Part 1 of 2

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
No 10,448

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LIST OF ILLUSTRATIONS

SUMMARY

During the summer of 1981, extensive geophysical and geochemical programs were carried out on the Late Claim, near Merritt, British Columbia. An east-west grid of 16 lines was established on the property and magnetic and VLF-EM readings taken; these were subsequently plotted and contoured. An induced polarization survey was carried out along every second line and plans prepared showing chargeability, resistivity and self-potential. Soil samples were collected at 25 m intervals along all the survey lines, and tested for copper, lead, zinc and silver.

CONCLUSIONS

Lack of outcrop is a hinderance to both the use of geology and geochemistry as prospecting tools on this property. The soil geochemistry anomalies revealed are consequently small (with the possible exception of copper) and scattered. The magnetic survey revealed one area of steep field gradients, typical of underlying volcanic rocks with magnetite content. It is conceivable that the magnetic highs represent more mineralized regions, and the lows may be caused by alteration, however it is not justifiable to recommend drilling targets on the magnetic data alone, unless there are some coincident anomalies from other surveys. Similarly, the VLF-EM anomalies although showing up some strong structural trends, did not correspond to other features.

In their report, Kallock and Goldsmith state: "No further exploration of the property is recommended unless strongly anomalous zones are detected with recent geochemical and geophysical surveys". It is considered that strong anomalies have not been revealed, however if further exploration is to be carried out it is recommended that drilling be used to investigate the IP anomaly on line 5+00N (anomaly "d"). Trenching could be useful in revealing the cause of the VLF-EM anomalies. Further geophysics on the claim should not be employed unless positive results are obtained from the drilling of the IP feature.

GEOPHYSICAL/GEOCHEMICAL REPORT

ON

MAGNETIC, VLF-EM, INDUCED POLARIZATION

AND SOIL GEOCHEMISTRY SURVEYS

OVER THE

LATE MINERAL CLAIM

MERRITT AREA

NICOLA MINING DIVISION

BRITISH COLUMBIA

INTRODUCTION

This report discusses the theory, instrumentation, field procedure and results of magnetic, VLF-EM, induced polarization (IP) and soil geochemistry surveys carried out over the Late Claim near Merritt, British Columbia. The field work was completed in various phases within the period May 12th to October 20th, 1981.

Outcropping Triassic volcanics on the claim contain patches of disseminated chalcopyrite and chalcocite; the aim of the geochemical and geophysical work was to detect surface and depth expressions, respectively, of any significant base metal mineralization on the property. The use of geophysics and geochemistry was recommended by Kelly (1980) in his geological report on the property.

A survey grid of 16 east-west lines at a nominal spacing of

100 m, was laid out over the property. Magnetic and VLF-EM readings, and soil samples, were then taken at 25 m intervals along these lines. The IP survey was carried out on every second line, using a pole-dipole array, and taking readings at up to five levels.

The magnetic and VLF-EM results have been presented as contour plans; the IP results are presented as four drawings - chargeability for n = 2, apparent resistivity for n = 2, pseudosections and a plan of the self potential gradient; the 851 soil samples were analyzed for copper, lead, zinc and silver, and the values plotted and contoured.

PROPERTY AND OWNERSHIP

The Late Claim comprises 9 units, as shown in Figure 2, and described below:

CLAIM NAME	NO. OF UNITS	RECORD NO.	EXPIRY DATE
Late	9	623(5)	May 23, 1982

The property is wholly owned by Inter-Continental Energy Corporation of Vancouver, British Columbia.

LOCATION AND ACCESS

The property is located 41 km southeast of Merritt, B.C., at geographical coordinates 49° 49' N, 120° 26' W. Access is gained by turning off the Merritt-Princeton road (Highway #5), 4 1/2 km south of Aspen Grove; gravel and dirt roads then lead through Kentucky Lakes, 28 km to the claim. A dirt track runs diagonally across the property.

PHYSIOGRAPHY

The claim lies on the Thompson Plateau, just to the east of the Cascade Mountains, part of the Coast Mountains of the Canadian Cordillera. Total elevation on the property, which is mostly covered by coniferous forest, is about 150 m, from 1,350 to 1,500 m a.s.l. Thumb Lake, which lies partly within the claim, is at an elevation of approximately 1,357 m.

GEOLOGY

Although the property is mostly covered by glacial deposits or the waters of Thumb Lake, the underlying rock type is believed to be Upper Triassic volcanic flows and breccias of the Nicola Group. This rock unit, in some areas, is host to economic ore deposits (copper in particular), usually in association with granodiorite intrusives.

In his summary of previous exploration in the vicinity of the claims, Kelly (1980), hypothesized that the Late Claim lay on the eastern limb of a major north-trending syncline, and that Thumb Lake marked a WNW-trending shear zone which may have served as a conduit for mineralizing solutions emanating from granodiorite intrusions to the east. This then gave rise to metallogenic zoning away from Thumb Lake, with copper deposition near the lake, then silver to the north-east and zinc to the northwest.

Kallock and Goldsmith (1981) found neither contradictory nor confirmatory evidence for these theories. They mapped andesite and andesite breccia to the north and east of Thumb Lake, and augite andesite to the southwest. Several dykes were noted, ranging in composition from dacitic to dioritic. One north-east trending shear zone was observed near the prospect pit, and calcite venation implied mainly north-south planes of weakness.

GEOPHYSICAL SURVEY

Instrumentation and Theory

a) Magnetic Survey

The magnetic survey was carried out with a model MP-2 proton precession magnetometer, manufactured by Scintrex Limited of Concord, Ontario. This instrument reads out directly in gammas to an accuracy of $\pm$ 1 gamma, over a range of 20,000-100,000 γ . The operating temperature range is -35^{o} to $+50^{o}$ C, and its gradient tolerance is up to 5,000 γ per meter.

Only two commonly occurring minerals are strongly magnetic, magnetite and pyrrhotite; magnetic surveys are therefore used to detect the presence of these minerals in varying concentrations. Magnetics is also useful as a reconnaissance tool for mapping geologic lithology and structure since different rock types have different background amounts of magnetite and/or pyrrhotite.

b) VLF-EM Survey

The Sabre Instruments Ltd., model 27, VLF-EM receiver was tuned to the Seattle transmitting station, to take readings of the dip angle of the field.

In all electromagnetic prospecting, a transmitter produces an alternating magnetic field (primary) by passing a strong alternating current usually through a coil of wire. If a conductive mass such as a sulphide body is within this magnetic field, a secondary alternating electric current is induced within it which in turn induces a secondary magnetic field that distorts the primary field. It is this distortion that is measured by the VLF-EM receiver.

Most EM instruments employ frequencies ranging from a few hundred to a few thousand Hertz. The VLF-EM method uses a frequency range from 16 to 24 KHz and is therefore more sensitive to bodies of lower conductivity. VLF-EM anomalies are therefore often caused by one or more of the following; electrolyte filled fault or shear zones, clay beds, porous horizons, carbonaceous sediments (e.g. graphitic), relatively low conductivity sulphide bodies and lithological contacts. The precise cause of an anomaly is consequently difficult to determine and VLF-EM surveys preferable should not be interpreted without a good geological knowledge of the property and/or the assistance of other geophysical and geochemical surveys.

A survey line crossing a buried conductor will record dip angle values that are negative (upward dipping) before the conductor and positive after it, as the magnetic component of the field is deflected up over the body. The inflection point (zero crossing) on the profile should lie directly over the causative body.

c) Induced Polarization Survey

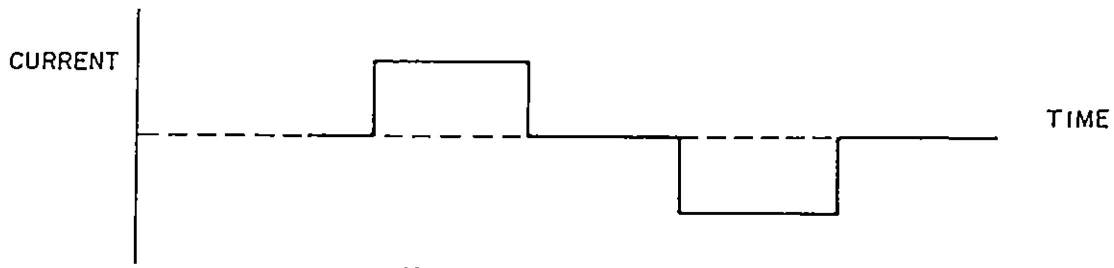
The induced polarization transmitter was a Phoenix Instruments model IPT-1, powered by a MG-2, 60 Briggs & Stratton generator. The transmitter current varied from 0.75 to 2.2A. The receiver was a Huntec Mark IV, operating in the time-domain mode. This is state-of-the-art equipment, with software-controlled functions, programmeable through the front panel.

Following current switch-off, a delay time of 300 ms was introduced before the voltage decay curve was sampled by ten 65 ms wide windows. The instrument readout was the chargeability.

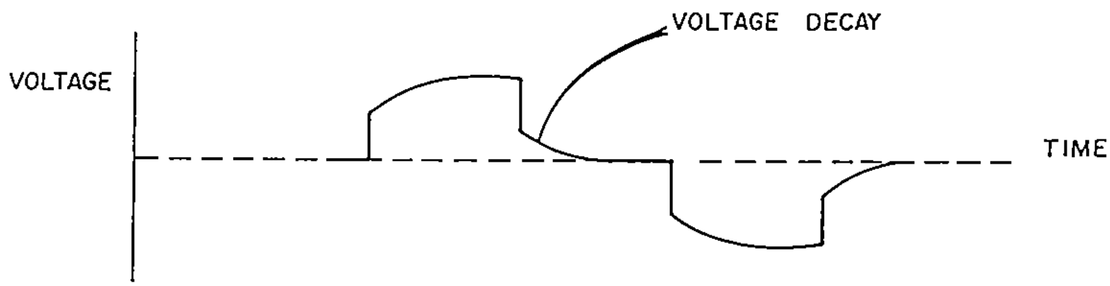
The theory of the induced polarization effect is as follows: When a voltage is applied to the ground, electric current flows, mainly in the electrolyte-filled capillaries in the rock. If the capillaries also contain certain mineral particles that transport current by electrons (most sulphides, some oxides and graphite), then the ionic charges build up at the particle-electrolyte interface, positive ones where the current enters the particle and negative ones where it leaves. This accumulation of charge creates a voltage that tends to oppose the current flow across the interface. When the current is switched off, the created voltage slowly decreases as the accumulated ions diffuse back into the electrolyte. This type of induced polarization phenomenon is known as electrode polarization.

