The Washability Data section contains confidential information or data, as described in Section 2 of the *Coal Act Regulation*, and has been excluded from this report.

Coal Act Regulation: http://www.qp.gov.bc.ca/statreg/reg/C/251_2004.htm

QUINTETTE COAL LIMITED
1988 GEOLOGICAL REPORT
TRANSFER, GRIZZLY, PERRY CREEK , MARMOT AND WOLVERINE VALLEY SOUTH AREAS
APRIL, 1989

Prepared by Technical Services Department
Quintette Coal Limited

746

TITLE PAGE

1988 GEOLOGICAL REPORT

TRANSFER, GRIZZLY, PERRY CREEK, MARMOT AND WOLVERINE VALLEY SOUTH AREAS

COAL LICENCES: 3386, 3594, 3600, 3601,
3618, 3660, 3661, 3662
3335, 3339, 3340, 3341,
4532

QUINTETTE COAL LIMITED - Owner/Operator

Submitted: April 15, 1989

Assessment Report for the Application to Extend the Term of Quintette Coal Limited's Licences, 1989 - 1990

Location: Latitude - 55° 00' N
Longitude - 121° 10' W

NTS Map Sheet 93-P-3
93-I-14

Peace River Land District

Work conducted between May 5, 1988 and January 17, 1989

Report prepared by: Technical Services Department
Quintette Coal Limited

PREFACE

This report documents and describes the geology and coal quality based on exploration work completed to the end of 1988, in the Areas known as Transfer, Grizzly, Perry Creek, Marmot and Wolverine Valley South located on Quintette Coal Limited's Coal Licences in northeast British Columbia.

Exploration work has been undertaken on Quintette's licences since 1971. All work was completed under the supervision of Denison Mines Limited, Coal Division, and Quintette Coal Limited. The data presented in the report is from rotary/percussion drilling, core drilling, geologic mapping, and refraction seismic surveys. The 1988 geologic data is recorded on geologic maps which locate the mapping, drill holes and similar prior years work. Correlation charts, seam structure contours and cross sections are presented to supplement the geology plans.

The report presents regional and detailed geologic descriptions of the resource areas.

This report references all previous geologic reports on the Quintette Property.

Previous nomenclature for the areas discussed in this Report:

Transfer Area	- Johnson Area, Hermann Area
Grizzly Area	- Hermann South, Dupont Licence Area
Perry Creek Area	- Wolverine Area, Wolverine River North
Marmot Area	- Marmot Steep, Nabors Road, Hermann North
Wolverine Valley South Area	- a continuation of Mesa Extension Structures

At the time of submission, all 1988 analytical data had not been received. Therefore, Appendix 2, documenting the 1988 quality data, will be submitted at a later date.

STATEMENT OF QUALIFICATIONS

I, David G. S. Johnson, graduated from Mount Allison University, Sackville, New Brunswick, with a Bachelor of Science Degree in Geology in May, 1970. I have worked in Mineral Exploration for six years, managing field exploration programs and writing reports and recommendations on those programs. I have worked in coal exploration and mine development for the last eleven years in northeast British Columbia. I have conducted field exploration, geologic mapping, core logging, trenching; supervised core drilling, rotary drilling, adit driveage, and associated field work; managed exploration crews, contractors, and reclamation; participated in mine development, coal quality control, reserve evaluation; have prepared several structural and stratigraphic interpretations of coal reserve areas in northeast British Columbia.

David G. S. Johnson
Senior Geologist
Quintette Coal Limited
Tumbler Ridge, B. C.

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DESCRIPTION

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INDEX - ADDENDA

AREA	DRAWING NUMBER
Transfer	87-903-79-001 (Rev 2) 87-903-79-003 (Rev 3) 87-903-79-005 (Rev 1) 88-903-79-001 (Rev 2) 88-903-79-002 88-903-79-003 (Rev 1) 88-903-79-004 88-903-79-005
Grizzly	88-905-79-001
Vicinity M19 Pit (Transfer)	88-902-79-001 (Rev 4)
East Mesa (Marmot)	88-601-79-001
Mesa Extension	88-100-79-002
Perry Creek	88-906-79-001 (Rev 3)

Note: The three Addenda are supplied to the Ministry of Energy, Mines and Petroleum Resources, Victoria, B.C., only (2 copies of each). Other copies and originals are on file at the Administration Building, Quintette Coal Limited, Tumbler Ridge, B.C.

1.0 SUMMARY

The Quintette Coal Limited (Q.C.L.) property is situated in the Peace River Land District in northeast British Columbia in the inner foothills of the northern Rocky Mountains. Q.C.L. has a contract in place to produce five million tonnes of clean metallurgical coal per year. All coal production is from the Lower Cretaceous Gates Formation.

Exploration work on the Q.C.L. property was initiated in 1971 and has proceeded almost continuously through mine startup in 1982 to date. 1988 Exploration was conducted in the Transfer, Grizzly, Perry Creek, Marmot and Wolverine Valley South Areas. Exploration of the Transfer and Grizzly Areas was initiated in 1976 with regional scale geologic mapping and some core drilling. The Perry Creek Area has long been recognized for its coal potential, being the first area explored in 1971.

Exploration of the Wolverine Valley South Area began in 1976 and 1977 with regional and detailed mapping in and around the current Mesa Pit.

The Marmot Area has been explored since 1982 when the coal section was recognized during construction of the project.

Relative to the current active mining areas, Transfer and Grizzly lie between Shikano and Mesa Pits; Perry Creek is north of the Wolverine River and of Mesa Pit; Marmot is a continuation of the Mesa Pit coal southeast of the pit; and Wolverine Valley South is a continuation of the Mesa Extension reserve northwest of Mesa Pit to the Wolverine River Valley.

1.1 WORK COMPLETED

A total of 105 rotary and 34 core holes have been completed in the Transfer and Grizzly Areas to the end of 1988. Most of these holes have intersected Gates Formation coal seams, however, some have drilled the Hulcross, Moosebar and Gething Formations. Geologic mapping along 38 km of exploration road cuts and in areas of natural rock exposure has provided excellent structural and stratigraphic control. Drill hole information and seismic refraction survey

has allowed delineation of overburden thicknesses in the vicinity of the Shikano Syncline.

Using the geologic data base, an interpretation at 1:2500 scale has been updated and coverage expanded, consisting of structure contours of J seam, cross sections at 500 m intervals, correlation charts, and geology plans. Refraction seismic profiles outlining the depth to bedrock along five seismic lines have also been completed.

In the Perry Creek Area, 12 core holes and 9 rotary holes have been completed. Geologic mapping has been completed along approximately 2 km of exploration road cuts and in areas of natural rock exposure. A 1:5000 scale interpretation has been completed with six cross sections, a structure contour of J seam, correlation charts and a geology plan.

Five core holes and 11 rotary holes have been completed in Marmot to the end of 1988. This data combined with geologic mapping along 3 km of exploration road cuts and in areas of natural rock exposure have allowed for an interpretation at 1:2500 scale, consisting of cross sections at 500 m intervals, a structure contour of J seam, correlation charts and a geology plan.

In the Wolverine Valley South Area, only regional mapping has been completed in previous years. This area is a continuation of the Mesa Extension structure beneath Mesa Pit which has had 199 rotary and 18 core holes completed in it. The 1988 Exploration program drilled an additional 11 rotary and 1 core hole in the structure towards the Wolverine River (Wolverine Valley South Area). Based on additional field mapping along road cuts and the drilling, an interpretation at 1:2500 scale was produced with cross sections at 500 m, a J seam structure contour and a geology plan.

Core samples have been taken of the coal seams and analyzed for chemical and rheologic properties.

Geotechnical studies were conducted in Transfer and Grizzly for future mine planning.
Reclamation of the 1988 exploration disturbances has been completed.

1.2 STRATIGRAPHY

The stratigraphy within the Transfer, Grizzly, Perry Creek, Marmot and Wolverine Valley South Areas are typical of the regional stratigraphy of the Quintette property. The formations that have been identified are, from oldest to youngest, Gething, Moosebar, Gates, Hulcross and Boulder Creek.

The Moosebar and Hulcross Formations are marine transgressive units separating the Gething and Boulder Creek Formations from the Gates Formation. The Boulder Creek and Gates Formation are basically continental deposits. The common lithologies of the near shore and deltaic units of these two formations vary from mudstones to pebbly conglomerates with a predominance of fine sandstone. The Middle Gates Formation contains all the productive coal seams (D3, D4, E, F, E4 (G1), G, J and K (J2, J3)). Some thin coals are also encountered in the Upper Gates Formation, but are not considered recoverable.

The marine influence in the Gates Formation increases to the northwest between Transfer and Perry Creek. This is particularly noted in the Lower and Upper Gates Formation. Within the Middle Gates Formation, channel sands and conglomerates are present. These conglomerates can affect the coal seam development.

1.3 COAL SEAM DEVELOPMENT

A total of five continuous seams have been correlated in the Transfer and Grizzly Areas. These seams, F, G, J, K1 and K2 have an average aggregate thickness of 14.07 m in Transfer and 12.89 m (excludes K2) in Grizzly.

In the upper Gates Formation, B seam may be recoverable. D and E seams in the middle Gates occasionally attain mineable thicknesses but due to inseam partings their development is inconsistent.

The partings within G seam in the Grizzly Area can be greater than 1 m thick. Also, the parting thicknesses between J and K1, and K1 and K2 can be thin allowing the J-K sequence to be mined as one section.

In the Perry Creek Area, the main productive seam is J1/2 which averages 5.69 m. Other seams that are potentially recoverable are D3, E4, G1 and J3. An average aggregate thickness of these five seams is 11.89 m. The J1/2 seam thickness varies as a direct result of the rapid northward thickening of the parting between J1 and J2.

In the Marmot Area E, E4, G and J seams are well developed with E and J representing approximately 13 m of the 16.82 m cumulative average. Of note is the correlation of E4 with G1 and E2/3 with F seam in Transfer.

The Wolverine Valley South Area has similar coal seam development to Mesa Extension in Mesa Pit. Seams D3, D4, E, G and J all have mineable thicknesses. E seam is thick with many rock partings while J is thick with few rock partings. Aggregate thicknesses of the seams will approach 20 m.

1.4 STRUCTURE

The resource of the Transfer and Grizzly Areas is in a series of northwest trending folds which are dominated by the Transfer Anticline and the Shikano Anticline in the Grizzly Area. Both these folds plunge to the northwest. The Shikano Syncline lies between these two major structures providing further resource potential. The Mesa Fault truncates the Transfer Syncline West Limb and is the only major thrust identified although a number of small faults are interpreted where tight folding occurs.

In the Perry Creek Area, the resource potential is in the Perry Creek Syncline which is an open fold bounded by tighter folds to the southwest (Fortress Mountain Anticline and Syncline) and to the northeast.

The Marmot Area lies between the steep and overturned forelimb of the Marmot Anticline in Mesa Pit and the termination of the Transfer Anticline/Syncline. The area is dominated by this limb dipping from vertical to almost flat lying.

A northeast dipping fault is interpreted to repeat the coal section along with other minor associated faults.

The Wolverine Valley South Area is a continuation of the plunging Middle Anticline and associated structures identified in Mesa Extension. The structures outcrop in the area providing some near surface coal.

1.5 COAL QUALITY

Analysis has been completed on coal samples from core drilling and adit driveage in previous years. During 1988, core samples were tested for chemical and rheological properties. The coals from each of the areas are typically medium to volatile bituminous coal.

1.6 CONCLUSION

As a result of the current level of geologic data, the consistent seam development and the easily defined structures in the Transfer and Grizzly Areas, the resource in these blocks can be measured with a high degree of confidence.

1988 studies in the Shikano Syncline, Transfer West Limb and Transfer East Limb Areas have defined the extent of the resource permitting confident reserve evaluation in the future.

Within the Perry Creek Area, a thick J sequence, and G and E4 seams have been identified within a simple geologic structure. Further exploration will be required where J seam outcrops and in the structures to the southwest.

Work in the Marmot Area has provided data for an interpretation for possible inclusion in longer term plans. The northwest end of Marmot is currently part of the short range mine plan for the Mesa Pit.

The Wolverine Valley South Area provides the potential of expanded current pit development since its coal seams and structure are contiguous with the Mesa Extension reserve. Further definition of this resource area is a priority.

2.0 INTRODUCTION

The Quintette property is situated in the Peace River Land District of northeast British Columbia in the inner foothills of the northern Rocky Mountains. Quintette Coal Limited (Q.C.L.) has a contract to produce five million tonnes of clean metallurgical coal per year. All coal production is from the Lower Cretaceous Gates Formation.

Work on the Q.C.L. property was initiated in 1971 and has proceeded almost continually through mine startup in 1982 to the present. Exploration of the resources began with regional scale geologic mapping. Initial drilling was performed in 1976 in the Transfer Area, in 1984 in the Grizzly Area, in 1971 in the Perry Creek Area, in 1982 in the Marmot Area, and in 1988 in the Wolverine Valley South Area. Drilling and mapping have continued as the need to evaluate the reserve potential has increased.

Extensive sampling and testing programs have confirmed that Q.C.L. coal is a good quality medium volatile coking coal. It is a strong coking coal, and is capable of replacing most of the world's best medium and low volatile coking coals in blends.

Potential mineable reserves on the Q.C.L. property are estimated at 2.8 billion tonnes of coal in-place to a maximum depth below surface of 500 m.

The purpose of the 1988 exploration was to explore for mineable open pit reserves which may represent alternate options to those included in Q.C.L.'s current long term mining plan. Drilling has been completed in all of the exploration areas in 1988.

2.1 LOCATION AND ACCESS

The Q.C.L. property is located in the Rocky Mountain Foothills belt of northeastern British Columbia (see Figures 2.1 and 2.2). The coal bearing trend of this region is commonly referred to as the Peace River Coal Block.

The locations of the Transfer, Grizzly, Perry Creek, Marmot and Wolverine Valley South Areas relative to the property's primary infrastructure are illustrated in Figure 2.3. The focus of recent exploration activity (1988) was on the two distinct geological structures which, in order of resource size, are Transfer and Grizzly. A lesser amount of exploration was conducted in Perry Creek (2 diamond and 4 rotary drill holes), Marmot (2 diamond and 5 rotary drill holes), and Wolverine Valley South (1 diamond and 11 rotary drill holes) Areas.

Air distances to communities surrounding the property are as follows:

City	Population*	Distance
Prince George	67,721	160 km southwest
Dawson Creek	10,544	106 km northeast
Chetwynd	2,774	98 km north
Tumbler Ridge	4,385	20 km east

*1986 Census

The property is accessible by three routes: the Boundary Road (Heritage Highway) from Tupper, British Columbia; the Fellers Heights Road (Heritage Highway) from Dawson Creek/Fellers Heights; and Highway 29 from Chetwynd to Tumbler Ridge. The distances for the routes are as follows:

Boundary Road - Dawson Creek to Tumbler Ridge	210 km
Fellers Heights Road - Dawson Creek to Tumbler Ridge	127 km
Chetwynd to Tumbler Ridge	100 km
Tumbler Ridge to plantsite	18 km

Access within the property is gained by several existing roads developed for the mine. The 1986, 1987 and 1988 exploration programs established 4-wheel drive access routes from the existing roads into the exploration areas. The location of these routes is shown on the geology plans in Appendix 1.2.

The current road distance from the Preparation Plant and Mine Service Complex to the target areas are listed as follows:

Exploration Areas
Current Road Access Distances

From	To	Distance (km)
Transfer	Preparation Plant	22
	Mine Service Complex	13
Grizzly	Preparation Plant	7
Perry Creek	Preparation Plant	28
	Mine Service Complex	20
Marmot	Preparation Plant	15
	Mine Service Complex	6
Wolverine Valley South	Preparation Plant	22
	Mine Service Complex	4

2.2 PROPERTY DESCRIPTION

The Q.C.L. property consists of 136 Coal Licences covering an area of 33,001 ha and Coal Lease #6 consisting of 11,667 ha (see Figure 2.4 and Appendix T.1). The original Q.C.L. licences were acquired by Denison Mines Limited (D.M.L.) in 1969 and 1970. The first coal exploration on the property was undertaken by D.M.L. in 1970. A significant exploration program was conducted each of the following years to 1977. Smaller programs were completed in 1979 and 1980. In 1981, large scale exploration was again undertaken.

For the purpose of developing the coal licences, Q.C.L. was incorporated under the laws of British Columbia on December 20, 1971.

D.M.L. was appointed by Q.C.L. to manage the Q.C.L. project through the feasibility and construction/development stages of the project and to assume responsibility for the management of operations thereafter.

Current major partners in Quintette Coal Limited are D.M.L., Charbonnages de France, the Japanese Steel Industry, Mitsui Mining, Tokyo Boeki, and Sumitomo Corporation.

The Transfer, Grizzly and Marmot Areas are situated between the two sections of Coal Lease #6. The Transfer Area is approximately 3 km long and 700 m wide (average) while the Grizzly Area is 1.6 km in length and 500 m wide on average. Slopes vary from gentle (0^{o} to 10^{o}) to maximum natural slopes of 36^{o}.

The Marmot Area is approximately 3.5 km long and 700 m wide on average. Natural slopes vary from gentle to the maximum near Mesa Pit.

The Perry Creek Area is situated north of Mesa Pit on the north bank of the Wolverine River Valley. Its slopes are predominantly gentle with local small cliffs due to thick conglomerates in the Middle Gates Formation.

The Wolverine Valley South Area extends from Mesa Pit northwest to the Wolverine River, an area approximately 2.1 km long and 1.5 km wide. Relief is generally high in this area with many slopes approaching 36^{o}.

The Transfer and Grizzly Areas range from sub alpine to well below tree line in the Murray River Valley. The Perry Creek Area is also below tree line in the Wolverine River Valley and has been partially logged. The Marmot and Wolverine Valley South Areas range from just below tree line to valley floors. Stands of spruce and pine with cottonwood and poplar are predominant. The range in elevation for each area is as follows:

Maximum and Minimum Elevations Above Sea Level

Area	Maximum Elevation (m)	Minimum Elevation (m)
Transfer	1650	780
Grizzly	1150	780
Perry Creek	1100	925
Marmot	1500	1200
Wolverine Valley S	1400	850

2.3 EXPLORATION PROGRAMS 2-5

A summary of exploration activity undertaken in the exploration areas to the end of the 1988 field season is presented in Table 2.1.

Pre-1988 Exploration:

Regional scale geologic mapping (1:5000) aided by aerial photograph interpretation was the only form of geological assessment undertaken in the Transfer and Grizzly Areas prior to 1984 when the first rotary (6) and diamond (1) holes were completed in the Hermann South Area, now referred to as the Grizzly Area. In 1985, limited mapping and the first two diamond drill holes were completed in the Transfer Anticline. One 1976 core hole, QJD7643 was collared in the West Limb of the Transfer Syncline. This hole intersected only B and D seams.

The 1986 Exploration program allowed for the completion of detailed geological mapping of naturally exposed outcrops as well as those exposed by access routes and trench construction. No rotary drilling was conducted in the Transfer or Grizzly Areas, but total of 7 diamond drill holes, 2 in the Grizzly Area and 5 in the Transfer Area, were completed. This supplemented the above-noted mapping such that a preliminary determination of resources could be made within approximate pit limits (unscheduled mine area).

During the 1987 exploration season, 7 diamond and 36 rotary drill holes were completed in the Transfer Area while 5 diamond and 21 rotary drill holes were completed in the Grizzly Area. Three adits were driven into the mineable coal seams in each area in order to obtain bulk samples. Aerial photography and topographic mapping at 1:2500 scale were also completed.

In the Perry Creek Area, the coal measures were drilled in 1971 with the completion of 6 core holes on the northeastern slopes of Fortress Mountain. These holes were drilled to test for underground potential. Hole #QWD7119, closest to the current area of interest, intersected a thick J seam section. Later drilling in 1974, in adjacent areas, also confirmed the presence of significant coal thicknesses in the Gates Formation in the Wolverine River

Valley. Five (5) rotary holes drilled in 1987 confirmed a thick J seam sequence.

In the Marmot Area, initial exploration, in the form of regional geologic mapping took place in the 1970's. In 1982,2 short rotary holes were drilled along Nabors Road. This was followed in 1983 by a further 5 rotary holes and in 1984 by 3 core holes and 6 rotary holes. Geologic mapping of exploration roads was also completed.

The Wolverine Valley South Area has only had geologic mapping conducted in the area prior to 1988.

1988 Exploration:

The 1988 Exploration Program witnessed rotary and core drilling, detailed geologic mapping of naturally exposed outcrops as well as those exposed by access routes, aerial photography, and seismic refraction studies.

In the Transfer Area, 7 diamond and 27 rotary holes were drilled while 4 diamond and 4 rotary holes were completed in the Grizzly Area. Geologic mapping was also done along new access roads. At the southeastern end of Transfer (Shikano Syncline), utilizing an existing seismic line and flagged lines, a seismic refraction study was completed to determine the depth of overburden. This data allowed definition of the subsurface and determined where the coal had been "washed out". The data is also of interest vis a vis engineering studies for use in future mine planning.

During 1988, 2 diamond and 4 rotary holes were completed in the Perry Creek Area, along with geologic mapping and aerial photography. Five holes indicated the presence of a thick J seam sequence, and a northeasterly thickening trend of a parting within the seam. This conglomerate parting separates J1 and J2 seams, rapidly varying in thickness from less than 1 m to over 35 m.

In the Marmot Area, 2 diamond and 5 rotary drill holes were completed along with geologic mapping of new rock exposures. The new data permitted confirmation of the correlation of the seams between Transfer and Mesa Pit. Of interest is that F seam (Transfer) correlates with E2/3 seams in Mesa Pit and G1 seam (Transfer) correlates with E4 seam in Mesa Pit.

In Wolverine Valley South, 1 core hole and 11 rotary holes were completed. Accompanied by geologic mapping and data from additional drilling performed for Q.C.L.'s Production Geology group, an updated interpretation of the structure was done. The interpretation indicates some near surface coal and shows a steeply northwest plunging Middle Anticline.

2.3.1 Project Management and Primary Contractors 2-8

This report and the exploration work was completed by Q.C.L. geology staff, consultants and contractors.

Quintette Coal Limited

D. G. S. Johnson	- Senior Geologist
T. Wall	- Geologist
G. Cane	- Geologist-in-Training
D. P. Lortie	- Computer Geologist
N. C. Hori	- Geological Technician
D. Landry, S. Thomson	- Draftspersons
L. Yarwood, M. Healey	- Geophysical Logging

Consultants

W. R. Leeder, E. Toth	- Denison Mines Limited, Coal Division

Contractors 1988

Loiselle Contractors Ltd	- Road and Drillsite Construction, Reclamation
Les Woods and Sons	- Reclamation
Tonto Drilling	- Core Drilling
Western Hydro Air Drilling	- Rotary Drilling
Century Geophysical	- Geophysical Logging
Stables, Tryon and Associates	- Surveying
Commercial Testing and Engineering	- Core Analysis
Geo-Physi-Con	- Refraction Seismic Survey
Golder Associates	- Geotechnical Studies

2.4 STANDARDS AND PROCEDURES 2-9

2.4.1 Geologic Mapping

Geologic mapping in the Transfer, Grizzly, Marmot, Perry Creek and Wolverine Valley South Areas was conducted at 1:2500 scale by Quintette personnel.

The majority of mapping was conducted along exploration roads constructed during 1988. These roads provided excellent rock and coal exposures. Control was based on survey points spaced at approximately 100 m intervals along the roads. All of the geologic mapping was plotted on the geology plans presented in Appendix 1.2.

Reconnaissance mapping off the exploration roads was controlled by previously established survey points, airphoto control points, geologic control points and drill holes. Accuracy was maintained by closing the traverses to one of the known points.

Field data was recorded on map cards at 1:2500 scale. The mapping was done by a modified plane table method using a chain and compass. Lithologies, structural and sedimentological features, and bed orientation were recorded on the map cards.

2.4.2 Rotary Drilling

The contract rotary drilling companies have drilled both vertical holes and angle holes (to -45^{o}) with both downhole hammer and conventional rotary bits, using reverse circulation equipment. During 1988, no sampling of the rotary cuttings was done. The drillers daily reports are kept on file at the Administration Building, Quintette Coal Limited. These reports record coal intersections, water levels and estimated flow rates. The locations of all rotary drill holes are on the geology plans in Appendix 1.2.

Appendix T.2.1 contains summaries of all rotary holes. These summaries identify seam intersections and other notable sedimentary and structural

features. Table 2.2 lists all rotary holes with their location, elevation, and depth.

2.4.3 Diamond Drilling

Diamond drill holes were drilled vertically or at an angle providing H.Q. core (64 mm diameter) with conventional wireline recovery equipment. Each drill hole was geophysically logged followed by detailed visual core descriptions and complete sampling of all mineable coal sections. Approximately 5 kilograms of coal sample was taken from each metre of mineable section and sent to commercial laboratories for washability and related analyses as described in the following section.

The location of diamond drill holes are shown on the geology plans in Appendix 1.2 and a summary of each core hole is found in Appendix T.2.2. The detailed written descriptions of all recent cored drill holes are available in the Q.C.L. Administration building. Copies of each descriptive log are presented as Addendum II to this report. Table 2.3 lists all diamond holes with their location, elevation and depth.

2.4.4 Drill Core Analysis

Drill core samples of mining sections, where 80% or better core recovery has been achieved, normally provide the primary data points for the assessment of in-place ash content, washability yield predictions, and other physical, rheological, and chemical properties. Normal procedures involve the segregation of a selected mining section into various sample components based on coal and rock partings. These samples are then combined into a single sample or composite, representing the selected mining section.

The 1985, 1986, 1987 and 1988 analytical procedure is presented in Figure 2.5. Appendix 1 compiles all of the analytical data. Tables 2.4, 2.5, 2.6 and 2.7 identify all component samples, the sample intervals and the composite samples for diamond drilling in 1988 and all previous years for each of the exploration areas.

2.4.5 Geophysical Logging 2-11

Rotary and diamond drill holes have been logged by down hole geophysical methods since the commencement of drilling. However, in some instances, the caving of drill holes either prevented the completion of geophysical logs or required the holes to be logged through the drill stem.

The types of geophysical logs completed include:

1. Gamma
2. Neutron
3. Density
4. Caliper
5. Deviation
6. Resistivity

Geophysical logging was conducted by Century Geophysical and by Q.C.L. during 1988. Mining section thicknesses are determined from the core holes using detailed geophysical logs. Seam depths are determined from the 1:20 scale density geophysical log. The core descriptive log is then adjusted to these depths and missing core locations identified. The coal seam thickness is determined by adjusting the apparent seam thickness (distance between top and bottom as picked on the geophysical log) by the cosine of the measured bedding angle in the core.

Rotary drill holes are used for seam and rock thicknesses in the sense that the tops and bottoms of coal seams and correlation points are marked on the section profile of the drill holes on the sections. The interpretation then uses the elevation of these intersections when the top (and at times, the bottom) structure contour of each seam is drawn.

Copies of all geophysical logs are available in the Administration Building of Quintette Coal Limited. Copies of the geophysical logs are presented in Addendum I to this report.

2.4.6 Survey Control

During 1988, the Transfer,Grizzly, Marmot, Perry Creek and Wolverine Valley South Areas were surveyed by Stables, Tryon and Associates, Dawson Creek, British Columbia. Survey control of drill holes, exploration roads, airphoto targets, and geologic control points was completed using the Model 14A Geodometer and the Wild T16 Theodolite with various control stations established previously. The survey maps are on file in the Q.C.L. Administration Building, with the 1988 survey maps presented in Addendum III.

2.4.7 Geotechnical Studies

During 1988, Golder Associates conducted geotechnical and hydrogeological studies in the Transfer and Grizzly Areas. Six rotary holes were drilled to test overburden composition and standpipes were installed in 8 drill holes. Table 2.8 lists all drill holes completed for geotechnical testing and drill holes with standpipe/piezometer installations. Appendix T.2.3 contains summaries of all the geotechnical drill holes and standpipe/piezometer installations.

2.4.8 Reclamation

Reclamation of the 1988 and some 1987 disturbances was conducted by Loiselle Contractors Limited, Tumbler Ridge, British Columbia and Les Woods and Sons Limited, Chetwynd, British Columbia.

The program included bucking of all slash to ensure rapid decomposition and to inhibit fires. Spruce slash was burned.
All roads have been cross ditched as required for erosion control as well as seeded. Some main access roads were not seeded since they will be used in the 1989 exploration season.

The equipment used for reclamation was a D6 or D7 bulldozer, a small backhoe,

chainsaws and a seeder/spreader. The fertilizer mix was 8-36-17 at 125 kg per hectare. The seed mix consisted of Creeping Red Fescue at 55%, Kentucky Blue Grass at 25%, and Alsike Clover at 20%, applied at 50 kg per hectare.

2.4.9 Refraction Seismic Survey

A refraction seismic survey in the southeast end of Transfer and Grizzly (Shikano Syncline) was conducted by Geo-Physi-Con Company Limited, Calgary, Alberta. The purpose of the survey was to determine the thickness of overburden. This information was needed to assess whether coal seams would be present in parts of the area or "washed out". The survey was carried out along 5 lines for a total length of 4.42 km.

Relative elevation changes were determined using a hand inclinometer and relative elevations were tied in at selected survey locations to determine true elevations.

The seismic data was recorded with a GeoMetrics ES1210F, 12 channel signal enhancement seismograph.

A geophone spacing of 20 metres was used and shots (explosives) were located 20 m to 280 m past the end geophones of each spread and at the one-third points (interior shots) along each spread.

Explosives were detonated at the surface to produce compression type seismic energy. Geophones would then detect the onset and passage of seismic energy. Due to the contrast of compression wave velocity between bedrock and unconsolidated overburden, the depth to bedrock could be plotted. Details of the seismic survey are presented in Appendix T.4.

2.5 FUTURE DEVELOPMENT

Exploration work has defined a significant resource in the Transfer and Grizzly Areas. Sampling of the coal has confirmed the quality of the coal. Further work will be required to:

1. Confirm structures on the Transfer Anticline's west limb,
2. Better define the M-9 structure, particularly in the steep west limb of the M-9 Syncline,
3. Further define, by infill drilling, anomalies that may limit the resource such as:
   - F seam thickness on the Transfer Anticline east limb
   - K2 seam wash-out (QHR87030)
   - Seam thicknesses around QHD87010 where structural thinning has been interpreted,
4. Further define coal quality through core sample analysis where data is sparse or unreliable.

Regardless of the extent of future exploration or development work, definition of the geology in the Transfer and Grizzly Areas currently has a high degree of confidence. A preliminary mine plan based on the geology presented in this report will also have similar confidence in reserve figures, supporting a possible Stage I submission to the Government of British Columbia.

The 1988 exploration work also included hydrogeological and geotechnical studies that are ongoing.

In the Perry Creek Area, the exploration data indicates a simple geological structure with thick J seam coal. The preliminary geologic interpretation presented in this report will allow resource definition. Future work will depend on the requirements of the Quintette project. If the resource is to be exploited, further work will be required to:

1. Define the extent of the thick J2 parting,
2. Define J seam outcrop,
3. Define any structural complications near the Perry Creek Syncline axis

4. Explore and define the Fortress Mountain Anticline/Syncline to the southwest.

In the Marmot Area, a simple geologic structure has been interpreted. Prior to any commitment to recover coal in the area, further work will be required to:

1. Define the extent of overburden,
2. Define the extent of faulting identified in Mesa Pit that extends into the area,
3. Confirm seam thicknesses and quality,
4. Confirm the existence of a significant northeast dipping fault that has been interpreted.

In the Wolverine Valley South Area, initial drilling in 1988 identified some near surface coal. The structures have been shown to be continuous with the Mesa Extension structures in Mesa Pit. Since this area has the potential to expand the Mesa Extension reserve, further work is required to:

1. Define the structures, including fold relationships and fold plunges,
2. Confirm seam thicknesses and quality,
3. Confirm seam correlation with Mesa Extension,
4. Define extent of overburden in the Wolverine River Valley that may cover the coal section,
5. Define the extent of the recoverable coal down the valley.

Table 2.1

EXPLORATION SUMMARY

		Transfer/ Grizzly	Perry Creek	Marmot	Wolverine Valley South	Totals
Pre 1985						
Rotary holes	#	6	-	13		19
	m	686	-	1413		2099
Core holes	#	1	10	3		14
	m	110	2480	579		3169
Roads	km	1.5	10	2.3		13.8
Totals						
Rotary holes	#	104	9	18	11	142
	m	11979	827	2387	1147	16340
Core holes	#	34	12	5	1	52
	m	4925	2845	872	234	8876
Geotechnical	#	6	-	-	-	6
holes	m	272	-	-	-	272
Adits	#	6	-	-	-	6
	m	251	-	-	-	251
Roads	km	38.1	13.6	5.0	4.5	61.2

Table 2.1

EXPLORATION SUMMARY

		Transfer/ Grizzly	Perry Creek	Marmot	Wolverine Valley South	Totals
1988						
Rotary holes	#	31	4	5	11	51
	m	3049	567	974	1147	5737
Core holes	#	11	2	2	1	16
	m	1455	365	293	234	2347
Geotechnical	#	6	-	-	-	6
holes	m	272	-	-	-	272
Roads	km	7.6	2.3	2.7	4.5	17.1
1987						
Rotary holes	#	67	5			72
	m	8244	260			8504
Core holes	#	12	-			12
	m	1844	-			1844
Adits	#	6	-			6
	m	251	-			251
Roads	km	21.4	1.3			22.7
1986						
Core holes	#	8				8
	m	1142				1142
Roads	km	7.6				7.6
1985						
Core holes	#	2				2
	m	374				374
Roads	km	-				-

Table 2.2

ROTARY DRILLING SUMMARY

Transfer and Grizzly

HOLE	Northing m	Easting m	Elevation m	depth m
QHR84017	6095367.5500	624352.7310	877.05	128.00
QHR84018	6095285.3300	623971.7990	857.66	238.30
QHR84028	6095484.3600	624054.2890	879.24	198.00
QHR84027	6095326.5300	623962.4200	860.26	32.00
QHR84029	6095305.8000	623944.9000	861.39	54.00
QHR84030	6095326.5300	623960.4200	860.26	36.00
QHR87001	6096302.7600	624678.7200	848.18	189.60
QHR87002	6096356.1500	624465.2600	879.90	156.30
QHR87003	6096422.3500	624278.6900	895.45	140.00
QHR87004	6096486.6500	624117.6000	931.67	121.80
QHR87005	6096582.5400	623827.8900	985.67	117.50
QHR87006	6096741.6800	623311.9200	1057.87	182.00
QHR87007	6096526.6900	623136.8700	1117.65	170.20
QHR87008	6096594.0400	623196.4000	1107.99	107.30
QHR87009	6096471.1600	623293.4400	1108.97	132.30
QHR87010	6096347.6300	623296.4300	1109.67	164.40
QHR87011	6096681.6700	623132.3700	1107.81	121.50
QHR87012	6096590.3700	623063.5400	1116.81	183.30
QHR87013	6096728.4800	623477.3100	1041.15	143.70
QHR87014	6096773.6500	623194.3000	1076.90	207.40
QHR87015	6096508.6200	623456.4900	1079.99	56.70
QHR87016	6096078.3600	623627.5500	1071.99	146.60
QHR87017	6095936.6500	623801.6600	1011.93	164.80
QHR87018	6095705.4000	624093.4800	978.03	123.00
QHR87019	6095531.2600	624218.7000	916.10	110.70
QHR87020	6096256.3600	624879.7200	797.81	244.00
QHR87021	6096160.3200	620569.2500	1572.82	168.80
QHR87022	6096087.3000	620508.1200	1580.60	144.60
QHR87023	6095983.1100	620432.7200	1601.62	171.00
QHR87024	6096026.8600	620712.8900	1564.25	128.50
QHR87025	6095957.5600	620647.1700	1585.04	110.00
QHR87026	6095680.6300	620701.8000	1573.08	140.00
QHR87027	6095842.9400	620804.1700	1549.64	80.00
QHR87028	6096294.4200	620421.7000	1542.16	172.00
QHR87029	6095579.2000	620866.5800	1545.46	110.00
QHR87030	6095302.3100	621163.2600	1489.50	86.80
QHR87031	6095747.6400	621267.2000	1425.42	50.00
QHR87032	6095887.3500	621106.0400	1451.87	92.70
QHR87033	6095148.0300	621293.3700	1437.70	98.70
QHR87034	6095778.1600	621750.4500	1319.00	108.00
QHR87035	6096125.3000	620293.6600	1558.01	129.00
QHR87036	6096202.0900	620351.1400	1544.31	117.60
QHR87037	6095758.0000	620771.3200	1560.42	91.80
QHR87038	6096017.0100	620942.6700	1490.85	129.00
QHR87039	6095418.9600	621016.0100	1522.50	99.00
QHR87040	6095283.7400	622166.7700	1361.19	98.20
QHR87041	6095150.7400	623801.9400	891.53	187.80
QHR87042	6095081.3500	623748.7500	891.10	129.70
QHR87043	6094827.3600	623622.9900	902.11	116.40
QHR87044	6094992.3500	623705.1900	880.04	135.70

Table 2.2 (Continued)

ROTARY DRILLING SUMMARY

Transfer and Grizzly (continued)

HOLE	Northing m	Easting m	Elevation m	depth m
QHR87045	6094837.8000	623932.4500	838.09	99.00
QHR87047	6094922.2800	623977.7800	838.73	79.00
QHR87048	6095005.9100	624037.4500	836.82	111.30
QHR87049	6094780.3300	623876.6500	841.24	90.80
QHR87050	6095263.2700	624327.4100	844.50	91.80
QHR87051	6093986.5700	622728.3700	857.50	147.70
QHR87052	6093829.3100	622093.2200	951.88	127.90
QHR87053	6094070.2200	622065.9500	1034.79	86.00
QHR87054	6094207.2100	622091.5900	1049.43	99.00
QHR87055	6093811.2000	622506.6200	890.45	55.60
QHR87056	6093869.5000	623134.0200	857.51	91.30
QHR87057	6094089.2800	623303.9000	876.83	91.30
QHR87058	6094292.6300	623438.8700	881.64	79.20
QHR87059	6095942.5900	621392.1300	1368.63	190.60
QHR87060	6095749.2500	621503.1700	1346.09	80.30
QHR87061	6095928.1200	620875.6100	1527.81	99.20
QHR87062	6096057.4100	620103.8400	1544.99	178.90
QHR87063	6096279.5400	620168.5600	1508.25	109.90
QHR87064	6096360.0100	620222.2700	1499.61	103.60
QHR87065	6096311.4300	619929.8200	1519.31	146.70
QHR87066	6096322.9200	620077.6000	1505.69	85.20
QHR87067	6096417.4100	619995.3400	1499.61	42.00
QHR87068	6096527.4400	620065.1000	1484.15	79.30
QHR88003	6094622.9800	620565.2700	1332.38	58.88
QHR88004	6094949.7100	620890.4900	1354.74	167.36
QHR88005	6094980.6700	620710.0300	1444.25	147.72
QHR88006	6095268.3700	620089.9800	1540.25	166.62
QHR88007	6095440.6100	619910.3400	1586.98	78.20
QHR88011	6095441.1000	619907.6300	1586.98	198.20
QHR88012	6095444.7600	619916.1400	1587.17	47.58
QHR88013	6095500.8400	619756.9900	1610.59	138.72
QHR88014	6095534.8800	621839.8700	1324.72	95.30
QHR88015	6095021.6700	623106.0800	1068.53	111.88
QHR88016	6094992.1600	622876.2200	1112.54	74.76
QHR88017	6095037.2500	622921.5200	1117.09	84.08
QHR88018	6096199.0200	620128.2800	1522.53	125.02
QHR88019	6094998.4800	621360.9200	1349.43	102.04
QHR88020	6094894.4100	621303.4500	1283.06	126.70
QHR88021	6094893.5400	621302.6700	1282.11	163.12
QHR88022	6094890.0200	621286.0200	1282.73	95.92
QHR88023	6094536.1900	621724.3300	1166.96	173.78
QHR88024	6094535.4500	621723.8600	1167.16	132.22
QHR88025	6094661.3100	621312.6300	1170.74	30.00
QHR88026	6094653.5800	621305.3900	1171.61	107.84
QHR88027	6094396.5800	621638.8800	1091.14	53.44
QHR88028	6094395.2000	621732.0800	1087.83	54.32
QHR88029	6094304.1500	622181.6700	1072.37	53.32
QHR88030	6094264.4600	622137.2700	1059.79	53.32
QHR88031	6094991.7900	624610.9700	797.34	114.36
QHR88032	6095105.9700	624423.0100	816.85	24.00

Table 2.2 (Continued)

ROTARY DRILLING SUMMARY

Transfer and Grizzly (continued)

HOLE	Northing m	Easting m	Elevation m	depth m
QHR88033	6095149.0500	624447.3400	822.08	119.62
QHR88034	6094883.3300	624479.3300	779.80	30.10
QHR88035	6094732.3800	624054.1200	830.42	35.10
QHR88036	6094627.5800	623986.4000	827.92	52.10
				=========
				11945.92

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104.

