QUINTETTE COAL LIMITED

1987 EXPLORATION REPORT

TRANSFER, GRIZZLY AND PERRY CREEK AREAS

FEBRUARY, 1988

Prepared by Technical Services Department
Quintette Coal Limited

739

TITLE PAGE

1987 EXPLORATION REPORT

TRANSFER, GRIZZLY AND PERRY CREEK AREAS

COAL LICENCES: 3340, 3335, 3341, 3661, 3662,
3660, 7849; 7848, 7847, 7846,
7845, 3339; 3596, 3600, 4534.

QUINTETTE COAL LIMITED - Owner/Operator

Submitted: February 29, 1988

for: F.A.M.E. (Financial Assistance for Mineral Exploration)
PROGRAM - REF # 10963-M19

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, 1987 and January 16, 1988

Report prepared by: Technical Services Department
Quintette Coal Limited

PREFACE

This report documents exploration and development work completed to the end of 1987 on the areas known as Transfer and Grizzly, and Perry Creek, on Quintette Coal Limited's Coal Licences in northeast British Columbia. This report is submitted in support of the Financial Assistance for Mineral Exploration (F.A.M.E.) Grant #10963-M19.

Exploration work has been done on Quintette's licences since 1971. The majority of work in the Transfer and Grizzly Areas was done in 1987. All work has been done 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 adits. The 1987 geologic data is recorded on geologic maps which locate the mapping, drill holes and adits. Descriptive logs, geophysical logs and analytical data 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

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 ten 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, including the Mesa Extension Reserve Area and the Transfer Area.

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

Bibliography

Wolverine Area - Report on Exploration Work North of the Wolverine River, January 1973

1974 Wolverine Exploration Report, December 1974

1984 Quintette Geological Report, April 1985

Transfer Area Geological Report, March 1987

Mesa Extension Geological Report, March 1987

1987 EXPLORATION REPORT
TRANSFER, GRIZZLY AND PERRY CREEK AREAS

Table of Contents

1987 EXPLORATION REPORT
TRANSFER, GRIZZLY AND PERRY CREEK AREAS

Table of Contents

1987 EXPLORATION REPORT
TRANSFER, GRIZZLY AND PERRY CREEK AREAS

LIST OF TABLES

1987 EXPLORATION REPORT
TRANSFER, GRIZZLY AND PERRY CREEK AREAS

LIST OF FIGURES

1987 EXPLORATION REPORT
TRANSFER, GRIZZLY AND PERRY CREEK AREAS

INDEX - APPENDICES

Not filmed (redundant)

1987 EXPLORATION REPORT
TRANSFER, GRIZZLY AND PERRY CREEK AREAS

INDEX - APPENDICES

1987 EXPLORATION REPORT
TRANSFER, GRIZZLY AND PERRY CREEK AREAS

INDEX-APPENDICES

Addendum I Geophysical Logs

Addendum II Volume I Descriptive Logs
QHD87001 to QHD87006
Volume II Descriptive Logs
QHD87007 to QHD87012

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

1.0 INTRODUCTION

The Quintette property is situated in northeast British Columbia in the Peace River Land District in the inner foothills of the northern Rocky Mountains. Quintette Coal Limited (QCL) 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 QCL property was initiated in 1971 and has proceeded almost continually through mine startup in 1982 to the present. Exploration of the Transfer Area reserve began with regional scale and geologic mapping. Initial drilling was performed in 1976 in the Transfer Area, in 1984 in the Grizzly Area, and in 1971 in the Perry Creek Area. Drilling and mapping have continued as the need to evaluate the reserve potential has increased.

Extensive sampling and testing programs have confirmed that QCL 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 QCL property are estimated at 2.8 billion tonnes of coal in-place to a maximum depth below surface of 500 m. Preliminary estimates indicate a total resource of 27.9 million tonnes of product coal in the Transfer and Grizzly areas.

The purpose for exploration in the Transfer, Grizzly and Perry Creek Areas is to develop mineable open pit reserves which may prove more economically attractive than certain portions of QCL's current long term mining plan. Drilling has been completed in all three areas of these areas in 1987.

1.1 LOCATION AND ACCESS

The QCL property is located in the Rocky Mountain Foothills belt of northeastern British Columbia (see Figures 1.1 and 1.2). The coal bearing trend of this region is commonly referred to as the Peace River Coal Block.

The locations of the Transfer, Grizzly and Perry Creek Areas relative to the property's primary infrastructure are illustrated in Figure 1.3. The focus of recent exploration activity (1987) and this report is on the two distinct geological structures which, in order of resource size, are Transfer and Grizzly. A minor amount of exploration (5 rotary drill holes) was carried out in the Perry Creek Area.

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 and 1987 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 and on the Exploration Location Maps in Appendix 1.1.

The current road distance from the Preparation Plant and Mine Service Complex to the three 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

1.2 PHYSIOGRAPHY

The Transfer and Grizzly Areas range from sub alpine to well below tree line in the Murray River Valley. Stands of spruce and pine with cottonwood and poplar are predominant. The Perry Creek Area is also below tree line in the Wolverine River Valley and has been partially logged. 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

1.3 PROPERTY DESCRIPTION

The QCL property consists of 136 Coal Licences covering an area of 33,001 ha and Coal Lease #6 consisting of 11,667 ha. The original QCL licences were acquired by Denison Mines Limited (DML) in 1969 and 1970. The first coal exploration on the property was undertaken by DML 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, QCL was incorporated under the laws of British Columbia, December 20, 1971.

DML was appointed by QCL to manage the QCL project through the feasability 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 DML, Charbonnages de France, the Japanese Steel Industry, Mitsui Mining, Tokyo Boeki, and Sumitomo Corporation.

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

1.3.1 Coal Licences

The location of coal licences covering the exploration areas is illustrated in Figure 1.4. QCL's coal licences are described in Appendix T.1.
The following table lists the exploration areas and the specific licences that cover each area.

Area	Coal Licences	Type of Work performed
Transfer	3340,3335,3341 3661,3662,3660,7849	Rotary and Core Drilling, Adits, Mapping
Grizzly	7848,7847,7846, 7845,3339	Rotary and Core Drilling, Adits, Mapping
Perry Creek	3596,3600,4534	Rotary Drilling

1.4 ECONOMIC ASSESSMENT

Exploration in the Transfer and Grizzly Areas has indicated the potential to develop mineable open pit reserves which may prove more economically attractive than other portions of QCL's long term mining plan.

In the Perry Creek Area, the favourable structure and thick coal may prove an attractive economic situation.

Maps showing the location of exploration activities are presented in Appendix 1.1.

1.4.1 Structure

Resources have been measured on anticline limbs in both the Transfer and Grizzly Areas based on data to the end of 1986. These structures are similar in nature to the Shikano Anticline currently being mined, with their limbs generally dipping from 35^{0} to 65^{0} with northwesterly plunges from 10^{0} to 30^{0}. The Transfer Area has a larger resource potential, mainly attributed to the near surface Middle Gates Formation along the axis of the Transfer Anticline.

In the Perry Creek Area, the Perry Creek Syncline has long been recognized as an open fold with a very shallow dipping west limb. It is in this structurally simple limb that near surface coal has been identified.

1.4.2 Coal Seam Thickness

In the Transfer and Grizzly Areas, seams F, G, J, K1 and K2, have been identified from drilling and are readily correlated to coal seams in the Shikano deposit. In both anticlines, thin or poorly developed intersections have been found in D and E coal seams resulting in their exclusion from current resource evaluations. Seams F and G are well developed, forming single, thick mining sections in both structures. The interseam partings between J, K1 and K2 are variable in thickness such that this zone may be mined either singly (including all partings) or as two separate mining

sections. Seam K2 may not be recoverable in the Grizzly area due to its thinness and the thick interseam parting between K1 and K2.

Thickness range and average values are compared to Shikano deposits as follows:

Average Mining Section Thickness*

Seam	Grizzly	Transfer	Shikano
D	-	-	2.81
E	-	-	2.12
F	3.52	4.05	4.05
G	3.19	3.70	3 27
J	-	-	4.65
J+K1	6.11	7.13	-
K1	-	-	0.87
K1+K2	-	1.12	-

*from pre-1987 data. These are averages of the values used for current resource tonnages.

In Perry Creek Area, J is the main economic seam. From 1987 drilling this seam has a thickness of at least 5.5 metres. This seam and its thickness is correlateable to J1 seam in Mesa Pit. G seam was also intersected although its thickness is only 0.9 metres. J2 seam, which exceeds 2 metres in thickness, is separated from J1 by a parting of 1.6 metres.

1.4.3 Coal Quality

Transfer and Grizzly coal is self coking and medium to low volatile bituminous in rank. The quality data is based on detailed analysis of coal core and bulk adit samples.

Coal analysis indicates that the coal is typical of other QCL coals. The following tables summarize the mean values of the raw and clean coal analysis by seam:

Page 1-7 of this report contains coal quality data, and remains confidential under the terms of the *Coal Act Regulation*, Section 2(1). It has been removed from the public version.

http://www.bclaws.ca/EPLibraries/bclaws_new/document/ID/freeside/10_251_2004

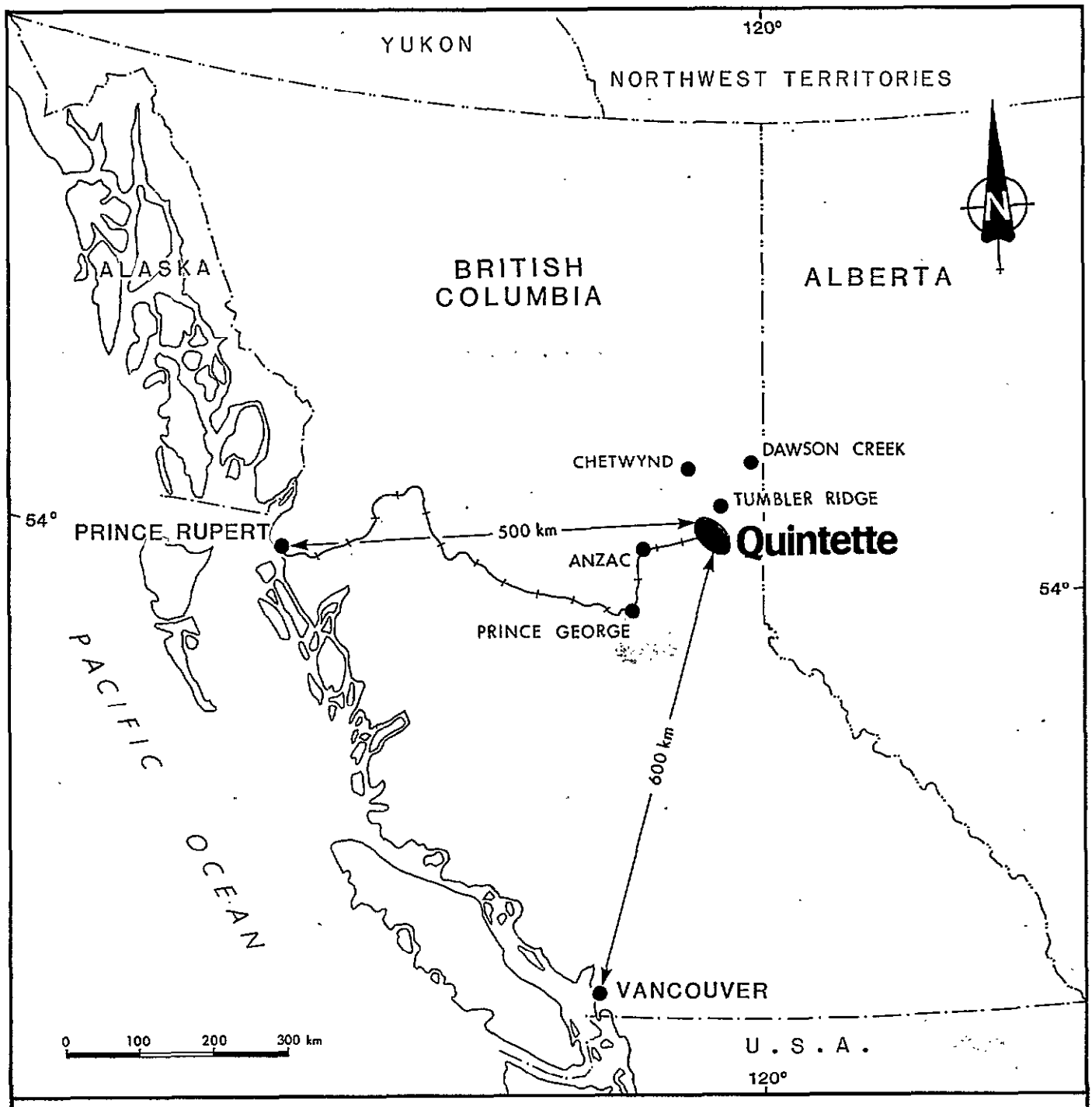
1.4.4 Resources

In the Transfer and Grizzly Areas, preliminary estimates based on the 1986 exploration data indicate a total resource of 27.9 million tonnes of product coal. These resources are summarized as follows:

	Grizzly	Transfer	Combined Pits
Product Met (M tonnes)	5.992	20.766	26.758
Product Thermal (M tonnes)	0.337	0.772	1.109

1987 Exploration has confirmed coal thicknesses and highlighted some structural changes from the 1986 interpretation, however, the total resource is expected to be similar to the 1986 evaluation. A new resource calculation will be completed for the Transfer area based on the 1987 interpretation.

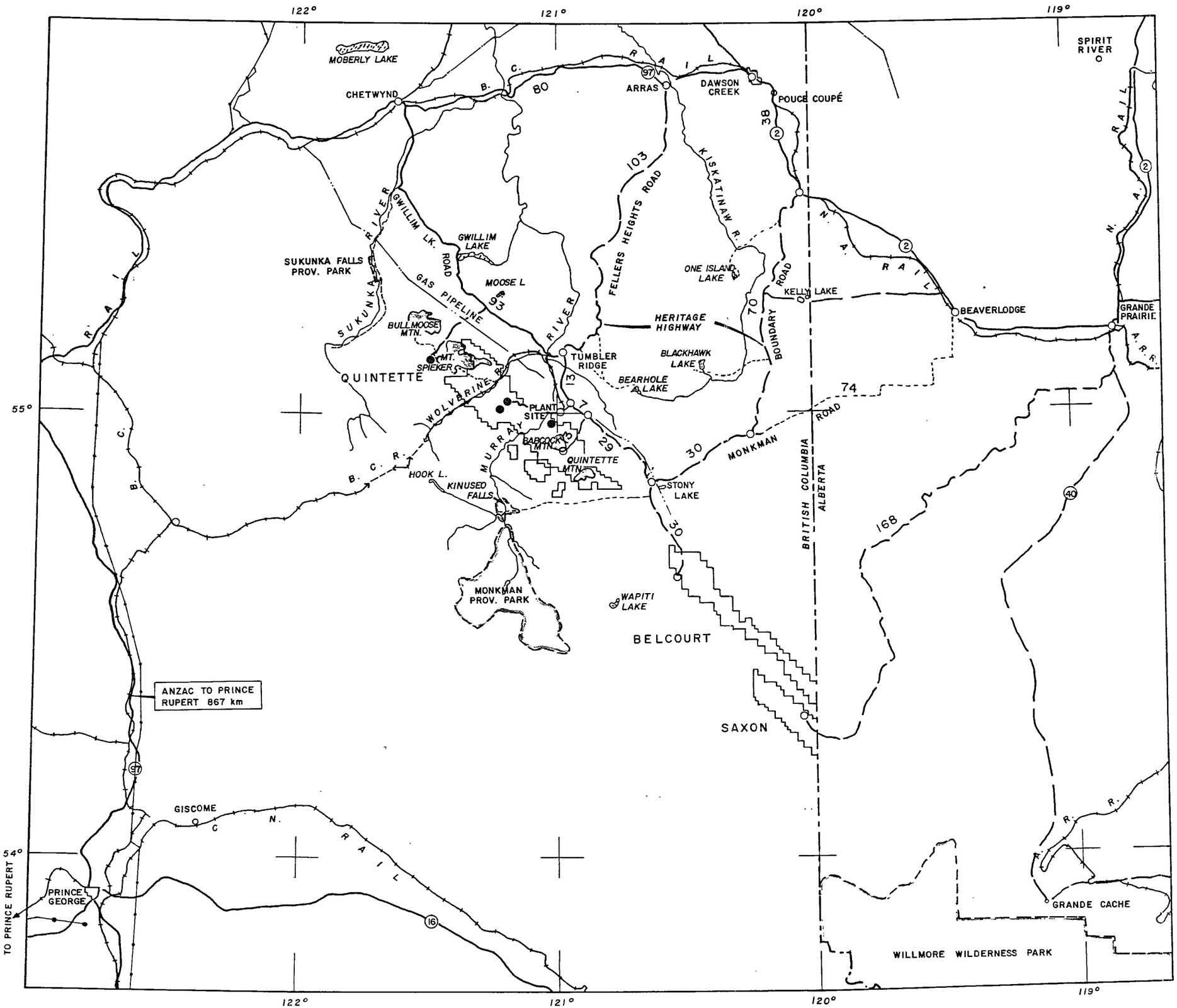
In the Perry Creek Syncline, initial indications are of a recoverable resource (open pit mining) varying from 1.5 million tonnes to 15 million tonnes of product coal. The resource is highly dependent on a favourable shallow dipping structure and good seam development which will be defined with future exploration.



Quintette Coal Limited

GENERAL LOCATION

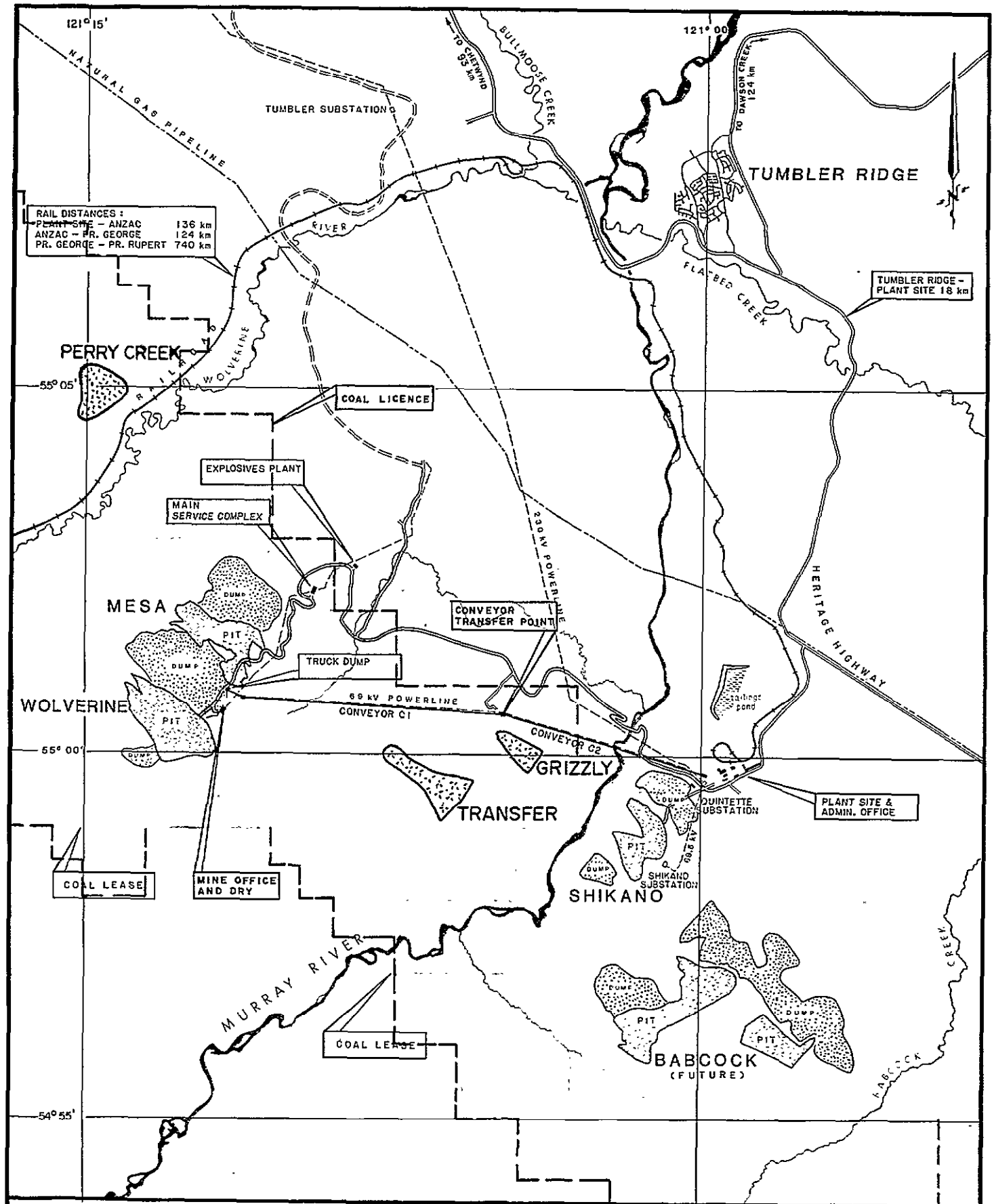
Fig. 1.1



QUINTETTE COAL LIMITED

NORTHEAST B.C. PROPERTIES

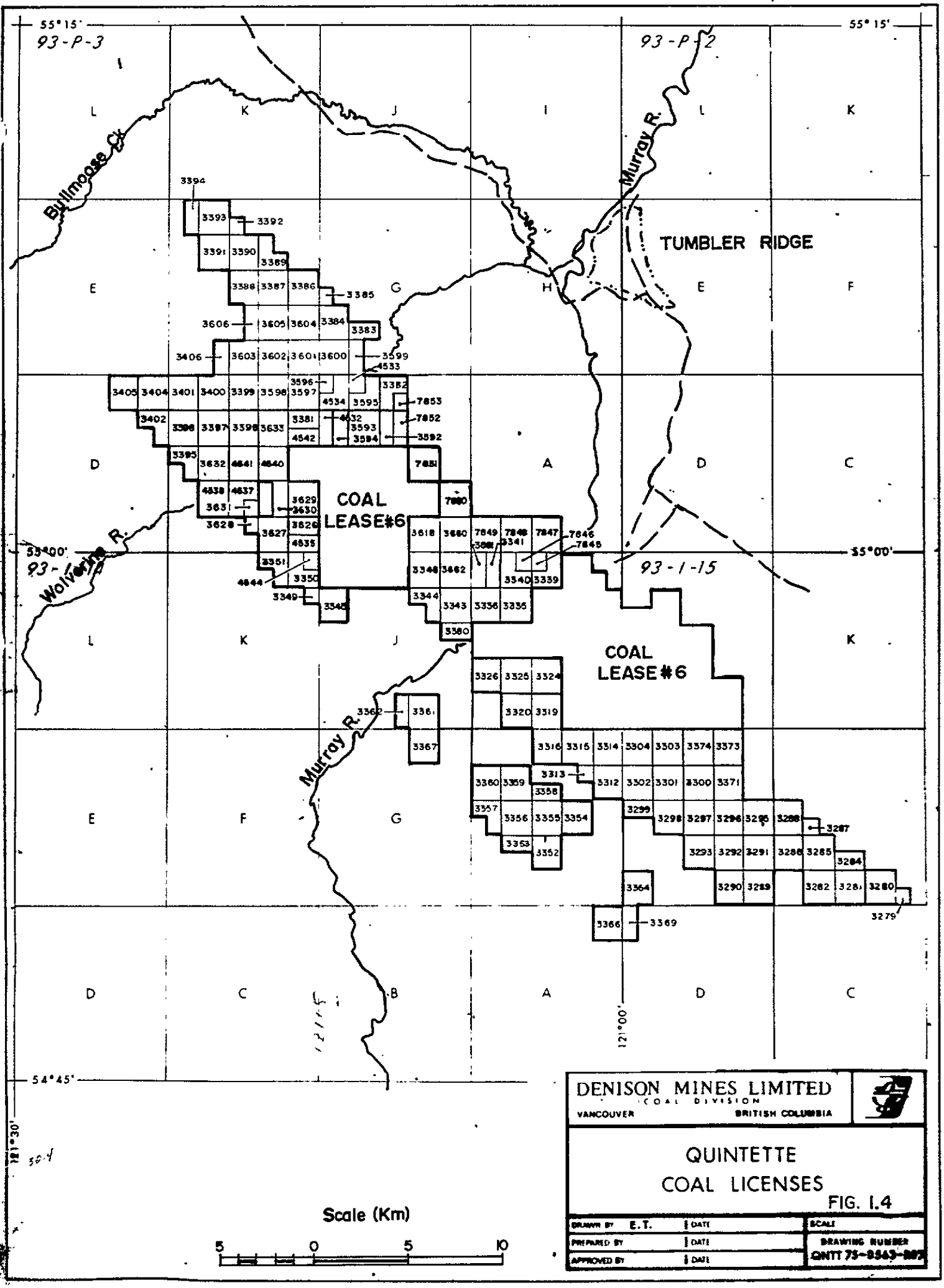
Fig. 1.2



QUINTETTE COAL LIMITED

SITE INFRASTRUCTURE

Fig. 1.3


55° 15'
93-P-3
93-P-2
55° 15'
Bullmoose Ck.
Murray R.
TUMBLER RIDGE
COAL LEASE#6
COAL LEASE#6
Murray R.
Wolverine R.
55°00'
93-1-15
55°00'
54°45'
121°30'
121°00'
Scale (Km)
5 0 5 10
DENISON MINES LIMITED
COAL DIVISION
VANCOUVER BRITISH COLUMBIA
QUINTETTE
COAL LICENSES
FIG. 1.4
DRAWN BY E.T.
DATE
SCALE
PREPARED BY
DATE
APPROVED BY
DATE
DRAWING NUMBER
QNTT 75-9563-B02

2.0 EXPLORATION SUMMARY

A summary of exploration activity undertaken in the Transfer and Grizzly Areas and Perry Creek Area to the end of the 1987 field season is presented in Table 2.1.

2.1 EXPLORATION PROGRAMS PRIOR TO 1987

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 1976 when the first three helicopter supported diamond drill holes were completed (QJD7641, 7642, 7643). The next phase of work involved the completion of one rotary drill hole (QJR8001) in 1980 to test Gates Member coal thickness in the remnant syncline structure referred to as the Hermann Syncline. This structure was accessed in 1980 when Nabors Drilling Limited completed a gas well (B.P. et al Murray d-83-J-93-I-14) for British Petroleum through the structure, encountering a potentially productive gas bearing horizon well below the coal measures. During 1982, six rotary drill holes (QHR8201-8206) were completed on the forenoted well site and access road to test coal thicknesses of both the Hermann Syncline and the Hermann North Area, where a steeply dipping Gates section extends southeasterly from the Marmot subpit in the Mesa Mine. Results of this program led to the completion of 5 rotary drill holes (QHR8301-8305) in 1983 plus access road construction and detailed geological mapping (1:2500 scale) in Hermann North. In 1984, the drilling of 12 additional rotary holes and trenching were undertaken in the Hermann Syncline, plus 6 rotary holes and 3 diamond holes in Hermann North. This season also saw the completion of 6 rotary holes in the Gething Area and the first rotary (6) and diamond (1) holes in the Hermann South Area, now referred to as the Grizzly Area. In 1985 limited mapping and the first two diamond drill holes were placed in the Transfer Anticline.

