

PROSPECTING REPORT  
OF THE  
COT AND BULL CLAIMS  
MESS LAKE AREA, LIARD MINING DIVISION, B.C.  
BY  
A. I. BETMANIS, P.Eng.

Claims: COT (1593), 6 Units  
BULL (1594), 3 Units  
Location:  $57^{\circ} 27\frac{1}{2}'$  N;  $130^{\circ} 54'$  W.  
N.T.S: 1048/7W  
Owner: K. N. Cottrell, Dease Lake, B.C.

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## INTRODUCTION

Ken Cottrell, a trapper operating trap lines in the Mess Creek and Schaft Creek valleys, staked the COT and BULL claims in August 1980 to cover various copper and silver showings he had located while trapping near Mess Lake. These claims were submitted to Teck Explorations Limited, who are exploring the Liard Copper Mines Ltd. porphyry copper-molybdenum deposit at Schaft Creek. In return for a first refusal of the claims, Teck agreed to use the cost of examination and prospecting of the claims to one year's assessment credit. The writer spent one day, July 16, 1981, in examining and prospecting the claims.

### (a) Location and Access

The claims are located on a steep mountain side 1 km. southwest of the southwest corner of Mess Lake, approximately 51 km. south-south east of Telegraph Creek and 71 km. southwest of Iskut, B.C., in the Liard Mining Division. Geographical coordinates are  $57^{\circ} 27\frac{1}{2}'$  N,  $130^{\circ} 54'$  W (NTS 1046/7W). Elevations on the property vary from 730 to 1740 metres above sea-level.

Access to the property is by helicopter only. Fixed wing aircraft strips close-by are located at Schaft Creek and Iskut, and are serviced by Trans Provincial Airlines from Terrace on a semi-scheduled basis. Float planes can be chartered out of Iskut or Dease Lake to land at Mess Lake.

