4189

GEOPHYSICAL, GEOCHEMICAL REPORT

on the

HAG 'A' & 'B' GROUPS OF CLAIMS

WHOLLY OWNED BY

CANADIAN SUPERIOR EXPLORATION LIMITED

93L/16E, 93M/1E

CLAIMS: HAG 1-64
(107813-107846, 108364-108393)

LOCATION: 40 Miles East-North East of SMITHERS, B.C.
54°N 126°E
OMINECA MINING DIVISION

PERIOD: May 18th - November 11th, 1972.

W. RAINBOTH, P.ENG.
G. BRACE

TABLE OF CONTENTS

INTRODUCTION

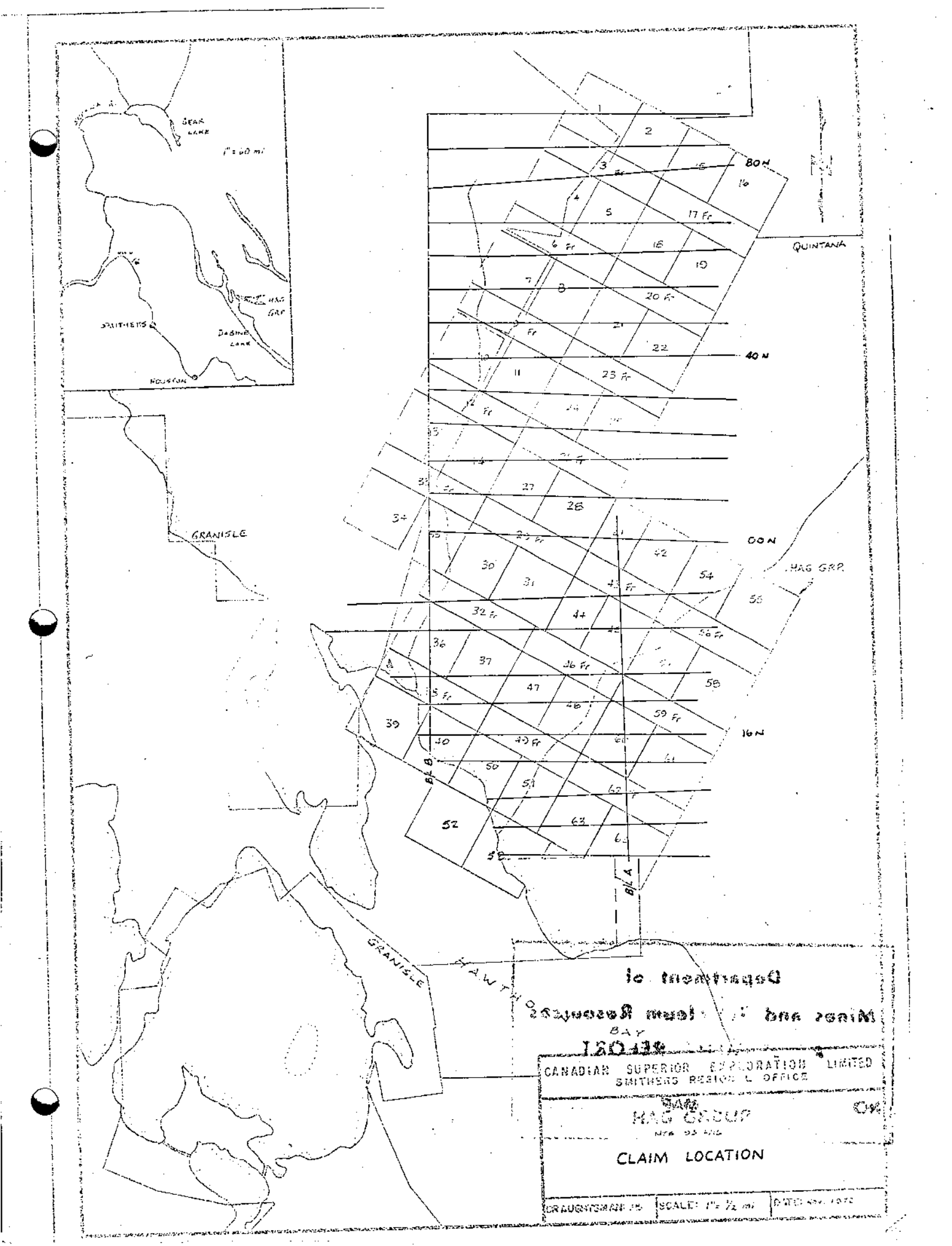
This report is concerned with geochemical, magnetic, and induced polarization surveys completed upon the HAG 'A' and 'B' groups of claims which are wholly owned by Canadian Superior Exploration Limited. These surveys were conducted during the period May 18th - November 11th, 1972.

These two groups of claims were initially staked to allow unimpeded access to an exploration of two undrilled IP anomalies located on ground previously held by Bethex and Tro-Buttle Mines.

This property is located approximately 40 air miles East-North East of Smithers, B.C. and immediately East of Hawthorne Bay, Babine Lake. Access is by road from Smithers to Smithers Landing (approximately 45 miles) and thence by boat to the property or by float equipped aircraft from Smithers to Hawthorne Bay.

A list of Personnel involved in the surveys along with the dates worked and rates of salaries is appended to this report as Appendix II.

Other related costs to these surveys being applied for as Assessment Credits and the Total Surveys Expenditure are attached as Appendix III.


BEAR LAKE
1" = 50 mi
SMITHERS
HAG GRP
QUINTANA
80 N
40 N
00 N
16 N
GRANISLE
HAG GRP
BLA
BLB
GRANISLE
HAWTHORNE BAY
CANADIAN SUPERIOR EXPLORATION LIMITED
SMITHERS REGION L OFFICE
HAG GROUP
CLAIM LOCATION

SUMMARY

Analyses of the geochemical and geophysical surveys conducted on the HAG 'A' and 'B' groups of claims have yielded the following interpretations and conclusions.

1. Geochemical sampling provided no useful data. These negative results are probably a function of heavy clay cover acting in such a manner so as to impede geochemical disperssion.

2. Within the northern grid area the contact between Sustut sedimentary rocks and Hazelton volcanic rocks is delineated by distinct resistivity contact.

3. In the southern grid area the series of magnetic highs have been attributed to Hazelton sedimentary rocks.

4. A displacement of the isomagnetic contours along lines 00 N (North Grid) has been interpreted as being representative of an E-W striking fault.

5. A strong, lengthy metal factor anomaly along line 56N (North Grid) and its cross sectional counterpart on line 36E represent a structural or structurally controlled linear conductor possibly in the form of an E-W striking fault carrying pyritic metallics, graphite and possibly alteration minerals, such as kaolinite.

6. Metal factor anomalies on line 72N, 64N, 48N and 40N all lie to the immediate west of the interpreted resistivity contact. These are thought to represent a continuous zone of conduction lying within Sustut sedimentary rocks and probably being caused by pyritic metallics possibly being introduced from the Hazelton rocks.

HISTORY AND PREVIOUS TECHNICAL WORK

Previous work on these two groups of claims consisted of:

(A) Magnetic, geochemical, and induced polarization surveys followed by six diamond drill holes totalling 1500 feet - conducted by Tro-Buttle Mines Ltd.

(B) An extensive IP survey followed by eleven diamond drill holes totalling 3200 feet - conducted by Bethex.

IP anomalies over this ground were found to be caused by sediments and minor volcanics containing graphitic and pyritic sections. No explanation was found for weak copper geochemical anomalies discovered and later drilled by Tro-Buttle Mines.

GENERAL GEOLOGICAL SETTING

A geological map prepared by Canadian Superior Exploration Limited indicated that the two claim groups are underlain by Sustut Group and Hazelton Group interbedded volcanic and sedimentary rock sediments.

The Haselton Volcanic Rocks are mainly fine to medium grained andesitic tuffs with interpolated basalt-andesite rocks. The sedimentary rocks consist of interbedded greywacke, argillite and shales with some strong graphitic zones.

The Sustut sedimentary rocks are mainly interbedded sandstones, shales, and mudstone.

Sulphide mineralization in the immediate area of interest consisted of dessiminated pyrite and magnetite within the Hazelton Volcanics and minor dessiminated pyrite within the Sustut sediments. No copper mineralization as such was encountered anywhere on the grid. However, a one inch wide Pb/Zn/Cu vein has been reported by Bethex. This was not located.

GEOCHEMISTRY

Sample collection, preparation, and analysis.

Soil samples were taken along cutlines at two hundred foot intervals with the aid of a hammer-mattock (Grubhoe) where possible in the (B) horizon.

These samples were packaged in soil sample envelopes supplied by the Canada Envelope Company of Montreal and made of high wet-strength kraft brown paper with a wet strength of 32 lbs. and measuring 3½" by 8½" when the flap of the envelope is folded. These samples were partially dried in the field by suspending them in the bags under the roof of a tent.
In the laboratory these samples were dried in a warm oven while still in the bags and then screened through an 80 mesh nylon screen - the fines being used for the analysis.

The tests performed on these samples were as follows:

(A) Total copper.

The sample of the fines from the screened and dried sample was digested with fuming perchloric acid for four hours in a pyrex beaker. The siliceous sediment was allowed to settle and the solution diluted to a measured volume with distilled and de-metallised water. An aliquot of the test solution was then taken and analysed for copper using an atomic absorption spectrometer. Carefully prepared standards were used for control. This copper analysis was carried out by Core Laboratories of Smithers.

(B) Total mercury.

Samples of the fines from screened and dried samples were analysed for total mercury (in ppb) using the mercury spectrometer method.

DISCUSSION OF RESULTS

No useful geochemical patterns were found. A visual estimate of background values for copper and mercury are respectively 40 ppm and 75 ppb. A number of erratic highs do occur throughout the survey area, however it was impossible to group these into any form of meaningfull pattern.

Overburden throughout the survey area was mainly clayey till and not amenable to soil geochemistry.

GEOPHYSICS

Instrumentation and Survey Procedure.

Instrumentation for the Induced Polarization Survey consisted of a McPhar P654 Frequency Domain IP System operating at 0.31 and 5.0 Hz.
Notes on the theory, method of field operation, and presentation of data for the McPhar Induced Polarization method, are included at the end of this report.

Presentation of the data for this survey is presented in two forms:

1. Contoured pseudo-sections of resistivity metal factor and frequency effect. (Drawing No.
2. A plan map of the survey area indicating definite, probable, and possible anomalies by solid, broken and slanted broken bars respectively. (Drawing No.

A dipole-dipole electrode configuration was employed throughout the survey. Electrode separation was maintained at 300 feet with multiple spacings to 900 feet (n = 3) about each survey station. This method resulted in collection of 1200 readings.

