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Volume II of  
REPORT ON PHASE II AND III  
GEOLOGY, GEOPHYSICS AND DIAMOND DRILLING  
SCOTCH CREEK PROPERTY  
(Celista Group) 8/88

Kamloops Mining Division  
NTS 82L/14, 50°58'N Lat, 119°26'W Long.

for

NEXUS RESOURCE CORPORATION

February, 1987

G.R. Cope B.Sc. & T.G. Hawkins, P.Geol.

PART 2 OF 4  
GEOLOGICAL BRANCH  
ASSESSMENT REPORT

16,191

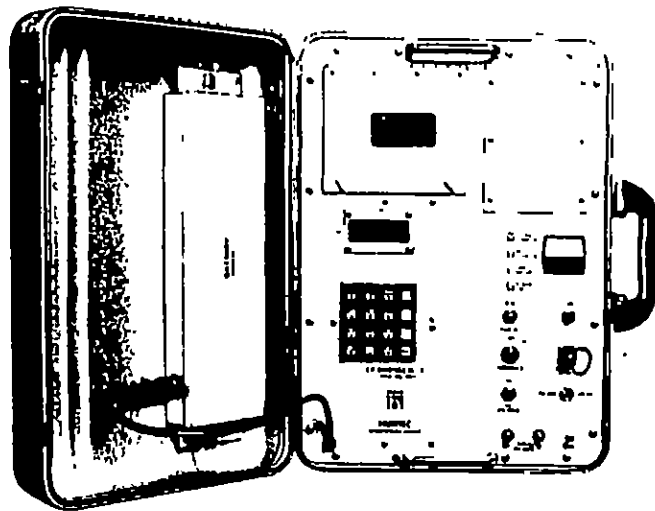
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**Appendix VIa**

**IP/RESISTIVITY SURVEY SPECIFICATIONS**

# M-4 Induced Polarization Receiver



## DESCRIPTION

The Hunttec M-4 is a microprocessor based receiver for time and frequency domain IP and complex resistivity measurement. It is

**Easy to operate.** One switch starts a measurement, of up to 29 quantities simultaneously. The optional Cassette DataLogger records them all in seconds. Calibration, gain setting and SP buckout are all automatic.

**Reliable.** Using advanced digital signal processing techniques, the M-4 delivers consistently accurate data even in noisy, highly conductive areas. For mechanical reliability it is packaged in a rugged aluminum case for backpack or hand carrying.

**Versatile.** The operator may adjust delay and integration times, operating frequency and other measurement parameters, to adapt to a wide range of survey conditions and requirements. An independent reference channel facilitates drillhole and underground work, and guarantees transmitter-receiver synchronization in high-noise conditions.

**Highly accurate.** With a frequency bandwidth of 100 Hz and noise-cancelling digital signal stacking, the M-4 delivers very precise results. The details are summarized in a table overleaf.

**Sensitive.** The same features that make the M-4 accurate allow detection of very weak signals. The Hunttec receiver requires lower transmitter power than any other, for a given set of operating conditions. Automatic correction for drifts in self-potential and gain allow long stacking times for significant signal-to-noise improvements.

**Intelligent.** Under the control of a powerful 16-bit microprocessor, the M-4 calibrates and tests itself between measurements. Coded error messages, flashed onto the display, inform the operator of any malfunction.

The M-4 Receiver is complemented by Hunttec's new M-4 transmitters, which offer precisely timed constant-current output and both time and frequency domain waveforms, compati-

ble with the receiver's accuracy and multi-mode measurement capabilities. The RL-2 Reference Isolator connects any IP transmitter to the receiver's reference channel. The GeoDataBase field computer reads, stores and processes data from M-4 cassettes.

Contact Hunttec for more information on the benefits offered by the M-4 product line.

## FEATURES

- Time and Frequency domain IP and Complex Resistivity operation
- Simultaneous Time domain and Complex Resistivity measurement
- Automatic calibration
  - gain setting
  - SP cancellation
  - fault diagnosis
  - filter tuning
- Independent reference channel for drillhole and underground work
- 33 quantities, displayable on large 3 1/2 digit low-temperature liquid-crystal readout
- Analogue meter for source resistance measurement
- 10<sup>9</sup> ohms differential input resistance
- 8 hours continuous operation with replaceable, rechargeable nickel-cadmium battery pack (2 supplied)
- Optional Cassette DataLogger fits inside case, has read-after-write error checking. Up to 350 stations per tape.
- Conveniently packaged for backpacking or hand carrying
- 100 Hz bandwidth, fine time-resolution
- Advanced digital signal stacking
- Delivers reliable, accurate data in noisy, highly conductive areas.

25 Howden Road,  
Scarborough,  
Ontario, Canada  
M1R 5A6  
Phone (416) 751-8055  
Telex 06-963640  
Cable: Huntor,  
Toronto

**hunttec**  
(70) LIMITED

## SPECIFICATIONS

### Inputs Signal Channel

Range:  $5 \times 10^{-1}$  to 10 volts. Automatic ranging.  
**Overload indication**  
 Resistance: Greater than  $10^9$  ohms differential  
 Bandwidth: 100 Hz  
 SP Cancellation: -5 to +5 volts (automatic)  
 Protection: Low-leakage diode clamps, gas discharge surge arrestors, replaceable fuses.

### Reference Channel

Level: 500 mV minimum, 10 volts peak maximum, overload indication  
 Resistance:  $2 \times 10^9$  ohms differential

### Controls and Functions

#### Operating Controls

Keypad: 16 keys, calculator format, function associated with each key.

#### Reference

Registers: Keypad may be used to store up to ten  $3\frac{1}{2}$  digit numeric values with floating decimal point, to represent station number, line number, operator, time, date, weather, transmitter current, etc. for recording on cassette.

#### Programming Controls

Sub-panel: All programming controls are on a covered sub-panel, not accessible during normal operation.

#### Thumbwheel

Switches: Select delay time  $t_D$  in milliseconds, chargeability window  $t_P$  in milliseconds; operating frequency; PFE frequency ratio.

#### Displayable Quantities

Time domain: Primary voltage; self-potential; chargeability (total or each of 10 windows of equal width); phases of odd harmonics 3 to 15; amplitudes of odd harmonics 1 to 15; cycle count; repeating display of polarization potential and total chargeability.

Freq. domain: Primary amplitude; Percent Frequency Effect; self-potential; cycle count.

Complex Resistivity: Phases of odd harmonics 3 to 15; amplitudes of odd harmonics 1 to 15; fundamental phase (with ref. input); cycle count.

Any mode: Battery voltage, Frequency error.

### Outputs

#### Displays

Digital Display:  $3\frac{1}{2}$  digit, low-temperature liquid crystal display. Indicates measurement results and diagnostic error messages.

Analogue Meter: Ohms scale for source resistance; also gives qualitative indication of signal-to-noise ratio.

#### Cassette DataLogger (Optional)

Description: Accommodated within M-4 chassis. If not acquired with receiver, may be retrofitted by user at any time. Two recording modes:

Partial: All sub-panel settings, measurement results, and contents of reference registers are recorded (2 seconds recording time).

Full: As in partial mode, but also recorded is one cycle of averaged signal waveform (28 seconds recording time). If external

reference is used, one cycle of reference waveform is also recorded (60 seconds recording time). Extra memory and software available to average and store the reference waveform for advanced offline resistivity computation.

#### Format:

ANSI/EICMA/ISO standard for saturation recording: 80 bytes/record, all data recorded in ASCII code.

#### Verification:

Read-after-write data verification (automatic)

#### Mechanical

M-4 Receiver with battery pack: 45 cm x 33 cm x 14 cm, 10.0 kg

M-4 Receiver with battery pack and Cassette DataLogger:

Dimensions as above, 11.0 kg

Replaceable Battery pack:

33 cm x 11 cm x 4.5 cm, 3 kg

#### Environmental

##### Temperature:

Operation:  $-20^\circ\text{C}$  to  $+55^\circ\text{C}$

Storage:  $-40^\circ\text{C}$  to  $+70^\circ\text{C}$

Moisture-proof, operable in light drizzle.

##### Humidity:

$-1,525$  m to  $+4,775$  m

##### Shock, Vibration:

Suitable for transport in bush vehicles.

## OUTPUT ACCURACY AND SENSITIVITY

milliradians	volts	volts	volts	seconds	%
2 milli-radians(1)	1% 40Hz 2% to 80Hz	$\pm 1\%$	$\pm 1\%$	0.1%(2)	0.1%(3) full scale
0.01 milliradians	$10^{-6}$ volts	$10^{-6}$ volts	$10^{-3}$ volts	$10^{-3}$ seconds	0.001% full scale

1) Frequency domain mode: at harmonic frequencies up to 15 Hz, increases to not more than 5 milliradians at 80 Hz.

Time domain mode: at harmonic frequencies up to 7.5 Hz, increases to not more than 5 milliradians at 30 Hz.

2) of total OFF time

3) Full scale defined as 100% PFE.

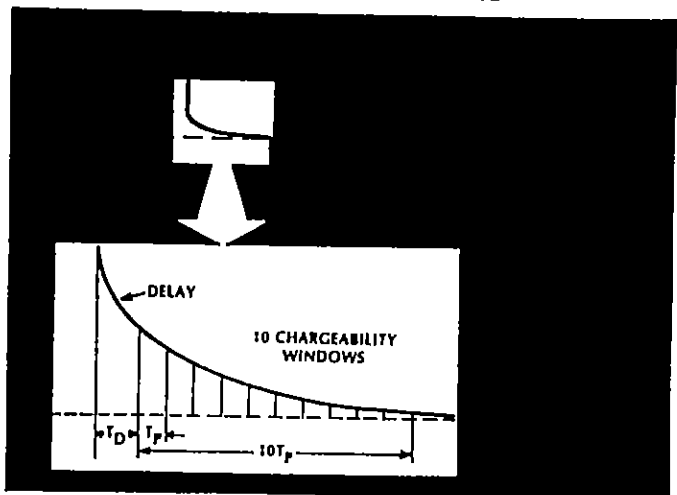
Cassette Data: recorded in ASCII, 9 digits with decimal point fixed for four decimal digits.

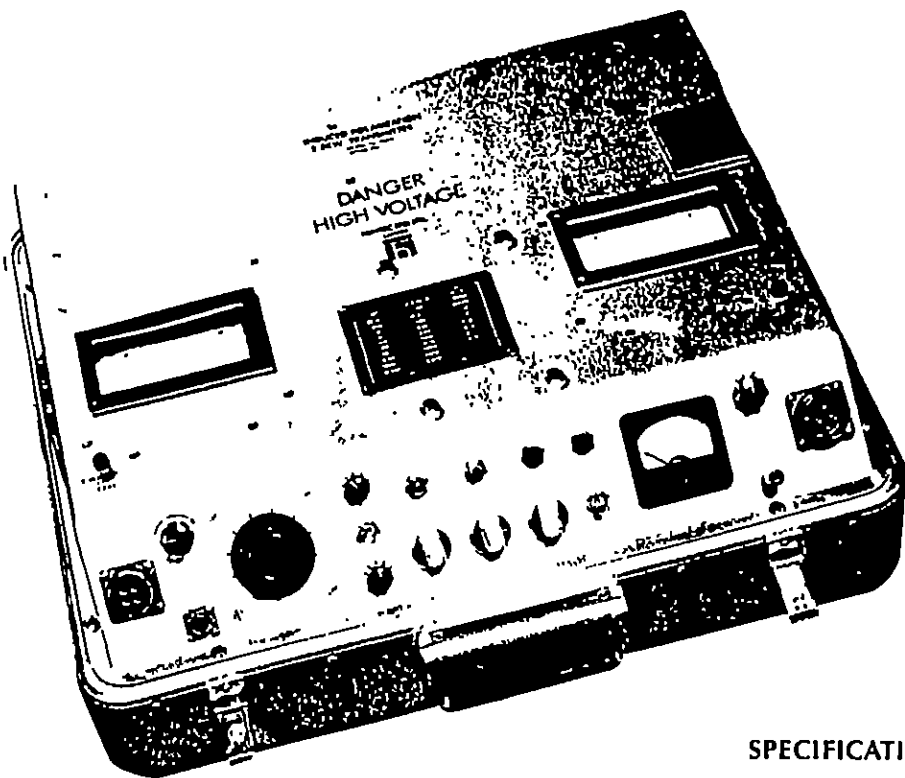
Display Data:  $3\frac{1}{2}$  digits, floating decimal point

Resolution of averaged waveform limited by A/D converter to one part or 4096 x (square root of cycle count).

Resolution of reference waveform (not averaged) limited by available memory to one part in 256. Additional memory and averaging software available as option.

## CHARGEABILITY WINDOWS





# M-4 SERIES Induced Polarization/ Resistivity 2.5 kW Transmitter

## DESCRIPTION

The HUNTEC M-4 2.5 kW Induced Polarization transmitter is designed for time domain, frequency domain (PFE) and complex resistivity applications. The unit converts primary 400 Hz ac power from an engine-alternator set to a regulated dc output current, set by the operator. Current regulation eliminates output waveform distortion due to electrode polarization effects. It is achieved in the transmitter by varying the alternator field currents. The transmitter is equipped with dummy loads to smooth out generator load variations.

## FEATURES

- Solid-state switching for long life and precise timing.
- Open circuit during the "off" time ensures no counter current flow.
- Resistance measurement for load matching.
- Precision crystal controlled timing.
- Failsafe operation protects against short-circuit and overvoltage.
- Automatic regulation of output current eliminates errors due to changing polarization potential and load resistance.

## SPECIFICATIONS

### Mark-4 2.5 kW Transmitter

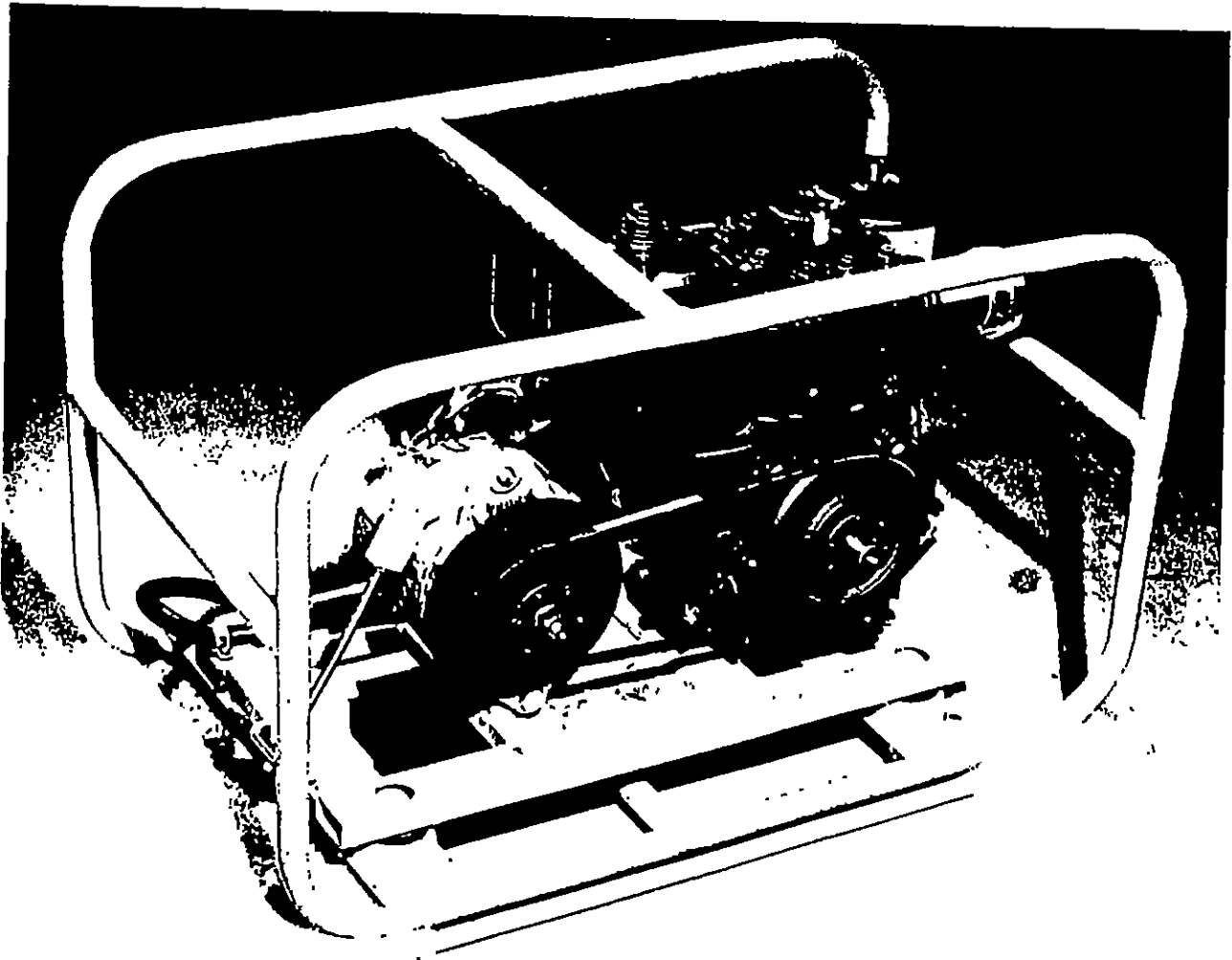
- A) Power input:** 96 — 144 V line to line 3 phase 400 Hz (from Hunttec generator set)
- B) Output:** Voltage: 150 — 2200 V dc in 8 steps  
Current: 0.2 — 7 A regulated\*\*
- C) Current regulation:** Less than  $\pm 0.1\%$  change for  $\pm 10\%$  load change
- D) Output frequency:** 0.0625 Hz to 1 Hz (time domain, complex resistivity)  
0.0625 Hz to 4 Hz (frequency domain) selectable from front panel  
An additional range of frequencies between 0.78 and 5.0 Hz is available and can be selected by an internal switch.
- E) Frequency accuracy:**  $\pm 50$  ppm  $-30^{\circ}\text{C}$  to  $+60^{\circ}\text{C}$
- F) Output duty cycle:** 0.5 to 0.9375 in increments of 0.0625 (time domain)  
0.9375 (complex resistivity)  
0.75 (frequency domain)
- G) Output current meter:** Two ranges: 0-5 A and 0-10 A
- H) Ground resistance meter:** Two ranges: 0-10 k $\Omega$  and 0-100 k $\Omega$
- I) Input voltage meter:** 0-150 V
- J) Dummy load:** Two levels: 500 W and 1.75 kW
- K) Temperature range:**  $-34^{\circ}\text{C}$  to  $+50^{\circ}\text{C}$
- L) Size:** 53 cm x 43 cm x 29 cm
- M) Weight:** 26 kg

\*\*Smaller currents are obtainable, but outside the current regulation range the transmitter voltage is regulated, not the current.



hunttec  
(70) LIMITED

25 HOWDEN ROAD,  
SCARBOROUGH,  
ONTARIO, CANADA  
M1R 5A6  
PHONE (416) 751-8055  
TELEX 06-9636-40  
CABLE: HUNTOR,  
TORONTO



#### SPECIFICATIONS

##### M-4 2.5 kW Engine Driven Alternator

<b>Output:</b>	120 V ac 400 Hz 3.5 kVA maximum
<b>Engine:</b>	6 kW air cooled, single cylinder four cycle piston engine with manual start
<b>Fuel:</b>	Regular grade gasoline, tank capacity 3.8 L to give 4 h duration
<b>Alternator:</b>	Delta connected heavy duty automobile type, belt driven, air cooled
<b>Construction:</b>	Tubular protective carrying frame with resiliently mounted engine and alternator
<b>Size:</b>	51 cm x 48 cm x 76 cm
<b>Weight (dry):</b>	61 kg



**Appendix VIb**

**IP/RESISTIVITY METHODS**



## NOTES ON IP/RESISTIVITY SURVEYS

### General

Induced Polarization (IP)/resistivity surveys are commonly conducted in the time domain and frequency domain, and less frequently, as spectral or complex resistivity measurements. There are a variety of geometrical arrays that can be employed.

The present survey employed time-domain measurements using the dipole-dipole array. Measurements were made with the Hunttec Mk IV receiver and 2.5 kw transmitter.

The following discussion sets out in some detail the principles and procedures of the IP method as related to the present survey.

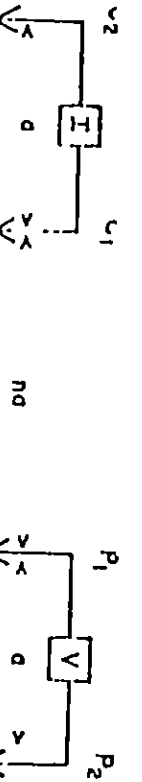
### Time Domain Method

As shown in Figure 1, in the time domain a modified, square-wave current consisting of "on/off/on/off" cycles of equal duration is transmitted into the ground through a pair of electrodes (current dipole). The primary ( $V_p$ ) and secondary ( $V_s$ ) voltages generated in the ground are measured at another pair of electrodes (potential dipole). The primary voltage, measured during the "on" current cycles, is a function of the electrical resistivity of the ground. The secondary voltage, measured during "off" current cycles, is the IP effect which reflects the amount of polarizable minerals, such as metallic sulphides, graphite, etc., in the ground.

