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TIME-DOMAIN IP/RESISTIVITY, HORIZONTAL-LOOP ELECTROMAGNETIC AND MAGNETOMETER SURVEYS

SANTRAP AND BIAZ GRIDS

ENID-MASSEY PROPERTY

ENID, MASSEY, FORTUNE, COTE And TURNBULL TOWNSHIPS

ONTARIO

NTS: 42 A/12

FOR

LAURION MINERAL EXPLORATION INC.

JVX Ltd.

TIME-DOMAIN IP/RESISTIVITY, HORIZONTAL-LOOP ELECTROMAGNETIC And MAGNETOMETER SURVEYS

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1. INTRODUCTION

In November and December 2006, **JVX Ltd.** (**JVX**) completed Horizontal-Loop Electromagnetic (HLEM), Magnetometer (MAG) and Time-Domain IP/Resistivity (IP/Res) Surveys for **LAURION Mineral Exploration Inc. (LAURION)** on their Enid-Massey Property. The Enid-Massey Property is located in the Porcupine Mining Division of Northern Ontario approximately 35 km west of Timmins (Figure 1).

At the time of the surveys, the Enid-Massey property consisted of 56 contiguous, unpatented mining claims in Enid, Massey, Fortune, Cote and Turnbull Townships (Figure 2). In December 2006 and January 2007, **LAURION** staked 8 additional claims in Enid and Fortune Townships contiguous with the existing claims.

The property is accessible year-round by vehicle by taking Highway 101 west from Timmins for 4 km and then northwest along the Mallette all-weather gravel road. The Mallette road crosses the western portion of the property between km markers 31 and 44.

The surveys were conducted on the Santrap and Biaz Grids located in Enid Township. The Santrap Grid is located at km marker 43 along the Mallette Road in the northwest section of the property. The Biaz Grid is located to the southeast of the Santrap grid along Fortune Road approximately 1 km north of km marker 37.5 of the Mallette Road (Figure 2).

The geophysical surveys covered portions of the following two claims:

4204311 **4200628**

The objective of these surveys was to outline anomalous zones potentially containing economic concentrations of Ni-Cu-PGE and/or VMS Cu-Zn-Au-Ag mineralization. The grids were selected based on favourable results obtained in a summer 2006 program of prospecting, stripping and trenching following up on promising conductive trends interpreted from an AeroTEM II airborne survey (Johnson, 2006) completed over the entire property in early 2006.

Details on the surveyed grids, survey coverage, methods, personnel, instrumentation, data processing and presentation are described in Appendix 1.

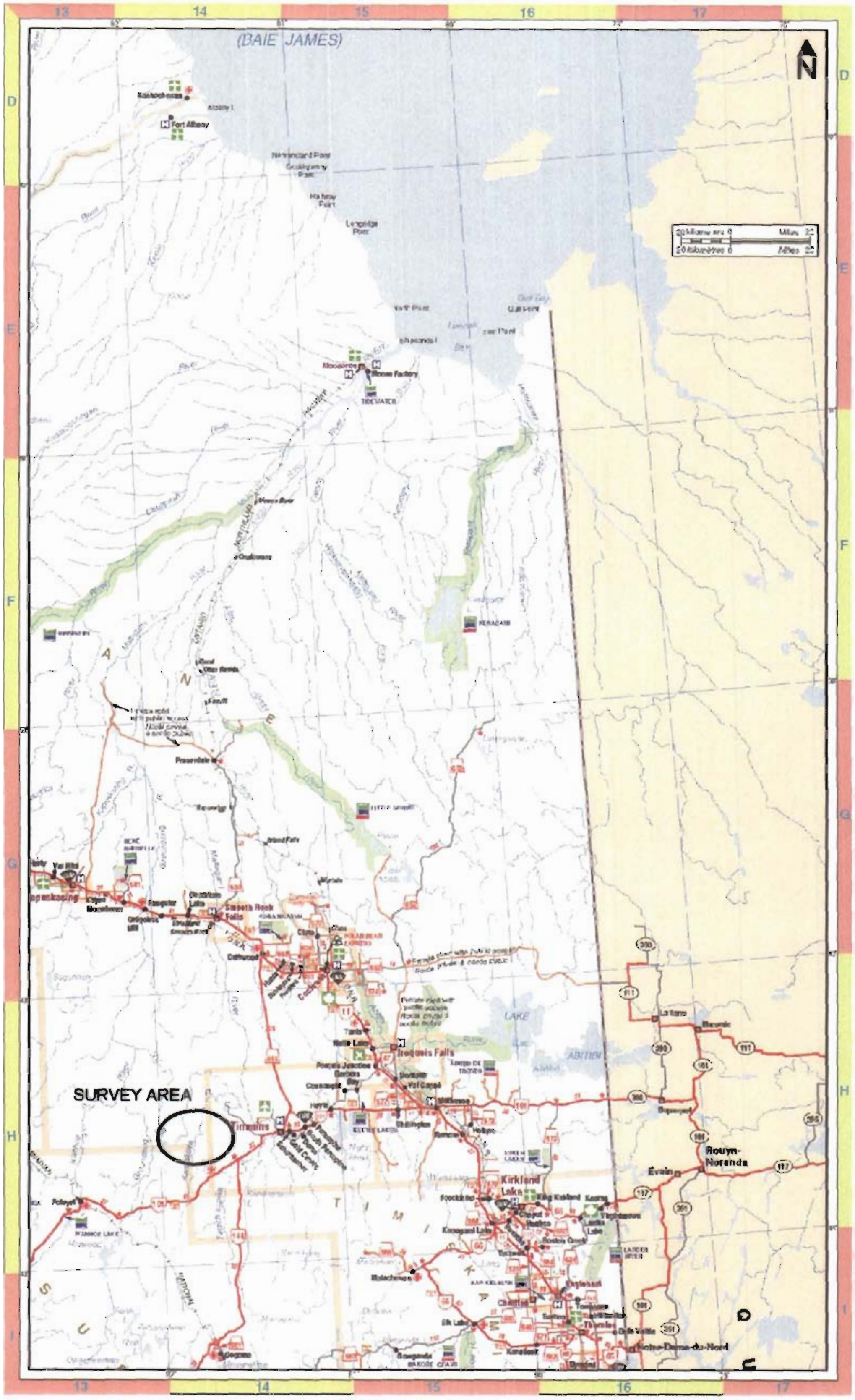

FIGURE 1

SURVEYED BY JVX LTD.
November - December 2006
Ref. no. 6-68

REGIONAL LOCATION MAP

SANTRAP AND BIAZ SURVEYS - ENID MASSEY TWPS.

