

Geological Report on The
ADAMS PROJECT

Peace River District

Map Reference: 94 B/1 E & W
03 O/15E & W

55° 53' to 56° 05' Northern Latitude
122° 21' to 122° 37'30" Western Longitude

Coal Licences 4153 to 4184 Inclusive

Held by: Shell Canada Resources Limited

Operated by: Crows Nest Resources Limited

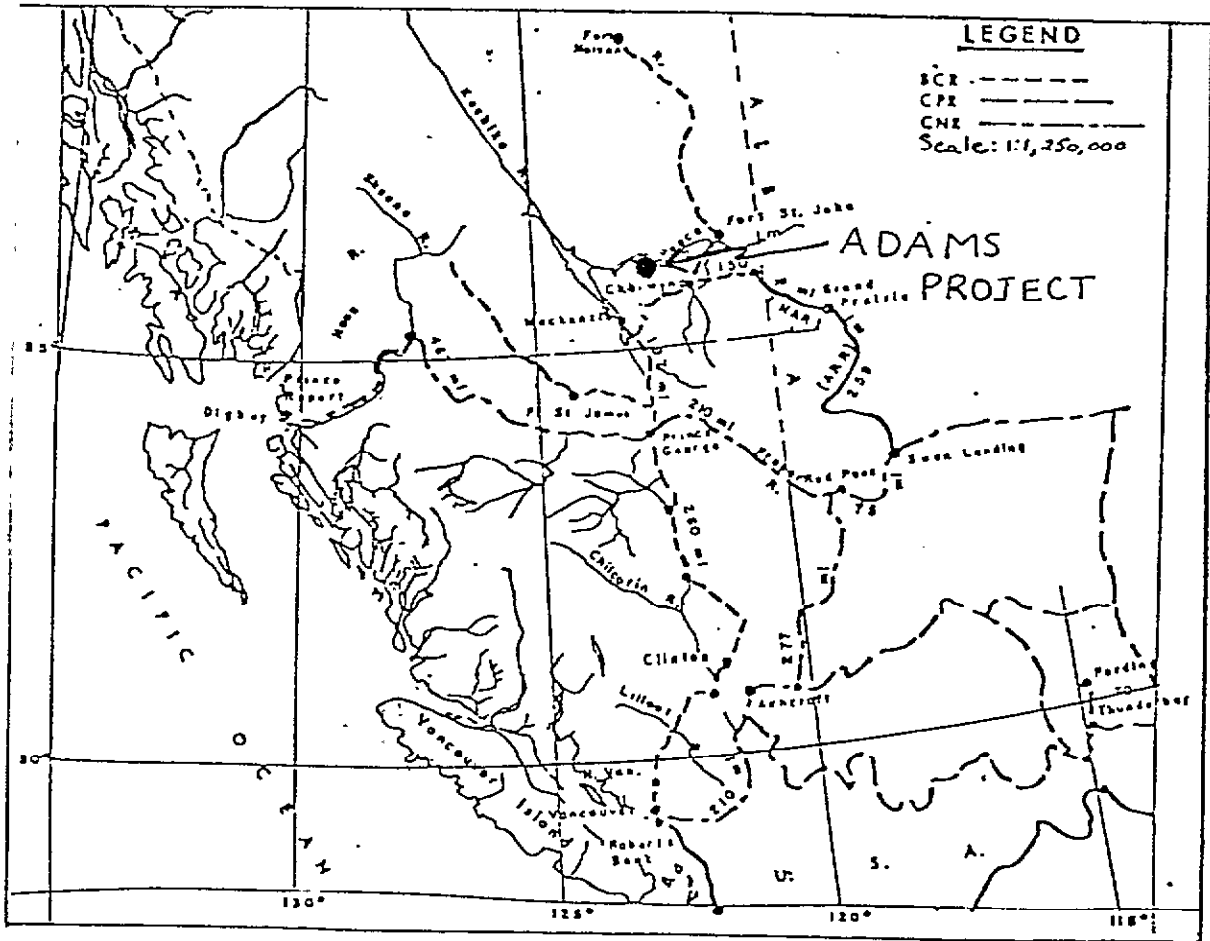
Calgary, Alberta

Author: C. Beavan
Geologist
Crows Nest Resources Ltd.

Exploration Period: June and July, 1963

Report Date: November 1963

ADAMS COAL PROPERTY



Report on Coal Licences 4153 to 4184 inclusive
Peace River District, B.C.

Held by: Shell Canada Resources Limited
Operated by: Crows Nest Resources Limited

PROFESSIONAL VERIFICATION OF REPORT

Entitled: Geological Report on the Adams Project
Coal Licences 4153 to 4184 Inclusive

Miss Cathy Beavan planned and carried out the 1979 geological field program on Adams B.C. Coal Licences held by Shell Canada Resources Ltd. She also prepared this report. Mr. Frank Martonhegyi supervised the activity of this program under the general direction of the undersigned.

Cathy Beavan, B.Sc., graduated in Geology from McGill University, in 1970. She completed all course work towards a M.Sc. degree in Geology in 1979. Her experience with Western Canada coal exploration since 1977 includes positions with:

- B.P. Coal, Calgary, Alberta
- Crows Nest Industries Ltd., Calgary, Alberta
- Crows Nest Resources Ltd., Calgary, Alberta

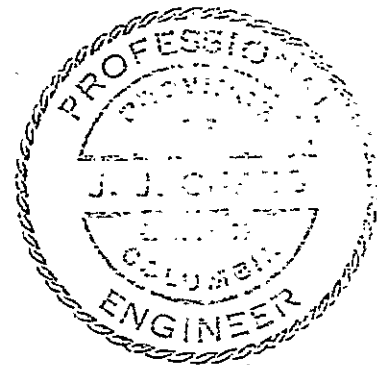
Frank Martonhegyi, M.E., graduated in Mining Geological Engineering from the University of the Heavy Industry, Hungary, in 1962; and received post-graduate training at the University of Saskatchewan, Saskatoon, in 1969-1971. His experience in Western Canadian a coal exploration since 1971 includes positions with:

- CanPac Minerals Ltd., Calgary, Alberta
- Shell Canada Resources Ltd., Calgary, Alberta
- Crows Nest Resources Ltd., Calgary, Alberta

His prior experience includes underground coal mining geology, geo-technical engineering and geochemistry in Hungary, Austria and Canada.

He currently holds the position of Senior Staff Geologist for Crows Nest Resources Ltd. supervising coal exploration in British Columbia.

I consider both the aforementioned geologists to be well qualified to undertake responsibilities they were assigned for this project. I am satisfied that the attached report dated November 16, 1979 has been competently prepared and justly represents the information obtained from this project.



J. J. Crabb
J. J. Crabb, P. Eng.

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SUMMARY

The Adams property covers 9288 hectares in thirty-two Coal Licences Nos. 4153 to 4184 inclusive. It is located in northeastern British Columbia twenty-three kilometres west of the W.A.C. Bennett Dam and is situated between two of Utah Mines properties in northeastern B.C.

In June and July 1979 an exploration program was conducted on the Adams property that consisted of:

- 1) geological mapping
- 2) photogrammetric and geodetic surveying
- 3) drilling four diamond core holes and two rotary holes

The coal measures of the Gething Formation were the target of the exploration. Drilling encountered a 2 to 2.5 metre thick seam approximately 70 meters below the top of the Gething formation that is correlateable in 3 holes. Two other seams over 2 metres thick were encountered in two separate drill holes.

The structure of the Adams property is relatively simple consisting of a syncline and an anticline. It is the relatively flat lying axial regions of these structure that could hold potential for underground mining.

1 INTRODUCTION

1.1 Location and Access (see figure 1)

The Adams property lies within the Rocky Mountain Foothills in front of the Rocky Mountains in northeastern British Columbia. It is twenty-three kilometers west of the W.A.C. Bennett Dam, eight kilometers south of the Williston Resivoire and sixty-four kilometers north west of Chetwynd. On the west side of Carbon Creek from the Adams property is Utah's Mines Carbon Creek Development and on its eastern edge is the old BRI property now held by Utah Mines.

Geographically the Adams licences extend between:

122° 21' and 122° 37'30" of Western Longitude, and
55° 53' and 56° 05' of Northern Latitude

and are found on NTS map sheets 93 O 15 and 16 and 94 B 1 and 2.

Access to the property is:

- 1) from the east by way of the gravel Johnson Creek Forestry Road which intersects Highway 29 thirty-two kilometers north of Chetwynd, and
- 2) from the east through Hudson Hope, across the Bennett Dam and along a Utah Road that intersects the Johnson Creek Forestry Road at kilometer forty-seven.

Within the Adams block the Johnson Creek Forestry road crosses the property in the north and has several networks of old logging roads and logging landing heading north from it (see Enclosure 1)

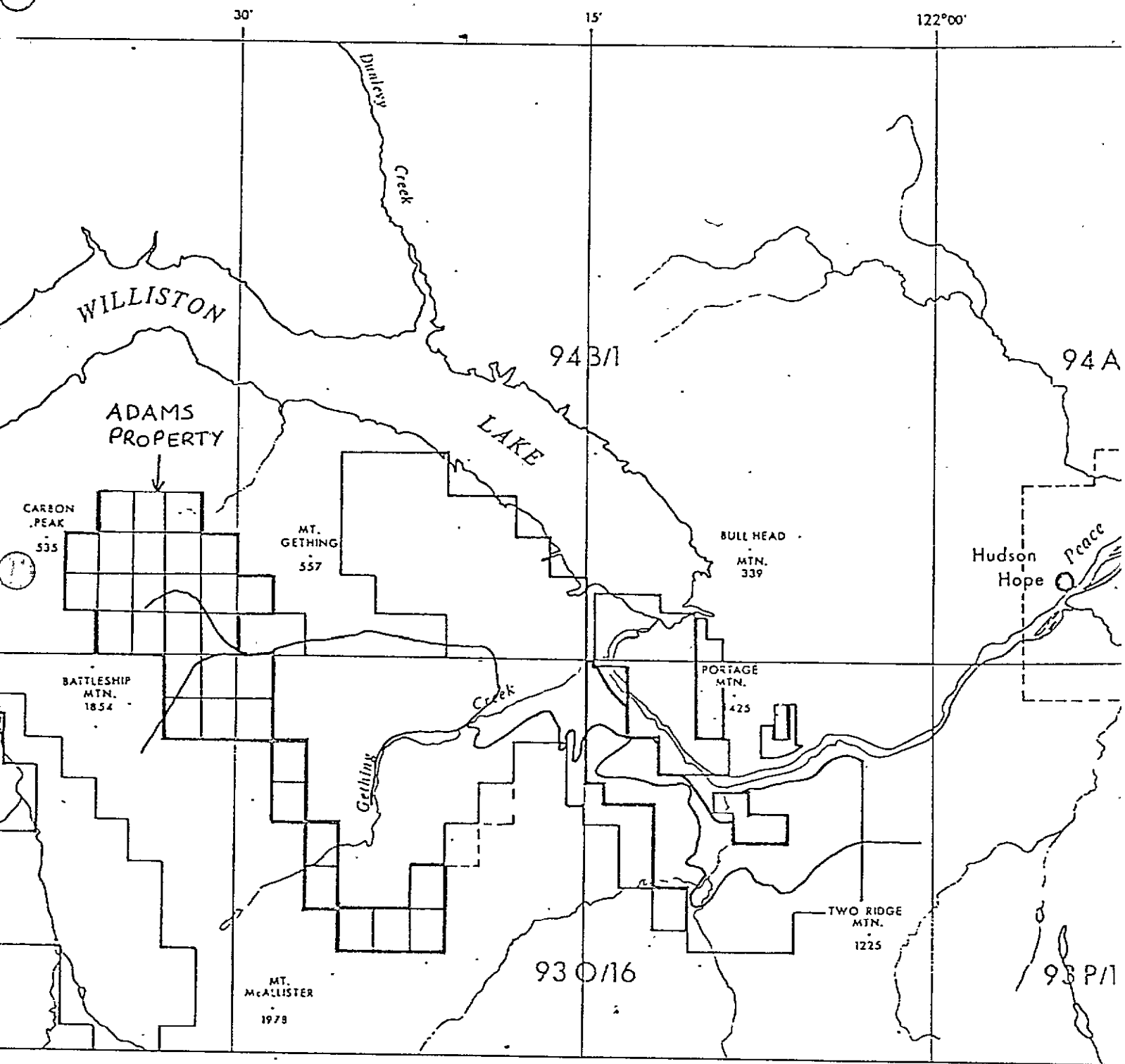


Figure 1

Location and Access Map for Adams Property, B.C.

Scale: 1:250,000

1.2 Tenure

The Adams property is held by Shell Canada Resources Limited and is operated by Crows Nest Resources Limited. The property consists of thirty-two coal licences, Numbers 4153-4184, inclusive, totalling 9288 hectares (see Figure 2 and Enclosure 2). These licences were granted on August 17, 1978.

CROWS NEST RESOURCES LIMITED
EXPLORATION

B. C. COAL LICENCES
TENURE STANDING

BLOCK: ADAMS
GROUP: NEW, NOT GROUPED YET

PROJECT: ADAMS
YEAR: 1979
DATE: FEB. 1979

PROJECT	AREA	BLOCK	TITLES	AREA	GROUP	LICENCE	ACO/ADM	RENTALS		REQUIREMENT WORK				BUDGET		EXP	POTL	COMMITMENTS, J. V.	REMARKS			
								ANNUAL	TOTAL TO DATE	APPROVED	CURRENT YEAR	PREVIOUS YEAR	DATE	CURRENT YEAR	TOTAL	SHELL	OTHER THAN B.C. SOFT DESCRIPTION					
NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.			
ADAMS	32	0288	ADAMS	32	0288		1978	320	22,010	22,010	NIL	1	60,000	NIL	NIL	AUG. 17	-	-	34,000			
						4154			03, 04, 73, 74	200												
						4155			81, 82, 91, 92	200												
						4156			83, 84, 93, 94	200												
						4157			UNITS 69, 70, 79, 80	201												
						4158			89, 90, 99, 100	201												
						4159			01, 02, 71, 72	201												
						4160			83, 84, 73, 74	201												
						4161			85, 86, 95, 96	201												
						4162			UNITS 6, 6, 15, 10	201												
						4163			27, 28, 37, 38	201												
						4164			47, 48, 57, 58	201												
						4165			89, 70, 79, 80	200												
						4166			89, 90, 99, 100	200												
						4167			29, 30, 39, 40	200												
						4168			UNITS 1, 2, 11, 12	200												
						4169			3, 4, 13, 14	200												
						4170			5, 6, 15, 16	200												
						4171			7, 8, 17, 18	200												
						4172			21, 22, 31, 32	200												
						4173			23, 24, 33, 34	200												
						4174			25, 26, 35, 36	200												
						4175			27, 28, 37, 38	200												
						4176			29, 30, 39, 40	200												
						4177			41, 42, 51, 52	200												
						4178			43, 44, 53, 54	200												
						4179			45, 46, 55, 56	200												
						4180			47, 48, 57, 58	200												
						4181			49, 50, 59, 60	200												
						4182			63, 64, 73, 74	200												
						4183			65, 66, 75, 76	200												
						4184			67, 68, 77, 78	200												
						4185			UNITS 93-0-15 BLK I	200												
						4186			81, 82, 71, 72	200												

2 1979 EXPLORATION PROGRAM

2.1 Aerial Photography and Topographic Mapping

McElhanney Surveying and Engineering Ltd. of Vancouver, B.C. was contracted to produce a preliminary set of topographic maps from government photographs and a new series of air photographs and set of 1:10,000/10 m topographic maps of the Adams property (See Enclosure 1 which also shows the geology of the property).

The photography was flown on September 12, 1979 and the photographs are at a scale of 1:18,000 and are identified as follows:

06492-2	Line 1 A	121-133
06492-2	Line 1	83-120
06492-2	Line 1 A	44-82
06492-2	Line 2	1-43
06492-2	Line 2 A	43-89

The photographs from 1979 together with maps from photographs flown in August 1977 were used to produce the 1:10,000 topographic maps.

2.2 Geological Mapping

Mapping on the Adams property consists primarily of stream traverses and was undertaken with a view to:

- 1) better define the upper and lower Gething contacts,
- 2) gain as much structural information as possible, and
- 3) gain an understanding of the coal-bearing Gething formation.

Transportation to and from most traverses was by means of a Bell 206 helicopter contracted from Maple Leaf Helicopters in Chetwynd.

The geology was plotted originally on 1:10,000/10.0 m McElhanney topographic maps from June, 1978 and was later transferred to the more extensive coverage maps from September, 1979 (See Enclosure 1).

2.3 Surveying

Ground survey control was contracted to Shell Canada Resources Ltd.

Conventional surveying methods were used to determine locations, elevations and UTM coordinates of all six 1979 drill holes and five old Utah drill holes, two of which (Utah #1 and Utah #2) are on the Adams property.

For a report on the location survey see Enclosure 3.

2.4 Drilling

Four diamond holes and two rotary holes were drilled in July, 1979. In total 1430.3 metres were drilled.

Diamond drilling was contracted to Canadian Longyear Inc. and was done using a Canadian Longyear 38 drill. All four diamond drill sites were accessible by helicopter only and rig moves were carried out using a Bell 205 helicopter. One of the drill sites (hole D79-01) had been slashed

ADAMS 1979 DRILLING SURVEY

DRILL HOLE	D79-01	D79-02	R79-03	D79-04	R79-05	D79-06
Azimuth & Hole Angle	279.5°/71.5°	053°/26.5°	015°/13°	330°/76.2°	027.4°/76.2°	333.2°/88°
U.T.M. Coordinates:						
Northing	6194833.4	6199678.2	6206608.3	6194897.1	6209102.9	6212013.5
Easting	538930.5	535693.8	530405.8	538064.7	528708.6	526940.9
Hole Elevation	892.51	908.81	869.98	967.38	941.57	1096.49
Drill Hole Type	diamond	diamond	rotary	diamond	rotary	diamond
Total Depth	164.5	134.4	329.2	274.6	281.9	245.7
Cored Intervals	19.8-164.5	13.4-134.4	-	46.0-274.6	-	20.7-245.7
Sampled Intervals	27.66-29.77 32.38-33.01	45.65-46.82 47.5-48.48	-	105.40-106.35 106.35-106.43 106.43-107.13	-	74.86-75.34 75.34-75.78 75.78-77.25
Logs Run	Gamma Ray Neutron Sidewall- Densilog Caliper Focused Beam	*Gamma Ray *Neutron *Sidewall- *Densilog *Caliper *Focused Beam	Gamma Ray Neutron Sidewall- Densilog Caliper Focused- Beam	Gamma Ray Neutron Sidewall- Densilog Caliper Focused Beam	Gamma Ray Neutron Sidewall- Densilog Caliper Focused Beam	Gamma Ray Neutron Sidewall- Densilog Caliper Focused Beam
	<i>licence</i>	4159	4161	4168	4159	4173
						4183

Figure 3

and prepared in 1978 and the three remaining sites were slashed and prepared in June and July, 1979 by Walter Schilling of Chetwynd. All four holes were cored using an HQ core barrel. (see Enclosure 4 for a description of the Core)

Rotary drilling was contracted to Alberta Southern Exploration Drilling Ltd. and was carried out using a Cyclone 60 drill. Both rotary holes were drilled on pre-existing logging landings.

See figure 3 for a summary of drill hole data and information.

3.5 Downhole Geophysical Logging

Upon completion of each hole, Roke Oil Enterprises Ltd. ran the following suite of geophysical logs:

Logged	}	Gamma ray (1:200)
through the		Neutron (1:200)
rods		Sidewall Densilog (1:200 and 1:20 for coal seams over a metre in thickness)

	}	Caliper (1:200 and 1:20 for coal seams over a meter in thickness)
Logged		Focused beam on both 0-4000 and 0-2000 scales (1:200 and 1:20 for coal seams over a metre in thickness)
open hole		Directional survey

See enclosure 5 for a full suite of logs.

3 GEOLOGY

3.1 General Statement

The bedrock on the Adams property consists mostly of Lower Cretaceous Formations. The nomenclature used in this report follows Stott, 1971, and is as follows:

Fort St. John Group	Commotion Formation
	Moosebar Formation
Bullhead Group	Gething Formation
	Cadomin Formation

See figure 4 for a table of Formation and their descriptions.

3.2 Stratigraphy

3.2.1 Cadomin Formation

The Cadomin is the oldest Cretaceous formation on the Adams property and is the best exposed. It consists of massive, cross-bedded, coarse-grained, greyish to reddish-brown weathering, conglomeratic sandstones and fine conglomerates with some interbedded fine-grained sandstones, carbonaceous shales and thin coaly beds.

3.2.2 Gething Formation

The Gething Formation directly overlies the Cadomin Formation and consists of interbedded mudstones, coals, siltstones, sandstones and occasional conglomerates. These units are all relatively thin and it

TABLE OF FORMATIONS

	Formation or Group	Thickness (feet)	Lithology	
Lower Cretaceous	Fort St. John Group	3,000- 5,000	Dark grey, marine shale with fine grained sandstone.	
	Bullhead Group 0-2,500	Gething Formation	900 - 1,000	Fine-grained, cherty to quartzose sandstone; rusty weathering shales; carbonaceous mudstone and coal seams; minor conglomerate.
		Cadomin Formation	0 - 500	Massive chert conglomerate and coarse-grained sandstone; carbonaceous shale, minor coal.
	Regional erosional unconformity; bevels rocks of succeedingly older age northward and eastward.			
	Minnes Group	0 - 6,000	Massive, quartzose sandstone; alternating units of fine-grained sandstone and mudstone; minor carbonaceous sediments.	
Jurassic	Fernie Formation	0 - 1,000	Calcareous and phosphatic shales; rusty weathering shales; glauconitic siltstone; sideritic shales thinly interbedded sand- stone, shale, and silt- stone.	

is their frequent repetitions that characterizes the Gething Formation. In the Peace River Canyon five miles northeast of Adams the Gething is between 500 metres and 550 metres thick.

3.2.3 Moosebar Formation

The Moosebar Formation directly overlies the Gething Formation and is rarely exposed on the Adams property. The formation consists of a sequence of dark gray to black friable shales. On Track Creek thirteen kilometres east of Adams, the Moosebar is 407 metres thick.

3.3 Structure

The Adams property lies within the Foothills structural belt of the Rocky Mountains. At depth this area falls within a structurally complex area, but the surface structure of the area is considered to be of the Foothills compression type. The Cretaceous was deformed during the Laramide Orogeny, being folded into elongate plunging anticlines and synclines. Structurally the Adams property is composed of two such units: the Adams syncline in the northwest and the Gething Creek ^{anticline}~~syncline~~ in the southeast. The axial portions of both structures have gentle dips (10° - 20°) while dips on the flanks increase to up to 60° . Both structures plunge gently to the southeast. For idealized cross-sections of both these structures see Enclosure 6.

In the northwest portion of the property, immediately east of Carbon Peak and Battleship Mountain, the Carbon Creek Fault thrusts Triassic and Jurassic rocks from the west onto the Cretaceous. From the limited surface and drill hole information, however, faulting on the Adams property within the Cretaceous is minor.

3.4 Coal Geology

The coal of interest on the Adams property lies within the Gething Formation. In the Peace River Canyon area coal beds vary from a few centimetres to 4.5 metres thick. Figure 5 is a list of some of the thicker coal seams in the Gething in the Peace River region. Although the 1979 drill program was concerned with locating any sizeable coal seam, it was the "Trojan" seam that was of primary interest since to date it has been found to be the thickest seam in the Gething. In the 1979 drill holes the seam over 2 metres thick and occurring in the top 70 metres of the Gething has been tentatively indentified as the Trojan seam. Thus holes D 79-01, D79-02, and R79-03 all intersected the Trojan seam. Hole R79-05 interesected a sandstone washout of the Trojan seam. both holes D79-04 and D79-06 were started below the Trojan horizon but both holes did encounter a seam over 2 metres in thickness. Neither of these seams has been identified as any of the seams in figure 6 however.

Enclosure 7 shows a correlation for the gamma ray neturon logs from all the 1979 holes plus two holes drilled by Utah in 1979. In the north it can be seen on logs D79-06, A73-01, A73-02 and R79-05 that there is a thick correlateable sandstone-conglomerate unit. Holes R79-05 and R79-03 are easily correlateable with the presence in both of the Moosebar-Gething contact. Log R79-03 also shows the présence of the Trojan Seam which makes it correlateable with holes D79-02 and E79-01. The sandstone conglomerate unit at the bottom of hole D79-01 has been correlated with a similar unit towards the top of D79-04.

THICKER COAL SEAMS IN GETHING FORMATION

Depth Below Moosebar Formation	Lithology	Thickness (approx.)
	Sandstone, shale	23' - 26'
23' - 26'	<u>Superior Seam</u>	2' - 3' 8"
	Shale, coal, sandstone	80'
93' - 130'	<u>Trojan Seam</u>	4' 0" - 8' 4"
	Shale, sandstone	115'
160' - 255'	<u>Titan Seam</u>	4' 0" - 5' 2"
	Shale, clay ironstone	20'
250'	<u>Falls Seam</u>	1' 8" - 3' 7"
	Sandstone, shale, clay ironstone, thin coal seams	110'
460'	<u>Little Mogul Seam</u>	0' 8" - 3' 3"
	Shale, sandstone	10'
475'	<u>Mogul Seam</u>	3' 2" - 4' 8"
	Sandstone	110'
585'	<u>Castle Point Seam</u>	2' 1" - 3' 5"
	Shale	28'
605'	<u>Milligon Seam</u>	2' 5" - 2' 10"
	Shale, sandstone, thin coal seams	610'
1215'	<u>Grant Seam or Murray Seam</u>	5' 5" - 5' 9", 7' 2"
	Shale, clay ironstone	35'
1250'	<u>Riverside Seam</u>	2' 10"

Figure 5

4 COAL QUALITY

All seams in the 1979 diamond drill holes over 2 metres thick were sampled and were sent to the C.N.R.L. Lab in Fernie to be analyzed. As of the writing of this report the analyses had not been done and results will be forwarded when they are received by Crow's Nest Resources.

Figure 4 tabulates the samples and their depths.

Upper Gething coals in the Peace River District are medium volatile bituminous (ASTM), with high Heat Value and low ash content and often exhibit good coking characteristics. Utah Mines in 1973, analyzed all seams in their drill holes over 0.3 metres and the FSI's varied from 1 to 7, ash varied from 3.17 % to 28.10 % and volatile matter from 20.70% to 32.90%.

5 MINEABILITY

5.1 Open Pit

Due to the lack of great coal seam thicknesses and dip-slope situations, open pit mining possibilities appear to be remote.

5.2 Underground

Possibilities of underground mining are governed by the thickness of the coal seam, its attitude and its roof conditions. On the Adams property the Adams syncline and the Gething Creek anticline hold the greatest potential for underground mining, particularly the synclinal area. Dips in the syncline region are as low as 7° from outcrop evidence whereas in the anticline region the gentler dips are in the 15° - 20° range from outcrop information. A 2 to 2.5 metre seam does exist from drill hole information but to date its persistence both in thickness and in lateral extent are unknown. Roof conditions, while good in the two core holes that encountered the seam, are also unproven.

INTER-OFFICE CORRESPONDENCE

Date: August 8, 1979

To: Crows Nest Resources Limited (CNRL)
Frank Martonhegyi

From: Shell Canada Resources
Surveying Section

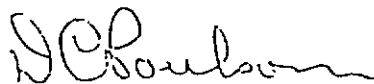
Subject: Location Survey
ADAMS PROSPECT - CHETWYND AREA - N. E. British Columbia

Three 2nd order control stations (McAllister, Nobrac, and Gething) were used to establish the survey in this area. A total of 6 drill holes (4 diamond and 2 rotary holes) as well as 5 old UTAH drill holes were surveyed between June 29, 1979 and July 27, 1979 using conventional surveying methods of theodolite and electronic distance measuring equipment. Coordinates and all calculations were done in the U.T.M. Grid System and distances and bearings (referenced to 123°W) were corrected for sea level and scale factor.

Accuracy of the drill location network was above 1/50000 in all cases.

The results of the surveys were presented to CNRL in both tabular and plan form - the tabular form hereby attached.

The total survey cost attributed to the ADAMS PROSPECT was approximately \$5,600.



A. Hittel

AH:cg
Attachment

ADAMS DRILL HOLE

U T M

<u>Drill Hole</u>	<u>Northing</u>	<u>Easting</u>	<u>Elevation</u>
dDh 7901	6194833.4	538930.5	892.51
dDH 7902	6197678.2	535693.8	908.81
rDH 7903	6206608.3	530405.8	869.98
dDH 7904	6194897.1	538064.7	967.38
rDH 7905	6209102.9	528708.6	941.57
dDh 7906	6212013.5	526940.9	1096.49
*Utah #1	6210994.5	525268.0	1232.92
*Utah #2	6210413.5	528570.6	963.43
*Utah #3	6196715.5	536614.7	1011.30
*Utah #4	6195201.3	537498.3	982.68
*Utah #5	6199351.4	535383.9	1062.74

* Old drill hole

MAJOR CONTROL USED

Gething	6210552.320	534499.763	1826.67
Nobrac	6211269.635	522654.935	1753.51



DEPARTMENT OF MINES AND PETROLEUM RESOURCES
Coal Act (Sec. 19)

APPLICATION TO EXTEND TERM OF LICENCE

1. I, GLENN C. PROUDFOOT agent for SUELL CANADA RESOURCES LTD
(Name) (Name)
400 FOURTH AVENUE SW.
(Address) (Address)
CALGARY, ALBERTA T2P 0J4
Valid FMC No. 171 929

hereby apply to the Minister to extend the term of Coal Licences No(s) 4153 TO 4184 INCLUSIVE
32 LICENCES IN THE PEACE RIVER LAND DISTRICT CALLED ADAMS COAL PROSPECT.
for a further period of one year.

2. I have performed, or caused to be performed, during the period AUGUST 17, 1978 to
AUGUST 16, 1979, work to the value of at least \$ 299,042
on the location of coal licences as follows:

CATEGORY OF WORK

	Licence No(s).	Apportioned Cost
Geological mapping - - - -	<u>4153 TO 4184 INCLUSIVE</u>	<u>\$ 56,051</u>
Surveys: Geophysical - - - -	-	-
Geochemical - - - -	-	-
Other <u>Geodetic</u> - - - -	<u>4153 TO 4184 INCL.</u>	<u>\$ 16,640</u>
Road construction - - - -	-	-
Surface work - - - -	-	-
Underground work - - - -	-	-
Drilling - - - -	<u>4183, 4159, 4164, 4168, 4159, 4173</u>	<u>\$ 204,476</u>
Logging, sampling, and testing	<u>4183, 4159, 4164, 4168, 4159, 4173</u>	<u>\$ 19,375</u>
Reclamation - - - -	-	-
Other work (specify <u>Preparation of Report</u>)	<u>4153 TO 4184 INCL</u>	<u>\$ 2,500 to date</u>

3. I wish to apply \$ 299,042 of this value of work on Coal Licence(s)*
4153 TO 4184 INCLUSIVE.

N.A. 4. I wish to pay cash in lieu of work in the amount of \$..... on Coal Licence(s)
No(s).....

N.A. 5. I wish to apply \$..... of this value of work to claim a refund of cash in lieu of work in
the amount of \$..... which was paid to extend the term of Coal Licence(s) No(s).
..... from
to....., 19..... Mining Receipt No.....
for prior payment of cash in lieu of work is attached for adjustment.

6. The work performed on the location(s) is detailed in the attached report entitled
Report will be submitted in ninety days.

AUGUST 16, 1979
(Date)

[Signature]
(Signature and position)
LANDMAN

* Applications to group licences may be filed to apportion costs on a maximum of 10 licences.

(FORMS TO BE SUBMITTED IN DUPLICATE)

FOR DEPARTMENTAL USE ONLY

Value of work reported \$..... Value of work applied on licences \$.....
Value of work approved \$..... Value of credit remaining \$.....

Work performed. Yes No

The program of operations detailed hereunder was carried out during the period from August 17, 1978 to August 16, 1979. Total costs are \$ 299,042, an average of \$ 13.05 per acre (32.20 per hectare). 22,910 acres ~ 9,288 hectares

GEOLOGICAL MAPPING Yes No Cost \$ 56,051

	Area (Acres)	Scale	Time
Reconnaissance	<u>25,000 ac ~ 10,000 ha</u>	<u>1:10,000</u>	<u>approx 120 man-days</u>
Detail: Surface	_____	_____	_____
Underground	_____	_____	_____
Other (specify)	_____	_____	_____

GEOPHYSICAL OR GEOCHEMICAL SURVEYS Yes No Cost \$ NIL

Method _____ Line miles _____

OTHER SURVEYS Yes No Cost \$ 16,640

GEODETIC Grid _____ Topographic location Other photogrammetric mapping
photomosaic

ROAD CONSTRUCTION Yes No Cost \$ NIL

Length: On Licences _____ Access (off licences) _____

SURFACE WORK Yes No Cost \$ NIL

Length _____

Trenching _____

Seam tracing _____

Crosscutting _____

Other _____

SITE PREPARATION AND ASSISTANCE IN DRILL TRANSPORTATION IN DRILLING
Licence Number(s) _____

UNDERGROUND WORK Yes No Cost \$ NIL

Test adits: Number _____ Average length _____ Total footage _____

Other workings: Area _____ Total footage _____

DRILLING Yes No Cost \$ 204,476

	Hole Size	Number of Holes	Total Footage
Core: Diamond <input checked="" type="checkbox"/> Wireline <input type="checkbox"/>	<u>HQ</u>	<u>4</u>	<u>2,689 feet</u>
Rotary: Conventional <input checked="" type="checkbox"/>		<u>2</u>	<u>2,005 feet</u>
Reverse circulation <input type="checkbox"/>			

Other Canadian Longear (Diamond)

Contractor Alberta Southern (Rotary) Where core stored BC DEMPR Charlie Lake, BC.

LOGGING, SAMPLING, AND TESTING (check) Yes No Cost \$ 19,375

Lithology: Drill samples Core samples Bulk samples

Logs: Gamma-Neutron Density Other

Testing: Prox. analysis FSI Washability

Carbonization Petrographic Plasticity Other

OTHER WORK (specify details) preparation of Geol. Report Cost \$ 2,500 to date

VALUATION OF WORK: COST STATEMENT
(Sec. 27, B.C. Reg. 436/75)

ON-PROPERTY COSTS: For period from August 17, 1978 to August 16, 1979

1. OPERATOR'S FEES, SALARIES, AND WAGES:

	Average Number of Employees	Average Rate	Average Number of Days	Amount
Professional and technical	3	125	60	22,500
Machine operators and support				-
Miners				-
Other				-
Total operator's costs \$				22,500

2. CONTRACTORS AND CONSULTANTS:

Name	Service	Contract Amount
TRONNES SURVEY (L. TRONNES)	FIELD FOREMAN	11,225
SHELL SURVEYING DEPT.	LOCATION SURVEY	5,600
ROKE OIL ENTERPRISES LTD.	DOWNHOLE GEOPHYSICAL LOGGING	15,125
CANADIAN LONGYEAR DRILLING CO.	DIAMOND DRILLING	51,307
ALBERTA SOUTHERN EXPLORATION	ROTARY DRILLING	12,000
NORTH STAR CONSTRUCTION LTD.	SITE PREPARATION (SLASHING)	3,000
DEMEV-LECHESTER CONSTRUCTION	SITE PREPARATION (SLASHING, BULLDOZER)	5,500
DYFOW CONSULTANTS & HOLDING LTD.	GEOLOGICAL CONSULTING	300
Total contractor and consultant costs \$		104,057

3. EQUIPMENT AND INSTRUMENTS USED: Owned Rented

Type	Rented From	Amount
GEOLOGICAL FIELD EQUIPMENT		400
Total equipment and instrument rentals \$		400

4. FIELD CAMP COSTS:

	Amount	
Food	22,550	
Accommodation	12,915	
Fuel	560	
Other	560	
Total field camp costs \$		36,025

5. SAMPLING, ANALYSIS, AND TESTING:

Service	Performed by	Amount
COAL ANALYSES	CNRL LAB, FERNIE, BC.	500
Totals, samplings, analysis, and testing \$		500

DIRECTIONAL SURVEY

ROKE OIL ENTERPRISES LTD.

COMPANY: CROWS NEST RESOURCES LTD

GRID: _____

DATE SURVEYED: JULY 5, 1979

DRILLHOLE: 79 - 01

LATITUDE: _____

SURVEY BY: PUBANZ

LOCATION: PEACE RIVER LAND DISTRICT

DEPARTURE: _____

WITNESSED BY : HOFFMAN

FIELD: ADAMS COAL PROPERTY, B.C.

ELEVATION: _____

CALCULATIONS BY: _____

MAGNETIC DECLINATION: _____

CORRECTION OF: _____

FOR: _____ GRID: _____

Num-ber	Cable Depth	Slant Angle	Slant Angle Bearing	Num-ber	Cable Depth	Slant Angle	Slant Angle Bearing	Num-ber	Cable Depth	Slant Angle	Slant Angle Bearing
0	0	18	-	11				22			
1	20	18.4	-	12				23			
2	24	19.1	279	13				24			
3	40	* 18.6 19.8	277.2 280.7	14				25			
4	60	19	280.1	15				26			
5	80	18.7	280.1	16				27			
6	94	18.8	280.6	17				28			
7	100	* 18.8 18.9	277.6 276.2	18				29			
8	120	18.2	280.8	19				30			
9	140	18.5	281	20				31			
10	160	18.8	281.7	21				32			

ADAMS 79(3)A.

