

00167



## **Crows Nest Resources**

Eau Claire Place, 525 - 3rd Avenue S.W., Calgary, Alberta (403) 232-4355  
P.O. Box 2699, Station M, Calgary, Alberta T2P 2M7 Telex 03-822505 **LIMITED**

December 31, 1981

Ministry of Energy, Mines and Petroleum Resources  
British Columbia

Enclosed please find our report on the Quilchena Coal Prospect.

Mr. Patrick C. Gilmar planned and carried out the 1981 geological field program on Quilchena B.C. Coal Licences held by Shell Canada Resources Limited and operated by Crows Nest Resources Limited. He and Shasta Abbott prepared this report. Kevin Sharman did the fieldwork. 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. Prior to his graduation Mr. Gilmar worked as a field assistant for a number of major mining companies in British Columbia and Alberta. Pat Gilmar has been employed with the company as a Geologist since 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 Limited, Calgary, Alberta
- Shell Canada Resources Limited, Calgary, Alberta
- Crows Nest Resources Limited, 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 Manager, B.C. Projects for Crows Nest Resources Limited supervising coal exploration in British Columbia.

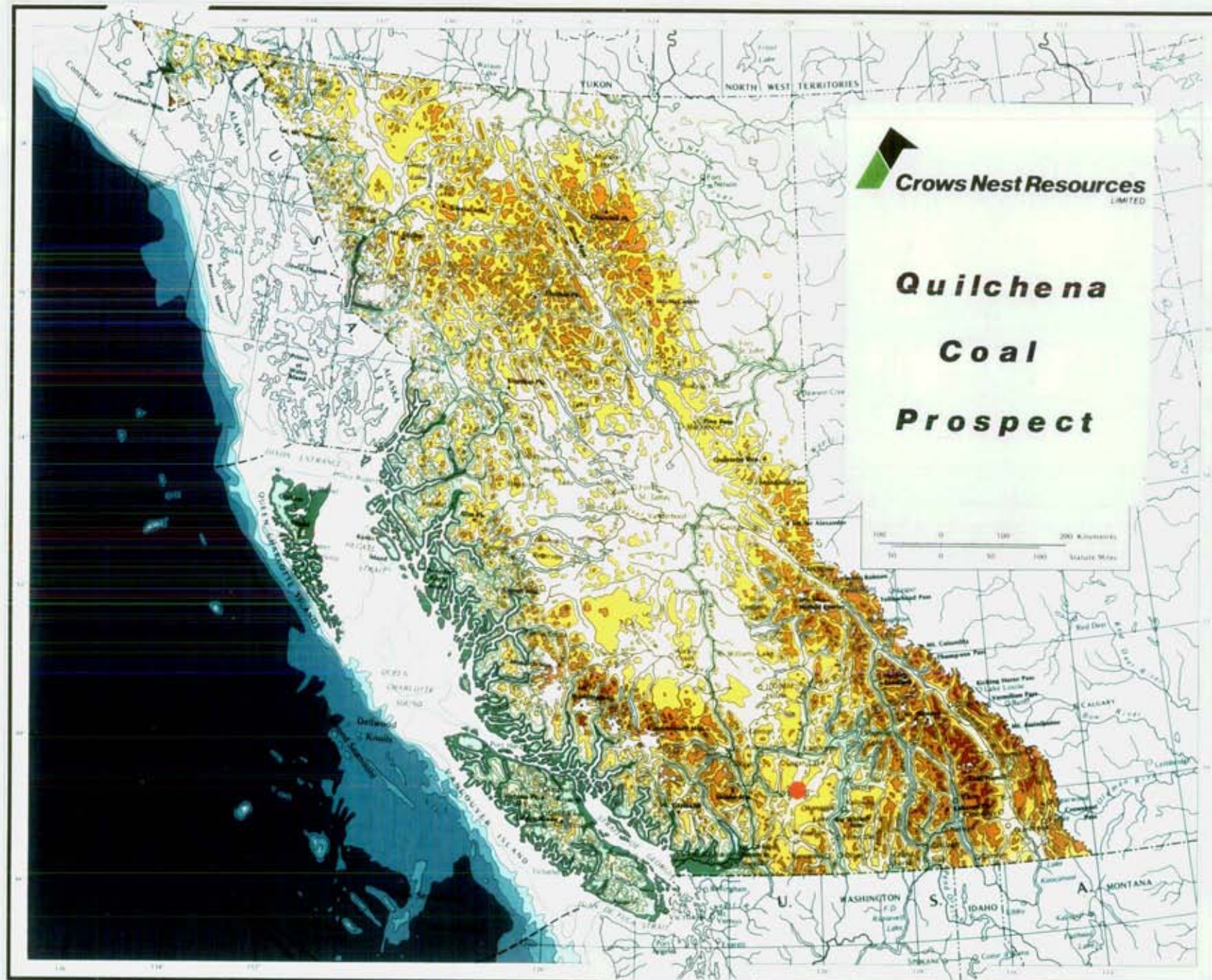
In my opinion, all of these personnel are fully qualified, by training and experience to prepare this report and this account of work done under their direct supervision.

Yours very truly,

H.G. Rushton, P. Geol.  
Vice-President - Exploration

00167 (1)





Quilchena S117

1981 DRILLING

QUILCHENA CREEK



QUILCHENA  
COAL PROSPECT

**OPEN FILE**

Report on Coal Licences 4322 to 4327 inclusive  
Kamloops Division of Yale Land District, British Columbia  
on work done in period August 1981

Held by: SHELL CANADA RESOURCES LIMITED

Operated by: CROWS NEST RESOURCES LIMITED

N. Lat. 50°06', W. Long. 120°30', NTS 92I/1 and 2

Authors

Patrick C. Gilmar  
Shasta A. Abbott  
Geologists  
Crows Nest Resources Limited

November 30, 1981

5/BXb.0

## ENCLOSURES

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## 1.0 Summary

The Quilchena coal prospect is located in the Merritt Coalfield in South-central British Columbia. Six B.C. coal licences, covering 1,373 hectares, are held by Shell Canada Resources Limited and operated by Crows Nest Resources Limited.

Access to the project area is 24 km northeast from Merritt along Highway 5, then 5 km south. Sage brush covered grazing land of moderate relief is characteristic of the licence area.

The coal measures lie within the Coldwater Formation, Tertiary Age. They occupy a depression in Triassic volcanics and are also bounded by Jurassic intrusives and by younger volcanics. Six to seven seams have been recorded in the predominantly conglomeratic sandstone strata.

Prior to 1980, scattered mapping and excavating was done in the Quilchena coal basin. No detailed geological map was filed. In 1980 Crows Nest Resources exploration included detailed mapping and drilling two rotary holes (523 metres). In 1981 two rotary holes (543 metres) were drilled and one hand trench was dug.

The property is regarded as a thermal prospect. No quality analysis has been done but High Volatile Bituminous B coal is expected. Initial work indicates some underground potential but little if any open pit potential. Further exploration is required before coal resources can be estimated on this early grass roots project.

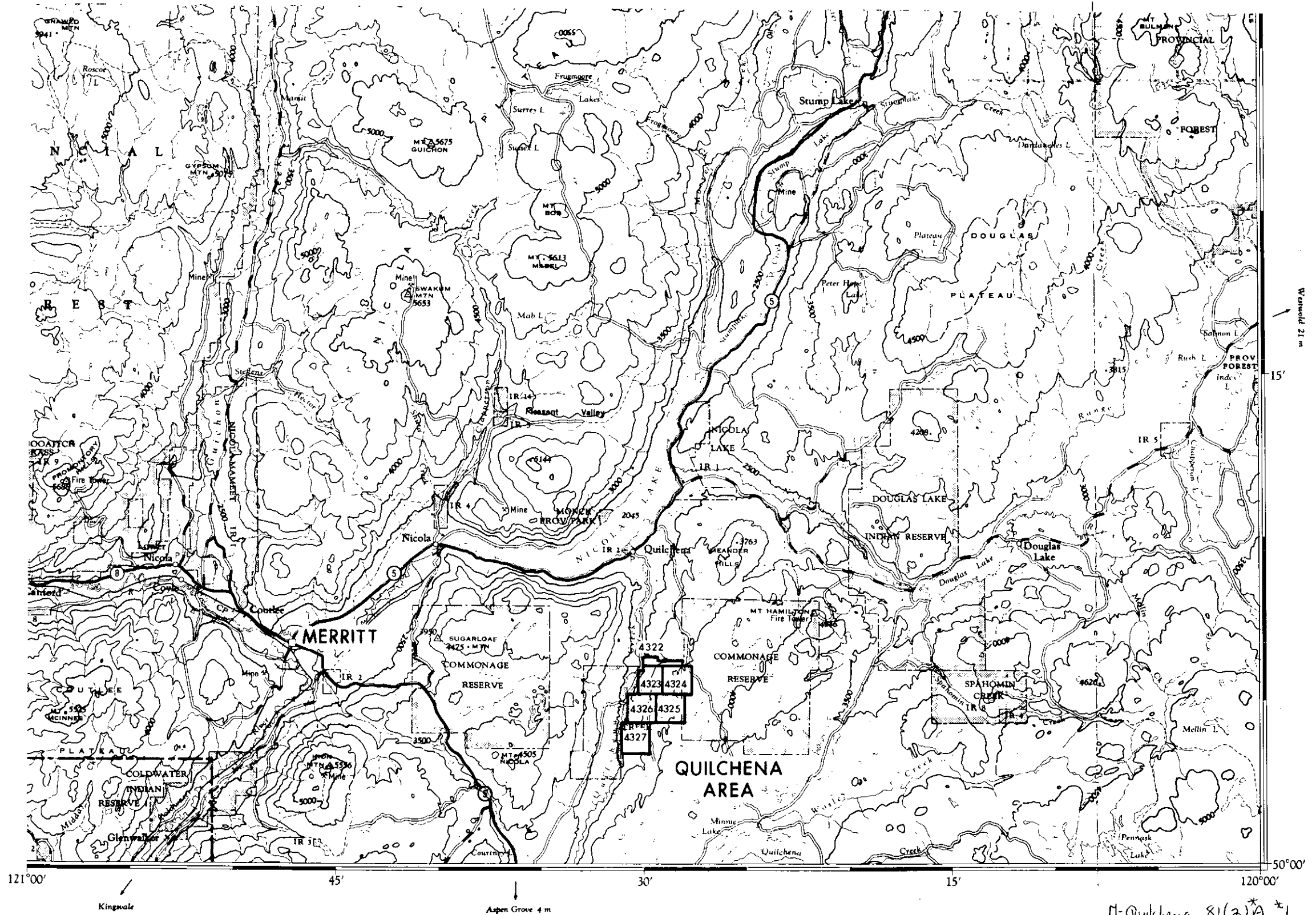
2.0 Location

Enclosure No. 1 Location Index Map.

Quilchena Coal Prospect is located in the Merritt Coalfield in South-central British Columbia, Township 91, Kamloops Division of Yale Land District, NTS 92I, 1 and 2. The licences are located at N. Lat.  $50^{\circ}06'$ , W. Long.  $120^{\circ}30'$ , along Quilchena Creek, south of Nicola Lake.

*Both Rotary Holes are on  
Licence 4326*

*Trench is on Licence 4325.*



SCALE 1:250,000

5000                      0                      5000                      10,000                      15,000                      20,000 metres

M-Qulchena 81(2)\*A \*1



**Crows Nest Resources Limited**  
EXPLORATION

BRITISH COLUMBIA  
MERRITT

QUILCHENA  
LOCATION INDEX MAP

AUTHOR	SCALE	ENCLOSURE No. 1
DATE 8/12/31	REVISED:	DRAWING No. CA-261
To Accompany		

### 3.0 Access

Appendix A - Coal Prospects Map

Appendix B - 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, Highway No. 5 joins Highway No. 3 at Princeton. Merritt is approximately 385 km by CPR line from the Vancouver area ports.