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 performed in the Transfer or Grizzly Areas, but 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).

In the Perry Creek Area, the coal measures were drilled in 1971 with the completion of six 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.

2.2 1987 OBJECTIVES AND SCOPE

Primary objectives of the exploration program were to:

1. Undertake in-fill drilling to confirm seam continuity as follow-up to 1986 exploration.
2. Confirm the extent of overburden in the southeastern portion (Murray River Valley) of the Grizzly and Transfer Areas and at the same time to confirm the continuity of the coal between Transfer and Grizzly.
3. Obtain bulk samples from test adits driven in the mineable coal seams to further assess washability and to undertake pilot scale carbonization tests in Transfer and Grizzly Areas.
4. Determine the presence of a thick J seam in the Perry Creek Syncline.

In order to fulfill these objectives, 7 diamond and 46 rotary drill holes were completed in the Transfer Area while 5 diamond and 21 rotary drill holes were located in the Grizzly Area. Three adits were driven into the mineable coal seams in each area in order to obtain the necessary bulk samples.

In the Perry Creek Area, five rotary holes were completed, with four holes intersecting a thick J seam sequence.

2.3 PROJECT MANAGEMENT AND PRIMARY CONTRACTORS

This report and the exploration work was completed by QCL geology staff, consultants and contractors.

Quintette Coal Limited

G. P. Gormley	- Chief Geologist
D. G. S. Johnson (Author)	- Senior Geologist
D. P. Lortie	- Geologist
N. C. Hori	- Geological Technician
T. Wall	- Geologist
K. Vandenameele	- Draftsperson
F. Worthington	- Senior Coal Preparation Engineer

Consultants

I. Kakizaki	- Chief Geologist, Mitsui Mining Overseas Development Company Ltd
H. Wada	- Geologist, Mitsui Mining Overseas Development Company Ltd.
R. Leeder	- Manager of Product Services, Denison Mines Limited, Coal Division
J. H. Perry	- JHP Coal Ex Consulting Ltd

Contractors 1987

Loiselle Contractors Ltd	- Road and Drillsite construction and Reclamation
Tonto Drilling	- Core drilling
Western Hydro Air Drilling	- Rotary drilling
BPB Instruments	- Geophysical Logging
Target Tunnelling	- Adit Construction and Sampling
Stables, Tryon and Associates	- Surveying
Western Photogrammetry	- Topographic mapping
Commercial Testing and Engineering	- Core analysis
Birtley Coal and Minerals Testing	- Bulk sample washing and analysis
Piteau and Associates	- Geotechnical Studies

2.4 STANDARDS AND PROCEDURES

2.4.1 Geophysical Logging

Rotary and diamond drill holes have been logged by down hole geophysical methods since the commencement of drilling in 1971 (Perry Creek) and 1976 (Transfer). 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 BPB Instruments Ltd and by QCL during 1987. 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 profile of the drill holes on the sections. The interpretation then uses 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 and copies of all logs are presented as Addendum I to this report.

2.4.2 Rotary Drilling

The contract rotary drilling companies have drilled both vertical holes and angle holes (to -45^{0}) with both downhole hammer and conventional rotary bits, using reverse circulation equipment. During 1987, no sampling of the rotary cuttings was done. The drill rig used for all 1987 drilling was Western Hydro Air's Schramm model 685 (1980). 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 summary sheets of all rotary holes which identify seam intersections. Table 2.2 lists all rotary holes with their location, elevation, and depth.

2.4.3 Diamond Drilling

During 1987, Tonto Drilling Limited drilled vertical and angle holes of H.Q. core size (64 mm diameter) with conventional wireline recovery equipment using a Longyear 44 drill rig. 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 Testing and Engineering for washability and related analyses as described in the following section.

The location of diamond drill holes in the Transfer and Grizzly Areas are shown on the geology plans in Appendix 1.1 and a summary sheet of each 1987 core hole is found in Appendix T.2.2. The detailed written descriptions of all cored drill holes are available in the QCL Administration building. Copies of each descriptive log are presented as Addendum II (Volumes 1 and 2) 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 actual section to be mined.

All 1987 core analysis was conducted by Commercial Testing and Engineering, Vancouver, B.C. The analytical procedure is presented in Figure 2.1. The analytical test results from the drill core sampling are presented in Appendix 2.1.1. Table 2.4 identifies all 1987 component samples, the sample intervals and the composite samples.

2.4.5 Geologic Mapping

Geologic mapping in the Transfer and Grizzly Areas was conducted at 1:2500 scale by Quintette personnel and Mitsui consultants.

The majority of mapping was conducted along exploration roads constructed during 1987. These roads provided excellent rock and coal exposures. Control was based on survey points spaced at approximately 100 m intervals along the roads. Survey control was by Stables, Tryon and Associates, Dawson Creek, British Columbia. These survey control maps are presented in Appendix 1.3. 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.
No geologic mapping was carried out in the Perry Creek area during 1987. The geology plan presented in Appendix 1.2.3 is based on regional mapping in the early 1970's.

2.4.6 Topographic Survey

During 1987, the Transfer/Grizzly Area was flown and 1:2500 scale topographic maps were prepared. Surveying of airphoto targets was by Stables, Tryon and Associates, Dawson Creek, British Columbia. The location of these targets are found on the survey maps in Appendix 1.3. Survey control for the topographic mapping is described as follows:

> "Photo targets numbered 1 to 13, and A to E were surveyed in the summer of 1987 by Stables, Tryon and Associates under the personal supervision of Tom Tryon,British Columbia Land Surveyor. Distances were measured by a "Model 14A" Geodometer and angles were measured using a "Wild T16" Theodolite. Co-ordinates and Elevations of targets 9, 11, 12 and "E" were determined from those of Triangulation Station "Airy". All others were surveyed from stations along conveyor and power lines Right-of-Way, from values tabulated by McElhanney and Associates."

Topographic mapping was done by Western Photogrammetry, Edmonton, Alberta. The maps were prepared from three east-west flight lines. Aerial Triangulation and preparation was undertaken on WILD PUG III and BC1 analytical system. The numerical adjustment was done using the PATM-43 program. The data was stream digitized (data tapes are stored at Quintette Coal Limited, Administration Building) on WILD BC1 using the T Map software system for graphics edit. The final copy topographic maps are presented in Appendix 1.4.

The topography on the geology maps presented in Appendix 1.2 is from 1:5000 maps sheets enlarged to 1:2500 scale. Survey control and cartographic description is discussed in the Transfer Area Geological Report, March 1987.

2.4.7 Adits

In 1987, adits were driven into the mineable coal seams in both the Transfer and Grizzly Areas. The following table summarizes the adit driveage:

1987 Transfer/Grizzly Adits

Area	Adit #	Length (m)	Seams Sampled
Grizzly	QHA87001	34.3	J, K1
	QHA87002	39.3	G
	QHA87003	38	F
Transfer	QHA87004	45	F
	QHA87005	44	J, K1, K2
	QHA87006	49.5	G
Total driveage:		251.1	

Target Tunnelling Limited, Strathmore, Alberta constructed and sampled all adits. Adits were constructed by drilling and blasting along the coal seam. Coal waste and coal samples were removed by an air tugger or wheelbarrow depending on conditions. The adits were ventilated by a forcing fan. Adit drawings are presented in Appendix T.3. Adit locations are plotted on the Geology Maps in Appendix 1.2 and on the Exploration Location Map in Appendix 1.1.1.

2.4.8 Adit Sample Analysis

Bulk samples from the major seams (F, G, J, K) were obtained in both the Transfer and Grizzly Areas. These samples were shipped to Birtley Coal and Minerals Testing, Calgary, Alberta, for raw analysis, pilot scale washing and clean coal analysis. The results of this testing program are presented in Appendix 2.1.2.

The Transfer J seam bulk sample was rewashed using different cut points that more closely simulated actual Quintette Preparation Plant conditions. This resulted in a clean coal product with a lower ash level.

2.4.9 Geotechnical Studies

During 1987, Piteau and Associates were contracted to carry out a geotechnical and hydrogeological assessment of the Transfer and Grizzly Areas. This report is presented as Appendix 2.2.

2.4.10 Reclamation

Reclamation of the 1987 and some 1986 disturbances was conducted by Loiselle Contractors Limited, Tumbler Ridge, British Columbia.

The program included bucking of all slash to ensure rapid decomposition and to inhibit fires. Spruce slash was burned although some slash will not be totally disposed of until the 1988 field season when it will be drier. All slash requiring burning has been piled.

All roads have been crossditched as required for erosion control as well as seeded. Some main access roads were not seeded since they will be used in the 1988 exploration season. Recontouring of the exploration road beyond QHD87008 was completed since topography is very steep in this area and it is close to a natural drainage.

Adit sites were totally reclaimed by burying the waste coal and resloping these piles. At QHA8704, a small drainage was reopened. All sites were seeded.

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 was creeping red fescue 55%, kentucky blue grass 25%, alfalfa 20% at 50 kg per hectare.

Table 2.1

1987 Exploration Summary

Area	Activity	No.	Total length	Comments
Transfer	Road Construction		14.7 km	
	Geologic Mapping			All new access roads were mapped plus reconnaissance areas.
	Rotary Drilling	46	5169.1 m	QHR87021-87068 (excluding 87046 and 050)
	Core Drilling	8	1251.38 m	QHD87004 - QHD87011
	Adits	3	139 m	QHA87004,5,6. Seams sampled:F,G,J,K1,K2
Grizzly	Road Construction		6.7 km	
	Geologic Mapping			All new access roads were mapped.
	Rotary Drilling	21	3074.9 m	QHR87001-020 plus QHR87050
	Core Drilling	4	592.67 m	QHD87001-003 plus QHD87012
	Adits	3	112 m	QHA87001,2,3. Seams sampled:F,G,J,K1.
Perry Creek	Road Construction		1.3 km	
	Rotary Drilling	5	259.6 m	QPR87001-005

Totals:

Rotary holes	72	8503.6 m
Core holes	12	1844.05 m
Roads		22.7 km
Adits	6	251 m

Table 2.2

1987 Rotary Drilling Summary

Hole #	UTM Northing m	UTM Easting m	Elevation m	Depth m
QHR87001	624678.720	6096302.760	848.18	189.60
QHR87002	624465.260	6096356.150	879.90	156.30
QHR87003	624278.690	6096422.350	895.45	140.00
QHR87004	624117.600	6096486.650	931.67	121.80
QHR87005	623827.890	6096582.540	985.67	117.50
QHR87006	623311.920	6096741.680	1057.87	182.00
QHR87007	623136.870	6096526.690	1117.65	170.20
QHR87008	623196.400	6096594.040	1107.99	107.30
QHR87009	623293.440	6096471.160	1108.97	132.30
QHR87010	623296.430	6096347.630	1109.67	164.40
QHR87011	623132.370	6096681.670	1107.81	121.50
QHR87012	623063.540	6096590.370	1116.81	183.30
QHR87013	623477.310	6096728.480	1041.15	143.70
QHR87014	623194.300	6096773.650	1076.90	207.40
QHR87015	623456.490	6096508.620	1079.99	56.70
QHR87016	623627.550	6096078.360	1071.99	146.60
QHR87017	623801.660	6095936.650	1014.93	164.80
QHR87018	624093.480	6095705.400	978.03	123.00
QHR87019	624218.700	6095531.260	916.10	110.70
QHR87020	624879.720	6096256.360	797.81	244.00
QHR87021	620569.250	6096160.320	1572.82	168.80
QHR87022	620508.120	6096087.300	1580.60	144.60
QHR87023	620432.720	6095983.110	1601.62	171.00
QHR87024	620712.890	6096026.860	1564.25	128.50
QHR87025	620647.170	6095957.560	1585.04	110.00
QHR87026	620701.800	6095680.630	1573.08	140.00
QHR87027	620804.170	6095842.940	1549.64	80.00
QHR87028	620421.700	6096294.420	1542.16	172.00
QHR87029	620866.580	6095579.200	1545.46	110.00
QHR87030	621163.260	6095302.310	1489.50	86.80
QHR87031	621267.200	6095747.640	1425.42	50.00
QHR87032	621106.040	6095887.350	1451.87	92.70
QHR87033	621293.370	6095148.030	1437.70	98.70
QHR87034	621750.450	6095778.160	1319.00	108.00
QHR87035	620293.660	6096125.300	1558.01	129.00
QHR87036	620351.140	6096202.090	1544.31	117.60
QHR87037	620771.320	6095758.000	1562.42	91.80
QHR87038	620942.670	6096017.010	1490.85	129.00
QHR87039	621016.010	6095418.960	1522.50	99.00
QHR87040	622166.770	6095283.740	1361.19	98.20
QHR87041	623801.940	6095150.740	891.53	187.80
QHR87042	623748.750	6095081.350	891.10	129.70
QHR87043	623622.990	6094827.360	902.11	116.40
QHR87044	623705.190	6094992.350	880.04	135.70
QHR87045	623932.450	6094837.800	838.09	99.00
QHR87047	623977.780	6094922.280	838.73	79.00
QHR87048	624037.450	6095005.910	836.82	111.30
QHR87049	623876.650	6094780.330	841.24	90.80

Table 2.2.

1987 Rotary Drilling Summary

Hole #	UTM Northing m	UTM Easting m	Elevation m	Depth m
QHR87050	624327.410	6095263.270	844.50	91.80
QHR87051	622728.370	6093986.570	857.50	147.70
QHR87052	622093.220	6093829.310	951.88	127.90
QHR87053	622065.950	6094070.220	1034.79	86.00
QHR87054	622091.590	6094207.210	1049.43	99.00
QHR87055	622506.620	6093811.200	890.45	55.60
QHR87056	623134.020	6093869.500	857.51	91.30
QHR87057	623303.900	6094089.280	876.83	91.30
QHR87058	623438.870	6094282.630	881.64	79.20
QHR87059	621392.130	6095942.590	1368.63	190.60
QHR87060	621503.170	6095749.250	1346.09	80.30
QHR87061	620875.610	6095928.120	1527.81	99.20
QHR87062	620103.840	6096057.410	1544.99	178.90
QHR87063	620168.560	6096279.540	1508.25	109.90
QHR87064	620222.270	6096360.010	1499.61	103.60
QHR87065	619929.820	6096311.430	1519.31	146.70
QHR87066	620077.600	6096322.920	1505.69	85.20
QHR87067	619995.340	6096417.410	1499.61	42.00
QHR87068	620065.100	6096527.440	1484.15	79.30
				=========
				8244.00
				*********
QPR87001	612398.180	6105215.210	918.24	73.50
QPR87002	612049.340	6104982.650	954.63	60.50
QPR87003	612166.360	6105131.430	945.01	44.40
QPR87004	612307.370	6105276.760	930.10	37.90
QPR87005	612422.970	6105449.840	923.61	43.30
				=========
				259.60
				*********

Table 2.3

1987 Diamond Drilling Summary

Hole #	UTM Northing m	UTM Easting m	Elevation m	Depth m
QHD87001	623618.590	6096689.550	1021.15	160.79
QHD87002	623250.510	6096678.450	1081.36	99.12
QHD87003	623915.720	6095802.930	996.29	177.52
QHD87004	620622.540	6095885.150	1589.74	151.10
QHD87005	620230.280	6096045.680	1573.26	185.78
QHD87006	620295.840	6096478.670	1486.07	202.44
QHD87007	622018.430	6095442.390	1329.15	120.63
QHD87008	621727.190	6094538.830	1167.00	138.62
QHD87009	622957.500	6095088.700	1108.43	105.14
QHD87010	623642.350	6094879.670	894.89	158.55
QHD87011	623875.170	6095267.550	877.77	189.12
QHD87012	624826.020	6096170.570	818.91	155.24
				=========
				1844.05
				*********

Table 2.4

Transfer/Grizzly

1987 Core Sampling Summary

Drill Hole	Component Sample #	Core Interval (m)	Seam	Composite #
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	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	KOP	K1P -
	1020	87.89 - 88.21	KO	K1P -
	1021	88.21 - 89.83	K1	C7
	1022	92.68 - 93.48	K2	C8*
				*No composite analysis - Petrography only
QHD87003	1147	24.17 - 24.80	D1	
	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	C9
	1025	83.53 - 87.22	F2	C9
	1013	87.22 - 87.60	F3	-
	1026	109.89 - 110.69	G2	C10
	1027	110.69 - 111.33	G3P	C10
	1028	111.33 - 112.09	G3	C10
	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

Transfer/Grizzly 1987 Core Sampling Summary

QHD87004	1033	85.14 - 86.56	G1-A	-
	1034	86.79 - 87.78	G1	C13
	1035	87.78 - 87.98	G2P	C13
	1036	87.98 - 88.84	G2	C13
	1037	88.84 - 89.56	G3P	C13
	1038	89.56 - 90.48	G3	C13
	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	
	1142	100.96 - 101.96	E2	
	1143	101.96 - 102.25	E2	
	1144	102.25 - 102.50	E2	
	1145	103.64 - 104.45	E3	
	1146	104.45 - 105.02	E3 lower	
	1045	123.48 - 124.09	F1	C17
	1046	124.09 - 124.55	F2P	C17
	1047	124.55 - 127.44	F2	C17
	1048	157.47 - 158.67	G1	C18
	1049	158.67 - 158.75	G2P	C18
	1050	158.75 - 159.61	G2	C18
	1051	159.61 - 160.18	G3P	C18
	1052	160.18 - 161.33	G3	C18
	1053	175.50 - 180.40	J	C19
	1054	183.85 - 184.96	K2	C20
QHD87006	1136	15.43 - 16.58	B	
	1137	83.08 - 84.30	D	
	1138	105.93 - 106.46	E1	
	1139	106.46 - 106.89	E2P	
	1140	106.89 - 108.25	E2	
	1055	135.77 - 136.23	F1	C21
	1056	136.23 - 136.94	F2P	C21
	1057	136.94 - 140.41	F2	C21
	1058	161.71 - 163.02	G1	-
	1059	164.65 - 166.02	G3	-
	1060	186.83 - 192.19	J	C22
	1061	192.19 - 192.70	KOP	K1P -
	1062	192.70 - 193.26	KO	K1P -
	1063	193.26 - 194.26	K1	-
	1064	195.39 - 196.41	K2	C23
	1065	196.41 - 197.17	K2 lower	C23

Transfer Grizzly 1987 Core Sampling Summary

QHD87007	1066	32.22 - 33.40	F1	C24
	1067	33.40 - 33.95	F2P	
	1068	33.95 - 38.68	F2	
	1069	72.66 - 73.93	G1	C25
	1070	73.93 - 74.15	G2P	
	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	C27
	1078	25.34 - 25.71	F2P	
	1079	25.71 - 27.56	F2	
	1080	61.08 - 61.93	G1	C28
	1081	61.93 - 62.10	G2P	
	1082	62.10 - 63.23	G2	
	1083	63.23 - 63.65	G3P	
	1084	63.65 - 65.20	G3	
	1085	88.12 - 93.94	J	C29
QHD87010	1133	22.18 - 23.40	D1 (E3?)	
	1134	23.40 - 23.76	D2P	
	1135	23.76 - 24.03	D2	
	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	K0P } K1P	-
	1093	118.24 - 118.80	K0 }	-
	1094	118.80 - 119.81	K1	C32
	1095	128.06 - 131.11	K2	C33

Transfer Grizzly 1987 Core Sampling Summary

QHD87011	1127	61.40 - 62.22	D1		
	1128	62.22 - 62.64	D2P		
	1129	62.64 - 63.47	D2		
	1130	97.80 - 98.39	E3		
	1131	98.39 - 98.72	E3		
	1132	98.72 - 99.07	E3		
	1096	121.53 - 121.92	F1		C34
	1097	121.92 - 122.08	F2P		C34
	1098	122.08 - 125.93	F2		C34
	1099	146.22 - 147.27	G1		C35
	1100	147.27 - 147.59	G2P		C35
	1101	147.59 - 148.41	G2		C35
	1102	148.41 - 148.88	G3P		C35
	1103	148.88 - 150.42	G3		C35
	1104	170.19 - 175.22	J		C36
	1105	175.22 - 175.76	KOP	K1P	-
	1106	175.76 - 176.36	KO	K1P	-
	1107	176.36 - 177.43	K1		C37
QHD87012	1120	24.66 - 26.41	D1		
	1121	26.41 - 26.74	D2P		
	1122	26.74 - 27.64	D2		
	1123	46.80 - 47.18	E3		
	1124	47.18 - 48.11	E3		
	1125	48.11 - 48.49	E3		
	1126	48.49 - 48.85	E3		
	1108	71.44 - 72.01	F1		C38
	1109	72.01 - 72.43	F2P		C38
	1110	72.43 - 76.51	F2		C38
	1111	118.83 - 119.16	G1-A		C39
	1112	119.16 - 119.27	G2P		C39
	1113	119.27 - 120.73	G2		C39
	1114	120.73 - 121.96	G3P		-
	1115	121.96 - 123.22	G3		C40
	1116	141.94 - 148.00	J		C41
	1117	148.00 -(148.64)	KOP	K1P	-
	1118	(148.64)- 149.30	KO	K1P	-
	1119	149.30 - 150.90	K1		C42

QUINTETTE COAL LIMITED

1987 DRILL CORE ANALYSIS FLOW DIAGRAM

(+40% Core Recovery)

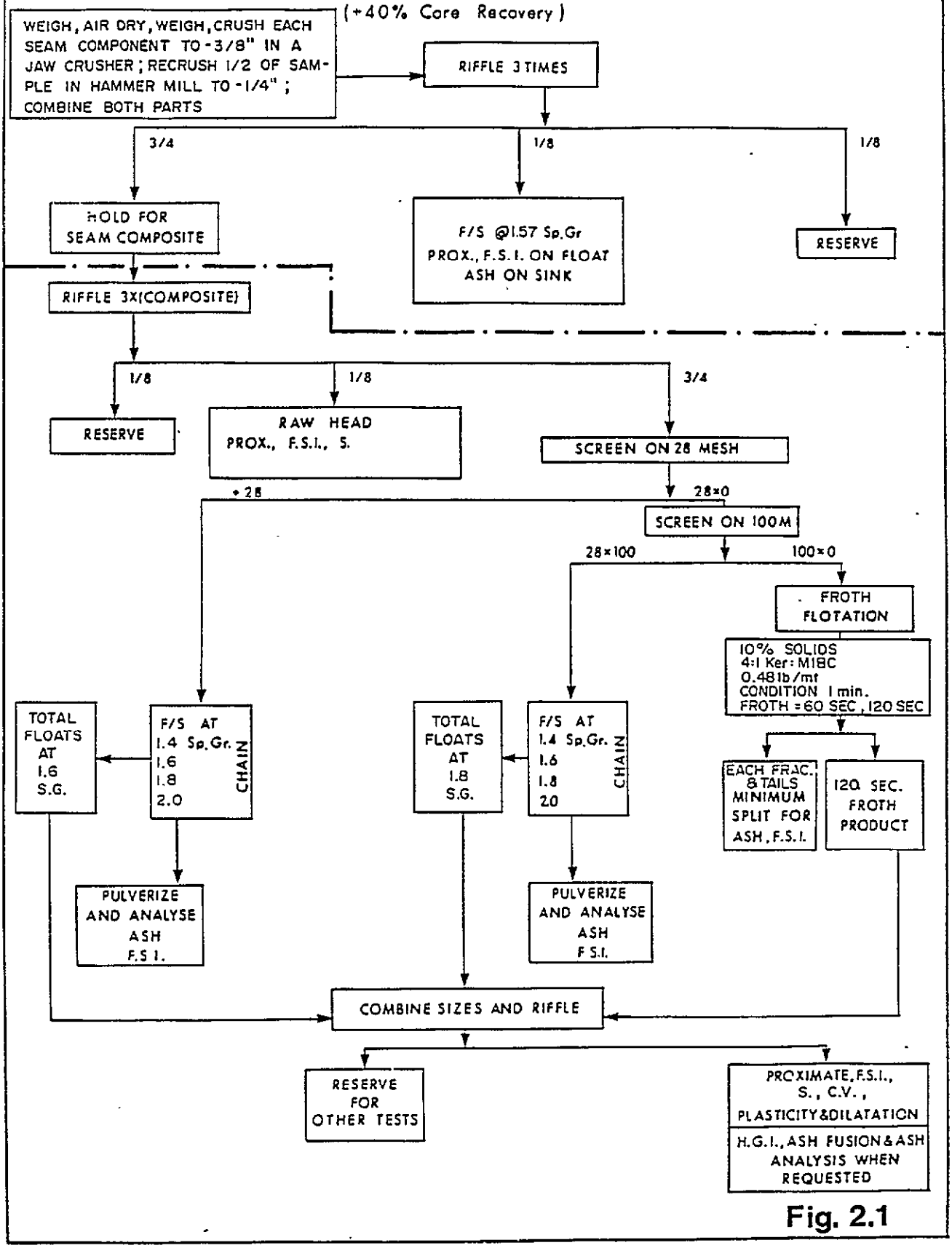


Fig. 2.1

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 as encountered by past exploration. The coal seam 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 1.2.4. Further descriptions of the formations encountered at QCL can be found in previous QCL Geological Reports.

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 Map (Appendix 1.2.1) illustrates 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

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 or no definitive outcrop in the area 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 235 metres. ($\pm$ 20 metres).

(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 first productive coal seam, namely D1. This sequence is approximately 90 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 zones designated as A, B and C seams are found in this upper portion. All three are considered to be uneconomical 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. 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 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 so called "caprock" found in the Mesa, Wolverine and Shikano Pits. The thickness of the conglomerate is relatively thin compared to other locations and ranges from 2.75 metres in the southwest of the area to less than one metre (or non-existent) in the rest of the area.

(ii) Middle Gates Member

The lower limit of the Middle Gates Member is marked by the floor of K2 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 the last four coal seams should be termed "mineable" in the Transfer Area, since D and E seams have poorly developed thickness and quality.

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

(ie; between D and E in QHD 86003, and F and G in QHD 86008). The thickness ranges and general lithologies of the interseam strata are summaried on Table 3.1 The Middle Gates Member is approximately 100 metres thick.

(iii) Lower Gates Member

The Lower Gates Member is a thickened, coarsening upward sequence of fine to medium sandstones. This unit was deposited in a near shore/shoreface-beach environment occasionally cut by distributary channels as evidenced by coarser less well sorted conglomerate and coarse sandstones.

The top massive light or pale green sandstones grade to underlying thinner beds of fine and very fine sandstones interbedded with sandy shales and shales of a marine transgression referred to as a transition zone. One thin coal seam designated as L seam is found at the base of this section approximately 40 metres below K2. The thickness of the Lower Gates Member is approximately 110 metres.

