

K-SHELL CORBIN 79(1)A

"CORBIN-COAL MOUNTAIN PROPERTY"

C.L. NOS. 414

PATRICK G. GILMAR

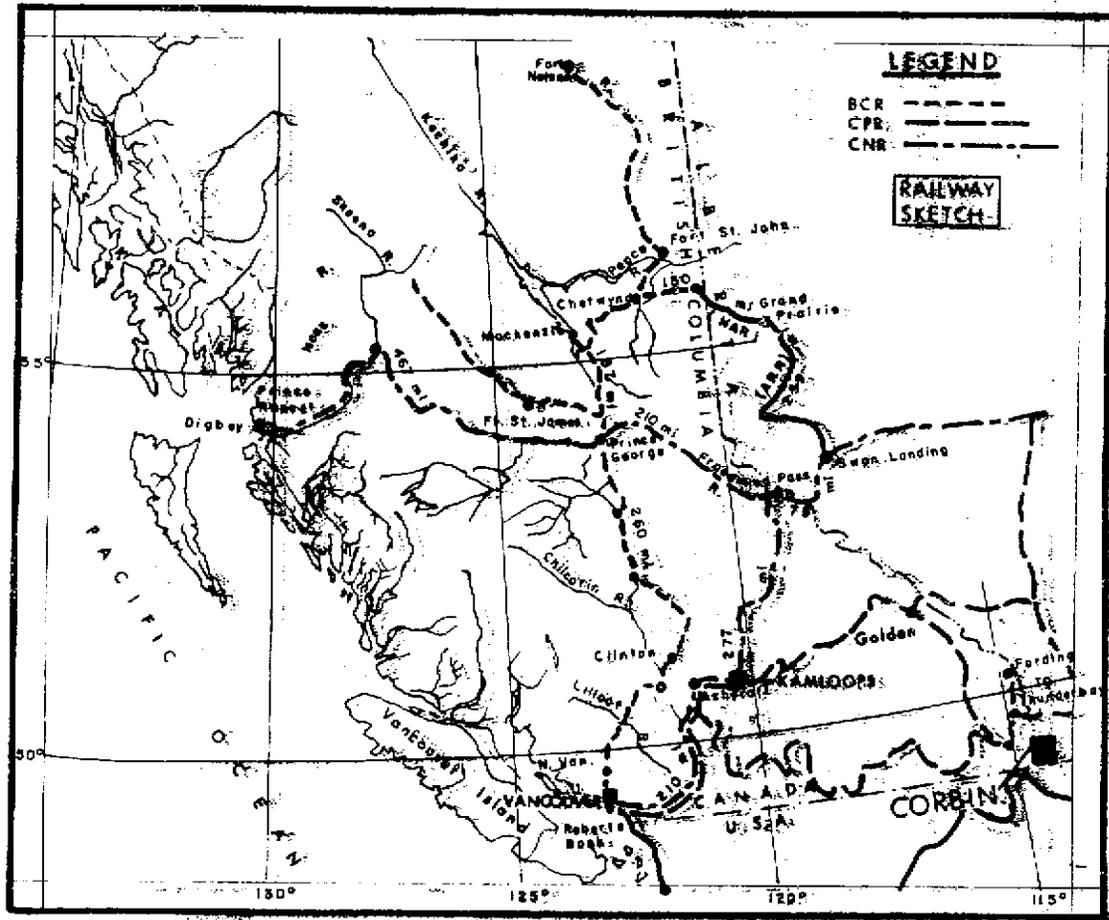
GEOLOGICAL BRANCH
ASSESSMENT REPORT

00 388

Part 1 of 2

OPEN FILE

CORBIN-COAL MOUNTAIN PROPERTY



Report on Coal Licence 414 Group 6
Kootenay Land District, British Columbia on work
done in September, 1979.

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

Lat: 49° 28' to 49° 29', Long: 114° 39' to 114° 40'
NTS: 82 G/7

April 30, 1980.

Author
Patrick C. Gilmar
Geologist
Crows Nest Resources Ltd.