Marmot

Hole	Northing UTM	Easting UTM	Elevation metres	DEPTH m
QHR8205	6096634.9000	618431.9000	1399.00	70.00
QHR8206	6096804.1000	618532.2000	1373.10	61.00
QHR83001	6097092.8000	618366.9000	1409.90	164.00
QHR83002	6097059.5000	618173.7000	1389.60	176.00
QHR83003	6097027.3000	618131.0000	1387.70	96.00
QHR83004	6096943.5000	618280.2000	1408.10	150.00
QHR83005	6096807.0000	618534.3000	1373.00	187.00
QHR84012	6096775.5000	618343.6000	1400.90	109.50
QHR84013	6096730.3000	618300.0000	1411.20	91.30
QHR84014	6097198.3000	618049.0000	1310.90	97.40
QHR84015	6097143.4000	618028.3000	1317.40	60.80
QHR84016	6096881.7000	618253.4000	1408.80	83.50
QHR84025	6096825.9000	618230.8000	1412.80	66.80
QHR86022	6095522.7350	619535.3910	1620.59	79.00
QHR86023	6095599.2080	619483.7540	1622.70	103.50
QHR86024	6095732.9130	619306.2900	1626.43	146.00
QHR88001	6097094.4300	618647.2900	1342.07	208.28
QHR88002	6096953.5400	618567.4200	1352.07	200.18
QHR88008	6096543.6500	618879.5400	1464.54	234.48
QHR88009	6096037.1700	619148.4300	1566.86	96.56
QHR88010	6096035.2100	619139.8300	1565.81	232.22
				=========
				2713.52

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21.

Table 2.2 (Continued)

ROTARY DRILLING SUMMARY

Perry Creek

HOLE	Northing m	Easting m	Elevation m	depth none
QPR87001	6105215.2100	612398.1800	918.24	73.50
QPR87002	6104982.6500	612049.3400	954.63	60.50
QPR87003	6105131.4300	612166.3600	945.01	44.40
QPR87004	6105276.7600	612307.3700	930.10	37.90
QPR87005	6105449.8400	612422.9700	923.61	43.30
QPR88001	6106415.9300	611144.3000	1134.47	181.80
QPR88002	6106305.6800	611550.0200	1101.47	171.30
QPR88003	6105851.1500	612203.0000	1054.24	137.10
QPR88004	6106535.4800	611498.1400	1092.31	70.82
				=========
				820.62

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9.

Wolverine Valley South

Hole	Northing m	Easting m	Elevation m	Depth none
QWR88501	6101927.6000	612761.8100	866.37	102.36
QWR88502	6101124.1900	612698.2500	1009.93	83.82
QWR88503	6101317.3700	612850.2200	1051.04	76.84
QWR88504	6101230.7400	612782.9000	1019.83	90.12
QWR88505	6101452.1500	612955.3100	1052.12	114.10
QWR88506	6101034.5000	612999.2000	1108.90	72.06
QWR88507	6100847.7200	613208.6800	1121.58	59.34
QWR88508	6101238.5800	613123.0900	1136.00	192.48
QWR88509	6101775.3800	612708.7200	885.30	47.28
QWR88510	6101889.6400	612654.2100	857.62	11.00
QWR88155	6100738.7600	613876.7700	1351.57	297.16
QWR88130	6100041.8500	614270.9490	1163.20	213.90
QWR88131	6100041.1600	614267.8770	1163.19	207.00
QWR88151	6100502.5600	614122.4940	1388.25	284.90
QWR88152	6100269.0700	614072.3300	1415.55	160.50
QWR88153	6100117.8800	614293.2790	1429.13	161.00
QWR88154	6100083.4300	614266.8100	1432.11	193.10
				=========
				2367.26

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17.

Table 2.3

DIAMOND DRILLING SUMMARY

Transfer and Grizzly

HOLE	Northing m	Easting m	Elevation m	Depth m
QHD85001	6095479.7200	620842.4600	1513.20	150.00
QHD85002	6096247.8900	620665.9900	1549.76	225.00
QHD86003	6096400.2400	619865.6300	1532.05	225.86
QHD86004	6095039.7100	621025.4900	1328.95	63.70
QHD86005	6095040.5100	621025.8900	1329.25	178.31
QHD86006	6095648.4600	621718.5900	1325.06	99.06
QHD86007	6095276.7300	622427.3300	1292.95	138.68
QHD86008	6095971.6100	621225.6800	1413.39	169.50
QHD84004	6095357.4400	624377.1800	875.76	109.62
QHD86001	6096557.3300	623975.7500	953.93	147.00
QHD86002	6096236.9800	623500.7600	1095.53	120.40
QHD87001	6096689.5500	623618.5900	1021.15	160.79
QHD87002	6096678.4500	623250.5100	1081.36	99.12
QHD87003	6095802.9300	623915.7200	996.29	177.52
QHD87004	6095885.1500	620622.5400	1589.74	151.10
QHD87005	6096045.6800	620230.2800	1573.26	185.78
QHD87006	6096478.6700	620295.8400	1186.07	202.44
QHD87007	6095442.3900	622018.4300	1329.15	120.63
QHD87008	6094538.8300	621727.1900	1167.00	138.62
QHD87009	6095088.7000	622957.5000	1108.43	105.14
QHD87010	6094879.6700	623642.3500	894.89	158.55
QHD87011	6095267.5500	623875.1700	877.77	189.12
QHD87012	6096170.5700	624826.0200	818.91	155.24
QHD88002	6095006.2250	620510.6660	1464.97	247.50
QHD88003	6094667.8070	621309.9380	1171.43	120.42
QHD88004	6094804.7750	624224.6630	814.20	115.60
QHD88005	6094924.7700	623402.7900	987.16	147.06
QHD88006	6094505.4500	621847.8700	1168.19	73.76
QHD88007	6094857.3700	624157.1400	778.71	129.42
QHD88008	6095046.2900	624356.1000	826.64	195.80
QHD88009	6094925.7600	624248.9800	828.72	153.80
QHD88010	6094638.0500	623985.6100	827.92	91.74
QHD88011	6094780.6400	624397.6100	779.57	100.90
QHD88012	6094785.2000	624763.9100	776.48	107.59
				4954.77

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34.

Marmot

Hole	Northing UTM	Easting UTM	Elevation metres	DEPTH m
QJD7643	6095755.8200	619441.1000	1641.49	264.50
QHD84001	6097258.4100	618097.9520	1302.92	215.30
QHD84002	6097064.0300	618204.5470	1390.14	204.70
QHD84003	6096706.5900	618493.2100	1388.48	153.29
QHD88001	6094312.3030	619063.4351	1556.25	232.21
QMD88002	6095006.2250	620510.6657	1464.97	247.50
				1317.50

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6.

Table 2.3 (Continued)

DIAMOND DRILLING SUMMARY

Perry Creek

HOLE	Northing m	Easting m	Elevation m	depth none
WDH1	6104019.5200	611495.6700	953.50	230.00
QWD7112	6104933.1800	612623.8900	872.60	308.40
QWD7115	6106026.7500	610406.5000	1286.10	444.10
QWD7117	6106740.3600	609627.1300	1286.40	397.00
QWD7118	6106780.3700	610356.2800	1181.50	175.87
QWD7119	6105587.8400	611041.3000	1212.50	197.21
QWD7120	6107129.0600	610082.3900	1206.30	191.11
QWD7121	6107121.0000	610296.0000	1219.20	169.77
QWD7401	6108028.0000	612523.0000	1131.00	235.29
QWD7402	6103221.0000	611336.0000	982.00	124.00
QPD88001	6106067.9900	611877.8700	1071.32	171.00
QPD88002	6105650.9400	611562.3000	1099.31	194.15
				=========
				2837.90

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12.

Wolverine Valley South

Hole	Northing m	Easting m	Elevation m	Depth none
QMD88003	6100962.8000	613524.6000	1302.30	232.20
QMD88004	6100180.4500	614348.1920	1430.19	212.50
				=========
				444.70

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2.

Table 2.4
TRANSFER/GRIZZLY
CORE SAMPLING SUMMARY

Drill Hole	Component Sample #	Core Interval (m)	Seam	Composite #
QHD84004	QHD84004-7	31.30 - 31.93	F1/F2P(F1+F2)+	
	QHD84004-8	31.93 - 35.27	F2	QH844-14-F
	QHD84004-9	35.27 - 35.97	F2 lower	-
	QHD84004-4	55.46 - 57.36	G1	
	QHD84004-5	57.36 - 57.93	G2P(G2PROC)	QH844-15-G
	QHD84004-6	57.93 - 58.89	G2	
	QHD84004-3J1	80.40 - 85.37	J (J1)	QH844-16-J1
	QHD84004-2J3	86.58 - 87.63	K1 (J3)	QH844-17-J3
	QHD84004-1	91.37 - 92.06	K2 (K seam)	-
QHD85001	1	17.21 - 18.15	D1 (D)	1
	2	45.69 - 45.89	E3 (E1)	2-4
	3	45.89 - 46.14	E3 (E2P)	2-4
	4	46.14 - 46.54	E3 (E2)	2-4
	5	69.58 - 70.83	F1/F2P	5-8
	6	70.83 - 72.45	F2 (F2)	5-8
	7	72.45 - 72.78	F2 (F3P)	5-8
	8	72.78 - 74.89	F2 (F3)	5-8
	9	99.24 - 100.20	G1	9-13
	10	100.20 - 100.51	G2P	9-13
	11	100.51 - 101.39	G2	9-13
	12	101.39 - 101.93	G3P	9-13
	13	101.93 - 102.87	G3	9-13
	14	116.91 - 117.62	J (J1)	14-15
	15	117.62 - 121.43	J (J2)	14-15
	16	121.43 - 122.53	K1P	-
	17	122.53 - 123.43	K1	17
	18	123.43 - 124.41	K2P	-
	19	124.41 - 125.23	K2	19
QHD85002	20	37.73 - 38.74	B	20
	21	98.98 - 100.31	D1/D2 (D)	21
	22	117.80 - 118.35	E1	22-27
	23	118.35 - 118.81	E2P	22-27
	24	118.81 - 119.20	E2 (E2)	22-27
	25	119.20 - 119.52	E2 (E3P)	22-27
	26	119.52 - 120.31	E2 (E3)	22-27
	27	121.67 - 122.77	E3 (E4)	22-27

+Items in parentheses are previous sample identifications

Table 2.4
TRANSFER/GRIZZLY
CORE SAMPLING SUMMARY

QHD85002B	Q86-1081	144.90 - 145.43	F1	T-24
	Q86-1082	145.43 - 146.04	F2P	
	Q86-1083	146.04 - 147.10	F2	
	Q86-1084	147.10 - 147.27		
	Q86-1052	172.60 - 173.55	G1	T-17
	Q86-1053	173.55 - 173.73	G2P	
	Q86-1054	173.73 - 174.43	G2	
	Q86-1018	191.28 - 195.94	J	T-4
	Q86-1019	195.94 - 196.93	K1P	
	Q86-1020	196.93 - 198.08	K1	
	Q86-1021	198.08 - 198.80	K2P	
	Q86-1022	198.80 - 200.16	K2	
QHD86001*	Q86-1074	51.65 - 52.38	F1	T-22
	Q86-1075	52.38 - 52.70	F2P	
	Q86-1076	52.70 - 55.78	F2	
	Q86-1077	55.78 - 56.45	F2 lower	-
	Q86-1043	90.46 - 90.72	G1	T-15
	Q86-1044	90.72 - 91.07	G2P	
	Q86-1045	91.07 - 92.03	G2	
	Q86-1046	92.03 - 92.96	G3P	
	Q86-1047	92.96 - 94.28	G3	
	Q86-1010	115.86 - 120.56	J	T-2
	Q86-1011	120.56 - 121.00	K1P	
	Q86-1012	121.00 - 122.60	K1	
	Q86-1013	127.25 - 127.85	K2	-
QHD86002*	Q86-1078	38.31 - 38.96	F1	T-23
	Q86-1079	38.96 - 39.37	F2P	
	Q86-1080	39.37 - 42.12	F2	
	Q86-1048	77.60 - 77.82	G1/G2P	T-16
	Q86-1049	77.82 - 78.63	G2	
	Q86-1050	78.63 - 79.14	G3P	
	Q86-1051	79.14 - 80.90	G3	
	Q86-1014	95.56 - 100.49	J	T-3
	Q86-1015	100.49 - 101.05	K1P	
	Q86-1016	101.05 - 102.33	K1	
	Q86-1017	105.60 - 106.33	K2	-
QHD86003	Q86-1085	130.66 - 131.40	F1/F2P	T-25
	Q86-1086	131.40 - 133.24	F2	
	Q86-1087	133.24 - 133.49		
	Q86-1088	133.49 - 135.58		

*Intervals derived from summary sheets and quality sheets.

Table 2.4
TRANSFER/GRIZZLY
CORE SAMPLING SUMMARY

QHD86003 (continued)	Q86-1055	163.28 - 163.81	G1	T-18
	Q86-1056	163.81 - 163.97	G2P	
	Q86-1057	163.97 - 165.10	G2	
	Q86-1058	165.10 - 165.44	G3P	
	Q86-1023	183.90 - 188.68	J	T-5
	Q86-1024	188.68 - 189.48	K1P	
	Q86-1025	189.48 - 190.47	K1	
	Q86-1026	192.00 - 193.14	K2	T-6
QHD86005*	Q86-1106	13.75 - 16.01	D1	T-29
	Q86-1027	146.80 - 151.38	J	T-7
	Q86-1028	151.38 - 152.61	K1P	
	Q86-1029	152.61 - 153.52	K1	
	Q86-1030	154.76 - 155.84	K2	T-8
QHD86006*	Q86-1089	11.16 - 12.05	F1	T-26
	Q86-1090	12.05 - 12.49	F2P	
	Q86-1091	12.49 - 12.91	F2	
	Q86-1092	12.91 - 13.02		
	Q86-1059	41.76 - 42.66	G1	T-19
	Q86-1060	42.66 - 42.86	G2P	
	Q86-1061	42.86 - 43.87	G2	
	Q86-1062	43.87 - 44.27	G3P	
	Q86-1063	44.27 - 45.70	G3	
	Q86-1010	65.50 - 70.45	J	T-9
	Q86-1011	70.45 - 71.64	K1P	
	Q86-1012	71.64 - 72.66	K1	
	Q86-1034	73.88 - 75.10	K2	T-10
QHD86007	Q86-1093	42.84 - 43.73	F1	T-27
	Q86-1094	43.73 - 44.36	F2P	
	Q86-1095	44.36 - 46.57	F2	
	Q86-1096	46.57 - 46.62		
	Q86-1097	47.43 - 47.96		
	Q86-1098	47.96 - 49.02		
	Q86-1064*	72.60 - 73.39	G1	T-20
	Q86-1065*	73.39 - 73.56	G2P	
	Q86-1066*	73.56 - 74.69	G2	
	Q86-1067*	74.69 - 75.04	G3P	
	Q86-1068*	75.04 - 76.32	G3	
	Q86-1035*	98.46 - 104.57	J	T-11
	Q86-1036*	104.57 - 105.40	K1P	
	Q86-1037*	105.40 - 106.81	K1	
	Q86-1038*	110.17 - 111.37	K2	T-12

Table 2.4
TRANSFER/GRIZZLY
CORE SAMPLING SUMMARY

QHD86008	Q86-1099	79.40 - 80.45	F1	T-28
	Q86-1100	80.45 - 80.89	F2P	T-28
	Q86-1101	80.89 - 81.95	F2	T-28
	Q86-1102	81.95 - 81.99	F2	T-28
	Q86-1103	81.99 - 83.29	F2	T-28
	Q86-1104	83.29 - 83.42	F2	T-28
	Q86-1105	83.42 - 84.40	F2	T-28
	Q86-1069	125.05 - 126.34	G1	T-21
	Q86-1070	126.34 - 126.48	G2P	T-21
	Q86-1071	126.48 - 127.75	G2	T-21
	Q86-1072	127.75 - 128.38	G3P	T-21
	Q86-1073	128.38 - 129.88	G3	T-21
	Q86-1039	152.94 - 160.02	J	T-13
	Q86-1040	160.02 - 161.01	K1P	T-13
	Q86-1041	161.01 - 162.61	K1	T-13
	Q86-1042	165.64 - 166.97	K2	T-14

QHD87001	1000	67.94 - 68.91	F1	C1
	1001	69.15 - 73.15	F2	C1
	1002	73.15 - 73.61	F2 lower	-
	1003	118.04 - 118.46	G1	C2
	1004	118.46 - 118.82	G2P	C2
	1005	118.82 - 119.88	G2	C2
	1006	119.88 - 120.79	G3P	*
	1007	120.79 - 122.16	G3	C2
	1008	141.76 - 147.69	J	C3

*Not included in composite

QHD87002	1009	17.14 - 17.71	F1	C4
	1010	17.71 - 18.00	F2P	C4
	1011	18.00 - 20.55	F2	C4
	1012	20.55 - 20.87	F2 lower (F3)	-
	1014	61.85 - 62.44	G1/G2P	C5
	1015	62.44 - 63.57	G2	C5
	1016	63.57 - 63.77	G3P	C5
	1017	63.77 - 64.57	G3	C5
	1018	82.25 - 87.45	J	C6
	1019	87.45 - 87.89	K0P K1P	-
	1020	87.89 - 88.21	K0	-
	1021	88.21 - 89.83	K1	C7
	1022	92.68 - 93.48	K2	C8*

*No composite analysis - Petrography and component analysis only

Table 2.4
TRANSFER/GRIZZLY
CORE SAMPLING SUMMARY

QHD87003	1147	24.17 - 24.80	D1		C49
	1148	24.80 - 25.24	D2P		
	1149	25.24 - 25.98	D2		
	1023	82.64 - 83.17	F1		C9
	1024	83.17 - 83.53	F2P		
	1025	83.53 - 87.22	F2		
	1013	87.22 - 87.60	F2 lower (F3)		-
	1026	109.89 - 110.69	G2		C10
	1027	110.69 - 111.33	G3P		
	1028	111.33 - 112.09	G3		
	1029	129.08 - 133.22	J		C11
	1030	133.22 - 133.94	KOP	K1P	-
	1031	133.94 - 134.40	KO	K1P	-
	1032	134.40 - 135.41	K1		C12
QHD87004	1033	85.14 - 86.56	G1-A		-
	1034	86.79 - 87.78	G1		C13
	1035	87.78 - 87.98	G2P		
	1036	87.98 - 88.84	G2		
	1037	88.84 - 89.56	G3P		
	1038	89.56 - 90.48	G3		
	1039	104.60 - 108.60	J		C14
	1040	108.60 - 109.35	KOP	K1P	-
	1041	109.35 - 109.62	KO	K1P	-
	1042	109.62 - 110.61	K1		C15
	1043	110.61 - 111.28	K2P		-
	1044	111.28 - 112.53	K2		C16
QHD87005	1141	15.47 - 18.63	B		C50
	1142	100.96 - 101.96		(E)	-
	1143	101.96 - 102.25	E2	(E)	-
	1144	102.25 - 102.50		(E)	-
	1145	103.64 - 104.45	E3	(E)	-
	1146	104.45 - 105.02		(E)	-
	1045	123.48 - 124.09	F1		C17
	1046	124.09 - 124.55	F2P		
	1047	124.55 - 127.44	F2		
	1048	157.47 - 158.67	G1		C18
	1049	158.67 - 158.75	G2P		
	1050	158.75 - 159.61	G2		
	1051	159.61 - 160.18	G3P		
	1052	160.18 - 161.33	G3		
	1053	175.50 - 180.40	J		C19
	1054	183.85 - 184.96	K2		C20

Table 2.4
TRANSFER/GRIZZLY
CORE SAMPLING SUMMARY

QHD87006	1136	15.43 - 16.58	B	C51
	1137	83.08 - 84.30	D1/D2 (D)	-
	1138	105.93 - 106.46	E1	-
	1139	106.46 - 106.89	E2P (E)	-
	1140	106.89 - 108.25	E2	C52
	1055	135.77 - 136.23	F1	
	1056	136.23 - 136.94	F2P	C21
	1057	136.94 - 140.41	F2	
	1058	161.71 - 163.02	G1	-
	1059	164.65 - 166.02	G3	-
	1060	186.83 - 192.19	J	C22
	1061	192.19 - 192.70	K0P (K1P)	-
	1062	192.70 - 193.26	K0 (K1P)	-
	1063	193.26 - 194.26	K1	-
	1064	195.39 - 196.41	K2	C23
	1065	196.41 - 197.17	K2 lower	
QHD87007	1066	32.22 - 33.40	F1	
	1067	33.40 - 33.95	F2P	C24
	1068	33.95 - 38.68	F2	
	1069	72.66 - 73.93	G1	
	1070	73.93 - 74.15	G2P	C25
	1071	74.15 - 75.62	G2	
	1072	75.62 - 76.00	G3P	
	1073	76.00 - 78.50	G3	
	1074	103.12 - 109.99	J	C26
	1075	111.76 - 113.28	K1	-
	1076	116.54 - 118.16	K2	-
QHD87008	No Samples Taken			
QHD87009	1077	24.70 - 25.34	F1	
	1078	25.34 - 25.71	F2P	C27
	1079	25.71 - 27.56	F2	
	1080	61.08 - 61.93	G1	
	1081	61.93 - 62.10	G2P	
	1082	62.10 - 63.23	G2	C28
	1083	63.23 - 63.65	G3P	
	1084	63.65 - 65.20	G3	
	1085	88.12 - 93.94	J	C29

Table 2.4
TRANSFER/GRIZZLY
CORE SAMPLING SUMMARY

QHD87010	1133	22.18 - 23.40	E3	(E)	C53A
	1134	23.40 - 23.76			-
	1135	23.76 - 24.03			C53
	1086	89.91 - 90.82	G1		-
	1087	90.82 - 91.13	G2P		-
	1088	91.13 - 91.94	G2		C30
	1089	91.94 - 92.40	G3P		-
	1090	92.40 - 94.48	G3		-
	1091	114.91 - 117.62	J		C31
	1092	117.62 - 118.24	KOP	K1P	-
	1093	118.24 - 118.80	KO		-
	1094	118.80 - 119.81	K1		C32
	1095	128.06 - 131.11	K2		C33
QHD87011	1127	61.40 - 62.22	D1		-
	1128	62.22 - 62.64	D2P	(D)	-
	1129	62.64 - 63.47	D2		-
	1130	97.80 - 98.39			-
	1131	98.39 - 98.72	E3	(E)	-
	1132	98.72 - 99.07			-
	1096	121.53 - 121.92	F1		
	1097	121.92 - 122.08	F2P		C34
	1098	122.08 - 125.93	F2		
	1099	146.22 - 147.27	G1		
	1100	147.27 - 147.59	G2P		
	1101	147.59 - 148.41	G2		C35
	1102	148.41 - 148.88	G3P		
	1103	148.88 - 150.42	G3		
	1104	170.19 - 175.22	J		C36
	1105	175.22 - 175.76	KOP	K1P	-
	1106	175.76 - 176.36	KO		-
	1107	176.36 - 177.43	K1		C37
QHD87012	1120	24.66 - 26.41	D1		
	1121	26.41 - 26.74	D2P	(D)	C54
	1122	26.74 - 27.64	D2		
	1123	46.80 - 47.18	E3P		-
	1124	47.18 - 48.11			-
	1125	48.11 - 48.49	E3	(E)	-
	1126	48.49 - 48.85			-
	1108	71.44 - 72.01	F1		
	1109	72.01 - 72.43	F2P		C38
	1110	72.43 - 76.51	F2		
	1111	118.83 - 119.16	G1-A		
	1112	119.16 - 119.27	G2P		C39
	1113	119.27 - 120.73	G2		
	1114	120.73 - 121.96	G3P		-
	1115	121.96 - 123.22	G3		C40

Table 2.4
TRANSFER/GRIZZLY
CORE SAMPLING SUMMARY

QHD87012	1116	141.94 - 148.00	J	C41
(continued)	1117	148.00 -(148.64)	KOP } K1P	-
	1118	(148.64)- 149.30	KO } K1P	-
	1119	149.30 - 150.90	K1	C42
QHD88002	3113	12.44 - 13.92	E	C-117
	3114	16.78 - 17.48	E	-
	3115	17.48 - 18.02	E Floor	-
	3116	35.76 - 36.56	F1	C-118
	3117	36.56 - 37.22	F2P	C-118
	3118	37.22 - 38.92	F2	C-118
	3119	38.92 - 39.23	F2P	C-118
	3120	39.23 - 40.96	F2 Lower	C-118
	3121	40.96 - 41.51	F2P	-
	3122	56.58 - 57.60	G1	C-119
	3123	57.60 - 57.78	G2P	C-119
	3124	57.78 - 58.78	G2	C-119
	3125	58.78 - 59.13	G3P	C-119
	3126	59.13 - 60.18	G3	C-119
	3127	60.18 - 60.39	G3 Floor	-
	3128	74.95 - 77.97	J	C-120
	3129	77.97 - 78.52	K1P	-
	3130	78.52 - 79.10	K1	C-121
QHD88003	3046	41.05 - 42.40	G1	-
	3051	42.40 - 42.73	G2P	-
	3052	42.73 - 43.84	G2 Upper	-
	3053	44.20 - 46.80	G2	-
	3054	46.80 - 47.54	G3P	-
	3055	47.54 - 52.62	G3	-
	3056	81.76 - 86.43	J	-
	3057	89.04 - 90.43	K2	-
QHD88004	3131	81.50 - 82.26	K2	-
QHD88005	3058	6.34 - 7.32	E3	-
	3059	32.57 - 33.26	F1	C-122
	3060	33.26 - 33.52	F2P	C-122
	3061	33.52 - 35.75	F2	C-122
	3062	35.75 - 36.49	F2 Lower	-
	3063	36.49 - 36.72	F2 Lower P	-
	3064	36.72 - 38.30	F2 Lower	-
	3065	38.30 - 38.38	F2 Floor O	-
	3066	81.48 - 82.47	G1	C-123**
	3067	82.47 - 83.48	G2P	-
	3068*	84.12 - 85.37 and	G2 and	-
		86.24 - 86.91	G3	-

*

** Core incorrectly placed in storage boxes, resulting in erroneous sampling. Proximate analysis only

Table 2.4
TRANSFER/GRIZZLY
CORE SAMPLING SUMMARY

QHD88005 (continued)	3069	115.41 - 115.63	J Roof	C-124
	3070	115.63 - 122.51	J	
	3071	122.51 - 123.85	K1P	-
	3072	123.85 - 125.34	K1	C-125**
	3073	137.36 - 138.44	K2	C-126
	3074	138.44 - 138.66	K2 Floor	-
QHD88006	3075	6.54 - 7.90	E	-
	3076	15.66 - 15.80	F1 Roof	-
	3077	15.80 - 16.61	F1	C-127
	3078	16.61 - 17.05	F2P	
	3079	17.05 - 18.37	F2	
	3080	18.37 - 19.31	F2P	
	3081	19.31 - 20.97	F2 Lower	
	3082	34.14 - 34.92	G1	C-128
	3083	34.92 - 35.26	G2P	-
	3084	35.26 - 36.44	G2	-
	3085	36.44 - 36.78	G3P	-
	3086	36.78 - 37.91	G3	C-129
	3087	37.91 - 38.25	G3 Floor	
	3088	39.17 - 40.85	G3 Repeat	-
	3089	65.29 - 69.95	J	C-130
	3090	69.95 - 70.62	K1P Upper	-
	3091	70.62 - 70.92	K1P Lower	-
	3092	70.92 - 71.09	K1 Roof	C-131
	3093	71.09 - 72.22	K1	
QHD88007	3132	63.36 - 64.00	F1/F2P	C-136
	3133	64.00 - 65.91	F2	
	3134	65.91 - 66.75	F2	
	3135	66.75 - 67.76	F2	
	3136	87.14 - 87.86	G1	C-137
	3137	87.86 - 88.18	G2P	
	3138	88.18 - 88.91	G2	
	3139	88.91 - 89.57	G3P	
	3140	89.57 - 90.69	G3	
	3141	111.39 - 113.27	J	C-138
	3142	113.27 - 114.54	J	
	3143	114.54 - 116.13	J	
	3144	117.19 - 117.64	K1 Upper	-
	3145	117.64 - 118.15	K1 Upper	-
	3146	118.15 - 119.61	K1	-
	3147	123.51 - 124.13	K2	C-139
QHD88008	3148	64.34 - 65.20	D	C-140
	3149	65.20 - 65.54	D Parting	
	3150	65.54 - 66.26	D	
	3151	95.72 - 97.15	E	C-141

Table 2.4
TRANSFER/GRIZZLY
CORE SAMPLING SUMMARY

QHD88008	3152	120.44 - 120.63	F Roof	
(continued)	3153	120.63 - 121.24	F1/F2P	
	3154	121.24 - 123.79	F2	C-142
	3155	123.79 - 124.09	F2 Rock	
	3156	124.09 - 124.42	F2	
	3157	142.74 - 143.54	G1	
	3158	143.54 - 143.80	G2P	
	3159	143.80 - 144.66	G2	C-143
	3160	144.66 - 145.00	G3P	
	3161	145.00 - 146.30	G3	
	3162	175.86 - 177.72		
	3163	177.72 - 178.85	J	C-144
	3164	178.85 - 180.40		
	3165	180.40 - 181.16	K1P	-
	3166	181.16 - 181.34	K1 Upper	-
	3167	181.34 - 181.58		C-145
	3168	181.58 - 182.58	K1	
	3169	187.32 - 187.96	K2	C-146
QHD88009	3170	82.79 - 83.48	F1/F2P	-
	3171	83.48 - 86.02	F2	
	3172	86.02 - 87.47		
	3173	108.04 - 108.96	G1	-
	3174	108.96 - 109.30	G2P	-
	3175	109.30 - 109.87	G2	-
	3176	109.87 - 110.15	G3P	-
	3177	110.15 - 111.56	G3	-
	3178	132.98 - 135.08		C-147
	3179	135.08 - 136.75	J	
	3180	136.75 - 138.25		
	3181	139.48 - 139.70	K1 Upper	C-148
	3182	139.70 - 140.92	K1	
	3183	145.90 - 146.63	K2	C-149
QHD88010	No Samples			
QHD88011	3196	80.96 - 86.16	J	C-150
	3197	86.16 - 87.07	K1P	-
	3198	87.07 - 88.70	K1	-
	3199	93.50 - 94.20	K2	C-151
QHD88012	3184	65.11 - 65.20		
	3185	65.20 - 66.06		
	3186	66.06 - 66.34	G	C-152
	3187	66.34 - 67.44		
	3188	67.44 - 68.00		
	3189	68.00 - 69.31		

Table 2.4
TRANSFER/GRIZZLY
CORE SAMPLING SUMMARY

QHD88012 (continued)	3190	94.89 - 96.93	J	C-153
	3191	96.93 - 97.91		
	3192	97.91 - 99.66		
	3193	99.66 - 100.96	K1P	
	3194	100.96 - 102.17	K1	C-154
	3195	107.25 - 107.83	K2	C-155

Table 2.5

PERRY CREEK
CORE SAMPLING SUMMARY

Drill Hole	Component Sample #	Core Interval.(m)	Seam	Composite #
QWD7115	D401, D402, D403, D404	98.76 - 100.40	E4	15-1
	D405, D406, D407	135.94 - 137.46	J1	15-2
	D408, D409, D410, D411, D412	152.10 - 154.59	J2U	15-3
	D413, D414, D415, D416, D417	160.93 - 163.53	J3	15-4
	D430, D431, D432, D433	404.77 - 406.91	Gething II	15-5
	D441, D442, D443, D444, D445	408.89 - 411.02	Gething III	15-6
	D451, D452, D453	34.44 - 38.31	E4	17-1
	D454	120.18 - 122.56	J3	17-2
	D455	374.32 - 376.42	Gething II	17-4
	D456	376.42 - 376.97		17-3
	D457	376.97 - 377.34		

Table 2.5

PERRY CREEK
CORE SAMPLING SUMMARY

Drill Hole	Component Sample #	Core Interval (m)	Seam	Composite #
QWD7115 (cont)	D458	382.93 - 384.94	Gething III	17-5
QWD7118	D446	69.86 - 70.32	E4	18-1
	D447	102.29 - 103.33	J1	-
	D448			
	D449	140.82 - 142.62	J2U	18-2
	D450	150.32 - 152.58	J3	18-3
QWD7119	D459	127.09 - 128.68	E4	19-1
	D460	159.18 - 160.28	G	-
	D461	167.46 - 169.67	J1	19-2
	D462	169.67 - 169.76	J2P	19-3
	D463	169.76 - 173.33	J2	
	D464			
	D465			
	D466	175.21 - 177.46	J3	19-4
QWD7120	D467	87.40 - 87.77		20-1
	D468	87.77 - 87.83	E3	
	D469	87.83 - 88.30		
	D470	88.30 - 89.18	E4P	
	D471	89.18 - 90.56	E4	
	D472	119.67 - 119.94	J1	-
	D473	119.94 - 120.86		
	D474	173.34 - 176.02	J3	20-2
QWD7121	D475	52.73 - 54.82	J3	21-1

Table 2.5

PERRY CREEK
CORE SAMPLING SUMMARY

Drill Hole	Component Sample #	Core Interval (m)	Seam	Composite #
QWD7402	1240, 1241	30.81 - 31.72	(Gates #7) E3	W-4
	1234, 1235	65.82 - 66.64	(Gates #3) G	W-3
	1221, 1222, 1223, 1224, 1225, 1226, 1227	84.16 - 93.27	(Gates #1&2) J1/J2,J3P,J3	W-6
QPD88001	3001	62.05 - 62.17	E2	-
	3002	62.17 - 62.65		-
	3003	64.87 - 65.32	E3	-
	3004	69.68 - 70.52	E4	-
	3005	98.80 - 99.48	G	-
	3006	105.74 - 106.92	J1	C-101
	3007	145.70 - 148.85	J2	C-102
	3008	148.85 - 149.18		
	3009	151.32 - 154.23	J3	C-103
QPD88002	3010	22.27 - 23.82	D	-
	3011	111.48 - 111.88		C-104
	3012	111.88 - 112.39	E3	
	3013	114.07 - 115.16		C-105
	3014	122.41 - 124.03	E4	C-106
	3015	152.84 - 153.64	G2	-
	3016	168.92 - 170.33	J1	C-107
	3017	170.33 - 170.95	J2P	-
	3018	170.95 - 174.68	J2	C-108
	3019	176.60 - 178.87	J3	C-109

Note: Names in parenthesis are previous seam identifications.

Table 2.6

MARMOT
CORE SAMPLING SUMMARY

Drill Hole	Component Sample #	Core Interval (m)	Seam	Composite #
QHD84001	QHD84001- 4	105.68 - 106.52		
	QHD84001- 5	106.52 - 106.92	E1	
	QHD84001- 6	106.92 - 111.02		
	QHD84001- 7	111.02 - 111.83	E2P	
	QHD84001- 8	111.83 - 114.71	E2	
	QHD84001- 9	114.71 - 114.84	E3P	
	QHD84001-10	114.84 - 117.16	E3	
	QHD84001-11	117.16 - 117.90		
	QHD84001-12	123.50 - 124.55	(F) E4	
	QHD84001-13	124.55 - 124.91		
	QHD84001-14	142.69 - 143.43	G1	
	QHD84001-15	143.43 - 144.06	G2P	
	QHD84001-16	144.06 - 145.34	G2	
	QHD84001- 3	169.35 - 177.14	(J1,J2P,J2) J	QH841-1-J
	QHD84001- 1	192.26 - 193.50	(K3)K2	QH841-2-K3
	QHD84001- 2	193.50 - 193.75	(K3lower)K2lower	-
QHD84002	QHD84002-18	20.87 - 22.84	C1	-
	QHD84002- 8	96.34 - 97.50	E1U	
	QHD84002- 9	97.50 - 97.73	E1Up	
	QHD84002-10	97.73 - 99.83	E1 (E1)	QH842-3-E1
	QHD84002-11	99.83 - 100.33	E1P	
	QHD84002-12	100.33 - 102.86	E1lower	
	QHD84002-13	102.86 - 103.74	E2P	
	QHD84002-14	103.74 - 107.72	E2	
	QHD84002-15	107.72 - 108.26	E3P	QH842-4-E23
	QHD84002-16	108.26 - 110.58	E3	
	QHD84002-17	110.58 - 112.72	E3lower	-
	QHD84002- 7	118.28 - 119.59	E4	-
	QHD84002- 4	138.90 - 139.87	G1	
	QHD84002- 5	139.87 - 140.40	G2P	QH842-5-G
	QHD84002- 6	140.40 - 141.50	G2	
	QHD84002- 3	164.87 - 171.53	(J2)J	Q842-6-J2
	QHD84002- 2	189.30 - 189.61	(K2)K1	-
	QHD84002- 1	192.12 - 193.34	(K3)K2	QH842-7-K3

Table 2.6

MARMOT
CORE SAMPLING SUMMARY

Drill Hole	Component Sample #	Core Interval (m)	Seam	Composite #
QHD84003	QHD84003-9	26.66 - 27.51	E1U	
	QHD84003-10	27.51 - 27.76	E1UP } E1	QH843-9-E-1
	QHD84003-11	27.76 - 31.79	E1	
	QHD84003-12	31.79 - 32.80	E2P	-
	QHD84003-13	32.80 - 33.60	E2U } E2	
	QHD84003-14	33.60 - 35.48	E2	QH843-10-E23
	QHD84003-15	35.48 - 35.92	E3P	
	QHD84003-16	35.92 - 38.22	E3	
	QHD84003-17	38.22 - 39.15	E3lower	-
	QHD84003- 8	51.18 - 52.08	(F)E4U	QH843-11-F
	QHD84003- 7	61.62 - 62.48	G1	
	QHD84003-18	62.48 - 63.04	G2P	QH843-12-G
	QHD84003- 6	63.04 - 64.12	G2	
	QHD84003- 5	81.86 - 87.60	(J2)J	QH843-13-J12
	QHD84003- 2	100.96 - 101.61	(K2)K1	-
	QHD84003- 1	102.85 - 104.08	(K3)K2	-
QHD88001	3022	29.02 - 29.84	B	C-110
	3023	89.21 - 89.64	D1	-
	3024	140.28 - 140.77	E1	
	3025	140.77 - 141.16	E2P	
	3026	141.16 - 142.41	E2	
	3027	142.41 - 142.91	E3P	C-111
	3028	142.91 - 143.48	E3	
	3029	143.48 - 143.74	E4P	
	3030	143.74 - 144.38	E4	
	3031	144.38 - 144.49	E4 floor	
	3032	147.76 - 148.16	F1	
	3033	148.16 - 148.50	F2P	
	3034	148.50 - 150.22	F2	
	3035	150.22 - 150.54	F2 rock	
	3036	150.54 - 153.62	F2	
	3037	171.44 - 172.17	G1	C-112
	3038	172.17 - 172.41	G1 lower	
	3039	172.41 - 173.23	G2P	

Table 2.6

MARMOT
CORE SAMPLING SUMMARY

Drill Hole	Component Sample #	Core Interval (m)	Seam	Composite #
QHD88001 (cont)	3040	173.23 - 173.43	G2 upper	
	3041	173.43 - 173.56	G2 rock	
	3042	173.56 - 174.04	G2	C-113
	3043	174.04 - 174.20	G2 lower	
	3044	174.20 - 174.56	G3P	
	3045	174.56 - 175.35	G3	
	3047	192.93 - 197.63	J	C-114
	3048	206.01 - 206.41	K1 upper	-
	3049	206.41 - 207.20	K1	-
	3050	208.42 - 209.36	K2	C-115
QMD88002	3020	63.39 - 69.58	J1	C-116
	3021	73.33 - 73.98	J3	-

Note: Names in parenthesis are previous seam identifications.

