GEOPHYSICAL REPORT ON THE

SIXTY MILE PROPERTY 2011 PROGRAM

DAWSON MINING DISTRICT

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TABLE OF CONTENTS

List of Figures

List of Digital Products

ELF-EM (Graben Fault zone)/Geosoft packed maps/*.map
ELF-EM (Graben Fault zone)/PDFs/*.PDF
ELF-EM (Graben Fault zone)/Raw /JulXX.xyz
ELF-EM (Graben Fault zone)/Graben Fault Zone 2011 ELF.gdb and xyz
ELF-EM (Graben Fault zone)/RDU-11552-YT daily reports.pdf
IP & HLEM (Thrust zone) – field reports\Daily logs\Thrust zone 2011 geophysics daily log – XXX XX field report.pdf
IP & HLEM (Thrust zone) – field reports\Raw\Thrust zone 2011 geophysics raw data – XXX XX field report\

IP & HLEM (Thrust zone) – field reports\Figures\Thrust zone 2011 geophysics figures – XXX XX field report\pdf & jpg\
IP & HLEM (Thrust zone) – field reports\Figures\Thrust zone 2011 geophysics figures – XXX XX field report\packed Geosoft maps\
IP & HLEM (Thrust zone) – field reports\Final Data\
IP & HLEM (Thrust zone) – field reports\Coordinates\
IP & HLEM (Thrust zone) – field reports\Thrust zone 2011 geophysics field report – XXX XX.pdf
DCIP2D inversion\Kennecott Trench grids\\Composite sections & plan maps\
DCIP2D inversion\Kennecott Trench grids\Inversion output files\
DCIP2D inversion\Layfield grid\Composite sections & plan maps\
DCIP2D inversion\Layfield grid\Inversion output files\
DCIP2D inversion\Georeferenced grids\
DCIP2D inversion\Miller Creek grid\Inversion output files\
DCIP2D inversion\Cholach grid\Inversion output files\
DCIP3D inversion – Kennecott Trench grid\UBC
DCIP3D inversion – Kennecott Trench grid\3D PDF
DCIP3D inversion – Kennecott Trench grid\DXF
DCIP3D inversion – Kennecott Trench grid\Voxel
DCIP3D inversion – Kennecott Trench grid\Geosoft map
DCIP3D inversion – Kennecott Trench grid\Pred vs Obs

1 OVERVIEW

In the summer of 2011, Aurora Geosciences Ltd. conducted induced polarization – resistivity (IP), horizontal loop electromagnetic (HLEM) and extremely low frequency electromagnetic (ELF-EM) surveys on the Sixty Mile property. A controlled-source audio-magnetotelluric (CSAMT) survey was also conducted in the 2011 season by Zonge International but these data do not constitute a part of this report. During the data collection, the Sixty Mile project was wholly owned by Radius Gold Inc., but as of December 9, 2011 Rackla Metals Inc. was spun out from Radius Gold Inc. and the Sixty Mile project is now held by Rackla Metals Inc.

The ELF-EM survey was designed to map the conductive response of anomalies picked from the CSAMT survey and provide infill and detail mapping of these anomalies. The ELF-EM performed well compared to the CSAMT survey and with no cut-lines, only a two-person crew required and able to collect approximately 2.5 line-km daily, the ELF-EM offers a cost-effective, deep-EM alternative. Unfortunately, the infill and detail survey was cut short due to an instrument malfunction.

The Kennecott Trench grid has been the most extensively explored area of the Thrust zone area and the best results to date are from DDH11-18 where the gold mineralization occurs at the margin of a chargeable zone which is offset from a conductive zone. If this margin represents a contact which acted as a fluid conduit, results suggest that conditions were favorable for precipitation of gold within the quartz-rich unit adjacent to this conduit. The limited results at the Layfield and Miller Creek grids support this interpretation and it is recommended that the exploration focus at all three areas be within this area on the margin of the chargeablilty high, offset from the conductive zone.

Although the focus of exploration has been on the quartz-rich schists and quartzites on the southeastern portion of the grids, DDH11-19 intersected several significant gold intervals (up to 4.4 ppm) and extensive elevated arsenic. Additionally DDH10-04 had anomalous gold and arsenic. Therefore, although not the primary target, the schists to the northwest, within the highly conductive and chargeable area, have shown potential to host significant gold mineralization and should not be ignored. This geophysical signature is seen at the Kennecott Trench, Miller Creek and Layfield grids.

There has been limited work done at the Cholach grid, and the geophysics suggest a different setting than at the Kennecott Trench, Miller Creek and Layfield grids; there is no very conductive and chargeable unit imaged at Cholach. The IP-resistivity shows an area of moderate, but elevated chargeability bounded by resistivity lows and centered on the gold-in-soil anomaly and favorable RAB drilling results.

2 ELF-EM (GRABEN FAULT ZONE)

The ELF-EM survey was designed to map the conductive response of anomalies picked from the CSAMT survey and provide infill and detail mapping of these anomalies. During the period July 7th through 13th, 2011, 10.5 line-km of ELF surveying were completed over the property. CSAMT lines 18 & 19 were resurveyed to ensure compatibility of results then an infill grid was completed between CSAMT lines 15 and 20 over an area of interest. The survey was cut short due to an instrument malfunction.

2.1 Personnel

The ground geophysical surveys were conducted by the following personnel:

Dave Hildes	Project Manager	July 7 – 10, 2011
Ben Postlethwaite	Geophysicist	July 7 – 13, 2011
Samuel Tarkalam	Technician	July 10 – 13, 2011
Jay Watt	Technician	July 9, 2011

2.2 Instruments and Equipment

The crew was equipped with the following instruments and equipment:

ELF Survey	1	ELF System – Sensor unit and computer
	1	Garmin 60csx GPS
Data Processing	1	Laptop computer
	1	Geosoft Oasis Montaj software
Other	1	Truck

2.3 Survey Location

Rackla Metal's Sixty Mile property is located approximately 75 km due west of Dawson, situated on the Yukon Alaska border. The survey described in this section took place on virtual GPS grids negating the need for a picket grid, though where existing grid lines aligned with the survey, pickets were used for reference. All geophysical data collected were geo-referenced to UTM Zone 07N coordinates in the NAD83 datum.

2.4 Survey Specifications

The ELF survey was completed according to the following specifications:

Grid	Line spacing	Station spacing	Frequencies	Notes
CSAMT Lines 18 & 19	250 m	25 and 50 m	22, 45, 90,180, 360, 720 & 1440 Hz	Low frequency noisy
CSAMT lines 15-20 infill	25 m	50, 25 & 12.5 m	22, 45, 90, 180, 360, 720 & 1440 Hz	Low frequency noisy, last day had very poor 720 and 1440 Hz signal

2.5 Processing Method

The data was visually examined and irregular readings were ejected from the data set. For each frequency a first order regional trend was removed from the data by subtracting a local mean; the north and south grids were treated as separate datasets in this procedure and a second iteration of irregular data removal was effected.

The east and north data were then gridded, smoothed with a 5X5 Gaussian filter, the divergence was calculated and then displayed as a colour grid for each frequency except 11 Hz which had poor signal. See for example the figure *r_180.pdf* which shows an arrow representation of the real 180 Hz data as well as the divergence of the gridded real 180 Hz data. The dominant conductor is apparent on the southeast ends of L18E and L19E both in the divergence and by noting that the tipper passes through zero over the conductor. Several holes were drilled in the more resistive unit to the northwest of the dominant conductor.

Figure *magntitude_360.pdf* shows the calculated magnitude of the tipper at 360 Hz (to be exact, the additive inverse of the magnitude so that the colours are consistent - pink representing high conductivity). Although this figure shows a very cohesive pattern and appears to delineate a northeast-southwest contact well, the relationship to conductivity is not as clear. The magnitude of the tipper tends to zero in a homogeneous earth as well as over a conductor.

