

# OPEN FILE

**68** QUESNEL 71(1)A OTHER REG. BC.

EXPLORATION REPORT ON  
QUESNEL COAL PROPERTIES

MASTER EXPLORATIONS LTD. (COF 2)  
APRIL 1962

GEOLOGICAL BRANCH  
ASSESSMENT REPORT


00 035

~~FILE 17~~  
CB - QUESNEL 7(C) A

# OPEN FILE

10-Apr-72

I certify that the contents of the attached report represent accurately the work done on the subject coal licences in 1971 and that I have full knowledge of the data presented therein.

  
E.J. Panchysyn, P. Eng.

Exploration Report

on

Quesnel Coal Properties

To

Department of Mines and  
Petroleum Resources

Province of British Columbia

Master Explorations Ltd.  
Calgary, Alberta

By: T.N. Yoon  
Project Resident  
Geologist

April, 1972

## Table of Contents

	<u>Page</u>
Table of Contents	ii
List of Figures	iii
Introduction	1
General Geology	3
Economic Geology of Coal Deposits	7
References	12
Appendix	13
Drill Logs (QN-71-1 - QN-72-21)	

## List of Figures

Figure 1	Index Map and Tipper's (1959) Geological Map of the Quesnel Area Showing the Location of Master Explorations Ltd.'s Coal Licenced Area	2
Figure 2	Table of Formations (Compiled by T.N. Yoon)	6
Figure 3	Map of the Quesnel Exploration Area Showing the Locations of Drill Holes, Geological Structures and Positions of the Cross-section Lines	In Pocket
Figure 4	Subsurface Data of Coal Seams Near the Australian Creek, Quesnel Area, B.C. (Compiled by T.N. Yoon)	9
Figure 5	Cross-sections A-A', B-B', C-C' and D-D'	In Pocket
Figure 6	Certificate of Assay (Outcrop Samples)	10
Figure 7	Certificate of Assay (Drill Hole Samples)	11

## Introduction

This report on the Quesnel coal properties (59 coal licences - 1971, 27,992 acres) of Master Explorations Ltd. was prepared for the Department of Mines and Petroleum Resources, British Columbia.

The exploration area is located on both the eastern and western banks of the Fraser River, approximately 25 miles south of Quesnel, B.C. Access to the area is by Highway 97 (eastern bank) and by gravel road (western bank) along the Fraser River, south of the Town of Quesnel. (See Figure 1)

This report presents the result of our drilling operation and geologic reconnaissance in the exploration area. Master Explorations Ltd. carried out drilling in the area for 54 days during December, 1971, January and February, 1972. The operation has been done along the trail without surface disturbances mainly in lots 8009, 8010 and 8012 (owned by M. G. Lepetich and his family) on the western bank of the Fraser River and in lots 5052, 9695, 3143, 314 and 9133 (owned by Darrone Ranch Ltd.) on the eastern bank of the River. Total drilling footage of 21 holes is 4,825 ft. The drilling equipment consisted of a Mayhew Model 1000 using a water circulation to retrieve the cuttings. This equipment was mounted on a track vehicle. The drill hole diameter was  $4\frac{1}{2}$ " . This equipment was rented from Manalta Coal Ltd., Calgary, Alberta.

LEGEND

CENOZOIC

TERTIARY

MIocene AND (?) PLIOCENE

7 Basalt, andesite, related tuff and breccia; minor conglomerate, greywacke, shale and diatomite; 7a, may be Pleistocene; 7b, mainly sediments


EOCENE AND/OR OLIGOCENE










6 Basalt, andesite, related tuff and breccia; minor conglomerate, sandstone, and shale

5 Conglomerate, sandstone, greywacke, shale, lignite; minor breccia, tuff, and basalt

PALEOCENE AND/OR EOCENE

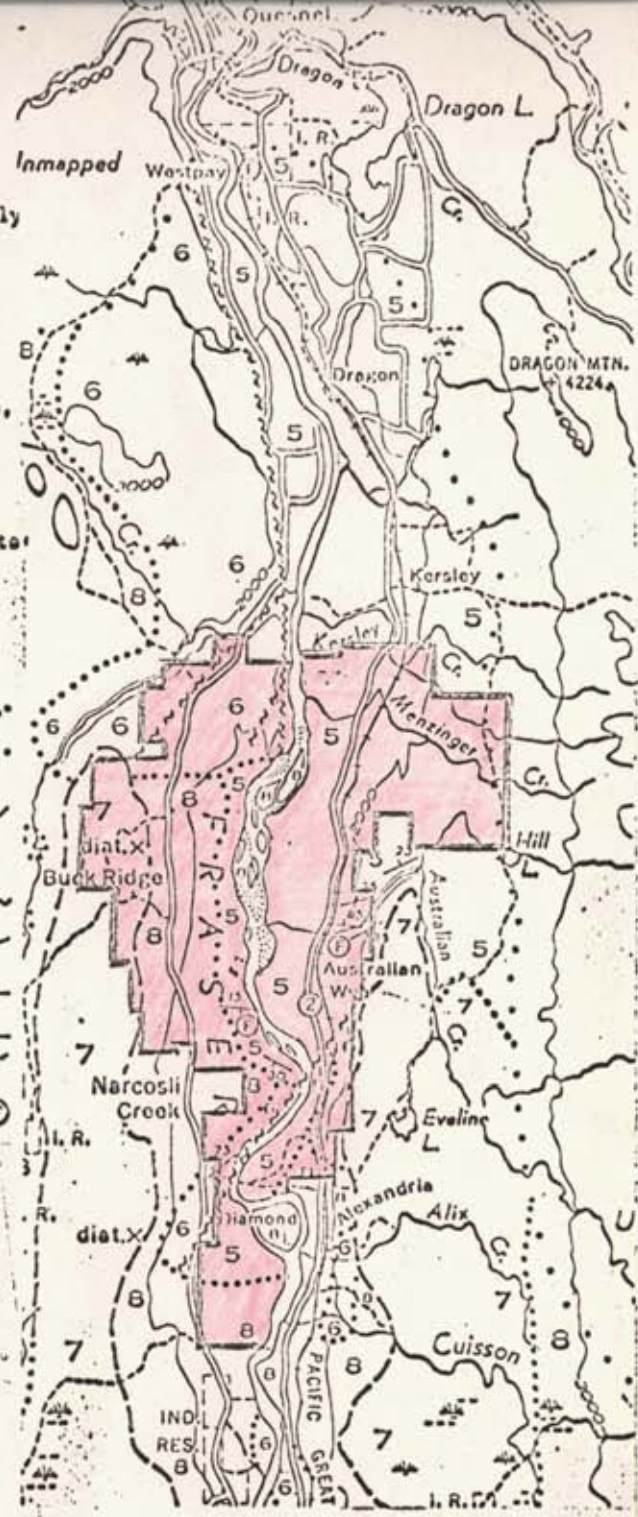
4 Rhyolite, dacite, trachyte; related tuff and breccia; andesite and basalt; minor sediments; 4a, mainly andesite and basalt

 Alberta Coal Ltd. Coal License Area

- Geological boundary (defined, approximate, assumed). . . . . 
- Limit of geological mapping. . . . . 
- Bedding (inclined; vertical, tops not indicated). . . . . 
- Fault (defined, approximate, assumed). . . . . 
- Lineament (from air photographs). . . . . 
- Anticline (defined, approximate). . . . . 
- Syncline (defined, approximate). . . . . 
- Glacial striae. . . . . 
- Fossil locality. . . . . 



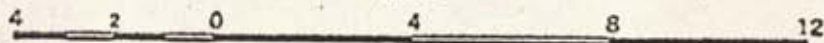
INDEX MAP



MAP 12-1959  
GEOLOGY  
QUESNEL  
CARIBOO DISTRICT  
BRITISH COLUMBIA

Figure 1. Index map and geological map of the Quesnel area showing the location of Alberta Coal Ltd. Coal License area.

Scale: One Inch to Four Miles =  $\frac{1}{253,440}$  Miles



CB-QUESNEL 71(2)A

## General Geology

The Tertiary deposits are scattered in the Prince George-Quesnel map area. Lignite deposits of the Fraser River Formation are exposed between Quesnel and Alexandria. This formation consists of conglomerate, sandstone, shale, clay, lignite, minor tuff and basalt. (See Figure 2)

The sandstone is fine to medium-grained and poorly sorted. The pebbles of conglomerate are generally well rounded and composed for the most part of quartz and of metamorphosed and volcanic origin. The shale beds are generally thin and vary in colour from brown to black.

Bedrock is poorly exposed in the map area. Rock is only exposed along some creeks and rivers and on the steeper hills - elsewhere small, widely scattered outcrops rise above the glacial drift. The sedimentary rocks are poorly consolidated and generally undeformed but are folded and faulted. (Tipper, 1959, 1961)

At no point have both the top and bottom of the Fraser River Formation been observed. There is no general correspondence between sections of different points. It is difficult to estimate total thickness of the formation. (Cockfield, 1932) The maximum thickness obtained by cockfield (1932) was 535 feet. Reinecke's (1920) estimate was 700 feet. (See Figure 2) Near Australian Creek, the sediments are not less than 1,200 feet thick (Tipper, 1959)



The age of the coal-bearing rocks was given by Dawson (1875) and Reinecke (1920) as Miocene. The age of these lignite-bearing strata in the area was also defined as Miocene by Tipper (1961). Some plant fossils were collected from the formation between Quesnel and Soda Creek. The flora has been dated by W.A. Bell as late Eocene.

Seven drill holes on the eastern bank of the Fraser River indicate thick Pleistocene sediments in the area. (See Figure 3) They are composed mainly of sand, gravel, clay and angular, lithic fragments of various sources. Both poorly stratified drift and generally well-stratified Quaternary deposits are found in the area. The former is closely connected in origin with glacial ice such as, basal till, ablation till and collapsed outwash gravel. The latter is mainly fluvial deltaic deposits such as, clay and well sorted gravel.

