

FORDING RIVER 29 (10) A  
FORDING COAL LIMITED

FORDING RIVER OPERATIONS

SUMMARY REPORT

1979 WORK ON CROWN GRANT LOTS 6825E $\frac{1}{2}$  & 6824W $\frac{1}{2}$

323

(1)



P.O. Box 100, Elkford, British Columbia V0B 1H0 / (604) 865-2271 / Telex 041-45162

MINISTRY OF MINES AND  
PETROLEUM RESOURCES

APR 8 1980

MINERAL TITLES FILE ROOM

Ministry of Mines and Petroleum Resource  
Parliament Buildings  
Victoria, B.C.  
V8V 1X4

March 31, 1980

Attention: Mr. A.R. Corner  
Administrator for Coal

6032

Dear Sir:

Re: Cominco Crown Grant Lots 6825 E $\frac{1}{2}$  & 6824 W $\frac{1}{2}$

Please find enclosed two copies of the report entitled "Summary Report-  
1979 Work Done on Crown Grant Lots 6825 E $\frac{1}{2}$  and 6824 W $\frac{1}{2}$ ".

I trust that this submission will satisfy the requirements of Section  
12 (1) of the Coal Act and Section 5 of the Coal Act Regulations.

Yours truly,

K.A. Komenac  
Exploration Geologist.

KK:ja

Encl. (2)

Alex, For your files  
Paul

REFERRED TO	DATE	INITIALS
C.G.C.		
D.C.C.		
G.C.		
F.M.C.		
M.T.D.R.		
P.L.C.R.		
COAL		✓
FILE NO.		
FILING CLERK		

K-FORDING RIVER 79 (10)A

**CONFIDENTIAL**  
**FILE**

FORDING COAL LIMITED  
FORDING RIVER OPERATIONS

SUMMARY REPORT

1979 WORK ON CROWN GRANT LOTS 6825E $\frac{1}{2}$  AND 6824W $\frac{1}{2}$

MINING DISTRICT: Fort Steele

LAND DISTRICT: Kootenay

NTS LOCATION: 82J7W  
Latitude 50° 10'  
Longitude 114° 52'

OWNER: Cominco Limited  
200 Granville Square  
Vancouver, B.C.

OPERATOR: Fording River Operations  
Fording Coal Limited  
Box 100  
Elkford, B.C.

AUTHOR: K.A. Komenac  
Exploration Geologist  
Fording River Operations

DATE WORK DONE: August to November, 1980

DATE SUBMITTED: March 31, 1980

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	3) Coal Analyses	
	a) Proximate Analyses; Sulphur, F.S.I. and Calorific Value Determinations	
	* b) Petrographic Analyses	
	FOR PETROGRAPHIC ANALYSIS, REFER TO CONFIDENTIAL COAL ANALYSIS DATA FILE.	

LIST OF ILLUSTRATIONS

<u>ILLUSTRATION NUMBER</u>	<u>DESCRIPTION</u>
1	Index Map - General Geology & Coal Properties Scale: 1:50,000
2	Geological Mapping & Exploration Drilling Aldridge Creek Area Scale: 1:10,000

## FORDING RIVER OPERATIONS

### SUMMARY REPORT

#### 1979 WORK ON CROWN GRANT LOTS 6825E $\frac{1}{2}$ and 6824W $\frac{1}{2}$

#### I INTRODUCTION

##### a) Geography and History

The Crown Grant lots 6825E $\frac{1}{2}$  and 6824W $\frac{1}{2}$  are located on the Eastern bank of the Upper Elk River Valley, near the confluence of Aldridge Creek and the Elk River. The area covered by the aforementioned Lots includes most of the western flank of Mount Viets.

Access to the area is north by gravel road from Elkford via the Kan-Elk powerline road on the east side of the Elk River, or the B.C. Forestry Service road on the west side. The distance from Elkford is approximately 35 kilometers on a direct line.

