4012

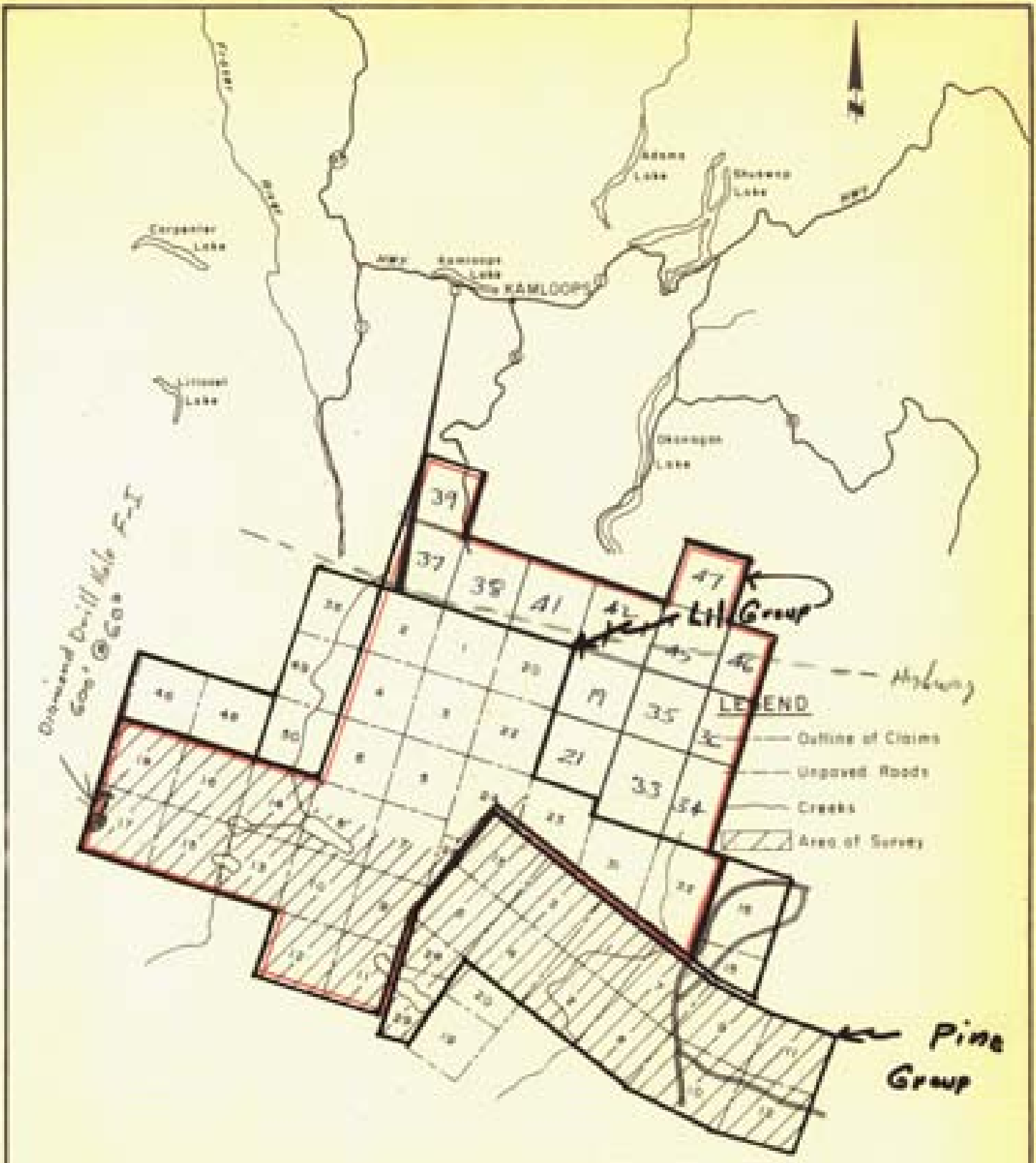
GEOPHYSICAL REPORT
On An
INDUCED POLARIZATION SURVEY
on behalf of
FALAISE LAKE MINES LTD.