A similar effect occurs if clay particles are present in the conducting medium. Charged clay particles attract oppositely-charged ions from the surrounding electrolyte; when the current stops, the ions slowly diffuse back to their equilibruim state. This process is known as membrane polarization and gives rise to induced polarization effects even in the absense of metallic-type conductors.

Most IP surveys are carried out by taking measurements in the "time-domain" or the "frequency-domain".



Transmitted Waveform



Recorded Voltage

Time-domain measurements involve sampling the waveform at intervals after the current is switched off, to derive a dimensionless parameter, the chargeability, "M" which is a measure of the strength of the induced polarization effect. Measurements in the frequency-domain are based on the fact that the resistance produced at the electrolyte-charged particle interface decreases with increasing frequency. The difference between apparent resistivity readings at a high and low frequency is expressed as the percentage frequency effect, "PFE".

The two IP response parameters, M and PFE are nearly proportional at fairly low polarization values. In the absence of large membrane polarization effects, high M or PFE values may indicate the presence of disseminated sulphide mineralization.

In the process of carrying out an IP survey, two other sets of readings are taken; these are resistivity and self-potential "SP". The resistivity is a measure of how well the ground conducts electricity, and depends mainly on saturation and the ionic and clay particle content of the pore waters.

The self-potential effect is believed to be caused by the vertical gradient in Eh (oxidation potential) usually present in the ground. Any strong conductor (e.g. metallic sulphides or graphite), especially if it intersects the water table, will provide a medium for electron transfer from deeper layers to the surface. The current circuit is completed by ionic conduction through pore water surrounding the conductor. The surface manifestation of this phenomenon is a negative potential above the conductor; this is generally of the order 100-700 mV, although higher values have been reported. The overall ground potential pattern may be complicated by the topographic effect (increasing negative values going up-hill), the effect of telluric currents, and contact voltages between pots and ground in different moisture conditions. Nevertheless the presence of sizeable ground potentials is a good indicator of massive deposits of such materials as pyrite, pyrrhotite, chalcopyrite, chalcocite, covellite, graphite, anthracite, pyrolusite and psilomelane.

Field Procedure and Reduction of Observations

a) Magnetics

Readings of the earth's total field were taken at 25 m intervals along the 16 east-west lines, 100 m apart. The diurnal variation was monitored in the field by the closed loop method to enable the variation to be removed from the raw data prior to plotting.

A statistical analysis of the magnetic readings was carried out by grouping the readings into 100γ intervals, then plotting a cumulative frequency graph. The resulting distribution was used to choose the threshold values for defining magnetic high and magnetic low areas on the contour plan.

b) VLF-EM

Dip angle readings were taken at 25 m intervals along the survey lines.

To permit easy contouring, a numerical filter (the Fraser-filter) was then applied to the results. This is a 4-point difference operator that reduces the inherent high frequency noise in the data and phase-shifts the readings such that a zero crossing becomes a peak, i.e. a high positive value. Anomaly flanks become negative values, when filtered, and these are therefore ignored when contouring.

c) Induced Polarization

The pole-dipole electrical configuration was used for the work. In this array, one of the current electrodes is deployed a long distance from the other three electrodes, so that it has a negligible effect on the voltage recorded at the potential electrodes. For this survey the fixed current electrode was located at the western end of each line.

The two potential electrodes were kept 50 m apart and readings taken at 50 m intervals along every second survey line with the mobile current electrode 100 m from the potential dipole (i.e. n = 2). When anomalous values were recorded (usually M $\geqslant$ 3), further readings were taken at different "levels", for n values of 1, 3, 4 and sometimes 5.

Stainless steel stakes were used for current electrodes. The potential electrodes comprised metallic copper in copper sulphate solution, in non-polarizing, unglazed, porcelain pots.

The chargeability values are read directly from the instrument and no data processing is therefore required prior to plotting. The resistivity values are derived from current and voltage readings taken in the field. These values are combined with the geometrical factor appropriate for the pole-dipole array, to compute the apparent resistivities. The self-potential readings are obtained directly from the instrument. The positive terminal was connected to the eastern potential pot, so a positive reading represents an increase in potential from west to east.

The geophysical data has been presented in two forms. The chargeability and resistivity results for n = 2 are shown in plan form on Sheets 3 and 4, with the values being plotted half way between the mobile current electrode and the nearer potential pot. The self-potential gradient is plotted at the mid-point of the two potential electrodes (Sheet 6). An alternative presentation of multi-level IP and resistivity results is the pseudo-section where the figures are plotted at the intersection of lines drawn from a horizontal datum at 45^{o} from the current electrode and the nearer potential electrode. The IP values are plotted below the line and the resistivity values (as a mirror image), above the line (Sheet 5).

Results

a) Magnetic Survey

The statistical analysis of the results showed an approximate normal distribution, but with some skew towards high values. The parameters of the cumulative frequency graph were as follows:

Anomalous low threshold	56,700 γ
Sub-anomalous low threshold	57,083 γ
Mean	57,485 γ
Sub-anomalous high threshold	57,885 γ
Anomalous high threshold	58,280 γ

These values were used as the basis for contouring the readings, to show magnetic high areas (above 57,900 γ), and magnetic low areas (below 57,100 γ). The contour interval used was 200 γ (approximately one-half standard deviation).

The most notable feature of the magnetic contour plan is the area of intense activity in the south-west corner of the property, with north-south trending high and low anomalies. From the geological mapping of Kallock and Goldsmith, the underlying rock type in this area is augite andesite. Elsewhere on the claim there are scattered magnetic highs and magnetic lows. The most extensive anomaly is a magnetic low running northwest from the northern end of Thumb Lake. This may represent a structual fracture such as a fault.

b) VLF-EM Surveys

The Fraser-filtered dip angles have been contoured at an intercal of 4°, for positive values. There are three prominent anomalies. In the eastern half of the property there are two sub-parallel features (marked on Sheet 2 as "a" and "B"), trending approximately north-south. Anomaly b may be partly caused by topography as it coincides with a morainal ridge. This anomaly is not continuous through line 5+00N, where there is a prospect pit, however it may reappear on lines 2+00, 3+00 and 4+00N. To the west of Thumb Lake there is a fairly intense, bifurcating anomaly ("c"). Elsewhere on the claim there are some low amplitude anomalies that confirm the general north-south trend of the underlying structure.

c) Induced Polarization

The chargeability for n = 2 plan (Sheet 3), shows that the highest values occur in the eastern half of the property, with M values up to 6.4, against a background of about 2.0 The main anomaly ("d") is centered on line 5+00N, just east of the prospect pit. There is an elongated NNW-SSE trending anomaly ("e") running approximately along line 1+00W, and cutting lines 7+00N through 13+00N. The pseudo-sections (Sheet 5), reveal that both these anomalies show up on all the levels. There is generally poor correspondence between IP highs and resistivity lows, in fact anomaly "d" coincides with a resistivity high.

The plan of apparent resistivity for n = 2 (Sheet 4), also shows how the lowest resistivity areas tend to be in the west of the property, away from the higher IP readings. The variations in resistivity are likely to reflect small changes in moisture content and little can be concluded about the significance of individual anomalies without a comparison with the other geophysical and geochemical results.

The SP gradient profiles (Sheet 6), are very noisy, presumably due to variable grounding conditions for the pots. SP is unlikely to respond strongly to the disseminated or vein type mineralization that is the more likely target on this property - it is more suitable for detecting massive ore bodies. Therefore any anomalies (e.g. on lines 7+00N and 9+00N, just north of Thumb Lake) are unlikely to be significant, but should nevertheless be considered in the context of the other survey results.

GEOCHEMICAL SURVEY

Survey Procedure

The soil samples were taken at 25-meter intervals along the geophysical survey lines. The samples were picked up with a D-handled shovel at about a 15-centimeter depth. The horizon sampled was B except where it could not be obtained, then horizon C was sampled. Samples were placed in brown wet-strength paper bags marked with grid coordinates.

Laboratory Testing Procedure

All samples were tested by Acme Analytical Laboratories Ltd. of Burnaby, B.C. The sample is first thoroughly dried and then sifted through a -80 mesh screen. A measured amount of the sifted material is then put into a test tube with subsequent measured additions of aqua regia. This mixture is next heated for a certain length of time. The parts per million (ppm) copper, silver, lead and zinc is then measured by atomic absorption.

Treatment of Data

A statistical analysis of the copper, lead and zinc values was used to find the background, sub-anomalous and anomalous levels of each distribution. If the readings approximate a normal distribution, the background is taken to be the 50% level, the sub-anomalous threshold value is the 16% level (one standard deviation), and the anomalous threshold is the 2 1/2% level (two standard deviations). The sub-anomalous threshold is a term used to denote the minimum value that although not considered anomalous, may still be important as an indicator of mineralization.

Most of the silver values were 0.1 ppm, with only a few higher readings. A statistical analysis was therefore not possible and the sub-anomalous and anomalous values were determined by "eyeballing".

Results

Copper

The statistical analysis of the copper values showed an approximate normal distribution, but with some skew towards higher values. The background (mean) level was found to be 18 ppm, the sub-anomalous threshold 25 ppm and the anomalous threshold 33 ppm. The results were contoured for values above 25 ppm, using a logarithmic contour interval (see Sheet 7). The anomalies are small, usually quite intense, and tend to fall around the perimeter of Thumb Lake, and in the north-east corner of the property.

Lead

The lead values were normally distributed with a background level of 10 ppm, a sub-anomalous threshold of 13 ppm and an anomalous threshold of 15 ppm. Anomalies were generally only a single reading, the maximum value recorded was 21 ppm.

Zinc

The zinc levels showed a normal distribution up to the anomalous level, then a skew towards higher values. The parameters taken from the cumulative frequency curve were: background 40 ppm, sub-anomalous level 53 ppm, anomalous level 65 ppm. The anomalies were sparse, mainly being concentrated in the north-west of the claim.

Silver

The majority of the silver values were 0.1 ppm, with higher values only up to 0.5 ppm. The sub-anomalous and anomalous threshold levels were taken to be 0.25 and 0.35 ppm. Only a few localized anomalies were revealed.