Crown Granted Lots (fee-simple lands) 6824W $\frac{1}{2}$  and 6825E $\frac{1}{2}$  are owned by Cominco Limited. These fee simple lands are subject to an agreement, between Cominco Limited and Fording Coal Limited, respecting the exploration and development thereof and the mining and sale of the coal therefrom. Under this agreement, Fording has the right, subject to applicable government acts and regulation, to explore for, develop, and extract coal from these fee simple lands, and has the responsibility of maintaining the land in good standing.

Previous work done by Fording Coal Limited in this area, was primarily concerned with attempting to extinguish a fire, which had been ignited by a forest fire in 1936. The fire started in an old prospect opening (pre-1909) on the south side of Aldridge Creek. In 1975 and 1976 a project was conducted which involved the removal of the coal seam at surface, in advance of the fire. It was hoped that water, collected in the bottom of the ditch would be sufficient to halt the fire's advance. This project was unsuccessful. In 1977, measures were taken to prevent the burning seam from igniting the coal stockpiled in 1975, and the forested area towards which the fire was advancing.

#### Reference:

- i) Illustration No. 1 - Index Map - General Geology and Coal Properties.

b) Summary of Work Done in 1979

Two centre-return rotary holes were drilled; RH #914 to a depth of 114.5m and RH #915 to a depth of 85.5m. The holes were drilled with a Drill Systems CSR-750 Rotary Drill using 3½" (88.9mm) reverse circulation drill pipe and a 3 7/8" (98.4mm) tricone bit. The drill is owned and operated by Fording Coal Limited. Both holes were geophysically logged using the gamma-ray - neutron method. (Appendix 2 - Drillhole logs: - Gamma-ray - neutron.)

In addition to drilling, a minor program of geological field mapping was conducted. The areas mapped included the Aldridge Creek bottom area, the "burning seam" area on the south bank of Aldridge Creek, and the lower regions on the west flank of Mount Viets.

The field mapping covered portions of Crown Grant Lots 6825E½ and 6824W½. Both rotary drill holes (RH #914 & #915) are located on Crown Grant Lot 6825E½.

Reference:

Illustration No. 2 - Geological Mapping and Exploration Drilling -  
Aldridge Creek Area

c) Statement of Author's Academic and Professional Qualifications

The author of this report, K.A. Komenac, received in 1973, the degree of Bachelor of Science (Geology Major) from the University of British Columbia, and is registered as an Engineer-in-Training with the Association of Professional Engineers of the Province of British Columbia. The author has been an employee of Fording Coal Limited at the Fording River Operation since November of 1973, as Assistant Pit Geologist, Acting Pit Geologist, and, since, 1978 as Exploration Geologist.

II OBJECTIVES

The main objectives of the 1979 geological mapping and drilling program in the Aldridge Creek - Mount Viets area were as follows:

- a) To acquire a general knowledge of the rock types, bedding attitudes, and coal seam outcrop locations in the area to aid in developing future exploration proposals, and
- b) To obtain unoxidized samples of coal from the down-dip extension of the "burning" seam and adjacent minor seams, for analysis.

To a large extent, the program objectives were attained.

### III RESULTS AND CONCLUSIONS

#### a) Rotary Drilling Program

Rotary hole #914, collared stratigraphically below the "burning seam", intersected several minor coal seams (less than 0.7m thick) down to a depth of 113m. At this depth, the hanging wall of what appears to be a more significant seam was penetrated. However, unloading problems caused by excessive water volumes, forced abandonment of the hole at 1.5m into the seam.

Rotary hole #915, collared stratigraphically above the "burning seam" intersected 3m of coal at 1.4m, and 3.5m of coal at 37.3m. The latter seam is most likely the down dip extension of the "burning seam".

Petrographic and Proximate analyses of the coal seams intersected by RH #914 and #915 show these seams to be medium volatile bituminous in rank; and are therefore contained in the upper third of the Lower Kootenay Formation.

