

REPORT ON THE
GROUND MAGNETOMETER, & GEOCHEMICAL SURVEY *ys*
FOR
921/6E T. C. EXPLORATIONS LTD.
P.M., P.I.M., I.L., OVERSIGHT & BRON M.C.
IN THE
HIGHLAND VALLEY AREA, B.C.
Lat.N. 50°25', Long. W. 121° 05'
November 10, 1966 A.F.Roberts, P.Eng.

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T. C. Explorations Ltd.
Suite 201,
569 Howe Street,
Vancouver 1, B. C.,
October 3rd, 1966.

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To: Mining Recorder,
Kamloops, B. C.

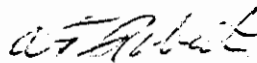
Sirs:

The operator of our magnetometer, Mr. K. Lovang, was originally employed, and trained by Hans Lundberg & Associates of Toronto, in magnetometer and other geophysical methods of exploration, through the period of 1958 to 1961.

Since then he has been employed on Magnetometer work by Mr. Karl Erikson, of Bordyke Mines, and Dr. Chris. Riley, of Plateau Metals, before entering our employ in November of 1965.

He has proven to be very reliable in both his field and office work, and to have a thorough knowledge of the use of the instrument.

Yours truly,



A. F. Roberts, P.Eng.
Field Manager.

REPORT ON THE
GROUND MAGNETOMETER & GEOCHEMICAL SURVEY

FOR

T. C. EXPLORATIONS LTD.

P. M., P.I.M., I.L., OVERSIGHT & BRON MINING CLAIMS

IN THE

HIGHLAND VALLEY AREA, B. C.

Lat. N. 50° 25', Long. W. 121° 05'

November 10, 1966

A. F. Roberts, P. Eng.

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ENSLOSURES:

- 1) Claim Map, 400 scale back cover ~~#~~ 3
- 3) Magnetometer Survey 400 scale back cover ~~#~~ 1
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INTRODUCTION: 1)

This report covers the magnetometer and geochemical surveys of the southern claims of T. C. Explorations Ltd., a method which was reasonably successful in finding mineralized areas on the Company's Lake and Laken claims, to the north.

The claims are Bron 1 - 9, IL3 - 6, P.M.9-16, Oversight 1 and 2, and the P. I. M.7-20, a total of 37 claims.

LOCATION: 2)

The claims all lie south of the north shore of Pemainus Lake, and up the north and east slopes of Spaist Mountain. The average elevation is about 5,000 feet.

TOPOGRAPHY:

The country to the west of the 65 E baseline is on the sides of Mt. Spaist and is generally quite rugged, with numerous outcrops.

To the east of the 65 E. baseline, the country flattens out with swampy areas between low ridges.

The forest cover varies from very thick small pines, to fairly open pine covered ground, with spruce in the low lying areas.

GENERAL GEOLOGY:

Geological mapping of the area has not been done by the Company.

The rocks of the area are of the Bethsaida type of granites, which are associated with the Lornex, Bethlehem, and Craigmont properties. Hydrothermal alteration with the deposition of the sulphides caused these rocks to become soft, and easily eroded, and to have low, or negative

- 1) Claim map back cover
- 2) Ashcroft Map Sheet 1010A

General Geology cont'd.

magnetic readings compared to the stronger rocks of the area.

The rocks of the ridges are of the Skeena type granites.

From the topographic maps, Pemainus Lake appears to lie in a fault, with a number of north west-south east fractures radiating from it.

At 70 S + 61 E, a 2" to 12" vein of chalcite and bornite about 100 ft. long was found, striking north westerly and dipping flatly to the west. otherwise, only float containing bornite and malachite was found on the north slope of Spaist Mountain.

On the enclosed claim map, are plotted trenches on the Highland Chief ground containing very low values in copper, and a strong fault, about 4 ft. wide and full of gouge. The projected extension of the fault enters T. C. ground and crosses near a small anomaly at 15 S - 1300 West.

MAGNETOMETER SURVEY: 3)

The survey was carried out with a Sharpes MF-1 Fluxgate Magnetometer, Serial No. 50715, with:

F S = 10 UA 1%

17,000 ohms + 20%

The lines were cut, under contract, from the existing base line of The Laken group, so that all work done on both maps would tie in properly, and a new N & S base line was established at 65E.

