0.05	3.87	mg/L	0.05	
Chromium D-Cr	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	
Cobalt D-Co	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Copper D-Cu	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Iron D-Fe	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	
Lead D-Pb	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Lithium D-Li	0.112	mg/L	0.01	0.012	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	
Magnesium D-Mg	3.34	mg/L	0.05	7.54	mg/L	0.05	5.82	mg/L	0.05	35.8	mg/L	0.05	25.5	mg/L	0.05	11.9	mg/L	0.05	
Manganese D-Mn	0.058	mg/L	0.001	0.0156	mg/L	0.001	0.0031	mg/L	0.001	0.0522	mg/L	0.001	0.0011	mg/L	0.001	<0.0010	mg/L	0.001	
Mercury D-Hg	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Molybdenum D-Mo	<0.0010	mg/L	0.001	0.0117	mg/L	0.001	0.0063	mg/L	0.001	<0.0010	mg/L	0.001	0.0098	mg/L	0.001	0.0011	mg/L	0.001	
Nickel D-Ni	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	
Phosphorus D-P	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	
Potassium D-K	2.4	mg/L	0.5	1.58	mg/L	0.5	<0.50	mg/L	0.5	<0.50	mg/L	0.5	1.95	mg/L	0.5	<0.50	mg/L	0.5	
Selenium D-Se	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	
Silicon D-Si	1.21	mg/L	0.05	0.798	mg/L	0.05	1.76	mg/L	0.05	0.242	mg/L	0.05	0.853	mg/L	0.05	1.1	mg/L	0.05	
Silver D-Ag	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	
Sodium D-Na	215	mg/L	0.05	11.3	mg/L	0.05	0.377	mg/L	0.05	0.215	mg/L	0.05	0.498	mg/L	0.05	0.231	mg/L	0.05	
Strontium D-Sr	0.294	mg/L	0.001	0.818	mg/L	0.001	0.157	mg/L	0.001	1.01	mg/L	0.001	0.616	mg/L	0.001	0.0355	mg/L	0.001	
Thallium D-Tl	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Tin D-Sn	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Titanium D-Ti	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	
Uranium D-U	<0.00010	mg/L	0.0001	0.00013	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	0.00016	mg/L	0.0001	<0.00010	mg/L	0.0001	
Vanadium D-V	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	
Zinc D-Zn	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	
Physical Tests																			
Conductivity (uS/cm)	973	uS/cm	2	187	uS/cm	2	91.3	uS/cm	2	644	uS/cm	2	243	uS/cm	2	107	uS/cm	2	
pH	8.15	pH	0.1	7.97	pH	0.1	7.31	pH	0.1	8.09	pH	0.1	8.08	pH	0.1	7.61	pH	0.1	
Sample Preparation																			
Total Volume - In (mL)	500	mL	0	500	mL	0	500	mL	0	500	mL	0	500	mL	0	500	mL	0	
Total Volume - Out (mL)	500	mL	0	370	mL	0	425	mL	0	445	mL	0	500	mL	0	425	mL	0	
Dissolved Anions																			
Acidity (to pH 8.3) CaCO3	1.1	mg/L	1	1.2	mg/L	1	<1.0	mg/L	1	1.3	mg/L	1	1.1	mg/L	1	1.1	mg/L	1	
Alkalinity-Total CaCO3	126	mg/L	1	58.1	mg/L	1	39.9	mg/L	1	105	mg/L	1	85.8	mg/L	1	58.9	mg/L	1	
Sulphate SO4	331	mg/L	2.5	34.1	mg/L	0.5	4.29	mg/L	0.5	271	mg/L	0.5	41.9	mg/L	0.5	<0.50	mg/L	0.5	

Project	Mt. Klappan Cycle #29	Water Analysis												
Report to	Rescan Environmental Services													
ALS File No.	Z5437													
Date Recieved	11/9/2006													
Date	11/27/2006													
RESULTS OF ANALYSIS														
Sample ID	85-027- 17-29			85-027- 24-29				86-035- 07-29				86-035- 09-29		
Date Sampled	11/9/2006			11/9/2006				11/9/2006				11/9/2006		
Time Sampled														
ALS Sample ID	3			4				5				6		
Nature	Water			Water				Water				Water		
		Units	DI		Units	DI			Units	DI				
Dissolved Metals														
Aluminum D-Al	0.05	mg/L	0.01	0.073	mg/L	0.01		0.01	mg/L	0.01		0.078	mg/L	0.01
Antimony D-Sb	0.002	mg/L	0.001	0.0015	mg/L	0.001	<0.0010		mg/L	0.001	<0.0010		mg/L	0.001
Arsenic D-As	0.0012	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010		mg/L	0.001	<0.0010		mg/L	0.001
Barium D-Ba	0.0212	mg/L	0.001	0.0672	mg/L	0.001		0.213	mg/L	0.001		0.138	mg/L	0.001
Beryllium D-Be	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050		mg/L	0.005	<0.0050		mg/L	0.005
Bismuth D-Bi	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050		mg/L	0.005	<0.0050		mg/L	0.005
Boron D-B	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10		mg/L	0.1	<0.10		mg/L	0.1
Cadmium D-Cd	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050		mg/L	0.0005	<0.00050		mg/L	0.0005
Calcium D-Ca	7.63	mg/L	0.05	10.1	mg/L	0.05		9.52	mg/L	0.05		4.49	mg/L	0.05
Chromium D-Cr	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050		mg/L	0.005	<0.0050		mg/L	0.005
Cobalt D-Co	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010		mg/L	0.001	<0.0010		mg/L	0.001
Copper D-Cu	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010		mg/L	0.001		0.0016	mg/L	0.001
Iron D-Fe	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030		mg/L	0.03	<0.030		mg/L	0.03
Lead D-Pb	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010		mg/L	0.001	<0.0010		mg/L	0.001
Lithium D-Li	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010		mg/L	0.01		0.022	mg/L	0.01
Magnesium D-Mg	4.29	mg/L	0.05	7.51	mg/L	0.05		16.3	mg/L	0.05		4.44	mg/L	0.05
Manganese D-Mn	0.0012	mg/L	0.001	0.01	mg/L	0.001		0.0167	mg/L	0.001		0.0019	mg/L	0.001
Mercury D-Hg	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010		mg/L	0.001	<0.0010		mg/L	0.001
Molybdenum D-Mo	0.0034	mg/L	0.001	0.005	mg/L	0.001		0.0032	mg/L	0.001	<0.0010		mg/L	0.001
Nickel D-Ni	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050		mg/L	0.005	<0.0050		mg/L	0.005
Phosphorus D-P	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30		mg/L	0.3	<0.30		mg/L	0.3
Potassium D-K	<0.50	mg/L	0.5	0.82	mg/L	0.5		2.12	mg/L	0.5		3.18	mg/L	0.5
Selenium D-Se	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010		mg/L	0.01	<0.010		mg/L	0.01
Silicon D-Si	1.15	mg/L	0.05	1.25	mg/L	0.05		0.633	mg/L	0.05		0.649	mg/L	0.05
Silver D-Ag	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010		mg/L	0.0001	<0.00010		mg/L	0.0001
Sodium D-Na	0.521	mg/L	0.05	0.803	mg/L	0.05		2.89	mg/L	0.05		51	mg/L	0.05
Strontium D-Sr	0.187	mg/L	0.001	0.376	mg/L	0.001		0.677	mg/L	0.001		0.238	mg/L	0.001
Thallium D-Tl	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010		mg/L	0.001	<0.0010		mg/L	0.001
Tin D-Sn	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010		mg/L	0.001	<0.0010		mg/L	0.001
Titanium D-Ti	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010		mg/L	0.01	<0.010		mg/L	0.01
Uranium D-U	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010		mg/L	0.0001	<0.00010		mg/L	0.0001
Vanadium D-V	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010		mg/L	0.01	<0.010		mg/L	0.01
Zinc D-Zn	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050		mg/L	0.005	<0.0050		mg/L	0.005
Physical Tests														
Conductivity (uS/cm)	68.5	uS/cm	2	103	uS/cm	2		173	uS/cm	2		259	uS/cm	2
pH	6.97	pH	0.1	7.73	pH	0.1		8.06	pH	0.1		8.43	pH	0.1
Sample Preparation														
Total Volume - In (mL)	500	mL	0	500	mL	0		500	mL	0		500	mL	0
Total Volume - Out (mL)	475	mL	0	430	mL	0		440	mL	0		430	mL	0
Dissolved Anions														
Acidity (to pH 8.3) CaCO3	1.9	mg/L	1	1.6	mg/L	1		1.5	mg/L	1	<1.0		mg/L	1
Alkalinity-Total CaCO3	34.6	mg/L	1	63.8	mg/L	1		106	mg/L	1		153	mg/L	1
Sulphate SO4	2.3	mg/L	0.5	1.77	mg/L	0.5		3.85	mg/L	0.5		5.46	mg/L	0.5

Project	Mt. Klappan Cycle #34	Water Analysis																							
Report to	Rescan Environmental Services																								
ALS File No.	Z5436																								
Date Recieved	11/9/2006																								
Date	11/27/2006																								
RESULTS OF ANALYSIS																									
Sample ID	ARD3-07B -34	ARD3-14B -34				ARD1-15 -34				ARD2-12 -34				019-02 -34				ARD2-07 -34				DUMP-2.5 M-34			
Date Sampled	11/9/2006	11/9/2006				11/9/2006				11/9/2006				11/9/2006				11/9/2006							
Time Sampled																									
ALS Sample ID	1	3				4				5				6				9				10			
Nature	Water	Water				Water				Water				Water				Water				Water			
		Units	DI		Units	DI		Units	DI		Units	DI		Units	DI		Units	DI		Units	DI				
Dissolved Metals																									
Aluminum D-Al	2.08	mg/L	0.01	0.012	mg/L	0.01	0.081	mg/L	0.01	<0.010	mg/L	0.01	2.06	mg/L	0.01	0.01	mg/L	0.01	0.026	mg/L	0.01				
Antimony D-Sb	0.0109	mg/L	0.001	<0.0010	mg/L	0.001	0.0024	mg/L	0.001	<0.0010	mg/L	0.001	0.0017	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001				
Arsenic D-As	0.0366	mg/L	0.001	<0.0010	mg/L	0.001	0.0044	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001				
Barium D-Ba	0.092	mg/L	0.001	0.148	mg/L	0.001	0.0883	mg/L	0.001	0.0201	mg/L	0.001	0.0448	mg/L	0.001	0.102	mg/L	0.001	0.0071	mg/L	0.001				
Beryllium D-Be	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005				
Bismuth D-Bi	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005				
Boron D-B	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1				
Cadmium D-Cd	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005				
Calcium D-Ca	0.26	mg/L	0.05	11.6	mg/L	0.05	8.79	mg/L	0.05	88.9	mg/L	0.05	1	mg/L	0.05	9.54	mg/L	0.05	3.96	mg/L	0.05				
Chromium D-Cr	0.0051	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005				
Cobalt D-Co	0.0073	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001				
Copper D-Cu	0.0055	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	0.003	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001				
Iron D-Fe	0.582	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	0.334	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03				
Lead D-Pb	0.0027	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001				
Lithium D-Li	0.032	mg/L	0.01	0.011	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	0.061	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01				
Magnesium D-Mg	0.417	mg/L	0.05	6.68	mg/L	0.05	6.11	mg/L	0.05	36.2	mg/L	0.05	1.16	mg/L	0.05	26.6	mg/L	0.05	12.2	mg/L	0.05				
Manganese D-Mn	0.0056	mg/L	0.001	0.0155	mg/L	0.001	0.0034	mg/L	0.001	0.0555	mg/L	0.001	0.0031	mg/L	0.001	0.0016	mg/L	0.001	<0.0010	mg/L	0.001				
Mercury D-Hg	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001				
Molybdenum D-Mo	0.163	mg/L	0.001	0.0113	mg/L	0.001	0.0059	mg/L	0.001	<0.0010	mg/L	0.001	0.0248	mg/L	0.001	0.012	mg/L	0.001	0.0011	mg/L	0.001				
Nickel D-Ni	0.0528	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005				
Phosphorus D-P	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3				
Potassium D-K	1.12	mg/L	0.5	1.56	mg/L	0.5	<0.50	mg/L	0.5	<0.50	mg/L	0.5	1.56	mg/L	0.5	2	mg/L	0.5	<0.50	mg/L	0.5				
Selenium D-Se	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01				
Silicon D-Si	3.79	mg/L	0.05	0.67	mg/L	0.05	1.4	mg/L	0.05	0.196	mg/L	0.05	2.05	mg/L	0.05	0.729	mg/L	0.05	0.957	mg/L	0.05				
Silver D-Ag	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001				
Sodium D-Na	79.4	mg/L	0.05	13.7	mg/L	0.05	0.374	mg/L	0.05	0.203	mg/L	0.05	174	mg/L	2	0.58	mg/L	0.05	0.254	mg/L	0.05				
Strontium D-Sr	0.0239	mg/L	0.001	0.738	mg/L	0.001	0.171	mg/L	0.001	1.03	mg/L	0.001	0.103	mg/L	0.001	0.649	mg/L	0.001	0.0333	mg/L	0.001				
Thallium D-Tl	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001				
Tin D-Sn	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001				
Titanium D-Ti	0.013	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	0.012	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01				
Uranium D-U	0.00013	mg/L	0.0001	0.00012	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	0.00039	mg/L	0.0001	0.00014	mg/L	0.0001	<0.00010	mg/L	0.0001				
Vanadium D-V	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01				
Zinc D-Zn	0.0197	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	0.0086	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005				
Physical Tests																									
Conductivity (uS/cm)	347	uS/cm	2	172	uS/cm	2	90.9	uS/cm	2	614	uS/cm	2	791	uS/cm	2	246	uS/cm	2	104	uS/cm	2				
pH	9.13	pH	0.1	7.98	pH	0.1	7.3	pH	0.1	7.88	pH	0.1	8.99	pH	0.1	7.95	pH	0.1	7.72	pH	0.1				
Sample Preparation																									
Total Volume - In (mL)	500	mL	0	500	mL	0	500	mL	0	500	mL	0	500	mL	0	500	mL	0	500	mL	0				
Total Volume - Out (mL)	350	mL	0	465	mL	0	505	mL	0	455	mL	0	370	mL	0	375	mL	0	470	mL	0				
Dissolved Anions																									
Acidity (to pH 8.3) CaCO3	<1.0	mg/L	1	2.1	mg/L	1	2.1	mg/L	1	2.6	mg/L	1	<1.0	mg/L	1	1.4	mg/L	1	1.6	mg/L	1				
Alkalinity-Total CaCO3	170	mg/L	1	63.1	mg/L	1	42.1	mg/L	1	99.6	mg/L	1	279	mg/L	1	87.8	mg/L	1	58.6	mg/L	1				
Sulphate SO4	26.3	mg/L	0.5	33	mg/L	0.5	4.29	mg/L	0.5	261	mg/L	0.5	114	mg/L	0.5	47.7	mg/L	0.5	0.56	mg/L	0.5				

Project	Mt. Klappan Cycle #28	Water Analysis																			
Report to	Rescan Environmental Services																				
ALS File No.	Z5247																				
Date Recieved	11/2/2006																				
Date	11/16/2006																				
RESULTS OF ANALYSIS																					
Sample ID	85-016- 07-28	85-027- 02-28				85-027- 17-28				85-027- 24-28				86-035- 07-28				86-035- 09-28			
Date Sampled	11/2/2006	11/2/2006				11/2/2006				11/2/2006				11/2/2006				11/2/2006			
Time Sampled																					
ALS Sample ID	1	2				3				4				5				6			
Nature	Water	Water				Water				Water				Water				Water			
		Units	DI		Units	DI		Units	DI		Units	DI		Units	DI		Units	DI			
Dissolved Metals																					
Aluminum D-Al	0.161	mg/L	0.01	0.782	mg/L	0.01	0.071	mg/L	0.01	0.11	mg/L	0.01	0.01	mg/L	0.01	0.062	mg/L	0.01			
Antimony D-Sb	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	0.0021	mg/L	0.001	0.0014	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001			
Arsenic D-As	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	0.0013	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001			
Barium D-Ba	0.143	mg/L	0.001	0.0646	mg/L	0.001	0.0249	mg/L	0.001	0.0656	mg/L	0.001	0.218	mg/L	0.001	0.121	mg/L	0.001			
Beryllium D-Be	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005			
Bismuth D-Bi	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005			
Boron D-B	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1			
Cadmium D-Cd	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005			
Calcium D-Ca	3.06	mg/L	0.05	1.22	mg/L	0.05	8.52	mg/L	0.05	10.5	mg/L	0.05	9.99	mg/L	0.05	3.9	mg/L	0.05			
Chromium D-Cr	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005			
Cobalt D-Co	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001			
Copper D-Cu	<0.0010	mg/L	0.001	0.0027	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001			
Iron D-Fe	<0.030	mg/L	0.03	0.159	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03			
Lead D-Pb	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001			
Lithium D-Li	0.079	mg/L	0.01	0.039	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	0.024	mg/L	0.01			
Magnesium D-Mg	6.75	mg/L	0.05	5.87	mg/L	0.05	4.85	mg/L	0.05	7.68	mg/L	0.05	16.4	mg/L	0.05	3.78	mg/L	0.05			
Manganese D-Mn	0.0013	mg/L	0.001	0.0032	mg/L	0.001	<0.0010	mg/L	0.001	0.0105	mg/L	0.001	0.0184	mg/L	0.001	0.0017	mg/L	0.001			
Mercury D-Hg	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001			
Molybdenum D-Mo	<0.0010	mg/L	0.001	0.0147	mg/L	0.001	0.0035	mg/L	0.001	0.0045	mg/L	0.001	0.0028	mg/L	0.001	<0.0010	mg/L	0.001			
Nickel D-Ni	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005			
Phosphorus D-P	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3			
Potassium D-K	2.92	mg/L	0.5	2.74	mg/L	0.5	<0.50	mg/L	0.5	0.83	mg/L	0.5	2.18	mg/L	0.5	3.02	mg/L	0.5			
Selenium D-Se	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01			
Silicon D-Si	1.11	mg/L	0.05	3.08	mg/L	0.05	1.23	mg/L	0.05	1.34	mg/L	0.05	0.696	mg/L	0.05	0.702	mg/L	0.05			
Silver D-Ag	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001			
Sodium D-Na	165	mg/L	2	84.4	mg/L	2	0.666	mg/L	0.05	0.771	mg/L	0.05	3.2	mg/L	0.05	60.1	mg/L	0.05			
Strontium D-Sr	0.404	mg/L	0.001	0.238	mg/L	0.001	0.219	mg/L	0.001	0.395	mg/L	0.001	0.696	mg/L	0.001	0.2	mg/L	0.001			
Thallium D-Tl	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001			
Tin D-Sn	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001			
Titanium D-Ti	<0.010	mg/L	0.01	0.024	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01			
Uranium D-U	0.00022	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001			
Vanadium D-V	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01			
Zinc D-Zn	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005			
Physical Tests																					
Conductivity (uS/cm)	688	uS/cm	2	397	uS/cm	2	74.8	uS/cm	2	106	uS/cm	2	176	uS/cm	2	282	uS/cm	2			
pH	8.64	pH	0.1	8.74	pH	0.1	7.15	pH	0.1	7.9	pH	0.1	8.17	pH	0.1	8.56	pH	0.1			
Sample Preparation																					
Total Volume - In (mL)	500	mL	0	500	mL	0	500	mL	0	500	mL	0	500	mL	0	500	mL	0			
Total Volume - Out (mL)	520	mL	0	520	mL	0	450	mL	0	450	mL	0	485	mL	0	485	mL	0			
Dissolved Anions																					
Acidity (to pH 8.3) CaCO3	<1.0	mg/L	1	<1.0	mg/L	1	<1.0	mg/L	1	2.6	mg/L	1	1.4	mg/L	1	<1.0	mg/L	1			
Alkalinity-Total CaCO3	334	mg/L	1	149	mg/L	1	35.3	mg/L	1	60	mg/L	1	88.5	mg/L	1	143	mg/L	1			
Sulphate SO4	18.4	mg/L	0.5	35.9	mg/L	0.5	1.96	mg/L	0.5	1.21	mg/L	0.5	3.58	mg/L	0.5	5.82	mg/L	0.5			

Project	Mt. Klappan Cycle #33	Water Analysis													
Report to	Rescan Environmental Services														
ALS File No.	Z5246														
Date Recieved	11/2/2006														
Date	11/14/2006														
RESULTS OF ANALYSIS															
Sample ID	ARD3-14B -33			ARD1-15 -33				ARD2-12 -33				ARD2-07 -33			DUMP-2.5 M-33
Date Sampled	11/2/2006			11/2/2006				11/2/2006				11/2/2006			11/2/2006
Time Sampled															
ALS Sample ID	3			4				5				9			10
Nature	Water			Water				Water				Water			Water
		Units	DI		Units	DI			Units	DI			Units	DI	
Dissolved Metals															
Aluminum D-Al	0.016	mg/L	0.01	0.092	mg/L	0.01	<0.010	mg/L	0.01	0.011	mg/L	0.01	0.401	mg/L	0.01
Antimony D-Sb	<0.0010	mg/L	0.001	0.0028	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Arsenic D-As	<0.0010	mg/L	0.001	0.005	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Barium D-Ba	0.126	mg/L	0.001	0.093	mg/L	0.001	0.0173	mg/L	0.001	0.103	mg/L	0.001	0.0111	mg/L	0.001
Beryllium D-Be	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Bismuth D-Bi	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Boron D-B	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1
Cadmium D-Cd	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005
Calcium D-Ca	10.4	mg/L	0.05	10.4	mg/L	0.05	120	mg/L	0.05	8.69	mg/L	0.05	2.9	mg/L	0.05
Chromium D-Cr	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Cobalt D-Co	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Copper D-Cu	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	0.0015	mg/L	0.001
Iron D-Fe	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	0.11	mg/L	0.03
Lead D-Pb	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Lithium D-Li	0.011	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01
Magnesium D-Mg	5.74	mg/L	0.05	7.03	mg/L	0.05	44.3	mg/L	0.05	23.1	mg/L	0.05	9.7	mg/L	0.05
Manganese D-Mn	0.0125	mg/L	0.001	<0.0010	mg/L	0.001	0.0645	mg/L	0.001	0.0024	mg/L	0.001	0.0021	mg/L	0.001
Mercury D-Hg	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Molybdenum D-Mo	0.0114	mg/L	0.001	0.0063	mg/L	0.001	<0.0010	mg/L	0.001	0.0109	mg/L	0.001	<0.0010	mg/L	0.001
Nickel D-Ni	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Phosphorus D-P	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3
Potassium D-K	1.45	mg/L	0.5	<0.50	mg/L	0.5	<0.50	mg/L	0.5	2.07	mg/L	0.5	<0.50	mg/L	0.5
Selenium D-Se	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01
Silicon D-Si	0.755	mg/L	0.05	1.68	mg/L	0.05	0.246	mg/L	0.05	0.742	mg/L	0.05	1.56	mg/L	0.05
Silver D-Ag	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001
Sodium D-Na	16.5	mg/L	0.05	0.4	mg/L	0.05	0.209	mg/L	0.05	0.495	mg/L	0.05	0.222	mg/L	0.05
Strontium D-Sr	0.608	mg/L	0.001	0.186	mg/L	0.001	1.22	mg/L	0.001	0.655	mg/L	0.001	0.0293	mg/L	0.001
Thallium D-Tl	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Tin D-Sn	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Titanium D-Ti	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01
Uranium D-U	0.00012	mg/L	0.0001	0.0001	mg/L	0.0001	<0.00010	mg/L	0.0001	0.00012	mg/L	0.0001	<0.00010	mg/L	0.0001
Vanadium D-V	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01
Zinc D-Zn	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Physical Tests															
Conductivity (uS/cm)	171	uS/cm	2	102	uS/cm	2	762	uS/cm	2	214	uS/cm	2	82	uS/cm	2
pH	8.09	pH	0.1	7.77	pH	0.1	7.95	pH	0.1	8.15	pH	0.1	7.7	pH	0.1
Sample Preparation															
Total Volume - In (mL)	500	mL	0	500	mL	0	500	mL	0	500	mL	0	500	mL	0
Total Volume - Out (mL)	520	mL	0	365	mL	0	390	mL	0	520	mL	0	400	mL	0
Dissolved Anions															
Acidity (to pH 8.3) CaCO3	1.7	mg/L	1	1.6	mg/L	1	2.2	mg/L	1	1.4	mg/L	1	1.3	mg/L	1
Alkalinity-Total CaCO3	60.1	mg/L	1	43	mg/L	1	101	mg/L	1	71.4	mg/L	1	39.1	mg/L	1
Sulphate SO4	24.6	mg/L	0.5	4.34	mg/L	0.5	339	mg/L	2.5	31.1	mg/L	0.5	<0.50	mg/L	0.5

Project	Mt. Klappan Cycle #27	Water Analysis										
Report to	Rescan Environmental Services											
ALS File No.	Z5058											
Date Recieved	10/26/2006											
Date	11/7/2006											
RESULTS OF ANALYSIS												
Sample ID	85-027- 17-27			85-027- 24-27				86-035- 07-27				86-035- 09-27
Date Sampled	10/26/2006			10/26/2006				10/26/2006				10/26/2006
Time Sampled												
ALS Sample ID	3			4				5				6
Nature	Water			Water				Water				Water
		Units	DI		Units	DI			Units	DI		
Dissolved Metals												
Aluminum D-Al	0.046	mg/L	0.01	0.061	mg/L	0.01	<0.010	mg/L	0.01	0.064	mg/L	0.01
Antimony D-Sb	0.0018	mg/L	0.001	0.0013	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Arsenic D-As	0.0011	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Barium D-Ba	0.0221	mg/L	0.001	0.0537	mg/L	0.001	0.226	mg/L	0.001	0.0926	mg/L	0.001
Beryllium D-Be	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Bismuth D-Bi	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Boron D-B	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1
Cadmium D-Cd	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005
Calcium D-Ca	7.82	mg/L	0.05	10	mg/L	0.05	11.2	mg/L	0.05	3	mg/L	0.05
Chromium D-Cr	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Cobalt D-Co	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Copper D-Cu	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Iron D-Fe	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03
Lead D-Pb	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Lithium D-Li	<0.010	mg/L	0.01	<0.010	mg/L	0.01	0.011	mg/L	0.01	0.027	mg/L	0.01
Magnesium D-Mg	3.86	mg/L	0.05	6.53	mg/L	0.05	16.5	mg/L	0.05	2.64	mg/L	0.05
Manganese D-Mn	<0.0010	mg/L	0.001	0.0097	mg/L	0.001	0.0228	mg/L	0.001	0.0024	mg/L	0.001
Mercury D-Hg	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Molybdenum D-Mo	0.0038	mg/L	0.001	0.005	mg/L	0.001	0.0036	mg/L	0.001	0.0012	mg/L	0.001
Nickel D-Ni	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Phosphorus D-P	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3
Potassium D-K	<0.50	mg/L	0.5	0.76	mg/L	0.5	2.29	mg/L	0.5	2.66	mg/L	0.5
Selenium D-Se	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01
Silicon D-Si	1.2	mg/L	0.05	1.25	mg/L	0.05	0.736	mg/L	0.05	0.745	mg/L	0.05
Silver D-Ag	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001
Sodium D-Na	0.493	mg/L	0.05	0.798	mg/L	0.05	4.13	mg/L	0.05	73.8	mg/L	2
Strontium D-Sr	0.173	mg/L	0.001	0.336	mg/L	0.001	0.724	mg/L	0.001	0.151	mg/L	0.001
Thallium D-Tl	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Tin D-Sn	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Titanium D-Ti	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01
Uranium D-U	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001
Vanadium D-V	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01
Zinc D-Zn	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Physical Tests												
Conductivity (uS/cm)	72.2	uS/cm	2	107	uS/cm	2	202	uS/cm	2	308	uS/cm	2
pH	7.58	pH	0.1	7.92	pH	0.1	8.19	pH	0.1	8.47	pH	0.1
Sample Preparation												
Total Volume - In (mL)	500	mL	0	500	mL	0	500	mL	0	500	mL	0
Total Volume - Out (mL)	350	mL	0	435	mL	0	400	mL	0	430	mL	0
Dissolved Anions												
Acidity (to pH 8.3) CaCO3	1.7	mg/L	1	1.7	mg/L	1	1.1	mg/L	1	<1.0	mg/L	1
Alkalinity-Total CaCO3	35.2	mg/L	1	59.4	mg/L	1	109	mg/L	1	166	mg/L	1
Sulphate SO4	2.83	mg/L	0.5	1.94	mg/L	0.5	5.07	mg/L	0.5	7.51	mg/L	0.5

Project	Mt. Klappan Cycle #32	Water Analysis																	
Report to	Rescan Environmental Services																		
ALS File No.	Z5057																		
Date Recieved	10/26/2006																		
Date	11/7/2006																		
RESULTS OF ANALYSIS																			
Sample ID	ARD3-08B -32	ARD3-14B -32				ARD1-15 -32				ARD2-12 -32				ARD2-07 -32				DUMP-2.5 M-32	
Date Sampled	10/26/2006	10/26/2006				10/26/2006				10/26/2006				10/26/2006				10/26/2006	
Time Sampled																			
ALS Sample ID	2	3				4				5				9				10	
Nature	Water	Water				Water				Water				Water				Water	
		Units	DI		Units	DI		Units	DI		Units	DI		Units	DI		Units	DI	
Dissolved Metals																			
Aluminum D-Al	0.048	mg/L	0.01	0.019	mg/L	0.01	0.093	mg/L	0.01	<0.010	mg/L	0.01	0.013	mg/L	0.01	0.189	mg/L	0.01	
Antimony D-Sb	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	0.002	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Arsenic D-As	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	0.0041	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Barium D-Ba	0.0178	mg/L	0.001	0.116	mg/L	0.001	0.0682	mg/L	0.001	0.0162	mg/L	0.001	0.099	mg/L	0.001	0.0095	mg/L	0.001	
Beryllium D-Be	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	
Bismuth D-Bi	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	
Boron D-B	0.13	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	
Cadmium D-Cd	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	
Calcium D-Ca	2.93	mg/L	0.05	9.4	mg/L	0.05	7.91	mg/L	0.05	139	mg/L	0.05	9.38	mg/L	0.05	3.73	mg/L	0.05	
Chromium D-Cr	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	
Cobalt D-Co	0.0012	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Copper D-Cu	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Iron D-Fe	0.037	mg/L	0.03	0.035	mg/L	0.03	0.039	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	0.091	mg/L	0.03	
Lead D-Pb	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Lithium D-Li	0.129	mg/L	0.01	0.014	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	
Magnesium D-Mg	3.34	mg/L	0.05	4.9	mg/L	0.05	5.01	mg/L	0.05	53	mg/L	0.05	23.2	mg/L	0.05	10.7	mg/L	0.05	
Manganese D-Mn	0.1	mg/L	0.001	0.0135	mg/L	0.001	0.0039	mg/L	0.001	0.123	mg/L	0.001	0.0022	mg/L	0.001	0.0012	mg/L	0.001	
Mercury D-Hg	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Molybdenum D-Mo	<0.0010	mg/L	0.001	0.0133	mg/L	0.001	0.0056	mg/L	0.001	<0.0010	mg/L	0.001	0.0129	mg/L	0.001	<0.0010	mg/L	0.001	
Nickel D-Ni	0.0082	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	0.0052	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	
Phosphorus D-P	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	
Potassium D-K	2.3	mg/L	0.5	1.43	mg/L	0.5	<0.50	mg/L	0.5	0.54	mg/L	0.5	1.97	mg/L	0.5	<0.50	mg/L	0.5	
Selenium D-Se	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	
Silicon D-Si	1.59	mg/L	0.05	0.704	mg/L	0.05	1.38	mg/L	0.05	0.231	mg/L	0.05	0.737	mg/L	0.05	1.27	mg/L	0.05	
Silver D-Ag	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	
Sodium D-Na	242	mg/L	2	23	mg/L	0.05	0.367	mg/L	0.05	0.295	mg/L	0.05	0.523	mg/L	0.05	0.234	mg/L	0.05	
Strontium D-Sr	0.296	mg/L	0.001	0.548	mg/L	0.001	0.14	mg/L	0.001	1.44	mg/L	0.001	0.598	mg/L	0.001	0.0333	mg/L	0.001	
Thallium D-Tl	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Tin D-Sn	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Titanium D-Ti	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	
Uranium D-U	<0.00010	mg/L	0.0001	0.00014	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	0.00016	mg/L	0.0001	<0.00010	mg/L	0.0001	
Vanadium D-V	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	
Zinc D-Zn	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	
Physical Tests																			
Conductivity (uS/cm)	1050	uS/cm	2	186	uS/cm	2	83.1	uS/cm	2	885	uS/cm	2	236	uS/cm	2	106	uS/cm	2	
pH	7.93	pH	0.1	8.05	pH	0.1	7.7	pH	0.1	7.92	pH	0.1	8.03	pH	0.1	7.92	pH	0.1	
Sample Preparation																			
Total Volume - In (mL)	500	mL	0	500	mL	0	500	mL	0	500	mL	0	500	mL	0	500	mL	0	
Total Volume - Out (mL)	475	mL	0	450	mL	0	450	mL	0	425	mL	0	350	mL	0	450	mL	0	
Dissolved Anions																			
Acidity (to pH 8.3) CaCO3	1.8	mg/L	1	1.6	mg/L	1	1.6	mg/L	1	3.3	mg/L	1	1.6	mg/L	1	1.5	mg/L	1	
Alkalinity-Total CaCO3	169	mg/L	1	67	mg/L	1	35.6	mg/L	1	97.3	mg/L	1	80.7	mg/L	1	58.1	mg/L	1	
Sulphate SO4	293	mg/L	2.5	29	mg/L	0.5	3.83	mg/L	0.5	420	mg/L	2.5	38.6	mg/L	0.5	0.58	mg/L	0.5	

Project	Mt. Klappan Cycle #26	Water Analysis										
Report to	Rescan Environmental Services											
ALS File No.	Z3913r											
Date Recieved	10/19/2006											
Date	12/5/2006											
RESULTS OF ANALYSIS												
Sample ID	85-027- 17-26			85-027- 24-26				86-035- 07-26				86-035- 09-26
Date Sampled	10/19/2006			10/19/2006				10/19/2006				10/19/2006
Time Sampled												
ALS Sample ID	3			4				5				6
Nature	Water			Water				Water				Water
		Units	DI		Units	DI			Units	DI		
Dissolved Metals												
Aluminum D-Al	0.05	mg/L	0.01	0.071	mg/L	0.01	0.011	mg/L	0.01	0.512	mg/L	0.01
Antimony D-Sb	0.0022	mg/L	0.001	0.0015	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Arsenic D-As	0.0011	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Barium D-Ba	0.0213	mg/L	0.001	0.0519	mg/L	0.001	0.19	mg/L	0.001	0.0814	mg/L	0.001
Beryllium D-Be	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Bismuth D-Bi	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Boron D-B	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1
Cadmium D-Cd	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005
Calcium D-Ca	6.92	mg/L	0.05	9.08	mg/L	0.05	9.07	mg/L	0.05	2.44	mg/L	0.05
Chromium D-Cr	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Cobalt D-Co	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Copper D-Cu	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Iron D-Fe	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	0.064	mg/L	0.03
Lead D-Pb	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Lithium D-Li	<0.010	mg/L	0.01	<0.010	mg/L	0.01	0.012	mg/L	0.01	0.023	mg/L	0.01
Magnesium D-Mg	3.78	mg/L	0.05	6.22	mg/L	0.05	13.3	mg/L	0.05	2.07	mg/L	0.05
Manganese D-Mn	<0.0010	mg/L	0.001	0.0116	mg/L	0.001	0.0184	mg/L	0.001	0.0029	mg/L	0.001
Mercury D-Hg	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Molybdenum D-Mo	0.0033	mg/L	0.001	0.0047	mg/L	0.001	0.0033	mg/L	0.001	0.0011	mg/L	0.001
Nickel D-Ni	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Phosphorus D-P	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3
Potassium D-K	<0.50	mg/L	0.5	0.8	mg/L	0.5	2.2	mg/L	0.5	2.39	mg/L	0.5
Selenium D-Se	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01
Silicon D-Si	1.15	mg/L	0.05	1.29	mg/L	0.05	0.692	mg/L	0.05	1.59	mg/L	0.05
Silver D-Ag	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001
Sodium D-Na	0.542	mg/L	0.05	0.838	mg/L	0.05	4.16	mg/L	0.05	62.4	mg/L	2
Strontium D-Sr	0.169	mg/L	0.001	0.316	mg/L	0.001	0.59	mg/L	0.001	0.119	mg/L	0.001
Thallium D-Tl	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Tin D-Sn	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Titanium D-Ti	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	0.017	mg/L	0.01
Uranium D-U	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001
Vanadium D-V	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01
Zinc D-Zn	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Physical Tests												
Conductivity (uS/cm)	68	uS/cm	2	98	uS/cm	2	168	uS/cm	2	278	uS/cm	2
pH	7.01	pH	0.1	7.83	pH	0.1	8.08	pH	0.1	8.64	pH	0.1
Sample Preparation												
Total Volume - In (mL)	500	mL	0	500	mL	0	500	mL	0	500	mL	0
Total Volume - Out (mL)	520	mL	0	470	mL	0	485	mL	0	450	mL	0
Dissolved Anions												
Acidity (to pH 8.3) CaCO3	1.6	mg/L	1	1.5	mg/L	1	1	mg/L	1	<1.0	mg/L	1
Alkalinity-Total CaCO3	33.3	mg/L	1	48.8	mg/L	1	89.7	mg/L	1	156	mg/L	1
Sulphate SO4	2	mg/L	1	1.6	mg/L	1	4.3	mg/L	1	8.4	mg/L	0.5

Project	Mt. Klappan Cycle #26	Water Analysis												
Report to	Rescan Environmental Services													
ALS File No.	Z3913													
Date Recieved	10/19/2006													
Date	11/6/2006													
RESULTS OF ANALYSIS														
Sample ID	85-027- 17-26			85-027- 24-26				86-035- 07-26				86-035- 09-26		
Date Sampled	10/19/2006			10/19/2006				10/19/2006				10/19/2006		
Time Sampled														
ALS Sample ID	3			4				5				6		
Nature	Water			Water				Water				Water		
		Units	DI		Units	DI			Units	DI		Units	DI	
Dissolved Metals														
Aluminum D-Al	0.05	mg/L	0.01	0.071	mg/L	0.01		0.011	mg/L	0.01		0.512	mg/L	0.01
Antimony D-Sb	0.0022	mg/L	0.001	0.0015	mg/L	0.001	<0.0010		mg/L	0.001	<0.0010		mg/L	0.001
Arsenic D-As	0.0011	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010		mg/L	0.001	<0.0010		mg/L	0.001
Barium D-Ba	0.0213	mg/L	0.001	0.0519	mg/L	0.001		0.19	mg/L	0.001		0.0814	mg/L	0.001
Beryllium D-Be	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050		mg/L	0.005	<0.0050		mg/L	0.005
Bismuth D-Bi	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050		mg/L	0.005	<0.0050		mg/L	0.005
Boron D-B	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10		mg/L	0.1	<0.10		mg/L	0.1
Cadmium D-Cd	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050		mg/L	0.0005	<0.00050		mg/L	0.0005
Calcium D-Ca	6.92	mg/L	0.05	9.08	mg/L	0.05		9.07	mg/L	0.05		2.44	mg/L	0.05
Chromium D-Cr	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050		mg/L	0.005	<0.0050		mg/L	0.005
Cobalt D-Co	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010		mg/L	0.001	<0.0010		mg/L	0.001
Copper D-Cu	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010		mg/L	0.001	<0.0010		mg/L	0.001
Iron D-Fe	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030		mg/L	0.03		0.064	mg/L	0.03
Lead D-Pb	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010		mg/L	0.001	<0.0010		mg/L	0.001
Lithium D-Li	<0.010	mg/L	0.01	<0.010	mg/L	0.01		0.012	mg/L	0.01		0.023	mg/L	0.01
Magnesium D-Mg	3.78	mg/L	0.05	6.22	mg/L	0.05		13.3	mg/L	0.05		2.07	mg/L	0.05
Manganese D-Mn	<0.0010	mg/L	0.001	0.0116	mg/L	0.001		0.0184	mg/L	0.001		0.0029	mg/L	0.001
Mercury D-Hg	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010		mg/L	0.001	<0.0010		mg/L	0.001
Molybdenum D-Mo	0.0033	mg/L	0.001	0.0047	mg/L	0.001		0.0033	mg/L	0.001		0.0011	mg/L	0.001
Nickel D-Ni	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050		mg/L	0.005	<0.0050		mg/L	0.005
Phosphorus D-P	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30		mg/L	0.3	<0.30		mg/L	0.3
Potassium D-K	<0.50	mg/L	0.5	0.8	mg/L	0.5		2.2	mg/L	0.5		2.39	mg/L	0.5
Selenium D-Se	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010		mg/L	0.01	<0.010		mg/L	0.01
Silicon D-Si	1.15	mg/L	0.05	1.29	mg/L	0.05		0.692	mg/L	0.05		1.59	mg/L	0.05
Silver D-Ag	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010		mg/L	0.0001	<0.00010		mg/L	0.0001
Sodium D-Na	0.542	mg/L	0.05	0.838	mg/L	0.05		4.16	mg/L	0.05		62.4	mg/L	2
Strontium D-Sr	0.169	mg/L	0.001	0.316	mg/L	0.001		0.59	mg/L	0.001		0.119	mg/L	0.001
Thallium D-Tl	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010		mg/L	0.001	<0.0010		mg/L	0.001
Tin D-Sn	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010		mg/L	0.001	<0.0010		mg/L	0.001
Titanium D-Ti	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010		mg/L	0.01		0.017	mg/L	0.01
Uranium D-U	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010		mg/L	0.0001	<0.00010		mg/L	0.0001
Vanadium D-V	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010		mg/L	0.01	<0.010		mg/L	0.01
Zinc D-Zn	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050		mg/L	0.005	<0.0050		mg/L	0.005
Physical Tests														
Conductivity (uS/cm)	68	uS/cm	2	98	uS/cm	2		168	uS/cm	2		278	uS/cm	2
pH	7.01	pH	0.1	7.83	pH	0.1		8.08	pH	0.1		8.64	pH	0.1
Sample Preparation														
Total Volume - In (mL)	500	mL	0	500	mL	0		500	mL	0		500	mL	0
Total Volume - Out (mL)	520	mL	0	470	mL	0		485	mL	0		450	mL	0
Dissolved Anions														
Acidity (to pH 8.3) CaCO3	1.6	mg/L	1	1.5	mg/L	1		1	mg/L	1	<1.0		mg/L	1
Alkalinity-Total CaCO3	33.3	mg/L	1	48.8	mg/L	1		89.7	mg/L	1		156	mg/L	1
Sulphate SO4	2	mg/L	1	1.6	mg/L	1		1.6	mg/L	1		8.4	mg/L	0.5

Project	Mt. Klappan Cycle #31	Water Analysis																										
Report to	Rescan Environmental Services																											
ALS File No.	Z3912																											
Date Recieved	10/19/2006																											
Date	11/6/2006																											
RESULTS OF ANALYSIS																												
Sample ID	ARD3-07B -31				ARD3-14B -31				ARD1-15 -31				ARD2-12 -31				019-02 -31				ARD2-07 -31				DUMP-2.5 M-31			
Date Sampled	10/19/2006				10/19/2006				10/19/2006				10/19/2006				10/19/2006				10/19/2006							
Time Sampled																												
ALS Sample ID	1				3				4				5				6				9				10			
Nature	Water				Water				Water				Water				Water				Water							
		Units	DI		Units	DI		Units	DI		Units	DI		Units	DI		Units	DI		Units	DI							
Dissolved Metals																												
Aluminum D-Al	1.01	mg/L	0.01	0.016	mg/L	0.01	0.096	mg/L	0.01	<0.010	mg/L	0.01	1.16	mg/L	0.01	<0.010	mg/L	0.01	0.254	mg/L	0.01							
Antimony D-Sb	0.0154	mg/L	0.001	<0.0010	mg/L	0.001	0.0027	mg/L	0.001	<0.0010	mg/L	0.001	0.0018	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001							
Arsenic D-As	0.0351	mg/L	0.001	<0.0010	mg/L	0.001	0.0044	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001							
Barium D-Ba	0.045	mg/L	0.001	0.122	mg/L	0.001	0.0752	mg/L	0.001	0.0194	mg/L	0.001	0.0308	mg/L	0.001	0.0919	mg/L	0.001	0.0102	mg/L	0.001							
Beryllium D-Be	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005							
Bismuth D-Bi	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005							
Boron D-B	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1							
Cadmium D-Cd	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005							
Calcium D-Ca	0.193	mg/L	0.05	8.88	mg/L	0.05	7.95	mg/L	0.05	103	mg/L	0.05	6.08	mg/L	0.05	7.71	mg/L	0.05	3.55	mg/L	0.05							
Chromium D-Cr	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005							
Cobalt D-Co	0.0033	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001							
Copper D-Cu	0.004	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	0.0032	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001							
Iron D-Fe	0.343	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	0.576	mg/L	0.03	<0.030	mg/L	0.03	0.082	mg/L	0.03							
Lead D-Pb	0.0011	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001							
Lithium D-Li	0.034	mg/L	0.01	0.019	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	0.055	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01							
Magnesium D-Mg	0.24	mg/L	0.05	4.95	mg/L	0.05	5.44	mg/L	0.05	43.4	mg/L	0.05	0.716	mg/L	0.05	20.1	mg/L	0.05	10.8	mg/L	0.05							
Manganese D-Mn	0.0025	mg/L	0.001	0.0126	mg/L	0.001	0.0043	mg/L	0.001	0.0691	mg/L	0.001	0.0036	mg/L	0.001	0.0028	mg/L	0.001	0.0014	mg/L	0.001							
Mercury D-Hg	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001							
Molybdenum D-Mo	0.183	mg/L	0.001	0.0164	mg/L	0.001	0.0058	mg/L	0.001	<0.0010	mg/L	0.001	0.0191	mg/L	0.001	0.0118	mg/L	0.001	0.0011	mg/L	0.001							
Nickel D-Ni	0.0236	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005							
Phosphorus D-P	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3							
Potassium D-K	0.84	mg/L	0.5	1.49	mg/L	0.5	<0.50	mg/L	0.5	0.51	mg/L	0.5	1.18	mg/L	0.5	1.93	mg/L	0.5	<0.50	mg/L	0.5							
Selenium D-Se	0.013	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01							
Silicon D-Si	6.19	mg/L	0.05	0.789	mg/L	0.05	1.4	mg/L	0.05	0.221	mg/L	0.05	6.47	mg/L	0.05	0.731	mg/L	0.05	1.38	mg/L	0.05							
Silver D-Ag	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001							
Sodium D-Na	82.2	mg/L	2	31.6	mg/L	0.05	0.407	mg/L	0.05	0.288	mg/L	0.05	147	mg/L	2	0.587	mg/L	0.05	0.244	mg/L	0.05							
Strontium D-Sr	0.0165	mg/L	0.001	0.542	mg/L	0.001	0.151	mg/L	0.001	1.15	mg/L	0.001	0.061	mg/L	0.001	0.505	mg/L	0.001	0.0315	mg/L	0.001							
Thallium D-Tl	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001							
Tin D-Sn	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001							
Titanium D-Ti	0.035	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	0.081	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01							
Uranium D-U	0.00011	mg/L	0.0001	0.00018	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	0.00026	mg/L	0.0001	0.00012	mg/L	0.0001	<0.00010	mg/L	0.0001							
Vanadium D-V	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01							
Zinc D-Zn	0.0073	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	0.0075	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005							
Physical Tests																												
Conductivity (uS/cm)	361	uS/cm	2	204	uS/cm	2	84.2	uS/cm	2	700	uS/cm	2	667	uS/cm	2	203	uS/cm	2	100	uS/cm	2							
pH	9.24	pH	0.1	8	pH	0.1	7.63	pH	0.1	7.91	pH	0.1	9	pH	0.1	7.86	pH	0.1	7.86	pH	0.1							
Sample Preparation																												
Total Volume - In (mL)	500	mL	0	500	mL	0	500	mL	0	500	mL	0	500	mL	0	500	mL	0	500	mL	0							
Total Volume - Out (mL)	300	mL	0	430	mL	0	450	mL	0	445	mL	0	350	mL	0	505	mL	0	460	mL	0							
Dissolved Anions																												
Acidity (to pH 8.3) CaCO3	<1.0	mg/L	1	1.3	mg/L	1	1.6	mg/L	1	2.3	mg/L	1	<1.0	mg/L	1	1.4	mg/L	1	1.3	mg/L	1							
Alkalinity-Total CaCO3	164	mg/L	1	73.8	mg/L	1	38.5	mg/L	1	77.2	mg/L	1	241	mg/L	1	66.3	mg/L	1	49.8	mg/L	1							
Sulphate SO4	32.2	mg/L	1	32.5	mg/L	1	3.9	mg/L	1	313	mg/L	5	102	mg/L	0.5	34.8	mg/L	1	<1.0	mg/L	1							

Project	Mt. Klappan Cycle #25	Water Analysis																			
Report to	Rescan Environmental Services																				
ALS File No.	Z3675																				
Date Recieved	10/12/2006																				
Date	10/27/2006																				
RESULTS OF ANALYSIS																					
Sample ID	85-016- 07-25	85-027- 02-25				85-027- 17-25				85-027- 24-25				86-035- 07-25				86-035- 09-25			
Date Sampled	10/12/2006	10/12/2006				10/12/2006				10/12/2006				10/12/2006				10/12/2006			
Time Sampled																					
ALS Sample ID	1	2				3				4				5				6			
Nature	Water	Water				Water				Water				Water				Water			
		Units	DI		Units	DI		Units	DI		Units	DI		Units	DI		Units	DI			
Dissolved Metals																					
Aluminum D-Al	0.703	mg/L	0.01	2.6	mg/L	0.01	0.053	mg/L	0.01	0.074	mg/L	0.01	0.012	mg/L	0.01	0.714	mg/L	0.01			
Antimony D-Sb	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	0.002	mg/L	0.001	0.0013	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001			
Arsenic D-As	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	0.001	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001			
Barium D-Ba	0.131	mg/L	0.001	0.0748	mg/L	0.001	0.0245	mg/L	0.001	0.0575	mg/L	0.001	0.201	mg/L	0.001	0.0337	mg/L	0.001			
Beryllium D-Be	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005			
Bismuth D-Bi	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005			
Boron D-B	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1			
Cadmium D-Cd	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005			
Calcium D-Ca	2.75	mg/L	0.05	0.836	mg/L	0.05	7.56	mg/L	0.05	8.97	mg/L	0.05	8.87	mg/L	0.05	0.672	mg/L	0.05			
Chromium D-Cr	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005			
Cobalt D-Co	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001			
Copper D-Cu	0.0012	mg/L	0.001	0.0034	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001			
Iron D-Fe	0.06	mg/L	0.03	0.251	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	0.077	mg/L	0.03			
Lead D-Pb	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001			
Lithium D-Li	0.093	mg/L	0.01	0.032	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	0.01	mg/L	0.01	0.011	mg/L	0.01			
Magnesium D-Mg	5.65	mg/L	0.05	3.7	mg/L	0.05	4.08	mg/L	0.05	6.6	mg/L	0.05	13.5	mg/L	0.05	0.656	mg/L	0.05			
Manganese D-Mn	0.0012	mg/L	0.001	0.0035	mg/L	0.001	<0.0010	mg/L	0.001	0.0115	mg/L	0.001	0.0197	mg/L	0.001	0.001	mg/L	0.001			
Mercury D-Hg	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001			
Molybdenum D-Mo	0.0029	mg/L	0.001	0.0227	mg/L	0.001	0.0039	mg/L	0.001	0.0055	mg/L	0.001	0.0033	mg/L	0.001	<0.0010	mg/L	0.001			
Nickel D-Ni	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005			
Phosphorus D-P	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3			
Potassium D-K	3.23	mg/L	0.5	3.03	mg/L	0.5	<0.50	mg/L	0.5	0.84	mg/L	0.5	2.23	mg/L	0.5	1.43	mg/L	0.5			
Selenium D-Se	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01			
Silicon D-Si	1.5	mg/L	0.05	2.29	mg/L	0.05	1.06	mg/L	0.05	1.15	mg/L	0.05	0.57	mg/L	0.05	1.23	mg/L	0.05			
Silver D-Ag	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001			
Sodium D-Na	205	mg/L	2	90	mg/L	2	0.623	mg/L	0.05	0.929	mg/L	0.05	5.05	mg/L	0.05	36.6	mg/L	0.05			
Strontium D-Sr	0.344	mg/L	0.001	0.152	mg/L	0.001	0.191	mg/L	0.001	0.339	mg/L	0.001	0.623	mg/L	0.001	0.0357	mg/L	0.001			
Thallium D-Tl	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001			
Tin D-Sn	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001			
Titanium D-Ti	<0.010	mg/L	0.01	0.023	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	0.013	mg/L	0.01			
Uranium D-U	0.00054	mg/L	0.0001	0.00011	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001			
Vanadium D-V	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01			
Zinc D-Zn	<0.0050	mg/L	0.005	0.0065	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005			
Physical Tests																					
Conductivity (uS/cm)	857	uS/cm	2	408	uS/cm	2	71.8	uS/cm	2	99.3	uS/cm	2	170	uS/cm	2	159	uS/cm	2			
pH	8.66	pH	0.1	8.5	pH	0.1	6.91	pH	0.1	7.57	pH	0.1	7.96	pH	0.1	8.35	pH	0.1			
Sample Preparation																					
Total Volume - In (mL)	500	mL	0	500	mL	0	500	mL	0	500	mL	0	500	mL	0	500	mL	0			
Total Volume - Out (mL)	395	mL	0	425	mL	0	435	mL	0	435	mL	0	425	mL	0	430	mL	0			
Dissolved Anions																					
Acidity (to pH 8.3) CaCO3	<1.0	mg/L	1	<1.0	mg/L	1	1.8	mg/L	1	1.8	mg/L	1	1.7	mg/L	1	<1.0	mg/L	1			
Alkalinity-Total CaCO3	447	mg/L	1	116	mg/L	1	33.8	mg/L	1	45.3	mg/L	1	86	mg/L	1	83.2	mg/L	1			
Sulphate SO4	31	mg/L	0.5	60.1	mg/L	0.5	2.85	mg/L	0.5	1.91	mg/L	0.5	4.84	mg/L	0.5	3.93	mg/L	0.5			

Project	Mt. Klappan Cycle #30	Water Analysis													
Report to	Rescan Environmental Services														
ALS File No.	Z3674														
Date Recieved	10/12/2006														
Date	10/27/2006														
RESULTS OF ANALYSIS															
Sample ID	ARD3-14B -30			ARD1-15 -30				ARD2-12 -30				ARD2-07 -30			DUMP-2.5 M-30
Date Sampled	10/12/2006			10/12/2006				10/12/2006				10/12/2006			10/12/2006
Time Sampled															
ALS Sample ID	3			4				5				9			10
Nature	Water			Water				Water				Water			Water
		Units	DI		Units	DI			Units	DI			Units	DI	
Dissolved Metals															
Aluminum D-Al	0.013	mg/L	0.01	0.115	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	0.014	mg/L	0.01
Antimony D-Sb	<0.0010	mg/L	0.001	0.0018	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Arsenic D-As	<0.0010	mg/L	0.001	0.0054	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Barium D-Ba	0.12	mg/L	0.001	0.0632	mg/L	0.001	0.0205	mg/L	0.001	0.0897	mg/L	0.001	0.008	mg/L	0.001
Beryllium D-Be	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Bismuth D-Bi	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Boron D-B	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1
Cadmium D-Cd	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005
Calcium D-Ca	8	mg/L	0.05	6.15	mg/L	0.05	67	mg/L	0.05	7.13	mg/L	0.05	4.28	mg/L	0.05
Chromium D-Cr	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Cobalt D-Co	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Copper D-Cu	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Iron D-Fe	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03
Lead D-Pb	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Lithium D-Li	0.017	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01
Magnesium D-Mg	4.43	mg/L	0.05	4.47	mg/L	0.05	28	mg/L	0.05	18.2	mg/L	0.05	13.6	mg/L	0.05
Manganese D-Mn	0.0119	mg/L	0.001	<0.0010	mg/L	0.001	0.0491	mg/L	0.001	0.0033	mg/L	0.001	<0.0010	mg/L	0.001
Mercury D-Hg	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Molybdenum D-Mo	0.0181	mg/L	0.001	0.0048	mg/L	0.001	<0.0010	mg/L	0.001	0.013	mg/L	0.001	0.0012	mg/L	0.001
Nickel D-Ni	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Phosphorus D-P	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3
Potassium D-K	1.4	mg/L	0.5	<0.50	mg/L	0.5	<0.50	mg/L	0.5	1.83	mg/L	0.5	<0.50	mg/L	0.5
Selenium D-Se	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01
Silicon D-Si	0.684	mg/L	0.05	1.03	mg/L	0.05	0.178	mg/L	0.05	0.609	mg/L	0.05	0.889	mg/L	0.05
Silver D-Ag	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001
Sodium D-Na	34.9	mg/L	0.05	0.333	mg/L	0.05	0.226	mg/L	0.05	0.501	mg/L	0.05	0.238	mg/L	0.05
Strontium D-Sr	0.501	mg/L	0.001	0.127	mg/L	0.001	0.85	mg/L	0.001	0.478	mg/L	0.001	0.0387	mg/L	0.001
Thallium D-Tl	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Tin D-Sn	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Titanium D-Ti	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01
Uranium D-U	0.00021	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001
Vanadium D-V	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01
Zinc D-Zn	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Physical Tests															
Conductivity (uS/cm)	228	uS/cm	2	68.2	uS/cm	2	515	uS/cm	2	196	uS/cm	2	122	uS/cm	2
pH	8.05	pH	0.1	7.62	pH	0.1	7.63	pH	0.1	7.43	pH	0.1	7.9	pH	0.1
Sample Preparation															
Total Volume - In (mL)	500	mL	0	500	mL	0	500	mL	0	500	mL	0	500	mL	0
Total Volume - Out (mL)	415	mL	0	520	mL	0	480	mL	0	375	mL	0	415	mL	0
Dissolved Anions															
Acidity (to pH 8.3) CaCO3	2.7	mg/L	1	2	mg/L	1	3.4	mg/L	1	2.3	mg/L	1	2	mg/L	1
Alkalinity-Total CaCO3	79.6	mg/L	1	31	mg/L	1	75.6	mg/L	1	54.3	mg/L	1	71.1	mg/L	1
Sulphate SO4	40.3	mg/L	0.5	3.19	mg/L	0.5	220	mg/L	0.5	37.8	mg/L	0.5	0.55	mg/L	0.5

Project	Mt. Klappan Cycle #24	Water Analysis										
Report to	Rescan Environmental Services											
ALS File No.	Z3454											
Date Recieved	10/5/2006											
Date	10/19/2006											
RESULTS OF ANALYSIS												
Sample ID	85-027- 17-24			85-027- 24-24				86-035- 07-24				86-035- 09-24
Date Sampled	10/5/2006			10/5/2006				10/5/2006				10/5/2006
Time Sampled												
ALS Sample ID	3			4				5				6
Nature	Water			Water				Water				Water
		Units	DI		Units	DI			Units	DI		
Dissolved Metals												
Aluminum D-Al	0.081	mg/L	0.01	0.093	mg/L	0.01	0.012	mg/L	0.01	0.794	mg/L	0.01
Antimony D-Sb	0.0021	mg/L	0.001	0.0014	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Arsenic D-As	0.0012	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Barium D-Ba	0.0229	mg/L	0.001	0.0523	mg/L	0.001	0.175	mg/L	0.001	0.0637	mg/L	0.001
Beryllium D-Be	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Bismuth D-Bi	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Boron D-B	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1
Cadmium D-Cd	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005
Calcium D-Ca	6.67	mg/L	0.05	8.44	mg/L	0.05	8.42	mg/L	0.05	1.58	mg/L	0.05
Chromium D-Cr	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Cobalt D-Co	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Copper D-Cu	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Iron D-Fe	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	0.083	mg/L	0.03
Lead D-Pb	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Lithium D-Li	<0.010	mg/L	0.01	<0.010	mg/L	0.01	0.014	mg/L	0.01	0.026	mg/L	0.01
Magnesium D-Mg	3.73	mg/L	0.05	5.97	mg/L	0.05	11.7	mg/L	0.05	1.48	mg/L	0.05
Manganese D-Mn	<0.0010	mg/L	0.001	0.0101	mg/L	0.001	0.0196	mg/L	0.001	0.0019	mg/L	0.001
Mercury D-Hg	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Molybdenum D-Mo	0.0041	mg/L	0.001	0.0054	mg/L	0.001	0.0045	mg/L	0.001	<0.0010	mg/L	0.001
Nickel D-Ni	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Phosphorus D-P	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3
Potassium D-K	<0.50	mg/L	0.5	0.87	mg/L	0.5	2.23	mg/L	0.5	2.17	mg/L	0.5
Selenium D-Se	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01
Silicon D-Si	1.27	mg/L	0.05	1.32	mg/L	0.05	0.697	mg/L	0.05	1.61	mg/L	0.05
Silver D-Ag	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001
Sodium D-Na	0.613	mg/L	0.05	0.964	mg/L	0.05	5.91	mg/L	0.05	65	mg/L	0.05
Strontium D-Sr	0.166	mg/L	0.001	0.314	mg/L	0.001	0.544	mg/L	0.001	0.0835	mg/L	0.001
Thallium D-Tl	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Tin D-Sn	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Titanium D-Ti	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	0.018	mg/L	0.01
Uranium D-U	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001
Vanadium D-V	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01
Zinc D-Zn	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Physical Tests												
Conductivity (uS/cm)	64.7	uS/cm	2	97.2	uS/cm	2	167	uS/cm	2	291	uS/cm	2
pH	7.16	pH	0.1	7.8	pH	0.1	8.05	pH	0.1	8.62	pH	0.1
Sample Preparation												
Total Volume - In (mL)	500	mL	0	500	mL	0	500	mL	0	500	mL	0
Total Volume - Out (mL)	420	mL	0	450	mL	0	425	mL	0	470	mL	0
Dissolved Anions												
Acidity (to pH 8.3) CaCO3	2.4	mg/L	1	1.5	mg/L	1	1.2	mg/L	1	<1.0	mg/L	1
Alkalinity-Total CaCO3	30.8	mg/L	1	46.6	mg/L	1	86.2	mg/L	1	156	mg/L	1
Sulphate SO4	2.86	mg/L	0.5	1.96	mg/L	0.5	5.32	mg/L	0.5	6.79	mg/L	0.5

Project	Mt. Klappan Cycle #29	Water Analysis																	
Report to	Rescan Environmental Services																		
ALS File No.	Z3453																		
Date Recieved	10/5/2006																		
Date	10/20/2006																		
RESULTS OF ANALYSIS																			
Sample ID	ARD3-08B -29	ARD3-14B -29				ARD1-15 -29				ARD2-12 -29				ARD2-07 -29				DUMP-2.5 M-29	
Date Sampled	10/5/2006	10/5/2006				10/5/2006				10/5/2006				10/5/2006					
Time Sampled																			
ALS Sample ID	2	3				4				5				9				10	
Nature	Water	Water				Water				Water				Water				Water	
		Units	DI		Units	DI		Units	DI		Units	DI		Units	DI		Units	DI	
Dissolved Metals																			
Aluminum D-Al	0.266	mg/L	0.01	0.038	mg/L	0.01	0.088	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	0.017	mg/L	0.01	
Antimony D-Sb	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	0.0027	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Arsenic D-As	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	0.0048	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Barium D-Ba	0.023	mg/L	0.001	0.0948	mg/L	0.001	0.0807	mg/L	0.001	0.021	mg/L	0.001	0.132	mg/L	0.001	0.0082	mg/L	0.001	
Beryllium D-Be	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	
Bismuth D-Bi	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	
Boron D-B	0.12	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	
Cadmium D-Cd	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	
Calcium D-Ca	2.79	mg/L	0.05	6.23	mg/L	0.05	7.9	mg/L	0.05	79.3	mg/L	0.05	9.09	mg/L	0.05	4.29	mg/L	0.05	
Chromium D-Cr	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	
Cobalt D-Co	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Copper D-Cu	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Iron D-Fe	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	
Lead D-Pb	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Lithium D-Li	0.142	mg/L	0.01	0.023	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	
Magnesium D-Mg	3.32	mg/L	0.05	3.53	mg/L	0.05	5.9	mg/L	0.05	34.3	mg/L	0.05	25.5	mg/L	0.05	14.1	mg/L	0.05	
Manganese D-Mn	0.0707	mg/L	0.001	0.0087	mg/L	0.001	0.0013	mg/L	0.001	0.0533	mg/L	0.001	0.0062	mg/L	0.001	<0.0010	mg/L	0.001	
Mercury D-Hg	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Molybdenum D-Mo	<0.0010	mg/L	0.001	0.0174	mg/L	0.001	0.0074	mg/L	0.001	<0.0010	mg/L	0.001	0.0122	mg/L	0.001	0.0013	mg/L	0.001	
Nickel D-Ni	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	
Phosphorus D-P	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	
Potassium D-K	2.35	mg/L	0.5	1.31	mg/L	0.5	<0.50	mg/L	0.5	<0.50	mg/L	0.5	2.21	mg/L	0.5	<0.50	mg/L	0.5	
Selenium D-Se	0.01	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	
Silicon D-Si	1.49	mg/L	0.05	0.813	mg/L	0.05	1.4	mg/L	0.05	0.224	mg/L	0.05	0.839	mg/L	0.05	1.05	mg/L	0.05	
Silver D-Ag	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	
Sodium D-Na	248	mg/L	2	38.5	mg/L	0.05	0.442	mg/L	0.05	0.269	mg/L	0.05	0.615	mg/L	0.05	0.223	mg/L	0.05	
Strontium D-Sr	0.302	mg/L	0.001	0.394	mg/L	0.001	0.168	mg/L	0.001	1.02	mg/L	0.001	0.659	mg/L	0.001	0.039	mg/L	0.001	
Thallium D-Tl	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Tin D-Sn	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Titanium D-Ti	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	
Uranium D-U	<0.00010	mg/L	0.0001	0.00019	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	0.00016	mg/L	0.0001	<0.00010	mg/L	0.0001	
Vanadium D-V	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	
Zinc D-Zn	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	
Physical Tests																			
Conductivity (uS/cm)	1130	uS/cm	2	232	uS/cm	2	86.5	uS/cm	2	573	uS/cm	2	240	uS/cm	2	122	uS/cm	2	
pH	8.16	pH	0.1	8	pH	0.1	7.76	pH	0.1	7.81	pH	0.1	7.95	pH	0.1	7.94	pH	0.1	
Sample Preparation																			
Total Volume - In (mL)	500	mL	0	500	mL	0	500	mL	0	500	mL	0	500	mL	0	500	mL	0	
Total Volume - Out (mL)	435	mL	0	400	mL	0	505	mL	0	455	mL	0	450	mL	0	450	mL	0	
Dissolved Anions																			
Acidity (to pH 8.3) CaCO3	<1.0	mg/L	1	1.1	mg/L	1	1.4	mg/L	1	2.1	mg/L	1	1.3	mg/L	1	1.1	mg/L	1	
Alkalinity-Total CaCO3	165	mg/L	1	85	mg/L	1	41	mg/L	1	89.2	mg/L	1	82.7	mg/L	1	63	mg/L	1	
Sulphate SO4	384	mg/L	2.5	36.5	mg/L	0.5	5.51	mg/L	0.5	223	mg/L	0.5	35.8	mg/L	0.5	0.71	mg/L	0.5	

Project	Mt. Klappan Cycle #23	Water Analysis										
Report to	Rescan Environmental Services											
ALS File No.	Z3156											
Date Recieved	9/28/2006											
Date	10/19/2006											
RESULTS OF ANALYSIS												
Sample ID	85-027- 17-23			85-027- 24-23				86-035- 07-23				86-035- 09-23
Date Sampled	9/28/2006			9/28/2006				9/28/2006				9/28/2006
Time Sampled												
ALS Sample ID	3			4				5				6
Nature	Water			Water				Water				Water
		Units	DI		Units	DI			Units	DI		
Dissolved Metals												
Aluminum D-Al	0.065	mg/L	0.01	0.062	mg/L	0.01	0.016	mg/L	0.01	0.506	mg/L	0.01
Antimony D-Sb	0.0026	mg/L	0.001	0.0016	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Arsenic D-As	0.0015	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Barium D-Ba	0.0294	mg/L	0.001	0.0775	mg/L	0.001	0.201	mg/L	0.001	0.0887	mg/L	0.001
Beryllium D-Be	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Bismuth D-Bi	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Boron D-B	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1
Cadmium D-Cd	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005
Calcium D-Ca	8.64	mg/L	0.05	11.9	mg/L	0.05	8.98	mg/L	0.05	2.22	mg/L	0.05
Chromium D-Cr	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Cobalt D-Co	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Copper D-Cu	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Iron D-Fe	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	0.041	mg/L	0.03
Lead D-Pb	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Lithium D-Li	<0.010	mg/L	0.01	<0.010	mg/L	0.01	0.012	mg/L	0.01	0.027	mg/L	0.01
Magnesium D-Mg	5.16	mg/L	0.05	8.97	mg/L	0.05	13.6	mg/L	0.05	2.15	mg/L	0.05
Manganese D-Mn	0.0016	mg/L	0.001	0.0116	mg/L	0.001	0.0237	mg/L	0.001	0.002	mg/L	0.001
Mercury D-Hg	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Molybdenum D-Mo	0.0046	mg/L	0.001	0.0057	mg/L	0.001	0.0037	mg/L	0.001	0.0017	mg/L	0.001
Nickel D-Ni	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Phosphorus D-P	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3
Potassium D-K	<0.50	mg/L	0.5	1.1	mg/L	0.5	2.47	mg/L	0.5	2.64	mg/L	0.5
Selenium D-Se	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01
Silicon D-Si	1.3	mg/L	0.05	1.34	mg/L	0.05	0.621	mg/L	0.05	1.26	mg/L	0.05
Silver D-Ag	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001
Sodium D-Na	0.79	mg/L	0.05	1.32	mg/L	0.05	7.48	mg/L	0.05	104	mg/L	2
Strontium D-Sr	0.235	mg/L	0.001	0.482	mg/L	0.001	0.632	mg/L	0.001	0.124	mg/L	0.001
Thallium D-Tl	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Tin D-Sn	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Titanium D-Ti	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	0.012	mg/L	0.01
Uranium D-U	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001
Vanadium D-V	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01
Zinc D-Zn	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Physical Tests												
Conductivity (uS/cm)	82.8	uS/cm	2	129	uS/cm	2	176	uS/cm	2	424	uS/cm	2
pH	6.56	pH	0.1	7.74	pH	0.1	7.87	pH	0.1	8.45	pH	0.1
Sample Preparation												
Total Volume - In (mL)	500	mL	0	500	mL	0	500	mL	0	500	mL	0
Total Volume - Out (mL)	435	mL	0	510	mL	0	515	mL	0	475	mL	0
Dissolved Anions												
Acidity (to pH 8.3) CaCO3	2	mg/L	1	1.7	mg/L	1	1.1	mg/L	1	<1.0	mg/L	1
Alkalinity-Total CaCO3	42.2	mg/L	1	47	mg/L	1	95.2	mg/L	1	237	mg/L	1
Sulphate SO4	2.79	mg/L	0.5	1.86	mg/L	0.5	4.44	mg/L	0.5	10.8	mg/L	0.5

Project	Mt. Klappan Cycle #22	Water Analysis																
Report to	Rescan Environmental Services																	
ALS Fle No.	Z2912																	
Date Recieved	9/21/2006																	
Date	10/12/2006																	
RESULTS OF ANALYSIS																		
Sample ID	85-016- 07-22			85-027- 02-22			85-027- 17-22			85-027- 24-22			86-035- 07-22			86-035- 09-22		
Date Sampled	9/21/2006			9/21/2006			9/21/2006			9/21/2006			9/21/2006			9/21/2006		
Time Sampled																		
ALS Sample ID	1			2			3			4			5			6		
Nature	Water			Water			Water			Water			Water			Water		
		Units	DI		Units	DI		Units	DI		Units	DI		Units	DI		Units	DI
Dissolved Metals																		
Aluminum D-Al	0.702	mg/L	0.01	2.04	mg/L	0.01	0.078	mg/L	0.01	0.073	mg/L	0.01	0.013	mg/L	0.01	0.994	mg/L	0.01
Antimony D-Sb	<0.0010	mg/L	0.001	0.0013	mg/L	0.001	0.0028	mg/L	0.001	0.002	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Arsenic D-As	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	0.0019	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Barium D-Ba	0.112	mg/L	0.001	0.0662	mg/L	0.001	0.0244	mg/L	0.001	0.0644	mg/L	0.001	0.177	mg/L	0.001	0.0601	mg/L	0.001
Beryllium D-Be	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Bismuth D-Bi	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Boron D-B	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1
Cadmium D-Cd	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005
Calcium D-Ca	2.35	mg/L	0.05	0.726	mg/L	0.05	6.99	mg/L	0.05	9.84	mg/L	0.05	7.88	mg/L	0.05	1.33	mg/L	0.05
Chromium D-Cr	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Cobalt D-Co	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Copper D-Cu	0.0017	mg/L	0.001	0.0034	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	0.0013	mg/L	0.001
Iron D-Fe	0.055	mg/L	0.03	0.211	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	0.097	mg/L	0.03
Lead D-Pb	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Lithium D-Li	0.119	mg/L	0.01	0.047	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	0.016	mg/L	0.01	0.022	mg/L	0.01
Magnesium D-Mg	4.28	mg/L	0.05	3.16	mg/L	0.05	3.97	mg/L	0.05	7.24	mg/L	0.05	11.1	mg/L	0.05	1.22	mg/L	0.05
Manganese D-Mn	0.0019	mg/L	0.001	0.0028	mg/L	0.001	0.0021	mg/L	0.001	0.0106	mg/L	0.001	0.0225	mg/L	0.001	0.0017	mg/L	0.001
Mercury D-Hg	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Molybdenum D-Mo	0.0037	mg/L	0.001	0.0324	mg/L	0.001	0.0051	mg/L	0.001	0.0065	mg/L	0.001	0.0055	mg/L	0.001	0.0011	mg/L	0.001
Nickel D-Ni	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Phosphorus D-P	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3
Potassium D-K	2.86	mg/L	0.5	2.9	mg/L	0.5	<0.50	mg/L	0.5	1.05	mg/L	0.5	2.42	mg/L	0.5	1.91	mg/L	0.5
Selenium D-Se	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01
Silicon D-Si	1.85	mg/L	0.05	3.91	mg/L	0.05	1.53	mg/L	0.05	1.46	mg/L	0.05	0.718	mg/L	0.05	1.97	mg/L	0.05
Silver D-Ag	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001
Sodium D-Na	230	mg/L	2	109	mg/L	2	0.774	mg/L	0.05	1.42	mg/L	0.05	9.32	mg/L	0.05	72.3	mg/L	2
Strontium D-Sr	0.294	mg/L	0.001	0.135	mg/L	0.001	0.182	mg/L	0.001	0.4	mg/L	0.001	0.543	mg/L	0.001	0.0712	mg/L	0.001
Thallium D-Tl	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Tin D-Sn	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Titanium D-Ti	<0.010	mg/L	0.01	0.031	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	0.024	mg/L	0.01
Uranium D-U	0.00079	mg/L	0.0001	0.00019	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001
Vanadium D-V	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01
Zinc D-Zn	<0.0050	mg/L	0.005	0.0052	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Physical Tests																		
Conductivity (uS/cm)	936	uS/cm	2	469	uS/cm	2	66.9	uS/cm	2	108	uS/cm	2	164	uS/cm	2	298	uS/cm	2
pH	8.76	pH	0.1	8.64	pH	0.1	7.27	pH	0.1	7.79	pH	0.1	7.92	pH	0.1	8.54	pH	0.1
Sample Preparation																		
Total Volume - In (mL)	500	mL	0	500	mL	0	500	mL	0	500	mL	0	500	mL	0	500	mL	0
Total Volume - Out (mL)	485	mL	0	350	mL	0	375	mL	0	400	mL	0	385	mL	0	460	mL	0
Dissolved Anions																		
Acidity (to pH 8.3) CaCO3	<1.0	mg/L	1	<1.0	mg/L	1	1.3	mg/L	1	1.2	mg/L	1	<1.0	mg/L	1	<1.0	mg/L	1
Alkalinity-Total CaCO3	497	mg/L	1	157	mg/L	1	31.8	mg/L	1	58.3	mg/L	1	85.3	mg/L	1	144	mg/L	1
Sulphate SO4	39	mg/L	0.5	83.8	mg/L	0.5	3.44	mg/L	0.5	2.03	mg/L	0.5	5.9	mg/L	0.5	8.5	mg/L	0.5

Project	Mt. Klappan Cycle #27	Water Analysis													
Report to	Rescan Environmental Services														
ALS File No.	Z2911														
Date Recieved	9/21/2006														
Date	10/12/2006														
RESULTS OF ANALYSIS															
Sample ID	ARD3-14B -27			ARD1-15 -27				ARD2-12 -27				ARD2-07 -27			DUMP-2.5 M-27
Date Sampled	9/21/2006			9/21/2006				9/21/2006				9/21/2006			9/21/2006
Time Sampled															
ALS Sample ID	3			4				5				9			10
Nature	Water			Water				Water				Water			Water
		Units	DI		Units	DI			Units	DI			Units	DI	
Dissolved Metals															
Aluminum D-Al	0.047	mg/L	0.01	0.096	mg/L	0.01	<0.010	mg/L	0.01	0.013	mg/L	0.01	0.016	mg/L	0.01
Antimony D-Sb	0.0011	mg/L	0.001	0.0031	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Arsenic D-As	<0.0010	mg/L	0.001	0.007	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Barium D-Ba	0.0626	mg/L	0.001	0.0754	mg/L	0.001	0.0202	mg/L	0.001	0.141	mg/L	0.001	0.0075	mg/L	0.001
Beryllium D-Be	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Bismuth D-Bi	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Boron D-B	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1
Cadmium D-Cd	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005
Calcium D-Ca	3.82	mg/L	0.05	7.41	mg/L	0.05	98.4	mg/L	0.05	7.43	mg/L	0.05	3.94	mg/L	0.05
Chromium D-Cr	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Cobalt D-Co	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Copper D-Cu	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	0.0015	mg/L	0.001
Iron D-Fe	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03
Lead D-Pb	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Lithium D-Li	0.026	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01
Magnesium D-Mg	2.13	mg/L	0.05	5.65	mg/L	0.05	36.3	mg/L	0.05	18	mg/L	0.05	12.1	mg/L	0.05
Manganese D-Mn	0.0061	mg/L	0.001	<0.0010	mg/L	0.001	0.0588	mg/L	0.001	0.0109	mg/L	0.001	<0.0010	mg/L	0.001
Mercury D-Hg	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Molybdenum D-Mo	0.0189	mg/L	0.001	0.0081	mg/L	0.001	<0.0010	mg/L	0.001	0.0149	mg/L	0.001	0.0013	mg/L	0.001
Nickel D-Ni	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Phosphorus D-P	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3
Potassium D-K	1.12	mg/L	0.5	<0.50	mg/L	0.5	0.51	mg/L	0.5	2.07	mg/L	0.5	<0.50	mg/L	0.5
Selenium D-Se	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01
Silicon D-Si	0.893	mg/L	0.05	1.58	mg/L	0.05	0.212	mg/L	0.05	0.839	mg/L	0.05	1.04	mg/L	0.05
Silver D-Ag	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001
Sodium D-Na	49.7	mg/L	0.05	0.508	mg/L	0.05	0.312	mg/L	0.05	0.629	mg/L	0.05	0.242	mg/L	0.05
Strontium D-Sr	0.249	mg/L	0.001	0.163	mg/L	0.001	1.13	mg/L	0.001	0.519	mg/L	0.001	0.0354	mg/L	0.001
Thallium D-Tl	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Tin D-Sn	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Titanium D-Ti	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01
Uranium D-U	0.0002	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001
Vanadium D-V	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01
Zinc D-Zn	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Physical Tests															
Conductivity (uS/cm)	239	uS/cm	2	81.5	uS/cm	2	631	uS/cm	2	187	uS/cm	2	112	uS/cm	2
pH	8.15	pH	0.1	7.77	pH	0.1	7.77	pH	0.1	7.83	pH	0.1	7.72	pH	0.1
Sample Preparation															
Total Volume - In (mL)	500	mL	0	500	mL	0	500	mL	0	500	mL	0	500	mL	0
Total Volume - Out (mL)	520	mL	0	420	mL	0	480	mL	0	420	mL	0	470	mL	0
Dissolved Anions															
Acidity (to pH 8.3) CaCO3	1.3	mg/L	1	1.3	mg/L	1	1.9	mg/L	1	1.2	mg/L	1	1.2	mg/L	1
Alkalinity-Total CaCO3	98.6	mg/L	1	38.5	mg/L	1	86.7	mg/L	1	82	mg/L	1	55.9	mg/L	1
Sulphate SO4	27.8	mg/L	5	5.6	mg/L	0.5	286	mg/L	0.5	23.3	mg/L	0.5	1.15	mg/L	0.5

Project	Mt. Klappan Cycle #21	Water Analysis												
Report to	Rescan Environmental Services													
ALS File No.	Z2574													
Date Recieved	9/14/2006													
Date	10/2/2006													
RESULTS OF ANALYSIS														
Sample ID	85-027- 17-21			85-027- 24-21				86-035- 07-21				86-035- 09-21		
Date Sampled	9/14/2006			9/14/2006				9/14/2006				9/14/2006		
Time Sampled														
ALS Sample ID	3			4				5				6		
Nature	Water			Water				Water				Water		
		Units	DI		Units	DI			Units	DI				
Dissolved Metals														
Aluminum D-Al	0.124	mg/L	0.01	0.104	mg/L	0.01		0.012	mg/L	0.01		1.66	mg/L	0.01
Antimony D-Sb	0.0024	mg/L	0.001	0.0019	mg/L	0.001	<0.0010		mg/L	0.001	<0.0010		mg/L	0.001
Arsenic D-As	0.0024	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010		mg/L	0.001	<0.0010		mg/L	0.001
Barium D-Ba	0.0178	mg/L	0.001	0.0605	mg/L	0.001		0.152	mg/L	0.001		0.0479	mg/L	0.001
Beryllium D-Be	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050		mg/L	0.005	<0.0050		mg/L	0.005
Bismuth D-Bi	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050		mg/L	0.005	<0.0050		mg/L	0.005
Boron D-B	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10		mg/L	0.1	<0.10		mg/L	0.1
Cadmium D-Cd	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050		mg/L	0.0005	<0.00050		mg/L	0.0005
Calcium D-Ca	4.53	mg/L	0.05	8.73	mg/L	0.05		6.37	mg/L	0.05		0.644	mg/L	0.05
Chromium D-Cr	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050		mg/L	0.005	<0.0050		mg/L	0.005
Cobalt D-Co	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010		mg/L	0.001	<0.0010		mg/L	0.001
Copper D-Cu	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010		mg/L	0.001		0.0017	mg/L	0.001
Iron D-Fe	0.037	mg/L	0.03	<0.030	mg/L	0.03	<0.030		mg/L	0.03		0.144	mg/L	0.03
Lead D-Pb	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010		mg/L	0.001	<0.0010		mg/L	0.001
Lithium D-Li	<0.010	mg/L	0.01	<0.010	mg/L	0.01		0.012	mg/L	0.01		0.018	mg/L	0.01
Magnesium D-Mg	2.62	mg/L	0.05	6.51	mg/L	0.05		8.85	mg/L	0.05		0.628	mg/L	0.05
Manganese D-Mn	<0.0010	mg/L	0.001	0.0105	mg/L	0.001		0.027	mg/L	0.001		0.0017	mg/L	0.001
Mercury D-Hg	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010		mg/L	0.001	<0.0010		mg/L	0.001
Molybdenum D-Mo	0.0051	mg/L	0.001	0.0074	mg/L	0.001		0.0045	mg/L	0.001		0.0011	mg/L	0.001
Nickel D-Ni	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050		mg/L	0.005	<0.0050		mg/L	0.005
Phosphorus D-P	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30		mg/L	0.3	<0.30		mg/L	0.3
Potassium D-K	<0.50	mg/L	0.5	1.08	mg/L	0.5		2.28	mg/L	0.5		1.71	mg/L	0.5
Selenium D-Se	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010		mg/L	0.01	<0.010		mg/L	0.01
Silicon D-Si	1.16	mg/L	0.05	1.42	mg/L	0.05		0.63	mg/L	0.05		2.12	mg/L	0.05
Silver D-Ag	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010		mg/L	0.0001	<0.00010		mg/L	0.0001
Sodium D-Na	0.626	mg/L	0.05	1.49	mg/L	0.05		10.3	mg/L	0.05		63.4	mg/L	2
Strontium D-Sr	0.125	mg/L	0.001	0.366	mg/L	0.001		0.451	mg/L	0.001		0.0361	mg/L	0.001
Thallium D-Tl	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010		mg/L	0.001	<0.0010		mg/L	0.001
Tin D-Sn	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010		mg/L	0.001	<0.0010		mg/L	0.001
Titanium D-Ti	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010		mg/L	0.01		0.028	mg/L	0.01
Uranium D-U	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010		mg/L	0.0001	<0.00010		mg/L	0.0001
Vanadium D-V	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010		mg/L	0.01	<0.010		mg/L	0.01
Zinc D-Zn	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050		mg/L	0.005	<0.0050		mg/L	0.005
Physical Tests														
Conductivity (uS/cm)	48.1	uS/cm	2	102	uS/cm	2		148	uS/cm	2		253	uS/cm	2
pH	7.11	pH	0.1	7.86	pH	0.1		7.95	pH	0.1		8.66	pH	0.1
Sample Preparation														
Total Volume - In (mL)	500	mL	0	500	mL	0		500	mL	0		500	mL	0
Total Volume - Out (mL)	490	mL	0	460	mL	0		475	mL	0		475	mL	0
Dissolved Anions														
Acidity (to pH 8.3) CaCO3	2	mg/L	1	1.8	mg/L	1		1.5	mg/L	1	<1.0		mg/L	1
Alkalinity-Total CaCO3	21.2	mg/L	1	55.1	mg/L	1		78.2	mg/L	1		133	mg/L	1
Sulphate SO4	3.15	mg/L	0.5	2.95	mg/L	0.5		5.37	mg/L	0.5		8.82	mg/L	0.5

Project	Mt. Klappan Cycle #26	Water Analysis																																		
Report to	Rescan Environmental Services																																			
ALS File No.	Z2573																																			
Date Recieved	9/14/2006																																			
Date	10/2/2006																																			
RESULTS OF ANALYSIS																																				
Sample ID	ARD3-08B -26			ARD3-14B -26				ARD1-15 -26					ARD2-12 -26					ARD2-07 -26																		
Date Sampled	9/14/2006			9/14/2006				9/14/2006					9/14/2006					9/14/2006							9/14/2006											
Time Sampled																																				
ALS Sample ID	2			3				4					5					9																		
Nature	Water			Water				Water					Water					Water																		
		Units	DI		Units	DI			Units	DI				Units	DI				Units	DI						Units	DI									
Dissolved Metals																																				
Aluminum D-Al	0.655	mg/L	0.01	0.038	mg/L	0.01	0.131	mg/L	0.01	<0.010	mg/L	0.01	0.019	mg/L	0.01	0.014	mg/L	0.01																		
Antimony D-Sb	0.0011	mg/L	0.001	<0.0010	mg/L	0.001	0.0033	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001																		
Arsenic D-As	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	0.01	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001																		
Barium D-Ba	0.0256	mg/L	0.001	0.0461	mg/L	0.001	0.0661	mg/L	0.001	0.0197	mg/L	0.001	0.126	mg/L	0.001	0.0061	mg/L	0.001																		
Beryllium D-Be	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005																		
Bismuth D-Bi	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005																		
Boron D-B	0.12	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1																		
Cadmium D-Cd	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005																		
Calcium D-Ca	2.89	mg/L	0.05	2.55	mg/L	0.05	6.28	mg/L	0.05	111	mg/L	0.05	6.14	mg/L	0.05	2.82	mg/L	0.05																		
Chromium D-Cr	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005																		
Cobalt D-Co	0.002	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001																		
Copper D-Cu	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001																		
Iron D-Fe	0.04	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03																		
Lead D-Pb	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001																		
Lithium D-Li	0.136	mg/L	0.01	0.017	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01																		
Magnesium D-Mg	3.62	mg/L	0.05	1.39	mg/L	0.05	4.92	mg/L	0.05	43.7	mg/L	0.05	15.5	mg/L	0.05	9.4	mg/L	0.05																		
Manganese D-Mn	0.133	mg/L	0.001	0.0045	mg/L	0.001	<0.0010	mg/L	0.001	0.11	mg/L	0.001	0.0099	mg/L	0.001	0.0016	mg/L	0.001																		
Mercury D-Hg	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001																		
Molybdenum D-Mo	<0.0010	mg/L	0.001	0.0177	mg/L	0.001	0.0093	mg/L	0.001	<0.0010	mg/L	0.001	0.0144	mg/L	0.001	0.0012	mg/L	0.001																		
Nickel D-Ni	0.0119	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005																		
Phosphorus D-P	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3																		
Potassium D-K	2.67	mg/L	0.5	0.9	mg/L	0.5	<0.50	mg/L	0.5	0.61	mg/L	0.5	2.07	mg/L	0.5	<0.50	mg/L	0.5																		
Selenium D-Se	0.011	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01																		
Silicon D-Si	2.05	mg/L	0.05	0.695	mg/L	0.05	1.58	mg/L	0.05	0.26	mg/L	0.05	0.742	mg/L	0.05	0.854	mg/L	0.05																		
Silver D-Ag	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001																		
Sodium D-Na	264	mg/L	0.05	42.4	mg/L	0.05	0.481	mg/L	0.05	0.362	mg/L	0.05	0.611	mg/L	0.05	0.2	mg/L	0.05																		
Strontium D-Sr	0.341	mg/L	0.001	0.169	mg/L	0.001	0.148	mg/L	0.001	1.34	mg/L	0.001	0.467	mg/L	0.001	0.0285	mg/L	0.001																		
Thallium D-Tl	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001																		
Tin D-Sn	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001																		
Titanium D-Ti	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01																		
Uranium D-U	<0.00010	mg/L	0.0001	0.00022	mg/L	0.0001	0.00011	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001																		
Vanadium D-V	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01																		
Zinc D-Zn	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005																		
Physical Tests																																				
Conductivity (uS/cm)	1130	uS/cm	2	201	uS/cm	2	73.3	uS/cm	2	730	uS/cm	2	167	uS/cm	2	89.3	uS/cm	2																		
pH	8.34	pH	0.1	8.16	pH	0.1	8.14	pH	0.1	7.51	pH	0.1	8.01	pH	0.1	7.88	pH	0.1																		
Sample Preparation																																				
Total Volume - In (mL)	500	mL	0	500	mL	0	500	mL	0	500	mL	0	500	mL	0	500	mL	0																		
Total Volume - Out (mL)	440	mL	0	470	mL	0	410	mL	0	460	mL	0	475	mL	0	475	mL	0																		
Dissolved Anions																																				
Acidity (to pH 8.3) CaCO3	<1.0	mg/L	1	<1.0	mg/L	1	1.3	mg/L	1	2.9	mg/L	1	1.3	mg/L	1	1.3	mg/L	1																		
Alkalinity-Total CaCO3	161	mg/L	1	76.7	mg/L	1	33.4	mg/L	1	100	mg/L	1	74.3	mg/L	1	44	mg/L	1																		
Sulphate SO4	394	mg/L	2.5	26.2	mg/L	0.5	5.72	mg/L	0.5	319	mg/L	2.5	18.4	mg/L	0.5	0.63	mg/L	0.5																		

Project	Mt. Klappan Cycle #20	Water Analysis												
Report to	Rescan Environmental Services													
ALS File No.	Z2252													
Date Recieved	9/7/2006													
Date	9/21/2006													
RESULTS OF ANALYSIS														
Sample ID	85-027- 17-20			85-027- 24-20				86-035- 07-20				86-035- 09-20		
Date Sampled	9/7/2006			9/7/2006				9/7/2006				9/7/2006		
Time Sampled														
ALS Sample ID	3			4				5				6		
Nature	Water			Water				Water				Water		
		Units	DI		Units	DI			Units	DI				
Dissolved Metals														
Aluminum D-Al	0.113	mg/L	0.01	0.112	mg/L	0.01		0.013	mg/L	0.01		1.32	mg/L	0.01
Antimony D-Sb	0.002	mg/L	0.001	0.0016	mg/L	0.001	<0.0010		mg/L	0.001	<0.0010		mg/L	0.001
Arsenic D-As	0.0025	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010		mg/L	0.001	<0.0010		mg/L	0.001
Barium D-Ba	0.0152	mg/L	0.001	0.054	mg/L	0.001		0.165	mg/L	0.001		0.0352	mg/L	0.001
Beryllium D-Be	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050		mg/L	0.005	<0.0050		mg/L	0.005
Bismuth D-Bi	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050		mg/L	0.005	<0.0050		mg/L	0.005
Boron D-B	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10		mg/L	0.1	<0.10		mg/L	0.1
Cadmium D-Cd	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050		mg/L	0.0005	<0.00050		mg/L	0.0005
Calcium D-Ca	3.98	mg/L	0.05	6.94	mg/L	0.05		6.83	mg/L	0.05		0.44	mg/L	0.05
Chromium D-Cr	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050		mg/L	0.005	<0.0050		mg/L	0.005
Cobalt D-Co	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010		mg/L	0.001	<0.0010		mg/L	0.001
Copper D-Cu	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010		mg/L	0.001	<0.0010		mg/L	0.001
Iron D-Fe	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030		mg/L	0.03		0.133	mg/L	0.03
Lead D-Pb	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010		mg/L	0.001	<0.0010		mg/L	0.001
Lithium D-Li	<0.010	mg/L	0.01	<0.010	mg/L	0.01		0.017	mg/L	0.01		0.016	mg/L	0.01
Magnesium D-Mg	2.4	mg/L	0.05	5.41	mg/L	0.05		9.42	mg/L	0.05		0.434	mg/L	0.05
Manganese D-Mn	<0.0010	mg/L	0.001	0.006	mg/L	0.001		0.0273	mg/L	0.001		0.0013	mg/L	0.001
Mercury D-Hg	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010		mg/L	0.001	<0.0010		mg/L	0.001
Molybdenum D-Mo	0.0049	mg/L	0.001	0.007	mg/L	0.001		0.004	mg/L	0.001	<0.0010		mg/L	0.001
Nickel D-Ni	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050		mg/L	0.005	<0.0050		mg/L	0.005
Phosphorus D-P	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30		mg/L	0.3	<0.30		mg/L	0.3
Potassium D-K	<0.50	mg/L	0.5	1.01	mg/L	0.5		2.5	mg/L	0.5		1.46	mg/L	0.5
Selenium D-Se	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010		mg/L	0.01	<0.010		mg/L	0.01
Silicon D-Si	1.1	mg/L	0.05	1.36	mg/L	0.05		0.716	mg/L	0.05		2.36	mg/L	0.05
Silver D-Ag	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010		mg/L	0.0001	<0.00010		mg/L	0.0001
Sodium D-Na	0.603	mg/L	0.05	1.48	mg/L	0.05		14	mg/L	0.05		59.8	mg/L	0.05
Strontium D-Sr	0.11	mg/L	0.001	0.305	mg/L	0.001		0.473	mg/L	0.001		0.0235	mg/L	0.001
Thallium D-Tl	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010		mg/L	0.001	<0.0010		mg/L	0.001
Tin D-Sn	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010		mg/L	0.001	<0.0010		mg/L	0.001
Titanium D-Ti	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010		mg/L	0.01		0.032	mg/L	0.01
Uranium D-U	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010		mg/L	0.0001	<0.00010		mg/L	0.0001
Vanadium D-V	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010		mg/L	0.01	<0.010		mg/L	0.01
Zinc D-Zn	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050		mg/L	0.005	<0.0050		mg/L	0.005
Physical Tests														
Conductivity (uS/cm)	42.5	uS/cm	2	84.1	uS/cm	2		162	uS/cm	2		249	uS/cm	2
pH	7.61	pH	0.1	8	pH	0.1		8.01	pH	0.1		8.75	pH	0.1
Sample Preparation														
Total Volume - In (mL)	500	mL	0	500	mL	0		500	mL	0		500	mL	0
Total Volume - Out (mL)	430	mL	0	490	mL	0		450	mL	0		450	mL	0
Dissolved Anions														
Acidity (to pH 8.3) CaCO3	2	mg/L	1	2.4	mg/L	1		1.8	mg/L	1	<1.0		mg/L	1
Alkalinity-Total CaCO3	18	mg/L	1	43.5	mg/L	1		88.5	mg/L	1		128	mg/L	1
Sulphate SO4	3.13	mg/L	0.5	2.75	mg/L	0.5		5.28	mg/L	0.5		8.47	mg/L	0.5

Project	Mt. Klappan Cycle #19	Water Analysis																						
Report to	Rescan Environmental Services																							
ALS File No.	Z1940																							
Date Recieved	8/31/2006																							
Date	9/20/2006																							
RESULTS OF ANALYSIS																								
Sample ID	85-016- 07-19			85-027- 02-19				85-027- 17-19					85-027- 24-19				86-035- 07-19					86-035- 09-19		
Date Sampled	8/31/2006			8/31/2006				8/31/2006					8/31/2006				8/31/2006					8/31/2006		
Time Sampled																								
ALS Sample ID	1			2				3					4				5					6		
Nature	Water			Water				Water					Water				Water					Water		
		Units	DI		Units	DI			Units	DI				Units	DI			Units	DI				Units	DI
Dissolved Metals																								
Aluminum D-Al	1.47	mg/L	0.01	2.41	mg/L	0.01	0.076	mg/L	0.01	0.135	mg/L	0.01	0.024	mg/L	0.01	1.27	mg/L	0.01						
Antimony D-Sb	<0.0010	mg/L	0.001	0.0015	mg/L	0.001	0.0024	mg/L	0.001	0.0016	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001						
Arsenic D-As	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	0.0017	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001						
Barium D-Ba	0.0796	mg/L	0.001	0.0739	mg/L	0.001	0.0226	mg/L	0.001	0.0678	mg/L	0.001	0.182	mg/L	0.001	0.0479	mg/L	0.001						
Beryllium D-Be	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005						
Bismuth D-Bi	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005						
Boron D-B	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1						
Cadmium D-Cd	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005						
Calcium D-Ca	1.19	mg/L	0.05	0.539	mg/L	0.05	5.8	mg/L	0.05	8.08	mg/L	0.05	7.31	mg/L	0.05	0.696	mg/L	0.05						
Chromium D-Cr	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005						
Cobalt D-Co	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001						
Copper D-Cu	0.0017	mg/L	0.001	0.004	mg/L	0.001	0.0202	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001						
Iron D-Fe	0.132	mg/L	0.03	0.253	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	0.134	mg/L	0.03						
Lead D-Pb	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	0.0035	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001						
Lithium D-Li	0.08	mg/L	0.01	0.041	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	0.018	mg/L	0.01	0.022	mg/L	0.01						
Magnesium D-Mg	2.02	mg/L	0.05	2.16	mg/L	0.05	2.84	mg/L	0.05	5.22	mg/L	0.05	8.44	mg/L	0.05	0.535	mg/L	0.05						
Manganese D-Mn	0.0052	mg/L	0.001	0.0062	mg/L	0.001	<0.0010	mg/L	0.001	0.0056	mg/L	0.001	0.0207	mg/L	0.001	0.002	mg/L	0.001						
Mercury D-Hg	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001						
Molybdenum D-Mo	0.0032	mg/L	0.001	0.0339	mg/L	0.001	0.0057	mg/L	0.001	0.0072	mg/L	0.001	0.0043	mg/L	0.001	0.0015	mg/L	0.001						
Nickel D-Ni	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005						
Phosphorus D-P	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3						
Potassium D-K	2.43	mg/L	0.5	3.14	mg/L	0.5	<0.50	mg/L	0.5	1.06	mg/L	0.5	2.58	mg/L	0.5	1.75	mg/L	0.5						
Selenium D-Se	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01						
Silicon D-Si	2.66	mg/L	0.05	3.89	mg/L	0.05	1.19	mg/L	0.05	1.42	mg/L	0.05	0.737	mg/L	0.05	2.48	mg/L	0.05						
Silver D-Ag	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001						
Sodium D-Na	185	mg/L	0.05	115	mg/L	0.05	0.697	mg/L	0.05	1.51	mg/L	0.05	18.1	mg/L	0.05	78.8	mg/L	0.05						
Strontium D-Sr	0.158	mg/L	0.001	0.114	mg/L	0.001	0.161	mg/L	0.001	0.361	mg/L	0.001	0.535	mg/L	0.001	0.0381	mg/L	0.001						
Thallium D-Tl	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001						
Tin D-Sn	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001						
Titanium D-Ti	0.017	mg/L	0.01	0.037	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	0.033	mg/L	0.01						
Uranium D-U	0.00066	mg/L	0.0001	0.0002	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001						
Vanadium D-V	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01						
Zinc D-Zn	<0.0050	mg/L	0.005	0.0143	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005						
Physical Tests																								
Conductivity (uS/cm)	732	uS/cm	2	485	uS/cm	2	58.1	uS/cm	2	95.4	uS/cm	2	190	uS/cm	2	336	uS/cm	2						
pH	8.97	pH	0.1	8.78	pH	0.1	7.7	pH	0.1	8.31	pH	0.1	8.26	pH	0.1	8.82	pH	0.1						
Sample Preparation																								
Total Volume - In (mL)	500	mL	0	500	mL	0	500	mL	0	500	mL	0	500	mL	0	500	mL	0						
Total Volume - Out (mL)	390	mL	0	375	mL	0	515	mL	0	425	mL	0	510	mL	0	475	mL	0						
Dissolved Anions																								
Acidity (to pH 8.3) CaCO3	<1.0	mg/L	1	<1.0	mg/L	1	2.4	mg/L	1	2	mg/L	1	1.2	mg/L	1	<1.0	mg/L	1						
Alkalinity-Total CaCO3	355	mg/L	1	188	mg/L	1	27.3	mg/L	1	48	mg/L	1	113	mg/L	1	178	mg/L	1						
Sulphate SO4	27.1	mg/L	5	77.4	mg/L	0.5	4.07	mg/L	0.5	3.18	mg/L	0.5	5.68	mg/L	0.5	10.8	mg/L	0.5						

Project	Mt. Klappan Cycle #24	Water Analysis															
Report to	Rescan Environmental Services																
ALS File No.	Z1939																
Date Recieved	8/31/2006																
Date	9/20/2006																
RESULTS OF ANALYSIS																	
Sample ID	ARD3-14B -24			ARD1-15 -24				ARD2-12 -24				ARD2-07 -24				DUMP-2.5 M-24	
Date Sampled	8/31/2006			8/31/2006				8/31/2006				8/31/2006				8/31/2006	
Time Sampled																	
ALS Sample ID	3			4				5				9				10	
Nature	Water			Water				Water				Water				Water	
		Units	DI		Units	DI			Units	DI			Units	DI		Units	DI
Dissolved Metals																	
Aluminum D-Al	0.067	mg/L	0.01	0.099	mg/L	0.01	<0.010	mg/L	0.01	0.011	mg/L	0.01	0.028	mg/L	0.01		
Antimony D-Sb	0.0011	mg/L	0.001	0.0033	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001		
Arsenic D-As	<0.0010	mg/L	0.001	0.0069	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001		
Barium D-Ba	0.0429	mg/L	0.001	0.0843	mg/L	0.001	0.0224	mg/L	0.001	0.129	mg/L	0.001	0.0062	mg/L	0.001		
Beryllium D-Be	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005		
Bismuth D-Bi	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005		
Boron D-B	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1		
Cadmium D-Cd	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005		
Calcium D-Ca	2.42	mg/L	0.05	8	mg/L	0.05	82.6	mg/L	0.05	6.66	mg/L	0.05	3.06	mg/L	0.05		
Chromium D-Cr	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005		
Cobalt D-Co	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001		
Copper D-Cu	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001		
Iron D-Fe	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03		
Lead D-Pb	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001		
Lithium D-Li	0.024	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01		
Magnesium D-Mg	1.15	mg/L	0.05	5.48	mg/L	0.05	27.2	mg/L	0.05	13.4	mg/L	0.05	8.44	mg/L	0.05		
Manganese D-Mn	0.0041	mg/L	0.001	<0.0010	mg/L	0.001	0.0546	mg/L	0.001	0.0136	mg/L	0.001	0.0015	mg/L	0.001		
Mercury D-Hg	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001		
Molybdenum D-Mo	0.0207	mg/L	0.001	0.0092	mg/L	0.001	<0.0010	mg/L	0.001	0.0174	mg/L	0.001	0.0011	mg/L	0.001		
Nickel D-Ni	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005		
Phosphorus D-P	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3		
Potassium D-K	0.98	mg/L	0.5	0.53	mg/L	0.5	0.52	mg/L	0.5	2.06	mg/L	0.5	<0.50	mg/L	0.5		
Selenium D-Se	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01		
Silicon D-Si	0.924	mg/L	0.05	1.49	mg/L	0.05	0.242	mg/L	0.05	0.845	mg/L	0.05	1.02	mg/L	0.05		
Silver D-Ag	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001		
Sodium D-Na	58	mg/L	0.05	0.533	mg/L	0.05	0.319	mg/L	0.05	0.653	mg/L	0.05	0.203	mg/L	0.05		
Strontium D-Sr	0.157	mg/L	0.001	0.18	mg/L	0.001	1.07	mg/L	0.001	0.463	mg/L	0.001	0.0264	mg/L	0.001		
Thallium D-Tl	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001		
Tin D-Sn	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001		
Titanium D-Ti	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01		
Uranium D-U	0.00025	mg/L	0.0001	0.00012	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001		
Vanadium D-V	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01		
Zinc D-Zn	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	0.0144	mg/L	0.005	<0.0050	mg/L	0.005		
Physical Tests																	
Conductivity (uS/cm)	270	uS/cm	2	89.5	uS/cm	2	577	uS/cm	2	175	uS/cm	2	93.7	uS/cm	2		
pH	8.38	pH	0.1	8.12	pH	0.1	7.88	pH	0.1	8.13	pH	0.1	7.86	pH	0.1		
Sample Preparation																	
Total Volume - In (mL)	500	mL	0	500	mL	0	500	mL	0	500	mL	0	500	mL	0		
Total Volume - Out (mL)	500	mL	0	515	mL	0	460	mL	0	485	mL	0	420	mL	0		
Dissolved Anions																	
Acidity (to pH 8.3) CaCO3	1.9	mg/L	1	2.2	mg/L	1	2.9	mg/L	1	1.8	mg/L	1	2	mg/L	1		
Alkalinity-Total CaCO3	128	mg/L	1	39.9	mg/L	1	107	mg/L	1	80.7	mg/L	1	44.2	mg/L	1		
Sulphate SO4	27.6	mg/L	0.5	7.04	mg/L	0.5	257	mg/L	0.5	18.8	mg/L	0.5	1.38	mg/L	0.5		

Project	Mt. Klappan Cycle #18	Water Analysis												
Report to	Rescan Environmental Services													
ALS File No.	Z1629													
Date Recieved	8/24/2006													
Date	9/13/2006													
RESULTS OF ANALYSIS														
Sample ID	85-027- 17-18			85-027- 24-18				86-035- 07-18				86-035- 09-18		
Date Sampled	8/24/2006			8/24/2006				8/24/2006				8/24/2006		
Time Sampled														
ALS Sample ID	3			4				5				6		
Nature	Water			Water				Water				Water		
		Units	DI		Units	DI			Units	DI				
Dissolved Metals														
Aluminum D-Al	0.172	mg/L	0.01	0.1	mg/L	0.01		0.015	mg/L	0.01		2.13	mg/L	0.01
Antimony D-Sb	0.0018	mg/L	0.001	0.0017	mg/L	0.001	<0.0010		mg/L	0.001	<0.0010		mg/L	0.001
Arsenic D-As	0.0023	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010		mg/L	0.001	<0.0010		mg/L	0.001
Barium D-Ba	0.0171	mg/L	0.001	0.0584	mg/L	0.001		0.161	mg/L	0.001		0.0558	mg/L	0.001
Beryllium D-Be	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050		mg/L	0.005	<0.0050		mg/L	0.005
Bismuth D-Bi	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050		mg/L	0.005	<0.0050		mg/L	0.005
Boron D-B	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10		mg/L	0.1	<0.10		mg/L	0.1
Cadmium D-Cd	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050		mg/L	0.0005	<0.00050		mg/L	0.0005
Calcium D-Ca	3.92	mg/L	0.05	7.68	mg/L	0.05		6.41	mg/L	0.05		0.6	mg/L	0.05
Chromium D-Cr	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050		mg/L	0.005		0.0063	mg/L	0.005
Cobalt D-Co	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010		mg/L	0.001	<0.0010		mg/L	0.001
Copper D-Cu	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010		mg/L	0.001		0.0013	mg/L	0.001
Iron D-Fe	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030		mg/L	0.03		0.15	mg/L	0.03
Lead D-Pb	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010		mg/L	0.001	<0.0010		mg/L	0.001
Lithium D-Li	<0.010	mg/L	0.01	<0.010	mg/L	0.01		0.022	mg/L	0.01		0.021	mg/L	0.01
Magnesium D-Mg	2.58	mg/L	0.05	6.08	mg/L	0.05		8.69	mg/L	0.05		0.6	mg/L	0.05
Manganese D-Mn	<0.0010	mg/L	0.001	0.0065	mg/L	0.001		0.0207	mg/L	0.001		0.0019	mg/L	0.001
Mercury D-Hg	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010		mg/L	0.001	<0.0010		mg/L	0.001
Molybdenum D-Mo	0.0052	mg/L	0.001	0.0073	mg/L	0.001		0.0047	mg/L	0.001		0.0013	mg/L	0.001
Nickel D-Ni	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050		mg/L	0.005	<0.0050		mg/L	0.005
Phosphorus D-P	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30		mg/L	0.3	<0.30		mg/L	0.3
Potassium D-K	<0.50	mg/L	0.5	1.14	mg/L	0.5		2.51	mg/L	0.5		1.77	mg/L	0.5
Selenium D-Se	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010		mg/L	0.01	<0.010		mg/L	0.01
Silicon D-Si	1.13	mg/L	0.05	1.43	mg/L	0.05		0.768	mg/L	0.05		1.42	mg/L	0.05
Silver D-Ag	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010		mg/L	0.0001	<0.00010		mg/L	0.0001
Sodium D-Na	0.615	mg/L	0.05	1.95	mg/L	0.05		25.6	mg/L	0.05		79.4	mg/L	0.05
Strontium D-Sr	0.122	mg/L	0.001	0.371	mg/L	0.001		0.487	mg/L	0.001		0.036	mg/L	0.001
Thallium D-Tl	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010		mg/L	0.001	<0.0010		mg/L	0.001
Tin D-Sn	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010		mg/L	0.001	<0.0010		mg/L	0.001
Titanium D-Ti	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010		mg/L	0.01	<0.010		mg/L	0.01
Uranium D-U	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010		mg/L	0.0001	<0.00010		mg/L	0.0001
Vanadium D-V	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010		mg/L	0.01	<0.010		mg/L	0.01
Zinc D-Zn	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050		mg/L	0.005	<0.0050		mg/L	0.005
Physical Tests														
Conductivity (uS/cm)	43.2	uS/cm	2	94.5	uS/cm	2		189	uS/cm	2		332	uS/cm	2
pH	7.41	pH	0.1	8.15	pH	0.1		8.29	pH	0.1		8.84	pH	0.1
Sample Preparation														
Total Volume - In (mL)	500	mL	0	500	mL	0		500	mL	0		500	mL	0
Total Volume - Out (mL)	360	mL	0	510	mL	0		440	mL	0		410	mL	0
Dissolved Anions														
Acidity (to pH 8.3) CaCO3	2.1	mg/L	1	1.8	mg/L	1	<1.0		mg/L	1	<1.0		mg/L	1
Alkalinity-Total CaCO3	16.7	mg/L	1	47.9	mg/L	1		102	mg/L	1		167	mg/L	1
Sulphate SO4	3.48	mg/L	0.5	3.26	mg/L	0.5		6.02	mg/L	0.5		10.3	mg/L	0.5

