87-357-16113

REPORT ON
COMBINED HELICOPTER BORNE
MAGNETIC, ELECTROMAGNETIC AND VLF
SURVEY
COTTONWOOD PROPERTIES
CARIBOO ~~DISTRICT~~ M.D., BRITISH COLUMBIA

93H/4W, 93G/1E
53°01.7' 121°57.5'

FOR LIST OF CLAIMS SURVEYED
SEE APPENDIX II A AND II B

Owner(s): J.C. BOT, D.C. ULETT

for
Operator: RISE RESOURCES ~~LTD.~~ INC. &
GALLANT GOLD MINES LTD.
by
AERODAT LIMITED

FILMED

June 6, 1987

GEOLOGICAL BRANCH
ASSESSMENT REPORT

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16,113

G. Podolsky
P. Eng.

PRINCE GEORGE

/ 87-357-16113

Province of British Columbia — Ministry of Energy, Mines and Petroleum Resources

ASSESSMENT REPORT
TITLE PAGE AND SUMMARY

TYPE OF REPORT/SURVEY(S)	TOTAL COST
Geophysical	$17,692.31

AUTHOR(S) G. Podolski SIGNATURE(S) [signature] for

DATE STATEMENT OF EXPLORATION AND DEVELOPMENT FILED February 2, 1987 YEAR OF WORK 1987

PROPERTY NAME(S)
WINGDAM, WINGDAM CREEK

COMMODITIES PRESENT Placer Au

B.C. MINERAL INVENTORY NUMBER(S), IF KNOWN 93H-12, 86

MINING DIVISION Cariboo NTS 93H/4W, 93G/1E

LATITUDE 53°01.7' LONGITUDE 121°57.5'

NAMES and NUMBERS of all mineral tenures in good standing (when work was done) that form the property (Examples: TAX 1-4, FIRE 2 (12 units); PHOENIX (Lot 1706); Mineral Lease M 123; Mining or Certified Mining Lease ML 12 (claims involved)):

Most, Light 1-2, Lance, Free, Wing, Hy, Lake 1-4, Angus, Ram 1-4, Wingdam, Dam (130 units)

OWNER(S)
(1) John C. Bot
Donald C. Ulett
(2)

MAILING ADDRESS
1900-999 W. Hastings St.
Vancouver, B.C. V6C 2W2

OPERATOR(S) (that is, Company paying for the work)
(1) Rise Resources Inc. (2)

MAILING ADDRESS
1900-999 W. Hastings St.
VANCOUVER, B.C. V6C 2W2

SUMMARY GEOLOGY (lithology, age, structure, alteration, mineralization, size, and attitude):

The property straddles the contact between Cambrian metamorphosed sediments of the Cariboo Group and Mesozoic, mainly volcanic rocks of the Quesnel Trough. The Cariboo Group, which is present in the eastern portion of the property, is comprised predominantly of clastic rocks with lesser amounts of carbonate rocks. The rocks of the Quesnel Trough include a variety of mafic and intermediate volcanics, argillites, hornblende diorite, and occasionally felsic intrusive rocks. Quartz veins appear to be associated with felsic intrusives.

REFERENCES TO PREVIOUS WORK

(over)

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1. INTRODUCTION

This report describes an airborne geophysical survey carried out on behalf of Rise Resources Ltd. and Gallant Gold Mines Ltd. by Aerodat Limited. Equipment operated included a three frequency electromagnetic system, a high sensitivity cesium vapour magnetometer, a two frequency VLF-EM system, a film tracking camera and an altimeter. Electromagnetic, magnetic and altimeter data were recorded both in digital and analog form. Positioning data were recorded on film as well as being marked on the flight path mosaic by the operator while in flight.

The survey, comprising two blocks of ground separated by about 20 kilometres in the Cottonwood Provincial Forest area (Cariboo Mining District) of British Columbia and centred about 25 kilometres east northeast of the town of Quesnel, were flown on January 19th and 20th, 1987. Three flights were required to complete the survey with flight lines oriented at Azimuths of 055-235 degrees and flown at a nominal spacing of 200 metres. Coverage and data quality were considered to be well within the specifications described in the contract.

The purpose of the survey was to record airborne geophysical data over and around ground that is of interest to Rise Resources Ltd. and Gallant Gold Mines Ltd.

A total of 400 kilometres of the recorded data were compiled in map form and are presented as part of this report according to specifications outlined by Rise Resources Ltd. and Gallant Gold Mines Ltd.

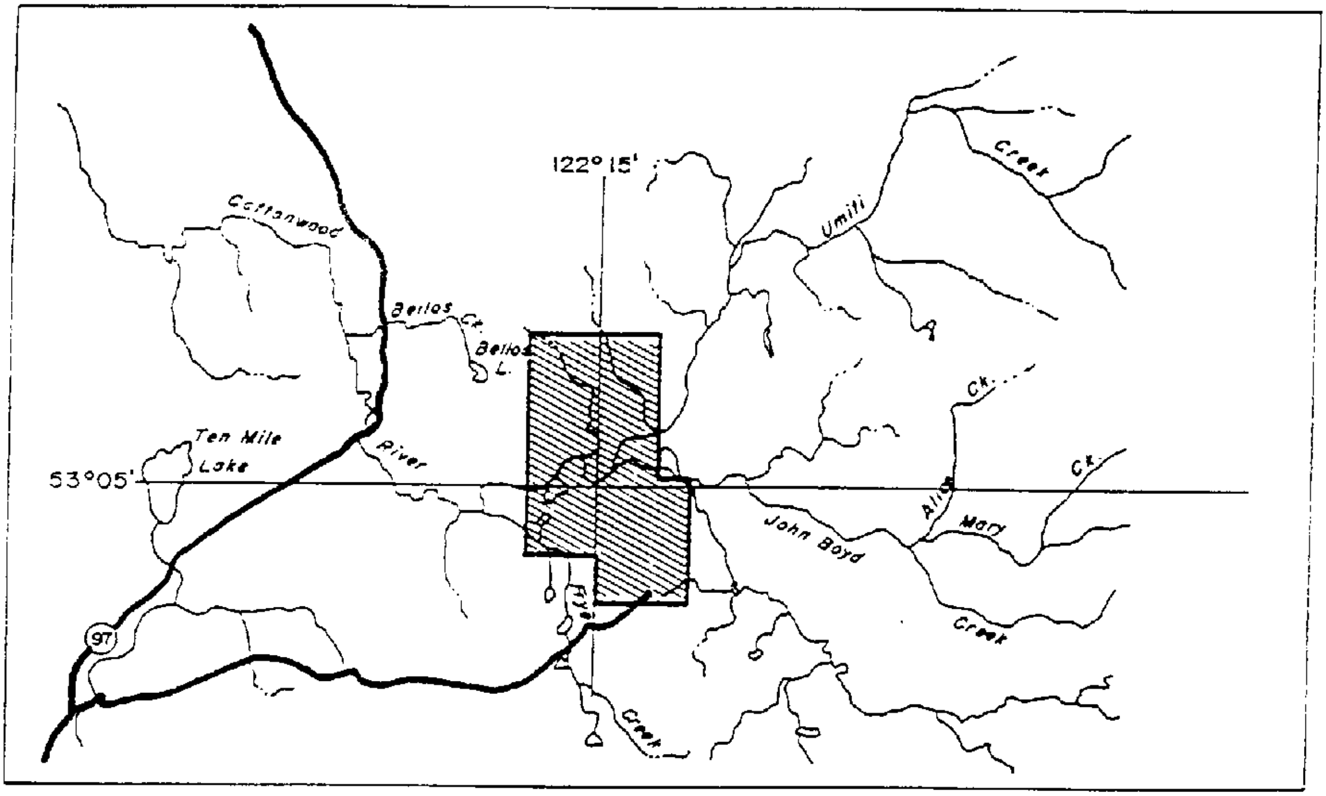
2. SURVEY AREA LOCATION

The survey areas are depicted on the index maps shown on page 2-2. They are centred at Latitude 53 degrees 05 minutes north, Longitude 122 degrees 15 minutes west, approximately 7 kilometres north west of the village of Cottonwood for the western survey area and at Latitude 53 degrees 02 minutes north, Longitude 121 degrees 57 minutes west, approximately 2 kilometres south southeast of Wingdam on the Quesnel - Barkerville road in the Cottonwood Provincial Forest area of northern British Columbia (NTS Reference Map Nos. 93 A, B, G, H). Access may be overland off the road between Quesnel and Barkerville or by helicopter from Quesnel or Wells. The historical gold mining camp of Barkerville is located approximately 35 kilometres to the east.

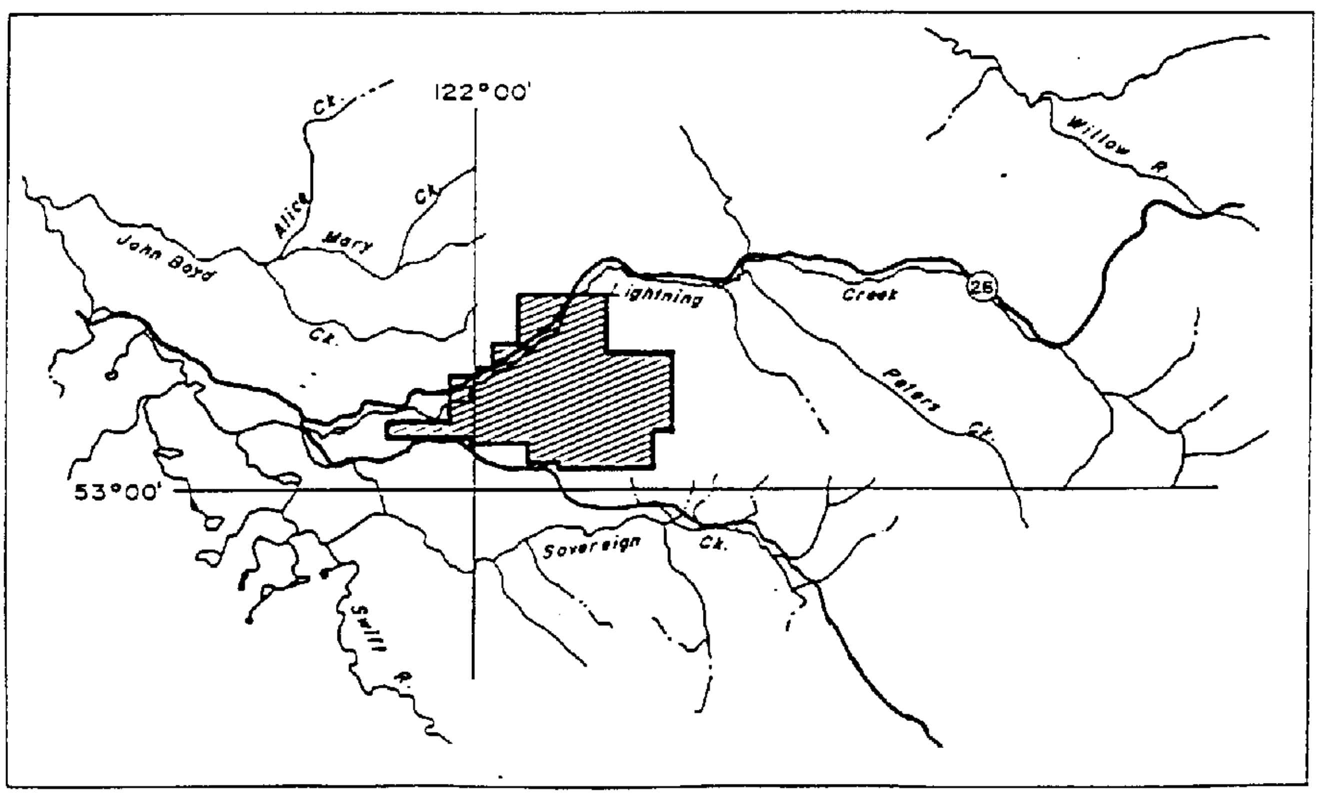
RISE RESOURCES LTD.
and
CALLANT GOLD MINES LTD.