The apparent resistivity of the ground is not directly measured, but is obtained by a mathematical formula utilizing the primary voltage value, the current output from the transmitter at the same instant and a geometrical constant dependent on the array type being used:

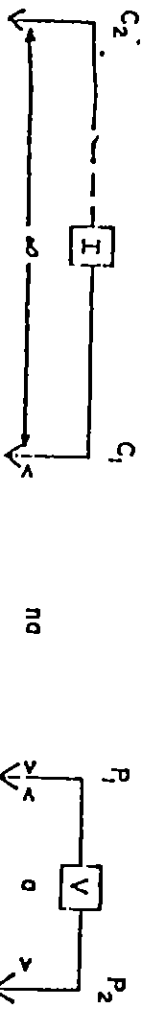
$$\rho_a = \frac{V_p}{I} \times aF$$



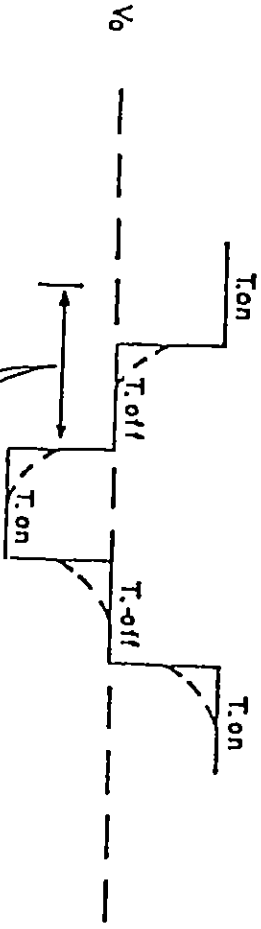


DIPOLE DIPOLE ARRAY

Apparent Resistivity  $\rho_a = \frac{V}{I} \dots G$   
 where G is a geometrical factor  
 dependant on survey array



POLE DIPOLE ARRAY

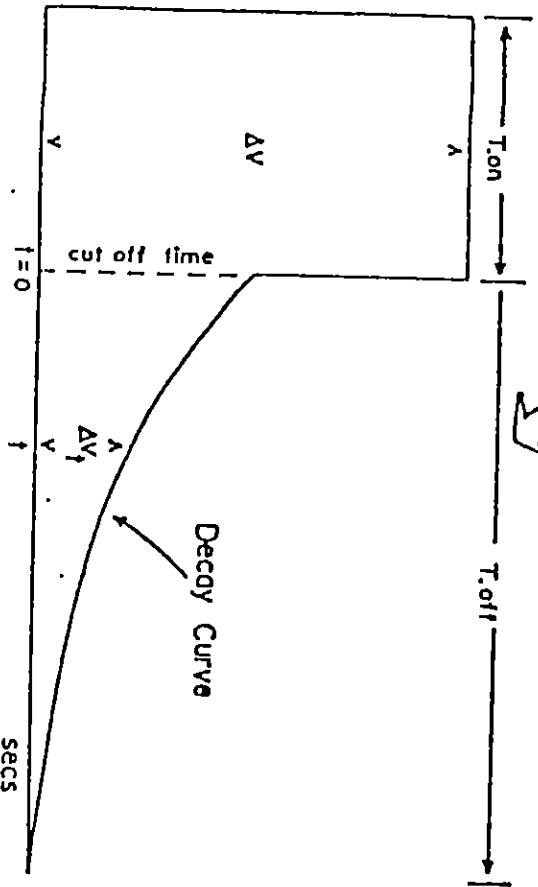


———— Transmitter waveform

----- Signal "seen" at receiver

T.on = 2 secs.

T.off = 2 secs.



Chargeability at time t  $M_t = \frac{\Delta V_t}{\Delta V}$

# PRINCIPLE OF TIME DOMAIN I.P.

Figure 1



- 3 -

where:  $\rho_a$  = apparent resistivity in ohm-meters  
 $V_p$  = primary voltage (volts)  
 $I$  = transmitted current (amps)  
 $a$  = electrode spacing in meters  
 $F$  = geometrical factor depending on the electrode array used.

The Huntec Mk IV system measures the secondary voltage or IP effect at 10 time intervals of equal width. The width of the time window ( $T_p$ ) and the length of the delay ( $T_d$ ) between the start of an "off" cycle and the beginning of the IP measurement are adjustable to suit the conditions of the survey. In the present survey, these were set at 100 msec and 100 msec, respectively, and the IP effect was recorded for each of five individual time windows ( $M_1$ ,  $M_3$ ,  $M_5$ ,  $M_7$  and  $M_9$ ) and for the total decay voltage ( $M_T$ ). The secondary voltage divided by the primary voltage yields the parameter chargeability in milliseconds.

The decay curve constructed from the ten chargeability observations is generally in the form of an exponential decay curve. It frequently can be split into two portions - an early fast decay portion and a later slow decay portion. The fast decay portion is generally due to inductive effects, while the later slow decay predominantly reflects true polarization effects. In theory chargeability is the value of the slow decay extrapolated backwards to the instant of transmitter shut-off.

### Survey Arrays

A number of different arrays are available for carrying out IP measurements. The ones generally used in mineral exploration are the dipole-dipole, pole-dipole and the gradient array, shown graphically in Figure 2, and described further below.

#### (1) Dipole-Dipole Array

This array is one of the most commonly used arrays in IP and is the



only one used with time-domain, frequency-domain and spectral surveys.

The system employs four moving electrodes with a layout as shown in Figure 2. The two current electrodes  $C_1$  and  $C_2$  and the two potential or measuring electrodes  $P_1$  and  $P_2$  have the same separation, called the 'a' spacing. The interval between the current and potential pair is generally some fixed multiple 'n' of this 'a' spacing. Measurements with the dipole-dipole array are plotted at the mid-point of the array.

As the 'n' value is increased, (i.e., as the current and potential dipoles are moved farther and farther apart), this has the effect of increasing the depth of exploration. While this is typically quoted as being one half of the total array length, actual depth of exploration is strongly dependent on the distribution of resistivity in the ground and is often much less than half the array length, particularly if conductive overburden is present.

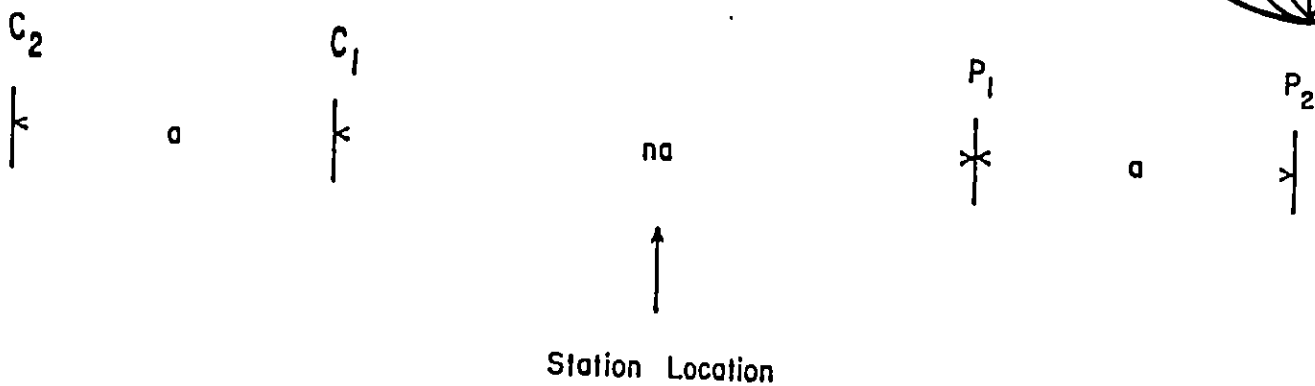
#### Advantages

1. The system has low inductive coupling because the current wires and reading wires can be kept separated.
2. Anomalies are symmetrical.
3. Sensitivity and resolution are good where 'a' and 'n' are chosen appropriately relative to the target dimensions and depth.

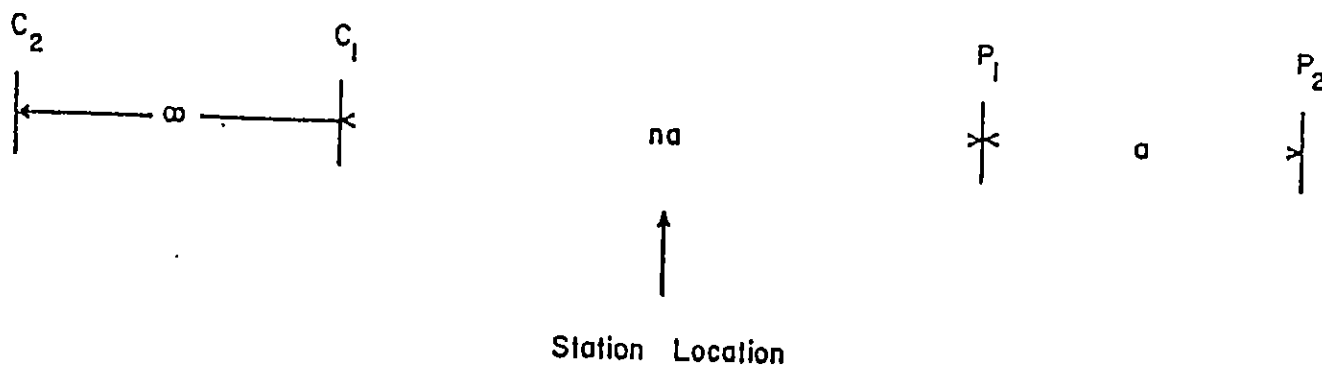
#### Disadvantages

1. Operations can be slow since all four electrodes are moved along the survey line.

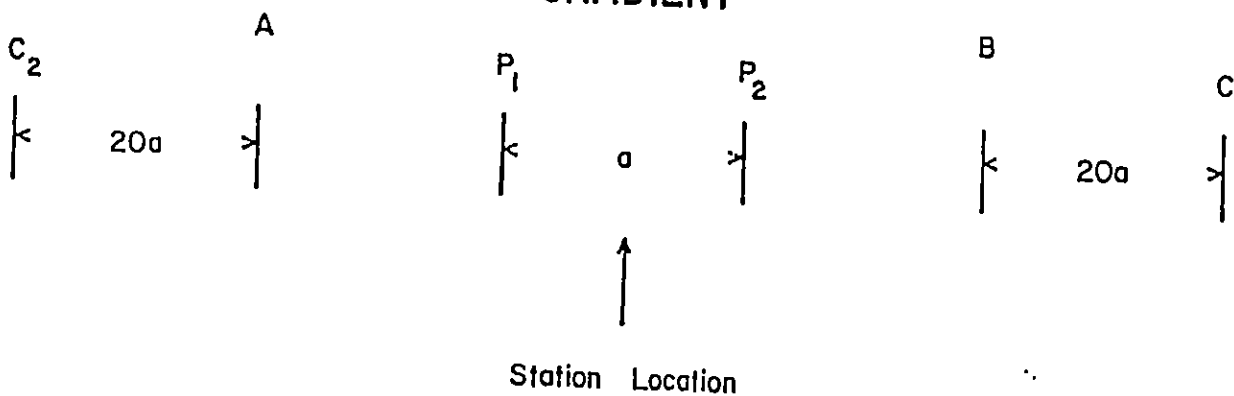
# DIPOLE - DIPOLE



# POLE - DIPOLE



# GRADIENT



A, B = extent of survey

2. Electrical contact can be especially difficult in areas with highly resistive surficial materials, such as dry sand, permafrost or exposed bedrock.
3. Primary ( $V_p$ ) and secondary ( $V_s$ ) voltages are lower than with other arrays which can cause measurement difficulties and lack of penetration in areas of high surface conductivity.

(2) Pole-Dipole Array

The pole-dipole (or three electrode) array is frequently used, most often in the time-domain.

Electrodes  $C_1$  and  $P_1-P_2$  move along the survey line. While  $C_2$ , the remote current electrode, can be anywhere in the area provided it is at a large distance from the station being measured (In highly conductive ground the actual location of  $C_2$  may be critical as current paths may be adversely distorted). The separation between  $C_1$  and  $P_1P_2$  can be increased, usually at integral intervals, to achieve varying depths of exploration. Readings are plotted in several conventions between the potential dipole and the active (moving) current electrode.

Advantages

1. Faster than the double-dipole array since only three electrodes are moved.
2. In areas of bad contact, i.e. dry, frozen or outcrop areas, it is easier to use than dipole-dipole since only one current electrode has to be moved.
3. Better depth of exploration than the double-dipole array.
4. Fairly sensitive and fairly good resolution.



### Disadvantages

1. Yields asymmetrical anomalies with the anomaly peak seldom directly over the polarizable source. The anomaly shape is dependent on the direction of  $C_2$ .
2. More wire is needed because of the array length; this leads to logistical problems (moose, rabbits, etc.).
3. EM coupling is higher than with the dipole-dipole array.

### Gradient Array

In the gradient array, normally only run in the time domain, two current electrodes are placed a large, fixed distance 'D' apart. The potential electrode pair are held at a constant separation 'a' and move along survey lines parallel to the line joining  $C_1$  and  $C_2$ . The separation between  $P_1$  and  $P_2$  is not rigidly specified but should not be greater than  $D/10$ . Greater resolution is attained with a shorter 'a' spacing, but at the cost of lower primary and secondary voltages.

Generally, survey coverage is restricted to an area comprising the middle 1/3 of  $C_1C_2$ . The measurement is plotted at the midpoint of the potential dipole.

### Advantages

1. Depth of exploration is good whilst retaining high resolution for small bodies; least susceptible to the masking effect of conductive overburden.
2. Production is fast since only two electrodes are moved; two or more receivers can be used simultaneously.
3. Less hazardous since current electrodes are not handled in moving stations.



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4. Least affected by topographic variations.
5. Useful in areas of high resistivity or in frozen terrain, since fixed current electrodes can be located where electrical contact is good, or carefully built to achieve good contact.
6. Can indicate dip of simple targets.

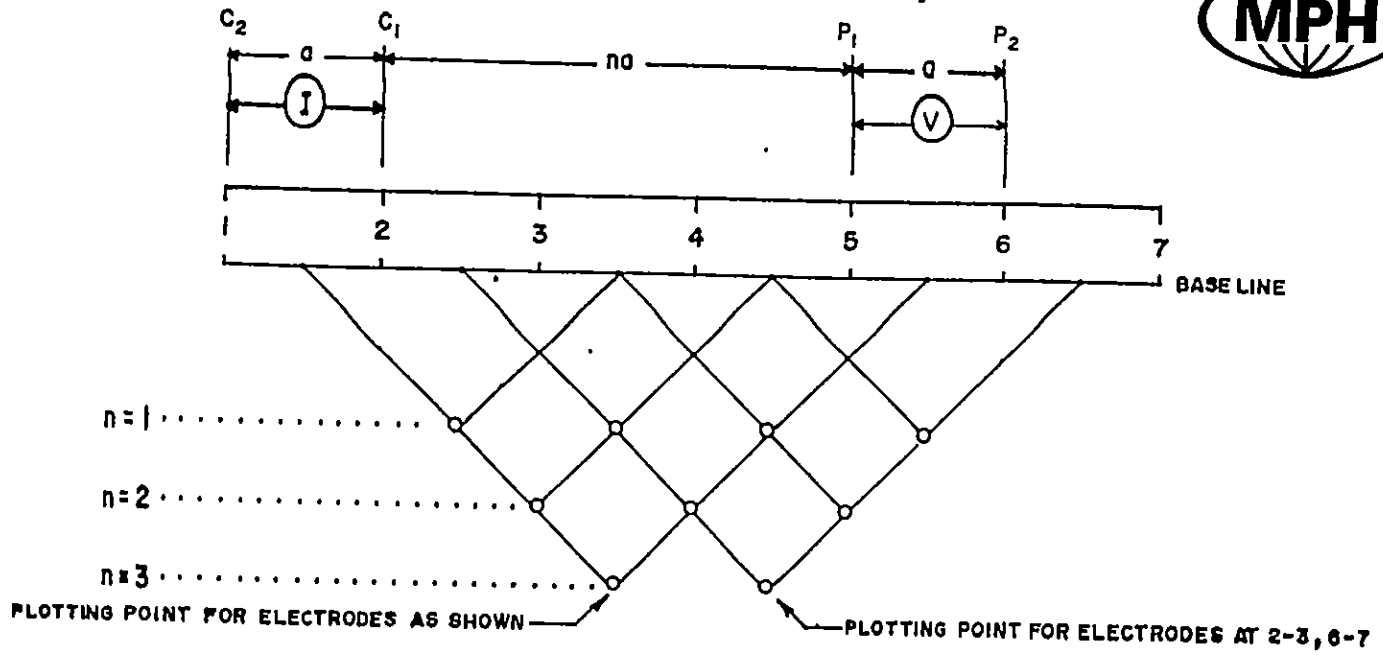
#### Disadvantages

1. Not practical where long profiles are desired or where survey lines are a long way apart.
2. Low  $V_p$  and  $V_s$  make the method difficult to impossible in areas of high conductivity.
3. High inductive effect is created by large current dipole.
4. Narrow conductive bodies in conducting environment can sometimes produce false resistivity highs.
5. Not readily amenable to detailed interpretation as to depth of source.

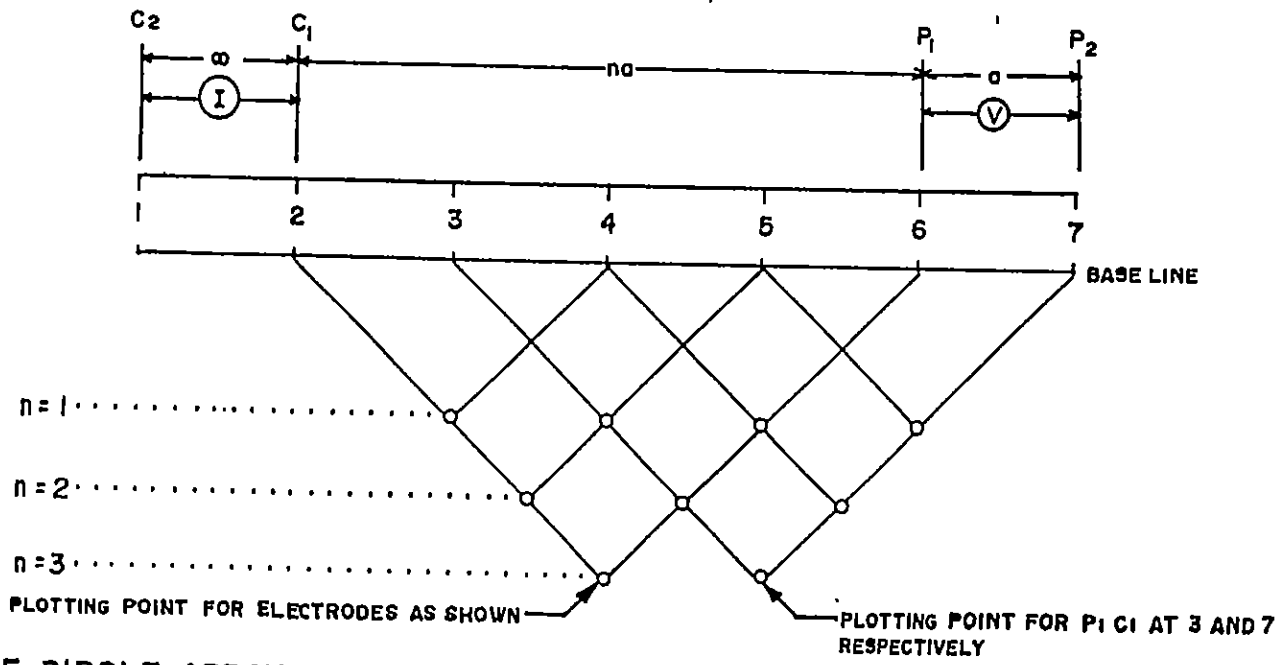
The relative performance of the different arrays in terms of various survey and target parameters is summarized in Table 1.

