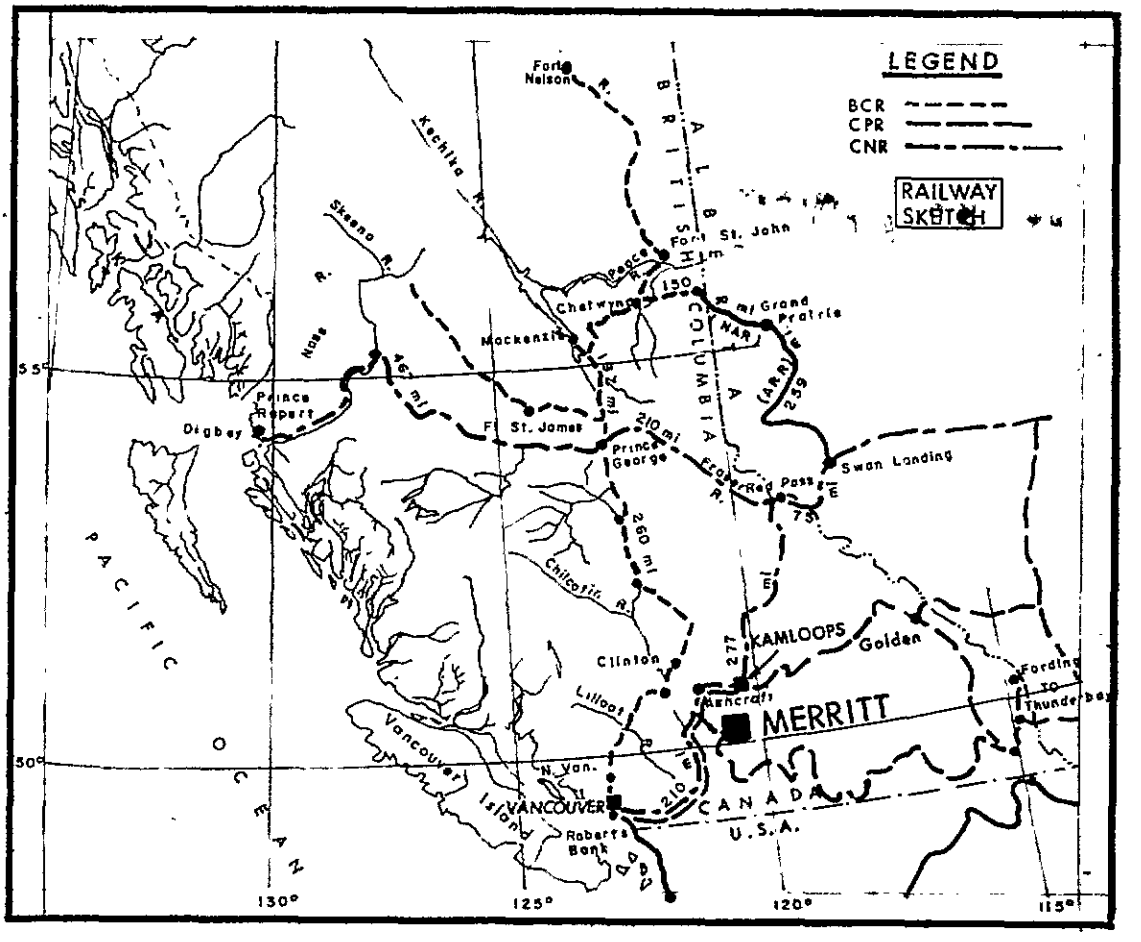
MERRITT
COAL PROSPECT



Report on Coal Licenses 6215 to 6242 inclusive,
Kamloops Division of Yale Land District, British Columbia
on work done in period May 22, 1979 to December 9, 1980

Held by: SHELL CANADA RESOURCES LIMITED
Operated by: CROWS NEST RESOURCES LIMITED

Lat. 50° 10', Long. 120°40' to 120° 50' NTS 9312

June 1981

OPEN FILE

Authors:
Patrick C. Gilmar
Kevin Sharman
Geologists
Crows Nest Resources Ltd.

PROFESSIONAL VERIFICATION OF REPORT

Entitled: Merritt Coal Prospect
Kamloops Division of Yale Land District, B. C.
B. C. Coal Licences
6215 to 6242 inclusive

Mr. Patrick C. Gilmar planned and carried out the 1979-1980 geological field program on Merritt, B.C. Coal Licences held by Shell Canada Resources Ltd. and operated by Crows Nest Resources Ltd. He and Kevin Sharman prepared this report. Mr. Frank Martonhegyi supervised the activity of this program under the general direction of the undersigned.

Pat Gilmar, B.Sc., graduated in Geology from the University of Calgary, in 1978. Kevin Sharman, B.Sc., graduated in Geology from the University of Calgary, in 1979.

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 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, geotechnical engineering and geochemistry in Hungary, Austria and Canada.

He currently holds the position of District Manager - Exploration, B.C. & Other Canadian Projects for Crows Nest Resources Ltd. supervising coal exploration in British Columbia.

I consider the aforementioned geologists to be well qualified to undertake responsibilities they were assigned on this project. I am satisfied that the attached report dated December 28, 1979 has been competently prepared and justly represents the information obtained from this project.

H.G. Rushton, P. Geol.

PROFESSIONAL GEOLOGIST ALBERTA H. G. RUSHTON

1/AVa.2

MERRITT COAL PROSPECT

1/AVa.1

TABLE OF CONTENTS

ENCLOSURES

APPENDICES

1.0 SUMMARY

The Merritt coal prospect is located in the Merritt Coalfield in south-central British Columbia. Thirty-six coal licences, covering 4637 hectares, are held by Shell Canada Resources Limited and operated by Crows Nest Resources Limited. An additional 1127 ha. of coal land are optioned to Shell by Imperial Metals and Power Limited (605 ha) and Chutter Ranch Limited (621 ha).

The project area borders on Merritt townsite, which is 100 km south of Kamloops on Highway No. 5. Merritt is approximately 385 km by CPR line from the Vancouver area ports. This line traverses through the middle of the property. All areas on the coal licences are easily accessable by gravel road or on the sagebrush covered grazing lands.

The coal measures lie within the Coldwater Formation, Tertiary Age. They occupy a depression in Triassic volcanics and are in places overlain by younger valley basalts. These measures are predominantly non-marine conglomerates and sandstones which accumulated in a restricted inland lake environment. Coal generally grades to shale both horizontally and vertically rather than forming continuous seams.

Nearly 3 million tons of thermal coal was underground mined in the coalfield between 1906 and the late 1950's. Later exploration concentrated in the old mine workings area called Coal Gully Hill and

Coldwater Hill. Between 1960 and 1969, twenty exploration holes totalling 1415 meters were drilled there by Imperial Metals and Power Limited and Sumicol Consultants Limited.

In 1979 and 1980, Crows Nest Resources Limited drilled 21 rotary holes totalling 3877 meters. Detailed geological mapping and backhoe trenching was also done.

The property is regarded as a thermal project with High Volatile Bituminous "B" coal. Exploration has delineated the area just south of Merritt townsite as the only place with any open pit potential. Here, 5.1 million tonnes of coal, geologically in place at 8.2 bank cubic meters per tonne have been defined.

2.0 LOCATION

Enclosure No. 1 - Location Index Map

Enclosure No. 2 - Coal Licence Map

Merritt Coal Prospect is located in the Merritt Coalfield in south-central British Columbia, Township 91, Kamloops Division of Yale Land District, N.T.S. 92 I 1 & 2. The licences are located at N. Lat. 50° 06', W. Long. 120° 45', surrounding Merritt townsite.

3.0 ACCESS

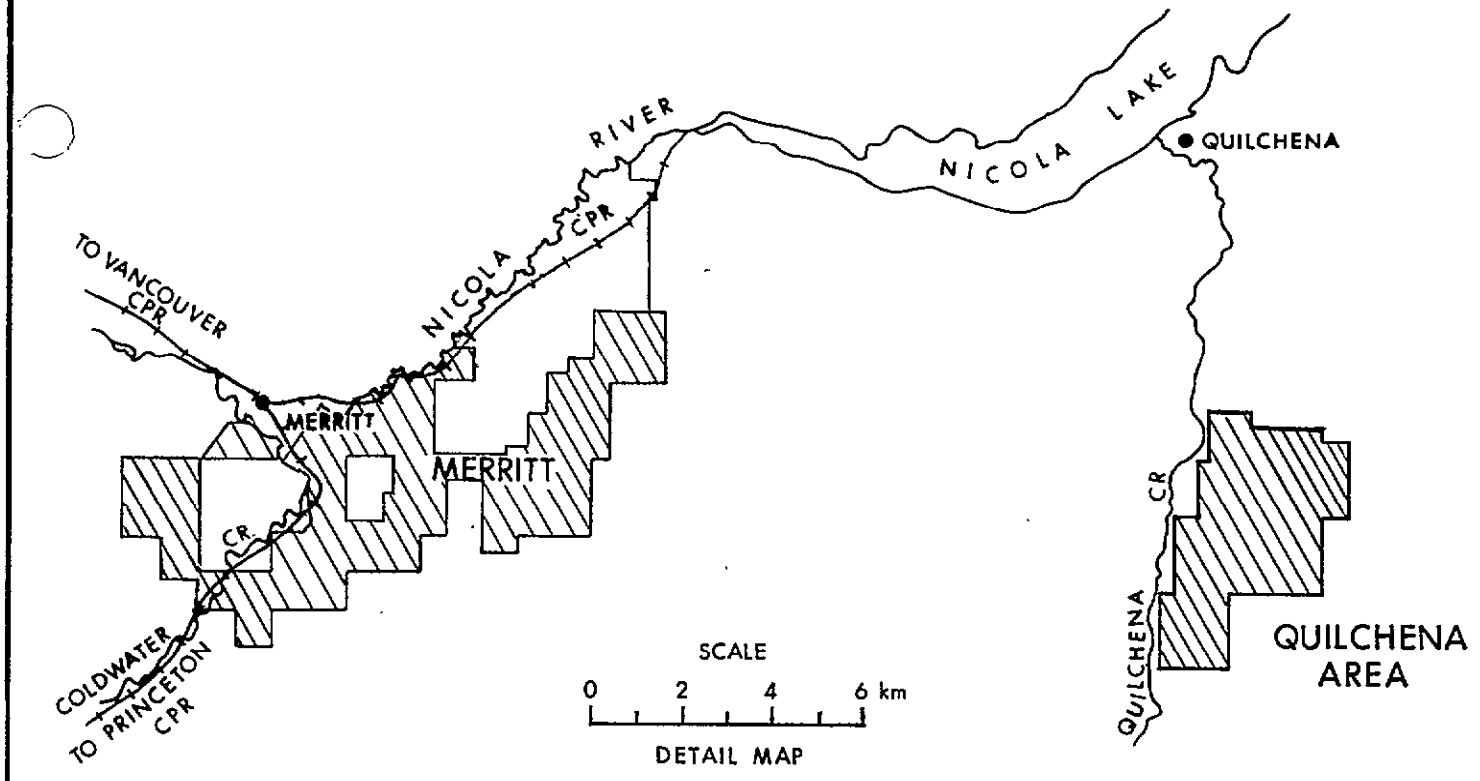
Enclosure A - Access Map.

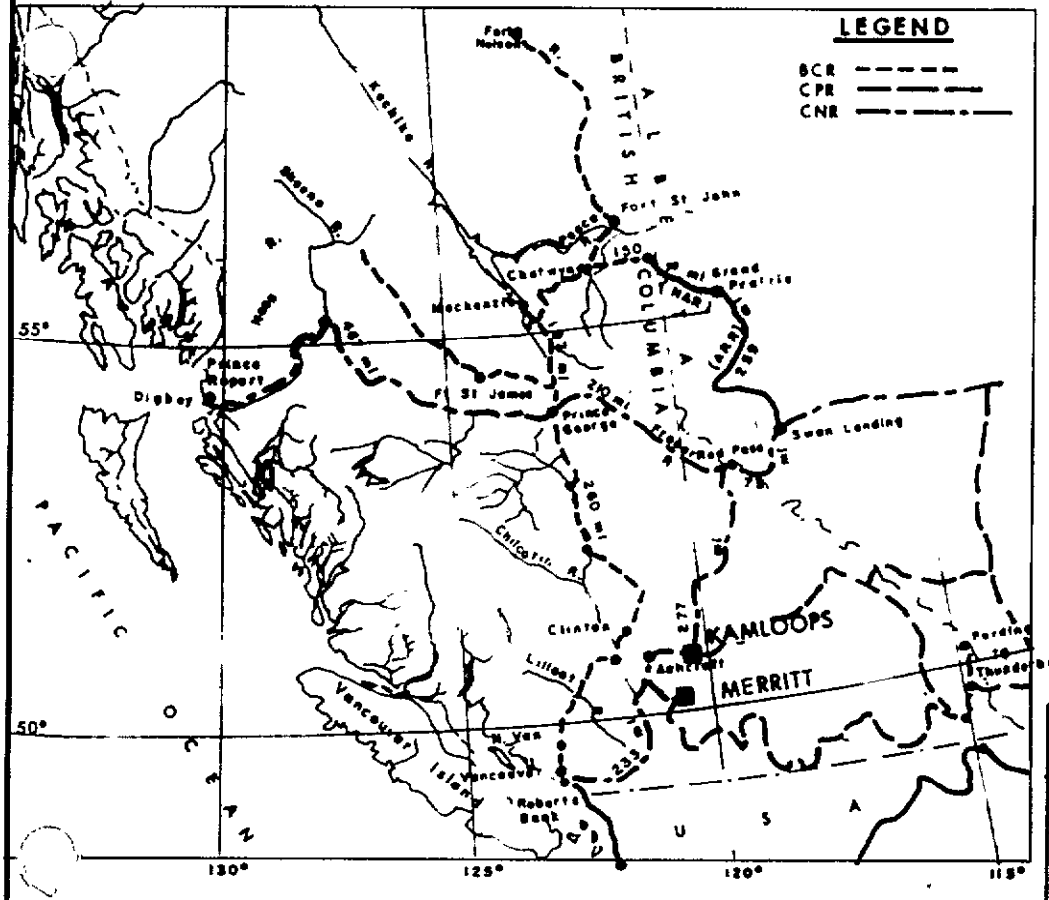
From the Trans Canada Highway Merritt is 65 km west of Spences Bridge on Highway No. 8 and 100 km south of Kamloops on Highway No. 5. Southward 90 km from Merritt, Highway No. 5 joins Highway No. 3 at Princeton.

Merritt is approximately 385 km by CPR line from the Vancouver area ports. This line traverses through the middle of the property.

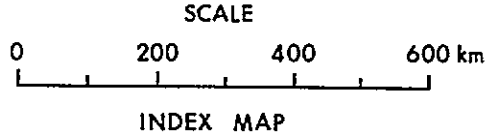
The Merritt Prospect has moderate relief - less than 300 metres on the coal bearing land. The area is easily accessible by gravel road or on the sagebrush covered grazing lands. Two major drainages, the Nicola and Coldwater Rivers, flow through the area joining at Merritt townsite.

The prospect is subdivided into three areas. South of the Merritt townsite are Coal Gully Hill and Coldwater Hill. On the east boundary of Merritt townsite is a nearly flat area called Diamond Vale. Three miles east of Merritt townsite is Normandale.





INDEX MAP

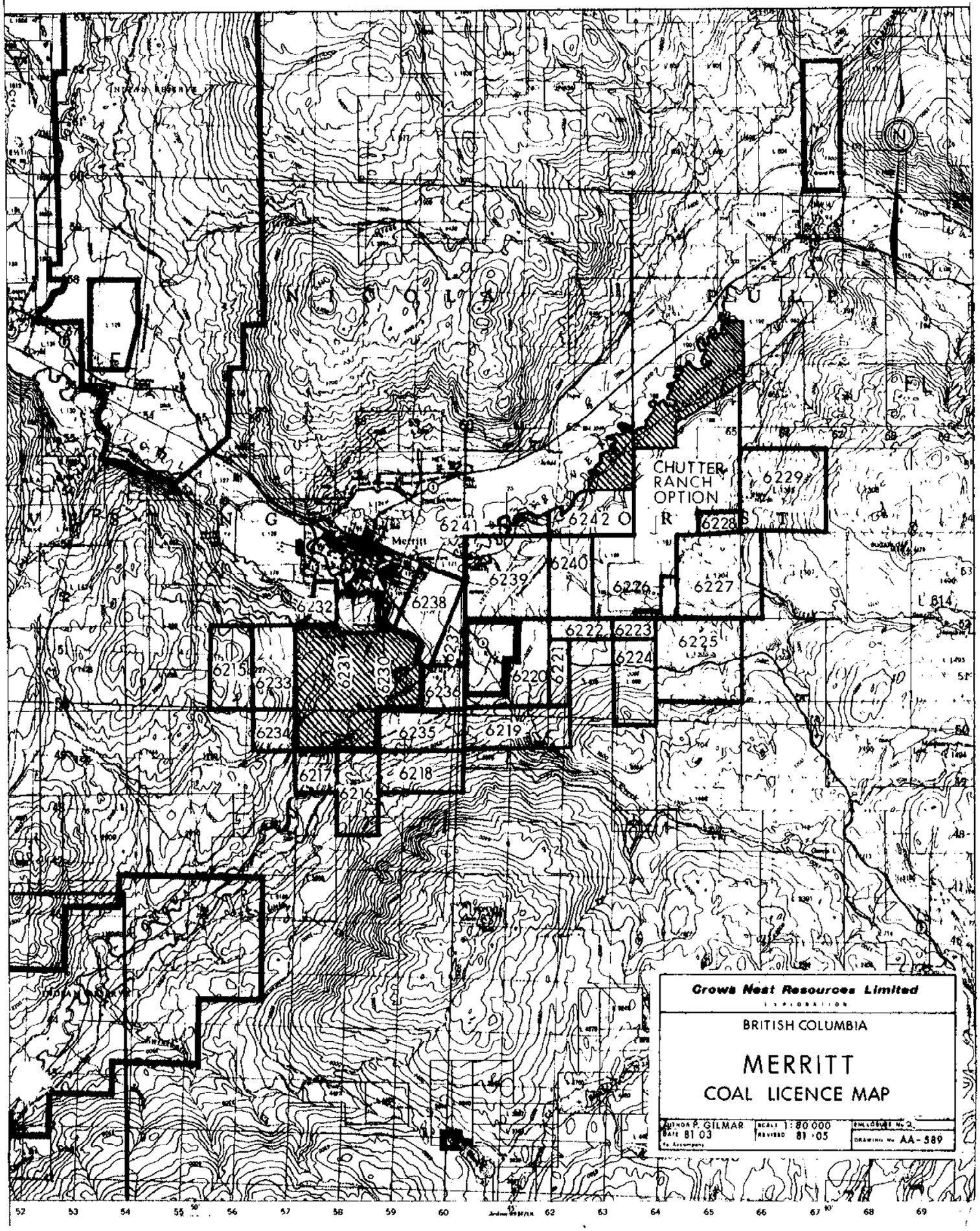


Crows Nest Resources Limited
EXPLORATION

BRITISH COLUMBIA
MERRITT

MERRITT
LOCATION INDEX MAP

DRAWN P. GILMAR	SCALE AS SHOWN	FIG. 1
DATE NOV 1979	REVISED MAY 1981	DRAWING No. AA-588



Crows Nest Resources Limited
EXPLORATION

BRITISH COLUMBIA

MERRITT
COAL LICENCE MAP

AUTHOR P. GILMAR
DATE 81 03
As Accompanies

SCALE 1:80 000
REVISED 81 05

ENCLOSURE No. 2
DRAWING No. AA-589

4.0 TENURE

Enclosure B - B.C. Land Tenure Standing

Enclosure C - Coal Land Disposition Map

The B.C. Coal licences granted on September 27, 1978, held by Shell Canada Resources Limited, operated by Crows Nest Resources Limited, cover a total of 4637 ha of Crown coal land. These 36 licences are in one licence area.

An additional 1127 ha of coal land are optioned to Shell by Imperial Metals and Power Limited (506 ha) and Chutter Ranch Limited (621 ha).

5.0 WORK DONE

5.1 Prior to 1979

The earliest reference to coal in the Merritt area is dated 1877-78. Regular underground production totalling 2.7 million tons occurred between 1906-1945, 80% from the Coal Gully Hill and Coldwater Hill area, Middlesboro Collieries the main producer. Diamond Vale Mine produced only a small tonnage. Limited production continued until late 1950's. Prior to and during regular production numerous prospect holes were drilled and adits dug throughout the coalfield. Mapping was scattered and incomplete.

Later exploration concentrated in the Coal Gully Hill and Coldwater Hill area, on lots optioned by Imperial Metals and Power Limited. In 1960 they drilled 16 rotary holes totalling 1157 meters. Two of these holes were later deepened by diamond drilling.

In 1968 Sumicol Consultants Company Limited cored 258 meters in one diamond hole between Coal Gully Hill and Coldwater Hill. In 1969 they completed 3 diamond holes coring 563 meters in the same area.