DISCUSSION OF RESULTS

The following table summarizes the cross-correlation between the various survey results.

Approximately Location		Coincident Anomalies
14+00W	15+00N	Ag anomaly "x", Zn anomaly "u", Cu anomaly "f"
0+50W	15+00N	Pb anomaly "p", Cu anomaly "h"
2+00W	13+00N	Ag anomaly "z", Pb anomaly "q", Cu anomaly "i"
14+00W	8+00N	Pb anomaly "r", Cu anomaly "j", along same N-S strike as Zn anomaly "v"
11+00W	8+00N	Zn anomaly "w", Cu anomaly "k", in magnetic low area
3+00W	5+00N	Pb anomaly "s", with minor Cu anomalies, in IP high, and on strike with VLF-EM lineation

It will be seen that the cross-correlation between geophysics and geochemistry is not strong. There are only a few small copper anomalies in the magnetically-active area to the west of Thumb Lake; the VLF-EM lineations do not seem to correspond with geochemical trends, and the IP highs do not contain any particularly strong geochemical anomalies. The geochemical anomalies are generally weak and scattered, with no strong correlation between themselves.

Respectfully submitted,
GEOTRONICS SURVEYS LTD.

J.M. Anderson,
Geophysicist

December 18, 1981

SELECTED BIBLIOGRAPHY

Kallock, P. and Goldsmith, L.B., Geological Investigation of the Late #1 Mineral Claim, Arctex Engineering Services, 1981.

Kelly, S.F., Report to the Inter-Continental Energy Corp. of Vancouver, B.C. Concerning the Late Claim Group at Thumb Lake, near Merritt, Nicola Mining Division, B.C., Consultants Report, 1980.

Preto, V.A., Geology of the Nicola Group Between Merritt and Princeton, B.C., Ministry of Energy, Mines and Petroleum Resources Bulletin 69, 1979.

Rice, H.M.A., Geology of the Princeton Map-Area, B.C., Canada Dept. of Mines and Resources, Memoir 243, Map 888A. 1947.

GEOPHYSICIST'S CERTIFICATE

I, J.M. ANDERSON, of the City of Vancouver, in the Province of British Columbia, do hereby certify:

That I am a Consulting Geophysicist of Geotronics Surveys Ltd., with offices at #403-750 West Pender Street, Vancouver, British Columbia.

I further certify:

1. That I am a graduate of the University of Tasmania (1971), and hold a B.Sc. degree in Geophysics.
2. That I have been practising my profession for the past ten years.
3. This report is compiled from data obtained from VLF-EM, magnetic, induced polarization and soil geochemistry surveys carried out under the direction of David G. Mark, Geophysicist, and the field supervision of J. Ashenhurst, H. Richardson and P. Arbez from May 12th to October 20th, 1981.
4. I have no direct or indirect interest in the Late Claim, nor in Inter-Continental Energy Corporation, nor do I expect to receive any interest as a result of writing this report.

J.M. Anderson

J.M. Anderson,
Geophysicist

December 18, 1981

AFFIDAVIT OF EXPENSES

This is to certify that magnetic, VLF-EM, soil geochemistry and induced polarization surveys, as well as line-cutting, were carried out within the period of July 11th to October 20th, 1981 on the Late Claim at Thumb Lake within the Nicola Mining Division, B.C., to the value of the following:

FIELD: (a: magnetic, VLF-EM & soil geochemistry surveys, 27 days)

Geophysical technician & helper	$ 6,324
Room and board	3,407
Truck rental & gas	2,720
Instrument rental	300
Survey supplies	200
	12,951

FIELD: (b: line-cutting & I.P. survey, 21 days)

5-man I.P. crew and instrument	$12,350
Room and board	3,100
Truck rental and gas	2,400
Chainsaw rentals	200
	$18,050

LAB:

Soil geochemistry analysis for 4 elements	$ 2,828

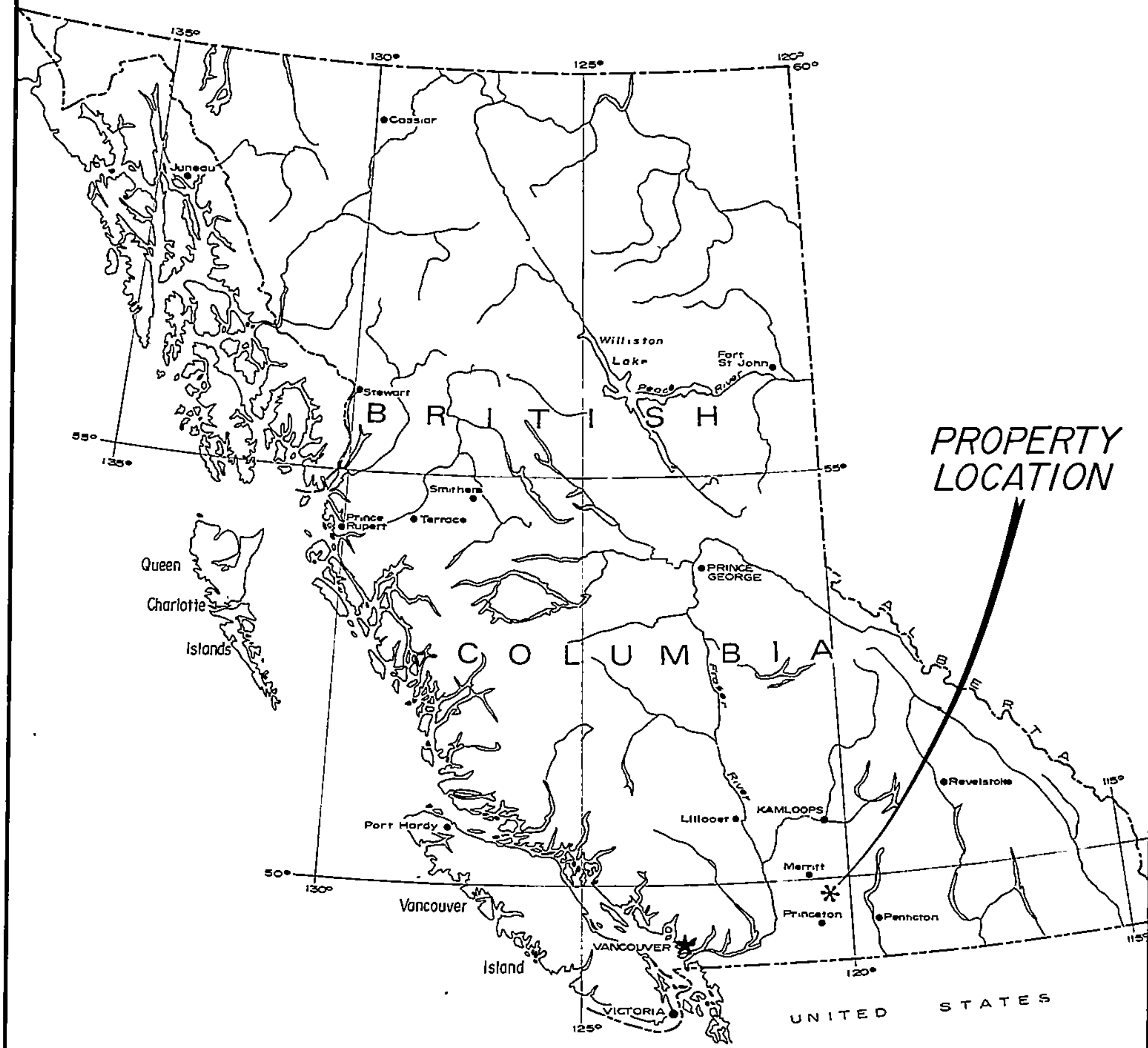
OFFICE:

Geophysicist	1,890
Geophysical technician	1,480
Drafting and printing	3,051
Typing, photocopying and compilation	200
	$ 6,621
GRAND TOTAL	$40,050

Respectfully submitted,
GEOTRONICS SURVEYS LTD.

David G. Mark, Manager
Geophysicist

May 25, 1982



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INTER-CONTINENTAL ENERGY CORP.