COTTONWOOD FOREST

Area A



Area B



3. AIRCRAFT AND EQUIPMENT

3.1 Aircraft

An Aerospatiale A-Star 350D helicopter, (C-GNSM), owned and operated by Maple Leaf Helicopters Limited, was used for the survey. Installation of the geophysical and ancillary equipment was carried out by Aerodat. The survey aircraft was flown at a mean terrain clearance of 60 metres.

3.2 Equipment

3.2.1 Electromagnetic System

The electromagnetic system was an Aerodat 3-frequency system. Two vertical coaxial coil pairs were operated at 935 Hz and 4600 Hz and a horizontal coplanar coil pair at 4175 Hz. The transmitter-receiver separation was 7 metres. Inphase and quadrature signals were measured simultaneously for the 3 frequencies with a time constant of 0.1 seconds. The electromagnetic bird was towed 30 metres below the transmitter.

3.2.2 VLF-EM System

The VLF-EM System was a Herz Totem 2A. This instrument measures the total field and quadrature components of two selected transmitters, preferably oriented at right angles to one another. The sensor was towed in a bird 12 metres below the helicopter. The transmitters monitored were Jim Creek, Washington broadcasting at 24.8 kHz for the line station and Lualualei, Hawaii broadcasting at 23.4 kHz for the orthogonal station.

3.2.3 Magnetometer

The magnetometer employed a Scintrex Model VIW-2321 H8 cesium, optically pumped magnetometer sensor. The sensitivity of this instrument was 0.1 nanoTeslas at a 0.2 second sampling rate. The sensor was towed in a bird 12 metres below the helicopter.

3.2.4 Magnetic Base Station

An IFG-2 proton precession magnetometer was operated at the base of operations to record diurnal variations of the earth's magnetic field. The clock of the base station was synchronized with that of the airborne system to facilitate later correlation.

3.2.5 Radar Altimeter

A Hoffman HRA-100 radar altimeter was used to record terrain clearance. The output from the instrument is a linear function of altitude for maximum accuracy.

3.2.6 Tracking Camera

A Geocam tracking camera was used to record flight path on 35 mm film. The camera was operated in strip film mode and the fiducial numbers for cross-reference to the analog and digital data were imprinted on the margin of the film.

3.2.7 Analog Recorder

An RMS dot-matrix recorder was used to display the data during the survey. In addition to manual and time fiducials, the following data were recorded:

Channel	Input	Scale
00	Low Frequency Inphase	2 ppm/mm
01	Low Frequency Quadrature	2 ppm/mm
02	High Frequency Inphase	2 ppm/mm
03	High Frequency Quadrature	2 ppm/mm
04	Mid Frequency Inphase	4 ppm/mm
05	Mid Frequency Quadrature	4 ppm/mm
06	VLF-EM Total Field, Line	2.5%/mm
07	VLF-EM Quadrature, Line	2.5%/mm
08	VLF-EM Total Field, Ortho	2.5%/mm
09	VLF-EM Quadrature, Ortho	2.5%/mm

Channel	Input	Scale
10	Altimeter (150 m at top of chart)	3 m/mm
11	Magnetometer, fine	2.5 nT/mm
12	Magnetometer, coarse	25 nT/mm
13	Magnetometer, noise	0.025 nT/mm

3.2.8 Digital Recorder

A DGR 33 data system recorded the survey on magnetic tape. Information recorded was as follows:

Equipment	Recording Interval
EM system	0.1 seconds
VLF-EM	0.25 seconds
Magnetometer	0.25 seconds
Altimeter	0.5 seconds

Positional information was recorded at 0.5 second intervals on a DAC/NAV I.

3.2.9 Radar Positioning System

A Motorola Mini-Ranger (MRS III) radar navigation system was used for both navigation and flight path recovery. Transponders sited at fixed locations were interrogated several times per second and the ranges from these points to the helicopter measured to a high degree of accuracy. A navigational computer triangulates the position of the helicopter and provides the pilot with navigation information. The range/range data was recorded on magnetic tape for subsequent flight path determination.

4. DATA PRESENTATION

4.1 Base Map

A photomosaic base at a scale of 1:10,000 was prepared from a photo lay down map, supplied by the Aerodat, on an screened mylar base.

4.2 Flight Path Map

Although the Mini-Ranger navigation system was used for navigation purposes, the flight path had to be derived from a combination of the available Mini-Ranger data, from navigators manual "picks" that were marked on the photomosaic flight line map and points picked from the record of the flight path taken by the film tracking camera. In rugged or mountainous terrain where line-of-sight electronic navigation and flight path recovery systems are not practical, this method is the only means available to establish flight path. Depending on the quality of the air photos and the photomosaic, the degree and density to which points can be recovered, the rugged nature of the terrain and the quality of the navigation, this method may show errors of greater than 30 metres in the location of anomalies on the topographic map with respect to their true position on the ground. The flight path map showing all flight lines, is presented on a Cronaflex copy of the base map, with camera frame and navigator's manual fiducials for cross reference to both the analog and digital data.

4.3 Airborne Electromagnetic Survey Interpretation Map

The electromagnetic data were recorded digitally at a sample rate of 10 per second with a time constant of 0.1 seconds. A two stage digital filtering process was carried out to reject major sferic events and to reduce system noise.

Local sferic activity can produce sharp, large amplitude events that cannot be removed by conventional filtering procedures. Smoothing or stacking will reduce their amplitude but leave a broader residual response that can be confused with geological phenomena. To avoid this possibility, a computer algorithm searches out and rejects the major sferic events.

The signal to noise ratio was further enhanced by the application of a low pass digital filter. It has zero phase shift which prevents any lag or peak displacement from occurring, and it suppresses only variations with a wavelength less than about 0.25 seconds. This low effective time constant permits maximum profile shape resolution.

Following the filtering process, a base level correction was made. The correction applied is a linear function of time that ensures the corrected amplitude of the various inphase and quadrature components is zero when no conductive or permeable source is present. The filtered and levelled data were used in the interpretation of the electromagnetics.

An interpretation map was prepared showing peak locations of anomalies and conductivity thickness ranges along with the Inphase amplitudes (computed from the 4600 Hz coaxial response) and conductor axes. The anomalous responses of the three coil configurations along with the interpreted conductor axes were plotted on a Cronaflex copy of the photo base map.

4.4 Total Field Magnetic Contours

The aeromagnetic data were corrected for diurnal variations by adjustment with the digitally recorded base station magnetic values. No correction for regional variation was applied. The corrected profile data were interpolated onto a regular grid at a 25 metre true scale interval using a cubic spline technique. The grid provided the basis for threading the presented contours at a 2 nanoTesla interval.

The contoured aeromagnetic data have been presented on a Cronaflex copy of the photomosaic base map.

4.5 Vertical Magnetic Gradient Contours

The vertical magnetic gradient was calculated from the gridded total field magnetic data. Contoured at a 0.2 nT/m interval, the gradient data were presented on a Cronaflex copy of the photomosaic base map.

4.6 Apparent Resistivity Contours

The electromagnetic information was processed to yield a map of the apparent resistivity of the ground.

The approach taken in computing apparent resistivity was to assume a model of a 200 metre thick conductive layer (i.e., effectively a half space) over a resistive bedrock. The computer then generated, from nomograms for this model, the resistivity that would be consistent with the bird elevation and recorded amplitude for the coaxial frequency pair used. The apparent resistivity profile data were interpolated onto a regular grid at a 25 metres true scale interval using a cubic spline technique.

The contoured apparent resistivity data were presented on a Cronaflex copy of the photomosaic base map with the flight path and electromagnetic anomaly information.

4.7 VLF-EM Total Field Contours

The VLF-EM signals from NLK, Jim Creek, Washington, and from NPM Lualualei, Hawaii broadcasting at 24.8 and 23.4 kHz respectively, were compiled in contour map form and presented on a Cronaflex copy of the photomosaic base map.

5. INTERPRETATION

5.1 Geology

No geologic data were supplied to Aerodat by Rise Resources Ltd. and Gallant Gold Mines Ltd. (the client) and no other published data were available to the writer. Also, types of targets sought have not been discussed or identified by the client although it is generally assumed that the primary interest is in gold mineralization that is known to occur in the general area.

5.2 Magnetics

The magnetic data from the high sensitivity cesium magnetometer provided virtually a continuous magnetic reading when recording at two-tenth second intervals. The system is also noise free for all practical purposes.

The sensitivity of 0.1 nT allows for the mapping of very small inflections in the magnetic field, resulting in a contour map that is comparable in quality to ground data. Both the fine and coarse magnetic traces were recorded on the magnetic charts.

West Area (A.1) - The magnetic contour map is dominated by a north westerly trending anomaly in the east central portion of the survey. Peak values are only about 700 nanoTeslas (nT) above the approximate 58,000 nT background but the magnetic gradient is quite uniform across the entire width of the survey up to the maximum values. The causative body must be a deep-seated intrusive whose surface expression is outlined by the high gradient areas on the vertical gradient map.

The small features throughout the Total Field Contour map show no particular orientation although north westerly trends are apparent. However, the Vertical Magnetic Gradient map shows a dominant set of east-west to west northwesterly trends throughout the area. This is believed to be a reflection of a fairly consistent series of near east-west faults although little if any of this is evident on the photomosaic map. (North easterly faulting is evident from the latter, a difficult situation to detect considering the line direction and spacing.)

East Area (A.2) - The Total Field Magnetic map indicates that the area can be divided into two stratigraphic units roughly along a north westerly line through the centre of the survey block. A fairly strong magnetic trend, dipping shallowly to the south west, marks the contact zone. Magnetic values along this trend reach a peak of about 2,600 nT (Line 2270) above a 59,950 nT background over the south east portion of the trend.

A few minor (i.e., 10 to 20 nT) north west trends were mapped to the south west of the interpreted contact but the strong magnetic gradient tends to mask these subtle trends. North east of this contact, the magnetic relief is perhaps twice as high but even without the strong gradient effects, no clear-cut pattern of magnetic trends comes out. This may be due to faulting, a few of which can readily be traced out from the magnetic map. These include east northeasterly and north northeasterly faults that have produced apparent gaps in the north west magnetic trend. A west northwesterly fault or shear is also indicated within the south western part of the survey.

