

BRALCO OPTION

1978 PROGRAMME OF TRENCHING & DRILLING

78-#518-#7106  
Cariboo Mining Division

NTS 93 A 14

53°54' N 121°19' W

R.V. Longe

Jan. 1979

Work performed on

<u>Lot No.</u>	<u>Name</u>	<u>Record No.</u>	<u>Owner</u>
3511	Surprise 4	] - 577	J. & M. Hajek
3513	Surprise 1		"
3514	Surprise 3	] - 578	"
3510	Surprise 2		"

Operator: Rio Tinto Canadian Exploration Ltd.

7106  
2 of 2

Bralco Option  
Cariboo Mining Division  
N.T.S. 93 A 14

SUMMARY

Nineteen reverted crown grants belonging to J. and M. Hajek were optioned by Riocanex and incorporated into its Cunningham Creek project for 1978.

270 metres of backhoe trench, dug to explore for massive sphalerite found at the collar of an old shaft, exposed two metres of sphalerite in limestone. Two holes totalling 192.3 metres, drilled to test continuity of sulphides down dip and on strike, did not intersect significant mineralization.

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## 1. INTRODUCTION

During 1976 and 1977 Riocanex explored occurrences of lead and zinc in shales and limestones in the vicinity of Cunningham Creek on a group of staked and optioned claims referred to as the "Cunningham Creek claims". Because they include a significant zinc showing in association with geochemical anomalies for both lead and zinc in soils, 19 reverted crown grants belonging to J. and M. Hajek were optioned and incorporated, as the "Bralco Option", into the Cunningham Creek claims.

Sphalerite is found in spoil from an abandoned shaft near the boundary between reverted crown grants L3510 and L3513. Trenching exposed about two metres of sphalerite-bearing limestone near to the shaft. Two holes were then drilled to test the down dip and on strike continuity of this sulphide bearing bed. The drilling did not intersect significant sulphides. It was concluded that lithologic continuity was absent and that no further testing of this target was warranted.