#### References:

- i) Appendix 1 - Drillhole logs - Lithological
- ii) Appendix 2 - Drillhole Logs - Gamma-ray-neutron
- iii) Appendix 3 - Coal Analyses

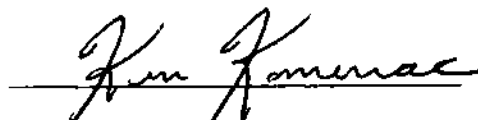
#### b) Geological Field Mapping Program

The mapping completed in 1979 located several coal seam subcrops on the lower west flank of Mount Viets and on the southern bank of Aldridge Creek. In addition, bedding attitudes were measured in several locations. This information will be useful for developing future exploration programs in the area.

#### Reference:

Illustration No. 2 - Geological Mapping and Exploration Drilling -  
Aldridge Creek Area

Prepared by:

  
K.A. Komenac  
Exploration Geologist



IV APPENDICES

- 1) Drillhole logs - Lithological
- 2) Drillhole logs - Gamma-ray-Neutron
- 3) Coal Analyses
  - a) Proximate Analyses; Sulphur, FSI and Calorific Value Determinations
  - b) Petrographic Analyses

APPENDIX 1

DRILLHOLE LOGS - LITHOLOGICAL

# Rotary Drill Geological Log

RH-914



FORDING RIVER OPERATIONS

Objective: \_\_\_\_\_

Logged By: RK      Date: Dec. 79

Block: \_\_\_\_\_      Sect: \_\_\_\_\_      Place: Aldridge Crk. Area      App. Bear: \_\_\_\_\_      App. Dip.: \_\_\_\_\_      Length: \_\_\_\_\_

LATITUDE: 164 76.5      DEPARTURE: 22 196.4      ELEVATION: 1609.5

Ore Classes & An: \_\_\_\_\_      0.0

From Ft.	To Ft.	From m.	To m.	INTERSECTIONS TAKEN FROM GAMMA RAY-NEUTRON LOG <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	TOP OF SEAM	ELEVATION	TTL. TH.	NET TH.
0	8	0	2.4	Overburden (Casing 16' 4.9m)				
		2.4	9	Mudstone				
		9	22	Sandstone				
		22	29.2	Sandy siltstone and sandstone				
		29.2	38	Sandstone				
		38	42.5	Sandy siltstone near top and mudstone				
139.5	141	42.5	43	Coal 0.5m 1.5'				
		43	44	Mudstone				
144.5	145.5	44	44.3	Coal 0.3m 1'				
		44.3	48	Silty sandstone near top and siltstone				
157.5	159.5	48	48.6	Coal 0.6m 2'				
		48.6	55.5	Mudstone near top and siltstone				
		55.5	66	Mostly sandstone with siltstone interbeds				
		66	74	Sandstone				
		74	83.3	Mudstone, siltstone near bottom				
273.5	275.5	83.3	84	Coal 0.7m 2'				
		84	87.5	Siltstone				
		87.5	105	Sandstone				
		105	113	Mudstone and bands of siltstone				
370.5	375	113	114.5	Coal 1.5m + 5'		1496.5	1.5'	

End of hole In coal as drill was unable to unload water.      Nov. 6/79      CSR 750 HOLE      Hole No. RH-914      Page 1 of 1

# Rotary-Drill Geological Log

RH-915



FORDING RIVER OPERATIONS

Objective: \_\_\_\_\_

Logged By: RK

Date: Dec. 79

LATITUDE

DEPARTURE

ELEVATION

164 490.3

22 128.9

1579.8

Back:

Sect:

Place:

Aldridge Crk. Area

App. Bear:

App. Dip:

Length:

0.0

From Ft.	To Ft.	From m.	To m.	INTERSECTIONS TAKEN FROM GAMMA RAY - NEUTRON LOG	TOP OF SEAM	ELEVATION	TTL. TH.	NET TH.
		0	1.4					
4.5	14.5	1.4	4.4	Coal 3m 10'	SEAM -			
		4.4	10.4	Mudstone		1578.4	3	
34	36	10.4	11	Coal 0.6m 2'				
		11	13.5	Mudstone and siltstone				
		13.5	19	Sandstone				
		19	23.2	Silty mudstone				
76	77.5	23.2	23.6	Coal 0.4m 1.5'				
		23.6	37.3	Siltstone, bands of mudstone, sandstone 27.5m - 31m				
122.5	137	37.3	41.8	Coal 3.5m 11.5'		1542.5	3.5	
		41.8	50	Mudstone				
		50	64	Sandstone				
		64	76.5	Shaley siltstone near top, siltstone sandy near bottom				
		76.5	85.5	Sandstone, silty band near 79m.				
				End of hole				
				Nov. 7/79				

CSR 750 HOLE

Hole No. RH 915

Page 1 of 1

APPENDIX 2

DRILLHOLE LOGS - GAMMA-RAY-NEUTRON

# ROKE

GAMMA RAY NEUTRON LOG

OIL ENTERPRISES LTD. CALGARY, ALBERTA

FILE NO. \_\_\_\_\_ COMPANY FORDING COAL LIMITED

LSD SEC \_\_\_\_\_ WELL RH-914

TWP \_\_\_\_\_ RGE \_\_\_\_\_ LOCATION ALDRIDGE CREEK

W \_\_\_\_\_ M \_\_\_\_\_ FIELD FORDING

PROVINCE BRITISH COLUMBIA Other Services: NONE

**323**

Permanent Datum GROUND LEVEL Elev. \_\_\_\_\_ K.B. \_\_\_\_\_

Log Measured from GROUND LEVEL Above Perm. Datum \_\_\_\_\_ CSG \_\_\_\_\_

Well Depths Measured from GROUND LEVEL G.L. \_\_\_\_\_ METRIC \_\_\_\_\_

Run. No.	ONE
Date	8 NOV 79
First Reading	114
Last Reading	00
METERS Logged	114
Depth Reached	114.5
Depth Driller	114.5
Casing Roke	4
Casing Driller	4
Fluid Type	AIR/WATER
Liquid Level	14.5
Min. Diam.	9.65 CM
Rm @	
Operating Time	1/2 HR
Truck No.	37

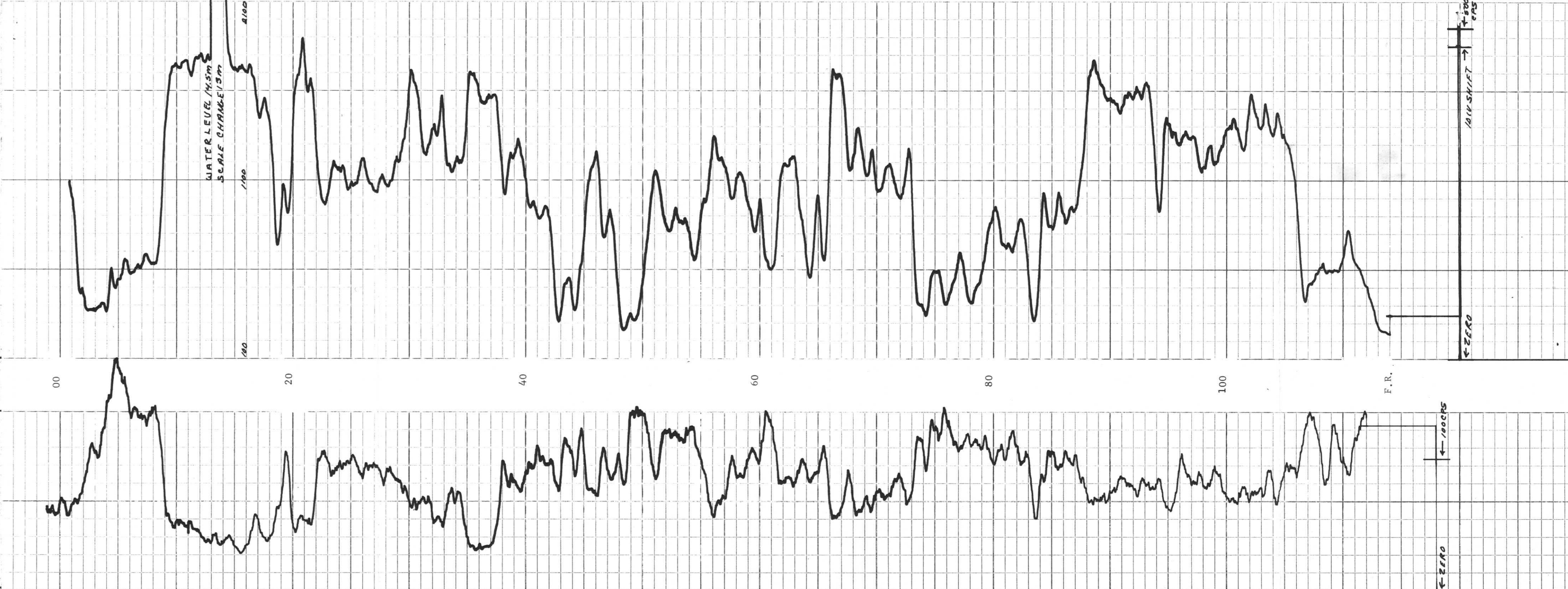
Recorded By JOHNSON Witnessed By KOMENAC

