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9/87

GEOPHYSICAL REPORT

ON

INDUCED POLARIZATION AND RESISTIVITY SURVEYS

OVER A PORTION OF THE

PINE CLAIMS

READE LAKE, CRANBROOK AREA

FORT STEELE M.D.

BRITISH COLUMBIA

PROPERTY		: On and to the North of St. Mary River and 2.0 km due west of the Cranbrook Airport, B.C.
		: 49° 38.5' North Latitude 115° ~~51'~~ 49.7' West Longitude
		: N.T.S. 82G/12W
WRITTEN FOR	Owner/Operator	: VICTORIA RESOURCE CORPORATION #713-744 West Hastings Street Vancouver, B.C., V6C 1A5
WRITTEN BY		: David G. Mark, Geophysi... GEOTRONICS SURVEYS LTD. 530 - 800 West Pender S... Vancouver, B.C., V6C 2V...
DATED		: December 10, 1986

GEOLOGICAL ASSESSMENT

15382

GEOTRONICS

GEOTRONICS SURVEYS LTD.
Engineering & Mining Geophysicists
VANCOUVER CANADA

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SUMMARY

Induced polarization and resistivity surveys were carried out during September, 1986 over two grids within the Pine claims located on and north of St. Mary River and 2 km due west of the Cranbrook Airport within southeastern British Columbia. The purpose of the work was to locate sulphide zones that could contain gold mineralization and/or that are similar to the nearby Sullivan lead-zinc-silver deposit.

The property is easily accessible by 2-wheel drive vehicle. The terrain consists of flat to gentle slopes covered with grazing land and sparsely-populated pine trees with light underbrush.

The general area is underlain by the Purcell Supergroup of sediments of Precambrian age that is cut by block faulting. The northern two-thirds of the property is underlain by the Creston formation and by the Aldridge formation which underlies the Creston formation. The south and southwestern part of the property is underlain by the Kitchener formation which overlies the Creston. The rock-types of the above-named formations are predominantly argillites, siltstones and quartzites with some dolomite. Also, part of the southeastern part of the property is underlain by the Eager formation which consists of shale, limestone, siltstone and sandstone. Two stocks of quartz monzonite, one of which underlies the Lake grid, intrude into the Eager formation. The Pine claims occur on the western half of a large, high-amplitude magnetic anomaly. The probable causative source is a gabbroic intrusive at a depth of 700 to 900 m below surface.

No mineralization has so far been located on the property. However, the Sullivan, which is the world's largest lead-zinc-silver

orebody, is located 10 km northwest of the property and the zinc-lead-silver Kootenay King is located 17 km to the east-northeast. Also current drilling on the Wait claims which are to the immediate north of the Pine claims has intersected widespread mineralization within the sediments consisting of pyrite, pyrrhotite, sphalerite and galena. No assay results are yet available.

The IP and resistivity surveys were carried out using a Huntec receiver operating in the time-domain mode over two different grids. Over the North grid the pole-dipole array was used at two separations with a dipole length and reading interval of 100 m. Eight lines were done. The readings were plotted on a survey plan, in pseudosection form. Over the Lake grid, the dipole-dipole array was used at five separations and with a dipole length and reading interval of 30 m. A total of five lines were done and the results were plotted in pseudosection form and contoured.

CONCLUSIONS

1. A large, widespread IP anomaly containing significant values was discovered on the North grid. Pyrite mineralization was noted in the area indicating pyrite to likely be the main causative source.

2. There was no particular correlation of the IP high with the resistivity results probably because the whole grid area is underlain by a resistivity low (all values below 100 ohm-meters). The likely cause of the low is a particular rock-type within the Aldridge sediments.

3. Almost the entire Lake grid is anomalous in IP values. However, there appears to be at least two distinct anomalies with one occurring within the Eager sediments and the second within the quartz monzonite intrusive.

4. Using the resistivity results to define the rock-type, the quartz monzonite IP anomaly occurs on the eastern part of line 0, and on lines 1S and 2S. It reaches a high of 100 ms. Its probable cause is sulphides.

5. The Eager sediment IP anomaly occurs on the western part of L-0, the southern part of the test line, and the entire line of 4S. It reaches a high of 129 ms. It is possible that this anomaly is actually two anomalies.

6. The Eager sediment anomaly surrounds the lake within which occurs a medium strength Turam EM conductor that correlates with a small amplitude magnetic high. The suggestive causative source of the EM magnetic anomaly is pyrrhotite. Probably the main cause of the IP anomaly is pyrite. The fact that the lake occurs within the center suggests it to be a topographic low caused by the weathering of an altered fractured sulphide zone.

7. Drill-testing of a strong IP anomaly correlating with a gravity anomaly and a resistivity low is currently underway on the Wait claims which border the Pine claims to the north. Widespread stratiform sulphide mineralization consisting of pyrite, pyrrhotite, sphalerite and galena has been intersected. No assay results are available.

8. Pyrite is probably the main sulphide within the causative source of each of the three IP anomalies mentioned above. It may be acting as a halo within which occurs gold and/or silver-lead-zinc mineralization.

RECOMMENDATIONS

Considering the nearby Sullivan and Kootenay King deposits as well as the current drilling on the Wait claims, the results on the Pine claims are very encouraging and definitely warrant further work as follows:

1. The IP and resistivity survey should be continued on both grids in an attempt to better define the three IP anomalies. (a) on the North grid, at least three or four of the lines should be extended further west. (b) on the Lake grid, lines 0 and 4S should be extended to both the east and the west. Also north-south lines of up to 1,000 m should be run on both the east and west sides of the lake.

2. A gravity survey should be conducted over each of the two grids in order to determine the possibility of the occurrence of silver-lead-zinc mineralization. This is especially important over the North grid IP anomaly since it occurs within the Aldridge sediments which is the host rock for the Sullivan and Kootenay King deposits.

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INTRODUCTION AND GENERAL REMARKS

This report discusses the instrumentation, theory, field procedure and results of induced polarization (IP) and resistivity surveys carried out over a portion of the Pine claims, located near north of Cranbrook in the Fort Steele Mining Division of British Columbia.

The field work was completed from September 16th to the 26th, 1986 under the supervision of the writer and under the field supervision of Andrew Rybaltowski, geophysicist, who also formed part of the field crew. A geophysical technician as well as 2 helpers completed the crew of four.

The purpose of the IP survey over the North grid was to locate the source of anomalous gold results within silt soil geochemical sampling. Over the Lake grid the purpose was to follow up on

Turam EM anomalies located by geophysical crews of Cominco during 1969 and 1970.

The purpose of the resistivity survey was to locate areas of alteration and/or fracturing as well as to help map lithology. Alteration and fracturing often occur with sulphide mineralization and is reflected as a resistivity low which should therefore correlate with an IP high.

Exploration on the property is under the supervision of B.H. Kahlert, P.Eng., consulting geological engineer, who worked closely with the IP crew.

PROPERTY AND OWNERSHIP

The property consists of seven contiguous claims totalling 116 units as shown on Map 2 and as described below:

Name of Claim	No of Units	Record Number	Anniversary Date
Pine 1	20	2462(9)	September 23rd
Pine 2	20	2463(9)	September 23rd
Pine 3	20	2464(9)	September 23rd
Pine 4	20	2465(9)	September 23rd
Pine 5	10	2466(9)	September 23rd
Pine 6	12	2467(9)	September 23rd
Pine 7	14	2468(9)	September 23rd

The seven Pine claims as shown on Map 2 are wholly owned by Victoria Resource Corporation of Vancouver, B.C.

LOCATION AND ACCESS

The Pine claims are located in the Kimberley River valley 2 km due west of the Cranbrook airport. Reade Lake occurs within the center of the property and St. Mary River flows easterly across the southern boundary.

The geographical coordinates for the center of the property are 49° 38' north latitude and 115° 51' west longitude.

Access is easily gained from the towns of Cranbrook or Kimberley by travelling along Highway #95A which runs northwesterly across the southwestern corner of the property. The western boundary of the Pine #3 claim is about 12 km from Kimberley and the southern boundary of the same claim is about 16 km from Cranbrook. In addition the property is well covered by secondary roads and dirt roads.

PHYSIOGRAPHY

The property occurs within the eastern part of the Purcell Mountains, a physiographic division of the Columbia Mountains. It occurs at the conjunction of the St. Mary River valley with the broad U-shaped Kootenay River valley which is to the immediate west of the Rocky Mountain Trench. The trench runs along the southerly-flowing Kootenay River. The terrain is gentle over almost the entire property varying from 920 to 980 m, though along the St. Mary river, the elevation is as low as 850 m.

The property is mainly drained by the southerly-flowing Burnett Creek as well as the easterly-flowing St. Mary River. Small shallow lakes and swamps also occur throughout the property.

The vegetation consists mainly of grazing land and sparsely-populated pine trees with very light underbrush except along the creeks where the underbrush is thick.