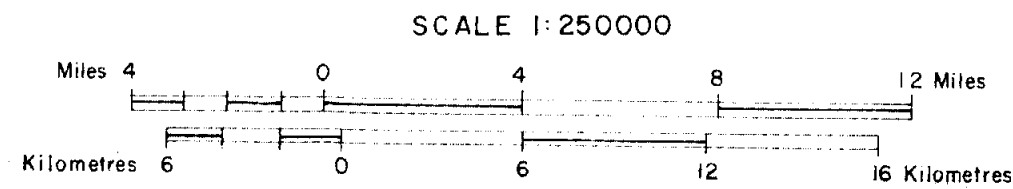
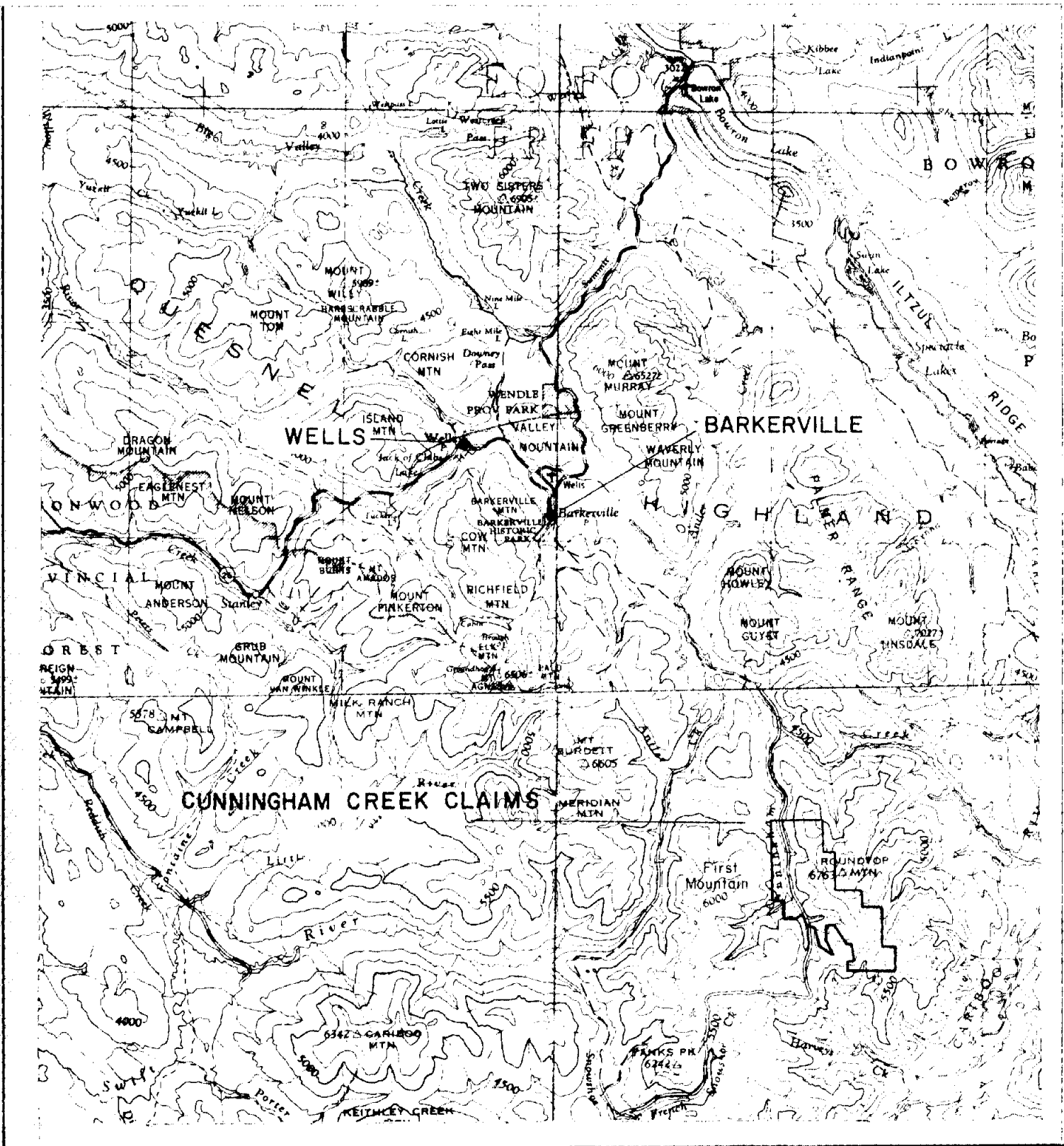
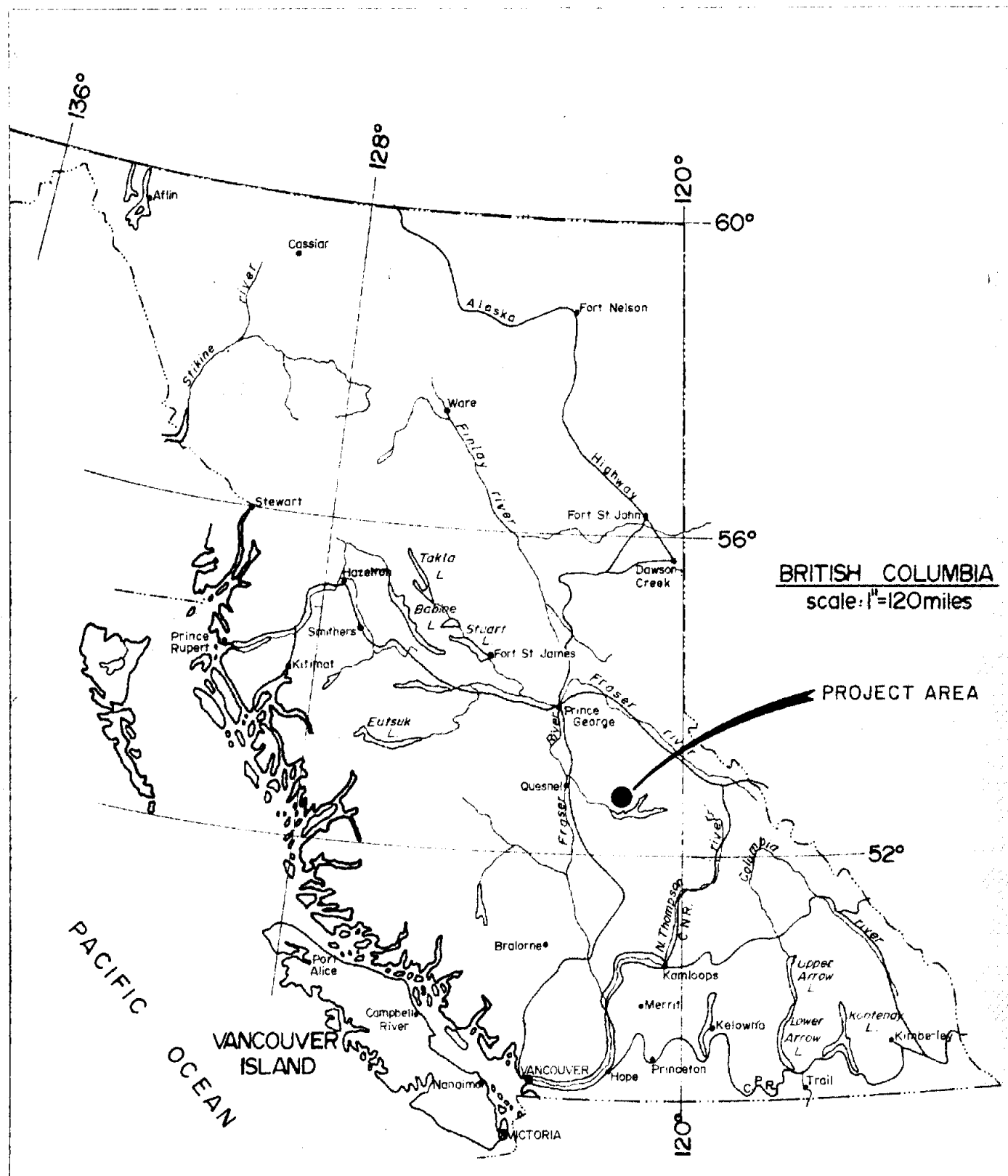
This assessment report has been written to meet an early due date on one of the optioned Bralco claims. The information contained incorporates information from a report by G.D. Hodgson, covering all the Cunningham Creek claims, due to be submitted in February.