TIME-DOMAIN IP / RESISTIVITY, HORIZONTAL-LOOP, EM AND MAGNETOMETER SURVEYS

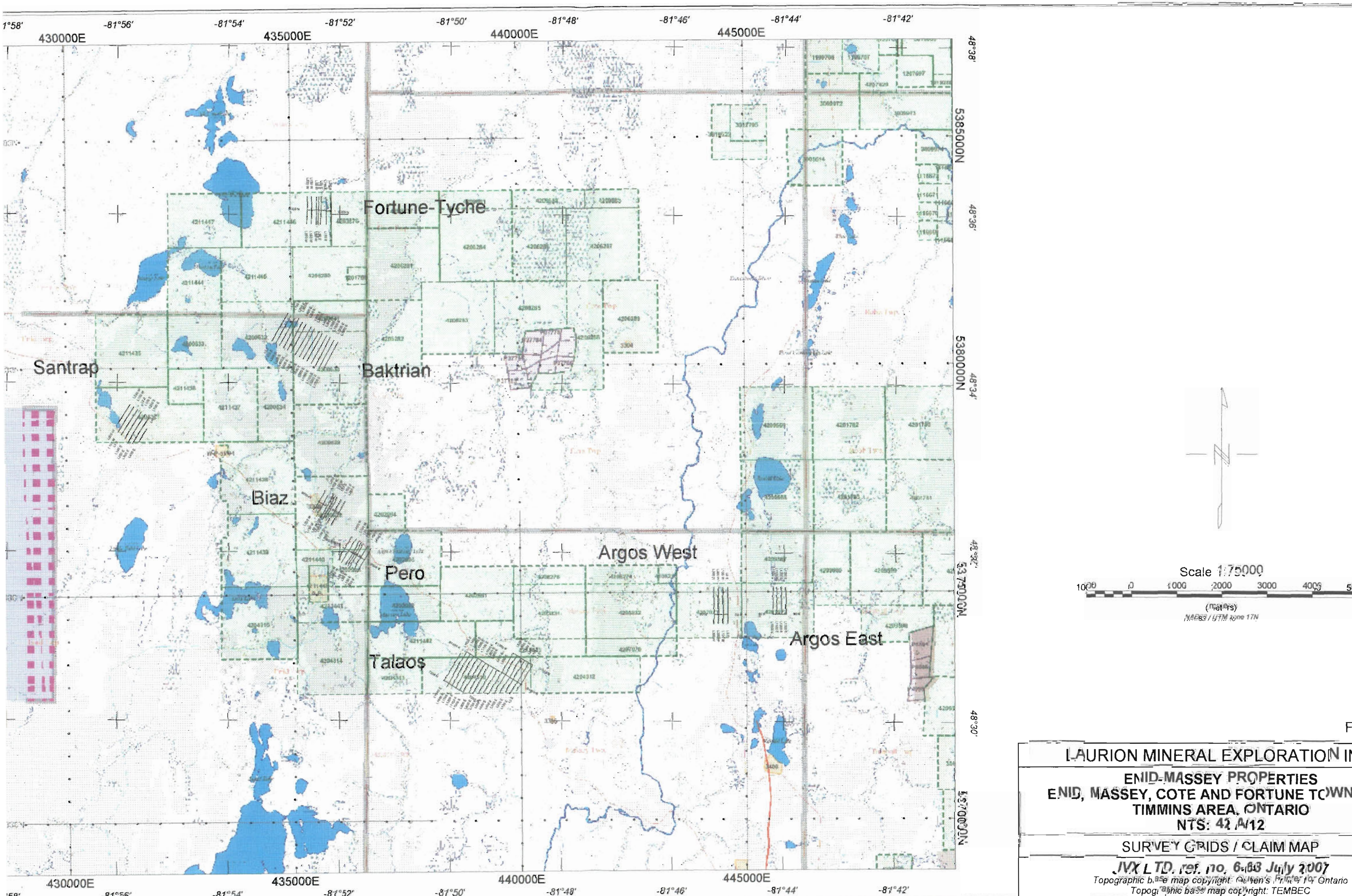

FIGURE 2

LAURION MINERAL EXPLORATION INC.

ENID-MASSEY PROPERTIES
ENID, MASSEY, COTE AND FORTUNE TOWNSHIPS
TIMMINS AREA, ONTARIO
NTS: 42 A/12

SURVEY GRIDS / CLAIM MAP

JVX LTD. ref. no. 6-63 July 2007

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2. GEOLOGY

The regional and property geology is outlined by Tihor (2007) as follows:

> "Regional geology is reported by Wolfe (1970) and Barrie (2000). Supracrustal rocks of the area belong to the Kamiskotia Volcanic Complex (KVC), a bimodal assemblage, including tholeiitic basalts and subordinate basaltic andesites and andesites, and high silica rhyolites. The KVC is intruded by a large layered tholeiitic intrusion known as the Kamiskotia Gabbroic Complex (KGC). The northern part of the KGC is, in turn, intruded by a large, oval shaped granophyric body which may be coeval with the KGC and may be the uppermost, volatile-rich portion of the same body.
>
> Four volcanogenic copper-zinc+/-silver+/-gold deposits, including the Kam-Kotia Mine have been mined from rocks of the KVC.
>
> Much of the Enid-Massey property is underlain by the northern portion of the Kamiskotia Gabbroic Complex. In this area the KGC consists of Upper Zone mesocumulus and orthocumulus gabbronorites and ferroan gabbronorites (Barrie, 2000). In northeastern Enid township it is common to find coarse grained pegmatoid leucogabbros with frequent massive to near massive clots many centimeters in diameter consisting of magnetite or ilmenite, or a mixture of the two. Rarely, lensoid concentrations of near massive pyrrhotite contain up to 1.5% combined Cu-Ni (report on detailed prospecting on KGC to follow).
>
> Due to a lack of exploration and large areas covered by swamp or glacial outwash sands, little is know of the volcanic rocks surrounding the KGC. It may reasonable be assumed that the Kamiskotia Volcanic Complex wraps around the north and west portions of the gabbro and may have similar potential for volcanogenic massive sulphide deposits as found in the Kam-Kotia Mine area."

3. PREVIOUS WORK

Historical exploration on the Enid-Massey Property was concentrated in Massey and Cote Townships, the extreme northeast section of Enid Township and the southeast section of Fortune Township. The most active exploration period occurred in the 1960's soon after the discovery of the Kidd Creek Zn-Cu deposit located in Kidd Township northeast of the property.

There has been only limited historical work recorded in the area covered by the Santrap Grid. Previous exploration on the Santrap Grid has been documented by Tihor (2007) and is provided below:

> In 1965, **Mespi Mines Ltd** contracted Canadian Aero Mineral Surveys Limited to fly airborne EM and Magnetics over a portion of northeast Enid Township. The south-central part of the survey overflew LME's Santrap Sector drilling area. The Mespi survey showed only two weak conductors, both of which are located about 900 m east of LME's current drilling. They did not follow up on these conductors.
>
> In 1977, **Noranda Exploration Co. Ltd** drilled two short X-Ray drill holes. Exact location is unknown but is believed to be near current hole SA-06-02. They

reported basalt, silicified tuff, felsic porphyries, oxide iron formation and "a few narrow sections display fair conductivity" They found "up to 5% sulphide mineralization, chiefly pyrite with some chalcopyrite". Their drill logs show only two samples assayed, one of which is weakly anomalous in Ag, Cu and Zn.

There is no record of previous exploration work for the area covered by the **Biaz** Grid.

4. FINAL PRODUCTS

The results of the IP/Res Surveys are presented in a series of stacked,contoured pseudosections that show the apparent resistivity, Mx chargeability, spectral MIP, tau and c. Also, the following plan maps of the results of the IP/Res, HLEM and MAG Surveys are included:

Contoured Mx Chargeability (n=2)
Contoured Apparent Resistivity (n=2)
HLEM Profiles (In-phase and Quadrature)
Contoured Total Magnetic Intensity
Compilation Map

All plan maps show the survey grid with both UTM and latitude/longitude annotations. The compilation map shows anomalous zones and exploration targets and also includes topographic features (lakes/rivers/roads), claim boundaries and claim numbers.

Digital results (this report, raw and processed ASCII data files, Geosoft and AutoCAD map or drawing files) are archived on CD.

5. COMPILATION MAP

Selected features have been interpreted from the IP pseudosections and plan maps and drafted onto a compilation map. Features shown are

- IP anomalies. Tops of chargeable bodies as picked from the pseudosections. Shown as a bar parallel to the survey line. Bar thickness is an indicator of anomaly strength. Bar symbols and approximate peak anomaly amplitude ranges (Mx values) are

———— Strong, $Mx \geq 20$ mV/v

— — ▪ Moderate, $10 \leq Mx < 20$ mV/V

- - - - Weak, $5 \leq Mx < 10$ mV/V

xxxxxxxxx Very Weak, 3 ≤ Mx <5 mV/V

- Attached to the IP anomaly symbol are the M-IP peak value (M) and the 'n' value that best characterizes the top of the IP anomaly. The time constant (tau) is also attached and is characterised as short (S) for tau values less than 1 sec, moderate (M) for tau values between 1 and 10 sec and long (L) for tau values over 10 sec.
- IP Chargeability Zones
- Anomalous Resistivity and MAG Zones
- HLEM (MaxMin) Conductors
- Structural Features
- Historical Data
- Recommended Drill Targets

6. RESULTS

Survey results have been plotted as described in Sections 4 & 5 above. A discussion of the results for the Santrap and Biaz Grids is provided below.