Project	Mt. Klappan Cycle #23	Water Analysis																
Report to	Rescan Environmental Services																	
ALS File No.	Z1628																	
Date Recieved	8/24/2006																	
Date	9/13/2006																	
RESULTS OF ANALYSIS																		
Sample ID	ARD3-08B -23			ARD3-14B -23			ARD1-15 -23			ARD2-12 -23			ARD2-07 -23			DUMP-2.5 M-23		
Date Sampled	8/24/2006			8/24/2006			8/24/2006			8/24/2006			8/24/2006			8/24/2006		
Time Sampled																		
ALS Sample ID	2			3			4			5			9			10		
Nature	Water			Water			Water			Water			Water			Water		
		Units	DI		Units	DI		Units	DI		Units	DI		Units	DI		Units	DI
Dissolved Metals																		
Aluminum D-Al	0.656	mg/L	0.01	0.103	mg/L	0.01	0.113	mg/L	0.01	<0.010	mg/L	0.01	0.014	mg/L	0.01	0.081	mg/L	0.01
Antimony D-Sb	0.0013	mg/L	0.001	<0.0010	mg/L	0.001	0.0032	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Arsenic D-As	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	0.0071	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Barium D-Ba	0.0266	mg/L	0.001	0.0321	mg/L	0.001	0.0803	mg/L	0.001	0.0239	mg/L	0.001	0.119	mg/L	0.001	0.0069	mg/L	0.001
Beryllium D-Be	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Bismuth D-Bi	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Boron D-B	0.15	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1
Cadmium D-Cd	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005
Calcium D-Ca	3.88	mg/L	0.05	1.82	mg/L	0.05	7.83	mg/L	0.05	84.8	mg/L	0.05	6.64	mg/L	0.05	3.14	mg/L	0.05
Chromium D-Cr	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Cobalt D-Co	0.004	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Copper D-Cu	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Iron D-Fe	0.046	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03
Lead D-Pb	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Lithium D-Li	0.17	mg/L	0.01	0.025	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01
Magnesium D-Mg	4.47	mg/L	0.05	0.897	mg/L	0.05	6.15	mg/L	0.05	32.8	mg/L	0.05	17.5	mg/L	0.05	10.6	mg/L	0.05
Manganese D-Mn	0.197	mg/L	0.001	0.0025	mg/L	0.001	<0.0010	mg/L	0.001	0.0757	mg/L	0.001	0.0151	mg/L	0.001	0.0015	mg/L	0.001
Mercury D-Hg	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Molybdenum D-Mo	<0.0010	mg/L	0.001	0.0186	mg/L	0.001	0.0096	mg/L	0.001	<0.0010	mg/L	0.001	0.0198	mg/L	0.001	0.001	mg/L	0.001
Nickel D-Ni	0.0223	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Phosphorus D-P	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3
Potassium D-K	2.66	mg/L	0.5	0.78	mg/L	0.5	0.54	mg/L	0.5	0.53	mg/L	0.5	2.3	mg/L	0.5	<0.50	mg/L	0.5
Selenium D-Se	0.017	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01
Silicon D-Si	2.24	mg/L	0.05	0.828	mg/L	0.05	1.48	mg/L	0.05	0.266	mg/L	0.05	0.8	mg/L	0.05	1.01	mg/L	0.05
Silver D-Ag	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001
Sodium D-Na	290	mg/L	0.05	51.9	mg/L	0.05	0.55	mg/L	0.05	0.412	mg/L	0.05	1	mg/L	0.05	0.22	mg/L	0.05
Strontium D-Sr	0.428	mg/L	0.001	0.11	mg/L	0.001	0.181	mg/L	0.001	1.16	mg/L	0.001	0.536	mg/L	0.001	0.0296	mg/L	0.001
Thallium D-Tl	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Tin D-Sn	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Titanium D-Ti	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01
Uranium D-U	<0.00010	mg/L	0.0001	0.00023	mg/L	0.0001	0.00011	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001
Vanadium D-V	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01
Zinc D-Zn	0.0053	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Physical Tests																		
Conductivity (uS/cm)	1310	uS/cm	2	241	uS/cm	2	86.2	uS/cm	2	584	uS/cm	2	177	uS/cm	2	110	uS/cm	2
pH	8.48	pH	0.1	8.45	pH	0.1	8.17	pH	0.1	7.58	pH	0.1	8.15	pH	0.1	8	pH	0.1
Sample Preparation																		
Total Volume - In (mL)	500	mL	0	500	mL	0	500	mL	0	500	mL	0	500	mL	0	500	mL	0
Total Volume - Out (mL)	410	mL	0	470	mL	0	410	mL	0	475	mL	0	450	mL	0	470	mL	0
Dissolved Anions																		
Acidity (to pH 8.3) CaCO3	2.1	mg/L	1	<1.0	mg/L	1	1.9	mg/L	1	2.9	mg/L	1	1.5	mg/L	1	2	mg/L	1
Alkalinity-Total CaCO3	161	mg/L	1	99.9	mg/L	1	39.8	mg/L	1	111	mg/L	1	75.3	mg/L	1	46.8	mg/L	1
Sulphate SO4	389	mg/L	2.5	23.2	mg/L	0.5	6.85	mg/L	0.5	237	mg/L	0.5	20	mg/L	0.5	0.78	mg/L	0.5

Project	Mt. Klappan Cycle #17	Water Analysis												
Report to	Rescan Environmental Services													
ALS File No.	Z1270													
Date Recieved	8/17/2006													
Date	9/5/2006													
RESULTS OF ANALYSIS														
Sample ID	85-027- 17-17			85-027- 24-17				86-035- 07-17				86-035- 09-17		
Date Sampled	8/17/2006			8/17/2006				8/17/2006				8/17/2006		
Time Sampled														
ALS Sample ID	3			4				5				6		
Nature	Water			Water				Water				Water		
		Units	DI		Units	DI			Units	DI				
Dissolved Metals														
Aluminum D-Al	0.046	mg/L	0.01	0.089	mg/L	0.01		0.02	mg/L	0.01		2.73	mg/L	0.01
Antimony D-Sb	0.0026	mg/L	0.001	0.0019	mg/L	0.001	<0.0010		mg/L	0.001	<0.0010		mg/L	0.001
Arsenic D-As	0.0015	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010		mg/L	0.001	<0.0010		mg/L	0.001
Barium D-Ba	0.0274	mg/L	0.001	0.0705	mg/L	0.001		0.156	mg/L	0.001		0.0654	mg/L	0.001
Beryllium D-Be	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050		mg/L	0.005	<0.0050		mg/L	0.005
Bismuth D-Bi	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050		mg/L	0.005	<0.0050		mg/L	0.005
Boron D-B	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10		mg/L	0.1	<0.10		mg/L	0.1
Cadmium D-Cd	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050		mg/L	0.0005	<0.00050		mg/L	0.0005
Calcium D-Ca	6.61	mg/L	0.05	8.58	mg/L	0.05		5.91	mg/L	0.05		0.57	mg/L	0.05
Chromium D-Cr	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050		mg/L	0.005		0.008	mg/L	0.005
Cobalt D-Co	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010		mg/L	0.001	<0.0010		mg/L	0.001
Copper D-Cu	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010		mg/L	0.001		0.0011	mg/L	0.001
Iron D-Fe	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030		mg/L	0.03		0.25	mg/L	0.03
Lead D-Pb	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010		mg/L	0.001	<0.0010		mg/L	0.001
Lithium D-Li	<0.010	mg/L	0.01	<0.010	mg/L	0.01		0.025	mg/L	0.01		0.022	mg/L	0.01
Magnesium D-Mg	4.5	mg/L	0.05	7.36	mg/L	0.05		8.29	mg/L	0.05		0.588	mg/L	0.05
Manganese D-Mn	<0.0010	mg/L	0.001	0.007	mg/L	0.001		0.0196	mg/L	0.001		0.0023	mg/L	0.001
Mercury D-Hg	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010		mg/L	0.001	<0.0010		mg/L	0.001
Molybdenum D-Mo	0.0057	mg/L	0.001	0.0081	mg/L	0.001		0.0047	mg/L	0.001		0.0014	mg/L	0.001
Nickel D-Ni	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050		mg/L	0.005	<0.0050		mg/L	0.005
Phosphorus D-P	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30		mg/L	0.3	<0.30		mg/L	0.3
Potassium D-K	<0.50	mg/L	0.5	1.34	mg/L	0.5		2.57	mg/L	0.5		1.91	mg/L	0.5
Selenium D-Se	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010		mg/L	0.01	<0.010		mg/L	0.01
Silicon D-Si	1.04	mg/L	0.05	1.38	mg/L	0.05		0.778	mg/L	0.05		4.03	mg/L	0.05
Silver D-Ag	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010		mg/L	0.0001	<0.00010		mg/L	0.0001
Sodium D-Na	0.982	mg/L	0.05	2.44	mg/L	0.05		34.8	mg/L	0.05		88.9	mg/L	0.05
Strontium D-Sr	0.205	mg/L	0.001	0.423	mg/L	0.001		0.435	mg/L	0.001		0.0342	mg/L	0.001
Thallium D-Tl	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010		mg/L	0.001	<0.0010		mg/L	0.001
Tin D-Sn	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010		mg/L	0.001	<0.0010		mg/L	0.001
Titanium D-Ti	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010		mg/L	0.01		0.068	mg/L	0.01
Uranium D-U	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010		mg/L	0.0001	<0.00010		mg/L	0.0001
Vanadium D-V	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010		mg/L	0.01	<0.010		mg/L	0.01
Zinc D-Zn	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050		mg/L	0.005	<0.0050		mg/L	0.005
Physical Tests														
Conductivity (uS/cm)	70.3	uS/cm	2	108	uS/cm	2		225	uS/cm	2		356	uS/cm	2
pH	7.48	pH	0.1	8.16	pH	0.1		8.2	pH	0.1		8.85	pH	0.1
Sample Preparation														
Total Volume - In (mL)	500	mL	0	500	mL	0		500	mL	0		500	mL	0
Total Volume - Out (mL)	620	mL	0	450	mL	0		520	mL	0		410	mL	0
Dissolved Anions														
Acidity (to pH 8.3) CaCO3	2.2	mg/L	1	1.8	mg/L	1		1	mg/L	1	<1.0		mg/L	1
Alkalinity-Total CaCO3	34.2	mg/L	1	59.1	mg/L	1		115	mg/L	1		185	mg/L	1
Sulphate SO4	4.17	mg/L	0.5	3.85	mg/L	0.5		5.38	mg/L	0.5		10.8	mg/L	0.5

Project	Mt. Klappan Cycle #22	Water Analysis																			
Report to	Rescan Environmental Services																				
ALS File No.	Z1269																				
Date Recieved	8/17/2006																				
Date	9/5/2006																				
RESULTS OF ANALYSIS																					
Sample ID	ARD3-07B -22			ARD3-14B -22			ARD1-15 -22			ARD2-12 -22			019-02 -22			ARD2-07 -22			DUMP-2.5 M-22		
Date Sampled	8/17/2006			8/17/2006			8/17/2006			8/17/2006			8/17/2006			8/17/2006					
Time Sampled																					
ALS Sample ID	1			3			4			5			6			9			10		
Nature	Water			Water			Water			Water			Water			Water			Water		
		Units	DI		Units	DI		Units	DI		Units	DI		Units	DI		Units	DI		Units	DI
Dissolved Metals																					
Aluminum D-Al	4.32	mg/L	0.01	0.107	mg/L	0.01	0.084	mg/L	0.01	<0.010	mg/L	0.01	1.43	mg/L	0.01	0.013	mg/L	0.01	0.021	mg/L	0.01
Antimony D-Sb	0.0261	mg/L	0.001	0.0016	mg/L	0.001	0.0038	mg/L	0.001	<0.0010	mg/L	0.001	0.0028	mg/L	0.001	0.0011	mg/L	0.001	<0.0010	mg/L	0.001
Arsenic D-As	0.0507	mg/L	0.001	<0.0010	mg/L	0.001	0.0059	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Barium D-Ba	0.132	mg/L	0.001	0.0352	mg/L	0.001	0.0924	mg/L	0.001	0.0245	mg/L	0.001	0.0352	mg/L	0.001	0.119	mg/L	0.001	0.0087	mg/L	0.001
Beryllium D-Be	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Bismuth D-Bi	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Boron D-B	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	0.14	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1
Cadmium D-Cd	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005
Calcium D-Ca	0.293	mg/L	0.05	1.65	mg/L	0.05	8.21	mg/L	0.05	87.9	mg/L	0.05	0.878	mg/L	0.05	6.91	mg/L	0.05	4.22	mg/L	0.05
Chromium D-Cr	0.0111	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Cobalt D-Co	0.0047	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Copper D-Cu	0.0042	mg/L	0.001	0.0027	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	0.0018	mg/L	0.001	0.0015	mg/L	0.001	<0.0010	mg/L	0.001
Iron D-Fe	0.444	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	0.171	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03
Lead D-Pb	0.0018	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Lithium D-Li	0.052	mg/L	0.01	0.028	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	0.084	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01
Magnesium D-Mg	0.522	mg/L	0.05	1.02	mg/L	0.05	7.5	mg/L	0.05	37.7	mg/L	0.05	1.14	mg/L	0.05	19.6	mg/L	0.05	15.6	mg/L	0.05
Manganese D-Mn	0.0054	mg/L	0.001	0.0034	mg/L	0.001	<0.0010	mg/L	0.001	0.0682	mg/L	0.001	0.0029	mg/L	0.001	0.0147	mg/L	0.001	<0.0010	mg/L	0.001
Mercury D-Hg	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Molybdenum D-Mo	0.374	mg/L	0.001	0.0252	mg/L	0.001	0.0096	mg/L	0.001	<0.0010	mg/L	0.001	0.0368	mg/L	0.001	0.0219	mg/L	0.001	0.001	mg/L	0.001
Nickel D-Ni	0.0352	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Phosphorus D-P	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3
Potassium D-K	2.22	mg/L	0.5	0.97	mg/L	0.5	0.63	mg/L	0.5	0.63	mg/L	0.5	1.84	mg/L	0.5	2.49	mg/L	0.5	<0.50	mg/L	0.5
Selenium D-Se	0.017	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	0.015	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01
Silicon D-Si	7.39	mg/L	0.05	0.927	mg/L	0.05	1.37	mg/L	0.05	0.237	mg/L	0.05	2.56	mg/L	0.05	0.827	mg/L	0.05	1.05	mg/L	0.05
Silver D-Ag	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001
Sodium D-Na	125	mg/L	0.05	73.1	mg/L	0.05	0.613	mg/L	0.05	0.425	mg/L	0.05	249	mg/L	0.05	0.895	mg/L	0.05	0.298	mg/L	0.05
Strontium D-Sr	0.033	mg/L	0.001	0.119	mg/L	0.001	0.218	mg/L	0.001	1.34	mg/L	0.001	0.12	mg/L	0.001	0.56	mg/L	0.001	0.0414	mg/L	0.001
Thallium D-Tl	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Tin D-Sn	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Titanium D-Ti	0.069	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	0.021	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01
Uranium D-U	0.00037	mg/L	0.0001	0.0003	mg/L	0.0001	0.00011	mg/L	0.0001	<0.00010	mg/L	0.0001	0.0006	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001
Vanadium D-V	0.011	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01
Zinc D-Zn	0.0085	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Physical Tests																					
Conductivity (uS/cm)	518	uS/cm	2	306	uS/cm	2	99.1	uS/cm	2	611	uS/cm	2	1010	uS/cm	2	193	uS/cm	2	135	uS/cm	2
pH	9	pH	0.1	8.48	pH	0.1	8.1	pH	0.1	7.7	pH	0.1	8.93	pH	0.1	8.08	pH	0.1	8.03	pH	0.1
Sample Preparation																					
Total Volume - In (mL)	500	mL	0	500	mL	0	500	mL	0	500	mL	0	500	mL	0	500	mL	0	500	mL	0
Total Volume - Out (mL)	375	mL	0	475	mL	0	480	mL	0	520	mL	0	435	mL	0	470	mL	0	520	mL	0
Dissolved Anions																					
Acidity (to pH 8.3) CaCO3	<1.0	mg/L	1	<1.0	mg/L	1	1.6	mg/L	1	3	mg/L	1	<1.0	mg/L	1	1.7	mg/L	1	1.7	mg/L	1
Alkalinity-Total CaCO3	187	mg/L	1	135	mg/L	1	45.5	mg/L	1	97.7	mg/L	1	310	mg/L	1	74.4	mg/L	1	57.6	mg/L	1
Sulphate SO4	70.7	mg/L	0.5	25.9	mg/L	0.5	6.38	mg/L	0.5	246	mg/L	0.5	198	mg/L	0.5	19.4	mg/L	0.5	1.61	mg/L	0.5

Project	Mt. Klappan Cycle #16		Water Analysis																					
Report to	Rescan Environmental Services																							
ALS File No.	X9970																							
Date Recieved	8/10/2006																							
Date	8/25/2006																							
RESULTS OF ANALYSIS																								
Sample ID	85-016- 07-16				85-027- 02-16				85-027- 17-16				85-027- 24-16				86-035- 07-16				86-035- 09-16			
Date Sampled	8/10/2006				8/10/2006				8/10/2006				8/10/2006				8/10/2006							
Time Sampled																								
ALS Sample ID	1				2				3				4				5				6			
Nature	Water				Water				Water				Water				Water							
		Units	DI		Units	DI		Units	DI		Units	DI		Units	DI		Units	DI						
Dissolved Metals																								
Aluminum D-Al	2.93	mg/L	0.01	4.96	mg/L	0.01	0.126	mg/L	0.01	0.146	mg/L	0.01	0.048	mg/L	0.01	3.43	mg/L	0.01						
Antimony D-Sb	0.001	mg/L	0.001	0.0022	mg/L	0.001	0.0026	mg/L	0.001	0.0016	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001						
Arsenic D-As	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	0.0016	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001						
Barium D-Ba	0.102	mg/L	0.001	0.119	mg/L	0.001	0.0277	mg/L	0.001	0.061	mg/L	0.001	0.153	mg/L	0.001	0.0728	mg/L	0.001						
Beryllium D-Be	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005						
Bismuth D-Bi	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005						
Boron D-B	0.13	mg/L	0.1	0.15	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	0.11	mg/L	0.1						
Cadmium D-Cd	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005						
Calcium D-Ca	1.1	mg/L	0.05	0.463	mg/L	0.05	6.37	mg/L	0.05	6.99	mg/L	0.05	5.72	mg/L	0.05	0.548	mg/L	0.05						
Chromium D-Cr	<0.0050	mg/L	0.005	0.0083	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	0.0103	mg/L	0.005						
Cobalt D-Co	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001						
Copper D-Cu	0.0026	mg/L	0.001	0.0071	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	0.0016	mg/L	0.001						
Iron D-Fe	0.171	mg/L	0.03	0.329	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	0.216	mg/L	0.03						
Lead D-Pb	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001						
Lithium D-Li	0.093	mg/L	0.01	0.045	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	0.031	mg/L	0.01	0.023	mg/L	0.01						
Magnesium D-Mg	2.1	mg/L	0.05	2.24	mg/L	0.05	4.14	mg/L	0.05	5.95	mg/L	0.05	7.81	mg/L	0.05	0.609	mg/L	0.05						
Manganese D-Mn	0.005	mg/L	0.001	0.0047	mg/L	0.001	<0.0010	mg/L	0.001	0.006	mg/L	0.001	0.0329	mg/L	0.001	0.0027	mg/L	0.001						
Mercury D-Hg	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001						
Molybdenum D-Mo	0.0036	mg/L	0.001	0.0342	mg/L	0.001	0.0061	mg/L	0.001	0.0075	mg/L	0.001	0.005	mg/L	0.001	0.0015	mg/L	0.001						
Nickel D-Ni	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005						
Phosphorus D-P	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3						
Potassium D-K	2.89	mg/L	0.5	3.75	mg/L	0.5	<0.50	mg/L	0.5	1.28	mg/L	0.5	2.76	mg/L	0.5	2.09	mg/L	0.5						
Selenium D-Se	<0.010	mg/L	0.01	0.012	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01						
Silicon D-Si	1.43	mg/L	0.05	1.81	mg/L	0.05	1.16	mg/L	0.05	1.34	mg/L	0.05	1.01	mg/L	0.05	1.23	mg/L	0.05						
Silver D-Ag	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001						
Sodium D-Na	217	mg/L	0.05	120	mg/L	0.05	1.04	mg/L	0.05	2.47	mg/L	0.05	46.2	mg/L	0.05	95.2	mg/L	0.05						
Strontium D-Sr	0.158	mg/L	0.001	0.0979	mg/L	0.001	0.186	mg/L	0.001	0.349	mg/L	0.001	0.417	mg/L	0.001	0.0335	mg/L	0.001						
Thallium D-Tl	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001						
Tin D-Sn	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001						
Titanium D-Ti	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01						
Uranium D-U	0.00068	mg/L	0.0001	0.0003	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001						
Vanadium D-V	<0.010	mg/L	0.01	0.011	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01						
Zinc D-Zn	<0.0050	mg/L	0.005	0.0114	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	0.0054	mg/L	0.005						
Physical Tests																								
Conductivity (uS/cm)	838	uS/cm	2	511	uS/cm	2	66.9	uS/cm	2	91.7	uS/cm	2	257	uS/cm	2	372	uS/cm	2						
pH	8.96	pH	0.1	8.74	pH	0.1	7.68	pH	0.1	8.14	pH	0.1	8.19	pH	0.1	8.79	pH	0.1						
Sample Preparation																								
Total Volume - In (mL)	500	mL	0	500	mL	0	500	mL	0	500	mL	0	500	mL	0	500	mL	0						
Total Volume - Out (mL)	445	mL	0	330	mL	0	415	mL	0	400	mL	0	415	mL	0	390	mL	0						
Dissolved Anions																								
Acidity (to pH 8.3) CaCO3	<1.0	mg/L	1	<1.0	mg/L	1	1.4	mg/L	1	1.2	mg/L	1	<1.0	mg/L	1	<1.0	mg/L	1						
Alkalinity-Total CaCO3	419	mg/L	1	161	mg/L	1	31.2	mg/L	1	46.7	mg/L	1	136	mg/L	1	184	mg/L	1						
Sulphate SO4	36.2	mg/L	0.5	85.5	mg/L	0.5	4.03	mg/L	0.5	3.46	mg/L	0.5	5.53	mg/L	0.5	12.2	mg/L	0.5						

Project	Mt. Klappan Cycle #21	Water Analysis													
Report to	Rescan Environmental Services														
ALS File No.	X9969														
Date Recieved	8/10/2006														
Date	8/24/2006														
RESULTS OF ANALYSIS															
Sample ID	ARD3-14B -21			ARD1-15 -21				ARD2-12 -21				ARD2-07 -21			DUMP-2.5 M-21
Date Sampled	8/10/2006			8/10/2006				8/10/2006				8/10/2006			8/10/2006
Time Sampled															
ALS Sample ID	3			4				5				9			10
Nature	Water			Water				Water				Water			Water
		Units	DI		Units	DI			Units	DI			Units	DI	
Dissolved Metals															
Aluminum D-Al	0.216	mg/L	0.01	0.082	mg/L	0.01	<0.010	mg/L	0.01	0.015	mg/L	0.01	0.03	mg/L	0.01
Antimony D-Sb	0.0017	mg/L	0.001	0.004	mg/L	0.001	<0.0010	mg/L	0.001	0.0012	mg/L	0.001	<0.0010	mg/L	0.001
Arsenic D-As	<0.0010	mg/L	0.001	0.0062	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Barium D-Ba	0.0226	mg/L	0.001	0.093	mg/L	0.001	0.0235	mg/L	0.001	0.106	mg/L	0.001	0.0084	mg/L	0.001
Beryllium D-Be	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Bismuth D-Bi	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Boron D-B	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1
Cadmium D-Cd	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005
Calcium D-Ca	0.893	mg/L	0.05	8.89	mg/L	0.05	89	mg/L	0.05	6.68	mg/L	0.05	3.97	mg/L	0.05
Chromium D-Cr	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Cobalt D-Co	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Copper D-Cu	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Iron D-Fe	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03
Lead D-Pb	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Lithium D-Li	0.036	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01
Magnesium D-Mg	0.531	mg/L	0.05	7.76	mg/L	0.05	35.8	mg/L	0.05	17.9	mg/L	0.05	13.2	mg/L	0.05
Manganese D-Mn	0.002	mg/L	0.001	<0.0010	mg/L	0.001	0.1	mg/L	0.001	0.0195	mg/L	0.001	<0.0010	mg/L	0.001
Mercury D-Hg	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Molybdenum D-Mo	0.0251	mg/L	0.001	0.0101	mg/L	0.001	<0.0010	mg/L	0.001	0.0225	mg/L	0.001	0.0011	mg/L	0.001
Nickel D-Ni	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Phosphorus D-P	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3
Potassium D-K	0.82	mg/L	0.5	0.65	mg/L	0.5	0.62	mg/L	0.5	2.49	mg/L	0.5	<0.50	mg/L	0.5
Selenium D-Se	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01
Silicon D-Si	1.19	mg/L	0.05	1.56	mg/L	0.05	0.333	mg/L	0.05	0.965	mg/L	0.05	1.24	mg/L	0.05
Silver D-Ag	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001
Sodium D-Na	69.9	mg/L	0.05	0.704	mg/L	0.05	0.444	mg/L	0.05	0.923	mg/L	0.05	0.282	mg/L	0.05
Strontium D-Sr	0.0665	mg/L	0.001	0.217	mg/L	0.001	1.15	mg/L	0.001	0.503	mg/L	0.001	0.0366	mg/L	0.001
Thallium D-Tl	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Tin D-Sn	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Titanium D-Ti	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01
Uranium D-U	0.00022	mg/L	0.0001	0.00011	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001
Vanadium D-V	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01
Zinc D-Zn	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Physical Tests															
Conductivity (uS/cm)	295	uS/cm	2	104	uS/cm	2	620	uS/cm	2	182	uS/cm	2	122	uS/cm	2
pH	8.48	pH	0.1	8.27	pH	0.1	7.54	pH	0.1	8	pH	0.1	8.06	pH	0.1
Sample Preparation															
Total Volume - In (mL)	500	mL	0	500	mL	0	500	mL	0	500	mL	0	500	mL	0
Total Volume - Out (mL)	430	mL	0	500	mL	0	450	mL	0	400	mL	0	520	mL	0
Dissolved Anions															
Acidity (to pH 8.3) CaCO3	<1.0	mg/L	1	1.3	mg/L	1	2.5	mg/L	1	1.3	mg/L	1	1.1	mg/L	1
Alkalinity-Total CaCO3	130	mg/L	1	48.9	mg/L	1	123	mg/L	1	94.2	mg/L	1	63.1	mg/L	1
Sulphate SO4	26.8	mg/L	0.5	6.85	mg/L	0.5	241	mg/L	0.5	20.8	mg/L	0.5	1.56	mg/L	0.5

Project	Mt. Klappan Cycle #15	Water Analysis												
Report to	Rescan Environmental Services													
ALS File No.	X9635													
Date Recieved	8/3/2006													
Date	8/18/2006													
RESULTS OF ANALYSIS														
Sample ID	85-027- 17-15			85-027- 24-15				86-035- 07-15				86-035- 09-15		
Date Sampled	8/3/2006			8/3/2006				8/3/2006				8/3/2006		
Time Sampled														
ALS Sample ID	3			4				5				6		
Nature	Water			Water				Water				Water		
		Units	DI		Units	DI			Units	DI				
Dissolved Metals														
Aluminum D-Al	0.11	mg/L	0.01	0.109	mg/L	0.01		0.115	mg/L	0.01		3.19	mg/L	0.01
Antimony D-Sb	0.0026	mg/L	0.001	0.0016	mg/L	0.001	<0.0010		mg/L	0.001	<0.0010		mg/L	0.001
Arsenic D-As	0.0018	mg/L	0.001	0.0012	mg/L	0.001	<0.0010		mg/L	0.001	<0.0010		mg/L	0.001
Barium D-Ba	0.0259	mg/L	0.001	0.0648	mg/L	0.001		0.13	mg/L	0.001		0.0706	mg/L	0.001
Beryllium D-Be	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050		mg/L	0.005	<0.0050		mg/L	0.005
Bismuth D-Bi	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050		mg/L	0.005	<0.0050		mg/L	0.005
Boron D-B	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10		mg/L	0.1	<0.10		mg/L	0.1
Cadmium D-Cd	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050		mg/L	0.0005	<0.00050		mg/L	0.0005
Calcium D-Ca	6.02	mg/L	0.05	7.32	mg/L	0.05		4.69	mg/L	0.05		0.538	mg/L	0.05
Chromium D-Cr	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050		mg/L	0.005	<0.0050		mg/L	0.005
Cobalt D-Co	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010		mg/L	0.001	<0.0010		mg/L	0.001
Copper D-Cu	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010		mg/L	0.001	<0.0010		mg/L	0.001
Iron D-Fe	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030		mg/L	0.03	<0.030		mg/L	0.03
Lead D-Pb	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010		mg/L	0.001	<0.0010		mg/L	0.001
Lithium D-Li	<0.010	mg/L	0.01	0.011	mg/L	0.01		0.038	mg/L	0.01		0.031	mg/L	0.01
Magnesium D-Mg	3.65	mg/L	0.05	5.87	mg/L	0.05		5.78	mg/L	0.05		0.528	mg/L	0.05
Manganese D-Mn	<0.0010	mg/L	0.001	0.0049	mg/L	0.001		0.025	mg/L	0.001		0.0022	mg/L	0.001
Mercury D-Hg	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010		mg/L	0.001	<0.0010		mg/L	0.001
Molybdenum D-Mo	0.0064	mg/L	0.001	0.0074	mg/L	0.001		0.0053	mg/L	0.001		0.0015	mg/L	0.001
Nickel D-Ni	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050		mg/L	0.005	<0.0050		mg/L	0.005
Phosphorus D-P	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30		mg/L	0.3	<0.30		mg/L	0.3
Potassium D-K	<0.50	mg/L	0.5	1.28	mg/L	0.5		2.23	mg/L	0.5		1.94	mg/L	0.5
Selenium D-Se	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010		mg/L	0.01	<0.010		mg/L	0.01
Silicon D-Si	1.3	mg/L	0.05	1.41	mg/L	0.05		1.22	mg/L	0.05		2.94	mg/L	0.05
Silver D-Ag	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010		mg/L	0.0001	<0.00010		mg/L	0.0001
Sodium D-Na	1	mg/L	0.05	2.75	mg/L	0.05		51.7	mg/L	0.05		100	mg/L	0.05
Strontium D-Sr	0.168	mg/L	0.001	0.353	mg/L	0.001		0.329	mg/L	0.001		0.0324	mg/L	0.001
Thallium D-Tl	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010		mg/L	0.001	<0.0010		mg/L	0.001
Tin D-Sn	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010		mg/L	0.001	<0.0010		mg/L	0.001
Titanium D-Ti	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010		mg/L	0.01	<0.010		mg/L	0.01
Uranium D-U	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010		mg/L	0.0001	<0.00010		mg/L	0.0001
Vanadium D-V	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010		mg/L	0.01	<0.010		mg/L	0.01
Zinc D-Zn	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050		mg/L	0.005	<0.0050		mg/L	0.005
Physical Tests														
Conductivity (uS/cm)	63.1	uS/cm	2	96	uS/cm	2		277	uS/cm	2		411	uS/cm	2
pH	8.01	pH	0.1	8.47	pH	0.1		8.46	pH	0.1		8.77	pH	0.1
Sample Preparation														
Total Volume - In (mL)	500	mL	0	500	mL	0		500	mL	0		500	mL	0
Total Volume - Out (mL)	380	mL	0	450	mL	0		510	mL	0		505	mL	0
Dissolved Anions														
Acidity (to pH 8.3) CaCO3	2	mg/L	1	1.4	mg/L	1	<1.0		mg/L	1	<1.0		mg/L	1
Alkalinity-Total CaCO3	28	mg/L	1	48.3	mg/L	1		147	mg/L	1		212	mg/L	1
Sulphate SO4	4.37	mg/L	0.5	3.51	mg/L	0.5		6.09	mg/L	0.5		12.7	mg/L	0.5

Project	Mt. Klappan Cycle #20	Water Analysis																	
Report to	Rescan Environmental Services																		
ALS File No.	X9634																		
Date Recieved	8/3/2006																		
Date	8/18/2006																		
RESULTS OF ANALYSIS																			
Sample ID	ARD3-08B -20	ARD3-14B -20				ARD1-15 -20				ARD2-12 -20				ARD2-07 -20				DUMP-2.5 M-20	
Date Sampled	8/3/2006	8/3/2006				8/3/2006				8/3/2006				8/3/2006					
Time Sampled																			
ALS Sample ID	2	3				4				5				9				10	
Nature	Water	Water				Water				Water				Water				Water	
		Units	DI		Units	DI		Units	DI		Units	DI		Units	DI		Units	DI	
Dissolved Metals																			
Aluminum D-Al	0.191	mg/L	0.01	0.221	mg/L	0.01	0.078	mg/L	0.01	<0.010	mg/L	0.01	0.016	mg/L	0.01	0.024	mg/L	0.01	
Antimony D-Sb	0.0017	mg/L	0.001	0.0016	mg/L	0.001	0.0041	mg/L	0.001	<0.0010	mg/L	0.001	0.0011	mg/L	0.001	<0.0010	mg/L	0.001	
Arsenic D-As	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	0.0064	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Barium D-Ba	0.0222	mg/L	0.001	0.0233	mg/L	0.001	0.094	mg/L	0.001	0.0365	mg/L	0.001	0.118	mg/L	0.001	0.009	mg/L	0.001	
Beryllium D-Be	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	
Bismuth D-Bi	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	
Boron D-B	0.18	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	
Cadmium D-Cd	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	
Calcium D-Ca	4.68	mg/L	0.05	0.91	mg/L	0.05	8.56	mg/L	0.05	95.9	mg/L	0.05	6.08	mg/L	0.05	4.43	mg/L	0.05	
Chromium D-Cr	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	
Cobalt D-Co	0.0079	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Copper D-Cu	<0.0010	mg/L	0.001	0.0016	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Iron D-Fe	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	
Lead D-Pb	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Lithium D-Li	0.273	mg/L	0.01	0.038	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	
Magnesium D-Mg	4.87	mg/L	0.05	0.484	mg/L	0.05	7.35	mg/L	0.05	38.2	mg/L	0.05	14.9	mg/L	0.05	14.6	mg/L	0.05	
Manganese D-Mn	0.237	mg/L	0.001	0.0019	mg/L	0.001	<0.0010	mg/L	0.001	0.118	mg/L	0.001	0.0182	mg/L	0.001	<0.0010	mg/L	0.001	
Mercury D-Hg	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Molybdenum D-Mo	<0.0010	mg/L	0.001	0.0233	mg/L	0.001	0.0107	mg/L	0.001	<0.0010	mg/L	0.001	0.0198	mg/L	0.001	0.0011	mg/L	0.001	
Nickel D-Ni	0.0319	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	
Phosphorus D-P	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	
Potassium D-K	2.87	mg/L	0.5	0.75	mg/L	0.5	0.66	mg/L	0.5	0.65	mg/L	0.5	2.22	mg/L	0.5	<0.50	mg/L	0.5	
Selenium D-Se	0.026	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	
Silicon D-Si	1.93	mg/L	0.05	1.15	mg/L	0.05	1.62	mg/L	0.05	0.33	mg/L	0.05	0.909	mg/L	0.05	1.2	mg/L	0.05	
Silver D-Ag	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	
Sodium D-Na	366	mg/L	0.05	68.7	mg/L	0.05	0.704	mg/L	0.05	0.468	mg/L	0.05	0.836	mg/L	0.05	0.275	mg/L	0.05	
Strontium D-Sr	0.526	mg/L	0.001	0.0626	mg/L	0.001	0.212	mg/L	0.001	1.3	mg/L	0.001	0.431	mg/L	0.001	0.0388	mg/L	0.001	
Thallium D-Tl	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Tin D-Sn	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Titanium D-Ti	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	
Uranium D-U	<0.00010	mg/L	0.0001	0.00025	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	
Vanadium D-V	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	
Zinc D-Zn	0.0109	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	
Physical Tests																			
Conductivity (uS/cm)	1820	uS/cm	2	315	uS/cm	2	104	uS/cm	2	677	uS/cm	2	171	uS/cm	2	136	uS/cm	2	
pH	8.23	pH	0.1	8.63	pH	0.1	8.26	pH	0.1	7.72	pH	0.1	8.08	pH	0.1	7.97	pH	0.1	
Sample Preparation																			
Total Volume - In (mL)	500	mL	0	500	mL	0	500	mL	0	500	mL	0	500	mL	0	500	mL	0	
Total Volume - Out (mL)	490	mL	0	520	mL	0	375	mL	0	435	mL	0	460	mL	0	460	mL	0	
Dissolved Anions																			
Acidity (to pH 8.3) CaCO3	2.1	mg/L	1	<1.0	mg/L	1	1.8	mg/L	1	3.7	mg/L	1	1.8	mg/L	1	1.7	mg/L	1	
Alkalinity-Total CaCO3	152	mg/L	1	143	mg/L	1	48.2	mg/L	1	125	mg/L	1	78.1	mg/L	1	72.7	mg/L	1	
Sulphate SO4	684	mg/L	2.5	24.8	mg/L	0.5	7.42	mg/L	0.5	266	mg/L	0.5	20.9	mg/L	0.5	1.41	mg/L	0.5	

Project	Mt. Klappan Cycle #14	Water Analysis												
Report to	Rescan Environmental Services													
ALS File No.	X9338													
Date Recieved	7/27/2006													
Date	8/16/2006													
RESULTS OF ANALYSIS														
Sample ID	85-027- 17-14			85-027- 24-14				86-035- 07-14				86-035- 09-14		
Date Sampled	7/27/2006			7/27/2006				7/27/2006				7/27/2006		
Time Sampled														
ALS Sample ID	3			4				5				6		
Nature	Water			Water				Water				Water		
		Units	DI		Units	DI			Units	DI				
Dissolved Metals														
Aluminum D-Al	0.136	mg/L	0.01	0.11	mg/L	0.01		0.222	mg/L	0.01		2.77	mg/L	0.01
Antimony D-Sb	0.0023	mg/L	0.001	0.0016	mg/L	0.001		0.0011	mg/L	0.001		<0.0010	mg/L	0.001
Arsenic D-As	0.0018	mg/L	0.001	0.0011	mg/L	0.001		<0.0010	mg/L	0.001		<0.0010	mg/L	0.001
Barium D-Ba	0.0251	mg/L	0.001	0.0658	mg/L	0.001		0.0913	mg/L	0.001		0.0656	mg/L	0.001
Beryllium D-Be	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005		<0.0050	mg/L	0.005		<0.0050	mg/L	0.005
Bismuth D-Bi	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005		<0.0050	mg/L	0.005		<0.0050	mg/L	0.005
Boron D-B	<0.10	mg/L	0.1	<0.10	mg/L	0.1		<0.10	mg/L	0.1		<0.10	mg/L	0.1
Cadmium D-Cd	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005		<0.00050	mg/L	0.0005		<0.00050	mg/L	0.0005
Calcium D-Ca	5.93	mg/L	0.05	7.91	mg/L	0.05		3.29	mg/L	0.05		0.607	mg/L	0.05
Chromium D-Cr	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005		<0.0050	mg/L	0.005		0.0079	mg/L	0.005
Cobalt D-Co	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001		<0.0010	mg/L	0.001		<0.0010	mg/L	0.001
Copper D-Cu	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001		<0.0010	mg/L	0.001		0.0011	mg/L	0.001
Iron D-Fe	<0.030	mg/L	0.03	<0.030	mg/L	0.03		0.032	mg/L	0.03		0.181	mg/L	0.03
Lead D-Pb	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001		<0.0010	mg/L	0.001		<0.0010	mg/L	0.001
Lithium D-Li	<0.010	mg/L	0.01	<0.010	mg/L	0.01		0.034	mg/L	0.01		0.03	mg/L	0.01
Magnesium D-Mg	3.58	mg/L	0.05	6.18	mg/L	0.05		4.01	mg/L	0.05		0.584	mg/L	0.05
Manganese D-Mn	<0.0010	mg/L	0.001	0.0051	mg/L	0.001		0.0142	mg/L	0.001		0.0021	mg/L	0.001
Mercury D-Hg	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001		<0.0010	mg/L	0.001		<0.0010	mg/L	0.001
Molybdenum D-Mo	0.0062	mg/L	0.001	0.0073	mg/L	0.001		0.0064	mg/L	0.001		0.0017	mg/L	0.001
Nickel D-Ni	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005		<0.0050	mg/L	0.005		<0.0050	mg/L	0.005
Phosphorus D-P	<0.30	mg/L	0.3	<0.30	mg/L	0.3		<0.30	mg/L	0.3		<0.30	mg/L	0.3
Potassium D-K	<0.50	mg/L	0.5	1.37	mg/L	0.5		2.06	mg/L	0.5		1.9	mg/L	0.5
Selenium D-Se	<0.010	mg/L	0.01	<0.010	mg/L	0.01		<0.010	mg/L	0.01		<0.010	mg/L	0.01
Silicon D-Si	1.25	mg/L	0.05	1.41	mg/L	0.05		1.31	mg/L	0.05		2.06	mg/L	0.05
Silver D-Ag	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001		<0.00010	mg/L	0.0001		<0.00010	mg/L	0.0001
Sodium D-Na	1.03	mg/L	0.05	3.24	mg/L	0.05		59.5	mg/L	0.05		112	mg/L	0.05
Strontium D-Sr	0.164	mg/L	0.001	0.377	mg/L	0.001		0.221	mg/L	0.001		0.0356	mg/L	0.001
Thallium D-Tl	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001		<0.0010	mg/L	0.001		<0.0010	mg/L	0.001
Tin D-Sn	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001		<0.0010	mg/L	0.001		<0.0010	mg/L	0.001
Titanium D-Ti	<0.010	mg/L	0.01	<0.010	mg/L	0.01		<0.010	mg/L	0.01		0.016	mg/L	0.01
Uranium D-U	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001		<0.00010	mg/L	0.0001		0.00013	mg/L	0.0001
Vanadium D-V	<0.010	mg/L	0.01	<0.010	mg/L	0.01		<0.010	mg/L	0.01		<0.010	mg/L	0.01
Zinc D-Zn	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005		<0.0050	mg/L	0.005		<0.0050	mg/L	0.005
Physical Tests														
Conductivity (uS/cm)	60.9	uS/cm	2	99.6	uS/cm	2		285	uS/cm	2		454	uS/cm	2
pH	7.78	pH	0.1	8.54	pH	0.1		8.54	pH	0.1		8.92	pH	0.1
Sample Preparation														
Total Volume - In (mL)	500	mL	0	500	mL	0		500	mL	0		500	mL	0
Total Volume - Out (mL)	470	mL	0	470	mL	0		450	mL	0		450	mL	0
Dissolved Anions														
Acidity (to pH 8.3) CaCO3	1.2	mg/L	1	<1.0	mg/L	1		<1.0	mg/L	1		<1.0	mg/L	1
Alkalinity-Total CaCO3	24.9	mg/L	1	48.7	mg/L	1		155	mg/L	1		226	mg/L	1
Sulphate SO4	4.32	mg/L	0.5	3.72	mg/L	0.5		6.33	mg/L	0.5		13.9	mg/L	0.5

Project	Mt. Klappan Cycle #13	Water Analysis																
Report to	Rescan Environmental Services																	
ALS File No.	X8942																	
Date Recieved	7/20/2006																	
Date	8/9/2006																	
RESULTS OF ANALYSIS																		
Sample ID	85-016- 07-13			85-027- 02-13				85-027- 17-13				85-027- 24-13			86-035- 07-13		86-035- 09-13	
Date Sampled	7/20/2006			7/20/2006				7/20/2006				7/20/2006			7/20/2006		7/20/2006	
Time Sampled																		
ALS Sample ID	1			2				3				4			5		6	
Nature	Water			Water				Water				Water			Water		Water	
		Units	DI		Units	DI			Units	DI			Units	DI			Units	DI
Dissolved Metals																		
Aluminum D-Al	1.83	mg/L	0.01	4.82	mg/L	0.01	0.096	mg/L	0.01	0.124	mg/L	0.01	0.248	mg/L	0.01	2.22	mg/L	0.01
Antimony D-Sb	<0.0010	mg/L	0.001	0.0021	mg/L	0.001	0.0026	mg/L	0.001	0.0016	mg/L	0.001	0.0012	mg/L	0.001	<0.0010	mg/L	0.001
Arsenic D-As	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	0.0016	mg/L	0.001	0.001	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Barium D-Ba	0.0724	mg/L	0.001	0.119	mg/L	0.001	0.0312	mg/L	0.001	0.0695	mg/L	0.001	0.089	mg/L	0.001	0.0556	mg/L	0.001
Beryllium D-Be	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Bismuth D-Bi	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Boron D-B	0.11	mg/L	0.1	0.11	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1
Cadmium D-Cd	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005
Calcium D-Ca	0.792	mg/L	0.05	0.427	mg/L	0.05	6.77	mg/L	0.05	7.48	mg/L	0.05	2.59	mg/L	0.05	0.458	mg/L	0.05
Chromium D-Cr	<0.0050	mg/L	0.005	0.0089	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	0.0063	mg/L	0.005
Cobalt D-Co	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Copper D-Cu	0.0039	mg/L	0.001	0.0066	mg/L	0.001	<0.0010	mg/L	0.001	0.0011	mg/L	0.001	0.002	mg/L	0.001	<0.0010	mg/L	0.001
Iron D-Fe	0.1	mg/L	0.03	0.29	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	0.118	mg/L	0.03
Lead D-Pb	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Lithium D-Li	0.104	mg/L	0.01	0.063	mg/L	0.01	<0.010	mg/L	0.01	0.012	mg/L	0.01	0.045	mg/L	0.01	0.033	mg/L	0.01
Magnesium D-Mg	1.55	mg/L	0.05	2.15	mg/L	0.05	4.52	mg/L	0.05	6.35	mg/L	0.05	3.58	mg/L	0.05	0.485	mg/L	0.05
Manganese D-Mn	0.0033	mg/L	0.001	0.0053	mg/L	0.001	<0.0010	mg/L	0.001	0.0061	mg/L	0.001	0.0148	mg/L	0.001	0.0019	mg/L	0.001
Mercury D-Hg	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Molybdenum D-Mo	0.005	mg/L	0.001	0.0313	mg/L	0.001	0.0067	mg/L	0.001	0.0075	mg/L	0.001	0.0072	mg/L	0.001	0.0017	mg/L	0.001
Nickel D-Ni	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Phosphorus D-P	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3
Potassium D-K	2.34	mg/L	0.5	3.82	mg/L	0.5	<0.50	mg/L	0.5	1.52	mg/L	0.5	2.08	mg/L	0.5	1.7	mg/L	0.5
Selenium D-Se	<0.010	mg/L	0.01	0.011	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01
Silicon D-Si	1.24	mg/L	0.05	1.72	mg/L	0.05	1.24	mg/L	0.05	1.42	mg/L	0.05	1.37	mg/L	0.05	1.28	mg/L	0.05
Silver D-Ag	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001
Sodium D-Na	207	mg/L	0.05	148	mg/L	0.05	1.34	mg/L	0.05	4.22	mg/L	0.05	71	mg/L	2	109	mg/L	0.05
Strontium D-Sr	0.119	mg/L	0.001	0.0986	mg/L	0.001	0.21	mg/L	0.001	0.39	mg/L	0.001	0.206	mg/L	0.001	0.0309	mg/L	0.001
Thallium D-Tl	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Tin D-Sn	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Titanium D-Ti	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01
Uranium D-U	0.00072	mg/L	0.0001	0.00033	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	0.00012	mg/L	0.0001
Vanadium D-V	<0.010	mg/L	0.01	0.011	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01
Zinc D-Zn	<0.0050	mg/L	0.005	0.0099	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Physical Tests																		
Conductivity (uS/cm)	773	uS/cm	2	591	uS/cm	2	73.6	uS/cm	2	105	uS/cm	2	322	uS/cm	2	441	uS/cm	2
pH	8.99	pH	0.1	8.92	pH	0.1	7.85	pH	0.1	8.18	pH	0.1	8.54	pH	0.1	8.92	pH	0.1
Sample Preparation																		
Total Volume - In (mL)	500	mL	0	500	mL	0	500	mL	0	500	mL	0	500	mL	0	500	mL	0
Total Volume - Out (mL)	425	mL	0	485	mL	0	520	mL	0	500	mL	0	450	mL	0	435	mL	0
Dissolved Anions																		
Acidity (to pH 8.3) CaCO3	<1.0	mg/L	1	<1.0	mg/L	1	1.2	mg/L	1	<1.0	mg/L	1	<1.0	mg/L	1	<1.0	mg/L	1
Alkalinity-Total CaCO3	396	mg/L	2	243	mg/L	2	35	mg/L	1	53.4	mg/L	1	179	mg/L	1	242	mg/L	1
Sulphate SO4	41.3	mg/L	1	79	mg/L	1	4.86	mg/L	0.5	3.75	mg/L	0.5	6.84	mg/L	0.5	13.2	mg/L	0.5

Project	Mt. Klappan Cycle #18	Water Analysis													
Report to	Rescan Environmental Services														
ALS File No.	X8941														
Date Recieved	7/20/2006														
Date	8/9/2006														
RESULTS OF ANALYSIS															
Sample ID	ARD3-14B -18			ARD1-15 -18				ARD2-12 -18				ARD2-07 -18			DUMP-2.5 M-18
Date Sampled	7/20/2006			7/20/2006				7/20/2006				7/20/2006			7/20/2006
Time Sampled															
ALS Sample ID	3			4				5				9			10
Nature	Water			Water				Water				Water			Water
		Units	DI		Units	DI			Units	DI			Units	DI	
Dissolved Metals															
Aluminum D-Al	0.149	mg/L	0.01	0.103	mg/L	0.01	<0.010	mg/L	0.01	0.018	mg/L	0.01	0.022	mg/L	0.01
Antimony D-Sb	0.0022	mg/L	0.001	0.0042	mg/L	0.001	<0.0010	mg/L	0.001	0.0015	mg/L	0.001	<0.0010	mg/L	0.001
Arsenic D-As	<0.0010	mg/L	0.001	0.0067	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Barium D-Ba	0.0242	mg/L	0.001	0.0909	mg/L	0.001	0.039	mg/L	0.001	0.184	mg/L	0.001	0.0082	mg/L	0.001
Beryllium D-Be	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Bismuth D-Bi	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Boron D-B	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1
Cadmium D-Cd	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005
Calcium D-Ca	0.801	mg/L	0.05	8.72	mg/L	0.05	95.8	mg/L	0.05	7.1	mg/L	0.05	3.93	mg/L	0.05
Chromium D-Cr	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Cobalt D-Co	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	0.001	mg/L	0.001	<0.0010	mg/L	0.001
Copper D-Cu	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	0.001	mg/L	0.001	<0.0010	mg/L	0.001
Iron D-Fe	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03
Lead D-Pb	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Lithium D-Li	0.046	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01
Magnesium D-Mg	0.483	mg/L	0.05	8.18	mg/L	0.05	38.9	mg/L	0.05	18.9	mg/L	0.05	14.2	mg/L	0.05
Manganese D-Mn	0.002	mg/L	0.001	<0.0010	mg/L	0.001	0.111	mg/L	0.001	0.0222	mg/L	0.001	<0.0010	mg/L	0.001
Mercury D-Hg	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Molybdenum D-Mo	0.027	mg/L	0.001	0.0111	mg/L	0.001	<0.0010	mg/L	0.001	0.0236	mg/L	0.001	0.0014	mg/L	0.001
Nickel D-Ni	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Phosphorus D-P	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3
Potassium D-K	0.83	mg/L	0.5	0.71	mg/L	0.5	0.74	mg/L	0.5	2.76	mg/L	0.5	<0.50	mg/L	0.5
Selenium D-Se	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01
Silicon D-Si	1.16	mg/L	0.05	1.63	mg/L	0.05	0.294	mg/L	0.05	1.04	mg/L	0.05	1.08	mg/L	0.05
Silver D-Ag	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001
Sodium D-Na	94.7	mg/L	0.05	0.773	mg/L	0.05	0.554	mg/L	0.05	1.12	mg/L	0.05	0.243	mg/L	0.05
Strontium D-Sr	0.0659	mg/L	0.001	0.23	mg/L	0.001	1.35	mg/L	0.001	0.562	mg/L	0.001	0.0377	mg/L	0.001
Thallium D-Tl	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Tin D-Sn	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Titanium D-Ti	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01
Uranium D-U	0.00034	mg/L	0.0001	0.00012	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001
Vanadium D-V	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01
Zinc D-Zn	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Physical Tests															
Conductivity (uS/cm)	388	uS/cm	2	109	uS/cm	2	652	uS/cm	2	195	uS/cm	2	127	uS/cm	2
pH	8.69	pH	0.1	8.04	pH	0.1	8.01	pH	0.1	8.17	pH	0.1	8.06	pH	0.1
Sample Preparation															
Total Volume - In (mL)	500	mL	0	500	mL	0	500	mL	0	500	mL	0	500	mL	0
Total Volume - Out (mL)	480	mL	0	450	mL	0	480	mL	0	480	mL	0	485	mL	0
Dissolved Anions															
Acidity (to pH 8.3) CaCO3	<1.0	mg/L	1	1.2	mg/L	1	2.6	mg/L	1	1.2	mg/L	1	1.1	mg/L	1
Alkalinity-Total CaCO3	194	mg/L	1	51.2	mg/L	1	101	mg/L	1	80.4	mg/L	1	59.5	mg/L	1
Sulphate SO4	26	mg/L	0.5	7.51	mg/L	0.5	294	mg/L	0.5	24.9	mg/L	0.5	1.61	mg/L	0.5

Project	Mt. Klappan Cycle #12	Water Analysis												
Report to	Rescan Environmental Services													
ALS File No.	X8581													
Date Recieved	7/13/2006													
Date	7/28/2006													
RESULTS OF ANALYSIS														
Sample ID	85-027- 17-12			85-027- 24-12				86-035- 07-12				86-035- 09-12		
Date Sampled	7/13/2006			7/13/2006				7/13/2006				7/13/2006		
Time Sampled														
ALS Sample ID	3			4				5				6		
Nature	Water			Water				Water				Water		
		Units	DI		Units	DI			Units	DI				
Dissolved Metals														
Aluminum D-Al	0.045	mg/L	0.01	0.066	mg/L	0.01		0.229	mg/L	0.01		1.99	mg/L	0.01
Antimony D-Sb	0.0029	mg/L	0.001	0.002	mg/L	0.001		0.0015	mg/L	0.001		<0.0010	mg/L	0.001
Arsenic D-As	0.0015	mg/L	0.001	0.0014	mg/L	0.001		<0.0010	mg/L	0.001		<0.0010	mg/L	0.001
Barium D-Ba	0.0294	mg/L	0.001	0.0785	mg/L	0.001		0.0657	mg/L	0.001		0.0556	mg/L	0.001
Beryllium D-Be	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005		<0.0050	mg/L	0.005		<0.0050	mg/L	0.005
Bismuth D-Bi	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005		<0.0050	mg/L	0.005		<0.0050	mg/L	0.005
Boron D-B	<0.10	mg/L	0.1	<0.10	mg/L	0.1		<0.10	mg/L	0.1		<0.10	mg/L	0.1
Cadmium D-Cd	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005		<0.00050	mg/L	0.0005		<0.00050	mg/L	0.0005
Calcium D-Ca	6.2	mg/L	0.05	8.11	mg/L	0.05		1.87	mg/L	0.05		0.421	mg/L	0.05
Chromium D-Cr	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005		<0.0050	mg/L	0.005		0.0064	mg/L	0.005
Cobalt D-Co	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001		<0.0010	mg/L	0.001		<0.0010	mg/L	0.001
Copper D-Cu	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001		<0.0010	mg/L	0.001		0.0015	mg/L	0.001
Iron D-Fe	<0.030	mg/L	0.03	<0.030	mg/L	0.03		0.036	mg/L	0.03		0.152	mg/L	0.03
Lead D-Pb	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001		<0.0010	mg/L	0.001		<0.0010	mg/L	0.001
Lithium D-Li	<0.010	mg/L	0.01	0.014	mg/L	0.01		0.043	mg/L	0.01		0.026	mg/L	0.01
Magnesium D-Mg	4.12	mg/L	0.05	6.56	mg/L	0.05		2.19	mg/L	0.05		0.407	mg/L	0.05
Manganese D-Mn	<0.0010	mg/L	0.001	0.0066	mg/L	0.001		0.0108	mg/L	0.001		0.0018	mg/L	0.001
Mercury D-Hg	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001		<0.0010	mg/L	0.001		<0.0010	mg/L	0.001
Molybdenum D-Mo	0.0064	mg/L	0.001	0.008	mg/L	0.001		0.0078	mg/L	0.001		0.0017	mg/L	0.001
Nickel D-Ni	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005		<0.0050	mg/L	0.005		<0.0050	mg/L	0.005
Phosphorus D-P	<0.30	mg/L	0.3	<0.30	mg/L	0.3		<0.30	mg/L	0.3		<0.30	mg/L	0.3
Potassium D-K	<0.50	mg/L	0.5	1.75	mg/L	0.5		1.77	mg/L	0.5		1.63	mg/L	0.5
Selenium D-Se	<0.010	mg/L	0.01	<0.010	mg/L	0.01		<0.010	mg/L	0.01		<0.010	mg/L	0.01
Silicon D-Si	1.19	mg/L	0.05	1.58	mg/L	0.05		1.59	mg/L	0.05		2.12	mg/L	0.05
Silver D-Ag	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001		<0.00010	mg/L	0.0001		<0.00010	mg/L	0.0001
Sodium D-Na	1.42	mg/L	0.05	6	mg/L	0.05		78.1	mg/L	2		102	mg/L	0.05
Strontium D-Sr	0.2	mg/L	0.001	0.421	mg/L	0.001		0.143	mg/L	0.001		0.0292	mg/L	0.001
Thallium D-Tl	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001		<0.0010	mg/L	0.001		<0.0010	mg/L	0.001
Tin D-Sn	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001		<0.0010	mg/L	0.001		<0.0010	mg/L	0.001
Titanium D-Ti	<0.010	mg/L	0.01	<0.010	mg/L	0.01		<0.010	mg/L	0.01		0.022	mg/L	0.01
Uranium D-U	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001		<0.00010	mg/L	0.0001		0.00012	mg/L	0.0001
Vanadium D-V	<0.010	mg/L	0.01	<0.010	mg/L	0.01		<0.010	mg/L	0.01		<0.010	mg/L	0.01
Zinc D-Zn	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005		<0.0050	mg/L	0.005		<0.0050	mg/L	0.005
Physical Tests														
Conductivity (uS/cm)	72.2	uS/cm	2	124	uS/cm	2		339	uS/cm	2		446	uS/cm	2
pH	7.77	pH	0.1	8.21	pH	0.1		8.54	pH	0.1		8.94	pH	0.1
Sample Preparation														
Total Volume - In (mL)	500	mL	0	500	mL	0		500	mL	0		500	mL	0
Total Volume - Out (mL)	425	mL	0	500	mL	0		475	mL	0		505	mL	0
Dissolved Anions														
Acidity (to pH 8.3) CaCO3	1.4	mg/L	1	1.8	mg/L	1		<1.0	mg/L	1		<1.0	mg/L	1
Alkalinity-Total CaCO3	33.6	mg/L	1	66.6	mg/L	1		185	mg/L	1		237	mg/L	1
Sulphate SO4	4.08	mg/L	0.5	3.26	mg/L	0.5		6.28	mg/L	0.5		13.4	mg/L	0.5

Project	Mt. Klappan Cycle #11	Water Analysis												
Report to	Rescan Environmental Services													
ALS File No.	X8281													
Date Recieved	7/6/2006													
Date	7/24/2006													
RESULTS OF ANALYSIS														
Sample ID	85-027- 17-11			85-027- 24-11				86-035- 07-11				86-035- 09-11		
Date Sampled	7/6/2006			7/6/2006				7/6/2006				7/6/2006		
Time Sampled														
ALS Sample ID	3			4				5				6		
Nature	Water			Water				Water				Water		
		Units	DI		Units	DI			Units	DI				
Dissolved Metals														
Aluminum D-Al	0.145	mg/L	0.01	0.117	mg/L	0.01		0.473	mg/L	0.01		2.7	mg/L	0.01
Antimony D-Sb	0.0028	mg/L	0.001	0.0019	mg/L	0.001		0.0016	mg/L	0.001		<0.0010	mg/L	0.001
Arsenic D-As	0.0019	mg/L	0.001	0.0012	mg/L	0.001		0.0011	mg/L	0.001		<0.0010	mg/L	0.001
Barium D-Ba	0.03	mg/L	0.001	0.0728	mg/L	0.001		0.0396	mg/L	0.001		0.0591	mg/L	0.001
Beryllium D-Be	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005		<0.0050	mg/L	0.005		<0.0050	mg/L	0.005
Bismuth D-Bi	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005		<0.0050	mg/L	0.005		<0.0050	mg/L	0.005
Boron D-B	<0.10	mg/L	0.1	<0.10	mg/L	0.1		<0.10	mg/L	0.1		<0.10	mg/L	0.1
Cadmium D-Cd	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005		<0.00050	mg/L	0.0005		<0.00050	mg/L	0.0005
Calcium D-Ca	6.15	mg/L	0.05	7.3	mg/L	0.05		0.95	mg/L	0.05		0.364	mg/L	0.05
Chromium D-Cr	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005		<0.0050	mg/L	0.005		0.0076	mg/L	0.005
Cobalt D-Co	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001		<0.0010	mg/L	0.001		<0.0010	mg/L	0.001
Copper D-Cu	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001		<0.0010	mg/L	0.001		0.0011	mg/L	0.001
Iron D-Fe	<0.030	mg/L	0.03	<0.030	mg/L	0.03		0.049	mg/L	0.03		0.156	mg/L	0.03
Lead D-Pb	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001		<0.0010	mg/L	0.001		<0.0010	mg/L	0.001
Lithium D-Li	<0.010	mg/L	0.01	0.017	mg/L	0.01		0.045	mg/L	0.01		0.034	mg/L	0.01
Magnesium D-Mg	3.82	mg/L	0.05	5.84	mg/L	0.05		1.15	mg/L	0.05		0.398	mg/L	0.05
Manganese D-Mn	<0.0010	mg/L	0.001	0.0055	mg/L	0.001		0.005	mg/L	0.001		0.0019	mg/L	0.001
Mercury D-Hg	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001		<0.0010	mg/L	0.001		<0.0010	mg/L	0.001
Molybdenum D-Mo	0.0069	mg/L	0.001	0.0082	mg/L	0.001		0.0095	mg/L	0.001		0.0018	mg/L	0.001
Nickel D-Ni	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005		<0.0050	mg/L	0.005		<0.0050	mg/L	0.005
Phosphorus D-P	<0.30	mg/L	0.3	<0.30	mg/L	0.3		<0.30	mg/L	0.3		<0.30	mg/L	0.3
Potassium D-K	<0.50	mg/L	0.5	1.77	mg/L	0.5		1.36	mg/L	0.5		1.65	mg/L	0.5
Selenium D-Se	<0.010	mg/L	0.01	<0.010	mg/L	0.01		<0.010	mg/L	0.01		<0.010	mg/L	0.01
Silicon D-Si	1.39	mg/L	0.05	1.58	mg/L	0.05		1.71	mg/L	0.05		2.55	mg/L	0.05
Silver D-Ag	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001		<0.00010	mg/L	0.0001		<0.00010	mg/L	0.0001
Sodium D-Na	1.56	mg/L	0.05	7.83	mg/L	0.05		80.1	mg/L	2		108	mg/L	0.05
Strontium D-Sr	0.192	mg/L	0.001	0.392	mg/L	0.001		0.072	mg/L	0.001		0.0257	mg/L	0.001
Thallium D-Tl	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001		<0.0010	mg/L	0.001		<0.0010	mg/L	0.001
Tin D-Sn	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001		<0.0010	mg/L	0.001		<0.0010	mg/L	0.001
Titanium D-Ti	<0.010	mg/L	0.01	<0.010	mg/L	0.01		<0.010	mg/L	0.01		0.026	mg/L	0.01
Uranium D-U	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001		<0.00010	mg/L	0.0001		0.00013	mg/L	0.0001
Vanadium D-V	<0.010	mg/L	0.01	<0.010	mg/L	0.01		<0.010	mg/L	0.01		<0.010	mg/L	0.01
Zinc D-Zn	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005		<0.0050	mg/L	0.005		<0.0050	mg/L	0.005
Physical Tests														
Conductivity (uS/cm)	68.7	uS/cm	2	117	uS/cm	2		319	uS/cm	2		452	uS/cm	2
pH	7.96	pH	0.1	8.24	pH	0.1		8.76	pH	0.1		8.89	pH	0.1
Sample Preparation														
Total Volume - In (mL)	500	mL	0	500	mL	0		500	mL	0		500	mL	0
Total Volume - Out (mL)	495	mL	0	520	mL	0		475	mL	0		455	mL	0
Dissolved Anions														
Acidity (to pH 8.3) CaCO3	<1.0	mg/L	1	<1.0	mg/L	1		<1.0	mg/L	1		<1.0	mg/L	1
Alkalinity-Total CaCO3	29.9	mg/L	1	62	mg/L	1		169	mg/L	1		220	mg/L	1
Sulphate SO4	5.44	mg/L	0.5	3.8	mg/L	0.5		7.62	mg/L	0.5		16.2	mg/L	0.5

Project	Mt. Klappan Cycle #10	Water Analysis																			
Report to	Rescan Environmental Services																				
ALS File No.	X7945																				
Date Recieved	6/29/2006																				
Date	7/17/2006																				
RESULTS OF ANALYSIS																					
Sample ID	85-016- 07-10	85-027- 02-10				85-027- 17-10				85-027- 24-10				86-035- 07-10				86-035- 09-10			
Date Sampled	6/29/2006	6/29/2006				6/29/2006				6/29/2006				6/29/2006				6/29/2006			
Time Sampled																					
ALS Sample ID	1	2				3				4				5				6			
Nature	Water	Water				Water				Water				Water				Water			
		Units	DI		Units	DI		Units	DI		Units	DI		Units	DI		Units	DI			
Dissolved Metals																					
Aluminum D-Al	2.38	mg/L	0.01	1.95	mg/L	0.01	0.052	mg/L	0.01	0.122	mg/L	0.01	0.62	mg/L	0.01	3.37	mg/L	0.01			
Antimony D-Sb	<0.0010	mg/L	0.001	0.0021	mg/L	0.001	0.0027	mg/L	0.001	0.0024	mg/L	0.001	0.0017	mg/L	0.001	<0.0010	mg/L	0.001			
Arsenic D-As	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	0.0015	mg/L	0.001	0.0015	mg/L	0.001	0.0011	mg/L	0.001	<0.0010	mg/L	0.001			
Barium D-Ba	0.07	mg/L	0.001	0.0601	mg/L	0.001	0.0325	mg/L	0.001	0.0723	mg/L	0.001	0.0349	mg/L	0.001	0.0685	mg/L	0.001			
Beryllium D-Be	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005			
Bismuth D-Bi	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005			
Boron D-B	0.12	mg/L	0.1	0.11	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	0.12	mg/L	0.1			
Cadmium D-Cd	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005			
Calcium D-Ca	0.628	mg/L	0.05	0.354	mg/L	0.05	6.57	mg/L	0.05	7.72	mg/L	0.05	0.696	mg/L	0.05	0.394	mg/L	0.05			
Chromium D-Cr	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	0.0095	mg/L	0.005			
Cobalt D-Co	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001			
Copper D-Cu	0.0021	mg/L	0.001	0.0032	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	0.0012	mg/L	0.001			
Iron D-Fe	0.141	mg/L	0.03	0.155	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	0.065	mg/L	0.03	0.183	mg/L	0.03			
Lead D-Pb	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001			
Lithium D-Li	0.108	mg/L	0.01	0.066	mg/L	0.01	<0.010	mg/L	0.01	0.022	mg/L	0.01	0.044	mg/L	0.01	0.037	mg/L	0.01			
Magnesium D-Mg	1.09	mg/L	0.05	1.49	mg/L	0.05	4.4	mg/L	0.05	6.47	mg/L	0.05	0.88	mg/L	0.05	0.473	mg/L	0.05			
Manganese D-Mn	0.0037	mg/L	0.001	0.0033	mg/L	0.001	0.0019	mg/L	0.001	0.0063	mg/L	0.001	0.0047	mg/L	0.001	0.0021	mg/L	0.001			
Mercury D-Hg	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001			
Molybdenum D-Mo	0.0053	mg/L	0.001	0.0281	mg/L	0.001	0.0058	mg/L	0.001	0.0118	mg/L	0.001	0.0097	mg/L	0.001	0.0021	mg/L	0.001			
Nickel D-Ni	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005			
Phosphorus D-P	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3			
Potassium D-K	2.1	mg/L	0.5	2.59	mg/L	0.5	<0.50	mg/L	0.5	2.09	mg/L	0.5	1.25	mg/L	0.5	1.86	mg/L	0.5			
Selenium D-Se	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01			
Silicon D-Si	2.6	mg/L	0.05	3.2	mg/L	0.05	1.13	mg/L	0.05	1.69	mg/L	0.05	1.51	mg/L	0.05	2.22	mg/L	0.05			
Silver D-Ag	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001			
Sodium D-Na	194	mg/L	2	144	mg/L	2	1.88	mg/L	0.05	14.6	mg/L	0.05	79.1	mg/L	2	127	mg/L	2			
Strontium D-Sr	0.09	mg/L	0.001	0.0778	mg/L	0.001	0.214	mg/L	0.001	0.403	mg/L	0.001	0.0541	mg/L	0.001	0.0291	mg/L	0.001			
Thallium D-Tl	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001			
Tin D-Sn	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001			
Titanium D-Ti	0.014	mg/L	0.01	0.024	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	0.019	mg/L	0.01			
Uranium D-U	0.00082	mg/L	0.0001	0.00028	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	0.00019	mg/L	0.0001			
Vanadium D-V	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01			
Zinc D-Zn	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005			
Physical Tests																					
Conductivity (uS/cm)	779	uS/cm	2	608	uS/cm	2	76	uS/cm	2	149	uS/cm	2	322	uS/cm	2	513	uS/cm	2			
pH	8.9	pH	0.1	8.83	pH	0.1	7.92	pH	0.1	8.26	pH	0.1	8.75	pH	0.1	9.02	pH	0.1			
Sample Preparation																					
Total Volume - In (mL)	500	mL	0	500	mL	0	500	mL	0	500	mL	0	500	mL	0	500	mL	0			
Total Volume - Out (mL)	475	mL	0	440	mL	0	505	mL	0	430	mL	0	440	mL	0	435	mL	0			
Dissolved Anions																					
Acidity (to pH 8.3) CaCO3	<1.0	mg/L	1	<1.0	mg/L	1	<1.0	mg/L	1	<1.0	mg/L	1	<1.0	mg/L	1	<1.0	mg/L	1			
Alkalinity-Total CaCO3	387	mg/L	1	234	mg/L	1	34	mg/L	1	73.6	mg/L	1	163	mg/L	1	249	mg/L	1			
Sulphate SO4	44.6	mg/L	0.5	68	mg/L	0.5	4.73	mg/L	0.5	5.48	mg/L	0.5	7.69	mg/L	0.5	19.6	mg/L	0.5			

Project	Mt. Klappan Cycle #15	Water Analysis													
Report to	Rescan Environmental Services														
ALS File No.	X7944														
Date Recieved	6/29/2006														
Date	7/28/2006														
RESULTS OF ANALYSIS															
Sample ID	ARD3-14B -15			ARD1-15 -15				ARD2-12 -15				ARD2-07 -15			DUMP-2.5 M-15
Date Sampled	6/29/2006			6/29/2006				6/29/2006				6/29/2006			6/29/2006
Time Sampled															
ALS Sample ID	3			4				5				9			10
Nature	Water			Water				Water				Water			Water
		Units	DI		Units	DI			Units	DI			Units	DI	
Dissolved Metals															
Aluminum D-Al	0.601	mg/L	0.01	0.091	mg/L	0.01	<0.010	mg/L	0.01	0.024	mg/L	0.01	0.015	mg/L	0.01
Antimony D-Sb	0.0024	mg/L	0.001	0.0051	mg/L	0.001	<0.0010	mg/L	0.001	0.0017	mg/L	0.001	<0.0010	mg/L	0.001
Arsenic D-As	<0.0010	mg/L	0.001	0.0072	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Barium D-Ba	0.0207	mg/L	0.001	0.0915	mg/L	0.001	0.0247	mg/L	0.001	0.0964	mg/L	0.001	0.0088	mg/L	0.001
Beryllium D-Be	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Bismuth D-Bi	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Boron D-B	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1
Cadmium D-Cd	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005
Calcium D-Ca	0.442	mg/L	0.05	9.03	mg/L	0.05	93.2	mg/L	0.05	6.57	mg/L	0.05	4.15	mg/L	0.05
Chromium D-Cr	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Cobalt D-Co	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	0.0012	mg/L	0.001	<0.0010	mg/L	0.001
Copper D-Cu	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Iron D-Fe	0.036	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03
Lead D-Pb	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Lithium D-Li	0.049	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01
Magnesium D-Mg	0.281	mg/L	0.05	9.02	mg/L	0.05	37.3	mg/L	0.05	17.9	mg/L	0.05	14.7	mg/L	0.05
Manganese D-Mn	0.0013	mg/L	0.001	<0.0010	mg/L	0.001	0.138	mg/L	0.001	0.0187	mg/L	0.001	<0.0010	mg/L	0.001
Mercury D-Hg	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Molybdenum D-Mo	0.0385	mg/L	0.001	0.0141	mg/L	0.001	<0.0010	mg/L	0.001	0.0262	mg/L	0.001	0.0015	mg/L	0.001
Nickel D-Ni	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	0.0055	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Phosphorus D-P	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3
Potassium D-K	0.68	mg/L	0.5	0.79	mg/L	0.5	0.9	mg/L	0.5	2.78	mg/L	0.5	<0.50	mg/L	0.5
Selenium D-Se	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01
Silicon D-Si	1.59	mg/L	0.05	1.66	mg/L	0.05	0.361	mg/L	0.05	1.03	mg/L	0.05	1.21	mg/L	0.05
Silver D-Ag	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001
Sodium D-Na	92.2	mg/L	0.05	0.907	mg/L	0.05	0.718	mg/L	0.05	1.34	mg/L	0.05	0.247	mg/L	0.05
Strontium D-Sr	0.0381	mg/L	0.001	0.249	mg/L	0.001	1.31	mg/L	0.001	0.529	mg/L	0.001	0.0388	mg/L	0.001
Thallium D-Tl	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Tin D-Sn	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Titanium D-Ti	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01
Uranium D-U	0.00037	mg/L	0.0001	0.00013	mg/L	0.0001	<0.00010	mg/L	0.0001	0.0001	mg/L	0.0001	<0.00010	mg/L	0.0001
Vanadium D-V	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01
Zinc D-Zn	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	0.0059	mg/L	0.005	<0.0050	mg/L	0.005
Physical Tests															
Conductivity (uS/cm)	392	uS/cm	2	117	uS/cm	2	639	uS/cm	2	193	uS/cm	2	129	uS/cm	2
pH	8.75	pH	0.1	8.04	pH	0.1	8.15	pH	0.1	8.14	pH	0.1	8.11	pH	0.1
Sample Preparation															
Total Volume - In (mL)	500	mL	0	500	mL	0	500	mL	0	500	mL	0	500	mL	0
Total Volume - Out (mL)	420	mL	0	470	mL	0	475	mL	0	505	mL	0	430	mL	0
Dissolved Anions															
Acidity (to pH 8.3) CaCO3	<1.0	mg/L	1	<1.0	mg/L	1	2.4	mg/L	1	1.2	mg/L	1	<1.0	mg/L	1
Alkalinity-Total CaCO3	177	mg/L	1	56.5	mg/L	1	117	mg/L	1	75.4	mg/L	1	73.2	mg/L	1
Sulphate SO4	27.1	mg/L	0.5	7.48	mg/L	0.5	244	mg/L	0.5	26	mg/L	0.5	1.74	mg/L	0.5

Project	Mt. Klappan Cycle #9	Water Analysis											
Report to	Rescan Environmental Services												
ALS File No.	X7627												
Date Recieved	6/22/2006												
Date	7/11/2006												
RESULTS OF ANALYSIS													
Sample ID	85-027- 17-9	85-027- 24-9				86-035- 07-9				86-035- 09-9			
Date Sampled	6/22/2006	6/22/2006				6/22/2006				6/22/2006			
Time Sampled													
ALS Sample ID	3	4				5				6			
Nature	Water	Water				Water				Water			
		Units	DI		Units	DI		Units	DI		Units	DI	
Dissolved Metals													
Aluminum D-Al	0.062	mg/L	0.01	0.384	mg/L	0.01	1.28	mg/L	0.01	2.79	mg/L	0.01	
Antimony D-Sb	0.0031	mg/L	0.001	0.0026	mg/L	0.001	0.002	mg/L	0.001	0.0011	mg/L	0.001	
Arsenic D-As	0.0016	mg/L	0.001	0.0014	mg/L	0.001	0.0016	mg/L	0.001	0.001	mg/L	0.001	
Barium D-Ba	0.0335	mg/L	0.001	0.0751	mg/L	0.001	0.0451	mg/L	0.001	0.073	mg/L	0.001	
Beryllium D-Be	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	
Bismuth D-Bi	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	
Boron D-B	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	0.11	mg/L	0.1	
Cadmium D-Cd	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	
Calcium D-Ca	6.05	mg/L	0.05	5.79	mg/L	0.05	0.66	mg/L	0.05	0.486	mg/L	0.05	
Chromium D-Cr	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	0.0058	mg/L	0.005	0.0078	mg/L	0.005	
Cobalt D-Co	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Copper D-Cu	<0.0010	mg/L	0.001	0.0012	mg/L	0.001	0.0037	mg/L	0.001	0.0015	mg/L	0.001	
Iron D-Fe	<0.030	mg/L	0.03	0.05	mg/L	0.03	0.165	mg/L	0.03	0.177	mg/L	0.03	
Lead D-Pb	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Lithium D-Li	<0.010	mg/L	0.01	0.018	mg/L	0.01	0.044	mg/L	0.01	0.04	mg/L	0.01	
Magnesium D-Mg	4.15	mg/L	0.05	5.09	mg/L	0.05	0.811	mg/L	0.05	0.496	mg/L	0.05	
Manganese D-Mn	0.0048	mg/L	0.001	0.0052	mg/L	0.001	0.0045	mg/L	0.001	0.0023	mg/L	0.001	
Mercury D-Hg	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Molybdenum D-Mo	0.0057	mg/L	0.001	0.0106	mg/L	0.001	0.0108	mg/L	0.001	0.0026	mg/L	0.001	
Nickel D-Ni	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	
Phosphorus D-P	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	
Potassium D-K	<0.50	mg/L	0.5	2.1	mg/L	0.5	1.29	mg/L	0.5	1.8	mg/L	0.5	
Selenium D-Se	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	
Silicon D-Si	1.12	mg/L	0.05	2.05	mg/L	0.05	2.85	mg/L	0.05	2.58	mg/L	0.05	
Silver D-Ag	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	
Sodium D-Na	2.11	mg/L	0.05	17.1	mg/L	0.05	74.6	mg/L	0.05	131	mg/L	0.05	
Strontium D-Sr	0.22	mg/L	0.001	0.347	mg/L	0.001	0.0512	mg/L	0.001	0.0348	mg/L	0.001	
Thallium D-Tl	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Tin D-Sn	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Titanium D-Ti	<0.010	mg/L	0.01	<0.010	mg/L	0.01	0.026	mg/L	0.01	0.025	mg/L	0.01	
Uranium D-U	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	0.00025	mg/L	0.0001	
Vanadium D-V	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	
Zinc D-Zn	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	
Sample Preparation													
Total Volume - In (mL)	500	mL	0	500	mL	0	500	mL	0	500	mL	0	
Total Volume - Out (mL)	475	mL	0	520	mL	0	475	mL	0	500	mL	0	
Physical Tests													
Conductivity (uS/cm)	72.9	uS/cm	2	143	uS/cm	2	327	uS/cm	2	547	uS/cm	2	
pH	7.87	pH	0.1	8.36	pH	0.1	8.69	pH	0.1	8.94	pH	0.1	
Dissolved Anions													
Acidity (to pH 8.3) CaCO3	1	mg/L	1	<1.0	mg/L	1	<1.0	mg/L	1	<1.0	mg/L	1	
Alkalinity-Total CaCO3	32.3	mg/L	1	74.9	mg/L	1	164	mg/L	1	269	mg/L	1	
Sulphate SO4	5.12	mg/L	0.5	4.06	mg/L	0.5	8	mg/L	0.5	23.5	mg/L	0.5	

Project	Mt. Klappan Cycle #8	Water Analysis											
Report to	Rescan Environmental Services												
ALS File No.	X7303												
Date Recieved	6/15/2006												
Date	6/29/2006												
RESULTS OF ANALYSIS													
Sample ID	85-027- 17-8	85-027- 24-8				86-035- 07-8				86-035- 09-8			
Date Sampled	6/15/2006	6/15/2006				6/15/2006				6/15/2006			
Time Sampled													
ALS Sample ID	3	4				5				6			
Nature	Water	Water				Water				Water			
		Units	DI		Units	DI		Units	DI		Units	DI	
Dissolved Metals													
Aluminum D-Al	0.082	mg/L	0.01	0.294	mg/L	0.01	1.06	mg/L	0.01	3.77	mg/L	0.01	
Antimony D-Sb	0.0031	mg/L	0.001	0.0028	mg/L	0.001	0.0023	mg/L	0.001	0.0012	mg/L	0.001	
Arsenic D-As	0.0016	mg/L	0.001	0.0024	mg/L	0.001	0.0019	mg/L	0.001	0.0011	mg/L	0.001	
Barium D-Ba	0.0328	mg/L	0.001	0.0695	mg/L	0.001	0.0372	mg/L	0.001	0.0732	mg/L	0.001	
Beryllium D-Be	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	
Bismuth D-Bi	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	
Boron D-B	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	0.12	mg/L	0.1	
Cadmium D-Cd	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	
Calcium D-Ca	5.86	mg/L	0.05	5.17	mg/L	0.05	0.523	mg/L	0.05	0.374	mg/L	0.05	
Chromium D-Cr	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	0.0105	mg/L	0.005	
Cobalt D-Co	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Copper D-Cu	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	0.0012	mg/L	0.001	0.0043	mg/L	0.001	
Iron D-Fe	<0.030	mg/L	0.03	0.035	mg/L	0.03	0.117	mg/L	0.03	0.166	mg/L	0.03	
Lead D-Pb	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Lithium D-Li	<0.010	mg/L	0.01	0.025	mg/L	0.01	0.055	mg/L	0.01	0.049	mg/L	0.01	
Magnesium D-Mg	4.15	mg/L	0.05	4.98	mg/L	0.05	0.697	mg/L	0.05	0.467	mg/L	0.05	
Manganese D-Mn	0.0063	mg/L	0.001	0.0041	mg/L	0.001	0.0043	mg/L	0.001	0.0546	mg/L	0.001	
Mercury D-Hg	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Molybdenum D-Mo	0.0057	mg/L	0.001	0.0128	mg/L	0.001	0.0122	mg/L	0.001	0.0026	mg/L	0.001	
Nickel D-Ni	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	
Phosphorus D-P	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	
Potassium D-K	<0.50	mg/L	0.5	2.26	mg/L	0.5	1.32	mg/L	0.5	1.93	mg/L	0.5	
Selenium D-Se	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	
Silicon D-Si	1.24	mg/L	0.05	1.93	mg/L	0.05	2.59	mg/L	0.05	2.35	mg/L	0.05	
Silver D-Ag	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	
Sodium D-Na	2.76	mg/L	0.05	28	mg/L	0.05	91.5	mg/L	0.05	139	mg/L	0.05	
Strontium D-Sr	0.21	mg/L	0.001	0.312	mg/L	0.001	0.045	mg/L	0.001	0.0302	mg/L	0.001	
Thallium D-Tl	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Tin D-Sn	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Titanium D-Ti	<0.010	mg/L	0.01	<0.010	mg/L	0.01	0.017	mg/L	0.01	0.019	mg/L	0.01	
Uranium D-U	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	0.00027	mg/L	0.0001	
Vanadium D-V	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	
Zinc D-Zn	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	
Physical Tests													
Conductivity (uS/cm)	73.5	uS/cm	2	177	uS/cm	2	371	uS/cm	2	576	uS/cm	2	
pH	7.76	pH	0.1	8.21	pH	0.1	8.83	pH	0.1	9.1	pH	0.1	
Sample Preparation													
Total Volume - In (mL)	500	mL	0	500	mL	0	500	mL	0	500	mL	0	
Total Volume - Out (mL)	470	mL	0	455	mL	0	505	mL	0	410	mL	0	
Dissolved Anions													
Acidity (to pH 8.3) CaCO3	2	mg/L	1	<1.0	mg/L	1	<1.0	mg/L	1	<1.0	mg/L	1	
Alkalinity-Total CaCO3	29.7	mg/L	1	94.8	mg/L	1	201	mg/L	1	288	mg/L	1	
Sulphate SO4	6.06	mg/L	0.5	6.16	mg/L	0.5	8.54	mg/L	0.5	26.5	mg/L	0.5	

Project	Mt. Klappan Cycle #7	Water Analysis																			
Report to	Rescan Environmental Services																				
ALS File No.	X6914																				
Date Recieved	6/8/2006																				
Date	6/22/2006																				
RESULTS OF ANALYSIS																					
Sample ID	85-016- 07-7	85-027- 02-7				85-027- 17-7				85-027- 24-7				86-035- 07-7				86-035- 09-7			
Date Sampled	6/8/2006	6/8/2006				6/8/2006				6/8/2006				6/8/2006				6/8/2006			
Time Sampled																					
ALS Sample ID	1	2				3				4				5				6			
Nature	Water	Water				Water				Water				Water				Water			
		Units	DI		Units	DI		Units	DI		Units	DI		Units	DI		Units	DI			
Dissolved Metals																					
Aluminum D-Al	0.463	mg/L	0.01	3.49	mg/L	0.01	0.134	mg/L	0.01	0.358	mg/L	0.01	1.62	mg/L	0.01	3.29	mg/L	0.01			
Antimony D-Sb	0.0011	mg/L	0.001	0.0019	mg/L	0.001	0.0038	mg/L	0.001	0.0032	mg/L	0.001	0.0034	mg/L	0.001	0.0013	mg/L	0.001			
Arsenic D-As	0.0049	mg/L	0.001	0.0052	mg/L	0.001	0.0014	mg/L	0.001	0.0031	mg/L	0.001	0.0034	mg/L	0.001	0.0022	mg/L	0.001			
Barium D-Ba	0.0287	mg/L	0.001	0.0878	mg/L	0.001	0.04	mg/L	0.001	0.0555	mg/L	0.001	0.0483	mg/L	0.001	0.0716	mg/L	0.001			
Beryllium D-Be	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005			
Bismuth D-Bi	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005			
Boron D-B	0.14	mg/L	0.1	0.12	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	0.11	mg/L	0.1			
Cadmium D-Cd	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005			
Calcium D-Ca	0.327	mg/L	0.05	0.181	mg/L	0.05	6.27	mg/L	0.05	3.62	mg/L	0.05	0.424	mg/L	0.05	0.328	mg/L	0.05			
Chromium D-Cr	<0.0050	mg/L	0.005	0.0051	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	0.0073	mg/L	0.005	0.0092	mg/L	0.005			
Cobalt D-Co	<0.0010	mg/L	0.001	0.0012	mg/L	0.001	0.0011	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001			
Copper D-Cu	0.0039	mg/L	0.001	0.0073	mg/L	0.001	<0.0010	mg/L	0.001	0.001	mg/L	0.001	0.0024	mg/L	0.001	0.0019	mg/L	0.001			
Iron D-Fe	<0.030	mg/L	0.03	0.323	mg/L	0.03	<0.030	mg/L	0.03	0.041	mg/L	0.03	0.202	mg/L	0.03	0.215	mg/L	0.03			
Lead D-Pb	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001			
Lithium D-Li	0.086	mg/L	0.01	0.043	mg/L	0.01	<0.010	mg/L	0.01	0.02	mg/L	0.01	0.05	mg/L	0.01	0.037	mg/L	0.01			
Magnesium D-Mg	0.584	mg/L	0.05	0.984	mg/L	0.05	4.76	mg/L	0.05	3.45	mg/L	0.05	0.649	mg/L	0.05	0.454	mg/L	0.05			
Manganese D-Mn	0.0196	mg/L	0.001	0.0208	mg/L	0.001	0.008	mg/L	0.001	0.0078	mg/L	0.001	0.0086	mg/L	0.001	0.0066	mg/L	0.001			
Mercury D-Hg	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001			
Molybdenum D-Mo	0.0062	mg/L	0.001	0.0189	mg/L	0.001	0.0063	mg/L	0.001	0.0137	mg/L	0.001	0.0161	mg/L	0.001	0.003	mg/L	0.001			
Nickel D-Ni	<0.0050	mg/L	0.005	0.005	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005			
Phosphorus D-P	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3			
Potassium D-K	1.36	mg/L	0.5	2.71	mg/L	0.5	<0.50	mg/L	0.5	2.08	mg/L	0.5	1.49	mg/L	0.5	1.87	mg/L	0.5			
Selenium D-Se	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01			
Silicon D-Si	1.51	mg/L	0.05	5.01	mg/L	0.05	1.38	mg/L	0.05	1.84	mg/L	0.05	3.39	mg/L	0.05	3.58	mg/L	0.05			
Silver D-Ag	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001			
Sodium D-Na	169	mg/L	0.05	111	mg/L	0.05	3.69	mg/L	0.05	33.8	mg/L	0.05	107	mg/L	0.05	142	mg/L	0.05			
Strontium D-Sr	0.0531	mg/L	0.001	0.0434	mg/L	0.001	0.229	mg/L	0.001	0.217	mg/L	0.001	0.0425	mg/L	0.001	0.0291	mg/L	0.001			
Thallium D-Tl	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001			
Tin D-Sn	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001			
Titanium D-Ti	<0.010	mg/L	0.01	0.047	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	0.028	mg/L	0.01	0.037	mg/L	0.01			
Uranium D-U	0.00094	mg/L	0.0001	0.00027	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	0.00015	mg/L	0.0001	0.00031	mg/L	0.0001			
Vanadium D-V	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01			
Zinc D-Zn	<0.0050	mg/L	0.005	0.0062	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005			
Physical Tests																					
Conductivity (uS/cm)	701	uS/cm	2	464	uS/cm	2	86.7	uS/cm	2	187	uS/cm	2	432	uS/cm	2	597	uS/cm	2			
pH	8.98	pH	0.1	8.72	pH	0.1	7.93	pH	0.1	8.49	pH	0.1	8.85	pH	0.1	9.04	pH	0.1			
Sample Preparation																					
Total Volume - In (mL)	500	mL	0	500	mL	0	500	mL	0	500	mL	0	500	mL	0	500	mL	0			
Total Volume - Out (mL)	520	mL	0	500	mL	0	520	mL	0	520	mL	0	505	mL	0	425	mL	0			
Dissolved Anions																					
Acidity (to pH 8.3) CaCO3	<1.0	mg/L	1	<1.0	mg/L	1	4.7	mg/L	1	<1.0	mg/L	1	<1.0	mg/L	1	<1.0	mg/L	1			
Alkalinity-Total CaCO3	349	mg/L	2	200	mg/L	2	38.6	mg/L	2	98.3	mg/L	2	233	mg/L	2	290	mg/L	1			
Sulphate SO4	33.4	mg/L	0.5	43.8	mg/L	0.5	7.19	mg/L	0.5	6.39	mg/L	0.5	10.5	mg/L	0.5	25.7	mg/L	5			

Project	Mt. Klappan Cycle #12	Water Analysis													
Report to	Rescan Environmental Services														
ALS Fle No.	X6913														
Date Recieved	6/8/2006														
Date	6/29/2006														
RESULTS OF ANALYSIS															
Sample ID	ARD3-14B -12			ARD1-15 -12				ARD2-12 -12				ARD2-07 -12			DUMP-2.5 M-12
Date Sampled	6/8/2006			6/8/2006				6/8/2006				6/8/2006			6/8/2006
Time Sampled															
ALS Sample ID	3			4				5				9			10
Nature	Water			Water				Water				Water			Water
		Units	DI		Units	DI			Units	DI			Units	DI	
Dissolved Metals															
Aluminum D-Al	0.495	mg/L	0.01	0.106	mg/L	0.01	<0.010	mg/L	0.01	0.023	mg/L	0.01	0.014	mg/L	0.01
Antimony D-Sb	0.0031	mg/L	0.001	0.0057	mg/L	0.001	0.0011	mg/L	0.001	0.0022	mg/L	0.001	<0.0010	mg/L	0.001
Arsenic D-As	<0.0010	mg/L	0.001	0.0078	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Barium D-Ba	0.0173	mg/L	0.001	0.0797	mg/L	0.001	0.0317	mg/L	0.001	0.0905	mg/L	0.001	0.0074	mg/L	0.001
Beryllium D-Be	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Bismuth D-Bi	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Boron D-B	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1
Cadmium D-Cd	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005
Calcium D-Ca	0.28	mg/L	0.05	7.68	mg/L	0.05	121	mg/L	0.05	5.78	mg/L	0.05	3.48	mg/L	0.05
Chromium D-Cr	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Cobalt D-Co	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	0.001	mg/L	0.001	<0.0010	mg/L	0.001
Copper D-Cu	0.001	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Iron D-Fe	0.042	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03
Lead D-Pb	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Lithium D-Li	0.051	mg/L	0.01	<0.010	mg/L	0.01	0.012	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01
Magnesium D-Mg	0.193	mg/L	0.05	8.64	mg/L	0.05	53.5	mg/L	0.05	15.7	mg/L	0.05	13.1	mg/L	0.05
Manganese D-Mn	<0.0010	mg/L	0.001	0.0015	mg/L	0.001	0.217	mg/L	0.001	0.0151	mg/L	0.001	<0.0010	mg/L	0.001
Mercury D-Hg	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Molybdenum D-Mo	0.0542	mg/L	0.001	0.0149	mg/L	0.001	<0.0010	mg/L	0.001	0.0291	mg/L	0.001	0.0019	mg/L	0.001
Nickel D-Ni	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	0.0095	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Phosphorus D-P	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3
Potassium D-K	0.63	mg/L	0.5	0.83	mg/L	0.5	1.27	mg/L	0.5	2.69	mg/L	0.5	<0.50	mg/L	0.5
Selenium D-Se	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01
Silicon D-Si	1.66	mg/L	0.05	1.55	mg/L	0.05	0.499	mg/L	0.05	1.06	mg/L	0.05	1.14	mg/L	0.05
Silver D-Ag	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001
Sodium D-Na	109	mg/L	2	1.09	mg/L	0.05	1.53	mg/L	0.05	1.56	mg/L	0.05	0.21	mg/L	0.05
Strontium D-Sr	0.0283	mg/L	0.001	0.238	mg/L	0.001	1.71	mg/L	0.001	0.451	mg/L	0.001	0.0344	mg/L	0.001
Thallium D-Tl	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Tin D-Sn	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Titanium D-Ti	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01
Uranium D-U	0.00046	mg/L	0.0001	0.00015	mg/L	0.0001	<0.00010	mg/L	0.0001	0.00011	mg/L	0.0001	<0.00010	mg/L	0.0001
Vanadium D-V	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01
Zinc D-Zn	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Physical Tests															
Conductivity (uS/cm)	451	uS/cm	2	115	uS/cm	2	876	uS/cm	2	185	uS/cm	2	119	uS/cm	2
pH	8.71	pH	0.1	7.97	pH	0.1	8.13	pH	0.1	8	pH	0.1	8.02	pH	0.1
Sample Preparation															
Total Volume - In (mL)	500	mL	0	500	mL	0	500	mL	0	500	mL	0	500	mL	0
Total Volume - Out (mL)	495	mL	0	490	mL	0	495	mL	0	470	mL	0	470	mL	0
Dissolved Anions															
Acidity (to pH 8.3) CaCO3	<1.0	mg/L	1	1.4	mg/L	1	3.6	mg/L	1	3	mg/L	1	2.6	mg/L	1
Alkalinity-Total CaCO3	201	mg/L	1	57.7	mg/L	2	152	mg/L	2	66.8	mg/L	2	75.3	mg/L	2
Sulphate SO4	29.5	mg/L	5	8.27	mg/L	0.5	379	mg/L	2.5	22.9	mg/L	5	1.67	mg/L	0.5

Project	Mt. Klappan Cycle #6	Water Analysis																	
Report to	Rescan Environmental Services																		
ALS File No.	X6562																		
Date Recieved	6/1/2006																		
Date	6/22/2006																		
RESULTS OF ANALYSIS																			
Sample ID	85-016- 07-6	85-027- 02-6				85-027- 17-6				85-027- 24-6				86-035- 07-6				86-035- 09-6	
Date Sampled	6/1/2006	6/1/2006				6/1/2006				6/1/2006				6/1/2006				6/1/2006	
Time Sampled																			
ALS Sample ID	1	2				3				4				5				6	
Nature	Water	Water				Water				Water				Water				Water	
		Units	DI		Units	DI		Units	DI		Units	DI		Units	DI		Units	DI	
Dissolved Metals																			
Aluminum D-Al	1.2	mg/L	0.01	2.6	mg/L	0.01	0.08	mg/L	0.01	0.441	mg/L	0.01	1.31	mg/L	0.01	3	mg/L	0.01	
Antimony D-Sb	0.0014	mg/L	0.001	0.0031	mg/L	0.001	0.0036	mg/L	0.001	0.0042	mg/L	0.001	0.0041	mg/L	0.001	0.0013	mg/L	0.001	
Arsenic D-As	<0.0010	mg/L	0.001	0.0012	mg/L	0.001	0.0018	mg/L	0.001	0.0036	mg/L	0.001	0.0032	mg/L	0.001	0.0012	mg/L	0.001	
Barium D-Ba	0.0367	mg/L	0.001	0.0706	mg/L	0.001	0.0323	mg/L	0.001	0.0454	mg/L	0.001	0.0427	mg/L	0.001	0.0669	mg/L	0.001	
Beryllium D-Be	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	
Bismuth D-Bi	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	
Boron D-B	0.11	mg/L	0.1	0.13	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	0.13	mg/L	0.1	
Cadmium D-Cd	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	
Calcium D-Ca	0.337	mg/L	0.05	0.184	mg/L	0.05	5.26	mg/L	0.05	2.8	mg/L	0.05	0.446	mg/L	0.05	0.378	mg/L	0.05	
Chromium D-Cr	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	0.006	mg/L	0.005	0.0087	mg/L	0.005	
Cobalt D-Co	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Copper D-Cu	0.0022	mg/L	0.001	0.0051	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	0.0019	mg/L	0.001	0.0018	mg/L	0.001	
Iron D-Fe	0.094	mg/L	0.03	0.245	mg/L	0.03	<0.030	mg/L	0.03	0.038	mg/L	0.03	0.153	mg/L	0.03	0.176	mg/L	0.03	
Lead D-Pb	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Lithium D-Li	0.108	mg/L	0.01	0.063	mg/L	0.01	<0.010	mg/L	0.01	0.025	mg/L	0.01	0.064	mg/L	0.01	0.047	mg/L	0.01	
Magnesium D-Mg	0.534	mg/L	0.05	0.885	mg/L	0.05	3.85	mg/L	0.05	2.66	mg/L	0.05	0.59	mg/L	0.05	0.433	mg/L	0.05	
Manganese D-Mn	0.0031	mg/L	0.001	0.0037	mg/L	0.001	0.0079	mg/L	0.001	0.0026	mg/L	0.001	0.0039	mg/L	0.001	0.0082	mg/L	0.001	
Mercury D-Hg	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Molybdenum D-Mo	0.0083	mg/L	0.001	0.029	mg/L	0.001	0.0074	mg/L	0.001	0.0196	mg/L	0.001	0.0222	mg/L	0.001	0.0037	mg/L	0.001	
Nickel D-Ni	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	
Phosphorus D-P	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	
Potassium D-K	1.54	mg/L	0.5	2.41	mg/L	0.5	<0.50	mg/L	0.5	2.07	mg/L	0.5	1.39	mg/L	0.5	1.81	mg/L	0.5	
Selenium D-Se	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	
Silicon D-Si	2.61	mg/L	0.05	4.64	mg/L	0.05	1.22	mg/L	0.05	2.09	mg/L	0.05	2.95	mg/L	0.05	3.19	mg/L	0.05	
Silver D-Ag	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	
Sodium D-Na	180	mg/L	0.05	139	mg/L	0.05	4.59	mg/L	0.05	48.4	mg/L	0.05	121	mg/L	0.05	152	mg/L	0.05	
Strontium D-Sr	0.0519	mg/L	0.001	0.0448	mg/L	0.001	0.189	mg/L	0.001	0.165	mg/L	0.001	0.0418	mg/L	0.001	0.0292	mg/L	0.001	
Thallium D-Tl	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Tin D-Sn	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Titanium D-Ti	0.014	mg/L	0.01	0.042	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	0.019	mg/L	0.01	0.03	mg/L	0.01	
Uranium D-U	0.00097	mg/L	0.0001	0.0003	mg/L	0.0001	<0.00010	mg/L	0.0001	0.00011	mg/L	0.0001	0.00019	mg/L	0.0001	0.00036	mg/L	0.0001	
Vanadium D-V	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	
Zinc D-Zn	<0.0050	mg/L	0.005	0.0062	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	
Physical Tests																			
Conductivity (uS/cm)	735	uS/cm	2	571	uS/cm	2	77.6	uS/cm	2	227	uS/cm	2	478	uS/cm	2	621	uS/cm	2	
pH	8.93	pH	0.1	8.83	pH	0.1	7.87	pH	0.1	8.52	pH	0.1	8.88	pH	0.1	9.07	pH	0.1	
Sample Preparation																			
Total Volume - In (mL)	500	mL	0	500	mL	0	500	mL	0	500	mL	0	500	mL	0	500	mL	0	
Total Volume - Out (mL)	440	mL	0	430	mL	0	440	mL	0	460	mL	0	440	mL	0	420	mL	0	
Dissolved Anions																			
Acidity (to pH 8.3) CaCO3	<1.0	mg/L	1	<1.0	mg/L	1	4.9	mg/L	1	<1.0	mg/L	1	<1.0	mg/L	1	<1.0	mg/L	1	
Alkalinity-Total CaCO3	354	mg/L	1	234	mg/L	1	31.8	mg/L	1	126	mg/L	1	263	mg/L	1	297	mg/L	1	
Sulphate SO4	50	mg/L	1	66.8	mg/L	1	8.5	mg/L	1	9.3	mg/L	1	12.3	mg/L	1	44.1	mg/L	1	

Project	Mt. Klappan Cycle #11	Water Analysis													
Report to	Rescan Environmental Services														
ALS File No.	X6561														
Date Recieved	6/1/2006														
Date	6/22/2006														
RESULTS OF ANALYSIS															
Sample ID	ARD3-14B -11			ARD1-15 -11				ARD2-12 -11				ARD2-07 -11			DUMP-2.5 M-11
Date Sampled	6/1/2006			6/1/2006				6/1/2006				6/1/2006			6/1/2006
Time Sampled															
ALS Sample ID	3			4				5				9			10
Nature	Water			Water				Water				Water			Water
		Units	DI		Units	DI			Units	DI			Units	DI	
Dissolved Metals															
Aluminum D-Al	0.723	mg/L	0.01	0.132	mg/L	0.01	<0.010	mg/L	0.01	0.025	mg/L	0.01	0.018	mg/L	0.01
Antimony D-Sb	0.0036	mg/L	0.001	0.0063	mg/L	0.001	0.001	mg/L	0.001	0.0024	mg/L	0.001	<0.0010	mg/L	0.001
Arsenic D-As	<0.0010	mg/L	0.001	0.0102	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Barium D-Ba	0.0195	mg/L	0.001	0.0758	mg/L	0.001	0.0231	mg/L	0.001	0.088	mg/L	0.001	0.0077	mg/L	0.001
Beryllium D-Be	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Bismuth D-Bi	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Boron D-B	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1
Cadmium D-Cd	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005
Calcium D-Ca	0.267	mg/L	0.05	8.14	mg/L	0.05	101	mg/L	0.05	6.13	mg/L	0.05	3.69	mg/L	0.05
Chromium D-Cr	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Cobalt D-Co	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	0.0013	mg/L	0.001	<0.0010	mg/L	0.001
Copper D-Cu	0.0011	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Iron D-Fe	0.05	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03
Lead D-Pb	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Lithium D-Li	0.067	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01
Magnesium D-Mg	0.332	mg/L	0.05	9.15	mg/L	0.05	44.6	mg/L	0.05	17.4	mg/L	0.05	13.6	mg/L	0.05
Manganese D-Mn	0.0012	mg/L	0.001	0.0026	mg/L	0.001	0.22	mg/L	0.001	0.0179	mg/L	0.001	<0.0010	mg/L	0.001
Mercury D-Hg	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Molybdenum D-Mo	0.072	mg/L	0.001	0.0187	mg/L	0.001	<0.0010	mg/L	0.001	0.0335	mg/L	0.001	0.0019	mg/L	0.001
Nickel D-Ni	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	0.0098	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Phosphorus D-P	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3
Potassium D-K	0.71	mg/L	0.5	0.95	mg/L	0.5	1.3	mg/L	0.5	3	mg/L	0.5	<0.50	mg/L	0.5
Selenium D-Se	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01
Silicon D-Si	1.96	mg/L	0.05	1.81	mg/L	0.05	0.439	mg/L	0.05	1.13	mg/L	0.05	1.2	mg/L	0.05
Silver D-Ag	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001
Sodium D-Na	123	mg/L	0.05	1.3	mg/L	0.05	1.56	mg/L	0.05	1.89	mg/L	0.05	0.224	mg/L	0.05
Strontium D-Sr	0.0282	mg/L	0.001	0.247	mg/L	0.001	1.45	mg/L	0.001	0.498	mg/L	0.001	0.0341	mg/L	0.001
Thallium D-Tl	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Tin D-Sn	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Titanium D-Ti	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01
Uranium D-U	0.00061	mg/L	0.0001	0.00014	mg/L	0.0001	<0.00010	mg/L	0.0001	0.00012	mg/L	0.0001	<0.00010	mg/L	0.0001
Vanadium D-V	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01
Zinc D-Zn	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	0.0061	mg/L	0.005	<0.0050	mg/L	0.005
Physical Tests															
Conductivity (uS/cm)	489	uS/cm	2	117	uS/cm	2	709	uS/cm	2	196	uS/cm	2	118	uS/cm	2
pH	8.75	pH	0.1	8.04	pH	0.1	8.04	pH	0.1	8.05	pH	0.1	8.04	pH	0.1
Sample Preparation															
Total Volume - In (mL)	500	mL	0	500	mL	0	500	mL	0	500	mL	0	500	mL	0
Total Volume - Out (mL)	430	mL	0	480	mL	0	475	mL	0	480	mL	0	430	mL	0
Dissolved Anions															
Acidity (to pH 8.3) CaCO3	<1.0	mg/L	1	3.1	mg/L	1	5.3	mg/L	1	2.5	mg/L	1	2.5	mg/L	1
Alkalinity-Total CaCO3	217	mg/L	1	49.8	mg/L	1	118	mg/L	1	66.3	mg/L	1	63.4	mg/L	1
Sulphate SO4	48	mg/L	1	8.9	mg/L	1	286	mg/L	1	33	mg/L	1	2.8	mg/L	1

Project	Mt. Klappan Cycle #5	Water Analysis																	
Report to	Rescan Environmental Services																		
ALS File No.	X6197																		
Date Recieved	5/25/2006																		
Date	6/15/2006																		
RESULTS OF ANALYSIS																			
Sample ID	85-016- 07-5	85-027- 02-5				85-027- 17-5				85-027- 24-5				86-035- 07-5				86-035- 09-5	
Date Sampled	5/25/2006	5/25/2006				5/25/2006				5/25/2006				5/25/2006				5/25/2006	
Time Sampled																			
ALS Sample ID	1	2				3				4				5				6	
Nature	Water	Water				Water				Water				Water				Water	
		Units	DI		Units	DI		Units	DI		Units	DI		Units	DI		Units	DI	
Dissolved Metals																			
Aluminum D-Al	3.72	mg/L	0.01	4.55	mg/L	0.01	0.169	mg/L	0.01	0.647	mg/L	0.01	2.02	mg/L	0.01	4.21	mg/L	0.01	
Antimony D-Sb	0.0017	mg/L	0.001	0.0035	mg/L	0.001	0.0041	mg/L	0.001	0.005	mg/L	0.001	0.0048	mg/L	0.001	0.0014	mg/L	0.001	
Arsenic D-As	<0.0010	mg/L	0.001	0.0013	mg/L	0.001	0.0023	mg/L	0.001	0.0054	mg/L	0.001	0.0046	mg/L	0.001	0.0012	mg/L	0.001	
Barium D-Ba	0.0641	mg/L	0.001	0.113	mg/L	0.001	0.0372	mg/L	0.001	0.0418	mg/L	0.001	0.0515	mg/L	0.001	0.0851	mg/L	0.001	
Beryllium D-Be	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	
Bismuth D-Bi	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	
Boron D-B	0.13	mg/L	0.1	0.14	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	0.13	mg/L	0.1	
Cadmium D-Cd	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	
Calcium D-Ca	0.253	mg/L	0.05	0.19	mg/L	0.05	5.09	mg/L	0.05	1.99	mg/L	0.05	0.381	mg/L	0.05	0.373	mg/L	0.05	
Chromium D-Cr	<0.0050	mg/L	0.005	0.0061	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	0.0094	mg/L	0.005	0.0118	mg/L	0.005	
Cobalt D-Co	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Copper D-Cu	0.0037	mg/L	0.001	0.0083	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	0.002	mg/L	0.001	0.0014	mg/L	0.001	
Iron D-Fe	0.257	mg/L	0.03	0.391	mg/L	0.03	<0.030	mg/L	0.03	0.068	mg/L	0.03	0.22	mg/L	0.03	0.24	mg/L	0.03	
Lead D-Pb	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Lithium D-Li	0.091	mg/L	0.01	0.06	mg/L	0.01	<0.010	mg/L	0.01	0.021	mg/L	0.01	0.063	mg/L	0.01	0.046	mg/L	0.01	
Magnesium D-Mg	0.54	mg/L	0.05	1.02	mg/L	0.05	3.87	mg/L	0.05	1.92	mg/L	0.05	0.547	mg/L	0.05	0.473	mg/L	0.05	
Manganese D-Mn	0.0029	mg/L	0.001	0.0036	mg/L	0.001	0.0077	mg/L	0.001	0.002	mg/L	0.001	0.0039	mg/L	0.001	0.0022	mg/L	0.001	
Mercury D-Hg	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Molybdenum D-Mo	0.0094	mg/L	0.001	0.0382	mg/L	0.001	0.0087	mg/L	0.001	0.0261	mg/L	0.001	0.029	mg/L	0.001	0.0045	mg/L	0.001	
Nickel D-Ni	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	
Phosphorus D-P	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	
Potassium D-K	1.97	mg/L	0.5	3.03	mg/L	0.5	<0.50	mg/L	0.5	2	mg/L	0.5	1.52	mg/L	0.5	2	mg/L	0.5	
Selenium D-Se	<0.010	mg/L	0.01	0.011	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	0.011	mg/L	0.01	<0.010	mg/L	0.01	
Silicon D-Si	4.53	mg/L	0.05	5.35	mg/L	0.05	1.49	mg/L	0.05	2.41	mg/L	0.05	4.17	mg/L	0.05	3.35	mg/L	0.05	
Silver D-Ag	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	
Sodium D-Na	158	mg/L	0.05	144	mg/L	0.05	6.4	mg/L	0.05	60.3	mg/L	0.05	124	mg/L	0.05	155	mg/L	0.05	
Strontium D-Sr	0.0421	mg/L	0.001	0.0478	mg/L	0.001	0.201	mg/L	0.001	0.125	mg/L	0.001	0.0378	mg/L	0.001	0.0328	mg/L	0.001	
Thallium D-Tl	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Tin D-Sn	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Titanium D-Ti	0.029	mg/L	0.01	0.049	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	0.026	mg/L	0.01	0.031	mg/L	0.01	
Uranium D-U	0.00087	mg/L	0.0001	0.00041	mg/L	0.0001	<0.00010	mg/L	0.0001	0.00016	mg/L	0.0001	0.00022	mg/L	0.0001	0.00044	mg/L	0.0001	
Vanadium D-V	<0.010	mg/L	0.01	0.01	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	
Zinc D-Zn	0.0066	mg/L	0.005	0.0103	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	
Physical Tests																			
Conductivity (uS/cm)	681	uS/cm	2	652	uS/cm	2	88.6	uS/cm	2	286	uS/cm	2	529	uS/cm	2	706	uS/cm	2	
pH	8.99	pH	0.1	8.9	pH	0.1	7.97	pH	0.1	8.73	pH	0.1	9.01	pH	0.1	9.13	pH	0.1	
Sample Preparation																			
Total Volume - In (mL)	500	mL	0	500	mL	0	500	mL	0	500	mL	0	500	mL	0	500	mL	0	
Total Volume - Out (mL)	420	mL	0	500	mL	0	455	mL	0	480	mL	0	485	mL	0	505	mL	0	
Dissolved Anions																			
Acidity (to pH 8.3) CaCO3	<1.0	mg/L	1	<1.0	mg/L	1	2.9	mg/L	1	<1.0	mg/L	1	<1.0	mg/L	1	<1.0	mg/L	1	
Alkalinity-Total CaCO3	310	mg/L	1	256	mg/L	1	32.1	mg/L	1	136	mg/L	1	273	mg/L	1	328	mg/L	1	
Sulphate SO4	59.9	mg/L	0.5	89.4	mg/L	0.5	12	mg/L	0.5	15	mg/L	0.5	17	mg/L	0.5	63.1	mg/L	0.5	

