87-8-15518

PACIFIC GEOPHYSICAL LIMITED

REPORT

ON THE

RESISTIVITY AND INDUCED POLARIZATION SURVEY

ON THE

NORSE CLAIM GROUP
KAMLOOPS MINING DIVISION
BRITISH COLUMBIA

FOR

TECK CORPORATION

LATITUDE: 50° 22' N
LONGITUDE: 121° ~~02~~ 025' W

N.T.S. 92-I/6E

OWNER-OPERATOR: TECK CORPORATION

BY

PAUL A. CARTWRIGHT, P. Geoph.
MICHAEL J. CORMIER, B.Sc.

DATED: 10 DECEMBER 1986

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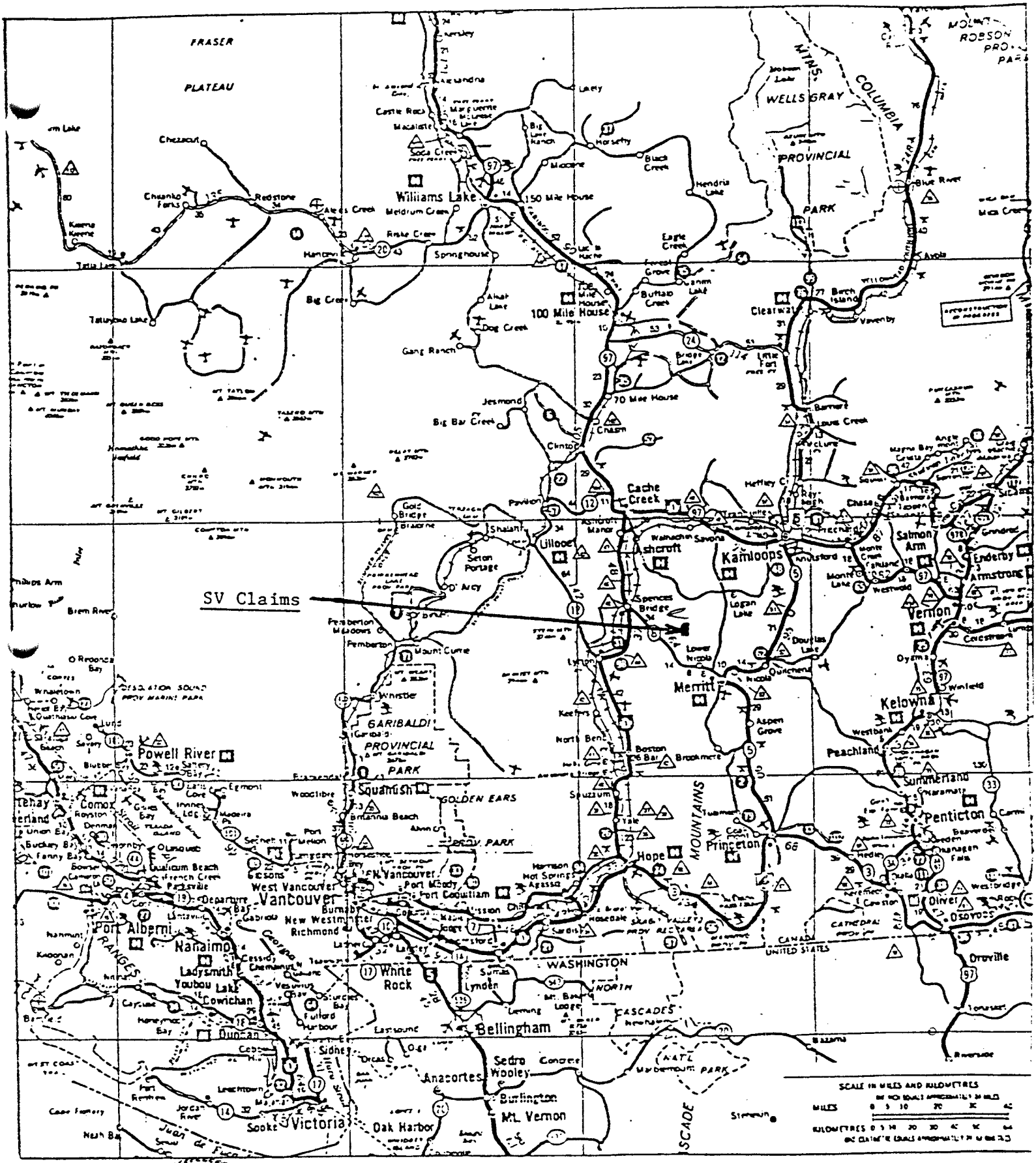
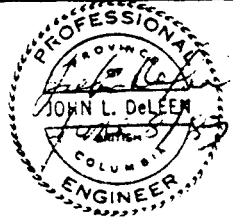
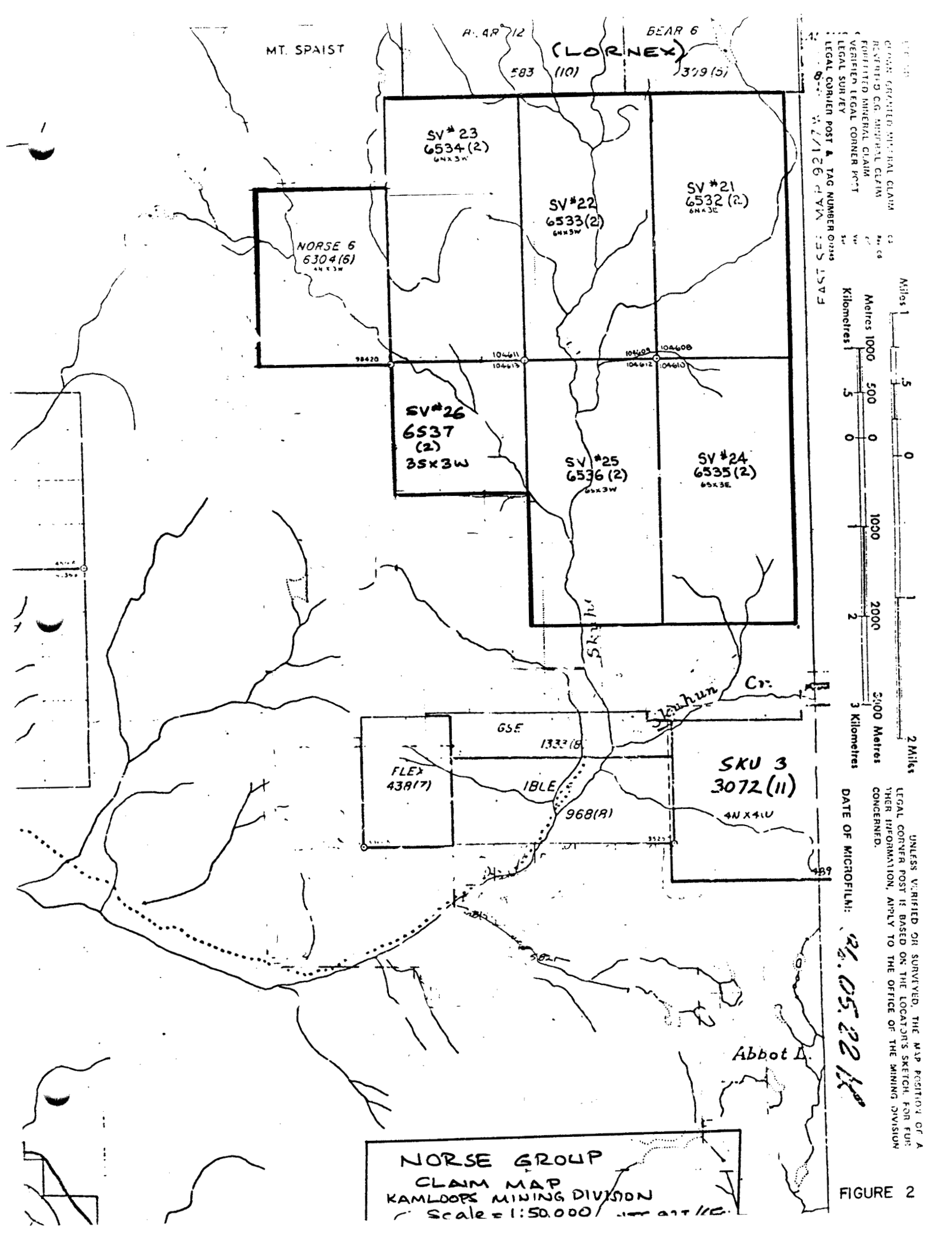




LOCATION OF SV CLAIMS

HIGHLAND VALLEY, B.C.

FIGURE 1



NORSE GROUP
CLAIM MAP
KAMLOOPS MINING DIVISION
Scale = 1:50,000

FIGURE 2

PART A REPORT

1) INTRODUCTION

An Induced Polarization and Resistivity Survey has been completed on the Norse Claim Group, Kamloops Mining Division, at the request of Bill Meyer, Exploration Manager for Teck Corporation.

The property is located approximately 22 km east-southeast of the community of Spences Bridge, B.C. Access is via a system of logging and drill roads off Highway 8 (Merritt-Spences Bridge). See Figure 1.

Previous work on the property has been carried out by several operators and includes geophysical surveys (Magnetic, Electromagnetic, Seismic, IP and Resistivity), geochemical surveys, trenching and drilling (both diamond and percussion).

The objective of the present IP and Resistivity Survey was to locate areas of disseminated sulphide mineralization which could be indicative of a porphry copper deposit.

A Phoenix Model IPV-1 Induced Polarization and Resistivity receiver unit was used, together with a Phoenix Model IPT-1 IP and Resistivity transmitter powered by a 2.0 kw motor-generator. IP effects are recorded as Percent Frequency Effects (PFE) at operating frequencies of 4.0 Hz and 0.25 Hz, while Apparent Resistivity values are normalized in units of ohm-meters. All work employed the dipole-dipole array with a 150 meter electrode separation. Four dipole separations were recorded in every case.

Field work took place during the period October 17, 1986 to November 10, 1986, under the supervision of both Paul A. Cartwright, P. Geoph., and Michael J. Cormier, B.Sc. Their certificates of qualification are included with this report.

2) DESCRIPTION OF CLAIMS

The Norse Claim Group consists of the following mineral claims, which are

also illustrated in Figure 2.

Claim	Units	Record No.	Expiry Date
SV#21	18	6532	27 Feb. 1987
SV#22	18	6533	27 Feb. 1987
SV#23	18	6534	27 Feb. 1987
SV#24	18	6535	27 Feb. 1987
SV#25	18	6536	27 Feb. 1987
SV#26	9	6537	27 Feb. 1987
Norse #6	12	6304	27 June 1987

The claims are held by Teck Corporation under an option agreement from Planet Photon Ventures Ltd.

3) DESCRIPTION OF GEOLOGY

The following geological description has been taken from material provided by the staff of Teck Corporation.

"The Guichon Creek Batholith underlies an area of 400 square miles in the Highland Valley. It is a concordant intrusive and has 10 phases or varieties. The major phases show a nearly concentric arrangement and in general decrease in age inward. The youngest phases, the Bethlehem and Bethsaida, occur in the central portion of the batholith and are the host rock for all of the major ore bodies in the Highland Valley. The central core area, the Bethsaida phase, is quartz-monzonite in composition. The surrounding Bethlehem phase is granodiorite in composition.

Faulting in the Highland Valley has been extensive. However, to date (1983), only a few of the major faults have been mapped. The principle fault is the north-south trending Lornex Fault. This fault has offset, and in turn has been offset, by the east-west trending faults. It is generally believed that the Bethlehem and Bethsaida intrusives and the north-south and east-west faults are the loci for ore deposition in the Highland Valley.

The Lornex Fault which strikes north-south is located in the valley of Skuhost Creek in the center of the claim block."

4) PRESENTATION OF DATA

The dipole-dipole array Induced Polarization and Resistivity results are shown on the following data plots in the manner described in Part B of this report.

Line	Electrode Interval	Dwg. No.
3500 N	150 Meters	IP-5873-1
3250 N	150 Meters	IP-5873-2
3000 N	150 Meters	IP-5873-3
2750 N	150 Meters	IP-5873-4
2500 N	150 Meters	IP-5873-5
2250 N	150 Meters	IP-5873-6
2000 N	150 Meters	IP-5873-7
1750 N	150 Meters	IP-5873-8
1500 N	150 Meters	IP-5873-9
1250 N	150 Meters	IP-5873-10
1000 N	150 Meters	IP-5873-11
750 N	150 Meters	IP-5873-12
500 N	150 Meters	IP-5873-13
250 N	150 Meters	IP-5873-14
000 N	150 Meters	IP-5873-15
750 S	150 Meters	IP-5873-16
1250 S	150 Meters	IP-5873-17

Also enclosed with this report are Dwg. Nos. I.P.P.-B-4150A and -4150B, 1:5,000 scale contoured plan maps of the Fraser Filtered PFE and Apparent Resistivity results respectively. Anomalous zones, as interpreted from inspection of the pseudosections, are outlined on Dwg. No. I.P.P.-B-4150A.

It should be noted that the station positions on the grid lines were determined using distances measured along the slope. The above mentioned plan maps, however, represent a true horizontal plane, using inclinometer data gathered during the survey.

All of the topographical and claim information enclosed with this report is derived from material furnished by Teck Corporation.

Since the Induced Polarization measurement is essentially an averaging process, as are all the potential methods, it is frequently difficult to exactly pinpoint the source of an anomaly. Certainly no anomaly can be located with more accuracy than the electrode interval length; i.e., when using a 150 meter electrode interval, the position of a narrow sulphide body can only be determined to lie between two stations 150 meters apart. In order to definitely locate, and fully evaluate a narrow, shallow source, it is necessary to use shorter electrode intervals. In order to locate sources at some depth, larger electrode intervals must be used with a corresponding increase in the uncertainties of location.

5) DISCUSSION OF RESULTS

The present dipole-dipole IP and Resistivity survey employed an electrode spacing of 150 meters and recorded data from 1 to 4 dipole separations, resulting in a depth of penetration of approximately 300 meters. These specifications were deemed necessary in order to penetrate large thicknesses of overburden known to exist in the area. While the depth to bedrock is often great in the central and north-central grid areas, much less cover is present near the edges of the grid where a number of bedrock outcrops are evident on the eastern and western ends of some of the grid lines.

As previously mentioned, the anomalous zones have been marked on Dwg. No. I.P.P.-B-4150A, a plan map of the PFE data after being subjected to a Fraser Filter. This filtering process is a type of moving average which can have the effect of enhancing near surface anomalies while diluting those recorded at the larger dipole separations. Therefore, the anomalous zones indicated on the plan map are based not only on the filtered values, but also include interpretation of the PFE pseudo-sections (Dwg. Nos. IP-5873-1 to -17).