Below are two figures (Figure 2-1 and Figure 2-2) showing the ELF results compared to the CSAMT derived 2D conductivity inversions:

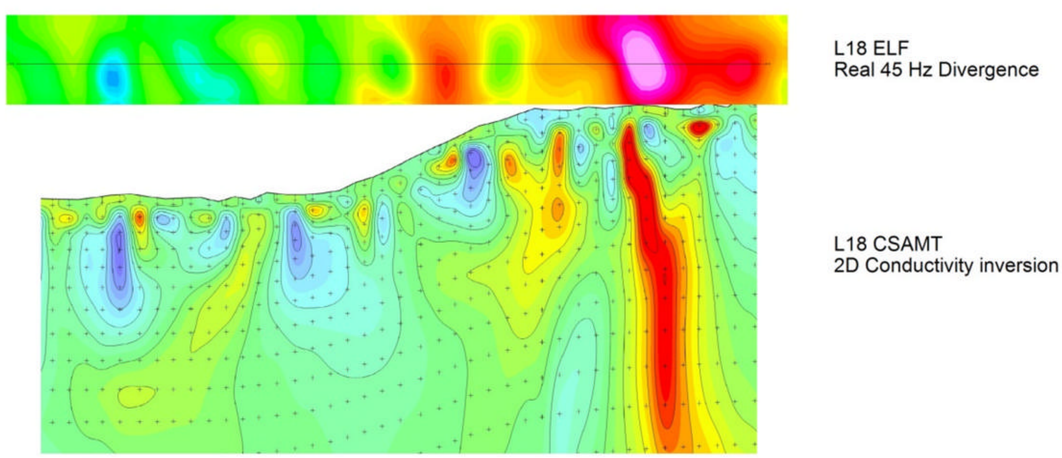

Figure 2-1 Line 18 ELF-EM & CSAMT comparison

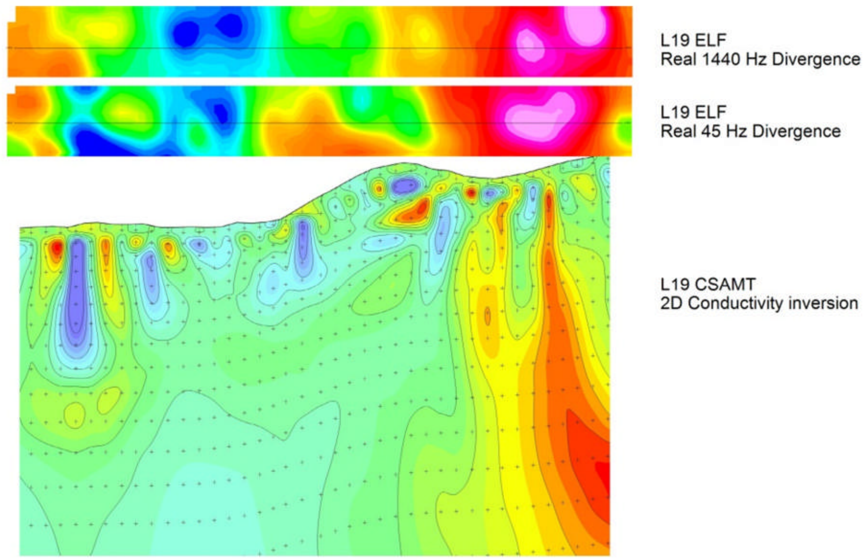

Figure 2-2 Line 19 ELF-EM & CSAMT comparison

As can be seen the agreement between the two surveys is quite good. The main conductor at the end of the line is well imaged in both surveys and several of the more resistive features resolved in the CSAMT inversions are also imaged by the ELF-EM system. The higher frequency data on L19, representative of more shallow conductivity structure, mimic the near surface CSAMT inversion results well. The comparison for the lower frequency is more complicated as the inversion produces conductivities at discrete depths while the ELF-EM depth penetration is dependent on the conductivity structure and is an integrated effect. An inversion of the ELF-EM data would be more appropriate to directly compare against the CSAMT inversion.

2.6 Products and Conclusions

The following files are attached to this report under the folder *ELF-EM (Graben Fault zone)*

- *Geosoft packed maps/*.map* - Geosoft format packed maps of all real & quadrature frequency maps and select frequency magnitude maps.
- *PDFs/*.PDF* – PDF format maps of all real & quadrature frequency maps and select frequency magnitude maps.
- *Raw /JulXX.xyz* – Raw ELF-EM files from July 08 to July 10.
- *Graben Fault Zone 2011 ELF.gdb and xyz* – Final database in both Geosoft database and ASCII format.
- *RDU-11552-YT daily reports.pdf* – A PDF of the survey log detailing day to day operations.

In conclusion, the ELF-EM performed well compared to the CSAMT survey. With no cut-lines required and a two-person crew able to collect approximately 2.5 line-km daily, the ELF-EM offers a cost-effective, deep-EM alternative.

3 IP & HLEM (THRUST ZONE) – FIELD REPORTS

Line cutting, IP and HLEM were conducted on several small grids within the Thrust Zone, done by different crews throughout the summer and reported on by three field reports submitted to Radius Gold Inc. shortly after completion of each phase. The first was written by Andre Lebel on July 15th, 2011; the second by Genevieve Hetu on August 28th, 2011; and the third by Jay Watt submitted September 13, 2011. A map of the cut lines is shown below in Figure 3-1.

The four grids were the Kennecott Trench Zone, Miller Creek, Layfield and Cholach grids.

Line cutting and gridding on the Kennecott Trench grid totaled 6.5 km. The lines were surveyed using an I-9 Apex MaxMin using the frequencies of 220, 1760, 3520, 7040, 14080 Hz and a 20 channel 25m modified pole-dipole array that moved from north to south. A gradient IP survey was conducted on 5 km of the Kennecott Trench grid. These surveys were described in the first field report, 2D inversions were run on data and recommendations were made during the summer season (see Section 4.1.2). Additionally, a 3D inversion was performed after the completion of the 2011 drilling and further recommendations are made in Section 5.4.

On the Miller Creek grid, 4.8 km were cut, gridded, IP and HLEM surveyed using an expanding pole-dipole survey with 50 metre dipoles. The tie-line of the Miller Creek grid is contiguous with the tie-line on the Layfield grid and the end of the Miller Creek tie-line was not HLEM surveyed due to a broken