## 2. LOCATION and ACCESS

The Cunningham Creek claims lie in central British Columbia, 80 km east of Quesnel, 150 km southeast of Prince George and 26 km southeast of Wells, (Figure 1). Access to Wells, and the restored village of Barkerville 10 km to the south, is by paved road from Quesnel. Barkerville and Roundtop Mountain are connected by a logging road and an old mining road which, when dry can be used by pickup trucks. Light planes can land on an airstrip between Wells and Barkerville. Helicopters can land in natural and artificial clearings on the claims. The Bralco crown grants lie at the South end of the Cunningham Creek claims.

NTS:

93 A 14



RIO TINTO CANADIAN EXPLORATION LTD.

BARKERVILLE PROJECT

LOCATION MAP

FIGURE I

JAN. 77 R.V.L./y.m. DWG L.-6450

3. CLAIMS

290 m of trenching and 193.2 m of drilling were carried out on the following four reverted crown grants.

L3511	Surprise 4	}	577
L3513	Surprise 1		
L3514	Surprise 3	}	578
L3510	Surprise 2		

The 19 crown grants belonging to J. and M. Hajek optioned as part of the Bralco option are listed below.

GROUP 7808			
	<u>NAME</u>	<u>LOT NO.</u>	<u>RECORD NO.</u>
1	Fourth of July	L9818	311
2	International 3	L3491	312
3	International 4	L3492	313
4	International 1	L3489	314
5	International 6	L3486	315
6	Dawn 2 Fr	L3494	316
7	Dawn Fr	L3493	317
8	Federal Fr	L3509	} 318
	Federal 1	L3507	
9	International 2	L3490	319
10	Peerless 3	L3499	} 514
	Hub Fr	L3500	
	Hub 2 Fr	L3498	
	Peerless 4 Fr	L3508	
11	Sedan	L3501	570
12	Peerless 2	L3502	571
13	Sedan 1	L3503	572
14	Peerless 1	L3504	573
15	International 7	L3487	} 575
	1 International Fr	L3495	
16	Surprise 6	L10940	} 576
	Surprise 7 Fr	L3512	
	Sedan 4 Fr	L3505	
17	Surprise 4	L3511	} 577
	Surprise 1	L3513	
18	Surprise 3	L3514	} 578
	Surprise 2	L3510	
19	Sedan 3	L3497	} 579
	Sedan 5 Fr	L3506	





#### 4. HISTORY AND PREVIOUS WORK

The area between Roundtop Mountain and First Mountain has been the scene of gold mining from placer operations since 1885. Gold mining from quartz veins began in 1922 in the vicinity of the Cariboo Hudson mine which adjoins the Bralco option to the southwest.