Each of the anomalous zones illustrated on Dwg. No. I.P.P.-B-4150A are discussed below.

Zone A

This anomaly lies at the western edge of the property and has been classified as "probable". It is typified by moderate magnitude IP effects (P.F.E.) accompanied by higher than background apparent resistivity data. Because of its proximity to the grid boundary, not enough information has been gathered to fully evaluate Zone A. It is even possible that the source of the anomaly may lie outside the western edge of the grid.

Zone B

This zone is the strongest and most well defined anomaly on the grid. It can be detected as far north as the western end of Line 2500N and as far south as Line 0 where it is open to the southeast. The zone is best defined in the vicinity of Station 2100W on Line 250N, where depth to the top of the causitive source is estimated to be within one dipole separation, i.e. 150 meters. This anomaly is also characterized by moderate magnitude PFE values. The accompanying apparent resistivity values are often relatively high in magnitude compared to the surrounding values. It is felt that this is typical of resistivity values associated with bedrock as opposed to those recorded within overburden.

In general terms, it may be stated that for a given % content of polarizable material, a resistive rock type will give rise to a higher magnitude PFE measurement than will a more conductive rock type. This involves the relative permeabilities of the samples in question and the blockage of electrolyte conduits by the polarizable material. The reader is referred to Part B of this report for more information with regard to the IP effect.

In this particular situation, anomalous PFE values are associated with apparent resistivity measurements felt to be characteristic of resistive bedrock. Therefore, while the increase in IP effect is encouraging, the cause may not be due solely to an increase in the content of polarizable material present. The thinning conductive cover, combined with the averaging effect intrinsic to the IP technique,

may be a contributing factor.

Zone C

Zone C is a large scale feature which is detected on all of the lines surveyed. From Line 0 to Line 1000N, the anomaly appears to consist of a single source which is then interpreted to divide into two separate branches in the area between Line 750N and Line 1250N.

In general, weakly anomalous IP effects constitute Zone C, although somewhat higher than usual PFE values are recorded sporadically along the length of the more eastern branch as well as on Line 750N and Line 1000N. Higher than background apparent resistivity values almost always coincide with the positions of the elevated IP effects.

Depth to bedrock is thought to be on the order of 200 meters in places overlying Zone C. Diamond drill hole No. DDH-2, previously drilled near Station 750W on Line 2500N, was terminated at 250 feet in overburden without encountering basement rocks, while diamond drill hole No. DDH-6 was abandoned at 480 feet still in overburden. This hole was located near Station 700W on Line 1000N.

Zone C1

Zone C1 is thought to be a southern extension of Zone C. It may be noted that the eastern edge of this zone is coincident with trenching carried out during previous work on the property.

Zone D

Located near the eastern end of Line 1250S, Zone D is marked by somewhat anomalous PFE values, coupled with high apparent resistivities. Again, previous trenching coincides with the anomaly. Zone D remains open to the south.

6) SUMMARY AND RECOMMENDATIONS

An Induced Polarization and Resistivity survey has been completed on the Norse Claim Group on behalf of Teck Corporation.

Several zones of anomalous IP effects (PFEs), accompanied by relatively high magnitude Apparent Resistivity values, have been outlined (Dwg. No. I.P.P.-B-4150A). While possibly indicative of the presence of interesting metallic mineralization, it is felt that these moderately anomalous areas should be viewed with a degree of caution. The low magnitude trends detected by the present survey could be attributable to an increase in the resistivity of the background rock rather than to an increase in the amount of polarizable material present.

All available data, both geophysical and otherwise, should be carefully evaluated before proceeding with further work. If a decision is made to carry out a drill program on the property, it is felt that Zone B, in the vicinity of Station 2100W on Line 250N, would be the most favourable area to investigate.

PACIFIC GEOPHYSICAL LTD.

Paul A. Cartwright

Paul A. Cartwright, P. Geoph.

Michael J. Cormier

Michael J. Cormier, B.Sc.

Dated: 10 December 1986.

7) ASSESSMENT DETAILS

Property: Norse

Mining Division: Kamloops

Sponsor: Teck Corporation

Province: British Columbia

Location: 22 km ESE of Spence's Bridge, B.C.

Type of Survey: Induced Polarization and Resistivity

Operating Days: 24.0

Date Started: October 17, 1986

Equivalent 8 hr. Man Days: 169.0

Date Finished: November 10, 1986

Consulting Man. Days: 10.0

Number of Stations: 365

Drafting Man Days: 10.0

Number of Readings: 2,126

Total Man Days: 189.0

Km of Line Surveyed: 52.5

Consultants:

Paul A. Cartwright, 4238 West 11th Ave., Vancouver, B.C.
Michael J. Cormier, 2242 Stephens St., Vancouver, B.C.

Field Technicians:

R. Wartnow, 4976 2nd Ave., Tsawwassen, B.C.
M. Makulowich, 669 Valdes Drive, Kamloops, B.C.
R. Bulger, 224 W. 17th, North Vancouver, B.C.
G. Mantie, 214 Strom Ave., Kamloops, B.C.
R. Harrison, P.O. Box 2497, Merritt, B.C.

Draughtsmen:

P.A. Cartwright, 4238 West 11th Ave., Vancouver, B.C.
M.J. Cormier, 2422 Stephens St., Vancouver, B.C.

PACIFIC GEOPHYSICAL LIMITED

Paul A. Cartwright

Paul A. Cartwright, P. Geoph.

Dated: 10 December 1986

8) STATEMENT OF COSTS

TECK CORPORATION

Induced Polarization and Resistivity Survey - Norse Claim Group, Kamloops M.D., British Columbia

Period:	October 17 - 20, 1986
Crew:	P. Cartwright, R. Wartnow, R. Bulger, R. Harrison
Period:	October 21, 1986
Crew:	P. Cartwright, R. Wartnow, R. Bulger, M. Makulowich
Period:	October 22 - 27, 1986
Crew:	P. Cartwright, M. Cormier, R. Bulger, M. Makulowich, G. Mantie
Period:	October 28 - November 5, 1986
Crew:	M. Cormier, M. Makulowich, R. Bulger, G. Mantie
Period:	November 6 - 10, 1986
Crew:	P. Cartwright, M. Cormier, M. Makulowich, R. Bulger, G. Mantie

24 Operating Days @ $1,100.00	$ 26,400.00
1 Bad Weather Day @ $ 700.00	700.00
Mobilization-Demobilization	1,200.00
Interpretive Report (48 km @ $60.00)	2,880.00
	$ 31,180.00

PACIFIC GEOPHYSICAL LIMITED

Paul A. Cartwright

Paul A. Cartwright, P. Geoph.

Dated: 10 December 1986

CERTIFICATE

I, Paul A. Cartwright, of the City of Vancouver, Province of British Columbia, do hereby certify:

1. I am a geophysicist residing at 4238 W. 11th Avenue, Vancouver, B.C.

2. I am a graduate of the University of British Columbia, with a B.Sc. Degree (1970).

3. I am a member of the Society of Exploration Geophysicists, the European Association of Exploration Geophysicists and the Canadian Society of Exploration Geophysicists.

4. I have been practising my profession for 16 years.

5. I am a Professional Geophysicist licensed in the Province of Alberta.

6. I have no direct or indirect interest, nor do I expect to receive any interest, directly or indirectly, in the property or securities of Teck Corporation, Planet Photon Ventures Ltd., or any affiliates.

7. The statements made in this report are based on a study of published geological literature and unpublished reports.

8. Permission is granted to use in whole or in part for assessment and qualification requirements but not for advertising purposes.

DATED AT VANCOUVER, BRITISH COLUMBIA this 10th day of December 1986.

Paul A. Cartwright, P.Geoph.

CERTIFICATE

I, Michael J. Cormier, of the City of Vancouver, Province of British Columbia, do hereby certify that:

1. I am a geophysicist residing at 2242 Stephens Street, Vancouver, British Columbia.

2. I am a graduate of McGill University, Montreal, Quebec with a B. Sc. Degree (1981).

3. I have been practising my profession for 5 years.

4. I have no direct or indirect interest, nor do I expect to receive any interest, directly or indirectly, in the property or securities of Teck Corporation, Planet Photon Ventures Ltd.

5. The statements made in this report are based on a study of published geological literature and unpublished private reports.

6. Permission is granted to use in whole or in part for assessment and qualification requirements but not for advertising purposes.

DATED AT VANCOUVER, BRITISH COLUMBIA this 10th day of December, 1986.

Michael J. Cormier

Michael J. Cormier, B.Sc.

PART B

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

Induced Polarization as a geophysical measurement refers to the blocking action or polarization of metallic or electronic conductors in a medium of ionic solution conduction.

This electro-chemical phenomenon occurs wherever electrical current is passed through an area which contains metallic minerals such as base metal sulphides. Normally, when current is passed through the ground, as in resistivity measurements, all of the conduction takes place through ions present in the water content of the rock, or soil, i.e., by ionic conduction. This is because almost all minerals have a much higher specific resistivity than ground water. The group of minerals commonly described as "metallic", however, have specific resistivities much lower than ground waters. The induced polarization effect takes place at those interfaces where the mode of conduction changes from ionic in the solutions filling the interstices of the rock to electronic in the metallic minerals present in the rock.

The blocking action or induced polarization mentioned above, which depends upon the chemical energies necessary to allow the ions to give up or receive electrons from the metallic

surface, increases with the time that a d.c. current is allowed to flow through the rock; i.e., as ions pile up against the metallic interface the resistance to current flow increases. Eventually, there is enough polarization in the form of excess ions at the interfaces, to appreciably reduce the amount of current flow through the metallic particle. This polarization takes place at each of the infinite number of solution-metal interfaces in a mineralized rock.

When the d.c. voltage used to create this d.c. current flow is cut off, the Coulomb forces between the charged ions forming the polarization cause them to return to their normal position. This movement of charge creates a small current flow which can be measured on the surface of the ground as a decaying potential difference.

From an alternate viewpoint it can be seen that if the direction of the current through the system is reversed repeatedly before the polarization occurs, the effective resistivity of the system as a whole will change as the frequency of the switching is changed. This is a consequence of the fact that the amount of current flowing through each metallic interface depends upon the length of time that current has been passing through it in one direction.

The values of the per cent frequency effect or F.E. are a measurement of the polarization in the rock mass. However, since the measurement of the degree of polarization is related to the apparent resistivity of the rock mass, it is found that the metal factor values or M.F. can be useful values

determining the amount of polarization present in the rock mass. The MF values are obtained by normalizing the F.E. values for varying resistivities.

The Induced Polarization measurement is perhaps the most powerful geophysical method for the direct detection of metallic sulphide mineralization, even when this mineralization is of very low concentration. The lower limit of volume per cent sulphide necessary to produce a recognizable IP anomaly will vary with the geometry and geologic environment of the source, and the method of executing the survey. However, sulphide mineralization of less than one per cent by volume has been detected by the IP method under proper geological conditions.

The greatest application of the IP method has been in the search for disseminated metallic sulphides of less than 20% by volume. However, it has also been used successfully in the search for massive sulphides in situations where, due to source geometry, depth of source, or low resistivity of surface layer, the EM method cannot be successfully applied. The ability to differentiate ionic conductors, such as water-filled shear zones, makes the IP method a useful tool in checking EM anomalies which are suspected of being due to these causes.

In normal field applications the IP method does not differentiate between the economically important metallic minerals such as chalcopyrite, chalcocite, molybdenite, galena, etc., and the other metallic minerals such as pyrite. The Induced Polarization effect is due to the total of all electronic conducting minerals in the rock mass. Other electronic conducting

materials which can produce an IP response are magnetite, pyrolusite, graphite, and some forms of hematite.

In the field procedure, measurements on the surface are made in a way that allows 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 in distance (X) apart. The potentials are measured at two points (X) feet apart, in line with the current electrodes is an integer number (n) times the basic distance (X).

The measurements are made along a surveyed line, with a constant distance (nX) between the nearest current and potential electrodes. In most surveys, several traverses are made with various values of (n); i.e., (n) = 1, 2, 3, 4, etc. The kind of survey required (detailed or reconnaissance) decides the number of values of (n) used.

In plotting the results, the values of apparent resistivity, apparent per cent frequency effect, and the apparent metal factor measured for each set of electrode positions are plotted at the intersection of grid lines, one from the center point of the current electrodes and the other from the center point of the potential electrodes. (See Figure A) The resistivity values are plotted at the top of the data profile, above the metal factor values. On a third line, below the metal factor values, are plotted the values of the percent frequency effect. The lateral displacement of a given value is determined by the location along the survey line of the center

point between the current and potential electrodes. The distance of the value from the line is determined by the distance (nX) between the current and potential electrodes when the measurement was made.

The separation between sender and receiver electrodes is only one factor which determines the depth to which the ground is being sampled in any particular measurement. The plots then, when contoured, are not section maps of the electrical properties of the ground under the survey line. The interpretation of the results from any given survey must be carried out using the combined experience gained from field results, model study results and the theoretical investigations. The position of the electrodes when anomalous values are measured is important in the interpretation.

In the field procedure, the interval over which the potential differences are measured is the same as the interval over which the electrodes are moved after a series of potential readings has been made. One of the advantages of the Induced Polarization method is that the same equipment can be used for both detailed and reconnaissance surveys merely by changing the distance (X) over which the electrodes are moved each time. In the past, intervals have been used ranging from 25 feet to 2000 feet for (X). In each case, the decision as to the distance (X) and the values of (n) to be used is largely determined by the expected size of the mineral deposit being sought, the size of the expected anomaly and the speed with which it is desired to progress.

The diagram in Figure A demonstrates the method used in plotting the results. Each value of the apparent resistivity, apparent metal factor, and apparent per cent frequency effect is plotted and identified by the position of the four electrodes when the measurement was made. It can be seen that the values measured for the larger values of (n) are plotted farther from the line indicating that the thickness of the layer of the earth that is being tested is greater than for the smaller values of (n); i.e., the depth of the measurement is increased.

The IP measurement is basically obtained by measuring the difference in potential or voltage (Δ V) obtained at two operating frequencies. The voltage is the product of the current through the ground and the apparent resistivity of the ground. Therefore, in field situations where the current is very low due to poor electrode contact, or the apparent resistivity is very low, or a combination of the two effects; the value of (Δ V) the change is potential will be too small to be measurable. The symbol "TL" on the data plots indicates this situation.