LATE CLAIM

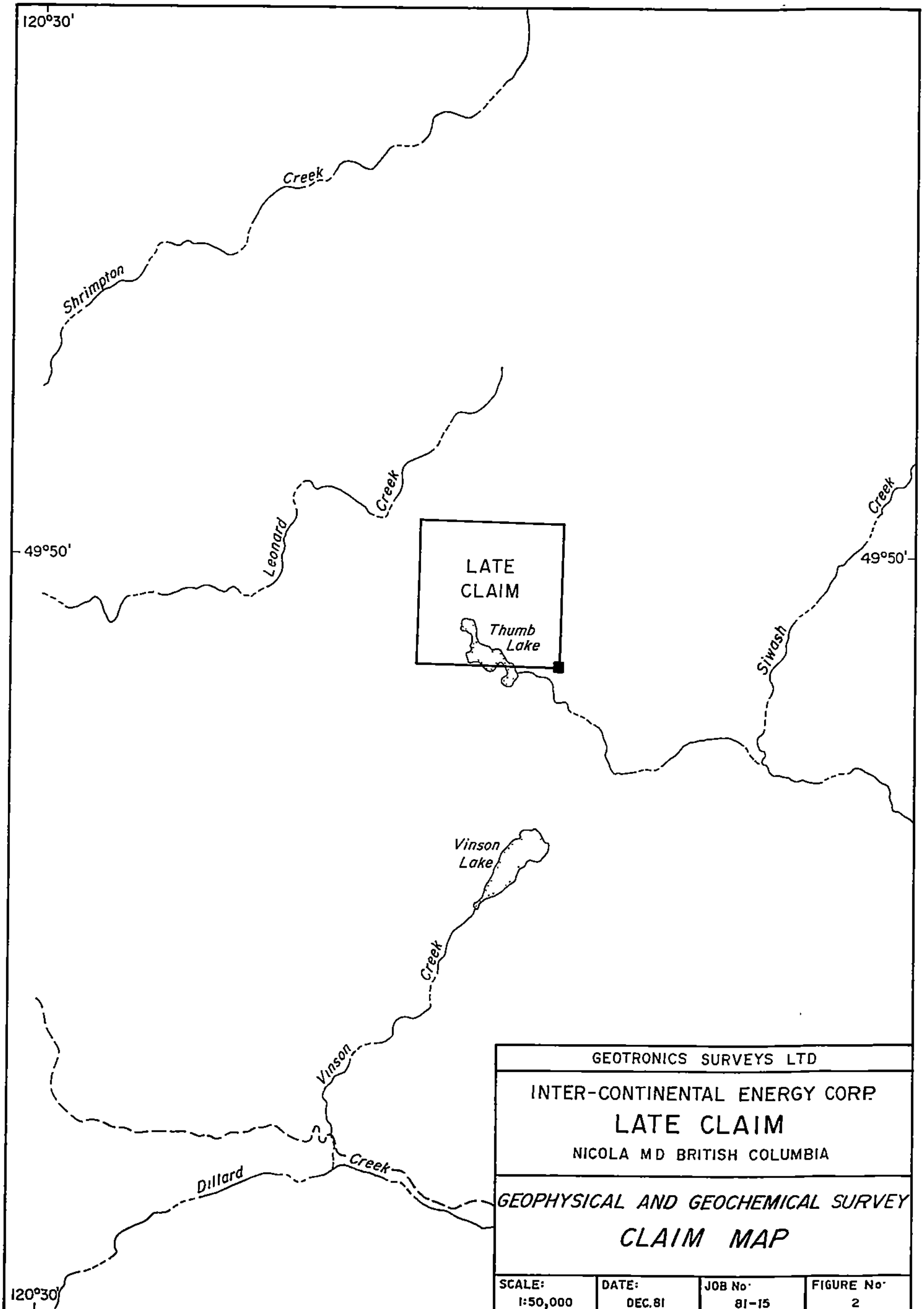
NICOLA M.D. BRITISH COLUMBIA

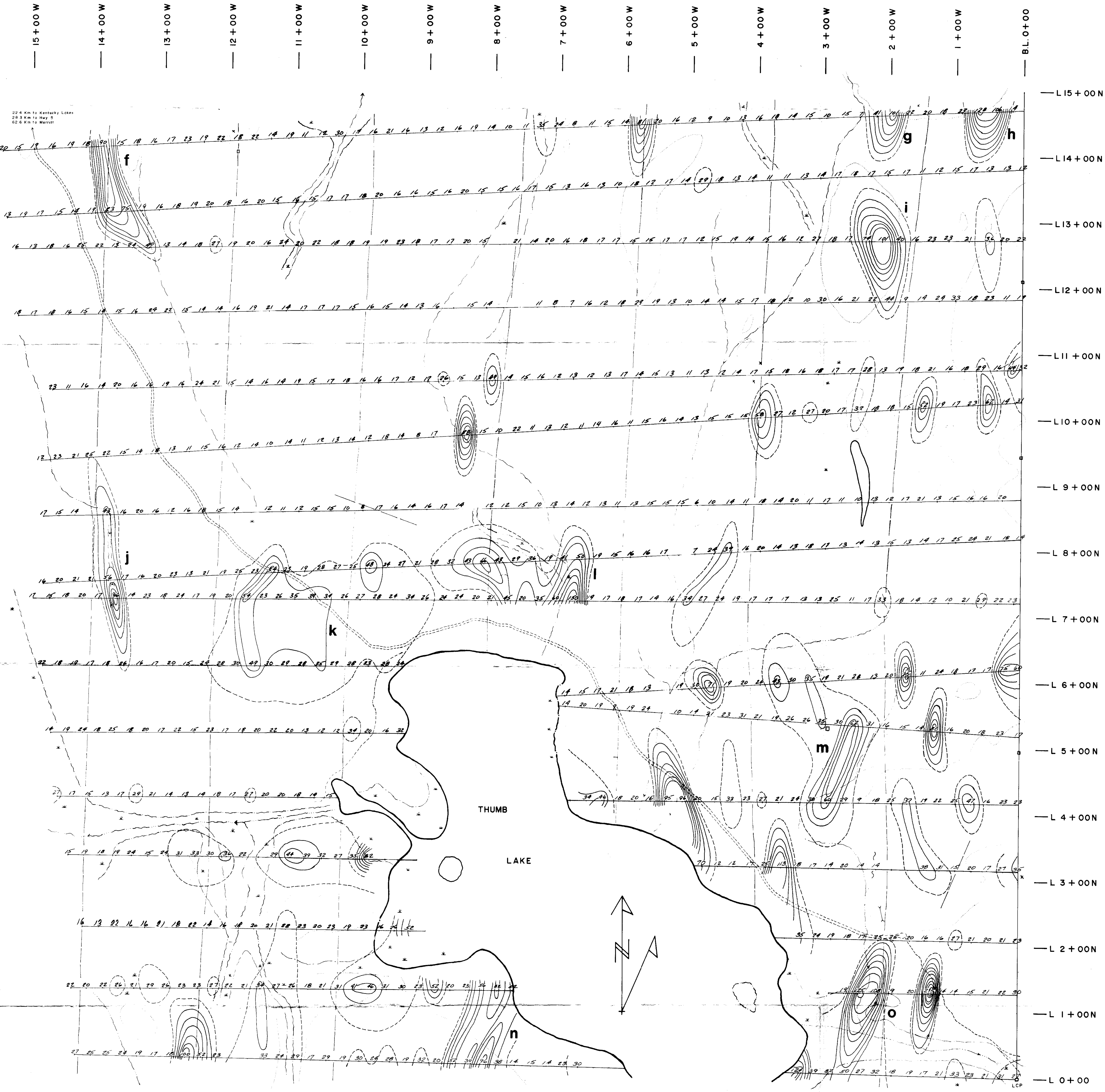
GEOPHYSICAL AND GEOCHEMICAL SURVEY

LOCATION MAP

SCALE:	DATE:	JOB No:	FIGURE No:
1:50,000	DEC.81	81-15	1

ALTAIR drafting services ltd.


120°30'
Shrimpton
Creek
Leonard
Creek
49°50'
LATE
CLAIM
Thumb
Lake
Siwash
Creek
49°50'
Vinson
Lake
Creek
Vinson
Dillard
Creek
120°30'
GEOTRONICS SURVEYS LTD
INTER-CONTINENTAL ENERGY CORP.
LATE CLAIM
NICOLA M.D. BRITISH COLUMBIA
GEOPHYSICAL AND GEOCHEMICAL SURVEY
CLAIM MAP
SCALE: 1:50,000
DATE: DEC. 81
JOB No. 81-15
FIGURE No. 2



SYMBOLS

- × Small outcrop
- Outcrop area
- Assumed fault
- Pit, trench
- Secondary road
- Trail
- Shoreline
- Swamp / drainage boundary
- Swamp
- Stream, intermittent stream
- Claim post
- Cut (old) picket line
- Blazed line

NOTES:

1.) All odd numbered lines are blazed and brushed out.

2.) Location of the N - S blazed lines as shown have been partially interpolated. All are yellow - flagged and are the original reconnaissance geochem survey lines.

LEGEND

52 Copper values in p.p.m.

Sub - anomalous contour

Anomalous contours at values of: 33, 40, 50, 60, 70, 85, 100, 120, 150, 180 and 220 p.p.m.

Interpreted Anomalies (see text)

SURVEY PARAMETERS:

Mean background value:	18
Sub - anomalous threshold value:	25
Anomalous threshold value:	33

Part 1 of 2

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
NO. 10,448

50 25 0 25 50 75 100 200
Metres

To Accompany Geochemical / Geophysical Report By J. M. Anderson, Geophysicist.

GEOTRONICS SURVEYS LTD.

INTER-CONTINENTAL ENERGY CORP.

LATE CLAIM

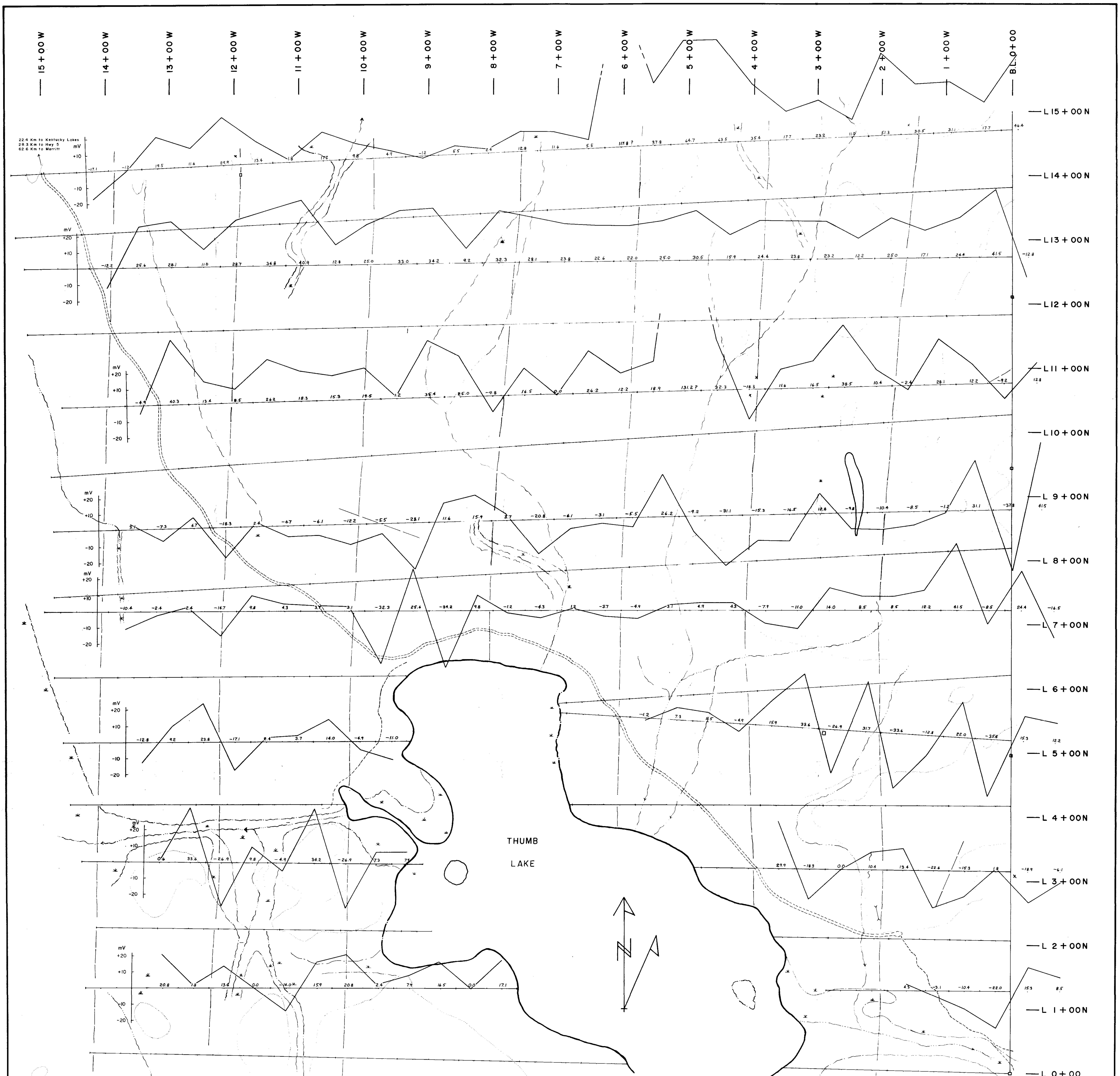
NICOLA MINING DISTRICT, BRITISH COLUMBIA.

