

180-#83-# 7869

PROSPECTOR'S REPORT ON
GOAT #1 MINERAL CLAIM
SCHAFT CREEK AREA, LIARD MINING DIVISION, B.C.

BY
ALAN RAVEN
PROSPECTOR
FOR
TECK CORPORATION

CLAIMS: Goat #1
LOCATION: N.T.S. 104 G/6E
Lat. 57°25'N, Long. 131°01'W
Liard Mining Division

Vancouver, B. C.

September 27, 1979

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
7869

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PROSPECTOR'S REPORT ON
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INTRODUCTION

(a) Claim

The Goat #1 (926) mineral claim of 18 units adjoins the Lacasse (623) claim on the north. This group was staked by A. Raven on August 8 and 9, 1979 for Teck Corporation.

(b) Location, Access and Geography

The Goat #1 M.C. is located approximately 62 kilometers S.8°E from Telegraph Creek and 4 to 5 kilometers north of the junction of Schaft and Hickman Creeks, in the Liard Mining Division. The geographical co-ordinates are 54°25'N and 131°01'W and the N.T.S. designation is 104 G/6E. The claim adjoins the Lacasse Group on the north.

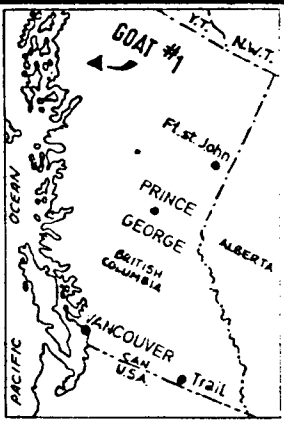
Access to the property is by fixed wing aircraft from Terrace to the Liard Copper Schaft Creek gravel airstrip, or by helicopter to the Lacasse property. The flying distance from Terrace is approximately 360 kilometers. Trans Provincial Airlines at Terrace operates a semi-scheduled service with an Islander fixed wing to Schaft Creek. Vancouver Island Helicopters is available for charter from Stewart, a distance of 190 kilometers from the property.

Teck personnel travelled to the property by fixed wing from Terrace, and then set up a tent camp north of Mt. Lacasse at elevation 6,200' with helicopter assistance from Stewart.

15'

131°00'

130°45'



TELEGRAPH CREEK

ZAGODDETCHINO MTN.

MESS

Taweh

TELEGRAPH CREEK

CREEK TRAIL

SCHAFT CREEK

MESS LAKE

GOAT #1

LACASSE GROUP

MOUNT LACASSE

NTS 104 G

TECK CORPORATION
VANCOUVER, B.C.

GOAT #1 MINERAL CLAIM

PROPERTY LOCATION MAP

SCALE 1:250,000



45'

57° 30'

15'

131°00'

130°45'

px. 78

The claims covered by this report lie north of Mount Lacasse with an elevation of 2,040 meters and Schaft Creek at approximately 820 meters elevation. Schaft Creek occupies a U-shaped valley with the braided creek channel meandering across glacial debris on the valley floor. From the width of the creek channel the slope rises towards Mount Lacasse with a progressively steepening slope which is comprised of a series of barren rock bluffs and talus slopes.

(c) History of Property and Scope of Current Work

The general Lacasse area, including the Goat #1 claim, received work to some degree during the 1960's following the exploration development of the Liard Copper deposit at Schaft Creek. The outcome or extent of work done on the present Goat #1 claim is not known to the writer. However, a diamond drill hole was drilled at a northerly inclination near the northern edge of the claim. Core has been removed from the drill site, and no particulars regarding the results of the drilling, or depth of the hole, are known.

The prospecting work carried out on the Goat #1 claim and described in this report was done to determine the grade and possible extent of a copper mineralized zone located on the adjoining Lacasse Group in 1978 which appeared to continue to the north. The Lacasse zone is described in "Report on the Geology (including Prospector's Report) on the Lacasse and Schaft Claims, Schaft Creek Area, Liard Mining Division, B.C." by A. I. Betmanis, P.Eng., dated November 3, 1978 and submitted for assessment.