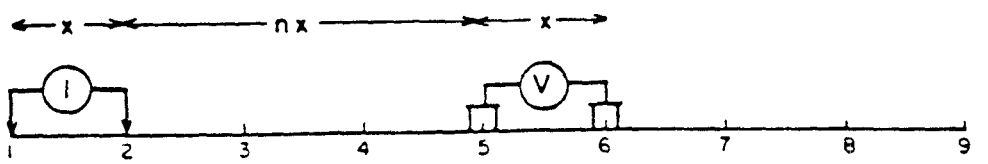
In some situations spurious noise, either man-made or natural, will render it impossible to obtain a reading. The symbol "N" on the data plots indicates a station at which it is too noisy to record a reading. If a reading can be obtained, but for reasons of noise there is some doubt as to its accuracy, the reading is bracketed in the data plot ( ).

In certain situations negative values of Apparent Frequency Effect are recorded. This may be due to the geologic

environment or spurious electrical effects. The actual negative frequency effect value recorded is indicated on the data plot; however, the symbol "NEG" is indicated for the corresponding value of Apparent Metal Factor. In contouring negative values the contour lines are indicated to the nearest positive value in the immediate vicinity of the negative value.

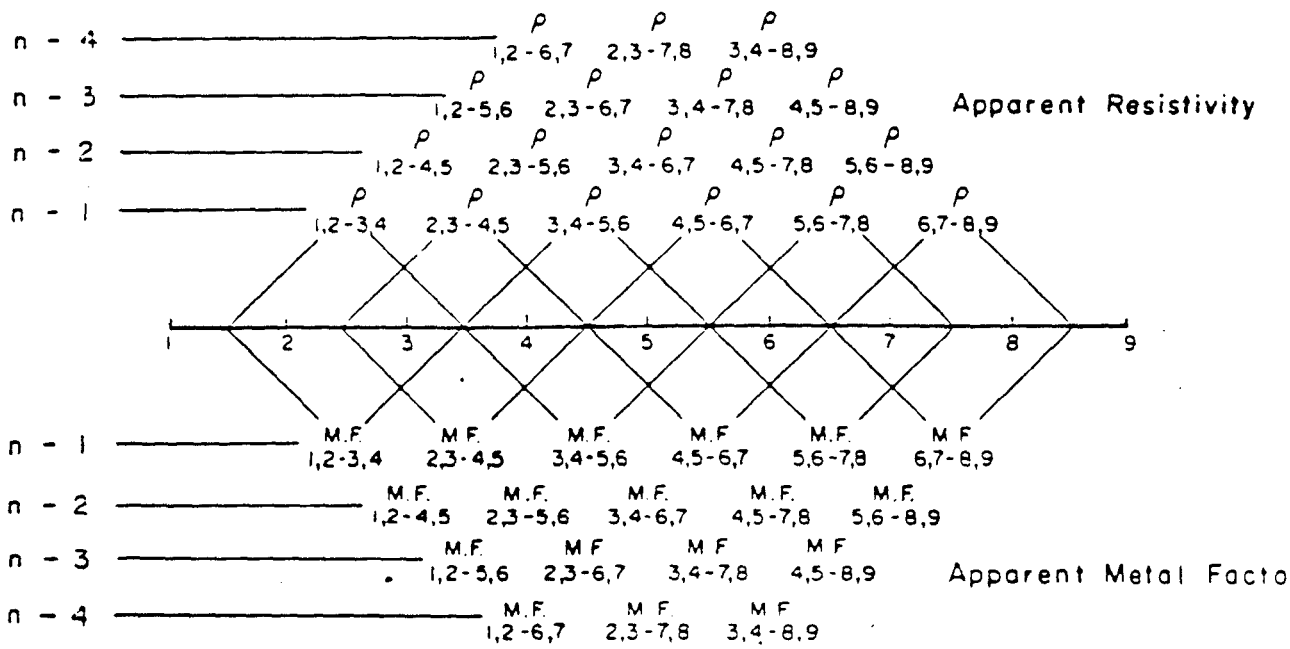
The symbol "NR" indicates that for some reason the operator did not attempt to record a reading, although normal survey procedures would suggest that one was required. This may be due to inaccessible topography or other similar reasons. Any symbol other than those discussed above is unique to a particular situation and is described within the body of the report.

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



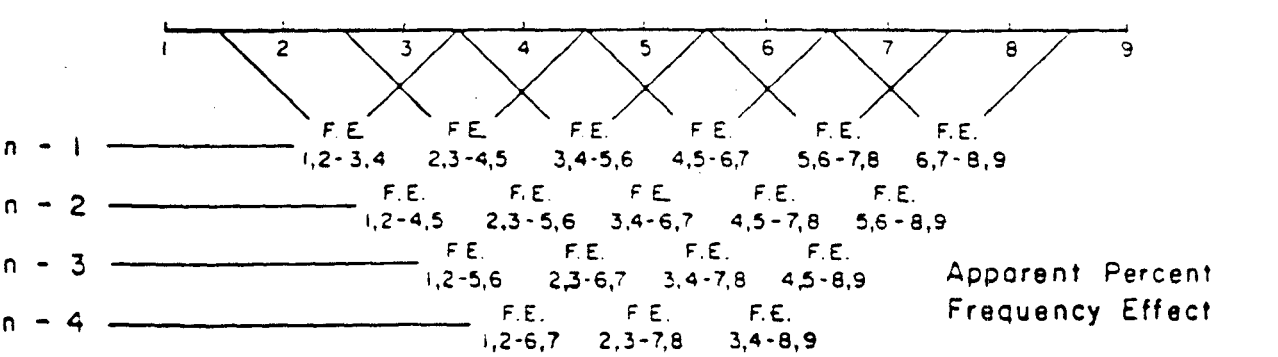
Stations on line

x = Electrode spread length
n = Electrode separation



Apparent Resistivity

Apparent Metal Factor



Apparent Percent Frequency Effect

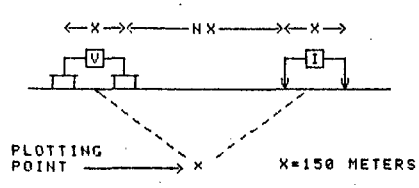
Fig. A

TECK CORPORATION

NORSE CLAIM GROUP

KAMLOOPS M.D., B.C.

LINE NO -3500N



FREQUENCY (HERTZ)
0.25;4.0

NOTE- CONTOURS AT LOGARITHMIC INTERVALS. 1,-1.5 -2,-3,-5,-7.5,-10 PLUS EACH 0.25 FROM 0.5 TO 2.0

DWG. NO.-I.P.-5873-1

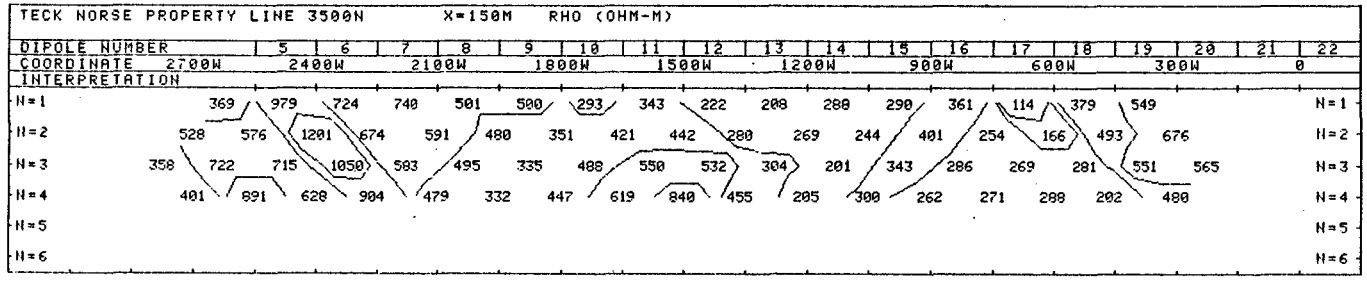
DATE SURVEYED: OCT-NOV/86

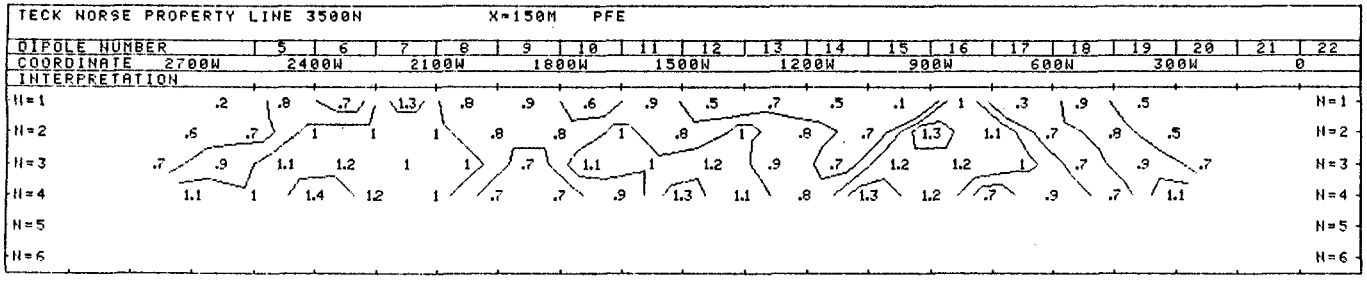
APPROVED MJC

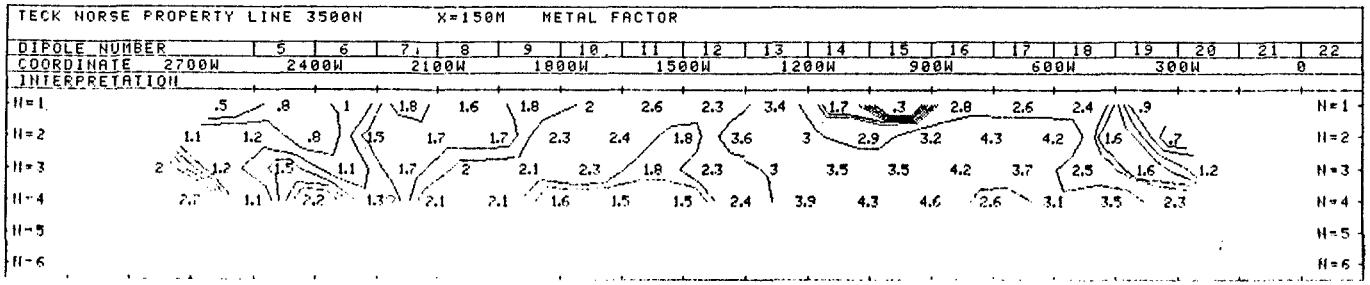
DATE Nov. 27/86

PACIFIC GEOPHYSICAL LTD.

INDUCED POLARIZATION AND RESISTIVITY SURVEY





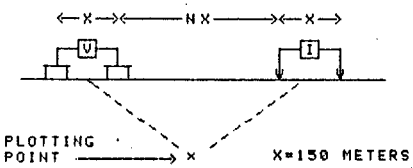


TECK CORPORATION

NORSE CLAIM GROUP

KAMLOOPS M.D., B.C.

LINE NO -3250N



FREQUENCY (HERTZ)
0.25;4.0

NOTE- CONTOURS AT LOGARITHMIC INTERVALS. 1,-1.5 -2,-3,-5,-7.5,-10 PLUS EACH 0.25 FROM 0.5 TO 2.0

DWG. NO.-I.P.-5873-2

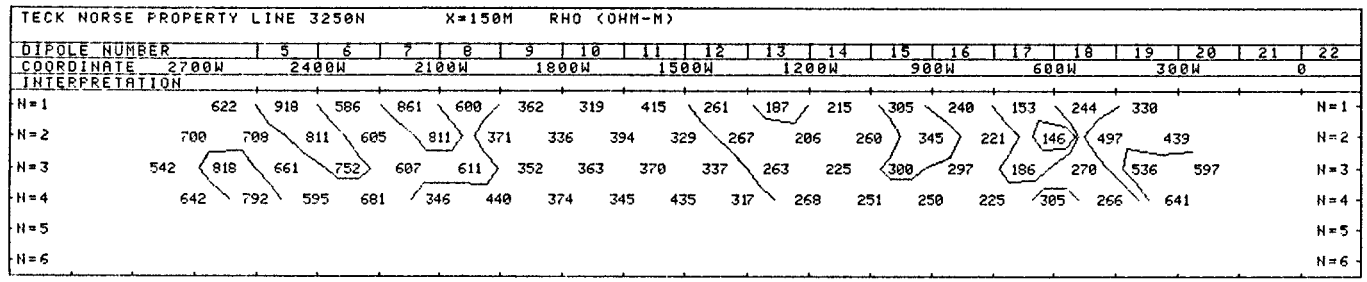
DATE SURVEYED: OCT-NOV/86

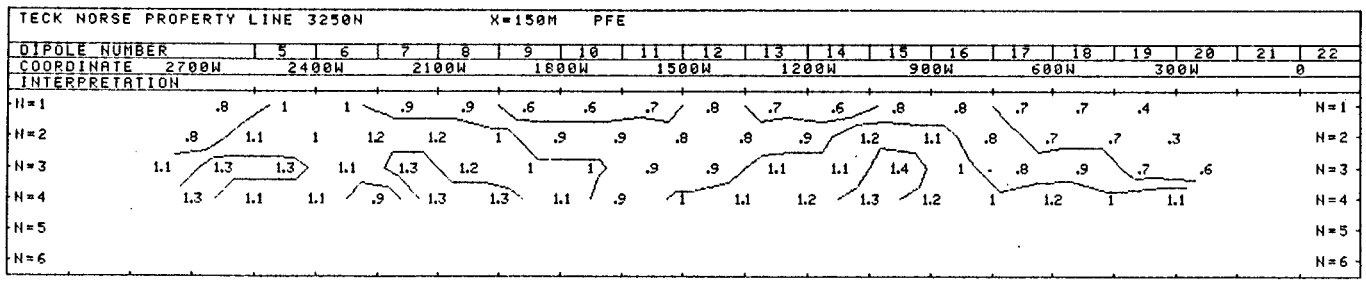
APPROVED MJC

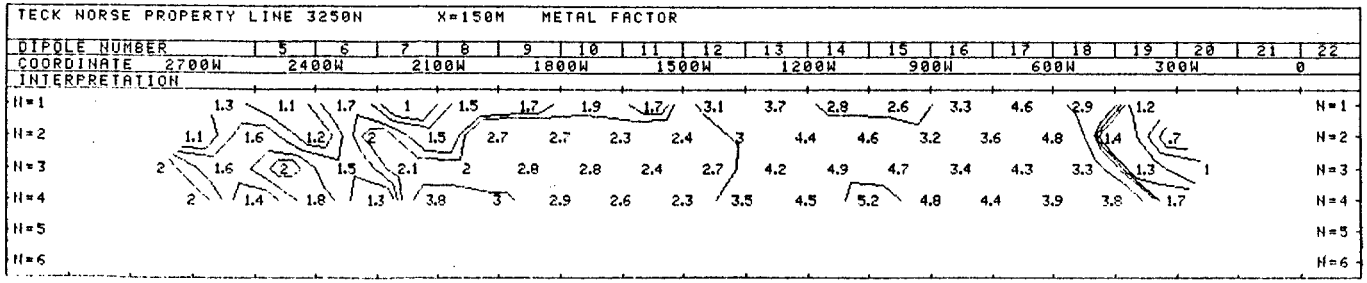
DATE Nov. 27/86

PACIFIC GEOPHYSICAL LTD.