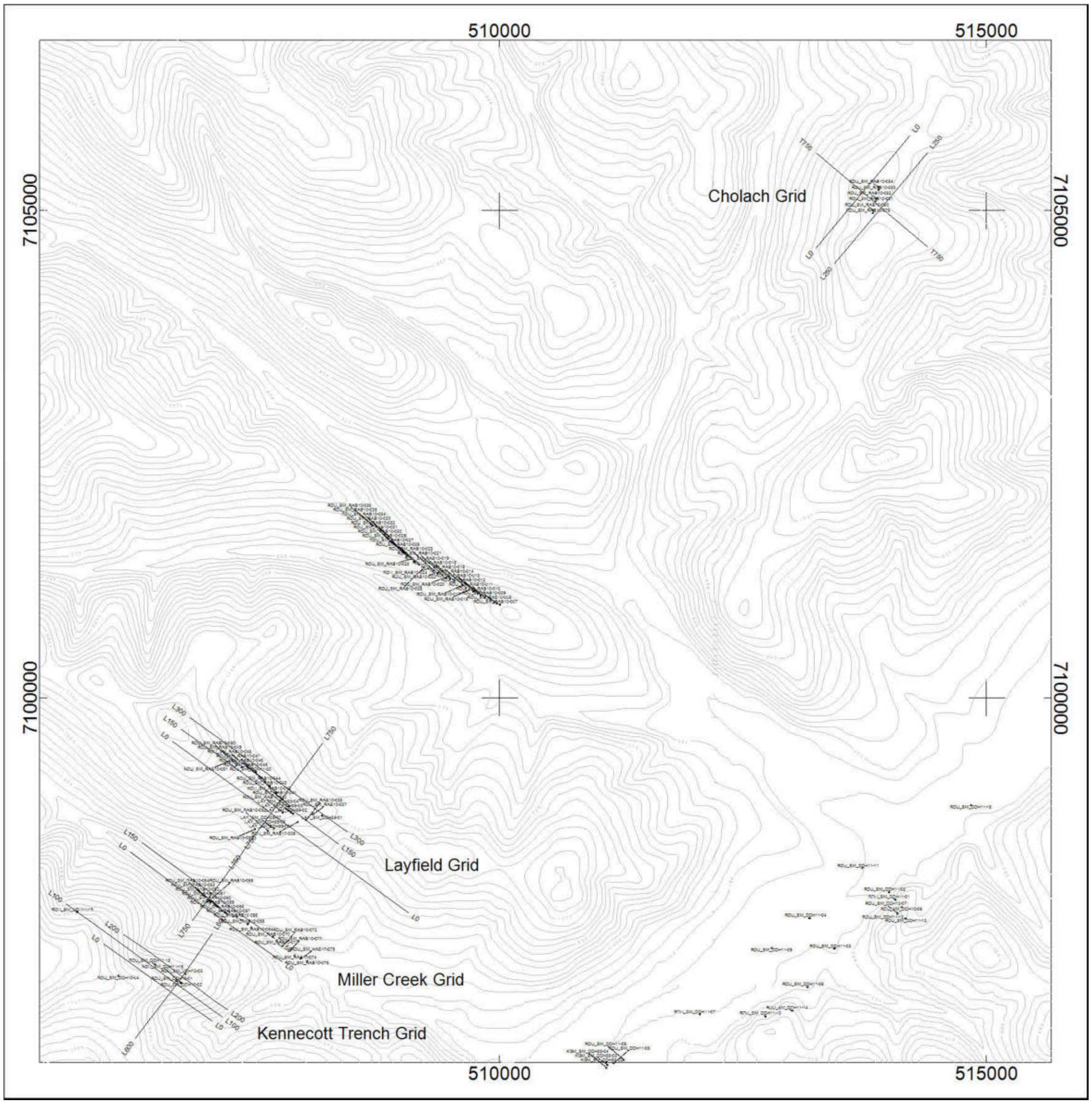

Figure 3-1 Thrust zone 2011 geophysics grids

reference cable. The IP work on the Miller Creek grid was described in the second field report while the HLEM was described in the third field report. Note that although all data and stations are correctly geo-referenced, the orientation of the northwest trending lines in the HLEM database were assumed to run grid east-west and therefore the station numbers are reversed from the IP (and the Kennecott and Layfield grids) where the lines were assumed to run grid north-south.

A total of 8.25 line-km of line were cut, gridded, IP and HLEM surveyed on the Layfield grid using an expanding pole-dipole survey with 50 metre dipoles. The IP work on the Layfield grid was described in the second field report while the HLEM was described in the first field report.

On the Cholach grid, 4.5 line-km were cut, gridded, IP and HLEM surveyed. The IP survey used was an expanding pole-dipole using 25 m dipoles. Note that although all data and stations are all geo-referenced correctly, the orientation of the northwest trending lines on the Cholach grid were assumed to run grid east-west and therefore the station numbers are reversed from the IP on the Kennecott, Miller Creek and Layfield grids where the lines were assumed to run grid north-south.

3.1 Personnel

The following personnel conducted the surveys:

Andre Lebel	IP Crew chief / HLEM Crew Chief / Line-cutter	June 17th – July 13th
Samuel Tarkalam	IP tech	July 1st – July 13th
Barry Silverfox	IP tech/ Brusher / HLEM Helper	June 17th – July 13th
Jay Watt	IP tech	July 10th – July 13th
Ray Mazurak	Line-cutter crew chief	May 19th – June 26th
Dan Mackenzie	Line-cutter	May 19th – June 16th
Heidi Manicke	Brusher / Line-cutter/ IP tech / HLEM Helper	June 1st – July 10th
Bruce Germaine	Line-cutter	June 17th – July 13th
Charlie Turanich-Noyen	Brusher/ HLEM Helper	May 17th – June 23rd
Warren Kapaniuk	Line-cutter crew chief	May 17th – June 23rd
Mac Cohan	Brusher	May 17th – June 1st
JP Lemire	IP tech	July 2nd – July 8th
Dave Hildes	Geophysicist Project Manager	August 16th – August 19th
Genevieve Hetu	IP Crew chief	August 16th – August 28th
Stefan Groensdahl	Helper	August 16st – August 27th
Zain Syed	Helper	August 16th – August 27th
Russell Radwanski	Helper	August 19th – August 28th
Jay Watt	Crew Chief	August 31st – September 2

Graeme Chan	Helper	September 1st – September 2

3.2 Instruments and Equipment

The HLEM crew was equipped with the following instruments and equipment:

HLEM instrument	1	APEX Parametrics I-9 Maxmin
Other	2	VHF Handheld radios
Other	1	Laptop with Geosoft

The IP crew was equipped with the following instruments and equipment:

IP receiver	1	Iris Elrec Pro
IP transmitter	1	GDD TxII 3.6 kW
Generator	1	Honda 5kW generator
IP equipment	1	Repair tools & spare IP parts
	7 km	18 gauge wire
	6	VHF handheld radios
		Georeels & spools, 25m 10 pin IP cables, stainless steel electrodes
Other	1	Laptop with Geosoft IP package
	1	Sat phone

The line cutting crew was equipped with the following instruments and equipment:

Line cutting equipment	5	Chain saws
		Radios, handheld GPSes, safety equipment
Other	1	Laptop
	1	Sat phone

3.3 Survey Specifications

The HLEM survey was conducted according to the following specifications:

Coil Separation	100 m
Frequencies	220, 1760, 3520, 7040, 14080 Hz
Station Separation	25 m
Terrain Slopes	Recorded in percent
Terrain Corrections	Coils held at the indicated slope for coplanar coils. Short chaining errors caused by rough topography (such as steep slopes) were corrected for using the slope chaining method with Apex parametrics software MMCFIX1.
Grid registration	Handheld GPS points at line ends averaged 60 s or until estimated accuracy < 10 m, whichever was longer. All coordinates in NAD83 UTM Zone 7N.

The IP and resistivity surveys were conducted according to the following specifications:

Array	Modified pole-dipole and Gradient (Kennecott Trench grid only)
Dipole spacing	25 m / 50 m in areas of poor data quality on the dipoles 10 – 15 to improve the data quality (Kennecott trench grid) 50 m (Miller Creek and Layfield) 25 m (Cholach)
Dipoles Read	N=1 through 20 where possible (Kennecott Trench grid) N=1 through 10 (Miller Creek, Layfield and Cholach grids)
Tx	Time domain, 50% duty cycle, reversing polarity, 0.125 Hz.
Stacks	Minimum 15
Rx error	5 mV/V or less, otherwise repeated several times until repeatability assured.
Grid registration	Handheld GPS points at line ends and every 500m minimum averaged 60 s or until estimated accuracy < 10 m, whichever was longer. All coordinates in NAD83 UTM Zone 7N.

3.4 Data Processing

The HLEM data was dumped in its raw form from the instrument using GemLink. Short coil spacing errors were corrected using the Apex software MMCFIX1. Data was exported to an ASCII format using MMCPRO87, and plotted using Geosoft Oasis software.

The IP data was downloaded nightly from the ELREC PRO receiver and imported into Geosoft Oasis Montaj IP package. Every reading was inspected and readings which did not repeat were rejected from the database. Apparent resistivity was recalculated using a four electrode equation assuming a homogeneous earth. The average apparent chargeability was calculated using a weighted mean based on the number of stacks and the standard deviation of the chargeability.

GPS points were dumped from the non-differential handheld units and the coordinates for the stations determined by linear interpolation between stations.

Pseudosections of apparent resistivity, apparent chargeability and apparent chargeability error, draped over topography, were produced with Oasis Montaj. These pseudosections are included with this report in PDF format as well as packed Oasis Montaj map files.