The lines were chained, and flagged at 100 ft. intervals, and spaced at 500 ft. intervals North to South.

Magnetometer base stations were established along the 65 E line

3) Magnetometer Survey Map back cover

by transferring readings from the original base stations on The Laken group, and repeated to minimize errors.

All readings were corrected twice daily to catch any possible errors, or wide fluctuations.

The maximum reading obtained was plus 3780 gammas on the ridges on the west side. The minimum reading was minus 490 gammas at 80S + 630OE.

MAPPING:

The magnetometer readings were plotted on a 200 scale map, with 100 gamma contour interval, and reduced by photographic means to 400 scale, for convenience in handling, and to tie in with the geochemical, and claim maps.

The larger creeks and swamps are also plotted on the maps, and some geological information picked up on the adjacent B. J. claims.

The anomalous area of below plus 200 gammas fitted in with the copper showings on The Laken claims, and a fringe of from 200 to 300 gammas was added, and also fits in with The Laken showings.

OBSERVATIONS:

On mapping, the 200 gamma anomaly is found to extend for 7500 ft. in a southeasterly direction, and a further 7500 feet north westerly on The Lake and Laken claims, in a continuous belt, with numerous smaller parallel anomalies.

Geochemical anomalies on both the north and south groups follow closely to the magnetic anomalies.

It is possible that part of the anomalous condition is due to

overburden, as the anomalous areas tend to follow the valleys and swampy areas. At 0 + 00 a test hole was still in overburden at 120 ft. when it was stopped. The high readings follow quite closely to the high ground.

GEOCHEMICAL SURVEY: 4)

The samples were taken on the drainage system of the area, and on the lines used for the magnetometer survey.

The surface vegetation and humus was scraped off, and a sample of the underlying soil was cleaned of any roots, stones, etc. and placed in a wet-proof paper bag. The bag was marked with the location, and direction of drainage flow, and the same date logged in a field book.

Assays were done by T. C. L. Laboratories of Vancouver, using the hot HNO₃ acid extraction method.

The results of the assays were mapped on 400 scale with an arrow showing the direction of drainage flow.

Until more is known of the mineral occurrences of the area, it is difficult to define a background count. However, Lornex assumes:

0-800 PPM background

800-1000 PPM weak

1000-2000 PPM moderate

+ 2000 PPM strong

Their method of extraction is not known.

The T-C ground is generally steeper than that at Lornex and possibly a lower background count may be reasonable.

From this work, there is an anomalous area of 3400 PPM to 1700 PPM, from 45+00S to 30+00S west of the 65 E Baseline.

Also one weak reading, 1100 PPM, west of 65 E on Line 80S, and another, 1200 PPM, west of the zero Baseline on Line 15S.

4) Spoil Survey Map Back cover.

CONCLUSION:

The strong anomalous structure revealed by the magnetometer survey is a continuation of the same structure found on The Lake, and Laken claims, where Cu, and Mo mineralization was found.

The soil anomalies coincide to a great degree with the magnetic anomaly, and indicate possible ore bearing structures.

RECOMMENDATIONS:

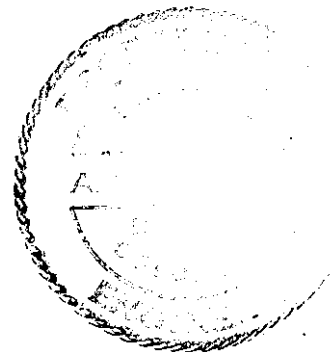
1) That trenching be done on the areas where both magnetometer and geochemical surveys coincide, to be followed by percussion drilling if good mineralization is found.

2) That an I. P. survey of the area be made as soon as snow has gone from the area. Due to the steepness of the ground, it would be almost impossible to pull wire over the ground on snowshoes during the winter.

Respectfully submitted,



A. F. ROBERTS, P. Eng.,
Field Manager.



ADDENDUM:

After this report was completed, Dr. A. C. Skerl's report was received.