<u>Santrap Grid</u>

The Santrap Grid was established to cover the southeast portion of a cluster of closely spaced, northwest striking AeroTEM conductors. These conductors could potentially be outlining VMS mineralization as follow-up prospecting near Line 200E identified some weakly anomalous Cu-Au samples hosted in basalt. These samples were in close proximity to AeroTEM conductors. The prospecting work also outlined felsic rocks near the south end of Line 300E.

Initially, the HLEM and MAG Surveys were performed to detail the airborne electromagnetic anomalies in preparation for a late fall 2006 drill program. The MAG Surveys outlined several magnetic highs coincident with AeroTEM conductors on Lines 0, 100 and 200E. The HLEM Surveys identified a few weakly conductive features. However, these conductors are poorly defined and their exact location is not easily interpreted from the profiles.

The HLEM and MAG Surveys were followed up by an IP/Res Survey completed on Lines 0 to 200E and southwest of Baseline 500 N on Line 300E. The results indicate that the AeroTEM conductors exhibit a strong association with anomalous chargeability. Chargeable sources are moderate to strong and most of them are grouped into three parallel, northwest-southeast trending zones (**IP-1** to **IP-3**). **IP-1** is a two-line anomaly that flanks the north edge of a broad resistivity high. This resistivity high is located on Lines 100, 200 and 300E and is coincident with a topographic high. **IP-2** and **IP-3** are located northeast of **IP-1** and both zones extend from Line 300E northwest to Line 0.

Biaz Grid

The Biaz Grid covered an isolated AeroTEM conductor. Follow-up prospecting work returned some weakly anomalous Cu-Ni values hosted in gabbro coincident with the AeroTEM anomaly.

As was the case on the Santrap Grid, a small grid was established over the AeroTEM conductor and initially both HLEM and MAG Surveys were completed. The HLEM Survey outlined some weak quadrature responses; however, no anomalous response was observed coinciding with the airborne conductor. Several magnetic highs were outlined by the MAG Survey. Most of the magnetic highs form a northnorthwest-southsoutheast trend. This would be consistent with the known regional trend of diabase dykes in the area. A magnetic high is observed on Line 0 at 275-287N in close proximity to the AeroTEM conductor and the anomalous Cu-Ni grab samples.

An IP/Res Survey followed over three lines (Lines 50W, 0 and 50E). Weak to moderate near-surface chargeability responses were observed on Lines 0 and 50E. On Line 50E, a moderately chargeable anomaly occurs at 275-300N and is associated with a relatively weak resistivity low and a moderate magnetic high. The Spectral Tau results indicate that the chargeable source is likely medium-grained. A moderate chargeability anomaly is also observed on Line 0 at approximately 400N. This source coincides with high resistivities and occurs along the southwest edge of a NNW-SSE magnetic high trend.

7. DRILL TARGETS

Santrap Grid

The following two (2) drill targets were recommended:

Target	IP zone	Line	Collar	Azimuth	Incline	Hole Length
T-1	IP-2	200E	435N	210°	-50°	134m
T-2	IP-2	0	300N	030°	-45°	100m

Table 1. Drill Targets, Santrap Grid

These targets were drilled in December 2006. **T-1** was designed to test a strong chargeability zone coincident with a strong resistivity low on Line 200E. **T-2** was located along strike to the northwest and tested a strong near-surface chargeability anomaly that flanked the northeast edge of a weak resistivity high. The resistivity high likely represents the northwest extension of the broad resistivity high outlined on the compilation map on Lines 100 to 300E.

Both holes intersected massive to disseminated sulphide zones. Also, a narrow, VMS type sulphide zone was intersected near surface in the hole testing **T-2** on Line 0 (**SA-06-02**). This sulphide zone was hosted in felsic volcanics at the contact with underlying basalts. There was also a broader sulphide zone hosted in basalts intersected at depth in this hole. Anomalous Zn values were associated with this zone.

Based on these results three additional holes were drilled on Lines 0 and 200E. VMS style mineralization was observed in two of the three holes. Of interest, the elevated Zn values were seen only in the hole drilled on Line 0 (**SA-06-04**) and associated mainly with pyrite hosted in basalts. On the other hand, the anomalous Cu values were confined to **SA-06-05** drilled on Line 200E and were associated mostly with pyrrhotite mineralization hosted in felsic volcanics.

<u>Biaz Grid</u>

The anomalous chargeability feature located on Line 50E is recommended for drilling. The chargeable source coincides with a relatively weak resistivity low. Details on the proposed drillhole are provided in the following table:

Target	Line	Collar	Azimuth	Incline	Depth
T-1	50E	315N	210°	-45°	100m

Table 2. Proposed Drillhole, Biaz Grid

8. SUMMARY AND RECOMMENDATIONS

A program of ground geophysics (HLEM, MAG and IP/Res Surveys) was completed by **JVX** on the Santrap and Biaz Grids located in Enid Township northwest of Timmins, Ontario. The Santrap and Biaz Grids are located on the **LAURION's** Enid-Massey Property. The surveys were intended to detail promising airborne conductors outlined by an earlier AeroTEM II combined electromagnetic-magnetic survey.

HLEM and MAG Surveys were completed on both the Santrap and Biaz Grids in November, 2006. The HLEM Surveys outlined a few weakly conductive features but none of them coincided with the known airborne anomalies. The MAG

Surveys outlined several moderate magnetic highs. Some of the magnetic highs were associated with the AeroTEM conductors. In December 2006, follow-up IP/Res Surveys were conducted over a few lines on each grid.

On the Santrap Grid, the IP/Res Surveys outlined several moderate to strong chargeable sources. Two targets were recommended for drilling on Line 200E and 0. The drill program was conducted in December 2006 with VMS type mineralized zones intersected in hole SA-06-02 on Line 0. Additional drilling was completed on Lines 0 and 200E with favourable results (anomalous Zn and Cu mineralization) obtained in two of the three holes drilled. Based on these results, the grid should be enlarged to cover the remaining AeroTEM anomalies in the vicinity. Additional drilling should also be considered at depth on Lines 0 and 200E and along strike to the northwest and southeast.

IP/Res Surveys were also completed on three lines of the Biaz Grid. Two moderate chargeability anomalies were identified on Lines 0 and 50E. Neither of these anomalies coincided with the AeroTEM conductor or the anomalous Ni-Cu showing but one of them was located along strike to the southeast on Line 50E. This anomaly is near surface and associated with a magnetic high. Drilling of this target is recommended as it could reflect Ni-Cu mineralization. Additional IP/Res Surveys should be completed on the two lines southeast of Line 50E if drilling results are favourable.

Respectfully submitted,

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9. REFERENCES

Tihor, L.A. (2007) A Report on the Laurion Mineral Exploration Inc. 2006 Diamond Drilling Program, Enid-Massey Project, Enid, Massey, Cote and Fortune Townships, Porcupine Mining Division NTS 42 A/12, January 2007 - Unpublished Report

Johnson, I.M. (2006) Preliminary Comments - AeroTEM Survey - Enid-Massey Project - Timmins Area - Laurion Gold (Laurion Mineral Exploration Inc.) - August 2006 - Unpublished Company Report

Appendix 1

JVX Ltd.

Survey Specification Sheets

Appendix 1
Surveys, Data Processing, Presentation, Modelling and Archives

The HLEM, MAG and IP/Res Surveys were carried out on the Santrap and Biaz Grids between November 12 and December 6, 2006. The Santrap and Biaz Grids were established in October 2006. The survey lines were oriented northeast-southwest (030°) with pickets erected at 25 m intervals. Aluminum tags were used for station markings.

Production summaries for the HLEM, MAG And IP/Res Surveys on the Santrap and Biaz Grids are provided in Tables A1 to A6. For the IP/Res surveys, listed are the lines surveyed, stations of the first and last IP/Res readings, surveyed distances, number of readings and date. The station of the first reading is the location of the nearest potential electrode (P1) to the near current electrode with the station of the last reading is the location of the furthest potential electrode P(end) from the near current electrode. For the HLEM and MAG surveys, listed are the lines surveyed, stations of the first and last readings, survey distances, number of readings and date.