3.5 Products

The following files are attached to this report under the folder *IP & HLEM (Thrust zone) – field reports*

\Daily logs\Thrust zone 2011 geophysics daily log – XXX XX field report.pdf	Daily logs of the surveys from the three submitted field reports.
\Raw\Thrust zone 2011 geophysics raw data – XXX XX field report	Daily dump files of MaxMin, GPS and Elrec Pro
\Figures\Thrust zone 2011 geophysics figures – XXX XX field report\pdf & jpg	IP pseudosections, HLEM stacked profiles and grid maps in pdf or jpg formats.
\Figures\Thrust zone 2011 geophysics figures – XXX XX field report\packed Geosoft maps	IP pseudosections, HLEM stacked profiles and grid maps in packed Geosoft map formats.
\Final Data	Final Databases in geosoft gdb and ASCII .XYZ format. Channel.txt files describing the channels in the databases.
\Coordinates	NAD83 UTM Zone 7N coordinates for the four 2011 geophysics grids in the Thrust zone
Thrust zone 2011 geophysics field report – XXX XX.pdf	Copies of the three field reports describing the 2011 geophysical operations on the Thrust zone. This information is completely summarized in this report

4 THRUST ZONE IP – 2D INVERSIONS

During the course of the 2011 season, 2D inversions were run on the Thrust zone IP-resistivity data using the UBC DCIP2D algorithm to guide drilling as required. Composite sections were then made incorporating the IP-resistivity & HLEM data, recovered 2D resistivity and chargeability models and recommended drill holes. These were completed for the Kennecott Trench and Layfield grids but due to the drilling plans changing late in the summer, the composite sections were not required nor produced for the Miller Creek or Cholach grids.

4.1 Kennecott Trench grid

4.1.1 2011 summer proposed holes

This section has been included for completeness, but has been superseded by the subsequent 3D inversion described below in Section 5.

Four holes were proposed all at a dip of 55 and 300 metres long. These holes were designed to test the chargeable zones on the northwest end of the grid. L100 goes further to the northwest than lines 0 or 200 but also the anomaly at approximately station 1400 (tested by holes 2 and 3) has the strongest chargeability response on L100. The predicted – observed difference is acceptable on L100 although the inversion underestimates the most northwest chargeability and conductivity anomalies.

Hole	Line (collar)	Station (collar)	Easting (collar)	Northing (collar)	Azimuth	Priority
1	100	1900	505663	7097803	110	1
2	100	1500	505977	7097576	110	2
3	100	1325	506114	7097476	290	3
4	100	1800	505742	7097746	290	4

Hole 1 was the top priority as it intersects the northwest chargeability anomaly, which is the strongest, and extends into the conductive zone at depth. It does cross an HLEM conductor but it is a very weak so optimistically the drilling would not be adversely affected by a fault. The hole dipping up the line (hole 4) also tests this chargeable body but extends at depth into an area where this is no data coverage.

Holes 2 & 3 test another chargeability anomaly that is less strong and does not extend as much into the modelled conductive zone. There appears to be a thin conductor at station 1300 and that in combination with the deeper conductor is complicating the HLEM response. Hole 2 intercepts this thin conductor at depth and if it images a fault could lead to poor drilling conditions.

4.1.2 Recommendations

See Section 5.4.

4.1.3 Products

This section has been included for completeness, but has been superseded by the subsequent 3D inversion described below in Section 5. The following files are attached to this report under the folder *DCIP2D inversion\Kennecott Trench grids*

Composite sections & plan maps\	Composite sections including HLEM and IP-resistivity data and 2D recovered resistivity and chargeability. L100 has the proposed holes in the composite section. Plan map of L100 with proposed hole collars.
Inversion output files\	UBC format mesh file, 2D recovered conductivity and chargeability models, predicted DC and IP data and log files for each line.

4.2 Layfield grid

4.2.1 2011 summer proposed holes

Five holes were proposed all at a dip of 55 and 300 metres long.

Hole	Line (collar)	Station (collar)	Easting (collar)	Northing (collar)	Azimuth	Priority
1	150	1337.5	507288	7099270	290	2
2	150	1300	507317	7099249	110	1
3	150	1500	507162	7099366	110	2
4	300	1250	507381	7099358	110	1
5	0	-150	508381	7098294	290	3

Hole 1 was to test the strong chargeability on the northwest ends of the lines, also extending into the conductive zone. This feature is quite similar on all three lines and there is no compelling reason to test one line over the other therefore the middle line was chosen. The azimuth is designed to cross-cut stratigraphy.

Both RAB holes with the best results on the Layfield grid are within a chargeability low, mid resistivity on the margin of a high chargeable zone, reminiscent of results at the Kennecott Trench grid, therefore the chargeability lows are of interest and hole 2 tests this. The azimuth was chosen to follow stratigraphy and cross-cut the veins. There may not be a direct relationship with chargeability and gold; chargeability can be controlled by grain size and assemblage of sulphides and not total sulphide content

Hole 3 test the same target as hole 1 but cross-cuts the veins, not the stratigraphy.

Hole 4 is similar to hole 2, but on L300.

Hole 5 is a weak geophysical target, but the only noteworthy anomaly in the head of Wy gulch where the only example of cinnabar has been found on the property.

4.2.2 Recommendations

Figure 4-1 shows several RAB holes, proposed holes and the diamond drillhole DDH 11-20 in relationship with lines 300 and 150. There were three intersections in DDH 11-20 with greater than 1 ppm gold and, within the bounds of the very limited drill control, the highest gold values occur on the margins of moderate chargeability offset from a conductive area , similar to what is observed in the Kennecott Trench zone (see Sections 5.3 and 5.4). Therefore proposed holes 2 & 4 as described above in Section 4.2.1 are the highest priority recommended holes at Layfield.

Also observed at the Kennecott Trench grid are significant gold results within the very chargeable and conductive schists (see Sections 5.3 and 5.4). Therefore proposed holes 1 & 3 as described above in Section 4.2.1 remain valid secondary exploration targets. No further information is available for the head of Wy gulch and proposed hole 5 as described above in Section 4.2.1 remains a valid tertiary target.

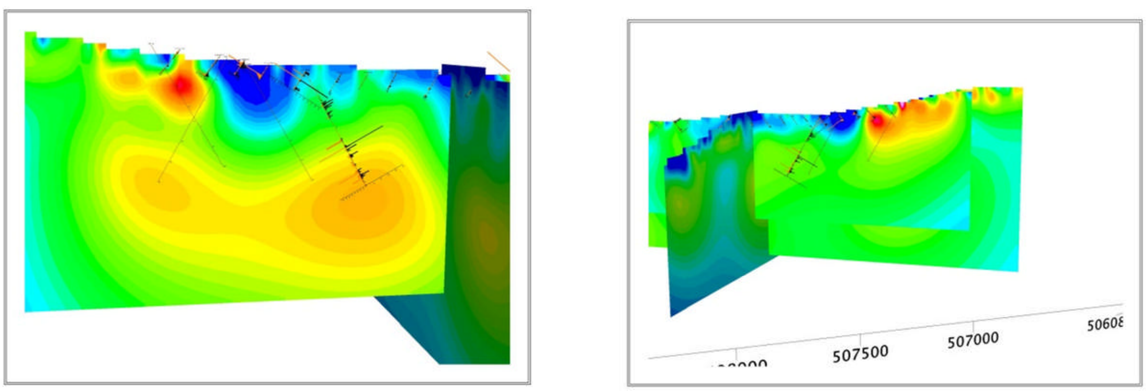

Figure 4-1 View of 2D chargeability model on L300 of the Layfield grid (image on the left) and 2D chargeability of L150 of the Layfield grid (image on the right). View direction of the image on the left is inclination 10, declination 45, view direction of the image on the right is inclination 10, declination 200.

4.2.3 Products

The following files are attached to this report under the folder *DCIP2D inversion*

\Layfield grid\Composite sections & plan maps	Composite sections including HLEM and IP-resistivity data, 2D recovered resistivity and chargeability and proposed holes. Plan map of Layfield grid with proposed hole collars. These maps do not include DDH11-20
\Layfield grid\Inversion output files	UBC format mesh file, 2D recovered conductivity and chargeability models,

	predicted DC and IP data and log files for each line.
\Geo-referenced grids	Geo-referenced Geosoft format section grids of the 2D recovered resistivity and chargeability. These can be viewed in 3D space with the Geosoft viewer.

4.3 Miller Creek grid

Due to drilling plans changing late in the summer, composite sections and proposed holes were not required nor produced for the Miller Creek grid. No diamond drilling has been done in this area.