#### Presentation

Induced Polarization/resistivity data taken with a multi-spaced dipole-dipole array are generally plotted as pseudosections with each measurement plotted at the intersection of a 45° diagonal drawn from the center of the transmitting and receiving dipoles for each value of the separation, as seen in Figure 3. Plotting in this manner builds up a vertical section of data points. The term pseudo-



**DIPOLE DIPOLE ARRAY**



**POLE DIPOLE ARRAY**

Figure 3  
**PLOTTING POINTS FOR VARIOUS ARRAYS**





TABLE 1  
Summary of Array Performance

<u>Characteristic</u>	<u>Dipole-</u> <u>dipole</u>	<u>Pole-</u> <u>dipole</u>	<u>Gradient</u>
Magnitude of response	B	A	C
Dip of source	C	C	A
Overburden penetration	B	A	A
Recognition of overburden irregularities	A	B	B
Freedom from interference of overburden irregularities	B	A	C
Horizontal resolution and location	B	C	A
Depth of Detection	B	A	D
Depth: Interpretability	A	B	C
Freedom from inductive coupling, layered earth	A	B	C
Freedom from inductive coupling, finite inhom- geneties	A	B	D



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section is used because the plotted depth does not represent the actual depth of exploration for that measurement. This actual depth depends on the electrical properties of the ground.

The data presented in the pseudosections is typically contoured at semi-logarithmic intervals ... 1.0, 1.5, 2.0, 3.0, 5.0, 7.5, 10.0 ... rather than at linear intervals because of the large range in the recorded data.

Data taken with a multi-spaced pole-dipole array are also typically plotted in pseudosection form, with the active (moving) current electrode and the midpoint of the potential dipole utilized to form the 45° diagonals.

Note that data taken with several different dipole lengths may be combined and plotted as a composite pseudosection, thereby displaying both shallow and deep anomalies simultaneously. Where overlapping data points are less than fully consistent, contouring (and interpretation) favours the values taken with the shorter dipole.

For the gradient array, resistivity and chargeability values are plotted as profiles at the mid-point of the potential dipole, as shown in Figure 2.

#### Interpretation

Multi-spaced dipole-dipole (or pole-dipole) data enable delineation of the location, depth and properties of a resistivity or chargeability anomaly. Just as the pseudosection plot is not a true depth section, it is also important to bear in mind that the values recorded and plotted are apparent resistivity and chargeability, which are the actual resistivity and chargeability of the ground only if the earth is homogeneous. In the all-important cases of narrow and/or deep targets, the recorded (apparent) values may bear only a slight indication of the intrinsic values of the target. It is a



critical part of the interpretive process to estimate the intrinsic resistivity and chargeability of the causative sources from the apparent values, in addition to determining the geometry and location of the source.

With the gradient array, interpretability as to depth and intrinsic properties is reduced, although repeat surveys with several different dipole lengths can give some qualitative indication of depth.

Additional Remarks

The detectability of a conductive and/or polarizable body with IP is a function of its size and intrinsic electrical properties vis-a-vis the size and type of electrode array. Hence, targets that are very small or deep (relative to the scale of the electrode array) may be undetectable. Consequently, multiple coverage with several different arrays may be required to define shallow, narrow sources and to detect larger targets at depth.

Since IP and resistivity are techniques that reflect the averaged response of a volume of rock, resolution is a function of the array type and size. Typically, with the dipole-dipole array, two conductors or two polarizable sources separated by less than a dipole length cannot be resolved as individual responses.

Geologic sources that yield low resistivities are fairly numerous and include: connected zones of sulphides and graphite; clays and other water-saturated unconsolidated materials; intense hydrothermal alteration; and fault gouge.

Sources of IP anomalies are more restricted. They include: most metallic sulphides, graphite, some oxides and to a lesser extent, clays and zeolites. Under favourable conditions, targets or formations containing a few tenths of a per cent sulphides are detectable.



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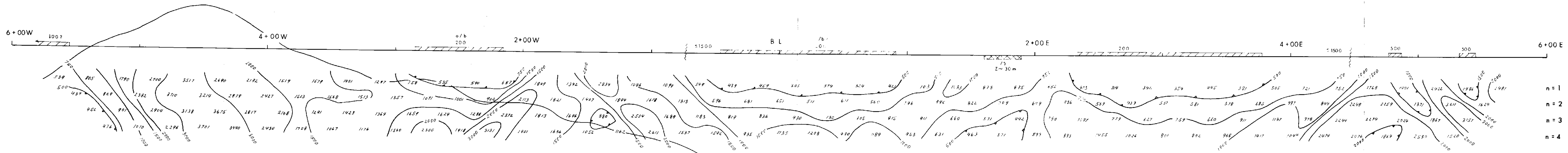
Finally, polarizable targets that are very highly resistive or very conductive may yield nil or negligible IP responses. In the former case, no current can flow through the rock mass. In the latter case, the conductor acts as a dead short, so that virtually no secondary decay voltage is observed.

Despite the complexity of survey procedures and interpretation, IP has demonstrated excellent effectiveness in exploration for various types of sulphide-bearing ore deposits in the 30 years since its original implementation. More recently, following the discovery of the Hemlo gold deposits, increasing use has been made of IP in exploration for gold.



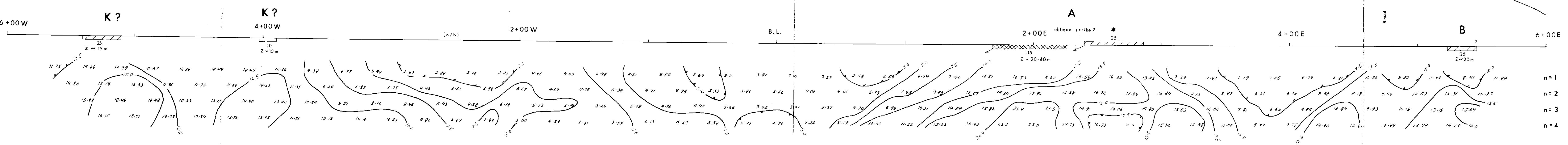
**Appendix VIc**

**FIGURES P1-P17 - PSEUDOSECTIONS**



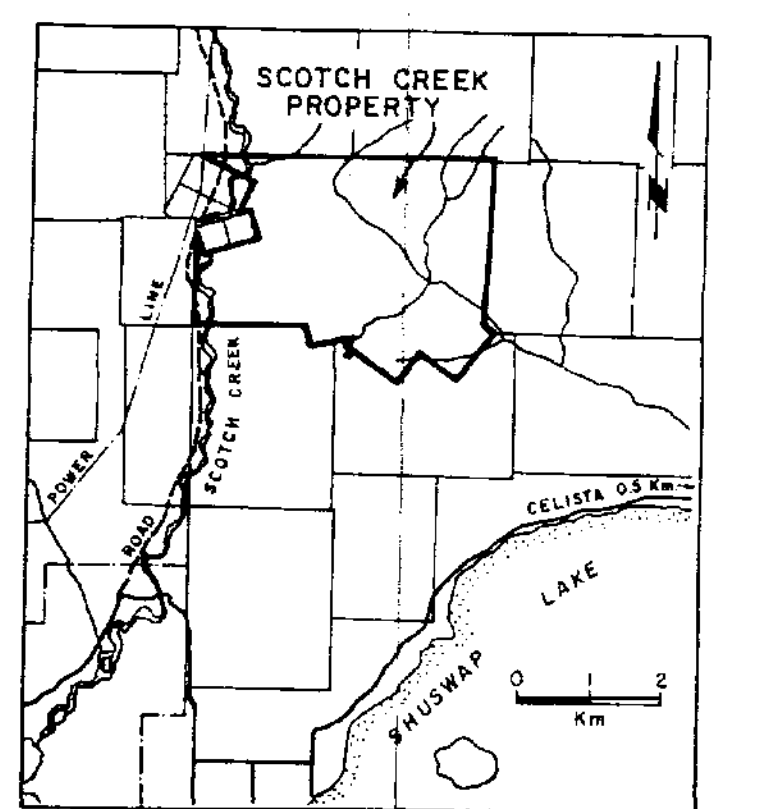
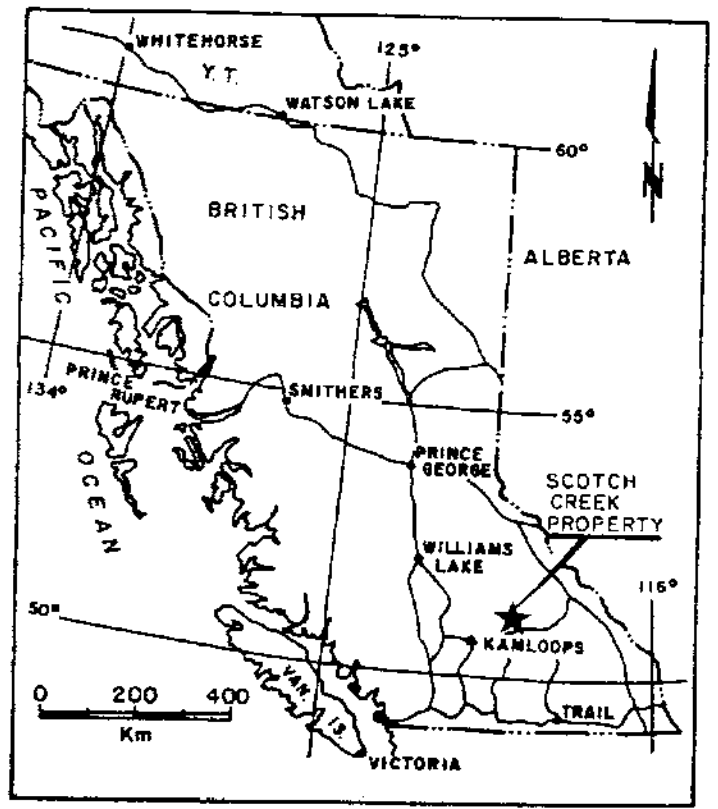
n = 1  
n = 2  
n = 3  
n = 4

RESISTIVITY  
( $\Omega$  - metres)



n = 1  
n = 2  
n = 3  
n = 4

TOTAL CHARGEABILITY  
(ms)



**LEGEND**

TRANSMITTER HUNTEC 2.5 kw  
RECEIVER HUNTEC MK IV  
DIPOLE DIPOLE ARRAY  
a = 25 m n = 1, 2, 3, 4

RESISTIVITY LOWS ( $\Omega$ m.m) Limits Undefined

RESISTIVITY LOW AT SURFACE ESTIMATED INTRINSIC RESISTIVITY ( $\Omega$ m.m)

RESISTIVITY LOW AT DEPTH ESTIMATED INTRINSIC RESISTIVITY ( $\Omega$ m.m)  
 Z ~ 10 ESTIMATED DEPTH (m)

CHARGEABILITY HIGHS (ms) Limits Undefined

CHARGEABILITY HIGH AT SURFACE \* CORRESPONDING RESISTIVITY LOW ESTIMATED INTRINSIC CHARGEABILITY (ms)  
 ESTIMATED DIP

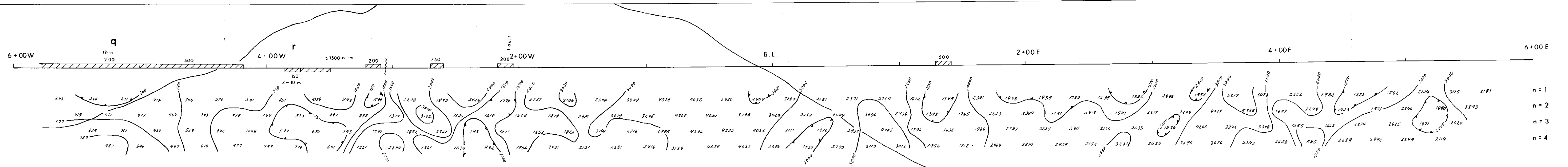
CHARGEABILITY HIGH AT DEPTH ESTIMATED INTRINSIC CHARGEABILITY (ms)  
 Z ~ 20 ESTIMATED DEPTH (m)

PART 2 OF 4  
**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

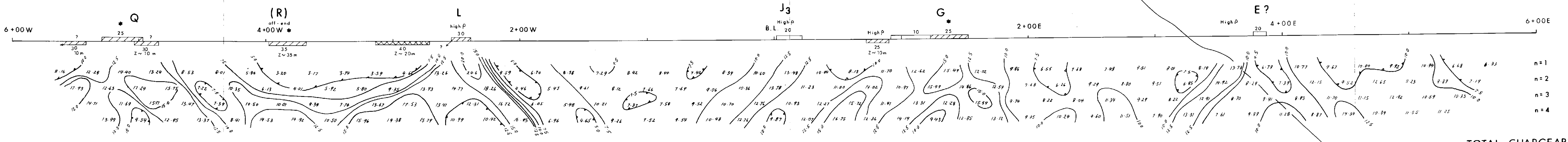
16,191



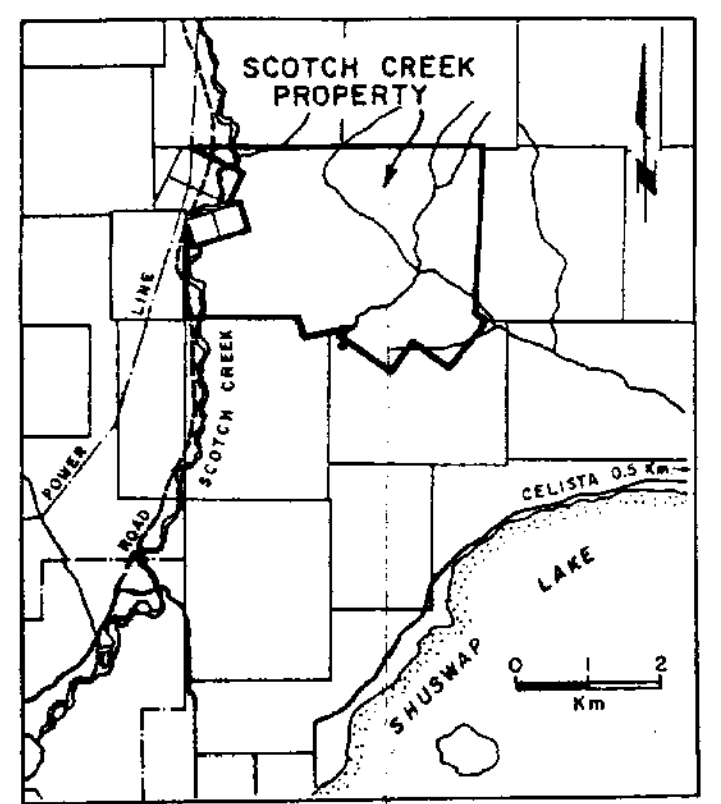
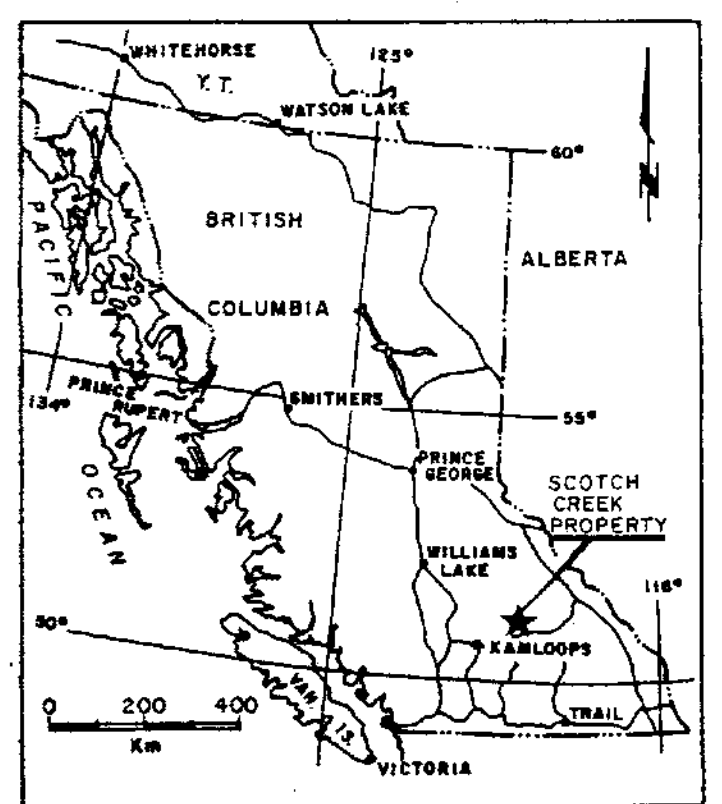
NEXUS RESOURCE CORPORATION	
INDUCED POLARIZATION SURVEY HUNTEC MK IV DIPOLE-DIPOLE LINE 2+00N SCOTCH CREEK PROJECT	
Project No: V 237	By: J.R.
Scale: 1:1250	Drawn: J.S.
Drawing No: PI	Date: FEBRUARY 1987.



RESISTIVITY  
( $\Omega$  - metres)



TOTAL CHARGEABILITY  
(ms)



**LEGEND**

TRANSMITTER HUNTEC 2.5 kw  
RECEIVER HUNTEC Mk IV

DIPOLE DIPOLE ARRAY  
 $a = 25m$   $n = 1, 2, 3, 4$

RESISTIVITY LOWS ( $\Omega m \cdot m$ )  
Limits Undefined  
< 10 10-100 100-1000 1000

RESISTIVITY LOW AT SURFACE ESTIMATED INTRINSIC RESISTIVITY ( $\Omega m \cdot m$ )

RESISTIVITY LOW AT DEPTH ESTIMATED INTRINSIC RESISTIVITY ( $\Omega m \cdot m$ )  
 $Z \sim 10$  ESTIMATED DEPTH (m)

CHARGEABILITY HIGHS (ms)  
Limits Undefined  
> 50 30 20 10

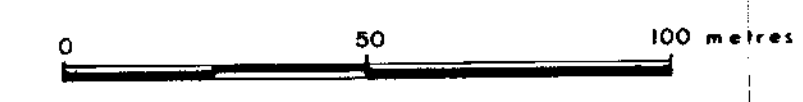
CHARGEABILITY HIGH AT SURFACE ESTIMATED INTRINSIC CHARGEABILITY (ms)  
ESTIMATED DIP

CHARGEABILITY HIGH AT DEPTH ESTIMATED INTRINSIC CHARGEABILITY (ms)  
 $Z \sim 20$  ESTIMATED DEPTH (m)

{ - FAULT or CONTACT  
 O/B - OVERBURDEN  
 C? - cultural source  
 A,B - CHARGEABILITY ZONES

PART 2 OF 4  
GEOLOGICAL BRANCH  
ASSESSMENT REPORT

16,191

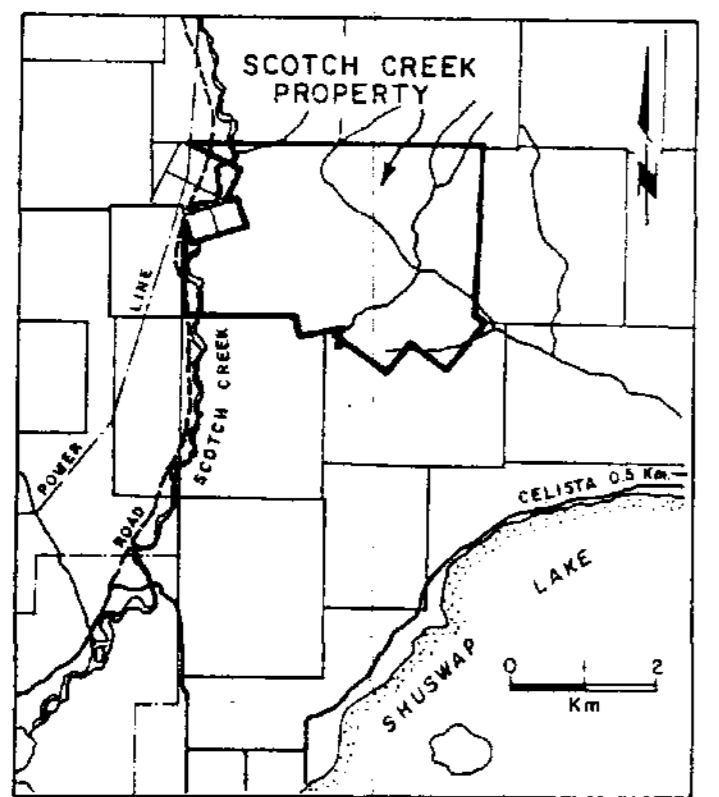
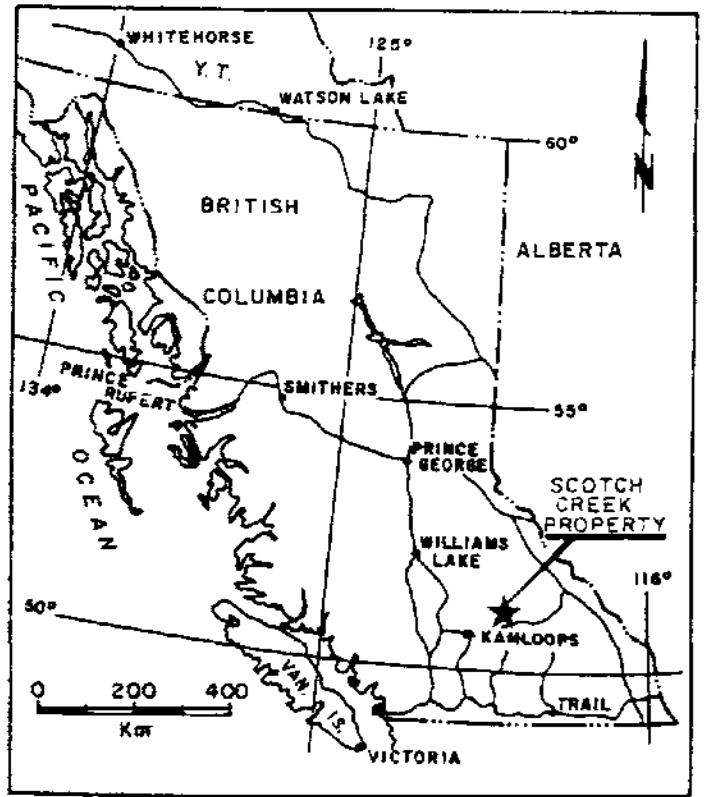
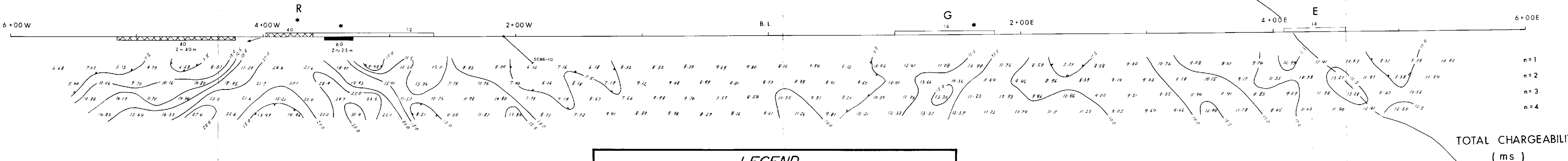
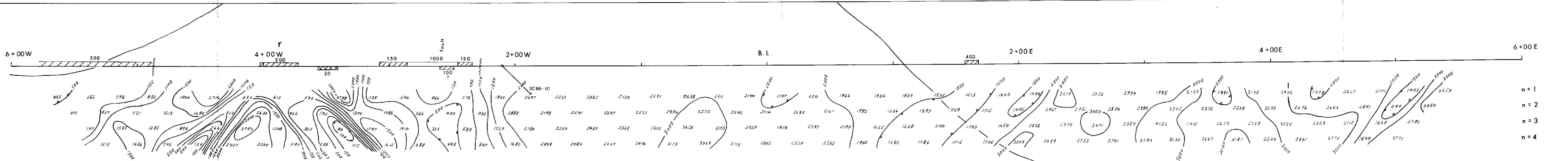


NEXUS RESOURCE CORPORATION

INDUCED POLARIZATION SURVEY  
HUNTEC MK IV DIPOLE-DIPOLE  
LINE 4+00 S  
SCOTCH CREEK PROJECT

Project No: V 237	By: J. R.
Scale: 1 : 1250	Drawn: J. S.
Drawing No: PIO	Date: FEBRUARY 1987.