Project	Mt. Klappan Cycle #10	Water Analysis													
Report to	Rescan Environmental Services														
ALS File No.	X6196														
Date Recieved	5/25/2006														
Date	6/7/2006														
RESULTS OF ANALYSIS															
Sample ID	ARD3-14B -10			ARD1-15 -10				ARD2-12 -10				ARD2-07 -10			DUMP-2.5 M-10
Date Sampled	5/25/2006			5/25/2006				5/25/2006				5/25/2006			5/25/2006
Time Sampled															
ALS Sample ID	3			4				5				9			10
Nature	Water			Water				Water				Water			Water
		Units	DI		Units	DI			Units	DI			Units	DI	
Dissolved Metals															
Aluminum D-Al	1.2	mg/L	0.01	0.114	mg/L	0.01	<0.010	mg/L	0.01	0.02	mg/L	0.01	0.021	mg/L	0.01
Antimony D-Sb	0.0037	mg/L	0.001	0.007	mg/L	0.001	0.001	mg/L	0.001	0.0025	mg/L	0.001	<0.0010	mg/L	0.001
Arsenic D-As	<0.0010	mg/L	0.001	0.0103	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Barium D-Ba	0.0259	mg/L	0.001	0.0816	mg/L	0.001	0.0295	mg/L	0.001	0.0847	mg/L	0.001	0.0083	mg/L	0.001
Beryllium D-Be	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Bismuth D-Bi	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Boron D-B	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1
Cadmium D-Cd	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005
Calcium D-Ca	0.277	mg/L	0.05	8.06	mg/L	0.05	101	mg/L	0.05	6.02	mg/L	0.05	3.61	mg/L	0.05
Chromium D-Cr	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Cobalt D-Co	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	0.0014	mg/L	0.001	<0.0010	mg/L	0.001
Copper D-Cu	0.0067	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Iron D-Fe	0.09	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03
Lead D-Pb	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Lithium D-Li	0.061	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01
Magnesium D-Mg	0.228	mg/L	0.05	9.96	mg/L	0.05	44.9	mg/L	0.05	17.6	mg/L	0.05	14.4	mg/L	0.05
Manganese D-Mn	0.0018	mg/L	0.001	0.0035	mg/L	0.001	0.229	mg/L	0.001	0.0178	mg/L	0.001	<0.0010	mg/L	0.001
Mercury D-Hg	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Molybdenum D-Mo	0.082	mg/L	0.001	0.0221	mg/L	0.001	<0.0010	mg/L	0.001	0.0352	mg/L	0.001	0.002	mg/L	0.001
Nickel D-Ni	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	0.0106	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Phosphorus D-P	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3
Potassium D-K	0.75	mg/L	0.5	1.03	mg/L	0.5	1.33	mg/L	0.5	3.07	mg/L	0.5	<0.50	mg/L	0.5
Selenium D-Se	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01
Silicon D-Si	2.63	mg/L	0.05	1.83	mg/L	0.05	0.467	mg/L	0.05	1.19	mg/L	0.05	1.22	mg/L	0.05
Silver D-Ag	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001
Sodium D-Na	114	mg/L	0.05	1.49	mg/L	0.05	1.95	mg/L	0.05	2.14	mg/L	0.05	0.227	mg/L	0.05
Strontium D-Sr	0.0297	mg/L	0.001	0.274	mg/L	0.001	1.53	mg/L	0.001	0.507	mg/L	0.001	0.0362	mg/L	0.001
Thallium D-Tl	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Tin D-Sn	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Titanium D-Ti	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01
Uranium D-U	0.00083	mg/L	0.0001	0.00015	mg/L	0.0001	<0.00010	mg/L	0.0001	0.00013	mg/L	0.0001	<0.00010	mg/L	0.0001
Vanadium D-V	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01
Zinc D-Zn	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Physical Tests															
Conductivity (uS/cm)	505	uS/cm	2	125	uS/cm	2	751	uS/cm	2	202	uS/cm	2	122	uS/cm	2
pH	8.9	pH	0.1	8.12	pH	0.1	7.93	pH	0.1	8.12	pH	0.1	8.13	pH	0.1
Sample Preparation															
Total Volume - In (mL)	500	mL	0	500	mL	0	500	mL	0	500	mL	0	500	mL	0
Total Volume - Out (mL)	485	mL	0	490	mL	0	490	mL	0	500	mL	0	490	mL	0
Dissolved Anions															
Acidity (to pH 8.3) CaCO3	<1.0	mg/L	1	3.2	mg/L	1	3.8	mg/L	1	2.5	mg/L	1	2	mg/L	1
Alkalinity-Total CaCO3	199	mg/L	1	54.9	mg/L	1	126	mg/L	1	68.4	mg/L	1	62	mg/L	1
Sulphate SO4	55.1	mg/L	1	11.5	mg/L	1	343	mg/L	5	37.6	mg/L	0.5	2.89	mg/L	0.5

Project	Mt. Klappan Cycle #4	Water Analysis																			
Report to	Rescan Environmental Services																				
ALS File No.	X5928																				
Date Recieved	5/18/2006																				
Date	6/2/2006																				
RESULTS OF ANALYSIS																					
Sample ID	85-016- 07-4	85-027- 02-4				85-027- 17-4				85-027- 24-4				86-035- 07-4				86-035- 09-4			
Date Sampled	5/18/2006	5/18/2006				5/18/2006				5/18/2006				5/18/2006				5/18/2006			
Time Sampled																					
ALS Sample ID	1	2				3				4				5				6			
Nature	Water	Water				Water				Water				Water				Water			
		Units	DI		Units	DI		Units	DI		Units	DI		Units	DI		Units	DI			
Dissolved Metals																					
Aluminum D-Al	3.71	mg/L	0.01	3.14	mg/L	0.01	0.141	mg/L	0.01	0.68	mg/L	0.01	1.72	mg/L	0.01	2.98	mg/L	0.01			
Antimony D-Sb	0.0019	mg/L	0.001	0.004	mg/L	0.001	0.0045	mg/L	0.001	0.0062	mg/L	0.001	0.006	mg/L	0.001	0.0016	mg/L	0.001			
Arsenic D-As	<0.0010	mg/L	0.001	0.0013	mg/L	0.001	0.0023	mg/L	0.001	0.0074	mg/L	0.001	0.0056	mg/L	0.001	0.0012	mg/L	0.001			
Barium D-Ba	0.0631	mg/L	0.001	0.0841	mg/L	0.001	0.0405	mg/L	0.001	0.0371	mg/L	0.001	0.0461	mg/L	0.001	0.0714	mg/L	0.001			
Beryllium D-Be	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005			
Bismuth D-Bi	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005			
Boron D-B	0.15	mg/L	0.1	0.19	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	0.11	mg/L	0.1	0.17	mg/L	0.1			
Cadmium D-Cd	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005			
Calcium D-Ca	0.235	mg/L	0.05	0.221	mg/L	0.05	5.12	mg/L	0.05	1.8	mg/L	0.05	0.308	mg/L	0.05	0.364	mg/L	0.05			
Chromium D-Cr	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	0.0074	mg/L	0.005	0.0075	mg/L	0.005			
Cobalt D-Co	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001			
Copper D-Cu	0.003	mg/L	0.001	0.0039	mg/L	0.001	<0.0010	mg/L	0.001	0.0018	mg/L	0.001	0.0016	mg/L	0.001	0.0015	mg/L	0.001			
Iron D-Fe	0.249	mg/L	0.03	0.277	mg/L	0.03	<0.030	mg/L	0.03	0.058	mg/L	0.03	0.177	mg/L	0.03	0.192	mg/L	0.03			
Lead D-Pb	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001			
Lithium D-Li	0.103	mg/L	0.01	0.08	mg/L	0.01	0.011	mg/L	0.01	0.022	mg/L	0.01	0.073	mg/L	0.01	0.05	mg/L	0.01			
Magnesium D-Mg	0.448	mg/L	0.05	1.06	mg/L	0.05	3.87	mg/L	0.05	1.73	mg/L	0.05	0.447	mg/L	0.05	0.413	mg/L	0.05			
Manganese D-Mn	0.0033	mg/L	0.001	0.0035	mg/L	0.001	0.0096	mg/L	0.001	0.0019	mg/L	0.001	0.0033	mg/L	0.001	0.0021	mg/L	0.001			
Mercury D-Hg	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001			
Molybdenum D-Mo	0.0127	mg/L	0.001	0.052	mg/L	0.001	0.0103	mg/L	0.001	0.0352	mg/L	0.001	0.0424	mg/L	0.001	0.0063	mg/L	0.001			
Nickel D-Ni	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005			
Phosphorus D-P	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3			
Potassium D-K	1.89	mg/L	0.5	2.73	mg/L	0.5	0.53	mg/L	0.5	1.98	mg/L	0.5	1.4	mg/L	0.5	1.57	mg/L	0.5			
Selenium D-Se	<0.010	mg/L	0.01	0.013	mg/L	0.01	<0.010	mg/L	0.01	0.013	mg/L	0.01	0.014	mg/L	0.01	<0.010	mg/L	0.01			
Silicon D-Si	5.23	mg/L	0.05	5.91	mg/L	0.05	1.43	mg/L	0.05	2.35	mg/L	0.05	3.84	mg/L	0.05	4.76	mg/L	0.05			
Silver D-Ag	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001			
Sodium D-Na	169	mg/L	0.05	178	mg/L	0.05	9.94	mg/L	0.05	77.1	mg/L	0.05	139	mg/L	0.05	164	mg/L	0.05			
Strontium D-Sr	0.0392	mg/L	0.001	0.0567	mg/L	0.001	0.192	mg/L	0.001	0.105	mg/L	0.001	0.0324	mg/L	0.001	0.0306	mg/L	0.001			
Thallium D-Tl	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001			
Tin D-Sn	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001			
Titanium D-Ti	0.032	mg/L	0.01	0.048	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	0.021	mg/L	0.01	0.042	mg/L	0.01			
Uranium D-U	0.00112	mg/L	0.0001	0.00054	mg/L	0.0001	<0.00010	mg/L	0.0001	0.00022	mg/L	0.0001	0.00026	mg/L	0.0001	0.00061	mg/L	0.0001			
Vanadium D-V	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01			
Zinc D-Zn	0.0069	mg/L	0.005	0.0066	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005			
Physical Tests																					
Conductivity (uS/cm)	741	uS/cm	2	809	uS/cm	2	106	uS/cm	2	348	uS/cm	2	594	uS/cm	2	768	uS/cm	2			
pH	8.96	pH	0.1	8.82	pH	0.1	7.85	pH	0.1	8.77	pH	0.1	8.9	pH	0.1	9.02	pH	0.1			
Sample Preparation																					
Total Volume - In (mL)	500	mL	0	500	mL	0	500	mL	0	500	mL	0	500	mL	0	500	mL	0			
Total Volume - Out (mL)	480	mL	0	430	mL	0	505	mL	0	435	mL	0	520	mL	0	415	mL	0			
Dissolved Anions																					
Acidity (to pH 8.3) CaCO3	<1.0	mg/L	1	<1.0	mg/L	1	1.2	mg/L	1	<1.0	mg/L	1	<1.0	mg/L	1	<1.0	mg/L	1			
Alkalinity-Total CaCO3	322	mg/L	2	292	mg/L	2	35.6	mg/L	2	171	mg/L	2	320	mg/L	2	331	mg/L	2			
Sulphate SO4	76.3	mg/L	1	134	mg/L	1	16	mg/L	1	20.9	mg/L	1	22.8	mg/L	1	78.7	mg/L	1			

Project	Mt. Klappan Cycle #9	Water Analysis													
Report to	Rescan Environmental Services														
ALS File No.	X5927														
Date Recieved	5/18/2006														
Date	6/2/2006														
RESULTS OF ANALYSIS															
Sample ID	ARD3-14B -9			ARD1-15 -9				ARD2-12 -9				ARD2-07 -9			DUMP-2.5 M-9
Date Sampled	5/18/2006			5/18/2006				5/18/2006				5/18/2006			5/18/2006
Time Sampled															
ALS Sample ID	3			4				5				9			10
Nature	Water			Water				Water				Water			Water
		Units	DI		Units	DI			Units	DI			Units	DI	
Dissolved Metals															
Aluminum D-Al	1.13	mg/L	0.01	0.122	mg/L	0.01	<0.010	mg/L	0.01	0.023	mg/L	0.01	0.015	mg/L	0.01
Antimony D-Sb	0.0046	mg/L	0.001	0.0067	mg/L	0.001	0.0011	mg/L	0.001	0.0029	mg/L	0.001	<0.0010	mg/L	0.001
Arsenic D-As	<0.0010	mg/L	0.001	0.0126	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Barium D-Ba	0.0297	mg/L	0.001	0.0719	mg/L	0.001	0.0309	mg/L	0.001	0.114	mg/L	0.001	0.0086	mg/L	0.001
Beryllium D-Be	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Bismuth D-Bi	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Boron D-B	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1
Cadmium D-Cd	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005
Calcium D-Ca	0.317	mg/L	0.05	7.15	mg/L	0.05	101	mg/L	0.05	6.14	mg/L	0.05	3.59	mg/L	0.05
Chromium D-Cr	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Cobalt D-Co	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	0.0013	mg/L	0.001	<0.0010	mg/L	0.001
Copper D-Cu	0.0016	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Iron D-Fe	0.083	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03
Lead D-Pb	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Lithium D-Li	0.074	mg/L	0.01	<0.010	mg/L	0.01	0.01	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01
Magnesium D-Mg	0.222	mg/L	0.05	8.26	mg/L	0.05	44.4	mg/L	0.05	16.9	mg/L	0.05	13.5	mg/L	0.05
Manganese D-Mn	0.0011	mg/L	0.001	0.0026	mg/L	0.001	0.252	mg/L	0.001	0.0159	mg/L	0.001	0.0013	mg/L	0.001
Mercury D-Hg	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Molybdenum D-Mo	0.101	mg/L	0.001	0.0227	mg/L	0.001	<0.0010	mg/L	0.001	0.038	mg/L	0.001	0.0022	mg/L	0.001
Nickel D-Ni	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	0.0118	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Phosphorus D-P	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3
Potassium D-K	0.7	mg/L	0.5	0.94	mg/L	0.5	1.36	mg/L	0.5	3.23	mg/L	0.5	<0.50	mg/L	0.5
Selenium D-Se	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01
Silicon D-Si	2.67	mg/L	0.05	1.88	mg/L	0.05	0.47	mg/L	0.05	1.22	mg/L	0.05	1.2	mg/L	0.05
Silver D-Ag	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001
Sodium D-Na	128	mg/L	0.05	1.44	mg/L	0.05	2.43	mg/L	0.05	2.37	mg/L	0.05	0.221	mg/L	0.05
Strontium D-Sr	0.0342	mg/L	0.001	0.239	mg/L	0.001	1.55	mg/L	0.001	0.516	mg/L	0.001	0.036	mg/L	0.001
Thallium D-Tl	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	0.0011	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Tin D-Sn	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Titanium D-Ti	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01
Uranium D-U	0.00121	mg/L	0.0001	0.00016	mg/L	0.0001	<0.00010	mg/L	0.0001	0.00015	mg/L	0.0001	<0.00010	mg/L	0.0001
Vanadium D-V	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01
Zinc D-Zn	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	0.0058	mg/L	0.005	<0.0050	mg/L	0.005
Physical Tests															
Conductivity (uS/cm)	606	uS/cm	2	119	uS/cm	2	794	uS/cm	2	208	uS/cm	2	124	uS/cm	2
pH	8.85	pH	0.1	7.99	pH	0.1	8.3	pH	0.1	8.19	pH	0.1	8.07	pH	0.1
Sample Preparation															
Total Volume - In (mL)	500	mL	0	500	mL	0	500	mL	0	500	mL	0	500	mL	0
Total Volume - Out (mL)	310	mL	0	375	mL	0	425	mL	0	475	mL	0	520	mL	0
Dissolved Anions															
Acidity (to pH 8.3) CaCO3	<1.0	mg/L	1	1	mg/L	1	2.5	mg/L	1	1.4	mg/L	1	1.2	mg/L	1
Alkalinity-Total CaCO3	270	mg/L	2	52.7	mg/L	2	137	mg/L	2	80.8	mg/L	2	75	mg/L	2
Sulphate SO4	65.3	mg/L	1	12.3	mg/L	1	355	mg/L	5	35.6	mg/L	1	3.3	mg/L	1

Project	Mt. Klappan Cycle #3	Water Analysis																	
Report to	Rescan Environmental Services																		
ALS Fle No.	X5608r																		
Date Recieved	5/11/2006																		
Date	12/5/2006																		
RESULTS OF ANALYSIS																			
Sample ID	85-016- 07-3	85-027- 02-3				85-027- 17-3				85-027- 24-3				86-035- 07-3				86-035- 09-3	
Date Sampled	5/11/2006	5/11/2006				5/11/2006				5/11/2006				5/11/2006				5/11/2006	
Time Sampled																			
ALS Sample ID	1	2				3				4				5				6	
Nature	Water	Water				Water				Water				Water				Water	
		Units	DI		Units	DI		Units	DI		Units	DI		Units	DI		Units	DI	
Dissolved Metals																			
Aluminum D-Al	2.45	mg/L	0.01	1.16	mg/L	0.01	0.095	mg/L	0.01	0.705	mg/L	0.01	2.08	mg/L	0.01	3.35	mg/L	0.01	
Antimony D-Sb	0.0026	mg/L	0.001	0.0048	mg/L	0.001	0.0049	mg/L	0.001	0.0055	mg/L	0.001	0.0083	mg/L	0.001	0.0025	mg/L	0.001	
Arsenic D-As	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	0.0031	mg/L	0.001	0.009	mg/L	0.001	0.0092	mg/L	0.001	0.0015	mg/L	0.001	
Barium D-Ba	0.0474	mg/L	0.001	0.0452	mg/L	0.001	0.0375	mg/L	0.001	0.0233	mg/L	0.001	0.053	mg/L	0.001	0.08	mg/L	0.001	
Beryllium D-Be	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	
Bismuth D-Bi	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	
Boron D-B	0.14	mg/L	0.1	0.18	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	0.16	mg/L	0.1	
Cadmium D-Cd	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	
Calcium D-Ca	0.247	mg/L	0.05	0.256	mg/L	0.05	4.26	mg/L	0.05	1.07	mg/L	0.05	0.43	mg/L	0.05	0.418	mg/L	0.05	
Chromium D-Cr	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	0.009	mg/L	0.005	0.009	mg/L	0.005	
Cobalt D-Co	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Copper D-Cu	0.0024	mg/L	0.001	0.002	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	0.0022	mg/L	0.001	0.0026	mg/L	0.001	
Iron D-Fe	0.155	mg/L	0.03	0.116	mg/L	0.03	<0.030	mg/L	0.03	0.069	mg/L	0.03	0.169	mg/L	0.03	0.16	mg/L	0.03	
Lead D-Pb	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Lithium D-Li	0.128	mg/L	0.01	0.098	mg/L	0.01	0.014	mg/L	0.01	0.026	mg/L	0.01	0.089	mg/L	0.01	0.072	mg/L	0.01	
Magnesium D-Mg	0.42	mg/L	0.05	1.03	mg/L	0.05	3.11	mg/L	0.05	0.939	mg/L	0.05	0.536	mg/L	0.05	0.49	mg/L	0.05	
Manganese D-Mn	0.002	mg/L	0.001	0.0025	mg/L	0.001	0.0078	mg/L	0.001	0.0012	mg/L	0.001	0.0033	mg/L	0.001	0.0017	mg/L	0.001	
Mercury D-Hg	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Molybdenum D-Mo	0.0218	mg/L	0.001	0.0837	mg/L	0.001	0.0129	mg/L	0.001	0.0486	mg/L	0.001	0.0804	mg/L	0.001	0.0109	mg/L	0.001	
Nickel D-Ni	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	
Phosphorus D-P	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	
Potassium D-K	1.77	mg/L	0.5	2.36	mg/L	0.5	0.6	mg/L	0.5	1.7	mg/L	0.5	1.6	mg/L	0.5	2.09	mg/L	0.5	
Selenium D-Se	<0.010	mg/L	0.01	0.02	mg/L	0.01	<0.010	mg/L	0.01	0.017	mg/L	0.01	0.022	mg/L	0.01	<0.010	mg/L	0.01	
Silicon D-Si	3.42	mg/L	0.05	3.66	mg/L	0.05	1.43	mg/L	0.05	2.35	mg/L	0.05	3.61	mg/L	0.05	2.59	mg/L	0.05	
Silver D-Ag	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	
Sodium D-Na	201	mg/L	0.05	207	mg/L	0.05	15.4	mg/L	0.05	77.8	mg/L	0.05	164	mg/L	0.05	224	mg/L	0.05	
Strontium D-Sr	0.0456	mg/L	0.001	0.0706	mg/L	0.001	0.169	mg/L	0.001	0.0601	mg/L	0.001	0.0432	mg/L	0.001	0.042	mg/L	0.001	
Thallium D-Tl	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Tin D-Sn	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Titanium D-Ti	<0.010	mg/L	0.01	0.012	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	
Uranium D-U	0.00134	mg/L	0.0001	0.00071	mg/L	0.0001	<0.00010	mg/L	0.0001	0.00023	mg/L	0.0001	0.00044	mg/L	0.0001	0.00115	mg/L	0.0001	
Vanadium D-V	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	
Zinc D-Zn	0.0052	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	
Physical Tests																			
Conductivity (uS/cm)	830	uS/cm	2	933	uS/cm	2	122	uS/cm	2	350	uS/cm	2	679	uS/cm	2	990	uS/cm	2	
pH	8.94	pH	0.1	8.73	pH	0.1	7.95	pH	0.1	9.02	pH	0.1	8.97	pH	0.1	9.16	pH	0.1	
Sample Preparation																			
Total Volume - In (mL)	500	mL	0	500	mL	0	500	mL	0	500	mL	0	500	mL	0	500	mL	0	
Total Volume - Out (mL)	465	mL	0	470	mL	0	455	mL	0	430	mL	0	480	mL	0	445	mL	0	
Dissolved Anions																			
Acidity (to pH 8.3) CaCO3	<1.0	mg/L	1	<1.0	mg/L	1	1.2	mg/L	1	<1.0	mg/L	1	<1.0	mg/L	1	<1.0	mg/L	1	
Alkalinity-Total CaCO3	341	mg/L	2	297	mg/L	2	32.5	mg/L	2	156	mg/L	2	345	mg/L	2	386	mg/L	2	
Sulphate SO4	98.2	mg/L	1	183	mg/L	1	25.8	mg/L	1	26.6	mg/L	1	34.4	mg/L	1	127	mg/L	1	

Project	Mt. Klappan Cycle #3	Water Analysis																	
Report to	Rescan Environmental Services																		
ALS File No.	X5608																		
Date Recieved	5/11/2006																		
Date	5/24/2006																		
RESULTS OF ANALYSIS																			
Sample ID	85-016- 07-3	85-027- 02-3				85-027- 17-3				85-027- 24-3				86-035- 07-3				86-035- 09-3	
Date Sampled	5/11/2006	5/11/2006				5/11/2006				5/11/2006				5/11/2006				5/11/2006	
Time Sampled																			
ALS Sample ID	1	2				3				4				5				6	
Nature	Water	Water				Water				Water				Water				Water	
		Units	DI		Units	DI		Units	DI		Units	DI		Units	DI		Units	DI	
Dissolved Metals																			
Aluminum D-Al	2.45	mg/L	0.01	1.16	mg/L	0.01	0.095	mg/L	0.01	0.705	mg/L	0.01	2.08	mg/L	0.01	3.35	mg/L	0.01	
Antimony D-Sb	0.0026	mg/L	0.001	0.0048	mg/L	0.001	0.0049	mg/L	0.001	0.0055	mg/L	0.001	0.0083	mg/L	0.001	0.0025	mg/L	0.001	
Arsenic D-As	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	0.0031	mg/L	0.001	0.009	mg/L	0.001	0.0092	mg/L	0.001	0.0015	mg/L	0.001	
Barium D-Ba	0.0474	mg/L	0.001	0.0452	mg/L	0.001	0.0375	mg/L	0.001	0.0233	mg/L	0.001	0.053	mg/L	0.001	0.08	mg/L	0.001	
Beryllium D-Be	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	
Bismuth D-Bi	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	
Boron D-B	0.14	mg/L	0.1	0.18	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	0.16	mg/L	0.1	
Cadmium D-Cd	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	
Calcium D-Ca	0.247	mg/L	0.05	0.256	mg/L	0.05	4.26	mg/L	0.05	1.07	mg/L	0.05	0.43	mg/L	0.05	0.418	mg/L	0.05	
Chromium D-Cr	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	0.009	mg/L	0.005	0.009	mg/L	0.005	
Cobalt D-Co	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Copper D-Cu	0.0024	mg/L	0.001	0.002	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	0.0022	mg/L	0.001	0.0026	mg/L	0.001	
Iron D-Fe	0.155	mg/L	0.03	0.116	mg/L	0.03	<0.030	mg/L	0.03	0.069	mg/L	0.03	0.169	mg/L	0.03	0.16	mg/L	0.03	
Lead D-Pb	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Lithium D-Li	0.128	mg/L	0.01	0.098	mg/L	0.01	0.014	mg/L	0.01	0.026	mg/L	0.01	0.089	mg/L	0.01	0.072	mg/L	0.01	
Magnesium D-Mg	0.42	mg/L	0.05	1.03	mg/L	0.05	3.11	mg/L	0.05	0.939	mg/L	0.05	0.536	mg/L	0.05	0.49	mg/L	0.05	
Manganese D-Mn	0.002	mg/L	0.001	0.0025	mg/L	0.001	0.0078	mg/L	0.001	0.0012	mg/L	0.001	0.0033	mg/L	0.001	0.0017	mg/L	0.001	
Mercury D-Hg	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Molybdenum D-Mo	0.0218	mg/L	0.001	0.0837	mg/L	0.001	0.0129	mg/L	0.001	0.0486	mg/L	0.001	0.0804	mg/L	0.001	0.0109	mg/L	0.001	
Nickel D-Ni	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	
Phosphorus D-P	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	
Potassium D-K	1.77	mg/L	0.5	2.36	mg/L	0.5	0.6	mg/L	0.5	1.7	mg/L	0.5	1.6	mg/L	0.5	2.09	mg/L	0.5	
Selenium D-Se	<0.010	mg/L	0.01	0.02	mg/L	0.01	<0.010	mg/L	0.01	0.017	mg/L	0.01	0.022	mg/L	0.01	<0.010	mg/L	0.01	
Silicon D-Si	3.42	mg/L	0.05	3.66	mg/L	0.05	1.43	mg/L	0.05	2.35	mg/L	0.05	3.61	mg/L	0.05	2.59	mg/L	0.05	
Silver D-Ag	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	
Sodium D-Na	201	mg/L	0.05	207	mg/L	0.05	15.4	mg/L	0.05	77.8	mg/L	0.05	164	mg/L	0.05	224	mg/L	0.05	
Strontium D-Sr	0.0456	mg/L	0.001	0.0706	mg/L	0.001	0.169	mg/L	0.001	0.0601	mg/L	0.001	0.0432	mg/L	0.001	0.042	mg/L	0.001	
Thallium D-Tl	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Tin D-Sn	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Titanium D-Ti	<0.010	mg/L	0.01	0.012	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	
Uranium D-U	0.00134	mg/L	0.0001	0.00071	mg/L	0.0001	<0.00010	mg/L	0.0001	0.00023	mg/L	0.0001	0.00044	mg/L	0.0001	0.00115	mg/L	0.0001	
Vanadium D-V	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	
Zinc D-Zn	0.0052	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	
Physical Tests																			
Conductivity (uS/cm)	830	uS/cm	2	933	uS/cm	2	122	uS/cm	2	350	uS/cm	2	679	uS/cm	2	990	uS/cm	2	
pH	8.94	pH	0.1	8.73	pH	0.1	7.95	pH	0.1	9.02	pH	0.1	8.97	pH	0.1	9.16	pH	0.1	
Sample Preparation																			
Total Volume - In (mL)	500	mL	0	500	mL	0	500	mL	0	500	mL	0	500	mL	0	500	mL	0	
Total Volume - Out (mL)	465	mL	0	470	mL	0	455	mL	0	430	mL	0	480	mL	0	445	mL	0	
Dissolved Anions																			
Acidity (to pH 8.3) CaCO3	<1.0	mg/L	1	<1.0	mg/L	1	1.2	mg/L	1	<1.0	mg/L	1	<1.0	mg/L	1	<1.0	mg/L	1	
Alkalinity-Total CaCO3	341	mg/L	2	297	mg/L	2	32.5	mg/L	2	156	mg/L	2	345	mg/L	2	386	mg/L	2	
Sulphate SO4	98.2	mg/L	1	183	mg/L	1	25.8	mg/L	1	26.6	mg/L	1	34.4	mg/L	1	127	mg/L	1	

Project	Mt. Klappan Cycle #8	Water Analysis															
Report to	Rescan Environmental Services																
ALS File No.	X5607																
Date Recieved	5/11/2006																
Date	5/24/2006																
RESULTS OF ANALYSIS																	
Sample ID	ARD3-14B -8	ARD1-15 -8				ARD2-12 -8				ARD2-07 -8				DUMP-2.5 M-8			
Date Sampled	5/11/2006	5/11/2006				5/11/2006				5/11/2006				5/11/2006			
Time Sampled																	
ALS Sample ID	3	4				5				9				10			
Nature	Water	Water				Water				Water				Water			
		Units	DI		Units	DI		Units	DI		Units	DI		Units	DI		
Dissolved Metals																	
Aluminum D-Al	0.602	mg/L	0.01	0.119	mg/L	0.01	<0.010	mg/L	0.01	0.03	mg/L	0.01	0.02	mg/L	0.01		
Antimony D-Sb	0.005	mg/L	0.001	0.0074	mg/L	0.001	0.0011	mg/L	0.001	0.0032	mg/L	0.001	<0.0010	mg/L	0.001		
Arsenic D-As	<0.0010	mg/L	0.001	0.0111	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001		
Barium D-Ba	0.0175	mg/L	0.001	0.0689	mg/L	0.001	0.0292	mg/L	0.001	0.0726	mg/L	0.001	0.0082	mg/L	0.001		
Beryllium D-Be	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005		
Bismuth D-Bi	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005		
Boron D-B	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1		
Cadmium D-Cd	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005		
Calcium D-Ca	0.233	mg/L	0.05	7.46	mg/L	0.05	117	mg/L	0.05	5.73	mg/L	0.05	3.69	mg/L	0.05		
Chromium D-Cr	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005		
Cobalt D-Co	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	0.0014	mg/L	0.001	0.0013	mg/L	0.001	<0.0010	mg/L	0.001		
Copper D-Cu	0.0013	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001		
Iron D-Fe	0.04	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03		
Lead D-Pb	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001		
Lithium D-Li	0.072	mg/L	0.01	<0.010	mg/L	0.01	0.015	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01		
Magnesium D-Mg	0.144	mg/L	0.05	9.52	mg/L	0.05	52.5	mg/L	0.05	16.4	mg/L	0.05	13.9	mg/L	0.05		
Manganese D-Mn	<0.0010	mg/L	0.001	0.0038	mg/L	0.001	0.321	mg/L	0.001	0.015	mg/L	0.001	<0.0010	mg/L	0.001		
Mercury D-Hg	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001		
Molybdenum D-Mo	0.0963	mg/L	0.001	0.0258	mg/L	0.001	<0.0010	mg/L	0.001	0.0389	mg/L	0.001	0.0022	mg/L	0.001		
Nickel D-Ni	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	0.017	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005		
Phosphorus D-P	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3		
Potassium D-K	0.6	mg/L	0.5	1.11	mg/L	0.5	1.65	mg/L	0.5	3.15	mg/L	0.5	<0.50	mg/L	0.5		
Selenium D-Se	<0.010	mg/L	0.01	0.011	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01		
Silicon D-Si	1.95	mg/L	0.05	1.88	mg/L	0.05	0.496	mg/L	0.05	1.29	mg/L	0.05	1.41	mg/L	0.05		
Silver D-Ag	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001		
Sodium D-Na	125	mg/L	0.05	1.79	mg/L	0.05	4.15	mg/L	0.05	2.65	mg/L	0.05	0.214	mg/L	0.05		
Strontium D-Sr	0.0234	mg/L	0.001	0.26	mg/L	0.001	1.76	mg/L	0.001	0.48	mg/L	0.001	0.0353	mg/L	0.001		
Thallium D-Tl	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	0.0011	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001		
Tin D-Sn	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001		
Titanium D-Ti	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01		
Uranium D-U	0.00087	mg/L	0.0001	0.00016	mg/L	0.0001	<0.00010	mg/L	0.0001	0.00016	mg/L	0.0001	<0.00010	mg/L	0.0001		
Vanadium D-V	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01		
Zinc D-Zn	<0.0050	mg/L	0.005	0.008	mg/L	0.005	<0.0050	mg/L	0.005	0.0052	mg/L	0.005	<0.0050	mg/L	0.005		
Physical Tests																	
Conductivity (uS/cm)	514	uS/cm	2	125	uS/cm	2	841	uS/cm	2	202	uS/cm	2	124	uS/cm	2		
pH	8.93	pH	0.1	8.14	pH	0.1	8.27	pH	0.1	8.1	pH	0.1	8.11	pH	0.1		
Sample Preparation																	
Total Volume - In (mL)	500	mL	0	500	mL	0	500	mL	0	500	mL	0	500	mL	0		
Total Volume - Out (mL)	430	mL	0	430	mL	0	420	mL	0	460	mL	0	405	mL	0		
Dissolved Anions																	
Acidity (to pH 8.3) CaCO3	<1.0	mg/L	1	1.4	mg/L	1	2.9	mg/L	1	1.5	mg/L	1	1.3	mg/L	1		
Alkalinity-Total CaCO3	231	mg/L	2	50.1	mg/L	2	112	mg/L	2	67.7	mg/L	2	69.1	mg/L	2		
Sulphate SO4	38.8	mg/L	1	13.4	mg/L	1	382	mg/L	5	40.3	mg/L	1	3.6	mg/L	1		

Project	Mt. Klappan Cycle #2	Water Analysis																	
Report to	Rescan Environmental Services																		
ALS Fle No.	X5264																		
Date Recieved	5/4/2006																		
Date	5/23/2006																		
RESULTS OF ANALYSIS																			
Sample ID	85-016- 07-2	85-027- 02-2				85-027- 17-2				85-027- 24-2				86-035- 07-2				86-035- 09-2	
Date Sampled	5/4/2006	5/4/2006				5/4/2006				5/4/2006				5/4/2006				5/4/2006	
Time Sampled																			
ALS Sample ID	1	2				3				4				5				6	
Nature	Water	Water				Water				Water				Water				Water	
		Units	DI		Units	DI		Units	DI		Units	DI		Units	DI		Units	DI	
Dissolved Metals																			
Aluminum D-Al	1.95	mg/L	0.01	1.14	mg/L	0.01	0.159	mg/L	0.01	0.591	mg/L	0.01	0.997	mg/L	0.01	2.64	mg/L	0.01	
Antimony D-Sb	0.0028	mg/L	0.001	0.0051	mg/L	0.001	0.0056	mg/L	0.001	0.0072	mg/L	0.001	0.0096	mg/L	0.001	0.0024	mg/L	0.001	
Arsenic D-As	0.0016	mg/L	0.001	0.0018	mg/L	0.001	0.004	mg/L	0.001	0.0134	mg/L	0.001	0.0095	mg/L	0.001	0.0021	mg/L	0.001	
Barium D-Ba	0.0453	mg/L	0.001	0.0446	mg/L	0.001	0.0509	mg/L	0.001	0.0217	mg/L	0.001	0.0346	mg/L	0.001	0.0708	mg/L	0.001	
Beryllium D-Be	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	
Bismuth D-Bi	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	
Boron D-B	0.18	mg/L	0.1	0.23	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	0.14	mg/L	0.1	0.2	mg/L	0.1	
Cadmium D-Cd	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	
Calcium D-Ca	0.307	mg/L	0.05	0.229	mg/L	0.05	4.97	mg/L	0.05	1.06	mg/L	0.05	0.254	mg/L	0.05	0.447	mg/L	0.05	
Chromium D-Cr	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	0.0071	mg/L	0.005	
Cobalt D-Co	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	0.0011	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Copper D-Cu	0.0027	mg/L	0.001	0.0021	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	0.0018	mg/L	0.001	0.0019	mg/L	0.001	
Iron D-Fe	0.113	mg/L	0.03	0.094	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	0.095	mg/L	0.03	0.111	mg/L	0.03	
Lead D-Pb	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Lithium D-Li	0.152	mg/L	0.01	0.121	mg/L	0.01	0.022	mg/L	0.01	0.028	mg/L	0.01	0.099	mg/L	0.01	0.077	mg/L	0.01	
Magnesium D-Mg	0.49	mg/L	0.05	1.18	mg/L	0.05	4.05	mg/L	0.05	0.998	mg/L	0.05	0.393	mg/L	0.05	0.518	mg/L	0.05	
Manganese D-Mn	0.0022	mg/L	0.001	0.0026	mg/L	0.001	0.0118	mg/L	0.001	0.0011	mg/L	0.001	0.0023	mg/L	0.001	0.0015	mg/L	0.001	
Mercury D-Hg	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Molybdenum D-Mo	0.0391	mg/L	0.001	0.154	mg/L	0.001	0.02	mg/L	0.001	0.123	mg/L	0.001	0.148	mg/L	0.001	0.0181	mg/L	0.001	
Nickel D-Ni	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	
Phosphorus D-P	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	
Potassium D-K	1.8	mg/L	0.5	2.71	mg/L	0.5	0.92	mg/L	0.5	1.94	mg/L	0.5	1.51	mg/L	0.5	2.01	mg/L	0.5	
Selenium D-Se	0.016	mg/L	0.01	0.034	mg/L	0.01	<0.010	mg/L	0.01	0.028	mg/L	0.01	0.032	mg/L	0.01	<0.010	mg/L	0.01	
Silicon D-Si	3.06	mg/L	0.05	3.66	mg/L	0.05	1.45	mg/L	0.05	2.01	mg/L	0.05	2.89	mg/L	0.05	2.23	mg/L	0.05	
Silver D-Ag	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	0.00022	mg/L	0.0001	
Sodium D-Na	227	mg/L	0.05	261	mg/L	0.05	31.6	mg/L	0.05	109	mg/L	0.05	187	mg/L	0.05	244	mg/L	0.05	
Strontium D-Sr	0.0586	mg/L	0.001	0.0844	mg/L	0.001	0.221	mg/L	0.001	0.0677	mg/L	0.001	0.0355	mg/L	0.001	0.045	mg/L	0.001	
Thallium D-Tl	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Tin D-Sn	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Titanium D-Ti	<0.010	mg/L	0.01	0.014	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	0.011	mg/L	0.01	<0.010	mg/L	0.01	
Uranium D-U	0.00172	mg/L	0.0001	0.00101	mg/L	0.0001	<0.00010	mg/L	0.0001	0.00032	mg/L	0.0001	0.00043	mg/L	0.0001	0.0012	mg/L	0.0001	
Vanadium D-V	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	
Zinc D-Zn	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	
Physical Tests																			
Conductivity (uS/cm)	944	uS/cm	2	1120	uS/cm	2	211	uS/cm	2	462	uS/cm	2	748	uS/cm	2	1050	uS/cm	2	
pH	8.9	pH	0.1	8.75	pH	0.1	7.92	pH	0.1	9.05	pH	0.1	8.9	pH	0.1	9.07	pH	0.1	
Sample Preparation																			
Total Volume - In (mL)	500	mL	0	500	mL	0	500	mL	0	500	mL	0	500	mL	0	500	mL	0	
Total Volume - Out (mL)	495	mL	0	415	mL	0	485	mL	0	500	mL	0	330	mL	0	450	mL	0	
Dissolved Anions																			
Acidity (to pH 8.3) CaCO3	<1.0	mg/L	1	<1.0	mg/L	1	1.4	mg/L	1	<1.0	mg/L	1	<1.0	mg/L	1	<1.0	mg/L	1	
Alkalinity-Total CaCO3	364	mg/L	2	313	mg/L	2	39.9	mg/L	2	201	mg/L	2	400	mg/L	2	413	mg/L	2	
Sulphate SO4	128	mg/L	1	269	mg/L	1	60.4	mg/L	1	41.6	mg/L	1	51.7	mg/L	1	119	mg/L	1	

Project	Mt. Klappan Cycle #7	Water Analysis													
Report to	Rescan Environmental Services														
ALS File No.	X5263														
Date Recieved	5/4/2006														
Date	5/18/2006														
RESULTS OF ANALYSIS															
Sample ID	ARD3-14B -7			ARD1-15 -7				ARD2-12 -7				ARD2-07 -7			DUMP-2.5 M-7
Date Sampled	5/4/2006			5/4/2006				5/4/2006				5/4/2006			5/4/2006
Time Sampled															
ALS Sample ID	3			4				5				9			10
Nature	Water			Water				Water				Water			Water
		Units	DI		Units	DI			Units	DI			Units	DI	
Dissolved Metals															
Aluminum D-Al	0.527	mg/L	0.01	0.126	mg/L	0.01	<0.010	mg/L	0.01	0.025	mg/L	0.01	0.016	mg/L	0.01
Antimony D-Sb	0.0057	mg/L	0.001	0.0074	mg/L	0.001	0.0012	mg/L	0.001	0.0036	mg/L	0.001	<0.0010	mg/L	0.001
Arsenic D-As	<0.0010	mg/L	0.001	0.011	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Barium D-Ba	0.0171	mg/L	0.001	0.0777	mg/L	0.001	0.0323	mg/L	0.001	0.132	mg/L	0.001	0.009	mg/L	0.001
Beryllium D-Be	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Bismuth D-Bi	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Boron D-B	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	0.11	mg/L	0.1	<0.10	mg/L	0.1
Cadmium D-Cd	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005
Calcium D-Ca	0.21	mg/L	0.05	8.88	mg/L	0.05	104	mg/L	0.05	7.2	mg/L	0.05	3.94	mg/L	0.05
Chromium D-Cr	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Cobalt D-Co	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	0.0017	mg/L	0.001	<0.0010	mg/L	0.001
Copper D-Cu	0.0022	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Iron D-Fe	0.034	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03
Lead D-Pb	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Lithium D-Li	0.072	mg/L	0.01	<0.010	mg/L	0.01	0.014	mg/L	0.01	0.01	mg/L	0.01	<0.010	mg/L	0.01
Magnesium D-Mg	0.156	mg/L	0.05	10.8	mg/L	0.05	47.6	mg/L	0.05	19.4	mg/L	0.05	14.3	mg/L	0.05
Manganese D-Mn	<0.0010	mg/L	0.001	0.0047	mg/L	0.001	0.279	mg/L	0.001	0.0194	mg/L	0.001	0.0032	mg/L	0.001
Mercury D-Hg	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Molybdenum D-Mo	0.114	mg/L	0.001	0.0296	mg/L	0.001	<0.0010	mg/L	0.001	0.0451	mg/L	0.001	0.0024	mg/L	0.001
Nickel D-Ni	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	0.0142	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Phosphorus D-P	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3
Potassium D-K	0.63	mg/L	0.5	1.27	mg/L	0.5	1.75	mg/L	0.5	3.5	mg/L	0.5	<0.50	mg/L	0.5
Selenium D-Se	<0.010	mg/L	0.01	0.012	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01
Silicon D-Si	1.78	mg/L	0.05	1.99	mg/L	0.05	0.567	mg/L	0.05	1.48	mg/L	0.05	1.46	mg/L	0.05
Silver D-Ag	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001
Sodium D-Na	133	mg/L	0.05	2.13	mg/L	0.05	6.51	mg/L	0.05	3.39	mg/L	0.05	0.231	mg/L	0.05
Strontium D-Sr	0.0254	mg/L	0.001	0.296	mg/L	0.001	1.59	mg/L	0.001	0.57	mg/L	0.001	0.0375	mg/L	0.001
Thallium D-Tl	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	0.0011	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Tin D-Sn	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Titanium D-Ti	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01
Uranium D-U	0.00097	mg/L	0.0001	0.00018	mg/L	0.0001	<0.00010	mg/L	0.0001	0.00019	mg/L	0.0001	<0.00010	mg/L	0.0001
Vanadium D-V	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01
Zinc D-Zn	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	0.0103	mg/L	0.005	<0.0050	mg/L	0.005
Physical Tests															
Conductivity (uS/cm)	552	uS/cm	2	131	uS/cm	2	757	uS/cm	2	220	uS/cm	2	121	uS/cm	2
pH	8.92	pH	0.1	8.11	pH	0.1	8.28	pH	0.1	8.15	pH	0.1	8.08	pH	0.1
Sample Preparation															
Total Volume - In (mL)	500	mL	0	500	mL	0	500	mL	0	500	mL	0	500	mL	0
Total Volume - Out (mL)	415	mL	0	485	mL	0	500	mL	0	460	mL	0	510	mL	0
Dissolved Anions															
Acidity (to pH 8.3) CaCO3	<1.0	mg/L	1	<1.0	mg/L	1	2.6	mg/L	1	1.6	mg/L	1	1.3	mg/L	1
Alkalinity-Total CaCO3	259	mg/L	2	58.1	mg/L	2	126	mg/L	2	63.7	mg/L	2	67.4	mg/L	2
Sulphate SO4	31.9	mg/L	1	13.6	mg/L	1	322	mg/L	5	45.8	mg/L	1	3.6	mg/L	1

Project	Mt. Klappan Cycle #1	Water Analysis																	
Report to	Rescan Environmental Services																		
ALS File No.	X5049																		
Date Recieved	4/27/2006																		
Date	5/12/2006																		
RESULTS OF ANALYSIS																			
Sample ID	85-016- 07-1	85-027- 02-1				85-027- 17-1				85-027- 24-1				86-035- 07-1				86-035- 09-1	
Date Sampled	4/27/2006	4/27/2006				4/27/2006				4/27/2006				4/27/2006				4/27/2006	
Time Sampled																			
ALS Sample ID	1	2				3				4				5				6	
Nature	Water	Water				Water				Water				Water				Water	
		Units	DI		Units	DI		Units	DI		Units	DI		Units	DI		Units	DI	
Dissolved Metals																			
Aluminum D-Al	1.15	mg/L	0.01	0.936	mg/L	0.01	0.059	mg/L	0.01	0.73	mg/L	0.01	1.06	mg/L	0.01	1.99	mg/L	0.01	
Antimony D-Sb	0.0041	mg/L	0.001	0.0067	mg/L	0.001	0.0088	mg/L	0.001	0.0101	mg/L	0.001	0.0127	mg/L	0.001	0.0024	mg/L	0.001	
Arsenic D-As	0.002	mg/L	0.001	0.0029	mg/L	0.001	0.0056	mg/L	0.001	0.021	mg/L	0.001	0.013	mg/L	0.001	0.0028	mg/L	0.001	
Barium D-Ba	0.0409	mg/L	0.001	0.0428	mg/L	0.001	0.0329	mg/L	0.001	0.0219	mg/L	0.001	0.0336	mg/L	0.001	0.058	mg/L	0.001	
Beryllium D-Be	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	
Bismuth D-Bi	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	
Boron D-B	0.2	mg/L	0.1	0.23	mg/L	0.1	<0.10	mg/L	0.1	0.11	mg/L	0.1	0.16	mg/L	0.1	0.2	mg/L	0.1	
Cadmium D-Cd	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	
Calcium D-Ca	0.311	mg/L	0.05	0.261	mg/L	0.05	10.1	mg/L	0.05	0.878	mg/L	0.05	0.286	mg/L	0.05	0.422	mg/L	0.05	
Chromium D-Cr	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	0.0057	mg/L	0.005	
Cobalt D-Co	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	0.0032	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Copper D-Cu	0.0046	mg/L	0.001	0.0026	mg/L	0.001	0.0013	mg/L	0.001	<0.0010	mg/L	0.001	0.002	mg/L	0.001	0.0017	mg/L	0.001	
Iron D-Fe	0.075	mg/L	0.03	0.077	mg/L	0.03	<0.030	mg/L	0.03	0.039	mg/L	0.03	0.112	mg/L	0.03	0.124	mg/L	0.03	
Lead D-Pb	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Lithium D-Li	0.201	mg/L	0.01	0.14	mg/L	0.01	0.061	mg/L	0.01	0.029	mg/L	0.01	0.118	mg/L	0.01	0.076	mg/L	0.01	
Magnesium D-Mg	0.495	mg/L	0.05	1.16	mg/L	0.05	8.23	mg/L	0.05	0.833	mg/L	0.05	0.375	mg/L	0.05	0.447	mg/L	0.05	
Manganese D-Mn	0.0019	mg/L	0.001	0.0022	mg/L	0.001	0.0231	mg/L	0.001	<0.0010	mg/L	0.001	0.0021	mg/L	0.001	0.0014	mg/L	0.001	
Mercury D-Hg	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Molybdenum D-Mo	0.0738	mg/L	0.001	0.347	mg/L	0.001	0.0372	mg/L	0.001	0.29	mg/L	0.001	0.258	mg/L	0.001	0.0313	mg/L	0.001	
Nickel D-Ni	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	
Phosphorus D-P	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	
Potassium D-K	1.95	mg/L	0.5	2.96	mg/L	0.5	1.75	mg/L	0.5	2.3	mg/L	0.5	1.57	mg/L	0.5	1.98	mg/L	0.5	
Selenium D-Se	0.03	mg/L	0.01	0.049	mg/L	0.01	0.024	mg/L	0.01	0.052	mg/L	0.01	0.053	mg/L	0.01	<0.010	mg/L	0.01	
Silicon D-Si	3.34	mg/L	0.05	3.8	mg/L	0.05	1.67	mg/L	0.05	2.26	mg/L	0.05	3.18	mg/L	0.05	4.07	mg/L	0.05	
Silver D-Ag	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	
Sodium D-Na	270	mg/L	2	274	mg/L	2	90.1	mg/L	2	137	mg/L	2	187	mg/L	2	225	mg/L	2	
Strontium D-Sr	0.073	mg/L	0.001	0.0948	mg/L	0.001	0.428	mg/L	0.001	0.0596	mg/L	0.001	0.0348	mg/L	0.001	0.0433	mg/L	0.001	
Thallium D-Tl	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Tin D-Sn	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	
Titanium D-Ti	<0.010	mg/L	0.01	0.011	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	0.011	mg/L	0.01	0.031	mg/L	0.01	
Uranium D-U	0.00243	mg/L	0.0001	0.00112	mg/L	0.0001	0.00021	mg/L	0.0001	0.00037	mg/L	0.0001	0.00056	mg/L	0.0001	0.00102	mg/L	0.0001	
Vanadium D-V	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	0.01	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	
Zinc D-Zn	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	
Physical Tests																			
Conductivity (uS/cm)	1190	uS/cm	2	1290	uS/cm	2	520	uS/cm	2	637	uS/cm	2	806	uS/cm	2	985	uS/cm	2	
pH	8.91	pH	0.1	8.81	pH	0.1	8.1	pH	0.1	9.26	pH	0.1	9.01	pH	0.1	9.1	pH	0.1	
Sample Preparation																			
Total Volume - In (mL)	500	mL	0	500	mL	0	500	mL	0	500	mL	0	500	mL	0	500	mL	0	
Total Volume - Out (mL)	415	mL	0	495	mL	0	605	mL	0	470	mL	0	425	mL	0	475	mL	0	
Dissolved Anions																			
Acidity (to pH 8.3) CaCO3	<1.0	mg/L	1	<1.0	mg/L	1	1.1	mg/L	1	<1.0	mg/L	1	<1.0	mg/L	1	<1.0	mg/L	1	
Alkalinity-Total CaCO3	362	mg/L	2	322	mg/L	2	55	mg/L	2	265	mg/L	2	384	mg/L	2	395	mg/L	2	
Sulphate SO4	239	mg/L	1	305	mg/L	5	173	mg/L	1	65.6	mg/L	1	72	mg/L	1	129	mg/L	1	

Project	Mt. Klappan Cycle #6	Water Analysis															
Report to	Rescan Environmental Services																
ALS File No.	X5027																
Date Recieved	4/27/2006																
Date	5/12/2006																
RESULTS OF ANALYSIS																	
Sample ID	ARD3-14B -6	ARD1-15 -6				ARD2-12 -6				ARD2-07 -6				DUMP-2.5 M-6			
Date Sampled	4/27/2006	4/27/2006				4/27/2006				4/27/2006				4/27/2006			
Time Sampled																	
ALS Sample ID	3	4				5				9				10			
Nature	Water	Water				Water				Water				Water			
		Units	DI		Units	DI		Units	DI		Units	DI		Units	DI		
Dissolved Metals																	
Aluminum D-Al	0.978	mg/L	0.01	0.124	mg/L	0.01	<0.010	mg/L	0.01	0.029	mg/L	0.01	0.015	mg/L	0.01		
Antimony D-Sb	0.0075	mg/L	0.001	0.0083	mg/L	0.001	0.0015	mg/L	0.001	0.0037	mg/L	0.001	<0.0010	mg/L	0.001		
Arsenic D-As	<0.0010	mg/L	0.001	0.012	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001		
Barium D-Ba	0.0219	mg/L	0.001	0.0658	mg/L	0.001	0.0369	mg/L	0.001	0.104	mg/L	0.001	0.009	mg/L	0.001		
Beryllium D-Be	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005		
Bismuth D-Bi	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005		
Boron D-B	0.11	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	0.12	mg/L	0.1	<0.10	mg/L	0.1		
Cadmium D-Cd	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005		
Calcium D-Ca	0.201	mg/L	0.05	7.61	mg/L	0.05	120	mg/L	0.05	7.26	mg/L	0.05	3.89	mg/L	0.05		
Chromium D-Cr	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005		
Cobalt D-Co	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	0.0014	mg/L	0.001	0.0018	mg/L	0.001	<0.0010	mg/L	0.001		
Copper D-Cu	0.0013	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001		
Iron D-Fe	0.065	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03		
Lead D-Pb	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001		
Lithium D-Li	0.08	mg/L	0.01	<0.010	mg/L	0.01	0.017	mg/L	0.01	0.01	mg/L	0.01	<0.010	mg/L	0.01		
Magnesium D-Mg	0.202	mg/L	0.05	10.4	mg/L	0.05	59.6	mg/L	0.05	20.7	mg/L	0.05	15.3	mg/L	0.05		
Manganese D-Mn	<0.0010	mg/L	0.001	0.0032	mg/L	0.001	0.369	mg/L	0.001	0.0174	mg/L	0.001	0.0033	mg/L	0.001		
Mercury D-Hg	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001		
Molybdenum D-Mo	0.135	mg/L	0.001	0.0319	mg/L	0.001	<0.0010	mg/L	0.001	0.0431	mg/L	0.001	0.0025	mg/L	0.001		
Nickel D-Ni	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	0.0201	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005		
Phosphorus D-P	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3		
Potassium D-K	0.73	mg/L	0.5	1.35	mg/L	0.5	2.17	mg/L	0.5	3.54	mg/L	0.5	<0.50	mg/L	0.5		
Selenium D-Se	<0.010	mg/L	0.01	0.014	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01		
Silicon D-Si	2.55	mg/L	0.05	1.84	mg/L	0.05	0.597	mg/L	0.05	1.4	mg/L	0.05	1.43	mg/L	0.05		
Silver D-Ag	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001		
Sodium D-Na	141	mg/L	2	2.51	mg/L	0.05	12.7	mg/L	0.05	4.12	mg/L	0.05	0.254	mg/L	0.05		
Strontium D-Sr	0.0268	mg/L	0.001	0.278	mg/L	0.001	1.9	mg/L	0.001	0.58	mg/L	0.001	0.0375	mg/L	0.001		
Thallium D-Tl	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	0.0013	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001		
Tin D-Sn	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001		
Titanium D-Ti	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01		
Uranium D-U	0.00112	mg/L	0.0001	0.00017	mg/L	0.0001	<0.00010	mg/L	0.0001	0.00031	mg/L	0.0001	<0.00010	mg/L	0.0001		
Vanadium D-V	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01		
Zinc D-Zn	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	0.006	mg/L	0.005	<0.0050	mg/L	0.005		
Physical Tests																	
Conductivity (uS/cm)	596	uS/cm	2	135	uS/cm	2	913	uS/cm	2	240	uS/cm	2	131	uS/cm	2		
pH	9	pH	0.1	8.13	pH	0.1	8.24	pH	0.1	8.13	pH	0.1	8.09	pH	0.1		
Sample Preparation																	
Total Volume - In (mL)	500	mL	0	500	mL	0	500	mL	0	500	mL	0	500	mL	0		
Total Volume - Out (mL)	410	mL	0	435	mL	0	420	mL	0	500	mL	0	465	mL	0		
Dissolved Anions																	
Acidity (to pH 8.3) CaCO3	<1.0	mg/L	1	<1.0	mg/L	1	1.4	mg/L	1	1.3	mg/L	1	1.1	mg/L	1		
Alkalinity-Total CaCO3	283	mg/L	2	51.5	mg/L	2	132	mg/L	2	70	mg/L	2	83.2	mg/L	2		
Sulphate SO4	32.8	mg/L	1	15.8	mg/L	1	412	mg/L	5	52.8	mg/L	1	4.7	mg/L	1		

Project	Mt. Klappan Cycle #5	Water Analysis															
Report to	Rescan Environmental Services																
ALS File No.	X4651																
Date Recieved	4/20/2006																
Date	5/5/2006																
RESULTS OF ANALYSIS																	
Sample ID	ARD3-14B -5	ARD1-15 -5				ARD2-12 -5				ARD2-07 -5				DUMP-2.5 M-5			
Date Sampled	4/20/2006	4/20/2006				4/20/2006				4/20/2006				4/20/2006			
Time Sampled																	
ALS Sample ID	3	4				5				9				10			
Nature	Water	Water				Water				Water				Water			
		Units	DI		Units	DI		Units	DI		Units	DI		Units	DI		
Dissolved Metals																	
Aluminum D-Al	0.93	mg/L	0.01	0.125	mg/L	0.01	<0.010	mg/L	0.01	0.027	mg/L	0.01	0.02	mg/L	0.01		
Antimony D-Sb	0.0068	mg/L	0.001	0.0087	mg/L	0.001	0.0015	mg/L	0.001	0.0043	mg/L	0.001	<0.0010	mg/L	0.001		
Arsenic D-As	0.0012	mg/L	0.001	0.012	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001		
Barium D-Ba	0.0195	mg/L	0.001	0.0681	mg/L	0.001	0.0277	mg/L	0.001	0.0554	mg/L	0.001	0.0076	mg/L	0.001		
Beryllium D-Be	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005		
Bismuth D-Bi	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005		
Boron D-B	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	0.14	mg/L	0.1	<0.10	mg/L	0.1		
Cadmium D-Cd	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005		
Calcium D-Ca	0.135	mg/L	0.05	8.56	mg/L	0.05	138	mg/L	0.05	8.42	mg/L	0.05	3.91	mg/L	0.05		
Chromium D-Cr	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005		
Cobalt D-Co	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	0.002	mg/L	0.001	0.002	mg/L	0.001	<0.0010	mg/L	0.001		
Copper D-Cu	0.0014	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001		
Iron D-Fe	0.063	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03		
Lead D-Pb	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001		
Lithium D-Li	0.079	mg/L	0.01	<0.010	mg/L	0.01	0.025	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01		
Magnesium D-Mg	0.16	mg/L	0.05	11	mg/L	0.05	67.2	mg/L	0.05	24.8	mg/L	0.05	13.8	mg/L	0.05		
Manganese D-Mn	<0.0010	mg/L	0.001	0.0033	mg/L	0.001	0.459	mg/L	0.001	0.0179	mg/L	0.001	0.0016	mg/L	0.001		
Mercury D-Hg	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001		
Molybdenum D-Mo	0.141	mg/L	0.001	0.0344	mg/L	0.001	<0.0010	mg/L	0.001	0.0497	mg/L	0.001	0.0025	mg/L	0.001		
Nickel D-Ni	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	0.0285	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005		
Phosphorus D-P	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3		
Potassium D-K	0.63	mg/L	0.5	1.51	mg/L	0.5	2.33	mg/L	0.5	4.04	mg/L	0.5	<0.50	mg/L	0.5		
Selenium D-Se	<0.010	mg/L	0.01	0.02	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01		
Silicon D-Si	2.15	mg/L	0.05	1.62	mg/L	0.05	0.512	mg/L	0.05	1.25	mg/L	0.05	1.21	mg/L	0.05		
Silver D-Ag	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001		
Sodium D-Na	141	mg/L	2	3.12	mg/L	0.05	20.7	mg/L	0.05	5.74	mg/L	0.05	0.216	mg/L	0.05		
Strontium D-Sr	0.0179	mg/L	0.001	0.276	mg/L	0.001	2.01	mg/L	0.001	0.642	mg/L	0.001	0.0322	mg/L	0.001		
Thallium D-Tl	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	0.0017	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001		
Tin D-Sn	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001		
Titanium D-Ti	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01		
Uranium D-U	0.00092	mg/L	0.0001	0.00018	mg/L	0.0001	<0.00010	mg/L	0.0001	0.00046	mg/L	0.0001	<0.00010	mg/L	0.0001		
Vanadium D-V	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01		
Zinc D-Zn	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	0.0057	mg/L	0.005	<0.0050	mg/L	0.005		
Physical Tests																	
Conductivity (uS/cm)	536	uS/cm	2	143	uS/cm	2	1040	uS/cm	2	287	uS/cm	2	121	uS/cm	2		
pH	8.98	pH	0.1	8.1	pH	0.1	8	pH	0.1	8.11	pH	0.1	8.1	pH	0.1		
Sample Preparation																	
Total Volume - In (mL)	500	mL	0	500	mL	0	500	mL	0	500	mL	0	500	mL	0		
Total Volume - Out (mL)	445	mL	0	430	mL	0	450	mL	0	480	mL	0	455	mL	0		
Dissolved Anions																	
Acidity (to pH 8.3) CaCO3	<1.0	mg/L	1	1.8	mg/L	1	4.3	mg/L	1	2.3	mg/L	1	1.6	mg/L	1		
Alkalinity-Total CaCO3	244	mg/L	2	59.5	mg/L	2	121	mg/L	2	71.5	mg/L	2	61.8	mg/L	2		
Sulphate SO4	34.3	mg/L	1	18.1	mg/L	1	516	mg/L	10	81.4	mg/L	1	5.1	mg/L	1		

Project	Mt. Klappan Cycle #4	Water Analysis															
Report to	Rescan Environmental Services																
ALS File No.	X4432																
Date Recieved	4/13/2006																
Date	5/2/2006																
RESULTS OF ANALYSIS																	
Sample ID	ARD3-14B -4	ARD1-15 -4				ARD2-12 -4				ARD2-07 -4				DUMP-2.5 M-4			
Date Sampled	4/13/2006	4/13/2006				4/13/2006				4/13/2006				4/13/2006			
Time Sampled																	
ALS Sample ID	3	4				5				9				10			
Nature	Water	Water				Water				Water				Water			
		Units	DI		Units	DI		Units	DI		Units	DI		Units	DI		
Dissolved Metals																	
Aluminum D-Al	1.43	mg/L	0.01	0.116	mg/L	0.01	<0.010	mg/L	0.01	0.033	mg/L	0.01	0.015	mg/L	0.01		
Antimony D-Sb	0.0089	mg/L	0.001	0.0095	mg/L	0.001	0.0015	mg/L	0.001	0.0049	mg/L	0.001	<0.0010	mg/L	0.001		
Arsenic D-As	0.0028	mg/L	0.001	0.0127	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001		
Barium D-Ba	0.0278	mg/L	0.001	0.0631	mg/L	0.001	0.0231	mg/L	0.001	0.0565	mg/L	0.001	0.008	mg/L	0.001		
Beryllium D-Be	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005		
Bismuth D-Bi	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005		
Boron D-B	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	0.13	mg/L	0.1	<0.10	mg/L	0.1		
Cadmium D-Cd	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005		
Calcium D-Ca	0.175	mg/L	0.05	8.29	mg/L	0.05	157	mg/L	0.05	8.01	mg/L	0.05	3.64	mg/L	0.05		
Chromium D-Cr	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005		
Cobalt D-Co	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	0.0025	mg/L	0.001	0.0015	mg/L	0.001	<0.0010	mg/L	0.001		
Copper D-Cu	0.0076	mg/L	0.001	<0.0010	mg/L	0.001	0.0064	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001		
Iron D-Fe	0.069	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03		
Lead D-Pb	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001		
Lithium D-Li	0.097	mg/L	0.01	<0.010	mg/L	0.01	0.03	mg/L	0.01	0.014	mg/L	0.01	<0.010	mg/L	0.01		
Magnesium D-Mg	0.152	mg/L	0.05	12.1	mg/L	0.05	78.1	mg/L	0.05	25.8	mg/L	0.05	14.8	mg/L	0.05		
Manganese D-Mn	<0.0010	mg/L	0.001	0.0035	mg/L	0.001	0.563	mg/L	0.001	0.0122	mg/L	0.001	<0.0010	mg/L	0.001		
Mercury D-Hg	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001		
Molybdenum D-Mo	0.224	mg/L	0.001	0.0399	mg/L	0.001	<0.0010	mg/L	0.001	0.0573	mg/L	0.001	0.0025	mg/L	0.001		
Nickel D-Ni	0.0086	mg/L	0.005	<0.0050	mg/L	0.005	0.0426	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005		
Phosphorus D-P	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3		
Potassium D-K	0.76	mg/L	0.5	1.8	mg/L	0.5	2.72	mg/L	0.5	4.52	mg/L	0.5	<0.50	mg/L	0.5		
Selenium D-Se	<0.010	mg/L	0.01	0.026	mg/L	0.01	<0.010	mg/L	0.01	0.015	mg/L	0.01	<0.010	mg/L	0.01		
Silicon D-Si	2.26	mg/L	0.05	1.98	mg/L	0.05	0.572	mg/L	0.05	1.53	mg/L	0.05	1.47	mg/L	0.05		
Silver D-Ag	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001		
Sodium D-Na	151	mg/L	2	4.12	mg/L	0.05	35.5	mg/L	0.05	7.19	mg/L	0.05	0.236	mg/L	0.05		
Strontium D-Sr	0.025	mg/L	0.001	0.311	mg/L	0.001	2.31	mg/L	0.001	0.689	mg/L	0.001	0.0349	mg/L	0.001		
Thallium D-Tl	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	0.0017	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001		
Tin D-Sn	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001		
Titanium D-Ti	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01		
Uranium D-U	0.00157	mg/L	0.0001	0.00021	mg/L	0.0001	<0.00010	mg/L	0.0001	0.00039	mg/L	0.0001	<0.00010	mg/L	0.0001		
Vanadium D-V	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01		
Zinc D-Zn	0.0062	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005		
Physical Tests																	
Conductivity (uS/cm)	649	uS/cm	2	163	uS/cm	2	1230	uS/cm	2	316	uS/cm	2	130	uS/cm	2		
pH	9.13	pH	0.1	8.13	pH	0.1	8.04	pH	0.1	8.03	pH	0.1	8.09	pH	0.1		
Sample Preparation																	
Total Volume - In (mL)	500	mL	0	500	mL	0	500	mL	0	500	mL	0	500	mL	0		
Total Volume - Out (mL)	430	mL	0	455	mL	0	440	mL	0	495	mL	0	430	mL	0		
Dissolved Anions																	
Acidity (to pH 8.3) CaCO3	<1.0	mg/L	1	1.6	mg/L	1	4.2	mg/L	1	2.2	mg/L	1	1.4	mg/L	1		
Alkalinity-Total CaCO3	291	mg/L	2	66.8	mg/L	2	109	mg/L	2	61.6	mg/L	2	66.9	mg/L	2		
Sulphate SO4	44.8	mg/L	1	22	mg/L	1	658	mg/L	5	98.7	mg/L	1	5.5	mg/L	1		

Project	Mt. Klappan Cycle #3	Water Analysis													
Report to	Rescan Environmental Services														
ALS File No.	X4100														
Date Recieved	4/6/2006														
Date	4/25/2006														
RESULTS OF ANALYSIS															
Sample ID	ARD3-14B -3			ARD1-15 -3				ARD2-12 -3				ARD2-07 -3			DUMP-2.5 M-3
Date Sampled	4/6/2006			4/6/2006				4/6/2006				4/6/2006			4/6/2006
Time Sampled															
ALS Sample ID	3			4				5				9			10
Nature	Water			Water				Water				Water			Water
		Units	DI		Units	DI			Units	DI			Units	DI	
Dissolved Metals															
Aluminum D-Al	1.23	mg/L	0.01	0.12	mg/L	0.01	0.053	mg/L	0.01	0.021	mg/L	0.01	0.027	mg/L	0.01
Antimony D-Sb	0.0101	mg/L	0.001	0.0098	mg/L	0.001	0.0016	mg/L	0.001	0.0052	mg/L	0.001	<0.0010	mg/L	0.001
Arsenic D-As	0.005	mg/L	0.001	0.0141	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Barium D-Ba	0.0238	mg/L	0.001	0.057	mg/L	0.001	0.0172	mg/L	0.001	0.0417	mg/L	0.001	0.0071	mg/L	0.001
Beryllium D-Be	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Bismuth D-Bi	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Boron D-B	<0.10	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	0.13	mg/L	0.1	<0.10	mg/L	0.1
Cadmium D-Cd	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005
Calcium D-Ca	0.127	mg/L	0.05	8.33	mg/L	0.05	271	mg/L	0.05	10	mg/L	0.05	3.22	mg/L	0.05
Chromium D-Cr	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Cobalt D-Co	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	0.0057	mg/L	0.001	0.0036	mg/L	0.001	<0.0010	mg/L	0.001
Copper D-Cu	0.0017	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Iron D-Fe	0.055	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03
Lead D-Pb	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Lithium D-Li	0.086	mg/L	0.01	<0.010	mg/L	0.01	0.051	mg/L	0.01	0.017	mg/L	0.01	<0.010	mg/L	0.01
Magnesium D-Mg	0.142	mg/L	0.05	13.2	mg/L	0.05	131	mg/L	0.05	33.4	mg/L	0.05	14.4	mg/L	0.05
Manganese D-Mn	<0.0010	mg/L	0.001	0.0037	mg/L	0.001	1.15	mg/L	0.001	0.0215	mg/L	0.001	<0.0010	mg/L	0.001
Mercury D-Hg	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Molybdenum D-Mo	0.305	mg/L	0.001	0.0509	mg/L	0.001	<0.0010	mg/L	0.001	0.0554	mg/L	0.001	0.0029	mg/L	0.001
Nickel D-Ni	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	0.0862	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Phosphorus D-P	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3
Potassium D-K	0.71	mg/L	0.5	2.08	mg/L	0.5	3.5	mg/L	0.5	5.08	mg/L	0.5	<0.50	mg/L	0.5
Selenium D-Se	<0.010	mg/L	0.01	0.035	mg/L	0.01	<0.010	mg/L	0.01	0.024	mg/L	0.01	<0.010	mg/L	0.01
Silicon D-Si	1.63	mg/L	0.05	1.99	mg/L	0.05	0.763	mg/L	0.05	1.74	mg/L	0.05	1.42	mg/L	0.05
Silver D-Ag	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001
Sodium D-Na	152	mg/L	2	5.64	mg/L	0.05	79	mg/L	0.05	10	mg/L	0.05	0.235	mg/L	0.05
Strontium D-Sr	0.0217	mg/L	0.001	0.316	mg/L	0.001	3.56	mg/L	0.001	0.811	mg/L	0.001	0.0323	mg/L	0.001
Thallium D-Tl	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	0.0024	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Tin D-Sn	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Titanium D-Ti	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01
Uranium D-U	0.00142	mg/L	0.0001	0.00023	mg/L	0.0001	0.00012	mg/L	0.0001	0.00048	mg/L	0.0001	<0.00010	mg/L	0.0001
Vanadium D-V	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01
Zinc D-Zn	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	0.0069	mg/L	0.005	<0.0050	mg/L	0.005
Physical Tests															
Conductivity (uS/cm)	676	uS/cm	2	177	uS/cm	2	1870	uS/cm	2	388	uS/cm	2	124	uS/cm	2
pH	9.14	pH	0.1	8.22	pH	0.1	7.67	pH	0.1	8	pH	0.1	8.06	pH	0.1
Sample Preparation															
Total Volume - In (mL)	500	mL	0	500	mL	0	500	mL	0	500	mL	0	500	mL	0
Total Volume - Out (mL)	450	mL	0	445	mL	0	430	mL	0	450	mL	0	410	mL	0
Dissolved Anions															
Acidity (to pH 8.3) CaCO3	<1.0	mg/L	1	<1.0	mg/L	1	6.8	mg/L	1	2.4	mg/L	1	1.9	mg/L	1
Alkalinity-Total CaCO3	293	mg/L	2	62.1	mg/L	2	125	mg/L	2	64.4	mg/L	2	70.6	mg/L	2
Sulphate SO4	54.2	mg/L	1	27.9	mg/L	1	1080	mg/L	5	134	mg/L	1	6.8	mg/L	1

Project	Mt. Klappan Cycle #2	Water Analysis													
Report to	Rescan Environmental Services														
ALS File No.	X3793														
Date Recieved	3/30/2006														
Date	4/24/2006														
RESULTS OF ANALYSIS															
Sample ID	ARD3-14B -2			ARD1-15 -2				ARD2-12 -2				ARD2-07 -2			DUMP-2.5 M-2
Date Sampled	3/30/2006			3/30/2006				3/30/2006				3/30/2006			3/30/2006
Time Sampled															
ALS Sample ID	3			4				5				9			10
Nature	Water			Water				Water				Water			Water
		Units	DI		Units	DI			Units	DI			Units	DI	
Dissolved Metals															
Aluminum D-Al	1.62	mg/L	0.01	0.126	mg/L	0.01	<0.010	mg/L	0.01	0.022	mg/L	0.01	0.057	mg/L	0.01
Antimony D-Sb	0.0099	mg/L	0.001	0.0104	mg/L	0.001	0.0011	mg/L	0.001	0.0059	mg/L	0.001	<0.0010	mg/L	0.001
Arsenic D-As	0.0095	mg/L	0.001	0.018	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Barium D-Ba	0.0268	mg/L	0.001	0.0598	mg/L	0.001	0.019	mg/L	0.001	0.0389	mg/L	0.001	0.0074	mg/L	0.001
Beryllium D-Be	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Bismuth D-Bi	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Boron D-B	0.13	mg/L	0.1	<0.10	mg/L	0.1	0.11	mg/L	0.1	0.17	mg/L	0.1	<0.10	mg/L	0.1
Cadmium D-Cd	<0.0015	mg/L	0.0015	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005
Calcium D-Ca	0.132	mg/L	0.05	9.68	mg/L	0.05	381	mg/L	0.05	12.9	mg/L	0.05	3.44	mg/L	0.05
Chromium D-Cr	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005
Cobalt D-Co	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	0.0285	mg/L	0.001	0.0046	mg/L	0.001	<0.0010	mg/L	0.001
Copper D-Cu	0.0019	mg/L	0.001	<0.0010	mg/L	0.001	<0.0020	mg/L	0.002	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Iron D-Fe	0.097	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03
Lead D-Pb	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Lithium D-Li	0.098	mg/L	0.01	0.012	mg/L	0.01	0.133	mg/L	0.01	0.023	mg/L	0.01	<0.010	mg/L	0.01
Magnesium D-Mg	0.124	mg/L	0.05	14.8	mg/L	0.05	260	mg/L	0.05	40.8	mg/L	0.05	12.9	mg/L	0.05
Manganese D-Mn	<0.0010	mg/L	0.001	0.0032	mg/L	0.001	2.54	mg/L	0.001	0.0237	mg/L	0.001	<0.0010	mg/L	0.001
Mercury D-Hg	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Molybdenum D-Mo	0.43	mg/L	0.001	0.0728	mg/L	0.001	<0.0010	mg/L	0.001	0.0579	mg/L	0.001	0.0032	mg/L	0.001
Nickel D-Ni	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	0.258	mg/L	0.005	0.0072	mg/L	0.005	<0.0050	mg/L	0.005
Phosphorus D-P	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3
Potassium D-K	0.75	mg/L	0.5	2.83	mg/L	0.5	5.48	mg/L	0.5	6.44	mg/L	0.5	<0.50	mg/L	0.5
Selenium D-Se	0.014	mg/L	0.01	0.043	mg/L	0.01	0.024	mg/L	0.01	0.045	mg/L	0.01	<0.010	mg/L	0.01
Silicon D-Si	3.83	mg/L	0.05	2.26	mg/L	0.05	0.604	mg/L	0.05	1.93	mg/L	0.05	1.82	mg/L	0.05
Silver D-Ag	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001
Sodium D-Na	149	mg/L	2	8.78	mg/L	0.05	205	mg/L	0.05	15.3	mg/L	0.05	0.263	mg/L	0.05
Strontium D-Sr	0.0191	mg/L	0.001	0.357	mg/L	0.001	6.79	mg/L	0.001	1.02	mg/L	0.001	0.0294	mg/L	0.001
Thallium D-Tl	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	0.0039	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Tin D-Sn	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001
Titanium D-Ti	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01
Uranium D-U	0.00147	mg/L	0.0001	0.00034	mg/L	0.0001	0.0001	mg/L	0.0001	0.0005	mg/L	0.0001	<0.00010	mg/L	0.0001
Vanadium D-V	0.013	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01
Zinc D-Zn	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	0.0066	mg/L	0.005	<0.0050	mg/L	0.005
Physical Tests															
Conductivity (uS/cm)	657	uS/cm	2	210	uS/cm	2	3250	uS/cm	2	476	uS/cm	2	117	uS/cm	2
pH	9.23	pH	0.1	8.53	pH	0.1	7.76	pH	0.1	7.96	pH	0.1	8.06	pH	0.1
Sample Preparation															
Total Volume - In (mL)	500	mL	0	500	mL	0	500	mL	0	500	mL	0	500	mL	0
Total Volume - Out (mL)	280	mL	0	425	mL	0	350	mL	0	445	mL	0	420	mL	0
Dissolved Anions															
Acidity (to pH 8.3) CaCO3	<1.0	mg/L	1	3	mg/L	1	8.6	mg/L	1	3.5	mg/L	1	2	mg/L	1
Alkalinity-Total CaCO3	272	mg/L	2	62.4	mg/L	2	96.6	mg/L	2	68.8	mg/L	2	53.7	mg/L	2
Sulphate SO4	75	mg/L	1	40	mg/L	1	1950	mg/L	5	187	mg/L	1	9.6	mg/L	1

Project	Mt. Klappan Cycle #1																																							
Report to	Rescan Environmental Services																																							
ALS File No.	X3506																																							
Date Received	3/23/2006																																							
Date	4/4/2006																																							
RESULTS OF ANALYSIS																																								
Sample ID	ARD3-07B -1				ARD3-08B -1				ARD3-14B -1				ARD1-15 -1				ARD2-12 -1				019-02 -1				ARD1-06 -1				ARD1-07 -1				ARD2-07 -1				DUMP-2.5 M-1			
Date Sampled	3/23/2006				3/23/2006				3/23/2006				3/23/2006				3/23/2006				3/23/2006				3/23/2006				3/23/2006				3/23/2006							
Time Sampled																																								
ALS Sample ID	1				2				3				4				5				6				7				8				9				10			
Nature	Water				Water				Water				Water				Water				Water				Water				Water				Water							
	Units	DI	Units	DI	Units	DI	Units	DI	Units	DI	Units	DI	Units	DI	Units	DI	Units	DI	Units	DI	Units	DI	Units	DI	Units	DI	Units	DI	Units	DI	Units	DI								
Dissolved Metals																																								
Aluminum D-Al	4.72	mg/L	0.01	36.1	mg/L	0.01	1.22	mg/L	0.01	0.116	mg/L	0.01	0.01	mg/L	0.01	15.4	mg/L	0.01	20.1	mg/L	0.01	14.2	mg/L	0.01	0.03	mg/L	0.01	0.044	mg/L	0.01										
Antimony D-Sb	0.0842	mg/L	0.001	0.0375	mg/L	0.001	0.0163	mg/L	0.001	0.0137	mg/L	0.001	0.0057	mg/L	0.001	0.0336	mg/L	0.001	0.0135	mg/L	0.001	0.0119	mg/L	0.001	0.0101	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001							
Arsenic D-As	0.483	mg/L	0.001	0.0054	mg/L	0.001	0.0192	mg/L	0.001	0.0199	mg/L	0.001	<0.0010	mg/L	0.001	0.0128	mg/L	0.001	0.0181	mg/L	0.001	0.0266	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001							
Barium D-Ba	0.14	mg/L	0.001	0.379	mg/L	0.001	0.0247	mg/L	0.001	0.083	mg/L	0.001	0.0201	mg/L	0.001	0.288	mg/L	0.001	0.429	mg/L	0.001	0.517	mg/L	0.001	0.0517	mg/L	0.001	0.0068	mg/L	0.001	0.0068	mg/L	0.001							
Beryllium D-Be	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005							
Bismuth D-Bi	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005							
Boron D-B	<0.10	mg/L	0.1	0.18	mg/L	0.1	0.12	mg/L	0.1	<0.10	mg/L	0.1	<0.10	mg/L	0.1	0.16	mg/L	0.1	0.13	mg/L	0.1	0.15	mg/L	0.1	0.1	mg/L	0.1	0.22	mg/L	0.1	<0.10	mg/L	0.1							
Cadmium D-Cd	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005	<0.00050	mg/L	0.0005							
Calcium D-Ca	0.186	mg/L	0.05	0.262	mg/L	0.05	0.12	mg/L	0.05	9.42	mg/L	0.05	122	mg/L	0.05	0.445	mg/L	0.05	0.214	mg/L	0.05	0.315	mg/L	0.05	10.6	mg/L	0.05	3.04	mg/L	0.05	3.04	mg/L	0.05							
Chromium D-Cr	0.0122	mg/L	0.005	0.0502	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	0.0179	mg/L	0.005	0.0219	mg/L	0.005	0.0163	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005							
Cobalt D-Co	0.0011	mg/L	0.001	0.0038	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	0.0045	mg/L	0.001	0.0011	mg/L	0.001	0.0077	mg/L	0.001	0.0105	mg/L	0.001	0.0056	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001							
Copper D-Cu	0.0012	mg/L	0.001	0.0068	mg/L	0.001	0.0014	mg/L	0.001	<0.0010	mg/L	0.001	0.0022	mg/L	0.001	0.0043	mg/L	0.001	0.0171	mg/L	0.001	0.0173	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001							
Iron D-Fe	0.29	mg/L	0.03	0.441	mg/L	0.03	0.036	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	0.533	mg/L	0.03	0.925	mg/L	0.03	1.17	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03	<0.030	mg/L	0.03							
Lead D-Pb	0.0012	mg/L	0.001	0.0019	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	0.0031	mg/L	0.001	0.0036	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001							
Lithium D-Li	0.08	mg/L	0.01	0.176	mg/L	0.01	0.105	mg/L	0.01	15.7	mg/L	0.01	0.167	mg/L	0.01	0.118	mg/L	0.01	0.151	mg/L	0.01	0.146	mg/L	0.01	0.027	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01							
Magnesium D-Mg	0.422	mg/L	0.05	1.18	mg/L	0.05	0.116	mg/L	0.05	15.7	mg/L	0.05	75.3	mg/L	0.05	0.989	mg/L	0.05	0.78	mg/L	0.05	0.818	mg/L	0.05	34.1	mg/L	0.05	13.2	mg/L	0.05	13.2	mg/L	0.05							
Manganese D-Mn	0.0071	mg/L	0.001	0.0063	mg/L	0.001	<0.0010	mg/L	0.001	0.0038	mg/L	0.001	0.499	mg/L	0.001	0.0038	mg/L	0.001	0.0062	mg/L	0.001	0.0065	mg/L	0.001	0.0237	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001							
Mercury D-Hg	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001							
Molybdenum D-Mo	0.454	mg/L	0.001	0.0289	mg/L	0.001	0.568	mg/L	0.001	0.101	mg/L	0.001	0.0011	mg/L	0.001	0.0489	mg/L	0.001	0.0438	mg/L	0.001	0.0403	mg/L	0.001	0.056	mg/L	0.001	0.0036	mg/L	0.001	0.0036	mg/L	0.001							
Nickel D-Ni	0.0165	mg/L	0.005	0.0169	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005	0.0808	mg/L	0.005	0.0055	mg/L	0.005	0.0174	mg/L	0.005	0.0202	mg/L	0.005	0.0124	mg/L	0.005	<0.0050	mg/L	0.005	<0.0050	mg/L	0.005							
Phosphorus D-P	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3	<0.30	mg/L	0.3							
Potassium D-K	2.28	mg/L	0.5	9.32	mg/L	0.5	0.75	mg/L	0.5	3.71	mg/L	0.5	3.66	mg/L	0.5	4.12	mg/L	0.5	4.98	mg/L	0.5	3.81	mg/L	0.5	6.66	mg/L	0.5	<0.50	mg/L	0.5	<0.50	mg/L	0.5							
Selenium D-Se	0.054	mg/L	0.01	0.061	mg/L	0.01	0.022	mg/L	0.01	0.051	mg/L	0.01	0.017	mg/L	0.01	0.042	mg/L	0.01	0.053	mg/L	0.01	0.035	mg/L	0.01	0.05	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01							
Silicon D-Si	3.57	mg/L	0.05	3.92	mg/L	0.05	2.58	mg/L	0.05	2.25	mg/L	0.05	1.04	mg/L	0.05	2.81	mg/L	0.05	4.42	mg/L	0.05	8.42	mg/L	0.05	2.28	mg/L	0.05	1.73	mg/L	0.05	1.73	mg/L	0.05							
Silver D-Ag	0.00011	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001							
Sodium D-Na	130	mg/L	2	230	mg/L	0.05	165	mg/L	2	12.9	mg/L	0.05	313	mg/L	0.05	237	mg/L	0.05	161	mg/L	2	164	mg/L	2	19.3	mg/L	0.05	0.254	mg/L	0.05	0.254	mg/L	0.05							
Strontium D-Sr	0.0248	mg/L	0.001	0.104	mg/L	0.001	0.0221	mg/L	0.001	0.394	mg/L	0.001	2.49	mg/L	0.001	0.0906	mg/L	0.001	0.0793	mg/L	0.001	0.124	mg/L	0.001	0.935	mg/L	0.001	0.0294	mg/L	0.001	0.0294	mg/L	0.001							
Thallium D-Tl	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	0.0022	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001							
Tin D-Sn	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001	<0.0010	mg/L	0.001							
Titanium D-Ti	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01							
Uranium D-U	0.0009	mg/L	0.0001	0.00041	mg/L	0.0001	0.00146	mg/L	0.0001	0.00035	mg/L	0.0001	0.00014	mg/L	0.0001	0.00109	mg/L	0.0001	0.00137	mg/L	0.0001	0.00145	mg/L	0.0001	0.00067	mg/L	0.0001	<0.00010	mg/L	0.0001	<0.00010	mg/L	0.0001							
Vanadium D-V	0.024	mg/L	0.01	0.054	mg/L	0.01	0.025	mg/L	0.01	<0.010	mg/L	0.01	<0.010	mg/L	0.01	0.029	mg/L	0.01	0.033	mg/L	0.01	0.026	mg/L	0.01	<0.010	mg/L	0.0													



ALS Canada Ltd.
 2103 Dollarton Hwy
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To: RESCAN ENVIRONMENTAL SERVICES LTD.
 6TH FL, 1111 W HASTINGS ST
 VANCOUVER BC V6E 2J3

Page: 1
 Finalized Date: 19-DEC-2005
 This copy reported on
 18-JAN-2013
 Account: VF

CERTIFICATE VA05104769

Project: Mount Klappan 0882-002-07
 P.O. No.:
 This report is for 89 Drill Core samples submitted to our lab in Vancouver, BC, Canada on 30-NOV-2005.
 The following have access to data associated with this certificate:
 LISA BARAZZUOL

SAMPLE PREPARATION	
ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-22	Sample login - Rcd w/o BarCode
CRU-31	Fine crushing - 70% <2mm
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um

ANALYTICAL PROCEDURES		
ALS CODE	DESCRIPTION	
S-IR07	Sulphide Sulphur (Leco)	
C-GAS05	Inorganic Carbon (CO2)	
S-GRA06a	Sulfate Sulfur (HCl leachable)	
ME-MS61	48 element four acid ICP-MS	
Hg-CV41	Trace Hg - cold vapor/AAS	FIMS
OA-ELE08	1:1 Rinse pH	
ME-XRF06	Whole Rock Package - XRF	XRF
OA-GRA06	LOI for ME-XRF06	WST-SIM
C-IR07	Total Carbon (Leco)	LECO
OA-VOL08	Basic Acid Base Accounting	
S-IR08	Total Sulphur (Leco)	LECO
OA-ELE07	Paste pH	
S-GRA06	Sulfate Sulfur-carbonate leach	LECO

To: RESCAN ENVIRONMENTAL SERVICES LTD.
 ATTN: ALS MINERALS

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Comments: ** CORRECTED COPY for Project Name **

Signature: 
 Colin Ramshaw, Vancouver Laboratory Manager



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To: RESCAN ENVIRONMENTAL SERVICES LTD.
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Page: 2 - A
 Total # Pages: 4 (A - F)
 Plus Appendix Pages
 Finalized Date: 19-DEC-2005
 Account: VF

Project: Mount Klappan 0882-002-07

CERTIFICATE OF ANALYSIS VA05104769

Sample Description	Method	WEI-21	OA-VOL08	OA-VOL08	OA-VOL08	OA-VOL08	OA-ELE07	OA-VOL08	S-IR08	S-GRA06	S-GRA06a	S-IR07	C-GAS05	C-GAS05	ME-MS61	ME-MS61
	Analyte	Recvd Wt.	FIZZ RAT	MPA	NNP	NP	pH	Ratio (N)	S	S	S	S	C	CO2	Ag	Al
	Units	kg	Unity	tCaCO3/1000	tCaCO3/1000	tCaCO3/1000	Unity	Unity	%	%	%	%	%	%	ppm	%
	LOR	0.02	1	0.3	1	1	0.1	0.01	0.01	0.01	0.01	0.01	0.05	0.2	0.01	0.01
05-ARD1-01		1.12	2	1.6	41	43	8.7	27.52	0.05	<0.01	<0.01	0.05	2.69	9.9	0.21	6.57
05-ARD1-02		0.42	2	2.5	21	23	8.8	9.20	0.08	<0.01	0.01	0.06	0.48	1.8	0.22	7.20
05-ARD1-03		0.54	1	1.6	4	6	8.3	3.84	0.05	<0.01	0.01	0.04	0.06	0.2	0.39	7.52
05-ARD1-04		0.70	2	2.5	37	39	8.4	15.60	0.08	<0.01	<0.01	0.07	1.33	4.9	0.11	8.54
05-ARD1-05		0.66	2	2.2	21	23	8.4	10.51	0.07	<0.01	0.01	0.06	0.41	1.5	0.26	6.96
05-ARD1-06		0.92	1	22.2	-8	14	8.2	0.63	0.71	0.01	0.01	0.68	0.60	2.2	0.27	9.14
05-ARD1-07		0.44	1	6.9	1	8	8.2	1.16	0.22	<0.01	0.01	0.17	0.07	0.3	0.09	9.79
05-ARD1-07-2		1.02	2	0.9	48	49	8.5	52.27	0.03	<0.01	0.02	0.02	0.90	3.3	0.12	4.07
05-ARD1-08		0.62	3	1.9	105	107	8.6	57.07	0.06	<0.01	0.02	0.05	1.23	4.5	0.22	5.00
05-ARD1-09		0.76	1	385.9	-372	14	6.4	0.04	12.35	0.04	0.02	11.05	0.24	0.9	0.27	7.91
05-ARD1-10		0.68	3	9.7	127	137	9.2	14.14	0.31	<0.01	0.01	0.21	2.21	8.1	0.08	7.49
05-ARD1-11		0.32	2	17.5	23	40	9.3	2.29	0.56	<0.01	<0.01	0.56	0.50	1.9	<0.01	0.24
05-ARD1-12		0.66	3	1.3	100	101	8.7	80.80	0.04	<0.01	0.04	0.02	1.44	5.3	0.17	4.26
05-ARD1-13		0.80	2	1.6	44	46	8.1	29.44	0.05	<0.01	0.01	0.04	1.63	6.0	0.27	6.30
05-ARD1-14		0.74	2	3.1	48	51	8.1	16.32	0.10	<0.01	0.01	0.06	1.53	5.6	0.42	7.21
05-ARD1-15		0.54	4	1.6	315	317	8.8	202.9	0.05	0.01	<0.01	0.02	4.11	15.1	0.14	3.57
05-ARD2-01A		0.88	3	1.9	215	217	9.2	115.75	0.06	<0.01	0.01	0.06	3.38	12.4	0.12	5.89
05-ARD2-02		0.68	3	1.6	148	150	9.2	96.00	0.05	<0.01	0.01	0.03	2.07	7.6	0.28	7.01
05-ARD2-03		0.86	3	1.9	116	118	9.4	62.93	0.06	0.01	<0.01	0.05	1.52	5.6	0.15	3.71
05-ARD2-04		0.66	1	0.3	11	11	7.4	35.20	0.01	<0.01	<0.01	0.01	0.05	0.2	0.23	6.61
05-ARD2-05		0.62	2	4.1	60	64	9.1	15.75	0.13	0.07	<0.01	0.09	1.27	4.7	0.11	4.46
05-ARD2-06		0.78	2	1.9	58	60	8.9	32.00	0.06	<0.01	<0.01	0.04	3.40	12.5	0.15	7.34
05-ARD2-07		0.64	2	9.1	45	54	7.8	5.96	0.29	0.01	0.02	0.21	1.63	6.0	0.23	6.46
05-ARD2-08		0.76	3	6.3	110	116	7.9	18.56	0.20	<0.01	0.02	0.14	1.69	6.2	0.18	7.09
05-ARD2-09		0.58	2	0.9	45	46	8.9	49.07	0.03	<0.01	<0.01	0.03	1.06	3.9	0.24	7.07
05-ARD2-10A		0.62	3	39.1	121	160	9.2	4.10	1.25	0.01	<0.01	1.24	2.73	10.0	0.33	7.00
05-ARD2-11		0.50	1	1.9	5	7	8.6	3.73	0.06	<0.01	0.01	0.05	<0.05	<0.2	0.20	8.45
05-ARD2-12		0.70	3	551.6	-382	170	7.5	0.31	17.65	0.07	0.08	17.35	2.23	8.2	0.12	3.23
05-ARD2-13		0.64	3	501.6	-386	116	7.1	0.23	16.05	0.11	0.07	15.30	1.39	5.1	0.07	2.62
05-ARD2-14		0.56	3	1.9	99	101	9.3	53.87	0.06	0.01	<0.01	0.04	1.63	6.0	0.11	6.25
05-ARD2-15		0.44	3	1.9	135	137	8.7	73.07	0.06	<0.01	0.01	0.06	2.19	8.0	0.12	8.05
05-ARD2-16		0.58	2	8.8	32	41	8.9	4.69	0.28	<0.01	<0.01	0.30	0.90	3.3	0.28	5.13
05-ARD3-01A		0.92	3	1.9	153	155	8.8	82.67	0.06	<0.01	0.01	0.05	2.71	9.9	0.15	6.96
05-ARD3-02B		1.04	1	262.5	-253	10	6.5	0.04	8.40	0.04	0.01	7.98	0.25	0.9	1.52	5.75
05-ARD3-03A		0.82	3	1.6	208	210	9.2	134.40	0.05	<0.01	<0.01	0.05	2.88	10.6	0.18	4.69
05-ARD3-04A		0.50	3	19.7	75	95	8.8	4.83	0.63	0.01	0.01	0.61	1.43	5.2	0.07	7.12
05-ARD3-05A		0.84	2	24.7	24	49	8.7	1.98	0.79	0.01	0.02	0.79	1.82	6.7	0.32	7.05
05-ARD3-06A		0.76	2	3.8	15	19	8.6	5.07	0.12	<0.01	0.01	0.10	0.40	1.5	0.16	5.06
05-ARD3-07A		0.72	3	2.2	111	113	9.1	51.66	0.07	<0.01	0.02	0.07	2.03	7.4	0.10	3.80
05-ARD3-08A		0.48	1	335.9	-318	18	5.0	0.05	10.75	0.12	0.08	9.74	0.07	0.3	0.69	7.76

Comments: ** CORRECTED COPY for Project Name **

***** See Appendix Page for comments regarding this certificate *****



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Page: 2 - B
 Total # Pages: 4 (A - F)
 Plus Appendix Pages
 Finalized Date: 19-DEC-2005
 Account: VF

Project: Mount Klappan 0882-002-07

CERTIFICATE OF ANALYSIS VA05104769

Sample Description	Method Analyte Units LOR	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	
		As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu	Fe	Ga	Ge	Hf
		ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
		0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2	0.01	0.05	0.05	0.1
05-ARD1-01		1.4	760	1.54	0.21	0.49	0.81	38.30	27.7	154	3.28	92.9	9.07	16.15	0.16	1.8
05-ARD1-02		5.2	740	1.47	0.17	0.35	0.59	29.70	39.2	250	3.08	84.8	2.40	18.20	0.10	1.8
05-ARD1-03		5.4	1460	2.01	0.21	0.14	1.33	41.30	66.2	142	5.27	91.8	1.02	19.60	0.12	2.3
05-ARD1-04		2.7	850	1.70	0.16	0.43	0.37	35.00	16.9	176	3.67	63.8	4.53	20.00	0.14	1.8
05-ARD1-05		4.3	770	1.59	0.13	0.37	0.83	32.60	22.7	267	2.80	70.5	3.44	17.15	0.12	1.7
05-ARD1-06		7.2	900	1.84	0.16	0.18	0.42	39.00	22.2	113	5.49	64.8	4.21	22.00	0.14	2.0
05-ARD1-07		6.7	990	2.20	0.18	0.13	0.35	38.60	8.2	91	5.15	63.6	1.29	24.10	0.13	2.6
05-ARD1-07-2		10.5	640	0.90	0.09	1.00	0.37	20.20	12.5	160	1.44	37.1	2.51	10.00	0.11	1.0
05-ARD1-08		11.0	610	1.05	0.08	1.10	0.89	25.40	18.0	251	1.49	68.6	3.19	11.10	0.10	1.3
05-ARD1-09		26.6	50	1.31	0.13	0.34	0.20	28.20	17.0	176	3.91	73.5	12.05	17.25	0.23	1.7
05-ARD1-10		3.0	630	1.20	0.12	1.46	0.35	29.40	14.4	194	3.07	51.0	4.73	16.95	0.12	1.4
05-ARD1-11		0.7	40	0.05	<0.01	0.11	<0.02	1.54	0.5	3	0.12	3.4	0.06	0.55	0.06	0.2
05-ARD1-12		7.9	530	0.92	0.09	0.72	0.41	21.90	17.7	167	1.31	39.8	2.96	10.50	0.10	1.2
05-ARD1-13		8.5	1210	1.51	0.18	0.34	0.79	34.30	14.4	111	3.42	83.6	4.50	17.00	0.15	1.8
05-ARD1-14		4.0	1370	1.52	0.21	0.65	1.13	46.80	33.2	175	3.35	95.4	5.67	19.10	0.18	2.2
05-ARD1-15		1.4	650	0.74	0.06	6.55	0.26	15.75	9.3	85	1.06	25.6	2.25	8.17	0.08	1.0
05-ARD2-01A		1.6	570	0.95	0.10	2.39	0.41	27.70	22.2	89	2.53	51.3	7.95	13.10	0.18	1.1
05-ARD2-02		6.8	900	1.32	0.14	2.01	0.74	33.10	18.8	144	3.27	68.0	4.70	16.15	0.14	1.8
05-ARD2-03		5.8	580	0.69	0.07	2.31	0.26	17.40	10.0	102	1.11	28.2	1.76	8.43	0.10	1.0
05-ARD2-04		3.0	850	1.32	0.13	0.26	0.54	36.10	23.0	217	2.42	63.1	3.79	15.95	0.13	1.9
05-ARD2-05		6.1	340	0.52	0.08	1.54	0.21	19.10	11.2	101	0.67	11.8	2.19	8.15	0.09	1.1
05-ARD2-06		1.5	970	1.35	0.10	1.35	0.32	34.10	21.9	119	3.22	56.4	8.09	16.80	0.19	1.9
05-ARD2-07		5.4	860	1.14	0.12	0.81	0.15	30.80	20.2	120	2.74	48.3	4.08	14.45	0.15	1.7
05-ARD2-08		5.1	870	1.18	0.13	1.21	0.21	36.70	15.8	138	2.93	55.2	4.01	16.35	0.15	1.7
05-ARD2-09		2.2	950	1.32	0.14	0.63	0.74	34.60	25.4	131	3.04	72.2	3.08	16.95	0.15	2.1
05-ARD2-10A		16.6	310	1.00	0.15	2.70	0.45	25.30	39.0	83	5.05	95.0	6.46	15.35	0.17	1.5
05-ARD2-11		1.9	1330	1.75	0.15	0.12	1.43	56.60	5.7	109	6.52	91.9	1.02	21.80	0.14	2.0
05-ARD2-12		45.1	20	0.38	0.02	4.04	0.09	10.20	8.5	56	0.79	30.1	17.40	7.18	0.27	0.9
05-ARD2-13		20.5	30	0.39	0.01	2.46	0.09	8.27	5.6	37	0.75	16.8	11.60	5.65	0.18	0.7
05-ARD2-14		4.1	550	0.77	0.03	1.52	0.17	20.40	16.4	147	1.18	19.0	3.03	13.20	0.10	1.2
05-ARD2-15		5.9	800	1.20	0.13	0.96	0.48	31.40	18.0	148	3.33	60.8	6.81	18.25	0.17	1.4
05-ARD2-16		0.6	510	0.71	0.10	0.65	0.55	18.05	5.5	50	3.54	38.2	2.51	12.45	0.09	2.7
05-ARD3-01A		2.9	640	1.00	0.10	1.46	0.42	41.50	35.8	128	2.77	55.3	6.95	15.80	0.20	2.0
05-ARD3-02B		259.0	100	1.22	0.17	0.10	1.09	25.80	24.7	115	3.98	109.5	7.91	14.85	0.23	2.2
05-ARD3-03A		3.9	720	0.96	0.08	3.60	0.43	21.60	15.0	196	1.61	42.7	4.47	11.15	0.13	1.1
05-ARD3-04A		1.8	820	0.77	0.09	1.90	0.10	17.40	3.8	7	1.67	25.7	2.96	12.95	0.12	2.4
05-ARD3-05A		23.9	1080	1.44	0.15	0.51	0.92	39.50	41.8	166	3.59	82.6	5.02	17.55	0.19	1.9
05-ARD3-06A		1.5	580	0.93	0.08	0.23	0.31	21.20	14.9	123	2.01	48.3	1.26	11.90	0.10	1.4
05-ARD3-07A		2.3	760	0.85	0.06	0.59	0.32	22.20	11.6	92	1.25	32.3	2.83	9.52	0.11	2.1
05-ARD3-08A		158.5	180	1.32	0.10	1.57	0.34	30.60	33.8	92	2.96	115.5	10.55	17.45	0.24	2.9

Comments: ** CORRECTED COPY for Project Name **

***** See Appendix Page for comments regarding this certificate *****



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Page: 2 - C
 Total # Pages: 4 (A - F)
 Plus Appendix Pages
 Finalized Date: 19-DEC-2005
 Account: VF

Project: Mount Klappan 0882-002-07

CERTIFICATE OF ANALYSIS VA05104769

Sample Description	Method	Hg-CV41	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte Units LOR	Hg ppm	In ppm	K %	La ppm	Li ppm	Mg %	Mn ppm	Mo ppm	Na %	Nb ppm	Ni ppm	P ppm	Pb ppm	Rb ppm	Re ppm
		0.01	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10	0.5	0.1	0.002
05-ARD1-01		0.19	0.068	1.64	18.7	22.0	2.48	1310	5.04	0.71	6.5	184.5	590	11.6	66.3	0.003
05-ARD1-02		0.10	0.064	1.57	14.9	25.5	0.94	286	4.63	1.06	6.9	232.0	670	8.8	63.9	0.003
05-ARD1-03		0.33	0.079	2.20	20.5	17.2	0.69	90	8.64	1.06	8.4	268.0	530	12.2	86.3	0.006
05-ARD1-04		0.05	0.073	1.50	16.7	25.2	1.90	631	1.76	1.30	6.0	135.5	660	3.7	57.3	0.002
05-ARD1-05		0.15	0.056	1.54	16.5	33.5	1.11	440	4.08	0.90	7.0	193.0	600	7.5	63.2	0.004
05-ARD1-06		0.15	0.082	2.00	19.0	31.7	0.93	286	1.57	1.07	5.9	83.1	540	17.3	79.5	0.002
05-ARD1-07		0.08	0.087	1.87	18.6	31.0	0.55	60	2.05	1.22	6.5	38.7	420	6.2	85.7	0.002
05-ARD1-07-2		0.05	0.035	0.91	10.4	20.2	1.28	433	0.92	0.85	3.7	122.5	360	6.1	36.1	<0.002
05-ARD1-08		0.04	0.042	0.98	13.1	34.5	2.35	455	1.83	1.02	4.2	192.0	350	5.5	34.9	0.005
05-ARD1-09		1.93	0.062	1.22	13.1	13.4	0.56	178	2.75	1.39	4.1	184.0	340	13.9	48.6	0.003
05-ARD1-10		0.10	0.061	1.14	14.2	19.8	2.12	775	1.94	1.31	4.7	130.0	590	4.3	41.6	0.002
05-ARD1-11		0.07	<0.005	0.04	0.6	3.1	0.04	11	0.18	0.02	0.4	3.6	10	<0.5	1.5	<0.002
05-ARD1-12		0.03	0.036	0.79	11.4	21.5	2.07	396	0.98	1.00	3.7	150.5	310	5.8	32.4	0.005
05-ARD1-13		0.06	0.063	1.86	16.0	15.5	2.29	1005	3.64	0.49	8.2	115.0	830	9.4	57.3	0.007
05-ARD1-14		0.08	0.070	1.97	20.4	18.4	2.74	1290	10.30	0.81	9.4	166.5	1100	11.1	80.3	0.007
05-ARD1-15		0.05	0.028	0.73	8.0	18.6	3.60	586	0.83	0.78	3.3	71.0	460	3.7	27.0	<0.002
05-ARD2-01A		0.11	0.052	0.77	13.2	64.8	2.78	1280	1.79	0.77	3.1	137.5	1180	4.5	27.6	0.002
05-ARD2-02		0.21	0.059	1.48	16.5	37.1	2.51	1220	2.10	0.81	6.9	115.5	1060	9.2	54.2	0.003
05-ARD2-03		0.05	0.027	0.71	8.9	21.6	1.44	424	0.75	0.82	3.5	80.6	890	4.6	26.6	<0.002
05-ARD2-04		0.04	0.054	1.37	16.4	30.5	1.10	816	2.36	0.91	7.2	160.0	750	7.8	55.9	0.003
05-ARD2-05		0.08	0.023	0.40	9.3	35.6	0.85	398	0.65	1.10	2.6	54.2	670	5.3	13.8	<0.002
05-ARD2-06		0.12	0.060	1.20	16.3	7.9	2.15	1500	1.00	1.10	4.3	129.0	790	5.4	40.1	<0.002
05-ARD2-07		0.16	0.051	1.30	14.8	24.5	1.66	402	1.82	0.74	5.3	114.0	760	10.9	47.6	0.002
05-ARD2-08		0.09	0.057	1.46	16.4	26.5	2.00	485	2.10	0.80	6.3	116.5	780	5.5	59.3	<0.002
05-ARD2-09		0.07	0.059	1.54	16.9	27.8	1.48	529	4.37	0.97	7.7	146.0	670	9.0	65.0	0.003
05-ARD2-10A		0.81	0.064	1.28	11.9	20.4	1.92	1135	3.32	0.81	3.3	193.0	440	17.6	58.8	0.006
05-ARD2-11		0.06	0.080	2.06	25.3	28.0	0.75	63	2.80	0.94	7.5	81.7	510	5.1	94.7	0.002
05-ARD2-12		1.60	0.024	0.36	4.9	27.8	1.96	432	1.33	0.41	2.5	49.2	1320	15.4	11.5	<0.002
05-ARD2-13		2.42	0.019	0.24	4.1	39.4	0.97	156	0.89	0.38	1.3	26.7	3610	2.9	8.0	<0.002
05-ARD2-14		0.06	0.036	0.72	10.0	14.3	1.34	632	0.69	1.54	3.2	75.1	610	3.7	23.3	<0.002
05-ARD2-15		0.07	0.063	1.06	14.9	14.0	1.78	1445	1.28	1.21	4.7	127.0	680	6.7	36.5	0.002
05-ARD2-16		0.04	0.043	0.72	9.0	92.0	1.14	315	63.00	0.43	4.7	79.1	220	12.4	32.0	0.003
05-ARD3-01A		0.09	0.058	0.76	17.0	15.0	1.74	1450	2.31	0.95	4.3	180.0	600	10.0	27.4	0.002
05-ARD3-02B		2.27	0.055	1.54	11.4	21.9	0.62	314	6.94	0.59	7.1	268.0	390	81.2	69.5	0.005
05-ARD3-03A		0.05	0.036	1.14	10.9	17.7	2.79	911	1.64	0.66	4.6	113.5	390	4.7	37.7	0.004
05-ARD3-04A		0.49	0.034	1.10	7.4	52.8	1.38	695	3.51	0.79	1.3	9.9	1250	4.1	27.3	0.002
05-ARD3-05A		0.19	0.065	1.92	16.6	20.4	1.92	1145	5.27	1.00	8.0	224.0	790	11.2	73.2	0.003
05-ARD3-06A		0.10	0.040	1.20	10.5	16.6	0.51	138	2.10	0.56	4.9	105.5	490	5.9	42.6	0.002
05-ARD3-07A		0.05	0.037	0.94	10.3	6.7	1.07	615	2.55	0.61	3.6	105.0	300	7.2	28.5	<0.002
05-ARD3-08A		2.24	0.068	1.42	13.5	66.6	0.43	323	5.38	0.86	6.2	289.0	7280	134.0	46.6	0.003

Comments: ** CORRECTED COPY for Project Name **

***** See Appendix Page for comments regarding this certificate *****



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Page: 2 - D
 Total # Pages: 4 (A - F)
 Plus Appendix Pages
 Finalized Date: 19-DEC-2005
 Account: VF

Project: Mount Klappan 0882-002-07

CERTIFICATE OF ANALYSIS VA05104769

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	
	Analyte	S	Sb	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	V	W	Y	Zn
	Units	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	LOR	0.01	0.05	1	0.2	0.2	0.05	0.05	0.2	0.005	0.02	0.1	1	0.1	0.1	2
05-ARD1-01		0.06	0.69	4	1.2	116.5	0.47	0.10	4.4	0.360	0.41	1.8	167	0.8	17.3	190
05-ARD1-02		0.09	0.97	3	1.3	123.0	0.51	0.09	4.5	0.425	0.40	1.7	146	0.9	11.9	171
05-ARD1-03		0.05	2.19	4	1.5	119.0	0.65	0.12	5.6	0.444	0.77	2.3	176	1.3	14.4	209
05-ARD1-04		0.09	0.52	2	1.3	192.0	0.42	0.11	3.6	0.474	0.39	1.2	155	0.7	13.7	126
05-ARD1-05		0.09	1.31	3	1.3	137.5	0.49	0.08	4.2	0.390	0.40	1.7	146	0.9	13.2	146
05-ARD1-06		0.75	1.40	4	1.4	171.5	0.42	0.10	4.5	0.472	0.73	1.5	155	0.7	13.7	141
05-ARD1-07		0.22	0.63	3	1.6	191.5	0.46	0.12	4.9	0.427	0.57	1.9	126	0.8	16.0	110
05-ARD1-07-2		0.04	0.90	2	0.8	169.0	0.27	0.05	2.6	0.191	0.27	0.9	79	0.5	8.7	84
05-ARD1-08		0.07	1.73	3	0.8	380.0	0.30	0.07	2.8	0.245	0.25	1.3	115	0.6	10.8	106
05-ARD1-09		>10.0	1.26	6	1.2	164.0	0.30	0.10	2.7	0.413	0.78	1.1	124	0.5	16.6	148
05-ARD1-10		0.31	0.58	2	1.0	188.0	0.35	0.08	3.0	0.394	0.30	1.0	138	0.5	12.2	105
05-ARD1-11		0.02	0.10	2	<0.2	10.4	<0.05	<0.05	<0.2	0.015	<0.02	0.1	11	0.1	0.9	5
05-ARD1-12		0.05	1.09	2	0.9	109.0	0.28	0.05	2.8	0.202	0.24	1.1	88	0.6	9.1	81
05-ARD1-13		0.05	0.95	4	1.4	73.9	0.58	0.12	4.6	0.375	0.63	2.0	162	1.1	15.9	140
05-ARD1-14		0.13	1.81	3	1.6	111.0	0.62	0.12	5.8	0.433	0.70	2.2	178	1.2	17.2	157
05-ARD1-15		0.07	0.45	1	0.7	469.0	0.23	<0.05	2.2	0.156	0.23	0.8	69	0.5	8.0	55
05-ARD2-01A		0.06	0.80	1	0.8	212.0	0.22	0.10	2.3	0.331	0.26	0.6	161	0.4	17.0	104
05-ARD2-02		0.06	1.34	2	1.3	825.0	0.47	0.08	4.5	0.381	0.49	1.7	142	0.8	14.7	134
05-ARD2-03		0.07	0.97	1	0.8	310.0	0.24	<0.05	2.3	0.169	0.25	0.9	63	0.5	9.7	57
05-ARD2-04		0.01	0.46	1	1.2	98.8	0.49	0.07	4.3	0.397	0.36	1.5	142	0.8	13.0	126
05-ARD2-05		0.13	1.30	1	0.6	182.0	0.18	<0.05	2.0	0.161	0.14	0.8	50	0.3	10.7	42
05-ARD2-06		0.06	0.78	1	1.1	188.5	0.27	0.07	3.0	0.407	0.37	1.1	149	0.6	16.9	84
05-ARD2-07		0.27	1.02	2	1.1	211.0	0.34	0.08	3.7	0.338	0.37	1.1	123	1.0	13.2	108
05-ARD2-08		0.20	1.02	1	1.2	211.0	0.42	0.09	4.3	0.386	0.41	1.2	142	0.7	12.1	126
05-ARD2-09		0.04	1.06	2	1.3	215.0	0.52	0.08	4.7	0.391	0.52	1.8	138	1.0	14.8	129
05-ARD2-10A		1.31	8.31	5	1.0	219.0	0.23	0.19	2.6	0.383	1.37	0.9	140	0.5	10.9	102
05-ARD2-11		0.04	0.82	2	1.6	133.0	0.54	<0.05	5.2	0.449	0.85	1.9	138	1.2	12.6	182
05-ARD2-12		>10.0	6.51	6	0.7	504.0	0.10	<0.05	1.2	0.164	1.16	0.4	49	0.3	8.6	44
05-ARD2-13		>10.0	5.79	4	0.5	532.0	0.07	<0.05	0.8	0.127	1.27	0.3	34	0.2	9.2	18
05-ARD2-14		0.06	1.23	1	0.8	181.0	0.20	<0.05	2.0	0.323	0.23	0.7	85	0.4	10.1	69
05-ARD2-15		0.05	0.68	2	1.2	184.5	0.31	0.10	3.4	0.437	0.35	1.1	154	0.6	10.8	111
05-ARD2-16		0.21	1.60	2	0.9	150.0	0.21	<0.05	2.3	0.266	0.42	0.7	146	0.5	7.8	98
05-ARD3-01A		0.05	1.12	2	1.0	170.0	0.28	0.09	2.6	0.398	0.27	1.1	160	0.5	15.1	87
05-ARD3-02B		7.72	28.80	13	1.3	81.8	0.38	0.13	3.5	0.325	3.17	1.9	177	0.7	13.9	134
05-ARD3-03A		0.06	0.95	1	0.9	178.5	0.30	<0.05	2.9	0.252	0.34	1.0	126	0.6	9.8	83
05-ARD3-04A		0.55	0.79	3	0.8	308.0	0.17	0.05	3.4	0.223	0.36	1.2	45	0.4	11.4	40
05-ARD3-05A		0.75	3.57	5	1.3	128.5	0.50	0.11	4.2	0.433	0.69	1.6	147	1.0	12.9	132
05-ARD3-06A		0.08	0.43	2	1.0	99.4	0.32	0.06	2.9	0.288	0.32	1.1	97	0.6	8.8	93
05-ARD3-07A		0.05	0.92	1	1.1	99.1	0.23	<0.05	2.4	0.187	0.29	0.9	53	0.6	12.6	66
05-ARD3-08A		>10.0	25.10	8	1.2	288.0	0.23	0.09	2.3	0.471	2.79	1.0	220	0.5	31.1	120