Table 2.7

WOLVERINE VALLEY SOUTH
CORE SAMPLING SUMMARY

Drill Hole	Component Sample #	Core Interval (m)	Seam	Composite #
QMD88003	3094	69.69 - 70.38	B	-
	3095	178.68 - 180.21	D3	C-132
	3096	180.21 - 180.36	D3 floor	-
	3097	181.57 - 181.91	D4 upper	-
	3098	181.91 - 182.23	D4 lower	-
	3099	185.38 - 185.96	E	-
	3100	185.96 - 186.47	E Parting	-
	3101	186.47 - 187.52	E	-
	3102	189.29 - 190.19	E	C-133
	3103	190.19 - 190.38	E floor	-
	3104	204.76 - 205.30	E	-
	3105	206.13 - 207.56	E	C-134
	3106	207.56 - 207.88	E floor	-
	3107	209.43 - 210.08	E	C-135
	*3108	210.08 - 210.38	E Parting	
	3109	210.38 - 211.82	E	
	3110	211.82 - 212.57	E Parting	-
	3111	212.57 - 218.56	E3	-
	3112	222.04 - 223.02	E lower	-

* Sulphur analysis on raw sample.

Table 2.8

TRANSFER AND GRIZZLY
GEOTECHNICAL DRILL HOLE SUMMARY

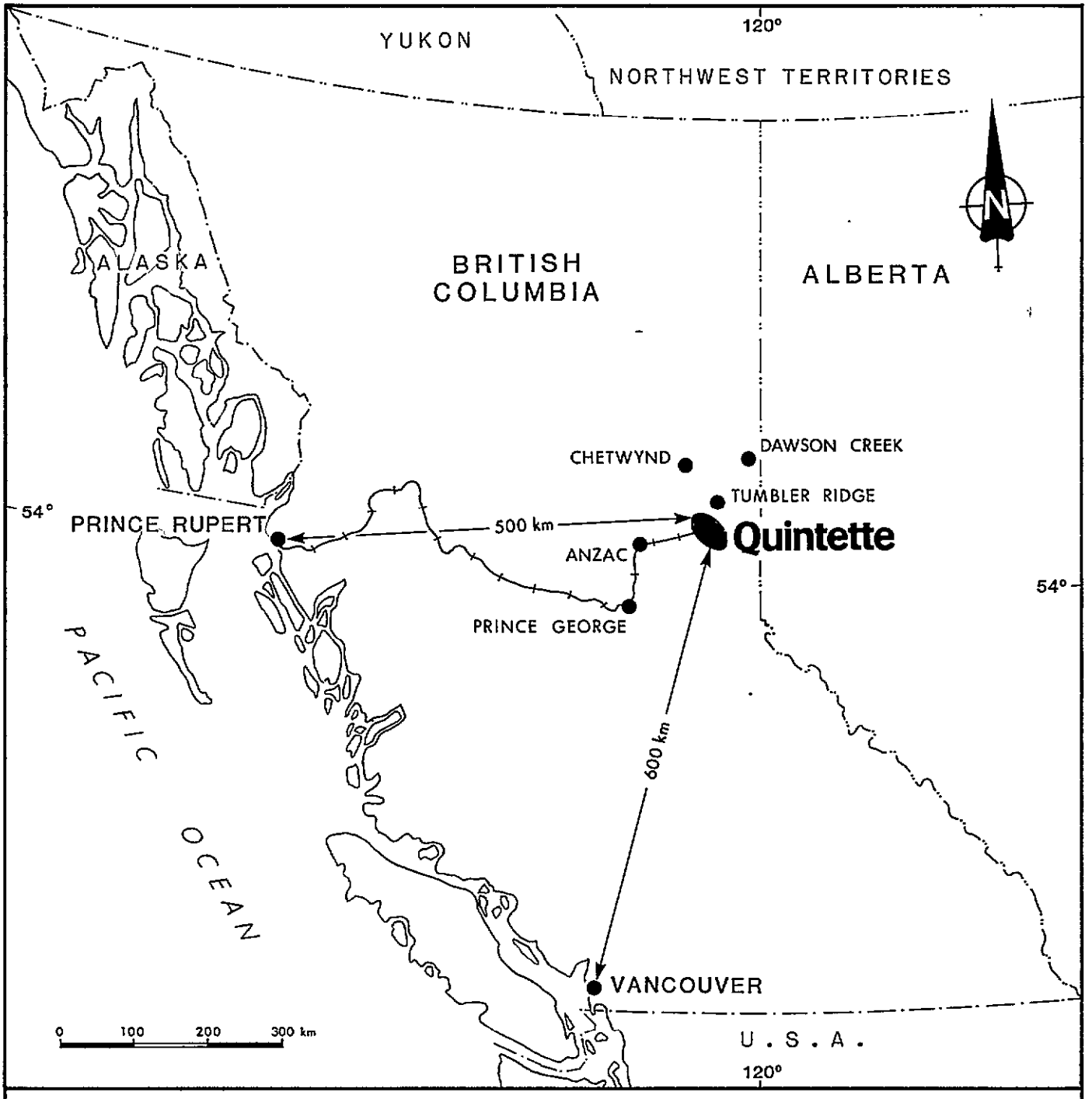
Drill Hole	Inclination (^{o})	Total Depth (m)	Collar Elevation (m asl)	Piezometer/Standpipe Label	Depth (m)	Stratigraphic Location
QHD86006*	60^{o}	99.2	1325.06	P1	96.9	Below K2
				P2	69.3	J Seam
				S3	38.7	Above G
QHR87033*	90^{o}	99.0	1437.70	P1	95.9	Below K2
				S2	71.6	J Seam
QHR87024*	90^{o}	131.0	1564.25	P1	97.2	Below G
				P2	69.45	Between F & G
				P3	37.8	Above F
QHR87023*	90^{o}	173.0	1601.62	P1	169.5	Below K2
				P2	130.5	Across G
				P3	104.8	F Seam
QHR87017*	90^{o}	165.2	1014.93	P1	161.35	Below K2
				P2	135.15	Top of J
				S3	127.2	Below G
QHR87013*	65^{o}	144.0	1041.15	P1	139.63	Below K2
				P2	118.02	Between G & J
				S3	100.7	Above G
QHR87007*	90^{o}	171.2	1117.65	P1	169.75	Below K2
				P2	133.6	Across G
				S3	110.00	Between F & G
QHR87004*	65^{o}	123.0	931.67	P1	100.4	Top of J
				P2	64.34	Between F & G
				S3	52.8	Below F
QHR88701	90^{o}	16.5	778.42		--	--
QHR88702	90^{o}	72.6	793.49		72.54	Overburden
					17.37	Overburden
QHR88703	90^{o}	45.7	788.71		--	Overburden
QHR88704	90^{o}	50.6	781.02		50.6	Overburden
					21.95	Overburden
QHR88705	90^{o}	31.1	775.42		--	Overburden
QHR88706	90^{o}	55.5	775.85		38.40	Overburden
QHR88031*	90^{o}	114	797.34		114.36	Below K2

Table 2.8

TRANSFER AND GRIZZLY
GEOTECHNICAL DRILL HOLE SUMMARY

Drill Hole	Inclination (^{o})	Total Depth (m)	Collar Elevation (m asl)	Piezometer/Standpipe Label Depth (m)	Piezometer/Standpipe Stratigraphic Location
QHR88033*	90^{o}	121	822.08	121	Below K2
QHD88007*	90^{o}	129.84	778.71	129.84	Below K2
QHD88011*	90^{o}	97.8	779.57	97.8	Below K2
QHD88012*	90^{o}	107.59	776.48	107.59	Below K2

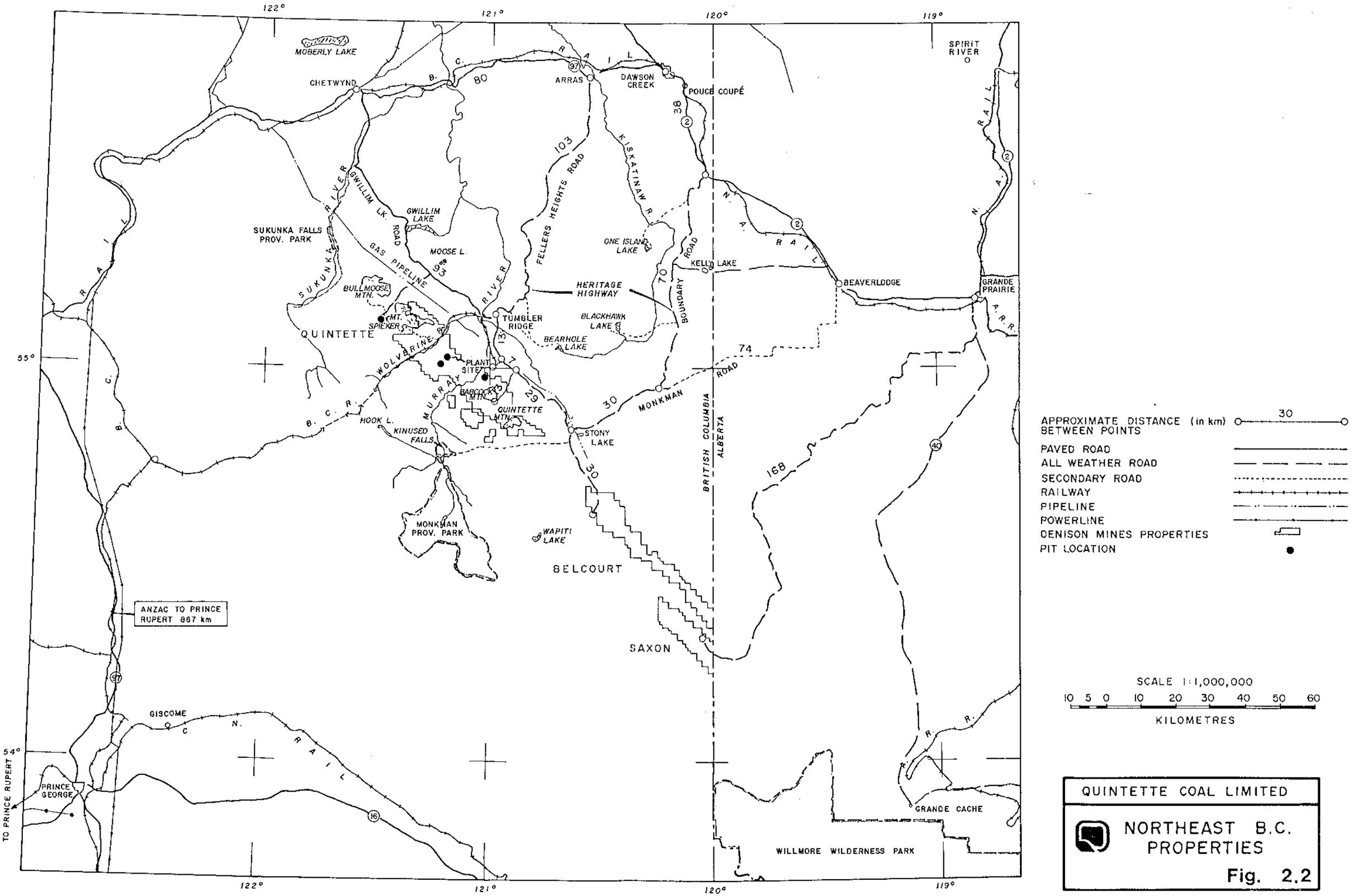
* Note: Summary information for these drill holes are included in Tables 2.2 and 2.3.



Quintette Coal Limited

GENERAL LOCATION

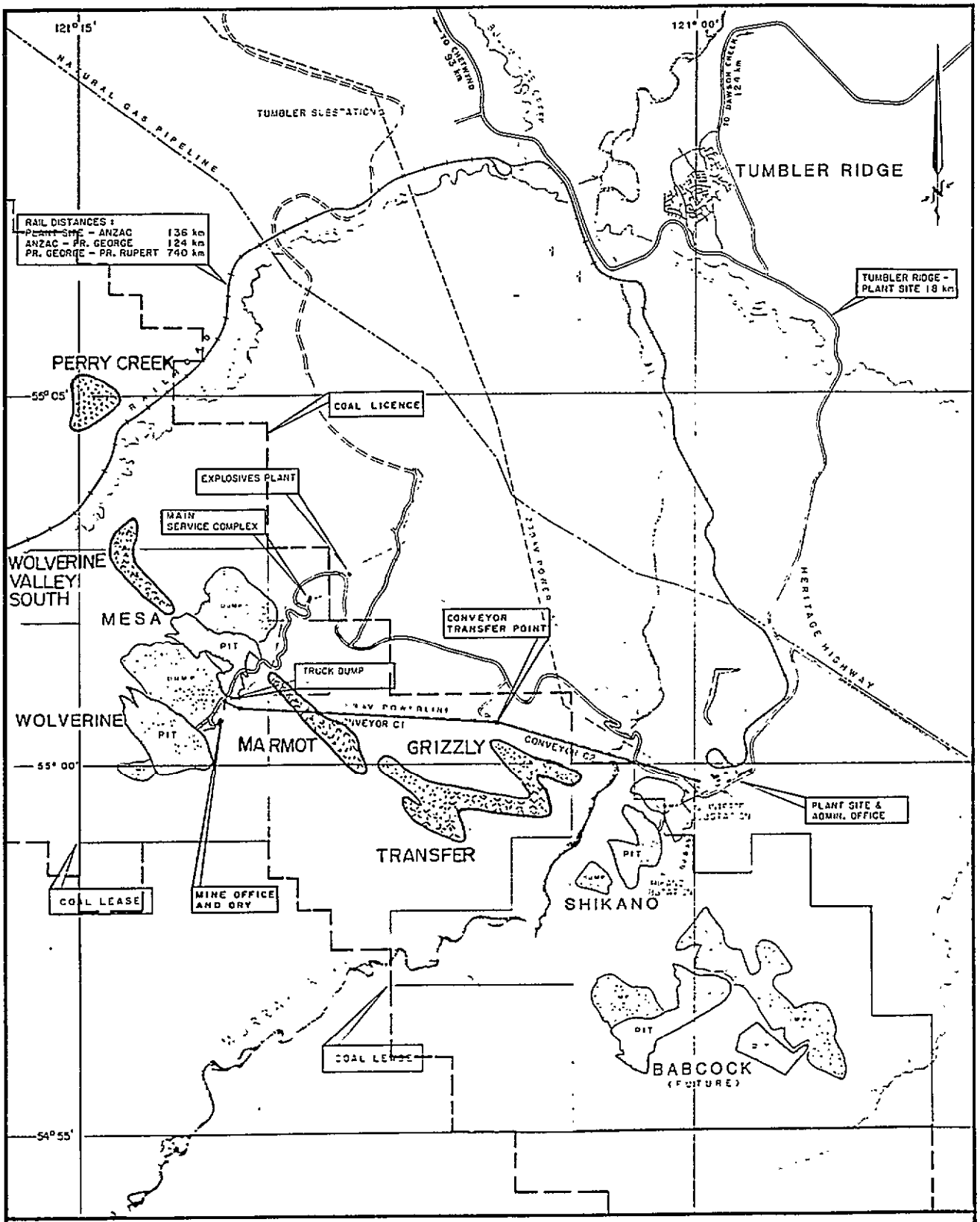
Fig. 2.1



QUINTETTE COAL LIMITED

NORTHEAST B.C. PROPERTIES

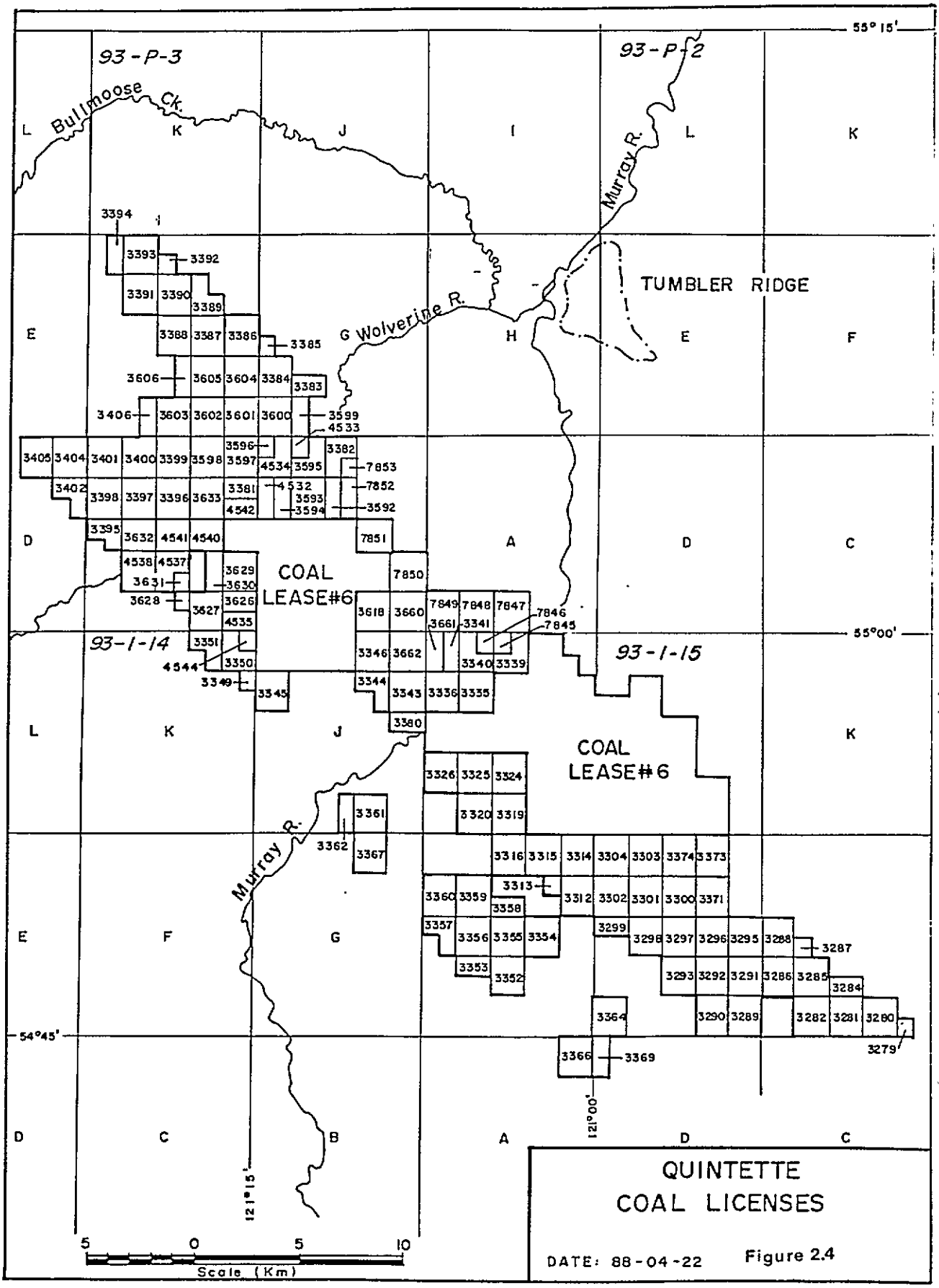
Fig. 2.2



QUINTETTE COAL LIMITED

SITE INFRASTRUCTURE

Fig. 2.3



QUINTETTE COAL LICENSES

DATE: 88-04-22

Figure 2.4

QUINTETTE COAL LIMITED

1985 – 88 DRILL CORE ANALYSIS FLOW DIAGRAM

(+40% Core Recovery)

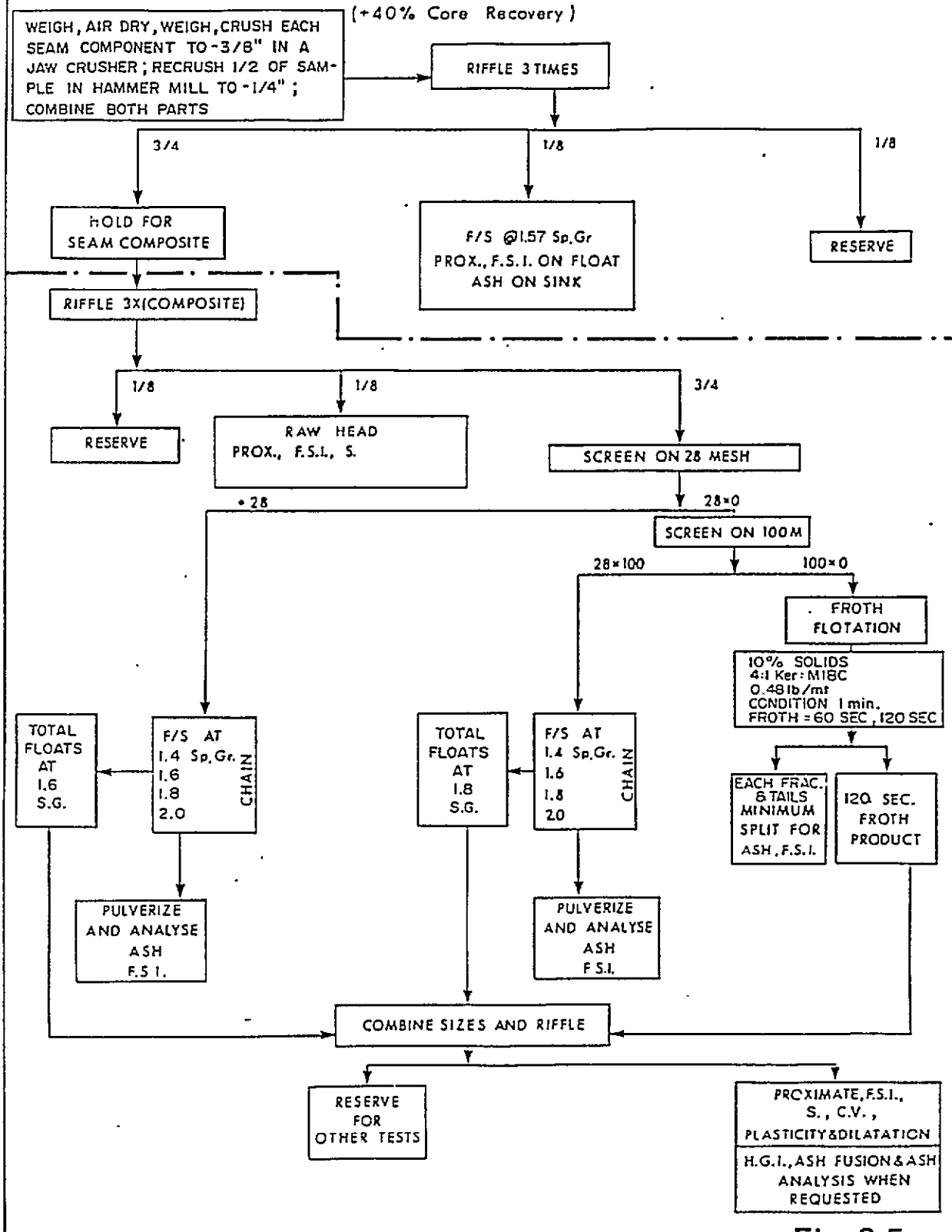


Fig. 2.5

3.0 GEOLOGY

3.1 REGIONAL STRATIGRAPHY

The stratigraphic succession exposed on the Quintette property ranges from Upper Jurassic to Lower Cretaceous in age. It consists of an interfingering of shales and sands both marine and continental in origin. Most of the coal-bearing strata is derived from deltaic and near-shore environments. The table of formations for Quintette is outlined in Figure 3.1 and indicates general formation thickness ranges and coal zones. The coal seams of economic thickness and quality are found in the Gates and Gething Formations. The regional distribution of these formations is illustrated on the Regional Geology Map in Appendix 1.2.6. Further descriptions of the formations encountered at Q.C.L. can be found in previous Q.C.L. Geological Reports. Table 3.1 summarizes formation thicknesses in the exploration areas.

3.2 LOCAL STRATIGRAPHY

3.2.1 Transfer

The stratigraphic sequence drilled and exposed in the Transfer Area is the Boulder Creek Formation, Hulcross Formation, Gates Formation, Moosebar Formation and Gething Formation. The Geology Maps (Appendix 1.2.1) illustrate the distribution of these stratigraphic units, where they are exposed, and the position of the economic coal seams.

Boulder Creek Formation

The Boulder Creek Formation, the uppermost unit exposed in the Transfer Area, is distributed in the northeast limb of the Transfer Anticline and in the core of the Transfer Syncline. This formation consists mainly of massive sandstone and conglomerate with minor shale and thin inferior coal seams. It is known to create ridges in this region. In the Transfer Area, a ridge formed by the lower part of the Boulder Creek Formation is conspicuous and easily traced both in the field and on the topography maps. The formation thickness is estimated at approximately 130 metres.

Hulcross Formation 3-2

The Hulcross Formation is conformably overlain by the Boulder Creek Formation. It is essentially characterized by homogeneous dark grey marine shales/siltstones interbedded with very fine sandstones. Intermittent thin beds of sandstone, calcareous shale and bentonite have been identified within this sequence as well. In the top and bottom 5 metres of the formation, siltstone is dominant and contains interbeds of shale. The base of the formation is marked by a thin bed of pebble conglomerate or coarse sandstone. The thickness of the Hulcross Formation is approximately 90 to 100 metres.

Owing to its very fine grained nature, the Hulcross Formation has little definitive outcrop being exposed only where there is high relief, although the access road from the Gething to the Transfer Area provides good continuous exposures. The formation's location is defined as the recessive strata which exists between the resistant, ridge-forming conglomerate in the lower Boulder Creek Formation and the resistant, ridge-forming conglomerates and sandstones in the upper sequence of the Gates Formation.

Gates Formation

The Gates Formation contains the economic coal seams of the Transfer Area, and is widely distributed in both limbs of the Transfer Anticline. The formation can be divided into three members: Upper, Middle and Lower. Although each of the members contains coal, seams of economic thickness occur only in the Middle Gates Member. The total thickness of the formation is 290 metres ($\pm$ 10 metres). The correlation charts in Appendix T.3 show the stratigraphic variation within the Gates Formation.

(i) Upper Gates Member:

The upper member of the Gates Formation is defined as between the base of the Hulcross Formation and the top of the D Seam. This sequence is approximately 80 metres thick.

The upper half of this member is non-marine and consists of fluvial and estuarine channel deposits (interbedded sandstones, siltstones, mudstones) and thin coals typical of a coastal plain environment. Occasional thin and continuous conglomerates have been identified.

In the Transfer Area, as well as other areas of the property, three coal horizons designated as A, B and C are found in this upper portion. All three are considered to be uneconomic due to their thinness (usually less than 0.5 metres) and inconsistent development. In the Transfer Area, A and C seams are poorly developed, present only as carbonaceous shale. However, the thickness of B seam may exceed 2.5 metres in the nose of the Transfer Anticline (see QHD87005).

The lower sequence of Upper Gates is basically a shallow marine to near shore distributary set of regression deposits. Very fine and fine grained sandstone are predominant with subordinate amounts of shale and siltstone. Halfway through this section is a tuffaceous horizon, used as a marker for stratigraphic correlation. The conglomerate present at the base of the Upper Gates in the Transfer Area is stratigraphically equivalent to the "Caprock" found in the Mesa, Wolverine and Shikano Pits. The thickness of the conglomerate in Transfer however, is relatively thin compared to other locations and ranges up to only 2.75 metres in the southwest.

(ii) Middle Gates Member

The Middle Gates Member is from the top of D seam to the floor of K seam. The member contains six coal seams (D, E, F, G, J and K in descending order) which readily correlate to the coal seams in Shikano Pit (See Figure 3.2). Only four of the coal seams are considered mineable in the Transfer Area, since D and E seams have poorly developed thicknesses. The Stratigraphic Correlation Chart in Appendix T.3.1 illustrates the Middle Gates Development.

Interseam strata are related to fluvial channels and overbank deposits, composed mainly of shale with minor sandstone and siltstone, or of alternating beds of shale and sandstone. In some places, discontinuous channel sandstones are found at different horizons creating variations in interseam thickness

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR87022	1580.60	6096087.3000	620508.1200	144.60	OVER	0.00	2.50	0.00	10.00	147.72	88.23
					E1	19.80	20.20	10.00	20.00	185.64	87.47
					E2P	20.20	20.80	20.00	30.00	207.51	87.76
					E2	20.80	21.30	30.00	40.00	194.25	88.88
					E3P	21.30	22.20	40.00	50.00	187.99	88.74
					E3	22.20	24.40	50.00	60.00	175.25	88.04
					E4P	24.40	26.80	60.00	70.00	183.34	87.52
					E4	26.80	28.20	70.00	80.00	181.03	86.87
					F1	50.06	50.78	80.00	90.00	173.60	86.43
					F2P	50.78	51.01	90.00	100.00	172.47	85.48
					F2	51.01	54.83	100.00	110.00	166.91	84.81
					F	50.06	54.83	110.00	120.00	168.30	85.13
					G1	84.10	85.20	120.00	130.00	167.65	85.00
					G2P	85.20	85.32	130.00	144.60	167.93	84.83
					G2	85.32	87.22				
					G3P	87.22	87.55				
					G3	87.55	89.07				
					G	84.10	89.07				
					J	105.87	110.73				
					K1P	110.73	111.93				
					K1	111.93	112.79				
					K2P	112.79	113.73				
					K2	113.73	115.00				

thick. The middle zone is a marine coarsening up sequence of approximately 90 metres thickness while the lower zone is approximately 70 metres thick and made up of thin channels and overbank deposits, but no significant coal.

Overburden

During the 1988 exploration season a refraction seismic survey was conducted at the southeast portion of Transfer (Shikano Syncline), with lines perpendicular and parallel to an existing seismic line. The survey results were used to determine the depth of overburden.

Results revealed the presence of three layers in the survey area characterized by different compression wave velocities. The upper layer had velocities indicating unconsolidated and unsaturated material. The intermediate layer had velocities typical of consolidated and/or saturated overburden. Samples taken show a well consolidated glacial till with a matrix of clay. The lower layer's velocities are typical of bedrock. In some areas an additional intermediate layer of unconsolidated and unsaturated material is present.

The depth to bedrock in the seismic survey area is quite variable, ranging from 90 to 100 metres to the southwest to less than 10 m in the southeast.

3.2.2 Grizzly

The stratigraphy underlying the Grizzly Area is identical to that of the Transfer Area: Boulder Creek, Hulcross, Gates, and Moosebar Formations in descending order. Four coal seams of mining interest, F, G, J and K1 seams, are found in the Middle Gates Member. The Grizzly Stratigraphic Correlation chart is in Appendix T.3.3. The development of the Middle Gates Member is the same as that of the Transfer Area, with the following primary differences:

i) a thick conglomerate and sandstone bed of zero to 30 metres is present between F and G seams, thickening the interval.

ii) the interseam thickness between J and K1 is relatively thin (0.38 metres - 1.16 metres) for most of the area.

iii) the interval between K1 and K2 is thicker (2.6 metres - 5.7 metres) than the Transfer area where it can be less than one metre thick.

The thickness ranges and general lithologies of the interseam strata are summarized on Table 3.4. The distribution of the various stratigraphic units is also illustrated on the Grizzly Geology Map in Appendix 1.2.2.

3.2.3 Perry Creek

The stratigraphic sequence exposed in the Perry Creek Area is similar to the regional Quintette Stratigraphy. In the immediate area, the sequence is from the Boulder Creek Formation at the top of Fortress Mountain to the Gething Formation exposed in Perry Creek and the Wolverine River Valley. The Geology Map in Appendix 1.2.3 illustrates the distribution of the formations.

Of particular interest is the Middle Gates Formation exposed in the Perry Creek Syncline. The Middle Gates sequence in this area contains a significant number of channel conglomerates between the coal seams. These conglomerates are best developed between what are correlated as seams E and F, and seams G and J. The Perry Creek Stratigraphic Correlation chart in Appendix T.3.5 illustrates the Middle Gates Formation stratigraphy.

There are a number of significant trends indicated from the core drilling in the Perry Creek Area. Heading, northeast there is a decrease in the parting between E3 and E4 seams and between G and J seams. Another trend is the major increase of the J2 parting in a northerly direction, where the parting forms a massive conglomerate up to 37.5 m in thickness. This conglomerate has an interpreted east - west trend.

The remaining stratigraphy is similar to other Quintette areas. For their descriptions, see the Transfer Area stratigraphy in this report and the descriptions in previous Quintette Geological reports.

3.2.4 Marmot

The stratigraphy of the Marmot Area is similar to that of the Transfer Area and Mesa Pit.

Exploration in Marmot has allowed confirmation of the Middle Gates Formation seam correlations between the two adjacent areas. The correlation charts in Appendices T.3.7 and T.3.8 illustrate the Middle Gates Formation variation where F seam (Transfer) is seen to correlate with the lower part of E2 seam and E3 seam, and G1 seam (Transfer) correlates with E4 seam in Mesa Pit. This results in a high variation of interseam thicknesses (see Table 3.8).

Another significant variation is in the J to K sequence. From the southeast to the northwest (Mesa Pit) the K parting thicknesses are greatly reduced.

Since D seam is not well developed in the Marmot Area, the correlation of its location is not confirmed. This may result in future redefinition of Upper and Middle Gates thicknesses and D/E interseam lithologies.

The Marmot Geology Map, in Appendix 1.2.4 illustrates the distribution of the Boulder Creek, Hulcross and Gates Formations and the trace of J seam.

3.2.5 Wolverine Valley South

The stratigraphic sequence drilled and exposed in the Wolverine Valley South Area includes the Boulder Creek, Hulcross, Gates and Moosebar Formations. The Wolverine Valley South Geology Map, presented in Appendix 1.2.5, illustrates the distribution of these stratigraphic units, where they are exposed and the position of J seam. The formations have similar stratigraphy to that in the Transfer Area and as described in the Mesa Extension Geological Report.

The Gates Formation stratigraphy in the area is best illustrated by the Mesa Extension Stratigraphic Correlation (Sheet 1 of 2) presented in Appendix T.3.9. This correlation is for the area immediately southeast of the Wolverine Valley South Area. The major stratigraphic variations that have been noted are the thinning of the D3/D4 interseam, the development of a

conglomerate between E4 and G seam, thickening the interseam and resulting in a much thinner E4 seam, and the disappearance of the "CapRock" conglomerate in places. The Middle Gates Member has thickened (approximately 80 m) compared to Mesa Extension (approximately 65 m).

Other formation thicknesses are interpreted to be similar to other areas in the property. See Table 3.1, Summary of Formation Thicknesses, for a comparison.

3.3 LOCAL COAL SEAM DEVELOPMENT AND CORRELATION

3.3.1 Transfer

As mentioned in the stratigraphic descriptions, six coal seams are present in the Middle Gates Member in the Transfer Area, four of these (F, G, J and K seams) are termed "mineable". The cumulative coal seam thickness (F,G,J, K1 and K2) in the Transfer Area exceeds 14 metres.

Both D and E seams are split into thin coal beds by partings and are considered as "non-mineable" in the area. In some drill holes, however, these seams have a mineable thickness of more than 1 metre ie; D seam in QHD86005 and E seam in QHD86003. A detailed reserve evaluation may delineate areas in which D and or E seams are recoverable. Table 3.3 summarizes average seam thickness for the Transfer Area. The seam correlation charts for Transfer are in Appendix T.3.2.

F Seam

F seam is well developed throughout the Transfer Area, averaging more than 4 metres. The columnar section depicted in Figure 3.3 shows a typical F seam development. The seam is generally divided into three portions designated as F1, F2 Parting and F2 from top to base. In the vicinity of QHD86003, F1 is not present and the parting (F2P) forms the top portion of F seam. The parting between F1 and F2 (F2P) is composed mainly of high ash coal and carbonaceous shale. F2 comprises the major portion of the seam, and consists mainly of low ash coal with two to four discontinuous thin partings.

The thickness of the partings is normally less than 10 centimetres, but the parting developed at the middle of F2 can be relatively thick. This in fact, results in the lower portion of F2 being unmineable in the vicinity of QHD87009, resulting in a thinning of the seam in this area. The top and bottom of the seam consist of shale or carbonaceous shale, with coal stringers.

G seam

G seam is characterized by two major continuous partings, and is divided into five sections: three coal beds identified as G1, G2 and G3; and two rock partings denoted as G2P and G3P. Figure 3.4 shows a typical G seam section. G1 has few or no partings. G2P is composed of shale, carbonaceous shale, and inferior coal. G2 occasionally contains one or two very thin partings in the lower half. G3P is composed of shale and siltstone, in some places (QHD86001, 86007) consisting entirely of siltstone with very thin bands of shale at the top and bottom. G3 is characterized by a group of partings near the base. The roof of G seam is shale, occasionally with a thin carbonaceous layer underlying it. The floor of G seam consists of carbonaceous shale.

J Seam

J seam is well developed throughout the Transfer Area, averaging more than 4.5 metres. Figure 3.5 shows a typical J seam section. Although no major parting appears in J seam, many thin inferior coal bands (fusinite?), usually less than 5 centimetres thick, are present. The top of the seam consists of shale or carbonaceous shale, and the bottom is carbonaceous shale with coal bands.

K Seam

K seam is composed of two separate sub-seams, identified as K1 for the upper, and K2 for the lower. A typical K seam section is shown in Figure 3.6.

(i) K1 Seam

K1 seam is characterized by alternating thin beds of coal and carbonaceous shale in the upper section. This high ash zone is often excluded from the K1 Mining section and included in the K1 Parting between J and K1 seams. The lower section of K1 seam is very clean and is usually considered the K1 Mining section.

In the Transfer Area, the interval between J and K1 is often less than 1 metre, however toward the southeast on both limbs of the Transfer Anticline, the parting thickness can exceed 1.5 metres.

(ii) K2 Seam

K2 seam has one or two discontinuous thin partings. The interseam strata between K1 and K2 consist of shale, siltstone and carbonaceous shale with coal stringers, with sandstone appearing in the eastern part of the area. The thickness of the interseam is normally greater than 1 metre, increasing to more than 4 metres toward the southeast (Grizzly). In some areas the interseam is less than 1 metre in which case J to K2 Seam may form a single mining section. A small coal parting below K2 seam is sometimes part of the mining section (see the seam correlation chart), depending on its thickness and the parting thickness separating it from K2 seam.

In one drill hole (QHR87030) K2 is missing. This is currently considered to be a stratigraphic anomaly and therefore K2 Seam's thickness is considered to be 0 at this drill hole location.

3.3.2 Grizzly

The characteristics of each mineable coal seam in the Grizzly Area are very similar to that of the Transfer Area. Only points of significant difference are described here. The cumulative mineable coal seam thickness (excluding K2) in the Grizzly Area exceeds 12 metres. Table 3.5 summarizes the average seam thickness for the Grizzly Area. The Grizzly Seam Correlation Chart is presented in Appendix T.3.4.

F Seam

F seam maintains a good thickness as compared to the Transfer Area, averaging slightly less. Seam development is similar to Transfer.

G Seam

In the northeast limb of the Grizzly Structure, the thickness of the lower parting (G3P) thickens to just under 1 metre. It is noted to exceed 1 metre in the axis of the Shikano Anticline.

G seam is overlain directly by a thick conglomerate and sandstone bed in most of the Grizzly Area. This conglomerate rapidly thins in the west limb of the anticline.

J Seam

J seam has a similar development with an almost identical average thickness to Transfer.

K1 Seam

K1 seam may be mined together with J seam in a single mining section owing to the thin interval between the two seams and the better coal development in the upper part of K1 seam.

K2 Seam

K2 seam is thinner (less than 1 m), and is separated by a thick interseam (up to 5.7 metres) from K1, and may not be considered recoverable in the Grizzly Area.

3.3.3 Perry Creek

The most significant seam in the Perry Creek Area is J seam. Drilling has intersected a consistent J1/2 seam development of more than 5.5 metres. The J1 and J2 seams become separated by a rapidly northward thickening parting as can be seen in the Stratigraphic Correlation (Appendix T.3.5) and is indicated on the Seam Correlation Chart (Appendix T.3.6). This conglomerate parting separates J seam into J1 and J2. The parting ranges from 0.1 m in QWD7119 to 37.5 m in QPD88001 over a distance of about 900 m. The underlying J3 seam is shown to maintain a consistent thickness averaging 2.37 m throughout the area. The J1/2 seams are separated from J3 by a parting approximately 2 m thick consisting predominantly of shales with fine sandstone. J3 seam is underlain by a medium sandstone typical of the sands of the Torrens/Quintette Members of the Gates Formation.

A thin (<1m) and persistent G seam has also been correlated throughout the area (see the seam correlation). This seam has only minor rock partings.

Other seams that may be recoverable in certain sections of the Perry Creek Area are E2, E3 and E4. Thickness of these seams will not exceed 2 metres except where E3 and E4 seam coalesce as in QWD7118.

The coal seam intersections are recorded on the drill hole summary sheets in Appendix T.2. For 1987 holes, since the strata dips at less than 10^{0} where holes were drilled, these intersections can be considered as a true seam thickness. Average thickness and thickness ranges are as found in Table 3.7.

3.3.4 Marmot

The Marmot Area is a transition between the correlations of Transfer Area and Mesa Pit. As a result of the 1988 exploration drilling, the understanding of the regional correlation has improved. This will also affect the understanding of regional quality variations in the Quintette Property. As stated previously, F seam in Transfer correlates with E2/3 in the Mesa Pit, and G1 seam in Transfer correlates with E4 in Mesa Pit. This correlation is best illustrated by the Seam Correlation in Appendix T.3.8.