Magnetic data was collected using a Sharpes MF1 Fluxgate Magnetometer which measures the vertical component of the earth's magnetic field. These measurements were taken along cutlines of 100 foot intervals.

Diurnal measurements in the earth's magnetic field during the magnetic surveys were accounted for by establishing base stations along the survey grid base line. These stations were read every time the baseline was crossed by the operator, and any resulting variation was removed from the collected data in the normal mathematical process.

DISCUSSION OF RESULTS

(A) Magnetic

The main magnetic feature evident on the isomagnetic plan was a northerly trending series of high magnetic responses. These are generally greater than 200 gammas above magnetic background (visually estimated to be 200 - 300 gammas) and attain a maximum of 1150 gammas on line 0 N 20 W (South Grid). Along Line 56 N (South Grid) displacement of the isomagnetic contours (in a right lateral sense) suggests the possible existence of a fault striking approximately East-West. An almost complete absence of geologic data in this area precludes a definite correlation between these magnetic features and the underlying rock units. Where geologic data is available, i.e. across grid 60N to 32N (south Grid) the trend of these magnetic features would appear to obliquely intersect a sedimentary horizon.

The only other anomalous features evident on the isomagnetic contour plan are a series of small closures located in the northern one third of the grid area. These are generally 100 - 200 gammas above background. Geologic data in this area suggests that these features are the magnetic representations of a very erratic and lean magnetite distribution within volcanic and sedimentary horizons.

(B) Resistivity Data

In a gross sense resistivity data can be separated into two component parts:

1. An area of relatively low resistivities, consistently less than 100 ohm feet and generally averaging 50-60 ohm feet - this area would appear to correspond to the Sustut type sediments, i.e. greywackes, argillite, mudstones and silt stones.

2. An area of relatively high resistivities, consistently greater than 200 ohm feet and generally averaging 400-500 ohm feet - this area would appear to correspond to the andesitic tuffs of the Hazelton group.

This resistivity contrast between the two groups can be traced from line 72N to line 40N on the North Grid. (See Drawings 2 - 8)

On the South Grid resistivities are relatively low (again generally less than 100 ohm feet) and featureless.

In addition there are resistivity depressions coincident with IP anomalies. These will be discussed in this context.

(C) Induced Polarization

NOTE: All metal factor anomalies are confined to the northern grid area and occur on lines 72N to 40N with the exception of line 60N.

The metal factor anomalies on line 72N, 64N, 48N and 40N all exhibit essentially the same characteristics i.e. they have only a weak to moderate response amplitude, are generally confined, and appear to have a distinct spatial relationship to the previously mentioned resistivity contact - occurring to the immediate west of it. It is thought that the anomalies on these lines represent a more or less continuous zone.

The depths to the causative bodies on lines 72N, 64N and 48N are probably less than or equal to 225 feet. On line 40N depth to the causative body is probably less than or equal to 300 feet.

The metal factor anomaly on line 56N would appear to be distinctly different to those mentioned above. It exhibits an exceptionally strong response (up to 7200MF), a maximum length of 3600 feet and would appear to straddle the projected resistivity contact between lines 64N and 48N. An additional survey line positioned along line 36E from 42N to 70N has also delineated this anomaly and indicates a width of less than or equal to 300 feet.

Depth to the causative body indicated on line 56N and 36E is less than or equal to 150 feet.

The anomalies located on line 52N do not appear to fit either the two previous types. It is possible however that the IP equipment along this line was responding to the exceptionally strong anomaly on line 56N.

INTERPRETATIONS AND CONCLUSIONS

Although geologic data is sparse analysis of the combined geophysical data does allow a probable exterpolation of the spatial positioning of the various rock units underlying the survey areas. As has been previously mentioned a distinct resistivity contrast occurs throughout the northern grid area with higher resistivities appearing to be spatially related to andesitic tuffs of the Hazelton Group and lower resistivities appearing to be spatially related to various sedimentary horizons of the Sustut Group. This apparent electrical contrast between the two groups also evident in the frequency effect data with increased frequency effect responses (generally greater by a factor of 2 to 3) being related to the Hazelton Rocks - probably being caused by formational pyrite.

This resistivity contrast is absent in the southern grid area. The decreased resistivities measured in this area are, however thought to be indicative of a sedimentary environment. The magnetic character of these sediments is substantially different from that of the Sustut sediments in the northern grid area. Previous experience in this area and the presence of Hazelton sediments to the immediate north of this magnetic feature suggests that this feature is representative of Hazelton sediments which therefore must contain a relatively large amount of indigenous magnetic material.

The above interpretations have been indicated on the IP Anomaly Plan (Drawing No.

The rather lengthy but exceptionally strong metal factor anomaly on L56N (North Grid) and the cross-sectional anomaly on L36E represents some form of structural or structurally controlled linear conductor, with a small width. The linear nature of this conductor combined with its apparent transection of the magnetic and geologic trends suggests that this conductor is most probably directly related to a strong E-W fault.

Previous drilling (by Bethex) and geologic mapping in the immediate vicinity suggests that the most probable polarizable material in the vicinity to account for this anomaly is a combination of pyritic metallics, graphite and possibly alteration minerals, e.g. kaolinite.

As can be seen from the IP data profiles and anomaly plan the metal factor anomalies on lines 72N, 64N, 48N, and 40N all lie to the immediate west of the interpreted resistivity contact and thus probably within the Sustut sediments. These are thought to represent a more or less continuous zone. The frequency effect within these anomalies is slightly increased relative to those interpreted as being directly related to the Hazelton rocks. This suggests that there is an increase in polarizable material along this interpreted

contact zone, and within the Sustut rocks.

Considering that the interpreted are of Sustut sediments do not appear to contain an appreciable amount of polarizable material (as evidenced by the depressed and frequency effect and metal factor responses) and the close spatial relationship between these anomalies in the interpreted contact, it would not appear to be unreasonable to assume that there has been an introduction of polarizable material, probably in the form of pyritic metallics, into the Sustut sediments and along the contact with Hazelton rocks. This may have been brought about as a function of the interpreted faulting along line 56N, however there is no physical evidence to support this theory.

G.R. Brace

W.R. Rainboth

NOTES ON THE THEORY, METHOD OF FIELD OPERATION AND PRESENTATION OF DATA FOR THE INDUCED POLARIZATION METHOD.

Induced polarization (in a geophysical exploration sense) involves electro-chemical processes which take place when current flows from an electrolyte (ionic conduction) into a metal (electronic conduction) or vice-versa.

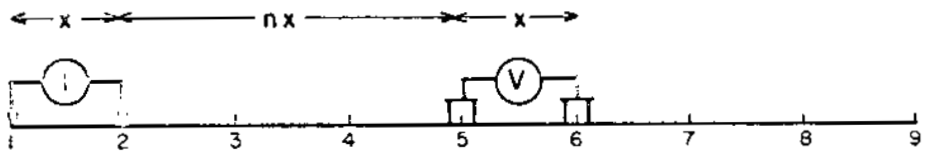
Normally, when current is passed through the ground, all of the conduction takes place through ions present in the interstitial fluid content of the rock. If, however, the interstices are blocked by metallic particles this ionic conduction will be "blocked" as the mode of conduction attempts to change from ionic to electronic. Thus, there will be an ion build up at the boundary with a resulting charge polarization. The amount of blocking action or induced polarization will depend upon the chemical energies necessary to allow the ions to give up or receive electrons from the metallic surface and increases with time that a D.C. current is allowed to flow through the rock. This blocking action is analogous to the introduction of a capacitance to a purely resistive circuit.

If an AC Signal is applied to the system the effective impedance of the system is found to decrease with increasing frequency. Thus, apparent resitivity measurements made at two frequencies would be different from each other. The larger the differences, the larger the frequency dependance. And since the frequency dependance is brought about by the introduction of a capacitance into a purely resistive system the larger the frequency dependance, the greater is the capacitance, i.e., the induced polarization effect. This then is the so-called frequency effect quantity and is non-dimensional. Metal factor values are obtained by normalizing the frequency effect values with respect to the varying resistivities.

In the field procedure measurements in the surface are made in such manner as to allow the effects of lateral changes in the properties of the ground to be separated from the effects of vertical changes in the properties. Current is applied to the ground at two points a distance (x) apart. The polentials are measured at two other points (x) feet apart and in line with the current electrodes and separated from them by an integer number (n) times the basic distance (x). Usually several traverses are made along the survey line with various values of (n) i.e., (n) = 1, 2, 3 and 4.

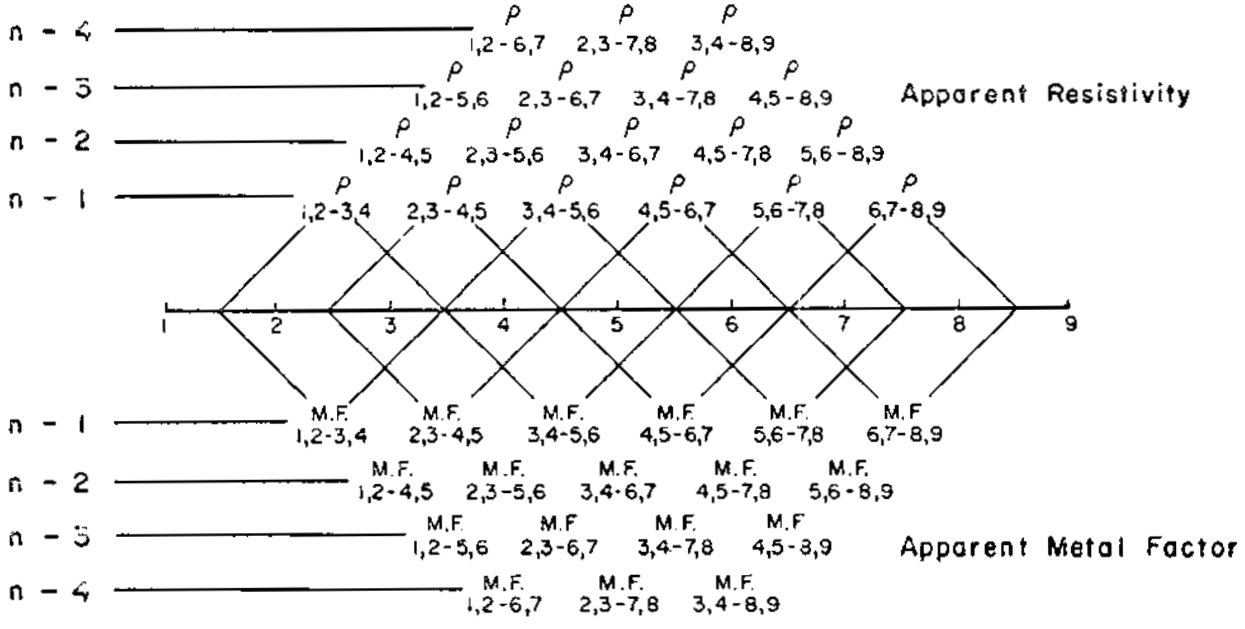
The method of plotting the results is diagramatically depicted in the accompanying figure.