* REPEATS

DIAMOND DRILL CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7901 SHEET No: 2

DATE BEGUN: JULY 1, 1979 DEPTH: _____ BEARING: 279.5° U.T.M. 6194833.395N;538930.473E

DATE FINISHED: JULY 5, 1979 ELEV. COLLAR: 892.51 metres TOTAL DEPTH: 165 metres COAL LICENSE: 4159

LAT.: ADAMS-DOWLING CREEK HOLE ANGLE: 71.5° LOGGED BY: G. HOFFMAN CORE SIZE: HO

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
Box 4 27.74											
		0.02					MUDSTONE - dark brown, carbonaceous				
					27.66						
		0.05					COAL - bright banded	core solid	No. 1		
		0.04					- dull and bright	core solid			
		0.07					- dull banded	core solid			
		0.06					- bright, with pyrite inclusions	core solid			
		0.10					- dull banded	core solid			
		0.02					- bright banded	core solid			
		0.04					- dull and bright	core solid			
		0.07					- dull banded	core broken			
		0.11					- dull	core solid			
		0.05					- bright banded	core solid			
		0.04					- bright	core solid			
		0.03					- bright	core pulverized			
		0.02					- stoney	core solid			
		0.03					- bright banded	core solid			
		0.06					- dull banded	core solid			
		0.03					- dull	core solid			
		0.10					- bright banded	core solid			
		0.07					- dull banded	core solid			
		0.08					- dull and bright, with pyrite	core solid			
		0.09					- stoney	core solid			
		0.05					- dull banded	core solid			
		0.09					- dull	core solid			
29.26							CORE LOSS - 0.42 m coal				
							COAL - dull	core solid			
							- dull banded	core solid			
							- bright banded	core solid			
							- bright	core solid			

DIAMOND DRILL CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7901 SHEET No: 3

DATE BEGUN: JULY 1, 1979 DEPTH: _____ BEARING: 279.5° U.T.M. 6194833.395N;538930.473E

DATE FINISHED: JULY 5, 1979 ELEV. COLLAR: 892.51 metres TOTAL DEPTH: 165 metres COAL LICENSE: 4159

LAT.: ADAMS-DOWLING CREEK HOLE ANGLE: 71.5° LOGGED BY: G. HOFFMAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
		0.06					COAL - bright banded	core solid	No. 1		
		0.02					- stoney	core solid	↓		
	2.11		2.08	80.1%	29.77						
		0.11					CLAYSTONE - carbonaceous, with frequent bright coal bands				
		0.22					SANDSTONE - fine-grained, grey, wavy bedding frequent coaly inclusions				
		0.46				80°	SILTSTONE - dark grey, grading to carbonaceous mudstone at top, bedding irregular				
Box 5		0.29					- as above				
30.78		0.20					- as above				
		0.13					CLAYSTONE - carbonaceous, with coaly inclusions				
		0.02					COAL - stoney, frequent bright coal bands				
		0.04					- dull	core solid			
		0.07					- dull banded	core solid			
		0.03					- bright	core solid			
		0.04					- dull	core solid			
		0.73					MUDSTONE - dark grey				
		0.10					CLAYSTONE - carbonaceous, fissile				
32.31											

DIAMOND DRILL CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7901 SHEET No: 4

DATE BEGUN: JULY 1, 1979 DEPTH: _____ BEARING: 279.5° U.T.M. 6194833.395N;538930.473E

DATE FINISHED: JULY 5, 1979 ELEV. COLLAR: 892.51 metres TOTAL DEPTH: 165 metres COAL LICENSE: 4159

LAT.: ADAMS-DOWLING CREEK HOLE ANGLE: 71.5° LOGGED BY: G. HOFFMAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
32.31					32.38						
		0.03					COAL - dull	core solid	No. 2		
		0.02					- dull and bright	core solid			
		0.04					- dull	core solid			
		0.04					- bright banded	core solid			
		0.02					- bright	core solid			
		0.04					- dull banded	core solid			
		0.04					- dull and bright	core solid			
		0.03					- dull banded	core solid			
		0.03					- dull and bright	core solid			
		0.09					- dull banded	core solid			
		0.08					- dull banded	core broken			
		0.04					- dull and bright	core solid			
		0.03					- dull banded	core solid			
		0.08					- bright banded	core solid			
		0.01					- bright	core solid			
		0.01					- dull	core solid	✓		
	0.63		0.62	100%	33.01						
		0.05					CLAYSTONE - carbonaceous				
		0.22					MUDSTONE - dark grey, occasional carbonaceous phases and sandy phases				
Box 6											

DIAMOND DR CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7901 SHEET No: 5

DATE BEGUN: JULY 1, 1979 DEPTH: _____ BEARING: 279.5° U.T.M. 6194833.395N; 538930.473E

DATE FINISHED: JULY 5, 1979 ELEV. COLLAR: 892.51 metres TOTAL DEPTH: 165 metres COAL LICENSE: 4159

LAT.: ADAMS-DOWLING CREEK HOLE ANGLE: 71.5° LOGGED BY: G. HOFFMAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
Box 6											
		0.52				90°	MUDSTONE - dark grey, with a few silty interbeds				
33.83											
		1.56				70°	- as above				
35.36											
		0.63				80°	- as above				
Box 7											
		0.55					- as above				
		0.04					COAL - dull banded	core solid			
		0.05					- dull	core solid			
		0.03					- bright banded	core solid			
		0.17					- stoney	core solid			
36.88											
		0.22					CLAYSTONE - carbonaceous, coaly, core strongly broken				
		0.15					COAL - dull, core pulverized				
		0.43					MUDSTONE - dark grey, unbroken				
		0.18					- as above, broken and pulverized				
		0.20					- as above, unbroken				
38.40											
		0.35					- unbroken				
Box 8											
		1.29					- as above, with silty zones, unbroken				
39.93											
		0.66				90°	- as above				

DIAMOND DRILL CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7901 SHEET No: 6

DATE BEGUN: JULY 1, 1979 DEPTH: _____ BEARING: 279.5° U.T.M. 6194833.395N;538930.473E

DATE FINISHED: JULY 5, 1979 ELEV. COLLAR: 892.51 metres TOTAL DEPTH: 165 metres COAL LICENSE: 4159

LAT.: ADAMS-DOWLING CREEK HOLE ANGLE: 71.5° LOGGED BY: G. HOFFMAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
		0.05					COAL - dull banded core solid				
		0.09					CLAYSTONE - coaly, with lenses and beds of pyrite				
		0.06					COAL - dull banded core solid				
		0.02					- bright				
		0.65					MUDSTONE - dark grey, irregular silty interbeds, coaly inclusions				
Box 9 41.45						70°					
		1.50				80°	- as above, less silty				
42.98											
		1.34				75°	- as above				
Box 10											
		0.18					- as above				
44.50											
		0.63				80°	- as above, very sandy towards base				
		0.79				84°	SILTSTONE - dark grey				
46.02											
		1.16				80°	- as above				
Box 11											
		0.39					- as above				
		0.97					SANDSTONE - grey, with silty interbeds				
		0.51				84°	SILTSTONE - dark grey				
49.07											
		0.85					- as above				
Box 12											

DIAMOND DR. CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7901 SHEET No: 7

DATE BEGUN: JULY 1, 1979 DEPTH: _____ BEARING: 279.5° U.T.M. 6194833.395N; 538930.473E

DATE FINISHED: JULY 5, 1979 ELEV. COLLAR: 892.51 metres TOTAL DEPTH: 165 metres COAL LICENSE: 4159

LAT.: ADAMS-DOWLING CREEK HOLE ANGLE: 71.5° LOGGED BY: G. HOFFMAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
Box 12											
	0.30						SILTSTONE - as above				
	0.07						MUDSTONE - dark grey				
	0.02						COAL - dull banded	core solid			
	0.03						- dull and bright	core solid			
	0.03						- dull banded	core solid			
	0.06						- bright	core solid			
50.60											
	0.06						- bright	core solid			
	1.57					65°	SILTSTONE - dark grey				
52.12											
	0.67					85°	- as above				
Box 13											
	0.83						MUDSTONE - dark grey				
53.64											
	0.36						- as above				
	0.28						CLAYSTONE - light tan, kaolinitic, see gamma log				
	0.53					85°	MUDSTONE - dark grey, bottom half broken				
	0.04						COAL - dull	core somewhat broken			
	0.03						- dull and bright	core somewhat broken			
	0.10						- dull	core somewhat broken			
	0.03						- dull banded	core somewhat broken			
	0.17						- dull	core somewhat broken			
55.17											
	0.09						- dull	core somewhat broken			
	0.03						- dull and bright	core somewhat broken			

DIAMOND DIOL CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7901 SHEET No: 7

DATE BEGUN: JULY 1, 1979 DEPTH: _____ BEARING: 279.5° U.T.M. 6194833.395N;538930.473E

DATE FINISHED: JULY 5, 1979 ELEV. COLLAR: 892.51 metres TOTAL DEPTH: 165 metres COAL LICENSE: 4159

LAT.: ADAMS-DOWLING CREEK HOLE ANGLE: 71.5° LOGGED BY: G. HOFFMAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
Box 12											
		0.30					SILTSTONE - as above				
		0.07					MUDSTONE - dark grey				
		0.02					COAL - dull banded	core solid			
		0.03					- dull and bright	core solid			
		0.03					- dull banded	core solid			
		0.06					- bright	core solid			
50.60		0.06					- bright	core solid			
		1.57				65°	SILTSTONE - dark grey				
52.12		0.67				85°	- as above				
Box 13		0.83					MUDSTONE - dark grey				
53.64		0.36					- as above				
		0.28					CLAYSTONE - light tan, kaolinitic, see gamma log				
		0.53				85°	MUDSTONE - dark grey, bottom half broken				
		0.04					COAL - dull	core somewhat broken			
		0.03					- dull and bright	core somewhat broken			
		0.10					- dull	core somewhat broken			
		0.03					- dull banded	core somewhat broken			
		0.17					- dull	core somewhat broken			
55.17		0.09					- dull	core somewhat broken			
		0.03					- dull and bright	core somewhat broken			

DIAMOND DRILL CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7901 SHEET No: 8

DATE BEGUN: JULY 1, 1979 DEPTH: _____ BEARING: 279.5° U.T.M. 6194833, 395N; 538930.473E

DATE FINISHED: JULY 5, 1979 ELEV. COLLAR: 892.51 metres TOTAL DEPTH: 165 metres COAL LICENSE: 4159

LAT.: ADAMS-DOWLING CREEK HOLE ANGLE: 71.5° LOGGED BY: G. HOFFMAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
		0.05					COAL - bright banded				
		0.13					- dull				
		0.02					- dull banded				
		0.03					- dull				
Box 14											
		0.06					- dull				
		0.03					- dull banded				
		0.34					MUDSTONE - dark grey				
		0.76					SILTSTONE - dark grey				
56.69											
		0.24					- as above				
		0.06					MUDSTONE - dark grey, with coaly inclusions				
		0.02					COAL - bright				
		0.25				78°	MUDSTONE - dark grey				
		0.56					SILTSTONE - dark grey				
		0.06					CLAYSTONE - coaly, with bright coal bands				
58.21											
		0.02					- as above				
		0.14					MUDSTONE - dark grey, coaly inclusions				
Box 15											
		0.80					- as above, slickensides at top of box				

DIAMOND DR. CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7901 SHEET No: 9

DATE BEGUN: JULY 1, 1979 DEPTH: _____ BEARING: 279.5° U.T.M. 6194833, 395N; 538930, 473E

DATE FINISHED: JULY 5, 1979 ELEV. COLLAR: 892.51 metres TOTAL DEPTH: 165 metres COAL LICENSE: 4159

LAT.: ADAMS-DOWLING CREEK HOLE ANGLE: 71.5° LOGGED BY: G. HOFFMAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
	0.19						SILTSTONE - dark grey				
59.74							- as above				
	0.72										
	0.64						MUDSTONE - dark grey				
61.26							- as above				
	0.09										
	0.03						CLAYSTONE - coaly, with bright coal bands				
	0.11						MUDSTONE - dark grey				
Box 16											
	1.31						- as above				
62.79											
	1.42						- as above				
64.31											
	0.05						- as above				
Box 17											
	1.53						- as above				
65.84											
	1.26						- as above				
Box 18											
	1.78						- as above				
68.88											
	0.24						- as above				
	0.18						CLAYSTONE - frequent bright coal bands				
	0.55						MUDSTONE - dark grey				
Box 19											

DIAMOND D_{OL} CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7901 SHEET No: 9

DATE BEGUN: JULY 1, 1979 DEPTH: _____ BEARING: 279.5° U.T.M. 6194833.395N; 538930.473E

DATE FINISHED: JULY 5, 1979 ELEV. COLLAR: 892.51 metres TOTAL DEPTH: 165 metres COAL LICENSE: 4159

LAT.: ADAMS-DOWLING CREEK HOLE ANGLE: 71.5° LOGGED BY: G. HOFFMAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
		0.19					SILTSTONE - dark grey				
59.74		0.72					- as above				
		0.64					MUDSTONE - dark grey				
61.26		0.09					- as above				
		0.03					CLAYSTONE - coaly, with bright coal bands				
		0.11					MUDSTONE - dark grey				
Box 16		1.31					- as above				
62.79		1.42					- as above				
64.31		0.05					- as above				
Box 17		1.53					- as above				
65.84		1.26					- as above				
Box 18		1.78					- as above				
68.88		0.24					- as above				
		0.18					CLAYSTONE - frequent bright coal bands				
		0.55					MUDSTONE - dark grey				
Box 19											

DIAMOND DRILL CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7901 SHEET No: 10

DATE BEGUN: JULY 1, 1979 DEPTH: _____ BEARING: 279.5° U.T.M. 6194833.395N; 538930.473E

DATE FINISHED: JULY 5, 1979 ELEV. COLLAR: 892.51 metres TOTAL DEPTH: 165 metres COAL LICENSE: 4159

LAT.: ADAMS-DOWLING CREEK HOLE ANGLE: 71.5 LOGGED BY: G. HOFFMAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
		0.49				82°	MUDSTONE - dark grey				
70.41		1.10				86°	- as above				
		0.09					CLAYSTONE - bright coal inclusions				
		0.35					MUDSTONE - some coaly bands				
71.93		0.58					- as above				
		0.02					COAL - stoney	core solid			
		0.02					- bright	core solid			
		0.03					- dull banded	core solid			
		0.03					- dull and bright	core solid			
Box 20		0.06					- dull and bright	core solid			
		0.04					- dull	core solid			
		0.02					- stoney	core solid			
		0.03					- dull banded	core solid			
		0.07					- dull	core solid			
		0.02					- bright banded	core solid			
		0.38					SANDSTONE - dark grey, silty				
		0.12				80°	SANDSTONE - grey, medium-grained				
73.46		1.56					- as above				
74.98											

DIAMOND DRILL CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7901 SHEET No: 12

DATE BEGUN: JULY 1, 1979 DEPTH: _____ BEARING: 279.5° U.T.M. 6194833.395N; 538930.473E
 DATE FINISHED: JULY 5, 1979 ELEV. COLLAR: 892.51 metres TOTAL DEPTH: 165 metres COAL LICENSE: 4159
 LAT.: ADAMS-DOWLING CREEK HOLE ANGLE: 71.5° LOGGED BY: G. HOFFMAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
		0.05					COAL - dull banded	core solid			
		0.07					- bright	core solid			
		0.02					- dull and bright	core solid			
		0.05					- dull banded	core solid			
		0.05					- bright	core solid			
		0.03					- dull	core solid			
		0.03					- dull and bright	core solid			
88.70											
		0.07					- bright	core solid			
		0.59					MUDSTONE - dark grey				
Box 26											
		0.88				84°	- as above				
90.22											
		1.45				87°	- as above				
91.74											
		0.44				84°	- as above				
Box 27											
		1.11				85°	SILTSTONE - dark grey, sandy				
93.27											
		0.48				85°	MUDSTONE - dark grey				
		0.10					COAL - bright	core broken			
		0.04					- stoney	core solid			
		0.13					CLAYSTONE - coaly				
		0.07					COAL - dull	core broken			
		0.07					- dull and bright	core broken			

DIAMOND DR. CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7901 SHEET No: 13

DATE BEGUN: JULY 1, 1979 DEPTH: _____ BEARING: 279.5° U.T.M. 6194833.395N; 538930.473E

DATE FINISHED: JULY 5, 1979 ELEV. COLLAR: 892.51 metres TOTAL DEPTH: 165 metres COAL LICENSE: 4159

LAT.: ADAMS-DOWLING CREEK HOLE ANGLE: 71.5° LOGGED BY: G. HOFFMAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
		0.03					COAL - dull				
		0.03					- dull and bright	core broken			
		0.11					- dull	core solid			
		0.06					- dull banded	core solid			
		0.06					- dull and bright	core solid			
		0.01					- bright	core solid			
		0.03					- dull	core solid			
		0.02					- bright	core solid			
		0.16					- bright banded	core solid			
94.79											
		0.10					- bright banded	core solid			
Box 28											
		0.11					- bright banded	core broken			
		0.03					- bright	core broken			
		0.04					- dull and bright	core broken			
		0.93				80°	SILTSTONE - dark grey, with sandy lenses				
		0.14					COAL - bright				
		0.17				82°	SILTSTONE - dark grey, sandy lenses				
96.32											
		1.31					- as above				
Box 29											
		0.15					- as above				
97.84											
		1.51				85°	- as above				
99.36											
		1.06				85°	- as above				
Box 30											

DIAMOND DRILL CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7901 SHEET No: 14

DATE BEGUN: JULY 1, 1979 DEPTH: _____ BEARING: 279.5° U.T.M. 6194833.395N;538930.473E

DATE FINISHED: JULY 5, 1979 ELEV. COLLAR: 892.51 metres TOTAL DEPTH: 165 metres COAL LICENSE: 4159

LAT.: ADAMS-DOWLING CREEK HOLE ANGLE: 71.5° LOGGED BY: G. HOFFMAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
Box 30											
	0.41						SILTSTONE - as above				
100.89											
	1.23					79°	- as above, a few coaly bands				
	0.08						COAL - dull banded	core solid			
	0.03						- dull	core solid			
	0.05						- bright banded	core solid			
	0.03						- bright	core solid			
102.41											
	0.04						- bright banded	core solid			
	0.12						- bright	core solid			
	0.07						- dull banded	core solid			
	0.05						- dull	core solid			
	0.02						- bright	core solid			
	0.02						- bright banded	core solid			
	0.10						- dull banded	core solid			
	0.01						- bright	core solid			
	0.04						- dull and bright	core solid			
	0.12						- dull banded	core solid			
	0.03						- dull and bright	core solid			
	0.08						- bright banded	core solid			
	0.16						MUDSTONE - dark grey				
Box 31											
	0.48						- as above, some coaly inclusions				
103.94											
	1.28						- as above				

DIAMOND DR. CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7901 SHEET No: 14

DATE BEGUN: JULY 1, 1979 DEPTH: _____ BEARING: 279.5° U.T.M. 6194833.395N; 538930.473E

DATE FINISHED: JULY 5, 1979 ELEV. COLLAR: 892.51 metres TOTAL DEPTH: 165 metres COAL LICENSE: 4159

LAT.: ADAMS-DOWLING CREEK HOLE ANGLE: 71.5° LOGGED BY: G. HOFFMAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
Box 30											
		0.41					SILTSTONE - as above				
100.89											
		1.23				79°	- as above, a few coaly bands				
		0.08					COAL - dull banded	core solid			
		0.03					- dull	core solid			
		0.05					- bright banded	core solid			
		0.03					- bright	core solid			
102.41											
		0.04					- bright banded	core solid			
		0.12					- bright	core solid			
		0.07					- dull banded	core solid			
		0.05					- dull	core solid			
		0.02					- bright	core solid			
		0.02					- bright banded	core solid			
		0.10					- dull banded	core solid			
		0.01					- bright	core solid			
		0.04					- dull and bright	core solid			
		0.12					- dull banded	core solid			
		0.03					- dull and bright	core solid			
		0.08					- bright banded	core solid			
		0.16					MUDSTONE - dark grey				
Box 31											
		0.48					- as above, some coaly inclusions				
103.94											
		1.28					- as above				

DIAMOND DRILL CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7901 SHEET No: 15

DATE BEGUN: JULY 1, 1979 DEPTH: _____ BEARING: 279.5° U.T.M. 6194833, 395N; 538930, 473E
 DATE FINISHED: JULY 5, 1979 ELEV. COLLAR: 892.51 metres TOTAL DEPTH: 165 metres COAL LICENSE: 4159
 LAT.: ADAMS-DOWLING CREEK HOLE ANGLE: 71.5° LOGGED BY: G. HOFFMAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
		0.02					COAL - bright core solid				
		0.05					- dull banded core solid				
		0.01					- bright core solid				
		0.10					- bright banded core solid				
		0.03					- bright core solid				
105.46											
		0.01					- dull core solid				
		0.05					- bright banded core solid				
		0.52					MUDSTONE - dark grey, some coaly inclusions				
Box 32		0.59				80°	- as above				
106.98											
		0.14					- as above				
		0.05					COAL - bright core solid				
		0.08					MUDSTONE - coaly				
		0.08					COAL - bright core solid				
		0.34					MUDSTONE - dark grey				
		0.02					COAL - dull core solid				
		0.18					- bright core solid				
		0.35					MUDSTONE - dark grey, coaly at top				
108.51											
		0.75				78°	- as above				
Box 33											

DIAMOND DRILL CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7901 SHEET No: 16
 DATE BEGUN: JULY 1, 1979 DEPTH: _____
 DATE FINISHED: JULY 5, 1979 ELEV. COLLAR: 892.51 metres TOTAL DEPTH: 165 metres
 LAT.: ADAMS-DOWLING CREEK HOLE ANGLE: 71.5°

BEARING: 279.5° U.T.M. 6194833.395N; 538930.473E
 COAL LICENSE: 4159
 LOGGED BY: G. HOFFMAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
Box 33											
		0.73				88°	SILTSTONE - dark grey				
110.03		1.58					- as above				
111.56		0.47				85°	- as above				
Box 34		0.98				81°	- as above				
113.08		0.57					- as above				
		0.21					COAL - bright				
		0.14					CLAYSTONE - carbonaceous				
		0.06					COAL - dull banded				core broken
		0.02					- bright				core broken
		0.02					- dull				core broken
		0.08					- bright banded				core broken
		0.03					- dull				core broken
		0.03					- stoney				core broken
		0.14					SILTSTONE - grey				
		0.19					COAL - bright				core solid
114.60		0.23				85°	SILTSTONE - dark grey				
Box 35											

DIAMOND DR. CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7901 SHEET No: 17

DATE BEGUN: JULY 1, 1979 DEPTH: _____ BEARING: 279.5° U.T.M. 6194833, 395N; 538930, 473E

DATE FINISHED: JULY 5, 1979 ELEV. COLLAR: 892.51 metres TOTAL DEPTH: 165 metres COAL LICENSE: 4159

LAT.: ADAMS-DOWLING CREEK HOLE ANGLE: 71.5° LOGGED BY: G. HOFFMAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
Box 35											
		1.29				78°	SILTSTONE - as above				
116.13											
		1.55				80°	- as above				
Box 36											
117.65											
		1.40				84°	- as above				
		0.04					COAL - dull and bright				
119.18											
		1.22					SILTSTONE - dark grey, coaly bands at top				
Box 37											
120.70											
		0.26					- as above				
		0.02					COAL - bright banded	core solid			
		0.02					- dull banded	core solid			
		0.01					- bright	core solid			
		0.02					- dull	core solid			
		1.26				78°	SILTSTONE - dark grey, coaly bands at top				
122.2											
		1.22					- as above, sandy at base				
Box 38											
		0.28				84°	SANDSTONE - grey, medium-grained				
123.75											
		1.50				84°	- as above				
125.27											
		1.00				87°	- as above, silty at base				
Box 39											

DIAMOND DR CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7901 SHEET No: 18

DATE BEGUN: JULY 1, 1979 DEPTH: _____ BEARING: 279,5° U.T.M. 6194833,395N;538930.473E

DATE FINISHED: JULY 5, 1979 ELEV. COLLAR: 892.51 metres TOTAL DEPTH: 165 metres COAL LICENSE: 4159

LAT.: ADAMS DOWLING CREEK HOLE ANGLE: 71.5° LOGGED BY: G. HOFFMAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
Box 39											
		0.60				78°	SILTSTONE - as above				
127.80											
		1.42				79°	- as above, some large sandy lenses				
128.32											
		0.82				85°	- as above				
Box 40											
		0.76				79°	- as above				
129.84											
		1.37					MUDSTONE - dark grey				
131.37											
		0.03					COAL - bright	core solid			
		0.06					- bright banded	core solid			
		0.23					MUDSTONE - dark grey				
		0.04					COAL - bright banded	core solid			
		0.05					- bright	core solid			
		0.05				90°	SILTSTONE - dark grey				
Box 41											
		1.19				84°	- as above				
132.89											
		1.47				88°	- as above				
134.41											
		0.17					- as above				
Box 42											
		1.38				83°	- as above				
135.94											
		1.50				80°	- as above				
137.46											
Box 43											

DIAMOND DR CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7901 SHEET No: 19

DATE BEGUN: JULY 1, 1979 DEPTH: _____ BEARING: 279.5° U.T.M. 6194833.395N;538930.473E
 DATE FINISHED: JULY 5, 1979 ELEV. COLLAR: 892.51 metres TOTAL DEPTH: 165 metres COAL LICENSE: 4159
 LAT.: ADAMS-DOWLING CREEK HOLE ANGLE: 71.5° LOGGED BY: G. HOFFMAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
Box 43											
		1.52				79°	SILTSTONE - as above				
138.99											
		1.27				77°	- as above, coaly bands near base				
Box 44											
		0.27					- as above, coaly				
		0.12					COAL - dull and bright				core broken
		0.11					- bright				core broken
		1.25				78°	SILTSTONE - dark grey, sandy at base				
142.04											
		0.94				85°	SANDSTONE - grey, medium-grained				
Box 45											
		0.54					- as above				
143.56											
		0.92					- as above				
		0.17					COAL - dull				core broken
		0.07					- dull banded				core solid
		0.14					- dull				core solid
		0.05					- bright				core solid
		0.32				79°	SANDSTONE - grey, medium-grained, silty at top				
145.08											
		0.71					- as above				
Box 46											
		0.79				81°	- as above				
146.61											
		1.56					- as above, silty at base				
148.13											

DIAMOND DRILL CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7901 SHEET No: 20

DATE BEGUN: JULY 1, 1979 DEPTH: _____ BEARING: 279.5° U.T.M. 6194833.395N;538930.473E

DATE FINISHED: JULY 5, 1979 ELEV. COLLAR: 892.51 metres TOTAL DEPTH: 165 metres COAL LICENSE: 4159

LAT.: ADAMS-DOWLING CREEK HOLE ANGLE: 71.5° LOGGED BY: G. HOFFMAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
			0.39			80°	SILTSTONE - dark grey				
Box 47											
			0.95			79°	- as above				
149.66											
			1.57			78°	- as above				
151.18											
			0.13				- as above				
Box 48											
			1.42			80°	- as above				
152.70											
			1.46			88°	- as above				
Box 49											
154.23											
			1.56				- as above				
155.75											
			0.38				- as above				
			0.13				COAL - dull banded				
			0.05				- dull and bright				
			0.04				- dull				
							core broken				
							core solid				
							core solid				
			0.49			81°	SILTSTONE - dark grey				
Box 50											
			0.28				- as above				
157.27											
			0.59			79°	- as above, sandy at base				
			0.34				CONGLOMERATE - pebbles up to 5mm, much sandy matrix				

DIRECTIONAL LOVEY

ROKE OIL ENTERPRISES LTD.

COMPANY: CROWS NEST RESOURCES LTD.

GRID: _____

DATE SURVEYED: JULY 10, 1979

DRILLHOLE: 79 - 02

LATITUDE: _____

SURVEY BY: PUBANZ

LOCATION: PEACE RIVER LAND DISTRICT

DEPARTURE: _____

WITNESSED BY : HOFFMAN

FIELD: ADAMS COAL PROPERTY, B.C.

ELEVATION: _____

CALCULATIONS BY: _____

MAGNETIC DECLINATION: _____

CORRECTION OF: _____

FOR: _____ GRID: _____

Number	Cable Depth	Slant Angle	Slant Angle Bearing	Number	Cable Depth	Slant Angle	Slant Angle Bearing	Number	Cable Depth	Slant Angle	Slant Angle Bearing
0	20	26.3	47.7	11				22			
1	33	26.0	52.4	12				23			
2	40	26.3	49.3	13				24			
3	43	26.5	50.4	14				25			
4	60	26.0	47.4	15				26			
5	64	26.0	47.4	16				27			
6	75	26.3	55.6	17				28			
7	80	26.0	58.1	18				29			
8	100	26.3	57.5	19				30			
9	120	26.7	54.0	20				31			
10	130	26.0	62.8	21				32			

DIAMOND DRILL CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7902 SHEET No: ONE

DATE BEGUN: JULY 7, 1979 DEPTH: _____ BEARING: 53° U.T.M. 6197678.2N; 535693.8E
 DATE FINISHED: JULY 9, 1979 ELEV. COLLAR: 908.81 metres TOTAL DEPTH: 134.4 metres COAL LICENSE: 4164
 LAT.: ADAMS-GETHING CREEK HOLE ANGLE: 26.5° LOGGED BY: G. HOFFMAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
							ALLUVIUM - no core				
Box 1											
	0.63						SILTSTONE - dark grey with irregular sandy beds				
14.02											
	0.70					50°	- as above				
	0.30					50°	MUDSTONE - dark grey				
	0.05						COAL - dull and bright, pyrite core solid				
15.54											
	0.10						- stoney, pyrite core solid				
	0.03						- bright core solid				
	0.09						CLAYSTONE - coaly, dark grey				
	0.34					50°	SANDSTONE - light grey, fine-grained, silty				
Box 2											
	0.81						- as above				
17.07											
	0.66					55°	- as above				
	0.14						MUDSTONE - grey, sheared, core broken				
	0.08						COAL -dull, pyrite				
	0.26						MUDSTONE - dark grey				
18.59											
	0.12						- sheared, core broken				
	0.30						- not sheared or broken				
Box 3											

DIAMOND DRILL CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7902 SHEET No: 2
 DATE BEGUN: JULY 7, 1979 DEPTH: _____ BEARING: 53°
 DATE FINISHED: JULY 9, 1979 ELEV. COLLAR: 908.81 metres TOTAL DEPTH: 134.4 metres U.T.M. 6197678.2N;535693.8E
 LAT.: ADAMS-GETHING CREEK HOLE ANGLE: 26.5° LOGGED BY: G. HOFFMAN COAL LICENSE: 4164
 CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
Box 3											
		0.47					MUDSTONE - as above, some sheared and broken with calcite veins and slicken sides				
		0.06					COAL - bright, pulverized				
		0.15					MUDSTONE - dark grey, sheared and broken				
20.12		1.42				55°	SANDSTONE - light grey, medium-grained, silty at top, calcite veins				
21.64		0.14					- as above, calcite veins				
Box 4		1.32				50°	- as above, siltstone clasts at top, calcite veins				
23.16		0.34					- as above, coaly wisps at base				
		0.95					MUDSTONE - grey, calcite veins, cor broken				
Box 5											
24.69		0.63				60°	- as above, silty at base				
		0.36					SANDSTONE - medium-grained, with siltstone clasts and coaly wisps				
		0.28					COAL - dull, sheared and broken				
26.21		0.11					- as above				
		0.03					SILTSTONE - dark grey				
		0.02					COAL - dull, sheared				
		0.03					- bright				

DIAMOND DR. CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7902 SHEET No: 3

DATE BEGUN: JULY 7, 1979 DEPTH: _____ BEARING: 53° U.T.M. 6197678.2N;535693.8E

DATE FINISHED: JULY 9, 1979 ELEV. COLLAR: 908.81 metres TOTAL DEPTH: 134.4 metres COAL LICENSE: 4164

LAT.: ADAMS-GETHING CREEK HOLE ANGLE: 26.5° LOGGED BY: G.HOFFMAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
		0.06					CLAYSTONE - dark grey, coaly				
		0.06					SANDSTONE - light grey, medium-grained				
		0.83					MUDSTONE - dark grey, silty, sheared at top				
Box 6											
27.74		0.28				50°	SILTSTONE - dark grey				
		0.02					CLAYSTONE - carbonaceous				
		1.16					SILTSTONE - dark grey				
		0.29				55°	SANDSTONE - light grey, medium-grained, silty, calcite veins				
29.26		0.82					- as above				
Box 7											
		0.51					- as above				
		0.57					MUDSTONE - dark grey with sandy beds, calcite veins				
		0.02					COAL - bright, sheared				
		0.24					SILTSTONE - dark grey				
		0.02					COAL - bright, sheared				
		0.87					SILTSTONE - dark grey				
32.31											
							NOTE: This is a possible FAULT ZONE. Note shearing and change in dip below the coaly section.				

DIAMOND DRILL CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7902 SHEET No: 4
 DATE BEGUN: JULY 7, 1979 DEPTH: _____ BEARING: 53°
 DATE FINISHED: JULY 9, 1979 ELEV. COLLAR: 908.81 metres TOTAL DEPTH: 134.4 metres COAL LICENSE: 4164
 LAT.: ADAMS-GETHING CREEK HOLE ANGLE: 26.5° LOGGED BY: G. HOFFMAN CORE SIZE: HQ

U.T.M. 6197678.2N; 535693.8E

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
32.31											
		0.04					COAL - bright, heavily sheared				
		0.12					- dull banded, core pulverized				
		0.29					CLAYSTONE - dark grey, sheared, slickensides				
		0.09					COAL - dull, heavily sheared				
		0.13					- dull and bright, core pulverized				
Box 8		0.06					- as above				
		0.19					- dull, heavily sheared				
33.83											
		0.37					SILTSTONE - dark grey				
		0.13					COAL - dull, sheared and pulverized				
		0.15					MUDSTONE - dark grey				
		0.02					COAL - dull, heavily sheared				
		0.38					MUDSTONE - dark grey, heavily sheared and broken				
35.36											
		0.88				85°	SILTSTONE - grey, unbroken, sandy beds				
Box 9		0.50				80°	- as above				
36.88											
		1.41					- as above				
38.40											
		0.65				85°	- as above				
Box 10											

DIAMOND DR. CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7902 SHEET No: 5

DATE BEGUN: JULY 7, 1979 DEPTH: _____ BEARING: 53° U.T.M. 6197678.2N;535693.8E

DATE FINISHED: JULY 9, 1979 ELEV. COLLAR: 908.81 metres TOTAL DEPTH: 134.4 metres COAL LICENSE: 4164

LAT.: ADAMS-GETHING CREEK HOLE ANGLE: 26.5° LOGGED BY: G. HOFFMAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
Box 10		0.83					SILTSTONE - grey, sandy				
39.93		1.47				70°	- as above				
41.45		0.41					- as above				
Box 11		1.10					- as above				
42.98		1.52				80°	MUDSTONE - dark grey				
44.50											
Box 12		1.29				85°	- as above				
					45.65		CORE LOSS - 0.12 m coal				
		0.08					COAL - dull	core broken	No. 3A		
		0.11					- dull and bright	core solid	No. 3A		
		0.05					- dull	core solid	No. 3A		
46.02											
		0.05					- dull	core solid	No. 3A		
		0.04					- dull banded	core solid	No. 3A		
		0.01					- bright banded	core solid	No. 3A		
		0.05					- dull	core solid	No. 3A		
		0.02					- bright	core solid	No. 3A		
		0.03					- dull and bright	core solid	No. 3A		
		0.07					- dull banded, much pyrite	core solid	No. 3A		
		0.06					- dull	core solid	No. 3A		
		0.12					- dull banded, sheared	core solid	No. 3A		
		0.07					- bright banded, much pyrite	core solid	No. 3A		

DIAMOND DR. CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7902 SHEET No: 6

DATE BEGUN: JULY 7, 1979 DEPTH: _____ BEARING: 53° U.T.M. 6197678.2N; 535693.8E

DATE FINISHED: JULY 9, 1979 ELEV. COLLAR: 908.81 metres TOTAL DEPTH: 134.4 metres COAL LICENSE: 4164

LAT.: ADAMS-GETHING CREEK HOLE ANGLE: 26.5° LOGGED BY: G. HOFFMAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
		0.07					COAL - dull and bright	core solid	No.3A		
		0.01					- bright	core solid	No.3A		
		0.05					- dull banded	core solid	No.3A		
		0.04					- dull	core solid	No.3A		
		0.05					- dull and bright	core solid	No.3A		
		0.07					- bright banded	core broken	No.3A		
47.55											
Box 13							CORE LOSS - 0.68 m coal				
		0.17					COAL - dull banded	core broken	No.3B		
		0.05					- dull and bright, heavily sheared, pulverized		No.3B		
		0.21					- dull banded, heavily sheared, core broken		No.3B		
		0.11					- bright banded, heavily sheared, pulverized		No.3B		
							CORE LOSS - 0.44 m coal				
	2.83		2.73	56.2%	48.48						
		0.13					CLAYSTONE - dark grey, core broken				
		0.22					SILTSTONE - dark grey, sheared at top				
49.07											
		1.17				75°	- as above				
		0.26				75°	SANDSTONE - light grey, medium-grained				
		0.09					SILTSTONE - dark grey				
50.60											
		0.13					MUDSTONE - dark grey, carbonaceous at top				
Box 14											
		0.68					- as above				
		0.61				75°	- as above, silty				
		1.36					- as above, not silty				

DIAMOND DRILL CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7902 SHEET No: 7

DATE BEGUN: JULY 7, 1979 DEPTH: _____ BEARING: 53° U.T.M. 6197678.2N;535693.8E

DATE FINISHED: JULY 9, 1979 ELEV. COLLAR: 908.81 metres TOTAL DEPTH: 134.4 metres COAL LICENSE: 4164

LAT.: ADAMS-GETHING CREEK HOLE ANGLE: 26.5° LOGGED BY: G. HOFFMAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
53.64											
Box 15		1.48				80°	SILTSTONE - dark grey				
		1.34				80°	- as above				
Box 16		0.22					MUDSTONE - dark grey				
56.69		1.43					- as above				
		0.69				75°	- as above, silty				
Box 17		0.61					- as above, not silty				
59.74		1.36					- as above				
61.26		0.70				75°	SILTSTONE - dark grey				
Box 18		0.78				75°	- as above				
62.79		1.57				80°	- as above				
64.31		0.30					- as above				
Box 19		0.60				75°	- as above, sandy interbeds at base				
		0.25					MUDSTONE - dark grey				
		0.04					COAL - dull banded				core solid
		0.04					- dull				core solid
		0.02					- dull and bright				core solid
		0.04					- dull banded				core solid

DIAMOND DRILL CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7902 SHEET No: 8

DATE BEGUN: JULY 7, 1979 DEPTH: _____ BEARING: 53° U.T.M. 6197678.2N;535693.8E
 DATE FINISHED: JULY 9, 1979 ELEV. COLLAR: 908.81 metres TOTAL DEPTH: 134.4 metres COAL LICENSE: 4164
 LAT. ADAMS-GETHING CREEK HOLE ANGLE: 26.5° LOGGED BY: G. HOFFMAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
		0.09					COAL - dull core solid				
		0.04					- dull banded core solid				
65.84											
		0.07					- dull and bright core solid				
		0.02					- bright core solid				
		0.05					- dull banded, sheared core broken				
		0.13					CLAYSTONE - dark grey, carbonaceous				
		0.05					COAL - bright banded core solid				
		0.02					- bright core solid				
		0.03					- dull banded core solid				
		0.03					- bright core solid				
		0.17					CLAYSTONE - dark grey, carbonaceous				
		0.04					COAL - dull and bright, sheared core broken				
		0.14					MUDSTONE - dark grey				
		0.41				75°	SILTSTONE - grey, sandy				
67.36											
		0.22					- as above				
Box 20											
		0.20					- as above				
		0.44					SANDSTONE - medium-grained, calcite veins				

DIAMOND DI CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7902 SHEET No: 9

DATE BEGUN: JULY 7, 1979 DEPTH: _____ BEARING: 53° U.T.M. 6197678, 2N; 535693, 8E

DATE FINISHED: JULY 9, 1979 ELEV. COLLAR: 908.81 metres TOTAL DEPTH: 134.4 metres COAL LICENSE: 4164

LAT.: ADAMS-GETHING CREEK HOLE ANGLE: 26.5° LOGGED BY: G. HOFFMAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
		0.65				65°	SILTSTONE - dark grey, sandy interbeds				
68.88		1.31				75°	MUDSTONE - dark grey				
70.41											
Box 21		1.33					- as above				
		0.38					SANDSTONE - light grey, medium-grained, silty interbeds				
71.93		1.22					- as above				
Box 22		0.17					- as above				
73.46		0.81				75°	SILTSTONE - dark grey				
		0.07					COAL - bright banded	core solid			
		0.21					- dull banded, sheared	core solid			
		0.05					- dull, sheared	core solid			
		0.11					- bright banded, sheared	core solid			
		0.17					- dull banded, sheared	core pulverized			
74.98		0.08					- dull banded, sheared	core solid			
		0.06					- bright banded	core solid			
		0.09					- dull banded, sheared	core solid			
		0.09					- dull	core solid			
		0.17					- dull, sheared	core pulverized			

DIAMOND DRILL CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7902 SHEET No: 10

DATE BEGUN: JULY 7, 1979 DEPTH: _____ BEARING: 53° U.T.M. 6197678.2N, 535693.8E

DATE FINISHED: JULY 9, 1979 ELEV. COLLAR: 908.81 metres TOTAL DEPTH: 134.4 metres COAL LICENSE: 4164