E/F Seam

E seam is well correlated with E0, E1, E2 and E3. in Mesa Pit. Seam development is very good with an average thickness of 8.50 m. E0 has become a recoverable section of the seam. The parting in E2 seam in Mesa Pit, develops into the major parting that separates E seam and F seam in Transfer Area. Therefore, In Marmot Area, this parting is taken as the division between E1 and E2 seams. When E seam separates into E and F seams toward the Transfer Area (see QHD88001), the upper part contains more rock partings which results in it not being considered recoverable in the Transfer Area. F seam, on the other hand, remains very consistent in its development as F seam and as the E2/E3 seam sequence, the lower part (E3) containing more rockpartings than the upper half, making definition of the seam bottom difficult.

E4/G Seam

There has always been a question as regards the correlation of E4 seam in Mesa Pit. The drilling that has been completed in Marmot Area in 1988 and previously in 1984 (Hermann North) indicates a good correlation between E4 and G1 seam of Transfer Area. The lower section of both E4 and G1 have a characteristic high ash zone, along with the fact the G1 "disappears" where E4 is identified. The G2/3 sequence (G1/2 in Mesa Pit and Marmot Area) maintain good seam development averaging 2.07 m with a significant rock parting.

J Seam

J seam remains a very consistent seam with minor rock partings. It averages 4.65 m in Marmot Area. It can be overlain and underlain by coally partings.

K Seams

The K seams (K1, K2 and K3) are consistently thin throughout the area, usually less than 1 m and occasionally with coal sections less than 0.3 m. In the southern half of the area they are separated by partings from J seam well over 6 m which may preclude their mining recovery. To the northwest, near Mesa Pit, they are within 2 m of J seam and correlate to J2 and J3 in Mesa Pit.

Rock partings in the K seam persist throughout the Marmot Area, particularly in the upper part of K1. K3 is a thin (<0.2m) rider approximately 1 m below K2.

3.3.5 Wolverine Valley South

Seam development is expected to be very similar to Mesa Extension in Mesa Pit. Only one core hole has been completed in the Wolverine Valley South Area (QMD88003) which intersected D, E and E4 seams. Due to significant faulting identified in this hole it is difficult to discuss the seam development other than it is correlatable to Mesa Extension. For purposes of this discussion, rotary hole QMR88508 was used as a guide for seam development.

B Seam

There is an indication of good coal development with only minor rock partings. This seam could exceed 1.5 m.

D Seams

D3 and D4 seams may be recoverable together in the Wolverine Valley South Area. D3 is a thick (approximately 2 m) clean seam and is underlain by three coal partings (D4 seam) separated by less than 0.5 m of rock. Since these seams are readily correlated to Mesa Extension, they are expected to persist in the area.

E Seam

E seam correlates well with Mesa Extension, continuing with its numerous rock partings. E1 is indicated to be very high ash with rock partings approaching 0.5 m in an estimated 3.5 m thickness. E2 and E3 appear to have fewer partings and cleaner coal in general. The lower part of E3 is separated by a thick (approximately 2.5 m) rock parting, similar to that noted in the northwest end of Mesa Extension (QMD86001 and QMD88004).

E4 Seam

E4 seam is very thin (<0.5 m) with a rock parting.

G Seam

G seam is a thin (< 1 m) seam with no significant rock parings.

J Seam

J seam is very well developed in the Wolverine Valley South Area with expected true thicknesses reaching 8 m. The hanging wall of the seam has the characteristic high ash zone that is not considered part of the seam. The lower J2 and J3 seams have coalesced with J1 such that only the J2 Parting (between J1 and J2) is developed to a significant extent. This parting is expected to be a coally shale with rock partings up to 30 cm. J3 has no significant rock partings which indicates better development in the Wolverine Valley South Area than in the northwest end of Mesa Extension (QMD86001 and QMD88004).

3.4 REGIONAL STRUCTURE

The regional geologic structure is best illustrated on the Regional Geology Map in Appendix 1.2.6. The Regional Map highlights the formation outcrops which are primarily controlled by a series of northwesterly trending folds. The fold system characterizes the structure of the exploration areas discussed in this report.

The Transfer/Grizzly Area is comprised of a series of major folds designated from west to east as the Transfer Syncline, Transfer Anticline, Shikano Syncline and Shikano Anticline. Smaller folds have developed on the Transfer Syncline east limb and on the Shikano Syncline west limb (M-9 structure).

The Perry Creek Area is dominated by the Perry Creek Syncline which forms the major resource area.

The Marmot Area is a steeply dipping limb, a continuation of the forelimb of Marmot Anticline in Mesa Pit.

The Wolverine Valley South structures are continuation of the Mesa Extension structures.

The only major fault recognized is the Mesa Fault which truncates the Transfer West limb structure.

Figure 3.7 highlights the regional structure and the relative position of each exploration area.

Geological structures and topography define, to a large extent, the coal reserve areas with the Q.C.L. property. This is most obvious in some of the pit areas where the coal reserves are entirely contained within synclines which form topographic highs (Wolverine and Mesa Pits and the Deputy Subpit). Underground reserves are located in large, structurally continuous blocks on limbs of anticlines and synclines. Faulting is not frequent within these folds, however it does become more common as the folds become tighter.

3.5 LOCAL STRUCTURE

The local structures of the Transfer, Grizzly, Perry Creek, Marmot and Wolverine Valley South Areas are illustrated by the Geology Maps in Appendix 1.2, the Structure Contours in Appendix 1.3 and the Cross Sections in Appendix 1.1.

3.5.1 Transfer

The dominant structure in the Transfer Area is the northwest-southeast trending Transfer Anticline that plunges (10^{o}-20^{o}) to the northwest. The coal-bearing Gates Formation is distributed on both limbs of the anticline.

Dips on the northeast limb of the anticline are 35^{o} to 40^{o} in the north western half of the limb, becoming steeper toward the southeast and at depth, with dips exceeding 60^{o} at the southeastern end. On the southwest limb, dips

are relatively steep and range from 50^{o} to 90^{o}.

The southwest limb of the Transfer Anticline is a relatively complicated structure. This limb between the Transfer Syncline axis and the Transfer Anticline axis is interpreted to have a smaller anticline and syncline pair near the Transfer Syncline axis (see Section 28000, Appendix 1.1.1). This structure brings the coal seams near surface in a high relief area. Faulting is interpreted on the limbs of these tight folds, including those in the Transfer Syncline. The southwest limb of the Transfer Syncline is vertical to overturned with interpreted normal faults (see Section 29000). This limb is also the forelimb of an anticline that is truncated by the Mesa Fault.

The major thrust that separates the Gething Area and the Transfer Area, the Mesa Fault, is interpreted to be southwest dipping, truncating the steeply dipping coal section in the Transfer Syncline west limb. Coal intersections are noted in the fault zone, but many cannot be confidently identified due to the structural disturbance.

Minor southwest dipping faults are interpreted along the backlimb of the Transfer Anticline (see Section 29000, Appendix 1.1.1). These faults have the effect of increasing the Gates Formation thickness on the backlimb and the coal section along the axis of the anticline.

A stylized section of the Transfer and Grizzly structure is shown in Figure 3.8.

The M-9 Anticline and Syncline and the Shikano Syncline lie between Transfer and Grizzly. These folds have the effect of bringing the coal section close to surface. Excessive overburden bury the fold structures in the Murray River Valley and has been defined by drilling and seismic surveying. This has defined the subcrop of the coal seams (the extent of erosion) and the flat to minimal northwest plunge of the Shikano Syncline.

The southwest limb of the M-9 Syncline is interpreted to be vertical to overturned (see Section 26500) with structural thinning of the coal seams (see QHD87010). This is a local phenomenon that is not considered to greatly

affect resources since surrounding drill data confirms the normal thicknesses of coal in the limb of M-9 Syncline.

3.5.2 Grizzly

The geologic structure of the Grizzly Area is controlled by the Shikano Anticline plunging 10^{0}-30^{0} to the northwest. This anticline has a broad or box-like top of about 100 metres in width. The strata dips 55^{0} to 65^{0} on the northeast limb of the anticline and about 45^{0} on the southwest limb. No major faults have been found in the area. As in the case of the Transfer Area, further minor faults will likely occur along or near fold axes resulting in seam and interseam thickening. Minor faulting has been identified (QHR87018 and QHR87019) on the southwest limb.

The stylized section (Figure 3.8) further illustrates the Grizzly structure.

3.5.3 Perry Creek

The Perry Creek resource area is the Perry Creek Syncline which is a doubly plunging open fold. The major plunge direction is to the southeast. The southwest limb of the fold has dips of less than 10^{0} near the axis while the northeast has dips exceeding 45^{0}. Mapping of the northeast limb has also identified dips of less than 10^{0} which indicate the beginning of another fold in this limb to the northwest.

No major faulting has been interpreted.

To the southwest the Fortress Mountain Anticline and Syncline are the major structures. The limbs of the syncline are steep ($>60^{0}$). Future development or the Perry Creek Area will require better definition of these structures.

The Perry Creek Syncline and Fortress Mountain Anticline structure is illustrated by the J3 seam structure contour in Appendix 1.3.3 and by the sections in Appendix 1.1.3.

3.5.4 Marmot

The Marmot Area lies between Mesa Pit and the Transfer Area. It is a continuation of the steeply northeast dipping to overturned forelimb of the Marmot Anticline in Mesa Pit.

Reverse faulting has been recognized in the pit and this faulting has been projected into the northwest end of the Marmot Area.

In a southeasterly direction, from Mesa Pit, the limb gradually flattens to dips of 25^{0} near the overland conveyor. It is in this vicinity that a northeast dipping thrust fault is interpreted to repeat the coal section. This fault ultimately loses itself in the termination of the Transfer Anticline/Syncline (see Sections 31500, Appendix 1.1.4). At this location, the limb has a flexure that brings a significant coal section closer to surface.

Pre-1988 drilling has defined small faults in the limb that are also interpreted as northeast dipping. These are illustrated on Section 31500.

The limb continues to the southeast and develops into a fold pair before it is truncated by the Mesa Fault where it is considered part of the Transfer Area Structure (see the J seam contour, Sheet 1, in Appendix 1.3.1).

The cross sections in Appendix 1.1.4 and the structure contour of J seam in Appendix 1.3.4 illustrate the structure of the area.

3.5.5 Wolverine Valley South

The Wolverine Valley South Area is the northwestern exposure of the Mesa Extension structures in Mesa Pit. The sections and J seam contour in Appendices 1.1.5 and 1.3.5 respectively illustrate the structure.

The dominant fold is the steeply northwest plunging Middle Anticline and the syncline to the southwest. These folds are currently interpreted to keep some

of the coal just below surface as they plunge toward the Wolverine River Valley. The forelimb of the Middle Anticline is very steep, dipping generally between 60^{o} and 90^{o}.. The limb has been mapped as overturned (see Section 38600) and this folding is interpreted to be the culmination of the Middle Anticline in an axial fault (see J seam contour).

The syncline, southwest of Middle Anticline, also plunges steeply northwest. It is less well defined, and J seam outcrop on its steeply dipping southwest limb is highly interpretive.

The syncline northeast of the Middle Anticline (Mesa Syncline) becomes a broad open fold at the Wolverine River Valley (see Section 39000). Beyond this structure, detailed interpretation has not been conducted.

A more detailed description of the Mesa Extension structure can be found in the Mesa Extension Geological Report.

Table 3.1

EXPLORATION AREAS
SUMMARY OF FORMATION THICKNESSES

	Transfer and Grizzly (m)	Perry Creek (m)	Marmot (m)	Wolverine Valley South (m)
Formations				
Boulder Creek	+110	-	-	-
Hulcross	90-100	-	100	100
Gates	280-300	300	300-320	290
Upper Gates Member	70- 90	100-120	80-125	100
Middle Gates Member	90-120	60- 80	68-120	75- 80
Lower Gates Member	100-120	120	110	-
Moosebar	80- 90	80	85	-
Gething	200-250	200	-	-

Table 3.2

TRANSFER
INTERSEAM THICKNESS AND LITHOLOGY

Interval	Thickness Range (m)	General Lithology
D seam to E seam	11 - 26	Mainly shale with minor very fine sandstone and channel sandstone.
E seam to F seam	15 - 23	Southwest limb of Transfer Anticline - predominantly sandstone with interbedded shale. North limb of Transfer Anticline - shale with minor interbedded sandstone and sandy shale.
F seam to G seam	14 - 33	Interbedded shale and sandstone, with occasional channel sandstone.
G seam to J Seam	12 - 21	Shale with interbedded sandstone. 3 - 4 metres of sandstone overlies J seam.
J seam to K1 seam	0.7 - 1.6	Shale, carbonaceous shale.
K1 seam to K2 seam	0.6 - 4.5	Shale, carbonaceous shale and very fine to fine sandstone.

Table 3.3

TRANSFER
AVERAGE SEAM THICKNESS

Seam	Thickness Range (m)	Average Thickness (m)
F	2.52 - 4.95	4.12
G	2.88 - 4.43	3.52
J	3.82 - 4.91	4.37
K1	0.46 - 1.41	1.01
K2	0.34 - 1.46	1.05
	Total Cumulative Average	**14.07**

Note: Thickness data from Diamond Drill holes and adits only.

Table 3.4

GRIZZLY
INTERSEAM THICKNESS AND LITHOLOGY

Interval	Thickness Range (m)	General Lithology
D seam to E seam	12 - 30	Carbonaceous shale with interbedded very fine to medium sandstone.
E seam to F seam	17 - 22	Very fine to fine sandstone with underlying shale and carbonaceous shale.
F seam to G seam	16 - 39	Upper 6 to 9 metres is shale with minor fine sandstone underlain by conglomerate and fine sandstone.
G seam to J seam	14 - 18	Interbedded shale, siltstone and fine sandstone.
J seam to K1 seam	0.6 - 1.2	Carbonaceous shale and siltstone.
K1 seam to K2 seam	2.6 - 5.7	Shale interbedded with very fine to fine sandstone.

Table 3.5

GRIZZLY
AVERAGE SEAM THICKNESS

Seam	Thickness Range (m)	Average Thickness (m)
F	3.36 - 4.54	3.82
G	2.97 - 3.79	3.35
J	4.01 - 4.91	4.52
K1	0.90 - 1.52	1.20
K2	0.51 - 0.83	0.66
	Total Cumulative Average	**13.55**

Note: Thickness data from Diamond Drill holes and adits only.

Table 3.6

PERRY CREEK
INTERSEAM THICKNESS AND LITHOLOGY

Interval	Thickness Range (m)	General Lithology
D3 seam to E2 seam	11.0 - 44.0	Carbonaceous shale, interbedded with sandy shale and very fine sandstone.
E2 seam to E3 seam	1.5 - 19	Carbonaceous shale grading to sandy shale and very fine sand to the north.
E3 seam to E4 seam	0.9 - 7.0	Fine to very fine sandstone with interbedded sandy and carbonaceous shales.
E4 seam to G seam	23 - 30	Predominantly conglomerate grading to coarse sandstone with underlying fine sandstone and interbedded shales.
G seam to J1 seam	4.2 - 15	Predominantly shale with interbedded sandy shale and sandstone.
J1 seam to J2 seam	0.1 - 38*	Carbonaceous shale rapidly changing to conglomerate and coarse sandstone north of QPD88002.
J2 seam to J3 seam	0.3 - 4.5	Carbonaceous shale, sandy shale and minor fine sandstone.

* J1 - J2 interseam is thin in the south area of Perry Creek Syncline. The interseam rapidly develops into a thickening wedge of conglomerate to the north towards Perry Creek.

Table 3.7

PERRY CREEK
AVERAGE SEAM THICKNESS*

Seam	Thickness Range (m)	Average Thickness (m)
** D3	1.68	1.68
E4	0.77 - 1.61	1.32
G	0.60 - 1.10	0.83
***J1	1.09	1.09
J1/2	5.53 - 5.85	5.69
***J2	2.98	2.98
J3	2.24 - 2.62	2.37
	Total Cumulative Average	11.89

* Unless otherwise noted, data is derived using QPD88001, QPD88002 and QWD7119,

** Data from QWD7119 only,

*** From QPD88001 - not included in Cummulative Average.

Table 3.8

MARMOT
INTERSEAM THICKNESS AND LITHOLOGY

Interval	Thickness Range (m)	General Lithology
E seam to G seam	7 - 14	Interbedded shale, siltstone and sandstone.
G seam to J seam	11 - 17	Interbedded shale, siltstone and sandstone with occasional coal stringers.
J seam to K seam	1.6 - 13	Predominantly a thin carbonaceous shale unit in the northwest thickening to a wedge of sandstone with interbedded siltstone and shale in the southeast.

Table 3.9

MARMOT
AVERAGE SEAM THICKNESS*

Seam	Thickness Range (m)	Average Thickness (m)
* E1	3.53 - 5.04	4.16
** E2/E3	3.46 - 4.81	4.34
E4	0.69 - 0.95	0.82
G	2.01 - 2.18	2.07
J	3.81 - 5.98	4.65
K1	0.21 - 1.17	0.65
K2	0.41 - 1.07	0.82
	Total Cumulative Average	**17.51**

* Includes correlatable E1, E2 and E3 seams from QHD88001,

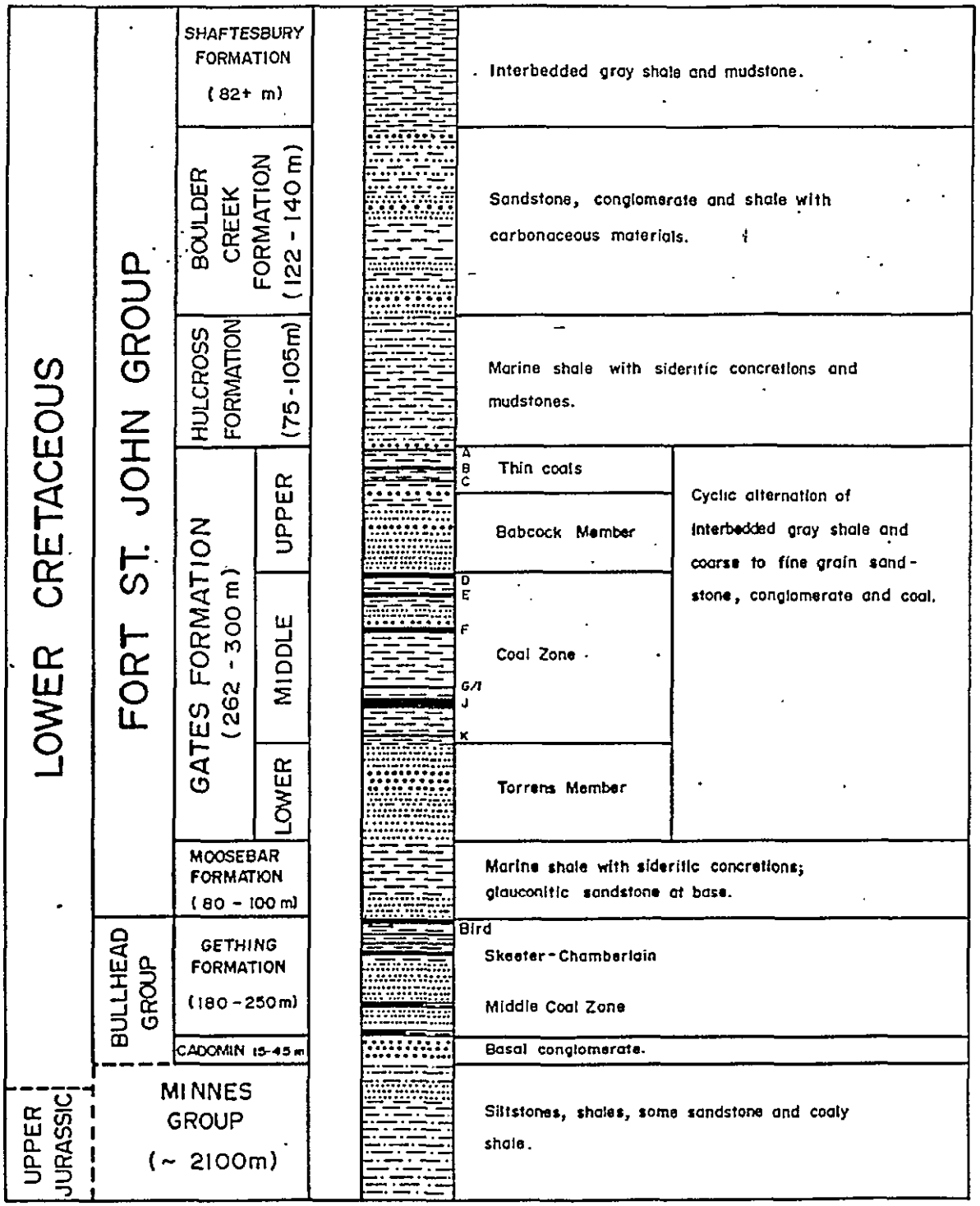
** Includes correlatable F seam from QHD88001.

Table 3.10

WOLVERINE VALLEY SOUTH
INTERSEAM THICKNESS AND LITHOLOGY

Interval	Thickness (m)	General Lithology
Above D3 seam		Interbedded sandstone, sandy shale and shale (marine).
D3 seam to D4 seam	1.1	Shale, coally shale and coal.
D4 seam to E seam	4.4	Very fine sandstone, shale and coally shales and coal (E0).
E seam to E3 lower	2.5	Fine sandstone, shale near coal.
E3 seam to E4 seam	1.5	Very fine sandstone and sandy shale.
E4 seam to G seam	22.3	Upper half conglomerate with thin coals and sandstone/sandy shale in lower half.
G seam to J seam	21.8	Thin sandstone and sandy shale. Shale and coally shale above J seam.
Below J seam		Medium to fine sandstone.

Note: All thicknesses and descriptions from QMR88508 (Geophysical logs).

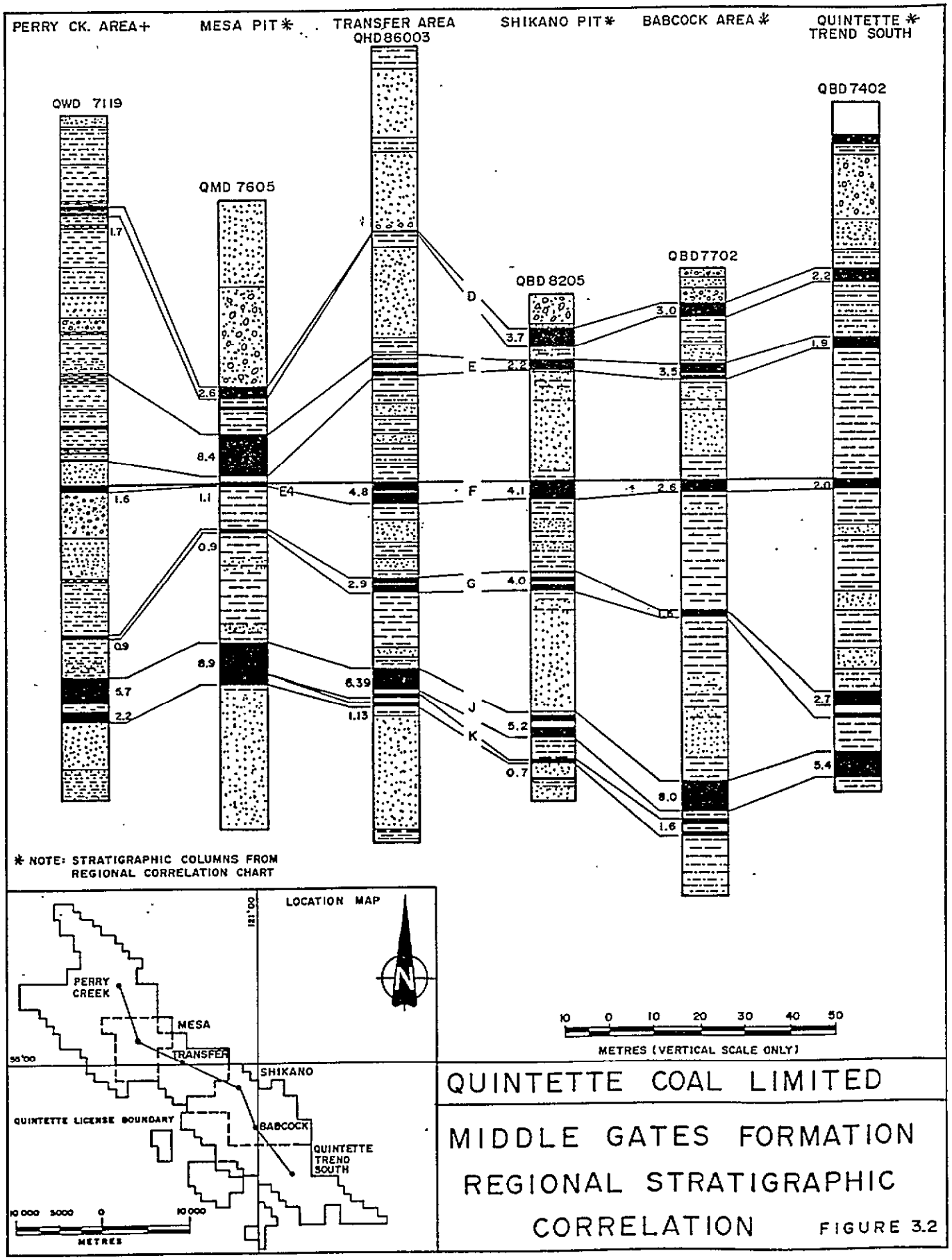


QUINTETTE COAL LIMITED

GENERAL STRATIGRAPHIC SECTION

(Updated April, 1988)

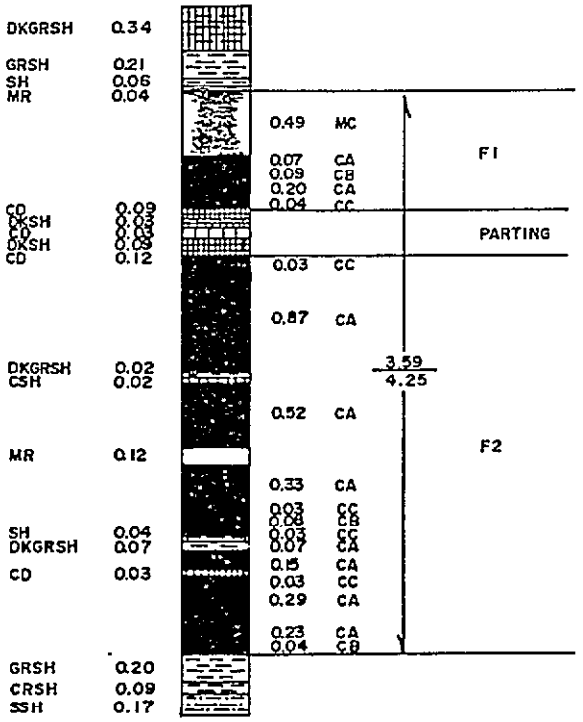
FIGURE 3.1



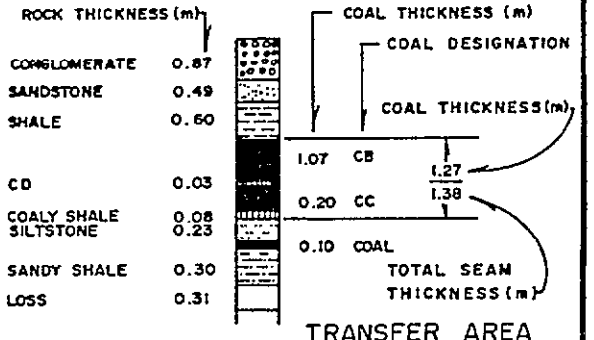
QUINTETTE COAL LIMITED

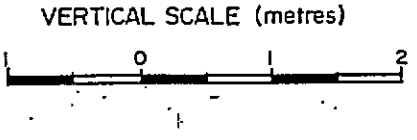
MIDDLE GATES FORMATION REGIONAL STRATIGRAPHIC CORRELATION

FIGURE 3.2



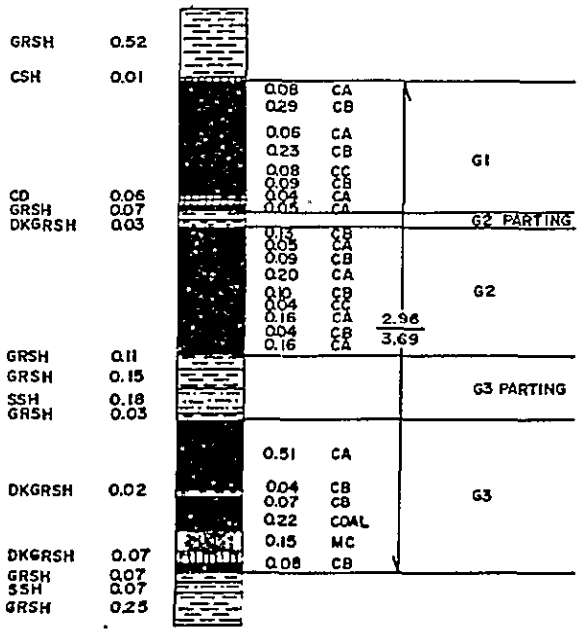
LEGEND



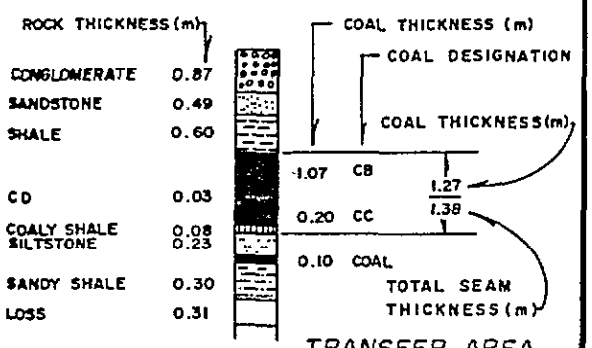


Date: FEB 16, 1987	QUINTETTE COAL LIMITED	TYPICAL SECTION OF F SEAM TAKEN FROM QHD 86008
Design: HTB	Project Manager DENISON MINES LIMITED	
Drawn: KJV	COAL DIVISION	FIGURE 3.3 Rev. 0
Scale:		

BCIL 7747 OCL



LEGEND

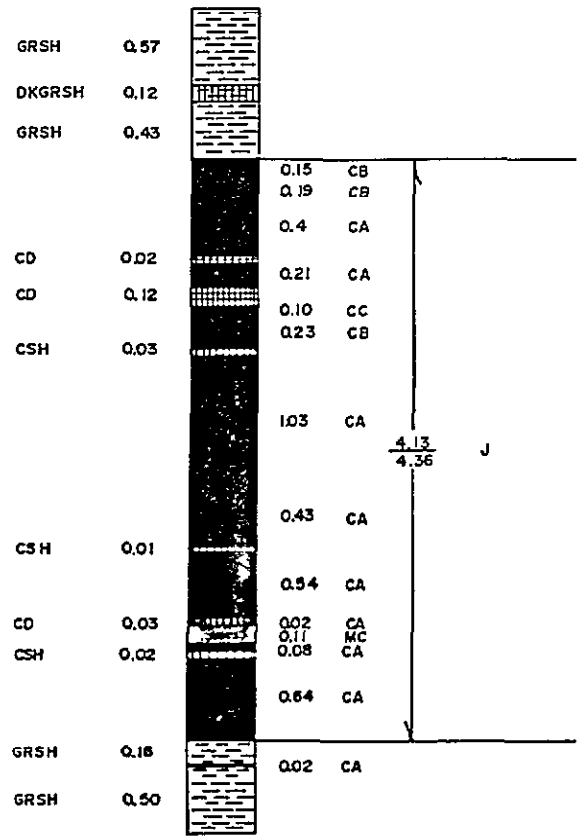


VERTICAL SCALE (metres)

1 0 1 2

Date: FEB 16, 1987	QUINTETTE COAL LIMITED	TYPICAL SECTION OF G SEAM TAKEN FROM QHD 86008	
Design: HTB			
Drawn: KJV	Project Manager DENISON MINES LIMITED		
Scale:	COAL DIVISION	FIGURE 3.4	Rev. 0

BCIL 7742 OCL

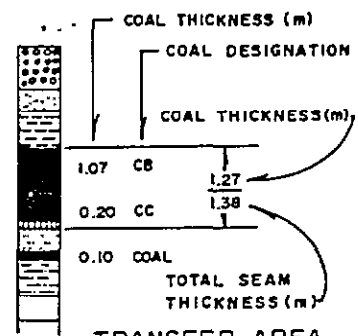


VERTICAL SCALE (metres)

1 0 1 2

LEGEND

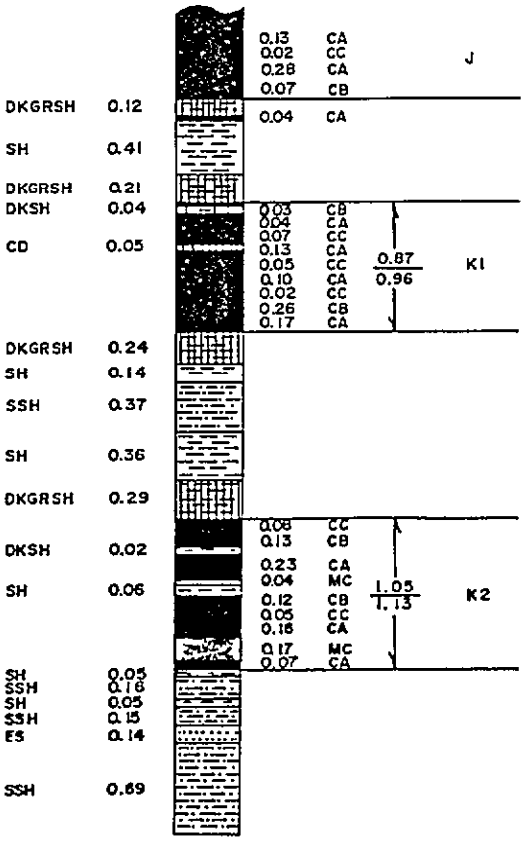
ROCK THICKNESS (m)	
CONGLOMERATE	0.87
SANDSTONE	0.49
SHALE	0.60
CD	0.03
COALY SHALE / SILTSTONE	0.08 / 0.23
SANDY SHALE	0.30
LOSS	0.31



TRANSFER AREA

Date: FEB 16, 1987	QUINTETTE COAL LIMITED	TYPICAL SECTION OF J SEAM	
Design: HTB	Project Manager	TAKEN FROM QHD 85002	
Drawn: KJV	DENISON MINES LIMITED	FIGURE 3.5	Rev. 0
Scale:	COAL DIVISION		

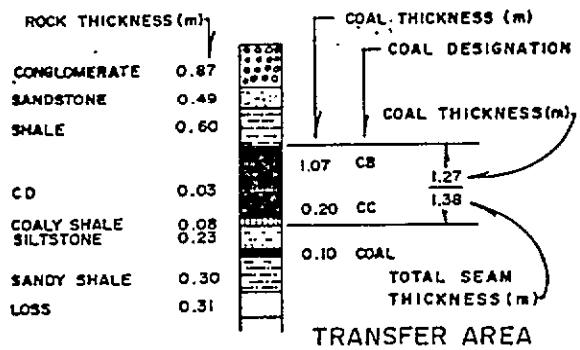
BCIL 7742 OCL



VERTICAL SCALE (metres)

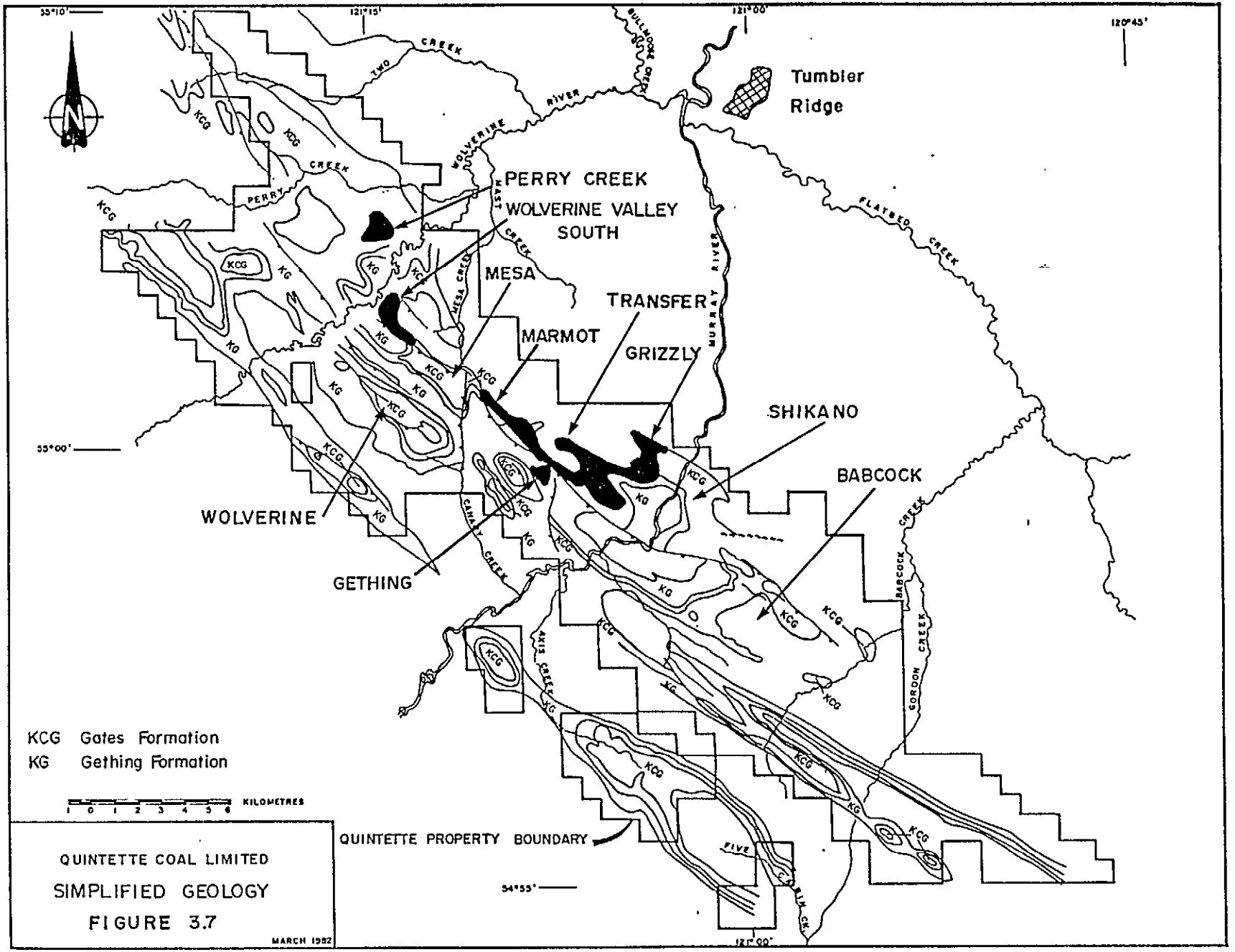
1 0 1 2

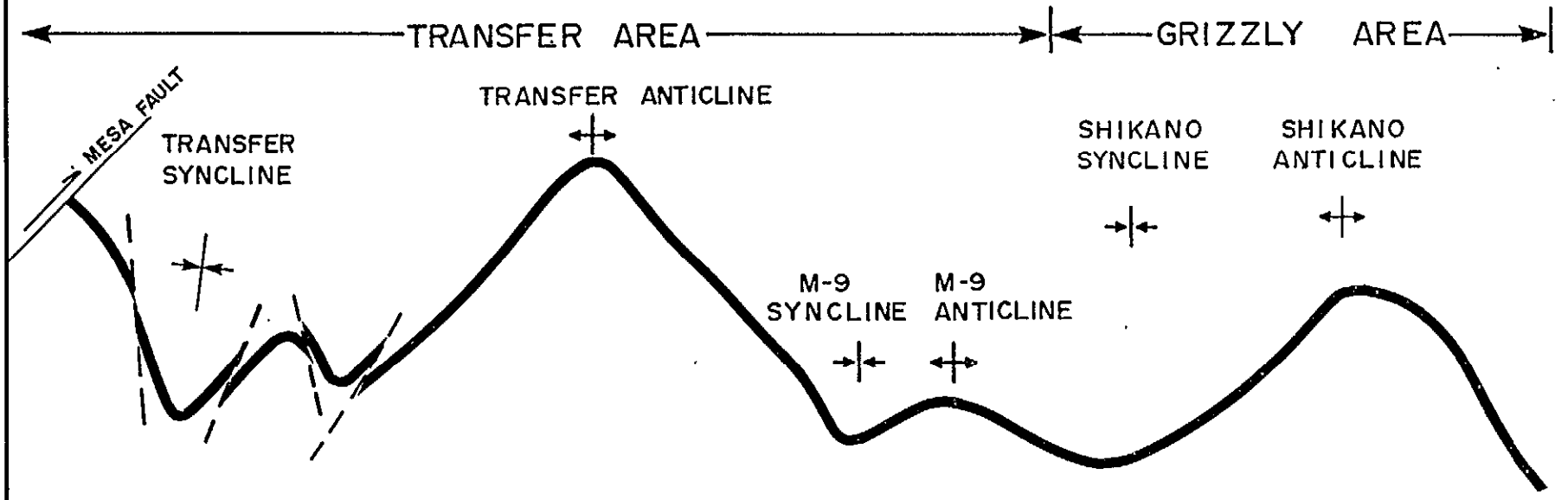
LEGEND



Date: FEB 16, 1987	QUINTETTE COAL LIMITED	TYPICAL SECTION OF K SEAM TAKEN FROM QHD 86003	
Design: HTB	Project Manager DENISON MINES LIMITED		
Drawn: KJV	COAL DIVISION	FIGURE 3.6	Rev. 0
Scale:			