Owing to the scarcity of outcrops in the area, it is difficult to make an overall picture of the geological structure. The structure of the sedimentary rocks on the eastern bank may be considered as an anticline with the axis close to the present position of the downstream of the Australian Creek. (See Figure 3)

Changes in strike and dip of the Tertiary rocks on the western bank are suggested - a possible westward plunging syncline. Strikes of rocks range from N20W to N45W as well as dipping which changes from  $11^{\circ}$  SW to  $30^{\circ}$  SW. Amount of plunge cannot be determined because of scarce outcrops. Both limbs of this syncline has been eroded during the Pleistocene time and were covered by glacial drift. (See Figure 3)

Era	Period or Epoch	Formation and Group	Lithology	Thickness (Feet)	
Cenozoic	Quaternary	Recent		Basalt, basalt breccia, volcanic ash	
		Pleistocene and recent		Till, gravel, sand, clay and silt.	25 - 50 Max. 700
	Tertiary	Miocene and (?)Pliocene		Basalt, andesite, related tuff and breccia, minor conglomerate, greywacke, shale, diatomite	
		Eocene and/or Oligocene		Basalt, andesite, related tuff and breccia, minor conglomerate, sandstone, shale	
			Fraser River Formation(?)	Conglomerate, sandstone, greywacke, shale, lignite minor breccia, tuff and basalt	700 (1920) 535 (1932) 1200 (1959)
Paleocene and/or Eocene		Rhyolite, dacite, trachyte, related tuff and breccia, andesite, basalt, minor sediments			
Mesozoic	Jurassic or Cretaceous		Conglomerate, greywacke, argillite		
	Middle Jurassic	Hazelton Group (In Part)	Andesite, basalt, related tuff and breccia, conglomerate, greywacke, shale		
Not known to be in contact					
Paleozoic	Permian and (?) Earlier	Cache Creek Group	Chert, argillite, limestone, greenstone, minor greywacke and conglomerate		

Figure 2 Table of Formations  
(Compiled by T. N. Yoon)

## Economic Geology of Coal Deposits

Outcrops of low-grade lignite were reported on both the eastern and western banks of the Fraser River, south of Quesnel. The coal seams are exposed along the Australian Creek (3' and 4' thick), south of Alexandria ferry (15', 4', 9' and 1' thick) on the eastern bank of the river and in lot 8010 on the western bank. (Circa 50' thick).

The information of Diamond Drilling (Cariboo Coal & Clay Co. Ltd., 1929) in the Australian Creek area (Lay, 1930) is that Hole No. 1 (320 feet deep) shows four coal seams varying in thickness from 4 to 14 feet and Hole No. 2 (484 feet deep) exhibits two coal seams, 15 feet and 72 feet thick. (See Figure 4) Bore-hole for oil (1,400 feet deep), one-quarter mile from the mouth of the Australian Creek, did not show any coal (Cockfield, 1932).

The result of our drilling operation shows that the lignite deposit at shallow depth is confined in lots 8009 and 8010 on the western bank. (See Figure 3 and Appendix) Cross-sections A-A', B-B', C-C' and D-D' indicate relationship between topography and lignite seams in the area. (See Figure 5)

The following table gives the result of analysis of lignite from the Australian Creek.

	<u>As Received</u>	<u>Dried (105° C)</u>
Moisture	11.5%	
Ash	29.4%	33.2%
Volatile matter	30.6%	34.6%
Fixed Carbon (by difference)	28.5%	32.2%

(After L. Reinecke, 1920)

The samples from both outcrops (See Figure 6) and drill holes (See Figure 7) in lots 8009 and 8010 were analyzed.

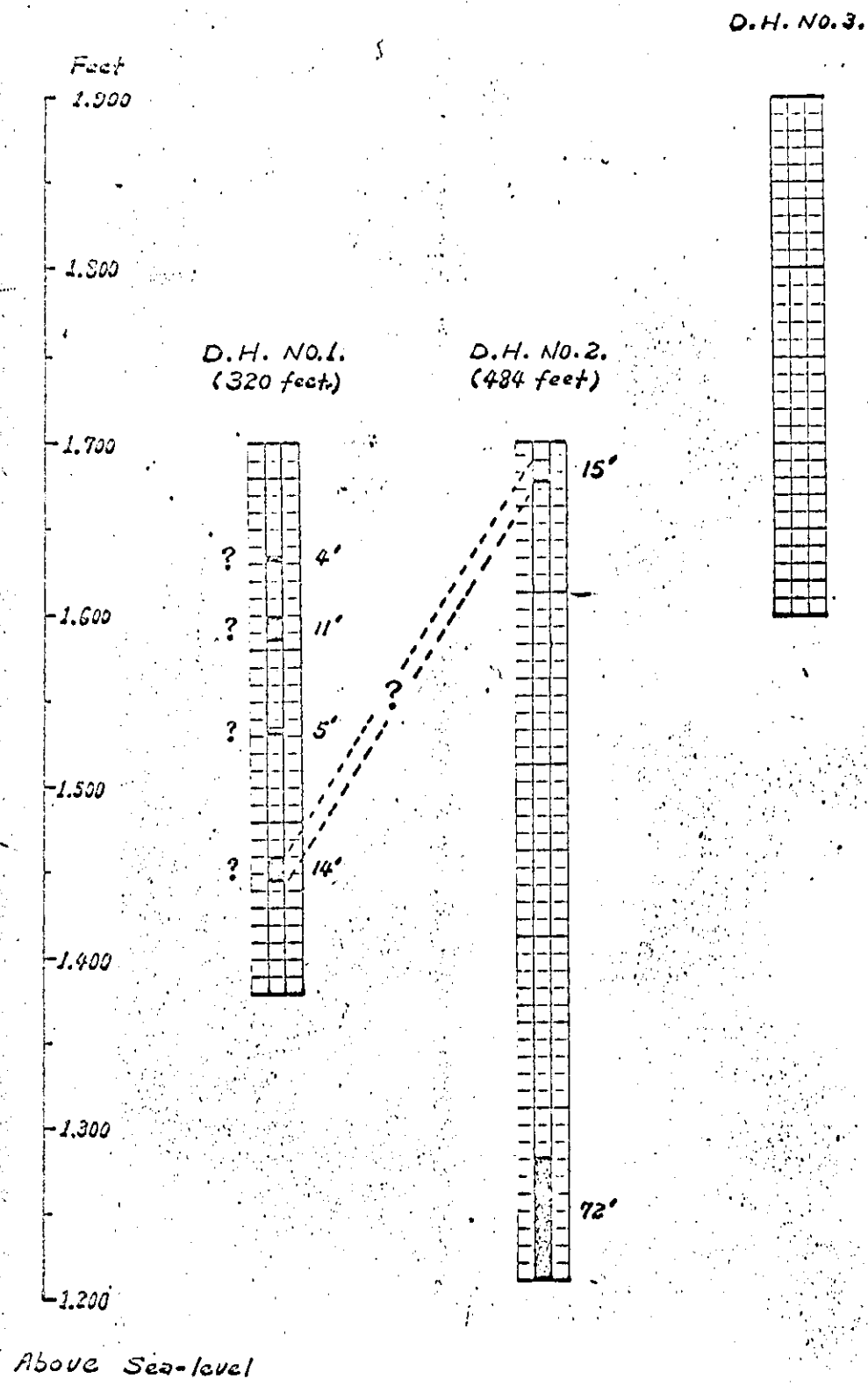
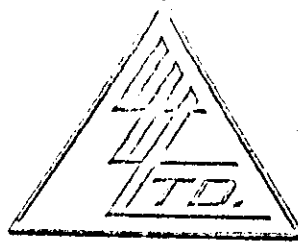


Figure 4 Subsurface data of coal seams near the Australian Creek, Quesnel area, B. C.

(By: T. N. Yoon).

To: MASTER EXPLORATION LTD.,  
 P.O. Box 2880,  
 Calgary 2, Alta.  
 Attn. Mr. B. Tanner



File No. 1803  
 Date Nov. 26, 1971  
 Samples Coal

Certificate of  
 ASSAY OF  
 LORING LABORATORIES LTD.

SAMPLE No.	RC'D %H2O	INH %H2O	% V.M.	% ASH	% F.C.	% S	B.T.U. /lb.
<u>RAW COAL</u>							
"AIR DRIED" Sample Q - 1	-	3.74	36.48	27.24	32.54	.47	8,876
"AS RECEIVED" Sample Q - 1	34.0	-	24.08	17.98	23.94	.31	5,858

EQUILIBRIUM MOISTURE & ASH FUSION TO FOLLOW.

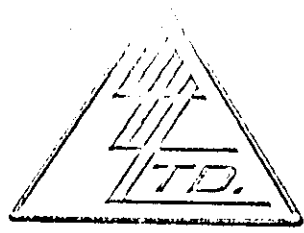
I Herby Certify THAT THE ABOVE RESULTS ARE THOSE  
 ASSAYS MADE BY ME UPON THE HEREIN DESCRIBED SAMPLES . . .

Figure 6 Certificate of Assay (Outcrop Sample)

Rejects Retained one month.  
 Pulps Retained one month  
 unless specific arrangements  
 made in advance.

*C. L. M. J. ...*  
 Licensed Assayer of British Columbia

LORING LABORATORIES LIMITED,  
 P.O. Box 2800,  
 Calgary 2, Alberta



File No. 5654  
 Date February 23, 1972  
 Samples Coal

Attn: Mr. T.N. Yoon

Certificate of  
 ASSAY OF  
 LORING LABORATORIES LTD.

SAMPLE No.	REC'D %H2O	% V.M.	% ASH	% F.C.	% S	B.T.U. / lb.
QN-1-A	42.8	21.26	16.98	18.96	.21	4,845
QN-1-B	45.3	19.27	15.20	20.23	.26	4,709
QN-2-A	47.1	17.42	18.10	17.38	.25	4,155
QN-2-B	56.2	16.92	13.64	13.24	.14	3,815
QN-4-A	41.7	20.21	18.83	19.26	.22	4,742
QN-4-B	41.7	20.36	18.30	19.64	.28	4,816
QN-8-A	43.6	21.39	15.40	19.61	.25	5,078
QN-8-B	47.8	17.90	14.43	19.87	.23	4,517

\* All figures are calculated "As Received."