INDUCED POLARIZATION AND RESISTIVITY SURVEY





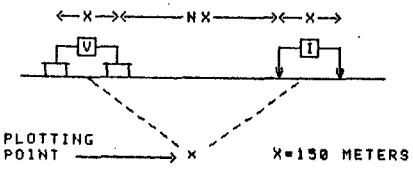


TECK CORPORATION

NORSE CLAIM GROUP

KAMLOOPS M.D., B.C.

LINE NO -3000N



FREQUENCY (HERTZ)
0.25/4.0

NOTE- CONTOURS AT LOGARITHMIC INTERVALS. 1,-1.5 -2,-3,-5,-7.5,-10 PLUS EACH 0.25 FROM 0.5 TO 2.0

DWG. NO.-I.P.-5873-3

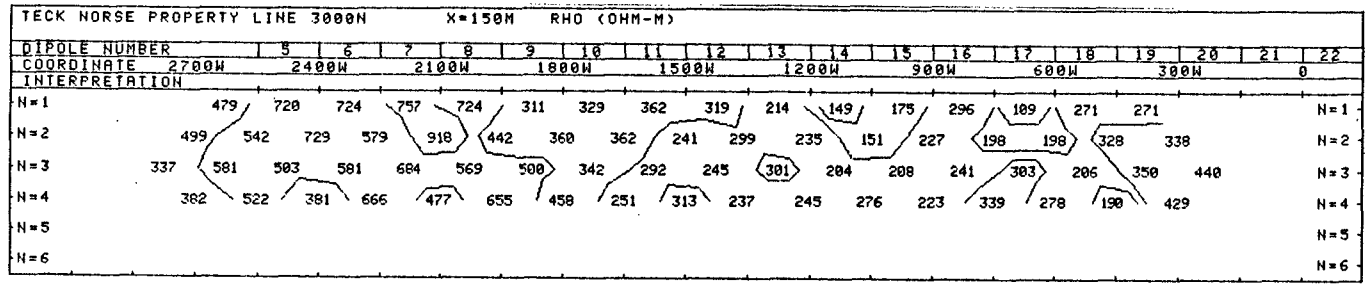
DATE SURVEYED: OCT-NOV/86

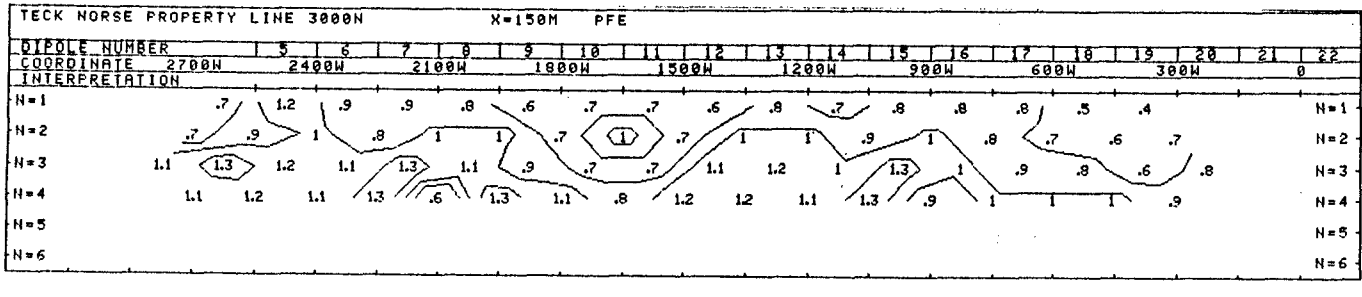
APPROVED MJC

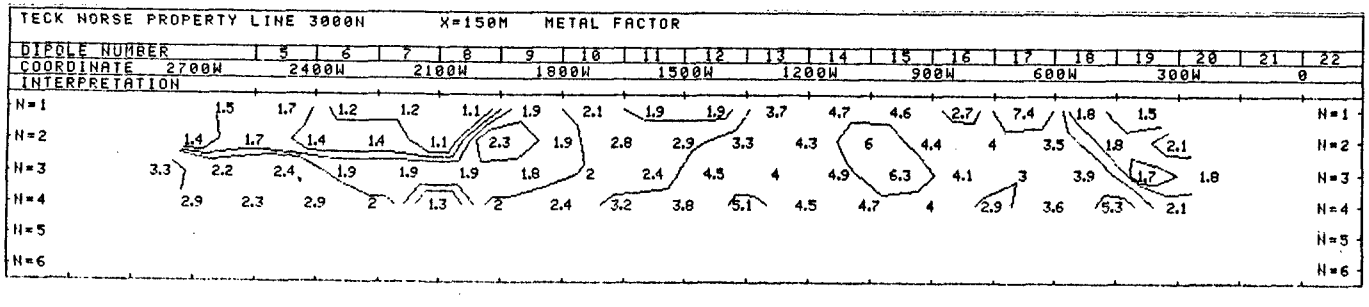
DATE Nov. 27/86

PACIFIC GEOPHYSICAL LTD.

INDUCED POLARIZATION AND RESISTIVITY SURVEY





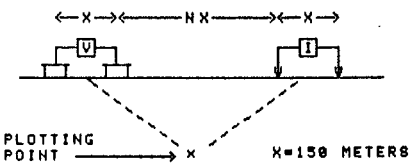


TECK CORPORATION

NORSE CLAIM GROUP

KAMLOOPS M.D./B.C.

LINE NO.-2750N



FREQUENCY (HERTZ)
0.25/4.0

NOTE- CONTOURS AT LOGARITHMIC INTERVALS. 1,-1.5 -2,-3,-5,-7.5,-10 PLUS EACH 0.25 FROM 0.5 TO 2.0

DWG. NO.-I.P.-5873-4

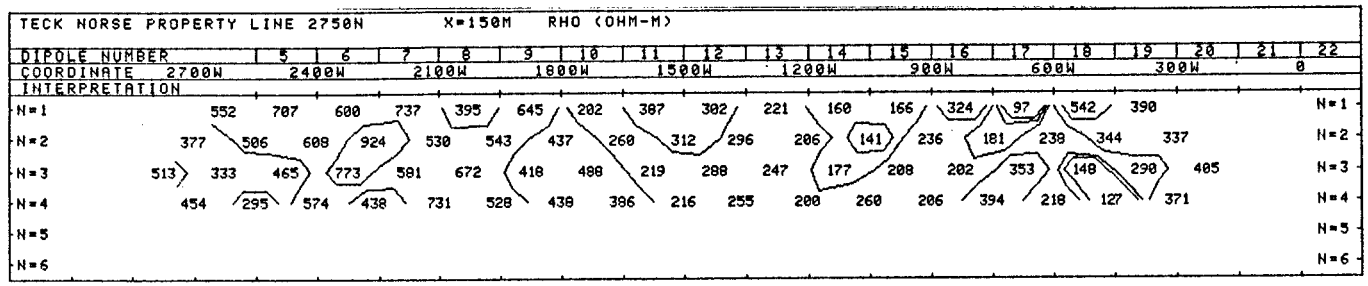
DATE SURVEYED-OCT-NOV/86

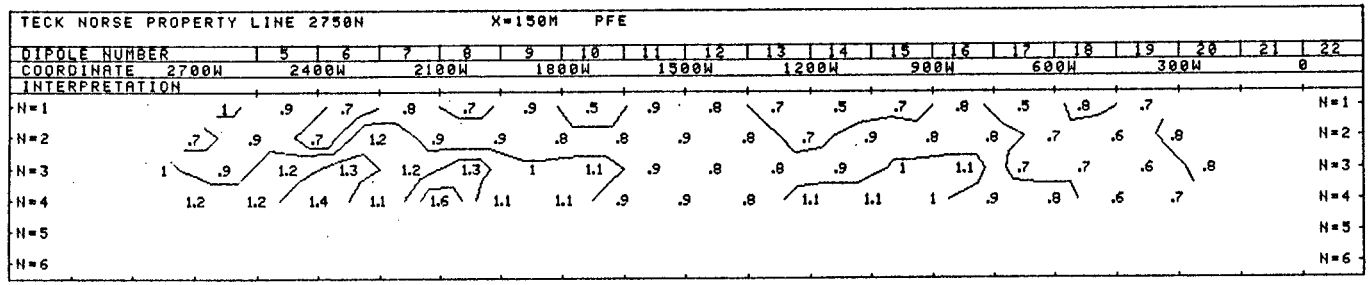
APPROVED MJC

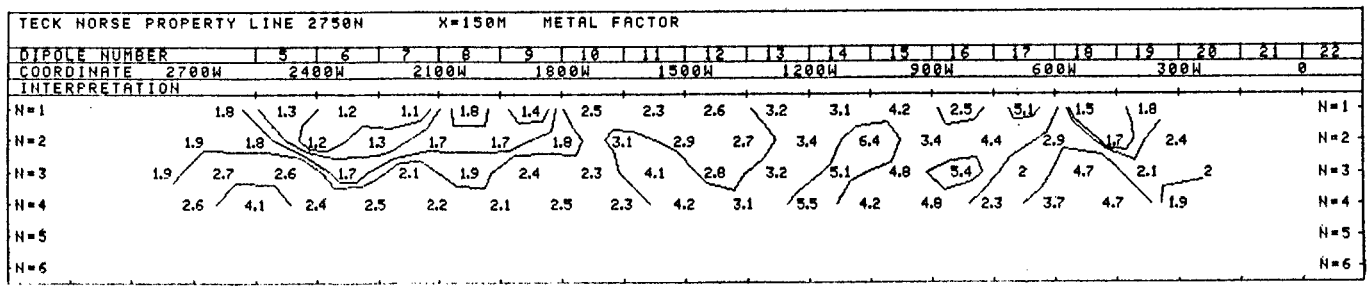
DATE Nov. 27/86

PACIFIC GEOPHYSICAL LTD.

INDUCED POLARIZATION AND RESISTIVITY SURVEY





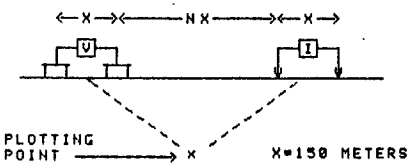


TECK CORPORATION

NORSE CLAIM GROUP

KAMLOOPS M.D./B.C.

LINE NO.-2500N



FREQUENCY (HERTZ)
0.25)4.0

NOTE- CONTOURS AT LOGARITHMIC INTERVALS. 1,-1.5 -2,-3,-5,-7.5,-10 PLUS EACH 0.25 FROM 0.5 TO 2.0

DWG. NO.-I.P.-5873-5

DATE SURVEYED: OCT-NOV/86

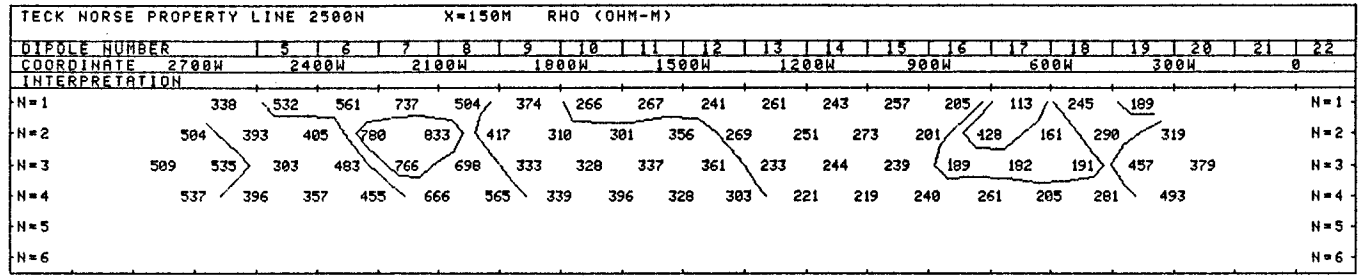
APPROVED MJC

DATE Nov. 27/86

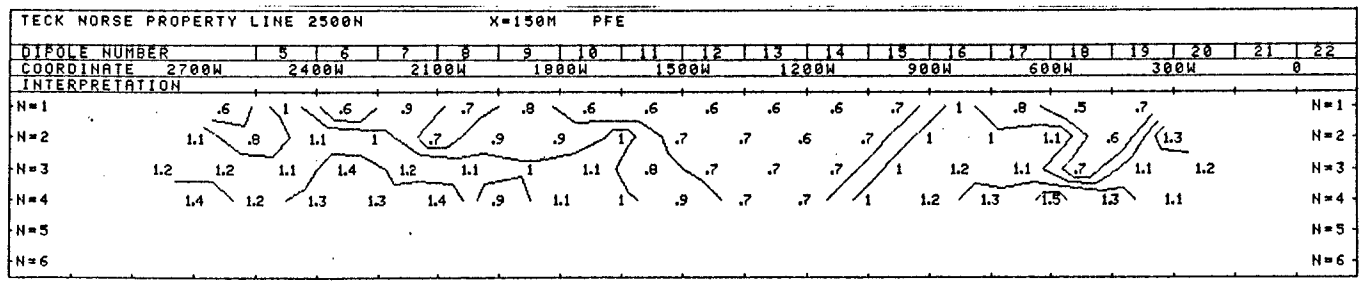
PACIFIC GEOPHYSICAL LTD.