The Vertical Magnetic Gradient map supports the east northeast fault trends but adds little to the overall magnetic picture. Lacking any geologic guidelines as to rock types and lithologies, the "best guess" interpretation of the strong magnetic trend is that of a mafic (intrusive) sill dipping south westerly and displaced vertically by faulting, probably along east northeasterly faults.

5.3 ELECTROMAGNETICS

The electromagnetic data was first checked by a line-by-line examination of the analog records. Record quality was good with little or no sferic interference and instrument noise was well within specifications. Geologic noise, in the form of surficial conductors, is present on all three channels of the data, particularly on the higher frequency responses.

Anomalies were picked off the analog traces of the low and high frequency coaxial responses and then validated on the coplanar profile data. These selections were then checked with a proprietary computerized selection program which can be adjusted for ambient and instrumental noise. The data were then edited and re-plotted on a copy of the of the profile map. This procedure ensured that every anomalous response spotted on the analog data was plotted on the final map and allowed for the rejection - or inclusion if warranted - of obvious surficial conductors.

Each conductor or group of conductors was evaluated on the bases of magnetic (and lithologic, where applicable) correlations apparent on the analog data and man made or surficial features not obvious on the analog charts.

RESULTS: West Area (A.1) - The most striking aspect of this survey is the extremely high surficial - and probably, bedrock - conductance values recorded over almost the entire area of the survey. With general background resistivity values of the order of 50 to 63 ohm-metres, it is the values of the order of 400 ohm-metres that are considered anomalous.

The resistivity highs tend to correlate with magnetic highs particularly the north west trending magnetic high in the east central portion of the survey. However this correlation also holds for the apparent EM trends in the south west corner and, to a lesser degree, with the EM anomalies along the western boundary of the survey in the area of Line 1300. The gradient map is the better of the magnetic data sets to observe this correlation.

An anomalously high conductance area appears in the west central part of the survey centred on Line 1280 about 1.5 kilometres from the western boundary. The conductance values are of the order of four times background, consistent with an abrupt thickening of the surface layer or a change in resistivity and not necessarily a change in "bedrock" conductance. The surrounding resistivity highs not borne out in the magnetic data, may be due to bedrock topography.

A north westerly trending anomaly at the extreme eastern ends of Lines 1030 and 1011 conforms to the "classic" vertical sheet conductor model but is thought to be of cultural (i.e.

telephone line?) origin.

East Area (A.2) - The contrast in stratigraphy over this survey area is perhaps more pronounced on the electromagnetic data than on the magnetics. The interpreted north west contact also produces a marked increase in the overall conductance values south west of the contact. One or two major conductive trends exist to the north east of this contact zone, generally corresponding to areas of magnetic lows. To the south east, no correlation with magnetics is apparent, although the higher amplitude conductors in the south east tend to fall within magnetic lows.

5.4 APPARENT RESISTIVITY

The Apparent Resistivity maps give a more comprehensive picture of the distributions of conductance throughout the surveys. Some of the conductors or conductive zones may appear to fall along distinct trends but the general impression is one of a broad belt of conductive stratigraphy with local changes due to variations in bedrock levels, undulations in the conductive horizon and locally, intrusives or changes in bedrock lithology. This is particularly applicable to the western survey area. Over the eastern block, the conductive zones to the north east of the 'contact' are likely similar although in a different stratigraphic unit. They could also represent 'islands or windows' of the lithologies to the south west. Conductance is generally high over both areas.

5.5 VLF-EM TOTAL FIELD

West Area (A.1): Contrary to the magnetic pattern, the VLF map shows a dominant north-south series of trends with only a minor disruption in the immediate area of the intrusive body. Offsets along the north-south trends are indicative of near east-west faulting. The VLF pattern appears to be a reflection of the north-south stratigraphy (?) characterized by the north-south lineaments on the photomosaic map. This may be conductivity changes across the contacts (i.e. changes in water content of the adjacent strata) but some geologic input would be necessary to extend this interpretation along these concepts. There is also a strong suspicion that, with the high surficial conductance, the VLF trends are primarily reflections of transmitter direction.

East Area (A.2): The VLF contour data shows broad, northsouth VLF trends that are disrupted or displaced along north westerly and north easterly lineaments. These lineaments corroborate trends evident on or interpreted from the magnetics. The north-south VLF trend appears to be a reflection of the

'Line' transmitter direction, that is, virtually due south. No corresponding magnetic trends are evident.

5.6 CONCLUSIONS

A complete and definitive interpretation of the electromagnetic data would require some geologic guidelines, but even the most rudimentary data is lacking.

West Area (A.1): The anomalously high and almost uniform, near surface conductances throughout this survey area are thought to be a function of the underlying lithologies. Conductivity contrasts along north west trends appear to be due more to the presence of intrusive (?) magnetic bodies than to any changes in host rock mineralization or composition. The writer has no explanation for the high overall conductance values in this terrain but believes it is not solely due to overburden. Rather, it could be a weathered sediment (shale or slate) with high conductance electrolytes tied up in the resulting clay materials. Conductive trends within the 'bedrock' are then a function of contrasts in bedrock lithology as typified by the magnetic high zones that have been interpreted as intrusive bodies.

Areas to be targeted for further exploration work should be restricted to the immediate vicinity of the magnetic highs (i.e., intrusives) as depicted on the Vertical Magnetic Gradient map and possibly the intersections of these highs with the east-west structural breaks.

East Area (A.2): The north west magnetic trend appears to be from a mafic or ultramafic sill along a major fault or unconformity, probably with sediments to the south west and sediments interbedded with intermediate to felsic volcanics to the north east. The conductive areas and zones as depicted on the Apparent Resistivity map do not in themselves appear to present exploration targets - the mineralization is thought to be clays or graphites with some minor sulphides - but the intersection of fault trends with these zones may be significant.

The results from these two surveys are compatible with a broad, high conductance area that extends at least to the strong north west trend mapped in the eastern block.

5.7 RECOMMENDATIONS

The survey data should be re-interpreted after the geologic data has been compiled on either a Vertical Magnetic Gradient or Apparent Resistivity base, preferably the latter. Faults and shears, interpreted from the magnetics, should also be incorporated. Without any geologic data, the writer is not in a position to postulate a suitable geologic model for the electromagnetic data that has been recorded over these areas or for possibilities of gold mineralization within the areas. Therefore, no recommendations can be made for any additional geophysical work and no recommendations for further exploration are submitted other than the suggestions regarding the significance of transverse structures (under Conclusions).

REGISTERED PROFESSIONAL ENGINEER
G. PODOLSKY
PROVINCE OF ONTARIO

George Podolsky

for

AERODAT LIMITED

June 6, 1987

J8647

APPENDIX I

GENERAL INTERPRETIVE CONSIDERATIONS

Electromagnetic

The Aerodat three frequency system utilizes two different transmitter-receiver coil geometries. The traditional coaxial coil configuration is operated at two widely separated frequencies and the horizontal coplanar coil pair is operated at a frequency approximately aligned with one of the coaxial frequencies.

The electromagnetic response measured by the helicopter system is a function of the "electrical" and "geometrical" properties of the conductor. The "electrical" property of a conductor is determined largely by its electrical conductivity, magnetic susceptibility and its size and shape; the "geometrical" property of the response is largely a function of the conductor's shape and orientation with respect to the measuring transmitter and receiver.

Electrical Considerations

For a given conductive body the measure of its conductivity or conductance is closely related to the measured phase shift between the received and transmitted electromagnetic field. A small phase shift indicates a relatively high conductance, a large phase shift lower conductance. A small phase shift results in a large inphase to quadrature ratio and a large phase shift a low ratio. This relationship is shown quantitatively for a non-magnetic vertical half-plane model on the accompanying phasor diagram. Other physical models will show the same trend but different quantitative relationships.

The phasor diagram for the vertical half-plane model, as presented, is for the coaxial coil configuration with the amplitudes in parts per million (ppm) of the primary field as measured at the response peak over the conductor. To assist the interpretation of the survey results the computer is used to identify the apparent conductance and depth at selected anomalies. The results of this calculation are presented in table form in Appendix II and the conductance and inphase amplitude are presented in symbolized form on the map presentation.

The conductance and depth values as presented are correct only as far as the model approximates the real geological situation. The actual geological source may be of limited length, have significant dip, may be strongly magnetic, its conductivity and thickness may vary with depth and/or strike and adjacent bodies and overburden may have modified the response. In general the conductance estimate is less affected by these limitations than is the depth estimate, but both should be considered as relative rather than absolute guides to the anomaly's properties.

Conductance in mhos is the reciprocal of resistance in ohms and in the case of narrow slab-like bodies is the product of electrical conductivity and thickness.

Most overburden will have an indicated conductance of less than 2 mhos; however, more conductive clays may have an apparent conductance of say 2 to 4 mhos. Also in the low conductance range will be electrolytic conductors in faults and shears.

The higher ranges of conductance, greater than 4 mhos, indicate that a significant fraction of the electrical conduction is electronic rather than electrolytic in nature. Materials that conduct electronically are limited to certain metallic sulphides and to graphite. High conductance anomalies, roughly 10 mhos or greater, are generally limited to sulphide or graphite bearing rocks.

Sulphide minerals, with the exception of such ore minerals as sphalerite, cinnabar and stibnite, are good conductors; sulphides may occur in a disseminated manner that inhibits electrical conduction through the rock mass. In this case the apparent conductance can seriously underrate the quality of the conductor in geological terms. In a similar sense the relatively non-conducting sulphide minerals noted above may be present in significant consideration in association with minor conductive sulphides, and the electromagnetic response only relate to the minor associated mineralization. Indicated conductance is also of little direct significance for the identification of gold mineralization. Although gold is highly conductive, it would not be expected to exist in sufficient quantity to create a recognizable anomaly, but minor accessory sulphide mineralization could provide a useful indirect indication.

In summary, the estimated conductance of a conductor can provide a relatively positive identification of significant sulphide or graphite mineralization; however, a moderate to low conductance value does not rule out the possibility of significant economic mineralization.

Geometrical Considerations

Geometrical information about the geologic conductor can often be interpreted from the profile shape of the anomaly. The change in shape is primarily related to the change in inductive coupling among the transmitter, the target, and the receiver.

In the case of a thin, steeply dipping, sheet-like conductor, the coaxial coil pair will yield a near symmetric peak over the conductor. On the other hand, the coplanar coil pair will pass through a null couple relationship and yield a minimum over the conductor, flanked by positive side lobes. As the dip of the conductor decreased from vertical, the coaxial anomaly shape changes only slightly, but in the case of the coplanar coil pair the side lobe on the down dip side strengthens relative to that on the up dip side.

As the thickness of the conductor increases, induced current flow across the thickness of the conductor becomes relatively significant and complete null coupling with the coplanar coils is no longer possible. As a result, the apparent minimum of the coplanar response over the conductor diminishes with increasing thickness, and in the limiting case of a fully 3 dimensional body or a horizontal layer or half-space, the minimum disappears completely.

A horizontal conducting layer such as overburden will produce a response in the coaxial and coplanar coils that is a function of altitude (and conductivity if not uniform). The profile shape will be similar in both coil configurations with an amplitude ratio (coplanar:coaxial) of about 4:1*.