\* Equilibrium moisture samples have been shipped  
 to Ottawa for analysis.

I Hereby Certify THAT THE ABOVE RESULTS ARE THOSE  
 ASSAYS MADE BY ME UPON THE HEREIN DESCRIBED SAMPLES . . . .

Figure 7 Certificate of Assay (Drill Hole Sample)

Rejects Retained one month.  
 Pulp Retained one month  
 unless specific arrangements  
 made in advance.

*[Signature]*  
 Licensed Assayer of British Columbia



## REFERENCES

Cockfield, W.E.

1932. "Oil possibilities between Soda Creek and Quesnel, Cariboo District, British Columbia"  
G.S.C. Summary Report, 1931, Part A  
p. 58 - 65

Lay, D.

1930. "North-Eastern Mineral Survey District (No. 2)"  
British Columbia, Department of Mines  
Annual Report (1930) p. 128 - 178

Reinecke, L.

1920. "Mineral Deposits Between Lillooet and Prince George, British Columbia"  
G.S.C. Memoir 118

Tipper, H.W.

1959. "Geology, Quesnel, Cariboo District, British Columbia" with descriptive notes  
G.S.C. Map 12 - 1959
1961. "Geology, Prince George, Cariboo District, British Columbia" with descriptive notes  
G.S.C. Map 49 - 1960

APPENDIX

Drill Logs (QN-71-1 - QN-71-21)

DRILL HOLE LOGS

Drill Hole No. QN-71-1

COMPANY: Master Explorations Ltd.

AREA: Quesnel, B. C.

DRILLER: W. Woods

LOCATION: S, W, NE Cor. Sec. , Twp. , R. , W M

ELEVATION: 1490'

DATE: 10-Dec-71

FROM	TO	DESCRIPTION
0	4'	Sand
4	14'	Gravel
14	26'	Shale
26	48.2'	Coal (sampled)
48.2	49.5'	Shale
49.5	59.5'	Coal (sampled)
59.5	74.3'	Clay
74.3	74.8'	Coal
74.8	76'	Clay
76	76.3'	Coal
76.3	80'	Clay
80	81'	Coal
81	81.5'	Shale (brown)
81.5	82.2'	Coal
82.2	83'	Shale (brown)
83	83.3'	Coal
83.3	85.3'	Brown shale
85.3	86'	Coal
86	87.4'	Brown shale
87.4	87.9'	Coal
87.9	91'	Brown shale
91	93.5'	Coal
93.5	94'	Brown shale
94	98.7'	Coal (sampled)
98.7	99'	Brown shale
99	145'	Light grey clay
		Total Depth = 145'

DRILL HOLE LOGS

Drill Hole No. QN-71-2

COMPANY: Master Explorations Ltd.

AREA: Quesnel, B.C.

DRILLER: W. Woods

LOCATION: S, W, NE Cor. Sec. , Twp. , R. , W M

ELEVATION: 1480'

DATE: 14-Dec-71

FROM	TO	DESCRIPTION
0	4'	Sandy clay
4	12'	Gravel
12	17'	Clay
17	22'	Shattered sandstone
22	27.5'	Sand
27.5	33.2'	Shale
33.2	36.5'	Coal
36.5	37.2'	Brown shale
37.2	41'	Coal (sampled)
41	41.3'	Brown shale
41.3	47.5'	Coal (sampled)
47.5	49'	Brown shale
49	52.3'	Coal
52.3	52.8'	Brown shale
52.8	53.1'	Coal
53.1	55'	Brown shale
55	61.2'	Coal (sampled)
61.2	61.8'	Light grey clay
61.8	63'	Coal
63	64.5'	Brown shale
64.5	65.3'	Coal (sampled)
65.3	65.8'	Brown shale
65.8	67.5'	Coal (sampled)
67.5	68.5'	Brown clay
68.5	70.1'	Coal
70.1	70.4'	Brown shale
70.4	71.6'	Coal
71.6	72'	Brown clay
72	72.8'	Coal

....2

DRILL HOLE LOGS

Drill Hole No. QN-71-2

COMPANY: Master Explorations Ltd.

AREA: Quesnel, B.C.

DRILLER: W. Woods

LOCATION: S, W, NE Cor. Sec. , Twp. , R. , W M

ELEVATION: 1480'

DATE: 14-Dec-71

FROM	TO	DESCRIPTION
72.8	73'	Brown clay
73	76.2'	Coal
76.2	76.5'	Brown clay
76.5	77.5'	Coal
77.5	79'	Brown clay
79	142'	Light grey clay
142	147'	Brown clay
147	171.5'	Light grey clay
171.5	172.3'	Brown shale
172.3	173.8'	Coal
173.8	174.2'	Brown shale
174.2	175.6'	Coal
175.6	176'	Brown shale
176	176.8'	Coal
176.8	180.2'	Brown shale
180.2	181'	Coal
181	183.2'	Light Grey Clay
183.2	185'	Coal
185	185.6'	Brown shale
185.6	187'	Coal
187	188.5'	Light Grey Clay
188.5	188.9'	Brown shale
188.9	190.2'	Coal
190.2	192.8'	Brown shale
192.8	193.4'	Coal
193.4	195'	Brown shale
195	225'	Light Grey Clay
		Total Depth = 225'

DRILL HOLE LOGS

Drill Hole No. QN-71-3

COMPANY: Master Explorations Ltd.

AREA: Quesnel, B.C.

DRILLER: W. Woods

LOCATION:           S,          W, NE Cor. Sec. , Twp. , R. , W M

ELEVATION: 1580'

DATE: 16-Dec-71

FROM	TO	DESCRIPTION
0	11'	Clay (sandy)
11	11.5'	Hard black sandstone (boulder)
11.5	32'	Sandy clay & rocks
32	36'	Brown clay
36	113'	Soft grey clay
113	116'	Brown shale
116	124'	Soft grey clay
124	129.5'	Brown shale
129.5	133'	Grey clay
133	179'	Brown shale
179	214'	Grey clay
214	237.5'	Brown shale
237.5	241.2'	Coal (sampled)
241.2	241.6'	Brown shale
241.6	249'	Coal (sampled)
249	251'	Brown shale
251	271'	Light grey clay
271	274'	Grey sandstone
274	295'	Light grey clay
		Total Depth = 295'

DRILL HOLE LOGS

Drill Hole No. QN-71-4

COMPANY: Master Explorations Ltd.

AREA: Quesnel, B.C.

DRILLER: W. Woods

LOCATION: S, W, NE Cor. Sec. , Twp. , R. , W M

ELEVATION: 1570'

DATE: 18-Dec-71

FROM	TO	DESCRIPTION
0	7'	Sand.
7	17'	Gravel
17	34'	Grey clay
34	56'	Brown shale
56	60.3'	Coal (sampled)
60.3	60.5'	Brown shale
60.5	61.7'	Coal (sampled)
61.7	62'	Brown shale
62	62.9'	Coal (sampled)
62.9	63.5'	Brown shale
63.5	67'	Coal (sampled)
67	68.5'	Brown shale
68.5	69'	Coal
69	70.1'	Brown shale
70.1	70.4'	Coal
70.4	78.8'	Brown shale
78.8	82.5'	Coal & carb. shale (sampled) 50% each
82.5	83.7'	Grey clay
83.7	86.5'	Coal & carb. shale (sampled) 50% each
86.5	88'	Brown shale
88	94'	Coal (sampled)
94	95.9'	Soft grey clay
95.9	96.5'	Brown shale
96.5	122'	Soft grey clay
122	127'	Sandstone
127	149'	Soft grey clay
149	158'	Brown shale
158	237'	Soft grey clay

DRILL HOLE LOGS

Drill Hole No. QN-71-4

COMPANY: Master Explorations Ltd.

AREA: Quesnel, B. C.

DRILLER: W. Woods

LOCATION: S, W, NE Cor. Sec. , Twp. , R. , W M

ELEVATION: 1570'

DATE: 18-Dec-71

FROM	TO	DESCRIPTION
237	242.2'	Brown shale & carb. shale
242.2	242.9'	Coal
242.9	244.1'	Brown shale
244.1	244.8'	Coal
244.8	246.6'	Brown shale & carb. shale
246.6	247.5'	Coal
247.5	250.2'	Brown shale
250.2	250.5'	Coal
250.5	253'	Brown shale
253	253.5'	Coal
253.5	257.8'	Brown shale
257.8	258.2'	Coal
258.2	259'	Brown shale
259	260'	Light grey clay
260	263'	Brown shale
263	275'	Light grey clay
		Total Depth = 275'



DRILL HOLE LOGS

Drill Hole No. QN-71-5

COMPANY: Master Explorations Ltd.

AREA: Quesnel, B.C.

DRILLER: W. Woods

LOCATION: S, W, NE Cor. Sec. , Twp. , R. , W M

ELEVATION: 1590'

DATE: 21-Dec-71

FROM	TO	DESCRIPTION
0	31'	Sandy clay
31	49'	Blue clay
49	57'	Sandy clay
57	66.5'	Clay & rocks
66.5	71'	Brown & red shale & carb. shale
71	77'	Brown shale
77	114'	Soft grey clay
114	123'	Brown shale
123	131'	Soft grey clay
131	139'	Brown shale
139	143'	Soft grey clay
143	161'	Brown shale
161	194'	Soft grey clay
194	236.7'	Brown shale
236.7	238'	Coal
238	241.2'	Brown shale
241.2	245.6'	Coal (sampled)
245.6	248'	Brown shale
248	256.5'	Coal (sampled)
256.5	259.8'	Brown shale
259.8	261.5'	Coal
261.5	265'	Brown shale
265	301'	Light grey clay
301	306.7'	Brown shale & carb. shale
306.7	311.5'	Brown shale
311.5	312.7'	Coal
312.7	314'	Brown shale
314	314.7'	Coal

DRILL HOLE LOGS

Drill Hole No. QN-71-5

COMPANY: Master Explorations Ltd.