Comments: ** CORRECTED COPY for Project Name **

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Page: 2 - E
 Total # Pages: 4 (A - F)
 Plus Appendix Pages
 Finalized Date: 19-DEC-2005
 Account: VF

Project: Mount Klappan 0882-002-07

CERTIFICATE OF ANALYSIS VA05104769

Sample Description	Method Analyte Units LOR	ME-MS61	OA-ELE08	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06
		Zr ppm	pH Unity	SiO2 %	Al2O3 %	Fe2O3 %	CaO %	MgO %	Na2O %	K2O %	Cr2O3 %	TiO2 %	MnO %	P2O5 %	SrO %	BaO %
05-ARD1-01		67.0	0.1	54.04	11.81	12.47	0.62	4.05	0.86	1.91	0.01	0.63	0.16	0.13	0.01	0.08
05-ARD1-02		61.9		71.30	12.68	3.34	0.46	1.54	1.47	1.77	0.04	0.71	0.03	0.13	0.01	0.08
05-ARD1-03		78.0		73.00	14.49	1.45	0.19	1.17	1.54	2.62	0.02	0.82	<0.01	0.13	0.02	0.15
05-ARD1-04		63.6		58.67	16.54	6.60	0.58	3.20	1.77	1.82	0.02	0.84	0.07	0.15	0.02	0.10
05-ARD1-05		60.6		70.45	12.70	4.90	0.50	1.91	1.30	1.83	0.04	0.72	0.05	0.12	0.02	0.10
05-ARD1-06		74.1		57.06	18.36	6.28	0.25	1.70	1.51	2.58	0.02	0.95	0.03	0.13	0.02	0.10
05-ARD1-07		90.2		62.99	20.40	1.95	0.19	1.03	1.81	2.93	0.01	1.00	<0.01	0.09	0.02	0.11
05-ARD1-07-2		35.4		76.78	7.20	3.58	1.34	2.01	1.17	0.98	0.02	0.32	0.04	0.08	0.02	0.07
05-ARD1-08		56.5		65.32	9.29	4.84	1.55	4.02	1.52	1.13	0.03	0.45	0.05	0.08	0.04	0.09
05-ARD1-09		59.9		47.38	14.90	16.62	0.47	0.95	1.76	1.50	0.03	0.74	0.01	0.07	0.02	0.10
05-ARD1-10		49.7		56.99	14.74	7.30	2.16	3.72	1.93	1.43	0.03	0.71	0.10	0.14	0.02	0.07
05-ARD1-11		7.9		15.49	5.95	0.76	1.32	0.71	0.42	0.63	0.01	0.31	0.02	0.02	0.03	0.12
05-ARD1-12		42.4		71.58	7.94	4.43	1.01	3.56	1.47	0.97	0.03	0.35	0.05	0.07	0.01	0.07
05-ARD1-13		67.8		62.26	12.41	6.90	0.49	4.09	0.80	2.30	0.02	0.68	0.13	0.18	0.01	0.15
05-ARD1-14		66.9		58.65	12.74	8.03	0.86	4.43	1.09	2.24	0.02	0.74	0.16	0.21	0.01	0.14
05-ARD1-15		29.4		56.62	6.41	3.50	9.25	6.09	1.09	0.85	0.01	0.28	0.08	0.10	0.05	0.07
05-ARD2-01A		51.4		42.32	11.71	12.92	3.52	4.93	1.17	0.99	0.02	0.61	0.19	0.26	0.02	0.06
05-ARD2-02		54.4		58.01	12.79	7.12	2.65	4.24	1.22	1.62	0.02	0.66	0.15	0.23	0.09	0.10
05-ARD2-03		27.7		72.92	7.23	2.87	3.41	2.64	1.33	0.88	0.02	0.31	0.05	0.20	0.04	0.08
05-ARD2-04		62.8		67.80	13.47	6.05	0.39	2.02	1.43	1.75	0.03	0.80	0.10	0.17	0.01	0.11
05-ARD2-05		36.5		72.68	9.04	3.62	2.36	1.62	1.81	0.52	0.02	0.35	0.05	0.16	0.02	0.04
05-ARD2-06		67.7		47.70	14.50	12.83	2.00	3.88	1.50	1.55	0.01	0.77	0.20	0.19	0.02	0.11
05-ARD2-07		51.9		59.42	14.07	7.30	1.30	3.44	1.21	1.79	0.02	0.71	0.05	0.18	0.03	0.10
05-ARD2-08		52.3		56.91	14.91	6.86	1.90	3.81	1.23	2.00	0.03	0.78	0.06	0.19	0.02	0.11
05-ARD2-09		62.2		64.73	14.00	5.04	0.93	2.77	1.50	2.01	0.03	0.77	0.07	0.15	0.02	0.11
05-ARD2-10A		46.2		35.05	13.48	10.04	3.81	3.43	1.17	1.67	0.01	0.72	0.16	0.10	0.03	0.11
05-ARD2-11		61.2		62.97	18.34	1.71	0.19	1.52	1.54	2.76	0.02	0.94	<0.01	0.12	0.02	0.17
05-ARD2-12		46.1		20.21	6.68	25.54	5.48	3.46	0.49	0.46	0.01	0.33	0.06	0.29	0.06	0.04
05-ARD2-13		35.1		19.33	7.26	21.24	4.17	2.22	0.64	0.39	0.02	0.33	0.03	1.10	0.09	0.06
05-ARD2-14		37.7		66.48	11.93	4.85	2.21	2.37	2.34	0.90	0.03	0.60	0.08	0.16	0.02	0.06
05-ARD2-15		40.7		51.64	16.16	10.77	1.42	3.19	1.71	1.34	0.02	0.83	0.19	0.15	0.02	0.08
05-ARD2-16		142.5		39.51	10.02	3.48	0.88	1.89	0.71	0.88	<0.01	0.56	0.03	0.05	0.03	0.08
05-ARD3-01A		67.3		50.76	14.14	11.32	2.24	3.27	1.37	1.02	0.01	0.82	0.20	0.12	0.03	0.08
05-ARD3-02B		106.5		51.40	12.07	12.29	0.15	1.17	0.90	2.04	0.01	0.64	0.03	0.09	0.01	0.13
05-ARD3-03A		34.2		58.41	8.65	7.02	5.12	4.88	0.98	1.35	0.03	0.47	0.12	0.09	0.02	0.08
05-ARD3-04A		37.1		29.00	14.64	4.44	2.57	2.39	1.23	1.45	<0.01	0.42	0.10	0.30	0.05	0.19
05-ARD3-05A		56.0		52.65	14.69	8.28	0.77	3.59	1.61	2.60	0.02	0.85	0.16	0.17	0.02	0.17
05-ARD3-06A		42.0		68.54	15.31	3.06	0.52	1.44	1.33	2.36	0.05	0.83	0.02	0.17	0.01	0.09
05-ARD3-07A		59.5		63.53	11.45	6.93	1.32	2.97	1.47	1.81	0.03	0.54	0.12	0.12	0.02	0.12
05-ARD3-08A		147.0		31.85	14.72	14.32	2.02	0.73	1.06	1.67	0.01	0.81	0.04	1.50	0.03	0.09

Comments: ** CORRECTED COPY for Project Name **

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Page: 2 - F
 Total # Pages: 4 (A - F)
 Plus Appendix Pages
 Finalized Date: 19-DEC-2005
 Account: VF

Project: Mount Klappan 0882-002-07

CERTIFICATE OF ANALYSIS VA05104769

Sample Description	Method Analyte Units LOR	ME-XRF06	ME-XRF06	C-IR07
		LOI %	Total %	C %
		0.01	0.01	0.01
05-ARD1-01		12.75	99.53	4.08
05-ARD1-02		5.26	98.82	1.40
05-ARD1-03		4.48	100.05	1.24
05-ARD1-04		9.71	100.10	2.42
05-ARD1-05		5.57	100.20	1.20
05-ARD1-06		10.35	99.33	3.67
05-ARD1-07		7.26	99.80	2.19
05-ARD1-07-2		5.08	98.71	1.37
05-ARD1-08		11.05	99.47	5.02
05-ARD1-09		15.25	99.80	3.60
05-ARD1-10		10.70	100.05	3.03
05-ARD1-11		72.60	98.38	>50
05-ARD1-12		7.44	98.97	2.46
05-ARD1-13		9.66	100.10	2.51
05-ARD1-14		10.65	99.97	2.87
05-ARD1-15		14.25	98.63	4.31
05-ARD2-01A		21.20	99.92	9.26
05-ARD2-02		11.05	99.95	3.17
05-ARD2-03		6.53	98.51	1.90
05-ARD2-04		5.30	99.44	0.65
05-ARD2-05		6.40	98.67	2.25
05-ARD2-06		14.75	100.00	4.25
05-ARD2-07		9.91	99.54	2.58
05-ARD2-08		10.65	99.45	3.03
05-ARD2-09		7.31	99.45	1.92
05-ARD2-10A		30.20	99.98	18.70
05-ARD2-11		9.09	99.40	4.60
05-ARD2-12		36.80	99.91	17.20
05-ARD2-13		43.20	100.10	26.1
05-ARD2-14		7.72	99.74	1.87
05-ARD2-15		12.55	100.05	3.22
05-ARD2-16		41.40	99.51	35.2
05-ARD3-01A		14.65	100.05	4.86
05-ARD3-02B		19.05	99.98	10.00
05-ARD3-03A		11.60	98.81	3.61
05-ARD3-04A		43.30	100.05	37.5
05-ARD3-05A		14.00	99.58	6.18
05-ARD3-06A		5.63	99.36	1.35
05-ARD3-07A		8.75	99.17	2.39
05-ARD3-08A		30.70	99.57	19.10

Comments: ** CORRECTED COPY for Project Name **

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Page: 3 - A
 Total # Pages: 4 (A - F)
 Plus Appendix Pages
 Finalized Date: 19-DEC-2005
 Account: VF

Project: Mount Klappan 0882-002-07

CERTIFICATE OF ANALYSIS VA05104769

Sample Description	Method Analyte Units LOR	WEI-21 Recvd Wt. kg	OA-VOL08 FIZZ RAT Unity	OA-VOL08 MPA tCaCO3/1000	OA-VOL08 NNP tCaCO3/1000	OA-VOL08 NP tCaCO3/1000	OA-ELE07 pH Unity	OA-VOL08 Ratio (N) Unity	S-IR08 S %	S-GRA06 S %	S-GRA06a S %	S-IR07 S %	C-GAS05 C %	C-GAS05 CO2 %	ME-MS61 Ag ppm	ME-MS61 Al %
			0.02	1	0.3	1	1	0.1	0.01	0.01	0.01	0.01	0.01	0.05	0.2	0.01
05-ARD3-09A		0.68	2	3.1	21	24	8.7	7.68	0.10	<0.01	0.02	0.11	0.98	3.6	0.16	9.83
05-ARD3-10A		0.86	2	3.4	47	50	8.9	14.55	0.11	0.01	0.01	0.08	1.56	5.7	0.07	7.71
05-ARD3-11A		0.86	2	3.1	55	58	8.9	18.56	0.10	0.01	0.03	0.06	1.35	4.9	0.10	7.95
05-ARD3-12A		0.64	2	1.6	57	59	9.4	37.76	0.05	0.02	0.04	0.04	1.16	4.2	0.08	6.62
05-ARD3-13A		0.50	2	12.8	36	49	9.3	3.82	0.41	<0.01	0.03	0.41	0.98	3.6	<0.01	0.25
05-ARD3-14A		0.58	2	204.4	-156	48	7.0	0.23	6.54	0.06	0.04	5.72	0.79	2.9	0.75	2.68
05-ARD3-15A		0.94	2	1.6	40	42	9.0	26.88	0.05	<0.01	<0.01	0.03	1.10	4.0	0.07	7.12
05-ARD3-16		0.56	2	1.9	34	36	9.1	19.20	0.06	<0.01	0.04	0.03	0.68	2.5	0.13	4.12
05-ARD4-01		0.70	2	308.1	-264	44	6.7	0.14	9.86	0.08	0.06	9.23	0.82	3.0	0.30	7.95
05-ARD4-02		0.52	1	81.3	-74	7	7.5	0.09	2.60	0.05	0.03	2.35	0.10	0.4	0.27	9.20
05-ARD4-03		0.68	2	3.1	41	44	8.6	14.08	0.10	<0.01	0.02	0.09	1.48	5.4	0.33	6.49
05-ARD4-04		0.74	3	6.6	252	259	8.9	39.47	0.21	<0.01	0.06	0.18	3.99	14.6	0.39	7.10
05-ARD4-05		0.82	2	1.3	31	32	8.1	25.60	0.04	<0.01	0.01	0.02	1.12	4.1	0.15	5.65
05-ARD4-06		0.98	1	6.9	6	13	8.5	1.89	0.22	<0.01	0.02	0.14	0.50	1.8	0.29	6.84
05-ARD4-07-1		0.80	2	1.3	25	26	7.9	20.80	0.04	<0.01	0.01	0.03	0.76	2.8	0.14	6.47
05-ARD4-08		0.68	2	10.9	37	48	8.1	4.39	0.35	<0.01	0.03	0.34	4.24	15.5	0.18	5.30
05-ARD4-09		0.72	3	1.6	130	132	9.0	84.48	0.05	<0.01	0.02	0.05	2.05	7.5	0.12	6.41
05-ARD4-10		0.80	2	1.6	26	28	8.0	17.92	0.05	<0.01	0.01	0.04	0.84	3.1	0.23	5.56
05-06-01		0.58	1	0.9	11	12	8.3	12.80	0.03	<0.01	0.02	0.03	0.38	1.4	0.10	9.45
05-06-02		0.70	2	1.6	69	71	8.8	45.44	0.05	<0.01	0.01	0.04	1.75	6.4	0.12	8.39
05-06-03		1.10	2	1.6	55	57	8.8	36.48	0.05	<0.01	0.02	0.03	2.66	9.8	0.10	6.87
05-06-04		0.70	2	3.1	57	60	8.5	19.20	0.10	0.01	0.01	0.07	1.66	6.1	0.24	8.65
05-06-05		0.88	2	0.9	43	44	8.8	46.93	0.03	<0.01	0.01	0.03	1.17	4.3	0.10	8.32
05-06-06		0.78	3	4.4	155	159	9.1	36.34	0.14	0.01	0.03	0.11	2.22	8.1	0.15	7.74
05-06-07		0.72	2	5.6	67	73	9.1	12.98	0.18	<0.01	0.01	0.18	1.21	4.4	0.12	7.83
05-06-08		0.76	4	0.3	744	744	9.3	2381	0.01	<0.01	0.02	0.01	9.17	33.6	<0.01	0.16
05-06-09		0.70	3	0.6	180	181	9.0	289.6	0.02	<0.01	0.01	0.02	2.74	10.1	0.09	7.27
05-06-10		6.80	2	94.1	-25	69	9.0	0.73	3.01	0.02	0.04	2.78	1.41	5.2	0.82	3.37
05-06-11		0.60	1	7.8	10	18	8.4	2.30	0.25	<0.01	0.01	0.23	0.66	2.4	0.18	7.28
05-06-12		0.66	1	10.9	-3	8	8.5	0.73	0.35	0.02	0.05	0.32	0.14	0.5	0.35	9.49
05-06-13		1.10	1	5.0	16	21	8.4	4.20	0.16	<0.01	0.01	0.16	0.76	2.8	0.13	8.44
05-019-01		0.56	1	3.8	11	15	8.6	4.00	0.12	<0.01	0.05	0.11	0.70	2.6	0.12	7.76
05-019-02		0.74	3	55.0	75	130	8.6	2.36	1.76	0.01	0.01	1.56	1.68	6.2	0.24	6.70
05-019-03		0.82	2	2.2	39	41	8.6	18.74	0.07	<0.01	<0.01	0.05	1.46	5.3	0.14	8.51
05-019-04		0.84	3	2.8	126	129	8.8	45.87	0.09	<0.01	<0.01	0.07	1.84	6.8	0.13	7.43
05-019-05		0.72	4	7.5	456	463	9.0	61.73	0.24	<0.01	0.02	0.20	6.02	22.1	0.15	3.29
05-019-06		0.98	2	11.3	40	51	8.6	4.53	0.36	0.01	0.02	0.31	1.52	5.6	0.19	7.77
05-019-07		0.72	3	0.9	93	94	8.9	100.25	0.03	<0.01	0.02	0.03	1.28	4.7	0.13	3.82
05-019-08		0.82	2	1.9	33	35	8.2	18.67	0.06	<0.01	0.01	0.04	1.53	5.6	0.15	8.04
05-019-09		0.72	4	0.6	421	422	8.9	675.2	0.02	<0.01	<0.01	0.02	5.61	20.6	0.10	3.14

Comments: ** CORRECTED COPY for Project Name **

***** See Appendix Page for comments regarding this certificate *****



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Page: 3 - B
 Total # Pages: 4 (A - F)
 Plus Appendix Pages
 Finalized Date: 19-DEC-2005
 Account: VF

Project: Mount Klappan 0882-002-07

CERTIFICATE OF ANALYSIS VA05104769

Sample Description	Method Analyte Units LOR	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	
		As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu	Fe	Ga	Ge	Hf
		ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
		0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2	0.01	0.05	0.05	0.1
05-ARD3-09A		4.0	1080	1.67	0.15	0.20	0.64	42.40	19.0	105	5.16	55.5	3.73	23.60	0.15	2.5
05-ARD3-10A		2.6	720	1.30	0.15	0.77	0.45	30.70	15.8	137	3.40	63.3	3.44	18.00	0.15	1.6
05-ARD3-11A		6.3	560	1.06	0.05	1.21	0.14	29.10	21.6	190	2.25	26.4	3.07	17.65	0.15	1.3
05-ARD3-12A		2.6	340	0.73	0.04	1.28	0.23	24.40	13.8	226	1.32	21.5	2.46	14.90	0.11	1.1
05-ARD3-13A		0.3	40	0.07	<0.01	0.12	0.04	2.08	0.2	2	0.26	3.2	0.15	0.74	0.05	0.2
05-ARD3-14A		36.2	70	0.46	0.05	1.12	0.19	19.20	18.2	37	1.33	51.3	6.63	7.22	0.17	1.9
05-ARD3-15A		2.1	410	0.89	0.04	0.86	0.23	24.10	12.8	276	1.65	26.2	2.87	16.00	0.12	1.1
05-ARD3-16		4.4	620	0.73	0.07	0.71	0.32	19.50	9.5	141	1.27	31.3	1.50	10.00	0.11	1.2
05-ARD4-01		23.4	130	1.33	0.10	1.02	0.43	26.60	13.4	161	3.46	53.7	9.51	17.70	0.24	2.2
05-ARD4-02		12.6	300	1.56	0.19	0.11	0.19	40.00	19.9	125	5.08	56.9	2.89	22.50	0.17	2.0
05-ARD4-03		5.7	1220	1.56	0.22	0.35	0.84	40.40	21.9	102	3.68	81.8	3.69	17.55	0.12	2.0
05-ARD4-04		4.1	1240	1.01	0.16	3.59	0.32	34.40	16.9	25	3.01	57.5	5.72	17.05	0.15	2.3
05-ARD4-05		2.9	910	1.28	0.09	0.21	0.38	30.60	16.2	193	2.09	37.1	3.10	14.25	0.10	1.5
05-ARD4-06		4.6	1310	1.70	0.20	0.14	0.84	41.80	10.4	119	5.62	65.7	2.04	18.45	0.11	2.3
05-ARD4-07-1		2.6	1150	1.40	0.10	0.22	0.31	36.00	20.1	135	2.42	42.9	2.21	16.70	0.08	2.0
05-ARD4-08		3.4	590	1.15	0.12	0.48	0.29	29.60	20.7	121	2.61	48.2	11.90	13.15	0.19	1.7
05-ARD4-09		7.1	680	0.88	0.06	2.10	0.33	26.40	19.6	135	2.06	26.1	3.64	14.25	0.10	1.3
05-ARD4-10		4.2	870	1.16	0.14	0.27	0.75	32.20	19.3	235	2.64	56.1	2.68	14.20	0.09	1.5
05-06-01		1.7	990	1.66	0.18	0.18	0.19	43.20	15.0	133	5.12	81.9	1.29	23.60	0.09	2.3
05-06-02		9.0	770	1.24	0.12	1.69	0.38	31.10	21.7	237	3.18	48.7	3.20	19.45	0.10	1.4
05-06-03		2.5	570	0.94	0.12	1.10	0.27	25.70	38.5	162	2.39	43.0	4.95	16.05	0.10	1.2
05-06-04		3.1	830	1.37	0.17	1.23	0.34	30.90	149.0	174	4.44	61.8	3.44	20.50	0.11	1.7
05-06-05		3.3	750	1.09	0.09	0.88	0.33	31.60	16.7	213	2.71	28.8	3.19	17.70	0.09	1.8
05-06-06		17.2	760	1.15	0.10	2.99	0.35	32.20	37.6	211	3.33	38.3	3.47	17.15	0.11	1.5
05-06-07		0.8	750	1.08	0.16	2.27	0.72	24.10	17.8	83	4.30	63.5	2.27	18.00	0.06	2.2
05-06-08		12	80	0.06	0.01	14.45	0.02	0.52	1.0	7	0.06	2.4	0.74	0.33	<0.05	0.1
05-06-09		2.1	630	1.02	0.10	2.97	0.33	27.50	16.6	207	2.96	41.5	4.57	15.85	0.11	1.2
05-06-10		70.4	200	0.79	0.16	1.95	0.50	24.10	55.0	51	3.92	79.9	4.90	9.64	0.17	1.6
05-06-11		3.9	720	1.25	0.22	0.21	0.56	33.60	11.8	108	5.17	91.9	2.49	20.00	0.09	2.1
05-06-12		22.0	1190	1.71	0.27	0.11	0.82	38.50	48.0	117	7.44	102.5	1.61	25.70	0.11	2.7
05-06-13		3.6	970	1.56	0.20	0.34	0.26	24.80	11.5	99	7.26	61.7	2.37	22.00	0.08	2.5
05-019-01		2.0	850	1.46	0.15	0.15	0.49	32.40	5.8	55	5.23	41.5	2.97	18.60	0.09	2.6
05-019-02		30.7	290	1.07	0.11	1.77	0.16	28.90	21.9	81	2.56	24.2	6.55	13.95	0.14	1.7
05-019-03		9.7	960	1.54	0.12	0.63	0.41	35.40	12.9	114	4.07	38.0	4.93	19.25	0.11	1.9
05-019-04		3.8	890	1.11	0.13	1.69	0.23	30.80	16.8	154	2.73	47.0	4.83	16.20	0.11	1.4
05-019-05		9.5	190	0.58	0.05	9.47	0.10	16.30	21.2	68	0.75	18.6	8.65	7.75	0.13	0.9
05-019-06		10.6	950	1.26	0.15	0.98	0.19	30.20	30.1	141	3.05	54.3	4.62	17.35	0.11	1.6
05-019-07		3.5	470	0.77	0.08	1.64	0.28	17.75	13.2	173	1.23	27.5	2.64	9.26	0.07	0.9
05-019-08		2.5	920	1.49	0.15	0.26	0.45	36.60	18.9	101	4.13	43.9	4.75	18.70	0.12	2.1
05-019-09		1.9	380	0.72	0.07	9.10	0.22	15.05	9.5	99	1.02	22.8	5.13	7.38	0.08	0.8

Comments: ** CORRECTED COPY for Project Name **

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Page: 3 - C
 Total # Pages: 4 (A - F)
 Plus Appendix Pages
 Finalized Date: 19-DEC-2005
 Account: VF

Project: Mount Klappan 0882-002-07

CERTIFICATE OF ANALYSIS VA05104769

Sample Description	Method	Hg-CV41	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte Units LOR	Hg ppm	In ppm	K %	La ppm	Li ppm	Mg %	Mn ppm	Mo ppm	Na %	Nb ppm	Ni ppm	P ppm	Pb ppm	Rb ppm	Re ppm
		0.01	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10	0.5	0.1	0.002
05-ARD3-09A		0.06	0.079	2.15	18.5	32.3	0.92	657	1.26	1.05	6.9	56.7	600	10.0	83.9	0.002
05-ARD3-10A		0.15	0.063	1.27	14.9	29.6	1.42	577	1.97	1.18	4.7	125.0	610	3.6	46.4	0.002
05-ARD3-11A		0.16	0.049	1.04	14.0	36.6	1.49	356	1.60	1.33	4.7	135.0	650	6.9	34.9	<0.002
05-ARD3-12A		0.05	0.038	0.59	11.9	51.1	1.76	291	0.64	0.99	4.0	118.0	640	2.6	21.6	<0.002
05-ARD3-13A		0.02	<0.005	0.07	1.0	2.5	0.04	56	0.08	0.03	0.3	1.2	90	<0.5	3.2	<0.002
05-ARD3-14A		2.77	0.023	0.35	11.2	25.0	0.77	210	7.39	0.30	4.9	190.5	320	75.9	14.4	0.002
05-ARD3-15A		0.07	0.043	0.65	12.0	47.5	1.76	393	0.66	1.11	4.5	149.5	760	2.6	24.0	<0.002
05-ARD3-16		0.05	0.032	0.87	9.9	26.4	0.88	237	0.82	0.70	4.1	101.0	630	4.2	32.2	<0.002
05-ARD4-01		2.63	0.063	1.42	11.9	20.6	0.91	228	2.87	1.26	3.4	115.5	320	9.4	44.4	0.003
05-ARD4-02		1.08	0.084	1.96	16.7	30.1	0.61	152	1.88	1.11	5.6	110.0	410	15.4	77.9	0.002
05-ARD4-03		0.10	0.074	1.74	19.8	19.8	2.11	792	4.48	0.57	8.7	119.5	830	12.0	72.2	0.008
05-ARD4-04		0.13	0.089	1.75	14.6	33.5	3.77	1300	2.32	0.31	2.9	34.8	560	21.2	58.2	0.007
05-ARD4-05		0.07	0.046	1.24	15.6	23.2	1.40	443	2.56	0.96	6.4	118.5	480	6.6	50.4	0.002
05-ARD4-06		0.11	0.076	1.93	20.8	21.8	1.30	226	2.62	0.78	7.9	92.9	420	12.2	86.1	0.005
05-ARD4-07-1		0.07	0.050	1.54	18.5	21.3	1.12	291	2.32	0.88	8.3	129.5	410	7.2	56.2	0.002
05-ARD4-08		0.25	0.051	1.03	14.8	18.8	3.54	1930	2.97	0.62	5.0	142.5	530	6.4	44.8	0.002
05-ARD4-09		0.08	0.044	0.69	13.4	15.0	1.67	677	1.27	1.36	3.8	116.0	650	6.2	27.8	0.002
05-ARD4-10		0.14	0.058	1.18	16.4	26.2	1.29	459	4.11	0.83	6.6	158.0	620	6.5	56.3	0.004
05-06-01		0.32	0.084	1.30	20.0	19.6	0.58	144	1.11	1.44	6.5	91.3	370	2.9	60.2	0.002
05-06-02		0.10	0.072	1.09	15.0	17.4	1.40	608	1.38	1.62	5.4	124.5	630	8.3	42.4	0.002
05-06-03		0.08	0.066	0.86	12.4	15.3	1.62	808	2.22	1.24	3.8	177.5	520	6.2	34.9	<0.002
05-06-04		0.21	0.079	1.08	14.5	15.0	1.38	571	13.20	1.58	5.1	451.0	600	11.2	44.0	0.003
05-06-05		0.07	0.056	0.98	15.6	15.8	1.18	588	1.83	1.95	4.3	78.6	610	7.6	36.5	<0.002
05-06-06		0.11	0.063	1.14	15.2	11.5	1.88	615	1.64	1.53	4.7	206.0	630	9.9	39.8	<0.002
05-06-07		0.20	0.092	0.89	11.2	31.2	1.35	386	2.52	1.23	5.1	118.0	640	9.9	40.6	0.002
05-06-08		0.01	<0.005	0.02	<0.5	5.6	9.45	124	0.24	0.05	0.1	13.5	580	0.5	0.7	<0.002
05-06-09		0.12	0.056	0.78	13.3	14.0	2.07	842	1.11	1.11	4.8	114.0	1280	5.1	29.1	<0.002
05-06-10		1.27	0.046	0.77	12.6	23.0	1.16	426	15.35	0.23	2.9	237.0	2160	44.3	52.0	0.014
05-06-11		0.11	0.093	0.98	15.4	43.9	1.04	220	4.52	0.83	7.2	137.5	240	7.2	55.7	0.006
05-06-12		0.94	0.104	1.74	18.4	44.0	0.60	82	5.92	1.08	4.6	235.0	230	18.1	87.2	0.005
05-06-13		0.15	0.069	1.36	12.2	26.5	1.01	289	3.87	0.91	4.4	96.5	160	5.2	87.7	0.003
05-019-01		0.06	0.069	1.28	15.6	49.5	0.84	386	1.05	0.82	6.3	49.5	180	12.6	58.7	0.002
05-019-02		0.45	0.053	0.92	14.2	40.3	1.81	716	1.01	0.85	4.0	102.0	470	25.2	40.5	<0.002
05-019-03		0.06	0.068	1.37	17.6	31.7	1.24	831	1.70	1.00	5.6	49.8	760	8.6	54.3	<0.002
05-019-04		0.09	0.061	1.26	14.5	29.7	1.82	636	1.49	0.88	4.3	115.0	870	4.6	46.8	<0.002
05-019-05		0.13	0.026	0.21	8.5	46.6	4.64	1195	0.60	0.18	1.8	132.5	580	9.9	9.0	<0.002
05-019-06		0.18	0.064	1.36	14.7	29.0	1.56	551	1.72	0.87	4.7	134.0	630	12.4	51.5	0.002
05-019-07		0.03	0.033	0.74	8.9	22.6	1.15	500	1.89	0.65	3.4	81.4	500	4.5	32.3	0.002
05-019-08		0.05	0.075	1.37	17.9	35.5	1.11	989	2.41	0.83	5.7	57.7	530	10.5	56.0	0.002
05-019-09		0.03	0.024	0.67	7.8	14.0	4.02	1470	0.65	0.31	2.9	72.5	470	3.3	28.0	<0.002

Comments: ** CORRECTED COPY for Project Name **

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Page: 3 - D
 Total # Pages: 4 (A - F)
 Plus Appendix Pages
 Finalized Date: 19-DEC-2005
 Account: VF

Project: Mount Klappan 0882-002-07

CERTIFICATE OF ANALYSIS VA05104769

Sample Description	Method Analyte Units LOR	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	
		S %	Sb ppm	Se ppm	Sn ppm	Sr ppm	Ta ppm	Te ppm	Th ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Y ppm	Zn ppm
05-ARD3-09A		0.08	0.97	2	1.7	218.0	0.45	0.10	5.3	0.514	0.68	1.7	158	1.0	14.3	138
05-ARD3-10A		0.09	0.47	1	1.2	192.5	0.33	0.12	3.3	0.421	0.36	1.0	140	0.6	11.8	107
05-ARD3-11A		0.10	0.81	1	1.1	213.0	0.31	<0.05	2.9	0.376	0.28	0.8	106	0.5	10.0	99
05-ARD3-12A		0.05	0.34	1	0.9	144.5	0.27	<0.05	2.3	0.315	0.17	0.7	100	0.5	8.8	74
05-ARD3-13A		<0.01	<0.05	1	<0.2	14.8	<0.05	<0.05	0.3	0.018	0.02	0.1	4	0.1	1.3	5
05-ARD3-14A		6.35	5.52	8	1.2	147.0	0.14	0.06	1.5	0.170	0.35	0.5	73	0.4	6.5	96
05-ARD3-15A		0.05	0.35	1	0.9	154.0	0.29	<0.05	2.4	0.359	0.18	0.8	103	0.5	9.6	92
05-ARD3-16		0.06	0.72	1	1.0	115.0	0.27	<0.05	2.8	0.205	0.28	1.0	71	0.6	9.9	63
05-ARD4-01		9.79	1.15	5	1.1	184.5	0.28	0.08	2.9	0.405	1.02	1.1	94	0.4	14.3	104
05-ARD4-02		2.38	3.62	3	1.5	188.0	0.39	0.14	4.0	0.533	0.60	1.0	168	0.7	13.2	130
05-ARD4-03		0.10	1.43	3	1.7	128.5	0.64	0.12	5.4	0.376	0.63	2.0	141	1.1	15.6	126
05-ARD4-04		0.20	3.96	5	1.4	450.0	0.25	0.19	2.6	0.361	0.56	0.7	123	0.3	13.9	100
05-ARD4-05		0.03	0.79	2	1.2	113.0	0.47	0.05	3.4	0.298	0.38	1.2	97	0.7	10.7	77
05-ARD4-06		0.20	2.65	3	1.7	118.0	0.66	0.07	5.9	0.385	0.72	2.2	137	1.1	13.1	138
05-ARD4-07-1		0.03	0.73	2	1.3	128.5	0.67	<0.05	4.2	0.345	0.45	1.5	110	0.7	10.8	81
05-ARD4-08		0.36	0.77	3	1.0	127.0	0.37	0.08	3.2	0.292	0.32	1.3	142	0.6	14.4	87
05-ARD4-09		0.05	1.05	2	1.0	215.0	0.29	<0.05	2.5	0.295	0.25	0.9	93	0.5	12.5	68
05-ARD4-10		0.05	0.94	2	1.3	90.3	0.49	0.08	3.9	0.325	0.44	1.6	115	0.7	12.6	99
05-06-01		0.03	0.56	2	1.7	163.5	0.50	0.12	4.7	0.580	0.46	1.4	171	0.8	11.0	52
05-06-02		0.05	1.42	2	1.3	193.0	0.41	0.07	3.2	0.527	0.36	1.1	137	0.6	11.2	104
05-06-03		0.05	1.02	2	1.1	163.0	0.30	0.08	2.7	0.396	0.30	0.9	138	0.5	8.9	82
05-06-04		0.10	1.60	4	1.4	175.0	0.39	0.14	3.7	0.496	0.41	1.3	135	0.7	11.6	89
05-06-05		0.03	0.97	2	1.1	175.0	0.32	<0.05	3.1	0.437	0.33	1.1	147	0.6	12.0	94
05-06-06		0.16	2.33	2	1.2	214.0	0.34	0.07	2.8	0.446	0.39	1.0	118	0.6	14.2	94
05-06-07		0.17	0.69	3	1.4	253.0	0.34	0.10	3.5	0.455	0.34	1.1	145	0.6	10.0	154
05-06-08		0.01	0.07	2	<0.2	201.0	<0.05	<0.05	<0.2	0.007	<0.02	<0.1	3	0.1	0.3	8
05-06-09		0.02	0.66	2	1.1	206.0	0.33	0.06	2.6	0.460	0.23	0.9	126	0.6	13.6	86
05-06-10		3.09	27.00	18	0.9	118.5	0.19	0.17	2.3	0.149	1.34	1.0	118	0.3	18.2	67
05-06-11		0.18	1.56	2	1.6	131.0	0.40	0.22	3.5	0.481	0.45	0.7	180	0.6	8.3	112
05-06-12		0.33	11.15	6	1.7	145.0	0.43	0.23	4.6	0.556	1.31	1.9	183	0.9	14.7	124
05-06-13		0.14	1.59	2	1.5	148.5	0.40	0.12	4.1	0.468	0.56	1.3	123	0.9	7.3	71
05-019-01		0.08	0.41	2	1.5	157.5	0.42	0.07	4.6	0.421	0.50	1.5	143	0.7	10.6	102
05-019-02		1.75	2.97	3	1.1	193.0	0.30	0.07	2.8	0.301	0.38	0.9	90	0.5	11.5	99
05-019-03		0.06	1.10	2	1.4	184.5	0.43	0.06	4.0	0.428	0.46	1.5	137	0.7	13.4	105
05-019-04		0.10	0.66	2	1.1	214.0	0.32	0.09	2.8	0.414	0.37	0.9	142	0.5	13.0	90
05-019-05		0.26	1.53	2	0.6	290.0	0.13	<0.05	1.2	0.169	0.12	0.4	56	0.2	10.2	59
05-019-06		0.36	1.90	3	1.2	209.0	0.36	0.10	3.2	0.439	0.47	1.0	138	0.6	10.2	95
05-019-07		0.03	0.53	1	0.8	139.5	0.26	<0.05	2.3	0.189	0.22	0.9	74	0.4	8.5	53
05-019-08		0.05	0.93	2	1.4	181.5	0.43	0.09	4.5	0.437	0.45	1.6	140	0.7	12.3	106
05-019-09		0.03	0.53	2	0.7	862.0	0.21	<0.05	1.8	0.150	0.17	0.7	70	0.4	10.9	48

Comments: ** CORRECTED COPY for Project Name **

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Page: 3 - E
 Total # Pages: 4 (A - F)
 Plus Appendix Pages
 Finalized Date: 19-DEC-2005
 Account: VF

Project: Mount Klappan 0882-002-07

CERTIFICATE OF ANALYSIS VA05104769

Method Analyte Units LOR	ME-MS61 Zr ppm	OA-ELE08 pH Unity	ME-XRF06 SiO2 %	ME-XRF06 Al2O3 %	ME-XRF06 Fe2O3 %	ME-XRF06 CaO %	ME-XRF06 MgO %	ME-XRF06 Na2O %	ME-XRF06 K2O %	ME-XRF06 Cr2O3 %	ME-XRF06 TiO2 %	ME-XRF06 MnO %	ME-XRF06 P2O5 %	ME-XRF06 SrO %	ME-XRF06 BaO %
Sample Description	0.5	0.1	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
05-ARD3-09A	73.7		56.68	19.98	5.97	0.29	1.72	1.50	2.76	0.01	0.99	0.08	0.13	0.03	0.14
05-ARD3-10A	49.3		57.34	16.43	5.83	1.23	2.66	1.80	1.64	0.02	0.82	0.08	0.14	0.02	0.09
05-ARD3-11A	39.6		61.46	15.94	5.01	1.80	2.66	1.94	1.30	0.03	0.72	0.04	0.14	0.03	0.06
05-ARD3-12A	34.2		65.40	13.43	4.23	2.02	3.26	1.46	0.76	0.05	0.60	0.04	0.17	0.02	0.05
05-ARD3-13A	5.8		21.34	8.03	2.88	1.60	1.07	0.72	0.91	<0.01	0.38	0.15	0.27	0.03	0.08
05-ARD3-14A	132.0		31.30	5.03	8.75	1.35	1.12	0.39	0.42	0.01	0.28	0.02	0.07	0.02	0.04
05-ARD3-15A	34.9		64.19	14.41	4.71	1.30	3.17	2.04	0.87	0.05	0.70	0.04	0.18	0.01	0.05
05-ARD3-16	34.0		77.99	8.17	2.49	1.08	1.63	1.12	1.09	0.03	0.39	0.03	0.13	0.01	0.09
05-ARD4-01	60.2		43.79	15.67	14.23	1.46	1.66	1.69	1.75	0.02	0.77	0.02	0.06	0.02	0.13
05-ARD4-02	57.5		57.98	19.65	4.66	0.16	1.15	1.61	2.57	0.01	1.03	0.01	0.09	0.02	0.13
05-ARD4-03	69.9		63.73	12.67	5.67	0.51	3.75	0.90	2.37	0.02	0.73	0.11	0.16	0.02	0.14
05-ARD4-04	73.8		35.38	13.98	8.78	4.91	6.64	0.45	2.39	0.01	0.70	0.19	0.14	0.05	0.15
05-ARD4-05	52.5		68.32	11.69	5.07	0.32	2.71	1.47	1.72	0.03	0.58	0.06	0.12	0.01	0.12
05-ARD4-06	73.5		65.69	14.49	3.26	0.21	2.41	1.28	2.66	0.01	0.74	0.02	0.10	0.01	0.16
05-ARD4-07-1	68.6		69.50	13.51	3.64	0.33	2.06	1.37	2.05	0.06	0.64	0.04	0.09	0.01	0.14
05-ARD4-08	59.1		45.07	10.12	18.09	0.65	6.00	0.86	1.37	0.03	0.52	0.26	0.12	0.01	0.07
05-ARD4-09	47.6		61.16	12.49	5.72	2.98	2.88	2.04	0.94	0.02	0.53	0.09	0.15	0.02	0.07
05-ARD4-10	50.5		69.74	11.63	4.46	0.41	2.49	1.29	1.68	0.04	0.64	0.06	0.16	0.01	0.10
05-06-01	69.0		63.42	20.65	2.12	0.27	1.10	2.28	1.82	0.03	1.13	0.01	0.09	0.02	0.13
05-06-02	47.9		56.73	17.88	5.23	2.54	2.57	2.34	1.51	0.04	1.00	0.08	0.15	0.02	0.09
05-06-03	41.5		58.43	14.19	7.85	1.62	2.91	1.78	1.16	0.02	0.72	0.11	0.13	0.02	0.07
05-06-04	56.8		55.85	18.43	5.57	1.90	2.53	2.24	1.50	0.02	0.96	0.07	0.15	0.02	0.12
05-06-05	60.5		62.68	16.12	4.76	1.22	1.99	2.74	1.29	0.03	0.77	0.07	0.15	0.02	0.10
05-06-06	51.9		55.08	15.49	5.39	4.23	3.28	2.09	1.50	0.04	0.80	0.08	0.15	0.02	0.09
05-06-07	103.5		46.44	12.57	2.69	2.47	1.77	1.51	0.97	0.02	0.68	0.04	0.11	0.03	0.08
05-06-08	14.0		24.39	0.23	1.22	21.18	15.86	0.13	0.04	<0.01	0.02	0.02	0.13	0.02	<0.01
05-06-09	49.7		52.70	14.89	7.38	4.32	3.67	1.65	1.09	0.04	0.84	0.11	0.30	0.02	0.08
05-06-10	60.7		37.16	6.86	7.13	2.68	1.98	0.34	1.11	0.02	0.30	0.07	0.50	0.02	0.07
05-06-11	143.0		43.50	16.22	3.85	0.29	1.87	1.32	1.42	0.02	0.92	0.02	0.05	0.02	0.10
05-06-12	73.5		52.23	20.99	2.50	0.14	1.10	1.62	2.44	0.01	1.04	<0.01	0.05	0.02	0.14
05-06-13	80.5		47.04	18.39	3.66	0.50	1.80	1.40	1.94	0.01	0.91	0.03	0.04	0.02	0.13
05-019-01	96.1		49.26	17.31	4.78	0.22	1.57	1.29	1.85	<0.01	0.82	0.05	0.05	0.02	0.10
05-019-02	51.2		55.85	12.99	10.48	2.53	3.25	1.20	1.26	0.02	0.53	0.09	0.10	0.02	0.10
05-019-03	68.4		56.72	17.22	7.57	0.90	2.25	1.49	1.92	0.02	0.81	0.11	0.18	0.02	0.11
05-019-04	47.9		56.40	14.78	7.58	2.47	3.24	1.28	1.71	0.03	0.76	0.08	0.21	0.02	0.10
05-019-05	29.2		32.09	6.28	13.95	13.74	7.87	0.32	0.32	0.01	0.30	0.18	0.14	0.03	0.02
05-019-06	53.1		56.60	16.08	7.22	1.46	2.89	1.37	1.88	0.01	0.92	0.07	0.15	0.03	0.11
05-019-07	31.9		71.80	8.18	4.49	2.58	2.22	1.20	1.06	0.03	0.40	0.07	0.12	0.02	0.06
05-019-08	72.4		51.03	24.18	6.99	0.37	2.12	1.28	1.88	0.01	0.81	0.12	0.14	0.02	0.11
05-019-09	29.1		42.85	5.79	7.84	12.63	6.77	0.52	0.82	0.02	0.27	0.21	0.11	0.09	0.06

Comments: ** CORRECTED COPY for Project Name **

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Page: 3 - F
 Total # Pages: 4 (A - F)
 Plus Appendix Pages
 Finalized Date: 19-DEC-2005
 Account: VF

Project: Mount Klappan 0882-002-07

CERTIFICATE OF ANALYSIS VA05104769

Sample Description	Method Analyte Units LOR	ME-XRF06	ME-XRF06	C-IR07
		LOI %	Total %	C %
		0.01	0.01	0.01
05-ARD3-09A		9.69	99.97	2.76
05-ARD3-10A		11.90	100.00	4.47
05-ARD3-11A		8.79	99.92	2.05
05-ARD3-12A		7.46	98.92	1.56
05-ARD3-13A		62.50	99.96	>50
05-ARD3-14A		49.80	98.60	39.8
05-ARD3-15A		7.39	99.13	1.58
05-ARD3-16		3.89	98.14	0.94
05-ARD4-01		18.75	100.05	6.99
05-ARD4-02		10.70	99.76	4.01
05-ARD4-03		8.65	99.42	2.17
05-ARD4-04		26.20	99.97	12.75
05-ARD4-05		6.53	98.75	1.42
05-ARD4-06		8.17	99.22	3.35
05-ARD4-07-1		5.91	99.34	1.00
05-ARD4-08		16.65	99.82	4.70
05-ARD4-09		10.30	99.38	3.24
05-ARD4-10		6.10	98.81	1.35
05-06-01		6.69	99.75	1.32
05-06-02		9.80	99.98	2.29
05-06-03		10.50	99.52	2.86
05-06-04		10.20	99.55	2.49
05-06-05		7.76	99.68	1.81
05-06-06		11.00	99.24	2.67
05-06-07		30.70	100.05	23.4
05-06-08		35.40	98.62	11.55
05-06-09		13.05	100.15	3.07
05-06-10		40.30	98.53	34.7
05-06-11		30.30	99.90	23.5
05-06-12		17.25	99.53	11.15
05-06-13		23.90	99.76	16.55
05-019-01		22.70	100.00	15.55
05-019-02		10.55	98.97	2.56
05-019-03		10.15	99.46	2.43
05-019-04		10.60	99.25	2.48
05-019-05		23.40	98.67	6.43
05-019-06		10.20	98.97	2.62
05-019-07		6.45	98.68	1.53
05-019-08		11.00	100.05	2.84
05-019-09		21.80	99.79	5.81

Comments: ** CORRECTED COPY for Project Name **

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Page: 4 - A
 Total # Pages: 4 (A - F)
 Plus Appendix Pages
 Finalized Date: 19-DEC-2005
 Account: VF

Project: Mount Klappan 0882-002-07

CERTIFICATE OF ANALYSIS VA05104769

Sample Description	Method Analyte Units LOR	WEI-21 Recvd Wt. kg	OA-VOL08 FIZZ RAT Unity	OA-VOL08 MPA tCaCO3/1000	OA-VOL08 NNP tCaCO3/1000	OA-VOL08 NP tCaCO3/1000	OA-ELE07 pH Unity	OA-VOL08 Ratio (N) Unity	S-IR08 S %	S-GRA06 S %	S-GRA06a S %	S-IR07 S %	C-GAS05 C %	C-GAS05 CO2 %	ME-MS61 Ag ppm	ME-MS61 Al %
		0.02	1	0.3	1	1	0.1	0.01	0.01	0.01	0.01	0.01	0.05	0.2	0.01	0.01
05-019-10		0.92	2	0.6	50	51	8.6	81.60	0.02	<0.01	<0.01	0.02	1.06	3.9	0.16	5.38
05-019-11		1.02	3	2.2	114	116	8.8	53.03	0.07	<0.01	0.02	0.05	1.91	7.0	0.13	3.03
05-019-12		0.68	2	1.3	54	55	8.8	44.00	0.04	<0.01	0.02	0.03	1.31	4.8	0.10	7.42
05-019-13		0.54	2	2.8	30	33	8.5	11.73	0.09	<0.01	0.01	0.07	1.14	4.2	0.13	7.43
05-019-14		1.34	2	146.3	-81	65	7.5	0.44	4.68	0.05	0.03	4.42	1.06	3.9	0.02	0.28
05-019-15		0.56	1	9.4	0	9	8.3	0.96	0.30	<0.01	0.02	0.27	0.05	0.2	0.17	6.65
05-019-16		0.80	2	10.9	33	44	8.5	4.02	0.35	<0.01	0.02	0.29	1.38	5.1	0.13	7.52
DUMP SURFACE		2.88	1	6.3	6	12	7.0	1.92	0.20	<0.01	<0.01	0.18	0.17	0.6	0.12	5.41
DUMP 2.5M		11.24	1	5.0	7	12	7.1	2.40	0.16	<0.01	0.01	0.14	0.11	0.4	0.14	5.68

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Page: 4 - B
 Total # Pages: 4 (A - F)
 Plus Appendix Pages
 Finalized Date: 19-DEC-2005
 Account: VF

Project: Mount Klappan 0882-002-07

CERTIFICATE OF ANALYSIS VA05104769

Sample Description	Method Analyte Units LOR	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	
		As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu	Fe	Ga	Ge	Hf
		ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
		0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2	0.01	0.05	0.05	0.1
05-019-10		3.2	640	1.02	0.10	1.12	0.50	23.40	14.0	201	1.96	41.0	2.99	12.25	0.08	1.6
05-019-11		2.9	380	0.64	0.07	1.52	0.25	17.65	9.2	72	0.89	21.9	4.44	7.52	0.08	0.9
05-019-12		3.0	670	1.16	0.07	1.18	0.26	27.60	14.3	239	2.09	28.5	3.85	15.95	0.08	1.4
05-019-13		3.9	920	1.32	0.16	0.33	0.27	33.20	13.6	149	3.35	57.4	3.72	16.75	0.10	1.4
05-019-14		1.6	30	0.07	0.01	0.30	<0.02	1.74	3.0	2	0.08	2.2	1.00	0.69	<0.05	0.2
05-019-15		3.2	900	1.73	0.21	0.12	0.90	40.90	10.0	118	6.47	72.8	2.01	18.50	0.10	2.6
05-019-16		12.2	960	1.22	0.16	0.63	0.14	33.10	18.6	138	3.50	60.3	4.80	18.40	0.20	1.6
DUMP SURFACE		4.6	810	1.10	0.11	0.30	0.27	29.30	10.4	73	2.65	50.4	2.76	13.15	0.16	2.1
DUMP 2.5M		4.5	820	1.12	0.12	0.28	0.29	31.40	12.8	84	2.83	55.2	2.73	13.70	0.15	1.9

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Page: 4 - C
 Total # Pages: 4 (A - F)
 Plus Appendix Pages
 Finalized Date: 19-DEC-2005
 Account: VF

Project: Mount Klappan 0882-002-07

CERTIFICATE OF ANALYSIS VA05104769

Sample Description	Method Analyte Units LOR	Hg-CV41 Hg ppm 0.01	ME-MS61 In ppm 0.005	ME-MS61 K % 0.01	ME-MS61 La ppm 0.5	ME-MS61 Li ppm 0.2	ME-MS61 Mg % 0.01	ME-MS61 Mn ppm 5	ME-MS61 Mo ppm 0.05	ME-MS61 Na % 0.01	ME-MS61 Nb ppm 0.1	ME-MS61 Ni ppm 0.2	ME-MS61 P ppm 10	ME-MS61 Pb ppm 0.5	ME-MS61 Rb ppm 0.1	ME-MS61 Re ppm 0.002
05-019-10		0.03	0.044	1.01	12.2	28.0	1.28	546	1.99	0.75	5.1	122.0	440	6.0	44.7	0.002
05-019-11		0.04	0.028	0.54	9.1	18.8	1.38	955	1.23	0.48	3.0	81.5	440	3.5	25.0	<0.002
05-019-12		0.06	0.051	0.87	13.7	48.3	1.52	617	0.67	1.06	4.4	121.5	480	3.3	34.7	<0.002
05-019-13		0.13	0.064	1.17	16.0	27.7	1.06	585	1.64	0.93	4.8	105.5	550	4.6	45.8	0.002
05-019-14		1.38	<0.005	0.02	0.9	4.0	0.12	42	0.34	0.03	0.3	11.3	530	1.8	1.0	<0.002
05-019-15		0.20	0.081	1.57	20.0	40.6	0.98	72	2.22	0.63	7.3	108.0	300	11.4	79.9	0.005
05-019-16		0.14	0.074	1.32	15.7	37.4	1.56	478	1.66	0.95	5.2	106.0	630	8.6	53.9	0.002
DUMP SURFACE		0.44	0.055	0.93	14.2	36.4	0.66	368	2.05	0.68	4.8	69.0	700	7.8	37.6	<0.002
DUMP 2.5M		0.36	0.055	1.03	15.2	36.7	0.64	380	2.41	0.71	5.0	81.2	730	7.3	42.3	0.002

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Page: 4 - D
 Total # Pages: 4 (A - F)
 Plus Appendix Pages
 Finalized Date: 19-DEC-2005
 Account: VF

Project: Mount Klappan 0882-002-07

CERTIFICATE OF ANALYSIS VA05104769

Sample Description	Method Analyte Units LOR	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	
		S %	Sb ppm	Se ppm	Sn ppm	Sr ppm	Ta ppm	Te ppm	Th ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Y ppm	Zn ppm
		0.01	0.05	1	0.2	0.2	0.05	0.05	0.2	0.005	0.02	0.1	1	0.1	0.1	2
05-019-10		0.03	0.62	2	1.1	203.0	0.39	0.05	3.2	0.283	0.30	1.3	104	0.7	10.3	91
05-019-11		0.07	1.10	2	0.7	171.5	0.23	<0.05	2.2	0.137	0.18	0.8	61	0.4	8.2	44
05-019-12		0.04	0.53	1	1.1	208.0	0.32	<0.05	2.6	0.386	0.25	1.0	124	0.5	11.1	87
05-019-13		0.09	0.64	2	1.2	175.5	0.37	0.09	3.2	0.420	0.34	1.0	137	0.5	10.2	98
05-019-14		0.33	0.35	2	<0.2	25.2	<0.05	<0.05	0.2	0.016	0.08	0.1	6	0.1	1.8	5
05-019-15		0.26	0.64	3	1.7	141.0	0.60	0.09	4.9	0.399	0.69	1.9	138	1.1	14.3	132
05-019-16		0.34	0.78	2	1.3	204.0	0.42	0.11	3.5	0.440	0.41	1.0	150	0.6	12.1	106
DUMP SURFACE		0.13	0.85	4	1.1	198.0	0.38	0.10	3.6	0.297	0.35	1.3	94	0.7	10.8	71
DUMP 2.5M		0.11	0.78	3	1.2	178.0	0.40	0.08	3.7	0.326	0.35	1.4	111	0.7	11.7	82

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Page: 4 - E
 Total # Pages: 4 (A - F)
 Plus Appendix Pages
 Finalized Date: 19-DEC-2005
 Account: VF

Project: Mount Klappan 0882-002-07

CERTIFICATE OF ANALYSIS VA05104769

Sample Description	Method Analyte Units LOR	ME-MS61 Zr ppm	OA-ELE08 pH Unity	ME-XRF06 SiO2 %	ME-XRF06 Al2O3 %	ME-XRF06 Fe2O3 %	ME-XRF06 CaO %	ME-XRF06 MgO %	ME-XRF06 Na2O %	ME-XRF06 K2O %	ME-XRF06 Cr2O3 %	ME-XRF06 TiO2 %	ME-XRF06 MnO %	ME-XRF06 P2O5 %	ME-XRF06 SrO %	ME-XRF06 BaO %
		0.5	0.1	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
05-019-10		49.3		69.16	10.70	4.94	1.68	2.36	1.13	1.37	0.04	0.53	0.08	0.12	0.02	0.08
05-019-11		31.6		69.97	6.07	7.18	2.26	2.48	0.75	0.74	0.01	0.26	0.14	0.10	0.02	0.04
05-019-12		46.5		62.39	14.40	5.89	1.66	2.73	1.49	1.13	0.04	0.68	0.07	0.12	0.02	0.08
05-019-13		49.4		61.98	15.36	5.97	0.48	1.94	1.49	1.62	0.02	0.78	0.08	0.13	0.02	0.12
05-019-14		7.3		12.53	5.03	8.43	2.51	1.50	0.29	0.30	<0.01	0.18	0.07	0.95	0.03	0.04
05-019-15		85.6		54.70	14.08	3.06	0.17	1.72	1.03	2.18	0.01	0.77	<0.01	0.07	0.02	0.13
05-019-16		55.1		55.98	16.56	7.80	0.95	2.94	1.36	1.77	0.02	0.90	0.06	0.15	0.03	0.11
DUMP SURFACE		77.4	7.3	42.49	11.48	4.32	0.43	1.15	1.03	1.29	0.01	0.56	0.05	0.17	0.02	0.12
DUMP 2.5M		68.3	7.3	46.29	11.98	4.14	0.39	1.07	1.13	1.41	0.01	0.61	0.05	0.17	0.03	0.12

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Page: 4 - F
 Total # Pages: 4 (A - F)
 Plus Appendix Pages
 Finalized Date: 19-DEC-2005
 Account: VF

Project: Mount Klappan 0882-002-07

CERTIFICATE OF ANALYSIS VA05104769

Sample Description	Method Analyte Units LOR	ME-XRF06	ME-XRF06	C-IR07
		LOI %	Total %	C %
		0.01	0.01	0.01
05-019-10		6.52	98.75	1.40
05-019-11		8.14	98.16	2.28
05-019-12		8.49	99.20	1.61
05-019-13		9.29	99.27	2.65
05-019-14		68.10	99.96	>50
05-019-15		21.60	99.53	16.30
05-019-16		11.00	99.62	3.03
DUMP SURFACE		35.20	98.32	29.5
DUMP 2.5M		32.30	99.69	25.0

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Page: Appendix 1
Total # Appendix Pages: 1
Finalized Date: 19-DEC-2005
Account: VF

Project: Mount Klappan 0882-002-07

CERTIFICATE OF ANALYSIS VA05104769

Method	CERTIFICATE COMMENTS
ME-MS61 ME-MS61	Interference: Samples with Ca > 10% on ICP-MS As. ICP-AES As results reported (2 ppm DL) REE's may not be totally soluble in this method.



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Page: 1
 Finalized Date: 23-JAN-2006
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CERTIFICATE VA06000488

Project: Mount Klappan 0882-002-07
 P.O. No.:
 This report is for 57 Rock samples submitted to our lab in Vancouver, BC, Canada on 2-JAN-2006.
 The following have access to data associated with this certificate:
 LISA BARAZZUOL

SAMPLE PREPARATION	
ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-22	Sample login - Rcd w/o BarCode
CRU-31	Fine crushing - 70% <2mm
PUL-QC	Pulverizing QC Test
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um

ANALYTICAL PROCEDURES		
ALS CODE	DESCRIPTION	
S-IR07	Sulphide Sulphur (Leco)	
C-GAS05	Inorganic Carbon (CO2)	
S-GRA06a	Sulfate Sulfur (HCl leachable)	
ME-MS61	48 element four acid ICP-MS	
Hg-CV41	Trace Hg - cold vapor/AAS	FIMS
C-IR07	Total Carbon (Leco)	LECO
ME-XRF06	Whole Rock Package - XRF	XRF
OA-GRA06	LOI for ME-XRF06	WST-SIM
ME-MS41	51 anal. aqua regia ICPMS	
OA-VOL08	Basic Acid Base Accounting	
S-IR08	Total Sulphur (Leco)	LECO
OA-ELE07	Paste pH	
S-GRA06	Sulfate Sulfur-carbonate leach	LECO

To: RESCAN ENVIRONMENTAL SERVICES LTD.
 ATTN: ALS MINERALS

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

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Signature: 
 Colin Ramshaw, Vancouver Laboratory Manager



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Page: 2 - A
 Total # Pages: 3 (A - I)
 Plus Appendix Pages
 Finalized Date: 23-JAN-2006
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Project: Mount Klappan 0882-002-07

CERTIFICATE OF ANALYSIS VA06000488

Sample Description	Method	WEI-21	OA-VOL08	OA-VOL08	OA-VOL08	OA-VOL08	OA-ELE07	OA-VOL08	S-IR08	S-GRA06	S-GRA06a	S-IR07	C-GAS05	C-GAS05	ME-MS61	ME-MS61
	Analyte	Recvd Wt.	FIZZ RAT	MPA	NNP	NP	pH	Ratio (N)	S	S	S	S	C	CO2	Ag	Al
	Units	kg	Unity	tCaCO3/1000	tCaCO3/1000	tCaCO3/1000	Unity	Unity	%	%	%	%	%	%	ppm	%
	LOR	0.02	1	0.3	1	1	0.1	0.01	0.01	0.01	0.01	0.01	0.05	0.2	0.01	0.01
85-016-01		0.58	3	1.3	334	335	9.0	268.0	0.04	<0.01	0.01	0.03	4.67	17.1	0.12	1.86
85-016-02		0.70	2	1.3	44	45	8.6	36.00	0.04	<0.01	<0.01	0.03	1.56	5.7	0.17	5.63
85-016-03		0.40	2	2.8	25	28	8.0	9.96	0.11	<0.01	0.04	0.08	1.15	4.2	0.40	7.20
85-016-04		0.30	1	1.3	5	6	7.0	4.80	0.04	<0.01	<0.01	0.03	<0.05	<0.2	0.19	8.27
85-016-05		0.60	3	0.9	158	159	8.7	169.60	0.03	<0.01	<0.01	0.03	2.23	8.2	0.17	5.56
85-016-06		0.78	3	1.3	219	220	9.2	176.00	0.04	<0.01	0.02	0.04	1.39	5.1	0.05	4.40
85-016-07		0.58	3	10.9	98	109	8.7	9.97	0.35	0.01	0.02	0.34	2.25	8.3	0.19	6.47
85-016-08		0.44	1	22.2	-19	3	4.7	0.14	0.71	0.20	0.22	0.47	0.07	0.3	0.08	10.05
85-016-09		0.76	3	14.1	101	115	7.8	8.18	0.45	0.09	0.12	0.31	1.71	6.3	0.10	5.14
85-016-10		0.52	1	4.1	25	29	8.6	7.14	0.13	<0.01	0.01	0.11	0.96	3.5	0.12	8.08
85-016-11		0.40	1	1.3	7	8	8.4	6.40	0.04	<0.01	<0.01	0.03	0.15	0.6	0.16	4.79
85-016-12		0.28	1	2.2	8	10	8.4	4.57	0.07	<0.01	0.01	0.07	0.52	1.9	0.16	8.36
85-016-13		0.38	1	2.8	2	5	8.8	1.78	0.09	<0.01	<0.01	0.10	0.05	0.2	0.16	6.86
85-027-01		0.42	1	1.9	26	28	8.0	14.93	0.06	<0.01	0.01	0.04	1.33	4.9	0.19	5.88
85-027-02		0.54	1	26.9	2	29	8.4	1.08	0.86	0.01	0.01	0.85	1.63	6.0	0.22	6.99
85-027-03		0.52	1	64.7	-34	31	6.2	0.48	2.07	0.24	0.31	1.71	0.50	1.8	0.12	6.56
85-027-04		0.36	3	3.8	107	111	8.9	29.60	0.12	0.02	0.01	0.10	1.64	6.0	0.28	6.53
85-027-05		0.86	3	4.7	106	111	9.1	23.68	0.15	<0.01	0.02	0.05	1.71	6.3	0.04	7.94
85-027-06		0.52	1	2.2	29	31	8.8	14.17	0.07	<0.01	0.01	0.07	1.22	4.5	0.22	7.34
85-027-07		0.88	1	0.9	30	31	9.1	33.07	0.03	<0.01	0.01	0.03	2.85	10.5	0.08	5.71
85-027-08		0.54	3	0.3	390	390	9.7	1248.0	0.01	<0.01	<0.01	0.02	5.52	20.2	0.06	3.52
85-027-09		0.64	2	2.2	57	59	8.5	26.97	0.07	<0.01	0.02	0.06	1.68	6.2	0.17	8.77
85-027-10		0.60	3	1.3	128	129	8.9	103.20	0.04	<0.01	0.01	0.04	2.15	7.9	0.15	8.49
85-027-11		0.62	2	2.2	65	67	9.1	30.63	0.07	<0.01	0.01	0.06	1.11	4.1	0.18	7.73
85-027-12		0.56	2	23.1	30	53	7.3	2.29	0.74	0.11	0.11	0.60	0.87	3.2	0.35	6.81
85-027-13		0.54	1	3.8	16	20	8.1	5.33	0.12	<0.01	<0.01	0.08	0.62	2.3	0.27	9.20
85-027-14		0.20	1	803.1	-798	5	4.1	0.01	25.7	0.35	0.39	24.7	0.16	0.6	1.16	5.37
85-027-15		0.62	1	2.5	18	20	8.9	8.00	0.08	<0.01	0.01	0.08	1.81	6.6	0.23	6.09
85-027-16		0.46	1	2.8	7	10	8.0	3.56	0.09	<0.01	0.01	0.07	0.21	0.8	0.13	8.66
85-027-17		0.72	2	3.8	19	23	8.1	6.13	0.12	0.01	0.01	0.10	0.36	1.3	0.21	2.54
85-027-18		0.48	1	73.8	-77	-3	4.3	-0.04	2.36	0.48	0.45	1.82	<0.05	<0.2	0.27	9.46
85-027-19		0.34	1	4.7	5	10	7.6	2.13	0.15	0.04	0.01	0.13	0.13	0.5	0.08	9.32
85-027-20		0.50	3	1.9	309	311	9.4	165.85	0.06	<0.01	0.01	0.05	5.05	18.5	0.10	3.56
85-027-21		0.38	3	0.9	386	387	9.4	412.8	0.03	<0.01	0.01	0.02	5.23	19.2	0.05	1.96
85-027-23		0.30	3	2.2	132	134	9.3	61.26	0.07	0.01	0.01	0.06	1.79	6.6	0.27	6.64
85-027-24		0.38	1	1.6	17	19	9.2	12.16	0.05	0.01	<0.01	0.05	0.53	1.9	0.17	6.48
85-027-25		0.58	2	0.9	57	58	8.9	61.87	0.03	<0.01	<0.01	0.02	1.83	6.7	0.12	7.99
85-027-27		0.64	2	1.3	67	68	9.1	54.40	0.04	<0.01	<0.01	0.04	1.73	6.3	0.07	7.66
85-027-28		0.54	3	120.3	170	290	8.1	2.41	3.85	0.06	0.06	3.78	4.44	16.3	0.69	3.13
04-SR-01		0.68	2	1.6	51	53	9.1	33.92	0.05	0.02	<0.01	0.04	3.98	14.6	0.11	6.69

Comments: ** CORRECTED COPY for Project Name **

***** See Appendix Page for comments regarding this certificate *****



ALS Canada Ltd.
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To: RESCAN ENVIRONMENTAL SERVICES LTD.
 6TH FL, 1111 W HASTINGS ST
 VANCOUVER BC V6E 2J3

Page: 2 - B
 Total # Pages: 3 (A - I)
 Plus Appendix Pages
 Finalized Date: 23-JAN-2006
 Account: VF

Project: Mount Klappan 0882-002-07

CERTIFICATE OF ANALYSIS VA06000488

Sample Description	Method Analyte Units LOR	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	
		As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu	Fe	Ga	Ge	Hf
		ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
		0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2	0.01	0.05	0.05	0.1
85-016-01		7.0	180	0.23	0.16	7.45	0.28	9.57	10.8	84	0.36	52.0	3.74	4.38	0.05	0.5
85-016-02		12.1	840	1.14	0.15	0.70	0.48	28.80	18.7	206	2.04	54.3	3.13	13.60	0.06	1.3
85-016-03		12.3	1410	1.78	0.22	0.52	1.22	45.20	22.9	190	3.97	98.9	4.03	19.05	0.09	1.9
85-016-04		1.9	1030	1.67	0.23	0.14	0.57	46.30	17.7	144	4.23	92.5	0.96	19.35	0.05	2.0
85-016-05		16.7	830	1.14	0.10	3.16	0.61	28.80	18.8	268	2.15	45.3	3.40	13.15	0.07	1.5
85-016-06		2.8	410	0.95	0.05	2.06	0.11	25.30	4.9	62	1.89	22.0	12.30	9.96	0.12	1.1
85-016-07		10.0	620	1.12	0.08	0.40	0.24	32.20	17.8	110	2.83	34.5	10.45	14.55	0.09	2.1
85-016-08		12.5	1150	2.04	0.24	0.14	0.22	47.80	11.3	109	6.70	65.7	1.90	25.30	0.08	2.3
85-016-09		9.6	410	0.70	0.08	2.84	0.75	22.10	13.8	76	1.58	60.2	3.23	11.95	0.07	1.3
85-016-10		5.2	940	1.48	0.15	0.61	0.42	36.30	26.9	172	3.04	62.4	3.63	19.35	0.07	1.5
85-016-11		3.1	570	1.10	0.08	0.16	0.44	25.90	11.4	147	1.58	32.5	2.03	11.70	0.05	1.1
85-016-12		6.3	1260	1.73	0.13	0.17	0.49	34.40	12.6	112	5.95	43.2	3.68	20.40	0.08	2.1
85-016-13		1.0	920	1.61	0.11	0.04	0.52	31.10	3.1	97	10.30	38.1	1.04	18.30	0.07	1.5
85-027-01		1.8	820	1.36	0.16	0.33	0.73	35.50	15.4	179	2.77	69.4	4.61	14.90	0.09	1.7
85-027-02		15.6	1160	1.58	0.20	0.54	0.16	36.90	14.0	98	4.51	56.9	5.80	17.25	0.11	1.6
85-027-03		41.2	200	1.18	0.07	1.60	0.15	42.60	17.0	114	2.62	20.4	3.76	14.70	0.09	1.4
85-027-04		6.2	870	1.44	0.16	1.75	0.72	39.90	46.9	160	3.61	68.2	4.34	15.70	0.09	2.2
85-027-05		4.7	800	1.24	0.07	2.63	0.30	26.80	14.6	316	2.06	39.8	2.70	17.95	0.07	1.2
85-027-06		11.3	1220	1.53	0.18	0.70	0.79	38.80	29.9	153	4.03	82.3	4.13	18.85	0.09	1.8
85-027-07		1.0	760	1.13	0.13	1.42	0.27	36.40	12.9	89	2.99	41.0	9.08	12.80	0.15	1.1
85-027-08		1.8	220	0.32	0.06	9.39	0.17	12.20	4.6	19	0.74	22.6	5.17	6.04	0.07	0.9
85-027-09		5.7	990	1.27	0.18	1.30	0.49	38.40	21.7	159	3.93	72.5	5.46	20.20	0.13	1.5
85-027-10		2.6	940	1.45	0.18	2.06	0.59	36.00	22.5	153	4.22	73.8	4.34	19.55	0.13	1.9
85-027-11		11.6	820	1.05	0.09	1.69	0.42	30.40	17.5	197	3.20	39.5	3.56	16.15	0.10	1.2
85-027-12		30.8	780	0.91	0.12	1.55	0.54	31.50	38.1	107	3.01	56.3	3.63	15.10	0.11	1.3
85-027-13		7.5	1550	1.40	0.18	0.15	0.48	38.10	42.7	137	4.78	70.9	2.78	20.40	0.16	2.1
85-027-14		183.0	190	0.50	0.05	0.18	0.33	7.91	95.5	3	1.54	136.0	23.30	12.00	0.89	0.7
85-027-15		4.2	1200	1.44	0.19	0.44	0.62	35.70	18.3	127	3.00	67.5	6.47	15.30	0.24	2.2
85-027-16		1.0	1310	1.95	0.13	0.12	0.49	37.40	7.1	141	5.29	83.4	2.02	21.00	0.16	2.2
85-027-17		5.1	310	0.49	0.09	0.59	0.19	14.90	6.9	71	0.68	27.6	1.01	6.13	0.07	0.9
85-027-18		14.4	260	1.39	0.20	0.13	0.13	35.80	23.7	120	4.62	60.9	3.54	21.20	0.16	1.7
85-027-19		4.0	1420	1.78	0.20	0.26	0.31	36.40	14.1	184	5.61	67.7	2.11	21.00	0.11	2.0
85-027-20		5.6	450	0.63	0.06	2.56	0.24	18.25	12.2	63	1.64	24.4	16.30	7.76	0.25	0.9
85-027-21		1.6	150	0.18	0.04	8.80	0.22	5.67	6.9	41	0.36	18.0	4.92	4.04	0.08	0.6
85-027-23		10.7	1000	1.27	0.14	2.51	0.95	36.00	24.5	211	2.67	67.8	3.30	15.75	0.09	1.5
85-027-24		2.8	640	1.19	0.10	0.41	0.85	30.10	18.4	315	2.27	54.5	2.68	15.45	0.07	1.7
85-027-25		3.0	860	1.18	0.14	0.94	0.45	36.00	16.9	163	2.92	59.6	5.13	17.40	0.10	1.7
85-027-27		1.9	780	1.10	0.07	1.74	0.22	26.70	14.6	222	2.00	36.1	3.89	15.60	0.06	1.4
85-027-28		92.4	150	0.59	0.08	5.72	0.22	18.35	20.0	55	2.36	35.2	10.40	8.65	0.16	1.8
04-SR-01		2.0	730	1.01	0.10	1.13	0.43	31.80	20.4	59	3.07	35.8	11.30	14.95	0.15	2.3

Comments: ** CORRECTED COPY for Project Name **

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Page: 2 - C
 Total # Pages: 3 (A - I)
 Plus Appendix Pages
 Finalized Date: 23-JAN-2006
 Account: VF

Project: Mount Klappan 0882-002-07

CERTIFICATE OF ANALYSIS VA06000488

Sample Description	Method	Hg-CV41	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P	Pb	Rb	Re
	Units	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	LOR	0.01	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10	0.5	0.1	0.002
85-016-01		0.14	0.039	0.25	5.0	25.1	3.89	985	0.82	0.19	1.7	74.0	290	13.7	7.4	0.009
85-016-02		0.04	0.045	1.00	14.8	22.5	2.44	428	2.01	1.08	5.8	173.0	450	6.6	35.1	0.004
85-016-03		0.07	0.070	1.94	22.6	18.6	1.56	846	2.63	0.98	9.2	184.5	820	12.4	67.1	0.007
85-016-04		0.40	0.075	2.16	23.1	16.4	0.66	62	3.26	0.86	8.1	135.0	530	9.0	72.4	0.002
85-016-05		0.03	0.048	1.14	14.7	19.3	2.45	680	1.91	1.01	5.5	194.0	470	7.5	39.9	0.003
85-016-06		0.03	0.033	0.81	14.5	14.8	2.72	1230	0.79	0.50	2.7	38.6	6590	2.8	26.5	0.002
85-016-07		0.11	0.055	1.28	16.2	29.6	2.02	952	1.15	0.76	4.5	57.2	520	10.8	43.8	0.002
85-016-08		0.38	0.102	2.39	23.1	43.5	0.62	73	2.23	1.05	6.6	50.0	460	6.7	87.7	0.002
85-016-09		0.30	0.065	0.63	10.5	49.3	1.76	514	1.54	0.68	2.9	163.0	240	11.5	22.7	0.002
85-016-10		0.08	0.068	1.40	17.8	26.1	1.26	532	1.91	1.19	5.9	166.0	660	4.1	47.0	0.002
85-016-11		0.05	0.039	0.99	13.2	38.8	0.59	207	0.98	0.77	4.6	81.5	450	5.2	36.4	0.002
85-016-12		0.03	0.074	2.32	17.2	21.1	0.96	530	1.83	0.81	6.2	51.1	500	10.6	75.8	0.002
85-016-13		0.03	0.061	1.96	16.0	23.6	0.60	68	0.98	0.67	6.9	31.1	60	8.0	106.0	0.002
85-027-01		0.05	0.061	1.33	18.0	25.5	2.30	613	3.00	0.93	7.4	151.5	580	7.9	48.5	0.004
85-027-02		0.25	0.073	2.01	18.6	18.0	2.24	524	1.87	0.70	6.0	81.2	1020	9.8	66.6	0.003
85-027-03		1.87	0.045	1.46	22.6	20.0	1.24	249	2.48	1.01	4.0	70.5	4250	6.4	49.4	0.004
85-027-04		0.14	0.063	1.41	20.2	22.7	2.08	681	7.64	1.10	7.5	259.0	600	14.2	53.5	0.005
85-027-05		0.27	0.060	0.97	12.9	21.9	1.63	442	1.27	2.10	5.4	83.9	880	3.8	23.3	0.002
85-027-06		0.14	0.081	1.66	18.7	36.3	1.82	935	2.37	1.11	7.4	155.5	750	12.0	57.8	0.003
85-027-07		0.12	0.057	1.00	19.7	7.0	2.31	1675	1.37	0.90	2.9	90.5	4600	4.4	36.1	0.002
85-027-08		0.04	0.025	0.28	5.6	35.0	4.00	1955	0.32	0.86	1.5	38.8	280	14.7	8.3	0.002
85-027-09		0.20	0.084	1.28	18.4	10.0	1.69	986	1.63	1.62	5.4	142.0	1220	8.2	47.1	0.002
85-027-10		0.14	0.090	1.08	16.5	16.0	1.51	1000	2.20	1.48	5.3	115.0	630	6.8	34.9	0.002
85-027-11		0.46	0.054	0.91	15.0	19.0	1.48	633	0.87	1.48	4.3	113.5	650	6.2	31.9	0.002
85-027-12		0.74	0.059	0.95	15.4	23.0	1.39	591	2.32	1.28	3.9	141.5	2390	22.4	33.5	0.002
85-027-13		0.20	0.080	1.98	17.8	32.3	1.25	457	4.07	1.10	5.9	164.0	570	7.7	68.2	0.002
85-027-14		0.40	0.055	1.26	2.7	6.9	0.45	282	5.68	0.80	1.0	245.0	260	171.0	39.8	0.002
85-027-15		0.08	0.064	1.58	17.8	22.0	2.13	1430	2.20	0.85	7.4	133.5	870	9.3	62.6	0.003
85-027-16		0.22	0.081	2.41	17.9	20.3	1.02	158	1.16	0.94	8.0	96.9	510	7.2	96.3	0.002
85-027-17		0.08	0.023	0.44	7.3	27.2	0.58	113	1.11	0.52	2.8	56.8	310	5.3	18.7	0.002
85-027-18		0.86	0.088	1.94	16.4	30.6	0.85	153	1.51	1.10	6.1	119.0	490	17.2	71.0	0.002
85-027-19		0.14	0.075	1.94	17.1	30.2	0.91	144	1.90	1.33	6.7	112.5	470	6.8	76.0	0.002
85-027-20		0.06	0.038	0.43	8.9	14.1	3.28	3820	1.25	0.52	2.2	90.5	1180	4.3	15.5	0.002
85-027-21		0.03	0.025	0.19	2.7	39.5	3.55	1630	0.43	0.34	1.0	78.3	240	20.6	6.0	0.002
85-027-23		0.06	0.062	1.54	17.8	29.1	2.33	732	3.73	0.94	7.4	188.5	940	12.5	55.4	0.006
85-027-24		0.07	0.055	1.12	15.3	36.1	1.66	248	2.42	1.10	7.2	184.0	640	5.8	46.7	0.003
85-027-25		0.09	0.070	1.17	16.9	10.3	1.57	1040	1.78	1.45	5.1	122.0	700	8.8	43.8	0.002
85-027-27		0.09	0.051	1.02	13.1	22.4	1.61	630	0.87	1.77	4.3	102.5	610	3.6	32.3	0.002
85-027-28		1.68	0.031	0.68	9.6	25.4	4.21	2520	5.86	0.24	6.4	130.5	800	35.3	30.9	0.006
04-SR-01		0.05	0.072	0.95	15.3	15.1	2.13	2230	1.22	0.78	4.5	39.6	1200	7.3	35.8	0.002

Comments: ** CORRECTED COPY for Project Name **

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Page: 2 - D
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Project: Mount Klappan 0882-002-07

CERTIFICATE OF ANALYSIS VA06000488

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	
	Analyte	S	Sb	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	V	W	Y	Zn
Units	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
LOR	0.01	0.05	1	0.2	0.2	0.05	0.05	0.2	0.005	0.02	0.1	1	0.1	0.1	0.1	2
85-016-01	0.04	0.73	3	0.5	965.0	0.11	0.08	1.0	0.112	0.06	0.5	39	0.2	9.7	51	
85-016-02	0.04	1.25	2	1.1	146.5	0.46	0.07	3.5	0.285	0.31	1.3	105	0.6	11.6	83	
85-016-03	0.10	1.87	4	1.6	132.5	0.66	0.12	5.7	0.449	0.60	2.3	162	1.0	16.6	165	
85-016-04	0.03	0.61	2	1.5	150.0	0.60	0.10	5.7	0.507	0.50	2.2	170	0.9	11.6	166	
85-016-05	0.04	1.27	2	1.1	298.0	0.39	0.06	3.3	0.290	0.32	1.3	95	0.6	12.9	102	
85-016-06	0.05	0.40	2	0.6	210.0	0.20	0.05	1.8	0.196	0.17	0.7	94	0.2	36.7	63	
85-016-07	0.39	1.29	2	0.9	135.0	0.32	0.05	3.1	0.332	0.48	1.5	134	0.4	18.1	105	
85-016-08	0.77	1.14	3	1.7	187.5	0.51	0.14	5.7	0.586	0.74	1.7	172	0.8	16.2	132	
85-016-09	0.48	1.74	2	1.0	453.0	0.21	0.06	2.0	0.247	0.20	0.8	75	0.2	12.8	200	
85-016-10	0.13	0.60	2	1.3	208.0	0.44	0.08	3.6	0.474	0.49	1.2	149	0.6	13.0	109	
85-016-11	0.04	0.61	2	1.0	91.1	0.33	0.05	3.1	0.219	0.24	1.1	79	0.5	11.2	67	
85-016-12	0.07	1.02	2	1.4	167.0	0.45	0.09	4.5	0.457	0.57	1.7	146	0.7	15.4	120	
85-016-13	0.08	0.38	2	1.4	109.5	0.54	0.05	4.2	0.407	1.06	1.4	125	0.9	9.5	80	
85-027-01	0.06	0.39	3	1.3	105.5	0.51	0.07	4.6	0.360	0.34	2.0	142	0.7	15.5	117	
85-027-02	0.89	1.56	3	1.3	132.0	0.42	0.10	4.1	0.406	0.52	1.3	145	0.6	13.6	137	
85-027-03	2.15	2.35	3	0.9	202.0	0.32	0.05	3.2	0.289	0.79	2.0	77	0.5	26.2	89	
85-027-04	0.13	0.74	3	1.3	200.0	0.54	0.08	4.9	0.389	0.38	2.2	135	0.8	13.7	129	
85-027-05	0.16	0.58	2	1.1	255.0	0.36	0.05	2.5	0.536	0.24	0.9	134	0.5	13.0	106	
85-027-06	0.07	1.20	3	1.3	239.0	0.53	0.15	4.4	0.466	0.54	1.7	169	0.8	15.0	174	
85-027-07	0.03	0.45	3	0.9	145.5	0.24	0.06	2.5	0.320	0.29	1.0	149	0.4	24.2	73	
85-027-08	0.01	0.34	3	0.5	1020.0	0.11	0.05	1.3	0.157	0.08	0.4	38	0.2	9.8	43	
85-027-09	0.08	1.41	3	1.4	190.0	0.38	0.12	3.7	0.515	0.48	1.3	160	0.7	13.2	112	
85-027-10	0.04	0.70	3	1.4	194.0	0.39	0.14	3.6	0.502	0.36	1.3	145	0.8	13.5	126	
85-027-11	0.07	1.89	3	1.0	178.0	0.31	0.05	2.8	0.375	0.33	1.0	117	0.5	12.8	104	
85-027-12	0.83	8.08	4	1.0	349.0	0.27	0.09	2.6	0.390	0.62	0.9	106	0.5	17.3	112	
85-027-13	0.12	2.54	2	1.3	124.5	0.44	0.13	3.9	0.533	0.61	1.2	166	0.7	13.2	131	
85-027-14	>10.0	25.60	123	0.7	77.1	0.06	0.34	0.4	0.364	1.29	0.3	130	0.3	8.6	207	
85-027-15	0.12	1.20	2	1.3	99.2	0.49	0.09	4.5	0.340	0.51	1.9	153	1.0	15.8	127	
85-027-16	0.10	0.57	2	1.6	117.5	0.58	0.05	5.1	0.479	0.62	1.7	195	1.0	13.1	164	
85-027-17	0.14	0.98	2	0.7	124.5	0.19	0.05	2.0	0.115	0.13	0.8	43	0.4	6.0	40	
85-027-18	2.47	2.12	2	1.4	183.5	0.41	0.11	3.8	0.525	0.54	0.9	161	0.6	11.4	128	
85-027-19	0.16	0.97	2	1.4	184.5	0.46	0.12	3.7	0.534	0.51	1.1	168	0.7	11.6	121	
85-027-20	0.06	0.56	1	0.4	142.5	0.15	0.09	1.3	0.188	0.18	0.6	81	0.3	12.8	75	
85-027-21	0.03	0.46	2	0.4	861.0	0.06	0.05	0.7	0.075	0.07	0.2	25	0.1	15.4	62	
85-027-23	0.08	1.63	3	1.2	206.0	0.49	0.08	4.0	0.356	0.45	1.6	119	0.8	19.6	141	
85-027-24	0.06	0.59	2	1.0	125.0	0.46	0.05	3.9	0.351	0.28	1.6	136	0.6	13.3	129	
85-027-25	0.04	0.91	2	1.1	174.5	0.34	0.08	3.5	0.446	0.37	1.2	147	0.7	13.3	107	
85-027-27	0.04	0.48	1	0.9	225.0	0.29	0.05	2.6	0.402	0.24	0.9	124	0.4	11.9	90	
85-027-28	4.93	14.25	17	0.6	406.0	0.19	0.08	1.8	0.150	3.14	1.1	115	0.4	20.5	68	
04-SR-01	0.04	0.76	1	0.8	162.5	0.28	0.07	3.1	0.365	0.31	1.7	144	0.5	17.8	128	

Comments: ** CORRECTED COPY for Project Name **

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Page: 2 - E
 Total # Pages: 3 (A - I)
 Plus Appendix Pages
 Finalized Date: 23-JAN-2006
 Account: VF

Project: Mount Klappan 0882-002-07

CERTIFICATE OF ANALYSIS VA06000488

Sample Description	Method Analyte Units LOR	ME-MS61 Zr ppm	C-IR07 C %	ME-XRF06 SiO2 %	ME-XRF06 Al2O3 %	ME-XRF06 Fe2O3 %	ME-XRF06 CaO %	ME-XRF06 MgO %	ME-XRF06 Na2O %	ME-XRF06 K2O %	ME-XRF06 Cr2O3 %	ME-XRF06 TiO2 %	ME-XRF06 MnO %	ME-XRF06 P2O5 %	ME-XRF06 SrO %	ME-XRF06 BaO %
85-016-01		22.8	6.56	53.63	3.38	5.67	10.25	6.51	0.36	0.28	0.01	0.21	0.14	0.05	0.10	0.02
85-016-02		41.6	2.14	67.30	10.37	4.87	1.00	4.15	1.55	1.21	0.04	0.48	0.14	0.11	0.02	0.09
85-016-03		62.8	2.44	61.90	13.91	6.20	0.74	2.71	1.51	2.39	0.03	0.79	0.12	0.19	0.01	0.16
85-016-04		60.8	1.84	68.46	16.12	1.45	0.19	1.20	1.32	2.68	0.02	0.89	<0.01	0.12	0.02	0.13
85-016-05		43.6	2.65	61.88	9.79	5.05	4.28	4.03	1.43	1.35	0.06	0.51	0.09	0.11	0.03	0.11
85-016-06		58.3	4.63	45.53	8.35	18.83	2.98	4.73	0.68	1.02	0.01	0.35	0.20	1.52	0.02	0.05
85-016-07		71.2	3.90	50.82	12.29	15.08	0.55	3.40	1.10	1.60	0.01	0.61	0.12	0.11	0.01	0.08
85-016-08		66.6	4.17	58.62	20.07	2.79	0.20	1.08	1.54	2.98	0.01	1.01	<0.01	0.10	0.02	0.13
85-016-09		48.5	3.40	65.67	9.74	5.04	4.08	3.18	1.08	0.76	0.01	0.48	0.06	0.04	0.05	0.06
85-016-10		49.6	2.12	61.51	16.02	5.38	0.87	2.20	1.69	1.74	0.03	0.84	0.07	0.17	0.02	0.10
85-016-11		35.3	0.47	79.30	8.91	2.99	0.24	1.00	1.27	1.21	0.02	0.44	0.02	0.11	0.01	0.06
85-016-12		68.1	1.84	59.41	17.72	5.65	0.26	1.75	1.20	3.03	0.01	0.90	0.07	0.10	0.02	0.14
85-016-13		52.4	16.40	58.75	13.70	1.49	0.06	0.99	1.02	2.50	0.01	0.75	<0.01	0.01	0.01	0.11
85-027-01		50.3	2.10	61.98	11.58	7.35	0.48	4.00	1.39	1.65	0.03	0.66	0.08	0.15	0.01	0.10
85-027-02		52.3	3.07	55.12	13.89	8.95	0.80	3.88	1.02	2.60	0.01	0.72	0.07	0.23	0.02	0.15
85-027-03		45.1	3.14	61.85	12.23	5.52	2.22	2.04	1.47	1.78	0.02	0.52	0.03	0.93	0.02	0.12
85-027-04		73.1	4.47	58.80	11.84	6.23	2.36	3.35	1.65	1.67	0.02	0.65	0.09	0.14	0.02	0.09
85-027-05		38.5	2.44	58.84	15.95	3.96	3.63	2.72	2.82	1.17	0.06	0.98	0.05	0.20	0.03	0.08
85-027-06		52.6	6.81	53.99	15.32	6.12	1.01	3.05	1.54	2.11	0.02	0.81	0.13	0.17	0.02	0.14
85-027-07		48.4	4.10	50.34	11.19	13.97	2.11	3.95	1.18	1.28	0.01	0.59	0.26	1.03	0.01	0.09
85-027-08		23.9	5.87	45.11	6.10	7.60	12.40	6.32	1.27	0.32	<0.01	0.27	0.27	0.07	0.10	0.03
85-027-09		49.2	3.30	53.71	16.47	8.10	1.83	2.83	2.25	1.55	0.02	0.90	0.13	0.26	0.02	0.10
85-027-10		57.3	4.01	51.82	17.53	6.80	3.09	2.59	1.99	1.37	0.02	0.91	0.13	0.15	0.02	0.10
85-027-11		39.7	2.92	60.32	14.19	5.36	2.34	2.43	1.95	1.08	0.03	0.66	0.08	0.13	0.02	0.09
85-027-12		50.2	8.72	56.40	12.64	5.30	2.08	2.08	1.82	1.11	0.01	0.70	0.07	0.49	0.04	0.10
85-027-13		66.3	4.17	58.85	18.21	4.27	0.22	2.20	1.67	2.52	0.01	0.97	0.06	0.14	0.01	0.18
85-027-14		16.2	0.78	30.46	11.13	32.58	0.28	0.84	1.01	1.75	<0.01	0.71	0.03	0.06	0.01	0.12
85-027-15		70.7	2.74	59.43	11.69	9.74	0.64	3.72	1.35	1.97	0.01	0.62	0.19	0.19	0.01	0.14
85-027-16		62.6	1.89	64.49	16.56	3.02	0.19	1.81	1.44	3.01	0.02	0.88	0.01	0.12	0.02	0.15
85-027-17		27.6	0.54	86.39	4.65	1.45	0.83	0.99	0.91	0.53	0.01	0.22	<0.01	0.06	0.02	0.03
85-027-18		50.7	2.68	57.42	18.58	5.29	0.19	1.48	1.57	2.47	0.01	0.97	0.01	0.11	0.02	0.16
85-027-19		63.4	5.50	60.66	17.73	3.10	0.36	1.58	1.95	2.35	0.02	0.97	0.01	0.12	0.02	0.17
85-027-20		33.8	6.38	35.57	7.11	23.84	3.79	5.88	0.69	0.58	<0.01	0.36	0.57	0.27	0.02	0.05
85-027-21		16.1	5.44	50.09	3.52	7.33	11.99	5.74	0.58	0.21	<0.01	0.14	0.23	0.05	0.08	0.02
85-027-23		46.5	2.64	60.30	12.20	4.97	3.48	3.94	1.28	1.82	0.03	0.68	0.09	0.21	0.02	0.12
85-027-24		53.1	1.46	69.84	11.81	3.82	0.57	2.85	1.56	1.34	0.05	0.70	0.02	0.14	0.02	0.06
85-027-25		54.9	2.74	57.61	14.54	7.53	1.28	2.53	1.89	1.43	0.02	0.78	0.13	0.15	0.02	0.09
85-027-27		42.1	2.79	58.42	14.34	6.02	2.51	2.71	2.38	1.24	0.03	0.71	0.08	0.14	0.02	0.09
85-027-28		68.7	23.4	26.54	5.64	14.50	7.17	6.65	0.30	0.82	<0.01	0.25	0.37	0.16	0.05	0.06
04-SR-01		83.7	5.06	43.11	12.82	17.03	1.64	3.79	1.09	1.22	<0.01	0.68	0.30	0.29	0.02	0.09

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Page: 2 - F
 Total # Pages: 3 (A - I)
 Plus Appendix Pages
 Finalized Date: 23-JAN-2006
 Account: VF

Project: Mount Klappan 0882-002-07

CERTIFICATE OF ANALYSIS VA06000488

Sample Description	Method Analyte Units LOR	ME-XRF06	ME-XRF06	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	
		LOI %	Total %	Ag ppm	Al %	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr ppm	Cs ppm
85-016-01		19.45	100.05	0.01	0.01	0.1	10	10	0.05	0.01	0.01	0.01	0.02	0.1	1	0.05
85-016-02		8.23	99.56													
85-016-03		8.70	99.36													
85-016-04		6.12	98.70													
85-016-05		10.35	99.05													
85-016-06		15.65	99.91													
85-016-07		13.60	99.40													
85-016-08		10.90	99.43													
85-016-09		9.56	99.81													
85-016-10		8.37	99.00													
85-016-11		3.09	98.67													
85-016-12		8.18	98.44													
85-016-13		20.00	99.41													
85-027-01		8.72	98.16													
85-027-02		11.60	99.04													
85-027-03		10.10	98.85													
85-027-04		11.55	98.47													
85-027-05		9.56	100.05													
85-027-06		14.60	99.03													
85-027-07		14.00	100.00													
85-027-08		19.25	99.09													
85-027-09		11.55	99.71													
85-027-10		13.45	99.96													
85-027-11		9.83	98.51													
85-027-12		16.00	99.00													
85-027-13		10.50	99.82													
85-027-14		21.10	100.05													
85-027-15		9.99	99.69													
85-027-16		6.78	98.50													
85-027-17		2.42	98.54													
85-027-18		11.15	99.42													
85-027-19		10.80	99.83													
85-027-20		21.10	99.84													
85-027-21		18.75	98.73													
85-027-23		9.17	98.29													
85-027-24		5.95	98.74													
85-027-25		10.75	98.75													
85-027-27		9.96	98.66													
85-027-28		35.70	98.20													
04-SR-01		17.10	99.17													

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Page: 2 - G
 Total # Pages: 3 (A - I)
 Plus Appendix Pages
 Finalized Date: 23-JAN-2006
 Account: VF

Project: Mount Klappan 0882-002-07

CERTIFICATE OF ANALYSIS VA06000488

Sample Description	Method Analyte Units LOR	ME-MS41 Cu ppm 0.2	ME-MS41 Fe % 0.01	ME-MS41 Ga ppm 0.05	ME-MS41 Ge ppm 0.05	ME-MS41 Hf ppm 0.02	ME-MS41 Hg ppm 0.01	ME-MS41 In ppm 0.005	ME-MS41 K % 0.01	ME-MS41 La ppm 0.2	ME-MS41 Li ppm 0.1	ME-MS41 Mg % 0.01	ME-MS41 Mn ppm 5	ME-MS41 Mo ppm 0.05	ME-MS41 Na % 0.01	ME-MS41 Nb ppm 0.05
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85-027-28																
04-SR-01																

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Page: 2 - H
 Total # Pages: 3 (A - I)
 Plus Appendix Pages
 Finalized Date: 23-JAN-2006
 Account: VF

Project: Mount Klappan 0882-002-07

CERTIFICATE OF ANALYSIS VA06000488

Sample Description	Method Analyte Units LOR	ME-MS41 Ni ppm 0.2	ME-MS41 P ppm 10	ME-MS41 Pb ppm 0.2	ME-MS41 Rb ppm 0.1	ME-MS41 Re ppm 0.001	ME-MS41 S % 0.01	ME-MS41 Sb ppm 0.05	ME-MS41 Sc ppm 0.1	ME-MS41 Se ppm 0.2	ME-MS41 Sn ppm 0.2	ME-MS41 Sr ppm 0.2	ME-MS41 Ta ppm 0.01	ME-MS41 Te ppm 0.01	ME-MS41 Th ppm 0.2	ME-MS41 Ti % 0.005
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Page: 2 - I
 Total # Pages: 3 (A - I)
 Plus Appendix Pages
 Finalized Date: 23-JAN-2006
 Account: VF

Project: Mount Klappan 0882-002-07

CERTIFICATE OF ANALYSIS VA06000488

Sample Description	Method Analyte Units LOR	ME-MS41 Ti ppm 0.02	ME-MS41 U ppm 0.05	ME-MS41 V ppm 1	ME-MS41 W ppm 0.05	ME-MS41 Y ppm 0.05	ME-MS41 Zn ppm 2	ME-MS41 Zr ppm 0.5
85-016-01								
85-016-02								
85-016-03								
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85-027-27								
85-027-28								
04-SR-01								

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Page: 3 - A
 Total # Pages: 3 (A - I)
 Plus Appendix Pages
 Finalized Date: 23-JAN-2006
 Account: VF

Project: Mount Klappan 0882-002-07

CERTIFICATE OF ANALYSIS VA06000488

Sample Description	Method Analyte Units LOR	WEI-21	OA-VOL08	OA-VOL08	OA-VOL08	OA-VOL08	OA-ELE07	OA-VOL08	S-IR08	S-GRA06	S-GRA06a	S-IR07	C-GAS05	C-GAS05	ME-MS61	ME-MS61
		Recvd Wt. kg	FIZZ RAT Unity	MPA tCaCO3/1000	NNP tCaCO3/1000	NP tCaCO3/1000	pH Unity	Ratio (N) Unity	S %	S %	S %	S %	C %	CO2 %	Ag ppm	Al %
		0.02	1	0.3	1	1	0.1	0.01	0.01	0.01	0.01	0.01	0.05	0.2	0.01	0.01
04-SR-02		0.30	1	15.0	14	29	9.2	1.93	0.48	<0.01	0.01	0.43	1.09	4.0		
04-SR-03		1.00	3	1.3	118	119	9.5	95.20	0.04	<0.01	<0.01	0.04	1.52	5.6	0.13	4.14
04-SR-04		0.42	2	5.0	51	56	9.4	11.20	0.16	<0.01	0.01	0.16	4.24	15.5	0.18	3.94
04-SR-05		0.90	3	1.9	247	249	9.6	132.80	0.06	<0.01	0.01	0.05	3.48	12.8	0.16	5.26
86-035-01		0.40	1	78.4	-70	8	2.7	0.10	2.59	0.38	0.41	1.99	0.22	0.8		
86-035-02		0.24	2	2.5	64	66	8.9	26.40	0.08	<0.01	<0.01	0.07	1.91	7.0	0.10	7.68
86-035-03		0.30	3	0.6	162	163	9.1	260.8	0.02	<0.01	<0.01	0.02	2.98	10.9	0.09	7.13
86-035-04		0.44	3	768.8	-614	155	6.9	0.20	24.6	0.18	0.17	23.5	2.33	8.6	1.66	1.22
86-035-05		0.30	3	3.4	79	82	8.6	23.85	0.11	0.01	0.01	0.10	1.91	7.0	0.17	9.26
86-035-06		0.44	4	1.6	703	705	8.9	451.2	0.05	<0.01	0.01	0.03	9.08	33.3	0.07	0.81
86-035-07		0.36	2	2.5	29	31	8.9	12.40	0.08	<0.01	<0.01	0.06	0.91	3.3	0.19	7.19
86-035-08		0.30	2	1.6	39	41	8.9	26.24	0.05	0.01	0.01	0.04	2.98	10.9	0.20	5.56
86-035-09		0.48	2	48.1	13	61	7.5	1.27	1.54	0.13	0.13	1.28	0.93	3.4	0.16	7.40
86-035-10		0.26	2	15.0	70	85	9.1	5.67	0.48	<0.01	<0.01	0.48	1.31	4.8		
86-035-11		0.44	1	2.8	12	15	8.4	5.33	0.09	0.01	0.01	0.07	0.22	0.8	0.08	8.59
86-035-12		0.44	3	1.3	234	235	9.3	188.00	0.04	<0.01	0.01	0.05	5.05	18.5	0.04	4.37
86-035-13		0.24	2	1.9	61	63	8.7	33.60	0.06	0.01	0.01	0.05	1.89	6.9	0.14	8.90

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Page: 3 - B
 Total # Pages: 3 (A - I)
 Plus Appendix Pages
 Finalized Date: 23-JAN-2006
 Account: VF

Project: Mount Klappan 0882-002-07

CERTIFICATE OF ANALYSIS VA06000488

Sample Description	Method Analyte Units LOR	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	
		As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu	Fe	Ga	Ge	Hf
		ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
04-SR-02		0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2	0.01	0.05	0.05	0.1
04-SR-03		2.4	600	0.79	0.09	2.16	0.36	20.80	10.1	153	1.22	29.8	2.37	9.91	0.05	1.2
04-SR-04		3.9	670	0.91	0.11	0.45	0.64	31.10	18.8	85	2.19	55.8	11.30	10.05	0.12	2.1
04-SR-05		6.7	820	0.91	0.11	4.79	0.49	24.70	13.8	181	1.95	49.1	4.09	11.50	0.07	1.6
86-035-01																
86-035-02		3.7	760	1.20	0.12	1.32	0.34	31.70	21.5	201	3.41	50.1	5.34	16.40	0.08	1.2
86-035-03		3.5	620	1.04	0.12	1.23	0.30	32.20	8.2	115	2.71	49.6	7.50	16.05	0.10	2.2
86-035-04		405.0	40	0.19	0.07	4.38	0.37	12.20	54.7	40	0.73	45.8	25.10	2.96	0.50	0.4
86-035-05		6.7	920	1.48	0.19	1.44	0.56	36.10	23.2	129	4.42	71.0	4.56	21.20	0.09	1.6
86-035-06		5	100	0.11	0.04	14.85	0.19	4.35	4.7	15	0.21	9.6	5.09	1.76	0.06	0.4
86-035-07		15.8	1300	1.64	0.15	0.40	0.75	40.50	16.2	193	3.15	64.6	2.71	17.50	0.07	2.3
86-035-08		2.6	700	1.38	0.12	0.33	0.54	31.30	17.3	173	2.74	58.6	9.25	13.45	0.12	2.0
86-035-09		13.8	350	0.94	0.05	1.69	0.13	30.60	29.8	220	3.15	17.3	3.35	15.35	0.06	1.9
86-035-10																
86-035-11		4.2	740	1.42	0.07	0.34	0.26	39.90	9.7	113	2.41	16.3	2.11	18.40	0.05	2.0
86-035-12		0.5	510	0.79	0.07	2.48	0.09	28.40	4.6	55	1.82	22.7	15.00	9.72	0.25	1.3
86-035-13		4.3	840	1.17	0.16	1.52	0.56	31.00	32.0	144	3.74	67.3	3.84	19.85	0.15	1.3

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Page: 3 - C
 Total # Pages: 3 (A - I)
 Plus Appendix Pages
 Finalized Date: 23-JAN-2006
 Account: VF

Project: Mount Klappan 0882-002-07

CERTIFICATE OF ANALYSIS VA06000488

Sample Description	Hg-CV41 Hg ppm	ME-MS61 In ppm	ME-MS61 K %	ME-MS61 La ppm	ME-MS61 Li ppm	ME-MS61 Mg %	ME-MS61 Mn ppm	ME-MS61 Mo ppm	ME-MS61 Na %	ME-MS61 Nb ppm	ME-MS61 Ni ppm	ME-MS61 P ppm	ME-MS61 Pb ppm	ME-MS61 Rb ppm	ME-MS61 Re ppm
	0.01	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10	0.5	0.1	0.002
04-SR-02	0.01														
04-SR-03	0.10	0.035	0.82	10.4	20.1	1.74	449	0.88	0.75	4.3	77.6	440	4.3	32.9	0.002
04-SR-04	0.05	0.049	1.06	15.2	15.8	5.28	2110	4.15	0.40	7.9	167.5	590	7.5	40.7	0.003
04-SR-05	0.06	0.044	1.25	12.3	19.9	3.30	1555	2.20	0.98	5.7	99.7	570	7.2	44.7	0.003
86-035-01	0.26														
86-035-02	0.07	0.059	1.15	15.4	14.8	1.94	959	1.26	1.23	5.0	151.5	1020	4.7	39.5	0.002
86-035-03	0.05	0.060	0.89	15.0	23.8	2.78	1290	0.83	0.88	4.4	154.0	520	3.7	35.1	0.002
86-035-04	3.38	0.016	0.15	6.3	9.4	1.59	924	5.91	0.10	0.7	148.0	1240	136.5	8.0	0.002
86-035-05	0.10	0.078	1.06	16.4	15.4	1.39	931	2.01	1.31	5.7	121.0	1200	8.2	41.0	0.002
86-035-06	0.04	0.012	0.16	2.1	24.9	7.20	2020	0.41	0.09	1.0	26.2	210	17.8	5.6	0.002
86-035-07	0.11	0.070	1.76	18.9	17.1	1.14	516	3.89	1.23	8.0	140.5	580	10.1	60.8	0.003
86-035-08	0.13	0.064	1.42	15.5	15.6	2.00	1580	2.58	0.60	6.2	138.0	590	6.1	55.5	0.002
86-035-09	1.87	0.049	1.08	14.8	24.1	1.19	243	1.36	1.54	4.7	173.5	570	14.3	40.6	0.002
86-035-10	0.07														
86-035-11	0.11	0.039	1.35	19.5	151.5	0.60	137	1.03	1.97	6.3	25.2	390	5.3	48.0	0.002
86-035-12	0.04	0.029	0.96	14.5	16.2	3.82	1775	0.43	0.32	2.6	64.3	1200	1.6	33.8	0.002
86-035-13	0.07	0.061	1.17	14.3	14.6	1.57	787	2.55	1.29	5.4	176.5	920	7.2	41.2	0.003

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Page: 3 - D
 Total # Pages: 3 (A - I)
 Plus Appendix Pages
 Finalized Date: 23-JAN-2006
 Account: VF

Project: Mount Klappan 0882-002-07

CERTIFICATE OF ANALYSIS VA06000488

Sample Description	Method Analyte Units LOR	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	
		S %	Sb ppm	Se ppm	Sn ppm	Sr ppm	Ta ppm	Te ppm	Th ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Y ppm	Zn ppm
04-SR-02		0.01	0.05	1	0.2	0.2	0.05	0.05	0.2	0.005	0.02	0.1	1	0.1	0.1	2
04-SR-03		0.05	0.63	1	0.8	158.0	0.28	0.05	2.7	0.197	0.25	1.0	81	0.6	9.4	66
04-SR-04		0.15	1.55	2	0.7	89.8	0.27	0.07	2.6	0.212	0.36	1.6	191	0.5	19.2	104
04-SR-05		0.07	1.18	2	0.9	679.0	0.37	0.05	3.1	0.290	0.33	1.4	105	0.6	12.8	91
86-035-01																
86-035-02		0.08	0.89	1	0.9	162.0	0.33	0.09	2.7	0.444	0.30	0.9	162	0.5	14.1	110
86-035-03		0.02	0.39	1	1.0	178.5	0.27	0.06	2.9	0.382	0.26	1.2	156	0.5	14.9	90
86-035-04		>10.0	51.10	65	0.3	665.0	0.05	0.17	0.7	0.044	4.27	0.4	33	0.2	21.4	63
86-035-05		0.12	1.31	2	1.3	183.5	0.38	0.12	3.3	0.517	0.37	1.1	157	0.6	13.5	140
86-035-06		0.07	0.43	3	0.2	3380.0	0.09	0.05	0.7	0.034	0.05	0.3	18	0.1	10.0	36
86-035-07		0.08	1.35	2	1.7	155.5	0.52	0.05	4.2	0.385	0.51	1.4	111	0.9	14.9	139
86-035-08		0.05	0.73	2	1.0	110.5	0.41	0.06	3.7	0.322	0.37	1.7	137	0.7	15.5	125
86-035-09		1.67	4.28	3	0.9	197.5	0.31	0.05	2.5	0.357	0.58	1.1	99	0.5	12.9	138
86-035-10																
86-035-11		0.10	0.91	1	1.0	186.5	0.42	0.05	3.8	0.332	0.34	1.5	97	0.7	12.6	77
86-035-12		0.04	0.22	2	0.6	307.0	0.18	0.05	1.8	0.214	0.22	0.8	131	0.3	19.9	56
86-035-13		0.07	1.40	3	1.3	180.0	0.39	0.12	2.9	0.521	0.39	1.0	152	0.6	11.6	130

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Page: 3 - E
 Total # Pages: 3 (A - I)
 Plus Appendix Pages
 Finalized Date: 23-JAN-2006
 Account: VF

Project: Mount Klappan 0882-002-07

CERTIFICATE OF ANALYSIS VA06000488

Sample Description	Method Analyte Units LOR	ME-MS61 Zr ppm	C-IR07 C %	ME-XRF06 SiO2 %	ME-XRF06 Al2O3 %	ME-XRF06 Fe2O3 %	ME-XRF06 CaO %	ME-XRF06 MgO %	ME-XRF06 Na2O %	ME-XRF06 K2O %	ME-XRF06 Cr2O3 %	ME-XRF06 TiO2 %	ME-XRF06 MnO %	ME-XRF06 P2O5 %	ME-XRF06 SrO %	ME-XRF06 BaO %
		0.5	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
04-SR-02			>50	18.68	6.64	8.40	3.60	2.21	0.30	0.20	<0.01	0.14	0.08	1.78	0.08	0.16
04-SR-03		37.5	1.90	71.47	7.41	3.45	2.94	2.88	1.13	0.97	0.02	0.37	0.06	0.10	0.02	0.06
04-SR-04		83.0	19.20	31.77	7.33	16.31	0.61	8.78	0.47	1.34	0.01	0.37	0.30	0.13	0.01	0.08
04-SR-05		51.4	4.23	51.52	9.56	6.26	6.69	5.52	1.51	1.44	0.03	0.52	0.21	0.13	0.07	0.09
86-035-01			>50	23.88	12.13	4.54	1.40	0.87	0.49	0.79	<0.01	0.70	<0.01	0.45	0.04	0.07
86-035-02		45.6	3.02	54.61	14.39	8.13	1.87	3.34	1.71	1.42	0.03	0.78	0.13	0.21	0.01	0.08
86-035-03		77.1	3.40	52.78	12.70	10.87	1.67	4.56	1.18	1.08	0.01	0.65	0.16	0.10	0.02	0.06
86-035-04		14.4	12.50	18.64	2.33	35.57	5.53	2.66	0.10	0.19	<0.01	0.10	0.12	0.25	0.06	0.02
86-035-05		48.1	3.07	54.65	16.62	6.71	1.98	2.32	1.70	1.26	0.02	0.88	0.11	0.26	0.02	0.10
86-035-06		9.5	9.15	27.61	1.44	7.70	16.10	12.18	0.27	0.14	<0.01	0.05	0.26	0.04	0.34	0.01
86-035-07		66.5	1.63	66.31	13.73	4.10	0.54	2.02	1.76	2.17	0.02	0.72	0.06	0.13	0.02	0.15
86-035-08		63.3	3.61	52.84	10.90	14.25	0.50	3.58	0.88	1.84	0.02	0.59	0.22	0.14	0.01	0.08
86-035-09		58.8	6.41	58.94	13.42	4.85	2.28	1.97	2.15	1.30	0.03	0.64	0.02	0.12	0.02	0.09
86-035-10			>50	23.30	8.91	1.84	6.05	3.35	0.46	0.91	<0.01	0.61	0.02	1.06	0.13	0.23
86-035-11		59.8	0.78	66.51	16.66	3.21	0.50	1.05	2.89	1.71	0.02	0.66	0.01	0.07	0.02	0.09
86-035-12		62.9	6.18	36.62	8.11	22.03	3.39	6.08	0.42	1.15	<0.01	0.37	0.24	0.24	0.03	0.06
86-035-13		45.0	3.05	55.13	16.56	5.81	2.16	2.49	1.77	1.45	0.02	0.93	0.10	0.19	0.02	0.10

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Page: 3 - F
 Total # Pages: 3 (A - I)
 Plus Appendix Pages
 Finalized Date: 23-JAN-2006
 Account: VF

Project: Mount Klappan 0882-002-07

CERTIFICATE OF ANALYSIS VA06000488

Sample Description	Method Analyte Units LOR	ME-XRF06	ME-XRF06	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	
		LOI %	Total %	Ag ppm	Al %	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr ppm	Cs ppm
04-SR-02		56.80	99.05	0.02	0.29	2.4	10	280	0.14	0.04	1.14	0.05	2.54	2.1	2	0.36
04-SR-03		7.40	98.26													
04-SR-04		32.50	100.00													
04-SR-05		14.70	98.25													
86-035-01		53.10	98.45	0.17	0.38	12.0	10	70	0.18	0.16	0.60	0.14	1.63	14.2	3	0.68
86-035-02		11.50	98.21													
86-035-03		12.90	98.76													
86-035-04		33.40	98.98													
86-035-05		11.65	98.26													
86-035-06		32.80	98.94													
86-035-07		6.67	98.40													
86-035-08		12.90	98.73													
86-035-09		13.05	98.88													
86-035-10		52.60	99.47	0.10	0.69	3.3	10	420	0.35	0.05	2.69	0.11	2.51	4.1	6	0.53
86-035-11		4.79	98.18													
86-035-12		21.00	99.76													
86-035-13		11.75	98.47													

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Page: 3 - G
 Total # Pages: 3 (A - I)
 Plus Appendix Pages
 Finalized Date: 23-JAN-2006
 Account: VF

Project: Mount Klappan 0882-002-07

CERTIFICATE OF ANALYSIS VA06000488

Sample Description	Method Analyte Units LOR	ME-MS41 Cu ppm	ME-MS41 Fe %	ME-MS41 Ga ppm	ME-MS41 Ge ppm	ME-MS41 Hf ppm	ME-MS41 Hg ppm	ME-MS41 In ppm	ME-MS41 K %	ME-MS41 La ppm	ME-MS41 Li ppm	ME-MS41 Mg %	ME-MS41 Mn ppm	ME-MS41 Mo ppm	ME-MS41 Na %	ME-MS41 Nb ppm
04-SR-02		9.6	3.24	0.81	0.09	0.02	0.05	0.012	0.03	1.0	4.2	0.70	455	0.38	0.06	0.05
04-SR-03																
04-SR-04																
04-SR-05																
86-035-01		29.5	2.21	1.07	0.05	0.04	0.25	0.024	0.05	0.7	11.6	0.18	55	1.92	0.06	0.05
86-035-02																
86-035-03																
86-035-04																
86-035-05																
86-035-06																
86-035-07																
86-035-08																
86-035-09																
86-035-10		31.1	0.99	1.63	0.06	0.02	0.07	0.030	0.09	0.9	9.5	1.21	253	3.03	0.08	0.05
86-035-11																
86-035-12																
86-035-13																

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Page: 3 - H
 Total # Pages: 3 (A - I)
 Plus Appendix Pages
 Finalized Date: 23-JAN-2006
 Account: VF

Project: Mount Klappan 0882-002-07

CERTIFICATE OF ANALYSIS VA06000488

Sample Description	Method Analyte Units LOR	ME-MS41 Ni ppm	ME-MS41 P ppm	ME-MS41 Pb ppm	ME-MS41 Rb ppm	ME-MS41 Re ppm	ME-MS41 S %	ME-MS41 Sb ppm	ME-MS41 Sc ppm	ME-MS41 Se ppm	ME-MS41 Sn ppm	ME-MS41 Sr ppm	ME-MS41 Ta ppm	ME-MS41 Te ppm	ME-MS41 Th ppm	ME-MS41 Ti %
04-SR-02 04-SR-03 04-SR-04 04-SR-05		0.2	10	0.2	0.1	0.001	0.01	0.05	0.1	0.2	0.2	0.2	0.01	0.01	0.2	0.005
86-035-01		2.4	3700	2.6	1.4	0.001	0.01	0.17	3.7	0.3	0.2	237.0	0.01	0.02	0.3	0.005
86-035-02 86-035-03 86-035-04 86-035-05 86-035-06		48.6	1260	16.0	2.5	0.001	2.12	1.23	2.3	1.8	0.2	113.0	0.01	0.07	0.6	0.005
86-035-07 86-035-08 86-035-09 86-035-10 86-035-11		13.9	3190	3.4	2.8	0.002	0.05	0.51	5.3	0.5	0.2	685.0	0.01	0.04	0.2	0.005
86-035-12 86-035-13																

Comments: ** CORRECTED COPY for Project Name **

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Page: 3 - I
 Total # Pages: 3 (A - I)
 Plus Appendix Pages
 Finalized Date: 23-JAN-2006
 Account: VF

Project: Mount Klappan 0882-002-07

CERTIFICATE OF ANALYSIS VA06000488

Sample Description	Method Analyte Units LOR	ME-MS41 Ti ppm 0.02	ME-MS41 U ppm 0.05	ME-MS41 V ppm 1	ME-MS41 W ppm 0.05	ME-MS41 Y ppm 0.05	ME-MS41 Zn ppm 2	ME-MS41 Zr ppm 0.5
04-SR-02 04-SR-03 04-SR-04 04-SR-05		0.02	0.15	7	0.10	7.56	21	0.7
86-035-01		0.02	0.24	8	0.05	5.11	34	0.9
86-035-02 86-035-03 86-035-04 86-035-05 86-035-06								
86-035-07 86-035-08 86-035-09 86-035-10 86-035-11		0.02	0.08	20	0.05	8.30	43	0.7
86-035-12 86-035-13								

Comments: ** CORRECTED COPY for Project Name **

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Project: Mount Klappan 0882-002-07

CERTIFICATE OF ANALYSIS VA06000488

Method	CERTIFICATE COMMENTS
ME-MS41	Interference: Samples with Ca > 10% on ICP-MS As. ICP-AES As results reported (2 ppm DL)
ME-MS61	Interference: Samples with Ca > 10% on ICP-MS As. ICP-AES As results reported (2 ppm DL)
ME-MS61	REE's may not be totally soluble in this method.