In the case of a spherical conductor, the induced currents are confined to the volume of the sphere, but not relatively restricted to any arbitrary plane as in the case of a sheet-like form. The response of the coplanar coil pair directly over the sphere may be up to 8* times greater than that of the coaxial pair.

In summary, a steeply dipping, sheet-like conductor will display a decrease in the coplanar response coincident with the peak of the coaxial response. The relative strength of this coplanar null is related inversely to the thickness of the conductor; a pronounced null indicates a relatively thin conductor. The dip of such a conductor can be inferred from the relative amplitudes of the side-lobes.

Massive conductors that could be approximated by a conducting sphere will display a simple single peak profile form on both coaxial and coplanar coils, with a ratio between the coplanar to coaxial response amplitudes as high as 8*.

Overburden anomalies often produce broad poorly defined anomaly profiles. In most cases, the response of the coplanar coils closely follows that of the coaxial coils with a relative amplitude ratio of 4*.

Occasionally, if the edge of an overburden zone is sharply defined with some significant depth extent, an edge effect will occur in the coaxial coils. In the case of a horizontal conductive ring or ribbon, the coaxial response will consist of two peaks, one over each edge; whereas the coplanar coil will yield a single peak.

* It should be noted at this point that Aerodat's definition of the measured ppm unit is related to the primary field sensed in the receiving coil without normalization to the maximum coupled (coaxial configuration). If such normalization were applied to the Aerodat units, the amplitude of the coplanar coil pair would be halved.

Magnetics

The Total Field Magnetic Map shows contours of the total magnetic field, uncorrected for regional variation. Whether an EM anomaly with a magnetic correlation is more likely to be caused by a sulphide deposit than one without depends on the type of mineralization. An apparent coincidence between an EM and a magnetic anomaly may be caused by a conductor which is also magnetic, or by a conductor which lies in close proximity to a magnetic body. The majority of conductors which are also magnetic are sulphides containing pyrrhotite and/or magnetite. Conductive and magnetic bodies in close association can be, and often are, graphite and magnetite. It is often very difficult to distinguish between these cases. If the conductor is also magnetic, it will usually produce an EM anomaly whose general pattern resembles that of the magnetics. Depending on the magnetic permeability of the conducting body, the amplitude of the inphase EM anomaly will be weakened, and if the conductivity is also weak, the inphase EM anomaly may even be reversed in sign.

VLF Electromagnetics

The VLF-EM method employs the radiation from powerful military radio transmitters as the primary signals. The magnetic field associated with the primary field is elliptically polarized in the vicinity of electrical conductors. The Herz Totem uses three coils in the X, Y, Z configuration to measure the total field and vertical quadrature component of the polarization ellipse.

The relatively high frequency of VLF (15-25) kHz provides high response factors for bodies of low conductance. Relatively "disconnected" sulphide ores have been found to produce measureable VLF signals. For the same reason, poor conductors such as sheared contacts, breccia zones, narrow faults, alteration zones and porous flow tops normally produce VLF anomalies. The method can therefore be used effectively for geological mapping. The only relative disadvantage of the method lies in its sensitivity to conductive overburden. In conductive ground the depth of exploration is severely limited.

The effect of strike direction is important in the sense of the relation of the conductor axis relative to the energizing electromagnetic field. A conductor aligned along a radius drawn from a transmitting station will be in a maximum coupled orientation and thereby produce a stronger response than a similar conductor at a different strike angle. Theoretically, it would be possible for a conductor, oriented tangentially to the transmitter to produce no signal. The most obvious effect of the strike angle consideration is that conductors favourably oriented with respect to the transmitter location and also near perpendicular to the flight direction are most clearly rendered and usually dominate the map presentation.

The total field response is an indicator of the existence and position of a conductivity anomaly. The response will be a maximum over the conductor, without any special filtering, and strongly favour the upper edge of the conductor even in the case of a relatively shallow dip.

The vertical quadrature component over steeply dipping sheet-like conductor will be a cross-over type response with the cross-over closely associated with the upper edge of the conductor.

The response is a cross-over type due to the fact that it is the vertical rather than total field quadrature component that is measured. The response shape is due largely to geometrical rather than conductivity considerations and the distance between the maximum and minimum on either side of the cross-over is related to target depth. For a given target geometry, the larger this distance the greater the depth.

The amplitude of the quadrature response, as opposed to shape is function of target conductance and depth as well as the conductivity of the overburden and host rock. As the primary field travels down to the conductor through conductive material it is both attenuated and phase shifted in a negative sense. The secondary field produced by this altered field at the target also has an associated phase shift. This phase shift is positive and is larger for relatively poor conductors. This secondary field is attenuated and phase shifted in a negative sense during return travel to the surface. The net effect of these 3 phase shifts determine the phase of the secondary field sensed at the receiver.

A relatively poor conductor in resistive ground will yield a net positive phase shift. A relatively good conductor in more conductive ground will yield a net negative phase shift. A combination is possible whereby the net phase shift is zero and the response is purely in-phase with no quadrature component.

A net positive phase shift combined with the geometrical crossover shape will lead to a positive quadrature response on the side of approach and a negative on the side of departure. A net negative phase shift would produce the reverse. A further sign reversal occurs with a 180 degree change in instrument orientation as occurs on reciprocal line headings. During digital processing of the quadrature data for map presentation this is corrected for by normalizing the sign to one of the flight line headings.

APPENDIX II A

LIST OF CLAIMS SURVEYED - JOB J8647A

CLAIMS	RECORDS	UNITS	ANNIVERSARIES
CWR	7414	20	21 MARCH
CWR 2	7436	12	25 MARCH
CWR 3	7439	20	26 MARCH
CWR 4	7618	16	29 APRIL
CR	7396	20	10 MARCH
O	7395	20	10 MARCH
HO	7506	20	11 APRIL

J8647A - GALLANT GOLD MINES LTD

FLIGHT	LINE	ANOMALY	CATEGORY	AMPLITUDE (PPM) INPHASE	QUAD.	CONDUCTOR CTP MHOS	DEPTH MTRS	BIRD HEIGHT MTRS
1	1011	A	1	31.1	30.0	1.6	0	606
1	1030	A	1	64.4	74.8	1.6	0	465
1	1060	A	1	26.6	34.8	1.0	0	520
1	1070	A	2	33.5	25.4	2.2	0	602
1	1070	B	1	22.5	23.3	1.3	0	576
1	1070	C	0	22.3	35.5	0.7	0	525
1	1070	D	0	21.6	36.1	0.6	0	540
1	1080	A	0	20.6	30.8	0.7	0	553
1	1080	B	0	26.2	41.4	0.7	0	499
1	1080	C	0	28.9	40.1	0.9	0	476
1	1080	D	1	34.3	31.3	1.7	0	548
1	1090	A	2	39.3	31.1	2.2	0	587
1	1090	B	1	25.4	32.5	1.0	0	507
1	1090	C	1	28.1	30.9	1.3	0	530
1	1090	D	1	24.1	31.0	1.0	0	560
1	1090	E	1	22.8	25.0	1.2	0	608
1	1100	A	0	27.4	38.5	0.9	0	564
1	1100	B	0	23.0	45.5	0.5	0	454
1	1100	C	0	21.2	39.6	0.5	0	538
1	1100	D	0	27.2	40.3	0.8	0	500
1	1100	E	1	27.0	24.7	1.6	0	627
1	1100	F	0	31.2	47.0	0.9	0	523
1	1110	A	1	31.9	30.4	1.6	0	564
1	1120	A	0	9.9	16.5	0.5	0	648
1	1130	A	0	14.3	23.7	0.5	0	589
1	1140	A	0	25.7	41.9	0.7	0	498
1	1140	B	0	26.7	40.2	0.8	0	533
1	1140	C	0	26.2	39.2	0.8	0	505
1	1150	A	2	21.7	15.7	2.0	0	697
1	1150	B	2	20.9	14.0	2.2	0	705
1	1150	C	0	29.1	48.7	0.7	0	487
1	1150	D	0	23.0	37.7	0.7	0	497
1	1160	A	1	27.2	30.3	1.2	0	551

Estimated depth may be unreliable because the stronger part of the conductor may be deeper or to one side of the flight line, or because of a shallow dip or overburden effects.

J8647A - GALLANT GOLD MINES LTD

FLIGHT	LINE	ANOMALY	CATEGORY	AMPLITUDE (PPM) INPHASE	QUAD.	CONDUCTOR CTP MHOS	DEPTH MTRS	BIRD HEIGHT MTRS
1	1160	B	0	29.3	42.5	0.9	0	499
1	1160	C	0	27.7	43.0	0.8	0	508
1	1160	D	0	32.0	77.1	0.5	0	431
1	1160	E	0	26.3	42.7	0.7	0	443
1	1170	A	1	30.7	40.7	1.0	0	500
1	1170	B	0	16.5	36.2	0.4	0	582
1	1180	A	1	36.5	48.3	1.1	0	482
1	1180	B	0	38.7	59.1	0.9	0	456
1	1180	C	1	37.0	48.7	1.1	0	547
1	1180	D	0	21.2	46.1	0.4	0	467
1	1180	E	0	29.0	43.0	0.9	0	505
1	1180	F	0	38.9	63.4	0.8	0	518
1	1190	A	1	19.9	20.8	1.2	0	658
1	1190	B	0	27.7	58.6	0.5	0	478
1	1190	C	0	38.7	70.7	0.7	0	462
1	1190	D	1	25.3	26.7	1.3	0	518
1	1201	A	1	43.8	63.3	1.0	0	472
1	1201	B	0	25.9	45.5	0.6	0	508
1	1201	C	0	23.2	43.7	0.6	0	534
1	1210	A	0	16.8	22.6	0.8	0	600
1	1210	B	0	27.8	52.9	0.6	0	475
1	1220	A	0	30.1	62.4	0.5	0	481
1	1220	B	0	32.0	50.2	0.8	0	513
1	1220	C	0	34.4	53.7	0.9	0	527
1	1220	D	0	29.5	42.8	0.9	0	472
1	1230	A	0	28.4	50.8	0.7	0	454
1	1230	B	0	41.1	93.1	0.6	0	436
1	1230	C	0	21.2	57.7	0.3	0	458
1	1240	A	0	24.9	32.9	0.9	0	537
1	1240	B	0	24.4	36.6	0.8	0	557
1	1250	A	0	31.6	54.9	0.7	0	512
1	1250	B	0	26.3	39.4	0.8	0	591
1	1260	A	0	19.6	26.2	0.8	0	569
1	1260	B	1	40.1	51.4	1.2	0	486
1	1260	C	1	31.9	36.9	1.2	0	553

Estimated depth may be unreliable because the stronger part of the conductor may be deeper or to one side of the flight line, or because of a shallow dip or overburden effects.