5.2 1979 Exploration Program

Enclosure D - Drill Hole Summaries

Enclosure E - Drill Hole Stratigraphic Sections

Enclosure F - Downhole Geophysical Logs

Enclosure G - Trench Stratigraphic Sections

Enclosure H - Traverse Survey Map

On Shell Canada Limited Coal Licences:

- detailed geological mapping at 1:5000 scale on sedimentary outcrop areas
- reconnaissance mapping throughout the coal basin
- 3 open holes drilled totalling 445 meters by Garity & Baker Drilling Limited
- drill holes geophysically logged by BPB Instruments Limited
- sampling of major drill hole coal intersections
- hand trenching through coal seams
- reclamation by hand seeding of drill sites, access trails, and hand trenches
- location survey of drill holes and mapping control points by Surveying Department, Shell Canada Resources Limited.

On Imperial Metals and Power Option (Lot 166):

- detailed geological mapping at 1:5000 scale
- drilling of ten rotary holes totalling 1857 meters by Garity and Baker Drilling Limited.
- drill holes geophysically logged by BPB Instruments Limited
- sampling of major drill hole coal intersections
- hand trenching through coal seams

- backhoe trenching (21) totalling 105 meters
- 10 old mine entries sealed as directed by the mines inspector
- location survey of drill holes and control points by Surveying Department, Shell Canada Resources Limited
- reclamation by hand seeding of drill sites, trenches and access trails.

On Chutter Ranch Option:

- detailed geological mapping at 1:5000 scale
- 1 open hole drilled totalling 243 meters.

5.3 1980 Exploration Program

Enclosure I - Applications to Extend Term of Licences

Enclosure J - Drill Hole Summaries

Enclosure K - Drill Hole Stratigraphic Sections

Enclosure L - Downhole Geophysical Logs

Enclosure M - Report and Traverse Survey Map 1980

On Shell Canada Limited Coal Licences:

- regional mapping to confirm the boundary of the coal basin
- 7 open holes drilled totalling 1332 meters by Simpson Drilling Limited
- drill hole spot cores taken for bedding attitude checks
- drill holes geophysically logged by BPB Instruments Limited
- location survey of drill holes and baseline by Sheltech Canada.

In addition to the regular exploration program, two coal research projects were tested within the drilling area. Merritt was chosen for these tests because of favorable terrain and ground conditions. Shell Seismic conducted a short reflection and refraction seismic program in the early spring. D.T. Fudge Consultants tested resistivity methods during mid-summer and late autumn. Results from the seismic project are still being evaluated. A report on the resistivity testing has been completed.

6.0 GEOLOGY

6.1 Regional

Enclosure N - Regional Geology Map

The Merritt Coalfield of south-central British Columbia is one of several remnant early Tertiary basins within the Cordilleran intermontane belt. The coal deposits in the Merritt, Tulameen, Princeton and Hat Creek basins may have been originally interconnected but are now isolated from each other.

Coal deposits of the Merritt Coalfield lie within the Coldwater Formation, Kamloops Group, Tertiary age. These measures are predominantly conglomerate and sandstone with shale and lensing coal seams.

Lying unfomformably below the Coldwater beds are Triassic Nicola Group rocks. They consist principally of volcanics of diverse types, grouped under the general term of greenstone.

Two ages of volcanics unconformably overly the Coldwater beds in the Merritt Coalfield. Near the western edge, Early Miocene lavas overly with gentle dips. Eastward, nearly horizontal benches of Late Miocene vesicular basalt flows are the most recent consolidated rocks of the area.

TABLE OF FORMATIONS
MERRITT COALFIELD

PERIOD	EPOCH	FORMATION		LITHOLOGY
QUATERNARY	PLEISTOCENE & RECENT			STEAM ALLUVIUM GLACIAL DRIFT
TERTIARY	MIOCENE OR LATER	VALLEY BASALT		MAINLY VESICULAR BASALT
	MIOCENE OR EARLIER	KAMLOOPS GROUP	VOLCANIC	RHYOLITE, ANDESITE BASALT WITH ASSOCIATED TUFFS, BRECCIAS, AND AGGLOMERATES
			TRANQUILLE FM	CONGLOMERATE SANDSTONE, SHALE AND TUFF, THIN COAL SEAMS
			COLDWATER FM*	CONGLOMERATE SANDSTONE, SHALE & COAL
		COPPER CREEK INTRUSIONS		GRANITE, GRANODIORITE GRANITE PORPHYRY
TRIASSIC	UPPER TRIASSIC	NICOLA GROUP		GREENSTONE; ANDESITE, BASALT; AGGLOMERATE, BRECCIA, TUFF; MINOR ARGILLITE LIMESTONE, AND CONGLOMERATE

The Merritt coal basin is roughly 19 km long, stretching north eastward, and from 1.5 to 5 km wide. It occupies a depression in Triassic greenstones and mapped boundaries are largely conjectural due to heavy glacial drift cover.

6.2 Stratigraphy

Enclosure O - Coal Gully Hill Stratigraphic Section
Coldwater Hill Stratigraphic Section
Diamond Vale Stratigraphic Section

Enclosure P - Cross Section A-A'

Unconformably overlying the Nicola Volcanics, the lower beds of the Coldwater Formation contain considerable detrital material and often resemble a breccia. Upwards through the coal measures, interstratified conglomeratic sandstone predominate. Rapid vertical and lateral variations in thickness and nature of individual beds suggest deposition in an unstable environment. Lack of uniformity and continuity in texture and rock type has greatly hindered correlations, even over short distances. Coal seam correlation has been further complicated by seam splitting and wedge-outs.

This non-marine sequence of coal-bearing sedimentary rocks probably accumulated in a restricted inland lake environment. A greater degree of sediment variation is reflected than that of a deltaic setting. Coal generally grades to shale both horizontally and vertically rather than forming continuous seams. Fluctuating amounts of coarse clastic material prevail.

The best outcrop of the coal measures in the Merritt area occurs in Coal Gully. Here 4 seams are in 129 metres of section. For Coal Gully Hill, Middlesboro Collieries showed 7 seams in 235 meters but no recognizable agreement has been seen in recent drill holes.

Coldwater Hill has many conglomeratic sandstone outcrops. Here a stratigraphic section measured from mine workings and outcrop shows 6 seams in 137 meters. This has been confirmed by former drill holes and recent drilling has delineated more and thicker seams at depth. Up to ten seams greater than 1 metre thick have been intersected but none are of commercial interest.

The Diamond Vale area has very limited sedimentary outcrop. A stratigraphic section measured on the surface and in accessible mine workings contains five seams in 95 meters. Recent drilling confirmed this section with one additional seam encountered.

Elsewhere in the basin several isolated outcrops of coal measures exist. These occurrences are predominantly sandstone sections barren of coal or with coal of no commercial interest. At Normandale, on the eastern margin of the coal basin, a 1.5 metre coal seam can be seen in outcrop.

6.3 Structure

Enclosure Q - Geology Compilation Map 1
Enclosure R - Geology Map 1-A (Coal Gully Hill - Coldwater Hill)
Enclosure S - Structural Cross-Sections (Coal Gully Hill - Coldwater Hill)
Enclosure T - Structural Cross-Section (Diamond Vale)
Enclosure U - Drill Hole Correlation Chart

Extensive glacial drift cover, rapid textural changes of the clastics, and lenticular nature of the coal seams has rendered it difficult to work out the nature of folds and faults throughout the basin. Since drilling in the basin is mostly open-hole, few subsurface attitudes are known beside those in worked out mine areas. Using outcrop and drill hole data along with former underground mine plans, correlations and details of the structures have been made.

The general structure of Coal Gully Hill is a series of normal faults and folds trending and plunging southeasterly. Graben structures on the north-southerly trending tensional faults occur here, forming a major break with the coal measures on Coldwater Hill. At the western contact with the volcanics, the measures dip steeply to near vertical, striking in various directions. On the eastern flank of the hill the measures are more broadly folded and dips are shallower.

Coldwater Hill has a less complicated structure although several flexures are apparent. Outcrops generally maintain a north easterly dip between 20° and 35°. The seams have not been mined beyond the Coldwater River but are believed to maintain the same attitude easterly. The thin seams therefore rapidly gain cover with depth. The Diamond Vale Mine area has a simple monoclinal structure. Here the measures strike 235° dipping 27° southwest toward Coldwater Hill. Mine plans have indicated some steepening of the seams down dip. A broad syncline could therefore exist between Diamond Vale and Coldwater Hill but the thin seams would be at a great depth and no correlations have been successful.

East of Diamond Vale Mine area several thin seams have been delineated by drilling and seen in scattered outcrop. Immediately east of Diamond Vale Mine, seams dip shallowly eastward toward a tongue of recent basaltic lava. Inferring that the seams extend

under the flow and possibly thicken, two drill holes were attempted on the lava bench. Unfortunately both were abandoned due to adverse drilling conditions caused by heavy glacial debris and basalt rubble. At Normandale, on the eastern end of the coal basin, a small coal seam striking north with near vertical dip can be seen in outcrop. Immediately east of this seam the Nicola volcanics outcrop and to the west glacial deposits rapidly thicken. This area probably has a complicated structure similar to the western fringe of the basin at Coal Gully Hill.

6.4 Mineability

Enclosure No. 4 - Reserve Calculation Chart.

The Coal Gully Hill area has been extensively underground mined in the past. It appears that most of the surface mineable coal here has been removed by former underground operations. Deeper underground potential may still exist.

Coldwater Hill has also been extensively mined from surface outcrop. Seams near the surface are thin and gain cover rapidly down dip therefore have no surface minable potential. Some underground potential may exist.

MERRITT RESERVE CALCULATION
(Coal Gully Hill - Coldwater Hill)
. . . GEOLOGICALLY IN PLACE COAL . .

SECTION NO. (ENCLOSURE #)	GEOLOGICALLY IN PLACE COAL VOLUME (M^3)	GEOLOGICALLY IN PLACE COAL TONNAGE (S.G.= 1.5)	PIT VOLUME (FROM PLANIMETER)	WASTE BCM (PIT VOLUME - COAL M3)	RATIO BCM/TONNE RAW COAL
000	600,510	900,765	9,881,250	9,280,740	10.30:1
150s	698,601	1,047,901	8,908,350	8,209,749	7.83:1
300s	401,373	602,059	7,095,750	6,694,377	11.12:1
450s	550,521	825,781	6,455,700	5,905,179	7.15:1
600s	574,035	861,052	5,304,300	4,730,265	5.49:1
750s	583,260	874,890	7,875,000	7,291,740	8.33:1
TOTAL	3,408,300	5,112,450	45,520,350	42,112,050	8.23:1

- MAXIMUM PIT WALL ANGLE 50°
- SEAMS - 0.50 METER EXCLUDED

Only a small tonnage was mined from the Diamond Vale Mine area. Unfortunately the seams are too thin and gain cover too rapidly down dip for open pit potential. Underground potential is also questionable.

The only open pit potential is confined to the area between Coal Gully Hill and Coldwater Hill, extending northerly for 900 meters. Extensive Pleistocene deposits of boulder clay and gravel up to 100 meters thick have left this area totally covered. The geological interpretation has therefore been based entirely on rotary drill hole information.

Geologically in place coal reserves were measured in this area by planimetering coal and overburden volumes and using a maximum 50° pit wall. On the 6 cross-sections 000 through 750S, 5.2 million tonnes at a ratio of 8.2 bank cubic meters per tonne were calculated.

6.5 Coal Quality

Merritt coal is ranked as High Volatile Bituminous "B". The property is regarded to be a thermal prospect but at least one of the seams has fairly good coking properties.

The processed quality for the Merritt coal is summarized as follows:

Moisture	2.7%
Ash	9.5%
Volatile Matter	37.4%
Fixed Carbon	50.4%
Sulphur	0.7%
Calorific Value	7200 KCAL/KG
F.S.I.	0-5 I
Rank	hvbB ASTM

7.0 BIBLIOGRAPHY

Lorimer, M.K., (1962) Engineering Report on the Merritt Coalfield for Imperial Metals and Power Ltd.

Sumicol Consultants Limited, (1969) Merritt Coal Sumicol Report for Imperial Metals and Power Ltd.

White, W.H. (1964) Report on the Merritt Coalfield, Report of the Minister of Mines.

Williams, V.E., and Ross, C.A., (1979) Depositional Setting and Coal Petrology of Tulameen Coalfield, South-Central Brisith Columbia, AAPG Bull. V. 63, No. 11, P. 2058-2069.

Encl I

Province of British Columbia
Ministry of Energy, Mines and Petroleum Resources

APPLICATION TO EXTEND TERM OF LICENCE

I, Bolton Agnew (Name) agent for Shell Canada Resources Limited. (Name)

P.O. Box 100 (Address) 400 - 4 Avenue, S.W. (Address)

Calgary, Alberta Calgary, Alberta, T2P 2H5

Valid FMC No. 207568

hereby apply to the Minister to extend the term of Coal Licence(s) No(s). 6216, 6217, 6220-6223 Incl., 6226-6233 Incl., 6234-6242 Incl. - Twenty-three B.C. Crown Coal Licences, 2185 Hectares for a further period of one year.

2. Property name Merritt Coal Project, Kamloops Division of Yale Land District

3. I am allowing the following Coal Licence(s) No(s). to forfeit 6215, 6218, 6219, 6224, 6225

4. I have performed, or caused to be performed, during the period May 21, 1980 to May 20, 19 81, work to the value of at least $ 267,909.33 on the location of coal licence(s) as follows:

CATEGORY OF WORK	Licence(s) No(s).	Apportioned Cost
Geological mapping	6216-6217, 6220-6223 6226-6233, 6234-6242	$ 3,865.00
Surveys: Geophysical	6231, 6232, 6233	$ 57,929.38
Geochemical	-	-
Other (location)	6231, 6232, 6233	$ 4,679.65
Road construction	-	-
Surface work	-	-
Underground work	-	-
Drilling	6231	$150,464.25
Logging, sampling, and testing	6231	$ 40,390.68
Reclamation	-	-
Other work (specify)	-	-
Off-property costs		$ 10,580.37

5. I wish to apply $ 187,536.53 of this value of work on Coal Licence(s) No(s). 6216, 6217, 6220-6223 Incl., 6226-6233 Incl., 6234-6242 Incl.

6. I wish to pay cash in lieu of work in the amount of $ 45.00 on Coal Licence(s) No(s). 6230

7. The work performed on the location(s) is detailed in the attached report entitled Merritt Geological Report 1980 will be submitted in ninety days

Thirty percent of the expenditures have been disclaimed for work done on Freehold Lot 166

May 20, 1981 (Date)

(Signature)

Land Supervisor (Position)

(FORMS AND REPORT TO BE SUBMITTED IN DUPLICATE)

Encl I

CATEGORY OF WORK

GEOLOGICAL MAPPING Yes ☒ No ☐

		Area (Hectares)	Scale	Duration
Reconnaissance				
Detail:	Surface	2,000	1:5,000	24 Man-days
	Underground			
*Other (specify)				
			Total Cost	$ 3,865.00

GEOPHYSICAL/GEOCHEMICAL SURVEYS Yes ☒ No ☐

Method	Seismic 22,155.79
Grid	
Topographic	Location 4,679.65
*Other (specify)	
	Resistivity 35,773.59
	Total Cost $62,609.03

ROAD CONSTRUCTION Yes ☐ No ☒

Length ..... Width .....
On Licence(s) No(s). .....
Access to .....
Total Cost $ .....

SURFACE WORK Yes ☐ No ☒

	Length	Width	Depth	Cost
Trenching				
Seam Tracing				
Crosscutting				
*Other (specify)				
			Total Cost	$

UNDERGROUND WORK Yes ☐ No ☒

	No. of Adits	Maximum Length	No. of Holes	Total Metres	Cost
Test Adits					
*Other workings					
				Total Cost	$

DRILLING Yes ☒ No ☐

		Hole Size	No. of Holes	Total Metres	Cost
Core:	Diamond				
	Wireline				
Rotary:	Conventional	10 cm	7	1,323	150,464.25
	Reverse circulation				
*Other (specify)					
Contractor					
Where is the core stored?					
				Total Cost	$ 150,464.25

LOGGING, SAMPLING AND TESTING Yes ☒ No ☐

Lithology:	Drill samples	☒	Core samples	☐	Bulk samples	☐
Logs:	Gamma-neutron	☒	Density	☒		
*Other (specify)		Neutron, Resistivity, Sonic				
Testing:	Proximate analysis	☐	FSI	☐	Washability	☐
	Carbonization	☐	Petrographic	☐	Plasticity	☐
*Other (specify)						
					Total Cost	$ 40,390.68

OTHER WORK (specify details) — Cost

Total Cost	$
On-property costs	257,328.96
Off-property costs	10,580.37
Total Expenditures	$ 267,909.33

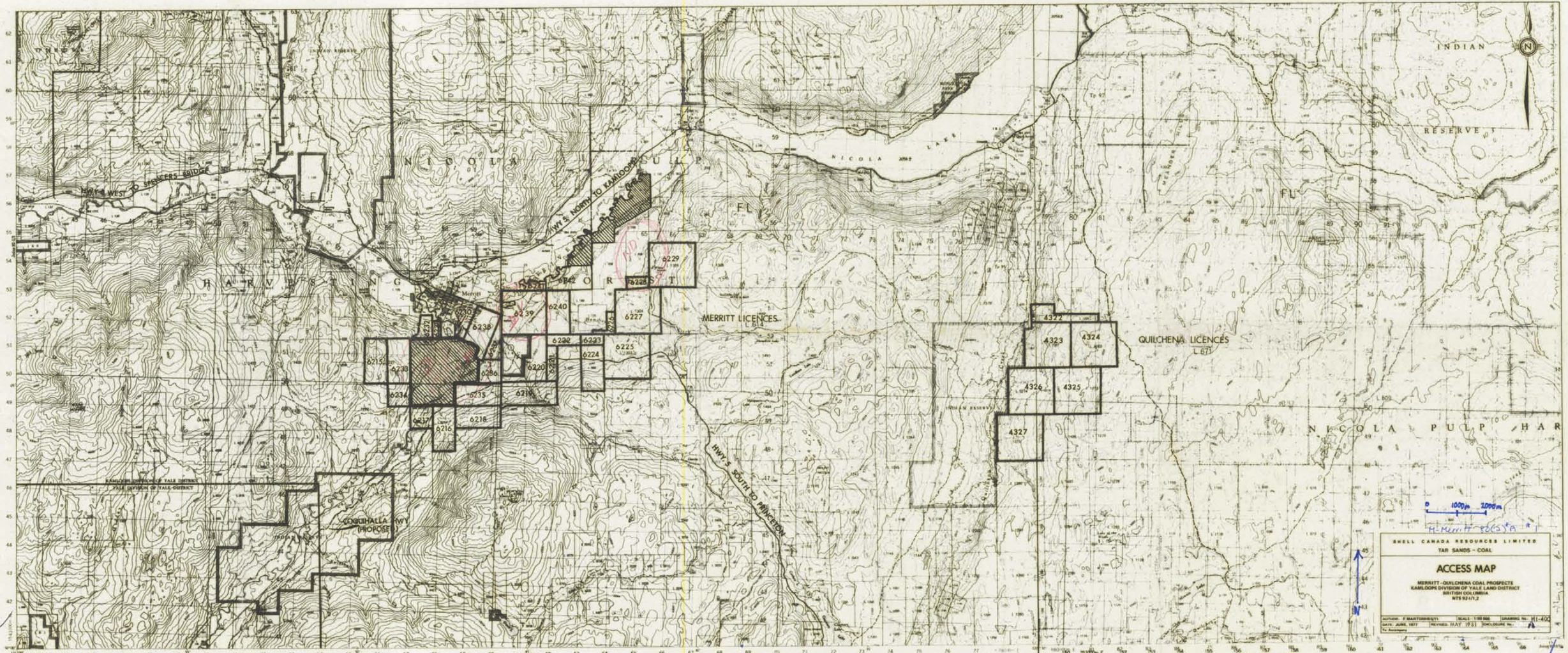
Thirty percent of the expenditures have been disclaimed for work done on Freehold Lot 166

May 20, 1981 (Date)

(Signature)

for Manager - Accounting, CNRL (Position)

*A full explanation of other work is to be included.