HISTORY OF PREVIOUS WORK

The only known previous work is soil geochemistry and geophysics work carried out by Cominco during the period of September 20, 1969 to August 1, 1970, when the southern part of the Pine claims were covered by the Wye claims. A grid was placed on the southern part of and to the south of as well as on the western part of and to the west of the presently-known Lake grid. The soil samples were tested for lead and zinc but revealed no significant results. The geophysics consisted of Turam EM and magnetic surveys. The Turam revealed one north-south conductor of moderate conductivity correlating with a weak 50-gamma magnetic high. Six other weak "noise level" conductors were revealed, four of which correlated with weak magnetic highs as well. The EM and magnetic high correlation suggests that pyrrhotite is the causative source. In addition, a low-order magnetic high occurs on the eastern part of the grid and is probably a reflection of the monzonite stock in this area.

Since the claims have been staked, no previous work has been done other than some prospecting, chip sampling and silt geochemical testing. Soil sampling was being carried out while the IP-resistivity surveys were underway but the results were not available to the writer.

GEOLOGY

a) Regional

The following is quoted from Kahlert in his report titled "Kimberley Project, St. Mary Geophysical Anomaly" to Victoria Resource Corporation and Anglo Canadian Mining Corporation.

"The work by Cairns, Rice, Leech, Hoy and others has developed a good understanding of the geology and structure of the Kimberley district of southeastern B.C. The area lies within the Purcell Anticlinorium, a geological sub-province which lies between the Rocky Mountain Thrust and Fold Belt to the east and the Kootenay Arc to the west.

"In the core of the Purcell anticlinorium, the Purcell Supergroup includes up to 11 kilometres of dominantly carbonate and fine-grained clastic rocks. The anticlinorium is cut by a number of late, NE-trending faults. These faults appear to follow the loci of older structures that have been actively, intermittently, and locally modified the type, distribution and thickness of late Proterozoic and Paleozoic rocks (Leech, 1985; Lis and Price, 1976). Dramatic thickness and facies changes in Purcell rocks east of the trench, particularly along the Boulder Creek fault zone indicate that, at least locally, these structures were active during deposition of Purcell strata (Hoy, 1979, 1982)."

"In summary, it is evident that deep crustal structures in underlying crystalline basement affected the eastern margin of the Purcell basin. Furthermore, the distribution of base metal concentrations, such as Sullivan, North Star, Stemwinder and Kootenay King, appears to be tectonically controlled (Kanasewich, 1968). Such concentrations occur near the intersection of the N-trending, rifted, continental margin and a pronounced SW-trending, tectonic zone. The tectonic control may be direct, with zones of crustal weakness localizing deep-rooted basement faults that controlled the outflow of metal-charged fluids, or indirect, with these zones localizing geothermal convective cells that controlled sulphide deposition."

b) <u>Property</u>

The following is taken from the G.S.C. map of the area by Leech.

The northwestern part of the property is underlain by the Aldridge formation. This formation is composed of grey quartzites and siltstones as well as dark argillites. This is the favourable host-rock for mineralization in the area and hosts the Sullivan orebody. The North grid occurs within the Aldridge formation.

The Creston formation which overlies the Aldridge occurs along the eastern and south central parts of the property. It is composed of grey and green argillites and siltstones as well as grey, green, white and purple quartzites.

The Kitchener formation which is younger than the Creston formation occurs along the southern part of the property and is composed of grey and green argillite and dolomitic argillite, grey dolomite, quartzite and grey limestone.

All of the above-named formations are of the Precambrian Purcell age.

The Eager formation which is of Lower and(?) Middle Cambrian age occurs within the southeastern part of the property. It underlies the Lake grid and consists of shale, limestone, siltstone and sandstone.

The only intrusives known in the area are Cretaceous quartz monzonites two of which intrude the Eager formation within the Pine claims. One occurs within the Lake grid to the immediate east of the lake and the second occurs 1,800 m due west of the first.

The area is cut by extensive block faulting which Leech shows within the southern half of the Pine claims. The faults are shown to strike predominantly eastern. Also one is shown to strike northerly and another, northeasterly.

No mineralization is known to occur on the property except for some pyritization noted by Kahlert (verbal) on the western part of the North grid. However, extensive sulphide mineralization has been intersected by current drilling on the Wait claims which occur to the immediate north of the Pine claims. The drilling was done on correlating IP high, gravity high, and resistivity low anomalies. The mineralization intersected was stratiform within the Aldridge formation and consisted of pyrite, pyrrhotite, sphalerite and galena. No assay results are yet available.

Within the general area, the two most well-known deposits are the Sullivan lead-zinc-silver deposit and the Kootenay King zinc-lead-silver deposit both of which occur within the Aldridge formation. The Sullivan occurs 10 km to the northwest of the Pine claims, and the Kootenay King, 17 km to the east-northeast).

St. Mary Magnetic Anomaly

Of interest to the geology of the property is the occurrence of a large, strong aeromagnetic anomaly (as surveyed by the G.S.C.) over which the Pine claims occur on the western half of. The size of the anomaly is 15 km northerly by 13.6 km easterly with the high amplitude center occurring 4.34 km south of the southern boundary. The anomaly reaches a high of 1,100 gammas above background and thus, with a 300 m terrain clearance, is considered to be an extremely strong anomaly response.

Kahlert, in his report, notes "the causative source to be a body with dimensions 9 km by 5 km, elongate north-south. The depth to the top of the source is estimated to be between 700 and 900 meters below surface, while a small apophysis reaches within 200 meters of surface." The causative source is thought to be a basic igneous intrusive, probably a gabbro. Quartz monzonite intrusives outcrop on surface but this rock-type does not have a strong enough magnetic signature to be the causative source.

INSTRUMENTATION

The transmitter used for the induced polarization-resistivity survey was a Model IPT-1, manufactured by Phoenix Geophysics Ltd. of Markham, Ontario. It was powered by a 2.0 kw motor-generator, Model MG-2, also manufactured by Phoenix.

The receiver used was a model Mark IV manufactured by Huntec ('70) Limited of Scarborough, Ontario. This is state-of-the-art equipment, with software-controlled functions, programmable through the front panel.

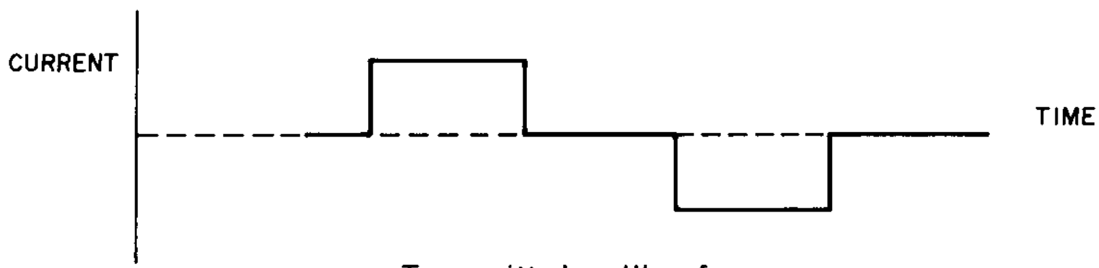
The Mark IV system is capable of time domain, frequency domain, and complex resistivity measurements.

THEORY

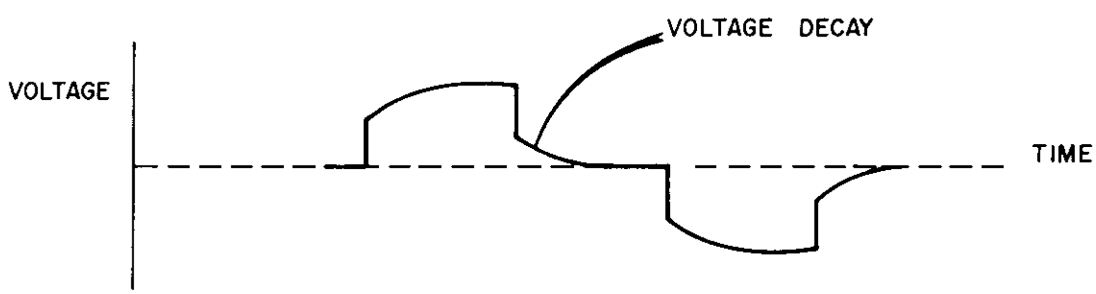
When a voltage is applied to the ground, electrical current flows, mainly in the electrolyte-filled capillaries within the rock. If the capillaries also contain certain mineral particles that transport current by electrons (most sulphides, some oxides and graphite), then the ionic charges build up at 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 phenomena 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 equilibrium state. This process is known as membrane polarization and gives rise to induced polarization effects even in the absence 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 paramater, 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 quantity, apparent resistivity, ρ_a, computed from electrical survey results is only the true earth resistivity in a homogenous sub-surface. When vertical (and lateral) variations in electrical properties occur, as they always will in the real world, the apparent resistivity will be influenced by the various layers, depending on their depth relative to the electrode spacing. A single reading cannot therefore be attributed to a particular depth.