92I/10E

Lil and Pine claims 17 miles west of Kamloops
B.C., Kamloops Mining Division
Lat. 56°42'N Long. 120°40'W N.T.S. 92I/10

AUTHOR: Glen E. White B.Sc. Geophysicist
P. ENG: D. Parent
DATE OF WORK: June 2 - 7, 1972
DATE OF REPORT: June 23, 1972

C O N T E N T S



FALAISE LAKE MINES LTD.

LIL & PINE CLAIMS

LOCATION AND CLAIMS MAP

SCALE - LOCATION MAP - 1" = 30 MILES APPROX. CLAIM MAP - 1" = 3000' APPROX.

Glen E. White
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&
services ltd.

4012 M-1

FIG. 1
June 23, 1972

INTRODUCTION

From June 2 to 9, 1972, Glen E. White Geophysical Consulting and Services Ltd. conducted a program of induced polarization surveying on behalf of Falaise Lake Mines Ltd. over the Lil and Pine mineral claims in the Cherry Creek area on the south side of Kamloops Lake, Kamloops Mining Division, B.C.

The purpose of the survey was to examine areas of favourable geology for anomalous chargeability responses which could possibly be associated with copper mineralization.

PROPERTY

The induced polarization survey discussed in this report was conducted over claims and portions of mineral claims 5 - 18, 24, 26 - 29 (Lil) and Pine 1 - 12 as illustrated in Figure 1.

LOCATION AND ACCESS

The Lil and Pine mineral claims are located some 17 miles west of Kamloops B.C. near Cherry Creek south of Highway No. 1 Latitude 56°42'N Longitude 120°40'W N.T.S. 92I/10

Access to the claim group is south via the new subdivision road immediately east of the Gardi Ranch or west along the Beaton Lake road from Highway No. 1 for a distance of some 4 miles.

GENERAL GEOLOGY

Geologically the property is underlain by the Nicola group of sedimentary and volcanic rocks of upper Triassic age which have been intruded by the Iron Mask Batholith of Jurassic age. The batholith appears to have intruded into the limb of a northwesterly trending syncline and consists of various textures of gabbro, diorite, pyroxite, monzonite and syenite. Younger, more quatrz-bearing stocks known as the Cherry Creek and Sugarloaf intrusives have intruded the periphery of the Iron Mask intrusive. These

units were then covered by the Tertiary coldwater sedimentary beds and volcanic flows of the Kamloops Group.

Copper mineralization has generally been structurally controlled as primary mineralization and has been deposited in the Nicola and Iron Mask Batholith near the periphery of the Iron Mask Batholith and in shears associated with the Cheery Creek and Sugarloaf Hill stocks. Secondary enrichment can occur as native copper and chalcocite as in the mineral deposit located by Afton Mines Ltd.

SURVEY SPECIFICATIONS

Electrode Array

The data was obtained using the "three electrode" array. This array consists of one current (C_1) and two potential electrodes (P_1 and P_2) which are moved together along the survey line at a fixed distance apart, which is known as the "a" spacing. The second current electrode (C_2) is placed at "infinity".

Induced Polarization System

The equipment used on this survey was the Huntec pulse-type unit. Power was obtained from a JLO motor, coupled to a 2.5 KW 400 cycle three-phase generator, providing a maximum of 2.5 KW D.C. to the ground. The cycling rate is 1.5 seconds "current on" and 0.5 seconds "current off", the pulses reversing continuously in polarity. Power was transmitted to the ground through two current electrodes C_1 and C_2, and measurements taken across two potential electrodes, P_1 and P_2.

The data recorded in the field consist of careful measurements of the current (I) in amperes flowing through electrodes C_1 and C_2, the primary voltage (V_p) appearing between electrodes P_1 and P_2 during the "current on" part of the cycle, and the secondary voltage (V_s) appearing between electrodes P_1 and P_2 during the "current off" part of the cycle.