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CERTIFICATE VA06019080

Project: Mount Klappan 0882-002-07
 P.O. No.:
 This report is for 10 Rock samples submitted to our lab in Vancouver, BC, Canada on 7-MAR-2006.
 The following have access to data associated with this certificate:
 LISA BARAZZUOL

SAMPLE PREPARATION	
ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-22	Sample login - Rcd w/o BarCode
CRU-31	Fine crushing - 70% <2mm
PUL-QC	Pulverizing QC Test
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um

ANALYTICAL PROCEDURES		
ALS CODE	DESCRIPTION	
S-IR07	Sulphide Sulphur (Leco)	
C-GAS05	Inorganic Carbon (CO2)	
S-GRA06a	Sulfate Sulfur (HCl leachable)	
ME-MS61	48 element four acid ICP-MS	
Hg-CV41	Trace Hg - cold vapor/AAS	FIMS
C-IR07	Total Carbon (Leco)	LECO
ME-XRF06	Whole Rock Package - XRF	XRF
OA-GRA06	LOI for ME-XRF06	WST-SIM
OA-VOL08	Basic Acid Base Accounting	
S-IR08	Total Sulphur (Leco)	LECO
OA-ELE07	Paste pH	
S-GRA06	Sulfate Sulfur-carbonate leach	LECO

To: RESCAN ENVIRONMENTAL SERVICES LTD.
 ATTN: ALS MINERALS

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Comments: ** CORRECTED COPY for Project Name ** pH of de-ionized water reads 6.0.

Signature: 
 Colin Ramshaw, Vancouver Laboratory Manager



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 Total # Pages: 2 (A - F)
 Plus Appendix Pages
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 Account: VF

Project: Mount Klappan 0882-002-07

CERTIFICATE OF ANALYSIS VA06019080

Sample Description	Method Analyte Units LOR	WEI-21	OA-VOL08	OA-VOL08	OA-VOL08	OA-VOL08	OA-ELE07	OA-VOL08	S-IR08	S-GRA06	S-GRA06a	S-IR07	C-GAS05	C-GAS05	ME-MS61	ME-MS61
		Recvd Wt. kg	FIZZ RAT Unity	MPA tCaCO3/1000	NNP tCaCO3/1000	NP tCaCO3/1000	pH Unity	Ratio (N) Unity	S %	S %	S %	S %	C %	CO2 %	Ag ppm	Al %
		0.02	1	0.3	1	1	0.1	0.01	0.01	0.01	0.01	0.01	0.05	0.2	0.01	0.01
05-ARD3-07B		8.00	2	2.5	56	58	9.6	23.20	0.08	<0.01	0.01	0.06	1.43	5.2	0.15	6.48
05-ARD3-08b		6.16	1	43.1	-24	19	8.4	0.44	1.38	0.02	0.02	1.38	0.61	2.2	0.21	9.05
05-ARD3-14B		4.56	2	20.6	29	50	9.2	2.42	0.66	0.01	0.02	0.58	0.75	2.8	0.16	5.31
05-ARD1-15		7.80	3	1.9	265	267	9.2	142.40	0.06	0.01	0.01	0.04	3.51	12.9	0.13	3.79
05-ARD2-12		5.28	3	266.6	-102	165	7.7	0.62	8.53	0.06	0.05	8.52	2.12	7.8	0.08	3.24
05-019-02		6.80	2	38.8	11	50	9.1	1.29	1.24	0.02	0.01	1.16	0.86	3.1	0.29	8.47
05-ARD1-06		7.32	1	16.6	1	18	8.8	1.09	0.53	0.01	0.02	0.52	0.19	0.7	0.21	9.38
05-ARD1-07		8.12	1	9.4	8	17	8.6	1.81	0.30	0.01	0.01	0.24	0.51	1.9	0.15	9.40
05-ARD2-07		7.16	2	9.1	53	62	8.0	6.84	0.29	0.02	0.01	0.26	1.57	5.8	0.19	7.54
DUMP-2.5M		7.28	1	5.6	4	10	7.2	1.78	0.18	<0.01	0.02	0.17	0.10	0.4	0.13	5.33

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Comments: ** CORRECTED COPY for Project Name ** pH of de-ionized water reads 6.0.

***** See Appendix Page for comments regarding this certificate *****



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 Total # Pages: 2 (A - F)
 Plus Appendix Pages
 Finalized Date: 15-MAR-2006
 Account: VF

Project: Mount Klappan 0882-002-07

CERTIFICATE OF ANALYSIS VA06019080

Sample Description	Method Analyte Units LOR	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	
		As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu	Fe	Ga	Ge	Hf
		ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
		0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2	0.01	0.05	0.05	0.1
05-ARD3-07B		10.0	1240	1.48	0.12	0.93	0.56	39.30	19.0	150	2.20	51.3	3.68	16.85	0.17	2.9
05-ARD3-08b		25.8	870	1.76	0.10	0.33	0.27	35.20	22.5	126	3.82	43.0	4.26	21.50	0.17	1.8
05-ARD3-14B		5.8	460	1.04	0.13	1.11	0.43	33.40	8.6	46	4.05	62.4	1.46	13.85	0.13	2.2
05-ARD1-15		5.5	610	0.80	0.07	5.50	0.27	17.50	10.9	112	1.19	28.5	2.03	9.55	0.11	0.9
05-ARD2-12		46.3	70	0.62	0.04	4.27	0.09	15.20	7.7	37	0.93	25.4	8.68	8.03	0.17	1.2
05-019-02		21.6	1040	1.51	0.15	1.02	0.20	35.40	20.2	100	3.84	83.9	5.09	20.30	0.16	1.6
05-ARD1-06		11.2	880	1.78	0.11	0.31	0.29	34.60	19.5	114	4.55	45.3	3.73	21.90	0.14	1.8
05-ARD1-07		10.4	860	1.84	0.09	0.22	0.28	33.70	19.8	127	3.88	38.1	3.27	21.90	0.13	1.8
05-ARD2-07		11.0	960	1.41	0.14	1.24	0.15	36.50	18.1	130	3.35	52.2	4.29	18.20	0.15	1.6
DUMP-2.5M		4.3	740	1.19	0.11	0.23	0.28	30.60	11.0	76	2.81	48.5	2.82	14.20	0.13	1.9

Comments: ** CORRECTED COPY for Project Name ** pH of de-ionized water reads 6.0.

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Page: 2 - C
 Total # Pages: 2 (A - F)
 Plus Appendix Pages
 Finalized Date: 15-MAR-2006
 Account: VF

Project: Mount Klappan 0882-002-07

CERTIFICATE OF ANALYSIS VA06019080

Sample Description	Method Analyte Units LOR	Hg-CV41	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	
		Hg ppm	In ppm	K %	La ppm	Li ppm	Mg %	Mn ppm	Mo ppm	Na %	Nb ppm	Ni ppm	P ppm	Pb ppm	Rb ppm	Re ppm
		0.01	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10	0.5	0.1	0.002
05-ARD3-07B		0.05	0.070	1.55	17.8	10.9	1.47	817	3.94	1.09	6.2	165.0	500	11.3	51.9	0.003
05-ARD3-08b		0.65	0.068	1.78	16.8	29.7	0.90	418	1.42	1.15	5.4	88.7	770	19.4	67.7	0.002
05-ARD3-14B		0.14	0.060	0.87	14.9	73.6	0.78	125	3.36	0.59	4.9	49.5	100	8.1	47.7	0.004
05-ARD1-15		0.06	0.030	0.74	8.7	20.3	3.05	523	0.86	0.82	3.8	79.3	460	6.4	30.6	0.002
05-ARD2-12		2.33	0.028	0.36	7.5	45.7	1.86	359	1.49	0.37	2.9	57.5	3490	9.1	13.7	0.002
05-019-02		0.48	0.072	1.32	16.4	44.9	1.58	437	1.47	1.03	5.4	91.4	640	24.7	57.7	0.002
05-ARD1-06		0.14	0.071	1.94	16.3	33.3	0.90	262	1.31	1.17	5.9	63.1	580	12.5	72.1	0.002
05-ARD1-07		0.15	0.066	1.94	16.3	32.8	0.89	230	1.22	1.28	6.0	59.9	430	11.3	70.8	0.002
05-ARD2-07		0.15	0.063	1.58	17.3	22.1	1.94	416	2.27	0.86	6.3	112.0	950	10.0	61.9	0.002
DUMP-2.5M		0.38	0.054	0.97	14.6	36.5	0.57	357	2.47	0.60	5.8	75.3	560	7.3	42.4	0.004

Comments: ** CORRECTED COPY for Project Name ** pH of de-ionized water reads 6.0.

***** See Appendix Page for comments regarding this certificate *****



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Page: 2 - D
 Total # Pages: 2 (A - F)
 Plus Appendix Pages
 Finalized Date: 15-MAR-2006
 Account: VF

Project: Mount Klappan 0882-002-07

CERTIFICATE OF ANALYSIS VA06019080

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	
	Analyte	S	Sb	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	V	W	Y	Zn
	Units	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	LOR	0.01	0.05	1	0.2	0.2	0.05	0.05	0.2	0.005	0.02	0.1	1	0.1	0.1	2
05-ARD3-07B		0.07	1.46	2	1.8	162.5	0.41	0.09	3.9	0.285	0.45	1.4	91	1.0	22.8	100
05-ARD3-08b		1.39	4.56	4	1.3	202.0	0.39	0.07	3.8	0.402	0.68	1.3	125	0.7	16.1	116
05-ARD3-14B		0.58	0.88	3	1.2	155.0	0.30	0.11	3.4	0.223	0.38	1.2	90	0.7	12.6	68
05-ARD1-15		0.06	0.52	2	0.7	351.0	0.26	<0.05	2.3	0.166	0.22	0.8	68	0.5	8.3	58
05-ARD2-12		8.69	8.46	5	0.6	803.0	0.11	0.06	1.2	0.166	1.07	0.4	66	0.4	11.2	31
05-019-02		1.19	2.40	3	1.2	211.0	0.36	0.09	3.6	0.397	0.46	1.0	140	0.7	13.8	126
05-ARD1-06		0.58	1.18	2	1.3	179.0	0.40	0.07	4.2	0.467	0.59	1.3	138	0.8	12.4	127
05-ARD1-07		0.29	1.18	2	1.3	188.5	0.40	0.07	3.9	0.454	0.45	1.3	134	0.7	12.2	127
05-ARD2-07		0.29	1.02	3	1.2	218.0	0.42	0.11	4.1	0.389	0.40	1.1	139	0.8	14.2	121
DUMP-2.5M		0.11	0.73	3	1.1	137.0	0.40	0.09	3.9	0.274	0.38	1.4	97	0.7	11.4	72

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Comments: ** CORRECTED COPY for Project Name ** pH of de-ionized water reads 6.0.

***** See Appendix Page for comments regarding this certificate *****



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Page: 2 - E
 Total # Pages: 2 (A - F)
 Plus Appendix Pages
 Finalized Date: 15-MAR-2006
 Account: VF

Project: Mount Klappan 0882-002-07

CERTIFICATE OF ANALYSIS VA06019080

Sample Description	Method Analyte Units LOR	ME-MS61 Zr ppm	C-IR07 C %	ME-XRF06 SiO2 %	ME-XRF06 Al2O3 %	ME-XRF06 Fe2O3 %	ME-XRF06 CaO %	ME-XRF06 MgO %	ME-XRF06 Na2O %	ME-XRF06 K2O %	ME-XRF06 Cr2O3 %	ME-XRF06 TiO2 %	ME-XRF06 MnO %	ME-XRF06 P2O5 %	ME-XRF06 SrO %	ME-XRF06 BaO %
		0.5	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
05-ARD3-07B		97.2	2.12	63.90	12.38	5.60	1.33	2.62	1.48	1.97	0.03	0.55	0.10	0.11	0.02	0.15
05-ARD3-08b		57.9	3.11	58.14	17.28	6.30	0.50	1.67	1.59	2.32	0.03	0.78	0.05	0.17	0.02	0.10
05-ARD3-14B		83.7	38.3	35.09	10.45	2.01	1.59	1.46	0.84	1.14	<0.01	0.40	0.01	0.03	0.02	0.06
05-ARD1-15		31.0	3.84	58.60	7.06	3.06	7.99	5.20	1.04	0.92	0.02	0.31	0.06	0.10	0.04	0.07
05-ARD2-12		69.6	36.4	19.97	5.81	11.42	6.00	3.10	0.45	0.43	<0.01	0.27	0.04	0.69	0.07	0.04
05-019-02		53.9	3.06	55.82	16.31	7.47	1.41	2.78	1.41	1.68	0.02	0.78	0.05	0.15	0.02	0.12
05-ARD1-06		61.9	2.71	58.92	18.32	5.65	0.42	1.63	1.76	2.39	0.02	0.83	0.03	0.13	0.02	0.10
05-ARD1-07		60.8	1.97	60.52	18.03	4.91	0.34	1.64	1.83	2.36	0.02	0.84	0.03	0.10	0.02	0.10
05-ARD2-07		57.9	2.63	58.73	14.31	6.47	1.73	3.32	1.19	1.89	0.02	0.67	0.05	0.20	0.02	0.12
DUMP-2.5M		70.1	27.5	43.43	10.96	4.17	0.34	1.13	0.91	1.32	0.01	0.51	0.04	0.13	0.02	0.08

Comments: ** CORRECTED COPY for Project Name ** pH of de-ionized water reads 6.0.

***** See Appendix Page for comments regarding this certificate *****



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Page: 2 - F
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 Finalized Date: 15-MAR-2006
 Account: VF

Project: Mount Klappan 0882-002-07

CERTIFICATE OF ANALYSIS VA06019080

Sample Description	Method Analyte Units LOR	ME-XRF06	ME-XRF06
		LOI %	Total %
		0.01	0.01
05-ARD3-07B		8.32	98.55
05-ARD3-08b		9.90	98.85
05-ARD3-14B		45.30	98.40
05-ARD1-15		13.70	98.18
05-ARD2-12		49.80	98.09
05-019-02		10.15	98.17
05-ARD1-06		9.00	99.23
05-ARD1-07		7.90	98.64
05-ARD2-07		10.15	98.87
DUMP-2.5M		35.40	98.45

Comments: ** CORRECTED COPY for Project Name ** pH of de-ionized water reads 6.0.

***** See Appendix Page for comments regarding this certificate *****



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Page: Appendix 1
Total # Appendix Pages: 1
Finalized Date: 15-MAR-2006
Account: VF

Project: Mount Klappan 0882-002-07

CERTIFICATE OF ANALYSIS VA06019080

Method	CERTIFICATE COMMENTS
ME-MS61	REE's may not be totally soluble in this method.



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CERTIFICATE VA06019080

Project: Mount Klappan 0882-002-07
 P.O. No.:
 This report is for 10 Rock samples submitted to our lab in Vancouver, BC, Canada on 7-MAR-2006.
 The following have access to data associated with this certificate:
 LISA BARAZZUOL

SAMPLE PREPARATION	
ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-22	Sample login - Rcd w/o BarCode
CRU-31	Fine crushing - 70% <2mm
PUL-QC	Pulverizing QC Test
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um

ANALYTICAL PROCEDURES		
ALS CODE	DESCRIPTION	
S-IR07	Sulphide Sulphur (Leco)	
C-GAS05	Inorganic Carbon (CO2)	
S-GRA06a	Sulfate Sulfur (HCl leachable)	
ME-MS61	48 element four acid ICP-MS	
Hg-CV41	Trace Hg - cold vapor/AAS	FIMS
C-IR07	Total Carbon (Leco)	LECO
ME-XRF06	Whole Rock Package - XRF	XRF
OA-GRA06	LOI for ME-XRF06	WST-SIM
OA-VOL08	Basic Acid Base Accounting	
S-IR08	Total Sulphur (Leco)	LECO
OA-ELE07	Paste pH	
S-GRA06	Sulfate Sulfur-carbonate leach	LECO

To: RESCAN ENVIRONMENTAL SERVICES LTD.
 ATTN: ALS MINERALS

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Comments: ** CORRECTED COPY for Project Name ** pH of de-ionized water reads 6.0.

Signature: 
 Colin Ramshaw, Vancouver Laboratory Manager



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Page: 2 - A
 Total # Pages: 2 (A - F)
 Plus Appendix Pages
 Finalized Date: 15-MAR-2006
 Account: VF

Project: Mount Klappan 0882-002-07

CERTIFICATE OF ANALYSIS VA06019080

Sample Description	Method Analyte Units LOR	WEI-21	OA-VOL08	OA-VOL08	OA-VOL08	OA-VOL08	OA-ELE07	OA-VOL08	S-IR08	S-GRA06	S-GRA06a	S-IR07	C-GAS05	C-GAS05	ME-MS61	ME-MS61
		Recvd Wt. kg	FIZZ RAT Unity	MPA tCaCO3/1000	NNP tCaCO3/1000	NP tCaCO3/1000	pH Unity	Ratio (N) Unity	S %	S %	S %	S %	C %	CO2 %	Ag ppm	Al %
		0.02	1	0.3	1	1	0.1	0.01	0.01	0.01	0.01	0.01	0.05	0.2	0.01	0.01
05-ARD3-07B		8.00	2	2.5	56	58	9.6	23.20	0.08	<0.01	0.01	0.06	1.43	5.2	0.15	6.48
05-ARD3-08b		6.16	1	43.1	-24	19	8.4	0.44	1.38	0.02	0.02	1.38	0.61	2.2	0.21	9.05
05-ARD3-14B		4.56	2	20.6	29	50	9.2	2.42	0.66	0.01	0.02	0.58	0.75	2.8	0.16	5.31
05-ARD1-15		7.80	3	1.9	265	267	9.2	142.40	0.06	0.01	0.01	0.04	3.51	12.9	0.13	3.79
05-ARD2-12		5.28	3	266.6	-102	165	7.7	0.62	8.53	0.06	0.05	8.52	2.12	7.8	0.08	3.24
05-019-02		6.80	2	38.8	11	50	9.1	1.29	1.24	0.02	0.01	1.16	0.86	3.1	0.29	8.47
05-ARD1-06		7.32	1	16.6	1	18	8.8	1.09	0.53	0.01	0.02	0.52	0.19	0.7	0.21	9.38
05-ARD1-07		8.12	1	9.4	8	17	8.6	1.81	0.30	0.01	0.01	0.24	0.51	1.9	0.15	9.40
05-ARD2-07		7.16	2	9.1	53	62	8.0	6.84	0.29	0.02	0.01	0.26	1.57	5.8	0.19	7.54
DUMP-2.5M		7.28	1	5.6	4	10	7.2	1.78	0.18	<0.01	0.02	0.17	0.10	0.4	0.13	5.33

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Comments: ** CORRECTED COPY for Project Name ** pH of de-ionized water reads 6.0.

***** See Appendix Page for comments regarding this certificate *****



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Page: 2 - B
 Total # Pages: 2 (A - F)
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 Finalized Date: 15-MAR-2006
 Account: VF

Project: Mount Klappan 0882-002-07

CERTIFICATE OF ANALYSIS VA06019080

Sample Description	Method Analyte Units LOR	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	
		As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr ppm	Cs ppm	Cu ppm	Fe %	Ga ppm	Ge ppm	Hf ppm
		0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2	0.01	0.05	0.05	0.1
05-ARD3-07B		10.0	1240	1.48	0.12	0.93	0.56	39.30	19.0	150	2.20	51.3	3.68	16.85	0.17	2.9
05-ARD3-08b		25.8	870	1.76	0.10	0.33	0.27	35.20	22.5	126	3.82	43.0	4.26	21.50	0.17	1.8
05-ARD3-14B		5.8	460	1.04	0.13	1.11	0.43	33.40	8.6	46	4.05	62.4	1.46	13.85	0.13	2.2
05-ARD1-15		5.5	610	0.80	0.07	5.50	0.27	17.50	10.9	112	1.19	28.5	2.03	9.55	0.11	0.9
05-ARD2-12		46.3	70	0.62	0.04	4.27	0.09	15.20	7.7	37	0.93	25.4	8.68	8.03	0.17	1.2
05-019-02		21.6	1040	1.51	0.15	1.02	0.20	35.40	20.2	100	3.84	83.9	5.09	20.30	0.16	1.6
05-ARD1-06		11.2	880	1.78	0.11	0.31	0.29	34.60	19.5	114	4.55	45.3	3.73	21.90	0.14	1.8
05-ARD1-07		10.4	860	1.84	0.09	0.22	0.28	33.70	19.8	127	3.88	38.1	3.27	21.90	0.13	1.8
05-ARD2-07		11.0	960	1.41	0.14	1.24	0.15	36.50	18.1	130	3.35	52.2	4.29	18.20	0.15	1.6
DUMP-2.5M		4.3	740	1.19	0.11	0.23	0.28	30.60	11.0	76	2.81	48.5	2.82	14.20	0.13	1.9

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Comments: ** CORRECTED COPY for Project Name ** pH of de-ionized water reads 6.0.

***** See Appendix Page for comments regarding this certificate *****



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Page: 2 - C
 Total # Pages: 2 (A - F)
 Plus Appendix Pages
 Finalized Date: 15-MAR-2006
 Account: VF

Project: Mount Klappan 0882-002-07

CERTIFICATE OF ANALYSIS VA06019080

Method Analyte Units LOR	Hg-CV41	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
Sample Description	Hg ppm	In ppm	K %	La ppm	Li ppm	Mg %	Mn ppm	Mo ppm	Na %	Nb ppm	Ni ppm	P ppm	Pb ppm	Rb ppm	Re ppm
	0.01	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10	0.5	0.1	0.002
05-ARD3-07B	0.05	0.070	1.55	17.8	10.9	1.47	817	3.94	1.09	6.2	165.0	500	11.3	51.9	0.003
05-ARD3-08b	0.65	0.068	1.78	16.8	29.7	0.90	418	1.42	1.15	5.4	88.7	770	19.4	67.7	0.002
05-ARD3-14B	0.14	0.060	0.87	14.9	73.6	0.78	125	3.36	0.59	4.9	49.5	100	8.1	47.7	0.004
05-ARD1-15	0.06	0.030	0.74	8.7	20.3	3.05	523	0.86	0.82	3.8	79.3	460	6.4	30.6	0.002
05-ARD2-12	2.33	0.028	0.36	7.5	45.7	1.86	359	1.49	0.37	2.9	57.5	3490	9.1	13.7	0.002
05-019-02	0.48	0.072	1.32	16.4	44.9	1.58	437	1.47	1.03	5.4	91.4	640	24.7	57.7	0.002
05-ARD1-06	0.14	0.071	1.94	16.3	33.3	0.90	262	1.31	1.17	5.9	63.1	580	12.5	72.1	0.002
05-ARD1-07	0.15	0.066	1.94	16.3	32.8	0.89	230	1.22	1.28	6.0	59.9	430	11.3	70.8	0.002
05-ARD2-07	0.15	0.063	1.58	17.3	22.1	1.94	416	2.27	0.86	6.3	112.0	950	10.0	61.9	0.002
DUMP-2.5M	0.38	0.054	0.97	14.6	36.5	0.57	357	2.47	0.60	5.8	75.3	560	7.3	42.4	0.004

Comments: ** CORRECTED COPY for Project Name ** pH of de-ionized water reads 6.0.

***** See Appendix Page for comments regarding this certificate *****



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Page: 2 - D
 Total # Pages: 2 (A - F)
 Plus Appendix Pages
 Finalized Date: 15-MAR-2006
 Account: VF

Project: Mount Klappan 0882-002-07

CERTIFICATE OF ANALYSIS VA06019080

Sample Description	Method Analyte Units LOR	ME-MS61 S %	ME-MS61 Sb ppm	ME-MS61 Se ppm	ME-MS61 Sn ppm	ME-MS61 Sr ppm	ME-MS61 Ta ppm	ME-MS61 Te ppm	ME-MS61 Th ppm	ME-MS61 Ti %	ME-MS61 Tl ppm	ME-MS61 U ppm	ME-MS61 V ppm	ME-MS61 W ppm	ME-MS61 Y ppm	ME-MS61 Zn ppm
05-ARD3-07B		0.07	1.46	2	1.8	162.5	0.41	0.09	3.9	0.285	0.45	1.4	91	1.0	22.8	100
05-ARD3-08b		1.39	4.56	4	1.3	202.0	0.39	0.07	3.8	0.402	0.68	1.3	125	0.7	16.1	116
05-ARD3-14B		0.58	0.88	3	1.2	155.0	0.30	0.11	3.4	0.223	0.38	1.2	90	0.7	12.6	68
05-ARD1-15		0.06	0.52	2	0.7	351.0	0.26	<0.05	2.3	0.166	0.22	0.8	68	0.5	8.3	58
05-ARD2-12		8.69	8.46	5	0.6	803.0	0.11	0.06	1.2	0.166	1.07	0.4	66	0.4	11.2	31
05-019-02		1.19	2.40	3	1.2	211.0	0.36	0.09	3.6	0.397	0.46	1.0	140	0.7	13.8	126
05-ARD1-06		0.58	1.18	2	1.3	179.0	0.40	0.07	4.2	0.467	0.59	1.3	138	0.8	12.4	127
05-ARD1-07		0.29	1.18	2	1.3	188.5	0.40	0.07	3.9	0.454	0.45	1.3	134	0.7	12.2	127
05-ARD2-07		0.29	1.02	3	1.2	218.0	0.42	0.11	4.1	0.389	0.40	1.1	139	0.8	14.2	121
DUMP-2.5M		0.11	0.73	3	1.1	137.0	0.40	0.09	3.9	0.274	0.38	1.4	97	0.7	11.4	72

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Comments: ** CORRECTED COPY for Project Name ** pH of de-ionized water reads 6.0.

***** See Appendix Page for comments regarding this certificate *****



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Page: 2 - E
 Total # Pages: 2 (A - F)
 Plus Appendix Pages
 Finalized Date: 15-MAR-2006
 Account: VF

Project: Mount Klappan 0882-002-07

CERTIFICATE OF ANALYSIS VA06019080

Sample Description	Method Analyte Units LOR	ME-MS61 Zr ppm	C-IR07 C %	ME-XRF06 SiO2 %	ME-XRF06 Al2O3 %	ME-XRF06 Fe2O3 %	ME-XRF06 CaO %	ME-XRF06 MgO %	ME-XRF06 Na2O %	ME-XRF06 K2O %	ME-XRF06 Cr2O3 %	ME-XRF06 TiO2 %	ME-XRF06 MnO %	ME-XRF06 P2O5 %	ME-XRF06 SrO %	ME-XRF06 BaO %
05-ARD3-07B		97.2	2.12	63.90	12.38	5.60	1.33	2.62	1.48	1.97	0.03	0.55	0.10	0.11	0.02	0.15
05-ARD3-08b		57.9	3.11	58.14	17.28	6.30	0.50	1.67	1.59	2.32	0.03	0.78	0.05	0.17	0.02	0.10
05-ARD3-14B		83.7	38.3	35.09	10.45	2.01	1.59	1.46	0.84	1.14	<0.01	0.40	0.01	0.03	0.02	0.06
05-ARD1-15		31.0	3.84	58.60	7.06	3.06	7.99	5.20	1.04	0.92	0.02	0.31	0.06	0.10	0.04	0.07
05-ARD2-12		69.6	36.4	19.97	5.81	11.42	6.00	3.10	0.45	0.43	<0.01	0.27	0.04	0.69	0.07	0.04
05-019-02		53.9	3.06	55.82	16.31	7.47	1.41	2.78	1.41	1.68	0.02	0.78	0.05	0.15	0.02	0.12
05-ARD1-06		61.9	2.71	58.92	18.32	5.65	0.42	1.63	1.76	2.39	0.02	0.83	0.03	0.13	0.02	0.10
05-ARD1-07		60.8	1.97	60.52	18.03	4.91	0.34	1.64	1.83	2.36	0.02	0.84	0.03	0.10	0.02	0.10
05-ARD2-07		57.9	2.63	58.73	14.31	6.47	1.73	3.32	1.19	1.89	0.02	0.67	0.05	0.20	0.02	0.12
DUMP-2.5M		70.1	27.5	43.43	10.96	4.17	0.34	1.13	0.91	1.32	0.01	0.51	0.04	0.13	0.02	0.08

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Comments: ** CORRECTED COPY for Project Name ** pH of de-ionized water reads 6.0.

***** See Appendix Page for comments regarding this certificate *****



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Page: 2 - F
 Total # Pages: 2 (A - F)
 Plus Appendix Pages
 Finalized Date: 15-MAR-2006
 Account: VF

Project: Mount Klappan 0882-002-07

CERTIFICATE OF ANALYSIS VA06019080

Sample Description	Method Analyte Units LOR	ME-XRF06 LOI %	ME-XRF06 Total %
	0.01	0.01	
05-ARD3-07B		8.32	98.55
05-ARD3-08b		9.90	98.85
05-ARD3-14B		45.30	98.40
05-ARD1-15		13.70	98.18
05-ARD2-12		49.80	98.09
05-019-02		10.15	98.17
05-ARD1-06		9.00	99.23
05-ARD1-07		7.90	98.64
05-ARD2-07		10.15	98.87
DUMP-2.5M		35.40	98.45

Comments: ** CORRECTED COPY for Project Name ** pH of de-ionized water reads 6.0.

***** See Appendix Page for comments regarding this certificate *****



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Page: Appendix 1
Total # Appendix Pages: 1
Finalized Date: 15-MAR-2006
Account: VF

Project: Mount Klappan 0882-002-07

CERTIFICATE OF ANALYSIS VA06019080

Method	CERTIFICATE COMMENTS
ME-MS61	REE's may not be totally soluble in this method.



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Page: 1
 Finalized Date: 26-APR-2006
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 18-JAN-2013
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CERTIFICATE VA06029706

Project: Mount Klappan 0882-002-07
 P.O. No.:
 This report is for 6 Drill Core samples submitted to our lab in Vancouver, BC, Canada on 7-APR-2006.
 The following have access to data associated with this certificate:
 LISA BARAZZUOL ANTHONY BELLIS

SAMPLE PREPARATION	
ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-22	Sample login - Rcd w/o BarCode
CRU-21	Crush entire sample >70% -6 mm
SPL-21	Split sample - riffle splitter
SPL-21d	Split sample - duplicate
PUL-31	Pulverize split to 85% <75 um
CRU-QC	Crushing QC Test

ANALYTICAL PROCEDURES		
ALS CODE	DESCRIPTION	
S-IR07	Sulphide Sulphur (Leco)	
C-GAS05	Inorganic Carbon (CO2)	
S-GRA06a	Sulfate Sulfur (HCl leachable)	
ME-MS61	48 element four acid ICP-MS	
Hq-CV41	Trace Hg - cold vapor/AAS	FIMS
C-IR07	Total Carbon (Leco)	LECO
ME-XRF06	Whole Rock Package - XRF	XRF
OA-GRA06	LOI for ME-XRF06	WST-SIM
OA-VOL08	Basic Acid Base Accounting	
S-IR08	Total Sulphur (Leco)	LECO
OA-ELE07	Paste pH	
S-GRA06	Sulfate Sulfur-carbonate leach	LECO

To: RESCAN ENVIRONMENTAL SERVICES LTD.
 ATTN: ALS MINERALS

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****
 Comments: ** CORRECTED COPY for Project Name **

Signature: 
 Colin Ramshaw, Vancouver Laboratory Manager



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Page: 2 - A
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Project: Mount Klappan 0882-002-07

CERTIFICATE OF ANALYSIS VA06029706

Sample Description	Method Analyte Units LOR	WEI-21 Recvd Wt. kg	OA-VOL08 FIZZ RAT Unity	OA-VOL08 MPA tCaCO3/1000	OA-VOL08 NNP tCaCO3/1000	OA-VOL08 NP tCaCO3/1000	OA-ELE07 pH Unity	OA-VOL08 Ratio (N) Unity	S-IR08 S %	S-GRA06 S %	S-GRA06a S %	S-IR07 S %	C-GAS05 C %	C-GAS05 CO2 %	ME-MS61 Ag ppm	ME-MS61 Al %
		0.02	1	0.3	1	1	0.1	0.01	0.01	0.01	0.01	0.01	0.05	0.2	0.01	0.01
85-016-07		2.40	2	6.6	32	39	8.7	5.94	0.21	0.01	<0.01	0.16	1.02	3.8	0.22	7.74
85-027-02		2.48	1	11.9	14	26	8.4	2.19	0.38	0.02	<0.01	0.28	0.52	1.9	0.26	8.12
85-027-17		2.22	2	3.1	40	43	9.0	13.76	0.10	0.02	<0.01	0.06	0.54	2.0	0.20	2.50
85-027-24		4.60	3	1.6	152	154	9.5	98.56	0.05	0.01	<0.01	0.05	1.95	7.2	0.12	4.79
86-035-07		2.96	2	1.3	47	48	9.1	38.40	0.04	0.01	<0.01	0.03	1.65	6.1	0.17	5.20
86-035-09		3.96	2	4.7	56	61	9.2	13.01	0.15	0.02	<0.01	0.10	1.18	4.3	0.11	7.95

Comments: ** CORRECTED COPY for Project Name **

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 Account: VF

Project: Mount Klappan 0882-002-07

CERTIFICATE OF ANALYSIS VA06029706

Sample Description	Method Analyte Units LOR	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	
		As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu	Fe	Ga	Ge	Hf
		ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
		0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2	0.01	0.05	0.05	0.1
85-016-07		5.9	780	1.17	0.18	0.54	0.24	32.30	11.1	96	3.81	87.5	6.21	15.95	0.09	2.0
85-027-02		12.3	1420	1.49	0.24	0.32	0.19	37.10	14.3	114	4.94	74.5	4.31	19.65	0.09	2.3
85-027-17		7.3	300	0.45	0.12	1.02	0.18	15.00	8.6	38	0.71	33.4	1.14	5.91	<0.05	0.9
85-027-24		4.3	460	0.84	0.09	3.25	0.30	21.50	13.7	215	1.50	35.3	2.65	10.15	0.07	1.3
86-035-07		6.4	580	0.98	0.17	0.75	0.42	26.30	14.1	218	2.09	47.7	5.60	12.20	0.08	1.5
86-035-09		4.6	800	1.04	0.15	1.56	0.09	27.10	14.8	229	3.54	17.4	4.13	15.65	0.08	1.4

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Page: 2 - C
 Total # Pages: 2 (A - F)
 Plus Appendix Pages
 Finalized Date: 26-APR-2006
 Account: VF

Project: Mount Klappan 0882-002-07

CERTIFICATE OF ANALYSIS VA06029706

Sample Description	Hg-CV41 Hg ppm 0.01	ME-MS61 In ppm 0.005	ME-MS61 K % 0.01	ME-MS61 La ppm 0.5	ME-MS61 Li ppm 0.2	ME-MS61 Mg % 0.01	ME-MS61 Mn ppm 5	ME-MS61 Mo ppm 0.05	ME-MS61 Na % 0.01	ME-MS61 Nb ppm 0.1	ME-MS61 Ni ppm 0.2	ME-MS61 P ppm 10	ME-MS61 Pb ppm 0.5	ME-MS61 Rb ppm 0.1	ME-MS61 Re ppm 0.002
85-016-07	0.10	0.063	1.60	16.0	29.0	1.48	599	1.55	0.88	5.1	52.6	1290	10.3	58.4	0.002
85-027-02	0.16	0.085	2.31	17.5	28.5	2.00	403	2.20	0.83	6.9	105.0	780	9.9	78.6	0.003
85-027-17	0.07	0.025	0.43	7.7	27.2	0.76	148	1.21	0.49	2.7	59.8	280	4.4	16.8	<0.002
85-027-24	0.05	0.039	0.80	10.6	31.2	2.52	402	1.52	0.78	4.7	122.0	580	4.8	29.9	0.002
86-035-07	0.17	0.045	1.10	13.6	34.7	1.44	903	1.87	0.68	5.4	144.5	550	5.1	41.1	0.002
86-035-09	0.13	0.044	1.16	13.6	29.3	1.73	449	0.66	1.50	4.6	106.0	680	4.2	39.9	<0.002

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Page: 2 - D
 Total # Pages: 2 (A - F)
 Plus Appendix Pages
 Finalized Date: 26-APR-2006
 Account: VF

Project: Mount Klappan 0882-002-07

CERTIFICATE OF ANALYSIS VA06029706

Sample Description	Method Analyte Units LOR	ME-MS61 S %	ME-MS61 Sb ppm	ME-MS61 Se ppm	ME-MS61 Sn ppm	ME-MS61 Sr ppm	ME-MS61 Ta ppm	ME-MS61 Te ppm	ME-MS61 Th ppm	ME-MS61 Ti %	ME-MS61 Tl ppm	ME-MS61 U ppm	ME-MS61 V ppm	ME-MS61 W ppm	ME-MS61 Y ppm	ME-MS61 Zn ppm
		0.01	0.05	1	0.2	0.2	0.05	0.05	0.2	0.005	0.02	0.1	1	0.1	0.1	2
85-016-07		0.23	0.81	1	1.2	161.0	0.33	0.07	3.6	0.407	0.40	1.4	140	0.7	15.9	112
85-027-02		0.40	1.14	1	1.5	137.0	0.46	0.12	4.7	0.485	0.58	1.5	182	0.9	15.4	160
85-027-17		0.11	0.93	<1	0.7	173.0	0.20	<0.05	2.0	0.115	0.13	0.8	43	0.4	5.9	38
85-027-24		0.05	0.60	<1	0.9	183.5	0.33	<0.05	2.7	0.257	0.20	1.1	98	0.5	9.9	81
86-035-07		0.04	0.67	1	1.0	170.0	0.37	0.06	3.3	0.288	0.30	1.4	124	0.7	11.5	95
86-035-09		0.18	0.53	<1	1.0	193.5	0.31	<0.05	2.5	0.393	0.32	0.9	112	0.6	11.4	102

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Page: 2 - E
 Total # Pages: 2 (A - F)
 Plus Appendix Pages
 Finalized Date: 26-APR-2006
 Account: VF

Project: Mount Klappan 0882-002-07

CERTIFICATE OF ANALYSIS VA06029706

Sample Description	Method Analyte Units LOR	ME-MS61 Zr ppm	C-IR07 C %	ME-XRF06 SiO2 %	ME-XRF06 Al2O3 %	ME-XRF06 Fe2O3 %	ME-XRF06 CaO %	ME-XRF06 MgO %	ME-XRF06 Na2O %	ME-XRF06 K2O %	ME-XRF06 Cr2O3 %	ME-XRF06 TiO2 %	ME-XRF06 MnO %	ME-XRF06 P2O5 %	ME-XRF06 SrO %	ME-XRF06 BaO %
		0.5	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
85-016-07		71.4	3.66	55.58	15.08	9.37	0.77	2.53	1.26	2.11	0.01	0.73	0.07	0.30	0.02	0.09
85-027-02		75.8	2.42	57.68	16.35	6.48	0.45	3.34	1.20	2.93	0.01	0.85	0.05	0.17	0.01	0.16
85-027-17		30.0	0.82	84.81	4.67	1.67	1.35	1.24	0.82	0.51	<0.01	0.19	0.01	0.07	0.02	0.04
85-027-24		42.8	2.69	63.89	8.96	4.16	4.50	4.26	1.27	1.01	0.05	0.47	0.05	0.15	0.02	0.06
86-035-07		53.0	2.94	64.20	9.94	8.33	1.03	2.43	1.06	1.35	0.03	0.53	0.11	0.12	0.02	0.07
86-035-09		47.1	2.21	60.39	14.70	6.16	2.07	2.77	2.23	1.41	0.03	0.67	0.05	0.15	0.02	0.11

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Page: 2 - F
 Total # Pages: 2 (A - F)
 Plus Appendix Pages
 Finalized Date: 26-APR-2006
 Account: VF

Project: Mount Klappan 0882-002-07

CERTIFICATE OF ANALYSIS VA06029706

Sample Description	Method Analyte Units LOR	ME-XRF06	ME-XRF06
		LOI %	Total %
		0.01	0.01
85-016-07		11.50	99.44
85-027-02		9.57	99.25
85-027-17		3.29	98.70
85-027-24		10.35	99.20
86-035-07		9.67	98.91
86-035-09		9.27	100.05

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Page: Appendix 1
Total # Appendix Pages: 1
Finalized Date: 26-APR-2006
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CERTIFICATE OF ANALYSIS VA06029706

Method	CERTIFICATE COMMENTS
ME-MS61	REE's may not be totally soluble in this method.



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Page: 1
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 25-JAN-2013
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CERTIFICATE VA06029706

Project: Mount Klappan 0882-002-07
 P.O. No.:
 This report is for 6 Drill Core samples submitted to our lab in Vancouver, BC, Canada on 7-APR-2006.
 The following have access to data associated with this certificate:
 LISA BARAZZUOL ANTHONY BELLIS

SAMPLE PREPARATION	
ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-22	Sample login - Rcd w/o BarCode
CRU-21	Crush entire sample >70% -6 mm
SPL-21	Split sample - riffle splitter
SPL-21d	Split sample - duplicate
PUL-31	Pulverize split to 85% <75 um
CRU-QC	Crushing QC Test

ANALYTICAL PROCEDURES		
ALS CODE	DESCRIPTION	
S-IR07	Sulphide Sulphur (Leco)	
C-GAS05	Inorganic Carbon (CO2)	
S-GRA06a	Sulfate Sulfur (HCl leachable)	
ME-MS61	48 element four acid ICP-MS	
Hq-CV41	Trace Hg - cold vapor/AAS	FIMS
C-IR07	Total Carbon (Leco)	LECO
ME-XRF06	Whole Rock Package - XRF	XRF
OA-GRA06	LOI for ME-XRF06	WST-SIM
OA-VOL08	Basic Acid Base Accounting	
S-IR08	Total Sulphur (Leco)	LECO
OA-ELE07	Paste pH	
S-GRA06	Sulfate Sulfur-carbonate leach	LECO

To: RESCAN ENVIRONMENTAL SERVICES LTD.
 ATTN: ALS MINERALS

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

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Signature: 
 Colin Ramshaw, Vancouver Laboratory Manager



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Page: 2 - A
 Total # Pages: 2 (A - F)
 Plus Appendix Pages
 Finalized Date: 26-APR-2006
 Account: VF

Project: Mount Klappan 0882-002-07

CERTIFICATE OF ANALYSIS VA06029706

Sample Description	Method	WEI-21	OA-VOL08	OA-VOL08	OA-VOL08	OA-VOL08	OA-ELE07	OA-VOL08	S-IR08	S-GRA06	S-GRA06a	S-IR07	C-GAS05	C-GAS05	ME-MS61	ME-MS61
	Analyte	Recvd Wt.	FIZZ RAT	MPA	NNP	NP	pH	Ratio (N	S	S	S	S	C	CO2	Ag	Al
	Units	kg	Unity	tCaCO3/1000	tCaCO3/1000	tCaCO3/1000	Unity	Unity	%	%	%	%	%	%	ppm	%
	LOR															
85-016-07		0.02	1	0.3	1	1	0.1	0.01	0.01	0.01	0.01	0.01	0.05	0.2	0.01	0.01
85-027-02		2.40	2	6.6	32	39	8.7	5.94	0.21	0.01	<0.01	0.16	1.02	3.8	0.22	7.74
85-027-17		2.48	1	11.9	14	26	8.4	2.19	0.38	0.02	<0.01	0.28	0.52	1.9	0.26	8.12
85-027-24		2.22	2	3.1	40	43	9.0	13.76	0.10	0.02	<0.01	0.06	0.54	2.0	0.20	2.50
86-035-07		4.60	3	1.6	152	154	9.5	98.56	0.05	0.01	<0.01	0.05	1.95	7.2	0.12	4.79
86-035-09		2.96	2	1.3	47	48	9.1	38.40	0.04	0.01	<0.01	0.03	1.65	6.1	0.17	5.20
86-035-09		3.96	2	4.7	56	61	9.2	13.01	0.15	0.02	<0.01	0.10	1.18	4.3	0.11	7.95

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Page: 2 - B
 Total # Pages: 2 (A - F)
 Plus Appendix Pages
 Finalized Date: 26-APR-2006
 Account: VF

Project: Mount Klappan 0882-002-07

CERTIFICATE OF ANALYSIS VA06029706

Sample Description	Method Analyte Units LOR	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	
		As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu	Fe	Ga	Ge	Hf
		ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
		0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2	0.01	0.05	0.05	0.1
85-016-07		5.9	780	1.17	0.18	0.54	0.24	32.30	11.1	96	3.81	87.5	6.21	15.95	0.09	2.0
85-027-02		12.3	1420	1.49	0.24	0.32	0.19	37.10	14.3	114	4.94	74.5	4.31	19.65	0.09	2.3
85-027-17		7.3	300	0.45	0.12	1.02	0.18	15.00	8.6	38	0.71	33.4	1.14	5.91	<0.05	0.9
85-027-24		4.3	460	0.84	0.09	3.25	0.30	21.50	13.7	215	1.50	35.3	2.65	10.15	0.07	1.3
86-035-07		6.4	580	0.98	0.17	0.75	0.42	26.30	14.1	218	2.09	47.7	5.60	12.20	0.08	1.5
86-035-09		4.6	800	1.04	0.15	1.56	0.09	27.10	14.8	229	3.54	17.4	4.13	15.65	0.08	1.4

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Page: 2 - C
 Total # Pages: 2 (A - F)
 Plus Appendix Pages
 Finalized Date: 26-APR-2006
 Account: VF

Project: Mount Klappan 0882-002-07

CERTIFICATE OF ANALYSIS VA06029706

Sample Description	Method Analyte Units LOR	Hg-CV41 Hg ppm 0.01	ME-MS61 In ppm 0.005	ME-MS61 K % 0.01	ME-MS61 La ppm 0.5	ME-MS61 Li ppm 0.2	ME-MS61 Mg % 0.01	ME-MS61 Mn ppm 5	ME-MS61 Mo ppm 0.05	ME-MS61 Na % 0.01	ME-MS61 Nb ppm 0.1	ME-MS61 Ni ppm 0.2	ME-MS61 P ppm 10	ME-MS61 Pb ppm 0.5	ME-MS61 Rb ppm 0.1	ME-MS61 Re ppm 0.002
85-016-07		0.10	0.063	1.60	16.0	29.0	1.48	599	1.55	0.88	5.1	52.6	1290	10.3	58.4	0.002
85-027-02		0.16	0.085	2.31	17.5	28.5	2.00	403	2.20	0.83	6.9	105.0	780	9.9	78.6	0.003
85-027-17		0.07	0.025	0.43	7.7	27.2	0.76	148	1.21	0.49	2.7	59.8	280	4.4	16.8	<0.002
85-027-24		0.05	0.039	0.80	10.6	31.2	2.52	402	1.52	0.78	4.7	122.0	580	4.8	29.9	0.002
86-035-07		0.17	0.045	1.10	13.6	34.7	1.44	903	1.87	0.68	5.4	144.5	550	5.1	41.1	0.002
86-035-09		0.13	0.044	1.16	13.6	29.3	1.73	449	0.66	1.50	4.6	106.0	680	4.2	39.9	<0.002

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Page: 2 - D
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 Plus Appendix Pages
 Finalized Date: 26-APR-2006
 Account: VF

Project: Mount Klappan 0882-002-07

CERTIFICATE OF ANALYSIS VA06029706

Sample Description	Method Analyte Units LOR	ME-MS61 S %	ME-MS61 Sb ppm	ME-MS61 Se ppm	ME-MS61 Sn ppm	ME-MS61 Sr ppm	ME-MS61 Ta ppm	ME-MS61 Te ppm	ME-MS61 Th ppm	ME-MS61 Ti %	ME-MS61 Tl ppm	ME-MS61 U ppm	ME-MS61 V ppm	ME-MS61 W ppm	ME-MS61 Y ppm	ME-MS61 Zn ppm
		0.01	0.05	1	0.2	0.2	0.05	0.05	0.2	0.005	0.02	0.1	1	0.1	0.1	2
85-016-07		0.23	0.81	1	1.2	161.0	0.33	0.07	3.6	0.407	0.40	1.4	140	0.7	15.9	112
85-027-02		0.40	1.14	1	1.5	137.0	0.46	0.12	4.7	0.485	0.58	1.5	182	0.9	15.4	160
85-027-17		0.11	0.93	<1	0.7	173.0	0.20	<0.05	2.0	0.115	0.13	0.8	43	0.4	5.9	38
85-027-24		0.05	0.60	<1	0.9	183.5	0.33	<0.05	2.7	0.257	0.20	1.1	98	0.5	9.9	81
86-035-07		0.04	0.67	1	1.0	170.0	0.37	0.06	3.3	0.288	0.30	1.4	124	0.7	11.5	95
86-035-09		0.18	0.53	<1	1.0	193.5	0.31	<0.05	2.5	0.393	0.32	0.9	112	0.6	11.4	102

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Page: 2 - E
 Total # Pages: 2 (A - F)
 Plus Appendix Pages
 Finalized Date: 26-APR-2006
 Account: VF

Project: Mount Klappan 0882-002-07

CERTIFICATE OF ANALYSIS VA06029706

Sample Description	Method Analyte Units LOR	ME-MS61 Zr ppm	C-IR07 C %	ME-XRF06 SiO2 %	ME-XRF06 Al2O3 %	ME-XRF06 Fe2O3 %	ME-XRF06 CaO %	ME-XRF06 MgO %	ME-XRF06 Na2O %	ME-XRF06 K2O %	ME-XRF06 Cr2O3 %	ME-XRF06 TiO2 %	ME-XRF06 MnO %	ME-XRF06 P2O5 %	ME-XRF06 SrO %	ME-XRF06 BaO %
85-016-07		71.4	3.66	55.58	15.08	9.37	0.77	2.53	1.26	2.11	0.01	0.73	0.07	0.30	0.02	0.09
85-027-02		75.8	2.42	57.68	16.35	6.48	0.45	3.34	1.20	2.93	0.01	0.85	0.05	0.17	0.01	0.16
85-027-17		30.0	0.82	84.81	4.67	1.67	1.35	1.24	0.82	0.51	<0.01	0.19	0.01	0.07	0.02	0.04
85-027-24		42.8	2.69	63.89	8.96	4.16	4.50	4.26	1.27	1.01	0.05	0.47	0.05	0.15	0.02	0.06
86-035-07		53.0	2.94	64.20	9.94	8.33	1.03	2.43	1.06	1.35	0.03	0.53	0.11	0.12	0.02	0.07
86-035-09		47.1	2.21	60.39	14.70	6.16	2.07	2.77	2.23	1.41	0.03	0.67	0.05	0.15	0.02	0.11

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Page: 2 - F
 Total # Pages: 2 (A - F)
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 Finalized Date: 26-APR-2006
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CERTIFICATE OF ANALYSIS VA06029706

Sample Description	Method Analyte Units LOR	ME-XRF06 LOI %	ME-XRF06 Total %
	0.01	0.01	
85-016-07		11.50	99.44
85-027-02		9.57	99.25
85-027-17		3.29	98.70
85-027-24		10.35	99.20
86-035-07		9.67	98.91
86-035-09		9.27	100.05

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Page: Appendix 1
Total # Appendix Pages: 1
Finalized Date: 26-APR-2006
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CERTIFICATE OF ANALYSIS VA06029706

Method	CERTIFICATE COMMENTS
ME-MS61	REE's may not be totally soluble in this method.



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 6TH FL, 1111 W HASTINGS ST
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 18-JAN-2013
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CERTIFICATE VA06100281

Project: Mount Klappan 0882-002-07
 P.O. No.:
 This report is for 39 Rock samples submitted to our lab in Vancouver, BC, Canada on 6-SEP-2006.
 The following have access to data associated with this certificate:
 DAVE ARCHIBALD

SAMPLE PREPARATION	
ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-22	Sample login - Rcd w/o BarCode
CRU-21	Crush entire sample >70% -6 mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% < 75 um
CRU-QC	Crushing QC Test

ANALYTICAL PROCEDURES		
ALS CODE	DESCRIPTION	
S-IR07	Sulphide Sulphur (Leco)	
C-GAS05	Inorganic Carbon (CO2)	
S-GRA06a	Sulfate Sulfur (HCl leachable)	
ME-MS61	48 element four acid ICP-MS	
Hg-CV41	Trace Hg - cold vapor/AAS	FIMS
C-IR07	Total Carbon (Leco)	LECO
ME-XRF06	Whole Rock Package - XRF	XRF
OA-GRA06	LOI for ME-XRF06	WST-SIM
OA-VOL08	Basic Acid Base Accounting	
S-IR08	Total Sulphur (Leco)	LECO
OA-ELE07	Paste pH	
S-GRA06	Sulfate Sulfur-carbonate leach	LECO

To: RESCAN ENVIRONMENTAL SERVICES LTD.
 ATTN: ALS MINERALS

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Comments: ** CORRECTED COPY for Project Name **

Signature: 
 Colin Ramshaw, Vancouver Laboratory Manager



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Page: 2 - A
 Total # Pages: 2 (A - F)
 Plus Appendix Pages
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Project: Mount Klappan 0882-002-07

CERTIFICATE OF ANALYSIS VA06100281

Sample Description	Method Analyte Units LOR	WEI-21	OA-VOL08	OA-VOL08	OA-VOL08	OA-VOL08	OA-ELE07	OA-VOL08	S-IR08	S-GRA06	S-GRA06a	S-IR07	C-GAS05	C-GAS05	ME-MS61	ME-MS61
		Recvd Wt. kg	FIZZ RAT Unity	MPA tCaCO3/1000	NNP tCaCO3/1000	NP tCaCO3/1000	pH Unity	Ratio (N) Unity	S %	S %	S %	S %	C %	CO2 %	Ag ppm	Al %
06-KLAP H-2		3.40	1	0.6	2	3	7.4	4.80	0.02	<0.01	<0.01	0.01	<0.05	<0.2	0.08	3.32
06-KLAP H-3		3.58	1	0.9	2	3	7.0	3.20	0.03	<0.01	0.01	0.01	<0.05	<0.2	0.13	2.54
06-KLAP H-4		2.68	1	1.3	2	3	6.9	2.40	0.04	<0.01	0.02	0.02	<0.05	<0.2	0.13	2.87
06-KLAP H-6		3.96	1	0.9	2	3	7.4	3.20	0.03	<0.01	<0.01	0.02	<0.05	0.2	0.18	2.61
06-KLAP H-7		3.48	2	0.6	40	41	8.5	65.60	0.02	<0.01	0.01	0.01	0.51	1.9	0.18	5.92
06-KLAP H-8		3.74	2	0.6	46	47	8.6	75.20	0.02	<0.01	0.01	0.01	0.56	2.1	0.14	6.29
06-KLAP H-9		3.48	3	0.9	137	138	8.6	147.20	0.03	<0.01	0.01	0.01	1.71	6.3	0.19	5.87
06-KLAP H-11		3.22	2	1.3	69	70	8.8	56.00	0.04	<0.01	0.01	0.03	0.96	3.5	0.11	3.44
06-KLAP H-12		2.28	1	3.1	2	5	7.5	1.60	0.10	<0.01	<0.01	0.07	<0.05	<0.2	0.19	3.13
06-KLAP H-13		3.32	2	1.6	76	78	8.5	49.92	0.05	<0.01	0.01	0.04	1.21	4.4	0.28	6.43
06-KLAP H-14		3.10	2	0.9	74	75	8.8	80.00	0.03	<0.01	<0.01	0.02	1.09	4.0	0.22	4.86
06-KLAP H-15		2.58	1	0.3	0	0	6.7	0.00	0.01	<0.01	0.01	0.01	0.05	0.2	0.15	2.70
06-KLAP H-20		2.32	1	17.8	-6	12	7.3	0.67	0.57	0.04	0.02	0.41	<0.05	0.2	0.46	7.87
06-KLAP H-21		2.94	1	3.4	9	12	7.8	3.49	0.11	0.02	0.01	0.08	0.05	0.2	0.42	7.66
06-KLAP H-22		2.44	1	1.6	11	13	8.0	8.32	0.05	<0.01	<0.01	0.03	0.05	0.2	0.27	6.56
06-KLAP H-25		2.54	1	52.5	-46	7	6.9	0.13	1.68	0.06	0.04	1.38	0.05	0.2	0.85	6.89
06-KLAP H-26		2.80	1	206.6	-204	3	4.1	0.01	6.61	0.15	0.15	6.28	<0.05	0.2	2.26	7.12
06-KLAP H-29		3.62	2	11.9	40	52	8.0	4.38	0.38	0.02	0.01	0.26	0.59	2.2	0.24	6.63
06-KLAP H-31		2.50	1	7.5	-1	7	7.0	0.93	0.24	0.01	0.02	0.16	<0.05	0.2	0.28	8.04
06-KLAP H-32		2.88	1	1.3	3	4	7.1	3.20	0.04	<0.01	<0.01	0.03	0.06	0.2	0.20	3.76
06-KLAP H-36		2.54	1	0.9	6	7	7.2	7.47	0.03	0.01	0.02	0.01	0.07	0.3	0.16	7.99
06-KLAP H-39		2.34	1	1.3	21	22	8.5	17.60	0.04	<0.01	<0.01	0.03	0.17	0.6	0.21	5.46
06-KLAP H-42		3.10	1	0.6	8	9	8.1	14.40	0.02	<0.01	<0.01	<0.01	0.11	0.4	0.18	3.35
06-KLAP L-1		2.26	1	0.9	35	36	8.5	38.40	0.03	<0.01	<0.01	0.02	0.47	1.7	0.29	7.04
06-KLAP L-4		2.84	1	0.6	12	13	8.0	20.80	0.02	<0.01	<0.01	0.01	0.14	0.5	0.21	6.12
06-KLAP L-6		2.58	1	0.9	12	13	7.7	13.87	0.03	<0.01	<0.01	0.01	0.17	0.6	0.22	5.79
06-KLAP L-9A		2.08	1	0.6	11	12	8.0	19.20	0.02	0.01	0.01	0.01	0.11	0.4	0.23	6.52
06-KLAP L-9B		3.66	1	0.3	7	7	7.3	22.40	0.01	<0.01	0.02	0.01	<0.05	0.2	0.27	7.01
06-KLAP L-13		3.22	1	0.6	15	16	7.8	25.60	0.02	<0.01	<0.01	0.01	0.16	0.6	0.16	7.13
06-KLAP L-14		2.76	1	1.3	3	4	7.3	3.20	0.04	<0.01	<0.01	0.03	<0.05	0.2	0.16	2.88
06-KLAP L-16		3.06	2	0.9	89	90	8.9	96.00	0.03	<0.01	<0.01	0.02	1.23	4.5	0.14	4.91
06-KLAP L-17		2.60	3	1.3	190	191	8.9	152.80	0.04	<0.01	<0.01	0.03	2.54	9.3	0.12	5.21
06-KLAP L-18		2.32	2	4.1	45	49	8.9	12.06	0.13	<0.01	0.01	0.09	0.62	2.3	0.16	3.00
06-KLAP L-21		4.02	1	1.3	2	3	7.3	2.40	0.04	0.02	<0.01	0.03	0.07	0.2	0.12	2.79
06-KLAP L-23		2.08	1	1.3	14	15	8.1	12.00	0.04	<0.01	<0.01	0.02	0.10	0.4	0.15	5.74
06-KLAP L-24		3.02	2	0.6	24	25	8.0	40.00	0.02	<0.01	<0.01	0.01	0.34	1.3	0.15	4.68
06-KLAP L-26		2.60	2	2.8	38	41	8.4	14.58	0.09	<0.01	0.02	0.06	0.41	1.5	0.26	7.38
06-KLAP L-27		2.68	1	2.2	14	16	8.5	7.31	0.07	<0.01	0.01	0.05	0.12	0.5	0.15	4.97
06-KLAP L-28		3.78	1	0.9	4	5	7.2	5.33	0.03	<0.01	0.03	0.01	<0.05	<0.2	0.19	6.76

Comments: ** CORRECTED COPY for Project Name **

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Page: 2 - B
 Total # Pages: 2 (A - F)
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 Finalized Date: 8-NOV-2006
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Project: Mount Klappan 0882-002-07

CERTIFICATE OF ANALYSIS VA06100281

Sample Description	Method Analyte Units LOR	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	
		As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu	Fe	Ga	Ge	Hf
		ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
		0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2	0.01	0.05	0.05	0.1
06-KLAP H-2		3.6	580	0.60	0.06	0.06	0.09	17.60	6.1	100	1.17	20.1	1.36	8.40	0.05	1.0
06-KLAP H-3		2.4	570	0.52	0.08	0.06	0.08	15.40	3.7	47	0.96	21.9	1.29	6.69	<0.05	0.9
06-KLAP H-4		3.6	700	0.61	0.07	0.06	0.15	16.85	5.3	45	0.95	27.0	1.67	7.27	0.05	1.1
06-KLAP H-6		3.2	490	0.58	0.07	0.10	0.14	16.00	5.4	42	0.84	23.3	1.24	6.79	0.06	0.9
06-KLAP H-7		4.2	1000	1.02	0.08	1.14	0.48	29.50	17.4	301	2.69	48.0	3.77	13.45	0.08	1.7
06-KLAP H-8		3.4	900	0.99	0.09	1.30	0.42	29.10	15.6	265	2.31	43.6	3.52	14.10	0.09	1.9
06-KLAP H-9		8.0	1110	1.02	0.10	3.09	0.60	31.60	16.0	196	2.80	55.3	3.76	13.20	0.09	2.0
06-KLAP H-11		4.1	560	0.73	0.05	1.66	0.23	19.00	8.0	174	1.22	24.1	2.80	8.28	0.08	1.1
06-KLAP H-12		2.8	680	0.63	0.07	0.09	0.18	19.10	6.5	61	1.15	26.3	1.94	7.92	0.06	1.4
06-KLAP H-13		14.2	950	1.09	0.12	2.09	0.78	33.80	20.8	218	2.34	64.8	3.94	14.60	0.10	2.0
06-KLAP H-14		3.9	650	0.68	0.07	1.87	0.30	23.60	14.3	202	1.71	31.6	2.72	10.75	0.08	1.3
06-KLAP H-15		2.2	420	0.53	0.07	0.03	0.05	16.70	3.8	41	0.76	19.4	1.47	7.22	0.05	1.0
06-KLAP H-20		9.5	890	1.41	0.20	0.28	0.41	40.70	20.4	138	5.94	70.3	4.99	18.70	0.13	3.1
06-KLAP H-21		6.6	790	1.31	0.15	0.29	0.46	37.10	23.7	239	4.44	74.9	4.86	18.10	0.11	2.6
06-KLAP H-22		6.0	960	1.18	0.11	0.20	0.50	32.60	19.5	215	3.63	51.2	4.19	15.20	0.10	2.4
06-KLAP H-25		21.1	320	1.06	0.13	0.40	1.04	25.00	14.4	71	7.28	54.7	4.25	14.65	0.11	1.8
06-KLAP H-26		73.2	170	0.96	0.15	0.29	3.31	24.60	3.8	58	4.69	62.6	7.23	17.35	0.29	2.6
06-KLAP H-29		8.1	730	0.97	0.06	1.67	0.29	26.10	15.2	175	2.72	27.0	3.41	14.30	0.09	1.6
06-KLAP H-31		10.4	930	1.52	0.19	0.13	0.52	35.50	14.6	117	5.28	60.4	5.01	18.70	0.11	2.5
06-KLAP H-32		4.4	620	0.68	0.07	0.13	0.26	19.10	8.2	75	1.44	20.7	1.31	9.08	0.06	1.2
06-KLAP H-36		5.1	750	1.44	0.17	0.16	0.30	37.50	18.3	160	3.78	45.3	4.41	18.40	0.11	2.2
06-KLAP H-39		6.4	570	0.91	0.08	0.60	0.27	27.00	16.9	215	2.24	34.2	3.36	12.40	0.09	1.7
06-KLAP H-42		4.1	490	0.60	0.06	0.19	0.23	18.15	7.4	73	1.37	19.8	1.50	8.21	0.07	1.1
06-KLAP L-1		9.8	980	1.31	0.17	0.95	0.76	37.90	23.9	213	3.43	75.0	4.80	15.90	0.12	2.1
06-KLAP L-4		6.1	800	1.12	0.10	0.39	0.50	27.80	21.7	258	2.46	52.9	5.99	13.95	0.12	1.5
06-KLAP L-6		16.8	1000	1.06	0.10	0.42	0.87	29.70	19.3	212	2.82	49.5	3.57	13.50	0.11	1.8
06-KLAP L-9A		5.2	1110	1.30	0.13	0.37	0.71	35.80	22.3	219	3.43	65.9	4.70	15.95	0.12	2.4
06-KLAP L-9B		7.3	1190	1.35	0.14	0.13	0.82	37.90	32.3	285	3.94	70.7	4.13	16.30	0.12	2.2
06-KLAP L-13		7.3	930	1.26	0.13	0.42	0.96	35.40	19.9	216	3.45	62.3	4.74	16.45	0.12	2.3
06-KLAP L-14		4.1	540	0.67	0.07	0.07	0.10	18.40	5.2	99	0.97	21.9	1.89	7.80	0.07	1.1
06-KLAP L-16		2.1	850	0.87	0.06	2.43	0.27	24.40	13.7	155	1.84	25.9	2.67	11.00	0.09	1.3
06-KLAP L-17		3.6	350	0.67	0.05	4.48	0.15	28.10	9.6	101	1.46	21.9	3.76	10.20	0.11	1.9
06-KLAP L-18		4.1	360	0.68	0.06	1.30	0.15	18.20	8.3	54	1.04	26.8	2.50	7.10	0.08	1.0
06-KLAP L-21		2.8	650	0.69	0.08	0.09	0.08	17.55	4.7	72	1.22	26.9	1.63	7.67	0.07	1.2
06-KLAP L-23		4.6	710	1.15	0.08	0.29	0.33	30.80	19.7	266	2.93	41.6	3.64	14.05	0.12	2.1
06-KLAP L-24		4.9	500	0.93	0.08	0.64	0.25	24.70	16.2	242	1.63	29.5	2.70	11.35	0.09	1.4
06-KLAP L-26		3.8	800	1.48	0.17	1.03	0.51	38.70	23.9	206	4.83	75.1	4.85	17.70	0.13	2.7
06-KLAP L-27		3.2	630	0.95	0.08	0.39	0.33	24.70	12.9	186	2.31	36.3	2.94	11.90	0.09	1.7
06-KLAP L-28		8.4	1090	1.40	0.12	0.11	0.59	37.10	27.7	241	3.41	65.1	3.47	16.55	0.12	2.1

Comments: ** CORRECTED COPY for Project Name **

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Page: 2 - C
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Project: Mount Klappan 0882-002-07

CERTIFICATE OF ANALYSIS VA06100281

Sample Description	Method Analyte Units LOR	Hg-CV41	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
		Hg ppm	In ppm	K %	La ppm	Li ppm	Mg %	Mn ppm	Mo ppm	Na %	Nb ppm	Ni ppm	P ppm	Pb ppm	Rb ppm	Re ppm
06-KLAP H-2		0.22	0.032	0.70	9.0	17.6	0.35	105	0.64	0.62	3.6	51.4	310	3.3	29.8	<0.002
06-KLAP H-3		0.38	0.027	0.58	7.7	11.3	0.25	108	1.91	0.47	3.0	27.2	280	2.7	24.7	0.002
06-KLAP H-4		0.05	0.029	0.68	8.4	11.8	0.43	164	0.76	0.41	3.4	32.2	280	4.3	28.5	<0.002
06-KLAP H-6		0.03	0.026	0.55	8.0	12.4	0.27	165	0.79	0.59	3.0	32.5	270	4.2	24.3	<0.002
06-KLAP H-7		0.04	0.048	1.34	15.3	21.4	1.06	527	2.08	0.97	6.9	165.5	640	5.7	50.6	0.002
06-KLAP H-8		0.03	0.049	1.12	15.0	27.3	1.52	496	0.98	1.03	6.3	125.5	620	5.7	44.0	0.002
06-KLAP H-9		0.06	0.053	1.31	16.4	20.7	2.65	1870	1.92	0.93	7.4	140.5	620	6.8	49.7	0.003
06-KLAP H-11		0.05	0.029	0.68	9.5	18.0	1.51	733	1.68	0.54	3.8	60.2	350	3.1	28.6	<0.002
06-KLAP H-12		0.04	0.032	0.64	9.3	15.5	0.59	198	0.62	0.60	4.3	37.9	280	4.3	28.1	<0.002
06-KLAP H-13		0.05	0.056	1.35	18.2	27.5	2.12	882	2.38	0.94	8.1	151.5	710	9.0	51.1	0.004
06-KLAP H-14		0.04	0.038	0.84	12.0	22.4	1.66	592	1.68	0.93	5.4	111.0	460	4.9	36.0	0.002
06-KLAP H-15		0.04	0.023	0.48	8.3	16.7	0.10	306	0.48	0.15	3.6	23.0	340	3.5	23.0	<0.002
06-KLAP H-20		0.11	0.077	1.79	19.9	51.4	2.25	213	2.40	1.13	8.5	154.0	880	10.8	79.3	0.004
06-KLAP H-21		0.11	0.070	1.35	18.5	56.4	2.57	174	1.94	1.31	8.4	192.5	710	7.9	61.5	0.004
06-KLAP H-22		0.05	0.054	1.40	16.5	45.4	2.36	195	1.95	1.15	8.4	169.0	650	7.4	59.1	0.003
06-KLAP H-25		0.26	0.065	1.40	11.4	32.8	1.37	540	5.05	1.62	5.0	64.9	460	12.1	53.9	0.010
06-KLAP H-26		0.99	0.068	1.82	12.5	10.7	0.52	136	53.50	1.37	4.6	43.9	1500	15.7	62.6	0.059
06-KLAP H-29		0.10	0.040	0.93	14.0	34.9	1.34	683	3.44	2.29	5.8	83.6	750	4.7	33.6	0.004
06-KLAP H-31		0.07	0.076	1.66	16.1	39.6	1.79	281	2.51	1.25	7.8	100.5	610	8.1	62.6	0.004
06-KLAP H-32		0.04	0.027	0.80	9.8	13.0	0.36	195	1.93	0.70	3.8	59.6	360	4.1	32.5	0.002
06-KLAP H-36		0.07	0.073	1.52	18.0	45.0	1.86	258	2.53	1.14	9.2	150.0	810	9.9	59.3	0.003
06-KLAP H-39		0.09	0.044	0.99	13.8	35.4	1.84	229	0.95	1.34	6.1	122.5	570	6.2	40.0	0.002
06-KLAP H-42		0.28	0.027	0.64	9.3	23.6	0.50	196	0.77	0.69	3.8	53.3	310	3.8	27.0	<0.002
06-KLAP L-1		0.06	0.062	1.58	18.8	22.2	1.36	917	4.37	0.83	7.9	192.0	740	10.6	59.8	0.005
06-KLAP L-4		0.05	0.047	1.22	14.6	20.8	1.08	1045	1.71	0.76	6.1	198.5	670	6.4	48.4	0.003
06-KLAP L-6		0.06	0.050	1.06	13.8	23.3	1.36	781	2.54	0.96	6.8	163.0	630	7.3	44.7	0.002
06-KLAP L-9A		0.06	0.059	1.19	17.6	23.2	1.27	766	3.02	0.82	8.5	188.5	790	8.6	52.1	0.004
06-KLAP L-9B		0.06	0.067	1.48	19.2	28.2	1.43	499	4.95	0.78	8.8	266.0	610	10.3	62.4	0.005
06-KLAP L-13		0.05	0.063	1.11	17.8	28.3	1.78	594	1.41	1.07	8.7	165.0	780	9.7	48.7	0.003
06-KLAP L-14		0.04	0.031	0.53	9.0	12.7	0.56	113	0.77	0.46	3.8	42.2	310	3.9	23.6	0.002
06-KLAP L-16		0.03	0.038	1.00	12.0	13.3	1.85	854	0.35	1.02	5.0	78.8	530	5.2	38.7	<0.002
06-KLAP L-17		0.05	0.035	0.81	13.9	25.3	2.23	1390	0.66	1.63	5.7	56.3	640	5.9	28.1	<0.002
06-KLAP L-18		0.06	0.026	0.48	8.8	25.6	0.80	567	1.02	0.83	3.5	44.2	390	5.1	20.8	<0.002
06-KLAP L-21		0.02	0.029	0.65	8.7	15.4	0.52	121	0.58	0.40	3.6	30.2	280	4.2	29.9	<0.002
06-KLAP L-23		0.05	0.052	1.11	15.3	42.1	1.93	226	1.74	1.18	7.5	165.5	580	6.3	50.1	0.003
06-KLAP L-24		0.02	0.039	0.84	12.4	31.1	1.00	374	1.67	0.97	5.4	123.5	470	6.7	35.0	<0.002
06-KLAP L-26		0.05	0.074	1.60	20.0	51.8	2.66	544	2.92	1.22	9.5	176.0	1160	9.9	66.8	0.004
06-KLAP L-27		0.05	0.042	0.94	12.7	31.6	1.51	198	1.29	1.10	5.8	122.5	500	5.3	42.0	0.002
06-KLAP L-28		0.08	0.063	1.27	19.0	31.3	1.39	287	3.82	0.96	8.9	184.5	580	7.2	57.8	0.004

Comments: ** CORRECTED COPY for Project Name **

***** See Appendix Page for comments regarding this certificate *****



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Page: 2 - D
 Total # Pages: 2 (A - F)
 Plus Appendix Pages
 Finalized Date: 8-NOV-2006
 Account: VF

Project: Mount Klappan 0882-002-07

CERTIFICATE OF ANALYSIS VA06100281

Sample Description	Method Analyte Units LOR	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	
		S %	Sb ppm	Sc ppm	Se ppm	Sn ppm	Sr ppm	Ta ppm	Te ppm	Th ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Y ppm
06-KLAP H-2		0.01	0.63	7.7	1	0.8	41.8	0.26	<0.05	2.3	0.159	0.21	0.8	62	0.7	6.0
06-KLAP H-3		0.02	0.46	5.7	1	0.7	43.6	0.20	<0.05	2.1	0.119	0.18	0.8	46	0.8	6.0
06-KLAP H-4		0.04	0.58	6.7	1	0.7	36.8	0.23	<0.05	2.4	0.128	0.21	1.0	48	0.6	8.4
06-KLAP H-6		0.03	0.60	5.1	1	0.8	42.8	0.23	0.07	2.3	0.112	0.16	0.9	44	0.5	5.9
06-KLAP H-7		0.01	0.72	16.2	1	1.1	145.0	0.45	0.06	3.6	0.336	0.36	1.4	129	0.9	13.7
06-KLAP H-8		0.02	0.43	17.0	1	1.1	114.5	0.42	0.06	3.6	0.350	0.33	1.5	134	0.8	15.2
06-KLAP H-9		0.02	0.89	14.1	2	1.1	151.5	0.49	0.07	3.9	0.337	0.39	1.8	117	1.0	16.3
06-KLAP H-11		0.04	0.73	10.0	1	0.7	116.0	0.25	<0.05	2.3	0.173	0.20	0.9	66	0.8	9.6
06-KLAP H-12		0.10	0.47	8.1	2	0.8	45.5	0.31	0.05	2.7	0.156	0.19	1.1	58	0.7	9.7
06-KLAP H-13		0.05	1.37	16.1	2	1.1	154.0	0.54	0.07	4.1	0.381	0.42	1.9	133	0.9	16.4
06-KLAP H-14		0.04	0.54	11.7	2	1.0	161.5	0.32	0.05	2.9	0.249	0.24	1.1	86	0.8	11.9
06-KLAP H-15		0.01	0.46	5.6	2	0.8	25.8	0.23	<0.05	2.3	0.122	0.16	0.9	45	0.4	4.8
06-KLAP H-20		0.58	1.12	22.6	3	1.5	120.0	0.51	0.14	5.0	0.417	0.52	2.1	177	1.0	28.8
06-KLAP H-21		0.11	0.65	23.1	3	1.4	143.5	0.50	0.10	4.3	0.432	0.39	1.9	173	0.9	22.9
06-KLAP H-22		0.04	0.78	17.1	2	1.2	108.5	0.52	0.07	4.0	0.375	0.35	1.8	133	0.9	15.8
06-KLAP H-25		1.73	19.40	16.1	6	1.1	128.5	0.31	0.10	2.5	0.352	0.76	1.3	159	0.8	20.3
06-KLAP H-26		6.91	19.45	18.7	48	1.3	89.2	0.29	0.17	2.2	0.340	5.36	5.6	495	0.8	27.3
06-KLAP H-29		0.39	1.44	14.9	4	1.0	173.0	0.35	0.05	2.3	0.328	0.48	1.3	122	0.7	15.3
06-KLAP H-31		0.26	1.17	22.0	3	1.4	91.1	0.47	0.11	4.0	0.438	0.47	1.7	167	0.9	18.4
06-KLAP H-32		0.04	0.54	7.8	2	0.8	55.4	0.23	<0.05	2.4	0.156	0.25	1.0	60	0.7	8.4
06-KLAP H-36		0.02	0.60	19.9	2	1.6	70.2	0.55	0.08	4.1	0.427	0.40	1.6	145	0.9	15.7
06-KLAP H-39		0.05	0.88	13.7	2	1.0	125.5	0.36	0.05	3.3	0.288	0.28	1.3	107	0.7	14.4
06-KLAP H-42		0.02	0.56	8.0	2	0.8	61.6	0.24	<0.05	2.4	0.149	0.19	1.0	58	0.6	7.5
06-KLAP L-1		0.03	1.20	19.5	3	1.2	98.0	0.50	0.09	4.7	0.378	0.47	2.1	154	0.8	13.4
06-KLAP L-4		0.01	0.74	21.2	2	1.1	72.5	0.40	0.07	3.6	0.343	0.38	1.5	145	0.6	11.4
06-KLAP L-6		0.02	2.49	15.6	2	1.1	92.8	0.41	0.06	3.6	0.313	0.36	1.7	120	0.8	16.9
06-KLAP L-9A		0.02	0.95	21.5	2	1.3	76.1	0.54	0.08	4.5	0.386	0.45	2.1	152	0.9	16.6
06-KLAP L-9B		0.01	1.25	19.4	2	1.4	79.3	0.56	0.09	4.3	0.411	0.51	2.1	152	0.9	19.1
06-KLAP L-13		0.01	0.67	20.7	2	1.3	93.3	0.54	0.07	4.4	0.417	0.40	2.1	157	0.9	16.4
06-KLAP L-14		0.04	0.83	7.1	2	0.8	51.2	0.24	<0.05	2.3	0.143	0.18	1.0	56	0.5	6.2
06-KLAP L-16		0.03	0.60	11.4	2	0.9	167.5	0.30	<0.05	2.7	0.248	0.31	1.1	85	0.6	10.6
06-KLAP L-17		0.05	0.66	10.4	2	0.9	336.0	0.34	<0.05	3.0	0.242	0.16	1.2	66	0.6	14.9
06-KLAP L-18		0.13	0.71	8.0	2	0.7	83.4	0.22	<0.05	2.1	0.133	0.16	0.9	45	0.4	9.3
06-KLAP L-21		0.04	0.47	7.0	2	0.8	53.9	0.24	<0.05	2.4	0.139	0.17	0.9	50	0.5	8.1
06-KLAP L-23		0.04	0.80	16.1	2	1.2	102.5	0.46	0.05	3.8	0.325	0.29	1.6	119	0.9	15.9
06-KLAP L-24		0.03	0.74	11.2	2	1.1	95.2	0.33	0.05	3.2	0.242	0.25	1.2	89	0.7	10.8
06-KLAP L-26		0.09	1.00	22.5	3	1.4	142.0	0.58	0.10	4.9	0.432	0.44	2.2	165	1.0	25.6
06-KLAP L-27		0.08	0.55	12.5	2	1.0	103.5	0.36	0.06	3.1	0.260	0.24	1.4	97	0.9	11.3
06-KLAP L-28		0.02	1.27	18.9	2	1.4	80.7	0.56	0.07	4.4	0.395	0.47	2.0	151	0.9	16.7

Comments: ** CORRECTED COPY for Project Name **

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Page: 2 - E
 Total # Pages: 2 (A - F)
 Plus Appendix Pages
 Finalized Date: 8-NOV-2006
 Account: VF

Project: Mount Klappan 0882-002-07

CERTIFICATE OF ANALYSIS VA06100281

Sample Description	Method Analyte Units LOR	ME-MS61	ME-MS61	C-IR07	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06
		Zn	Zr	C	SiO2	Al2O3	Fe2O3	CaO	MgO	Na2O	K2O	Cr2O3	TiO2	MnO	P2O5	SrO
		ppm	ppm	%	%	%	%	%	%	%	%	%	%	%	%	%
		2	0.5	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
06-KLAP H-2		44	31.1	0.18	85.26	6.92	1.99	0.09	0.68	1.00	0.94	0.01	0.27	0.01	0.08	<0.01
06-KLAP H-3		29	29.5	0.18	89.13	5.25	1.86	0.06	0.48	0.59	0.76	<0.01	0.20	<0.01	0.07	<0.01
06-KLAP H-4		37	37.4	0.15	87.10	5.58	2.33	0.07	0.77	0.48	0.85	0.01	0.23	0.01	0.06	<0.01
06-KLAP H-6		32	30.9	0.24	88.95	5.14	1.75	0.13	0.47	0.74	0.69	0.01	0.16	0.01	0.06	<0.01
06-KLAP H-7		100	52.9	0.76	69.96	11.24	5.36	1.55	1.81	1.29	1.62	0.05	0.59	0.06	0.13	0.01
06-KLAP H-8		99	59.8	0.81	68.54	11.56	4.93	1.74	2.46	1.31	1.30	0.07	0.58	0.06	0.13	0.01
06-KLAP H-9		108	61.9	2.16	60.90	10.79	5.31	4.22	4.22	1.20	1.53	0.04	0.56	0.24	0.13	0.01
06-KLAP H-11		51	32.7	1.20	75.95	6.56	4.04	2.34	2.50	0.64	0.83	0.04	0.27	0.09	0.08	0.01
06-KLAP H-12		40	43.7	0.19	85.93	6.02	2.62	0.10	1.02	0.74	0.79	<0.01	0.31	0.02	0.06	<0.01
06-KLAP H-13		123	63.1	1.77	62.16	12.40	5.79	2.99	3.60	1.27	1.66	0.03	0.70	0.11	0.16	0.02
06-KLAP H-14		76	46.8	1.31	72.03	8.84	3.76	2.57	2.67	1.14	1.00	0.04	0.42	0.07	0.10	0.02
06-KLAP H-15		35	35.5	0.20	89.12	5.07	1.99	0.03	0.23	0.10	0.60	<0.01	0.19	0.03	0.07	<0.01
06-KLAP H-20		167	102.0	0.82	61.40	15.07	7.35	0.41	3.88	1.51	2.33	0.02	0.75	0.02	0.19	0.01
06-KLAP H-21		148	87.3	1.07	62.36	14.68	7.20	0.41	4.41	1.76	1.76	0.04	0.76	0.02	0.15	0.01
06-KLAP H-22		139	77.5	0.45	66.79	12.44	6.08	0.28	3.98	1.52	1.80	0.03	0.65	0.02	0.14	0.01
06-KLAP H-25		126	59.1	1.14	66.21	13.47	6.38	0.59	2.43	2.22	1.87	0.01	0.62	0.07	0.10	0.01
06-KLAP H-26		298	89.6	2.13	60.82	13.25	9.70	0.39	0.91	1.78	2.30	0.01	0.68	0.01	0.30	0.01
06-KLAP H-29		96	52.4	0.93	66.01	13.01	5.08	2.52	2.34	3.14	1.18	0.03	0.65	0.09	0.16	0.02
06-KLAP H-31		153	89.8	0.77	63.47	15.51	7.11	0.18	3.04	1.65	2.10	0.01	0.76	0.03	0.13	0.01
06-KLAP H-32		48	38.5	0.39	85.70	7.20	1.75	0.18	0.65	0.86	1.00	0.01	0.28	0.02	0.08	<0.01
06-KLAP H-36		122	76.7	0.80	65.29	15.13	6.31	0.23	3.16	1.48	1.96	0.02	0.75	0.03	0.17	0.01
06-KLAP H-39		99	55.5	0.49	73.06	10.29	4.82	0.85	3.09	1.78	1.20	0.03	0.53	0.02	0.12	0.01
06-KLAP H-42		52	32.9	0.28	85.67	6.49	2.14	0.26	0.89	0.85	0.81	0.01	0.27	0.02	0.07	0.01
06-KLAP L-1		142	66.3	1.24	66.02	12.78	6.78	1.30	2.24	1.00	1.94	0.07	0.65	0.11	0.15	0.01
06-KLAP L-4		109	55.6	0.80	65.90	11.67	8.77	0.56	1.88	0.94	1.58	0.04	0.61	0.14	0.15	0.01
06-KLAP L-6		113	60.4	0.81	71.40	11.17	5.23	0.62	2.38	1.24	1.37	0.03	0.54	0.10	0.14	0.01
06-KLAP L-9A		130	78.7	0.64	68.09	12.70	7.01	0.53	2.25	1.06	1.55	0.04	0.68	0.10	0.18	0.01
06-KLAP L-9B		144	70.8	0.40	67.61	13.62	5.95	0.17	2.54	1.01	1.91	0.04	0.77	0.06	0.14	0.01
06-KLAP L-13		143	77.6	0.70	65.93	13.68	7.00	0.61	3.09	1.42	1.40	0.03	0.75	0.07	0.16	0.01
06-KLAP L-14		32	33.4	0.25	86.12	5.64	2.70	0.09	1.00	0.53	0.68	0.01	0.25	0.01	0.07	<0.01
06-KLAP L-16		66	40.8	1.50	70.09	9.08	3.79	3.39	3.01	1.27	1.19	0.02	0.40	0.10	0.11	0.02
06-KLAP L-17		59	62.3	2.72	59.18	9.56	5.44	6.33	3.63	2.05	0.97	0.02	0.40	0.18	0.13	0.04
06-KLAP L-18		46	32.9	0.76	80.06	5.81	3.68	1.90	1.38	1.02	0.62	<0.01	0.20	0.07	0.09	0.01
06-KLAP L-21		34	39.9	0.17	86.79	5.41	2.31	0.11	0.93	0.45	0.82	0.01	0.20	0.01	0.07	<0.01
06-KLAP L-23		113	74.2	0.40	71.50	11.19	5.34	0.41	3.36	1.60	1.43	0.04	0.59	0.02	0.12	0.01
06-KLAP L-24		85	46.0	0.67	78.00	8.78	3.82	0.89	1.69	1.24	1.03	0.04	0.42	0.04	0.10	0.01
06-KLAP L-26		145	92.9	1.08	61.70	13.58	6.89	1.48	4.36	1.55	1.98	0.03	0.75	0.07	0.23	0.01
06-KLAP L-27		86	54.7	0.44	76.27	9.49	4.21	0.55	2.58	1.45	1.15	0.03	0.42	0.02	0.11	0.01
06-KLAP L-28		123	66.9	0.67	71.23	12.73	4.85	0.15	2.31	1.23	1.61	0.04	0.67	0.03	0.12	0.01

Comments: ** CORRECTED COPY for Project Name **

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Page: 2 - F
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 Plus Appendix Pages
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CERTIFICATE OF ANALYSIS VA06100281

Sample Description	Method Analyte Units LOR	ME-XRF06	ME-XRF06	ME-XRF06
		BaO %	LOI %	Total %
		0.01	0.01	0.01
06-KLAP H-2		0.07	1.99	99.31
06-KLAP H-3		0.07	1.55	100.05
06-KLAP H-4		0.08	1.73	99.30
06-KLAP H-6		0.06	1.59	99.77
06-KLAP H-7		0.11	5.66	99.45
06-KLAP H-8		0.11	5.83	98.63
06-KLAP H-9		0.13	10.15	99.43
06-KLAP H-11		0.07	5.64	99.06
06-KLAP H-12		0.08	2.06	99.75
06-KLAP H-13		0.11	8.33	99.34
06-KLAP H-14		0.07	6.40	99.13
06-KLAP H-15		0.05	2.14	99.62
06-KLAP H-20		0.11	6.06	99.11
06-KLAP H-21		0.10	6.33	99.99
06-KLAP H-22		0.11	4.79	98.64
06-KLAP H-25		0.11	5.42	99.51
06-KLAP H-26		0.14	9.66	99.95
06-KLAP H-29		0.09	5.30	99.62
06-KLAP H-31		0.10	5.68	99.79
06-KLAP H-32		0.07	2.25	100.05
06-KLAP H-36		0.08	5.07	99.69
06-KLAP H-39		0.07	4.00	99.88
06-KLAP H-42		0.06	2.18	99.72
06-KLAP L-1		0.11	6.67	99.83
06-KLAP L-4		0.10	6.44	98.78
06-KLAP L-6		0.12	5.26	99.61
06-KLAP L-9A		0.13	5.63	99.96
06-KLAP L-9B		0.14	5.51	99.48
06-KLAP L-13		0.11	5.62	99.88
06-KLAP L-14		0.06	2.04	99.20
06-KLAP L-16		0.09	7.12	99.69
06-KLAP L-17		0.04	11.20	99.16
06-KLAP L-18		0.04	3.91	98.79
06-KLAP L-21		0.08	2.25	99.44
06-KLAP L-23		0.09	4.23	99.93
06-KLAP L-24		0.05	3.82	99.94
06-KLAP L-26		0.09	6.53	99.25
06-KLAP L-27		0.07	3.59	99.95
06-KLAP L-28		0.12	4.65	99.75

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Page: Appendix 1
Total # Appendix Pages: 1
Finalized Date: 8-NOV-2006
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Project: Mount Klappan 0882-002-07

CERTIFICATE OF ANALYSIS VA06100281

Method	CERTIFICATE COMMENTS
ME-MS61	REE's may not be totally soluble in this method.



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Page: 1
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CERTIFICATE VA07087034

Project: Mount Klappan 0882-002-07
 P.O. No.:
 This report is for 5 Rock samples submitted to our lab in Vancouver, BC, Canada on 9-AUG-2007.
 The following have access to data associated with this certificate:
 DAVE ARCHIBALD NORA HUTT

SAMPLE PREPARATION	
ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-22	Sample login - Rcd w/o BarCode
CRU-21	Crush entire sample >70% -6 mm
PUL-31	Pulverize split to 85% <75 um
SPL-21	Split sample - riffle splitter

ANALYTICAL PROCEDURES		
ALS CODE	DESCRIPTION	
S-IR07	Sulphide Sulphur (Leco)	
C-GAS05	Inorganic Carbon (CO2)	
S-GRA06a	Sulfate Sulfur (HCl leachable)	
ME-MS61	48 element four acid ICP-MS	
Hg-CV41	Trace Hg - cold vapor/AAS	FIMS
C-IR07	Total Carbon (Leco)	LECO
OA-ELE08	1:1 Rinse pH	
ME-XRF06	Whole Rock Package - XRF	XRF
OA-GRA06	LOI for ME-XRF06	WST-SIM
OA-VOL08	Basic Acid Base Accounting	
S-IR08	Total Sulphur (Leco)	LECO
OA-ELE07	Paste pH	
S-GRA06	Sulfate Sulfur-carbonate leach	LECO

To: RESCAN ENVIRONMENTAL SERVICES LTD.
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Signature: 
 Colin Ramshaw, Vancouver Laboratory Manager



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Page: 2 - A
 Total # Pages: 2 (A - F)
 Plus Appendix Pages
 Finalized Date: 24-SEP-2007
 Account: VF

Project: Mount Klappan 0882-002-07

CERTIFICATE OF ANALYSIS VA07087034

Sample Description	Method Analyte Units LOR	WEI-21 Recvd Wt. kg	OA-VOL08 FIZZ RAT Unity	OA-VOL08 MPA tCaCO3/1000	OA-VOL08 NNP tCaCO3/1000	OA-VOL08 NP tCaCO3/1000	OA-ELE07 pH Unity	OA-VOL08 Ratio (N) Unity	S-IR08 S %	S-GRA06 S %	S-GRA06a S %	S-IR07 S %	C-GAS05 C %	C-GAS05 CO2 %	ME-MS61 Ag ppm	ME-MS61 Al %
		0.02	1	0.3	1	1	0.1	0.01	0.01	0.01	0.01	0.01	0.05	0.2	0.01	0.01
MK-CUBE-1		1.72	1	0.9	10	11	7.8	11.73	0.03	0.01	0.01	0.01	<0.05	0.2	0.29	7.16
MK-CUBE-2		2.26	1	0.3	11	11	7.6	35.20	0.01	0.02	<0.01	0.01	0.08	0.3	0.28	6.73
MK-CUBE-3		1.02	1	6.9	9	16	7.4	2.33	0.22	<0.01	<0.01	0.16	0.27	1.0	0.13	5.33
MK-CUBE-4		1.14	1	10.6	-3	8	6.9	0.75	0.34	0.01	0.01	0.25	0.10	0.4	0.06	3.21
MK-CUBE-5		1.90	1	0.6	12	13	7.4	20.80	0.02	<0.01	<0.01	0.01	0.12	0.4	0.16	6.91

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Page: 2 - B
 Total # Pages: 2 (A - F)
 Plus Appendix Pages
 Finalized Date: 24-SEP-2007
 Account: VF

Project: Mount Klappan 0882-002-07

CERTIFICATE OF ANALYSIS VA07087034

Sample Description	Method Analyte Units LOR	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	
		As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu	Fe	Ga	Ge	Hf
		ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
		0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2	0.01	0.05	0.05	0.1
MK-CUBE-1		22.6	1320	1.46	0.20	0.30	0.88	45.20	24.8	154	4.06	81.2	5.88	18.45	0.14	2.0
MK-CUBE-2		19.9	1210	1.37	0.15	0.36	0.93	42.30	25.0	204	3.40	75.2	4.78	17.15	0.11	2.0
MK-CUBE-3		5.3	710	1.05	0.10	0.42	0.32	33.60	10.6	57	2.94	53.6	3.73	13.90	0.12	2.2
MK-CUBE-4		2.5	540	0.71	0.09	0.22	0.14	21.1	7.4	36	1.78	33.3	1.7	8.49	<0.05	1.6
MK-CUBE-5		11.9	1220	1.20	0.12	0.33	0.64	38.90	20.7	266	2.71	60.2	3.83	16.95	0.09	2.2

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Page: 2 - C
 Total # Pages: 2 (A - F)
 Plus Appendix Pages
 Finalized Date: 24-SEP-2007
 Account: VF

Project: Mount Klappan 0882-002-07

CERTIFICATE OF ANALYSIS VA07087034

Sample Description	Method Analyte Units LOR	Hg-CV41 Hg ppm 0.01	ME-MS61 In ppm 0.005	ME-MS61 K % 0.01	ME-MS61 La ppm 0.5	ME-MS61 Li ppm 0.2	ME-MS61 Mg % 0.01	ME-MS61 Mn ppm 5	ME-MS61 Mo ppm 0.05	ME-MS61 Na % 0.01	ME-MS61 Nb ppm 0.1	ME-MS61 Ni ppm 0.2	ME-MS61 P ppm 10	ME-MS61 Pb ppm 0.5	ME-MS61 Rb ppm 0.1	ME-MS61 Re ppm 0.002
MK-CUBE-1		0.10	0.075	1.68	22.6	23.6	0.84	2680	4.04	0.83	8.7	166.5	1040	11.8	71.8	0.004
MK-CUBE-2		0.10	0.067	1.46	21.2	26.5	0.71	979	5.07	0.82	7.9	186.5	690	11.6	61.0	0.004
MK-CUBE-3		0.32	0.057	0.83	16.0	45.8	0.69	547	2.02	0.58	6.5	60.6	560	8.4	36.1	0.003
MK-CUBE-4		0.18	0.037	0.5	10.2	35.1	0.35	240	1.51	0.34	5.3	38.4	780	5.5	21.3	0.002
MK-CUBE-5		0.07	0.066	1.60	19.0	18.5	0.65	670	3.08	1.10	7.7	207.0	600	10.0	62.5	0.003

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Page: 2 - D
 Total # Pages: 2 (A - F)
 Plus Appendix Pages
 Finalized Date: 24-SEP-2007
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Project: Mount Klappan 0882-002-07

CERTIFICATE OF ANALYSIS VA07087034

Sample Description	Method Analyte Units LOR	ME-MS61 S %	ME-MS61 Sb ppm	ME-MS61 Sc ppm	ME-MS61 Se ppm	ME-MS61 Sn ppm	ME-MS61 Sr ppm	ME-MS61 Ta ppm	ME-MS61 Te ppm	ME-MS61 Th ppm	ME-MS61 Ti %	ME-MS61 Tl ppm	ME-MS61 U ppm	ME-MS61 V ppm	ME-MS61 W ppm	ME-MS61 Y ppm
MK-CUBE-1		0.01	1.65	19.0	3	1.4	86.9	0.57	0.13	5.5	0.401	0.67	2.3	154	1.0	17.3
MK-CUBE-2		0.01	1.80	19.0	2	1.4	87.9	0.50	0.12	4.8	0.384	0.59	2.2	146	0.9	17.2
MK-CUBE-3		0.16	0.73	12.9	3	1.2	140.5	0.38	0.12	3.7	0.281	0.41	1.6	89	0.6	11.9
MK-CUBE-4		0.22	0.53	8.7	3	0.7	306	0.26	0.08	2.2	0.199	0.25	1	64	0.4	9.2
MK-CUBE-5		0.02	1.29	15.8	2	1.4	109.0	0.49	0.08	4.4	0.376	0.51	1.9	124	0.9	17.0

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Page: 2 - E
 Total # Pages: 2 (A - F)
 Plus Appendix Pages
 Finalized Date: 24-SEP-2007
 Account: VF

Project: Mount Klappan 0882-002-07

CERTIFICATE OF ANALYSIS VA07087034

Sample Description	Method Analyte Units LOR	ME-MS61 Zn ppm	ME-MS61 Zr ppm	C-IR07 C %	OA-ELE08 pH Unity	ME-XRF06 SiO2 %	ME-XRF06 Al2O3 %	ME-XRF06 Fe2O3 %	ME-XRF06 CaO %	ME-XRF06 MgO %	ME-XRF06 Na2O %	ME-XRF06 K2O %	ME-XRF06 Cr2O3 %	ME-XRF06 TiO2 %	ME-XRF06 MnO %	ME-XRF06 P2O5 %
		2	0.5	0.01	0.1	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.001
MK-CUBE-1		144	68.6	0.90	7.1	63.00	14.39	8.43	0.42	1.59	1.20	2.27	0.03	0.72	0.36	0.226
MK-CUBE-2		140	68.7	0.70	7.5	67.26	13.31	6.83	0.51	1.36	1.21	1.94	0.03	0.74	0.13	0.154
MK-CUBE-3		80	87.6	34.2	7.2	36.62	10.03	4.75	0.58	1.23	0.81	1.05	0.02	0.45	0.06	0.116
MK-CUBE-4		47	65.7	>50	7.0	24.11	6.70	2.09	0.31	0.67	0.52	0.65	0.01	0.31	0.03	0.168
MK-CUBE-5		119	72.6	0.60	7.7	69.62	13.08	5.33	0.46	1.21	1.61	2.04	0.04	0.65	0.08	0.130

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Page: 2 - F
 Total # Pages: 2 (A - F)
 Plus Appendix Pages
 Finalized Date: 24-SEP-2007
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CERTIFICATE OF ANALYSIS VA07087034

Sample Description	Method Analyte Units LOR	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06
		SrO %	BaO %	LOI %	Total %
		0.01	0.01	0.01	0.01
MK-CUBE-1		0.01	0.16	7.14	99.94
MK-CUBE-2		0.01	0.14	6.17	99.80
MK-CUBE-3		0.02	0.08	43.40	99.21
MK-CUBE-4		0.04	0.06	63.80	99.46
MK-CUBE-5		0.01	0.14	5.26	99.68

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Page: Appendix 1
Total # Appendix Pages: 1
Finalized Date: 24-SEP-2007
Account: VF

Project: Mount Klappan 0882-002-07

CERTIFICATE OF ANALYSIS VA07087034

Method	CERTIFICATE COMMENTS
ME-MS61	REE's may not be totally soluble in this method.