The ability of the ground to transmit electricity is, in the absence of metallic-type conductors, almost completely depending on the volume, nature and content of the pore space. Empirical relationships can be derived linking the formation resistivity to the pore water resistivity, as a function of porosity. Such a formula is Archie's Law, which states (assuming complete saturation) in clean formations:

$$\frac{Ro}{Rw} = 0^{-2}$$

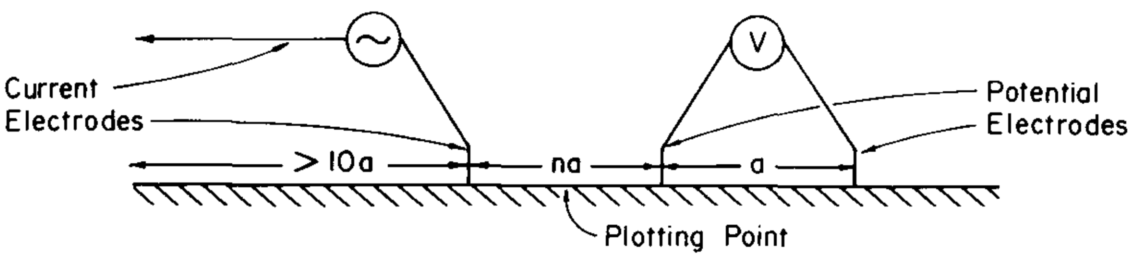
Where: Ro is formation resistivity
Rw is pore water resistivity
0 is porosity

SURVEY PROCEDURE

The IP and resistivity measurements were taken in the time-domain mode using an 8-second square wave charge cycle (2-seconds positive charge, 2-seconds off, 2-seconds negative charge, 2-seconds off). The delay time used after the charge shuts off was 200 milliseconds and the integration time used was 1,500 milli-seconds divided into 10 windows.

The array used over the North grid was the pole-dipole array shown as follows:

POLE-DIPOLE ARRAY

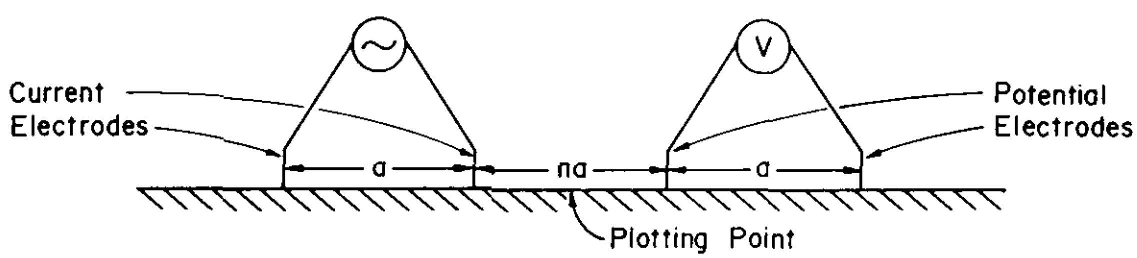


The electrode spacing (or dipole length) is denoted at 'a' and was chosen as 100 m. The 'n' was read to two dipole separations ('na') which was therefore 200 m.

The pole-dipole array was chosen because of its greater speed for the purpose of reconnaissance work. Where the target is large, the lack of symmetry of the pole-dipole array is considered to be of small disadvantage.

The array chosen for the Lake grid was the dipole-dipole array shown as follows:

DIPOLE-DIPOLE ARRAY



The dipole length ('a') was chosen to be 30 m. It was read to five separations ('na') which was therefore 150 m which gives a theoretical depth penetration of 75 to 100 m.

The dipole-dipole array was chosen because of its symmetry resulting in a greater reliability in interpretation. Furthermore, a narrow, vein-like target which may occur within the Lake grid, can be missed by the pole-dipole array.

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

For the North grid the baseline was placed in a north-south direction. The survey lines were run east-west at a 400-meter interval and readings were taken every 100 m.

On the Lake grid, a north-south test line was originally run in February, 1986 along the eastern side of the lake where very high IP readings were immediately encountered.

In September, 1986, the baseline for the Lake grid was placed in a north-south direction and the survey lines were run east-west at a 100-meter interval. Readings were taken every 30 m. Line 3S was not done since it was too short to acquire useful IP-resistivity data. (The southeastern corner of the lake probably extends further east than is shown. The lake on the survey plan, Map #3, was taken from the 1:50,000 government topography map for the area). The test line is drawn in an approximate position since the survey stakes had to be removed after the IP-resistivity readings were finished.

COMPILATION OF DATA

The chargeability (IP) 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, or dipole-dipole arrays to compute the apparent resistivities.

For the North grid, the chargeability and resistivity data were plotted in pseudosection form on a survey plan on Map #4, at a scale of 1:10,000. They were plotted midway from the location of the closest current electrode and the closest potential electrode as shown above. The chargeability data were contoured at a 5 millisecond contour interval, and the resistivity data, at a 10 ohm-meter contour interval.

The results of the Lake grid are shown in pseudosection form for the five lines, including the test line, on Maps 5 to 9, respectively, at a scale of 1:2,000. Each value is plotted at a point formed from the intersection of a line drawn from the mid-point of each of the two dipoles.

The survey plan of both grids is drawn on Map #3 at a scale of 1:20,000. Since interpretational results are shown as well as the approximate positions of Turam EM conductors and a magnetic high delineated from surveys by Cominco.

DISCUSSION OF RESULTS

A. North Grid

A large widespread IP anomaly was discovered on the west side of the north grid. It is closed off on the east side and almost closed off on the south and north sides. It is therefore at least 2,600 m long in a north-south direction and 1,400 m wide in an east-west direction. The intensity of the anomaly reaches 54 ms against a background of 2 to 4 ms. It has good depth extent, perhaps to a few hundred meters. The anomaly is shown on the survey plan (Map 3) as outlined by the 10-ms contour.

The anomaly undoubtedly reflects sulphides, probably pyrite, especially considering that Kahlert (verbal communication) has noted widespread pyritization in the area. Gold mineralization may be associated with the pyrite or the IP anomaly could be reflecting a pyritization halo around a lead/zinc and/or gold deposit.

The IP anomaly does not correlate with a resistivity low, mainly because the whole grid area is underlain by a resistivity low. All values are below 100 ohm-meters. It is quite probable the widespread low is a reflection of one particular rock-type within the Aldridge sediments. Or alternatively, it could be a reflection of alteration and fracturing associated with the sulphide zone as reflected by the IP high.

There is no particular pattern to the resistivity results from which can be interpreted geology except for a lineal resistivity low seen on lines 2N to 14N. It is suggestive of a fault and/or lithological contact and is shown on the survey plan (Map 3).

B. Lake Grid

Just as the North grid is underlain by a widespread resistivity low, it appears that the Lake grid is underlain by a widespread IP high. Virtually all of the values are anomalous on each of the survey lines.

However, it is quite possible that the IP survey is actually reflecting 2 anomalies. One anomaly occurs within the quartz monzonite, and the second within the Eager sidements. This conclusion is reached because of the following:

However, it is quite possible that the IP survey is actually reflecting 2 anomalies. One anomaly occurs within the quartz monzonite, and the second within the Eager sidements. This conclusion is reached because of the following:

1. The contact between the quartz monzonite and the Eager sediments can only be seen on one pseudosection, which is L-0. It is probably defined by the 300 ohm-meter contour which indicates the contact dipping to the west. The quartz monzonite is to the east, and the Eager sediments to the west.

2. The same line indicates 2 IP anomalies separated by an IP low centered at 1+80W and dipping to the west. The western IP anomaly is stratiform in shape showing a shallow dip to the east and occurs entirely within the Eager sediments.

   The second IP anomaly occurs entirely within the quartz monzonite intrusive, appears to dip to the west, and increases in intensity with depth. It is interesting to note that the higher IP values at depth correlate with a local resistivity low within the quartz monzonite. This could be due to alteration associated with the IP causative source (probably sulphides), or possibly, but not likely, underlying sediments.

The 1S and 2S pseudosections, because of the higher resistivity values, probably occur entirely within the quartz monzonite intrusive. Neither line could be extended far enough west because of the lake.

On line 1S, all IP values are anomalous, reaching a high of 60 ms. However, a local west-dipping low correlates with a west-dipping resistivity low. Possibly, the correlating lows are reflecting a fault or shear zone within which the sulphides have been altered.

On line 2S, the IP values are higher, reaching a high of 100 ms at depth. On this line, there is little correlation between the resistivity values and the IP values. In fact, the IP data exhibits a westerly dip, and the resistivity data exhibits an easterly dip.

The resistivity values on line 4S indicate that the entire line probably occurs within the Eager sediments. However, the higher resistivity values on the eastern half of the line indicate that the quartz monzonite intrusive may occur to the immediate north.

The entire line is anomalous in IP values reaching a high of 129 ms on the western end. There is no particular correlation with the resistivity results.

Because this IP anomaly appears to occur entirely within the Eager sediments, it is concluded to be a separate anomaly from that which occurs within the quartz monzonite on lines 1S, 2S and the eastern part of line 0. Quite possibly this is the same anomaly as occurs on the western part of line 0.

The north-south test line is entirely anomalous as well, except for the northern end where the values are below 10 ms. However, the most prominent feature of this line occurs at the approximate position of line 2S. South of this line, the IP values are highly anomalous with the readings for the most part being above 80 ms and reaching a high of 110 ms. North of this line, the readings are only weakly anomalous with the values being for the most part below 30 ms. Furthermore, the IP high correlates with a resistivity low with almost all values below 100 ohm-meters. The lower IP values correlate with high resistivity values that are for the most part above 150 ohm-meters.