EQUIPMENT DATA	
NEUTRON	NEUTRON
NEUTRON/NEUTRON	3.175 CM
PROPORTIONAL	15.24 CM
MRC-N.S.S.W	265
AmBe	43.18 CM
3 CURIES	

LOGGING DATA	
GENERAL	GAMMA RAY
GENERAL	NEUTRON
API G. R. UNITS PER LOG DIV.	16 API
T. C. SEC.	3
SENS. SETTINGS DIV. L OR R	0L
API N. UNITS PER LOG DIV.	16 API
T. C. SEC.	3
SENS. SETTINGS DIV. L OR R	0L

GAMMA RAY	
ONE	ONE
TOOL MODEL NO.	3.175 CM
DIAMETER	SCINTILLATION
DETECTOR MODEL NO.	10.16 CM
TYPE	2 M
LENGTH	GENERAL
DISTANCE TO N. SOURCE	37
HOIST TRUCK NO.	37
INSTRUMENT TRUCK NO.	R-GRN 125A002
TOOL SERIAL NO.	





# ROKE

GAMMA RAY NEUTRON LOG

OIL ENTERPRISES LTD. CALGARY, ALBERTA

FILE NO. \_\_\_\_\_ COMPANY FORDING COAL LIMITED

LSD \_\_\_\_\_ SEC \_\_\_\_\_ TWP \_\_\_\_\_ RGE \_\_\_\_\_ W \_\_\_\_\_ M \_\_\_\_\_

WELL RH-915 LOCATION ALDRIDGE CREEK FIELD FORDING

PROVINCE BRITISH COLUMBIA Other Services: \_\_\_\_\_

Permanent Datum GROUND LEVEL Elev. \_\_\_\_\_ K.B. \_\_\_\_\_  
 Log Measured from GROUND LEVEL Above Perm. Datum \_\_\_\_\_ CSG \_\_\_\_\_  
 Well Depths Measured from GROUND LEVEL G.L. \_\_\_\_\_ METRIC

