

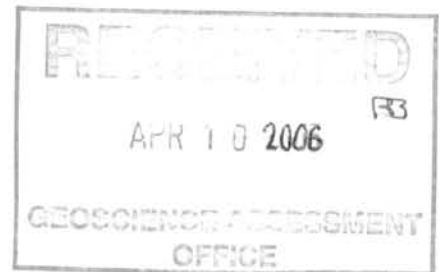


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GOLDEN VALLEY MINES LTD.

**Magnetometric and Induced Polarization surveys
on Plumber Prospect,
Cairo Township, Matachewan Area, Ontario
41 P/15**

Work Report



Project 247.07P


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1. INTRODUCTION

At the request of Mr. Langis Plante, project geologist for **GOLDEN VALLEY MINES LTD.**, Magnetometer-gradiometer (Mag-Grad) and Induced Polarization (IP) surveys were run in March 2006 on the Plumber Prospect by GÉOSIG INC., a consulting firm in geophysics. This property is located in the Matachewan Area, in northern Ontario. The area has a good potential due to the presence of few mines in the vicinity. The geophysical survey was carried from March 6th to March 14th, 2006, and it covered 21,3 line-km of Mag and 18,2 km of I.P. surveys on a new grid. This report presents the results of the geophysical surveys only.

2. PROPERTY, LOCALIZATION AND ACCESS

The Plumber Prospect is situated approximately 4 kilometres straight line (about 10 kilometres driving) North of Matachewan, Ontario. The survey property is located in Cairo Township, Larder Lake mining division. The central part of the grid is approximately located at UTM (zone 17, NAD 83) coordinates 5 314 615mN and 527 430mE. From Matachewan, the grid can be reached by the road # 66 to Kirkland Lake and the road to Matachewan reserve that starts some 4 kilometres East of the village. The Montreal River borders the west side of the survey grid.

The survey grid covers the 2 following claims:

3003794 3003795

3. FIELD WORKS, PROCEDURE AND INSTRUMENTS

The survey grid extends in an NNW-SSE direction and it includes NE-SW 100-meter spaced lines from 3+00W to 14+00E. A base line intersects the grid at 0+00 with tie lines at 5+30S and 8+30N.

The I.P. survey covered the lines for a total of 18,2 km. I.P. stations were read at 25m separations on every line. The Mag-Grad survey covered the lines as well as the baseline and tie lines, for a total of 21,3 line-km.

The preliminary results of all the surveys were processed in the field for a quality control.

3.1 Magnetometer-gradimeter

The Total Magnetic Field survey was run by Christopher Cyr, technician. The magnetometric equipment included two GSM-19WV. The unit with S/N #1101118 was the field unit and the unit S/N 612621 was the base station. The GSM equipments are manufactured by GEM System Inc. (Richmond Hill, Ont.).

This magnetometer system measures the value of the total magnetic field with a precision of ± 1.0 nT.

Field readings of the earth's Total Magnetic Field and its vertical gradient were taken with two sensors installed on the same pole. Readings were taken every 12.5 m, while the base station readings were recorded every 30 seconds. Diurnal corrections and instrument drifts were then automatically computed when the data of both instruments were dumped to a computer.

Measurements for the Total Magnetic Field were taken in a mobile Mag mode with a three (3) second-sampling readings and label readings taken each 12.5 meters.

3.2 Induced Polarization (IP)

The IP survey was performed in the time domain mode with a standard waveform: 2 seconds ON, 2 seconds OFF. We used a dipole-dipole array, with a = 25m electrode spacing, and readings were taken at every separation (n=1, 2, 3, 3, 5 and 6).

Steel pin electrodes were used for the receiver and the transmitter. On the receiver electrode spreads, stainless steel pin electrodes were used in order to improve the signal-to-noise ratio. The following equipment was used:

Receiver: Elrec-6 built by IRIS/BRGM, s/n 108

Transmitter: T3P 228 1,8 kW built by Instrumentation GDD Inc.

The receiver read out chargeability (M) within 0.1 msec on ten windows, which were added up with the following formula:

TRUE IP CURVE (Newmont standard IP decay curve):

$$N = (160M_1 K_1 + 160M_2 K_2 + 160M_3 K_3 + 160M_3 K_3 + 160M_5 K_5 + 160M_6 K_6 + 160M_7 K_7 + 160M_8 K_8 + 160M_9 K_9 + 160M_{10} K_{10}) / 1600.$$

The party chief for the IP survey was Georges Tiliki, MBA. The following personnel completed the team:

- Christopher Cyr, Technician
- André Simard, Technician
- Gilles Simard, Technician
- Jean-Rock Dominique, Technician
- Mamert Khorto, Technician

Simon Tshimbalanga, eng. who also processed and interpreted the data, maps and pseudo-sections, wrote the report. Donald Saindon finalized the maps and the pseudo-sections.

4. MAGNETOMETER-GRADIOMETER SURVEY

4.1 Purpose of the Magnetometric survey

Magnetic surveys are useful in exploration as magnetic anomalies represent different rock types. During a survey, the total magnetic field is measured. The total field map allows the definition of near-surface magnetic bodies and the vertical gradient helps to trace their contacts.

4.2 Presentation of results

All the MAG-GRAD data have been plotted on maps at a 1:2 500 metric scale, using computer software programs: Geosoft and MicroStation. On map no. 7921, the total field magnetic results and the vertical gradient are presented as profiles and posting. The magnetic profiles appear as red lines at a vertical scale of 1500 nT per centimetre, with a base value of 56 600 nT. The gradiometric profiles are in blue with a 300 nT/m vertical scale and 0 as base value.

The Total Magnetic Field and the vertical gradient colour contour maps have also been drawn at the same scale on map no. 7922 and 7923.

4.3 Results of the Magnetometer-gradiometer survey

The magnetic field background on the property is around 56 400 nT with a maximum of 61 800 nT and a minimum of 52 063 nT. The magnetic vertical gradient varies from -1394 nT/m to 1819 nT/m.

The Magnetometric colour contour map shows that the magnetic is very active in the area. This magnetic activity has provided several magnetic horizons with a predominant northwest-southeast trend. The ground magnetic survey seems to confirm the geological trend.

The magnetometric colour contour map also shows a change in the intensity of magnetization with a North-South imaginary separation line going from line 11+00E/3+00S to line 2+00E/2+00N. This variation of the magnetic activity probably reflects a change in the physical properties of subsurface rocks. The magnetic activity is much stronger on the East side where a major magnetic high rear up over this higher Mag area. This major magnetic high is outlined by values higher than 57 700 nT and it is located on the south flank of a hill.

5. INDUCED POLARIZATION (IP) SURVEY

5.1 Purpose of the IP survey

An IP survey is usually done in order to detect conductive and/or polarizable materials such as sulfides or graphite. Therefore, the survey consists in measuring the chargeability (M) and the apparent resistivity (R) along the grid lines surveyed.

Theoretically, the resistivity map should pinpoint conductive sulfides or graphite bodies. In reality, resistivity maps usually reflect variations in the conductivity and thickness of the overburden. The chargeability (M) measurements do allow the detection of sulfides or graphite bodies, either massive or disseminated, as the overburden seldom if ever shows any chargeability.

In areas of variable overburden conductivity, chargeability "anomalies", even over massive sulfide bodies, are subdued where the surface conductivities are high. Readings may be lower over sulfide bodies covered by clays (as low as 3 msec) than over non-mineralized but highly resistive volcanic outcrops (10 to 20 msec). To interpret an IP survey with such variations, both sets of measurements, chargeability and resistivity, must therefore be studied together. This is why we prepared normalized chargeability (NC) maps as they better reflect the actual distribution of sulfides and other polarizable materials. Resistivity and raw chargeability maps are also presented.

5.2 Presentation of results

The results of the survey are represented at a 1:2 500 scale. On map no. 7924, we plotted the three profiles at the following scales:

Chargeability (M)	15 msec/cm
Surface resistivity (R)	Logarithmic scale: 1 to 1 000 000 Ω -m, 1 decades/cm 1000 Ω -meters centred on the line
Normalized chargeability (NC)	15 mhosec/cm

The localization of IP conductors is mostly based on the shape of the NC profiles, which were calculated from M and R with the following formula:

$$NC = 9,58 * M/\sqrt{R}$$

$$R = \Pi * a * n (n+1) * (n+2) * Vp/I,$$

where:	NC	= normalized chargeability, mhosec
	R	= apparent surface resistivity, Ω -meters
	M	= chargeability read on the receiver display, msec.
	Vp	= voltage between receiver electrodes, mvolts
	I	= current transmitted, milli-amperes
	a	= electrode spacing, meters
	n	= number of separations
	9,58	= normalization factor

We gave the name of mhosec to the normalized chargeability as it is obtained by multiplying the conductivity (I/R) measured in mhos by the chargeability (milliseconds), or mhosec. By combining those two parameters, we created the new name, mhosec.

The resistivity, chargeability and the normalized chargeability, also at the first separation, have been contoured and they respectively appear on maps no. 7925, 7926 and 7927. The six separations are presented as colour contoured pseudo-sections at the 1:2 500 scale. The interpretation of the IP survey is based on the pseudo-sections, which was then transferred on the profiles.

5.3 Usefulness of the Normalized Chargeability

An IP survey consists in measuring the apparent resistivity and chargeability between four electrodes in order to predict the distribution of sulfides and other polarizable materials such as graphite. From those two parameters, we calculate the Normalized Chargeability (NC) using the formulas mentioned above. In areas of variable overburden conductivity, the application of the NC filter compensates for the high background chargeability observed in areas of high resistivity (outcrops or

outcrops covered by very thin overburden) or the extremely low background chargeability observed in areas of swamps and conductive overburden.

The purpose of the exercise is to refine the NC so that a given mass of sulfides is represented by an anomaly of at least approximately the same amplitude, whatever the nature and depth of the surface overburden.

5.4 Probability of IP anomalies

In an attempt to clarify our reports, we add one parameter to the description of each anomaly. In geophysics, we may express the probability that a bedrock source anomaly exists. Here is an explanation of that parameter we will use to better describe the anomalies of our surveys:

- A 0.9 probability indicates that the anomaly is actually present in the bedrock and that it will be intersected in more than nine out of ten attempted drill holes. A miss on such an anomaly means that there is either a mistake in chaining, or that the drill hole crossed the anomaly through a dyke, a faulted offset, or a local "barren" hole. Anyone with experience in a mine will testify that such occurrences can occasionally happen.
- A 0.5 probability means that the signature of the anomaly is somewhat doubtful, the signal-to-noise ratio is less than 3, either because the overburden is deep or because of the interference of an adjacent stronger anomaly. The probability that the anomaly corresponds to a target is therefore lowered to a point where only one in two of such drill holes will hit a target. For example, if a target is small but of cylindrical shape, a drill hole collared too far away may completely miss the anomaly if the cylinder has a lateral rake. Any target having a 0.5 probability should be drilled if the local geology is favourable or if targets are few or far between. Out of the thousands of drill holes that we have recommended up to now, only six have resulted in mining operations. For three out of these six mines, the first drill hole was spotted on a doubtful anomaly where the probability was about 0.5 or, in other words, there was only one chance out of two to explain the anomaly by a bedrock source. And yet, most DDH are drilled on anomalies that have a probability of 0.9.
- A 0.2 probability means that, on the average, only one drill hole in five will intersect a sulfide concentration important enough to explain the anomaly. It is often much better to drill such weak IP anomalies if the geology is favourable than to select diamond drill targets at random, or even to select magnetic anomalies or VLF targets. When comparing targets for example, we believe that the probability is much less than 0.1, that an "average" magnetic anomaly will correspond to sulfides or graphite and, if we consider VLF anomalies in clay areas, the probability

is lower than 0.05, or hardly better than luck. However, VLF anomalies where the overburden is resistive may be just as reliable as MaxMin or Pulse surveys in outcrop areas, or where the overburden is non conductive.

6. DESCRIPTION OF THE IP SURVEY

6.1 Resistivity

The apparent resistivity on this area varies from 10 Ω -meters to 34 400 Ω -meters. As mentioned earlier, the resistivity maps usually reflect variations in the conductivity and thickness of the overburden. The variation of the resistivity on an IP survey is also often associated with the different types of rocks where the overburden is shallow. On this property, low resistivity areas are characterized by resistivity lower than 1000 Ω -meters whereas the high resistivity areas are reflected by values higher than 2000 Ω -meters and they reflect areas of outcrops or near surface bedrock.

The colour contour map of resistivity (7925) shows a higher resistivity horizon in the northeast corner of the grid that corresponds to the magnetic high located on the south flank of a hill.

6.2 Chargeability

The background chargeability, on map no. 7926, stands around 5 milliseconds. Once again, the south flank of the hill to the northeast corner of the grid is reflected by an area of high chargeability that roughly corresponds to the magnetic and resistivity highs. A high chargeability area also occupies the southwest corner of the grid. In fact, the colour contour map of the chargeability shows mostly a high chargeability area with two intercalated diagonal lows in the central part. Most of the anomalies occur in those high chargeability area and they integrate the response of nearby IP anomalies.

6.3 Normalized chargeability

The background NC values vary from 0.5 to 1.0 mhosec. Generally, with such low reference levels, even small amounts of sulfides give a clear anomaly. The individual anomalies are described in the table below.

6.4 Description of IP anomalies

Several IP axes have been identified and Forty-four of them are numbered IP-1 to IP-44 and described in this survey. Most of the anomalies have a roughly NNW-SSE trend and some are related to magnetic horizons with the same trend. Several anomalies seem to be the result of intermixed anomaly patterns from nearby mineralized formations. The annexed table summarizes the main characteristics of the anomalies of this survey.

7. DISCUSSION OF THE IP RESULTS AND RECOMMENDATIONS

The survey area is characterized by magnetic contrasts and by numerous IP anomalies ranging from weak to high IP values. For the interpretation, Géosig Inc. used the map of the total magnetic field as a guide to help for the correlation from line to line of the IP anomalies but an alternative correlation is possible. Interpretation should eventually be modified and improved with available geological information.

In the priority given in the description table, only the geophysical characteristics are considered. Determination of drilling targets priorities requires that all available geological and geochemical information must be considered.

Even though anomalies are often well defined, a major part of the survey presents anomalies with a complex pattern due to an intermixing or overlapping of nearby anomalies. An alternate model could better reflect the reality than the one proposed.

Generally, the intensity of anomalies varies from weak to high and they are associated to highly resistive or weakly conductive formations. Stripping and trenching are recommended on resistive areas where the bedrock is outcropping or near the surface. Drilling is recommended over IP anomalies showing a good geological or/and geochemical association.

8. CONCLUSION

This geophysical campaign gave interesting information about this Property.

The Magnetometer-gradiometer survey gives a good image of the geology and helps to discriminate numerous magnetic horizons. Some of the magnetic layers partly correspond to IP anomalies. They generally have a NNW-SSE trend.

The IP survey led to detection and description of several new anomalies, some of which partly correspond to magnetic layers. Although not all IP anomalies will lead to economic discoveries, the results obtained in this area make this method one of the best with regard to the quality of targets versus prospecting costs. Stripping and trenches are recommended as they could explain most of the anomalies. Drilling is recommended on strong IP anomalies that could not be explained by stripping and on all IP anomalies showing coinciding geochemical anomaly or/and favourable geology.

LIST OF MAPS

Scale: 1: 2 500

Map #	Title
7921	Magnetometer-gradiometer survey - Profiles and Posting
7922	Magnetometer survey - Total Field Contours
7923	Gradiometer survey – Vertical Gradient Contours
7924	Induced Polarization Survey - Profiles and Posting
7925	Induced Polarization Survey - Resistivity Contours
7926	Induced Polarization Survey - Chargeability Contours
7927	Induced Polarization Survey Normalized Chargeability Contours

Description table of IP anomalies – Plumber Prospect

#	From Ln/Stn	To Ln/Stn	Length (m)	Target Ln/Stn	IP (msec) / back	Resis. (Ω -m) / back	NC (mhosec) / back	Probability	Priority	Comments
IP-1	7+00E 12+12N	7+00E 12+12N	-	7+00E 12+12N	9.2 / 5	5580 / > 6000	1.1 / 0.7	0.7	2	Moderate increase of IP with regard to the local background. Not totally covered. Associated to a weak Mag. Possible extension to both sides.
IP-2	6+00E 10+25N	8+00E 10+75N	200	6+00E 10+25N	17 / >5	6701 / uniform	1.9 / 0.6	0.7	2	Possible to moderate anomaly on uniform resistivity. Possible extension to both sides. Generally on the contact of a high Mag horizon.
IP-3	7+00E 9+50N	9+00E 9+25N	200	7+00E 9+50N	21 / > 5	5547 / complex	2.6 / 0.6	0.5	2	Moderate to poor anomaly in a complex resistivity pattern. In a high Mag.
IP-4	12+00E 9+12.5N	12+00E 9+12.5N	-	12+00E 9+12.5N	19.9 / 2	3327 / gradient	3.3 / 0.6	0.7	2	Moderate IP anomaly on a resistivity gradient. Weak Mag Association. Possible extension to the south. On strike with IP-3.
IP-5	6+00E 8+50N	9+00E 8+50N	300	7+00E 8+75N	32 / 5	6033 / gradient	4 / 0.6	0.7	2	Weak to moderate IP anomaly on a resistivity gradient. Intermixed with nearby anomalies. Located in a strong high Mag horizon. On strike with a weaker anomaly on lines 11+00E and 12+00E.
IP-6	6+00E 8+12.5N	11+00E 7+50N	500	6+00E 8+12.5N	37 / > 5	1951 / > 4600	7.9 / 0.6	0.9	1	Strong increase of IP associated with a drop of resistivity on described line. Intermixing with nearby anomalies. Located in a high Mag zone.
IP-7	6+00E 7+37.5N	9+00E 7+50N	300	7+00E 7+75N	46 / > 5	3993 / gradient	6.9 / 0.6	0.9	1	Strong IP anomaly on a resistivity gradient. Intermixing with nearby anomalies. Located in a high Mag horizon.
IP-8	4+00E 5+12.5N	4+00E 5+12.5N	-	4+00E 5+12.5N	8.7 / 5	4562 / > 7000	1.2 / 0.6	0.5	2	Moderate IP anomaly showing a weak resistivity drop. On the contact of a high Mag horizon. Possible extension to the northwest.
IP-9	2+00E 3+75N	9+00E 7+12.5N	700	7+00E 6+75N	41 / > 5	3962 / uniform	6.1 / 0.6	0.9	1	Strong increase of IP associated to a high Mag horizon. Possible extension to the northwest.
IP-10	7+00E 5+87.5N	12+00E 7+62.5N	500	11+00E 7+12.5N	31 / > 5	3221 / uniform	5.1 / 0.7	0.9	1	Generally moderate to strong IP anomaly associated to a high Mag horizon.
IP-11	3+00E 3+87N	14+00E 7+37.5N	1100	10+00E 6+12.5N	14 / 5	1608 / > 2000	3.2 / 0.5	0.7	1	Generally moderate to weak increase of IP. Skips line 5+00E. Possible extension to the southeast.
IP-12	2+00E 3+12.5N	14+00E 4+75N	1200	9+00E 4+25N	12 / 5	693 / complex	4.3 / 0.5	0.8	1	Long and generally moderate IP anomaly showing weak drop of resistivity. Possible extension to both sides.

