

A LOGISTICAL AND INTERPRETIVE REPORT

ON

SPECTRAL IP, RESISTIVITY,

VLF-EM AND MAGNETOMETER

SURVEYS

CONDUCTED ON

THE OSSIAN GOLD MINE PROPERTY

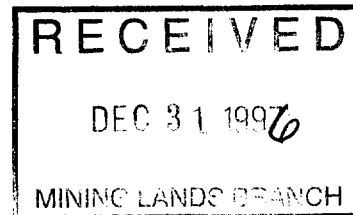
PROJECT 53

OSSIAN TWP., LARDER LAKE AREA, ONTARIO

FOR

SILVER CENTURY EXPLORATIONS LTD.

2.16992



BY

JVX LTD.



32D05SE0102 2.16992 OSSIAN

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ON
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VLF-EM AND MAGNETOMETER
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THE OSSIAN GOLD MINE PROPERTY
PROJECT 53
OSSIAN TWP., LARDER LAKE AREA, ONTARIO

For:

Silver Century Explorations Ltd.

c/o Hubacheck Consultants Ltd.

Suite 1401, 141 Adelaide Street West

Toronto, Ontario

M5H 3L5

Tel.: (416) 364-2895

Fax: (416) 364-5384

Attention: Peter Hubacheck / David Christie

By:

JVX Ltd.

60 West Wilmot St, Unit #22

Richmond Hill, Ontario

L4B 1M6

Contact: Blaine Webster

Tel.: (905) 731-0972

Fax: (905) 731-9312

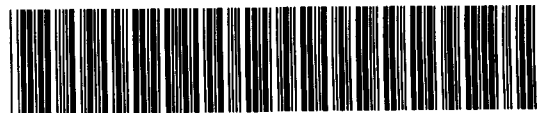
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1 INTRODUCTION

1.1 GENERAL

JVX Ltd. conducted time-domain spectral Induced polarization/resistivity (IP/res.), Magnetometer and VLF-EM surveys from June 8 to August 24, 1996, on behalf of **Silver Century Explorations Ltd.** The survey was located on the Ossian Gold Mine Property, Project 53, Ossian Twp., Larder Lake Area, Ontario (N.T.S. 32D/4, D/5).

Claim numbers: 11131, 11132, 11133, 11180, 11181, 11182, 11183, 11184, 11185, 11186, 11187, 11188, 11344, 11413, 11999, 12000, 12020, 12021, 12716, 12717, 12577, 12578 and 15891.

1.2 PURPOSE

The purpose of this survey was to locate areas of base metal or gold mineralization.

2 DATA ACQUISITION

2.1 SURVEY SPECIFICATIONS

| IP/Resistivity | |
|---|----------------------------|
| Transmitter | Scintrex IPC-7/2.5 kW |
| Receiver | Scintrex IPR-12 |
| Array Type | Pole-Dipole |
| Transmit Cycle Time | 2 sec |
| Receive Cycle Time | 2 sec |
| Number of Potential Electrode Pairs | 6 |
| Electrode Spacing (<i>a spacing</i>) | 25 metres & 100 ft. |
| Number of Lines Surveyed | 13 (a=25m) 1 (a=100ft.) |
| Survey Coverage | 23,251 metres |

Table 1: Specifications for the IP/Resistivity Survey

| TOTAL MAGNETIC SURVEY | |
|------------------------------|------------------------------|
| Instrument | IGS-2/MP-4 |
| Sensor type | Proton Precession |
| Number of Lines Surveyed | 28 crosslines & 2 base lines |
| Survey Coverage | 49,901.7 m. |

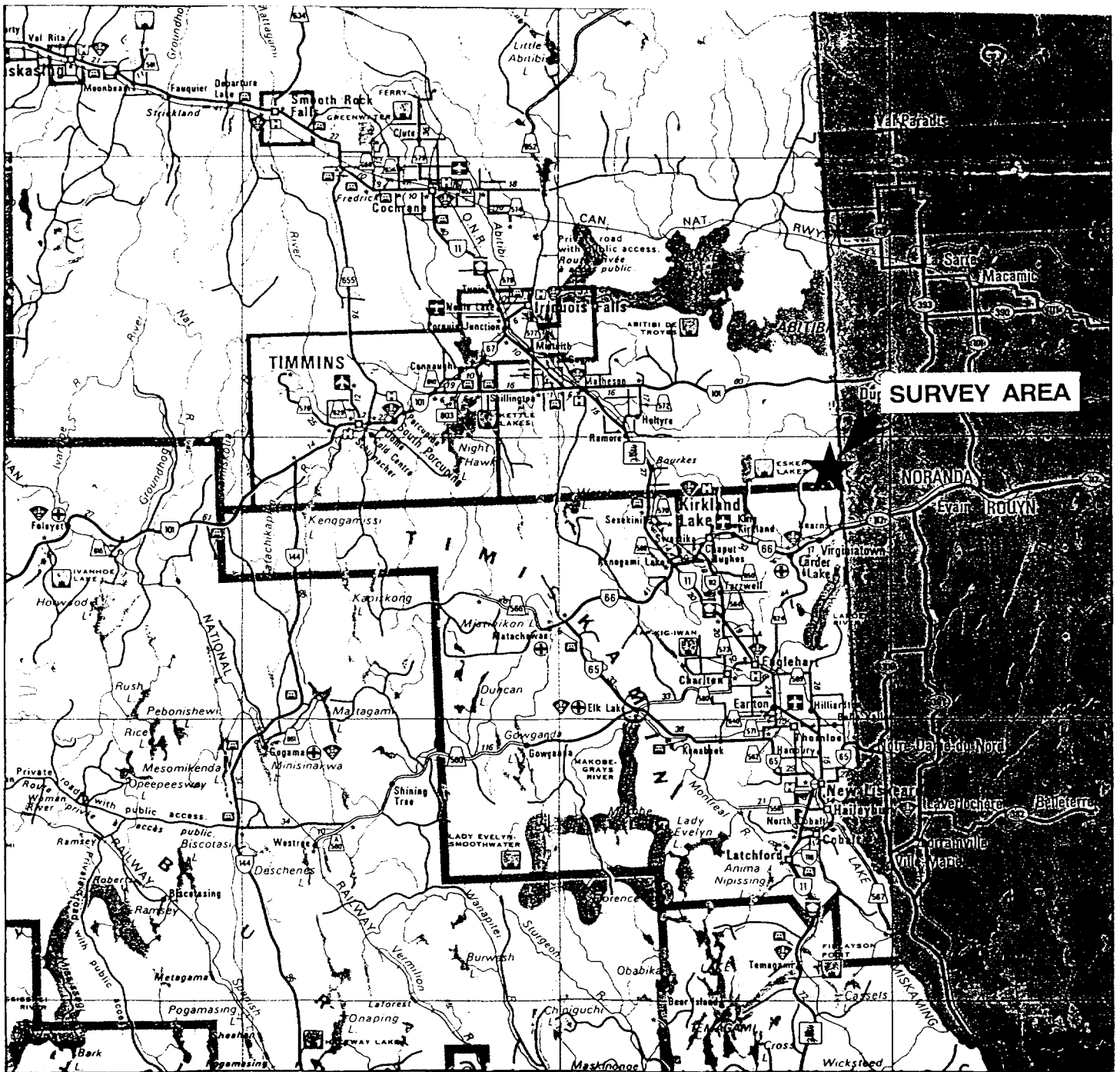
Table 2: Specifications for the Magnetic Surveys

| VLF-EM SURVEY | |
|--------------------------|------------------------------|
| Transmitter | NAA (Cutler Maine, 24.0 kHz) |
| Receiver | Scintrex IGS-2/VLF-4 |
| Number of Lines Surveyed | 28 crosslines & 2 base lines |
| Survey Coverage | 49,901.7 m |

Table 3: Specifications for the VLF-EM Surveys

2.2 GRID SPECIFICATIONS

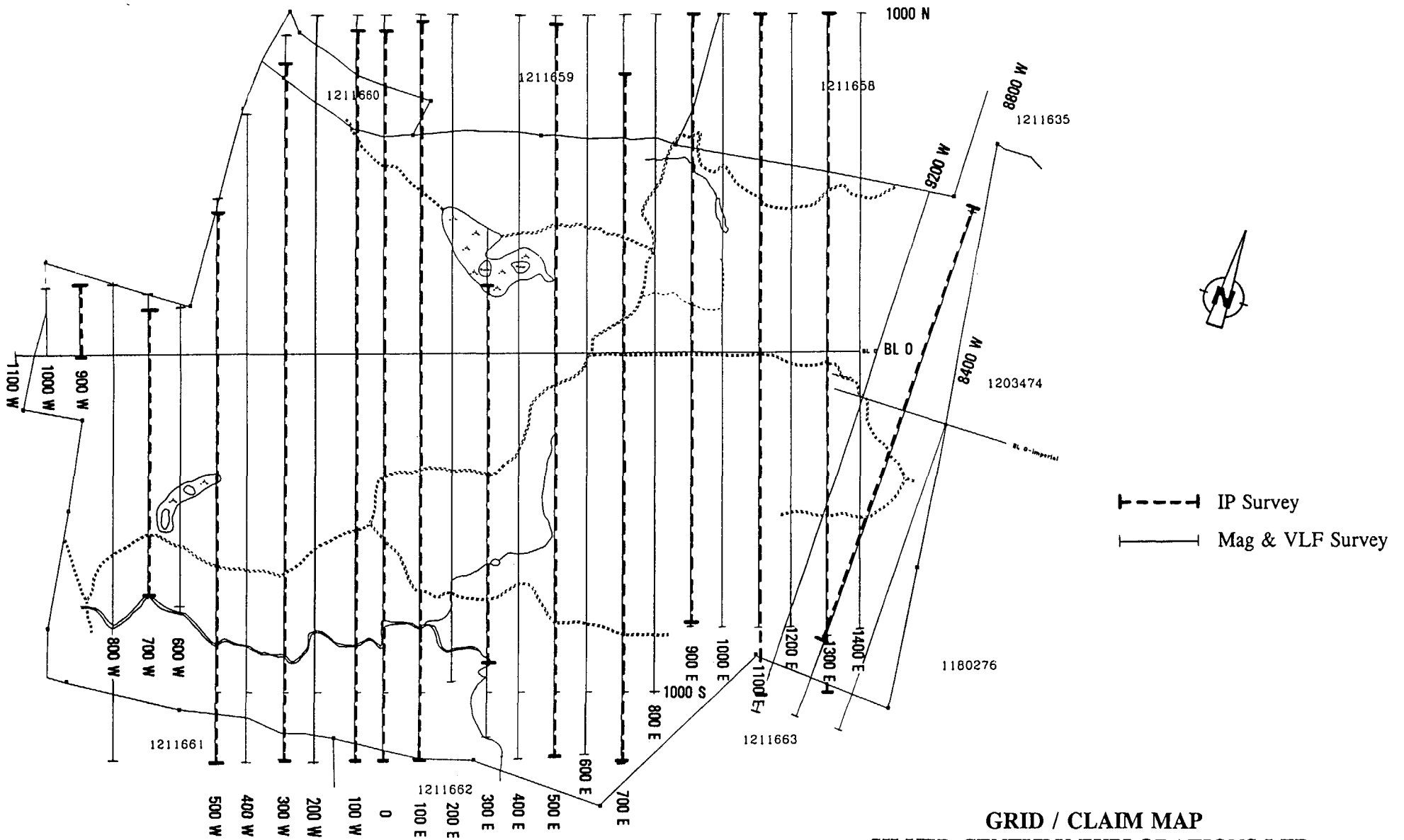
The survey grid is located on the Ossian Gold Mine Property, Ossian Twp., Larder Lake Area, Ontario (see Figure 1).



LOCATION MAP
SILVER CENTURY EXPLORATIONS LTD.
PROJECT 53
OSSIAN GOLD MINE PROPERTY
 Ossian Twp, Larder Lake area, Ontario
 NTS 32 D/4 & 32 D/5
GROUND GEOPHYSICAL SURVEY
 Scale: 1 : 1,600,000

Surveyed by J VX Ltd.
 Summer 1996

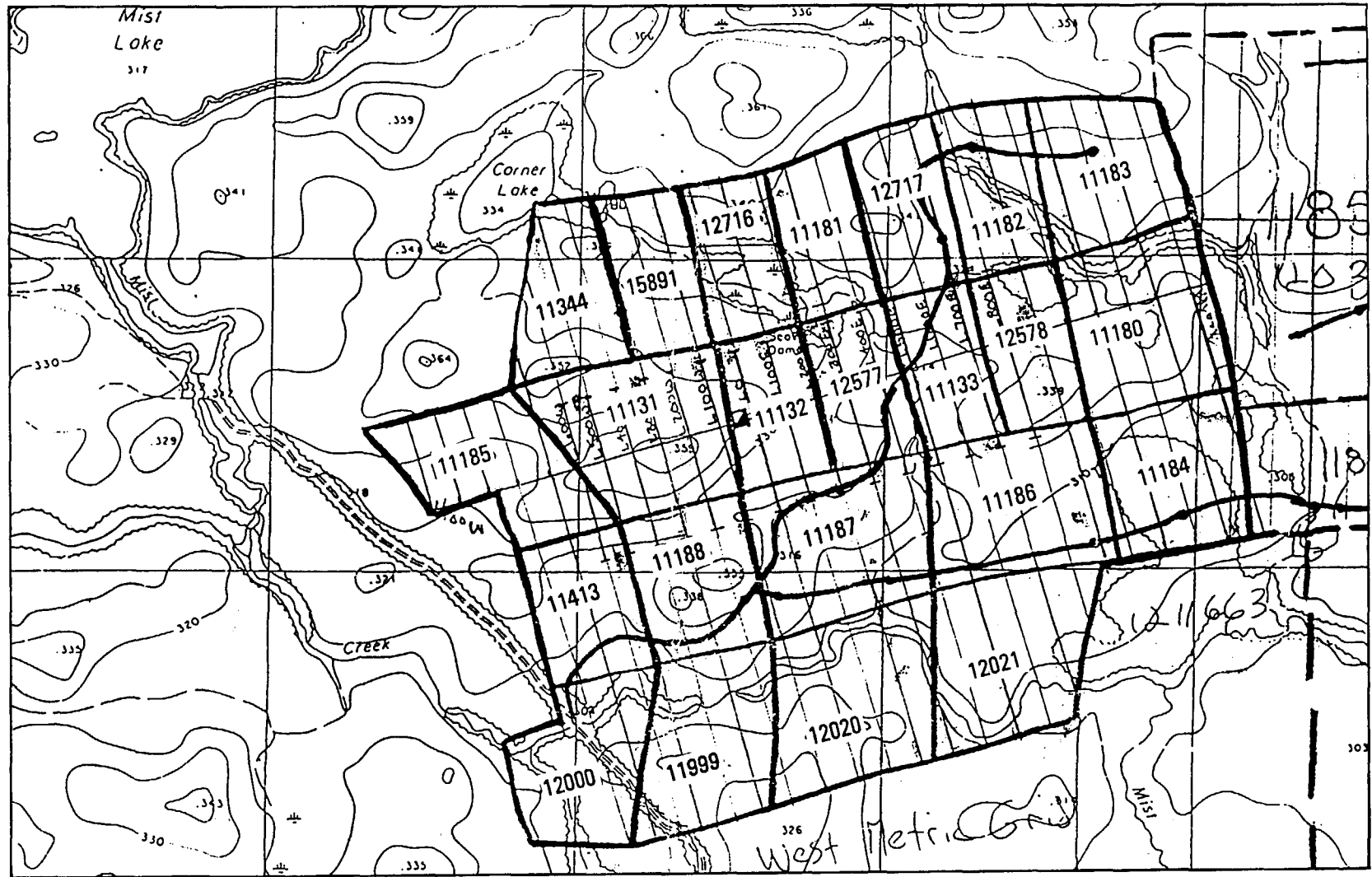
Figure 1



GRID / CLAIM MAP
SILVER CENTURY EXPLORATIONS LTD.
PROJECT 53
OSSIAN GOLD MINE PROPERTY
 Ossian Twp, Larder Lake area, Ontario
 NTS 32 D/4 & 32 D/5
GROUND GEOPHYSICAL SURVEY

Surveyed by **JVX Ltd.**
 Summer 1996

Figure 2



DETAILED CLAIM MAP
SILVER CENTURY EXPLORATIONS LTD.
PROJECT 53
OSSIAN GOLD MINE PROPERTY
 Ossian Twp, Larder Lake area, Ontario
 NTS 32 D/4 & 32 D/5
GROUND GEOPHYSICAL SURVEY
 Scale 1 : 20,000

Surveyed by **JVX Ltd.**
 Summer 1996

Figure 2a

2.3 PRODUCTION SUMMARY

Total IP coverage was 23,251 metres. Total magnetometer coverage was 49,901.7 meters. Total VLF-EM coverage was 49,901.7 meters. The following tables list the survey coverage in detail:

| Line | From Station | To Station | Distance (m) | No. of Readings | a' spacing (m) |
|--------------|--------------|------------|-------------------|-----------------|-------------------|
| 900W | 25 S | 200 N | 225 | 8 | 25 |
| 700W | 700 S | 225 N | 925 | 36 | 25 |
| 500W | 1215 S | 425 N | 1640 | 65 | 25 |
| 300W | 1200 S | 850 N | 2050 | 81 | 25 |
| 100W | 1200 S | 950 N | 2150 | 85 | 25 |
| 0 | 1200 S | 925 N | 2125 | 84 | 25 |
| 100E | 1200 S | 975 N | 2175 | 86 | 25 |
| 300E | 900 S | 200 N | 1100 | 43 | 25 |
| 500E | 1175 S | 975 N | 2150 | 85 | 25 |
| 700E | 1200 S | 825 N | 2025 | 80 | 25 |
| 900E | 775 S | 1000 N | 1775 | 70 | 25 |
| 1100E | 800 S | 1000 N | 1800 | 71 | 25 |
| 1300E | 800 S | 1000 N | 1800 | 71 | 25 |
| | | | Distance (feet;m) | | a' spacing (feet) |
| 8800W | 2300 S | 2000 N | 4300;1311 | 42 | 100 |
| Total | | | 23 251 | 907 | |