Quilchena is 24 km northeast from Merritt along Highway 5, then 5 km south. Two all-weather, gravel roads provide access to the west and east sides of the property. Nearly all points on the prospect area are easily accessible on the sagebrush covered grazing land.

The prospect area has moderate relief, less than 400 metres on the coal bearing land. Surrounding hillsides are of more rugged relief with heavy timber cover. Quilchena Creek, on the west boundary of the prospect, drains northward into Nicola Lake.

4.0 Tenure

Appendix C - B.C. Land Tenure Standing

Appendix D - Coal Land Disposition Map

The B.C. Coal Licences granted on September 27, 1978, held by Shell Canada Resources Limited and operated by Crows Nest Resources Limited, cover a total of 1373 ha of Crown land. These six licences are in one licence block. The surface rights belong to Douglas Lake Cattle Company Limited.

## 5.0 Work Done

### 5.1 Prior to 1981

The earliest reference to the Merritt Coalfield is in a Geological Survey of Canada report dated 1877-78. Underground production totalling 2.7 million tons occurred between 1906-1945, 80% by Middlesboro Collieries bordering Merritt townsite. Limited production continued until late 1950's.

Reference to the Quilchena coal basin is recorded in a Geological Survey of Canada preliminary report dated September 23, 1904. According to this report small excavations, shafts, and trenches uncovered several seams in the area. No detailed geological map of the coal measures was filed.

During the 1977-79 summer field seasons several Crows Nest Resources personnel scouted the prospect area trying to confirm information from the 1904 report.

In 1980 Crows Nest Resources did 1:5000 scale mapping, hand trenching, drilling of two rotary holes (523 metres), and location surveys. Work was completed on December 9.

5.2 1981 Program

Appendix E - Applications to Extend Term of Licences

Appendix F - Drill Hole Summaries

Appendix G - Drill Hole Stratigraphic Sections

Appendix H - Downhole Geophysical Logs

Appendix I - Trench Section

Appendix J - Traverse Survey Map

Fieldwork was carried out in August during dry, hot weather. Two rotary drill holes (543 metres) were completed by Can-West Drilling and geophysically logged by BPB Instruments. Logs run were gamma ray, l.s. density, caliper, neutron and focussed electric. Both drill holes were located on the north part of C.L. 4326. Neither drill hole intersected coal and therefore they were not cemented. RQ 201 was taken over by Douglas Lake Cattle Co. for a water well.

Location surveys of the two drill holes was completed by Sheltech Canada .

6.0 Geology

6.1 Regional

Enclosure No. 2 - Table of Formations

Appendix I - Regional Geology Map

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

Lying unconformably below the Coldwater beds are Triassic Nicola Group rocks. They consist principally of volcanics of diverse types, grouped under the general term of greenstone. Intrusive into the greenstones are Coast Intrusions of Jurassic or later age. In some of the valleys nearly horizontal benches of Late Miocene vesicular basalt overlie the Coldwater beds. These are probably the most recent consolidated rocks of the area.

TABLE OF FORMATIONS  
MERRITT COALFIELD  
QUILCHENA COAL BASIN

PERIOD	EPOCH	FORMATION		LITHOLOGY
QUATERNARY	PLEISTOCENE & RECENT			STREAM ALLUVIAL, 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
JURASSIC & (?) LATER		COAST INTRUSIONS		GRANODIORITE, QUARTZ DIORITE, DIORITE GABBRO, & PYROXENITE
TRIASSIC	UPPER TRIASSIC	NICOLA GROUP		GREENSTONE; ANDESITE, BASALT; AGGLOMERATE, BRECCIA, TUFF; MINOR ARGILLITE LIMESTONE, AND CONGLOMERATE

## 6.2 Stratigraphy

Outcropping strata along Quilchena Creek consist predominantly of conglomerate, conglomeratic sandstones, and sandstone. Shale and coal seams make up less than 10% of the 120 meters of exposed section.

The Quilchena coal measures closely resemble those of the Merritt basin. There, rapid vertical and lateral variations in thickness and nature of individual beds suggest deposition in an unstable environment. At Quilchena six to seven small seams have been recorded in outcrop and drill holes. To date, a stratigraphic section depicting the number and position of the coal seams has not been generated.

### 6.3 Structure

Appendix L - Geology Compilation Map

Appendix M - Cross Section A-A'

The Quilchena coal basin is roughly 11 Km long by 3 Km wide, stretching in a north-south direction. It occupies a depression in the Triassic greenstones. To the south, the sediments terminate against granodiorites and quartz diorites which are intruded into the greenstones. On the western boundary exposures of nearly horizontal benches of valley basalt unconformably overly the Coldwater beds.

Due to heavy drift cover, structure within the basin is not well-defined. Attitudes measured along the east banks of Quilchena Creek retain strikes of  $330^{\circ}$  to  $360^{\circ}$  with dips  $20^{\circ}$  to  $40^{\circ}$  north east. As seen in the Merritt basin, strata near the volcanic contact are probably bent into sharp folds with near vertical dips. This assumption is supported by steep dips measured from spot cores taken in the 1980 drilling.

Drill hole information is not sufficient to produce a typical stratigraphic section showing the number and position of coal seams. However, a cross section has been constructed using the drill hole data and the trench section. The coal zone which occurs near surface in RQ 102 appears to correlate with the coal zone occurring near the bottom of RQ 101. This would suggest an easterly dip of approximately forty degrees.

#### 6.4 Coal Resources and Mineability

Initial work indicates some underground but little if any open pit potential. Seams are relatively thin and gain cover rapidly down dip. The coal resources of the prospect cannot be estimated at this time due to incomplete exploration and evaluation even on a grass roots level.

6.5 Coal Quality

The property is regarded as a thermal prospect. No quality information is available to date. A Merritt type coal quality (High Volatile Bituminous B) is expected.

7.0 Bibliography

Bell, R.W. (1904) Preliminary Report on the Quilchena Coal Basin, Nicola Valley, B.C., Geol. Surv. of Canada, Open File 04(1)A.

Camsell, C. 1915 Nicola and Quilchena Coal Areas, Coal Fields of B.C., G.S.C. Memoir 69, p.p. 280-285.

Cockfield, W.E.,(1961) Geology and Mineral Deposits of Nicola Map-Area, British Columbia, Geol. Surv. of Canada Memoir 249.

Crows Nest Resources (1980) Quilchena Prospect Report

Dawson, G.M. Preliminary Report on the Physical and Geological Features of the Southern Portion of the Interior of British Columbia; Geol. Surv. Canada, Dept. of Prog. 1877-8 (1879).

White, W.H. (1946) Report on the Merritt Coalfield, Report of the Minister of Mines, (pages 250-279).

DATE: DECEMBER 1981

RA - 312





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

APPLICATION TO EXTEND TERM OF LICENCE

I, LESLIE GRAMANTIK agent for SHELL CANADA RESOURCES LIMITED  
(Name) (Name)  
P.O. BOX 100 CALGARY  
(Address) (Address)  
ALBERTA T2P 2H5

Valid FMC No. 207568

hereby apply to the Minister to extend the term of Coal Licence(s) No(s). 4322 TO 4327 INCL  
6 LICENCES, 1373 HECTARES, GROUP #234  
for a further period of one year.

2. Property name QUILCHENA, KAMLOOPS DIVISION OF YALE LAND DISTRICT

3. I am allowing the following Coal Licence(s) No(s). to forfeit N/A

4. I have performed, or caused to be performed, during the period DECEMBER 31st 1980 to  
DECEMBER 31st 19 81, work to the value of at least \$ 50,448.00  
on the location of coal licence(s) as follows:

CATEGORY OF WORK	Licence(s) No(s).	Apportioned Cost
Geological mapping	<u>4326</u>	<u>3,814.00</u>
Surveys: Geophysical	<u>-</u>	<u>-</u>
Geochemical	<u>-</u>	<u>-</u>
Other (location)	<u>4326</u>	<u>2,751.00</u>
Road construction	<u>-</u>	<u>-</u>
Surface work	<u>4326</u>	<u>490.00</u>
Underground work	<u>-</u>	<u>-</u>
Drilling	<u>4326</u>	<u>36,253.00</u>
Logging, sampling, and testing	<u>4326</u>	<u>3,075.00</u>
Reclamation	<u>-</u>	<u>-</u>
Other work (specify)	<u>-</u>	<u>-</u>
Off-property costs	<u>GEOLOGICAL REPORTS</u>	<u>4,065.00</u>

5. I wish to apply \$ 50,448.00 of this value of work on Coal Licence(s) No(s). 4322 TO 4327  
INCL.

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

7. The work performed on the location(s) is detailed in the attached report entitled  
QUILCHENA COAL PROSPECT, 1981

DECEMBER 22, 1981  
(Date)

Gramantik  
(Signature)  
ASSISTANT LANDMAN  
(Position)

# CATEGORY OF WORK

## GEOLOGICAL MAPPING

Yes ☒

No ☐

Area (Hectares) ..... Scale ..... Duration .....  
 Reconnaissance .....  
 Detail: Surface ..... 100 ..... 1:5000 ..... 10 MAN DAYS  
 Underground .....

\*Other (specify) .....

Total Cost \$ ..... 3,814.00

## GEOPHYSICAL/GEOCHEMICAL SURVEYS

Yes ☒

No ☐

Method .....  
 Grid .....  
 Topographic ..... LOCATION SURVEYS  
 \*Other (specify) .....

Total Cost \$ ..... 2,751.00

## ROAD CONSTRUCTION

Yes ☐

No ☒

Length ..... Width .....  
 On Licence(s) No(s) .....  
 Access to .....

Total Cost \$ .....

## SURFACE WORK

Yes ☒

No ☐

Length ..... Width ..... Depth ..... Cost .....  
 Trenching ..... 15 METERS ..... 2 METERS ..... 1 METER .....  
 Seam Tracing .....  
 Crosscutting .....  
 \*Other (specify) .....

Total Cost \$ ..... 490.00

## 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 ..... 5 1/8 INCHES ..... 2 ..... 546 .....  
 Reverse circulation .....

\*Other (specify) .....

Contractor ..... CAN-WEST DRILLING INC. PRINCE GEORGE  
 Where is the core stored? .....

Total Cost \$ ..... 36,253.00

## LOGGING, SAMPLING AND TESTING

Yes ☒

No ☐

Lithology: Drill samples ☒ Core samples ☐ Bulk samples ☐  
 Logs: Gamma-neutron ☒ Density ☒  
 \*Other (specify) .....  
 Testing: Proximate analysis ☐ FSI ☐ Washability ☐  
 Carbonization ☐ Petrographic ☐ Plasticity ☐  
 \*Other (specify) .....

TOTAL COST \$ ..... 3,075.00

## OTHER WORK (specify details)


1980 GEOLOGICAL REPORT ..... Cost ..... 1,755.00  
 1981 GEOLOGICAL REPORT ..... 2,310.00  
 Total Cost \$ ..... 4,065.00  
 On-property costs ..... 46,383.00  
 Off-property costs ..... 4,065.00  
 Total Expenditures \$ ..... 50,448.00

Dec 22/81  
 (Date)

W. St. Onvalle  
 (Signature)

MANAGER ACCOUNTING C.N.R.L.  
 (Position)

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



APPF

# ROTARY HOLE RQ-201

DATE: August 12 - August 13/81  
 LOCATION: Quilchena, North boundary of Licence 4326  
 RIG TYPE: Can-West Drilling, TH-100 cyclone, single wall rotary  
 ELEVATION(m) 915.70  
 NORTHING: 5550954.10  
 EASTING: 679174.36  
 TOTAL DEPTH (m): 238  
 ANGLE: Vertical  
 COMMENTS: Abandoned D.H. taken over by Douglas Lake Cattle Co. for a  
 water well, Quaternary to 67 m.