AREA: Quesnel, B.C.

DRILLER: W. Woods

LOCATION: S, W, NE Cor. Sec. , Twp. , R. , W M

ELEVATION: 1590'

DATE: 21-Dec-71

FROM	TO	DESCRIPTION
314.7	319'	Brown shale
319	389'	Light grey clay
389	394.6'	Carb. shale & brown shale
394.6	397.1'	Coal
397.1	397.5'	Brown & red shale
397.5	455'	Light grey shale
		Total Depth = 455'

DRILL HOLE LOGS

Drill Hole No. QN-72-6

COMPANY: Master Explorations Ltd.

AREA: Quesnel, B.C.

DRIILLER: W. Woods

LOCATION: S, W, NE Cor. Sec. , Twp. , R. , W M

ELEVATION: 1660'

DATE: 7-Jan-72

FROM	TO	DESCRIPTION
0	13.5'	Sand & gravel
13.5	28'	Sandy clay
28	33'	Blue clay
33	44'	Clay & rocks
44	46'	Carb. shale & red shale (lost circ)
46	48'	Clay & rocks
48	78'	Sand & gravel
78	86'	Sandy clay
86	115'	Soft grey clay
115	121'	Blue clay
121	148'	Soft grey clay
148	153'	Blue clay
153	172'	Soft grey clay
172	207'	Clay & rocks
207	225'	Gravel (possibly cemented)
Total Depth = 225'		

DRILL HOLE LOGS

Drill Hole No. QN-72-7

COMPANY: Master Explorations Ltd.

AREA: Quesnel, B.C.

DRILLER: W. Woods

LOCATION: S, W, NE Cor. Sec. , Twp. , R. , W M

ELEVATION: 1540'

DATE: 9-Jan-72

FROM	TO	DESCRIPTION
0	22'	Sand
22	33'	Gravel
33	41'	Brown shale
41	48'	Soft grey clay
48	77'	Brown shale
77	101'	Soft grey clay
101	130.2'	Brown shale
130.2	131'	Black shale
131	132.5'	Coal
132.5	134'	Brown shale
134	135.6'	Coal
135.6	137'	Brown shale
137	138.5'	Coal
138.5	139'	Brown shale
139	139.7'	Coal
139.7	140.5'	Brown shale
140.5	141.6'	Coal
141.6	144'	Brown shale
144	147.2'	Coal
147.2	148'	Brown shale
148	152.5'	Coal
152.5	153.5'	Light grey clay
153.5	161.2'	Coal
161.2	162.5'	Brown shale
162.5	171'	Coal
171	255'	Light grey clay
		Total Depth = 255'

DRILL HOLE LOGS

Drill Hole No. QN-72-8

COMPANY: Master Explorations Ltd.

AREA: Quesnel, B.C.

DRIILLER: W. Woods

LOCATION: S, W, NE Cor. Sec. , Twp. , R. , W M

ELEVATION: 1480'

DATE: 11-Jan-72

FROM	TO	DESCRIPTION
0	8.5'	Sand
8.5	26'	Gravel
26	36.5'	Grey clay
36.5	72'	Brown shale
72	119'	Light grey clay
119	128'	Brown shale
128	131'	Light grey clay
131	136.7'	Brown shale
136.7	140.6'	Coal & carb. shale
140.6	142'	Brown shale
142	146'	Coal & carb. shale
146	156.2'	Coal
156.2	158'	Brown shale
158	158.9'	Coal
158.9	161.5'	Brown shale
161.5	205'	Light grey clay
		Total Depth = 205'

DRILL HOLE LOGS

Drill Hole No. QN-72-9

COMPANY: Master Explorations Ltd.

AREA: Quesnel, B.C.

DRILLER: W. Woods

LOCATION: S. W, NE Cor. Sec. , Twp. , R. , W M

ELEVATION: 1550'

DATE: 14-Jan-72

FROM	TO	DESCRIPTION
0	6'	Sand
6	17'	Gravel
17	31'	Grey clay
31	31.8'	Coal
31.8	33.2'	Brown shale
33.2	34.5'	Coal
34.5	37'	Brown shale
37	41'	Light grey clay
41	42'	Brown shale
42	70.5'	Light grey clay
70.5	255'	Brown shale
Total Depth = 255'		

DRILL HOLE LOGS

Drill Hole No. QN-72-10

COMPANY: Master Explorations Ltd.

AREA: Quesnel, B.C.

DRILLER: \_\_\_\_\_

LOCATION: \_\_\_\_\_ S, \_\_\_\_\_ W, NE Cor. Sec. \_\_\_\_\_, Twp. \_\_\_\_\_, R. \_\_\_\_\_, W \_\_\_\_\_ M

ELEVATION: 1570'

DATE: 15-Jan-72

FROM	TO	DESCRIPTION
0	12.5'	Sand
12.5	18'	Gravel
18	130'	Sand
130	156'	Sandy clay
156	167'	Sand
167	196'	Sandy clay
196	215'	Gravel
Total Depth = 215'		

DRILL HOLE LOGS

Drill Hole No. QN-72-11

COMPANY: Master Explorations Ltd.

AREA: Quesnel, B.C.

DRILLER: \_\_\_\_\_

LOCATION: S, W, NE Cor. Sec. , Twp. , R. , W M

ELEVATION: 1450'

DATE: 20-Jan-72

FROM	TO	DESCRIPTION
0	11'	Sand
11	21.5'	Gravel
21.5	87'	Grey clay & rocks
87	102'	Gravel
102	108'	Clay & rocks
108	119'	Gravel
119	138'	Clay & rocks
138	153'	Sand
153	189'	Sandy clay
189	245'	Gravel & sandy clay
		Total Depth = 245'



DRILL HOLE LOGS

Drill Hole No. QN-72-12

COMPANY: Master Explorations Ltd.

AREA: Quesnel, B.C.

DRILLER: W. Woods

LOCATION: S, W, NE Cor. Sec. , Twp. , R. , W M

ELEVATION: 1640'

DATE: 22-Jan-72

FROM	TO	DESCRIPTION
0	5'	Sand
5	38'	Gravel
38	123'	Sand
123	130'	Grey clay
130	142'	Clay & rocks
142	169'	Sand & gravel
169	203'	Cemented gravel
203	255'	Sandy clay & rocks
		Total Depth = 255'

DRILL HOLE LOGS

Drill Hole No. QN-72-13

COMPANY: Master Explorations Ltd.

AREA: Quesnel, B.C.

DRILLER: W. Woods

LOCATION: S, W, NE Cor. Sec. , Twp. , R. , W M

ELEVATION: 1550'

DATE: 3-Feb-72

FROM	TO	DESCRIPTION
0	4'	Sand
4	13'	Gravel
13	16'	Sand & gravel
16	31'	Gravel (blind)
31	78'	Sand
78	123'	Sandy clay
123	189'	Sand
189	255'	Sandy clay & rocks
		Total Depth = 255'

DRILL HOLE LOGS

Drill Hole No. QN-72-14

COMPANY: Master Explorations Ltd.

AREA: Quesnel, B.C.

DRILLER: W. Woods

LOCATION: S, W, NE Cor. Sec. , Twp. , R. , W M

ELEVATION: 1490'

DATE: 4-Feb-72

FROM	TO	DESCRIPTION
0	6'	Sand
6	14'	Gravel
14	36'	Sandy clay & gravel
36	39.5'	Sand
39.5	56'	Sandy clay
56	130'	Sandy clay & rocks
130	215'	Sand
215	255'	Sandy clay
		Total Depth = 255'

DRILL HOLE LOGS

Drill Hole No. QN-72-15

COMPANY: Master Explorations Ltd.

AREA: Quesnel, B.C.

DRILLER: W. Woods

LOCATION: S, W, NE Cor. Sec. , Twp. , R. , W M

ELEVATION: 1520'

DATE: 7-Feb-72

FROM	TO	DESCRIPTION
0	3'	Sand
3	11'	Gravel
11	29'	Sandy clay & gravel
29	40'	Cemented gravel
40	107'	Sandy clay
107	195'	Sandy clay & rocks
		Total Depth = 195'

DRILL HOLE LOGS

Drill Hole No. QN-72-16

COMPANY: Master Explorations Ltd.

AREA: Quesnel, B.C.

DRILLER: W. Woods

LOCATION: S, W, NE Cor. Sec. , Twp. , R. , W M

ELEVATION: 1470'

DATE: 6-Feb-72

FROM	TO	DESCRIPTION
0	9'	Sand
9	16'	Gravel
16	22'	Gravel & sandy clay
22	27'	Sand
27	120'	Sandy clay & rocks
120	139'	Sandy clay & gravel
139	146'	Gravel
146	163'	Sandy clay & rocks
163	195'	Cemented gravel
Total Depth = 195'		

DRILL HOLE LOGS

Drill Hole No. QN-72-17

COMPANY: Master Explorations Ltd.

AREA: Quesnel, B.C.

DRILLER: W. Woods

LOCATION: S, W, NE Cor. Sec. , Twp. , R. , W M

ELEVATION: 1430'

DATE: 7-Feb-72

FROM	TO	DESCRIPTION
0	4'	Sand
4	18'	Gravel
18	29'	Sandy clay & gravel
29	32'	Cemented gravel
32	95'	Sandy clay
Total Depth = 95'		

DRILL HOLE LOGS

Drill Hole No. QN-72-18

COMPANY: Master Explorations Ltd.

AREA: Quesnel, B. C.