Table 4: Summary for IP/Resistivity Survey

| Line | From Station | To Station | Distance (m) | No. of Readings |
|----------|--------------|------------|--------------|-----------------|
| 8400 W | 0 S | 3200 S | 975.4 | 65 |
| 8800 W | 3200 S | 2000 N | 1585 | 107 |
| 9200 W | 3250 S | 2000 N | 1600.2 | 107 |
| Baseline | 9200 W | 8450 W | 228.6 | 198 |
| 1400 E | 825 S | 1000 N | 1825 | 149 |
| 1300 E | 825 S | 1000 N | 1825 | 147 |
| 1200 E | 812.5 S | 1000 N | 1812.5 | 146 |
| 1100 E | 800 S | 1000 N | 1800 | 145 |
| 1000 E | 800 S | 1012.5 N | 1812.5 | 146 |
| 900 E | 800 S | 1000 N | 1800 | 145 |
| 800 E | 1000 S | 1000 N | 2000 | 161 |
| 700 E | 1212.5 S | 1000N | 2212.5 | 178 |

| | | | | |
|--------------|---------|---------|-----------------|--------------|
| 600 E | 1200 S | 1000N | 2200 | 177 |
| 500 E | 1200 S | 1000 N | 2200 | 177 |
| 400 E | 1200 S | 1000 N | 2200 | 177 |
| 300 E | 1125 S | 225 N | 1350 | 106 |
| 200 E | 962.5 S | 1000 N | 1962.5 | 158 |
| 100 E | 1200 S | 1000 N | 2200 | 177 |
| 0 | 1200 S | 1000 N | 2200 | 198 |
| 100 W | 1200 S | 1000 N | 2200 | 187 |
| 200 W | 1200 S | 1000 N | 2200 | 187 |
| 300 W | 1200 S | 912.5 N | 2112.5 | 180 |
| 400 W | 1200 S | 700 N | 1900 | 163 |
| 500 W | 1200 S | 450 N | 1650 | 143 |
| 600 W | 737.5 S | 137.5 N | 875 | 72 |
| 700 W | 700 S | 175 N | 875 | 71 |
| 800 W | 1200 S | 200 N | 1400 | 113 |
| 900 W | 0 | 200 N | 200 | 17 |
| 1000 W | 0 | 200 N | 200 | 17 |
| Baseline | 1100 W | 1400E | 2500 | 200 |
| Total | | | 49 901.7 | 4 214 |

Table 5: Summary for Magnetometer Survey

| Line | From Station | To Station | Distance (m) | No. of Readings |
|--------------|--------------|------------|-----------------|-----------------|
| 8400 W | 0 S | 3200 N | 975.4 | 65 |
| 8800 W | 3200 S | 2000 N | 1585 | 107 |
| 9200 W | 3250 S | 2000 N | 1600.2 | 107 |
| Baseline | 9200 W | 8450 W | 228.6 | 198 |
| 1400 E | 825 S | 1000 N | 1825 | 149 |
| 1300 E | 825 S | 1000 N | 1825 | 147 |
| 1200 E | 812.5 S | 1000 N | 1812.5 | 146 |
| 1100 E | 800 S | 1000 N | 1800 | 145 |
| 1000 E | 800 S | 1012.5 N | 1812.5 | 146 |
| 900 E | 800 S | 1000 N | 1800 | 145 |
| 800 E | 1000 S | 1000 N | 2000 | 161 |
| 700 E | 1212.5 S | 1000 N | 2212.5 | 178 |
| 600 E | 1200 S | 1000 N | 2200 | 177 |
| 500 E | 1200 S | 1000 N | 2200 | 177 |
| 400 E | 1200 S | 1000 N | 2200 | 177 |
| 300 E | 1125 S | 225 N | 1350 | 106 |
| 200 E | 962.5 S | 1000 N | 1962.5 | 158 |
| 100 E | 1200 S | 1000 N | 2200 | 177 |
| 0 | 1200 S | 1000 N | 2200 | 198 |
| 100 W | 1200 S | 1000 N | 2200 | 187 |
| 200 W | 1200 S | 1000 N | 2200 | 187 |
| 300 W | 1200 S | 912.5 N | 2121.5 | 180 |
| 400 W | 1200 S | 700 N | 1900 | 163 |
| 500 W | 1200 S | 450 N | 1650 | 143 |
| 600 W | 737.5 S | 137.5 N | 875 | 72 |
| 700 W | 700 S | 175 N | 875 | 71 |
| 800 W | 1200 S | 200 N | 1400 | 113 |
| 900 W | 0 | 200 N | 200 | 17 |
| 1000 W | 0 | 200 N | 200 | 17 |
| Baseline | 1100 W | 1400 E | 2500 | 200 |
| Total | | | 49,901.7 | 4 214 |

Table 6: Summary for VLF-EM Survey

2.4 PERSONNEL

Michelle Nield (Geophysical Technician)

Ms. Nield operated the Scintrex IPC-7 2.5 kW transmitter. She was responsible for data quality and day-to-day operation and direction of the survey.

Mike Fecteau (Geophysical Technician)

Mr. Fecteau operated the Scintrex IPR-12 receiver. He was responsible for data quality and the day-to-day operation of the survey.

Roger Poirier (Geophysicist)

Mr. Poirier operated the Scintrex Envimag & IGS-2 Magnetometers. He was responsible for the quality of the Magnetometer and VLF-EM survey data.

Three or four field assistants were also engaged by JVX as required.

Andrew Wang (Geophysicist):

Mr. Wang processed the data and is responsible for the data storage.

Dagmar Piska (Draftperson) and Vaso Lymberis (Draftperson):

Ms. Piska and Ms. Lymberis carried out manual drafting, and assembled and bound the report.

Joe Mihelcic (Geophysicist):

Mr. Mihelcic interpreted the data, plotted the maps, and wrote this report.

Blaine Webster (President, JVX Ltd.):

Mr. Webster provided overall supervision of the survey.

2.5 FIELD INSTRUMENTATION

JVX supplied the geophysical instruments described below. Additional information about the geophysical methods can be found in Appendix A.

2.5.1 I.P. Transmitter

A **Scintrex IPC-7/2.5 kW Time Domain Transmitter** powered by an eight horsepower motor generator was used. The transmitter generates square wave current output with a period of 4, 8, or 16 seconds. A digital multi-meter in series with the transmitter was used to measure the magnitude of the current output.

2.5.2 I.P. Receiver

A **Scintrex IPR-12 Time Domain Receiver** was used. This unit samples the voltage decay curve as measured by the potential electrodes at ten points in time. Readings are repeated until they converge to within a tolerance level, and the data are stored in solid-state memory.

2.5.3 Magnetometer

The Envimag magnetometer was used as the base station. The IGS-2/Mag-4 system was used to measure the total field over the grid.

2.5.4 VLF-EM

The Scintrex Envimag/VLF and IGS-2/MP-4 system was used to measure the vertical in-phase, out-of-phase, and horizontal field component.

3 DATA PROCESSING

After being transferred to a field computer at the end of each survey day, the data were examined, corrected, and organized by the instrument operator. The results were plotted on the following printers:

- STAR NX-80 colour dot-matrix printer
- EPSON FX-80 dot-matrix printer

These plots were used to monitor progress and data quality, and to make an initial interpretation. Thus survey parameters and design were altered when necessary.

The data were sent by courier to the head office of JVX in Richmond Hill, Ontario. They were processed and results were plotted on the following printers as was necessary:

- HEWLETT PACKARD DESIGNJET 750C colour plotter
- NICOLET ZETA 36 inch pen plotter
- TEKTRONIX COLORQUICK ink jet printer
- FUJITSU DL2400 colour dot-matrix printer
- TEXAS INSTRUMENTS MicroLaser Pro 600 Laser printer

The processing procedure follows:

3.1 IP AND RESISTIVITY

Steps 1 and 2 were performed both in the field and in the head office. Steps 3 and 4 were performed at the head office.

- 1) The **GEOPAK IPSECT Package** was used to generate colour pseudosections of chargeability and resistivity data.
- 2) The in-house **JVX SOFT II Package** was used to perform spectral analysis of the time-domain data. This step was crucial to maximizing the information that can be obtained from IP data. This software analyses the shape of the IP decay curve, giving information about:
 - (a) the grain size (indicated by the parameter τ),
 - (b) the uniformity of the grain size (indicated by c), and
 - (c) the magnitude of the chargeable source (indicated by $M-IP$).(Please see Appendix A for more information about spectral analysis.)

- 3) The pseudosections from 2 above were aligned in **AUTOCAD**, then plotted.
- 4) Contoured plan maps of both chargeability and resistivity data from one dipole were produced using **JVX** in-house software and the **GEOPAK Line Processing Package**. Additional drafting on these maps was done through **AUTOCAD**.

3.2 MAGNETICS and VLF-EM

A contour map and profile map of the magnetic and VLF-EM data were generated in the head office using the **GEOPAK** and **GEOSOFT** line processing software.

- 3) The pseudosections from 2 above were aligned in **AUTOCAD**, then plotted.
- 4) Contoured plan maps of both chargeability and resistivity data from one dipole were produced using **JVX** in-house software and the **GEOPAK Line Processing Package**. Additional drafting on these maps was done through **AUTOCAD**.

3.2 MAGNETICS and VLF-EM

A contour map and profile map of the magnetic and VLF-EM data were generated in the head office using the **GEOPAK** and **GEOSOFT** line processing software.

4 INTERPRETATION METHODOLOGY

JVX uses its many years of experience in geophysical interpretation to extract the most accurate information from the data. The procedures involved are simplified for the sake of clarity.

4.1 IP AND RESISTIVITY

The IP and resistivity data are interpreted using the following procedure:

- 1) Chargeability anomalies are picked on the pseudosections and classified using the following scheme *as a guide* (Mx sample window = 310 ms to 1050ms)

Very Strong (> 30 mV/V) and well defined

Strong (20 to 30 mV/V) and well defined

Moderate (10 to 20 mV/V) and well defined

Weak (5 to 10 mV/V) and well defined

Very Weak (3 to 5 mV/V) and poorly defined

x x x x *Extremely Weak* (<3 mV/V) and very poorly defined

The peak of the anomaly provides a qualitative indication of the depth to the top of the anomalous source and the location of the centre of the body. Where possible, the location and dipole number of the peak are written beside the anomaly bar.

- 2) The spectral characteristics of the anomalies are examined. The peak value of *M-IP* is noted, and t is classified according to the following scheme:

L *Long* (> 10.0 sec)

M *Medium* (1.0 to 10.0 sec)

S *Short* (< 1.0 sec)

- In particular, very high *M-IP* values (> 900 mV/V) with short τ are typically the most favourable spectral IP targets.

4.2 MAGNETICS

The total field magnetic data are studied for lateral changes of the strength of the magnetic field. Representative contours are chosen to best express both anomalous bodies and lithological contacts.

4.3 VLF

The VLF survey data conducted using transmitter station NAA, Cutler Maine, which operates at a frequency of 24.0 kHz. The conductive axes are determined by locating cross-over responses.

5 DISCUSSION

The interpretation of the geophysical data was compiled onto a single map, and is summarized in the sections following. This Compilation Map and all data plots are included in Appendix B. Apparent resistivity zones have not been outlined on this map since their orientations are uncertain.

VLF-EM conductor axes and trends have been determined from a Fraser Filter colour/contour map. VLF trends are in two main directions, northeast-southwest and east-west. These trends may define geological and/or topographic orientations. Magnetometer data are relatively flat throughout the survey grid. The largest magnetic variations from a background base level of approximately 57 580 nT are less than +/- 300 nT. This is typical for minor pyrrhotite/magnetite and rock-type changes over the property. For comparison purposes, massive magnetite and pyrrhotite typically cause anomalies in excess of 10,000 nT and 3,000 nT respectively.

IP-1, IP-2, VLF-1 and VLF-2:

These chargeability zones extend across the central part of the grid. Spectral tau values are primarily long indicating coarse-grained or linked sulphides. Apparent resistivity values are mainly low in these areas typical for conductive sulphides. VLF conductor axis *VLF-1* supports this interpretation since it generally coincides with these long time constant anomalies within *IP-1*. The symmetrical shape of *VLF-1* suggests that it is likely the result of a near vertical body.

Individual anomalies along these chargeability zones (e.g., *IP-1* at L500W and L700W, and *IP-2* at L500E - see Compilation Map) with short time constant tau coincide with high MIP values indicating a relatively large amount of fine-grained sulphides. Apparent resistivity high anomalies, indicative of silicification, coincide with these short time constant anomalies.

VLF-2 is a moderate strength east-west trending conductor well defined on the Fraser Filter map and located immediately south of *IP-1* and *IP-2*. It appears to be predominantly south-dipping and its source may actually consist of at least two laterally displaced segments. Although it is shown on the Compilation Map as a single continuous conductor axis, a lateral north-south displacement of up to 75 metres may exist between L500W and L600W. The conductor is poorly defined east of L100W although the Fraser Filter map shows that a VLF trend may continue eastwards to at least L400E.

VLF-2 could be the result of sulphides defined by *IP-1* near surface (n=1) chargeability anomalies that continue down-dip towards the south, although this is uncertain. The source of *VLF-2* may also be the result of conductive overburden effects, geologic contacts and/or weathering layers that may be sub-parallel to *IP-1* and *IP-2*.

IP-1 and *IP-2* chargeability zones primarily coincide with magnetic low zones and are flanked by minor magnetic high or background level zones. Apparent resistivity high anomalies generally coincide with magnetic low zones throughout the survey area. Therefore, it is likely that the low magnetic and high apparent resistivity values obtained through *IP-1* and *IP-2* are a result of a more felsic rock with relatively non-magnetic sulphide mineralization.

IP-3, VLF-3, Mag-1 and Mag-2:

IP-3 is a 'wish-bone' shaped chargeability zone located north of *IP-1* and *IP-2*, and between relative magnetic high zones identified on the Compilation Map as *Mag-1*. The spectral parameters MIP and tau are moderate (<300 mV/V) and short respectively. The peak of the anomaly source ranges from n=1 (near surface) on L500E to n=4 (relatively deep) on L1300E and L8800W (Imperial grid). Unlike *IP-1* and *IP-2* where short time constant tau anomalies coincide with high apparent resistivity anomalies, *IP-3* anomalies coincide with low apparent resistivity anomalies (e.g., L700E and L1300E). *IP-3* is likely the result of fine-grained sulphides with less silicification compared to short time constant anomalies in *IP-1* and *IP-2*.

VLF conductor axis *VLF-3* coincides with *IP-3* on L1300E and L8800W. The conductor appears to be north-dipping. Since *IP-3* chargeability anomalies in this area are relatively deep (n=4), it is unlikely that *VLF-3* is directly related to the source of *IP-3*. A VLF trend continues west to L900E from *VLF-3*. Although *VLF-3* may be the result of conductive mineralization, *VLF-3* and the VLF trend may also be the result of conductive overburden effects, geologic contacts and/or weathering layers.

Mag-1 consists of several relative magnetic high zones east of L800E and north of 200S. Preliminary geologic mapping data (supplied by Silver Century Explorations Ltd.) shows that north of *IP-3* the rock type is predominantly mafic volcanics. The south side of *IP-3* is predominantly felsic volcanics. Although *Mag-1* boundaries do not coincide exactly with these geologic boundaries, it appears that, in general, the more mafic volcanics in the north are more magnetic than the felsic volcanics towards the south. South of 500S magnetic values, identified as *Mag-2*, are similar to *Mag-1* and again the geologic mapping data indicate mafic volcanics in this area.

IP-4:

IP-4 is a relatively narrow anomaly, located in the northern corner of the survey grid. It branches out towards the southwest. Spectral MIP are relatively low (<175 mV/V) in the

northeast part of the zone and relatively high (>400 mV/V) in the northwest arm. They are all near surface (n=1) except on L900E where the anomaly is located relatively deep (n=3). A magnetic high zone also coincides with the zone on L900E. The southwest-northeast trending branches of *IP-4* are sub-parallel to VLF trends indicated on the Compilation Map. Whether there is a geologic or topographic relationship between the VLF and IP anomaly sources is uncertain. *IP-4* is typical of varying amounts of fine-grained sulphides. It may also be associated with silicification on L1300E where apparent resistivity values are very high.

IP-5:

This short IP chargeability zone is located southwest of *IP-4*. It consists of relatively high MIP and short time constant anomalies. Apparent resistivity high anomalies are located in the east part (L100E), northwest side and south side of the IP zone. Magnetics data are weakly above background as expected for the mafic volcanics. A VLF trend that passes through the IP anomaly is likely a result of swamp effects. *IP-5* is typical of fine-grained sulphides.

VLF-4:

This relatively short (~300 m) VLF conductor axis is sub-parallel to *IP-5* discussed previously. Although the inphase response is quite strong, the quadrature response is relatively flat. Dip direction due to interference from adjacent VLF trends and due to the limited length of *VLF-4* is uncertain but probably north dipping. Terrain or a weathered fracture/shear could produce this anomaly. Sulphides could also result in this type of anomaly although the IP survey did not detect any at this location. A very weak magnetic high zone coincides with *VLF-4* on L100W and a very weak IP zone is located immediately north of *VLF-4* and the magnetics anomaly. The direct or indirect relationship between these magnetic, VLF and IP anomalies is unknown.

IP-6, VLF-5 and VLF-6:

IP-6 is a very weak and narrow chargeability zone located in the southern part of the grid. Spectral MIP values are less than 100 mV/V and time constants are short. This zone contains very minor fine-grained sulphides. *VLF-5* is a poorly defined sub-parallel east-west trending conductor axis that may extend eastwards beyond L8400W (Imperial Grid). *VLF-6* is a poorly defined east-south-east extension of *VLF-5* at L100W.

IP-6 is located in an area of below background magnetometer values even though geologic mapping indicates that the area consists of mafic volcanics. This suggests that much of the magnetic mineralization may have been 'washed-out' of the rock. *IP-6* may consist of secondary mineralization indirectly related to the VLF conductors. The VLF anomalies may be associated with shear zones or geologic contacts that contain conductive materials.