INDUCED POLARIZATION AND RESISTIVITY SURVEY

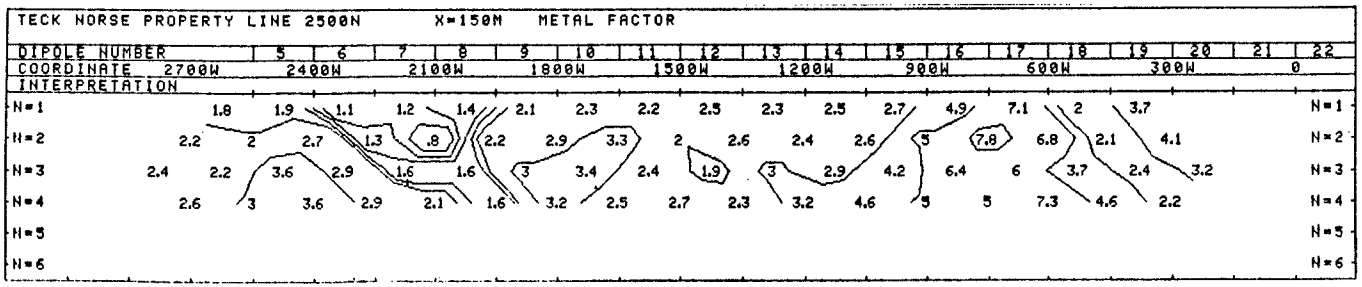
TECK NORSE PROPERTY LINE 2500N X=150M RHO (OHM-M)



TECK NORSE PROPERTY LINE 2500N X=150M PFE



TECK NORSE PROPERTY LINE 2500N X=150M METAL FACTOR

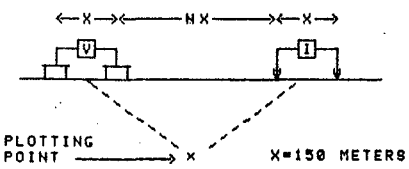


TECK CORPORATION

NORSE CLAIM GROUP

KAMLOOPS M.D./B.C.

LINE NO.-2250N



FREQUENCY (HERTZ)
0.25/4.0

NOTE- CONTOURS AT LOGARITHMIC INTERVALS. 1,-1.5 -2,-3,-5,-7.5,-10 PLUS EACH 0.25 FROM 0.5 TO 2.0

DWG. NO.-I.P.-5873-6

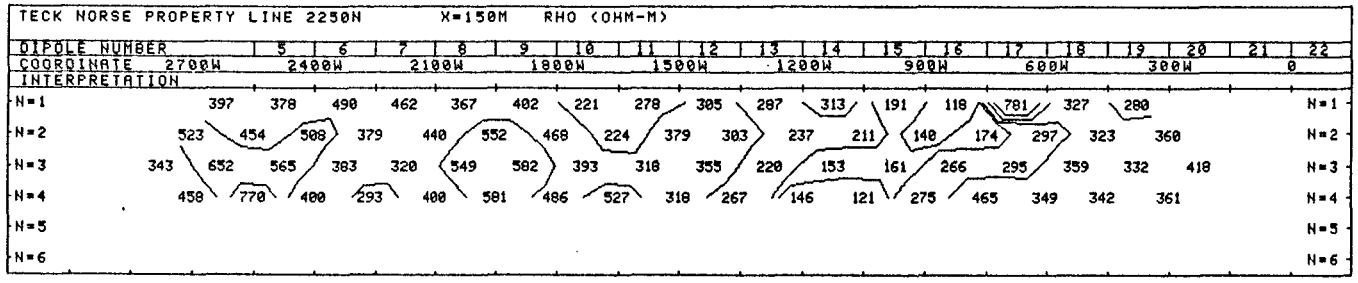
DATE SURVEYED OCT-NOV/86

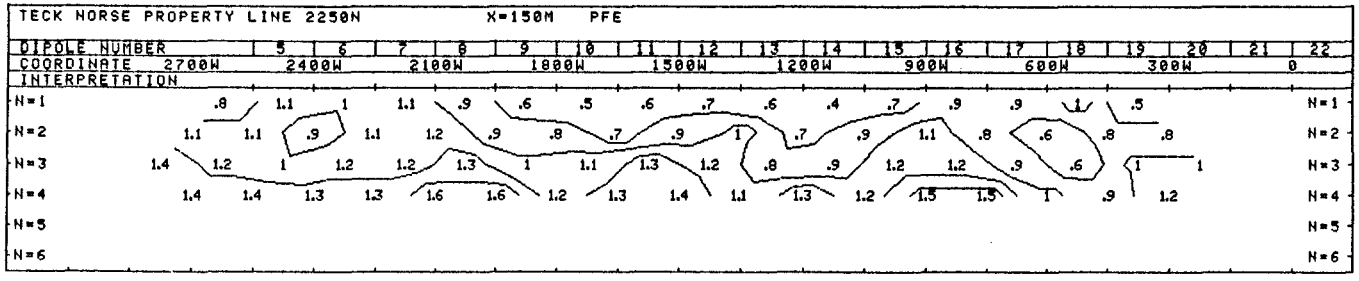
APPROVED MJC

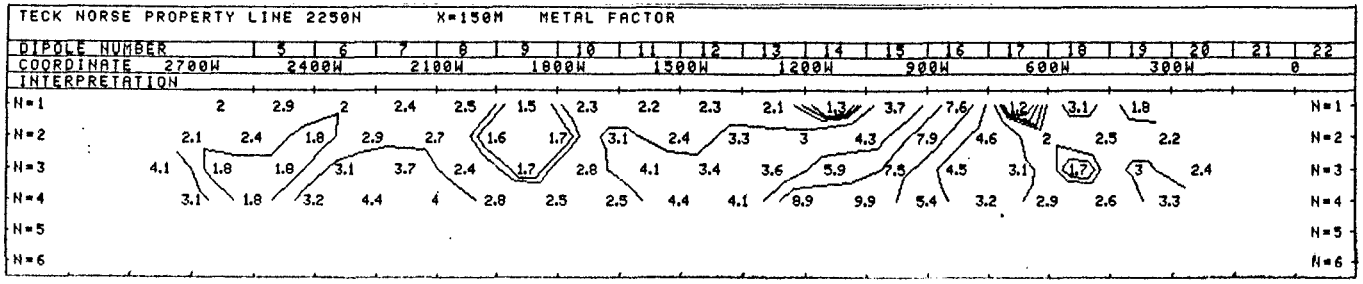
DATE Nov. 27/86

PACIFIC GEOPHYSICAL LTD.

INDUCED POLARIZATION AND RESISTIVITY SURVEY





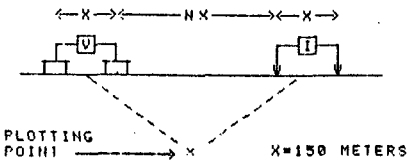


TECK CORPORATION

NORSE CLAIM GROUP

KAMLOOPS M.D., B.C.

LINE NO -2000N



FREQUENCY (HERTZ)
0.25:4.0

NOTE- CONTOURS AT LOGARITHMIC INTERVALS. 1,-1.5 -2,-3,-5,-7.5,-10 PLUS EACH 0.25 FROM 0.5 TO 2.0

DWG. NO.-I.P.-5873-7

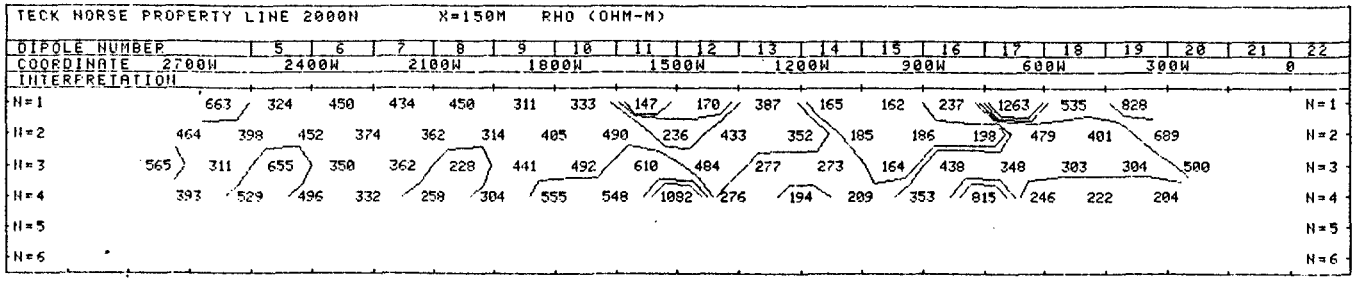
DATE SURVEYED OCT-NOV. 86

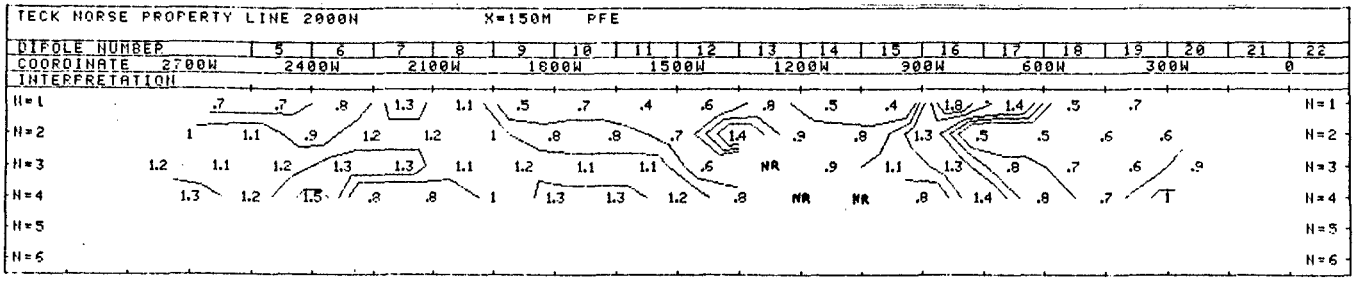
APPROVED MJC

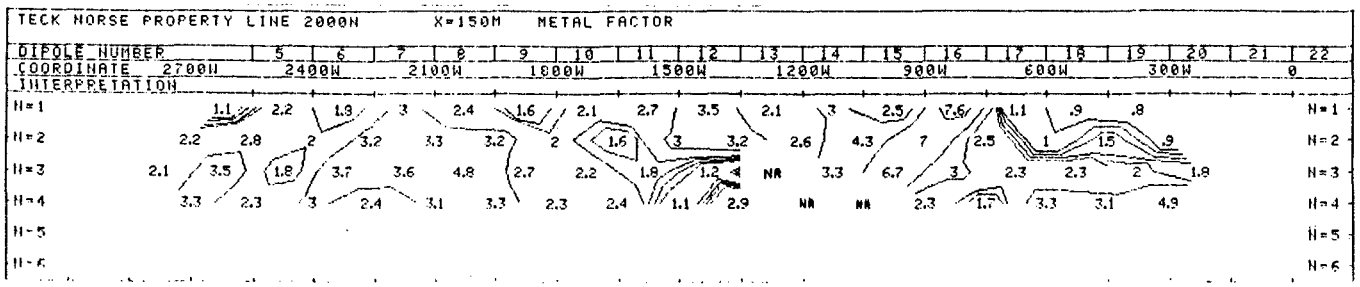
DATE Nov. 27/86

PACIFIC GEOPHYSICAL LTD.

INDUCED POLARIZATION AND RESISTIVITY SURVEY





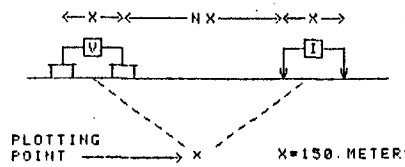


TECK CORPORATION

NORSE CLAIM GROUP

KAMLOOPS M.D. B.C.

LINE NO -1750N



FREQUENCY (HERTZ)
0.25;4.0

NOTE- CONTOURS AT LOGARITHMIC INTERVALS. 1,-1.5 -2,-3,-5,-7.5,-10 PLUS EACH 0.25 FROM 0.5 TO 2.0

DWG. NO.-I P.-5873-8

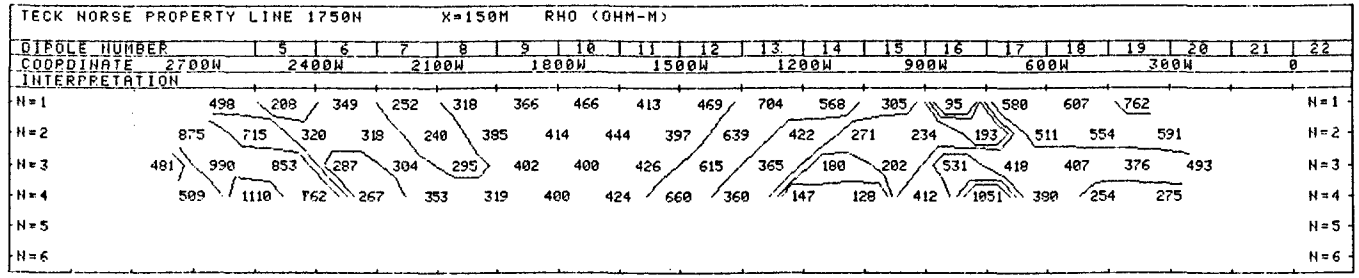
DATE SURVEYED: OCT-NOV/86

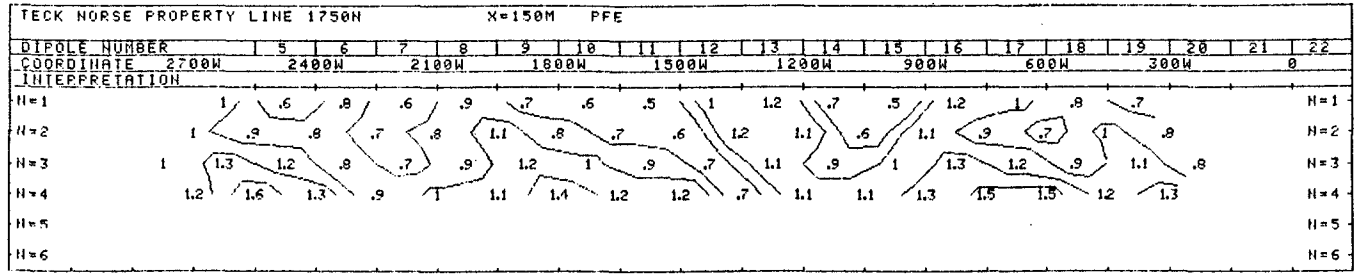
APPROVED MJC

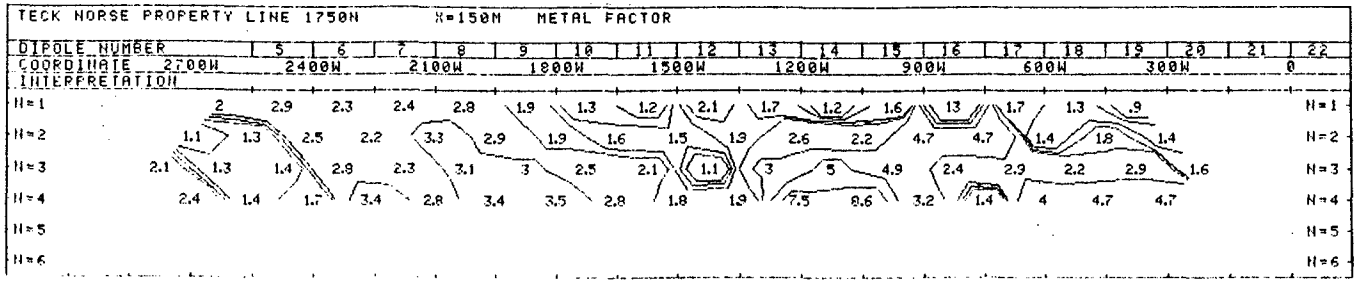
DATE Nov. 27/86

PACIFIC GEOPHYSICAL LTD.