Line	Start	End	Distance (m)	No. of Readings	Frequencies (Hz)	Date
0	150 N	700 N	550	21	444, 1777, 7111	November 17, 2006
100E	100 N	700 N	600	23	444, 1777, 7111	November 17, 2006
200E	50 N	700 N	650	25	444, 1777, 7111	November 17, 2006
300E	100 N	700 N	600	23	444, 1777, 7111	November 17, 2006
400E	200 N	450 N	250	9	444, 1777, 7111	November 17, 2006
Total			**2650**	**101**		

Table A1. Production Summary, Santrap Grid HLEM Surveys

Line	Start	End	Distance (m)	No. of Readings	Frequencies (Hz)	Date
250W	50 N	550 N	500	19	1777, 7111	November 16, 2006
150W	50 N	475 N	425	16	1777, 7111	November 16, 2006
50W	75 N	550 N	475	18	1777, 7111	November 16, 2006
0	75 N	550 N	475	18	1777, 7111	November 20, 2006
50E	125 N	550 N	425	16	1777, 7111	November 16, 2006
150E	50 N	550 N	500	19	1777, 7111	November 16, 2006
250E	50 N	550 N	500	19	1777, 7111	November 16, 2006
Total			**3300**	**125**		

Table A2. Production Summary, Biaz Grid HLEM Surveys

Line	Start	End	Distance (m)	No. of Readings	Date
BL 500N	150 N	700 N	550	21	November 14, 2006
200W	250 N	750 N	500	41	November 14, 2006
100W	100 N	750 N	650	53	November 14, 2006
0	87.5 N	750 N	662.5	54	November 14, 2006
100E	50 N	750 N	700	43	November 14, 2006
200E	0	750 N	750	47	November 14, 2006
300E	50 N	750 N	700	43	November 14, 2006
400E	150 N	500 N	350	29	November 14, 2006
Total			**4862.5**	**331**	

Table A3. Production Summary, Santrap Grid MAG Surveys

Line	Start	End	Distance (m)	No. of Readings	Date
BL 300N	275 W	75 W	200	17	November 12, 2006
250W	100 N	600 N	500	41	November 12, 2006
150W	0	525 N	525	43	November 12, 2006
50W	0	600 N	600	49	November 12, 2006
0	0	600 N	600	49	November 12, 2006
50E	75 N	600 N	525	43	November 12, 2006
150E	0	600 N	600	49	November 12, 2006
250E	0	600 N	600	49	November 12, 2006
Total			**4150**	**340**	

Table A4. Production Summary, Biaz Grid MAG Surveys

Line	C2 (Start)	P (end)	Distance (m)	No. of Readings	Date
0	100 N	725 N	625	25	December 5, 2006
100E	50 N	725 N	675	27	December 5, 2006
200E	0 N	725 N	725	29	December 4, 2006
300E	125 N	575 N	450	18	December 6, 2006
Total			**2475**	**99**	

Table A5. Production Summary, Santrap Grid IP/Res Surveys

Line	C2 (start)	P (end)	Distance (m)	No. of Readings	Date
50W	50 N	575 N	525	21	December 6, 2006
0	0 N	575 N	575	23	December 6, 2006
50E	0 N	575 N	575	23	December 6, 2006
Total			**1675**	**67**	

Table A6. Production Summary, Biaz Grid IP/Res Surveys

Santrap Grid

The Santrap Grid consists of seven (7) survey lines oriented north-northeast (030°). Using a hand-held unit, **JVX** personnel collected GPS control points in UTM coordinates (NAD83, Zone 17) at several stations on the grid. A list of control points is provided in Table A7.

Line	Station	UTM_E	UTM_N
200 W	275 N	431162	5378821
200 W	500 N	431284	5379011
200 W	750 N	431417	5379215
100 W	100 N	431153	5378614
100 W	500 N	431467	5378953
100 W	750 N	431500	5379165
0	100 N	431228	5378564
0	500 N	431449	5378898
0	750 N	431589	5379109
100 E	50 N	431297	5378466
100 E	500 N	431535	5378847
100 E	750 N	431668	5379057
200 E	100 N	431408	5378451
200 E	500 N	431620	5378794
200 E	750 N	431754	5378999
300 E	150 N	431519	5378440
300 E	500 N	431705	5378734
300 E	750 N	431836	5378934
400 E	200 N	431626	5378427
400 E	500 N	431785	5378681
BL 500 N	200 W	431284	5379011
BL 500 N	100 W	431367	5378953
BL 500 N	0	431449	5378898
BL 500 N	100 E	431535	5378847
BL 500 N	200 E	431620	5378794
BL 500 N	300 E	431705	5378734
BL 500 N	400 E	431785	5378681

Table A7. UTM coordinates of the Santrap Grid control points.

Biaz Grid

The Biaz Grid also consists of 7 lines oriented north-northeast (030°). **JVX** personnel also collected GPS data at selected stations. A list of control points is provided in Table A8.

Line	Station	UTM_E	UTM_N
250 W	0	435406	5376790
250 W	300 N	435566	5377042
250 W	600 N	435725	5377295
150 W	0	435508	5376730
150 W	300 N	435653	5376991
150 W	600 N	435810	5377244
50 W	0	435601	5376702
50 W	300 N	435743	5376940
50 W	600 N	435894	5377195
0	0	435633	5376652
0	300 N	435789	5376911
0	600 N	435942	5377170
50 E	0	435670	5376628
50 E	300 N	435828	5376888
50 E	600 N	435987	5377145
150 E	0	435757	5376579
150 E	300 N	435914	5376836
250 E	0	435845	5376528
250 E	300 N	436000	5376794
250 E	600 N	436149	5377048
BL 300 N	250 W	435566	5377042
BL 300 N	150 W	435653	5376991
BL 300 N	50 W	435743	5376940
BL 300 N	0	435789	5376911
BL 300 N	50 E	435828	5376888
BL 300 N	150 E	435914	5376836
BL 300 N	250 E	436000	5376794

Table A8. UTM coordinates of the Biaz Grid control points.

Personnel

Alex Jelenic (Geophysicist) acted as party chief and was responsible for all technical aspects of the field surveys. Mr. Jelenic and Scott Mortson (operator) performed the HLEM and MAG surveys. Also, Mr. Mortson operated the receiver for the IP/Res Surveys with Mr Jelenic operating the IP transmitter. Joe Gamblin and George Echum and Jeremy Chartier were employed as assistants for the IP/Res Surveys.

Lily Manoukian (Geophysicist) processed and plotted the plan maps, pseudosections and figures.

Miroslav Savic (Geologist) drafted the compilation maps.

John Gilliatt (Sr. Geophysicist) supervised the IP/Res, HLEM and MAG Surveys and prepared this report.

Blaine Webster (President) provides overall supervision of activities at **JVX** as the responsibility holder under the Certificate of Authorization issued to **JVX** by the APGO.

Instrumentation

The following instruments were used for the HLEM, MAG and IP/Res Surveys. Instrument specification sheets are included in Appendix 3.

HLEM Surveys

Apex Parametrics HLEM System (Max-Min)

The Max-Min HLEM system is made up of receiver, transmitter and data acquisition computer. The receiver is a one-piece unit with two ferrite-cored receiver coils. The transmitter consists of three separate parts: console, air cored coil and battery pack. The receiver and transmitter are connected by means of a reference cable. Survey data are recorded by the data acquisition computer (Max-Min Computer or MMC) attached to the receiver.

JVX used an Apex Parametrics I-8 system for the survey. The I-8 can operate at any or all of 8 frequencies – 111 Hz, 222 Hz, 444 Hz, 888 Hz, 1777 Hz, 3555 Hz, 7111 Hz, and 14080 Hz with coil separations of 12.5 to 200 m. Output consists of the in-phase and quadrature components of the secondary magnetic field as a percentage of the primary field as would be seen at the receiver if coils were horizontal coplanar at the separation specified.

There are a number of options to deal with any amount of terrain and this depends on the grid - slope or secant chained. If slope chained, HLEM coil separation as measured along track is fixed. If secant chained, coil separation as measured horizontally is fixed. Coil separation as measured along track is then equal to or greater than the specified coil separation. In either case, the operator records the slope between transmitter and receiver. The receiver then corrects the measured in-phase and quadrature data to an idealized HLEM system of horizontal coplanar coils at a fixed separation.