From the RAB drilling results and the limited IP completed in the area (see Figure 4-2) the highest gold values are on the margin of a chargeable and conductive area, consistent with what is observed at the Layfield and Kennecott trench grids (see Sections 4.2.2, 5.3 and 5.4) and further exploration should focus on this area.

4.3.1 Products

\Miller Creek\Inversion output files	UBC format mesh file, 2D recovered conductivity and chargeability models, predicted DC and IP data and log files for each line.
\Geo-referenced grids	Geo-referenced Geosoft format section grids of the 2D recovered resistivity and chargeability. These can be viewed in 3D space with the Geosoft viewer.

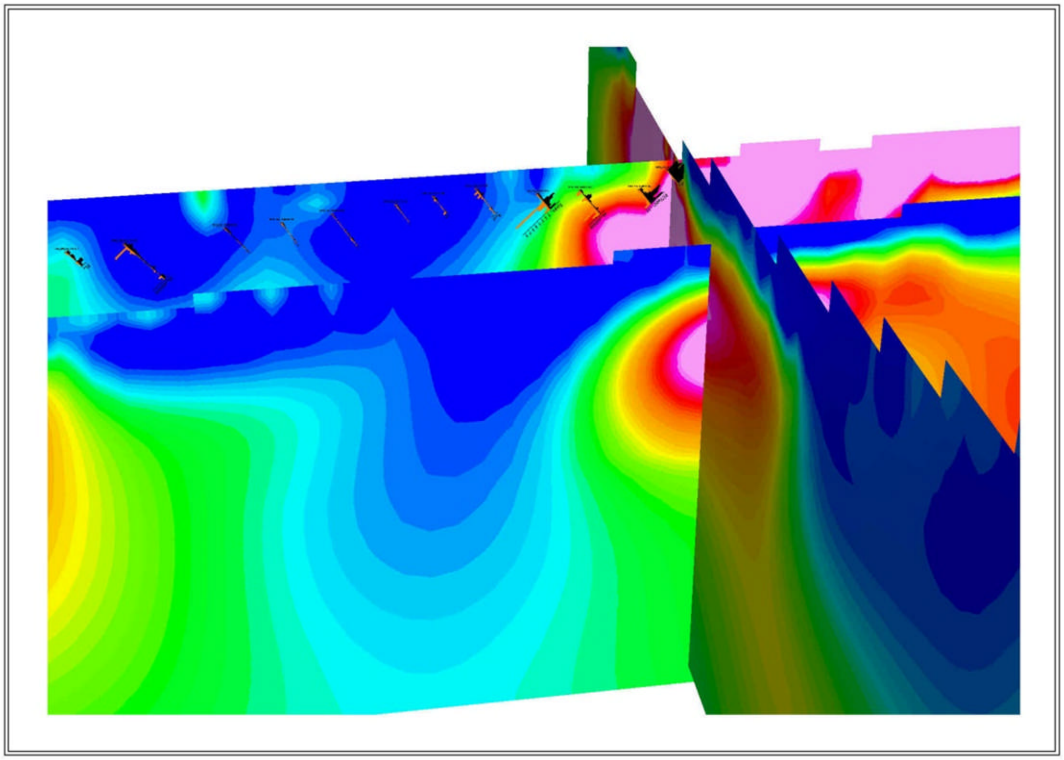

Figure 4-2 Miller Creek 2D recovered chargeability sections. View is from inclination 30 and declination 225. Gold and Arsenic assays are shown on the shallow RAB holes drilled in between lines 0 and 100.

4.4 Cholach grid

Due to drilling plans changing late in the summer, composite sections and proposed holes were not required nor produced for the Cholach grid. No diamond drilling has been done in this area.

The limited IP done on this grid suggests a different setting than at the Kennecott Trench, Miller Creek and Layfield grids; there is no very conductive and chargeable unit imaged. Figure 4-3 shows the recovered chargeability (colour scale 0 to 15 mV/V) and recovered resistivity (colour scale 100 to 3000 Ohm-m, log-linear scale). The grid was centered upon a soil anomaly and favorable RAB drilling results. The IP-resistivity shows an area of moderate, but elevated chargeability within the central area bounded by resistivity lows on the southwest and northeast on both lines 0 and 250.

It is recommended that the chargeability highs be drill tested and the IP–resistivity grid be infilled and extended if warranted by favorable drill results.

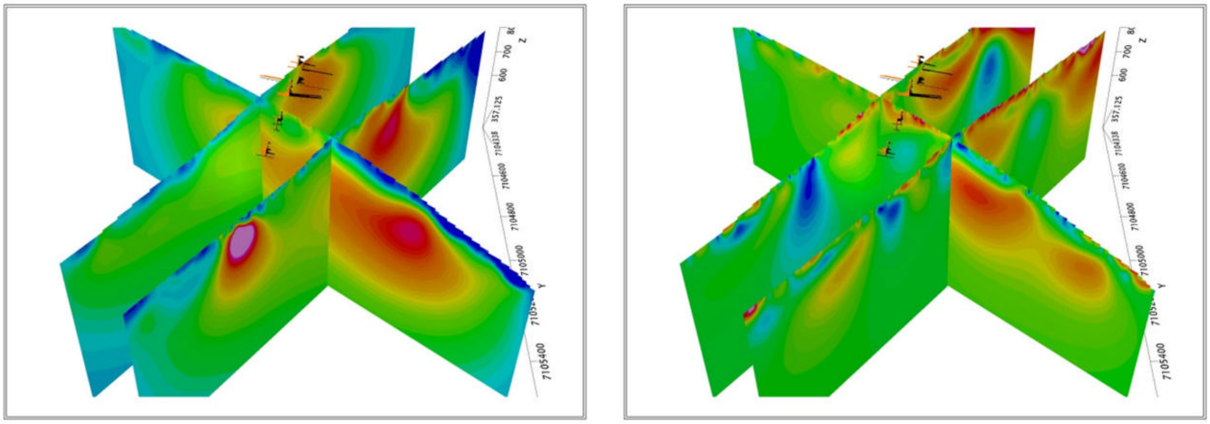

Figure 4-3 Cholach grid 2D recovered chargeability (left) and 2D recovered resistivity (right) with RAB gold and Arsenic results.

4.4.1 Products

\Cholach\Inversion output files	UBC format mesh file, 2D recovered conductivity and chargeability models, predicted DC and IP data and log files for each line.
\Georeferenced grids	Georeferenced Geosoft format section grids of the 2D recovered resistivity and chargeability. These can be viewed in 3D space with the Geosoft viewer.

5 KENNECOTT TRENCH GRID IP – 3D INVERSION

In the Summer of 2011, 6.5 km of induced polarization - resistivity (IP) data were collected on the Kennecott Trench Zone of the Sixty Mile property. This section describes the data inversion steps taken to model the resistivity and induced polarization data provided in the field report, and makes recommendations based on the results of the inversion. Louis Rosenthal performed the 3D inversions and contributed substantially to this section.

5.1 Data inversion

The final resistivity and chargeability data were modeled using the DCIP3D inversion software developed by the University of British Columbia Geophysical Inversion Facility. This software package produces a geo-referenced chargeability (V/V) and conductivity (mS/m) model.

The inversions used the data from the final database provided with the field report. The DC inversions used the primary voltage normalized by the current as input and the IP inversions used dimensionless averaged IP as input. The dataset was rotated 36 degrees counter-clockwise so that the lines were oriented (grid) east-west. This rotation decreases the size of the inversion mesh which improves the efficiency of the inversion.

5.1.1 DC inversion

The final DC inversion used a 15m mesh and was weighted from the top down to discourage surface noise. Several models were calculated using different combinations of initial and reference models. The final model fit the data very closely in the resistive ground to the southeast for all dipole separations. A large, deeply buried conductive feature in the northwest overlain by highly resistive rocks was not resolved as accurately, especially at wide dipole separations. Stacked sections of the observed and predicted conductivity and a difference calculation plot are included with this report.

5.1.2 IP inversion

The sensitivity of the IP inversion was calculated using the final DC model. Several models were calculated using different combinations of initial and reference models. The best model used a reference model and initial model of 50 mV/V and used surface weighting to discourage spottiness. Stacked sections of predicted and observed chargeability and a difference calculation plot are included with this report.