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ENCLOSURES

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APPENDICES

	<u>Scale</u>	
APPENDIX A Aerial Photograph	1:5 000	} SEE K. CHELL-CORBIN 79(2)A
APPENDIX B Topographical Map	1:5 000	
APPENDIX C 1979 Cost Statement (Application to Extend Term of Licences)		
APPENDIX D B.C. Coal Licences Tenure Standing		

1.0 LOCATION AND ACCESS

The Corbin-Coal Mountain prospect consists of one coal licence, Coal Licence No. 414, which covers an area of 259 hectares. The property is located in southeastern British Columbia and lies 4 km directly west of the Alberta-British Columbia boundary, 53 km directly north of the United States border, and 28 km directly east of Fernie, B.C. (Enclosure 1).

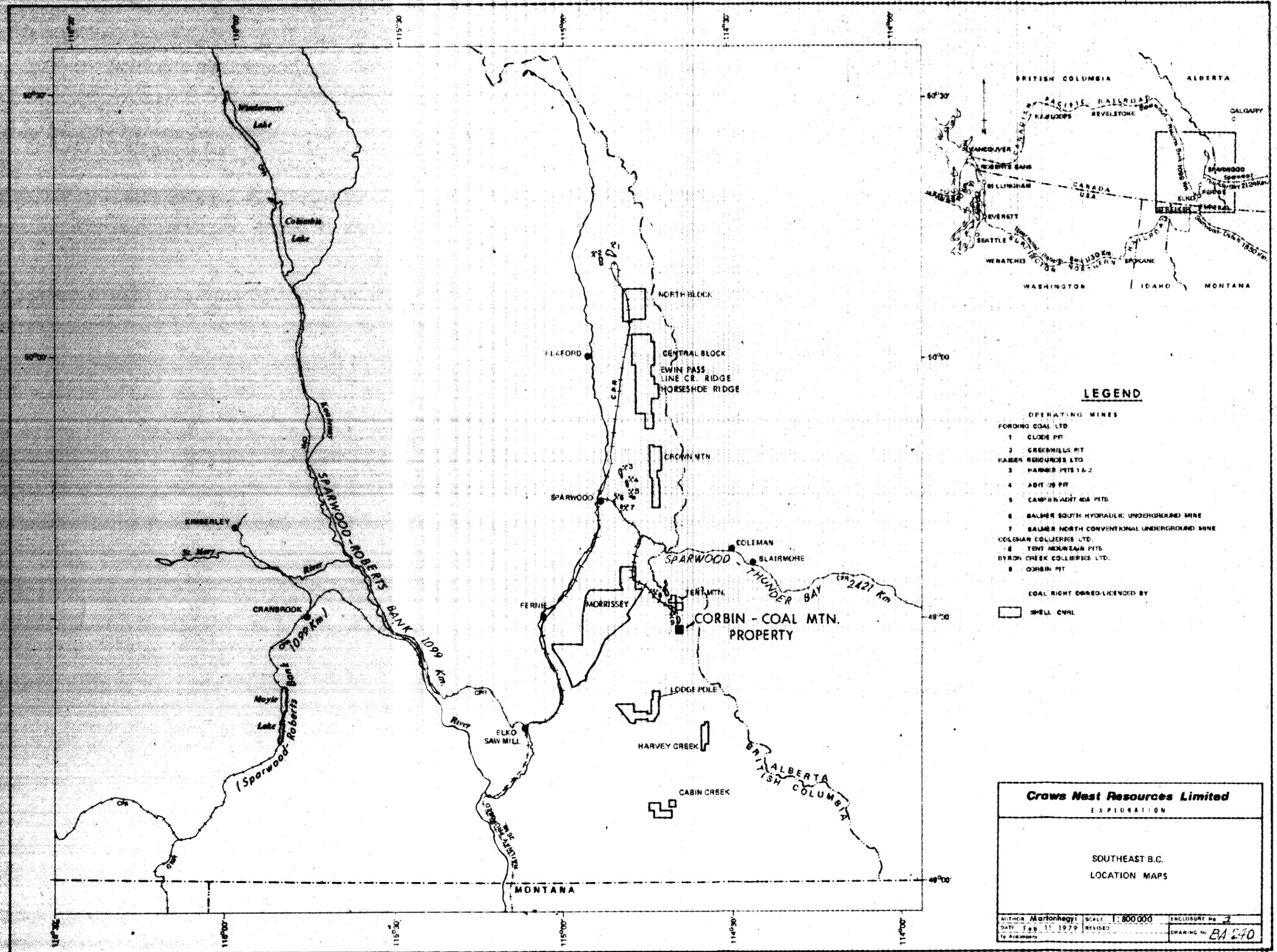
The Corbin-Coal Mountain coal licence covers the southern end of Coal Mountain near the former coal mining town of Corbin. Byron Creek Collieries is presently producing thermal coal from a surface mine on the northern end of Coal Mountain.