The normal interpretation is that the high IP - low resistivity correlation is reflecting significant sulphide mineralization within a zone of alteration and/or fracturing. Certainly the sulphide mineralization is a highly probable cause. It is possible, however, that the resistivity change may be due to a lithological contact, with Eager sediments being to the south of line 2S and quartz monzonite being to the north.

The IP high on the southern half of the test line is probably the same as that occurring on the entire line 4S and quite possibly the same as that occurring on the western half of line 0. And the IP low at the northern end of this line is close to and therefore probably part of the same low as that occurring on line 0 between the two IP highs.

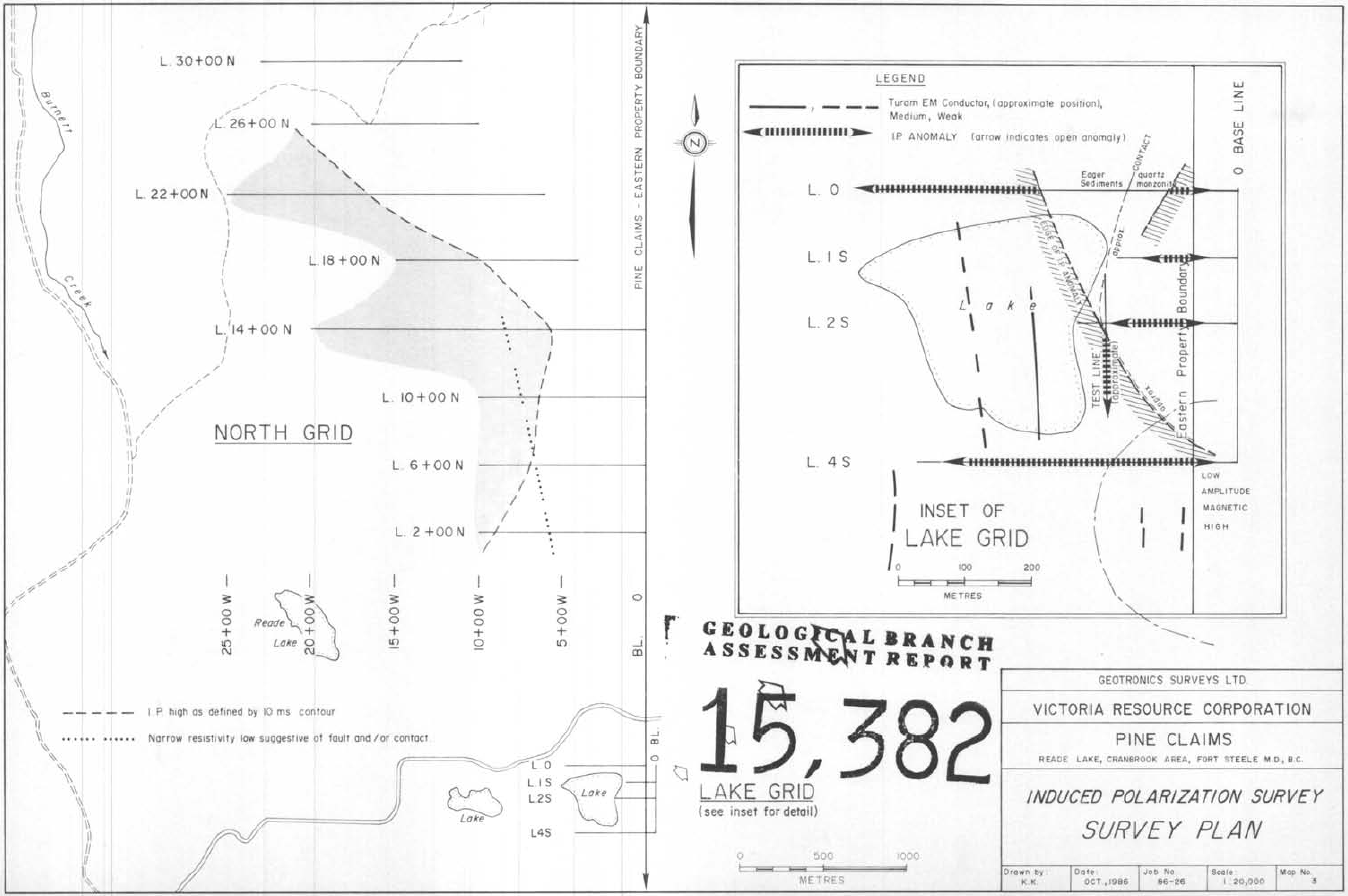
The probable cause of the two IP anomalies is, as mentioned above for the test line, in all probability sulphides. As is the case for the North grid anomaly, the sulphides are probably mainly pyrite. Pyrrhotite probably also occurs as is indicated by the Turam EM conductors correlating with weak lineal magnetic highs. It is interesting to note that the strongest EM conductor, in addition to a weak one, occurs within the center of the lake. On the north, south and east sides of the lake occur very high IP anomalous readings that are very indicative of sulphides. This suggests that the lake may be a topographic low caused by the weathering of a zone of sulphides, alteration and/or fracturing.

As mentioned above for the North grid anomaly, though the sulphides may be mostly pyrite, they may be enveloping gold mineralization (though here the host rock is the Eager formation and the Sullivan and Kootenay King deposits occur within the Aldridge).

Respectfully submitted,
GEOTRONICS SURVEYS LTD.

David G. Mark,
Geophysicisit

December 10, 1986



GEOLOGICAL BRANCH ASSESSMENT REPORT

15,382

GEOTRONICS SURVEYS LTD.

VICTORIA RESOURCE CORPORATION

PINE CLAIMS

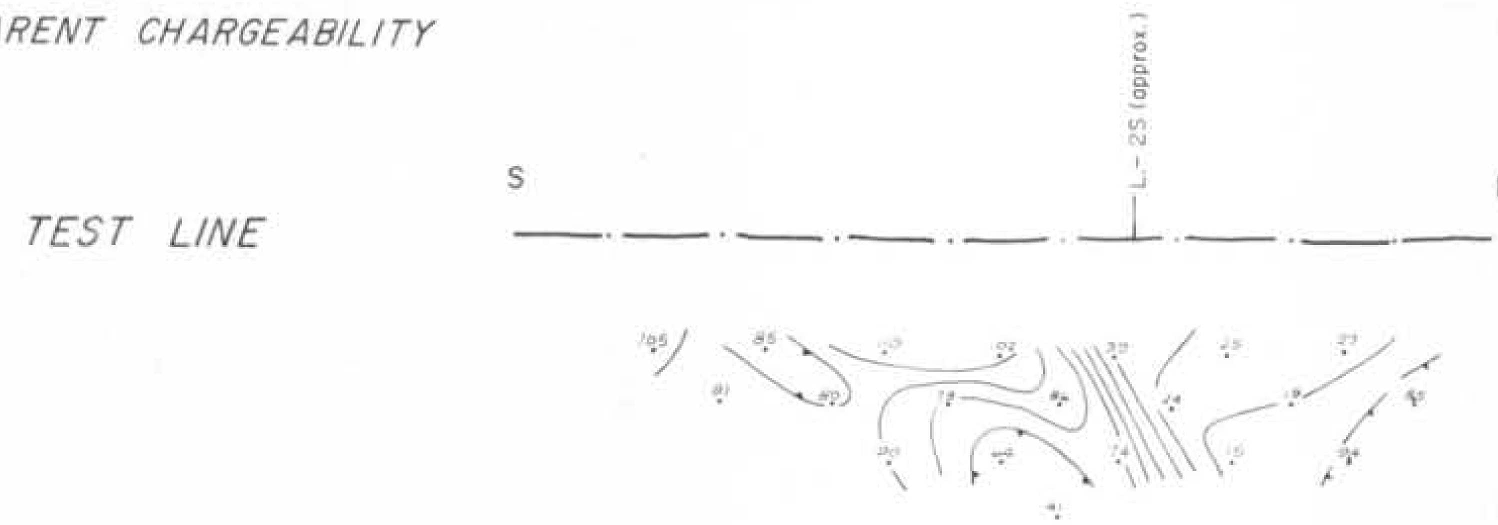
READE LAKE, CRANBROOK AREA, FORT STEELE M.D., B.C.