LAT.: ADAMS-GETHING CREEK HOLE ANGLE: 26.5° LOGGED BY: G. HOFFMAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
		0.22					MUDSTONE - as above				
Box 23		0.78					- as above				
76.50		1.45				75°	- as above, silty at centre				
78.03		0.07					COAL - dull, sheared				
		0.02					- bright, sheared				
		0.23					MUDSTONE - dark grey				
Box 24		0.26					- as above				
		0.14					- as above, coaly inclusions				
		0.71					- as above, no inclusions				
79.55		1.53					- as above, silty at base				
81.08											
Box 25						80°	SANDSTONE - light grey, medium-grained				
		0.76					siltstone clasts at base				
		0.05					MUDSTONE - dark grey				
		0.05					COAL - stoney				core solid
		0.05					- dull and bright				core solid
		0.02					- bright banded				core solid
		0.04					- dull, pyrite				core solid
		0.03					- dull banded, pyrite				core solid

DIAMOND DRILL CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7902 SHEET No: 11

DATE BEGUN: JULY 7, 1979 DEPTH: _____ BEARING: 53° U.T.M. 6197678.2N;535693.8E

DATE FINISHED: JULY 9, 1979 ELEV. COLLAR: 908.81 metres TOTAL DEPTH: 134.4 metres COAL LICENSE: 4164

LAT.: ADAMS-GETHING CREEK HOLE ANGLE: 26.5° LOGGED BY: G. HOFFMAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
		0.06					COAL - dull and bright				
		0.02					- bright banded				
		0.09					- bright				
		0.10					MUDSTONE - dark grey				
82.60		0.39				80°	SILTSTONE - dark grey, sandy interbeds at base				
		0.86				75°	SANDSTONE - light grey, silty interbeds at top and base, some siltstone interbeds				
Box 26		0.21				80°	- as above				
84.12		0.85				75°	- as above				
		0.63				80°	MUDSTONE - dark grey, some silty interbeds				
85.65		1.01				80°	- as above				
Box 27		0.42					- as above				
87.17		0.53				85°	- as above				
		0.12					- as above, coaly				
		0.06					COAL - dull and bright				
		0.29					MUDSTONE - dark grey				

DIAMOND DRILL CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7902 SHEET No: 12

DATE BEGUN: JULY 7, 1979 DEPTH: _____ BEARING: 53° U.T.M. 6197678, 2N; 535693, 8E

DATE FINISHED: JULY 9, 1979 ELEV. COLLAR: 908.81 metres TOTAL DEPTH: 134.4 metres COAL LICENSE: 4164

LAT.: ADAMS-GETHING CREEK HOLE ANGLE: 26.5° LOGGED BY: G. HOFFMAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
		0.38				75°	SANDSTONE - light grey, medium-grained, silty at top				
88.70		0.70					- as above				
Box 28		0.53				75°	- as above				
90.22		1.49				80°	- as above				
91.74		0.61				70°	- as above				
		0.01					COAL - bright				
		0.06					SANDSTONE - as above				
Box 29		0.46					- as above				
		0.29				75°	MUDSTONE - dark grey				
93.27		1.44					- as above, silty at base				
94.79		0.39				75°	SILTSTONE - dark grey				
Box 30		1.12				80°	- as above, irregular sandy interbeds				
96.32		0.67					- as above, includes small siltstone clasts				
		0.58					SANDSTONE - light grey, fine-grained				
97.84		0.05					- as above				
Box 31											

DIAMOND DR. CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7902 SHEET No: 13

DATE BEGUN: JULY 7, 1979 DEPTH: _____ BEARING: 53° U.T.M. 6197678.2N;535693.8E

DATE FINISHED: JULY 9, 1979 ELEV. COLLAR: 908.81 metres TOTAL DEPTH: 134.4 metres COAL LICENSE: 4164

LAT.: ADAMS-GETHING CREEK HOLE ANGLE: 26.5° LOGGED BY: G. HOFFMAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
Box 3L											
		0.41				70°	SANDSTONE - as above				
		0.29				60°	- medium-grained, with siltstone clasts				
		0.75				70°	- as above, siltstone interbeds, no clasts				
99.36											
		0.34				80°	SILTSTONE - dark grey, sandy interbeds				
		0.06					COAL - stoney with bright bands core solid				
		0.15					- dull core broken				
		0.09					- bright core pulverized				
		0.27					MUDSTONE - dark grey				
		0.30				80°	SILTSTONE - dark grey				
Box 32											
100.89											
		0.69					- as above, core broken, some calcite veins				
		0.26					COAL - dull banded core pulverized				
		0.14					SILTSTONE - dark grey				
102.41											
		1.46				75°	- as above				
Box 3B											
103.94											
		0.53					- as above				
		0.46					MUDSTONE - dark grey				

DIAMOND DRILL CORE LOG

(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7902 SHEET No: 14
 DATE BEGUN: JULY 7, 1979 DEPTH: _____ BEARING: 53° U.T.M. 6197678, 2N; 535693.8E
 DATE FINISHED: JULY 9, 1979 ELEV. COLLAR: 908.81 metres TOTAL DEPTH: 134.4 metres COAL LICENSE: 4164
 LAT.: ADAMS-GETHING CREEK HOLE ANGLE: 26.5° LOGGED BY: G. HOFFMAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
		0.04					COAL - dull and bright				
		0.04					- dull				
		0.04					- dull banded				
		0.05					- bright banded				
		0.08					- bright				
		0.04					- pyrite and stoney coal				
		0.06					- bright				
		0.03					- dull banded				
		0.04					MUDSTONE - dark grey, carbonaceous				
105.46		1.20				80°	SILTSTONE - dark grey, sandy interbeds				
Box 34		0.32					- as above				
106.98		1.38				80°	- as above				
		0.17					SANDSTONE - fine-grained, light grey				
108.51		0.86				70°	- as above				
Box 35		0.65				80°	SILTSTONE - dark grey				
110.03		1.55					- as above, sandy at base				
111.56		0.71				80°	SANDSTONE - light grey, fine-grained				
Box 36		0.70				80°	- as above				
		0.60					SILTSTONE - dark grey				
113.08											

DIAMOND DR. CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7902 SHEET No: 15

DATE BEGUN: JULY 7, 1979 DEPTH: _____ BEARING: 53° U.T.M. 6197678.2N;535693.8E

DATE FINISHED: JULY 9, 1979 ELEV. COLLAR: 908.81 metres TOTAL DEPTH: 134.4 metres COAL LICENSE: 4164

LAT.: ADAMS-GETHING CREEK HOLE ANGLE: 26.5° LOGGED BY: G. HOFFMAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
113.08											
		0.07					COAL - bright banded				core broken
		0.08					- dull banded				core broken
		0.05					- dull and bright				core broken
		0.03					- bright				core broken
		0.05					SANDSTONE - light grey, medium-grained				
		0.05					COAL - dull banded				core broken
		0.06					- dull and bright				core solid
		1.06				72°	SILTSTONE - dark grey				
114.60		0.21					- as above				
Box 37		1.15				75°	- as above				
		0.02					COAL - bright				
116.13		0.17					SILTSTONE - dark grey				
		1.25				65°	SANDSTONE - fine and medium-grained, silty at top				
117.65											
Box '38		1.50				70°	- as above, with calcite veins				
119.18		0.66					- as above, with beds of siltstone clasts				
		0.61				80°	SILTSTONE - dark grey				
Box 39											

DIAMOND DRILL CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7902 SHEET No: 16

DATE BEGUN: JULY 7, 1979 DEPTH: _____ BEARING: 53° U.T.M. 6197678.2N; 535693.8E

DATE FINISHED: JULY 9, 1979 ELEV. COLLAR: 908.81 metres TOTAL DEPTH: 134.4 metres COAL LICENSE: 4164

LAT.: ADAMS-GETHING CREEK HOLE ANGLE: 26.5° LOGGED BY: G. HOFFMAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
Box 39			0.28			85°	SILTSTONE - as above, sandy interbeds				
120.70			1.07				- as above				
			0.20				COAL - bright banded core solid				
			0.07				MUDSTONE - dark grey, coaly at top				
122.22			1.09			85°	- dark grey, silty				
123.44			0.60			85°	- as above				
Box 40			1.00			75°	SILTSTONE - grey, sandy				
124.97			1.11			80°	- as above				
Box 41			0.52				MUDSTONE - dark grey, with thin silty beds				
126.58			1.13				- as above				
			0.31			75°	- as above, with frequent irregular sandy beds, bioturbation				
128.20			0.02			85°	- as above				
			0.21				COAL - dull and bright core broken				
			0.46			80°	SILTSTONE - dark grey				

DIRECTIONAL SURVEY

ROKE OIL ENTERPRISES LTD.

COMPANY: CROWS NEST RESOURCES LTD.

GRID: _____

DATE SURVEYED: JULY 12, 1979

DRILLHOLE: 79 - 03

LATITUDE: _____

SURVEY BY: PUBANZ

LOCATION: PEACE RIVER LAND DISTRICT

DEPARTURE: _____

WITNESSED BY : HOFFMAN

FIELD: ADAMS COAL PROPERTY, B.C.

ELEVATION: _____

CALCULATIONS BY: _____

MAGNETIC DECLINATION: _____

CORRECTION OF: _____

FOR: _____ GRID: _____

Number	Cable Depth	Slant Angle	Slant Angle Bearing	Number	Cable Depth	Slant Angle	Slant Angle Bearing	Number	Cable Depth	Slant Angle	Slant Angle Bearing
0	0	1.2	-	11	220	14.6	22.8	22			
1	20	2.3	312.4	12	240	15.6	21.0	23			
2	40	1.5	348.4	13	260	* 17.3 18.1	23.4 17.9	24			
3	60	* 7.2 5.2	4.8 6.4	14	280	18.8	23.7	25			
4	80	8.2	12.1	15	300	19.6	24.7	26			
5	100	8.0	20.7	16	308	19.3	23.8	27			
6	120	11.7	18.9	17	320	22.0	26.5	28			
7	140	13.4	20.1	18				29			
8	160	* 14.3 135	23.0 23.4	19				30			
9	180	15.2	23.0	20				31			
10	200	15.1	23.1	21				32			

* REPEATS

DIRECTIONAL VEY

ROKE OIL ENTERPRISES LTD.

COMPANY: CROWS NEST RESOURCES LTD

GRID: _____

DATE SURVEYED: JULY 19, 1979

DRILLHOLE: D - 79 - 04

LATITUDE: _____

SURVEY BY: PUBANZ

LOCATION: PEACE RIVER LAND DISTRICT

DEPARTURE: _____

WITNESSED BY : HOFFMAN

FIELD: ADAMS COAL PROPERTY, B.C.

ELEVATION: _____

CALCULATIONS BY: _____

MAGNETIC DECLINATION: _____

CORRECTION OF: _____

FOR: _____ GRID: _____

Num- ber	Cable Depth	Slant Angle	Slant Angle Bearing	Num- ber	Cable Depth	Slant Angle	Slant Angle Bearing	Num- ber	Cable Depth	Slant Angle	Slant Angle Bearing
0	0	15	-	11	180	13.8	330.1	22			
1	20	14.9	-	12	200	13.5	330.2	23			
2	40	15.3	-	13	220	13.1	330.6	24			
3	60	* 15.0 14.8	330.5 333.7	14	240	*12.3 12.7	331.2 330.5	25			
4	80	14.7	332.4	15	260	12.7	328.0	26			
5	100	14.6	331.0	16	270	12.8	331.3	27			
6	106	13.6	332.4	17				28			
7	120	14.1	332.2	18				29			
8	140	* 14.2 13.2	330.7 324.1	19				30			
9	151	13.4	328.8	20				31			
10	160	13.2	329.6	21				32			

* REPEATS

DIAMOND DRILL CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7904 SHEET No: ONE

DATE BEGUN: JULY 12, 1979 DEPTH: _____ BEARING: 330° U.T.M. 6194897.1N;538064.7E

DATE FINISHED: JULY 18, 1979 ELEV. COLLAR: 967.38 metres TOTAL DEPTH: 275 metres COAL LICENSE: 4159

Loc.: ADAMS-N. OF DOWLING CR. HOLE ANGLE: 76.2° LOGGED BY: G. HOFFMAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
							ALLUVIUM - no core				
Box 1											
		0.57					SANDSTONE - grey, medium-grained, broken at top, micaceous				
46.02			1.46			85°	- as above				
47.55											
		0.33					- as above				
Box 2											
		1.05				85°	SILTSTONE - dark grey				
		0.03					COAL - bright				
49.07											
		1.62				85°	SILTSTONE - dark grey, some sandy zones, micaceous				
50.60											
		0.08					- as above				
Box 3											
		1.19				90°	- as above, sandy at top				
52.12											
		0.75				90°	- as above				
		0.48					SANDSTONE - grey, medium-grained, micaceous				
		0.06					COAL - bright banded				
Box 4											
		0.15					SILTSTONE - dark grey, micaceous				
		0.04					COAL - dull and bright				
		1.46					SILTSTONE - dark grey, micaceous, some sandy zones				
55.17											

DIAMOND DRILL CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7904 SHEET No: 2

DATE BEGUN: JULY 12, 1979 DEPTH: _____ BEARING: 330° U.T.M. 6194897.1N; 538064.7E
 DATE FINISHED: JULY 18, 1979 ELEV. COLLAR: 967.38 metres TOTAL DEPTH: 275 metres COAL LICENSE: 4159
 LAT.: ADAMS-N. OF DOWLING CR. HOLE ANGLE: 76.2° LOGGED BY: G. HOFFMAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
		0.07					SILTSTONE - as above				
		0.06					COAL - bright banded	core solid			
		0.02					- dull and bright	core solid			
		0.09					- dull banded	core solid			
		0.11					- dull and bright	core solid			
Box 5		0.59					SILTSTONE - dark grey, micaceous				
56.69		0.63					SANDSTONE - light grey, medium-grained, micaceous				
58.22		1.51				85°	- as above, with beds of pebble conglomerate				
Box 6		0.61				90°	- as above, pebbles at top				
59.74		0.95					- as above, pebbles absent				
61.26		1.40				85°	- as above				
Box 7		0.34					- as above				
		0.60					- as above, coaly inclusions at base				
		0.07					CLAYSTONE - coaly, with pyrite				
62.79		0.42				85°	SANDSTONE - light grey, medium-grained, micaceous				
		1.46					- as above				
64.31											
Box 8											

DIAMOND DRILL CORE LOG

(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7904 SHEET No: 3

DATE BEGUN: JULY 12, 1979 DEPTH: _____ BEARING: 330° U.T.M. 6194897.1N:538064.7E

DATE FINISHED: JULY 18, 1979 ELEV. COLLAR: 967.38 metres TOTAL DEPTH: 275 metres COAL LICENSE: 4159

LAT.: ADAMS N. OF DOWLING CR. HOLE ANGLE: 76.2° LOGGED BY: G. HOFFMAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
Box 8											
		1.48					SANDSTONE - as above				
65.84		0.53				83°	- as above				
		0.72				86°	SILTSTONE - dark grey, micaceous, thin sandy beds				
Box 9		0.25					- as above				
67.36		1.61				87°	- as above				
68.88		0.85					- as above				
Box 10		0.56				87°	- as above				
70.41		1.54				90°	- as above				
71.93		0.58					- as above				
Box 11		0.35					- as above				
		0.48					COAL - dull				
		0.07					- bright				
73.46											
		0.02					- bright banded				
		1.09				90°	SILTSTONE - dark grey, micaceous, sandy at base				
		0.08					COAL - bright				

DIAMOND DR. CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7904 SHEET No: 4

DATE BEGUN: JULY 12, 1979 DEPTH: _____ BEARING: 330° U.T.M. 6194897.1N; 538064.7E
 DATE FINISHED: JULY 18, 1979 ELEV. COLLAR: 967.38 metres TOTAL DEPTH: 275 metres COAL LICENSE: 4159
 LAT.: ADAMS-N. OF DOWLING CR. HOLE ANGLE: 76.2° LOGGED BY: G. HOFFMAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
		0.20					CLAYSTONE - coaly, with bright coal bands				
		0.09					COAL - bright banded				
74.98		0.07					CLAYSTONE - coaly, with bright coal bands				
		0.18					SILTSTONE - dark grey, micaceous				
Box 12		1.23				85°	- as above, sandy at top				
76.50		0.90					- as above, not sandy				
		0.16					MUDSTONE - coaly				
		0.03					COAL - bright				
		0.34				90°	SILTSTONE - dark grey, micaceous				
78.03		0.08					- as above				
Box 13		1.40					- as above				
79.55		0.97					- as above				
		0.06					COAL - dull banded				
		0.34				90°	SILTSTONE - as above				
Box 14		0.12				85°	- as above				
81.08											

DIAMOND DR. CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7904 SHEET No: 5

DATE BEGUN: JULY 12, 1979 DEPTH: _____ BEARING: 330° U.T.M. 6194897.1N; 538064.7E
 DATE FINISHED: JULY 18, 1979 ELEV. COLLAR: 967.38 metres TOTAL DEPTH: 275 metres COAL LICENSE: 4159
 LAT.: ADAMS-N. OF DOWLING CR. HOLE ANGLE: 76.2° LOGGED BY: G. HOFFMAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
81.08											
		1.43				90°	SILTSTONE - as above				
82.60											
		1.03				90°	- as above				
Box 15											
		0.57					- as above				
84.12											
		1.11					- as above				
		0.24					COAL - dull				
85.65											
		0.19					- dull				
		0.32				90°	MUDSTONE - dark grey, micaceous				
		0.06					COAL - dull				
		0.06					- bright				
		0.08				90°	MUDSTONE - dark grey, micaceous				
Box 16											
		0.24					- as above				
		0.18					COAL - bright				
		0.46				90°	MUDSTONE - as above				
87.17											
		1.47					- as above				
88.70											
		0.45				90°	- as above				
Box 17											

DIAMOND DRILL CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7904 SHEET No: 6

DATE BEGUN: JULY 12, 1979 DEPTH: _____ BEARING: 330° U.T.M. 6194897.1N; 538064.7E

DATE FINISHED: JULY 18, 1979 ELEV. COLLAR: 967.38 metres TOTAL DEPTH: 275 metres COAL LICENSE: 4159

LAT.: ADAMS-N.OF DOWLING CR. HOLE ANGLE: 76.2° LOGGED BY: G. HOFFMAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
Box 17											
		1.12				90°	MUDSTONE - as above				
90.22		0.70					- as above				
		0.10					COAL - bright banded				
		0.06					- dull banded				
		0.48					- dull				
		0.04					- bright				
		0.09					SILTSTONE - dark grey, micaceous, sandy				
91.74		0.21				85°	- as above				
Box 18		1.30					- as above				
93.27		1.39					SANDSTONE - light grey, medium-grained, micaceous				
Box 19		0.12				90°	SILTSTONE - dark grey, micaceous				
94.79		1.52				85°	- as above				
96.32		0.95					- as above				
Box 20		0.54				90°	- as above				
97.84		1.51					- as above				
99.36		0.66					- as above				
Box 21											

DIAMOND DR. CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7904 SHEET No: 7
 DATE BEGUN: JULY 12, 1979 DEPTH: _____ BEARING: 330° U.T.M. 6194897.1N;538064.7E
 DATE FINISHED: JULY 18, 1979 ELEV. COLLAR: 967.38 metres TOTAL DEPTH: 275 metres COAL LICENSE: 4159
 LAT.: ADAMS-N. OF DOWLING CR. HOLE ANGLE: 76.2° LOGGED BY: G. HOFFMAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
Box 21											
		0.73				85°	SILTSTONE - as above				
100.89		1.52				82°	SANDSTONE - light grey, medium-grained, micaceous				
102.41		0.41					- as above				
Box 22											
		1.01				85°	SILTSTONE - dark grey, micaceous				
103.94		1.29				90°	MUDSTONE - dark grey, micaceous				
105.46		0.09					- as above				
					105.24						
							CORE LOSS - 0.16m coal				
		0.05					COAL - bright banded, sheared	core broken	No. 4A		
Box 23											
		0.08					- as above	core broken			
		0.11					- dull and bright	core broken			
		0.09					- dull banded	core broken			
		0.11					- dull and bright	small fragments			
		0.34					- dull banded	small fragments			
		0.04					CLAYSTONE - brown, small broken fragments				
		0.13					COAL - dull powder	pulverized	✓		
		0.08					SILTSTONE - broken fragments		No. 4B		
		0.43					COAL - dull powder	pulverized	No. 4C		
106.98											
		0.27					- dull powder	pulverized	✓		
							CORE LOSS - 0.26m coal				
	2.15	1.73	2.14	80.5%	107.39						
		0.70				70°	MUDSTONE - dark grey, silty				
Box 24											

DIAMOND DRILL CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7904 SHEET No: 8

DATE BEGUN: JULY 12, 1979 DEPTH: _____ BEARING: 330° U.T.M. 6194897.1N; 538064.7E

DATE FINISHED: JULY 18, 1979 ELEV. COLLAR: 967.38 metres TOTAL DEPTH: 275 metres COAL LICENSE: 4159

LAT.: ADAMS-N. OF DOWLING CR. HOLE ANGLE: 76.2 LOGGED BY: G. HOFFMAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
Box 24											
		0.23				85°	MUDSTONE - dark grey, micaceous				
108.51		1.44				85°	- as above				
110.03		0.94					- as above				
Box 25											
		0.63					- as above				
111.56		1.45				86°	SILTSTONE - dark grey, micaceous				
113.08		0.68				86°	- as above, sandy				
Box 26											
		0.86					- as above				
114.60		1.41				83°	- as above				
116.13		0.48				85°	SANDSTONE - light grey, medium-grained, micaceous				
Box 27											
		1.15				85°	- as above, silty at base				
117.65		1.50					SILTSTONE - dark grey, micaceous				
119.18		0.08					MUDSTONE - dark grey, micaceous				
Box 28											
		0.39					- as above				
		0.71					CLAYSTONE - dark grey, micaceous, broken at base				
		0.24					SILTSTONE - dark grey, micaceous				

DIAMOND DRILL CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7904 SHEET No: 9

DATE BEGUN: JULY 12, 1979 DEPTH: _____ BEARING: 330° U.T.M. 6194897.1N;538064.7E
 DATE FINISHED: JULY 18, 1979 ELEV. COLLAR: 967.38 metres TOTAL DEPTH: 275 metres COAL LICENSE: 4159
 LAT.: ADAMS-N.OF DOWLING CR. HOLE ANGLE: 76.2° LOGGED BY: G. HOFFMAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
		0.24				87°	SANDSTONE - light grey, medium-grained, micaceous				
120.70		1.21				86°	- as above				
Box 29		0.20					- as above, silty				
122.22		0.47					- as above, silty				
		0.38					CLAYSTONE - dark grey, micaceous				
		0.02					COAL - bright				
		0.36				85°	MUDSTONE - dark grey, micaceous				
		0.04					COAL - bright banded, pyrite				
		0.22					MUDSTONE - dark grey, micaceous				
123.75		0.99				88°	- as above				
Box 30		0.37					- as above				
125.27		1.42				85°	- as above				
126.80		0.68					- as above				
Box 31		0.71					- as above				

DIAMOND DR. CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7904 SHEET No: 10
 DATE BEGUN: JULY 12, 1979 DEPTH: _____ BEARING: 330° U.T.M. 6194897.1N;538064.7E
 DATE FINISHED: JULY 18, 1979 ELEV. COLLAR: 967.38 metres TOTAL DEPTH: 275 metres COAL LICENSE: 4159
 LAT.: ADAMS-N. OF DOWLING CR. HOLE ANGLE: 76.2° LOGGED BY: G. HOFFMAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
		0.04					COAL - dull banded core solid				
128.32		0.25					- dull banded core solid				
		0.29					- bright core solid				
		0.05					- stoney with bright bands core solid				
		0.04					- stoney core solid				
		0.02					MUDSTONE - dark grey				
		0.02					COAL - stoney				
		0.57					MUDSTONE - dark grey				
		0.06					COAL - bright				
		0.10					MUDSTONE - dark grey, micaceous				
129.84		0.52				85°	- as above				
Box 32		0.73				90°	- as above				
131.37		1.45				87°	- as above				
132.89		0.33					- as above				
Box 33		1.06					- as above, core very broken and weathered				
134.42		0.15					- as above, core solid				

DIAMOND DRILL CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7904 SHEET No: 11

DATE BEGUN: JULY 12, 1979 DEPTH: _____ BEARING: 330° U.T.M. 6194897.1N; 538064.7E

DATE FINISHED: JULY 18, 1979 ELEV. COLLAR: 967.38 metres TOTAL DEPTH: 275 metres COAL LICENSE: 4159

LAT.: ADAMS-N.OF DOWLING CR. HOLE ANGLE: 76.2° LOGGED BY: G. HOFFMAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
	1.26					83°	SILTSTONE - grey, micaceous, sandy				
Box 34											
135.94											
	1.03						- as above, core strongly broken				
137.46											
	0.80						- as above, broken				
	0.08						COAL - dull and bright, broken and pulverized				
	0.08						MUDSTONE - dark grey, coaly at top, micaceous				
Box 35											
	0.28						- as above, broken at top, sandy at base				
	0.04						COAL - bright				
	0.10						MUDSTONE - dark grey				
138.99											
	1.14					84°	- as above, sandy at centre				
	0.32						CLAYSTONE - dark grey with coaly inclusions				
140.51											
	0.41					86°	- as above				
	0.02						COAL - dull and bright	core solid			
	0.07						- dull	core solid			
	0.07						- dull and bright	pulverized			
Box 36											
	0.08						COAL - dull and bright	core solid			
	0.13						- bright	pulverized			

DIAMOND DRILL CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7904 SHEET No: 12

DATE BEGUN: JULY 12, 1979 DEPTH: _____ BEARING: 330° U.T.M. 6194897.1N; 538064.7E

DATE FINISHED: JULY 18, 1979 ELEV. COLLAR: 967.38 metres TOTAL DEPTH: 275 metres COAL LICENSE: 4159

LAT.: ADAMS-NOE DOWLING CR. HOLE ANGLE: 76.2° LOGGED BY: G. HOFFMAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
		0.17				87°	SILTSTONE - dark grey, micaceous				
142.04		0.81					- as above				
		0.65				85°	SANDSTONE - light grey, medium-grained, micaceous				
143.56		0.82					- as above				
Box 37		0.83				77°	- as above				
145.08		1.39					- as above				
146.61		0.26					- as above				
Box 38		0.39					- as above				
		0.88				80°	SILTSTONE - dark grey, sandy, micaceous				
148.13		0.48				88°	- as above				
		0.95				90°	MUDSTONE - dark grey, micaceous				
Box 39											
149.66		0.65					- as above				
		0.04					COAL - bright banded				core solid
		0.04					- dull banded				core solid
		0.51				90°	MUDSTONE - dark grey				

DIAMOND DRILL CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7904 SHEET No: 13
 DATE BEGUN: JULY 12, 1979
 DATE FINISHED: JULY 18, 1979
 LAT.: ADAMS-N.OF DOWLING CR.

DEPTH: _____ BEARING: 330° U.T.M. 6194897.1N;538064.7E
 ELEV. COLLAR: 967.38 metres TOTAL DEPTH: 275 metres COAL LICENSE: 4159
 HOLE ANGLE: 76.2° LOGGED BY: G. HOFFMAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
156.67											
		1.58					SILTSTONE - dark grey, micaceous				
158.19											
Box 42		0.15					- as above				
		0.36					SANDSTONE - light grey, silty				
158.80											
		0.84					- as above				
		0.73				80°	SILTSTONE - dark grey, micaceous				
160.32											
		0.02					COAL - dull banded				
		0.12					- bright				
		0.10					SILTSTONE - dark grey				
		0.13					COAL - dull banded	core solid			
		0.03					- bright banded	core solid			
		0.01					- dull	core solid			
		0.27					MUDSTONE - dark grey				
Box 43											
		0.84					SANDSTONE - light grey, silty				
161.85											
		0.61					- as above				
		0.44				86°	SILTSTONE - dark grey				
		0.06					COAL - dull				
		0.08					- dull banded				
		0.04					- bright				
		0.05					- stoney				

DIAMOND DR. CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7904 SHEET No: 14

DATE BEGUN: JULY 12, 1979 DEPTH: _____ BEARING: 330° U.T.M. 6194897.1N; 538064.7E

DATE FINISHED: JULY 18, 1979 ELEV. COLLAR: 967.38 metres TOTAL DEPTH: 275 metres COAL LICENSE: 4159

LAT.: ADAMS-N.OF DOWLING CR. HOLE ANGLE: 76.2° LOGGED BY: G. HOFFMAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
		0.06					COAL - bright banded				
		0.01					- stoney				
		0.19				85°	MUDSTONE - dark grey				
163.37		0.50					- as above				
Box 44		0.35					- as above				
		0.53					SANDSTONE - light grey, grading to siltstone at base				
164.90		0.30					- as above				
		0.29					MUDSTONE - dark grey				
		0.04					COAL - dull and bright			core solid	
		0.02					- bright			core solid	
		0.87				90°	SILTSTONE - dark grey				
166.42		0.37					- as above				
Box 45		0.16					- as above				
		0.94				87°	SANDSTONE - light grey, medium-grained				
167.94		1.52					- as above				
169.47		0.15				90°	SILTSTONE - dark grey				
Box 46											

DIAMOND DRILL CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7904 SHEET No: 15
 DATE BEGUN: JULY 12, 1979 DEPTH: _____ BEARING: 330° U.T.M. 6194897.1N;538064.7E
 DATE FINISHED: JULY 18, 1979 ELEV. COLLAR: 967.38 metres TOTAL DEPTH: 275 metres COAL LICENSE: 4159
 LAT.: ADAMS-N.OF DOWLING CR. HOLE ANGLE: 76.2° LOGGED BY: G. HOFFMAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
Box 46											
		0.68				90°	SILTSTONE - dark grey				
		0.34					MUDSTONE - dark grey				
		0.22					COAL - bright, sheared core broken				
170.99		0.10					- as above core broken				
		1.44				85°	SILTSTONE - grey, with sandy zones				
Box 47		0.11					- as above				
172.52		1.35				78°	- as above				
174.04		1.23					- as above				
Box 48		0.32					- as above				
175.56		0.85				85°	- as above				
		0.55					SANDSTONE - light grey, medium-grained, micaceous				
177.09		0.99				90°	- as above				
Box 49		0.53					- as above				
178.61		1.49				90°	- as above				
180.14		0.71				85°	SILTSTONE - dark grey, micaceous				
Box 50											

DIAMOND DRILL CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7904 SHEET No: 16

DATE BEGUN: JULY 12, 1979 DEPTH: _____ BEARING: 330° U.T.M. 6194897.1N; 538064.7E
 DATE FINISHED: JULY 18, 1979 ELEV. COLLAR: 967.38 metres TOTAL DEPTH: 275 metres COAL LICENSE: 4159
 LAT.: ADAMS-N. OF DOWLING CR. HOLE ANGLE: 76.2° LOGGED BY: G. HOFFMAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
Box 50											
		0.88				90°	SILTSTONE - as above				
181.66		0.08					- as above				
		1.37				90°	MUDSTONE - dark grey				
183.18		0.43					- dark grey				
Box 51		0.26					- as above				
		0.04					COAL - bright banded				
		0.76					MUDSTONE - as above				
184.71		1.46				90°	- as above				
		0.03					COAL - dull banded				
186.23		0.04					- dull				
		0.02					MUDSTONE - dark grey				
		0.04					COAL - dull and bright				
Box 52		0.05					- bright, sheared				
		0.39					MUDSTONE - dark grey				
		1.03					SILTSTONE - dark grey, micaceous				
187.76											

DIAMOND DRILL CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7904 SHEET No: 17

DATE BEGUN: JULY 12, 1979 DEPTH: _____ BEARING: 330° U.T.M. 6194897, 1N; 538064, 7E
 DATE FINISHED: JULY 18, 1979 ELEV. COLLAR: 967.38 metres TOTAL DEPTH: 275 metres COAL LICENSE: 4159
 LAT.: ADAMS-N. OF DOWLING CR. HOLE ANGLE: 76.2° LOGGED BY: G. HOFFMAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
		0.20				90°	SILTSTONE - as above				
		0.01					COAL - dull				
		0.08					SILTSTONE - coaly				
		0.03					COAL - bright banded				
		0.02					- dull				
		0.02					MUDSTONE - coaly				
		0.94				90°	SILTSTONE - dark grey, micaceous				
Box 53		0.11					- as above				
189.28		1.23					- as above				
		0.30				80°	MUDSTONE - dark grey, coaly at base				
190.80		0.07					- coaly				
		0.03					COAL - dull banded				
		0.03					- bright banded				
		0.05					MUDSTONE - coaly				
		0.01					COAL - bright banded				
		0.07					- dull banded				
		0.13					MUDSTONE - dark grey				

DIAMOND DRILL CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7904 SHEET No: 18

DATE BEGUN: JULY 12, 1979 DEPTH: _____ BEARING: 330° U.T.M. 6194897.1N;538064.7E

DATE FINISHED: JULY 18, 1979 ELEV. COLLAR: 967.38 metres TOTAL DEPTH: 275 metres COAL LICENSE: 4159

LAT.: ADAMS-N.OF DOWLING CR. HOLE ANGLE: 76.2° LOGGED BY: G. HOFFMAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
		0.74				80°	SILTSTONE - drak grey, micaceous				
Box 54		0.26					- sandy				
192.33		1.51				90°	SANDSTONE - light grey, medium-grained, micaceous				
193.85		0.90				85°	- as above				
Box 55		0.57				90°	SILTSTONE - dark grey, micaceous				
195.38		0.44					- as above				
		0.30				90°	SANDSTONE - light grey, medium-grained, micaceous				
		0.88					SILTSTONE - as above				
196.90		0.54					- as above				
Box 56		0.69					- as above				
		0.15					SANDSTONE - light grey				
198.42		0.09				90°	CLAYSTONE - kaolinitic				
		1.42				90°	SANDSTONE - light grey, medium-grained, micaceous				
199.95		0.28					- as above				
Box 57		0.11					- as above				

DIAMOND DRILL CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7904 SHEET No: 19

DATE BEGUN: JULY 12, 1979 DEPTH: _____ BEARING: 330° U.T.M. 6194897, 1N; 538064, 7E
 DATE FINISHED: JULY 18, 1979 ELEV. COLLAR: 967.38 metres TOTAL DEPTH: 275 metres COAL LICENSE: 4159
 LAT.: ADAMS-N.OF DOWLING CR. HOLE ANGLE: 76.2° LOGGED BY: G. HOFFMAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
		0.08					COAL - bright, sheared				
		0.52				90°	MUDSTONE - dark grey				
		0.48					SANDSTONE - light grey, medium-grained, micaceous				
201.47		1.59				90°	- as above				
203.00 Box 58		1.49				85°	SILTSTONE - dark grey, micaceous, sandy beds				
204.52		1.39				87°	- as above				
Box 59		0.18					- as above				
206.04		1.46				85°	- as above				
207.57		1.13				90°	- as above				
Box 60		0.39				90°	- as above				
209.09		1.49				90°	- as above				
210.62		0.80				90°	- as above, less sandy				
Box 61		0.72					- as above, sandy				
212.14		1.46					- as above				
213.66											

DIAMOND DRILL CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7904 SHEET No: 20

DATE BEGUN: JULY 12, 1979 DEPTH: _____ BEARING: 330° U.T.M. 6194897.1N;538064.7E

DATE FINISHED: JULY 18, 1979 ELEV. COLLAR: 967.38 metres TOTAL DEPTH: 275 metres COAL LICENSE: 4159

LAT.: ADAMS-N.OF DOWLING CR. HOLE ANGLE: 76.2° LOGGED BY: G. HOFFMAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
		0.57				90°	SILTSTONE - as above				
Box 62		1.05					- as above, less sandy towards base				
215.19		0.80				90°	MUDSTONE - dark grey				
		0.04					COAL - dull banded				
		0.02					- stoney				
		0.54				90°	SILTSTONE - dark grey				
216.71		0.30					SANDSTONE - grey, silty, micaceous, bioturbated				
Box 63		1.28				90°	- as above				
218.24		1.43				85°	- as above, mudstone beds at base				
219.76		0.05					- as above				
Box 64		0.42					- as above, with mudstone beds				
		1.11					SILTSTONE - grey, micaceous, bioturbated, with thin sandy beds				
221.28		0.50					- as above				
		0.87					MUDSTONE - dark grey				
Box 65		0.06					- coaly				
222.81											

DIAMOND DRILL CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7904 SHEET No: 21
 DATE BEGUN: JULY 12, 1979 DEPTH: _____ BEARING: 330° U.T.M. 6194897.1N;538064.7E
 DATE FINISHED: JULY 18, 1979 ELEV. COLLAR: 967.38 metres TOTAL DEPTH: 275 metres COAL LICENSE: 4159
 LAT.: ADAMS-N. OF DOWLING CR. HOLE ANGLE: 76.2° LOGGED BY: G. HOFFMAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
			0.02				COAL - bright, pulverized				
			0.06				MUDSTONE - dark grey, coaly				
			0.71			90°	SILTSTONE - dark grey				
			0.79			85°	SANDSTONE - grey, micaceous, silty, bioturbated				
224.33			1.06			85°	- as above				
Box 66			0.39				- as above				
225.86			1.59			85°	- as above				
227.38			0.88				- as above				
Box 67			0.57				- as above				
228.90			0.65			85°	SILTSTONE - dark grey, micaceous, thin sandy beds at top				
			0.01				- coaly				
			0.92			80°	- as above, not coaly				
230.43			0.62			85°	MUDSTONE - dark grey				
Box 68			0.36				- as above				

DIAMOND DRILL CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7904 SHEET No: 22

DATE BEGUN: JULY 12, 1979 DEPTH: _____ BEARING: 330° U.T.M. 6194897.1N; 538064.7E
 DATE FINISHED: JULY 18, 1979 ELEV. COLLAR: 967.38 metres TOTAL DEPTH: 275 metres COAL LICENSE: 4159
 LAT.: ADAMS-N.OF DOWLING CR. HOLE ANGLE: 76.2° LOGGED BY: G. HOFFMAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
		0.04					COAL - dull banded				
		0.08					- bright				
		0.02					- stoney				
		0.03					- bright				
		0.04					- stoney				
		0.06					- bright				
231.95											
		1.60				85°	MUDSTONE - dark grey				
		0.50				90°	- as above				
Box 69		1.00				90°	- as above				
		0.13					- as above				
		1.44				85°	SILTSTONE - grey, sandy, bioturbated				
236.52		0.15					- as above				
Box 70		0.92				90°	- as above				
		0.36					MUDSTONE - dark grey, silty near top				
238.05		1.41				90°	- as above				
Box 71		0.14					- as above				
239.57		0.52					- as above				

DIAMOND DRILL CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7904 SHEET No: 23

DATE BEGUN: JULY 12, 1979 DEPTH: _____ BEARING: 330° U.T.M. 6194897.1N; 538064.7E
 DATE FINISHED: JULY 18, 1979 ELEV. COLLAR: 967.38 metres TOTAL DEPTH: 275 metres COAL LICENSE: 4159
 LAT.: ADAMS-N. OF DOWLING CR. HOLE ANGLE: 76.2° LOGGED BY: G. HOFFMAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
		0.74				85°	SANDSTONE - grey, silty, bioturbated, micaceous				
Box 71		0.14				90°	MUDSTONE - grey				
241.10		0.18					- as above				
		0.09					COAL - dull				
		0.06					- bright banded				
		0.04					- dull and bright				
		0.06					- bright				
		0.02					- stoney				
		0.02					- bright				
		0.50				90°	SILTSTONE - grey, sandy, bioturbated, micaceous				
		0.10					MUDSTONE - dark grey				
		0.02				90°	COAL - bright				
		0.14					MUDSTONE - dark grey				
Box 72		0.11					- as above				
242.62		0.15					- as above, silty				
		1.30				85°	SILTSTONE - grey, micaceous, some coaly inclusions				
244.14		1.16				90°	- as above				
Box 73											