The relief of the property is great, with the high point of 2090 m at the summit of Coal Mountain and the low point of 1550 m lying on Michel Creek to the west (Enclosure 2). The major portion of coal reserves lie high on the western flank of Coal Mountain.

A logging road runs along the western edge of coal licence No. 414 and, follows Michel Creek north to Highway 3 near Sparwood B.C., a distance of 23 km from Corbin townsite. Access to the interior of the licence near the summit of Coal Mountain could be gained from the north through Byron Creek minesite only. Construction of a access road from the south was begun in 1978 and completed in September, 1979. This road avoids the minesite.

A rail spur from Corbin townsite to the CP Rail line at McGillivray B.C. has been constructed by Byron Creek Collieries Limited (Enclosure 3). The spurline is 20 km long and follows Michel Creek, paralling a newly built public road which extends south, from Highway No. 3. Unit trains

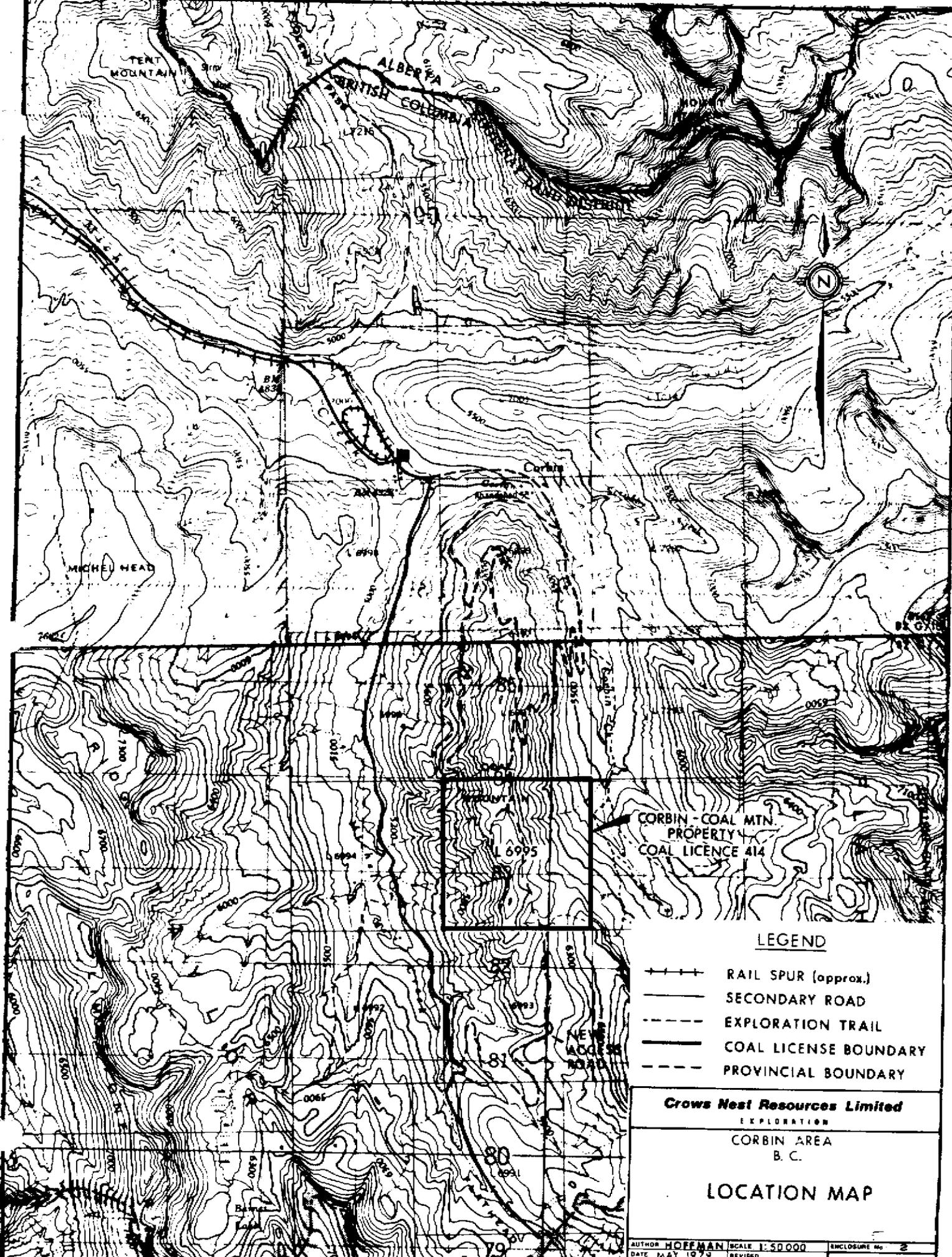
are presently hauling coal from Corbin to Thunder Bay, Ontario, a distance of 2125 km. The rail distance from Corbin to Vancouver is 1140 km.