In areas of very low topographic relief, the slope % option is turned off. The coils are held horizontal and coplanar at a fixed separation. No slope corrections are applied.

The MMC calculates the electrical conductivity for a homogeneous half-space at each operating frequency. The calculation is based on sounding curves stored in the MMC. The quadrature response is used to determine conductivity. The inphase (or amplitude) response is used to decide on the right conductivity of the two that fits the quadrature response. Output is in Siemens/m. The inverse of conductivity in Siemens/m is the resistivity in ohm.m.

The MMCPRO program calculates a 'best fit' conductivity by matching measured to theoretical sounding curves using all frequencies. The goodness of fit is reported as 'error'.

MAG Surveys

GEM Systems GSM-19 Magnetometer

The GEM Systems GSM-19 Magnetometer was used to carry out the MAG Surveys. The system was configured to operate in stop and measure mode. In stop and measure mode, total magnetic intensities were measured and recorded with line, station, date and time in digital memory. Total magnetic intensity was measured to 0.1 nT.

IP/Res Surveys

Scintrex IPR12 time domain receiver.

For each potential electrode pair, the IPR12 measures the primary voltage (Vp) and the ratio of secondary to primary voltages (Vs/Vp) at 11 points on the IP decay (2 second current pulse). These 11 points (slices or windows) are labeled M0 to M10. There is the option for an additional user defined slice (Mx). Units of measurement are millivolts for Vp and milliVolts/Volt (mV/V) for M0 to M10 and Mx. Time settings are

Vp : 200 to 1600 msec
M0 centered at 60 msec (50 to 70)
M1 centered at 90 msec (70 to 110)
M2 centered at 130 msec (110 to 150)
M3 centered at 190 msec (150 to 230)
M4 centered at 270 msec (230 to 310)
M5 centered at 380 msec (310 to 450)
M6 centered at 520 msec (450 to 590)
M7 centered at 705 msec (590 to 820)
M8 centered at 935 msec (820 to 1050)
M9 centered at 1230 msec (1050 to 1410)
M10 centered at 1590 msec (1410 to 1770)
Mx centered at 870 msec (690 to 1050)

The apparent resistivity is calculated from Vp, the transmitted current and the appropriate geometric or K factors. M0 to M10 define the IP decay curve. **JVX** used the average of the M7 and M8 slices as the Mx slice presented in the contoured pseudosections.

JVX has chosen the above settings for Mx in order to better reflect an IP measurement (M7) from the older Scintrex IPR11 time domain receiver. In IPR11 surveys from the 1980s, this chargeability window was most often plotted and experience gained is based in part on this measurement.

The IPR12 also calculates the theoretical decay that best fits the measured decay. The theoretical decay is based on the Cole-Cole impedance model developed in the 1970s. The fit is based on a set of theoretical master curves with restrictions that limit the value of the calculation. JVX uses a different method to calculate impedance parameters (see below).

Scintrex IPC-7 2.5 kW time domain transmitter

This transmitter is powered by an 8 hp motor generator and produces a commutated square wave current output with current on times of 2, 4, 8, or 16 seconds. A 2 second current pulse was used (base frequency of .125 Hz). Output current is stabilized to within ±0.1% for up to 50% external load or ± 10% input voltage variations. Voltage, current and circuit resistance are displayed in analog and digital form.

Survey Specifications

HLEM Surveys

HLEM Surveys used a 100 m coil separation with readings every 25 m along the survey lines. The HLEM coils were held horizontal at the pickets and the lines were slope chained. Readings were corrected to simulate horizontal coplanar coils at 100 m separations.

MAG Surveys

The MAG surveys were completed using the "stop and record" method with readings every 12.5 m along gridlines.

IP/Res Surveys

The pole-dipole array was used for the IP/Res surveys. Six dipoles were read at every station with the current electrode always located to the southwest of the potential electrodes. The array sketch map is shown on each pseudosection.

The station spacing and electrode spacing ("a" spacing) was 25 m.

Data Processing and Presentation

At the end of every survey day, the HLEM, MAG and IP/Res data were dumped to a PC and checked for erroneous measurements and/or mislabeled line/station headers. The corrected data was transferred to **JVX's** Richmond Hill office.

Geosoft's Sushi and **Oasis Montaj** geophysical data processing systems (see www.geosoft.com) were used to process and plot the plan maps and the IP/Res pseudosections. The compilation maps were prepared using AutoCAD drafting software (see www.autodesk.com).

The compilation (base) maps shows the true grid layout (collected by JVX using a handheld GPS unit), UTM (NAD83, Z14) and latitude/longitude coordinates, lakes and swamps, roads, claim boundaries and claim numbers. All maps and pseudosections are drawn at a scale of 1:2500.

The HLEM results are presented as offset profiles of the in-phase and quadrature responses for each frequency measured. The n=2 chargeability and n=2 apparent resistivity IP/res data have been gridded / contoured and results displayed as posted values plus colour and line contours. The MAG data are shown as contours (colour plus superimposed line).

IP/Res Pseudosections

The pseudosections are plotted using standard depth and position conventions. The plot position for any measured quantity for the n^{th} potential dipole pair is (n+½)a/2 m forward of and below the current electrode. Pole-dipole anomaly shapes depend on array orientation. The array sketch shown with each pseudosection shows the correct array orientation.

These plot forms have been found to give a reasonable image of target location, width and depth where 1) the anomalously chargeable and/or resistive body is an isolated, near-vertical tabular body, 2) where background chargeabilities and resistivities (overburden and host rock) are uniform and 3) where the terrain is relatively flat. They are more difficult to interpret for irregular or nearby chargeable bodies and where there is any amount of conductive cover or topographic relief. Forward or inverse modelling may be useful in such cases.

For Mx and M-IP chargeability and for apparent resistivity, colour contours in the pseudosections are assigned by equal area distribution for each individual pseudosection. Line to line changes in colour assignment will occur. Colour assignments for the spectral 'c' and 'tau' are fixed.

Impedance Modelling

The Cole-Cole impedance model was developed in the 1970s after it became clear that chargeability is a complex property that includes amplitude (volume percent electronic conductors), grain size and grain size uniformity. In this model, the low frequency electrical impedance Z(ω) of rocks and soils is defined by 4 parameters. They are

- r_0 : DC resistivity in ohm.m
- m : true chargeability amplitude in V/V
- τ : tau - time constant in seconds
- c : exponent

The form of the model is

$$Z(\omega) = r_0 \{1 - m [1 - (1+(i\omega\tau)^c)^{-1}]\} \text{ ohm.m}$$

where ω is the angular frequency (2πf).

The true chargeability is a better measure of the volume percent electronic conductors (some metallic sulphides, magnetite, graphite). The time constant is a measure of the square of the average grain size. The exponent is a measure of the uniformity of the grain size. Common or possible ranges are 0 to 1 (m), .001 to 1000 seconds (tau) and .1 to .5 (c).

In time domain IP surveys, impedance model parameters may be estimated using a best fit between theoretical and measured decays[1]. Software to affect this best fit was developed by Scintrex for the IPR11 in the 1980s. In order to use this software, the IPR11 decay is interpolated from the IPR12 decays.

The extraction of impedance model parameters may fail if the measured decay is too noisy. In this case, the pseudosections are left blank. Impedance model parameters are only apparent. Resistivity and chargeability amplitude are subject to the effects of array geometry, target shape, size and attitude, geometric and physical attenuation. The time constant and c values are less affected by geometric effects.

---

[1] See Johnson, I. M., "Spectral induced polarization parameters as determined through time-domain measurements: Geophysics, 49, 1993-2004 (1984)

Archives

The results of the survey are archived on CD. Included on the CD are Oasis Montaj and ACAD viewers. File types include

ASCII *.xyz - line/station IP and Magnetic data with UTMs
Geosoft databases - For all the data
Geosoft *.map – maps included with this report
AutoCAD *.dxf – compilation map
MS WORD *.doc – report
Raw data - The original instrument dumps.

Appendix 2
Statement of Qualifications

I, John Gilliatt, declare that:

1. I am a geophysicist with residence in Guelph, Ontario and presently employed in this capacity with JVX Ltd. of Richmond Hill, Ontario.