DIAMOND DRILL CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7904 SHEET No: 24

DATE BEGUN: JULY 12, 1979 DEPTH: _____ BEARING: 330° U.T.M. 6194897.1N; 538064.7E

DATE FINISHED: JULY 18, 1979 ELEV. COLLAR: 967.38 metres TOTAL DEPTH: 275 metres COAL LICENSE: 4159

LAT.: ADAMS-N.OF DOWLING CR. HOLE ANGLE: 76.2° LOGGED BY: G. HOFFMAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
Box 73											
		0.44					SILTSTONE - as above, sandy, bioturbated				
245.67		1.49				90°	- as above				
247.19		0.15					- as above				
		0.73				85°	SANDSTONE - light grey, medium-grained, micaceous				
Box 74		0.27					- as above				
248.72		1.45				90°	- as above				
		0.23					MUDSTONE - dark grey, some coaly inclusions				
250.24		0.51					- as above				
		0.15					SILTSTONE - dark grey, bioturbated, micaceous				
Box 75		0.90				90°	- as above				
251.76		0.48					- as above				
		0.19					MUDSTONE - dark grey				
		0.05					COAL - bright banded				
		0.03					- dull banded				
		0.02					- bright				
		0.22					MUDSTONE - dark grey, coaly inclusions				

DIAMOND DRILL CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7904 SHEET No: 25

DATE BEGUN: JULY 12, 1979 DEPTH: _____ BEARING: 330° U.T.M. 6194897.1N; 538064.7E

DATE FINISHED: JULY 18, 1979 ELEV. COLLAR: 967.38 metres TOTAL DEPTH: 275 metres COAL LICENSE: 4159

LAT.: ADAMS-N.OF DOWLING CR. HOLE ANGLE: 76.2° LOGGED BY: G. HOFFMAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
		0.05					COAL - stoney with bright bands				
		0.44				90°	MUDSTONE - dark grey				
253.29		0.23					- as above				
Box 76		0.65				90°	- as above, silty at base				
		0.04					COAL - bright				
		0.40					MUDSTONE - dark grey, coaly inclusions				
		0.05					COAL - dull banded, pulverized				
		0.08					MUDSTONE - coaly				
		0.10					COAL - dull				core solid
		0.03					- bright				core solid
254.81		0.03					MUDSTONE - coaly				
		0.11					COAL - bright banded				core broken
		0.07					- dull				core broken
		0.11					- bright banded				core broken
		1.00				90°	SILTSTONE - grey, silty, bioturbated				
256.34											
Box 77											

DIAMOND DRILL CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7904 SHEET No: 26

DATE BEGUN: JULY 12, 1979 DEPTH: _____ BEARING: 330° U.T.M. 6194897.1N;538064.7E
 DATE FINISHED: JULY 18, 1979 ELEV. COLLAR: 967.38 metres TOTAL DEPTH: 275 metres COAL LICENSE: 4159
 LAT.: ADAMS-N. OF DOWLING CR. HOLE ANGLE: 76.2° LOGGED BY: G. HOFFMAN CORE SIZE: HO

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
Box 77											
		0.02					MUDSTONE - coaly				
		0.08					COAL - bright banded				
		0.02					MUDSTONE - coaly				
		0.03					COAL - stoney				
		0.03					- dull and bright				
		0.21					MUDSTONE - coaly				
		1.14				90°	SILTSTONE - grey, micaceous, thin sandy beds, bioturbated				
257.86		1.25				90°	- as above				
Box 78		0.18					- as above				
		0.09				85°	SANDSTONE - light grey, medium-grained, micaceous				
259.38		1.47					- as above				
260.91		0.76					- as above				
		0.06					COAL - dull				
		0.04					- dull banded				
		0.05					- stoney with bright bands				
		0.04					- bright banded				
Box 79											

DIAMOND DRILL CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7904 SHEET No: 27

DATE BEGUN: JULY 12, 1979 DEPTH: _____ BEARING: 330° U.T.M. 6194897.1N;538064.7E

DATE FINISHED: JULY 18, 1979 ELEV. COLLAR: 967.38 metres TOTAL DEPTH: 275 metres COAL LICENSE: 4159

LAT.: ADAMS-N. OF DOWLING CR. HOLE ANGLE: 76.2° LOGGED BY: G. HOFFMAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
Box 79											
		0.08					COAL - bright				
		0.02					- stoney				
		0.07					- bright				
		0.23					MUDSTONE - dark grey, thin calcite veins				
262.43											
		0.13					COAL - bright				
		0.11					MUDSTONE - coaly				
		0.03					COAL - bright				
		0.13					MUDSTONE - dark grey				
		1.04				85°	SILTSTONE - grey, thin sandy beds, bioturbated				
263.96											
		0.16					- as above				
		0.48				90°	MUDSTONE - dark grey, silty at top				
Box 80											
		0.83					- as above				
265.48											
		0.89					- as above, broken at top				
		0.21					COAL - dull				
		0.10					- bright banded				
		0.07					- bright				
		0.07					MUDSTONE - dark grey, coaly				
267.00											
		0.07					- as above				

DIAMOND D¹LL CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7904 SHEET No: 28

DATE BEGUN: JULY 12, 1979 DEPTH: _____ BEARING: 330° U.T.M. 6194897.1N;538064.7E

DATE FINISHED: JULY 18, 1979 ELEV. COLLAR: 967.38 metres TOTAL DEPTH: 275 metres COAL LICENSE: 4159

LAT.: ADAMS-N. OF DOWLING CR. HOLE ANGLE: 76.2° LOGGED BY: G. HOFFMAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
		0.26					SANDSTONE - light grey, medium-grained, micaceous				
Box 81		1.19				80°	- as above				
268.53		1.06					- as above				
		0.36				90°	MUDSTONE - dark grey				
270.05		0.06					- as above				
Box 82		1.06					- as above				
		0.35				85°	SANDSTONE - light grey, medium-grained, silty and bioturbated at top				
271.58		0.50					- as above				
		0.04					COAL - dull and bright				
		0.18					MUDSTONE - dark grey				
		0.17					- as above, silty, bioturbated				
		0.50				85°	- as above, not silty, coaly inclusions				
Box 83											
273.10		0.69				90°	- as above				
		0.90				90°	SILTSTONE - grey, micaceous, bioturbated				
274.62											
T.D.							END OF HOLE 7904				
							ADAMS COAL PROPERTY BETWEEN GETHING & DOWLING CREEKS				

DIRECTIONAL SURVEY

ROKE OIL ENTERPRISES LTD.

COMPANY: CROWS NEST RESOURCES LTD

GRID: _____

DATE SURVEYED: JULY 15, 1979

DRILLHOLE: 79 - 05

LATITUDE: _____

SURVEY BY: PUBANZ

LOCATION: PEACE RIVER LAND DISTRICT

DEPARTURE: _____

WITNESSED BY : HOFFMAN

FIELD: ADAMS COAL PROPERTY, B.C.

ELEVATION: _____

CALCULATIONS BY: _____

MAGNETIC DECLINATION: _____

CORRECTION OF: _____

FOR: _____ GRID: _____

Number	Cable Depth	Slant Angle	Slant Angle Bearing	Number	Cable Depth	Slant Angle	Slant Angle Bearing	Number	Cable Depth	Slant Angle	Slant Angle Bearing
0	0	0.2	-	11	200	14.1	19.6	22			
1	20	0.8	-	12	220	14.7	20.2	23			
2	40	0.3	-	13	240	15.8	28.2	24			
3	60	* 4.9 4.5	22.0 23.2	14	260	* 14.9 16.4	32.2 28.1	25			
4	80	9.7	24.5	15	266	16.8	29.3	26			
5	100	10.8	17.8	16	278	17.1	27.4	27			
6	120	11.9	17.0	17				28			
7	140	12.3	18.4	18				29			
8	153	12.7	22.0	19				30			
9	160	* 13.4 12.7	18.4 23.4	20				31			
10	180	13.2	17.5	21				32			

* REPEATS

DIRECTIONAL SURVEY

ROKE OIL ENTERPRISES LTD.

COMPANY: CROWS NEST RESOURCES

GRID: _____

DATE SURVEYED: JULY 31, 1979

DRILLHOLE: D - 79 - 06

LATITUDE: _____

SURVEY BY: PUBANZ

LOCATION: PEACE RIVER LAND DISTRICT

DEPARTURE: _____

WITNESSED BY : HOFFMAN

FIELD: ADAMS COAL PROPERTY

ELEVATION: _____

CALCULATIONS BY: _____

MAGNETIC DECLINATION: _____

CORRECTION OF: _____

FOR: _____ GRID: _____

Number	Cable Depth	Slant Angle	Slant Angle Bearing	Number	Cable Depth	Slant Angle	Slant Angle Bearing	Number	Cable Depth	Slant Angle	Slant Angle Bearing
0	0	0.8	-	11	200	* 2.2 2.1	342.7 339.2	22	..		
1	22	1.7	311.8	12	220	2.3	344.2	23			
2	* 40	*1.6 2.0	332.4 333.6	13	240	2.3	346.4	24			
3	60	2.0	328.1	14				25			
4	75	2.2	329.7	15				26			
5	80	2.4	324.3	16				27			
6	100	2.1	327.6	17				28			
7	120	* 1.9 2.4	327.8 332.6	18				29			
8	140	2.1	337.0	19				30			
9	160	2.1	336.7	20				31			
10	180	1.7	341.8	21				32			

DIAMOND DR CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7906 SHEET No: ONE

DATE BEGUN: JULY 24, 1979 DEPTH: _____ BEARING: 333.2 U.T.M. 6212013.5N;526940.9E

DATE FINISHED: JULY 31, 1979 ELEV. COLLAR: 1096.49 metres TOTAL DEPTH: 245.67 metres COAL LICENSE: 4183

LAT.: NORTH ADAMS HOLE ANGLE: 88° LOGGED BY: C. BEAVAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
							GRAVEL - no core				
Box 1			0.15				SANDSTONE - light grey, fine-grained, occasional pebbles toward base				
			0.64				CONGLOMERATE - granule to pebble, light grey matrix 20%, subrounded clasts of grey, white and black chert and argillite, average clast size 1/2 cm				
			0.07			90°	SANDSTONE - as sandstone above				
			0.60				CONGLOMERATE - granule clasts, grey, very little matrix, porous towards base, subangular clasts of chert and argillite as above, abundant black clasts				
			1.13				- pebble clasts, light grey subrounded clasts of chert and argillite, minor green chert clasts, matrix 15%				
Box 2			0.04				- average clast size 1 cm				
23.16			0.22				- as above				
			0.03				- as above, matrix 70%, abundant large irregular coaly inclusions				
			1.32			90°	- granule to pebble, grey, matrix 10% with porous phases and occasional sandstone				

DIAMOND D_{OL} CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7906 SHEET No: 2

DATE BEGUN: JULY 24, 1979 DEPTH: _____ BEARING: 333.2 U.T.M. 6212013.5N; 526940.9E

DATE FINISHED: JULY 31, 1979 ELEV. COLLAR: 1096.49 metres TOTAL DEPTH: 245.67 metres COAL LICENSE: 4183

LAT.: NORTH ADAMS HOLE ANGLE: 88 LOGGED BY: G. BEAVAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
24.69											
		1.06					CONGLOMERATE - as above				
Box 3		0.56					- as above, sandstone matrix increases				
26.21		0.05					to 70% toward base				
		0.98				85°	SANDSTONE - grey, medium-grained, occasional pebble bands, numerous large coaly inclusions (rootlets)				
		0.62					CONGLOMERATE - pebble clasts, grey, clasts of grey, white, black and green chert and argillite subrounded, matrix 20%, grades to unit below				
Box 4		1.06									
		0.09				85°	- granule clasts, minor pebbles, poorly sorted frequent sandstone phases, grey, white and black chert and argillite,				
29.26		1.59					green chert absent, matrix % variable				
30.78											
Box 5		1.26					SANDSTONE - light grey, cross-bedded, frequent fine irregular coaly inclusions and large phases of granule conglomerate, one large coal band (1 cm) at base				
		0.34				85°	CONGLOMERATE - granule clasts, grey and black clasts of chert and argillite, matrix 30%				
32.31		1.19					SANDSTONE - light grey, medium-grained, large scale cross-bedding, frequent phases of granule conglomerate and large irregular coaly inclusions				
Box 6											

DIAMOND DR. CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7906 SHEET No: 3

DATE BEGUN: JULY 24, 1979 DEPTH: _____ BEARING: 333.2 U.T.M. 6212013.5N; 526940.9E

DATE FINISHED: JULY 31, 1979 ELEV. COLLAR: 1096.49 metres TOTAL DEPTH: 245.67 metres COAL LICENSE: 4183

LAT.: NORTH ADAMS HOLE ANGLE: 88° LOGGED BY: C. BEAVAN CORE SIZE: HO

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
Box 6											
		0.35				80°	SANDSTONE - as above				
33.83											
		1.54					- as above				
35.36											
		0.13					- as above				
		0.74					SANDSTONE - light grey, fine to medium-grained, carbonaceous, with frequent irregular coaly inclusions toward top, minor cross-bedding				
Box 7											
		0.63									
36.88											
		1.62				85°	- as above				
38.40											
		0.48					- as above				
Box 8											
		0.97					- as above				
39.93											
		1.40				80°	- as above				
		0.08					- as above with interbeds of dark grey carbonaceous siltstone				
		0.09					- light grey, medium-grained, no siltstone beds				
41.45											
		0.14									
Box 9											
		1.38				80°	- as above				
42.98											
		1.35					- as above, limonitic fractures				
Box 10											

DIAMOND DR CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7906 SHEET No: 4

DATE BEGUN: JULY 24, 1979 DEPTH: _____ BEARING: 333.2 U.T.M. 6212013.5N;526940.9E
 DATE FINISHED: JULY 31, 1979 ELEV. COLLAR: 1096.49 metres TOTAL DEPTH: 245.67 metres COAL LICENSE: 4183
 LAT.: NORTH ADAMS HOLE ANGLE: 88° LOGGED BY: C. BEAVAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
Box 10											
		0.16					- as above, muddy wisps				
44.50		0.63					- as above, some pebbles at top				
46.02							CORE LOSS				
		1.50				80°	- as above, fine grained, several rounded mud clasts				
47.55		0.26					- as above, scattered pebbles				
Box 11		0.22					- as above				
		0.32					MUDSTONE - dark grey, laminated				
		0.41					SANDSTONE - light grey, medium grey, scattered pebbles				
49.07		1.55				85°	- as above, minor coaly patches				
50.60		0.10					- as above, limonite at base				
Box 12		1.44				82°	SANDSTONE - light grey, medium grained with pebble bands and scattered pebbles throughout (pebbles to 3 mm)				
52.12		1.37				85°	- as above				
Box 13		0.23				90°	- as above, cross bedding				
53.64											

DIAMOND DR. CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7906 SHEET No: 5

DATE BEGUN: JULY 24, 1979 DEPTH: _____ BEARING: 333.2 U.T.M. 6212013.5N; 526940.9E

DATE FINISHED: JULY 31, 1979 ELEV. COLLAR: 1096.49 metres TOTAL DEPTH: 245.67 metres COAL LICENSE: 4183

LAT.: NORTH ADAMS HOLE ANGLE: 88° LOGGED BY: C. BEAVAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
53.64											
		1.13				85°	- as above, coaly partings				
		0.37					CONGLOMERATE - medium grained, light grey matrix				
55.17											
		0.35				90°	- as above				
Box 14											
		1.06					- as above, with minor sandstone bands and minor coaly partings				
		0.18				83°	SANDSTONE - light grey, medium grained, scattered pebbles, scattered elongated mud clasts, in places limonitic				
56.69											
		0.86				90°	- as above, minor carbonaceous coated stylolite looking partings				
Box 15											
		0.59				90°	- as above				
58.21											
		1.50					- as above, carbonaceous wisps				
Box 16											
		0.09					- as above				
59.74											
		1.36					- as above, occasional mud clast				
61.26											
		0.72					- as above, becoming finer				
Box 17											
		0.76					SILTSTONE - light grey, faintly laminated, some penny coal bands and some mudstone bands				
		0.09					MUDSTONE - dark grey, silty laminations				

DIAMOND DRILL CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7906 SHEET No: 6

DATE BEGUN: JULY 24, 1979 DEPTH: _____ BEARING: 333.2 U.T.M. 6212013.5N, 526940.9E

DATE FINISHED: JULY 31, 1979 ELEV. COLLAR: 1096.49 metres TOTAL DEPTH: 245.67 metres COAL LICENSE: 4183

LAT.: NORTH ADAMS HOLE ANGLE: 88° LOGGED BY: C. BEAVAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
62.79											
		1.35				90°	SILTSTONE - frequent muddy laminations, some mottling, burrows, some cross-bedding				
Box 18											
		0.16					SANDSTONE - light grey, interlaminated with dark grey mudstone				
64.31											
		1.58				85°	SANDSTONE - fine to medium grained, minor cross-bedding, coaly wisps and partings towards bottom				
65.84											
		0.35					- as above				
Box 19											
		1.20				90°	- as above, conglomeratic band near top				
67.36											
		0.97					- as above				
Box 20											
		0.71				85°	- as above, medium grained towards bottom				
68.88											
		1.35				90°	- as above, minor conglomeratic bands, coaly wisps and partings				
70.41											
		0.56					- as above				
		0.16				90°	MUDSTONE - dark grey with minor silty interbeds				
Box 21											
		0.89				90°	- as above, very few silty interbeds towards base				
71.93											
		1.36					- as above				
73.46											

DIAMOND DR. CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7906 SHEET No: 7

DATE BEGUN: JULY 24, 1979 DEPTH: _____ BEARING: 333.2 U.T.M. 6212013.5N;526940.9E

DATE FINISHED: JULY 31, 1979 ELEV. COLLAR: 1096.49 metres TOTAL DEPTH: 245.67 metres COAL LICENSE: 4183

LAT.: NORTH ADAMS HOLE ANGLE: 88° LOGGED BY: C. BEAVAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
73.46											
		0.65					- as above				
Box 22											
		1.02				85°	- as above, increasing siltstone partings toward bottom				
		0.12					CLAYSTONE - carbonaceous, minor bright bands toward base	No. 5A			
					74.80						
							CORE LOSS - 0.10 m coal				
74.98											
		0.04					COAL - dull and bright core solid				
		0.03					- dull core solid				
		0.09					- dull banded core solid				
		0.04					- bright banded core solid				
		0.02					- dull core broken				
		0.02					- bright banded core solid				
		0.05					- dull banded core solid				
		0.03					- dull and bright core solid				
		0.05					- bright banded core solid				
		0.01					- bright core solid	√			
	0.56	0.38	0.56	67.9	75.34						
		0.43					MUDSTONE - dark grey	No. 5B			
		0.03			75.78		COAL - bright banded core solid	No. 5C			
		0.01					- dull core solid				
		0.01					- bright banded core solid				
		0.04					- dull banded core solid				
		0.01					- bright core solid				
		0.03					- dull banded core solid				
		0.01					- dull core solid				
		0.03					- dull banded core solid				

DIAMOND DRILL CORE LOG

(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7906 SHEET No: 8
 DATE BEGUN: JULY 24, 1979 DEPTH: _____ BEARING: 333.2
 DATE FINISHED: JULY 31, 1979 ELEV. COLLAR: 1096.49 metres TOTAL DEPTH: 245.67 metres U.T.M. 6212013, 5N; 526940.9E
 LAT.: NORTH ADAMS HOLE ANGLE: 88° LOGGED BY: C. BEAVAN CORE LICENSE: 4183
 CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
		0.01					- bright core solid				
		0.03					- dull banded core solid				
		0.04					- dull banded core solid				
		0.04					- dull and bright core solid				
		0.01					- bright core solid				
		0.03					- dull banded core solid				
		0.02					- dull core solid				
		0.01					- dull banded core solid				
		0.01					- dull core solid				
		0.05					- bright banded core solid				
		0.05					- dull banded core solid				
		0.01					- bright core solid				
		0.06					- dull banded core solid				
		0.01					- bright core solid				
		0.04					- dull banded core solid				
		0.02					- dull and bright core solid				
		0.06					- dull banded core solid				
		0.02					- bright banded core solid				
							CORE LOSS - 0.08				
76.50											
		0.01					- bright banded core solid				
		0.02					- dull banded core solid				
		0.02					- bright banded core solid				
Box 23											
		0.03					- dull banded core solid				
		0.10					- dull and minor pyrite specks core solid				
		0.02					- dull banded, minor pyrite core solid				
		0.01					- bright, minor pyrite core solid				
		0.10					- dull banded, minor pyrite core solid				
		0.03					- bright banded, minor pyrite core solid				
		0.03					- bright, minor pyrite core solid				
		0.03					- dull banded core broken				

DIAMOND DR. CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7906 SHEET No: 9

DATE BEGUN: JULY 24, 1979 DEPTH: _____ BEARING: 333.2 U.T.M. 6212013.5N, 526940.9E

DATE FINISHED: JULY 31, 1979 ELEV. COLLAR: 1096.49 metres TOTAL DEPTH: 245.67 metres COAL LICENSE: 4183

LAT.: NORTH ADAMS HOLE ANGLE: 88° LOGGED BY: C. BEAVAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
		0.03					- bright core broken				
		0.10					- bright banded, minor pyrite core broken				
		0.08					- bright and dull core broken				
		0.05					- stony, some bright bands core broken	✓			
	1.43	1.35	1.35	94.4	77.25						
		0.40					MUDSTONE - dark grey, minor coaly bands near top				
		0.43					SILTSTONE - light grey, few laminations				
78.03											
		1.32					- laminated, cross bedded				
Box 24											
		0.13					- as above, sandy layers				
79.55											
		1.59				85°	- as above				
81.08											
		0.99					- as above, increasing mudstone interbeds				
Box 25											
							MUDSTONE - dark grey with silty layers				
82.60											
		1.63				90°	- as above				
84.12											
		0.06				90°	- as above				
Box 26											
		0.14					- as above				
		0.07					STONY COAL - minor bright bands				
		0.03					COAL - dull core broken				
		0.02					- bright banded core solid				
		0.12					- dull banded core solid				

DIAMOND DR CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7906 SHEET No: 10

DATE BEGUN: JULY 24, 1979 DEPTH: _____ BEARING: 333.2 U.T.M. 6212013.5N;526940.9E

DATE FINISHED: JULY 31, 1979 ELEV. COLLAR: 1096.49 metres TOTAL DEPTH: 245.67 metres COAL LICENSE: 4183

LAT.: NORTH ADAMS HOLE ANGLE: 88° LOGGED BY: C. BEAVAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
		0.06					- dull and bright core broken				
		0.05					- bright, minor calcite core broken				
							band at base				
		0.09					STONY COAL - minor bright bands				
		0.79				90°	SILTSTONE - dark grey at top to light grey at base, laminated, contorted beds				
85.65											
		0.80				80°	- as above				
Box 27											
		0.47					- as above				
		0.44				85°	MUDSTONE - dark grey with light grey silty interbeds				
87.17											
		0.02					COAL - dull, pyrite bands core solid				
		0.03					- dull and bright core solid				
		0.05					- dull banded core solid				
		0.01					MUDSTONE - carbonaceous core solid				
		0.03					COAL - dull banded core solid				
		0.08					- dull and bright core solid				
		0.05					- bright banded core solid				
		0.13					- dull and bright core solid				
		0.02					- bright banded core solid				
		0.06					- dull banded, 1 mudstone band .001 thick core solid				
		0.07					- dull core solid				
		0.02					- bright core solid				

DIAMOND DRILL CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7906 SHEET No: 11

DATE BEGUN: JULY 24, 1979 DEPTH: _____ BEARING: 333.2 U.T.M. 6212013.5N; 526940.9E

DATE FINISHED: JULY 31, 1979 ELEV. COLLAR: 1096.49 metres TOTAL DEPTH: 245.67 metres COAL LICENSE: 4183

LAT.: NORTH ADAMS HOLE ANGLE: 88° LOGGED BY: C. BEAVAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
		0.30					MUDSTONE - dark grey				
		0.19					SILTSTONE - light grey with mudstone laminations, cross bedding, channel scours, ripple marks				
Box 28		0.25				90°	- as above				
88.70		1.62					- as above				
90.22		0.28					- as above				
Box 29		1.21				90°	- as above				
91.74		0.89					- as above				
Box 30		0.14				90°	- as above				
		0.26					MUDSTONE - dark grey, thin siltstone laminations				
93.27		1.56					- as above, with increasing siltstone interbeds				
94.79		1.27					- as above, decreasing siltstone interbeds, several minor, very thin calcite veins				
Box 31		0.02					COAL - dull banded, calcite vein				
		0.02					- dull				
		0.03					- bright banded				
		0.01					- stony				

DIAMOND DRILL CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7906 SHEET No: 12

DATE BEGUN: JULY 24, 1979 DEPTH: _____ BEARING: 333.2 U.T.M. 6212013.5N;526940.9E

DATE FINISHED: JULY 31, 1979 ELEV. COLLAR: 1096.49 metres TOTAL DEPTH: 245.67 metres COAL LICENSE: 4183

LAT.: NORTH ADAMS HOLE ANGLE: 88 LOGGED BY: C. BEAVAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
		0.01					- dull core solid				
		0.02					- bright core solid				
				0.04			- dull banded core solid				
96.32											
		0.02					- bright core solid				
		0.03					- dull banded core solid				
		0.03					- bright core solid				
		0.03					- dull banded core solid				
		0.34				90°	MUDSTONE - dark grey, calcite veins which crosscut each other				
		0.05					COAL - dull and bright				
		0.14					MUDSTONE - dark grey, minor silty interbeds				
		0.04				85°	SILTSTONE - light grey with dark grey mudstone laminations, cross bedding, scours, ball and pillow				
Box 32											
		0.88					- as above				
97.84											
		1.32				90°	- as above				
Box 33											
		0.23					- as above				
99.36											
		0.53					- as above				
		1.07					MUDSTONE - dark grey, light grey siltstone laminations, minor cross bedding				
100.89											

DIAMOND DR CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7906 SHEET No: 13

DATE BEGUN: JULY 24, 1979 DEPTH: _____ BEARING: 333.2 U.T.M. 6212013.5N; 526940.9E

DATE FINISHED: JULY 31, 1979 ELEV. COLLAR: 1096.49 metres TOTAL DEPTH: 245.67 metres COAL LICENSE: 4183

LAT.: NORTH ADAMS HOLE ANGLE: 88° LOGGED BY: C. BEAVAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
100.89											
		0.29				90°	- as above				
Box 34											
		1.32					- as above				
102.41											
		0.61					- as above				
		0.08					MUDSTONE - dark grey, carbonaceous				
		0.04					COAL - dull and bright	core solid			
		0.02					- dull	core solid			
		0.01					- bright	core solid			
		0.07					- dull banded, limonitic patches (pyrite bands?)	core solid			
Box 35											
		0.06					- dull and bright	core solid			
		0.01					- bright	core solid			
		0.04					- dull banded	core solid			
		0.09					- stony with bright bands	core solid			
		0.02					- bright banded	core solid			
		0.04					- bright	core broken			
		0.07					- stony with bright bands	core broken			
		0.01					- bright	core broken			
		0.02					- dull and bright	core broken			
		0.03					- bright banded	core broken			
103.94											
		0.42					MUDSTONE - dark grey, a .005 coal				
		1.06				90°	SILTSTONE - light grey, laminated				
105.46											
		0.09					- as above				
Box 36											

DIAMOND DRILL CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7906 SHEET No: 14

DATE BEGUN: JULY 24, 1979 DEPTH: _____ BEARING: 333.2 U.T.M. 6212013.5N; 526940.9E

DATE FINISHED: JULY 31, 1979 ELEV. COLLAR: 1096.49 metres TOTAL DEPTH: 245.67 metres COAL LICENSE: 4183

LAT.: NORTH ADAMS HOLE ANGLE: 88° LOGGED BY: C. BEAVAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
Box 36											
		1.37					- as above, becoming increasingly sandy, cross-bedded, vertical worm burrows				
106.98											
		0.74				90°	SANDSTONE - light grey, laminated, cross-bedded, minor silty and muddy layers, minor calcite veins at 0.55				
Box 37											
		0.08					- as above				
		0.74				90°	SILTSTONE - light grey with muddy layers, cross-bedded				
108.51											
		0.38					- as above				
		0.97					MUDSTONE - dark grey, very minor silty layers				
Box 38											
		0.26					- as above				
		0.03					STONY COAL - minor bright bands core broken				
		0.10					COAL - dull and bright				
		1.25				90°	MUDSTONE - dark grey, minor, very thin coal bands				
111.56											
		0.25					- as above				
		0.08					COAL - dull and bright, some shearing core solid				
		0.12					- stony with bright bands core solid				
Box 39											

DIAMOND DI CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7906 SHEET No: 15

DATE BEGUN: JULY 24, 1979 DEPTH: _____ BEARING: 333.2 U.T.M. 6212013.5N;526940.9E

DATE FINISHED: JULY 31, 1979 ELEV. COLLAR: 1096.49 metres TOTAL DEPTH: 245.67 metres COAL LICENSE: 4183

LAT.: NORTH ADAMS HOLE ANGLE: 88° LOGGED BY: G. BEAVAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
Box 39											
		0.04					- stony with bright bands core solid				
		0.02					- bright core solid				
		0.03					- stony with bright bands core solid				
		0.99				85°	SILTSTONE - light grey (medium grey at top), laminated				
113.08		1.09					- as above, becoming darker grey at base				
Box 40		0.48					MUDSTONE - dark grey, some laminations				
114.60		0.20					- as above				
		0.01					COAL - bright core solid				
		0.04					- dull with pyrite bands core solid				
		0.02					- dull and bright core solid				
		0.01					- stony with bright bands core solid				
		0.03					- dull and bright core solid				
		0.12					CARBONACEOUS MUDSTONE				
		0.02					COAL - stony with bright bands core solid				
		0.06					- dull and bright, some stony core broken				
		0.38					MUDSTONE - dark grey with coaly bands at top				
		0.59				85°	SILTSTONE - light grey, laminated, cross bedding, burrows				
116.13		0.13					- as above				
Box 41											

DIAMOND DRILL CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7906 SHEET No: 16

DATE BEGUN: JULY 24, 1979 DEPTH: _____ BEARING: 333.2 U.T.M. 6212013.5N;526940.9E

DATE FINISHED: JULY 31, 1979 ELEV. COLLAR: 1096.49 metres TOTAL DEPTH: 245.67 metres COAL LICENSE: 4183

LAT.: NORTH ADAMS HOLE ANGLE: 88° LOGGED BY: G. BEAVAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
Box 41											
			0.98				- as above, becoming increasingly sandy				
			0.51			85°	SANDSTONE - fine grained, laminated, highly cross-bedded towards bottom with no burrows				
Box 42											
			0.71				- as above				
119.18											
			0.75				- as above, less cross-bedding, more burrows, increasingly silty				
			0.75			85°	SILTSTONE - medium grey, burrows, cross bedding				
Box 43											
			0.09				- as above				
120.70											
			0.29				- as above				
			1.09			90°	MUDSTONE - dark grey, silty laminations				
			0.03				- as above, carbonaceous, minor bright bands				
			0.05				COAL - dull and bright core solid				
122.22											
			0.12				- dull and bright with stony sheared coal bands core broken				
			0.01				- bright core solid				
			0.04				- dull banded core solid				
			0.05				- dull, some stony bands core solid				
			0.08				- dull banded, some stony core solid				
			0.11				- dull and bright, some stony core solid				
							(0.02 broken at bottom)				
Box 44											

DIAMOND DRILL CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7906 SHEET No: 17

DATE BEGUN: JULY 24, 1979 DEPTH: _____ BEARING: 333.2 U.T.M. 6212013.5N; 526940.9E

DATE FINISHED: JULY 31, 1979 ELEV. COLLAR: 1096.49 metres TOTAL DEPTH: 245.67 metres COAL LICENSE: 4183

LAT.: NORTH ADAMS HOLE ANGLE: 88° LOGGED BY: C. BEAVAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
Box 44											
		0.04					- dull banded, some stony core solid				
		0.05					- dull and bright, some stony core solid				
		0.11					- dull and bright, sheared core broken				
		0.88				90°	MUDSTONE - dark grey, some silty laminations				
124.66		0.25					- as above				
		0.05					COAL - dull banded, sheared core broken				
		0.05					- dull and bright core solid				
		0.04					- dull banded core solid				
		0.03					- dull, stony bands core solid				
		0.04					- bright banded core solid				
		0.08					- dull banded core solid				
		0.04					- stony with bright bands core solid				
		0.37					MUDSTONE - dark grey, some coaly bands (rootlets) minor silty laminations				
Box 45											
		0.51					- as above, more silty laminations, burrows				
125.27		0.23					- as above				
		0.72					SILTSTONE - light grey, burrows, minor laminations				
		0.60				85°	MUDSTONE - dark grey, silty laminations, burrows				
Box 46											
		1.36					- as above				
128.32											

DIAMOND DR. CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7906 SHEET No: 18

DATE BEGUN: JULY 24, 1979 DEPTH: _____ BEARING: 333.2 U.T.M. 6212013.5N;526940.9E

DATE FINISHED: JULY 31, 1979 ELEV. COLLAR: 1096.49 metres TOTAL DEPTH: 245.67 metres COAL LICENSE: 4183

LAT.: NORTH ADAMS HOLE ANGLE: 88 LOGGED BY: C. BEAVAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
128.32											
		0.47					- as above, coaly band at base				
		0.28				90°	SILTSTONE - light grey, dark grey, muddy laminations				
Box 47		0.84					- as above, burrows, becoming sandy at base				
129.84						90°	SANDSTONE - light grey, laminated, burrows, contorted bedding, increasingly cross-bedded at base, calcite veins throughout				
Box 48		0.24				85°	- cross-bedded				
131.37		1.58					- as above, some burrows				
132.89		0.15					- as above				
Box 49		0.74					- as above, increasingly sandy				
		0.55				90°	MUDSTONE - with silty laminations, burrows				
134.42		0.90					- as above				
Box 50		0.74				90°	- as above, increasingly muddy				
135.94		0.39					- as above, no silty laminations, coaly bands				
		1.03					SILTSTONE - laminated, contorted at top, cross-bedded				
Box 51											

DIAMOND DI CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7906 SHEET No: 19

DATE BEGUN: JULY 24, 1979 DEPTH: _____ BEARING: 333.2 U.T.M. 6212013.5N;526940.9E

DATE FINISHED: JULY 31, 1979 ELEV. COLLAR: 1096.49 metres TOTAL DEPTH: 245.67 metres COAL LICENSE: 4183

LAT.: NORTH ADAMS HOLE ANGLE: 88 LOGGED BY: C. BEAVAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
Box 51											
		0.02				90°	MUDSTONE - dark grey with silty laminations				
137.46		1.63					- as above, increasing silty laminations and beds				
138.99		0.47					- as above				
Box 52		0.93					- as above				
140.51		1.20					- as above				
Box 53		0.28					- as above				
142.04		0.38					- as above, increasingly muddy				
		0.11					COAL - dull banded	core solid			
		0.03					- bright banded	core solid			
		0.01					- stony	core solid			
		0.01					- bright	core solid			
		0.01					- carbonaceous mudstone	core solid			
		0.02					- dull with some stony	core solid			
		0.04					- dull and bright, sheared	core broken			
		0.08					- dull banded	core solid			
		0.07					- bright banded	core solid			
		0.03					- dull banded	core solid			
		0.03					- stony	core solid			
		0.66				90°	MUDSTONE - minor coal bands at top				
143.56		0.27					- as above, silty laminations.				
Box 54											

DIAMOND DRILL CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7906 SHEET No: 20

DATE BEGUN: JULY 24, 1979 DEPTH: _____ BEARING: 333.2 U.T.M. 6212013.5N;526940.9E

DATE FINISHED: JULY 31, 1979 ELEV. COLLAR: 1096.49 metres TOTAL DEPTH: 245.67 metres COAL LICENSE: 4183

LAT.: NORTH ADAMS HOLE ANGLE: 88° LOGGED BY: C. BEAVAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
Box 54											
		1.31					- as above, with silty laminations towards top				
145.08											
		0.41					- as above				
		0.01					COAL - stony core solid				
		0.05					- bright core solid				
		0.05					- dull core solid				
		0.03					carbonaceous mudstone core solid				
		0.04					- dull core solid				
		0.04					carbonaceous mudstone core solid				
		0.05					- dull core solid				
		0.10					- dull banded core solid				
		0.04					- dull core solid				
Box 55											
		0.07					- dull banded core broken				
		0.16					- dull, sheared				
		0.39					MUDSTONE - dark grey				
146.60											
		1.42				90°	SILTSTONE - light grey, some muddy beds and laminations, burrows, becoming sandy at base				
Box 56											
		0.16					SANDSTONE - light grey, fine grained, laminations				
148.13											
		1.45				85°	- as above, increasingly laminated				
		0.29					- as above				
		0.13					SILTSTONE - light grey, muddy laminations				
Box 57											

DIAMOND DRILL CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7906 SHEET No: 21

DATE BEGUN: JULY 24, 1979 DEPTH: _____ BEARING: 333.2 U.T.M. 6212013.5N; 526940.9E

DATE FINISHED: JULY 31, 1979 ELEV. COLLAR: 1096.49 metres TOTAL DEPTH: 245.67 metres COAL LICENSE: 4183

LAT.: NORTH ADAMS HOLE ANGLE: 88° LOGGED BY: C. BEAVAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
Box 57											
		0.25					- as above				
		0.89					MUDSTONE - silty laminations, dark grey				
151.18											
		0.03					COAL - carbonaceous mudstone core solid				
		0.10					- dull banded core solid				
		0.04					- bright banded core solid				
		0.04					carbonaceous mudstone core solid				
		0.02					- dull banded core solid				
		0.10					- dull and bright with some carbonaceous mudstone core broken				
		0.09					- dull core solid				
		0.15					- dull banded, minor shearing core solid				
		0.08					- stony, minor bright bands core solid				
		0.01					carbonaceous mudstone core solid				
		0.01					- bright banded core solid				
		0.04					- stony, minor bright bands core solid				
152.10											
Box 58											
		1.44				80°	SILTSTONE - medium grey, mottled, worm burrows				
153.62											
		0.70					- as above, becoming less mottled and increasingly laminated				
Box 59											
		0.74				90°	- as above, laminated, cross-bedded				
155.14											
		0.66					- as above, becoming increasingly muddy				
		0.72					MUDSTONE - dark grey with minor silty laminations				
Box 60											

DIAMOND DRILL CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7906 SHEET No: 22

DATE BEGUN: JULY 24, 1979 DEPTH: _____ BEARING: 333.2 U.T.M. 6212013.5N; 526940.9E

DATE FINISHED: JULY 31, 1979 ELEV. COLLAR: 1096.49 metres TOTAL DEPTH: 245.67 metres COAL LICENSE: 4183