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CERTIFICATE VA07101149

Project: MT. KLAPPEN 0882-002-07
 P.O. No.:
 This report is for 14 Crushed Rock samples submitted to our lab in Vancouver, BC, Canada on 7-SEP-2007.
 The following have access to data associated with this certificate:
 DAVE ARCHIBALD NORA HUTT

SAMPLE PREPARATION	
ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-22	Sample login - Rcd w/o BarCode
SCR-51	Screening
CMB-01	Recombining samples
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% < 75 um

ANALYTICAL PROCEDURES		
ALS CODE	DESCRIPTION	
S-IR07	Sulphide Sulphur (Leco)	
C-GAS05	Inorganic Carbon (CO2)	
S-GRA06a	Sulfate Sulfur (HCl leachable)	
C-IR07	Total Carbon (Leco)	LECO
ME-MS61	48 element four acid ICP-MS	
Hq-CV41	Trace Hg - cold vapor/AAS	FIMS
ME-XRF06	Whole Rock Package - XRF	XRF
OA-GRA06	LOI for ME-XRF06	WST-SIM
OA-ELE08	1:1 Rinse pH	
OA-VOL08	Basic Acid Base Accounting	
S-IR08	Total Sulphur (Leco)	LECO
OA-ELE07	Paste pH	
S-GRA06	Sulfate Sulfur-carbonate leach	LECO

To: RESCAN ENVIRONMENTAL SERVICES LTD.
 ATTN: ALS MINERALS

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Signature: 
 Colin Ramshaw, Vancouver Laboratory Manager



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Page: 2 - A
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 Plus Appendix Pages
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 Account: VF

Project: MT. KLAPPEN 0882-002-07

CERTIFICATE OF ANALYSIS VA07101149

Sample Description	Method Analyte Units LOR	WEI-21 Recvd Wt. kg	OA-VOL08 FIZZ RAT Unity	OA-VOL08 MPA tCaCO3/1000	OA-VOL08 NNP tCaCO3/1000	OA-VOL08 NP tCaCO3/1000	OA-ELE07 pH Unity	OA-VOL08 Ratio (N) Unity	S-IR08 S %	S-GRA06 S %	S-GRA06a S %	S-IR07 S %	C-GAS05 C %	C-GAS05 CO2 %	C-IR07 C %	ME-MS61 Ag ppm
		0.02	1	0.3	1	1	0.1	0.01	0.01	0.01	0.01	0.01	0.05	0.2	0.01	0.01
ARD3-07B		0.96	2	1.9	65	67	9.2	35.73	0.06	<0.01	0.02	0.04	1.49	5.4	2.09	0.14
85-027-02		0.92	1	12.8	15	28	7.8	2.19	0.41	0.02	0.07	0.33	0.66	2.4	2.28	0.27
ARD2-07		0.92	2	7.2	59	66	8.4	9.18	0.23	<0.01	0.03	0.16	1.26	4.6	2.49	0.22
85-027-24		0.94	3	1.6	159	161	9.1	103.05	0.05	<0.01	0.02	0.03	2.20	8.1	2.86	0.13
ARD3-08B		0.98	1	34.1	-19	15	6.0	0.44	1.09	0.07	0.09	0.86	0.28	1.0	2.73	0.22
DUMP-2.5M		0.90	1	5.9	6	12	7.6	2.02	0.19	<0.01	0.02	0.20	0.05	0.2	26.6	0.13
85-027-17		0.94	2	2.8	39	42	9.3	14.93	0.09	0.01	0.01	0.06	0.54	2.0	0.77	0.17
85-016-07		0.94	1	5.6	19	25	7.9	4.44	0.18	<0.01	0.01	0.13	1.36	5.0	3.61	0.13
ARD2-12		0.96	2	259.1	-169	90	5.6	0.35	8.29	0.18	0.17	7.28	1.93	7.1	3.17	0.09
019-02		0.94	2	45.0	12	57	8.3	1.27	1.44	0.03	0.04	1.25	0.89	3.3	3.15	0.35
86-035-07		0.90	2	1.9	54	56	8.6	29.87	0.06	<0.01	0.02	0.06	1.84	6.7	2.92	0.17
86-035-09		0.92	2	4.1	65	69	8.3	16.98	0.13	0.02	0.04	0.10	1.26	4.6	2.09	0.07
ARD1-15		1.00	3	1.3	277	278	9.3	222.4	0.04	<0.01	0.01	0.03	3.49	12.8	3.85	0.12
ARD3-14B		0.96	1	18.8	19	38	7.8	2.03	0.60	0.01	0.02	0.57	0.51	1.9	38.9	0.11

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Page: 2 - B
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 Plus Appendix Pages
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Project: MT. KLAPPEN 0882-002-07

CERTIFICATE OF ANALYSIS VA07101149

Sample Description	Method Analyte Units LOR	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	
		Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr ppm	Cs ppm	Cu ppm	Fe %	Ga ppm	Ge ppm
ARD3-07B		6.37	7	1230	1.49	0.12	1.02	0.52	42.5	16.6	154	2.23	52.7	3.89	15.85	0.14
85-027-02		8.01	13	1390	1.34	0.23	0.31	0.18	32.8	15.1	112	4.5	63.3	4.32	20	0.14
ARD2-07		7.1	8	970	1.27	0.17	1.26	0.15	36.8	17	124	3.82	55.3	4.38	16.75	0.17
85-027-24		4.71	4	450	0.8	0.12	3.44	0.32	22	14.3	192	1.55	37.5	2.76	11.05	0.13
ARD3-08B		8.57	20	890	1.62	0.14	0.29	0.25	36.8	23.5	138	4.53	47.5	4.05	20.2	0.19
DUMP-2.5M		5.19	10	750	0.96	0.16	0.23	0.29	31.6	11.3	86	3.22	54.1	3.09	13.9	0.16
85-027-17		2.32	10	280	0.49	0.08	0.96	0.19	14.15	9	35	0.71	29.9	1.15	6.33	0.12
85-016-07		7.42	13	770	1.28	0.14	0.56	0.23	34.2	11.6	87	3.82	46	6.47	17.25	0.21
ARD2-12		3.01	49.2	170	0.6	0.06	4.2	0.08	16.05	7.2	38	0.99	24.6	8.73	7.15	0.17
019-02		7.58	21.6	930	1.21	0.18	1.15	0.2	34.8	18.6	102	3.92	49.5	5.2	17.6	0.16
86-035-07		4.96	9.3	560	0.97	0.11	0.75	0.42	25.6	14.4	200	2.01	46.1	6.06	12.25	0.17
86-035-09		7.06	7.6	740	0.95	0.06	1.5	0.08	24.9	14.8	197	3.24	15.7	4.06	15.25	0.16
ARD1-15		3.76	7.3	590	0.77	0.1	6	0.25	18.35	9.8	124	1.33	28.9	2.2	8.8	0.11
ARD3-14B		4.97	7.7	470	0.91	0.15	0.95	0.38	32.4	7.5	51	4.5	51	1.41	12.9	0.15

Comments: ** CORRECTED COPY for Project Name **

***** See Appendix Page for comments regarding this certificate *****



ALS Canada Ltd.
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To: RESCAN ENVIRONMENTAL SERVICES LTD.
 6TH FL, 1111 W HASTINGS ST
 VANCOUVER BC V6E 2J3

Page: 2 - C
 Total # Pages: 2 (A - F)
 Plus Appendix Pages
 Finalized Date: 30-OCT-2007
 Account: VF

Project: MT. KLAPPEN 0882-002-07

CERTIFICATE OF ANALYSIS VA07101149

Sample Description	Method Analyte Units LOR	ME-MS61	Hg-CV41	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	
		Hf ppm	Hg ppm	In ppm	K %	La ppm	Li ppm	Mg %	Mn ppm	Mo ppm	Na %	Nb ppm	Ni ppm	P ppm	Pb ppm	Rb ppm
		0.1	0.01	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10	0.5	0.1
ARD3-07B		3.6	0.05	0.071	1.37	19.6	11	1.53	858	1.95	1.05	6.6	154.5	540	12.1	54.8
85-027-02		2	0.18	0.078	1.64	14.8	25.8	1.85	388	1.44	0.74	7	108	750	11	68.3
ARD2-07		1.8	0.14	0.063	1.51	17.8	21.5	1.85	426	1.77	0.87	6.6	114	930	10.9	57.8
85-027-24		1.2	0.05	0.036	0.76	11.1	28.7	2.5	406	1.14	0.75	5	123.5	600	5.2	31.3
ARD3-08B		2.2	0.44	0.072	1.9	18.5	30	0.81	346	1.41	0.9	6	89.2	740	19.8	66.8
DUMP-2.5M		2	0.26	0.057	1.02	15.3	35.7	0.58	417	2.43	0.61	6.2	82.3	560	7.9	41.5
85-027-17		0.8	0.06	0.023	0.38	6.9	23.6	0.71	156	1.1	0.49	2.8	63.5	270	4.3	17.6
85-016-07		2.2	0.08	0.067	1.57	16.8	28.7	1.41	588	1.11	0.71	5.1	55.3	1330	10	60.2
ARD2-12		1.4	1.93	0.031	0.33	8.4	46.1	1.74	342	1.53	0.3	3.4	50.5	3710	8.8	12
019-02		1.6	0.47	0.075	1.28	17	43.1	1.56	424	1.35	0.84	5.4	101	640	34.7	51.4
86-035-07		1.4	0.15	0.043	1.02	12.8	28.6	1.38	918	1.39	0.57	5.3	139	540	5.4	39.5
86-035-09		1.1	0.11	0.044	1.09	12.4	24.1	1.56	414	0.56	1.28	4.4	105.5	650	4.4	38.7
ARD1-15		1.1	0.05	0.029	0.82	9.1	20.3	3.16	535	0.47	0.83	4.1	78.6	470	3.7	30.2
ARD3-14B		2.1	0.12	0.052	0.91	15.3	49	0.72	110	2.02	0.47	5.3	46.6	90	7.5	46.5

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 VANCOUVER BC V6E 2J3

Page: 2 - D
 Total # Pages: 2 (A - F)
 Plus Appendix Pages
 Finalized Date: 30-OCT-2007
 Account: VF

Project: MT. KLAPPEN 0882-002-07

CERTIFICATE OF ANALYSIS VA07101149

Sample Description	Method Analyte Units LOR	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	
		Re ppm	S %	Sb ppm	Sc ppm	Se ppm	Sn ppm	Sr ppm	Ta ppm	Te ppm	Th ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm
ARD3-07B		0.003	0.06	1.31	16.5	2	2.1	157.5	0.42	0.07	4.4	0.32	0.45	1.5	91	1
85-027-02		0.002	0.44	1.21	21.2	2	1.9	120	0.44	0.15	4.3	0.472	0.56	1.3	169	0.9
ARD2-07		0.003	0.23	0.95	15.8	1	1.5	199	0.42	0.09	4.2	0.4	0.45	1.3	143	0.9
85-027-24		0.002	0.05	0.56	11.2	1	1.1	176.5	0.32	<0.05	2.6	0.244	0.22	1.2	94	0.6
ARD3-08B		<0.002	1.11	4.55	17.2	2	1.5	169	0.4	0.06	3.9	0.477	0.71	1.5	139	0.7
DUMP-2.5M		0.003	0.13	0.72	13.9	2	1.6	135	0.4	0.07	3.8	0.314	0.4	1.5	109	0.6
85-027-17		0.002	0.1	0.85	5.5	1	0.7	151.5	0.18	<0.05	1.7	0.102	0.14	0.7	37	0.4
85-016-07		0.004	0.18	0.79	20.3	2	1.2	147	0.33	0.08	3.6	0.398	0.46	1.4	140	0.6
ARD2-12		0.002	8.5	8.78	8.8	4	0.8	785	0.11	0.06	1.2	0.189	1.2	0.5	68	0.4
019-02		0.003	1.4	2.74	18.9	2	1.3	206	0.36	0.11	3.4	0.431	0.49	1.1	143	0.7
86-035-07		0.002	0.04	0.64	16.7	2	1	149	0.33	0.06	3	0.268	0.31	1.2	120	0.6
86-035-09		<0.002	0.12	0.46	14.7	1	0.9	165.5	0.29	<0.05	2.3	0.372	0.32	0.8	106	0.5
ARD1-15		0.002	0.05	0.42	8.5	1	1	359	0.26	<0.05	2.3	0.192	0.24	0.9	74	0.5
ARD3-14B		0.003	0.54	0.7	11.9	2	1.3	128	0.28	0.09	3	0.256	0.42	1.2	97	0.7

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Page: 2 - E
 Total # Pages: 2 (A - F)
 Plus Appendix Pages
 Finalized Date: 30-OCT-2007
 Account: VF

Project: MT. KLAPPEN 0882-002-07

CERTIFICATE OF ANALYSIS VA07101149

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06
	Analyte	Y	Zn	Zr	SiO2	Al2O3	Fe2O3	CaO	MgO	Na2O	K2O	Cr2O3	TiO2	MnO	P2O5	SrO
	Units	ppm	ppm	ppm	%	%	%	%	%	%	%	%	%	%	%	%
	LOR	0.1	2	0.5	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.001	0.01
ARD3-07B		23.2	107	103	65.01	12.29	5.51	1.39	2.67	1.43	1.91	0.02	0.54	0.11	0.116	0.02
85-027-02		13.1	161	62.4	58.01	16.90	6.21	0.44	3.32	1.04	2.89	0.02	0.87	0.05	0.165	0.02
ARD2-07		14.2	124	85.8	59.63	14.43	6.15	1.71	3.23	1.23	1.88	0.02	0.70	0.05	0.202	0.02
85-027-24		9.9	78	42.5	64.24	9.08	4.01	4.64	4.31	1.03	0.96	0.04	0.44	0.05	0.130	0.02
ARD3-08B		16.3	136	72	60.01	17.55	5.65	0.39	1.51	1.33	2.33	0.02	0.80	0.04	0.157	0.02
DUMP-2.5M		11.1	80	74.2	45.56	10.90	4.15	0.33	1.09	0.90	1.32	0.01	0.52	0.05	0.123	0.02
85-027-17		5.8	36	29.2	86.37	4.67	1.61	1.30	1.29	0.70	0.51	<0.01	0.16	0.02	0.062	0.02
85-016-07		17.3	110	98	55.77	15.24	8.95	0.77	2.58	1.03	2.03	0.01	0.73	0.08	0.291	0.02
ARD2-12		11.1	31	87.7	20.59	5.54	11.05	5.65	2.87	0.39	0.39	0.01	0.29	0.04	0.729	0.06
019-02		13.2	127	59.2	56.15	16.21	7.67	1.68	2.87	1.25	1.61	0.03	0.75	0.06	0.144	0.03
86-035-07		10.7	92	48.1	64.59	10.04	8.59	1.05	2.55	0.85	1.36	0.03	0.49	0.12	0.121	0.02
86-035-09		10.1	103	42.7	60.72	14.68	5.82	2.06	2.79	1.89	1.35	0.04	0.67	0.05	0.144	0.02
ARD1-15		8.8	63	37.2	58.29	7.13	3.08	8.18	5.32	1.09	0.91	0.02	0.33	0.07	0.103	0.04
ARD3-14B		11.8	71	89.7	40.28	10.87	1.91	1.32	1.31	0.70	1.16	0.01	0.40	0.01	0.025	0.02

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Page: 2 - F
 Total # Pages: 2 (A - F)
 Plus Appendix Pages
 Finalized Date: 30-OCT-2007
 Account: VF

Project: MT. KLAPPEN 0882-002-07

CERTIFICATE OF ANALYSIS VA07101149

Sample Description	Method Analyte Units LOR	ME-XRF06	ME-XRF06	ME-XRF06	OA-ELE08	SCR-51	SCR-51	SCR-51	SCR-51	SCR-51	SCR-51	SCR-51	SCR-51	SCR-51	SCR-51	
		BaO	LOI	Total	pH	WT.+2mm	WT.+850u	WT.+425u	WT.+250u	WT.+180u	WT.+106u	WT.+75um	WT.+53um	WT.-53um	WT.+3.3	WT.+4.75
		%	%	%	Unity	g	g	g	g	g	g	g	g	g	g	g
ARD3-07B		0.14	8.77	99.93	8.3	322.3	165.8	84.5	41.7	20.8	29.3	12.9	15.8	59.2	102.0	59.8
85-027-02		0.16	9.86	99.95	7.6	270.2	197.3	114.1	57.1	24.9	30.9	8.2	8.1	19.7	48.5	101.6
ARD2-07		0.11	10.25	99.62	8.0	334.4	148.7	54.5	23.7	9.9	15.1	9.3	8.3	26.9	141.0	104.6
85-027-24		0.06	10.70	99.71	8.6	241.0	164.3	87.6	48.0	26.2	34.2	13.4	13.0	54.1	156.5	46.8
ARD3-08B		0.10	10.00	99.91	6.8	153.7	132.7	64.8	49.5	33.5	60.3	27.6	22.8	32.4	125.5	247.7
DUMP-2.5M		0.08	34.80	99.85	7.4	217.2	137.2	57.5	24.9	11.5	16.0	7.9	8.1	72.4	232	42.4
85-027-17		0.03	3.25	99.99	8.7	278.5	203.1	92.4	37.7	15.5	14.2	4.4	3.2	13.5	206	35.2
85-016-07		0.09	11.95	99.54	7.9	248.3	181.0	73.1	28.2	12.6	21.0	13.5	12.5	24.2	142.5	148.0
ARD2-12		0.04	50.70	98.35	7.0	140.0	118.4	84.8	56.9	23.3	40.6	20.5	19.1	61.4	216	124.1
019-02		0.11	11.30	99.86	8.1	207.2	212.7	101.6	43.8	19.2	25.3	14.1	17.8	101.9	103.0	50.6
86-035-07		0.07	10.00	99.88	8.3	210.0	160.2	84.6	49.7	25.8	37.8	18.3	13.4	22.4	163.5	85.3
86-035-09		0.09	9.57	99.89	8.2	76.5	50.1	24.7	30.7	26.9	77.5	51.8	23.8	21.4	98.7	402.7
ARD1-15		0.07	14.60	99.23	8.8	232.4	154.2	84.1	48.9	27.2	46.0	17.3	15.9	45.1	212	47.6
ARD3-14B		0.06	40.30	98.37	8.2	197.1	164.3	94.3	55.2	28.2	38.3	15.4	12.5	27.3	175.0	112.3

Comments: ** CORRECTED COPY for Project Name **

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ALS Canada Ltd.
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Page: Appendix 1
Total # Appendix Pages: 1
Finalized Date: 30-OCT-2007
Account: VF

Project: MT. KLAPPEN 0882-002-07

CERTIFICATE OF ANALYSIS VA07101149

Method	CERTIFICATE COMMENTS
ME-MS61	REE's may not be totally soluble in this method.



Environmental Division

ANALYTICAL REPORT

RESCAN ENVIRONMENTAL SERVICES

ATTN: DAVE ARCHIBALD

Reported On: 13-FEB-07 06:11 AM

SIXTH FLOOR
1111 WEST HASTINGS STREET
VANCOUVER BC V6E 2J3

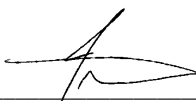
Lab Work Order #: **L471041**

Date Received: **18-JAN-07**

Project P.O. #: NOT SUBMITTED
Job Reference: MT. KLAPPAN CYCLE#44 HUMIDITY CELLS
Legal Site Desc:
CofC Numbers:

Other Information:

Comments:



Joyce Chow
General Manager, Vancouver

For any questions about this report please contact your Account Manager:

ANDRE LANGLAIS

THIS REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL WITHOUT THE WRITTEN AUTHORITY OF THE LABORATORY.
ALL SAMPLES WILL BE DISPOSED OF AFTER 30 DAYS FOLLOWING ANALYSIS. PLEASE CONTACT THE LAB IF YOU
REQUIRE ADDITIONAL SAMPLE STORAGE TIME.

ALS LABORATORY GROUP ANALYTICAL REPORT

		Sample ID	L471041-1	L471041-2	L471041-3	L471041-4	L471041-5
		Description					
		Sampled Date	18-JAN-07	18-JAN-07	18-JAN-07	18-JAN-07	18-JAN-07
		Sampled Time					
		Client ID	ARD3-08B-44	ARD3-14B-44	ARD1-15-44	ARD2-12-44	ARD2-07-44
Grouping	Analyte						
WATER							
Sample Preparation	total volume in (mL)		500	500	500	500	500
	total volume out (mL)		435	480	470	470	475
Physical Tests	Conductivity (uS/cm)		1390	199	94.5	510	311
	pH (pH)		7.77	7.91	7.20	7.85	7.87
Anions and Nutrients	Acidity (as CaCO3) (mg/L)		2.7	1.6	1.3	2.1	1.2
	Alkalinity, Total (as CaCO3) (mg/L)		70.8	62.4	41.3	91.0	98.6
	Sulfate (SO4) (mg/L)		628	44.8	4.7	205	71.1
Dissolved Metals	Aluminum (Al)-Dissolved (mg/L)		0.016	<0.010	0.079	<0.010	<0.010
	Antimony (Sb)-Dissolved (mg/L)		<0.0010	<0.0010	0.0020	<0.0010	<0.0010
	Arsenic (As)-Dissolved (mg/L)		<0.0010	<0.0010	0.0037	<0.0010	<0.0010
	Barium (Ba)-Dissolved (mg/L)		0.0345	0.183	0.0850	0.0214	0.0903
	Beryllium (Be)-Dissolved (mg/L)		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Bismuth (Bi)-Dissolved (mg/L)		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Boron (B)-Dissolved (mg/L)		0.10	<0.10	<0.10	<0.10	<0.10
	Cadmium (Cd)-Dissolved (mg/L)		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Calcium (Ca)-Dissolved (mg/L)		27.7	20.4	9.32	72.2	12.6
	Chromium (Cr)-Dissolved (mg/L)		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Cobalt (Co)-Dissolved (mg/L)		0.0034	<0.0010	<0.0010	<0.0010	<0.0010
	Copper (Cu)-Dissolved (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Iron (Fe)-Dissolved (mg/L)		<0.030	<0.030	<0.030	<0.030	<0.030
	Lead (Pb)-Dissolved (mg/L)		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Lithium (Li)-Dissolved (mg/L)		0.121	<0.010	<0.010	<0.010	<0.010
	Magnesium (Mg)-Dissolved (mg/L)		33.6	11.1	6.18	29.3	35.5
	Manganese (Mn)-Dissolved (mg/L)		0.714	0.00402	0.00053	0.0234	0.00075
	Mercury (Hg)-Dissolved (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Molybdenum (Mo)-Dissolved (mg/L)		<0.00050	0.00946	0.00512	<0.00050	0.00575
	Nickel (Ni)-Dissolved (mg/L)		0.0239	<0.0050	<0.0050	<0.0050	<0.0050
	Phosphorus, Dissolved (mg/L)		<0.30	<0.30	<0.30	<0.30	<0.30
	Potassium (K)-Dissolved (mg/L)		6.13	1.55	<0.50	<0.50	1.82
	Selenium (Se)-Dissolved (mg/L)		<0.010	<0.010	<0.010	<0.010	<0.010
	Silicon (Si)-Dissolved (mg/L)		0.896	0.685	1.41	0.214	0.726
	Silver (Ag)-Dissolved (mg/L)		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Sodium (Na)-Dissolved (mg/L)		239	2.01	<0.50	<0.50	<0.50
	Strontium (Sr)-Dissolved (mg/L)		2.82	1.07	0.160	0.783	0.685
	Thallium (Tl)-Dissolved (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Tin (Sn)-Dissolved (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Titanium (Ti)-Dissolved (mg/L)		<0.010	<0.010	<0.010	<0.010	<0.010
	Uranium (U)-Dissolved (mg/L)		<0.00010	0.00012	<0.00010	<0.00010	0.00015

ALS LABORATORY GROUP ANALYTICAL REPORT

		Sample ID	L471041-6			
		Description				
		Sampled Date	18-JAN-07			
		Sampled Time				
		Client ID	DUMP-2.5M-44			
Grouping	Analyte					
WATER						
Sample Preparation	total volume in (mL)		500			
	total volume out (mL)		420			
Physical Tests	Conductivity (uS/cm)		91.5			
	pH (pH)		8.17			
Anions and Nutrients	Acidity (as CaCO3) (mg/L)		1.4			
	Alkalinity, Total (as CaCO3) (mg/L)		45.8			
	Sulfate (SO4) (mg/L)		<1.0			
Dissolved Metals	Aluminum (Al)-Dissolved (mg/L)		0.139			
	Antimony (Sb)-Dissolved (mg/L)		<0.0010			
	Arsenic (As)-Dissolved (mg/L)		<0.0010			
	Barium (Ba)-Dissolved (mg/L)		0.00783			
	Beryllium (Be)-Dissolved (mg/L)		<0.0050			
	Bismuth (Bi)-Dissolved (mg/L)		<0.0050			
	Boron (B)-Dissolved (mg/L)		<0.10			
	Cadmium (Cd)-Dissolved (mg/L)		<0.00050			
	Calcium (Ca)-Dissolved (mg/L)		3.23			
	Chromium (Cr)-Dissolved (mg/L)		<0.0050			
	Cobalt (Co)-Dissolved (mg/L)		<0.0010			
	Copper (Cu)-Dissolved (mg/L)		<0.0010			
	Iron (Fe)-Dissolved (mg/L)		0.044			
	Lead (Pb)-Dissolved (mg/L)		<0.00050			
	Lithium (Li)-Dissolved (mg/L)		<0.010			
	Magnesium (Mg)-Dissolved (mg/L)		10.6			
	Manganese (Mn)-Dissolved (mg/L)		0.00071			
	Mercury (Hg)-Dissolved (mg/L)		<0.0010			
	Molybdenum (Mo)-Dissolved (mg/L)		0.00081			
	Nickel (Ni)-Dissolved (mg/L)		<0.0050			
	Phosphorus, Dissolved (mg/L)		<0.30			
	Potassium (K)-Dissolved (mg/L)		<0.50			
	Selenium (Se)-Dissolved (mg/L)		<0.010			
	Silicon (Si)-Dissolved (mg/L)		1.10			
	Silver (Ag)-Dissolved (mg/L)		<0.00010			
	Sodium (Na)-Dissolved (mg/L)		<0.50			
	Strontium (Sr)-Dissolved (mg/L)		0.0307			
	Thallium (Tl)-Dissolved (mg/L)		<0.0010			
	Tin (Sn)-Dissolved (mg/L)		<0.0010			
	Titanium (Ti)-Dissolved (mg/L)		<0.010			
	Uranium (U)-Dissolved (mg/L)		<0.00010			

ALS LABORATORY GROUP ANALYTICAL REPORT

	Sample ID Description Sampled Date Sampled Time Client ID	L471041-1	L471041-2	L471041-3	L471041-4	L471041-5
		18-JAN-07	18-JAN-07	18-JAN-07	18-JAN-07	18-JAN-07
		ARD3-08B-44	ARD3-14B-44	ARD1-15-44	ARD2-12-44	ARD2-07-44
Grouping	Analyte					
WATER						
Dissolved Metals	Vanadium (V)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Zinc (Zn)-Dissolved (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050

ALS LABORATORY GROUP ANALYTICAL REPORT

		Sample ID	L471041-6				
		Description					
		Sampled Date	18-JAN-07				
		Sampled Time					
		Client ID	DUMP-2.5M-44				
Grouping	Analyte						
WATER							
Dissolved Metals	Vanadium (V)-Dissolved (mg/L)	<0.010					
	Zinc (Zn)-Dissolved (mg/L)	<0.0050					

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)
ACY-PCT-VA	Water	Acidity by Automated Titration	APHA 2310 "Acidity"
This analysis is carried out using procedures adapted from APHA Method 2310 "Acidity". Acidity is determined by potentiometric titration to a specified endpoint.			
ALK-COL-VA	Water	Alkalinity by Colourimetric (Automated)	APHA 310.2
This analysis is carried out using procedures adapted from EPA Method 310.2 "Alkalinity". Total Alkalinity is determined using the methyl orange colourimetric method.			
EC-MAN-HCELL-VA	Water	Conductivity (Manual)	APHA 2510 "Conductivity"
This analysis is carried out using procedures adapted from APHA Method 2510 "Conductivity". Conductivity is determined using a conductivity electrode.			
HG-DIS-CVAFS-VA	Water	Dissolved Mercury in Water by CVAFS	EPA SW-846 3005A & EPA 245.7
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedures may involve preliminary sample treatment by filtration (EPA Method 3005A) and involves a cold-oxidation of the acidified sample using bromine monochloride prior to reduction of the sample with stannous chloride. Instrumental analysis is by cold vapour atomic fluorescence spectrophotometry (EPA Method 245.7).			
MET-DIS-ICP-VA	Water	Dissolved Metals in Water by ICPOES	EPA SW-846 3005A/6010B
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedure involves filtration (EPA Method 3005A) and analysis by inductively coupled plasma - optical emission spectrophotometry (EPA Method 6010B).			
MET-DIS-LOW-MS-VA	Water	Metals in Water by ICPMS(Low)	EPA SW-846 3005A/6020
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedure involves preliminary sample treatment by filtration (EPA Method 3005A). Instrumental analysis is by inductively coupled plasma - mass spectrometry (EPA Method 6020).			
PH-MAN-HCELL-VA	Water	pH by Manual Meter	APHA 4500-H "pH Value"
This analysis is carried out using procedures adapted from APHA Method 4500-H "pH Value". The pH is determined in the laboratory using a pH electrode.			
SO4-TUR-VA	Water	Sulphate(SO4) by Turbidity	APHA 4500-SO4 "Sulphate"
This analysis is carried out using procedures adapted from APHA Method 4500-SO4 "Sulphate". Sulphate is determined using the turbidimetric method.			

** Laboratory Methods employed follow in-house procedures, which are generally based on nationally or internationally accepted methodologies. The last two letters of the above ALS Test Code column indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location	Laboratory Definition Code	Laboratory Location
VA	ALS LABORATORY GROUP - VANCOUVER, BC, CANADA		

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)
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GLOSSARY OF REPORT TERMS

Surr - A surrogate is an organic compound that is similar to the target analyte(s) in chemical composition and behavior but not normally detected in environmental samples. Prior to sample processing, samples are fortified with one or more surrogate compounds.

The reported surrogate recovery value provides a measure of method efficiency.

mg/kg (units) - unit of concentration based on mass, parts per million

mg/L (units) - unit of concentration based on volume, parts per million

N/A - Result not available. Refer to qualifier code and definition for explanation

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Although test results are generated under strict QA/QC protocols, any unsigned test reports, faxes, or emails are considered preliminary.

ALS Laboratory Group has an extensive QA/QC program where all analytical data reported is analyzed using approved referenced procedures followed by checks and reviews by senior managers and quality assurance personnel. However, since the results are obtained from chemical measurements and thus cannot be guaranteed, ALS Laboratory Group assumes no liability for the use or interpretation of the results.



Environmental Division

ANALYTICAL REPORT

RESCAN ENVIRONMENTAL SERVICES

ATTN: DAVE ARCHIBALD

Reported On: 13-FEB-07 06:04 AM

SIXTH FLOOR
1111 WEST HASTINGS STREET
VANCOUVER BC V6E 2J3

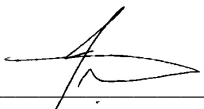
Lab Work Order #: **L471044**

Date Received: **18-JAN-07**

Project P.O. #: NOT SUBMITTED
Job Reference: MT KLAPPAN CYCLE#39 HUMIDITY CELLS
Legal Site Desc:
CofC Numbers:

Other Information:

Comments:



Joyce Chow
General Manager, Vancouver

For any questions about this report please contact your Account Manager:

ANDRE LANGLAIS

THIS REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL WITHOUT THE WRITTEN AUTHORITY OF THE LABORATORY.
ALL SAMPLES WILL BE DISPOSED OF AFTER 30 DAYS FOLLOWING ANALYSIS. PLEASE CONTACT THE LAB IF YOU
REQUIRE ADDITIONAL SAMPLE STORAGE TIME.

ALS LABORATORY GROUP ANALYTICAL REPORT

		Sample ID	L471044-1	L471044-2	L471044-3	L471044-4
		Description				
		Sampled Date	18-JAN-07	18-JAN-07	18-JAN-07	18-JAN-07
		Sampled Time				
		Client ID	85-027-17-39	85-027-24-39	86-035-07-39	86-035-09-39
Grouping	Analyte					
WATER						
Sample Preparation	total volume in (mL)		500	500	500	500
	total volume out (mL)		475	460	520	430
Physical Tests	Conductivity (uS/cm)		58.9	83.3	235	289
	pH (pH)		7.38	7.92	8.26	8.11
Anions and Nutrients	Acidity (as CaCO3) (mg/L)		1.5	1.5	<1.0	<1.0
	Alkalinity, Total (as CaCO3) (mg/L)		26.0	40.4	137	118
	Sulfate (SO4) (mg/L)		2.6	1.9	4.0	45.8
Dissolved Metals	Aluminum (Al)-Dissolved (mg/L)		0.059	0.102	<0.010	<0.010
	Antimony (Sb)-Dissolved (mg/L)		0.0013	<0.0010	<0.0010	<0.0010
	Arsenic (As)-Dissolved (mg/L)		0.0013	<0.0010	<0.0010	<0.0010
	Barium (Ba)-Dissolved (mg/L)		0.0173	0.0528	0.267	0.474
	Beryllium (Be)-Dissolved (mg/L)		<0.0050	<0.0050	<0.0050	<0.0050
	Bismuth (Bi)-Dissolved (mg/L)		<0.0050	<0.0050	<0.0050	<0.0050
	Boron (B)-Dissolved (mg/L)		<0.10	<0.10	<0.10	<0.10
	Cadmium (Cd)-Dissolved (mg/L)		<0.00050	<0.00050	<0.00050	<0.00050
	Calcium (Ca)-Dissolved (mg/L)		6.26	7.66	12.4	19.8
	Chromium (Cr)-Dissolved (mg/L)		<0.0050	<0.0050	<0.0050	<0.0050
	Cobalt (Co)-Dissolved (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010
	Copper (Cu)-Dissolved (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010
	Iron (Fe)-Dissolved (mg/L)		<0.030	<0.030	<0.030	<0.030
	Lead (Pb)-Dissolved (mg/L)		<0.00050	<0.00050	<0.00050	<0.00050
	Lithium (Li)-Dissolved (mg/L)		<0.010	<0.010	<0.010	0.017
	Magnesium (Mg)-Dissolved (mg/L)		3.57	5.86	25.6	20.1
	Manganese (Mn)-Dissolved (mg/L)		<0.00050	0.00317	<0.00050	0.00288
	Mercury (Hg)-Dissolved (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010
	Molybdenum (Mo)-Dissolved (mg/L)		0.00329	0.00485	0.00257	0.00132
	Nickel (Ni)-Dissolved (mg/L)		<0.0050	<0.0050	<0.0050	<0.0050
	Phosphorus, Dissolved (mg/L)		<0.30	<0.30	<0.30	<0.30
	Potassium (K)-Dissolved (mg/L)		<0.50	0.58	1.83	4.75
	Selenium (Se)-Dissolved (mg/L)		<0.010	<0.010	<0.010	<0.010
	Silicon (Si)-Dissolved (mg/L)		0.929	1.06	0.706	0.659
	Silver (Ag)-Dissolved (mg/L)		<0.00010	<0.00010	<0.00010	<0.00010
	Sodium (Na)-Dissolved (mg/L)		<0.50	<0.50	1.34	10.4
	Strontium (Sr)-Dissolved (mg/L)		0.150	0.269	0.826	0.940
	Thallium (Tl)-Dissolved (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010
	Tin (Sn)-Dissolved (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010
	Titanium (Ti)-Dissolved (mg/L)		<0.010	<0.010	<0.010	<0.010
	Uranium (U)-Dissolved (mg/L)		<0.00010	<0.00010	<0.00010	0.00012

ALS LABORATORY GROUP ANALYTICAL REPORT

	Sample ID Description Sampled Date Sampled Time Client ID	L471044-1	L471044-2	L471044-3	L471044-4
Grouping	Analyte				
WATER					
Dissolved Metals	Vanadium (V)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010
	Zinc (Zn)-Dissolved (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)
ACY-PCT-VA	Water	Acidity by Automated Titration	APHA 2310 "Acidity"
This analysis is carried out using procedures adapted from APHA Method 2310 "Acidity". Acidity is determined by potentiometric titration to a specified endpoint.			
ALK-COL-VA	Water	Alkalinity by Colourimetric (Automated)	APHA 310.2
This analysis is carried out using procedures adapted from EPA Method 310.2 "Alkalinity". Total Alkalinity is determined using the methyl orange colourimetric method.			
EC-MAN-HCELL-VA	Water	Conductivity (Manual)	APHA 2510 "Conductivity"
This analysis is carried out using procedures adapted from APHA Method 2510 "Conductivity". Conductivity is determined using a conductivity electrode.			
HG-DIS-CVAFS-VA	Water	Dissolved Mercury in Water by CVAFS	EPA SW-846 3005A & EPA 245.7
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedures may involve preliminary sample treatment by filtration (EPA Method 3005A) and involves a cold-oxidation of the acidified sample using bromine monochloride prior to reduction of the sample with stannous chloride. Instrumental analysis is by cold vapour atomic fluorescence spectrophotometry (EPA Method 245.7).			
MET-DIS-ICP-VA	Water	Dissolved Metals in Water by ICPOES	EPA SW-846 3005A/6010B
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedure involves filtration (EPA Method 3005A) and analysis by inductively coupled plasma - optical emission spectrophotometry (EPA Method 6010B).			
MET-DIS-LOW-MS-VA	Water	Metals in Water by ICPMS(Low)	EPA SW-846 3005A/6020
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedure involves preliminary sample treatment by filtration (EPA Method 3005A). Instrumental analysis is by inductively coupled plasma - mass spectrometry (EPA Method 6020).			
PH-MAN-HCELL-VA	Water	pH by Manual Meter	APHA 4500-H "pH Value"
This analysis is carried out using procedures adapted from APHA Method 4500-H "pH Value". The pH is determined in the laboratory using a pH electrode.			
SO4-TUR-VA	Water	Sulphate(SO4) by Turbidity	APHA 4500-SO4 "Sulphate"
This analysis is carried out using procedures adapted from APHA Method 4500-SO4 "Sulphate". Sulphate is determined using the turbidimetric method.			

** Laboratory Methods employed follow in-house procedures, which are generally based on nationally or internationally accepted methodologies. The last two letters of the above ALS Test Code column indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location	Laboratory Definition Code	Laboratory Location
VA	ALS LABORATORY GROUP - VANCOUVER, BC, CANADA		

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)
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GLOSSARY OF REPORT TERMS

Surr - A surrogate is an organic compound that is similar to the target analyte(s) in chemical composition and behavior but not normally detected in environmental samples. Prior to sample processing, samples are fortified with one or more surrogate compounds.

The reported surrogate recovery value provides a measure of method efficiency.

mg/kg (units) - unit of concentration based on mass, parts per million

mg/L (units) - unit of concentration based on volume, parts per million

N/A - Result not available. Refer to qualifier code and definition for explanation

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Although test results are generated under strict QA/QC protocols, any unsigned test reports, faxes, or emails are considered preliminary.

ALS Laboratory Group has an extensive QA/QC program where all analytical data reported is analyzed using approved referenced procedures followed by checks and reviews by senior managers and quality assurance personnel. However, since the results are obtained from chemical measurements and thus cannot be guaranteed, ALS Laboratory Group assumes no liability for the use or interpretation of the results.



RESCAN ENVIRONMENTAL SERVICES
ATTN: DAVE ARCHIBALD
SIXTH FLOOR
1111 WEST HASTINGS STREET
VANCOUVER BC V6E 2J3

Date Received: 25-JAN-07
Report Date: 28-JAN-13 14:59 (MT)
Version: DRAFT

Client Phone: 604-689-9460

Certificate of Analysis

Lab Work Order #: L473127
Project P.O. #: NOT SUBMITTED
Job Reference: MT. KLAPPAN CYCLE#45 HUMIDITY CELLS
C of C Numbers:
Legal Site Desc:

Comments: Please note that after re-analysis of sample DUMP-2.5M-45, we revised the Metals data for Calcium, Iron and Silicon.
No other data was changed.



Andre Langlais
Account Manager

[This report shall not be reproduced except in full without the written authority of the Laboratory.]

ADDRESS: 8081 Lougheed Hwy, Suite 100, Burnaby, BC V5A 1W9 Canada | Phone: +1 604 253 4188 | Fax: +1 604 253 6700
ALS CANADA LTD Part of the ALS Group A Campbell Brothers Limited Company

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID Description Sampled Date Sampled Time Client ID	L473127-1	L473127-2	L473127-3	L473127-4	L473127-5
Grouping	Analyte					
WATER						
Sample Preparation	Total Volume In (mL)	500	500	500	500	500
	Total Volume Out (mL)	485	475	450	470	425
Physical Tests	Conductivity (uS/cm)	181	87.0	548	308	94.1
	pH (pH)	8.02	7.78	7.98	8.21	8.11
Anions and Nutrients	Acidity (as CaCO3) (mg/L)	1.5	1.3	1.8	1.0	1.2
	Alkalinity, Total (as CaCO3) (mg/L)	57.1	39.7	91.6	105	52.0
	Sulfate (SO4) (mg/L)	38.1	4.3	227	68.8	<1.0
Dissolved Metals	Aluminum (Al)-Dissolved (mg/L)	<0.010	0.084	<0.010	<0.010	0.274
	Antimony (Sb)-Dissolved (mg/L)	<0.0010	0.0019	<0.0010	<0.0010	<0.0010
	Arsenic (As)-Dissolved (mg/L)	<0.0010	0.0039	<0.0010	<0.0010	<0.0010
	Barium (Ba)-Dissolved (mg/L)	0.165	0.0809	0.0213	0.0630	0.00990
	Beryllium (Be)-Dissolved (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Bismuth (Bi)-Dissolved (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Boron (B)-Dissolved (mg/L)	<0.10	<0.10	<0.10	<0.10	<0.10
	Cadmium (Cd)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Calcium (Ca)-Dissolved (mg/L)	17.4	8.22	76.5	11.8	3.17
	Chromium (Cr)-Dissolved (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Cobalt (Co)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Copper (Cu)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Iron (Fe)-Dissolved (mg/L)	<0.030	<0.030	<0.030	<0.030	0.042
	Lead (Pb)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Lithium (Li)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Magnesium (Mg)-Dissolved (mg/L)	9.93	5.49	30.9	33.2	10.3
	Manganese (Mn)-Dissolved (mg/L)	0.00289	0.00081	0.0233	0.00053	0.00104
	Mercury (Hg)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Molybdenum (Mo)-Dissolved (mg/L)	0.00904	0.00488	<0.00050	0.00550	0.00080
	Nickel (Ni)-Dissolved (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Phosphorus, Dissolved (mg/L)	<0.30	<0.30	<0.30	<0.30	<0.30
	Potassium (K)-Dissolved (mg/L)	1.54	<0.50	<0.50	1.85	<0.50
	Selenium (Se)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Silicon (Si)-Dissolved (mg/L)	0.690	1.41	0.206	0.756	1.30
	Silver (Ag)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Sodium (Na)-Dissolved (mg/L)	1.66	<0.50	<0.50	<0.50	<0.50
	Strontium (Sr)-Dissolved (mg/L)	1.01	0.151	0.866	0.655	0.0318
	Thallium (Tl)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Tin (Sn)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	Description	Sampled Date	Sampled Time	Client ID
	L473127-1		25-JAN-07		ARD3-14B-45
	L473127-2		25-JAN-07		ARD1-15-45
	L473127-3		25-JAN-07		ARD2-12-45
	L473127-4		25-JAN-07		ARD2-07-45
	L473127-5		25-JAN-07		DUMP-2.5M-45
Grouping	Analyte				
WATER					
Dissolved Metals	Titanium (Ti)-Dissolved (mg/L)				
	<0.010	<0.010	<0.010	<0.010	<0.010
	Uranium (U)-Dissolved (mg/L)				
	<0.00010	<0.00010	<0.00010	0.00014	<0.00010
	Vanadium (V)-Dissolved (mg/L)				
	<0.010	<0.010	<0.010	<0.010	<0.010
	Zinc (Zn)-Dissolved (mg/L)				
	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
ACY-PCT-VA	Water	Acidity by Automatic Titration	APHA 2310 "Acidity"
This analysis is carried out using procedures adapted from APHA Method 2310 "Acidity". Acidity is determined by potentiometric titration to a specified endpoint.			
ACY-PCT-VA	Water	Acidity by Automatic Titration	APHA 2310 Acidity
This analysis is carried out using procedures adapted from APHA Method 2310 "Acidity". Acidity is determined by potentiometric titration to a specified endpoint.			
ALK-COL-VA	Water	Alkalinity by Colourimetric (Automated)	EPA 310.2
This analysis is carried out using procedures adapted from EPA Method 310.2 "Alkalinity". Total Alkalinity is determined using the methyl orange colourimetric method.			
EC-MAN-HCELL-VA	Water	Conductivity (Manual)	APHA 2510 Conductivity
This analysis is carried out using procedures adapted from APHA Method 2510 "Conductivity". Conductivity is determined using a conductivity electrode.			
HG-DIS-CVAFS-VA	Water	Dissolved Mercury in Water by CVAFS	EPA SW-846 3005A & EPA 245.7
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedures may involve preliminary sample treatment by filtration (EPA Method 3005A) and involves a cold-oxidation of the acidified sample using bromine monochloride prior to reduction of the sample with stannous chloride. Instrumental analysis is by cold vapour atomic fluorescence spectrophotometry (EPA Method 245.7).			
MET-DIS-ICP-VA	Water	Dissolved Metals in Water by ICPOES	EPA SW-846 3005A/6010B
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedure involves filtration (EPA Method 3005A) and analysis by inductively coupled plasma - optical emission spectrophotometry (EPA Method 6010B).			
MET-DIS-LOW-MS-VA	Water	Dissolved Metals in Water by ICPMS(Low)	EPA SW-846 3005A/6020A
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedures involves preliminary sample treatment by filtration (EPA Method 3005A). Instrumental analysis is by inductively coupled plasma - mass spectrometry (EPA Method 6020A).			
PH-MAN-HCELL-VA	Water	pH by Manual Meter	APHA 4500-H pH Value
This analysis is carried out using procedures adapted from APHA Method 4500-H "pH Value". The pH is determined in the laboratory using a pH electrode.			
SO4-TUR-VA	Water	Sulphate(SO4) by Turbidity	APHA 4500-SO4 E. SULPHATE
This analysis is carried out using procedures adapted from APHA Method 4500-SO4 "Sulphate". Sulphate is determined using the turbidimetric method.			

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
VA	ALS ENVIRONMENTAL - VANCOUVER, BRITISH COLUMBIA, CANADA

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

Surrogate - A compound that is similar in behaviour to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.

mg/kg - milligrams per kilogram based on dry weight of sample.

mg/kg wwt - milligrams per kilogram based on wet weight of sample.

mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight of sample.

mg/L - milligrams per litre.

< - Less than.

D.L. - The reported Detection Limit, also known as the Limit of Reporting (LOR).

N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.



Environmental Division

ANALYTICAL REPORT

RESCAN ENVIRONMENTAL SERVICES

ATTN: DAVE ARCHIBALD

Reported On: 15-FEB-07 04:57 PM

SIXTH FLOOR
1111 WEST HASTINGS STREET
VANCOUVER BC V6E 2J3

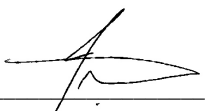
Lab Work Order #: **L473129**

Date Received: **25-JAN-07**

Project P.O. #: NOT SUBMITTED
Job Reference: MT. KLAPPAN CYCLE#40 HUMIDITY CELLS
Legal Site Desc:
CofC Numbers:

Other Information:

Comments:



Joyce Chow
General Manager, Vancouver

For any questions about this report please contact your Account Manager:

ANDRE LANGLAIS

THIS REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL WITHOUT THE WRITTEN AUTHORITY OF THE LABORATORY.
ALL SAMPLES WILL BE DISPOSED OF AFTER 30 DAYS FOLLOWING ANALYSIS. PLEASE CONTACT THE LAB IF YOU
REQUIRE ADDITIONAL SAMPLE STORAGE TIME.

ALS LABORATORY GROUP ANALYTICAL REPORT

		Sample ID	L473129-1	L473129-2	L473129-3	L473129-4	L473129-5
		Description					
		Sampled Date	25-JAN-07	25-JAN-07	25-JAN-07	25-JAN-07	25-JAN-07
		Sampled Time					
		Client ID	85-016-07-40	85-027-02-40	85-027-17-40	85-027-24-40	86-035-07-40
Grouping	Analyte						
WATER							
Sample Preparation	total volume in (mL)		500	500	500	500	500
	total volume out (mL)		400	400	500	440	400
Physical Tests	Conductivity (uS/cm)		504	296	62.6	85.4	239
	pH (pH)		8.55	8.40	7.58	7.95	8.38
Anions and Nutrients	Acidity (as CaCO3) (mg/L)		<1.0	<1.0	1.4	1.3	<1.0
	Alkalinity, Total (as CaCO3) (mg/L)		256	101	30.4	43.5	139
	Sulfate (SO4) (mg/L)		29.6	44.3	2.6	1.9	4.2
Dissolved Metals	Aluminum (Al)-Dissolved (mg/L)		0.015	0.415	0.145	0.148	0.018
	Antimony (Sb)-Dissolved (mg/L)		<0.0010	<0.0010	0.0015	0.0011	<0.0010
	Arsenic (As)-Dissolved (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Barium (Ba)-Dissolved (mg/L)		0.218	0.0540	0.0213	0.0541	0.278
	Beryllium (Be)-Dissolved (mg/L)		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Bismuth (Bi)-Dissolved (mg/L)		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Boron (B)-Dissolved (mg/L)		<0.10	<0.10	<0.10	<0.10	<0.10
	Cadmium (Cd)-Dissolved (mg/L)		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Calcium (Ca)-Dissolved (mg/L)		8.27	1.68	6.47	7.36	11.5
	Chromium (Cr)-Dissolved (mg/L)		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Cobalt (Co)-Dissolved (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Copper (Cu)-Dissolved (mg/L)		<0.0010	0.0011	<0.0010	<0.0010	<0.0010
	Iron (Fe)-Dissolved (mg/L)		<0.030	0.036	<0.030	<0.030	<0.030
	Lead (Pb)-Dissolved (mg/L)		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Lithium (Li)-Dissolved (mg/L)		0.050	0.031	<0.010	<0.010	<0.010
	Magnesium (Mg)-Dissolved (mg/L)		24.0	9.12	3.65	5.76	24.9
	Manganese (Mn)-Dissolved (mg/L)		0.00204	0.00253	0.00182	0.00437	<0.00050
	Mercury (Hg)-Dissolved (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Molybdenum (Mo)-Dissolved (mg/L)		0.00076	0.0171	0.00305	0.00458	0.00234
	Nickel (Ni)-Dissolved (mg/L)		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Phosphorus, Dissolved (mg/L)		<0.30	<0.30	<0.30	<0.30	<0.30
	Potassium (K)-Dissolved (mg/L)		4.31	3.18	<0.50	0.63	1.91
	Selenium (Se)-Dissolved (mg/L)		<0.010	<0.010	<0.010	<0.010	<0.010
	Silicon (Si)-Dissolved (mg/L)		0.565	0.953	1.27	1.28	0.702
	Silver (Ag)-Dissolved (mg/L)		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Sodium (Na)-Dissolved (mg/L)		82.0	52.8	<0.50	0.55	1.32
	Strontium (Sr)-Dissolved (mg/L)		1.25	0.349	0.163	0.281	0.856
	Thallium (Tl)-Dissolved (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Tin (Sn)-Dissolved (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Titanium (Ti)-Dissolved (mg/L)		<0.010	<0.010	<0.010	<0.010	<0.010
	Uranium (U)-Dissolved (mg/L)		0.00020	<0.00010	<0.00010	<0.00010	<0.00010

ALS LABORATORY GROUP ANALYTICAL REPORT

		Sample ID	L473129-6			
		Description				
		Sampled Date	25-JAN-07			
		Sampled Time				
		Client ID	86-035-09-40			
Grouping	Analyte					
WATER						
Sample Preparation	total volume in (mL)		500			
	total volume out (mL)		445			
Physical Tests	Conductivity (uS/cm)		297			
	pH (pH)		8.23			
Anions and Nutrients	Acidity (as CaCO3) (mg/L)		<1.0			
	Alkalinity, Total (as CaCO3) (mg/L)		102			
	Sulfate (SO4) (mg/L)		61.8			
Dissolved Metals	Aluminum (Al)-Dissolved (mg/L)		<0.010			
	Antimony (Sb)-Dissolved (mg/L)		<0.0010			
	Arsenic (As)-Dissolved (mg/L)		<0.0010			
	Barium (Ba)-Dissolved (mg/L)		0.449			
	Beryllium (Be)-Dissolved (mg/L)		<0.0050			
	Bismuth (Bi)-Dissolved (mg/L)		<0.0050			
	Boron (B)-Dissolved (mg/L)		<0.10			
	Cadmium (Cd)-Dissolved (mg/L)		<0.00050			
	Calcium (Ca)-Dissolved (mg/L)		19.3			
	Chromium (Cr)-Dissolved (mg/L)		<0.0050			
	Cobalt (Co)-Dissolved (mg/L)		<0.0010			
	Copper (Cu)-Dissolved (mg/L)		<0.0010			
	Iron (Fe)-Dissolved (mg/L)		<0.030			
	Lead (Pb)-Dissolved (mg/L)		<0.00050			
	Lithium (Li)-Dissolved (mg/L)		0.017			
	Magnesium (Mg)-Dissolved (mg/L)		20.0			
	Manganese (Mn)-Dissolved (mg/L)		0.00142			
	Mercury (Hg)-Dissolved (mg/L)		<0.0010			
	Molybdenum (Mo)-Dissolved (mg/L)		0.00157			
	Nickel (Ni)-Dissolved (mg/L)		<0.0050			
	Phosphorus, Dissolved (mg/L)		<0.30			
	Potassium (K)-Dissolved (mg/L)		4.80			
	Selenium (Se)-Dissolved (mg/L)		<0.010			
	Silicon (Si)-Dissolved (mg/L)		0.643			
	Silver (Ag)-Dissolved (mg/L)		<0.00010			
	Sodium (Na)-Dissolved (mg/L)		9.09			
	Strontium (Sr)-Dissolved (mg/L)		0.982			
	Thallium (Tl)-Dissolved (mg/L)		<0.0010			
	Tin (Sn)-Dissolved (mg/L)		<0.0010			
	Titanium (Ti)-Dissolved (mg/L)		<0.010			
	Uranium (U)-Dissolved (mg/L)		<0.00010			

ALS LABORATORY GROUP ANALYTICAL REPORT

	Sample ID Description Sampled Date Sampled Time Client ID	L473129-1	L473129-2	L473129-3	L473129-4	L473129-5
		25-JAN-07	25-JAN-07	25-JAN-07	25-JAN-07	25-JAN-07
		85-016-07-40	85-027-02-40	85-027-17-40	85-027-24-40	86-035-07-40
Grouping	Analyte					
WATER						
Dissolved Metals	Vanadium (V)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Zinc (Zn)-Dissolved (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050

ALS LABORATORY GROUP ANALYTICAL REPORT

	Sample ID Description Sampled Date Sampled Time Client ID	L473129-6 25-JAN-07 86-035-09-40				
Grouping	Analyte					
WATER						
Dissolved Metals	Vanadium (V)-Dissolved (mg/L)	<0.010				
	Zinc (Zn)-Dissolved (mg/L)	<0.0050				

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)
ACY-PCT-VA	Water	Acidity by Automated Titration	APHA 2310 "Acidity"
This analysis is carried out using procedures adapted from APHA Method 2310 "Acidity". Acidity is determined by potentiometric titration to a specified endpoint.			
ALK-COL-VA	Water	Alkalinity by Colourimetric (Automated)	APHA 310.2
This analysis is carried out using procedures adapted from EPA Method 310.2 "Alkalinity". Total Alkalinity is determined using the methyl orange colourimetric method.			
EC-MAN-HCELL-VA	Water	Conductivity (Manual)	APHA 2510 "Conductivity"
This analysis is carried out using procedures adapted from APHA Method 2510 "Conductivity". Conductivity is determined using a conductivity electrode.			
HG-DIS-CVAFS-VA	Water	Dissolved Mercury in Water by CVAFS	EPA SW-846 3005A & EPA 245.7
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedures may involve preliminary sample treatment by filtration (EPA Method 3005A) and involves a cold-oxidation of the acidified sample using bromine monochloride prior to reduction of the sample with stannous chloride. Instrumental analysis is by cold vapour atomic fluorescence spectrophotometry (EPA Method 245.7).			
MET-DIS-ICP-VA	Water	Dissolved Metals in Water by ICPOES	EPA SW-846 3005A/6010B
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedure involves filtration (EPA Method 3005A) and analysis by inductively coupled plasma - optical emission spectrophotometry (EPA Method 6010B).			
MET-DIS-LOW-MS-VA	Water	Metals in Water by ICPMS(Low)	EPA SW-846 3005A/6020
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedure involves preliminary sample treatment by filtration (EPA Method 3005A). Instrumental analysis is by inductively coupled plasma - mass spectrometry (EPA Method 6020).			
PH-MAN-HCELL-VA	Water	pH by Manual Meter	APHA 4500-H "pH Value"
This analysis is carried out using procedures adapted from APHA Method 4500-H "pH Value". The pH is determined in the laboratory using a pH electrode.			
SO4-TUR-VA	Water	Sulphate(SO4) by Turbidity	APHA 4500-SO4 "Sulphate"
This analysis is carried out using procedures adapted from APHA Method 4500-SO4 "Sulphate". Sulphate is determined using the turbidimetric method.			

** Laboratory Methods employed follow in-house procedures, which are generally based on nationally or internationally accepted methodologies. The last two letters of the above ALS Test Code column indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location	Laboratory Definition Code	Laboratory Location
VA	ALS LABORATORY GROUP - VANCOUVER, BC, CANADA		

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)
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GLOSSARY OF REPORT TERMS

Surr - A surrogate is an organic compound that is similar to the target analyte(s) in chemical composition and behavior but not normally detected in environmental samples. Prior to sample processing, samples are fortified with one or more surrogate compounds.

The reported surrogate recovery value provides a measure of method efficiency.

mg/kg (units) - unit of concentration based on mass, parts per million

mg/L (units) - unit of concentration based on volume, parts per million

N/A - Result not available. Refer to qualifier code and definition for explanation

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Although test results are generated under strict QA/QC protocols, any unsigned test reports, faxes, or emails are considered preliminary.

ALS Laboratory Group has an extensive QA/QC program where all analytical data reported is analyzed using approved referenced procedures followed by checks and reviews by senior managers and quality assurance personnel. However, since the results are obtained from chemical measurements and thus cannot be guaranteed, ALS Laboratory Group assumes no liability for the use or interpretation of the results.



Environmental Division

ANALYTICAL REPORT

RESCAN ENVIRONMENTAL SERVICES

ATTN: DAVE ARCHIBALD

SIXTH FLOOR
1111 WEST HASTINGS STREET
VANCOUVER BC V6E 2J3

Reported On: 16-FEB-07 03:25 PM

Revision: 1

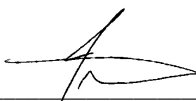
Lab Work Order #: **L475038**

Date Received: **01-FEB-07**

Project P.O. #: NOT SUBMITTED
Job Reference: MT. KLAPPAN CYCLE#46 HUMIDITY CELLS
Legal Site Desc:
CofC Numbers:

Other Information:

Comments:



Joyce Chow
General Manager, Vancouver

For any questions about this report please contact your Account Manager:

ANDRE LANGLAIS

THIS REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL WITHOUT THE WRITTEN AUTHORITY OF THE LABORATORY.
ALL SAMPLES WILL BE DISPOSED OF AFTER 30 DAYS FOLLOWING ANALYSIS. PLEASE CONTACT THE LAB IF YOU
REQUIRE ADDITIONAL SAMPLE STORAGE TIME.

ALS LABORATORY GROUP ANALYTICAL REPORT

		Sample ID	L475038-1	L475038-2	L475038-3	L475038-4	L475038-5
		Description					
		Sampled Date	01-FEB-07	01-FEB-07	01-FEB-07	01-FEB-07	01-FEB-07
		Sampled Time					
		Client ID	ARD3-07B-46	ARD3-14B-46	ARD1-15-46	ARD2-12-46	019-02-46
Grouping	Analyte						
WATER							
Sample Preparation	total volume in (mL)		500	500	500	500	500
	total volume out (mL)		410	435	440	480	410
Physical Tests	Conductivity (uS/cm)		307	191	95.2	502	627
	pH (pH)		9.66	8.02	7.76	7.96	9.02
Anions and Nutrients	Acidity (as CaCO3) (mg/L)		<1.0	1.5	1.4	1.8	<1.0
	Alkalinity, Total (as CaCO3) (mg/L)		152	68.2	45.1	92.4	252
	Sulfate (SO4) (mg/L)		16.6	45.1	4.1	222	95.7
Dissolved Metals	Aluminum (Al)-Dissolved (mg/L)		1.33				1.50
	Antimony (Sb)-Dissolved (mg/L)		0.0091				<0.0010
	Arsenic (As)-Dissolved (mg/L)		0.0161				<0.0010
	Barium (Ba)-Dissolved (mg/L)		0.0612				0.0397
	Beryllium (Be)-Dissolved (mg/L)		<0.0050				<0.0050
	Bismuth (Bi)-Dissolved (mg/L)		<0.0050				<0.0050
	Boron (B)-Dissolved (mg/L)		<0.10				<0.10
	Cadmium (Cd)-Dissolved (mg/L)		<0.00050				<0.00050
	Calcium (Ca)-Dissolved (mg/L)		0.229				1.02
	Chromium (Cr)-Dissolved (mg/L)		<0.0050				<0.0050
	Cobalt (Co)-Dissolved (mg/L)		0.0049				<0.0010
	Copper (Cu)-Dissolved (mg/L)		0.0043				0.0024
	Iron (Fe)-Dissolved (mg/L)		0.440				0.206
	Lead (Pb)-Dissolved (mg/L)		0.00209				<0.00050
	Lithium (Li)-Dissolved (mg/L)		0.032				0.059
	Magnesium (Mg)-Dissolved (mg/L)		0.400				1.45
	Manganese (Mn)-Dissolved (mg/L)		0.00427				0.00174
	Mercury (Hg)-Dissolved (mg/L)		<0.0010				<0.0010
	Molybdenum (Mo)-Dissolved (mg/L)		0.104				0.0143
	Nickel (Ni)-Dissolved (mg/L)		0.0342				<0.0050
	Phosphorus, Dissolved (mg/L)		<0.30				<0.30
	Potassium (K)-Dissolved (mg/L)		0.93				1.54
	Selenium (Se)-Dissolved (mg/L)		<0.010				<0.010
	Silicon (Si)-Dissolved (mg/L)		3.17				1.02
	Silver (Ag)-Dissolved (mg/L)		<0.00010				<0.00010
	Sodium (Na)-Dissolved (mg/L)		77.0				149
	Strontium (Sr)-Dissolved (mg/L)		0.0214				0.117
	Thallium (Tl)-Dissolved (mg/L)		<0.0010				<0.0010
	Tin (Sn)-Dissolved (mg/L)		<0.0010				<0.0010
	Titanium (Ti)-Dissolved (mg/L)		0.017				<0.010
	Uranium (U)-Dissolved (mg/L)		<0.00010				0.00021

ALS LABORATORY GROUP ANALYTICAL REPORT

		Sample ID	L475038-6	L475038-7		
		Description				
		Sampled Date	01-FEB-07	01-FEB-07		
		Sampled Time				
		Client ID	ARD2-07-46	DUMP-2.5M-46		
Grouping	Analyte					
WATER						
Sample Preparation	total volume in (mL)	500	500			
	total volume out (mL)	500	475			
Physical Tests	Conductivity (uS/cm)	275	118			
	pH (pH)	8.10	7.99			
Anions and Nutrients	Acidity (as CaCO3) (mg/L)	<1.0	1.1			
	Alkalinity, Total (as CaCO3) (mg/L)	107	67.7			
	Sulfate (SO4) (mg/L)	53.3	<1.0			
Dissolved Metals	Aluminum (Al)-Dissolved (mg/L)					
	Antimony (Sb)-Dissolved (mg/L)					
	Arsenic (As)-Dissolved (mg/L)					
	Barium (Ba)-Dissolved (mg/L)					
	Beryllium (Be)-Dissolved (mg/L)					
	Bismuth (Bi)-Dissolved (mg/L)					
	Boron (B)-Dissolved (mg/L)					
	Cadmium (Cd)-Dissolved (mg/L)					
	Calcium (Ca)-Dissolved (mg/L)					
	Chromium (Cr)-Dissolved (mg/L)					
	Cobalt (Co)-Dissolved (mg/L)					
	Copper (Cu)-Dissolved (mg/L)					
	Iron (Fe)-Dissolved (mg/L)					
	Lead (Pb)-Dissolved (mg/L)					
	Lithium (Li)-Dissolved (mg/L)					
	Magnesium (Mg)-Dissolved (mg/L)					
	Manganese (Mn)-Dissolved (mg/L)					
	Mercury (Hg)-Dissolved (mg/L)					
	Molybdenum (Mo)-Dissolved (mg/L)					
	Nickel (Ni)-Dissolved (mg/L)					
	Phosphorus, Dissolved (mg/L)					
	Potassium (K)-Dissolved (mg/L)					
	Selenium (Se)-Dissolved (mg/L)					
	Silicon (Si)-Dissolved (mg/L)					
	Silver (Ag)-Dissolved (mg/L)					
	Sodium (Na)-Dissolved (mg/L)					
	Strontium (Sr)-Dissolved (mg/L)					
	Thallium (Tl)-Dissolved (mg/L)					
	Tin (Sn)-Dissolved (mg/L)					
	Titanium (Ti)-Dissolved (mg/L)					
	Uranium (U)-Dissolved (mg/L)					

ALS LABORATORY GROUP ANALYTICAL REPORT

	Sample ID Description Sampled Date Sampled Time Client ID	L475038-1	L475038-2	L475038-3	L475038-4	L475038-5
		01-FEB-07	01-FEB-07	01-FEB-07	01-FEB-07	01-FEB-07
		ARD3-07B-46	ARD3-14B-46	ARD1-15-46	ARD2-12-46	019-02-46
Grouping	Analyte					
WATER						
Dissolved Metals	Vanadium (V)-Dissolved (mg/L)	<0.010				<0.010
	Zinc (Zn)-Dissolved (mg/L)	0.0169				<0.0050

ALS LABORATORY GROUP ANALYTICAL REPORT

	Sample ID Description Sampled Date Sampled Time Client ID	L475038-6	L475038-7		
Grouping	Analyte				
WATER					
Dissolved Metals	Vanadium (V)-Dissolved (mg/L) Zinc (Zn)-Dissolved (mg/L)				

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)
ACY-PCT-VA	Water	Acidity by Automated Titration	APHA 2310 "Acidity"
This analysis is carried out using procedures adapted from APHA Method 2310 "Acidity". Acidity is determined by potentiometric titration to a specified endpoint.			
ALK-COL-VA	Water	Alkalinity by Colourimetric (Automated)	APHA 310.2
This analysis is carried out using procedures adapted from EPA Method 310.2 "Alkalinity". Total Alkalinity is determined using the methyl orange colourimetric method.			
EC-MAN-HCELL-VA	Water	Conductivity (Manual)	APHA 2510 "Conductivity"
This analysis is carried out using procedures adapted from APHA Method 2510 "Conductivity". Conductivity is determined using a conductivity electrode.			
HG-DIS-CVAFS-VA	Water	Dissolved Mercury in Water by CVAFS	EPA SW-846 3005A & EPA 245.7
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedures may involve preliminary sample treatment by filtration (EPA Method 3005A) and involves a cold-oxidation of the acidified sample using bromine monochloride prior to reduction of the sample with stannous chloride. Instrumental analysis is by cold vapour atomic fluorescence spectrophotometry (EPA Method 245.7).			
MET-DIS-ICP-VA	Water	Dissolved Metals in Water by ICPOES	EPA SW-846 3005A/6010B
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedure involves filtration (EPA Method 3005A) and analysis by inductively coupled plasma - optical emission spectrophotometry (EPA Method 6010B).			
MET-DIS-LOW-MS-VA	Water	Metals in Water by ICPMS(Low)	EPA SW-846 3005A/6020
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedure involves preliminary sample treatment by filtration (EPA Method 3005A). Instrumental analysis is by inductively coupled plasma - mass spectrometry (EPA Method 6020).			
PH-MAN-HCELL-VA	Water	pH by Manual Meter	APHA 4500-H "pH Value"
This analysis is carried out using procedures adapted from APHA Method 4500-H "pH Value". The pH is determined in the laboratory using a pH electrode.			
SO4-TUR-VA	Water	Sulphate(SO4) by Turbidity	APHA 4500-SO4 "Sulphate"
This analysis is carried out using procedures adapted from APHA Method 4500-SO4 "Sulphate". Sulphate is determined using the turbidimetric method.			

** Laboratory Methods employed follow in-house procedures, which are generally based on nationally or internationally accepted methodologies. The last two letters of the above ALS Test Code column indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location	Laboratory Definition Code	Laboratory Location
VA	ALS LABORATORY GROUP - VANCOUVER, BC, CANADA		

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)
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GLOSSARY OF REPORT TERMS

Surr - A surrogate is an organic compound that is similar to the target analyte(s) in chemical composition and behavior but not normally detected in environmental samples. Prior to sample processing, samples are fortified with one or more surrogate compounds.

The reported surrogate recovery value provides a measure of method efficiency.

mg/kg (units) - unit of concentration based on mass, parts per million

mg/L (units) - unit of concentration based on volume, parts per million

N/A - Result not available. Refer to qualifier code and definition for explanation

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Although test results are generated under strict QA/QC protocols, any unsigned test reports, faxes, or emails are considered preliminary.

ALS Laboratory Group has an extensive QA/QC program where all analytical data reported is analyzed using approved referenced procedures followed by checks and reviews by senior managers and quality assurance personnel. However, since the results are obtained from chemical measurements and thus cannot be guaranteed, ALS Laboratory Group assumes no liability for the use or interpretation of the results.



Environmental Division

ANALYTICAL REPORT

RESCAN ENVIRONMENTAL SERVICES

ATTN: DAVE ARCHIBALD

Reported On: 14-MAR-07 05:35 PM

SIXTH FLOOR
1111 WEST HASTINGS STREET
VANCOUVER BC V6E 2J3

Lab Work Order #: **L477076**

Date Received: **08-FEB-07**

Project P.O. #: NOT SUBMITTED
Job Reference: MT. KLAPPAN CYCLE#47 HUMIDITY CELLS
Legal Site Desc:
CofC Numbers:

Other Information:

Comments:

TIMOTHY GUY CROWTHER
General Manager, Vancouver

For any questions about this report please contact your Account Manager:

ANDRE LANGLAIS

THIS REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL WITHOUT THE WRITTEN AUTHORITY OF THE LABORATORY.
ALL SAMPLES WILL BE DISPOSED OF AFTER 30 DAYS FOLLOWING ANALYSIS. PLEASE CONTACT THE LAB IF YOU
REQUIRE ADDITIONAL SAMPLE STORAGE TIME.

ALS LABORATORY GROUP ANALYTICAL REPORT

		Sample ID	L477076-1	L477076-2	L477076-3	L477076-4	L477076-5
		Description					
		Sampled Date	08-FEB-07	08-FEB-07	08-FEB-07	08-FEB-07	08-FEB-07
		Sampled Time					
		Client ID	ARD3-08B-47	ARD3-14B-47	ARD1-15-47	ARD2-12-47	ARD2-07-47
Grouping	Analyte						
WATER							
Sample Preparation	total volume in (mL)		500	500	500	500	500
	total volume out (mL)		470	430	510	450	505
Physical Tests	Conductivity (uS/cm)		1430	177	84.0	534	282
	pH (pH)		7.55	7.89	7.85	8.01	8.32
Anions and Nutrients	Acidity (as CaCO3) (mg/L)		3.7	2.4	2.2	2.9	1.0
	Alkalinity, Total (as CaCO3) (mg/L)		44.4	61.3	39.3	84.5	115
	Sulfate (SO4) (mg/L)		791	38.8	3.5	244	42.9
Dissolved Metals	Aluminum (Al)-Dissolved (mg/L)		<0.010	<0.010	0.080	<0.010	<0.010
	Antimony (Sb)-Dissolved (mg/L)		<0.0010	<0.0010	0.0016	<0.0010	<0.0010
	Arsenic (As)-Dissolved (mg/L)		<0.0010	<0.0010	0.0037	<0.0010	<0.0010
	Barium (Ba)-Dissolved (mg/L)		0.0166	0.151	0.0774	0.0208	0.0785
	Beryllium (Be)-Dissolved (mg/L)		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Bismuth (Bi)-Dissolved (mg/L)		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Boron (B)-Dissolved (mg/L)		0.11	<0.10	<0.10	<0.10	<0.10
	Cadmium (Cd)-Dissolved (mg/L)		0.00059	<0.00050	<0.00050	<0.00050	<0.00050
	Calcium (Ca)-Dissolved (mg/L)		49.9	18.6	8.48	77.9	11.7
	Chromium (Cr)-Dissolved (mg/L)		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Cobalt (Co)-Dissolved (mg/L)		0.0097	<0.0010	<0.0010	<0.0010	<0.0010
	Copper (Cu)-Dissolved (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Iron (Fe)-Dissolved (mg/L)		<0.030	<0.030	<0.030	<0.030	<0.030
	Lead (Pb)-Dissolved (mg/L)		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Lithium (Li)-Dissolved (mg/L)		0.102	<0.010	<0.010	<0.010	<0.010
	Magnesium (Mg)-Dissolved (mg/L)		65.5	10.3	5.53	32.4	33.0
	Manganese (Mn)-Dissolved (mg/L)		1.56	0.00115	0.00066	0.0257	<0.00050
	Mercury (Hg)-Dissolved (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Molybdenum (Mo)-Dissolved (mg/L)		<0.00050	0.00795	0.00435	<0.00050	0.00385
	Nickel (Ni)-Dissolved (mg/L)		0.0668	<0.0050	<0.0050	<0.0050	<0.0050
	Phosphorus, Dissolved (mg/L)		<0.30	<0.30	<0.30	<0.30	<0.30
	Potassium (K)-Dissolved (mg/L)		7.82	1.44	<0.50	<0.50	1.77
	Selenium (Se)-Dissolved (mg/L)		<0.010	<0.010	<0.010	<0.010	<0.010
	Silicon (Si)-Dissolved (mg/L)		0.784	0.640	1.22	0.194	0.717
	Silver (Ag)-Dissolved (mg/L)		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Sodium (Na)-Dissolved (mg/L)		200	1.25	<0.50	<0.50	<0.50
	Strontium (Sr)-Dissolved (mg/L)		5.06	0.966	0.139	0.823	0.602
	Thallium (Tl)-Dissolved (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Tin (Sn)-Dissolved (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Titanium (Ti)-Dissolved (mg/L)		<0.010	<0.010	<0.010	<0.010	<0.010
	Uranium (U)-Dissolved (mg/L)		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010

ALS LABORATORY GROUP ANALYTICAL REPORT

		Sample ID	L477076-6			
		Description				
		Sampled Date	08-FEB-07			
		Sampled Time				
		Client ID	DUMP-2.5M-47			
Grouping	Analyte					
WATER						
Sample Preparation	total volume in (mL)		500			
	total volume out (mL)		470			
Physical Tests	Conductivity (uS/cm)		90.9			
	pH (pH)		7.91			
Anions and Nutrients	Acidity (as CaCO3) (mg/L)		2.1			
	Alkalinity, Total (as CaCO3) (mg/L)		49.4			
	Sulfate (SO4) (mg/L)		<1.0			
Dissolved Metals	Aluminum (Al)-Dissolved (mg/L)		0.107			
	Antimony (Sb)-Dissolved (mg/L)		<0.0010			
	Arsenic (As)-Dissolved (mg/L)		<0.0010			
	Barium (Ba)-Dissolved (mg/L)		0.00753			
	Beryllium (Be)-Dissolved (mg/L)		<0.0050			
	Bismuth (Bi)-Dissolved (mg/L)		<0.0050			
	Boron (B)-Dissolved (mg/L)		<0.10			
	Cadmium (Cd)-Dissolved (mg/L)		<0.00050			
	Calcium (Ca)-Dissolved (mg/L)		3.42			
	Chromium (Cr)-Dissolved (mg/L)		<0.0050			
	Cobalt (Co)-Dissolved (mg/L)		<0.0010			
	Copper (Cu)-Dissolved (mg/L)		<0.0010			
	Iron (Fe)-Dissolved (mg/L)		<0.030			
	Lead (Pb)-Dissolved (mg/L)		<0.00050			
	Lithium (Li)-Dissolved (mg/L)		<0.010			
	Magnesium (Mg)-Dissolved (mg/L)		10.8			
	Manganese (Mn)-Dissolved (mg/L)		<0.00050			
	Mercury (Hg)-Dissolved (mg/L)		<0.0010			
	Molybdenum (Mo)-Dissolved (mg/L)		0.00076			
	Nickel (Ni)-Dissolved (mg/L)		<0.0050			
	Phosphorus, Dissolved (mg/L)		<0.30			
	Potassium (K)-Dissolved (mg/L)		<0.50			
	Selenium (Se)-Dissolved (mg/L)		<0.010			
	Silicon (Si)-Dissolved (mg/L)		1.01			
	Silver (Ag)-Dissolved (mg/L)		<0.00010			
	Sodium (Na)-Dissolved (mg/L)		<0.50			
	Strontium (Sr)-Dissolved (mg/L)		0.0320			
	Thallium (Tl)-Dissolved (mg/L)		<0.0010			
	Tin (Sn)-Dissolved (mg/L)		<0.0010			
	Titanium (Ti)-Dissolved (mg/L)		<0.010			
	Uranium (U)-Dissolved (mg/L)		<0.00010			

ALS LABORATORY GROUP ANALYTICAL REPORT

	Sample ID Description Sampled Date Sampled Time Client ID	L477076-1	L477076-2	L477076-3	L477076-4	L477076-5
		08-FEB-07	08-FEB-07	08-FEB-07	08-FEB-07	08-FEB-07
		ARD3-08B-47	ARD3-14B-47	ARD1-15-47	ARD2-12-47	ARD2-07-47
Grouping	Analyte					
WATER						
Dissolved Metals	Vanadium (V)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Zinc (Zn)-Dissolved (mg/L)	0.0108	<0.0050	<0.0050	<0.0050	<0.0050

ALS LABORATORY GROUP ANALYTICAL REPORT

	Sample ID Description Sampled Date Sampled Time Client ID	L477076-6 08-FEB-07 DUMP-2.5M-47				
Grouping	Analyte					
WATER						
Dissolved Metals	Vanadium (V)-Dissolved (mg/L)	<0.010				
	Zinc (Zn)-Dissolved (mg/L)	<0.0050				

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)
ACY-PCT-VA	Water	Acidity by Automated Titration	APHA 2310 "Acidity"
This analysis is carried out using procedures adapted from APHA Method 2310 "Acidity". Acidity is determined by potentiometric titration to a specified endpoint.			
ALK-COL-VA	Water	Alkalinity by Colourimetric (Automated)	APHA 310.2
This analysis is carried out using procedures adapted from EPA Method 310.2 "Alkalinity". Total Alkalinity is determined using the methyl orange colourimetric method.			
EC-MAN-HCELL-VA	Water	Conductivity (Manual)	APHA 2510 "Conductivity"
This analysis is carried out using procedures adapted from APHA Method 2510 "Conductivity". Conductivity is determined using a conductivity electrode.			
HG-DIS-CVAFS-VA	Water	Dissolved Mercury in Water by CVAFS	EPA SW-846 3005A & EPA 245.7
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedures may involve preliminary sample treatment by filtration (EPA Method 3005A) and involves a cold-oxidation of the acidified sample using bromine monochloride prior to reduction of the sample with stannous chloride. Instrumental analysis is by cold vapour atomic fluorescence spectrophotometry (EPA Method 245.7).			
MET-DIS-ICP-VA	Water	Dissolved Metals in Water by ICPOES	EPA SW-846 3005A/6010B
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedure involves filtration (EPA Method 3005A) and analysis by inductively coupled plasma - optical emission spectrophotometry (EPA Method 6010B).			
MET-DIS-LOW-MS-VA	Water	Dissolved Metals in Water by ICPMS(Low)	EPA SW-846 3005A/6020
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedure involves preliminary sample treatment by filtration (EPA Method 3005A). Instrumental analysis is by inductively coupled plasma - mass spectrometry (EPA Method 6020).			
PH-MAN-HCELL-VA	Water	pH by Manual Meter	APHA 4500-H "pH Value"
This analysis is carried out using procedures adapted from APHA Method 4500-H "pH Value". The pH is determined in the laboratory using a pH electrode.			
SO4-TUR-VA	Water	Sulphate(SO4) by Turbidity	APHA 4500-SO4 "Sulphate"
This analysis is carried out using procedures adapted from APHA Method 4500-SO4 "Sulphate". Sulphate is determined using the turbidimetric method.			

** Laboratory Methods employed follow in-house procedures, which are generally based on nationally or internationally accepted methodologies. The last two letters of the above ALS Test Code column indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location	Laboratory Definition Code	Laboratory Location
VA	ALS LABORATORY GROUP - VANCOUVER, BC, CANADA		

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)
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GLOSSARY OF REPORT TERMS

Surr - A surrogate is an organic compound that is similar to the target analyte(s) in chemical composition and behavior but not normally detected in environmental samples. Prior to sample processing, samples are fortified with one or more surrogate compounds.

The reported surrogate recovery value provides a measure of method efficiency.

mg/kg (units) - unit of concentration based on mass, parts per million

mg/L (units) - unit of concentration based on volume, parts per million

N/A - Result not available. Refer to qualifier code and definition for explanation

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Although test results are generated under strict QA/QC protocols, any unsigned test reports, faxes, or emails are considered preliminary.

ALS Laboratory Group has an extensive QA/QC program where all analytical data reported is analyzed using approved referenced procedures followed by checks and reviews by senior managers and quality assurance personnel. However, since the results are obtained from chemical measurements and thus cannot be guaranteed, ALS Laboratory Group assumes no liability for the use or interpretation of the results.



Environmental Division

ANALYTICAL REPORT

RESCAN ENVIRONMENTAL SERVICES

ATTN: DAVE ARCHIBALD

Reported On: 14-MAR-07 05:34 PM

SIXTH FLOOR
1111 WEST HASTINGS STREET
VANCOUVER BC V6E 2J3

Lab Work Order #: **L477077**

Date Received: **08-FEB-07**

Project P.O. #: NOT SUBMITTED
Job Reference: MT KLAPPAN CYCLE#42 HUMIDITY CELLS
Legal Site Desc:
CofC Numbers:

Other Information:

Comments: Due to interferences, Cr detection limit has been raised.

TIMOTHY GUY CROWTHER
General Manager, Vancouver

For any questions about this report please contact your Account Manager:

ANDRE LANGLAIS

THIS REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL WITHOUT THE WRITTEN AUTHORITY OF THE LABORATORY.
ALL SAMPLES WILL BE DISPOSED OF AFTER 30 DAYS FOLLOWING ANALYSIS. PLEASE CONTACT THE LAB IF YOU
REQUIRE ADDITIONAL SAMPLE STORAGE TIME.

ALS LABORATORY GROUP ANALYTICAL REPORT

		Sample ID	L477077-1	L477077-2	L477077-3	L477077-4
		Description				
		Sampled Date	08-FEB-07	08-FEB-07	08-FEB-07	08-FEB-07
		Sampled Time				
		Client ID	85-027-17-42	85-027-24-42	86-035-07-42	86-035-09-42
Grouping	Analyte					
WATER						
Sample Preparation	total volume in (mL)		500	500	500	500
	total volume out (mL)		500	500	465	440
Physical Tests	Conductivity (uS/cm)		60.7	92.7	292	330
	pH (pH)		7.24	7.97	8.48	8.27
Anions and Nutrients	Acidity (as CaCO3) (mg/L)		3.1	2.7	<1.0	1.8
	Alkalinity, Total (as CaCO3) (mg/L)		28.5	47.7	177	103
	Sulfate (SO4) (mg/L)		1.7	1.8	4.4	85.4
Dissolved Metals	Aluminum (Al)-Dissolved (mg/L)		0.075	0.081	<0.010	<0.010
	Antimony (Sb)-Dissolved (mg/L)		0.0014	0.0010	<0.0010	<0.0010
	Arsenic (As)-Dissolved (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010
	Barium (Ba)-Dissolved (mg/L)		0.0181	0.0516	0.355	0.285
	Beryllium (Be)-Dissolved (mg/L)		<0.0050	<0.0050	<0.0050	<0.0050
	Bismuth (Bi)-Dissolved (mg/L)		<0.0050	<0.0050	<0.0050	<0.0050
	Boron (B)-Dissolved (mg/L)		<0.10	<0.10	<0.10	<0.10
	Cadmium (Cd)-Dissolved (mg/L)		<0.00050	<0.00050	<0.00050	<0.00050
	Calcium (Ca)-Dissolved (mg/L)		6.91	9.00	15.3	24.8
	Chromium (Cr)-Dissolved (mg/L)		<0.0050	<0.0050	<0.0050	<0.0050
	Cobalt (Co)-Dissolved (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010
	Copper (Cu)-Dissolved (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010
	Iron (Fe)-Dissolved (mg/L)		<0.030	<0.030	<0.030	<0.030
	Lead (Pb)-Dissolved (mg/L)		<0.00050	<0.00050	<0.00050	<0.00050
	Lithium (Li)-Dissolved (mg/L)		<0.010	<0.010	<0.010	0.017
	Magnesium (Mg)-Dissolved (mg/L)		3.70	6.70	34.6	26.2
	Manganese (Mn)-Dissolved (mg/L)		0.00181	0.00147	<0.00050	0.00204
	Mercury (Hg)-Dissolved (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010
	Molybdenum (Mo)-Dissolved (mg/L)		0.00273	0.00454	0.00171	0.00129
	Nickel (Ni)-Dissolved (mg/L)		<0.0050	<0.0050	<0.0050	<0.0050
	Phosphorus, Dissolved (mg/L)		<0.30	<0.30	<0.30	<0.30
	Potassium (K)-Dissolved (mg/L)		<0.50	0.61	2.10	4.97
	Selenium (Se)-Dissolved (mg/L)		<0.010	<0.010	<0.010	<0.010
	Silicon (Si)-Dissolved (mg/L)		1.11	1.24	0.837	0.737
	Silver (Ag)-Dissolved (mg/L)		<0.00010	<0.00010	<0.00010	<0.00010
	Sodium (Na)-Dissolved (mg/L)		<0.50	<0.50	1.37	6.43
	Strontium (Sr)-Dissolved (mg/L)		0.150	0.277	1.04	0.989
	Thallium (Tl)-Dissolved (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010
	Tin (Sn)-Dissolved (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010
	Titanium (Ti)-Dissolved (mg/L)		<0.010	<0.010	<0.010	<0.010
	Uranium (U)-Dissolved (mg/L)		<0.00010	<0.00010	<0.00010	<0.00010

ALS LABORATORY GROUP ANALYTICAL REPORT

		Sample ID	L477077-1	L477077-2	L477077-3	L477077-4	
		Description					
		Sampled Date	08-FEB-07	08-FEB-07	08-FEB-07	08-FEB-07	
		Sampled Time					
		Client ID	85-027-17-42	85-027-24-42	86-035-07-42	86-035-09-42	
Grouping	Analyte						
WATER							
Dissolved Metals	Vanadium (V)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010	
	Zinc (Zn)-Dissolved (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)
ACY-PCT-VA	Water	Acidity by Automated Titration	APHA 2310 "Acidity"
This analysis is carried out using procedures adapted from APHA Method 2310 "Acidity". Acidity is determined by potentiometric titration to a specified endpoint.			
ALK-COL-VA	Water	Alkalinity by Colourimetric (Automated)	APHA 310.2
This analysis is carried out using procedures adapted from EPA Method 310.2 "Alkalinity". Total Alkalinity is determined using the methyl orange colourimetric method.			
EC-MAN-HCELL-VA	Water	Conductivity (Manual)	APHA 2510 "Conductivity"
This analysis is carried out using procedures adapted from APHA Method 2510 "Conductivity". Conductivity is determined using a conductivity electrode.			
HG-DIS-CVAFS-VA	Water	Dissolved Mercury in Water by CVAFS	EPA SW-846 3005A & EPA 245.7
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedures may involve preliminary sample treatment by filtration (EPA Method 3005A) and involves a cold-oxidation of the acidified sample using bromine monochloride prior to reduction of the sample with stannous chloride. Instrumental analysis is by cold vapour atomic fluorescence spectrophotometry (EPA Method 245.7).			
MET-DIS-ICP-VA	Water	Dissolved Metals in Water by ICPOES	EPA SW-846 3005A/6010B
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedure involves filtration (EPA Method 3005A) and analysis by inductively coupled plasma - optical emission spectrophotometry (EPA Method 6010B).			
MET-DIS-LOW-MS-VA	Water	Dissolved Metals in Water by ICPMS(Low)	EPA SW-846 3005A/6020
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedure involves preliminary sample treatment by filtration (EPA Method 3005A). Instrumental analysis is by inductively coupled plasma - mass spectrometry (EPA Method 6020).			
PH-MAN-HCELL-VA	Water	pH by Manual Meter	APHA 4500-H "pH Value"
This analysis is carried out using procedures adapted from APHA Method 4500-H "pH Value". The pH is determined in the laboratory using a pH electrode.			
SO4-TUR-VA	Water	Sulphate(SO4) by Turbidity	APHA 4500-SO4 "Sulphate"
This analysis is carried out using procedures adapted from APHA Method 4500-SO4 "Sulphate". Sulphate is determined using the turbidimetric method.			

** Laboratory Methods employed follow in-house procedures, which are generally based on nationally or internationally accepted methodologies. The last two letters of the above ALS Test Code column indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location	Laboratory Definition Code	Laboratory Location
VA	ALS LABORATORY GROUP - VANCOUVER, BC, CANADA		

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)
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GLOSSARY OF REPORT TERMS

Surr - A surrogate is an organic compound that is similar to the target analyte(s) in chemical composition and behavior but not normally detected in environmental samples. Prior to sample processing, samples are fortified with one or more surrogate compounds.

The reported surrogate recovery value provides a measure of method efficiency.

mg/kg (units) - unit of concentration based on mass, parts per million

mg/L (units) - unit of concentration based on volume, parts per million

N/A - Result not available. Refer to qualifier code and definition for explanation

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ALS Laboratory Group has an extensive QA/QC program where all analytical data reported is analyzed using approved referenced procedures followed by checks and reviews by senior managers and quality assurance personnel. However, since the results are obtained from chemical measurements and thus cannot be guaranteed, ALS Laboratory Group assumes no liability for the use or interpretation of the results.



Environmental Division

ANALYTICAL REPORT

RESCAN ENVIRONMENTAL SERVICES

ATTN: DAVE ARCHIBALD

SIXTH FLOOR
1111 WEST HASTINGS STREET
VANCOUVER BC V6E 2J3

Reported On: 14-MAR-07 05:30 PM

Revision: 2

Lab Work Order #: **L478818**

Date Received: **15-FEB-07**

Project P.O. #: NOT SUBMITTED
Job Reference: MT. KLAPPAN CYCLE#48 HUMIDITY CELLS
Legal Site Desc:
CofC Numbers:

Other Information:

Comments:

TIMOTHY GUY CROWTHER
General Manager, Vancouver

For any questions about this report please contact your Account Manager:

ANDRE LANGLAIS

THIS REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL WITHOUT THE WRITTEN AUTHORITY OF THE LABORATORY.
ALL SAMPLES WILL BE DISPOSED OF AFTER 30 DAYS FOLLOWING ANALYSIS. PLEASE CONTACT THE LAB IF YOU
REQUIRE ADDITIONAL SAMPLE STORAGE TIME.

ALS LABORATORY GROUP ANALYTICAL REPORT

		Sample ID	L478818-1	L478818-2	L478818-3	L478818-4	L478818-5
		Description					
		Sampled Date	15-FEB-07	15-FEB-07	15-FEB-07	15-FEB-07	15-FEB-07
		Sampled Time					
		Client ID	ARD3-14B-48	ARD1-15-48	ARD2-12-48	ARD2-07-48	DUMP-2.5M-48
Grouping	Analyte						
WATER							
Sample Preparation	total volume in (mL)		500	500	500	500	500
	total volume out (mL)		500	475	490	475	480
Physical Tests	Conductivity (uS/cm)		183	82.3	537	306	98.4
	pH (pH)		8.06	7.72	7.99	8.30	8.01
Anions and Nutrients	Acidity (as CaCO3) (mg/L)		4.4	2.8	3.2	3.2	2.3
	Alkalinity, Total (as CaCO3) (mg/L)		59.1	39.1	72.5	118	52.7
	Sulfate (SO4) (mg/L)		36.2	3.8	232	52.8	<1.0

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)
ACY-PCT-VA	Water	Acidity by Automated Titration	APHA 2310 "Acidity"
This analysis is carried out using procedures adapted from APHA Method 2310 "Acidity". Acidity is determined by potentiometric titration to a specified endpoint.			
ALK-COL-VA	Water	Alkalinity by Colourimetric (Automated)	APHA 310.2
This analysis is carried out using procedures adapted from EPA Method 310.2 "Alkalinity". Total Alkalinity is determined using the methyl orange colourimetric method.			
EC-MAN-HCELL-VA	Water	Conductivity (Manual)	APHA 2510 "Conductivity"
This analysis is carried out using procedures adapted from APHA Method 2510 "Conductivity". Conductivity is determined using a conductivity electrode.			
PH-MAN-HCELL-VA	Water	pH by Manual Meter	APHA 4500-H "pH Value"
This analysis is carried out using procedures adapted from APHA Method 4500-H "pH Value". The pH is determined in the laboratory using a pH electrode.			
SO4-TUR-VA	Water	Sulphate(SO4) by Turbidity	APHA 4500-SO4 "Sulphate"
This analysis is carried out using procedures adapted from APHA Method 4500-SO4 "Sulphate". Sulphate is determined using the turbidimetric method.			

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Laboratory Definition Code	Laboratory Location	Laboratory Definition Code	Laboratory Location
VA	ALS LABORATORY GROUP - VANCOUVER, BC, CANADA		

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mg/kg (units) - unit of concentration based on mass, parts per million

mg/L (units) - unit of concentration based on volume, parts per million

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Environmental Division

ANALYTICAL REPORT

RESCAN ENVIRONMENTAL SERVICES

ATTN: DAVE ARCHIBALD

Reported On: 14-MAR-07 11:10 AM

SIXTH FLOOR
1111 WEST HASTINGS STREET
VANCOUVER BC V6E 2J3

Lab Work Order #: **L478820**

Date Received: **15-FEB-07**

Project P.O. #: NOT SUBMITTED
Job Reference: MT. KLAPPAN CYCLE#43 HUMIDITY CELLS
Legal Site Desc:
CofC Numbers:

Other Information:

Comments:

TIMOTHY GUY CROWTHER
General Manager, Vancouver

For any questions about this report please contact your Account Manager:

ANDRE LANGLAIS

THIS REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL WITHOUT THE WRITTEN AUTHORITY OF THE LABORATORY.
ALL SAMPLES WILL BE DISPOSED OF AFTER 30 DAYS FOLLOWING ANALYSIS. PLEASE CONTACT THE LAB IF YOU
REQUIRE ADDITIONAL SAMPLE STORAGE TIME.

ALS LABORATORY GROUP ANALYTICAL REPORT

		Sample ID	L478820-1	L478820-2	L478820-3	L478820-4	L478820-5
		Description					
		Sampled Date	15-FEB-07	15-FEB-07	15-FEB-07	15-FEB-07	15-FEB-07
		Sampled Time					
		Client ID	85-016-07-43	85-027-02-43	85-027-17-43	85-027-24-43	86-035-07-43
Grouping	Analyte						
WATER							
Sample Preparation	total volume in (mL)		500	500	500	500	500
	total volume out (mL)		495	500	445	470	475
Physical Tests	Conductivity (uS/cm)		398	261	55.2	82.7	252
	pH (pH)		8.50	8.37	7.79	7.88	8.34
Anions and Nutrients	Acidity (as CaCO3) (mg/L)		<1.0	<1.0	2.8	2.6	<1.0
	Alkalinity, Total (as CaCO3) (mg/L)		226	114	26.3	42.3	149
	Sulfate (SO4) (mg/L)		13.5	26.6	2.2	1.3	3.3
Dissolved Metals	Aluminum (Al)-Dissolved (mg/L)		<0.010	0.065			
	Antimony (Sb)-Dissolved (mg/L)		<0.0010	<0.0010			
	Arsenic (As)-Dissolved (mg/L)		<0.0010	<0.0010			
	Barium (Ba)-Dissolved (mg/L)		0.265	0.0718			
	Beryllium (Be)-Dissolved (mg/L)		<0.0050	<0.0050			
	Bismuth (Bi)-Dissolved (mg/L)		<0.0050	<0.0050			
	Boron (B)-Dissolved (mg/L)		<0.10	<0.10			
	Cadmium (Cd)-Dissolved (mg/L)		<0.00050	<0.00050			
	Calcium (Ca)-Dissolved (mg/L)		9.96	2.36			
	Chromium (Cr)-Dissolved (mg/L)		<0.0050	<0.0050			
	Cobalt (Co)-Dissolved (mg/L)		<0.0010	<0.0010			
	Copper (Cu)-Dissolved (mg/L)		<0.0010	<0.0010			
	Iron (Fe)-Dissolved (mg/L)		<0.030	<0.030			
	Lead (Pb)-Dissolved (mg/L)		<0.00050	<0.00050			
	Lithium (Li)-Dissolved (mg/L)		0.031	0.028			
	Magnesium (Mg)-Dissolved (mg/L)		31.7	14.4			
	Manganese (Mn)-Dissolved (mg/L)		0.00120	0.00166			
	Mercury (Hg)-Dissolved (mg/L)		<0.0010	<0.0010			
	Molybdenum (Mo)-Dissolved (mg/L)		0.00057	0.00943			
	Nickel (Ni)-Dissolved (mg/L)		<0.0050	<0.0050			
	Phosphorus (P)-Dissolved (mg/L)		<0.30	<0.30			
	Potassium (K)-Dissolved (mg/L)		4.58	3.45			
	Selenium (Se)-Dissolved (mg/L)		<0.010	<0.010			
	Silicon (Si)-Dissolved (mg/L)		0.601	0.751			
	Silver (Ag)-Dissolved (mg/L)		<0.00010	<0.00010			
	Sodium (Na)-Dissolved (mg/L)		48.7	43.1			
	Strontium (Sr)-Dissolved (mg/L)		1.41	0.470			
	Thallium (Tl)-Dissolved (mg/L)		<0.0010	<0.0010			
	Tin (Sn)-Dissolved (mg/L)		<0.0010	<0.0010			
	Titanium (Ti)-Dissolved (mg/L)		<0.010	<0.010			
	Uranium (U)-Dissolved (mg/L)		<0.00010	<0.00010			

ALS LABORATORY GROUP ANALYTICAL REPORT

		Sample ID	L478820-6			
		Description				
		Sampled Date	15-FEB-07			
		Sampled Time				
		Client ID	86-035-09-43			
Grouping	Analyte					
WATER						
Sample Preparation	total volume in (mL)		500			
	total volume out (mL)		470			
Physical Tests	Conductivity (uS/cm)		401			
	pH (pH)		8.24			
Anions and Nutrients	Acidity (as CaCO3) (mg/L)		1.9			
	Alkalinity, Total (as CaCO3) (mg/L)		125			
	Sulfate (SO4) (mg/L)		106			
Dissolved Metals	Aluminum (Al)-Dissolved (mg/L)					
	Antimony (Sb)-Dissolved (mg/L)					
	Arsenic (As)-Dissolved (mg/L)					
	Barium (Ba)-Dissolved (mg/L)					
	Beryllium (Be)-Dissolved (mg/L)					
	Bismuth (Bi)-Dissolved (mg/L)					
	Boron (B)-Dissolved (mg/L)					
	Cadmium (Cd)-Dissolved (mg/L)					
	Calcium (Ca)-Dissolved (mg/L)					
	Chromium (Cr)-Dissolved (mg/L)					
	Cobalt (Co)-Dissolved (mg/L)					
	Copper (Cu)-Dissolved (mg/L)					
	Iron (Fe)-Dissolved (mg/L)					
	Lead (Pb)-Dissolved (mg/L)					
	Lithium (Li)-Dissolved (mg/L)					
	Magnesium (Mg)-Dissolved (mg/L)					
	Manganese (Mn)-Dissolved (mg/L)					
	Mercury (Hg)-Dissolved (mg/L)					
	Molybdenum (Mo)-Dissolved (mg/L)					
	Nickel (Ni)-Dissolved (mg/L)					
	Phosphorus (P)-Dissolved (mg/L)					
	Potassium (K)-Dissolved (mg/L)					
	Selenium (Se)-Dissolved (mg/L)					
	Silicon (Si)-Dissolved (mg/L)					
	Silver (Ag)-Dissolved (mg/L)					
	Sodium (Na)-Dissolved (mg/L)					
	Strontium (Sr)-Dissolved (mg/L)					
	Thallium (Tl)-Dissolved (mg/L)					
	Tin (Sn)-Dissolved (mg/L)					
	Titanium (Ti)-Dissolved (mg/L)					
	Uranium (U)-Dissolved (mg/L)					

ALS LABORATORY GROUP ANALYTICAL REPORT

		Sample ID	L478820-1	L478820-2	L478820-3	L478820-4	L478820-5
		Description					
		Sampled Date	15-FEB-07	15-FEB-07	15-FEB-07	15-FEB-07	15-FEB-07
		Sampled Time					
		Client ID	85-016-07-43	85-027-02-43	85-027-17-43	85-027-24-43	86-035-07-43
Grouping	Analyte						
WATER							
Dissolved Metals	Vanadium (V)-Dissolved (mg/L)		<0.010	<0.010			
	Zinc (Zn)-Dissolved (mg/L)		<0.0050	<0.0050			

ALS LABORATORY GROUP ANALYTICAL REPORT

Grouping	Analyte	Sample ID	Description	Sampled Date	Sampled Time	Client ID
WATER		L478820-6		15-FEB-07		86-035-09-43
Dissolved Metals	Vanadium (V)-Dissolved (mg/L) Zinc (Zn)-Dissolved (mg/L)					

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)
ACY-PCT-VA	Water	Acidity by Automated Titration	APHA 2310 "Acidity"
This analysis is carried out using procedures adapted from APHA Method 2310 "Acidity". Acidity is determined by potentiometric titration to a specified endpoint.			
ALK-COL-VA	Water	Alkalinity by Colourimetric (Automated)	APHA 310.2
This analysis is carried out using procedures adapted from EPA Method 310.2 "Alkalinity". Total Alkalinity is determined using the methyl orange colourimetric method.			
EC-MAN-HCELL-VA	Water	Conductivity (Manual)	APHA 2510 "Conductivity"
This analysis is carried out using procedures adapted from APHA Method 2510 "Conductivity". Conductivity is determined using a conductivity electrode.			
HG-DIS-CVAFS-VA	Water	Dissolved Mercury in Water by CVAFS	EPA SW-846 3005A & EPA 245.7
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedures may involve preliminary sample treatment by filtration (EPA Method 3005A) and involves a cold-oxidation of the acidified sample using bromine monochloride prior to reduction of the sample with stannous chloride. Instrumental analysis is by cold vapour atomic fluorescence spectrophotometry (EPA Method 245.7).			
MET-DIS-ICP-VA	Water	Dissolved Metals in Water by ICPOES	EPA SW-846 3005A/6010B
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedure involves filtration (EPA Method 3005A) and analysis by inductively coupled plasma - optical emission spectrophotometry (EPA Method 6010B).			
MET-DIS-LOW-MS-VA	Water	Dissolved Metals in Water by ICPMS(Low)	EPA SW-846 3005A/6020
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedure involves preliminary sample treatment by filtration (EPA Method 3005A). Instrumental analysis is by inductively coupled plasma - mass spectrometry (EPA Method 6020).			
PH-MAN-HCELL-VA	Water	pH by Manual Meter	APHA 4500-H "pH Value"
This analysis is carried out using procedures adapted from APHA Method 4500-H "pH Value". The pH is determined in the laboratory using a pH electrode.			
SO4-TUR-VA	Water	Sulphate(SO4) by Turbidity	APHA 4500-SO4 "Sulphate"
This analysis is carried out using procedures adapted from APHA Method 4500-SO4 "Sulphate". Sulphate is determined using the turbidimetric method.			

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Laboratory Definition Code	Laboratory Location	Laboratory Definition Code	Laboratory Location
VA	ALS LABORATORY GROUP - VANCOUVER, BC, CANADA		

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)
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GLOSSARY OF REPORT TERMS

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mg/kg (units) - unit of concentration based on mass, parts per million

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Environmental Division

ANALYTICAL REPORT

RESCAN ENVIRONMENTAL SERVICES

ATTN: DAVE ARCHIBALD

Reported On: 08-MAR-07 08:27 PM

SIXTH FLOOR
1111 WEST HASTINGS STREET
VANCOUVER BC V6E 2J3

Lab Work Order #: **L480802**

Date Received: **22-FEB-07**

Project P.O. #: NOT SUBMITTED
Job Reference: MT. KLAPPAN CYCLE#49 HUMIDITY CELLS
Legal Site Desc:
CofC Numbers:

Other Information:

Comments:

TIMOTHY GUY CROWTHER
General Manager, Vancouver

For any questions about this report please contact your Account Manager:

ANDRE LANGLAIS

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ALS LABORATORY GROUP ANALYTICAL REPORT

		Sample ID	L480802-1	L480802-2	L480802-3	L480802-4	L480802-5
		Description					
		Sampled Date	22-FEB-07	22-FEB-07	22-FEB-07	22-FEB-07	22-FEB-07
		Sampled Time					
		Client ID	ARD3-07B-49	ARD3-14B-49	ARD1-15-49	ARD2-12-49	019-02-49
Grouping	Analyte						
WATER							
Sample Preparation	total volume in (mL)		500	500	500	500	500
	total volume out (mL)		500	465	430	485	500
Physical Tests	Conductivity (uS/cm)		208	189	87.5	544	538
	pH (pH)		8.80	8.07	8.07	8.00	8.79
Anions and Nutrients	Acidity (as CaCO3) (mg/L)		<1.0	2.7	2.2	3.2	<1.0
	Alkalinity, Total (as CaCO3) (mg/L)		96.3	58.4	41.4	95.5	229
	Sulfate (SO4) (mg/L)		13.4	41.9	4.0	225	73.0
Dissolved Metals	Aluminum (Al)-Dissolved (mg/L)		3.00	<0.010	0.076	<0.010	1.46
	Antimony (Sb)-Dissolved (mg/L)		0.0049	<0.0010	0.0018	<0.0010	<0.0010
	Arsenic (As)-Dissolved (mg/L)		0.0123	<0.0010	0.0034	<0.0010	<0.0010
	Barium (Ba)-Dissolved (mg/L)		0.0869	0.163	0.0849	0.0205	0.0597
	Beryllium (Be)-Dissolved (mg/L)		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Bismuth (Bi)-Dissolved (mg/L)		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Boron (B)-Dissolved (mg/L)		<0.10	<0.10	<0.10	<0.10	<0.10
	Cadmium (Cd)-Dissolved (mg/L)		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Calcium (Ca)-Dissolved (mg/L)		0.230	20.0	9.08	83.3	1.24
	Chromium (Cr)-Dissolved (mg/L)		0.0082	<0.0050	<0.0050	<0.0050	<0.0050
	Cobalt (Co)-Dissolved (mg/L)		0.0036	<0.0010	<0.0010	<0.0010	<0.0010
	Copper (Cu)-Dissolved (mg/L)		0.0040	<0.0010	<0.0010	<0.0010	0.0015
	Iron (Fe)-Dissolved (mg/L)		0.449	<0.030	<0.030	<0.030	0.221
	Lead (Pb)-Dissolved (mg/L)		0.00165	<0.00050	<0.00050	<0.00050	<0.00050
	Lithium (Li)-Dissolved (mg/L)		0.019	<0.010	<0.010	<0.010	0.041
	Magnesium (Mg)-Dissolved (mg/L)		0.418	10.4	5.59	30.0	1.78
	Manganese (Mn)-Dissolved (mg/L)		0.00410	0.00091	0.00065	0.0327	0.00207
	Mercury (Hg)-Dissolved (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Molybdenum (Mo)-Dissolved (mg/L)		0.0914	0.00721	0.00440	<0.00050	0.0115
	Nickel (Ni)-Dissolved (mg/L)		0.0257	<0.0050	<0.0050	<0.0050	<0.0050
	Phosphorus (P)-Dissolved (mg/L)		<0.30	<0.30	<0.30	<0.30	<0.30
	Potassium (K)-Dissolved (mg/L)		1.39	1.43	<0.50	<0.50	1.79
	Selenium (Se)-Dissolved (mg/L)		<0.010	<0.010	<0.010	<0.010	<0.010
	Silicon (Si)-Dissolved (mg/L)		5.47	0.666	1.35	0.218	2.85
	Silver (Ag)-Dissolved (mg/L)		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Sodium (Na)-Dissolved (mg/L)		49.7	0.99	<0.50	<0.50	134
	Strontium (Sr)-Dissolved (mg/L)		0.0198	0.969	0.144	0.799	0.146
	Thallium (Tl)-Dissolved (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Tin (Sn)-Dissolved (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Titanium (Ti)-Dissolved (mg/L)		0.051	<0.010	<0.010	<0.010	0.030
	Uranium (U)-Dissolved (mg/L)		<0.00010	<0.00010	<0.00010	<0.00010	0.00021

ALS LABORATORY GROUP ANALYTICAL REPORT

		Sample ID	L480802-6	L480802-7			
		Description					
		Sampled Date	22-FEB-07	22-FEB-07			
		Sampled Time					
		Client ID	ARD2-07-49	DUMP-2.5M-49			
Grouping	Analyte						
WATER							
Sample Preparation	total volume in (mL)		500	500			
	total volume out (mL)		520	500			
Physical Tests	Conductivity (uS/cm)		237	87.2			
	pH (pH)		8.20	8.13			
Anions and Nutrients	Acidity (as CaCO3) (mg/L)		1.7	2.3			
	Alkalinity, Total (as CaCO3) (mg/L)		91.4	46.0			
	Sulfate (SO4) (mg/L)		39.4	<1.0			
Dissolved Metals	Aluminum (Al)-Dissolved (mg/L)		<0.010	0.046			
	Antimony (Sb)-Dissolved (mg/L)		<0.0010	<0.0010			
	Arsenic (As)-Dissolved (mg/L)		<0.0010	<0.0010			
	Barium (Ba)-Dissolved (mg/L)		0.0602	0.00616			
	Beryllium (Be)-Dissolved (mg/L)		<0.0050	<0.0050			
	Bismuth (Bi)-Dissolved (mg/L)		<0.0050	<0.0050			
	Boron (B)-Dissolved (mg/L)		<0.10	<0.10			
	Cadmium (Cd)-Dissolved (mg/L)		<0.00050	<0.00050			
	Calcium (Ca)-Dissolved (mg/L)		9.72	3.31			
	Chromium (Cr)-Dissolved (mg/L)		<0.0050	<0.0050			
	Cobalt (Co)-Dissolved (mg/L)		<0.0010	<0.0010			
	Copper (Cu)-Dissolved (mg/L)		<0.0010	<0.0010			
	Iron (Fe)-Dissolved (mg/L)		<0.030	<0.030			
	Lead (Pb)-Dissolved (mg/L)		<0.00050	<0.00050			
	Lithium (Li)-Dissolved (mg/L)		<0.010	<0.010			
	Magnesium (Mg)-Dissolved (mg/L)		24.9	9.28			
	Manganese (Mn)-Dissolved (mg/L)		<0.00050	<0.00050			
	Mercury (Hg)-Dissolved (mg/L)		<0.0010	<0.0010			
	Molybdenum (Mo)-Dissolved (mg/L)		0.00293	0.00061			
	Nickel (Ni)-Dissolved (mg/L)		<0.0050	<0.0050			
	Phosphorus (P)-Dissolved (mg/L)		<0.30	<0.30			
	Potassium (K)-Dissolved (mg/L)		1.38	<0.50			
	Selenium (Se)-Dissolved (mg/L)		<0.010	<0.010			
	Silicon (Si)-Dissolved (mg/L)		0.588	0.833			
	Silver (Ag)-Dissolved (mg/L)		<0.00010	<0.00010			
	Sodium (Na)-Dissolved (mg/L)		<0.50	<0.50			
	Strontium (Sr)-Dissolved (mg/L)		0.454	0.0290			
	Thallium (Tl)-Dissolved (mg/L)		<0.0010	<0.0010			
	Tin (Sn)-Dissolved (mg/L)		<0.0010	<0.0010			
	Titanium (Ti)-Dissolved (mg/L)		<0.010	<0.010			
	Uranium (U)-Dissolved (mg/L)		<0.00010	<0.00010			

ALS LABORATORY GROUP ANALYTICAL REPORT

	Sample ID Description Sampled Date Sampled Time Client ID	L480802-1	L480802-2	L480802-3	L480802-4	L480802-5
Grouping	Analyte					
WATER						
Dissolved Metals	Vanadium (V)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Zinc (Zn)-Dissolved (mg/L)	0.0120	<0.0050	<0.0050	<0.0050	<0.0050

ALS LABORATORY GROUP ANALYTICAL REPORT

	Sample ID Description Sampled Date Sampled Time Client ID	L480802-6	L480802-7		
Grouping	Analyte				
WATER					
Dissolved Metals	Vanadium (V)-Dissolved (mg/L)	<0.010	<0.010		
	Zinc (Zn)-Dissolved (mg/L)	<0.0050	<0.0050		

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)
ACY-PCT-VA	Water	Acidity by Automated Titration	APHA 2310 "Acidity"
This analysis is carried out using procedures adapted from APHA Method 2310 "Acidity". Acidity is determined by potentiometric titration to a specified endpoint.			
ALK-COL-VA	Water	Alkalinity by Colourimetric (Automated)	APHA 310.2
This analysis is carried out using procedures adapted from EPA Method 310.2 "Alkalinity". Total Alkalinity is determined using the methyl orange colourimetric method.			
EC-MAN-HCELL-VA	Water	Conductivity (Manual)	APHA 2510 "Conductivity"
This analysis is carried out using procedures adapted from APHA Method 2510 "Conductivity". Conductivity is determined using a conductivity electrode.			
HG-DIS-CVAFS-VA	Water	Dissolved Mercury in Water by CVAFS	EPA SW-846 3005A & EPA 245.7
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedures may involve preliminary sample treatment by filtration (EPA Method 3005A) and involves a cold-oxidation of the acidified sample using bromine monochloride prior to reduction of the sample with stannous chloride. Instrumental analysis is by cold vapour atomic fluorescence spectrophotometry (EPA Method 245.7).			
MET-DIS-ICP-VA	Water	Dissolved Metals in Water by ICPOES	EPA SW-846 3005A/6010B
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedure involves filtration (EPA Method 3005A) and analysis by inductively coupled plasma - optical emission spectrophotometry (EPA Method 6010B).			
MET-DIS-LOW-MS-VA	Water	Dissolved Metals in Water by ICPMS(Low)	EPA SW-846 3005A/6020
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedure involves preliminary sample treatment by filtration (EPA Method 3005A). Instrumental analysis is by inductively coupled plasma - mass spectrometry (EPA Method 6020).			
PH-MAN-HCELL-VA	Water	pH by Manual Meter	APHA 4500-H "pH Value"
This analysis is carried out using procedures adapted from APHA Method 4500-H "pH Value". The pH is determined in the laboratory using a pH electrode.			
SO4-TUR-VA	Water	Sulphate(SO4) by Turbidity	APHA 4500-SO4 "Sulphate"
This analysis is carried out using procedures adapted from APHA Method 4500-SO4 "Sulphate". Sulphate is determined using the turbidimetric method.			

** Laboratory Methods employed follow in-house procedures, which are generally based on nationally or internationally accepted methodologies. The last two letters of the above ALS Test Code column indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location	Laboratory Definition Code	Laboratory Location
VA	ALS LABORATORY GROUP - VANCOUVER, BC, CANADA		

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)
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GLOSSARY OF REPORT TERMS

Surr - A surrogate is an organic compound that is similar to the target analyte(s) in chemical composition and behavior but not normally detected in environmental samples. Prior to sample processing, samples are fortified with one or more surrogate compounds.

The reported surrogate recovery value provides a measure of method efficiency.

mg/kg (units) - unit of concentration based on mass, parts per million

mg/L (units) - unit of concentration based on volume, parts per million

N/A - Result not available. Refer to qualifier code and definition for explanation

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Although test results are generated under strict QA/QC protocols, any unsigned test reports, faxes, or emails are considered preliminary.

ALS Laboratory Group has an extensive QA/QC program where all analytical data reported is analyzed using approved referenced procedures followed by checks and reviews by senior managers and quality assurance personnel. However, since the results are obtained from chemical measurements and thus cannot be guaranteed, ALS Laboratory Group assumes no liability for the use or interpretation of the results.



Environmental Division

ANALYTICAL REPORT

RESCAN ENVIRONMENTAL SERVICES

ATTN: DAVE ARCHIBALD

Reported On: 08-MAR-07 08:25 PM

SIXTH FLOOR
1111 WEST HASTINGS STREET
VANCOUVER BC V6E 2J3

Lab Work Order #: **L480803**

Date Received: **22-FEB-07**

Project P.O. #: NOT SUBMITTED
Job Reference: MT. KLAPPAN CYCLE#44 HUMIDITY CELLS
Legal Site Desc:
CofC Numbers:

Other Information:

Comments:

TIMOTHY GUY CROWTHER
General Manager, Vancouver

For any questions about this report please contact your Account Manager:

ANDRE LANGLAIS

THIS REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL WITHOUT THE WRITTEN AUTHORITY OF THE LABORATORY.
ALL SAMPLES WILL BE DISPOSED OF AFTER 30 DAYS FOLLOWING ANALYSIS. PLEASE CONTACT THE LAB IF YOU
REQUIRE ADDITIONAL SAMPLE STORAGE TIME.