2. I obtained a Bachelor's Degree with Specialization in Geophysics from the University of Alberta in 1986.

3. I am a registered Professional Geophysicist (P. Geoph., #M44967) with APEGGA.

4. I have practiced my profession in Canada continuously since 1986.

5. I am a member of the Prospectors and Developers Association of Canada.

6. I have no interest nor do I expect to receive any interest in the properties or securities of **Laurion Mineral Exploration Inc.**

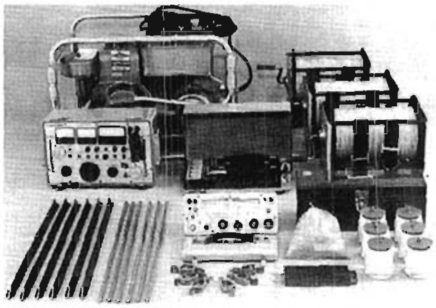
7. The statements made in this report represent my professional opinion based on my consideration of the information available to me at the time of preparing this report.

Richmond Hill, Ontario
April, 2007

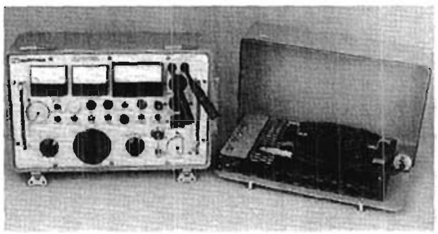
John Gilliatt, P. Geoph
Senior Geophyisicist
JVX Ltd.

Appendix 3
Instrument Specification Sheets

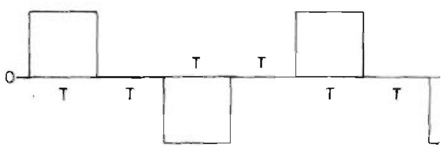
Technical Description of IPC-7/2.5 kW Transmitter System



Complete 2.5kW induced polarization system including motor-generator, reels with wire, tool kit, porous pots, simulator circuit, copper sulphate, IPR-8 receiver, dummy load, transmitter, electrodes and clips



IPC-7 / 2.5kW transmitter console with lid and dummy load.



Time Domain Waveform

Transmitter Console	
Maximum Output Power	1.85 kW maximum, defined as VI when current is on, into a resistive load
Output Current	10 amperes maximum
Output Voltage	Switch selectable up to 1210 volts DC
Automatic Cycle Timing	T:T:T:T: on:off:on:off
Automatic Polarity Change	Each 2T
Pulse Durations	Standard: T = 2,4 or 8 seconds, switch selectable Optional: T = 1,2,4 or 8 seconds, switch selectable Optional: T = 8,16,32 or 64 seconds, switch selectable
Voltage Meter	1500 volts full scale logarithmic
Current Meter	Standard: 10.0 A full scale logarithmic Optional: 0.3, 1.0, 3.0 or 10.0 A full scale linear, switch selectable
Period Time Stability	Crystal controlled to better than .01%
Operating Temperature Range	-30°C to +55°C
Overload Protection	Automatic shut-off at output current above 10.0 A
Open Loop Protection	Automatic shut-off at current below 100 mA
Undervoltage Protection	Automatic shut-off at output voltage less than 95 V
Dimensions	280 mm x 460 mm x 310 mm
Weight	30 kg
Shipping Weight	41 kg includes reusable wooden crate
Motor Generator	
Maximum Output Power	2.5 kVA, single phase
Output Voltage	110 V AC
Output Frequency	400 Hz
Motor	4 stroke, 8 HP Briggs & Stratton
Weight	59 kg
Shipping Weight	90 kg includes reusable wooden crate

SCINTREX

222 Snidercroft Road
Concord Ontario Canada
L4K 1B5

Telephone: (416) 669-2280
Cable: Geoscint Toronto
Telex: 06-964570

Geophysical and Geochemical Instrumentation and Services

IPR-12 SPECIFICATIONS

Inputs
1 to 8 dipoles are measured simultaneously.

Input Impedance
16 Megohms

SP Bucking
± 10 volt range. Automatic linear correction operating on a cycle by cycle basis.

Input Voltage (Vp) Range
50 μvolt to 14 volt.

Chargeability (M) Range
0 to 300 millivolt/volt.

Tau Range
60 microseconds to 2000 seconds.

Reading Resolution of Vp, SP and M
Vp, 10 microvolt; SP, 1 millivolt; M, 0.01 millivolt/volt.

Absolute Accuracy of Vp, Sp and M
Better than 1% .

Common Mode Rejection
At input more than 100db.

Vp Integration Time
10% to 80% of the current on time.

IP Transient Program
Total measuring time keyboard selectable at 1,2,4,8,16 or 32 seconds. Normally 14 windows except that the first four are not measured on the 1 second timing, the first three are not measured on the 2 second timing and the first is not measured on the 4 second timing. An additional transient slice of minimum 10 ms width, and 10 ms steps, with delay of at least 40 ms is keyboard selectable. Programmable windows also available.

Transmitter Timing
Equal on and off times with polarity change each half cycle. On/off times of 1,2,4,8,16 or 32 seconds. Timing accuracy of ±100 ppm or better is required.

External Circuit Test
All dipoles are measured individually in sequence, using a 10 Hz square wave. The range is 0 to 2 Mohm with 0.1 kohm resolution. Circuit resistances are displayed and recorded.

Filtering
RF filter, 10 Hz 6 pole low pass filter, statistical noise spike removal.

Internal Test Generator
1200 mV of SP; 807 mV of Vp and 30.28 mV/V of M.

Analog Meter
For monitoring input signals; switchable to any dipole via keyboard.

Keyboard
17 key keypad with direct one key access to the most frequently used functions.

Display
16 lines by 40 characters, 128 x 240 dots, Backlit SuperTwist Liquid Crystal Display. Displays instrument status and data during and after reading. Alphanumeric and graphic displays.

Display Heater
Available for below -15°C operation.

Memory Capacity
Stores approximately 400 dipoles of information when 8 dipoles are measured simultaneously.

Real Time Clock
Data is recorded with year, month, day, hour, minute and second.

Digital Data Output
Formatted serial data output for printer and PC, etc. Data output in 7 or 8 bit ASCII, one start, one stop bit, no parity format. Baud rate is keyboard selectable for standard rates between 300 baud and 57.6 kBaud. Selectable carriage return delay to accommodate slow peripherals. Hand-shaking is done by X-on/X-off.

Standard Rechargeable Batteries
Eight rechargeable Ni-Cad D cells. Supplied with a charger, suitable for 100/230V, 50 to 60 Hz, 10W. More than 20 hours service at +25°C, more than 8 hours at -30°C.

Ancillary Rechargeable Batteries
An additional eight rechargeable Ni-Cad D cells may be installed in the console along with the Standard Rechargeable Batteries. Used to power the Display Heater or as backup power. Supplied with a second charger. More than 6 hours service at -30°C.

Use of Non-Rechargeable Batteries
Can be powered by D size Alkaline batteries, but rechargeable batteries are recommended for lower cost over time.

Operating Temperature Range
-30°C to +50°C.

Storage Temperature Range
-30°C to +50°C.

Dimensions
Console: 355 x 270 x 165 mm
Charger: 120 x 95 x 55 mm

Weights
Console: 5.8 kg
Batteries: 1.3 kg
Charger: 1.1 kg

Transmitters Available
GGT-3 GGT-10

An ISO 9001:2000 registered company

* All specifications are subject to change without notice.

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v7.0

GEM SYSTEMS
ADVANCED MAGNETOMETERS

Overhauser

Magnetometer / Gradiometer / VLF (GSM-19 v7.0)

GEM's unique Overhauser system combines data quality, survey efficiency and options into an instrument that matches costlier optically pumped Caesium devices.