6 RECOMMENDATIONS

Several Target Areas for further exploration have been identified and prioritized on the Compilation Map. Almost all of the target areas have been located within the mapped felsic volcanics. They also coincide with relative magnetic low areas which may be favourable for gold if the primary magnetic mineralization was 'washed-out' and substituted with secondary gold-bearing sulphides.

HIGH PRIORITY

T-H1 (L500W/stn.100S), T-H2 (L100E/stn.25S), T-H3 (L700E/stn.25S-100S), T-H4 (L700W/stn.0-100S):

These high priority chargeability targets are located within IP zone *IP-1*. MIP values are over 400 mV/V and spectral tau values are short making these ideal gold exploration targets.

MEDIUM PRIORITY

T-M1 (L500E/stn.800N):

This target is located in the western part of *IP-4* in the northern part of the grid. This target should be investigated for fine grained sulphide mineralization that might contain gold since it is located immediately adjacent to conductor *VLF-4* and coincides with a relative magnetic low area, high spectral MIP (454 mV/V) and short time constant tau.

T-M2 (L100E/stn.825N), T-M3 (L700E/stn.125N):

Target *T-M2* is located approximately southwest of *T-M1* and has MIP=339 mV/V and short time constant tau which is favourable for gold mineralization. It coincides with high apparent resistivity anomalies. Target *T-M3* is similarly favourable for gold mineralization although it coincides with a weak apparent resistivity low anomaly. These targets may each be associated with silicification and alteration respectively.

LOW PRIORITY

T-L1 (L300W/stn.150S), T-L2 (L1100E/stn.275S), T-L3 (L700E/stn.350S-400S), T-L4 (L100E/stn.200S):

These target areas have chargeability anomalies with high (>400 mV/V) MIP values and long time constant tau which is indicative of coarse-grained sulphides. *T-L1* also coincides with an apparent resistivity low anomaly and poorly defined VLF conductor *VLF-1* which suggests that this anomaly may also be the result of linked sulphides. These targets should be investigated for gold mineralization especially if the gold was remobilized.

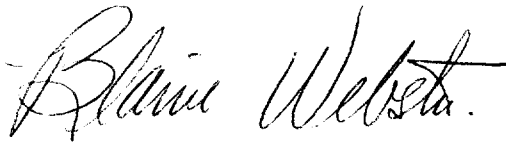
If there are any questions with regard to the conducting of the survey or the interpretation of the data, please call the undersigned at JVX Ltd.

Respectfully submitted,

JVX Ltd.



Joe Mihelcic, P.Eng., M.B.A.
Geophysicist



Blaine Webster, B.Sc.
President

APPENDIX A

Background

to the

Geophysical Methods

INDUCED POLARIZATION AND RESISTIVITY

1 THE IP EFFECT

The induced polarization (IP) phenomenon is primarily caused by:

- 1) electrical polarization at the boundary between the rock or soil and the pore fluids, and
- 2) electrical polarization at the boundary between metallic minerals (particularly sulphides) within pores and the pore fluids.

This polarization occurs when a current is applied across these boundaries. Its magnitude can be measured in two ways:

- 1) in the frequency domain (also known as phase IP), in which the applied current is sinusoidal, or
- 2) in the time domain, in which the applied current is a modified square wave.

JVX conducts IP surveys in the time domain because spectral analysis, a powerful interpretive tool, can only be performed in the time domain.

Generally, the current is transmitted as a modified square wave with a period of eight seconds (two seconds positive, two seconds off, two seconds negative, two seconds off). The voltage measured in the ground will have the form shown in figure IP-1. The IP effect is manifested as a roughly exponential voltage decay after the current is turned off, similar to the relaxation effect of a discharging capacitor. The IP receiver samples this voltage decay curve at a number of points.

The **SCINTREX IPR-11** receiver repeats and averages the following measurements until they converge:

- V_p The primary voltage (the steady-state amplitude of the voltage while the current is being transmitted).

- SP The self-potential (the steady state voltage when no current is being transmitted).
- m0 to m9 The chargeabilities (measures of the IP effect at different times along the decay voltage curve $V_s(t)$).

Each chargeability value (m0 to m9) is the ratio of the average secondary voltage over a time window to the primary voltage. Mathematically, this is given by:

$$m = \frac{1000}{V_p(t_2-t_1)} \int_{t_1}^{t_2} V_s(t) dt$$

where

- m = chargeability (in mV/V)
- $V_s(t)$ = secondary voltage (i.e. the voltage decay)
- V_p = primary voltage
- t_1 = beginning of time window
- t_2 = end of time window

The IPR-11 uses the ten time windows, also known as time slices, listed in table IP-1 and shown in figure IP-2. Unless otherwise stated, the term chargeability refers to the eighth time window (m7).

IP-3

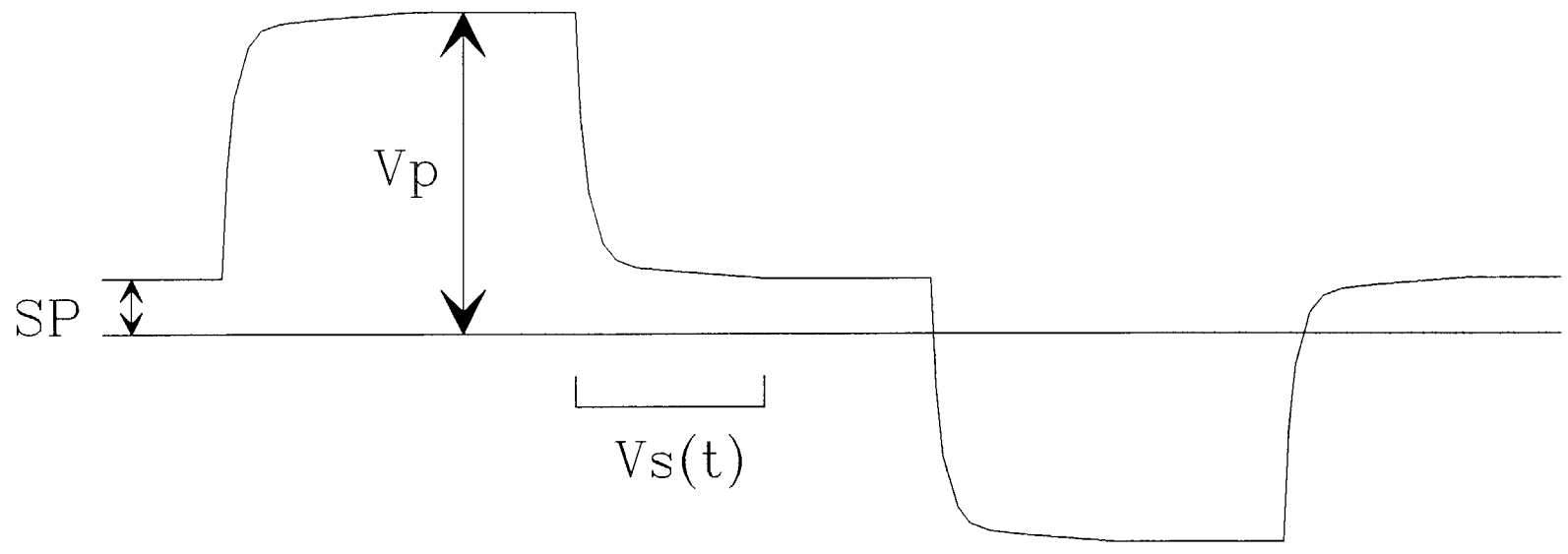
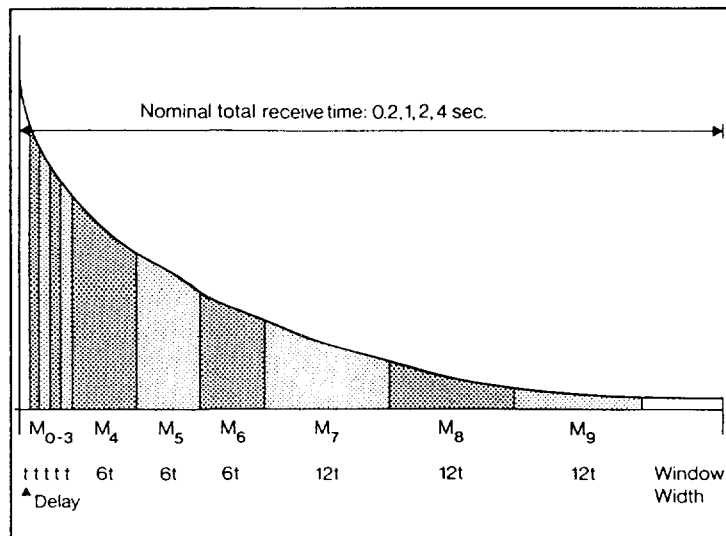


Figure IP-1 : The I.P. Waveform

| SLICE | DURATION (msec) | FROM (msec) | TO (msec) | MIDPOINT (msec) |
|-------|-----------------|-------------|-----------|-----------------|
| m0 | 30 | 30 | 60 | 45 |
| m1 | 30 | 60 | 90 | 75 |
| m2 | 30 | 90 | 120 | 105 |
| m3 | 30 | 120 | 150 | 135 |
| m4 | 180 | 150 | 330 | 240 |
| m5 | 180 | 330 | 510 | 420 |
| m6 | 180 | 510 | 690 | 600 |
| m7 | 360 | 690 | 1050 | 870 |
| m8 | 360 | 1050 | 1410 | 1230 |
| m9 | 360 | 1410 | 1770 | 1590 |

Table IP-1 : Time slices recorded by the IPR-11 receiver



IPR-11 Transient Windows

Figure IP-2 : IP effect decay curve with IPR-11 time slices

2 SPECTRAL ANALYSIS

With the ability to sample the decay curve at a number of points, the shape of the decay curve can be analysed. This gives important information about the characteristics of the source.

Spectral analysis utilises the Cole-Cole model of the IP effect (Pelton et al., 1978). This model uses the following four parameters (described in Johnson, 1984) to calculate a theoretical IP decay curve:

ρ_a **Resistivity** (Ωm)

This quantity is described in detail later in this appendix.

M-IP **Chargeability Amplitude** (mV/V)

This quantity is related to the volume percent of the chargeable source, although there is no simple quantitative relationship.

τ **Time Constant** (seconds)

The time constant is related to the grain size of the source. A short time constant (0.01 to 0.3 s) indicates a fine-grained source. A long time constant (30 to 100 s) indicates a coarse-grained, interconnected, or massive source.

c **Exponent** (dimensionless)

A high value (e.g. 0.5) indicates that the grain size is uniform. A low value (e.g. 0.1) indicates that there is a mixture of grain sizes.

Conventional chargeability is a combination of these spectral parameters. A change in any one parameter will produce a change in the apparent chargeability. *In the absence of spectral analysis, such changes are always ascribed to a change in the volume percent of the chargeable source, even though the cause may be a shift from fine-grained to coarse-grained material.*

JVX has developed a software package called **SOFT II** which determines the spectral parameters by comparing the measured decay curve with a library of model curves. The quality of the fit is given as a root-mean-square difference (expressed as a percentage). A low value (e.g. 1 %) indicates high quality data of medium to high amplitude. A high value (e.g. greater than 10 %) indicates poor quality or low amplitude data. If the fit is greater than 5 %, the spectral parameters are considered to be of poor quality, and therefore are usually discarded.

3 ARRAY CONFIGURATION

As mentioned above, a current must be flowing through the ground in order for the IP effect to occur. This current is applied using two electrodes, which are called C1 and C2, and the voltage decay is measured using two potential electrodes, P1 and P2. The distance separating P1 and P2 is known as the *a-spacing*, or *a*, and generally remains constant during the survey.

The three most common electrode array configurations are:

1) **Gradient**

C1 and C2 are located at an "infinite" distance (i.e. very far) from the grid, with one on each side. The potential electrodes move throughout the grid.

2) **Dipole-Dipole**

C1 and C2 are separated by a distance of *a*, and move along with the potential electrodes.

3) **Pole-Dipole**

C2 is located at "infinity". C1 moves along with the potential electrodes throughout the grid.

The gradient array allows for fast reconnaissance surveys. However, no depth information is obtained (described below), and the resolution is much lower because all of the ground between C1 and C2 is energised. Furthermore, the current will be channelled through conductive zones, which could result in inaccurate chargeability and resistivity values. Thus, great care must be used when using a gradient array.

In JVX' experience, the pole-dipole array is superior to the dipole-dipole array. Since C2 is located at an infinite distance, a greater volume of ground is energised. This results in better depth penetration (i.e. higher quality data), and is particularly important in the presence of thick and/or conductive overburden. However, the pole-dipole array does not have the disadvantages of the gradient array. Since C1 is located near the potential electrodes, depth information is obtained (see below), and resolution is high.

4 A-SPACING AND NUMBER OF DIPOLES

The resolution of the data depends on *a*, the electrode spacing. The smaller *a* is, the greater the resolution. However, the depth of penetration is also smaller. A larger *a* results in greater depth, but less resolution. Thus, both factors must be considered when selecting the electrode spacing.

The standard pole-dipole array is shown in figure IP-2. Seven potential electrodes are used to measure the voltage simultaneously across six electrode pairs (P1-P2, P2-P3, P3-

P4, etc.). Each pair is labelled using an integer, n , where na is the distance between the first potential electrode and the nearest current electrode.

The depth of investigation is greater when the potential electrode pair is farther from the current electrode (i.e. larger n). However, a greater separation distance also results in greater signal attenuation, limiting the number of dipoles which could be used effectively.

5 RESISTIVITY

The DC apparent resistivity (ρ_a) is a measure of the bulk electrical resistivity of the subsurface. Electricity flows primarily through the groundwater within fractures and pore spaces. Therefore, fault zones can be detected as low resistivity zones. However, sulphide minerals, some oxides, and graphite are also good conductors and so produce low resistivity zones. The current flow is electronic in these minerals rather than electrolytic as it is in groundwater. Sometimes, the geometry of the low resistivity zone can distinguish between a fault zone and a mineral source. In other cases, additional geological information is needed. Silicates, the most common rock forming minerals, are very poor conductors of electricity, producing high resistivity zones.

The resistivity is measured simultaneously with the IP data. For a homogeneous and isotropic subsurface, it is given by the following formula:

$$\rho_a = \frac{k V_p}{I}$$

where

$$\begin{aligned} \rho_a &= \text{apparent resistivity } (\Omega\text{m}) \\ V_p &= \text{primary voltage (measured while current is on) (mV)} \\ k &= \text{k-factor (m)} \end{aligned}$$

The *k-factor* is an array-dependant component. For a pole-dipole array, it is given by:

$$k = 2\pi n(n+1)a$$

where

$$\begin{aligned} n &= \text{dipole multiple (dimensionless)} \\ a &= \text{electrode separation (m)} \end{aligned}$$

Although the assumption of a homogeneous and isotropic earth is unrealistic, the calculated value of ρ_a can be used qualitatively to map changes in rock type (even to identify the rock type in some cases), and to map low resistivity fault zones.

References

- Johnson, I.M. Spectral I.P. Parameters as Determined through Time Domain Measurements, pp. 1993-2003 *Geophysics* **49**, 1984
- Johnson, I.M., B. Webster, R. Mathews, and S. McMullan Time Domain Spectral IP Results from Three Gold Deposits in Northern Saskatchewan, *The Canadian Mining and Metallurgical Bulletin*, Feb. 1989
- Pelton, W.H., S.H. Ward, P.G. Hallof, W.P. Sill, P.H. Nelson Mineral Discrimination and Removal of Inductive Coupling with Multifrequency IP, pp. 588-609, *Geophysics* **43**, 1978

MAGNETIC METHOD

The magnetic field measured at any point on or above the earth's surface is a combination of:

- 1) the earth's magnetic field,
- 2) the induced magnetization of near-surface material, and
- 3) the remanent magnetization of near-surface material.

The total measured field is equal to the vector sum of the magnetic field arising from all three factors.

1 THE EARTH'S MAGNETIC FIELD

The earth's magnetic field is similar in form to that of a bar magnet. The flux lines of the geomagnetic field are vertical at the north and south magnetic poles where the strength is approximately 60 000 nT (or gammas). In the equatorial region, the field is horizontal and its strength is approximately 30 000 nT. This field can be considered to be constant in space and time for exploration surveys.

2 INDUCED MAGNETIZATION

An external magnetic field (for example, the earth's) induces the magnetization of a ferrous body. This magnetized body then produces an additional magnetic field, known as the *induced field*, which is given by the following formula:

$$\mathbf{I} = k \mathbf{H}$$

where:

- \mathbf{I} = the induced magnetic field (nT) — a vector
- k = the volume magnetic susceptibility of the material
- \mathbf{H} = the external magnetic field (nT) — a vector

Thus, the strength of the induced magnetic field is a function of the susceptibility of the body. In turn, the susceptibility is a reflection of the content of ferrous minerals, most importantly magnetite. Note that the induced field is parallel to the external field.

3 REMANENT MAGNETIZATION

The remanent magnetization of rocks depends both on their composition and their previous history. Whereas the induced magnetization is nearly always parallel to the direction of the geomagnetic field, the natural remanent magnetization may bear no relation to the present direction and intensity of the earth's field. The remanent magnetization is related to the direction of the earth's field at the time the rocks were last magnetized. Generally, one can assume that there is no significant remanent magnetization when interpreting magnetic data.

4 DIURNAL CORRECTION

Although the earth's magnetic field is essentially constant, time-varying magnetic fields may result from atmospheric phenomena. Fields due to magnetic storms may vary by hundreds of nanoteslas in a few minutes. Therefore, it is necessary to monitor the background magnetic field constantly using a stationary base station magnetometer. The field measurements can then be corrected for the background magnetic variation. This process is known as diurnal correction.

5 INTERPRETATION

Magnetic data are used to map regions of different magnetic susceptibilities (i.e. ferrous content). The magnetic method cannot detect gold directly, but it can map structures which can aid in locating areas of silicification and carbonization. When used in conjunction with geological and other geophysical data, magnetic data can help select targets which are favourable for economic mineralisation.