INDUCED POLARIZATION SURVEY

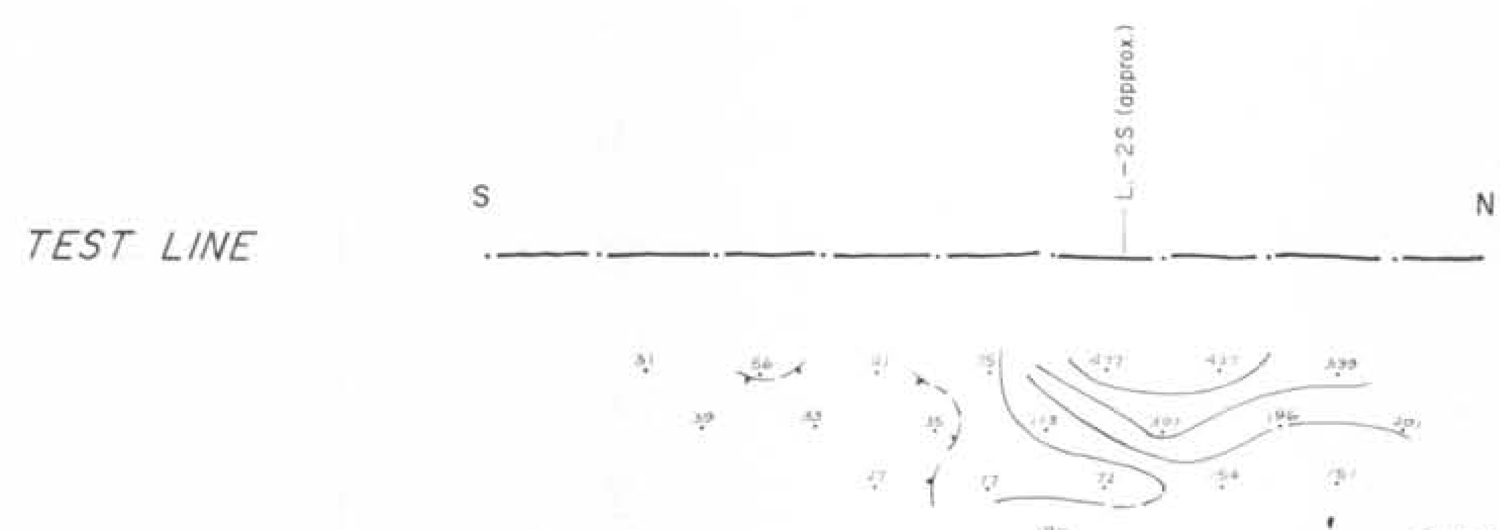
SURVEY PLAN

Drawn by:	Date:	Job No.	Scale:	Map No.
K.K.	OCT., 1986	86-26	1:20,000	3

APPARENT CHARGEABILITY



APPARENT RESISTIVITY



LEGEND

APPARENT CHARGEABILITY

Contour interval 10 milliseconds

I.P. Low

APPARENT RESISTIVITY

Contour interval 100 ohm-metres

Resistivity Low

INSTRUMENTATION

Receiver: Huntec Model Mk. IV

Transmitter: Phoenix IPT-I

Generator: Phoenix MG-2

SURVEY PARAMETERS

Survey Mode: Time Domain

Array: Pole - Dipole

Dipole Length: 30 metres

SCALE

0 50 100

METRES

GEOLOGICAL BRANCH
ASSESSMENT REPORT

15,382

GEOTRONICS SURVEYS LTD.

VICTORIA RESOURCE CORPORATION

PINE CLAIMS

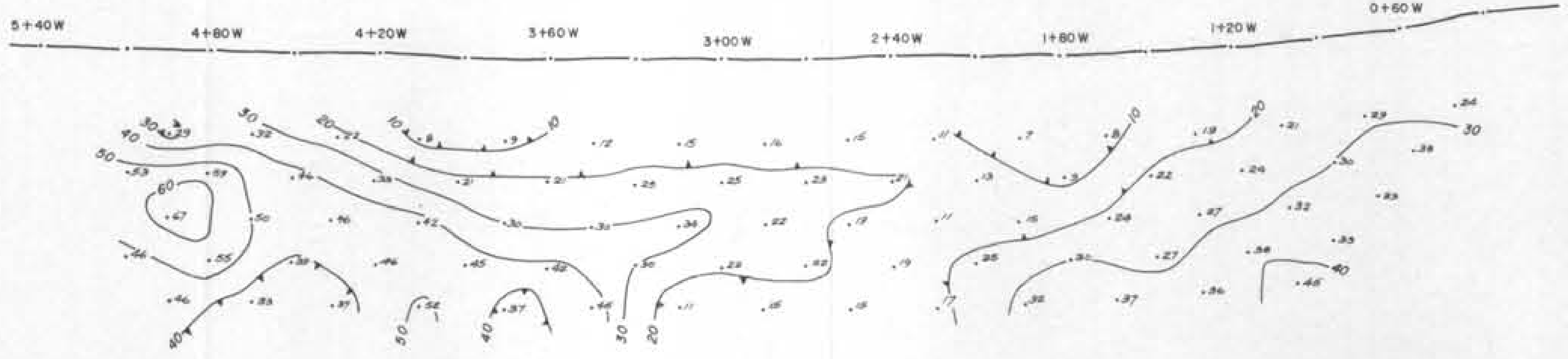
READE LAKE, CRANBROOK AREA, FORT STEELE M.D., B.C.

TEST LINE - LAKE GRID
INDUCED POLARIZATION SURVEY
APPARENT CHARGEABILITY AND RESISTIVITY PSEUDOSECTIONS

Drawn By:	Date:	Job No.	Scale:	Map No.
A.R.	OCT., 1986	86-26	1: 2000	5

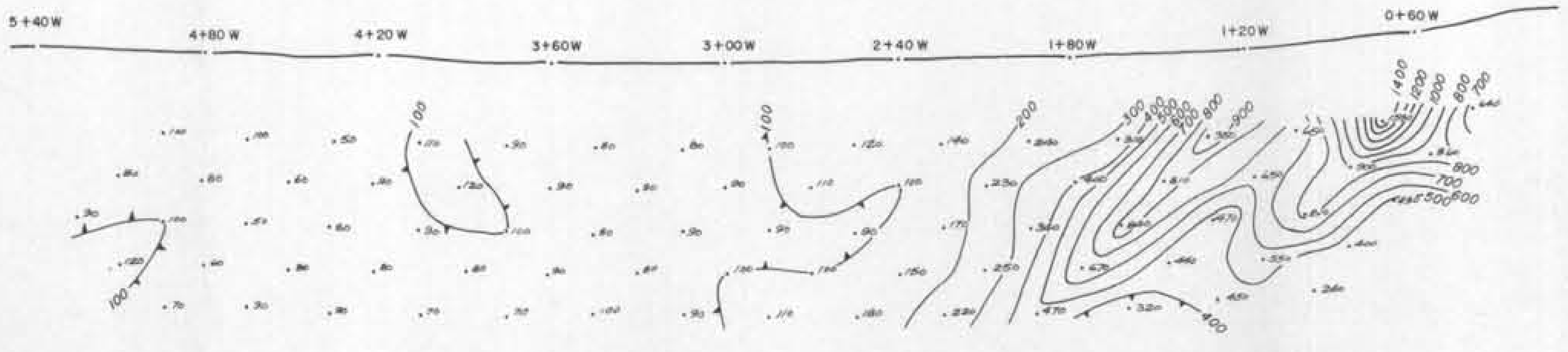
APPARENT CHARGEABILITY

LINE - O



APPARENT RESISTIVITY

LINE - O



LEGEND

APPARENT CHARGEABILITY

Contour interval 10 milliseconds

I.P. Low

APPARENT RESISTIVITY

Contour interval 100 ohm - metres

Resistivity Low

INSTRUMENTATION

Receiver: Huntec Model Mk. IV

Transmitter: Phoenix IPT - I

Generator: Phoenix MG-2

SURVEY PARAMETERS

Survey Mode: Time Domain

Array: Pole - Dipole

Dipole Length: 30 metres

SCALE

0 50 100

METRES

GEOLOGICAL BRANCH
ASSESSMENT REPORT

15,382

GEOTRONICS SURVEYS LTD.

VICTORIA RESOURCE CORPORATION

PINE CLAIMS

REEDE LAKE, CRANBROOK AREA, FORT STEELE M.D., B.C.