METHOD USED IN PLOTTING DIPOLE-DIPOLE INDUCED POLARIZATION AND RESISTIVITY RESULTS



Stations on line

x = Electrode spread length
n = Electrode separation



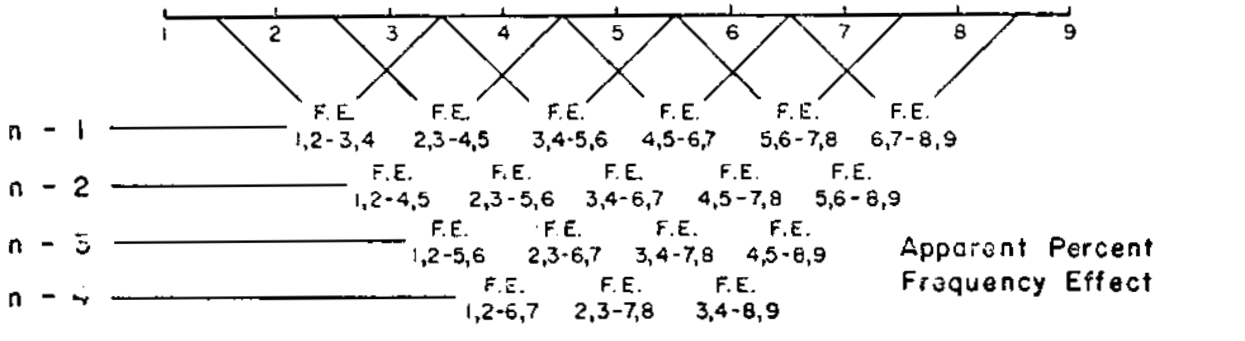


Fig. A

APPENDIX I

ASSESSMENT DETAILS

PROPERTY: HAG 'A' & 'B' Claim Group

OWNER: Canadian Superior Exploration Limited,
2201 - 1177 W. Hastings Street
VANCOUVER 1, B .C.

LOCATION: 40 miles ENE of SMITHERS, B.C.
and immediately E. of HAWTHORNE BAY, BABINE LAKE
OMINECA MINING DIVISION.

NUMBER OF CLAIMS: 64

NATURE OF SURVEYS:

(A) Geochemical
(B) Geophysical
(i) Magnetic
(ii) Induced Polarization

INSTRUMENTS: McPhar P654 I.P. System
Scintrex MF-1 Fluxgate Magnetometer

NUMBER OF SAMPLES TAKEN: 853

NUMBER OF READINGS TAKEN:

(A) Magnetic - 445
(B) Induced Polarization - 1200

APPENDIX II

LABOUR COST BREAKDOWN

Supervisory Personnel	Days Worked	Total Days	Rate	TOTAL
W. Rainboth (Geologist)	Nov.10-13	4 x	$75	$300
J. Baker (Geologist)	Oct.29-Nov.7 May 18 - 29 June 24, 25	12 x	$35	$420
G. Brace (Geophysicist)	Nov.11, 12	2 x	$35	$ 70
Geochemical Personnel				
D. Ferguson (Sampler)	May 18-29 June 9-11, " 18-20	18 x	$30	$540
M. Bristol (Sampler)	June 9-11, " 18-20	6 x	$30	$180
Line-Cutting Personnel				
D. Ferguson	June 12-17 Oct.25-Nov.1	14 x	30	$420
M. Bristol	June 12 - 17	6 x	30	$180
Geophysical Personnel				
D. Ferguson (Magnetometer Op.)	June 21-25	5 x	30	$150
G. Trefananko (I.P. Operator)	Oct.25-Nov.7	14 x	30	$420
(Tx. Operator)	Oct.25-Nov.7	14 x	30	$420
V. Leuguer (Helper)	Oct.25-Nov.7	14 x	30	$420
L. Duffels (Helper)	Oct.25-Nov.7	14 x	30	$420
		TOTAL		$ 4430

APPENDIX III

COST STATEMENT

LABOUR	
Salaries as per Appendix II	$4430
GEOCHEMICAL ANALYSIS	
864 Samples @ $3.00 per sample	$2592
EQUIPMENT RENTAL	
Magnetometer @ $250 per month	$62
McPhar P654 I.P. Unit @ $35 per day	$490
BOARD & LODGING	$798
DRAUGHTING	$200
TOTAL	$ 8572

APPENDIX IV

CERTIFICATE

I, CARRY R. BRACE, of the City of Kamloops, Province of British Columbia, do hereby certify that:

1. I am a Geophysicist resident at 207 - 1956 Curlew Road, Kamloops, British Columbia.

2. I am a graduate of the University of British Columbia, (1971) with a B.Sc. degree in Geophysics.

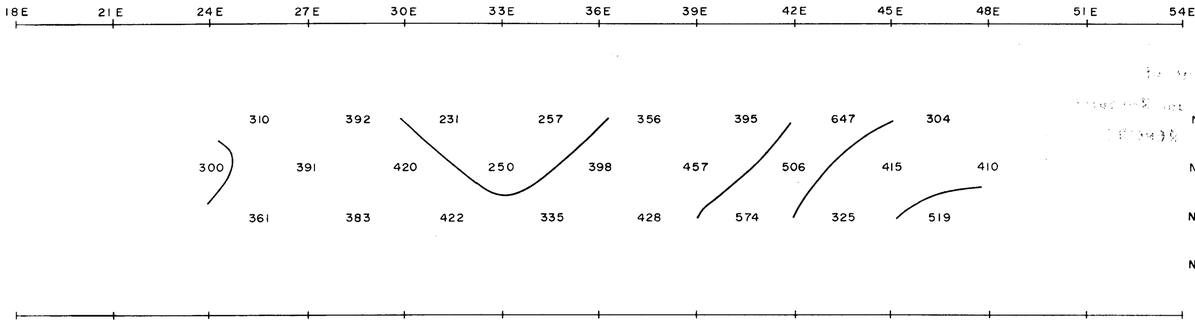
3. I have been practising my profession for one and a half years.

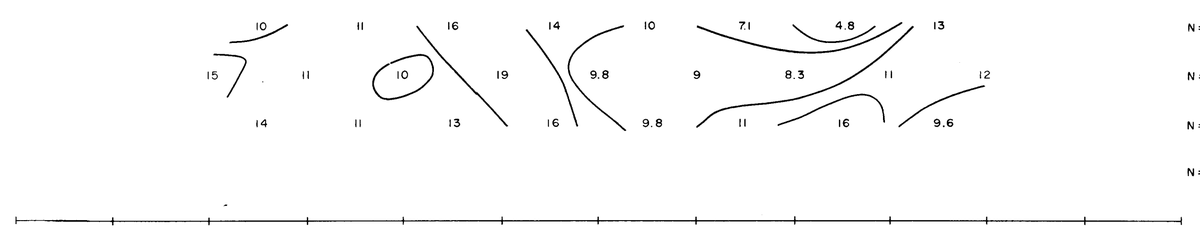
4. I am an associate member of the Society of Exploration Geophysicists.

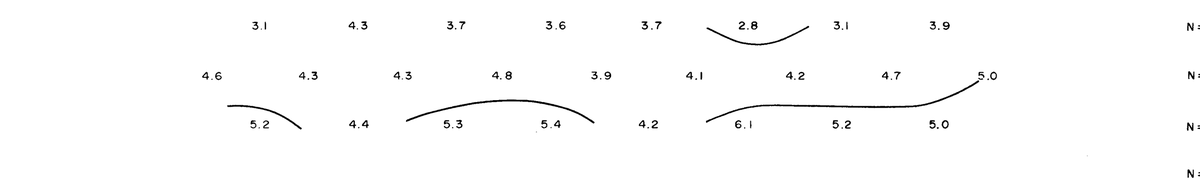
Dated at Kamloops, B.C.
This 2nd day of February, 1973.

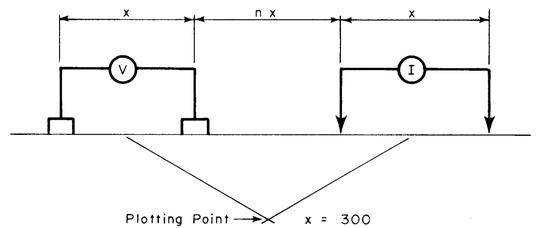
Garry R. Brace

Garry R. Brace, B.Sc.









SURFACE PROJECTION OF
ANOMALOUS ZONES

DEFINITE

PROBABLE

POSSIBLE

CANADIAN SUPERIOR EXPLORATION LTD.

KAMLOOPS BRITISH COLUMBIA

HAG PROJECT (P-83)

I. P. PROFILES

LINE 80 N

OMINECA M.D.