INDUCED POLARIZATION AND RESISTIVITY SURVEY





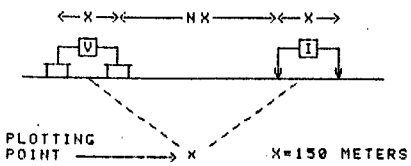


TECK CORPORATION

NORSE CLAIM GROUP

KAMLOOPS M.D. B.C.

LINE NO. -1500N



FREQUENCY (HERTZ)
0.25;4.0

NOTE- CONTOURS AT LOGARITHMIC INTERVALS. 1.-1.5 -2,-3,-5,-7.5,-10 PLUS EACH 0.25 FROM 0.5 TO 2.0

DWG. NO.-I.P.-5873-9

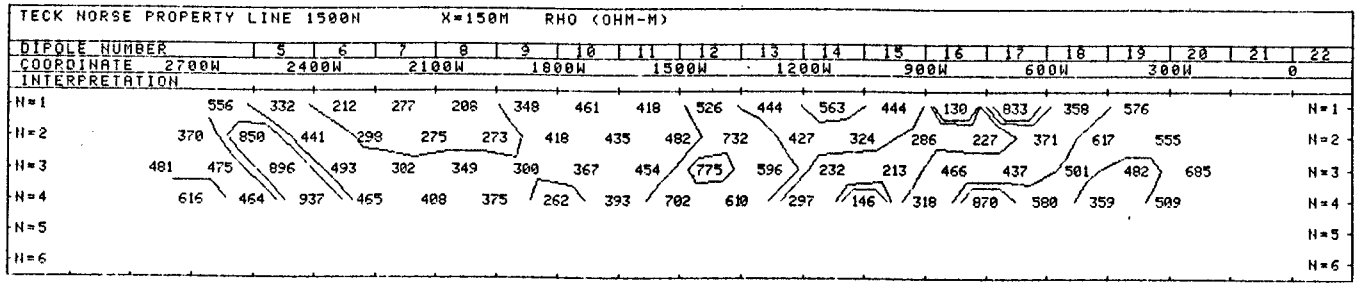
DATE SURVEYED: OCT-NOV/86

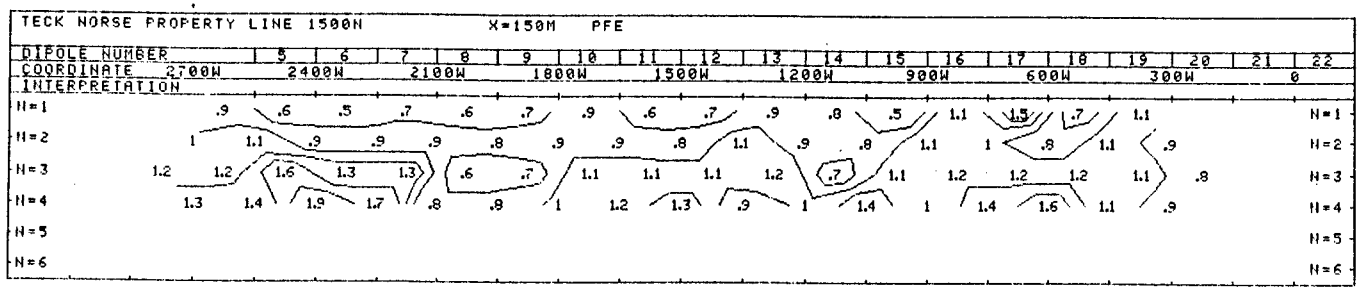
APPROVED MJC

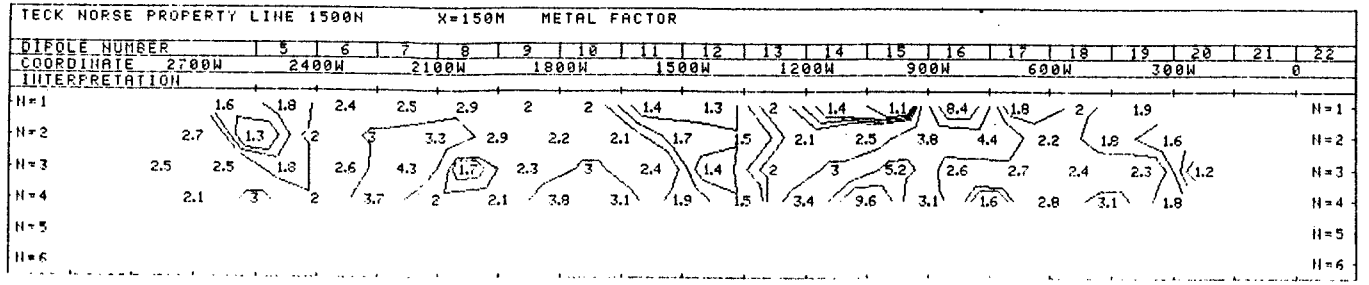
DATE Nov. 27/86

PACIFIC GEOPHYSICAL LTD.

INDUCED POLARIZATION AND RESISTIVITY SUPVEY





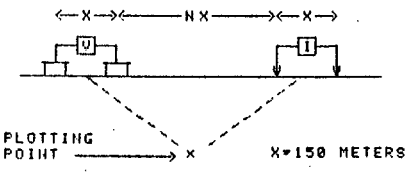


TECK CORPORATION

NORSE CLAIM GROUP

KAMLOOPS M.D., B.C.

LINE NO -1250N



FREQUENCY (HERTZ)
0.25;4.0

NOTE- CONTOURS AT LOGARITHMIC INTERVALS. 1,-1.5 -2,-3,-5,-7.5,-10 PLUS EACH 0.25 FROM 0.5 TO 2.0

DWG. NO.-I.P -5873-10

DATE SURVEYED: OCT-NOV/86

APPROVED MJC

DATE Nov. 27/86

PACIFIC GEOPHYSICAL LTD.

INDUCED POLARIZATION AND RESISTIVITY SURVEY

TECK NORSE PROPERTY LINE 1250N X=150M RHO (OHM-M)

DIPOLE NUMBER	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
COORDINATE 2700W		2400W		2100W		1800W		1500W		1200W		900W		600W		300W		0
INTERPRETATION																		
N=1		585	619	242	408	161	254	293	305	337	513	368	606	192	653	330	674	
N=2		528	674	388	475	364	303	325	287	447	586	578	339	280	272	302	681	735
N=3	378		580	447	395	375	532	379	297	341	794	736	422	208	434	328	586	628	789
N=4		398	370	452	332	574	627	325	338	571	861	464	225	283	484	705	512	608
N=5																		
N=6																		

TECK NORSE PROPERTY LINE 1250N X=150M PFE

DIPOLE NUMBER	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
COORDINATE 2700W		2400W		2100W		1800W		1500W		1200W		900W		600W		300W		0
INTERPRETATION																		
N=1		1.1	1.1	1.1	1.1	.6	.5	.8	.7	.9	1.2	.6	.9	.8	1.5	.4	.6	
N=2		1.1	1.2	1.3	1.1	1.4	1.1	.8	1	.9	1.1	1.1	1	.9	.8	.7	.7	.4
N=3	1.4		1.3	1.4	1.2	1.6	.8	1.1	1	1	1.1	1.1	1.2	.8	1.1	.9	1.1	.9	.6
N=4		1.7	1.7	1.4	1.7	1.1	.9	1.4	1.1	1.2	1	1.2	1.3	1.4	1.3	1.4	1.2	
N=5																		
N=6																		

TECK NORSE PROPERTY LINE 1250N X=150M METAL FACTOR

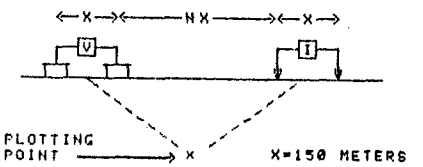
DIPOLE NUMBER	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
COORDINATE 2700W		2400W		2100W		1800W		1500W		1200W		900W		600W		300W		0
INTERPRETATION																		
N=1		1.9	1.8	4.5	2.7	3.7	2	2.7	2.3	2.7	2.3	1.6	1.5	4.2	2.3	1.2	.9	
N=2		2.1	1.8	3.4	2.3	3.8	3.6	2.5	3.5	2	1.9	1.3	2.9	3.2	2.9	2.3	1	.5
N=3	3.7		2.2	3.1	3	4.3	1.5	2.9	3.4	2.9	1.4	1.5	2.8	3.8	2.5	2.7	1.9	1.4	.8
N=4		4.3	4.6	3.1	5.1	1.9	1.4	4.3	3.3	2.1	1.2	2.6	5.8	5	2.7	2	2.3	1.6	
N=5																		
N=6																		

TECK CORPORATION

NORSE CLAIM GROUP

KAMLOOPS M.D., B.C.

LINE NO. -1000N



FREQUENCY (HERTZ)
0.25;4.0

NOTE- CONTOURS AT LOGARITHMIC INTERVALS. 1,-1.5 -2,-3,-5,-7.5,-10 PLUS EACH 0.25 FROM 0.5 TO 2.0

DWG. NO.-I.P.-5873-11

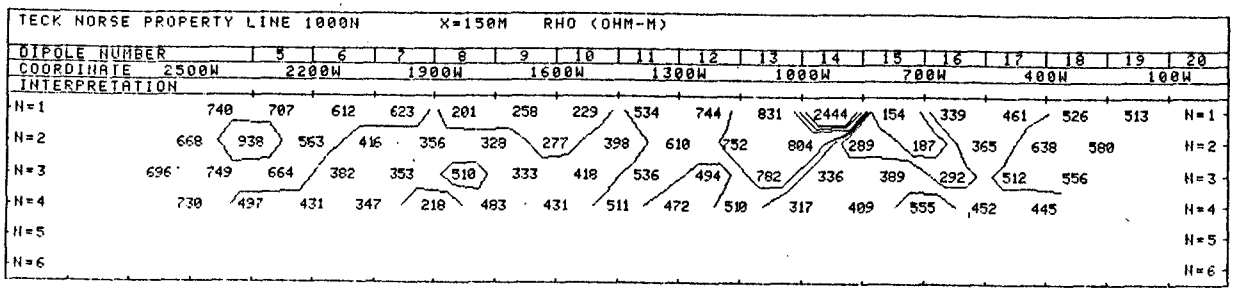
DATE SURVEYED: OCT-NOV. 86

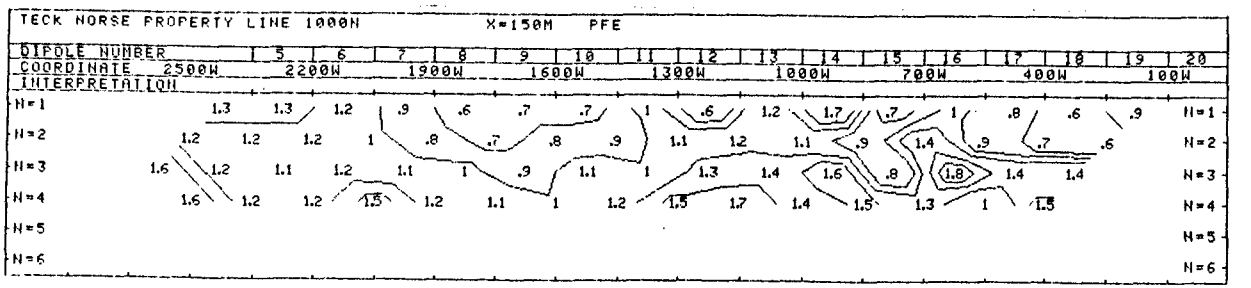
APPROVED MJC

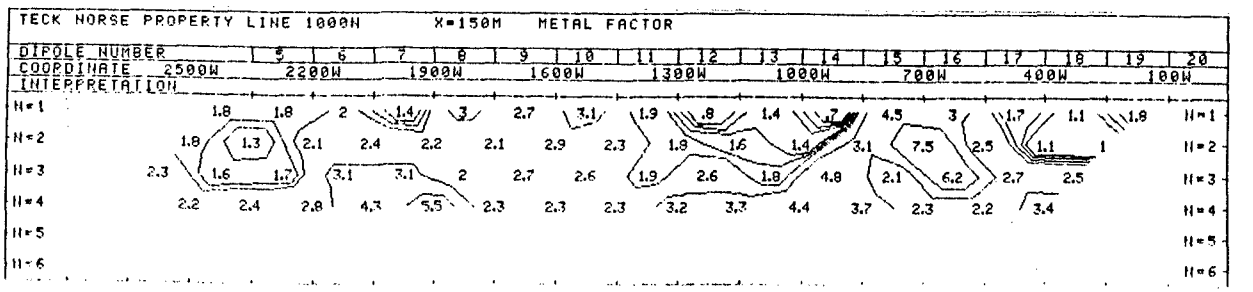
DATE Nov. 27/86

PACIFIC GEOPHYSICAL LTD.

INDUCED POLARIZATION AND RESISTIVITY SURVEY





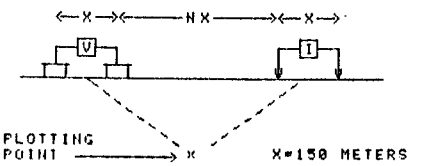


TECK CORPORATION

NORSE CLAIM GROUP

KAMLOOPS M.D. B.C.