LOGS RUN:	(BPB Instruments)	SCALE:	DEPTH:
	Gamma Ray	100:1	202 m
	L.S. Density	100:1	202 m
	Caliper	100:1	202 m
	Neutron-Neutron and G.R.	100:1	202 m

No coal intersections

4/B0a.1

# ROTARY HOLE RQ-202

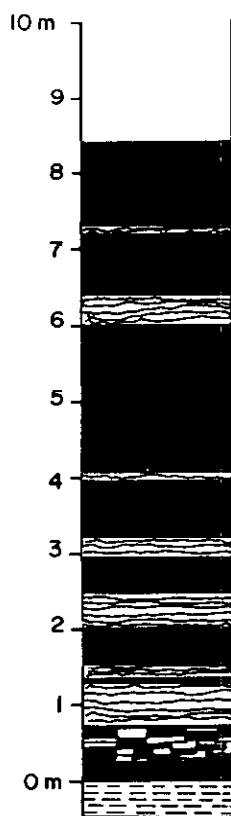
DATE: August 14 - August 16/81  
 LOCATION: Quilchena, North boundary of Licence 4326  
 RIG TYPE: Can-West Drilling, TH-100 cyclone, single wall rotary  
 ELEVATION(m) 896.41  
 NORTHING: 5550878.62  
 EASTING: 678999.08  
 TOTAL DEPTH (m): 305  
 ANGLE: Vertical  
 COMMENTS: Hole not cemented because no coal intersections  
 Quaternary to 103 m.

LOGS RUN:	(BPB Instruments)	SCALE:	DEPTH:
	Gamma Ray	100:1	290 m
	L.S. Density	100:1	290 m
	Caliper	100:1	290 m
	Neutron-Neutron and G.R.	100:1	290 m
	Focussed Electric	100:1	290 m

No coal intersections

# QUILCHENA TRENCH TQ-81-1

(measured thickness)



COAL, hard

332 / 65E

SHALE, bentonitic

339 / 60E

COAL, hard, blocky

SHALE, bentonitic, light brown

COAL, hard, blocky

326 / 55E

SHALE, bentonitic

COAL, hard, brown w

332 / 40E

SHALE, light brown

COAL, hard, slightly shaly

336 / 50E

SHALE, dk. grey, 10cm bentonite at top

COAL, blocky, orange w

040 / 43E

COAL / SHALE, interbedded

SHALE, brown, bentonitic

312 / 75E

COALY SHALE

COAL, soft, flaky

300 / 75E

FOOTWALL - bentonite, soft, light brown

M-Quilchena 81(3)\*A



Crows Nest Resources Limited  
EXPLORATION

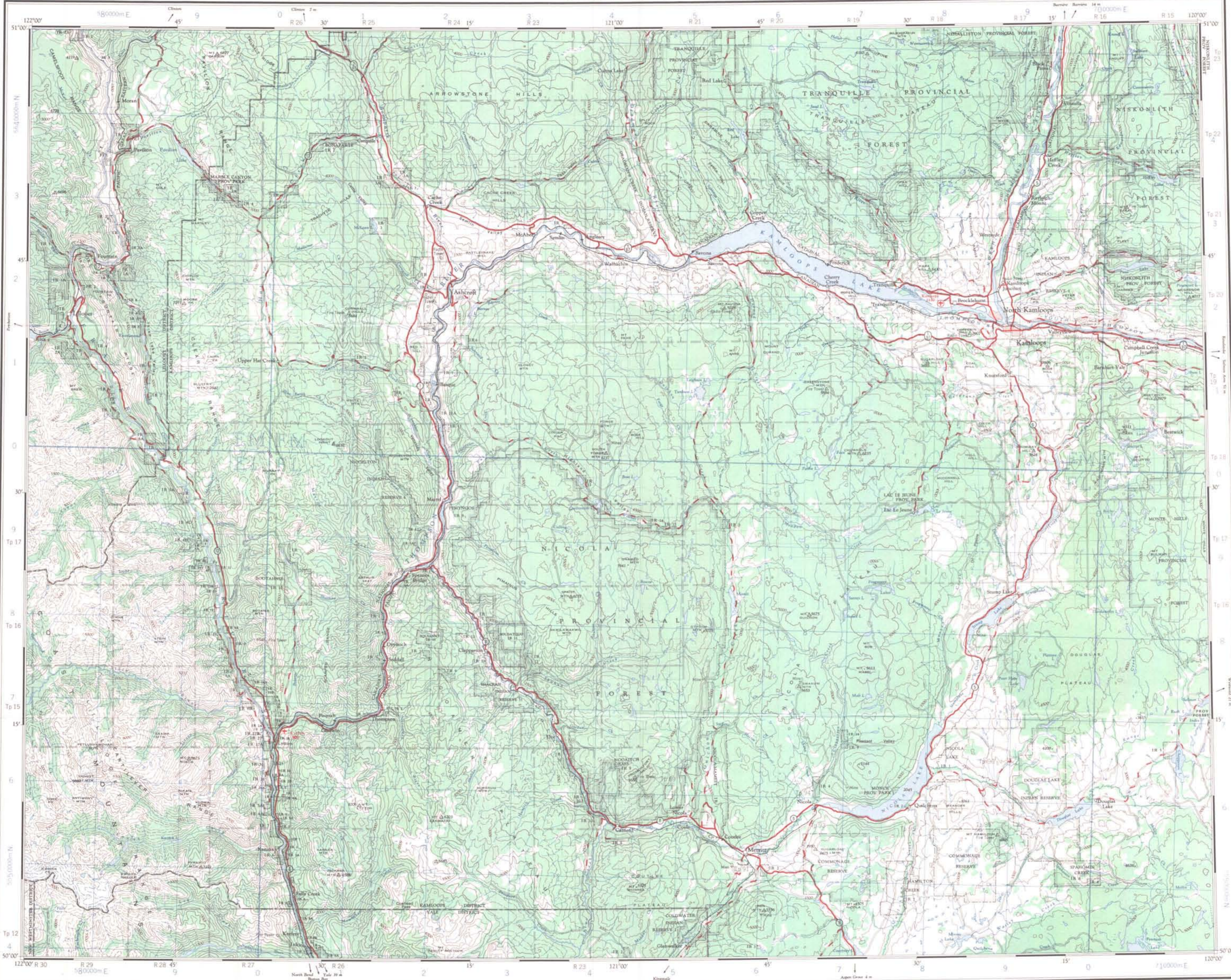
QUILCHENA  
BRITISH COLUMBIA

TRENCH TQ - 81-1

AUTHOR: P. GILMAR SCALE: 1:100  
DATE: 81 11 24 REVISED:

APPENDIX I

To Accompany DRAWING No. AA-751



Military users:  
refer to this map as  
Reference de cette carte  
pour usage militaire

SERIES A 502 SÉRIE  
MAP 92-1 CARTE  
EDITION 2 MCE ÉDITION

GRID ZONE DESIGNATION	UTM	FM	GM
10U	560	EL	GL
	60	70	

TO USE A REFERENCE TO NEAREST 100 METRES

EXAMPLE: FIRE TOWER

SQUARE: Read letters of 100,000 m square: FM

EASTING: Read number on grid line immediately to left of point

NORTHING: Read number on grid line immediately below point

Estimate letters of a square from this line upward to point

Estimate numbers of a square from this line westward to point

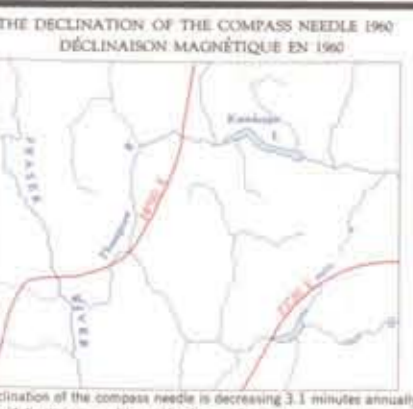
MILITARY GRID REFERENCE

10U 560 70

If reporting beyond 10° in any direction  
give Grid Zone Designation as: 10U FM 6709

TEN THOUSAND METRE  
UNIVERSAL TRANSVERSE MERCATOR GRID  
ZONE 10

167  
MOL



Complète la carte SURVEYS AND MAPPING BRANCH  
DEPARTMENT OF MINES AND TECHNICAL SURVEYS  
1960 from large scale maps. Printed 1962.

Cartes may be obtained from the Canada Map Office,  
Department of Energy, Mines and Resources, Ottawa,  
or your nearest map dealer.

© Canada Copyrights Reserved 1977

Road:  
hard surface, all weather: ligne solide  
loose surface, all weather: ligne pointillée  
wagon, cart track: ligne tireté  
Railway, normal gauge: ligne double tireté  
Depression contours: Courbes de creux  
Spot elevation, in feet: Rapports de nivellement en pieds  
Power transmission line: Ligne de transport d'énergie

Transverse Mercator Projection  
North American Datum 1927  
Contour Interval 500 feet  
Elevations in feet above Mean Sea Level

# ASHCROFT

## BRITISH COLUMBIA

### WEST OF SIXTH MERIDIAN - OUEST DU SIXIÈME MÉRIDIEN

Scale 1:250,000 Echelle



Projection Transverse de Mercator  
Réseau géodésique nord-américain 1927  
Équidistance des courbes: 500 pieds  
Élévations en pieds au-dessus du niveau moyen de la mer

Complète par la DIRECTION DES LEVÉS ET DE LA CARTOGRAPHIE,  
MINISTÈRE DES MINES ET DES RESSOURCES, en 1960.  
Cartes seules à large échelle. Imprimées en 1962.

Ces cartes sont en vente au Bureau des Cartes du Canada,  
Ministère de l'Énergie, des Mines et des Ressources, Ottawa,  
ou chez le vendeur le plus près.

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Town: Village ou Settlement: Rue: Church: School: Boundary monument: Horizontal control point: Point géodésique: Cour d'eau intermittent ou à sec: Lac intermittent: Rapids, chutes: Marsh or swamp: Marais ou marécage: Lightship: Phare: Airport: Aéroport: Steep slope: Bas de pentes fortes: Base of flood: Base de crues

Crows Nest Resources Limited  
EXPLORATION

QUILCHENA  
BRITISH COLUMBIA

ACCESS MAP

NTS 92-1  
APPENDIX B  
AUTHOR: DATE: B.I.-30  
SCALE: 1:250,000  
REVISED: DRAWING No:

H-Outline 81(3)A-1



GAMMA RAY  
NEUTRON-NEUTRON LOG

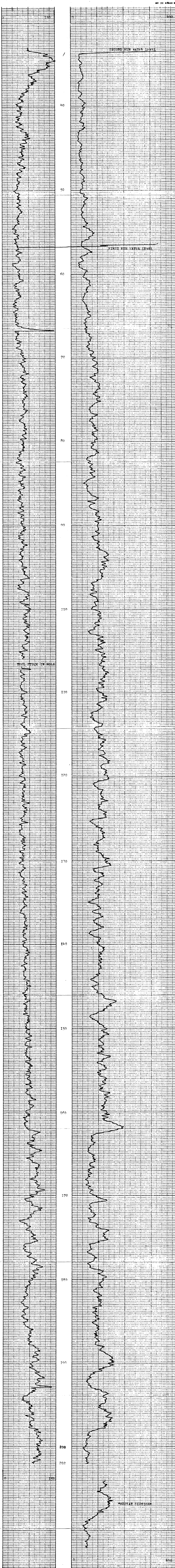
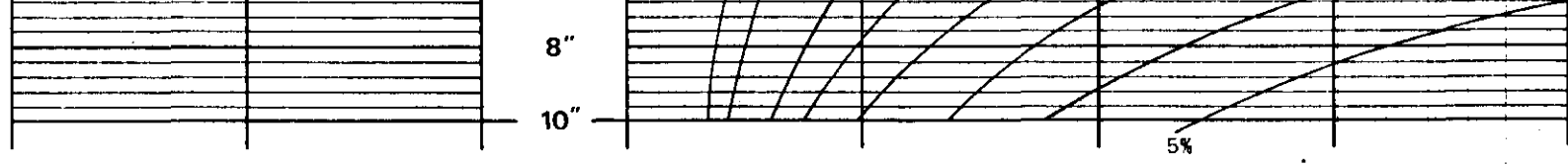
BOREHOLE 46-201  
CLIENT Crown West Resources Ltd.