VLF METHOD

1 TRANSMITTED SIGNAL

The Very Low Frequency (VLF) Electromagnetic Method measures variations in high-powered electromagnetic signals in the 5 to 25 kHz range which are broadcast for air and marine navigation.

Above a uniform earth, the vertically polarized primary (transmitted) signal has three components:

- 1) the horizontal component of the electric field parallel to the direction of propagation,
- 2) the vertical component of the electric field, and
- 3) the horizontal component of the magnetic field perpendicular to the direction of propagation.

This primary signal varies slightly with time, usually due to changes in the atmospheric conditions. However, more dramatic changes can sometimes be observed.

2 VLF MEASUREMENTS

The primary transmitted signal induces eddy currents in conductive bodies. These conductive bodies in turn generate secondary electromagnetic fields. The **Scintrex IGS-2/VLF-4** system measures three components of the resulting fields:

- 1) the horizontal field component,
- 2) the in-phase vertical component (as a percentage of the horizontal field), and
- 3) the out-of-phase vertical component (also as a percentage off the horizontal field).

The horizontal field component is not a reliable interpretive tool unless a second stationary VLF sensor (a "base station") is used to monitor fluctuations in the primary signal. These fluctuations are usually due to changes in atmospheric conditions, and can be dramatic in some cases. However, the in-phase and out-of-phase components can be used to locate conductive bodies reliably.

3 INTERPRETATION

In the absence of a conductive body, the vertical component is zero (both in-phase and out-of-phase). Near a conductor, the vertical component is non-zero. Generally, the polarity of both components changes as the sensor passes over a conductive body, i.e. from positive to negative, or negative to positive. Furthermore, the in-phase and out-of-phase components are of opposite polarity. For example, the in-phase will be positive to the east of a body, and negative to the west. The out-of-phase will be negative to the east, and positive to the west. Thus, the conductive body is located below the point where the two components *cross over*.

If a base station is used, a diurnal correction can be made, allowing a more detailed interpretation of the data. Alternately, a low-pass filter can be applied to determine the slow varying diurnal component of the primary field. This component can then be removed from the data. However, this method is far less reliable than the use of a base station.

APPENDIX B

Plates



Ministry of Northern Development and Mines

Declaration of Assessment Work Performed on Mining Land

Mining Act, Subsection 65(2) and 66(3), R.S.O. 1990

Transaction Number (office use)
 W9680.00632
 Assessment Files Research Imaging

Personal information collected on this form is obtained under the authority of subsection 65(2) and 66(3) of the Mining Act. Under section 8 of the Mining Act, the information must be kept and correspond with the mining land holder. Questions about this form should be directed to the Ministry of Northern Development and Mines, 6th Floor, 933 Ramsey Lake Road.



32D05SE0102 2.16992 OSSIAN

Instructions: - For use with form 0240. 900
 - Please type or print in ink.

2.16992

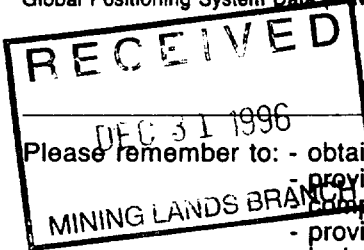
1. Recorded holder(s) (Attach a list if necessary)

| | |
|--|--|
| Name <i>Silver Century Expl. Ltd. / Sudbury Contract Mines Ltd.</i> | Client Number <i>301001 // 198617</i> |
| Address <i>#2302-401 Bay St., Toronto, Ontario, M5H 2Y4</i> | Telephone Number <i>416-947-1212</i> |
| | Fax Number <i>416-367-4681</i> |
| Name <i>Crow Geological Services Inc.</i> | Client Number |
| Address <i>#500-67 Richmond St. W., Toronto, Ontario, M5H 1Z5</i> | Telephone Number <i>416-361-0737</i> |
| | Fax Number <i>416-361-0923</i> |

2. Type of work performed: Check (✓) and report on only ONE of the following groups for this declaration.

- Geotechnical: prospecting, surveys, assays and work under section 18 (regs) Physical: drilling, stripping, trenching and associated assays Rehabilitation

| | |
|--|---|
| Work Type <i>Magnetic/VLF Survey IP/Resistivity Survey Line cutting</i> | Office Use |
| | Commodity |
| | Total \$ Value of Work Claimed <i>62,914.00</i> |
| Dates Work Performed From <i>08/06/96</i> To <i>24/08/96</i> | NTS Reference |
| Global Positioning System Data (if available) | Mining Division <i>Karder Lake</i> |
| Township/Area <i>OSSIAN TP.</i> | Resident Geologist District <i>Kirkland Lake</i> |
| M or G-Plan Number <i>M-378</i> | |



Please remember to: - obtain a work permit from the Ministry of Natural Resources as required;
 - provide proper notice to surface rights holders before starting work;
 - complete and attach a Statement of Costs, form 0212;
 - provide a map showing contiguous mining lands that are linked for assigning work;
 - include two copies of your technical report.

3. Person or companies who prepared the technical report (Attach a list if necessary)

| | |
|---|---|
| Name <i>JVX Ltd, 60 West Wilmot St. Unit #22</i> | Telephone Number <i>905-731-0972</i> |
| Address <i>Richmond Hill, Ontario, L4B 1M6</i> | Fax Number <i>905-731-9312</i> |
| Name <i>D A Hubachek Consultants Ltd,</i> | Telephone Number <i>416-364-2895</i> |
| Address <i>#1401-141 Adelaide St. W. Toronto, Ont. M5H 3L5</i> | Fax Number <i>416-364-5384</i> |
| Name | Telephone Number <i>416-364-5384</i> |
| Address | Fax Number <i>416-364-5384</i> |

DEC 28 1996

4. Certification by Recorded Holder or Agent

I, DAVID W. CHRISTIE (Print Name), do hereby certify that I have personal knowledge of the facts set forth in this Declaration of Assessment Work having caused the work to be performed or witnessed the same during or after its completion and, to the best of my knowledge, the annexed report is true.

| | |
|--|---|
| Signature of Recorded Holder or Agent <i>[Signature]</i> | Date <i>Dec 29/96</i> |
| Agent's Address <i>#1401-141 Adelaide St. W. Toronto Ont. M5H 3L5</i> | Telephone Number <i>416-364-2895</i> |
| | Fax Number <i>416-364-5384</i> |

T 1 M 1 22/07

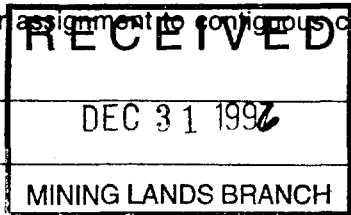
5. Work to be recorded and distributed. Work can only be assigned to claims that are contiguous (adjoining) to the mining land where work was performed, at the time work was performed. A map showing the contiguous link must accompany this form.

| Mining Claim Number. Or if work was done on other eligible mining land, show in this column the location number indicated on the claim map. | Number of Claim Units. For other mining land, list hectares. | Value of work performed on this claim or other mining land. | Value of work applied to this claim. | Value of work assigned to other mining claims. | Bank. Value of work to be distributed at a future date. |
|---|--|---|--------------------------------------|--|---|
| eg TB 7827 | 16 ha | \$26, 825 | N/A | \$24,000 | \$2,825 |
| eg 1234567 | 12 | 0 | \$24,000 | 2.16992 | 0 |
| eg 1234568 | 2 | \$ 8, 892 | \$ 4,000 | | \$4,892 |
| ✓ 1 11131 | 27.76 ha | 3609 | 0 | 0 | 3609 |
| ✓ 2 11132 | 14.25 | 1893 | 0 | 0 | 1893 |
| ✓ 3 11133 | 13.84 | 1834 | 0 | 0 | 1834 |
| ✓ 4 11181 | 14.57 | 1893 | 0 | 0 | 1893 |
| ✓ 5 11182 | 15.78 | 2071 | 0 | 0 | 2071 |
| ✓ 6 11183 | 23.07 | 3017 | 0 | 0 | 3017 |
| ✓ 7 11184 | 21.49 | 2840 | 0 | 0 | 2840 |
| ✓ 8 11185 | 21.17 | 2781 | 0 | 0 | 2781 |
| ✓ 9 11186 | 24.65 | 3254 | 0 | 0 | 3254 |
| ✓ 10 11187 | 26.6 | 3490 | 0 | 0 | 3490 |
| ✓ 11 11188 | 19.55 | 2544 | 0 | 0 | 2544 |
| ✓ 12 11189 | 25.33 | 3313 | 0 | 0 | 3313 |
| ✓ 13 11344 | 16.49 | 2189 | 0 | 0 | 2189 |
| ✓ 14 11413 | 16.84 | 2189 | 0 | 0 | 2189 |
| ✓ 15 11999 | 21.65 ha | 2840 | 0 | 0 | 2840 |
| Column Totals | | | | | |

I, DAVID W. CHRISTIE (Print Full Name), do hereby certify that the above work credits are eligible under subsection 7 (1) of the Assessment Work Regulation 6/96 for assignment to contiguous claims or for application to the claim where the work was done.

Signature of Recorded Holder or Agent Authorized in Writing

David W. Christie



Date Dec 21/96

6. Instructions for cutting back credits that are not approved.

Some of the credits claimed in this declaration may be cut back. Please check (✓) in the boxes below to show how you wish to prioritize the deletion of credits:

- 1. Credits are to be cut back from the Bank first, followed by option 2 or 3 or 4 as indicated.
- 2. Credits are to be cut back starting with the claims listed last, working backwards; or
- 3. Credits are to be cut back equally over all claims listed in this declaration; or
- 4. Credits are to be cut back as prioritized on the attached appendix or as follows (describe):

Note: If you have not indicated how your credits are to be deleted, credits will be cut back from the Bank first, followed by option number 2 if necessary.

For Office Use Only

Received Stamp

WARDER LAKE
DEC 23 1996

Deemed Approved Date

97 March 21

Date Notification Sent

Date Approved

Total Value of Credit Approved

Approved for Recording by Mining Recorder (Signature)

Heire McKeen

ACTING MINING RECORD

| Mining Claim Number. Or if work was done on other eligible mining land, show in this column the location number indicated on the claim map. | Number of Claim Units. For other mining land, list hectares. | Value of work performed on this claim or other mining land | Value of work applied to this claim | Value of work assigned to other mining claims | Bank. Value of work to be distributed at a future date |
|---|--|--|--|---|--|
| ✓ 16 | 12000 | 19.87ha | 2603 | 0 | 2603 |
| ✓ 17 | 12020 | 26.71 | 3490 | 0 | 3490 |
| ✓ 18 | 12021 | 26.71 | 3490 | 0 | 3490 |
| ✓ 19 | 12716 | 14.57 | 1893 | 0 | 1893 |
| ✓ 20 | 12717 | 15.78 | 2071 | 0 | 2071 |
| ✓ 21 | 12577 | 14.29 | 1893 | 0 | 1893 |
| ✓ 22 | 12578 | 14.08 | 1834 | 0 | 1834 |
| ✓ 23 | 15891 | 16.19ha | 2130 | 0 | 2130 |
| ✓ 24 | 1211661 | 2 units | 333 | 0 | 333 |
| ✓ 25 | 1211662 | 2 | 50 | 0 | 50 |
| ✓ 26 | 1211663 | 6 | 257 | 0 | 257 |
| ✓ 27 | 1211660 | 1 | 550 | 0 | 550 |
| ✓ 28 | 1211659 | 4 | 1235 | 0 | 1235 |
| ✓ 29 | 1211658 | 4 | 1328 | 0 | 1328 |
| | | 29 Claims | | | |
| | | 470.24 Units | | | |
| | | | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: auto;"> <p>RECEIVED</p> <p>DEC 31 1996</p> <p>MINING LANDS BRANCH</p> </div> | | |
| DEC 28 Column Totals | | 62914 | 0 | 0 | 62914 |

Personal information collected on this form is obtained under the authority of subsection 6(1) of the Assessment Work Regulation 6/96. Under section 8 of the Mining Act, the information is a public record. This information will be used to review the assessment work and correspond with the mining land holder. Questions about this collection should be directed to the Chief Mining Recorder, Ministry of Northern Development and Mines, 8th Floor, 933 Ramsey Lake Road, Sudbury, Ontario, P3E 6B5.

| Work Type | Units of Work <small>Depending on the type of work, list the number of hours/days worked, metres of drilling, kilometres of grid line, number of samples, etc.</small> | Cost Per Unit | Total Cost |
|---|---|---------------------|----------------------|
| Linecutting | BL 4.94 km Crosslines 48.88 km | 400.00 275.00 | 1976.00 13442.00 |
| Magnetic/VLF Survey | 49.9 km | 187/km | 9348.50 |
| IP/Resistivity Survey | IP a = 25m 20.9 km IP a = 50m 2.4 km | 1238/km | 26615.63 2,250.00 |
| Project Geologist | 0.5 days | \$ 323.16 | 161.58 |
| | | 2.16992 | |
| Associated Costs (e.g. supplies, mobilization and demobilization). | | | |
| Field Expenses | | | 2391.89 |
| Consultants Management Fee | | | 1449.64 |
| Administration Costs | | | 3479.14 |
| Transportation Costs | Mob/Demob | | 1000.00 |
| | ATV Trail (2km) | 400.00 | 800.00 |
| Food and Lodging Costs | | | |
| | | RECEIVED | |
| | | DEC 31 1996 | |
| | | MINING LANDS BRANCH | |
| Total Value of Assessment Work | | | 62,914.33 |

Calculations of Filing Discounts:

1. Work filed within two years of performance is claimed at 100% of the above Total Value of Assessment Work.
2. If work is filed after two years and up to five years after performance, it can only be claimed at 50% of the Total Value of Assessment Work. If this situation applies to your claims, use the calculation below:

TOTAL VALUE OF ASSESSMENT WORK x 0.50 = Total \$ value of worked claimed.

Note:

- Work older than 5 years is not eligible for credit.
- A recorded holder may be required to verify expenditures claimed in this statement of costs within 45 days of a request for verification and/or correction/clarification. If verification and/or correction/clarification is not made, the Minister may reject all or part of the assessment work submitted.

Certification verifying costs:

I, DAVID W. CHRISTIE, do hereby certify, that the amounts shown are as accurate as may reasonably be determined and the costs were incurred while conducting assessment work on the lands indicated on the accompanying Declaration of Work form as Agent - Project Geologist I am authorized to make this certification. (please print full name)
(recorded holder, agent, or state company position with signing authority)

Signature: [Signature] Date: Dec 30/96



March 11, 1997

Geoscience Assessment Office
933 Ramsey Lake Road
6th Floor
Sudbury, Ontario
P3E 6B5

Roy Spooner
Mining Recorder
4 Government Road East
Kirkland Lake, ON
P2N 1A2

Telephone: (705) 670-5853
Fax: (705) 670-5863

Dear Sir or Madam:

Submission Number: 2.16992

Status

Subject: Transaction Number(s): W9680.00632 Deemed Approval

We have reviewed your Assessment Work submission with the above noted Transaction Number(s). The attached summary page(s) indicate the results of the review. WE RECOMMEND YOU READ THIS SUMMARY FOR THE DETAILS PERTAINING TO YOUR ASSESSMENT WORK.

If the status for a transaction is a 45 Day Notice, the summary will outline the reasons for the notice, and any steps you can take to remedy deficiencies. The 90-day deemed approval provision, subsection 6(7) of the Assessment Work Regulation, will no longer be in effect for assessment work which has received a 45 Day Notice.

Please note any revisions must be submitted in DUPLICATE to the Geoscience Assessment Office, by the response date on the summary.

NOTE: This correspondence may affect the status of your mining lands. Please contact the Mining Recorder to determine the available options and the status of your claims.

If you have any questions regarding this correspondence, please contact Steve Beneteau by e-mail at beneteau_s@torv05.ndm.gov.on.ca or by telephone at (705) 670-5855.

Yours sincerely,

A handwritten signature in black ink, appearing to read "Ron C. Gashinski".