The apparent chargeability (M_a), in milliseconds, is calculated by dividing the secondary voltage by the primary voltage and multiplying by 400, which is the sampling time in milliseconds of the receiver unit. The apparent resistivity, in ohm-feet, is proportional to the ratio of the primary voltage to the measured current, the proportionality factor depending on the geometry of the electrode array used. The chargeability and resistivity obtained are called "apparent" as they are vlaues which that portion of the earth sampled by the array would have if it were homogeneous. As the earth sampled is usually inhomogeneous, the calculated apparent chargeability and apparent resistivity are functions of the actual chargeabilities and resistivities of the rocks sampled and of the geometry of these rocks.

Survey Grid

The induced polarization survey was conducted on a previously established survey grid which consisted of north-south directed traverse lines spaced 800 feet apart, and flagged at 100 foot intervals. The lines were turned off at right angles from an east-west directed baseline. Some 11 line miles of induced polarization surveying were conducted. An "a" spacing of 400 feet was used for the reconnaissance surveying and 200 feet for the detailing.

DATA PRESENTATION

The chargeability and apparent resistivity data obtained from this survey are depicted in contour form at a horizontal scale of 1" = 400' as follows:

Figure 2 - Chargeability contoured at an interval of one millisecond.

Figure 3 - Apparent resistivity contoured at 200, 300, 500, 750, 1000, and 1500 ohm-feet levels.

DISCUSSION OF RESULTS

The induced polarization data has been correlated with geological, geochemical and magnetic intensity maps of the survey area. These were provided by L.B. Gatenby, Geological Engineer.

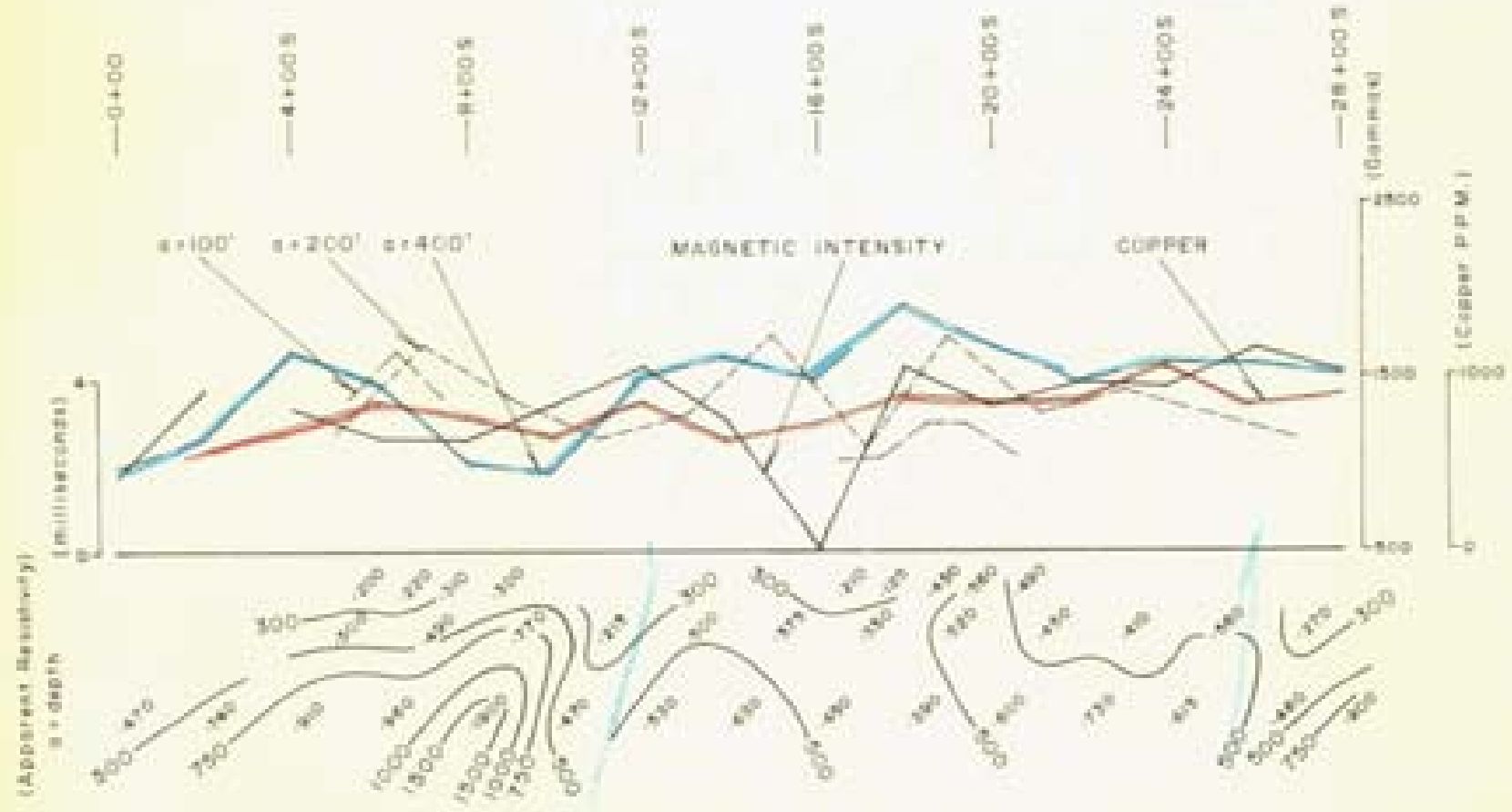
The resistivity data shows moderate variations which can be attributed to changes in the types and moisture content of the overburden and in the depth to bedrock. The resistivity contours show a definite bias for a northwest-southeast direction, parallel to the trends in topography.