Moosebar Formation

The Moosebar Formation is a marine sequence grading from very fine sandstones and interbedded siltstones and shales at the top, to marine shales with thin bentonite layers at its base. The unit is defined as between the base of the first thick sandstone in the Lower Gates Formation transition zone to the top of the Gething. In the Transfer area it is interpreted as 85 metres thick.

Gething Formation

The Gething Formation has been drilled and mapped at some locations in the Murray River Valley. It is divided into three zones with the upper zone, approximately 50 metres containing coal seams exceeding 2 metres 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.

3.2.2 Grizzly

The stratigraphy underlying the Grizzly Area is indentical 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 K seams, are found in the Middle Gates Member. 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 25 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 - 0.58 metres) for most of the area.

iii) the interval between K1 and K2 is thicker (3.0 metres - 3.7 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 3.2. 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.

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 tentatively identified as seams E and G (Seams 6 and 3 in 1974 correlation) and seams G and J (Seams 3 and 2 in 1974 correlation).

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 Transfer Coal Seam Development and Correlation

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 cummulative coal seam thickness (F,G,K,K1 and K2) in the Transfer Area exceeds 14 metres.

Both D and E seams are split into thin coal portions by partings and designated as "non-mineable" for most of 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, and further exploration may delineate areas in which D and or E seams are recoverable. Table 3.3 summarizes average seam thickness for the Transfer Area.

F Seam

F seam is well developed in thickness 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 and in fact, results in the lower portion of F2 being unmineable in the vicinity of QHD87009. The roof and floor 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 portions: three coal portions identified as G1, G2 and G3; and two partings denoted as G2P and G3P. Figure 3.4 shows a typical G seam section. G1 has little 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 somes 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 in thickness 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 roof consists of shale or carbonaceous shale, and the floor 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 portion. The seam grades to carbonaceous shale in some areas and is therefore excluded from coal mining sections.

For most of the Transfer Area, the interval between J and K1 is less than 1 metre.

(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 3 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.

3.2.5 Grizzly Coal Seam Development and Correlation

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 cummulative mineable coal seam thickness (excluding K2) in the Grizzly Area exceeds 12 metres. Table 3.4 summarizes the average seam thickness for the Grizzly Area.

F Seam

F seam is relatively thin compared to the Transfer Area, averaging more than a half metre less in thickness.

G Seam

In the northeast limb of the Grizzly Structure, the thickness of the lower parting (G3P) thickens to just under 1 metre.

G seam is overlain directly by a thick conglomerate and sandstone bed.

The overall seam thickness is similar to the Transfer Area.

J Seam

J seam has a similar development with a slightly thinner average thickness.

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.

K2 Seam

K2 seam is thinner, and is separated by a thick interseam (up to 3.8 metres) from K1.

3.2.6 Perry Creek Seam Development and Correlation

The most recent correlation in the Perry Creek Area was done in 1974 (see the 1974 Wolverine Exploration Report). In this correlation, seams were identified as 1 through 8. The following is a tentative comparison to current nomenclature:

1974 Seam designation	1987 Seam Identification
8	D
7	E
6	E
5	F?
4	G1?
3	G2
2	J1
1	J2 (K1)

The most significant seam is J1. The 1987 drilling intersected a consistent J1 seam development of more than 5.5 metres. From the 1974 correlation, it is expected that the mineable section of J seam will decrease where the overlying channel conglomerate thickens. The underlying J2 seam is expected to maintain a consistent thickness of approximately 2 metres throughout the area.

G seam was also intersected in the 1987 program and may be correlateable to G2 seam in the Mesa and Wolverine Pits. Its thickness does not exceed 1 metre.

The seams in the upper section of Middle Gates Formation were not drilled in 1987. From previous drilling (1971 and 1974), thickness of these seams will not exceed 2 metres except where two seam coalesce (as do seams 6 and 7 (E?) in QWD7118).

The coal seam intersections are recorded on the drill hole summary sheets in Appendix T.2.1. Since the strata dips at less than 10^{o} where these holes were drilled, these intersections can be considered as a true seam thickness. Average thickness and thickness ranges are as follows:

Perry Creek Syncline

Seam Thicknesses from 1987 Rotary Drilling

Seam	Thickness Range (m)	Average (m)
G	0.84 - 0.90	0.87
J1	5.2 - 7.04	5.84
Parting (J2P)	1.3 - 1.66	1.57
J2	2 - 2.36	2.22

3.3 REGIONAL STRUCTURE

The regional geologic structure of the Transfer/Grizzly Area is best illustrated in Figures 3.7 and 3.8. As shown in these figures, the area is characterized by northwesterly trending folds. Three pairs of folds are arranged in parallel and identified as the Shikano Anticline and Syncline, the M-9 Anticline and Syncline, and the Transfer Anticline and Syncline (from north to south). The Transfer Area is located on the Transfer Anticline and the Grizzly Area is on the Shikano Anticline.

3.4 LOCAL STRUCTURE

3.4.1 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 western half of the limb, becoming steeper toward the southeast, with a maximum of 57^{o} at the eastern end. On the southwest limb, dips are relatively steep and range from 50^{o} to 60^{o}. No major faults have been confirmed in the area although minor faults are expected along fold axes.

3.4.2 Grizzly

The geologic structure of the Grizzly Area is controlled by the Shikano Anticline plunging 10^{o}-30^{o} to the northwest. This anticline has a broad or box-like top of about 100 metres in width. The strata dip 55^{o} to 65^{o} on the northeast limb of the anticline and about 45^{o} 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.

3.4.3 Perry Creek

The Perry Creek exploration target is the Perry Creek Syncline which is an open fold plunging gently to the northwest. The west limb of the fold is expected to have dips of less than 10^{o} while the east limb will have dips of up to 45^{o}.

Table 3.1

Summary of Interseam Strata in the Middle Gates Member

Transfer

Interval	Approximate Thickness Range (m)	General Lithology
D seam to E seam	12 - 27	Mainly shale with minor very fine sand and channel sandstone
E seam to F seam	16 - 31	Southwest limb of Transfer Anticline- dominant sandstone with shale. North limb of Transfer Anticline - shale with minor sandstone and sandy shale.
F seam to G seam	13 - 33	Alternating beds of shale and sandstone, channel sandstone.
G seam to J seam	13 - 21	Shale sandstone. A 3 - 4 metre sandstone zone occurs at 3 metres above J seam.
J seam to K1 seam	0.4 - 1.5	Shale, carbonaceous shale.
K1 seam to K2 seam	0.7 - 4.3	Shale, carbonaceous shale and very fine to fine sandstone

Table 3.2

Summary of Interseam Strata in the Middle Gates Member

Grizzly

Interval	Approximate Thickness Range (m)	General Lithology
D seam to E seam	12 - 30	Carbonaceous shale with very fine to medium sand.
E seam to F seam	19 - 23	Very fine to fine sand grading to shales and carbonaceous shales towards F seam.
F seam to G seam	18 - 39	Conglomerate and fine sandstone. Shale with fine sandstone bed in upper 6 to 9 metres.
G seam to J seam	14 - 18	Alternating beds of shale, siltstone and fine sandstone.
J seam to K1 seam	0.4 - 1.1	Carbonaceous shale and siltstone.
K1 seam to K2 seam	3 - 7	Shale with very fine to fine sandstone beds.

Table 3.3

Seam Thickness Range

Transfer

Seam	Approximate Thickness Range (m)
F	2.4 - 5.5
G	2.8 - 5.1
J *	3.9 - 6.0
K1 **	0.8 - 1.4
K2	0.8 - 1.4

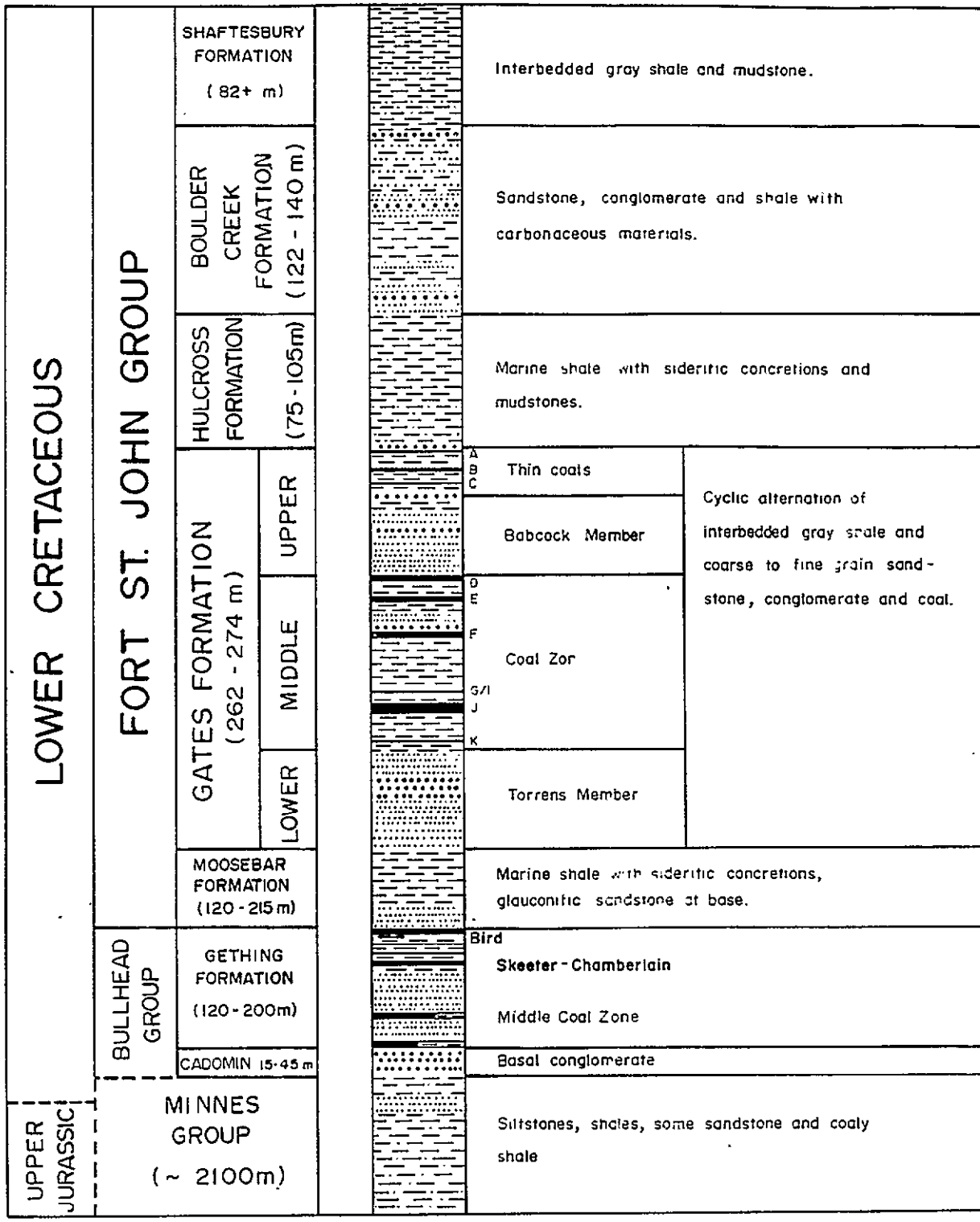
* Anomolous thickness of 1.90 m (QHD87010) not included.
** Anomolous thickness of 0.54 m (QHD87010) not included.

Table 3.4

Seam Thickness Range

Grizzly

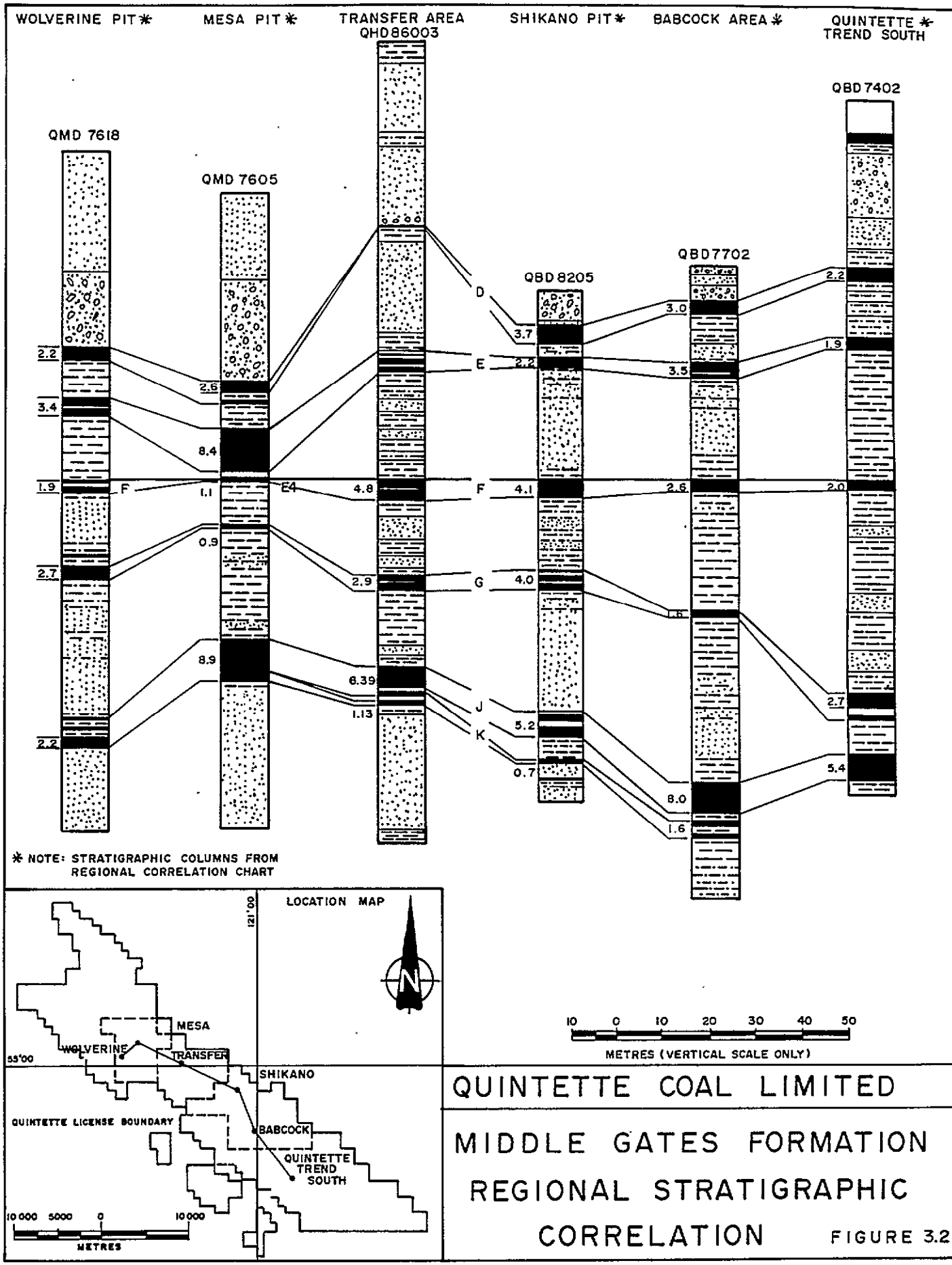
Seam	Approximate Thickness Range (m)
F	3.3 - 4.2
G	2.8 - 4.4
J	4.0 - 4.9
K1	0.9 - 1.5
K2	0.5 - 0.8



QUINTETTE COAL LIMITED

GENERAL STRATIGRAPHIC SECTION

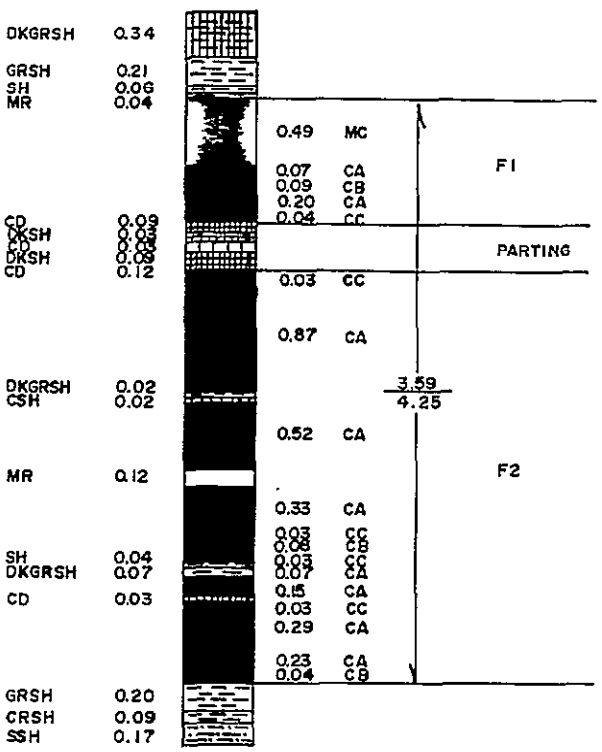
FIGURE 3.1



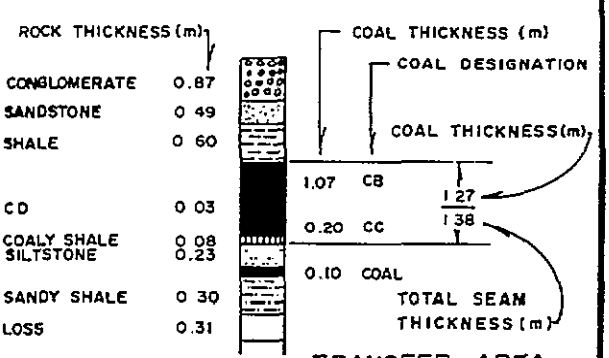
QUINTETTE COAL LIMITED

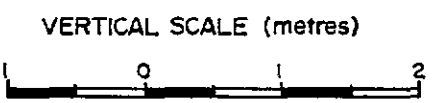
MIDDLE GATES FORMATION REGIONAL STRATIGRAPHIC CORRELATION

FIGURE 3.2



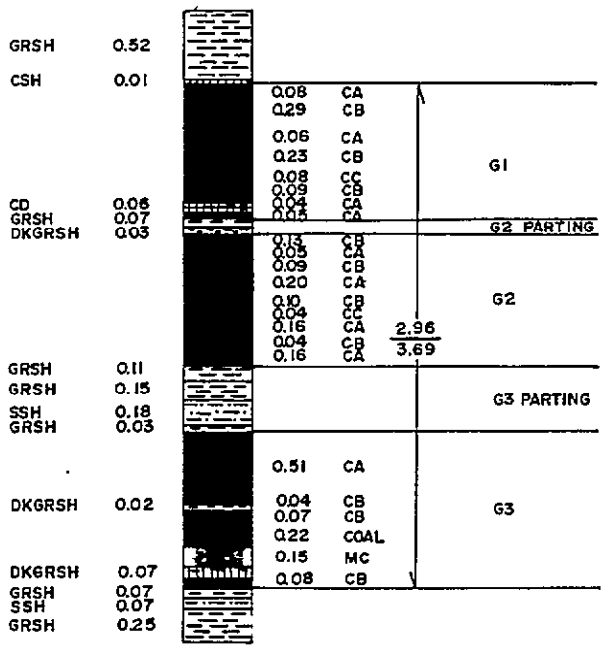
LEGEND



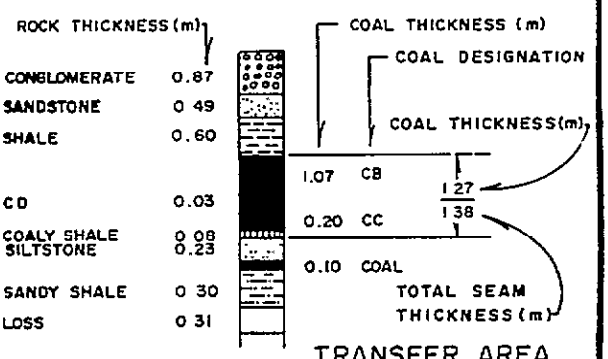


Date: FEB 16, 1987	QUINTETTE COAL LIMITED	TYPICAL SECTION OF F SEAM	
Design: HTB			
Drawn: KJV	Project Manager DENISON MINES LIMITED	TAKEN FROM QHD 86008	
Scale:	COAL DIVISION	FIGURE 3.3	Rev. 0

BCIL 7142 OCL



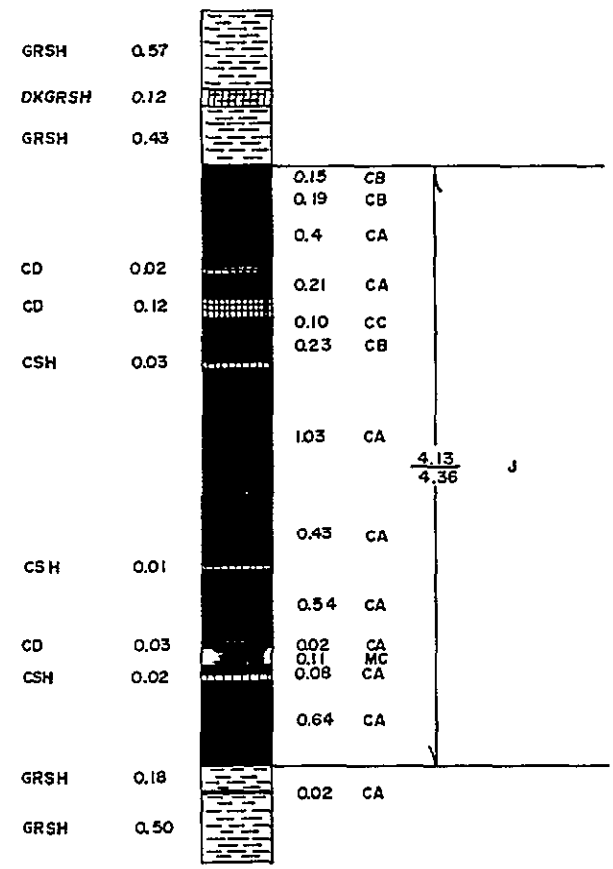
LEGEND



VERTICAL SCALE (metres)

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 7142 OCL



VERTICAL SCALE (metres)

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

COAL THICKNESS (m)

COAL DESIGNATION

COAL THICKNESS (m)

1.07 CB — 1.27 / 1.38

0.20 CC

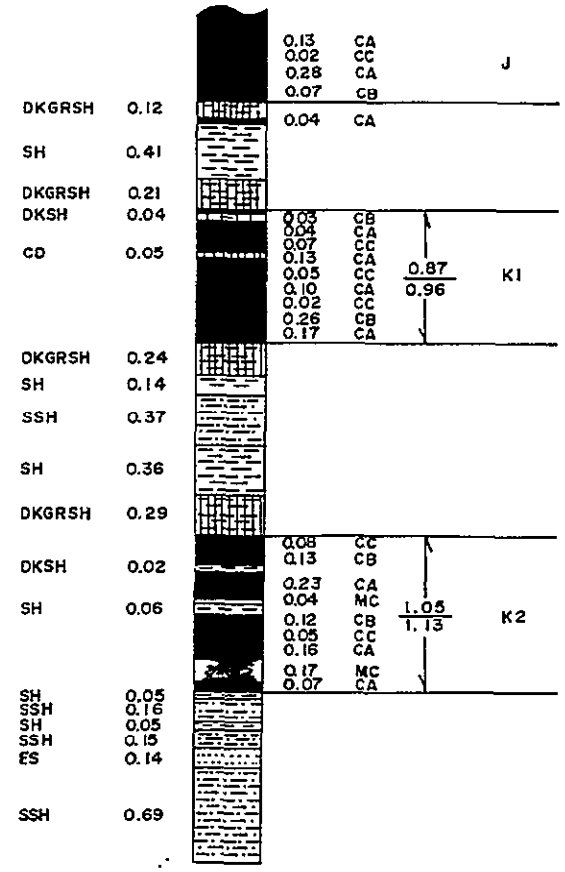
0.10 COAL

TOTAL SEAM THICKNESS (m)