GEOPHYSICAL & GEOCHEMICAL SURVEY

SOIL GEOCHEMISTRY

COPPER VALUES

SURVEY BY:	DRAWN BY:	DATE:	JOB No:	N.T.S:	SCALE:	SHEET No:
H.R.	C.B.	Dec., 1981.	81 - 15	92 H/16W	1:2,500	7



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LEGEND:

3.7 14.0 Self potential gradient, in mV. Points represent rise (+ve) or fall (-ve) in voltage from western electrode to eastern electrode.

part 1 of 2

50 25 0 25 50 75 100 200
Metres

To Accompany Geochemical / Geophysical Report By J. M. Anderson, Geophysicist.

GEOTRONICS SURVEYS LTD.

INTER-CONTINENTAL ENERGY CORP.

LATE CLAIM

NICOLA MINING DISTRICT, BRITISH COLUMBIA.

GEOPHYSICAL & GEOCHEMICAL SURVEY
INDUCED POLARIZATION SURVEY
SELF POTENTIAL PROFILES

SURVEY BY:	DRAWN BY:	DATE:	JOB No:	N.T.S:	SCALE:	SHEET No:
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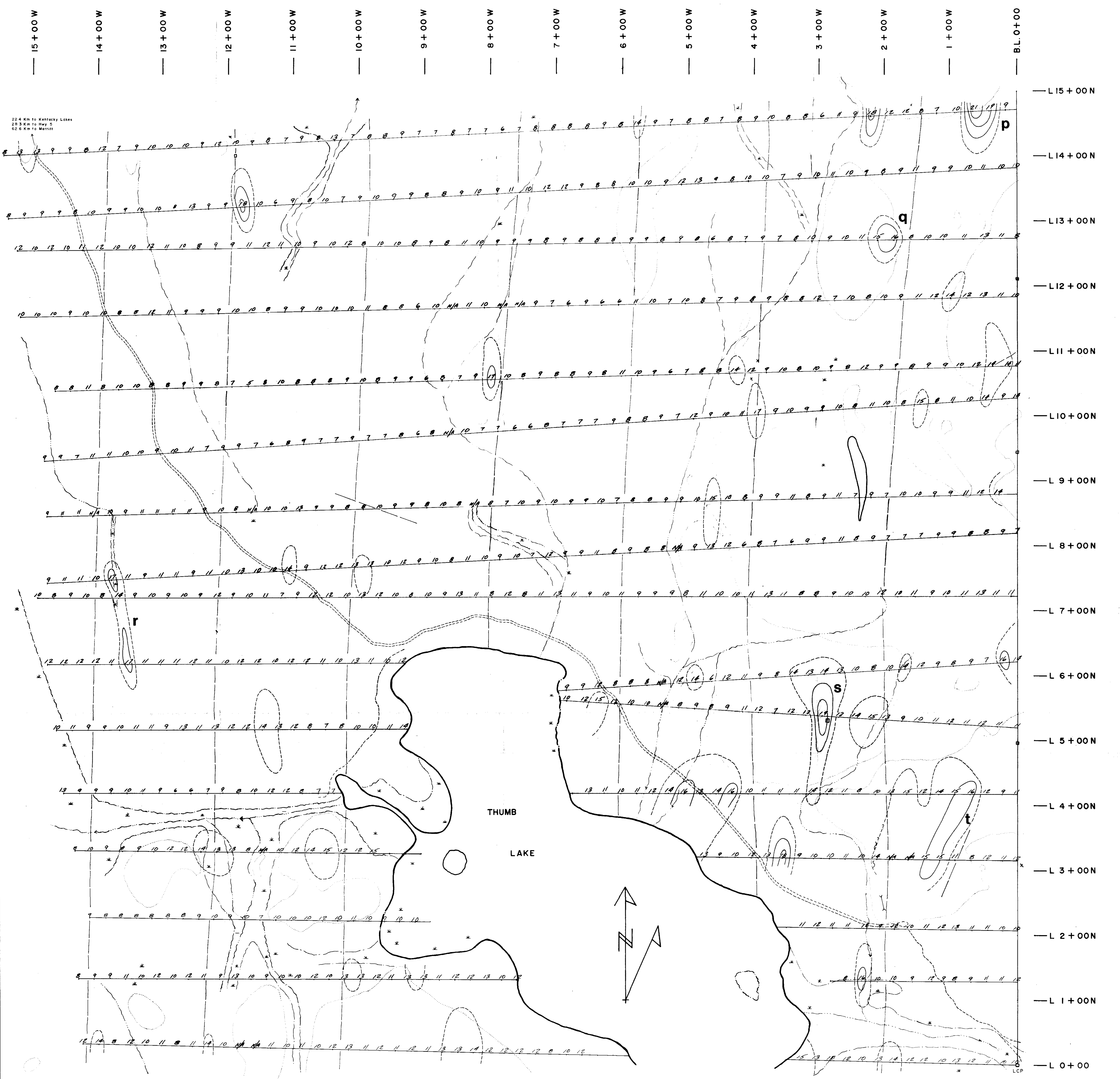

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LEGEND

12 Lead values in p.p.m.
Sub-anomalous contour
Anomalous contours at values of: 15, 17 and 20 p.p.m.
p Interpreted anomalies (see text)

SURVEY PARAMETERS

Mean background value: 10 p.p.m.
Sub-anomalous threshold value: 13 p.p.m.
Anomalous threshold value: 15 p.p.m.

part 1 of 2

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
NO. 10,448

50 25 0 25 50 75 100 200
Metres

To Accompany Geochemical / Geophysical Report By J. M. Anderson, Geophysicist.

GEOTRONICS SURVEYS LTD.

INTER-CONTINENTAL ENERGY CORP.

LATE CLAIM

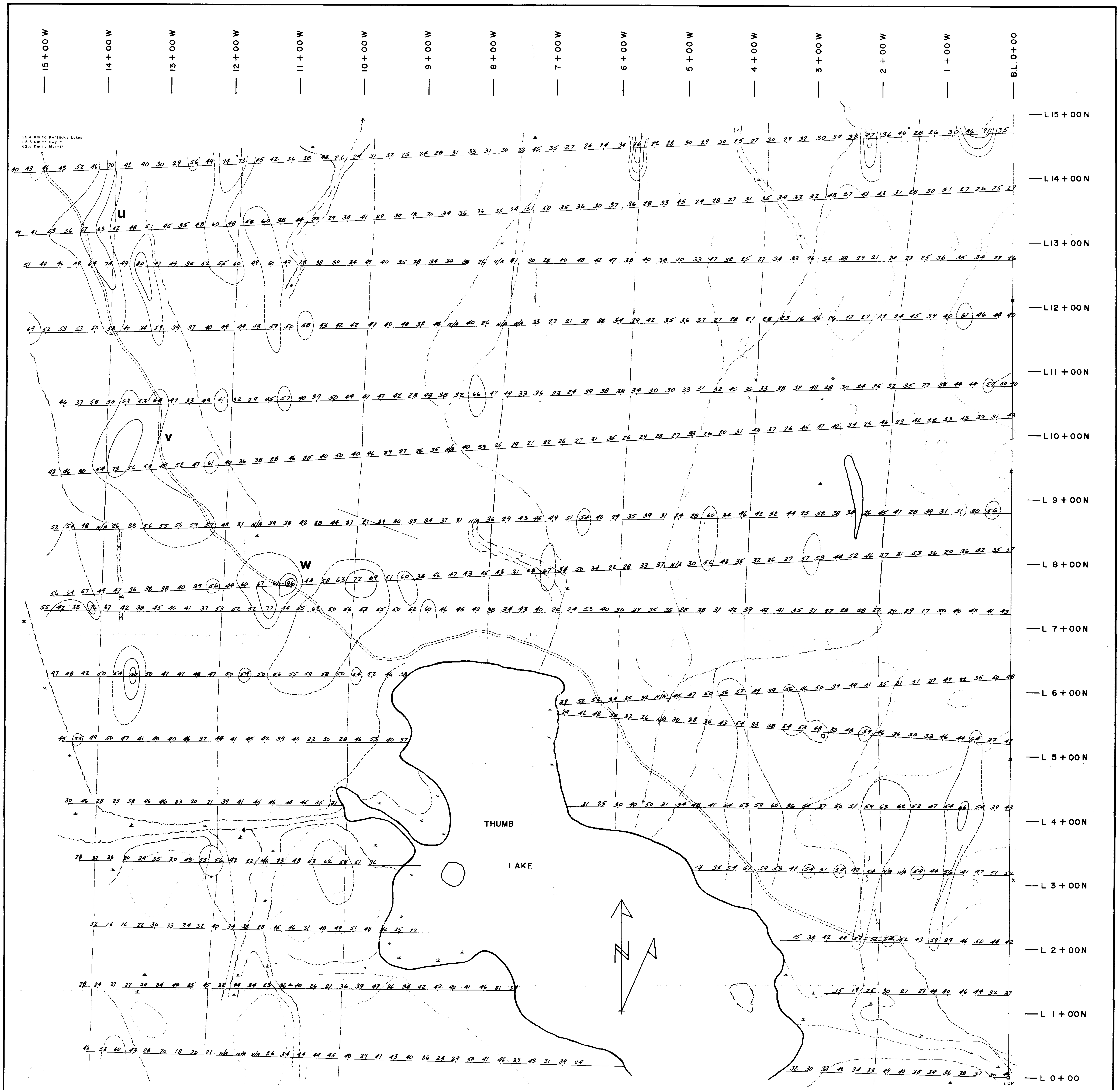
NICOLA MINING DISTRICT, BRITISH COLUMBIA.