J8647A - GALLANT GOLD MINES LTD

FLIGHT	LINE	ANOMALY	CATEGORY	AMPLITUDE (PPM) INPHASE	QUAD.	CONDUCTOR CTP MHOS	DEPTH MTRS	BIRD HEIGHT MTRS
1	1260	D	1	27.3	33.7	1.1	0	483
1	1260	E	0	14.8	25.2	0.5	0	482
1	1270	A	2	51.3	33.5	3.1	0	433
1	1270	B	1	17.7	16.3	1.4	0	704
1	1270	C	0	20.5	36.5	0.6	0	473
1	1280	A	0	8.0	8.2	0.8	0	808
1	1290	A	2	40.5	31.3	2.3	0	540
1	1290	B	2	40.4	34.3	2.0	0	595
1	1290	C	2	114.3	112.1	2.4	0	452
1	1290	D	0	24.8	35.0	0.9	0	542
1	1290	E	1	38.7	36.8	1.7	0	545
1	1290	F	1	29.0	27.0	1.6	0	623
1	1290	G	2	28.6	19.2	2.5	0	703
1	1300	A	2	21.0	15.5	2.0	0	678
1	1300	B	2	31.8	21.6	2.5	0	662
1	1300	C	1	21.1	20.0	1.4	0	679
1	1300	D	1	44.7	49.8	1.5	0	510
1	1300	E	1	40.6	44.9	1.4	0	464
1	1300	F	1	41.9	41.3	1.7	0	465
1	1310	A	1	15.4	12.7	1.5	0	817
1	1320	A	2	22.8	15.5	2.2	0	700
1	1320	B	0	18.1	36.3	0.5	0	486
1	1330	A	1	29.3	31.3	1.3	0	580
1	1330	B	1	27.1	35.7	1.0	0	532
1	1330	C	1	18.0	15.8	1.5	0	695
1	1360	A	1	43.2	65.1	1.0	0	497
1	1360	B	1	50.3	73.1	1.1	0	472
1	1370	A	1	49.3	68.0	1.2	0	457
1	1370	B	0	40.1	62.1	0.9	0	461
1	1380	A	1	37.6	49.6	1.1	0	452

Estimated depth may be unreliable because the stronger part of the conductor may be deeper or to one side of the flight line, or because of a shallow dip or overburden effects.

APPENDIX II B

LIST OF CLAIMS SURVEYED - JOB J8647B

CLAIMS	RECORDS	UNITS	ANNIVERSARIES
MOST	7253	20	13 JANUARY
LIGHT 1	7254	1	13 JANUARY
LIGHT 2	7336	1	17 FEBRUARY
LANCE	7365	8	25 FEBRUARY
FREE	7366	20	25 FEBRUARY
WING	7402	12	14 MARCH
HY	7410	4	14 MARCH
LAKE 1	7437	1	25 MARCH
LAKE 2	7438	1	25 MARCH
LIGHT 3	7482	1	7 APRIL
LIGHT 4	7483	1	7 APRIL
ANGUS	7512	20	14 APRIL
RAM 1	7785	1	18 JULY
RAM 2	7786	1	18 JULY
RAM 3	7787	1	18 JULY
RAM 4	7788	1	18 JULY
WINGDAM	7810	16	28 JULY
DAM	7933	20	5 SEPTEMBER

J8647B - GALLANT MINES LTD

FLIGHT	LINE	ANOMALY	CATEGORY	AMPLITUDE (PPM) INPHASE	QUAD.	CONDUCTOR CTP MHOS	DEPTH MTRS	BIRD HEIGHT MTRS
2	2011	A	2	20.4	11.0	3.0	0	498
2	2020	A	2	17.7	11.0	2.3	0	533
2	2030	A	0	4.3	21.6	0.0	0	495
2	2030	B	2	22.8	15.1	2.3	0	603
2	2040	A	0	7.9	9.5	0.7	0	550
2	2040	B	1	26.2	22.6	1.7	0	524
2	2040	C	1	24.9	22.2	1.6	0	538
2	2040	D	3	43.2	16.9	5.8	0	501
2	2040	E	3	44.3	21.2	4.5	0	525
2	2040	F	2	53.8	32.6	3.5	0	537
2	2040	G	3	60.1	31.7	4.3	0	590
2	2050	A	3	53.6	28.3	4.2	0	496
2	2050	B	3	53.7	22.7	5.6	0	432
2	2050	C	3	79.0	36.1	5.7	0	547
2	2050	D	2	63.4	46.9	2.8	0	448
2	2050	E	3	73.9	41.7	4.2	0	452
2	2050	F	3	72.7	37.7	4.7	0	518
2	2050	G	3	67.3	33.1	4.9	0	511
2	2050	H	0	5.7	22.7	0.1	0	438
2	2050	J	0	12.8	16.5	0.7	0	518
2	2050	K	0	10.5	16.1	0.5	0	570
2	2050	M	0	6.3	19.7	0.1	0	527
2	2050	N	0	3.1	14.8	0.0	0	626
2	2060	A	0	4.5	15.3	0.1	0	626
2	2060	B	0	13.6	16.0	0.9	0	486
2	2060	C	0	10.1	13.8	0.6	0	504
2	2060	D	1	22.7	19.7	1.6	0	494
2	2060	E	4	81.8	28.1	8.3	0	471
2	2060	F	3	46.0	21.0	4.8	0	488
2	2060	G	3	62.3	30.3	4.9	0	461
2	2060	H	2	48.3	36.5	2.5	0	475
2	2060	J	2	39.5	33.4	2.0	0	457
2	2060	K	2	34.9	26.9	2.2	0	480
2	2060	M	1	21.0	20.4	1.3	0	526
2	2060	N	1	18.1	16.4	1.4	0	622
2	2060	O	1	27.8	26.6	1.5	0	672
2	2070	A	2	27.1	20.0	2.1	0	523
2	2070	B	1	33.8	37.6	1.3	0	603

Estimated depth may be unreliable because the stronger part of the conductor may be deeper or to one side of the flight line, or because of a shallow dip or overburden effects.

J8647B - GALLANT MINES LTD

FLIGHT	LINE	ANOMALY	CATEGORY	AMPLITUDE (PPM) INPHASE	QUAD.	CONDUCTOR CTP MHOS	DEPTH MTRS	BIRD HEIGHT MTRS
2	2070	C	2	33.9	25.6	2.2	0	485
2	2070	D	1	34.6	32.9	1.7	0	545
2	2070	E	1	42.0	41.5	1.7	0	447
2	2070	F	2	62.7	39.9	3.4	0	462
2	2070	G	2	60.8	41.2	3.1	0	450
2	2070	H	2	74.2	46.2	3.7	0	463
2	2070	J	2	69.3	46.8	3.3	0	436
2	2070	K	3	60.7	30.8	4.6	0	472
2	2070	M	2	42.4	29.9	2.6	0	432
2	2070	N	3	36.5	18.2	4.0	0	458
2	2070	O	1	20.5	19.3	1.4	0	468
2	2070	P	1	20.4	17.2	1.6	0	550
2	2070	Q	1	27.4	21.8	1.9	0	482
2	2070	R	1	21.5	18.0	1.7	0	450
2	2070	S	1	26.9	23.1	1.7	0	456
2	2070	T	0	10.3	13.0	0.7	0	552
2	2070	U	1	47.5	63.8	1.2	0	488
2	2070	V	1	49.1	62.1	1.3	0	526
2	2070	W	1	41.7	48.1	1.4	0	599
2	2080	A	1	28.1	32.6	1.2	0	633
2	2080	B	1	28.6	32.4	1.2	0	537
2	2080	C	1	20.2	16.2	1.7	0	582
2	2080	D	1	25.0	23.5	1.5	0	535
2	2080	E	0	15.9	19.6	0.9	0	577
2	2080	F	0	6.9	8.9	0.6	0	593
2	2080	G	1	8.5	7.6	1.1	0	533
2	2080	H	3	21.7	8.9	4.4	0	566
2	2080	J	4	37.3	10.3	8.8	0	517
2	2080	K	3	38.4	11.8	7.7	0	551
2	2080	M	3	52.2	22.9	5.3	0	581
2	2080	N	3	46.1	24.1	4.0	0	562
2	2080	O	3	51.5	27.0	4.2	0	559
2	2080	P	3	57.0	23.6	5.8	0	550
2	2080	Q	3	56.3	24.6	5.4	0	479
2	2080	R	3	45.6	15.5	7.1	0	665
2	2080	S	2	29.0	16.8	3.0	0	530
2	2090	A	3	37.4	15.8	5.0	0	545
2	2090	B	3	33.2	13.4	5.1	0	474
2	2090	C	2	35.4	19.2	3.5	0	505
2	2090	D	3	29.0	11.1	5.3	0	533
2	2090	E	3	27.7	9.9	5.7	0	583
2	2090	F	4	37.0	9.1	10.2	0	553
2	2090	G	1	11.3	9.9	1.2	0	634

Estimated depth may be unreliable because the stronger part of the conductor may be deeper or to one side of the flight line, or because of a shallow dip or overburden effects.

J8647B - GALLANT MINES LTD

FLIGHT	LINE	ANOMALY	CATEGORY	AMPLITUDE (PPM) INPHASE	QUAD.	CONDUCTOR CTP MHOS	DEPTH MTRS	BIRD HEIGHT MTRS
2	2090	H	1	13.5	12.0	1.3	0	634
2	2090	J	0	9.1	10.3	0.8	0	524
2	2090	K	2	14.8	9.1	2.2	0	505
2	2090	M	1	12.6	9.5	1.6	0	590
2	2090	N	1	15.5	14.5	1.3	0	518
2	2090	O	3	23.7	9.9	4.4	0	574
2	2090	P	1	32.4	38.6	1.2	0	515
2	2090	Q	1	37.2	45.8	1.2	0	520
2	2090	R	1	28.3	27.1	1.5	0	478
2	2090	S	1	23.2	20.3	1.6	0	528
2	2100	A	1	16.7	12.0	1.9	0	618
2	2100	B	1	20.3	20.1	1.3	0	555
2	2100	C	1	25.2	19.8	1.9	0	603
2	2100	D	2	35.5	24.0	2.6	0	593
2	2100	E	2	54.7	33.9	3.4	0	551
2	2100	F	2	50.0	35.6	2.8	0	519
2	2100	G	3	36.4	15.3	5.0	0	684
2	2100	H	2	35.7	22.4	2.9	0	599
2	2100	J	3	51.5	27.7	4.0	0	589
2	2100	K	3	63.5	27.2	5.8	0	582
2	2100	M	3	57.3	29.7	4.4	0	528
2	2100	N	2	38.4	20.6	3.7	0	598
2	2100	O	3	35.3	16.6	4.3	0	484
2	2100	P	3	39.0	18.6	4.3	0	474
2	2100	Q	2	30.1	21.3	2.3	0	482
2	2100	R	1	17.2	19.4	1.0	0	401
2	2100	S	0	11.2	17.8	0.5	0	455
2	2110	A	2	26.0	17.1	2.5	0	453
2	2110	B	3	51.3	26.5	4.2	0	629
2	2110	C	2	42.8	24.5	3.5	0	648
2	2110	D	1	16.8	13.1	1.7	0	752
2	2110	E	2	21.2	13.8	2.3	0	629
2	2110	F	1	26.6	27.3	1.4	0	556
2	2110	G	2	37.7	19.1	3.9	0	579
2	2110	H	2	33.3	21.9	2.7	0	559
2	2110	J	2	16.5	11.2	2.0	0	631
2	2110	K	2	15.0	9.3	2.2	0	521
2	2110	M	1	16.1	13.2	1.5	0	513
2	2110	N	1	11.9	11.0	1.2	0	539
2	2110	O	1	10.9	10.7	1.0	0	506
2	2110	P	1	15.6	14.5	1.3	0	510
2	2110	Q	1	14.1	14.1	1.1	0	467
2	2120	A	1	8.5	8.1	1.0	0	735

Estimated depth may be unreliable because the stronger part of the conductor may be deeper or to one side of the flight line, or because of a shallow dip or overburden effects.