Dr. Skerl's report has been added without comment. The soil survey map has been amended to his remarks.

By super-imposing the soil map on the mag map his report is better illustrated.

The Bron claims were not recorded due to error. They are being re-staked on the same locations.

A. F. Roberts
A. F. Roberts.

1758 WESTERN PARKWAY
VANCOUVER 8, B.C.

19th November 1966

DR. A. C. SKERL
A.R.S.M., PH.D., P.ENG.
CONSULTING MINING GEOLOGIST

T. C. EXPLORATIONS
PIM & PM CLAIMS
NOTES ON MAGNETOMETER
& GEOCHEMICAL SURVEYS

INTRODUCTION

During the past two months Mr. K. Lovang has made a magnetometer survey and a geochemical silt survey under the direction of Mr. Roy Roberts.

My analysis of the results is as follows :

MAGNETOMETER SURVEY

The most significant feature of the magnetometer map is a zone of extra low gamma readings striking southeast from the west end of Pimainus Lake to the peak of Spaist Mountain and then in a southerly direction to the edge of the map.

This zone separates an area of high magnetic intensity in the southwest portion of the claims from an area of medium intensity in the northeast portion.

The magnetic high is the continuation of the one that was found in the Lake claims to the northwest and is no doubt due to a more basic diorite containing magnetite.

The change in strike on Spaist Mountain could be a reflection of a dip to the west.

Several subsidiary lows are also present in the area surveyed.

GEOCHEMICAL SURVEY

There are five areas of interesting anomalous copper values. The strongest is on the north slope below the peak of Spaist Mountain. The four highest values of the whole survey were obtained here - namely 3400, 2100, 2000 and 1700 ppm on four

successive lines down the slope in a distance of 1500 feet. Another nine values were all over 200 ppm giving an area of 1200 feet wide and 3000 feet long. This area is adjacent to and downhill from the contact of the more basic rock found by the magnetometer survey.

Another series of anomalous values were found in a south draining gully on the south side of Spaist Mountain for a distance of 4000 feet. This zone follows the trend of low magnetics at the contact previously described. The seven samples taken on the line furthest south were all anomalous.

A third zone consists of moderate values along a gully trending north from the contact about 2000 feet west of the first anomaly described above.

At another 2000 feet to the west some more anomalous values are associated with the contact zone.

A well defined gully in the northwest corner of the map has values ranging up to 1260 ppm over a length of 2400 feet.