Previous exploration for base metals in the vicinity of the Bralco crown grants was by Coast Interior Ventures Ltd. between 1972 and 1974 and by Riocanex in 1978 and 1977. In addition J. Hajek, under contract to Kerr-Addison explored the area for large-tonnage gold deposits during 1974-5.

#### 5. REGIONAL GEOLOGY

Two adjacent belts, one of black shales the other of phyllites and schists, trend NNW-SSE through Wells, Barkerville and Roundtop Mountain. These two formations have been mapped by Holland (1954), and by Sutherland Brown (1957, 1963), both of the B.C. Department of Mines, and more recently by Campbell, et al, (1973), of the Geological Survey of Canada in the course of a regional programme.

The Department of Mines refers to the black shale unit as the "Midas" Formation and to the overlying (supposedly younger) phyllites and schists as the "Snowshoe". Both are placed in the Paleozoic. To the G.S.C. both formations are Proterozoic and the black shale unit (termed "Isaac") is younger than the neighbouring ("Kaza") schists.

The Bralco showing, lies near the contact between rocks mapped as "Snowshoe" and those mapped as "Midas".

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OMIT

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## 6. LOCAL GEOLOGY

The Bralco crown grants are underlain by dark grey to black graphitic shales, grey banded limestones and brown phyllites and siltstone. Massive sphalerite occurs in rock debris next to the shaft. Two grab samples taken in 1976 averaged 5.3% Pb; 15% Zn; 0.9 oz/ton Ag. Host to mineralization appeared to be one of several steeply dipping dark grey to black limestone units striking SSE in a zone about 100 m wide. The limestones are interbanded with black graphitic shales. A soil geochemical anomaly in both Pb and Zn parallels the strike of the local rocks.

## 7. WORK PERFORMED IN 1978

In 1978 a 255 m long trench was excavated across the anomaly and a 15 m trench dug along the strike of the mineralized carbonate unit. Samples were taken at 5 m intervals along the length of the trench. Two holes totalling 192.3 m were drilled to explore the mineralization at depth. Sixteen core samples were analysed for gold. DWG. 8646 includes trench plan and profile showing results of drilling and geochemistry.

## 8. PERSONS EMPLOYED

The trenches were dug with a skidder-mounted backhoe belonging to J. Hidber of Telkwa B.C. and the holes drilled by W. Magnussen of Wells B.C., both under contract to Riocanex.

The trenches were logged by K. Lim. G.D. Hodgson supervised the work and logged the drill core.

The programme was carried out under the overall supervision of the writer.

## 9. TRENCHING

Light grey-green and brown chlorite-sericite phyllites and siltstones were exposed in the eastern half of the trench. In the western half dark grey to black laminated limestones are subordinate to black graphitic shales. Irregular pods of massive fine-grained sphalerite and galena are hosted by a grey limestone. The limestone is silicified in part and has associated quartz veining.

Trench sampling indicated the presence of mineralization - one sample adjacent to the old shaft ran 12,700 ppm Zn and 20,800 ppm Pb. Elsewhere, another sample returned 1700 ppm Pb but with negligible Zn.

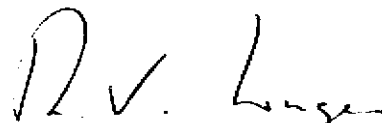
For results of geochemistry and drilling see Figure 3.

10. DRILL PROGRAMME

The two holes confirmed the continuation of silicified limestone to dip steeply eastwards, but the unit was barren of mineralization in both holes. DDH 78-9, collared south of the trench, intersected less limestone and less silicified rock. None of the core samples returned more than 30 ppb Au.

11. CONCLUSIONS

Lithologic units have little continuity along strike or down dip. Mineralization is patchy.