Cont. Int. : Logarithmic

Scale : 1" = 300'	Date : OCTOBER 1972
Survey by : McPhar Geophysical	Dwg No. 1

BLB

B.L.A

Hagan Arm

Hawthorn Bay

Newman Penninsula

McDonald Island

Boundary of CSE HAG GROUP

Geology

Symbols

CONTOURS :-

THRESHOLD 150-200 ppb Hg

ANOMALOUS >200 ppb Hg

HIGHLY ANOMALOUS >400 ppb Hg

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 4189 MAP #3

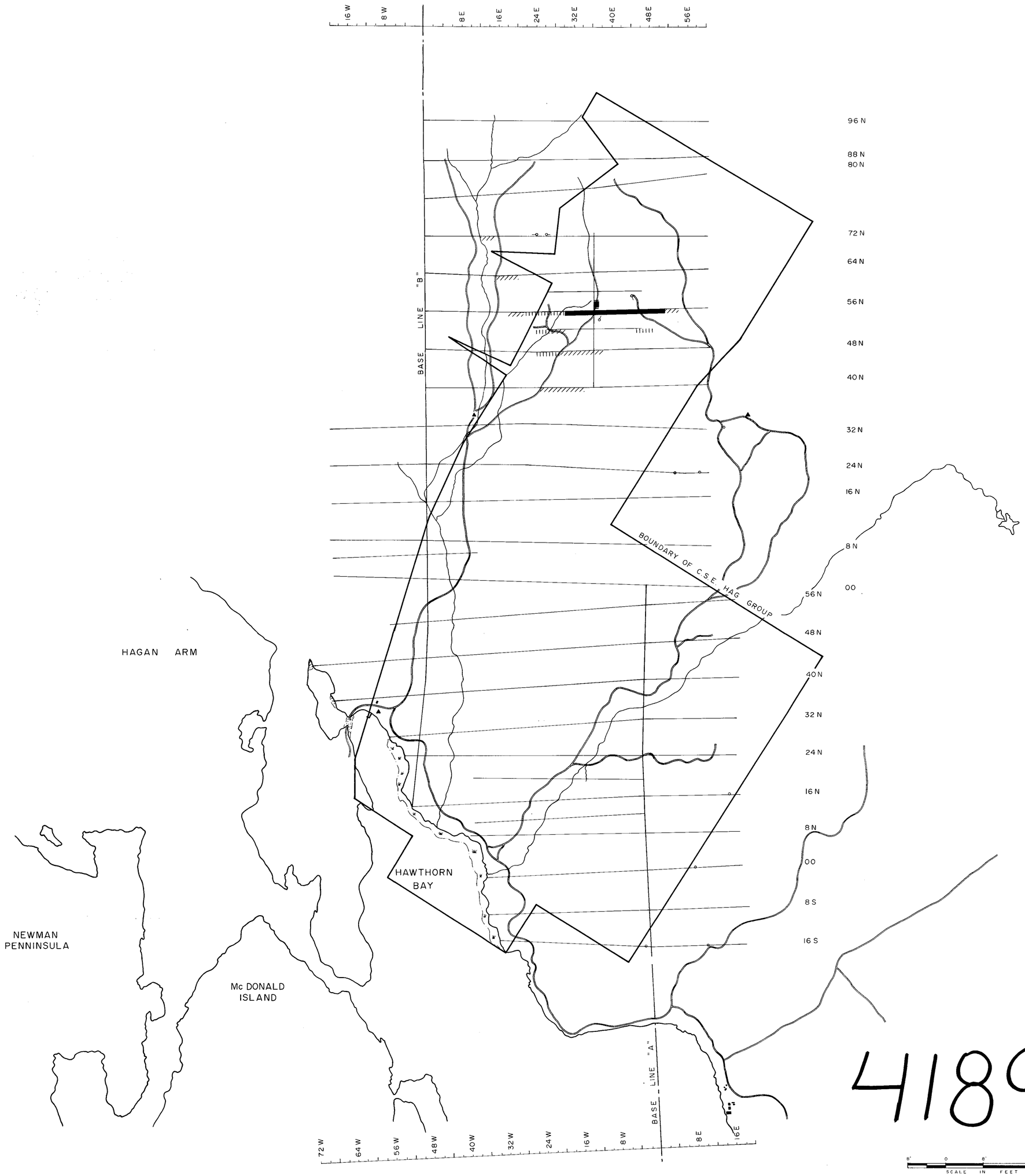
TO ACCOMPANY AGEOCHEMICAL - GEOPHYSICAL REPORT BY W. RAINBOTH, P. ENG., & G. BRACE ON THE HAG 'A' & 'B' GROUPS, OMINECA M.D. DATED FEB. 13, 1973

CANADIAN SUPERIOR EXPLORATION LIMITED
SMITHERS REGIONAL OFFICE

HAG GROUP
NTS 93 4/6

MERCURY IN SOILS

SCALE 1"=800'	J.B.		NOV. 1972



— LEGEND —

- ○ DIAMOND DRILL HOLE
- ▲ CAMPSITE

INSTRUMENTATION
McPhar P660
0.3 & 0.5 Hz
Dipole - Dipole Array
300' Electrode Spacing

Department of Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 4189 MAP #1

- DEFINITELY ANOMALOUS
- PROBABLY ANOMALOUS
- POSSIBLY ANOMALOUS

TO ACCOMPANY A GEOCHEMICAL - GEOPHYSICAL REPORT BY W. RAINBOTH, P. ENG., & G. BRACE ON THE HAG 'A' & 'B' GROUPS, OMINECA M.D. FEB. 13, 1973

4189 M-1

CANADIAN SUPERIOR EXPLORATION LTD.
KAMLOOPS BRITISH COLUMBIA

NTS 93 L 16
HAG GROUP

I.P. ANOMALY PLAN

Scale : 1" = 800'	Date : NOVEMBER 1972
Survey By : McPHAR GEOPHYSICAL	Dwg. No. 14

B1 B

Hagan Arm

Hawthorn Bay

Newman Penninsula

McDonald Island

BOUNDARY OF CSE HAG GROUP

B.L.A

Geology:

Symbols:

INSTRUMENT :- SHARPE MF-1 FLUXGATE

ARBITRARY BASE :- 205 $ (L 32N. 10E)

CONTOUR INTERVAL :- 100 $

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 4189 MAP #4

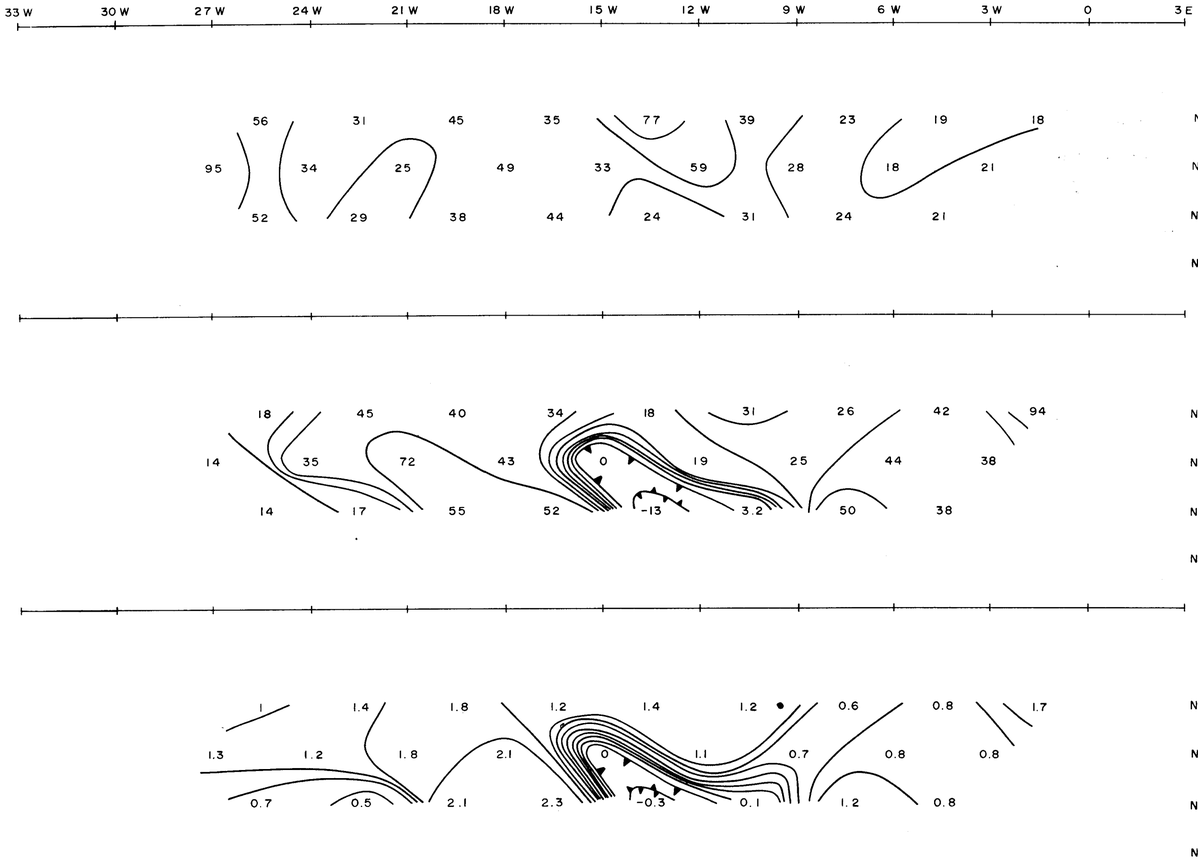
TO ACCOMPANY A GEOCHEMICAL - GEOPHYSICAL REPORT BY W. RAINBOTH, P. ENG., & G. BRACE on the Hag GROUPS 'A' & 'B', OMINECA M.D. DATED FEB. 13, 1973

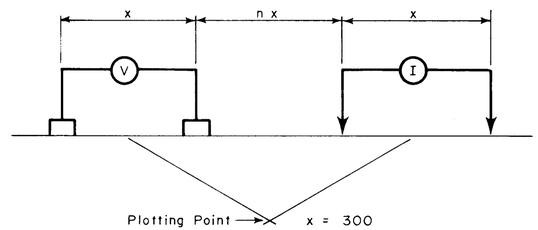
CANADIAN SUPERIOR EXPLORATION LIMITED
SMITHERS REGIONAL OFFICE

HAG GROUP
NTS 93 N/6

MAGNETIC SURVEY

SCALE 1"=800' | J.B | | NOV 1972





SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE

PROBABLE

POSSIBLE

CANADIAN SUPERIOR EXPLORATION LTD.

KAMLOOPS BRITISH COLUMBIA

HAG PROJECT (P-83)

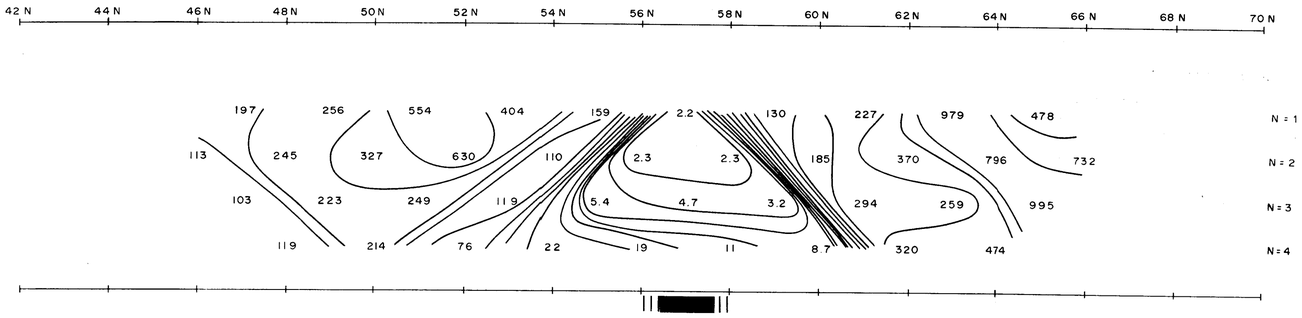
I.P. PROFILES

LINE 12 N

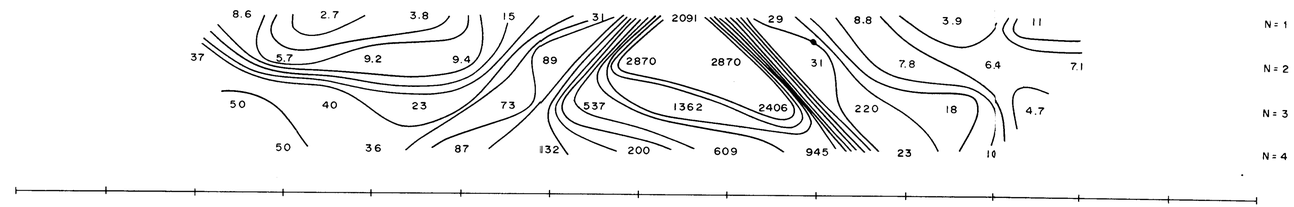
OMINECA M.D.