5.2 Processing

The padding cells were removed from the final models which were then imported into Oasis Montaj as 3D voxels. The voxels were rotated back into earth coordinates then re-gridded using a minimum curvature algorithm with 10 m cell size. These processed voxels are included with this report in various formats (Geosoft Voxels, AUTOCAD DXF and 3D PDF).

5.3 Interpretation

A combination of cross-sections and isosurfaces is used to visualize and interpret the model. The figures in this report use a conductivity isosurface of 0.01 mS/m (pink) and varying chargeability isosurfaces (red) depending on the zone being examined. The HLEM conductors identified are generally consistent with shallow recovered conductivities from the DC inversion except where deeper conductive bodies on the edge of the depth range of the HLEM disrupt the response from a nearby shallow conductor.

The northwest half of the survey area is modelled as being very conductive and chargeable (Figure 5-1). The conductive body is modelled as being deeper than the chargeable zone although they do overlap slightly. No drillholes intersect the northwest extent of the survey in the zone of anomalous chargeability and conductivity. The closest drillhole to this zone is DDH-10-04. The log reports quartzose schist with 2-3% disseminated pyrite between 6.1 and 85.54 meters, quartzose schist with increased minealization from 86.2 to 115.66 and finally a biotite-chlorite schist from 115.66 to 257.43 (EOH) where there is a deficit of sulphides. This is consistent with the recovered model: the more resistive and chargeable quartzose schist containing pervasive pyrite overlies the more conductive and non-chargeable biotite-chorite schist with few sulphides remaining. This drillhole did not intersect significant gold anomalies, although the arsenic numbers were high.

The extreme northwest end of L100 was the most chargeable of the survey and DDH11-19 was drilled to test this anomaly. It should be noted that L100 was the only line to extend into this northwest extremity and the model is not as well contrained as the rest of the survey. Additionally, the few data that were collected here had typically poor misfit (the predicted data from the model does not match well to the observed data). Therefore, caution should be exercised when viewing the 3D models in this region.

The data, the 2D model from which DDH11-19 was spotted and the 3D chargeability model all agree that the highest chargeabilities should lie in the upper 100 metres of DDH11-19. The hole was logged almost exclusively as a schist and photos show extensive shearing and brecciation however there is nothing to explain the increased observed and modelled near-surface chargeability. Below the modelled chargeability high, arsenic numbers are high and there are isolated significant gold values (up to 4.4 ppm Au).

The drilling to date is concentrated to the northwest of where the crossline intersects the main grid (Figure 5-2) in the more quartz-rich units which have returned better gold values. The area of current interest is immediately southeast of the contact between the chargeable and conductive rocks to to the northwest (interpreted to be the pyrite-rich quartzose schist and biotite-chlorite schists) and the resistive, non-chargeable rocks to the southeast. The crossline did not intersect significant conductivity or chargeability. The gold values appear to be bounded to the southeast by a shallow conductive feature imaged by both the HLEM survey and the IP-resistivity, although there has been no drilling to the southeast of this feature. The chargeability increases slightly to the southeast of the shallow conductive feature (fault?).

Hole DDH11-18 had the highest gold intersection in the survey area. This intersection, between 133-150 metres, corresponds to the edge of a moderate chargeability anomaly (Figure 5-3) hosted in the transition between a resistive zone above and conductive zone below (Figure 5-4). The anomalous gold at the bottom of holes DDH-10-01 and DDH-10-02 is in the same transition zone, although they are more distal to the chargeability high.

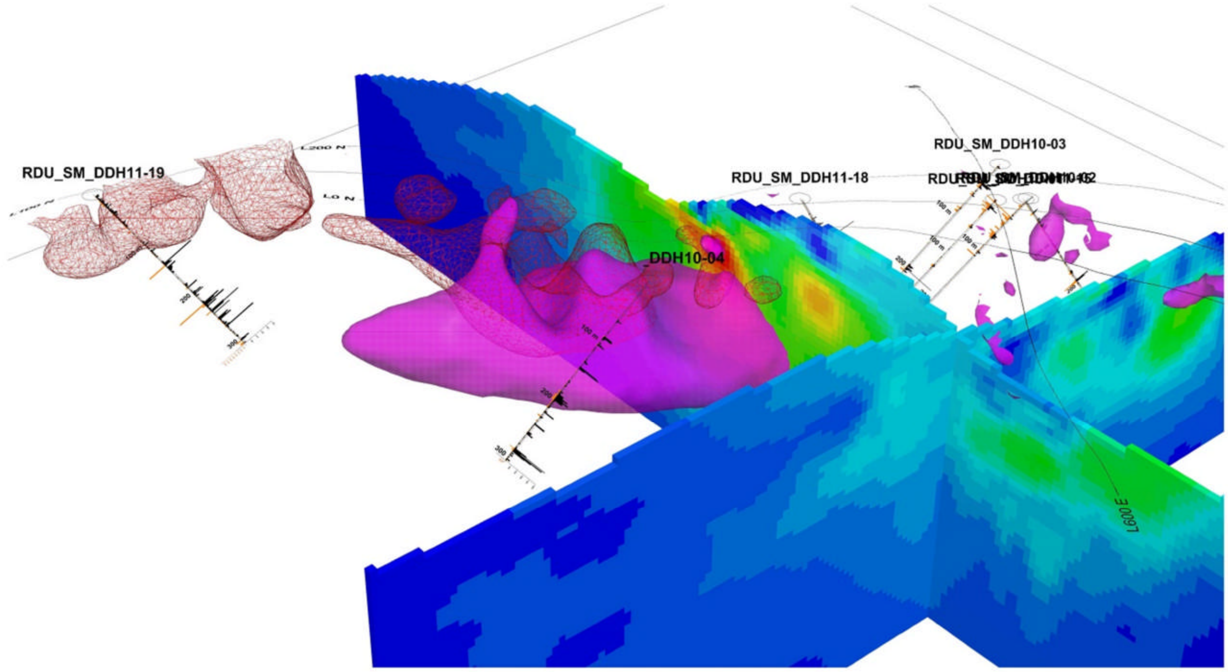

Figure 5-1 Zone of significant chargeability and conductivity in the NW extent of the grid area. Chargeability (wiremesh) and conductivity isosurfaces of 50 mV/V and 10 mS/m are plotted. The cross sections show the chargeability voxel, As values (black) and Au values (orange) are plotted beside the hole traces. View inclination is 35˚ and view declination is 40˚.