**MPH** MPH Consulting Limited



### LEGEND

TRANSMITTER: HUNTEC 2.5 kW  
 RECEIVER: HUNTEC MK IX  
 DIPOLE DIPOLE ARRAY  
 $a = 25\text{ m}$   $n = 1, 2, 3, 4$

RESISTIVITY LOWS ( $\Omega\text{-m}$ ) Limits Undefined  
 < 10 10-100 100-1000 1000

RESISTIVITY LOW AT SURFACE 100 ESTIMATED INTRINSIC RESISTIVITY ( $\Omega\text{-m}$ )  
 RESISTIVITY LOW AT DEPTH 70 ESTIMATED INTRINSIC RESISTIVITY ( $\Omega\text{-m}$ )  
 $Z \sim 10$  ESTIMATED DEPTH (m)

CHARGEABILITY HIGHS (ms) Limits Undefined  
 > 50 30 20 10

CHARGEABILITY HIGH AT SURFACE 30 ESTIMATED INTRINSIC CHARGEABILITY (ms)  
 CHARGEABILITY HIGH AT DEPTH 40 ESTIMATED INTRINSIC CHARGEABILITY (ms)  
 $Z \sim 20$  ESTIMATED DEPTH (m)

{ - FAULT or CONTACT  
 O/B OVERBURDEN  
 C? cultural source  
 A,B - CHARGEABILITY ZONES

\* CORRESPONDING RESISTIVITY LOW  
 ESTIMATED DIP

PART 2 OF 4  
GEOLOGICAL BRANCH  
ASSESSMENT REPORT

# 16,191



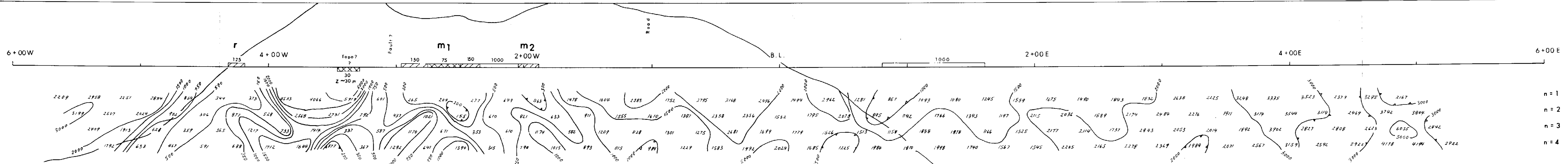
NEXUS RESOURCE CORPORATION

INDUCED POLARIZATION SURVEY  
HUNTEC MK IX DIPOLE-DIPOLE  
LINE 5+00S  
SCOTCH CREEK PROJECT

Project No: V 237	By: J. R.
Scale: 1:1250	Drawn: J.S.
Drawing No: P11	Date: FEBRUARY 1987

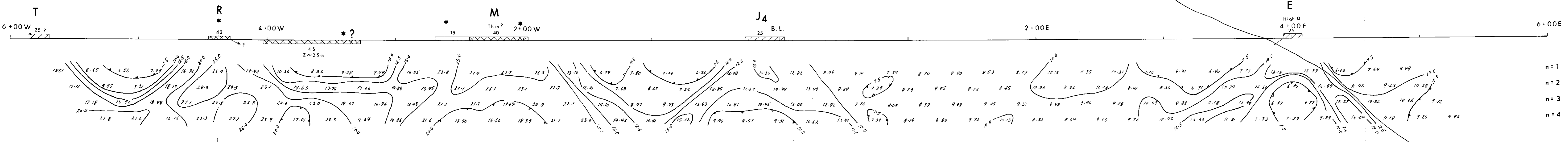
MPH Consulting Limited





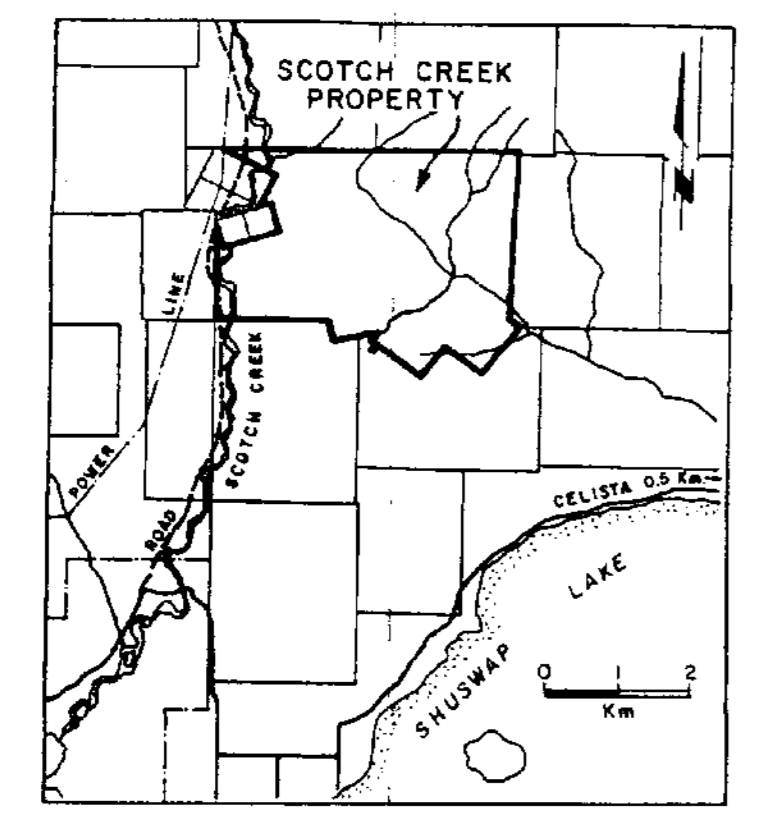
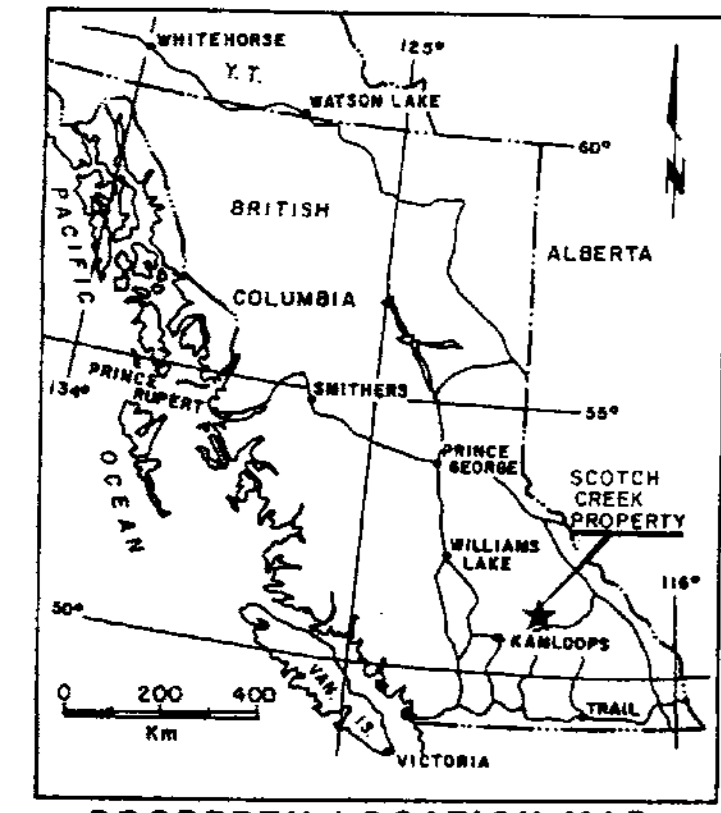
n = 1  
n = 2  
n = 3  
n = 4

RESISTIVITY  
( $\Omega$  - metres)



n = 1  
n = 2  
n = 3  
n = 4

TOTAL CHARGEABILITY  
(ms)



### LEGEND

TRANSMITTER HUNTEC 2.5 kW  
RECEIVER HUNTEC MK III

DIPOLE DIPOLE ARRAY  
 $a = 25\text{m}$   $n = 1, 2, 3, 4$

RESISTIVITY LOWS ( $\Omega\text{m}\cdot\text{m}$ )

RESISTIVITY AT SURFACE:  $< 10$  10-100 100-1000 1000

RESISTIVITY AT DEPTH: 70 ESTIMATED INTRINSIC RESISTIVITY ( $\Omega\text{m}\cdot\text{m}$ )

ESTIMATED DEPTH (m):  $Z \sim 10$

CHARGEABILITY HIGHS (ms)

CHARGEABILITY AT SURFACE:  $> 50$  30 20 10

CHARGEABILITY AT DEPTH: 40 ESTIMATED INTRINSIC CHARGEABILITY (ms)

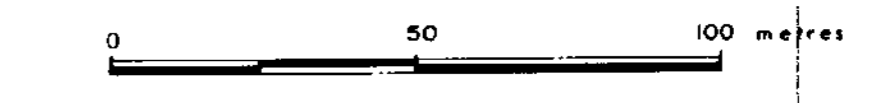
ESTIMATED DEPTH (m):  $Z \sim 20$

--- FAULT or CONTACT  
O/B - OVERBURDEN  
c? - cultural source  
A,B - CHARGEABILITY ZONES

\* CORRESPONDING RESISTIVITY LOW ESTIMATED INTRINSIC CHARGEABILITY (ms)

PART 2 OF 4  
GEOLOGICAL BRANCH  
ASSESSMENT REPORT

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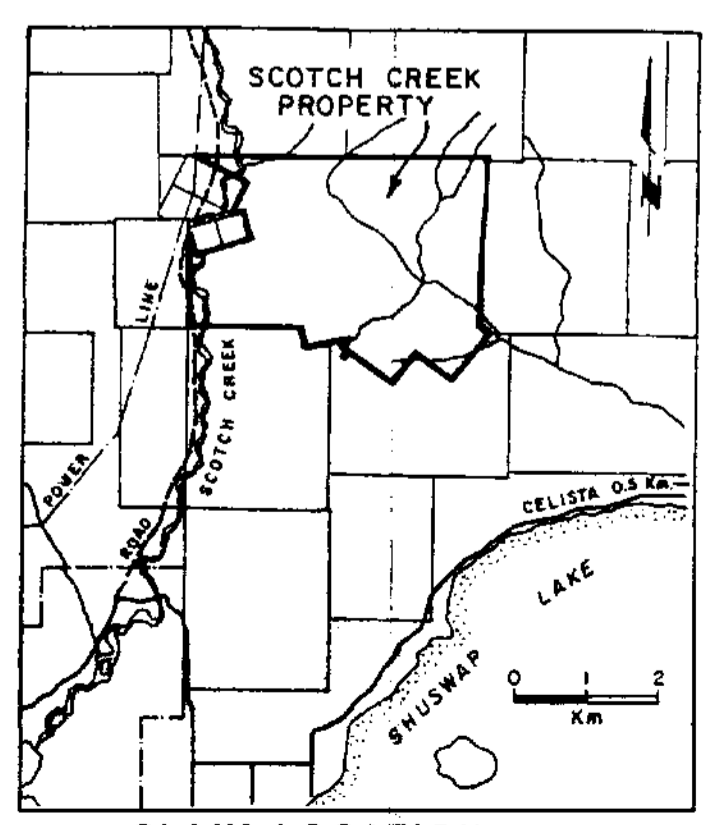
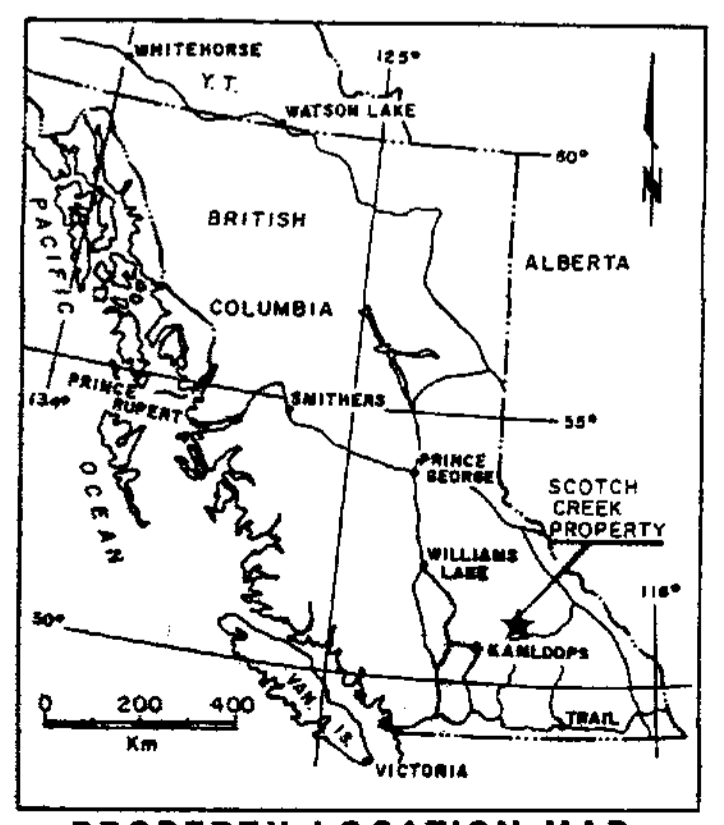
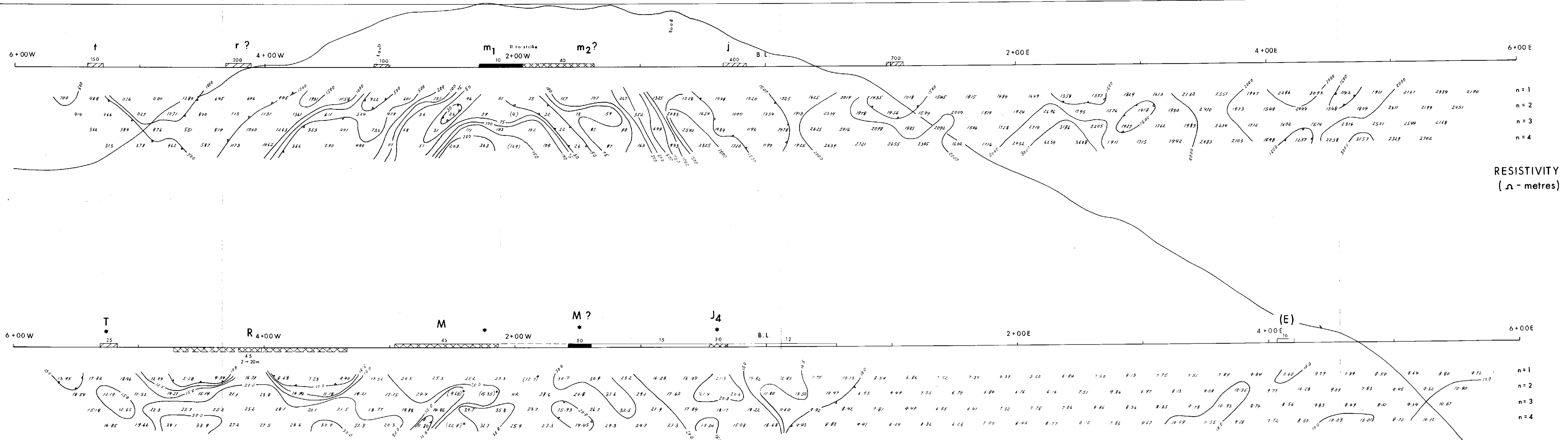


NEXUS RESOURCE CORPORATION

INDUCED POLARIZATION SURVEY  
HUNTEC MK III DIPOLE-DIPOLE  
LINE 6+00S  
SCOTCH CREEK PROJECT

Project No: V 237	By: J. R.
Scale: 1:1250	Drawn: J. S.
Drawing No: P12	Date: FEBRUARY 1987

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**LEGEND**

TRANSMITTER: HUNTEC 2.5 kW  
 RECEIVER: HUNTEC Mk IV

DIPOLE DIPOLE ARRAY  
 $a = 25\text{m}$   $n = 1, 2, 3, 4$

RESISTIVITY LOWS ( $\Omega\text{-m}$ )

RESISTIVITY LOW AT SURFACE: ESTIMATED INTRINSIC RESISTIVITY ( $\Omega\text{-m}$ )

RESISTIVITY LOW AT DEPTH: ESTIMATED INTRINSIC RESISTIVITY ( $\Omega\text{-m}$ )

CHARGEABILITY HIGHS (ms)

CHARGEABILITY HIGH AT SURFACE: \* CORRESPONDING RESISTIVITY LOW ESTIMATED INTRINSIC CHARGEABILITY (ms)

CHARGEABILITY HIGH AT DEPTH: ESTIMATED DIP

RESISTIVITY LOWS: Limits Undefined

CHARGEABILITY HIGHS: Limits Undefined

RESISTIVITY LOW AT SURFACE: 2-10 ESTIMATED DEPTH (m)

CHARGEABILITY HIGH AT DEPTH: 2-20 ESTIMATED DEPTH (m)

--- FAULT or CONTACT  
 O/B - OVERBURDEN  
 a? - cultural source  
 A,B - CHARGEABILITY ZONES

PART 2 OF 4  
 GEOLOGICAL BRANCH  
 ASSESSMENT REPORT

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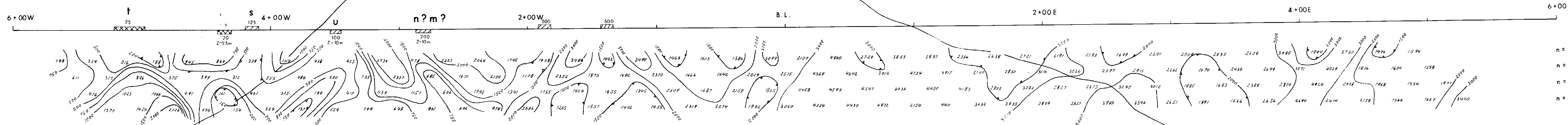
0 50 100 metres

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**INDUCED POLARIZATION SURVEY**  
 HUNTEC MK IV DIPOLE-DIPOLE  
 LINE 7+00 S  
 SCOTCH CREEK PROJECT

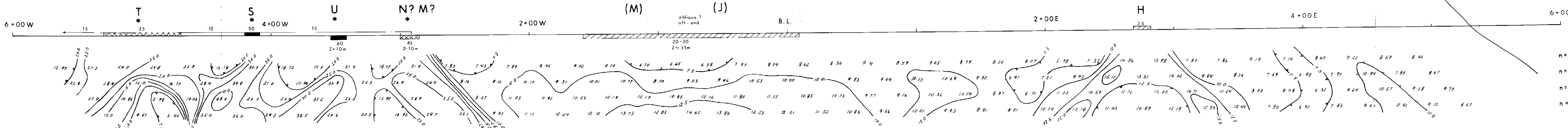
Project No: V 237	By: J. R.
Scale: 1:1250	Drawn: J. S.
Drawing No: P13	Date: FEBRUARY 1987.