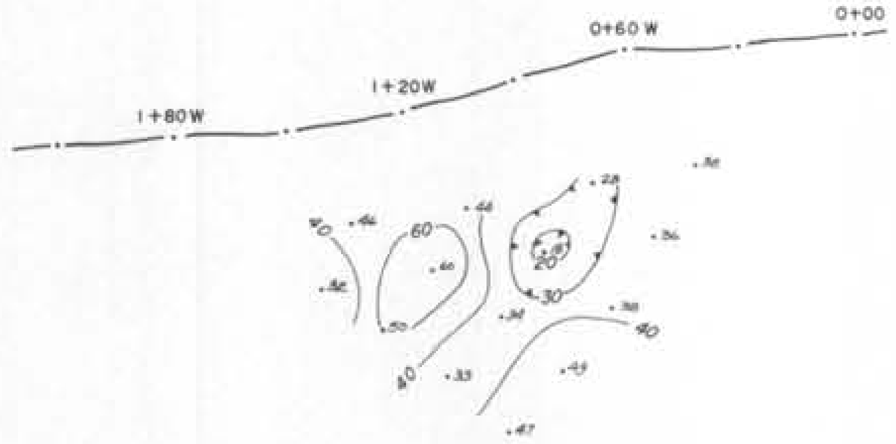
LAKE GRID
INDUCED POLARIZATION SURVEY
APPARENT CHARGEABILITY
AND RESISTIVITY

LINE-0 PSEUDOSECTIONS

Drawn By:	Date	Job No.	Scale:	Map No.
A.R.	OCT 1986	86-26	1:2000	6

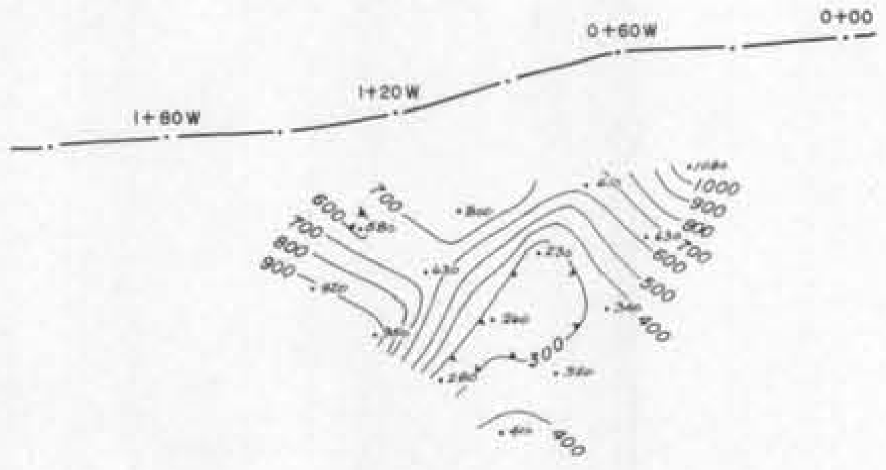
APPARENT CHARGEABILITY

LINE 1S



APPARENT RESISTIVITY

LINE 1S



GEOLOGICAL BRANCH
ASSESSMENT REPORT

15,382

LEGEND

APPARENT CHARGEABILITY

Contour Interval 10 milliseconds

I.P. Low

APPARENT RESISTIVITY

Contour interval 100 ohm - metres

Resistivity Low

INSTRUMENTATION

Receiver : Huntec Model Mk IV

Transmitter : Phoenix IPT-1

Generator : Phoenix MG-2

SURVEY PARAMETERS

Survey Mode : Time Domain

Array : Pole - Dipole

Dipole Length : 30 metres

SCALE

0 50 100

METRES

GEOTRONICS SURVEYS LTD

VICTORIA RESOURCE CORPORATION

PINE CLAIMS

READE LAKE, CRANBROOK AREA, FORT STEELE M.D., B.C.

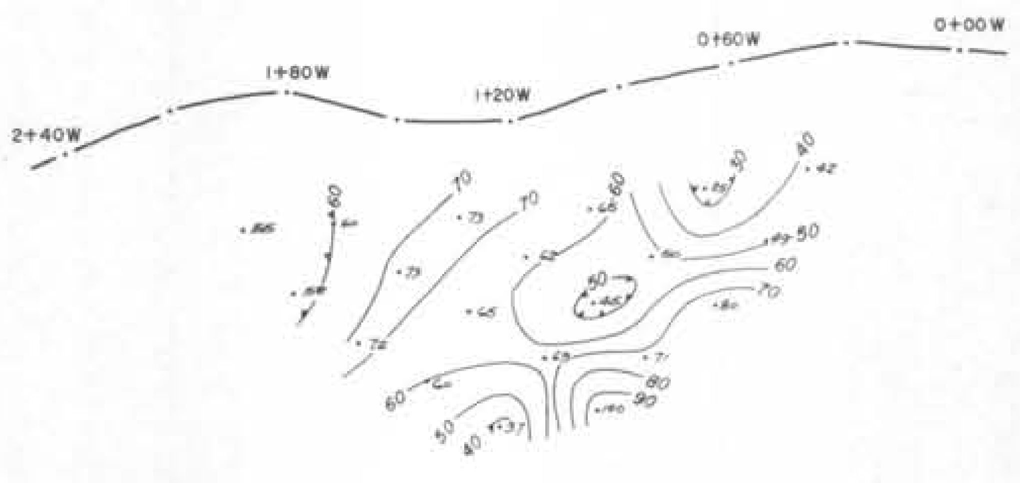
LAKE GRID

INDUCED POLARIZATION SURVEY
APPARENT CHARGEABILITY
AND RESISTIVITY
LINE 1S PSEUDOSECTIONS

Drawn By:	Date	Job No.	Scale	Map No.
A.R.	OCT 1986	86-26	1:2000	7

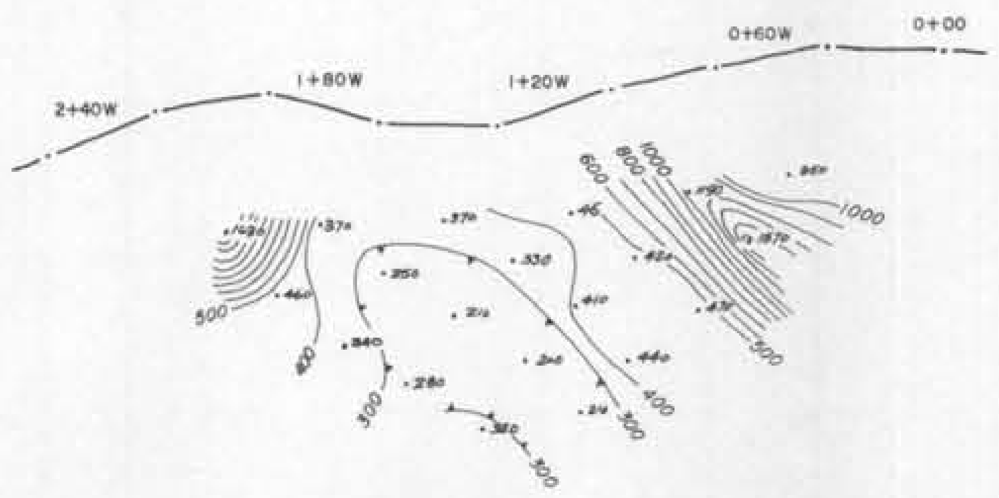
APPARENT CHARGEABILITY

LINE 2 S



APPARENT RESISTIVITY

LINE 2 S



LEGEND

APPARENT CHARGEABILITY

Contour interval 10 milliseconds

I.P. Low

APPARENT RESISTIVITY

Contour interval 100 ohm - metres

Resistivity Low

INSTRUMENTATION

Receiver : Huntec Model Mk. IV

Transmitter : Phoenix IPT - I

Generator : Phoenix MG-2

SURVEY PARAMETERS

Survey Mode : Time Domain

Array : Pole - Dipole

Dipole Length : 30 metres

SCALE

0 50 100

METRES

GEOTRONICS SURVEYS LTD.

VICTORIA RESOURCE CORPORATION

PINE CLAIMS

READE LAKE, CRANBROOK AREA, FORT STEELE M.D., B.C.