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162

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CROWS NEST RESOURCES LIMITED
EXPLORATION

B. C. COAL LICENCES
TENURE STANDING

BLOCK: MERRITT
GROUP: UNGROUPED

PROJECT: MERRITT

YEAR: 1980-81
DATE: JULY, 1981

KAMLOOPS DIV. YALE LAND DISTRICT

PROJECT			BLOCK			GROUP				LICENCE			ACQ/ADM		RENTALS		REQUIREMENT WORK						BUDGET		EXP	POTL	COMMITMENTS, J. V.	REMARKS
NAME	LICS. TOTAL NO.	AREA TOTAL AC/HA	NAME	LIC. TOTAL NO.	AREA TOTAL AC/HA	NO.	LICS. TOTAL NO.	AREA TOTAL AC/HA	YEAR	NO.	LEGAL DESCRIPTION	AREA TOTAL AC/HA	FEES YEAR	FEES #	ANNUAL #	TOTAL TO NEXT ANN 10^3	EXPIRED 10^3	CURRENT LIC. YEAR	CURRENT YEAR #	PRE-FULFILMENT YEAR	PRE-FULFILMENT #	ANNIVERSARY DATE	CURRENT YEAR AFE	CURRENT YEAR 10^3	TOTAL 10^3	SHELL CLASS	OTHER THAN B.C. GOV'T DESCRIPTION	
MERRITT	23	2185											80	280	10,925	25.7	16.3	2	27,313	4 & 0	171,194	MAY 21			213.5	Y		
			MERRITT	22	2179					6216	LOT 3250	130	80	270	10,895	21.9	16.3	2	27,238	4	171,194	MAY 21				Y		
										6217	SW1/4 SEC. 4 T. 91	65																
										6220	E. SEC. 11 T. 91	130																
										6221	LOT 3638	45																
										6222	LOT 3639	42																
										6223	LOT 1219	33																
										6226	LOT 186	33																
										6227	LOT 1304	261																
										6228	LOT 1148	33																
										6229	LOT 1305	262																
										6231	PORTION L. 172	17																
										6232	SW 1/4 SEC. 16	39																
										6233	E 1/2 L. 1227	130																
										6234	NE 1/4 SEC. 5	65																
										6235	N 1/2 SEC. 3	130																
										6236	SE 1/4 SEC. 10	65																
										6237	LOT 167	47																
										6238	LOT 122	125																
										6239	SEC. 14, T. 91	253																
										6240	N 1/2 SEC. 13	130																
										6241	PORTION S. 23	21																
										6242	PORTION S. 24	118																
			MERRITT	1	6					6230	LOT 1918	6	80	10	30	60	45	2	75	--	--	MAY 21				Y		
												MORK DONE $		80/81 87,536														

GENERAL REMARKS: FILL IN NECESSARY LINES AND COLUMNS ONLY. COAL DEVELOPMENT POTENTIAL IS "Y" (PRIME) UNLESS OTHERWISE STATED. LICENCES HELD BY SHELL CANADA RESOURCES LTD. CLM IS THE OPERATOR.

162

INTER-OFFICE CORRESPONDENCE

To: Crows Nest Resources Limited (CNRL)
Frank Martonhegyi

Date: August 8, 1979

From: Shell Canada Resources Limited
Surveying Section

Subject: Location Survey
Merritt Prospect, Merritt, British Columbia
Drill Holes DH 101 to DH 114.

Three 2nd order control stations (Iron, Prom & Post 7568) were found and occupied to establish a net work of 5 additional stations from which all further surveying was done. This network was run through a GALS adjustment.

Using this network a total of 48 trees, 11 old drill holes and 14 new drill hole locations were surveyed (between June 4, 1979 and August 2, 1979) using conventional surveying techniques 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 major network plus three additional networks was above 1/20000 in all cases.

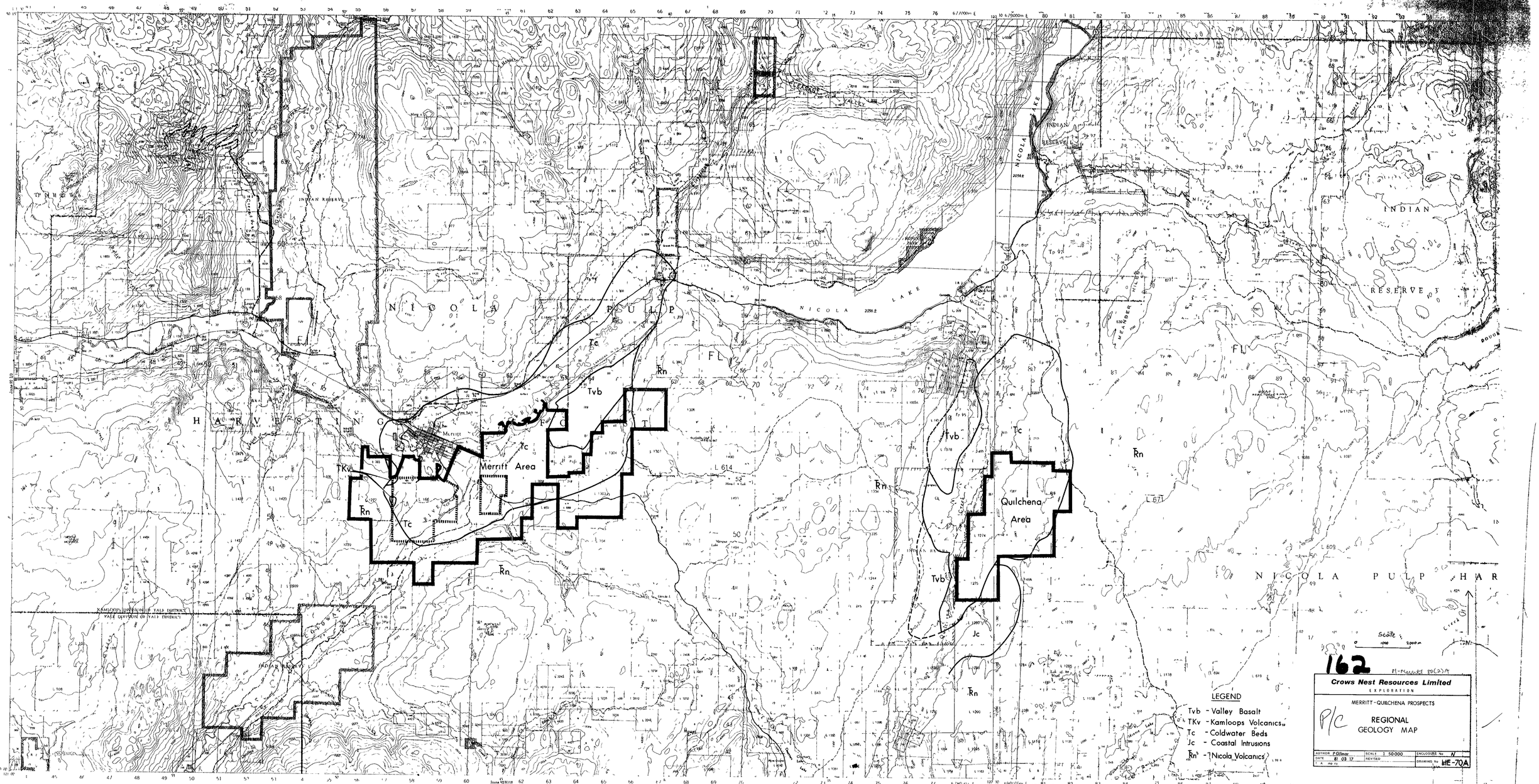
The results of the surveys were presented to CNRL in both a tabular and plan form - the tabular form hereby attached.

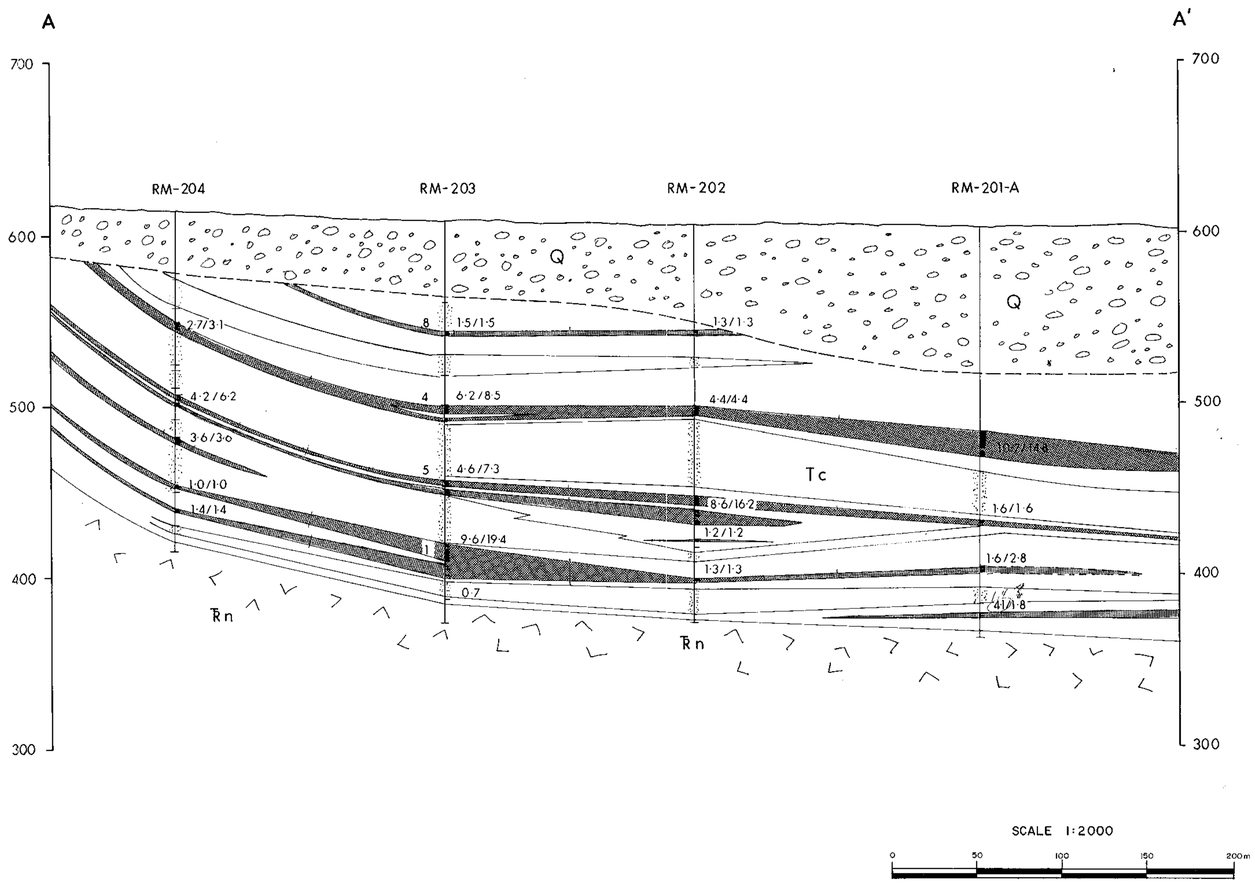
The total survey cost attributed to the MERRITT PROSPECT was approximately $7,800.

A. Hittel

AH:cg
Attachment

162


Merritt Area
Quilchena Area
Tvb
TKv
Tc
Jc
Rn
LEGEND
Tvb - Valley Basalt
TKv - Kamloops Volcanics
Tc - Coldwater Beds
Jc - Coastal Intrusions
Rn - Nicola Volcanics
Scale
0 1000 2000 m
Crows Nest Resources Limited
EXPLORATION
MERRITT-QUILCHENA PROSPECTS
P/C
REGIONAL GEOLOGY MAP
AUTHOR P.Gilmer
SCALE 1:50,000
ENCLOSURE No. IV
DATE 81 03 17
REVISED
DRAWING No. ME-70A



SCALE 1:2000

0 50 100 150 200m

LEGEND

QUATERNARY — Q — Pleistocene - Stream alluvium, glacial drift

TERTIARY — Tvb — Valley Basalt - mainly vesicular basalt

KAMLOOPS GROUP

TKv — Kamloops Volcanics - Rhyolite, andesite, basalt

Tc — Coldwater Formation - Conglomerate, sandstone shale and COAL

TRIASSIC — Rn — Nicola Group - Greenstone; andesite, basalt

——— – – – –?–? Geological contact - defined, approx., inferred

96/19.4 Net coal / Gross coal (m. drilled thickness)

Sandstone & Conglomerate

162 M-Merritt 80(2)A

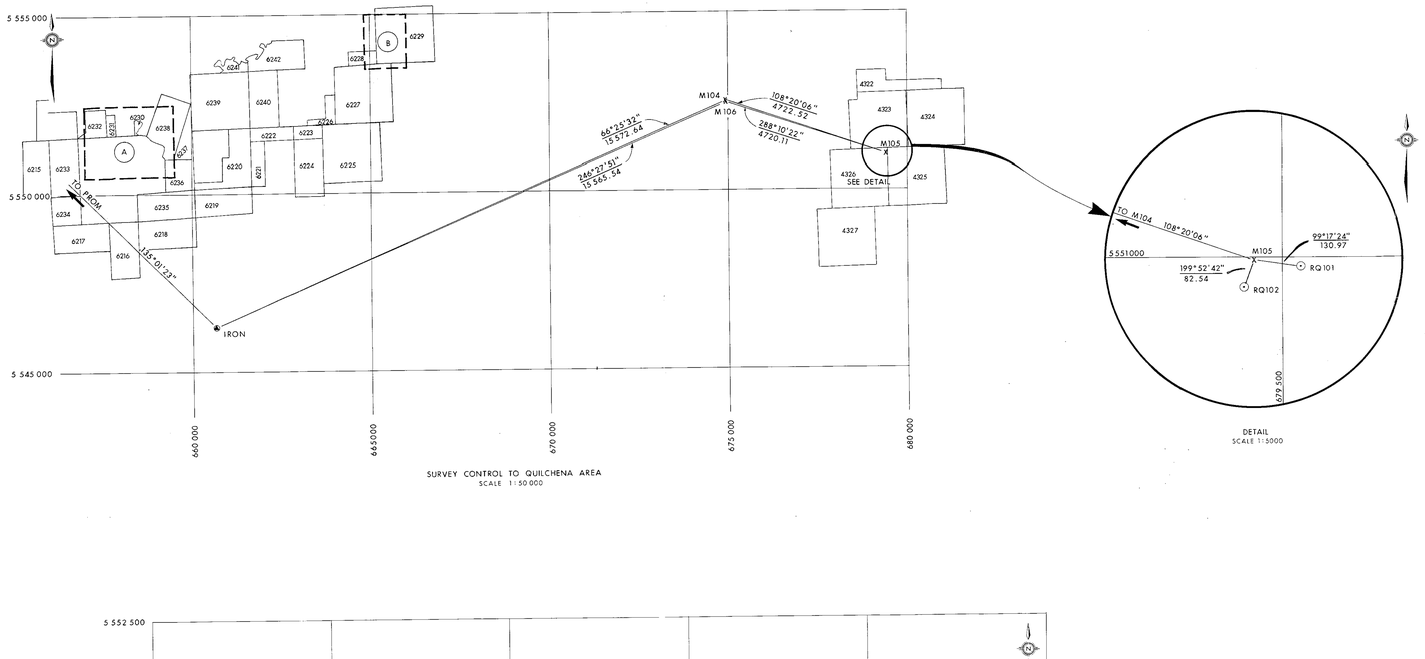
Crows Nest Resources Limited

EXPLORATION

MERRITT

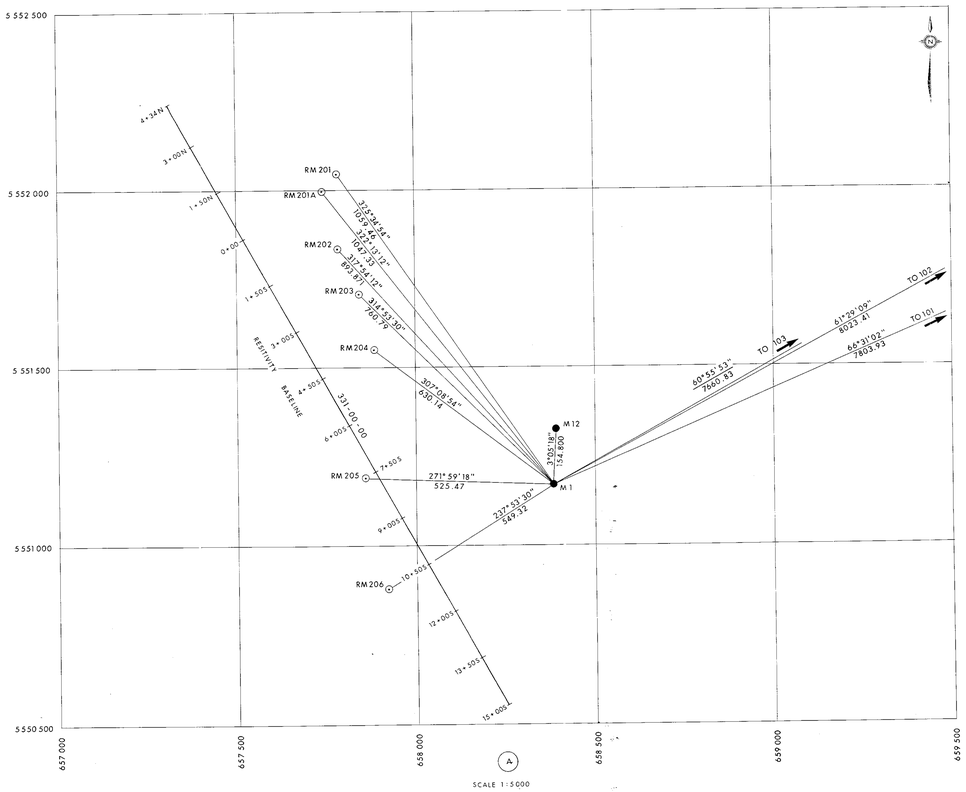
CROSS SECTION A-A

AUTHOR: K SHARMAN	SCALE: 1:2000	ENCLOSURE No: P
DATE: 81-05-11	REVISED:	DRAWING No: HJ-77
To Accompany		

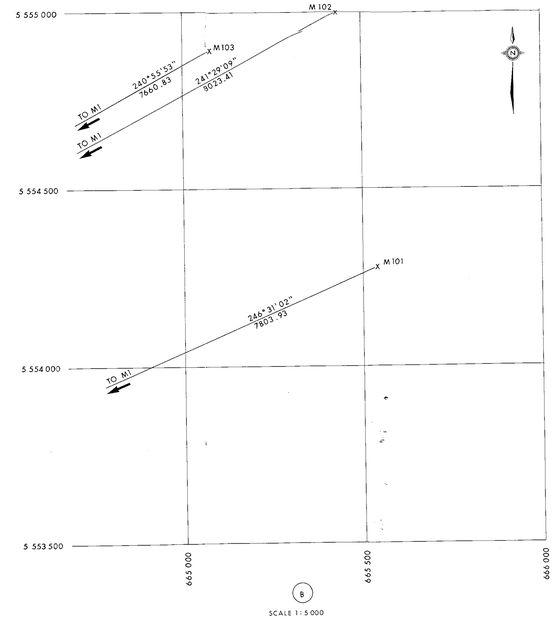


SURVEY CONTROL TO QUILCHENA AREA
SCALE 1:50 000

DETAIL
SCALE 1:5000



SCALE 1:5000



SCALE 1:5 000

LEGEND

- ▲ — 2nd ORDER CONTROL STATION
- ● — FOUND 12" SPIKE
- X — PLANT 12" SPIKE
- ⊙ — DRILL HOLE

SURVEY DONE BY Sheltech Canada , 1980.
ALL DISTANCES ARE IN METRES AND HAVE BEEN REDUCED TO THE U.T.M. PLANE.
ALL BEARINGS ARE REFERRED TO 123°W

TABLE OF COORDINATES

STATION	NORTHING	EASTING	ELEVATION
IRON	5 546 250.73	660 666.38	1692.86
PROM	5 562 093.82	644 836.04	1732.68
M 1	5 551 188.48	658 383.16	700.67
M 12	5 551 323.06	658 391.51	695.20
M 101	5 554 278.14	666 540.77	869.05
M 102	5 554 998.67	665 433.33	826.01
M 103	5 554 890.95	665 079.03	763.00
M 104	5 552 478.86	674 939.35	1210.25
M 105	5 550 993.28	679 422.12	968.71
M 106	5 552 465.41	674 937.45	1206.97

RESITIVITY BASELINE			
0+00	5 551 862	657 522	
1+50 N	5 561 994	657 450	
3+00 N	5 562 125	657 377	
4+34N	5 562 242	657 312	
1+50 S	5 551 732	657 595	
3+00 S	5 551 600	657 668	
4+50 S	5 551 469	657 740	
6+00 S	5 551 338	657 813	
7+50 S	5 551 207	657 886	
9+00 S	5 551 076	657 959	
10+50 S	5 550 944	658 031	
12+00 S	5 550 813	658 104	
13+50 S	5 550 682	658 177	
15+00 S	5 550 551	658 250	
16+50 S	5 550 420	658 322	

DRILL HOLES			
RM 201	5 552 042.46	657 784.33	608.24
RM 201 A	5 551 996.26	657 741.34	607.11
RM 202	5 551 831.75	657 783.93	605.73
RM 203	5 551 705.42	657 844.19	607.37
RM 204	5 551 549.01	657 880.90	612.67
RM 205	5 551 186.71	657 858.02	649.76
RM 206	5 550 876.50	657 917.87	666.01
RQ 101	5 550 972.14	679 951.37	965.30
RQ 102	5 550 915.66	679 394.05	945.95

162 M-Merritt 80(2)A

Sheltech Canada

Crows Nest Resources Limited
ENGINEERING

MERRITT - QUILCHENA
S.E. B.C.