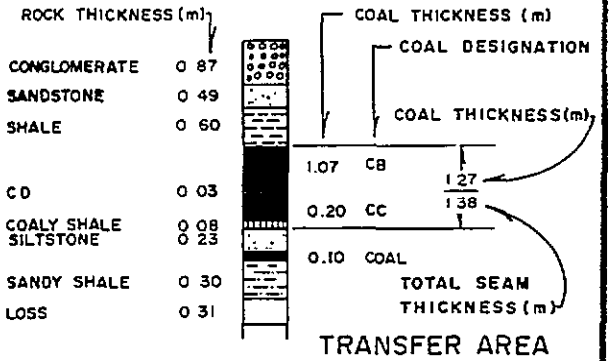
TRANSFER AREA

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

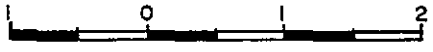
BCIL 7742 OCL



LEGEND

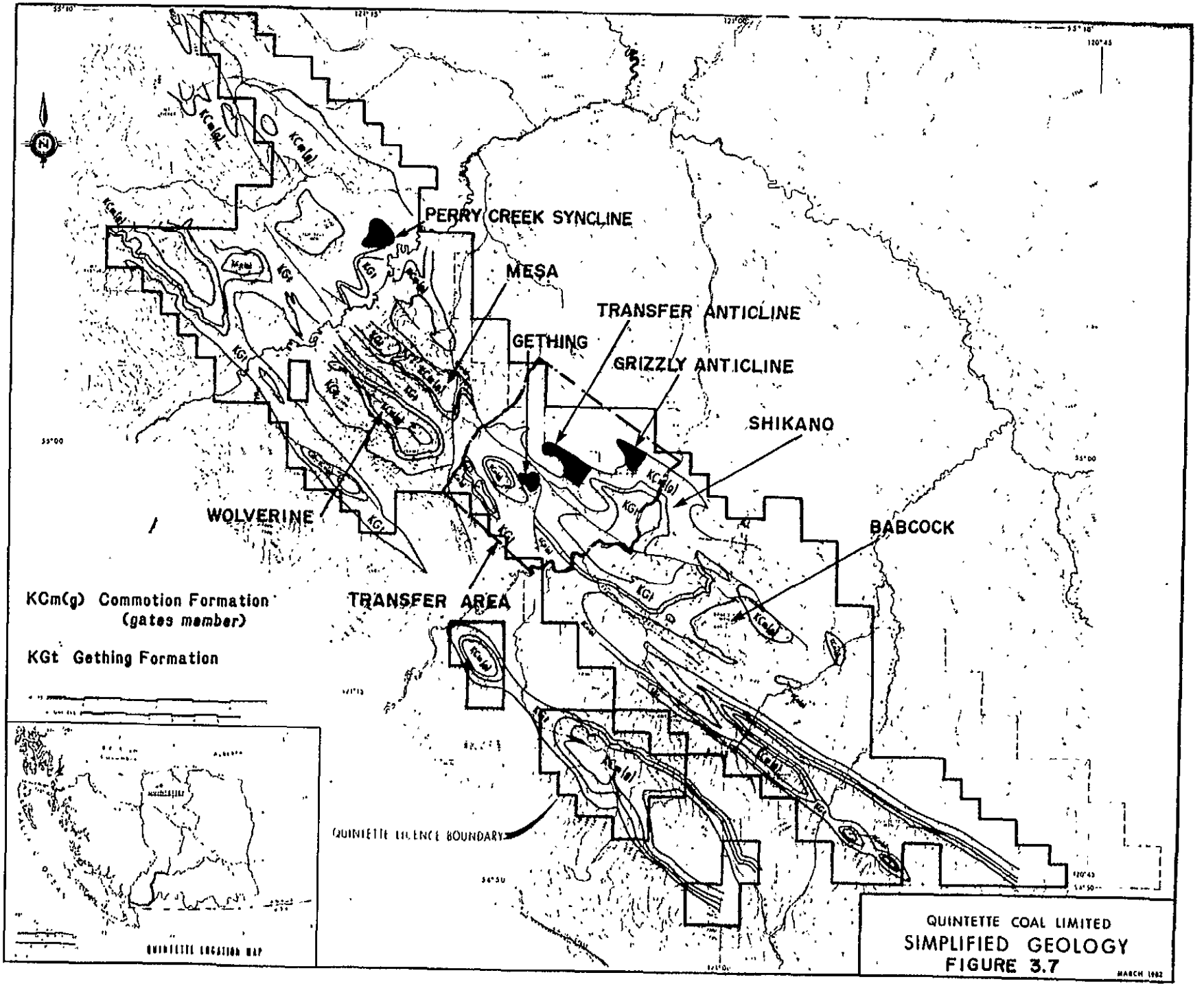


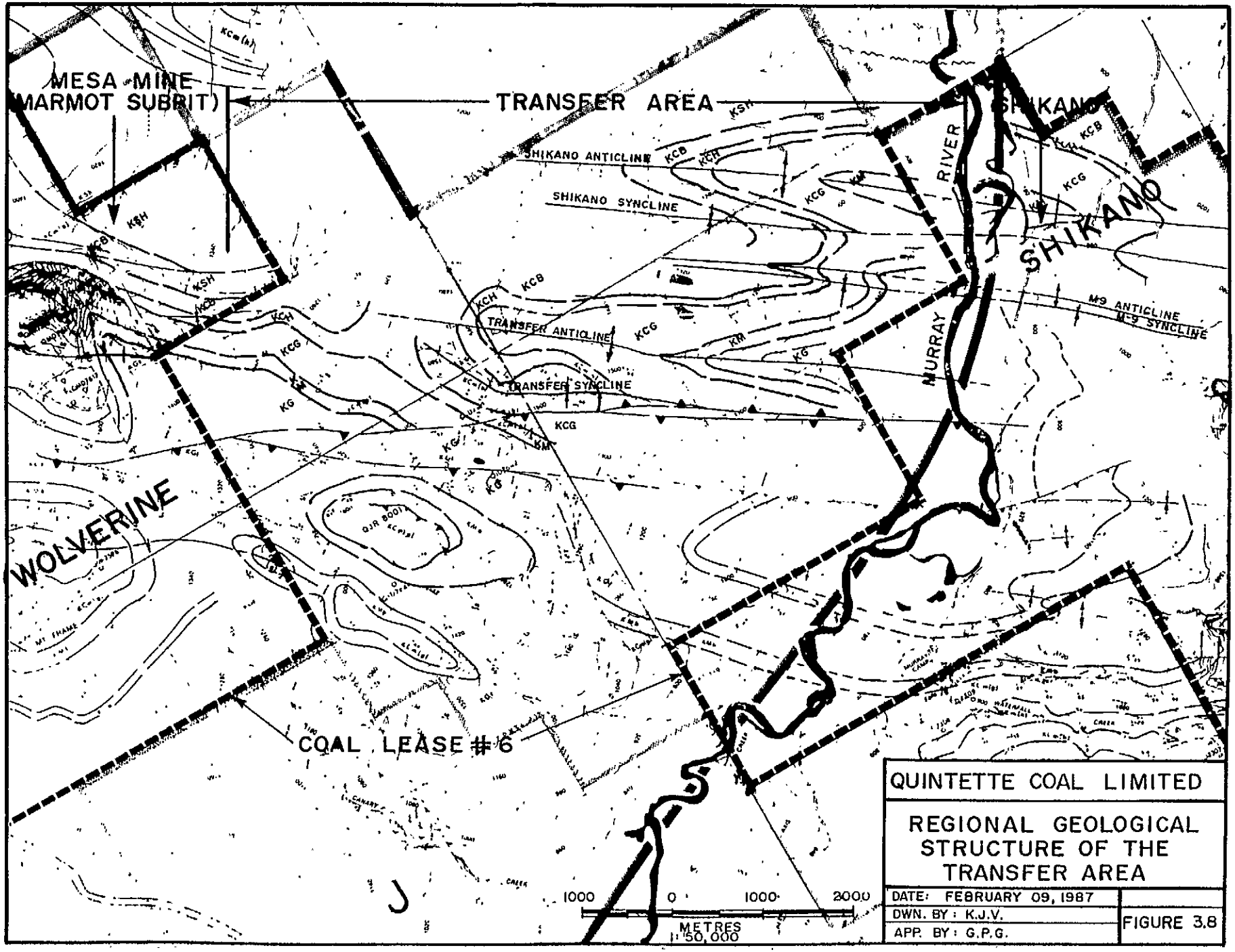
VERTICAL SCALE (metres)



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

BCIL 7/42 OCL


PERRY CREEK SYNCLINE
MESA
TRANSFER ANTICLINE
GETHING
GRIZZLY ANTICLINE
SHIKANO
WOLVERINE
BABCOCK
TRANSFER AREA
KCm(g) Commotion Formation (gates member)
KGt Gething Formation
QUINTETTE LICENCE BOUNDARY
QUINTETTE LOCATION MAP
QUINTETTE COAL LIMITED
SIMPLIFIED GEOLOGY
FIGURE 3.7
MARCH 1982



QUINTETTE COAL LIMITED

REGIONAL GEOLOGICAL STRUCTURE OF THE TRANSFER AREA

DATE: FEBRUARY 09, 1987	FIGURE 3.8
DWN. BY: K.J.V.	
APP. BY: G.P.G.	

Do not film this appendix

Appendix T.1

1987 Exploration Report

Legal Description of Coal Licences

APPENDIX 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

Do not film this appendix

Appendix T.2

1987 Exploration Report

Drill Hole Summaries

(between the red inserts)

Appendix T.2.1

Rotary Drill Holes

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT Grizzly

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR87001	-65°	~210°	189.6 m.	5¼" Rot.	

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED
848.1	6096302.76	624679.72		

GEOPHYSICAL DATA																OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR *	SLANT ∢ *					DEPTH	COMPOSITION
1:200	✓				✓	✓			✓	✓	✓						

-No Detail Logs-Tap lost! * Directional run by BPP - other logs by QCL.

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
"O" Correlation		16.2										
"▲" Correlation?		38.3										
Fault?		46.7										
D1		72.6 - 73.6										
D2P		73.6 - 74.0										
D2		74.0 - 74.9										
E1		88.7 - 88.9										
E2P		88.9 - 90.3										
E2		90.3 - 92.2										
E3P		92.2 - 92.8										
E3		92.8 - 95.0										lower zone hi ash

FORM 79-0850-R01

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT _____

PAGE 2 OF 3

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR 87001					

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	' ; NORTH	EAST	DRILLED	CORE LOGGED

GEOPHYSICAL DATA														OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT ∠			DEPTH	COMPOSITION

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
F1		114.4 - 115.0										
F2P		115.0 - 115.3										
F2		115.3 - 118.5										
(F)		114.4 - 118.5										
G Congl.		131.0 - 152.5										
G1		152.5 - 152.8										
G2P		152.8 - 153.0										
G2		153.0 - 154.1										
G3P		154.1 - 154.9										
G3		154.9 - 156.2										
(G)		152.5 - 156.2										
J		176.8 - 177.0										

FORM 79-0850-R01

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT _____

PAGE 3 OF 3

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR87001					

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	N ; NORTH	EAST	DRILLED	CORE LOGGED

GEOPHYSICAL DATA														OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT 4			DEPTH	COMPOSITION

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
KO												
K1 upper		177.7 - 178.2										V. broach
K1 lower		178.2 - 179.7										
(K1)		177.7 - 179.7										
K2P		179.7 - 184.3										
(Coal		181.3 - 181.5)										
K2		184.3 - 185.0										
Coal		185.6 - 185.8										

FORM 79-0850-R01

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT Grizzly

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR87002	~ -73°	210°	159.3	5 1/4" Rot.	

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED
879.90	6096356.15	6544645.86		

GEOPHYSICAL DATA															OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT				DEPTH	COMPOSITION
1:200	✓*				✓	✓				✓	✓**					

* Rods only

** 40 55m only – hole blocked

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
D1		19.8 - 22.3										
D2P		22.3 - 23.0										
D2		23.0 - 23.8										
E2		45.6 - 45.9										
F1		70.5 - 71.1										
F2P		71.1 - 71.6										
F2		71.6 - 75.8										
(E)		70.5 - 75.8										
G Coal		85.0 - 112.2										
G1		112.2 - 112.5										
G2P		112.5 - 112.6										

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT _____

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR87002					

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	; NORTH	EAST	DRILLED	CORE LOGGED

GEOPHYSICAL DATA														OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT ∠			DEPTH	COMPOSITION

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
G2		112.6 - 113.6										
G3P		113.6 - 114.7										
G3		114.7 - 115.9										
(G)		112.2 - 115.9										
J		134.0 - 138.9										
K1P		138.9 - 140.2										
K1		140.2 - 141.1										
K2P		141.1 - 145.3										
K2		145.3 - 145.7										

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT Grizzly

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QTR87003	−60°	~211°	140.0	5½" Rot	

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED
995.43	6096428.35	624278.69		870604

GEOPHYSICAL DATA

SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT 4			
1:200	✓				✓	✓	✓		✓	✓	✓			
1:20	✓				✓				✓					

OVERBURDEN

DEPTH	COMPOSITION

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
E3		12.48 - 14.55										Significant parting from 13.28 to 14.00
F1		37.78 - 38.78										
F2P		38.78 - 39.17										
F2		39.17 - 42.50										
(F)		37.78 - 42.50										
G Conglomerate		48.5 - 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										

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT _____

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR87003					

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED

GEOPHYSICAL DATA														OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT 4			DEPTH	COMPOSITION

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
K1P		106.92 - 107.71										
K1 upper		107.71 - 108.13		—	Very high ash							
K1 Lower		108.13 - 109.26										
(K1)		107.71 - 109.26										
K2P		109.23 - 113.64										
(Coal		111.15 - 111.26)										
K2		113.64 - 114.34										
Coal		114.54 - 115.08										Very hi ash

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT Grizzly

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR87004	-59°	219°	121.8	5½" Rot	

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED
931.67	6096486.65	624117.60		870604

GEOPHYSICAL DATA														
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT 4			
1:200	✓				✓	✓	✓		✓	✓*	✓*			
1:20	✓				✓				✓					

OVERBURDEN	
DEPTH	COMPOSITION

* by BPB

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
												Significant parting from
E3		13.29 - 15.44										14.16 - 14.86
												V. hi ash.
F1		37.39 - 38.23										
F2P		38.23 - 38.50										
F2		38.50 - 41.60										
Flow		41.60 - 42.10										
(F)		37.39 - 41.60										
G Coal		48.9 - 78.80										
G1		78.80 - 79.10										
G2P		79.10 - 79.36										
G2		79.36 - 80.44										Rock split near base
G3P		80.44 - 80.84										
G3		80.84 - 82.43										

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT _____

PAGE 2 OF 2

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR87004					

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED

GEOPHYSICAL DATA														OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT ∠			DEPTH	COMPOSITION

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
J		102.12 - 107.04										
K1P		107.04 - 107.72		(K1 upper zone		107.68 - 108.09	— very hi ash)					
K1	upper	107.72 - 108.09										v. hi ash
K1	lower	108.09 - 109.10										Rock split near base
(K1)		107.72 - 109.10										
K2P		109.10 - 113.16										
(Coal		110.58 - 110.64)										
K2		113.16 - 113.83										
Coal		114.35 - 114.60										hi ash.

FORM 79-0850-R01

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT Grizzly

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR 87005	-63°	208°	117.5	5½" Rot	

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED
995.67	6096582.54	623827.89		

GEOPHYSICAL DATA														OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT 4			DEPTH	COMPOSITION
1:200	✓				✓	✓	✓		✓	✓*	✓*				
1:20	✓				✓				✓						

* by BPB

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
F1		28.97 - 29.78										
F2P		29.78 - 29.96										
F2		29.96 - 32.98										
Flow		32.98 - 33.54										
(F)		28.97 - 32.98										
G Coal		40.7 - 78.61										
G2P		78.61 - 78.77										
G2		78.77 - 79.63										
G3P		79.63 80.51										
G3		80.51 81.95										
(G)		78.77 - 81.95										
J		97.51 - 102.47										

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT _____

PAGE 2 OF 2

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR87005					

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED

GEOPHYSICAL DATA														OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT ∠			DEPTH	COMPOSITION

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
K1P		102.47-103.36										
K1 upper		103.36-103.73										
K1 Lower		103.73-104.94										
(K1)		103.36-104.94										
K2P		104.94-108.77										
(Coal		106.15-106.26)										
K2		108.77-109.09										
Coal		109.40-109.49										V. hi ash

FORM 79-0850-R01

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT Grizzly

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR 87006	Vertical		182 m	5½" Rot.	

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED
1057.87	6096741.68	623311.92		870609

GEOPHYSICAL DATA														OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT ∠			DEPTH	COMPOSITION
1:200	·		✓		✓	✓	●								
1:20			✓		✓				✓						

Note: All picks from 1:200 ~~and~~ Density.

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
E2		2.5 - 3.3										
E3P		3.3 - 11.8										
E3		11.8 - 12.5										Very hi ash
F1		44.3 - 45.2										
F2P		45.2 - 45.6										
F2		45.6 - 50.5										
F Low		50.5 - 51.5										V. hi ash
(F)		44.3 - 50.5										
G Coal		61.6 - 128.1										Fault thickened?
G2P		128.1 - 128.6										
G2		128.6 - 129.8										
G3P		129.8 - 130.9										

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT _____

PAGE 2 OF 2

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR87006					

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED

GEOPHYSICAL DATA														OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT ∠			DEPTH	COMPOSITION

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
G3		130.9 - 133.1										
(A)		128.6 - 133.1										
J		157.5 - 165.2										
K1P		165.2 - 168.4										
K1	upper	166.4 - 167.2										V. fine ash
(K1)		167.2 - 169.0										
K2P		169.0 - 174.8		(Thin coal 170.4 - 170.6)								
K2		174.8 - 176.0										
Coal		176.8 - 177.1										

FORM 79-0850-R01

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT Grizzly

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR87007			170.2	5½" Rot.	

U.T.M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED
1117.65	6096526.69	683136.87		8706 11

GEOPHYSICAL DATA														
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT ∠			
1:200	✓				✓	✓	✓		✓	✓	✓			
1:20	✓	✓							✓					

OVERBURDEN	
DEPTH	COMPOSITION

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
D1		7.2 - 7.7										(from general log)
D2P		7.7 - 8.2										poor coal.
D2		8.2 - 8.7										"
(D)		7.2 - 8.7										
E3		32.0 - 39.2										Very poor coal - Cave?
												(from general log)
												Faulted? Water Level
												Faulted? Water Level
F1		81.64 - 82.44										
F2P		82.44 - 82.75										

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT _____

PAGE 2 OF 3

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR87007					

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED

GEOPHYSICAL DATA														OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT 4			DEPTH	COMPOSITION

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
F2		82.75 - 85.46										
F low		85.46 - 86.37										
(F)		81.64 - 85.46										
B Cgl		94.0 - 134.44										
G1		134.44 - 134.74										
G2P		134.74 - 135.00										"Low Ash" ~ 40%
G2		135.00 - 135.77										
G3A		135.77 - 135.91										
G3		135.91 - 137.34										Two hi ash partings.
(G)		134.44 - 137.34										
J		153.91 - 159.44										Very clean
K1P		159.44 - 159.93										

FORM 79-0850-R01

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT _____

PAGE 3 OF 3

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR87007					

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED

GEOPHYSICAL DATA														OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT ∠			DEPTH	COMPOSITION

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
K1	upper	159.93 - 160.67										hi ash.
K1	lower	160.67 - 162.03										
(K1)		159.93 - 162.03										
K2P		162.03 - 164.13										
(Coal		162.55 - 162.68)										
K2		164.13 - 165.04										
Coal		165.47 - 165.59										

FORM 79-0850-R01

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT Grizzly

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR 87008	Vertical.		103.6	5½" Rot.	

U.T.M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED
1107.99	6091694.04	623196.40		870612

GEOPHYSICAL DATA														
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT ∠			
1:200			✓		✓	✓								
			✓		✓									

OVERBURDEN	
DEPTH	COMPOSITION

NOTE: Seam Picks may be affected by Rod joints — logged through rods.

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
F1		21.0 - 21.5										
F2P		21.5 - 21.8										
F2		21.8 - 24.6										
FLow		24.6 - 25.5										
(F)		21.0 - 24.6										
G Cgl		31.6 - 65.1										
G1		65.6 - 66.2										
G2P		66.2 - 67.0										
G2		67.0 - 68.5										
G3P		68.5 - 69.1										
G3		69.1 - 70.0										
(G)		65.6 - 70.1										
J		85.1 - 89.9										

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT _____

PAGE 2 OF 2

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR87008					

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED

GEOPHYSICAL DATA														OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT 4			DEPTH	COMPOSITION

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
K1P		89.9 - 90.8		(K1 upper 90.8 - 91.3)								
K1 upper		90.8 - 91.3										
K1 lower		91.3 - 92.1										
(K1)		91.3 - 92.1										
K2P		92.1 - 95.2										
K2		95.2 - 96.1										

FORM 79-0850-R01

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT Grizzly

PAGE 1 OF 2

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR87009			132.3	5 1/4" Rot.	

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED
1109.97	6096471.16	623293.44		870613

GEOPHYSICAL DATA

SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT 4			
1:200	✓				✓	✓	✓		✓	✓	✓			
1:20		✓							✓					

OVERBURDEN

DEPTH	COMPOSITION
1.9 (casing)	

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
Coal		19.64 - 19.73										Hi ash
F1		19.88 - 20.76										
F2P		20.76 - 21.16										
F2		21.16 - 24.57										
F Low		24.57 - 25.48										V. Hi ash
(F)		19.88 - 24.57										
G Coal		33.2 - 82.0										
												(G1 eroded?)
G2		82.34 - 83.49										Top of G2 may be G2A
G3P		83.49 - 84.02										
G3		84.02 - 85.60										
(G)		82.34 - 85.60										

FORM 79-0850-R01

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT _____

PAGE 2 OF 2

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR87009					

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED

GEOPHYSICAL DATA														
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT 4			

OVERBURDEN	
DEPTH	COMPOSITION

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
J		103.39-108.83										
K1P		108.83-109.32										
K1 upper		109.32 - 110.15										- Two thin coals - overall ash V. hi.
K1 lower		110.15 - 110.99										
(K1)		110.15 - 110.99										
K2P		110.99 - 114.62										
(Coal		111.99 - 112.13)										
K2		114.62 - 115.61										
Coal		115.90 - 116.14										V. hi. ash.

FORM 79-0850-R01

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT Grizzly

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR87010	61.5°	041°	164.4	5½" Rot.	

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED
1109.67	6096347.63	6233916.43		870615

GEOPHYSICAL DATA

SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT ∠			
1:200			✓		✓	✓				✓*	✓*			
1:20			✓		✓									

Rods only. *Casing only.

OVERBURDEN

DEPTH	COMPOSITION

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
D1		32.0 - 32.9										
D2P		32.9 - 33.4										
D2		33.4 - 33.9										
(D)		32.0 - 33.9										
E3		66.8 - 67.2										V. hi ash
F1		87.5 - 87.9										
F2P		87.9 - 88.3										
F2		88.3 - 90.5										Thick hi ash parting in bottom half of F2.
(F)		87.5 - 90.5										
G Coal		98.4 - 125.9										
G1		125.9 - 126.2										
G2P		126.2 - 126.6										

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT _____

PAGE 2 OF 2

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR 87010					

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED

GEOPHYSICAL DATA														OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT ∠			DEPTH	COMPOSITION

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
G2		126.6 - 127.2										
G3P		127.2 - 127.8										
G3		127.8 - 128.8										
G		125.9 - 128.8										
J		143.8 - 149.4										
K1P		149.4 - 150.3										
K1		150.3 - 151.7										
K2P		151.7 - 154.3										
K2		154.3 - 155										

FORM 79-0850-R01

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT Grizzly

PAGE 1 OF 1

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR87011	90°		121.5	5½" Rot.	

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED
1107.81	6091681.67	623132.37		870615

GEOPHYSICAL DATA														OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT ∠			DEPTH	COMPOSITION
1:200			✓		✓	✓				✓*	✓*				
1:20			✓												

* Top 25m only.

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
F1		39.3 - 39.8										
F2P		39.8 - 40.1										
F2		40.1 - 42.8										
(F)		39.3 - 42.8										
G Cgl		49.6 - 81.5										
G1		81.5 - 81.7										
G2P		81.7 - 81.9										
G2		81.9 - 82.7										
G3P		82.7 - 84.1										
(G) J		~~81.5 - 84.1~~ 100.7 - 106.1										
K1P		106.1 - 106.8										
K1 upper		106.8 - 107.3										
K1 lower		107.3 - 108.4										
(K1) K2P		106.8 - 108.4 108.4 - 110.9										
K2		110.9 - 111.4										

FORM 79-0850-R01

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT Grizzly

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR87012	90°	—	183.3	5¼" Cot.	

U.T.M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED
1116.81	6096590.37	623063.54		870617

GEOPHYSICAL DATA															
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT 4				
1:200			✓		✓	✓			✓	✓	✓				
		✓	✓		✓										

OVERBURDEN	
DEPTH	COMPOSITION

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
D1		22.30-23.06										
D2P		23.06-23.17										
D2		23.17-23.96										
(D)		22.30-23.96										
F1		97.09-97.80										
F2P		97.80-97.99										
F2		97.99-101.73										
Flow		101.73-102.87										Very hi ash
(F)		97.09-101.73										(rock + coal)
G Cgl		109.2-147.58										
G1		147.58-147.69										
G2P		147.69-147.97										
G2		147.97-148.88										
G3P		148.88-149.08										
G3		149.08-150.81										
[illegible]		[illegible]										

FORM 79-0850-R01

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT _____

PAGE 2 OF 2

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR 87012					

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED

GEOPHYSICAL DATA															OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT ∠				DEPTH	COMPOSITION

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
J		166.44–170.82										
KIP		170.82 - 171.24										
Klupper		171.24 - 171.48										
KI Lower		171.48 - 172.28										
(KD	"	171.24 - 172.28										hi ash)
KZP		172.28 - 174.44										
(Coal -		172.53 - 172.67)										
KZ		174.44 - 175.25										
Coal		175.84 - 175.98										

FORM 79-0850-R01

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT Grizzly

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR 87013	-58	208°	143.7	5½" Rot	

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED
1041.15	6096728.48	623477.31		870618

GEOPHYSICAL DATA														
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT ∠			
1:200			✓		✓	✓			✓	✓	✓			
1:20		✓	✓		✓									

OVERBURDEN	
DEPTH	COMPOSITION

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
F1		56.30 - 57.08										
F2P		57.08 - 57.34										
F2		57.34 - 60.33										
F Low		60.33 - 61.04										High ash coal w. rock.
(F)		56.30 - 60.33										
G Cgl		68.1 - 103.68										
G1		103.68 - 103.99										
G2P		103.99 - 104.22										
G2		104.22 - 105.11										
G3P		105.11 - 105.64										
G3		105.64 - 107.07										
(G)		103.88 - 107.07										
J		123.84 - 128.74										

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT _____

PAGE 2 OF 2

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR87013					

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED

GEOPHYSICAL DATA														OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT ∠			DEPTH	COMPOSITION

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
K1P		128.74-129.23										
K1 upper		129.23-129.86										
K1 Lower		129.86-131.01										hi ash coal + rock plies
(K1)		129.23-131.01										
K2A		131.01-134.25										
(Coal		131.78-131.83)										
K2		134.25-134.98										
Coal		135.33-135.59										v. hi ash

FORM 79-0850-R01

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT Grizzly

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR87014	90° *		207.4m	5½" Rotary	

U.T.M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED
1076.90	6096773.65	623194.30	"	870620

GEOPHYSICAL DATA

SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT 4			
1:200			✓		✓	✓								
1:20			✓		✓									

OVERBURDEN

DEPTH	COMPOSITION

* No deviation

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
F3		34.9 - 35.2										
F1		67.5 - 68.5										
F2P		68.5 - 69.1										
F2		69.1 - 74.0										
F Low		74.0 - 74.8										V. hi ash
(F)		67.5 - 74.0										
G Cgl		85.0 - 148.7										
G1		148.7 - 149.2										
G2P		149.2 - 149.6										
G2		149.6 - 150.9										
G3P		150.9 - 152.6										
G3		152.6 - 154.6										
(G)		148.7 - 154.6										

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT _____

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR87014					

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED

GEOPHYSICAL DATA														OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT 4			DEPTH	COMPOSITION

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
J		181.6 - 190.1										
K1P		190.1 - 191.0										
K1 upper		191.0 - 191.8										
K1 lower		191.8 - 193.7										upper pat hi ash
(K1)		191.0 - 193.7										
K2P		193.7 - 198.3										
K2		198.3 - 199.5										

FORM 79-0850-R01

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT Grizzly

PAGE 1 OF 1

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR87015	90°		45m	5¾" Rot.	

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED
1079.99	6096508.62	623456.49		870621

GEOPHYSICAL DATA

SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT ∠			
1:200			✓		✓	✓			✓	✓	✓			
1:20*		✓	✓		✓				✓					

OVERBURDEN

DEPTH	COMPOSITION

* J Seam only

NOTE: DRILLER'S DEPTH = 56.7m ; LOGGER'S = 45m

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
G Coal		0 - 7.7										
G2 ?		7.7 - 9.7	}	Pick from General Log.								Too thick
G3P		9.7 - 10.8										
G3		10.8 - 12.1										
(G)		7.7 - 12.1										
J		26.10 - 31.14										
K1P		31.14 - 31.81										
K1 upper		31.81 - 32.19										Incl. coally parting
K1 Lower		32.19 - 33.44										
(K1)		31.81 - 33.44										Incl. upper rock split
K2P		33.44 - 36.47										
(Coal		34.08 - 34.20)										
K2		36.47 - 37.20										
K2 Low		37.20 - 37.82										Hi ash coal & rock partings

FORM 79-0850-R01

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT Grizzly

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR87016	-60°	035°	146.6m	5½" Rot.	