The chargeability data located several interesting anomalous chargeability trends in the southern section of the survey area. The chargeability values rise to a high of some 6.3 milliseconds above a background of some 2.5 milliseconds. They show strong NW - SE trends parallel to the resistivity data which would suggest that the chargeability anomalies are structurally controlled.

Correlation of the induced polarization, geological, magnetic intensity and geochemical data indicates that the southwestern section of the survey area containing the interesting chargeability anomalies is largely overburden covered. Spotty outcrops in the area indicate that the underlying rocks are a mixture of andesites and agglomerates of the Nicola group. Sparse amounts of pyrite and chalcopyrite were detected in outcrops in areas of background chargeability. This would indicate that the chargeability anomalies may possibly be caused by some 1 - 3% per volume of sulphide mineralization. The magnetic intensity data shows that in general the anomalous areas are underlain by values of low magnetic intensity which also trend in a NW-SE direction. The copper geochemical data detected above background values in the order of 100 p.p.m. copper along the anomalous chargeability trends. The composite profiles, Plate 1, shows the profile form of the three chargeability trends located along line 0 + 00. The first chargeability anomaly is located at 6S with a deeper extension at 4S. The second and third chargeability highs are located at 15S and 19S on either side of a magnetic low. All three anomalies would appear to be narrow structurally controlled chargeability features.

FALAISE LAKE MINES LTD.

COMPOSITE PROFILES — INDUCED POLARIZATION
MAGNETIC INTENSITY & GEOCHEMISTRY



LINE 0+00

Glen E. White
geophysical consulting
&
associates ltd.

PLATE 1
JUNE 21, 1973

CONCLUSIONS

During the early part of June 1972, an induced polarization survey was conducted over some of the Lil and Pine mineral claims, Kamloops area, on behalf of Falaise Lake Mines Ltd.

The survey delineated a zone of interesting NW-SE trending anomalous chargeability values which may be structurally controlled and which show direct correlation with above background copper geochemical anomalies.