Description table of IP anomalies– Plumber Prospect

#	From Ln/Stn	To Ln/Stn	Length (m)	Target Ln/Stn	IP (msec) / back	Resis. (Ω -m) / back	NC (mhossec) / back	Probability	Priority	Comments
IP-13	5+00E 2+75N	7+00E 3+06N	200	7+00E 3+06N	12 / 4	631 / >1000 ↓ complex	4.6 / 0.5	0.4	2	Moderate to weak IP anomaly showing a drop of resistivity. Corresponds to a high Mag. On strike with a weaker anomaly to the east.
IP-14	5+00E 0+87.5N	9+00E 3+12.5N	400	8+00E 2+50N	32 / 5	2163 / > 2600 ↓ complex	6.5 / 0.5	0.9	1	Strong increase of IP with a weak drop of resistivity. Generally in lower Mag. Intermixed with nearby anomalies.
IP-15	6+00E 2+50N	7+00E 2+75N	100	6+00E 2+50N	24 / 5	500 / > 1000 ↓	10 / 0.5	0.9	1	Quite strong IP anomaly showing a resistivity drop. Intermixed with nearby anomalies.
IP-16	13+00E 3+87N	13+00E 1+50N	600	11+00E 1+37.5N	19 / 4	661 / > 1000 ↓ complex	6.9 / 0.5	0.9	1	Weak to strong curvilinear IP anomaly with a drop of resistivity. Possible extension to the south.
IP-17	12+00E 2+62.5N	14+00E 3+37.5N	200	14+00E 3+37.5N	20 / 5	3532 / gradient	3.1 / 0.5	0.9	1	Moderate to strong IP anomaly with a shifted drop of resistivity. Located in a high Mag horizon. Possible extension to the southeast.
IP-18	3+00E 2+12.5N	6+00E 1+75N	300	5+00E 1+62.5N	18 / 4	746 / > 1100 ↓	6.4 / 0.5	0.9	1	Moderate to strong IP anomaly showing a drop of resistivity.
IP-19	1+00E 1+50N	1+00W 0+00N	800	3+00E 1+00N	12 / 5	1254 / complex	3.2 / 0.5	0.8	1	Weak to strong curvilinear IP anomaly in a complex resistivity pattern. Generally on a Mag contact. Possible extension to the northwest.
IP-20	5+00E 0+37.5N	8+00E 1+62.5N	300	8+00E 1+62.5N	7.9 / 4	896 / > 1400 ↓	2.5 / 0.5	0.7	2	Increase of IP associated to a drop of resistivity. Generally on the contact of a high Mag.
IP-21	3+00E 1+00S	4+00E 0+62.5S	100	4+00E 0+62.5S	8.9 / 4	1101 / > 1500 ↓	2.5 / 0.5	0.5	2	Increase of IP associated to a slight drop of resistivity.
IP-22	6+00E 0+62.5S	7+00E 0+37.5S	100	6+00E 0+62.5S	24 / 5	1141 / gradient	6.9 / 0.5	0.9	1	Strong IP anomaly with an irregular shape.
IP-23	1+00E 2+00S	7+00E 0+75S	600	4+00E 1+75S	21 / 5	2256 / uniform	4.1 / 0.5	0.9	1	Moderate to high IP anomaly in a high chargeability horizon. Integrates nearby IP anomalies. Skips line 3E
IP-24	3+00E 2+87.5S	9+00E 0+12N	600	5+00E 2+25S	30 / 5	22 / > 1300 ↓	62 / 0.5	0.9	1	Very strong IP anomaly associated to a very strong drop of resistivity. Located in a high chargeability horizon. Integrates the response of two nearby IP anomalies. On a high Mag contact on described line.

Description table of IP anomalies– Plumber Prospect

#	From Ln/Stn	To Ln/Stn	Length (m)	Target Ln/Stn	IP (msec) / back	Resis. (Ω -m) / back	NC (mhosec) / back	Probability	Priority	Comments
IP-25	4+00E 3+25S	7+00E 1+50S	300	5+00E 2+87.5S	36 / 5	142 / > 1300 ↓	29 / 0.5	0.9	1	Very strong IP anomaly associated to a strong drop of resistivity. Located in a high chargeability horizon. Integrates the response of two nearby IP anomalies. On a high Mag contact on described line.
IP-26	2+00E 3+62.5S	5+00E 3+25S	300	4+00E 3+75S	35 / 5	212 / > 1700 ↓	23 / 0.5	0.9	1	Strong increase of IP associated to a strong drop of resistivity. Located in the same high chargeability horizon than IP-24 & 25. Integrates the response of IP-25. Possible extension to the northwest.
IP-27	10+00E 0+75S	12+00E 0+50N	200	12+00E 0+50N	27 / 5	30 / > 1300 ↓	47 / 0.5	0.9	1	Moderate to strong IP anomaly associated to a strong drop of resistivity. Integrates the response of nearby anomalies. Occurs in a complex high chargeability area.
IP-28	7+00E 2+62.5S	13+00E 0+50N	600	13+00E 0+50N	33 / 5	194 / > 1600 ↓	23 / 0.5	0.9	1	Moderate to strong IP anomaly associated to a strong drop of resistivity. Partially integrates the response of nearby anomalies. Occurs in a complex high chargeability area. Often on a high Mag contact. Possible extension to the southeast.
IP-29	8+00E 3+00S	12+00E 0+75S	400	10+00E 1+75S	48 / 5	770 / > 2200 ↓	16 / 0.5	0.9	1	Moderate to very strong increase of IP associated to a drop of resistivity. Occurs in a high chargeability horizon. Integrates the response of nearby IP anomalies.
IP-30	11+00E 1+25S	12+00E 1+00S	100	12+00E 1+00S	38 / 5	4666 / < 2000	5.2 / 0.5	0.7	2	Moderate IP anomaly associated to resistivity increase. Occurs in a high chargeability horizon. Integrates nearby IP anomalies. Associated to a high Mag. Possible extension to the southeast.
IP-31	12+00E 1+37.5S	12+00E 1+37.5S	-	12+00E 1+37.5S	38 / 5	879 / > 2200 ↓ complex	12 / 0.5	0.9	1	Strong increase of IP with a drop of resistivity. Occurs in a high chargeability horizon. Integrates nearby anomalies. Associated to a high Mag. Possible extension to the southeast.
IP-32	11+00E 2+37.5S	12+00E 2+12.5S	100	12+00E 2+12.5S	41 / 5	1251 / uniform	11 / 0.5	0.9	1	Strong IP anomaly in a high chargeability horizon. Intermixed with nearby IP anomalies. Weak Mag association. Possible extensions to the southeast.

Description table of IP anomalies – Plumber Prospect

#	From Ln/Stn	To Ln/Stn	Length (m)	Target Ln/Stn	IP (msec) / back	Resis. (Ω -m) / back	NC (mhosec) / back	Probability	Priority	Comments
IP-33	10+00E 3+37.5S	11+00E 3+00S	100	11+00E 3+00S	42 / 5	780 / > 1600 ↓	14 / 0.5	0.9	1	Strong increase of IP associated to a drop of resistivity. Occurs in a high chargeability horizon. Integrates nearby anomalies. Possible extension to the southeast.
IP-34	7+00E 4+75S	11+00E 3+37.5S	400	10+00E 3+75S	52 / 5	121 / > 2700 ↓	45 / 0.5	0.9	1	Very strong increase of IP associated to a very strong drop of resistivity. Integrates nearby anomalies. Occurs in a high chargeability horizon. Corresponds to a Mag low. Possible extension to the southeast.
IP-35	9+00E 4+50S	11+00E 3+62.5S	200	9+00E 4+50S	43 / 5	423 / > 1500 ↓	20 / 1.0	0.9	1	Strong IP anomaly associated to a strong drop of resistivity. Integrates nearby IP anomalies responses. Occurs in a high chargeability horizon. Possible extension to the southeast.
IP-36	9+00E 4+75S	11+00E 4+12.5S	200	10+00E 4+12.5S	38 / 5	1274 / > 1600 ↓	10 / 0.5	0.9	1	Strong IP anomaly associated to a drop of resistivity. Integrates nearby IP anomalies responses. Occurs in a high chargeability horizon. Corresponds to a Mag low. Possible extension to both sides.
IP-37	11+00E 4+75S	11+00E 4+75S	-	11+00E 4+75S	27 / 5	267 / > 1600 ↓	16 / 0.5	0.9	1	Strong IP anomaly associated to a strong drop of resistivity. Integrates nearby IP anomalies responses. Occurs in a high chargeability horizon. On the contact of a weak Mag high. Possible extension to both ends.
IP-38	6+00E 4+12.5S	10+00E 2+00S	400	9+00E 2+87S	29 / 5	5693 / < 3000	3.6 / 0.5	0.5	2	Good IP increase in a high resistivity area. In a lower Mag. On strike with IP-30.
IP-39	6+00E 4+87S	9+00E 3+00S	300	7+00E 4+25S	27 / 5	790 / > 1600 ↓	9 / 1	0.9	1	Strong IP anomaly associated to a good resistivity drop. Integrates nearby IP anomalies responses. Occurs in a high chargeability horizon. On the contact of a weak Mag high. On strike with IP-32.
IP-40	7+00E 4+50N	9+00E 4+87.5N	200	8+00E 4+37.5N	8.2 / 6	1069 / complex	2.4 / 0.5	0.6	2	Moderate IP anomaly. Integrates the response of IP-12. Associated to a Mag high. On strike with a weaker IP anomaly that starts on line 11+00E.
IP-41	7+00E 1+37.5N	8+00E 2+00N	100	7+00E 1+37.5N	18 / 5	5111 / gradient	2.3 / 0.5	0.6	2	Moderate increase of IP on a resistivity gradient. Integrates nearby anomalies. Associated to a Mag high.
IP-42	9+00E 1+25N	9+00E 1+25N	-	9+00E 1+25N	12 / 5	1513 / uniform	2.9 / 0.5	0.6	2	Moderate IP anomaly intermixing with nearby anomaly. Occurs in a low Mag.

Description table of IP anomalies – Plumber Prospect

#	From Ln/Stn	To Ln/Stn	Length (m)	Target Ln/Stn	IP (msec) / back	Resis. (Ω -m) / back	NC (mhosec) / back	Probability	Priority	Comments
IP-43	8+00E 0+62.5N	10+00E 1+00N	200	9+00E 0+62.5N	14 / 5	115 / > 1200 ↓	12 / 0.5	0.7	1	IP increase associated to a local strong drop of resistivity in surface only. Located on a Mag high contact.
IP-44	10+00E 0+25S	13+00E 1+25N	300	12+00E 0+75N	14 / 5	2132 / gradient	2.8 / 0.5	0.7	2	Weak to moderate IP anomaly on a resistivity gradient. Integrates nearby anomalies. Corresponds to a Mag low.

CERTIFICATE of QUALIFICATIONS

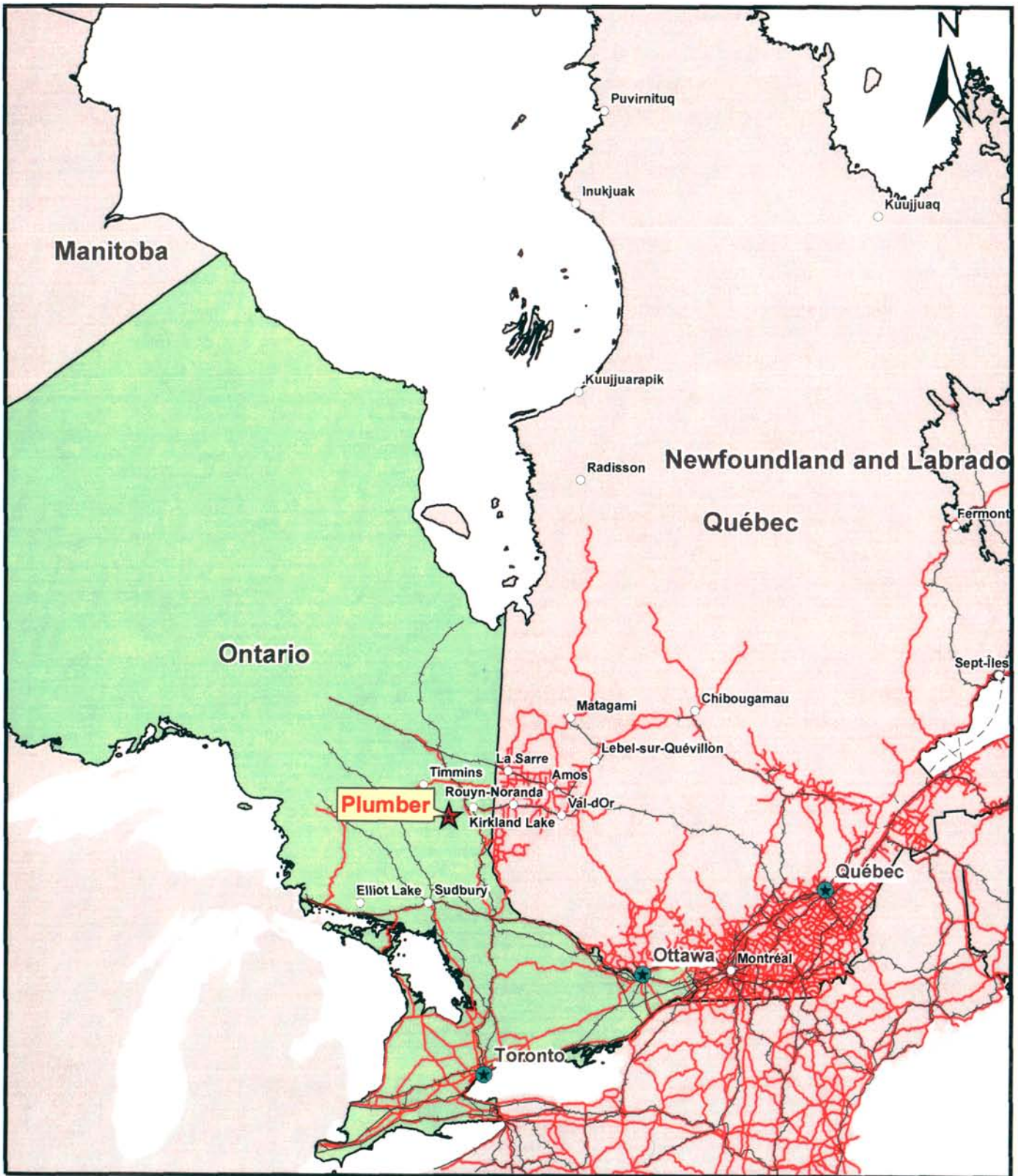
I, Simon Tshimbalanga, 1064, rue du Domaine, Cap-Rouge, Québec, hereby certify:

1. I am a graduate of Université Laval at Québec with a degree in Geology (1977) and an Engineer degree in Geology (1979).
2. I have been employed as an exploration Engineer and Geologist on a full time basis since 1977.
3. I am presently employed as a project Geologist with GÉOSIG Inc. of 3700 Chaudière Blvd., Sainte-Foy, Quebec, since 1980.
4. I own no direct, indirect or expect to receive any contingent interests in the subject properties or shares or securities of *Golden Valley Mines Ltd.*
5. I am a member of l'Ordre Des Ingénieurs du Québec (OIQ), the Association Professionnelle des Géologues et Géophysiciens du Québec (APGGQ), and of the (AEMQ) Association de l'Exploration Minière du Québec.
6. I have disclosed in this report all relevant material which, to the best of my knowledge, might have a bearing on the viability of the project and the recommendations presented.



Simon Tshimbalanga, Eng.
Géosig Inc.

Dated at Sainte-Foy, Québec, this 10th day of February, 2006



Loc_Ontario.mxd 2006/02/22 m.b.

GOLDEN VALLEY MINES LTD.