**MPH Consulting Limited**



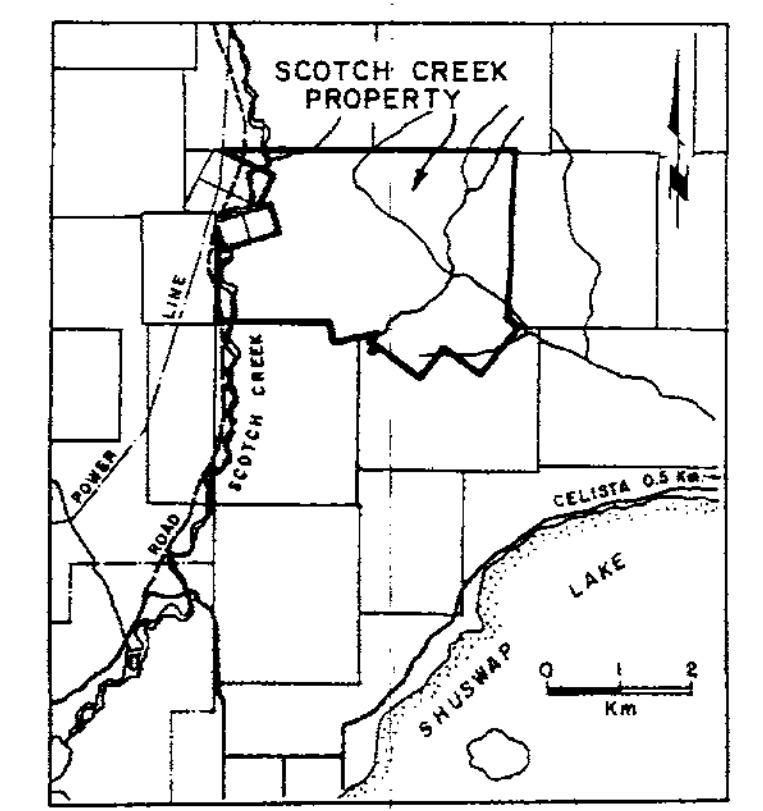
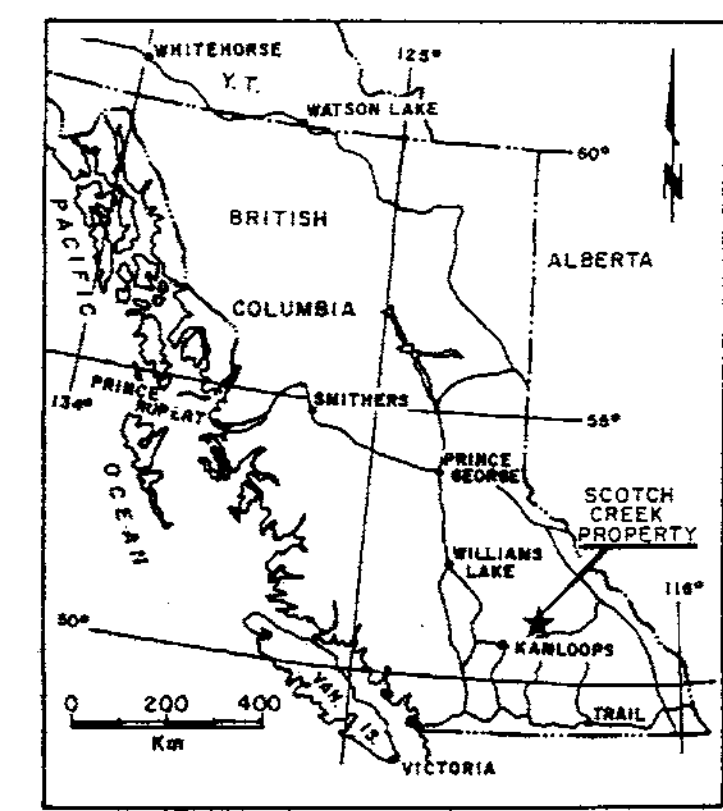
n = 1  
n = 2  
n = 3  
n = 4

RESISTIVITY  
( $\Omega$  - metres)



n = 1  
n = 2  
n = 3  
n = 4

TOTAL CHARGEABILITY  
(ms)



### LEGEND

TRANSMITTER: HUNTEC 2.5 kw  
RECEIVER: HUNTEC Mk IV

DIPOLE DIPOLE ARRAY  
a = 25m n = 1,2,3,4

RESISTIVITY LOWS ( $\Omega$ m.m)

RESISTIVITY LOW AT SURFACE:  $\frac{100}{\text{RESISTIVITY } (\Omega\text{m.m})}$

RESISTIVITY LOW AT DEPTH:  $\frac{70}{\text{RESISTIVITY } (\Omega\text{m.m})}$

ESTIMATED INTRINSIC RESISTIVITY ( $\Omega$ m.m)

Z=10 ESTIMATED DEPTH (m)

CHARGEABILITY HIGHS (ms)

CHARGEABILITY HIGH AT SURFACE:  $\frac{30}{\text{CHARGEABILITY (ms)}}$

CHARGEABILITY HIGH AT DEPTH:  $\frac{40}{\text{CHARGEABILITY (ms)}}$

ESTIMATED INTRINSIC CHARGEABILITY (ms)

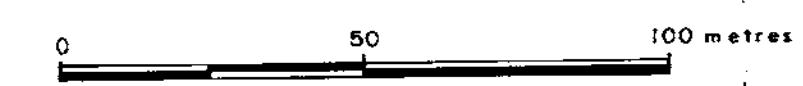
Z=20 ESTIMATED DEPTH (m)

— FAULT or CONTACT  
O/B - OVERBURDEN  
c? - cultural source  
A,B - CHARGEABILITY ZONES

\* CORRESPONDING RESISTIVITY LOW ESTIMATED INTRINSIC CHARGEABILITY (ms)

PART 2 OF 4  
GEOLOGICAL BRANCH  
ASSESSMENT REPORT

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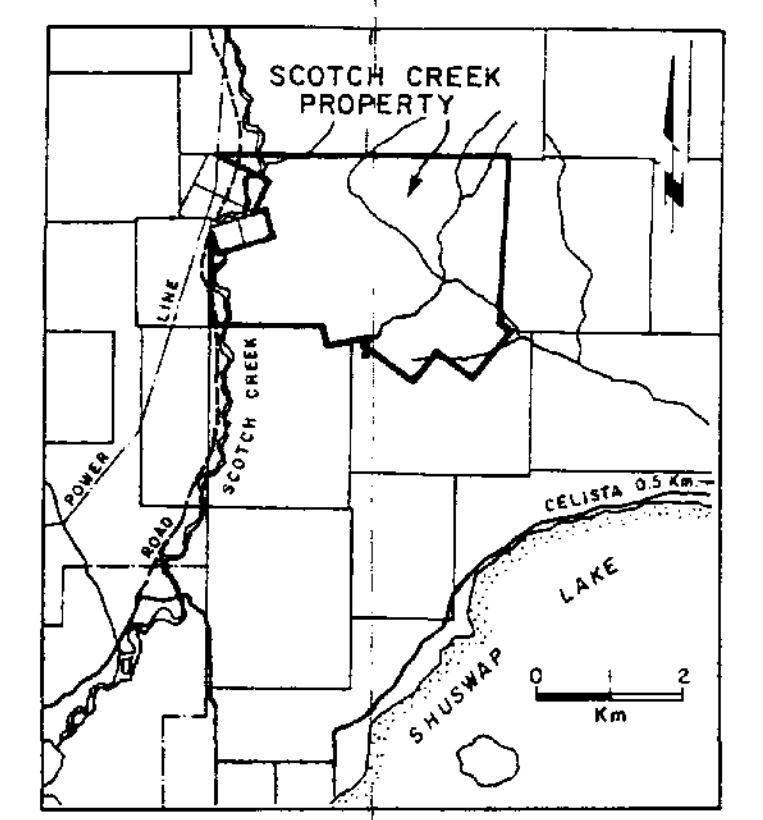
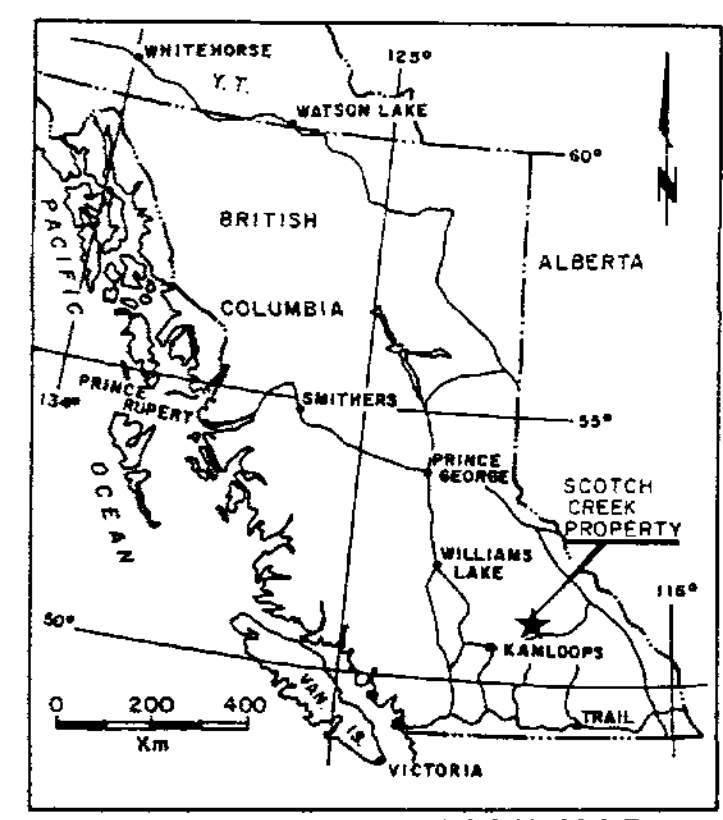
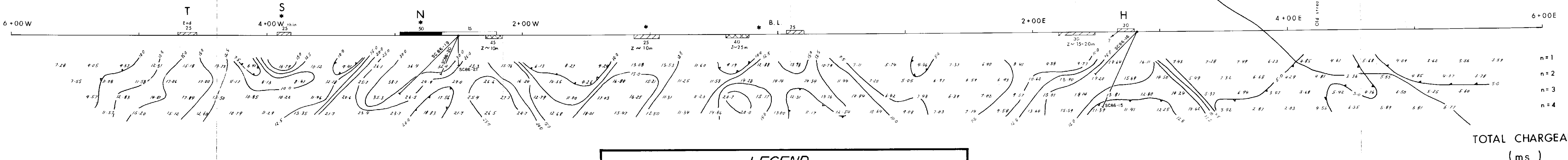
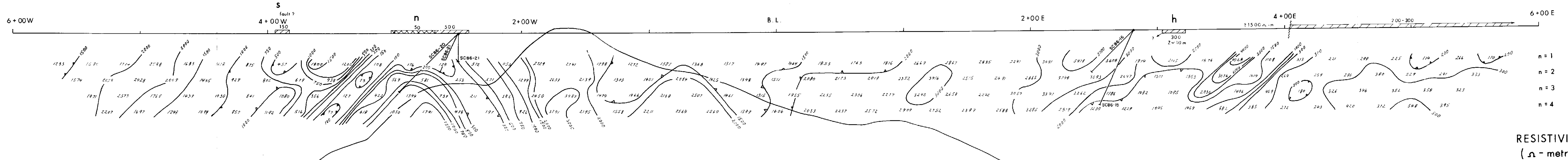


NEXUS RESOURCE CORPORATION

INDUCED POLARIZATION SURVEY  
HUNTEC MK IV DIPOLE-DIPOLE  
LINE 8 + 00 S  
SCOTCH CREEK PROJECT

Project No: V 237	By: J. R.
Scale: 1:1250	Drawn: J. S.
Drawing No: P14	Date: FEBRUARY 1987.

MPH Consulting Limited



**LEGEND**

TRANSMITTER: HUNTEC 2.5 kw  
 RECEIVER: HUNTEC Mk IV  
 DIPOLE DIPOLE ARRAY  
 a = 25 m n = 1,2,3,4

**RESISTIVITY LOWS (ohm.m)**  
 < 10 10-100 100-1000 1000 Limits Undefined

**CHARGEABILITY HIGHS (ms)**  
 > 50 30 20 10 Limits Undefined

RESISTIVITY LOW AT SURFACE ESTIMATED INTRINSIC RESISTIVITY (ohm.m)  
 100

CHARGEABILITY HIGH AT SURFACE ESTIMATED INTRINSIC CHARGEABILITY (ms)  
 30

RESISTIVITY LOW AT DEPTH ESTIMATED INTRINSIC RESISTIVITY (ohm.m)  
 70

CHARGEABILITY HIGH AT DEPTH ESTIMATED INTRINSIC CHARGEABILITY (ms)  
 40

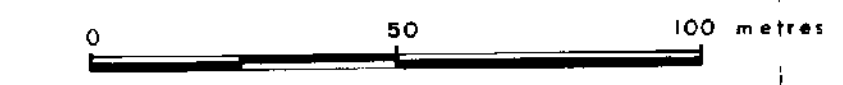
2 ~ 10 ESTIMATED DEPTH (m)      2 ~ 20 ESTIMATED DEPTH (m)

— FAULT or CONTACT  
 O/B - OVERBURDEN  
 ? - cultural source  
 A,B - CHARGEABILITY ZONES

\* CORRESPONDING RESISTIVITY LOW ESTIMATED INTRINSIC CHARGEABILITY (ms)  
 ESTIMATED DIP

PART 2 OF 4  
 GEOLOGICAL BRANCH  
 ASSESSMENT REPORT

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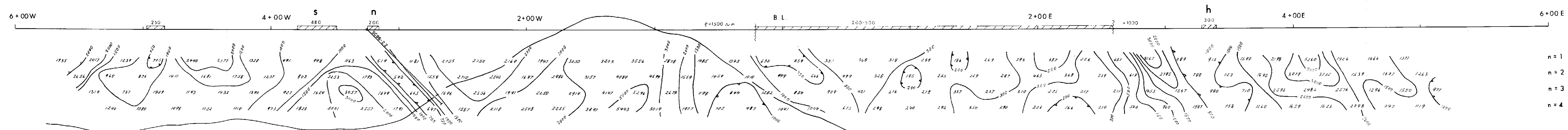


NEXUS RESOURCE CORPORATION

INDUCED POLARIZATION SURVEY  
 HUNTEC MK IV DIPOLE-DIPOLE  
 LINE 9 + 00 S  
 SCOTCH CREEK PROJECT

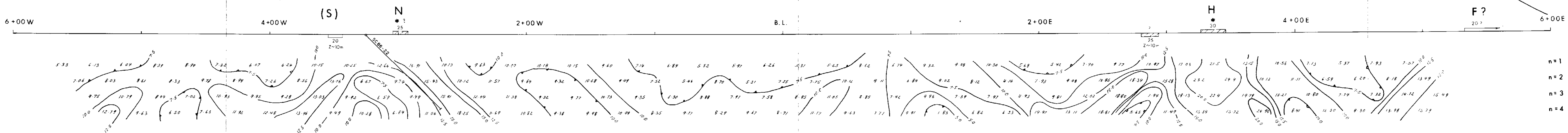
Project No: V 237	By: J. R.
Scale: 1:1250	Drawn: J. S.
Drawing No: P15	Date: FEBRUARY 1987

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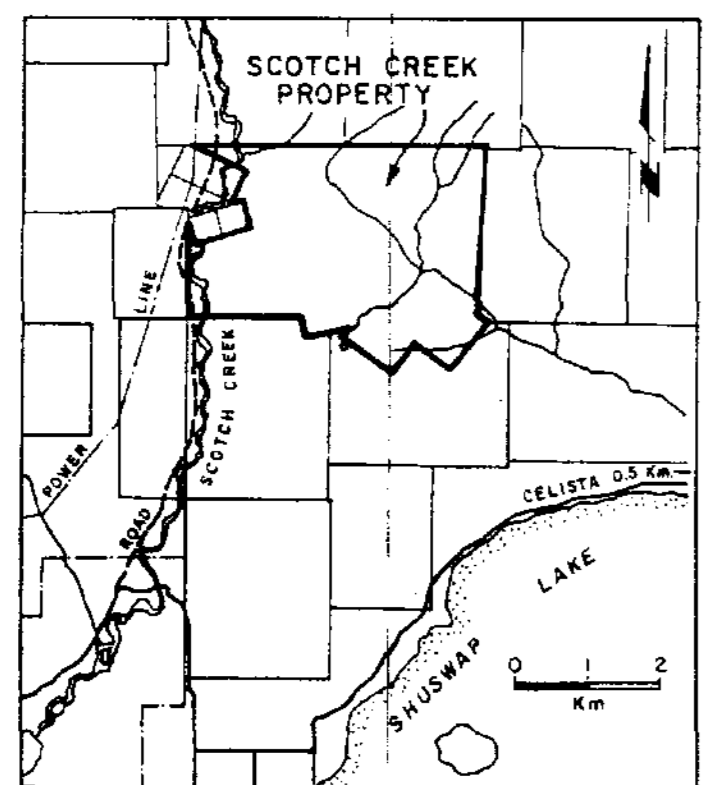
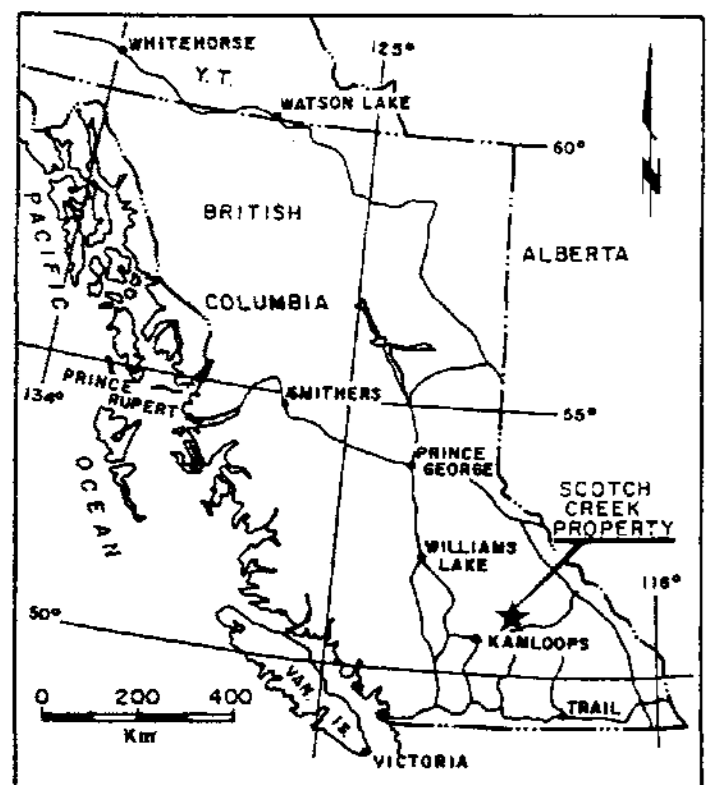
n = 1  
n = 2  
n = 3  
n = 4

RESISTIVITY  
( $\Omega$  - metres)



n = 1  
n = 2  
n = 3  
n = 4

TOTAL CHARGEABILITY  
(ms)



LEGEND

TRANSMITTER HUNTEC 2.5 kw  
RECEIVER HUNTEC Mk IX  
DIPOLE DIPOLE ARRAY  
 $a = 25m$   $n = 1, 2, 3, 4$

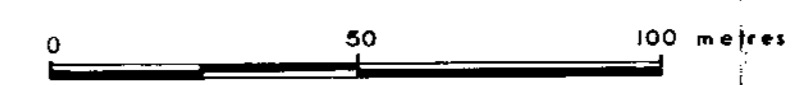
RESISTIVITY LOWS ( $\Omega m \cdot m$ )  
Limits Unrefined  
RESISTIVITY LOW AT SURFACE ESTIMATED INTRINSIC RESISTIVITY ( $\Omega m \cdot m$ )  
RESISTIVITY LOW AT DEPTH ESTIMATED INTRINSIC RESISTIVITY ( $\Omega m \cdot m$ )  
Z=10 ESTIMATED DEPTH (m)