LAT.: NORTH ADAMS HOLE ANGLE: 88° LOGGED BY: C. BEAVAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
Box 60											
		0.06					- as above				
156.67											
		0.93					- as above				
		0.04					COAL - dull banded	core broken			
		0.07					- dull	core broken			
		0.06					carbonaceous mudstone	core broken			
		0.04					- dull	core broken			
		0.07					carbonaceous mudstone	core solid			
		0.23				85°	SILTSTONE - dark grey at top, becoming lighter, laminated				
158.19											
		0.57					- as above, light grey, cross-bedding				
Box 61											
		0.84				85°	- as above				
159.72											
		0.68					- as above				
160.32											
		0.47					- as above, less laminated and more mottled				
Box 62											
		0.98				90°	- as above, more muddy beds				
161.85											
		0.46					- as above				
		0.71					MUDSTONE - dark grey, some silty laminations, minor burrows				
Box 63											
		0.37					- as above, carbonaceous at base				
163.37											

DIAMOND DR CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7906 SHEET No: 23

DATE BEGUN: JULY 24, 1979 DEPTH: _____ BEARING: 333.2 U.T.M. 6212013.5N; 526940.9N

DATE FINISHED: JULY 31, 1979 ELEV. COLLAR: 1096.49 metres TOTAL DEPTH: 245.67 metres COAL LICENSE: 4183

LAT.: NORTH ADAMS HOLE ANGLE: 88° LOGGED BY: C. BEAVAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
163.37											
		0.08					- as above				
		1.50				85°	SILTSTONE - light grey, laminated, cross-bedded				
164.90		0.06					- as above				
Box 64		1.54				90°	- as above, increasingly mottled, sandy at base				
166.42		0.60				90°	- as above, increasingly less laminated, very minor calcite vein and calcite blebs (fossils? burrow fillings)				
Box 65		0.81					- as above, increasingly mottled and muddy				
167.94		1.42					- as above, mottled and less muddy				
Box 66		0.17					- as above				
169.47		1.53					- mottled and less muddy				
170.99		0.01					COAL - stony				core broken
		0.03					- bright banded, some carbonaceous mudstone bands				core broken
		0.13					- dull banded, sheared				core broken
		0.07					- dull and bright				core broken
		0.08					- dull				core broken
Box 67		0.03					- stony				core solid
		0.02					- bright banded				core solid
		0.08					- dull banded				core solid

DIAMOND DR CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7906 SHEET No: 24

DATE BEGUN: JULY 24, 1979 DEPTH: _____ BEARING: 333.2 U.T.M. 6212013.5N;526940.9E

DATE FINISHED: JULY 31, 1979 ELEV. COLLAR: 1096.49 metres TOTAL DEPTH: 245.67 metres COAL LICENSE: 4183

LAT.: NORTH ADAMS HOLE ANGLE: 88° LOGGED BY: G. BEAVAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
		0.04					- dull core solid				
		0.07					- dull banded core solid				
		0.09					- stony core broken				
		0.18					- sheared core highly broken				
		0.02					- stony core broken				
		0.75					MUDSTONE - dark grey, some silty beds and laminations				
172.52		0.25					- as above, burrows				
		0.61				90°	SILTSTONE - medium grey, alternating burrowed and laminated beds				
Box 68		0.60				90°	- as above, laminated, cross-bedded				
174.04		1.57					- as above				
Box 69		1.32				90°	- as above, more muddy laminations				
175.56		0.69					- as above, less muddy, mostly mottled				
177.09		0.94				90°	- as above				
Box 70		1.22					- as above, very muddy at top, laminated siltstone at base				
178.61		0.27					- as above				
Box 71		1.57					- as above, mostly mottled				
180.14											

DIAMOND DRILL CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7906 SHEET No: 25

DATE BEGUN: JULY 24, 1979 DEPTH: _____ BEARING: 333.2 U.T.M. 6212013.5N;526940.9E

DATE FINISHED: JULY 31, 1979 ELEV. COLLAR: 1096.49 metres TOTAL DEPTH: 245.67 metres COAL LICENSE: 4183

LAT.: NORTH ADAMS HOLE ANGLE: 88° LOGGED BY: C. BEAVAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
181.66											
		0.25					- as above				
Box 72		0.12					SANDSTONE - light grey, fine grained, burrowed				
		0.86				90°	MUDSTONE - dark grey, silty laminations				
183.18											
		1.13					- as above				
Box 73		0.54					- as above, carbonaceous in part				
184.71											
		0.32					- as above				
		0.70					SILTSTONE - medium grey, mottled, burrows, muddy				
		0.58					SANDSTONE - light grey, fine grained, minor muddy wisps				
186.23											
Box 74		1.12					- as above, becoming silty and muddy towards base				
		0.44				90°	MUDSTONE - dark grey, frequent silty laminations				
187.76											
		0.61					- as above, burrowed				
Box 75		0.80					- as above				
189.28											
		0.85					- as above				

DIAMOND DRILL CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7906 SHEET No: 26

DATE BEGUN: JULY 24, 1979 DEPTH: _____ BEARING: 333.2 U.T.M. 6212013.5N;526940.9E

DATE FINISHED: JULY 31, 1979 ELEV. COLLAR: 1096.49 metres TOTAL DEPTH: 245.67 metres COAL LICENSE: 4183

LAT.: NORTH ADAMS HOLE ANGLE: 88° LOGGED BY: C. BEAVAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
		0.44					SILTSTONE - light grey, muddy laminations, some burrows				
Box 76		0.28					- as above				
190.80		0.53					- as above				
		0.75				90°	MUDSTONE - dark grey, silty laminations towards top and more muddy towards base				
192.33		0.56					- as above				
Box 77		0.51					- as above, no siltstone laminations at all, darker grey				
193.55		1.45					- as above				
194.77		0.13					- as above				
Box 78		0.47					- as above				
		0.05					COAL - dull banded core broken				
		0.24					- stony core very broken				
		0.05					- dull banded core broken				
		0.03					- stony core broken				
		0.34					MUDSTONE - dark grey, coaly bands				
		0.57					COAL - sheared core pulverized				

DIAMOND DRILL CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7906 SHEET No: 27

DATE BEGUN: JULY 24, 1979 DEPTH: _____ BEARING: 333.2 U.T.M. 6212013.5N;526940.9E

DATE FINISHED: JULY 31, 1979 ELEV. COLLAR: 1096.49 metres TOTAL DEPTH: 245.67 metres COAL LICENSE: 4183

LAT.: NORTH ADAMS HOLE ANGLE: 88 LOGGED BY: C. BEAVAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
		0.37					MUDSTONE - dark grey, coaly bands				
Box 79		0.38					- as above, becoming increasingly silty				
		0.76					SANDSTONE - light grey, fine grained, silty towards base, some laminations				
197.89		0.31					SILTSTONE - light grey, laminated and mottled				
		0.57					- as above, frequent muddy laminations				
		0.09					- as above, no muddy laminations				
Box 80		0.64					- as above, laminated, cross-bedded				
199.49		0.48					- as above, muddy laminations, burrows				
		0.97					MUDSTONE - dark grey, some silty laminations, some silty mottling, burrows				
Box 81		0.10					- as above				
201.09		1.58					SILTSTONE - medium grey and muddy at top, light grey and clean at base, burrows, mottled				
202.39		0.28					- as above, darker and muddy				
Box 82											

DIAMOND DRILL CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7906 SHEET No: 28

DATE BEGUN: JULY 24, 1979 DEPTH: _____ BEARING: 333.2 U.T.M. 6212013.5N;526940.9E

DATE FINISHED: JULY 31, 1979 ELEV. COLLAR: 1096.49 metres TOTAL DEPTH: 245.67 metres COAL LICENSE: 4183

LAT.: NORTH ADAMS HOLE ANGLE: 88° LOGGED BY: C. BEAVAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
Box 82											
		1.27					- as above, muddier and cleaner beds, burrows, finer laminations towards base				
204.22		0.83				90°	- as above, less burrowing, laminated				
Box 83		0.74					- as above, alternating silty and muddy beds, mottled, burrows				
205.80		1.42				90°	- as above, highly burrowed, more laminated towards base				
Box 84		0.15					- as above, laminated				
207.57		0.60					- as above, laminated				
		0.96				90°	MUDSTONE - dark grey, some silty laminated beds				
209.09		0.36					- as above				
Box 85		0.85				90°	- as above, few laminations				
210.62		0.42					- as above				
211.84							CORE LOSS				
		0.72					- as above				
Box 86		0.70					- as above				
213.66											

DIAMOND DRILL CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7906 SHEET No: 29

DATE BEGUN: JULY 24, 1979 DEPTH: _____ BEARING: 333.2 U.T.M. 6212013.5N;526940.9E

DATE FINISHED: JULY 31, 1979 ELEV. COLLAR: 1096.49 metres TOTAL DEPTH: 245.67 metres COAL LICENSE: 4183

LAT.: NORTH ADAMS HOLE ANGLE: 88 LOGGED BY: C. BEAVAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
213.66		1.45				90°	SILTSTONE - light grey, muddy towards top, laminated, sandy towards bottom				
Box 87		0.17					SANDSTONE - light grey, fine grained, faintly laminated, thin coal leases				
215.19						80°	- as above, scattered mud rip up clasts, becoming slightly finer grained towards bottom, laminated				
216.71		0.08					- as above				
		0.30					MUDSTONE - dark grey, some silty laminations				
Box 88		1.27					- as above, increasing silty laminations				
218.24		0.92					- as above				
Box 89		0.56					- as above				
219.76		0.84					- as above				
		0.79					SANDSTONE - light grey, fine grained, several muddy bands, laminated faintly, some burrows, some mud clasts				
Box 90		0.21					SILTSTONE - light grey, muddy patches, carbonaceous wisps and patches, burrows				
221.28											

DIAMOND DR CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7906 SHEET No: 30

DATE BEGUN: JULY 24, 1979 DEPTH: _____ BEARING: 333,2 U.T.M. 6212013.5N;526940.9E

DATE FINISHED: JULY 31, 1979 ELEV. COLLAR: 1096.49 metres TOTAL DEPTH: 245.67 metres COAL LICENSE: 4183

LAT.: NORTH ADAMS HOLE ANGLE: 88° LOGGED BY: C. BEAVAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
		0.02					COAL - dull core solid				
		0.01					- bright banded, pyrite bands core solid				
		0.06					- dull banded core solid				
		0.02					- dull core broken				
		0.13					MUDSTONE - dark grey, coaly lenses				
		0.98				90°	SILTSTONE - light grey, laminated, minor cross-bedding				
222.81		0.59					SANDSTONE - light grey, faintly laminated, fine grained, some muddy patches				
Box 91		0.26					- as above, well laminated				
		0.30					- as above, slightly coarser grained, faintly laminated				
		0.49				90°	SILTSTONE - light grey, well laminated				
224.33		1.09					- as above, worm burrows				
Box 92		0.33					- as above, increasing muddy laminations				
225.86		1.57				90°	MUDSTONE - dark grey, numerous silty laminations towards top and very muddy towards base, some burrows				
227.38											

DIAMOND DRILL CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7906 SHEET No: 31

DATE BEGUN: JULY 24, 1979 DEPTH: _____ BEARING: 333.2 U.T.M. 6212013.5N;526940.9E

DATE FINISHED: JULY 31, 1979 ELEV. COLLAR: 1096.49 metres TOTAL DEPTH: 245.67 metres COAL LICENSE: 4183

LAT.: NORTH ADAMS HOLE ANGLE: 88° LOGGED BY: C. BEAVAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
227.38											
		0.21					- as above				
Box 93											
		1.29					- as above, increasingly mottled, numerous burrows, very little siltstone towards base				
228.90											
		0.84				90°	SILTSTONE - light grey, faintly laminated, mottled, burrows				
Box 94											
		0.82					MUDSTONE - dark grey, mottled with siltstone, burrows				
230.43											
		1.30				90°	- as above, laminated towards base				
Box 95											
		0.11					- as above				
231.95											
		1.68					- as above				
233.48											
		0.19					- as above				
Box 96											
		1.25					- as above, increasingly muddy towards bottom, minor coal band (0.01)				
235.00											
		0.83					SILTSTONE - medium grey, frequent muddy laminations				
Box 97											
		0.79					MUDSTONE - dark grey, minor silty laminations, a 0.02 coaly band				
236.52											
		0.75					- as above, silty bands and silty mottling				

DIAMOND DR CORE LOG
(ALL ANGLES MEASURED FROM CORE AXIS)

HOLE No: 7906 SHEET No: 32

DATE BEGUN: JULY 24, 1979 DEPTH: _____ BEARING: 333.2 U.T.M. 6212013.5N; 526940.9E

DATE FINISHED: JULY 31, 1979 ELEV. COLLAR: 1096.49 metres TOTAL DEPTH: 245.67 metres COAL LICENSE: 4183

LAT.: NORTH ADAMS HOLE ANGLE: 88° LOGGED BY: C. BEAVAN CORE SIZE: HQ

MARKER BLOCKS	UNIT THICK.	RECOVD. THICK.	ACTUAL THICK.	% REC.	FINAL TOPS	BEDDING ANGLE	LITHOLOGY, ROCK TYPE, GRAIN SIZE, COLOUR, WEATHERING, GOUGE & SLICKS, BROKEN CORE.	SAMPLE No.	JOINTING	HARDNESS	FRACT. FREQ.
		0.57				90°	SILTSTONE - light grey, laminated, mottled in part				
Box 98		0.10				90°	- as above				
238.05		1.61					- as above, increasingly mottled				
239.57		0.30					- as above				
Box 99		0.18					- as above				
		0.95					MUDSTONE - dark grey, siltstone mottling, burrows				
241.10		1.00					- as above, some siltstone laminations as well as mottling				
Box 100		0.06					- as above				
		0.51				90°	SILTSTONE - light grey, laminated, cross-bedded in part, some burrows				
242.62		1.51					- as above, alternating laminations and mottling bands				
244.14		1.60					- as above, increasingly featureless towards base, calcite veins along fractures near base				
Box 101											
245.67							END OF HOLE 7906				

Mr. Adams 2/13/79

ROKE

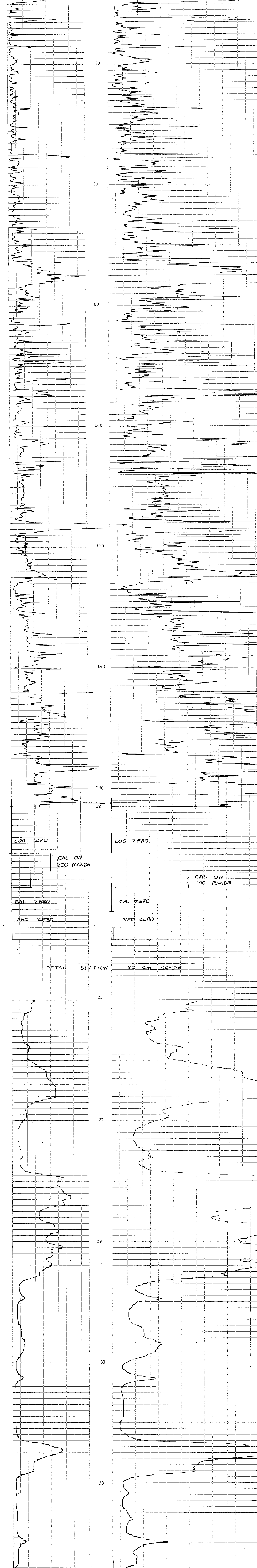
INTEGRATED SEISMIC LOGS

OIL ENTERPRISES LTD. CALGARY ALBERTA

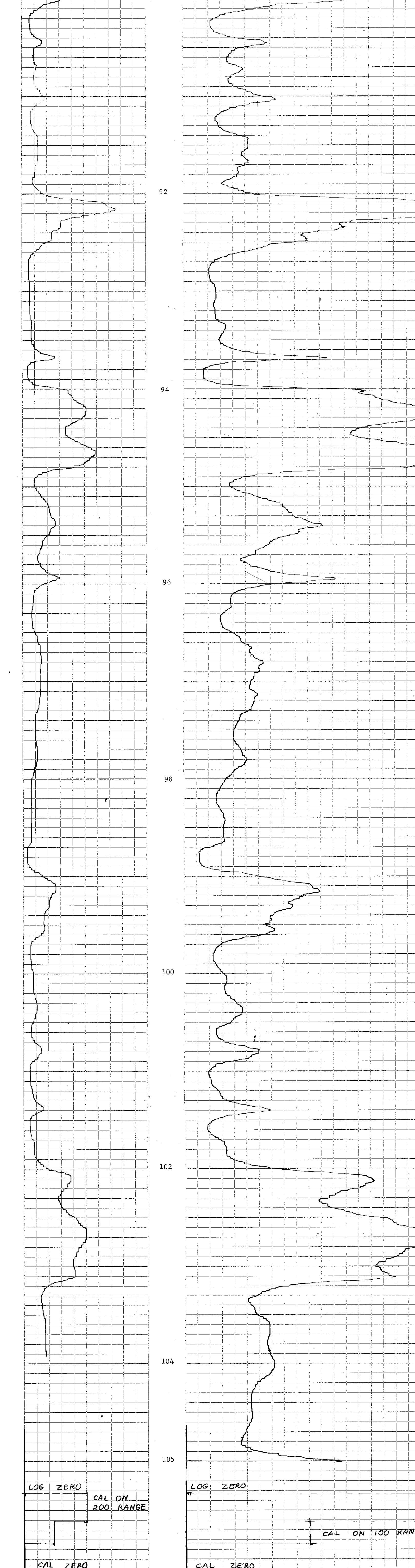
FILE NO.	COMPANY	GEOS. INSTR. RESOURCES LTD.
LOG NO.	WELL	D - 79 - 01
SEC	LOCATION	SEAS REEFER LAND RESERVE
DATE	FIELD	AMAS OIL PROPERTY
W	PROVINCE	ALBERTA
M	PERMITTING AGENCY	ALBERTA GOVERNMENT
	REG. NO.	5 JUNE 1979
	DATE	1979
	LOG NO.	163 M
	LOG DATE	5 JUNE 1979
	LOG TIME	1:45
	LOG PLACE	163.5
	LOG DEPTH	164.9
	LOG TYPE	19.9
	LOG METHOD	WATER/IND
	LOG INSTR.	TRINA
	LOG MODEL	9.6 CM
	LOG TEMP.	11.8 @ 25
	LOG PRESS.	2 HOURS
	LOG TIME	21 @ 4
	LOG NO.	456

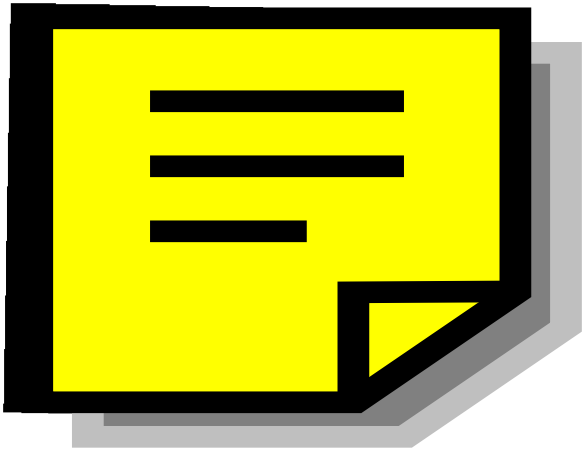
Remarks	PHI # 6	7 ELECTRODE SONDE
	CURRENT - HI	20 CM BEAM
	MIDFISH RESISTANCE 190 OHMS	5 CM BEAM
	1 METER ARRAY	CURRENT - LOW
		0.6 M ARRAY

RESISTIVITY	OHM METERS	RESISTIVITY	OHM METERS
0	4000	0	2000
		1000	
		2000	
		3200	
		4200	
		5200	
		6200	
		7200	
		8200	
		9200	
		10200	
		11200	
		12200	
		13200	



DETAIL SECTION 20 CM SONDE





79-1818

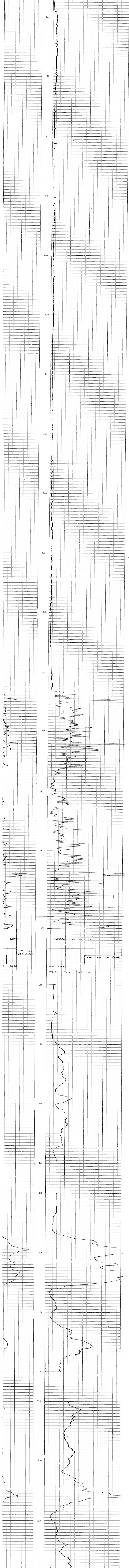
ROKE

PROCESSED BY: [Redacted]

OIL ENTERPRISES LTD. CALGARY, ALBERTA

FILE NO.	COMPANY	OXFORD RESOURCES LTD
WELL	WELL	R - 79 - 03
LOCATION	LOCATION	RACE HATER LAND DISTRICT
FIELD	FIELD	AINAS OVAL PROPERTY
PROVINCE	PROVINCE	BRITISH COLUMBIA
PROJECT DATA	PROJECT DATA	TOU OF CAINING BAY
DATE	DATE	12 JAN 1979
LOG NUMBER	LOG NUMBER	326 K
LOG DATE	LOG DATE	1979
LOG TIME	LOG TIME	3:25.5
LOG DEPTH	LOG DEPTH	329.2
LOG TYPE	LOG TYPE	WATER
LOG DURATION	LOG DURATION	12.7 CM
LOG TEMPERATURE	LOG TEMPERATURE	12.0 25
LOG PRESSURE	LOG PRESSURE	2 BARNS
LOG TANK NO.	LOG TANK NO.	10.4
LOG OPERATOR	LOG OPERATOR	ROBERT
LOG ASSISTANT	LOG ASSISTANT	FRANK

Remarks: PHL # 6 7 ELECTRODE SONDE
 CURRENT - HI 20 CM BEAM
 MUDFISH RESISTANCE - 280 OHMS 1 METER ARRAY



12-99005-79(3)A

ROKE

GAMMA RAY NEUTRON LOG

OIL ENTERPRISES LTD. CALGARY, ALBERTA

COMPANY: OIL ENTERPRISES LTD.
WELL: D-79-04

LOCATION: ERIE RIVER LAND DISTRICT
FIELD: ADAMS COAL PROPERTY

PROVINCE: BRITISH COLUMBIA
LOG MEASURED FROM: RIG FLOOR
WELL DEPTH MEASURED FROM: RIG FLOOR

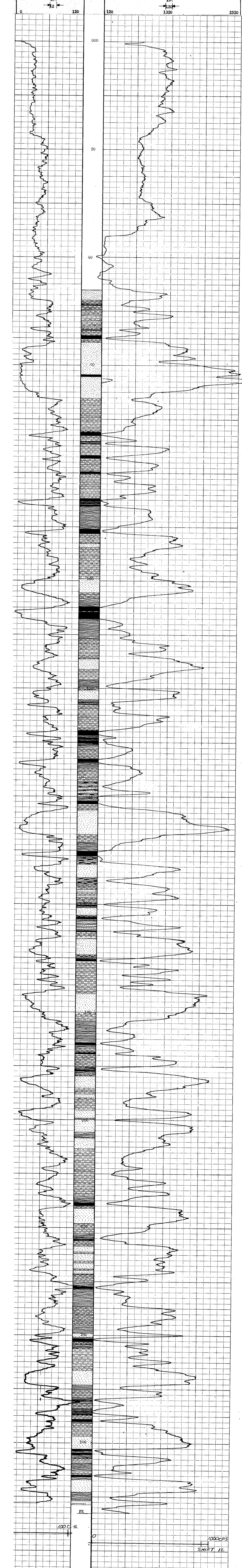
DATE: 19 JULY 1979
LAST READING: 273 M
FOUNDRY LOGGED: 0

Run No. 002
Depth Reached 273.5
Depth Driller 273.4
Casing Bore 46.2
Casing Outer 46
Fluid Type WATER/MUD
Lubric Level 26.5
Min. Diam. 9.6 CM
Rm @
Opening Time 1.7 HOUR
Truck No. RI # 4

GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.	125	LOG TYPE	NEUTRON/NEUTRON
DIAMETER	3.2 CM	TOOL MODEL NO.	125
DETECTOR MODEL NO.		DIAMETER	3.2 CM
TYPE	SCINTILLATION	DETECTOR MODEL NO.	
LENGTH	10 CM	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	2.07 M	LENGTH	15.24 CM
		SOURCE MODEL NO.	MRC-N-SS-W
		SERIAL NO.	171
		SPACING	43 CM
		TYPE	AmBe
		STRENGTH	3 CURIES

GENERAL		GAMMA RAY				NEUTRON									
RUN NO.	1	DEPTH FROM	0	TO	273	SPEED M/MIN	4	T.C. SEC.	3	SENS SETTINGS	1000	ZERO DIV. L OR R	1 L	API N. UNITS PER LOG DIV	120

REMARKS: LOGGED THROUGH HO DRILL RODS
DIAMOND CORE HOLE



1000 DEPS
SHIFT 12
HC-38D

456

W. ADAMS 79 (3/18)

ROKE

SIDEMALL DENSILOG
CALIPER

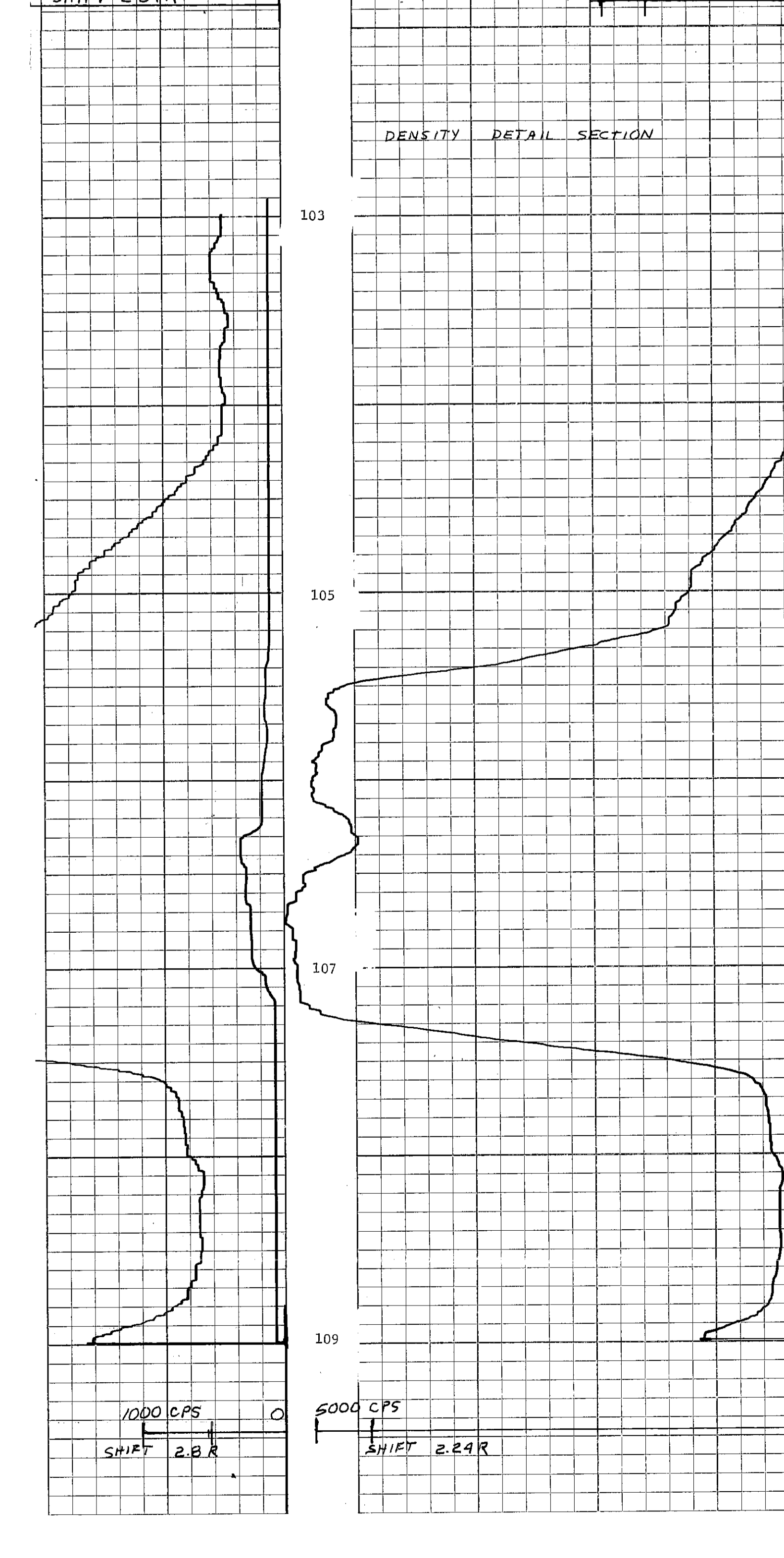
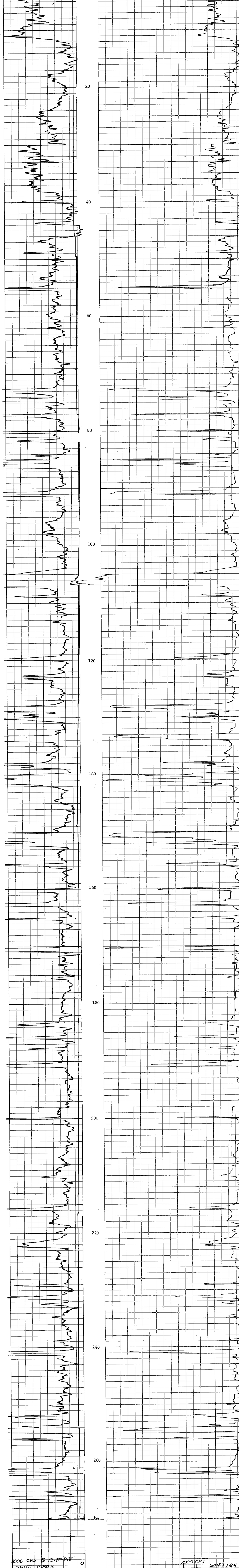
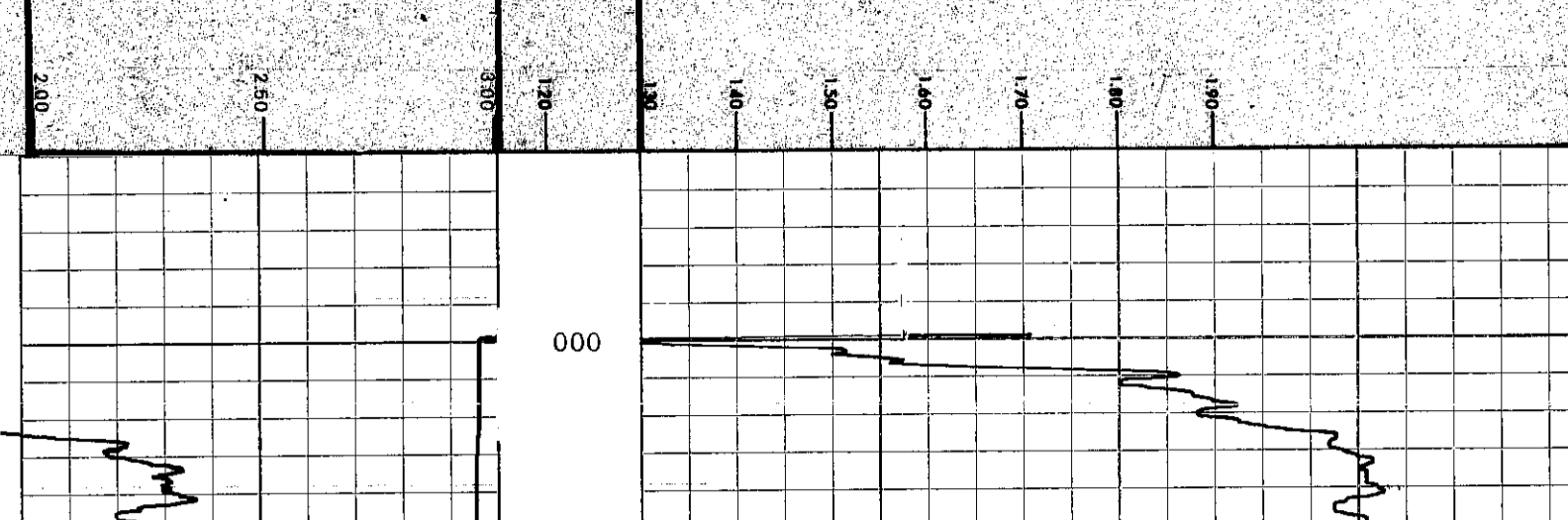
OIL ENTERPRISES LTD. CALGARY, ALBERTA

FILE NO.	COMPANY	GEORGE HEST ASSOCIATES LTD.
LOG TYPE	WELL	D - 79 - 04
RICE	LOCATION	YEGRE RIVER LAND DISTRICT
W.	FIELD	ALMAZ COAL PROPERTY
PROVINCE	ALBERTA	
PERMANENT DURATION	REG. FLOOR	REG. FLOOR
LOG MEASURED FROM	LOG FLOOR	LOG FLOOR
WELL DEPTH MEASURED FROM	LOG FLOOR	LOG FLOOR
DATE	DATE	19 JUN 1979
LOG NO.	DATE	19 JUN 1979
LOG READING	LOG READING	0
LOG READING	LOG READING	270
LOG READING	LOG READING	271.5
LOG READING	LOG READING	274.5
LOG READING	LOG READING	28.5
LOG READING	LOG READING	46
LOG READING	LOG READING	9.6 CM
LOG READING	LOG READING	2 HOURS
LOG READING	LOG READING	2 HOURS

RUN NO.	GENERAL			GAMMA RAY			SIDEMALL DENSILOG			
	DEPTH	SPEED	T.C.	SENS	-ZERO	API G.R. UNITS	T.C.	SENS	ZERO	CPS/DIV
1	0	270	7				0.2	1000	1.89 R	105.26
	103	109	5				0.2	5000	2.24 R	229.56

REMARKS: GENERAL SCALE LOGGED THROUGH HQ DRILL RODS, DIAMOND CORE HOLE
NOTE: POSITION OF RODS IN THE DRILLHOLE MUST BE TAKEN INTO CONSIDERATION WHEN USING THE DENSITY SCALE.

DENS TOOL # 553 A CALIPER TOOL # 776 DETAIL SECTION RUN IN OPEN HOLE



1000 CPS @ 13.87 DIV SHIFT 2.84R
1000 CPS SHIFT 1.84
1000 CPS SHIFT 2.84R
5000 CPS SHIFT 2.24R

Recorded by: [Signature]
Witnessed by: [Signature]

456

ROKE

GAMMA RAY NEUTRON LOG

12-202025 79 (3) 1A

OIL ENTERPRISES LTD. CALGARY, ALBERTA

FILE NO. COMPANY GCONS WEST RESOURCES LTD.
 WELL R - 79 - 05
 LOCATION PEACE RIVER LAND DISTRICT
 FIELD ADAMS OIL PROPERTY

PROVINCE BRITISH COLUMBIA
 TOP OF CASING 1500 FT
 TOP OF CASING ABOVE FROM DRAIN
 TOP OF CASING 281.5
 OTHER SERVICES: DENSO-CAL, FBI, DJR

Run No. 006
 Date 15 JUN 1979
 Last Reading 0
 Footage Logged 281.5

Depth Driller 281.9
 Casing Raker 23
 Casing Driller 22.5

Fluid Type WATER
 Liquid Lead 11.7 CM
 Min. Drum
 Run @
 Operating Time 1.8 HRS
 Truck No. FT 44

Recorded By: RYAN W. Witnessed By: HOEFMAN

456

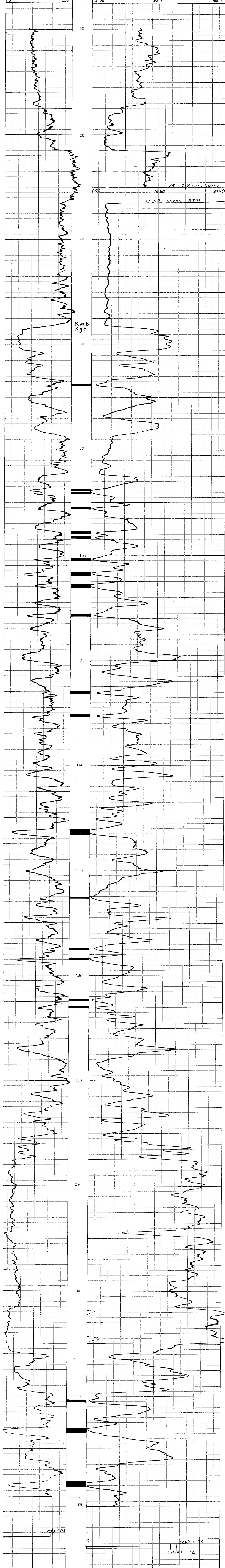
EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.	125	LOG TYPE	NEUTRON/NEUTRON
DIAMETER	3.2 CM	TOOL MODEL NO.	125
DETECTOR MODEL NO.		DIAMETER	3.2 CM
TYPE	SCINTILLATION	DETECTOR MODEL NO.	
LENGTH	10 CM	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	2.07 M	LENGTH	15.24 CM
		SOURCE MODEL NO.	MRC-N-SS-W
GENERAL		SERIAL NO.	171
HOIST TRUCK NO.		SPACING	43 CM
INSTRUMENT TRUCK NO.	FU # 4	TYPE	AmBe
TOOL SERIAL NO.	002	STRENGTH	3 CURIES

LOGGING DATA

GENERAL				GAMMA RAY				NEUTRON			
RUN NO.	DEPTHS	SPEED	T.C.	SENS	ZERO	API G. R. UNITS	T.C.	SENS	ZERO	API N. UNITS	REMARKS
NO.	FROM	TO	M/ MIN	SEC.	SETTINGS	DIV. L OR R	PER LOG DIV.	SEC.	SETTINGS	DIV. L OR R	PER LOG DIV.
1	0	30	4	3	100	0	15	3	1000	16 L	150
	30	281	4	3	100	0	15	3	1000	1 L	150

REMARKS: ROTARY DRILL HOLE



ROKE

OIL ENTERPRISES LTD. CALGARY, ALBERTA

GAMMA RAY NEUTRON LOG

72-00005 741319

FILE NO. COMPANY GROSS WEST RESOURCES LTD.
 WELL D-79-06
 LOCATION PEACE RIVER LAND DISTRICT
 FIELD ADAMS COAL PROPERTY
 PROVINCE BRITISH COLUMBIA
 PERMANENT DATUM RIG FLOOR
 LOG MEASURED FROM RIG FLOOR ABOVE PERM. DATUM
 WELL DEPTH MEASURED FROM RIG FLOOR METRIC
 OTHER SERVICES: DTR, TBL, DENIS-CAL, K.B., CSO, G.L.