And the latest v7.0 technology upgrades provide even more value:

Data export in standard XYZ (i.e. line-oriented) format for easy use in standard commercial software programs

Programmable export format for full control over output

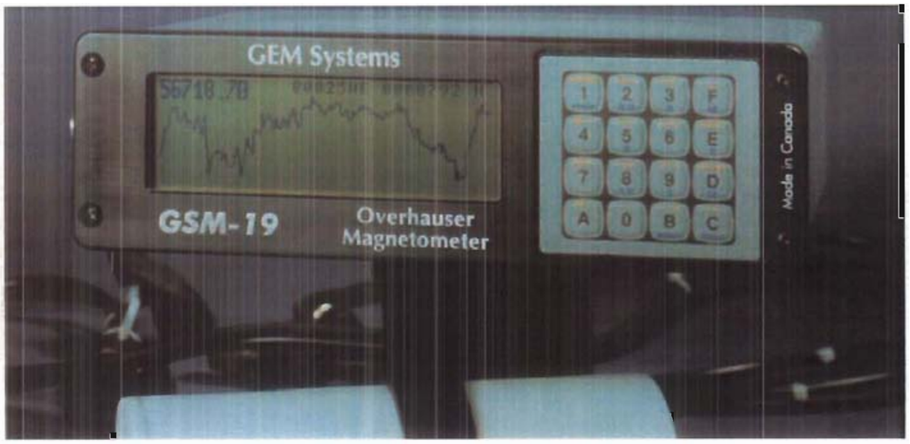
GPS elevation values provide input for geophysical modeling

Enhanced GPS positioning resolution
<1.5m standard GPS for high resolution surveying
<1.0m OmniStar GPS
<0.7m for newly introduced CDGPS

Multi-sensor capability for advanced surveys to resolve target geometry

Picket marketing / annotation for capturing related surveying information on-the-go

And all of these technologies come complete with the most attractive savings and warranty in the business!



Overhauser (GSM-19) console with sensor and cable. Can also be configured with additional sensor for gradiometer (simultaneous) readings.

The GSM-19 v7.0 Overhauser instrument is the total field magnetometer / gradiometer of choice in today's earth science environment -- representing a unique blend of physics, data quality, operational efficiency, system design and options that clearly differentiate it from other quantum magnetometers.

With data quality exceeding standard proton precession and comparable to costlier optically pumped cesium units, the GSM-19 is a standard (or emerging standard) in many fields, including:

- o Mineral exploration (ground and airborne base station)
- o Environmental and engineering
- o Pipeline mapping
- o Unexploded Ordnance Detection
- o Archeology
- o Magnetic observatory measurements
- o Volcanology and earthquake prediction

Taking Advantage of the Overhauser Effect

Overhauser effect magnetometers are essentially proton precession devices -- except that they produce an order-of-magnitude greater sensitivity. These "supercharged" quantum magnetometers also deliver high absolute accuracy, rapid cycling (up to 5 readings / second), and exceptionally low power consumption.

The Overhauser effect occurs when a special liquid (with unpaired electrons) is combined with hydrogen atoms and then exposed to secondary polarization from a radio frequency (RF) magnetic field.

The unpaired electrons transfer their stronger polarization to hydrogen atoms, thereby generating a strong precession signal -- that is ideal for very high-sensitivity total field measurements.

In comparison with proton precession methods, RF signal generation also keeps power consumption to an absolute minimum and eliminates noise (i.e. generating RF frequencies are well out of the bandwidth of the precession signal).

In addition, polarization and signal measurement can occur simultaneously -- which enables faster, sequential measurements. This, in turn, facilitates advanced statistical averaging over the sampling period and/or increased cycling rates (i.e. sampling speeds).

Other advantages are described in the section called, "GEM's Commercial Overhauser System" that appears later in this brochure.

Key System Components

Key components that differentiate the GSM-19 from other systems on the market include the sensor and data acquisition console. Specifications for components are provided on the right side of this page.

Sensor Technology

GEM's sensors represent a proprietary innovation that combines advances in electronics design and quantum magnetometer chemistry.

Electronically, the detection assembly includes dual pick-up coils connected in series opposition to suppress far-source electrical interference, such as atmospheric noise. Chemically, the sensor head houses a proprietary hydrogen-rich liquid solvent with free electrons (free radicals) added to increase the signal intensity under RF polarization.

From a physical perspective, the sensor is a small size, light-weight assembly that houses the Overhauser detection system and fluid. A rugged plastic housing protects the internal components during operation and transport.

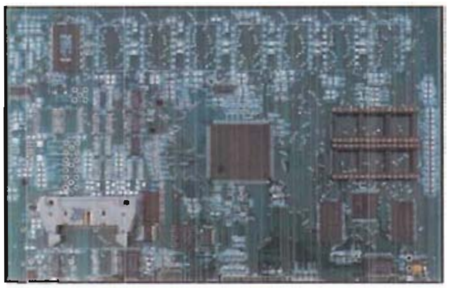
All sensor components are designed from carefully screened non-magnetic materials to assist in maximization of signal-to-noise. Heading errors are also minimized by ensuring that there are no magnetic inclusions or other defects that could result in variable readings for different orientations of the sensor.

Optional omni-directional sensors are available for operating in regions where the magnetic field is near-horizontal (i.e. equatorial regions). These sensors maximize signal strength regardless of field direction.

Data Acquisition Console Technology

Console technology comprises an external keypad / display interface with internal firmware for frequency counting, system control and data storage / retrieval. For operator convenience, the display provides both monochrome text as well as real-time profile data with an easy-to-use interactive menu for performing all survey functions.

The firmware provides the convenience of upgrades over the Internet via the GEMLinkW software. The benefit is that instrumentation can be enhanced with the latest technology without returning the system to GEM -- resulting in both timely implementation of updates and reduced shipping / servicing costs.



About GEM Advanced Magnetometers

GEM Systems, Inc. delivers the world's only magnetometers and gradiometers with built-in GPS for accurately-positioned ground, airborne and stationary data acquisition. The company serves customers in many fields including mineral exploration, hydrocarbon exploration, environmental and engineering, Unexploded Ordnance Detection, archeology, earthquake hazard prediction and observatory research.

Key products include the QuickTracker™ Proton Precession, Overhauser and SuperSenser™ Optically-Pumped Potassium instruments. Each system offers unique benefits in terms of sensitivity, sampling, and acquisition of high-quality data. These core benefits are complemented by GPS technologies that provide metre to sub-metre positioning.

With customers in more than 50 countries globally and more than 20 years of continuous technology R&D, GEM is known as the only geophysical instrument manufacturer that focuses exclusively on magnetic technology advancement.

"Our World is Magnetic"

Specifications

Performance

Sensitivity:	< 0.015 nT / √Hz @ 1 Hz
Resolution:	0.01 nT
Absolute Accuracy:	+/- 0.1 nT
Range:	10,000 to 120,000 nT
Gradient Tolerance:	> 10,000 nT/m
Samples at:	60+, 5, 3, 2, 1, 0.5, 0.2 sec
Operating Temperature:	-40C to +55C

Operating Modes

Manual: Coordinates, time, date and reading stored automatically at minimum 3 second interval.

Base Station: Time, date and reading stored at 3 to 60 second intervals.

Remote Control: Optional remote control using RS-232 interface.

Input / Output: RS-232 or analog (optional) output using 6-pin weatherproof connector.

Storage - 16 MB (# of Readings)

Mobile:	838,860
Base Station:	2,796,202
Gradiometer:	699,050
Walking Mag:	1,677,721

Dimensions

Console:	223 x 69 x 240 mm
Sensor:	175 x 75mm diameter cylinder

Weights

Console with Belt:	2.1 kg
Sensor and Staff Assembly:	1.0 kg

Standard Components

GSM-19 console, GEMLinkW software, batteries, harness, charger, sensor with cable, RS-232 cable, staff, instruction manual and shipping case.

Optional VLF

Frequency Range: Up to 3 stations between 15 to 30.0 kHz

Parameters: Vertical in-phase and out-of-phase components as % of total field. 2 components of horizontal field amplitude and total field strength in pT.