J8647B - GALLANT MINES LTD

FLIGHT	LINE	ANOMALY	CATEGORY	AMPLITUDE (PPM) INPHASE	QUAD.	CONDUCTOR CTP MHOS	DEPTH MTRS	BIRD HEIGHT MTRS
2	2120	B	1	19.5	16.2	1.6	0	476
2	2120	C	1	14.0	10.9	1.6	0	539
2	2120	D	1	10.3	8.7	1.2	0	592
2	2120	E	2	20.1	14.4	2.0	0	606
2	2120	F	1	11.7	12.0	1.0	0	504
2	2120	G	1	9.2	8.6	1.0	0	550
2	2120	H	2	10.5	6.2	2.1	0	809
2	2120	J	3	29.5	12.8	4.5	0	484
2	2120	K	3	35.5	12.8	6.1	0	511
2	2120	M	2	19.9	9.3	3.6	0	547
2	2120	N	1	20.3	16.1	1.7	0	472
2	2120	O	1	22.2	18.7	1.7	0	488
2	2130	A	1	28.6	23.6	1.9	0	436
2	2130	B	1	24.8	22.5	1.6	0	469
2	2130	C	1	20.0	16.6	1.6	0	434
2	2130	D	1	17.0	13.2	1.7	0	515
2	2130	E	1	11.9	9.5	1.4	0	490
2	2130	F	2	9.9	5.6	2.2	0	891
2	2130	G	0	9.0	14.4	0.5	0	574
2	2130	H	0	9.2	11.0	0.7	0	717
2	2130	J	1	11.6	9.4	1.4	0	589
2	2130	K	1	9.2	7.7	1.2	0	613
2	2130	M	2	12.6	7.0	2.4	0	599
2	2130	N	1	10.9	7.9	1.6	0	728
2	2130	O	0	6.5	6.8	0.7	0	673
2	2140	A	1	9.3	6.5	1.6	0	489
2	2140	B	1	11.8	7.7	1.9	0	498
2	2140	C	1	19.0	14.9	1.7	0	528
2	2140	D	1	12.7	11.4	1.2	0	486
2	2140	E	0	6.5	8.6	0.5	0	523
2	2140	F	0	9.5	10.4	0.8	0	564
2	2140	G	0	8.9	10.8	0.7	0	539
2	2140	H	1	18.4	16.2	1.5	0	496
2	2140	J	3	23.1	8.1	5.5	0	634
2	2140	K	3	40.9	19.1	4.5	0	606
2	2140	M	3	24.0	10.0	4.4	0	539
2	2140	N	4	25.4	6.7	8.3	0	653
2	2140	O	3	30.1	9.3	7.1	0	562
2	2140	P	3	22.5	6.1	7.7	0	562
2	2140	Q	3	26.6	12.0	4.1	0	594
2	2140	R	2	29.3	19.2	2.6	0	483
2	2140	S	1	17.0	19.4	1.0	0	511
2	2150	A	3	28.0	12.2	4.4	0	579

Estimated depth may be unreliable because the stronger part of the conductor may be deeper or to one side of the flight line, or because of a shallow dip or overburden effects.

J8647B - GALLANT MINES LTD

FLIGHT	LINE	ANOMALY	CATEGORY	AMPLITUDE (PPM) INPHASE	QUAD.	CONDUCTOR CTP MHOS	DEPTH MTRS	BIRD HEIGHT MTRS
2	2150	B	3	36.3	15.6	4.8	0	677
2	2150	C	3	19.4	8.2	4.0	0	598
2	2150	D	2	21.9	14.0	2.4	0	536
2	2150	E	1	17.3	15.0	1.5	0	518
2	2150	F	1	14.8	15.4	1.1	0	442
2	2150	G	0	11.5	13.3	0.8	0	507
2	2150	H	0	9.2	9.3	0.9	0	497
2	2150	J	1	11.5	8.8	1.5	0	559
2	2150	K	1	11.9	10.5	1.2	0	511
2	2150	M	2	12.5	7.6	2.1	0	496
2	2160	A	3	13.1	5.1	4.0	0	628
2	2160	B	2	17.0	11.4	2.1	0	473
2	2160	C	3	41.4	15.0	6.3	0	445
2	2160	D	3	47.4	16.2	7.1	0	509
2	2160	E	6	30.1	2.0	56.2	0	571
2	2160	F	3	66.0	35.1	4.4	0	520
2	2160	G	2	38.7	32.9	2.0	0	581
2	2160	H	1	19.6	17.4	1.5	0	511
2	2160	J	1	19.7	16.7	1.6	0	526
2	2160	K	2	19.9	11.7	2.6	0	477
2	2160	M	3	19.6	7.7	4.5	0	521
2	2160	N	2	15.0	10.1	2.0	0	557
2	2160	O	2	13.6	8.6	2.1	0	590
2	2170	A	2	25.9	19.4	2.1	0	461
2	2170	B	2	22.2	11.1	3.4	0	573
2	2170	C	3	29.4	12.8	4.4	0	506
2	2170	D	3	28.5	12.5	4.4	0	499
2	2170	E	2	20.1	13.3	2.2	0	515
2	2170	F	2	45.8	27.0	3.4	0	522
2	2170	G	2	58.1	38.4	3.2	0	457
2	2170	H	1	60.8	64.1	1.8	0	474
2	2170	J	3	83.6	43.5	4.9	0	508
2	2170	K	3	77.0	35.9	5.5	0	531
2	2170	M	3	68.1	29.0	5.9	0	562
2	2170	N	6	46.4	3.5	53.2	0	556
2	2170	O	4	34.5	9.5	8.6	0	498
2	2170	P	1	10.3	8.1	1.4	0	506
2	2170	Q	0	4.1	8.5	0.2	0	526
2	2170	R	0	6.4	10.8	0.4	0	534
2	2170	S	1	6.9	4.7	1.4	0	622
2	2170	T	2	12.2	6.0	2.8	0	627
2	2180	A	1	11.7	8.4	1.6	0	643

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FLIGHT	LINE	ANOMALY	CATEGORY	AMPLITUDE (PPM) INPHASE	QUAD.	CONDUCTOR CTP MHOS	DEPTH MTRS	BIRD HEIGHT MTRS
2	2180	B	1	9.9	9.3	1.0	0	540
2	2180	C	0	7.4	7.7	0.8	0	560
2	2180	D	0	7.0	16.7	0.2	0	452
2	2180	E	0	4.1	12.5	0.1	0	461
2	2180	F	2	31.7	15.7	3.8	0	584
2	2180	G	4	29.5	7.9	8.5	0	680
2	2180	H	2	78.0	47.0	3.9	0	519
2	2180	J	2	85.8	84.7	2.2	0	468
2	2180	K	1	49.3	54.0	1.6	0	510
2	2180	M	1	60.3	67.5	1.6	0	453
2	2180	N	1	58.3	65.9	1.6	0	518
2	2180	O	1	51.8	58.4	1.5	0	486
2	2180	P	3	45.0	22.4	4.3	0	636
2	2180	Q	2	24.5	11.6	3.7	0	576
2	2180	R	2	24.2	14.0	2.9	0	491
2	2180	S	2	19.6	10.2	3.1	0	529
2	2180	T	2	30.5	16.8	3.3	0	473
2	2190	A	3	34.5	16.3	4.2	0	512
2	2190	B	3	34.8	12.7	5.9	0	528
2	2190	C	3	35.1	14.6	5.0	0	630
2	2190	D	3	87.2	34.4	7.1	0	512
2	2190	E	3	86.9	52.6	4.1	0	471
2	2190	F	2	120.8	95.4	3.2	0	475
2	2190	G	3	160.8	89.2	5.5	0	479
2	2190	H	3	155.9	96.5	4.7	0	456
2	2190	J	1	60.6	67.4	1.6	0	480
2	2190	K	1	77.0	82.8	1.9	0	471
2	2190	M	1	67.7	74.7	1.7	0	477
2	2190	N	2	68.1	51.1	2.8	0	494
2	2190	O	4	41.8	12.0	8.6	0	452
2	2190	P	3	30.8	13.0	4.7	0	450
2	2190	Q	0	10.4	13.6	0.7	0	564
2	2190	R	1	25.3	21.0	1.8	0	496
2	2190	S	2	36.7	27.0	2.4	0	515
2	2200	A	1	9.6	7.0	1.5	0	557
2	2200	B	2	36.3	21.7	3.1	0	542
2	2200	C	2	31.1	19.3	2.8	0	570
2	2200	D	0	13.2	19.5	0.6	0	523
2	2200	E	0	12.6	25.5	0.4	0	463
2	2200	F	0	11.8	16.6	0.6	0	561
2	2200	G	4	19.0	3.7	11.5	0	543
2	2200	H	3	77.7	36.7	5.4	0	512
2	2200	J	2	83.6	82.4	2.1	0	457

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FLIGHT	LINE	ANOMALY	CATEGORY	AMPLITUDE (PPM) INPHASE	QUAD.	CONDUCTOR CTP MHOS	DEPTH MTRS	BIRD HEIGHT MTRS
2	2200	K	2	90.3	92.5	2.1	0	443
2	2200	M	1	55.8	55.3	1.9	0	475
2	2200	N	3	97.3	44.9	6.0	0	506
2	2200	O	3	140.0	56.3	7.9	0	514
2	2200	P	3	94.4	55.6	4.3	0	477
2	2200	Q	2	81.8	56.3	3.4	0	487
2	2200	R	4	153.1	55.1	9.3	0	518
2	2200	S	4	153.0	49.2	10.8	0	469
2	2200	T	4	127.0	44.6	9.1	0	482
2	2200	U	3	74.2	31.7	6.1	0	524
2	2200	V	2	17.5	9.8	2.7	0	579
2	2210	A	1	17.7	12.8	1.9	0	564
2	2210	B	3	27.5	11.8	4.4	0	517
2	2210	C	2	30.6	17.0	3.3	0	625
2	2210	D	3	81.0	40.6	5.1	0	516
2	2210	E	4	86.5	28.7	8.8	0	573
2	2210	F	2	58.6	46.0	2.6	0	550
2	2210	G	2	69.2	46.6	3.3	0	552
2	2210	H	3	106.2	40.3	7.9	0	495
2	2210	J	1	51.8	57.2	1.6	0	451
2	2210	K	1	48.0	49.9	1.7	0	458
2	2210	M	1	28.3	37.1	1.0	0	497
2	2210	N	1	38.6	44.5	1.3	0	519
2	2210	O	2	41.6	32.5	2.3	0	527
2	2210	P	2	35.5	18.9	3.6	0	603
2	2210	Q	2	24.2	11.2	3.8	0	627
2	2210	R	3	26.1	8.8	6.0	0	590
2	2220	A	1	14.2	9.8	1.9	0	557
2	2220	B	1	10.3	8.3	1.3	0	517
2	2220	C	1	15.3	13.8	1.3	0	496
2	2220	D	3	26.2	10.3	4.9	0	508
2	2220	E	2	15.0	9.4	2.2	0	576
2	2220	F	2	19.0	12.8	2.1	0	675
2	2220	G	1	26.3	24.3	1.6	0	576
2	2220	H	1	34.0	44.8	1.1	0	449
2	2220	J	1	32.2	42.2	1.1	0	471
2	2220	K	3	197.1	111.0	5.7	0	459
2	2220	M	2	160.7	135.0	3.2	0	421
2	2220	N	3	173.2	106.9	4.9	0	422
2	2220	O	1	80.7	103.4	1.5	0	410
2	2220	P	0	34.1	62.4	0.7	0	436
2	2220	Q	1	58.9	71.5	1.5	0	473
2	2220	R	1	27.9	37.2	1.0	0	537