BCIL 7742 OCL


Tumbler Ridge
PERRY CREEK
WOLVERINE VALLEY SOUTH
MESA
TRANSFER
MARMOT
GRIZZLY
SHIKANO
BABCOCK
WOLVERINE
GETHING
KCG Gates Formation
KG Gething Formation
KILOMETRES
QUINTETTE PROPERTY BOUNDARY
QUINTETTE COAL LIMITED
SIMPLIFIED GEOLOGY
FIGURE 3.7
MARCH 1982

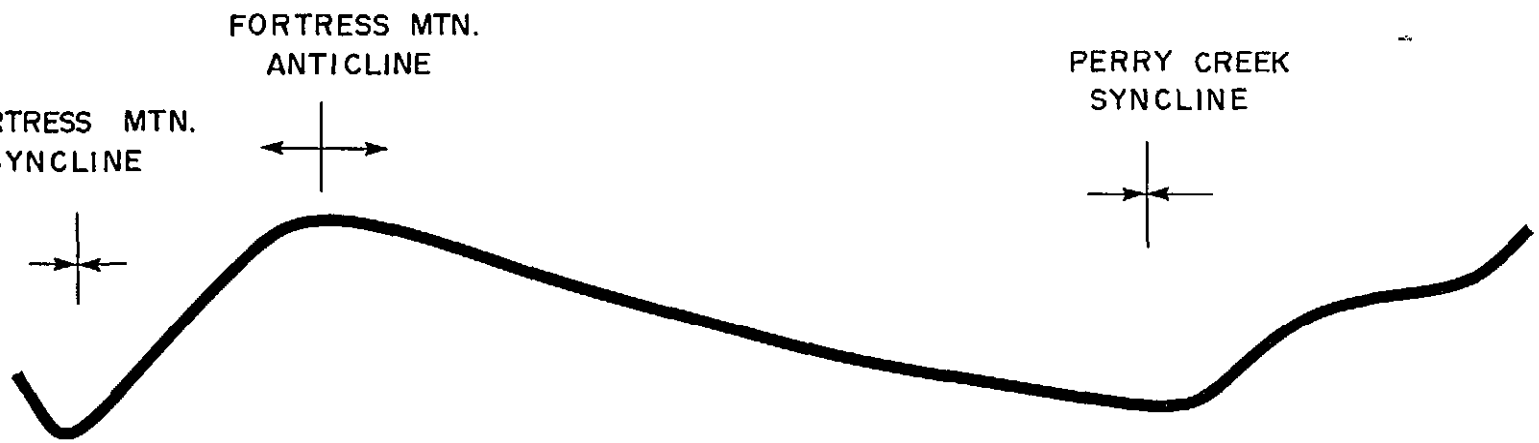


Not to Scale

NOTE: Stylized Line Represents J Seam

TRANSFER AND GRIZZLY STYLIZED SECTION

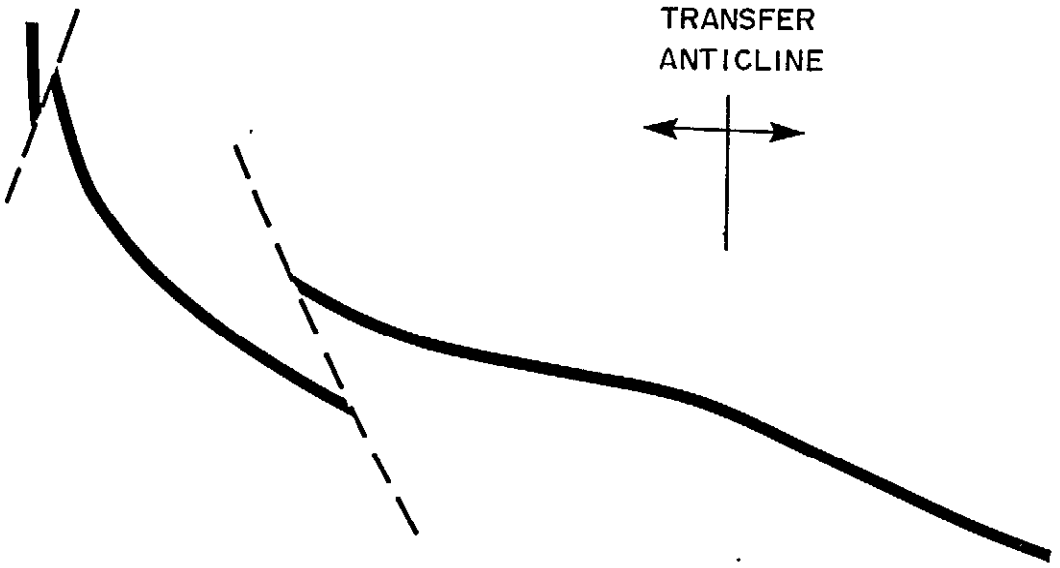
FIGURE 3.8



Not to Scale

NOTE: Stylized Line Represents J Seam

PERRY CREEK
STYLIZED SECTION
FIGURE 3.9



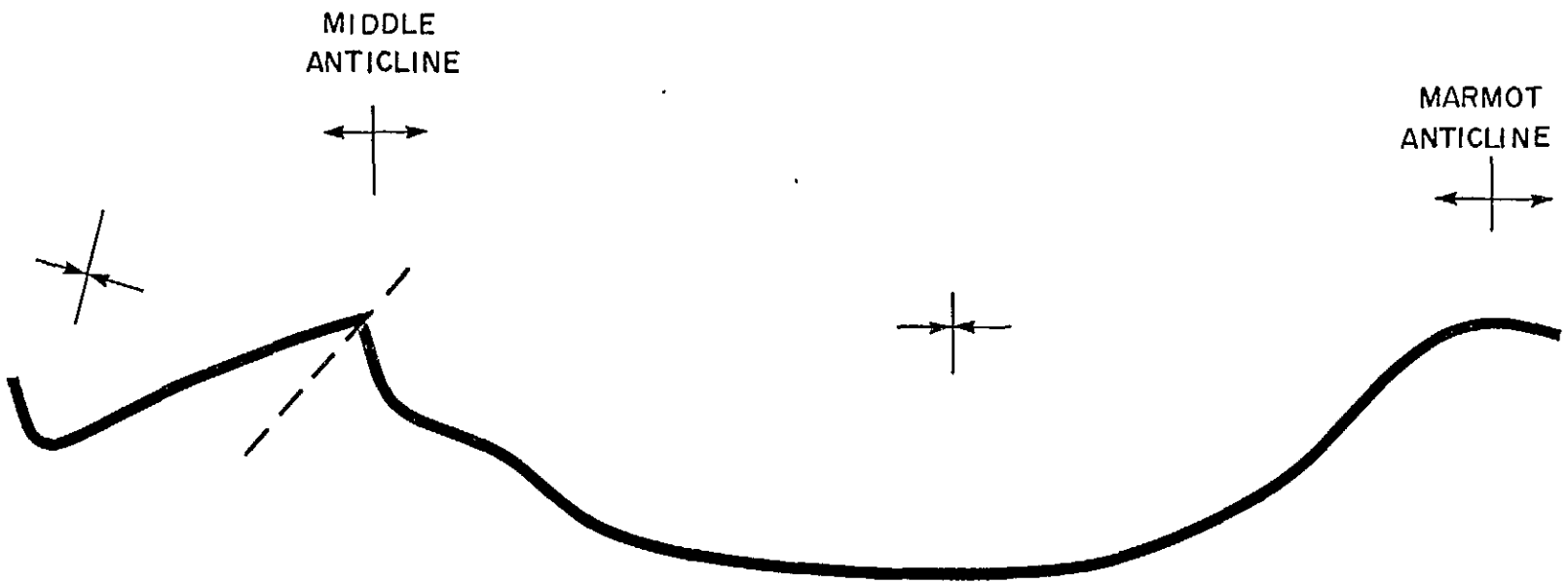
Not to Scale

NOTE: Stylized Line Represents J Seam

MARMOT

STYLIZED SECTION

FIGURE 3.10



Not to Scale

NOTE: Stylized Line Represents J Seam

WOLVERINE VALLEY SOUTH
STYLIZED SECTION

FIGURE 3.11

4.0 QUALITY

Analysis has been completed on all 1988 core samples. The analysis flow diagram is presented as Figure 2.5.

Tables 2.4 through 2.7 summarize the core sample intervals of all core drilling in each area including previous years. Drill core analysis data is presented in Appendix 2.

(Note: At the time of submission April 14, 1989, all analytical data had not been received. Therefore, Appendix 2 was not submitted with the report. It will be submitted at a future date when data has been received and compiled.)

See report 753.

Appendix T.1

1988 Geological Report

Legal Description of Coal Licences

APPENDIX I.1
LEGAL DESCRIPTION OF THE QUINTETTE COAL LICENCES

Licence No	Date Issued	Series	Block	Units	Paying Hectares
3633	May 27/75	93-P-3	C	63, 64, 73, 74	297
3632	May 27/75	93-P-3	C	47, 48, 57, 58	297
3631	May 27/75	93-P-3	C	25	75
3630	May 27/75	93-P-3	C	23, 33	149
3629	May 27/75	93-P-3	C	21, 22, 31, 32	298
3628	May 27/75	93-P-3	C	15	75
3627	May 27/75	93-P-3	C	3, 4, 13, 14	298
3626	May 27/75	93-P-3	C	11, 12	149
3618	May 27/75	93-P-3	B	3, 4, 13, 14	298
3606	Apr 29/75	93-P-3	F	25, 35	149
3605	Apr 29/75	93-P-3	F	23, 24, 33, 34	297
3604	Apr 29/75	93-P-3	F	21, 22, 31, 32	297
3603	Apr 29/75	93-P-3	F	5, 6, 15,16	297
3602	Apr 29/75	93-P-3	F	3, 4, 13, 14	297
3601	Apr 29/75	93-P-3	F	1, 2, 11, 12	297
3600	Apr 29/75	93-P-3	G	9, 10, 19, 20	297
3599	Apr 29/75	93-P-3	G	8, 18	149
3598	Apr 29/75	93-P-3	C	83, 84, 93, 94	297
3597	Apr 29/75	93-P-3	C	81, 82, 91, 92	297
3596	Apr 29/75	93-P-3	B	100	75
3595	Apr 29/75	93-P-3	B	87, 88, 97	223
3594	Apr 29/75	93-P-3	B	69, 79	149
3593	Apr 29/75	93-P-3	B	67, 68, 77, 78	297
3592	Apr 29/75	93-P-3	B	66, 76	149
3406	Feb 1/75	93-P-3	F	7, 17	149
3405	Feb 1/75	93-P-3	D	83, 84, 93, 94	297
3404	Feb 1/75	93-P-3	D	81, 82, 91, 92	297
3402	Feb 1/75	93-P-3	D	61, 71, 72	223
3401	Feb 1/75	93-P-3	C	89, 90, 99, 100	297
3400	Feb 1/75	93-P-3	C	87, 88, 97, 98	297
3399	Feb 1/75	93-P-3	C	85, 86, 95, 96	297
3398	Feb 1/75	93-P-3	C	69, 70, 79, 80	297
3397	Feb 1/75	93-P-3	C	67, 68, 77, 78	297
3396	Feb 1/75	93-P-3	C	65, 66, 75, 76	297
3395	Feb 1/75	93-P-3	C	49, 59, 60	223
3394	Nov 25/74	93-P-3	F	89, 99	149
3393	Nov 25/74	93-P-3	F	87, 88, 97, 98	296
3392	Nov 25/74	93-P-3	F	86	75

Licence No	Date Issued	Series	Block	Units	Paying Hectares
3391	Nov 25/74	93-P-3	F	67, 68, 77, 78	297
3390	Nov 25/74	93-P-3	F	65, 66, 75, 76	297
3389	Nov 25/74	93-P-3	F	63, 64, 74	223
3388	Nov 25/74	93-P-3	F	45, 46, 55, 56	297
3387	Nov 25/74	93-P-3	F	43, 44, 53, 54	297
3386	Nov 25/74	93-P-3	F	41, 42, 51, 52	297
3385	Nov 25/74	93-P-3	G	50	75
3384	Nov 25/74	93-P-3	G	29, 30 39, 40	297
3383	Nov 25/74	93-P-3	G	27, 28	149
3382	Nov 25/74	93-P-3	B	86, 95, 96	223
3381	Nov 25/74	93-P-3	C	71, 72	149
3380	Nov 25/74	93-I-14	J	51, 52	149
3374	Nov 25/74	93-I-15	E	85, 86, 95, 96	298
3373	Nov 25/74	93-I-15	E	83, 84, 93, 94	298
3371	Nov 25/74	93-I-15	E	63, 64, 73, 74	298
3369	Nov 25/74	93-I-15	D	90, 100	150
3367	Nov 25/74	93-I-14	G	83, 84, 93, 94	298
3366	Nov 25/74	93-I-14	A	81, 82, 91, 92	299
3364	Oct 16/74	93-I-15	E	9, 10, 19, 20	299
3362	Oct 16/74	93-I-14	J	5, 15	149
3361	Oct 16/74	93-I-14	J	3, 4, 13, 14	298
3360	Oct 16/74	93-I-14	H	69, 70, 79, 80	298
3359	Oct 16/74	93-I-14	H	67, 68, 77, 78	298
3358	Oct 16/74	93-I-14	H	65, 66	149
3357	Oct 16/74	93-I-14	H	49, 59, 60	224
3356	Oct 16/74	93-I-14	H	47, 48, 57,58	298
3355	Oct 16/74	93-I-14	H	45, 46, 55, 56	298
3354	Oct 16/74	93-I-14	H	43, 44, 53, 54	298
3353	Oct 16/74	93-I-14	H	37, 38	149
3352	Oct 16/74	93-I-14	H	25, 26, 35, 36	299
3351	Oct 16/74	93-I-14	K	83, 93, 94	223
3350	Oct 16/74	93-I-14	K	81, 82, 92	223
3349	Oct 16/74	93-I-14	K	71	75
3346	Oct 16/74	93-I-14	J	83, 84, 93, 94	298
3345	Oct 16/74	93-I-14	J	69, 70, 79, 80	298
3344	Oct 16/74	93-I-14	J	63, 73, 74	223
3343	Oct 16/74	93-I-14	J	61, 62, 71, 72	298
3341	Oct 16/74	93-I-14	I	89, 99	149
3340	Oct 16/74	93-I-14	I	87, 88, 98	223
3339	Oct 16/74	93-I-14	I	85, 86, 95	223
3336	Oct 16/74	93-I-14	I	69, 70, 79, 80	298
3335	Oct 16/74	93-I-14	I	67, 68, 77, 78	298
3326	Oct 16/74	93-I-14	I	29, 30, 39, 40	298

Licence No	Date Issued	Series	Block	Units	Paying Hectares
3325	Oct 16/74	93-I-14	I	27, 28, 37, 38	298
3324	Oct 16/74	93-I-14	I	25, 26, 35, 36	298
3320	Oct 16/74	93-I-14	I	7, 8, 17, 18	298
3319	Oct 16/74	93-I-14	I	5, 6, 15, 16	298
3316	Oct 16/74	93-I-14	H	85, 86, 95, 96	298
3315	Oct 16/74	93-I-14	H	83, 84, 93, 94	298
3314	Oct 16/74	93-I-14	H	81, 82, 91, 92	298
3313	Oct 16/74	93-I-14	H	73	75
3312	Oct 16/74	93-I-14	H	61, 62, 71, 72	298
3304	Oct 16/74	93-I-15	E	89, 90, 99, 100	298
3303	Oct 16/74	93-I-15	E	87, 88, 97, 98	298
3302	oct 16/74	93-I-15	E	69, 70, 79, 80	298
3301	Oct 16/74	93-I-15	E	67, 68, 77, 78	298
3300	Oct 16/74	93-I-15	E	65, 66, 75, 76	298
3299	Oct 16/74	93-I-15	E	59, 60	149
3298	Oct 16/74	93-I-15	E	47, 48, 57, 58	298
3297	Oct 16/74	93-I-15	E	45, 46,55, 56	298
3296	Oct 16/74	93-I-15	E	43, 44, 53, 54	298
3295	Oct 16/74	93-I-15	E	41, 42, 51, 52	298
3293	Oct 16/74	93-I-15	E	25, 26, 35, 36	299
3292	Oct 16/74	93-I-15	E	23, 24, 33, 34	299
3291	Oct 16/74	93-I-15	E	21, 22, 31, 32	299
3290	Oct 16/74	93-I-15	E	3, 4, 13, 14	299
3289	Oct 16/74	93-I-15	E	1, 2, 11, 12	299
3288	Oct 16/74	93-I-15	F	49, 50, 59, 60	298
3287	Oct 16/74	93-I-15	F	48	75
3286	Oct 16/74	93-I-15	F	29, 30, 39, 40	299
3285	Oct 16/74	93-I-15	F	27, 28, 37, 38	299
3284	Oct 16/74	93-I-15	F	25, 26	150
3282	Oct 16/74	93-I-15	F	7, 8, 17, 18	299
3281	Oct 16/74	93-I-15	F	5, 6, 15, 16	299
3280	Oct 16/74	93-I-15	F	3, 4, 13, 14	299
3279	Oct 16/74	93-I-15	F	2	75
3662	Sep 27/76	93-I-14	J	81, 82, 91, 92	298
3661	Sep 27/76	93-I-14	I	90, 100	149
3660	Sep 17/76	93-P-3	B	1, 2, 11,12	298
4532	Jan 15/79	93-P-3	B	70, 80	149
4533	Jan 15/79	93-P-3	B	98	75
4534	Jan 15/79	93-P-3	B	89, 90, 99	223
4535	Jan 15/79	93-P-3	C	1, 2	149
4537	Jan 15/79	93-P-3	C	26, 35, 36	223

Licence No	Date Issued	Series	Block	Units	Paying Hectares
4538	Jan 15/79	93-P-3	C	27, 28, 37, 38	297
4540	Jan 15/79	93-P-3	C	43, 44, 53, 54	297
4541	Jan 15/79	93-P-3	C	45, 46, 55, 56	297
4542	Jan 15/79	93-P-3	C	61, 62	149
4544	Jan 15/79	93-I-14	K	91	75
7845	Aug /84	93-I-14	I	96	75
7846	Aug /84	93-I-14	I	97	75
7847	Aug /84	93-P-3	S	5, 6, 15, 16	300
7848	Aug /84	93-P-3	A	7, 8, 17, 18	300
7849	Aug /84	93-P-3	A	9, 10, 19, 20	300
7850	Aug /84	93-P-3	B	21, 22, 31, 32	300
7851	Aug /84	93-P-3	B	43, 44, 53, 54	300
7852	Aug /84	93-P-3	B	65, 75	150
7853	Aug /84	93-P-3	B	85	75
				Total hectares	33,001

Appendix T.2

1988 Geological Report

Drill Hole Summaries

Appendix T.2.1

Rotary Drill Holes

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR84017	877.05	6095367.5500	624352.7310	128.00	OVER	0.00	4.50	0.00	128.00	0.00	90.00
					F1	44.72	45.16				
					F2P	45.16	45.41				
					F2	45.41	50.02				
					F	44.72	50.02				
					G12	71.99	74.52				
					G3P	74.52	75.14				
					G3	75.14	76.68				
					G	71.99	76.68				
					J	98.49	104.27				
					K1P	104.27	105.48				
					K1	105.48	107.56				
					K2P	107.56	110.75				
					K2	110.75	111.66				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR84018	857.66	6095285.3300	623971.7990	238.30	OVER	0.00	5.80	0.00	238.30	230.80	85.90
					COAL	19.94	20.87				
					COAL	78.40	79.83				
					COAL	114.50	115.04				
					COAL	115.29	115.64				
					COAL	115.92	116.13				
					F	142.80	145.35				
					FAULT	145.35	145.35				
					F	145.35	149.54				
					G1	187.50	188.43				
					G2P	188.43	188.77				
					G2	188.77	189.61				
					G12	187.50	189.61				
					G3P	189.61	190.00				
					G3	190.00	191.47				
					G	187.50	191.47				
					J	208.60	214.96				
					K1P	214.96	215.85				
					K1	215.85	217.18				
					K2P	217.18	222.80				
					K2	222.80	223.83				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR84028	879.24	6095484.3600	624054.2890	198.00	OVER	0.00	3.00	0.00	150.00	78.00	85.37
					COAL	59.62	61.21	150.00	170.00	97.50	75.52
					COAL	61.60	62.31	170.00	198.00	110.30	72.86
					COAL	93.93	94.69				
					COAL	94.90	95.48				
					COAL	95.66	95.84				
					F1	118.93	119.33				
					F2P	119.33	119.76				
					F2	119.76	123.46				
					F	118.93	123.46				
					G12	144.08	146.12				
					G3P	146.12	146.80				
					G3	146.80	148.18				
					G	144.08	148.18				
					J	164.22	168.35				
					K1P	168.35	170.38				
					K1	170.38	171.72				
					FAULT	171.12	171.12				
					K1	171.89	173.09				
					K2P	173.09	179.44				
					K2	179.44	179.99				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHRB4027	860.26	6095326.5300	623962.4200	32.00	OVER	0.00	8.50	0.00	32.00	0.00	90.00
					COAL	29.00	30.50				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR84029	861.39	6095305.8000	623944.9000	54.00	OVER	0.00	8.00	0.00	54.00	0.00	90.00
					COAL	21.65	22.50				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR84030	860.26	6095326.5300	623960.4200	36.00	OVER	0.00	8.00	0.00	36.00	0.00	90.00
					COAL	29.45	30.35				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth des	Dip des
QHR87001	848.18	6096302.7600	624670.7200	189.60	OVER	0.00	6.00	0.00	10.00	209.02	60.28
					FAULT	46.70	46.71	10.00	20.00	209.72	59.24
					D1	72.60	73.60	20.00	30.00	205.10	57.57
					D2P	73.60	74.00	30.00	40.00	204.29	57.48
					D2	74.00	74.90	40.00	50.00	208.29	56.93
					D	72.60	74.90	50.00	60.00	209.90	56.89
					E1	88.70	88.90	60.00	70.00	210.16	55.52
					E2P	88.90	90.30	70.00	80.00	208.99	54.53
					E2	90.30	90.80	80.00	90.00	208.47	54.65
					E3P	90.80	92.80	90.00	100.00	205.98	53.93
					E3	92.80	95.00	100.00	110.00	206.08	53.54
					E	88.70	95.00	110.00	120.00	206.55	52.77
					F1	114.40	115.00	120.00	130.00	207.16	52.44
					F2P	115.00	115.30	130.00	140.00	208.59	52.33
					F2	115.30	118.50	140.00	150.00	210.12	52.04
					F	114.40	118.50	150.00	160.00	214.35	51.39
					FL	118.50	118.50	160.00	170.00	212.82	52.07
					GCGL	131.00	152.50	170.00	180.00	216.74	50.92
					G1	152.50	152.80	180.00	189.60	216.74	50.92
					G2P	152.80	153.00				
					G2	153.00	154.10				
					G3P	154.10	154.90				
					G3	154.90	156.20				
					G	152.50	156.20				
					J	171.80	177.00				
					K1P	177.00	177.70				
					K1	177.70	179.70				
					K2P	179.70	184.30				
					K2	184.30	185.00				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHRB7002	879.90	6096356.1500	624465.2600	156.30	OVER	0.00	5.00	0.00	5.00	209.28	63.64
					D1	19.80	22.30	5.00	10.00	209.91	64.03
					D2P	22.30	23.00	10.00	15.00	209.60	63.98
					D2	23.00	23.80	15.00	20.00	210.61	63.52
					D	19.80	23.80	20.00	25.00	213.38	64.32
					E2	45.60	45.90	25.00	30.00	211.22	63.77
					E	45.60	45.90	30.00	35.00	208.51	63.45
					F1	70.50	71.10	35.00	40.00	211.38	62.61
					F2P	71.10	71.60	40.00	45.00	210.18	62.51
					F2	71.60	75.80	45.00	50.00	210.43	62.30
					F	70.50	75.80	50.00	55.00	209.98	62.84
					FL	75.80	75.80	55.00	159.30	209.98	62.84
					GCGL	85.00	112.20				
					G1	112.20	112.50				
					G2P	112.50	112.60				
					G2	112.60	113.60				
					G3P	113.60	114.70				
					G3	114.70	115.90				
					G	112.20	115.90				
					J	134.00	138.90				
					K1P	138.90	140.20				
					K1	140.20	141.10				
					K2P	141.10	145.30				
					K2	145.30	145.70				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
BHR87003	895.45	6096422.3500	624278.6900	140.00	OVER	0.00	5.00	0.00	5.00	210.09	59.87
					E2	12.48	13.28	5.00	10.00	212.83	60.64
					E3P	13.28	14.00	10.00	140.00	212.83	60.64
					E3	14.00	14.55				
					E	12.48	14.55				
					F1	37.78	38.78				
					F2P	38.78	39.17				
					F2	39.17	42.50				
					F	37.78	42.50				
					FL	42.50	42.50				
					GCGL	48.50	82.18				
					G2	82.18	83.10				
					G3P	83.10	84.10				
					G3	84.10	85.36				
					G	82.18	85.36				
					J	102.22	106.92				
					K1P	106.92	107.71				
					K1	107.71	109.26				
					K2P	109.26	113.64				
					K2	113.64	114.34				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
GHR87004	931.67	6096486.6500	624117.6000	121.80	OVER	0.00	3.00	0.00	10.00	218.85	58.89
					D1	13.29	14.16	10.00	20.00	219.14	59.60
					D2P	14.16	14.86	20.00	30.00	218.14	58.76
					D2	14.86	15.44	30.00	40.00	215.63	58.05
					D	13.29	15.44	40.00	50.00	216.98	57.81
					F1	37.39	38.23	50.00	60.00	214.51	56.93
					F2P	38.23	38.50	60.00	70.00	217.55	57.37
					F2	38.50	41.60	70.00	80.00	217.69	57.22
					F	37.39	41.60	80.00	90.00	217.56	56.82
					FL	41.60	42.10	90.00	100.00	218.09	57.01
					GCGL	48.90	78.80	100.00	110.00	219.86	56.66
					G1	78.80	79.10	110.00	120.00	225.61	56.05
					G2P	79.10	79.36	120.00	121.80	225.61	56.05
					G2	79.36	80.44				
					G3P	80.44	80.84				
					G3	80.84	82.43				
					G	78.80	82.43				
					J	102.12	107.04				
					K1P	107.04	107.72				
					K1	107.72	109.10				
					K2P	109.10	113.16				
					K2	113.16	113.83				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
GHR87005	985.67	6096582.5400	623827.0900	117.50	OVER	0.00	5.00	0.00	10.00	208.35	63.33
					F1	28.97	29.78	10.00	20.00	211.76	62.91
					F2P	29.78	29.96	20.00	30.00	213.67	61.03
					F2	29.96	32.98	30.00	40.00	215.15	60.03
					F	28.97	32.98	40.00	50.00	213.63	61.05
					FL	32.98	33.54	50.00	60.00	213.55	61.59
					GCGL	40.70	78.61	60.00	70.00	216.76	61.93
					G2P	78.61	78.77	70.00	80.00	211.63	62.12
					G2	78.77	79.63	80.00	90.00	213.69	61.86
					G3P	79.63	80.51	90.00	100.00	216.17	61.19
					G3	80.51	81.95	100.00	110.00	214.12	60.79
					G	78.77	81.95	110.00	117.50	214.12	60.79
					J	97.51	102.47				
					K1P	102.47	103.36				
					K1	103.36	104.94				
					K2P	104.94	108.77				
					K2	108.77	109.09				

Explosives were detonated at the surface to produce compression type seismic energy. Generally, 1 to 5 sticks (.2 to .8 kilogram) of Forcite (75%) were used for this purpose. All explosives were detonated with instantaneous electrical blasting caps. The detonating device also controlled the turn-on of the timing function of the recording seismograph. Geophones sensitive to vertical velocity and with a natural frequency of 14 hertz were used to detect the onset and passage of seismic energy.

Figure 4 illustrates typical records obtained for an end and an offset shot, along line 3. The direct or critically refracted compression wave arrive first at each geophone location. The first arrivals of compression type seismic energy are clearly visible on these records.

3.0 INTERPRETATION

The first break times were plotted against source offset distance to derive travel time graphs for direct and critically refracted compression wave seismic energy. The graphs were then analyzed using well established methods to derive the velocity and

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR87007	1117.65	6096526.6900	623136.8700	170.20	OVER	0.00	2.00	0.00	10.00	221.16	88.96
					D1	7.20	7.70	10.00	20.00	56.97	87.18
					D2P	7.70	8.20	20.00	30.00	82.18	85.55
					D2	8.20	8.70	30.00	40.00	87.82	85.54
					D	7.20	8.70	40.00	50.00	96.11	84.14
					E1	32.00	32.50	50.00	60.00	87.42	82.64
					E2P	32.50	34.80	60.00	70.00	77.96	80.38
					E2	34.80	35.10	70.00	80.00	74.57	79.76
					E3P	35.10	36.00	80.00	90.00	64.08	78.86
					E3	36.00	36.30	90.00	100.00	64.79	77.65
					E4P	36.30	38.70	100.00	110.00	71.81	77.72
					E4	38.70	39.20	110.00	120.00	73.81	77.10
					E	32.00	39.20	120.00	130.00	73.62	76.59
					F1	81.64	82.44	130.00	140.00	76.98	75.80
					F2P	82.44	82.75	140.00	150.00	79.62	75.91
					F2	82.75	85.46	150.00	160.00	83.50	76.30
					F	81.64	85.46	160.00	170.00	99.20	78.50
					FL	85.46	86.37	170.00	170.20	99.20	78.50
					GCGL	94.00	134.44				
					G1	134.44	134.74				
					G2P	134.74	135.00				
					G2	135.00	135.77				
					G3P	135.77	135.91				
					G3	135.91	137.34				
					G	134.44	137.34				
					J	153.91	159.44				
					K1P	159.44	159.93				
					K1	159.93	162.03				
					K2P	162.03	164.13				
					K2	164.13	165.04				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR87008	1107.99	6096594.0400	623196.4000	107.30	OVER	0.00	5.00				
					F1	21.00	21.50				
					F2P	21.50	21.80				
					F2	21.80	24.60				
					F	21.00	24.60				
					FL	24.60	25.50				
					GCGL	31.60	65.10				
					G1	65.60	66.20				
					G2P	66.20	67.00				
					G2	67.00	68.50				
					G3P	68.50	69.10				
					G3	69.10	70.10				
					G	65.60	70.10				
					J	85.10	89.90				
					K1P	89.90	90.80				
					K1	90.80	92.10				
					K2P	92.10	95.20				
					K2	95.20	96.10				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR87009	1108.97	6096471.1600	623293.4400	132.30	OVER	0.00	3.00	0.00	10.00	88.84	88.83
					F2P	20.76	21.16	10.00	20.00	145.24	89.18
					F2	21.16	24.57	20.00	30.00	92.76	87.78
					F	19.88	24.57	30.00	40.00	68.23	87.33
					FL	24.57	25.48	40.00	50.00	69.47	86.19
					GCGL	33.20	82.00	50.00	60.00	78.17	85.36
					G2P	82.00	82.34	60.00	70.00	75.77	84.70
					G2	82.34	83.49	70.00	80.00	74.75	84.35
					G3P	83.49	84.02	80.00	90.00	75.57	83.63
					G3	84.02	85.60	90.00	100.00	77.69	83.33
					G	82.34	85.60	100.00	110.00	74.70	83.40
					J	103.39	108.83	110.00	120.00	71.58	82.51
					K1P	108.83	109.32	120.00	130.00	70.73	82.15
					K1	109.32	110.99	130.00	132.30	70.73	82.15
					K2P	110.99	114.62				
					K2	114.62	115.61				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR87010	1109.67	6096347.6300	623296.4300	164.40	OVER	0.00	3.00	0.00	10.00	41.05	61.56
					D1	32.00	32.90	10.00	164.40	41.05	61.56
					D2P	32.90	33.40				
					D2	33.40	33.90				
					D	32.00	33.90				
					E3	66.80	67.20				
					E	66.80	67.20				
					F1	87.50	87.90				
					F2P	87.90	88.30				
					F2	88.30	90.50				
					F	87.50	90.50				
					FL	90.50	90.50				
					GCGL	98.40	125.90				
					G1	125.90	126.20				
					G2P	126.20	126.60				
					G2	126.60	127.20				
					G3P	127.20	127.80				
					G3	127.80	128.80				
					G	125.90	128.80				
					J	143.80	149.40				
					K1P	149.40	150.30				
					K1	150.30	151.70				
					K2P	151.70	154.30				
					K2	154.30	155.00				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR87011	1107.81	6096681.6700	623132.3700	121.50	OVER	0.00	3.00	0.00	5.00	150.99	88.96
					F1	39.30	39.80	5.00	10.00	355.15	88.83
					F2P	39.80	40.10	10.00	15.00	349.26	87.91
					F2	40.10	42.80	15.00	20.00	311.28	88.01
					F	39.30	42.80	20.00	25.00	97.61	89.63
					FL	42.80	42.80	25.00	121.50	97.61	89.63
					GCGL	49.60	81.50				
					G1	81.50	81.70				
					G2P	81.70	81.90				
					G2	81.90	82.70				
					G3P	82.70	84.10				
					G3	84.10	84.10				
					G	81.50	84.10				
					J	100.70	106.10				
					K1P	106.10	106.80				
					K1	106.80	108.40				
					K2P	108.40	110.90				
					K2	110.90	111.40				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
GHR87012	1116.81	6096590.3700	623063.5400	183.30	OVER	0.00	2.00	0.00	10.00	258.30	88.15
					D1	22.30	23.06	10.00	20.00	198.32	89.48
					D2P	23.06	23.17	20.00	30.00	351.85	88.67
					D2	23.17	23.96	30.00	40.00	63.64	88.83
					D	22.30	23.96	40.00	50.00	79.28	88.12
					F1	97.09	97.80	50.00	60.00	106.85	88.83
					F2P	97.80	97.99	60.00	70.00	99.47	88.12
					F2	97.99	101.73	70.00	80.00	92.80	85.91
					F	97.09	101.73	80.00	90.00	83.83	84.81
					FL	101.73	102.87	90.00	100.00	77.85	83.54
					GCGL	109.20	147.58	100.00	110.00	76.19	82.96
					G1	147.58	147.69	110.00	120.00	74.87	81.11
					G2P	147.69	147.97	120.00	130.00	75.56	80.01
					G2	147.97	148.88	130.00	140.00	74.90	79.24
					G3P	148.88	149.08	140.00	150.00	77.11	78.87
					G3	149.08	150.81	150.00	160.00	77.67	77.73
					G	147.58	150.81	160.00	170.00	80.79	77.04
					J	166.44	170.82	170.00	180.00	80.55	76.30
					K1P	170.82	171.24	180.00	183.30	80.55	76.30
					K1	171.24	172.28				
					K2P	172.28	174.44				
					K2	174.44	175.25				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR87013	1041.15	6096728.4800	623477.3100	143.70	OVER	0.00	3.00	0.00	10.00	211.21	59.64
					F1	56.30	57.08	10.00	20.00	210.98	60.10
					F2P	57.08	57.34	20.00	30.00	210.64	59.73
					F2	57.34	60.33	30.00	40.00	212.28	60.09
					F	56.30	60.33	40.00	50.00	210.90	60.25
					FL	60.33	61.04	50.00	60.00	209.95	59.56
					GCBL	68.10	103.68	60.00	70.00	211.44	58.32
					G1	103.68	103.99	70.00	80.00	211.06	58.81
					G2P	103.99	104.22	80.00	90.00	209.17	59.11
					G2	104.22	105.11	90.00	100.00	209.18	59.20
					G3P	105.11	105.64	100.00	110.00	209.84	59.42
					G3	105.64	107.07	110.00	120.00	209.07	58.97
					G	103.68	107.07	120.00	130.00	206.30	58.19
					J	123.84	128.74	130.00	140.00	209.09	57.64
					K1P	128.74	129.23	140.00	143.70	209.09	57.64
					K1	129.23	131.01				
					K2P	131.01	134.25				
					K2	134.25	134.98				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR87014	1076.90	6096773.6500	623194.3000	207.40	OVER	0.00	3.00				
					E4	34.90	35.20				
					E	34.90	35.20				
					F1	67.50	68.50				
					F2P	68.50	69.10				
					F2	69.10	74.00				
					F	67.50	74.00				
					FL	74.00	74.80				
					GCGL	85.00	148.70				
					G1	148.70	149.20				
					G2P	149.20	149.60				
					G2	149.60	150.90				
					G3P	150.90	152.60				
					G3	152.60	154.60				
					G	148.70	154.60				
					J	181.60	190.10				
					K1P	190.10	191.00				
					K1	191.00	193.70				
					K2P	193.70	198.30				
					K2	198.30	199.50				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR87015	1079.99	6096508.6200	623456.4900	56.70	GCGL	0.00	7.70	0.00	5.00	128.70	88.83
					G2	7.70	9.70	5.00	10.00	35.70	88.48
					G3P	9.70	10.80	10.00	15.00	351.54	89.18
					G3	10.80	12.10	15.00	20.00	77.63	89.18
					G	7.70	12.10	20.00	25.00	83.43	88.96
					J	26.10	31.14	25.00	30.00	19.60	88.96
					K1P	31.14	32.19	30.00	35.00	130.76	89.63
					K1	32.19	33.44	35.00	40.00	74.41	88.52
					K2P	33.44	36.47	40.00	45.00	197.51	86.65
					K2	36.47	37.20	45.00	56.70	197.51	86.65