DRILLER: W. Woods

LOCATION: S, W, NE Cor. Sec. , Twp. , R. , W M

ELEVATION: 1890'

DATE: 10-Feb-72

FROM	TO	DESCRIPTION
0	11'	Brown clay
11	43'	Sandy clay & rocks
43	51'	Sand
51	92'	Clay & rocks
92	104'	Blue clay
104	120'	Brown clay
120	124'	Brown shale
124	138'	Blue clay
138	140'	Brown shale
140	142'	Light grey clay
142	144'	Brown shale
144	187'	Grey clay
187	193'	Brown clay
193	197.5'	Brown shale
197.5	198'	Coal
198	199.6'	Brown shale
199.6	200.2'	Coal
200.2	203.5'	Brown shale
203.5	204.2'	Coal
204.2	206.5'	Brown shale
206.5	208'	Coal
208	211.3'	Brown shale
211.3	213.5'	Coal
213.5	218'	Brown shale
218	265'	Grey clay
		Total Depth = 265'

DRILL HOLE LOGS

Drill Hole No. QN-72-19

COMPANY: Master Explorations Ltd.

AREA: Quesnel, B.C.

DRILLER: W. Woods

LOCATION: S, W, NE Cor. Sec. , Twp. , R. , W. M.

ELEVATION: 1720'

DATE: 12-Feb-72

FROM	TO	DESCRIPTION
0	6'	Sand
6	19'	Sandy clay & rocks
19	23'	Coarse Sand (blind)
23	27'	Sandy clay
27	36'	Grey clay
36	36.5'	Coal
36.5	37'	Grey clay
37	41'	Blue clay
41	82.5'	Grey clay
82.5	83'	Brown shale
83	83.3'	Coal
83.3	88'	Brown shale
88	91'	Grey clay
91	92.7'	Brown shale
92.7	93.5'	Coal
93.5	105'	Brown shale (blind)
		Total Depth = 105'



DRILL HOLE LOGS

Drill Hole No. QN-72-20

COMPANY: Master Explorations Ltd.

AREA: Quesnel, B.C.

DRILLER: W. Woods

LOCATION: S, W, NE Cor. Sec. , Twp. , R. , W M

ELEVATION: 1740'

DATE: 13-Feb-72

FROM	TO	DESCRIPTION
0	28'	Sandy clay & rocks
28	41'	Grey clay
41	49'	Blue clay
49	84'	Light grey clay
84	87'	Brown shale
87	88.5'	Coal
88.5	89'	Brown shale
89	91'	Light grey clay
91	95.8'	Brown shale
95.8	99.2'	Coal
99.2	123'	Light grey clay
123	127'	Brown shale
127	133.2'	Coal (sampled)
133.2	160.7'	Light grey clay
160.7	161.5'	Coal
161.5	163'	Brown shale
163	163.5'	Coal
163.5	165'	Brown shale
165	166.2'	Coal
166.2	168'	Brown shale
168	187'	Light grey clay
187	190'	Brown shale
190	255'	Light grey clay
		Total Depth = 255'

DRILL HOLE LOGS

Drill Hole No. QN-72-21

COMPANY: Master Explorations Ltd.

AREA: Quesnel, B.C.

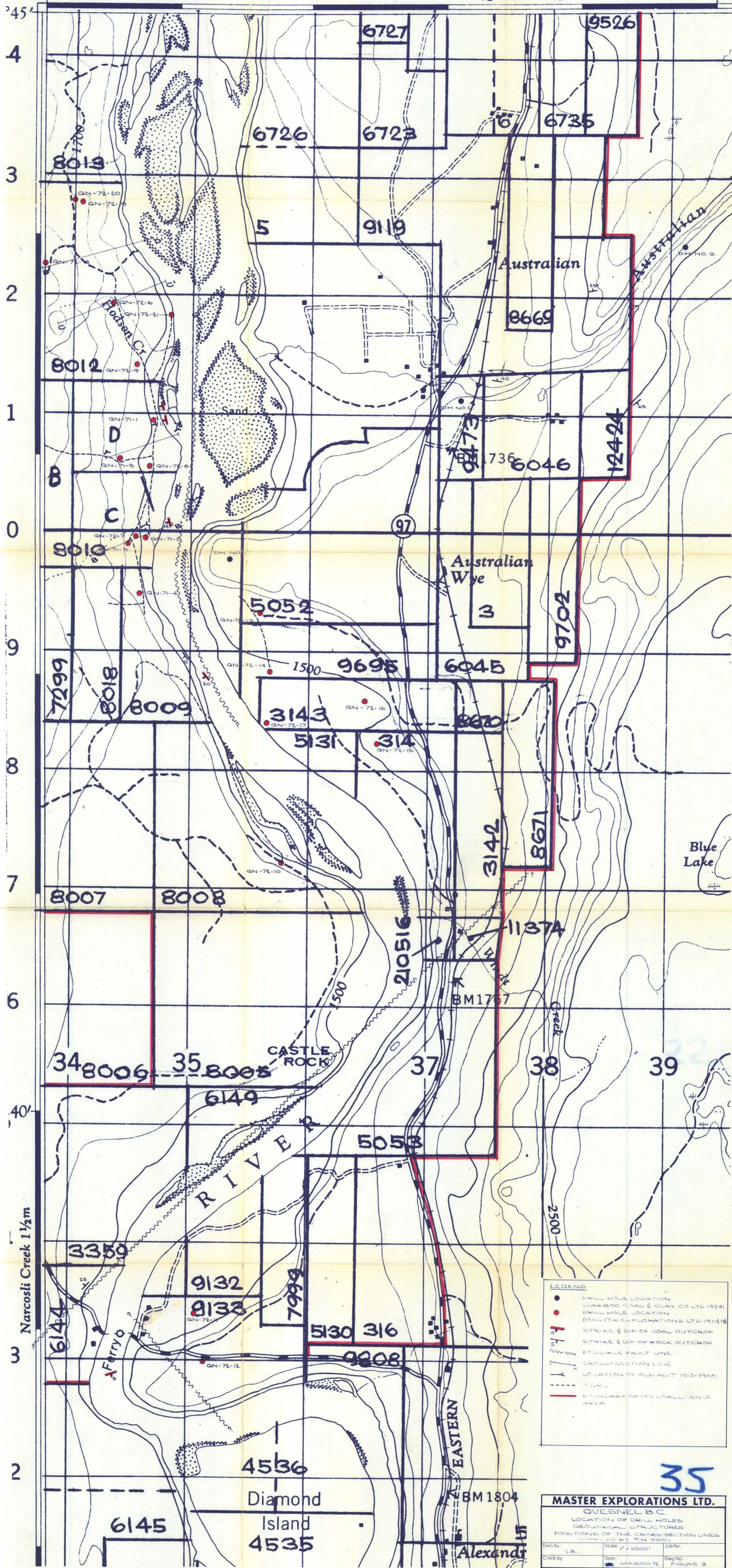
DRILLER: W. Woods

LOCATION: S. W, NE Cor. Sec. , Twp. , R. , W M

ELEVATION: 1450'

DATE: 13-Feb-72

FROM	TO	DESCRIPTION
0	8'	Sand
8	14'	Gravel & sandy clay
14	20'	Coarse sand
20	38'	Blue clay
38	41'	Coarse sand
41	71'	Grey clay & rocks
71	76'	Brown clay
76	87'	Sandy clay & rocks
87	155'	Grey clay
		Total Depth = 155'