Run. No. ONE
 Date 31 JULY 1979
 First Reading 241 M
 Last Reading 0
 Footage Logged 241.5
 Depth Reached 241.5
 Depth Driller 246.7
 Casing Role 20.7
 Casing Driller 20.7
 Fluid Type WATER/MUD
 Liquid Level 8
 Min. Diam. 9.6 CM
 Rim @
 Operating Times 1.3 HRS
 Truck No. FU # 4

Recorded By FRYANZ Witnessed By HOFFMAN

456

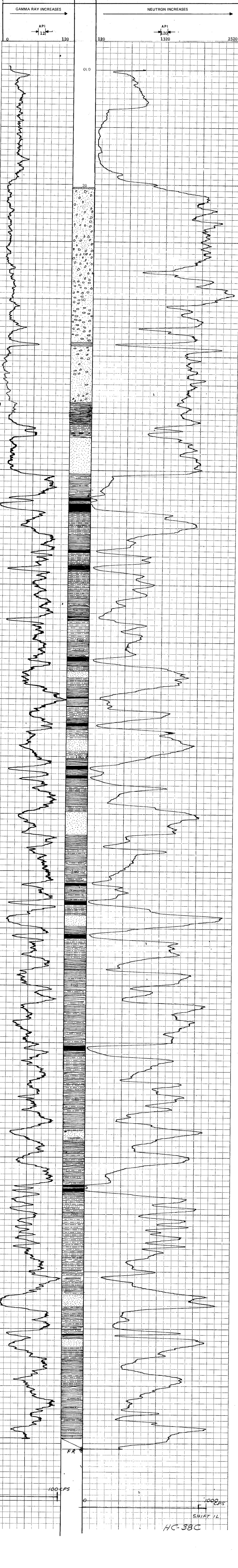
EQUIPMENT DATA

GAMMA RAY				NEUTRON			
RUN NO.	ONE	RUN NO.	ONE	RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.	125	LOG TYPE	NEUTRON/NEUTRON	TOOL MODEL NO.	125	TOOL MODEL NO.	125
DIAMETER	3.2 CM	DIAMETER	3.2 CM	DIAMETER	3.2 CM	DIAMETER	3.2 CM
DETECTOR MODEL NO.		DETECTOR MODEL NO.		DETECTOR MODEL NO.		DETECTOR MODEL NO.	
TYPE	SCINTILLATION	TYPE	PROPORTIONAL	TYPE	PROPORTIONAL	TYPE	PROPORTIONAL
LENGTH	10 CM	LENGTH	15.24 CM	LENGTH	15.24 CM	LENGTH	15.24 CM
DISTANCE TO N. SOURCE	2.07 M	SOURCE MODEL NO.	MRC-NSS-W	SOURCE MODEL NO.	MRC-NSS-W	SOURCE MODEL NO.	MRC-NSS-W
GENERAL				GENERAL			
HOIST TRUCK NO.		SERIAL NO.	171	SERIAL NO.	171	SERIAL NO.	171
INSTRUMENT TRUCK NO.	FU # 4	SPACING	43 CM	SPACING	43 CM	SPACING	43 CM
TOOL SERIAL NO.	002	TYPE	AmBe	TYPE	AmBe	TYPE	AmBe
		STRENGTH	3 CURIES	STRENGTH	3 CURIES	STRENGTH	3 CURIES

LOGGING DATA

RUN NO.	GENERAL		GAMMA RAY				NEUTRON				
	FROM	TO	SPEED	T.C.	SENS	ZERO	API G. R. UNITS	T.C.	SENS	ZERO	API N. UNITS
			M / MIN	SEC.	SETTINGS	DIV. L OR R	PER LOG DIV.	SEC.	SETTINGS	DIV. L OR R	PER LOG DIV.
1	0	241	4	3	100		12	3	1000	1 L	120

REMARKS LOGGED THROUGH HQ DRILL RODS
 DIAMOND CORE HOLE



HC-38C

ROKE

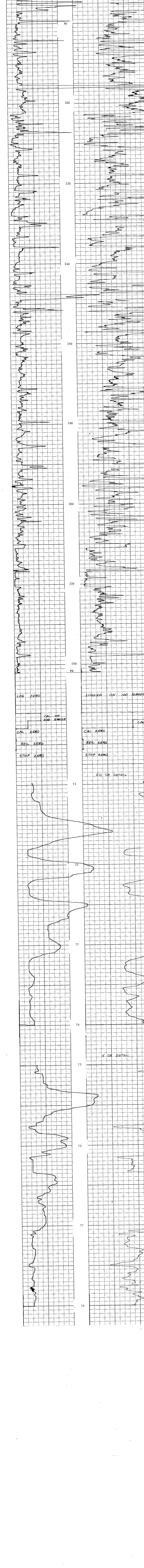
ROKED BEAR LOG

889775-26(314)

FILE NO. COMPANY GREGS WEST RESOURCES LTD. CALGARY, ALBERTA
 WELL D - 79 - 06
 LOCATION BRACE NEVER LAND DISTRICT
 FIELD ADAMS OIL PROPERTY
 PROVINCE BRITISH COLUMBIA
 PERMIT NO. B.C. 1000
 PERMIT DATE 1979
 LOG SHEET NO. 100001

LOG SHEET NO. 100001
 DATE 31 JULY 1979
 TIME 0
 DEPTH REACHED 246.5
 DEPTH OF FRESH WATER 246.5
 Casing Name 200.7
 Fluid Type WATER/SLUD
 Liquid Level 9.6 CM
 Min. Diam. 9.6 CM
 Run @ 23
 Operating Time 1.3 HRS
 Trawl No. III # 4

Remarks: FBL # 6 7 ELECTRODE SONDE 5 CM BEAM
 CURRENT - HI 20 CM BEAM CURRENT - STD
 MUDFISH - 400 OHMS 0.6 M ARRAY
 1 METER ARRAY

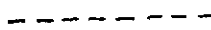


Recorded by: J. B. BARNES
 Witnessed by: J. B. BARNES

456

MAP SYMBOLS

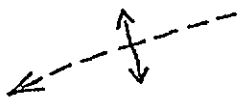
Strike and dip of bedding (horizontal, inclined, vertical, overturned)



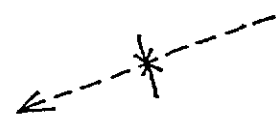
Geologic contact (approximate)



Thrust fault (approximate) (teeth in direction of dip)



Anticline (approximate) with plunge



Syncline (approximate) with plunge

* Coal

Coal outcrop

+ d 79-01

Diamond drill hole location of a 1979 CNRL drill hole

+ r 79-03

Rotary drill hole location of a 1979 CNRL drill hole

• A 73-1

Diamond drill hole location of drill hole not drilled by CNRL

Kcm

Compton Formation
GEOLOGICAL BRANCH
ASSESSMENT REPORT

Kmb

Moosebar Formation

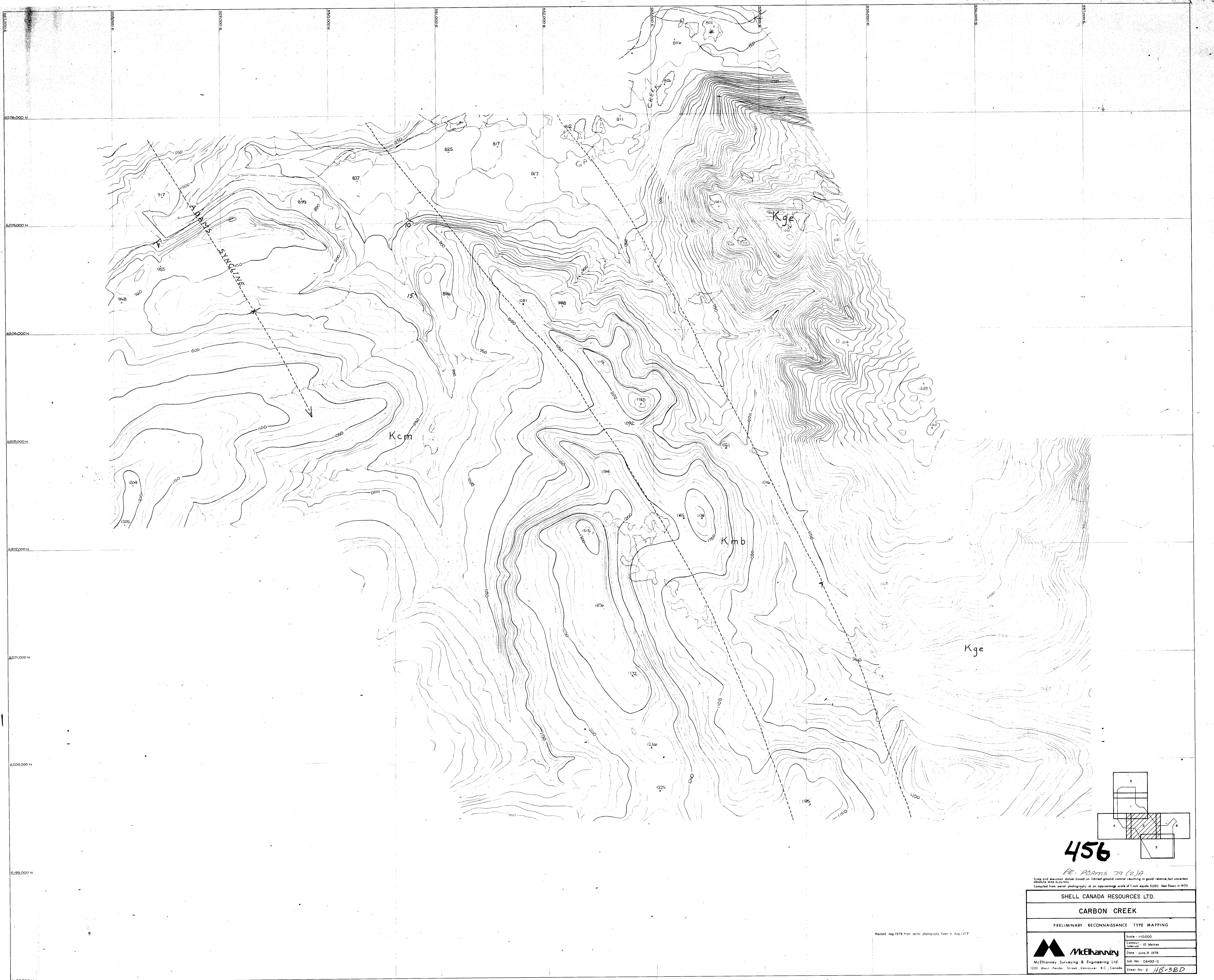
Kge

Gething Formation

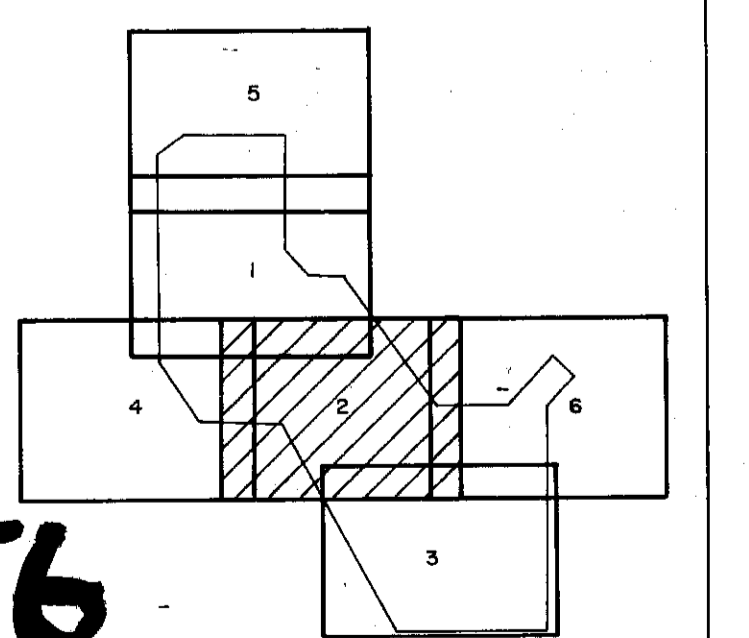
Kfd

Cadomin Formation

00 456



456

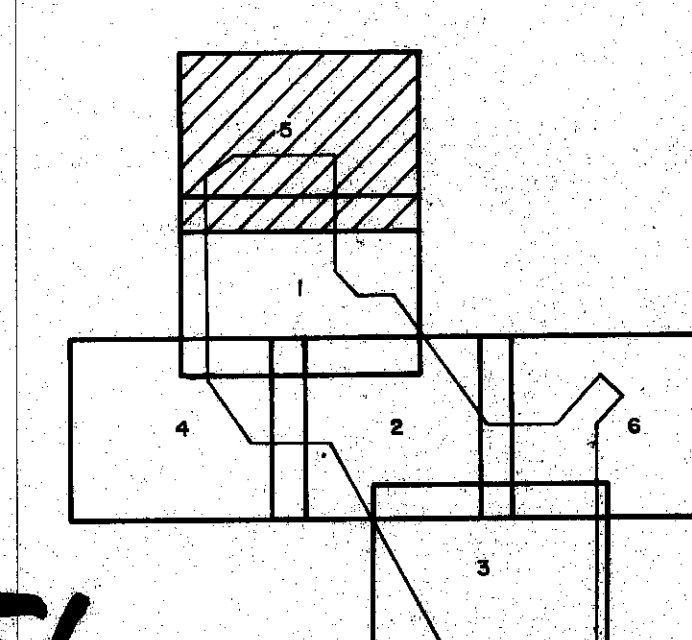
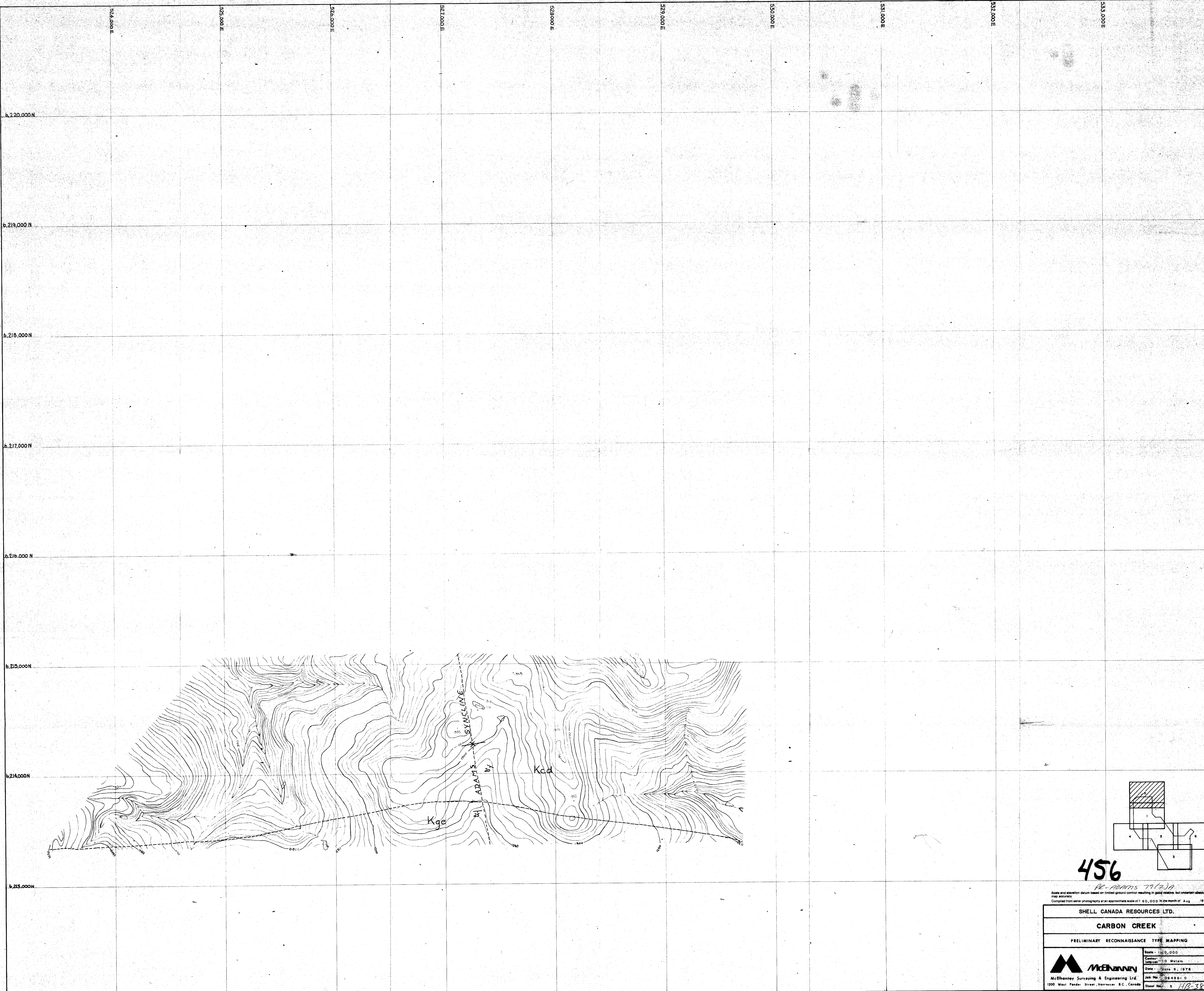


PL. 200ms 79 (e) 18

Scale and elevation down based on limited ground control resulting in good relative, but uncertain absolute map accuracy.
Compiled from aerial photography at an approximate scale of 1 inch equals 5280 feet flown in 1970.

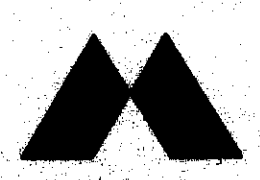
SHELL CANADA RESOURCES LTD.	
CARBON CREEK	
PRELIMINARY RECONNAISSANCE TYPE MAPPING	
Scale - 1:100,000	Contour Interval - 10 Metres
Date - June, 8, 1978	Job No. - 06492-0
McElhannay Surveying & Engineering Ltd. 1200 West Pender Street, Vancouver, B.C., Canada	Sheet No. 2 <i>11B-3B D</i>

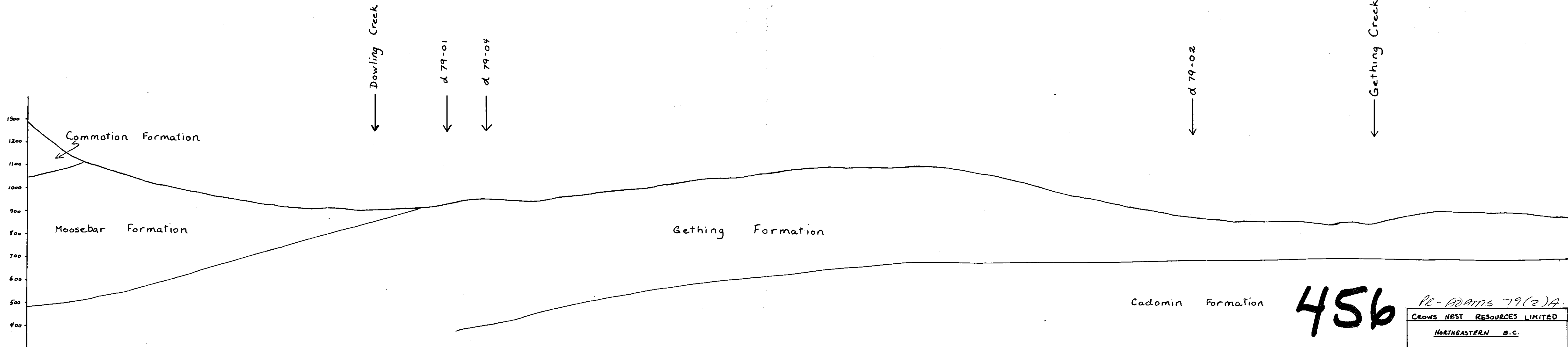
Revised Aug. 1978 from aerial photography flown in Aug. 1977



456

PC-ADAMS 79(2)A
 Scale and elevation datum based on limited ground control resulting in good relative, but uncertain absolute
 map accuracy.
 Compiled from aerial photography at an approximate scale of 1:80,000 in the month of Aug. 1977.

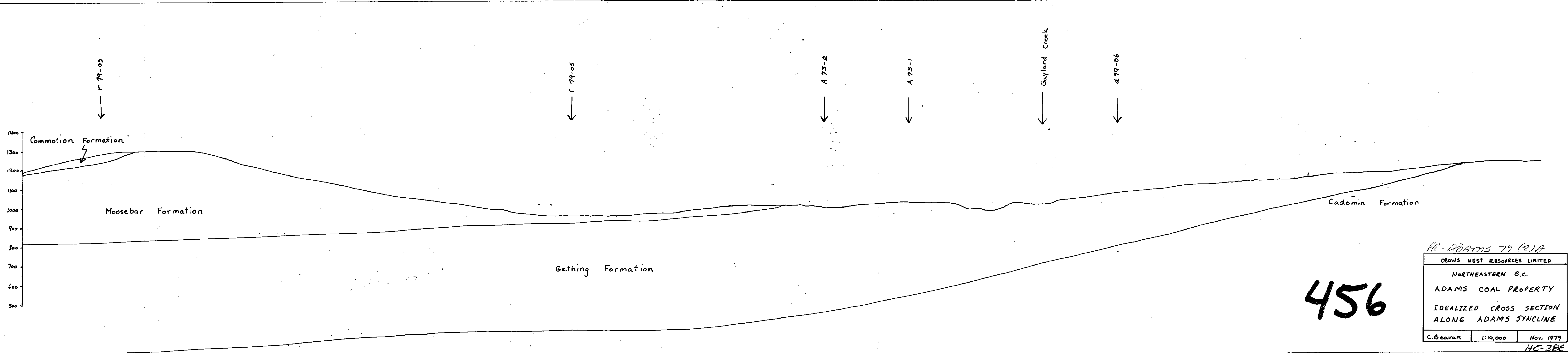
SHELL CANADA RESOURCES LTD.	
CARBON CREEK	
PRELIMINARY RECONNAISSANCE TYPE MAPPING	
 McElhanney McElhanney Surveying & Engineering Ltd. 1200 West Pender Street, Vancouver B.C., Canada	Scale - 1:80,000 Contour Interval - 10 Meters Date - June 9, 1978 Job No. 06488-0 Sheet No. 5 110-386



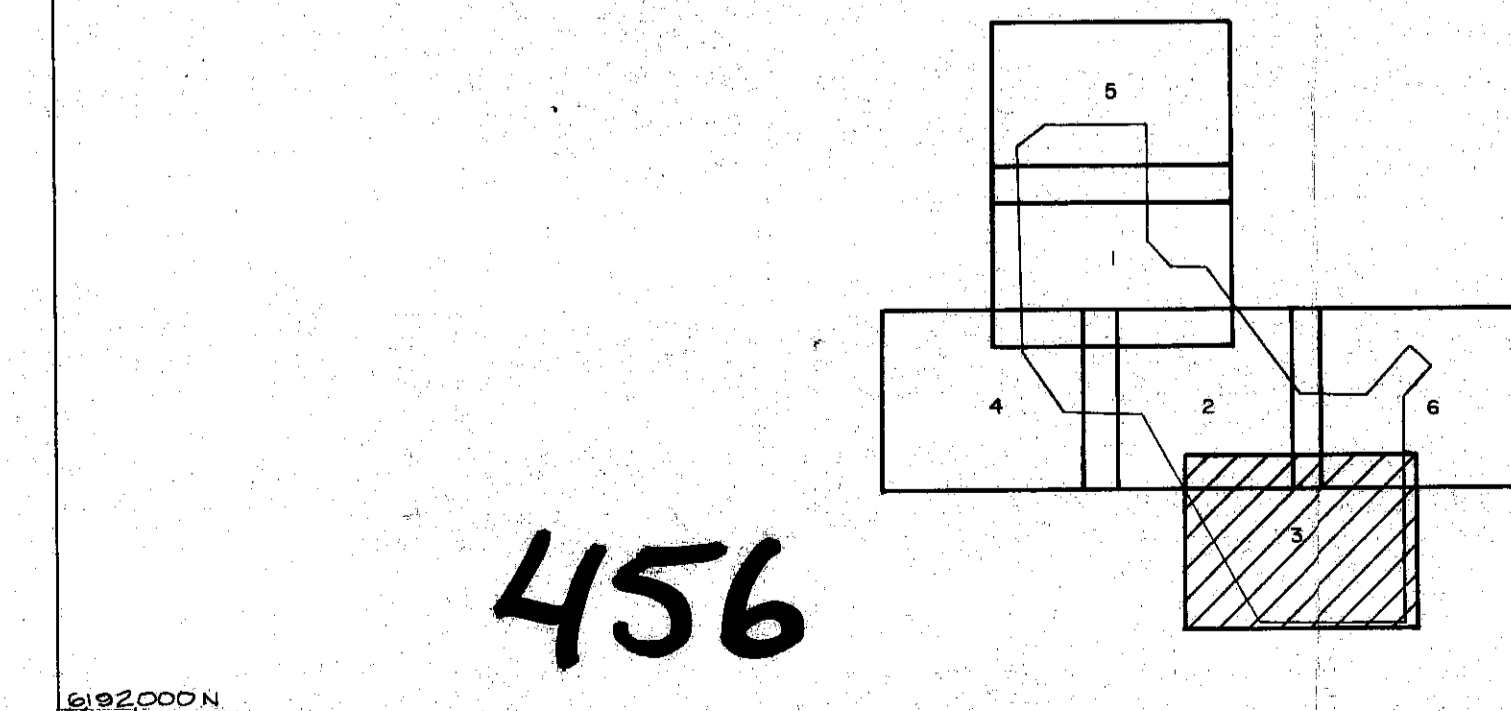
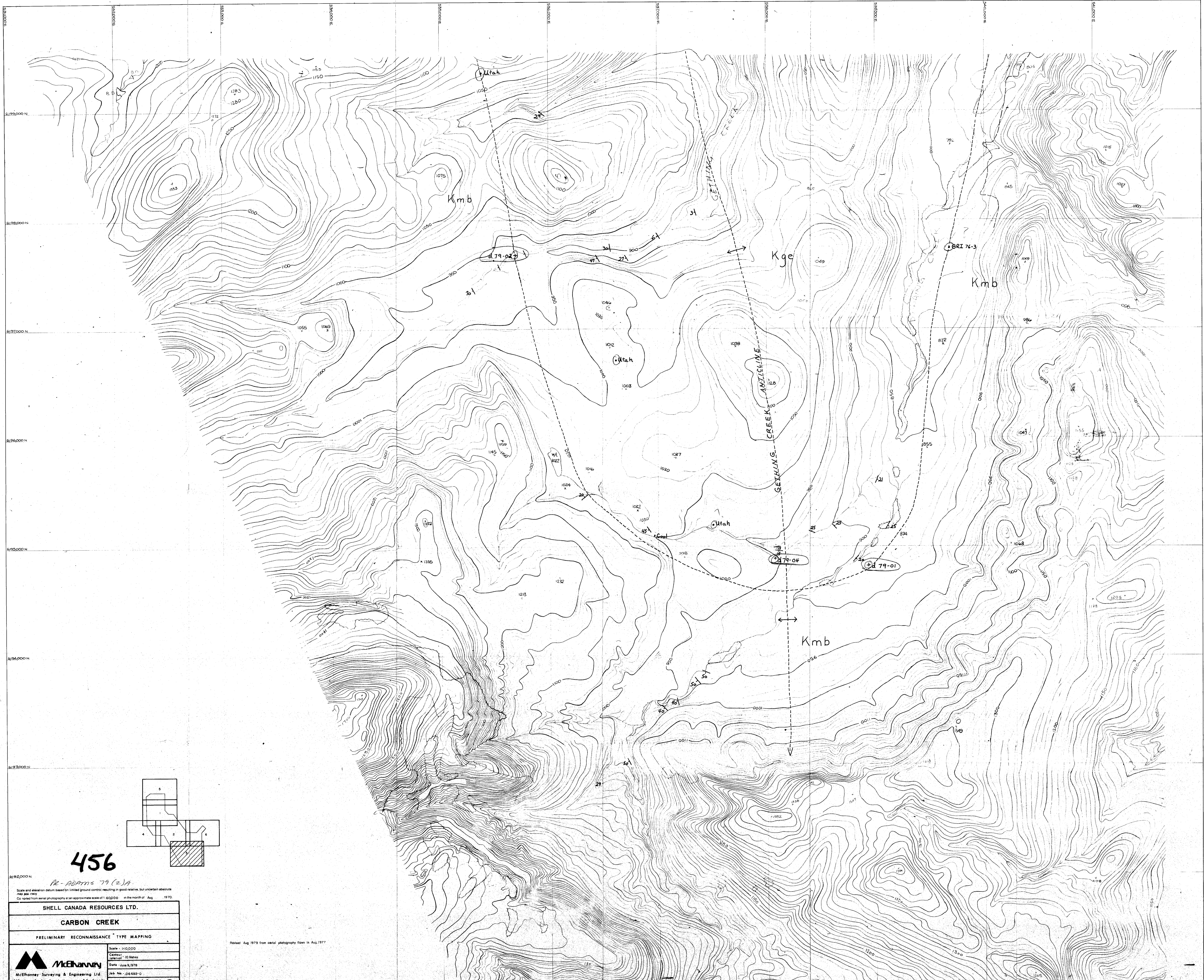
456

PL-ADAMS 79(2)A
 CROWS NEST RESOURCES LIMITED
 NORTHEASTERN B.C.
 ADAMS COAL PROPERTY
 IDEALIZED CROSS SECTION
 ALONG GETHING CREEK
 ANTICLINE
 C. Beavan 1:10,000 Nov. 1979

HC-38F



PL-ADAMS 79 (2)A
 CROWS NEST RESOURCES LIMITED
 NORTHEASTERN B.C.
 ADAMS COAL PROPERTY
 IDEALIZED CROSS SECTION
 ALONG ADAMS SYNCLINE
 C. BEAVER 1:10,000 Nov. 1979
 HC-3DE



456

PR - ADAMS 79 (2) A
 Scale and elevation datum based on limited ground control resulting in good relative, but uncertain absolute map accuracy.
 Co. copied from aerial photography at an approximate scale of 1:60,000 in the month of Aug. 1970.

SHELL CANADA RESOURCES LTD.
CARBON CREEK
 PRELIMINARY RECONNAISSANCE TYPE MAPPING

<p>McHanney McHanney Surveying & Engineering Ltd. 1370 West Pender Street, Vancouver, B.C., Canada</p>	Scale - 1:10,000
	Centre - 10 Metres
	Date - June 5, 1978
	Sheet No. - 28492-0
Sheet No. - 3	48-38 E

Revised Aug 1979 from aerial photography flown in Aug 1977

D-79-06

A-73-1

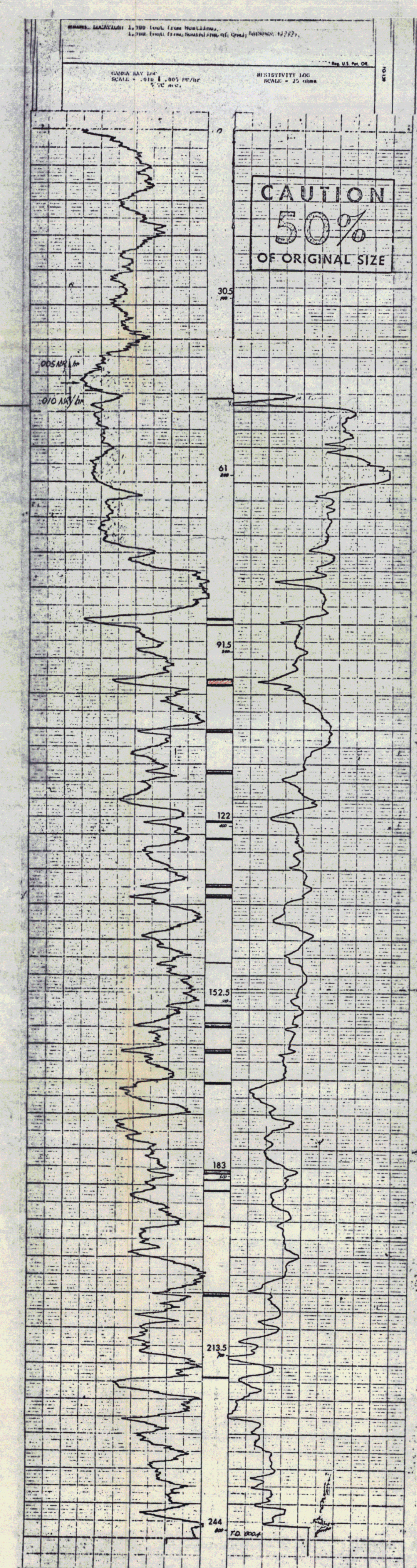
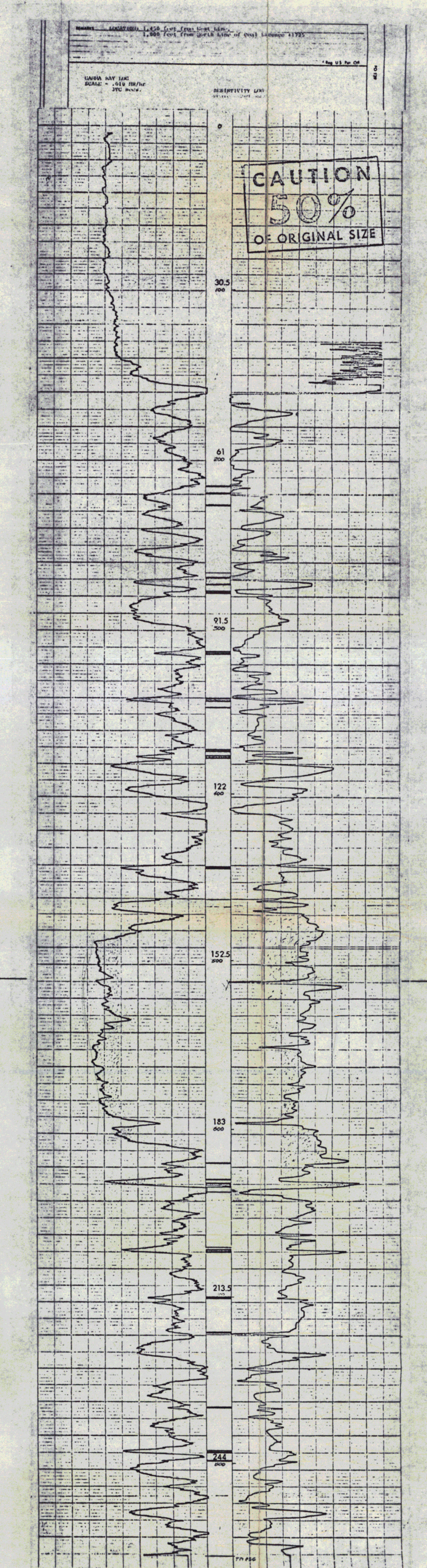
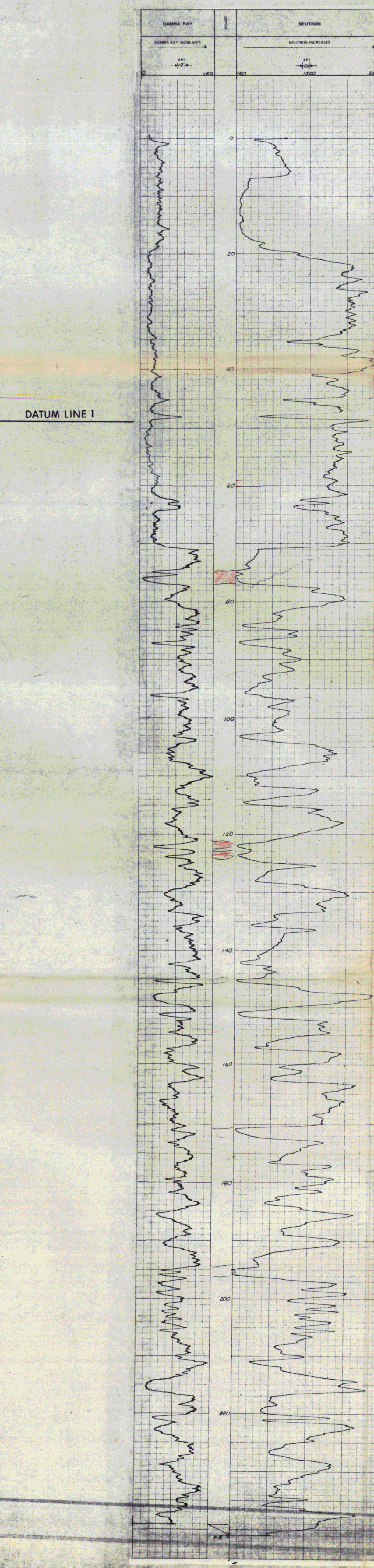
A-73-2