ORIGINAL SIGNED BY
Ron C. Gashinski
Senior Manager, Mining Lands Section
Mines and Minerals Division

Work Report Assessment Results

Submission Number: 2.16992

Date Correspondence Sent: March 11, 1997

Assessor: Steve Beneteau

| Transaction Number | First Claim Number | Township(s) / Area(s) | Status | Approval Date |
|---------------------------|---------------------------|------------------------------|-----------------|----------------------|
| W9680.00632 | 11131 | OSSIAN | Deemed Approval | February 21, 1997 |

Section:

14 Geophysical IP

14 Geophysical MAG

14 Geophysical VLF

Correspondence to:

Mining Recorder
Kirkland Lake, ON

Resident Geologist
Kirkland Lake, ON

Assessment Files Library
Sudbury, ON

Recorded Holder(s) and/or Agent(s):

David W. Christie
TORONTO, ONTARIO, CANADA

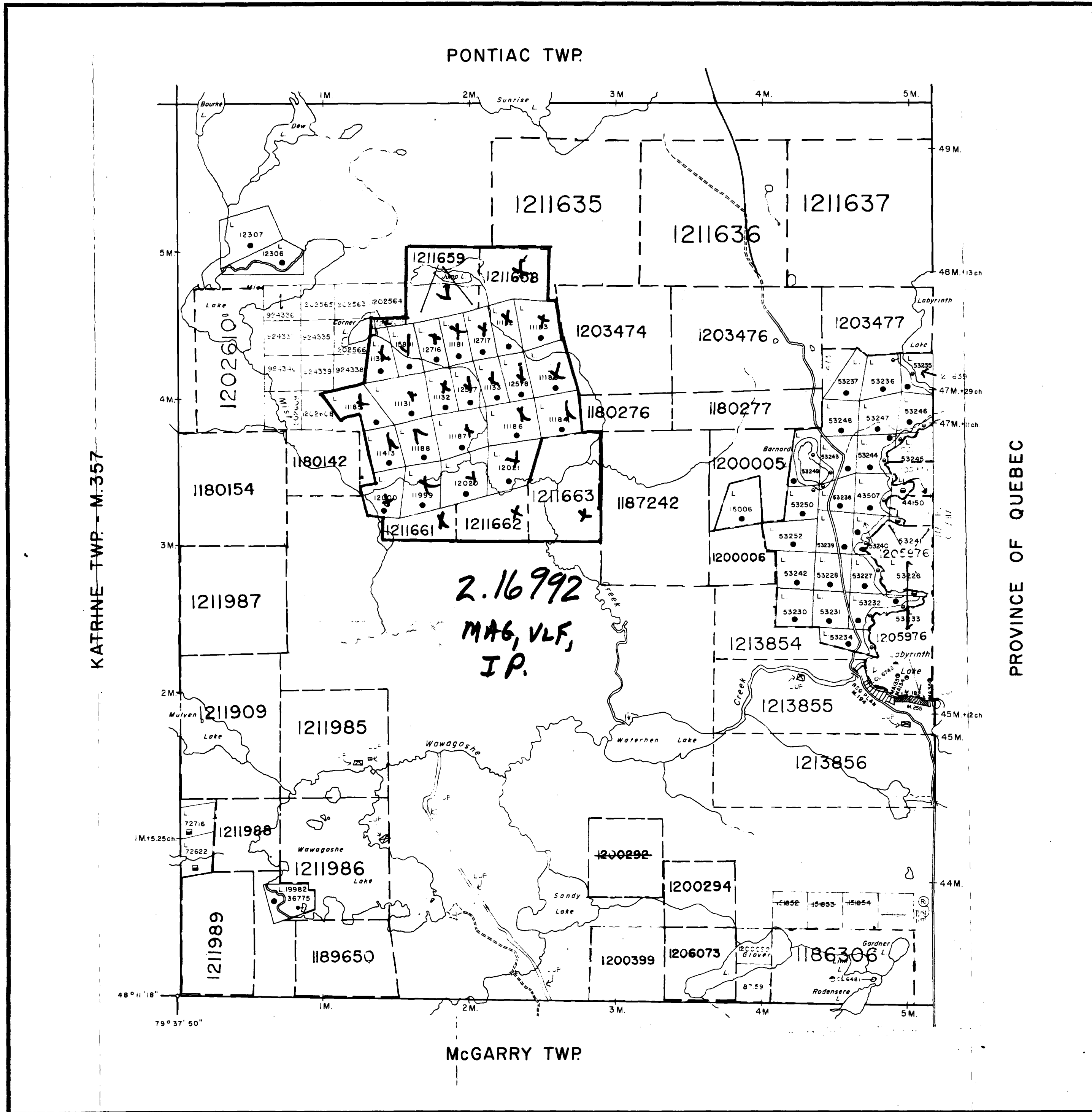
SILVER CENTURY EXPLORATIONS LTD.
TORONTO, ONTARIO

SUDBURY CONTACT MINES LIMITED
TORONTO, Ontario

85E.M

PWT NA1220

85E.M



THE TOWNSHIP OF 2.16992

OSSIAN

RECEIVED
 DISTRICT OF TIMISKAMING
 DEC 31 1996
 MINING LANDS BRANCH

LARDER LAKE MINING DIVISION

SCALE: 1-INCH = 40 CHAINS

DISPOSITION OF CROWN LANDS

- PATENT, SURFACE AND MINING RIGHTS ●
- " SURFACE RIGHTS ONLY ○
- " MINING RIGHTS ONLY ◐
- LEASE, SURFACE AND MINING RIGHTS ■
- " SURFACE RIGHTS ONLY ◑
- " MINING RIGHTS ONLY ◒
- LICENCE OF OCCUPATION ▼

- ROADS
- IMPROVED ROADS
- KING'S HIGHWAYS
- RAILWAYS
- POWER LINES
- MARSH OR MUSKEG
- MINES
- CANCELLED

NOTES

400' surface rights reservation along the shores of all lakes and rivers.

Areas withdrawn from staking under Section 43 of the Mining Act (R.S.O. 1970).

| Order No. | File | Date | Disposition |
|-----------|------|------|---|
| | | | SR - SURFACE RIGHTS MR - MINING RIGHTS |

MINING RECORDS OFFICE
 LARDER LAKE
 DEC 30 1996
 DATE OF ISSUE

CIRCULAR 11/1995

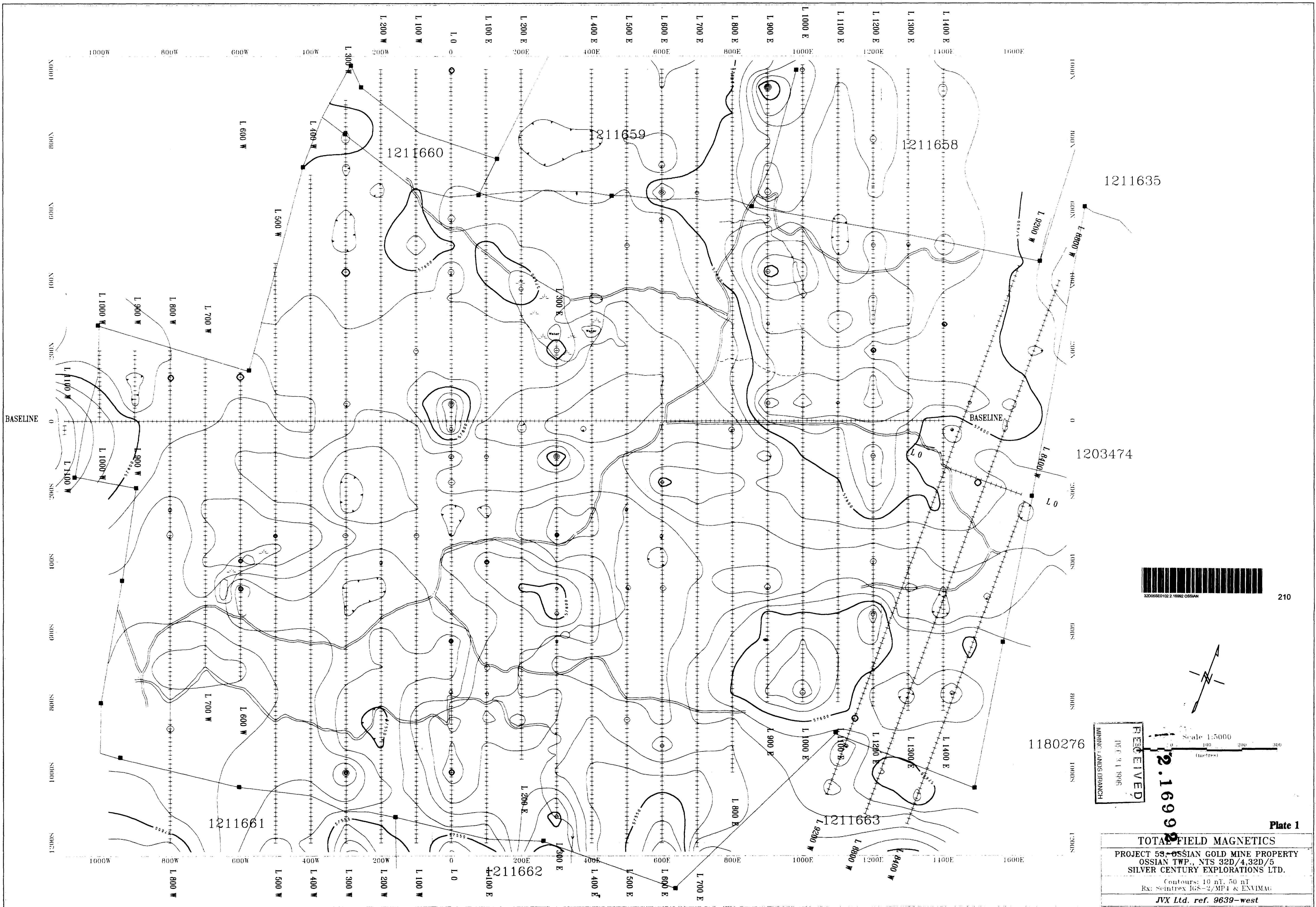
PLAN NO. M.378

ONTARIO
 MINISTRY OF NATURAL RESOURCES
 SURVEYS AND MAPPING BRANCH



200

3200550102 2.16992 OSSIAN



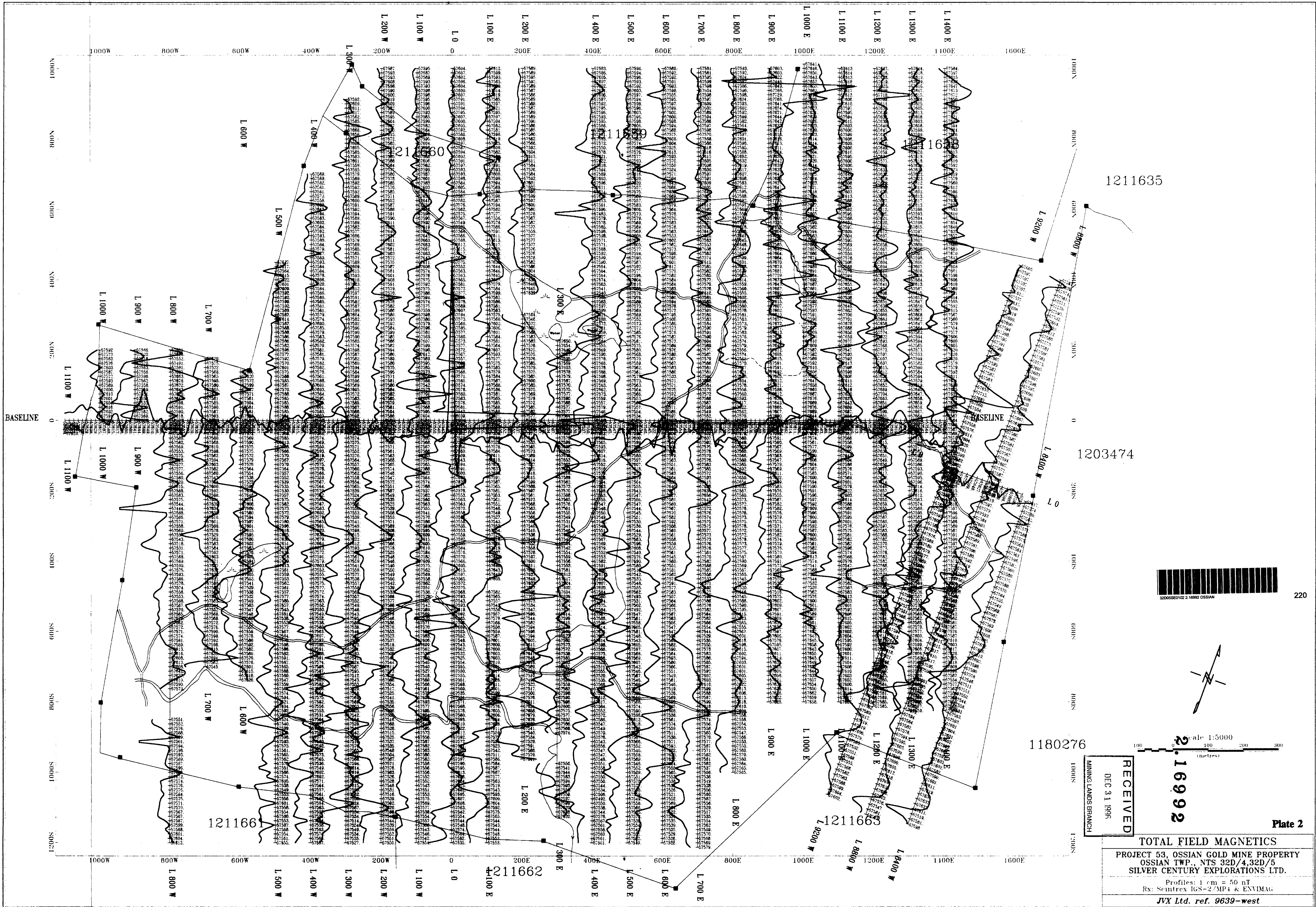
210

RECEIVED
DEC 1 1996
MINING LANDS BRANCH

Scale 1:5000
0 100 200 300
(metres)

2.1699Z

Plate 1
TOTAL FIELD MAGNETICS
PROJECT 58-OSSIAN GOLD MINE PROPERTY
OSSIAN TWP., NTS 32D/4,32D/5
SILVER CENTURY EXPLORATIONS LTD.
Contours: 10 nT, 50 nT
Rx: Scintrex IGS-2/MP4 & EXIMAG
JVX Ltd. ref. 9639-west



1211635

1203474



220



Scale 1:5000
2.16992
(Meters)

RECEIVED
DEC 31 1996
MINING LANDS BRANCH

Plate 2

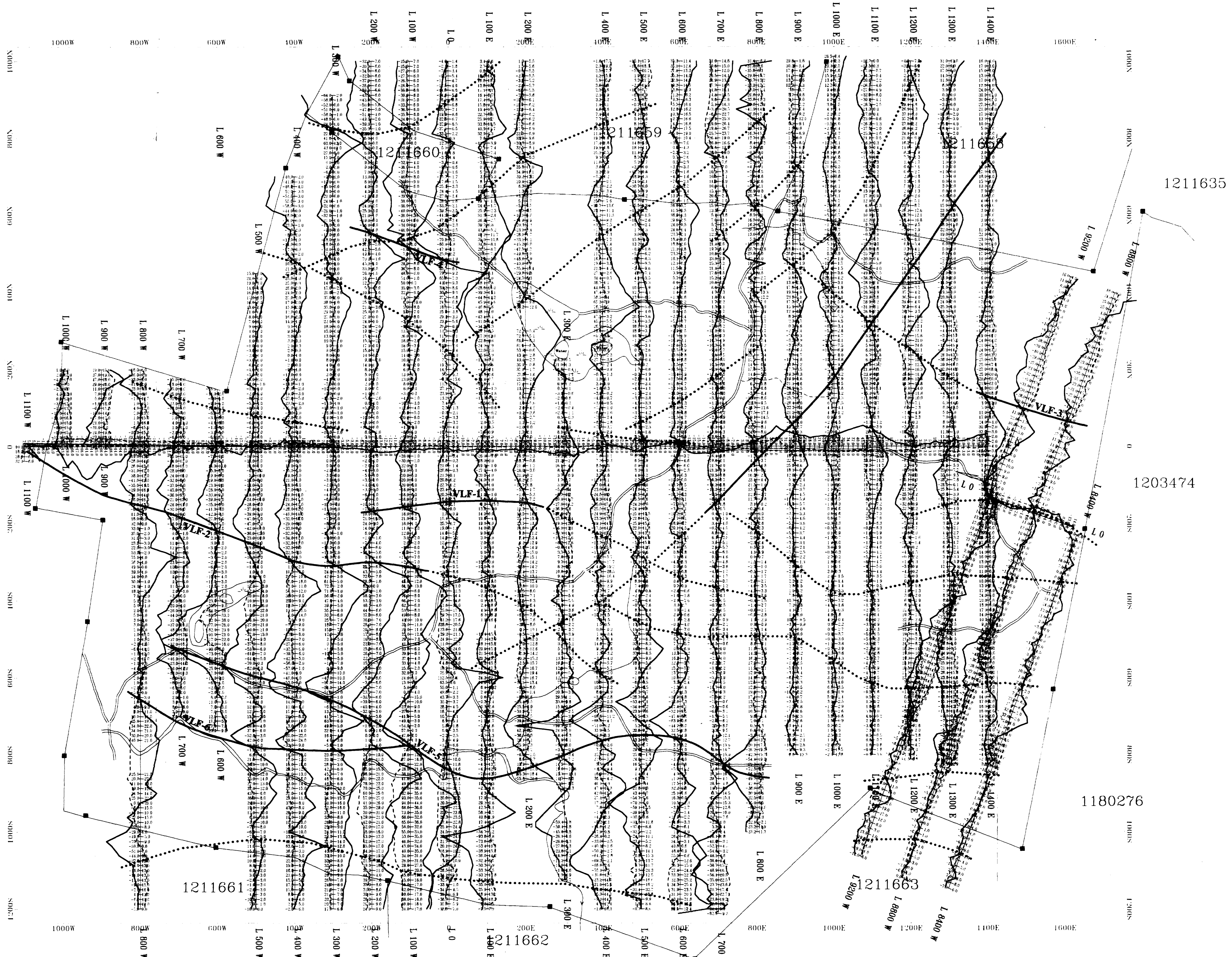
TOTAL FIELD MAGNETICS
PROJECT 53, OSSIAN GOLD MINE PROPERTY
OSSIAN TWP., NTS 32D/4,32D/5
SILVER CENTURY EXPLORATIONS LTD.
Profiles: 1 cm = 50 nT
Rx: Scintrex IGS-2/MP4 & ENVMAG
JVX Ltd. ref. 9639-west

121166

1211663

1180276

1211662



1211635

1203474

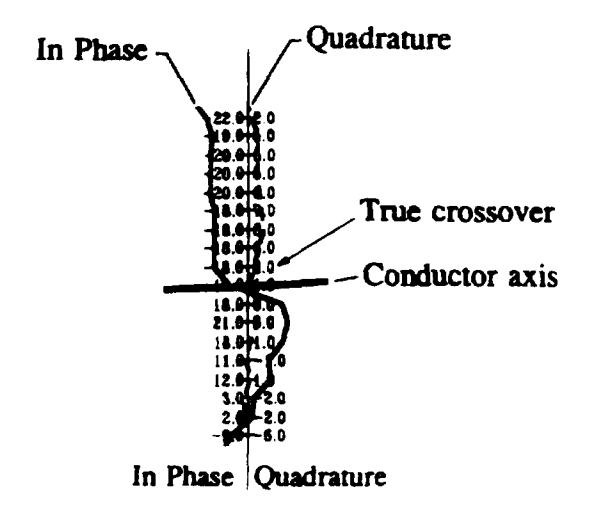
1180276

1211661

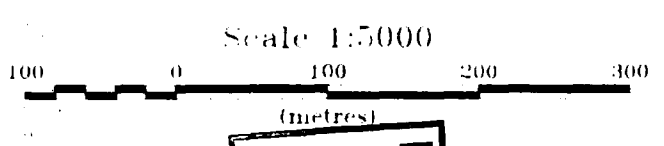
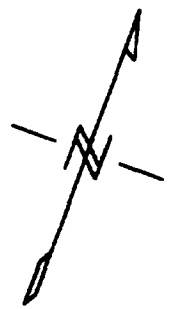
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1211663