Cont. Int. : Logarithmic

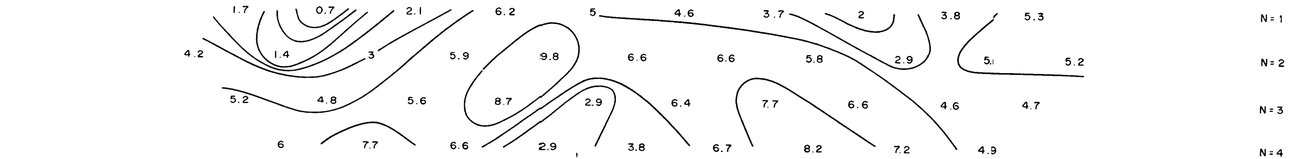
Scale : 1" = 300'	Date : OCTOBER 1972
Survey by : McPhar Geophysical	Dwg No. 12



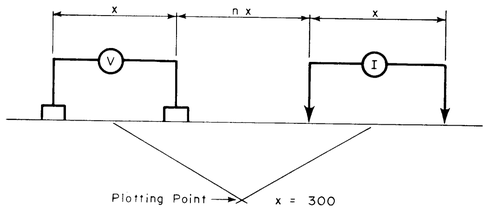
RESISTIVITY (APP.)



METAL FACTOR (APP.)



FREQUENCY EFFECT (%)



SURFACE PROJECTION OF
ANOMALOUS ZONES

DEFINITE

PROBABLE

POSSIBLE

CANADIAN SUPERIOR EXPLORATION LTD.

KAMLOOPS BRITISH COLUMBIA

HAG PROJECT (P-83)

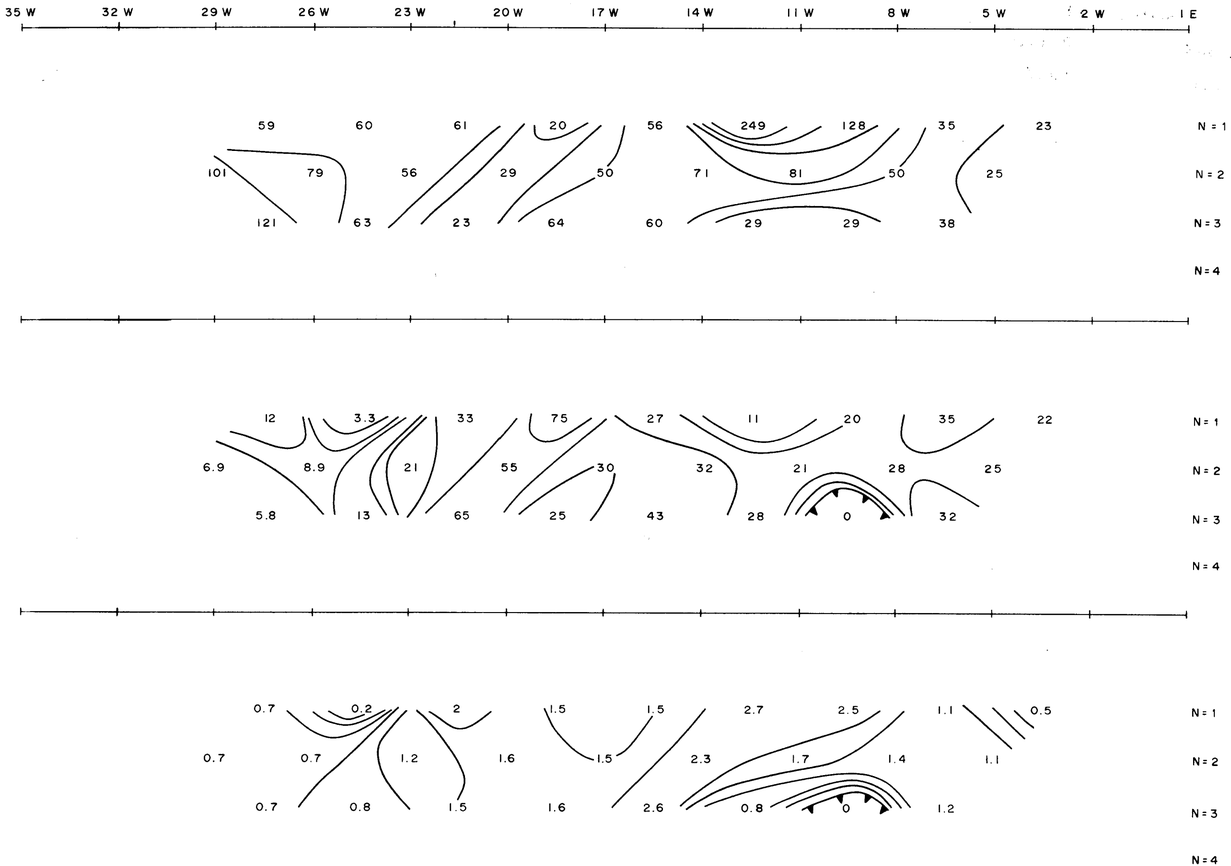
I.P. PROFILES

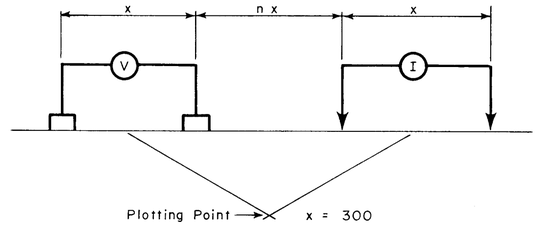
LINE 36 E

OMINECA M.D.

Cont. Int. = Logarithmic

Scale = 1" = 200'	Date = OCTOBER 1972
Survey by = McPhar Geophysical	Dwg No. 13





SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE

PROBABLE

POSSIBLE

CANADIAN SUPERIOR EXPLORATION LTD.

KAMLOOPS BRITISH COLUMBIA

HAG PROJECT (P-83)

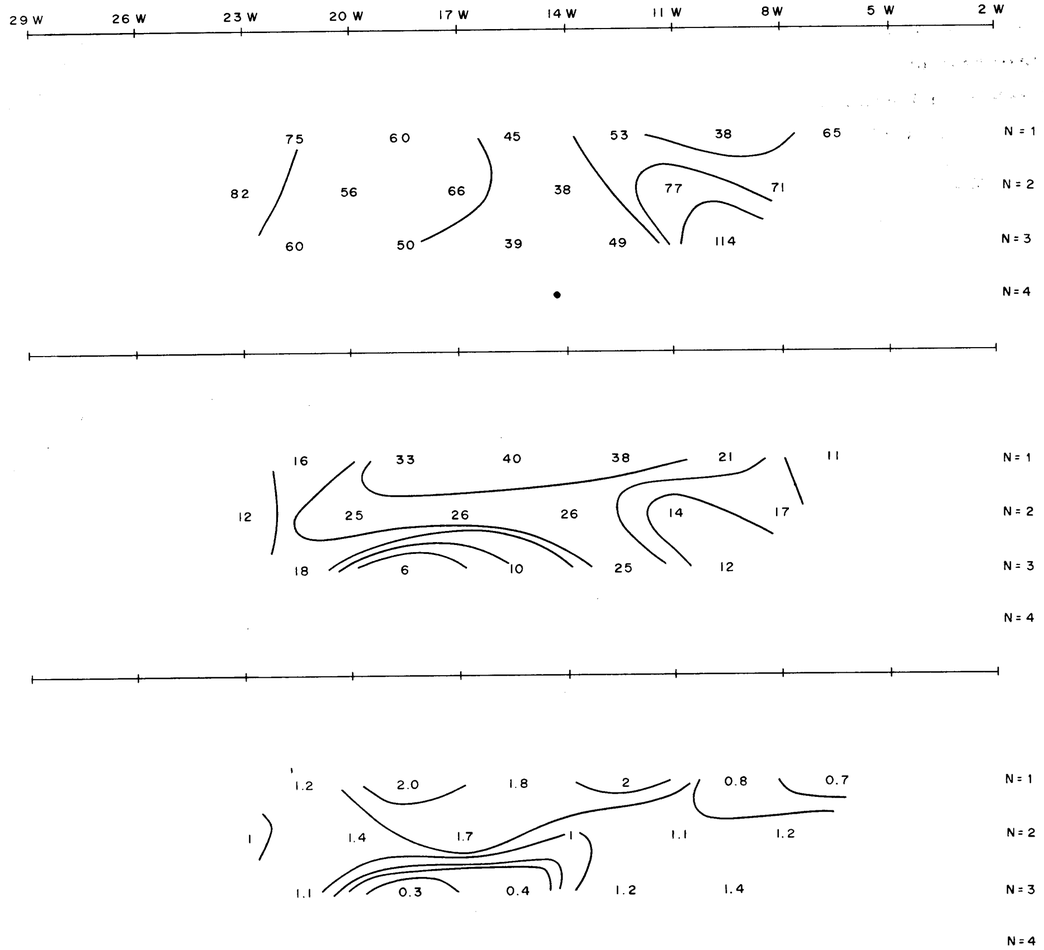
I.P. PROFILES

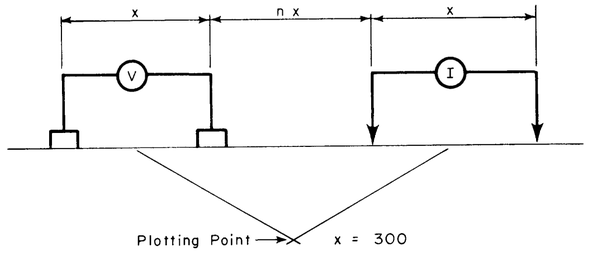
LINE 16 N

OMINECA M.D.

Cont. Int. : Logarithmic

Scale : 1" = 300'	Date : OCTOBER 1972
Survey by : McPhar Geophysical	Dwg No. 11





SURFACE PROJECTION OF
ANOMALOUS ZONES

DEFINITE

PROBABLE

POSSIBLE

CANADIAN SUPERIOR EXPLORATION LTD.