TRAVERSE SURVEY MAP

AUTHOR: SHELTECH	SCALE: AS SHOWN	ENCLOSURE No.: M
DATE: 81 02 24	REVISED:	DRAWING No: HA-69
To Accompany		

COLDWATER HILL

Stratigraphic Section

METERS		
15.24	Sandstone Coarse	
0.05	Shale nodular	
0.20	Bony Coal & Shale	)
1.11	Coal	) #2 Mine
0.10	Sandstone	) 2.03M Coal
0.38	Coal	)
0.23	Bony Coal & Shale	)
0.05	Shale	
1.57	Shale with trace coal	
0.25	Bony Coal	
5.48	Shale grey	
1.47	Sandstone fine, shaly streaks	
1.73	Sandstone, medium to coarse	
0.46	Sandstone, fine, shaly streaks	
5.84	Shale, grey, sandy	
0.25	Bony Coal	
1.04	Shale, dark, sandy, few coal streaks	
2.62	Sandstone, coarse	
0.61	Shale, grey, sandy	
1.27	Shale, grey	
1.29	Shale, grey, numerous coal streaks	
1.65	Sandstone, coarse	
2.08	Shale, grey, sandy, few coal streaks	
13.21	Sandstone, coarse	
0.24	Bony Coal & Shale	)
0.68	Coal	) #3 Mine
0.23	Shale	)
0.05	Coal	) 1.88M Coal
0.61	Shale	)
0.10	Coal	)
30.48	Measures	
1.27	Coal, numerous bony partings	
45.72	Measures	
0.66	Coal, numerous bony partings	

- Six coal seams

- Aggregate thickness 6.4 meters coal in 140.0 meter section

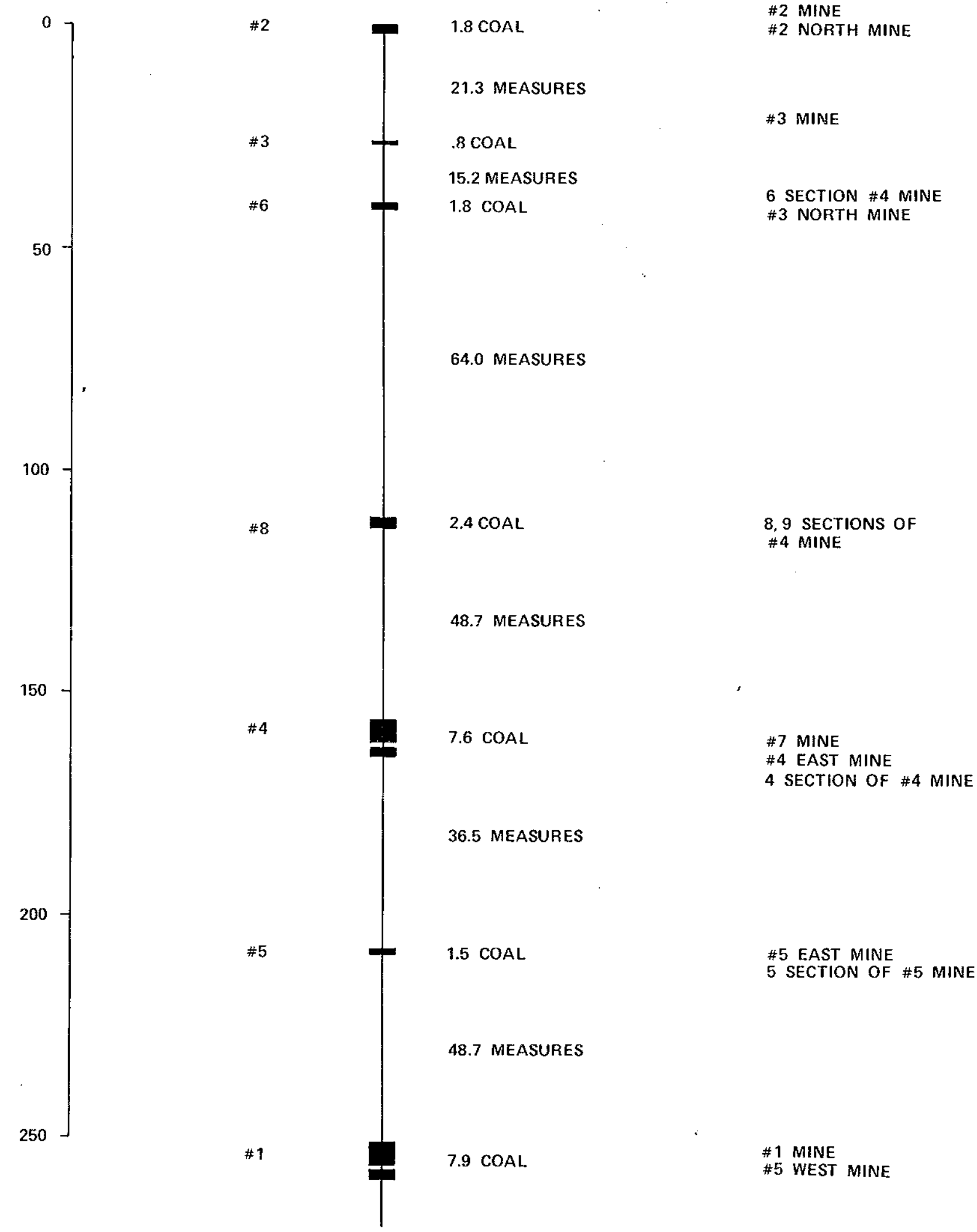
DIAMONDVALE

Stratigraphic Section

THICKNESS METERS		
	Sandstone roof	
0.30	Bony Coal	)
0.45	Coal	) Browitt
0.10	Shale	)
0.10	Bony Coal	) Entry
0.05	Shale	)
0.23	Bony Coal	) 1.22M Coal
39.62	Measures	
	Shale roof	
0.25	Bony Coal	)
0.13	Shale	)
0.51	Coal	) #3 Mine
0.13	Shale	)
0.02	Coal	) 1.40M Coal
0.02	Shale	)
0.33	Coal	)
35.05	Measures	
	Shale roof	
0.28	Coal	)
0.08	Shale	)
0.28	Coal	) #4 Mine
0.13	Bony Coal	)
0.05	Shale	) 1.75M Coal
0.18	Bony Coal	)
0.02	Shale	)
0.74	Coal	)
4.27	Measures	
0.38	Coal, several bony partings	
9.14	Measures	
0.69	Coal, several bony partings	

- fine coal seams
- aggregate thickness 5.4 meters Coal in 94.0M section

COAL GULLY HILL
IDEALIZED STRATIGRAPHIC SECTION

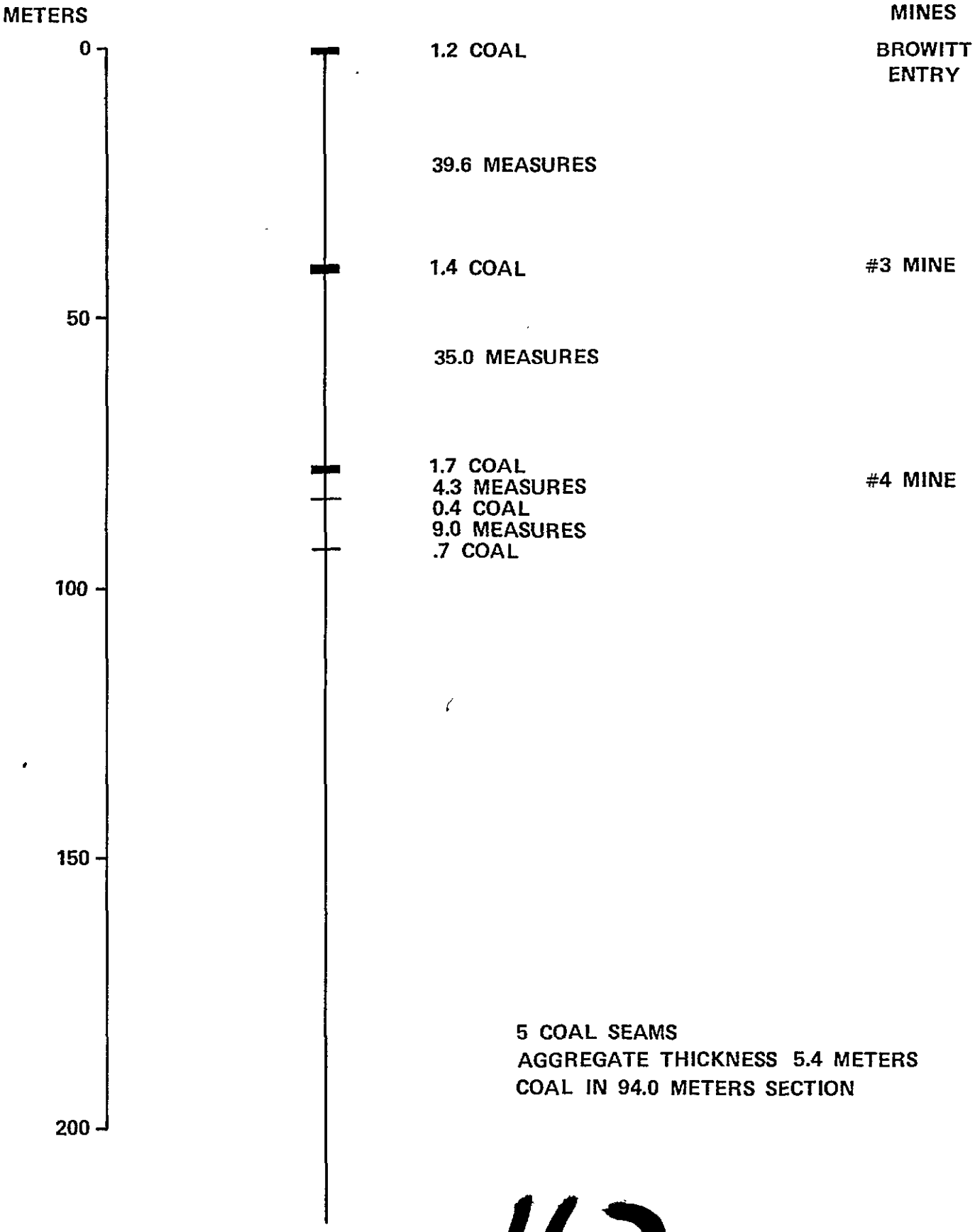


7 COAL SEAMS
AGGREGATE THICKNESS 23.8 METERS
COAL IN 258 METERS SECTION

162

HC-40E

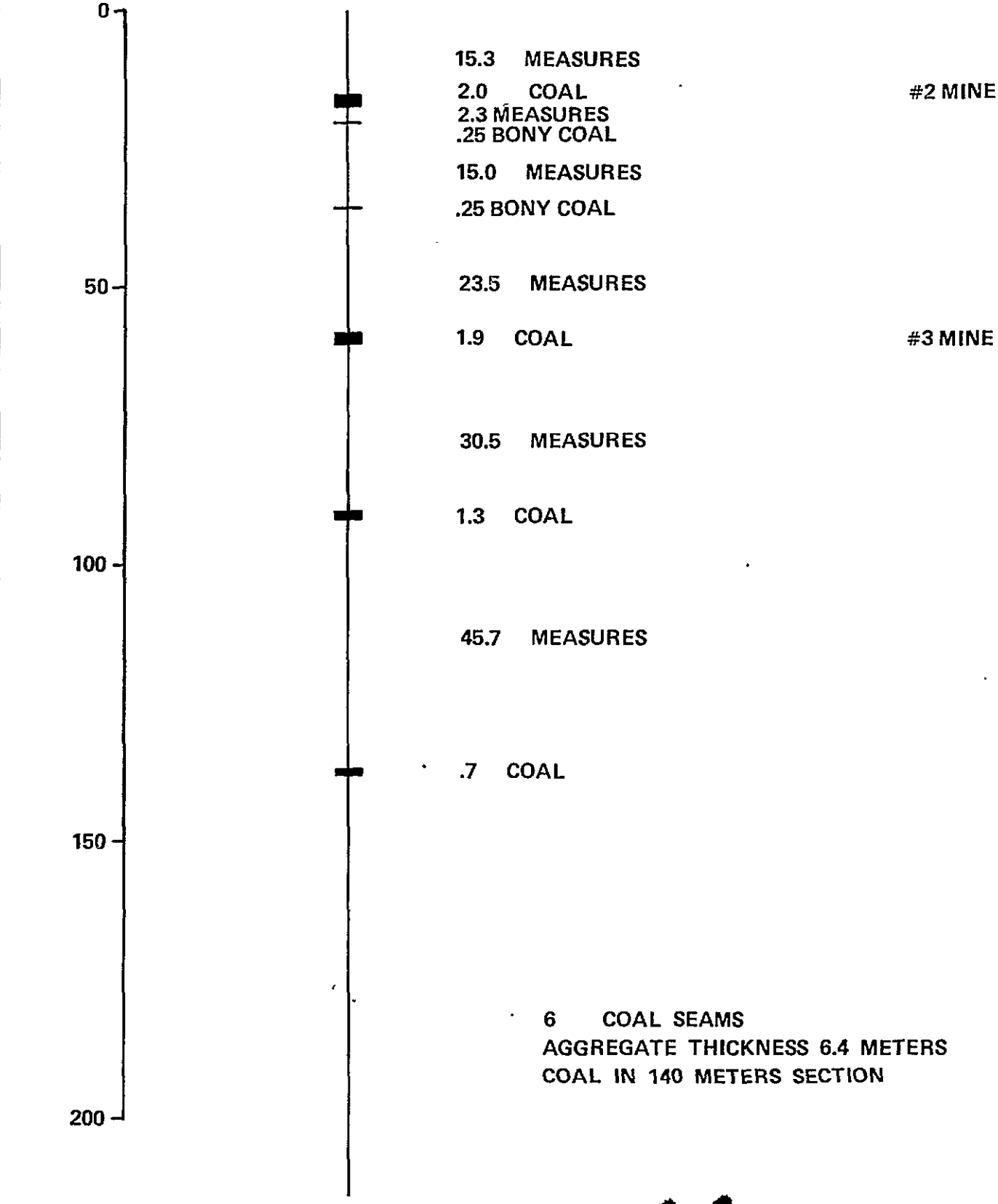
DIAMOND VALE MINES
STRATIGRAPHIC SECTION



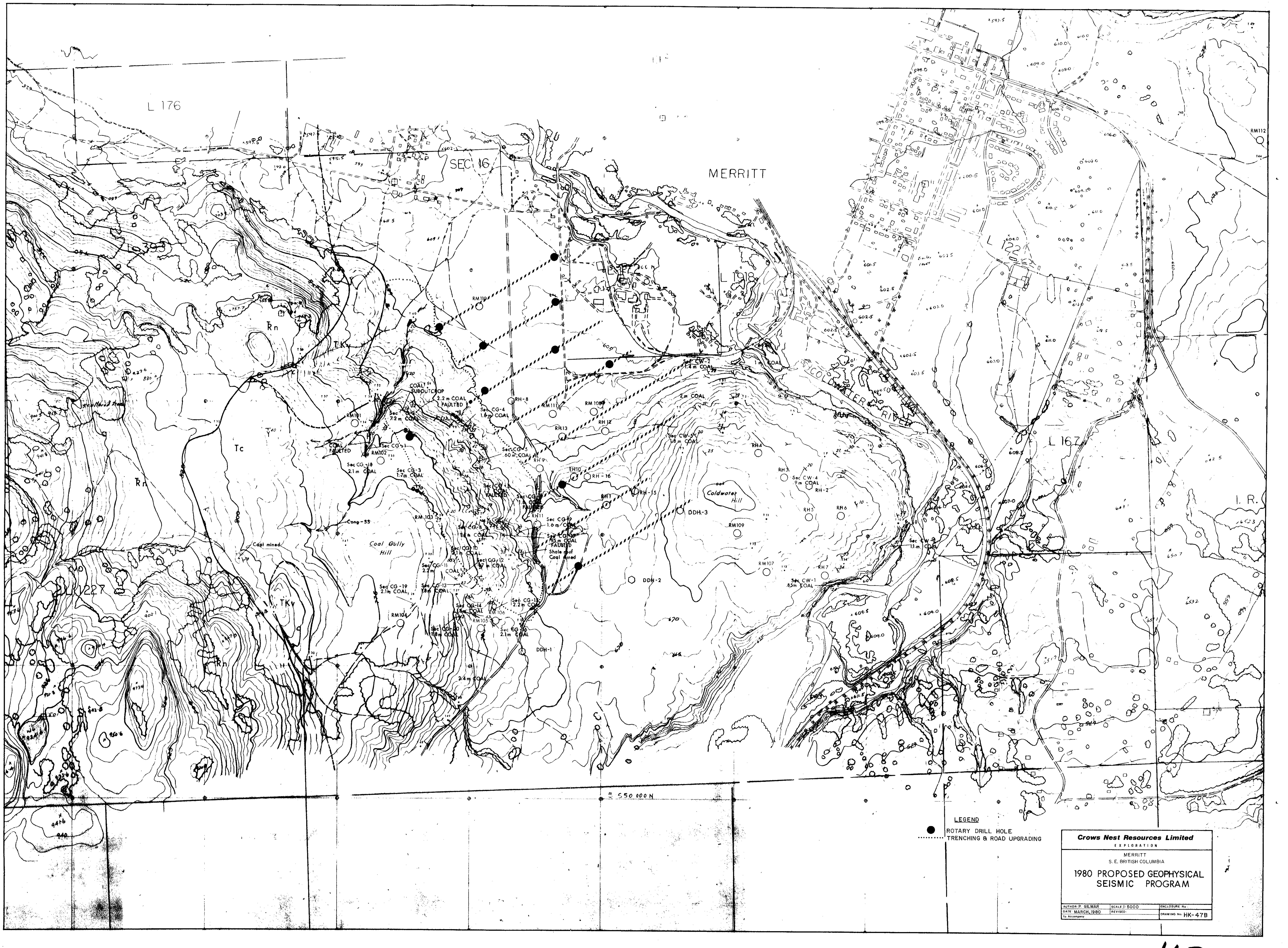
5 COAL SEAMS
AGGREGATE THICKNESS 5.4 METERS
COAL IN 94.0 METERS SECTION

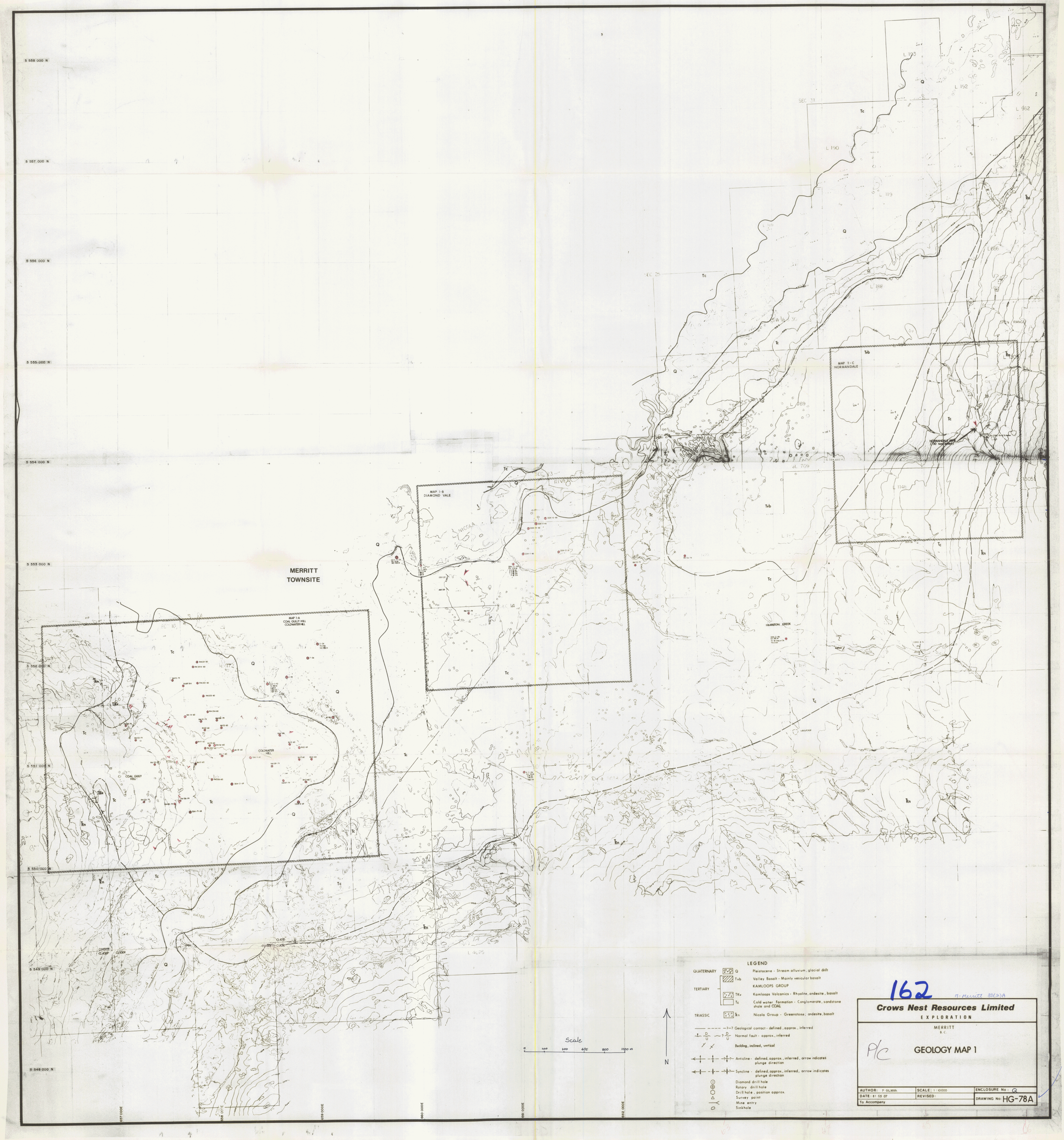
162

COLDWATER HILL
STRATIGRAPHIC SECTION



6 COAL SEAMS
AGGREGATE THICKNESS 6.4 METERS
COAL IN 140 METERS SECTION


L 176
SEC 16
MERRITT
L 122
L 167
I. R.
COLDWATER RIVER
Coldwater Hill
Coal Gully Hill
L 227
LEGEND
ROTARY DRILL HOLE
TRENCHING & ROAD UPGRADING
Crows Nest Resources Limited
EXPLORATION
MERRITT
S. E. BRITISH COLUMBIA
1980 PROPOSED GEOPHYSICAL
SEISMIC PROGRAM
AUTHOR: P. GILMAR
SCALE 1:5000
ENCLOSURE No:
DATE: MARCH, 1980
REVISED:
DRAWING No: HK-47B
To Accompany