R.V. Longe  
January 1979

APPENDIX 1  
DRILL LOGS

















APPENDIX 2

ANALYSIS REPORT





APPENDIX 3

COST STATEMENT

COST STATEMENT  
B.C. BRALCO OPTION

DIAMOND DRILLING & TRENCHING  
9 JULY through 13 OCTOBER 1978

DIAMOND DRILLING

SALARIES & WAGES

1 man, 15 Aug-13 Oct, 60 days @ \$62.50/day	\$3,750.00
Employee benefits @ 25% of above	937.50

RIOCANEX EQUIPMENT

60 days @ \$3.00/day	180.00
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FIELD TRANSPORTATION

Bombardier, 24 Jul-2 Sep, 41 days @ \$52.50/day/5*	430.50
Redhawk 4WD PU, 15 Aug-13 Oct, 60 days @ \$25/day/5	300.00
Damage repairs, \$12,402/5	2,480.40

FOOD & ACCOMMODATION

1 man, 60 days @ \$13/day	780.00
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DIAMOND DRILLING

15 Aug-12 Oct, DDH 78-8/9, 192.3M @ \$58.03/M	11,159.16
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SUPPLIES

60 days @ \$16.03/day/5	192.36
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FUEL

60 days @ \$5.48/day/5	65.76
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REPORT PREPARATION

\$755/2	<u>377.50</u>
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DIAMOND DRILLING TOTAL	\$20,653.18
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Cont'd...P.2

TRENCHING

SALARIES & WAGES

1 man, 10-16 Jul, 7 days @ \$48.46/day	\$ 339.22
Employee benefits @ 25% of above	84.81

RIOCANEX EQUIPMENT

7 days @ \$3.00/day	21.00
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FIELD TRANSPORTATION

Redhawk 4WD PU, 10-16 Jul, 7 days @ \$25/day/5	35.00
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FOOD & ACCOMMODATION

1 man, 7 days @ \$13/day	91.00
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SUPPLIES

7 days @ \$16.03/day	112.21
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TRENCHING

John Deere 540, 10-16 Jul, 270M @ \$4.59/M	1,238.76
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FUEL

7 days @ \$5.48/day/5	7.67
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REPORT PREPARATION

%755/2	<u>377.50</u>
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TRENCHING TOTAL	<u>\$ 2,307.17</u>
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TOTAL DRILLING & TRENCHING	<u><u>\$22,960.35</u></u>
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\*Apportioned between five concurrent field projects.

APPENDIX 4

STATEMENT OF QUALIFICATIONS

STATEMENT OF QUALIFICATIONS

R.V. Longe

ACADEMIC

1961	B.A.	Natural Sciences Tripos, (Geological Sciences)	Cambridge University
1965	M.Sc.	Geology	McGill University

PRACTICAL

1969 - present	Rio Tinto Canadian Exploration Ltd.	Vancouver, B.C.
	Geologist involved in various aspects of mineral exploration in B.C., Yukon, and Alaska.	
1967 (summer)	Amax Exploration	
	Geological mapping of Guichon Batholith, B.C.	
1965 - 1966 (summers)	Selco Exploration Limited,	
	Geological Mapping of Archean Greenstone belt south of James Bay, Ontario	
1964	West African Selection Trust	
	Diamond exploration in Ivory Coast and Mali, West Africa.	
1962 - 1963	Consolidated African Selection Trust Ltd.,	
	Mine Geologist, Akwatia, Ghana	
1961	Serra Leone Selection Trust Ltd.,	
	Geologist, reserve development department	
	Yangema Mine, Sierra Leone	

16. STATEMENT OF QUALIFICATIONS

G.D. Hodgson

Professional

P. Geol. Association of Professional  
Engineers, Geologists &  
Geophysicists of Alberta

Academic

1972 BSc (Hons) Geology Exeter University, U.K.

1976 MSc Geology University of Alberta

Practical

1978 - present Riocanex, Ltd., Vancouver, B.C.  
Geologist, party chief, mineral exploration,  
trenching and diamond drill supervision,  
central and northern B.C.

1977 (summer-fall) Riocanex, Ltd., Vancouver, B.C.  
Party chief, mineral exploration, geological  
mapping, trenching, diamond drill super-  
vision, west coast and central B.C.

1977 (winter) Dept. of Geology, U of A, Edmonton, Alta.  
Research Assistant - slope stability and  
landslide studies.