CHARGEABILITY HIGHS (ms)  
Limits Unrefined  
CHARGEABILITY HIGH AT SURFACE \* CORRESPONDING RESISTIVITY LOW ESTIMATED INTRINSIC CHARGEABILITY (ms) ESTIMATED DIP  
CHARGEABILITY HIGH AT DEPTH \* CORRESPONDING RESISTIVITY LOW ESTIMATED INTRINSIC CHARGEABILITY (ms) ESTIMATED DIP  
Z=20 ESTIMATED DEPTH (m)

- FAULT or CONTACT  
O/B - OVERBURDEN  
c? - cultural source  
A,B - CHARGEABILITY ZONES

PART 2 OF 4  
GEOLOGICAL BRANCH  
ASSESSMENT REPORT

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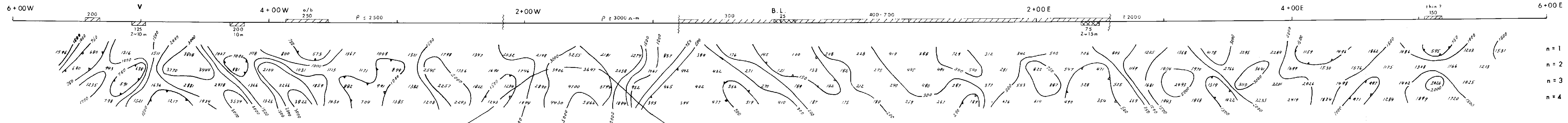


NEXUS RESOURCE CORPORATION

INDUCED POLARIZATION SURVEY  
HUNTEC MK IX DIPOLE-DIPOLE  
LINE 10+00S  
SCOTCH CREEK PROJECT

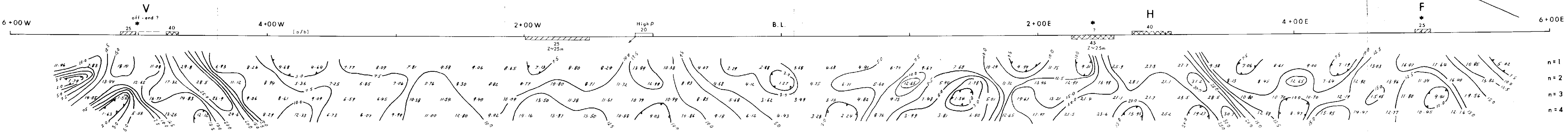
Project No: V 237 By: J. R.  
Scale: 1:1250 Drawn: J. S.  
Drawing No: P16 Date: FEBRUARY 1987

MPH MPH Consulting Limited



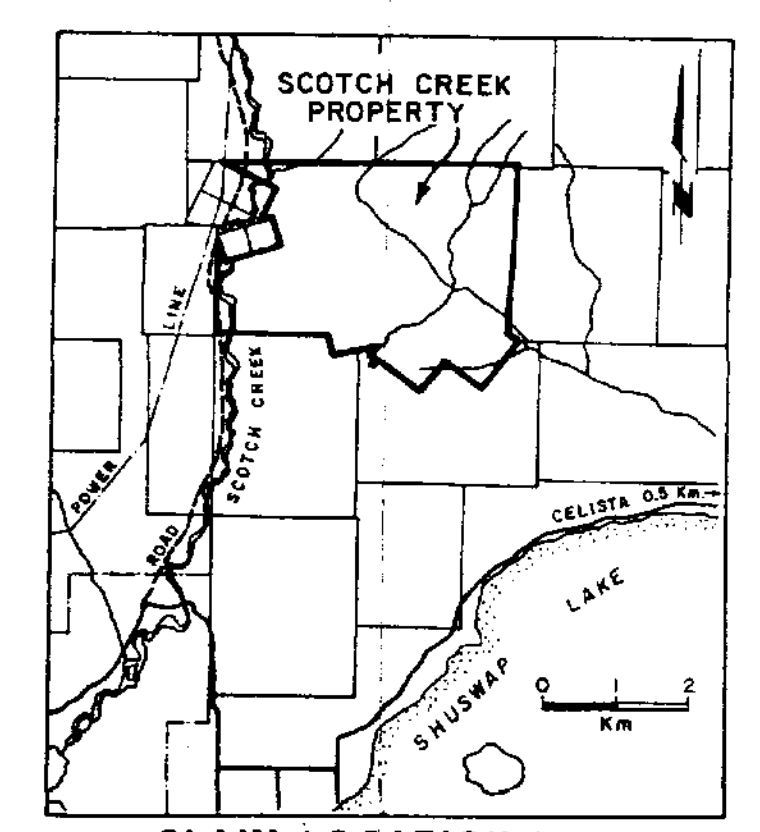
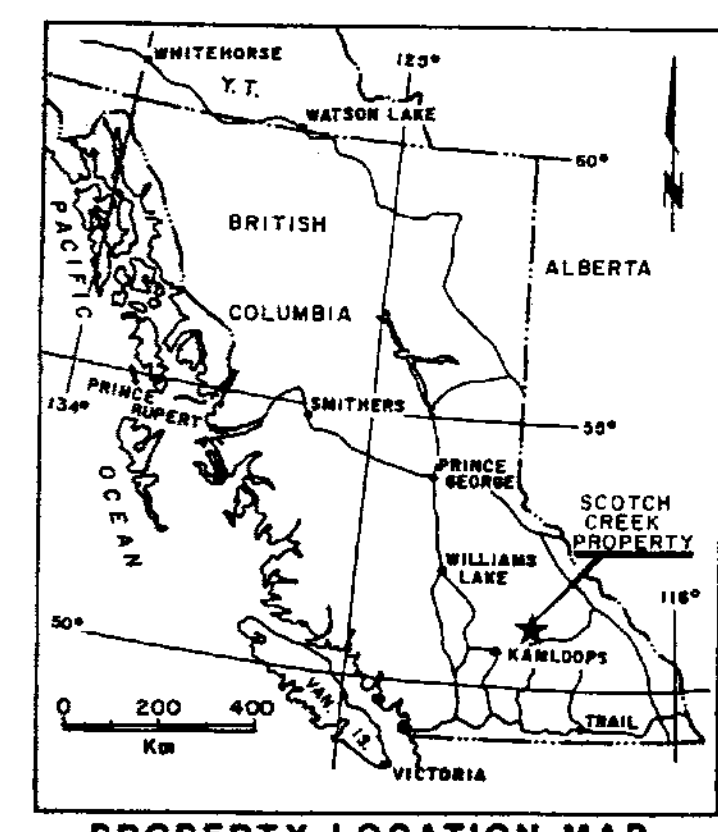
n = 1  
n = 2  
n = 3  
n = 4

RESISTIVITY  
( $\Omega$  - metres)



n = 1  
n = 2  
n = 3  
n = 4

TOTAL CHARGEABILITY  
(ms)

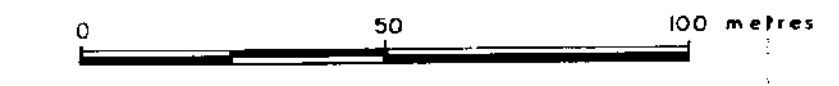


### LEGEND

<p>TRANSMITTER: HUNTEC 2.5 kw</p> <p>RECEIVER: HUNTEC Mk IV</p> <p>DIPOLE DIPOLE ARRAY a = 25m n = 1,2,3,4</p> <p>RESISTIVITY LOWS (ohm.m) → Limits Undefined  </p> <p>RESISTIVITY LOW AT SURFACE ESTIMATED INTRINSIC RESISTIVITY (ohm.m)  </p> <p>RESISTIVITY LOW AT DEPTH ESTIMATED INTRINSIC RESISTIVITY (ohm.m)  </p> <p style="text-align: center;">Z ~ 10 ESTIMATED DEPTH (m)</p>	<p>— FAULT or CONTACT</p> <p>O/B - OVERBURDEN</p> <p>c? - cultural source</p> <p>A,B - CHARGEABILITY ZONES</p> <p>CHARGEABILITY HIGHS (ms) → Limits Undefined  </p> <p>CHARGEABILITY HIGH AT SURFACE ESTIMATED INTRINSIC CHARGEABILITY (ms)  </p> <p>CHARGEABILITY HIGH AT DEPTH ESTIMATED INTRINSIC CHARGEABILITY (ms)  </p> <p style="text-align: center;">Z ~ 20 ESTIMATED DEPTH (m)</p>
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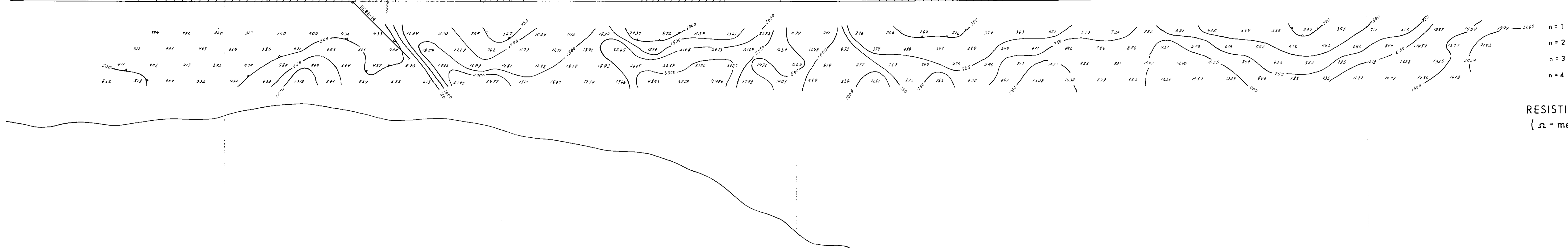
PART 2 OF 4  
GEOLOGICAL BRANCH  
ASSESSMENT REPORT

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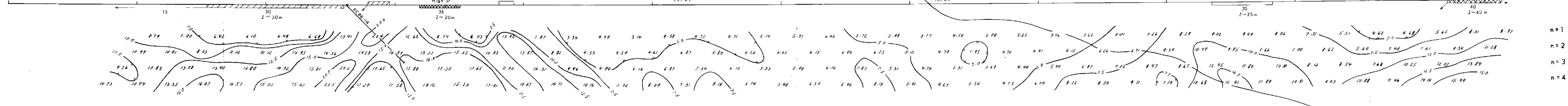
NEXUS RESOURCE CORPORATION	
INDUCED POLARIZATION SURVEY HUNTEC MK IV DIPOLE-DIPOLE LINE 11+00S SCOTCH CREEK PROJECT	
Project No: V 237	By: J.R.
Scale: 1:1250	Drawn: J.S.
Drawing No: P17	Date: FEBRUARY 1987
MPH Consulting Limited	

6+00W 4+00W 2+00W B.L. 2+00E 4+00E 6+00E

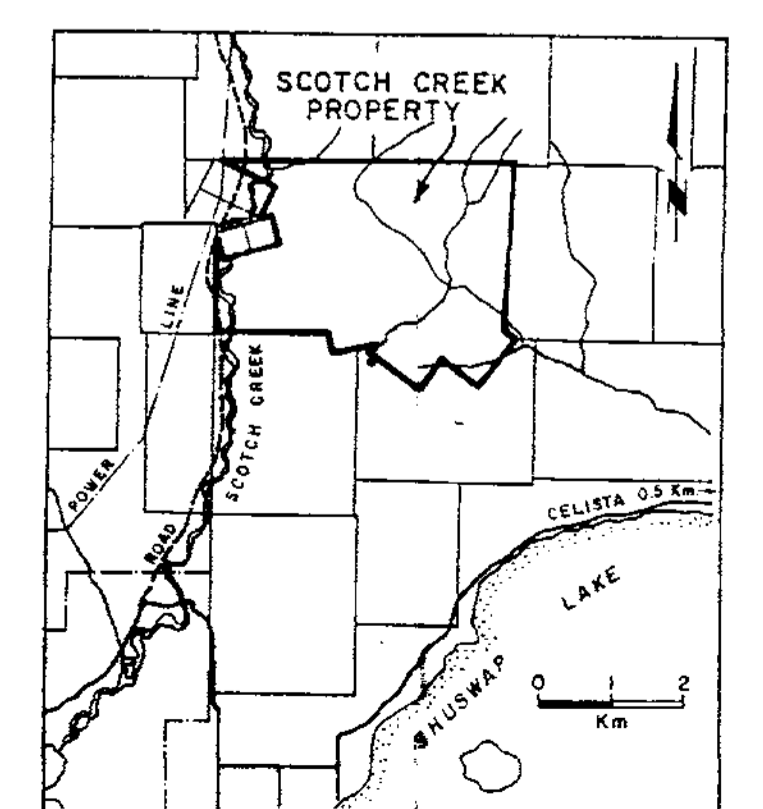


RESISTIVITY  
( $\rho$  - metres)

6+00W 4+00W 2+00W B.L. 2+00E 4+00E 6+00E



TOTAL CHARGEABILITY  
(ms)



### LEGEND

TRANSMITTER HUNTEC 2.5 kw  
RECEIVER HUNTEC MK IV  
DIPOLE DIPOLE ARRAY  
a = 25m n = 1,2,3,4

RESISTIVITY LOWS (ohm-m) Limits Undefined

RESISTIVITY LOW AT SURFACE ESTIMATED INTRINSIC RESISTIVITY (ohm-m)

RESISTIVITY LOW AT DEPTH ESTIMATED INTRINSIC RESISTIVITY (ohm-m)  
 z = 10 ESTIMATED DEPTH (m)

CHARGEABILITY HIGHS (ms) Limits Undefined

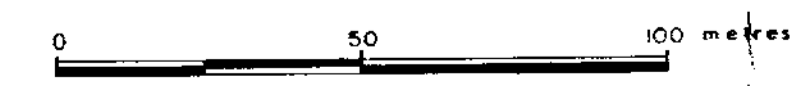
CHARGEABILITY HIGH AT SURFACE CORRESPONDING RESISTIVITY LOW ESTIMATED INTRINSIC CHARGEABILITY (ms)  
 ESTIMATED DIP

CHARGEABILITY HIGH AT DEPTH ESTIMATED INTRINSIC CHARGEABILITY (ms)  
 z = 20 ESTIMATED DEPTH (m)

--- FAULT or CONTACT  
 o/b - OVERBURDEN  
 c? - cultural source  
 A,B - CHARGEABILITY ZONES

PART 2 OF 4  
GEOLOGICAL BRANCH  
ASSESSMENT REPORT

# 16,191

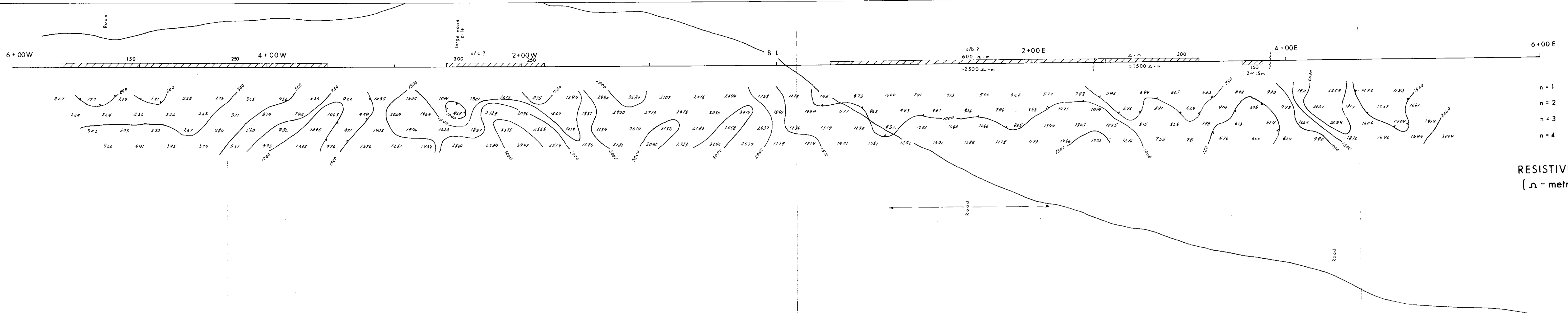


NEXUS RESOURCE CORPORATION

INDUCED POLARIZATION SURVEY  
HUNTEC MK IV DIPOLE-DIPOLE  
LINE 1+00N  
SCOTCH CREEK PROJECT

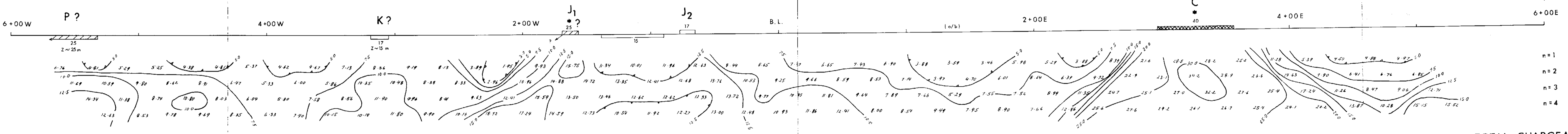
Project No. V 237	By J.R.
Scale: 1:1250	Drawn: J.S.
Drawing No. P2	Date: FEBRUARY 1987

MPH Consulting Limited



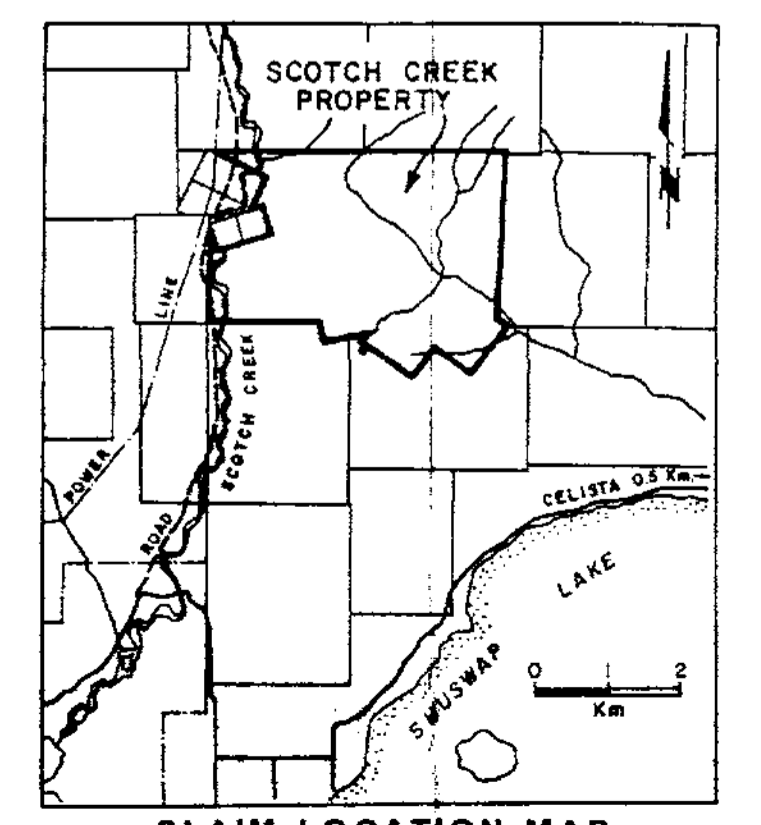
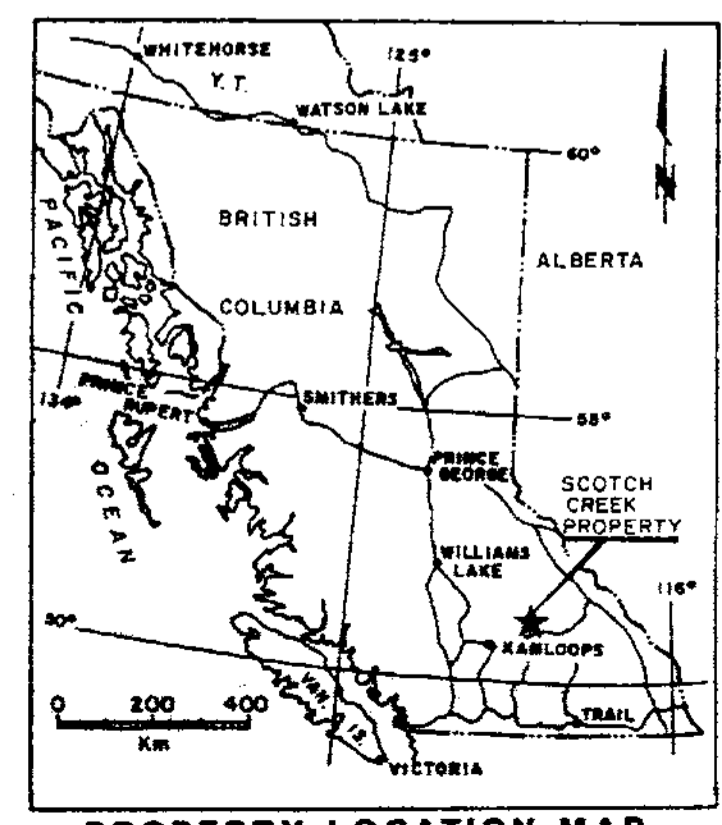
n = 1  
n = 2  
n = 3  
n = 4