Plumber Prospect

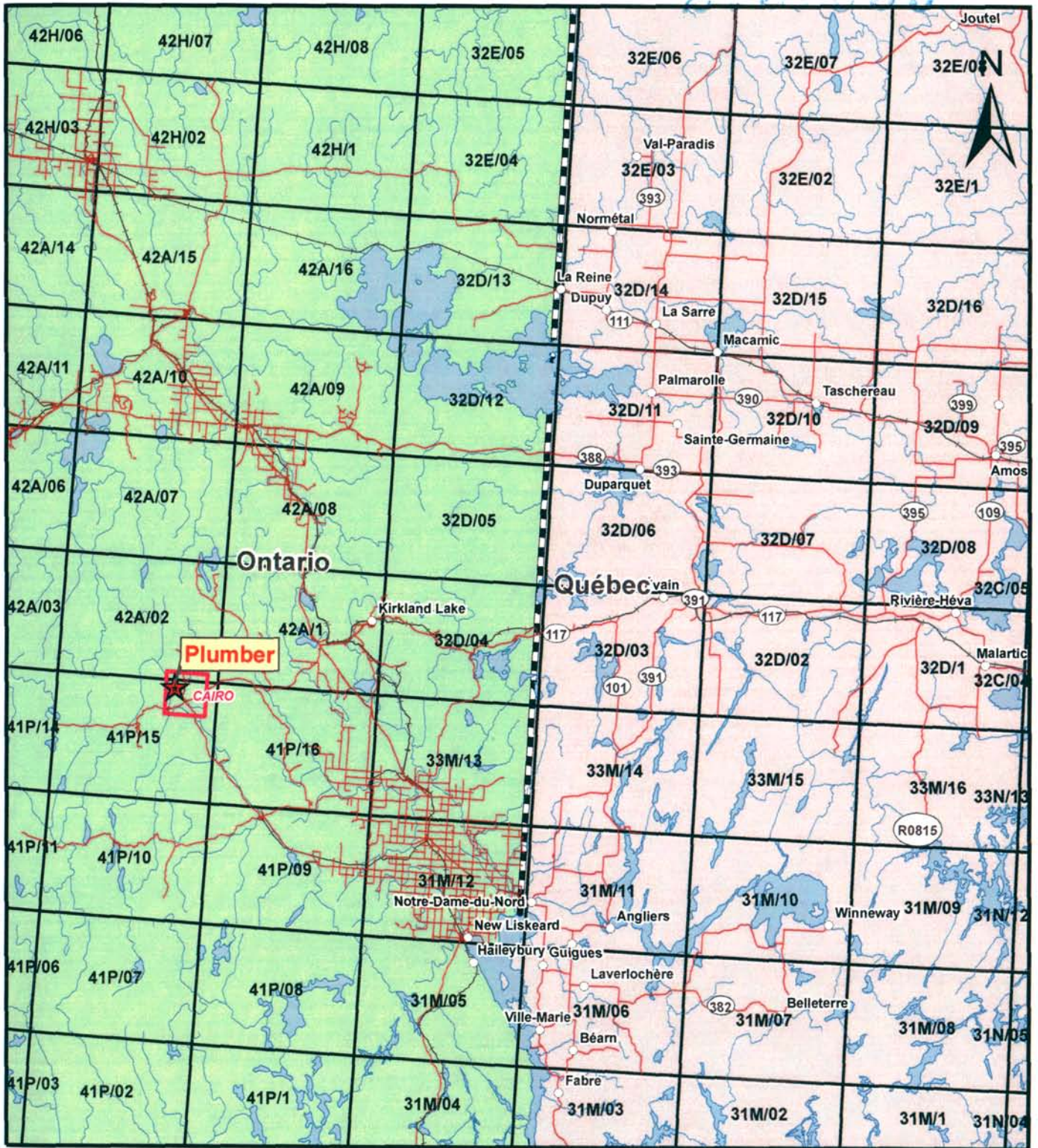
Located in N.T.S. 41P/15

1:10,000,000



Figure 1
GEOSIG Inc.

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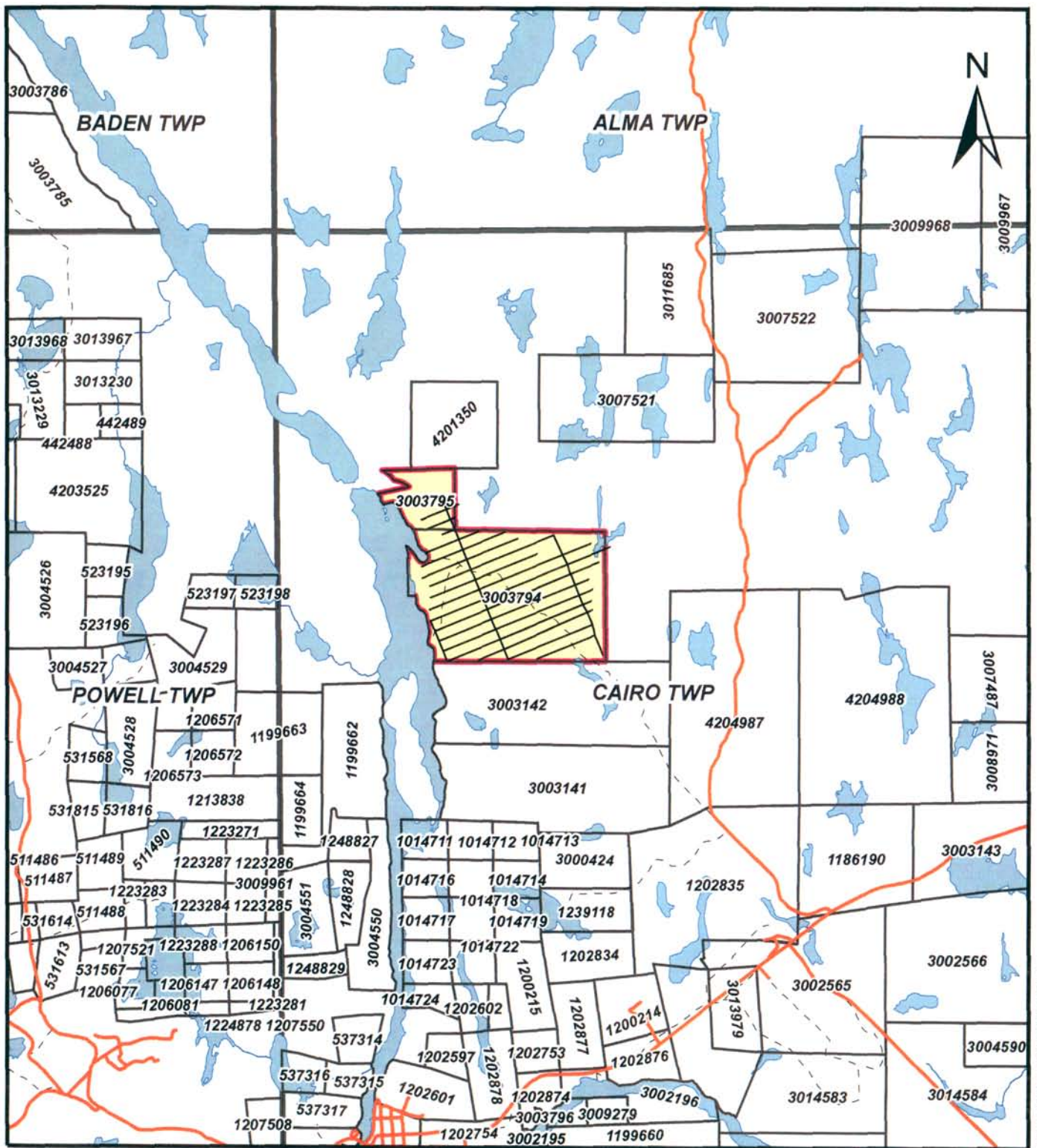


Loc_Region.mxd 2006/02/22 m.b.

GOLDEN VALLEY MINES LTD.
Plumber Prospect
Cairo Township, Ontario

Located in N.T.S. 41P/15
 1:1,250,000
 0 25
 Kilometers

Figure 2
 GEOSIG Inc.



Loc_Claim.mxd 2006/02/22 m.b.

GOLDEN VALLEY MINES LTD.

Plumber Prospect Cairo Township, Ontario

Located in N.T.S. 41P/15

1:50,000



Figure 3
GEOSIG Inc.

Appendix A

Claim Abstracts and Claim Map

Active Mining Claim Abstract
[| Main Menu](#) | [| Back](#) |

LARDER LAKE Mining Division		Claim No: L 3003794		Status: ACTIVE	
Due Date:	2006-MAY-17	Recorded:	2004-May-17		
Work Required:	\$ 5,200	Staked:			
Total Work:	\$ 0	Township/Area:	CAIRO (G-3209)		
Total Reserve:	\$ 0	Lot Description:			
Present Work Assignment:	\$ 0	Claim Units:	13		
Claim Bank:	\$ 0				

Claim Holders
Recorded Holder(s) Percentage

GOLDEN VALLEY MINES LTD. (100.00 %)

Client Number

401033

Transaction Listing

Type	Date	Applied	Description	Performed	Number
STAKER	2004-May-17		RECORDED BY HARRINGTON, MARTYN SPENCER (K22526)		R0480.02178
STAKER	2004-May-17		HARRINGTON, MARTYN SPENCER (142016) RECORDS 100.00 % IN THE NAME OF GOLDEN VALLEY MINES LTD. (401033)		R0480.02179
WORK	2004-Dec-08	\$ 0	CERTIFICATE CONFIRMING NOTICE OF INTENTION TO PERFORM ASSESSMENT WORK		W0480.01954

Claim Reservations

- 01 400' surface rights reservation around all lakes and rivers
- 02 Sand and gravel reserved
- 03 Peat reserved
- 04 Other reservations under the Mining Act may apply
- 05 Including land under water
- 06 Excluding road
- 09 Part mining rights only
- 18 Excluding buildings

Last modified: d/m/y 25/02/2005

Active Mining Claim Abstract
[| Main Menu](#) | [| Back](#) |

LARDER LAKE Mining Division		Claim No: L 3003795		Status: ACTIVE	
Due Date:	2006-MAY-17	Recorded:	2004-May-17		
Work Required:	\$ 800	Staked:			
Total Work:	\$ 0	Township/Area:	CAIRO (G-3209)		
Total Reserve:	\$ 0	Lot Description:			
Present Work Assignment:	\$ 0	Claim Units:	2		
Claim Bank:	\$ 0				

Claim Holders
Recorded Holder(s) Percentage

GOLDEN VALLEY MINES LTD. (100.00 %)

Client Number

401033

Transaction Listing

Type	Date	Applied	Description	Performed	Number
STAKER	2004-May-17		RECORDED BY HARRINGTON, MARTYN SPENCER (K22526)		R0480.02178
STAKER	2004-May-17		HARRINGTON, MARTYN SPENCER (142016) RECORDS 100.00 % IN THE NAME OF GOLDEN VALLEY MINES LTD. (401033)		R0480.02179
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- 05 Including land under water
- 09 Part mining rights only
- 18 Excluding buildings

Last modified: d/m/y 25/02/2005

Date / Time of Issue: Mon Feb 20 13:28:19 EST 2006

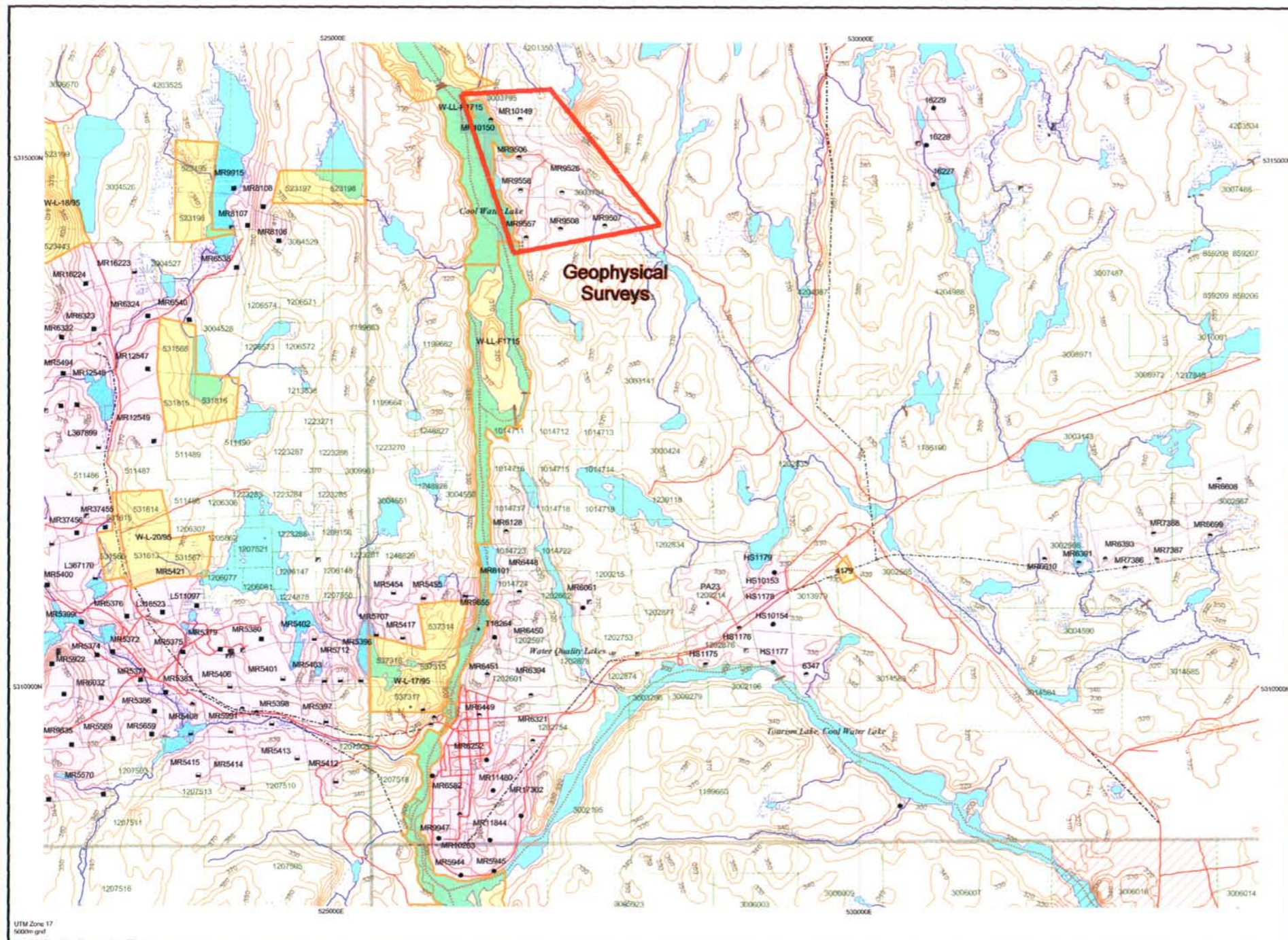
TOWNSHIP / AREA
CAIRO

PLAN
G-3209

ADMINISTRATIVE DISTRICTS / DIVISIONS

Mining Division
Land Titles/Registry Division
Ministry of Natural Resources District

Larder Lake
TIMISKAMING
KIRKLAND LAKE

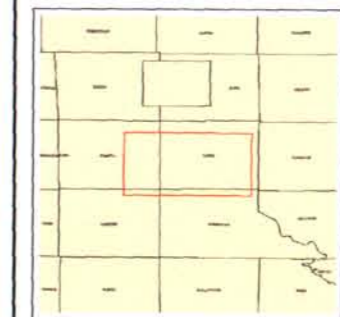


TOPOGRAPHIC

- Administrative Boundaries
- Township
- Concession Lot
- Provincial Park
- Indian Reserve
- Cliff, Pit & Pile
- Contour
- Mine Shafts
- Mine Headframe
- Railway
- Road
- Trail
- Natural Gas Pipelines
- Utilities
- Tower

Land Tenure

- Freehold Patent**
 - Surface And Mining Rights
 - Surface Rights Only
 - Mining Rights Only
- Leasehold Patent**
 - Surface And Mining Rights
 - Surface Rights Only
 - Mining Rights Only
- Licence of Occupation**
 - Users Not Specified
 - Surface And Mining Rights
 - Surface Rights Only
 - Mining Rights Only
 - Land Use Permit
 - Order In Council (Not open for staking)
 - Water Power Lease Agreement
- Mining Claim**
 - 1234567
 - 1234567



- LAND TENURE WITHDRAWALS**
- 1234 Area Withdrawn from Disposition
- Mining Acts Withdrawal Types
 - W'm Surface And Mining Rights Withdrawn
 - W'l Surface Rights Only Withdrawn
 - W'm Mining Rights Only Withdrawn
 - W'l Order In Council Withdrawal Types
 - W'm Surface And Mining Rights Withdrawn
 - W'l Surface Rights Only Withdrawn
 - W'm Mining Rights Only Withdrawn
- 1234567
- 1234567
- IMPORTANT NOTICES**



CLAIM MAP

Those wishing to stake mining claims should consult with the Provincial Mining Recorder's Office of the Ministry of Northern Development and Mines for additional information on the status of the lands shown hereon. This map is not intended for navigational, survey, or land title determination purposes as the information shown on this map is compiled from various sources. Completeness and accuracy are not guaranteed. Additional information may also be obtained through the local Land Titles or Registry Office, or the Ministry of Natural Resources.

The information shown is derived from digital data available in the Provincial Mining Recorder's Office at the time of downloading from the Ministry of Northern Development and Mines web site.

General Information and Limitations
 Contact Information:
 Provincial Mining Recorder's Office
 Willet Green Miller Centre 933 Ramsey Lake Road
 Sudbury ON P3E 6B5
 Home Page: www.mdmn.gov.on.ca/MNOC/MINESLANDS/misnmapge.htm

Toll Free
 Tel: 1 (888) 415-6845 ext 5779
 Fax: 1 (877) 670-1444

Map Datum: NAD 83
 Projection: UTM (6 degree)
 Topographic Data Source: Land Information Ontario
 Mining Land Tenure Source: Provincial Mining Recorder's Office

This map may not show unregistered land tenure and interests in land including certain patents, leases, easements, right of ways, flooding rights, licences, or other forms of disposition of rights and interest from the Crown. Also certain land tenure and land uses that restrict or prohibit free entry to stake mining claims may not be illustrated.

Appendix B

Equipment Specifications

Tx II 1800W I.P. Transmitter

by Instrumentation GDD, Québec



SPECIFICATIONS

- Protection against short circuits even at zero (0) ohms
- Output voltage range: 150 V - 2 000 V
- Power source: 120 V / 60 Hz - Optional: 220 V / 50 Hz
- Operates from a light backpackable standard 120 V generator

This backpackable 1400 W induced polarization (I.P.) transmitter works from a standard 120 V source and is well adapted to rocky environments where a high output voltage of up to 2 000 V is needed. Moreover, in highly conductive overburden, at 150 V, the highly efficient 1400 W transmitter is able to send a current of up to 10 amperes. By using this I.P. transmitter, you obtain fast and high-quality I.P. surveys in all possible field conditions.

Size: 21 x 34 x 39 cm

Weight: approx. 20 kg

Operating temperature: - 40 °C to 65 °C

Electrical characteristics : Used for time-domain I.P. 2 sec. ON, 2 sec. OFF
 Output current range: 0.005 to 10 A
 Output voltage range: 150 to 2000 V

Displays : Output current LCD: read to 0.001 A
 Standard LCD heater for very cold weather
 Total protection against short circuits even at zero ohms
 Indicator lamps

- High voltage ON/OFF
- Output overcurrent
- Generator over or undervoltage
- Overheating
- Logic failure
- Open loop protection

Power source

Any standard motor/generator 120V / 60 Hz

ELREC-6 by IRIS (BRGM)

Orléan, France

ELREC 6 (PDF)

MULTI CHANNEL IP/RESISTIVITY RECEIVER

Features

- Six simultaneous dipoles
- Twenty programmable chargeability windows
- High accuracy and sensitivity

General

ELREC 6 is a six dipole Time Domain Induced Polarization/Resistivity Receiver designed for high productivity surveys in mineral and groundwater exploration

ELREC 6 has been designed for being both a user friendly and very sensitive IP/Resistivity receiver.