KAMLOOPS BRITISH COLUMBIA

HAG PROJECT (P-83)

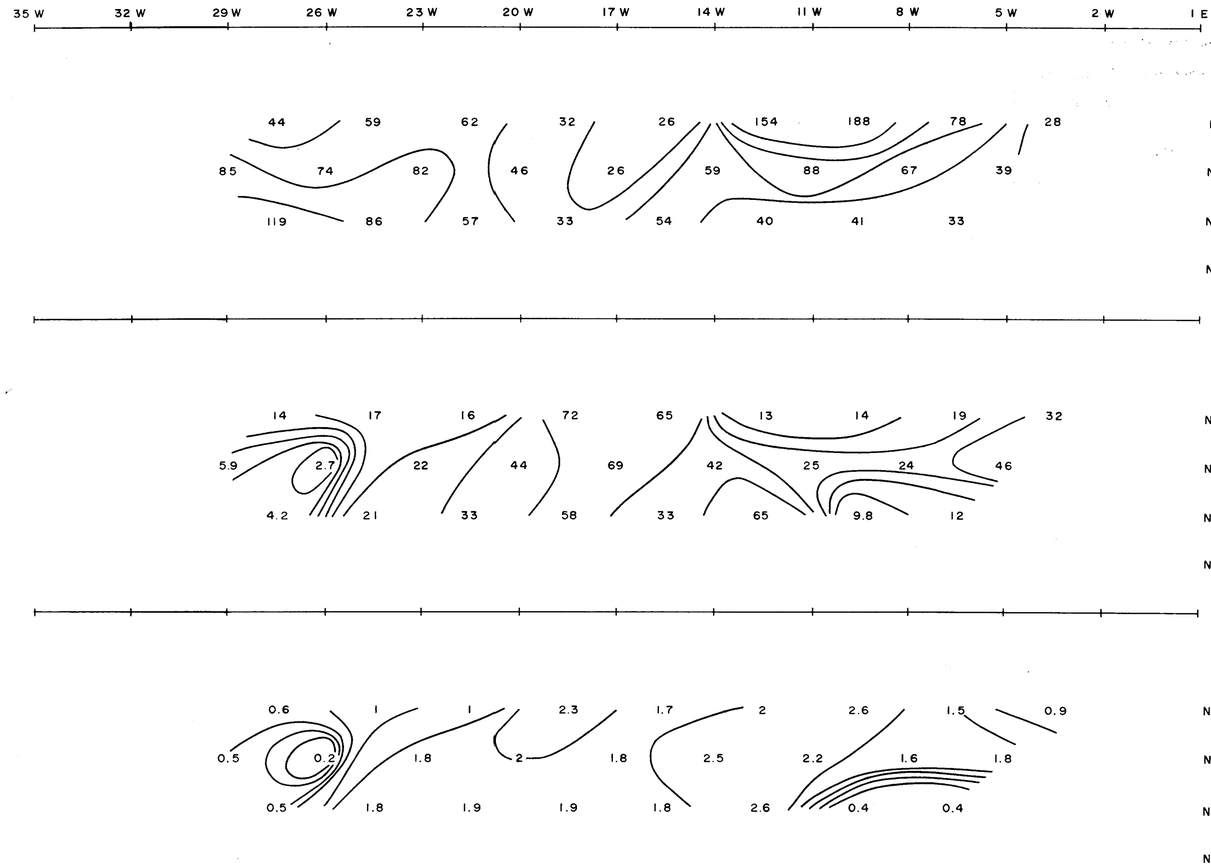
I. P. PROFILES

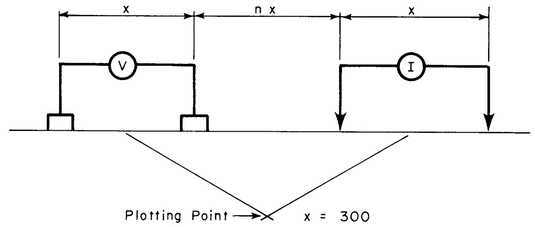
LINE 24 N

OMINECA M.D.

Cont. Int. : Logarithmic

Scale : 1" = 300'	Date : OCTOBER 1972
Survey by : McPhar Geophysical	Dwg No. 9





SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE

PROBABLE

POSSIBLE

CANADIAN SUPERIOR EXPLORATION LTD.

KAMLOOPS BRITISH COLUMBIA

HAG PROJECT (P-83)

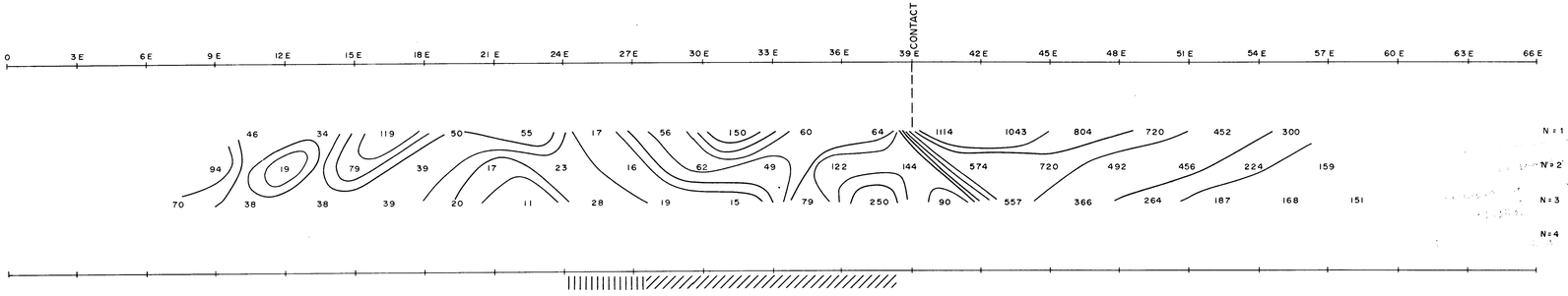
I.P. PROFILES

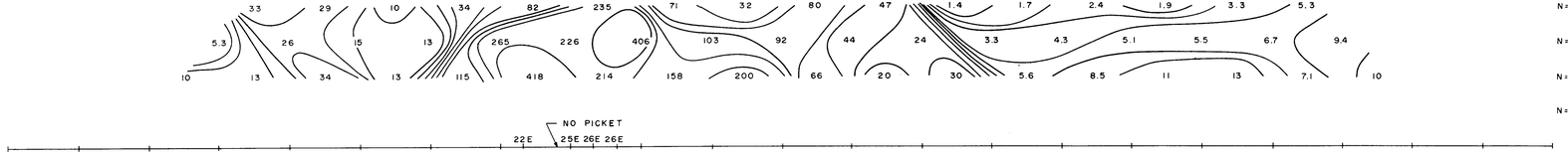
LINE 20 N

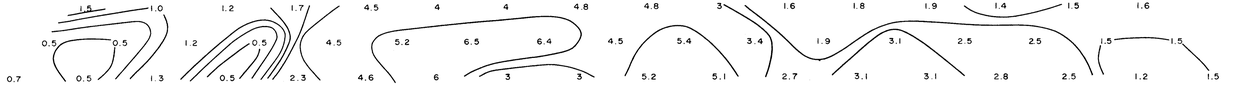
OMINECA M.D.

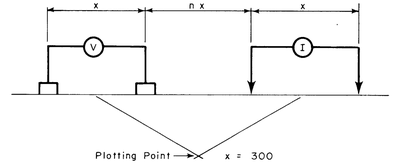
Cont. Int. : Logarithmic

Scale : 1" = 300'	Date : OCTOBER 1972
Survey by : McPhar Geophysical	Dwg No. 10









SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE

PROBABLE

POSSIBLE

CANADIAN SUPERIOR EXPLORATION LTD.

KAMLOOPS BRITISH COLUMBIA

HAG PROJECT (P-83)

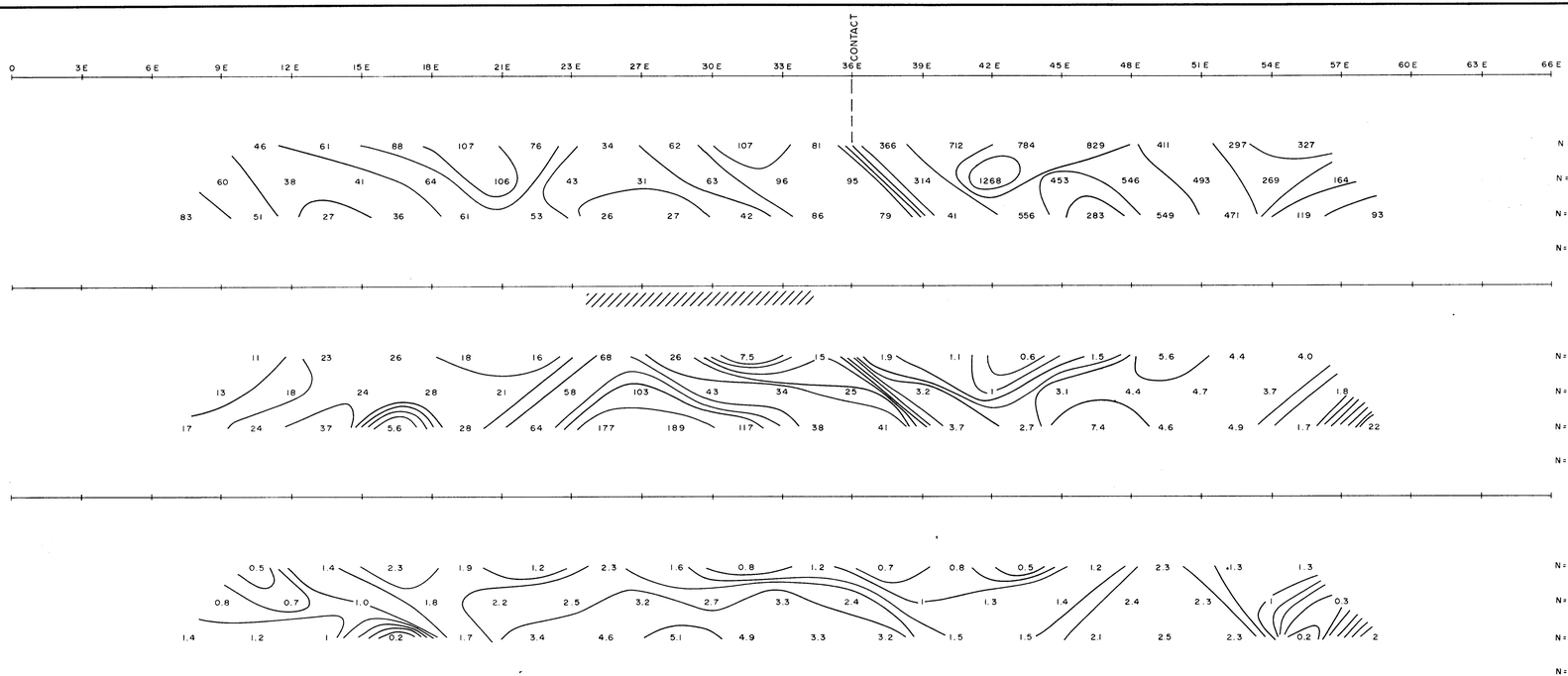
I.P. PROFILES

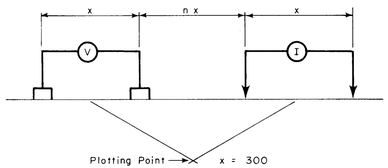
LINE 48 N

OMINECA M.D.