GEOLOGY

The following passages on regional and property geology are quoted from the November 3, 1978 report by A. I. Betmanis on the Lacasse and Schaft claims. Only sections applicable to the Goat claim, which is underlain by an extension of the Lacasse geology and mineralization, have been quoted.

(a) Regional Geology

Upper Triassic andesitic to basaltic volcanic rocks possibly corresponding to the Takla Group occur in an elongated northerly trending ridge between Mess and Schaft Creeks, and appear to have moderate to gentle northerly dip. The volcanics have been intruded on the west by quartz diorite to granodiorite to the post-Upper Triassic Hickman Batholith. Adjoining the Hickman Batholith to the north, government maps show Cretaceous to Tertiary quartz monzonite intrusives. The contact between volcanics and intrusive, whether quartz monzonite or Hickman Batholith, underlies the Lacasse Group irregularly in a north-south direction.

(b) Property Geology

(i) Lithology

Upper Triassic Volcanics: The volcanics mapped on the property are predominantly andesitic in composition but locally grade to basaltic higher in the section. Minor interbedded agglomerates were noted. The andesites are commonly finely porphyritic. Variations in colour from greenish to purple were observed, but no definite zone of purple volcanics, as reported on the adjoining Liard Copper Mines property, was distinguished.

The volcanics are commonly intruded by dykes, and the colour variations observed on the Lacasse Group are believed to be partly due to alteration as well as original composition. Bedding could not be measured accurately, but the beds appear to vary in thickness from a few meters for tuffs and agglomerates to several tens of meters for flows. The attitude appears to be gently northerly dipping.

Acidic Intrusives: The western side of the Lacasse claim group is underlain by dioritic to granitic medium to coarse grained intrusive. The most common composition is quartz diorite to quartz monzonite. The quartz monzonite variety appears to occur in areas where sulphide mineralization occurs, and the quartz diorite variety is most common in areas without sulphide mineralization or structural complexity.

Later Dykes: Andesite and diabase dykes cut the intrusive and some of the volcanic rocks. Dyke intrusion appears to be most intense near the intrusive-volcanic contact, and in a generalized zone in the intrusive as is shown on the geological map. Relationship between andesite and diabase dykes was not determined, but it was suspected that the andesite dykes are later and possibly Tertiary in age, and are feeders to Tertiary volcanics not mapped on the claims.

(ii) Structure

Various northeasterly faults were mapped and many of the intermittent drainages which flow from the western slope of Mount Lacasse to Schaft Creek are believed to follow structural lineaments. A northwesterly and northerly structural direction was assumed from the series of rock bluffs and escarpments on the east side of Schaft Creek, the predominant directions of andesitic dykes, and pronounced aerial photograph linears, but no measurable offsets in lithology were found.

(iii) Mineralization

The mineralized zone on the Lacasse Group contains predominantly a fine dissemination of chalcopyrite in the intrusive rock, and is sub-parallel to the volcanic-intrusive contact. At the northeastern part of the Lacasse Claim the chalcopyrite zone merges with the intrusive contact and the volcanics carry pyrite as well as chalcopyrite. Throughout most of the zone the sulphide minerals are almost exclusively chalcopyrite with minor amounts of bornite and pyrite.

Molybdenite was noted with a quartz vein in quartz monzonite from a talus slope, on the Lacasse claim, but no molybdenite mineralization was found in outcrop.

Pyrite up to 10% was found outcropping locally in a few of the drainages on the west slope of Mount Lacasse. It appears to be concentrated in the northeasterly structures and deposited at a later sulphide mineralizing stage than the main copper zone.

SAMPLES

Representative chip samples were taken from the mineralized zones to determine the copper and molybdenum content. The sample locations are plotted on the accompanying map along with traverse and field geology; the geology being based on my own field observations.