RECOMMENDATIONS

It is recommended that the principle induced polarization anomalous chargeability trend be investigated by diamond drilling. It is felt that a hole collared at

(1) Line 54W - 5S and drilled at an angle of 60° - 75° in a southerly direction for a distance of 500 feet and one at

(2) Line 0 - 19S and drilled at an angle of 60° - 75° in a northerly direction for a distance of 500 feet, would

effectively evaluate the anomalous chargeability trend.

Respectfully submitted,
GLEN E. WHITE GEOPHYSICAL
CONSULTING AND SERVICES LTD.

Glen E. White B.Sc.
Geophysicist

STATEMENT OF QUALIFICATIONS

Name: WHITE, Glen E.

Profession: Geophysicist

Education: B.Sc. Geophysics - Geology
University of British Columbia.

Professional Associations: Associate member of Society of Exploration Geophysicists.
Active member B.C. Society of Mining Geophysicists.

Experience: Pre-Graduate experience in Geology - Geochemistry - Geophysics with Anaconda American Brass.

Two years Mining Geophysicist with Sulmac Explorations Ltd. and Airborne Geophysics with Spartan Air Services Ltd.

One year Mining Geophysicist and technical Sales Manager in the Pacific north-west for W. P. McGill and Associates.

Two years Mining Geophysicist and supervisor Airborne and Ground Geophysical Divisions, with Geo-X Surveys Ltd.

Two years Chief Geophysicist Tri-Con Exploration Surveys Ltd.

One year Consulting Geophysicist.

Active experience in all Geologic provinces of Canada.

C E R T I F I C A T E

I, Douglas Parent, DO HEREBY CERTIFY AS FOLLOWS:

(1) That I am a Consulting Mining Engineer with a business office at 4495 Wallace St., Vancouver 8, B.C.

(2) That I am a Graduate of New Mexico Institute of Mining and Technology having received the degree of B.Sc. in Mining Engineering in 1934.

(3) That I am a registered P. ENG in the Association of Professional Engineers in the provinces of British Columbia and Quebec.

(4) That I have practised my profession as a Mining Engineer for the past 36 years.

(5) That I have reviewed a report dated June 23, 1972 based on work conducted by Glen E. White Geophysical Consulting and Services Ltd. under the supervision of Glen E. White B.Sc. Geophysicist, and concur with the findings therein.

(6) That this report consists of 7 typewritten pages and two maps.

(7) That I have no interest directly or indirectly in the Lil or Pine mineral claims or the securities of Falaise Lake Mines Ltd. nor do I expect to acquire or receive any.

DATED at Vancouver, British Columbia, this 23rd day of June, 1972.

DOUGLAS PARENT, P. ENG

Douglas Parent

Douglas Parent, P. ENG

A P P E N D I X

Instrument Specifications

Method of Survey - Induced Polarization

A. Instruments

(a) Type - Pulse
(b) Make - Huntec
(c) Serial No. - transmitter #107 - receiver #207

B. Specifications

(a) Size and Power - 2.5 KW
(b) Sensitivity - 300 x 10.5 volts
(c) Power Sources - 2.5 KW 400 cycle - three-phase generator
(d) Power by JLO motor, 5.2 H.P. @ 3,600 R.P.M.
(e) Timing - electronic, remote and direct
(f) Readings - (i) amps (ii) volts primary and secondary
(g) Calculate (i) Resistivity - ohm-feet
(ii) Chargeability - milliseconds

C. Survey Procedures

(a) method - power supplied to mobile probe along TW 18 stranded wire from stationary set-up
(b) configuration - Pole-dipole (three electrode array) Plot point midway between C_1 and P_1.