ELREC 6 is available in two models: the first option includes twenty programmable windows in Time Domain mode, the second provides both ten programmable windows in Time Domain mode as well as the Frequency Domain mode.

Six dipoles

The six channels of the receiver permit to measure six dipoles simultaneously, which provides a high efficiency in the field.

Twenty programmable windows

Beside the classical preset logarithmic and arithmetic modes, ELREC 6 also offers up to twenty fully independent programmable windows which the operator can define by himself according to the way he wants to sample the IP decay curve.

Automatic measuring process

A microprocessor fully controls the synchronization, the gain ranging, the stacking, and the display of the results including the apparent resistivity.

Monitoring display

During the acquisition, the chargeabilities of the six dipoles can be displayed simultaneously on the LCD display for a global visualization of the readings ; the standard deviations of these chargeabilities can also be displayed simultaneously for a real time monitoring of the quality of the ongoing readings.



Specifications

- Input Channels: Six
- Signal Waveform: Time Domain (ON+, OFF, ON-, OFF) with pulse duration of 0.5, 1, 2, 4, 8 seconds
- IP Chargeability Windows: Up to twenty arithmetic, logarithmic, or fully programmable
- Apparent Resistivity Computation: Average chargeability and standard deviation.
- Input Impedance: 10 Mohm
- Input Overvoltage Protection: up to 1000 volts
- Input Voltage Range: Each dipole: 10V max sum of voltage of dipoles 2 to 6: 15V max
- Automatic SP Bucking: $\pm 10V$ with linear drift correction up to 1 mV/s
- Power Line Rejection: 50 to 60 Hz
- Sampling Rate: 10 ms
- Common Mode Rejection: 100 dB (for $R_S = 0$)
- Grounding Resistance: Measurement from 0.1 to 467 Kohm
- Battery Test: Manual and automatic before each measurement

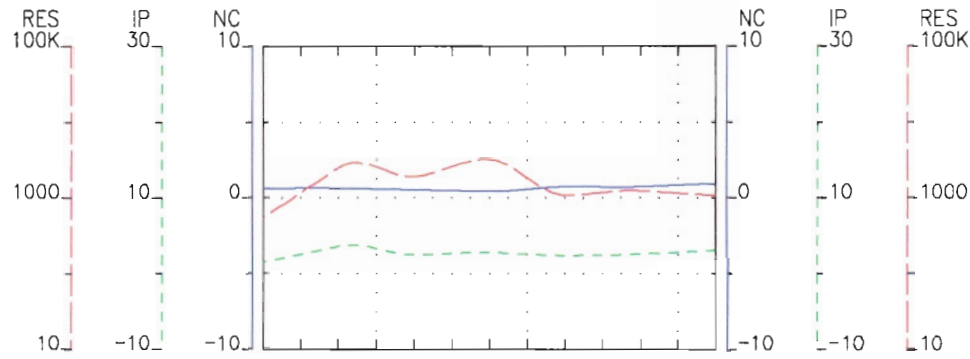
GSM-19WV MAGNETOMETER – GRADIOMETER – VLF



BY GEM SYSTEM, TORONTO

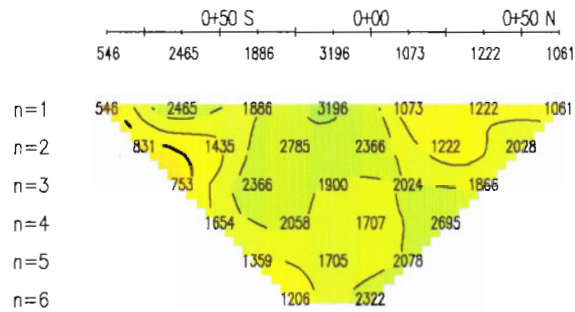
INSTRUMENT SPECIFICATIONS

Resolution:	0.01nT (gamma), magnetic field and gradient.
Accuracy:	0.2nT over operating range.
Range:	20,000 to 120,000nT.
Gradient Tolerance:	Over 10, 000nT/m
Operating Interval:	3 seconds minimum, faster optional. Readings initiated from keyboard, external trigger, or carriage return via RS-232C.
Input / Output:	6 pin weatherproof connector, RS-232C, and (optional) analog output.
Power Requirements:	12V, 200mA peak (during polarization), 30mA standby. 300mA peak in gradiometer mode.
Power Source:	Internal 12V, 2.6Ah sealed lead-acid battery standard, others optional. An External 12V power source can also be used.
Battery Charger:	Input: 110 VAC, 60Hz. Optional 110 / 220 VAC, 50 / 60Hz. Output: dual level charging.
Operating Ranges:	Temperature: - 40°C to +60°C. Battery Voltage: 10.0V minimum to 15V maximum. Humidity: up to 90% relative, non condensing.
Storage Temperature:	-50°C to +65°C.
Display:	LCD: 240 X 64 pixels, OR 8 X 30 characters. Built in heater for operation below -20°C.
Dimensions:	Console: 223 x 69 x 240mm. Sensor Staff: 4 x 450mm sections. Sensor: 170 x 71mm dia. Weight: console 2.1kg, Staff 0.9kg, Sensors 1.1kg each.
VLF	
Frequency Range:	15 - 30.0 kHz plus 57.9 kHz (Alaskan station)
Parameters Measured:	Vertical in-phase and out-of-phase components as percentage of total field. 2 relative components of horizontal field. Absolute amplitude of total field.
Resolution:	0.1%.
Number of Stations:	Up to 3 at a time.
Storage:	Automatic with: time, coordinates, magnetic field / gradient, slope, EM field, frequency, in- and out-of-phase vertical, and both horizontal components for each selected station.
Terrain Slope Range:	0° - 90° (entered manually).
Sensor Dimensions:	140 x 150 x 90 mm. (5.5 x 6 x 3 inches).
Sensor Weight:	1.0 kg (2.2 lb).

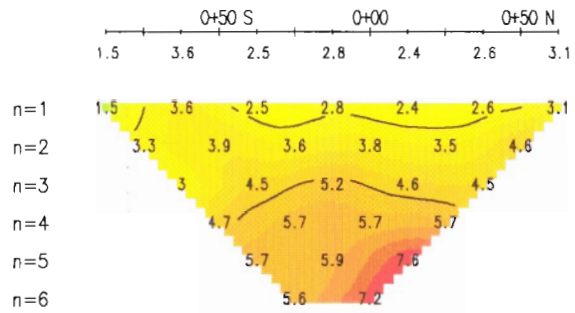


TOPOGRAPHY

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(OHM-M)

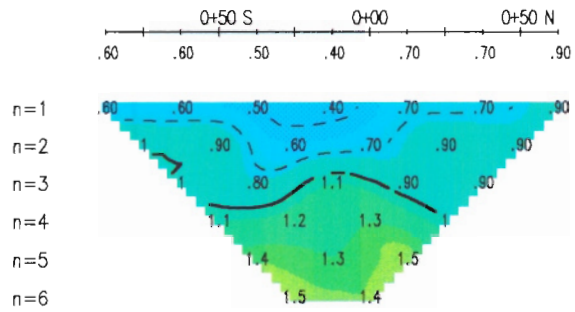


CHARGEABILITY
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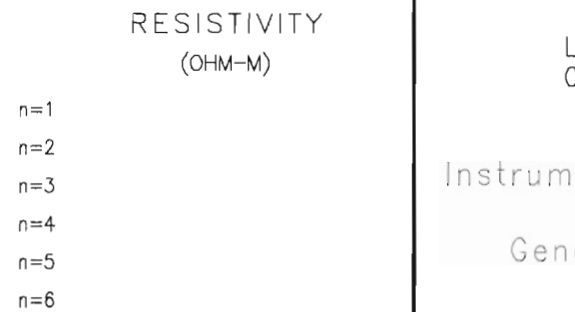
INTERPRETATION

NORMALIZED
CHARGEABILITY
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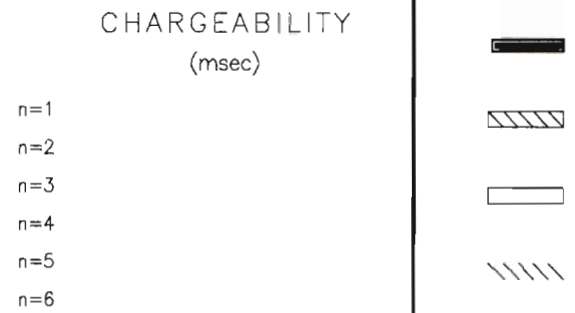


TOPOGRAPHY

RESISTIVITY
(OHM-M)



CHARGEABILITY
(msec)

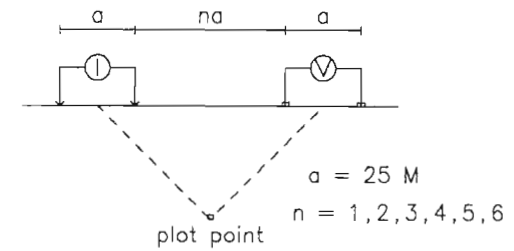


INTERPRETATION

NORMALIZED
CHARGEABILITY
 $NC=CH*9.58/\text{SQRT}(\text{Resis})$

Line 3+00 W

Dipole-Dipole Array



2-31959

Profiles N=1

Logarithmic
Contours 1, 1.5, 2, 3, 5, 7.5, 10, ...

Instruments Rx : ELREC-6 # 108, IRIS
Tx : 1800W GDD #228
Generator : Honda 2000W

Field work by: Georges Tiliki, MBA

INTERPRETATION

- Strong & sure IP anomaly ($0.9 > P > 0.7$) generally with decreased resistivity
- Moderate & probable IP anomaly ($0.7 > P > 0.4$) generally without resistivity decrease
- Possible IP anomaly ($0.4 > P > 0.2$) no resistivity signature
- Weak chargeability increase (doubtful $P > .2$)

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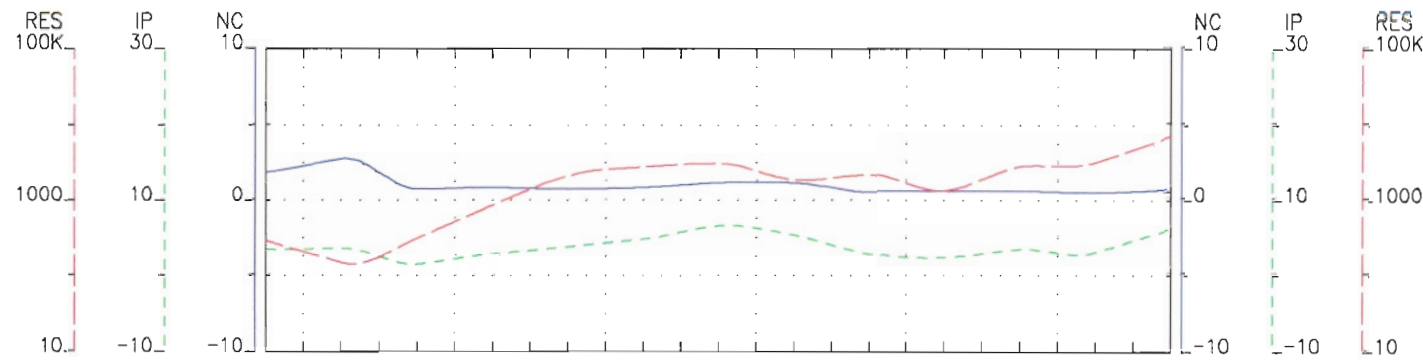
Line 3+00 W

GOLDEN VALLEY MINES LTD.

**INDUCED POLARIZATION
Plumber Prospect
Cairo Township, Ontario**

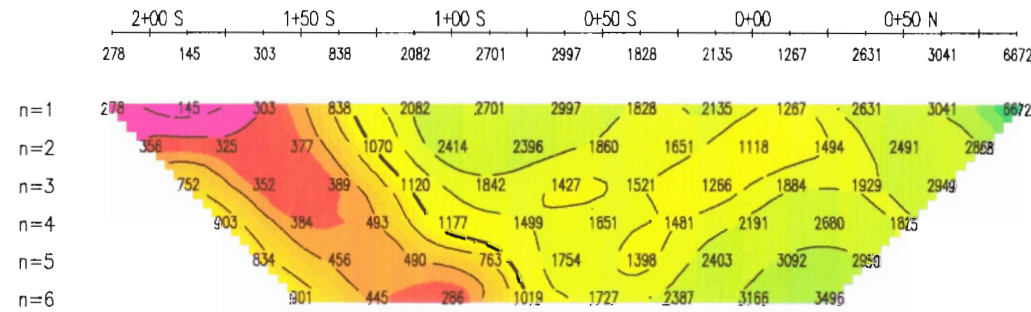
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Interpreted by: Simon Tshimbalanga, eng. project 247.07

GEOSIG INC.



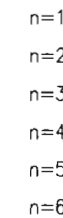
TOPOGRAPHY

RESISTIVITY
(OHM-M)

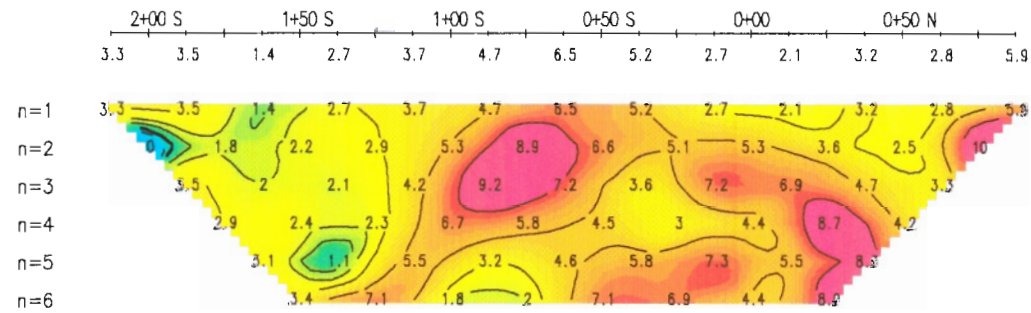


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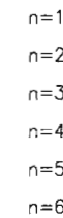
RESISTIVITY
(OHM-M)



CHARGEABILITY
(msec)



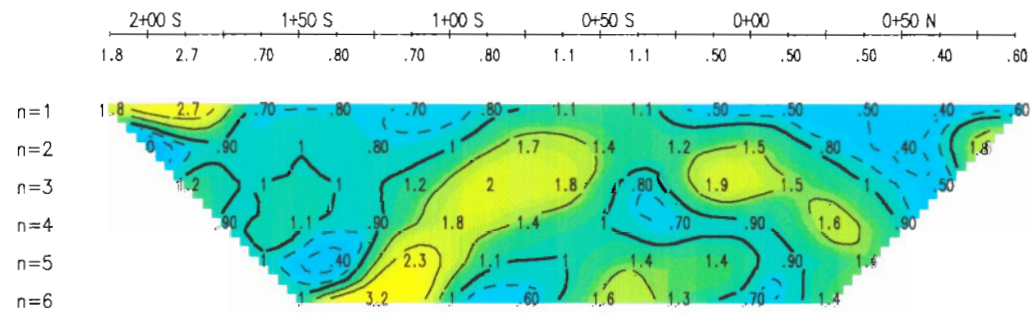
CHARGEABILITY
(msec)



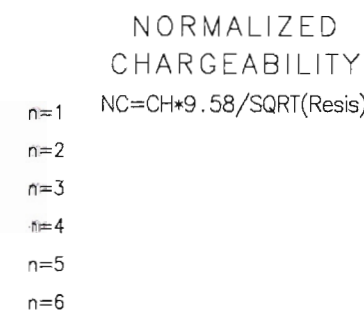
INTERPRETATION



NORMALIZED
CHARGEABILITY
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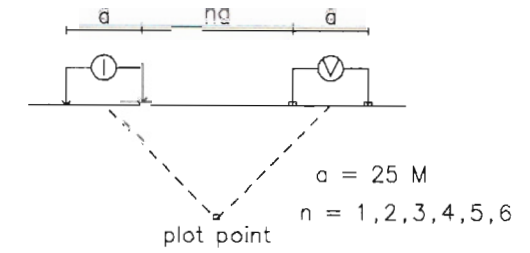


INTERPRETATION



Line 2+00 W

Dipole-Dipole Array



Profiles N=1

Logarithmic Contours 1, 1.5, 2, 3, 5, 7.5, 10, ...

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Tx : 1800W GDD #228
Generator : Honda 2000W

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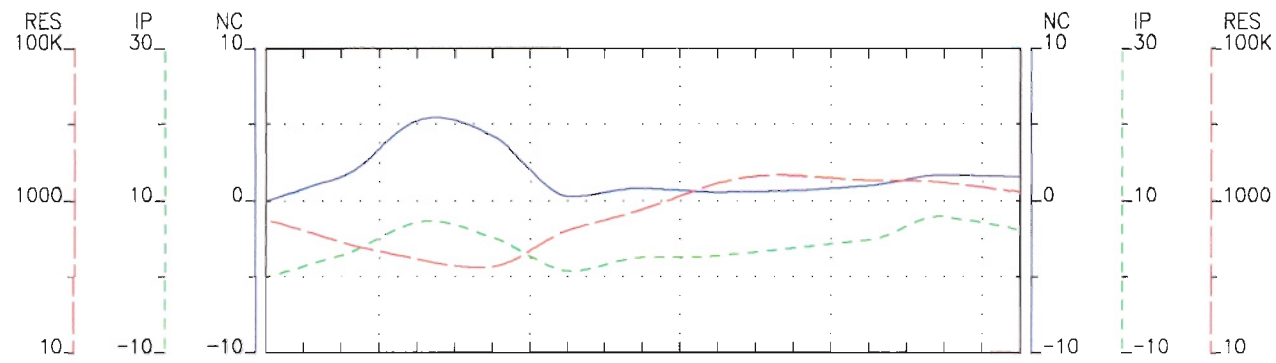
Line 2+00 W

GOLDEN VALLEY MINES LTD.

**INDUCED POLARIZATION
Plumber Prospect
Cairo Township, Ontario**

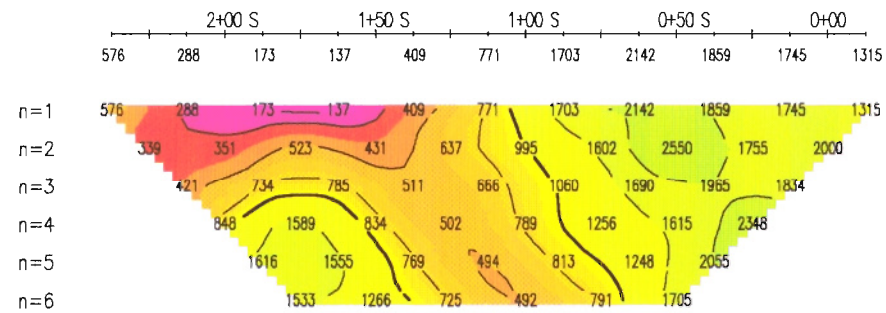
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GEOSIG INC.