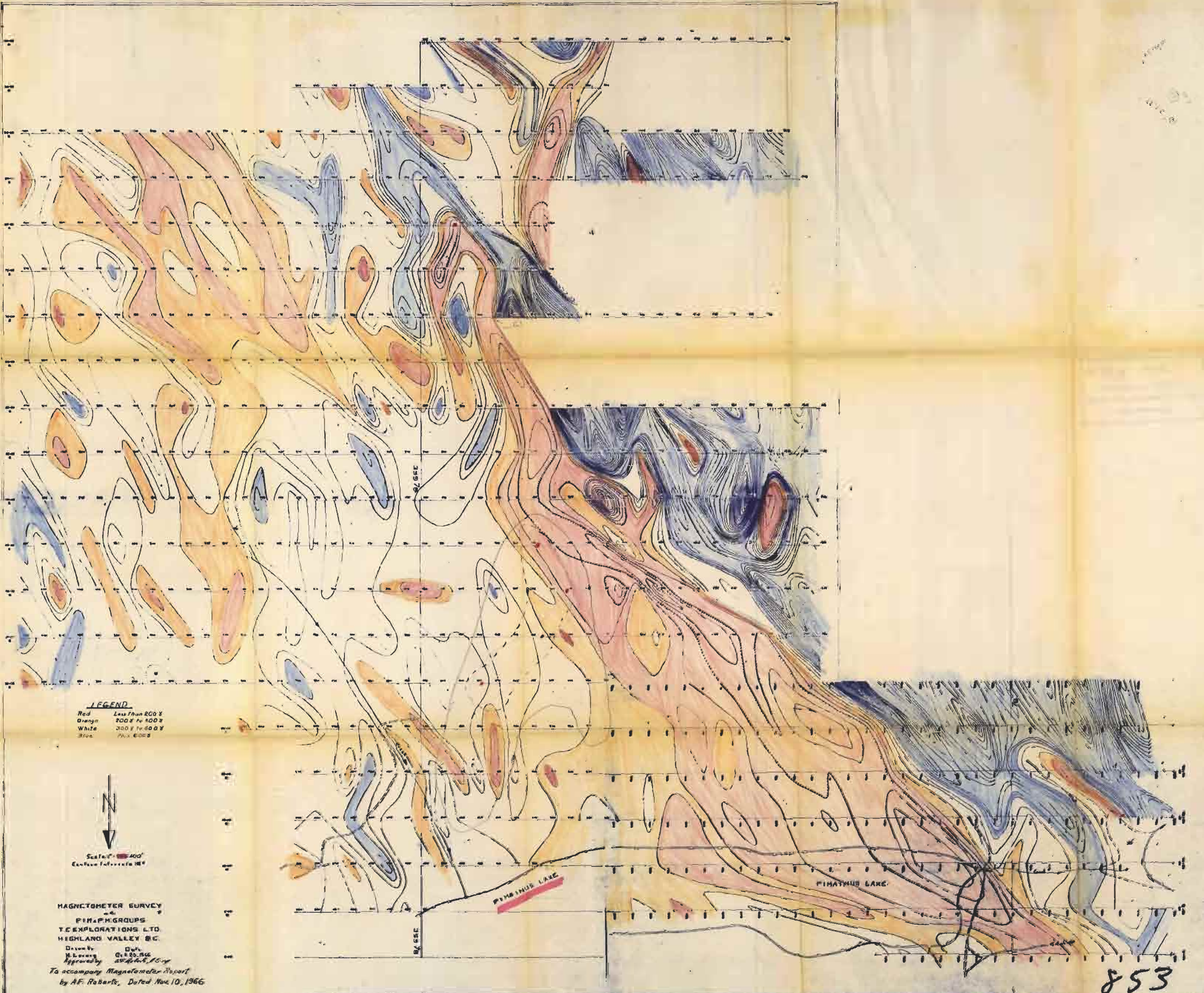
There is one more minor area on the east side of the map with values up to 370 ppm along a gully for 1600 feet and it is associated with a magnetic low.

R E C O M M E N D A T I O N

The main anomaly is conveniently situated just beyond the end of a roughly bulldozed road that passes around the east end of Pimainus Lake. This road should be extended as far as possible up Spaist Mountain so that cuts can be bulldozed to uncover the mineralization responsible for the anomalous silt values on lines 45, 40, 35 and 30 S. These cuts should extend from 45 E to 60 E.

Some preliminary trenching could also be tried on the other anomalous areas.