D. Presentation

Contour Maps (i) Chargeability - milliseconds
(ii) Resistivity - ohm-feet

LEGEND

Contour Line, Contour Interval - (milliseconds)

Stations

Outline of Claims

Claim Posts

Unpaved Roads

Cliffs

Pipeline

Powerline

INSTRUMENT HUNTEC 2.5 KW TIME DOMAIN (s=400')

C1 — C2 — P1 — P2

Pole-Dipole

CHARGEABILITY KEY

6.0 milliseconds
5.0 "
4.0 "
3.0 "

LIL 1 LIL 2 LIL 3 LIL 4 LIL 5 LIL 6 LIL 7 LIL 8 LIL 9 LIL 10 LIL 11 LIL 12 LIL 13 LIL 14 LIL 15 LIL 16 LIL 17 LIL 18 LIL 24 LIL 26 LIL 28 LIL 29

PINE 1 PINE 2 PINE 3 PINE 4 PINE 5 PINE 6 PINE 7 PINE 8 PINE 9 PINE 10 PINE 11 PINE 12 PINE 15

Brussels Lake

Duffy Creek

Kingston T.P. Line

Duffy Rd.

BASE LINE

Department of Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 4012 MAP #2

N.T.S. 92 I/10

LIL & PINE CLAIMS

KAMLOOPS LAKE

LOCATION MAP
SCALE 1" = 2 MILES APPROX

FALAISE LAKE MINES LTD.
LIL & PINE CLAIMS
KAMLOOPS MINING DIVISION - BRITISH COLUMBIA

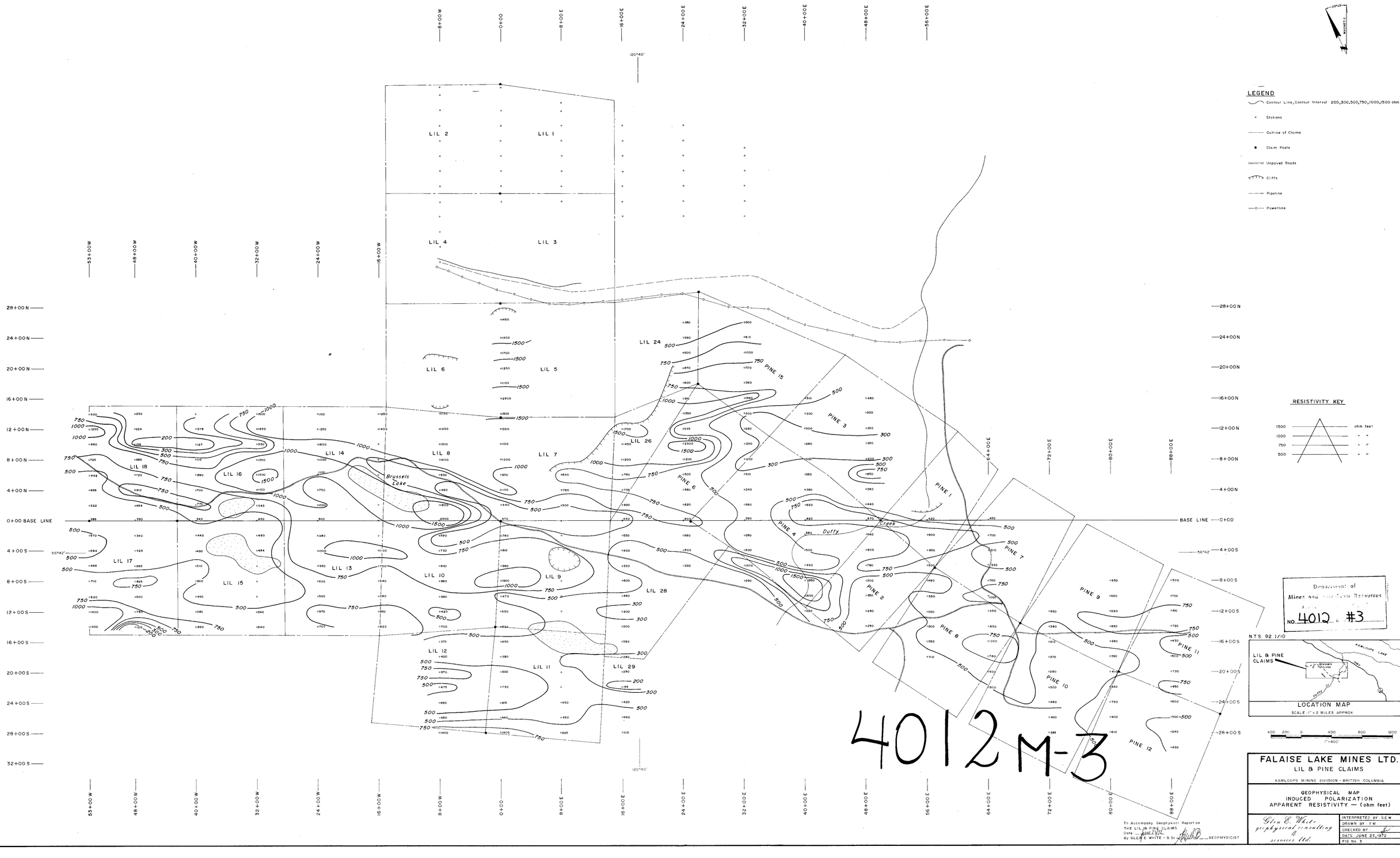
GEOPHYSICAL MAP
INDUCED POLARIZATION
PERCENT CHARGEABILITY - (milliseconds)