LEGEND

- OPERATING MINES**
- FORBING COAL LTD
 - 1 CLODE PIT
 - 2 GREENMILLS PIT
 - KAISER RESOURCES LTD
 - 3 HARNER PITS 1 & 2
 - 4 ADIT 29 PIT
 - 5 CAMPBELL ADIT PITS
 - 6 BALMER SOUTH HYDRAULIC UNDERGROUND MINE
 - 7 BALMER NORTH CONVENTIONAL UNDERGROUND MINE
 - COLEMAN COLLIERIES LTD.
 - 8 TENT MOUNTAIN PITS
 - BYRON CREEK COLLIERIES LTD.
 - 9 CORBIN PIT
- COAL RIGHT OWNED/LICENCED BY**
- SHELL CNRL

Crows Nest Resources Limited		
EXPLORATION		
SOUTHEAST B.C.		
LOCATION MAPS		
AUTHOR: Martonhegyi DATE: Feb. 11, 1979 To: Accompany	SCALE: 1:800,000 REVISIONS:	ENCLOSURE No. 2 DRAWING No. EA 240

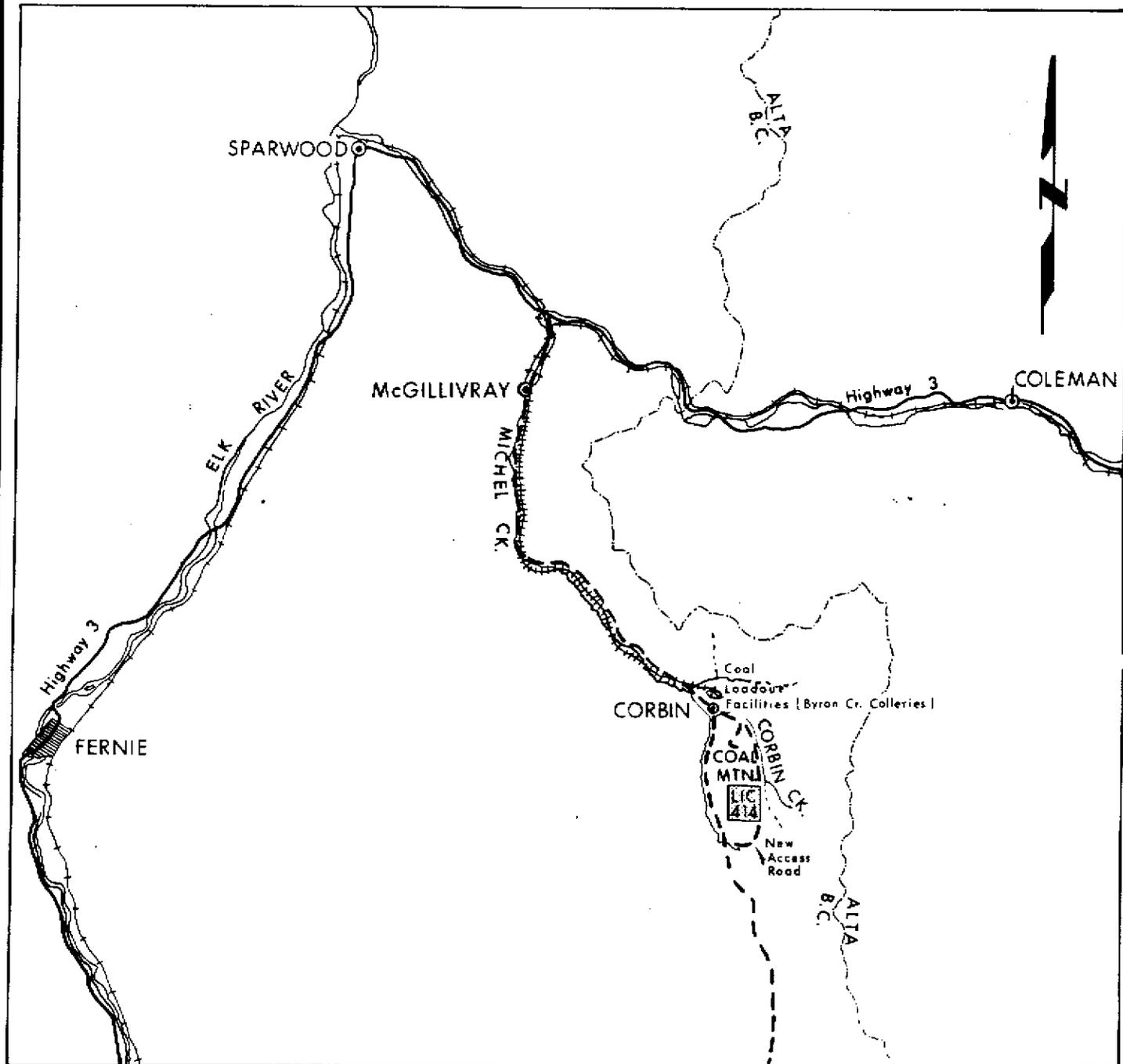


LEGEND

- ++++ RAIL SPUR (approx.)
- SECONDARY ROAD
- - - EXPLORATION TRAIL
- COAL LICENSE BOUNDARY
- - - PROVINCIAL BOUNDARY

Crows Nest Resources Limited
 EXPLORATION
 CORBIN AREA
 B. C.

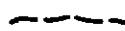
LOCATION MAP



LEGEND



Corbin Coal
License No. 414

-  Highway
-  Secondary road
-  Main C.P. Rail line
-  Spur line
-  Provincial boundary



Grows Nest Resources Limited		
EXPLORATION		
CORBIN		
SOUTHEASTERN B.C.		
COAL LICENSE LOCATION		
MAP		
AUTHOR: COAL	SCALE: 1:250 000	ENCLOSURE No. 3
DATE: FEB 79	REVISED	DRAWING No. AA-308
To Accompany		

2.0 SUMMARY

The Corbin Coal Property held by Shell Canada Resources Limited and operated by Crows Nest Resources Limited consists of three B.C. Coal Licences No. 412, 413, 414, Group 6, covering 713 hectares. The Corbin-Coal Mountain project where all work done in 1979 is on C.L. No. 414.