Cont. Int. = Logarithmic

Scale = 1" = 300'	Date = OCTOBER 1972
Survey by = McPhar Geophysical	Dwg No. 7





SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE

PROBABLE

POSSIBLE

CANADIAN SUPERIOR EXPLORATION LTD.

KAMLOOPS BRITISH COLUMBIA

HAG PROJECT (P-83)

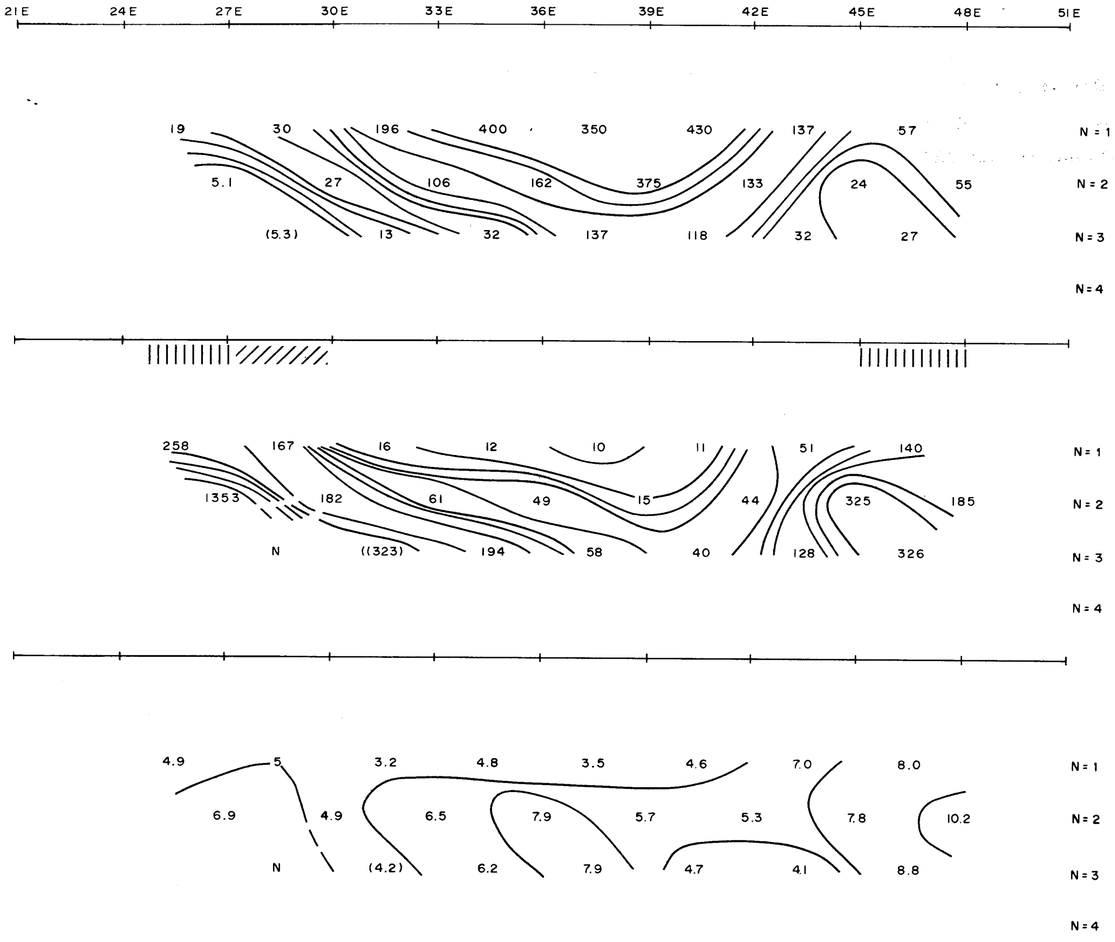
I.P. PROFILES

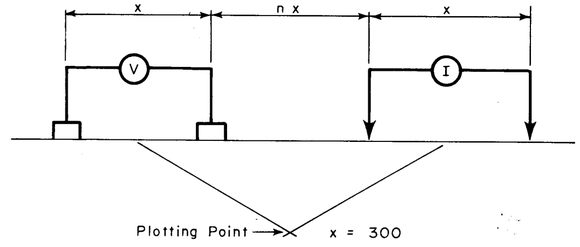
LINE 40 N

OMINECA M.D.

Cont. Int. : Logarithmic

Scale : 1" = 300'	Date : OCTOBER 1972
Survey by : McPhar Geophysical	Dwg No. 8





SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE

PROBABLE

POSSIBLE

CANADIAN SUPERIOR EXPLORATION LTD.

KAMLOOPS BRITISH COLUMBIA

HAG PROJECT (P-83)

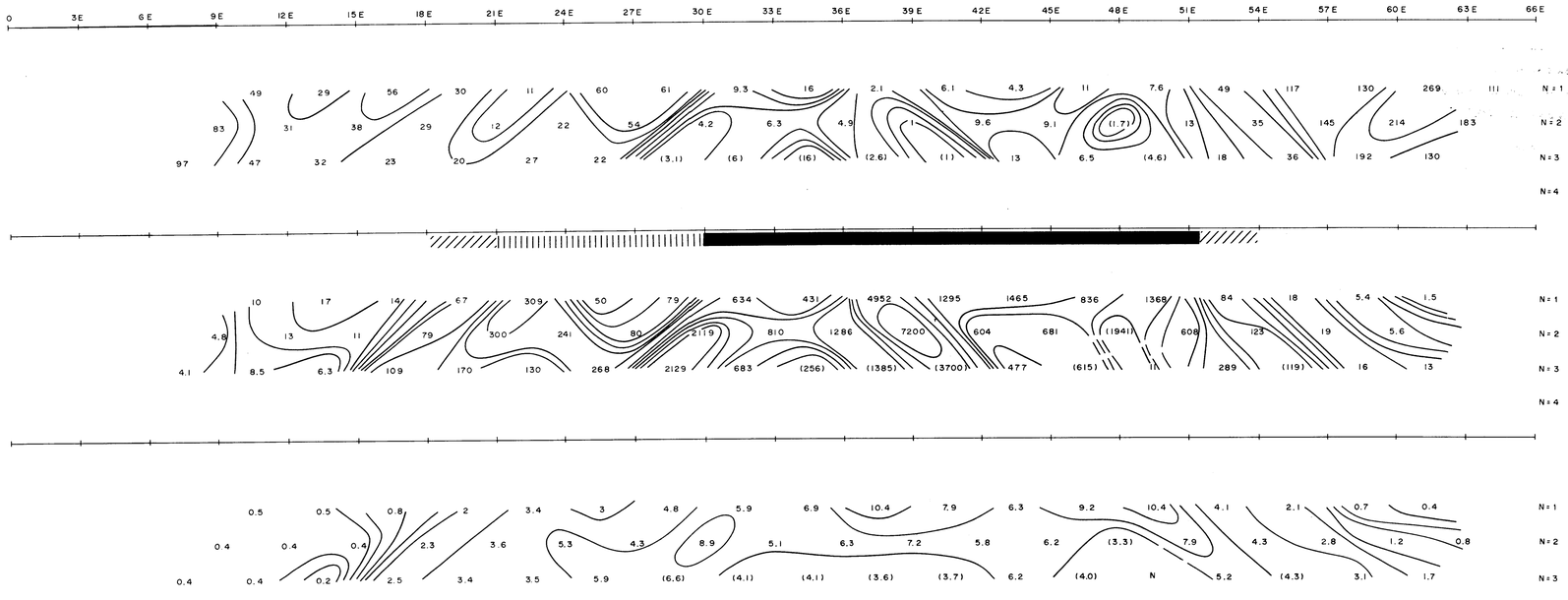
I. P. PROFILES

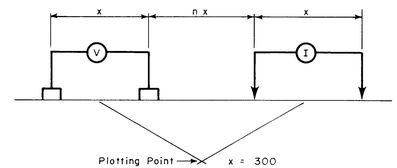
LINE 52 N

OMINECA M.D.

Cont. Int. : Logarithmic

Scale : 1" = 300'	Date : OCTOBER 1972
Survey by : McPhar Geophysical	Dwg No. 6





SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE

PROBABLE

POSSIBLE

CANADIAN SUPERIOR EXPLORATION LTD.

KAMLOOPS BRITISH COLUMBIA

HAG PROJECT (P-83)

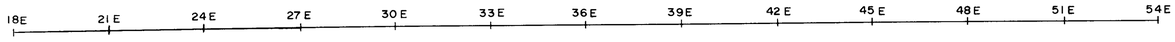
I.P. PROFILES

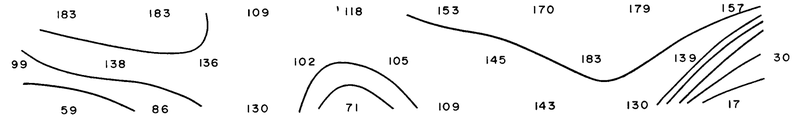
LINE 56 N

OMINECA M.D.

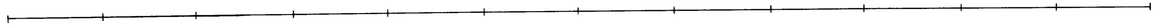
Cont. Int. : Logarithmic

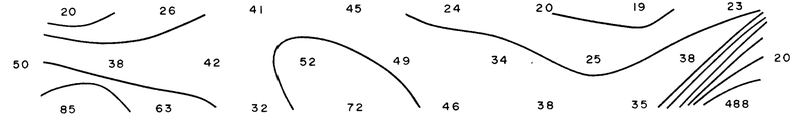
Scale : 1" = 300'	Date : OCTOBER 1972
Survey by : McPhar Geophysical	Dwg No. 5



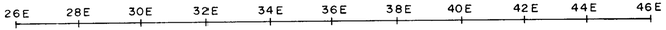


N = 1
N = 2 RESISTIVITY (APP.)
N = 3
N = 4



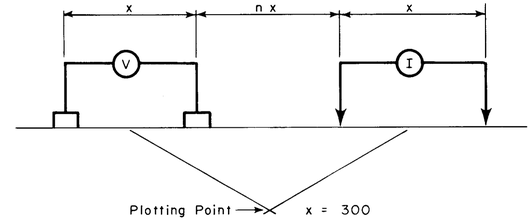


N = 1
N = 2 METAL FACTOR (APP.)
N = 3
N = 4



SURVEYED LINE IN FIELD

N = 1
N = 2 FREQUENCY EFFECT (%)
N = 3
N = 4



SURFACE PROJECTION OF
ANOMALOUS ZONES

DEFINITE

PROBABLE

POSSIBLE

CANADIAN SUPERIOR EXPLORATION LTD.