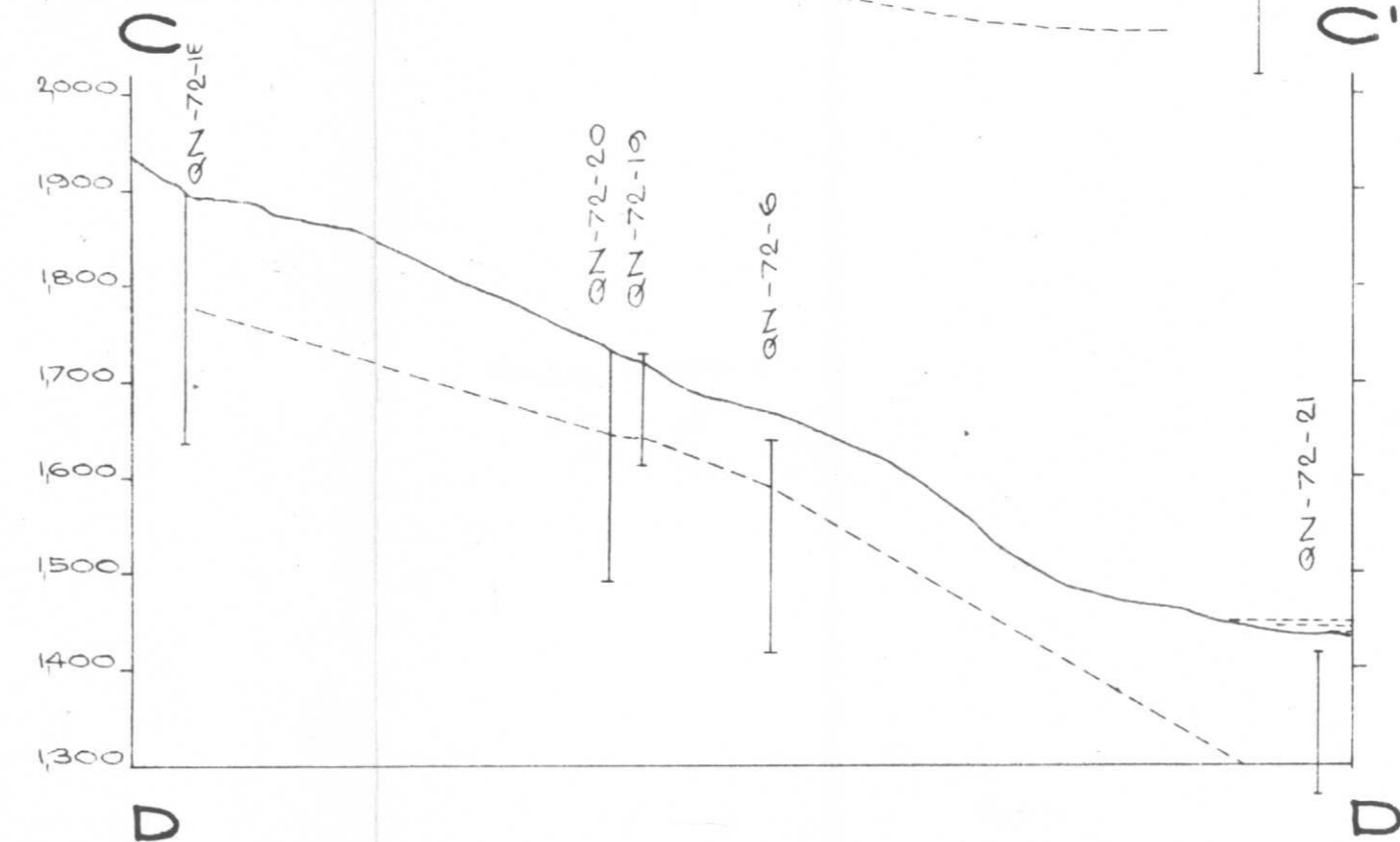
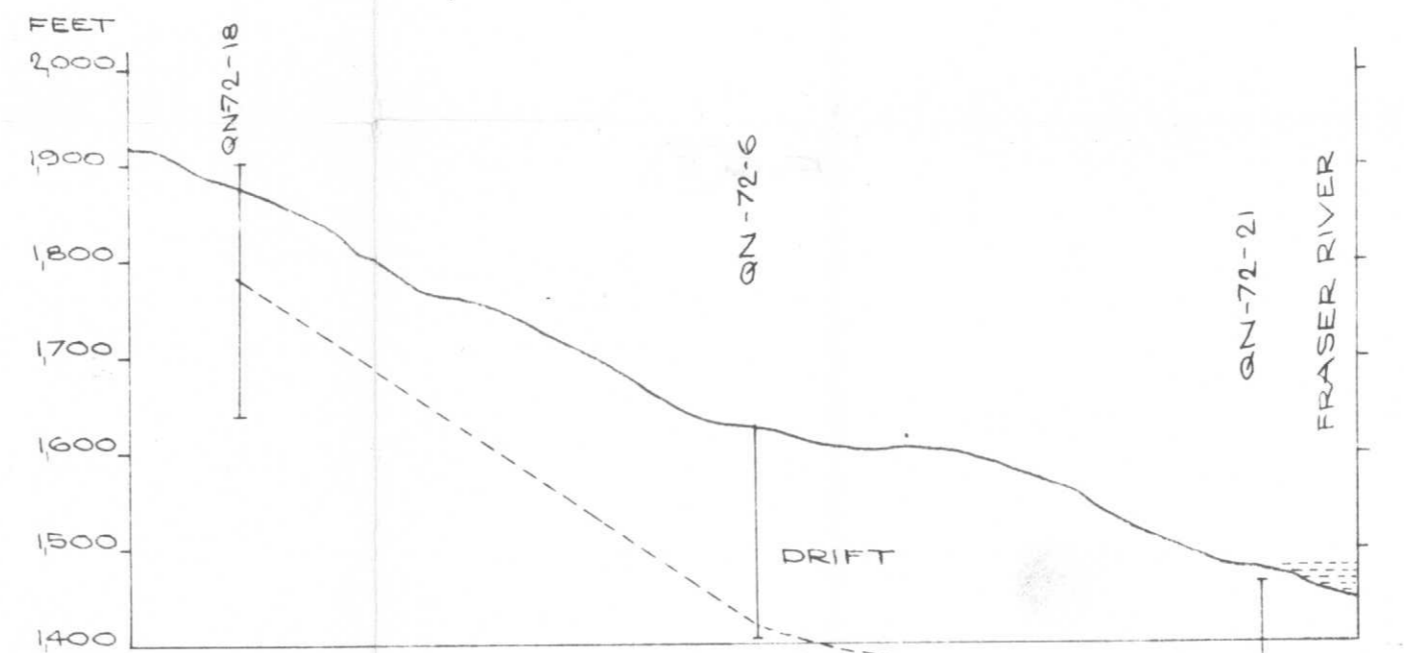
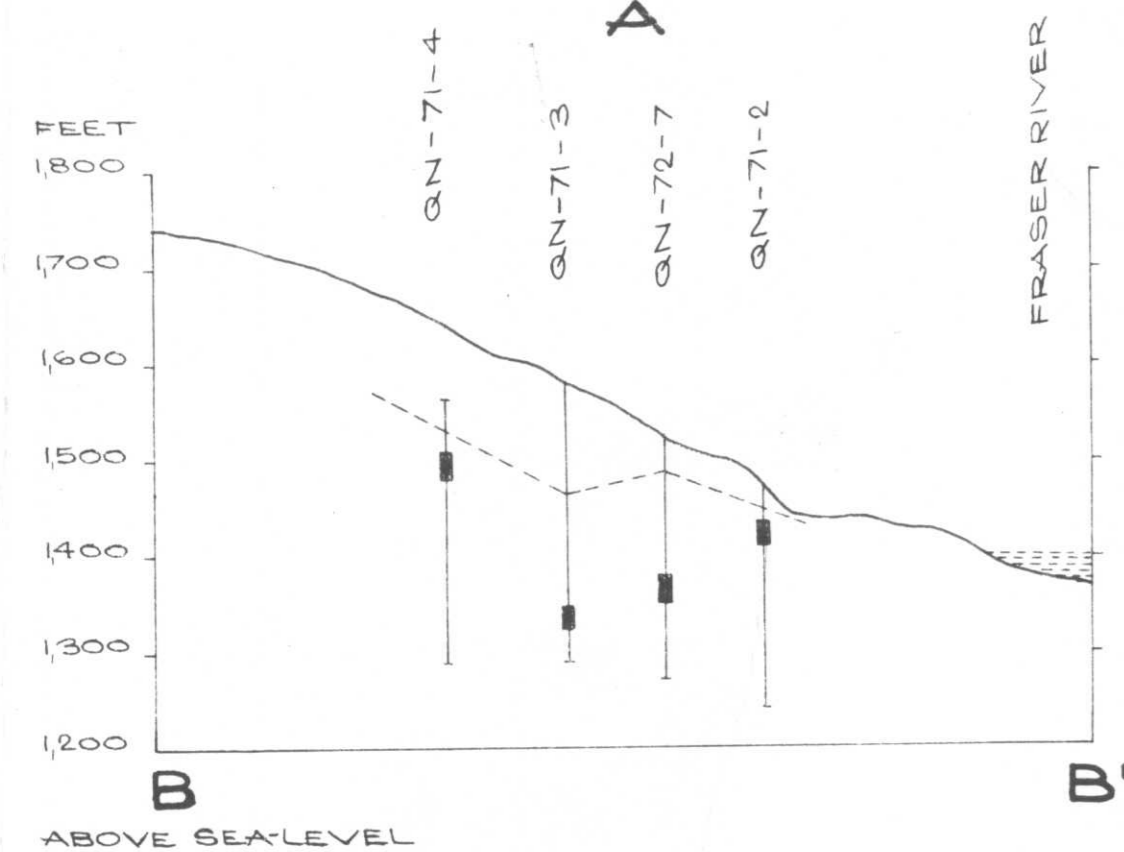
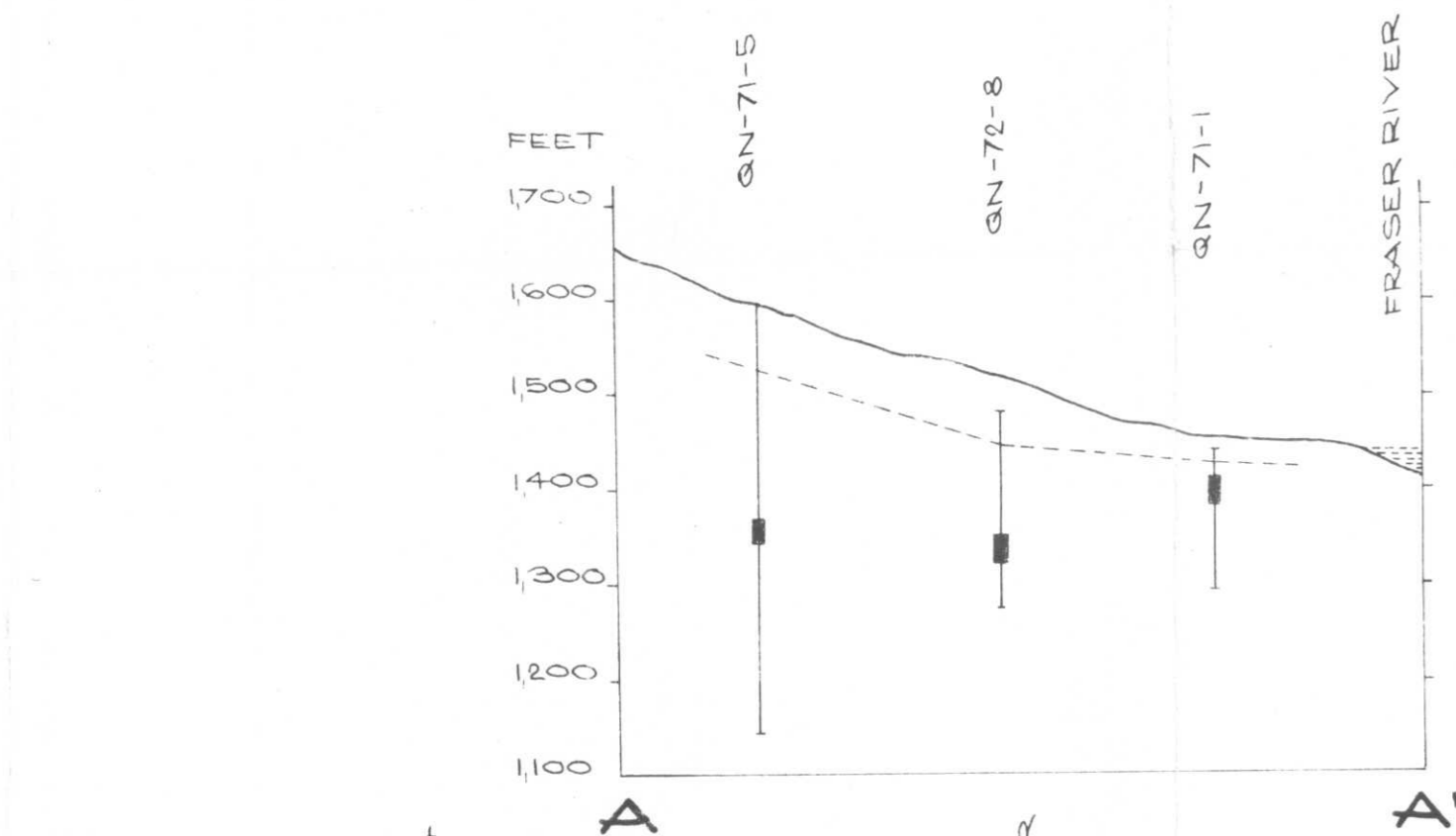