GEOPHYSICAL & GEOCHEMICAL SURVEY

SOIL GEOCHEMISTRY

LEAD VALUES

SURVEY BY:	DRAWN BY:	DATE:	JOB No:	N.T.S:	SCALE:	SHEET No:
H.R.	C.B	Dec., 1981.	81-15	92 H/16W	1:2,500	8



SYMBOLS

- × Small outcrop
- Outcrop area
- Assumed fault
- Pit, trench
- Secondary road
- Trail
- Shoreline
- Swamp / drainage boundary
- Swamp
- Stream, intermittent stream
- Claim post
- Cut (old) picket line
- Blazed line

NOTES:

1.) All odd numbered lines are blazed and brushed out.

2.) Location of the N-S blazed lines as shown have been partially interpolated. All are yellow-flagged and are the original reconnaissance geochem survey lines.

LEGEND

- 44 Zinc values in p.p.m.
- Sub-anomalous contour
- Anomalous contours at values of 65, 80 and 100 p.p.m.
- W Interpreted Anomalies (see text)

SURVEY PARAMETERS

Mean background value:	40 p.p.m.
Sub-anomalous threshold value:	53 p.p.m.
Anomalous threshold value:	65 p.p.m.

50 25 0 25 50 75 100 200
Metres

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part 1 of 2

GEOTRONICS SURVEYS LTD.

INTER-CONTINENTAL ENERGY CORP.

LATE CLAIM

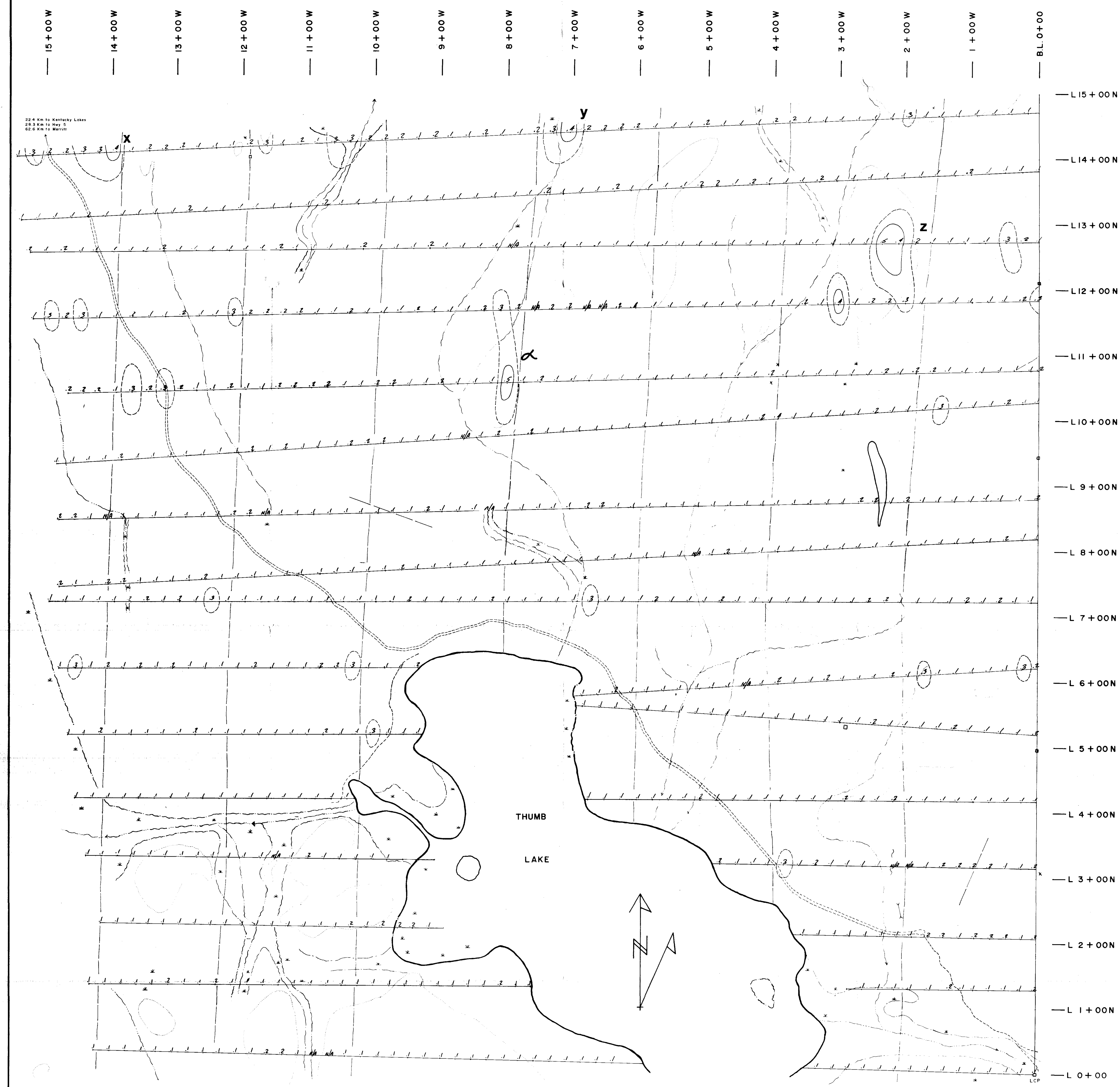
NICOLA MINING DISTRICT, BRITISH COLUMBIA.

GEOPHYSICAL & GEOCHEMICAL SURVEY

SOIL GEOCHEMISTRY

ZINC VALUES

SURVEY BY:	DRAWN BY:	DATE:	JOB No:	N.T.S:	SCALE:	SHEET No:
H.R.	C.B.	Dec., 1981.	81-15	92 H/16W	1:2,500	9



SYMBOLS

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LEGEND

.2 Silver values in p.p.m.

Sub-anomalous contour

y Interpreted Anomalies (see text)

SURVEY PARAMETERS

Background level:	.1 p.p.m.
Sub-anomalous threshold value:	.25 p.p.m.
Anomalous threshold value:	.35 p.p.m.

50 25 0 25 50 75 100 200
Metres

To Accompany Geochemical / Geophysical Report By J. M. Anderson, Geophysicist.

part 1 of 2

GEOTRONICS SURVEYS LTD.

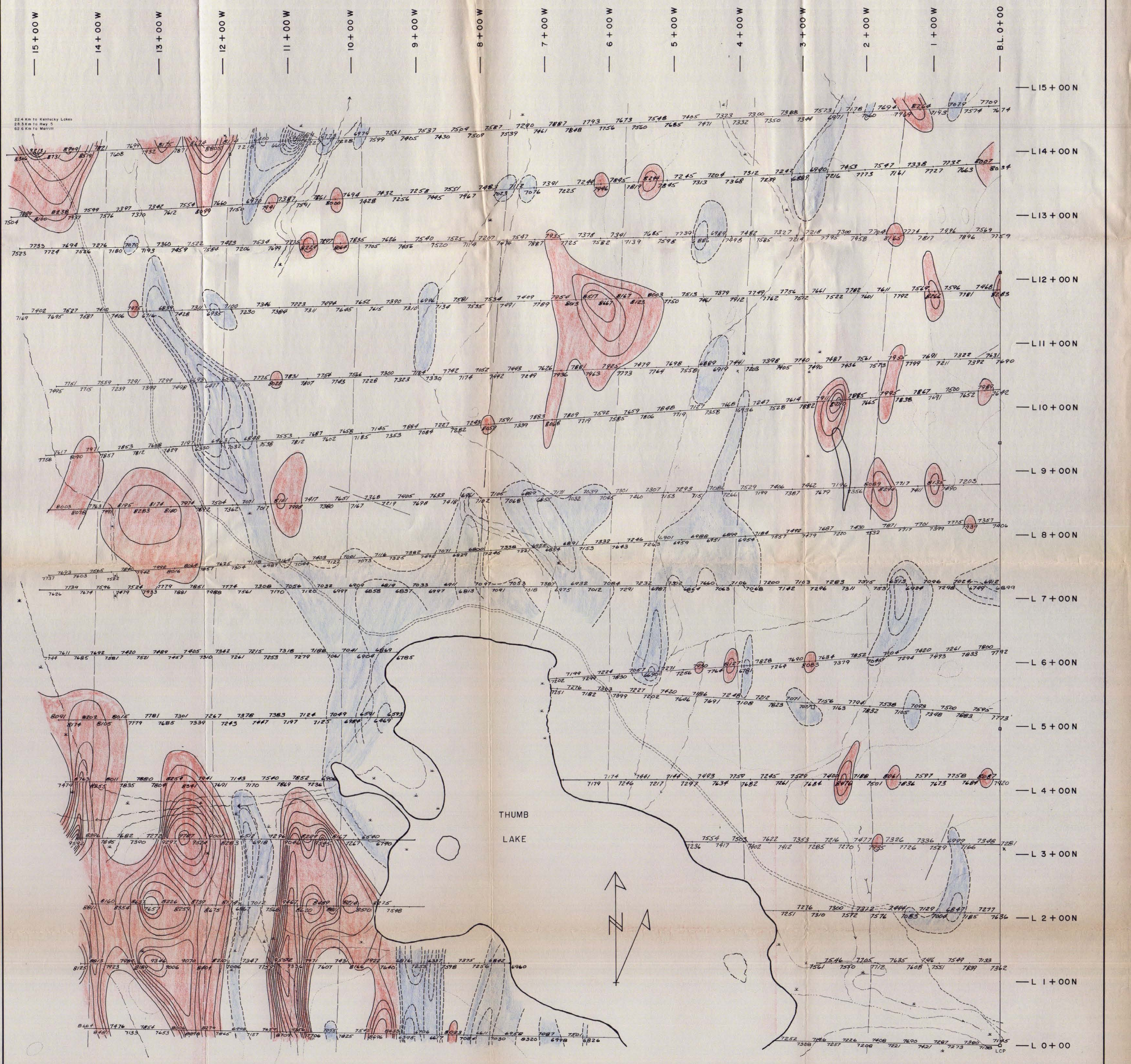
INTER-CONTINENTAL ENERGY CORP.