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR87016	1071.99	6096078.3600	623627.5500	146.60	DVER	0.00	4.00	0.00	10.00	35.68	63.29
					D1	9.39	10.83	10.00	20.00	34.25	62.22
					D	9.39	10.83	20.00	30.00	35.13	60.74
					F1	69.83	70.57	30.00	40.00	35.94	59.61
					F2P	70.57	70.75	40.00	50.00	37.35	59.17
					F2	70.75	73.86	50.00	60.00	35.51	59.60
					F	69.83	73.86	60.00	70.00	35.58	59.20
					FL	73.86	74.50	70.00	80.00	36.36	58.78
					GCGL	83.30	108.07	80.00	90.00	38.85	58.75
					G1	108.07	108.23	90.00	100.00	43.04	58.75
					G2P	108.23	108.68	100.00	110.00	41.04	57.56
					G2	108.68	109.44	110.00	120.00	42.50	56.38
					G3P	109.44	110.94	120.00	130.00	45.73	55.22
					G3	110.94	111.00	130.00	140.00	43.70	54.20
					G	108.07	111.00	140.00	146.60	43.70	54.20
					J	126.15	130.59				
					K1P	130.59	131.30				
					K1	131.30	132.58				
					K2P	132.58	136.24				
					K2	136.24	136.97				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR87017	1014.93	6095936.6500	623001.6600	164.80	OVER	0.00	3.00	0.00	10.00	27.28	89.63
					E3	44.09	46.63	10.00	20.00	167.95	89.18
					E4P	46.63	49.51	20.00	30.00	31.71	89.18
					E4	49.51	50.11	30.00	40.00	129.49	89.18
					E	44.09	50.11	40.00	50.00	88.04	89.18
					F1	73.34	74.31	50.00	60.00	99.07	88.96
					F2P	74.31	74.66	60.00	70.00	103.36	87.02
					F2	74.66	78.50	70.00	80.00	100.77	87.18
					F	73.34	78.50	80.00	90.00	93.99	86.84
					FL	78.50	78.50	90.00	100.00	94.78	86.23
					GCGL	94.70	110.30	100.00	110.00	88.17	85.91
					G1	116.43	116.54	110.00	120.00	86.74	84.15
					G2P	116.54	116.73	120.00	130.00	87.14	83.54
					G2	116.73	117.85	130.00	140.00	87.91	82.50
					G3P	117.85	118.51	140.00	150.00	100.77	80.98
					G3	118.51	120.06	150.00	160.00	101.97	80.38
					G	116.43	120.06	160.00	164.80	101.97	80.38
					J	137.65	142.72				
					K1P	142.72	144.24				
					K1	144.24	145.44				
					K2P	145.44	150.01				
					K2	150.01	150.84				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHRB7018	978.03	6095705.4000	624093.4800	123.00	OVER	0.00	2.00	0.00	10.00	43.32	63.99
					E3	21.80	23.10	10.00	20.00	48.57	64.66
					E	21.80	23.10	20.00	30.00	50.21	64.32
					F101	47.08	47.99	30.00	40.00	52.44	64.54
					F2P01	47.99	48.21	40.00	50.00	50.46	64.52
					F201	48.21	50.20	50.00	60.00	54.31	62.72
					F1	47.08	50.20	60.00	70.00	54.27	60.64
					FAULT	50.20	50.21	70.00	80.00	54.58	58.71
					F1	50.43	51.09	80.00	90.00	57.21	58.92
					F2P	51.09	51.41	90.00	100.00	56.31	58.92
					F2	51.41	55.04	100.00	110.00	55.35	58.82
					F	50.43	55.04	110.00	120.00	56.87	57.10
					FL	55.04	55.78	120.00	123.00	56.87	57.10
					GCGL	74.25	74.25				
					G1	74.25	74.86				
					G2P	74.86	74.99				
					G2	74.99	76.31				
					G3P	76.31	77.04				
					G3	77.04	78.25				
					G	74.25	78.25				
					J	93.61	97.83				
					K1P	97.83	98.46				
					K1	98.46	99.80				
					K2P	99.80	104.42				
					K2	104.42	105.17				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR87019	916.10	6095531.2600	624218.7000	110.70	OVER	0.00	4.00	0.00	10.00	44.46	61.93
					E3	17.10	18.30	10.00	20.00	49.33	62.30
					E	17.10	18.30	20.00	30.00	50.58	63.16
					F1	40.73	41.10	30.00	40.00	50.92	62.34
					F2P	41.10	41.41	40.00	50.00	50.45	62.34
					F2	41.41	44.87	50.00	60.00	50.94	61.90
					F	40.73	44.87	60.00	70.00	49.80	60.79
					FL	44.87	45.63	70.00	80.00	50.68	60.74
					GCGL	63.68	63.68	80.00	90.00	50.68	60.74
					G1	63.68	64.64	90.00	100.00	51.30	60.42
					G2P	64.64	64.86	100.00	110.70	41.10	57.26
					G2	64.86	65.72				
					G3P	65.72	66.34				
					G3	66.34	67.60				
					G	63.68	67.60				
					J	85.09	89.32				
					K1P	89.32	89.87				
					K1	89.87	91.57				
					K2P	91.57	96.34				
					K2	96.34	96.94				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
GWRB7020	797.81	6096256.3600	624879.7200	244.00	OVER	0.00	12.00	0.00	10.00	214.84	63.39
					C	53.52	54.92	10.00	20.00	211.56	61.73
					B	74.40	75.20	20.00	30.00	206.97	58.60
					D1	123.88	124.67	30.00	40.00	207.02	56.73
					D2P	124.67	124.83	40.00	50.00	208.91	56.17
					D2	124.83	126.91	50.00	60.00	209.88	55.44
					D	123.88	126.91	60.00	70.00	210.35	54.88
					E1	140.77	141.08	70.00	80.00	210.76	54.41
					E2P	141.08	142.06	80.00	90.00	211.53	53.86
					E2	142.06	143.14	90.00	100.00	212.51	53.77
					E3P	143.14	143.44	100.00	110.00	212.85	53.53
					E3	143.44	145.46	110.00	120.00	212.67	53.28
					E	142.06	145.46	120.00	130.00	212.35	52.96
					F1	163.03	163.66	130.00	140.00	212.13	52.45
					F2P	163.66	163.90	140.00	150.00	213.75	51.31
					F2	163.90	167.08	150.00	160.00	214.63	50.37
					F	163.03	167.08	160.00	170.00	212.95	50.19
					GCGL	180.00	204.00	170.00	180.00	213.10	49.25
					G1	204.00	204.00	180.00	190.00	214.14	48.18
					G2P	204.00	204.00	190.00	200.00	212.94	47.59
					G2	204.00	204.71	200.00	210.00	212.22	47.13
					G3P	204.71	205.50	210.00	220.00	212.60	46.88
					G3	205.50	206.74	220.00	230.00	212.78	46.95
					G	204.00	206.74	230.00	244.00	213.95	47.09
					J	221.28	226.10				
					K1P	226.10	226.59				
					K1	226.59	228.29				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR87021	1572.82	6096160.3200	620569.2500	168.80	OVER	0.00	5.00	0.00	5.00	186.15	88.82
					D1	46.65	47.42	5.00	10.00	203.32	88.73
					D	46.65	47.42	10.00	20.00	236.56	88.36
					E1	67.40	67.92	20.00	30.00	265.12	88.10
					E2P	67.92	68.61	30.00	40.00	281.65	88.39
					E2	68.61	69.04	40.00	50.00	265.82	88.32
					E3P	69.04	69.99	50.00	60.00	236.76	87.53
					E3	69.99	70.18	60.00	70.00	220.93	86.50
					E4P	70.18	71.94	70.00	160.80	220.93	86.50
					E4	71.94	72.47				
					F1	95.91	96.27				
					F2P	96.27	96.74				
					F2	96.74	100.11				
					F	95.91	100.11				
					G1	126.20	127.10				
					G2P	127.10	127.62				
					G2	127.62	128.30				
					G3P	128.30	128.85				
					G3	128.85	129.92				
					G	126.20	129.92				
					J	146.20	150.86				
					K1P	150.86	152.12				
					K1	152.12	152.99				
					K2P	152.99	154.06				
					K2	154.06	154.95				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
GHR87022	1580.60	6096087.3000	620508.1200	144.60	OVER	0.00	2.50	0.00	10.00	147.72	88.23
					E1	19.80	20.20	10.00	20.00	185.64	87.47
					E2P	20.20	20.80	20.00	30.00	207.51	87.76
					E2	20.80	21.30	30.00	40.00	194.25	88.88
					E3P	21.30	22.20	40.00	50.00	187.99	88.74
					E3	22.20	24.40	50.00	60.00	175.25	88.04
					E4P	24.40	26.80	60.00	70.00	183.34	87.52
					E4	26.80	28.20	70.00	80.00	181.03	86.87
					F1	50.06	50.78	80.00	90.00	173.60	86.43
					F2P	50.78	51.01	90.00	100.00	172.47	85.48
					F2	51.01	54.83	100.00	110.00	166.91	84.81
					F	50.06	54.83	110.00	120.00	168.30	85.13
					G1	84.10	85.20	120.00	130.00	167.65	85.00
					G2P	85.20	85.32	130.00	144.60	167.93	84.83
					G2	85.32	87.22				
					G3P	87.22	87.55				
					G3	87.55	89.07				
					G	84.10	89.07				
					J	105.87	110.73				
					K1P	110.73	111.93				
					K1	111.93	112.79				
					K2P	112.79	113.73				
					K2	113.73	115.00				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR87023	1601.62	6095983.1100	620432.7200	171.00	OVER	0.00	5.00	0.00	5.00	206.71	88.33
					D1	54.94	56.10	5.00	10.00	191.18	88.28
					D2P	56.10	57.08	10.00	20.00	125.36	87.73
					D2	57.08	57.32	20.00	30.00	59.45	86.85
					D3P	57.32	57.89	30.00	40.00	52.97	86.30
					D3	57.89	58.50	40.00	50.00	44.18	86.23
					E1	73.05	73.51	50.00	60.00	46.68	85.92
					E2P	73.51	73.98	60.00	70.00	91.43	85.15
					E2	73.98	74.88	70.00	80.00	133.42	84.05
					E3P	74.88	75.32	80.00	90.00	99.99	83.26
					E3	75.32	75.50	90.00	100.00	50.69	83.00
					E4P	75.50	77.94	100.00	110.00	55.89	82.28
					E4	77.94	79.84	110.00	120.00	59.67	81.43
					F1	97.76	98.40	120.00	130.00	63.83	80.33
					F2P	98.40	98.67	130.00	140.00	67.35	78.95
					F2	98.67	102.79	140.00	150.00	67.30	77.88
					F	97.76	102.79	150.00	160.00	67.23	76.49
					G1	128.92	129.98	160.00	171.00	67.44	75.66
					G2P	129.98	130.10				
					G2	130.10	130.91				
					G3P	130.91	131.36				
					G3	131.36	132.51				
					G	128.92	132.51				
					J	148.04	152.68				
					K1P	152.68	153.85				
					K1	153.85	154.55				
					K2P	155.66	156.68				
					COAL	155.40	155.66				
					K2	156.68	157.84				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
GHR87024	1564.25	6096026.8600	620712.8900	128.50	OVER	0.00	5.00	0.00	5.00	164.91	88.65
					E1	19.30	19.60	5.00	10.00	171.56	88.49
					E2P	19.60	20.40	10.00	20.00	175.49	88.63
					E2	20.40	21.90	20.00	30.00	182.39	88.53
					E3P	21.90	22.30	30.00	40.00	193.17	88.11
					E3	22.30	22.50	40.00	50.00	192.38	87.63
					E4P	22.50	25.57	50.00	60.00	194.92	86.89
					E4	25.57	26.41	60.00	70.00	201.31	86.45
					F1	49.29	49.70	70.00	80.00	200.55	85.89
					F2P	49.70	50.14	80.00	90.00	201.17	84.90
					F2	50.14	53.30	90.00	100.00	205.07	83.97
					F	49.29	53.30	100.00	110.00	207.45	82.80
					G1	87.55	88.64	110.00	128.50	207.07	81.95
					G2P	88.64	88.80				
					G2	88.80	89.80				
					G3P	89.80	90.37				
					G3	90.37	91.54				
					G	87.55	91.54				
					J	107.12	112.00				
					K1P	112.00	112.43				
					K1	112.43	113.56				
					K2P	113.56	114.16				
					K2	114.16	115.66				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR87025	1585.04	6095957.5600	620647.1700	110.00	OVER	0.00	4.50	0.00	3.00	283.43	88.12
					F1	31.49	32.14	3.00	10.00	293.76	88.22
					F2P	32.14	32.29	10.00	20.00	283.62	88.49
					F2	32.29	36.20	20.00	30.00	262.65	88.65
					F	31.49	36.20	30.00	40.00	273.99	88.55
					G1	64.99	66.04	40.00	50.00	285.41	88.47
					G2P	66.04	66.41	50.00	60.00	267.80	88.65
					G2	66.41	67.50	60.00	70.00	231.39	88.57
					G3P	67.50	67.92	70.00	80.00	196.92	88.10
					G3	67.92	69.23	80.00	90.00	186.02	87.74
					G	64.99	69.23	90.00	100.00	187.98	87.68
					J	89.60	95.62	100.00	110.00	133.71	87.19
					K1P	95.62	96.93				
					K1	96.93	97.92				
					K2P	97.92	98.69				
					K2	98.69	100.11				
					COAL	99.87	100.11				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR87026	1573.08	6095680.6300	620701.8000	140.00	OVER	0.00	6.50	0.00	3.00	50.27	89.47
					D1	13.16	14.34	3.00	10.00	57.66	89.47
					D2P	14.34	15.06	10.00	20.00	77.05	88.61
					D2	15.06	15.35	20.00	30.00	86.87	87.26
					D3P	15.35	15.57	30.00	40.00	84.33	86.61
					D3	15.57	16.24	40.00	50.00	79.81	86.18
					E4	43.95	45.42	50.00	60.00	76.19	86.02
					F1	64.55	65.36	60.00	70.00	76.64	85.79
					F2P	65.36	65.81	70.00	80.00	72.52	85.13
					F2	65.81	68.98	80.00	90.00	72.28	85.21
					F	64.55	68.98	90.00	100.00	70.98	84.89
					G1	104.26	105.58	100.00	110.00	67.50	84.21
					G2P	105.58	105.77	110.00	120.00	66.49	83.74
					G2	105.77	106.85	120.00	130.00	61.48	83.14
					G3P	106.85	107.14	130.00	140.00	58.30	82.68
					G3	107.14	108.45				
					G	104.26	108.45				
					J	123.32	128.83				
					K1P	128.83	130.10				
					K1	130.10	131.13				
					K2P	131.13	132.68				
					K2	132.68	134.10				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR87027	1549.64	6095842.9400	620804.1700	80.00	OVER	0.00	6.00	0.00	3.00	103.36	89.25
					G1	16.69	17.71	3.00	10.00	44.07	89.36
					G2P	17.71	17.83	10.00	20.00	281.75	89.32
					G2	17.83	19.19	20.00	30.00	197.82	88.81
					G3P	19.19	19.84	30.00	40.00	162.25	88.27
					G3	19.84	21.66	40.00	50.00	166.59	88.27
					G	16.69	21.66	50.00	60.00	186.57	88.16
					J	42.05	46.94	60.00	70.00	190.98	88.00
					K1P	46.94	47.92	70.00	80.00	190.07	87.97
					K1	47.92	49.00				
					K2P	49.00	49.99				
					K2	49.99	51.36				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth des	Dip des
GHR87028	1542.16	6096294.4200	620421.7000	172.00	OVER	0.00	4.00	0.00	5.00	293.99	90.00
					D1	58.59	59.60	5.00	10.00	13.37	89.47
					D2P	59.60	61.12	10.00	20.00	114.04	89.29
					D2	61.12	61.41	20.00	30.00	209.16	89.40
					D3P	61.41	61.74	30.00	40.00	231.51	89.16
					D3	61.74	62.30	40.00	50.00	195.42	89.40
					E1	78.72	79.22	50.00	60.00	227.72	89.40
					E2P	79.22	79.75	60.00	70.00	236.12	88.81
					E2	79.75	80.90	70.00	80.00	227.76	88.03
					E3P	80.90	81.16	80.00	90.00	217.34	87.20
					E3	81.16	81.48	90.00	100.00	200.63	86.71
					E4P	81.48	82.53	100.00	110.00	197.67	86.28
					E4	82.53	83.72	110.00	120.00	199.89	85.70
					F1	107.54	108.19	120.00	130.00	199.45	85.21
					F2P	108.19	108.65	130.00	140.00	195.04	84.46
					F2	108.65	112.18	140.00	150.00	191.65	83.76
					F	107.54	112.18	150.00	160.00	192.59	83.38
					G1	134.88	136.09	160.00	172.00	191.30	82.83
					G2P	136.09	136.22				
					G2	136.22	137.10				
					G3P	137.10	137.80				
					G3	137.80	139.08				
					G	134.88	139.08				
					J	156.37	161.58				
					K1P	161.58	162.66				
					K1	162.66	163.77				
					K2P	163.77	164.67				
					K2	164.67	165.97				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
GHR87029	1545.46	6095579.2000	620866.5800	110.00	OVER	0.00	4.00	0.00	3.00	314.44	88.51
					F1	15.59	16.47	3.00	10.00	340.75	88.69
					F2P	16.47	16.71	10.00	20.00	359.87	88.24
					F2	16.71	19.34	20.00	30.00	21.98	87.34
					F	15.59	19.34	30.00	40.00	60.65	85.25
					G1	48.39	49.42	40.00	50.00	71.22	83.25
					G2P	49.42	49.54	50.00	60.00	70.85	81.70
					G2	49.54	50.63	60.00	70.00	69.67	79.81
					G3P	50.63	50.97	70.00	80.00	70.64	78.91
					G3	50.97	52.25	80.00	90.00	70.58	78.48
					G	48.39	52.25	90.00	100.00	70.13	78.48
					J	66.86	71.31	100.00	110.00	74.96	78.60
					K1P	71.31	72.35				
					K1	72.35	73.39				
					K2P	73.39	74.54				
					K2	74.54	75.80				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR07030	1489.50	6095302.3100	621163.2600	86.80	OVER	0.00	6.00	0.00	3.00	175.55	89.63
					F	1.90	4.90	3.00	10.00	0.00	89.55
					G1	33.08	34.52	10.00	20.00	142.97	89.32
					G2P	34.52	34.79	20.00	30.00	62.95	89.32
					G2	34.79	36.30	30.00	40.00	75.19	89.32
					G3P	36.30	36.70	40.00	50.00	124.28	89.05
					G3	36.70	38.91	50.00	60.00	144.83	89.10
					G	33.08	38.91	60.00	70.00	137.05	89.36
					J	58.86	65.35	70.00	86.80	103.49	89.14
					K1P	65.35	66.44				
					K1	66.44	67.74				
					K2P	67.74	67.74				
					K2	67.74	67.74				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR87031	1425.42	6095747.6400	621267.2000	50.00	OVER	0.00	6.00	0.00	3.00	116.70	89.16
					J	23.33	28.72	3.00	10.00	157.38	89.16
					K1P	28.72	30.23	10.00	20.00	180.64	88.91
					K1	30.23	31.30	20.00	30.00	172.54	88.55
					K2P	31.30	32.56	30.00	40.00	197.81	88.64
					K2	32.56	34.11	40.00	50.00	207.60	88.32

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR07032	1451.87	6095887.3500	621106.0400	92.70	OVER	0.00	2.00	0.00	3.00	116.74	88.45
					F1	10.03	10.79	3.00	10.00	109.43	88.16
					F2P	10.79	11.15	10.00	20.00	99.31	87.74
					F2	11.15	14.23	20.00	30.00	104.80	87.60
					F	10.03	14.23	30.00	40.00	117.52	87.14
					G1	50.56	51.67	40.00	50.00	112.21	87.36
					G2P	51.67	51.78	50.00	60.00	125.01	87.71
					G2	51.78	52.85	60.00	70.00	151.95	87.66
					G3P	52.85	53.20	70.00	80.00	156.47	88.04
					G3	53.20	54.43	80.00	92.70	154.20	87.87
					G	50.56	54.43				
					J	71.09	76.65				
					K1P	76.65	78.30				
					K1	78.30	79.38				
					K2P	79.38	80.40				
					K2	80.40	82.00				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR87033	1437.70	6095148.0300	621293.3700	98.70	OVER	0.00	2.95	0.00	3.00	69.20	87.48
					F1	2.95	4.10	3.00	10.00	45.43	87.68
					F2P	4.10	4.51	10.00	20.00	36.22	88.35
					F2	4.51	8.56	20.00	30.00	59.14	89.22
					F	2.95	8.56	30.00	40.00	72.05	88.63
					G1	31.35	32.64	40.00	50.00	75.40	87.67
					G2P	32.64	32.92	50.00	60.00	85.31	87.84
					G2	32.92	34.26	60.00	70.00	97.65	87.90
					G3P	34.26	34.66	70.00	80.00	97.29	87.39
					G3	34.66	36.86	80.00	98.70	89.85	86.78
					G	31.35	36.86				
					J	60.73	66.27				
					K1P	66.27	67.19				
					K1	67.19	68.17				
					K2P	68.17	70.18				
					K2	70.18	72.03				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR87034	1319.00	6095778.1600	621750.4500	108.00	OVER	0.00	20.00				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR87035	1558.01	6096125.3000	620293.6600	129.00	OVER	0.00	6.00	0.00	1.00	70.59	86.17
					D1	16.40	17.00	1.00	10.00	50.43	86.58
					D2P	17.00	19.40	10.00	20.00	28.56	86.42
					D2	19.40	20.30	20.00	30.00	15.42	87.10
					E1	33.10	34.00	30.00	40.00	8.42	88.43
					E2P	34.00	35.10	40.00	50.00	34.35	88.17
					E2	35.10	37.05	50.00	60.00	57.51	87.58
					E3P	37.05	37.75	60.00	70.00	62.03	86.86
					E3	37.75	39.15	70.00	80.00	66.16	85.98
					E4P	39.15	40.62	80.00	90.00	66.86	83.64
					E4	40.62	41.38	90.00	100.00	63.10	82.56
					F1	61.26	61.96	100.00	110.00	57.23	82.36
					F2P	61.96	62.28	110.00	129.00	53.96	81.08
					F2	62.28	65.65				
					F	61.26	65.65				
					G1	91.01	92.09				
					G2P	92.09	92.21				
					G2	92.21	93.02				
					G3P	93.02	93.61				
					G3	93.61	94.61				
					G	91.01	94.61				
					J	111.47	116.92				
					K1P	116.92	117.69				
					K1	117.69	118.83				
					K2P	118.83	120.00				
					K2	120.00	120.88				
					COAL	121.55	121.78				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR87036	1544.31	6096202.0900	620351.1400	117.60	OVER	0.00	4.00	0.00	10.00	137.00	88.10
					D	2.40	3.20	10.00	20.00	161.00	87.20
					E1	21.40	21.80	20.00	30.00	173.00	85.60
					E2P	21.80	22.40	30.00	40.00	176.00	86.00
					E2	22.40	22.80	40.00	50.00	177.00	85.60
					E3P	22.80	23.70	50.00	60.00	173.00	84.90
					E3	23.70	24.24	60.00	70.00	176.00	84.90
					E4P	24.24	25.27	70.00	80.00	169.00	84.80
					E4	25.27	26.05	80.00	90.00	168.00	84.00
					F1	50.18	50.70	90.00	100.00	163.00	83.20
					F2P	50.70	51.14	100.00	110.00	168.00	82.40
					F2	51.14	54.25	110.00	117.60	162.00	82.90
					F	50.18	54.25				
					G1	77.99	79.23				
					G2P	79.23	79.40				
					G2	79.40	80.34				
					G3P	80.34	80.97				
					G3	80.97	82.12				
					G	77.99	82.12				
					J	97.80	103.48				
					K1P	103.48	104.56				
					K1	104.56	105.63				
					K2P	105.74	106.70				
					K2	106.70	107.98				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
BHR87037	1562.42	6095758.0000	620771.3200	91.80	OVER	0.00	4.00	0.00	5.00	97.00	89.50
					F1	7.70	8.10	5.00	10.00	94.00	88.80
					F2P	8.10	8.40	10.00	20.00	108.00	88.10
					F2	8.40	12.20	20.00	30.00	106.00	86.90
					F	7.70	12.20	30.00	40.00	113.00	85.50
					G1	41.47	42.70	40.00	50.00	119.00	86.10
					G2P	42.70	42.85	50.00	60.00	106.00	85.00
					G2	42.85	43.74	60.00	70.00	97.00	84.60
					G3P	43.74	44.22	70.00	80.00	95.00	84.10
					G3	44.22	45.60	80.00	91.80	93.00	84.00
					G	41.47	45.60				
					J	59.64	64.26				
					K1P	64.26	65.27				
					K1	65.27	66.22				
					K2P	66.22	67.01				
					K2	67.01	68.13				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR87038	1490.85	6096017.0100	620942.6700	129.00	QVER	0.00	10.00	0.00	5.00	310.00	88.70
					D1	10.30	11.38	5.00	10.00	290.00	88.20
					D2P	11.38	11.78	10.00	20.00	264.00	87.80
					D2	11.78	11.98	20.00	30.00	246.00	86.70
					D3P	11.98	12.27	30.00	40.00	238.00	85.90
					D3	12.27	12.90	40.00	50.00	233.00	84.90
					D	10.30	12.90	50.00	60.00	233.00	84.00
					E1	33.32	34.00	60.00	70.00	237.00	83.00
					E2P	34.00	34.83	70.00	80.00	234.00	82.60
					E2	34.83	35.04	80.00	90.00	228.00	81.60
					E3P	35.04	35.84	90.00	100.00	228.00	80.30
					E3	35.84	36.03	100.00	110.00	223.00	79.80
					E4P	36.03	38.26	110.00	120.00	215.00	78.40
					E4	38.26	39.85	120.00	129.00	220.00	77.90
					F1	58.26	58.97				
					F2P	58.97	59.24				
					F2	59.24	62.50				
					F	58.26	62.50				
					G1	97.42	98.45				
					G2P	98.45	98.62				
					G2	98.62	99.58				
					G3P	99.58	100.15				
					G3	100.15	101.25				
					G	97.42	101.25				
					J	115.70	120.59				
					K1P	120.59	121.72				
					K1	121.72	122.76				
					K2P	122.76	123.53				
					K2	123.53	125.01				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
BHR87039	1522.50	6095418.9600	621016.0100	99.00	OVER	0.00	2.00	0.00	5.00	341.00	89.90
					F1	13.93	15.30	5.00	10.00	100.00	89.70
					F2P	15.30	15.63	10.00	20.00	88.00	88.80
					F2	15.63	20.81	20.00	30.00	98.00	87.40
					F	13.93	20.81	30.00	40.00	104.00	86.30
					G1	53.75	55.06	40.00	50.00	93.00	85.50
					G2P	55.06	55.27	50.00	60.00	89.00	85.30
					G2	55.27	56.74	60.00	70.00	87.00	83.50
					G3P	56.74	57.38	70.00	80.00	81.00	81.70
					G3	57.38	58.93	80.00	90.00	81.00	81.30
					G	53.75	58.93	90.00	99.00	79.00	80.80
					J	79.48	83.02				
					K1P	83.02	84.20				
					K1	84.20	85.54				
					K2P	85.54	87.10				
					K2	87.10	88.80				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
GHR87040	1361.19	6095283.7400	622166.7700	98.20	OVER	0.00	1.00	0.00	5.00	237.00	89.70
					F1	14.18	15.33	5.00	10.00	256.00	89.90
					F2P	15.33	15.60	10.00	20.00	299.00	89.50
					F2	15.60	20.29	20.00	30.00	233.00	88.10
					F	14.18	20.29	30.00	40.00	224.00	87.80
					FAULT	25.50	25.51	40.00	50.00	217.00	87.30
					F2	25.51	27.20	50.00	60.00	222.00	87.00
					G1	43.99	45.05	60.00	70.00	220.00	86.40
					G2P	45.05	45.22	70.00	80.00	212.00	86.20
					G2	45.22	46.49	80.00	90.00	215.00	86.20
					G3P	46.49	47.05	90.00	98.20	216.00	84.30
					G3	47.05	48.61				
					G	43.99	48.61				
					J	72.04	77.82				
					K1P	77.82	79.00				
					K1	79.00	80.67				
					K2P	80.67	83.59				
					K2	83.59	85.06				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
GHR87041	891.53	6095150.7400	623801.9400	187.80	OVER	0.00	5.00	0.00	5.00	88.00	89.50
					D1	24.62	25.17	5.00	10.00	35.00	88.50
					D2P	25.17	25.53	10.00	20.00	187.00	89.50
					D2	25.53	26.40	20.00	30.00	199.00	87.30
					E3	59.82	61.06	30.00	40.00	217.00	86.10
					F1	79.40	79.76	40.00	50.00	225.00	85.60
					F2P	79.76	80.10	50.00	60.00	218.00	84.20
					F2	80.10	83.47	60.00	70.00	213.00	83.50
					F	79.40	83.47	70.00	80.00	218.00	83.50
					G1	104.04	104.92	80.00	90.00	221.00	83.00
					G2P	104.92	105.01	90.00	100.00	212.00	83.00
					G2	105.01	106.05	100.00	110.00	215.00	82.30
					G3P	106.05	108.18	110.00	120.00	214.00	82.00
					G	104.04	107.90	120.00	130.00	215.00	82.30
					J	126.40	131.12	130.00	140.00	218.00	82.00
					K1P	131.12	131.61	140.00	150.00	221.00	81.80
					K1	131.61	133.18	150.00	160.00	221.00	81.20
					K2P	133.18	138.37	160.00	170.00	217.00	80.80
					K2	138.37	139.20	170.00	180.00	219.00	80.60
								180.00	187.80	223.00	80.90

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR87042	891.10	6095081.3500	623740.7500	129.70	OVER	0.00	7.00	0.00	5.00	92.23	89.17
					E3	38.64	40.15	5.00	10.00	64.72	88.91
					F1	57.89	58.38	10.00	20.00	47.04	88.77
					F2P	58.38	58.72	20.00	30.00	73.36	88.85
					F2	58.72	62.68	30.00	40.00	84.08	88.85
					F	57.89	62.68	40.00	50.00	92.56	88.85
					G1	84.59	85.62	50.00	60.00	105.84	88.64
					G2P	85.62	85.79	60.00	70.00	109.06	88.28
					G2	85.79	86.36	70.00	80.00	114.68	88.12
					G3P	86.36	86.76	80.00	90.00	115.52	87.86
					G3	86.76	87.93	90.00	100.00	109.19	87.45
					G	84.59	87.93	100.00	110.00	104.01	87.28
					J	106.80	111.88	110.00	129.70	99.44	87.02
					K1P	111.88	112.36				
					K1	112.36	114.18				
					K2P	114.18	120.33				
					K2	120.33	121.06				
					FAULT	121.60	121.61				
					K2	121.98	123.01				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR87043	902.11	6094827.3600	623622.9900	116.40	OVER	0.00	2.00	0.00	5.00	248.00	89.20
					G1	36.40	37.63	5.00	10.00	259.00	88.60
					G2P	37.63	37.80	10.00	20.00	265.00	89.50
					G2	37.80	39.39	20.00	30.00	250.00	88.60
					G3P	39.39	40.35	30.00	40.00	239.00	88.40
					G3	40.35	42.32	40.00	50.00	239.00	87.70
					G	36.40	42.32	50.00	60.00	229.00	85.50
					J	71.76	79.63	60.00	70.00	223.00	82.60
					K1P	79.63	80.81	70.00	80.00	223.00	82.80
					K1	80.81	81.25	80.00	90.00	221.00	80.60
					K2P	81.25	90.37	90.00	100.00	223.00	76.90
					K2	90.37	91.48	100.00	110.00	219.00	75.60
					COALZ	91.60	92.47	110.00	116.40	217.00	75.10

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth des	Dip des
QHR87044	080.04	6094992.3500	623705.1900	135.70	OVER	0.00	3.00	0.00	5.00	128.00	89.30
					D1	10.68	11.69	5.00	10.00	99.00	89.80
					D2P	11.69	12.04	10.00	20.00	46.00	89.10
					D2	12.04	12.87	20.00	30.00	62.00	88.20
					D	10.68	12.87	30.00	40.00	72.00	88.20
					E3	47.27	48.86	40.00	50.00	79.00	87.90
					F1	65.53	65.91	50.00	60.00	80.00	87.70
					F2P	65.91	66.09	60.00	70.00	79.00	87.30
					F2	66.09	69.50	70.00	80.00	77.00	86.40
					F	65.53	69.50	80.00	90.00	74.00	85.60
					G1	92.10	92.80	90.00	100.00	68.00	85.10
					G2P	92.80	92.98	100.00	110.00	73.00	84.70
					G2	92.98	93.85	110.00	120.00	71.00	83.50
					G3P	93.85	94.23	120.00	130.00	62.00	81.50
					G3	94.23	95.55	130.00	135.70	59.00	80.70
					G	92.10	95.55				
					J	112.72	117.12				
					K1P	117.12	117.61				
					K1	117.61	119.07				
					K2P	119.07	125.06				
					K2	125.06	125.80				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth des	Dip des
GHR87045	838.09	6094837.8000	623932.4500	99.00	OVER	0.00	12.00	0.00	5.00	47.38	87.96
					G1	24.76	25.64	5.00	10.00	354.63	87.84
					G2P	25.64	25.90	10.00	20.00	17.56	87.75
					G2	25.90	26.64	20.00	30.00	96.19	87.60
					G3P	26.64	26.85	30.00	40.00	98.16	86.97
					G3	26.85	28.14	40.00	50.00	101.69	86.35
					G	24.76	28.14	50.00	60.00	105.32	85.39
					J	48.25	53.28	60.00	70.00	99.20	83.50
					K1P	53.28	53.90	70.00	80.00	97.35	82.46
					K1	53.90	55.62	80.00	99.00	93.79	81.29
					K2P	55.62	61.62				
					K2	61.62	62.15				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR87047	838.73	6094922.2800	623977.7800	79.00	OVER	0.00	5.00	0.00	5.00	281.97	88.13
					F1	13.78	14.16	5.00	10.00	233.85	88.32
					F2P	14.16	14.46	10.00	20.00	204.43	87.81
					F2	14.46	17.91	20.00	30.00	216.63	86.75
					F	13.78	17.91	30.00	40.00	231.96	86.29
					G1	39.64	40.68	40.00	50.00	255.42	86.36
					G2P	40.68	41.05	50.00	60.00	256.83	86.39
					G2	41.05	41.80	60.00	70.00	249.94	86.03
					G3P	41.80	42.10	70.00	79.00	240.84	85.12
					G3	42.10	43.23				
					G	39.64	43.23				
					J	59.72	66.28				
					K1P	66.28	67.44				
					K1	67.44	68.98				
					K2P	68.98	75.54				
					K2	75.54	76.19				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR87048	836.82	6095005.9100	624037.4500	111.30	OVER	0.00	2.00	0.00	5.00	297.57	88.10
					E3	27.32	28.90	5.00	10.00	248.92	87.65
					F1	47.49	47.93	10.00	20.00	202.89	86.86
					F2P	47.93	48.17	20.00	30.00	215.89	85.19
					F2	48.17	51.80	30.00	40.00	228.47	83.19
					F	47.49	51.80	40.00	50.00	239.54	82.73
					G1	72.33	73.29	50.00	60.00	246.61	82.38
					G2P	73.29	73.53	60.00	70.00	244.57	81.69
					G2	73.53	74.27	70.00	80.00	242.86	81.41
					G3P	74.27	74.46	80.00	90.00	240.33	80.99
					G3	74.46	75.74	90.00	100.00	240.19	80.44
					G	72.33	75.74	100.00	111.30	242.33	80.10
					J	94.07	98.57				
					K1P	98.57	99.34				
					K1	99.34	100.68				
					K2P	100.68	105.87				
					K2	105.87	106.58				
					K3	107.65	107.96				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHRB7049	841.24	6094780.3300	623876.6500	90.80	OVER	0.00	14.00				
					F1	25.76	26.24				
					G1	49.71	50.43				
					G2P	50.43	50.77				
					G2	50.77	51.37				
					G3P	51.37	52.00				
					G3	52.00	53.24				
					G	49.71	53.24				
					J	70.69	75.21				
					K1P	75.21	75.90				
					K1	75.90	77.94				
					K2P	77.94	83.74				
					K2	83.74	84.20				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR87050	844.50	6095263.2700	624327.4100	91.80	OVER	0.00	6.00				
					D1	16.32	17.71				
					D2P	17.71	18.34				
					D2	18.34	19.58				
					D	16.32	19.58				
					E3	49.48	51.04				
					F1	75.43	75.72				
					F2P	75.72	76.09				
					F2	76.09	79.53				
					F	75.43	79.53				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR87051	857.50	6093986.5700	622728.3700	147.70	OVER	0.00	6.00	0.00	5.00	151.80	89.30
					COAL	114.98	115.50	5.00	10.00	328.00	89.50
					COAL	115.75	115.92	10.00	15.00	17.30	88.50
					COAL	116.22	117.65	15.00	20.00	29.60	88.10
					COAL	130.34	130.97	20.00	25.00	35.30	87.60
					COAL	131.25	136.86	25.00	30.00	34.80	86.60
					COAL	138.55	139.43	30.00	35.00	22.80	86.60
					COAL	139.84	141.92	35.00	40.00	31.40	86.80
					COAL	142.74	142.87	40.00	45.00	23.70	86.30
								45.00	50.00	28.70	86.00
								50.00	55.00	25.40	85.70
								55.00	60.00	28.30	85.20
								60.00	65.00	31.20	84.70
								65.00	70.00	34.90	84.20
								70.00	75.00	35.80	83.70
								75.00	80.00	31.00	83.10
								80.00	85.00	32.50	83.20
								85.00	90.00	31.00	82.50
								90.00	95.00	32.50	82.00
								95.00	100.00	30.80	81.50
								100.00	105.00	30.60	81.30
								105.00	110.00	32.50	80.50
								110.00	115.00	33.20	80.00
								115.00	120.00	32.40	80.30
								120.00	125.00	32.00	80.60
								125.00	130.00	31.70	80.20
								130.00	135.00	31.00	79.80
								135.00	140.00	31.00	79.70
								140.00	145.00	32.90	80.00
								145.00	147.70	33.90	80.20

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR87052	951.88	6093829.3100	622093.2200	127.90	OVER	0.00	7.00				
					MB/GTCON	58.10	58.11				
					GT1	67.00	69.30				
					GT2	74.60	78.40				
					GT3U	84.80	85.50				
					GT3L	86.60	88.40				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
BHR87053	1034.79	6094070.2200	622065.9500	86.00	OVER	0.00	3.00				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR87054	1049.43	6094207.2100	622091.5900	99.00	OVER	0.00	3.00	0.00	10.00	256.70	89.10
					K2	3.75	5.28	10.00	20.00	233.10	88.60
					HIG	54.15	54.94	20.00	30.00	222.90	88.50
								30.00	40.00	231.80	87.30
								40.00	50.00	223.80	86.50
								50.00	99.00	211.10	86.30

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR87055	890.45	6093811.2000	622506.6200	55.60	OVER	0.00	6.00				
					COAL	12.80	13.57				
					COAL	13.95	15.35				
					COAL	23.04	26.69				
					COAL	33.63	34.13				
					COAL	34.71	36.28				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR87056	857.51	6093869.5000	623134.0200	91.30	OVER	0.00	9.00	0.00	91.30	47.20	62.83
					COAL	5.27	5.81				
					COAL	10.23	10.93				
					COAL	18.02	18.81				
					COAL	22.33	25.54				
					COAL	26.60	29.72				
					COAL	30.28	30.57				
					CGL	75.20	82.30				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR87057	876.83	6094089.2800	623303.9000	91.30	OVER	0.00	5.00				
					CGL	5.00	8.50				
					LGT	8.50	62.80				
					CADOMIN	62.80	91.30				

Hole	Elevation metres	Northing UTM	Eastins UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR87058	881.64	6094282.6300	623438.8700	79.20	QVER	0.00	6.00				
					MB/GT	41.20	41.21				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR07059	1368.63	6095942.5900	621392.1300	190.60	OVER	0.00	2.00	0.00	10.00	208.00	89.20
					D1	48.80	49.60	10.00	20.00	188.90	89.30
					D2P	49.60	49.80	20.00	30.00	119.00	88.60
					D2	49.80	50.90	30.00	40.00	4.50	89.60
					D3P	50.90	51.40	40.00	50.00	194.50	88.70
					D3	51.40	52.10	50.00	60.00	126.00	88.00
					D	48.80	52.10	60.00	70.00	44.50	89.10
					E2	73.00	74.10	70.00	80.00	224.80	89.40
					E4	101.90	104.80	80.00	90.00	200.20	88.10
					F1	140.40	142.15	90.00	100.00	166.70	87.90
					F2P	142.15	142.85	100.00	110.00	101.40	88.20
					F2	142.85	149.85	110.00	120.00	109.00	88.50
					F	140.40	149.85	120.00	130.00	193.50	88.50
								130.00	140.00	218.20	87.70
								140.00	150.00	206.70	88.00
								150.00	160.00	199.40	87.80
								160.00	170.00	210.40	87.70
								170.00	190.60	201.70	87.40