Coal mining activities have taken place in the Corbin area since 1908. The unusually thick coal in this area is well suited to recovery by surface mining methods. To date 9.2 million tonnes raw in-place coal have been delineated for the Upper Mammoth Seam on B.C. Coal Licence No. 414, most of which is considered thermal grade.

A detailed compilation of work done to 1978 was submitted in June, 1979 in the Crows Nest Resources Limited 1979 Corbin Geological Report. Surface work since then involved upgrading of a southern access road to the coal licence.

3.0 SUMMARY OF PREVIOUS WORK

Prior to 1978 Crows Nest Industries Limited carried out several exploration programs on the Corbin-Coal Mountain licence. This work included geological mapping drilling, and geophysical logging of 17 rotary drill holes.

The 1978 Crows Nest Resources Limited exploration program involved drilling of eight fully-cored diamond drill holes designed to yield additional structural, geotechnical, and coal quality data. Geological mapping, aerial photography, surveying, and road construction were also carried out. A compilation of all work done to 1978 was submitted in June, 1979 in the four-volume Crows Nest Resources Limited 1979 Corbin Geological Report.

4.0 WORK DONE IN 1979

Construction of a bulldozer road designed to provide southern access to Corbin-Coal Mountain Coal Licence No. 414 began in the Fall of 1978. Work was suspended in November and resumed in September of 1979. This 2.1 km route involved the upgrading of existing logging trails for most of its length and included a minimum of new land disturbance.

The 1979 upgrading was completed by Drain Brothers Construction Limited of Blairmore Alberta. Two D8H caterpillars and one 580C backhoe were used. Work involved ditching and blading the full length of the road and installing 20 culverts at creek crossings and marshy areas. In total, 18 calendar days were involved with on property costs totalling \$30,616.

At the completion of the program access to the road was blocked by a 10 foot earth barrier. No reclamation was carried out on the road in 1979.

PROFESSIONAL VERIFICATION OF REPORT

Entitled: Corbin - Coal Mountain Property
Report on Coal Licence 414, Group #6
Kootenay Land District, British Columbia on
work done in September, 1979

Mr. Bob Aiello supervised the 1979 access road upgrading program of Shell Canada Resources Limited and Crows Nest Resources Limited on the Corbin-Coal Mountain licence. Mr. Patrick Gilmar prepared this report.

Bob Aiello graduated in Mining Engineering Technology from the British Columbia Institute of Technology, in 1978, and has been employed with Crows Nest Resources Limited since then. Prior to his post secondary education, Mr. Aiello worked for over three years for Cardinal River Coal Limited. He currently holds the position of Field Co-ordinator for Crows Nest Resources Limited.

Patrick Gilmar, B.Sc., graduated in Geology from the University of Calgary, in 1978. Prior to his graduation, Mr. Gilmar worked as a field assistant for a number of major mining companies in British Columbia and Alberta. He has been employed with Crows Nest Resources Ltd. since graduation.

I consider both the aforementioned persons to be well qualified to undertake responsibilities they were assigned on this project. I am satisfied that the attached report dated April 30, 1980 has been competently prepared and justly represents the information obtained from this project.



J. J. Grabb, P. Eng.

April 30, 1980



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

APPLICATION TO EXTEND TERM OF LICENCE

I, BOLTON AGNEW (Name) agent for CROWS NEST RESOURCES LIMITED (Name)
P.O. BOX 2699 STATION "M" (Address)
CALGARY (Address) ALBERTA T2P 2M7 (Address)
 Valid FMC No. 187621

hereby apply to the Minister to extend the term of Coal Licences No(s) _____
412, 413, 414, 713 hectares, Group #6
 for a further period of one year.