LEGEND



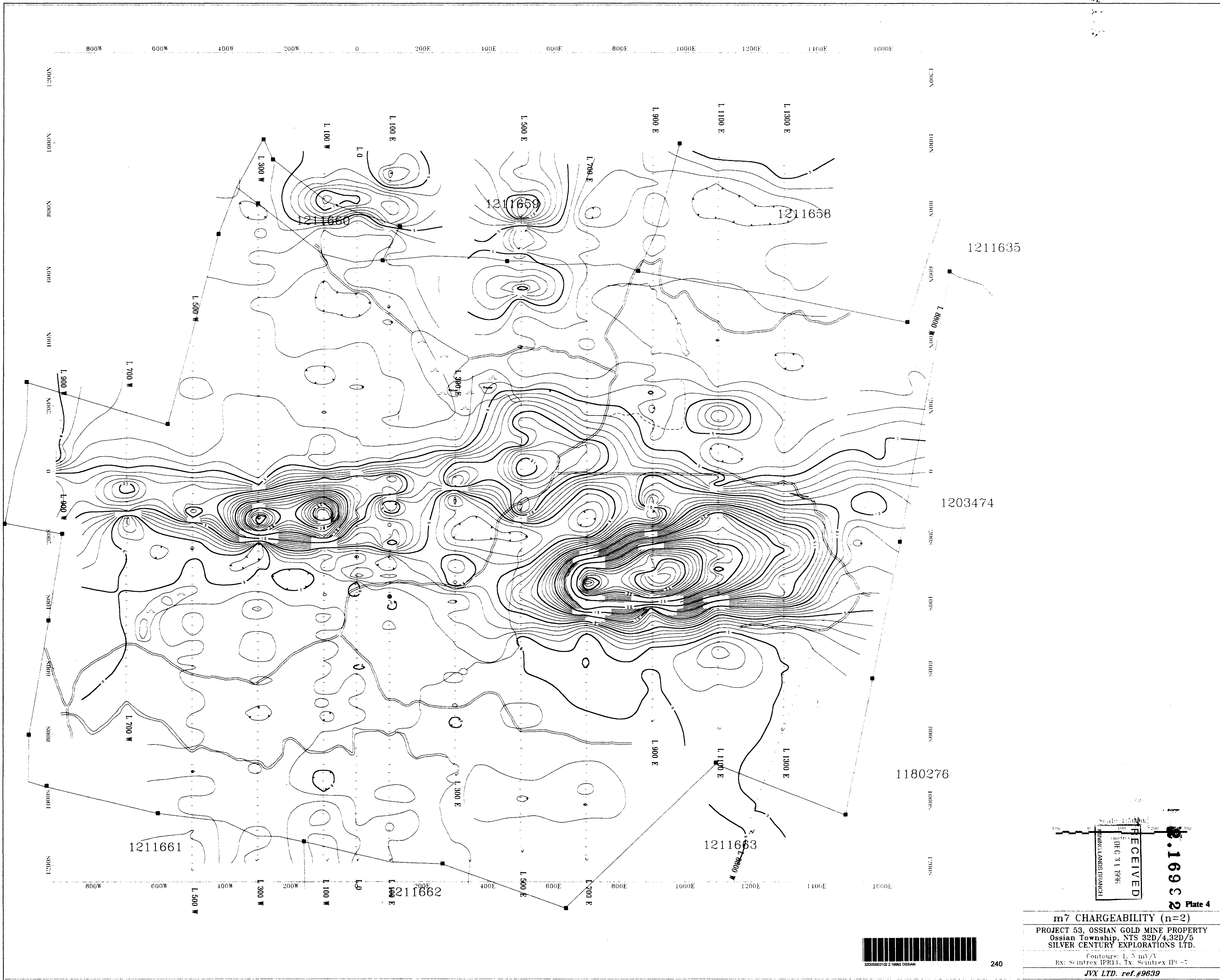
- VLF Conductor Axis
- VLF Fraser Filter Trend



2.16992

RECEIVED
DEC 31 1996
MINING LANDS BRANCH

VLF-EM Cutler, Maine
PROJECT 53, OSSIAN GOLD MINE PROPERTY
Ossian Township, NTS 32D/4,32D/5
SILVER CENTURY EXPLORATIONS LTD.



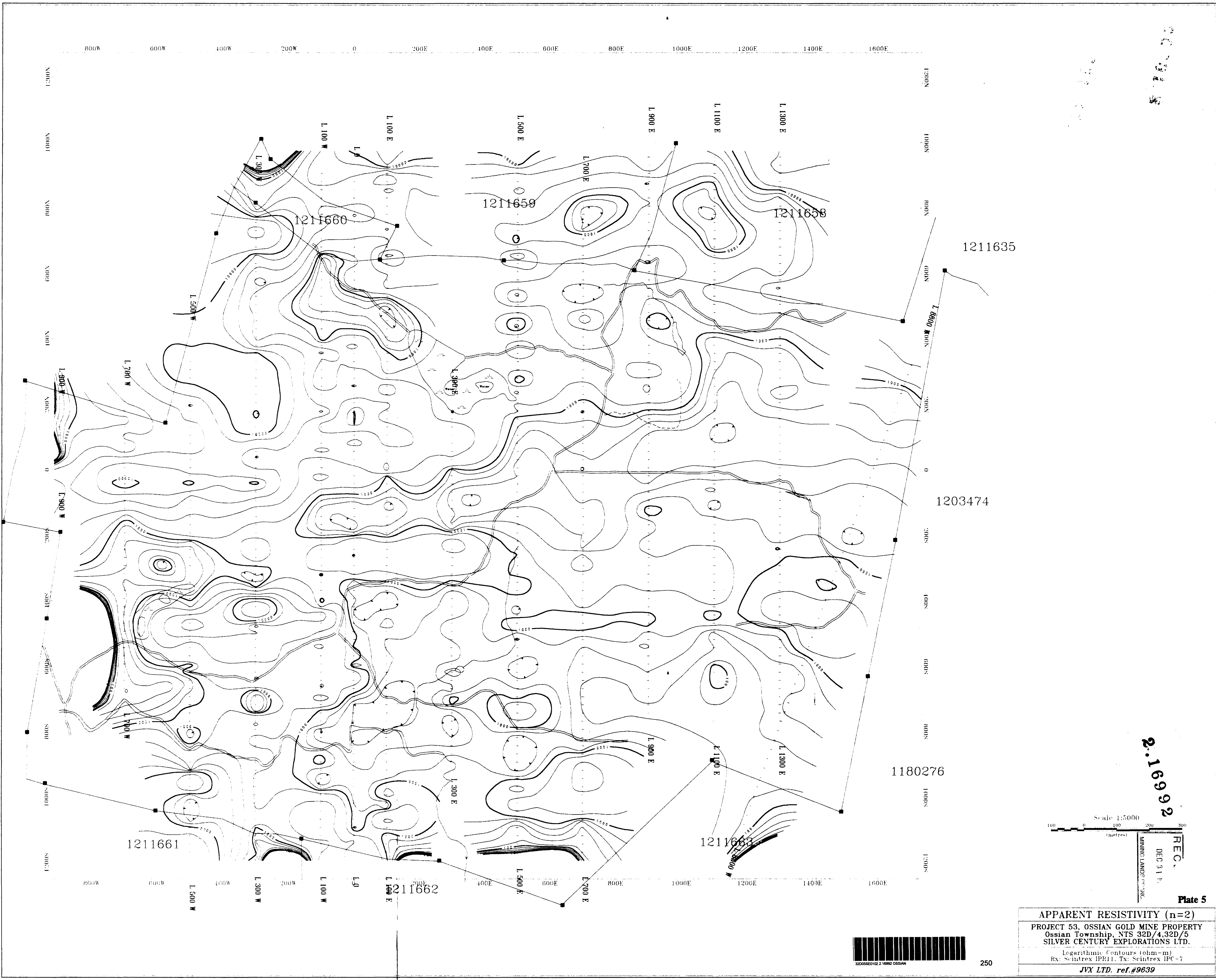
Scale 1:5000
 RECEIVED
 DEC 31 1996
 MINING LANDS BRANCH

16992
 Plate 4

m7 CHARGEABILITY (n=2)
 PROJECT 53, OSSIAN GOLD MINE PROPERTY
 Ossian Township, NTS 32D/4,32D/5
 SILVER CENTURY EXPLORATIONS LTD.
 Contours: 1.5 mV/A
 Ex: Scintrex IPR11, Tx: Scintrex IPC-7
 JVX LTD. ref.#9639



240



APPARENT RESISTIVITY (n=2)
 PROJECT 53, OSSIAN GOLD MINE PROPERTY
 Ossian Township, NTS 32D/4,32D/5
 SILVER CENTURY EXPLORATIONS LTD.
 Logarithmic Contours (ohm-m)
 Rx: Scintrex IPR11, Tx: Scintrex IPC-7
JVX LTD. ref.#9639

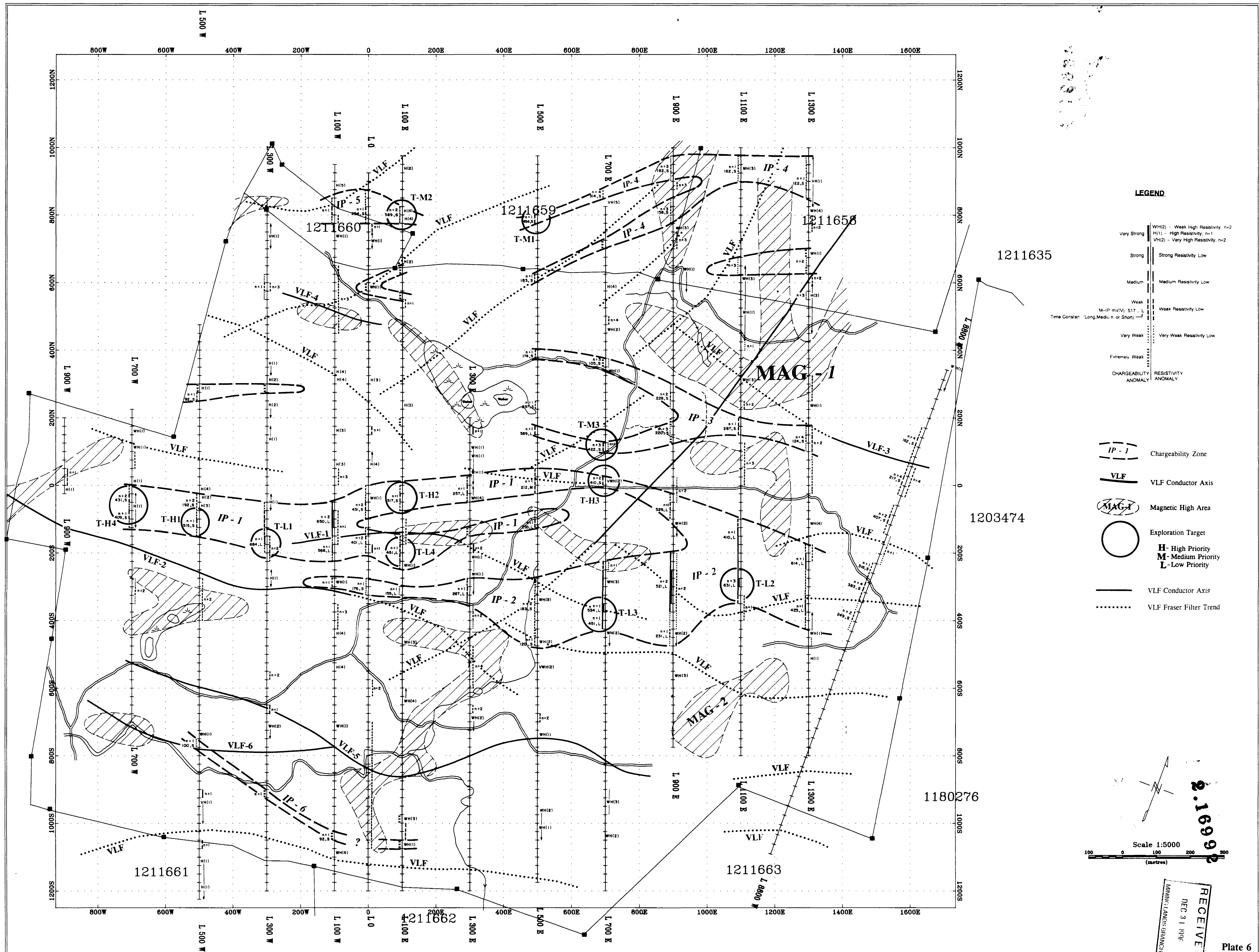
2.16992

Plate 5

Scale 1:5000
 100 0 100 200 300
 (metres)

REC.
 DEC 31 1992
 MINING LANDS DIVISION





LEGEND

| | |
|---|------------------------------------|
| Very Strong | WH(2) - Weak High Resistivity, n=2 |
| | H(1) - High Resistivity, n=1 |
| | VH(2) - Very High Resistivity, n=2 |
| Strong | Strong Resistivity Low |
| Medium | Medium Resistivity Low |
| Weak | Weak Resistivity Low |
| M-IP mV/V, 517, L | Weak Resistivity Low |
| Time Constant: Long, Medium, n or Short | |
| Very Weak | Very Weak Resistivity Low |
| Extremely Weak | |
| CHARGEABILITY ANOMALY | RESISTIVITY ANOMALY |

- IP-1 Chargeability Zone
- VLF VLF Conductor Axis
- MAG-1 Magnetic High Area
- Exploration Target
- H** - High Priority
- M** - Medium Priority
- L** - Low Priority
- VLF Conductor Axis
- VLF Fraser Filter Trend

Scale 1:5000

0 100 200 300 (metres)

2.16999

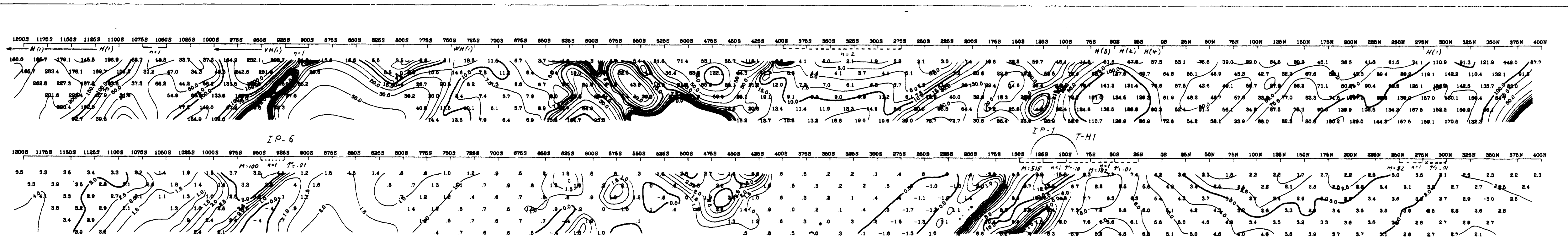
RECEIVED
DEC 31 1996
MINING LANDS BRANCH

Plate 6

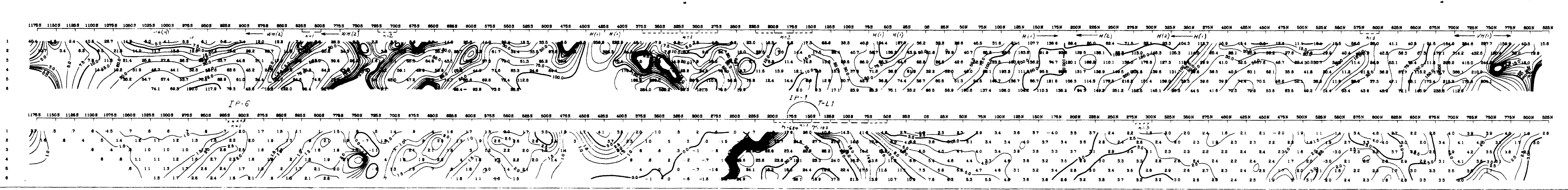
COMPILATION MAP
PROJECT 53, OSSIAN GOLD MINE PROPERTY
Ossian Township, NTS 32D/4,32D/5
SILVER CENTURY EXPLORATIONS LTD.
JVX LTD. ref. #9639



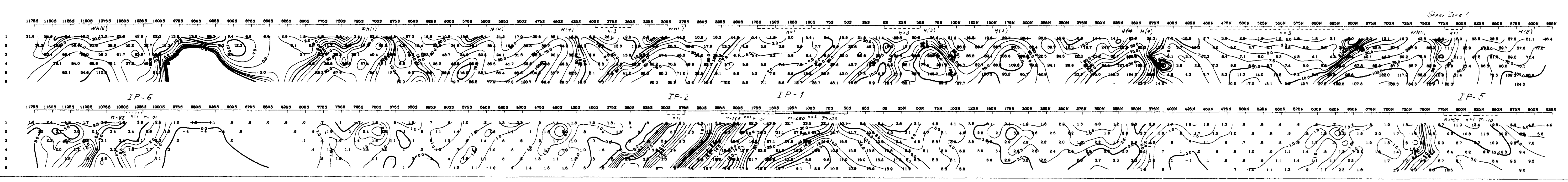
SILVER CENTURY EXPLORATIONS
Ossian Twp./Larder Lake, West
LINE NUMBER: 500 WEST
SCALE: 1" = 250 METRES
TX PULSE TIME: 2.0 SEC
RECEIVE TIME: 2.0 SEC
SCHEMATIC: IP-11 RECEIVER
POLY-DIPLOLE ARRAY
TRAY DIRECTION: SOUTH
CLIP POSITION: TRAILING
SCALE: 1" = 2500
PAGE # (WT): 1, 2, 3, 4, 5, 6