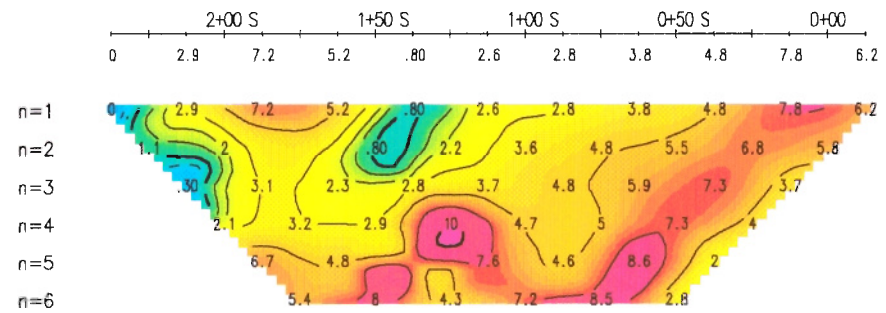


TOPOGRAPHY

RESISTIVITY
(OHM-M)

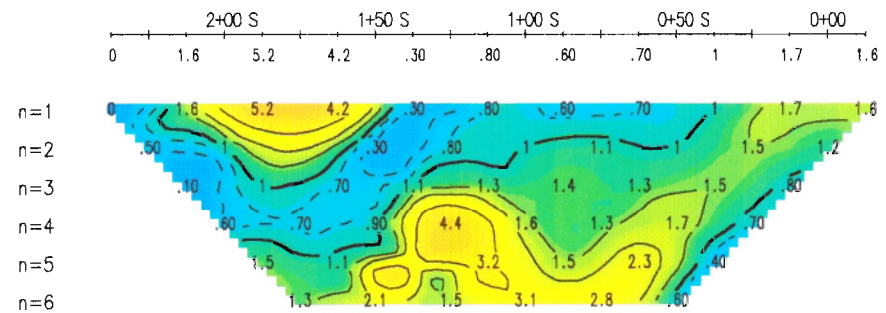


CHARGEABILITY
(msec)



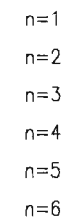
INTERPRETATION

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CHARGEABILITY
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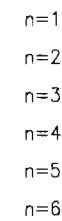


TOPOGRAPHY

RESISTIVITY
(OHM-M)

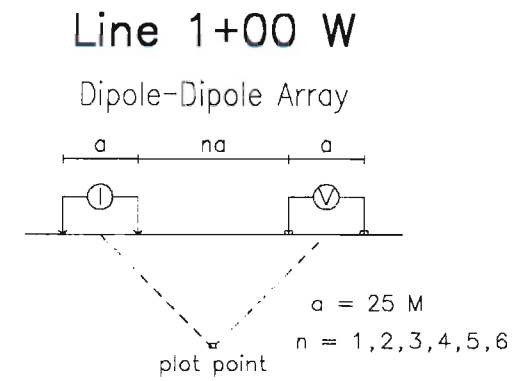
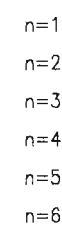


CHARGEABILITY
(msec)



INTERPRETATION

NORMALIZED
CHARGEABILITY
NC=CH*9.58/SQRT(Resis)



Profiles N=1

Logarithmic
Contours 1, 1.5, 2, 3, 5, 7.5, 10, ...

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Tx : 1800W GDD #228
Generator : Honda 2000W

Field work by: Georges Tiliki, MBA

INTERPRETATION

- Strong & sure IP anomaly ($0.9 > P > 0.7$) generally with decreased resistivity
- Moderate & probable IP anomaly ($0.7 > P > 0.4$) generally without resistivity decrease
- Possible IP anomaly ($0.4 > P > 0.2$) no resistivity signature
- Weak chargeability increase (doubtful $P > .2$)

SCALE 1:2500

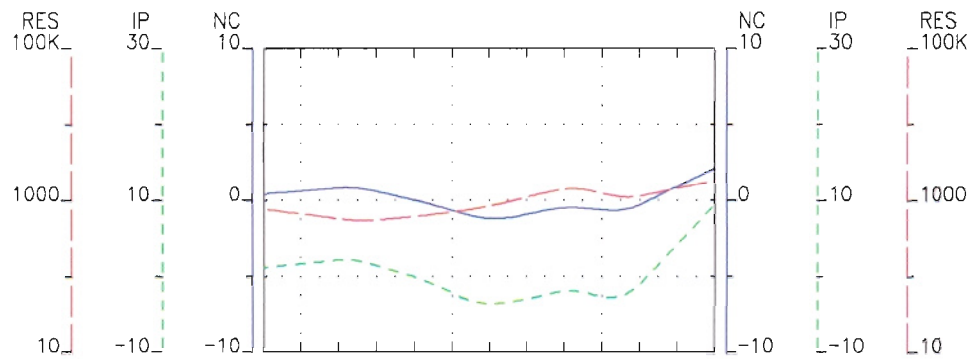
Line 1+00 W

GOLDEN VALLEY MINES LTD.

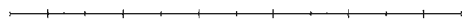
**INDUCED POLARIZATION
Plumber Prospect
Cairo Township, Ontario**

Date: 06/03/21 NTS: 41P/15
Interpreted by: Simon Tshimbalanga, eng. project 247.07

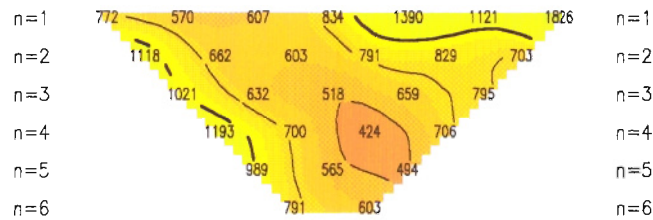
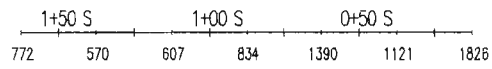
GEOSIG INC.



TOPOGRAPHY

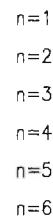


RESISTIVITY
(OHM-M)

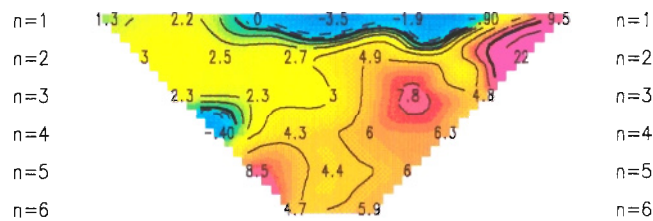
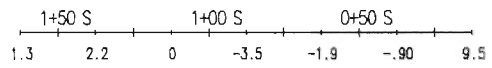


TOPOGRAPHY

RESISTIVITY
(OHM-M)



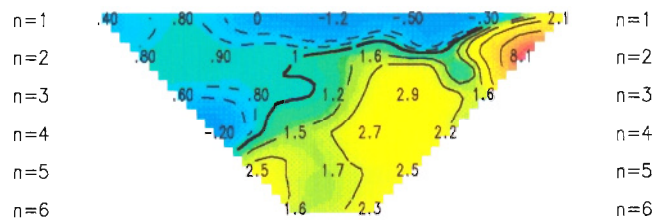
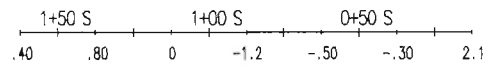
CHARGEABILITY
(msec)



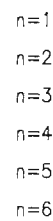
INTERPRETATION



NORMALIZED
CHARGEABILITY
 $NC=CH*9.58/SQRT(Resis)$

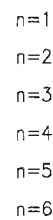


CHARGEABILITY
(msec)



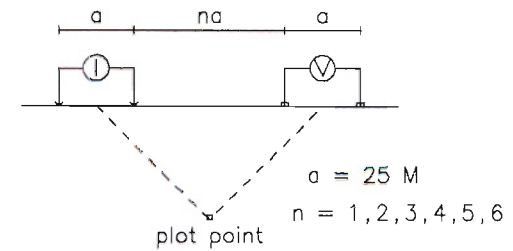
INTERPRETATION

NORMALIZED
CHARGEABILITY
 $NC=CH*9.58/SQRT(Resis)$



Line 0+00

Dipole-Dipole Array



Profiles N=1

Logarithmic
Contours 1, 1.5, 2, 3, 5, 7.5, 10, ...

Instruments Rx : ELREC-6 # 108, IRIS
Tx : 1800W GDD #228
Generator : Honda 2000W

Field work by: Georges Tiliki, MBA

INTERPRETATION

- Strong & sure IP anomaly ($0.9 > P > 0.7$) generally with decreased resistivity
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- Possible IP anomaly ($0.4 > P > 0.2$) no resistivity signature
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SCALE 1:2500

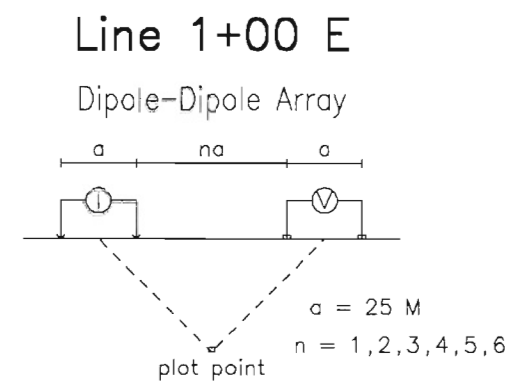
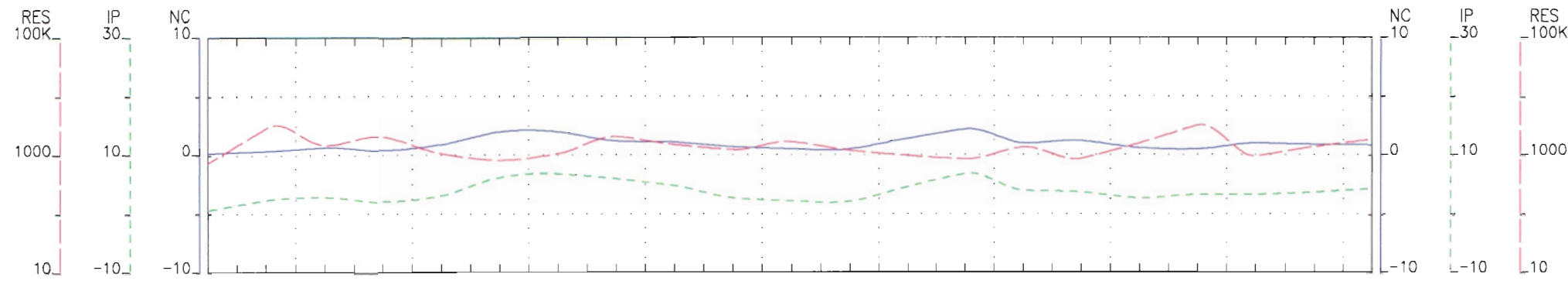
Line 0+00

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Date: 06/03/21 NTS: 41P/15
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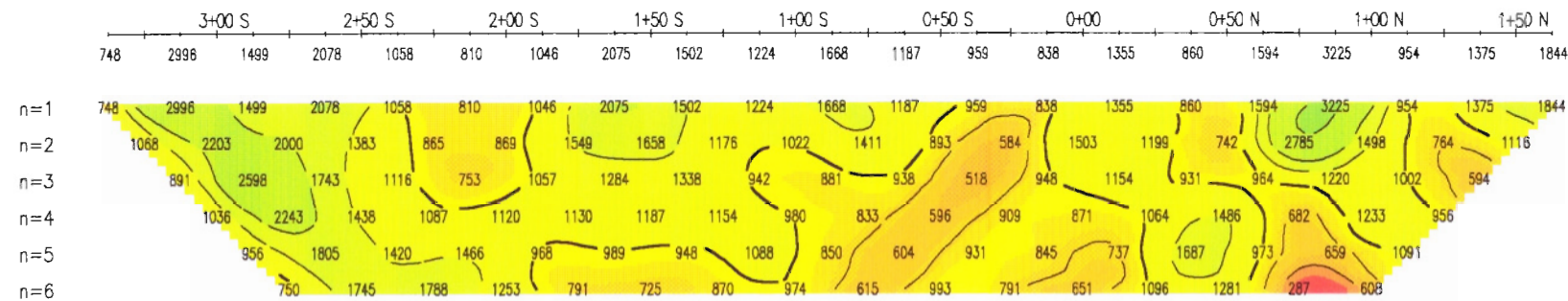
GEOSIG INC.



TOPOGRAPHY

TOPOGRAPHY

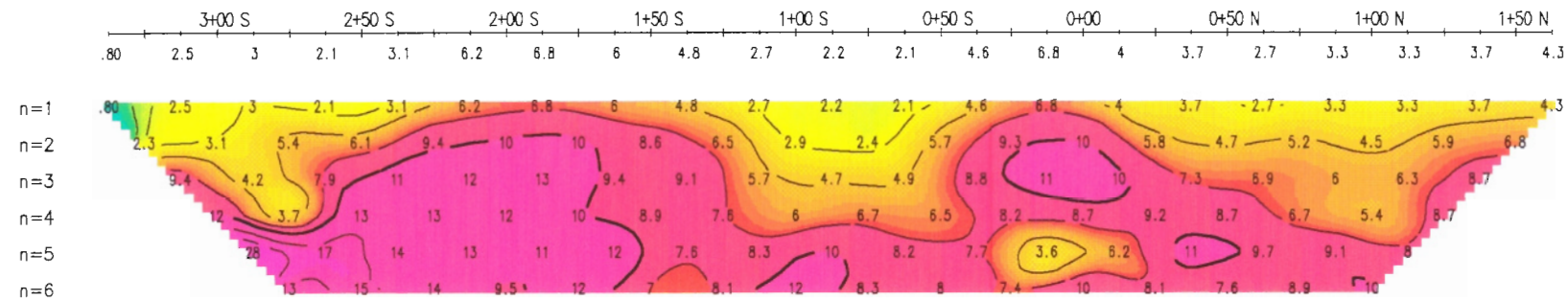
RESISTIVITY
(OHM-M)



RESISTIVITY
(OHM-M)

Logarithmic Contours
1, 1.5, 2, 3, 5, 7.5, 10, ..

CHARGEABILITY
(msec)



CHARGEABILITY
(msec)

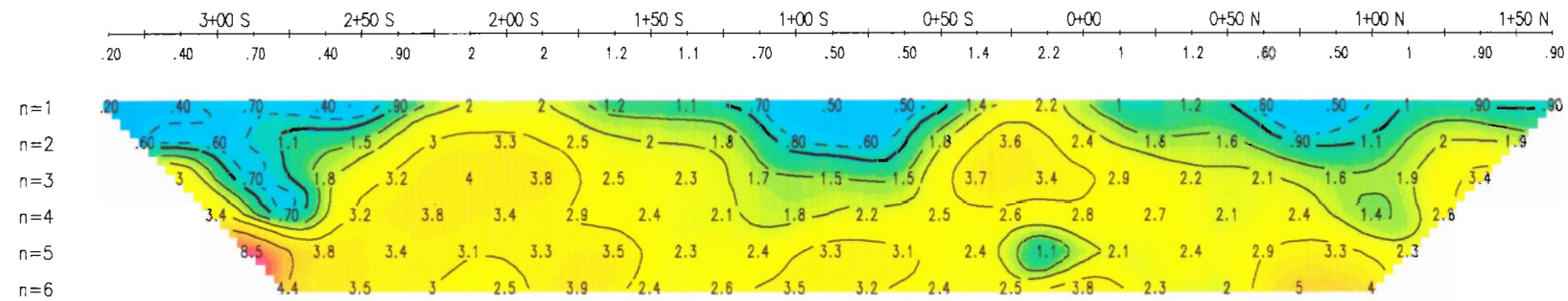
INTERPRETATION

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- Possible IP anomaly ($0.4 > P > 0.2$) no resistivity signature
- Weak chargeability increase (doubtful $P > .2$)

INTERPRETATION

INTERPRETATION

NORMALIZED
CHARGEABILITY
 $NC=CH*9.58/SQRT(Resis)$



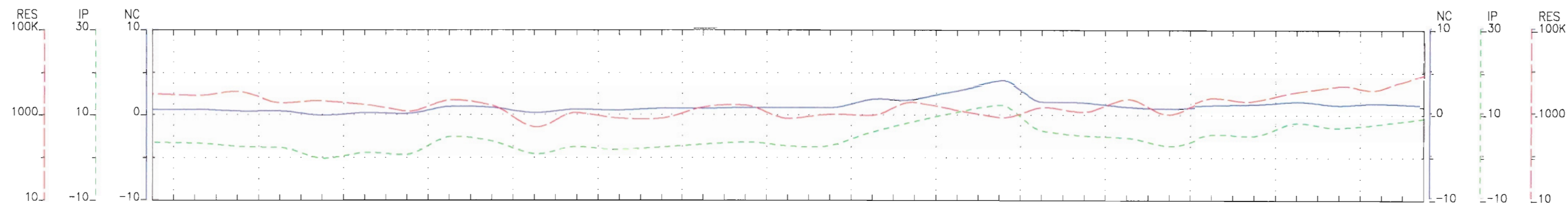
NORMALIZED
CHARGEABILITY
 $NC=CH*9.58/SQRT(Resis)$

GOLDEN VALLEY MINES LTD.

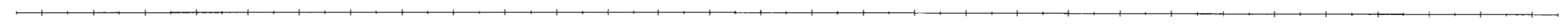
INDUCED POLARIZATION
Plumber Prospect
Cairo Township, Ontario

Date: 06/03/21 NTS: 41P/15
Interpreted by: Simon Tshimbalanga, eng. project 247.07

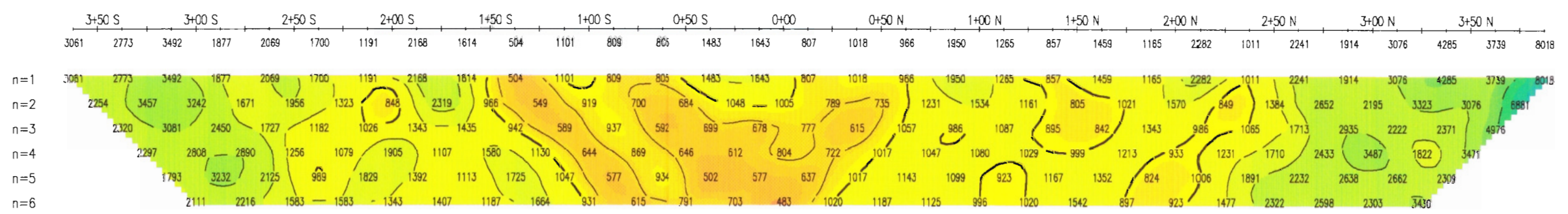
GEOSIG INC.