KAMLOOPS BRITISH COLUMBIA

HAG PROJECT (P-83)

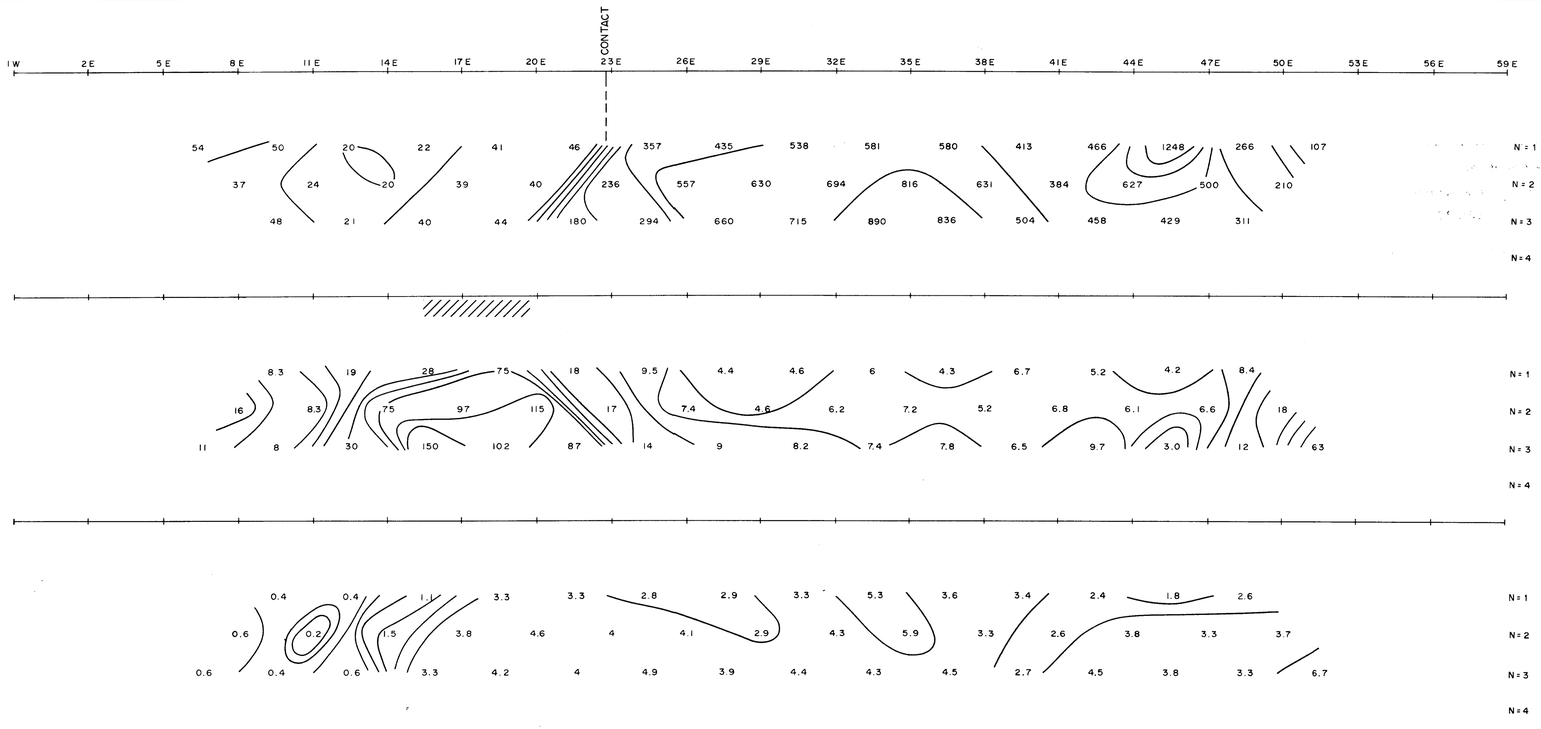
I. P. PROFILES

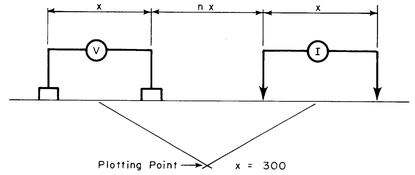
LINE 60 N

OMINECA M.D.

Cont. Int. : Logarithmic

Scale : 1" = 300'	Date : OCTOBER 1972
Survey by : McPhar Geophysical	Dwg No. 4





SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE

PROBABLE

POSSIBLE

CANADIAN SUPERIOR EXPLORATION LTD.

KAMLOOPS BRITISH COLUMBIA

HAG PROJECT (P-83)

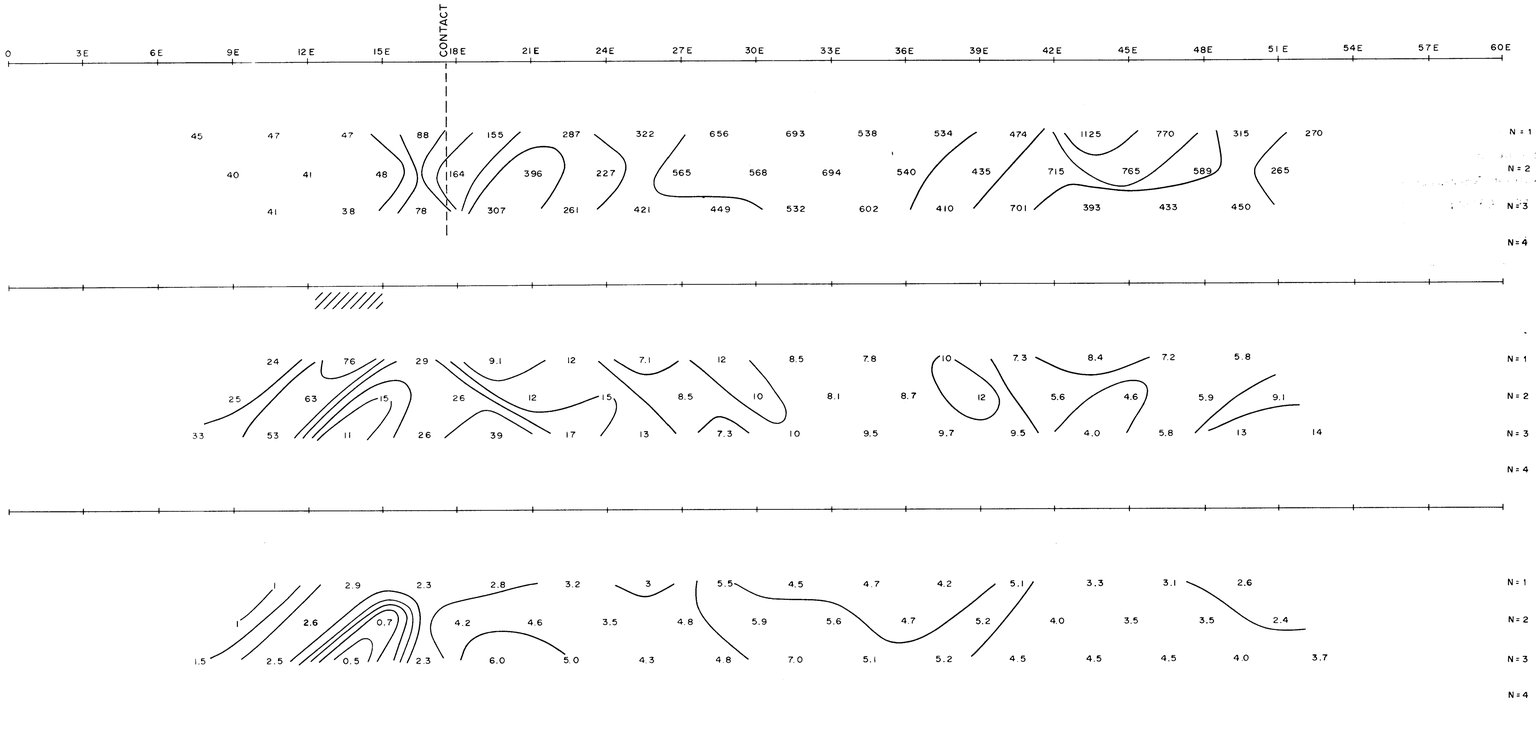
I.P. PROFILES

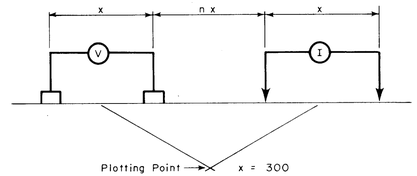
LINE 64N

OMINECA M.D.

Cont. Int. : Logarithmic

Scale : 1" = 300'	Date : OCTOBER 1972
Survey by : McPhar Geophysical	Dwg No. 3





SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE

PROBABLE

POSSIBLE

CANADIAN SUPERIOR EXPLORATION LTD.

KAMLOOPS BRITISH COLUMBIA

HAG PROJECT (P-83)

I.P. PROFILES

LINE 72 N

OMINECA M.D.

Cont. Int. = Logarithmic

Scale : 1" = 300'	Date : OCTOBER 1972
Survey by : McPhar Geophysical	Dwg No. 2

BLB

Hagan Arm

Hawthorn Bay

Newman Penninsula

McDonald Island

BOUNDARY OF CSE HAG GROUP

B.L.A

Geology:

Symbols:

CONTOURS:

THRESHOLD 40-100 ppm Cu

ANOMALOUS >100 ppm Cu

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 4189 MAP #2

TO ACCOMPANY A GEOCHEMICAL - GEOPHYSICAL REPORT BY W. RAINBOTH, P.ENG., & G. BRACE ON THE HAG 'A' & 'B' GROUPS, OMINECA M.D. DATED FEB. 13,1973

CANADIAN SUPERIOR EXPLORATION LIMITED
SMITHERS REGIONAL OFFICE

HAG GROUP

NTS 93 N/6

COPPER IN SOILS

SCALE: 1"=800' | J.B. | NOV. 1972