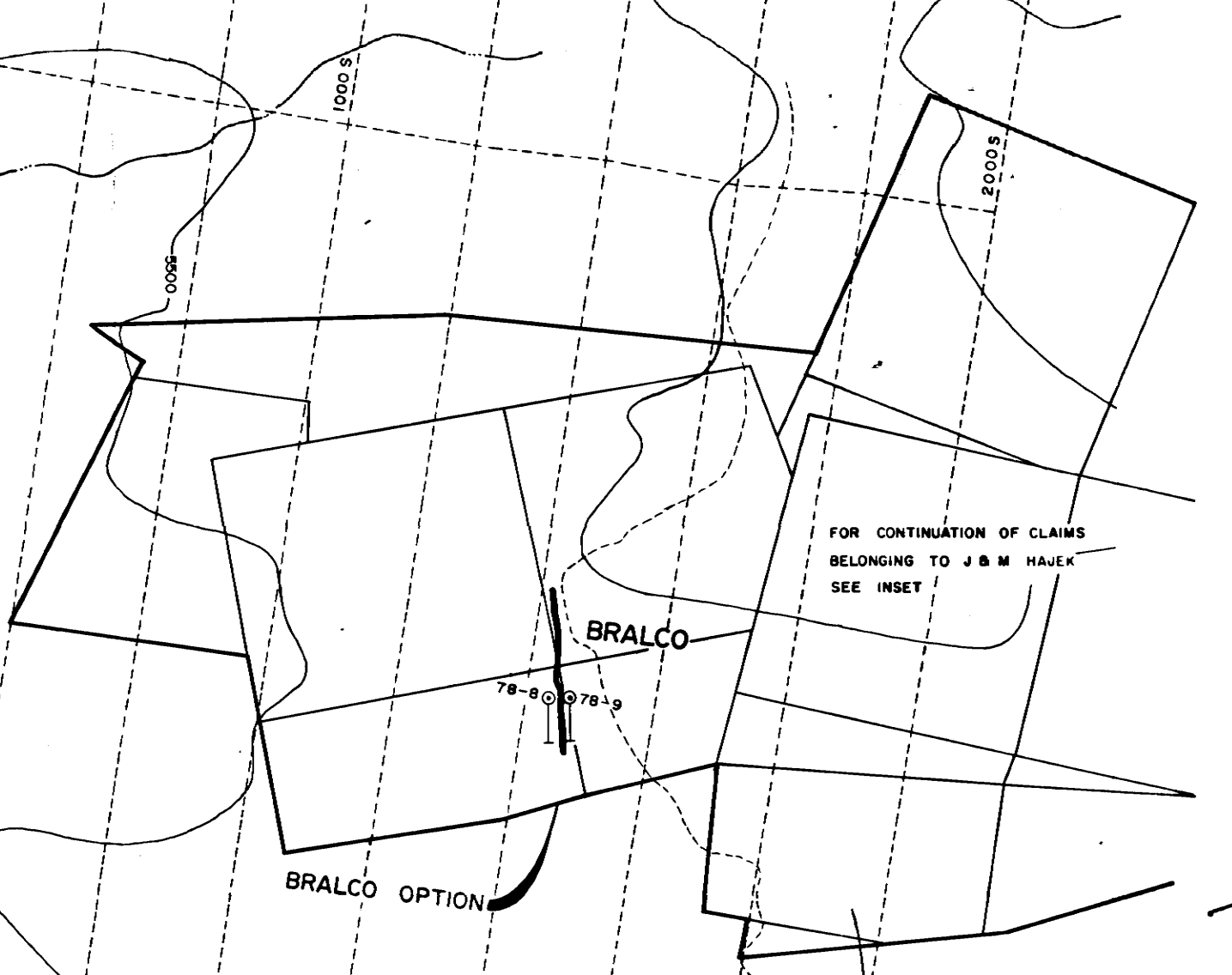
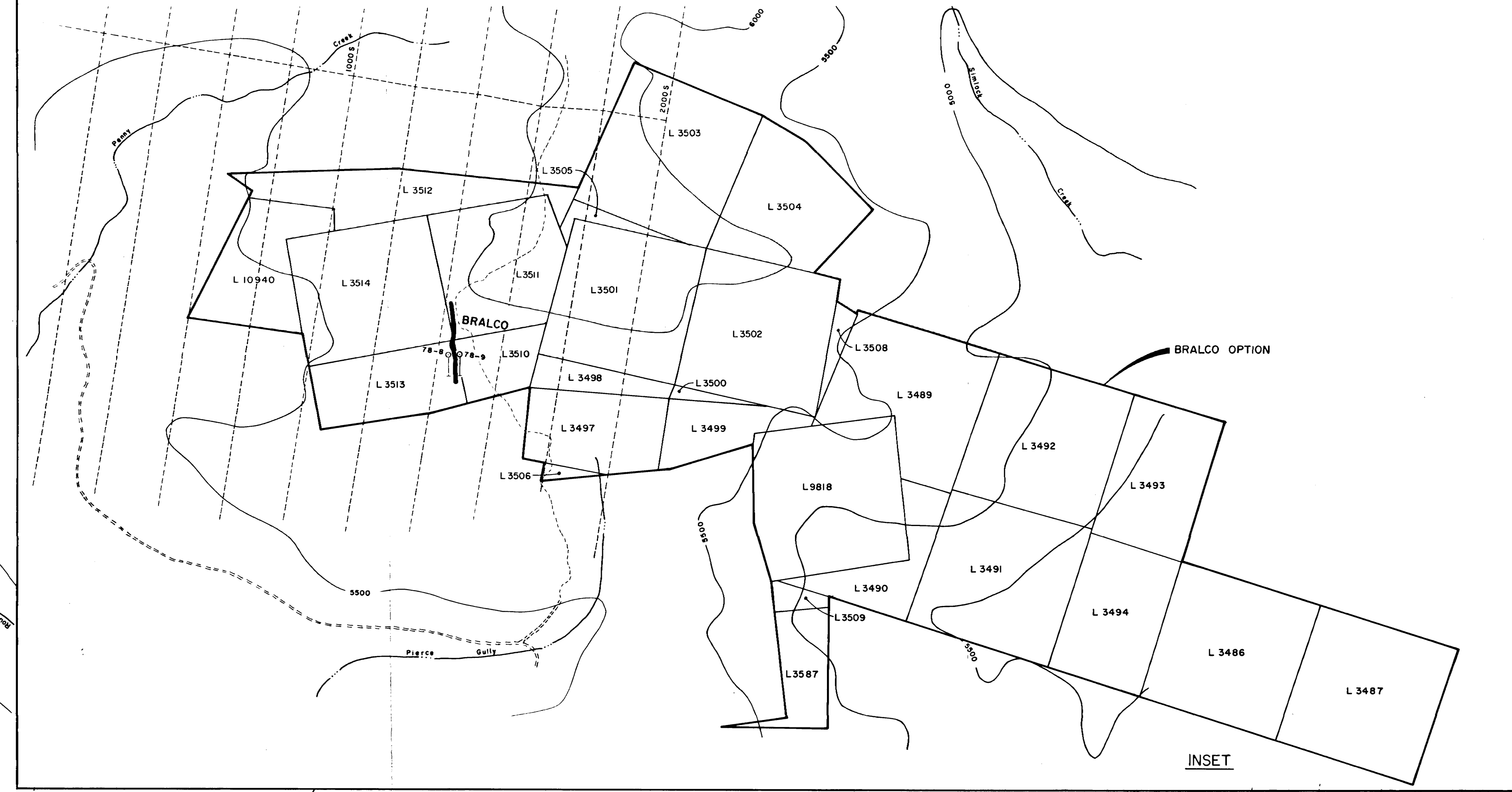
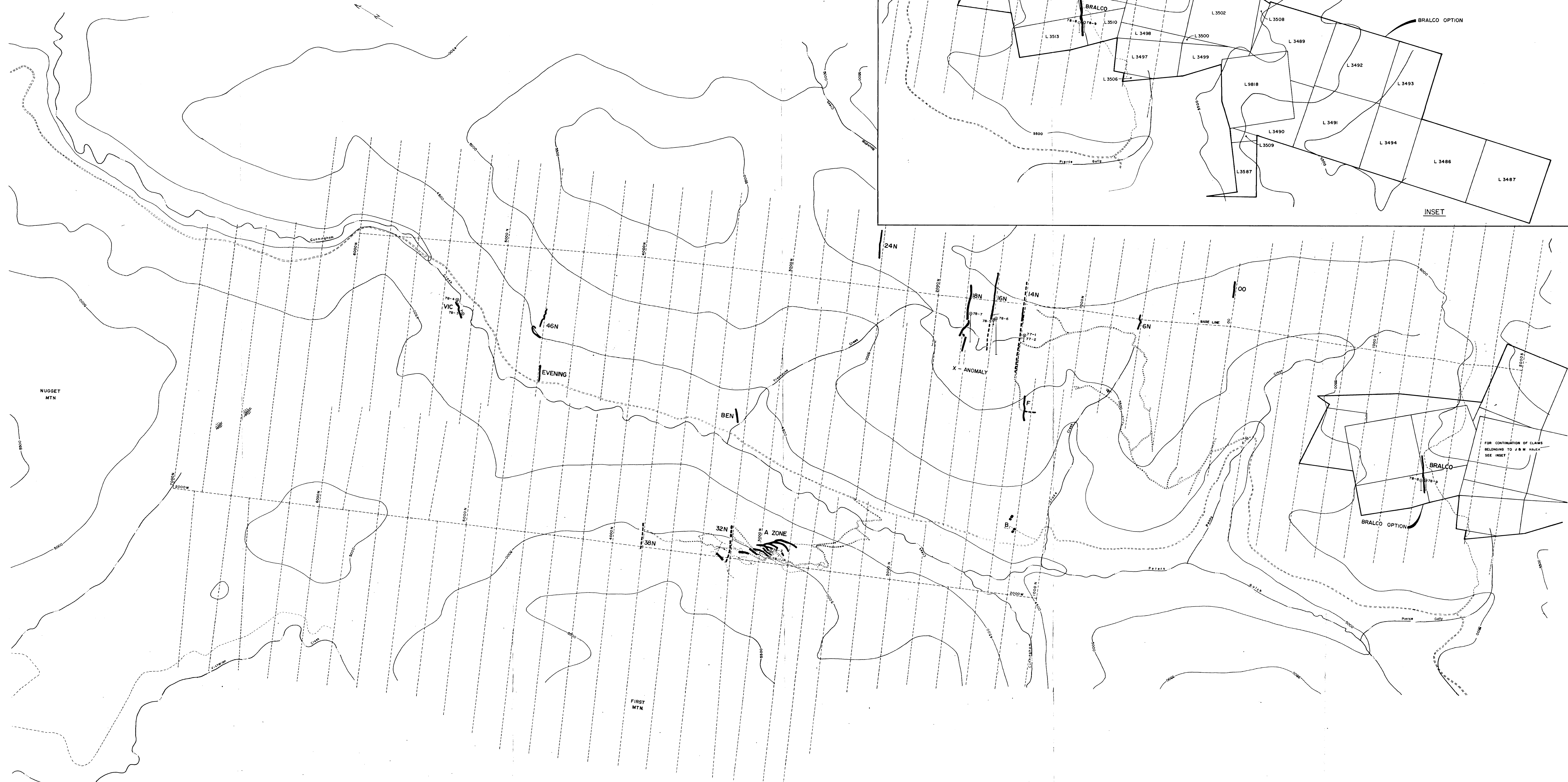
1976 (summer) Cominco Ltd., Vancouver, B.C.  
Party Chief: mineral exploration and  
diamond drill supervision, southern B.C.