LATE CLAIM

NICOLA MINING DISTRICT, BRITISH COLUMBIA.

GEOPHYSICAL & GEOCHEMICAL SURVEY
SOIL GEOCHEMISTRY
SILVER VALUES

SURVEY BY:	DRAWN BY:	DATE:	JOB No:	N.T.S:	SCALE:	SHEET No:
H.R.	C.B.	Dec., 1981.	81-15	92 H/16W	1:2,500	10



SYMBOLS

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LEGEND

8214 Value in gammas of earth's total magnetic field, less 50,000 ४

Contours of values above 57,900 ४, in 200 ४ intervals

Contours of values below 57,100 ४, in 200 ४ intervals

50 25 0 25 50 75 100 200
Metres

To Accompany Geochemical / Geophysical Report By J. M. Anderson, Geophysicist.

GEOTRONICS SURVEYS LTD.

INTER-CONTINENTAL ENERGY CORP.

LATE CLAIM

NICOLA MINING DISTRICT, BRITISH COLUMBIA.

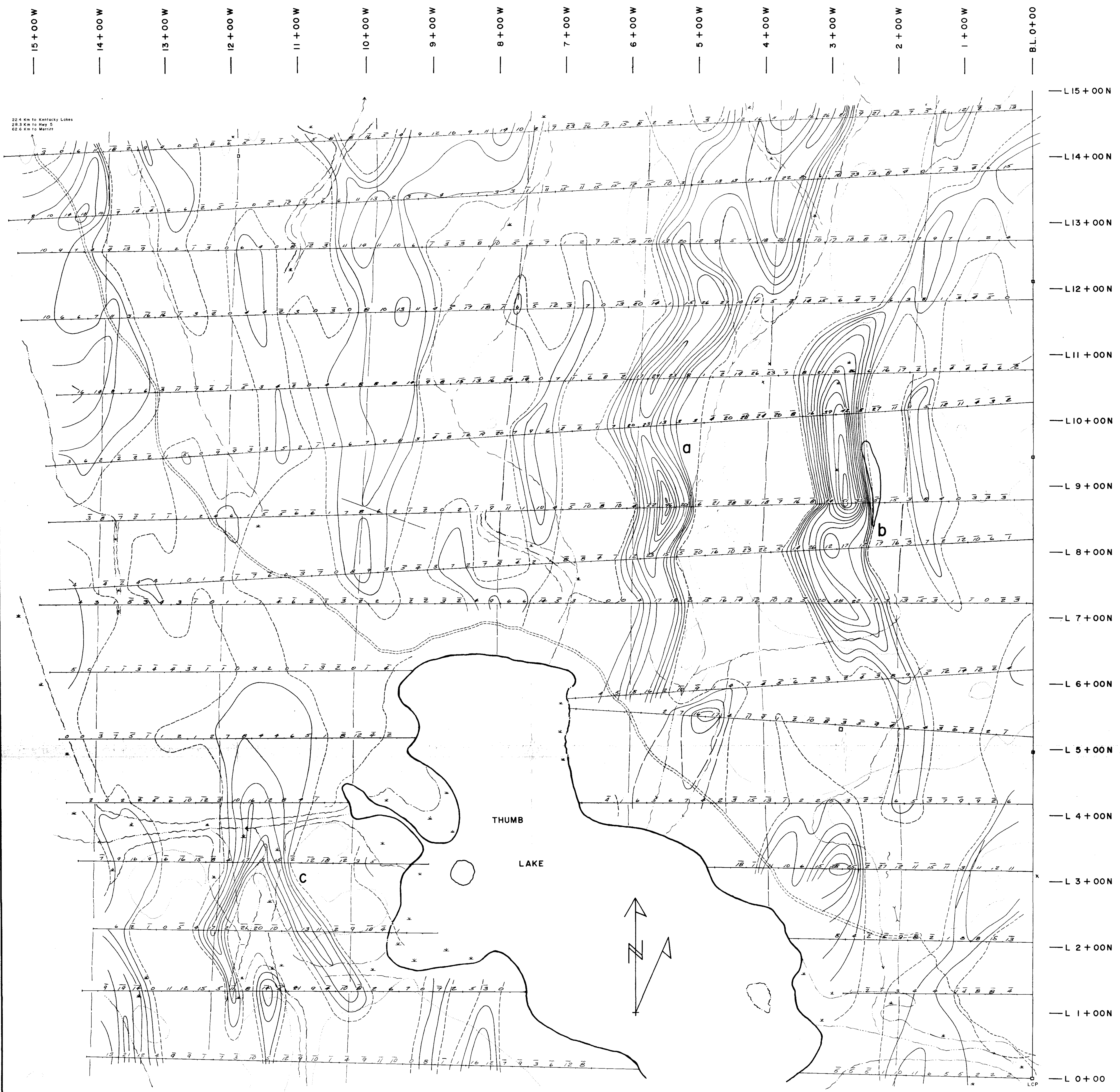
GEOPHYSICAL & GEOCHEMICAL SURVEY

MAGNETIC SURVEY

DATA & CONTOURS

SURVEY BY:	DRAWN BY:	DATE:	JOB No:	N.T.S:	SCALE:	SHEET No:
H.R.	C.B.	Dec., 1981.	81-15	92 H/16W	1:2,500	1

part 1
of 2



SYMBOLS

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LEGEND

9 Dip angle in degrees of VLF-EM field

$\bar{2}$ Negative dip angle

Contour interval: 4° for positive values

Transmitter station:
Seattle, Washington. 18.6 kHz

Receiver:
Sabre Electronics VLF-EM receiver

b Interpreted anomalies (see text)

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
10,448
NO:

VLF TRANSMITTER
SEATTLE

part 1
of 2

50 25 0 25 50 75 100 200
Metres

To Accompany Geochemical / Geophysical Report By J. M. Anderson, Geophysicist.

GEOTRONICS SURVEYS LTD.

INTER-CONTINENTAL ENERGY CORP.

LATE CLAIM

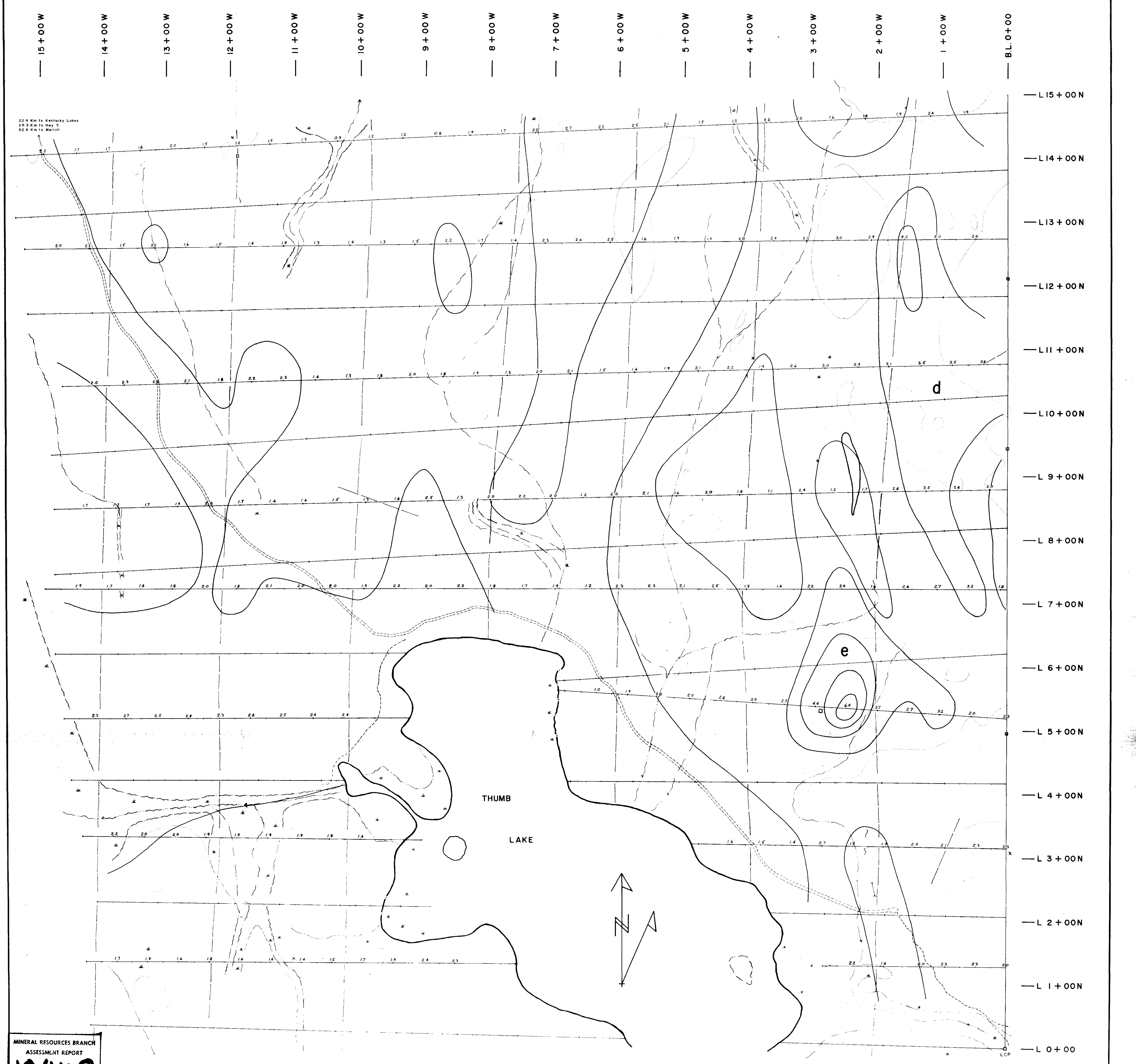
NICOLA MINING DISTRICT, BRITISH COLUMBIA.

GEOPHYSICAL & GEOCHEMICAL SURVEY

VLF-EM SURVEY

FRASER-FILTERED DIP ANGLE

SURVEY BY:	DRAWN BY:	DATE:	JOB No:	N.T.S:	SCALE:	SHEET No:
P.A.	C.B.	Dec., 1981	81-15	92 H/16 W	1:2,500	2



SYMBOLS

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- Blazed line

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INSTRUMENTATION:
Huntec M-4 Receiver
Phoenix IPT I Transmitter

Pole - dipole array
Dipole length - 50 m
Delay time - 300 ms
Integration time - 65 ms

LEGEND

2.4 Chargeability, M
Contour interval: 1, for $M \geq 2$
d Interpreted anomalies (see text)

50 25 0 25 50 75 100 200
Metres

To Accompany Geochemical / Geophysical Report By J. M. Anderson, Geophysicist.