RESISTIVITY  
( $\Omega$  - metres)



n = 1  
n = 2  
n = 3  
n = 4

TOTAL CHARGEABILITY  
(ms)



**LEGEND**

TRANSMITTER HUNTEC 2.5 kw  
RECEIVER HUNTEC Mk IV

DIPOLE DIPOLE ARRAY  
a = 25 m n = 1, 2, 3, 4

RESISTIVITY LOWS (ohm.m) → Limits Undefined  
 < 10 10-100 100-1000 1000

RESISTIVITY HIGH AT SURFACE 100 ESTIMATED INTRINSIC RESISTIVITY (ohm.m)

RESISTIVITY LOW AT DEPTH 70 ESTIMATED INTRINSIC RESISTIVITY (ohm.m)

Z ~ 10 ESTIMATED DEPTH (m)

CHARGEABILITY HIGHS (ms) → Limits Undefined  
 > 50 30 20 10

CHARGEABILITY HIGH AT SURFACE 30 CORRESPONDING RESISTIVITY LOW ESTIMATED INTRINSIC CHARGEABILITY (ms)

CHARGEABILITY HIGH AT DEPTH 40 ESTIMATED INTRINSIC CHARGEABILITY (ms)

Z ~ 20 ESTIMATED DEPTH (m)

- FAULT or CONTACT  
O/B - OVERBURDEN  
o/c? cultural source  
A/B - CHARGEABILITY ZONES

PART 2 OF 4  
GEOLOGICAL BRANCH  
ASSESSMENT REPORT

16,191



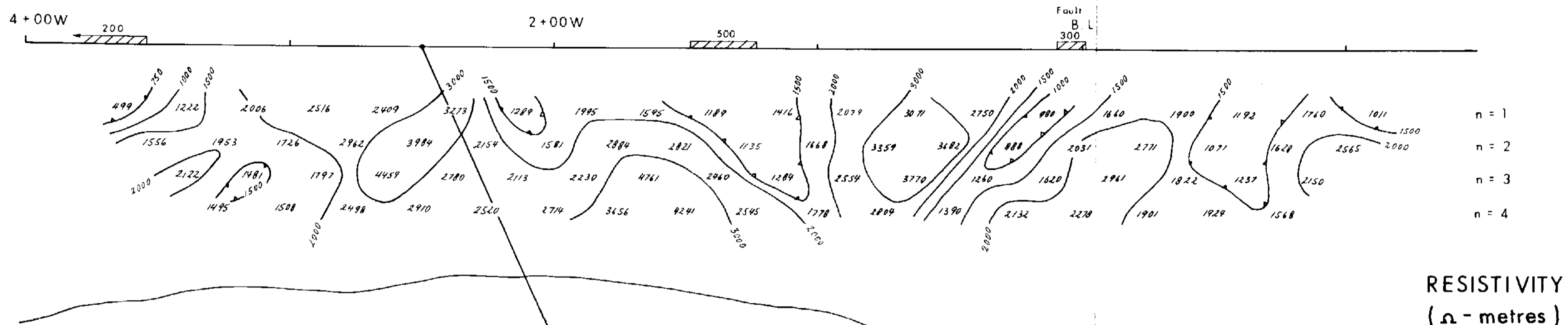
NEXUS RESOURCE CORPORATION

INDUCED POLARIZATION SURVEY  
HUNTEC MK IV DIPOLE-DIPOLE  
LINE 0 + 00  
SCOTCH CREEK PROJECT

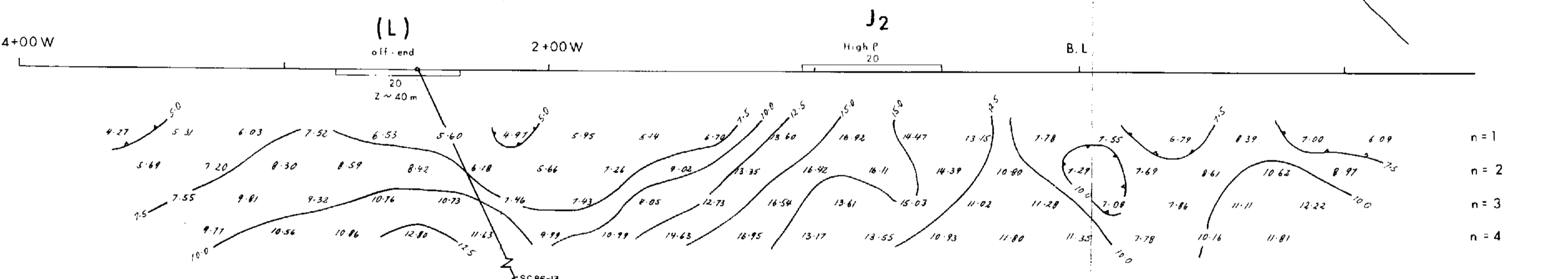
Project No: V 237	By: J. R.
Scale: 1 : 1250	Drawn: J. S.
Drawing No: P 3	Date: FEBRUARY 1987

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RESISTIVITY  
( $\Omega$  - metres)



TOTAL CHARGEABILITY  
(ms)

**LEGEND**

TRANSMITTER: HUNTEC 2.5 kw  
 RECEIVER: HUNTEC Mk IV

DIPOLE DIPOLE ARRAY  
 $a = 25m$   $n = 1, 2, 3, 4$

RESISTIVITY LOWS (ohm.m) Limits Undefined  
 < 10 10-100 100-1000 1000

CHARGEABILITY HIGHS (ms) Limits Undefined  
 > 50 30 20 10

RESISTIVITY LOW AT SURFACE 100 ESTIMATED INTRINSIC RESISTIVITY (ohm.m)

CHARGEABILITY HIGH AT SURFACE 30 \* CORRESPONDING RESISTIVITY LOW ESTIMATED INTRINSIC CHARGEABILITY (ms)

RESISTIVITY LOW AT DEPTH 70 ESTIMATED INTRINSIC RESISTIVITY (ohm.m)

CHARGEABILITY HIGH AT DEPTH 40 \* CORRESPONDING RESISTIVITY LOW ESTIMATED INTRINSIC CHARGEABILITY (ms)

Z ~ 10 ESTIMATED DEPTH (m)

Z ~ 20 ESTIMATED DEPTH (m)

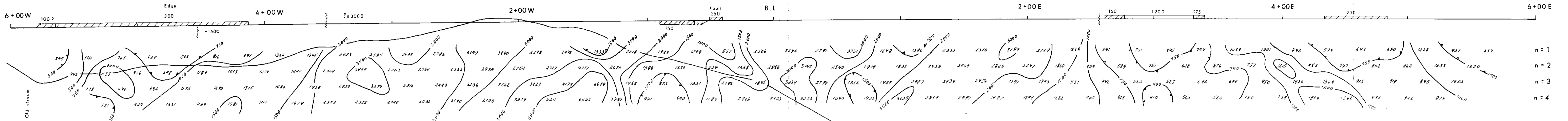
{ - FAULT or CONTACT  
 O/B - OVERBURDEN  
 c? - cultural source  
 A,B - CHARGEABILITY ZONES

PART 2 OF 4  
**GEOLOGICAL BRANCH  
 ASSESSMENT REPORT**

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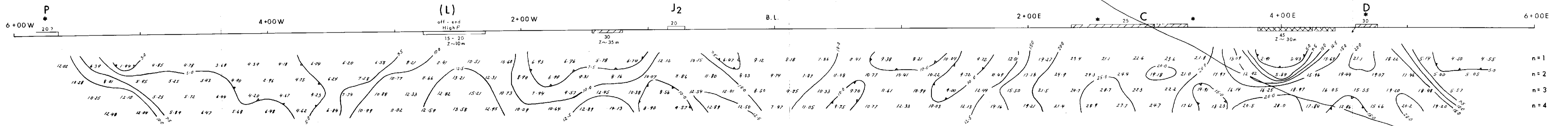


NEXUS RESOURCE CORPORATION	
INDUCED POLARIZATION SURVEY HUNTEC MK IV DIPOLE-DIPOLE LINE 0 + 50S SCOTCH CREEK PROJECT	
Project No: V 237	By: J. R.
Scale: 1:1250	Drawn: J.S.
Drawing No: P4	Date: FEBRUARY 1987.



n = 1  
n = 2  
n = 3  
n = 4

RESISTIVITY  
( $\Omega$  - metres)



n = 1  
n = 2  
n = 3  
n = 4

TOTAL CHARGEABILITY  
(ms)

### LEGEND

TRANSMITTER: HUNTEC 2.5 kw  
RECEIVER: HUNTEC MK IX  
DIPOLE DIPOLE ARRAY  
 $a = 25m$   $n = 1, 2, 3, 4$

RESISTIVITY LOWS ( $\Omega \cdot m$ )

CHARGEABILITY HIGHS (ms)

RESISTIVITY LOW AT SURFACE

RESISTIVITY LOW AT DEPTH

CHARGEABILITY HIGH AT SURFACE

CHARGEABILITY HIGH AT DEPTH

ESTIMATED INTRINSIC RESISTIVITY ( $\Omega \cdot m$ )

ESTIMATED INTRINSIC CHARGEABILITY (ms)

ESTIMATED DEPTH (m)

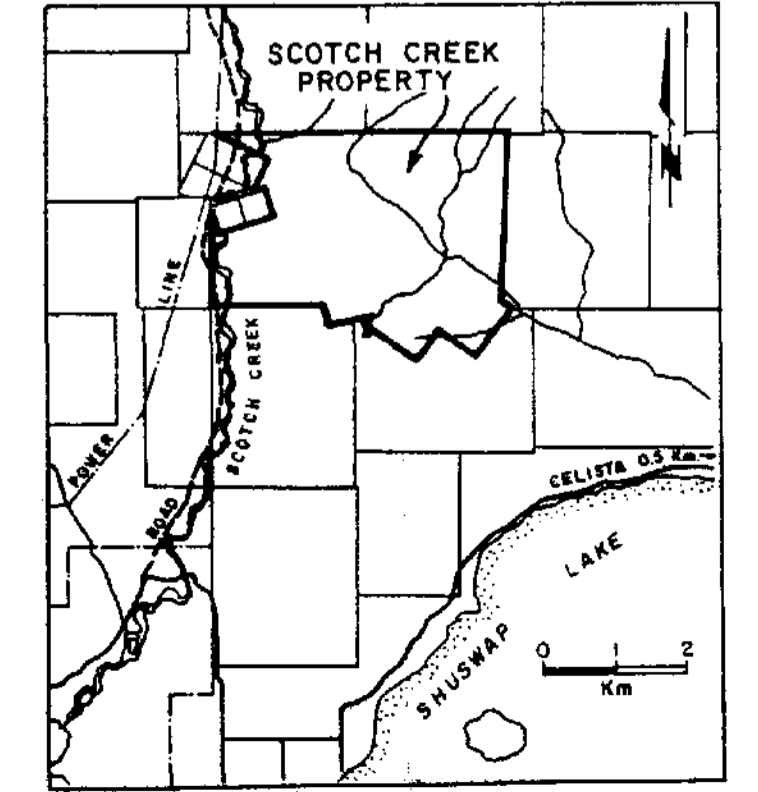
ESTIMATED DEPTH (m)

— FAULT or CONTACT  
O/B - OVERBURDEN  
c? - cultural source  
A,B - CHARGEABILITY ZONES

\* CORRESPONDING RESISTIVITY LOW

PART 2 OF 4  
GEOLOGICAL BRANCH  
ASSESSMENT REPORT

# 16,191

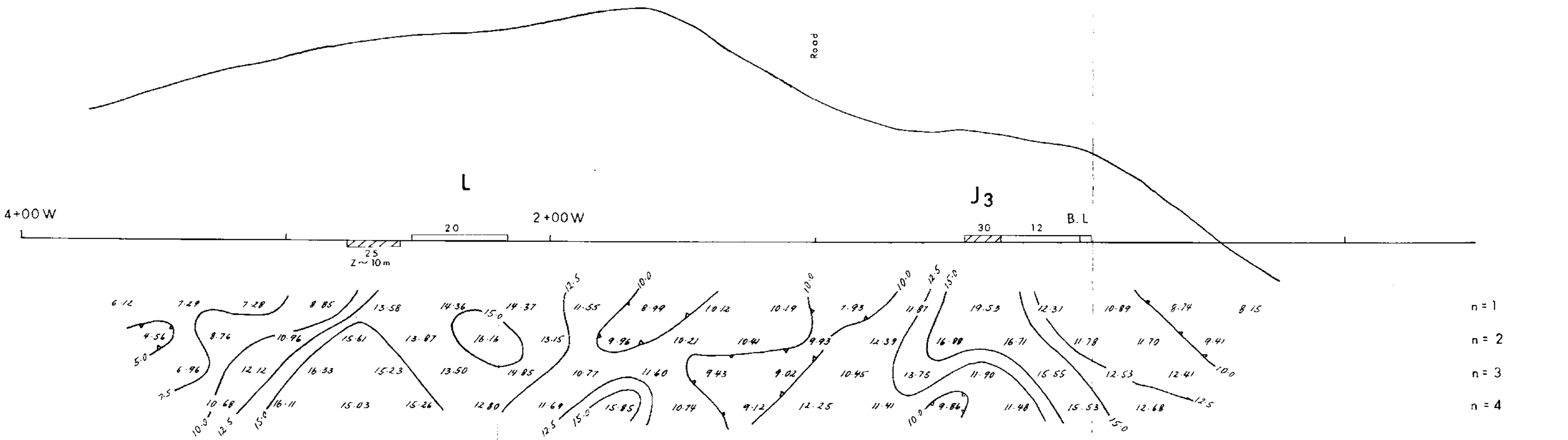
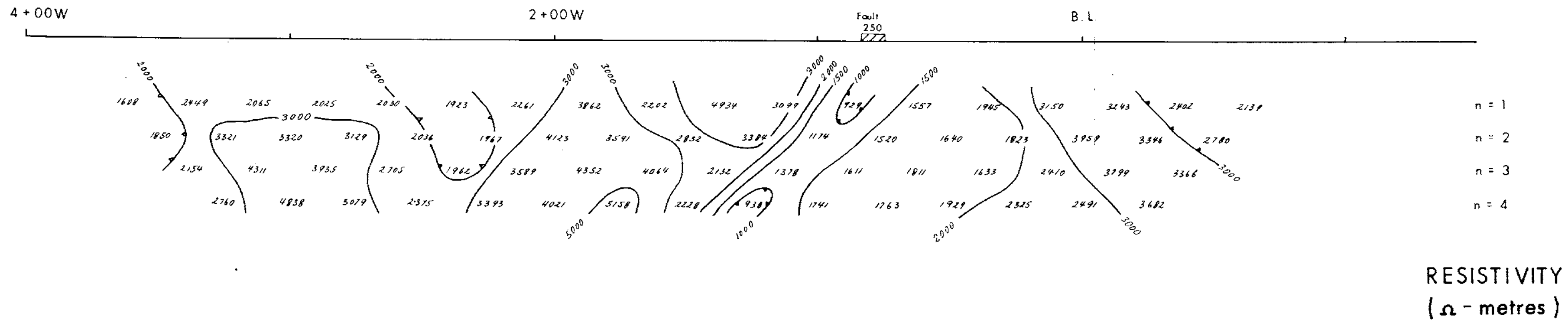


NEXUS RESOURCE CORPORATION

INDUCED POLARIZATION SURVEY  
HUNTEC MK IX DIPOLE-DIPOLE  
LINE 1+00S  
SCOTCH CREEK PROJECT

Project No: V 237	By: J. R.
Scale: 1:1250	Drawn: J. S.
Drawing No: P5	Date: FEBRUARY 1987

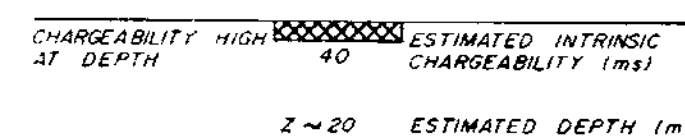
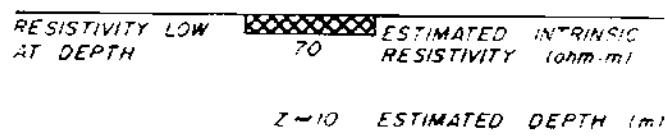
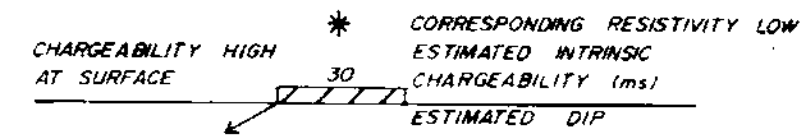
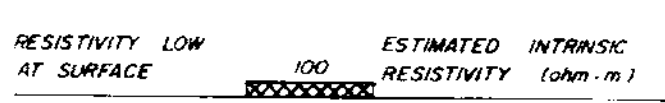
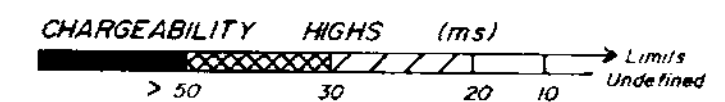
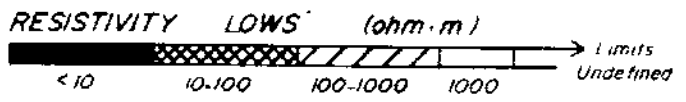
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### LEGEND

TRANSMITTER HUNTEC 2.5 kw  
 RECEIVER HUNTEC Mk IV

DIPOLE DIPOLE ARRAY  
 a = 25m n = 1,2,3,4



{ - FAULT or CONTACT  
 O/B - OVERBURDEN  
 c? - cultural source  
 A,B - CHARGEABILITY ZONES

### PART 2 OF 4 GEOLOGICAL BRANCH ASSESSMENT REPORT

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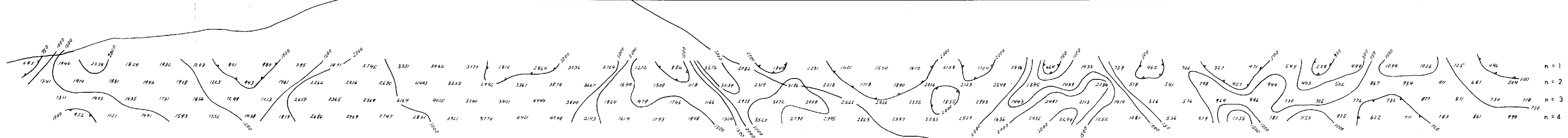
INDUCED POLARIZATION SURVEY  
 HUNTEC MK IV DIPOLE-DIPOLE  
 LINE 1+50 S  
 SCOTCH CREEK PROJECT