- LEGEND**
- DRILL HOLE LOCATION (CARIBOO COAL & CLAY CO LTD 1929)
  - DRILL HOLE LOCATION (MAG. EXP. EXPLORATIONS LTD 1971-72)
  - STRIKE & DIP OF COAL OUTCROP
  - STRIKE & DIP OF ROCK OUTCROP
  - POSSIBLE FAULT LINE
  - CROSS-SECTION LINE
  - LOCATION OF OLD ADIT (1913-1945)
  - TRAIL
  - BOUNDARY OF INTEL COALLENCE AREA

**MASTER EXPLORATIONS LTD.**  
 QUESNEL B.C.  
 LOCATION OF DRILL HOLES  
 GEOLOGICAL STRUCTURES  
 POSITIONS OF THE CROSS-SECTION LINES  
 COMPILLED BY T.M. YOUNG

Dwn by I. B.	Scale 1" = 1000'	Job No.
Chkd by	Date MARCH 72	Dwg No. FIGURE 3

35



SCALE: HORIZONTAL - 1" = 500'  
 VERTICAL - 1" = 200'

NOTE: COAL THICKNESSES NOT TO SCALE

<b>Legend:</b> - - - - ASSUMED STRATIGRAPHIC BOUNDARY BETWEEN QUATERNARY & TERTIARY BEDS ■ COAL HORIZON		
<b>MASTER EXPLORATIONS LTD.</b> CB-QUESNEL 71 (2) A, <b>QUESNEL-X-SECTIONS</b> A-A', B-B', C-C', D-D'		
Dwn by: I B	Scale: HOR. 1" = 500' VERT. 1" = 200'	Job No.:
Chk'd by:	Date: MARCH 1972	Dwg No. FIGURE 5

35

66 QUESNEL 71(1)A

OTHER REG. B.C.

EXPLORATION RESTRICTION  
**OPEN FILE**  
QUESNEL COAL PROPERTIES

(copy 2)

MASTER EXPLORATIONS LTD.

April 1972

035

OPEN FILE

in an area of approximately 29,000 acres in the vicinity of *Australian and Alexandria*, and in addition controls certain marl, fireclay, and diatomaceous-earth rights within this area. The accompanying map shows the area mentioned. This company supplied the Department with very full information as to the reports of various geologists and mining engineers on its property. It is desired to express appreciation of this commendable attitude.

Operations were in charge of A. J. Arland, and comprised diamond-drilling, surface prospecting, and a tunnel started in the large seam of coal which outcrops on the east side of the Fraser river close to the Alexandria ferry.

The location of the diamond-drill holes is shown on the accompanying plan. The information given out by the company concerning the results of diamond-drilling is that hole No. 1 during the first 320 feet cut four seams of coal varying in width from 4 to 14 feet, and that hole No. 2 at a depth of 5 feet cut a seam of coal 15 feet in width, and at a depth of 484 feet penetrated a seam 72 feet thick.

In the Annual Report for 1923, on pages 125, 126, and 127, will be found an account of coal-showings in this area. The coal-showings were again inspected in May and a short supplemental account follows, but it is unnecessary to repeat herein details given in the report mentioned.

Coal-seams west of the Fraser river dip westerly and those on the east side of the river easterly and north-westerly, and an anticlinal structure is suggested, the Fraser river following the crest of the anticline.

The seam west of the Fraser river on Doyle's ranch has been further exposed by surface pits on the banks of the river and is evidently of considerable width. It strikes about true north and south, with a slight westerly dip.

The seam exposed close to the Alexandria ferry on the east side of the Fraser river is about 14 feet in width, strikes N. 40° E. (mag.), and dips south-easterly. It is the most conveniently situated immediately available seam. A feature of all seams in this area is the high resin content.

Samples were taken of what appeared to be the best coal showing in the Australian Creek seam, in the large seam on Doyle's ranch west of the Fraser river, and in the seam by the Alexandria ferry, with the following results:—

Australian Creek seam: Moisture, 19.2 per cent.; volatile combustible matter, 29.3 per cent.; fixed carbon, 39.2 per cent.; ash, 12.3 per cent.

Large seam on Doyle's ranch: Moisture, 21 per cent.; volatile combustible matter, 25.5 per cent.; fixed carbon, 31.8 per cent.; ash, 21.7 per cent.

Seam by Alexandria ferry: Moisture, 16.6 per cent.; volatile combustible matter, 27 per cent.; fixed carbon, 50.9 per cent.; ash, 5.5 per cent. The split volatile ratio of these samples ranges from 1.3 to 2.1, and in accordance with Dowling's classification the coal would be classed as lignite.

DRILL HOLE LOGS

Exhibit "B"  
**OPEN FILE**  
Drill Hole No. QN-71-1

COMPANY: Master Explorations Ltd.

AREA: Quesnel, B.C.

DRILLER: W. Woods

LOCATION: S, W, NE Cor. Sec. , Twp. , R. , W M

ELEVATION: 1490'

DATE: 10-Dec-71

FROM	TO	DESCRIPTION
0	4'	Sand
4	14'	Gravel
14	26'	Shale
26	48.2'	Coal (sampled)
48.2	49.5'	Shale
49.5	59.5'	Coal (sampled)
59.5	74.3'	Clay
74.3	74.8'	Coal
74.8	76'	Clay
76	76.3'	Coal
76.3	80'	Clay
80	81'	Coal
81	81.5'	Shale (brown)
81.5	82.2'	Coal
82.2	83'	Shale (brown)
83	83.3'	Coal
83.3	85.3'	Brown shale
85.3	86'	Coal
86	87.4'	Brown shale
87.4	87.9'	Coal
87.9	91'	Brown shale
91	93.5'	Coal
93.5	94'	Brown shale
94	98.7'	Coal (sampled)
98.7	99'	Brown shale
99	145'	Light grey clay
		Total Depth = 145'

**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

**00 035**

DRILL HOLE LOGS

Drill Hole No. QN-71-2

COMPANY: Master Explorations Ltd.

AREA: Quesnel, B.C.

DRILLER: W. Woods

LOCATION: S, W, NE Cor. Sec. , Twp. , R. , W M

ELEVATION: 1480'

DATE: 14-Dec-71

FROM	TO	DESCRIPTION
0	4'	Sandy clay
4	12'	Gravel
12	17'	Clay
17	22'	Shattered sandstone
22	27.5'	Sand
27.5	33.2'	Shale
33.2	36.5'	Coal
36.5	37.2'	Brown shale
37.2	41'	Coal (sampled)
41	41.3'	Brown shale
41.3	47.5'	Coal (sampled)
47.5	49'	Brown shale
49	52.3'	Coal
52.3	52.8'	Brown shale
52.8	53.1'	Coal
53.1	55'	Brown shale
55	61.2'	Coal (sampled)
61.2	61.8'	Light grey clay
61.8	63'	Coal
63	64.5'	Brown shale
64.5	65.3'	Coal (sampled)
65.3	65.8'	Brown shale
65.8	67.5'	Coal (sampled)
67.5	68.5'	Brown clay
68.5	70.1'	Coal
70.1	70.4'	Brown shale
70.4	71.6'	Coal
71.6	72'	Brown clay
72	72.8'	Coal



DRILL HOLE LOGS

Drill Hole No. QN-71-2

COMPANY: Master Explorations Ltd.

AREA: Quesnel, B.C.

DRILLER: W. Woods

LOCATION: S, W, NE Cor. Sec. , Twp. , R. , W M

ELEVATION: 1480'

DATE: 14-Dec-71

FROM	TO	DESCRIPTION
72.8	73'	Brown clay
73	76.2'	Coal
76.2	76.5'	Brown clay
76.5	77.5'	Coal
77.5	79'	Brown clay
79	142'	Light grey clay
142	147'	Brown clay
147	171.5'	Light grey clay
171.5	172.3'	Brown shale
172.3	173.8'	Coal
173.8	174.2'	Brown shale
174.2	175.6'	Coal
175.6	176'	Brown shale
176	176.8'	Coal
176.8	180.2'	Brown shale
180.2	181'	Coal
181	183.2'	Light Grey Clay
183.2	185'	Coal
185	185.6'	Brown shale
185.6	187'	Coal
187	188.5'	Light Grey Clay
188.5	188.9'	Brown shale
188.9	190.2'	Coal
190.2	192.8'	Brown shale
192.8	193.4'	Coal
193.4	195'	Brown shale
195	225'	Light Grey Clay
		Total Depth = 225'

DRILL HOLE LOGS

Drill Hole No. QN-71-3

COMPANY: Master Explorations Ltd.

AREA: Quesnel, B.C.

DRILLER: W. Woods

LOCATION: S, W, NE Cor. Sec. , Twp. , R. , W M

ELEVATION: 1580'

DATE: 16-Dec-71

FROM	TO	DESCRIPTION
0	11'	Clay (sandy)
11	11.5'	Hard black sandstone (boulder)
11.5	32'	Sandy clay & rocks
32	36'	Brown clay
36	113'	Soft grey clay
113	116'	Brown shale
116	124'	Soft grey clay
124	129.5'	Brown shale
129.5	133'	Grey clay
133	179'	Brown shale
179	214'	Grey clay
214	237.5'	Brown shale
237.5	241.2'	Coal (sampled)
241.2	241.6'	Brown shale
241.6	249'	Coal (sampled)
249	251'	Brown shale
251	271'	Light grey clay
271	274'	Grey sandstone
274	295'	Light grey clay
		Total Depth = 295'

DRILL HOLE LOGS

Drill Hole No. QN-71-4

COMPANY: Master Explorations Ltd.