5 558 000 N
5 557 000 N
5 556 000 N
5 555 000 N
5 554 000 N
5 553 000 N
5 552 000 N
5 551 000 N
5 550 000 N
5 549 000 N
5 548 000 N
657 000E
658 000E
659 000E
660 000E
661 000E
662 000E
MERRITT
TOWNSITE
MAP 1-A
COAL GULLY HILL
COLDWATER HILL
MAP 1-B
DIAMOND VALE
MAP 1-C
NORMANDALE
NORMANDALE MINE
COAL GULLY HILL
COLDWATER HILL
HAMILTON CREEK
NICOLA
RIVER
COLDWATER RIVER
COLD WATER
RAILWAY
OPEN RANGE
SEC 31
SEC 25
SEC 23
SEC 16
SEC 14
SEC 12
SEC 10
SEC 5
SEC 3
SEC 2
SW 1/4 S 30
L 193
L 192
L 962
L 190
L 119
L 189
L 188
L 666
L 769
L 1148
L 1304
L 1305
L 1303
L 167
L 166
L 670
L 669
L 4075
I.R. 2
Q
Tc
Tvb
TKv
Ꞁn
CL4510
CL4308
CL4310
CL4509
CL4307
CL4309
LEGEND
QUATERNARY
Q Pleistocene - Stream alluvium, glacial drift
Tvb Valley Basalt - Mainly vesicular basalt
TERTIARY
KAMLOOPS GROUP
TKv Kamloops Volcanics - Rhyolite, andesite, basalt
Tc Cold water Formation - Conglomerate, sandstone shale and COAL
TRIASSIC
Ꞁn Nicola Group - Greenstone, andesite, basalt
Geological contact - defined, approx., inferred
Normal fault - approx., inferred
Bedding, inclined, vertical
Anticline - defined, approx., inferred, arrow indicates plunge direction
Syncline - defined, approx., inferred, arrow indicates plunge direction
Diamond drill hole
Rotary drill hole
Drill hole, position approx.
Survey point
Mine entry
Sinkhole
Scale
0 200 400 600 800 1000 m
N
162
M-Merritt 80(2)A
Crows Nest Resources Limited
EXPLORATION
MERRITT
B.C.
P/C
GEOLOGY MAP 1
AUTHOR: P GILMAR
SCALE: 1:10000
ENCLOSURE No: Q
DATE: 81 05 07
REVISED:
DRAWING No: HG-78A
To Accompany

656 500
657 000
657 500
5 552 000
5 551 500
5 551 000
5 550 500
LOT 166
CL 6232
CL 6231
4 + 34 N
3 + 00 N
1 + 50 N
0 + 00
1 + 50 S
3 + 00 S
SURVEYED BASELINE
RM110-79
RM101-79
RM102-79
RM103-79
RM104-79
RM105-79
RM106-79
RH8-60
T17
T18
T19
T20
T21
T22
T23
T24
T25
T26
T27
T28
T29
T30
T31
T32
T34
T35
T36
T37
T38
T39
T40
T41
T42
T48
T50
T52
SD-1
POST 7568
SHAFT
BOUNDARY APPROXIMATE
COAL GULLY HILL
LOT 166
No. 1 SEAM
No. 2 SEAM
No. 3 SEAM
No. 4 SEAM
No. 5 SEAM
No. 5 EAST No. 5 SEAM
No. 5 PROSPECT No. 5 SEAM
No. 6 SEAM
No. 8 SEAM
No. 8 MINE No. 8 SEAM
No. 3 MINE No. 3 SEAM
No. 3 SECTION No. 3 MINE
No. 3 NORTH PROSPECT
No. 2 EAST No. 2 SEAM
No. 2 NORTH
No. 2 SOUTH EXTENSION
FLEMING No. 3 MINE No. 4 SEAM
SEC. CG-1 COAL?
SEC. CG-2 7.2m COAL
SEC. CG-3 1.7m COAL
SEC. CG-4 1.6m COAL
SEC. CG-5 0.60m COAL
SEC. CG-6 1.9m COAL faulted
SEC. CG-7 0.8m COAL faulted
SEC. CG-8 1.0m COAL
SEC. CG-9 1.4m COAL
SEC. CG-10 2.1m COAL
SEC. CG-11 2.2m COAL
SEC. CG-12 1.7m COAL
SEC. CG-13 1.6m COAL
SEC. CG-14 1.6m COAL
SEC. CG-15 2.2m COAL
SEC. CG-16 2.2m COAL
SEC. CG-17 0.95m COAL faulted
SEC. CG-18 2.3m COAL
SEC. CG-19 2.1m COAL
SEC. CG-20 1.8m COAL
2.4m COAL MINED, BURNING
2.4m COAL
COAL SUBCROP
COAL, Mined
COAL SEAM BURNING
COAL OUTCROP MINED
COAL MINED
BURNING COAL SEAM
COAL BURNING
Sandstone 065/45
COMG-56
TKv
Tc
Rn
KEY MAP
0 20 40 60 80 100m
SCALE 1:2000
LEGEND
QUATERNARY
TERTIARY
TRIASSIC
Q Pleistocene - Stream alluvium, glacial drift
Tvb Valley Basalt - Mainly vesicular basalt
KAMLOOPS GROUP
TKv Kamloops Volcanics - Rhyolite, andesite, basalt
Tc Cold water Formation - Conglomerate, sandstone shale and COAL
Rn Nicola Group - Greenstone, andesite basalt
Geological contact, defined, approx, inferred
Normal fault, approx, inferred
Bedding, inclined, vertical
Anticline, defined, approx, interred; arrow indicates plunge direction
Syncline, defined, approx, interred; arrow indicates plunge direction
Diamond drill hole
Rotary drill hole
Drill hole, position approx
Survey point
Mine entry
Sinkhole
Crows Nest Resources Limited
EXPLORATION
MERRITT B.C.
GEOLOGY MAP 1-A
COAL GULLY HILL & COLDWATER HILL
162
AUTHOR: K SHARMAN
SCALE: 1:2000
ENCLOSURE No: 1
DATE: 81 05 07
REVISED:
To Accompany
DRAWING No. HG-78
SHEET 1 of 2
H-Merritt 82(2)SA

MERRITT TOWNSITE

658 000 | 658 500 | 659 000

5552 000 | 5 551 500 | 5551 000 | 5 550 500

RM201-80
RM201A-80
RM202-80
RM203-80
RM204-80
RM205-80
RM111-79
RM108-79
RM109-79
RM107-79
RH12-60
RH13-60
RH9-60
RH10-60
RH206-80
RH1-60
RH15-60
RH11-60
RH4-60
RH3-60
RH2-60
RH5-60
RH6-60
RH7-60
SD-3-69
SD-2-69
SD-4-69
E-1-1891

4+50 S | 6+00 S | 7+50 S | 9+00 S | 10+50 S | 12+00 S | 13+50 S | 15+00 S | 16+50 S

BALCO SAWMILL

CL 6230

COLDWATER HILL

COLDWATER RIVER

T1 | T2 | T5 | T6 | T7 | T9 | T10 | T11 | T12 | T13 | T14

SEC. CW2 1.4 m COAL
No.2 MINE
1m COAL
2m + COAL
SEC. CW-5 1.8 m COAL
No.2 SEAM
No.3 SEAM
SEC. CW-4 0.9m COAL
SEC. CW-3 1.1 m COAL
SEC. CW-1 0.85m COAL

OLD ROCK PILE MINED

0 20 40 60 80 100 m
SCALE - 1:2000

KEY MAP

LEGEND

QUATERNARY	Q	Pleistocene - Stream alluvium, glacial drift
TERTIARY	Tvb	Valley Basalt - Mainly vesicular basalt
		KAMLOOPS GROUP
	TKv	Kamloops Volcanics - Rhyolite, andesite, basalt
	Tc	Cold water Formation - Conglomerate, sandstone shale and COAL
TRIASSIC	Rn	Nicola Group - Greenstone, andesite, basalt

Geological contact - defined, approx., inferred
Normal fault - approx., inferred
Bedding, inclined, vertical
Anticline - defined, approx., inferred, arrow indicates plunge direction
Syncline - defined, approx., inferred, arrow indicates plunge direction
Diamond drill hole
Rotary drill hole
Drill hole, position approx.
Survey point
Mine entry
Sinkhole

M-Merritt 80(2)A

Crows Nest Resources Limited
EXPLORATION

MERRITT
B.C.

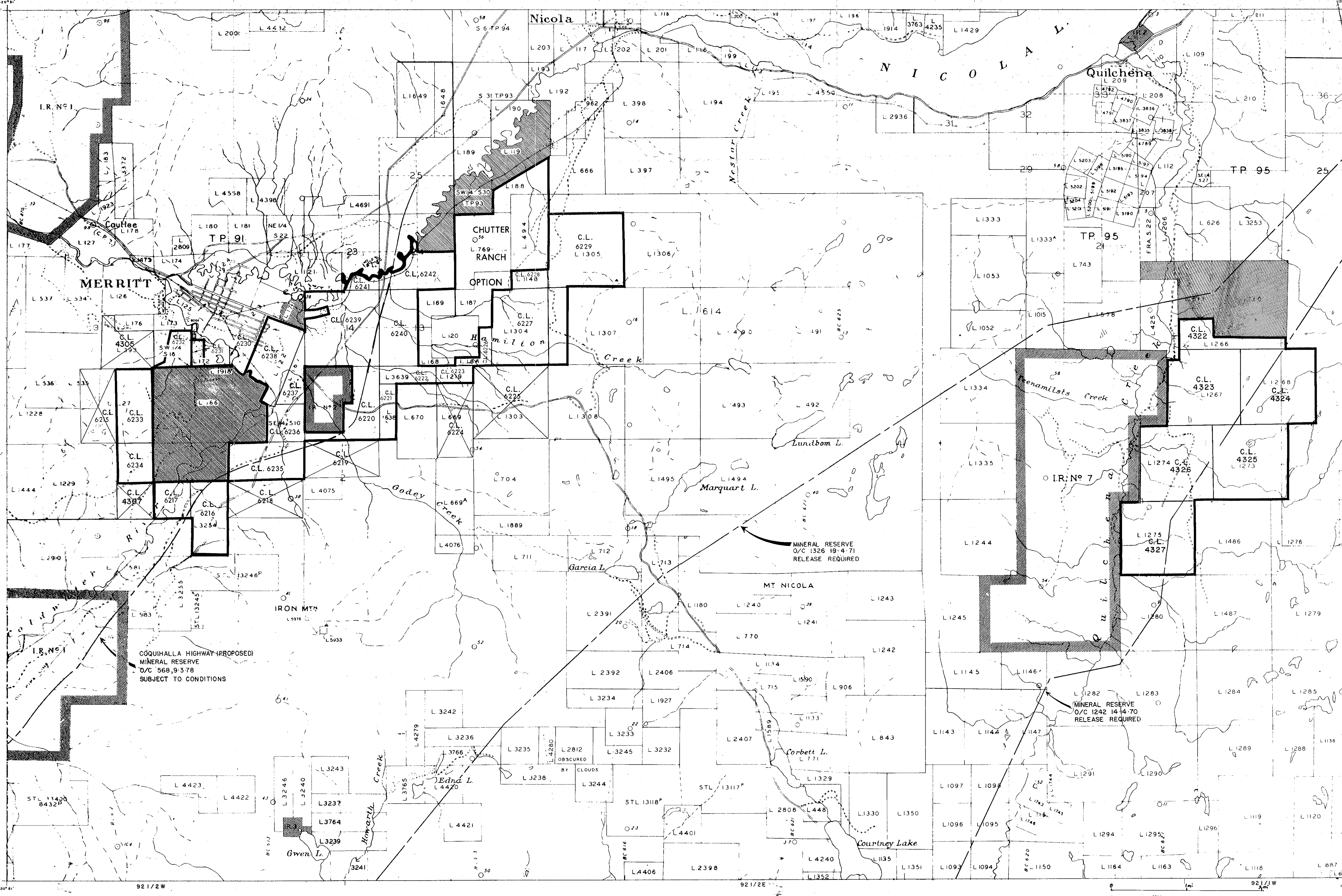
GEOLOGY MAP 1-A
COAL GULLY HILL & COLDWATER HILL

162

AUTHOR: K SHARMAN	SCALE: 1:2000	ENCLOSURE No: R
DATE: 81 05 07	REVISED:	DRAWING No: HG-78
To Accompany		

162

MERRITT COMPOSITE



LEGEND

Drill hole	DDH / RDH
Proposed drill hole	
Shaft	
Adit	
Trench or open cut	HAND / CAT.
Open pit or stripped area	
Seam tracing	
Access road	
Exploration road	
Proposed exploration road	

Alienated Coal Rights
Cool Licences
Forfeited Cool Licences

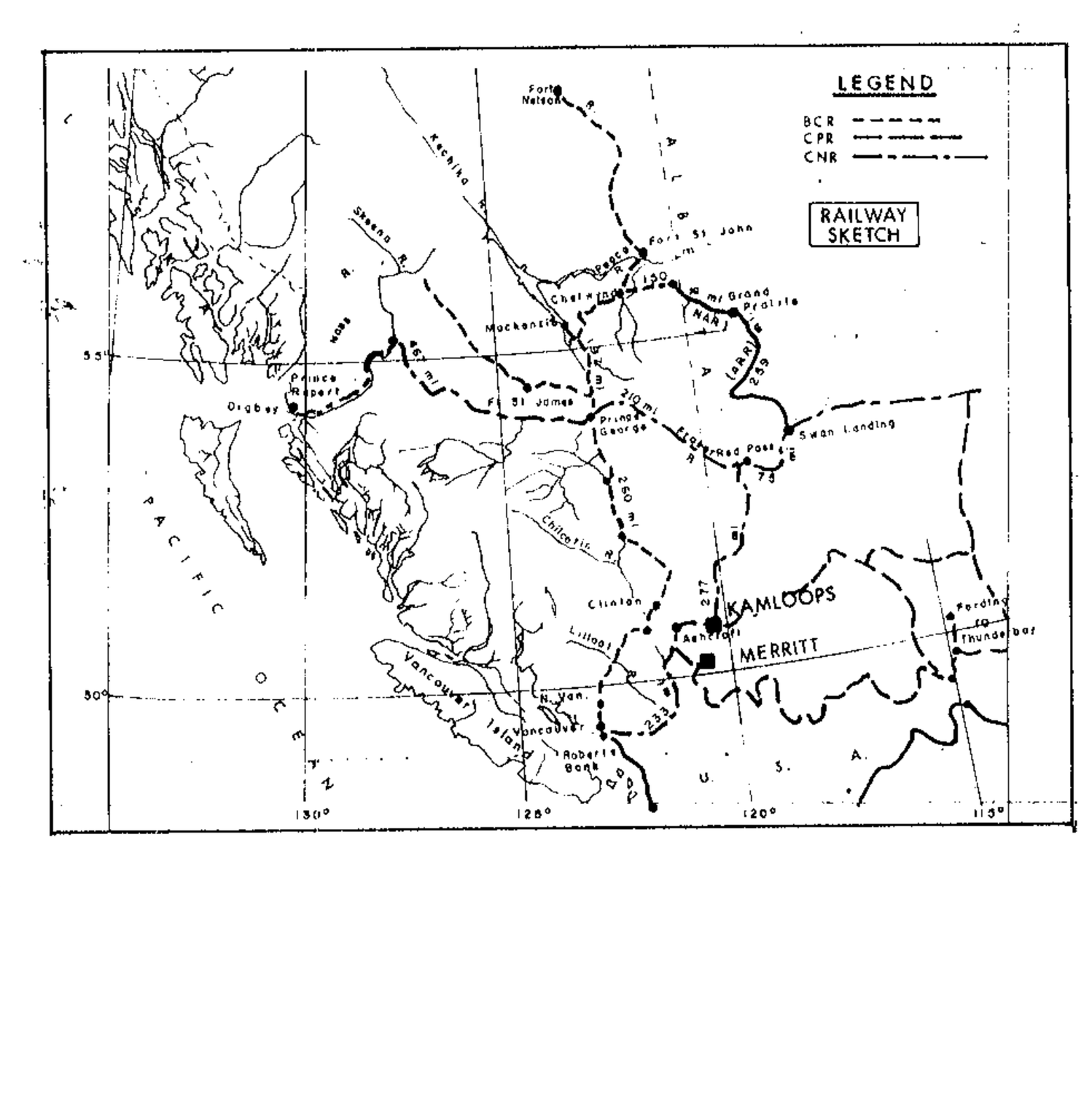
SCALE 1:31,680

COAL TITLES REFERENCE MAP MERRITT COMPOSITE

DEPARTMENT OF MINES AND PETROLEUM RESOURCES, VICTORIA, B.C.

FOR INFORMATION AND MAP COPIES APPLY TO THE OFFICE OF THE CHIEF GOLD COMMISSIONER, VICTORIA, B.C.

Map prepared from Air Interim 92 I / 1 & 2 (Parts)
Aerial photographs dated 1948, 1949
Completed 16/11/78. by D.H.



M-Merritt 80(2)A

Crows Nest Resources Limited
EXPLORATION

MERRITT AREA
B.C.