U.T.M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED
1071.99	6096078.36	623627.55		870622

GEOPHYSICAL DATA														OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT 4			DEPTH	COMPOSITION
1:200		✓	✓		✓	✓	✓		✓	✓	✓				
1:20		✓	✓		✓				✓						

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
D		9.39 - 10.83										
F1		69.83 - 70.57										
F2P		70.57 - 70.75										
F2		70.75 - 73.86										
F Low		73.86 - 74.50										
(F)		69.83 - 73.86										
G Cgl		83.3 - 108.07										
G1		108.07 - 108.23										
G2P		108.23 - 108.68										
G2		108.68 - 109.44										
G3P		109.44 - 110.94										
G3		110.94 - 111.00										
(G)		108.83 - 111.00										

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT _____

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR87016					

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED

GEOPHYSICAL DATA														OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT ∠			DEPTH	COMPOSITION

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
J		126.15 - 130.59										
K1P		130.59 - 131.30										
(Coal		131.03 - 131.12)										
K1 upper		131.30 - 131.67										
K1 Lower		131.67 - 132.58										
(K1)		131.30 - 132.58										
K2P		132.58 - 136.24										
(Coal		134.36 - 134.44)										
K2		136.24 - 136.97										
Coal		137.12 - 137.18										
Coal		137.46 - 137.18										V. hi ash.

FORM 79-0850-R01

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT Grizzly

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR87017	90°		164.8m	5½" Rot	

U.T.M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED
1014.93	6095936.665	623801.666		

GEOPHYSICAL DATA														OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT ∠			DEPTH	COMPOSITION
1:200			✓		✓	✓	✓		✓	✓	✓				
1:20		✓			✓		✓		✓						

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
												Hi ash - Significant parting from 45.37 to 45.99.
F3		44.09 - 46.63										
E3P		46.63 - 49.51										
E4		49.51 - 50.11										
F1		73.34 - 74.31										
F2P		74.31 - 74.66										
F2		74.66 - 78.50										
F		73.34 - 78.50										
G Cgl		94.7 - 110.3										
G1 ??		110.3 - 110.7	X	Not G1.								hi ash ?
G2P ?		110.7 - 116.73	X	Not G2P								Mostly conglomerate
G2		116.73 - 117.85										
G3P		117.85 - 118.51										

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT _____

PAGE 2 OF 2

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR 87017					

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED

GEOPHYSICAL DATA														OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT ∠			DEPTH	COMPOSITION

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
G2		118.51 - 120.06										
(G)		116.73 - 120.06										G2 + G3
J		137.65 - 142.72										
K1	upper	143.52 - 144.24										Very hi ash
K1	Lower	144.24 - 145.44										
(K1)		143.52 - 145.44										
K2P		145.44 - 150.01										
(Coal		147.03 - 147.24)										
K2		150.01 - 150.84										

FORM 79-0850-R01

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT Grizzly

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR 87018	−60°	~086°	123.0m	5½" Rotary	

U.T.M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED
978.03	6095705.40	624093.48		870624

GEOPHYSICAL DATA														OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT ∠			DEPTH	COMPOSITION
1:200			✓		✓	✓	✓		✓	✓	✓				
1:20		✓							✓						

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
E3		21.8 - 24.1										hi ash int parting
F1		47.08 - 47.99										
F2P		47.99 - 48.21										
F2		48.21 - 50.20										FAULT in "F2" - cuts
F0												F_2 & repeats full
FAULT		50.20	CHANGE	TO 49.65m.								F seam, including
					JP.							splits in roof.
F1		50.43 - 51.09										
F2P		51.09 - 51.41										
F2		51.41 - 55.04										
F Low		55.04 - 55.78										Very hi ash.
F		50.43 - 55.04										

FORM 79-0850-R01

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT _____

PAGE 2 OF 2

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR8706B					

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED

GEOPHYSICAL DATA														OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT ∠				DEPTH	COMPOSITION

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
G1		74.25-74.86										hi ash w. 2 partings
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										
K2P		97.83 - 98.46										
K1 upper		98.46 - 98.79										V. hi ash
K1 lower		98.79 - 99.80										
(K1)		98.46 - 99.80										
K2P		99.80- 104.42										
(Coal		101.37 - 101.49)										
K2		104.42-105.17										

hi-ash

FORM 79-0850-R01

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT GRIZZLY

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR87019	−60°	~057°	110.7M	5½" Rot.	

U.T.M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED
911e.10	6095531.26	624218.70		870625

GEOPHYSICAL DATA														OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT 4			DEPTH	COMPOSITION
1:200			✓		✓	✓	✓		✓	✓	✓				
		✓	✓		✓				✓						

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
E3		17.1 - 18.3										V. hi ash w. partings
F1		40.73 - 41.10										
F2P		41.10 - 41.41										
F2		41.41 - 44.87										
F Low		44.87 - 45.63										V. V. hi ash
(F)		40.73 - 44.87										
G1		63.68 - 64.64										Top. V. hi ash
G2P		64.64 - 64.86										
G2		64.86 - 65.72										
G3P		65.72 - 66.34										
G3		66.34 - 67.60										
(G)		63.68 - 67.60										

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT _____

PAGE 2 OF 2

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR87019					

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED

GEOPHYSICAL DATA														OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT α			DEPTH	COMPOSITION

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
J		85.09 - 89.32										
K1P		89.32 - 89.87										
K1 upper		89.87 - 90.51										high ash.
K1 lower		90.51 - 91.57										
(K1)		89.87 - 91.57										
K2P		91.57 - 96.34										
(Coal		92.97 - 93.03)										
K2		96.34 - 96.94										
Coal		97.16 - 97.25										

FORM 79-0850-R01

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT Grizzly

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR87020	-60	~210°	244.0	5¼" Rot	

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED
797.81	6096256.36	624879.72		870701

GEOPHYSICAL DATA														OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT 4			DEPTH	COMPOSITION
1:200			✓		✓	✓	✓		✓	✓	✓				
1:20		✓	✓		✓				✓						

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
C		53.52 - 54.92										Lower ½ hi ash.
B		74.4 - 75.2										V. hi ash
D1		123.88 - 124.67										
D2P		124.67 - 124.83										
D2		124.83 - 126.91										
(D)		123.88 - 126.91										
E1		140.77 - 141.08										
E2P		141.08 142.06										Significant rock parting
E2		142.06 - 143.14										
E3P		143.14 - 143.44										
		143.44 - 145.46										
		142.06 - 145.46										

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT _____

PAGE 2 OF 2

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR87020					

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED

GEOPHYSICAL DATA														OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT 4			DEPTH	COMPOSITION

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
F1		163.03 - 163.66										
F2P		163.66 - 163.90										
F2		163.90 - 167.08										
(F)		163.03 - 167.08										
G1		204.00 - 204.00										
G2P		204.00 - 204.00										
G2		204.00 - 204.71										
G3P		204.71 - 205.50										
G3		205.50 - 206.74										
(G)		204.00 - 206.74										
		221.28 - 226.10										
		226.10 - 226.59										
		226.59 - 228.29										hi ash in upper part

FORM 79-0850-R01

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT TRANSFER

PAGE 1 OF

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR 87021	⊥ 90°	—	168.8 m	5½" Rot.	

U.T.M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED
1572.82	6096160.32	620569.25		

GEOPHYSICAL DATA

SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT ∠			
1:200	✓				✓	✓	✓		✓					
1:20			✓											

OVERBURDEN

DEPTH	COMPOSITION

NOTE – All picks from Long Space Density detail log – not great!

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
D1	(D)	46.65-47.42										
E1		67.40-67.92										
E2P		67.92-68.61										
E2		68.61-70.18										
E3P		70.18-71.94										V. high ash
E3		71.94-72.47										V. high ash.
(No recoverable coal)												
F1		95.91-96.27										hi ash.
F2P		96.27-96.74										Thickness may be affected by rock joint
F2		96.74-100.11										
(F)		95.91-100.11										

FORM 79-0850-R01

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT _____

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR87021					

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED

GEOPHYSICAL DATA														OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT ∠			DEPTH	COMPOSITION

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
G1		126.70 - 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										

FORM 79-0850-R01

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT TRANSFER

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR 87022	90°		144.6	5½" Rot.	

U.T.M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED
1580.60	6096087.30	620508.12		870703

GEOPHYSICAL DATA															OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT 4				DEPTH	COMPOSITION
1:200	✓				✓	✓										
1:20		✓	✓													

Picked from General Log.

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
E1		19.8 - 20.2										
E2P		20.2 - 20.8										
E2		20.8 - 24.4										V. high ash
E3P		24.4 - 26.8										
E3		26.8 - 28.2										Good Coal.
F1		50.06 - 50.78										
F2P		50.78 - 51.01										
F2		51.01 - 54.83										
(F)		50.06 - 54.83										
G1		84.10 - 85.20										
G2P		85.20 - 85.32										

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT _____

PAGE 2 OF 2

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR87022					

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED

GEOPHYSICAL DATA														OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT 4			DEPTH	COMPOSITION

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
G2		85.32 - 87.22										
G3P		87.22 - 87.55										
G3		87.55 - 89.07										
G1		84.10 - 89.07										
J		105.87 - 110.73										
K1P		110.73 - 111.59										
K1		111.59 - 112.79										
K2P		112.79 - 113.73										
K2		113.73 - 115.00										

FORM 79-0850-R01

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT TRANSFER

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR87023	90	-	171.0	5½" Rot.	

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED
1601.62	6095983.11	620432.72		870704

GEOPHYSICAL DATA															OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT 4				DEPTH	COMPOSITION
1:200	✓				✓	✓										
1:20		✓	✓													

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
D1		54.94 - 55.56										
D2P		55.76 - 55.71										
D2		55.71 - 56.10										
D3P		56.10 - 57.08										
D3		57.08 - 57.32										V. high ash
D4P		57.32 - 57.89										
D4		57.89 - 58.50										high ash
E1		73.05 - 73.51										high ash
E2P		73.51 - 73.98										
E2		73.98 - 75.50										high ash
E3P		75.50 - 77.94										
E3		77.94 - 79.84										mineable
F1		97.76 - 98.40										

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR87023					

U.T.M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED

GEOPHYSICAL DATA														OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT ∠			DEPTH	COMPOSITION

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
F2P		98.40 - 98.67										
F2		98.67 - 102.79										
(F)		97.76 - 102.79										
G1		128.92 - 129.98										
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 - 153.39										
K1		153.39 - 154.35										

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT _____

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR87023					

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED

GEOPHYSICAL DATA														OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT ∠			DEPTH	COMPOSITION

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
K2P		154.35-156.68										
(Coal		155.40-155.66)										
K2		156.68-157.84										

FORM 79-0850-R01

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT TRANSFER

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR 87 024	90		128.5	5½" Rot.	

U.T.M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED
1564.25	6096026.86	620712.89		870705

GEOPHYSICAL DATA

SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT ∠			
1:200	✓				✓	✓								
1:20		✓	✓											

OVERBURDEN

DEPTH	COMPOSITION

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
E1	From Geophysical log	19.3 - 19.8										Sample for coal analysis only
E2P		19.8 - 20.4										
E2		20.4 - 22.7										
E3P		22.7 - 25.57										
E3		25.57 - 26.78										
												Good Coal
F1		49.29 - 49.70										
F2P		49.70 - 50.14										
F2		50.14 - 53.30										
(F)		49.29 - 53.30										
G1		87.55 - 88.64										
G2P		88.64 - 88.80										

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT TRANSFER

PAGE 2 OF 2

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR87024					

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED

GEOPHYSICAL DATA														OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT 4			DEPTH	COMPOSITION

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
G2		88.80 - 89.80										
G3P		89.80 - 90.37										
G3		90.37 - 91.54										
G		87.55 - 91.54										
J		109.12 - 112.00		Probably minable together.								
K1P		112.00 - 112.43										Contains some coal
K1		112.43 - 113.56										
K2P		113.56 - 114.16										
K2		114.16 - 115.14										

FORM 79-0850-R01

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT TRANSFER

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR87025			110.0	5¼" Rot	

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED
1585.04	6095957.56	620647.17		870707

GEOPHYSICAL DATA														OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT 4			DEPTH	COMPOSITION
1:200	✓				✓	✓								4.5	
1:20		✓	✓												

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
OB		0.0 - 4.5										
F1		31.49 - 32.14										
F2P		32.14 - 32.29										
F2		32.29 - 36.20										
(F)		31.49 - 36.20										
G1		64.99 - 66.04										
G2P		66.04 - 66.41										Contains coal parting
G2		66.41 - 67.50										
G3P		67.50 - 67.92										
G3		67.92 - 69.23										
(G)		64.99 - 69.23										

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT TRANSFER

PAGE 2 OF 2

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR 87025					

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED

GEOPHYSICAL DATA														OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT 4			DEPTH	COMPOSITION

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
J		89.60 - 95.62										
KIP		95.62 - 96.61										Contains coal parting
KI		96.61 - 97.92										
K2P		97.92 - 98.69										
K2		98.69 - 99.55										upper ½ v. high ash
COAL		99.87 - 100.11										

FORM 79-0850-R01

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT TRANSFER

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR87026	90		140.0	5½" Rot.	

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED
1573.08	6095680.63	620701.80		870707

GEOPHYSICAL DATA														
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT ∠			
1:200	✓				✓	✓								
1:20		✓	✓											

OVERBURDEN	
DEPTH	COMPOSITION

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
D1/D2		13.16 - 14.34										mineable
D3P		14.34 - 15.06										
D3		15.06 - 15.35										hi ash
D4P		15.35 - 15.57										
D4		15.57 - 16.24										hi ash.
E3		43.95 - 45.42										lower ½ V. hi ash.
F1		64.55 - 65.36										
F2P		65.36 - 65.81										Contains coally parting
F2		65.81 - 68.98										
(F)		64.55 - 68.98										

FORM 79-0850-R01

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT _____

PAGE 2 OF 2

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHRB7026					

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED

GEOPHYSICAL DATA														OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT ∠			DEPTH	COMPOSITION

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
G1		104.26-105.58										
G2P		105.58-105.77										
G2		105.77-106.85										
G3P		106.85-107.14										
G3		107.14-108.45										
G		104.26-108.45										
J		123.32-128.83										
K1P		128.83-129.70										
K1		129.70-131.13										upper part hi ash
K2P		131.13-132.68										
K2		132.68-134.10										includes lower coal partings

FORM 79-0850-R01

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT TRANSFER

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QWR87037	90		80.0	5 1/2" Rot.	

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED
1549.64	6095842.94	620804.17		870707

GEOPHYSICAL DATA

SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT 4			
1:500	✓				✓	✓								
1:20		✓	✓											

OVERBURDEN

DEPTH	COMPOSITION

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
G1		16.69 - 17.71										
G2P		17.71 - 17.83										
G2		17.83 - 19.19										
G3P		19.19 - 19.84										
G3		19.84 - 21.66										
(G)		16.69 - 21.66										
J		42.05 - 46.94										
K1P		46.94 - 47.60										
K1		47.60 - 49.00										
K2P		49.00 - 49.99										
K2		49.99 - 51.36										incl. Lower Split.

FORM 79-0850-R01

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT TRANSFER

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QNR87028	90		172.0	5½" Rot	

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED
1542.16	6096294.43	620421.70		870708

GEOPHYSICAL DATA															OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT ∠				DEPTH	COMPOSITION
1:200	✓				✓	✓										
1:20		✓	✓													

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
D1		58.59 - 59.10										mineable
D2P		59.10 - 59.21										
D2		59.21 - 59.60										mineable
D3P		59.60 - 61.12										
D3		61.12 - 61.41										v. high ash
D4P		61.41 - 61.74										
D4		61.74 - 62.30										v. high ash
E1		78.72 - 79.22										
E2P		79.22 - 79.75										
E2		79.75 - 81.48										high ash - significant parting at 80.90 - 81.16.
E3P		81.48 - 82.53										
E3		82.53 - 83.72										lower ½ v. hi ash.

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR87028					

U.T.M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED

GEOPHYSICAL DATA														OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT 4			DEPTH	COMPOSITION

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
F1		107.54-108.19										
F2P		108.19-108.65										coally
F2		108.65-112.18										
(F)		107.54-112.18										
G1		134.88-136.09										
G2P		136.09-136.22										
G2		136.22-137.10										
G3P		137.10-137.80										
G3		139.80-139.08										
(G)		134.88-139.08										
J		156.37-161.58										
K1P		161.58-162.66										Coally. incl. upper K1.
K1		162.66-163.77										
K2P		163.77-164.67										
K2												

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT TRANSFER

PAGE 1 OF 1

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR87029	90		110.0	5½" Rot	

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED
1545.46	6095579.30	620696.58		870710

GEOPHYSICAL DATA															OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT 4				DEPTH	COMPOSITION
1:200	✓				✓	✓										
1:20		✓	✓													

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
F1		15.59 – 16.47										
F2P		16.47 – 16.71										
F2		16.71 – 19.34										
(F)		15.59 – 19.34										
G1		48.39 – 49.42										
G2P		49.42 – 49.54										
G2		49.54 – 50.63										
G3P		50.63 – 50.97										
G3		50.97 – 52.25										
(G)		48.39 – 52.25										
J		66.86 – 71.31										
K1P		71.31 – 72.09										
K1		72.09 – 73.39										top ½ hi ash.
K2P		73.39 – 74.54										
K2		74.54 – 75.80										incl. lower split.

FORM 79-0850-R01

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT TRANSFER

PAGE 1 OF 1

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHB87030	90		86.8		

U.T.M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED
1459.50	6095302.31	621163.26		870711

GEOPHYSICAL DATA														
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT ∠			
1:200					✓	✓								
1:20		✓	✓											

OVERBURDEN	
DEPTH	COMPOSITION

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
(F)		1.9 - 4.9										From General Log
G1		33.08 - 34.52										
G2P		34.52 - 34.79										
G2		34.79 - 36.30										
G3P		36.30 - 36.70										
G3		36.70 - 38.91										
(G)		33.08 - 38.91										
J		58.86 - 65.35										
K1P		65.35 - 66.44										Contains 2 coal partings
K1		66.44 - 67.74										
No K2 - Note: K1 may be K2 & the thin coals between K1 & J are "K1"												

FORM 79-0850-R01

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT TRANSFER

PAGE 1 OF 1

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QNR87031	90		50.0	5½" Rot.	

U.T.M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	1st NORTH	EAST	DRILLED	CORE LOGGED
1425.42	6095747.64	621267.20		870712

GEOPHYSICAL DATA															OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT ∠				DEPTH	COMPOSITION
1:200	✓				✓	✓										
1:20		✓	✓													

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
J		23.33-28.72										
K1P		28.72-29.76										
K1		29.76-31.30										upper part hi ash.
K2P		31.30-32.56										
K2		32.56-34.11										Incl. Lower split

FORM 79-0850-R01

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT TRANSFER

PAGE 1 OF 1

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QNR87032	90		92.7	5½" Rot	

U.T.M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED
1451.87	6095887.35	6211016.04		870713

GEOPHYSICAL DATA

SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT 4			
1:200	✓				✓	✓			✓	—	✓			
1:20		✓	✓		✓				✓					

OVERBURDEN

DEPTH	COMPOSITION

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
F1		10.03 - 10.79										
F2P		10.79 - 11.15										
F2		11.15 - 14.23										
(F)		10.03 - 14.23										
G1		50.56 - 51.67										
G2P		51.67 - 51.78										
G2		51.78 - 52.85										
G3P		52.85 - 53.20										
G3		53.20 - 54.43										
(G)		50.56 - 54.43										
J		71.09 - 76.65										
KP		76.65 - 77.86										
K1		77.86 - 79.38										upper part hi ash
K2P		79.38 - 80.40										
K2		80.40 - 82.00										mid. lower split

FORM 79-0850-R01

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT TRANSFER

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR87033			98.7		

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED
1437.70	6095148.03	621293.37		870714

GEOPHYSICAL DATA

SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT			
1:200	✓				✓	✓								
1:20		✓	✓											

OVERBURDEN

DEPTH	COMPOSITION

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
F1		2.95 - 4.10										
F2P		4.10 - 4.51										
F2		4.51 - 8.56										
(F)		2.95 - 8.56										
G1		31.35 - 32.64										
G2P		32.64 - 32.92										
G2		32.92 - 34.26										
G3P		3426 - 34.66										
G3		34.66 - 35.86										
(G)		31.35 - 35.86										
[illegible]												
Coal		36.25 - 36.86										V. hi ash

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT _____

PAGE 2 OF 2

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR 87033					

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED

GEOPHYSICAL DATA														OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT ∠			DEPTH	COMPOSITION

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
J		60.73 - 66.71										
K1P		66.71 - 67.19		Could be mined together								
K1		67.19 - 68.17										
K2P		68.17 - 70.18										has thin coal parting
K2		70.18 - 72.03										and lower split

FORM 79-0850-R01

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT Transfer

PAGE 1 OF 1

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR87034	90°		108 m	5½" Rot.	

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED
1319.00	6095778.16	6217550.45	870715	

GEOPHYSICAL DATA														OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT ∠			DEPTH	COMPOSITION
	No Logs.													~20m	-

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
		- Difficult hole due to excessive overburden.										
		- No coal was intersected.										
		- Cone broke off bit @ 108 m.						Abandoned Hole.				No charge.
		- Tried to redrill in getting through overburden					See	'87	but not			successful

FORM 79-0850-R01

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT TRANSFER

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR87035	90		129.0	SF 4" Rot	

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED
1558.01	6096125.30	620293.66		870809

GEOPHYSICAL DATA														
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT ∠			
1:200	✓				✓	✓			✓	✓	✓			
		✓	✓		✓				✓					

OVERBURDEN	
DEPTH	COMPOSITION

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
D1		16.4 - 17.0										
D2P		17.0 - 17.4										
D2		17.4 - 17.7										
D3P		17.7 - 18.0										
D3		18.0 - 18.4										(some coally mix below)
D4P		18.4 - 19.4										
D4		19.4 - 20.9										
E1		32.7 - 34.0										Rock partings.
E2P		34.0 - 34.8										
E2		34.8 - 39.15										V. thin coals
E3P		39.15 - 40.62										
E3		40.62 - 41.38										
F1		61.26 - 61.96										
F2P		61.96 - 62.28										

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT TRANSFER

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR87035	90		129.0 m	5½" Rot	

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED
				870809

GEOPHYSICAL DATA														OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT 4			DEPTH	COMPOSITION
1:200	✓				✓	✓	✓		✓	✓	✓				
		✓	✓												

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
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 - 117.51										
K1		117.51 - 118.83										incl. high ash upper ½
K2P		118.83 - 120.00										
K2		120.00 - 120.88										excl. lower split

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT TRANSFER

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR87036	90		117.60	5½" Rot	

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED
1544.31	6096202.09	620351.14		870809

GEOPHYSICAL DATA														
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT ∠			
1:200	✓				✓	✓			✓	✓	✓			
1:20		✓	✓		✓				✓					

OVERBURDEN	
DEPTH	COMPOSITION

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
D Coal?		2.4 - 3.2										
E1		21.3 - 21.8		from General Log								
E2P		21.8 - 22.4										
E2		22.4 - 24.24										
E3P		24.24 - 25.27										
E3		25.27 - 27.77										
F1		50.18 - 50.70										
F2P		50.70 - 51.14										
F2		51.14 - 54.25										
(F)		50.18 - 54.25										
G1		77.99 - 79.23										
G2P		79.23 - 79.40										

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT _____

PAGE 2 OF 2

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR87036					

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED

GEOPHYSICAL DATA															OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT 4				DEPTH	COMPOSITION

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
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		103.48-104.48										
K1		104.48-105.74										
K2P		105.74-106.70										
K2		106.70-107.98										

FORM 79-0850-R01

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT TRANSFER

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR87037	90°	-	91.8	5½" Rot	

U.T.M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED
1562.42	6095758.00	620771.32		870809

GEOPHYSICAL DATA															OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT ∠				DEPTH	COMPOSITION
1:200	✓				✓	✓			✓	✓	✓					
1:20		✓	✓		✓				✓							

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
F1		7.7 - 8.1		From General Log								
F2P		8.1 - 8.4										
F2		8.4 - 12.2										
(F)		7.7 - 12.2										
G1		41.47 - 42.70										
G2P		42.70 - 42.85										
G2		42.85 - 43.74										
G3P		43.74 - 44.22										
G3		44.22 - 45.60										
(G)		41.47 - 45.60										

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT _____

PAGE 2 OF 2

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR87037					

U.T.M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED

GEOPHYSICAL DATA														OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT 4			DEPTH	COMPOSITION

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
J		59.64-64.44										
K1P		64.44 - 64.91										
K1		64.91 - 66.22										v. high ash upper ½
K2P		66.22 - 67.01										
K2		67.01 - 68.13										mid. lower split

FORM 79-0850-R01

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT TRANSFER

PAGE 1 OF

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR87038	90		129.0	5⅞" Rot	

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED
1490.85	6096017.01	620942.67		870813

GEOPHYSICAL DATA														
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT 4			
1:200	✓				✓	✓			✓	✓	✓			
		✓	✓		✓				✓					

OVERBURDEN	
DEPTH	COMPOSITION

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
D1		10.30 - 10.68										large ash band
D2P		10.68 - 10.94										
D2		10.94 - 11.38										
D3P		11.38 - 11.78.										
D3		11.78 - 11.98										
D4P		11.96 - 12.27										
D4		12.27 - 12.90.										
(D)		10.30 - 12.90										mineable?
E1		32.24 - 32.88										
E2P		32.88 - 33.32										
E2		33.32 - 36.03										high ash.
E3P		36.03 - 38.26										
E3		38.26 - 39.85'										high ash - excluding lower split.

FORM 79-0850-R01

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT _____

PAGE 2 OF _____

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR87038					

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED

GEOPHYSICAL DATA														OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT ∠			DEPTH	COMPOSITION

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
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										
K1D		120.59 - 121.48										
K1		121.48 - 122.76										hi ash upper ½
K2P		122.76 - 123.53										has thin coal split
K2		123.53 - 125.01										9 ct. lower split

FORM 79-0850-R01

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT TRANSFER

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR87039	90		99.0	5½" Rot	

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED
1522.50	6095418.96	621016.01		870815

GEOPHYSICAL DATA														OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT 4			DEPTH	COMPOSITION
1:200	✓				✓	✓			✓	✓	✓				
1:20		✓	✓		✓				✓						

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
F1		13.93-15.30										
F2P		15.30-15.63										
F2		15.63-20.81										
(F)		13.93-20.81										
G1		53.75-55.06										
G2P		55.06-55.27										
G2		55.27-56.74										
G3P		56.74-57.38										
G3		57.38-58.93										
(G)		53.75-58.93										

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT Transfer

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR 87039					

U.T.M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED

GEOPHYSICAL DATA														OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT ∠			DEPTH	COMPOSITION

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
J		79.48 – 83.02										
K1P		83.02 – 83.92										
K1		83.92 – 85.54										upper ½ hi ash
K2P		85.54 – 87.10										has coal split
K2		87.10 – 88.80										incl. lower split

FORM 79-0850-R01

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT TRANSFER

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR87040	90°	-	98.20	BQTK	

U.T.M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED
1361.19	6095283.74	622166.77	870808	870816

GEOPHYSICAL DATA														
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT 4			
1:200	✓				✓	✓			✓	✓	✓			
		✓	✓						✓					

OVERBURDEN	
DEPTH	COMPOSITION

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
F1		14.18 - 15.33										
F2P		15.33 - 15.60										
F2		15.60 - 20.29										
(F)		14.18 - 20.29										
Fault?		25.5										
F2 ?		25.5 - 27.2										
G1		43.99 - 45.05										
G2P		45.05 - 45.22										
G2		45.22 - 46.49										
G3P		46.49 - 47.05										
G3		47.05 - 48.61										
(G)		43.99 - 48.61										

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT _____

PAGE 2 OF 2

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR87040					

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED

GEOPHYSICAL DATA														OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT 4			DEPTH	COMPOSITION

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
J		72.04 - 77.82										
K1P		77.82 - 79.00										has coally partings upper ⅓ bi ash.
K1		79.00 - 80.67										
K2P		80.67 - 83.59	(thin coal 82.28 - 82.37)									
K2		83.59 - 85.06										excl. lower coally parting

FORM 79-0850-R01

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT TRANSFER

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR87041	90		187.8	5 7/4" Rot.	