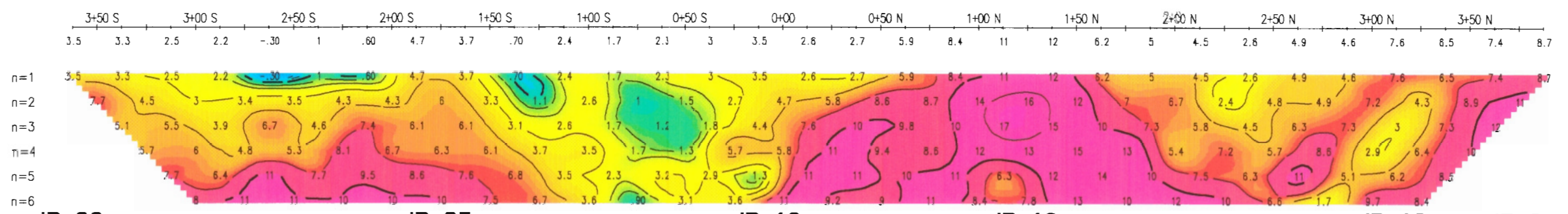
TOPOGRAPHY



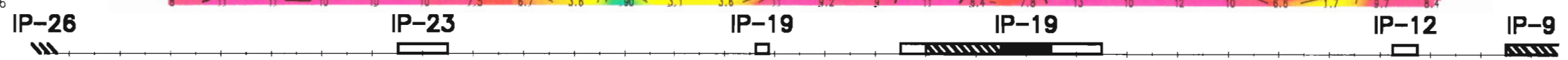
RESISTIVITY (OHM-M)



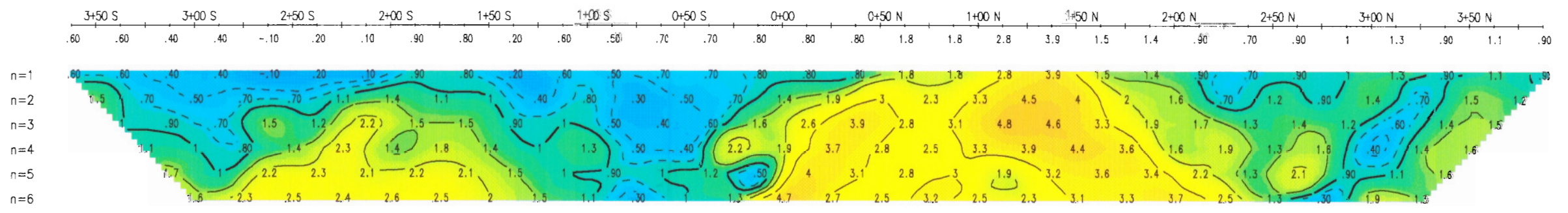
CHARGEABILITY (msec)



INTERPRETATION

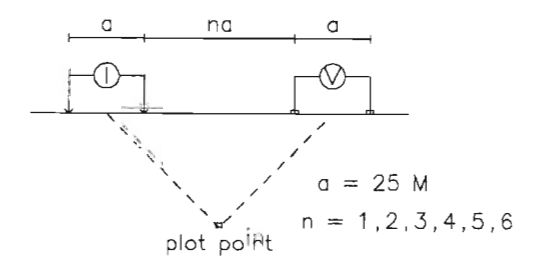


NORMALIZED CHARGEABILITY
NC=CH*9.58/SQRT(Resis)



Line 2+00 E

Dipole-Dipole Array



a = 25 M
n = 1, 2, 3, 4, 5, 6

Profiles N=1

Logarithmic Contours 1, 1.5, 2, 3, 5, 7.5, 10, ...

Instruments Rx : ELREG-6 # 108, IRIS
Tx : 1800W GDD #228
Generator : Honda 2000W

Field work by: Georges Tiliqi, MBA

INTERPRETATION

- Strong & sure IP anomaly (0.9 > P > 0.7) generally with decreased resistivity
- Moderate & probable IP anomaly (0.7 > P > 0.4) generally without resistivity decrease
- Possible IP anomaly (0.4 > P > 0.2) no resistivity signature
- Weak chargeability increase (doubtful P > 2)

SCALE 1:2500

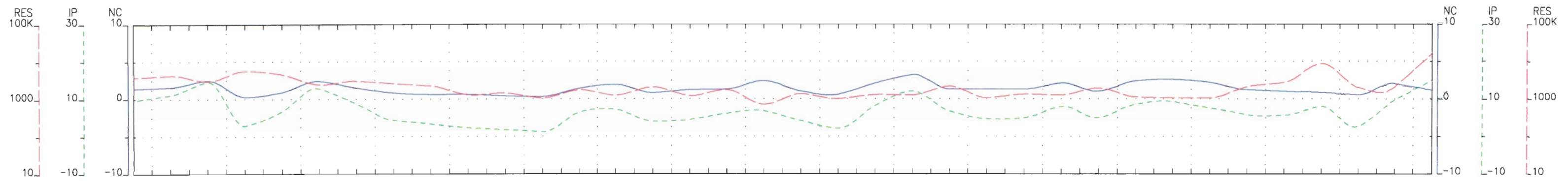
Line 2+00 E

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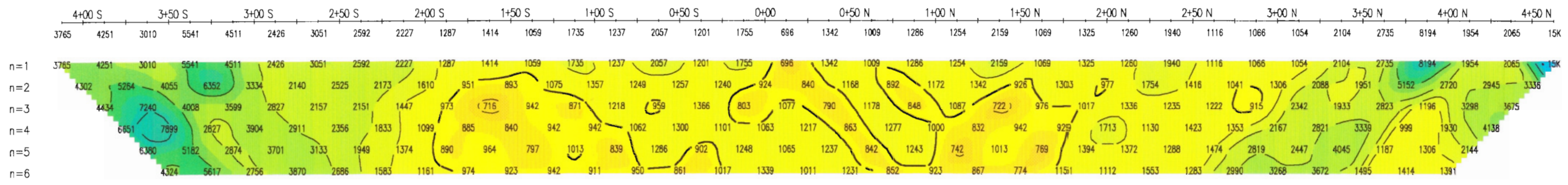
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Interpreted by: Simoni Tshimbalanga, eng. project 247.07

GEOSIG INC.

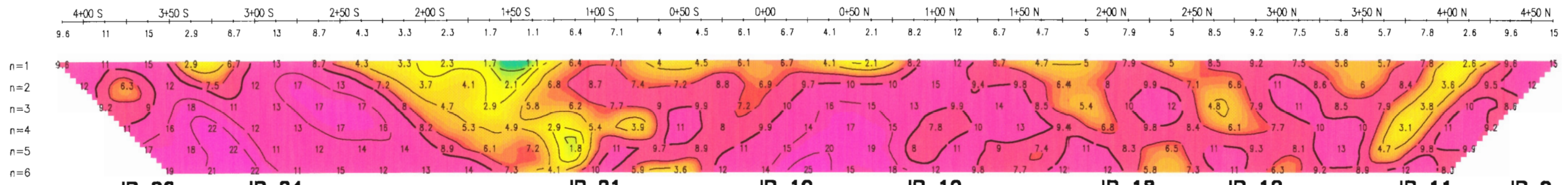


TOPOGRAPHY

RESISTIVITY (OHM-M)

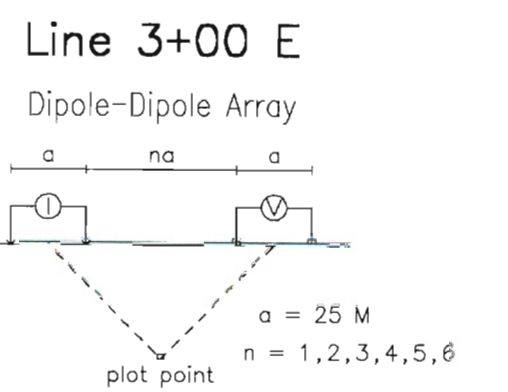
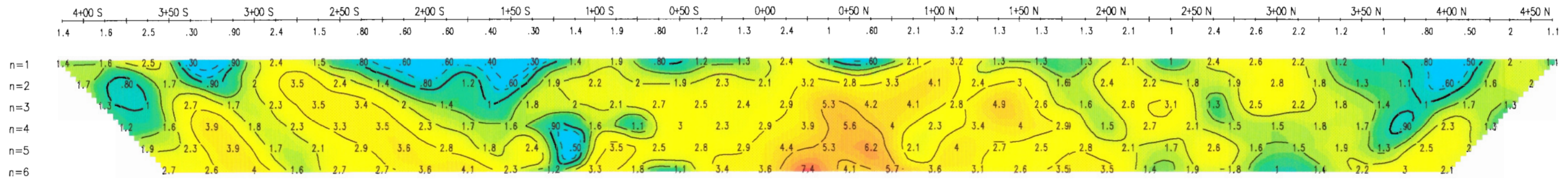


CHARGEABILITY (msec)



INTERPRETATION

NORMALIZED CHARGEABILITY
NC=CH*9.58/SQRT(Resis)



Profiles N=1

Logarithmic Contours 1, 1.5, 2, 3, 5, 7.5, 10, ...

Instruments Rx : ELREC-6 # 108, IRIS
Tx : 1800W GDD #228
Generator : Honda 2000W

Field work by: Georges Tiliki, MBA

INTERPRETATION

- Strong & sure IP anomaly ($0.9 > P > 0.7$ generally with decreased resistivity
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SCALE 1:2500

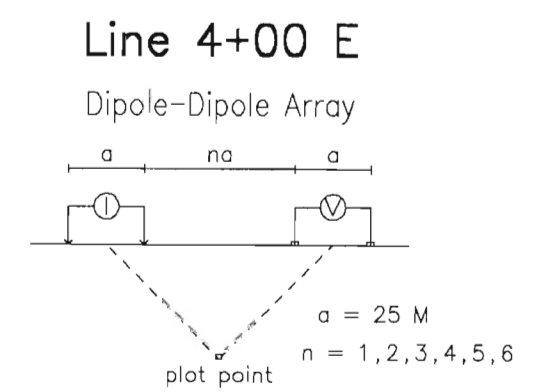
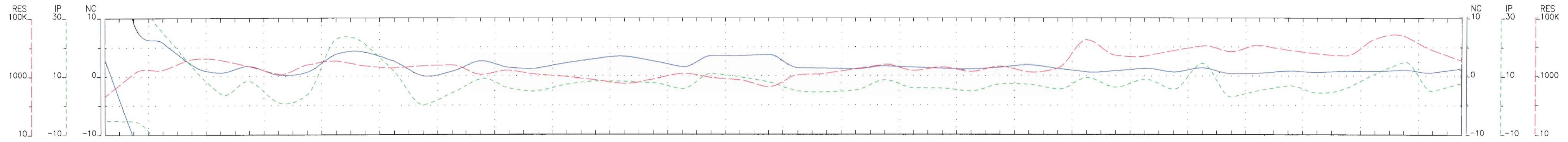
Line 3+00 E

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Date: 06/03/21 NTS: 41P/15
Interpreted by: Simon Tshimalanga, eng. project 247.0

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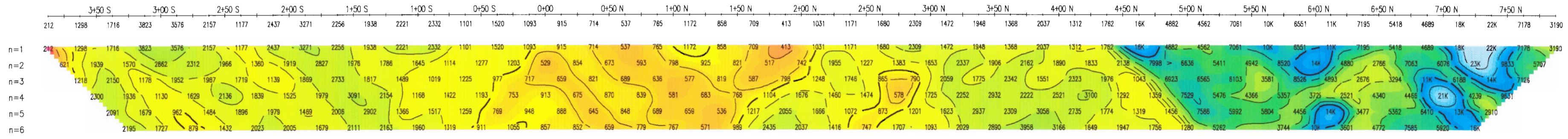


TOPOGRAPHY

TOPOGRAPHY

RESISTIVITY
(OHM-M)

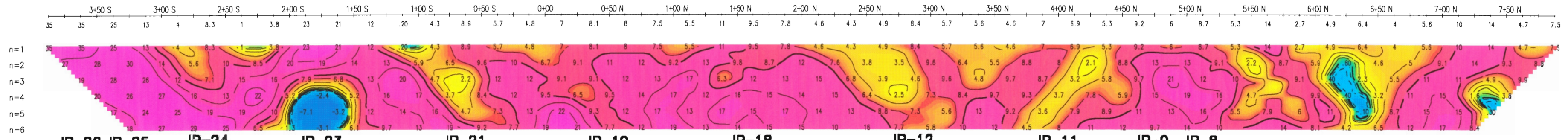
RESISTIVITY
(OHM-M)



Profiles N=1
Logarithmic Contours 1, 1.5, 2, 3, 5, 7.5, 10, ...
Instruments Rx : ELREC-6 # 108, IRIS
Tx : 1800W GDD #228
Generator : Honda 2000W

CHARGEABILITY
(msec)

CHARGEABILITY
(msec)



Field work by: Georges Tiitki, MBA

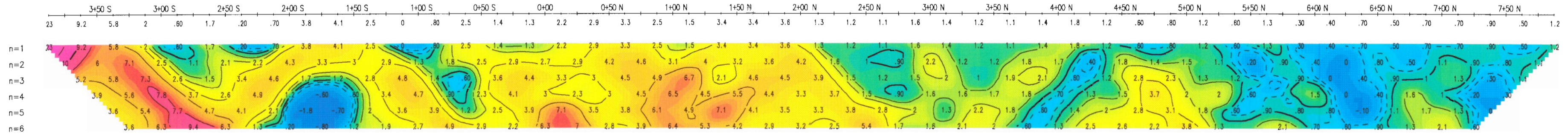
INTERPRETATION

INTERPRETATION

- INTERPRETATION**
- Strong & sure IP anomaly ($0.9 > P > 0.7$) generally with decreased resistivity
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NORMALIZED
CHARGEABILITY
 $NC=CH \cdot 9.58 / \text{SQRT}(\text{Resis})$

NORMALIZED
CHARGEABILITY
 $NC=CH \cdot 9.58 / \text{SQRT}(\text{Resis})$



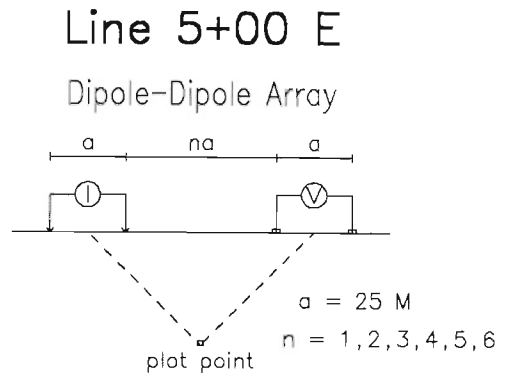
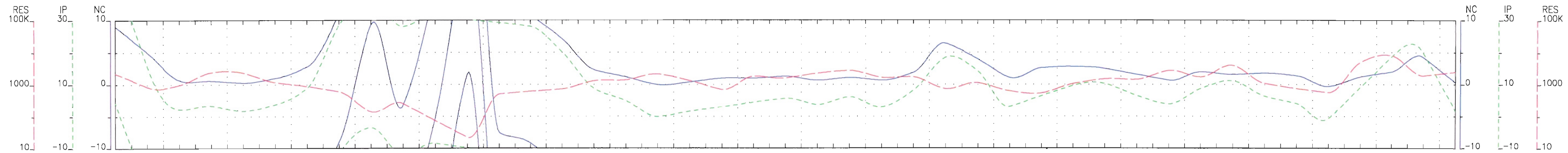
SCALE 1:2500
Line 4+00 E

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Plumber Prospect
Cairo Township, Ontario

Date: 06/03/21 NTS: 41P/15
Interpreted by: Simon Tshimbalanga, eng. project 247.07

GEOSIG INC.

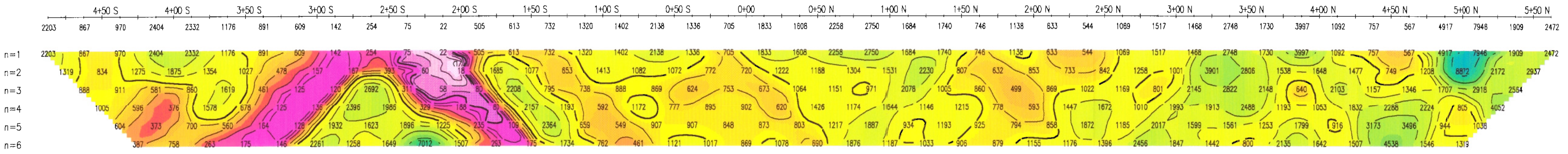


TOPOGRAPHY

TOPOGRAPHY

RESISTIVITY
(OHM-M)

RESISTIVITY
(OHM-M)



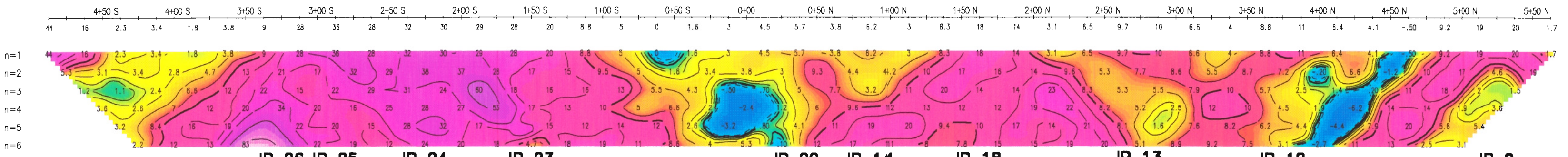
Profiles N=1
Logarithmic Contours 1, 1.5, 2, 3, 5, 7.5, 10, ...