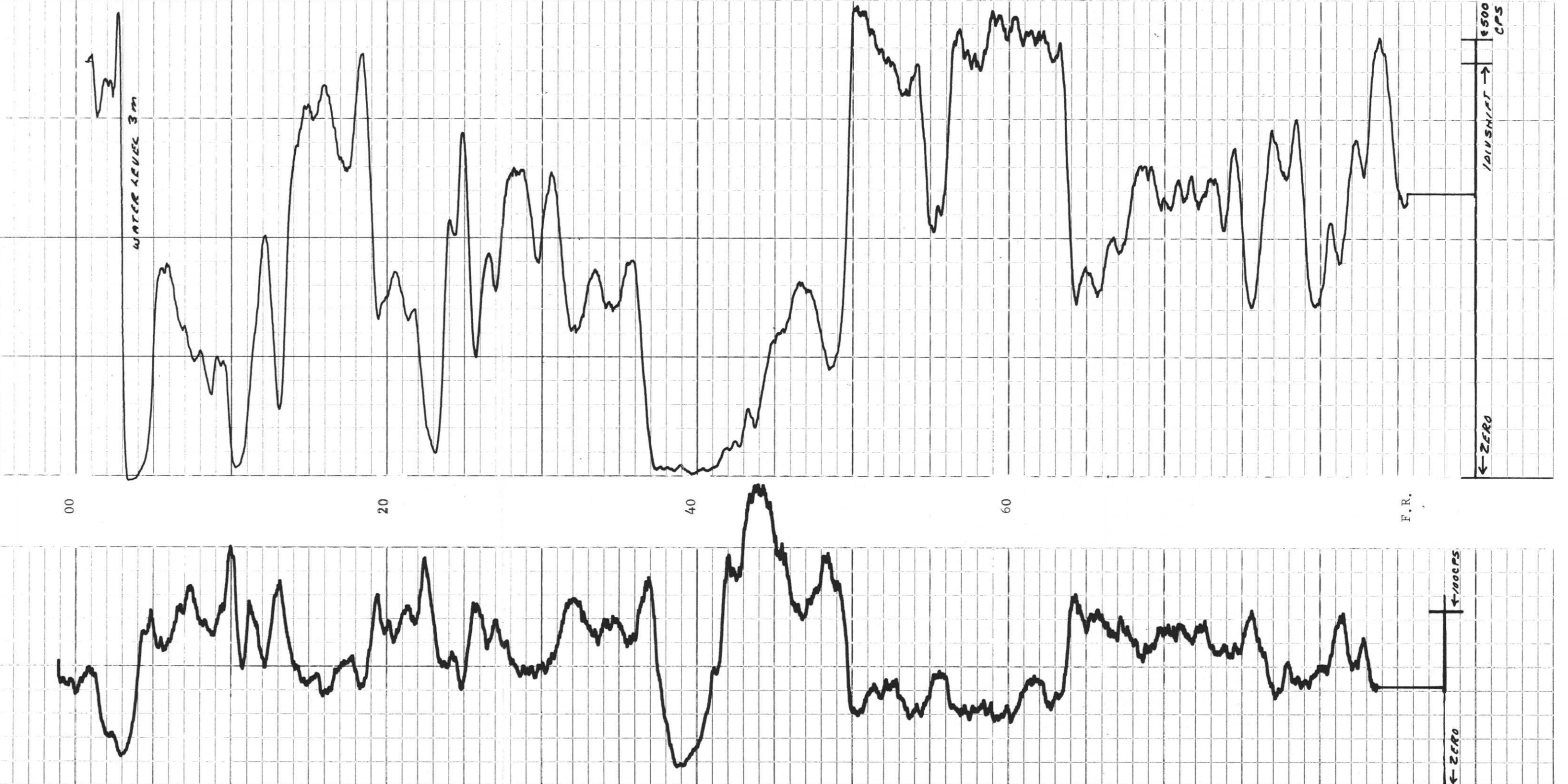
**323**

Run. No.	ONE
Date	8 NOV 79
First Reading	85.5 M
Last Reading	00
METERS Logged	85.5
Depth Reached	86
Depth Driller	86
Casing Roke	5
Casing Driller	5
Fluid Type	AIR/WATER
Liquid Level	3
Min. Diam.	9.65 CM
Rm @	
Operating Time	1/2 HR
Truck No.	37
Recorded By	JOHNSON
Witnessed By	KOMENAC