A. C. Skerl

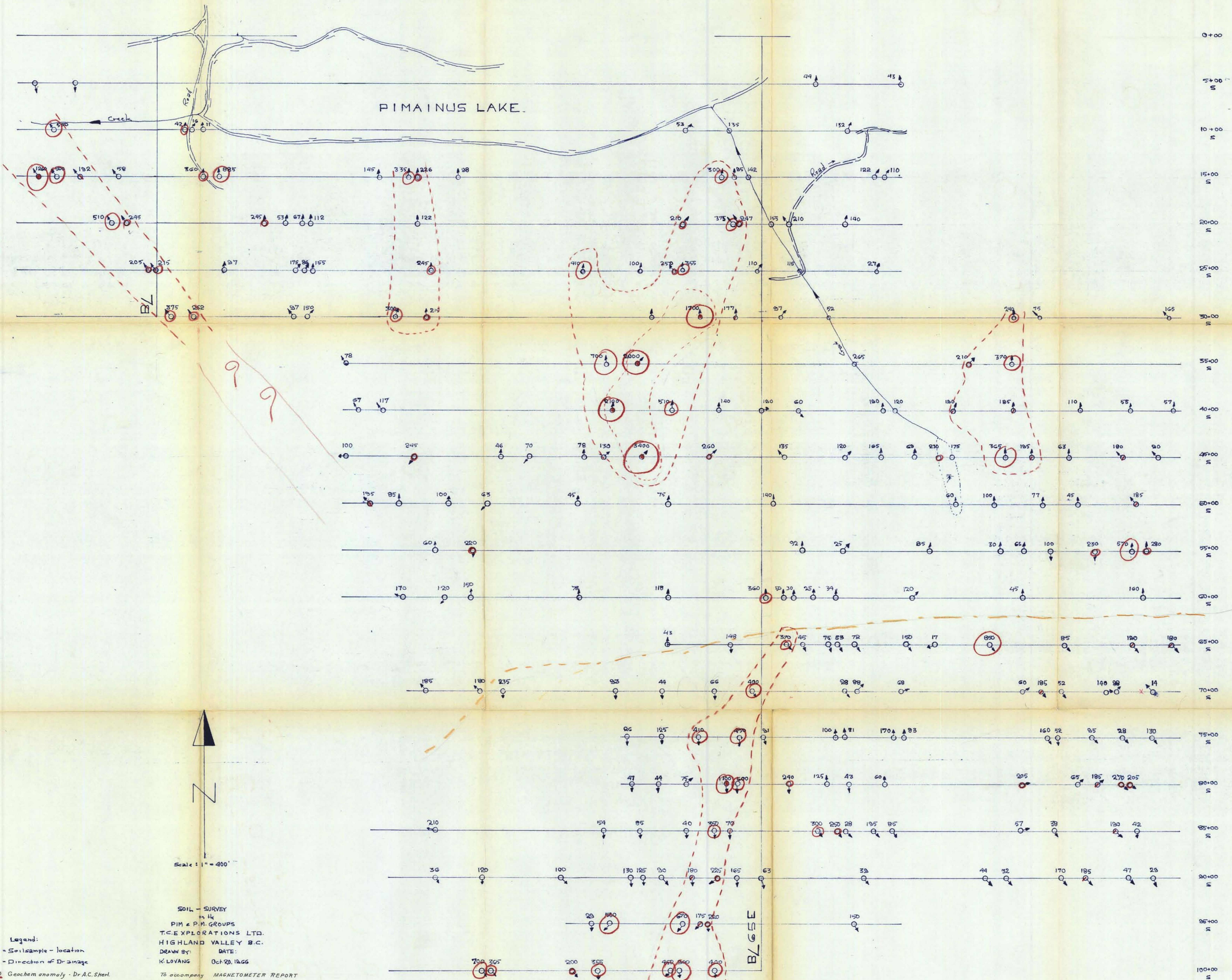


LEGEND
 Red Less Than 200 G
 Orange 200 G to 400 G
 White 400 G to 600 G
 Blue Plus 600 G

Scale: 1" = 400'
 Contour Interval 100 G

MAGNETOMETER SURVEY
 of
PIMATHUS GROUPS
T.E. EXPLORATIONS LTD.
HIGHLAND VALLEY B.C.
 Done by: D.W.
 E. Lewis Oct 25, 1966
 Approved by: A.F.R. 10-11-66
 To accompany Magnetometer Report
 by A.F. Roberts, Dated Nov. 10, 1966

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SOIL - SURVEY
 PIM & P.M. GROUPS
 T.C. EXPLORATIONS LTD.
 HIGHLAND VALLEY B.C.
 DRAWN BY: K. LOVANG
 DATE: Oct 20, 1966
 To accompany MAGNETOMETER REPORT
 by A.F. Roberts Dated Nov. 10, 1966.

Legend:
 ○ - Soil sample location
 → - Direction of Drainage
 RED - Geochem anomaly - Dr. A.C. Spierl

Department of
 Mines and Petroleum Resources
 ASSESSMENT REPORT
 NO. 853 MAP # 2

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MAP SHOWING
T.C. EXPLORATIONS & ADJACANT
CLAIM GROUPS

in the
HIGHLAND VALLEY B.C.
SOUTH SECTION

Drawn by: K. Lovang - Date: Sept. 19, 1966

Scale: 1" = 400'

Approved by: *[Signature]*

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT

NO. 853 MAP # 3

To accompany MAGNETOMETER REPORT
by A.F. Roberts Dated Nov. 10, 1966.