Project No: V 237  
 Scale: 1 : 1250  
 Drawing No: P 6

By: J. R.  
 Drawn: J.S.  
 Date: FEBRUARY 1987

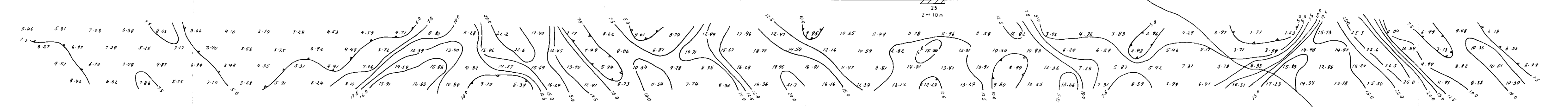


6+00W 4+00W 2+00W B.L. 2+00E 4+00E 6+00E

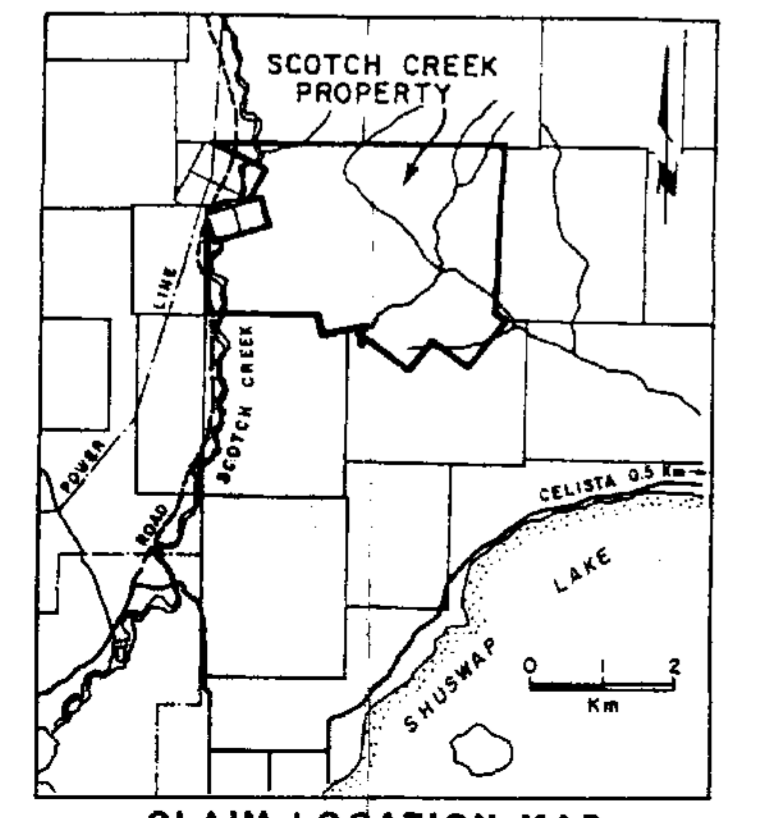
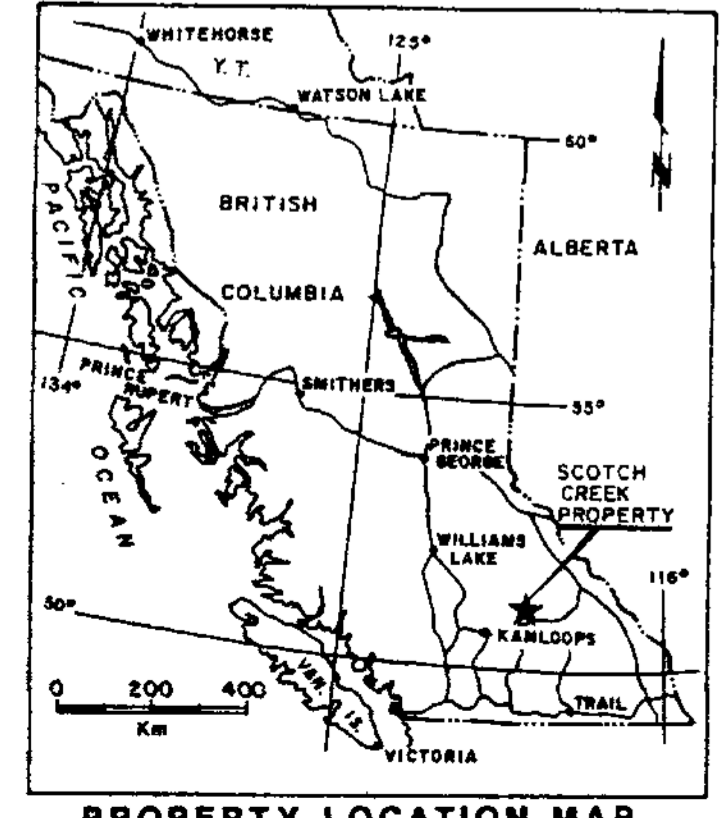


RESISTIVITY  
( $\rho$  - metres)

6+00W 4+00W 2+00W B.L. 2+00E 4+00E 6+00E



TOTAL CHARGEABILITY  
(ms)



### LEGEND

TRANSMITTER HUNTEC 2.5 kw  
RECEIVER HUNTEC Mk IV  
DIPOLE DIPOLE ARRAY  
 $a = 25\text{m}$   $n = 1, 2, 3, 4$

RESISTIVITY LOWS (ohm.m)

RESISTIVITY LOW AT SURFACE  
RESISTIVITY LOW AT DEPTH

ESTIMATED INTRINSIC RESISTIVITY (ohm.m)

ESTIMATED INTRINSIC RESISTIVITY (ohm.m)

ESTIMATED DEPTH (m)

ESTIMATED DEPTH (m)

CHARGEABILITY HIGHS (ms)

CHARGEABILITY HIGH AT SURFACE  
CHARGEABILITY HIGH AT DEPTH

ESTIMATED INTRINSIC CHARGEABILITY (ms)

ESTIMATED DIP

ESTIMATED INTRINSIC CHARGEABILITY (ms)

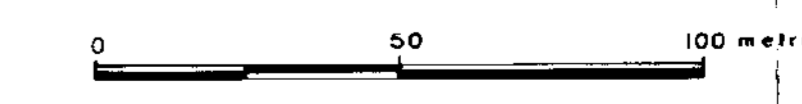
ESTIMATED DEPTH (m)

--- FAULT or CONTACT  
o/b - OVERBURDEN  
c? - cultural source  
A,B - CHARGEABILITY ZONES

\* CORRESPONDING RESISTIVITY LOW

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GEOLOGICAL BRANCH  
ASSESSMENT REPORT

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**NEXUS RESOURCE CORPORATION**

**INDUCED POLARIZATION SURVEY  
HUNTEC MK IV DIPOLE-DIPOLE  
LINE 2+00S  
SCOTCH CREEK PROJECT**

Project No: V 237	By: J.R.
Scale: 1:1250	Drawn: J.S.
Drawing No: P7	Date: FEBRUARY 1987

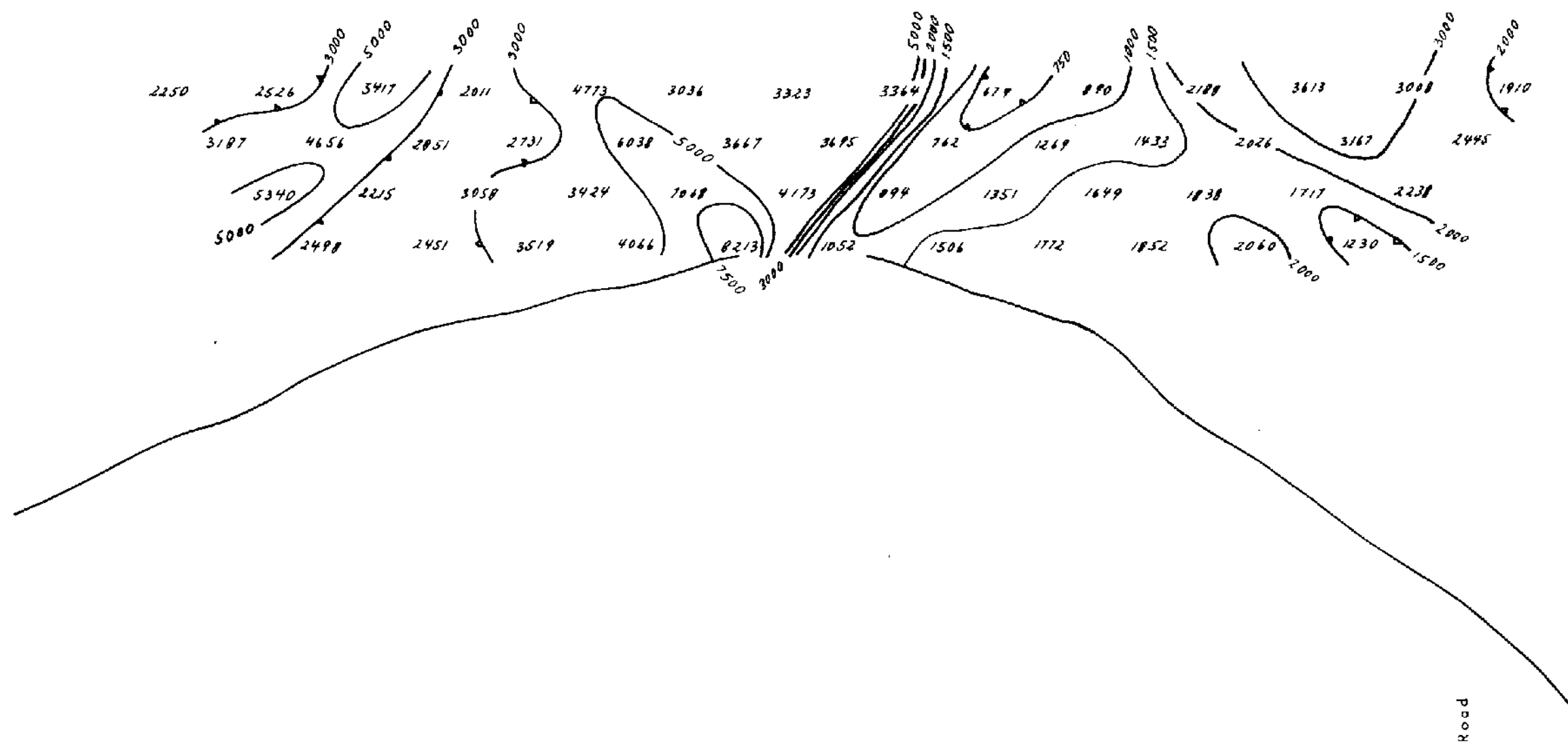
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4+00W

2+00W

Fault  
200

B.L.



n = 1  
 n = 2  
 n = 3  
 n = 4

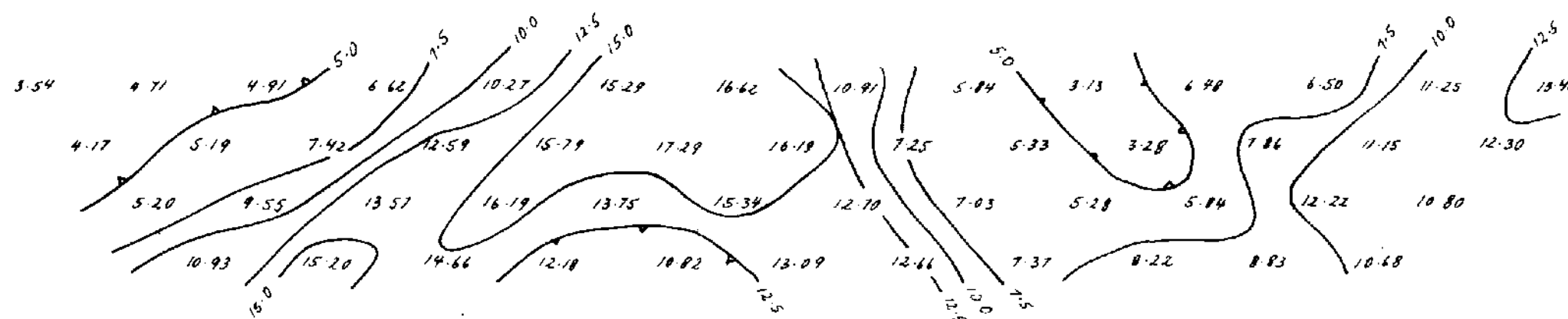
RESISTIVITY  
 ( $\Omega$  - metres)

4+00W

High e  
25 2+00W

J3

B.L.



n = 1  
 n = 2  
 n = 3  
 n = 4

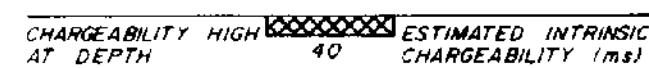
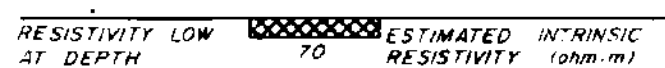
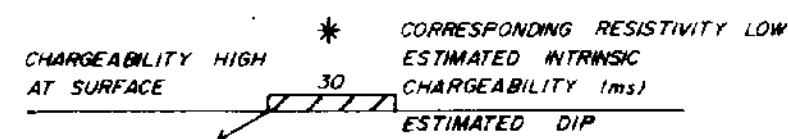
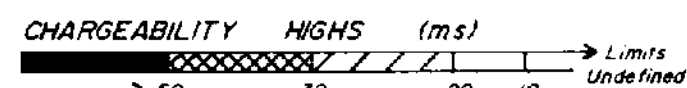
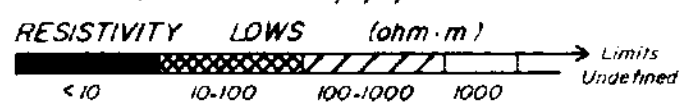
TOTAL CHARGEABILITY  
 (ms)

### LEGEND

TRANSMITTER HUNTEC 2.5 kw

RECEIVER HUNTEC Mk IV

DIPOLE DIPOLE ARRAY  
 $a = 25m$   $n = 1, 2, 3, 4$

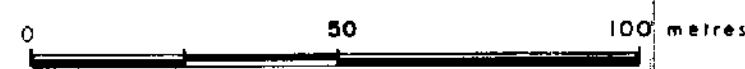


$Z \sim 10$  ESTIMATED DEPTH (m)

$Z \sim 20$  ESTIMATED DEPTH (m)

### PART 2 OF 4 GEOLOGICAL BRANCH ASSESSMENT REPORT

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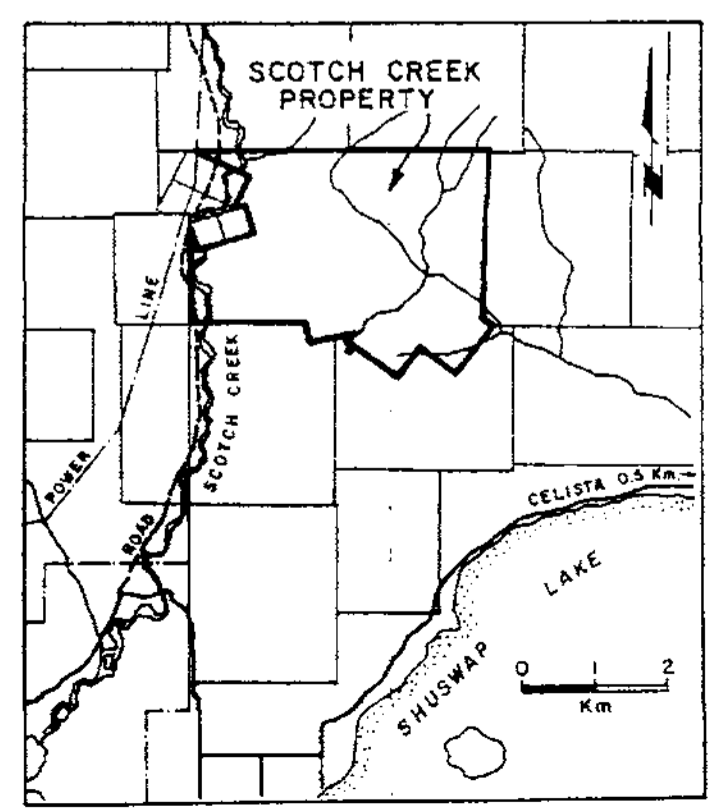
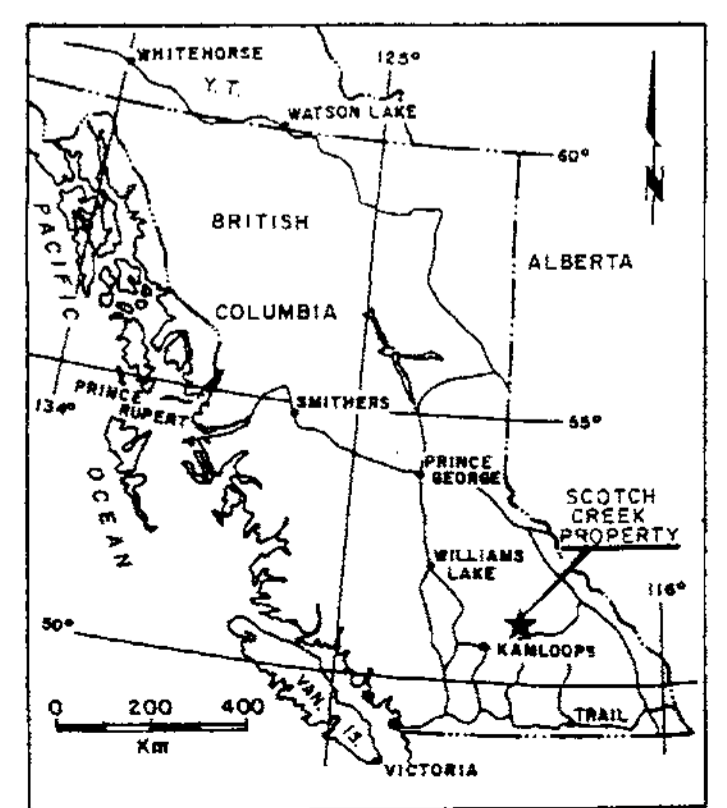
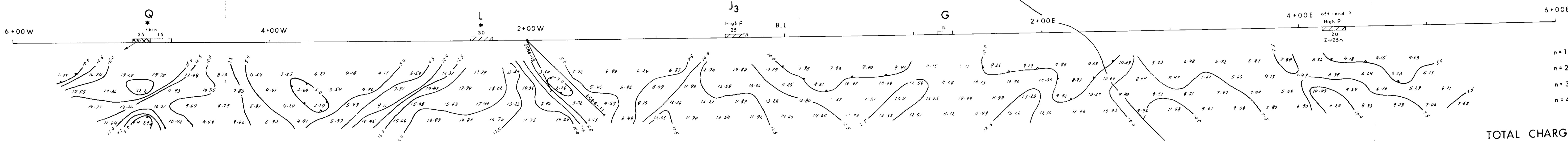
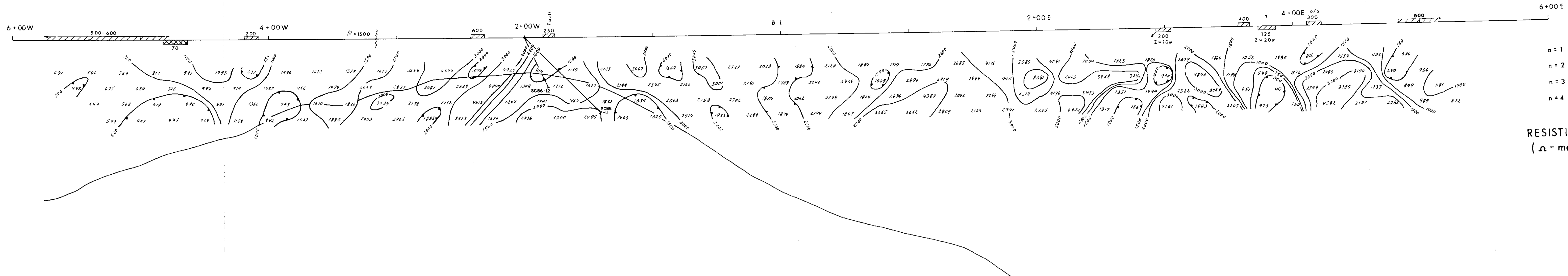
NEXUS RESOURCE CORPORATION

INDUCED POLARIZATION SURVEY  
 HUNTEC MK IV DIPOLE-DIPOLE  
 LINE 2+50S  
 SCOTCH CREEK PROJECT

Project No: V 237	By: J.R.
Scale: 1:1250	Drawn: J.S.
Drawing No: P8	Date: FEBRUARY 1987



MPH Consulting Limited



**LEGEND**

TRANSMITTER HUNTEC 2.5 kw  
 RECEIVER HUNTEC Mk IV

DIPOLE DIPOLE ARRAY  
 $a = 25m$   $n = 1, 2, 3, 4$

RESISTIVITY LOWS (ohm.m) → Limits Undefined  
 < 10 10-100 100-1000 1000

RESISTIVITY HIGH \* CORRESPONDING RESISTIVITY LOW  
 AT SURFACE 30 ESTIMATED INTRINSIC CHARGEABILITY (ms)  
 ESTIMATED DIP

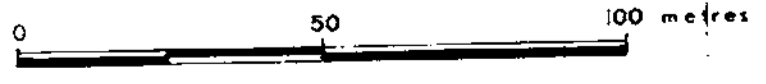
RESISTIVITY LOW AT DEPTH 70 ESTIMATED INTRINSIC RESISTIVITY (ohm.m)  
 $Z \sim 10$  ESTIMATED DEPTH (m)

CHARGEABILITY HIGHS (ms) → Limits Undefined  
 > 50 30 20 10

CHARGEABILITY HIGH \* CORRESPONDING RESISTIVITY LOW  
 AT DEPTH 40 ESTIMATED INTRINSIC CHARGEABILITY (ms)  
 $Z \sim 20$  ESTIMATED DEPTH (m)

PART 2 OF 4  
 GEOLOGICAL BRANCH  
 ASSESSMENT REPORT

16,191



NEXUS RESOURCE CORPORATION

INDUCED POLARIZATION SURVEY  
 HUNTEC MK IV DIPOLE-DIPOLE  
 LINE 3+00 S  
 SCOTCH CREEK PROJECT

Project No: V 237	By: J.R.
Scale: 1:1250	Drawn: J.S.
Drawing No: P9	Date: FEBRUARY 1987

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