2. I have performed, or caused to be performed, during the period February 1, 1979 to
January 31, 19 80, work to the value of at least \$ 30,991
 on the location of coal licences as follows:

CATEGORY OF WORK

	Licence No(s).	Apportioned Cost
Geological mapping - - - -	_____	_____
Surveys: Geophysical - - - -	_____	_____
Geochemical - - - -	_____	_____
Other - - - -	_____	_____
Road construction - - - -	<u>414 + access road</u>	<u>30,616</u>
Surface work - - - -	_____	_____
Underground work - - - -	_____	_____
Drilling - - - -	_____	_____
Logging, sampling, and testing -	_____	_____
Reclamation - - - -	_____	_____
Other work (specify) <u>Report</u> -	_____	<u>375</u>

3. I wish to apply \$ 30,409 of this value of work on Coal Licence(s)* 412, 413, 414

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

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 _____
Corbin - Coal Mtn. Project
Technical Report, 1979 - will be submitted in ninety days

 (Date) _____ (Signature and position) _____

* 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 February 1, 1979
to January 31, 1980. Total costs are \$ 30,991, an average
of \$ 43.46 per acre.

GEOLOGICAL MAPPING Yes No Cost \$ _____
Area (Acres) _____ Scale _____ Time _____
Reconnaissance _____
Detail: Surface _____
Underground _____
Other (specify) _____

GEOPHYSICAL OR GEOCHEMICAL SURVEYS Yes No Cost \$ _____
Method _____ Line miles _____

OTHER SURVEYS Yes No Cost \$ _____
Grid _____ Topographic _____ Other _____

ROAD CONSTRUCTION Yes No Cost \$ 30,616
Length: On Licences _____ Access (off licences) _____

SURFACE WORK Yes No Cost \$ _____
Length _____ Licence Number(s) _____
Trenching _____
Seam tracing _____
Crosscutting _____
Other _____

UNDERGROUND WORK Yes No Cost \$ _____
Test adits: Number _____ Average length _____ Total footage _____
Other workings: Area _____ Total footage _____

DRILLING Yes No Cost \$ _____
Hole Size _____ Number of Holes _____ Total Footage _____
Core: Diamond Wireline _____
Rotary: Conventional _____
Reverse circulation _____
Other _____
Contractor _____ Where core stored _____

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

REPORTS:

Reclamation work (Permit No. C-120) Detail of work* _____
- Technical Report on Work Done, 1979
_____ Cost \$ 375

OPERATIONS: Patrick Gilmar Geologist
Mr. Vern Scale Consultant
Work was supervised by Frank Martonhegyi Position Sr. Staff Geologist
Is this person a registered or licensed Professional Engineer in British Columbia? Yes No

NOTE—Where the licensee intends to perform, during the extended term of his licence, work not set out in the plan of operations filed under section 15 (2) (c), a supplemental plan of operations is to be attached.

* If reclamation work reported in separate report give details of report identification.

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

ON-PROPERTY COSTS: For period from February 1, 1979 to January 31, 1980

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

	Average Number of Employees	Average Rate	Average Number of Days	Amount
Professional and technical				
Machine operators and support				
Miners				
Other				
Total operator's costs \$				

2. CONTRACTORS AND CONSULTANTS:

Name	Service	Contract Amount
<u>Drain Brothers Construction</u>	<u>Bulldozer incl. supply of culverts</u>	<u>19,187</u>
<u>SAL Enterprises Ltd.</u>	<u>Supervising machinery work</u>	<u>1,465</u>
Total contractor and consultant costs \$		<u>20,652</u>

3. EQUIPMENT AND INSTRUMENTS USED: Owned _____ Rented _____

Type	Rented From	Amount
Total equipment and instrument rentals \$		

4. FIELD CAMP COSTS:

	Amount	
Food		
Accommodation	<u>540</u>	
Fuel	<u>5,479</u>	
Other		
Total field camp costs \$		<u>6,019</u>

5. SAMPLING, ANALYSIS, AND TESTING:

Service	Performed by	Amount
Totals, samplings, analysis, and testing \$		

6. SUPPLIES AND MATERIALS COSTS:

	Amount	
Process supplies		
Operating and maintenance supplies		
Office and technical supplies	<u>154</u>	
Other supplies and materials		
Total, supplies and materials \$		<u>154</u>