Resolution: 0.1% of total field

GEM Systems, Inc.
52 West Beaver Creek Road, 14
Richmond Hill, ON
Canada L4B 1L9
Email: info@gemsys.on.ca
Web: www.gemsys.ca

Represented By:

APEX PARAMETRICS MAXMIN I-8 SYSTEM

- Designed for groundwater and mineral exploration, and for geo-engineering applications, continuing the concepts of the earlier and highly popular MaxMin models.
- Frequency span is extended to eight octavely spaced frequencies from 110 to 14080 Hcreased range and number of coil separations. These and other developments result in greater performance with more applications and enhanced interpretation.
- Advanced spheric and powerline interference rejection is still further improved, resulting in more accurate surveys, particularly at the larger coil separations.
- MaxMin Computer or MMC, which is described in a separate data sheet, is offered for processing, display, storage and transfer. The MMC displays and stores the in-phase quadrature readings, their standard deviations, and the corresponding apparent conductivity values. Rough terrain surveys are also simplified with the MMC.
- Data interpretation and presentation programs are available for layered earth parametric soundings and discrete conductor surveys done with MaxMin EM.

MAXMIN COMPUTER MMC

- The MMC interfaces with MaxMin EM System receivers for digital data processing, display, storage and transfer, enhancing survey productivity and data accuracy.
- Digital display and logging of in-phase (real) and quadrature (imaginary) readings with standard deviations, the corresponding apparent ground conductivity values, line, station, terrain slope and coil tilt information.
- Easy fingertip operation by read and store switches on MaxMin receiver front panel, with digital averaging for improved signal to noise ratio,
- Rough terrain surveys are simplified with the use of built-in tilt meter, slope entry and computed coil orientation and separation information.
- Data transfer, formatting, correction and viewing programs are supplied for personal computers. Program for computing multi-frequency best-fit apparent conductivities and fit errors is provided.
- Data interpretation and presentation programs are available for multi-layer parametric or geometric soundings and discrete conductor surveys done with MaxMin EM.

MAXMIN I-8 ELECTROMAGNETIC SYSTEM SPECIFICATIONS:

FREQUENCIES:	110, 220, 440, 880, 1760, 3520, 7040 & 14080 Hz.
COIL SEPARATIONS:	SET NO. 1: 12.5, 25, 50, 75, 100, 125, 150, 200, 250, 300 and 400 metres (the standard set). SET NO. 2: 10, 20, 40, 80, 100, 120, 160, 200, 240, and 320 metres (selected with grid switch in receiver). SET NO. 3: 50, 100, 200, 300, 400, 500, 600 and 800 feet 12.5, 25, 50, 75, 100, 125, 150, 200, 250, 300 and 400 metres (selected with grid switch in receiver).
TRANSMITTER DIPOLE MOMENTS:	110 Hz: 220 Atm^2 1760 Hz: 160 Atm^2 220 Hz: 215 Atm^2 3520 Hz: 80 Atm^2 440 Hz: 210 Atm^2 7040 Hz: 40 Atm^2 880 Hz: 200 Atm^2 14080 Hz: 20 Atm^2
MODES OF OPERATION:	MAX 1: Horizontal loop or slingram - transmitter and receiver coil planes horizontal and coplanar MAX 2: Vertical coplanar loop mode transmitter MIN 1: Perpendicular mode 1 - transmitter coil plane horizontal and receiver coil plane vertical. MIN 2: Perpendicular mode 2 - transmitter coil plane vertical and receiver coil plane horizontal.
PARAMETERS MEASURED:	In-phase and quadrature components of the secondary magnetic field, in % of primary field
READOUTS:	Analog direct edgewise meter readouts for in phase, quadrature and flit. Additional digital LCD readouts provided in the optional MMC computer. Interfacing and controls are provided for ready plug-in of the MMC.
RANGES OF READOUTS:	Switch activated analog in-phase and quadrature 0 scales: 0±4%, 0±20 % and 0±100 %, and digital 0±199.9% autorange with optional MMC. Analog tilt 0±75 % and 0±99 % grade with MMC.
RESOLUTION:	Analog in-phase and quadrature 0.1 to 1 % of primary field, depending on scale used, digital 0.01 % with autoranging MMC; tilt 1 % grade,
REPEATABILITY:	0.01 to 1 % of primary field, typical, depending on frequency, coil separation and conditions.
SIGNAL FILTERING:	Powerline comb filter, continuous spheric noise clipping, auto-adjusting time constant, and more.
WARNING LIGHTS:	Receiver and reference warning lights to indicate potential error conditions.

SURVEY DEPTH PENETRATION:	From surface down to 1.5 times coil separation for large horizontal target and 0.75 times coil separation for large vertical target, values typical.
REFERENCE CABLE:	Lightweight unshielded 4/2 conductor teflon cable for maximum operating temperature range and for minimum pulling friction.
INTERCOM:	Voice communication link provided for operators via the reference cable.
TEMP. RANGE:	Minus 40 to plus 60 degrees Celsius, operating.
RECEIVER BATTERIES:	Four standard 9 V - 0.6 Ah alkaline batteries. Life 25 hours continuous duty, less In cold weather. Optional 1.2 Ah extended life lithium batteries available (recommended for very cold weather).
TRANSMITTER BATTERIES:	Standard rechargeable gel-type lead-acid 12 V - 13 Ah 14 Ah batteries (4 x 6V - 6.5 Ah) in nylon beltpack. Optionally rechargeable long life 12 V - 14 Ah nickel-cadmium batteries (20 x 1.2 V - 7 Ah) with Ni-Cad chargers - best choice for cold climates.
TRANSMITTER BATTERY:	Lead acid battery charger: 14.4 V @ 1.25 A, Ni-Cad battery charger: 1.4 A @ 16 V nominal output. Operation from 110 - 120 and 220 - 240 VAC, 50 -60 Hz, and 12 - 15 VDC supplies.
RECEIVER WEIGHT:	8 Kg carrying weight (including the two ferrite cored antenna coils), 9 Kg with MMC computer.
TRANSMITTER WEIGHT:	16 Kg carrying weight.
SHIPPING WEIGHT	60 Kg plus weight of reference cables at 2.8 Kg per 100 metres, plus optional items if any. Shipped in two aluminum lined field / shipping cases.
STANDARD SPARES:	Spare transmitter battery pack, spare transmitter battery charger, two spare transmitter retractile connecting cords, spare set of receiver batteries.
OPTIONS AND ACCESSORIES	- MMC, MaxMtn Computer option - Data interprellation and presentation programs - Reference cables, lengths as required - Reference cable extension adapter - Handheld inclinometer for rough terrain - Receiver extended life lithium batteries - Transmitter Ni-Cad battery & charger options - Minimal, regular or extended spare parts kit

MAXMIN COMPUTER MMC SPECIFICATIONS:

OPERATING SYSTEM:	Menu driven user-friendly hierarchial operating system, interfacing with MaxMin EM System receiver and with personal computers.
DISPLAY:	Liquid Crystal Display, with two lines of 24 alphanumeric characters each.
KEYBOARD:	18 tactile push-button keys
BEEPER:	To provide audible operator guidance and to speed up operations, especially in very cold weather,
CLOCK CALENDAR:	Date and Time (year, month, day, hour and minute)
COIL TILT:	Tilt display, with built in tilt sensor and circuitry. with 0±99% grade range and with 1% resolution
IN-PHASE & QUADRATURE:	0±199.9% auto-ranging programmable gain system with 0.1% resolution for displayed data and 0.01% resolution for stored data
APPARENT CONDUCTIVITY:	0.1 to 3276 milliSiemens (millimho) per metre available conductivity range, with conductivity arrived at using the quadrature, in-phase, frequency and coil separation data
PROCESSOR:	16 bit low power CMOS CPU and bus at 6 MHz clock rate
MEMORY:	ROM: 16 Kb, expandable to 64 Kb RAM: 256 Kb, static CMOS
PHYSICAL SIZE:	24.2 x 17.3 x 4.3 cm, to fit inside MaxMin receiver leather case notebook pocket.
WEIGHT:	1.0 Kilogram
BATTERIES:	Two 9 Volt- 0.57 Ampere-hour alkaline batteries. Battery life 28 hours continuous duty, less in cold weather. Optional 1.2 Ah lithium batteries recommended for very cold weather operation. One lithium 3 Volt back-up battery, type 2032.
CONNECTIONS:	19 pin bayonet connector receptacle to connect to MaxMin receiver with the supplied aluminum tube connectors. One each of DB25S and DB9S data transfer cords supplied for downloading data to personal computer serial port.
TEMPERATURE RANGE:	Minus 30 to plus 60 degree Celsius. Temperature sensor and temperature display built-in.