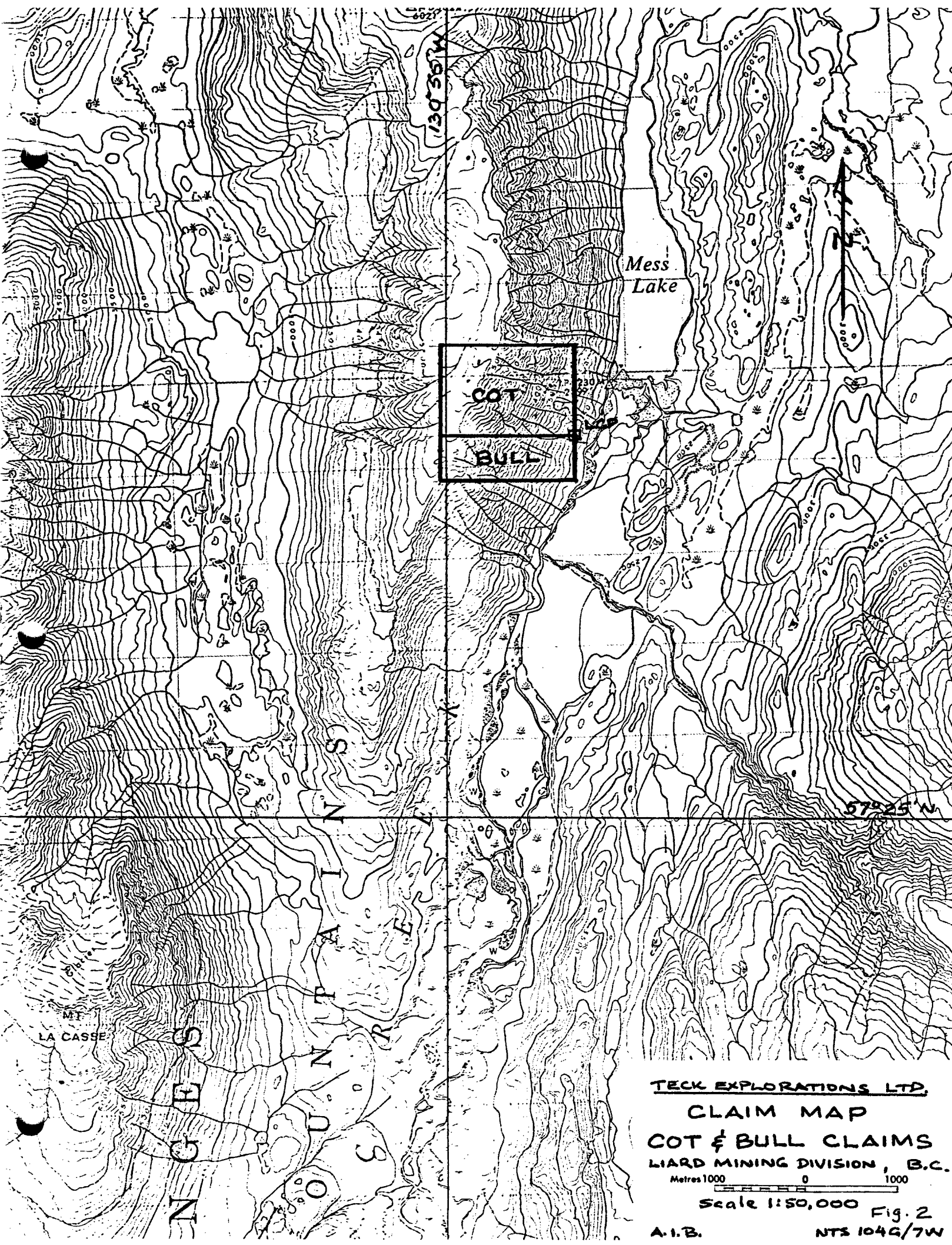
### (b) Property and Ownership

The property at one time was covered by part of a large claim block held by Hecla Operating Company. However, no exploration work is known to have been done on the current COT and BULL claims, and the Hecla claims, which probably were staked for access purposes to the Liard Copper deposit, were allowed to lapse to reduce the Hecla claim block.

Ken Cottrell, mailing address General Delivery, Dease Lake, B.C., is the sole holder of the mineral rights to the claims.

### (c) Area Prospected

The area prospected and examined covers approximately 0.5 square kilometers, predominantly in the southeast part of the COT claim and partly in the northeast part of the BULL claim. The area includes all the main showings located by Ken Cottrell on the claims. Other showings, reported to be similar but not as well mineralized, outside the prospected area were not examined.



Mess  
Lake

COT

BULL

130 35 W

57 25 W

LA CASSE

C  
E  
N  
T  
R  
E

C  
E  
N  
T  
R  
E

**TECK EXPLORATIONS LTD.**

**CLAIM MAP**

**COT & BULL CLAIMS**

**LIARD MINING DIVISION, B.C.**

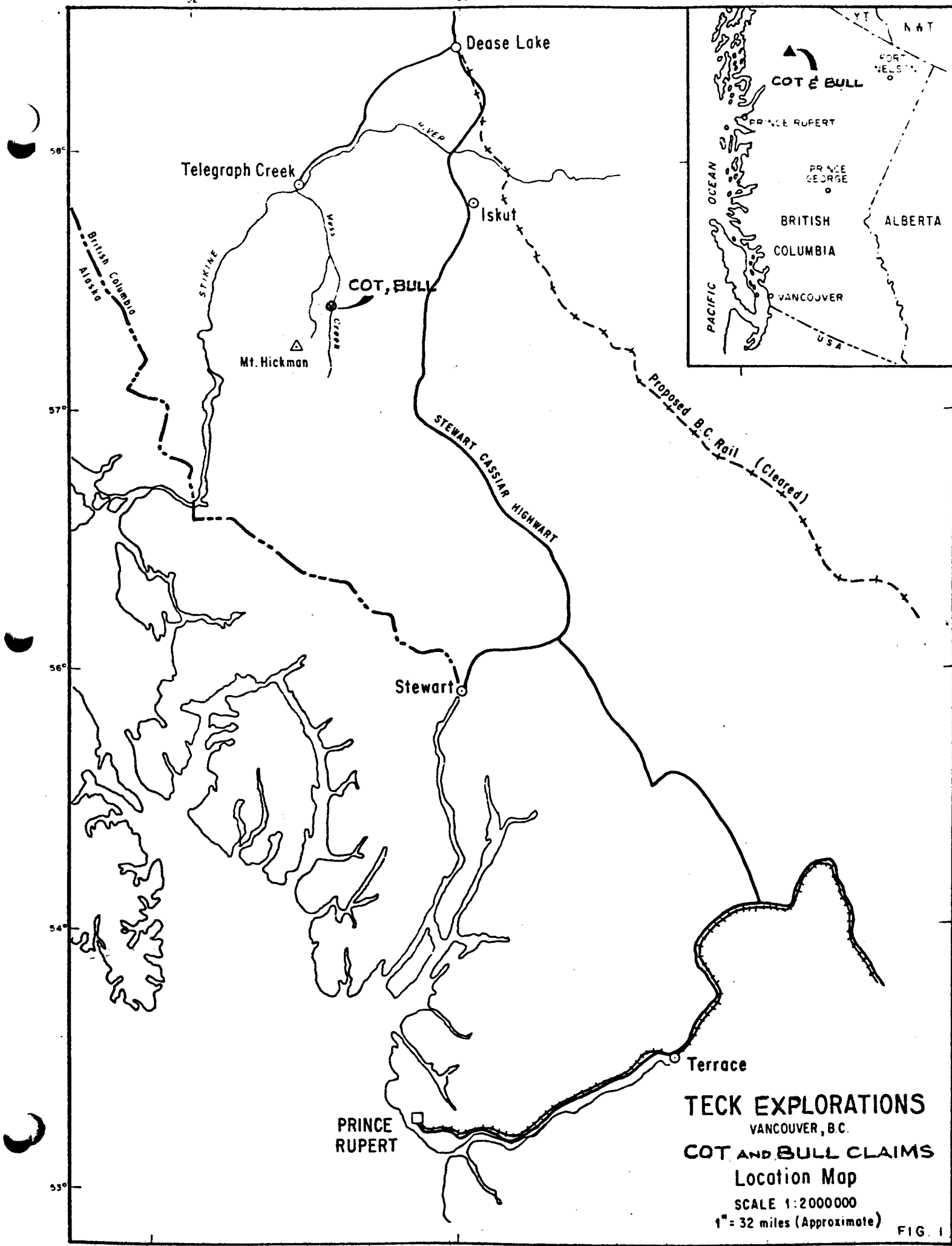
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Scale 1:50,000