ALS LABORATORY GROUP ANALYTICAL REPORT

		Sample ID	L480803-1	L480803-2	L480803-3	L480803-4
		Description				
		Sampled Date	22-FEB-07	22-FEB-07	22-FEB-07	22-FEB-07
		Sampled Time				
		Client ID	85-027-17-44	85-027-24-44	86-035-07-44	86-035-09-44
Grouping	Analyte					
WATER						
Sample Preparation	total volume in (mL)		500	500	500	500
	total volume out (mL)		505	465	520	520
Physical Tests	Conductivity (uS/cm)		63.8	86.4	222	340
	pH (pH)		7.87	8.21	8.38	8.20
Anions and Nutrients	Acidity (as CaCO3) (mg/L)		1.8	1.9	<1.0	1.6
	Alkalinity, Total (as CaCO3) (mg/L)		32.1	43.8	134	94.0
	Sulfate (SO4) (mg/L)		2.0	1.6	2.7	95.3
Dissolved Metals	Aluminum (Al)-Dissolved (mg/L)		0.048	0.067	<0.010	<0.010
	Antimony (Sb)-Dissolved (mg/L)		0.0015	<0.0010	<0.0010	<0.0010
	Arsenic (As)-Dissolved (mg/L)		0.0010	<0.0010	<0.0010	<0.0010
	Barium (Ba)-Dissolved (mg/L)		0.0189	0.0529	0.269	0.168
	Beryllium (Be)-Dissolved (mg/L)		<0.0050	<0.0050	<0.0050	<0.0050
	Bismuth (Bi)-Dissolved (mg/L)		<0.0050	<0.0050	<0.0050	<0.0050
	Boron (B)-Dissolved (mg/L)		<0.10	<0.10	<0.10	<0.10
	Cadmium (Cd)-Dissolved (mg/L)		<0.00050	<0.00050	<0.00050	<0.00050
	Calcium (Ca)-Dissolved (mg/L)		7.25	8.10	11.3	25.9
	Chromium (Cr)-Dissolved (mg/L)		<0.0050	<0.0050	<0.0050	<0.0050
	Cobalt (Co)-Dissolved (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010
	Copper (Cu)-Dissolved (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010
	Iron (Fe)-Dissolved (mg/L)		<0.030	<0.030	<0.030	<0.030
	Lead (Pb)-Dissolved (mg/L)		<0.00050	<0.00050	<0.00050	<0.00050
	Lithium (Li)-Dissolved (mg/L)		<0.010	<0.010	<0.010	0.013
	Magnesium (Mg)-Dissolved (mg/L)		3.92	5.99	25.9	28.4
	Manganese (Mn)-Dissolved (mg/L)		<0.00050	0.00173	<0.00050	0.00158
	Mercury (Hg)-Dissolved (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010
	Molybdenum (Mo)-Dissolved (mg/L)		0.00259	0.00427	0.00100	0.00099
	Nickel (Ni)-Dissolved (mg/L)		<0.0050	<0.0050	<0.0050	<0.0050
	Phosphorus (P)-Dissolved (mg/L)		<0.30	<0.30	<0.30	<0.30
	Potassium (K)-Dissolved (mg/L)		<0.50	0.55	1.58	4.51
	Selenium (Se)-Dissolved (mg/L)		<0.010	<0.010	<0.010	<0.010
	Silicon (Si)-Dissolved (mg/L)		0.993	1.07	0.583	0.642
	Silver (Ag)-Dissolved (mg/L)		<0.00010	<0.00010	<0.00010	<0.00010
	Sodium (Na)-Dissolved (mg/L)		<0.50	<0.50	0.90	4.13
	Strontium (Sr)-Dissolved (mg/L)		0.159	0.267	0.761	0.950
	Thallium (Tl)-Dissolved (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010
	Tin (Sn)-Dissolved (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010
	Titanium (Ti)-Dissolved (mg/L)		<0.010	<0.010	<0.010	<0.010
	Uranium (U)-Dissolved (mg/L)		<0.00010	<0.00010	<0.00010	<0.00010

ALS LABORATORY GROUP ANALYTICAL REPORT

	Sample ID Description Sampled Date Sampled Time Client ID	L480803-1	L480803-2	L480803-3	L480803-4	
Grouping	Analyte					
WATER						
Dissolved Metals	Vanadium (V)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	
	Zinc (Zn)-Dissolved (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)
ACY-PCT-VA	Water	Acidity by Automated Titration	APHA 2310 "Acidity"
This analysis is carried out using procedures adapted from APHA Method 2310 "Acidity". Acidity is determined by potentiometric titration to a specified endpoint.			
ALK-COL-VA	Water	Alkalinity by Colourimetric (Automated)	APHA 310.2
This analysis is carried out using procedures adapted from EPA Method 310.2 "Alkalinity". Total Alkalinity is determined using the methyl orange colourimetric method.			
EC-MAN-HCELL-VA	Water	Conductivity (Manual)	APHA 2510 "Conductivity"
This analysis is carried out using procedures adapted from APHA Method 2510 "Conductivity". Conductivity is determined using a conductivity electrode.			
HG-DIS-CVAFS-VA	Water	Dissolved Mercury in Water by CVAFS	EPA SW-846 3005A & EPA 245.7
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedures may involve preliminary sample treatment by filtration (EPA Method 3005A) and involves a cold-oxidation of the acidified sample using bromine monochloride prior to reduction of the sample with stannous chloride. Instrumental analysis is by cold vapour atomic fluorescence spectrophotometry (EPA Method 245.7).			
MET-DIS-ICP-VA	Water	Dissolved Metals in Water by ICPOES	EPA SW-846 3005A/6010B
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedure involves filtration (EPA Method 3005A) and analysis by inductively coupled plasma - optical emission spectrophotometry (EPA Method 6010B).			
MET-DIS-LOW-MS-VA	Water	Dissolved Metals in Water by ICPMS(Low)	EPA SW-846 3005A/6020
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedure involves preliminary sample treatment by filtration (EPA Method 3005A). Instrumental analysis is by inductively coupled plasma - mass spectrometry (EPA Method 6020).			
PH-MAN-HCELL-VA	Water	pH by Manual Meter	APHA 4500-H "pH Value"
This analysis is carried out using procedures adapted from APHA Method 4500-H "pH Value". The pH is determined in the laboratory using a pH electrode.			
SO4-TUR-VA	Water	Sulphate(SO4) by Turbidity	APHA 4500-SO4 "Sulphate"
This analysis is carried out using procedures adapted from APHA Method 4500-SO4 "Sulphate". Sulphate is determined using the turbidimetric method.			

** Laboratory Methods employed follow in-house procedures, which are generally based on nationally or internationally accepted methodologies. The last two letters of the above ALS Test Code column indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location	Laboratory Definition Code	Laboratory Location
VA	ALS LABORATORY GROUP - VANCOUVER, BC, CANADA		

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)
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GLOSSARY OF REPORT TERMS

Surr - A surrogate is an organic compound that is similar to the target analyte(s) in chemical composition and behavior but not normally detected in environmental samples. Prior to sample processing, samples are fortified with one or more surrogate compounds.

The reported surrogate recovery value provides a measure of method efficiency.

mg/kg (units) - unit of concentration based on mass, parts per million

mg/L (units) - unit of concentration based on volume, parts per million

N/A - Result not available. Refer to qualifier code and definition for explanation

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Although test results are generated under strict QA/QC protocols, any unsigned test reports, faxes, or emails are considered preliminary.

ALS Laboratory Group has an extensive QA/QC program where all analytical data reported is analyzed using approved referenced procedures followed by checks and reviews by senior managers and quality assurance personnel. However, since the results are obtained from chemical measurements and thus cannot be guaranteed, ALS Laboratory Group assumes no liability for the use or interpretation of the results.



Environmental Division

ANALYTICAL REPORT

RESCAN ENVIRONMENTAL SERVICES

ATTN: DAVE ARCHIBALD

Reported On: 15-MAR-07 09:01 PM

SIXTH FLOOR
1111 WEST HASTINGS STREET
VANCOUVER BC V6E 2J3

Lab Work Order #: **L482414**

Date Received: **28-FEB-07**

Project P.O. #: NOT SUBMITTED
Job Reference: MT. KLAPPAN CYCLE#50 HUMIDITY CELLS
Legal Site Desc:
CofC Numbers:

Other Information:

Comments: Dissolved Zinc result for sample ARD3-08B-50 was confirmed by re-analysis.

TIMOTHY GUY CROWTHER
General Manager, Vancouver

For any questions about this report please contact your Account Manager:

ANDRE LANGLAIS

THIS REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL WITHOUT THE WRITTEN AUTHORITY OF THE LABORATORY.
ALL SAMPLES WILL BE DISPOSED OF AFTER 30 DAYS FOLLOWING ANALYSIS. PLEASE CONTACT THE LAB IF YOU
REQUIRE ADDITIONAL SAMPLE STORAGE TIME.

ALS LABORATORY GROUP ANALYTICAL REPORT

		Sample ID	L482414-1	L482414-2	L482414-3	L482414-4	L482414-5
		Description					
		Sampled Date	28-FEB-07	28-FEB-07	28-FEB-07	28-FEB-07	28-FEB-07
		Sampled Time					
		Client ID	ARD3-08B-50	ARD3-14B-50	ARD1-15-50	ARD2-12-50	ARD2-07-50
Grouping	Analyte						
WATER							
Sample Preparation	total volume in (mL)		500	500	500	500	500
	total volume out (mL)		480	400	455	450	470
Physical Tests	Conductivity (uS/cm)		1840	197	83.7	510	304
	pH (pH)		7.42	8.03	8.06	8.04	8.35
Anions and Nutrients	Acidity (as CaCO3) (mg/L)		4.0	5.0	2.7	3.5	<1.0
	Alkalinity, Total (as CaCO3) (mg/L)		25.9	57.7	38.5	85.6	119
	Sulfate (SO4) (mg/L)		1140	50.1	3.4	217	53.0
Dissolved Metals	Aluminum (Al)-Dissolved (mg/L)		<0.010				
	Antimony (Sb)-Dissolved (mg/L)		<0.0010				
	Arsenic (As)-Dissolved (mg/L)		<0.0010				
	Barium (Ba)-Dissolved (mg/L)		0.0136				
	Beryllium (Be)-Dissolved (mg/L)		<0.0050				
	Bismuth (Bi)-Dissolved (mg/L)		<0.0050				
	Boron (B)-Dissolved (mg/L)		0.17				
	Cadmium (Cd)-Dissolved (mg/L)		0.00144				
	Calcium (Ca)-Dissolved (mg/L)		95.9				
	Chromium (Cr)-Dissolved (mg/L)		<0.0050				
	Cobalt (Co)-Dissolved (mg/L)		0.0233				
	Copper (Cu)-Dissolved (mg/L)		<0.0010				
	Iron (Fe)-Dissolved (mg/L)		<0.030				
	Lead (Pb)-Dissolved (mg/L)		<0.00050				
	Lithium (Li)-Dissolved (mg/L)		0.105				
	Magnesium (Mg)-Dissolved (mg/L)		129				
	Manganese (Mn)-Dissolved (mg/L)		3.12				
	Mercury (Hg)-Dissolved (mg/L)		<0.0010				
	Molybdenum (Mo)-Dissolved (mg/L)		<0.00050				
	Nickel (Ni)-Dissolved (mg/L)		0.163				
	Phosphorus (P)-Dissolved (mg/L)		<0.30				
	Potassium (K)-Dissolved (mg/L)		10.4				
	Selenium (Se)-Dissolved (mg/L)		0.012				
	Silicon (Si)-Dissolved (mg/L)		1.13				
	Silver (Ag)-Dissolved (mg/L)		<0.00010				
	Sodium (Na)-Dissolved (mg/L)		173				
	Strontium (Sr)-Dissolved (mg/L)		8.86				
	Thallium (Tl)-Dissolved (mg/L)		0.0011				
	Tin (Sn)-Dissolved (mg/L)		<0.0010				
	Titanium (Ti)-Dissolved (mg/L)		<0.010				
	Uranium (U)-Dissolved (mg/L)		<0.00010				

ALS LABORATORY GROUP ANALYTICAL REPORT

	Sample ID Description Sampled Date Sampled Time Client ID				
	L482414-6 28-FEB-07 DUMP-2.5M-50				
Grouping	Analyte				
WATER					
Sample Preparation	total volume in (mL)	500			
	total volume out (mL)	420			
Physical Tests	Conductivity (uS/cm)	97.6			
	pH (pH)	8.15			
Anions and Nutrients	Acidity (as CaCO3) (mg/L)	1.9			
	Alkalinity, Total (as CaCO3) (mg/L)	53.3			
	Sulfate (SO4) (mg/L)	<1.0			
Dissolved Metals	Aluminum (Al)-Dissolved (mg/L)				
	Antimony (Sb)-Dissolved (mg/L)				
	Arsenic (As)-Dissolved (mg/L)				
	Barium (Ba)-Dissolved (mg/L)				
	Beryllium (Be)-Dissolved (mg/L)				
	Bismuth (Bi)-Dissolved (mg/L)				
	Boron (B)-Dissolved (mg/L)				
	Cadmium (Cd)-Dissolved (mg/L)				
	Calcium (Ca)-Dissolved (mg/L)				
	Chromium (Cr)-Dissolved (mg/L)				
	Cobalt (Co)-Dissolved (mg/L)				
	Copper (Cu)-Dissolved (mg/L)				
	Iron (Fe)-Dissolved (mg/L)				
	Lead (Pb)-Dissolved (mg/L)				
	Lithium (Li)-Dissolved (mg/L)				
	Magnesium (Mg)-Dissolved (mg/L)				
	Manganese (Mn)-Dissolved (mg/L)				
	Mercury (Hg)-Dissolved (mg/L)				
	Molybdenum (Mo)-Dissolved (mg/L)				
	Nickel (Ni)-Dissolved (mg/L)				
	Phosphorus (P)-Dissolved (mg/L)				
	Potassium (K)-Dissolved (mg/L)				
	Selenium (Se)-Dissolved (mg/L)				
	Silicon (Si)-Dissolved (mg/L)				
	Silver (Ag)-Dissolved (mg/L)				
	Sodium (Na)-Dissolved (mg/L)				
	Strontium (Sr)-Dissolved (mg/L)				
	Thallium (Tl)-Dissolved (mg/L)				
	Tin (Sn)-Dissolved (mg/L)				
	Titanium (Ti)-Dissolved (mg/L)				
	Uranium (U)-Dissolved (mg/L)				

ALS LABORATORY GROUP ANALYTICAL REPORT

	Sample ID Description Sampled Date Sampled Time Client ID	L482414-1	L482414-2	L482414-3	L482414-4	L482414-5
		28-FEB-07	28-FEB-07	28-FEB-07	28-FEB-07	28-FEB-07
		ARD3-08B-50	ARD3-14B-50	ARD1-15-50	ARD2-12-50	ARD2-07-50
Grouping	Analyte					
WATER						
Dissolved Metals	Vanadium (V)-Dissolved (mg/L)	<0.010				
	Zinc (Zn)-Dissolved (mg/L)	0.0289				

ALS LABORATORY GROUP ANALYTICAL REPORT

	Sample ID Description Sampled Date Sampled Time Client ID	L482414-6 28-FEB-07 DUMP-2.5M-50				
Grouping	Analyte					
WATER						
Dissolved Metals	Vanadium (V)-Dissolved (mg/L) Zinc (Zn)-Dissolved (mg/L)					

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)
ACY-PCT-VA	Water	Acidity by Automated Titration	APHA 2310 "Acidity"
This analysis is carried out using procedures adapted from APHA Method 2310 "Acidity". Acidity is determined by potentiometric titration to a specified endpoint.			
ALK-COL-VA	Water	Alkalinity by Colourimetric (Automated)	APHA 310.2
This analysis is carried out using procedures adapted from EPA Method 310.2 "Alkalinity". Total Alkalinity is determined using the methyl orange colourimetric method.			
EC-MAN-HCELL-VA	Water	Conductivity (Manual)	APHA 2510 "Conductivity"
This analysis is carried out using procedures adapted from APHA Method 2510 "Conductivity". Conductivity is determined using a conductivity electrode.			
HG-DIS-CVAFS-VA	Water	Dissolved Mercury in Water by CVAFS	EPA SW-846 3005A & EPA 245.7
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedures may involve preliminary sample treatment by filtration (EPA Method 3005A) and involves a cold-oxidation of the acidified sample using bromine monochloride prior to reduction of the sample with stannous chloride. Instrumental analysis is by cold vapour atomic fluorescence spectrophotometry (EPA Method 245.7).			
MET-DIS-ICP-VA	Water	Dissolved Metals in Water by ICPOES	EPA SW-846 3005A/6010B
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedure involves filtration (EPA Method 3005A) and analysis by inductively coupled plasma - optical emission spectrophotometry (EPA Method 6010B).			
MET-DIS-LOW-MS-VA	Water	Dissolved Metals in Water by ICPMS(Low)	EPA SW-846 3005A/6020
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedure involves preliminary sample treatment by filtration (EPA Method 3005A). Instrumental analysis is by inductively coupled plasma - mass spectrometry (EPA Method 6020).			
PH-MAN-HCELL-VA	Water	pH by Manual Meter	APHA 4500-H "pH Value"
This analysis is carried out using procedures adapted from APHA Method 4500-H "pH Value". The pH is determined in the laboratory using a pH electrode.			
SO4-TUR-VA	Water	Sulphate(SO4) by Turbidity	APHA 4500-SO4 "Sulphate"
This analysis is carried out using procedures adapted from APHA Method 4500-SO4 "Sulphate". Sulphate is determined using the turbidimetric method.			

** Laboratory Methods employed follow in-house procedures, which are generally based on nationally or internationally accepted methodologies. The last two letters of the above ALS Test Code column indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location	Laboratory Definition Code	Laboratory Location
VA	ALS LABORATORY GROUP - VANCOUVER, BC, CANADA		

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)
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GLOSSARY OF REPORT TERMS

Surr - A surrogate is an organic compound that is similar to the target analyte(s) in chemical composition and behavior but not normally detected in environmental samples. Prior to sample processing, samples are fortified with one or more surrogate compounds.

The reported surrogate recovery value provides a measure of method efficiency.

mg/kg (units) - unit of concentration based on mass, parts per million

mg/L (units) - unit of concentration based on volume, parts per million

N/A - Result not available. Refer to qualifier code and definition for explanation

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Although test results are generated under strict QA/QC protocols, any unsigned test reports, faxes, or emails are considered preliminary.

ALS Laboratory Group has an extensive QA/QC program where all analytical data reported is analyzed using approved referenced procedures followed by checks and reviews by senior managers and quality assurance personnel. However, since the results are obtained from chemical measurements and thus cannot be guaranteed, ALS Laboratory Group assumes no liability for the use or interpretation of the results.



RESCAN ENVIRONMENTAL SERVICES
ATTN: DAVE ARCHIBALD
SIXTH FLOOR
1111 WEST HASTINGS STREET
VANCOUVER BC V6E 2J3

Date Received: 08-MAR-07
Report Date: 28-JAN-13 14:57 (MT)
Version: DRAFT

Client Phone: 604-689-9460

Certificate of Analysis

Lab Work Order #: **L482757**
Project P.O. #: NOT SUBMITTED
Job Reference: RES100-KLAP-HC-VA
C of C Numbers:
Legal Site Desc:

DRAFT

Andre Langlais
Account Manager

[This report shall not be reproduced except in full without the written authority of the Laboratory.]

ADDRESS: 8081 Lougheed Hwy, Suite 100, Burnaby, BC V5A 1W9 Canada | Phone: +1 604 253 4188 | Fax: +1 604 253 6700
ALS CANADA LTD Part of the ALS Group A Campbell Brothers Limited Company

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	Sample ID	Description	Sampled Date	Sampled Time	Client ID
DRAFT						

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
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** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
----------------------------	---------------------

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

Surrogate - A compound that is similar in behaviour to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.

mg/kg - milligrams per kilogram based on dry weight of sample.

mg/kg wwt - milligrams per kilogram based on wet weight of sample.

mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight of sample.

mg/L - milligrams per litre.

< - Less than.

D.L. - The reported Detection Limit, also known as the Limit of Reporting (LOR).

N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.

DRAFT



Environmental Division

ANALYTICAL REPORT

RESCAN ENVIRONMENTAL SERVICES

ATTN: DAVE ARCHIBALD

Reported On: 16-MAR-07 06:12 PM

SIXTH FLOOR
1111 WEST HASTINGS STREET
VANCOUVER BC V6E 2J3

Lab Work Order #: **L482760**

Date Received: **01-MAR-07**

Project P.O. #: NOT SUBMITTED
Job Reference: MT KLAPPAN CYCLE#45 HUMIDITY CELLS
Legal Site Desc:
CofC Numbers:

Other Information:

Comments:

TIMOTHY GUY CROWTHER
General Manager, Vancouver

For any questions about this report please contact your Account Manager:

ANDRE LANGLAIS

THIS REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL WITHOUT THE WRITTEN AUTHORITY OF THE LABORATORY.
ALL SAMPLES WILL BE DISPOSED OF AFTER 30 DAYS FOLLOWING ANALYSIS. PLEASE CONTACT THE LAB IF YOU
REQUIRE ADDITIONAL SAMPLE STORAGE TIME.

ALS LABORATORY GROUP ANALYTICAL REPORT

		Sample ID	L482760-1	L482760-2	L482760-3	L482760-4	
		Description					
		Sampled Date	01-MAR-07	01-MAR-07	01-MAR-07	01-MAR-07	
		Sampled Time					
		Client ID	85-027-17-45	85-027-24-45	86-035-07-45	86-035-09-45	
Grouping	Analyte						
WATER							
Sample Preparation	total volume in (mL)		500	500	500	500	
	total volume out (mL)		500	460	500	445	
Physical Tests	Conductivity (uS/cm)		66.6	83.5	262	413	
	pH (pH)		7.97	8.35	8.45	8.27	
Anions and Nutrients	Acidity (as CaCO ₃) (mg/L)		2.1	2.2	<1.0	1.3	
	Alkalinity, Total (as CaCO ₃) (mg/L)		32.8	43.4	153	103	
	Sulfate (SO ₄) (mg/L)		2.8	2.0	3.9	133	

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)
ACY-PCT-VA	Water	Acidity by Automated Titration	APHA 2310 "Acidity"
This analysis is carried out using procedures adapted from APHA Method 2310 "Acidity". Acidity is determined by potentiometric titration to a specified endpoint.			
ALK-COL-VA	Water	Alkalinity by Colourimetric (Automated)	APHA 310.2
This analysis is carried out using procedures adapted from EPA Method 310.2 "Alkalinity". Total Alkalinity is determined using the methyl orange colourimetric method.			
EC-MAN-HCELL-VA	Water	Conductivity (Manual)	APHA 2510 "Conductivity"
This analysis is carried out using procedures adapted from APHA Method 2510 "Conductivity". Conductivity is determined using a conductivity electrode.			
PH-MAN-HCELL-VA	Water	pH by Manual Meter	APHA 4500-H "pH Value"
This analysis is carried out using procedures adapted from APHA Method 4500-H "pH Value". The pH is determined in the laboratory using a pH electrode.			
SO4-TUR-VA	Water	Sulphate(SO4) by Turbidity	APHA 4500-SO4 "Sulphate"
This analysis is carried out using procedures adapted from APHA Method 4500-SO4 "Sulphate". Sulphate is determined using the turbidimetric method.			

** Laboratory Methods employed follow in-house procedures, which are generally based on nationally or internationally accepted methodologies. The last two letters of the above ALS Test Code column indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location	Laboratory Definition Code	Laboratory Location
VA	ALS LABORATORY GROUP - VANCOUVER, BC, CANADA		

GLOSSARY OF REPORT TERMS

Surr - A surrogate is an organic compound that is similar to the target analyte(s) in chemical composition and behavior but not normally detected in environmental samples. Prior to sample processing, samples are fortified with one or more surrogate compounds.

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mg/L (units) - unit of concentration based on volume, parts per million

N/A - Result not available. Refer to qualifier code and definition for explanation

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Environmental Division

ANALYTICAL REPORT

RESCAN ENVIRONMENTAL SERVICES

ATTN: DAVE ARCHIBALD

SIXTH FLOOR
1111 WEST HASTINGS STREET
VANCOUVER BC V6E 2J3

Reported On: 27-MAR-07 04:36 PM

Revision: 1

Lab Work Order #: **L484820**

Date Received: **08-MAR-07**

Project P.O. #: NOT SUBMITTED
Job Reference: MT. KLAPPAN CYCLE#51 HUMIDITY CELLS
Legal Site Desc:
CofC Numbers:

Other Information:

Comments:

TIMOTHY GUY CROWTHER
General Manager, Vancouver

For any questions about this report please contact your Account Manager:

ANDRE LANGLAIS

THIS REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL WITHOUT THE WRITTEN AUTHORITY OF THE LABORATORY.
ALL SAMPLES WILL BE DISPOSED OF AFTER 30 DAYS FOLLOWING ANALYSIS. PLEASE CONTACT THE LAB IF YOU
REQUIRE ADDITIONAL SAMPLE STORAGE TIME.

ALS LABORATORY GROUP ANALYTICAL REPORT

		Sample ID	L484820-1	L484820-2	L484820-3	L484820-4	L484820-5
		Description					
		Sampled Date	08-MAR-07	08-MAR-07	08-MAR-07	08-MAR-07	08-MAR-07
		Sampled Time					
		Client ID	ARD3-14B-51	ARD1-15-51	ARD2-12-51	ARD2-07-51	DUMP-2.5M-51
Grouping	Analyte						
WATER							
Sample Preparation	total volume in (mL)		500	500	500	500	500
	total volume out (mL)		500	465	465	465	440
Physical Tests	Conductivity (uS/cm)		201	79.8	590	287	92.1
	pH (pH)		8.08	8.13	8.04	8.32	8.23
Anions and Nutrients	Acidity (as CaCO3) (mg/L)		2.3	2.1	2.5	1.1	2.5
	Alkalinity, Total (as CaCO3) (mg/L)		65.2	37.0	85.0	115	49.8
	Sulfate (SO4) (mg/L)		49.1	3.5	259	49.0	<1.0
Dissolved Metals	Aluminum (Al)-Dissolved (mg/L)		<0.010	0.088	<0.010	<0.010	0.134
	Antimony (Sb)-Dissolved (mg/L)		<0.0010	0.0015	<0.0010	<0.0010	<0.0010
	Arsenic (As)-Dissolved (mg/L)		<0.0010	0.0035	<0.0010	<0.0010	<0.0010
	Barium (Ba)-Dissolved (mg/L)		0.155	0.0687	0.0172	0.0609	0.00752
	Beryllium (Be)-Dissolved (mg/L)		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Bismuth (Bi)-Dissolved (mg/L)		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Boron (B)-Dissolved (mg/L)		<0.10	<0.10	<0.10	<0.10	<0.10
	Cadmium (Cd)-Dissolved (mg/L)		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Calcium (Ca)-Dissolved (mg/L)		21.9	8.29	86.1	11.7	3.53
	Chromium (Cr)-Dissolved (mg/L)		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Cobalt (Co)-Dissolved (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Copper (Cu)-Dissolved (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Iron (Fe)-Dissolved (mg/L)		<0.030	<0.030	<0.030	<0.030	<0.030
	Lead (Pb)-Dissolved (mg/L)		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Lithium (Li)-Dissolved (mg/L)		<0.010	<0.010	<0.010	<0.010	<0.010
	Magnesium (Mg)-Dissolved (mg/L)		10.6	4.73	30.7	30.8	9.74
	Manganese (Mn)-Dissolved (mg/L)		0.00095	0.00126	0.0354	<0.00050	0.00056
	Mercury (Hg)-Dissolved (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Molybdenum (Mo)-Dissolved (mg/L)		0.00671	0.00404	<0.00050	0.00397	0.00068
	Nickel (Ni)-Dissolved (mg/L)		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Phosphorus (P)-Dissolved (mg/L)		<0.30	<0.30	<0.30	<0.30	<0.30
	Potassium (K)-Dissolved (mg/L)		1.35	<0.50	<0.50	1.55	<0.50
	Selenium (Se)-Dissolved (mg/L)		<0.010	<0.010	<0.010	<0.010	<0.010
	Silicon (Si)-Dissolved (mg/L)		0.728	1.40	0.230	0.714	1.05
	Silver (Ag)-Dissolved (mg/L)		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Sodium (Na)-Dissolved (mg/L)		0.80	<0.50	<0.50	<0.50	<0.50
	Strontium (Sr)-Dissolved (mg/L)		1.00	0.122	0.819	0.544	0.0300
	Thallium (Tl)-Dissolved (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Tin (Sn)-Dissolved (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Titanium (Ti)-Dissolved (mg/L)		<0.010	<0.010	<0.010	<0.010	<0.010
	Uranium (U)-Dissolved (mg/L)		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)
ACY-PCT-VA	Water	Acidity by Automated Titration	APHA 2310 "Acidity"
This analysis is carried out using procedures adapted from APHA Method 2310 "Acidity". Acidity is determined by potentiometric titration to a specified endpoint.			
ALK-COL-VA	Water	Alkalinity by Colourimetric (Automated)	APHA 310.2
This analysis is carried out using procedures adapted from EPA Method 310.2 "Alkalinity". Total Alkalinity is determined using the methyl orange colourimetric method.			
EC-MAN-HCELL-VA	Water	Conductivity (Manual)	APHA 2510 "Conductivity"
This analysis is carried out using procedures adapted from APHA Method 2510 "Conductivity". Conductivity is determined using a conductivity electrode.			
HG-DIS-CVAFS-VA	Water	Dissolved Mercury in Water by CVAFS	EPA SW-846 3005A & EPA 245.7
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedures may involve preliminary sample treatment by filtration (EPA Method 3005A) and involves a cold-oxidation of the acidified sample using bromine monochloride prior to reduction of the sample with stannous chloride. Instrumental analysis is by cold vapour atomic fluorescence spectrophotometry (EPA Method 245.7).			
MET-DIS-ICP-VA	Water	Dissolved Metals in Water by ICPOES	EPA SW-846 3005A/6010B
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedure involves filtration (EPA Method 3005A) and analysis by inductively coupled plasma - optical emission spectrophotometry (EPA Method 6010B).			
MET-DIS-LOW-MS-VA	Water	Dissolved Metals in Water by ICPMS(Low)	EPA SW-846 3005A/6020
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedure involves preliminary sample treatment by filtration (EPA Method 3005A). Instrumental analysis is by inductively coupled plasma - mass spectrometry (EPA Method 6020).			
PH-MAN-HCELL-VA	Water	pH by Manual Meter	APHA 4500-H "pH Value"
This analysis is carried out using procedures adapted from APHA Method 4500-H "pH Value". The pH is determined in the laboratory using a pH electrode.			
SO4-TUR-VA	Water	Sulphate(SO4) by Turbidity	APHA 4500-SO4 "Sulphate"
This analysis is carried out using procedures adapted from APHA Method 4500-SO4 "Sulphate". Sulphate is determined using the turbidimetric method.			

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Laboratory Definition Code	Laboratory Location	Laboratory Definition Code	Laboratory Location
VA	ALS LABORATORY GROUP - VANCOUVER, BC, CANADA		

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)
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GLOSSARY OF REPORT TERMS

Surr - A surrogate is an organic compound that is similar to the target analyte(s) in chemical composition and behavior but not normally detected in environmental samples. Prior to sample processing, samples are fortified with one or more surrogate compounds.

The reported surrogate recovery value provides a measure of method efficiency.

mg/kg (units) - unit of concentration based on mass, parts per million

mg/L (units) - unit of concentration based on volume, parts per million

N/A - Result not available. Refer to qualifier code and definition for explanation

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Environmental Division

ANALYTICAL REPORT

RESCAN ENVIRONMENTAL SERVICES

ATTN: DAVE ARCHIBALD

Reported On: 21-MAR-07 11:31 AM

SIXTH FLOOR
1111 WEST HASTINGS STREET
VANCOUVER BC V6E 2J3

Lab Work Order #: **L484821**

Date Received: **08-MAR-07**

Project P.O. #: NOT SUBMITTED
Job Reference: MT. KLAPPAN CYCLE#46 HUMIDITY CELLS
Legal Site Desc:
CofC Numbers:

Other Information:

Comments:

TIMOTHY GUY CROWTHER
General Manager, Vancouver

For any questions about this report please contact your Account Manager:

ANDRE LANGLAIS

THIS REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL WITHOUT THE WRITTEN AUTHORITY OF THE LABORATORY.
ALL SAMPLES WILL BE DISPOSED OF AFTER 30 DAYS FOLLOWING ANALYSIS. PLEASE CONTACT THE LAB IF YOU
REQUIRE ADDITIONAL SAMPLE STORAGE TIME.

ALS LABORATORY GROUP ANALYTICAL REPORT

		Sample ID	L484821-1	L484821-2	L484821-3	L484821-4	L484821-5
		Description					
		Sampled Date	08-MAR-07	08-MAR-07	08-MAR-07	08-MAR-07	08-MAR-07
		Sampled Time					
		Client ID	85-016-07-46	85-027-02-46	85-027-17-46	85-027-24-46	86-035-07-46
Grouping	Analyte						
WATER							
Sample Preparation	total volume in (mL)		500	500	500	500	500
	total volume out (mL)		420	400	465	445	400
Physical Tests	Conductivity (uS/cm)		303	326	61.6	79.5	295
	pH (pH)		8.51	7.93	7.89	8.28	8.50
Anions and Nutrients	Acidity (as CaCO3) (mg/L)		<1.0	3.5	3.2	3.3	<1.0
	Alkalinity, Total (as CaCO3) (mg/L)		160	41.3	31.4	42.9	194
	Sulfate (SO4) (mg/L)		21.2	106	2.5	1.7	4.5
Dissolved Metals	Aluminum (Al)-Dissolved (mg/L)		<0.010	0.043	0.056	0.108	<0.010
	Antimony (Sb)-Dissolved (mg/L)		<0.0010	<0.0010	0.0014	<0.0010	<0.0010
	Arsenic (As)-Dissolved (mg/L)		<0.0010	<0.0010	0.0012	<0.0010	<0.0010
	Barium (Ba)-Dissolved (mg/L)		0.188	0.0756	0.0164	0.0490	0.346
	Beryllium (Be)-Dissolved (mg/L)		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Bismuth (Bi)-Dissolved (mg/L)		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Boron (B)-Dissolved (mg/L)		<0.10	<0.10	<0.10	<0.10	<0.10
	Cadmium (Cd)-Dissolved (mg/L)		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Calcium (Ca)-Dissolved (mg/L)		8.09	4.08	6.93	7.33	15.2
	Chromium (Cr)-Dissolved (mg/L)		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Cobalt (Co)-Dissolved (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Copper (Cu)-Dissolved (mg/L)		0.0014	<0.0010	0.0011	<0.0010	<0.0010
	Iron (Fe)-Dissolved (mg/L)		<0.030	<0.030	<0.030	<0.030	<0.030
	Lead (Pb)-Dissolved (mg/L)		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Lithium (Li)-Dissolved (mg/L)		0.023	0.026	<0.010	<0.010	<0.010
	Magnesium (Mg)-Dissolved (mg/L)		22.9	20.9	3.67	5.57	36.1
	Manganese (Mn)-Dissolved (mg/L)		0.00090	0.00123	0.00076	0.00166	<0.00050
	Mercury (Hg)-Dissolved (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Molybdenum (Mo)-Dissolved (mg/L)		0.00123	0.00773	0.00267	0.00418	0.00125
	Nickel (Ni)-Dissolved (mg/L)		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Phosphorus (P)-Dissolved (mg/L)		<0.30	<0.30	<0.30	<0.30	<0.30
	Potassium (K)-Dissolved (mg/L)		3.47	3.35	<0.50	<0.50	1.79
	Selenium (Se)-Dissolved (mg/L)		<0.010	<0.010	<0.010	<0.010	<0.010
	Silicon (Si)-Dissolved (mg/L)		0.460	0.560	1.16	1.09	0.768
	Silver (Ag)-Dissolved (mg/L)		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Sodium (Na)-Dissolved (mg/L)		26.6	30.3	<0.50	<0.50	1.07
	Strontium (Sr)-Dissolved (mg/L)		0.955	0.645	0.141	0.223	0.850
	Thallium (Tl)-Dissolved (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Tin (Sn)-Dissolved (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Titanium (Ti)-Dissolved (mg/L)		<0.010	<0.010	<0.010	<0.010	<0.010
	Uranium (U)-Dissolved (mg/L)		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010

ALS LABORATORY GROUP ANALYTICAL REPORT

		Sample ID	L484821-6			
		Description				
		Sampled Date	08-MAR-07			
		Sampled Time				
		Client ID	86-035-09-46			
Grouping	Analyte					
WATER						
Sample Preparation	total volume in (mL)		500			
	total volume out (mL)		440			
Physical Tests	Conductivity (uS/cm)		435			
	pH (pH)		8.26			
Anions and Nutrients	Acidity (as CaCO3) (mg/L)		2.0			
	Alkalinity, Total (as CaCO3) (mg/L)		114			
	Sulfate (SO4) (mg/L)		143			
Dissolved Metals	Aluminum (Al)-Dissolved (mg/L)		<0.010			
	Antimony (Sb)-Dissolved (mg/L)		<0.0010			
	Arsenic (As)-Dissolved (mg/L)		<0.0010			
	Barium (Ba)-Dissolved (mg/L)		0.0892			
	Beryllium (Be)-Dissolved (mg/L)		<0.0050			
	Bismuth (Bi)-Dissolved (mg/L)		<0.0050			
	Boron (B)-Dissolved (mg/L)		<0.10			
	Cadmium (Cd)-Dissolved (mg/L)		<0.00050			
	Calcium (Ca)-Dissolved (mg/L)		36.3			
	Chromium (Cr)-Dissolved (mg/L)		<0.0050			
	Cobalt (Co)-Dissolved (mg/L)		<0.0010			
	Copper (Cu)-Dissolved (mg/L)		<0.0010			
	Iron (Fe)-Dissolved (mg/L)		<0.030			
	Lead (Pb)-Dissolved (mg/L)		<0.00050			
	Lithium (Li)-Dissolved (mg/L)		0.013			
	Magnesium (Mg)-Dissolved (mg/L)		36.3			
	Manganese (Mn)-Dissolved (mg/L)		0.00079			
	Mercury (Hg)-Dissolved (mg/L)		<0.0010			
	Molybdenum (Mo)-Dissolved (mg/L)		0.00099			
	Nickel (Ni)-Dissolved (mg/L)		<0.0050			
	Phosphorus (P)-Dissolved (mg/L)		<0.30			
	Potassium (K)-Dissolved (mg/L)		4.86			
	Selenium (Se)-Dissolved (mg/L)		<0.010			
	Silicon (Si)-Dissolved (mg/L)		0.708			
	Silver (Ag)-Dissolved (mg/L)		<0.00010			
	Sodium (Na)-Dissolved (mg/L)		3.35			
	Strontium (Sr)-Dissolved (mg/L)		1.03			
	Thallium (Tl)-Dissolved (mg/L)		<0.0010			
	Tin (Sn)-Dissolved (mg/L)		<0.0010			
	Titanium (Ti)-Dissolved (mg/L)		<0.010			
	Uranium (U)-Dissolved (mg/L)		<0.00010			

ALS LABORATORY GROUP ANALYTICAL REPORT

	Sample ID Description Sampled Date Sampled Time Client ID	L484821-1	L484821-2	L484821-3	L484821-4	L484821-5
		08-MAR-07	08-MAR-07	08-MAR-07	08-MAR-07	08-MAR-07
		85-016-07-46	85-027-02-46	85-027-17-46	85-027-24-46	86-035-07-46
Grouping	Analyte					
WATER						
Dissolved Metals	Vanadium (V)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Zinc (Zn)-Dissolved (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050

ALS LABORATORY GROUP ANALYTICAL REPORT

	Sample ID Description Sampled Date Sampled Time Client ID	L484821-6 08-MAR-07 86-035-09-46				
Grouping	Analyte					
WATER						
Dissolved Metals	Vanadium (V)-Dissolved (mg/L)	<0.010				
	Zinc (Zn)-Dissolved (mg/L)	<0.0050				

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)
ACY-PCT-VA	Water	Acidity by Automated Titration	APHA 2310 "Acidity"
This analysis is carried out using procedures adapted from APHA Method 2310 "Acidity". Acidity is determined by potentiometric titration to a specified endpoint.			
ALK-COL-VA	Water	Alkalinity by Colourimetric (Automated)	APHA 310.2
This analysis is carried out using procedures adapted from EPA Method 310.2 "Alkalinity". Total Alkalinity is determined using the methyl orange colourimetric method.			
EC-MAN-HCELL-VA	Water	Conductivity (Manual)	APHA 2510 "Conductivity"
This analysis is carried out using procedures adapted from APHA Method 2510 "Conductivity". Conductivity is determined using a conductivity electrode.			
HG-DIS-CVAFS-VA	Water	Dissolved Mercury in Water by CVAFS	EPA SW-846 3005A & EPA 245.7
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedures may involve preliminary sample treatment by filtration (EPA Method 3005A) and involves a cold-oxidation of the acidified sample using bromine monochloride prior to reduction of the sample with stannous chloride. Instrumental analysis is by cold vapour atomic fluorescence spectrophotometry (EPA Method 245.7).			
MET-DIS-ICP-VA	Water	Dissolved Metals in Water by ICPOES	EPA SW-846 3005A/6010B
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedure involves filtration (EPA Method 3005A) and analysis by inductively coupled plasma - optical emission spectrophotometry (EPA Method 6010B).			
MET-DIS-LOW-MS-VA	Water	Dissolved Metals in Water by ICPMS(Low)	EPA SW-846 3005A/6020
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedure involves preliminary sample treatment by filtration (EPA Method 3005A). Instrumental analysis is by inductively coupled plasma - mass spectrometry (EPA Method 6020).			
PH-MAN-HCELL-VA	Water	pH by Manual Meter	APHA 4500-H "pH Value"
This analysis is carried out using procedures adapted from APHA Method 4500-H "pH Value". The pH is determined in the laboratory using a pH electrode.			
SO4-TUR-VA	Water	Sulphate(SO4) by Turbidity	APHA 4500-SO4 "Sulphate"
This analysis is carried out using procedures adapted from APHA Method 4500-SO4 "Sulphate". Sulphate is determined using the turbidimetric method.			

** Laboratory Methods employed follow in-house procedures, which are generally based on nationally or internationally accepted methodologies. The last two letters of the above ALS Test Code column indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location	Laboratory Definition Code	Laboratory Location
VA	ALS LABORATORY GROUP - VANCOUVER, BC, CANADA		

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)
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GLOSSARY OF REPORT TERMS

Surr - A surrogate is an organic compound that is similar to the target analyte(s) in chemical composition and behavior but not normally detected in environmental samples. Prior to sample processing, samples are fortified with one or more surrogate compounds.

The reported surrogate recovery value provides a measure of method efficiency.

mg/kg (units) - unit of concentration based on mass, parts per million

mg/L (units) - unit of concentration based on volume, parts per million

N/A - Result not available. Refer to qualifier code and definition for explanation

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Although test results are generated under strict QA/QC protocols, any unsigned test reports, faxes, or emails are considered preliminary.

ALS Laboratory Group has an extensive QA/QC program where all analytical data reported is analyzed using approved referenced procedures followed by checks and reviews by senior managers and quality assurance personnel. However, since the results are obtained from chemical measurements and thus cannot be guaranteed, ALS Laboratory Group assumes no liability for the use or interpretation of the results.



Environmental Division

ANALYTICAL REPORT

RESCAN ENVIRONMENTAL SERVICES

ATTN: DAVE ARCHIBALD

Reported On: 30-MAR-07 05:45 PM

SIXTH FLOOR
1111 WEST HASTINGS STREET
VANCOUVER BC V6E 2J3

Lab Work Order #: **L486919**

Date Received: **15-MAR-07**

Project P.O. #: NOT SUBMITTED
Job Reference: MT. KLAPPAN CYCLE#52 HUMIDITY CELLS
Legal Site Desc:
CofC Numbers:

Other Information:

Comments:

TIMOTHY GUY CROWTHER
General Manager, Vancouver

For any questions about this report please contact your Account Manager:

ANDRE LANGLAIS

THIS REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL WITHOUT THE WRITTEN AUTHORITY OF THE LABORATORY.
ALL SAMPLES WILL BE DISPOSED OF AFTER 30 DAYS FOLLOWING ANALYSIS. PLEASE CONTACT THE LAB IF YOU
REQUIRE ADDITIONAL SAMPLE STORAGE TIME.

ALS LABORATORY GROUP ANALYTICAL REPORT

		Sample ID	L486919-1	L486919-2	L486919-3	L486919-4	L486919-5
		Description					
		Sampled Date	15-MAR-07	15-MAR-07	15-MAR-07	15-MAR-07	15-MAR-07
		Sampled Time					
		Client ID	ARD3-07B-52	ARD3-14B-52	ARD1-15-52	ARD2-12-52	019-02-52
Grouping	Analyte						
WATER							
Sample Preparation	total volume in (mL)		500	500	500	500	500
	total volume out (mL)		480	430	405	430	440
Physical Tests	Conductivity (uS/cm)		274	187	79.8	587	516
	pH (pH)		9.26	8.03	7.99	7.99	8.79
Anions and Nutrients	Acidity (as CaCO3) (mg/L)		<1.0	2.5	2.0	2.6	<1.0
	Alkalinity, Total (as CaCO3) (mg/L)		122	47.2	36.4	81.9	204
	Sulfate (SO4) (mg/L)		12.8	46.5	3.7	262	64.7
Dissolved Metals	Aluminum (Al)-Dissolved (mg/L)		1.83				1.24
	Antimony (Sb)-Dissolved (mg/L)		0.0090				<0.0010
	Arsenic (As)-Dissolved (mg/L)		0.0172				<0.0010
	Barium (Ba)-Dissolved (mg/L)		0.0622				0.0453
	Beryllium (Be)-Dissolved (mg/L)		<0.0050				<0.0050
	Bismuth (Bi)-Dissolved (mg/L)		<0.0050				<0.0050
	Boron (B)-Dissolved (mg/L)		<0.10				<0.10
	Cadmium (Cd)-Dissolved (mg/L)		<0.00050				<0.00050
	Calcium (Ca)-Dissolved (mg/L)		0.246				1.45
	Chromium (Cr)-Dissolved (mg/L)		<0.0050				<0.0050
	Cobalt (Co)-Dissolved (mg/L)		0.0049				<0.0010
	Copper (Cu)-Dissolved (mg/L)		0.0047				0.0015
	Iron (Fe)-Dissolved (mg/L)		0.494				0.181
	Lead (Pb)-Dissolved (mg/L)		0.00213				<0.00050
	Lithium (Li)-Dissolved (mg/L)		0.022				0.043
	Magnesium (Mg)-Dissolved (mg/L)		0.319				1.90
	Manganese (Mn)-Dissolved (mg/L)		0.00447				0.00164
	Mercury (Hg)-Dissolved (mg/L)		<0.0010				<0.0010
	Molybdenum (Mo)-Dissolved (mg/L)		0.0843				0.00800
	Nickel (Ni)-Dissolved (mg/L)		0.0340				<0.0050
	Phosphorus (P)-Dissolved (mg/L)		<0.30				<0.30
	Potassium (K)-Dissolved (mg/L)		1.08				1.63
	Selenium (Se)-Dissolved (mg/L)		<0.010				<0.010
	Silicon (Si)-Dissolved (mg/L)		3.25				2.49
	Silver (Ag)-Dissolved (mg/L)		<0.00010				<0.00010
	Sodium (Na)-Dissolved (mg/L)		67.6				127
	Strontium (Sr)-Dissolved (mg/L)		0.0182				0.155
	Thallium (Tl)-Dissolved (mg/L)		<0.0010				<0.0010
	Tin (Sn)-Dissolved (mg/L)		<0.0010				<0.0010
	Titanium (Ti)-Dissolved (mg/L)		0.019				0.027
	Uranium (U)-Dissolved (mg/L)		<0.00010				0.00015

ALS LABORATORY GROUP ANALYTICAL REPORT

	Sample ID Description Sampled Date Sampled Time Client ID	L486919-6	L486919-7		
Grouping	Analyte				
WATER					
Sample Preparation	total volume in (mL)	500	500		
	total volume out (mL)	465	420		
Physical Tests	Conductivity (uS/cm)	307	92.4		
	pH (pH)	8.38	8.04		
Anions and Nutrients	Acidity (as CaCO3) (mg/L)	<1.0	2.0		
	Alkalinity, Total (as CaCO3) (mg/L)	125	47.8		
	Sulfate (SO4) (mg/L)	49.7	<1.0		
Dissolved Metals	Aluminum (Al)-Dissolved (mg/L)				
	Antimony (Sb)-Dissolved (mg/L)				
	Arsenic (As)-Dissolved (mg/L)				
	Barium (Ba)-Dissolved (mg/L)				
	Beryllium (Be)-Dissolved (mg/L)				
	Bismuth (Bi)-Dissolved (mg/L)				
	Boron (B)-Dissolved (mg/L)				
	Cadmium (Cd)-Dissolved (mg/L)				
	Calcium (Ca)-Dissolved (mg/L)				
	Chromium (Cr)-Dissolved (mg/L)				
	Cobalt (Co)-Dissolved (mg/L)				
	Copper (Cu)-Dissolved (mg/L)				
	Iron (Fe)-Dissolved (mg/L)				
	Lead (Pb)-Dissolved (mg/L)				
	Lithium (Li)-Dissolved (mg/L)				
	Magnesium (Mg)-Dissolved (mg/L)				
	Manganese (Mn)-Dissolved (mg/L)				
	Mercury (Hg)-Dissolved (mg/L)				
	Molybdenum (Mo)-Dissolved (mg/L)				
	Nickel (Ni)-Dissolved (mg/L)				
	Phosphorus (P)-Dissolved (mg/L)				
	Potassium (K)-Dissolved (mg/L)				
	Selenium (Se)-Dissolved (mg/L)				
	Silicon (Si)-Dissolved (mg/L)				
	Silver (Ag)-Dissolved (mg/L)				
	Sodium (Na)-Dissolved (mg/L)				
	Strontium (Sr)-Dissolved (mg/L)				
	Thallium (Tl)-Dissolved (mg/L)				
Tin (Sn)-Dissolved (mg/L)					
Titanium (Ti)-Dissolved (mg/L)					
Uranium (U)-Dissolved (mg/L)					

ALS LABORATORY GROUP ANALYTICAL REPORT

		Sample ID	L486919-1	L486919-2	L486919-3	L486919-4	L486919-5
		Description					
		Sampled Date	15-MAR-07	15-MAR-07	15-MAR-07	15-MAR-07	15-MAR-07
		Sampled Time					
		Client ID	ARD3-07B-52	ARD3-14B-52	ARD1-15-52	ARD2-12-52	019-02-52
Grouping	Analyte						
WATER							
Dissolved Metals	Vanadium (V)-Dissolved (mg/L)	<0.010					<0.010
	Zinc (Zn)-Dissolved (mg/L)	0.0288					<0.0050

ALS LABORATORY GROUP ANALYTICAL REPORT

	Sample ID Description Sampled Date Sampled Time Client ID	L486919-6 15-MAR-07 ARD2-07-52	L486919-7 15-MAR-07 DUMP-2.5M-52		
Grouping	Analyte				
WATER					
Dissolved Metals	Vanadium (V)-Dissolved (mg/L) Zinc (Zn)-Dissolved (mg/L)				

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)
ACY-PCT-VA	Water	Acidity by Automated Titration	APHA 2310 "Acidity"
This analysis is carried out using procedures adapted from APHA Method 2310 "Acidity". Acidity is determined by potentiometric titration to a specified endpoint.			
ALK-COL-VA	Water	Alkalinity by Colourimetric (Automated)	APHA 310.2
This analysis is carried out using procedures adapted from EPA Method 310.2 "Alkalinity". Total Alkalinity is determined using the methyl orange colourimetric method.			
EC-MAN-HCELL-VA	Water	Conductivity (Manual)	APHA 2510 "Conductivity"
This analysis is carried out using procedures adapted from APHA Method 2510 "Conductivity". Conductivity is determined using a conductivity electrode.			
HG-DIS-CVAFS-VA	Water	Dissolved Mercury in Water by CVAFS	EPA SW-846 3005A & EPA 245.7
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedures may involve preliminary sample treatment by filtration (EPA Method 3005A) and involves a cold-oxidation of the acidified sample using bromine monochloride prior to reduction of the sample with stannous chloride. Instrumental analysis is by cold vapour atomic fluorescence spectrophotometry (EPA Method 245.7).			
MET-DIS-ICP-VA	Water	Dissolved Metals in Water by ICPOES	EPA SW-846 3005A/6010B
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedure involves filtration (EPA Method 3005A) and analysis by inductively coupled plasma - optical emission spectrophotometry (EPA Method 6010B).			
MET-DIS-LOW-MS-VA	Water	Dissolved Metals in Water by ICPMS(Low)	EPA SW-846 3005A/6020
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedure involves preliminary sample treatment by filtration (EPA Method 3005A). Instrumental analysis is by inductively coupled plasma - mass spectrometry (EPA Method 6020).			
PH-MAN-HCELL-VA	Water	pH by Manual Meter	APHA 4500-H "pH Value"
This analysis is carried out using procedures adapted from APHA Method 4500-H "pH Value". The pH is determined in the laboratory using a pH electrode.			
SO4-TUR-VA	Water	Sulphate(SO4) by Turbidity	APHA 4500-SO4 "Sulphate"
This analysis is carried out using procedures adapted from APHA Method 4500-SO4 "Sulphate". Sulphate is determined using the turbidimetric method.			

** Laboratory Methods employed follow in-house procedures, which are generally based on nationally or internationally accepted methodologies. The last two letters of the above ALS Test Code column indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location	Laboratory Definition Code	Laboratory Location
VA	ALS LABORATORY GROUP - VANCOUVER, BC, CANADA		

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)
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GLOSSARY OF REPORT TERMS

Surr - A surrogate is an organic compound that is similar to the target analyte(s) in chemical composition and behavior but not normally detected in environmental samples. Prior to sample processing, samples are fortified with one or more surrogate compounds.

The reported surrogate recovery value provides a measure of method efficiency.

mg/kg (units) - unit of concentration based on mass, parts per million

mg/L (units) - unit of concentration based on volume, parts per million

N/A - Result not available. Refer to qualifier code and definition for explanation

Test results reported relate only to the samples as received by the laboratory.

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Environmental Division

ANALYTICAL REPORT

RESCAN ENVIRONMENTAL SERVICES

ATTN: DAVE ARCHIBALD

Reported On: 30-MAR-07 05:47 PM

SIXTH FLOOR
1111 WEST HASTINGS STREET
VANCOUVER BC V6E 2J3

Lab Work Order #: **L486921**

Date Received: **15-MAR-07**

Project P.O. #: NOT SUBMITTED
Job Reference: MT. KLAPPAN CYCLE#47 HUMIDITY CELLS
Legal Site Desc:
CofC Numbers:

Other Information:

Comments:

TIMOTHY GUY CROWTHER
General Manager, Vancouver

For any questions about this report please contact your Account Manager:

ANDRE LANGLAIS

THIS REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL WITHOUT THE WRITTEN AUTHORITY OF THE LABORATORY.
ALL SAMPLES WILL BE DISPOSED OF AFTER 30 DAYS FOLLOWING ANALYSIS. PLEASE CONTACT THE LAB IF YOU
REQUIRE ADDITIONAL SAMPLE STORAGE TIME.

ALS LABORATORY GROUP ANALYTICAL REPORT

		Sample ID	L486921-1	L486921-2	L486921-3	L486921-4	
		Description					
		Sampled Date	15-MAR-07	15-MAR-07	15-MAR-07	15-MAR-07	
		Sampled Time					
		Client ID	85-027-17-47	85-027-24-47	86-035-07-47	86-035-09-47	
Grouping	Analyte						
WATER							
Sample Preparation	total volume in (mL)		500	500	500	500	
	total volume out (mL)		415	460	465	425	
Physical Tests	Conductivity (uS/cm)		58.0	86.1	302	436	
	pH (pH)		7.94	8.01	8.50	8.25	
Anions and Nutrients	Acidity (as CaCO ₃) (mg/L)		2.4	2.2	<1.0	1.6	
	Alkalinity, Total (as CaCO ₃) (mg/L)		26.3	42.4	187	97.3	
	Sulfate (SO ₄) (mg/L)		2.5	1.8	4.3	147	

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)
ACY-PCT-VA	Water	Acidity by Automated Titration	APHA 2310 "Acidity"
This analysis is carried out using procedures adapted from APHA Method 2310 "Acidity". Acidity is determined by potentiometric titration to a specified endpoint.			
ALK-COL-VA	Water	Alkalinity by Colourimetric (Automated)	APHA 310.2
This analysis is carried out using procedures adapted from EPA Method 310.2 "Alkalinity". Total Alkalinity is determined using the methyl orange colourimetric method.			
EC-MAN-HCELL-VA	Water	Conductivity (Manual)	APHA 2510 "Conductivity"
This analysis is carried out using procedures adapted from APHA Method 2510 "Conductivity". Conductivity is determined using a conductivity electrode.			
PH-MAN-HCELL-VA	Water	pH by Manual Meter	APHA 4500-H "pH Value"
This analysis is carried out using procedures adapted from APHA Method 4500-H "pH Value". The pH is determined in the laboratory using a pH electrode.			
SO4-TUR-VA	Water	Sulphate(SO4) by Turbidity	APHA 4500-SO4 "Sulphate"
This analysis is carried out using procedures adapted from APHA Method 4500-SO4 "Sulphate". Sulphate is determined using the turbidimetric method.			

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Laboratory Definition Code	Laboratory Location	Laboratory Definition Code	Laboratory Location
VA	ALS LABORATORY GROUP - VANCOUVER, BC, CANADA		

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mg/kg (units) - unit of concentration based on mass, parts per million

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Environmental Division

ANALYTICAL REPORT

RESCAN ENVIRONMENTAL SERVICES

ATTN: DAVE ARCHIBALD

Reported On: 16-APR-07 05:31 PM

SIXTH FLOOR
1111 WEST HASTINGS STREET
VANCOUVER BC V6E 2J3

Lab Work Order #: **L489230**

Date Received: **22-MAR-07**

Project P.O. #: NOT SUBMITTED
Job Reference: MT. KLAPPAN CYCLE#53 HUMIDITY CELLS
Legal Site Desc:
CofC Numbers:

Other Information:

Comments:

TIMOTHY GUY CROWTHER
General Manager, Vancouver

For any questions about this report please contact your Account Manager:

ANDRE LANGLAIS

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ALL SAMPLES WILL BE DISPOSED OF AFTER 30 DAYS FOLLOWING ANALYSIS. PLEASE CONTACT THE LAB IF YOU
REQUIRE ADDITIONAL SAMPLE STORAGE TIME.

ALS LABORATORY GROUP ANALYTICAL REPORT

		Sample ID	L489230-1	L489230-2	L489230-3	L489230-4	L489230-5
		Description					
		Sampled Date	22-MAR-07	22-MAR-07	22-MAR-07	22-MAR-07	22-MAR-07
		Sampled Time					
		Client ID	ARD3-08B-53	ARD3-14B-53	ARD1-15-53	ARD2-12-53	ARD2-07-53
Grouping	Analyte						
WATER							
Sample Preparation	total volume in (mL)		500	500	500	500	500
	total volume out (mL)		420	415	480	470	470
Physical Tests	Conductivity (uS/cm)		1570	207	82.9	548	308
	pH (pH)		7.50	8.04	8.29	7.97	8.33
Anions and Nutrients	Acidity (as CaCO3) (mg/L)		2.7	1.3	1.2	1.5	<1.0
	Alkalinity, Total (as CaCO3) (mg/L)		28.0	55.0	37.3	86.1	130
	Sulfate (SO4) (mg/L)		895	54.1	2.8	234	44.3
Dissolved Metals	Aluminum (Al)-Dissolved (mg/L)		<0.010	<0.010	0.073	<0.010	<0.010
	Antimony (Sb)-Dissolved (mg/L)		<0.0010	<0.0010	0.0015	<0.0010	<0.0010
	Arsenic (As)-Dissolved (mg/L)		<0.0010	<0.0010	0.0029	<0.0010	<0.0010
	Barium (Ba)-Dissolved (mg/L)		0.0151	0.176	0.0915	0.0201	0.0805
	Beryllium (Be)-Dissolved (mg/L)		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Bismuth (Bi)-Dissolved (mg/L)		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Boron (B)-Dissolved (mg/L)		0.11	<0.10	<0.10	<0.10	<0.10
	Cadmium (Cd)-Dissolved (mg/L)		0.00092	<0.00050	<0.00050	<0.00050	<0.00050
	Calcium (Ca)-Dissolved (mg/L)		92.1	22.1	8.61	84.0	12.7
	Chromium (Cr)-Dissolved (mg/L)		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Cobalt (Co)-Dissolved (mg/L)		0.0118	<0.0010	<0.0010	<0.0010	<0.0010
	Copper (Cu)-Dissolved (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Iron (Fe)-Dissolved (mg/L)		<0.030	<0.030	<0.030	<0.030	<0.030
	Lead (Pb)-Dissolved (mg/L)		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Lithium (Li)-Dissolved (mg/L)		0.073	<0.010	<0.010	<0.010	<0.010
	Magnesium (Mg)-Dissolved (mg/L)		135	11.8	5.33	29.9	35.0
	Manganese (Mn)-Dissolved (mg/L)		2.73	0.00059	0.00151	0.0422	<0.00050
	Mercury (Hg)-Dissolved (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Molybdenum (Mo)-Dissolved (mg/L)		<0.00050	0.00628	0.00401	<0.00050	0.00418
	Nickel (Ni)-Dissolved (mg/L)		0.100	<0.0050	<0.0050	<0.0050	<0.0050
	Phosphorus (P)-Dissolved (mg/L)		<0.30	<0.30	<0.30	<0.30	<0.30
	Potassium (K)-Dissolved (mg/L)		10.0	1.36	<0.50	<0.50	1.59
	Selenium (Se)-Dissolved (mg/L)		<0.010	<0.010	<0.010	<0.010	<0.010
	Silicon (Si)-Dissolved (mg/L)		0.931	0.618	1.21	0.213	0.755
	Silver (Ag)-Dissolved (mg/L)		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Sodium (Na)-Dissolved (mg/L)		114	0.72	<0.50	<0.50	<0.50
	Strontium (Sr)-Dissolved (mg/L)		9.14	1.12	0.144	0.831	0.643
	Thallium (Tl)-Dissolved (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Tin (Sn)-Dissolved (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Titanium (Ti)-Dissolved (mg/L)		<0.010	<0.010	<0.010	<0.010	<0.010
	Uranium (U)-Dissolved (mg/L)		<0.00010	<0.00010	<0.00010	<0.00010	0.00011

ALS LABORATORY GROUP ANALYTICAL REPORT

		Sample ID	L489230-6			
		Description				
		Sampled Date	22-MAR-07			
		Sampled Time				
		Client ID	DUMP-2.5M-53			
Grouping	Analyte					
WATER						
Sample Preparation	total volume in (mL)		500			
	total volume out (mL)		450			
Physical Tests	Conductivity (uS/cm)		93.0			
	pH (pH)		7.92			
Anions and Nutrients	Acidity (as CaCO3) (mg/L)		1.2			
	Alkalinity, Total (as CaCO3) (mg/L)		48.0			
	Sulfate (SO4) (mg/L)		<1.0			
Dissolved Metals	Aluminum (Al)-Dissolved (mg/L)		0.128			
	Antimony (Sb)-Dissolved (mg/L)		<0.0010			
	Arsenic (As)-Dissolved (mg/L)		<0.0010			
	Barium (Ba)-Dissolved (mg/L)		0.00829			
	Beryllium (Be)-Dissolved (mg/L)		<0.0050			
	Bismuth (Bi)-Dissolved (mg/L)		<0.0050			
	Boron (B)-Dissolved (mg/L)		<0.10			
	Cadmium (Cd)-Dissolved (mg/L)		<0.00050			
	Calcium (Ca)-Dissolved (mg/L)		3.51			
	Chromium (Cr)-Dissolved (mg/L)		<0.0050			
	Cobalt (Co)-Dissolved (mg/L)		<0.0010			
	Copper (Cu)-Dissolved (mg/L)		<0.0010			
	Iron (Fe)-Dissolved (mg/L)		<0.030			
	Lead (Pb)-Dissolved (mg/L)		<0.00050			
	Lithium (Li)-Dissolved (mg/L)		<0.010			
	Magnesium (Mg)-Dissolved (mg/L)		10.4			
	Manganese (Mn)-Dissolved (mg/L)		0.00066			
	Mercury (Hg)-Dissolved (mg/L)		<0.0010			
	Molybdenum (Mo)-Dissolved (mg/L)		0.00070			
	Nickel (Ni)-Dissolved (mg/L)		<0.0050			
	Phosphorus (P)-Dissolved (mg/L)		<0.30			
	Potassium (K)-Dissolved (mg/L)		<0.50			
	Selenium (Se)-Dissolved (mg/L)		<0.010			
	Silicon (Si)-Dissolved (mg/L)		0.996			
	Silver (Ag)-Dissolved (mg/L)		<0.00010			
	Sodium (Na)-Dissolved (mg/L)		<0.50			
	Strontium (Sr)-Dissolved (mg/L)		0.0308			
	Thallium (Tl)-Dissolved (mg/L)		<0.0010			
	Tin (Sn)-Dissolved (mg/L)		<0.0010			
	Titanium (Ti)-Dissolved (mg/L)		<0.010			
	Uranium (U)-Dissolved (mg/L)		<0.00010			

ALS LABORATORY GROUP ANALYTICAL REPORT

		Sample ID	L489230-1	L489230-2	L489230-3	L489230-4	L489230-5
		Description					
		Sampled Date	22-MAR-07	22-MAR-07	22-MAR-07	22-MAR-07	22-MAR-07
		Sampled Time					
		Client ID	ARD3-08B-53	ARD3-14B-53	ARD1-15-53	ARD2-12-53	ARD2-07-53
Grouping	Analyte						
WATER							
Dissolved Metals	Vanadium (V)-Dissolved (mg/L)		<0.010	<0.010	<0.010	<0.010	<0.010
	Zinc (Zn)-Dissolved (mg/L)		0.0173	<0.0050	<0.0050	<0.0050	<0.0050

ALS LABORATORY GROUP ANALYTICAL REPORT

	Sample ID Description Sampled Date Sampled Time Client ID	L489230-6 22-MAR-07 DUMP-2.5M-53			
Grouping	Analyte				
WATER					
Dissolved Metals	Vanadium (V)-Dissolved (mg/L)	<0.010			
	Zinc (Zn)-Dissolved (mg/L)	<0.0050			

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)
ACY-PCT-VA	Water	Acidity by Automated Titration	APHA 2310 "Acidity"
This analysis is carried out using procedures adapted from APHA Method 2310 "Acidity". Acidity is determined by potentiometric titration to a specified endpoint.			
ALK-COL-VA	Water	Alkalinity by Colourimetric (Automated)	APHA 310.2
This analysis is carried out using procedures adapted from EPA Method 310.2 "Alkalinity". Total Alkalinity is determined using the methyl orange colourimetric method.			
EC-MAN-HCELL-VA	Water	Conductivity (Manual)	APHA 2510 "Conductivity"
This analysis is carried out using procedures adapted from APHA Method 2510 "Conductivity". Conductivity is determined using a conductivity electrode.			
HG-DIS-CVAFS-VA	Water	Dissolved Mercury in Water by CVAFS	EPA SW-846 3005A & EPA 245.7
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedures may involve preliminary sample treatment by filtration (EPA Method 3005A) and involves a cold-oxidation of the acidified sample using bromine monochloride prior to reduction of the sample with stannous chloride. Instrumental analysis is by cold vapour atomic fluorescence spectrophotometry (EPA Method 245.7).			
MET-DIS-ICP-VA	Water	Dissolved Metals in Water by ICPOES	EPA SW-846 3005A/6010B
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedure involves filtration (EPA Method 3005A) and analysis by inductively coupled plasma - optical emission spectrophotometry (EPA Method 6010B).			
MET-DIS-LOW-MS-VA	Water	Dissolved Metals in Water by ICPMS(Low)	EPA SW-846 3005A/6020A
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedure involves preliminary sample treatment by filtration (EPA Method 3005A). Instrumental analysis is by inductively coupled plasma - mass spectrometry (EPA Method 6020A).			
PH-MAN-HCELL-VA	Water	pH by Manual Meter	APHA 4500-H "pH Value"
This analysis is carried out using procedures adapted from APHA Method 4500-H "pH Value". The pH is determined in the laboratory using a pH electrode.			
SO4-TUR-VA	Water	Sulphate(SO4) by Turbidity	APHA 4500-SO4 "Sulphate"
This analysis is carried out using procedures adapted from APHA Method 4500-SO4 "Sulphate". Sulphate is determined using the turbidimetric method.			

** Laboratory Methods employed follow in-house procedures, which are generally based on nationally or internationally accepted methodologies. The last two letters of the above ALS Test Code column indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location	Laboratory Definition Code	Laboratory Location
VA	ALS LABORATORY GROUP - VANCOUVER, BC, CANADA		

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)
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GLOSSARY OF REPORT TERMS

Surr - A surrogate is an organic compound that is similar to the target analyte(s) in chemical composition and behavior but not normally detected in environmental samples. Prior to sample processing, samples are fortified with one or more surrogate compounds.

The reported surrogate recovery value provides a measure of method efficiency.

mg/kg (units) - unit of concentration based on mass, parts per million

mg/L (units) - unit of concentration based on volume, parts per million

N/A - Result not available. Refer to qualifier code and definition for explanation

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Although test results are generated under strict QA/QC protocols, any unsigned test reports, faxes, or emails are considered preliminary.

ALS Laboratory Group has an extensive QA/QC program where all analytical data reported is analyzed using approved referenced procedures followed by checks and reviews by senior managers and quality assurance personnel. However, since the results are obtained from chemical measurements and thus cannot be guaranteed, ALS Laboratory Group assumes no liability for the use or interpretation of the results.



Environmental Division

ANALYTICAL REPORT

RESCAN ENVIRONMENTAL SERVICES

ATTN: DAVE ARCHIBALD

Reported On: 16-APR-07 05:29 PM

SIXTH FLOOR
1111 WEST HASTINGS STREET
VANCOUVER BC V6E 2J3

Lab Work Order #: **L489232**

Date Received: **22-MAR-07**

Project P.O. #: NOT SUBMITTED
Job Reference: MT KLAPPAN CYCLE#48 HUMIDITY CELLS
Legal Site Desc:
CofC Numbers:

Other Information:

Comments:

TIMOTHY GUY CROWTHER
General Manager, Vancouver

For any questions about this report please contact your Account Manager:

ANDRE LANGLAIS

THIS REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL WITHOUT THE WRITTEN AUTHORITY OF THE LABORATORY.
ALL SAMPLES WILL BE DISPOSED OF AFTER 30 DAYS FOLLOWING ANALYSIS. PLEASE CONTACT THE LAB IF YOU
REQUIRE ADDITIONAL SAMPLE STORAGE TIME.

ALS LABORATORY GROUP ANALYTICAL REPORT

		Sample ID	L489232-1	L489232-2	L489232-3	L489232-4
		Description				
		Sampled Date	22-MAR-07	22-MAR-07	22-MAR-07	22-MAR-07
		Sampled Time				
		Client ID	85-027-17-48	85-027-24-48	86-035-07-48	86-035-09-48
Grouping	Analyte					
WATER						
Sample Preparation	total volume in (mL)		500	500	500	500
	total volume out (mL)		465	445	465	410
Physical Tests	Conductivity (uS/cm)		57.4	81.1	321	504
	pH (pH)		7.85	8.21	8.47	8.13
Anions and Nutrients	Acidity (as CaCO3) (mg/L)		1.2	1.2	<1.0	<1.0
	Alkalinity, Total (as CaCO3) (mg/L)		26.0	40.8	192	115
	Sulfate (SO4) (mg/L)		1.8	1.1	3.8	167
Dissolved Metals	Aluminum (Al)-Dissolved (mg/L)		0.054	0.129	<0.010	0.048
	Antimony (Sb)-Dissolved (mg/L)		0.0012	<0.0010	<0.0010	<0.0010
	Arsenic (As)-Dissolved (mg/L)		0.0011	<0.0010	<0.0010	<0.0010
	Barium (Ba)-Dissolved (mg/L)		0.0155	0.0478	0.415	0.0831
	Beryllium (Be)-Dissolved (mg/L)		<0.0050	<0.0050	<0.0050	<0.0050
	Bismuth (Bi)-Dissolved (mg/L)		<0.0050	<0.0050	<0.0050	<0.0050
	Boron (B)-Dissolved (mg/L)		<0.10	<0.10	<0.10	<0.10
	Cadmium (Cd)-Dissolved (mg/L)		<0.00050	<0.00050	<0.00050	<0.00050
	Calcium (Ca)-Dissolved (mg/L)		6.37	7.48	16.4	43.5
	Chromium (Cr)-Dissolved (mg/L)		<0.0050	<0.0050	<0.0050	<0.0050
	Cobalt (Co)-Dissolved (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010
	Copper (Cu)-Dissolved (mg/L)		<0.0010	<0.0010	<0.0010	0.0031
	Iron (Fe)-Dissolved (mg/L)		<0.030	<0.030	<0.030	<0.030
	Lead (Pb)-Dissolved (mg/L)		<0.00050	<0.00050	<0.00050	<0.00050
	Lithium (Li)-Dissolved (mg/L)		<0.010	<0.010	<0.010	0.013
	Magnesium (Mg)-Dissolved (mg/L)		3.31	5.57	38.7	42.4
	Manganese (Mn)-Dissolved (mg/L)		<0.00050	0.00100	<0.00050	0.00131
	Mercury (Hg)-Dissolved (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010
	Molybdenum (Mo)-Dissolved (mg/L)		0.00260	0.00417	0.00104	0.00103
	Nickel (Ni)-Dissolved (mg/L)		<0.0050	<0.0050	<0.0050	<0.0050
	Phosphorus (P)-Dissolved (mg/L)		<0.30	<0.30	<0.30	<0.30
	Potassium (K)-Dissolved (mg/L)		<0.50	<0.50	1.84	5.10
	Selenium (Se)-Dissolved (mg/L)		<0.010	<0.010	<0.010	<0.010
	Silicon (Si)-Dissolved (mg/L)		0.913	1.07	0.801	0.703
	Silver (Ag)-Dissolved (mg/L)		<0.00010	<0.00010	<0.00010	<0.00010
	Sodium (Na)-Dissolved (mg/L)		<0.50	<0.50	0.97	3.11
	Strontium (Sr)-Dissolved (mg/L)		0.142	0.247	1.06	1.18
	Thallium (Tl)-Dissolved (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010
	Tin (Sn)-Dissolved (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010
	Titanium (Ti)-Dissolved (mg/L)		<0.010	<0.010	<0.010	<0.010
	Uranium (U)-Dissolved (mg/L)		<0.00010	<0.00010	<0.00010	<0.00010

ALS LABORATORY GROUP ANALYTICAL REPORT

		Sample ID	L489232-1	L489232-2	L489232-3	L489232-4	
		Description					
		Sampled Date	22-MAR-07	22-MAR-07	22-MAR-07	22-MAR-07	
		Sampled Time					
		Client ID	85-027-17-48	85-027-24-48	86-035-07-48	86-035-09-48	
Grouping	Analyte						
WATER							
Dissolved Metals	Vanadium (V)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010	
	Zinc (Zn)-Dissolved (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)
ACY-PCT-VA	Water	Acidity by Automated Titration	APHA 2310 "Acidity"
This analysis is carried out using procedures adapted from APHA Method 2310 "Acidity". Acidity is determined by potentiometric titration to a specified endpoint.			
ALK-COL-VA	Water	Alkalinity by Colourimetric (Automated)	APHA 310.2
This analysis is carried out using procedures adapted from EPA Method 310.2 "Alkalinity". Total Alkalinity is determined using the methyl orange colourimetric method.			
EC-MAN-HCELL-VA	Water	Conductivity (Manual)	APHA 2510 "Conductivity"
This analysis is carried out using procedures adapted from APHA Method 2510 "Conductivity". Conductivity is determined using a conductivity electrode.			
HG-DIS-CVAFS-VA	Water	Dissolved Mercury in Water by CVAFS	EPA SW-846 3005A & EPA 245.7
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedures may involve preliminary sample treatment by filtration (EPA Method 3005A) and involves a cold-oxidation of the acidified sample using bromine monochloride prior to reduction of the sample with stannous chloride. Instrumental analysis is by cold vapour atomic fluorescence spectrophotometry (EPA Method 245.7).			
MET-DIS-ICP-VA	Water	Dissolved Metals in Water by ICPOES	EPA SW-846 3005A/6010B
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedure involves filtration (EPA Method 3005A) and analysis by inductively coupled plasma - optical emission spectrophotometry (EPA Method 6010B).			
MET-DIS-LOW-MS-VA	Water	Dissolved Metals in Water by ICPMS(Low)	EPA SW-846 3005A/6020A
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedure involves preliminary sample treatment by filtration (EPA Method 3005A). Instrumental analysis is by inductively coupled plasma - mass spectrometry (EPA Method 6020A).			
PH-MAN-HCELL-VA	Water	pH by Manual Meter	APHA 4500-H "pH Value"
This analysis is carried out using procedures adapted from APHA Method 4500-H "pH Value". The pH is determined in the laboratory using a pH electrode.			
SO4-TUR-VA	Water	Sulphate(SO4) by Turbidity	APHA 4500-SO4 "Sulphate"
This analysis is carried out using procedures adapted from APHA Method 4500-SO4 "Sulphate". Sulphate is determined using the turbidimetric method.			

** Laboratory Methods employed follow in-house procedures, which are generally based on nationally or internationally accepted methodologies. The last two letters of the above ALS Test Code column indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location	Laboratory Definition Code	Laboratory Location
VA	ALS LABORATORY GROUP - VANCOUVER, BC, CANADA		

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)
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GLOSSARY OF REPORT TERMS

Surr - A surrogate is an organic compound that is similar to the target analyte(s) in chemical composition and behavior but not normally detected in environmental samples. Prior to sample processing, samples are fortified with one or more surrogate compounds.

The reported surrogate recovery value provides a measure of method efficiency.

mg/kg (units) - unit of concentration based on mass, parts per million

mg/L (units) - unit of concentration based on volume, parts per million

N/A - Result not available. Refer to qualifier code and definition for explanation

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Although test results are generated under strict QA/QC protocols, any unsigned test reports, faxes, or emails are considered preliminary.

ALS Laboratory Group has an extensive QA/QC program where all analytical data reported is analyzed using approved referenced procedures followed by checks and reviews by senior managers and quality assurance personnel. However, since the results are obtained from chemical measurements and thus cannot be guaranteed, ALS Laboratory Group assumes no liability for the use or interpretation of the results.



Environmental Division

ANALYTICAL REPORT

RESCAN ENVIRONMENTAL SERVICES

ATTN: DAVE ARCHIBALD

Reported On: 11-APR-07 12:57 PM

SIXTH FLOOR
1111 WEST HASTINGS STREET
VANCOUVER BC V6E 2J3

Lab Work Order #: **L491306**

Date Received: **29-MAR-07**

Project P.O. #: NOT SUBMITTED
Job Reference: MT. KLAPPAN CYCLE#54 HUMIDITY CELLS
Legal Site Desc:
CofC Numbers:

Other Information:

Comments:

TIMOTHY GUY CROWTHER
General Manager, Vancouver

For any questions about this report please contact your Account Manager:

ANDRE LANGLAIS

THIS REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL WITHOUT THE WRITTEN AUTHORITY OF THE LABORATORY.
ALL SAMPLES WILL BE DISPOSED OF AFTER 30 DAYS FOLLOWING ANALYSIS. PLEASE CONTACT THE LAB IF YOU
REQUIRE ADDITIONAL SAMPLE STORAGE TIME.

ALS LABORATORY GROUP ANALYTICAL REPORT

		Sample ID	L491306-1	L491306-2	L491306-3	L491306-4	L491306-5
		Description					
		Sampled Date	29-MAR-07	29-MAR-07	29-MAR-07	29-MAR-07	29-MAR-07
		Sampled Time					
		Client ID	ARD3-14B-54	ARD1-15-54	ARD2-12-54	ARD2-07-54	DUMP-2.5M-54
Grouping	Analyte						
WATER							
Sample Preparation	total volume in (mL)		500	500	500	500	500
	total volume out (mL)		450	470	435	470	450
Physical Tests	Conductivity (uS/cm)		215	77.3	605	258	91.3
	pH (pH)		8.04	7.84	8.00	8.22	7.91
Anions and Nutrients	Acidity (as CaCO ₃) (mg/L)		2.0	1.7	2.1	<1.0	1.6
	Alkalinity, Total (as CaCO ₃) (mg/L)		62.1	35.1	96.0	114	47.6
	Sulfate (SO ₄) (mg/L)		51.6	2.9	271	31.6	<1.0

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)
ACY-PCT-VA	Water	Acidity by Automated Titration	APHA 2310 "Acidity"
This analysis is carried out using procedures adapted from APHA Method 2310 "Acidity". Acidity is determined by potentiometric titration to a specified endpoint.			
ALK-COL-VA	Water	Alkalinity by Colourimetric (Automated)	APHA 310.2
This analysis is carried out using procedures adapted from EPA Method 310.2 "Alkalinity". Total Alkalinity is determined using the methyl orange colourimetric method.			
EC-MAN-HCELL-VA	Water	Conductivity (Manual)	APHA 2510 "Conductivity"
This analysis is carried out using procedures adapted from APHA Method 2510 "Conductivity". Conductivity is determined using a conductivity electrode.			
PH-MAN-HCELL-VA	Water	pH by Manual Meter	APHA 4500-H "pH Value"
This analysis is carried out using procedures adapted from APHA Method 4500-H "pH Value". The pH is determined in the laboratory using a pH electrode.			
SO4-TUR-VA	Water	Sulphate(SO4) by Turbidity	APHA 4500-SO4 "Sulphate"
This analysis is carried out using procedures adapted from APHA Method 4500-SO4 "Sulphate". Sulphate is determined using the turbidimetric method.			

** Laboratory Methods employed follow in-house procedures, which are generally based on nationally or internationally accepted methodologies. The last two letters of the above ALS Test Code column indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location	Laboratory Definition Code	Laboratory Location
VA	ALS LABORATORY GROUP - VANCOUVER, BC, CANADA		

GLOSSARY OF REPORT TERMS

Surr - A surrogate is an organic compound that is similar to the target analyte(s) in chemical composition and behavior but not normally detected in environmental samples. Prior to sample processing, samples are fortified with one or more surrogate compounds.

The reported surrogate recovery value provides a measure of method efficiency.

mg/kg (units) - unit of concentration based on mass, parts per million

mg/L (units) - unit of concentration based on volume, parts per million

N/A - Result not available. Refer to qualifier code and definition for explanation

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Although test results are generated under strict QA/QC protocols, any unsigned test reports, faxes, or emails are considered preliminary.

ALS Laboratory Group has an extensive QA/QC program where all analytical data reported is analyzed using approved referenced procedures followed by checks and reviews by senior managers and quality assurance personnel. However, since the results are obtained from chemical measurements and thus cannot be guaranteed, ALS Laboratory Group assumes no liability for the use or interpretation of the results.



Environmental Division

ANALYTICAL REPORT

RESCAN ENVIRONMENTAL SERVICES

ATTN: DAVE ARCHIBALD

Reported On: 16-APR-07 05:58 PM

SIXTH FLOOR
1111 WEST HASTINGS STREET
VANCOUVER BC V6E 2J3

Lab Work Order #: **L491307**

Date Received: **29-MAR-07**

Project P.O. #: NOT SUBMITTED
Job Reference: MT. KLAPPAN CYCLE#49 HUMIDITY CELLS
Legal Site Desc:
CofC Numbers:

Other Information:

Comments:

TIMOTHY GUY CROWTHER
General Manager, Vancouver

For any questions about this report please contact your Account Manager:

ANDRE LANGLAIS

THIS REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL WITHOUT THE WRITTEN AUTHORITY OF THE LABORATORY.
ALL SAMPLES WILL BE DISPOSED OF AFTER 30 DAYS FOLLOWING ANALYSIS. PLEASE CONTACT THE LAB IF YOU
REQUIRE ADDITIONAL SAMPLE STORAGE TIME.

ALS LABORATORY GROUP ANALYTICAL REPORT

		Sample ID	L491307-1	L491307-2	L491307-3	L491307-4	L491307-5
		Description					
		Sampled Date	29-MAR-07	29-MAR-07	29-MAR-07	29-MAR-07	29-MAR-07
		Sampled Time					
		Client ID	85-016-07-49	85-027-02-49	85-027-17-49	85-027-24-49	86-035-07-49
Grouping	Analyte						
WATER							
Sample Preparation	total volume in (mL)		500	500	500	500	500
	total volume out (mL)		500	500	500	500	445
Physical Tests	Conductivity (uS/cm)		308	256	48.2	69.6	312
	pH (pH)		8.19	7.64	7.93	8.19	8.44
Anions and Nutrients	Acidity (as CaCO3) (mg/L)		<1.0	2.0	1.7	1.7	<1.0
	Alkalinity, Total (as CaCO3) (mg/L)		81.0	28.8	21.5	35.2	182
	Sulfate (SO4) (mg/L)		76.4	90.2	1.6	<1.0	4.3
Dissolved Metals	Aluminum (Al)-Dissolved (mg/L)		<0.010	0.014			
	Antimony (Sb)-Dissolved (mg/L)		<0.0010	<0.0010			
	Arsenic (As)-Dissolved (mg/L)		<0.0010	<0.0010			
	Barium (Ba)-Dissolved (mg/L)		0.159	0.0467			
	Beryllium (Be)-Dissolved (mg/L)		<0.0050	<0.0050			
	Bismuth (Bi)-Dissolved (mg/L)		<0.0050	<0.0050			
	Boron (B)-Dissolved (mg/L)		<0.10	<0.10			
	Cadmium (Cd)-Dissolved (mg/L)		<0.00050	<0.00050			
	Calcium (Ca)-Dissolved (mg/L)		8.02	4.09			
	Chromium (Cr)-Dissolved (mg/L)		<0.0050	<0.0050			
	Cobalt (Co)-Dissolved (mg/L)		<0.0010	<0.0010			
	Copper (Cu)-Dissolved (mg/L)		<0.0010	<0.0010			
	Iron (Fe)-Dissolved (mg/L)		<0.030	<0.030			
	Lead (Pb)-Dissolved (mg/L)		<0.00050	<0.00050			
	Lithium (Li)-Dissolved (mg/L)		0.015	0.016			
	Magnesium (Mg)-Dissolved (mg/L)		24.5	22.4			
	Manganese (Mn)-Dissolved (mg/L)		0.00082	0.00055			
	Mercury (Hg)-Dissolved (mg/L)		<0.0010	<0.0010			
	Molybdenum (Mo)-Dissolved (mg/L)		0.00328	0.00493			
	Nickel (Ni)-Dissolved (mg/L)		<0.0050	<0.0050			
	Phosphorus (P)-Dissolved (mg/L)		<0.30	<0.30			
	Potassium (K)-Dissolved (mg/L)		3.23	2.83			
	Selenium (Se)-Dissolved (mg/L)		<0.010	<0.010			
	Silicon (Si)-Dissolved (mg/L)		0.342	0.430			
	Silver (Ag)-Dissolved (mg/L)		<0.00010	<0.00010			
	Sodium (Na)-Dissolved (mg/L)		19.5	13.3			
	Strontium (Sr)-Dissolved (mg/L)		1.06	0.656			
	Thallium (Tl)-Dissolved (mg/L)		<0.0010	<0.0010			
	Tin (Sn)-Dissolved (mg/L)		<0.0010	<0.0010			
	Titanium (Ti)-Dissolved (mg/L)		<0.010	<0.010			
	Uranium (U)-Dissolved (mg/L)		<0.00010	<0.00010			

ALS LABORATORY GROUP ANALYTICAL REPORT

	Sample ID Description Sampled Date Sampled Time Client ID				
	L491307-6				
	29-MAR-07				
	86-035-09-49				
Grouping	Analyte				
WATER					
Sample Preparation	total volume in (mL)	500			
	total volume out (mL)	450			
Physical Tests	Conductivity (uS/cm)	485			
	pH (pH)	8.25			
Anions and Nutrients	Acidity (as CaCO3) (mg/L)	<1.0			
	Alkalinity, Total (as CaCO3) (mg/L)	126			
	Sulfate (SO4) (mg/L)	154			
Dissolved Metals	Aluminum (Al)-Dissolved (mg/L)				
	Antimony (Sb)-Dissolved (mg/L)				
	Arsenic (As)-Dissolved (mg/L)				
	Barium (Ba)-Dissolved (mg/L)				
	Beryllium (Be)-Dissolved (mg/L)				
	Bismuth (Bi)-Dissolved (mg/L)				
	Boron (B)-Dissolved (mg/L)				
	Cadmium (Cd)-Dissolved (mg/L)				
	Calcium (Ca)-Dissolved (mg/L)				
	Chromium (Cr)-Dissolved (mg/L)				
	Cobalt (Co)-Dissolved (mg/L)				
	Copper (Cu)-Dissolved (mg/L)				
	Iron (Fe)-Dissolved (mg/L)				
	Lead (Pb)-Dissolved (mg/L)				
	Lithium (Li)-Dissolved (mg/L)				
	Magnesium (Mg)-Dissolved (mg/L)				
	Manganese (Mn)-Dissolved (mg/L)				
	Mercury (Hg)-Dissolved (mg/L)				
	Molybdenum (Mo)-Dissolved (mg/L)				
	Nickel (Ni)-Dissolved (mg/L)				
	Phosphorus (P)-Dissolved (mg/L)				
	Potassium (K)-Dissolved (mg/L)				
	Selenium (Se)-Dissolved (mg/L)				
	Silicon (Si)-Dissolved (mg/L)				
	Silver (Ag)-Dissolved (mg/L)				
	Sodium (Na)-Dissolved (mg/L)				
	Strontium (Sr)-Dissolved (mg/L)				
	Thallium (Tl)-Dissolved (mg/L)				
	Tin (Sn)-Dissolved (mg/L)				
	Titanium (Ti)-Dissolved (mg/L)				
	Uranium (U)-Dissolved (mg/L)				

ALS LABORATORY GROUP ANALYTICAL REPORT

	Sample ID Description Sampled Date Sampled Time Client ID	L491307-1	L491307-2	L491307-3	L491307-4	L491307-5
		29-MAR-07	29-MAR-07	29-MAR-07	29-MAR-07	29-MAR-07
		85-016-07-49	85-027-02-49	85-027-17-49	85-027-24-49	86-035-07-49
Grouping	Analyte					
WATER						
Dissolved Metals	Vanadium (V)-Dissolved (mg/L)	<0.010	<0.010			
	Zinc (Zn)-Dissolved (mg/L)	<0.0050	<0.0050			

ALS LABORATORY GROUP ANALYTICAL REPORT

	Sample ID Description Sampled Date Sampled Time Client ID	L491307-6 29-MAR-07 86-035-09-49				
Grouping	Analyte					
WATER						
Dissolved Metals	Vanadium (V)-Dissolved (mg/L) Zinc (Zn)-Dissolved (mg/L)					

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)
ACY-PCT-VA	Water	Acidity by Automated Titration	APHA 2310 "Acidity"
This analysis is carried out using procedures adapted from APHA Method 2310 "Acidity". Acidity is determined by potentiometric titration to a specified endpoint.			
ALK-COL-VA	Water	Alkalinity by Colourimetric (Automated)	APHA 310.2
This analysis is carried out using procedures adapted from EPA Method 310.2 "Alkalinity". Total Alkalinity is determined using the methyl orange colourimetric method.			
EC-MAN-HCELL-VA	Water	Conductivity (Manual)	APHA 2510 "Conductivity"
This analysis is carried out using procedures adapted from APHA Method 2510 "Conductivity". Conductivity is determined using a conductivity electrode.			
HG-DIS-CVAFS-VA	Water	Dissolved Mercury in Water by CVAFS	EPA SW-846 3005A & EPA 245.7
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedures may involve preliminary sample treatment by filtration (EPA Method 3005A) and involves a cold-oxidation of the acidified sample using bromine monochloride prior to reduction of the sample with stannous chloride. Instrumental analysis is by cold vapour atomic fluorescence spectrophotometry (EPA Method 245.7).			
MET-DIS-ICP-VA	Water	Dissolved Metals in Water by ICPOES	EPA SW-846 3005A/6010B
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedure involves filtration (EPA Method 3005A) and analysis by inductively coupled plasma - optical emission spectrophotometry (EPA Method 6010B).			
MET-DIS-LOW-MS-VA	Water	Dissolved Metals in Water by ICPMS(Low)	EPA SW-846 3005A/6020A
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedure involves preliminary sample treatment by filtration (EPA Method 3005A). Instrumental analysis is by inductively coupled plasma - mass spectrometry (EPA Method 6020A).			
PH-MAN-HCELL-VA	Water	pH by Manual Meter	APHA 4500-H "pH Value"
This analysis is carried out using procedures adapted from APHA Method 4500-H "pH Value". The pH is determined in the laboratory using a pH electrode.			
SO4-TUR-VA	Water	Sulphate(SO4) by Turbidity	APHA 4500-SO4 "Sulphate"
This analysis is carried out using procedures adapted from APHA Method 4500-SO4 "Sulphate". Sulphate is determined using the turbidimetric method.			

** Laboratory Methods employed follow in-house procedures, which are generally based on nationally or internationally accepted methodologies. The last two letters of the above ALS Test Code column indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location	Laboratory Definition Code	Laboratory Location
VA	ALS LABORATORY GROUP - VANCOUVER, BC, CANADA		

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)
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GLOSSARY OF REPORT TERMS

Surr - A surrogate is an organic compound that is similar to the target analyte(s) in chemical composition and behavior but not normally detected in environmental samples. Prior to sample processing, samples are fortified with one or more surrogate compounds.

The reported surrogate recovery value provides a measure of method efficiency.

mg/kg (units) - unit of concentration based on mass, parts per million

mg/L (units) - unit of concentration based on volume, parts per million

N/A - Result not available. Refer to qualifier code and definition for explanation

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Environmental Division

ANALYTICAL REPORT

RESCAN ENVIRONMENTAL SERVICES

ATTN: DAVE ARCHIBALD

Reported On: 20-APR-07 03:12 PM

SIXTH FLOOR
1111 WEST HASTINGS STREET
VANCOUVER BC V6E 2J3

Lab Work Order #: **L493374**

Date Received: **05-APR-07**

Project P.O. #: NOT SUBMITTED
Job Reference: MT. KLAPPAN CYCLE#55 HUMIDITY CELLS
Legal Site Desc:
CofC Numbers:

Other Information:

Comments:

TIMOTHY GUY CROWTHER
General Manager, Vancouver

For any questions about this report please contact your Account Manager:

ANDRE LANGLAIS

THIS REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL WITHOUT THE WRITTEN AUTHORITY OF THE LABORATORY.
ALL SAMPLES WILL BE DISPOSED OF AFTER 30 DAYS FOLLOWING ANALYSIS. PLEASE CONTACT THE LAB IF YOU
REQUIRE ADDITIONAL SAMPLE STORAGE TIME.

ALS LABORATORY GROUP ANALYTICAL REPORT

		Sample ID	L493374-1	L493374-2	L493374-3	L493374-4	L493374-5
		Description					
		Sampled Date	05-APR-07	05-APR-07	05-APR-07	05-APR-07	05-APR-07
		Sampled Time					
		Client ID	ARD3-07B-55	ARD3-14B-55	ARD1-15-55	ARD2-12-55	019-02-55
Grouping	Analyte						
WATER							
Sample Preparation	total volume in (mL)		500	500	500	500	500
	total volume out (mL)		445	425	475	470	500
Physical Tests	Conductivity (uS/cm)		157	197	79.2	509	546
	pH (pH)		9.00	8.03	8.36	7.94	8.76
Anions and Nutrients	Acidity (as CaCO3) (mg/L)		<1.0	2.4	1.8	2.9	<1.0
	Alkalinity, Total (as CaCO3) (mg/L)		61.3	49.4	34.5	65.5	181
	Sulfate (SO4) (mg/L)		9.3	47.7	3.2	220	62.3
Dissolved Metals	Aluminum (Al)-Dissolved (mg/L)		2.43	<0.010	0.081	<0.010	0.927
	Antimony (Sb)-Dissolved (mg/L)		0.0031	<0.0010	0.0013	<0.0010	<0.0010
	Arsenic (As)-Dissolved (mg/L)		0.0093	<0.0010	0.0026	<0.0010	<0.0010
	Barium (Ba)-Dissolved (mg/L)		0.0669	0.145	0.0811	0.0218	0.0578
	Beryllium (Be)-Dissolved (mg/L)		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Bismuth (Bi)-Dissolved (mg/L)		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Boron (B)-Dissolved (mg/L)		<0.10	<0.10	<0.10	<0.10	<0.10
	Cadmium (Cd)-Dissolved (mg/L)		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Calcium (Ca)-Dissolved (mg/L)		0.158	21.3	8.10	70.9	2.12
	Chromium (Cr)-Dissolved (mg/L)		0.0066	<0.0050	<0.0050	<0.0050	<0.0050
	Cobalt (Co)-Dissolved (mg/L)		0.0032	<0.0010	<0.0010	<0.0010	<0.0010
	Copper (Cu)-Dissolved (mg/L)		0.0030	<0.0010	<0.0010	<0.0010	0.0014
	Iron (Fe)-Dissolved (mg/L)		0.343	<0.030	<0.030	0.069	0.134
	Lead (Pb)-Dissolved (mg/L)		0.00143	<0.00050	<0.00050	<0.00050	<0.00050
	Lithium (Li)-Dissolved (mg/L)		0.015	<0.010	<0.010	<0.010	0.051
	Magnesium (Mg)-Dissolved (mg/L)		0.300	10.6	4.73	26.5	2.89
	Manganese (Mn)-Dissolved (mg/L)		0.00338	<0.00050	0.00144	0.0494	0.00166
	Mercury (Hg)-Dissolved (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Molybdenum (Mo)-Dissolved (mg/L)		0.0541	0.00606	0.00368	<0.00050	0.00389
	Nickel (Ni)-Dissolved (mg/L)		0.0226	<0.0050	<0.0050	<0.0050	<0.0050
	Phosphorus (P)-Dissolved (mg/L)		<0.30	<0.30	<0.30	<0.30	<0.30
	Potassium (K)-Dissolved (mg/L)		1.14	1.23	<0.50	<0.50	1.63
	Selenium (Se)-Dissolved (mg/L)		<0.010	<0.010	<0.010	<0.010	<0.010
	Silicon (Si)-Dissolved (mg/L)		3.31	0.654	1.21	0.200	2.06
	Silver (Ag)-Dissolved (mg/L)		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Sodium (Na)-Dissolved (mg/L)		37.5	0.57	<0.50	<0.50	124
	Strontium (Sr)-Dissolved (mg/L)		0.0131	0.962	0.125	0.725	0.223
	Thallium (Tl)-Dissolved (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Tin (Sn)-Dissolved (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Titanium (Ti)-Dissolved (mg/L)		0.026	<0.010	<0.010	<0.010	0.019
	Uranium (U)-Dissolved (mg/L)		<0.00010	<0.00010	<0.00010	<0.00010	0.00014

ALS LABORATORY GROUP ANALYTICAL REPORT

	Sample ID Description Sampled Date Sampled Time Client ID	L493374-6	L493374-7		
Grouping	Analyte				
WATER					
Sample Preparation	total volume in (mL)	500	500		
	total volume out (mL)	500	500		
Physical Tests	Conductivity (uS/cm)	193	79.3		
	pH (pH)	8.14	8.01		
Anions and Nutrients	Acidity (as CaCO3) (mg/L)	1.8	1.9		
	Alkalinity, Total (as CaCO3) (mg/L)	69.2	40.0		
	Sulfate (SO4) (mg/L)	29.1	<1.0		
Dissolved Metals	Aluminum (Al)-Dissolved (mg/L)	<0.010	0.167		
	Antimony (Sb)-Dissolved (mg/L)	<0.0010	<0.0010		
	Arsenic (As)-Dissolved (mg/L)	<0.0010	<0.0010		
	Barium (Ba)-Dissolved (mg/L)	0.0629	0.00776		
	Beryllium (Be)-Dissolved (mg/L)	<0.0050	<0.0050		
	Bismuth (Bi)-Dissolved (mg/L)	<0.0050	<0.0050		
	Boron (B)-Dissolved (mg/L)	<0.10	<0.10		
	Cadmium (Cd)-Dissolved (mg/L)	<0.00050	<0.00050		
	Calcium (Ca)-Dissolved (mg/L)	7.55	3.02		
	Chromium (Cr)-Dissolved (mg/L)	<0.0050	<0.0050		
	Cobalt (Co)-Dissolved (mg/L)	<0.0010	<0.0010		
	Copper (Cu)-Dissolved (mg/L)	<0.0010	<0.0010		
	Iron (Fe)-Dissolved (mg/L)	<0.030	0.033		
	Lead (Pb)-Dissolved (mg/L)	<0.00050	<0.00050		
	Lithium (Li)-Dissolved (mg/L)	<0.010	<0.010		
	Magnesium (Mg)-Dissolved (mg/L)	20.1	8.40		
	Manganese (Mn)-Dissolved (mg/L)	<0.00050	0.00063		
	Mercury (Hg)-Dissolved (mg/L)	<0.0010	<0.0010		
	Molybdenum (Mo)-Dissolved (mg/L)	0.00277	0.00058		
	Nickel (Ni)-Dissolved (mg/L)	<0.0050	<0.0050		
	Phosphorus (P)-Dissolved (mg/L)	<0.30	<0.30		
	Potassium (K)-Dissolved (mg/L)	1.04	<0.50		
	Selenium (Se)-Dissolved (mg/L)	<0.010	<0.010		
	Silicon (Si)-Dissolved (mg/L)	0.472	1.07		
	Silver (Ag)-Dissolved (mg/L)	<0.00010	<0.00010		
	Sodium (Na)-Dissolved (mg/L)	<0.50	<0.50		
	Strontium (Sr)-Dissolved (mg/L)	0.347	0.0267		
	Thallium (Tl)-Dissolved (mg/L)	<0.0010	<0.0010		
	Tin (Sn)-Dissolved (mg/L)	<0.0010	<0.0010		
	Titanium (Ti)-Dissolved (mg/L)	<0.010	<0.010		
	Uranium (U)-Dissolved (mg/L)	<0.00010	<0.00010		

ALS LABORATORY GROUP ANALYTICAL REPORT

		Sample ID	L493374-1	L493374-2	L493374-3	L493374-4	L493374-5
		Description					
		Sampled Date	05-APR-07	05-APR-07	05-APR-07	05-APR-07	05-APR-07
		Sampled Time					
		Client ID	ARD3-07B-55	ARD3-14B-55	ARD1-15-55	ARD2-12-55	019-02-55
Grouping	Analyte						
WATER							
Dissolved Metals	Vanadium (V)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
	Zinc (Zn)-Dissolved (mg/L)	0.0113	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050

ALS LABORATORY GROUP ANALYTICAL REPORT

	Sample ID Description Sampled Date Sampled Time Client ID	L493374-6 05-APR-07 ARD2-07-55	L493374-7 05-APR-07 DUMP-2.5M-55		
Grouping	Analyte				
WATER					
Dissolved Metals	Vanadium (V)-Dissolved (mg/L)	<0.010	<0.010		
	Zinc (Zn)-Dissolved (mg/L)	<0.0050	<0.0050		

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)
ACY-PCT-VA	Water	Acidity by Automated Titration	APHA 2310 "Acidity"
This analysis is carried out using procedures adapted from APHA Method 2310 "Acidity". Acidity is determined by potentiometric titration to a specified endpoint.			
ALK-COL-VA	Water	Alkalinity by Colourimetric (Automated)	APHA 310.2
This analysis is carried out using procedures adapted from EPA Method 310.2 "Alkalinity". Total Alkalinity is determined using the methyl orange colourimetric method.			
EC-MAN-HCELL-VA	Water	Conductivity (Manual)	APHA 2510 "Conductivity"
This analysis is carried out using procedures adapted from APHA Method 2510 "Conductivity". Conductivity is determined using a conductivity electrode.			
HG-DIS-CVAFS-VA	Water	Dissolved Mercury in Water by CVAFS	EPA SW-846 3005A & EPA 245.7
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedures may involve preliminary sample treatment by filtration (EPA Method 3005A) and involves a cold-oxidation of the acidified sample using bromine monochloride prior to reduction of the sample with stannous chloride. Instrumental analysis is by cold vapour atomic fluorescence spectrophotometry (EPA Method 245.7).			
MET-DIS-ICP-VA	Water	Dissolved Metals in Water by ICPOES	EPA SW-846 3005A/6010B
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedure involves filtration (EPA Method 3005A) and analysis by inductively coupled plasma - optical emission spectrophotometry (EPA Method 6010B).			
MET-DIS-LOW-MS-VA	Water	Dissolved Metals in Water by ICPMS(Low)	EPA SW-846 3005A/6020A
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedure involves preliminary sample treatment by filtration (EPA Method 3005A). Instrumental analysis is by inductively coupled plasma - mass spectrometry (EPA Method 6020A).			
PH-MAN-HCELL-VA	Water	pH by Manual Meter	APHA 4500-H "pH Value"
This analysis is carried out using procedures adapted from APHA Method 4500-H "pH Value". The pH is determined in the laboratory using a pH electrode.			
SO4-TUR-VA	Water	Sulphate(SO4) by Turbidity	APHA 4500-SO4 "Sulphate"
This analysis is carried out using procedures adapted from APHA Method 4500-SO4 "Sulphate". Sulphate is determined using the turbidimetric method.			

** Laboratory Methods employed follow in-house procedures, which are generally based on nationally or internationally accepted methodologies. The last two letters of the above ALS Test Code column indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location	Laboratory Definition Code	Laboratory Location
VA	ALS LABORATORY GROUP - VANCOUVER, BC, CANADA		

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)
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GLOSSARY OF REPORT TERMS

Surr - A surrogate is an organic compound that is similar to the target analyte(s) in chemical composition and behavior but not normally detected in environmental samples. Prior to sample processing, samples are fortified with one or more surrogate compounds.

The reported surrogate recovery value provides a measure of method efficiency.

mg/kg (units) - unit of concentration based on mass, parts per million

mg/L (units) - unit of concentration based on volume, parts per million

N/A - Result not available. Refer to qualifier code and definition for explanation

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Although test results are generated under strict QA/QC protocols, any unsigned test reports, faxes, or emails are considered preliminary.

ALS Laboratory Group has an extensive QA/QC program where all analytical data reported is analyzed using approved referenced procedures followed by checks and reviews by senior managers and quality assurance personnel. However, since the results are obtained from chemical measurements and thus cannot be guaranteed, ALS Laboratory Group assumes no liability for the use or interpretation of the results.



Environmental Division

ANALYTICAL REPORT

RESCAN ENVIRONMENTAL SERVICES

ATTN: DAVE ARCHIBALD

Reported On: 20-APR-07 03:10 PM

SIXTH FLOOR
1111 WEST HASTINGS STREET
VANCOUVER BC V6E 2J3

Lab Work Order #: **L493376**

Date Received: **05-APR-07**

Project P.O. #: NOT SUBMITTED
Job Reference: MT. KLAPPAN CYCLE#50 HUMIDITY CELLS
Legal Site Desc:
CofC Numbers:

Other Information:

Comments:

TIMOTHY GUY CROWTHER
General Manager, Vancouver

For any questions about this report please contact your Account Manager:

ANDRE LANGLAIS

THIS REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL WITHOUT THE WRITTEN AUTHORITY OF THE LABORATORY.
ALL SAMPLES WILL BE DISPOSED OF AFTER 30 DAYS FOLLOWING ANALYSIS. PLEASE CONTACT THE LAB IF YOU
REQUIRE ADDITIONAL SAMPLE STORAGE TIME.

ALS LABORATORY GROUP ANALYTICAL REPORT

		Sample ID	L493376-1	L493376-2	L493376-3	L493376-4
		Description				
		Sampled Date	05-APR-07	05-APR-07	05-APR-07	05-APR-07
		Sampled Time				
		Client ID	85-027-17-50	85-027-24-50	86-035-07-50	86-035-09-50
Grouping	Analyte					
WATER						
Sample Preparation	total volume in (mL)	500	500	500	500	
	total volume out (mL)	500	500	500	500	
Physical Tests	Conductivity (uS/cm)	54.4	77.9	250	370	
	pH (pH)	7.67	8.02	8.39	8.17	
Anions and Nutrients	Acidity (as CaCO3) (mg/L)	2.6	2.1	<1.0	2.1	
	Alkalinity, Total (as CaCO3) (mg/L)	23.7	37.8	138	88.9	
	Sulfate (SO4) (mg/L)	1.8	1.2	4.4	196	
Dissolved Metals	Aluminum (Al)-Dissolved (mg/L)	0.040	0.076	<0.010	<0.010	
	Antimony (Sb)-Dissolved (mg/L)	0.0010	<0.0010	<0.0010	<0.0010	
	Arsenic (As)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
	Barium (Ba)-Dissolved (mg/L)	0.0137	0.0441	0.283	0.0699	
	Beryllium (Be)-Dissolved (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	
	Bismuth (Bi)-Dissolved (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	
	Boron (B)-Dissolved (mg/L)	<0.10	<0.10	<0.10	<0.10	
	Cadmium (Cd)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	
	Calcium (Ca)-Dissolved (mg/L)	5.97	7.52	12.5	31.4	
	Chromium (Cr)-Dissolved (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	
	Cobalt (Co)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
	Copper (Cu)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
	Iron (Fe)-Dissolved (mg/L)	<0.030	<0.030	<0.030	<0.030	
	Lead (Pb)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	
	Lithium (Li)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	
	Magnesium (Mg)-Dissolved (mg/L)	2.95	5.18	27.6	28.8	
	Manganese (Mn)-Dissolved (mg/L)	0.00120	0.00149	<0.00050	0.00058	
	Mercury (Hg)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
	Molybdenum (Mo)-Dissolved (mg/L)	0.00204	0.00354	0.00068	0.00068	
	Nickel (Ni)-Dissolved (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	
	Phosphorus (P)-Dissolved (mg/L)	<0.30	<0.30	<0.30	<0.30	
	Potassium (K)-Dissolved (mg/L)	<0.50	<0.50	1.31	3.70	
	Selenium (Se)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	
	Silicon (Si)-Dissolved (mg/L)	0.850	1.00	0.606	0.576	
	Silver (Ag)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	
	Sodium (Na)-Dissolved (mg/L)	<0.50	<0.50	0.66	1.80	
	Strontium (Sr)-Dissolved (mg/L)	0.122	0.205	0.714	0.783	
	Thallium (Tl)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
	Tin (Sn)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
	Titanium (Ti)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	
	Uranium (U)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	

ALS LABORATORY GROUP ANALYTICAL REPORT

		Sample ID	L493376-1	L493376-2	L493376-3	L493376-4	
		Description					
		Sampled Date	05-APR-07	05-APR-07	05-APR-07	05-APR-07	
		Sampled Time					
		Client ID	85-027-17-50	85-027-24-50	86-035-07-50	86-035-09-50	
Grouping	Analyte						
WATER							
Dissolved Metals	Vanadium (V)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010	
	Zinc (Zn)-Dissolved (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)
ACY-PCT-VA	Water	Acidity by Automated Titration	APHA 2310 "Acidity"
This analysis is carried out using procedures adapted from APHA Method 2310 "Acidity". Acidity is determined by potentiometric titration to a specified endpoint.			
ALK-COL-VA	Water	Alkalinity by Colourimetric (Automated)	APHA 310.2
This analysis is carried out using procedures adapted from EPA Method 310.2 "Alkalinity". Total Alkalinity is determined using the methyl orange colourimetric method.			
EC-MAN-HCELL-VA	Water	Conductivity (Manual)	APHA 2510 "Conductivity"
This analysis is carried out using procedures adapted from APHA Method 2510 "Conductivity". Conductivity is determined using a conductivity electrode.			
HG-DIS-CVAFS-VA	Water	Dissolved Mercury in Water by CVAFS	EPA SW-846 3005A & EPA 245.7
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedures may involve preliminary sample treatment by filtration (EPA Method 3005A) and involves a cold-oxidation of the acidified sample using bromine monochloride prior to reduction of the sample with stannous chloride. Instrumental analysis is by cold vapour atomic fluorescence spectrophotometry (EPA Method 245.7).			
MET-DIS-ICP-VA	Water	Dissolved Metals in Water by ICPOES	EPA SW-846 3005A/6010B
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedure involves filtration (EPA Method 3005A) and analysis by inductively coupled plasma - optical emission spectrophotometry (EPA Method 6010B).			
MET-DIS-LOW-MS-VA	Water	Dissolved Metals in Water by ICPMS(Low)	EPA SW-846 3005A/6020A
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedure involves preliminary sample treatment by filtration (EPA Method 3005A). Instrumental analysis is by inductively coupled plasma - mass spectrometry (EPA Method 6020A).			
PH-MAN-HCELL-VA	Water	pH by Manual Meter	APHA 4500-H "pH Value"
This analysis is carried out using procedures adapted from APHA Method 4500-H "pH Value". The pH is determined in the laboratory using a pH electrode.			
SO4-TUR-VA	Water	Sulphate(SO4) by Turbidity	APHA 4500-SO4 "Sulphate"
This analysis is carried out using procedures adapted from APHA Method 4500-SO4 "Sulphate". Sulphate is determined using the turbidimetric method.			

** Laboratory Methods employed follow in-house procedures, which are generally based on nationally or internationally accepted methodologies. The last two letters of the above ALS Test Code column indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location	Laboratory Definition Code	Laboratory Location
VA	ALS LABORATORY GROUP - VANCOUVER, BC, CANADA		

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)
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GLOSSARY OF REPORT TERMS

Surr - A surrogate is an organic compound that is similar to the target analyte(s) in chemical composition and behavior but not normally detected in environmental samples. Prior to sample processing, samples are fortified with one or more surrogate compounds.

The reported surrogate recovery value provides a measure of method efficiency.

mg/kg (units) - unit of concentration based on mass, parts per million

mg/L (units) - unit of concentration based on volume, parts per million

N/A - Result not available. Refer to qualifier code and definition for explanation

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

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ALS Laboratory Group has an extensive QA/QC program where all analytical data reported is analyzed using approved referenced procedures followed by checks and reviews by senior managers and quality assurance personnel. However, since the results are obtained from chemical measurements and thus cannot be guaranteed, ALS Laboratory Group assumes no liability for the use or interpretation of the results.



Environmental Division

ANALYTICAL REPORT

RESCAN ENVIRONMENTAL SERVICES

ATTN: DAVE ARCHIBALD

Reported On: 08-MAY-07 04:57 PM

SIXTH FLOOR
1111 WEST HASTINGS STREET
VANCOUVER BC V6E 2J3

Lab Work Order #: **L494996**

Date Received: **12-APR-07**

Project P.O. #: NOT SUBMITTED
Job Reference: MT. KLAPPAN CYCLE#56 HUMIDITY CELLS
Legal Site Desc:
CofC Numbers:

Other Information:

Comments:

TIMOTHY GUY CROWTHER
General Manager, Vancouver

For any questions about this report please contact your Account Manager:

ANDRE LANGLAIS

THIS REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL WITHOUT THE WRITTEN AUTHORITY OF THE LABORATORY.
ALL SAMPLES WILL BE DISPOSED OF AFTER 30 DAYS FOLLOWING ANALYSIS. PLEASE CONTACT THE LAB IF YOU
REQUIRE ADDITIONAL SAMPLE STORAGE TIME.