EQUIPMENT DATA	
GAMMA RAY	NEUTRON
RUN NO. _____	RUN NO. _____
TOOL MODEL NO. _____	TOOL MODEL NO. _____
DIAMETER _____	DIAMETER _____
DETECTOR MODEL NO. _____	DETECTOR MODEL NO. _____
LENGTH _____	LENGTH _____
DISTANCE TO N. SOURCE _____	SOURCE MODEL NO. _____
GENERAL	GENERAL
HOIST TRUCK NO. _____	SERIAL NO. _____
INSTRUMENT TRUCK NO. _____	TYPE _____
TOOL SERIAL NO. _____	STRENGTH _____

LOGGING DATA	
GAMMA RAY	NEUTRON
RUN NO. _____	RUN NO. _____
DEPTH FROM _____	DEPTH FROM _____
DEPTH TO _____	DEPTH TO _____
SPEED _____	T.C. _____
TO _____	API G. R. UNITS _____
FROM _____	PER LOG DIV. _____
NO. _____	SEC. _____
1 _____	01. _____
_____	16. API _____
_____	500 _____
_____	1. _____
_____	150. API _____

REMARKS
GAMMA RAY INCREASES ↑
NEUTRON INCREASES ↑



APPENDIX 3

COAL ANALYSES

- a) Proximate Analyses; Sulphur, F.S.I. and  
Calorific Value Determinations
- b) Petrographic Analyses



Sent 30 Oct '71 to 65

ROTARY DRILL SAMPLING RECORD

# 914



FROM	TO	DESCRIPTION	SAMPLE NUMBER	B.T.U. (Actual)	WIDTH	M	A	VM	FC	FSI	S	REMARKS
42.15	43.15		32751		0.25		44.6			4 1/2		
47.75	48.25		753		0.5		26.1			6 1/2		
48.25	48.5		753		0.25		37.2			4 1/2		
113.0	113.5		754		0.5		8.0			7		
113.5	114.0		755		0.5		14.6			6 1/2		
114.0	114.5		32756		0.5		5.1			6		
113.0	114.5		Compo	13,904	1.5	0.8	9.4	27.1	62.7	7	0.60	PETROGRAPHY.

BULL - 1178

Sent 30 oct 1966

ROTARY DRILL SAMPLING RECORD



FROM	TO	DESCRIPTION	SAMPLE NUMBER	B.T.U. (Actual)	WIDTH	M	A	VM	FC	FSI	S	REMARKS
1.5	2.0		32757		0.5		6.5			7 1/2		
2.0	2.5		758		0.5		14.1			7		
2.5	3.0		759		0.5		3.0			7 1/2		
3.0	3.5		760		0.5		11.5			7		
3.5	4.0		761		0.5		10.3			6 1/2		
4.0	4.5	762		0.5		45.8			5 1/2			
1.5	4.5	COMPO.		11,936	3	0.5	15.6	27.5	56.4	6 1/2	0.80	PETROGRAPHY.
10.0	10.5		763		0.5		44.0			3 1/2		
10.5	11.0		764		0.5		14.2			7		
23.5	24.0		765		0.5		24.3			7		
37.5	38		32766		0.5		37.6			1		
38	38.5		767		0.5		18.0			2 1/2		
38.5	39		768		0.5		2.0			7		
39	39.5		769		0.5		3.4			5 1/2		
39.5	40		770		0.5		7.4			7		
40	40.5		771		0.5		6.8			7 1/2		
40.5	41		772		0.5		22.6			6 1/2		
41	41.5		773		0.5		18.6			6		
41.5	42		32774		0.5		61.0			1 1/2		
37.5	41.5	COMPO.		12,939	4	0.7	15.0	26.9	57.4	5 1/2	0.50	PETROGRAPHY.

MIN. 1965

PLAN OF OPERATIONS

FORDING RIVER OPERATIONS

FORDING COAL LIMITED

SUMMARY REPORT OF 1979 WORK

ON COMINCO CROWN GRANT LOTS, ALDRIDGE CREEK

NTS 82J/7W E½ C.G.L. 6825; W½ C.G.L. 6824

SUMMARY

Work done in the Aldridge Creek Area included the drilling of two centre-return rotary drillholes RH 914 (1145m) and RH 915 (855m), plus field mapping along the Aldridge Creek bottom, near the "Burning Seam", and on the west bank of Mount Veits. (See attached 1:10,000 scale map).