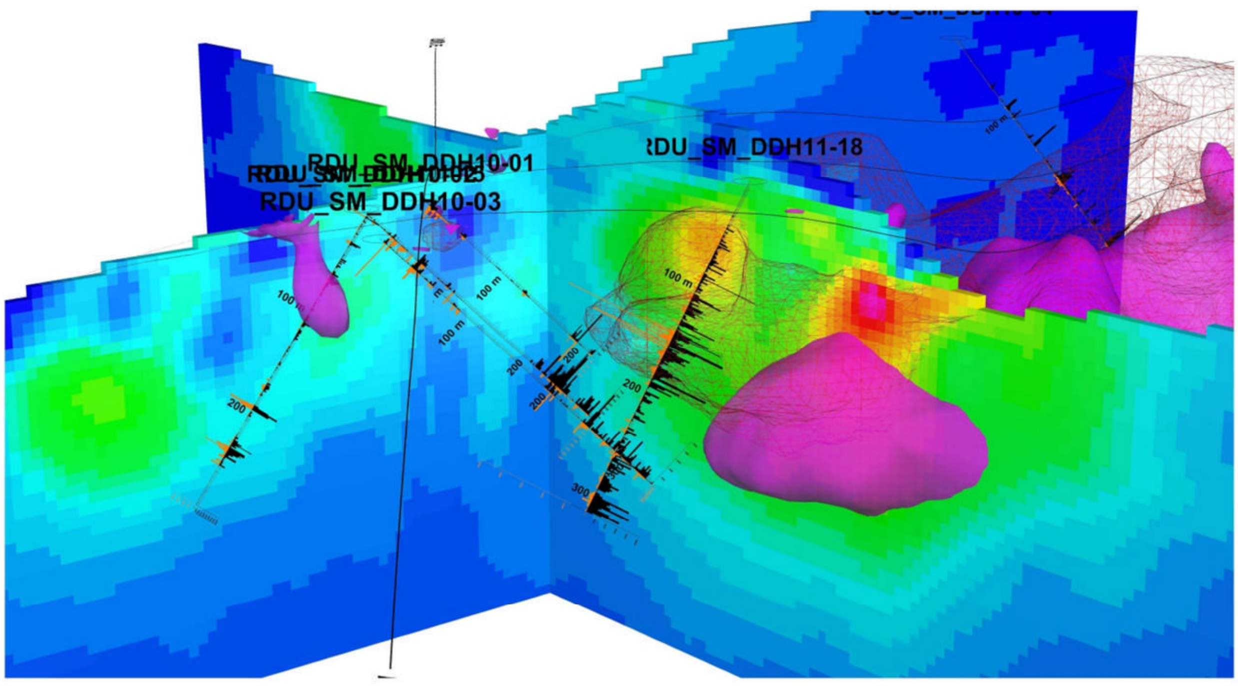

Figure 5-2 Southeast of the main chargeable zone where drillholes are concentrated. Chargeability (wiremesh) and conductivity isosurfaces of 30 mV/V and 10 mS/mare plotted. The cross sections show the chargeability voxel, As values (black) and Au values (orange) are plotted beside the hole traces. View inclination is 15˚ and view declination is 220˚.

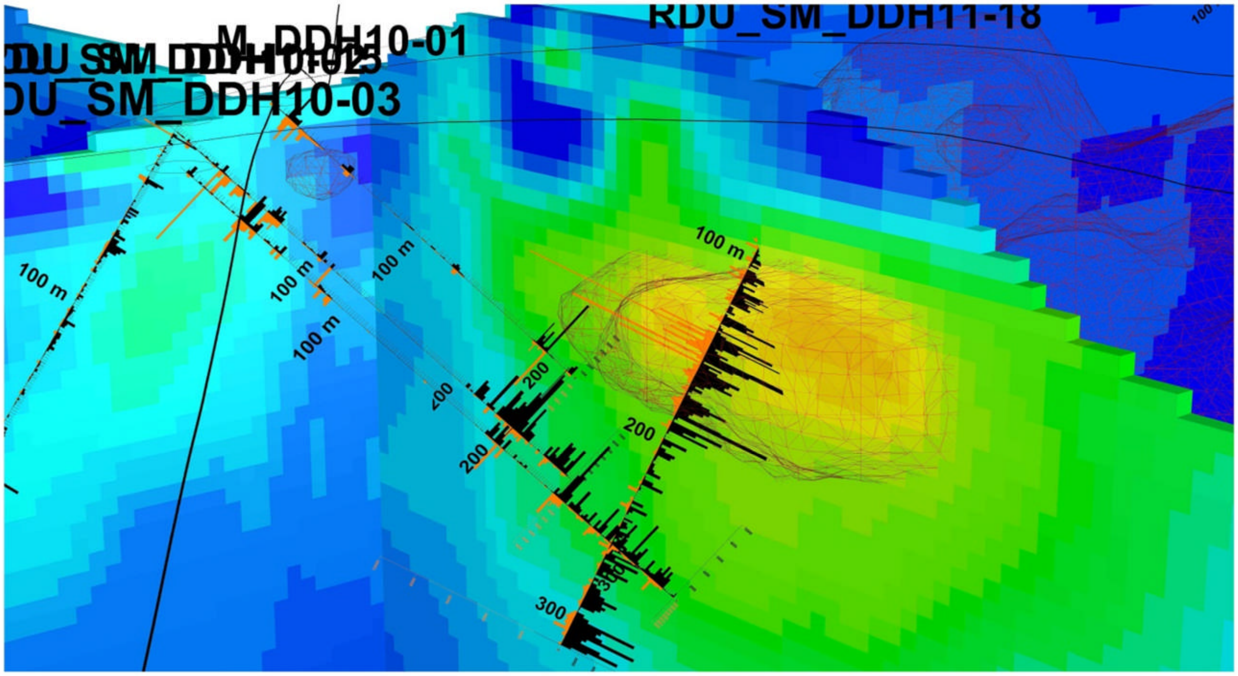

Figure 5-3 Focus on DDH11-18, chargeability isosurface (wiremesh) of 30 mV/V is plotted and a cross sections of the chargeability voxel, As values (black) and Au values (orange) are plotted beside the hole traces. View inclination is 15˚ and view declination is 220˚.

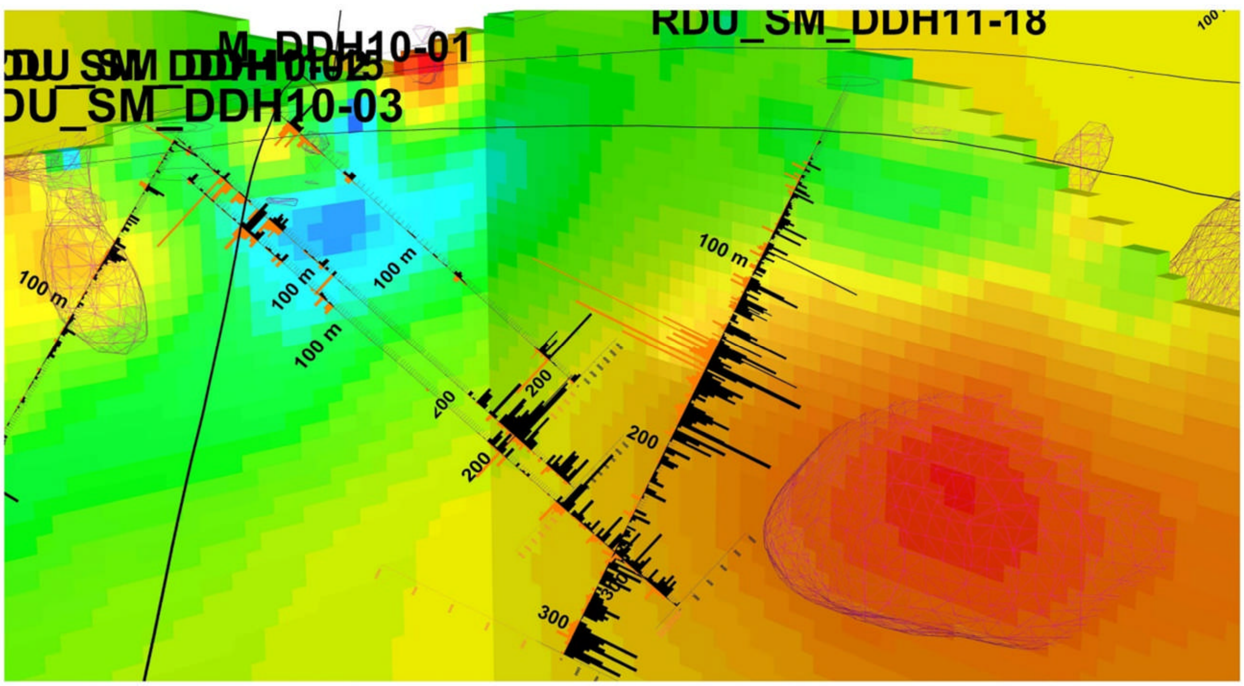

Figure 5-4 Focus on DDH11-18, conductivity isosurface (wiremesh) of 10 mS/m is plotted and a cross section of the conductivity voxel, As values (black) and Au values (orange) are plotted beside the hole traces. View inclination is 15˚ and view declination is 220˚.

5.4 Recommendations

The table below shows the collar and survey of the recommended drillholes in order of priority.