LINE NO.-750N



FREQUENCY (HERTZ)
0.25/4.0

NOTE- CONTOURS AT LOGARITHMIC INTERVALS. 1,-1.5 -2,-3,-5,-7.5,-10 PLUS EACH 0.25 FROM 0.5 TO 2.0

DWG. NO.-I.P.-5873-12

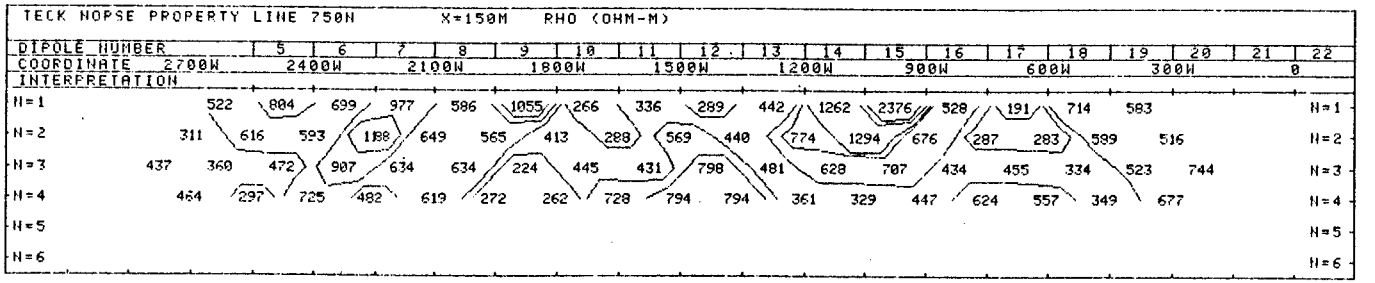
DATE SURVEYED OCT-NOV-86

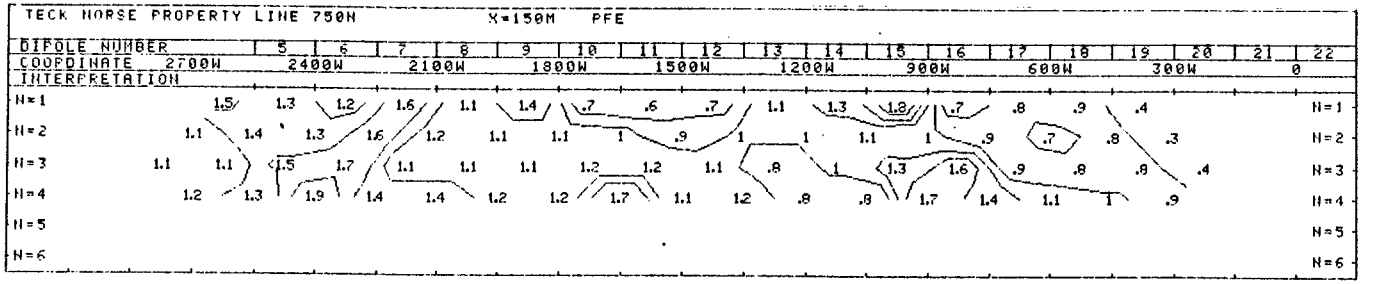
APPROVED MJC

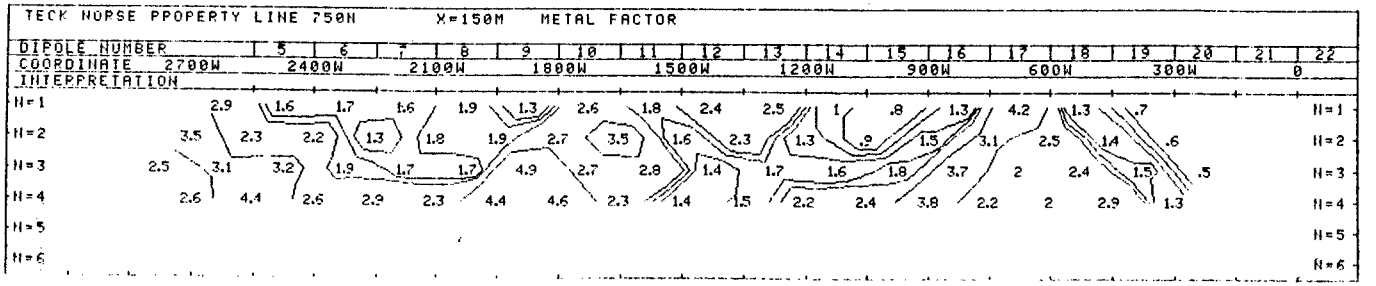
DATE Nov. 27/86

PACIFIC GEOPHYSICAL LTD.

INDUCED POLARIZATION AND RESISTIVITY SURVEY





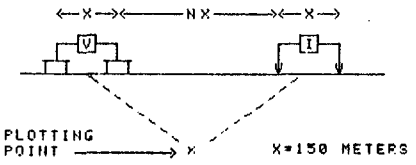


TECK CORPORATION

NORSE CLAIM GROUP

KAMLOOPS M.D.,B.C.

LINE NO.-500N



FREQUENCY (HERTZ)
0.25;4.0

NOTE- CONTOURS AT LOGARITHMIC INTERVALS. 1,-1.5 -2,-3,-5,-7.5,-10 PLUS EACH 0.25 FROM 0.5 TO 2.0

DWG. NO.-I.P.-5873-13

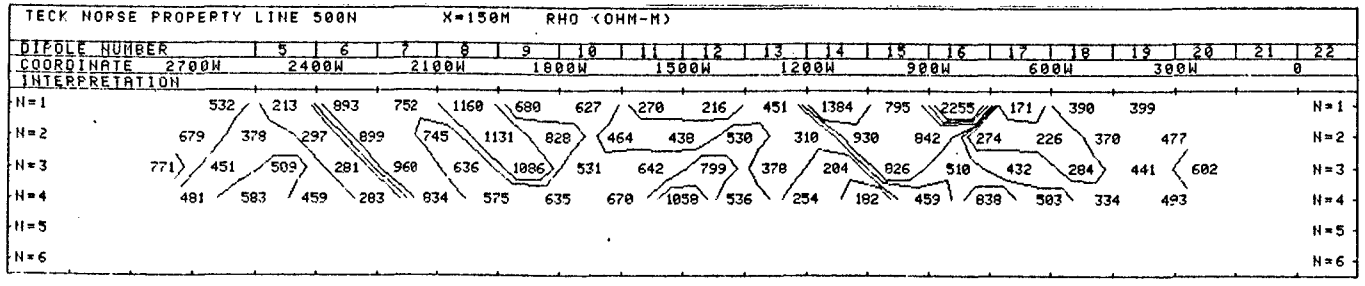
DATE SURVEYED OCT-NOV/86

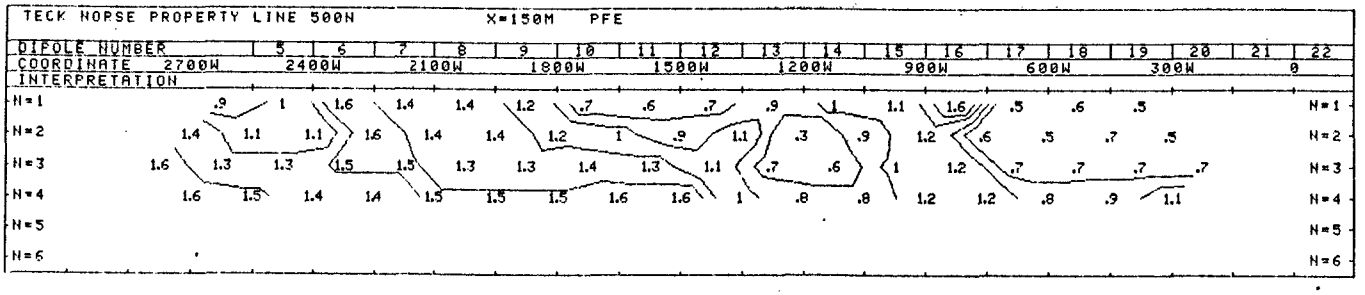
APPROVED MJC

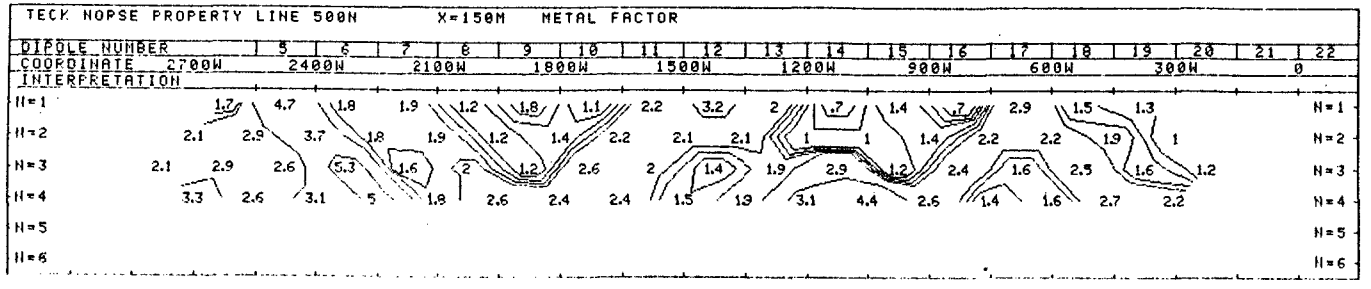
DATE Nov. 27/86

PACIFIC GEOPHYSICAL LTD.

INDUCED POLARIZATION AND RESISTIVITY SURVEY





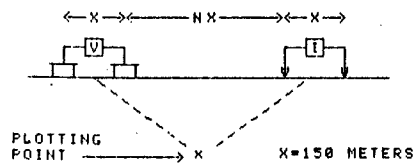


TECK CORPORATION

HORSE CLAIM GROUP

KAMLOOPS M.D., B.C.

LINE NO.-250N



FREQUENCY (HERTZ)
0.25/4.0

NOTE- CONTOURS AT LOGARITHMIC INTERVALS. 1,-1.5 -2,-3,-5,-7.5,-10 PLUS EACH 0.25 FROM 0.5 TO 2.0

DWG. NO.-I P.-5873-14

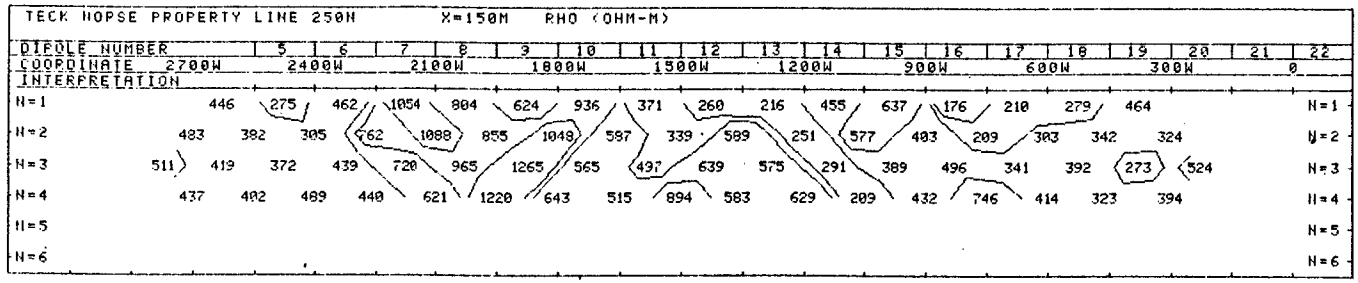
DATE SURVEYED: OCT-NOV/86

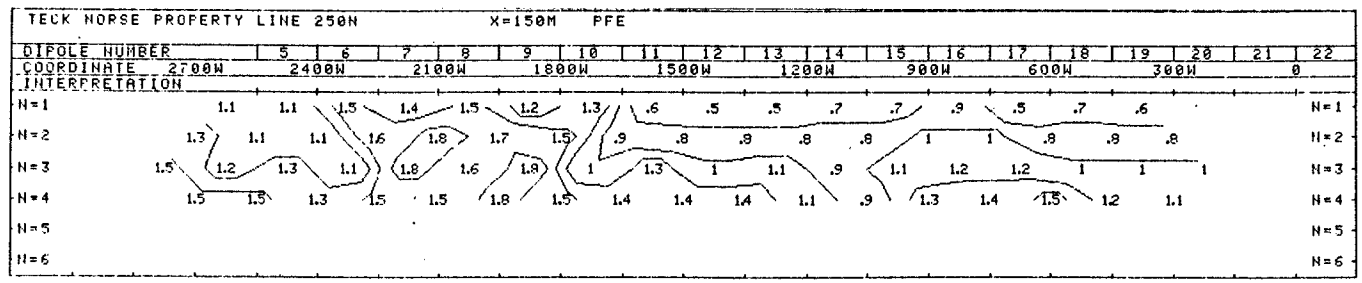
APPROVED MJC

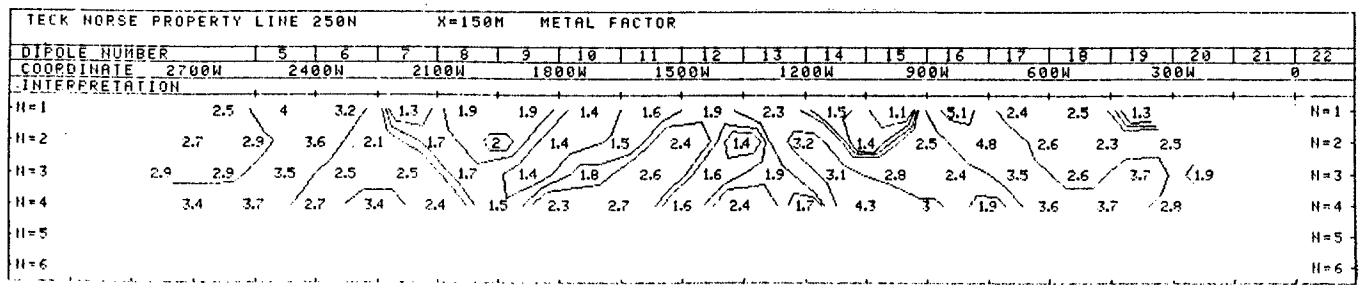
DATE Nov. 27/86

PACIFIC GEOPHYSICAL LTD.

INDUCED POLARIZATION AND RESISTIVITY SURVEY





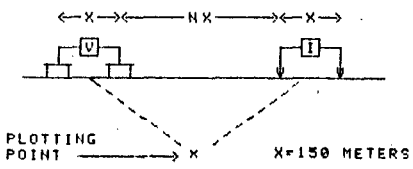


TECK CORPORATION

NORSE CLAIM GROUP

KAMLOOPS M.D.,B.C.

LINE NO -000N



FREQUENCY (HERTZ)
0.25;4.0

NOTE- CONTOURS AT LOGARITHMIC INTERVALS. 1,-1.5 -2,-3,-5,-7.5,-10 PLUS EACH 0.25 FROM 0.5 TO 2.0

DWG. NO.-I.P.-5873-15

DATE SURVEYED:OCT-NOV/86

APPROVED MJC

DATE Nov. 27/86

PACIFIC GEOPHYSICAL LTD.