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED
891.53	6095150.74	623801.94		870816

GEOPHYSICAL DATA														
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT α			
1:200	✓				✓	✓			✓	✓	✓			
1:20		✓	✓						✓					

OVERBURDEN	
DEPTH	COMPOSITION

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
D1		24.62-25.17										
D2P		25.17-25.53										
D2		25.53-26.40										
E3		59.82-61.06										Wash
F1		79.40-79.76										
F2P		79.76-80.10										
F2		80.10-83.47										
(F)		79.40-83.47										
G1		104.04-104.92										
G2P		104.92-105.01										
G2		105.01-106.05										
G3P		106.05-108.18										

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT _____

PAGE 2 OF 2

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR87041					

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED

GEOPHYSICAL DATA														OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT ∠			DEPTH	COMPOSITION

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
Q		104.04 - 107.9										
J		126.40 - 131.12					1	1				
K1P		131.12 - 131.61										
K1		131.61 - 133.18										upper ½ hi ash
K2P		133.18 - 138.37										incl. coal split
K2		138.37 - 139.20										

FORM 79-0850-R01

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT TRANSFER

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR87042	90		129.70	BQT	

U.T.M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED
891.10	6095081.35	623748.75		870818

GEOPHYSICAL DATA

SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT ∠	Dip Meter		
1:200	✓				✓	✓			✓	✓	✓	✓		
1:20		✓	✓		✓				✓					

OVERBURDEN

DEPTH	COMPOSITION

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
E3		38.64 - 40.15										
F1		57.89 - 58.38										
F2P		58.38 - 58.72										
F2		58.72 - 62.68										
(F)		57.89 - 62.68										
G1		84.59 - 85.62										
G2P		85.62 - 85.79										v. coally
G2		85.79 - 86.36										
G3P		86.36 - 86.76										
G3		86.76 - 87.93										
(G)		84.59 - 87.93			—							

FORM 79-0850-R01

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT _____

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR87042					

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED

GEOPHYSICAL DATA														OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT ∠			DEPTH	COMPOSITION

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
J		106.80 - 111.88										
K1P		111.88 - 112.36										
K1		112.36 - 114.18										mid. high ash upper
K2P		114.18 - 120.33										
K2		120.33 - 121.37										mid. lower split
FAULT ~~~		121.6										
K2 (repeat)		121.98 - 123.0										mid lower split

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT TRANSFER

PAGE 1 OF 1

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR87043	90		116.4	S 1/4 "Rot.	

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED
902.11	6094827.36	623622.99		870820

GEOPHYSICAL DATA

SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT ∠	Dip Meter		
1:200	✓				✓	✓			✓	✓	✓	✓		
1:20		✓	✓		✓				✓					

OVERBURDEN

DEPTH	COMPOSITION

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
G1		36.40 - 37.63										
G2P		37.63 - 37.80										
G2		37.80 - 39.39										
G3P		39.39 - 40.35										
G3		40.35 - 42.32										
G		36.40 - 42.32										
J		71.76 - 79.63										
K1P		79.63 - 80.81										
K1		80.81 - 81.25										Thin & clean
K2P		81.25 - 90.37										
K2		90.37 - 91.48										
(Coally zone		91.60 - 92.47)										

FORM 79-0850-R01

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT TRANSFER

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR87044	90		135.7	5½" Rot	

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED
880.04	6094992.35	623705.19		870820

GEOPHYSICAL DATA															OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT ∠	Dip Meter			DEPTH	COMPOSITION
1:200	✓				✓	✓			✓	✓	✓	✓				
1:20		✓	✓		✓				✓							

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
D1		10.68 - 11.69										
D2P		11.69 - 12.04										
D2		12.04 - 12.87										
(D)		10.68 - 12.87										
E3		47.27 - 48.86										
F1		65.53 - 65.91										
F2P		65.91 - 66.09										coally
F2		66.09 - 69.50										
(F)		65.53 - 69.50										
G1		92.10 - 92.80										
G2P		92.80 - 92.98										Coally
G2		92.98 - 93.85										
G3P		93.85 - 94.23										

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT _____

PAGE 2 OF 2

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR 87044					

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED

GEOPHYSICAL DATA														OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT ∠			DEPTH	COMPOSITION

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
G3		94.23 - 95.55										
G		92.10 - 95.55										
J		112.72 - 117.12										
K1P		117.12 - 117.61										
K1		117.61 - 119.07										upper ½ hi ash
K2P		119.07 - 125.06										
K2		125.06 - 125.80										excludes coally zone below.

FORM 79-0850-R01

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT TRANSFER

PAGE 1 OF 1

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR87045	90		99.0	5½" Rot	

U.T.M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED
838.09	6094837.80	623932.43		870821

GEOPHYSICAL DATA												Dip Meter		OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT ∠			DEPTH	COMPOSITION
1:200	✓				✓	✓			✓	✓	✓	✓			
1:20		✓	✓		✓				✓						

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
G1		24.76 - 25.64										
G2P		25.64 - 25.90										
G2		25.90 - 26.64										
G3P		26.64 - 26.85										
G3		26.85 - 28.14										
G		24.76 - 28.14										
J		46.25 - 53.28										
K1P		53.28 - 53.90										upper ½ high ash
K1		53.90 - 55.62										
K2P		55.62 - 61.62										
K2		61.62 - 62.80										mid. high ash lower split.

FORM 79-0850-R01

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT Transfer

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR87047	90		79.0	5½" RQT	

U.T.M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED
838.73	6094922.28	623977.78		870822

GEOPHYSICAL DATA														OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT ∠			DEPTH	COMPOSITION
1:200	✓				✓	✓				✓	✓				
			✓		✓										

* Note – Logs through rocks only except deviation

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
		* Picks from LSD										
F1		13.78 - 14.16										
F2P		14.16 - 14.46										
F2		14.46 - 17.91										
(F)		13.78 - 17.91										
G1		39.64 - 40.68										
G2P		40.68 - 41.05										
G2		41.05 - 40.80										
G3P		40.80 - 42.10										
G3		42.10 - 43.23										
(G)		39.64 - 43.23										
J		59.72 - 66.28										

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT _____

PAGE 2 OF 2

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR87047					

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED

GEOPHYSICAL DATA														OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT ∠			DEPTH	COMPOSITION

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
K1P		66.28-67.44										
K1		67.44-68.98										upper pat hi ash
K2P		68.98-75.54										
K2		75.54-76.19										lower ½ hi ash.

FORM 79-0850-R01

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT TRANSFER

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR87048	90°		111.30	5 1/4" Rot	

U.T.M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED
836.82	6095005.91	624037.45		870823

GEOPHYSICAL DATA												Dip Meter			OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT ∠				DEPTH	COMPOSITION
1:200	✓				✓	✓			✓	✓	✓	✓				
1:20		✓	✓		✓				✓							

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
D	@ Top of Hole?											
E3		27.32-28.90										
F1		47.49-47.93										
F2P		47.93-48.17										
F2		48.17-51.80										
(F)		47.49-51.80										
G1		72.33-73.29										
G2P		73.29-73.53										
G2		73.53-74.27										
G3P		74.27-74.46										
G3		74.46-75.74										
(G)		72.33-75.74										

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT TRANSFER

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR87048					

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED

GEOPHYSICAL DATA														OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT 4			DEPTH	COMPOSITION

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
J		94.07 - 98.57										
K1P		98.57 - 99.34										
K1		99.34 - 100.68										upper part hi ash.
K2P		100.68 - 105.87										
K2		105.87 - 106.58										excl. lower high split
K3		107.65 - 107.96										

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT TRANSFER

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR87049	90°		90.8m.	5½" Rot.	

U.T.M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED
841.24	6094780.33	623876.65		870823

GEOPHYSICAL DATA														
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT 4			
1:200	✓				✓	✓								
1:20			✓		✓									

OVERBURDEN	
DEPTH	COMPOSITION

* LOGGED THROUGH RODS.

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
*	Picks from LSD											
	DRILLER'S COAL INTERSECTIONS											
		49-54m										
		70-76m										
		76.5-78.5m										
		80-81m										
		83-84m										
F1	?	25.76-26.24		Note: This is near water level & the log is "irregular". There is a possibility of thicker coal, although the drillers did not note it.								
G1		49.71-50.43										
G2P		50.43-50.77										
G2		50.77-51.37										

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT _____

PAGE 2 OF 2

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR87049					

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED

GEOPHYSICAL DATA														OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT ∠			DEPTH	COMPOSITION

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
G												
G3P		51.37 - 52.00										
G3		52.00 - 53.24										
(G)		49.71 - 53.24										
J		70.69 - 75.21										upper part hi ash?
K1P		75.21 - 75.90										
K1		75.90 - 77.94										upper ½ v. hi ash.
K2P		77.94 - 83.74										
K2		83.74 - 84.20										

FORM 79-0850-R01

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT Grizzly

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR87050	90		91.8	5 1/4" Rot	

U.T.M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED
844.50	6095263.27	624327.41		870824

GEOPHYSICAL DATA														
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT ∠			
1:200	✓				✓	✓								
1:20			✓		✓									

OVERBURDEN	
DEPTH	COMPOSITION

* Logged through rocks. Hole did not drill to bottom of K (Driller's impatient to leave!)

* Picks from LSD

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
D1		16.32 - 17.71										
D2P		17.71 - 18.34										
D2		18.34 - 19.58										
(D)		16.32 - 19.58										
E3		49.48 - 51.8	(End point from general log)									hi ash
F1		75.43 - 75.72										
F2P		75.72 - 76.09										
F2		76.09 - 79.53		[lower 1/2 (78.00 - ~~79.53~~)								is very hi. ash]
(F)		75.43 - 79.53										

FORM 79-0850-R01

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT TRANSFER W.

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR87051	90 ±2°		147.7	5¼" Rot	

U.T.M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED
857.50	6093986.57	622728.37		871003

GEOPHYSICAL DATA														
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT 4			
1:200	✓				✓	✓			✓	✓	✓			

OVERBURDEN	
DEPTH	COMPOSITION

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
Top of Getting		110.8										
Coal		114.98 - 115.50										
Coal		115.75 - 115.92										
Coal		116.22 - 117.65										
Coal		130.34 - 130.97										
Coal		131.25 - 136.86										
Coal		138.55 - 139.83										High ash - contamination
Coal		139.84 - 141.92										
Coal		142.74 - 142.87										

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT TRANSFER W.

PAGE 1 OF

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR87052	90		127.9	5½" Rot	

U.T.M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED
951.88	6093829.31	622093.22		87 10 05

GEOPHYSICAL DATA														OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT ∠			DEPTH	COMPOSITION
* 1:200					✓	✓									

* Rocks only

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
M6 / GT Contact		58.1										
GT1		67.0 - 69.3		(Bird)								incl. Rock ~~Parting~~
GT2		74.6 - 78.4										Clean coal.
GT3 upper		84.8 - 85.5										
GT3 lower		86.6 - 88.4										
		(Picks from General & neutron log)										

FORM 79-0850-R01

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT TRANSFER W.

PAGE 1 OF 1

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR87053	90°		86 m.	5½" Rot	

U.T.M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED
1034.79	6094070.22	622065.95		871007

GEOPHYSICAL DATA

SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT 4			
* 1:200	✓				✓	✓			✓	✓	✓			

OVERBURDEN

DEPTH	COMPOSITION

* Logged to 36.5

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
	No Coal											

FORM 79-0850-R01

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT TRANSFER W.

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR87054	90		99.0		

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED
1049.43	6094207.21	622091.59		871007

GEOPHYSICAL DATA														
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT ∠			
1:200	✓				✓	✓			✓	✓	✓			

OVERBURDEN	
DEPTH	COMPOSITION

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
K2		3.75' - 5.28										
hi	gamma?	54.14 - 54.94										Coally

FORM 79-0850-R01

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT TRANSFER W.

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR87055	90°		55.6		

U.T.M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED
890.45	6093811.20	622506.62		871007

GEOPHYSICAL DATA

SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT 4			
1:200	✓				✓	✓			✓	✓	✓			
	✓				✓				✓					

OVERBURDEN

DEPTH	COMPOSITION

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
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										

FORM 79-0850-R01

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT TRANSFER W

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QPR 87056	-62.83°	047.2°	91.3		

U.T.M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED
857.51	6093869.50	623134.02		871009

GEOPHYSICAL DATA														
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT 4			
1:200	✓*				✓	✓			✓*	✓*	✓*			

OVERBURDEN	
DEPTH	COMPOSITION

* to 33.3 m.

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
Coal ?		5.27 - 5.81										
Coal		10.23 - 10.93										
Coal		18.02 - 18.81										Wash
Coal		22.33 - 25.45										
Coal		26.60 - 29.72										
Coal		30.28 - 30.57										
Gl		75.2 - 82.3										

FORM 79-0850-R01

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT TRANSFER W.

PAGE 1 OF 1

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR87057	90		91.3	5¾" Rot.	

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED
876.83	6094089.28	623303.90		871011

GEOPHYSICAL DATA															OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT ∠				DEPTH	COMPOSITION
1:200					✓	✓										

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
Cgl		0 – 8.5										
Lower Gething		8.5 – 62.8										
Cadomin ?		62.8 → T.D.										

FORM 79-0850-R01

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT Transfer W.

PAGE 1 OF 1

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR87058	90		79.2	5½" Rot	

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED
881.64	6094282.63	623438.87		87 10 11

GEOPHYSICAL DATA

SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT 4			
1:200					✓	✓								

OVERBURDEN

DEPTH	COMPOSITION

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
	Mb/Gt? 46.5											
		41.2 – See corrected ...					37051					

FORM 79-0850-R01

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT Transfer

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR87059	90°		190.6	5½" Rotary	

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED
1368.63	6095942.95	621392.13		87 12 09

GEOPHYSICAL DATA														OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT 4			DEPTH	COMPOSITION
1:200	✓				✓	✓	✓		✓	✓	✓			2m	

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
D1		48.8 - 49.6										
D2P		49.6 - 49.8										
D2		49.8 - 50.9										
D3P		50.9 - 51.4										
D3		51.4 - 52.1										
(D)		48.8 - 52.1										
E1		73.0 - 74.1										
E3		101.9 - 104.8										hi ash - incl lower split
F1		140.4 - 142.15										
F2P		142.15 - 142.85										
F2		142.85 - 149.85										
(F)		140.4 - 149.85										

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT TRANSFER

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR87060	90	–	80.3	5½" Rot.	

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED
1346.09	6095749.25	621503.17		

GEOPHYSICAL DATA														OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT 4			DEPTH	COMPOSITION
1:200	✓				✓	✓	✓		✓	✓	✓			3m	

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
G1		32.0 - 33.4										
G2P		33.4 - 33.55										
G2		33.55 - 34.9										
G3P		34.9 - 35.4										
G3		35.4 - 37.8		⇐ Density log is funny - makes "pick" difficult.								incl. Lower hi ash zone
G		32.0 - 37.8										
J		56.7 - 64.1										
K1P		64.1 - 65.3										
K1		65.3 - 67.4										incl. hi ash upper K1
K2P		67.4 - 69.5						"				has coal parting
K2		69.5 - 71.7						"				incl. lower split

FORM 79-0850-R01

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT TRANSFER

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR87061	90	-	99.2	5½" Rot	

U.T.M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED
1527.81	6095928.12	620875.61		871213

GEOPHYSICAL DATA

SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT 4			
1:200	✓				✓	✓	✓		✓	✓	✓			

OVERBURDEN

DEPTH	COMPOSITION
4m	

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
F1		17.9 - 18.4										
F2P		18.4 - 18.7										
F2		18.7 - 23.15										
(F)		17.9 - 23.15										
G Cgl.		33.3 - 56.15										
G1		56.15 - 57.2										
G2P		57.2 - 57.5										
G2		57.5 - 58.5										
G3P		58.5 - 59.2										
G3		59.2 - 60.6										
(G)		56.15 - 60.6										

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT _____

PAGE 2 OF 2

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR87061					

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED

GEOPHYSICAL DATA														
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT ∠			

OVERBURDEN	
DEPTH	COMPOSITION

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
J		75.5 - 80.4										
K1P		80.4 - 81.3										
K1		81.3 - 82.6										incl. K1 upper-high ash
K2P		82.6 - 83.25										
K2		83.25 - 84.95										incl. lower split.

FORM 79-0850-R01

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT TRANSFER

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR87062	90	–	178.9	5 1/4" ROT	

U.T.M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED
1544.99	6096057.41	620103.84		87 12 13

GEOPHYSICAL DATA

SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT 4			
1:200	✓				✓	✓			✓	✓	✓			

OVERBURDEN

DEPTH	COMPOSITION
6m	

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
B		25.1 - 26.2										
C		45.2 - 47.5										V. high ash - correlationally
hi gamma		69.3										
D1/D2		87.4 - 89.2										
D3P		89.2 - 90.7										
D3		90.7 - 91.4										
D4P		91.4 - 91.9										
D4		91.9 - 92.9										

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT TRANSFER

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR87062					

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED

GEOPHYSICAL DATA														OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT ∠			DEPTH	COMPOSITION

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
E1		107.6 - 108.0										
E2P		108.0 - 108.4										high ash
E2		108.4 - 109.95										high ash
E3P		109.95 - 111.25										
E3		111.25 - 112.0										excl. lower high ash split
F1		129.2 - 129.8										
F2P		129.8 - 130.2										
F2		130.2 - 133.6										
(F)		129.2 - 133.6										

FORM 79 - 0850 - R01

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT TRANSFER

PAGE 3 OF 3

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHD87062					

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED

GEOPHYSICAL DATA															OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT 4				DEPTH	COMPOSITION

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
GCgl		157.8 - 160.1										
G1		160.6 - 161.75										
G2P		161.75 - 161.95										
G2		161.95 - 162.8										
G3P		162.8 - 163.2										
G3		163.2 - 164.5										
(G)		160.6 - 164.5										
J -	(Top)	178.1 - 178.9										

FORM 79-0850-R01

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT TRANSFER

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR87063	90°	—	109.9	5½" Rot.	

U.T.M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED
1508.25	6096279.54	620168.56		871214

GEOPHYSICAL DATA														OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT ∠			DEPTH	COMPOSITION
1:200					✓	✓								3 m	
				RODS		only									

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
E1		15.2 - 15.7										
E2P		15.7 - 16.3										
E2		16.3 - 19.1										
E3P		19.1 - 20.8										
E3		20.8 - 22.2										
F1		44.2 - 44.8										
F2P		44.8 - 45.3										
F2		45.3 - 48.8										
(F)		44.2 - 48.8										
G1		69.3 - 70.2										
G2P		70.2 - 70.6										
G2		70.6 - 71.5										
G3P		71.5 - 72.0										
G3		72.0 - 73.4										
(G)		69.3 - 73.4										

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT _____

PAGE 2 OF 2

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR87063					

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED

GEOPHYSICAL DATA														OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT ∠			DEPTH	COMPOSITION

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
J		90.0 - 95.2										
K1P		95.2 - 95.9										
K1		95.9 - 97.0										
K2P		97.0 - 98.3										
K2		98.3 - 99.5										

FORM 79-0850-R01

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT TRANSFER

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHD87064	90	—	103.6	5½" RCX	

U.T.M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED
1499.61	6096360.01	620222.27	871214	871220

GEOPHYSICAL DATA														OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT ∠			DEPTH	COMPOSITION
1:200					✓	✓								5m	
				RODS			only								

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
D		21.2 - 22.6										
E1		43.4 - 44.2										
E2P		44.2 - 45.0										
E2		45.0 - 45.8										
E3P		45.8 - 46.9										
E3		46.9 - 48.4										
F1 ?		68.0 - 68.4										
F2P		68.4 - 68.8										
F2		68.8 - 73.2										
(F)		68.0 - 73.2										
G1		91.9 - 92.8										
G2P		92.8 - 93.2										
G2		93.2 - 94.2										
G3P		94.2 - 94.6										
G3		94.6 - 95.9										
(G)		94.6 - 95.9										

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT Transfer

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR87065	90	—	146.7	5½" Rot	

U.T.M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED
1519.31	6096311.43	619929.82		871216

GEOPHYSICAL DATA														OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT ∠			DEPTH	COMPOSITION
1:200					✓	✓								7m	
					Rods only										

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
hi D	gamma	19.6										
		50.8 - 52.0										
E1		80.2 - 81.0										
E2P		81.0 - 81.4										
E2		81.4 - 83.0										V. hi ash.
E3P		83.0 - 83.5										
E3		83.5 - 85.4										excl. lower split
F1		105.8 - 106.2										hi ash.
F2P		106.2 - 106.7										
F2		106.7 - 110.75										
(F)		106.7 - 110.75										

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT _____

PAGE 2 OF 2

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR87065					

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED

GEOPHYSICAL DATA														OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT 45			DEPTH	COMPOSITION

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
G Coal		129.2 - 130.5										
G1		131.4 - 132.1										
G2P		132.1 - 132.3										
G2		132.3 - 133.5										
G3P		133.5 - 134.0										
G3		134.0 - 135.7										Contains rock parting.
(G)		130.4 - 135.7										

FORM 79-0850-R01

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT TRANSFER

PAGE 1 OF 1

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR87066	90	—	85.2	5½" Rot	

U.T.M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED
1505.69	6096322.92	620077.60		871217

GEOPHYSICAL DATA														OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT 4			DEPTH	COMPOSITION
1:200					✓	✓								6m	
				Rods Only											

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
E1		27.2 - 28.2										
E2P		28.2 - 28.5										V. hi ash
E2		28.5 - 29.8										
E3P		29.8 - 30.9										
E3		30.9 - 32.0										
F1		62.1 - 62.8										
F2P		62.8 - 63.3										
F2		63.3 - 67.1										
(F)		62.1 - 67.1										

FORM 79-0850-R01

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT TRANSFER

PAGE 1 OF 1

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR87067	90	–	42	5 1/4" Rot.	

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED
1499.61	6096417.41	619995.34	871218	

GEOPHYSICAL DATA															OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT ∠				DEPTH	COMPOSITION
			Rods Stuck + had to pull out				–		No Logs						9m	

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
Coal		41-42										

FORM 79-0850-R01

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT TRANSFER

PAGE 1 OF

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHR87068	90	–	79.3	5½" Rot	

U.T.M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED
1484.15	6096527.44	620065.10		87-12-19

GEOPHYSICAL DATA															OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT 4				DEPTH	COMPOSITION
1:200					✓	✓									9m	
				Rods only												

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
"C"		19.6 - 22.8										Correlation only – very hi ash
hi	gamma	46.8										
D		65.7 - 67.6										

FORM 79-0850-R01

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT Perry Ck. Syn

PAGE 1 OF 1

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QPR87001	90°		73.5	5½" Rot	

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED
918.24	6105215.21	612398.18		871015

GEOPHYSICAL DATA															OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT -?				DEPTH	COMPOSITION
1:200	✓				✓	✓			✓	✓	✓					

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG B C N	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP LAB No	COMMENTS
(Lower Gates)												
"L"?		29.5 - 30.0										
Hi Gamma?		45.9										

FORM [illegible]

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT Perry Ck Syn

PAGE 1 OF 1

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QPR87002	90°		60.5		

U.T.M. COORDINATES			DATE (From / To)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED
954.63	6104982.65	612049.34		871014

GEOPHYSICAL DATA														OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT °			DEPTH	COMPOSITION
1:200					✓	✓									

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG B.C.N	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No	COMP. LAB No	COMMENTS
G ?		1.1 - 2.3		1.2								
J1		14.4 - 19.6	<10°	5.2								
J2P		19.6 - 20.9		1.3								
J2		20.9 - 22.9		2.0								

* Picks from General Gamma Log.

FORM 79 0850 R01

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT Perry Ck Syn
PAGE 1 OF 1

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QPR87003	90°		44.4	5⅞' Rot	

U.T.M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED
945.01	6105131.43	612166.36		871015

GEOPHYSICAL DATA																OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT					DEPTH	COMPOSITION
1:200	✓				✓	✓			✓	✓	✓						

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG B.C.H	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP LAB No	COMMENTS
G		11.00 - 11.90		0.90								
J1		22.03 - 27.60	<10°	5.57								
J2P		27.60 - 29.26		1.66								
J2		29.26 - 31.52		2.26								

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT Perry Ck Syn.

PAGE 1 OF 1

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QPR87004	90		37.9	5½" Rot	

U.T.M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED
930.10	6105276.67	612307.37		871015

GEOPHYSICAL DATA															OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT 4				DEPTH	COMPOSITION
1:200	✓				✓	✓			✓	✓	✓					

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG B.C.N	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No	COMP LAB No	COMMENTS
J1		13.08 - 20.12	<10°	7.04								
J2P		20.12 - 21.77		1.65								
J2		21.77 - 24.03		2.26								

FORM 79 0650 Rev.

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT Peny Ck. Syn

PAGE 1 OF 1

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QPR87005	90°		43.3	5½" Rot	

U.T.M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED
923.61	6105449.84	612422.97		87/01/15

GEOPHYSICAL DATA														OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT -5°			DEPTH	COMPOSITION
1:200	✓				✓	✓			✓	✓	✓				

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG BCN	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No	COMP LAB No	COMMENTS
G		8.62 - 9.46	~10°	0.84								
J1		25.65 - [illegible]		5.55								
J2P		31.20 - [illegible]		1.66								
J2		[illegible]		2.36								

FORM FY 0850 KH1

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT Slide Area

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QMR87135	90°	—	290.6	5½" Rot.	