Attached are field notes to accompany assay results.

CONCLUSIONS

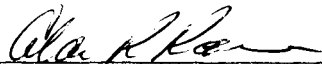
Prospecting and sampling of the Goat #1 M.C. indicates to me that this is a small continuous northern extension of the Lacasse zone to the south. The mineralization is not heavy and appears to be confined between two dyke structures.

The samples indicate low copper values over-all but the molybdenum values are higher than on the adjoining Lacasse zone to the south. This could possibly be due to the Goat samples being assayed for total molybdenum whereas the Lacasse samples were assayed for molybdenite.

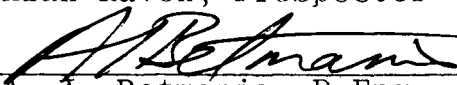
The mineralization is in both the quartz monzonite and some areas of quartz diorite with the highest assays being obtained from a shear zone located between two small dykes.

My field observations lead me to believe that this area of mineralization is a "lead-in" to the larger zone on the Lacasse Group.

Respectfully submitted,



Alan Raven, Prospector



A. I. Betmanis, P.Eng.

REFERENCES

- Campbell, D.D. (1970); Summary Report, Nabs Claims, Schaft Creek Deposit, Telegraph Creek, B.C.; private report for Paramount Mining Ltd. dated Nov. 19, 1970.
- Fox, R.E., Grove, E.W., Seraphim, R.H. and Sutherland-Brown, A. (1976): Schaft Creek in Porphyry Deposits of the Canadian Cordillera, CIMM Special Volume 15.
- Linder, H. (1975): Geology of the Schaft Creek Porphyry Copper-Molybdenum Deposit, Northwestern B.C. in Canadian Mining and Metallurgical Bulletin, June 1975.
- Panteleyev, A, and Dudas, B.M. (1973): Snow, Bird (Liard Copper); Nabs (Paramount) in Geology, Exploration and Mining in B.C. 1972, pp 527-8.
- Sutherland-Brown, A. (1971): Snow, Bird (Liard Copper) in Geology Exploration and Mining in B.C., 1970, pp 49-57.
- Betmanis, A. I. (1978): Report on the Geology (including Prospector's Report) of the Lacasse and Schaft Claims, Schaft Creek Area, Liard Mining Division, B.C.; dated November 3, 1978. Submitted for assessment.

FIELD NOTES TO ACCOMPANY ASSAY RESULTS

<u>Sample No.</u>	<u>Description</u>	<u>% Cu</u>	<u>% Mo</u>
1-1	- elev. 4,330' - qtz. monzonite in bedrock of creek. - spotty Min.	.08	.002
1-2	- elev. 4,760 - dyke structure 8' wide - epidote, malachite, chalco. - strike 146 ^o dip 20 ^o east.	.04	.002
1-3	- elev. 5,675' - on ridge small zone of qtz monzonite between 2 dykes (316 ^o dip slightly east) - 6' across zone.	.05	.001
1-4	- elev. 6,050' - chalco and malachite on fractures. - 12' qutz. mon. below volcanics.	.09	.004
1-5	- elev. 6,030' - 60' across shear zone including 4' of unsheared rock on each side.	.21	.003
1-6	- elev. 6,140' - shear zone between two dykes. - 20' wide.	.44	.007
1-7	- elev. 5,650 - 60' sparcely min. qtz. mon.	.13	.002

QUALIFICATIONS

Qualifications of Alan Raven, Prospector

Address: Box 29, R. R. #1, Christie's Corner, Prince George,
B. C.

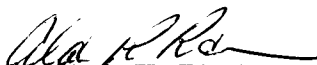
- 1969-73: Mineral Exploration and prospecting in British
Columbia
- 1973-74: Mineral exploration and prospecting in Australia.
- 1974-78: Mineral exploration and prospecting in British
Columbia.
- 1976: Prospector's Course, New Caledonia College,
Prince George.
- 1977: Advanced Prospector's Course, Selkirk College,
Castlegar, B. C.
- 1977: Examined by G. Klein, B. C. Department of Mines,
at the Provincial Geologist's office, Prince
George.

