



NORTHERN GEOLOGICAL & GEOPHYSICAL CONSULTANTS

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MEMORANDUM

To: Bill Chornobay
Goldstrike Resources Ltd.

Date: October 07, 2016

From: Louis Rosenthal
Dave Hildes

Re: 2016 Lucky Strike 2DIP Logistics Report

This memorandum describes the 2D Resistivity/Induced polarization (RESIP) surveys completed by Aurora Geosciences Ltd. (AGL) for Goldstrike Resources Ltd. at the Lucky Strike Property between September 16th and September 23rd, 2016. The purpose of the survey is to determine the resistivity and chargeability areas of known gold mineralization from trenching, and to see if that signature extends along strike to the SW.

Four AGL personnel mobilized from Whitehorse to the Thistle airstrip on the 16th of September in a Cessna Grand Caravan chartered from Alkan Air. The crew was hosted in a Druid Exploration camp who were operating the exploration program for Goldstrike Resources Ltd. The weather was excellent for the entire survey, temperatures generally being around or just below freezing in the morning and becoming progressively warmer throughout the day. There were no significant rain, thunderstorm or telluric events that disrupted the survey. The grids were accessed using a Hughes 500 helicopter, chartered by Druid Exploration which also slung the equipment from camp to the transmitter site, and in between transmitter sites. No significant damage to equipment occurred during the survey. No spills occurred during the survey, all transmitter sites were fully cleaned and the crew made an effort to not leave any garbage during the survey. Daily logs, a personnel tracking sheet and a production summary are included with this report.

Current was injected into the ground using a GDD TxII 3.6 kW transmitter powered by a 5 kW Honda generator, capable of a maximum voltage of 2400 V. The generator experienced minor difficulties on the third day of surveying, but was fixed in the field (disconnected choke cable). L7 used a dipole-dipole current setup, which did not provide enough current in the conductive ground. Therefore the transmitter array was switched to a modified pole-dipole setup, which uses a distant electrode (~500m) and provides a compromise between the signal of a pole-dipole survey and the lateral resolution of a dipole-dipole survey. Data was collected by an Iris Elrec-Pro 10-channel receiver connected to a 500 m array with stainless steel electrodes every 50 m. When the survey reaches the end of the line, the dipoles were "rolled off" until there was only one dipole ahead of the transmitter.

The surveys were done in challenging vegetation which affected productivity. A few gridding errors were made in the first two days (L7 & L6 are a bit shorter than they were drawn) due to the crew figuring out how to efficiently operate in that environment. Essentially one crew member spent most of their time flagging, gridding and brushing with hand tools. Future surveys in this terrain and vegetation would benefit from an additional crew member to help brush the lines. In light of this being a reconnaissance survey, sometimes problems were detected (usually electrodes that weren't connected) that were not fixed immediately. This affects less than 5% of the data and was done to maintain productivity.

L7, L6 and L5 all had a similar response to the survey. L5 & L6 used the same distant electrode, located at: 590335E and 7013296N. There are 2 distinct geophysical units here. To the southwest is a very low resistivity unit (10-100 ohm.m) that has extremely low chargeability (1-3 mV/V). This is in sharp contact with a low to moderate resistivity unit (200-500) with a 3-5 mV/V background chargeability. There is a subtle resistivity (~100 ohm) and chargeability (10 mV/V) anomaly in the unit to the northwest, that increases with wider dipole spacing. 2D modelling will determine the relationship between these units in quantitative terms.

L1 – L4 were all surveyed with the same distant electrode, located at: 591155E and 7012125N. Only L4 encountered the low resistivity unit mentioned above. The anomaly seen in the other lines is quieter here, seeming to exist more at depth, if at all. However a new, stronger anomaly was measured on L2 & L1 which has chargeabilities higher than 20 mV/V. This anomaly is at the north end of the lines, and is not closed off by the surveys.

L8 was a 10 m expanding pole-dipole survey conducted across the deep valley and creek then into the outcropping bedrock on the hill that flanks it. The goal was to detect the response of the bedrock and to see if the depth to bedrock could be determined in the valley using the RESIP method. The data shows very distinct resistivity and chargeability patterns on either side of the creek, and 2D modelling will determine if the depth to bedrock can be modelled from these data.

Instrument dump files and processed data in both ASCII and geosoft GDB format are included with this report. Pseudosections and stacked sections of the data were drawn in Geosoft and are included here as JPG's. An ASCII file containing the GPS coordinates of the survey stations is also included.

a. Crew

The following personnel conducted the survey:

Louis Rosenthal	Crew Chief	Sept. 16 th -Sept. 23 rd
Hannah Warrington	Geophysical technician	Sept. 16 th -Sept. 23 rd
Laura McIntyre	Geophysical technician	Sept. 16 th -Sept. 23 rd
Matt Ford	Geophysical technician	Sept. 16 th -Sept. 23 rd

b. Equipment

The crew was equipped with the following instruments and equipment:

IP receiver	2 - Iris Elrec Pro 10 channel IP receivers s/n 332 and 165:
IP transmitter	2 - GDD TxII 3.6 kW s/n 266 and 244:
Generator	1 - Honda Ex5000 5kW generator
IP Equipment	1 - Repair tools and spare IP parts 23 - 50m 10 pin receiver array cables 30 – 18 inch Stainless steel electrodes 6 km - 18 gauge wire 3 – Georeels 1 – Speedy winders and spools 4 - spools Various IP equipment including hammers, tarps, tents, salt.
Other	1 - Laptop with Geosoft IP package

5 - Garmin handheld non-differential GPS

5 - Icom handheld radios

1 - Icom base radios

c. Survey Location

The Lucky Strike is located XX km SW of Dawson City YT, and 20 km from the Thistle airstrip where the camp was located. The property was accessed by fixed wing aircraft and helicopter.

d. Survey Specifications

GPS

Geographic datum & projection:	NAD83 Zone 7 UTM coordinates.
Grid location:	The grid locations were provided by the on-site project manager from Druid.
Station marking:	Stations were situated using handheld Garmin GPS's.
Grid Registration	GPS points were taken every station. If the operator failed to register a grid point, his GPS track log was examined to register a location for the point.

2D RESIP

Array:	Dipole-dipole (L7), Expanding pole-dipole (other lines)
Dipole Spacing:	50 m (L1-L7), 10 m (L8)
Array Length:	500 m (L1-L7), 100 m (L8)
Transmitter settings:	Time domain, 50% duty cycle, reversing polarity, 0.125 Hz.
Receiver Settings:	Semi-logarithmically spaced time gates
Stacks:	15 stacks per reading
Repeats	At least two readings were taken for each current setup. If signal was low or the data was suspect, more readings were taken at the discretion of the operator.

e. Data Processing

Data was downloaded from the receiver and imported into Geosoft Oasis Montaj IP package. GPS databases are created from the track log and waypoints in the GPS dump files. The "georeference IP database" function in geosoft is used to assign coordinates to each electrode of each reading. Every reading is inspected and readings which do not repeat or are suspect for any reason are rejected using the Oasis Montaj's IP quality control tool. Elevations were assigned from the most current government digital elevation model of the area.

The apparent resistivity is calculated using a four electrode equation assuming a homogeneous earth using georeferenced coordinates. The apparent resistivity and total chargeability are averaged using the "Average IP Readings" function in Geosoft.

Pseudosections are plotted using the built in function in Oasis Montaj executable. The plotting station for the pseudosections are georeferenced using a cross-database channel lookup for both the east and north coordinates, and the topography is assigned to these stations by sampling the DEM. Table 1 lists the name and description of the channels in the final databases.

Table 1: List and description of the channels in the final databases

Channel Name	Description
X	Georeferenced Plot point – Easting
Y	Georeferenced Plot point – Northing
Z	Georeferenced Plot point – Elevation
__X	Local Coordinate Plot point – Station
__Y	Local Coordinate Plot point – Line
__Z	Local Coordinate Plot point – Depth
Stn	Stn, defined by geosoft as the midpoint between RX1 and TX1
Topo	Elevation of Stn
T1X	Local Coordinate of T1X (roving current electrode)
T1X_	UTM Easting Nad 83 Zone 3 coordinate of T1X
T1Y_	UTM Northing Nad 83 Zone 3 coordinate of T1X
T1Z_	Elevation of T1X
t2_Z	Elevation of T2X
T2X	Dummy value local coordinate of infinite electrode
T2X_	UTM Easting Nad 83 Zone 3 coordinate of T2X
T2y_	UTM Northing Nad 83 Zone 3 coordinate of T2X
R1X	Local Coordinate of potential electrode 1
R1X_	UTM Easting Nad 83 Zone 3 coordinate of R1X
R1Y_	UTM Northing Nad 83 Zone 3 coordinate of R1X
R1Z_	Elevation of R1X
R2X	Local Coordinate of potential electrode 2
R2X_	UTM Easting Nad 83 Zone 3 coordinate of R2X
R2Y_	UTM Northing Nad 83 Zone 3 coordinate of R2X
R2Z_	Elevation of R2X
Date	Date of data acquisition
DayTime	Time of data acquisition
Type	Geosoft indicator of array type
Time	Length of the reading window
Stack	Number of transmitter cycles measured during the course of the reading
RsCheck	Contact resistance of potential electrodes (kOhm)
IP_Index	Necessary channel for Geosoft Database
IP_Mask[0]	Geosoft mask value in the 40-80 ms offtime window (mV/V)
IP_Mask[1]	Geosoft mask value in the 80-120 ms offtime window (mV/V)
IP_Mask[2]	Geosoft mask value in the 120-160 ms offtime window (mV/V)
IP_Mask[3]	Geosoft mask value in the 160-200 ms offtime window (mV/V)
IP_Mask[4]	Geosoft mask value in the 200-240 ms offtime window (mV/V)
IP_Mask[5]	Geosoft mask value in the 240-280 ms offtime window (mV/V)
IP_Mask[6]	Geosoft mask value in the 280-360 ms offtime window (mV/V)
IP_Mask[7]	Geosoft mask value in the 360-440 ms offtime window (mV/V)