7. TRANSPORTATION COSTS (Ground transportation details):

Vehicles	Owner	Rental Rate	Amount
<u>one 4x4 truck</u>	<u>Rent rite</u>	<u>\$1000/month</u>	<u>520</u>
<u>Trucking</u>	<u>Kiki Trucking</u>		<u>616</u>

Air support details:

Aircraft Type	Owner	Charter
206 B	Kenting	2,655
Total transportation costs		\$ 3,791

8. RECLAMATION WORK:

_____ \$ _____

9. TRAVEL EXPENDITURES (operator's costs only):

Number of Personnel	Number of Trips	Amount
Total travel expenditures		\$ _____
Total costs		\$ 30,616

(Secs. 28 and 29, B.C. Reg. 436/75)

OFF-PROPERTY COSTS: Period from February 1, 1979 to January 31, 1980

- (a) Logistics and field support _____ \$ _____
- (b) Technical and feasibility studies _____
- (c) Preparation of reports 3 man-days _____ 375
- (d) Supplies and services _____
- (e) Mobilization and demobilization of equipment _____
- (f) Travelling expenses _____

Supporting Cost Statements Attached _____ Total \$ 375

Total supporting costs \$ _____

SUMMARY

On-property costs	\$ 30,616
Off-property costs	\$ 375
Total costs	\$ 30,991

Statement of costs verified by W.S. Kowalski

Jan 29/80
(Date)

W.S. Kowalski
(Signature and position)
Chief Accountant

CROWS NEST RESOURCES LIMITED
EXPLORATION

B. C. COAL LICENCES
TENURE STANDING

COAL MTN
BLOCK: CORBIN TENT MTN PROJECT: YEAR: 79-80
GROUP: *6 CORBIN COAL MTN DATE: JAN. 31 '80
(TENT MTN)

PROJECT		BLOCK		GROUP		LICENCE		ACQ/ADM	RENTALS	REQUIREMENT WORK			BUDGET		EXP	POTL	COMMITMENTS, J. Y.	REMARKS
NAME	LIC. TOTAL NO.	AREA TO AC HA	NAME	LIC. TOTAL NO.	AREA TO AC HA	NO.	DESCRIPTION	YEAR	ANNUAL \$10 ³	APPLIC. \$10 ³	CURRENT LIC. YEAR	1978	1979	1980	TOTAL \$10 ³	SHEETS	OTHER THAN B.C. GOV. I. DESCRIPTION	
				# 6	3 713 76			74 1,600	3,565 14.2	399 6	5,800 10-	107609	JAN. 31	35	2,121	Y		TWO LAND MAP SHEETS WORK REQMT FULFILLED TO JAN 31/80 UNDER COAL ACT '74
COAL MTN	1	259	COAL MTN	1	259	414	L 6995 259	1,400	5.2					49510(79)35 40511(80)	1,904	Y		
TENT MTN	2	454	TENT MTN	2	454	412	5/16 + L7002 195 NE 1/4	200	9.0					48511(80)	217	Y		
				# 6	3 713 ha 1,760 ac													
										WORK DONE	PRIOR TO '78	1978	1979					
										\$	153305	407348	130409					

GENERAL REMARKS: FOR NECESSARY TERMS AND CONDITIONS OF LICENCE DEVELOPMENT POTENTIAL OF THE APPLICANT'S BLOCKS OF LANDS SHOULD BE DETERMINED BY THE OPERATOR. ALL APPLICANT EXPENDITURES SINCE FEBRUARY 24, 1978 ARE CONSIDERED. OTHER LICENCE NOTICES PRIOR TO THIS DATE SHOULD BE REVIEWED FOR INITIAL ACQUISITION FEE FOR NORTH, CENTRAL AND CROW'S NEST BLOCKS (DISTRIBUTED ON AREA BASIS). RENTAL AND WORK CREDITS AS OF FEBRUARY 24, 1978 AND PREVIOUS CREDITS IN TOTAL EXPENDITURES.