Qualifications of Bill Buckler, Assistant

Address: 909 Thurlow Street, Vancouver, B. C.

- 1974-78: Seasonal work as assistant to geologist and
various geochemical surveys throughout B. C.

I certify that to the best of my knowledge the above data
are correct.



A. Raven,
September 27, 1979

Qualifications of A. I. Betmanis, Geologist

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

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

I am a graduate of the University of Toronto with a B.A.Sc. degree in Applied Geology;

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

I have practiced my profession in geology for the past 15 years and since 1970 in British Columbia.

On August 17, 1979 I visited the Goat #1 claim and examined the prospecting work as shown to me by Alan Raven, prospector; and subsequently have examined his Prospector's Report on the claim, and find it to be in accordance with my personal observations.

A handwritten signature in cursive script, appearing to read 'A. I. Betmanis', written over a horizontal line.

A. I. Betmanis, P.Eng.

STATEMENT AND DISTRIBUTION OF COSTS

INTRODUCTORY STATEMENT

During the prospecting of Goat #1 M.C. some time was devoted to claim staking. The staking is not applicable to assessment work. Costs of the program have been proportionally reduced by the appropriate man-days to not include the portions not applicable for assessment towards prospecting.

Wages

A. Raven - 22 days @ \$100/day	\$ 2,200.00
B. Buckler - 17 days @ \$60.00/day	1,020.00

Living Expenses

39 man days @ \$9.20/day	358.80
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<u>Field Equipment Used</u>	100.00
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Air Photographs (Pacific Survey Corp.)

62/120 of \$417.24	215.57
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<u>Air Charter (Trans Provincial Airlines)</u>	4,339.91
(Northern Mountain Helicopters)	

Mobilization of crews from Terrace to Schaft Creek, Northern Mtn. Helicopters movement of fly camp)