Glen E. White geophysical consulting services ltd.

INTERPRETED BY: G.E.W.
DRAWN BY: T.M.
CHECKED BY:
DATE: JUNE 23, 1972
FIG No. 2

To Accompany Geophysical Report on THE LIL & PINE CLAIMS
Date AUGUST 1972
By GLEN E. WHITE - B.Sc. GEOPHYSICIST

4012 M-2


LEGEND
Contour Line, Contour Interval 200,300,500,750,1000,1500 ohm feet
Stations
Outline of Claims
Claim Posts
Unpaved Roads
Cliffs
Pipeline
Powerline
RESISTIVITY KEY
1500 ohm feet
1000 " "
750 " "
500 " "
MAGNETIC
LIL 1
LIL 2
LIL 3
LIL 4
LIL 5
LIL 6
LIL 7
LIL 8
LIL 9
LIL 10
LIL 11
LIL 12
LIL 13
LIL 14
LIL 15
LIL 16
LIL 17
LIL 18
LIL 24
LIL 26
LIL 28
LIL 29
PINE 1
PINE 2
PINE 3
PINE 4
PINE 6
PINE 7
PINE 8
PINE 9
PINE 10
PINE 11
PINE 12
PINE 15
Brussels Lake
Duffy Creek
8+00 W
0+00
8+00 E
16+00 E
24+00 E
32+00 E
40+00 E
48+00 E
56+00 E
64+00 E
72+00 E
80+00 E
88+00 E
120°40'
56°42'
28+00 N
24+00 N
20+00 N
16+00 N
12+00 N
8+00 N
4+00 N
0+00 BASE LINE
4+00 S
8+00 S
12+00 S
16+00 S
20+00 S
24+00 S
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32+00 S
53+00 W
48+00 W
40+00 W
32+00 W
24+00 W
16+00 W
8+00 W
Department of Mines and [illegible] Resources
NO. 4012 #3
N.T.S. 92 I/10
LIL & PINE CLAIMS
KAMLOOPS LAKE
CHASE
LOCATION MAP
SCALE 1" = 2 MILES APPROX
400 200 0 400 800 1200
1"=400'
4012 M-3
FALAISE LAKE MINES LTD.
LIL & PINE CLAIMS
KAMLOOPS MINING DIVISION - BRITISH COLUMBIA
GEOPHYSICAL MAP
INDUCED POLARIZATION
APPARENT RESISTIVITY — (ohm feet)
Glen E. White geophysical consulting & services ltd.
INTERPRETED BY G.E.W.
DRAWN BY T.M.
CHECKED BY
DATE JUNE 23, 1972
FIG. No. 3
To Accompany Geophysical Report on THE LIL & PINE CLAIMS
Date June 1972
By GLEN E. WHITE - B.Sc. GEOPHYSICIST