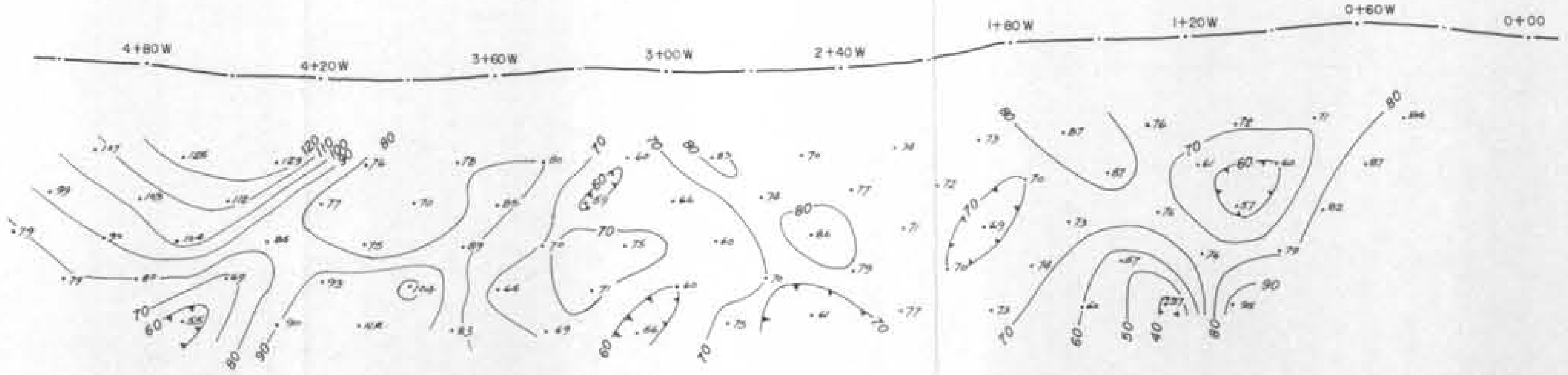
LAKE GRID

INDUCED POLARIZATION SURVEY
APPARENT CHARGEABILITY
AND RESISTIVITY
LINE 2S PSEUDOSECTIONS

Drawn By:	Date	Job No.	Scale:	Map No.
A.R.	OCT 1986	86-26	1 : 2000	8

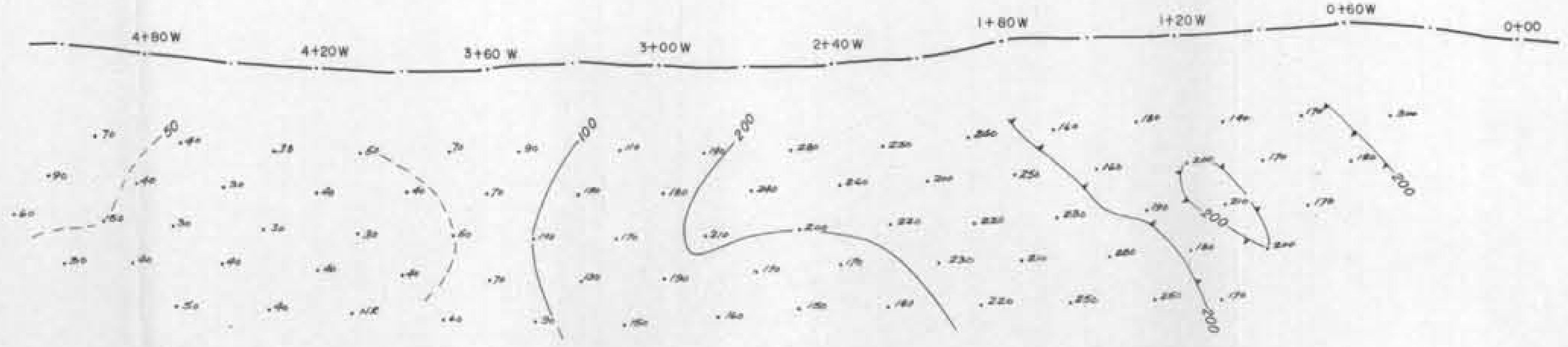
APPARENT CHARGEABILITY

LINE 4 S



APPARENT RESISTIVITY

LINE 4 S



LEGEND

APPARENT CHARGEABILITY

Contour interval 10 milliseconds

I.P. Low

APPARENT RESISTIVITY

Contour interval 100 ohm - metres

Resistivity Low

INSTRUMENTATION

Receiver: Huntec Model Mk IV

Transmitter: Phoenix IPT-1

Generator: Phoenix MG-2

SURVEY PARAMETERS

Survey Mode: Time Domain

Array: Pole - Dipole

Dipole Length: 30 metres

SCALE

0 50 100

METRES

GEOTRONICS SURVEYS LTD

VICTORIA RESOURCE CORPORATION

PINE CLAIMS

READE LAKE, CRANBROOK AREA, FORT STEELE M.D., B.C.

LAKE GRID

INDUCED POLARIZATION SURVEY

APPARENT CHARGEABILITY AND RESISTIVITY

LINE 4S PSEUDOSECTIONS

Drawn By:	Date:	Job No.:	Scale:	Map No.:
A.R.	OCT 1986	86-26	1:2000	9

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GEOPHYSICIST'S CERTIFICATE

I, DAVID G. MARK, 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 located at #530-800 West Pender Street, Vancouver, British Columbia.

I further certify:

1. I am a graduate of the University of British Columbia (1968) and hold a B.Sc. degree in Geophysics.

2. I have been practising my profession for the past 18 years and have been active in the mining industry for the past 21 years.

3. I am an active member of the Society of Exploration Geophysicists and a member of the European Association for Exploration Geophysicists.

4. This report is compiled from data obtained from induced polarization and resistivity surveys carried out by a crew of Geotronics Surveys Ltd., under my supervision and under the field supervision of Andrew Rybaltowski, geophysicist, for one day in February, 1986 and from September 16th to the 26th, 1986.

5. I do not hold any interest in Victoria Resource Corporation, nor in any of the properties discussed in this report, nor will I receive any interest as a result of writing this report.

David G. Mark
Geophysicist

December 10, 1986

AFFIDAVIT OF EXPENSES

This is to certify that I have caused induced polarization and resistivity surveys to be done over a portion of the Pine claims located on and around Reade Lake, 2 km due west of the Cranbrook airport within the Fort Steele Mining Division to the value of the following:

FIELD:

Mobilization, demobilization	$ 2,700
Grid preparation	1,000
4-man crew, 7 days at $1,500/day	10,500
Interpretive report	2,500
Grand Total	$ 16,700

Of the $16,700 spent on the property, $7,000 was spent on the Lake Group (Pine 1, 2 claims) and $9,700 was spent on the Pine North Group (Pine 3 to 7 claims).

Respectfully submitted,
GEOTRONICS SURVEYS LTD.

David G. Mark, Geophysicist
Manager

December 10, 1986

GEOTRONICS SURVEYS LTD.