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FLIGHT	LINE	ANOMALY	CATEGORY	AMPLITUDE (PPM) INPHASE	QUAD.	CONDUCTOR CTP MHOS	DEPTH MTRS	BIRD HEIGHT MTRS
2	2220	S	2	35.9	28.3	2.2	0	544
2	2220	T	2	30.6	22.1	2.3	0	642
2	2220	U	2	26.0	17.1	2.5	0	454
2	2220	V	2	25.6	16.1	2.6	0	535
2	2220	W	1	18.8	13.9	1.9	0	525
2	2220	X	1	13.9	11.3	1.5	0	575
2	2220	Y	1	18.5	14.1	1.8	0	523
2	2220	Z	2	22.0	13.6	2.5	0	542
2	2231	A	1	17.7	13.2	1.8	0	546
2	2231	B	2	19.3	13.1	2.1	0	611
2	2231	C	1	21.2	18.1	1.6	0	489
2	2231	D	1	20.3	17.9	1.5	0	500
2	2231	E	2	23.9	16.3	2.3	0	522
2	2231	F	1	15.1	14.9	1.2	0	520
2	2231	G	3	46.2	20.4	5.0	0	444
2	2231	H	3	55.3	23.9	5.5	0	506
2	2231	J	3	56.2	24.7	5.4	0	519
2	2232	A	1	21.7	21.1	1.4	0	458
2	2232	B	1	24.2	19.3	1.8	0	508
2	2232	C	3	37.9	19.0	4.0	0	508
2	2232	D	2	35.7	20.4	3.3	0	500
2	2232	E	2	30.9	20.4	2.6	0	479
2	2232	F	1	21.6	16.2	1.9	0	527
2	2232	G	1	19.8	17.6	1.5	0	501
2	2232	H	1	20.2	15.7	1.8	0	520
2	2232	J	1	22.8	20.2	1.6	0	512
2	2232	K	2	28.4	18.0	2.7	0	500
2	2232	M	2	28.0	15.9	3.1	0	634
2	2232	N	2	36.8	22.2	3.1	0	565
2	2232	O	2	29.6	21.3	2.3	0	557
2	2232	P	2	23.8	17.6	2.0	0	445
2	2232	Q	1	23.8	19.2	1.8	0	473
2	2232	R	1	48.6	48.0	1.8	0	472
2	2232	S	2	89.9	57.3	3.8	0	498
2	2232	T	2	85.1	70.4	2.7	0	431
2	2232	U	2	77.0	76.2	2.1	0	423
2	2232	V	1	62.2	69.4	1.7	0	444
2	2232	W	1	46.0	58.8	1.2	0	464
2	2232	X	0	28.1	40.1	0.9	0	471
2	2232	Y	2	51.4	34.4	3.0	0	476
2	2232	Z	2	55.8	36.6	3.2	0	482
2	2232	AA	4	31.3	7.4	10.2	0	491
2	2232	AB	4	58.0	15.7	10.2	0	607

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FLIGHT	LINE	ANOMALY	CATEGORY	AMPLITUDE (PPM) INPHASE	QUAD.	CONDUCTOR CTP MHOS	DEPTH MTRS	BIRD HEIGHT MTRS
2	2232	AC	2	49.5	28.2	3.7	0	545
2	2232	AD	2	28.8	14.1	3.8	0	504
2	2232	AE	3	28.6	13.5	4.0	0	533
2	2232	AF	2	27.7	15.6	3.1	0	462
2	2232	AG	2	28.4	17.1	2.9	0	459
2	2232	AH	2	24.5	16.5	2.3	0	480
2	2232	AJ	1	19.9	16.2	1.7	0	478
2	2232	AK	0	11.6	12.3	0.9	0	501
2	2232	AM	1	13.7	11.0	1.5	0	477
2	2232	AN	2	24.1	15.0	2.6	0	472
2	2240	A	1	14.0	10.8	1.6	0	541
2	2240	B	1	12.8	12.9	1.1	0	494
2	2240	C	1	17.0	14.9	1.4	0	528
2	2240	D	2	22.3	13.3	2.7	0	535
2	2240	E	2	23.2	12.2	3.2	0	547
2	2240	F	2	18.6	11.6	2.4	0	535
2	2240	G	4	85.1	28.2	8.8	0	530
2	2240	H	3	83.3	37.1	5.9	0	569
2	2240	J	4	72.3	19.0	11.3	0	632
2	2240	K	3	35.0	12.1	6.4	0	696
2	2240	M	4	50.9	15.6	8.4	0	616
2	2240	N	3	46.5	18.0	6.0	0	587
2	2240	O	0	22.4	35.2	0.7	0	494
2	2240	P	1	26.0	26.9	1.3	0	563
2	2240	Q	1	24.2	28.9	1.1	0	563
2	2240	R	1	42.8	41.5	1.7	0	528
2	2240	S	2	35.9	29.6	2.0	0	564
2	2240	T	3	60.8	33.9	4.0	0	477
2	2240	U	3	116.8	69.5	4.5	0	491
2	2240	V	2	76.3	59.4	2.8	0	506
2	2240	W	2	42.3	29.9	2.6	0	582
2	2240	X	2	42.9	30.7	2.6	0	609
2	2240	Y	1	19.7	15.7	1.7	0	513
2	2240	Z	2	30.1	18.9	2.7	0	503
2	2240	AA	1	24.7	22.0	1.6	0	452
2	2240	AB	2	27.3	16.6	2.8	0	586
2	2240	AC	2	26.5	16.6	2.6	0	505
2	2240	AD	2	25.7	16.3	2.6	0	518
2	2240	AE	1	19.1	19.9	1.2	0	476
2	2240	AF	1	15.6	16.3	1.1	0	496
3	2250	A	1	19.7	22.6	1.0	0	474
3	2250	B	1	17.5	19.6	1.0	0	504
3	2250	C	2	30.2	17.1	3.2	0	499

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FLIGHT	LINE	ANOMALY	CATEGORY	AMPLITUDE (PPM) INPHASE	QUAD.	CONDUCTOR CTP MHOS	DEPTH MTRS	BIRD HEIGHT MTRS
3	2250	D	2	23.6	15.3	2.4	0	563
3	2250	E	2	24.1	12.9	3.2	0	544
3	2250	F	2	25.2	19.2	2.0	0	496
3	2250	G	2	31.0	16.3	3.5	0	506
3	2250	H	1	15.4	16.1	1.1	0	510
3	2250	J	2	39.7	33.6	2.0	0	549
3	2250	K	2	49.6	41.3	2.2	0	545
3	2250	M	2	79.9	57.0	3.2	0	486
3	2250	N	2	84.1	56.0	3.6	0	512
3	2250	O	3	75.3	37.2	5.0	0	539
3	2250	P	2	30.4	18.3	2.9	0	615
3	2250	Q	2	21.2	11.6	2.9	0	494
3	2250	R	1	18.2	18.5	1.2	0	661
3	2250	S	4	34.6	9.5	8.6	0	497
3	2250	T	1	30.2	32.8	1.3	0	561
3	2250	U	1	24.4	23.8	1.4	0	636
3	2250	V	4	101.0	29.6	10.8	0	534
3	2250	W	3	109.9	51.0	6.1	0	485
3	2250	X	3	113.6	48.8	6.8	0	485
3	2250	Y	3	22.4	9.5	4.2	0	706
3	2250	Z	2	14.7	9.5	2.1	0	544
3	2260	A	2	9.7	3.9	3.4	0	705
3	2260	B	3	15.0	5.0	5.1	0	667
3	2260	C	4	88.0	25.7	10.5	0	577
3	2260	D	4	72.0	17.3	12.7	0	619
3	2260	E	3	30.1	8.6	7.9	0	520
3	2260	F	2	33.2	17.8	3.5	0	671
3	2260	G	3	43.9	20.6	4.6	0	641
3	2260	H	3	18.1	5.3	6.5	0	625
3	2260	J	2	76.3	46.3	3.9	0	513
3	2260	K	2	95.5	73.6	3.1	0	471
3	2260	M	2	102.0	95.0	2.5	0	442
3	2260	N	2	100.5	93.5	2.5	0	424
3	2260	O	0	21.6	27.9	0.9	0	538
3	2260	P	1	21.7	21.4	1.3	0	497
3	2260	Q	3	31.1	13.6	4.5	0	503
3	2260	R	2	25.6	17.0	2.4	0	494
3	2260	S	3	34.2	15.6	4.4	0	536
3	2260	T	2	31.5	16.1	3.7	0	508
3	2260	U	1	22.3	22.2	1.3	0	495
3	2260	V	1	21.5	19.6	1.5	0	504
3	2270	A	1	22.2	17.4	1.8	0	501
3	2270	B	1	24.9	22.9	1.5	0	454

Estimated depth may be unreliable because the stronger part of the conductor may be deeper or to one side of the flight line, or because of a shallow dip or overburden effects.