Instruments Rx : ELREC-6 # 108, IRIS
Tx : 1800W GDD #228
Generator : Honda 2000W

Field work by: Georges Tiliki, MBA

CHARGEABILITY
(msec)

CHARGEABILITY
(msec)



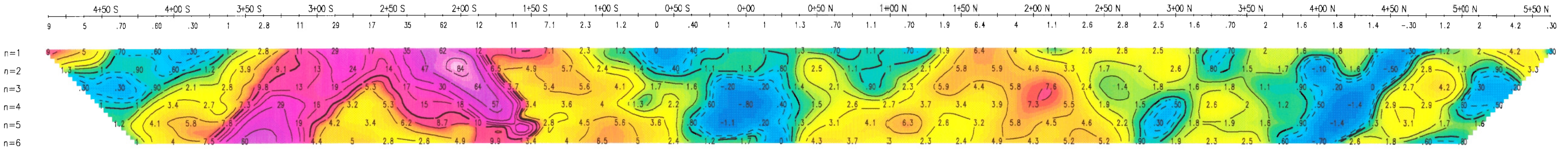
- INTERPRETATION
- Strong & sure IP anomaly ($0.9 > P > 0.7$) generally with decreased resistivity
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INTERPRETATION

INTERPRETATION

NORMALIZED CHARGEABILITY
 $NC=CH*9.58/\text{SQRT}(\text{Resis})$

NORMALIZED CHARGEABILITY
 $NC=CH*9.58/\text{SQRT}(\text{Resis})$



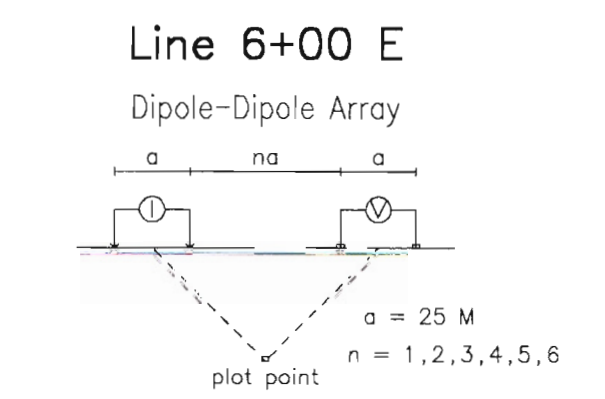
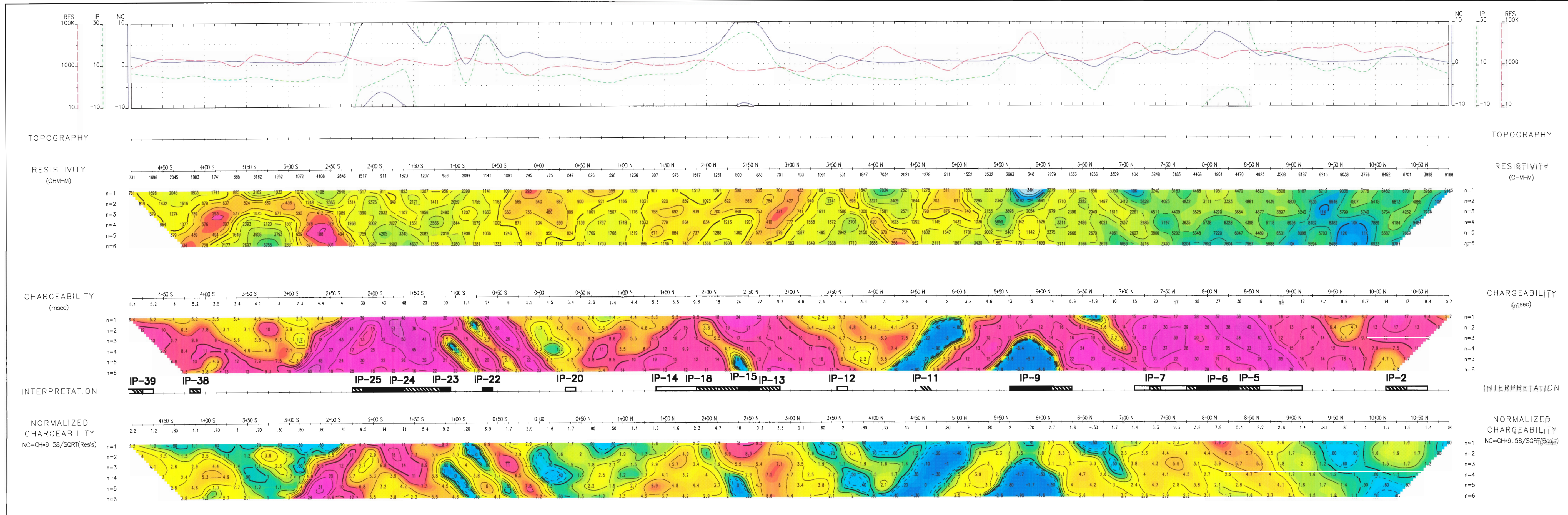
SCALE 1:2500
Line 5+00 E

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Date: 06/03/21 NTS: 41P/15
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Profiles N=1

Logarithmic Contours 1, 1.5, 2, 3, 5, 7.5, 10, ...

Instruments RX: ELREC-6 # 108, IRIS
 TX: 1800W GDD #228
 Generator: Honda 2000W

Field work by: Georges Tiliki, MBA

- INTERPRETATION**
- Strong & sure IP anomaly ($0.9 > P > 0.7$) generally with decreased resistivity
 - Moderate & probable IP anomaly ($0.7 > P > 0.4$) generally without resistivity decrease
 - Possible IP anomaly ($0.4 > P > 0.2$) no resistivity signature
 - Weak chargeability increase (doubtful $P > 0.2$)

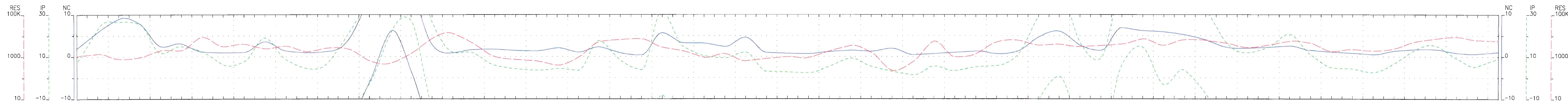
SCALE 1:2500
 Line 6+00 E

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INDUCED POLARIZATION
 Plumber Prospect
 Cairo Township, Ontario

Date: 06/03/21 NTS: 41P/15
 Interpreted by: Simon Tshimbalanga, eng. project 247.07

GEOSIG INC.

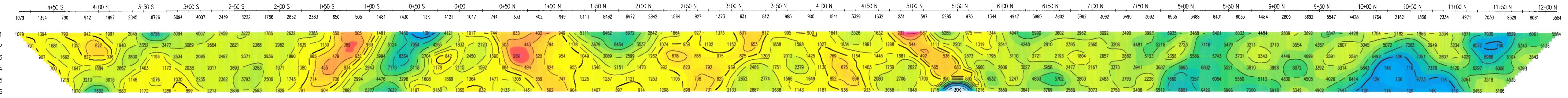


TOPOGRAPHY

TOPOGRAPHY

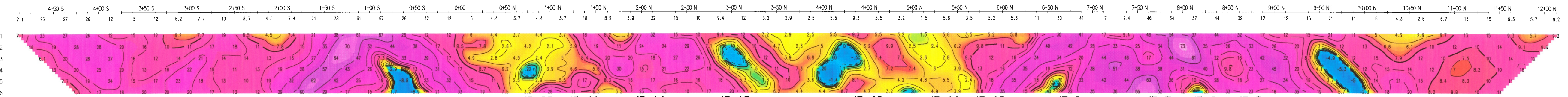
RESISTIVITY (OHM-M)

RESISTIVITY (OHM-M)



CHARGEABILITY (msec)

CHARGEABILITY (msec)

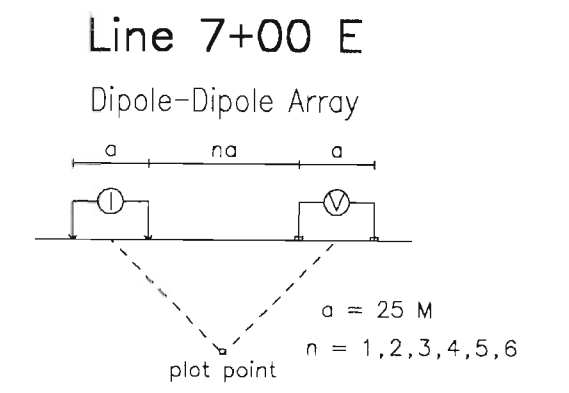
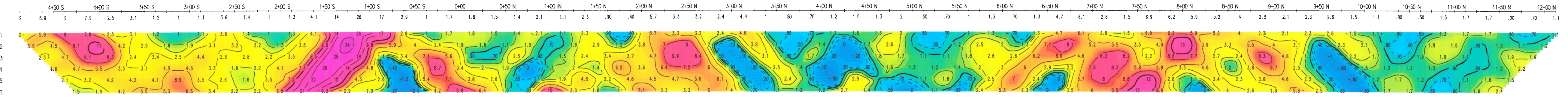


INTERPRETATION

INTERPRETATION

NORMALIZED CHARGEABILITY NC=CH*9.58/SQRT(Resis)

NORMALIZED CHARGEABILITY NC=CH*9.58/SQRT(Resis)



Profiles N=1

Logarithmic Contours 1, 1.5, 2, 3, 5, 7.5, 10, ...
 Instruments Rx : ELREC-6 # 108, IRIS
 Tx : 1800W GDD #228
 Generator : Honda 2000W

Field work by: Georges Tiliki, MBA

INTERPRETATION

- Strong & sure IP anomaly (0.9 > P > 0.7) generally with decreased resistivity
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SCALE 1:2500

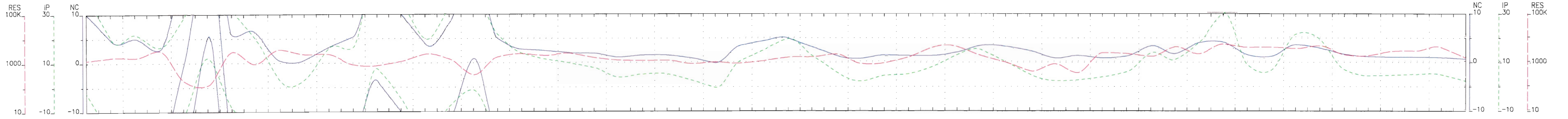
Line 7+00 E

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 Plumber Prospect
 Cairo Township, Ontario

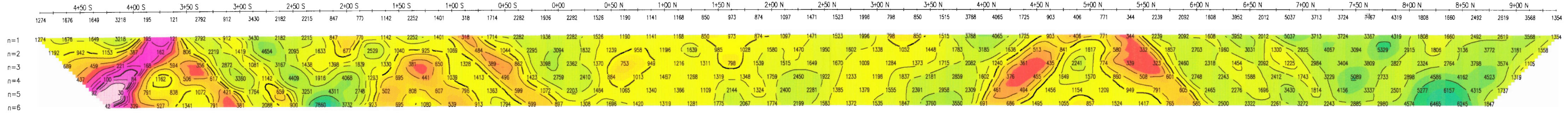
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 Interpreted by: Simon Tshimbalanga, eng. project 247.07

GEOSIG INC.

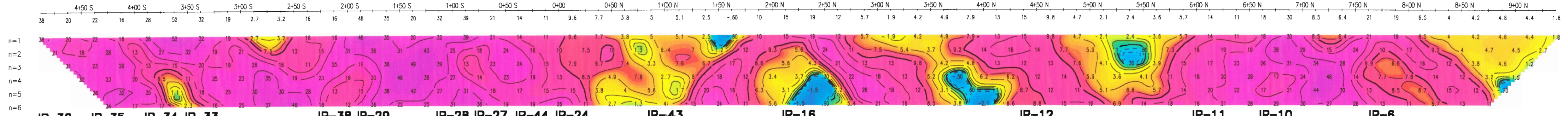


TOPOGRAPHY

RESISTIVITY (OHM-M)

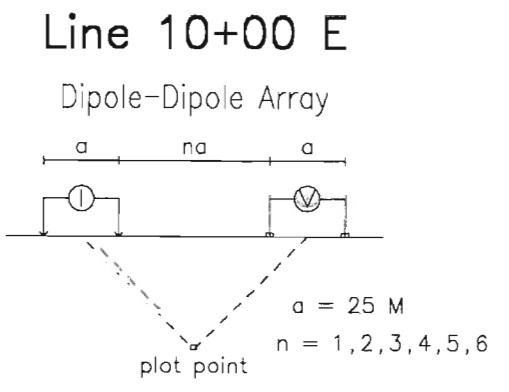
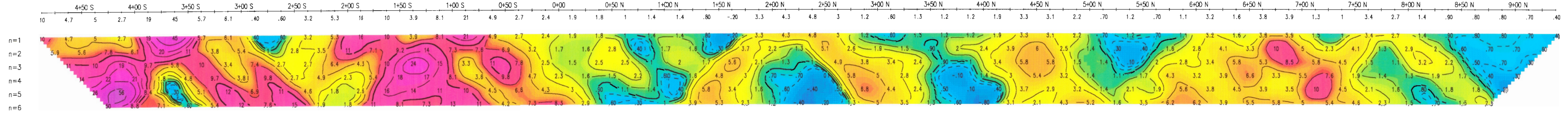


CHARGEABILITY (msec)



INTERPRETATION

NORMALIZED CHARGEABILITY
NC=CH*9.58/SQRT(Resis)



Profiles N=1

Logarithmic Contours 1, 1.5, 2, 3, 5, 7.5, 10, ...

Instruments Rx : ELREC-6 # 108, IRIS
Tx : 1800W GDD #228
Generator : Honda 2000W

Field work by: Georges Tiliki, MBA

INTERPRETATION

- Strong & sure IP anomaly ($0.9 > P > 0.7$) generally with decreased resistivity
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SCALE 1:2500

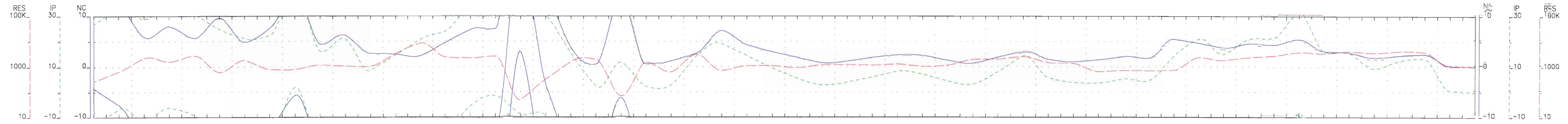
Line 10+00 E

GOLDEN VALLEY MINES LTD.

INDUCED POLARIZATION
Plumber Prospect
Cairo Township, Ontario

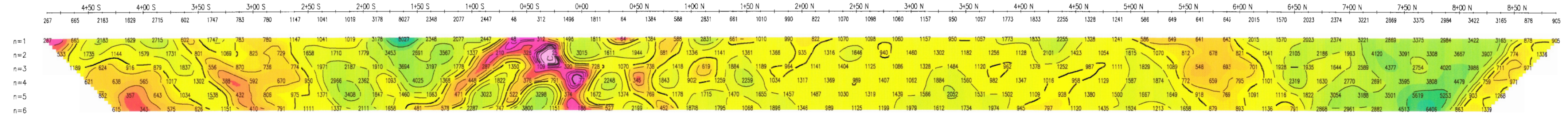
Date: 06/03/21 NTS: 41B/15
Interpreted by: Simon Tshimbalanga, eng. project 247.07

GEOSIG INC.

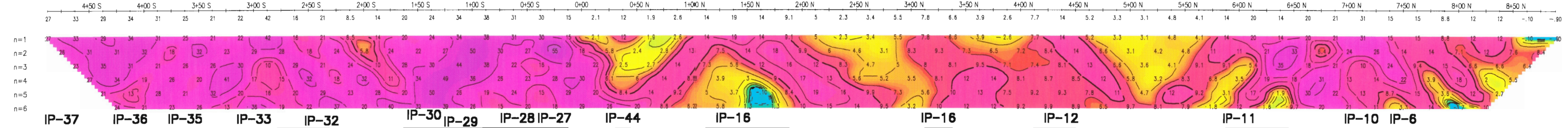


TOPOGRAPHY

RESISTIVITY (OHM-M)

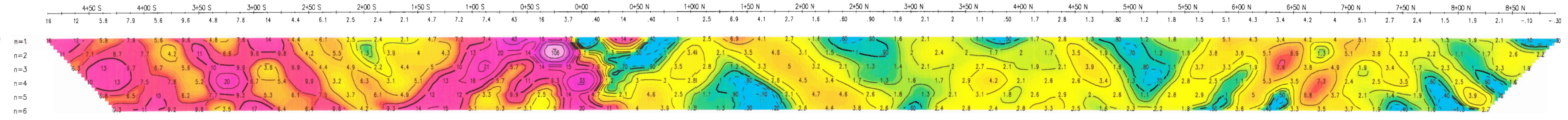


CHARGEABILITY (msec)



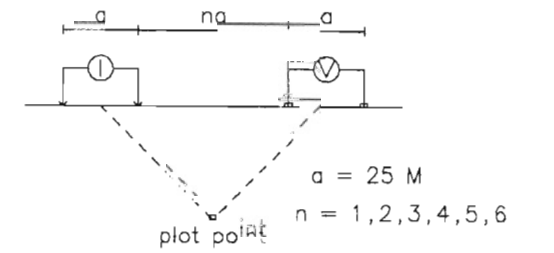
INTERPRETATION

NORMALIZED CHARGEABILITY NC=CH*9.58/SQRT(Resis)



Line 11+00 E

Dipole-Dipole Array



Profiles N=1

Logarithmic Contours 1, 1.5, 2, 3, 5, 7.5, 10, ...