GEOTRONICS SURVEYS LTD.

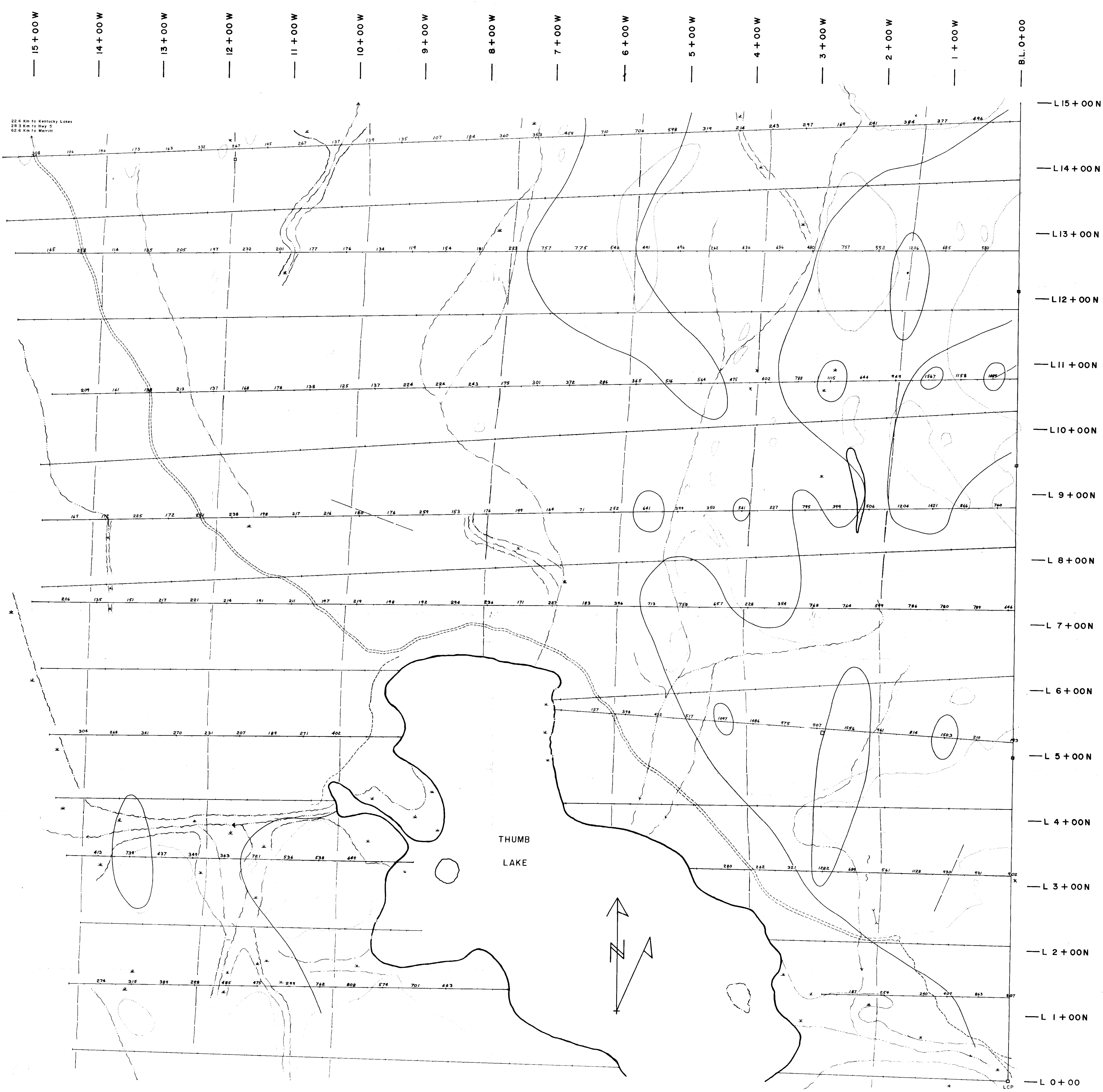
INTER-CONTINENTAL ENERGY CORP.

LATE CLAIM

NICOLA MINING DISTRICT, BRITISH COLUMBIA.

GEOPHYSICAL & GEOCHEMICAL SURVEY
INDUCED POLARIZATION SURVEY
CHARGEABILITY FOR N=2

SURVEY BY:	DRAWN BY:	DATE:	JOB No:	N.T.S:	SCALE:	SHEET No:
J.R.A.	J.R.A.	Dec., 1981.	81-15	92 H/16 W	1:2,500	3



SYMBOLS

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- Outcrop area
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- Pit, trench
- Secondary road
- Trail
- Shoreline
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LEGEND:

254 Apparent resistivity (Ωm) for n=2

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GEOTRONICS SURVEYS LTD.

INTER-CONTINENTAL ENERGY CORP.

LATE CLAIM

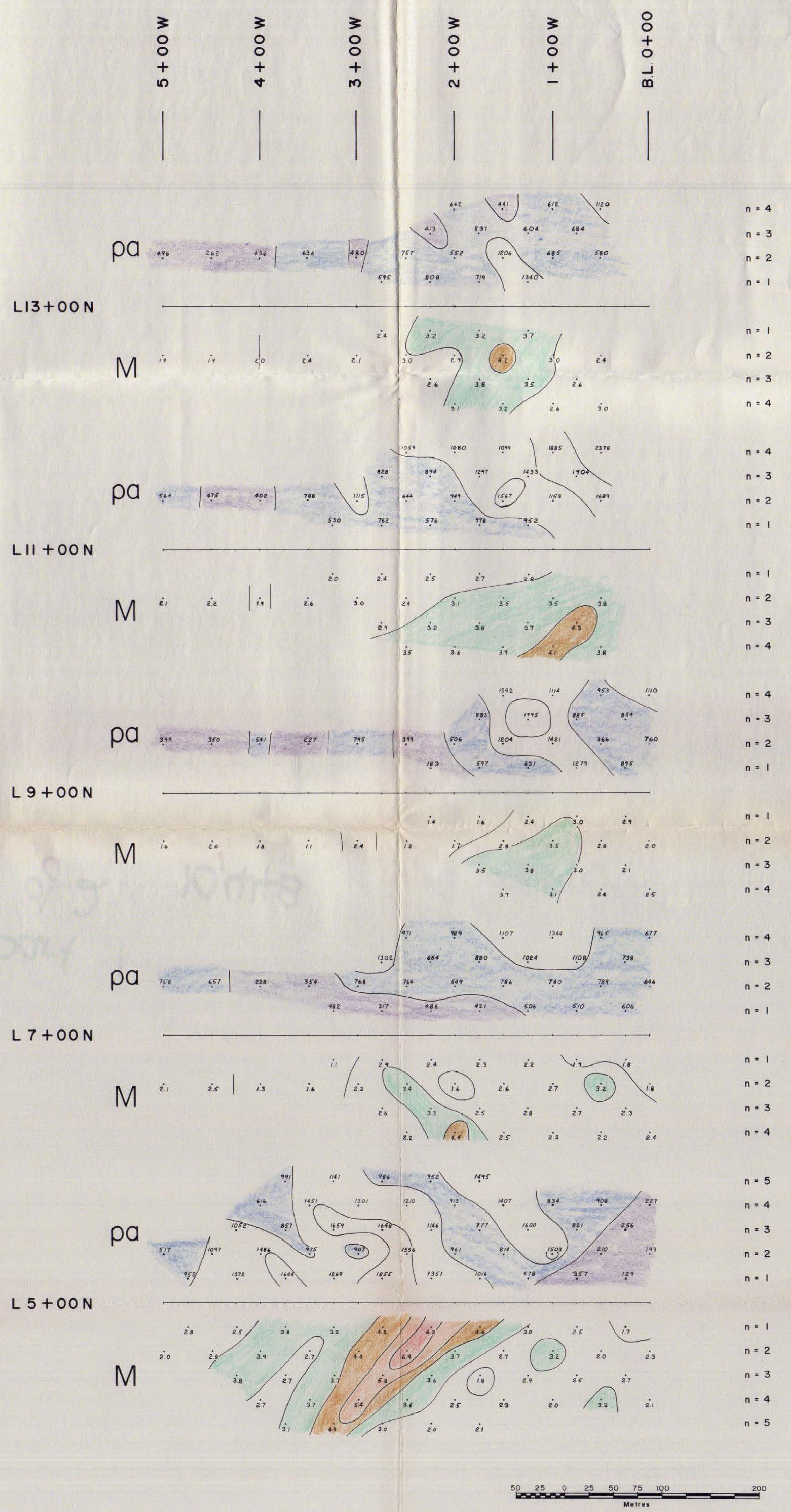
NICOLA MINING DISTRICT, BRITISH COLUMBIA.

GEOPHYSICAL & GEOCHEMICAL SURVEY

INDUCED POLARIZATION SURVEY

APPARENT RESISTIVITY DATA & CONTOURS

SURVEY BY:	DRAWN BY:	DATE:	JOB No:	N.T.S.:	SCALE:	SHEET No:
J.R.A.	J.R.A.	Dec., 1981.	81-15	92 H/16 W	1:2,500	4



To Accompany Geochemical / Geophysical Report By J. M. Anderson, Geophysicist.

INSTRUMENTATION:
Huntec M-4 Receiver
Phoenix IPT 1 Transmitter

Pole - dipole array
Dipole length - 50 m
Delay time - 300 ms
Integration time - 65 ms

GEOTRONICS SURVEYS LTD.

INTER-CONTINENTAL ENERGY CORP.

LATE CLAIM

NICOLA MINING DISTRICT, BRITISH COLUMBIA.

GEOPHYSICAL & GEOCHEMICAL SURVEY

INDUCED POLARIZATION SURVEY

RESISTIVITY & I.P. PSEUDOSECTIONS

SURVEY BY:	DRAWN BY:	DATE:	JOB No:	N.T.S.:	SCALE:	SHEET No:
J.R.A.	J.R.A.	Dec., 1981.	81-15	92 H/16 W	1:2,500	5

part 1 of 2