U.T.M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED
1262.40	6101146.97	615507.457	87 11 18	

GEOPHYSICAL DATA															OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT 4				DEPTH	COMPOSITION
1:200					✓	✓			✓	✓	✓					

NOTE – 2 runs through rods before hole completion

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B C N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No	COMP LAB No.	COMMENTS
Shaftesbury		0–10.1m										
Boulder Clk Fm		10.1m–172.0m										
Hulcross Fm		172.0m–288.3										
Gates Fm		288.3–290.6										

FORM 79-0850-RU1

Appendix T.2.2

Diamond Drill Holes

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT GRIZZLY

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHD87001	−65°	215°	160.79	HQ	

U.T.M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED
1021.15	6097689.55	[illegible]		Geophys. 870628

GEOPHYSICAL DATA															OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT 4				DEPTH	COMPOSITION
1:200	✓				✓	✓	✓		✓	✓	✓				8.96	
1:20		✓	✓		✓				✓							

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG BCN	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No	COMP LAB No.	COMMENTS
D1		44.08 - 45.03										all missing
F1		67.94 - 68.91								1006	C1	
F2P		68.91 - 69.15										all missing
F2		69.15 - 73.61								1001/02	C1 (1001)	
(F)		67.94 - 73.61										
G Cgl		81.55 - 117.96										
G1		118.04 - 118.46								1003	C2	
G2P		118.46 - 118.82								1004	C2	
G2		118.82 - 119.88								1005	C2	
G3P		119.88 - 120.79								1006	C2	
G3		120.79 - 122.16								[illegible]1	C2	
(G)		118.04 - 122.16										

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT

PAGE 2 OF 2

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHD87001					

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED

GEOPHYSICAL DATA															OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT +X				DEPTH	COMPOSITION

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B C N	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No	COMP LAB No.	COMMENTS
J		141.76-147.69							1008		C3	
K1P		147.69-149.07										incl. upper Hiash K1
K1		149.07-150.52							NOT SAMPLED			
K2P		150.52-154.68										
K2		154.68-155.50										
(Hiash Lower K2 155.50-156.24)												

FORM 79-0850 R07

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT Grizzly

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QH86-7002	90°	—	99.12 m	HQ	

U.T.M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED
1041.34	6071678.45	1123250.51		Geophys. 870701

GEOPHYSICAL DATA

SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT	Dip Meter
1:200	✓				✓	✓	✓		✓	✓	✓	✓
		✓	✓		✓				✓			

OVERBURDEN

DEPTH	COMPOSITION
4.65	

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG B.C.N	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No	COMP. LAB No	COMMENTS
F1		17.14 - 17.71								1009	C4	
F2P		17.71 - 18.00								1010	C4	
F2		18.00 - 20.87								1011/12	C4 (1011)	
(F)		17.14 - 20.87										
G Cgl.		28.15 - 61.72										
G1		61.85 - 62.06								1014	C5	
G2P		62.06 - 62.44										
G2		62.44 - 63.57								1015	C5	
G3P		63.57 - 63.77								1016	C5	
G3		63.77 - 66.43								1017	C5	
(G)		61.85 - 66.43										

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHD87002					

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED
1081.36	6096678.45	623250.51		

GEOPHYSICAL DATA															OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT				DEPTH	COMPOSITION

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG BCN	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No	COMP LAB No	COMMENTS
J		82.25 - 87.45								1016	C6	
K1P		87.45 - 88.21								1019/20		incl. upper hiwsh K1
K1		88.21 - 89.83								1021	C7	
K2P		89.83 - 92.68										incl. thin coal partg
K2		92.68 - 93.48								1022		

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT Grizzly

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
Q-1046-003	-65°	035°	171.52	HQ	

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED
996.29	5902.973	623915.72		

GEOPHYSICAL DATA														OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT 4			DEPTH	COMPOSITION
1:200	✓				✓	✓	✓		✓	✓	✓			2.5	
1:20		✓	✓		✓				✓						

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG BCN	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No	COMP LAB No	COMMENTS
D1		24.17 - 24.80								1147		
D2P		24.80 - 25.24								1148		
D2		25.24 - 25.98								1149		
(D)		24.17 - 25.98										
E3		54.50 - 56.66										significant rock parting. 54.50 - 55.94 high ash 55.94 - 56.66
(E)		54.50 - 55.38										
F1		82.64 - 83.17								1023	C9	
F2P		83.17 - 83.53								1024	C9	
F2		83.53 - 87.22								1025	C9	
(F)		82.64 - 87.22										F2 Sample from 87.22 - 87.64 ↙ V. high ash
FLower		87.57 - 87.79								1026		

Entered as: E2, E3P and F3

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHD 87003					

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED

GEOPHYSICAL DATA														OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT °			DEPTH	COMPOSITION

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG BCN	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No	COMP. LAB No	COMMENTS
G Cgl		104.14 - 108.78										
G1		108.78 - 109.38										Thick rock partings & thin coal seams - will be v. hi ash seam.
G2P		109.38 - 109.89										
G2		109.89 - 110.69								1026	C10	
G3P		110.69 - 111.33								1027	C10	
G3		111.33 - 112.09								1028	C10	
(G)		108.78 - 112.09										
J		129.08 - 133.22								1029	C11	
K1P		133.22 - 134.40								K30/1031		mid. hi ash upper K1
K1		134.40 - 135.41								1032	C12	
K2P		135.41 - 139.48										
K2		139.48 - 140.11										Tech. Comm. parting
Coal		140.22 - 140.37										

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT Transfer

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QW087004	90°		151.10	HQ	

U.T.M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED
1589.74	6095585.15	[illegible]22.54		Geoph. 870707

GEOPHYSICAL DATA															OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT ∢				DEPTH	COMPOSITION
1:200					✓	✓			✓	✓	✓					
1:20		✓	✓		✓				✓							

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG B.C.N	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No	COMP LAB No	COMMENTS
D1		[illegible]-9.07										
[illegible]		[illegible]										low [illegible] hi ash
[illegible]		[illegible]										
[illegible]		9.69-10.37										
[illegible]		[illegible]-10.[illegible]										
[illegible]		[illegible]77-11.[illegible]										V. hi ash.
[illegible]		[illegible]										
[illegible]		[illegible]						NO SAMPLES				
												V. hi ash
E1		22.60-[illegible]										
[illegible]		[illegible]			[illegible] possible 6E							hi ash
E2		26.62-[illegible]										
[illegible]		30.00-[illegible]										
E3		[illegible].10-35.05										

FORM 29-0850 R01

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT Transfer

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHD 87009					

U.T.M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED

GEOPHYSICAL DATA															OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT				DEPTH	COMPOSITION

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No	COMP LAB No	COMMENTS
F1		52.36-53.07								NO SAMPLES		
F2P		53.07-53.34										
F2		53.34-~~58.40~~ 56.60	56.60									
FAULT F2		~~56.60~~ 56.60-58.40										Fault thickened called G1-A
I												
G1		85.14-86.56								1033		Fault thickened
Fault		86.56										
G1		86.79-87.78								1034	C13	
G2P		87.78-88.98								1035	C13	
G2		88.98-89.84								1036	C13	
G3P		89.84-89.56								1037	C13	
G3		89.56-90.48								1038	C13	
G		86.79-90.48										

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT Transfer

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHD 87004					

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED

GEOPHYSICAL DATA														OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT ∠			DEPTH	COMPOSITION

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG B.C.N	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No	COMP LAB No	COMMENTS
J		104.60-108.60								1039	C14	
KIP		108.60-109.62								KOP/KO 1040/1041		
K1		109.62-110.52								1042	C15	
K2P		110.52-111.28								1043		
K2		111.28-112.53								1044	C16	incl. rock split @ base

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT TRANSFER

PAGE 1 OF 2

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHD 8[illegible]	90°	—	185.7[illegible]	[illegible]	

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED
157[illegible]	60[illegible]45.68	[illegible]		(Geol. [illegible]) 87[illegible]

GEOPHYSICAL DATA															OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT				DEPTH	COMPOSITION
1:[illegible]	✓				✓	✓			✓	✓	✓					
1:20[illegible]		✓	✓		✓				✓							

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG B.C.N	TRUE THICKNESS	COAL/ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No	COMP LAB No	COMMENTS
B		15.47-15.[illegible]										
										1[illegible]		Geo Coal
[illegible]	[illegible]	[illegible]		[illegible]								
D1		80.71-8[illegible]										
[illegible]		[illegible]										
[illegible]		[illegible]										
[illegible]												
[illegible]		[illegible]										
[illegible]		[illegible]										
[illegible]		[illegible]										

FORM 79-0850 R01

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT [illegible]

PAGE [illegible] OF [illegible]

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QH [illegible]					

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED

GEOPHYSICAL DATA														OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT			DEPTH	COMPOSITION

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG B.C.N	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No	COMP. LAB No	COMMENTS
E1		100.02 - 100.62										[illegible]
L1P		[illegible]										
L2		[illegible]								[illegible]		
L1		[illegible]										
L-		[illegible]								[illegible]		[illegible]
						a	white					
E1		[illegible]								[illegible]	C1	
L1		[illegible]								[illegible]		
L2		[illegible]								[illegible]		
D		[illegible]										

FORM 79-0850 R01

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT TRANSECT

PAGE 2 OF 4

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHD87005					

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED

GEOPHYSICAL DATA															OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT 4				DEPTH	COMPOSITION

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG B.C.I.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No	COMP LAB No.	COMMENTS
G1		1547-1551										
G2												
										1054	020	

FORM 79 0850 R01

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT TRANSFER
PAGE 1 OF 3

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QH087006	90°		202.44	HQ	

U.T.M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED
1496.07	[illegible]478.67	620295.84		([illegible]) 870719

GEOPHYSICAL DATA														OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT ∢			DEPTH	COMPOSITION
1:200	✓				✓	✓			✓	✓	✓				
1:20		✓	✓		✓				✓						

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG BCN	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No	COMP LAB No	COMMENTS
B		15.43 16.3[illegible]								113[illegible]		
C1		31.50 - [illegible]										
C2R		31.9[illegible] - 34.58										Carbo[illegible]
C2		[illegible] - 35.14										[illegible]
C		[illegible] 35.14	— not [illegible] the seam —									[illegible] Rock
D1		8[illegible]										
D2R		[illegible]										
D2		[illegible]										
D3R		[illegible]										
[illegible]		[illegible]										
[illegible]		[illegible]										
[illegible]		[illegible]										
[illegible]		[illegible]										

FORM 79-0850 R01

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT: TRANSFER

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHb 87006					

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED

GEOPHYSICAL DATA															OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT 4				DEPTH	COMPOSITION

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
E1		105.93-106.46								1138		
E2P		106.46-106.89								11[illegible]		
E2		106.89-108.[illegible]5								1140		Contains [illegible]
E3P		108.[illegible]5-10[illegible]										
E3		109.[illegible]-110.03										
(E)		105.93-110.03										Very hi ash
	(The [illegible]	[illegible]	[illegible]	[illegible]	E is	coaly - [illegible]	[illegible]	E3[illegible]				
F1		135.74-136.[illegible]								1055	C21	
F2P		136.39-136.94								1056	C21	
F[illegible]		[illegible]								1057	C21	
(F)		[illegible]										
G1		16[illegible]-162.78								1058		
G2P		1[illegible]-163.18										Co. [illegible]
G2		163.18-[illegible]										

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT

PAGE 3 OF 3

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHD 87006					

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED

GEOPHYSICAL DATA														OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT ∠			DEPTH	COMPOSITION

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
G1P		164.03 - 164.65										
G1a		164.65 - 166.02								1059		
G		161.71 - 166.02										
J		186.83 - 192.19								1060	C22	
K1P		192.19 - 192.67								1061		
~~K1~~												
K1		192.67 - 194.26		(192.67 - 193.26			is very thin ook)			1062/63		
K2A		194.26 - 195.39										
K2		195.39 - 196.41								1064	C23	
K3P		196.41 - 196.79		This has been			included in K2			1065 (To 197.17)		
K3		196.79 - 197.17										

FORM 79-0850-R01

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT TRADER

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHD87067	90°	—	120.63	HQ	

U.T.M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED
1329.15	6095442.39	622018.43		Geophys Log. 870211

GEOPHYSICAL DATA														
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT 4			
1:200	✓				✓	✓			✓	✓	✓			
1:20		✓	✓		✓				✓					

OVERBURDEN	
DEPTH	COMPOSITION

Note - logged by QCL & BPB — use BPB Logs for depths (Except for K2 - use QCL Logs - 0.60 m)

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No	COMP. LAB No	COMMENTS
F1		32.22 - 33.40								1066	C24	
F2P		33.40 - 33.95								1067	C24	
F2		33.95 - 38.68								1068	C24	
(F)		32.22 - 38.68										
G1		72.66 - 73.93								1069	C25	
G2P		73.93 - 74.15								1070	C25	
G2		74.15 - 75.62								1071	C25	
G3P		75.62 - 76.00								1072	C25	
G3		76.00 - 78.47								1073	C25	
(G)		72.66 - 78.47										
										1074	C26	
J		103.12 - 109.99										

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT _____

PAGE 2 OF 2

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHD 87007					

U.T.M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED

GEOPHYSICAL DATA															OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT 4				DEPTH	COMPOSITION

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
K1P		109.99 - 111.76										
K1		111.76 - 113.28								1075		
K2P		113.28 - 116.54								1076		
K2		116.54 - 113.1										

FORM 79-0850-R01

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT TRANSFER
PAGE 1 OF 2

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHD 87008	-68°	040°	138.62	HQ	

U. T. M. COORDINATES / **DATE (from / to)**

COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED
1167.00	6094538.83	621727.19	July /87	Geoph. 870801

GEOPHYSICAL DATA

SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT 4			
1:200	✓				✓	✓			✓	✓	✓			
1:20		✓	✓		✓				✓					

OVERBURDEN

DEPTH	COMPOSITION

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP LAB No.	COMMENTS
F1		37.22-37.87										
F2P		37.87-38.12										
F2		38.12-40.26										H. [illegible]
(F)		37.22-40.26										
Flower		40.26-41.27										V. [illegible] -
G1		58.87-59.78										
G2P		59.78-59.86										
G2		59.86-62.41										
G3P		62.41-62.94										[illegible] Coal Split
G3		62.94-64.75										
(G)		58.87-64.75										

FORM 79-0850 R01

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT ______

PAGE 2 OF 2

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHD 87008					

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED

GEOPHYSICAL DATA																OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT ∡					DEPTH	COMPOSITION

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
J		84.51-90.06										
K1P		90.06-91.98										
		(91.29 91.98 — hi ash upper K1 zone)										
K1		91.98-93.42										
K2P		93.42 96.3[illegible]										
K2		96.3[illegible] -98.49										
[illegible]		(98.49-99.80 - hi ash in K2 zone)										

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT TRANSFER

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHD 87009	-65°	043°	105.14	HQ	

U.T.M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED ~~final~~	CORE LOGGED
1109.43	6095086.30	622957.50	870808	Aug/87

GEOPHYSICAL DATA														OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT 4			DEPTH	COMPOSITION
1:300	✓				✓	✓									
1:20		✓	✓												

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No	COMP. LAB No.	COMMENTS
F1		24.70 - 25.34								1077	C27	
F2P		25.34 - 25.71								1078	C27	
F2		25.71 - 27.56								1079	C27	
(F)		24.70 - 27.56										
G1		61.08 - 61.93								1080	C28	
G2P		61.93 - 62.10								1081	C28	
G2		62.10 - 63.23								1082	C28	
G3P		63.23 - 63.65								1083	C28	
G3		63.65 - 65.20								1084	C28	
(G)		61.08 - 65.20										
										1085	C29	
J		88.12 - 93.94										

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QH)87009					

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED

GEOPHYSICAL DATA														OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT 4			DEPTH	COMPOSITION

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No	COMP. LAB No.	COMMENTS
K1P		93.94 - 95.40										9ad upper hi ash K1
K1		95.40 - 96.62								NC SAMPLES		
K2P		96.62 - 100.29										
K2		100.29 / 101.27										
		(101.27 - 102.07 - hi ash coally zone)										

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT TRANSFER

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHD 87010	-65	013°	158.55	HQ	

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED
994.89	6,094879.67	623642.35		Geophys. 870811

GEOPHYSICAL DATA														
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT ∠			
1:200	✓				✓	✓			✓	✓	✓			
1:20		✓	✓		✓				✓					

OVERBURDEN	
DEPTH	COMPOSITION

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
E3		22.18 - 24.03								1133		-called DI on sample -also 1134 and 1135 as DZP and D2
FAULT		48.09										
F1		4809 - 4940										
G1		89.91 - 90.82								1086		
G2P		90.82 - 91.03								1087		
G2		91.03 - 92.01								1088	C30	
G3P		92.01 - 92.40								1089		
G3		92.40 - 94.50								1090		
(G)		89.91 - 94.50										

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT _____

PAGE 2 OF 2

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHD87010					

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED

GEOPHYSICAL DATA														OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT ∠			DEPTH	COMPOSITION

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
J		114.68-117.62								1091	C31	
K1P		117.62-118.78								1092/93		Incl. coal split
K1		118.78-119.81								1094	C32	
K2P		119.81-128.06										
K2		128.06-129.77								1095	C33	
K2 lower		130.03-131.11										V. high ash.

FORM 79-0850-R01

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT Transfer

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHD87011	90°	—	189.12	HQ	

U.T.M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED
877.77	6095267.55	623875.17		Sept/87

GEOPHYSICAL DATA														
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT 4			
1:200	✓				✓	✓			✓	✓	✓			
1:20		✓	✓		✓				✓					

OVERBURDEN	
DEPTH	COMPOSITION

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
D1		61.40 - 62.22								1127		
D1P		62.22 - 62.64								1128		
D2		62.64 - 63.47								1129		
(D)		61.40 - 63.47										
EB		97.80 - 99.50								1130/31/32		V. hi Ash.
F1		121.53 - 121.92								1096	C34	
F2P		121.92 - 122.08								1097	C34	
F2		122.08 - 125.93								1098	C34	
(F)		121.53 - 125.93										
G1		146.22 - 147.27								1099	C35	
G2P		147.27 - 147.59								1100	C35	

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT _____

PAGE 2 OF 2

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHD 87011					

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED

GEOPHYSICAL DATA														OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT ∠			DEPTH	COMPOSITION

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
G2		147.59 - 148.41								1101	C35	
G3P		148.41 - 148.88								1102	C35	
G3		148.88 - 150.42								1103	C35	
(G)		146.22 - 150.42										
J		170.19 - 175.22								1104	C36	
K1P		175.22 - 176.36								1105/06		
K1		176.36 - 177.43								1107	C37	
K2P		177.43 - 183.82								N.S.		
K2		183.82 - 184.66								N.S.		

FORM 79-0850-R01

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT Grizzly

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHD87012	−65°	010°	155.24	HQ	

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED
818.91	6096170.57	624826.02		

GEOPHYSICAL DATA														OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT ∠			DEPTH	COMPOSITION
1:200	✓				✓	✓			✓	✓	✓				
1:20		✓	✓		✓				✓						

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
D1		24.86 - 26.41								1120		
D2P		26.41 - 26.74								1121		
D2		26.74 - 27.64								1122		
(D)		24.66 - 27.64										
E1		43.12 - 43.41										
E2P		43.41 - 44.68										
E2		44.68 - 46.02										2 partings - v. hi ash
E3P		46.02 - 46.80										
E3		46.80 - 49.36								1123/24/25/26		3 partings - v hi ash
F1		71.44 - 72.10								1108	C38	
F2P		72.10 - 72.43								1109	C38	
F2		72.43 - 76.35								1110	C38	
(F)		71.44 - 76.35										

Quintette Coal Limited

DRILL HOLE SUMMARY SHEET

PROJECT _____

PAGE 2 OF 2

HOLE NUMBER	HOLE ANGLE	COLLAR BEARING	TOTAL DEPTH	CORE SIZE	MAP / SECTION NUMBER
QHD87012					

U. T. M. COORDINATES			DATE (from / to)	
COLLAR ELEVATION	NORTH	EAST	DRILLED	CORE LOGGED

GEOPHYSICAL DATA														OVERBURDEN	
SCALE	DEN	BRD	LSD	HRD	GAM	NEUT	FBE	FBS	CAL	DIR	SLANT ∠				DEPTH	COMPOSITION

MINING SECTION

SEAM	ELEVATION (BASE)	DRILLED INTERVAL	AVG. B.C.N.	TRUE THICKNESS	COAL / ROCK	RECOVERY	INTERSEAM THICKNESS	DATE DRILLED	DATE SAMPLED	SAMPLE TAG No.	COMP. LAB No.	COMMENTS
G1		118.83 - 119.16								1111	C39	
G2P		119.16 - 119.27								1112	C39	
G2		119.27 - 120.73								1113	C39	
G3P		120.73 - 121.96								1114		
G3		121.96 - 123.22								1115	C40	
(G)		118.83 - 123.22										incl. very thick G3P.
J		141.94 - 148.00								1116	C41	
K1P		148.00 - 149.21								KOP 1117 / KO 18		incl. hi ash upper K1
K1		149.21 - 150.90								1119	C42	
K2P		150.90 - E.O.H. (155.24)										
		(K2 not drilled.)										

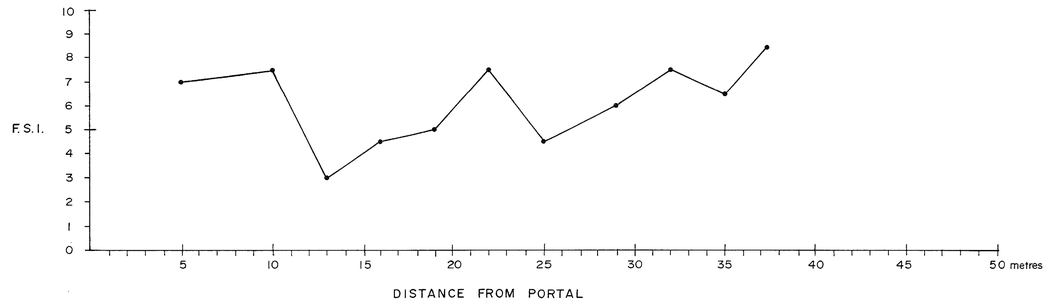
FORM 79-0850-R01

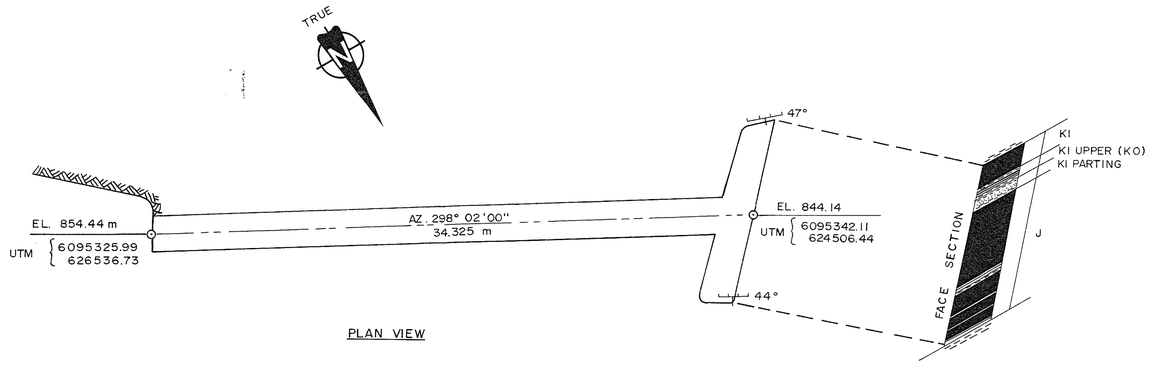
Appendix T.3

Adit Drawings

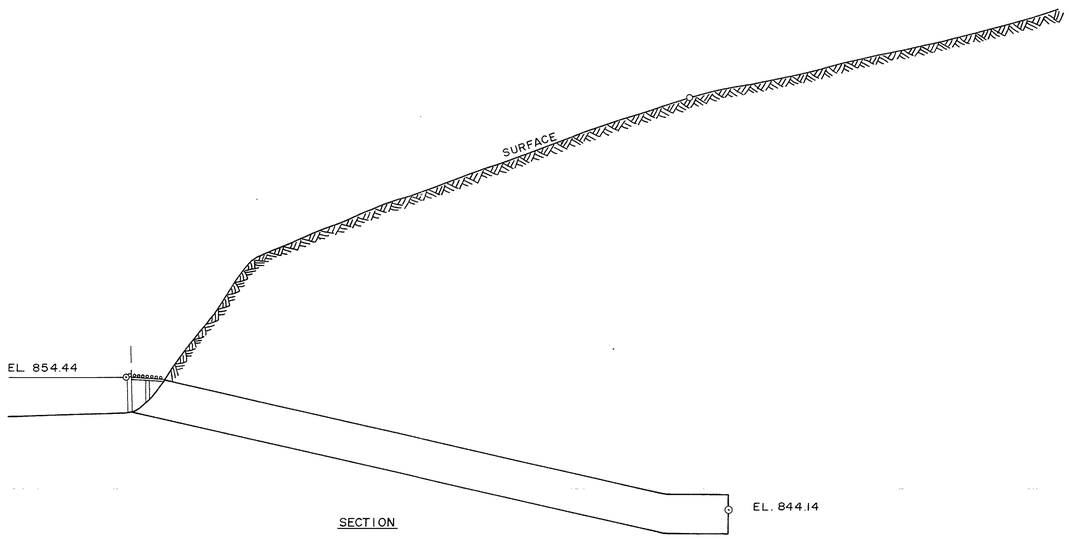
Do not film this appendix.

Q.C.L. FILE No.