ALS LABORATORY GROUP ANALYTICAL REPORT

		Sample ID	L494996-1	L494996-2	L494996-3	L494996-4	L494996-5
		Description					
		Sampled Date	12-APR-07	12-APR-07	12-APR-07	12-APR-07	12-APR-07
		Sampled Time					
		Client ID	ARD3-08B-56	ARD3-14B-56	ARD1-15-56	ARD2-12-56	ARD2-07-56
Grouping	Analyte						
WATER							
Sample Preparation	total volume in (mL)		500	500	500	500	500
	total volume out (mL)		470	435	470	425	475
Physical Tests	Conductivity (uS/cm)		1480	186	84.2	603	273
	pH (pH)		7.22	8.10	8.25	7.96	8.33
Anions and Nutrients	Acidity (as CaCO3) (mg/L)		6.2	2.2	1.4	3.8	<1.0
	Alkalinity, Total (as CaCO3) (mg/L)		14.7	54.6	36.9	103	109
	Sulfate (SO4) (mg/L)		918	36.9	3.0	250	33.8
Dissolved Metals	Aluminum (Al)-Dissolved (mg/L)		0.016				
	Antimony (Sb)-Dissolved (mg/L)		<0.0010				
	Arsenic (As)-Dissolved (mg/L)		<0.0010				
	Barium (Ba)-Dissolved (mg/L)		0.00917				
	Beryllium (Be)-Dissolved (mg/L)		<0.0050				
	Bismuth (Bi)-Dissolved (mg/L)		<0.0050				
	Boron (B)-Dissolved (mg/L)		0.10				
	Cadmium (Cd)-Dissolved (mg/L)		0.00113				
	Calcium (Ca)-Dissolved (mg/L)		78.9				
	Chromium (Cr)-Dissolved (mg/L)		<0.0050				
	Cobalt (Co)-Dissolved (mg/L)		0.0120				
	Copper (Cu)-Dissolved (mg/L)		<0.0010				
	Iron (Fe)-Dissolved (mg/L)		<0.030				
	Lead (Pb)-Dissolved (mg/L)		<0.00050				
	Lithium (Li)-Dissolved (mg/L)		0.050				
	Magnesium (Mg)-Dissolved (mg/L)		143				
	Manganese (Mn)-Dissolved (mg/L)		2.72				
	Mercury (Hg)-Dissolved (mg/L)		<0.0010				
	Molybdenum (Mo)-Dissolved (mg/L)		<0.00050				
	Nickel (Ni)-Dissolved (mg/L)		0.0953				
	Phosphorus (P)-Dissolved (mg/L)		<0.30				
	Potassium (K)-Dissolved (mg/L)		8.35				
	Selenium (Se)-Dissolved (mg/L)		<0.010				
	Silicon (Si)-Dissolved (mg/L)		0.663				
	Silver (Ag)-Dissolved (mg/L)		<0.00010				
	Sodium (Na)-Dissolved (mg/L)		58.4				
	Strontium (Sr)-Dissolved (mg/L)		8.51				
	Thallium (Tl)-Dissolved (mg/L)		<0.0010				
	Tin (Sn)-Dissolved (mg/L)		<0.0010				
	Titanium (Ti)-Dissolved (mg/L)		<0.010				
	Uranium (U)-Dissolved (mg/L)		<0.00010				

ALS LABORATORY GROUP ANALYTICAL REPORT

	Sample ID	L494996-6			
	Description				
	Sampled Date	12-APR-07			
	Sampled Time				
	Client ID	DUMP-2.5M-56			
Grouping	Analyte				
WATER					
Sample Preparation	total volume in (mL)	500			
	total volume out (mL)	470			
Physical Tests	Conductivity (uS/cm)	85.3			
	pH (pH)	8.09			
Anions and Nutrients	Acidity (as CaCO3) (mg/L)	1.4			
	Alkalinity, Total (as CaCO3) (mg/L)	42.6			
	Sulfate (SO4) (mg/L)	<1.0			
Dissolved Metals	Aluminum (Al)-Dissolved (mg/L)				
	Antimony (Sb)-Dissolved (mg/L)				
	Arsenic (As)-Dissolved (mg/L)				
	Barium (Ba)-Dissolved (mg/L)				
	Beryllium (Be)-Dissolved (mg/L)				
	Bismuth (Bi)-Dissolved (mg/L)				
	Boron (B)-Dissolved (mg/L)				
	Cadmium (Cd)-Dissolved (mg/L)				
	Calcium (Ca)-Dissolved (mg/L)				
	Chromium (Cr)-Dissolved (mg/L)				
	Cobalt (Co)-Dissolved (mg/L)				
	Copper (Cu)-Dissolved (mg/L)				
	Iron (Fe)-Dissolved (mg/L)				
	Lead (Pb)-Dissolved (mg/L)				
	Lithium (Li)-Dissolved (mg/L)				
	Magnesium (Mg)-Dissolved (mg/L)				
	Manganese (Mn)-Dissolved (mg/L)				
	Mercury (Hg)-Dissolved (mg/L)				
	Molybdenum (Mo)-Dissolved (mg/L)				
	Nickel (Ni)-Dissolved (mg/L)				
	Phosphorus (P)-Dissolved (mg/L)				
	Potassium (K)-Dissolved (mg/L)				
	Selenium (Se)-Dissolved (mg/L)				
	Silicon (Si)-Dissolved (mg/L)				
	Silver (Ag)-Dissolved (mg/L)				
	Sodium (Na)-Dissolved (mg/L)				
	Strontium (Sr)-Dissolved (mg/L)				
	Thallium (Tl)-Dissolved (mg/L)				
	Tin (Sn)-Dissolved (mg/L)				
	Titanium (Ti)-Dissolved (mg/L)				
	Uranium (U)-Dissolved (mg/L)				

ALS LABORATORY GROUP ANALYTICAL REPORT

	Sample ID Description Sampled Date Sampled Time Client ID	L494996-1 12-APR-07 ARD3-08B-56	L494996-2 12-APR-07 ARD3-14B-56	L494996-3 12-APR-07 ARD1-15-56	L494996-4 12-APR-07 ARD2-12-56	L494996-5 12-APR-07 ARD2-07-56
Grouping	Analyte					
WATER						
Dissolved Metals	Vanadium (V)-Dissolved (mg/L)	<0.010				
	Zinc (Zn)-Dissolved (mg/L)	0.0181				

ALS LABORATORY GROUP ANALYTICAL REPORT

Grouping	Analyte	Sample ID	Description	Sampled Date	Sampled Time	Client ID
WATER		L494996-6		12-APR-07		DUMP-2.5M-56
Dissolved Metals	Vanadium (V)-Dissolved (mg/L) Zinc (Zn)-Dissolved (mg/L)					

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)
ACY-PCT-VA	Water	Acidity by Automated Titration	APHA 2310 "Acidity"
This analysis is carried out using procedures adapted from APHA Method 2310 "Acidity". Acidity is determined by potentiometric titration to a specified endpoint.			
ALK-COL-VA	Water	Alkalinity by Colourimetric (Automated)	APHA 310.2
This analysis is carried out using procedures adapted from EPA Method 310.2 "Alkalinity". Total Alkalinity is determined using the methyl orange colourimetric method.			
EC-MAN-HCELL-VA	Water	Conductivity (Manual)	APHA 2510 "Conductivity"
This analysis is carried out using procedures adapted from APHA Method 2510 "Conductivity". Conductivity is determined using a conductivity electrode.			
HG-DIS-CVAFS-VA	Water	Dissolved Mercury in Water by CVAFS	EPA SW-846 3005A & EPA 245.7
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedures may involve preliminary sample treatment by filtration (EPA Method 3005A) and involves a cold-oxidation of the acidified sample using bromine monochloride prior to reduction of the sample with stannous chloride. Instrumental analysis is by cold vapour atomic fluorescence spectrophotometry (EPA Method 245.7).			
MET-DIS-ICP-VA	Water	Dissolved Metals in Water by ICPOES	EPA SW-846 3005A/6010B
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedure involves filtration (EPA Method 3005A) and analysis by inductively coupled plasma - optical emission spectrophotometry (EPA Method 6010B).			
MET-DIS-LOW-MS-VA	Water	Dissolved Metals in Water by ICPMS(Low)	EPA SW-846 3005A/6020A
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedure involves preliminary sample treatment by filtration (EPA Method 3005A). Instrumental analysis is by inductively coupled plasma - mass spectrometry (EPA Method 6020A).			
PH-MAN-HCELL-VA	Water	pH by Manual Meter	APHA 4500-H "pH Value"
This analysis is carried out using procedures adapted from APHA Method 4500-H "pH Value". The pH is determined in the laboratory using a pH electrode.			
SO4-TUR-VA	Water	Sulphate(SO4) by Turbidity	APHA 4500-SO4 "Sulphate"
This analysis is carried out using procedures adapted from APHA Method 4500-SO4 "Sulphate". Sulphate is determined using the turbidimetric method.			

** Laboratory Methods employed follow in-house procedures, which are generally based on nationally or internationally accepted methodologies. The last two letters of the above ALS Test Code column indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location	Laboratory Definition Code	Laboratory Location
VA	ALS LABORATORY GROUP - VANCOUVER, BC, CANADA		

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)
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GLOSSARY OF REPORT TERMS

Surr - A surrogate is an organic compound that is similar to the target analyte(s) in chemical composition and behavior but not normally detected in environmental samples. Prior to sample processing, samples are fortified with one or more surrogate compounds.

The reported surrogate recovery value provides a measure of method efficiency.

mg/kg (units) - unit of concentration based on mass, parts per million

mg/L (units) - unit of concentration based on volume, parts per million

N/A - Result not available. Refer to qualifier code and definition for explanation

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

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Environmental Division

ANALYTICAL REPORT

RESCAN ENVIRONMENTAL SERVICES

ATTN: DAVE ARCHIBALD

Reported On: 23-APR-07 06:57 PM

SIXTH FLOOR
1111 WEST HASTINGS STREET
VANCOUVER BC V6E 2J3

Lab Work Order #: **L494998**

Date Received: **12-APR-07**

Project P.O. #: NOT SUBMITTED
Job Reference: MT KLAPPAN CYCLE#51 HUMIDITY CELLS
Legal Site Desc:
CofC Numbers:

Other Information:

Comments:

TIMOTHY GUY CROWTHER
General Manager, Vancouver

For any questions about this report please contact your Account Manager:

ANDRE LANGLAIS

THIS REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL WITHOUT THE WRITTEN AUTHORITY OF THE LABORATORY.
ALL SAMPLES WILL BE DISPOSED OF AFTER 30 DAYS FOLLOWING ANALYSIS. PLEASE CONTACT THE LAB IF YOU
REQUIRE ADDITIONAL SAMPLE STORAGE TIME.

ALS LABORATORY GROUP ANALYTICAL REPORT

		Sample ID	L494998-1	L494998-2	L494998-3	L494998-4	
		Description					
		Sampled Date	12-APR-07	12-APR-07	12-APR-07	12-APR-07	
		Sampled Time					
		Client ID	85-027-17-51	85-027-24-51	86-035-07-51	86-035-09-51	
Grouping	Analyte						
WATER							
Sample Preparation	total volume in (mL)		500	500	500	500	
	total volume out (mL)		470	425	480	425	
Physical Tests	Conductivity (uS/cm)		57.3	82.9	295	277	
	pH (pH)		7.59	7.98	8.48	8.05	
Anions and Nutrients	Acidity (as CaCO3) (mg/L)		1.7	1.9	<1.0	2.1	
	Alkalinity, Total (as CaCO3) (mg/L)		24.6	40.0	168	57.0	
	Sulfate (SO4) (mg/L)		2.1	1.3	7.1	86.8	

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)
ACY-PCT-VA	Water	Acidity by Automated Titration	APHA 2310 "Acidity"
This analysis is carried out using procedures adapted from APHA Method 2310 "Acidity". Acidity is determined by potentiometric titration to a specified endpoint.			
ALK-COL-VA	Water	Alkalinity by Colourimetric (Automated)	APHA 310.2
This analysis is carried out using procedures adapted from EPA Method 310.2 "Alkalinity". Total Alkalinity is determined using the methyl orange colourimetric method.			
EC-MAN-HCELL-VA	Water	Conductivity (Manual)	APHA 2510 "Conductivity"
This analysis is carried out using procedures adapted from APHA Method 2510 "Conductivity". Conductivity is determined using a conductivity electrode.			
PH-MAN-HCELL-VA	Water	pH by Manual Meter	APHA 4500-H "pH Value"
This analysis is carried out using procedures adapted from APHA Method 4500-H "pH Value". The pH is determined in the laboratory using a pH electrode.			
SO4-TUR-VA	Water	Sulphate(SO4) by Turbidity	APHA 4500-SO4 "Sulphate"
This analysis is carried out using procedures adapted from APHA Method 4500-SO4 "Sulphate". Sulphate is determined using the turbidimetric method.			

** Laboratory Methods employed follow in-house procedures, which are generally based on nationally or internationally accepted methodologies. The last two letters of the above ALS Test Code column indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location	Laboratory Definition Code	Laboratory Location
VA	ALS LABORATORY GROUP - VANCOUVER, BC, CANADA		

GLOSSARY OF REPORT TERMS

Surr - A surrogate is an organic compound that is similar to the target analyte(s) in chemical composition and behavior but not normally detected in environmental samples. Prior to sample processing, samples are fortified with one or more surrogate compounds.

The reported surrogate recovery value provides a measure of method efficiency.

mg/kg (units) - unit of concentration based on mass, parts per million

mg/L (units) - unit of concentration based on volume, parts per million

N/A - Result not available. Refer to qualifier code and definition for explanation

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Although test results are generated under strict QA/QC protocols, any unsigned test reports, faxes, or emails are considered preliminary.

ALS Laboratory Group has an extensive QA/QC program where all analytical data reported is analyzed using approved referenced procedures followed by checks and reviews by senior managers and quality assurance personnel. However, since the results are obtained from chemical measurements and thus cannot be guaranteed, ALS Laboratory Group assumes no liability for the use or interpretation of the results.



Environmental Division

ANALYTICAL REPORT

RESCAN ENVIRONMENTAL SERVICES

ATTN: DAVE ARCHIBALD

Reported On: 07-MAY-07 03:32 PM

SIXTH FLOOR
1111 WEST HASTINGS STREET
VANCOUVER BC V6E 2J3

Lab Work Order #: **L497244**

Date Received: **19-APR-07**

Project P.O. #: NOT SUBMITTED
Job Reference: MT. KLAPPAN CYCLE#57 HUMIDITY CELLS
Legal Site Desc:
CofC Numbers:

Other Information:

Comments:

TIMOTHY GUY CROWTHER
General Manager, Vancouver

For any questions about this report please contact your Account Manager:

ANDRE LANGLAIS

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REQUIRE ADDITIONAL SAMPLE STORAGE TIME.

ALS LABORATORY GROUP ANALYTICAL REPORT

		Sample ID	L497244-1	L497244-2	L497244-3	L497244-4	L497244-5
		Description					
		Sampled Date	19-APR-07	19-APR-07	19-APR-07	19-APR-07	19-APR-07
		Sampled Time					
		Client ID	ARD3-14B-57	ARD1-15-57	ARD2-12-57	ARD2-07-57	DUMP-2.5M-57
Grouping	Analyte						
WATER							
Sample Preparation	total volume in (mL)		500	500	500	500	500
	total volume out (mL)		430	450	450	475	450
Physical Tests	Conductivity (uS/cm)		191	93.4	476	264	112
	pH (pH)		8.08	8.02	8.18	8.36	8.12
Anions and Nutrients	Acidity (as CaCO3) (mg/L)		1.1	<1.0	1.0	<1.0	<1.0
	Alkalinity, Total (as CaCO3) (mg/L)		63.9	46.5	95.5	112	62.2
	Sulfate (SO4) (mg/L)		39.7	2.9	177	36.5	<1.0
Dissolved Metals	Aluminum (Al)-Dissolved (mg/L)		<0.010	0.074	<0.010	<0.010	0.071
	Antimony (Sb)-Dissolved (mg/L)		<0.0010	0.0013	<0.0010	<0.0010	<0.0010
	Arsenic (As)-Dissolved (mg/L)		<0.0010	0.0017	<0.0010	<0.0010	<0.0010
	Barium (Ba)-Dissolved (mg/L)		0.156	0.0924	0.0255	0.0755	0.00873
	Beryllium (Be)-Dissolved (mg/L)		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Bismuth (Bi)-Dissolved (mg/L)		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Boron (B)-Dissolved (mg/L)		<0.10	<0.10	<0.10	<0.10	<0.10
	Cadmium (Cd)-Dissolved (mg/L)		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Calcium (Ca)-Dissolved (mg/L)		20.2	9.75	72.8	10.3	4.29
	Chromium (Cr)-Dissolved (mg/L)		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Cobalt (Co)-Dissolved (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Copper (Cu)-Dissolved (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Iron (Fe)-Dissolved (mg/L)		<0.030	<0.030	<0.030	<0.030	<0.030
	Lead (Pb)-Dissolved (mg/L)		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Lithium (Li)-Dissolved (mg/L)		<0.010	<0.010	<0.010	<0.010	<0.010
	Magnesium (Mg)-Dissolved (mg/L)		10.9	5.95	26.7	30.7	12.8
	Manganese (Mn)-Dissolved (mg/L)		0.00109	0.00496	0.0367	<0.00050	<0.00050
	Mercury (Hg)-Dissolved (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Molybdenum (Mo)-Dissolved (mg/L)		0.00574	0.00339	<0.00050	0.00451	0.00065
	Nickel (Ni)-Dissolved (mg/L)		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Phosphorus (P)-Dissolved (mg/L)		<0.30	<0.30	<0.30	<0.30	<0.30
	Potassium (K)-Dissolved (mg/L)		1.24	<0.50	<0.50	1.45	<0.50
	Selenium (Se)-Dissolved (mg/L)		<0.010	<0.010	<0.010	<0.010	<0.010
	Silicon (Si)-Dissolved (mg/L)		0.651	1.23	0.230	0.691	1.09
	Silver (Ag)-Dissolved (mg/L)		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Sodium (Na)-Dissolved (mg/L)		0.52	<0.50	<0.50	<0.50	<0.50
	Strontium (Sr)-Dissolved (mg/L)		0.948	0.143	0.714	0.496	0.0388
	Thallium (Tl)-Dissolved (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Tin (Sn)-Dissolved (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Titanium (Ti)-Dissolved (mg/L)		<0.010	<0.010	<0.010	<0.010	<0.010
	Uranium (U)-Dissolved (mg/L)		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010

ALS LABORATORY GROUP ANALYTICAL REPORT

		Sample ID	L497244-1	L497244-2	L497244-3	L497244-4	L497244-5
		Description					
		Sampled Date	19-APR-07	19-APR-07	19-APR-07	19-APR-07	19-APR-07
		Sampled Time					
		Client ID	ARD3-14B-57	ARD1-15-57	ARD2-12-57	ARD2-07-57	DUMP-2.5M-57
Grouping	Analyte						
WATER							
Dissolved Metals	Vanadium (V)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
	Zinc (Zn)-Dissolved (mg/L)	0.0111	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)
ACY-PCT-VA	Water	Acidity by Automated Titration	APHA 2310 "Acidity"
This analysis is carried out using procedures adapted from APHA Method 2310 "Acidity". Acidity is determined by potentiometric titration to a specified endpoint.			
ALK-COL-VA	Water	Alkalinity by Colourimetric (Automated)	APHA 310.2
This analysis is carried out using procedures adapted from EPA Method 310.2 "Alkalinity". Total Alkalinity is determined using the methyl orange colourimetric method.			
EC-MAN-HCELL-VA	Water	Conductivity (Manual)	APHA 2510 "Conductivity"
This analysis is carried out using procedures adapted from APHA Method 2510 "Conductivity". Conductivity is determined using a conductivity electrode.			
HG-DIS-CVAFS-VA	Water	Dissolved Mercury in Water by CVAFS	EPA SW-846 3005A & EPA 245.7
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedures may involve preliminary sample treatment by filtration (EPA Method 3005A) and involves a cold-oxidation of the acidified sample using bromine monochloride prior to reduction of the sample with stannous chloride. Instrumental analysis is by cold vapour atomic fluorescence spectrophotometry (EPA Method 245.7).			
MET-DIS-ICP-VA	Water	Dissolved Metals in Water by ICPOES	EPA SW-846 3005A/6010B
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedure involves filtration (EPA Method 3005A) and analysis by inductively coupled plasma - optical emission spectrophotometry (EPA Method 6010B).			
MET-DIS-LOW-MS-VA	Water	Dissolved Metals in Water by ICPMS(Low)	EPA SW-846 3005A/6020A
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedure involves preliminary sample treatment by filtration (EPA Method 3005A). Instrumental analysis is by inductively coupled plasma - mass spectrometry (EPA Method 6020A).			
PH-MAN-HCELL-VA	Water	pH by Manual Meter	APHA 4500-H "pH Value"
This analysis is carried out using procedures adapted from APHA Method 4500-H "pH Value". The pH is determined in the laboratory using a pH electrode.			
SO4-TUR-VA	Water	Sulphate(SO4) by Turbidity	APHA 4500-SO4 "Sulphate"
This analysis is carried out using procedures adapted from APHA Method 4500-SO4 "Sulphate". Sulphate is determined using the turbidimetric method.			

** Laboratory Methods employed follow in-house procedures, which are generally based on nationally or internationally accepted methodologies. The last two letters of the above ALS Test Code column indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location	Laboratory Definition Code	Laboratory Location
VA	ALS LABORATORY GROUP - VANCOUVER, BC, CANADA		

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)
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GLOSSARY OF REPORT TERMS

Surr - A surrogate is an organic compound that is similar to the target analyte(s) in chemical composition and behavior but not normally detected in environmental samples. Prior to sample processing, samples are fortified with one or more surrogate compounds.

The reported surrogate recovery value provides a measure of method efficiency.

mg/kg (units) - unit of concentration based on mass, parts per million

mg/L (units) - unit of concentration based on volume, parts per million

N/A - Result not available. Refer to qualifier code and definition for explanation

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Environmental Division

ANALYTICAL REPORT

RESCAN ENVIRONMENTAL SERVICES

ATTN: DAVE ARCHIBALD

SIXTH FLOOR
1111 WEST HASTINGS STREET
VANCOUVER BC V6E 2J3

Reported On: 10-MAY-07 11:46 AM

Revision: 3

Lab Work Order #: **L497246**

Date Received: **19-APR-07**

Project P.O. #: NOT SUBMITTED
Job Reference: MT. KLAPPAN CYCLE#52 HUMIDITY CELLS
Legal Site Desc:
CofC Numbers:

Other Information:

Comments:

TIMOTHY GUY CROWTHER
General Manager, Vancouver

For any questions about this report please contact your Account Manager:

ANDRE LANGLAIS

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ALS LABORATORY GROUP ANALYTICAL REPORT

		Sample ID	L497246-1	L497246-2	L497246-3	L497246-4	L497246-5
		Description					
		Sampled Date	19-APR-07	19-APR-07	19-APR-07	19-APR-07	19-APR-07
		Sampled Time					
		Client ID	85-016-07-52	85-027-02-52	85-027-17-52	85-027-24-52	86-035-07-52
Grouping	Analyte						
WATER							
Sample Preparation	total volume in (mL)		500	500	500	500	500
	total volume out (mL)		500	490	455	425	450
Physical Tests	Conductivity (uS/cm)		423	389	62.4	88.5	269
	pH (pH)		8.17	7.67	7.56	8.07	8.35
Anions and Nutrients	Acidity (as CaCO3) (mg/L)		1.1	1.5	1.2	1.1	<1.0
	Alkalinity, Total (as CaCO3) (mg/L)		109	33.0	28.6	44.4	158
	Sulfate (SO4) (mg/L)		133	167	2.7	1.6	10.0
Dissolved Metals	Aluminum (Al)-Dissolved (mg/L)		<0.010	<0.010	0.049	0.084	<0.010
	Antimony (Sb)-Dissolved (mg/L)		<0.0010	<0.0010	0.0013	<0.0010	<0.0010
	Arsenic (As)-Dissolved (mg/L)		<0.0010	<0.0010	0.0012	<0.0010	<0.0010
	Barium (Ba)-Dissolved (mg/L)		0.0875	0.0266	0.0158	0.0462	0.300
	Beryllium (Be)-Dissolved (mg/L)		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Bismuth (Bi)-Dissolved (mg/L)		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Boron (B)-Dissolved (mg/L)		<0.10	<0.10	<0.10	<0.10	<0.10
	Cadmium (Cd)-Dissolved (mg/L)		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Calcium (Ca)-Dissolved (mg/L)		14.9	8.29	6.79	8.43	13.1
	Chromium (Cr)-Dissolved (mg/L)		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Cobalt (Co)-Dissolved (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Copper (Cu)-Dissolved (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Iron (Fe)-Dissolved (mg/L)		<0.030	<0.030	<0.030	<0.030	<0.030
	Lead (Pb)-Dissolved (mg/L)		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Lithium (Li)-Dissolved (mg/L)		0.016	0.016	<0.010	<0.010	<0.010
	Magnesium (Mg)-Dissolved (mg/L)		42.9	42.2	3.58	6.04	30.7
	Manganese (Mn)-Dissolved (mg/L)		0.00094	0.00089	0.00066	0.00187	<0.00050
	Mercury (Hg)-Dissolved (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Molybdenum (Mo)-Dissolved (mg/L)		0.00116	0.00191	0.00275	0.00445	0.00118
	Nickel (Ni)-Dissolved (mg/L)		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Phosphorus (P)-Dissolved (mg/L)		<0.30	<0.30	<0.30	<0.30	<0.30
	Potassium (K)-Dissolved (mg/L)		3.52	3.12	<0.50	<0.50	1.44
	Selenium (Se)-Dissolved (mg/L)		<0.010	<0.010	<0.010	<0.010	<0.010
	Silicon (Si)-Dissolved (mg/L)		0.436	0.423	1.10	1.14	0.651
	Silver (Ag)-Dissolved (mg/L)		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Sodium (Na)-Dissolved (mg/L)		10.3	6.78	<0.50	<0.50	0.65
	Strontium (Sr)-Dissolved (mg/L)		1.51	0.991	0.146	0.234	0.775
	Thallium (Tl)-Dissolved (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Tin (Sn)-Dissolved (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Titanium (Ti)-Dissolved (mg/L)		<0.010	<0.010	<0.010	<0.010	<0.010
	Uranium (U)-Dissolved (mg/L)		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010

ALS LABORATORY GROUP ANALYTICAL REPORT

		Sample ID	L497246-6			
		Description				
		Sampled Date	19-APR-07			
		Sampled Time				
		Client ID	86-035-09-52			
Grouping	Analyte					
WATER						
Sample Preparation	total volume in (mL)		500			
	total volume out (mL)		485			
Physical Tests	Conductivity (uS/cm)		496			
	pH (pH)		8.29			
Anions and Nutrients	Acidity (as CaCO3) (mg/L)		<1.0			
	Alkalinity, Total (as CaCO3) (mg/L)		133			
	Sulfate (SO4) (mg/L)		165			
Dissolved Metals	Aluminum (Al)-Dissolved (mg/L)		<0.010			
	Antimony (Sb)-Dissolved (mg/L)		<0.0010			
	Arsenic (As)-Dissolved (mg/L)		<0.0010			
	Barium (Ba)-Dissolved (mg/L)		0.0820			
	Beryllium (Be)-Dissolved (mg/L)		<0.0050			
	Bismuth (Bi)-Dissolved (mg/L)		<0.0050			
	Boron (B)-Dissolved (mg/L)		<0.10			
	Cadmium (Cd)-Dissolved (mg/L)		<0.00050			
	Calcium (Ca)-Dissolved (mg/L)		47.0			
	Chromium (Cr)-Dissolved (mg/L)		<0.0050			
	Cobalt (Co)-Dissolved (mg/L)		<0.0010			
	Copper (Cu)-Dissolved (mg/L)		<0.0010			
	Iron (Fe)-Dissolved (mg/L)		<0.030			
	Lead (Pb)-Dissolved (mg/L)		<0.00050			
	Lithium (Li)-Dissolved (mg/L)		0.012			
	Magnesium (Mg)-Dissolved (mg/L)		41.3			
	Manganese (Mn)-Dissolved (mg/L)		0.00089			
	Mercury (Hg)-Dissolved (mg/L)		<0.0010			
	Molybdenum (Mo)-Dissolved (mg/L)		0.00068			
	Nickel (Ni)-Dissolved (mg/L)		<0.0050			
	Phosphorus (P)-Dissolved (mg/L)		<0.30			
	Potassium (K)-Dissolved (mg/L)		4.45			
	Selenium (Se)-Dissolved (mg/L)		<0.010			
	Silicon (Si)-Dissolved (mg/L)		0.733			
	Silver (Ag)-Dissolved (mg/L)		<0.00010			
	Sodium (Na)-Dissolved (mg/L)		1.86			
	Strontium (Sr)-Dissolved (mg/L)		1.08			
	Thallium (Tl)-Dissolved (mg/L)		<0.0010			
	Tin (Sn)-Dissolved (mg/L)		<0.0010			
	Titanium (Ti)-Dissolved (mg/L)		<0.010			
	Uranium (U)-Dissolved (mg/L)		<0.00010			

ALS LABORATORY GROUP ANALYTICAL REPORT

	Sample ID	L497246-6			
	Description				
	Sampled Date	19-APR-07			
	Sampled Time				
	Client ID	86-035-09-52			
Grouping	Analyte				
WATER					
Dissolved Metals	Vanadium (V)-Dissolved (mg/L)	<0.010			
	Zinc (Zn)-Dissolved (mg/L)	<0.0050			

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)
ACY-PCT-VA	Water	Acidity by Automated Titration	APHA 2310 "Acidity"
This analysis is carried out using procedures adapted from APHA Method 2310 "Acidity". Acidity is determined by potentiometric titration to a specified endpoint.			
ALK-COL-VA	Water	Alkalinity by Colourimetric (Automated)	APHA 310.2
This analysis is carried out using procedures adapted from EPA Method 310.2 "Alkalinity". Total Alkalinity is determined using the methyl orange colourimetric method.			
EC-MAN-HCELL-VA	Water	Conductivity (Manual)	APHA 2510 "Conductivity"
This analysis is carried out using procedures adapted from APHA Method 2510 "Conductivity". Conductivity is determined using a conductivity electrode.			
HG-DIS-CVAFS-VA	Water	Dissolved Mercury in Water by CVAFS	EPA SW-846 3005A & EPA 245.7
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedures may involve preliminary sample treatment by filtration (EPA Method 3005A) and involves a cold-oxidation of the acidified sample using bromine monochloride prior to reduction of the sample with stannous chloride. Instrumental analysis is by cold vapour atomic fluorescence spectrophotometry (EPA Method 245.7).			
MET-DIS-ICP-VA	Water	Dissolved Metals in Water by ICPOES	EPA SW-846 3005A/6010B
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedure involves filtration (EPA Method 3005A) and analysis by inductively coupled plasma - optical emission spectrophotometry (EPA Method 6010B).			
MET-DIS-LOW-MS-VA	Water	Dissolved Metals in Water by ICPMS(Low)	EPA SW-846 3005A/6020A
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedure involves preliminary sample treatment by filtration (EPA Method 3005A). Instrumental analysis is by inductively coupled plasma - mass spectrometry (EPA Method 6020A).			
PH-MAN-HCELL-VA	Water	pH by Manual Meter	APHA 4500-H "pH Value"
This analysis is carried out using procedures adapted from APHA Method 4500-H "pH Value". The pH is determined in the laboratory using a pH electrode.			
SO4-TUR-VA	Water	Sulphate(SO4) by Turbidity	APHA 4500-SO4 "Sulphate"
This analysis is carried out using procedures adapted from APHA Method 4500-SO4 "Sulphate". Sulphate is determined using the turbidimetric method.			

** Laboratory Methods employed follow in-house procedures, which are generally based on nationally or internationally accepted methodologies. The last two letters of the above ALS Test Code column indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location	Laboratory Definition Code	Laboratory Location
VA	ALS LABORATORY GROUP - VANCOUVER, BC, CANADA		

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)
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GLOSSARY OF REPORT TERMS

Surr - A surrogate is an organic compound that is similar to the target analyte(s) in chemical composition and behavior but not normally detected in environmental samples. Prior to sample processing, samples are fortified with one or more surrogate compounds.

The reported surrogate recovery value provides a measure of method efficiency.

mg/kg (units) - unit of concentration based on mass, parts per million

mg/L (units) - unit of concentration based on volume, parts per million

N/A - Result not available. Refer to qualifier code and definition for explanation

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Although test results are generated under strict QA/QC protocols, any unsigned test reports, faxes, or emails are considered preliminary.

ALS Laboratory Group has an extensive QA/QC program where all analytical data reported is analyzed using approved referenced procedures followed by checks and reviews by senior managers and quality assurance personnel. However, since the results are obtained from chemical measurements and thus cannot be guaranteed, ALS Laboratory Group assumes no liability for the use or interpretation of the results.



Environmental Division

ANALYTICAL REPORT

RESCAN ENVIRONMENTAL SERVICES

ATTN: DAVE ARCHIBALD

SIXTH FLOOR
1111 WEST HASTINGS STREET
VANCOUVER BC V6E 2J3

Reported On: 16-MAY-07 01:13 PM

Revision: 3

Lab Work Order #: **L499363**

Date Received: **26-APR-07**

Project P.O. #: NOT SUBMITTED
Job Reference: MT. KLAPPAN CYCLE#58 HUMIDITY CELLS
Legal Site Desc:
CofC Numbers:

Other Information:

Comments: Please Note: As requested, the metals data is being reported at a lower detection limit.

TIMOTHY GUY CROWTHER
General Manager, Vancouver

For any questions about this report please contact your Account Manager:

ANDRE LANGLAIS

THIS REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL WITHOUT THE WRITTEN AUTHORITY OF THE LABORATORY.
ALL SAMPLES WILL BE DISPOSED OF AFTER 30 DAYS FOLLOWING ANALYSIS. PLEASE CONTACT THE LAB IF YOU
REQUIRE ADDITIONAL SAMPLE STORAGE TIME.

ALS LABORATORY GROUP ANALYTICAL REPORT

		Sample ID	L499363-1	L499363-2	L499363-3	L499363-4	L499363-5
		Description					
		Sampled Date	26-APR-07	26-APR-07	26-APR-07	26-APR-07	26-APR-07
		Sampled Time					
		Client ID	ARD3-07B-58	ARD3-08B-58	ARD3-14B-58	ARD1-15-58	ARD2-12-58
Grouping	Analyte						
WATER							
Sample Preparation	total volume in (mL)		500	500	500	500	500
	total volume out (mL)		400	425	460	470	460
Physical Tests	Conductivity (uS/cm)		207	1430	201	99.1	505
	pH (pH)		8.97	7.61	8.10	7.74	8.18
Anions and Nutrients	Acidity (as CaCO3) (mg/L)		<1.0	3.0	1.3	<1.0	1.2
	Alkalinity, Total (as CaCO3) (mg/L)		88.2	46.0	60.2	45.7	92.6
	Sulfate (SO4) (mg/L)		12.8	842	44.6	3.9	204
Dissolved Metals	Aluminum (Al)-Dissolved (mg/L)		1.35	0.0031	0.0065	0.0618	0.0304
	Antimony (Sb)-Dissolved (mg/L)		0.00488	<0.00020	0.00031	0.00138	0.00038
	Arsenic (As)-Dissolved (mg/L)		0.0105	<0.00020	<0.00010	0.00200	<0.00010
	Barium (Ba)-Dissolved (mg/L)		0.0555	0.0160	0.176	0.0931	0.0245
	Beryllium (Be)-Dissolved (mg/L)		<0.00050	<0.0010	<0.00050	<0.00050	<0.00050
	Bismuth (Bi)-Dissolved (mg/L)		<0.00050	<0.0010	<0.00050	<0.00050	<0.00050
	Boron (B)-Dissolved (mg/L)		0.036	0.082	0.023	<0.010	<0.010
	Cadmium (Cd)-Dissolved (mg/L)		0.000175	0.00085	0.000051	<0.000050	<0.000050
	Calcium (Ca)-Dissolved (mg/L)		0.326	85.6	20.8	10.4	71.2
	Chromium (Cr)-Dissolved (mg/L)		0.00347	<0.0010	<0.00050	<0.00050	<0.00050
	Cobalt (Co)-Dissolved (mg/L)		0.00409	0.00807	<0.00010	0.00032	<0.00010
	Copper (Cu)-Dissolved (mg/L)		0.00407	0.00123	0.00036	0.00025	0.00013
	Iron (Fe)-Dissolved (mg/L)		0.458	<0.030	<0.030	<0.030	<0.030
	Lead (Pb)-Dissolved (mg/L)		0.00176	<0.00010	<0.000050	<0.000050	<0.000050
	Lithium (Li)-Dissolved (mg/L)		0.0198	0.049	<0.0050	<0.0050	<0.0050
	Magnesium (Mg)-Dissolved (mg/L)		0.59	145	12.5	6.77	30.1
	Manganese (Mn)-Dissolved (mg/L)		0.00400	2.69	0.000513	0.00388	0.0397
	Mercury (Hg)-Dissolved (mg/L)		<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Molybdenum (Mo)-Dissolved (mg/L)		0.0800	0.00036	0.00621	0.00364	0.000178
	Nickel (Ni)-Dissolved (mg/L)		0.0287	0.0669	0.00056	0.00053	0.00097
	Phosphorus (P)-Dissolved (mg/L)		<0.30	<0.30	<0.30	<0.30	<0.30
	Potassium (K)-Dissolved (mg/L)		<2.0	7.4	<2.0	<2.0	<2.0
	Selenium (Se)-Dissolved (mg/L)		0.0058	0.0054	<0.0010	0.0019	<0.0010
	Silicon (Si)-Dissolved (mg/L)		5.39	0.673	0.609	1.22	0.192
	Silver (Ag)-Dissolved (mg/L)		0.000024	<0.000020	<0.000010	<0.000010	<0.000010
	Sodium (Na)-Dissolved (mg/L)		50.0	46.9	0.530	0.254	0.153
	Strontium (Sr)-Dissolved (mg/L)		0.0257	9.10	1.09	0.142	0.811
	Thallium (Tl)-Dissolved (mg/L)		<0.00010	0.00081	<0.00010	<0.00010	0.00013
	Tin (Sn)-Dissolved (mg/L)		<0.00010	<0.00020	<0.00010	<0.00010	<0.00010
	Titanium (Ti)-Dissolved (mg/L)		0.036	<0.010	<0.010	<0.010	<0.010
	Uranium (U)-Dissolved (mg/L)		0.000048	<0.000020	0.000098	0.000042	0.000022

ALS LABORATORY GROUP ANALYTICAL REPORT

		Sample ID	L499363-6	L499363-7	L499363-8
		Description			
		Sampled Date	26-APR-07	26-APR-07	26-APR-07
		Sampled Time			
		Client ID	019-02-58	ARD2-07-58	DUMP-2.5M-58
Grouping	Analyte				
WATER					
Sample Preparation	total volume in (mL)		500	500	500
	total volume out (mL)		425	460	500
Physical Tests	Conductivity (uS/cm)		475	266	109
	pH (pH)		8.67	8.33	8.01
Anions and Nutrients	Acidity (as CaCO3) (mg/L)		<1.0	<1.0	<1.0
	Alkalinity, Total (as CaCO3) (mg/L)		125	112	56.5
	Sulfate (SO4) (mg/L)		85.8	34.5	<1.0
Dissolved Metals	Aluminum (Al)-Dissolved (mg/L)		0.137	0.0089	0.0558
	Antimony (Sb)-Dissolved (mg/L)		0.00050	0.00027	<0.00010
	Arsenic (As)-Dissolved (mg/L)		<0.00020	<0.00010	<0.00010
	Barium (Ba)-Dissolved (mg/L)		0.0448	0.0864	0.00851
	Beryllium (Be)-Dissolved (mg/L)		<0.0010	<0.00050	<0.00050
	Bismuth (Bi)-Dissolved (mg/L)		<0.0010	<0.00050	<0.00050
	Boron (B)-Dissolved (mg/L)		0.044	0.013	<0.010
	Cadmium (Cd)-Dissolved (mg/L)		<0.00010	<0.000050	<0.000050
	Calcium (Ca)-Dissolved (mg/L)		1.76	10.4	4.41
	Chromium (Cr)-Dissolved (mg/L)		<0.0010	<0.00050	<0.00050
	Cobalt (Co)-Dissolved (mg/L)		<0.00020	0.00011	<0.00010
	Copper (Cu)-Dissolved (mg/L)		0.00051	0.00020	0.00081
	Iron (Fe)-Dissolved (mg/L)		<0.030	<0.030	<0.030
	Lead (Pb)-Dissolved (mg/L)		<0.00010	<0.000050	<0.000050
	Lithium (Li)-Dissolved (mg/L)		0.039	<0.0050	<0.0050
	Magnesium (Mg)-Dissolved (mg/L)		2.64	30.7	13.3
	Manganese (Mn)-Dissolved (mg/L)		0.00071	0.000388	0.000482
	Mercury (Hg)-Dissolved (mg/L)		<0.000050	<0.000050	<0.000050
	Molybdenum (Mo)-Dissolved (mg/L)		0.0101	0.00418	0.000620
	Nickel (Ni)-Dissolved (mg/L)		<0.0010	<0.00050	<0.00050
	Phosphorus (P)-Dissolved (mg/L)		<0.30	<0.30	<0.30
	Potassium (K)-Dissolved (mg/L)		<2.0	<2.0	<2.0
	Selenium (Se)-Dissolved (mg/L)		0.0042	0.0024	<0.0010
	Silicon (Si)-Dissolved (mg/L)		0.612	0.606	0.991
	Silver (Ag)-Dissolved (mg/L)		<0.000020	<0.000010	<0.000010
	Sodium (Na)-Dissolved (mg/L)		94.9	0.366	0.284
	Strontium (Sr)-Dissolved (mg/L)		0.202	0.530	0.0397
	Thallium (Tl)-Dissolved (mg/L)		<0.00020	<0.00010	<0.00010
	Tin (Sn)-Dissolved (mg/L)		<0.00020	<0.00010	<0.00010
	Titanium (Ti)-Dissolved (mg/L)		<0.010	<0.010	<0.010
	Uranium (U)-Dissolved (mg/L)		0.000109	0.000080	0.000038

ALS LABORATORY GROUP ANALYTICAL REPORT

	Sample ID Description Sampled Date Sampled Time Client ID	L499363-1	L499363-2	L499363-3	L499363-4	L499363-5
Grouping	Analyte					
WATER						
Dissolved Metals	Vanadium (V)-Dissolved (mg/L)	0.0032	<0.0020	<0.0010	<0.0010	<0.0010
	Zinc (Zn)-Dissolved (mg/L)	0.0143	0.0079	0.0032	<0.0010	<0.0010

ALS LABORATORY GROUP ANALYTICAL REPORT

		Sample ID	L499363-6	L499363-7	L499363-8		
		Description					
		Sampled Date	26-APR-07	26-APR-07	26-APR-07		
		Sampled Time					
		Client ID	019-02-58	ARD2-07-58	DUMP-2.5M-58		
Grouping	Analyte						
WATER							
Dissolved Metals	Vanadium (V)-Dissolved (mg/L)	<0.0020	<0.0010	<0.0010			
	Zinc (Zn)-Dissolved (mg/L)	<0.0020	0.0027	<0.0010			

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)
ACY-PCT-VA	Water	Acidity by Automated Titration	APHA 2310 "Acidity"
This analysis is carried out using procedures adapted from APHA Method 2310 "Acidity". Acidity is determined by potentiometric titration to a specified endpoint.			
ALK-COL-VA	Water	Alkalinity by Colourimetric (Automated)	APHA 310.2
This analysis is carried out using procedures adapted from EPA Method 310.2 "Alkalinity". Total Alkalinity is determined using the methyl orange colourimetric method.			
EC-MAN-HCELL-VA	Water	Conductivity (Manual)	APHA 2510 "Conductivity"
This analysis is carried out using procedures adapted from APHA Method 2510 "Conductivity". Conductivity is determined using a conductivity electrode.			
HG-DIS-CVAFS-VA	Water	Dissolved Mercury in Water by CVAFS	EPA SW-846 3005A & EPA 245.7
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedures may involve preliminary sample treatment by filtration (EPA Method 3005A) and involves a cold-oxidation of the acidified sample using bromine monochloride prior to reduction of the sample with stannous chloride. Instrumental analysis is by cold vapour atomic fluorescence spectrophotometry (EPA Method 245.7).			
MET-DIS-ICP-VA	Water	Dissolved Metals in Water by ICPOES	EPA SW-846 3005A/6010B
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedure involves filtration (EPA Method 3005A) and analysis by inductively coupled plasma - optical emission spectrophotometry (EPA Method 6010B).			
MET-DIS-LOW-MS-VA	Water	Dissolved Metals in Water by ICPMS(Low)	EPA SW-846 3005A/6020A
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedure involves preliminary sample treatment by filtration (EPA Method 3005A). Instrumental analysis is by inductively coupled plasma - mass spectrometry (EPA Method 6020A).			
PH-MAN-HCELL-VA	Water	pH by Manual Meter	APHA 4500-H "pH Value"
This analysis is carried out using procedures adapted from APHA Method 4500-H "pH Value". The pH is determined in the laboratory using a pH electrode.			
SO4-TUR-VA	Water	Sulphate(SO4) by Turbidity	APHA 4500-SO4 "Sulphate"
This analysis is carried out using procedures adapted from APHA Method 4500-SO4 "Sulphate". Sulphate is determined using the turbidimetric method.			

** Laboratory Methods employed follow in-house procedures, which are generally based on nationally or internationally accepted methodologies. The last two letters of the above ALS Test Code column indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location	Laboratory Definition Code	Laboratory Location
VA	ALS LABORATORY GROUP - VANCOUVER, BC, CANADA		

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)
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GLOSSARY OF REPORT TERMS

Surr - A surrogate is an organic compound that is similar to the target analyte(s) in chemical composition and behavior but not normally detected in environmental samples. Prior to sample processing, samples are fortified with one or more surrogate compounds.

The reported surrogate recovery value provides a measure of method efficiency.

mg/kg (units) - unit of concentration based on mass, parts per million

mg/L (units) - unit of concentration based on volume, parts per million

N/A - Result not available. Refer to qualifier code and definition for explanation

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Although test results are generated under strict QA/QC protocols, any unsigned test reports, faxes, or emails are considered preliminary.

ALS Laboratory Group has an extensive QA/QC program where all analytical data reported is analyzed using approved referenced procedures followed by checks and reviews by senior managers and quality assurance personnel. However, since the results are obtained from chemical measurements and thus cannot be guaranteed, ALS Laboratory Group assumes no liability for the use or interpretation of the results.



Environmental Division

ANALYTICAL REPORT

RESCAN ENVIRONMENTAL SERVICES

ATTN: DAVE ARCHIBALD

SIXTH FLOOR
1111 WEST HASTINGS STREET
VANCOUVER BC V6E 2J3

Reported On: 16-MAY-07 01:21 PM

Revision: 3

Lab Work Order #: **L499373**

Date Received: **26-APR-07**

Project P.O. #: NOT SUBMITTED
Job Reference: MT. KLAPPAN CYCLE#53 HUMIDITY CELLS
Legal Site Desc:
CofC Numbers:

Other Information:

Comments: Please note: As requested, the metals are being reported at a low level detection limit.

TIMOTHY GUY CROWTHER
General Manager, Vancouver

For any questions about this report please contact your Account Manager:

ANDRE LANGLAIS

THIS REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL WITHOUT THE WRITTEN AUTHORITY OF THE LABORATORY.
ALL SAMPLES WILL BE DISPOSED OF AFTER 30 DAYS FOLLOWING ANALYSIS. PLEASE CONTACT THE LAB IF YOU
REQUIRE ADDITIONAL SAMPLE STORAGE TIME.

ALS LABORATORY GROUP ANALYTICAL REPORT

		Sample ID	L499373-1	L499373-2	L499373-3	L499373-4	L499373-5
		Description					
		Sampled Date	26-APR-07	26-APR-07	26-APR-07	26-APR-07	26-APR-07
		Sampled Time					
		Client ID	85-016-07-53	85-027-02-53	85-027-17-53	85-027-24-53	86-035-07-53
Grouping	Analyte						
WATER							
Sample Preparation	total volume in (mL)		500	500	500	500	500
	total volume out (mL)		425	425	480	460	460
Physical Tests	Conductivity (uS/cm)		674	658	60.2	84.7	288
	pH (pH)		8.36	8.05	7.56	7.87	8.49
Anions and Nutrients	Acidity (as CaCO3) (mg/L)		<1.0	1.3	1.1	1.0	<1.0
	Alkalinity, Total (as CaCO3) (mg/L)		163	75.7	27.5	42.0	153
	Sulfate (SO4) (mg/L)		238	300	2.7	2.0	14.1
Dissolved Metals	Aluminum (Al)-Dissolved (mg/L)		0.0062	0.0063	0.0553	0.104	0.0040
	Antimony (Sb)-Dissolved (mg/L)		0.00016	0.00019	0.00134	0.00090	0.00015
	Arsenic (As)-Dissolved (mg/L)		<0.00010	<0.00010	0.00126	0.00040	<0.00010
	Barium (Ba)-Dissolved (mg/L)		0.0898	0.0505	0.0152	0.0456	0.326
	Beryllium (Be)-Dissolved (mg/L)		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Bismuth (Bi)-Dissolved (mg/L)		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Boron (B)-Dissolved (mg/L)		0.057	0.056	<0.010	<0.010	<0.010
	Cadmium (Cd)-Dissolved (mg/L)		<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Calcium (Ca)-Dissolved (mg/L)		26.2	16.1	7.02	8.28	14.2
	Chromium (Cr)-Dissolved (mg/L)		<0.00050	<0.00050	<0.00050	0.00073	<0.00050
	Cobalt (Co)-Dissolved (mg/L)		<0.00010	0.00018	<0.00010	0.00010	<0.00010
	Copper (Cu)-Dissolved (mg/L)		0.00028	0.00043	0.00026	0.00033	0.00011
	Iron (Fe)-Dissolved (mg/L)		<0.030	<0.030	<0.030	<0.030	<0.030
	Lead (Pb)-Dissolved (mg/L)		<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Lithium (Li)-Dissolved (mg/L)		0.0199	0.0259	<0.0050	<0.0050	0.0064
	Magnesium (Mg)-Dissolved (mg/L)		80.9	84.3	4.02	6.61	35.0
	Manganese (Mn)-Dissolved (mg/L)		0.000860	0.000996	0.000493	0.00133	0.000255
	Mercury (Hg)-Dissolved (mg/L)		<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Molybdenum (Mo)-Dissolved (mg/L)		0.00134	0.00304	0.00273	0.00453	0.00133
	Nickel (Ni)-Dissolved (mg/L)		0.00080	0.00361	<0.00050	<0.00050	0.00117
	Phosphorus (P)-Dissolved (mg/L)		<0.30	<0.30	<0.30	<0.30	<0.30
	Potassium (K)-Dissolved (mg/L)		4.2	4.1	<2.0	<2.0	<2.0
	Selenium (Se)-Dissolved (mg/L)		0.0017	0.0052	0.0011	<0.0010	0.0015
	Silicon (Si)-Dissolved (mg/L)		0.592	0.687	0.994	1.10	0.596
	Silver (Ag)-Dissolved (mg/L)		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Sodium (Na)-Dissolved (mg/L)		10.3	8.4	0.285	0.361	0.625
	Strontium (Sr)-Dissolved (mg/L)		2.54	1.92	0.146	0.236	0.806
	Thallium (Tl)-Dissolved (mg/L)		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Tin (Sn)-Dissolved (mg/L)		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Titanium (Ti)-Dissolved (mg/L)		<0.010	<0.010	<0.010	<0.010	<0.010
	Uranium (U)-Dissolved (mg/L)		0.000082	0.000081	0.000030	0.000015	0.000077

ALS LABORATORY GROUP ANALYTICAL REPORT

		Sample ID	L499373-6			
		Description				
		Sampled Date	26-APR-07			
		Sampled Time				
		Client ID	86-035-09-53			
Grouping	Analyte					
WATER						
Sample Preparation	total volume in (mL)		500			
	total volume out (mL)		470			
Physical Tests	Conductivity (uS/cm)		460			
	pH (pH)		8.37			
Anions and Nutrients	Acidity (as CaCO3) (mg/L)		<1.0			
	Alkalinity, Total (as CaCO3) (mg/L)		128			
	Sulfate (SO4) (mg/L)		136			
Dissolved Metals	Aluminum (Al)-Dissolved (mg/L)		0.0036			
	Antimony (Sb)-Dissolved (mg/L)		0.00012			
	Arsenic (As)-Dissolved (mg/L)		<0.00010			
	Barium (Ba)-Dissolved (mg/L)		0.0719			
	Beryllium (Be)-Dissolved (mg/L)		<0.00050			
	Bismuth (Bi)-Dissolved (mg/L)		<0.00050			
	Boron (B)-Dissolved (mg/L)		0.028			
	Cadmium (Cd)-Dissolved (mg/L)		<0.000050			
	Calcium (Ca)-Dissolved (mg/L)		42.2			
	Chromium (Cr)-Dissolved (mg/L)		<0.00050			
	Cobalt (Co)-Dissolved (mg/L)		0.00021			
	Copper (Cu)-Dissolved (mg/L)		0.00016			
	Iron (Fe)-Dissolved (mg/L)		<0.030			
	Lead (Pb)-Dissolved (mg/L)		<0.000050			
	Lithium (Li)-Dissolved (mg/L)		0.0119			
	Magnesium (Mg)-Dissolved (mg/L)		41.7			
	Manganese (Mn)-Dissolved (mg/L)		0.000898			
	Mercury (Hg)-Dissolved (mg/L)		<0.000050			
	Molybdenum (Mo)-Dissolved (mg/L)		0.000697			
	Nickel (Ni)-Dissolved (mg/L)		0.00139			
	Phosphorus (P)-Dissolved (mg/L)		<0.30			
	Potassium (K)-Dissolved (mg/L)		3.8			
	Selenium (Se)-Dissolved (mg/L)		<0.0010			
	Silicon (Si)-Dissolved (mg/L)		0.677			
	Silver (Ag)-Dissolved (mg/L)		<0.000010			
	Sodium (Na)-Dissolved (mg/L)		1.71			
	Strontium (Sr)-Dissolved (mg/L)		1.08			
	Thallium (Tl)-Dissolved (mg/L)		<0.00010			
	Tin (Sn)-Dissolved (mg/L)		<0.00010			
	Titanium (Ti)-Dissolved (mg/L)		<0.010			
	Uranium (U)-Dissolved (mg/L)		0.000077			

ALS LABORATORY GROUP ANALYTICAL REPORT

	Sample ID Description Sampled Date Sampled Time Client ID	L499373-6 26-APR-07 86-035-09-53				
Grouping	Analyte					
WATER						
Dissolved Metals	Vanadium (V)-Dissolved (mg/L)	<0.0010				
	Zinc (Zn)-Dissolved (mg/L)	<0.0010				

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)
ACY-PCT-VA	Water	Acidity by Automated Titration	APHA 2310 "Acidity"
This analysis is carried out using procedures adapted from APHA Method 2310 "Acidity". Acidity is determined by potentiometric titration to a specified endpoint.			
ALK-COL-VA	Water	Alkalinity by Colourimetric (Automated)	APHA 310.2
This analysis is carried out using procedures adapted from EPA Method 310.2 "Alkalinity". Total Alkalinity is determined using the methyl orange colourimetric method.			
EC-MAN-HCELL-VA	Water	Conductivity (Manual)	APHA 2510 "Conductivity"
This analysis is carried out using procedures adapted from APHA Method 2510 "Conductivity". Conductivity is determined using a conductivity electrode.			
HG-DIS-CVAFS-VA	Water	Dissolved Mercury in Water by CVAFS	EPA SW-846 3005A & EPA 245.7
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedures may involve preliminary sample treatment by filtration (EPA Method 3005A) and involves a cold-oxidation of the acidified sample using bromine monochloride prior to reduction of the sample with stannous chloride. Instrumental analysis is by cold vapour atomic fluorescence spectrophotometry (EPA Method 245.7).			
MET-DIS-ICP-VA	Water	Dissolved Metals in Water by ICPOES	EPA SW-846 3005A/6010B
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedure involves filtration (EPA Method 3005A) and analysis by inductively coupled plasma - optical emission spectrophotometry (EPA Method 6010B).			
MET-DIS-LOW-MS-VA	Water	Dissolved Metals in Water by ICPMS(Low)	EPA SW-846 3005A/6020A
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedure involves preliminary sample treatment by filtration (EPA Method 3005A). Instrumental analysis is by inductively coupled plasma - mass spectrometry (EPA Method 6020A).			
PH-MAN-HCELL-VA	Water	pH by Manual Meter	APHA 4500-H "pH Value"
This analysis is carried out using procedures adapted from APHA Method 4500-H "pH Value". The pH is determined in the laboratory using a pH electrode.			
SO4-TUR-VA	Water	Sulphate(SO4) by Turbidity	APHA 4500-SO4 "Sulphate"
This analysis is carried out using procedures adapted from APHA Method 4500-SO4 "Sulphate". Sulphate is determined using the turbidimetric method.			

** Laboratory Methods employed follow in-house procedures, which are generally based on nationally or internationally accepted methodologies. The last two letters of the above ALS Test Code column indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location	Laboratory Definition Code	Laboratory Location
VA	ALS LABORATORY GROUP - VANCOUVER, BC, CANADA		

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)
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GLOSSARY OF REPORT TERMS

Surr - A surrogate is an organic compound that is similar to the target analyte(s) in chemical composition and behavior but not normally detected in environmental samples. Prior to sample processing, samples are fortified with one or more surrogate compounds.

The reported surrogate recovery value provides a measure of method efficiency.

mg/kg (units) - unit of concentration based on mass, parts per million

mg/L (units) - unit of concentration based on volume, parts per million

N/A - Result not available. Refer to qualifier code and definition for explanation

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Although test results are generated under strict QA/QC protocols, any unsigned test reports, faxes, or emails are considered preliminary.

ALS Laboratory Group has an extensive QA/QC program where all analytical data reported is analyzed using approved referenced procedures followed by checks and reviews by senior managers and quality assurance personnel. However, since the results are obtained from chemical measurements and thus cannot be guaranteed, ALS Laboratory Group assumes no liability for the use or interpretation of the results.



Environmental Division

ANALYTICAL REPORT

RESCAN ENVIRONMENTAL SERVICES

ATTN: DAVE ARCHIBALD

Reported On: 29-JUN-07 12:22 PM

SIXTH FLOOR
1111 WEST HASTINGS STREET
VANCOUVER BC V6E 2J3

Lab Work Order #: **L517851**

Date Received: **14-JUN-07**

Project P.O. #: NOT SUBMITTED
Job Reference: MT. KLAPPAN CYCLE#65 HUMIDITY CELLS
Legal Site Desc:
CofC Numbers:

Other Information:

Comments: Please note this is the last cycle for these humidity cells.

Timothy Guy Crowther
General Manager, Vancouver

For any questions about this report please contact your Account Manager:

Andre Langlais

THIS REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL WITHOUT THE WRITTEN AUTHORITY OF THE LABORATORY.
ALL SAMPLES WILL BE DISPOSED OF AFTER 30 DAYS FOLLOWING ANALYSIS. PLEASE CONTACT THE LAB IF YOU
REQUIRE ADDITIONAL SAMPLE STORAGE TIME.

ALS LABORATORY GROUP ANALYTICAL REPORT

		Sample ID	L517851-1	L517851-2	L517851-3	L517851-4	L517851-5
		Description					
		Sampled Date	14-JUN-07	14-JUN-07	14-JUN-07	14-JUN-07	14-JUN-07
		Sampled Time					
		Client ID	ARD3-07B-65	ARD3-08B-65	ARD3-14B-65	ARD1-15-65	ARD2-12-65
Grouping	Analyte						
WATER							
Sample Preparation	total volume in (mL)		500	500	500	500	500
	total volume out (mL)		410	465	475	465	465
Physical Tests	Conductivity (uS/cm)		308	1750	379	317	1350
	pH (pH)		8.75	7.65	8.07	7.81	7.90
Anions and Nutrients	Acidity (as CaCO3) (mg/L)		<1.0	6.0	5.4	4.0	5.2
	Alkalinity, Total (as CaCO3) (mg/L)		136	37.6	60.9	36.5	84.7
	Sulfate (SO4) (mg/L)		16.8	987	150	118	807
Dissolved Metals	Aluminum (Al)-Dissolved (mg/L)		1.53	0.058	<0.010	0.042	<0.010
	Antimony (Sb)-Dissolved (mg/L)		0.0066	<0.0010	<0.0010	0.0014	<0.0010
	Arsenic (As)-Dissolved (mg/L)		0.0069	<0.0010	<0.0010	0.0016	<0.0010
	Barium (Ba)-Dissolved (mg/L)		0.0533	0.0110	0.210	0.175	0.0345
	Beryllium (Be)-Dissolved (mg/L)		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Bismuth (Bi)-Dissolved (mg/L)		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Boron (B)-Dissolved (mg/L)		<0.10	<0.10	<0.10	<0.10	<0.10
	Cadmium (Cd)-Dissolved (mg/L)		<0.00050	0.00081	<0.00050	<0.00050	<0.00050
	Calcium (Ca)-Dissolved (mg/L)		0.630	118	45.9	35.6	239
	Chromium (Cr)-Dissolved (mg/L)		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Cobalt (Co)-Dissolved (mg/L)		0.0022	0.0059	<0.0010	<0.0010	<0.0010
	Copper (Cu)-Dissolved (mg/L)		0.0050	<0.0010	<0.0010	<0.0010	0.0011
	Iron (Fe)-Dissolved (mg/L)		0.215	<0.030	<0.030	<0.030	<0.030
	Lead (Pb)-Dissolved (mg/L)		0.00080	<0.00050	<0.00050	<0.00050	<0.00050
	Lithium (Li)-Dissolved (mg/L)		<0.050	<0.050	<0.050	<0.050	<0.050
	Magnesium (Mg)-Dissolved (mg/L)		0.97	231	25.4	23.3	106
	Manganese (Mn)-Dissolved (mg/L)		0.00231	2.23	0.00157	0.00500	0.352
	Mercury (Hg)-Dissolved (mg/L)		<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Molybdenum (Mo)-Dissolved (mg/L)		0.115	0.00157	0.00632	0.0101	0.00056
	Nickel (Ni)-Dissolved (mg/L)		0.0146	0.0444	<0.0050	<0.0050	0.0081
	Phosphorus (P)-Dissolved (mg/L)		<0.30	<0.30	<0.30	<0.30	<0.30
	Potassium (K)-Dissolved (mg/L)		<2.0	9.4	<2.0	<2.0	<2.0
	Selenium (Se)-Dissolved (mg/L)		<0.010	<0.010	<0.010	<0.010	<0.010
	Silicon (Si)-Dissolved (mg/L)		3.54	0.729	0.813	1.45	0.321
	Silver (Ag)-Dissolved (mg/L)		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Sodium (Na)-Dissolved (mg/L)		73.2	32.1	<2.0	<2.0	<2.0
	Strontium (Sr)-Dissolved (mg/L)		0.0504	9.34	1.80	0.356	5.47
	Thallium (Tl)-Dissolved (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Tin (Sn)-Dissolved (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Titanium (Ti)-Dissolved (mg/L)		0.014	<0.010	<0.010	<0.010	<0.010
	Uranium (U)-Dissolved (mg/L)		<0.00010	<0.00010	0.00017	0.00059	0.00012

ALS LABORATORY GROUP ANALYTICAL REPORT

		Sample ID	L517851-6	L517851-7	L517851-8
		Description			
		Sampled Date	14-JUN-07	14-JUN-07	14-JUN-07
		Sampled Time			
		Client ID	019-02-65	ARD2-07-65	DUMP-2.5M-65
Grouping	Analyte				
WATER					
Sample Preparation	total volume in (mL)	500	500	500	
	total volume out (mL)	420	470	420	
Physical Tests	Conductivity (uS/cm)	640	388	198	
	pH (pH)	8.54	8.17	8.31	
Anions and Nutrients	Acidity (as CaCO3) (mg/L)	<1.0	2.2	<1.0	
	Alkalinity, Total (as CaCO3) (mg/L)	138	84.6	106	
	Sulfate (SO4) (mg/L)	158	116	3.4	
Dissolved Metals	Aluminum (Al)-Dissolved (mg/L)	0.056	<0.010	0.016	
	Antimony (Sb)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	
	Arsenic (As)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	
	Barium (Ba)-Dissolved (mg/L)	0.0327	0.0432	0.0138	
	Beryllium (Be)-Dissolved (mg/L)	<0.0050	<0.0050	<0.0050	
	Bismuth (Bi)-Dissolved (mg/L)	<0.0050	<0.0050	<0.0050	
	Boron (B)-Dissolved (mg/L)	<0.10	<0.10	<0.10	
	Cadmium (Cd)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	
	Calcium (Ca)-Dissolved (mg/L)	3.39	14.2	8.12	
	Chromium (Cr)-Dissolved (mg/L)	<0.0050	<0.0050	<0.0050	
	Cobalt (Co)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	
	Copper (Cu)-Dissolved (mg/L)	0.0017	<0.0010	<0.0010	
	Iron (Fe)-Dissolved (mg/L)	<0.030	<0.030	<0.030	
	Lead (Pb)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	
	Lithium (Li)-Dissolved (mg/L)	<0.050	<0.050	<0.050	
	Magnesium (Mg)-Dissolved (mg/L)	5.53	48.7	25.2	
	Manganese (Mn)-Dissolved (mg/L)	0.00094	0.00095	<0.00050	
	Mercury (Hg)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	
	Molybdenum (Mo)-Dissolved (mg/L)	0.0166	0.0122	0.00077	
	Nickel (Ni)-Dissolved (mg/L)	<0.0050	<0.0050	<0.0050	
	Phosphorus (P)-Dissolved (mg/L)	<0.30	<0.30	<0.30	
	Potassium (K)-Dissolved (mg/L)	<2.0	<2.0	<2.0	
	Selenium (Se)-Dissolved (mg/L)	<0.010	<0.010	<0.010	
	Silicon (Si)-Dissolved (mg/L)	0.811	0.672	1.32	
	Silver (Ag)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	
	Sodium (Na)-Dissolved (mg/L)	135	<2.0	<2.0	
	Strontium (Sr)-Dissolved (mg/L)	0.342	0.568	0.0710	
	Thallium (Tl)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	
	Tin (Sn)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	
	Titanium (Ti)-Dissolved (mg/L)	<0.010	<0.010	<0.010	
	Uranium (U)-Dissolved (mg/L)	0.00015	0.00013	0.00012	

ALS LABORATORY GROUP ANALYTICAL REPORT

	Sample ID Description Sampled Date Sampled Time Client ID	L517851-6 14-JUN-07 019-02-65	L517851-7 14-JUN-07 ARD2-07-65	L517851-8 14-JUN-07 DUMP-2.5M-65		
Grouping	Analyte					
WATER						
Dissolved Metals	Vanadium (V)-Dissolved (mg/L)	<0.010	<0.010	<0.010		
	Zinc (Zn)-Dissolved (mg/L)	<0.010	<0.010	<0.010		

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)
ACY-PCT-VA	Water	Acidity by Automated Titration	APHA 2310 "Acidity"
This analysis is carried out using procedures adapted from APHA Method 2310 "Acidity". Acidity is determined by potentiometric titration to a specified endpoint.			
ALK-COL-VA	Water	Alkalinity by Colourimetric (Automated)	APHA 310.2
This analysis is carried out using procedures adapted from EPA Method 310.2 "Alkalinity". Total Alkalinity is determined using the methyl orange colourimetric method.			
EC-MAN-HCELL-VA	Water	Conductivity (Manual)	APHA 2510 "Conductivity"
This analysis is carried out using procedures adapted from APHA Method 2510 "Conductivity". Conductivity is determined using a conductivity electrode.			
HG-DIS-CVAFS-VA	Water	Dissolved Mercury in Water by CVAFS	EPA SW-846 3005A & EPA 245.7
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedures may involve preliminary sample treatment by filtration (EPA Method 3005A) and involves a cold-oxidation of the acidified sample using bromine monochloride prior to reduction of the sample with stannous chloride. Instrumental analysis is by cold vapour atomic fluorescence spectrophotometry (EPA Method 245.7).			
MET-DIS-ICP-VA	Water	Dissolved Metals in Water by ICPOES	EPA SW-846 3005A/6010B
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedure involves filtration (EPA Method 3005A) and analysis by inductively coupled plasma - optical emission spectrophotometry (EPA Method 6010B).			
MET-DIS-LOW-MS-VA	Water	Dissolved Metals in Water by ICPMS(Low)	EPA SW-846 3005A/6020A
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedure involves preliminary sample treatment by filtration (EPA Method 3005A). Instrumental analysis is by inductively coupled plasma - mass spectrometry (EPA Method 6020A).			
PH-MAN-HCELL-VA	Water	pH by Manual Meter	APHA 4500-H "pH Value"
This analysis is carried out using procedures adapted from APHA Method 4500-H "pH Value". The pH is determined in the laboratory using a pH electrode.			
SO4-TUR-VA	Water	Sulphate(SO4) by Turbidity	APHA 4500-SO4 "Sulphate"
This analysis is carried out using procedures adapted from APHA Method 4500-SO4 "Sulphate". Sulphate is determined using the turbidimetric method.			

** Laboratory Methods employed follow in-house procedures, which are generally based on nationally or internationally accepted methodologies. The last two letters of the above ALS Test Code column indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location	Laboratory Definition Code	Laboratory Location
VA	ALS LABORATORY GROUP - VANCOUVER, BC, CANADA		

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)
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GLOSSARY OF REPORT TERMS

Surr - A surrogate is an organic compound that is similar to the target analyte(s) in chemical composition and behavior but not normally detected in environmental samples. Prior to sample processing, samples are fortified with one or more surrogate compounds.

The reported surrogate recovery value provides a measure of method efficiency.

mg/kg (units) - unit of concentration based on mass, parts per million

mg/L (units) - unit of concentration based on volume, parts per million

N/A - Result not available. Refer to qualifier code and definition for explanation

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Although test results are generated under strict QA/QC protocols, any unsigned test reports, faxes, or emails are considered preliminary.

ALS Laboratory Group has an extensive QA/QC program where all analytical data reported is analyzed using approved referenced procedures followed by checks and reviews by senior managers and quality assurance personnel. However, since the results are obtained from chemical measurements and thus cannot be guaranteed, ALS Laboratory Group assumes no liability for the use or interpretation of the results.



Environmental Division

ANALYTICAL REPORT

RESCAN ENVIRONMENTAL SERVICES

ATTN: DAVE ARCHIBALD

Reported On: 29-JUN-07 12:25 PM

SIXTH FLOOR
1111 WEST HASTINGS STREET
VANCOUVER BC V6E 2J3

Lab Work Order #: **L517923**

Date Received: **14-JUN-07**

Project P.O. #: NOT SUBMITTED
Job Reference: MT. KLAPPAN CYCLE#60 HUMIDITY CELLS
Legal Site Desc:
CofC Numbers:

Other Information:

Comments: Please note this is the last cycle for these humidity cells.

Timothy Guy Crowther
General Manager, Vancouver

For any questions about this report please contact your Account Manager:

Andre Langlais

THIS REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL WITHOUT THE WRITTEN AUTHORITY OF THE LABORATORY.
ALL SAMPLES WILL BE DISPOSED OF AFTER 30 DAYS FOLLOWING ANALYSIS. PLEASE CONTACT THE LAB IF YOU
REQUIRE ADDITIONAL SAMPLE STORAGE TIME.

ALS LABORATORY GROUP ANALYTICAL REPORT

		Sample ID	L517923-1	L517923-2	L517923-3	L517923-4	L517923-5
		Description					
		Sampled Date	14-JUN-07	14-JUN-07	14-JUN-07	14-JUN-07	14-JUN-07
		Sampled Time					
		Client ID	85-016-07-60	85-027-02-60	85-027-17-60	85-027-24-60	86-035-07-60
Grouping	Analyte						
WATER							
Sample Preparation	total volume in (mL)		500	500	500	500	500
	total volume out (mL)		480	470	470	470	470
Physical Tests	Conductivity (uS/cm)		963	1550	105	136	462
	pH (pH)		8.37	8.18	7.47	7.97	8.52
Anions and Nutrients	Acidity (as CaCO3) (mg/L)		<1.0	2.7	2.9	3.1	<1.0
	Alkalinity, Total (as CaCO3) (mg/L)		167	103	26.9	44.1	213
	Sulfate (SO4) (mg/L)		423	891	16.7	16.3	71.6
Dissolved Metals	Aluminum (Al)-Dissolved (mg/L)		<0.010	<0.010	0.033	0.049	<0.010
	Antimony (Sb)-Dissolved (mg/L)		<0.0010	<0.0010	0.0017	<0.0010	<0.0010
	Arsenic (As)-Dissolved (mg/L)		<0.0010	<0.0010	0.0012	<0.0010	<0.0010
	Barium (Ba)-Dissolved (mg/L)		0.0534	0.0377	0.0243	0.0594	0.275
	Beryllium (Be)-Dissolved (mg/L)		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Bismuth (Bi)-Dissolved (mg/L)		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Boron (B)-Dissolved (mg/L)		<0.10	<0.10	<0.10	<0.10	<0.10
	Cadmium (Cd)-Dissolved (mg/L)		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Calcium (Ca)-Dissolved (mg/L)		39.8	44.5	11.2	11.8	19.1
	Chromium (Cr)-Dissolved (mg/L)		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Cobalt (Co)-Dissolved (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Copper (Cu)-Dissolved (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Iron (Fe)-Dissolved (mg/L)		<0.030	<0.030	<0.030	<0.030	<0.030
	Lead (Pb)-Dissolved (mg/L)		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Lithium (Li)-Dissolved (mg/L)		<0.050	<0.050	<0.050	<0.050	<0.050
	Magnesium (Mg)-Dissolved (mg/L)		137	259	6.46	10.4	64.5
	Manganese (Mn)-Dissolved (mg/L)		0.00166	0.00198	0.00152	0.00151	0.00055
	Mercury (Hg)-Dissolved (mg/L)		<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Molybdenum (Mo)-Dissolved (mg/L)		0.00079	0.00255	0.0113	0.0188	0.00224
	Nickel (Ni)-Dissolved (mg/L)		<0.0050	0.0068	<0.0050	<0.0050	<0.0050
	Phosphorus (P)-Dissolved (mg/L)		<0.30	<0.30	<0.30	<0.30	<0.30
	Potassium (K)-Dissolved (mg/L)		5.7	7.4	<2.0	<2.0	<2.0
	Selenium (Se)-Dissolved (mg/L)		<0.010	0.020	<0.010	<0.010	<0.010
	Silicon (Si)-Dissolved (mg/L)		0.575	0.724	1.38	1.27	0.708
	Silver (Ag)-Dissolved (mg/L)		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Sodium (Na)-Dissolved (mg/L)		10.1	10.7	<2.0	<2.0	<2.0
	Strontium (Sr)-Dissolved (mg/L)		2.96	3.52	0.218	0.324	0.943
	Thallium (Tl)-Dissolved (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Tin (Sn)-Dissolved (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Titanium (Ti)-Dissolved (mg/L)		<0.010	<0.010	<0.010	<0.010	<0.010
	Uranium (U)-Dissolved (mg/L)		<0.00010	0.00022	<0.00010	0.00010	0.00021

ALS LABORATORY GROUP ANALYTICAL REPORT

		Sample ID	L517923-6			
		Description				
		Sampled Date	14-JUN-07			
		Sampled Time				
		Client ID	86-035-09-60			
Grouping	Analyte					
WATER						
Sample Preparation	total volume in (mL)		500			
	total volume out (mL)		465			
Physical Tests	Conductivity (uS/cm)		786			
	pH (pH)		8.26			
Anions and Nutrients	Acidity (as CaCO3) (mg/L)		<1.0			
	Alkalinity, Total (as CaCO3) (mg/L)		119			
	Sulfate (SO4) (mg/L)		294			
Dissolved Metals	Aluminum (Al)-Dissolved (mg/L)		<0.010			
	Antimony (Sb)-Dissolved (mg/L)		<0.0010			
	Arsenic (As)-Dissolved (mg/L)		<0.0010			
	Barium (Ba)-Dissolved (mg/L)		0.0468			
	Beryllium (Be)-Dissolved (mg/L)		<0.0050			
	Bismuth (Bi)-Dissolved (mg/L)		<0.0050			
	Boron (B)-Dissolved (mg/L)		<0.10			
	Cadmium (Cd)-Dissolved (mg/L)		<0.00050			
	Calcium (Ca)-Dissolved (mg/L)		76.2			
	Chromium (Cr)-Dissolved (mg/L)		<0.0050			
	Cobalt (Co)-Dissolved (mg/L)		<0.0010			
	Copper (Cu)-Dissolved (mg/L)		<0.0010			
	Iron (Fe)-Dissolved (mg/L)		<0.030			
	Lead (Pb)-Dissolved (mg/L)		<0.00050			
	Lithium (Li)-Dissolved (mg/L)		<0.050			
	Magnesium (Mg)-Dissolved (mg/L)		82.0			
	Manganese (Mn)-Dissolved (mg/L)		0.00210			
	Mercury (Hg)-Dissolved (mg/L)		<0.000050			
	Molybdenum (Mo)-Dissolved (mg/L)		0.00050			
	Nickel (Ni)-Dissolved (mg/L)		<0.0050			
	Phosphorus (P)-Dissolved (mg/L)		<0.30			
	Potassium (K)-Dissolved (mg/L)		5.5			
	Selenium (Se)-Dissolved (mg/L)		<0.010			
	Silicon (Si)-Dissolved (mg/L)		0.797			
	Silver (Ag)-Dissolved (mg/L)		<0.00010			
	Sodium (Na)-Dissolved (mg/L)		2.5			
	Strontium (Sr)-Dissolved (mg/L)		1.36			
	Thallium (Tl)-Dissolved (mg/L)		<0.0010			
	Tin (Sn)-Dissolved (mg/L)		<0.0010			
	Titanium (Ti)-Dissolved (mg/L)		<0.010			
	Uranium (U)-Dissolved (mg/L)		<0.00010			

ALS LABORATORY GROUP ANALYTICAL REPORT

	Sample ID Description Sampled Date Sampled Time Client ID	L517923-1	L517923-2	L517923-3	L517923-4	L517923-5
Grouping	Analyte					
WATER						
Dissolved Metals	Vanadium (V)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Zinc (Zn)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010

ALS LABORATORY GROUP ANALYTICAL REPORT

	Sample ID Description Sampled Date Sampled Time Client ID	L517923-6 14-JUN-07 86-035-09-60				
Grouping	Analyte					
WATER						
Dissolved Metals	Vanadium (V)-Dissolved (mg/L)	<0.010				
	Zinc (Zn)-Dissolved (mg/L)	<0.010				

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)
ACY-PCT-VA	Water	Acidity by Automated Titration	APHA 2310 "Acidity"
This analysis is carried out using procedures adapted from APHA Method 2310 "Acidity". Acidity is determined by potentiometric titration to a specified endpoint.			
ALK-COL-VA	Water	Alkalinity by Colourimetric (Automated)	APHA 310.2
This analysis is carried out using procedures adapted from EPA Method 310.2 "Alkalinity". Total Alkalinity is determined using the methyl orange colourimetric method.			
EC-MAN-HCELL-VA	Water	Conductivity (Manual)	APHA 2510 "Conductivity"
This analysis is carried out using procedures adapted from APHA Method 2510 "Conductivity". Conductivity is determined using a conductivity electrode.			
HG-DIS-CVAFS-VA	Water	Dissolved Mercury in Water by CVAFS	EPA SW-846 3005A & EPA 245.7
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedures may involve preliminary sample treatment by filtration (EPA Method 3005A) and involves a cold-oxidation of the acidified sample using bromine monochloride prior to reduction of the sample with stannous chloride. Instrumental analysis is by cold vapour atomic fluorescence spectrophotometry (EPA Method 245.7).			
MET-DIS-ICP-VA	Water	Dissolved Metals in Water by ICPOES	EPA SW-846 3005A/6010B
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedure involves filtration (EPA Method 3005A) and analysis by inductively coupled plasma - optical emission spectrophotometry (EPA Method 6010B).			
MET-DIS-LOW-MS-VA	Water	Dissolved Metals in Water by ICPMS(Low)	EPA SW-846 3005A/6020A
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedure involves preliminary sample treatment by filtration (EPA Method 3005A). Instrumental analysis is by inductively coupled plasma - mass spectrometry (EPA Method 6020A).			
PH-MAN-HCELL-VA	Water	pH by Manual Meter	APHA 4500-H "pH Value"
This analysis is carried out using procedures adapted from APHA Method 4500-H "pH Value". The pH is determined in the laboratory using a pH electrode.			
SO4-TUR-VA	Water	Sulphate(SO4) by Turbidity	APHA 4500-SO4 "Sulphate"
This analysis is carried out using procedures adapted from APHA Method 4500-SO4 "Sulphate". Sulphate is determined using the turbidimetric method.			

** Laboratory Methods employed follow in-house procedures, which are generally based on nationally or internationally accepted methodologies. The last two letters of the above ALS Test Code column indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location	Laboratory Definition Code	Laboratory Location
VA	ALS LABORATORY GROUP - VANCOUVER, BC, CANADA		

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)
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GLOSSARY OF REPORT TERMS

Surr - A surrogate is an organic compound that is similar to the target analyte(s) in chemical composition and behavior but not normally detected in environmental samples. Prior to sample processing, samples are fortified with one or more surrogate compounds.

The reported surrogate recovery value provides a measure of method efficiency.

mg/kg (units) - unit of concentration based on mass, parts per million

mg/L (units) - unit of concentration based on volume, parts per million

N/A - Result not available. Refer to qualifier code and definition for explanation

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Although test results are generated under strict QA/QC protocols, any unsigned test reports, faxes, or emails are considered preliminary.

ALS Laboratory Group has an extensive QA/QC program where all analytical data reported is analyzed using approved referenced procedures followed by checks and reviews by senior managers and quality assurance personnel. However, since the results are obtained from chemical measurements and thus cannot be guaranteed, ALS Laboratory Group assumes no liability for the use or interpretation of the results.

APPENDIX E
RESUME OF PROJECT EXPLORATION SUPERVISING GEOLOGIST

PAUL OLDAKER

Hydrologist/Hydrogeologist, 2005 - Present

Mr. Oldaker is a hydrologist/hydrogeologist with more than 18 years of experience in the mining industry. He has worked on coal, oil and gas, hard rock, water supply, waste management and legal projects throughout the U.S. and abroad. Mr. Oldaker has also presented numerous papers on coal bed methane hydrogeology.

EDUCATION

- Graduate Studies and Thesis Work, Department of Earth Resources, Colorado State University, 1975-1977
- Bachelor of Science, Watershed Science, Colorado State University, 1971-1975

OTHER EMPLOYMENT

- **CONSULTING HYDROLOGIST/HYDROGEOLOGIST, 1982-Present**
Extensive service provided to energy related industries for coal hydrogeology lectures, reservoir evaluations, coal bed methane desorption analysis, production and monitor well drilling, completion, and testing, dewatering, and well and mine permit applications. This has included 127 projects for the oil and gas industry with 106 coal bed methane projects and 51 coal mine projects. Lectured on coal bed methane hydrogeology for clients in France, Germany, Czech Republic, China, and domestically. Charter member of the Coal Bed Methane Forum and presented four papers on coal bed methane hydrogeology to the forum. Presented three papers to the Colorado School of Mines Environmental Symposium. Presented four papers to the Rocky Mountain Association of Geologists and four papers to the American Association of Petroleum Geologists.
- **BEAK CONSULTANTS INC., Senior Hyrdologist/Hydrogeologist, 1980-1982**
Provided ground and surface water services to clients in the oil and gas, coal mining, oil shale, and hard rock mining industries.
- **PETER KIEWIT SONS' INC., Coal Mining Division, Environmental Hydrologist, 1977-1980**
Conducted ground and surface water studies for coal mine permitting and monitoring. He served on the National Coal Association/ Bituminous Coal Research Water Quality Technical Committee and the National Coal Association/American Mining Congress Hydrology Committee.

PROJECT LISTING

Mr. Oldaker managed extensive drilling programs at several Canadian locations for Marston in recent years including Fortune Minerals at Mt. Klappan as well as programs for Milner and Sheerness.

Mr. Oldaker has extensive project experience in coal, oil and gas, hard rock, water supply, waste management and legal projects throughout the U.S. and abroad. His experience can be seen in the following listing of projects by focus area.

See the list below for full details.

STATE	CLIENT	PROJECT	PROJECT DESCRIPTION
COAL MINES			
Colorado	Abraxus Pet.	East Side	Hydrology/Hydrogeology study for CMLRB permit
Colorado	Northwest Pipeline	Hawk's Nest	Hydrology/Hydrogeology study for CMLRB permit
Colorado	Peabody Coal Company	Yoast	Monitor well installation, development and testing
Colorado	Peabody Coal Company	Seneca II	Monitor well water quality sampling
Colorado	Peabody Coal Company	Yoast	Monitor well water quality sampling and development
Colorado	Peabody Coal Company	Seneca II-W	Monitor well water quality sampling

Colorado	Peabody Coal Company	Yoast	Monitor well testing
Colorado	Peabody Coal Company	Seneca II-W	Monitor well testing
Colorado	Peabody Coal Company	Dry Creek	Monitor well installation, development and testing
Colorado	Peabody Coal Company	Dry Creek	Monitor well water quality sampling
Colorado	Peabody Coal Company	HG Loadout	Monitor well water quality sampling
Colorado	Colowyo Coal Co.	Colowyo Mine Exp.	Data review of expansion area.
Colorado	Trapper Coal Co.	Trapper Mine	Wetland Delineation of Mine Permit Area
Montana	Meridian Land	Otter Creek	Hydrology/Hydrogeology study for DSL unsuitability determination
Montana	NERCO	Spring Creek	Technical review of AVF study for DSL permit
Montana	Peter Kiewit Sons'	East Decker	Hydrology/Hydrogeology study for DSL permit
Montana	Peter Kiewit Sons'	CX Ranch	Hydrology/Hydrogeology study for DSL permit
Montana	Peter Kiewit Sons'	West Decker	Hydrology/Hydrogeology study for DSL permit
Montana	Peter Kiewit Sons'	North Decker	Hydrology/Hydrogeology study for DSL permit
New Mexico	Kaiser Coal, Inc.	York Underground	Hydrology/Hydrogeology study for EMD permit
New Mexico	Kaiser Coal, Inc.	Upper York/Cimarron	Hydrology/Hydrogeology study for EMD permit
New Mexico	Kaiser Coal, Inc.	West Ridge	Hydrology/Hydrogeology study for EMD permit
New Mexico	Kaiser Coal, Inc.	Ancho	Hydrology/Hydrogeology study for EMD permit
New Mexico	Kaiser Coal, Inc.	Rosado	Hydrology/Hydrogeology study for EMD permit
New Mexico	Kaiser Coal, Inc.	Upper York	Well design, drilling, and testing for industrial supply
New Mexico	Kaiser Coal, Inc.	All Projects	Design and implementation of hydrologic data base on IBM PC
New Mexico	Kaiser Coal, Inc.	Cimarron	Bedrock well drilling, testing and analysis for industrial supply
New Mexico	Kaiser Coal, Inc.	Cimarron	Alluvial well testing and analysis for industrial supply
New Mexico	P&M York Canyon	Vermejo Intake	Well testing and analysis for infiltration gallery supply
New Mexico	P&M York Canyon	Vermejo Intake	Test gallery and design for infiltration gallery supply
New Mexico	P&M York Canyon	Road Canyon S. Mine	Hydrology/Hydrogeology study for EMD permit
New Mexico	P&M York Canyon	York Canyon S. Mine	Hydrology/Hydrogeology study for EMD permit
New Mexico	P&M York Canyon	Ancho Surface Mine	Hydrology/Hydrogeology study for EMD permit
New Mexico	P&M York Canyon	Ancho Surface Mine	Monitor well testing and development
New Mexico	P&M York Canyon	Cimarron U. Mine	Hydrology/Hydrogeology study for EMD permit
New Mexico	P&M York Canyon	Gachupin/Brackett Mine	Drilling, installation, and testing of alluvial monitor wells
New Mexico	P&M York Canyon	Gachupin/Brackett Mine	Hydrology/Hydrogeology study for EMD permit
New Mexico	Peter Kiewit Sons'	Gallo Wash	Hydrology/Hydrogeology study for EMD permit
New Mexico	Utah International	La Plata	Hydrology/Hydrogeology study for EMD permit
Texas	Dos Republicas Res.	Eagle Pass Mine	Hydrology/Hydrogeology study for TRRC permit
Wyoming	Peter Kiewit Sons'	Black Butte	Hydrology/Hydrogeology study for DEQ permit
Wyoming	Peter Kiewit Sons'	Bighorn	Hydrology/Hydrogeology study for DEQ permit
Wyoming	Peter Kiewit Sons'	Twin Creek	Hydrology/Hydrogeology study for DEQ permit

Wyoming	Peter Kiewit Sons'	Cumberland	Hydrology/Hydrogeology study for DEQ permit
Wyoming	Peter Kiewit Sons'	Rosebud	Hydrology/Hydrogeology study for DEQ permit
Wyoming	Peter Kiewit Sons'	Whitney	Hydrology/Hydrogeology study for DEQ permit
Wyoming	Sunedco	Cordero	Hydrology/Hydrogeology study for DEQ permit
Wyoming	Cyprus-Amax	Belle Ayr	Plan, install, and monitor high wall dewatering system
HARD ROCK MINES			
Alaska	USMX	Illinois Creek	Monitor well installation, testing, and sampling under fly in conditions
Alaska	USMX	Illinois Creek	Stream and monitor well sampling under fly in conditions
Arizona	Phelps Dodge	Verde Valley Smelter	Ground and surface water study of copper smelter tailings
California	Atlas Minerals	Coalinga Mine	Sedimentation study of asbestos mine
California	Atlas Minerals	Coalinga Mine	Reclamation plan of asbestos mine
California	Atlas Minerals	Coalinga Mine	Comments on EPA RI/FS of asbestos mine
Colorado	Confidential	Confidential	Hydrology/Hydrogeology study for EIS and mine dewatering design
Colorado	Smith Drilling	Uravan Mill	Well testing and straddle packer testing of uranium mill cleanup
Colorado	Hardrock S&G	Yampa R. Pit	Evaluation of stream channel change impact
Idaho	Meridian Land	Sand Point	Technical review of silica sand mine hydrology studies
Idaho	Meridian Gold	Beartrack Mine	Well testing for gold mine EIS
Montana	Sparrow Resources	Nellie Grant	Hydrology/hydrogeology study of gold/silver mine for DSL permit
Montana	PGM Resources	Stillwater	Hydrology/hydrogeology study for platinum/palladium mine EIS
Oregon	Atlas Minerals	Grassy Mountain	Well installation and testing for gold mine
Peru	Cyprus-Amax	Cerro Verde	Well installation and water sampling for copper mine
Washington	AMAX	Mt. Tolman	Technical review of EIS of a copper/moly mine
Wyoming	Stauffer Chemical	Big Island	Hydrogeology study of tailings water migration
WATER SUPPLY PROJECTS			
Arizona	Salazar Drilling	Hopi & Navajo Sites	Testing of water supply wells and packer testing for water supply
California	Western Transit Mix	Santa Cruz Plant	Water right and modeling analysis of surface water supply
Colorado	Animas Water Co.	West Animas	Well design and drilling for municipal supply
Colorado	Intermountain Drlg.	Bonati Homesite	Ground water evaluation for domestic supply
Colorado	WPRS	Grand Mesa	Ground water evaluation and testing for supplemental supply
Colorado	Davis,Graham &Stubbs	Terra Construction	Geophysical log evaluation of industrial supply well
Colorado	Durango Ski Corp.	Purgatory Ski Area	Ground water well testing and evaluation for commercial supply
Colorado	DW Metro. D. I	Durango West	Ground water evaluation of existing wells and supply
Colorado	DW Metro. D. II	Durango West	Ground water evaluation and drilling for municipal supply
Colorado	Goff Engineering	Cloman Ranch	Ground water evaluation for land appraisal
Colorado	McLaughlin Engineers	Monte Vista Coop	Ground water evaluation and drilling for irrigation supply

Colorado	McLaughlin Engineers	Terra Construction	Geophysical logging for SEO regulatory compliance
Colorado	McLaughlin Engineers	MDC- Rock Ck. Ranch	Ground water evaluation and drilling for municipal supply
Colorado	Park Funding Corp.	Vill. at Castle Rock	Ground water finite difference model for water supply evaluation
Colorado	Park Funding Corp.	Vill. at Castle Rock	Core, geophysical log correlation for specific yield
Colorado	Park Funding Corp.	Vill. at Castle Rock	Evaluation of SB-5 Testimony
Colorado	Park Funding Corp.	Vill. at Castle Rock	Methods and core sampling for specific yield
Colorado	Park Funding Corp.	Vill. at Castle Rock	Core, geophysical log correlation for sand/silt-stone thickness
Colorado	Park Funding Corp.	Vill. at Castle Rock	Long term pump testing for yield and water quality
Colorado	Park Funding Corp.	Vill. at Castle Rock	Specifications, drilling and testing of the Weaver #2 site
Colorado	Park Funding Corp.	Vill. at Castle Rock	Decree evaluation and water court testimony
Colorado	Purgatory Metro. D.	Purgatory Ski Area	Ground water evaluations and drilling for municipal supply
Colorado	Silver Pick I, Ltd.	Silver Pick	Ground water evaluation and drilling for commercial supply
Colorado	Telluride Ski Corp.	Mtn. Village	Ground water evaluation and drilling for commercial supply
Colorado	Town of Dove Creek	Town of Dove Creek	Ground water evaluation and testing for municipal supply
Colorado	Ute Mtn. Reservation	Towaoc	Ground water evaluation and well testing for municipal supply
Colorado	Vallilli Enterprises	Edgemont Ranch	Ground water evaluation and drilling for municipal supply
Colorado	Geowest Engineers	South Adams CSWD	Geophysical log analysis for municipal supply
Colorado	Geowest Engineers	Denver SE Well #8	Testing of municipal supply well
Colorado	Geowest Engineers	Colorado Centre	Water right and modeling analysis of surface water supply
Colorado	Self Ranch	Spring Gulch	Surface and ground water evaluation for Spring Gulch, Water Court testimony
Colorado	Waltman Home	Arkansas River	Inspection of flooding problem and report
Colorado	Durango/Beeman	Kroeger #1 Well	Consulting on Drilling of Water Supply Well and drill sample collection
Montana	Town of Gardiner	Town of Gardiner	Municipal well design and drilling
New Mexico	Denney-Gross & Ass.	Don Silvano Sub.	Ground water evaluation for subdivision supply
New Mexico	Denney-Gross & Ass.	Rio Rancho Unit 20	Ground water evaluation for municipal supply
New Mexico	Denney-Gross & Ass.	Rio Rancho Unit 8	Ground water evaluation for municipal supply
New Mexico	Kaiser Coal, Inc.	Upper York Mine	Well design and drilling for industrial supply
New Mexico	Kaiser Coal, Inc.	Cimarron Mine	Bedrock well drilling, testing and analysis for industrial supply
New Mexico	Kaiser Coal, Inc.	Cimarron Mine	Alluvial well testing and analysis for industrial supply
New Mexico	P&M York Canyon	Vermejo Intake	Well testing and analysis for infiltration gallery supply
New Mexico	P&M York Canyon	Vermejo Intake	Test gallery and design for infiltration gallery supply
New Mexico	Ute Engineering	Juniper Water Dist.	Ground water feasibility for municipal supply
Oregon	Atlas Minerals	Grassy Mountain	Well installation and testing for gold mine
Wyoming	CIG, Inc.	Table Rock	Evaluation and well rehabilitation for industrial supply
Wyoming	Geowest Engineers	Cody HWMF	Surface water analysis for diversion design

WASTE MANAGEMENT PROJECTS			
Arizona	Phelps Dodge	Verde Valley Smelter	Ground and surface water study of copper smelter tailings
California	Atlas Minerals	Coalinga Mine	Sedimentation study of asbestos mine
California	Atlas Minerals	Coalinga Mine	Reclamation plan of asbestos mine
California	Atlas Minerals	Coalinga Mine	Comments on EPA RI/FS of asbestos mine
Colorado	Amoco Production Co.	Ohnemus UIC Well	Hydrologic evaluation and testimony for water disposal well
Colorado	McLaughlin Eng.	Monte Vista Coop	Alluvial aquifer cleanup of petroleum distillate contamination
Colorado	CH2M Hill	Lowery Landfill	Preparation of ground water quality computer data base
Colorado	4 Corners Res. Inst.	Durango Landfill	Ground water evaluation of various landfill sites
Colorado	Smith Drilling	Uravan Mill	Well testing and pstraddle packer testing of uranium mill cleanup
Colorado	Amoco Production	Animas Valley Study	Evaluation of domestic well problems in CBM development area
Illinois	Marston & Marston	Perry Cnty. Landfill	Evaluation of landfill study with expert testimony
New Mexico	Amoco Production	San Juan Basin Wells	Preparation of expert witness testimony on well pit evaluations
New Mexico	Amoco Production	Animas Valley Study	Evaluation of domestic well problems in CBM development area
Wyoming	CIG, Inc.	Table Rock	Well rehabilitation for sour gas contamination
Wyoming	Spence & Schuster	Rawhide Subd.	Evaluation of CBM/subdivision gas leakage problem
Wyoming	Geowest Engineers	Cody HWMF	Surface water analysis for diversion design
LEGAL PROJECTS			
Federal	Peter Kiewit Sons'	Numerous Mines	Expert testimony on coal mining regulations- NCA/AMC
Federal	Peter Kiewit Sons'	Numerous Mines	Expert testimony on discharge regulations- NCA/BCR
Colorado	Amoco Production	Ohnemus UIC Well	Hydrologic evaluation and testimony for water disposal well
Colorado	Park Funding Corp.	Vill. at Castle Rock	Evaluation of SB-5 Testimony
Colorado	Park Funding Corp.	Vill. at Castle Rock	Decree evaluation and water court testimony
Colorado	Goff Engineering	Cloman Ranch	Ground water evaluation for land appraisal
Colorado	Amoco/Holland & Hart	San Juan O&G History	Research, review and presentation of San Juan Basin O&G history
Colorado	Self Ranch/Halvorson	Spring Gulch	Expert testimony on water rights in Colorado Water Court
Colorado	Amoco Production	Los Pinos Remediat.	COGCC/Amoco Consultant with presentations to the COGCC on gas seepage
Colorado	J. M. Huber Corp.	SJ Basin Well Spacing	Expert Testimony to the COGCC on Hydrology/Hydrogeology for Well Spacing
Illinois	Marston & Marston	Perry Cnty. Landfill	Evaluation of landfill study with expert testimony
New Mexico	Amoco Production	San Juan Basin Wells	Preparation of expert witness testimony on well pit evaluations
New Mexico	Peter Kiewit Sons'	Gallo Wash	Expert testimony on coal mining regulations
New Mexico	Peter Kiewit Sons'	Gallo Wash	Expert testimony on discharge regulations
New Mexico	Amoco/Holland & Hart	San Juan O&G History	Research, review and presentation of San Juan Basin O&G history
Montana	Meridian Land	Otter Creek	Hydrology/Hydrogeology study for DSL unsuitability

			determination
Montana	Peter Kiewit Sons'	Decker Mines	Expert testimony on coal mining regulations- Montana Coal Council
Montana	Peter Kiewit Sons'	Decker Mines	Expert testimony on discharge regulations- Montana Coal Council
Texas	Dos Republicas Res.	Eagle Pass Mine	Hydrology/Hydrogeology study for TRRC permit
Texas	Dos Republicas Res.	Eagle Pass Mine	Hydrology/Hydrogeology study for TNRCC permit
Wyoming	Peter Kiewit Sons'	Numerous Mines	Expert testimony on coal mining regulations- Wyoming Mining Ass.
Wyoming	Peter Kiewit Sons'	Numerous Mines	Expert testimony on discharge regulations- Wyoming Mining Ass.
Wyoming	Spence & Schuster	Rawhide Subd.	Evaluation of CBM/subdivision gas leakage problem
OIL AND GAS PROJECTS			
Alaska	Evergreen Resources	Matsu Basin Isotopes	Tritium, Carbon 14, and Chlorine 36 Sampling of surface water and CBM well
Alaska	Pioneer Resources	Matsu Basin Isotopes	Tritium, Carbon 14, and Chlorine 36 Sampling of surface water and CBM well
Colorado	Amoco Production	Ohnemus UIC Well	Hydrologic evaluation and testimony for water disposal well
Colorado	Amoco Production	Hawksnest Wells	Pressure fall off and build up well tests for CBM well
Colorado	Amoco Production	Mesa Verde Formation	Hydrogeology study including computer data base of Piceance CBM
Colorado	Confidential	Confidential	Water quality analyses for CBM water typing
Colorado	Amoco Production	Fruitland Formation	Hydrogeology study including computer data base of San Juan CBM
Colorado	Amoco Production	Raton/Vermejo F.	Hydrogeology study including computer data base of Raton Basin CBM
Colorado	Confidential	Confidential	Dewatering analysis of CBM reservoir pilot
Colorado	Confidential	Confidential	Preparation of drilling plan for CBM wells
Colorado	Mesa Grande Resource	Ludlow Leases	Drilling and evaluation of CBM test hole
Colorado	Conquest Oil	South Shale Ridge	CBM well test and reservoir reserve evaluation
Colorado	San Juan Basin IAT	Animas Valley Study	Evaluation of domestic well problems in CBM development area
Colorado	Amoco Production	Florida Nitrogen Injection	Installation and sampling of wells of CBM nitrogen injection
Colorado	Amoco Production	Florida Nitrogen Injection	Monthly domestic well sampling of CBM nitrogen injection project
Colorado	Amoco Production	Florida Nitrogen Injection	Gas sampling of wells for CBM nitrogen injection
Colorado	Amoco Production	Nitrogen Injection FM	Monitoring data analysis for CBM nitrogen injection
Colorado	Advanced Res./GRI	Raton/Vermejo F.	Hydrogeology study including computer data base of Raton Basin CBM
Colorado	Amoco/Holland & Hart	San Juan O&G History	Research, review and presentation of San Juan Basin O&G history
Colorado	Amoco Production	Raton Domestic Wells	Water quality sampling of CBM N2 wells, domestic wells, and creeks
Colorado	Amoco Production	Raton Domestic Wells	Follow up water quality sampling of CBM N2 wells, domestic wells, and creeks
Colorado	Amoco Production	Raton O&G History	Research, review and presentation of Raton Basin O&G history
Colorado	Amoco Production	Tiffany Nitrogen Injection	1997 Domestic well monitoring and database for CBM nitrogen injection

Colorado	Amoco Production	Tiffany Nitrogen Injection	1998 Domestic well monitoring and database for CBM nitrogen injection
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Colorado	BP Amoco	Tiffany Nitrogen Injection	2000 Domestic well monitoring and database for CBM nitrogen injection
Colorado	BP Amoco	Tiffany Nitrogen Injection	2001 Domestic well monitoring and database for CBM nitrogen injection
Colorado	BP Amoco	Tiffany Nitrogen Injection	2002 Domestic well monitoring and database for CBM nitrogen injection
Colorado	Amoco Production	Tiffany Monitor Well	Drilling, installation, and sampling of a monitor well for CBM N2 project
Colorado	Amoco Production	Los Pinos Remediat.	Modeling of remediation for CBM seeps
Colorado	Amoco	Los Pinos Remediat.	Logged Test Pits and Designed the Pick Bar Gas Collection System
Colorado	Amoco	Los Pinos Remediat.	Domestic sampling, installation, downhole videos, packer testing and testimony
Colorado	Amoco	Los Pinos Remediat.	Domestic well recompletions and transducer installations
Colorado	Amoco	Pine River Ranches	Database management, reporting and COGCC testimony
Colorado	Amoco	Pine River Ranches	1999 Database management and COGCC reporting on CD Rom
Colorado	Amoco	Pine River Ranches	2000 Database management and COGCC reporting on CD Rom
Colorado	BP Amoco	Pine River Ranches	2001 Database management and COGCC reporting on CD Rom
Colorado	BP Amoco	Pine River Ranches	2002 Database management and COGCC reporting on CD Rom
Colorado	BP America	Pine River Ranches	2003 Database management and COGCC reporting on CD Rom
Colorado	BP America	Pine River Ranches	2004 Database management and COGCC reporting on CD Rom
Colorado	BP Amoco	Pine River Ranches	Salmon 1 and Salmon 2 recompletion, perfing, and acidizing
Colorado	BP Amoco	Pine River Ranches	Carbon, hydrogen, strontium, iodine, argon, & helium isotope sampling of CBM
Colorado	BP Amoco	Pine River Ranches	Downhole Video of CBM monitor well
Colorado	BP Amoco	Infill Expert Witness	Expert Witness on San Juan Basin CBM infill application 320 acre to 160 acre
Colorado	BP Amoco	Pine River Ranches	2001 Isotope Sampling on CBM monitor wells
Colorado	BP Amoco	Pine River Ranches	2002 Isotope Sampling on CBM monitor wells
Colorado	BP America	Pine River Ranches	2003 Isotope Sampling on CBM monitor wells
Colorado	BP America	Texas Creek	2002 Isotope Sampling on CBM monitor wells
Colorado	BP America	San Juan Injection Wells	Research and report on San Juan Basin injection wells for Wright Water Engineers
Colorado	Enervest Operating Co.	Valencia Canyon Seeps	Downhole Video of two CBM monitor wells
Colorado	Enervest Operating Co.	Valencia Canyon Seeps	Geology and Hydrogeology Data Review
Colorado	Enervest Operating Co.	Valencia Canyon Seeps	Database Management and Presentations to West Outcrop Seep Group
Colorado	Enervest Operating Co.	Infill Expert Witness	Expert Witness on San Juan Basin CBM infill application 320 acre to 160 acre
Colorado	State of Colorado	La Plata O&G History	History of La Plata County Oil and Gas
Colorado	Huber Operating Co.	Infill Expert Witness	Geology and Hydrogeology Data Review for Spacing Hearing

Colorado	Huber Operating Co.	San Juan Basin	1998 Water sampling,database, & COGCC reporting of Domestic Well monitoring
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Colorado	Huber Operating Co.	San Juan Basin	2000 Water sampling,database, & COGCC reporting of Domestic Well monitoring
Colorado	Huber Operating Co.	San Juan Basin	2001 Database, and reporting to COGCC of Domestic Well monitoring
Colorado	Huber Operating Co.	San Juan Basin	2002 Database, and reporting to COGCC of Domestic Well monitoring
Colorado	Huber Operating Co.	San Juan Basin	Isotope Sampling on CBM monitor wells
Colorado	Huber Operating Co.	Infill Expert Witness	Expert Witness on San Juan Basin CBM infill application 320 acre to 160 acre
Colorado	Huber Operating Co.	San Juan Basin	Sampling of monitor wells for sod farm disposal of CBM produced water
Colorado	XTO Energy	San Juan Basin	2003 Water sampling,database, & COGCC reporting of Domestic Well monitoring
Colorado	XTO Energy	San Juan Basin	2004 Water sampling,database, & COGCC reporting of Domestic Well monitoring
Colorado	XTO Energy	San Juan Basin	Sampling of monitor wells for sod farm disposal of CBM water, COGCC Report
Colorado	Cedar Ridge LLC.	San Juan Basin	Prepared drilling and completion plans for venting wells
Colorado	Cedar Ridge LLC.	Raton Basin	Reviewed project plans and conducted literature review
Colorado	Cedar Ridge LLC.	Raton Basin	Conducted domestic well, spring, and stream sampling
Colorado	Cedar Ridge LLC.	Raton Basin	Prepared ground water report on coal bed methane
Colorado	Cedar Ridge LLC.	Raton Basin	Perforated, acidized, and tested multiple zones in the Merritt 29-2 CBM well
Colorado	Cedar Ridge LLC.	Raton Basin	Perforated, acidized, and tested multiple zones in the Turcotte 21-2 CBM well
Colorado	Cedar Ridge LLC.	Raton Basin	Planned, drilled, cored, and completed the Merritt 29-4 CBM well
Colorado	Cedar Ridge LLC.	Raton Basin	Perforated, acidized, and tested multiple zones in the Turcotte 21-3 CBM well
Colorado	Cedar Ridge LLC.	Raton Basin	Perforated, acidized, and tested multiple zones in the Wheeler 36-1 CBM well
Colorado	Cedar Ridge LLC.	Raton Basin	Perforated, acidized, and tested multiple zones in the Wheeler 36-3 CBM well
Colorado	Cedar Ridge LLC.	Raton Basin	Perforated,acidized, and tested multiple zones in the Ortiz School 34-1 CBM well
Colorado	Cedar Ridge LLC.	Raton Basin	Tested multiple zones in the Turcotte 21-1 CBM well
Colorado	Cedar Ridge LLC.	Raton Basin	Supervised CBM core drilling of Santa Clara 1-3
Colorado	Cedar Ridge LLC.	Raton Basin	Supervised CBM core drilling of Blackhawk 13-3
Colorado	Cedar Ridge LLC.	Raton Basin	Supervised CBM monitor well drilling,completion,measurement,and database
Colorado	Cedar Ridge LLC.	Raton Basin	2001 Measure CBM monitor well with reporting to COGCC
Colorado	Cedar Ridge LLC.	Raton Basin	2002 Measure CBM monitor well with reporting to COGCC
Colorado	Cedar Ridge LLC.	Raton Basin	2003 Measure CBM monitor well with reporting to COGCC
Colorado	Cedar Ridge LLC.	Raton Basin	Sampled eighteen CBM wells for NPDES discharge permit
Colorado	Cedar Ridge LLC.	Raton Basin	Consulting and reporting for NPDES discharge permit for CBM wells

Colorado	Cedar Ridge LLC.	Raton Basin	Stable Isotope Sampling and Analysis of Domestic and CBM Wells
Colorado	Cedar Ridge LLC.	Raton Basin	Tritium, Carbon 14, and Chlorine 36 Sampling of surface water and CBM well
Colorado	Cedar Ridge LLC.	Sand Wash Basin	Oil and Gas Seep location, mapping, literature review, and report
Colorado	Cedar Ridge LLC.	Sand Wash Basin	CBM Well and Seep Sampling for Stable Isotopes and report
Colorado	Phillips Petroleum	Sand Wash Basin	Consulting on CBM Project
Colorado	Gunnison Energy/WWE	Piceance Basin	Peer Reviewer of Surface and Ground water Report for CBM project
Colorado	Gunnison Energy/WWE	Piceance Basin	Research on GRI Piceance Basin Report
China	ARI/N. Chinese Pet.	CBM Hydrogeology	Prepared and taught hydrogeology sections of CBM short course
Czech Rep.	DOSCO- GPO	Silesia Basin CBM	Evaluation of CBM development plans
France	Hampton Ass.	Confidential	Prepared and taught hydrogeology sections of CBM short course
Germany	DOSCO- Saarberg Int.	Saarberg CBM	Evaluation of CBM development plans
Mexico	Confidential	Confidential	Assess CBM development plans, Drilled, cored & completed seven CBM wells
Mexico	Confidential	Confidential	Prepared report of CBM development with all files and well files on CD-ROM
Mexico	Confidential	Confidential	Presented project plans to multiple companies for possible sale of project
Nepal	United Nations DP	Kathmandu Gas	Teaching, packer testing, and data analysis of biogenic gas wells
New Mexico	Amoco Production	San Juan Basin Wells	Preparation of expert witness testimony on well pit evaluations
New Mexico	Amoco Production	Fruitland Formation	Hydrogeology study including computer data base of San Juan CBM
New Mexico	Blackwood & Nichols	San Juan Basin	Water quality analyses for CBM water typing
New Mexico	Confidential	Confidential	Hydrogeology study including computer data base of Raton CBM
New Mexico	San Juan Basin IAT	Animas Valley Study	Evaluation of domestic well problems in CBM development area
New Mexico	Advanced Res./GRI	Raton/Vermejo F.	Hydrogeology study including computer data base of Raton Basin CBM
New Mexico	McHugh-Nassau Res.	Carracas Mesa	Analyzed long term pressure build up tests on CBM wells
New Mexico	Amoco/Holland & Hart	San Juan O&G History	Research, review and presentation of San Juan Basin O&G history
New Mexico	Blagg Engineering	Isotope Evaluation	Evaluated isotope sample of Cedar Hill surface gas seep
Texas	Hampton Ass.	Confidential	Prepared and taught hydrogeology sections of CBM short course
Utah	Western Alliance	Ute Leases	Hydrogeologic evaluation of potential oil & gas leases
Wyoming	CIG, Inc.	Table Rock	Well rehabilitation for sour gas contamination
Wyoming	Spence & Schuster	Rawhide Subd.	Evaluation of CBM/subdivision gas leakage problem
Wyoming	CBM Associates	Powder River CBM Proj.	Supervised drilling, completion, and sampling of monitor wells for CBM water disp.