IP_Mask[8]	Geosoft mask value in the 440-520 ms offtime window (mV/V)
IP_Mask[9]	Geosoft mask value in the 520-600 ms offtime window (mV/V)
IP_Mask[10]	Geosoft mask value in the 600-680 ms offtime window (mV/V)
IP_Mask[11]	Geosoft mask value in the 680-760 ms offtime window (mV/V)
IP_Mask[12]	Geosoft mask value in the 760-840 ms offtime window (mV/V)
IP_Mask[13]	Geosoft mask value in the 840-1000 ms offtime window (mV/V)
IP_Mask[14]	Geosoft mask value in the 1000-1160 ms offtime window (mV/V)
IP_Mask[15]	Geosoft mask value in the 1160-1320 ms offtime window (mV/V)
IP_Mask[16]	Geosoft mask value in the 1320-1480 ms offtime window (mV/V)
IP_Mask[17]	Geosoft mask value in the 1480-1640 ms offtime window (mV/V)
IP_Mask[18]	Geosoft mask value in the 1640-1800 ms offtime window (mV/V)
IP_Mask[19]	Geosoft mask value in the 1800-1960 ms offtime window (mV/V)
Sp	Spontaneous potential (mV/V)
ResCalc	Apparent resistivity calculated by Geosoft (without correction for proximal infinite) (Ohm*m)
ResMeas	Apparent resistivity calculated by the receiver (local coordinate) (Ohm*m)
Vp	Primary voltage measured 1260 into the ontime window (mV)
VP_Final	Primary voltage normalized by the current then averaged between repeated readings weighted according to their standard deviation. (mV/mA)
QC_RES	Quality control for the resistivity channel
Recalc_res	Resistivity calculated using four electrode equation.
Res_Final	Final Calculated Resistivity averaged between repeated readings weighted according to their standard deviation. (ohm.m)
I	Transmitter current (A)
Chg	Average chargeability calculated by the receiver
IP[0]	Normalized Voltage measurement in the 40-80 ms offtime window (mV/V)
IP[1]	Normalized Voltage measurement in the 80-120 ms offtime window (mV/V)
IP[2]	Normalized Voltage measurement in the 120-160 ms offtime window (mV/V)
IP[3]	Normalized Voltage measurement in the 160-200 ms offtime window (mV/V)
IP[4]	Normalized Voltage measurement in the 200-240 ms offtime window (mV/V)
IP[5]	Normalized Voltage measurement in the 240-280 ms offtime window (mV/V)
IP[6]	Normalized Voltage measurement in the 280-360 ms offtime window (mV/V)
IP[7]	Normalized Voltage measurement in the 360-440 ms offtime window (mV/V)
IP[8]	Normalized Voltage measurement in the 440-520 ms offtime window (mV/V)
IP[9]	Normalized Voltage measurement in the 520-600 ms offtime window (mV/V)
IP[10]	Normalized Voltage measurement in the 600-680 ms offtime window (mV/V)
IP[11]	Normalized Voltage measurement in the 680-760 ms offtime window (mV/V)
IP[12]	Normalized Voltage measurement in the 760-840 ms offtime window (mV/V)
IP[13]	Normalized Voltage measurement in the 840-1000 ms offtime window (mV/V)
IP[14]	Normalized Voltage measurement in the 1000-1160 ms offtime window (mV/V)
IP[15]	Normalized Voltage measurement in the 1160-1320 ms offtime window (mV/V)
IP[16]	Normalized Voltage measurement in the 1320-1480 ms offtime window (mV/V)
IP[17]	Normalized Voltage measurement in the 1480-1640 ms offtime window (mV/V)
IP[18]	Normalized Voltage measurement in the 1640-1800 ms offtime window (mV/V)

IP[19]	Normalized Voltage measurement in the 1800-1960 ms offtime window (mV/V)
IP_Avg	Average Chargeability calculated by the receiver
IP_Avg_Final	Final Apparent chargeability averaged between repeated readings weighted according to their standard deviation. (mV/V)
IP_err_Final	Final Chargeability error averaged between repeated readings weighted according to their standard deviation. (mV/V)
MF	Calculated Metal Factor
N	The dipole number in the array
Q	Standard deviation of the average chargeability during the reading (mV/V)
QC	Quality control for IP_Avg Channel

e. Products

The following files are included in the digital version of this report:

<u>File / Folder name</u>	<u>Description of contents</u>
\GSR-16100-YT - Crew Log.pdf	Daily log, Production summary and Personnel Tracking Sheet in PDF format
\Databases\	Final IP and GPS Databases in Geosoft GDB and ASCII format
\Figures\	Pseudosections and Stacked Sections in PDF format
\Raw\	Raw IP receiver and GPS receiver dump files and transmitter notes.

Respectfully submitted,

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Aurora Geosciences Ltd.