J8647B - GALLANT MINES LTD

FLIGHT	LINE	ANOMALY	CATEGORY	AMPLITUDE (PPM) INPHASE	QUAD.	CONDUCTOR CTP MHOS	DEPTH MTRS	BIRD HEIGHT MTRS
3	2270	C	1	23.0	18.8	1.8	0	481
3	2270	D	2	30.1	15.7	3.5	0	528
3	2270	E	3	37.9	17.2	4.6	0	506
3	2270	F	1	22.7	18.7	1.7	0	540
3	2270	G	2	84.6	65.0	3.0	0	500
3	2270	H	2	59.0	39.4	3.2	0	572
3	2270	J	2	58.3	36.7	3.4	0	590
3	2270	K	2	22.5	10.2	3.9	0	483
3	2270	M	3	33.6	10.1	7.6	0	520
3	2270	N	3	32.9	10.7	6.8	0	489
3	2270	O	4	107.3	25.6	14.4	0	541
3	2270	P	3	118.5	46.4	7.8	0	484
3	2270	Q	3	35.6	14.5	5.2	0	651
3	2270	R	3	47.6	22.6	4.6	0	586
3	2270	S	1	31.4	26.7	1.9	0	521
3	2270	T	3	31.2	15.0	4.0	0	612
3	2280	A	3	49.1	25.1	4.2	0	591
3	2280	B	3	36.7	17.5	4.2	0	626
3	2280	C	4	97.1	33.8	8.6	0	524
3	2280	D	4	100.1	26.8	12.1	0	563
3	2280	E	3	23.8	6.4	7.9	0	600
3	2280	F	4	37.2	10.0	9.1	0	539
3	2280	G	4	38.4	10.0	9.6	0	549
3	2280	H	3	30.4	11.9	5.2	0	694
3	2280	J	1	15.5	12.6	1.5	0	484
3	2280	K	0	16.9	25.7	0.7	0	522
3	2280	M	0	14.1	30.9	0.4	0	452
3	2280	N	1	33.3	31.3	1.7	0	557
3	2280	O	2	25.8	20.0	2.0	0	526
3	2280	P	1	16.1	17.1	1.1	0	479
3	2280	Q	2	38.3	30.0	2.2	0	439
3	2280	R	1	32.8	29.0	1.8	0	454
3	2280	S	1	22.1	16.7	1.9	0	478
3	2280	T	1	18.4	17.2	1.3	0	489
3	2290	A	1	18.3	18.3	1.2	0	481
3	2290	B	2	27.7	16.0	3.0	0	517
3	2290	C	1	23.0	21.7	1.4	0	480
3	2290	D	1	22.7	20.5	1.5	0	510
3	2290	E	2	48.4	35.8	2.6	0	527
3	2290	F	0	18.0	31.5	0.6	0	503
3	2290	G	1	20.6	15.5	1.9	0	603
3	2290	H	5	45.4	7.4	18.7	0	673
3	2290	J	3	44.7	14.6	7.4	0	495

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FLIGHT	LINE	ANOMALY	CATEGORY	AMPLITUDE (PPM) INPHASE	QUAD.	CONDUCTOR CTP MHOS	DEPTH MTRS	BIRD HEIGHT MTRS
3	2290	K	3	28.5	8.6	7.2	0	516
3	2290	M	4	44.6	11.8	9.8	0	621
3	2290	N	4	46.1	12.0	10.1	0	623
3	2290	O	3	30.1	8.6	7.9	0	617
3	2290	P	2	37.9	29.8	2.2	0	500
3	2290	Q	3	76.4	37.6	5.1	0	509
3	2290	R	3	61.5	32.6	4.3	0	512
3	2290	S	2	9.2	4.8	2.3	0	696
2	2300	A	0	17.5	22.2	0.9	0	471
2	2300	B	1	23.9	23.2	1.4	0	452
2	2300	C	1	24.3	21.9	1.6	0	467
2	2300	D	1	21.7	23.8	1.2	0	496
2	2300	E	2	52.0	45.5	2.1	0	500
2	2300	F	2	73.2	64.3	2.4	0	484
2	2300	G	1	35.9	38.1	1.5	0	525
2	2300	H	1	37.6	39.7	1.5	0	510
2	2300	J	2	15.1	9.9	2.0	0	705
2	2300	K	1	14.2	14.2	1.1	0	533
2	2300	M	2	25.9	19.2	2.1	0	577
2	2300	N	1	26.3	24.2	1.6	0	549
2	2300	O	5	42.5	7.9	15.4	0	728
2	2300	P	4	36.9	8.2	11.7	0	526
3	2301	A	4	99.1	31.1	9.8	0	532
3	2301	B	4	86.0	29.9	8.3	0	532
3	2301	C	4	73.8	24.1	8.6	0	515
3	2301	D	1	8.2	6.7	1.2	0	509
3	2301	E	0	16.1	30.9	0.5	0	514
3	2301	F	1	38.2	34.0	1.9	0	463
3	2301	G	2	57.5	52.5	2.1	0	449
3	2301	H	2	66.0	39.5	3.8	0	474
3	2301	J	2	59.2	35.9	3.6	0	488
2	2310	A	3	49.8	22.3	5.1	0	525
2	2310	B	3	48.8	22.0	5.0	0	524
2	2310	C	1	6.9	5.9	1.0	0	621
2	2310	D	2	27.7	16.0	3.0	0	494
2	2310	E	2	31.7	19.4	2.9	0	486
2	2310	F	3	41.7	17.1	5.4	0	483
2	2310	G	4	34.8	9.9	8.3	0	596
2	2310	H	5	40.2	7.0	16.6	0	565
2	2310	J	2	27.4	14.3	3.4	0	634
2	2310	K	1	36.1	36.0	1.6	0	542
2	2310	M	2	53.5	32.7	3.4	0	550

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FLIGHT	LINE	ANOMALY	CATEGORY	AMPLITUDE (PPM) INPHASE	QUAD.	CONDUCTOR CTP MHOS	DEPTH MTRS	BIRD HEIGHT MTRS
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2	2310	N	2	45.4	31.5	2.8	0	550
2	2310	O	0	19.5	24.3	0.9	0	601
2	2310	P	1	12.4	11.8	1.1	0	807
2	2310	Q	2	53.3	49.3	2.0	0	489
2	2310	R	1	51.5	59.3	1.5	0	431
2	2310	S	1	87.6	95.7	1.9	0	426
2	2310	T	2	95.2	90.4	2.3	0	452
2	2310	U	1	49.4	50.8	1.7	0	484
2	2310	V	1	50.3	47.1	1.9	0	498
2	2310	W	1	20.7	17.4	1.6	0	500
2	2310	X	1	19.4	19.8	1.2	0	461
2	2311	A	1	19.2	17.0	1.5	0	538
2	2311	B	1	19.8	24.3	1.0	0	461
2	2311	C	1	23.2	27.8	1.0	0	488
2	2311	D	1	21.2	23.3	1.1	0	477
2	2311	E	1	17.4	20.3	1.0	0	499
2	2311	F	0	15.7	19.0	0.9	0	488
2	2320	A	2	25.6	16.3	2.6	0	477
2	2320	B	2	35.1	22.3	2.8	0	495
2	2320	C	1	20.0	19.7	1.3	0	482
2	2320	D	1	26.0	28.0	1.3	0	540
2	2320	E	1	35.3	38.8	1.4	0	539
2	2320	F	2	45.7	31.4	2.8	0	557
2	2320	G	2	28.3	19.7	2.3	0	608
2	2320	H	1	9.3	6.0	1.7	0	548
2	2320	J	2	45.4	25.1	3.7	0	562
2	2320	K	2	42.2	23.5	3.6	0	554
2	2320	M	2	93.7	72.6	3.0	0	443
2	2320	N	3	119.3	69.6	4.7	0	482
2	2320	O	3	86.5	49.6	4.3	0	509
2	2320	P	2	61.7	47.1	2.7	0	434
2	2320	Q	2	53.1	45.2	2.2	0	456
2	2320	R	2	55.4	35.4	3.3	0	478
2	2320	S	2	38.5	27.8	2.5	0	550
2	2320	T	1	28.1	23.6	1.8	0	585
2	2320	U	4	39.0	10.2	9.5	0	494
2	2320	V	4	42.8	8.4	14.4	0	495
2	2320	W	4	48.4	13.5	9.3	0	636
2	2320	X	4	51.9	12.8	11.2	0	491
2	2320	Y	5	48.9	9.2	15.8	0	524
2	2320	Z	1	14.0	13.3	1.2	0	547
2	2320	AA	1	14.9	15.5	1.1	0	535
2	2320	AB	1	12.3	9.5	1.5	0	729

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FLIGHT	LINE	ANOMALY	CATEGORY	AMPLITUDE (PPM) INPHASE	QUAD.	CONDUCTOR CTP MHOS	DEPTH MTRS	BIRD HEIGHT MTRS
2	2331	A	1	9.7	8.7	1.1	0	588
2	2331	B	4	42.5	10.8	10.2	0	516
2	2331	C	4	44.7	11.3	10.4	0	532
2	2331	D	1	25.4	19.8	1.9	0	578
2	2331	E	2	32.9	21.3	2.7	0	562
2	2331	F	3	58.1	24.8	5.6	0	534
2	2331	G	3	45.1	19.2	5.2	0	639
2	2331	H	2	44.7	24.1	3.8	0	608
2	2331	J	3	30.7	12.5	4.9	0	692
2	2331	K	1	18.7	21.5	1.0	0	586
2	2331	M	1	18.1	13.0	1.9	0	509
2	2331	N	1	14.8	10.7	1.8	0	542
2	2340	A	3	25.0	9.0	5.4	0	535
2	2350	A	2	18.4	9.2	3.2	0	695
2	2350	B	1	22.7	23.8	1.2	0	512
2	2350	C	1	20.5	20.7	1.3	0	514
2	2370	A	2	30.3	16.8	3.3	0	624
2	2370	B	3	25.6	10.1	4.9	0	566
2	2370	C	2	26.5	14.2	3.3	0	573
2	2370	D	2	24.5	13.0	3.2	0	613
2	2380	A	3	27.9	11.6	4.6	0	668
2	2380	B	2	26.4	14.0	3.3	0	628
2	2380	C	3	31.4	11.5	5.7	0	647
2	2380	D	3	38.3	16.5	4.9	0	518
2	2380	E	3	47.4	23.6	4.3	0	538
2	2380	F	2	32.8	25.3	2.2	0	557

Estimated depth may be unreliable because the stronger part of the conductor may be deeper or to one side of the flight line, or because of a shallow dip or overburden effects.

APPENDIX III

CERTIFICATE OF QUALIFICATIONS

I, GEORGE PODOLSKY, certify that: -

1. I am registered as a Professional Engineer in the Province of Ontario and work as a Professional Geophysicist.

2. I reside at 172 Dunwoody Drive in the town of Oakville, Ontario.

3. I hold a B. Sc. in Engineering Physics from Queen's University, having graduated in 1954.

4. I have been continuously engaged in both professional and managerial roles in the minerals industry in Canada and abroad for the past thirty two years.

5. I have been an active member of the Society of Exploration Geophysicists since 1960 and hold memberships on other professional societies involved in the minerals extraction and exploration industry.

6. The accompanying report was prepared from information published by government agencies, materials supplied by Rise Resources Ltd. and Gallant Gold Mines Ltd., and from a review of proprietary geophysical data compiled by Aerodat Ltd. in the course of producing this airborne survey. I have not visited the property.

7. I have no interest, direct or indirect, in the property described nor do I hold securities in Rise Resources Ltd. and Gallant Gold Mines Ltd..

8. I hereby consent to the use of this report in a Statement of Material Facts of the Company and for the preparation of a prospectus for submission to the British Columbia Securities Commission and/or other regulatory authorities.

REGISTERED PROFESSIONAL ENGINEER
G. PODOLSKY
PROVINCE OF ONTARIO

Signed

Oakville, Ontario — George Podolsky, P.Eng.

June 6, 1987 — GEOPOD ASSOCIATES INC.

APPENDIX IV

COST STATEMENT

AERODAT LIMITED	
390 LKM @ $75	$29,250.00
MOBILIZATION/DEMOBILIZATION	750.00
MARK MANAGEMENT LTD.	
PLANNING, SCHEDULING, SUPERVISION	4,500.00
TOTAL	$34,500.00

COST APPORTIONED TO JOBS

TO	JOB	AMOUNT
GALLANT GOLD MINES LTD.	J8647A	$16,807.69
RISE RESOURCES INC.	J8647B	17,692.31
TOTAL		$34,500.00