RH #914, collared stratigraphically below the "Burning Seam" intersected several very minor seams (less than 0.7m) down to 113m, where the hanging wall of what appears to be a more significant seam, was penetrated. However, unloading problems caused by excessive water pressures caused the hole to be abandoned at 1.5 meters into the seam. RH #915, collared stratigraphically above the "Burning Seam", intersected 3 meters of coal at 1.4m, and 3.5m of what is likely the down-dip extension of the "Burning Seam", at a depth of 37.3 meters.

Submitted by:



Ken Komenac  
Exploration Geologist

KK:lh

PLAN OF OPERATIONS

1

The proposed programme of operations detailed hereunder shall be carried out from January 1, 1980 to December 31, 1980, covering a period of 12 months. Total estimated costs are \$ 200,000, an average of \$ 105.65 per acre.

GEOLOGICAL MAPPING (Specify details) Yes X No Estimated cost: \$ 1,500

	Area (acres)	Scale	Estimated time
Reconnaissance	Not determined yet	1:2000	2 weeks
Detail - Surface			
Detail - Underground			
Other			

GEOPHYSICAL OR GEOCHEMICAL SURVEYS Yes No X Estimated cost: \$

Method: Line Miles:

OTHER SURVEYS: (Specify type and scale) Yes No X Estimated cost: \$

Licences: Topographic: Other:

ROAD CONSTRUCTION Yes X No Estimated cost: \$ 5,000

Length: On Licences 500m Access (off Licences) NIL

SURFACE WORK Yes No X Estimated cost: \$

Length: Licence location:

Seam tracing Crosscutting Other

UNDERGROUND WORK Yes No X Estimated cost: \$

Test adits: Number Average length: Total footage: Other workings: Total footage:

DRILLING Yes No Estimated cost: \$ 150,000

	Hole size	No. of Holes	Total footage:
Core: Diamond Wireline	HQ	5	5,000ft
Rotary: Air Water/mud			
Other:			

LOGGING, SAMPLING & TESTING (check) Yes X No Estimated cost: \$ 25,000

Lithology: Drill samples X Core samples X Bulk samples Mechanical logs: Gamma-Neutron X Density Other: Testing: Proximate analysis X FSI X Washability X Other Petrographic

CONTRACTORS

Name: Service: Estimated Contract amount:

Not yet determined.

REMARKS:

OPERATIONS Work to be supervised by: Position

K.A. Komenac Exploration Geologist

Is this person a registered or licensed Professional Engineer in B.C.? Yes No X



LIST OF ILLUSTRATIONS

ILLUSTRATION NUMBER

DESCRIPTION

1

Index Map - General Geology & Coal  
Properties  
Scale: 1:50,000

2

Geological Mapping & Exploration Drilling  
Aldridge Creek Area  
Scale: 1:10,000









Job No. 06333-6 Date Plotted August 1977	Metric Sheet Index	BLAIRMORE FM.	Burnt Area	1	RK	SEPT '79	INFO. OF GEN. GEOLOGY MAP(AUG '67) BY MRW	Drawn by	RK	AUG '79	GEOLOGICAL MAPPING & EXPLORATION DRILLING	 Metric Scale 1:10000 323 ILLUSTR.-2
McELHANNAY SURVEYING & ENGINEERING LTD.	15	UPPER KOOTENAY FM.	Coal seam	Revisions				Checked by			ALDRIDGE CREEK AREA	
		LOWER KOOTENAY FM.	Mudstone	No	Made by	Date	Description	Proj. Eng.	Approved		GENERAL GEOLOGY	

NOTE - COAL LICENSE LOT LOCNS ARE APPROX. ONLY

Co-ordinates and Elevations on this Map are in Metres

K-70000 R. 79(2)A

(1)