R-79-05

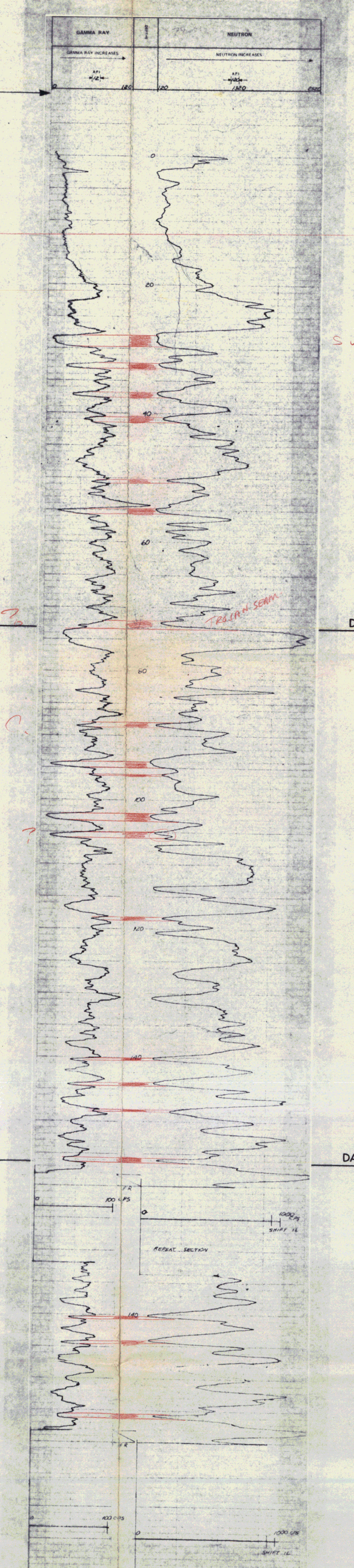
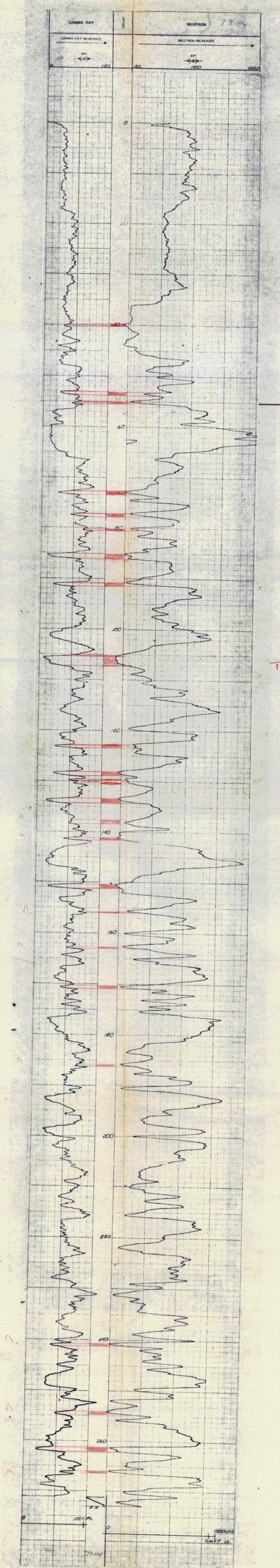
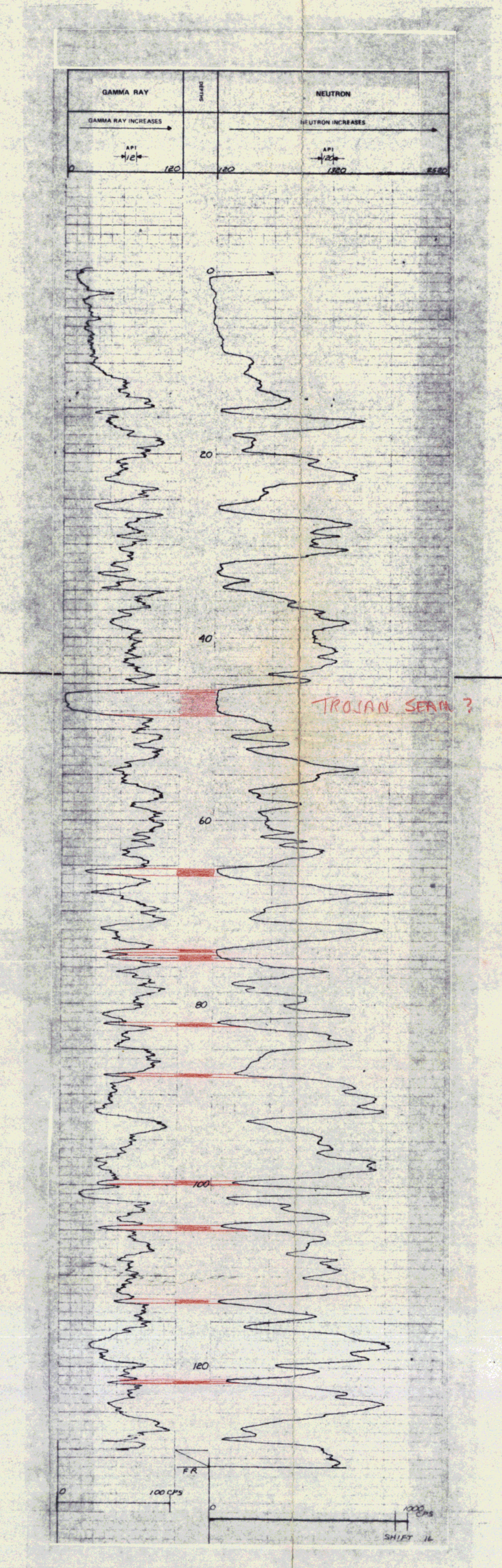
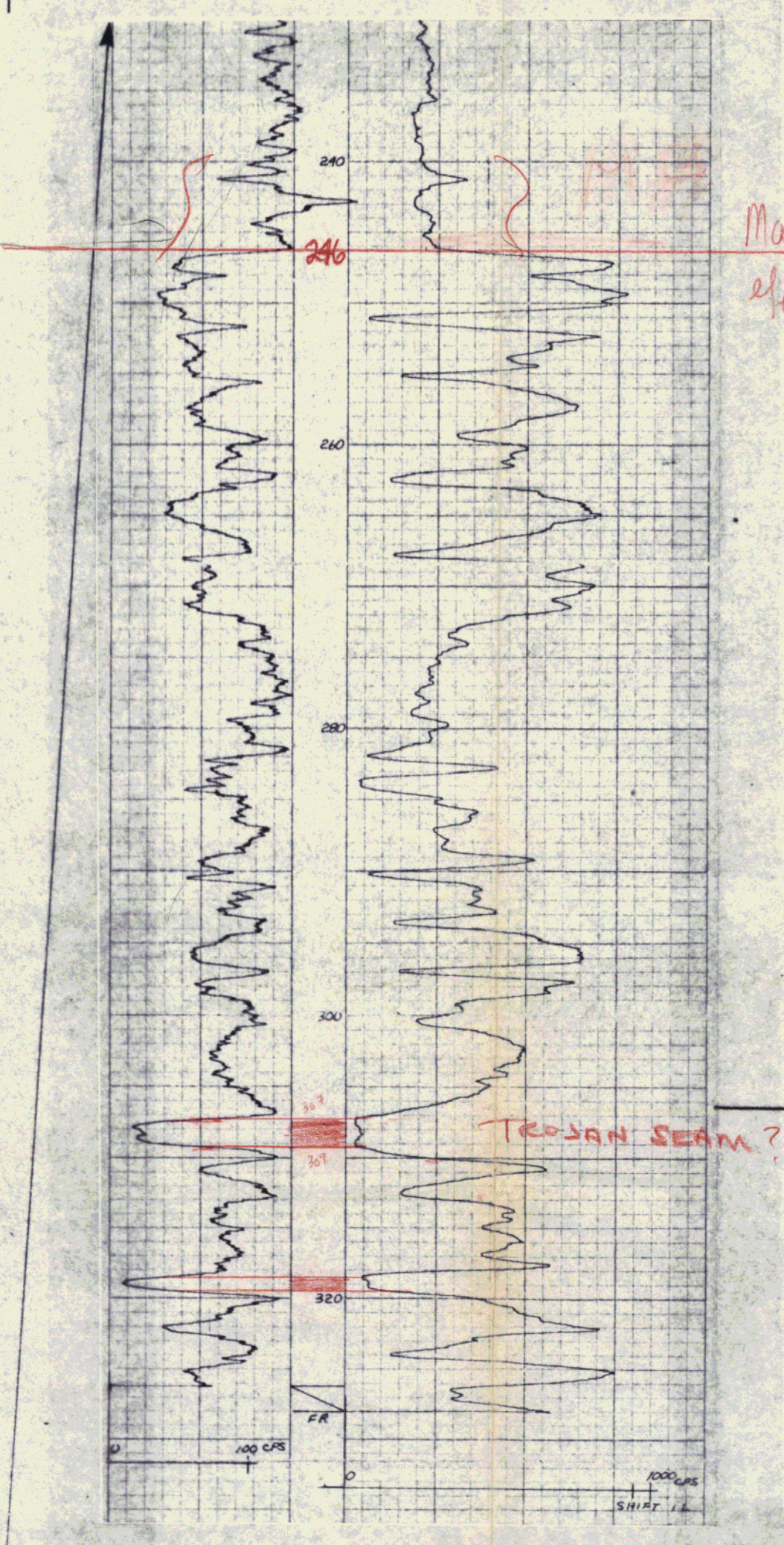
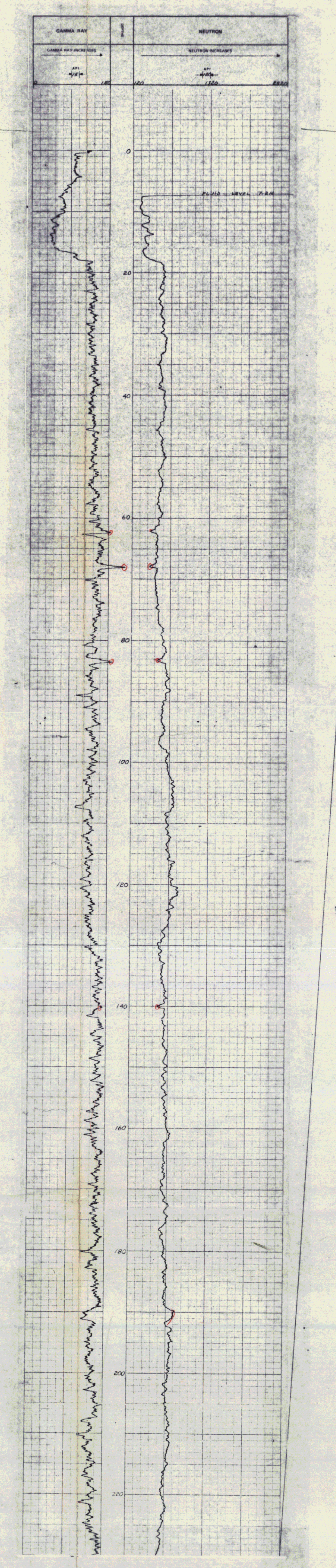
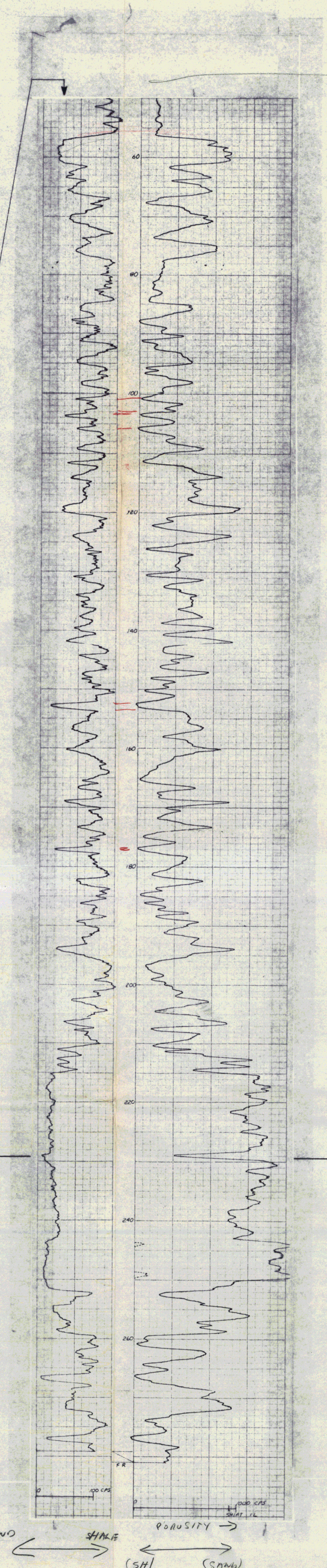
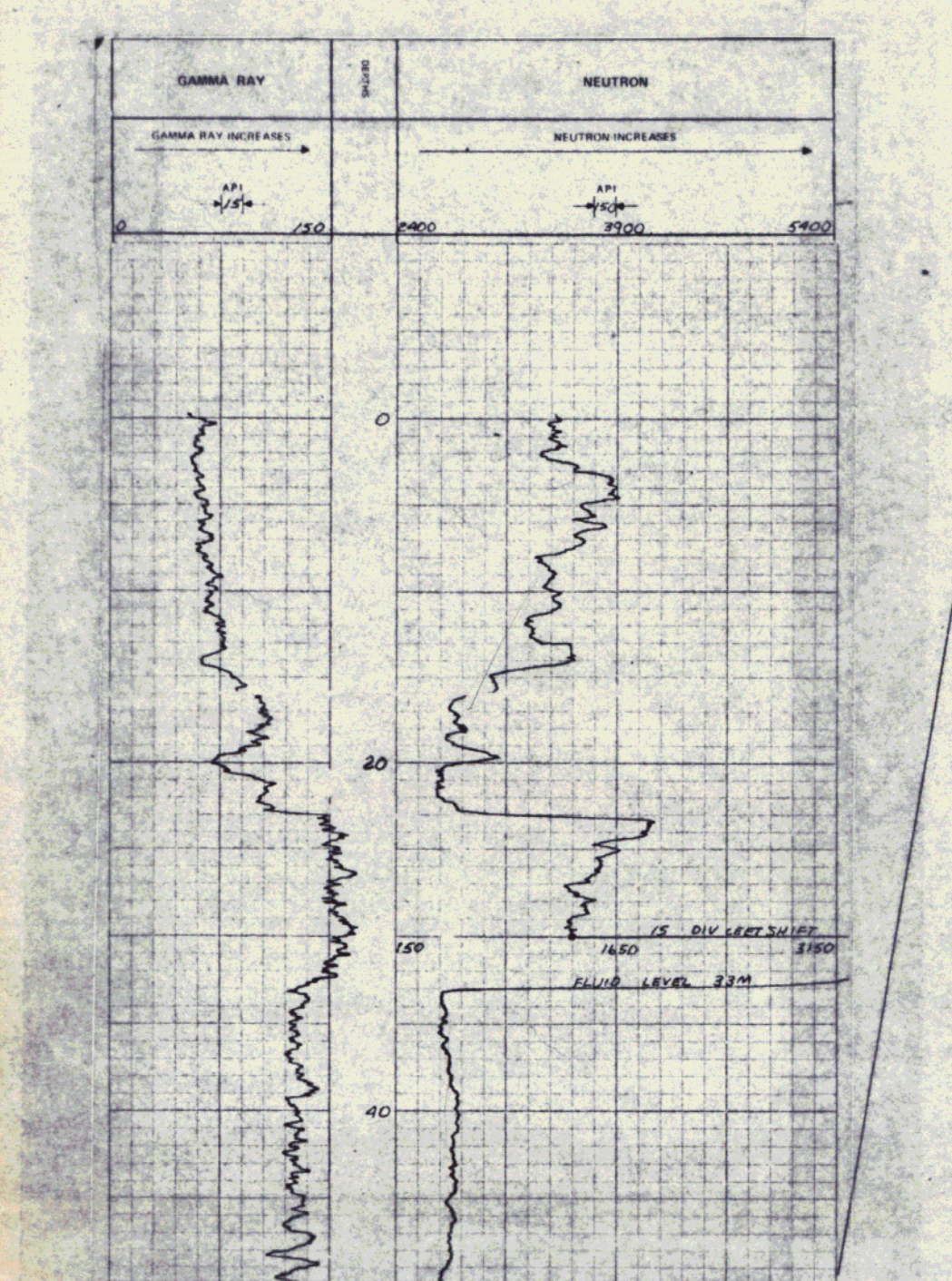
R-79-03

D-79-02

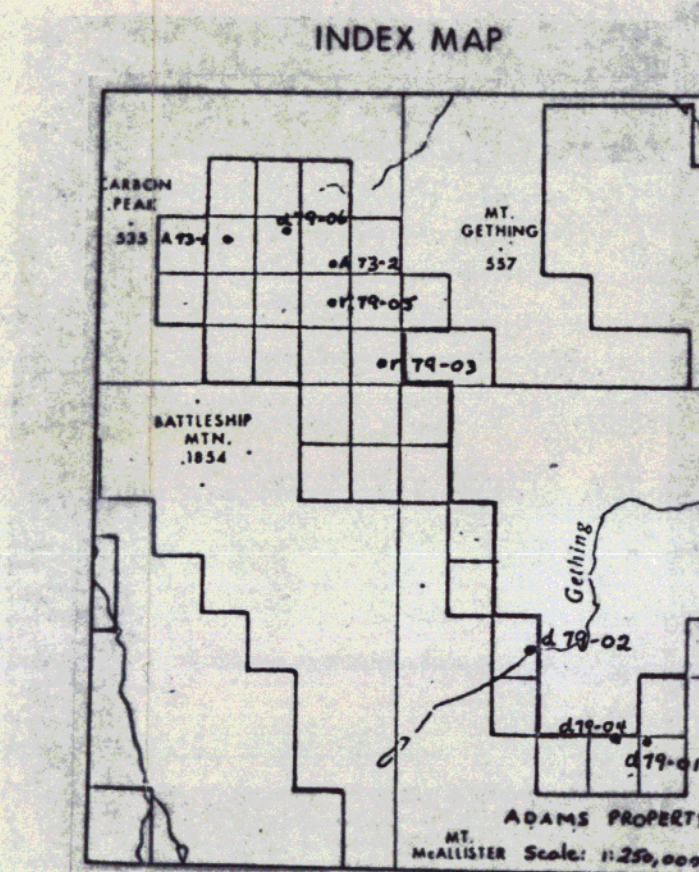
D-79-04

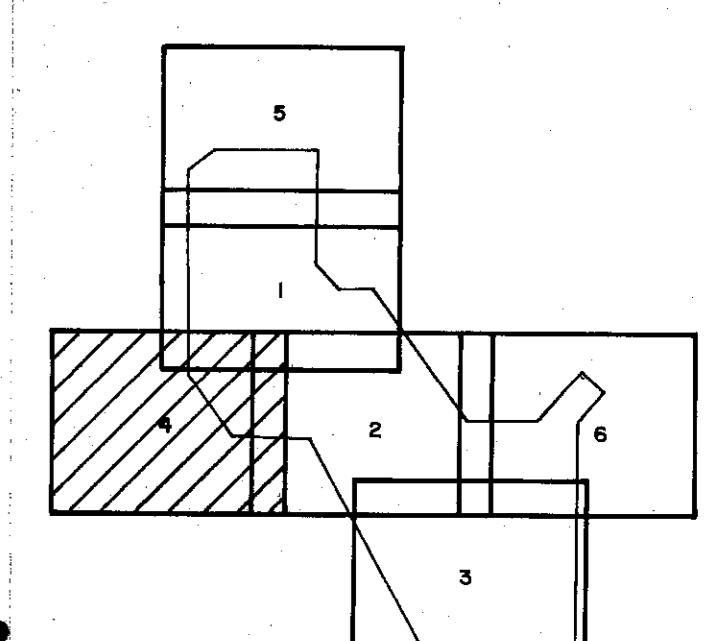
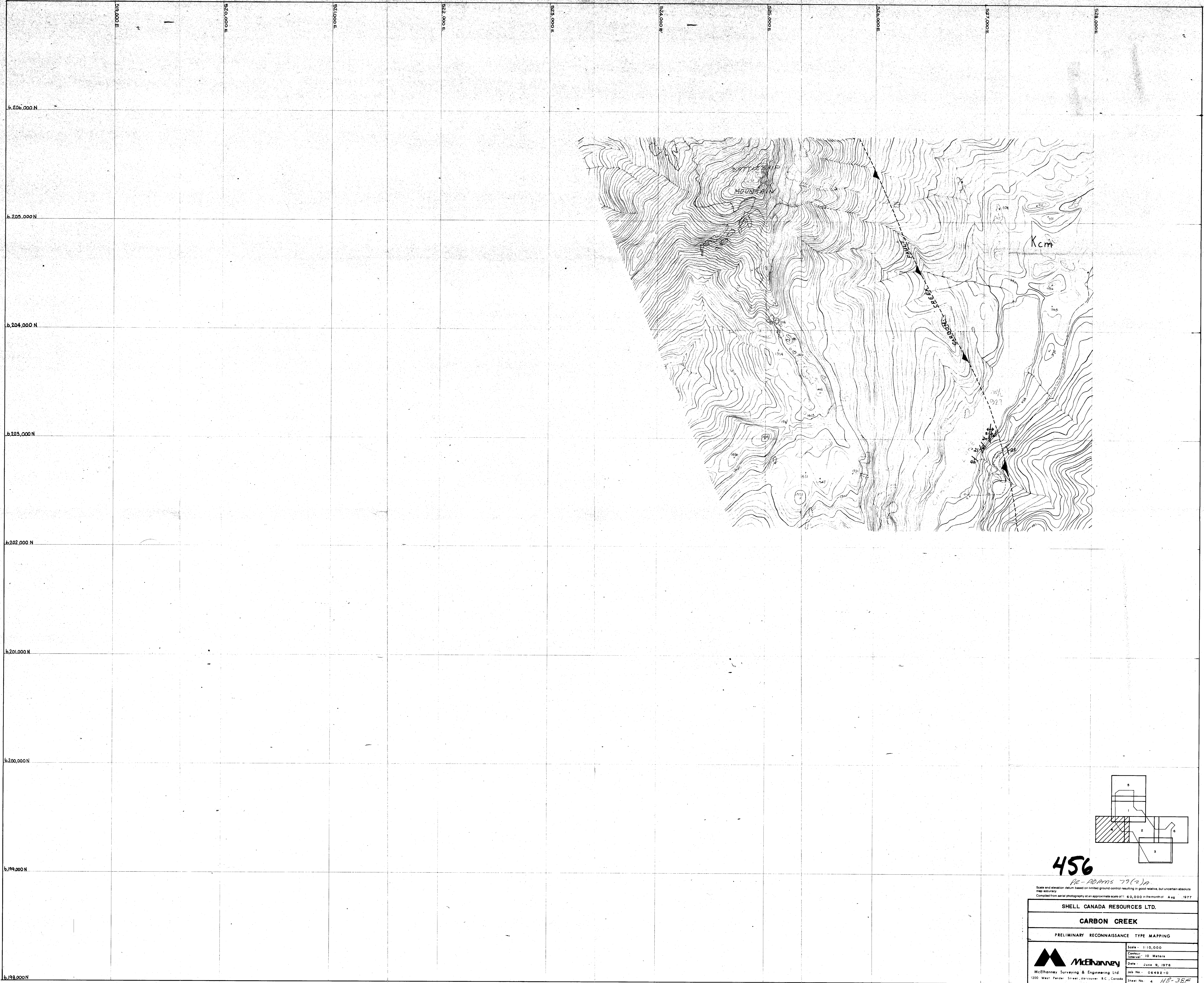


NOTE: HOLES A-73-1 & A-73-2 ARE AT A SCALE OF 1cm = 45m



D-79-01

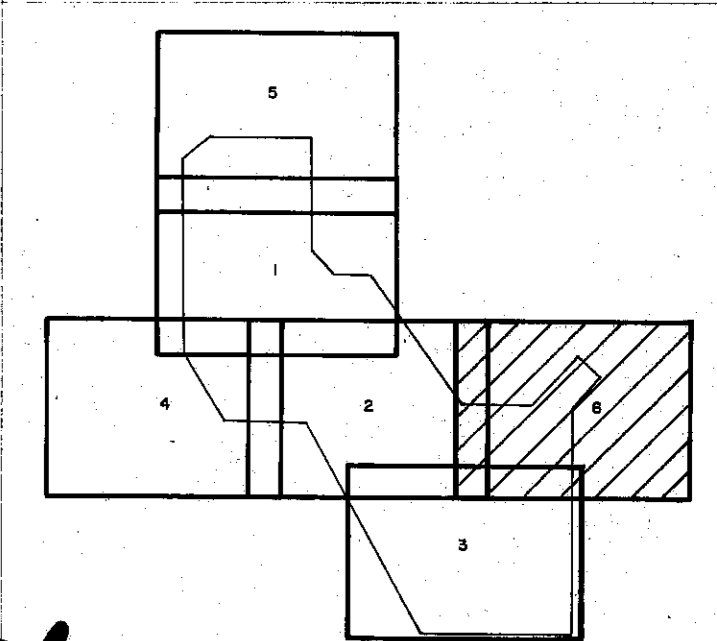
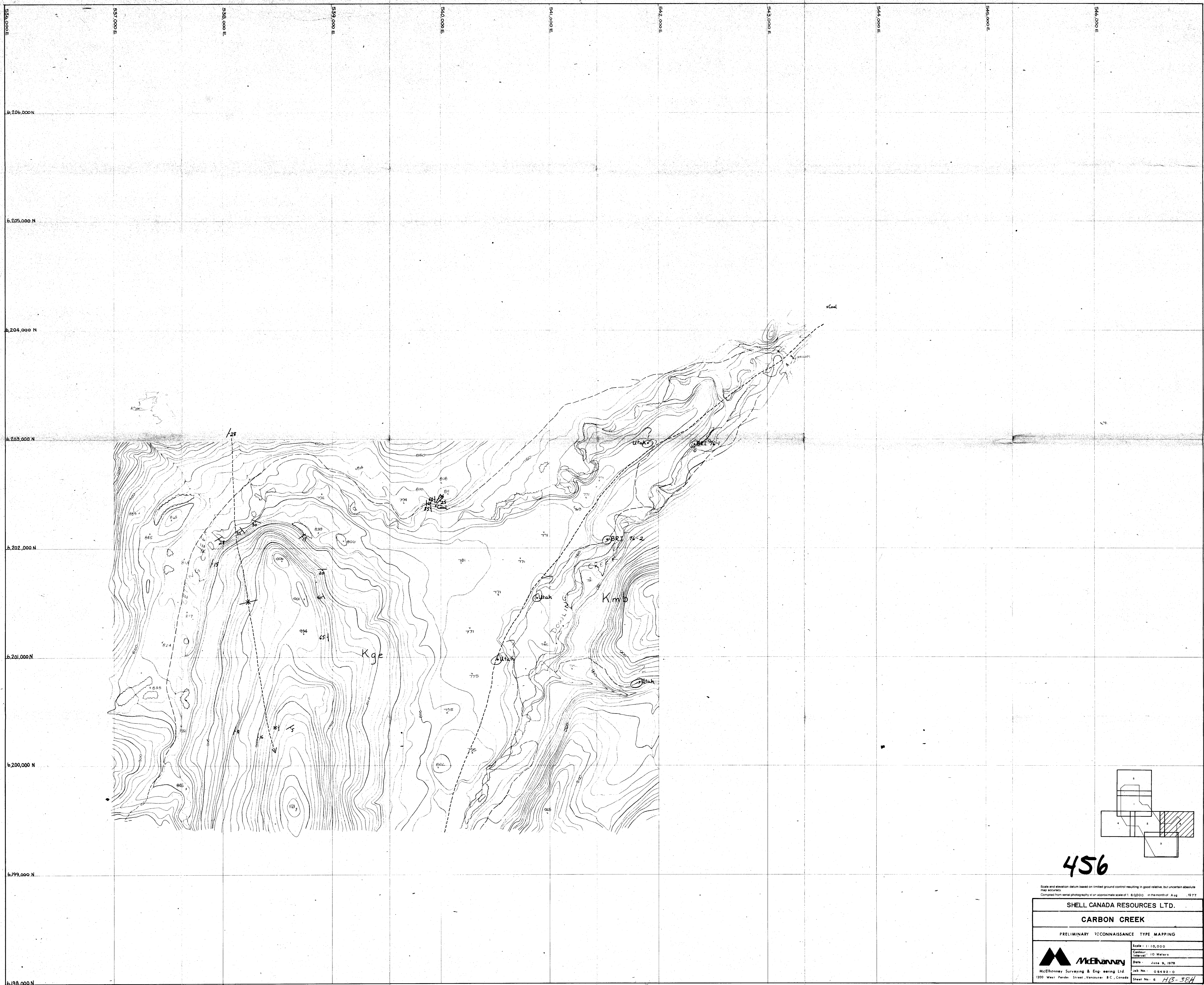




456

Re - 200ms 79(2) a.
 Scale and elevation datum based on limited ground control resulting in good relative, but uncertain absolute map accuracy.
 Compiled from aerial photography at an approximate scale of 1:60,000 in the month of Aug. 1977

SHELL CANADA RESOURCES LTD.	
CARBON CREEK	
PRELIMINARY RECONNAISSANCE TYPE MAPPING	
 McElhenny Surveying & Engineering Ltd. 1200 West Pender Street, Vancouver, B.C., Canada	Scale: 1:10,000
	Contour Interval: 10 Meters
	Date: June 9, 1978
	Job No.: 06492-0
Sheet No. 4	HS-38F



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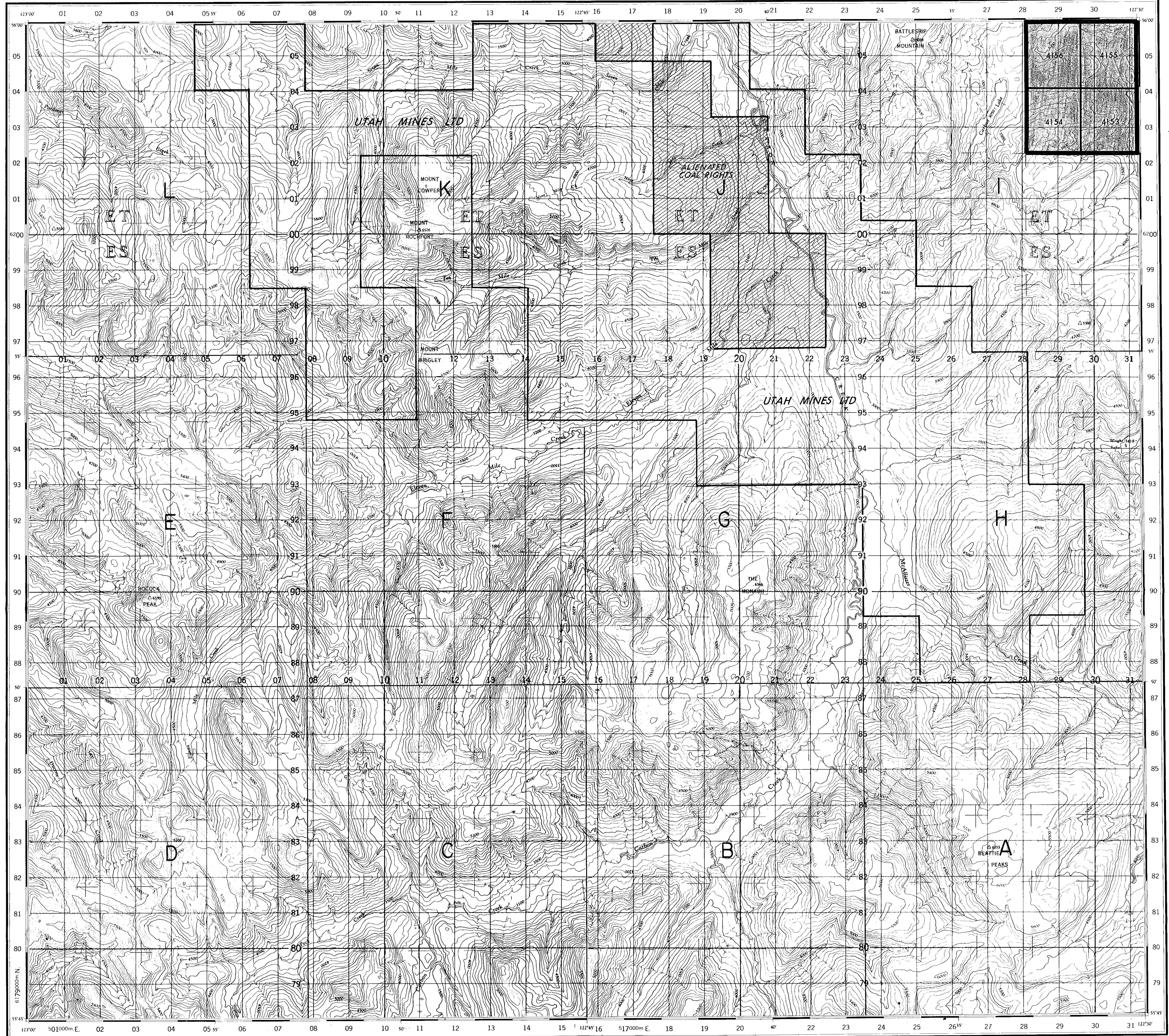
Scale and elevation datum based on limited ground control resulting in good relative but uncertain absolute map accuracy.
 Compiled from aerial photography at an approximate scale of 1:6,000 in the month of Aug 1977.

SHELL CANADA RESOURCES LTD.

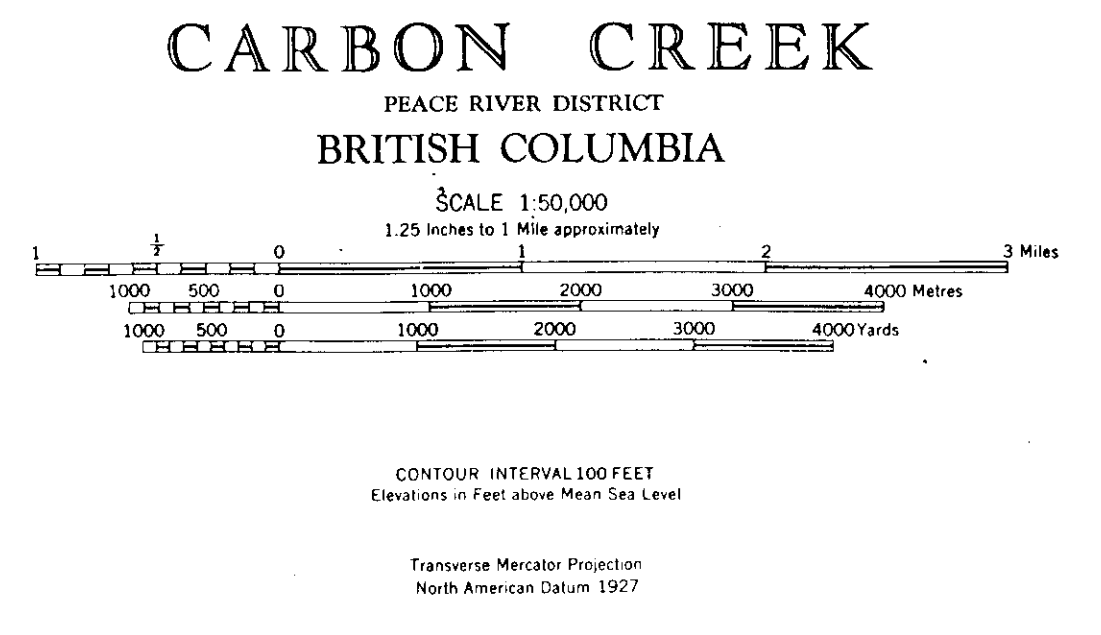
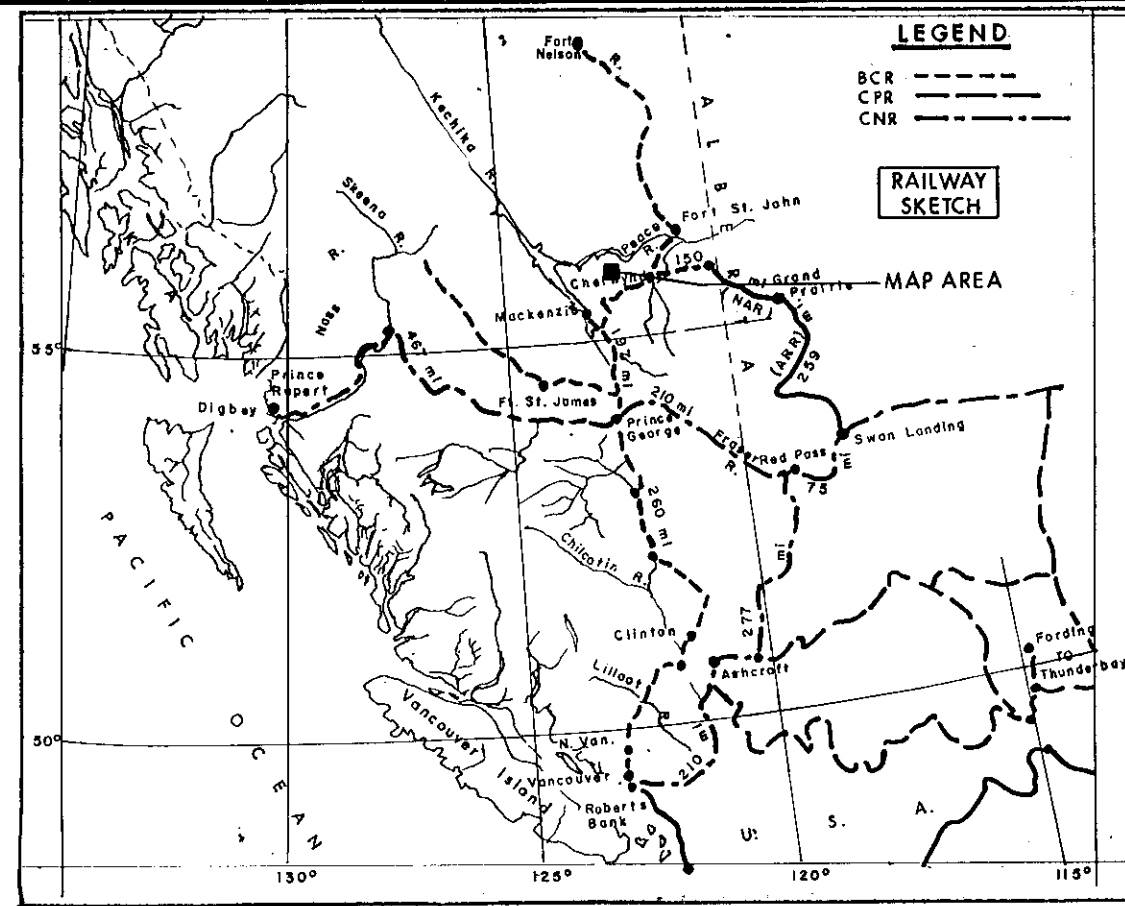
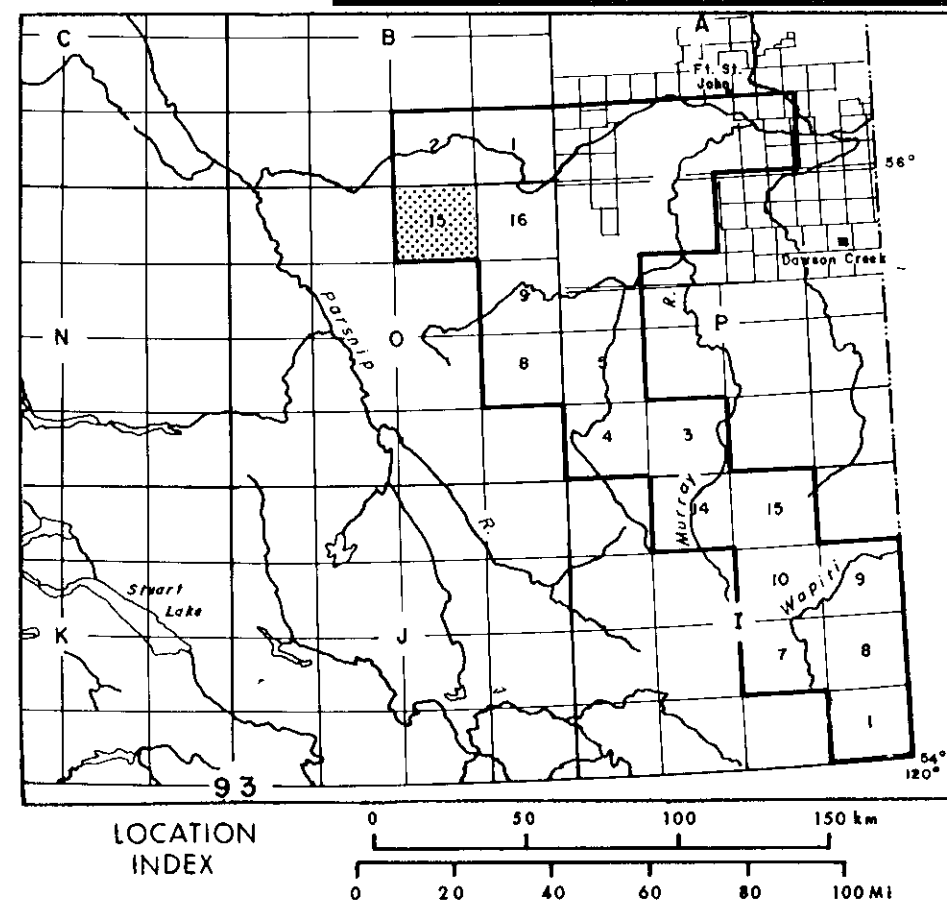
CARBON CREEK

PRELIMINARY CONTOUR TYPE MAPPING

<p>McKenney Surveying & Engineering Ltd. 1200 West Pender Street, Vancouver, B.C., Canada</p>	Scale: 1:10,000
	Contour Interval: 10 Meters
	Date: June 9, 1978
	Job No: 06492-0
	Sheet No: 6 H/S-384



178.84
178.88
178.92
178.96
179.00
179.04
179.07
179.11
179.15
179.19
179.23
179.27
179.30
179.34
179.38
179.42
179.45
179.49
179.53
179.57
179.61
179.65
179.68
179.72
179.76
179.80
179.84
179.88
179.91
179.95