INDUCED POLARIZATION AND RESISTIVITY SURVEY

TECK NORSE PROPERTY LINE 000N X=150M RHO (OHM-M)

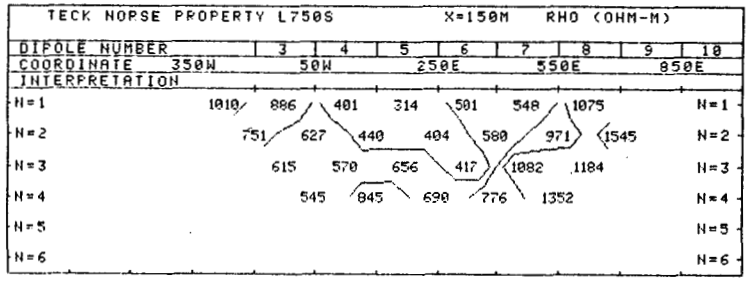
DIPOLE NUMBER	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
COORDINATE	2700W		2400W		2100W		1800W		1500W		1200W		900W		600W		300W	0
INTERPRETATION																		
N=1	434	281	250	473	821	900	513	645	292	275	152	194	141	246	356	504		N=1
N=2	361	442	369	333	441	1247	869	899	649	489	248	248	254	193	301	565	603	N=2
N=3	279	335	575	463	364	619	1076	1161	721	856	393	346	294	408	284	477	538	517 N=3
N=4	244	588	635	467	487	508	1286	863	854	653	482	352	436	560	430	452	422	N=4
N=5																		N=5
N=6																		N=6

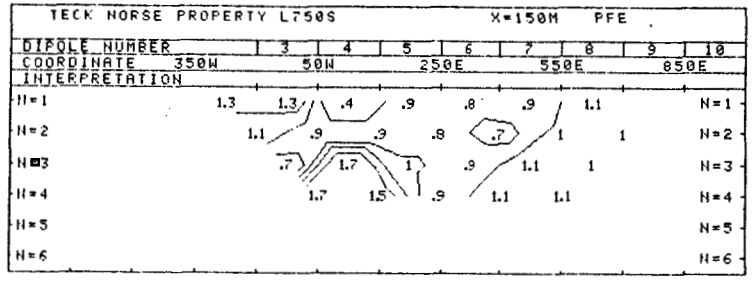
TECK NORSE PROPERTY LINE 000N X=150M PFE

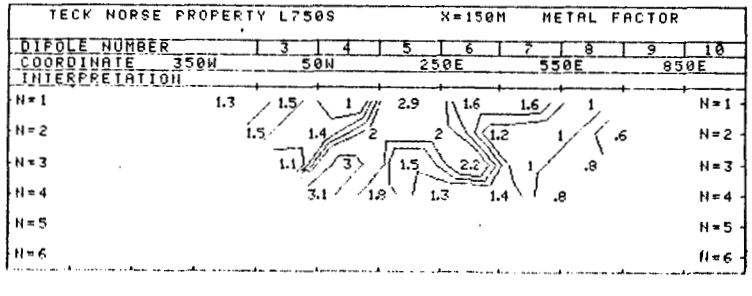
DIPOLE NUMBER	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
COORDINATE	2700W		2400W		2100W		1800W		1500W		1200W		900W		600W		300W	0
INTERPRETATION																		
N=1	1	.8	.8	1	1.3	1.4	.9	.7	.3	.5	.6	.6	.8	.3	.7	.5		N=1
N=2	1.2	1.2	1	1	1.1	1.4	1.3	1.1	.9	.8	1	.6	.9	.7	.7	.8	.6	N=2
N=3	1.3	1.3	1.3	1.1	1.2	1.4	1.4	1.5	1.2	1.1	1	1	1	1.2	1.2	.9	.7	<1 N=3
N=4	1.3	1.5	1.3	1.3	1.5	1.4	1.6	1.6	1.4	1.2	1.1	1.4	1	1.5	1.1	1	.9	N=4
N=5																		N=5
N=6																		N=6

TECK NORSE PROPERTY LINE 000N X=150M METAL FACTOR

DIPOLE NUMBER	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
COORDINATE	2700W		2400W		2100W		1800W		1500W		1200W		900W		600W		300W	0
INTERPRETATION																		
N=1	2.3	2.9	3.2	2.1	1.6	1.6	1.8	1.1	1	1.8	4	3.1	5.7	1.2	2	1		N=1
N=2	3.3	2.7	2.7	3	2.5	1.1	1.5	1.2	1.4	1.6	4	2.4	3.5	3.6	2.3	1.4	1	N=2
N=3	4.7	3.9	2.3	2.4	3.3	2.3	1.3	1.3	1.7	1.3	2.5	2.9	3.4	2.9	4.2	1.9	1.3	1.9 N=3
N=4	5.3	2.5	2	2.8	3.1	2.8	1.2	1.9	1.6	1.8	2.3	4	2.3	2.7	2.6	2.2	2.1	N=4
N=5																		N=5
N=6																		N=6







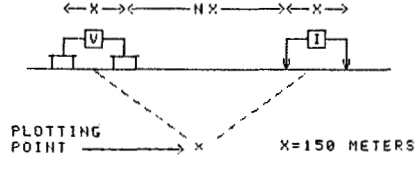
DWG. NO.-I.P.-5873-16

TECK CORPORATION

NORSE CLAIM GROUP

KAMLOOPS M.D., B.C.

LINE NO.-750S



FREQUENCY (HERTZ)
0.25, 4.0

NOTE- CONTOURS AT LOGARITHMIC INTERVALS. 1,-1.5 -2,-3,-5,-7.5,-10 PLUS EACH 0.25 FROM 0.5 TO 2.0

DATE SURVEYED: OCT-NOV/86

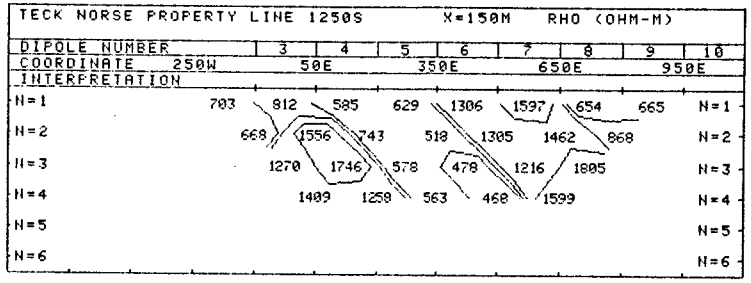
APPROVED

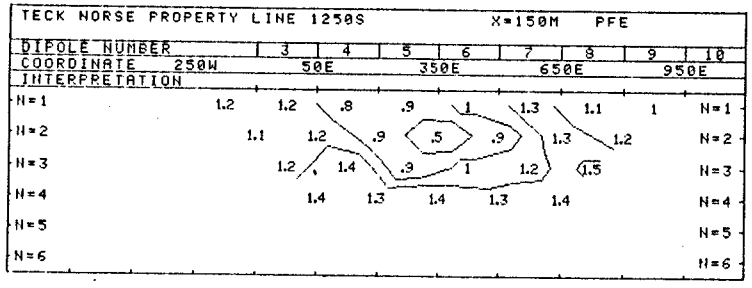
MJC

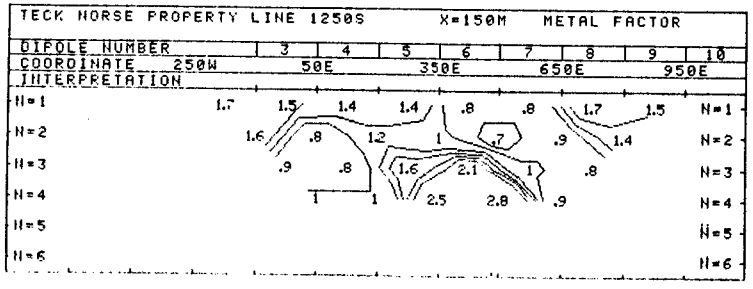
DATE Nov. 27/86

PACIFIC GEOPHYSICAL LTD.

INDUCED POLARIZATION AND RESISTIVITY SURVEY







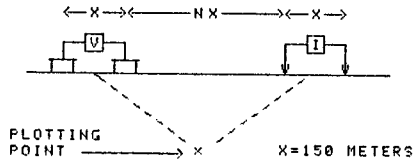
DWG. NO.-I.P.-5873-17

TECK CORPORATION

NORSE CLAIM GROUP

KAMLOOPS M.D./B.C.

LINE NO.-1250S



FREQUENCY (HERTZ)
0.25/4.0

NOTE- CONTOURS AT LOGARITHMIC INTERVALS. 1,-1.5 -2,-3,-5,-7.5,-10 PLUS EACH 0.25 FROM 0.5 TO 2.0

DATE SURVEYED: OCT-NOV/86

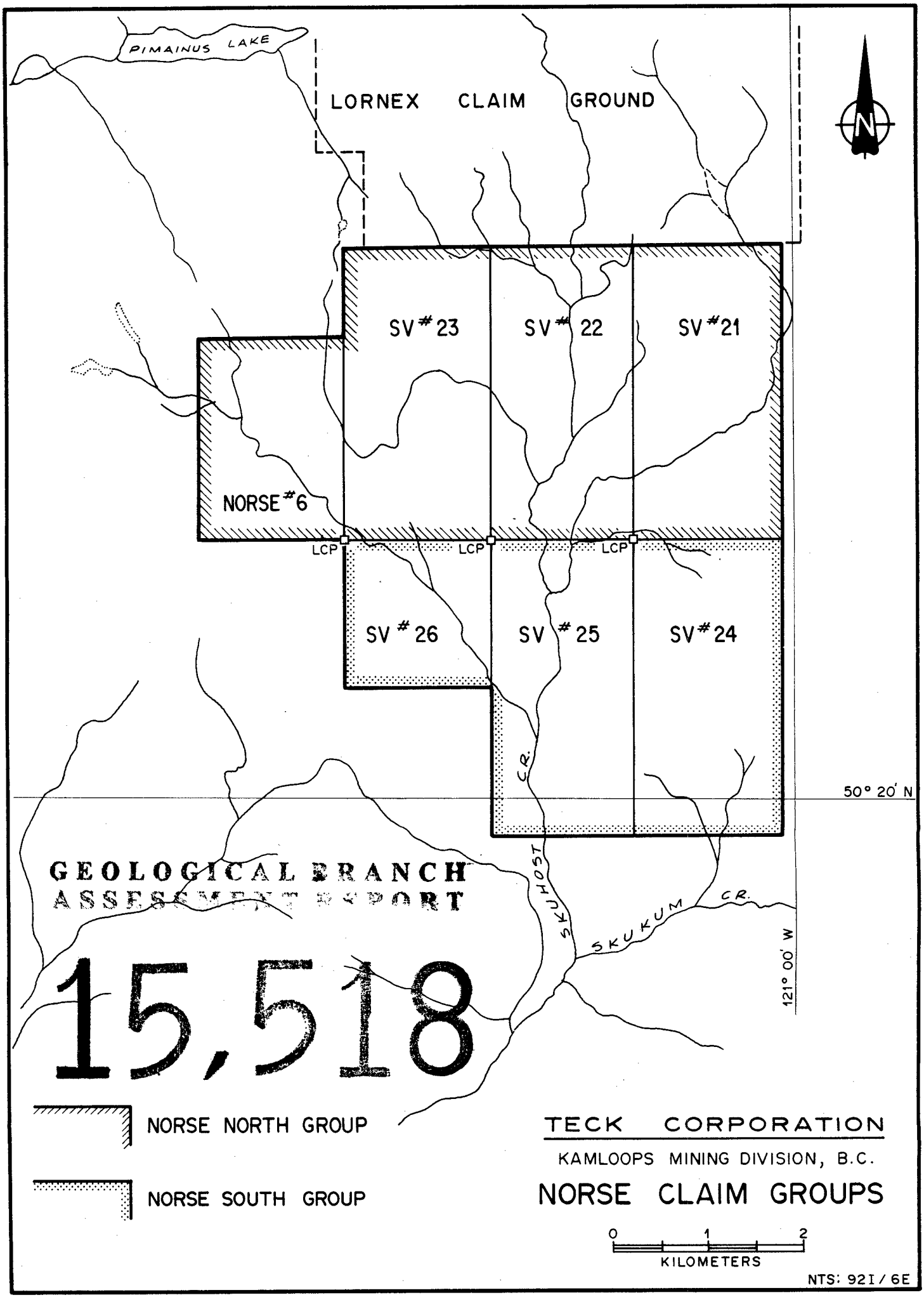
APPROVED

MJC

DATE Nov. 27/86

PACIFIC GEOPHYSICAL LTD.

INDUCED POLARIZATION AND RESISTIVITY SURVEY



NORSE NORTH GROUP

NORSE SOUTH GROUP

TECK CORPORATION

KAMLOOPS MINING DIVISION, B.C.

NORSE CLAIM GROUPS

0 1 2
KILOMETERS

NTS: 92I/6E

DDH-1
DDH-2
DDH-2a
DDH-3
DDH-4
DDH-5
DDH-6
DDH-7
DDH-8
DDH-9
DDH-10

A
B
C
C1
D

LCP
SV 21,22
SV 24,25

SKUHOST CR.

N

CLASSIFICATION OF ANOMALOUS ZONES

DEFINITE

PROBABLE

POSSIBLE

⊙ D.D.H.

TRENCH OUTLINE

CONTOURS AT LOGARITHMIC INTERVALS:
1, 1.5, 2, 3, 5, 7.5, 10 PLUS EACH 0.25 FROM 0.5 TO 2.0

NOTE: To accompany geophysical report on the dipole-dipole I.P. and Resistivity Survey (150m electrode interval) for TECK CORPORATION on the NORSE Claim Group by Paul A. Cartwright, P. Geoph. and Michael J. Cormier, B. Sc.

DATED: December 10, 1986.

TECK CORPORATION

FRASER FILTER PERCENT FREQ. EFFECT (P.F.E.)

NORSE CLAIM GROUP

KAMLOOPS M.D., BRITISH COLUMBIA

PACIFIC GEOPHYSICAL

0 100 200 300 400 500 600 metres

Appr. by: MJC | Date: Dec. 10/86 | NTS: 92I/6E

DWG. NO.- I.P.P.-B-4150A

DDH-1
DDH-2
DDH-2a
DDH-3
DDH-4
DDH-5
DDH-6
DDH-7
DDH-8
DDH-9
DDH-10

LCP
SV 21,22
SV 24,25

SKUHOST CR.

N

CONTOURS AT LOGARITHMIC INTERVALS:
1, 1.5, 2, 3, 5, 7.5, 10

⊙ D.D.H.

TRENCH OUTLINE

NOTE: To accompany geophysical report on the dipole-dipole I.P. and Resistivity Survey (150m electrode interval) for TECK CORPORATION on the NORSE Claim Group by Paul A. Cartwright, P. Geoph. and Michael J. Cormier, B. Sc.

DATED: December 10, 1986.

GEOLOGICAL BRANCH ASSESSMENT REPORT

TECK CORPORATION

FRASER FILTER APPARENT RESISTIVITY (OHM-M)

NORSE CLAIM GROUP

KAMLOOPS M.D., BRITISH COLUMBIA

PACIFIC GEOPHYSICAL

100 200 300 400 500 600 metres

Appr. by: MJC	Date: Dec. 10/86	NTS: 92I/6E

DWG. NO. - I.P.P.-B-4150B