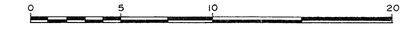




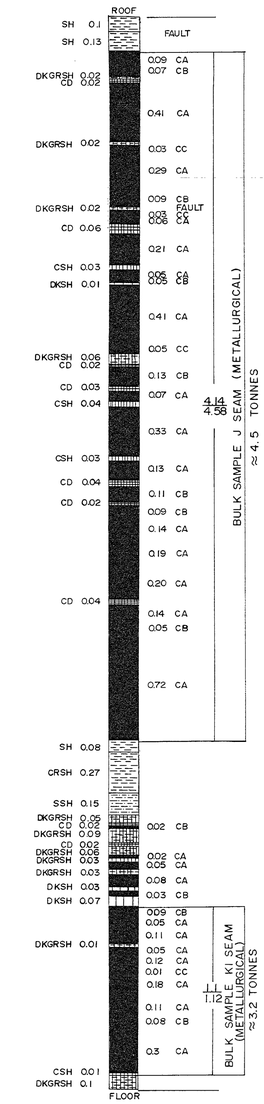
PLAN VIEW



SECTION



METRES



TRUE THICKNESS

VERTICAL SCALE ONLY - 1:20

LEGEND

- SHALE
- SANDY SHALE (SILTSTONE)
- COALY SHALE
- GREY SHALE
- DARK SHALE
- DARK GREY SHALE
- CA COAL 0-10% ASH
- CB COAL 11-20% ASH
- CC COAL 21-30% ASH
- CD COAL 30% ASH
- TOPOGRAPHY

Do not film these

Rev.	D	M	Y	Revision Description	Drn.	Des.	App.
0	16	02	88	ORIGINAL DRAFT	DKL	NH	DJ

QUINTETTE COAL LIMITED

Project Manager

DENISON MINES LIMITED

COAL DIVISION

Area GRIZZLY | Category ADITS

Drawing Title

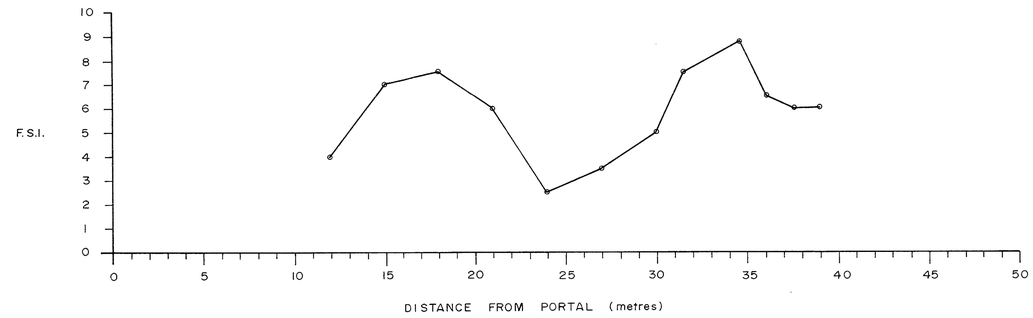
GRIZZLY ADIT QHA 8701 J AND KI SEAMS

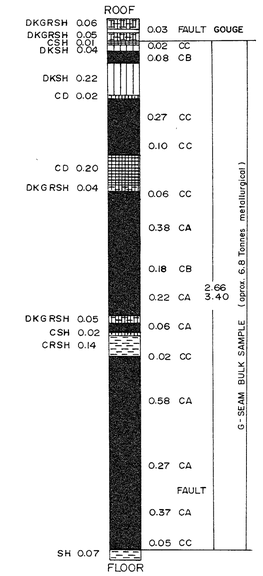
739

Scale	Drawing No.	Rev.
AS SHOWN	88 - 905 - 25 - 001	0

BCDL 7749-0CL

Q.C.L. FILE No.



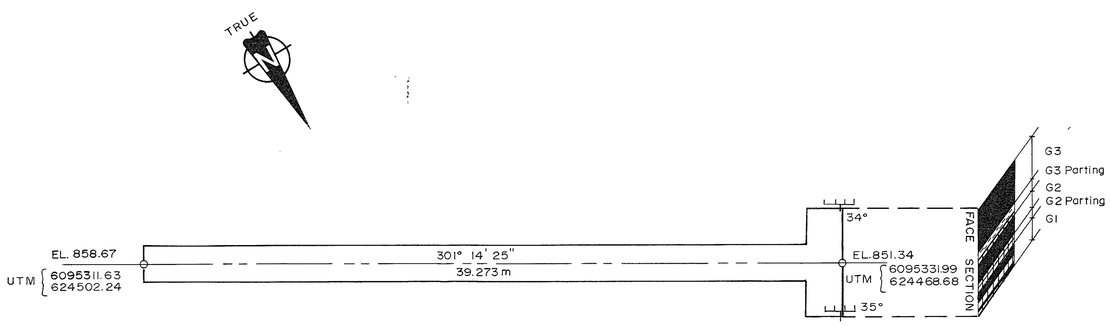


TRUE THICKNESS

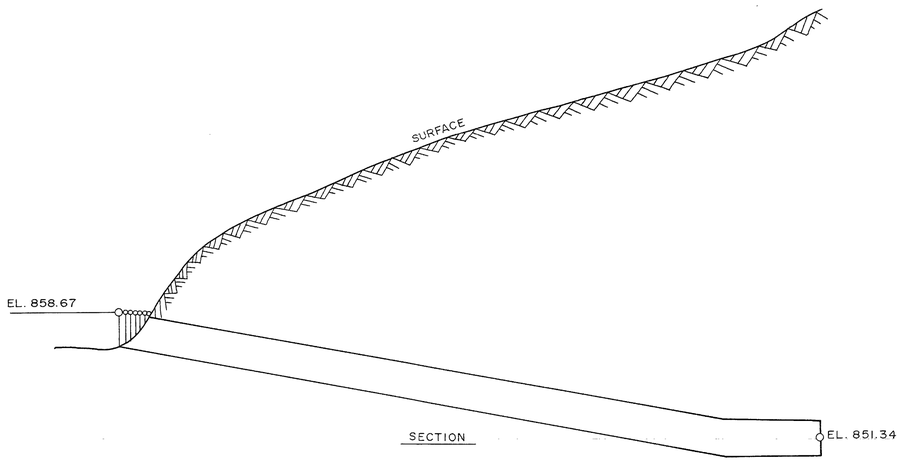
VERTICAL SCALE ONLY 1:20

LEGEND

- SHALE
- SANDY SHALE (SILTSTONE)
- COALY SHALE
- GREY SHALE
- DARK SHALE
- DARK GREY SHALE
- CA COAL 0-10% ASH
- CB COAL 11-20% ASH
- CC COAL 21-30% ASH
- CD COAL 30% ASH
- TOPOGRAPHY



PLAN VIEW



SECTION

Rev.	D	M	Y	Revision Description	Drn.	Des.	App.
0	16	02	88	ORIGINAL DRAFT	RLR	NH	DJ

QUINTETTE COAL LIMITED

Project Manager

DENISON MINES LIMITED

COAL DIVISION

Area	Category
GRIZZLY	ADITS

Drawing Title

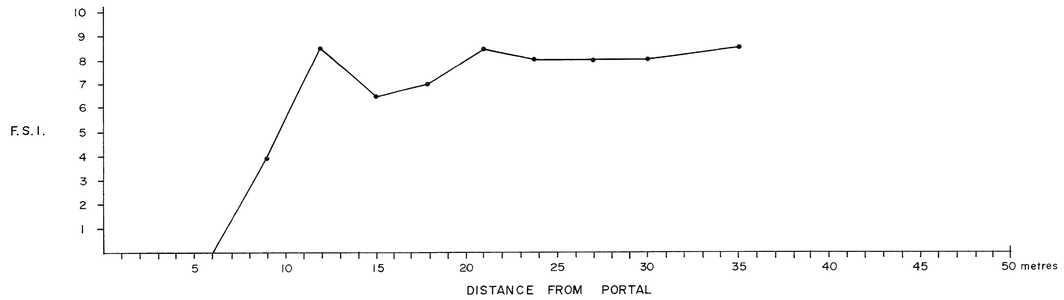
GRIZZLY ADIT QHA 8702 G- SEAM

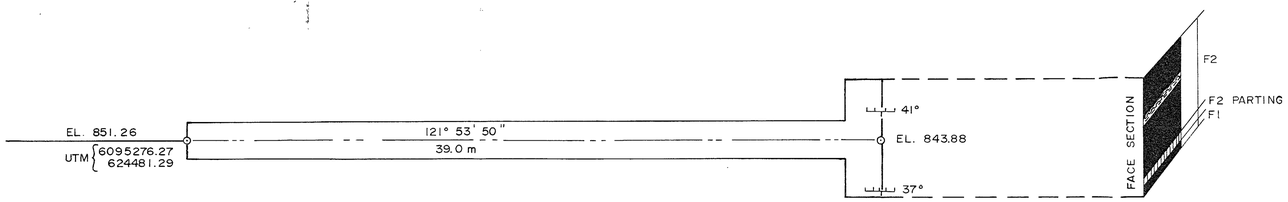
739

Scale	Drawing No.	Rev.
AS SHOWN	88-905-25-002	0

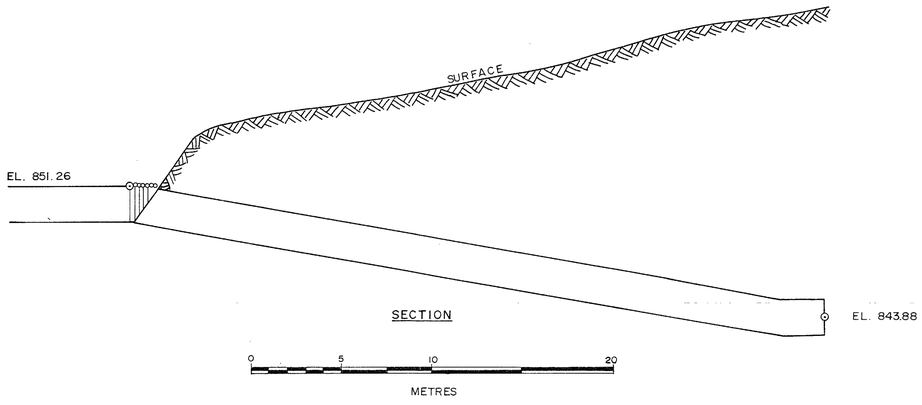
DGL-1789-QCL

Q.C.L. FILE No.

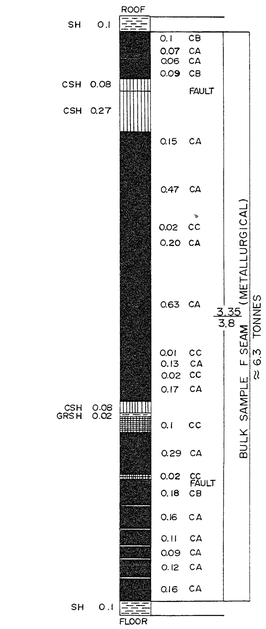




PLAN VIEW



SECTION



TRUE THICKNESS

VERTICAL SCALE ONLY - 1:20

LEGEND

- SHALE
- SANDY SHALE (SILTSTONE)
- COALY SHALE
- GREY SHALE
- DARK SHALE
- DARK GREY SHALE
- CA COAL 0-10% ASH
- CB COAL 11-20% ASH
- CC COAL 21-30% ASH
- CD COAL 30% ASH
- TOPOGRAPHY

Rev.	D	M	Y	Revision Description	Drn.	Des.	App.
0	16	02	88	ORIGINAL DRAFT	DKL	NH	DJ

QUINTETTE COAL LIMITED

Project Manager

DENISON MINES LIMITED

COAL DIVISION

Area GRIZZLY | Category ADITS

Drawing Title

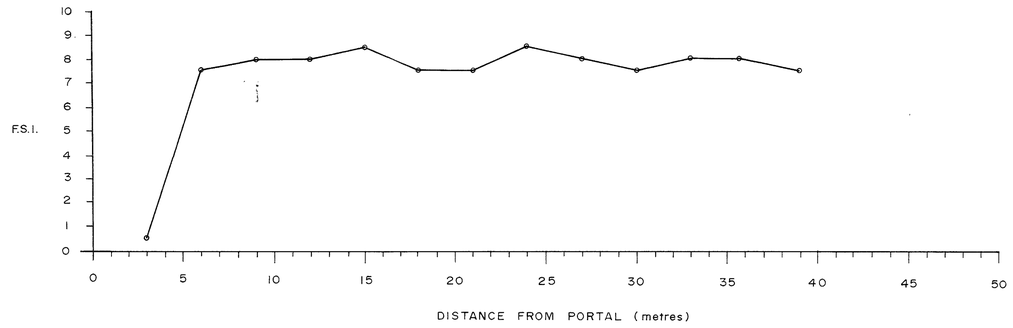
GRIZZLY ADIT QHA 8703 F SEAM

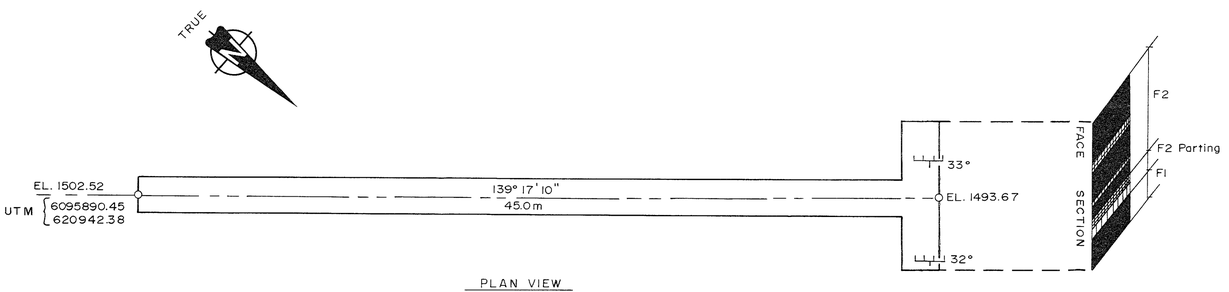
739

Scale	Drawing No.	Rev.
AS SHOWN	88-905-25-003	0

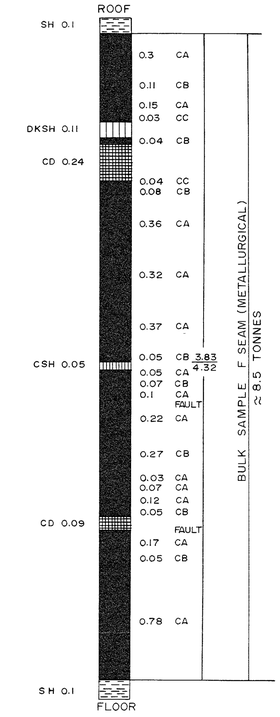
RDL 7149-QCL

Q.C.L. FILE No.





PLAN VIEW



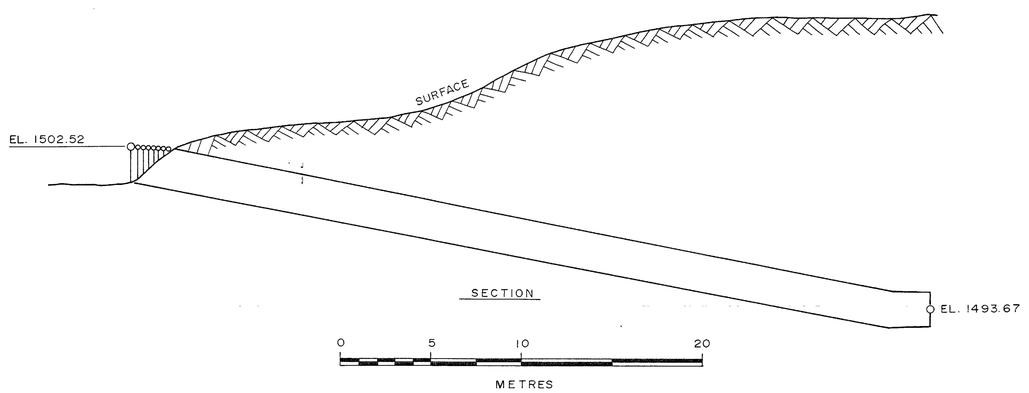
TRUE THICKNESS

VERTICAL SCALE ONLY 1: 20

LEGEND

- SHALE
- SANDY SHALE (SILTSTONE)
- COALY SHALE
- GREY SHALE
- DARK SHALE
- DARK GREY SHALE
- CA COAL 0-10% ASH
- CB COAL 11-20% ASH
- CC COAL 21-30% ASH
- CD COAL 30% ASH
- TOPOGRAPHY

Do not film these.



SECTION

Rev.	D	M	Y	Revision Description	Drn.	Des.	App.
0	17	2	88	ORIGINAL DRAFT	RLR	NH	DJ

QUINTETTE COAL LIMITED

Project Manager

DENISON MINES LIMITED

COAL DIVISION

Area: TRANSFER | Category: ADITS

Drawing Title

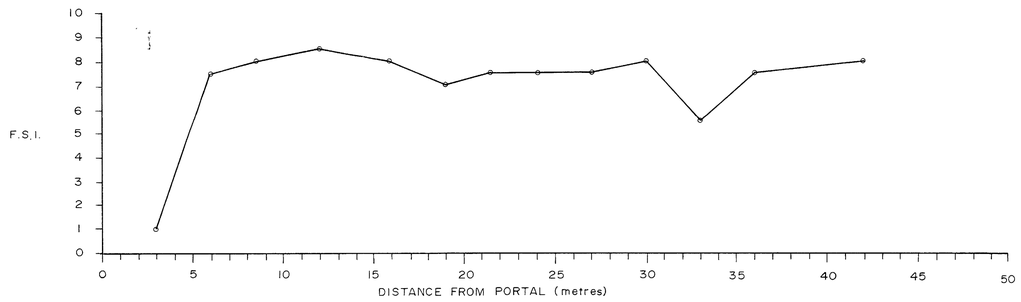
739

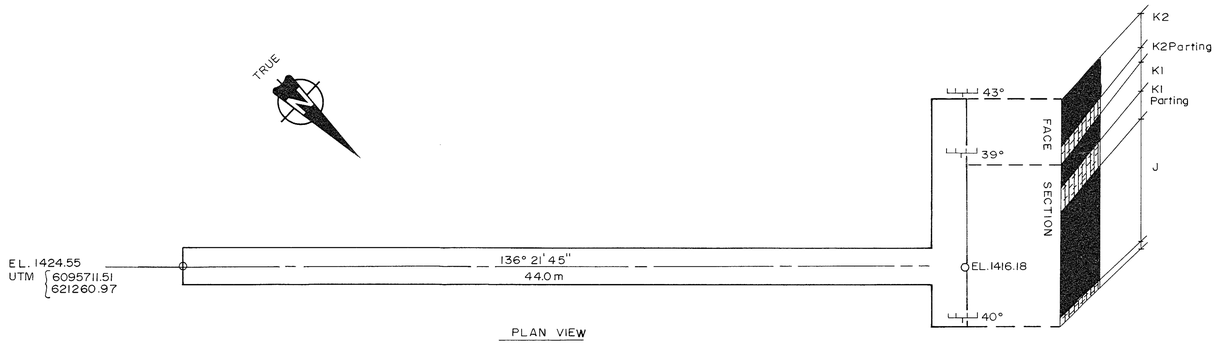
TRANSFER ADIT QHA 8704 F SEAM

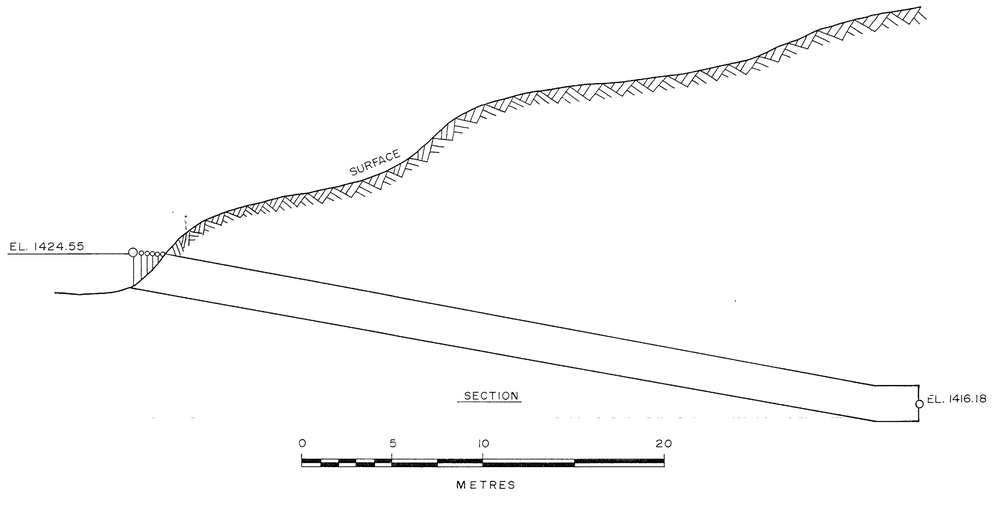
Scale	Drawing No.	Rev.
AS SHOWN	88-903-25-004	0

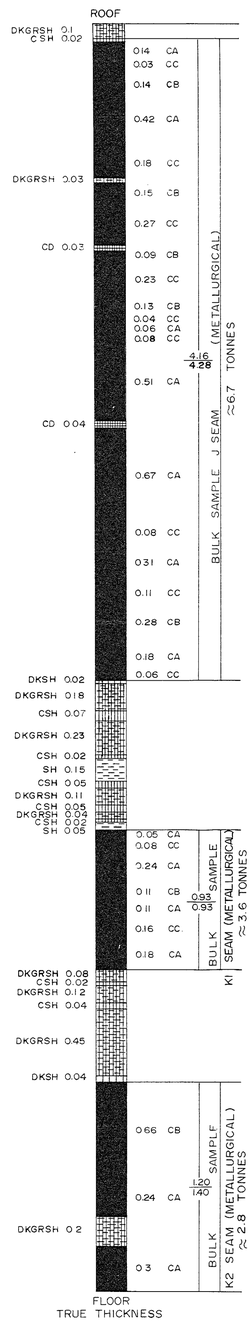
DCL - 7740 - OC1.

Q.C.L. FILE No.









LEGEND

- SHALE
- SANDY SHALE (SILTSTONE)
- COALY SHALE
- GREY SHALE
- DARK SHALE
- DARK GREY SHALE
- CA COAL 0-10% ASH
- CB COAL 11-20% ASH
- CC COAL 21-30% ASH
- CD COAL 30% ASH
- TOPOGRAPHY

Rev.	D	M	Y	Revision Description	Drn.	Des.	App.
0	16	02	88	ORIGINAL DRAFT	RLR	NH	DJ

QUINTETTE COAL LIMITED

Project Manager

DENISON MINES LIMITED

COAL DIVISION

Area: TRANSFER | Category: ADITS

Drawing Title

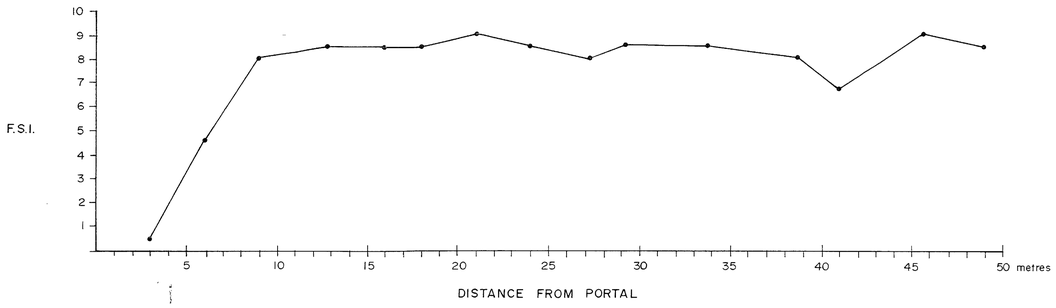
TRANSFER ADIT QHA 8705 J, K1, K2 SEAMS

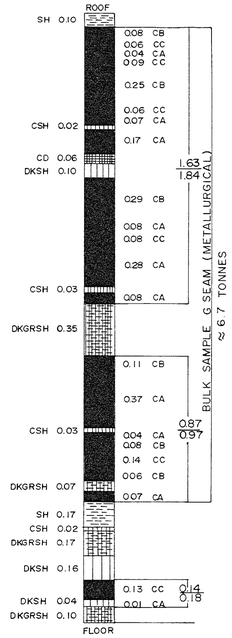
739

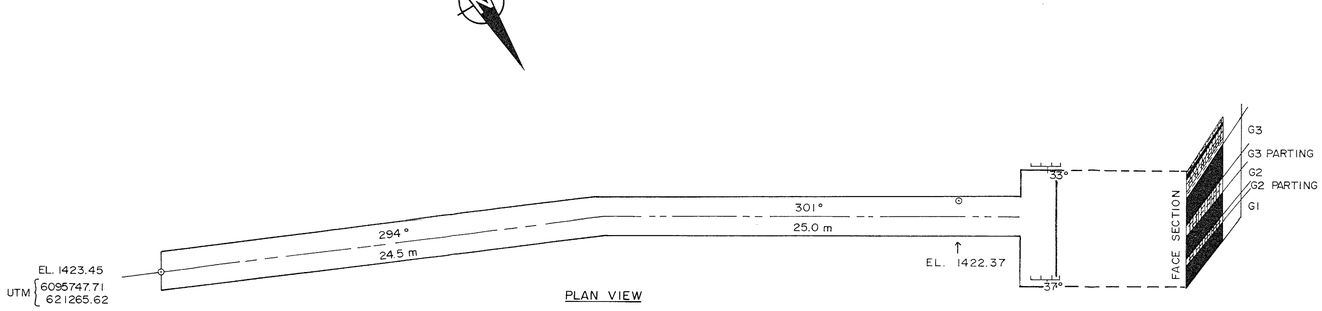
Scale	Drawing No.	Rev.
AS SHOWN	88-903-25-005	0

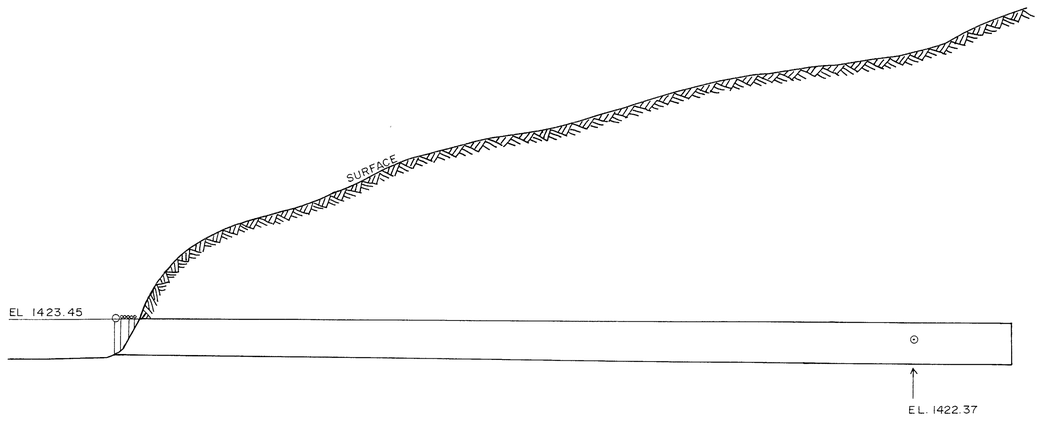
BCL-7140-QCL

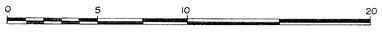
Q.C.L. FILE No.

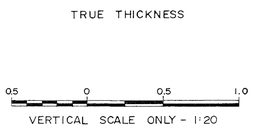












LEGEND

- SHALE
- SANDY SHALE (SILTSTONE)
- COALY SHALE
- GREY SHALE
- DARK SHALE
- DARK GREY SHALE
- CA COAL 0-10% ASH
- CB COAL 11-20% ASH
- CC COAL 21-30% ASH
- CD COAL 30% ASH
- TOPOGRAPHY

Rev.	D	M	Y	Revision Description	Drn.	Des.	App.
0	17	02	88	ORIGINAL DRAFT	DKL	NH	DJ

QUINTETTE COAL LIMITED

Project Manager

DENISON MINES LIMITED

COAL DIVISION

Area TRANSFER | Category ADITS

Drawing Title

TRANSFER ADIT QHA 8706 G SEAM

739

Scale	Drawing No.	Rev.
AS SHOWN	88-903-25-006	0

BCL-7740-0C1