Instruments Rx : ELREC-6 # 108, IRIS
Tx : 1800W GDD #22B
Generator : Honda 2000W

Field work by: Georges Tiliki, MBA

INTERPRETATION

- Strong & sure IP anomaly (0.9 > P > 0.7) generally with decreased resistivity
- Moderate & probable IP anomaly (0.7 > P > 0.4) generally without resistivity decrease
- Possible IP anomaly (0.4 > P > 0.2) no resistivity signature
- Weak chargeability increase (doubtful P > .2)

SCALE 1:2500

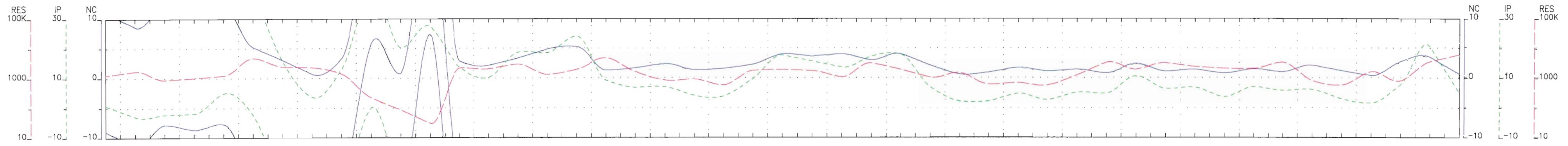
Line 11+00 E

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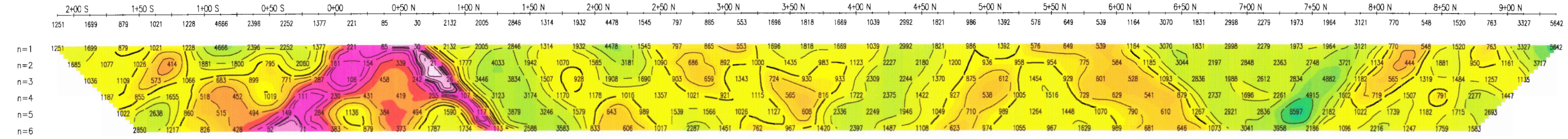
Date: 06/03/21 NTS: 41P/15
Interpreted by: Simon Tshimbalanga, eng. project 247.07

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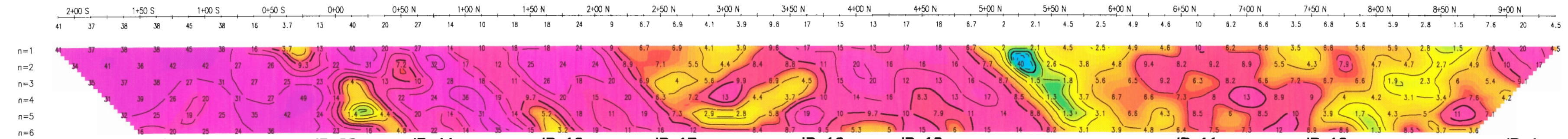


TOPOGRAPHY

RESISTIVITY (OHM-M)

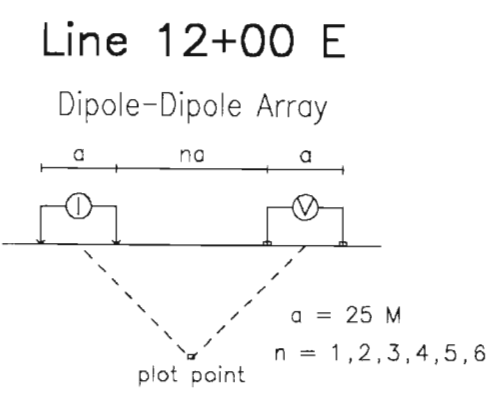
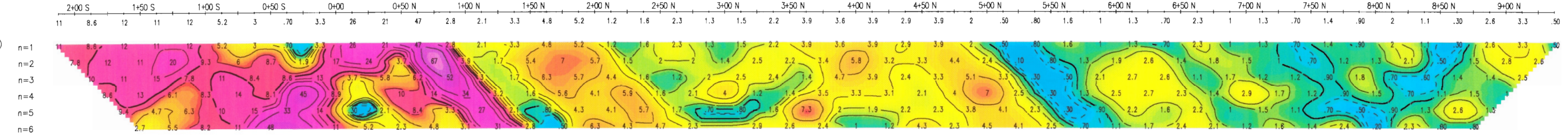


CHARGEABILITY (msec)



INTERPRETATION

NORMALIZED CHARGEABILITY
NC=CH*9.58/SQRT(Resis)



Line 12+00 E
Dipole-Dipole Array

Profiles N ≈ 1
Logarithmic Contours 1, 1.5, 2, 3, 5, 7.5, 10, ...

Instruments Rx : ELREC-6 # 108, IRIS
Tx : 1800W GDD #228
Generator : Honda 2000W

Field work by: Georges Tiliki, MBA

INTERPRETATION

- Strong & sure IP anomaly (0.9 > P > 0.7) generally with decreased resistivity
- Moderate & probable IP anomaly (0.7 > P > 0.4) generally without resistivity decrease
- Possible IP anomaly (0.4 > P > 0.2) no resistivity signature
- Weak chargeability increase (doubtful P > .2)

SCALE 1:2500

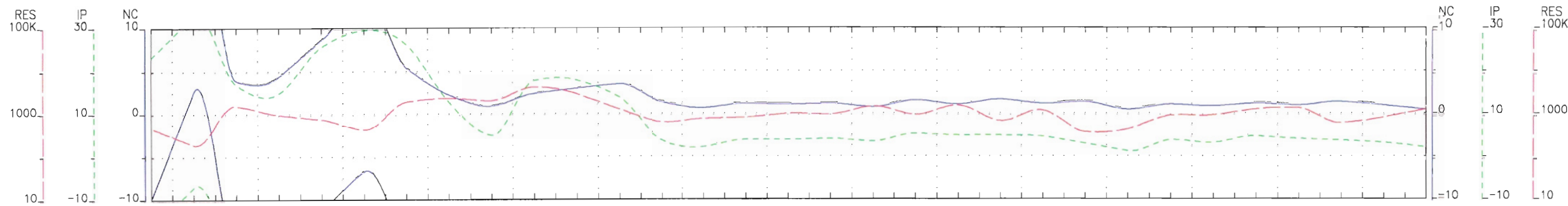
Line 12+00 E

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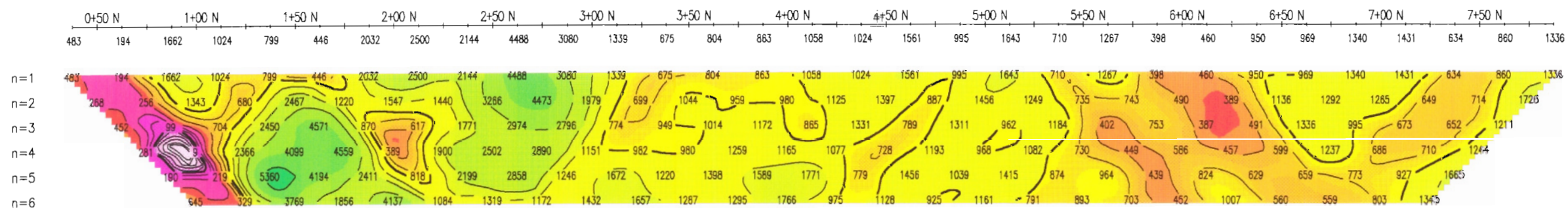
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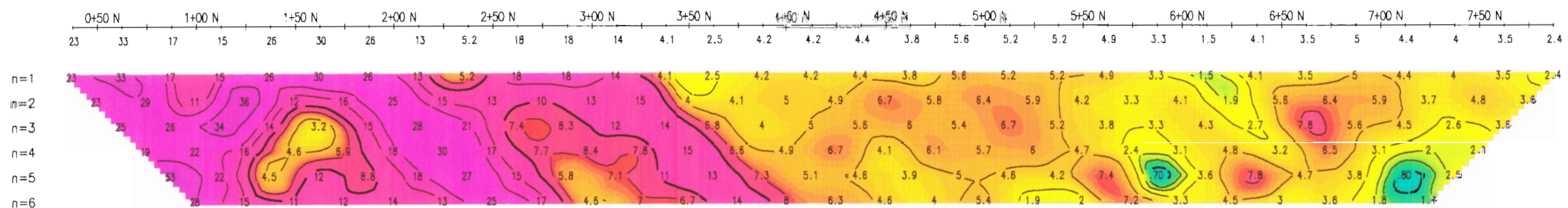
TOPOGRAPHY

RESISTIVITY
(OHM-M)



RESISTIVITY
(OHM-M)

CHARGEABILITY
(msec)

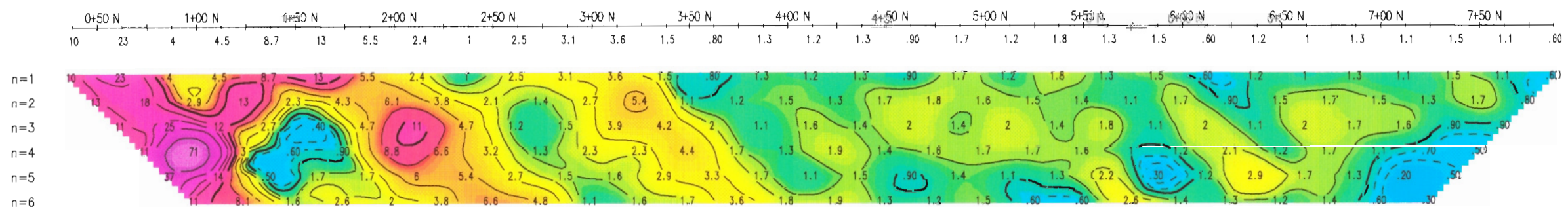


CHARGEABILITY
(msec)

INTERPRETATION

INTERPRETATION

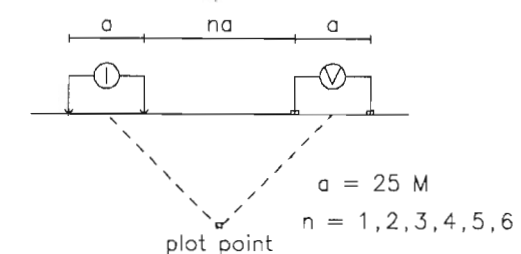
NORMALIZED
CHARGEABILITY
NC=CH*9.58/SQRT(Resis)



NORMALIZED
CHARGEABILITY
NC=CH*9.58/SQRT(Resis)

Line 13+00 E

Dipole-Dipole Array



Profiles N=1

Logarithmic Contours 1, 1.5, 2, 3, 5, 7.5, 10, ...

Instruments Rx : ELREC-6 # 108, IRIS
Tx : 1800W GDD #228
Generator : Honda 2000W

Field work by: Georges Tiliki, MBA

INTERPRETATION

- Strong & sure IP anomaly ($0.9 > P > 0.7$) generally with decreased resistivity
- Moderate & probable IP anomaly ($0.7 > P > 0.4$) generally without resistivity decrease
- Possible IP anomaly ($0.4 > P > 0.2$) no resistivity signature
- Weak chargeability increase (doubtful $P > 0.2$)

SCALE 1:2500

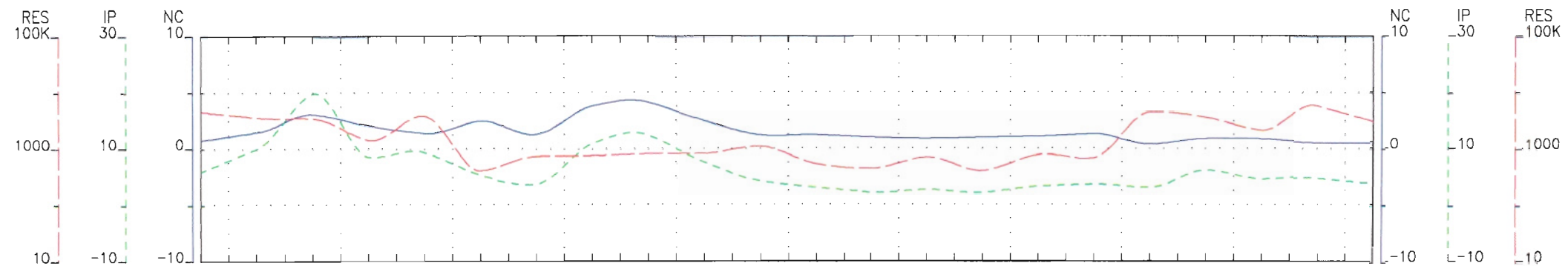
Line 13+00 E

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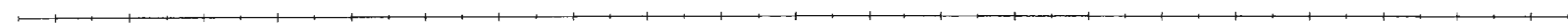
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Date: 06/03/22 NTS: 41P/15
Interpreted by: Simon Tshimbalanga, eng. project: 247-07

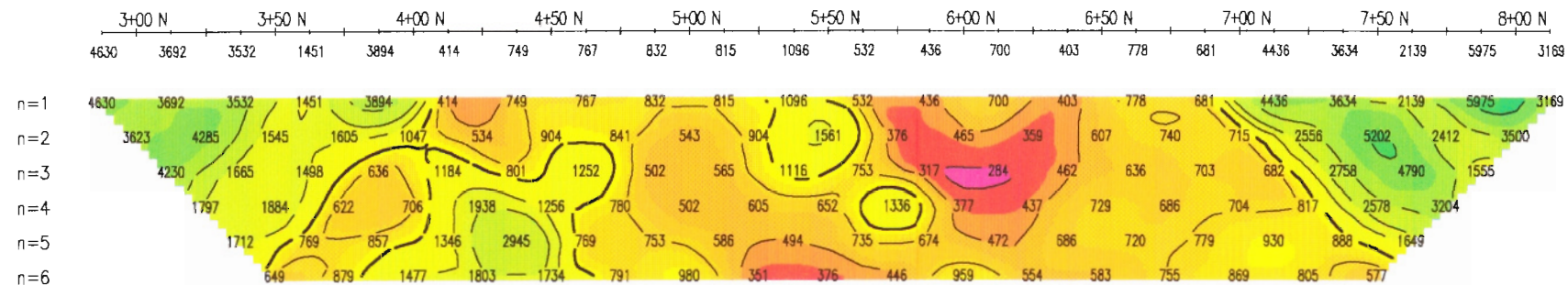
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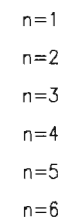


RESISTIVITY
(OHM-M)

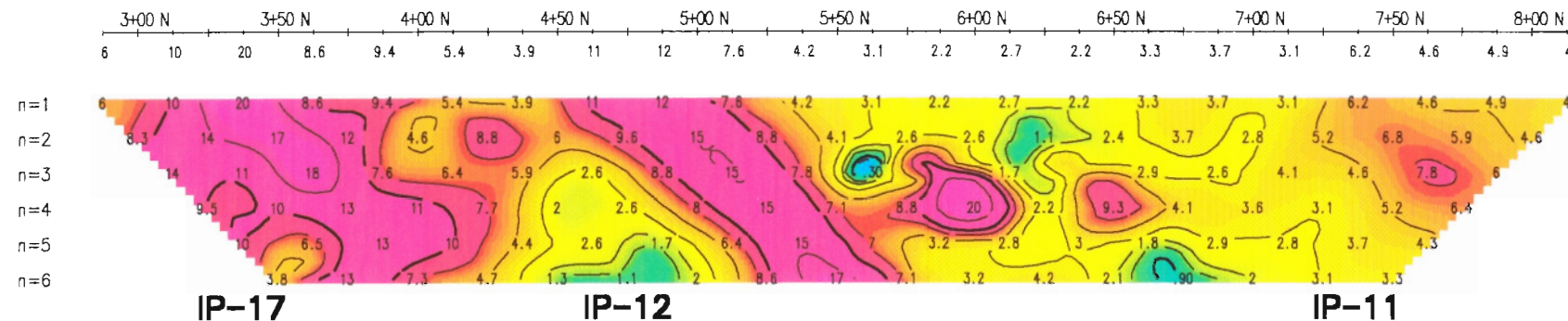


TOPOGRAPHY

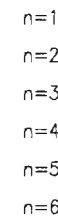
RESISTIVITY
(OHM-M)



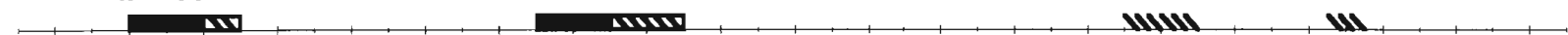
CHARGEABILITY
(msec)



CHARGEABILITY
(msec)

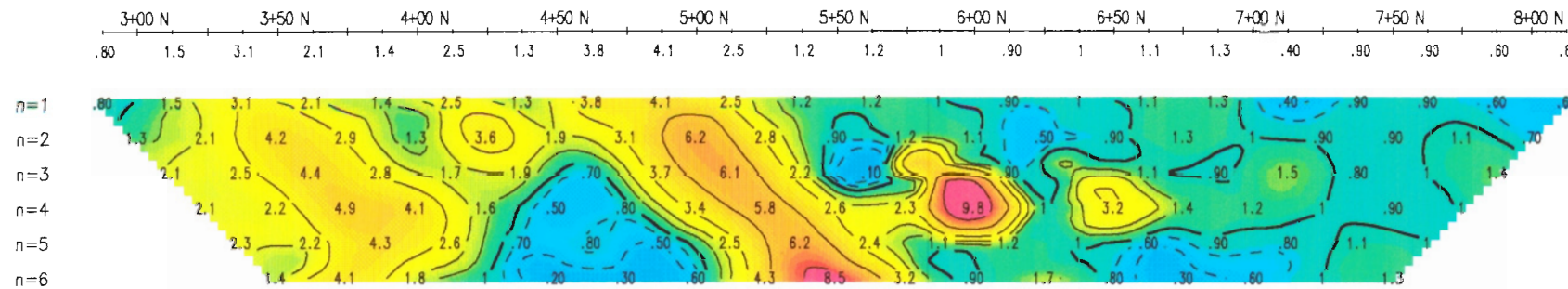


INTERPRETATION

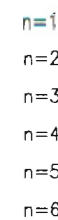


INTERPRETATION

NORMALIZED
CHARGEABILITY
 $NC=CH*9.58/SQRT(Resis)$

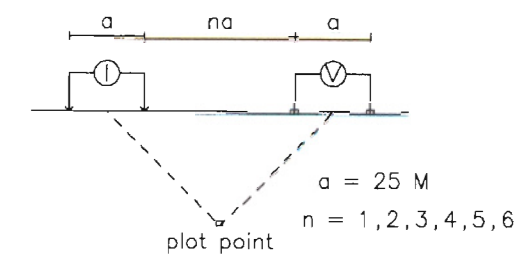


NORMALIZED
CHARGEABILITY
 $NC=CH*9.58/SQRT(Resis)$



Line 14+00 E

Dipole-Dipole Array



Profiles N=1

Logarithmic Contours 1, 1.5, 2, 3, 5, 7.5, 10, ...

Instruments Rx : ELREC-6 # 108, IRIS
Tx : 1800W GDD #228
Generator : Honda 2000W

Field work by: Georges Tiliki, MBA

INTERPRETATION

- Strong & sure IP anomaly ($0.9 > P > 0.7$) generally with decreased resistivity
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SCALE 1:2500

Line 14+00 E

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