LAND MAP

SHELL - CNRL LICENCES : MERRITT
QUILCHENA (GROUP 234)

92 I/1 & 2

AUTHOR: COAL	SCALE: 1:31 680	ENCLOSURE No: C
DATE: FEB. 1979	REVISED: JULY, 1981	DRAWING No: HH-18
To Accompany		

MERRITT - 1980 DRILLHOLE SUMMARY

ROTARY HOLE RM-201A

DATE:	Oct. 24-27, 1980
LOCATION:	Flats
RIG TYPE:	Single Wall
EASTING:	657741.54
NORTHING:	5551996.26
ELEV. (M):	607.11
TOTAL DEPTH (M):	240
ANGLE:	Vertical
AZIMUTH:	—
REMARKS:	Volcanics at 236.5 m, Full Log Suite to TD Quat. to 85.0m

COAL INTERSECTIONS

THICKNESS (M)	DEPTH (M)
2.4	119.7 - 122.1
0.4	122.6 - 123.0
1.7	123.5 - 125.2
1.6	125.6 - 127.2
2.7	127.5 - 130.2
1.4	132.0 - 133.4
0.5	134.0 - 134.5
1.6	172.0 - 173.6
0.8	199.0 - 199.8
0.8	201.0 - 201.8
0.6	226.2 - 226.8
0.5	227.5 - 228.0

ROTARY HOLE RM-202

DATE:	Oct. 27 - Nov. 1, 1980
LOCATION:	Flats (Lot 172)
RIG TYPE:	Single Wall
EASTING:	657783.93
NORTHING:	5551831.75
ELEV. (M):	605.73
TOTAL DEPTH (M):	233
ANGLE:	Vertical
AZIMUTH:	—
REMARKS:	Volcanics at 231 m, Full Log Suite to TD Quat. to 56.0m

COAL INTERSECTIONS

THICKNESS (M)	DEPTH (M)
1.3	62.0 - 63.3
4.4	106.4 - 110.8
4.8	158.6 - 163.4
0.8	166.8 - 167.6
1.2	169.4 - 170.6
1.8	173.0 - 174.8
1.2	183.6 - 184.8
0.4	188.2 - 188.6
1.3	206.5 - 207.8

CORE INTERVAL (M): 94-96, 123-125

ROTARY HOLE RH-203

DATE:	Nov. 2 - 6, 1980
LOCATION:	Flats (Lot 172)
RIG TYPE:	Single Wall
EASTING:	657844.19
NORTHING:	5551705.42
ELEV. (M):	607.37
TOTAL DEPTH (M):	234
ANGLE:	Vertical
AZIMUTH:	—
REMARKS:	Volcanics at 223.4 m, Full Log Suite to TD Quat. to 44.4m

COAL INTERSECTIONS

THICKNESS (M)	DEPTH (M)
1.5	64.2 - 65.7
4.4	108.3 - 112.7
1.8	115.0 - 116.8
2.4	151.7 - 154.1
2.2	156.8 - 159.0
0.8	189.2 - 190.0
5.4	191.8 - 197.4
0.6	201.0 - 201.6
0.6	203.0 - 203.6
2.2	206.4 - 208.6
0.7	220.2 - 220.9

CORE INTERVAL (M): 161-163

ROTARY HOLE RM-204

DATE:	Nov. 19 - 25, 1980
LOCATION:	Flats (Lot 172)
RIG TYPE:	Single Wall
EASTING:	657880.90
NORTHING:	5551549.01
ELEV. (M):	612.67
TOTAL DEPTH (M):	198
ANGLE:	Vertical
AZIMUTH:	—
REMARKS:	Volcs. at 191.8m Full Log Suite to TD Quat. to 36.0m

COAL INTERSECTIONS

THICKNESS (M)	DEPTH (M)
1.2	64.8 - 66.0
1.5	66.4 - 67.9
3.0	107.4 - 110.4
1.2	112.4 - 113.6
3.6	132.0 - 135.6
1.0	160.0 - 161.0
1.4	174.6 - 176.0

CORE INTERVAL (M): 121.75 - 123

ROTARY HOLE RM-205

DATE:	Nov. 6 - 12, 1980
LOCATION:	E Coldwater Hill (Lot 166)
RIG TYPE:	Single Wall
EASTING:	657917.87
NORTHING:	5550876.50
ELEV. (M):	666.01
TOTAL DEPTH (M):	239
ANGLE:	Vertical
AZIMUTH:	--
REMARKS:	Full Log Suite to TD Quat. to 24.6m

COAL INTERSECTIONS

THICKNESS (M)	DEPTH (M)
0.5	45.6 - 46.1
1.6	110.6 - 112.2
5.3	149.9 - 155.2
1.8	156.6 - 158.4
0.8	220.4 - 221.2

CORE INTERVAL (M): 90.6 - 92.6, 237 - 239

ROTARY HOLE RM-20C

DATE:	Nov. 12 - 17, 1980
LOCATION:	Dump (Lot 172)
RIG TYPE:	Single Wall
EASTING:	657858.02
NORTHING:	5551186.71
ELEV. (M):	649.76
TOTAL DEPTH (M):	188
ANGLE:	Vertical
AZIMUTH:	--
REMARKS:	Quat. to 63.8m Volcanics at 176.2 m. Full log suite to TD

COAL INTERSECTIONS

THICKNESS (M)	DEPTH (M)
1.2	65.2 - 66.4
0.7	67.3 - 68.0
4.0	126.2 - 130.2
2.0	132.0 - 134.0

CORE INTERVAL (M): 146-148

ROTARY HOLE RM-101

DATE:	June 27-29, 1979
LOCATION:	NW Coal Gully Hill
RIG TYPE:	Single Wall
ELEVATION:	727.34
NORTHING:	5551413.3
EASTING:	657064.6
TOTAL DEPTH:	210 meters
ANGLE:	vertical
AZIMUTH:	-
COMMENTS:	Volcanics at 95 meters

COAL INTERSECTIONS

THICKNESS METERS	DEPTH METERS	
.90	7.90 - 8.80	Shaly
.75	10.30 - 11.05	
1.40	11.90 - 13.30	
.35	48.20 - 48.55	Old workings
4.00	48.80 - 52.80	
7.40		

ROTARY HOLE RM-102

DATE:	June 29-31, 1979
LOCATION:	NE Coal Gully Hill
RIG TYPE:	Single Wall
ELEVATION:	740.18
NORTHING:	5551274.8
EASTING:	657159.8
TOTAL DEPTH:	196 meters
ANGLE:	Vertical
AZIMUTH:	-
COMMENTS:	Volcanics at 188 meters

COAL INTERSECTIONS

THICKNESS METERS	DEPTH METERS	
6.80	130.80 - 137.60	No density log (from gamma & rotary samples)
1.50	138.20 - 139.70	
8.30		

ROTARY HOLE RM-103

DATE:	July 1-4, 1979
LOCATION:	East Coal Gully Hill
RIG TYPE:	Single Wall
ELEVATION:	757.72
NORTHING:	5551031.3
EASTING:	657349.4
TOTAL DEPTH:	198.6
ANGLE:	Vertical
AZIMUTH:	-
COMMENTS:	Full log suite to TD

COAL INTERSECTIONS

THICKNESS METERS	DEPTH METERS	
4.15	85.80 - 89.95	Picks from open hole CCS
2.00	170.80 - 172.80	
6.15		

ROTARY HOLE RM-104

DATE:	July 4-5, 1979
LOCATION:	South Coal Gully Hill
RIG TYPE:	Double wall
ELEVATION:	767.70
NORTHING:	5550662.8
EASTING:	657236.7
TOTAL DEPTH:	128.5 meters
ANGLE:	Vertical
AZIMUTH:	-
COMMENTS:	Full log suite to TD

COAL INTERSECTIONS

THICKNESS METERS	DEPTH METERS	
3.60	60.50 - 64.10	Picks from open hole CCS

ROTARY HOLE RM-105

DATE:	
LOCATION:	SE Coal Gully Hill
RIG TYPE:	Double wall
ELEVATION:	703.85
NORTHING:	5550643.9
EASTING:	667543.1
TOTAL DEPTH:	53.0 meters
ANGLE:	35°
AZIMUTH:	N 75°E
COMMENTS:	Abandoned due to caving Full log suite to 53 meters

COAL INTERSECTIONS

THICKNESS METERS	DEPTH METERS	
.80	39.00 - 39.80	
1.10	40.30 - 41.50	
1.50	43.30 - 44.80	Picks from gamma and
1.20	46.20 - 47.40	rotary samples

ROTARY HOLE RM-106

DATE:	July 8-11, 1979
LOCATION:	SE Coal Gully Hill
RIG TYPE:	Double wall
ELEVATION:	693.35
NORTHING:	5550673.9
EASTING:	657598.1
TOTAL DEPTH:	243.5 meters
ANGLE:	35°
AZIMUTH:	N 65°E
COMMENTS:	Open hole logs to 224 meters

COAL INTERSECTIONS

THICKNESS METERS	DEPTH METERS	
1.60	17.60 - 19.20	
.80	100.80 - 101.60	
1.20	106.20 - 107.40	From open hole CCS
2.25	114.80 - 117.05	
.85	134.10 - 134.95	
6.90	223.80 - 230.70	

ROTARY HOLE RM-107

DATE:	July 12-14, 1979
LOCATION:	South Coldwater Hill
RIG TYPE:	Double wall
ELEVATION:	668.77
NORTHING:	5550860.8
EASTING:	658614.3
TOTAL DEPTH:	188.5 meters
ANGLE:	Vertical
AZIMUTH:	-
COMMENTS:	Abandoned due to circulation problems Open hole logs to 158 meters

COAL INTERSECTIONS

THICKNESS METERS	DEPTH METERS	
.50	35.70 - 36.20	
.80	46.80 - 47.60	From open hole CCS
1.20	65.60 - 66.80	
.70	84.80 - 85.50	
1.20	129.40 - 130.60	

ROTARY HOLE RM-108

DATE:	July 15-20, 1979
LOCATION:	North Coldwater Flat (Boulanger Property)
RIG TYPE:	Double wall
ELEVATION:	618.25
NORTHING:	5551457.1
EASTING:	657962.5
TOTAL DEPTH:	85.4 meters
ANGLE:	Vertical
AZIMUTH:	-
COMMENTS:	Logged through pipe only Overburden to 43.0 meters Abandoned at 86.4 due to caving

COAL INTERSECTIONS

THICKNESS METERS	DEPTH METERS	
5.50	68.50 - 74.00	Gamma-density through pipe

ROTARY HOLE RM-109

DATE:	July 17-23, 1979
LOCATION:	Central Coldwater Hill
RIG TYPE:	Single wall
ELEVATION:	689.43
NORTHING:	5551005.2
EASTING:	658506.7
TOTAL DEPTH:	401.80 meters
ANGLE:	Vertical
AZIMUTH:	-
COMMENTS:	Overburden to 12.6 meters Open hole log to 341 meters

COAL INTERSECTIONS

THICKNESS METERS	DEPTH METERS	
.80	24.80 - 25.60	
1.00	37.20 - 38.20	
.60	63.40 - 64.00	
.80	76.80 - 77.60	
1.20	93.90 - 95.10	
.50	112.60 - 113.10	Picks from open
2.10	171.00 - 172.10	
1.50	196.60 - 198.10	hole CCS
2.60	222.20 - 224.80	
1.40	243.00 - 244.40	
1.70	251.10 - 252.80	
.20	274.90 - 275.10	
.90	275.50 - 276.40	
1.20	279.00 - 280.20	
2.60	281.00 - 283.60	
2.70	311.00 - 313.70	

ROTARY HOLE RM-110

DATE:	July 19-21, 1979
LOCATION:	North Coal Gully Flat
RIG TYPE:	Double wall
ELEVATION:	608.57
NORTHING:	5551855.8
EASTING:	657526.2
TOTAL DEPTH:	115.7 meters
ANGLE:	Vertical
AZIMUTH:	-
COMMENTS:	Overburden to 48.20 meters Volcanics at 102.80 meters Logged through pipe only

COAL INTERSECTIONS

THICKNESS METERS	DEPTH METERS
4.40	82.00 - 86.40

ROTARY HOLE RM-111

DATE:	July 23-25, 1979
LOCATION:	North Coldwater Flat (Boulanger Property)
RIG TYPE:	Single wall
ELEVATION:	617.66
NORTHING:	5551450.2
EASTING:	657808.1
TOTAL DEPTH:	152.4
ANGLE:	Vertical
AZIMUTH:	-
COMMENTS:	Coal picks from BRD & CCS Volcanics at 139.5 meters Full log suite to TD

COAL INTERSECTIONS

THICKNESS METERS	DEPTH METERS	
.20	36.40 - 36.80	
.30	37.60 - 37.90	
.50	38.10 - 38.60	Picks from BRD
.60	39.10 - 39.70	and CCS
.30	78.10 - 78.40	
.40	78.80 - 79.40	
.30	80.30 - 80.60	
1.50	81.10 - 82.70	Shale split
.60	83.00 - 83.60	
.60	84.00 - 84.60	
.20	84.80 - 85.00	
1.10	85.30 - 86.40	
1.30	86.70 - 88.40	Shale splits at base
.50	88.90 - 89.50	Shale split
1.20	90.30 - 92.20	Shale splits
.80	92.40 - 93.20	
1.80	93.40 - 95.20	

ROTARY HOLE RM-112

DATE:	July 21-22, 1979
LOCATION:	West Diamondvale (Garthwaite Property)
RIG TYPE:	Double wall
ELEVATION:	628.38
NORTHING:	5552514.2
EASTING:	660468.8
TOTAL DEPTH:	237.0 meters
ANGLE:	Vertical
AZIMUTH:	-
COMMENTS:	Open hole logs to 108 meters Overburden to 43.20 meters

COAL INTERSECTIONS

THICKNESS METERS	DEPTH METERS
1.40	75.90 - 77.30
.70	79.10 - 79.80
1.40	108.10 - 109.50
2.00	138.60 - 140.60
1.20	172.00 - 173.20
1.80	189.60 - 191.40
1.70	213.90 - 215.60

ROTARY HOLE RM-113

DATE:	July 24-25, 1979
LOCATION:	East Diamondvale (Garthwaite Property)
RIG TYPE:	Double wall
ELEVATION:	663.31
NORTHING:	5552996.5
EASTING:	662123.5
TOTAL DEPTH:	92.3 meters
ANGLE:	Vertical
AZIMUTH:	-
COMMENTS:	Overburden to TD Abandoned due to caving Gamma-density log through pipe

COAL INTERSECTIONS

THICKNESS METERS	DEPTH METERS
N O C O A L	

ROTARY HOLE RM-114

DATE:	July 25-28, 1979
LOCATION:	East Diamondvale (Chutter Property)
RIG TYPE:	Single wall
ELEVATION:	706.41
NORTHING:	5553077.0
EASTING:	662610.9
TOTAL DEPTH:	243 meters
ANGLE:	Vertical
AZIMUTH:	-
COMMENTS:	Abandoned hole at 243 meters due to caving 177 meters of pipe lost in hole Gamma through pipe only log run

COAL INTERSECTIONS

THICKNESS METERS	DEPTH METERS

SECTION # CG-1

THICK.			ATTITUDES
3.4	SS	massive, gray to light brown, with some iron staining, most resistive near top but crumbles easily throughout. Appears to be coarse to fine grain with few conglomerate lenses, carbonaceous wisps near base. Three steep dipping joints evident.	28°SE dip
0.20	SS	massive, light brown, resistive, fine to medium grained	
0.50	SS	very fine grain, grading to siltstone grading to shale at bottom gray	
0.30	SS	fine grain, light brown	
3.10	Shale	silty, gray, with few thin very fine grain sandstone beds	
7.90	SS	very fine grain to fine grain, light brown to gray, few iron stained lenses of crystaline calcite about 3 cm thick, thinly bedded and badly weathered, iron staining on fractures numerous minor calcite filled faults	N50°E Vertical faulted
0.25	SS	fine grain, gray, weathers light brown	
0.45	SS	fine to medium grained, not as resistant as above	

-

SECTION # CG-2

THICK.			ATTITUDES
0.6		overburden (shale weathered, light gray, carbonaceous in places)	
0.1	Coal	hard and bright	24°E dip
0.1	Shale	medium gray	
0.8	Coal	iron staining, shaly in places	
0.5	Shale	light gray, fine sandstone near bottom	
0.85	Coal	sheared	
0.35	Shale	medium gray, sheared, carbonaceous in places	
0.3	Coal	sheared	
0.1	Shale	medium gray, sheared carbonaceous in places	
0.6	Coal	sheared	
0.1	Shale	medium gray; carbonaceous in places	
2.0	Coal	sheared	
0.7	Coal	with shale interbeds	
1.1	Shale	grading to siltstone at bottom	
2.2	Coal	shaly in places, three thin shale bands (< .05 meter)	
	Shale	light gray	8°E dip

SECTION # CG-3

THICK.			ATTITUDES
0.3	Shale	light gray, slightly silty	
0.2	SLST	red-brown	10°S dip
0.50	SLST	to very fine grain sandstone, light gray, light brown streaks and carbonaceous streaks near bottom	
1.90	Shale	medium-dark gray, carbonaceous in places, few very thin red streaks, silty near middle	
1.70	Coal	dull, medium-hard, some iron staining, several minute inclusions of amber, two thin $\leq$ .06 m bands of siltstone, gray	Varying strike N45°E to North
	Shale	black carbonaceous and coaly	

SECTION # CG-4

THICK.			ATTITUDES
3.3	SS	very fine grain, light brown, light gray interbed with siltstone, lenses of conglomerate, some iron staining	25°S dip
1.1	Shale	medium gray to carbonaceous, fissile, much coal, plant debris	
0.1	SLST	to very fine grain sandstone, buff white	
0.2	Shale	carbonaceous, coaly, some iron	
1.8	Coal	dull, disturbed, iron yellow stain, few thin shaly parts .05 m < resin inclusions, shaly near top and base	
0.2	Shale	coaly	
	Shale	slightly silty, few thin coal wisps, light brown to light gray, some iron staining	

SECTION CG-5

THICK.			ATTITUDES
0.20	SLST	light gray-greenish with numerous carbonaceous debris	
0.25	Coal	hard, shaly throughout, bright bands	10°NE dip
0.05	Shale	silty, light gray, some iron lensing out, slicked in part	
0.10	Coal	hard, shaly throughout, bright bands	
0.15	Shale	medium, gray to carbonaceous, some iron staining	
0.25	Coal	hard, shaly throughout, bright bands, some white stain	
0.30	Shale	medium, gray to carbonaceous, some iron staining	
	SLST	light gray, carbonaceous in places	

SECTION # CG-6

THICK.			ATTITUDES
1.10	Shale	silty	
0.20		Fault Gouge in coal and shale	56°S dip
0.30	Shale	coaly, dark gray	faulted
0.45	Coal		
0.35	Shale/Coal		
0.20	Coal	highly weathered	
0.40	Shale	dark brown, sheared, coal wisps, highly weathered	

SECTION # CG-7

THICK.			ATTITUDES
3.0	SS	coarse, coaly wisps at base	
1.20	SLST	medium gray, sandy in places, coarsening upwards	
0.50	Shale	coaly at base, dark gray	
1.60	Coal	some shaly splits, badly sheared	faulted
0.20	Shale	silty, medium brown	
0.10	Shale	coaly	
0.20	Coal	shaly, highly weathered	
0.40	Shale	medium brown, iron stains, with coal splits $\leq$ .04 m	
2.70	SS	fine to medium, sub-crop with interbedded shale fining upwards	
0.70	Cong-SS		72°NE dip
7.00	Cong	thin beds of large pebbles ($\leq$ 3 cm)	

SECTION # CG-8

THICK.			ATTITUDES
0.14	Shale	slight carbonaceous, sheared	
0.18	Coal	shaly	vertical
0.05	Shale	slightly silty, medium brown, carbonaceous streaks, plant debris	
1.09	Coal	shaly, with some thin coal shale partings (< .02 m)	
0.09	Shale	badly weathered, trace of plant debris, light brown	
0.05	Coal	shaly	
0.03	Shale	slightly silty, carbonaceous streaks and plant debris, medium brown, iron stain	
0.05	Coal	Shaly, badly weathered	
0.68	Shale	medium brown to medium gray, badly weathered and carbonaceous in places	

SECTION # CG-9

THICK.			ATTITUDES
6.0	Cong-SS		70°NE dip
1.6	Coal	entry	
	Shale	floor	

SECTION # CG-10

1.0	Shale		
0.5	Coal		65°SW dip
7.0	Shale		
1.6	Coal		
1.0	Shale	floor	

SECTION # CG-11

1.0	Shale		near vertical
0.15	Coal		
1.5	Shale		overturned
2.1	Coal		
0.1	Shale		
1.0	SS	coarse	

SECTION # CG-12

	Shale	roof	65°SW dip
1.7	Coal		
	Shale	floor	

SECTION # CG-13

THICK.			ATTITUDES
0.15	Shale	roof	
0.30	Coal		83°SW dip
1.6	Coal		
2.0	Shale		
1.0	Coal		
	Shale	floor	

SECTION # CG-14

	Shale	roof	65°SW dip
1.8	Coal		
	Shale	floor	

SECTION # CG-15

4.0	Shale		
2.1	Coal	entry	60°SW dip
0.15	Shale		
0.1	Coal		
1.0	Shale		

SECTION # CG-16

THICK.			ATTITUDES
2.00	SLST	medium gray	
1.00	SS	fine	63°SW dip
2.40	Shale	dark gray	
2.10	Coal	(entry)	
1.60	Shale	coal interbeds	
0.60	Shale	coaly with coal interbeds	
0.94	Shale	soft, medium brown, with coaly interbeds	
0.16	Coal	highly weathered	
0.20	Shale	with siltstone	
0.50	SS	medium to coarse	
0.70	Cong-SS		
0.30	Shale	medium gray	
1.10	SS	coarse, carbonaceous wisps	
0.60		covered, soft rock, probably shale	
1.00	Cong-SS		

SECTION # CG-17

THICK.			ATTITUDES
0.9	Cong-SS	numerous slicked surfaces along bedding	
0.3	SS	medium brown, plant debris	near vertical
0.2	Shale	silty, carbonaceous with coaly wisps	
0.6	SS	very fine grain, black to light gray	
0.05	Coal	slightly shaly, prominent fault surface along bedding	faulted
0.90	Coal	highly sheared, shale splits (10%)	
2.55	Shale	plant debris, deformed, medium gray	
3.0	SS	fine, blocky with some silty interbeds	

SECTION # CG-18

THICK.		ATTITUDES
	Overburden	
0.2	Shale	28°E dip
2.1	Coal	
	Covered below	

SECTION # CG-19

THICK.			ATTITUDES
1.3	Shale	with coal interbeds	
1.5	Shale	gray, soft	62°NW dip
0.50	Coal		
0.10	Shale	silty	
1.6	Coal		
1.3	Shale	silty with sandy beds, numerous coal stringers, highly weathered	
0.20	SS	medium grain	

SECTION # CG-20

THCIK.			ATTITUDES
0.30	Shale	brown with coal stringers	42°NE dip
1.80	Coal		
1.90	Shale	brown, with sandstone split near base	

SECTION # CG-21

THICK.			ATTITUDES
0.25	Coal	highly weathered	
0.35	Coal	shaly, highly weathered	N35°W 72°E
0.44	Coal	shaly, highly weathered	
0.30	Coal		
2.22	Shale	light gray	
0.30	Coal		
0.13	Shale	light brown	
0.61	Coal		

SECTION # CW-1

THICK.			ATTITUDES
3.00	Cong-SS		
1.00	SS	fine	
2.50		Covered	
2.75	Cong-SS		
0.20	SS	fine	
0.20	Coal		
0.05	Shale		
0.70	Cong-SS		
0.70	SLST	and Shale	
1.70	Cong-SS		
0.40	SS	fine	
1.00	Cong-SS		
1.40	SS	and Siltstone	
1.00	SS	fine	
3.00	SS	medium with coaly laminae, fining upwards	32° East Dip
0.80	SS	fine, blocky grading coarser upwards	
0.25	SLST	very fine sandstone, sharp contact	
0.65	Coal		N05°E 24°E
1.80	SS	blocky, small fault glacial	
1.40	Shale	black, fissile, getting silty upwards	
0.30		Covered	
0.70	Cong-SS		