Fig. 2

A.I.B.

NTS 104G/7W



**TECK EXPLORATIONS**  
 VANCOUVER, B.C.  
**COT AND BULL CLAIMS**  
 Location Map  
 SCALE 1:200000  
 1" = 32 miles (Approximate)

## OBSERVATIONS AND REPORT ON MINERALIZATION

### (a) General

Geological mapping by J. G. Souther for the Geological Survey of Canada (GSC Map 11-1971) indicates the claim area to be underlain by Upper Triassic volcanics with an Upper Cretaceous quartz monzonite intrusion in the northern part of the COT claim. These apparently are the same age rocks which host copper and gold mineralization in the Schaft Creek valley, approximately 12 km. to the southwest.

Examination of the claims area indicates that it is underlain predominantly by quartz diorite and/or quartz monzonite on the COT claim, mixed quartz monzonite/diorite and andesites on the BULL claim, and that both intrusive and volcanic rocks are cut by a swarm of later andesitic dykes. A large block of limestone, at least 300 m. by 150 m. where examined is included in the igneous rocks on the COT claim. Aerial helicopter reconnaissance in the Mess Creek Valley indicates that these limestone blocks, of possible Permian age, occur at scattered intervals in the Mess Creek area and have been emplaced either during intrusive activity or by structural means.

The purpose of the examination was to determine:

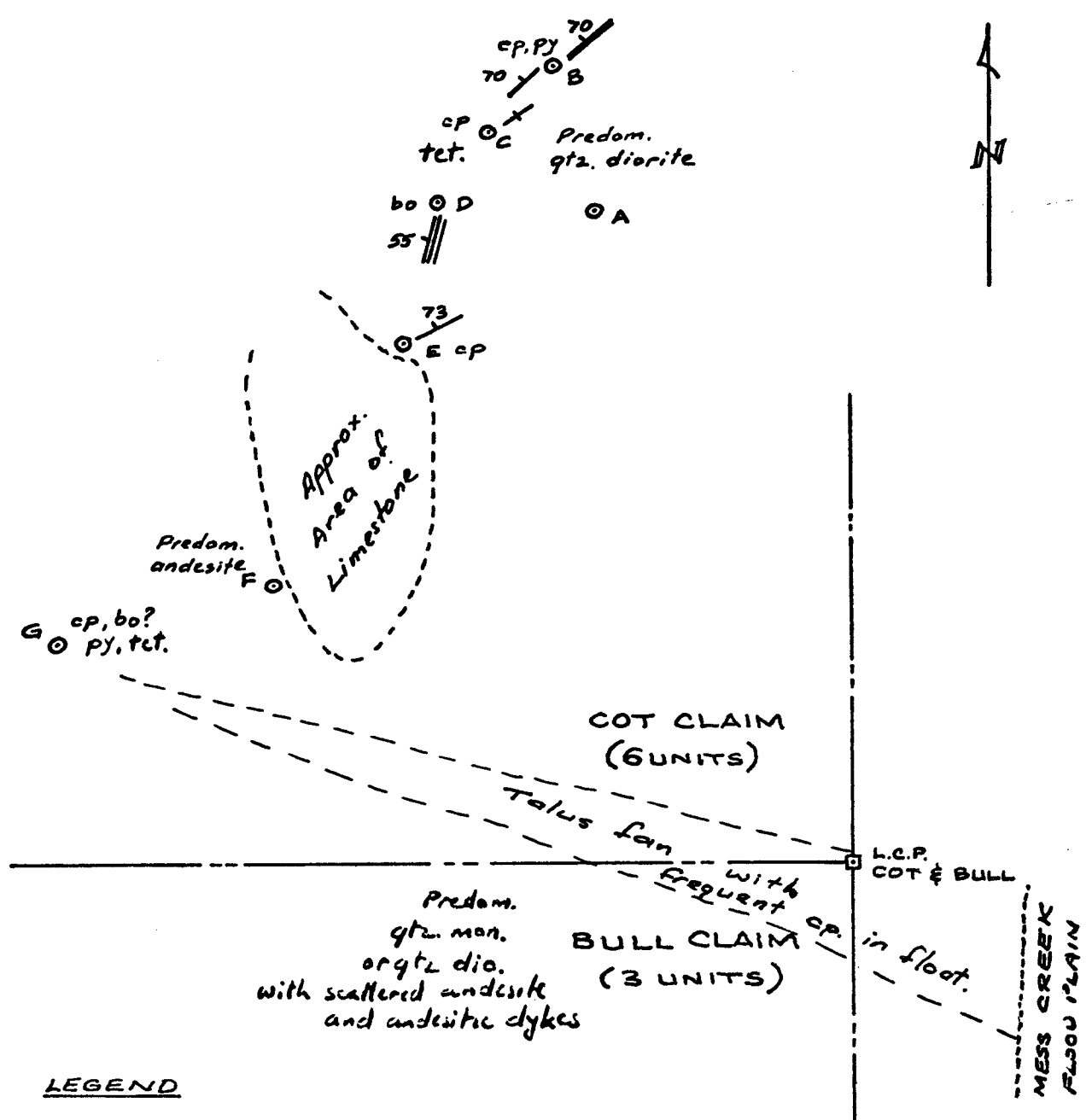
- (i) whether disseminated mineralization occurs in the intrusive;
- (ii) whether the volcanic rocks host porphyry-type mineralization as occurs at the Liard Copper deposit; and
- (iii) whether there is any mineralized skarn development in the limestone.

### (b) Details of Examination

A helicopter was used to land at Point A (see map at scale 1:5,000), the only helicopter-accessible spot on the mineralized area, and the mountainside was traversed using an altimeter and compass bearings to a corner of Mess Lake for control.

Observations relative to the control point shown on the map are listed below:

Point A. Elevation 3,480'. Fresh appearing quartz diorite, medium to fine grained; no observed mineralization.



LEGEND

- B ⊙ control point
- Y fracture
- // andesite dyke
- /// andesite dyke swarm
- cp chalcopyrite
- bo bornite
- py pyrite
- tet. tetrahedrite

COT AND BULL CLAIMS

Liard Mining Division, B.C.

NTS 1049/7W

0 100 200 M.

Scale = 1:5,000

Fig. 3

Point A-B. Fresh unmineralized quartz diorite with minor late andesitic dyke intrusion; area largely covered by talus.

Point B. Elevation 3,600'. Medium to coarse grained quartz diorite cut by 0.6 in. wide calcareous fine grained andesitic dyke N50°E, 70NW. Edges of dyke limonitic; parallel fractures to NE with minor chalcopyrite and pyrite.

Points B-C. Quartz diorite or monzonite, fractured, with rare occurrence of pyrite and chalcopyrite on fractures.

Point C. Elevation 3,680'. Quartz diorite and andesitic dyke contact with chalcopyrite and tetrahedrite mineralization at contact. Sample at contact taken over 20 cm. assayed 1.66% Cu, 6.52 oz. Ag/ton, 0.002 oz. Au/ton.