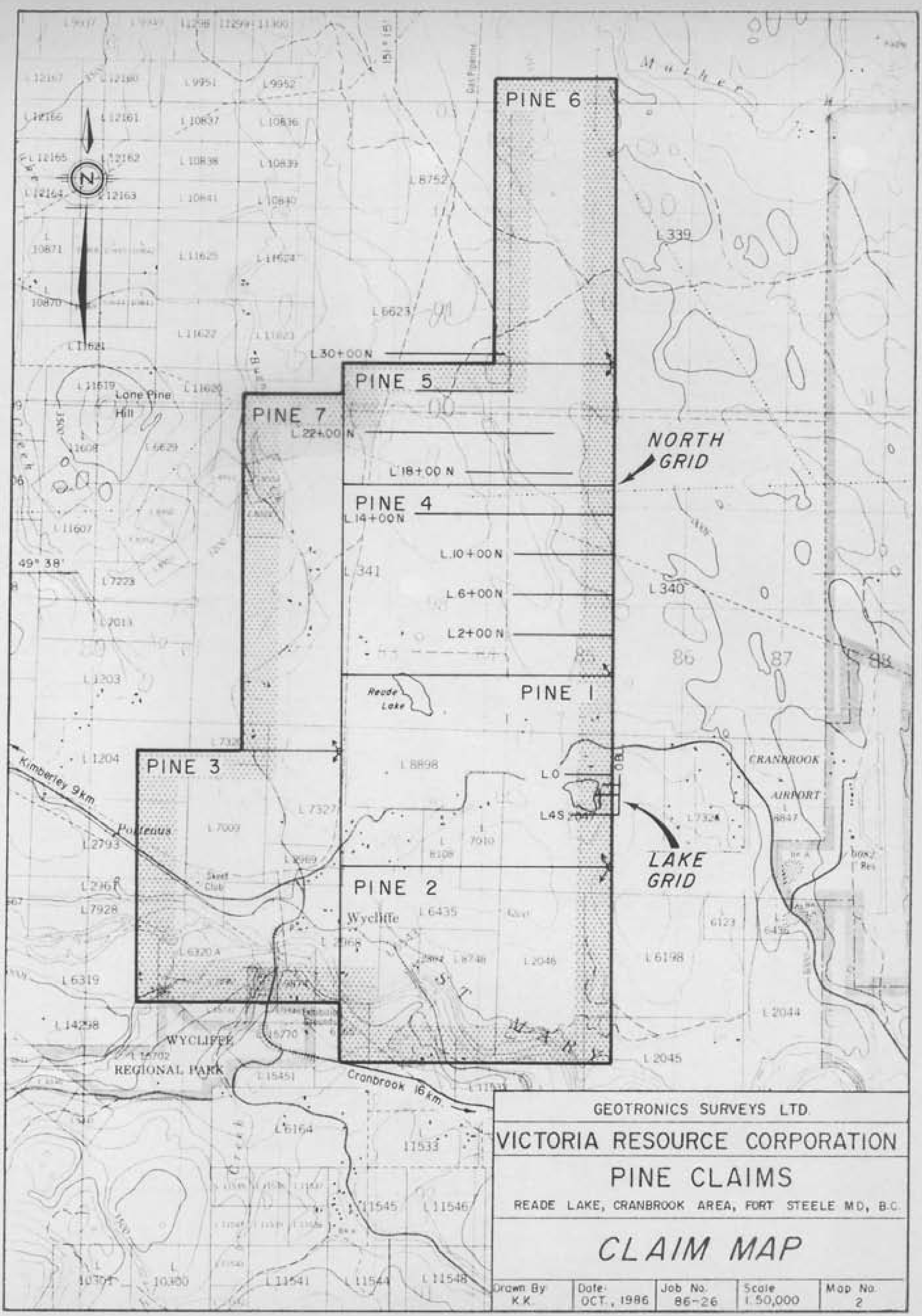
VICTORIA RESOURCE CORPORATION

PINE CLAIMS

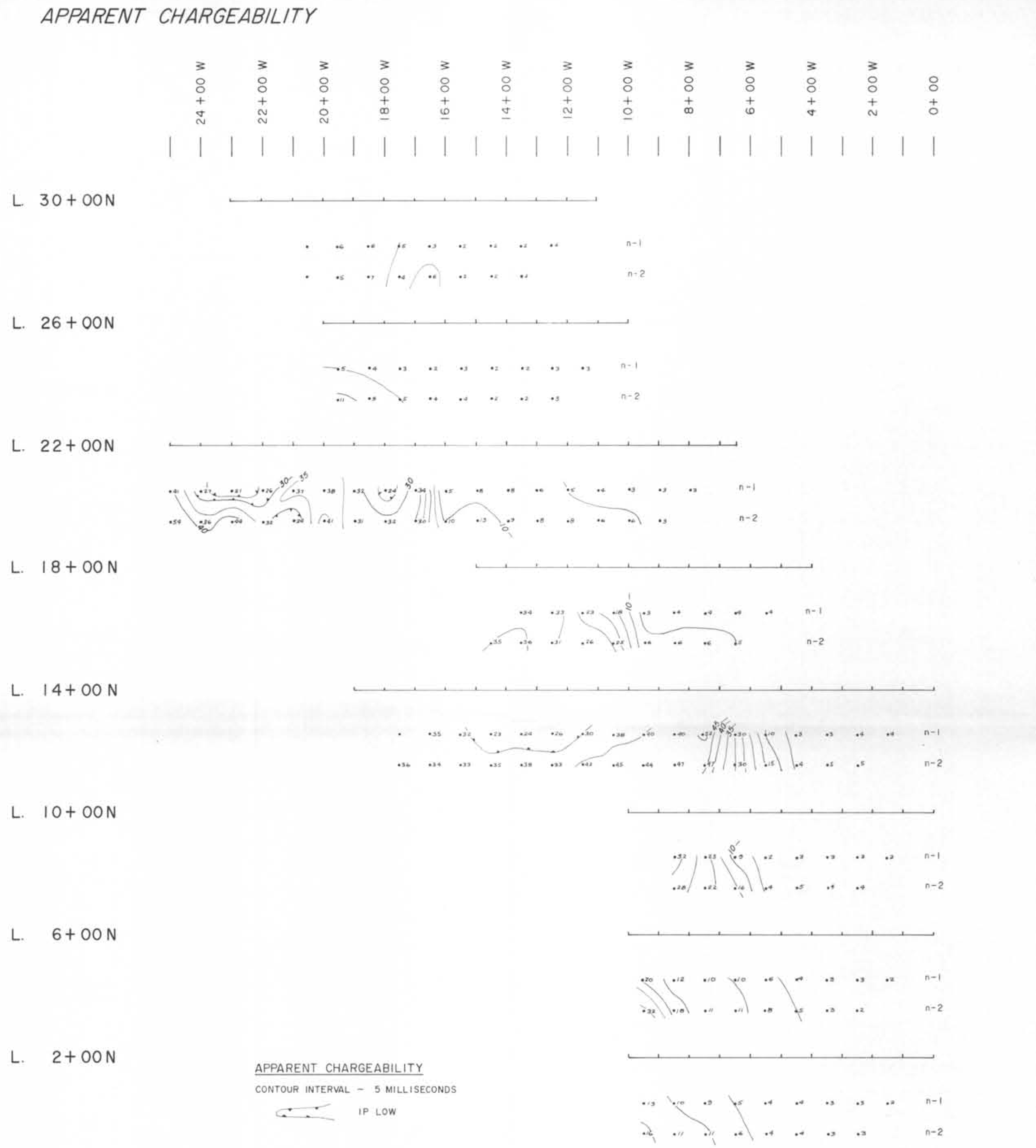
READE LAKE, CRANBROOK AREA, FORT STEELE M.D., B.C.

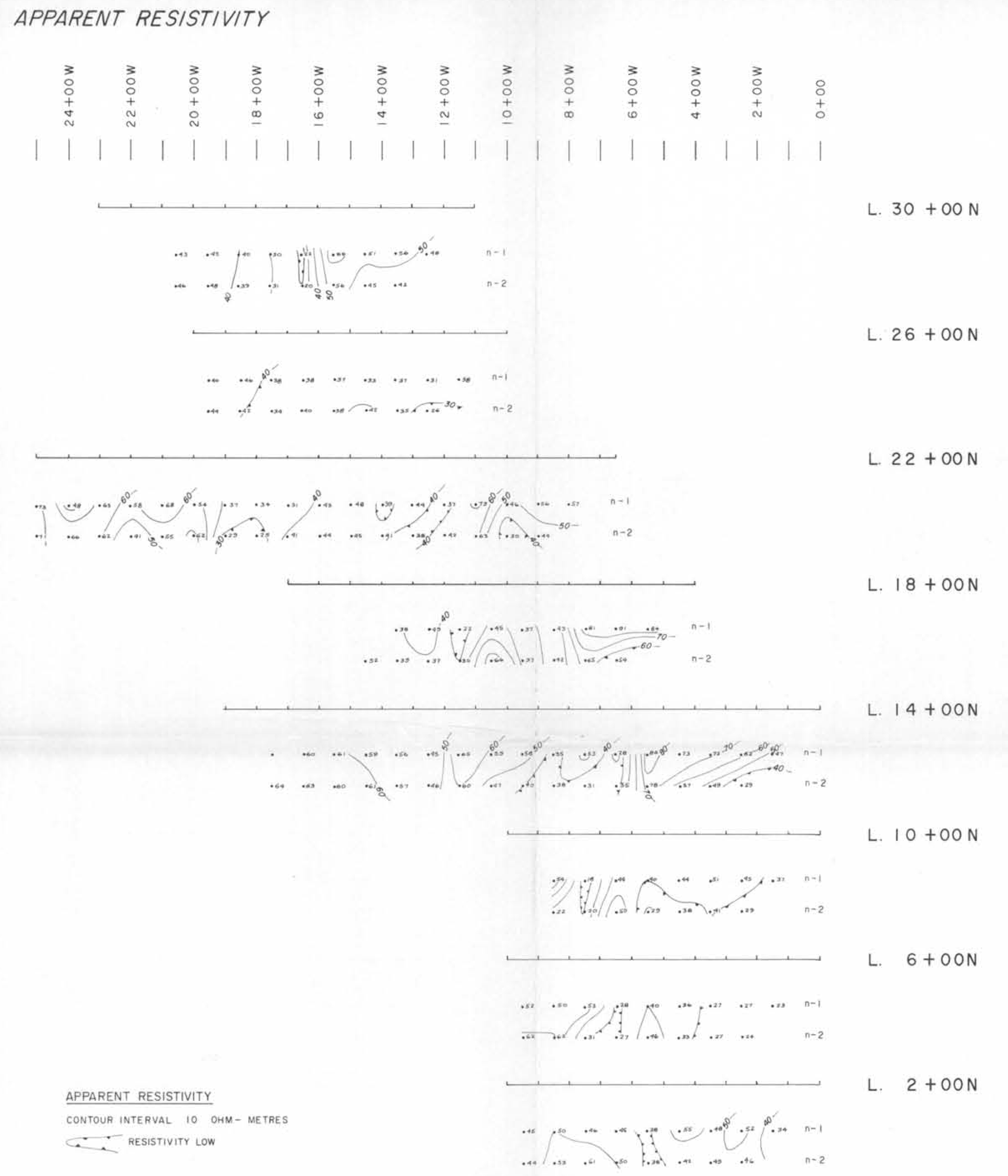
LOCATION MAP

Drawn By	Date	Job No.	Scale	Map No.
K.K	OCT. 1986	86-26	1:8,000,000	1



PINE 6
PINE 5
PINE 7
PINE 4
PINE 1
PINE 3
PINE 2
L30+00N
L22+00N
L18+00N
L14+00N
L10+00N
L6+00N
L2+00N
L0
L4S
BL
NORTH GRID
LAKE GRID
Reade Lake
Lone Pine Hill
Wycliffe
WYCLIFFE REGIONAL PARK
Kimberley 9km
Cranbrook 16km
CRANBROOK AIRPORT
49° 38'
L339
L340
L341
L6623
L8752
L8898
L7327
L7009
L6435
L6198
L2044
L2045
L6164
N
GEOTRONICS SURVEYS LTD.
VICTORIA RESOURCE CORPORATION
PINE CLAIMS
READE LAKE, CRANBROOK AREA, FORT STEELE M.D., B.C.
CLAIM MAP
Drawn By K.K.
Date OCT., 1986
Job No. 86-26
Scale 1:50,000
Map No. 2





INSTRUMENTATION:

RECEIVER: HUNTEC MODEL MK. IV
TRANSMITTER: PHOENIX IPT-1
GENERATOR: PHOENIX MG-2

SURVEY PARAMETERS:

SURVEY MODE: TIME DOMAIN
ARRAY: POLE – DIPOLE
DIPOLE LENGTH: 100 metres

METRES
0 100 200 300 400 500 600

15,382

TO ACCOMPANY GEOPHYSICAL REPORT BY DAVID G. MARK, GEOPHYSICIST.

GEOTRONICS SURVEYS LTD.

VICTORIA RESOURCE CORPORATION

PINE CLAIMS

READE LAKE, CRANBROOK AREA, FORT STEELE M.D., B.C.

NORTH GRID

INDUCED POLARIZATION SURVEY

APPARENT CHARGEABILITY AND RESISTIVITY

PSEUDOSECTIONS

Drawn By:	Date:	Job No.	Scale:	Map No.
A.R.	OCT., 1986	86-26	1:10,000	4