SECTION # CW-2

THICK.			ATTITUDES
	Cong-SS		
1.40	Coal	shaly with thin shale partings	22°NE dip
	Shale	carbonaceous and coaly	

CW-3

0.12	Shale	carbonaceous and coaly	
1.11	Coal	shaly in places, bright, few thin shaly partings	31°NE dip
	Shale	carbonaceous and coaly	

CW-4

0.9	Coal	shaly, sheared in large sheets	20°NE dip
1.1	Shale	slightly silty, carbonaceous, coaly in places near top, finer near base	

SECTION # CW-5

THICK.			ATTITUDES
0.4	SS	fine to medium, light gray, coaly wisps	20°NE dip
1.76	Coal	shaly with few thin shale partings, iron stain	
1.20	Shale	carbonaceous and coaly	
0.60	SS	fine to coarse, light gray, coaly wisps	

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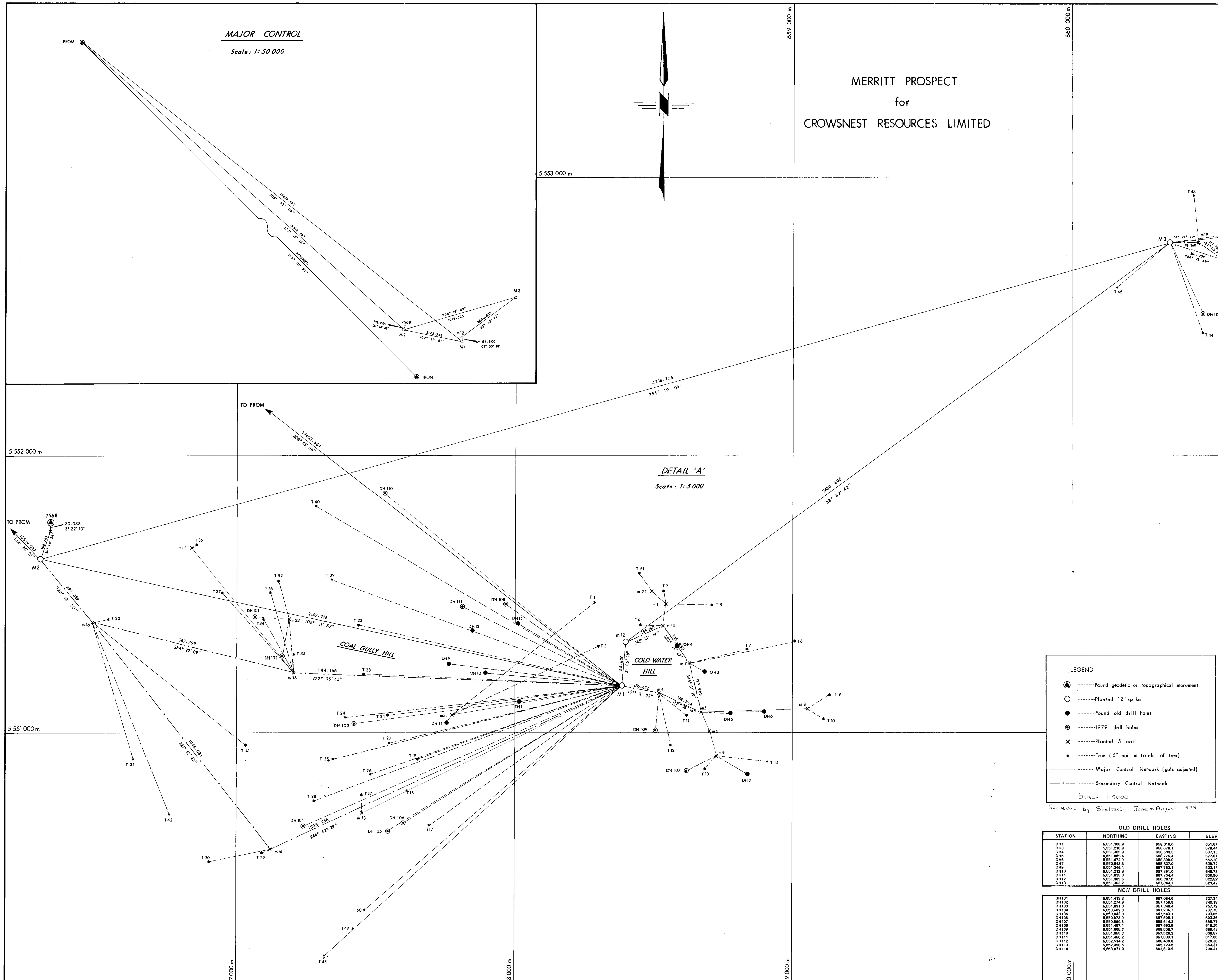


TABLE OF COORDINATES

N.B. All Distances & Coordinates shown are U.T.M. & referred to 123°W

	STATION	NORTHING	EASTING	ELEVATION
GALS (FIXED)	IRON	5,546,250.731	660,666.382	1,692.859
	PROM	5,562,093.820	644,836.039	1,732.681
	POST 7568	5,551,752.821	656,328.018	818.912
GALS (FREE)	M1	5,551,168.484	658,383.165	700.57
	M2	5,551,621.270	656,288.803	831.44
	M3	5,552,761.495	660,350.528	637.52
	m12	5,551,323.059	658,391.505	695.20
	m18	5,551,722.835	656,326.253	823.17
	m4	5,551,141.981	658,517.039	702.44
	m5	5,551,074.352	658,672.794	693.53
	m6	5,551,004.796	658,700.410	683.40
	m7	5,551,248.605	658,627.800	687.94
	m8	5,551,084.163	659,052.022	648.05
	m9	5,550,916.339	658,724.991	661.96
	m10	5,551,385.335	658,533.757	686.52
	m11	5,551,464.396	658,544.092	663.43
	m13	5,550,706.740	657,447.870	723.51
	m14	5,550,576.056	657,119.917	776.36
	m15	5,551,211.790	657,199.791	752.86
	m16	5,551,397.400	656,475.406	823.68
	m17	5,551,660.732	656.830.946	746.62
	m19	5,552,764.133	660,448.861	631.25
	m20	5,552,704.753	660,543.544	628.64
	m21	5,551,061.228	657,773.831	654.46
	m22	5,551,507.491	658,491.142	667.05
	m23	5,551,416.749	657,186.777	722.61

TREES

STATION	NORTHING	EASTING	ELEVATION
T1	5,551,466.9	658,284.6	649.0
T2	5,551,508.2	658,536.3	648.9
T3	5,551,310.5	658,298.7	677.6
T4	5,551,386.7	658,451.0	681.0
T5	5,551,460.1	658,705.4	632.3
T6	5,551,326.0	659,006.4	626.8
T7	5,551,207.4	658,830.1	649.4
T9	5,551,133.8	659.131.5	623.3
T10	5,551,048.5	659,109.3	627.0
T11	5,551,063.2	658.618.1	697.0
T12	5,550,956.2	658.558.7	683.7
T13	5,550,867.0	658,686.9	654.9
T14	5,550,896.3	658,908.2	639.5
T15			
T16			
T17	5,550,660.8	657,694.7	683.5
T18	5,550,787.8	657,610.0	697.8
T19	5,550,902.2	657,649.0	687.8
T20	5,550,960.1	657,546.0	710.1
T21	5,551,060.0	657,540.5	699.8
T22	5,551,384.1	657,434.0	677.2
T23	5,551,206.1	657,452.6	709.3
T24	5,551,053.9	657,386.4	749.8
T25	5,550,901.7	657,344.1	764.0
T26	5,550,845.8	657,479.4	734.2
T27	5,550,773.1	657,446.1	721.9
T28	5,550,750.4	657,275.6	767.3
T29	5,550,564.7	657,089.2	777.5
T30	5,550,532.6	656,701.1	788.1
T31	5,550,904.7	656,626.4	809.4
T32	5,551,407.8	656,533.1	803.7
T33			
T34	5,551,406.3	657,089.8	722.6
T35	5,551,278.5	657,200.5	739.1
T36	5,551,669.7	656,851.1	743.3
T37	5,551,601.4	656,944.4	742.3
T38	5,551,503.5	657,116.3	711.3
T39	5,551,548.7	657,337.7	667.3
T40	5,551,813.7	657,277.7	625.0
T41	5,550,955.0	657,024.6	772.0
T42	5,550,704.7	656,765.2	813.7
T43	5,552,934.4	660,432.1	606.0
T44	5,552,438.0	660,470.4	628.4
T45	5,552,604.5	660,158.9	614.3
T46	5,552.626.6	660,708.7	614.1
T47			
T48	5,550,195.8	657,316.4	705.5
T49	5,550,292.0	657,419.2	703.4
T50	5,550,362.4	657,460.1	705.3
T51	5,551,572.2	658,445.8	635.1
T52	5,551,640.0	657,148.9	689.0

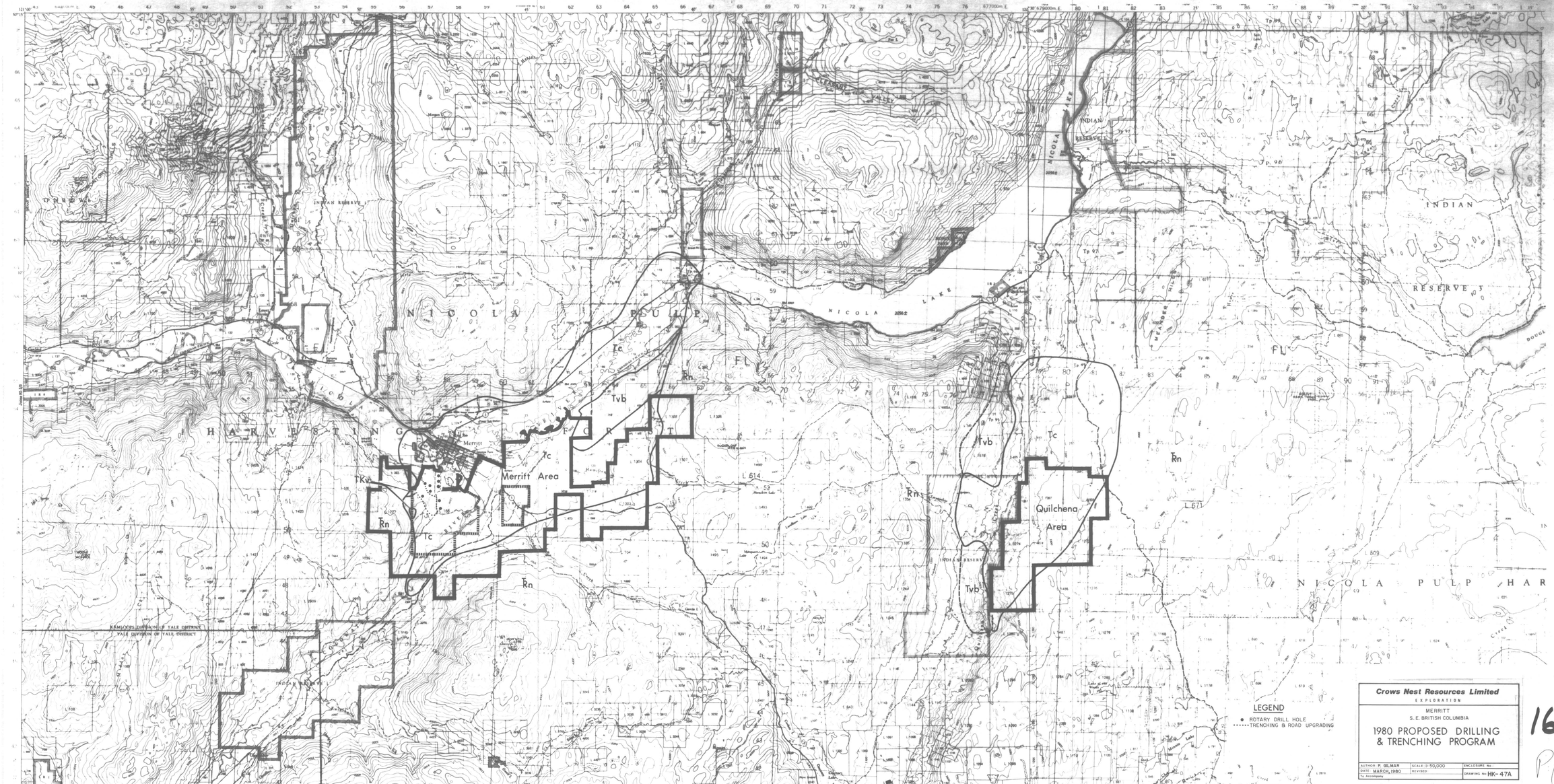
OLD DRILL HOLES

STATION	NORTHING	EASTING	ELEVATION
DH1	5,551,188.9	658,016.0	651.67
DH3	5,551,218.9	658,678.1	679.44
DH4	5,551,305.9	658,583.5	687,13
DH5	5,551,069.4	658,775.4	677.81
DH6	5,551,074.9	658,898.0	662.20
DH7	5,550,848.3	658,837.0	638.72
DH9	5,551,246.4	657,762.1	633.14
DH10	5,551,212.8	657,891.0	646.73
DH11	5,551,035.3	657,754.4	650.80
DH12	5,551,389.6	658,007.0	622.52
DH13	5,551,363.2	657,844.7	621.42

NEW DRILL HOLES

STATION	NORTHING	EASTING	ELEVATION
DH101	5,551,413.3	657,064.6	727.34
DH102	5,551,274.8	657,159.8	740.18
DH103	5,551,031.3	657,349.4	757.72
DH104	5,550,662.8	657,236.7	767.70
DH105	5,550,843.9	657,543.1	703.85
DH106	5,550,673.9	657,598.1	693.35
DH107	5,550,860.8	658,614.3	668.77
DH108	5,551,457.1	657,982.5	618.25
DH109	5,551,006.2	658,506.7	689.43
DH110	5,551,855.8	657,526.2	608.57
DH111	5,551,460.2	657,808.1	617.66
DH112	5,552,514.2	660,468.8	628.38
DH113	5,552,996.5	662,123.5	663.31
DH114	5,553,077.0	662,610.9	706.41

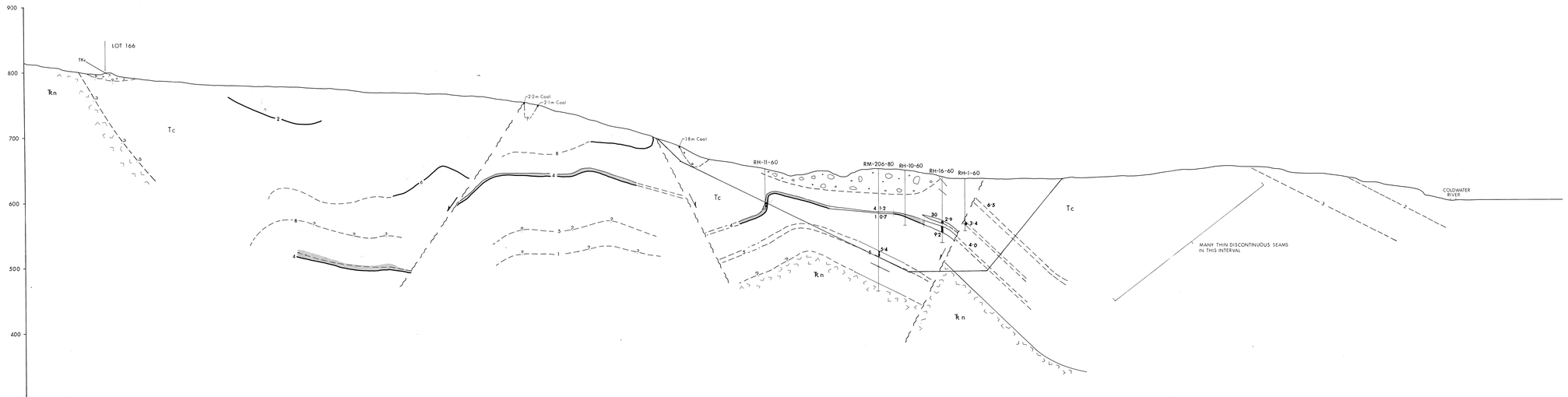
162 HB-49
Encl H


Merritt Area
Quilchena Area
Tc
Tvb
Rn
TKv
LEGEND
ROTARY DRILL HOLE
TRENCHING & ROAD UPGRADING
Crows Nest Resources Limited
EXPLORATION
MERRITT
S.E. BRITISH COLUMBIA
1980 PROPOSED DRILLING & TRENCHING PROGRAM
AUTHOR P. GILMAR
SCALE 1:50,000
DATE MARCH, 1980
REVISED
ENCLOSURE No.
To Accompany
DRAWING No. HK-47A

162

P/C

ELEV.(m)
LOT 166
Tc
TKv
COAL GULLY
RM-110-79
RM-201A-80
COLDWATER RIVER
FROM SEISMIC INFORMATION
Q
Ʀn
SCALE 1:2000
LEGEND
QUATERNARY Q Pleistocene - Stream alluvium, glacial drift
Tvb Valley Basalt - mainly vesicular basalt
KAMLOOPS GROUP
TERTIARY
TKv Kamloops Volcanics - Rhyolite, andesite, basalt
Tc Coldwater Formation - Conglomerate, sandstone shale and COAL
TRIASSIC Ʀn Nicola Group - Greenstone, andesite, basalt
Geological contact - defined, approx., inferred
Normal fault - approx. inferred
Bedding -
M-Merritt 80(2)A
Crows Nest Resources Limited
EXPLORATION
MERRITT
CROSS SECTION
000 162
AUTHOR: K. SHARMAN
SCALE: 1:2000
ENCLOSURE No: 5
DATE: 81 05·11
REVISED:
DRAWING No: HJ-77-B
To Accompany



900
800
700
600
500
400
300

LEGEND

- QUATERNARY — Q — Pleistocene - Stream alluvium, glacial drift
- TERTIARY — Tvb — Valley Basalt - mainly vesicular basalt
- KAMLOOPS GROUP
- TKv — Kamloops Volcanics - Rhyolite, andesite, basalt
- Tc — Coldwater Formation - Conglomerate, sandstone shale and COAL
- TRIASSIC — Rn — Nicola Group - Greenstone, andesite, basalt
- ——?—? Geological contact - defined, approx., inferred
- Normal fault - approx. inferred
- Bedding

SCALE 1:2000

0 50 100 150 200m

H-Result 80(2)P

Crows Nest Resources Limited

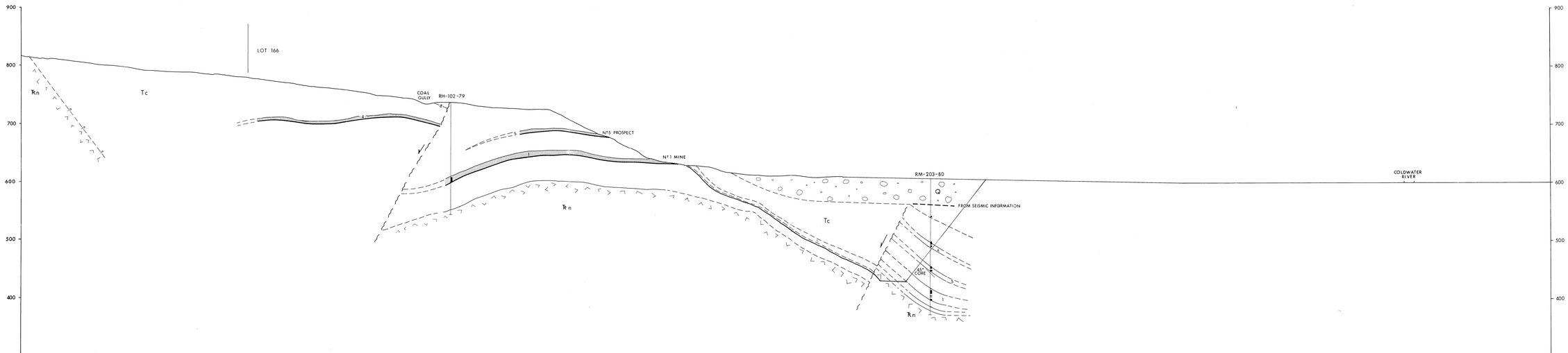
EXPLORATION

MERRITT

CROSS SECTION 750

162

AUTHOR: K. SHARMAN	SCALE: 1:2000	ENCLOSURE No. 5
DATE: 81-05-11	REVISED:	DRAWING No. HJ-77G
To Accompany		



LEGEND

QUATERNARY	Q	Pleistocene - Stream alluvium, glacial drift
TERTIARY	Tvb	Valley Basalt - mainly vesicular basalt
		KAMLOOPS GROUP
	TKv	Kamloops Volcanics - Rhyolite, andesite, basalt
	Tc	Coldwater Formation - Conglomerate, sandstone shale and COAL
TRIASSIC	Rn	Nicola Group - Greenstone, andesite, basalt