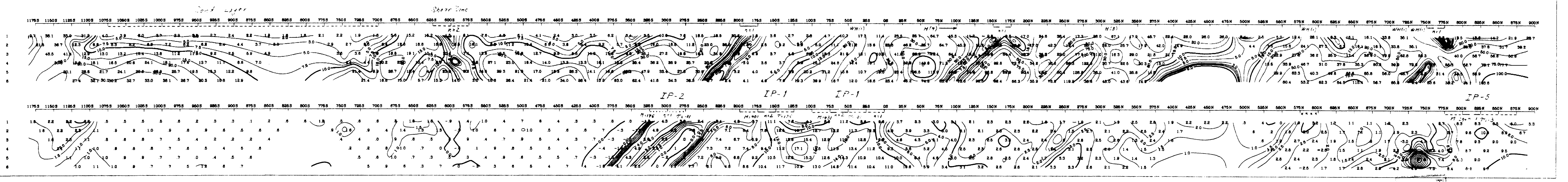
SILVER CENTURY EXPLORATIONS
Ossian Twp./Larder Lake, West
LINE NUMBER: 300 WEST
SCALE: 1" = 250 METRES
TX PULSE TIME: 2.0 SEC
RECEIVE TIME: 2.0 SEC
SCHEMATIC: IP-11 RECEIVER
POLY-DIPLOLE ARRAY
TRAY DIRECTION: SOUTH
CLIP POSITION: TRAILING
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PAGE # (WT): 1, 2, 3, 4, 5, 6



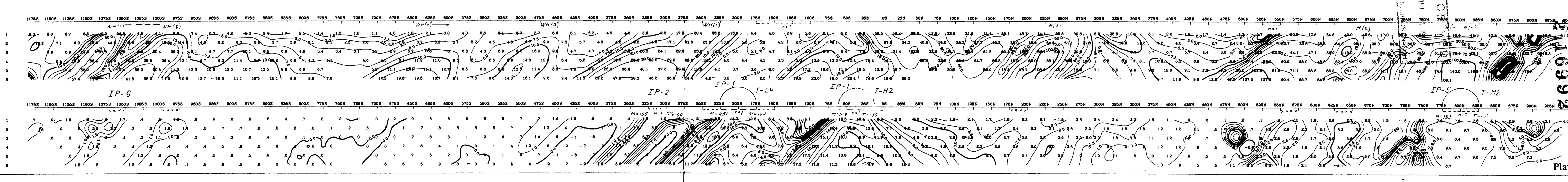
SILVER CENTURY EXPLORATIONS
LARDER LAKE AREA (West Grid)
LINE NUMBER: 100 WEST
SCALE: 1" = 250 METRES
TX PULSE TIME: 2.0 SEC
RECEIVE TIME: 2.0 SEC
SCHEMATIC: IP-11 RECEIVER
POLY-DIPLOLE ARRAY
TRAY DIRECTION: SOUTH
CLIP POSITION: TRAILING
SCALE: 1" = 2500
PAGE # (WT): 1, 2, 3, 4, 5, 6



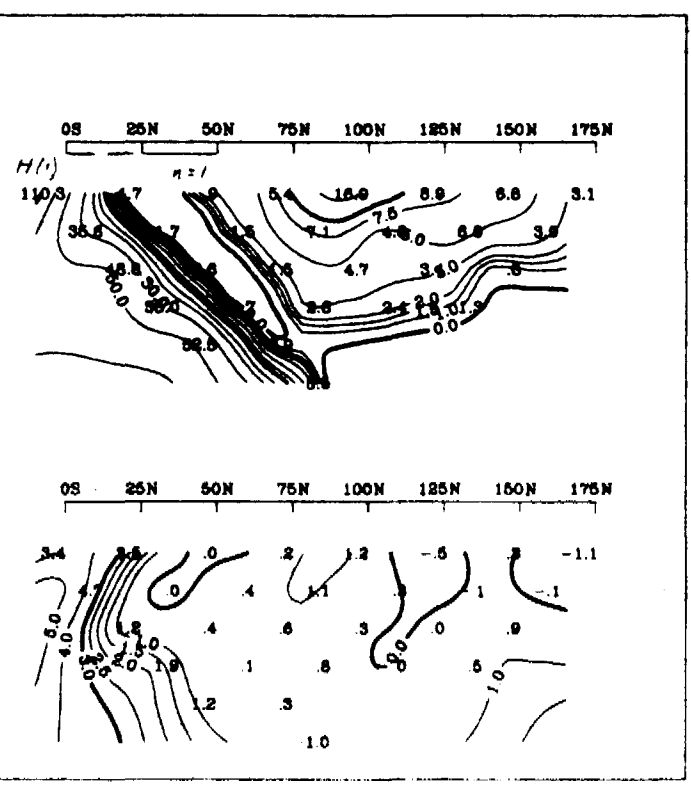
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LARDER LAKE AREA (West Grid)
LINE NUMBER: 0 EAST
SCALE: 1" = 250 METRES
TX PULSE TIME: 2.0 SEC
RECEIVE TIME: 2.0 SEC
SCHEMATIC: IP-11 RECEIVER
POLY-DIPLOLE ARRAY
TRAY DIRECTION: SOUTH
CLIP POSITION: TRAILING
SCALE: 1" = 2500
PAGE # (WT): 1, 2, 3, 4, 5, 6



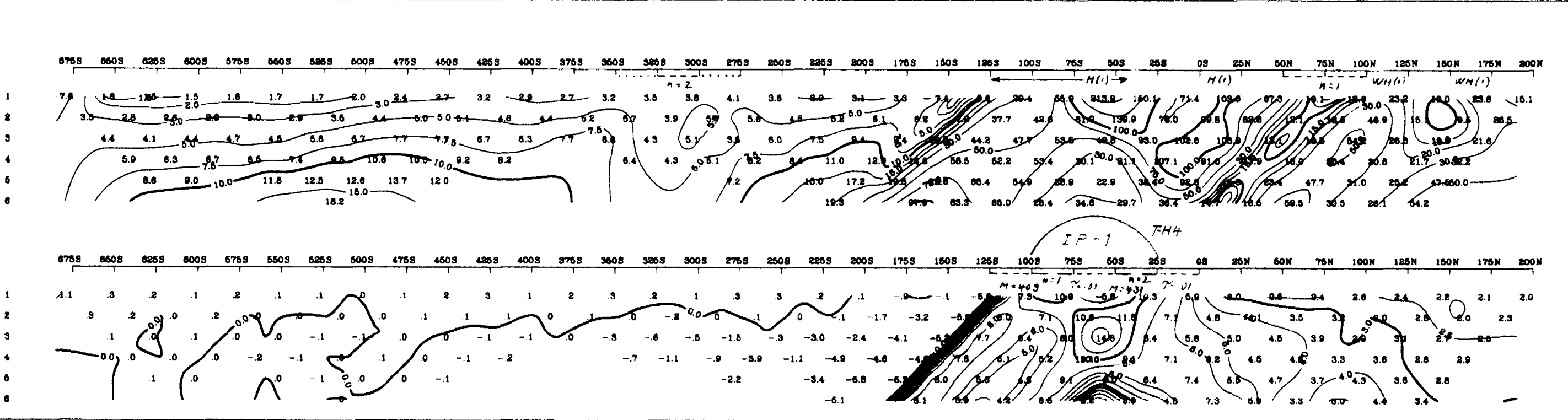
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LARDER LAKE AREA (West Grid)
LINE NUMBER: 100 EAST
SCALE: 1" = 250 METRES
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RECEIVE TIME: 2.0 SEC
SCHEMATIC: IP-11 RECEIVER
POLY-DIPLOLE ARRAY
TRAY DIRECTION: SOUTH
CLIP POSITION: TRAILING
SCALE: 1" = 2500
PAGE # (WT): 1, 2, 3, 4, 5, 6

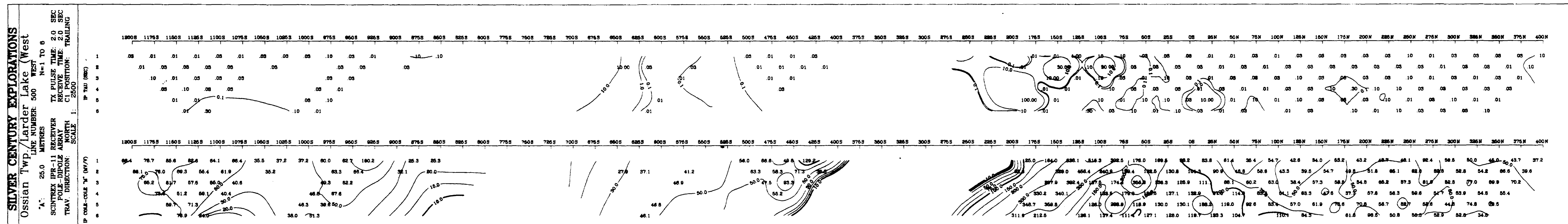
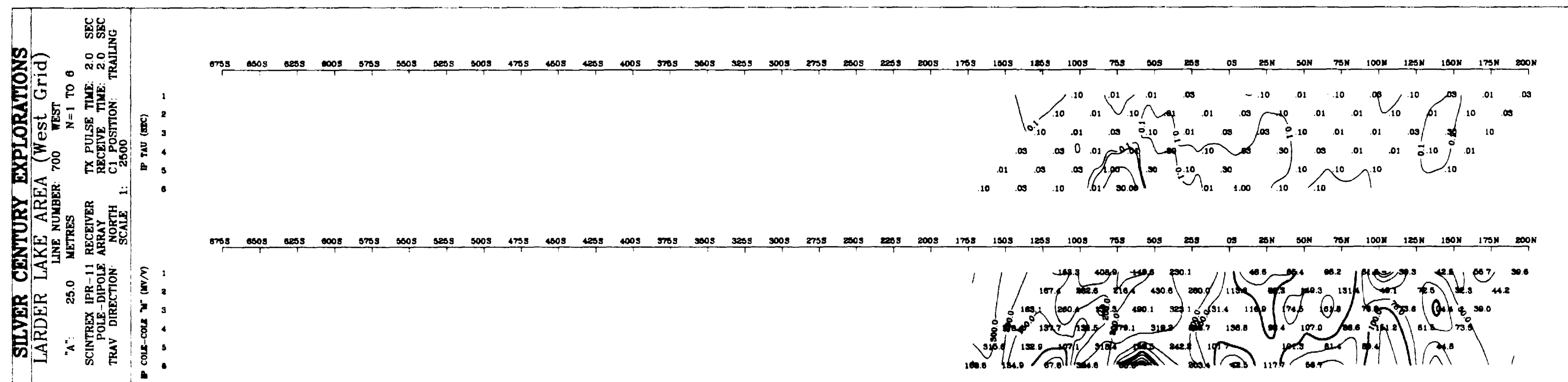


SILVER CENTURY EXPLORATIONS
LARDER LAKE AREA (West Grid)
LINE NUMBER: 000 WEST
SCALE: 1" = 250 METRES
TX PULSE TIME: 2.0 SEC
RECEIVE TIME: 2.0 SEC
SCHEMATIC: IP-11 RECEIVER
POLY-DIPLOLE ARRAY
TRAY DIRECTION: SOUTH
CLIP POSITION: TRAILING
SCALE: 1" = 2500
PAGE # (WT): 1, 2, 3, 4, 5, 6

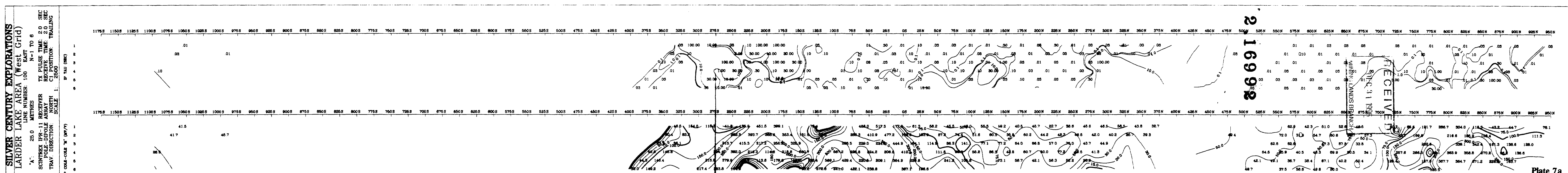
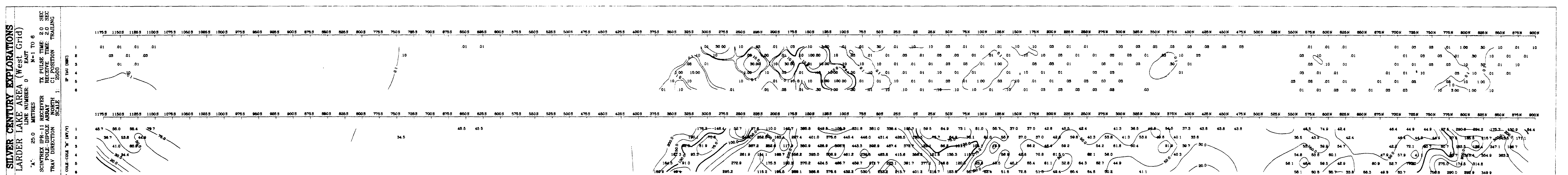
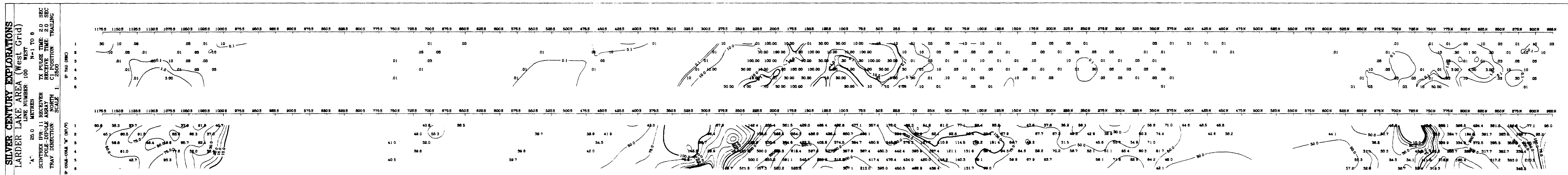
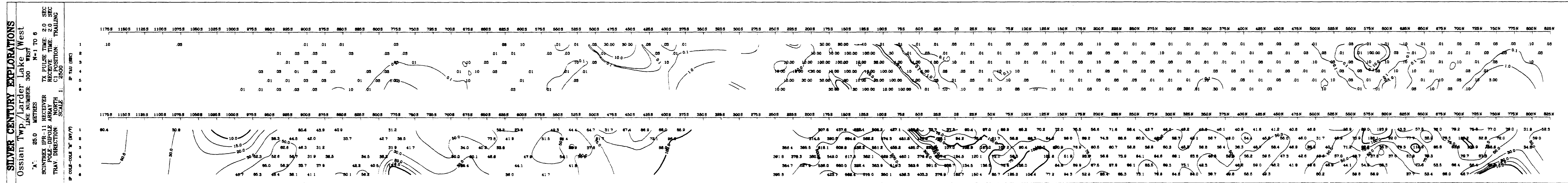


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LARDER LAKE AREA (West Grid)
LINE NUMBER: 100 WEST
SCALE: 1" = 250 METRES
TX PULSE TIME: 2.0 SEC
RECEIVE TIME: 2.0 SEC
SCHEMATIC: IP-11 RECEIVER
POLY-DIPLOLE ARRAY
TRAY DIRECTION: SOUTH
CLIP POSITION: TRAILING
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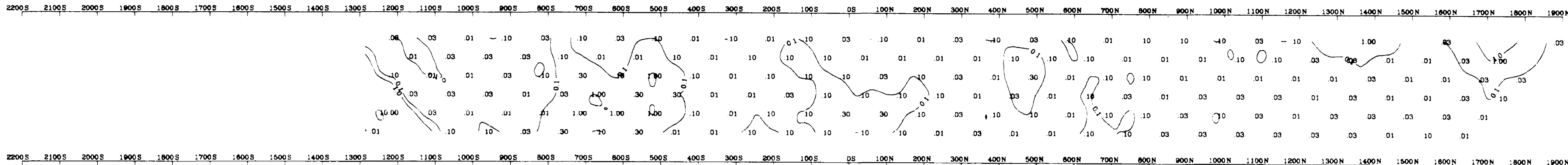
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Ossian Twp. Proj. (East Grid)

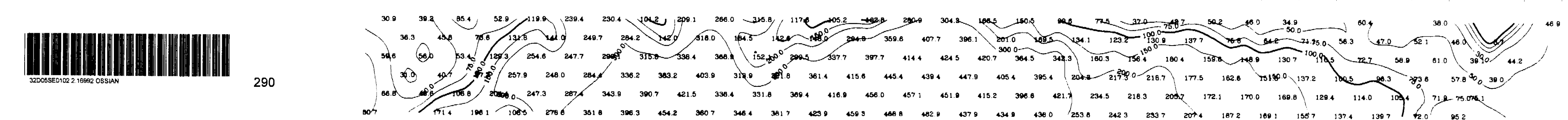
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SCINTREX IPR-11 RECEIVER TX PULSE TIME: 2.0 SEC
POLE-DIPOLE ARRAY RECEIVE TIME: 2.0 SEC
TRAV. DIRECTION: NORTH C1 POSITION: TRAILING
SCALE: 1: 2400

IP COLE-COLE "M" (MV/V) IF TAU (SEC)



