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October 27, 1998

Mineral Titles Ministry of Energy and Mines 4th Floor, 1810 Blanshard Street Victoria, B.C. V8V 1X4

ATTENTION: Mrs. Kim Stones, Coal Administrator

Dear Mrs. Stone:

Please find enclosed one copy of the report entitled "Summary Report - 1997 Exploration Program."

I trust that this submission will fulfil the requirements under the Coal Act and Coal Act Regulations.

Yours truly,

Harkene

K.A. Komenac, P. Eng. Senior Geologist Fording River Operations

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Enclosure

FORDING RIVER OPERATIONS

SUMMARY REPORT

1997 EXPLORATION PROGRAM

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Statement of Author's Academic and Professional Qualifications

The author of this report, K.A. Komenac, in 1973 received the degree of Bachelor of Science (Geology Major) from the University of British Columbia, and is registered as a Professional Engineer with the Association of Professional Engineers and Geoscientists 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, Exploration geologist, Senior Exploration Geologist and, since 1989, Senior Geologist.

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SCHEDULE C

PROVINCE OF BRITISH COLUMBIA	MINISTRY OF ENERGY, MINES A PETROLEUM RESO	AND DURCES	TITLE PAG ASSESSME	e of Int report
GENERAL NATURE OF W	/ORK			TOTAL COST
Exploration				\$1,950,000
Author of Landsman		Signatu	ure (s) <u>Ju</u>	func
K.A. Komenac (P. Eng.)				
Date report filed	ne 22/98	Year of work	199	7
Property Name Fordin	g River Operations			
Coal type (if applicable) _	Medium to High Vola	atile Bituminou	IS	
Mining Division Fort S	iteele	_ Longitude _	114º <u>52'</u>	
Coal Licence Numbers; C	oal Leases; Freehold	BC Coal Lea	se #1, 2 <u>5 an</u> d	d 9. Coal
Licences 328310, 3283	12, 328316, 328317, 3	328320 and C	rown Granted	Lot 16635W½
Owner (s)				
(1) FORDING COAL L	IMITED			
Box 100, Elkford,	B.C. VOB 1H0			
Operator (s)				
(a) Same				, <u>,,,</u> ,,
References to Previous V	Vork			
Annual Assessment F	eports since 1970			

Fording River Operations

Summary Report

1997 Exploration Program

I. Introduction

1. General Geography and History

The Fording River Coal property is located in the Fording River and Upper Elk Valleys, approximately 25 kilometres north of Elkford, B.C. Access is by paved road north from Elkford along the Fording River Valley, or north along the Elk River Valley via the Forestry Service gravel road or the Kan-Elk Powerline road.

The Fording River minesite is situated within the front range of the southern Canadian Rocky Mountains. At least ten major coal seams, generally greater than four metres thick, are contained in the Mist Mountain Formation of the Kootenay Group.

The Elk River portion of the property was actively explored by the Canadian Pacific Railway Company in the period 1902 - 1908. Until 1947, the property was comprised of 10,276 hectares in 40 Crown Granted Lots. In that year, the holdings were reduced to 2,979 hectares in 15 Crown Granted Lots. In 1967 and 1968, Canadian Pacific Oil and Gas reacquired part of the coal lands which had been abandoned in 1947. At the present time, the Fording River Property consists of 20,299 hectares, held on four Coal Leases, 65 Coal Licences and 15 Crown Granted Lots.

Mining operations which commenced in 1971, have produced more than 111.8 million tonnes of clean metallurgical and thermal coal for markets in North and South America, Africa, Europe and Asia. Of this total, 8.1 million tonnes were produced in 1997.