AREA 311 CHINA  
COUNTRY CANADA  
DATE LOGGED 16/05/81  
2. OF 2 LOGS

BOREHOLE DATA  
OPERATION DATA  
EQUIPMENT AND RECORDING DATA

LOG TAPING PANEL  
LOG SPEED STICKS  
REMARKS  
167 (01)

DEPTH	NEUTRON-NEUTRON	GAMMA RAY
6"		
8"		
10"		



DEPTH	NEUTRON-NEUTRON	GAMMA RAY
198		
200		
202		



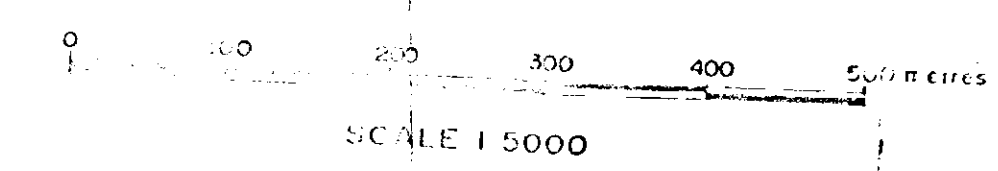
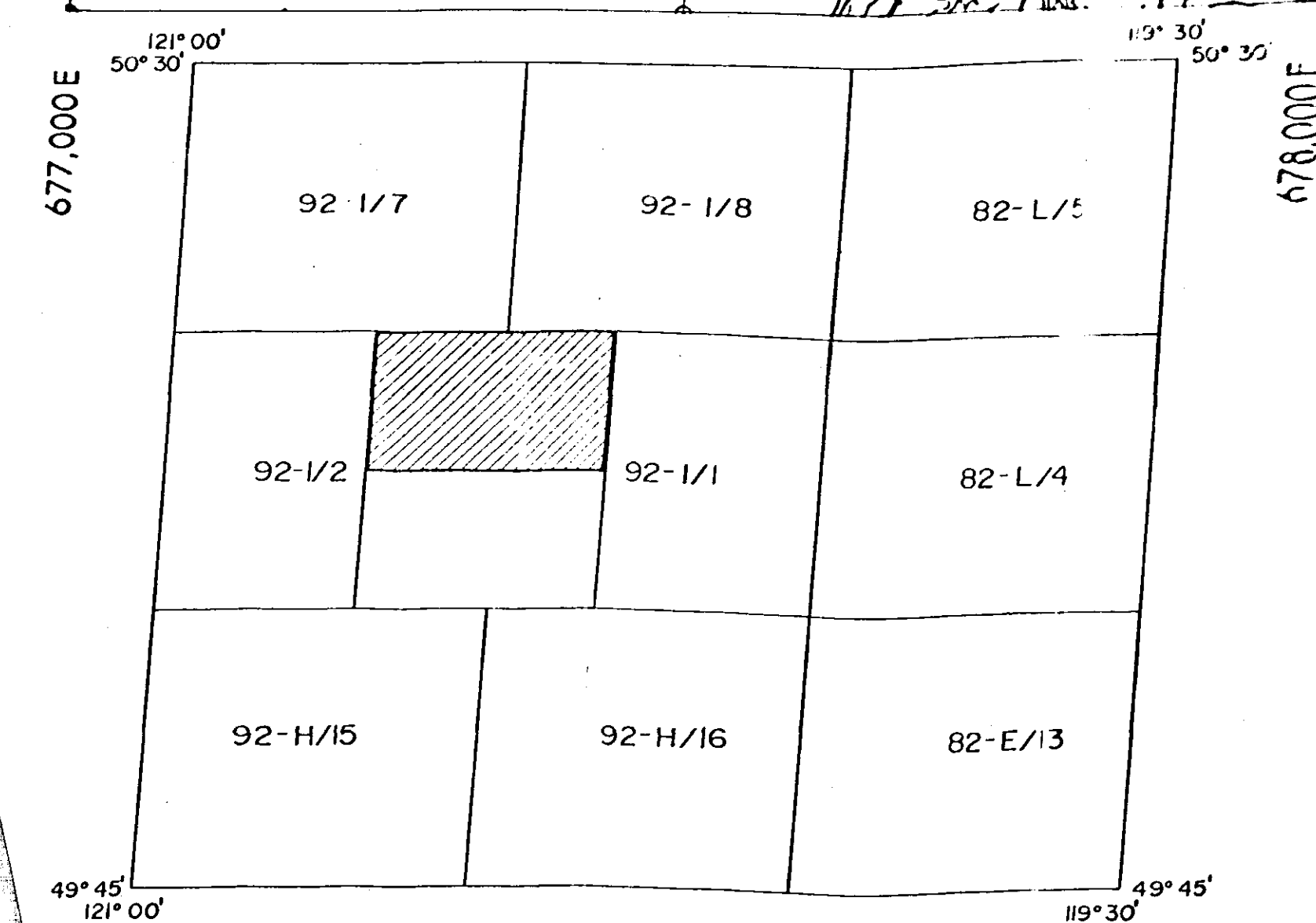
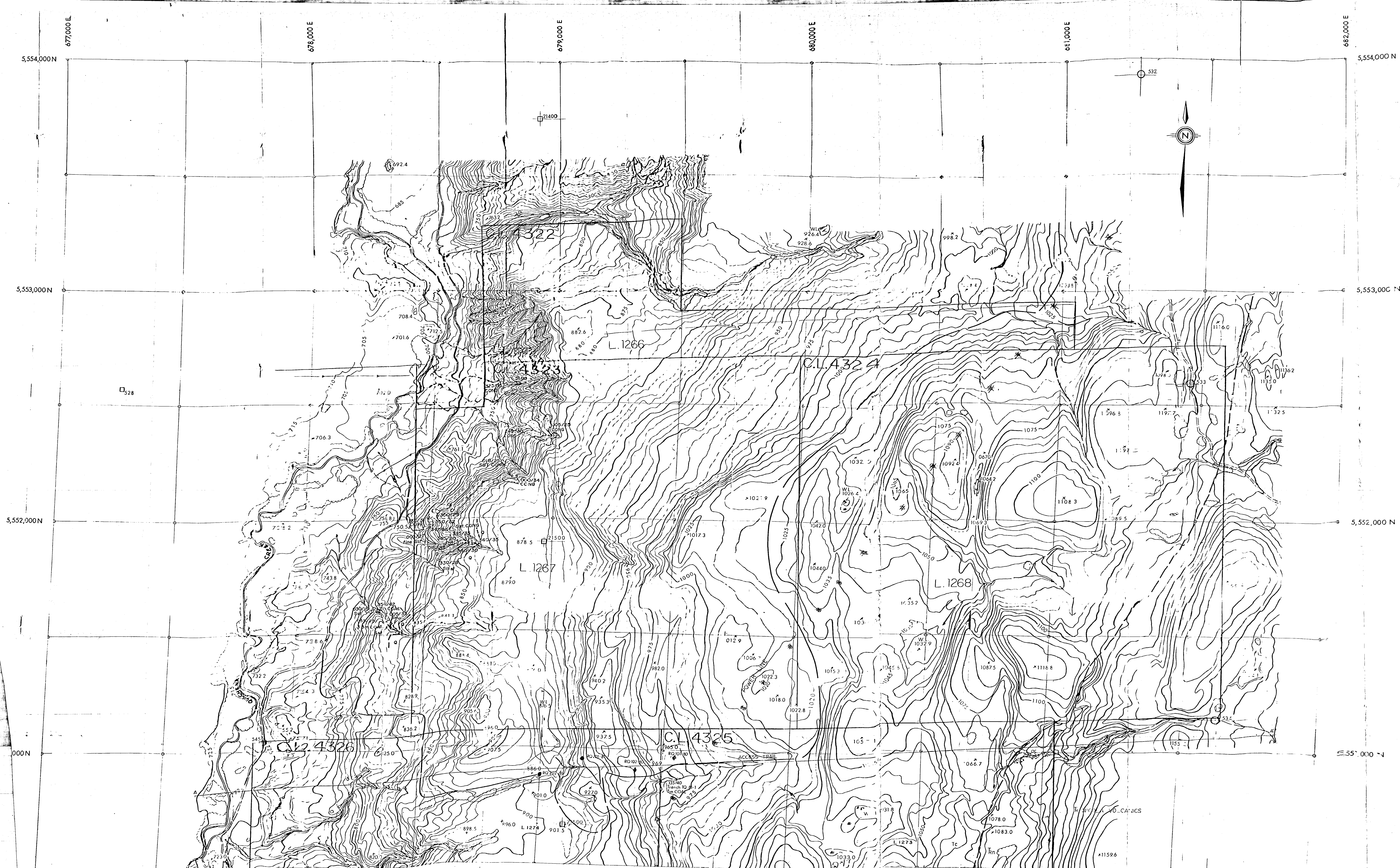