Crows Nest Resources Limited
EXPLORATION

CARBON CREEK
NORTHEASTERN B.C.
PEACE RIVER LAND DISTRICT

COAL LAND DISPOSITION MAP

PR-ADAMS 75(2)A

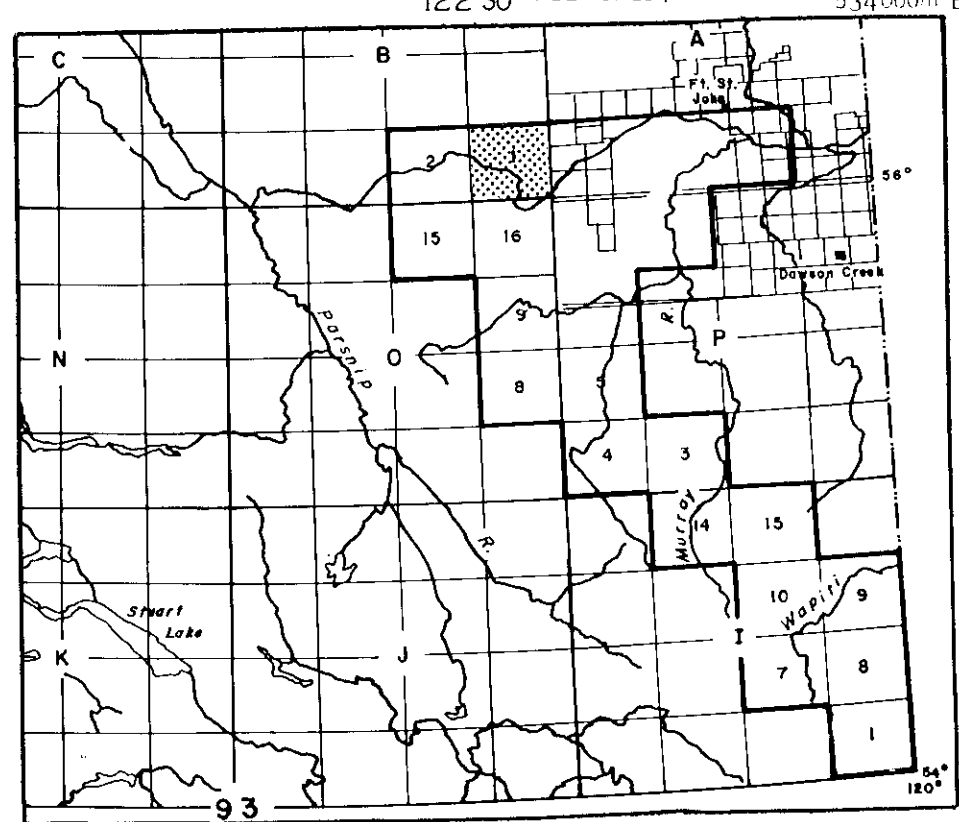
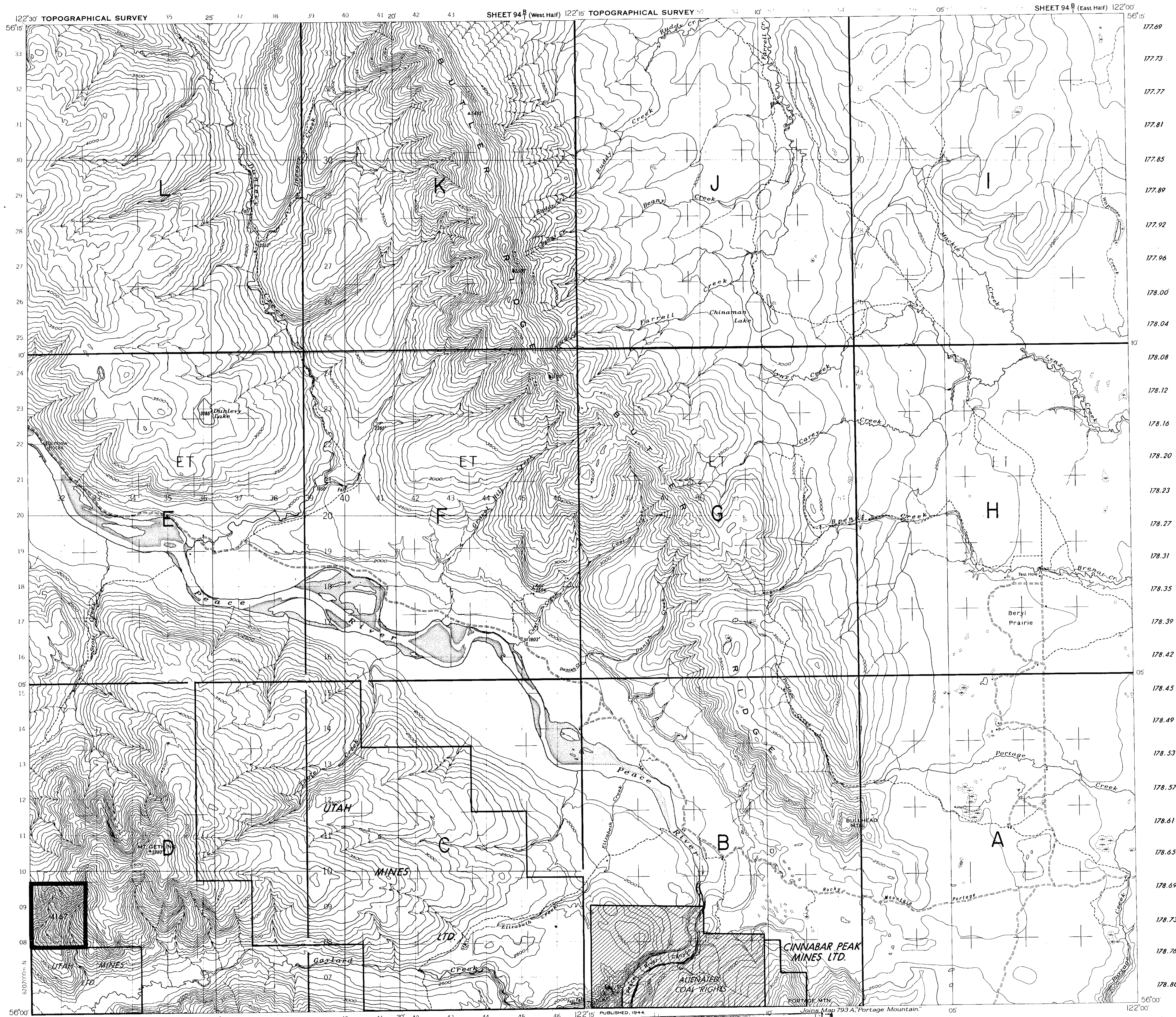
NTS 93O/15

AUTHOR: OLSON-MARTONHEGYI
DATE: FEB. 1979
To Accompany

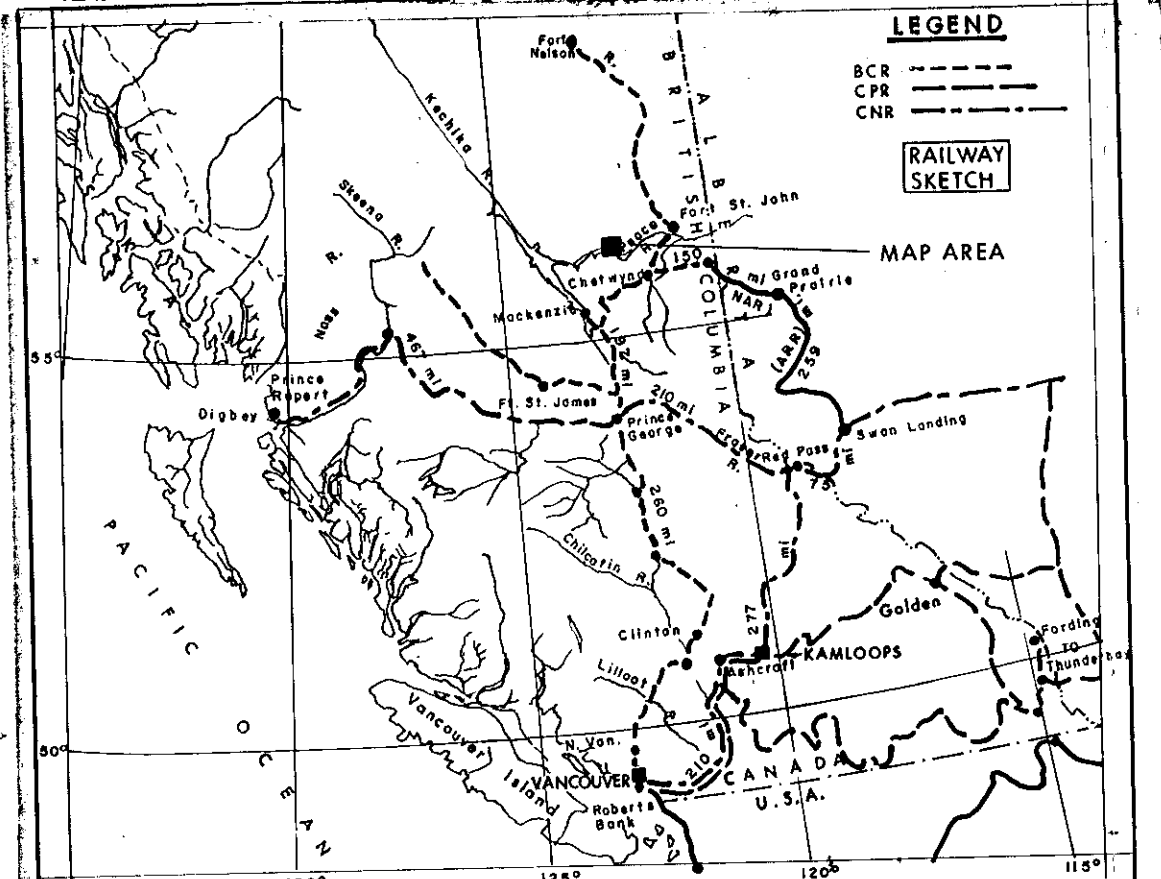
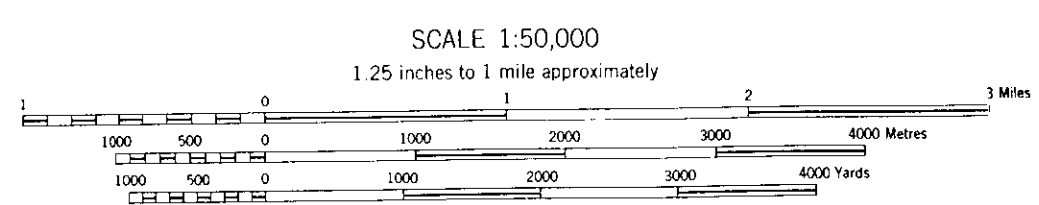
SCALE: 1:50,000
REVISED:

ENCLOSURE No.:
DRAWING No.: HC-18H

456



**DUNLEVY CREEK
CHINAMAN LAKE**
PEACE RIVER DISTRICT
BRITISH COLUMBIA



Crows Nest Resources Limited
EXPLORATION

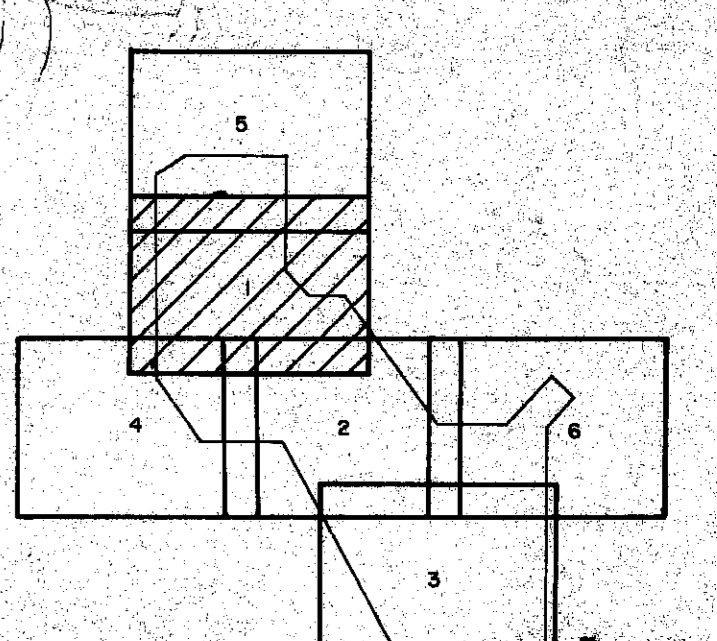
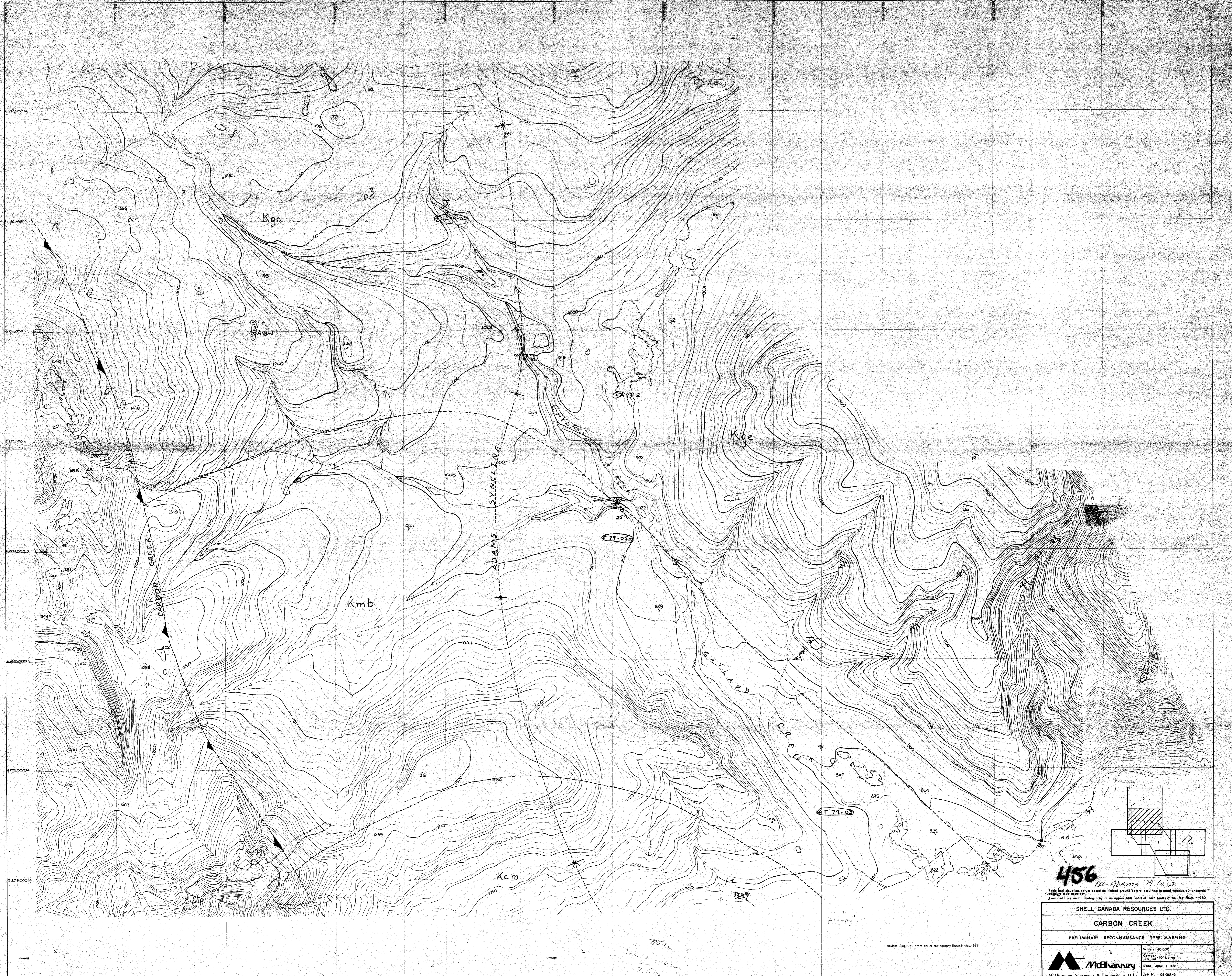
DUNLEVY CREEK
CHINAMAN LAKE
NORTHEASTERN B.C.
PEACE RIVER LAND DISTRICT

COAL LAND DISPOSITION MAP

PR-ADAMS 79(2)A NTS 948/1

AUTHOR: OLSON-MARTONHEGYI	SCALE: 1:50,000	ENCLOSURE No:
DATE: FEB. 1979	REVISED:	DRAWING No: HF-18D
To Accompany		

456

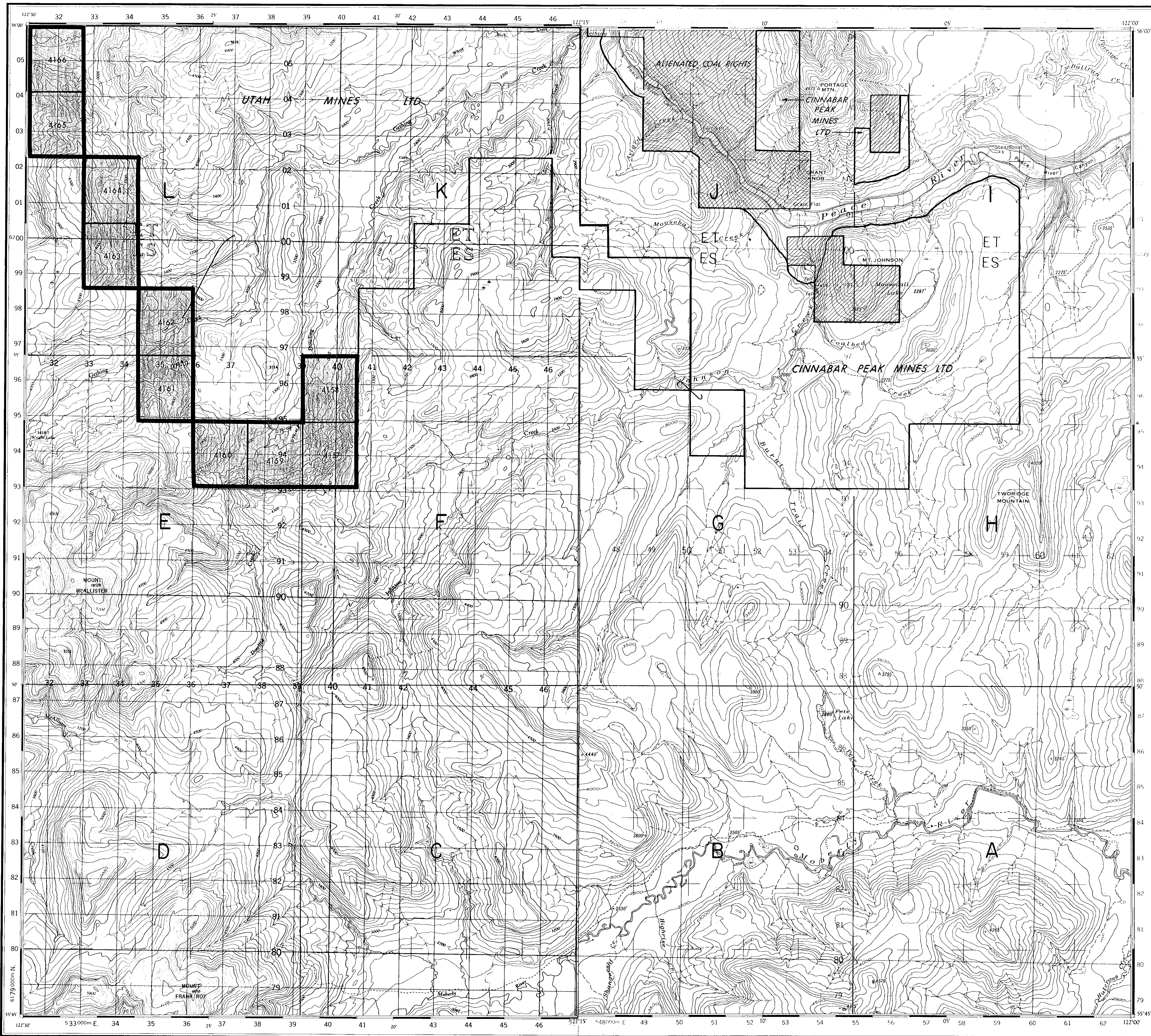


456
 Pt. Adams 79 (R)A
 Scale and elevation shown based on limited ground control resulting in good relative, but uncertain absolute map accuracy.
 Compiled from aerial photography at an approximate scale of 1 inch equals 5280 feet flown in 1970

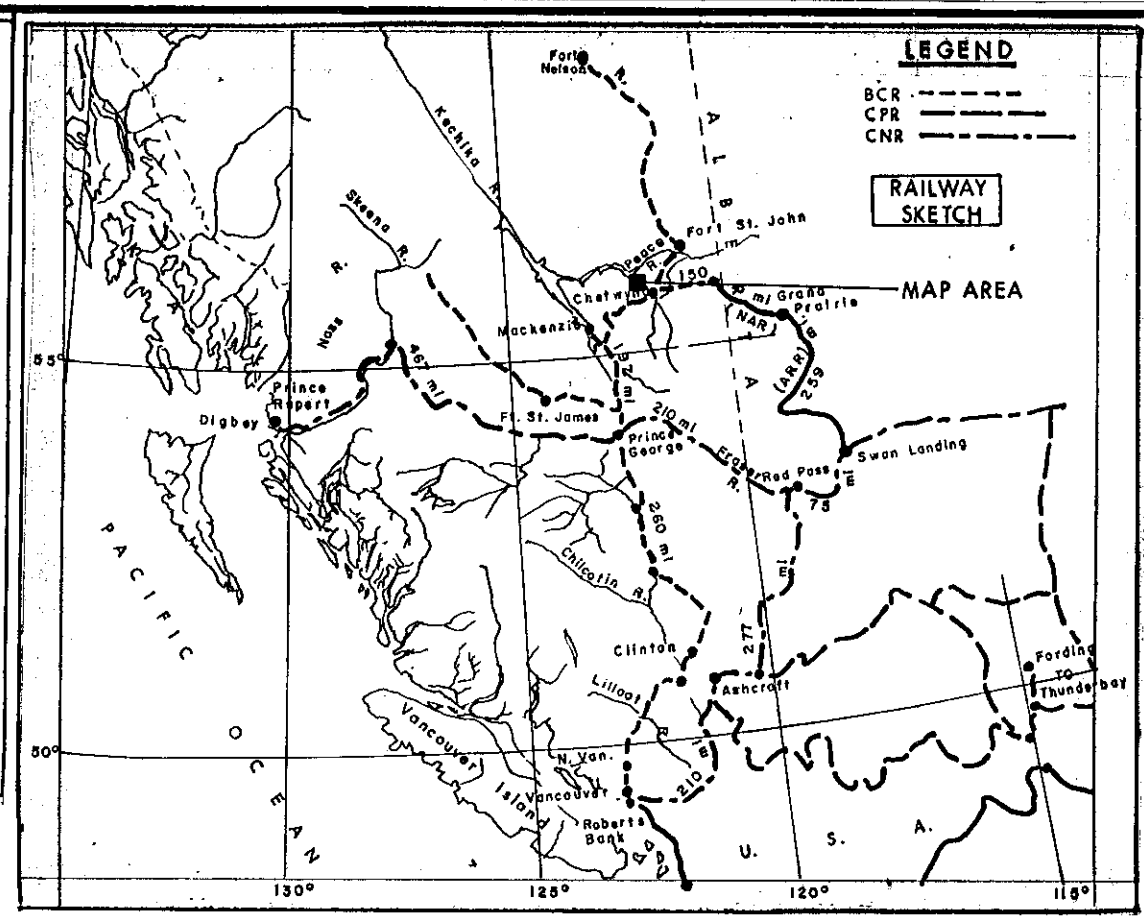
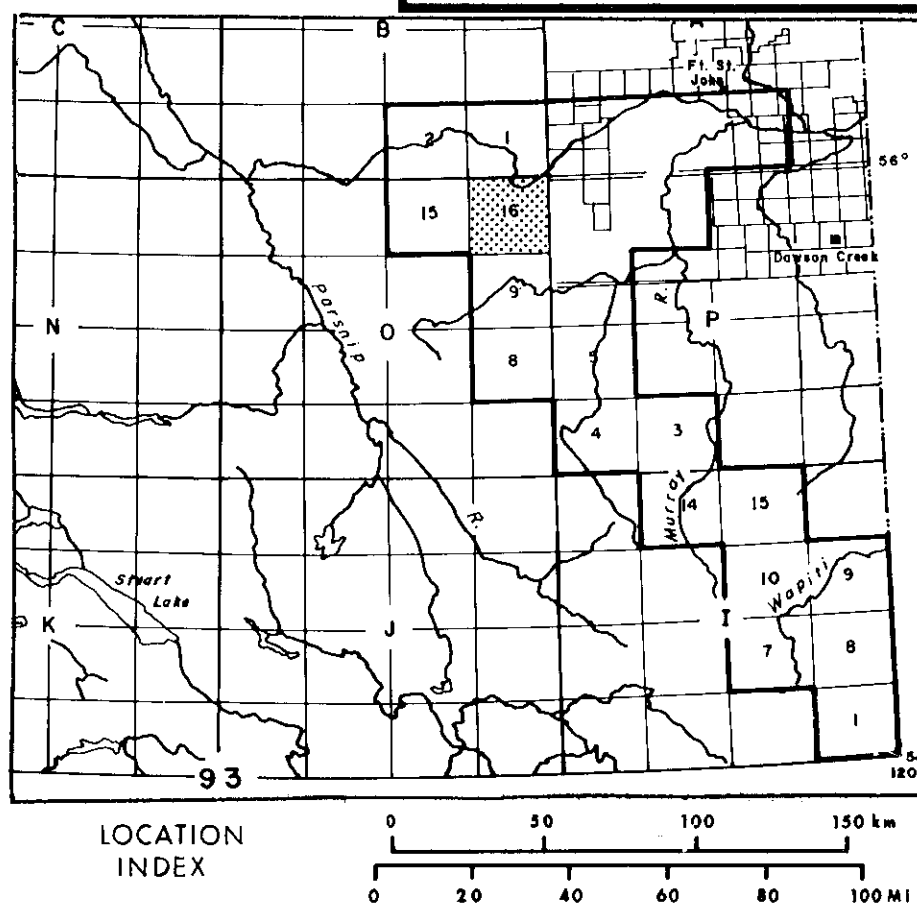
SHELL CANADA RESOURCES LTD.	
CARBON CREEK	
PRELIMINARY RECONNAISSANCE TYPE MAPPING	
Scale - 1:10,000	McElhanney
Contour - 10 metres	McElhanney Surveying & Engineering Ltd.
Interval - 10 metres	1200 West Pender Street, Vancouver, B.C., Canada
Date - June 8, 1978	Job No. - 08492-0
Sheet No. - 1	456-38C

Revised Aug. 1979 from aerial photography flown in Aug. 1977

750 m
 1 km = 1000 m
 7.5 cm

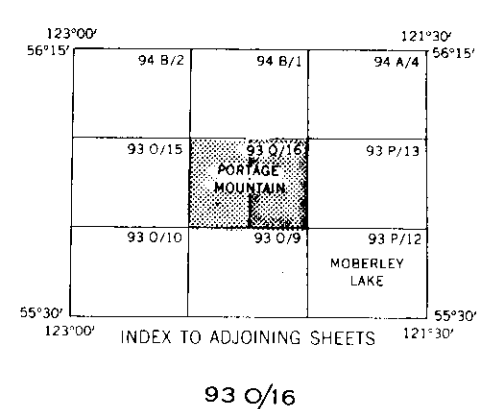


178.84
178.88
178.92
178.96
179.00
179.04
179.07
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179.19
179.23
179.27
179.30
179.34
179.38
179.42
179.45
179.49
179.53
179.57
179.61
179.65
179.68
179.72
179.76
179.80
179.84
179.88
179.91
179.95



PORTAGE MOUNTAIN
PEACE RIVER DISTRICT
BRITISH COLUMBIA
SCALE 1:50,000
1.25 inches to 1 mile approximately

CONTOUR INTERVAL 100 FEET
All Elevations in Feet above Mean Sea Level



Crows Nest Resources Limited
EXPLORATION

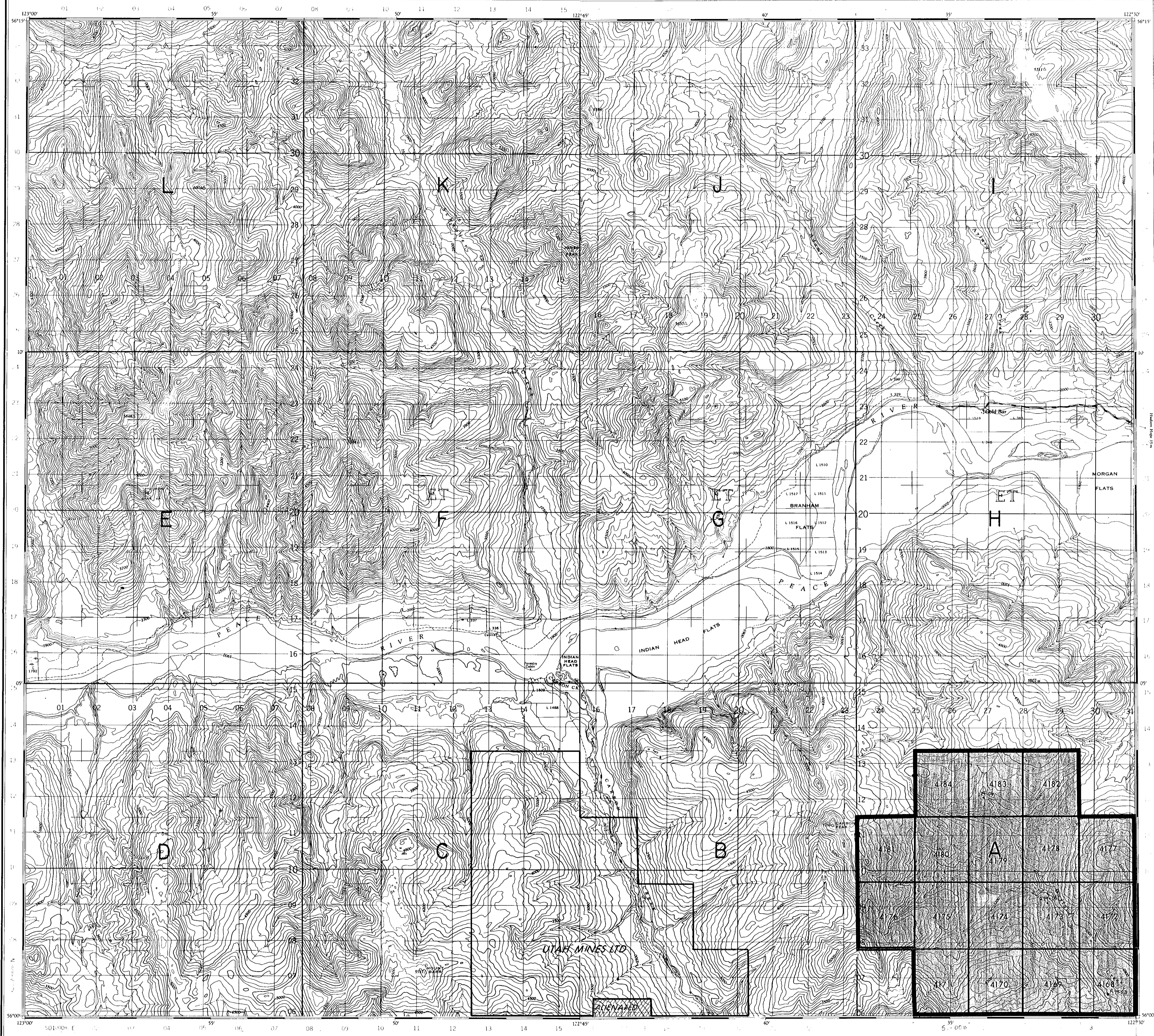
PORTAGE MOUNTAIN
NORTHEASTERN B.C.
PEACE RIVER LAND DISTRICT

COAL LAND DISPOSITION MAP

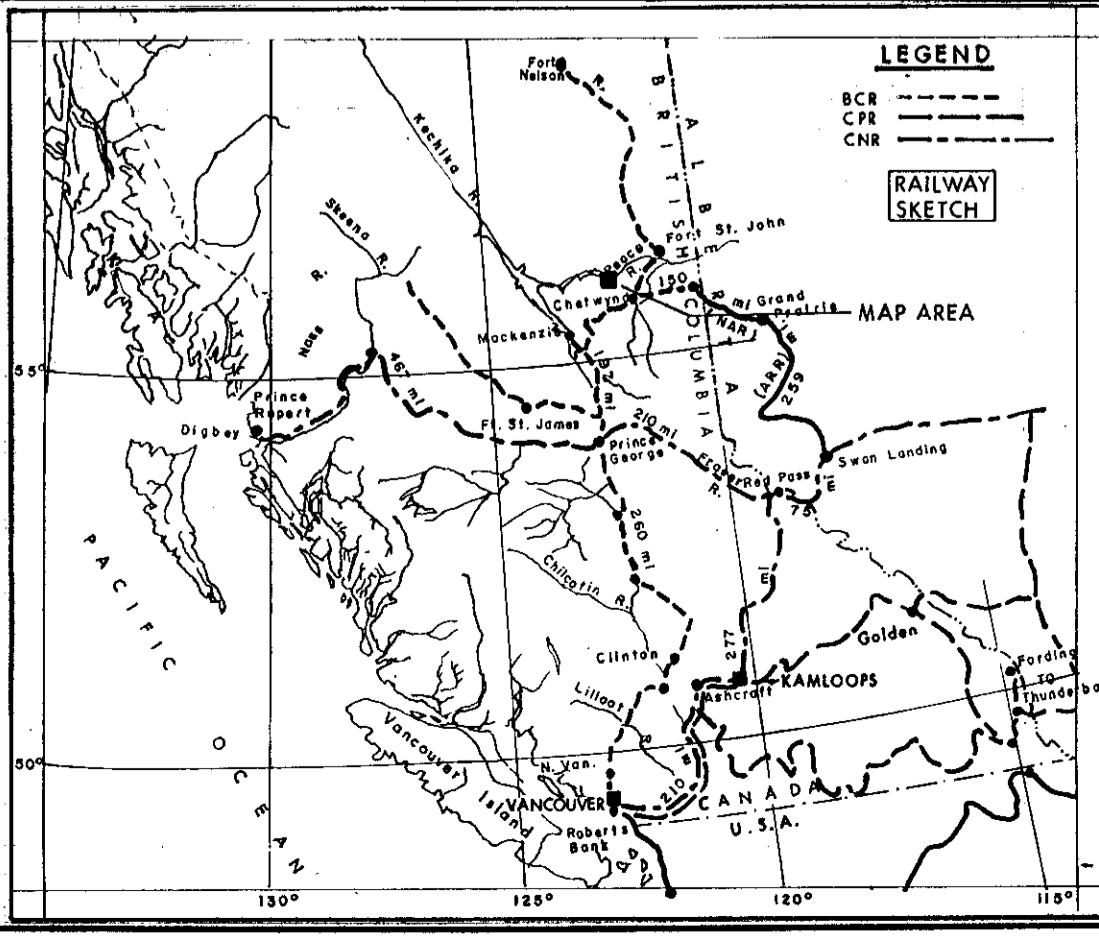
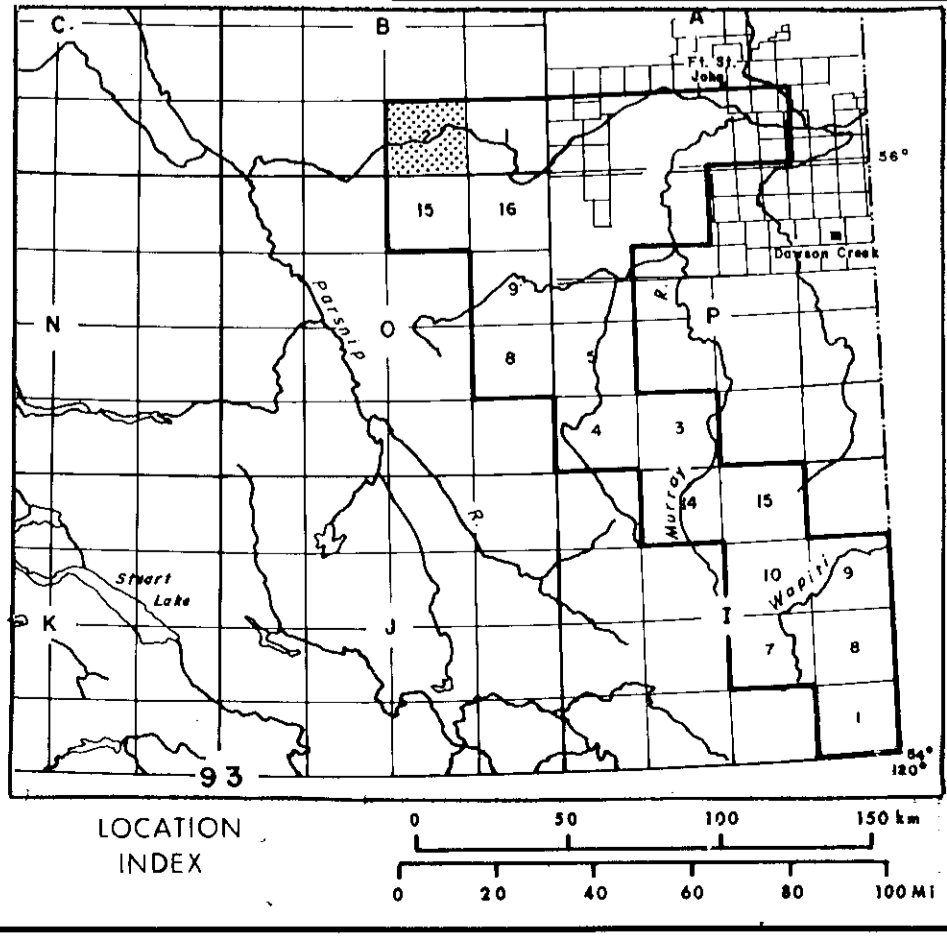
PR - Adams 79 (2) NTS 930/16

AUTHOR: OLSON-MARTONHEGYI	SCALE: 1:50,000	ENCLOSURE No:
DATE: FEB. 1979	REVISED:	DRAWING No: HC-18 I
To Accompany		

456



177.69
 177.73
 177.77
 177.81
 177.85
 177.89
 177.92
 177.96
 178.00
 178.04
 178.08
 178.12
 178.16
 178.20
 178.23
 178.27
 178.31
 178.35
 178.39
 178.42
 178.45
 178.49
 178.53
 178.57
 178.61
 178.65
 178.69
 178.73
 6205000
 178.76
 6207000
 178.80



GOLD BAR
 PEACE RIVER DISTRICT
 BRITISH COLUMBIA

SCALE 1:50,000 ÉCHELLE

CONTOUR INTERVAL 100 FEET
 Elevations in Feet above Mean Sea Level
 North American Datum 1927
 Transverse Mercator Projection
 MAGNETIC DECLINATION 28° 13' EAST
 AT CENTRE OF MAP 1961
 Annual change decreasing 4.5'

ÉQUIDISTANCE DES COURBES 100 PIEDS
 Elevations en pieds au-dessus du niveau moyen de la mer
 Réseau géodésique nord-américain unifié (1927)
 Projection transverse de Mercator
 DÉCLINAISON MAGNÉTIQUE AU CENTRE
 DE LA FEUILLE EN 1961: 28° 13' EST
 Variation annuelle: décroissant 4.5'

94 B/2 W	94 B/2 E	94 B/2 W
94 B/2 W	94 B/2 E	94 B/2 W
94 B/2 W	94 B/2 E	94 B/2 W

94 B/2

Crows Nest Resources Limited
 EXPLORATION

GOLD BAR
 NORTHEASTERN B.C.
 PEACE RIVER LAND DISTRICT

COAL LAND DISPOSITION MAP

AUTHOR: OLSON-MARTONHEGHI
 DATE: FEB. 1979
 To Accompany

SCALE: 1:50,000
 REVISED:

ENCLOSURE No:
 DRAWING No: HC-18J

NTS 94B/2

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