290



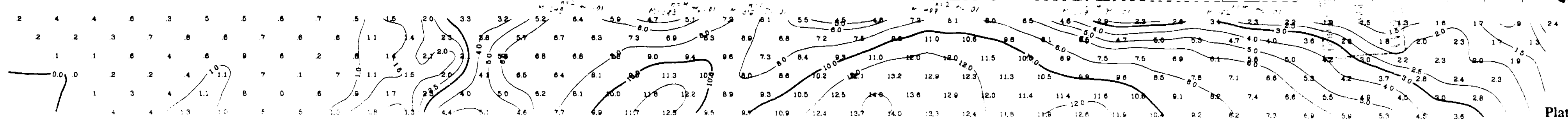
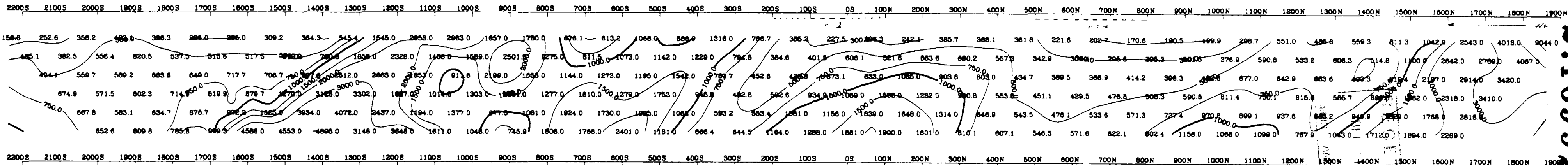
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Ossian Twp. Project

LINE NUMBER: 8600 WEST N-1 TO 6

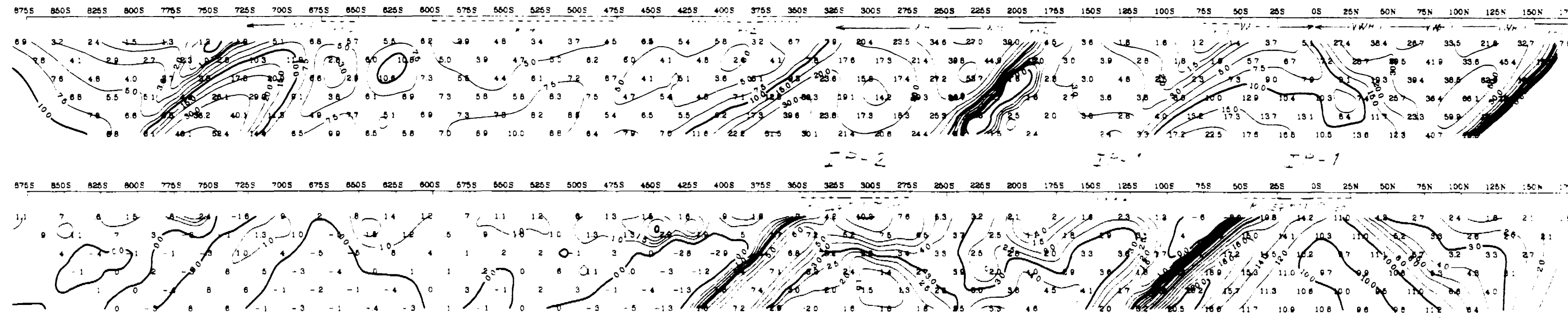
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POLE-DIPOLE ARRAY RECEIVE TIME: 2.0 SEC
TRAV. DIRECTION: NORTH C1 POSITION: TRAILING
SCALE: 1: 2400

RESISTIVITY SLICE 8 (M)



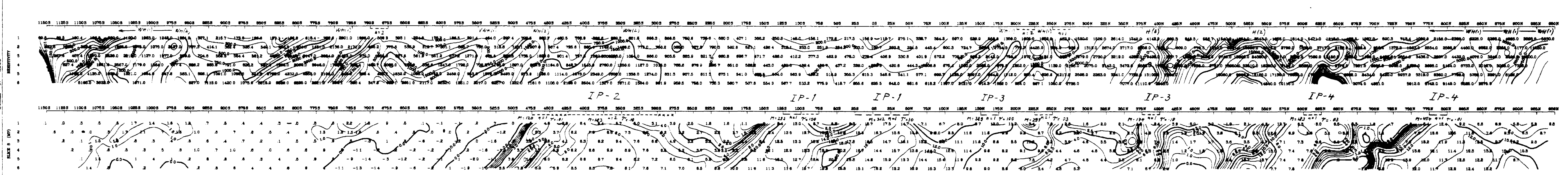
2.16992

SILVER CENTURY EXPLORATIONS
LARDER LAKE AREA (West Grid)
"A" 25.0 METERS
TX PULSE TIME 2.0 SEC
RECEIVE TIME 2.0 SEC
SUNTRAX ITR II RECEIVER
POLE DIPOLE ARRAY
CL POSITION
TRAY DIRECTION NORTH
SCALE 1:2500
SHEET # (PT)

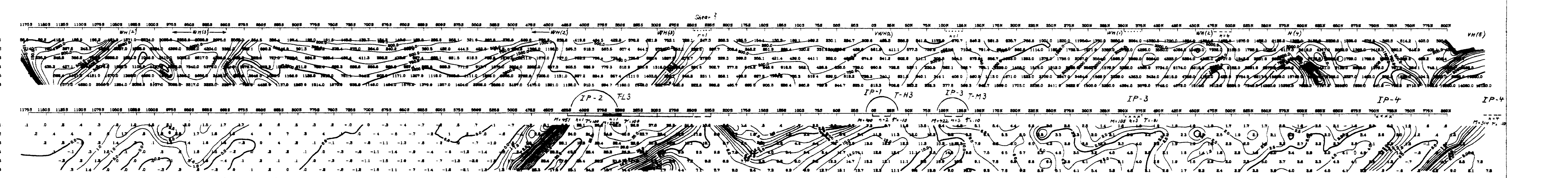


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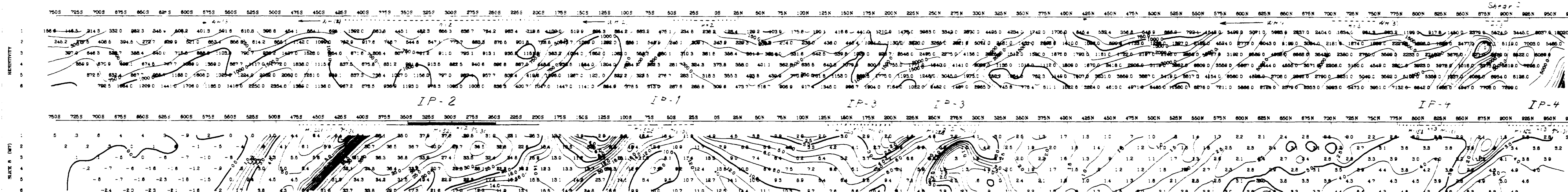
SILVER CENTURY EXPLORATIONS
LARDER LAKE AREA (West Grid)
"A" 25.0 METERS
TX PULSE TIME 2.0 SEC
RECEIVE TIME 2.0 SEC
SUNTRAX ITR II RECEIVER
POLE DIPOLE ARRAY
CL POSITION
TRAY DIRECTION NORTH
SCALE 1:2500
SHEET # (PT)



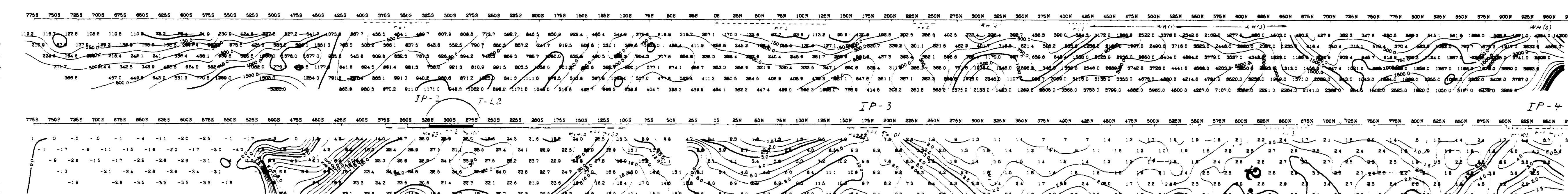
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LARDER LAKE AREA (West Grid)
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TX PULSE TIME 2.0 SEC
RECEIVE TIME 2.0 SEC
SUNTRAX ITR II RECEIVER
POLE DIPOLE ARRAY
CL POSITION
TRAY DIRECTION NORTH
SCALE 1:2500
SHEET # (PT)



SILVER CENTURY EXPL. LTD
ONSHAW TWP. PROJECT / WEST GRID
"A" 25.0 METERS
TX PULSE TIME 2.0 SEC
RECEIVE TIME 2.0 SEC
SUNTRAX ITR II RECEIVER
POLE DIPOLE ARRAY
CL POSITION
TRAY DIRECTION NORTH
SCALE 1:2500
SHEET # (PT)



SILVER CENTURY EXPL. LTD
ONSHAW TWP. PROJECT / WEST GRID
"A" 25.0 METERS
TX PULSE TIME 2.0 SEC
RECEIVE TIME 2.0 SEC
SUNTRAX ITR II RECEIVER
POLE DIPOLE ARRAY
CL POSITION
TRAY DIRECTION NORTH
SCALE 1:2500
SHEET # (PT)



SILVER CENTURY EXPL. LTD
ONSHAW TWP. PROJECT / WEST GRID
"A" 25.0 METERS
TX PULSE TIME 2.0 SEC
RECEIVE TIME 2.0 SEC
SUNTRAX ITR II RECEIVER
POLE DIPOLE ARRAY
CL POSITION
TRAY DIRECTION NORTH
SCALE 1:2500
SHEET # (PT)

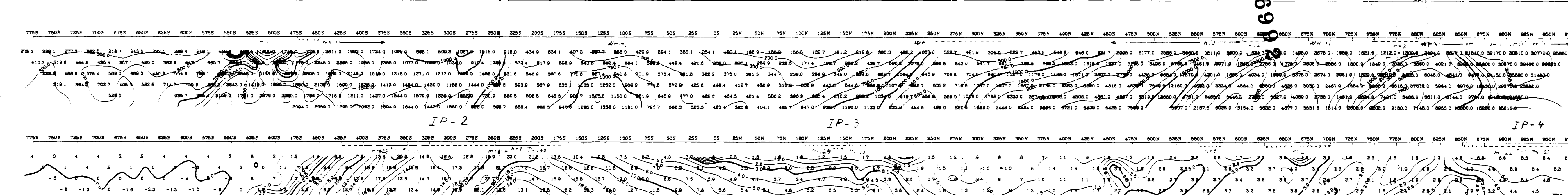
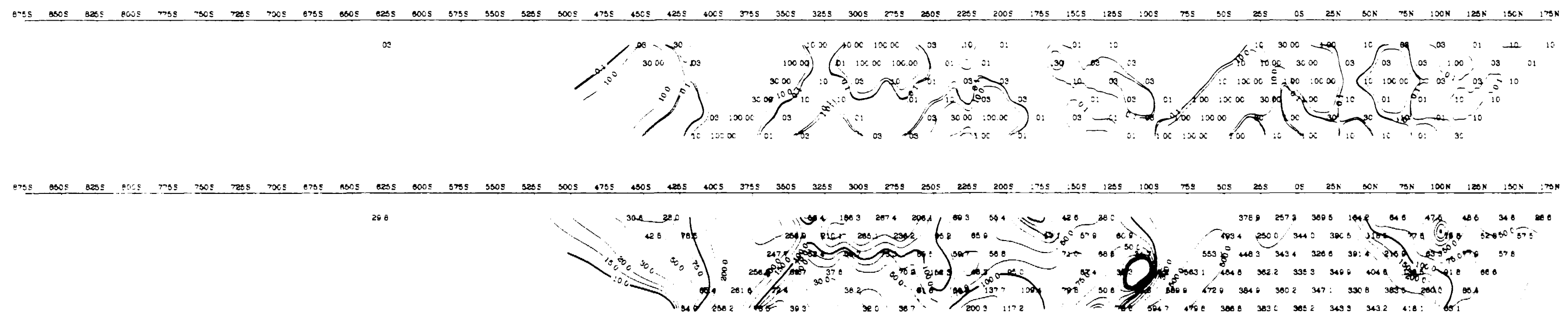
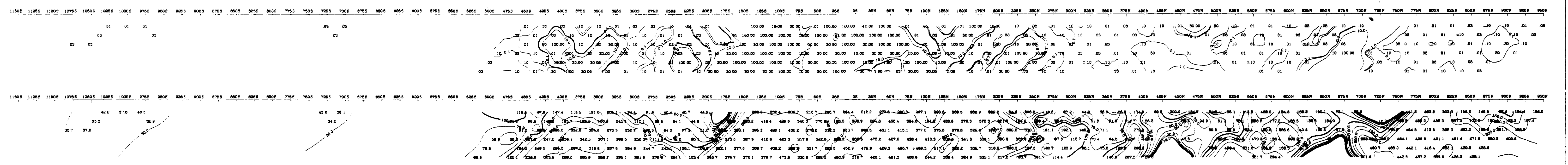


Plate 8

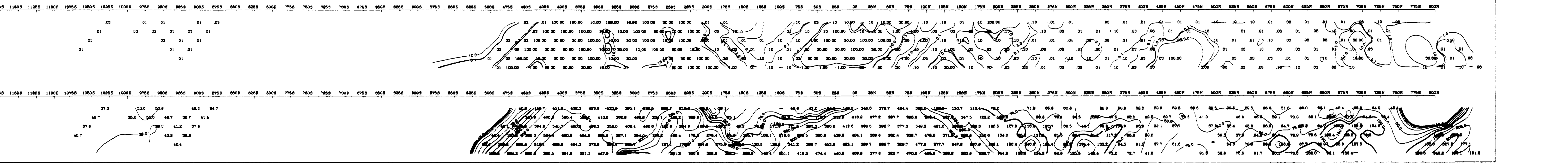
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LARDER LAKE AREA (West Grid)
LINE NUMBER 700 EAST TO 6
25.0 METRES
TX PULSE TIME 2.0 SEC
RECEIVE TIME 2.0 SEC
SCANNING FROM 11 RECEIVER
PULSE DIRECTION NORTH
TRAY DIRECTION SOUTH
SCALE 1:25000
BY DATE (MM/YY)



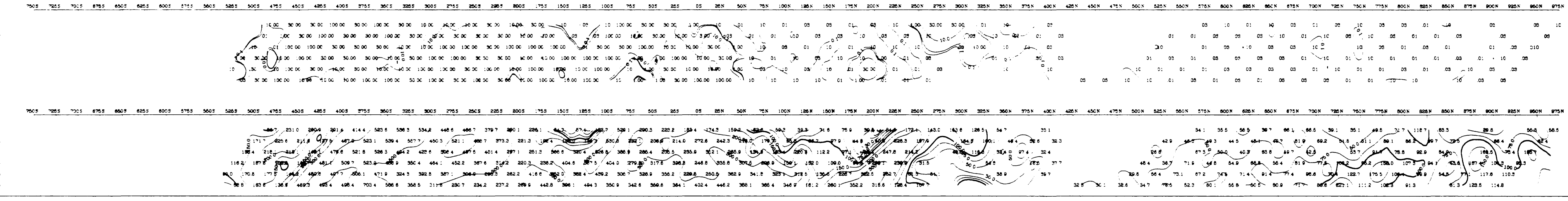
SILVER CENTURY EXPLORATIONS
LARDER LAKE AREA (West Grid)
LINE NUMBER 600 EAST TO 6
25.0 METRES
TX PULSE TIME 2.0 SEC
RECEIVE TIME 2.0 SEC
SCANNING FROM 11 RECEIVER
PULSE DIRECTION NORTH
TRAY DIRECTION SOUTH
SCALE 1:25000
BY DATE (MM/YY)



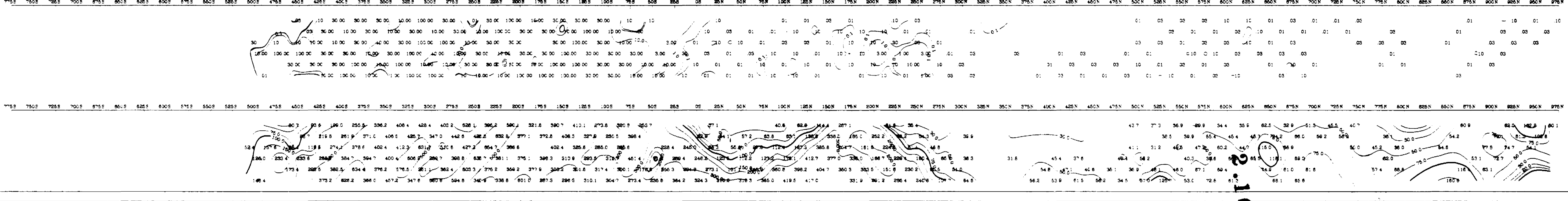
SILVER CENTURY EXPLORATIONS
LARDER LAKE AREA (West Grid)
LINE NUMBER 500 EAST TO 6
25.0 METRES
TX PULSE TIME 2.0 SEC
RECEIVE TIME 2.0 SEC
SCANNING FROM 11 RECEIVER
PULSE DIRECTION NORTH
TRAY DIRECTION SOUTH
SCALE 1:25000
BY DATE (MM/YY)



SILVER CENTURY EXPL. LTD.
Ossiah Twp Project / WEST GRID
LINE NUMBER 600 EAST TO 6
25.0 METRES
TX PULSE TIME 2.0 SEC
RECEIVE TIME 2.0 SEC
SCANNING FROM 11 RECEIVER
PULSE DIRECTION NORTH
TRAY DIRECTION SOUTH
SCALE 1:25000
BY DATE (MM/YY)



SILVER CENTURY EXPL. LTD.
Ossiah Twp Project / WEST GRID
LINE NUMBER 500 EAST TO 6
25.0 METRES
TX PULSE TIME 2.0 SEC
RECEIVE TIME 2.0 SEC
SCANNING FROM 11 RECEIVER
PULSE DIRECTION NORTH
TRAY DIRECTION SOUTH
SCALE 1:25000
BY DATE (MM/YY)



SILVER CENTURY EXPL. LTD.
Ossiah Twp Project / WEST GRID
LINE NUMBER 400 EAST TO 6
25.0 METRES
TX PULSE TIME 2.0 SEC
RECEIVE TIME 2.0 SEC
SCANNING FROM 11 RECEIVER
PULSE DIRECTION NORTH
TRAY DIRECTION SOUTH
SCALE 1:25000
BY DATE (MM/YY)