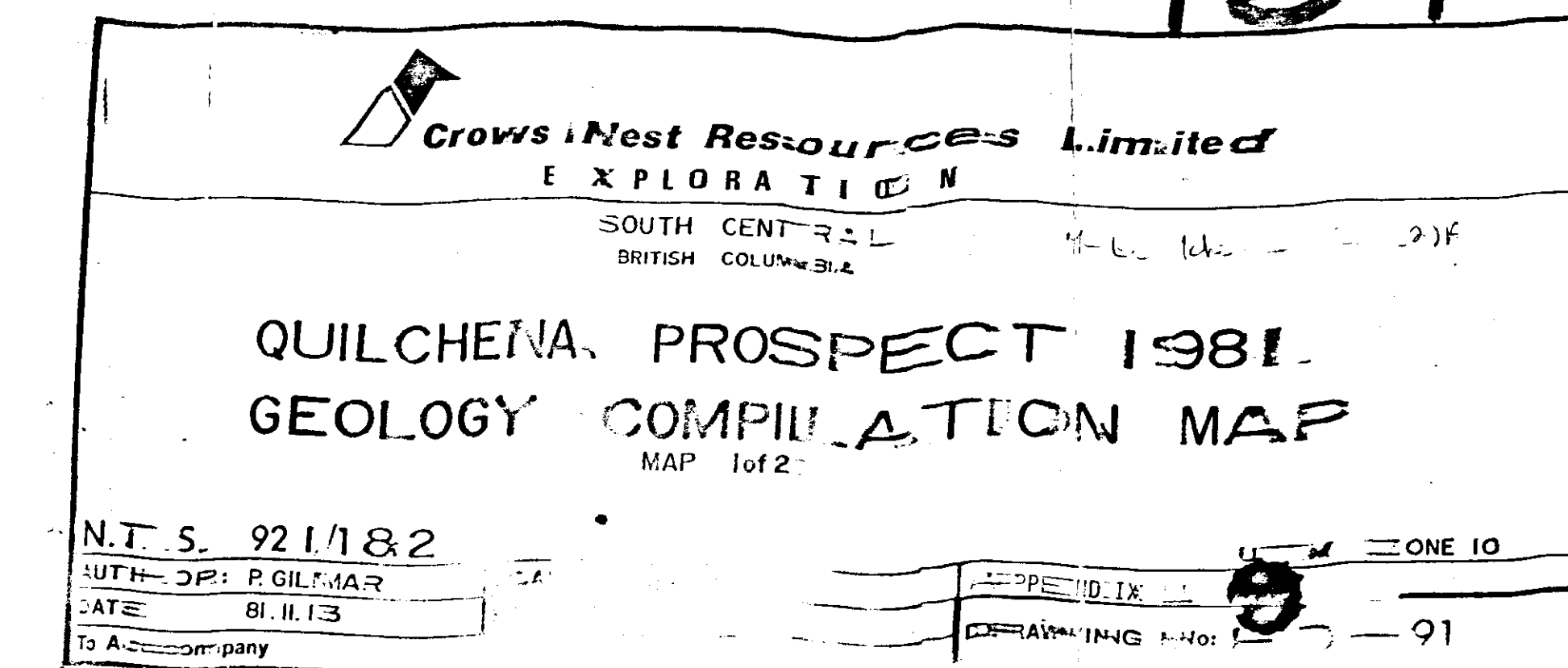






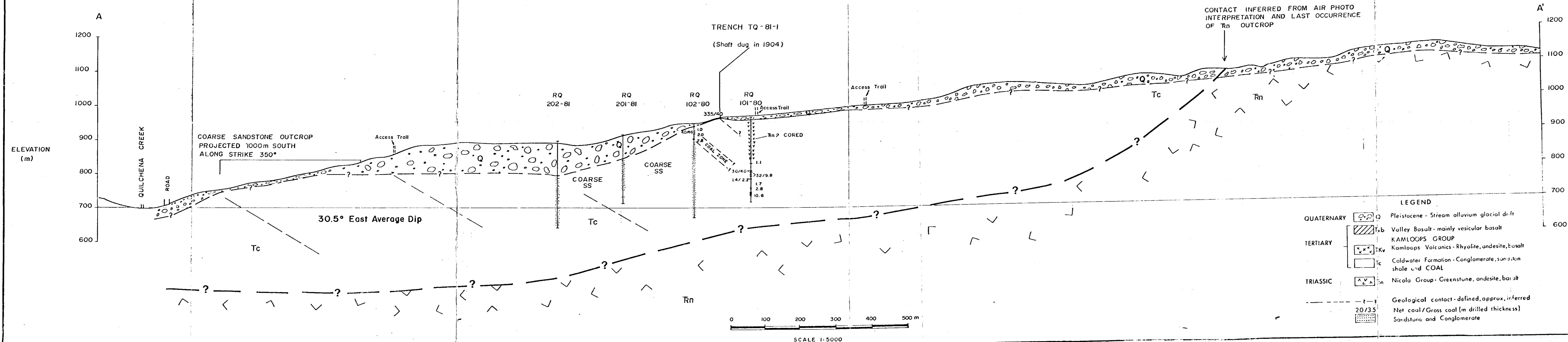
LEGEND

- 
- QUATERNARY Q Pleistocene - Stream alluvium, glacial drift
- Tvb Valley Basalt mainly vesicular basalt
- TEHIARY Kampolets Group
- Tkv Kampolets Volcanics - Rhyolite, andesite, basalt
- Tc Coldwater Formation - Conglomerate, sandstone shale and coal
- TRIASSIC Nicola Group Greenstone, andesite, basalt
- Access Trail (position approximate)
- Tc Tertiary / Triassic boundary
- Bedding Attitude
- Quaternary Cover
- Retary Drill Hole
- See Outcrop



INDIAN RESERVE

NICOLA PROVINCIAL FOREST



**167** (M02)

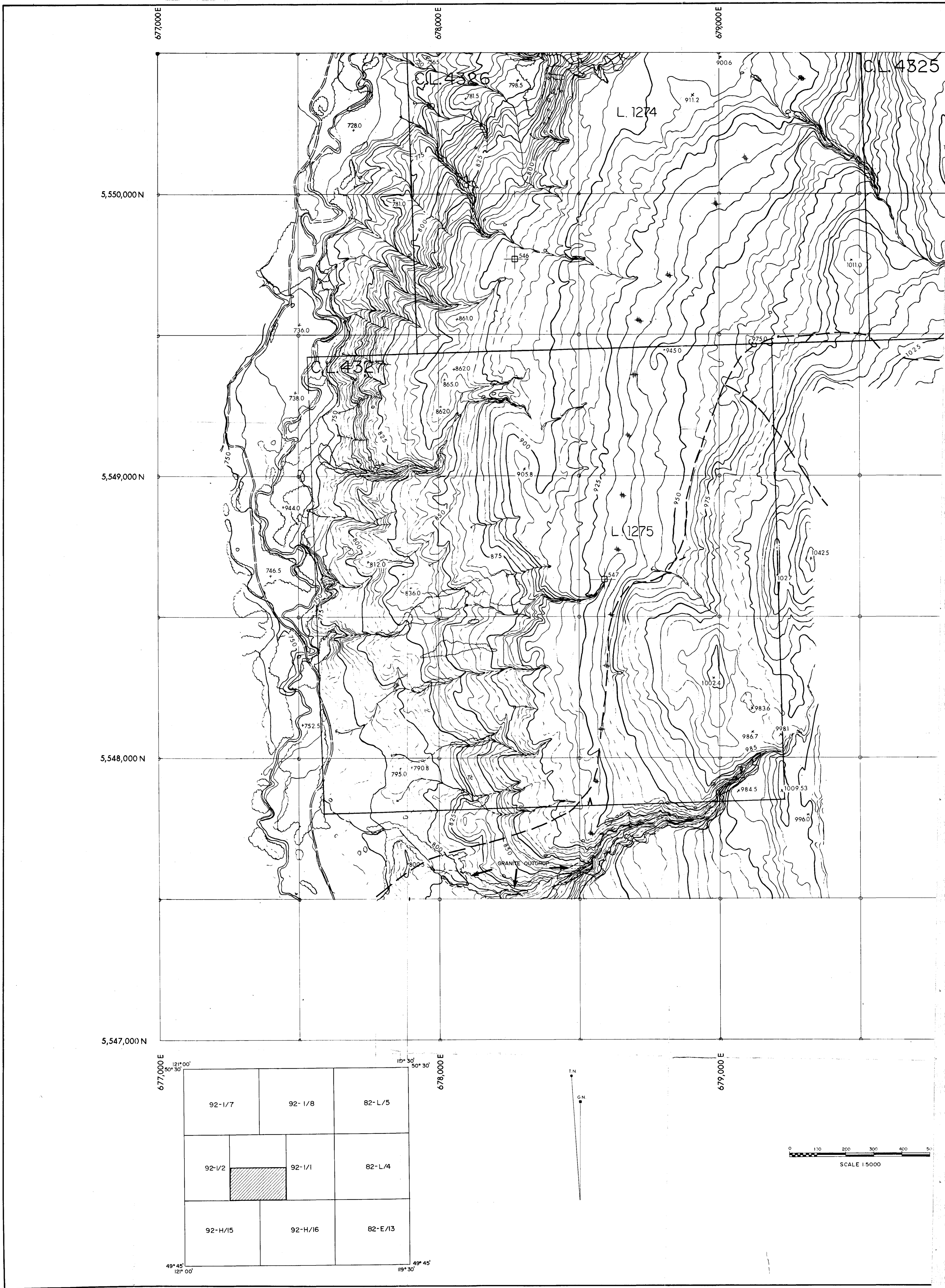
**Crows Nest Resources Limited**  
EXPLORATION

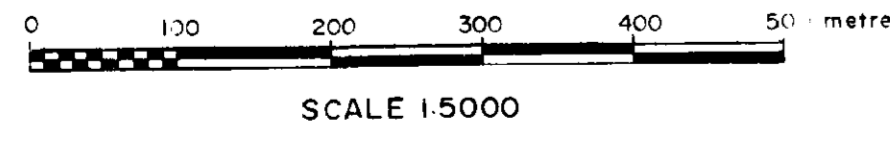
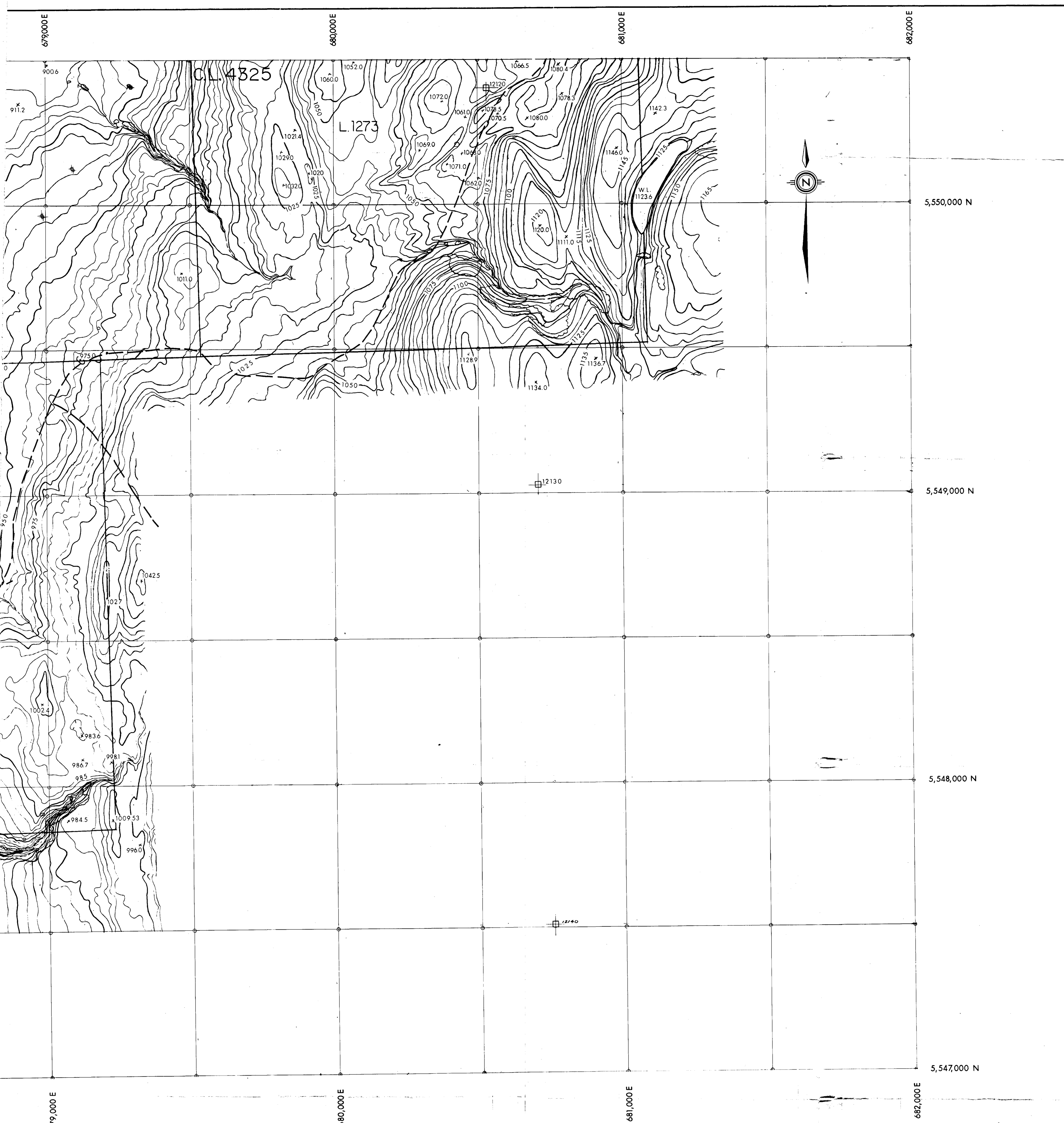
QUILCHENA  
BRITISH COLUMBIA