Reference:

i) Illustration No. 1a: Index Map - Coal Properties

2. Geology

i) <u>Stratigraphy</u>

The general stratigraphic succession on the Fording River Property is summarized in the following table:

PERIOD	LITHO-STRATIGRAPHIC UNITS				PRINCIPAL ROCK TYPES			
Recent	1				Colluvium			
Quaternary					Clay, silt, sand, gravel, cobbles			
Lower Cretaceous			E	Blairmore Group	Massive bedded sandstones and conglomerates			
	K			Elk Formation	Sandstone, siltstone, shale, mudstone, chert pebble			
	0				conglomerate, minor coal			
Lower	0		М	ist Mountain Formation	Sandstone, siltstone, shale, mudstone, thick coal seams			
	Т			Moose Mountain Member	Medium to coarse grained quartz-chart sandstone			
Cretaceous	E	м	F					
	N	0	0					
to	A	R	R					
	Y	R	М					
Upper		1	А	Weary Ridge Member	Fine to coarse grained, slightly ferruginous quartz-chart			
	G	s	т		sandstone			
Jurassic	R	s	I.					
	0	E	0					
	υ	Y	N					
	Р							
Jurassic	c Fernie Formation		ernie Formation	Shale, siltstone, fine-grained sandstone				
Triassic	Spray River Formation			ay River Formation	Sandy shale, shale quartzite			
· · · · · · · · · · · · · · · · · · ·	Rocky Mountain Formation Rundle Group							
Mississippian					Limestone			

The oldest rocks present on the Fording River property are the Rundle Group limestones, located on the west bank of the Fording River, near the southern property boundary. They are in faulted contact with the Kootenay Group to the west, and unconformable contact with Rocky Mountain Formation quartzites to the north. The latter are best exposed on the eastern slope of the Brownie Creek Valley.

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The Fernie Formation shales occur throughout the area, generally along the sides of the valleys on the lower flanks of the mountains. The shales are recessive and, therefore, poorly exposed. The Fernie Formation is in conformable contact with the Morrissey, through the "Passage Beds," which are a transitional zone from marine to non-marine sedimentation.

The Morrissey Formation, which is the "basal sandstone" of the Kootenay Group, is a prominent cliff-forming marker horizon in many locations. On the Fording River Property, the top of the Moose Mountain member (Morrissey Formation) is in sharp contact with #1 or A seam, the lowermost bed of the Mist Mountain Formation.

The Mist Mountain Formation contains all of the economic coal seams, and is the most widely occurring formation on Fording River Property. This economically important formation is an interbedded sequence of sandstones, siltstones, silty shales, mudstones, and medium to high volatile bituminous coal seams. The volatile content of the coal increases up section, with decreasing rank. Lenticular sandstones comprise about 1/3 of the Mist Mountain sediments at Fording River, but very few laterally extensive sandstone beds exist.

The sandstone above and below seam #4 (B) and above #9 (F), are the most persistent units, and are often cliff-forming marker horizons.

The Mist Mountain Formation is generally overlain conformably by strata of the Elk Formation. On the Fording property, this formation is commonly a succession of sandstones, siltstones, shales, mudstones, chert pebble conglomerates and sporadic, thin, high volatile bituminous coal seams. The coal seams are characterized by a high alginate content and referred to as "Needle" coal. The Elk Formation is observed near the tops of the mountains, mainly on the east side of the Elk Valley on the Greenhills Range, and northward to the Mount Tuxford areas.

The top of the Elk Formation marks the upper boundary of the Kootenay Group, which is unconformably overlain by the basal member of the Blairmore Group. This thick bedded, cliff-forming sandstone and conglomerate unit is observed on the upper slopes of Mount Tuxford.

ii) Structure

Subsequent to deposition, the sediments were involved in the mountain building movements of the late Cretaceous to early Tertiary Laramide orogeny. The major structural features of the Fording River property are the north-south trending synclines with near horizontal to steep westerly dipping thrust faults, and a few high angle normal faults. Some of the thrust faults probably were folded late in the tectonic cycle.

The formation of the major fold structures began early in the tectonic cycle. In the current mining area, two asymmetric synclines are evident; the Greenhills Syncline to the west, and the Alexander Creek Synclines to the east of the Fording River.

The thrust faulting (ie: the Ewin Pass and Brownie Ridge Thrusts), was probably contemporaneous with the later stages of folding. The intervening anticline was subsequently faulted (Ericson Fault), then eroded.