Points C-D. Fresh appearing quartz diorite or quartz monzonite with increasing andesitic dykes to south; no mineralization observed.

Point D. Elevation 3,710'. Series of andesitic dykes averaging 10 m. wide and at approximately N15°E, 55°W intruding quartz monzonite. Only one contact was found to be mineralized with bornite over 1 cm.

Points D-E. Dyke intruded quartz monzonite; two occurrences of minor chalcopyrite on fractures.

Point E. Elevation 3,790'. Andesitic dyke material cut by fault N65°E, 73°NW and parallel fractures. One fracture contains chalcopyrite mineralization over 1 cm; parallel fractures have minor amounts of chalcopyrite and pyrite.

Points E-F. Large block of white limestone, varying from coarse grained massive to fine grained laminated or bedded with contorted beds but predominantly N65°W, 65°SE near centre of body. Rare fractures with minor chalcopyrite mineralization. No skarn development.

Point F. Elevation 3,760'. Andesitic rocks, massive, with no observed mineralization.

Point G (Location estimated). A sheer cliff face striking approximately NNE and coated with malachite stain; at the head of a talus fan.

Point G-L.C.P. A narrow talus fan on a steep mountainside composed of an equal mixture of andesitic volcanic rocks and quartz diorites. Scattered rock fragments in the talus contain chalcopyrite and tetrahedrite mineralization of fractures.



Area South of G-L.C.P. Scattered outcrops in a talus slope. Both quartz monzonite and andesite were noted, with an increase of andesites to the south.

CONCLUSIONS

Mineralization on the COT and BULL claims occurs as chalcopyrite, pyrite, minor bornite, and tetrahedrite on widely spaced fractures striking north-northeasterly. The country rock does not appear to host disseminated mineralization. Individual widths are too narrow and too low grade to support underground mining. Whole rock areas are too weakly mineralized to support open pit bulk mining.

The mineralization appears to be post-intrusive, and there is no skarn development in the limestone.

Although the mineralization occurs over a fairly large area on the claims, no source of mineralization could be located in the claim area.

RESPECTFULLY SUBMITTED



A. I. BETMANIS, P.Eng.

October 1, 1981  
Vancouver, B.C.

To: Teck Explorations Ltd.

REPORT NO. A21 - 983

PAGE No. 1

BONDAR-CLEGG & COMPANY LTD.

DATE: August 11, 1981

1199 West Hastings Street  
Vancouver, B.C.  
V6Z 2K5

CERTIFICATE OF ASSAY

Samples Submitted: July 28, 1981  
Results Completed: August 11, 1981  
PROJECT: None Given


I hereby certify that the following are the results of assays made by us upon the herein described Rock samples.

MARKED	GOLD		SILVER		Cu						
	Ounces per Ton	Grams per Metric Ton	Ounces per Ton	Grams per Metric Ton	Percent	Percent	Percent	Percent	Percent	Percent	Percent
2726	0.002		6.52		1.66						

NOTE:  
Rejects retained three weeks  
Pulps retained three months  
unless otherwise arranged.

STATEMENT OF COSTS

A. I. Betmanis, P.Eng., 1 day, July 16, 1981	\$ 150.00
K. N. Cottrell, July 16, 1981	No Charge
Helicopter charter (Quasar Aviation) 1.6 hrs. @ \$375	\$ 600.00
Helicopter fuel, 36.8 gal. @ \$5.00/gallon	\$ 184.00
Camp costs at Schaft Creek, 2 days @ \$35/day	\$ 70.00
Report preparation and drafting	<u>\$ 200.00</u>
	<u>\$1,204.00</u>
Total amount to be recorded towards assessment work on COT and BULL claims:	 <u>\$900.00</u>

  
A. I. Betmanis, P.Eng.

STATEMENT OF QUALIFICATIONS

I, Andris I. Betmanis, do hereby certify that:

I am a geologist residing at 1988 Arroyo Court, North Vancouver, B.C., and employed by Teck Explorations Limited;

I am a graduate of the University of Toronto with a BAsC degree in Applied Geology;

I am a registered member of the Association of Professional Engineers of the Province of British Columbia;

I have practised my profession in geology continuously since 1965, and since 1970 in British Columbia;

In July 1981 I examined and prospected the COT and BULL claims, Mess Lake Area, Liard Mining Division, B.C., held by K. N. Cottrell.

A handwritten signature in black ink, appearing to read "A. I. Betmanis", written over a horizontal line.

A. I. Betmanis, P.Eng.