**CROSS SECTION A-A'**

AUTHOR: S. ABBOTT	SCALE: 1:5000	APPENDIX M
DATE: 81.11.30	REVISED:	DRAWING No. HE-91
To Accompany		

M03a






LEGEND

- QUATERNARY Q Pleistocene - Stream alluvium, glacial drift
- Tvb Valley Basalt mainly vesicular basalt
- TERTIARY
  - TKv Kamloops Volcanics Rhyolite, andesite, basalt
  - Tc Coldwater Formation - Conglomerate, sandstone, shale and Coal
- TRIASSIC
  - Nicola Group Greenstone, andesite, basalt
- Access Trail (position approximate)
- Tc Tertiary / Triassic Boundary
- Rn Bedding Attitude
- X 040/35 Quaternary Cover
- Rotary Drill Hole
- (OC) Rn Outcrop

167

**Crow's Nest Resources Limited**  
EXPLORATION

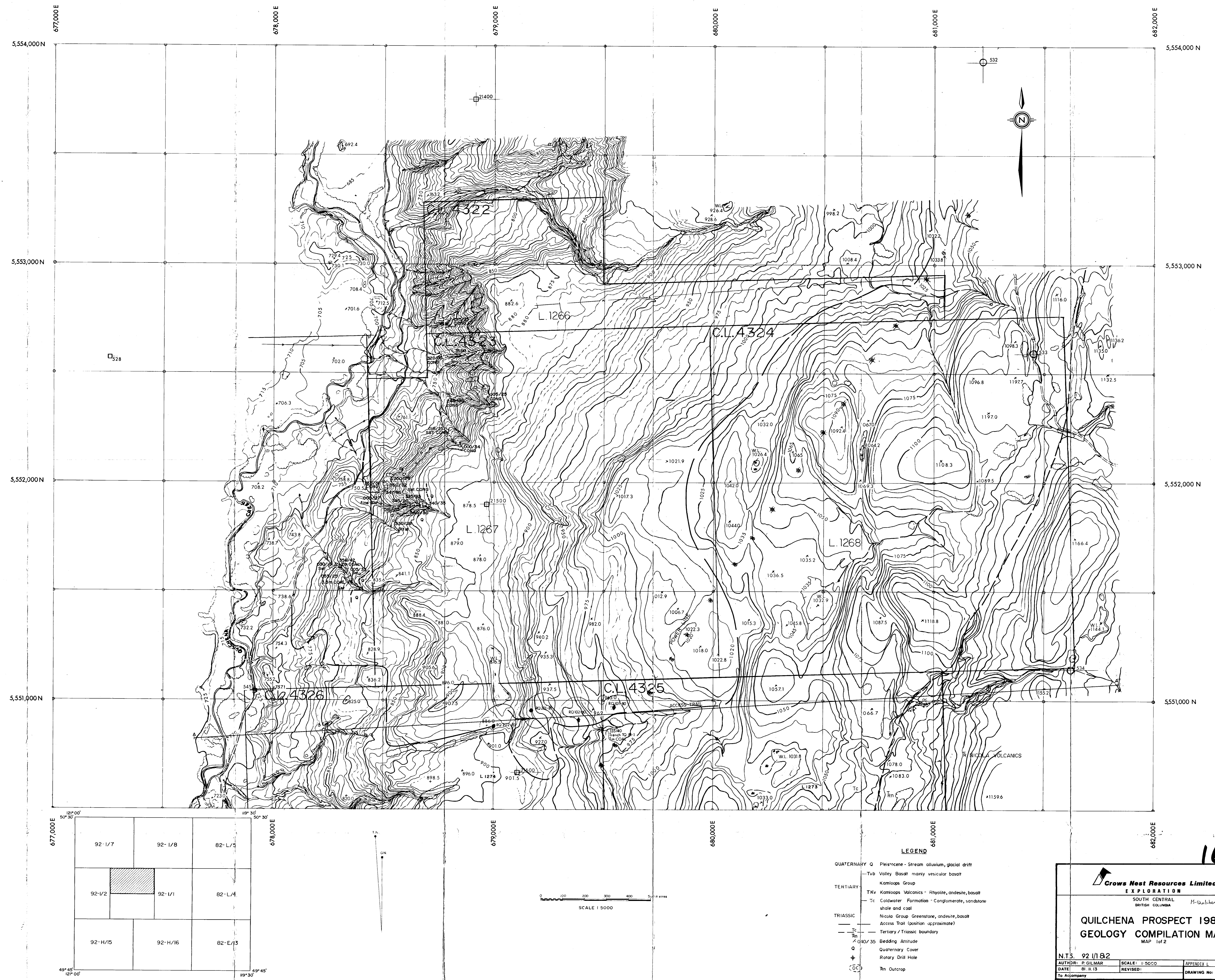
SOUTH CENTRAL  
BRITISH COLUMBIA

QUILCHENA PROSPECT 1981.  
GEOLOGY COMPILATION MAP  
MAP 2 of 2

N.T.S. - 92 1/182

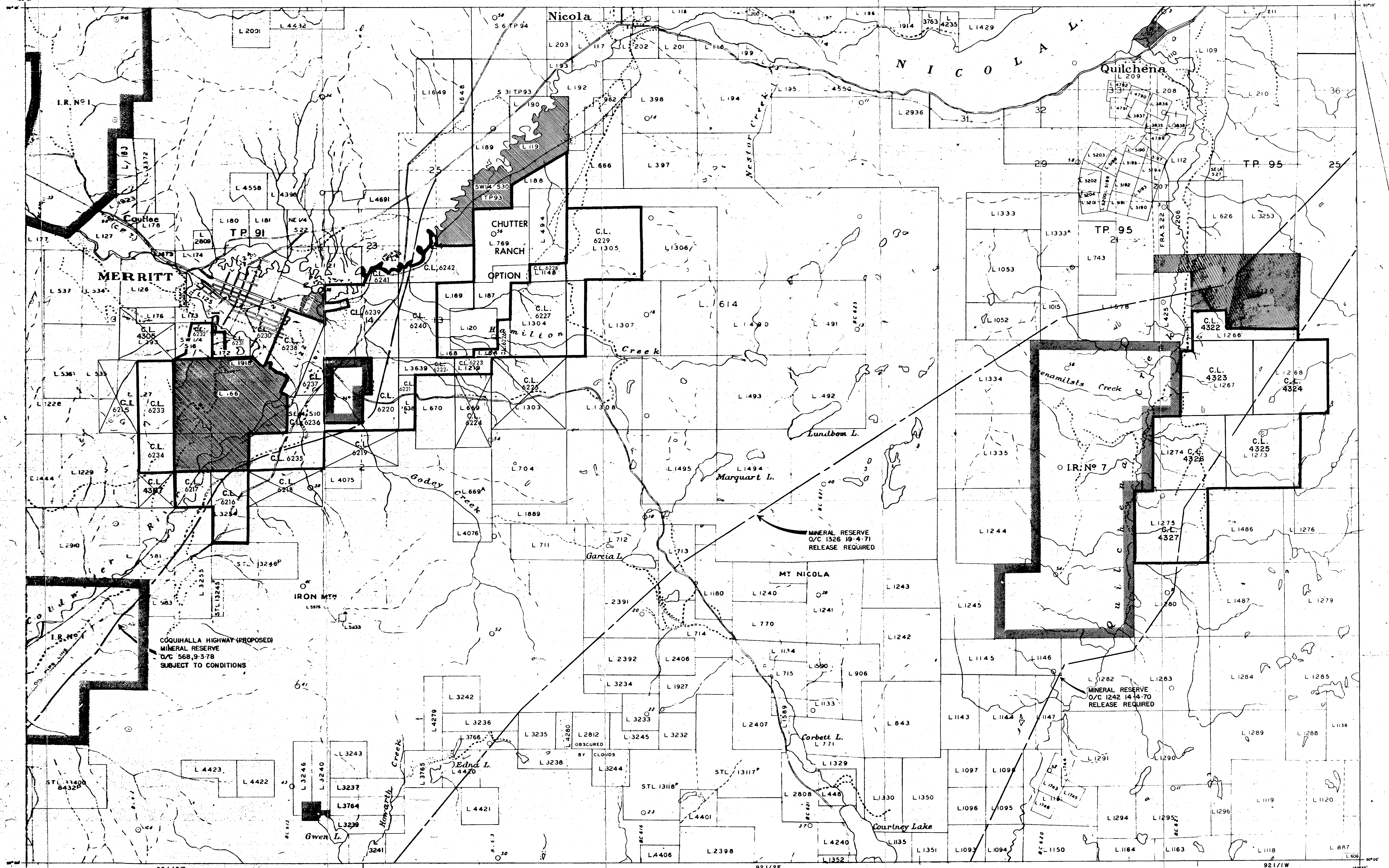
UTM ZONE 10

AUTHOR: P. GILMAR	SCALE: 1:5000	APPENDIX L
DATE: 81.11.13	REVISED:	DRAWING No: HD-91A
To Accompany		



# MERRITT COMPOSITE

1105



Drill hole  
 Proposed drill hole  
 Shaft  
 Adit  
 Trench or open cut

Open pit or stripped area  
 Seam tracing  
 Access road  
 Exploration road  
 Proposed exploration road