<u>Transportation (CP Air, Car & Mileage)</u>	507.10
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<u>Assaying (Bondar-Clegg Cu-Mo determinations)</u>	467.34
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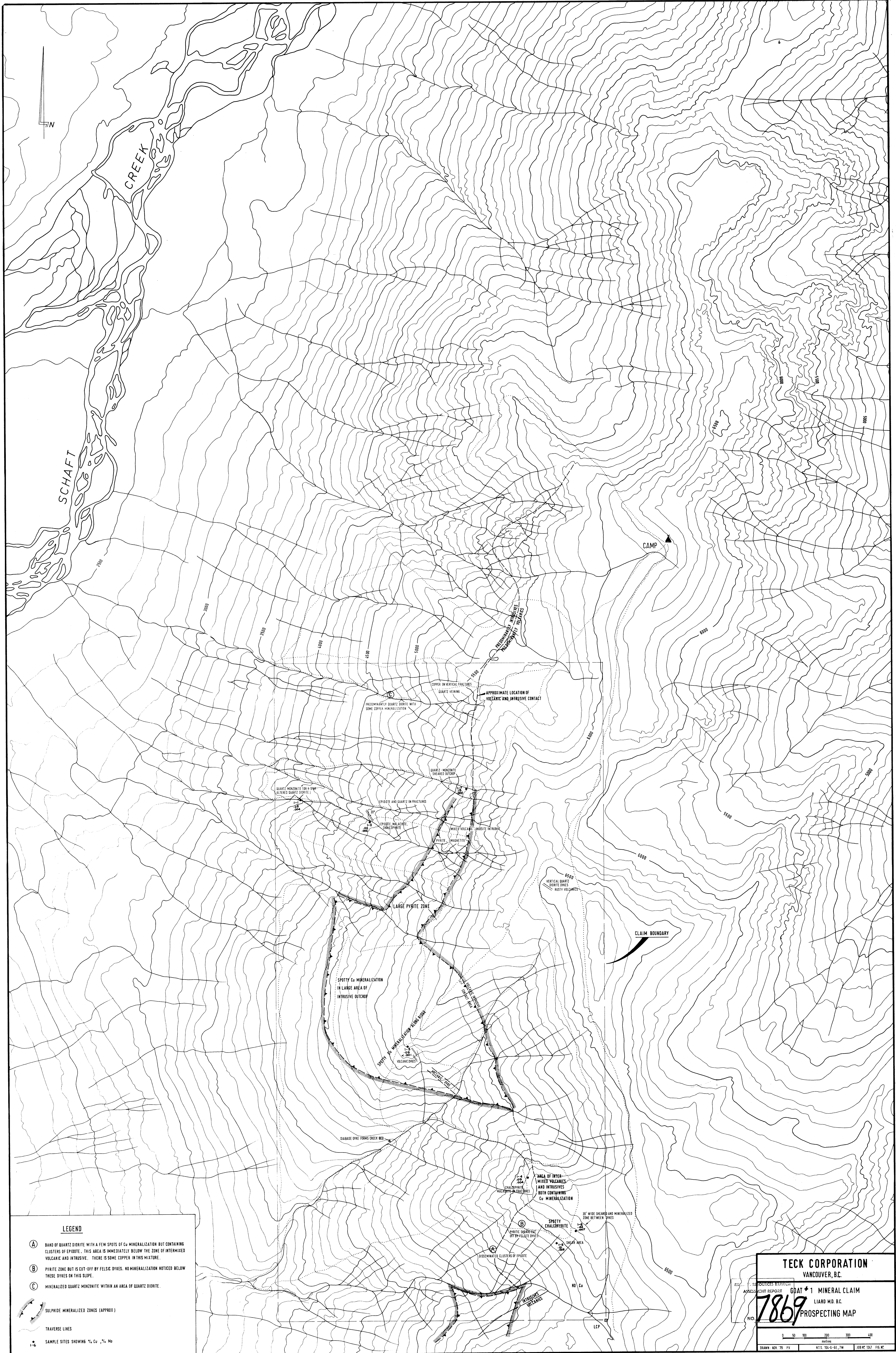
<u>Drafting and Printing</u>	640.05
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TOTAL	<u>\$ 9,848.77</u>
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I hereby certify that the above stated costs are all directly applicable to first year of assessment work on the Goat claim. It is requested that \$5,400 of this work be applied to the Goat #1 Claim.



A. I. Betmanis, P.Eng.



LEGEND

- (A) BAND OF QUARTZ DIORITE WITH A FEW SPOTS OF Cu MINERALIZATION BUT CONTAINING CLUSTERS OF EPIDOTE. THIS AREA IS IMMEDIATELY BELOW THE ZONE OF INTERMIXED VOLCANIC AND INTRUSIVE. THERE IS SOME COPPER IN THIS MIXTURE.
- (B) PYRITE ZONE BUT IS CUT-OFF BY FELSIC DYKES. NO MINERALIZATION NOTICED BELOW THESE DYKES ON THIS SLOPE.
- (C) MINERALIZED QUARTZ MONZONITE WITHIN AN AREA OF QUARTZ DIORITE.
- ↔ SULPHIDE MINERALIZED ZONES (APPROX)
- TRVERSE LINES
- SAMPLE SITES SHOWING % Cu, % Mo

TECK CORPORATION
VANCOUVER, B.C.

ASSESSMENT REPORT **GDAT #1 MINERAL CLAIM**
LIARD M.D. B.C.

NO. **7869** PROSPECTING MAP

0 50 100 200 300 400 500
metres

DRAWN NOV 78 PV K.T.S. 104-G-6E, 7W JOB NO. 1027 116.47