—?—? Geological contact - defined, approx., inferred

Normal fault - approx. inferred

Bedding

SCALE 1:2000

0 50 100 150 200m

H-Merritt 82F/2E

Crows Nest Resources Limited

EXPLORATION

MERRITT

CROSS SECTION

300

162

AUTHOR K. SHARMAN	SCALE 1:2000	ENCLOSURE No.
DATE 81-05-15	REVISED	DRAWING No. HJ-77D
To Accompany		

LEGEND

QUATERNARY		Q	Pleistocene - Stream alluvium, glacial drift
TERTIARY		Tvb	Valley Basalt - mainly vesicular basalt
			KAMLOOPS GROUP
		TKv	Kamloops Volcanics - Rhyolite, andesite, basalt
		Tc	Coldwater Formation - Conglomerate, sandstone shale and COAL
TRIASSIC		R̄n	Nicola Group - Greenstone; andesite, basalt

—— - - - - —?—? Geological contact - defined, approx., inferred

Normal fault - approx. inferred

Bedding -

SCALE 1:2000

0 50 100 150 200m

M-Merritt 80(2)A

Crows Nest Resources Limited

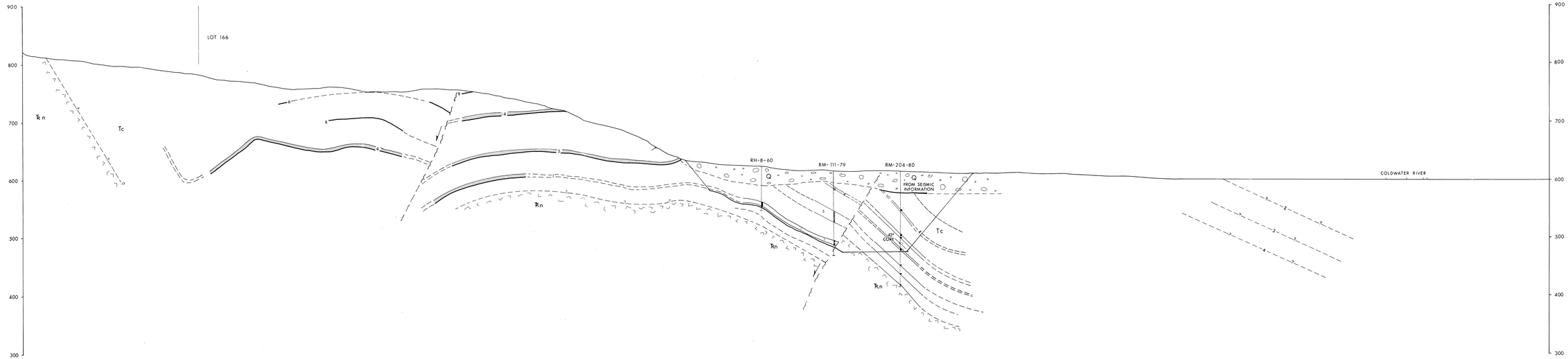
EXPLORATION

MERRITT

CROSS SECTION 600

162

AUTHOR: K. SHARMAN	SCALE: 1:2000	ENCLOSURE No: 5
DATE: 81·05·11	REVISED:	DRAWING No: HJ-77F
To Accompany		



LEGEND

QUATERNARY	Q	Pleistocene - Stream alluvium, glacial drift
	Tvb	Valley Basalt - mainly vesicular basalt
		KAMLOOPS GROUP
TERTIARY	Tkv	Kamloops Volcanics - Rhyolite, andesite, basalt
	Tc	Coldwater Formation - Conglomerate, sandstone shale and COAL
TRIASSIC	Rn	Nicola Group - Greenstone, andesite, basalt

—?— Geological contact - defined, approx., inferred

Normal fault - approx. inferred

Bedding

SCALE 1:2000

0 50 100 150 200m

M-Merritt 82(2)A

Crows Nest Resources Limited

EXPLORATION

MERRITT

CROSS SECTION 450

162

AUTHOR: K. SHARMAN	SCALE: 1:2000	ENCLOSURE No. 5
DATE: 81-05-11	REVISED:	DRAWING No. HJ-77E
To Accompany		

SCALE 1:2000

0 50 100 150 200m

LEGEND

QUATERNARY	Q	Pleistocene - Stream alluvium, glacial drift	
TERTIARY	Tvb	Valley Basalt - mainly vesicular basalt	
		KAMLOOPS GROUP	
	TKv	Kamloops Volcanics - Rhyolite, andesite, basalt	
	Tc	Coldwater Formation - Conglomerate, sandstone shale and COAL	
TRIASSIC	Ŧn	Nicola Group - Greenstone, andesite, basalt	

——— - - - - —?—? Geological contact - defined, approx., inferred

Normal fault - approx. inferred

Bedding -

M-Merritt 80(2)A

Crows Nest Resources Limited

EXPLORATION

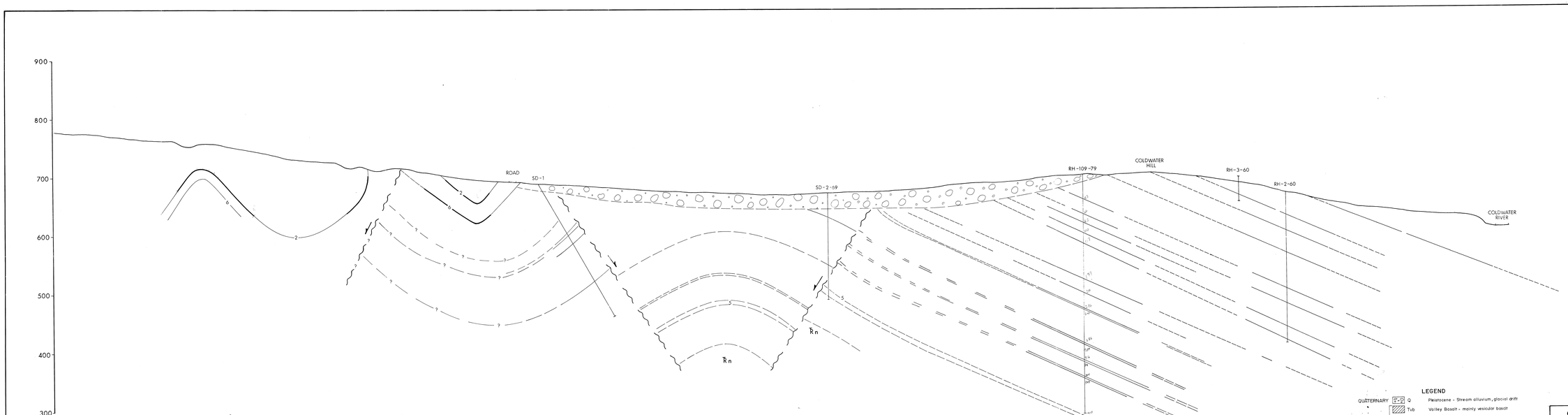
MERRITT

CROSS SECTION

150

162

AUTHOR: K. SHARMAN	SCALE: 1:2000	ENCLOSURE No: 13
DATE: 81·05·11	REVISED:	DRAWING No: HJ-77C
To Accompany		



Crows Nest Resources Limited

EXPLORATION

MERRITT

CROSS SECTION 1200

162

AUTHOR K. SHARMAN	SCALE 1:2000	ENCLOSURE No.
DATE: 81.08.07	REVISED	DRAWING No. HJ77M
To Accompany		

SCALE 1:2000

0 50 100 150 200 m

LEGEND

QUATERNARY		Q	Pleistocene - Stream alluvium, glacial drift
TERTIARY		Tvb	Valley Basalt - mainly vesicular basalt
			KAMLOOPS GROUP
		TKv	Kamloops Volcanics - Rhyolite, andesite, basalt
		Tc	Coldwater Formation - Conglomerate, sandstone shale and COAL
TRIASSIC		Ɍn	Nicola Group - Greenstone; andesite, basalt

—— – – – – —?—? Geological contact - defined, approx., inferred

Normal fault - approx. inferred

Bedding -

162 M-Merritt 80(2)A

Crows Nest Resources Limited

EXPLORATION

MERRITT

CROSS SECTION 1050

AUTHOR: K. SHARMAN	SCALE: 1:2000	ENCLOSURE No: 5
DATE: 81·05·11	REVISED:	DRAWING No: HJ-77-1
To Accompany		

162 M-Merritt 82(2)A

LEGEND

QUATERNARY		Q	Pleistocene - Stream alluvium, glacial drift
TERTIARY		Tvb	Valley Basalt - mainly vesicular basalt
			KAMLOOPS GROUP
		TKv	Kamloops Volcanics - Rhyolite, andesite, basalt
		Tc	Coldwater Formation - Conglomerate, sandstone shale and COAL
TRIASSIC		Ɍn	Nicola Group - Greenstone, andesite, basalt

—— - - - - —?—? Geological contact - defined, approx., inferred

Normal fault - approx. inferred

Bedding -

Crows Nest Resources Limited

EXPLORATION

MERRITT

CROSS SECTION 900

AUTHOR: K. SHARMAN	SCALE: 1:2000	ENCLOSURE No: 5
DATE: 81·05·11	REVISED:	DRAWING No: HJ-77-H
To Accompany		

SCALE 1:2000

0 50 100 150 200m

LEGEND

QUATERNARY		Q	Pleistocene - Stream alluvium, glacial drift
TERTIARY		Tvb	Valley Basalt - mainly vesicular basalt
			KAMLOOPS GROUP
		TKv	Kamloops Volcanics - Rhyolite, andesite, basalt
		Tc	Coldwater Formation - Conglomerate, sandstone shale and COAL
TRIASSIC		Rn	Nicola Group - Greenstone; andesite, basalt

—— - - - - —?—? Geological contact - defined, approx., inferred

Normal fault - approx. inferred

Bedding -

M-Merritt 80(2)A

Crows Nest Resources Limited

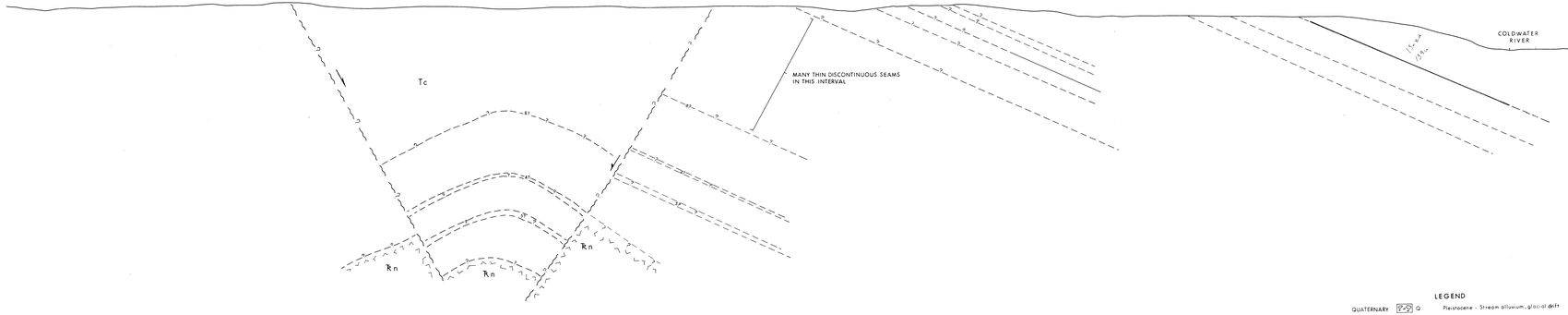
EXPLORATION

MERRITT

CROSS SECTION 1350

162

AUTHOR: K. SHARMAN	SCALE: 1:2000	ENCLOSURE No: 8
DATE: 81·05·11	REVISED:	DRAWING No: HJ-77J
To Accompany		



LEGEND

QUATERNARY	Q	Pleistocene - Stream alluvium, glacial drift
	Tvb	Valley Basalt - mainly vesicular basalt
		KAMLOOPS GROUP
TERTIARY	TKv	Kamloops Volcanics - Rhyolite, andesite, basalt
	Tc	Coldwater Formation - Conglomerate, sandstone shale and COAL
TRIASSIC	Kn	Nicola Group - Greenstone, andesite, basalt

—?—? Geological contact - defined, approx., inferred

Normal fault - approx. inferred

Bedding -

SCALE 1:2000

0 50 100 200 400m

M-present 82(2)A

Crows Nest Resources Limited

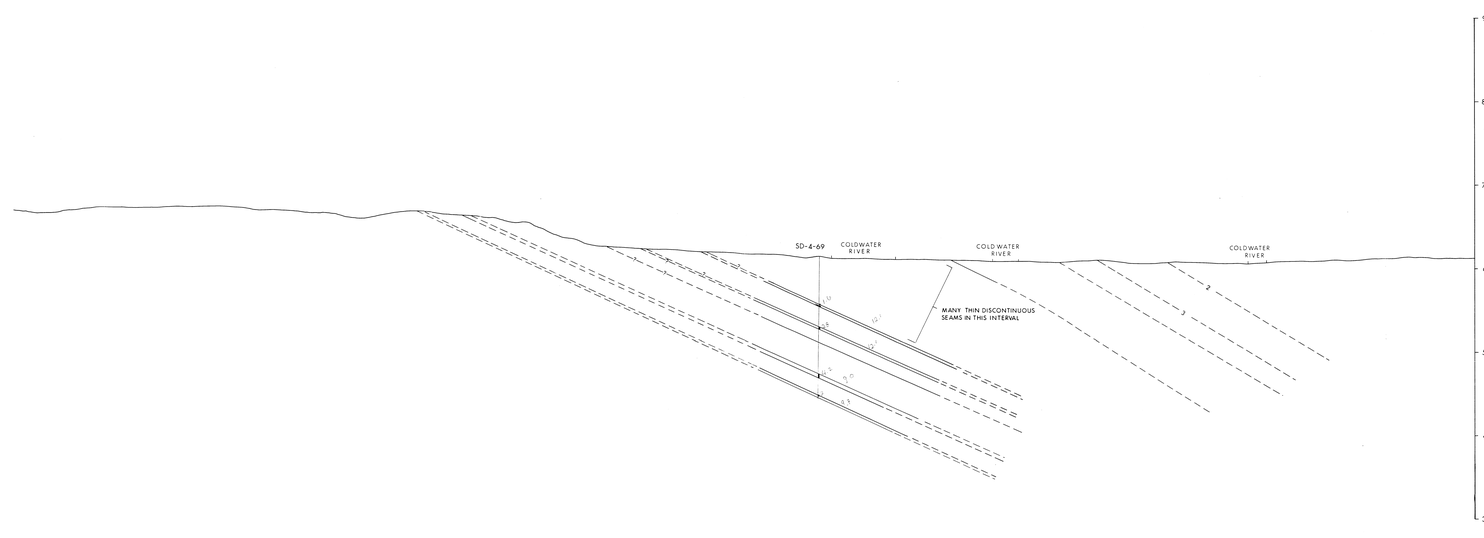
EXPLORATION

MERRITT

CROSS SECTION 1500

162

AUTHOR K. SHARMAN	SCALE 1:2000	ENCLOSURE No. 2
DATE 81 05 11	REVISED	DRAWING No. HJ-77K
To Accompany		



LEGEND

QUATERNARY	Q	Pleistocene - Stream alluvium, glacial drift
TERTIARY	Tvb	Valley Basalt - mainly vesicular basalt
		KAMLOOPS GROUP
	TKv	Kamloops Volcanics - Rhyolite, andesite, basalt
	Tc	Coldwater Formation - Conglomerate, sandstone shale and COAL
TRIASSIC	Rn	Nicola Group - Greenstones, andesite, basalt

—?—?— Geological contact - defined, approx., inferred

Normal fault - approx. inferred

Bedding

SCALE 1:2000

0 50 100 150 200m

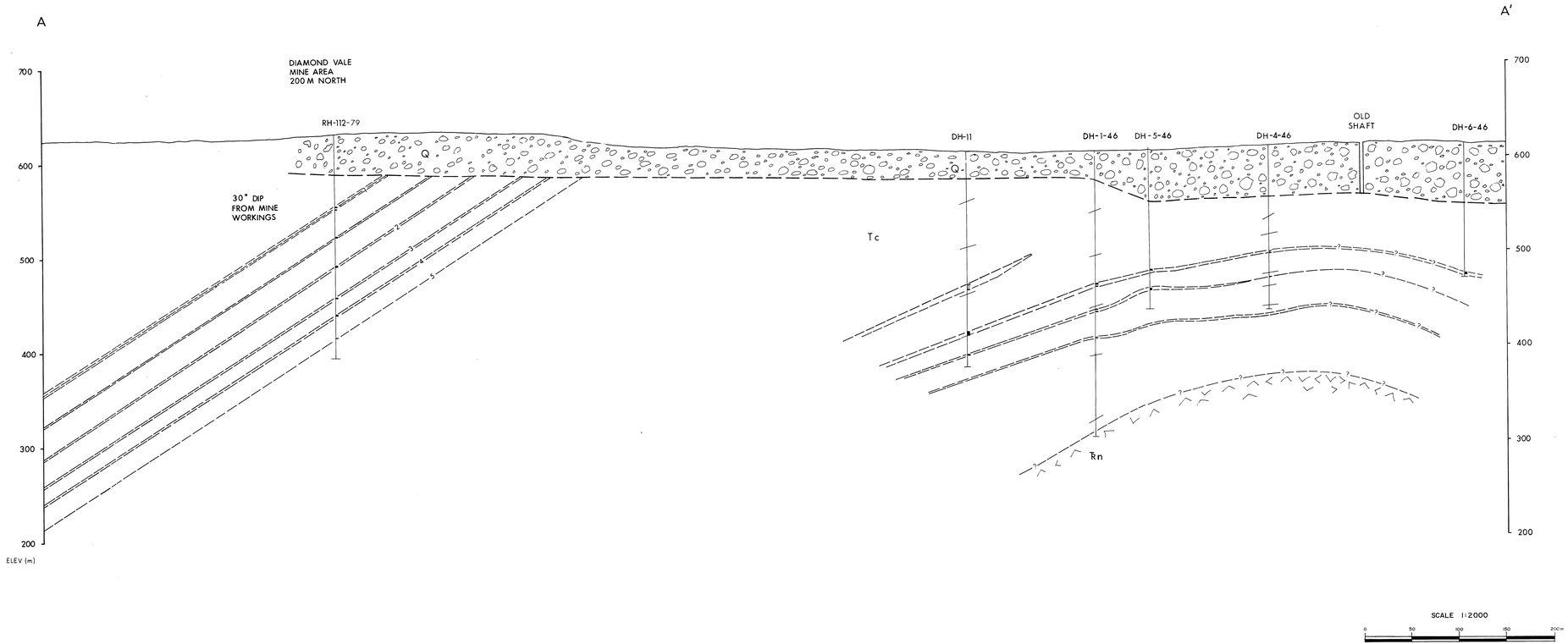
M-Merritt 82C/2/A

Crows Nest Resources Limited
EXPLORATION
MERRITT

CROSS SECTION 1650

162

AUTHOR K. SHARMAN	SCALE 1:2000	ENCLOSURE No.
DATE 81-03-11	REVISED	
To Accompany		DRAWING No. HJ-77L



SCALE 1:2000

0 50 100 150 200m

LEGEND

QUATERNARY — Q — Pleistocene - Stream alluvium, glacial drift

TERTIARY — Tvb — Valley Basalt - mainly vesicular basalt

KAMLOOPS GROUP

TKv — Kamloops Volcanics - Rhyolite, andesite, basalt

Tc — Coldwater Formation - Conglomerate, sandstone shale and COAL

TRIASSIC — Rn — Nicola Group - Greenstone, andesite, basalt

——— – – – ?–? Geological contact - defined, approx., inferred

Normal fault - approx. inferred

Bedding -

A. Merritt 88/2/9

Crows Nest Resources Limited

EXPLORATION

MERRITT
DIAMOND VALE

CROSS SECTION
A–A'

162

AUTHOR: K. SHARMAN	SCALE: 1: 2000	ENCLOSURE No: 7
DATE: 88-05-11	REVISED:	DRAWING No: HJ-77A
To Accompany		

RM - 201A - 80

RM - 202 - 80

RM - 203 - 80

RM - 204 - 80

RM - 111 - 79

RM - 108 - 79

RM - 206 - 80

RM - 205 - 80

RM - 106 - 79

RM - 110 - 79

QUATERNARY
STREAM ALLUVIUM
GLACIAL DRIFT

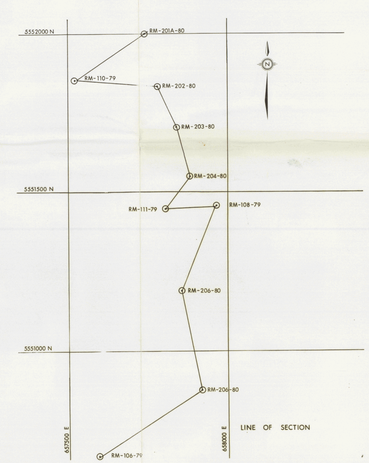
TERTIARY
COLDWATER FM.

TRIASSIC
NICOLA VOLCANICS

SHALE OUT

DATUM: TOP OF TRIASSIC NICOLA VOLCANICS

VERTICAL SCALE: 1:100
NO HORIZONTAL SCALE



Crows Nest Resources Limited
EXPLORATION
MERRITT
B.C.

DRILLHOLE CORRELATION CHART

162

AUTHOR: K. SHARMAN	SCALE: HOR: NONE, VERT: 1:100	ENCLOSURE No:
DATE: 81 - 04 - 28	REVISED:	DRAWING No: HI-78
To Accompany