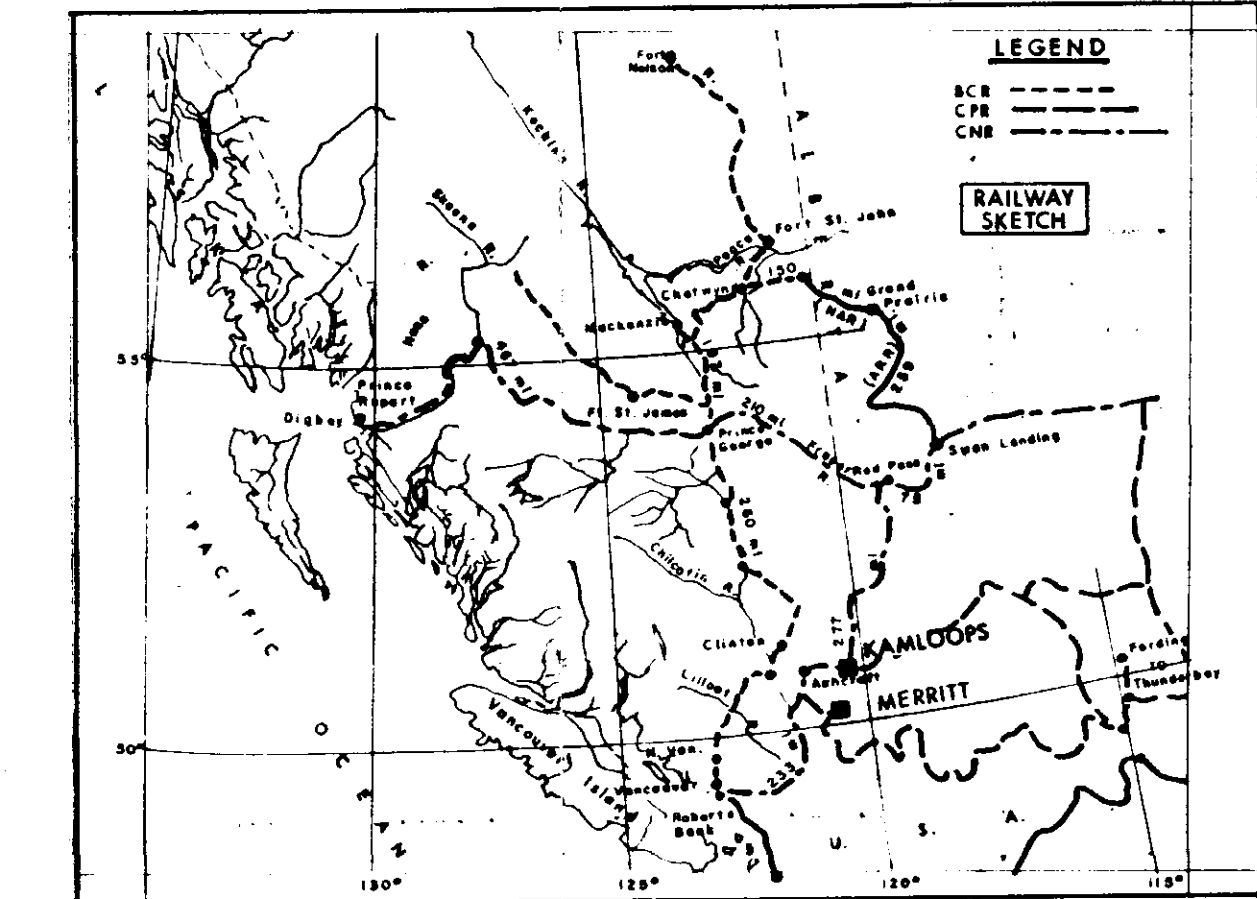
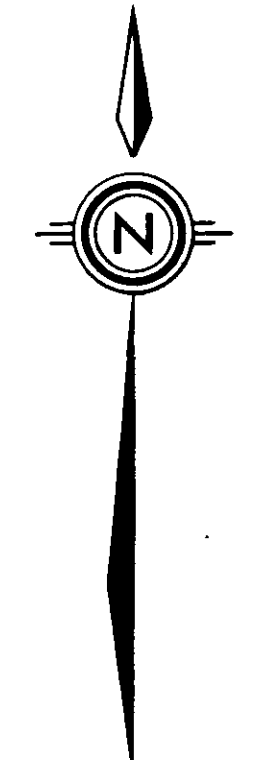
Alienated Coal Rights  
 Coal Licences  
 Forfeited Coal Licences

METRE 0 1000 2000 3000  
 SCALE 1:31,680

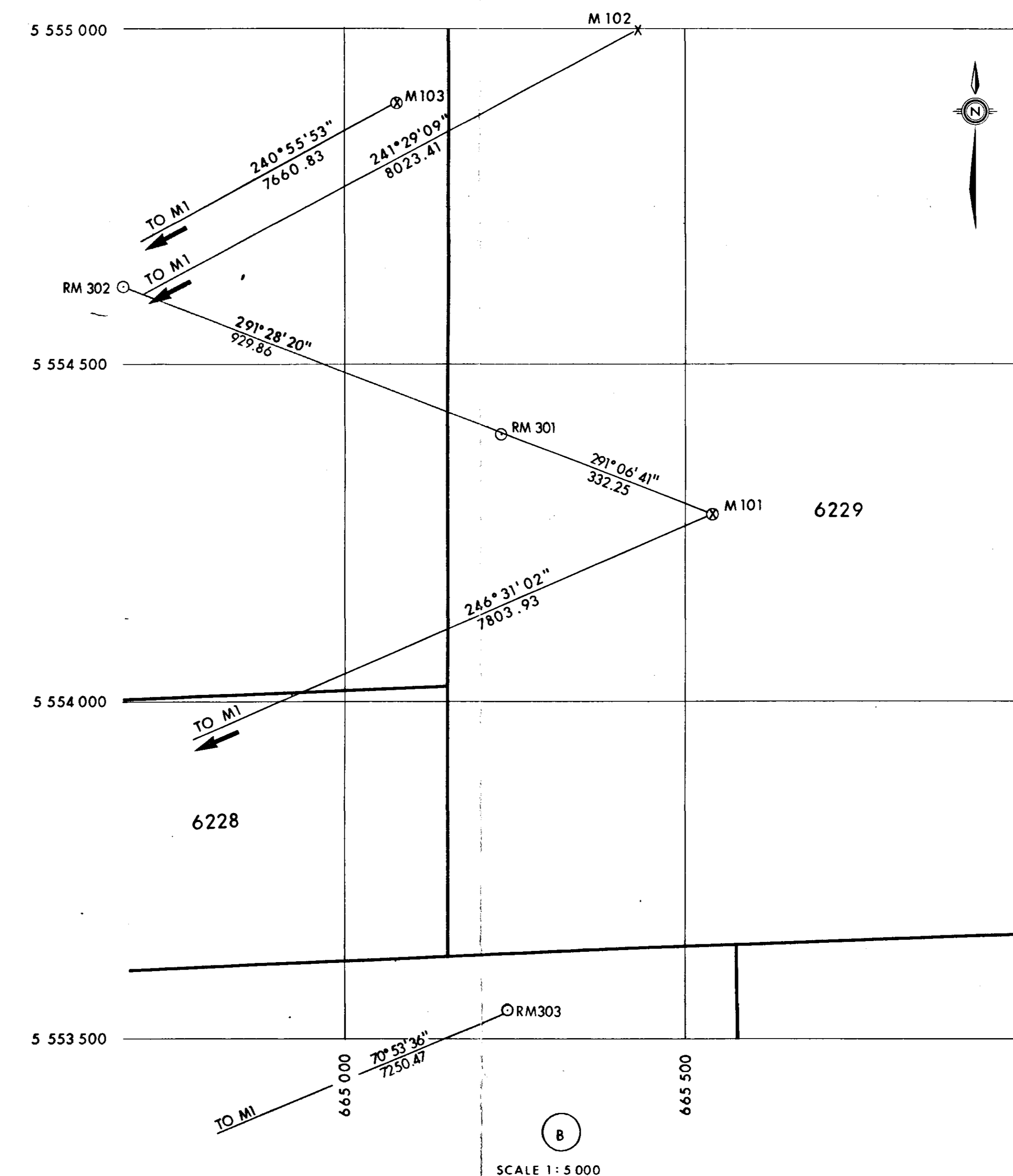
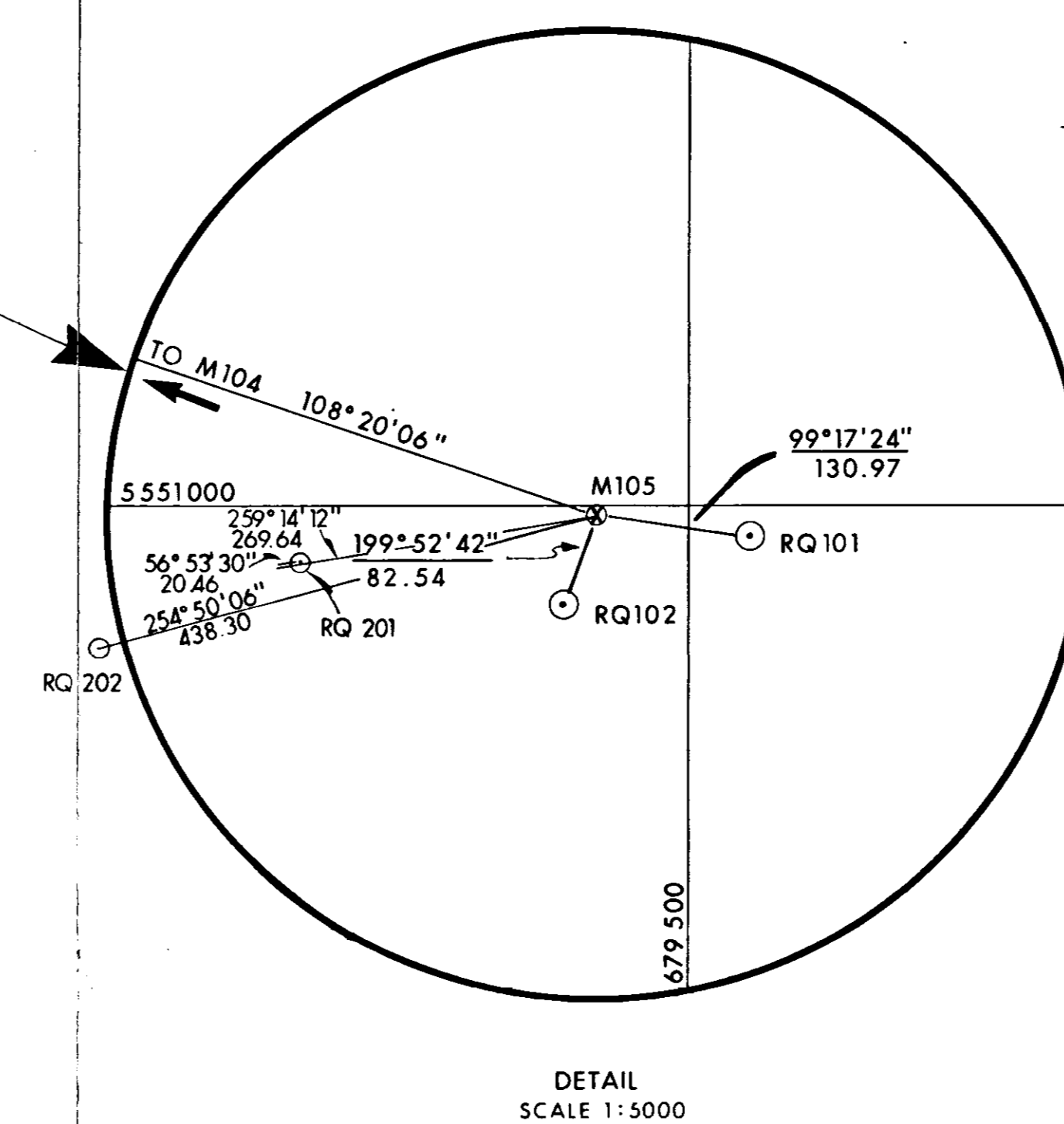
## COAL TITLES REFERENCE MAP MERRITT COMPOSITE

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 921/182 (Parts)  
 Aerial photographs dated 1946, 1949  
 Completed 16/11/78, by D.H.