AREA: Quesnel, B.C.

DRILLER: W. Woods

LOCATION: S, W, NE Cor. Sec. , Twp. , R. , W M

ELEVATION: 1570'

DATE: 18-Dec-71

FROM	TO	DESCRIPTION
0	7'	Sand.
7	17'	Gravel
17	34'	Grey clay
34	56'	Brown shale
56	60.3'	Coal (sampled)
60.3	60.5'	Brown shale
60.5	61.7'	Coal (sampled)
61.7	62'	Brown shale
62	62.9'	Coal (sampled)
62.9	63.5'	Brown shale
63.5	67'	Coal (sampled)
67	68.5'	Brown shale
68.5	69'	Coal
69	70.1'	Brown shale
70.1	70.4'	Coal
70.4	78.8'	Brown shale
78.8	82.5'	Coal & carb. shale (sampled) 50% each
82.5	83.7'	Grey clay
83.7	86.5'	Coal & carb. shale (sampled) 50% each
86.5	88'	Brown shale
88	94'	Coal (sampled)
94	95.9'	Soft grey clay
95.9	96.5'	Brown shale
96.5	122'	Soft grey clay
122	127'	Sandstone
127	149'	Soft grey clay
149	158'	Brown shale
158	237'	Soft grey clay

DRILL HOLE LOGS

Drill Hole No. QN-71-4

COMPANY: Master Explorations Ltd.

AREA: Quesnel, B.C.

DRILLER: W. Woods

LOCATION: S, W, NE Cor. Sec. , Twp. , R. , W M

ELEVATION: 1570'

DATE: 18-Dec-71

FROM	TO	DESCRIPTION
237	242.2'	Brown shale & carb. shale
242.2	242.9'	Coal
242.9	244.1'	Brown shale
244.1	244.8'	Coal
244.8	246.6'	Brown shale & carb. shale
246.6	247.5'	Coal
247.5	250.2'	Brown shale
250.2	250.5'	Coal
250.5	253'	Brown shale
253	253.5'	Coal
253.5	257.8'	Brown shale
257.8	258.2'	Coal
258.2	259'	Brown shale
259	260'	Light grey clay
260	263'	Brown shale
263	275'	Light grey clay
		Total Depth = 275'

DRILL HOLE LOGS

Drill Hole No. QN-71-5

COMPANY: Master Explorations Ltd.

AREA: Quesnel, B.C.

DRILLER: W. Woods

LOCATION: S, W, NE Cor. Sec. , Twp. , R. , W M

ELEVATION: 1590'

DATE: 21-Dec-71

FROM	TO	DESCRIPTION
0	31'	Sandy clay
31	49'	Blue clay
49	57'	Sandy clay
57	66.5'	Clay & rocks
66.5	71'	Brown & red shale & carb. shale
71	77'	Brown shale
77	114'	Soft grey clay
114	123'	Brown shale
123	131'	Soft grey clay
131	139'	Brown shale
139	143'	Soft grey clay
143	161'	Brown shale
161	194'	Soft grey clay
194	236.7'	Brown shale
236.7	238'	Coal
238	241.2'	Brown shale
241.2	245.6'	Coal (sampled)
245.6	248'	Brown shale
248	256.5'	Coal (sampled)
256.5	259.8'	Brown shale
259.8	261.5'	Coal
261.5	265'	Brown shale
265	301'	Light grey clay
301	306.7'	Brown shale & carb. shale
306.7	311.5'	Brown shale
311.5	312.7'	Coal
312.7	314'	Brown shale
314	314.7'	Coal

DRILL HOLE LOGS

Drill Hole No. QN-71-5

COMPANY: Master Explorations Ltd.

AREA: Quesnel, B.C.

DRILLER: W. Woods

LOCATION: S, W, NE Cor. Sec. , Twp. , R. , W M

ELEVATION: 1590'

DATE: 21-Dec-71

FROM	TO	DESCRIPTION
314.7	319'	Brown shale
319	389'	Light grey clay
389	394.6'	Carb. shale & brown shale
394.6	397.1'	Coal
397.1	397.5'	Brown & red shale
397.5	455'	Light grey shale
		Total Depth = 455'

DRILL HOLE LOGS

Drill Hole No. QN-72-6

COMPANY: Master Explorations Ltd.

AREA: Quesnel, B.C.

DRILLER: W. Woods

LOCATION: S, W, NE Cor. Sec. , Twp. , R. , W M

ELEVATION: 1660'

DATE: 7-Jan-72

FROM	TO	DESCRIPTION
0	13.5'	Sand & gravel
13.5	28'	Sandy clay
28	33'	Blue clay
33	44'	Clay & rocks
44	46'	Carb. shale & red shale (lost circ)
46	48'	Clay & rocks
48	78'	Sand & gravel
78	86'	Sandy clay
86	115'	Soft grey clay
115	121'	Blue clay
121	148'	Soft grey clay
148	153'	Blue clay
153	172'	Soft grey clay
172	207'	Clay & rocks
207	225'	Gravel (possibly cemented)
		 Total Depth = 225'

DRILL HOLE LOGS

Drill Hole No. QN-72-7

COMPANY: Master Explorations Ltd.

AREA: Quesnel, B.C.

DRILLER: W. Woods

LOCATION: S, W, NE Cor. Sec. , Twp. , R. , W M

ELEVATION: 1540'

DATE: 9-Jan-72

FROM	TO	DESCRIPTION
0	22'	Sand
22	33'	Gravel
33	41'	Brown shale
41	48'	Soft grey clay
48	77'	Brown shale
77	101'	Soft grey clay
101	130.2'	Brown shale
130.2	131'	Black shale
131	132.5'	Coal
132.5	134'	Brown shale
134	135.6'	Coal
135.6	137'	Brown shale
137	138.5'	Coal
138.5	139'	Brown shale
139	139.7'	Coal
139.7	140.5'	Brown shale
140.5	141.6'	Coal
141.6	144'	Brown shale
144	147.2'	Coal
147.2	148'	Brown shale
148	152.5'	Coal
152.5	153.5'	Light grey clay
153.5	161.2'	Coal
161.2	162.5'	Brown shale
162.5	171'	Coal
171	255'	Light grey clay
		Total Depth = 255'



DRILL HOLE LOGS

Drill Hole No. QN-72-8

COMPANY: Master Explorations Ltd.

AREA: Quesnel, B.C.

DRILLER: W. Woods

LOCATION: S. W, NE Cor. Sec. , Twp. , R. , W M

ELEVATION: 1480'

DATE: 11-Jan-72

FROM	TO	DESCRIPTION
0	8.5'	Sand
8.5	26'	Gravel
26	36.5'	Grey clay
36.5	72'	Brown shale
72	119'	Light grey clay
119	128'	Brown shale
128	131'	Light grey clay
131	136.7'	Brown shale
136.7	140.6'	Coal & carb. shale
140.6	142'	Brown shale
142	146'	Coal & carb. shale
146	156.2'	Coal
156.2	158'	Brown shale
158	158.9'	Coal
158.9	161.5'	Brown shale
161.5	205'	Light grey clay
		Total Depth = 205'

DRILL HOLE LOGS

Drill Hole No. QN-72-9

COMPANY: Master Explorations Ltd.

AREA: Quesnel, B.C.

DRILLER: W. Woods

LOCATION: S, W, NE Cor. Sec. , Twp. , R. , W M

ELEVATION: 1550'

DATE: 14-Jan-72

FROM	TO	DESCRIPTION
0	6'	Sand
6	17'	Gravel
17	31'	Grey clay
31	31.8'	Coal
31.8	33.2'	Brown shale
33.2	34.5'	Coal
34.5	37'	Brown shale
37	41'	Light grey clay
41	42'	Brown shale
42	70.5'	Light grey clay
70.5	255'	Brown shale
		Total Depth = 255'

DRILL HOLE LOGS

Drill Hole No. QN-72-10

COMPANY: Master Explorations Ltd.

AREA: Quesnel, B.C.

DRILLER: \_\_\_\_\_

LOCATION: S, W, NE Cor. Sec. , Twp. , R. , W M

ELEVATION: 1570'

DATE: 15-Jan-72

FROM	TO	DESCRIPTION
0	12.5'	Sand
12.5	18'	Gravel
18	130'	Sand
130	156'	Sandy clay
156	167'	Sand
167	196'	Sandy clay
196	215'	Gravel
Total Depth = 215'		

DRILL HOLE LOGS

Drill Hole No. QN-72-11

COMPANY: Master Explorations Ltd.

AREA: Quesnel, B.C.

DRILLER: \_\_\_\_\_

LOCATION: S, W, NE Cor. Sec. , Twp. , R. , W M

ELEVATION: 1450'

DATE: 20-Jan-72

FROM	TO	DESCRIPTION
0	11'	Sand
11	21.5'	Gravel
21.5	87'	Grey clay & rocks
87	102'	Gravel
102	108'	Clay & rocks
108	119'	Gravel
119	138'	Clay & rocks
138	153'	Sand
153	189'	Sandy clay
189	245'	Gravel & sandy clay
		Total Depth = 245'

DRILL HOLE LOGS

Drill Hole No. QN-72-12

COMPANY: Master Explorations Ltd.

AREA: Quesnel, B.C.

DRILLER: W. Woods

LOCATION: S, W, NE Cor. Sec. , Twp. , R. , W M

ELEVATION: 1640'

DATE: 22-Jan-72

FROM	TO	DESCRIPTION
0	5'	Sand
5	38'	Gravel
38	123'	Sand
123	130'	Grey clay
130	142'	Clay & rocks
142	169'	Sand & gravel
169	203'	Cemented gravel
203	255'	Sandy clay & rocks
		Total Depth = 255'