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth des	Dip des
QHR87060	1346.09	6095749.2500	621503.1700	80.30	OVER	0.00	3.00	0.00	10.00	228.60	89.50
					G1	32.00	33.40	10.00	20.00	3.30	87.00
					G2P	33.40	33.55	20.00	30.00	202.50	88.70
					G2	33.55	34.90	30.00	40.00	74.50	89.40
					G3P	34.90	35.40	40.00	50.00	298.90	88.80
					G3	35.40	37.80	50.00	60.00	266.40	86.50
					G	32.00	37.80	60.00	70.00	262.30	85.20
					J	50.70	64.10	70.00	80.30	257.10	83.90
					K1P	64.10	65.30				
					K1	65.30	67.40				
					K2P	67.40	69.50				
					K2	69.50	71.70				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR87061	1527.81	6095928.1200	620875.6100	99.20	OVER	0.00	4.00	0.00	10.00	35.50	88.80
					F1	17.90	18.40	10.00	20.00	40.70	88.50
					F2P	18.40	18.70	20.00	30.00	125.00	89.10
					F2	18.70	23.15	30.00	40.00	143.00	88.60
					F	17.90	23.15	40.00	50.00	143.20	88.40
					GCGL	33.30	56.15	50.00	60.00	156.60	88.00
					G1	56.15	57.20	60.00	70.00	181.80	86.70
					G2P	57.20	57.50	70.00	80.00	197.10	84.70
					G2	57.50	58.50	80.00	90.00	197.40	84.70
					G3P	58.50	59.20	90.00	99.20	199.90	83.90
					G3	59.20	60.60				
					G	56.15	60.60				
					J	75.50	80.40				
					K1P	80.40	81.30				
					K1	81.30	82.60				
					K2P	82.60	83.25				
					K2	83.25	84.95				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR87062	1544.99	6096057.4100	620103.8400	178.90	OVER	0.00	6.00				
					B	25.10	26.20				
					C	45.20	47.50				
					HG	69.30	69.31				
					D	67.40	69.20				
					E3	107.70	109.95				
					E4P	109.95	111.25				
					E4	111.25	112.00				
					F1	129.20	129.80				
					F2P	129.80	130.20				
					F2	130.20	133.60				
					F	129.20	133.60				
					GCGL	157.80	160.10				
					G1	160.60	161.75				
					G2P	161.75	161.95				
					G2	161.95	162.80				
					G3P	162.80	163.20				
					G3	163.20	164.50				
					G	160.60	164.50				
					J	178.10	178.90				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR87063	1508.25	6096279.5400	620168.5600	109.90	OVER	0.00	3.00				
					E3	14.50	16.80				
					E4P	16.80	17.80				
					E4	17.80	19.10				
					F1	44.20	44.80				
					F2P	44.80	45.30				
					F2	45.30	48.80				
					F	44.20	48.80				
					G1	69.30	70.20				
					G2P	70.20	70.60				
					G2	70.60	71.50				
					G3P	71.50	72.00				
					G3	72.00	73.40				
					G	69.30	73.40				
					J	90.00	95.20				
					K1P	95.20	95.90				
					K1	95.90	97.00				
					K2P	97.00	98.30				
					K2	98.30	99.50				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR87064	1499.61	6096360.0100	620222.2700	103.60	OVER	0.00	5.00				
					D	21.20	22.60				
					E3	42.70	45.00				
					E4P	45.00	45.80				
					E4	45.80	46.90				
					F1	68.00	68.40				
					F2P	68.40	68.80				
					F2	68.80	73.20				
					F	68.00	73.20				
					G1	91.90	92.80				
					G2P	92.80	93.20				
					G2	93.20	94.20				
					G3P	94.20	94.60				
					G3	94.60	95.90				
					G	91.90	95.90				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR87065	1519.31	6096311.4300	619929.8200	146.70	OVER	0.00	7.00				
					HB	19.60	19.61				
					D	50.80	52.00				
					E3	80.20	82.40				
					E4P	82.40	83.20				
					E4	83.20	84.50				
					F1	105.80	106.20				
					F2P	106.20	106.70				
					F2	106.70	110.75				
					F	106.70	110.75				
					GCGL	129.20	130.50				
					G1	131.40	132.10				
					G2P	132.10	132.30				
					G2	132.30	133.50				
					G3P	133.50	134.00				
					G3	134.00	135.70				
					G	130.40	135.70				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth des	Dip des
GHR87066	1505.69	6096322.9200	620077.6000	85.20	OVER	0.00	6.00				
					E3	27.20	29.60				
					E4P	29.60	30.90				
					E4	30.90	32.00				
					F1	62.10	62.80				
					F2P	62.80	63.30				
					F2	63.30	67.10				
					F	62.10	67.10				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR87067	1499.61	6096417.4100	619995.3400	42.00	COAL	41.00	42.00				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR87068	1484.15	6096527.4400	620065.1000	79.30	OVER	0.00	8.00				
					C	19.60	22.80				
					HG	46.80	46.81				
					B	65.70	67.60				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
BHR88003	1332.38	6094622.9800	620565.2700	58.88	OVER	0.00	2.00	0.00	5.00	158.50	89.20
					L	8.30	8.80	5.00	10.00	218.20	88.80
								10.00	15.00	73.10	88.70
								15.00	20.00	16.40	88.50
								20.00	25.00	22.50	88.00
								25.00	30.00	29.90	87.90
								30.00	35.00	35.00	87.60
								35.00	40.00	34.60	87.30
								40.00	45.00	33.90	87.20
								45.00	50.00	38.20	87.10
								50.00	58.88	41.00	86.80

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHRBB004	1354.74	6094949.7100	620890.4900	167.36	OVER	0.00	0.50	0.00	5.00	226.60	44.00
					B	2.90	3.70	5.00	10.00	222.20	44.00
					C1	14.50	15.00	10.00	15.00	214.20	43.90
					C2	35.30	35.60	15.00	20.00	216.20	43.70
					D1	87.84	88.35	20.00	25.00	214.60	44.40
					D2P	88.35	89.06	25.00	30.00	211.20	44.20
					D2	89.06	89.47	30.00	35.00	211.80	43.00
					D	87.84	89.47	35.00	40.00	211.50	42.50
					E1	102.54	102.90	40.00	45.00	209.60	41.90
					E2P	102.90	103.05	45.00	50.00	212.00	41.00
					E2	103.05	103.30	50.00	55.00	213.90	39.20
					E3P	103.30	104.10	55.00	60.00	211.40	37.40
					E3	104.10	105.35	60.00	65.00	211.00	36.80
					E4P	105.35	108.35	65.00	70.00	212.20	36.70
					E4	108.35	108.83	70.00	75.00	207.10	36.60
					E	102.54	108.83	75.00	80.00	209.60	36.80
					F1	111.75	112.86	80.00	85.00	210.10	36.90
					F2P	112.86	113.30	85.00	90.00	209.90	36.60
					F2U	113.30	114.30	90.00	95.00	215.40	35.30
					F2PTG	114.30	114.49	95.00	100.00	215.60	34.60
					F2L	114.49	116.89	100.00	105.00	214.50	34.30
					F	111.75	116.89	105.00	110.00	215.30	34.20
					FT	119.00	119.01	110.00	115.00	214.30	34.30
					F2L	119.06	121.10	115.00	120.00	214.80	34.50
					G1	124.18	125.15	120.00	125.00	215.00	34.40
					G2P	125.15	125.31	125.00	130.00	213.00	34.60
					G2	125.31	126.25	130.00	135.00	209.80	36.10
					G3P	126.25	126.56	135.00	140.00	208.60	35.90
					G3	126.56	128.05	140.00	145.00	208.30	34.30
					G	124.18	128.05	145.00	150.00	209.50	34.60
					J	140.80	145.27	150.00	155.00	214.70	34.30
					K1P	145.27	146.00	155.00	160.00	214.70	34.70
					K1	146.00	147.14	160.00	167.36	212.80	35.60
					K2P	147.14	148.28				
					K2	148.28	149.48				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR88005	1444.25	6094980.6700	620710.0300	147.72	OVER	0.00	1.00	0.00	147.72	217.00	60.00
					D2	59.00	59.70				
					D3P	59.70	60.30				
					D3	60.30	60.60				
					D4P	60.60	61.20				
					D4	61.20	62.00				
					D	59.00	62.00				
					E1	77.10	77.50				
					E2P	77.50	78.00				
					E2	78.00	79.10				
					E3P	79.10	82.20				
					E3	82.20	83.80				
					E	77.10	83.80				
					F1	95.10	96.20				
					F2P	96.20	96.80				
					F2	96.80	101.30				
					F	95.10	101.30				
					G1	108.30	108.90				
					G2P	108.90	109.30				
					G2	109.30	110.20				
					G3P	110.20	111.20				
					G3	111.20	111.90				
					G	108.30	111.90				
					J	128.10	134.30				
					K1P	134.30	135.30				
					K1	135.30	137.10				
					K2P	137.10	137.90				
					K2	137.90	138.20				
					K3P	138.20	139.60				
					K3	139.60	140.10				
					K	135.30	140.10				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHRB8006	1540.25	6095268.3700	620089.9800	166.62	OVER	0.00	4.00	0.00	105.00	217.00	60.00
					E1	13.10	13.70	105.00	110.00	219.70	58.10
					E2P	13.70	14.20	110.00	115.00	223.40	57.80
					E2	14.20	16.60	115.00	120.00	217.40	58.40
					E3P	16.60	19.50	120.00	125.00	219.10	59.10
					E3	19.50	21.10	125.00	130.00	220.10	60.10
					E4P	21.10	21.80	130.00	135.00	217.00	61.00
					E4	21.80	22.00	135.00	140.00	219.60	62.00
					E	13.10	21.10	140.00	145.00	217.50	62.30
					F1U	34.88	35.80	145.00	155.00	217.60	63.50
					F1PTG	35.80	36.14	155.00	160.00	218.20	64.50
					F1L	36.14	36.80	160.00	166.62	218.70	65.50
					F2P	36.80	37.49				
					F2U	37.49	39.45				
					FLT	39.50	39.60				
					F2PTG	39.45	39.84				
					F2U	39.84	41.28				
					F2PTG	41.28	41.88				
					F2L	41.88	46.57				
					F	34.88	46.57				
					FLT	56.00	56.10				
					G1	67.95	69.46				
					G2P	69.46	69.65				
					G2	69.65	69.95				
					G3P	69.95	70.28				
					G3	70.28	72.60				
					G	67.95	72.60				
					FLT	73.15	73.78				
					FLT	96.00	96.10				
					G1	107.88	109.15				
					G2P	109.15	109.36				
					G2	109.36	110.50				
					G3P	110.50	110.90				
					G3	110.90	112.42				
					G	107.88	112.42				
					J	134.75	140.20				
					K1P	140.20	141.37				
					K1	141.37	142.02				
					K2P	142.02	142.84				
					K2	142.84	143.35				
					K3P	143.35	151.61				
					K3	151.61	152.17				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR88007	1586.88	6095440.6100	619910.3400	78.20	OVER	0.00	2.40	0.00	78.20	217.00	60.00
					J	30.10	37.30				
					K	45.40	55.20				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR88011	1586.98	6095441.1000	619907.6300	198.20	OVER	0.00	5.00	0.00	20.00	216.80	60.50
					J	29.20	36.39	20.00	25.00	217.20	60.60
					FLT	36.85	37.67	25.00	35.00	219.90	61.40
					K1	46.20	48.98	35.00	40.00	221.80	61.30
					K2P	48.98	51.90	40.00	45.00	220.00	61.80
					K2U	51.90	52.21	45.00	60.00	220.80	61.80
					K2PTG	52.21	52.46	60.00	65.00	222.00	62.70
					K2L	52.46	55.08	65.00	75.00	218.70	63.00
					K3P	55.08	56.15	75.00	80.00	218.00	63.20
					K3	56.15	56.78	80.00	85.00	220.80	62.40
					K	46.20	56.78	85.00	90.00	219.40	62.70
					COAL	71.42	71.73	90.00	95.00	221.70	63.00
					PTG	71.73	72.25	95.00	100.00	222.90	63.20
					COAL	72.25	72.46	100.00	105.00	221.20	63.30
					PTG	72.46	73.87	105.00	115.00	220.90	63.20
					COAL	73.87	74.84	115.00	125.00	222.50	63.40
					PTG	74.84	77.92	125.00	130.00	219.60	63.50
					COAL	77.92	79.84	130.00	135.00	221.70	63.60
					PTG	79.84	80.03	135.00	145.00	219.40	63.50
					COAL	80.03	80.63	145.00	150.00	219.40	64.40
					G1	130.00	130.74	150.00	160.00	221.70	64.10
					G1PTG	130.74	130.94	160.00	165.00	224.40	63.50
					G1	130.94	141.85	165.00	170.00	222.50	63.60
					G2P	141.85	142.23	170.00	175.00	221.50	63.70
					G2	142.23	144.49	175.00	180.00	225.20	63.40
					G3P	144.49	145.77	180.00	185.00	220.50	63.20
					G3	145.77	150.26	185.00	190.00	224.40	63.40
					G	130.00	150.26	190.00	197.80	221.20	63.80
					J	168.94	172.58				
					K1	174.48	176.18				
					PTG	176.18	178.26				
					COAL	178.26	178.36				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR88012	1587.17	6095444.7600	619916.1400	47.58	OVER	0.00	6.00	0.00	10.00	37.00	45.00
					COAL	12.17	12.36	10.00	15.00	42.00	45.20
								15.00	20.00	45.00	44.70
								20.00	30.00	43.60	44.70
								30.00	35.00	48.80	44.60
								35.00	45.00	47.90	46.40
								45.00	47.58	44.20	43.90

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR88013	1610.59	6095500.8400	619756.9900	138.72	OVER	0.00	1.70	0.00	10.00	37.00	50.00
					L	27.10	27.32	10.00	30.00	34.80	50.20
					FLT	54.00	54.10	30.00	40.00	34.00	50.70
					B	60.79	62.62	40.00	45.00	32.10	51.30
					COAL	72.68	73.01	45.00	50.00	33.30	51.70
					KCH	92.00	92.01	50.00	55.00	36.50	51.80
								55.00	60.00	37.80	52.00
								60.00	65.00	37.70	51.90
								65.00	70.00	35.60	52.20
								70.00	75.00	37.20	52.10
								75.00	80.00	35.00	52.30
								80.00	85.00	38.30	52.40
								85.00	90.00	36.60	51.50
								90.00	95.00	37.40	50.70
								95.00	100.00	39.80	50.10
								100.00	105.00	35.30	49.00
								105.00	110.00	40.20	47.80
								110.00	115.00	40.30	46.00
								120.00	138.72	33.90	42.20

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR88014	1324.72	6095534.8800	621839.8700	95.30	OVER	0.00	5.00	0.00	5.00	217.00	60.00
					G1	25.61	26.48	5.00	15.00	222.40	57.40
					G2P	26.48	26.68	15.00	20.00	232.70	57.30
					G2	26.68	27.69	20.00	25.00	242.30	55.80
					G3P	27.69	28.27	25.00	30.00	234.40	57.10
					G3	28.27	29.80	30.00	35.00	231.90	57.70
					G	25.61	29.80	35.00	40.00	237.50	57.50
					J	46.72	52.49	40.00	45.00	239.50	56.60
					K1	52.49	53.53	45.00	50.00	233.00	57.80
					K2P	53.53	55.40	50.00	55.00	233.60	58.20
					K2	55.40	56.60	55.00	60.00	239.70	58.20
								60.00	65.00	235.00	58.50
								65.00	70.00	236.10	58.40
								70.00	75.00	227.50	59.10
								75.00	80.00	234.90	60.20
								80.00	85.00	228.60	61.20
								85.00	90.00	233.40	60.00
								90.00	95.00	237.60	60.30
								95.00	95.20	234.20	58.30

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
BHR88015	1068.53	6095021.6700	623106.0800	111.88	OVER	0.00	0.10	0.00	5.00	217.00	60.00
					F1	19.82	20.57	5.00	10.00	210.50	60.80
					F2P	20.57	20.85	10.00	15.00	211.00	61.70
					F2U	20.85	22.78	15.00	20.00	215.20	62.40
					F2PTB	22.78	23.05	25.00	30.00	225.50	61.30
					F2L	23.05	24.16	30.00	35.00	222.30	62.40
					F	19.82	24.16	35.00	40.00	216.60	62.60
					G1	57.79	58.48	40.00	45.00	222.40	63.00
					G2P	58.48	58.64	45.00	50.00	220.10	63.60
					G2	58.64	59.72	50.00	55.00	220.70	63.90
					G3P	59.72	60.24	55.00	60.00	228.90	64.10
					G3	60.24	61.48	60.00	65.00	221.20	64.60
					G	57.79	61.48	65.00	70.00	224.40	64.50
					J	83.31	88.40	70.00	75.00	220.30	63.70
					K1P	88.40	89.46	75.00	80.00	212.70	62.70
					K1	89.46	90.65	80.00	85.00	221.70	61.50
					K2P	90.65	94.60	85.00	90.00	226.70	60.80
					K2	94.60	95.56	90.00	95.00	219.00	60.20
								95.00	100.00	220.90	59.50
								100.00	105.00	224.60	58.50
								105.00	111.90	217.10	58.60

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHRB8016	1112.54	6094992.1600	622876.2300	74.76	OVER	0.00	6.10	0.00	8.00	0.00	90.00
					L	55.16	55.56	8.00	10.00	222.10	88.00
								10.00	15.00	200.70	89.10
								15.00	20.00	233.80	88.60
								20.00	25.00	215.00	88.90
								25.00	30.00	229.90	88.50
								30.00	35.00	174.70	89.10
								35.00	40.00	181.30	88.40
								40.00	45.00	216.90	87.70
								45.00	50.00	220.60	87.80
								50.00	55.00	225.40	87.60
								55.00	60.00	226.90	87.60
								60.00	65.00	228.80	88.40
								65.00	70.00	226.10	88.50
								70.00	74.76	228.40	88.40

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR88017	1117.09	6095037.2500	622921.5200	84.08	OVER	0.00	1.50	0.00	5.00	176.40	87.90
					G1	6.78	8.19	5.00	10.00	193.60	87.80
					G2P	8.19	8.37	10.00	15.00	287.90	88.10
					G2	8.37	10.03	15.00	20.00	42.00	88.40
					G3P	10.03	11.06	20.00	25.00	9.90	88.30
					G3	11.06	13.20	25.00	30.00	316.50	88.40
					G	6.78	13.20	30.00	35.00	343.10	88.80
					J	46.96	55.25	35.00	40.00	240.40	88.00
					K1P	55.25	56.98	40.00	45.00	255.60	87.60
					K1	56.98	58.29	45.00	50.00	245.90	87.40
					K2P	58.29	63.94	50.00	55.00	247.10	87.10
					K2	63.94	65.75	55.00	60.00	244.30	86.70
								60.00	65.00	242.30	87.00
								65.00	70.00	268.90	87.90
								70.00	75.00	253.60	87.80
								75.00	84.08	251.50	87.30

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR88018	1522.53	6096199.0200	620128.2800	125.02	OVER	0.00	4.00	0.00	4.00	0.00	90.00
					COAL	19.10	19.50	4.00	9.00	321.90	89.70
					E1	34.13	34.70	9.00	14.00	340.10	89.80
					E2P	34.70	34.80	14.00	19.00	315.20	89.30
					E2	34.80	36.21	19.00	24.00	334.70	89.20
					E3P	36.21	37.24	24.00	29.00	328.60	89.50
					E3	37.24	38.70	29.00	34.00	319.20	89.40
					E	34.13	38.70	34.00	39.00	340.70	89.10
					F1	58.38	58.83	39.00	44.00	36.80	88.40
					F2P	58.83	59.24	44.00	49.00	48.30	87.30
					F2U	59.24	60.41	49.00	54.00	59.70	86.50
					F2PTG	60.41	60.55	54.00	59.00	57.90	85.90
					F2L	60.55	62.57	59.00	64.00	56.70	84.50
					F	58.38	62.57	64.00	69.00	55.50	83.70
					G1	86.34	87.55	69.00	74.00	56.70	83.10
					G2P	87.55	87.73	74.00	79.00	58.80	82.30
					G2	87.73	88.59	79.00	84.00	60.40	82.20
					G3P	88.59	88.96	84.00	89.00	63.00	81.10
					G3	88.96	89.93	89.00	94.00	66.70	80.20
					G	86.34	89.93	94.00	99.00	68.00	79.60
					J	107.89	112.95	99.00	104.00	73.10	78.90
					K1P	112.95	113.95	104.00	109.00	72.70	78.60
					K1	113.95	115.18	109.00	114.00	72.40	77.90
					K2P	115.18	116.34	114.00	119.00	73.70	77.20
					K2	116.34	117.30	119.00	125.02	75.00	76.00
					COAL	118.43	118.63				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR88019	1349.43	6094998.4800	621360.9200	102.04	OVER	0.00	2.00	0.00	20.00	45.20	61.50
					F1	7.64	8.60	20.00	25.00	46.90	61.30
					F2P	8.60	8.76	25.00	30.00	47.40	61.30
					F2U	8.76	10.30	30.00	35.00	46.30	61.30
					F2PTG	10.30	10.94	35.00	40.00	47.80	60.50
					F2L	10.94	12.47	40.00	45.00	48.20	60.90
					F	7.64	12.47	45.00	50.00	47.40	60.70
					G1	25.84	26.62	50.00	55.00	48.60	60.40
					G2P	26.62	26.79	55.00	60.00	48.20	60.90
					G2	26.79	27.80	60.00	65.00	46.40	60.60
					G3P	27.80	28.14	65.00	70.00	47.40	60.90
					G3	28.14	29.47	70.00	75.00	47.40	61.70
					G	25.84	29.47	75.00	80.00	50.70	61.70
					J	45.49	49.64	80.00	85.00	48.40	61.30
					K1P	49.64	50.47	85.00	90.00	49.70	61.20
					K1	50.47	51.56	90.00	95.00	50.00	61.20
					K2P	51.56	52.09	95.00	102.04	42.60	60.00
					K2	52.09	53.53				
					K	50.47	53.53				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR88020	1283.06	6094894.4100	621303.4500	126.70	OVER	0.00	1.00	0.00	15.00	37.00	60.00
					E2	14.47	15.82	15.00	20.00	37.00	54.90
					E3P	15.82	16.24	20.00	25.00	38.80	59.80
					E3	16.24	16.64	25.00	30.00	39.50	60.90
					E	14.47	16.64	30.00	35.00	40.40	59.50
					F1	40.07	41.22	35.00	40.00	41.30	59.60
					F2P	41.22	41.38	40.00	45.00	40.90	59.80
					FLT	41.38	41.90	45.00	50.00	40.50	59.70
					F1	41.38	42.92	50.00	55.00	44.10	60.70
					F2P	42.92	43.78	55.00	60.00	43.20	61.20
					F2U	43.78	45.74	60.00	65.00	35.50	60.10
					F2PTG	45.74	45.82	65.00	70.00	43.10	60.40
					F2L	45.82	47.95	70.00	75.00	42.50	60.00
					F	40.07	47.95	75.00	80.00	43.40	61.10
					G1	61.52	62.47	80.00	85.00	43.80	61.40
					G2P	62.47	63.18	85.00	90.00	40.10	61.50
					G2	63.18	64.95	90.00	95.00	41.70	61.40
					G3P	64.95	65.46	95.00	100.00	44.20	62.50
					G3	65.46	66.73	100.00	105.00	42.70	61.90
					FLT	66.85	67.96	105.00	110.00	43.00	62.20
					PTG	66.73	66.93	110.00	115.00	39.70	62.30
					COAL	66.93	67.47	115.00	120.00	43.30	62.90
					PTG	67.47	67.73	120.00	126.70	45.20	63.40
					COAL	67.73	67.96				
					G	61.52	67.96				
					G1	69.06	70.04				
					G2P	70.04	70.83				
					G2	70.83	71.82				
					G3P	71.82	72.05				
					G3	72.05	73.42				
					G	69.06	73.42				
					J	90.79	95.34				
					K1P	95.34	96.10				
					K1	96.10	97.91				
					K2P	97.91	99.15				
					K2	99.15	100.28				
					K3P	100.28	100.49				
					K3	100.49	100.81				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR88021	1282.11	6094893.5400	621302.6700	163.12	OVER	0.00	1.00	0.00	2.00	0.00	90.00
					E2	10.70	11.10	2.00	5.00	310.10	87.80
					E3P	11.10	11.70	5.00	10.00	201.40	87.70
					E3	11.70	12.30	10.00	15.00	15.00	88.10
					F1	44.90	45.50	15.00	20.00	4.60	87.60
					F2P	45.50	46.20	20.00	25.00	5.80	87.80
					F2U	46.20	51.50	25.00	30.00	354.40	87.80
					F2PTG	51.50	53.50	30.00	35.00	356.70	87.80
					F2L	53.50	54.20	35.00	40.00	355.80	87.80
					F	44.90	51.50	40.00	45.00	350.80	87.70
					G1	78.00	79.00	45.00	50.00	349.90	87.70
					G2P	79.00	80.00	50.00	55.00	344.40	87.70
					G2	80.00	81.50	55.00	60.00	326.10	88.70
					G3P	81.50	82.90	60.00	65.00	339.40	88.00
					G3	82.90	85.40	65.00	70.00	354.60	88.30
					G	78.00	85.40	70.00	75.00	343.70	87.90
					J	108.00	121.90	75.00	80.00	338.80	87.70
					K1P	121.90	125.90	80.00	85.00	321.20	87.30
					K1	125.90	127.30	85.00	90.00	345.90	87.70
					K2P	127.30	129.20	90.00	95.00	357.50	87.50
					K2	129.20	131.10	95.00	100.00	340.30	87.50
					FLT	131.90	132.00	100.00	105.00	345.10	87.80
					K1	132.00	133.40	105.00	110.00	338.10	87.40
					K2P	133.40	135.60	110.00	115.00	355.30	88.00
					K2	135.60	137.60	115.00	163.12	2.20	88.10

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR88022	1282.73	6094890.0200	621286.0200	95.92	OVER	0.00	1.00	0.00	15.00	217.00	60.00
					COAL	4.80	5.30	15.00	25.00	226.90	59.10
					COAL	13.99	15.68	25.00	30.00	227.70	59.20
					COAL	25.00	25.44	30.00	40.00	234.80	60.20
								40.00	55.00	234.20	60.30
								55.00	65.00	228.60	60.90
								65.00	70.00	232.70	61.30
								70.00	80.00	237.90	62.10
								80.00	90.00	233.20	62.50
								90.00	95.92	230.80	62.00

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
GHR88023	1166.96	6094536.1900	621724.3300	173.78	OVER	0.00	2.00	0.00	6.00	0.00	90.00
					E	7.19	8.58	6.00	11.00	234.30	88.70
					PTG	8.58	9.90	11.00	16.00	187.00	89.00
					E	9.90	10.23	16.00	21.00	221.50	89.00
					PTG	10.23	10.97	21.00	26.00	209.70	88.90
					E	10.97	11.57	26.00	31.00	194.20	89.40
					F1	55.74	56.71	31.00	36.00	183.10	88.90
					F2P	56.71	57.12	36.00	41.00	228.80	89.00
					F2U	57.12	60.72	41.00	46.00	232.80	89.10
					F2PTG	60.72	60.87	46.00	51.00	228.30	89.50
					F2L	60.87	64.50	51.00	56.00	208.40	89.20
					FLT	64.50	64.60	56.00	61.00	177.00	89.20
					PTG	64.50	64.68	61.00	66.00	178.70	89.10
					F2L	64.68	65.48	66.00	71.00	199.00	89.10
					PTG	65.48	65.74	71.00	76.00	196.90	89.20
					COAL	65.74	65.99	76.00	81.00	251.60	89.00
					FLT	65.99	66.24	81.00	86.00	269.80	89.20
					F2U	66.24	69.86	86.00	91.00	277.50	89.40
					F2PTG	69.86	69.99	91.00	96.00	205.80	89.70
					F2L	69.99	72.84	96.00	101.00	182.40	89.60
					F	55.74	72.84	101.00	106.00	200.90	89.10
					G1U	97.48	98.05	106.00	111.00	209.20	89.30
					G1PTG	98.05	98.63	111.00	116.00	228.00	89.10
					G1L	98.63	99.89	116.00	121.00	261.80	89.30
					G2P	99.89	100.20	121.00	126.00	143.90	89.90
					G2U	100.20	101.77	126.00	131.00	120.50	89.00
					G2PTG	101.77	102.13	131.00	136.00	96.20	88.80
					G2L	102.13	102.76	136.00	141.00	101.80	88.60
					G3P	102.76	103.14	141.00	146.00	96.80	88.00
					G3	103.14	104.16	146.00	151.00	106.50	88.40
					G	97.48	104.16	151.00	156.00	119.70	88.30
					J	134.45	145.85	156.00	161.00	103.80	88.10
					COAL	146.57	146.77	161.00	166.00	112.60	88.40
					K1P	145.85	147.95	166.00	173.78	104.50	88.20
					K1	147.95	153.03				
					K2P	153.03	161.82				
					K2	161.82	163.90				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR88024	1167.16	6094535.4500	621723.8600	132.22	OVER	0.00	2.00	0.00	7.00	217.00	60.00
					E	3.80	4.80	7.00	12.00	217.20	61.80
					F1	35.94	37.00	12.00	17.00	211.80	62.30
					F2P	37.00	37.32	17.00	37.00	213.00	63.10
					F2	37.32	40.68	37.00	42.00	216.40	63.10
					F	35.94	40.68	42.00	47.00	215.60	63.20
					COAL	46.55	46.90	47.00	52.00	212.20	63.50
					COAL	46.98	47.26	52.00	57.00	212.50	63.30
					COAL	48.72	48.99	57.00	62.00	220.60	64.40
					COAL	49.40	49.72	62.00	67.00	217.70	64.40
					G1	52.34	53.74	67.00	77.00	218.60	64.70
					G2P	53.74	54.09	77.00	82.00	216.70	65.00
					G2	54.09	55.32	82.00	87.00	217.60	65.40
					G3P	55.32	56.28	87.00	102.00	217.40	65.90
					G3	56.28	57.92	102.00	107.00	208.70	65.40
					FLT	60.00	62.00	107.00	112.00	212.60	66.20
					G1	69.75	72.31	112.00	117.00	224.10	66.30
					G2P	72.31	73.14	117.00	122.00	218.10	67.10
					G2	73.14	74.46	122.00	132.22	217.80	67.50
					G3P	74.46	74.84				
					G3	74.84	76.65				
					G	69.75	76.65				
					J	97.80	104.40				
					K1P	104.40	105.84				
					K1	105.84	107.30				
					K2	109.84	112.10				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
BHR88025	1170.74	6094661.3100	621312.6300	30.00	OVER	0.00	3.00	0.00	30.00	37.00	60.00

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth des	Dip des
QHR88026	1171.61	6094653.5800	621305.3900	107.84	OVER	0.00	2.00	0.00	20.00	217.00	45.00
					G1	23.30	24.47	20.00	25.00	208.40	51.80
					G2P	24.47	24.78	25.00	30.00	212.60	52.10
					G2	24.78	25.88	30.00	35.00	212.10	52.50
					G3P	25.88	26.29	35.00	45.00	211.70	51.90
					G3	26.29	28.00	45.00	50.00	207.20	52.60
					G	23.30	28.00	50.00	70.00	208.90	53.90
					J	48.33	55.78	70.00	75.00	208.40	55.00
					FLT	55.78	61.80	75.00	80.00	205.60	54.30
					K1P	55.87	61.80	80.00	90.00	209.80	53.90
					K1	61.80	65.02	90.00	95.00	213.40	53.90
					K2P	65.02	66.80	95.00	100.00	211.40	54.30
					K2	66.80	68.75	100.00	107.84	209.40	54.50
					FLT	69.60	69.70				
					J	70.53	75.76				
					K1	77.50	79.40				
					K2P	79.40	80.42				
					K2	80.42	81.62				
					COAL	81.78	82.09				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
GHR88027	1081.14	6094396.5800	621638.8800	53.44	OVER	0.00	2.00	0.00	3.00	0.00	90.00
					J	7.33	11.65	3.00	6.00	181.50	89.10
					K1P	11.65	12.73	6.00	11.00	218.40	88.80
					K1	12.73	14.20	11.00	16.00	187.10	89.50
					K2P	14.20	15.57	16.00	21.00	306.20	89.20
					K2	15.57	17.06	21.00	26.00	274.20	88.60
								26.00	31.00	270.20	88.90
								31.00	36.00	288.90	88.90
								36.00	41.00	278.30	88.90
								41.00	46.00	267.80	88.10
								46.00	53.44	215.30	89.50

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR88028	1087.83	6094395.2000	621732.0800	54.32	QVER	0.00	3.00	0.00	3.00	0.00	90.00
								3.00	6.00	285.00	87.60
								6.00	11.00	295.00	87.10
								11.00	16.00	271.30	87.10
								16.00	21.00	282.50	88.10
								21.00	26.00	277.30	87.80
								26.00	31.00	269.20	88.20
								31.00	36.00	265.50	88.30
								36.00	41.00	291.10	88.70
								41.00	46.00	283.20	88.80
								46.00	54.32	294.30	88.40

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR88029	1072.37	6094304.1500	622181.6700	53.32	OVER	0.00	2.00	0.00	7.00	0.00	90.00
								7.00	12.00	267.50	88.30
								12.00	17.00	258.40	88.70
								17.00	22.00	191.80	89.00
								22.00	27.00	252.00	88.20
								27.00	32.00	234.40	87.90
								32.00	37.00	253.70	88.10
								37.00	42.00	234.30	88.20
								42.00	47.00	243.00	89.30
								47.00	53.32	154.00	89.70

Hole	Elevation metres	Northing UTM	Eastins UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
GPR88003	1054.24	6105851.1500	612203.0000	137.10	OVER	0.00	1.50	0.00	10.00	102.40	89.40
					E2	40.25	41.01	10.00	20.00	27.10	88.40
					E3P	41.01	42.63	20.00	30.00	167.40	89.40
					E3U	42.63	43.13	30.00	40.00	7.80	88.80
					PTG	43.13	43.91	40.00	50.00	24.40	88.40
					E3M	43.91	45.65	50.00	60.00	71.90	88.70
					PTG	45.65	46.92	60.00	70.00	52.00	87.90
					E3L	46.92	48.05	70.00	80.00	41.30	87.70
					E4	53.15	54.93	80.00	90.00	53.60	88.70
					G	84.68	85.38	90.00	100.00	49.00	87.20
					J1	93.42	94.68	100.00	110.00	37.10	87.40
					J2	118.80	121.93	110.00	120.00	43.20	87.20
					J3	121.93	127.17	120.00	134.96	45.70	85.70

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR88031	797.34	6094991.7900	624610.9700	114.36	OVER	0.00	5.00	0.00	6.00	0.00	90.00
					F1	26.79	27.21	6.00	10.00	307.40	88.90
					F2P	27.21	27.36	10.00	15.00	313.00	88.60
					F2	27.36	32.71	15.00	20.00	314.30	88.50
					F	26.79	32.71	20.00	25.00	321.70	88.70
					G1	52.39	53.63	25.00	30.00	342.20	88.20
					G2P	53.63	53.74	30.00	35.00	314.90	88.10
					G2	53.74	54.66	35.00	40.00	337.00	88.20
					G3P	54.66	55.03	40.00	45.00	356.00	88.30
					G3	55.03	56.49	45.00	50.00	356.80	88.10
					G	52.39	56.49	50.00	55.00	9.20	88.00
					J	80.55	85.81	55.00	60.00	16.90	87.80
					K1P	85.81	87.00	60.00	65.00	359.20	87.60
					K1	87.00	88.18	65.00	70.00	356.10	87.60
					K2P	88.18	92.99	70.00	75.00	12.90	88.00
					K2	92.99	93.65	75.00	80.00	14.30	86.80
								80.00	85.00	355.30	87.60
								85.00	90.00	8.60	87.60
								90.00	95.00	18.40	87.60
								95.00	100.00	15.90	86.90
								100.00	105.00	37.10	87.40
								105.00	114.36	18.40	87.20

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR88032	816.85	6095105.9700	624423.0100	24.00	OVER	0.00	24.00	0.00	24.00	0.00	90.00

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR88033	822.08	6095149.0500	624447.3400	119.62	OVER	0.00	1.00	0.00	10.00	0.00	90.00
					COAL	9.80	10.10	10.00	15.00	53.70	89.00
					E1	25.59	26.15	15.00	20.00	36.50	88.60
					E2P	26.15	26.64	20.00	25.00	29.20	88.30
					E2	26.64	26.90	25.00	30.00	2.70	88.40
					E3P	26.90	27.43	30.00	35.00	11.20	89.10
					E3U	27.43	28.92	35.00	40.00	37.90	88.40
					E3PTG	28.92	29.29	40.00	45.00	31.50	88.30
					E3L	29.29	29.64	45.00	50.00	22.60	87.50
					E3	27.43	29.64	50.00	55.00	37.80	87.90
					E	25.59	29.64	55.00	60.00	30.70	87.40
					F1	53.98	54.60	60.00	65.00	22.40	88.20
					F2P	54.60	54.70	65.00	70.00	49.70	88.10
					F2	54.70	58.60	70.00	75.00	34.50	87.50
					F	53.98	58.60	75.00	80.00	29.30	87.90
					G1	78.10	79.00	80.00	85.00	41.60	87.50
					G2P	79.00	79.15	85.00	90.00	31.50	87.50
					G2	79.15	80.06	90.00	95.00	38.30	87.50
					G3P	80.06	80.45	95.00	100.00	53.20	86.40
					G3	80.45	81.70	100.00	105.00	45.20	84.20
					G	78.10	81.70	105.00	110.00	48.40	84.50
					J	106.05	110.62	110.00	119.62	49.10	83.30
					K1P	110.62	111.42				
					K1	111.42	112.95				
					K2P	112.95	116.60				
					K2	116.60	117.48				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR88034	779.80	6094883.3300	624479.3300	30.10	OVER	0.00	30.00	0.00	30.00	0.00	90.00
					ABANDONE	30.00	30.10				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR88035	830.42	6094732.3800	624054.1200	35.10	OVER	0.00	35.00	0.00	35.00	0.00	90.00
					ABANDONE	35.00	35.10				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR88036	827.92	6094627.5800	623986.4000	52.10	OVER	0.00	52.00	0.00	52.00	0.00	90.00
					ABANDONE	52.00	52.10				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
GHR8205	1399.00	6096634.9000	618431.9000	70.00	K2	17.44	18.30	0.00	70.00	0.00	90.00
					K3	19.80	21.60				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR0206	1373.10	6096804.1000	618532.2000	61.00	COAL	13.20	14.80	0.00	61.00	0.00	90.00

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR83001	1409.90	6097092.8000	618366.9000	164.00	C	99.70	101.50	0.00	164.00	0.00	90.00
					E	151.30	152.30				
					FLT	152.30	152.30				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
BHR83002	1389.60	6097059.5000	618173.7000	176.00	E1	64.30	72.00				
					E2	72.80	77.00				
					E3	77.50	81.20				
					E	64.30	81.20				
					F	90.00	91.30				
					G	107.80	110.80				
					J	135.90	143.00				
					K1	155.60	156.20				
					K2	158.80	159.80				
					K3	161.40	163.40				
					K4	165.00	165.60				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR83003	1387.70	6097027.3000	618131.0000	96.00	F	4.80	6.30	0.00	96.00	0.00	90.00
					G	30.50	33.70				
					J	60.30	67.10				
					K1	78.30	80.00				
					K2	81.20	82.30				
					K3	84.60	86.10				
					K4	87.70	89.10				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR83004	1408.10	6096943.5000	618280.2000	150.00	E1	71.65	77.20	0.00	150.00	0.00	90.00
					E2	77.90	82.00				
					E3	82.60	84.70				
					E	71.65	84.70				
					F	94.00	94.80				
					G	106.45	108.85				
					J	130.60	135.70				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR83005	1373.00	6096807.0000	618534.3000	187.00	C	17.30	18.70	0.00	187.00	0.00	90.00
					E1	80.60	85.50				
					E2	86.70	89.40				
					E3	89.90	91.90				
					E	80.60	91.90				
					F	99.70	100.50				
					G1R	103.00	110.00				
					FLT	110.00	110.40				
					G1	110.80	111.60				
					G2P	111.60	111.90				
					G2	111.90	113.00				
					G	110.80	113.00				
					J	141.00	151.00				
					K	173.00	176.00				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHRB4012	1400.90	6096775.5000	618343.6000	109.50	F	11.13	12.22	0.00	5.00	201.00	88.50
					FLT	13.34	13.34	5.00	10.00	212.30	88.80
					G1	26.74	27.67	10.00	15.00	213.50	88.30
					G2P	27.67	28.12	15.00	20.00	206.70	88.30
					G2	28.19	29.40	20.00	25.00	201.90	88.40
					G	26.74	29.40	25.00	30.00	199.90	88.20
					J	50.33	57.11	30.00	35.00	203.00	88.10
					K2	73.34	73.98	35.00	40.00	210.60	87.90
					K3	75.44	76.74	40.00	45.00	210.40	88.00
								45.00	50.00	216.00	87.80
								50.00	55.00	225.40	87.60
								55.00	60.00	225.80	87.30
								60.00	65.00	218.00	87.00
								65.00	70.00	226.90	87.10
								70.00	75.00	228.00	86.40
								75.00	80.00	217.80	86.20
								80.00	85.00	220.70	85.50
								85.00	90.00	220.20	85.60
								90.00	95.00	241.70	85.60
								95.00	100.00	221.50	85.60
								100.00	105.00	228.70	85.40
								105.00	109.50	225.30	85.10