<b>Crows Nest Resources Limited</b>		
EXPLORATION		
MERRITT AREA B.C.		
LAND MAP		
SHELL-CNRL LICENCES: MERRITT QUILCHENA (GROUP 234)		
921/182		
AUTHOR: COAL	SCALE: 1:31,680	APPENDIX D
DATE: FEB. 1979	REVISED: JULY 1981	DRAWING NO: HH-18
To Accompany		



STATION	NORTHING	EASTING	ELEVATION
IRON	5 546 250.73	660 666.38	1692.86
PHOM	5 542 093.82	644 836.04	1722.68
M 1	5 551 168.45	658 393.16	700.72
M 12	5 551 323.06	658 391.51	695.20
I 101	5 554 274.14	665 540.77	869.25
M 102	5 554 998.67	665 433.33	826.01
I 103	5 554 890.55	665 079.03	763.15
M 104	5 552 478.86	674 939.95	1210.40
M 105	5 550 291.29	674 937.12	1210.40
M 106	5 552 485.45	674 937.45	1207.12


RESITIVITY BASELINE			
0+00	5 551 862	657 522	
1+50 N	5 551 994	657 450	
3+00 N	5 552 125	657 377	
4+34N	5 552 242	657 312	
1+50 S	5 551 732	657 595	
3+50 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	5 552 044.762	687 784.33	608.24
RM 201 A	5 561 198.26	687 743.54	607.11
RM 202	5 551 831.75	578 783.33	605.73
RM 203	5 551 705.72	687 844.19	607.37
RM 204	5 561 149.01	687 783.90	607.37
RM 205	5 551 186.71	658 058.02	640.76
RM 206	5 560 879.50	687 917.87	606.01
RM 207	5 552 197.14	678 551.37	607.11
RQ 102	5 550 915.66	678 394.05	645.95
RQ 201	5 550 954.10	678 174.36	915.70 (cut)
RQ 202			
RM 301	5 550 878.82	678 999.99	896.41
			812.98 (cut)
RM 302	5 554 818.15	686 270.85	722.55 (cut)
			728.15 (cut)
RM 303	5 553 541.82	665 234.40	680.65 (cut)
			863.15 (cut)

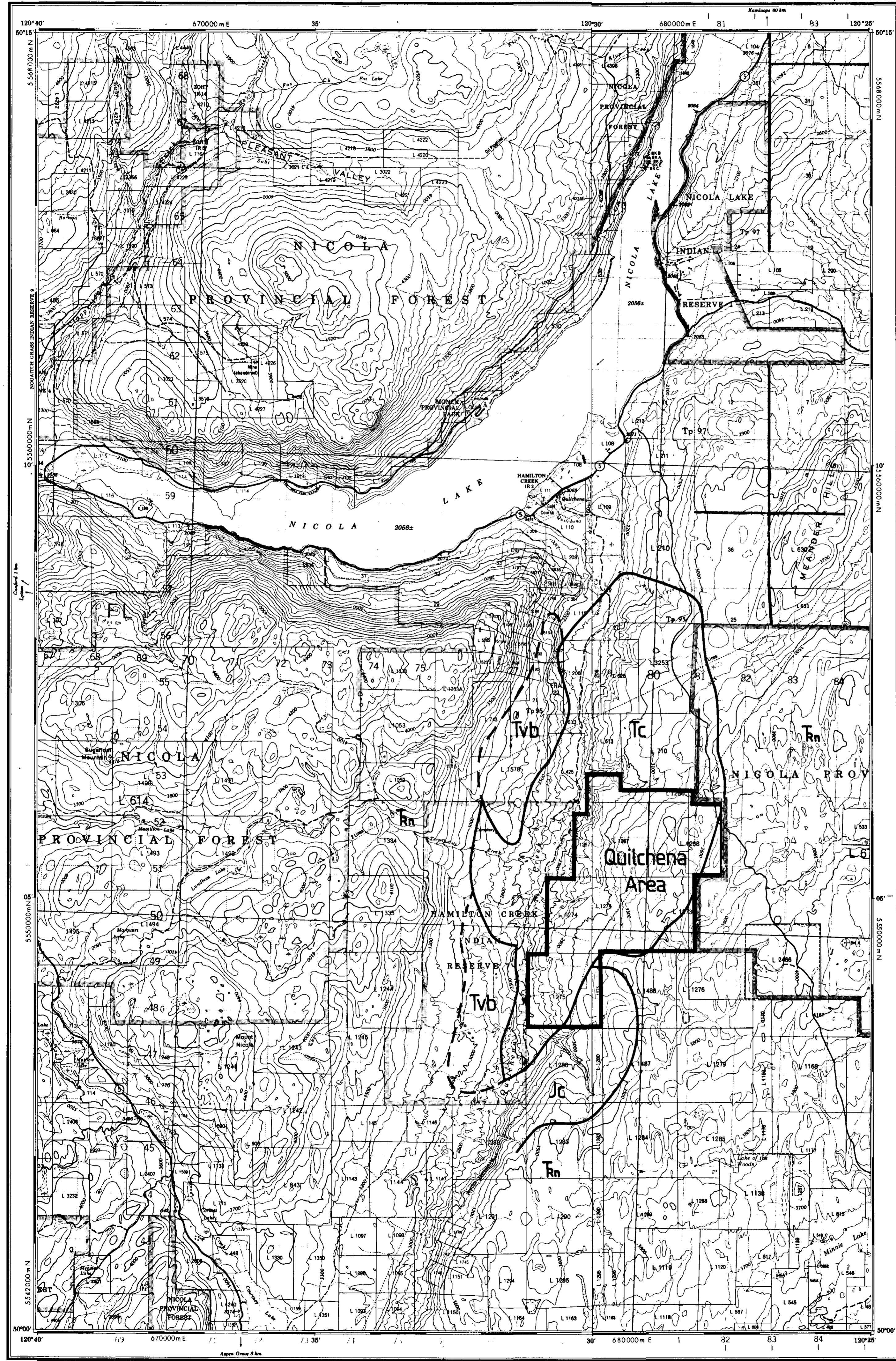
**LEGEND**

②	— 2 <sup>nd</sup> ORDER CONTROL STATION
●	— FOUND 12" SPIKE
X	— PLANT 12" SPIKE
⊙	— DRILL HOLE
⊗	— 3/4" REBAR

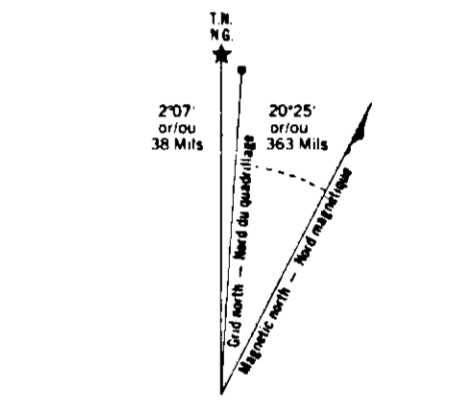
SURVEY DONE BY Sheltrech Canada, 1980.  
ALL DISTANCES ARE IN METRES AND HAVE BEEN REDUCED TO THE U.T.M. PLANE.  
ALL BEARINGS ARE REFERRED TO 123°W

		<b>Sheltech Canada</b>
<b><i>Crows Nest Resources Limited</i></b>		
<b>E N G I N E E R I N G</b>		
MERRITT - QUILCHENA S.E.B.C.		
TRAVERSE SURVEY MAP		
<div style="text-align: center; font-size: 2em; font-weight: bold;">167</div>		
<i>M-Quilchena 81(2)A</i>		
AUTHOR: SHELTECH DATE: 01/03/24 To Accompany	SCALE: AS SHOWN REVISED: 01/09/15	APPENDIX J DRAWING NO: <b>HA-69</b>

1:50,000



ABBREVIATIONS	ABRÉVIATIONS
Aband	Abandoned
C	Canary
CO	County
E	Elevator
Fy	Ferry
IB	Indian Reserve
H	Hospital
L	Lot
Micro	Micro-wave
Mun	Municipality
P	Post Office
PH	Power House
RCMP	Royal Canadian Mounted Police
Res	Reservoir
Trans Sta	Transformer Station
TFL	Tree Farm Licence



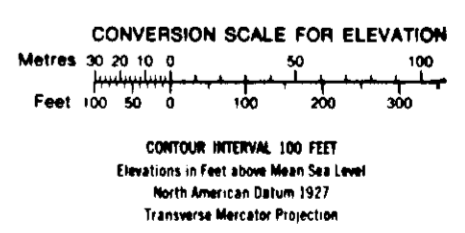
Utiliser le diagramme pour obtenir les valeurs numériques  
DECLINAISON MOYENNE APPROXIMATIVE  
AU CENTRE DE LA CARTE EN 1977  
Variation annuelle décroissante de 4"

ONE THOUSAND METRE  
UNIVERSAL TRANSVERSE MERCATOR GRID  
ZONE 10  
QUADRILLAGE DE MILLE MÈTRES  
TRANSVERSE UNIVERSEL DE MERCATOR

### LEGEND

- Tvb - VALLEY BASALT
- TKv - KAMLOOPS VOLCANICS
- Tc - COLDWATER BEDS
- Jc - COASTAL INTRUSIONS
- TRn - NICOLA VOLCANICS

Roads:  
hard surface, all weather .....  
hard surface, all weather .....  
loose or stabilized surface, all weather .....  
loose surface, dry weather .....  
unclassified streets .....  
cart track .....



121°00'	119°30'
50°30'	50°30'
92 U7	92 U8
92 U7	92 U1
92 U15	92 U16
92 U15	92 U13
49°45'	49°45'

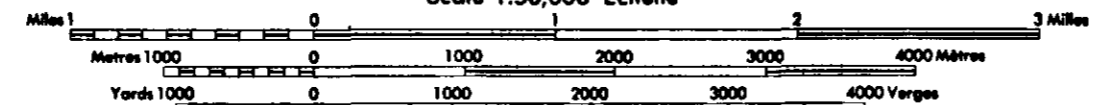
**Crows Nest Resources Limited**  
EXPLORATION  
QUILCHENA PROSPECTS  
REGIONAL  
GEOLOGY MAP

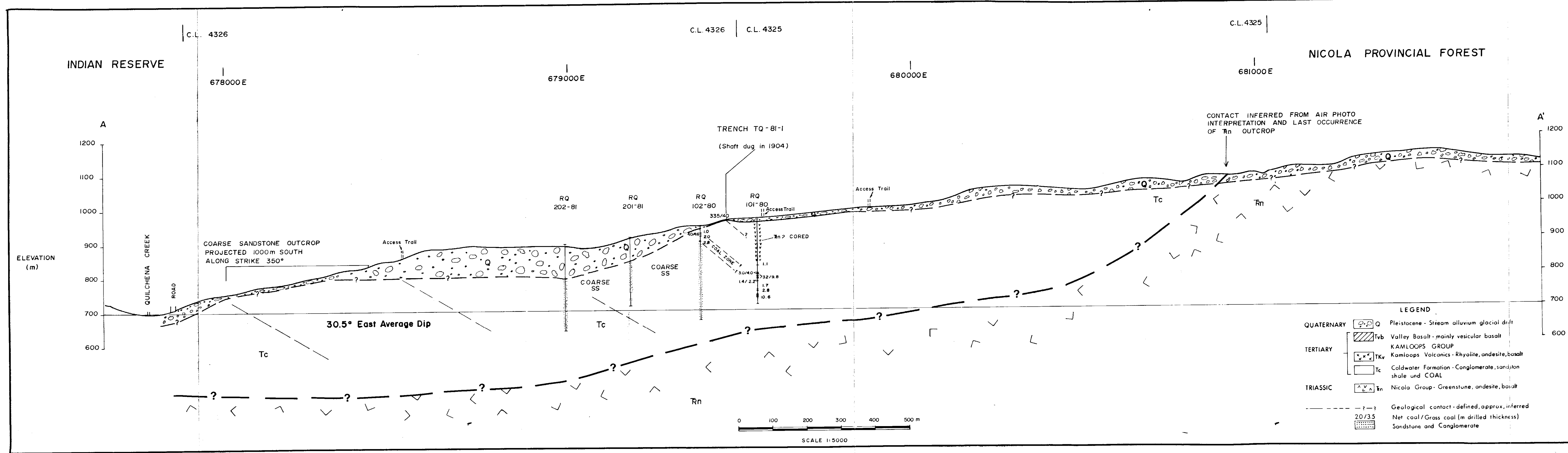
**167** (MOT)  
H. Quilchena 81(2)A

**APPENDIX K**  
AUTHOR: P. G. H. DATE: 81-03-17 SCALE: 1:50,000 REVISED: To Accompany DRAWING No: HE-70A

BRITISH COLUMBIA

Scale 1:50,000 Échelle





167 (108)

H. Quilchena 81(2)A

**Crows Nest Resources Limited**  
EXPLORATION

QUILCHENA  
BRITISH COLUMBIA

**CROSS SECTION A-A'**

AUTHOR: S. ABBOTT  
DATE: 81.11.30  
To Accompany:

SCALE: 1:5000  
REVISED:

APPENDIX M  
DRAWING No: HE-91