Practical (Cont 'd)

- 1974-1975 Pine Point Mines, Ltd., N.W.T.  
Mine geologist (exploration), diamond  
drill supervision.
- 1973 (summer) Alberta Research Council, Edmonton, Alta.  
Geological mapping, uraniferous metasedi-  
ments and granites, NE corner of Alberta.
- 1972 (summer) Dept. of Geology, U of A, Edmonton, Alta.  
Mapping and thesis data collection Giant  
Mine, Yellowknife, N.W.T.
- 1970-71 (summers) Geological Survey of Greenland, Copenhagen,  
Denmark. Geological mapping of East  
Greenland Caledonides.
- 1969 (summer) British Schools Exploring Society,  
London, U.K. Surveying, Nn. Newfoundland.







**LEGEND**

- Tranching 1978
- - - Tranching 1977
- - - Sample line 1977 & 1978
- Diamond drill hole

N.T.S. 93 A  
SCALE 1:10,000  
200 400 600 800 Metres

242  
MINERAL INVESTMENTS CONSULTANTS ASSOCIATION REPORT  
**7106**

RIO TINTO CANADIAN EXPLORATION LIMITED  
CUNNINGHAM CREEK CLAIMS  
WORK PERFORMED IN 1978  
& LOCATION OF BRALCO OPTION  
S. G. JAN. 1979 DWG L-8658