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR84013	1411.20	6096730.3000	618300.0000	91.30	K2	2.68	3.40	0.00	5.00	193.20	88.40
					K3	5.53	7.14	5.00	10.00	189.80	87.90
								10.00	15.00	195.00	87.40
								15.00	20.00	195.70	87.40
								20.00	25.00	190.00	86.90
								25.00	30.00	192.00	86.80
								30.00	35.00	200.50	86.50
								35.00	40.00	192.50	86.40
								40.00	45.00	196.70	86.10
								45.00	50.00	194.50	86.30
								50.00	55.00	200.50	85.80
								55.00	60.00	211.00	85.70
								60.00	65.00	206.40	85.40
								65.00	70.00	211.40	84.90
								70.00	75.00	209.60	84.90
								75.00	80.00	219.20	85.10
								80.00	85.00	220.10	84.80
								85.00	90.00	213.30	84.60
								90.00	91.30	201.60	84.10

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHRB4014	1310.90	6097198.3000	618049.0000	97.40	E1	28.40	36.50	0.00	10.00	327.90	88.80
					E2P	36.50	37.70	10.00	20.00	305.30	88.70
					E2	37.70	42.53	20.00	30.00	316.00	88.40
					E3P	42.53	42.80	30.00	40.00	301.80	88.20
					E3	42.80	45.30	40.00	50.00	308.00	88.20
					E	28.40	45.30	50.00	60.00	304.50	88.10
					F	54.84	56.46	60.00	70.00	309.70	88.00
					G	82.38	85.48	70.00	80.00	313.40	87.60
								80.00	90.00	307.20	87.20
								90.00	97.50	288.90	87.00

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR84015	1317.40	6097143.4000	618028.3000	60.80	J	23.86	32.17	0.00	2.00	221.50	88.30
					K2	42.83	44.03	2.00	4.00	222.70	88.30
					K3	47.93	49.54	4.00	6.00	243.60	88.10
								6.00	8.00	231.10	87.70
								8.00	10.00	233.10	87.50
								10.00	12.00	241.10	87.90
								12.00	14.00	257.00	88.00
								14.00	16.00	246.20	87.80
								16.00	18.00	239.50	87.80
								18.00	20.00	244.10	87.50
								20.00	22.00	252.30	87.10
								22.00	24.00	244.10	86.90
								24.00	26.00	251.40	86.90
								26.00	28.00	245.70	86.80
								28.00	30.00	250.20	86.80
								30.00	32.00	253.70	86.60
								32.00	34.00	242.90	86.70
								34.00	36.00	247.50	86.40
								36.00	38.00	244.00	86.60
								38.00	40.00	248.30	85.90
								40.00	42.00	249.00	85.70
								42.00	44.00	243.50	86.00
								44.00	46.00	241.40	86.10
								46.00	48.00	250.50	85.40
								48.00	50.00	249.00	85.00
								50.00	52.00	246.30	85.20
								52.00	54.00	248.80	85.20
								54.00	56.00	247.60	85.20
								56.00	58.00	246.20	85.30
								58.00	60.00	241.90	85.20
								60.00	60.80	249.40	85.10

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR84016	1408.80	6096881.7000	618253.4000	83.50	E1	0.00	7.10	0.00	83.50	0.00	90.00
					E2P	7.10	7.85				
					E2	7.85	12.10				
					E3P	12.10	12.80				
					E3	12.80	16.30				
					E	0.00	16.30				
					F	26.40	27.60				
					G1	43.15	44.00				
					G2P	44.40	44.60				
					G2	44.60	46.75				
					G	43.15	46.75				
					J	67.70	73.50				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR84025	1412.80	6096025.9000	618230.8000	66.80	J	0.00	4.32	0.00	5.00	268.20	89.30
					FLT	18.00	32.00	5.00	10.00	146.10	89.10
					K3	35.51	37.00	10.00	15.00	157.60	88.60
								15.00	20.00	161.30	88.20
								20.00	25.00	191.50	87.60
								25.00	30.00	203.80	86.90
								30.00	35.00	209.60	85.80
								35.00	40.00	224.50	85.30
								40.00	45.00	214.70	84.70
								45.00	50.00	209.80	84.20
								50.00	55.00	210.10	83.90
								55.00	60.00	213.40	83.30
								60.00	65.00	210.50	82.90
								65.00	66.80	214.00	82.50

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR06022	1620.59	6095522.7350	619535.3910	79.00	OVER	0.00	2.00	0.00	5.00	232.30	61.80
					KcG/KG	53.20	53.21	5.00	10.00	229.50	62.60
					BIRD	55.50	62.50	10.00	15.00	232.10	62.30
					FLT	62.50	62.51	15.00	20.00	229.40	62.80
								20.00	25.00	226.40	63.40
								25.00	30.00	239.20	64.80
								30.00	35.00	230.00	64.40
								35.00	40.00	229.80	63.70
								40.00	45.00	234.50	64.10
								45.00	50.00	234.80	64.70
								50.00	55.00	229.40	65.20
								55.00	60.00	230.00	65.10
								60.00	65.00	236.70	65.00
								65.00	70.00	232.10	64.80
								70.00	75.00	239.50	65.50
								75.00	78.10	241.60	65.80

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR86023	1622.70	6095599.2080	619403.7540	103.50	OVER	0.00	5.00	0.00	1.00	228.20	60.20
					KeG/KG	37.80	37.81	1.00	2.00	228.20	60.20
					COAL	46.10	52.50	2.00	3.00	228.20	60.20
					COAL	54.00	56.80	3.00	4.00	227.90	60.20
					FLT	60.00	60.10	4.00	5.00	224.70	60.20
					COAL	70.50	71.40	5.00	5.40	224.70	59.90
					J	74.40	90.60	5.40	103.50	227.00	60.00
					K1	92.80	94.00				
					K2P	94.00	95.30				
					K2	95.30	97.00				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
GHRB6024	1626.43	6095732.9130	619306.2900	146.00	OVER	0.00	3.00	0.00	5.00	205.30	60.70
					E3U	32.80	35.80	5.00	10.00	207.10	61.10
					E3PTG	35.80	37.60	10.00	15.00	211.80	61.90
					E3L	37.60	39.00	15.00	20.00	211.80	62.30
					COAL	45.70	46.90	20.00	25.00	209.20	62.80
					F1	60.00	60.80	25.00	30.00	211.30	62.80
					F2P	60.80	61.30	30.00	35.00	210.50	62.60
					F2	61.30	65.20	35.00	40.00	210.00	62.90
					F	60.00	65.20	40.00	45.00	214.30	62.40
					COAL	89.70	90.20	45.00	50.00	210.60	62.60
					COAL	94.30	101.70	50.00	55.00	211.60	62.60
					COAL	103.60	105.90	55.00	60.00	211.40	62.80
					COAL	107.30	109.60	60.00	65.00	214.00	63.50
					COAL	111.20	113.30	65.00	70.00	221.80	64.50
					COAL	120.00	123.20	70.00	75.00	209.30	64.40
					COAL	125.30	128.00	75.00	80.00	204.70	64.50
					COAL	129.80	134.40	80.00	85.00	207.80	65.90
								85.00	90.00	200.90	65.70
								90.00	95.00	213.60	66.40
								95.00	100.00	207.90	65.40
								100.00	105.00	222.40	66.20
								105.00	110.00	210.00	66.20
								110.00	115.00	205.50	66.30
								115.00	120.00	220.90	65.30
								120.00	125.00	219.20	67.60
								125.00	130.00	216.40	65.40
								130.00	135.00	218.70	68.30
								135.00	140.00	211.90	66.10
								140.00	145.00	215.30	66.40
								145.00	146.40	214.80	66.10

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR88001	1342.07	6097094.4300	618647.2900	208.28	OVER	0.00	29.00	0.00	40.00	267.40	88.70
					C1	60.20	60.48	40.00	45.00	316.60	88.40
					C2P	60.48	60.85	45.00	50.00	313.80	88.60
					C2	60.85	61.55	50.00	55.00	305.40	88.70
					C	60.20	61.55	55.00	60.00	303.30	88.70
					E1U	125.35	125.95	60.00	65.00	263.90	89.00
					E1PTG	125.95	126.10	65.00	70.00	136.30	88.70
					E1L	126.10	129.24	70.00	75.00	110.50	88.40
					E2P	129.24	130.42	75.00	80.00	127.20	88.50
					E2U	130.42	130.74	80.00	85.00	179.00	88.80
					E2PTG	130.74	131.15	85.00	90.00	137.90	88.50
					E2L	131.15	132.70	90.00	95.00	167.50	88.30
					E3P	132.70	132.95	95.00	100.00	194.70	87.90
					E3	132.95	134.68	100.00	105.00	201.40	87.30
					E	125.35	134.68	105.00	110.00	205.40	86.60
					F	141.75	142.46	110.00	115.00	206.10	86.00
					G1	148.21	148.91	115.00	120.00	203.80	85.40
					G2P	148.91	149.43	120.00	125.00	202.70	84.80
					G2	149.43	150.31	125.00	130.00	198.00	85.00
					J	169.49	173.79	130.00	135.00	194.00	85.30
					K1P	173.79	180.09	135.00	140.00	195.00	85.30
					K1	180.09	180.35	140.00	145.00	199.40	85.10
					K2P	180.35	181.70	145.00	150.00	207.40	84.60
					K2	181.70	182.08	150.00	155.00	208.10	84.60
					K3P	182.08	185.66	155.00	160.00	211.40	84.00
					K3	185.66	186.53	160.00	165.00	216.30	82.80
								165.00	170.00	219.60	82.20
								170.00	175.00	218.60	81.80
								175.00	180.00	218.80	81.30
								180.00	185.00	221.10	81.10
								185.00	190.00	217.70	80.90
								190.00	195.00	219.20	80.50
								195.00	200.00	221.20	80.60
								200.00	208.28	220.10	80.80

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR88002	1352.07	6096953.5400	618567.4200	200.18	QVER	0.00	11.00	0.00	20.00	36.10	88.80
					B	20.16	22.14	20.00	25.00	32.60	88.70
					C1	78.68	79.37	25.00	30.00	174.60	89.20
					C2P	79.37	79.61	30.00	35.00	155.20	88.80
					C2	79.61	80.61	35.00	40.00	154.80	88.70
					E1U	116.20	117.00	40.00	45.00	148.40	88.50
					E1P	117.00	117.21	45.00	50.00	143.40	88.30
					E1L	117.21	126.31	50.00	55.00	148.10	88.30
					E2P	126.31	127.62	55.00	60.00	146.50	88.00
					E2U	127.62	128.35	60.00	65.00	157.70	88.10
					E2PTG	128.35	128.64	65.00	70.00	163.70	87.80
					E2L	128.64	130.90	70.00	75.00	162.00	87.30
					E3P	130.90	131.13	75.00	80.00	154.20	87.00
					E3	131.13	134.28	80.00	85.00	144.70	86.70
					E	116.20	134.28	85.00	90.00	144.40	86.80
					F	140.36	141.08	90.00	95.00	149.20	86.60
					G1	147.42	148.15	95.00	100.00	153.90	86.00
					G2P	148.15	148.69	100.00	105.00	151.60	85.50
					G2	148.69	149.52	105.00	110.00	149.80	85.00
					J	167.20	171.45	110.00	115.00	151.10	84.30
					K1P	171.45	179.60	115.00	120.00	152.00	84.10
					K1	179.60	180.15	120.00	125.00	143.20	84.20
					K2P	180.15	181.03	125.00	130.00	145.10	84.40
					K2	181.03	181.48	130.00	135.00	146.40	84.30
					K3P	181.48	183.42	135.00	140.00	147.70	84.90
					K3	183.42	184.44	140.00	145.00	153.10	84.80
								145.00	150.00	168.40	84.50
								150.00	155.00	171.80	84.00
								155.00	160.00	179.60	83.30
								160.00	165.00	180.00	82.70
								165.00	170.00	179.00	82.70
								170.00	175.00	179.30	82.40
								175.00	180.00	181.30	81.60
								180.00	185.00	182.10	81.00
								185.00	190.00	179.10	80.60
								190.00	195.00	179.90	80.60
								195.00	200.18	175.20	80.70

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR88008	1464.54	6096543.6500	618879.5400	234.48	OVER	0.00	6.00	0.00	234.48	217.00	60.00
					C	38.44	39.43				
					COAL	58.47	58.68				
					COAL	59.10	59.50				
					D1	97.92	98.50				
					D2P	98.50	99.54				
					D2U	99.54	100.20				
					D2PTG	100.20	100.75				
					D2L	100.75	100.88				
					D2	99.54	100.20				
					D3P	100.88	101.42				
					D3	101.42	102.11				
					D	97.92	102.11				
					E1	151.62	152.06				
					E2P	152.06	152.22				
					E2	152.22	153.50				
					E3P	153.50	153.86				
					E3U	153.86	154.61				
					E3PTG	154.61	154.90				
					E3L	154.90	155.60				
					E	151.62	155.60				
					F1	157.93	158.43				
					F2P	158.43	158.73				
					F2U	158.73	160.50				
					F2PTG	160.50	160.80				
					F2L	160.80	162.89				
					F	157.93	162.89				
					G1	175.50	176.03				
					G2P	176.03	178.34				
					G2	178.34	179.02				
					G3P	179.02	179.58				
					G3	179.58	180.38				
					G	175.50	180.38				
					J	203.59	208.11				
					K1U	216.10	216.72				
					K1PTG	216.72	217.06				
					K1L	217.06	218.90				
					K1	216.10	218.90				
					K2P	218.90	219.14				
					K2	219.14	220.18				
					K3P	220.18	222.42				
					K3	222.42	222.59				
					K	217.06	220.18				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR88009	1566.86	6096037.1700	619148.4300	96.56	OVER	0.00	6.00	0.00	5.00	0.00	90.00
					A1	9.00	10.80	5.00	10.00	203.90	87.40
					A2F	10.80	11.00	10.00	15.00	209.00	87.10
					A2	11.00	11.40	15.00	20.00	220.80	87.40
					B	19.90	21.70	20.00	25.00	220.90	88.00
					COAL	29.80	30.30	25.00	30.00	223.20	88.60
								30.00	35.00	234.30	88.60
								35.00	40.00	252.10	88.90
								40.00	45.00	258.40	88.90
								45.00	50.00	312.60	88.90
								50.00	55.00	333.60	88.30
								55.00	60.00	345.00	87.60
								60.00	65.00	352.10	85.80
								65.00	70.00	355.10	85.60
								70.00	75.00	349.20	85.00
								75.00	80.00	348.80	84.90
								80.00	85.00	352.00	84.50
								85.00	90.00	349.40	84.50
								90.00	96.62	351.10	83.20

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR88010	1565.81	6096035.2100	619139.8300	232.22	OVER	0.00	6.00	0.00	11.00	217.00	60.00
					COAL	19.80	20.20	11.00	21.00	224.60	58.20
					C	45.50	45.90	21.00	31.00	222.10	58.00
					D1	81.67	82.24	31.00	36.00	218.40	59.10
					D2P	82.24	82.55	36.00	41.00	217.60	58.40
					D2	82.55	82.76	41.00	46.00	219.10	59.10
					D	81.67	82.76	46.00	51.00	219.30	58.70
					E1	140.49	141.23	51.00	56.00	218.10	59.10
					E2P	141.23	141.55	56.00	61.00	218.80	59.40
					E2	141.55	143.15	61.00	66.00	220.90	59.10
					E3P	143.15	144.54	66.00	71.00	222.70	59.80
					E3U	144.54	145.39	71.00	81.00	223.90	59.90
					E3PTG	145.39	145.73	81.00	86.00	222.00	59.60
					E3L	145.73	146.49	86.00	91.00	222.30	61.10
					E	140.49	146.49	91.00	96.00	218.80	61.50
					F1	151.54	151.94	96.00	101.00	222.50	61.30
					F2P	151.94	152.19	101.00	106.00	222.30	61.90
					F2U	152.19	153.97	106.00	111.00	218.20	62.20
					F2PTG	153.97	154.56	111.00	136.00	223.30	62.60
					F2L	154.56	156.73	136.00	141.00	227.90	61.80
					F	151.54	156.73	141.00	146.00	228.10	60.40
					G1	185.50	186.52	146.00	151.00	228.00	59.30
					G2P	186.52	187.23	151.00	166.00	235.00	58.20
					G2	187.23	188.02	166.00	171.00	241.10	55.70
					G3P	188.02	188.60	171.00	176.00	238.20	54.70
					G3	188.60	189.56	176.00	196.00	239.00	53.20
					G	185.50	189.56	196.00	201.00	238.90	46.20
					J	205.60	210.22	201.00	206.00	239.60	44.10
					K1	217.80	218.81	206.00	211.00	245.00	43.10
					K2P	218.81	220.00	211.00	216.00	242.10	40.60
					K2	220.00	221.99	216.00	221.00	238.30	39.30
					K3P	221.99	222.65	221.00	226.00	240.90	37.90
					K3	222.65	222.81	226.00	233.20	234.50	37.60
					K	217.80	221.99				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
OMR88501	866.37	6101927.6000	617741.8100	102.36	OVER	0.00	2.00	0.00	10.00	167.40	89.60
					G	5.38	6.40	10.00	20.00	237.10	89.60
					J	20.44	28.17	20.00	30.00	254.70	89.30
								30.00	40.00	261.10	89.00
								40.00	50.00	287.60	88.70
								50.00	60.00	274.20	88.60
								60.00	70.00	258.00	88.50
								70.00	80.00	242.60	89.00
								80.00	90.00	245.30	88.60
								90.00	102.36	251.10	89.00

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth des	Dir des
QMRQQ502	1009.93	6101124.1900	612668.2500	83.83	OVER	0.00	1.00	0.00	10.00	333.40	89.60
					G	9.10	10.03	10.00	20.00	22.00	89.50
					J	31.09	38.59	20.00	30.00	14.40	88.00
								30.00	40.00	42.40	87.90
								40.00	50.00	53.80	87.60
								50.00	60.00	18.20	86.60
								60.00	70.00	35.10	86.30
								70.00	83.83	30.00	86.80

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
OMR08503	1051.04	6101317.3700	612850.2200	76.84	OVER	0.00	1.00	0.00	10.00	281.00	89.70
					E3L	2.12	3.46	10.00	20.00	283.20	89.30
					E4	4.90	5.72	20.00	30.00	315.40	89.00
					FLT	12.00	12.25	30.00	40.00	354.90	89.40
					E4	13.93	14.25	40.00	50.00	133.20	89.60
					G	36.84	37.59	50.00	60.00	333.50	89.20
					J	56.62	64.06	60.00	76.84	321.00	88.90

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QHR00504	1049.83	6101230.7400	612782.9000	90.12	OVER	0.00	1.00	0.00	10.00	41.20	89.80
					E4	4.99	5.89	10.00	20.00	335.10	89.00
					G	20.46	21.72	20.00	30.00	347.80	89.40
					FLT	40.00	40.50	30.00	40.00	31.00	89.90
					J	53.82	61.62	40.00	50.00	93.80	89.30
								50.00	60.00	155.00	89.90
								60.00	70.00	209.20	89.80
								70.00	80.00	151.00	89.00
								80.00	90.12	161.40	89.00

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev. To	Azimuth deg	Dip deg
BMR88505	1052.12	6101452.1500	61?955.?100	114.40	OVER	0.00	2.00	0.00	10.00	215.30	89.10
					B3	18.27	20.90	10.00	20.00	221.30	89.80
					B4P	20.90	21.08	20.00	30.00	221.90	88.80
					B4U	21.08	21.39	30.00	40.00	223.80	88.00
					B4PTG	21.39	21.60	40.00	50.00	205.40	87.20
					B4L	21.60	22.47	50.00	60.00	232.00	87.90
					B	18.27	22.46	60.00	70.00	238.70	87.10
					E0U	24.00	25.10	70.00	80.00	229.90	87.40
					E0PTG	25.10	25.75	80.00	90.00	233.70	86.50
					E0L	25.75	26.11	90.00	100.00	226.60	86.60
					E0	24.00	26.11	100.00	114.40	234.30	86.20
					E1P	26.11	27.58				
					E1A	27.58	28.30				
					E1PTG	28.30	28.80				
					E1B	28.80	29.24				
					E1PTG	29.21	29.56				
					E1C	29.56	30.60				
					E1	27.58	30.60				
					E2P	30.60	31.55				
					E2U	31.55	32.40				
					E2PTG	32.40	32.52				
					E2L	32.52	34.81				
					E3P	34.81	35.07				
					E3U	35.07	36.85				
					E2E3U	30.60	36.85				
					E	27.58	36.85				
					E3PTG	36.85	40.68				
					E3L	40.68	41.78				
					E4P	41.78	43.50				
					E4U	43.50	43.79				
					E4PTG	43.79	55.21				
					E4L	55.21	55.74				
					E4	43.50	43.79				
					G	67.74	68.57				
					J	88.31	96.00				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QMR88506	1108.90	6101034.5000	612999.2000	72.06	OVER	0.00	1.65	0.00	11.00	86.50	89.10
					E4	1.65	3.04	11.00	21.00	63.70	89.10
					G	17.79	18.96	21.00	31.00	69.40	88.80
					J	51.92	57.10	31.00	41.00	80.20	88.40
								41.00	51.00	54.70	87.60
								51.00	61.00	71.00	86.60
								61.00	72.06	53.20	87.70

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dir deg
QMR88507	1121.58	6100847.7200	613208.6800	59.34	OVER	0.00	1.00	0.00	11.00	35.00	88.90
					G	6.73	8.15	11.00	21.00	62.40	89.60
					J	42.95	50.60	21.00	31.00	20.80	89.20
								31.00	41.00	1.80	89.00
								41.00	59.34	18.50	89.20

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QMR88508	1136.00	6101238.5800	613123.0900	192.48	COAL	3.69	4.64	0.00	10.00	120.00	88.90
					COAL	6.36	7.19	10.00	20.00	87.70	88.90
					R	25.76	27.78	20.00	30.00	3.50	89.60
					COAL	34.55	34.75	30.00	40.00	82.80	88.70
					COAL	45.39	46.00	40.00	50.00	169.30	89.50
					COAL	51.29	52.23	50.00	60.00	73.30	89.20
					D3	97.74	100.17	60.00	70.00	285.20	89.40
					D4P	100.17	100.53	70.00	80.00	249.70	89.50
					D4U	100.53	100.84	80.00	90.00	133.20	89.10
					D4PTG	100.84	101.42	90.00	100.00	56.90	89.60
					D4L	101.42	102.22	100.00	110.00	270.90	88.90
					D	97.74	102.22	110.00	120.00	225.90	89.40
					E0	103.98	105.05	120.00	130.00	268.30	89.00
					COAL	105.54	105.80	130.00	140.00	255.30	88.90
					E1	107.12	111.13	140.00	150.00	237.50	87.00
					E2P	111.13	111.99	150.00	160.00	256.20	84.40
					E2U	111.99	113.31	160.00	170.00	250.40	84.10
					E2PTG	113.31	113.37	170.00	180.00	253.20	82.50
					E2L	113.37	115.36	180.00	192.48	254.30	82.60
					E3P	115.36	115.70				
					E3U	115.70	116.78				
					E3PTG	116.78	120.34				
					E2E3U	111.99	120.34				
					E	107.12	120.34				
					E3L	120.34	121.07				
					E4P	121.07	122.79				
					E4	122.79	123.08				
					G	147.69	148.50				
					J	172.52	180.98				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QMR88509	885.30	6101775.3800	612708.7200	47.28	J	10.27	17.97	0.00	10.00	308.60	88.00
					FLT	36.20	37.80	10.00	20.00	283.40	88.30
								20.00	30.00	72.00	89.60
								30.00	47.28	245.80	88.50

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QMR88510	857.62	6101889.6400	612654.2400	11.00				0.00	11.00	0.00	90.00

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
GHR88155	1351.57	6100738.7600	613876.7700	297.16	OVER	0.00	3.00	0.00	5.00	215.20	59.00
					A	124.30	125.60	5.00	10.00	220.10	59.20
					B	151.05	152.08	10.00	15.00	220.10	59.80
					C	176.10	176.70	15.00	20.00	221.30	60.60
					D3	252.17	254.72	20.00	25.00	220.00	61.40
					E0	259.77	260.99	25.00	30.00	222.60	61.70
					E1P	260.99	262.84	30.00	35.00	219.00	62.40
					E1	262.84	266.35	35.00	40.00	221.70	62.60
					E2P	266.35	267.05	40.00	45.00	220.80	63.00
					E2U	267.05	269.27	45.00	50.00	220.80	63.60
					E2PTG	269.27	269.44	50.00	55.00	219.40	64.00
					E2L	269.44	271.34	55.00	60.00	220.70	64.40
					E2	267.05	271.34	60.00	65.00	220.80	64.50
					E3P	271.34	271.77	65.00	70.00	221.60	64.70
					E3U	271.77	273.60	70.00	75.00	223.40	64.50
					E	262.84	273.60	75.00	80.00	221.80	65.40
					E3PTG	273.60	278.38	80.00	85.00	220.80	65.80
					E3L	278.38	279.45	85.00	90.00	221.80	66.10
					E4P	279.45	281.37	90.00	95.00	222.00	66.40
					E4	281.37	282.62	95.00	100.00	221.30	66.70
					G	292.42	293.84	100.00	105.00	221.40	67.10
								105.00	110.00	222.40	66.90
								110.00	115.00	222.70	67.40
								115.00	120.00	222.60	67.70
								120.00	125.00	221.90	67.90
								125.00	130.00	223.70	68.20
								130.00	135.00	222.70	68.00
								135.00	140.00	223.20	68.50
								140.00	145.00	222.00	68.50
								145.00	150.00	223.00	68.60
								150.00	155.00	225.20	68.80
								155.00	160.00	223.10	69.00
								160.00	165.00	227.40	69.00
								165.00	170.00	228.80	68.60
								170.00	175.00	229.40	68.50
								175.00	180.00	229.00	68.00
								180.00	185.00	233.20	67.40
								185.00	190.00	233.20	67.10
								190.00	195.00	234.20	67.10
								195.00	200.00	234.30	66.50
								200.00	205.00	237.40	66.20
								205.00	210.00	240.90	65.70
								210.00	215.00	242.10	65.50
								215.00	220.00	242.70	65.10
								220.00	225.00	245.00	64.90
								225.00	230.00	250.10	64.70
								230.00	235.00	247.80	64.50
								235.00	240.00	254.00	63.90
								240.00	245.00	254.00	63.50
								245.00	250.00	255.90	63.10

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
MR88130	1463.20	6100041.8500	614270.9490	213.90	A1	20.20	20.50	0.00	10.00	27.30	89.40
					A2	26.80	27.10	10.00	20.00	174.60	88.80
					B	50.80	52.10	20.00	30.00	149.90	88.80
					C	59.00	59.70	30.00	40.00	358.00	89.50
					FA?	68.00	68.00	40.00	50.00	353.30	86.10
					G	90.40	90.40	50.00	60.00	71.70	87.30
					~	109.00	109.00	60.00	70.00	44.80	87.10
					CPRK	124.40	134.30	70.00	80.00	65.40	86.40
					D3	138.60	139.40	80.00	90.00	70.20	85.40
					E0	140.80	141.70	90.00	100.00	75.80	84.80
					E1	144.00	145.70	100.00	110.00	76.60	83.60
					E2	146.60	150.00	110.00	120.00	81.30	83.50
					E3	150.50	152.20	120.00	130.00	88.20	83.20
					E	144.00	152.20	130.00	140.00	84.40	82.70
					E3L	154.00	155.10	140.00	150.00	92.30	82.30
					E4	156.60	158.00	150.00	160.00	99.60	81.70
					G	176.70	178.10	160.00	170.00	113.80	79.80
					J1	190.60	195.70	170.00	180.00	124.00	76.70
					J2	196.20	197.60	180.00	190.00	124.40	75.60
					J3	198.20	199.50	190.00	200.00	122.50	74.10
					J	190.60	199.50	200.00	210.00	131.40	73.10
					J4	200.70	200.90	210.00	213.70	133.00	71.80

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QMR88131	1463.19	6100041.1600	614267.8770	207.00	A1?	23.60	24.00	0.00	10.00	257.00	65.40
					A2?	26.60	26.90	10.00	20.00	254.30	65.40
					B	32.80	34.00	20.00	30.00	246.60	65.10
					C	49.40	51.60	30.00	40.00	241.50	67.00
					CPRK	148.00	158.00	40.00	50.00	238.30	68.50
					D3	158.00	161.20	50.00	60.00	225.80	70.30
					D4	162.80	163.60	60.00	70.00	246.60	69.00
					E	169.60	180.20	70.00	80.00	207.10	69.60
					E4	183.40	185.60	80.00	90.00	223.00	69.90
					G	195.80	196.80	90.00	100.00	214.60	70.70
								100.00	110.00	207.80	71.50
								110.00	120.00	205.60	72.00
								120.00	130.00	206.90	74.20
								130.00	140.00	206.90	74.70
								140.00	150.00	202.00	75.50
								150.00	160.00	212.80	77.10
								160.00	170.00	213.30	74.10
								170.00	180.00	216.60	74.00
								180.00	190.00	218.70	73.20
								190.00	200.00	229.20	72.90
								200.00	206.80	223.90	72.10

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QMR88151	1388.25	6100502.5600	614122.4940	284.90	A1	26.60	27.40	0.00	11.00	223.30	63.20
					A2	34.80	35.20	11.00	21.00	220.10	63.90
					B	61.30	62.10	21.00	31.00	221.70	63.70
					D	69.90	69.90	31.00	41.00	228.90	65.00
					^	96.00	96.00	41.00	51.00	214.60	62.20
					CPRK	112.20	149.20	51.00	61.00	214.20	62.30
					D3	149.20	150.30	61.00	71.00	227.20	62.70
					D4	152.40	153.40	71.00	81.00	221.80	61.00
					E0	157.90	159.30	81.00	91.00	228.60	61.30
					E1	162.40	166.80	91.00	101.00	225.20	63.00
					E2	167.80	172.40	101.00	111.00	221.80	66.00
					E3	172.90	178.40	111.00	121.00	225.20	63.60
					E	162.40	178.40	121.00	131.00	208.10	64.00
					E3L	181.60	182.80	131.00	141.00	217.00	64.20
					E4	184.50	186.80	141.00	151.00	216.00	63.80
					G	197.50	199.10	151.00	161.00	211.30	63.40
					J1	243.70	250.40	161.00	171.00	220.50	63.80
					J2	255.40	256.90	171.00	181.00	217.20	64.30
					J3	257.80	260.00	181.00	191.00	220.20	63.90
					J	243.70	260.00	191.00	201.00	214.20	64.70
								201.00	211.00	203.50	65.90
								211.00	221.00	224.70	66.50
								221.00	231.00	220.60	67.20
								231.00	241.00	217.30	67.60
								241.00	251.00	215.70	68.60
								251.00	261.00	215.60	68.60
								261.00	271.00	187.00	68.90
								271.00	281.00	215.70	69.70
								281.00	284.70	215.70	69.70

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QMR88152	1415.55	6100269.0700	614272.3300	160.50	D	25.60	25.60	0.00	10.00	226.30	57.30
					^	32.60	32.60	10.00	20.00	231.50	57.50
					CPRK	51.20	67.90	20.00	30.00	228.80	58.20
					D3	67.90	69.50	30.00	40.00	223.10	59.30
					D4	71.40	73.30	40.00	50.00	218.00	61.00
					FA	74.60	74.60	50.00	60.00	212.50	60.90
					D4	74.60	75.70	60.00	70.00	215.90	60.60
					Eo	77.80	78.60	70.00	80.00	211.90	61.40
					E1	80.60	84.60	80.00	90.00	214.60	60.90
					E2	85.50	89.60	90.00	100.00	205.60	62.90
					E3	90.10	91.80	100.00	110.00	211.50	65.70
					E	80.60	91.80	110.00	120.00	204.60	63.50
					E3L	94.70	95.70	120.00	130.00	203.50	63.10
					E4	97.50	98.40	130.00	140.00	199.60	64.30
					FA	99.60	99.60	140.00	150.00	206.10	65.10
					E4	100.30	101.20	150.00	160.00	197.10	65.50
					G	109.50	111.00	160.00	160.50	189.00	65.10
					J1	139.00	145.70				
					J2	146.80	148.40				
					J3	149.00	150.50				
					J	139.00	150.50				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QMR88153	1429.13	6100117.8800	614293.2790	161.00	CPRK	24.80	50.00	0.00	10.00	309.00	88.80
					D3	50.00	51.40	10.00	20.00	303.20	88.60
					FA	51.40	51.60	20.00	30.00	303.10	87.50
					D3	51.60	54.20	30.00	40.00	311.90	88.10
					D4	57.00	58.20	40.00	50.00	339.00	86.90
					Eo	67.60	68.00	50.00	60.00	342.40	85.80
					E1	69.00	71.00	60.00	70.00	355.50	85.40
					E2	71.70	76.40	70.00	80.00	0.60	83.90
					WL	76.40	76.40	80.00	90.00	0.40	83.40
					E3	77.00	79.10	90.00	100.00	1.80	83.40
					E	69.00	79.10	100.00	110.00	14.20	82.70
					E3L	82.00	83.20	110.00	120.00	21.30	81.50
					E4	85.30	86.70	120.00	130.00	22.10	80.90
					COAL?	87.40	88.00	130.00	140.00	25.40	80.10
					FA	89.00	89.00	140.00	150.00	29.10	79.90
					E4	89.00	90.40	150.00	160.00	36.40	79.10
					COAL?	91.00	91.40	160.00	160.90	37.30	78.90
					G	103.10	104.40				
					FA	126.10	126.40				
					J1	136.40	141.10				
					J2	141.40	142.80				
					J3	143.40	144.20				
					J	136.40	144.20				
					J4	147.30	147.70				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
GMR88154	1432.11	6100083.4300	614266.8100	193.10	B?	12.70	13.20	0.00	10.00	97.50	87.80
					0	33.20	33.20	10.00	20.00	191.80	89.30
					^	62.00	62.00	20.00	30.00	303.60	88.40
					CPRK	87.30	105.30	30.00	40.00	300.80	88.90
					B3	105.30	107.40	40.00	50.00	313.20	88.60
					B4	109.10	110.00	50.00	60.00	38.50	86.90
					Eo	114.40	114.80	60.00	70.00	46.20	86.70
					E1	115.40	116.80	70.00	80.00	39.60	86.60
					E2	117.60	121.40	80.00	90.00	340.50	88.40
					E3	122.00	124.00	90.00	100.00	341.40	88.20
					E	115.40	124.00	100.00	110.00	343.30	88.30
					E3L	126.40	127.60	110.00	120.00	348.50	88.00
					E4	129.50	131.20	120.00	130.00	353.60	87.60
					G	139.90	141.70	130.00	140.00	344.10	86.70
					FA	150.20	150.20	140.00	150.00	355.80	86.70
					J1	165.80	175.00	150.00	160.00	1.90	87.20
					J2	175.40	176.80	160.00	170.00	22.50	86.40
					J3	177.50	178.60	170.00	180.00	29.40	84.90
					J	165.80	178.60	180.00	190.00	16.50	85.70
								190.00	195.20	17.60	86.10

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QPR87001	918.24	6105215.2100	612398.1800	73.50	QVER	0.00	3.00				
					L	29.50	30.00				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QPR87002	954.63	6104982.6500	612049.3400	60.50	OVER	0.00	3.00				
					COAL	1.10	2.30				
					J1J2	14.40	19.60				
					J3P	19.60	20.90				
					J3	20.90	22.90				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QPR87003	945.01	6105131.4300	612166.3600	44.40	OVER	0.00	3.00	0.00	10.00	49.80	87.50
					G	11.00	11.90	10.00	20.00	50.00	87.70
					J1J2	22.03	27.60	20.00	30.00	68.80	87.90
					J3P	27.60	29.26	30.00	40.00	57.50	87.50
					J3	29.26	31.52	40.00	14.40	50.20	86.80

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QFRB7004	930.10	6105276.7600	612307.3700	37.90	OVER	0.00	4.00	0.00	10.00	52.80	88.60
					J1J2	13.08	20.12	10.00	20.00	21.50	89.00
					J3P	20.12	21.77	20.00	30.00	266.50	89.10
					J3	21.77	24.03	30.00	37.90	233.80	88.90

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth des	Dip des
BPRB7005	923.61	6105449.8400	612402.9700	43.30	OVER	0.00	3.00	0.00	10.00	298.20	88.30
					G	8.62	9.46	10.00	20.00	267.20	88.60
					J1J2	25.65	31.20	20.00	30.00	227.80	88.20
					J3P	31.20	32.86	30.00	40.00	212.60	88.10
					J3	32.86	35.22	40.00	43.30	209.40	88.20

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
GPR88001	1134.47	6106415.9300	611144.3000	181.80	OVER	0.00	1.00	0.00	10.00	331.00	88.70
					COAL	4.60	5.70	10.00	20.00	83.50	89.20
					COAL	11.52	11.97	20.00	30.00	93.40	88.30
					COAL	13.91	14.16	30.00	40.00	142.10	88.10
					COAL	19.44	19.68	40.00	50.00	159.80	88.40
					C2	28.77	29.98	50.00	60.00	139.20	89.00
					COAL	71.48	71.60	60.00	70.00	122.90	88.90
					D3	75.20	75.76	70.00	80.00	100.10	88.90
					E1	110.40	110.70	80.00	90.00	67.90	87.80
					E1PTG	110.70	111.42	90.00	100.00	55.70	85.40
					E1	111.42	112.93	100.00	110.00	54.70	81.80
					E3U	131.08	132.31	110.00	120.00	49.50	84.80
					E3PTG	132.31	133.03	120.00	130.00	43.60	85.30
					E3L	133.03	133.37	130.00	140.00	47.60	84.90
					E3	131.08	133.37	140.00	150.00	44.50	85.10
					E4P	133.37	135.13	150.00	160.00	42.60	83.90
					E4	135.13	136.43	160.00	170.00	41.50	84.50
					G2	163.28	163.95	170.00	181.80	43.80	83.30
					J1	169.46	171.10				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QPR88002	1101.47	6106305.6800	611550.0200	171.30	OVER	0.00	3.00	0.00	10.00	20.10	88.50
					D3U	12.22	12.51	10.00	20.00	322.40	87.50
					D3PTG	12.51	12.74	20.00	30.00	332.40	87.00
					D3L	12.74	12.88	30.00	40.00	343.20	87.70
					D3	12.22	12.88	40.00	50.00	332.20	87.30
					E1	49.00	49.50	50.00	60.00	352.10	86.80
					E2U	61.20	61.33	60.00	70.00	357.60	85.70
					E2PTG	61.33	61.47	70.00	80.00	34.50	84.10
					E2L	61.47	61.65	80.00	90.00	34.60	83.80
					E2	61.20	61.65	90.00	100.00	13.50	83.20
					E3U	69.85	71.04	100.00	110.00	7.70	83.90
					E3PTG	71.04	71.32	110.00	120.00	8.30	83.80
					E3L	71.32	71.84	120.00	130.00	10.90	83.70
					E3	69.85	71.84	130.00	140.00	12.10	83.50
					E4P	71.84	74.49	140.00	150.00	16.40	83.30
					E4	74.49	77.23	150.00	160.00	28.50	82.60
					G	100.40	101.09	160.00	170.00	40.10	82.80
					J1	106.61	107.33	170.00	171.30	45.60	82.30
					J2	141.81	144.48				
					J3P	144.48	148.97				
					J3	148.97	151.36				

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
GPR88003	1054.24	6105851.1500	612203.0000	137.10	OVER	0.00	1.50	0.00	10.00	102.40	89.40
					E2	40.25	41.01	10.00	20.00	27.10	88.40
					E3P	41.01	42.63	20.00	30.00	167.40	89.40
					E3U	42.63	43.13	30.00	40.00	7.80	88.80
					PTG	43.13	43.91	40.00	50.00	24.40	88.40
					E3M	43.91	45.65	50.00	60.00	71.90	88.70
					PTG	45.65	46.92	60.00	70.00	52.00	87.90
					E3L	46.92	48.05	70.00	80.00	41.30	87.70
					E4	53.15	54.93	80.00	90.00	53.60	88.70
					G	84.68	85.38	90.00	100.00	49.00	87.20
					J1	93.42	94.68	100.00	110.00	37.10	87.40
					J2	118.80	121.93	110.00	120.00	43.20	87.20
					J3	121.93	127.17	120.00	134.96	45.70	85.70

Hole	Elevation metres	Northing UTM	Easting UTM	Depth metres	Seam	From metres	To metres	Dev. From	Dev To	Azimuth deg	Dip deg
QPR08004	1092.31	6106535.4800	611498.4400	70.82	OVER	0.00	1.00	0.00	10.00	131.90	88.60
					G	6.06	6.20	10.00	20.00	102.80	88.00
					J1	8.41	9.51	20.00	30.00	131.50	89.10
					J2	58.00	60.60	30.00	40.00	62.40	89.10
					J3	64.91	67.42	40.00	50.00	45.50	88.80
								50.00	60.00	75.00	87.60
								60.00	70.82	34.60	87.00