The Alexander Creek Syncline can be traced from the southern property boundary on Castle Mountain to the northern end of the property on Weary Ridge. The strata of the west limb, on the west face of Eagle Mountain, dips easterly at 20 to 25°, decreasing gradually to zero as the axis is approached. The east limb, however, attains a 20° westerly dip within a much shorter (500m) distance of the axis. This asymmetry is possible due, at least in part, to the influence of the Ewin Pass Thrust which subcrops 600 to 800 metres east of the synclinal axis.

Further to the east, on Brownie Ridge, the strata dips westerly at a mean dip of 42°. The Brownie Ridge Thrust, which subcrops near the crest of the ridge, probably contributes to this steepening.

Within the mining area, the axis of the Alexander Creek Syncline plunges to the north at an average of 4[°]. Turnbull Mountain exhibits a localized series of en echelon fold structures, plunging both to the north and south. These subsidiary folds may be related to thrust faulting. From the south end of Mount Tuxford, the synclinal axis continues north-northwest along the base of Mount Veits and into the Elk River Valley near Aldridge Creek.

On Mount Tuxford, the beds exposed are those of the Elk Formation and the overlying (non-coal bearing) Cadomin Formation. The area has not been extensively explored. The stratigraphic sequence of the east limb, in the more extensively explored Mist Mountain strata near Aldridge Creek (Elco property), closely resembles the east limb strata found on Henretta Ridge, ten kilometres to the south.

On the northwest corner of Eagle Mountain, the lower Kootenay-upper Fernie section is the locus for a zone of near horizontal thrust faulting. The effect is to cause a double repetition of the lower coal seams and basal sandstone on the west synclinal limb. This fault zone is synclinal in form, and continuous with the Ewin Pass Thrust zone found the east limb.

The Greenhills Syncline in the mining area, is essentially a "mirror-image" of the Alexander Creek structure. The east limb of the asymmetric syncline dips westerly at 15 to 25° , except in areas near the Ericson Fault, where 45 to 55° dips are common. The west limb exhibits much steeper dips; commonly in the 35 to 45° range. The Greenhills Syncline plunges northward (340 to 350°), at less than 5° , then apparently dies out to the north in the area of the Osborne Creek Depression.

The Ericson Fault, which locally runs along the base of the Greenhills Range west of the Fording River, is one of the major regional faults. From south to north, this westerly dipping (40 to 70°) normal fault, brings Mist Mountain strata progressively into contact with Rundle, Rock Mountain, Spray River, Fernie and Morrissey strata. The downthrown block is to the west.

Near the south end of Lake Mountain, the Ericson Fault begins to "splay" into two zones. The main fault runs along the eastern margin of Lake Mountain, and the subsidiary fault runs to the west, and appears to "die out" northward. The steep northward dip exhibited in the Lake Mountain strata could be due to influence from these flanking "splays" of the fault. The flat lying region to the north of Lake Mountain (Osborne Creek Depression area) is completely void of outcrop, and the Ericson Fault has not been traced either through or to the north of this area.

Reference:

i) Illustration No. 1b: General Geology Map

3. Summary of Work Done in 1997

84 reverse circulation drill holes were completed for a total of 20,745 metres. Geological field mapping was conducted by staff geologists on Henretta Ridge and Castle Mountain.

Rotary drilling was done by SDS Drilling using a Jaswell 2400, a Drill Systems CSR 1000 AV, and two Ingersol Rand TH100's.

All holes were geophysically logged through the rods using the gamma-neutron method. Holes that remained open after the rods were pulled were logged for hole deviation, and selected holes were logged for gamma-density. Logging was done by Fording Coal Limited staff and Century Geophysical Corporation.

Coal seams encountered by rotary drilling were sampled in 0.5m intervals. Representative composite samples for each coal seam encountered in the hole were prepared at Fording's Process Plant Laboratory. Each seam composite was tested for proximate analysis, % Sulphur and Free Swelling Index. Samples from selected seam composites were sent to David E. Pearson and Associates for petrographic analysis.

Fording Coal Limited staff laid out the access road the drillsite locations. Prelogging and slashing was done by Raymond Myles Contracting Limited.

Road and drillsite construction was done by Elkford Industries Ltd. Staff surveyors provided the required survey control and drillhole pickups.

The following table shows the drillhole locations with respect to Coal Lease and Licence boundaries:

Lease / Licence	Drillholes			
BC Coal Lease #1	RH # 2512, 2513, 2601 to 2606 incl.			
BC Coal Lease #2	RH # 2518 to 2524 incl.			
	RH # 2569, 2669 to 2672 incl.			
BC Coal Lease #5	RH # 2607 to 2615 incl.; 2617 to 2622 incl.; 2624 to			
	2632 incl.			
BC Coal Lease #9	RH # 2564 to 2568 incl.; 2570, 2562, 2661 to 2668			
	incl.			
C.L. 328310	RH # 2643, 2644, 2648, 2649 and 2650			
C.L. 328312	RH # 2635, 2636 and 2639			
C.L. 328316	RH # 2596 and 2660			
C.L. 328317	RH # 2593, 2594 and 2595			
C.L. 328320	RH # 2597, 2598, 2599 and 2600			
Crown Grant L6635W1/2	RH # 2615, 2616 sand 2617			
Freehold Land	RH # 2655 to 2659 incl.			

Reference:

i) Illustration No. 2a: 1997 Exploration Program

II. Individual Area Programs

1. Henretta Ridge Area

i) Objectives

The objective of the drilling program on Henretta Ridge was to provide fill-in information in selected areas where structural complexities made seam correlations difficult.

ii) Summary of Work Done

5 reverse circulation rotary holes were completed for a total of 836 metres. All holes were geophysically logged through the drill rods using the Gamma-Neutron method and in the open hole using the Gamma-Density method.

iii) Results and Conclusions

Evidence of thrust faulting (repeated seams) was encountered in three holes, providing accurate locations of the thrust planes in seams 142, 130 and 115. Seam 120 is absent in three of the holes. This is likely due to depositional influences, rather than structural.

Results from the 1997 drilling allowed a much better understanding of the structural complexities in Henretta Ridge Pit.

References:

- i) Illustration No. 3a: Henretta Ridge Area Program
- ii) Illustration No. 3b: Geological Cross Section 155,200N
- iii) Appendix 1: Drillhole Logs
- iv) Appendix 2: Sample Analyses

2. Castle Mountain Area Program

i) Objectives

The objective of the 1997 drilling program on Castle Mountain was to:

- provide additional geological and coal quality information on the upper portion of the north facing slope,
- expand geological and coal quality information further to the east and south of previous drilling programs, and
- provide fill-in information for the lower half of the Mist Mountain section on the lower portion of the west facing slope.

ii) Summary of Work Done

22 reverse circulation rotary holes were drilled for a total of 9,857 metres. All holes were geophysically logged through the drill rods using the gamma neutron method and in the open hole using the gamma density method. All but three holes were also logged for hole deviation.

iii) Results and Conclusions

Of the eight holes drilled on the north facing slope, three were entirely within the lower (220) thrust block, three were entirely within the upper (210) thrust block, and two that were collared in the upper block passed through the Ewin Pass Thrust fault, terminating in Mist Mountain strata from the lower block. The #13 seam to basal sandstone horizon was penetrated in both fault blocks. Seams from the lower (220) block are considerably thicker than the upper block equivalents.

All eight of the holes located to the south or east of previous drilling programs were collared in the upper fault block. The three easternmost holes passed through the Ewin Pass Thrust into lower block seams.

The other five holes remained in upper block strata for their entire length, terminating in Moose Mountain (basal) sandstone. The three southernmost holes intersected the entire section of Mist Mountain Formation.

Six holes were completed on the lower portion of the west facing slope, all of which intersected #7 seam, the primary target seam in this area. Three of the holes were continued down to basal sandstone. The stratigraphy in this area is characterized by a massive, 100 to 125 metre thick sandstone unit which occurs between #7 seam and the #5 seam sequence.

Castle Mountain geology has been updated using the 1997 data, and a rebuild of the 3D block model is currently underway.

Reference:

i)	Illustration	No.	4a:	Castle	Mountain	Area	Program
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- ii) Illustration No. 4b: Geological Cross Section 146,100N
- iii) Appendix 1: Drillhole Logs
- iv) Appendix 2: Sample Analyses

3. South Greenhills Area Program

i) Objectives

The objective of the drilling program in this area was to confirm seam thickness, location, quality and continuity in the Greenhills ridge area, and in the area immediately west of the current pit highwalls.

ii) Summary of Work Done

Ten reverse circulation rotary holes were drilled for a total of 5,998 metres. All holes were geophysically logged for gamma-neutron, gamma-density and hole deviation.

iii) Results and Conclusions

Five holes drilled in the ridge area confirmed seam thickness and continuity on the west limb and axial region of the Greenhills syncline. Due to caving hole condition, two of these holes did not reach basal sandstone.

Five holes were completed on the east synclinal limb immediately behind the Swift and K-Pit highwalls. Although basal sandstone was not reached, encouraging thicknesses of seams F, E, D and B were intersected. In two of the holes, seam F has been repeated by thrust faulting.

The South Greenhills 3D block model was rebuilt using the new drillhole information. Economic evaluation was completed and encouraging results were encountered in several areas. Additional drilling is planned for 1998.

References:

- i) Illustration No. 5a: South Greenhills Area Program
- ii) Illustration No. 5b: Geological Cross Section 146,300N
- iii) Appendix 1: Drillhole Logs
- iv) Appendix 2: Sample Analyses

4. Lake Pit Phase 2 Area

i) Objectives

The objective of the fill-in drilling program on the Lake Pit area was to provide additional location, thickness and quality information for seams L and M; as well as depth of overburden data, at a detail sufficient for final mine design.

ii) Summary of Work Done

30 shallow rotary holes were drilled for a total of 1,358 metres. All holes were geophysically logged through the rods using the gamma-neutron method. All but six holes remained open and were logged using the gamma-density method.

iii) Results and Conclusions

Results show the coal seams to be thinner than expected, and the depth of overburden to be thicker than indicated from previous surveys.

The Lake Pit gridded seam model was rebuilt using the 1997 data, and reevaluation of the economics shows the area to be much less attractive than previously thought.

References:

- i) Illustration No. 6a: Lake Pit Phase 2 Area Program
- ii) Illustration No. 6b: Geological Cross Section 151,000N
- iii) Appendix 1: Drillhole Logs
- iv) Appendix 2: Sample Analyses

5. Southwest Turnbull Area

i) Objectives

The objective of the drilling program on the southwest corner of Turnbull Mountain was to determine the location, thickness and quality of the upper Mist Mountain Formation seams (210 fault block) in this area.

ii) Summary of Work Done

Two reverse circulation rotary holes were completed for a total of 1,008 metres. Both holes were geophysically logged for gamma-neutron, gamma-density and hole deviation.

iii) Results and Conclusions

Both holes were collared above the #15 seam horizon. Reasonable thicknesses of seams #15 through #9 were encountered. Neither hole reached basal sandstone, and both remained in upper fault block strata for their entire length. Much more drilling will be required to fully assess this area.

References:

- i) Illustration No. 7a: South Turnbull Area Program
- ii) Appendix 1: Drillhole Logs
- iii) Appendix 2: Sample Analyses

6. Turn Creek Area

i) Objectives

The objective of the drilling program in the Turn Creek area was to determine the mining potential for seam 115, in the area between Turnbull Pit and Henretta South Pit.

ii) Summary of Work Done

15 rotary holes were drilled for a total of 1,668 metres. All holes were logged through the drill rods for gamma-neutron, and all but one hole was logged for gamma-density.

iii) Results and Conclusions

All but one hole, which was collared outside of the subcrop, intersected the target seam. Seam 115 is often split into 2 to 4 bands as parting thicknesses vary. Total coal thickness is also quite variable, ranging from 8 to 18 metres. Till thickness is often in the 9 to 12 metre range.

A gridded seam model has been built for the Turn Creek area and a small low stripping ratio pit has been identified.

References:

- i) Illustration No. 8a: Turn Creek Area Program
- ii) Illustration No. 8b: Geological Cross Section 153,000N
- iii) Appendix 1: Drillhole Logs
- iv) Appendix 2: Sample Analyses







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			Proj. Eng.	Approved		GEULUGT
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