Hole_ID	Easting	Northing	Elevation	Azimuth	DIP	TD	Priority
Proposed_1	506400	7097197	1049	110	-62	300	1
Proposed_2	506387	7097304	1023	110	-62	300	2
Proposed_3	506011	7097568	1101	290	-62	300	3
Proposed_4	506138	7097388	1062	290	-62	300	4

The best results to date in the Kennecott Trench Zone are from DDH11-18 where the gold mineralization occurs at the margin of a chargeable zone which is offset from a conductive zone. If this margin represents a contact which acted as a fluid conduit, results from DDH11-18 suggest that conditions were favorable for precipitation of gold within the quartz-rich unit adjacent to this conduit. Hole *Proposed_1*, which is a similar distance from the chargeable and conductive contacts as DDH11-18, is therefore a prospective target for similar gold values. The zone closer to the inferred contact is tested by hole *Proposed_2;* these are shown in Figure 5-5. The extension of the 10 mS/m conductivity isosurface is coincident with the edge of the topographic gully, further suggesting that this represents a contact or thrust plane consistent with a fluid conduit.

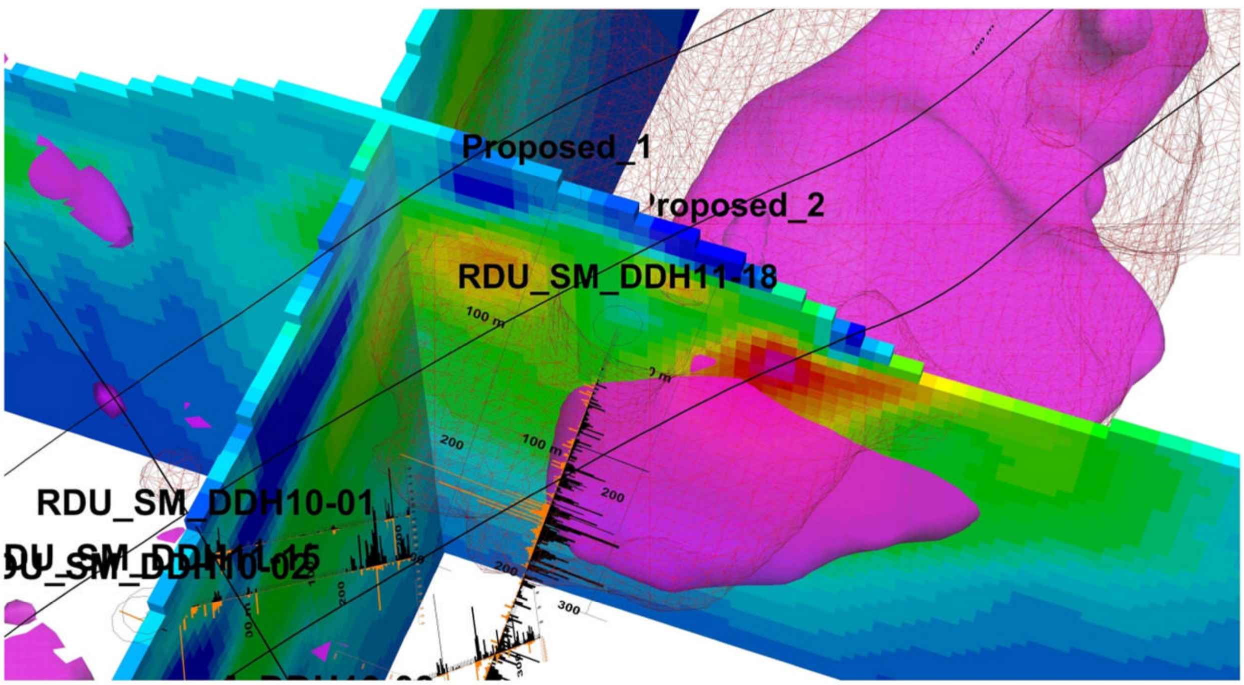

Figure 5-5 Proposed holes 1 & 2. Chargeability (wiremesh) and conductivity isosurfaces of 30 mV/V and 10 mS/m are plotted. The cross sections show the chargeability voxel, As values (black) and Au values (orange) are plotted beside the hole traces. View inclination is 55˚ and view declination is 250˚.

Although the focus of exploration has been on the quartz-rich schists and quartzites on the southeastern portion of the grid, DDH11-19 intersected several significant gold intervals (up to 4.4 ppm) and extensive elevated arsenic. Additionally DDH10-04 had anomalous gold and arsenic. Therefore, although not the primary target, the schists to the northwest have shown potential to host significant gold mineralization and should not be ignored. The IP / resistivity models are consistent with the results from DH10-04, but DDH11-19 remains enigmatic with respect to the geophysical results. However, as was the case in DDH11-18, the highest gold values appear to be on the margins of high chargeabilities. Therefore, hole *Proposed_3* is designed to test the margin of the local chargeability high across the dominant dip of the geology. Hole *Proposed_4* is designed to test both the high chargeability and the high conductivity zones, but this may be very similar to DDH10-04 which was not covered by the 2011 geophysical survey. Figure 5-6 shows these two proposed holes.

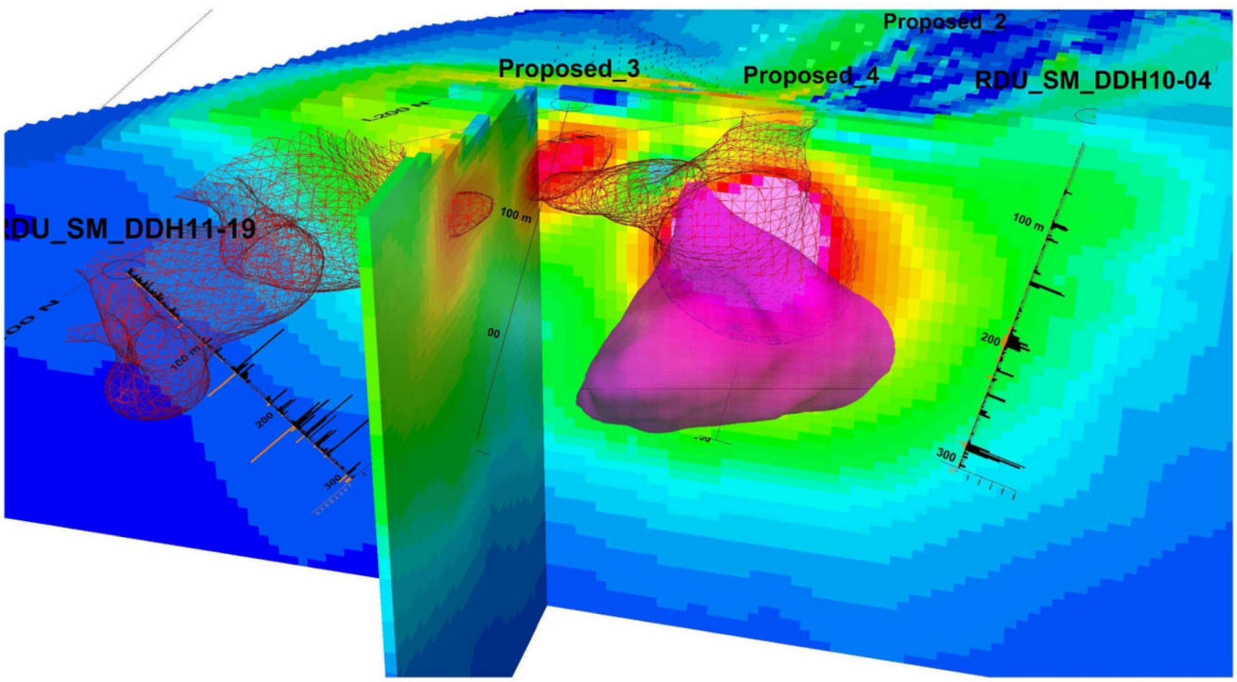

Figure 5-6 Proposed holes 3 & 4. Chargeability (wiremesh) and conductivity isosurfaces of 50 mV/V and 10 mS/m are plotted. The cross sections show the chargeability voxel, As values (black) and Au values (orange) are plotted beside the hole traces. View inclination is 30˚ and view declination is 75˚.

The areal coverage of the 2011 IP-resistivity survey was small; the survey was designed to only test the efficacy of the method at the Kennecott Trench Zone. Although not strongly conclusive, the limited drill control suggests that the method can guide future drilling and an expansion of the survey is recommended. The narrow features in the southeast may play a role in the mineralizing system, but it appears that proximity to the larger features to the northwest are more important in controlling gold mineralization and as such a n=10, 50 metre dipole survey would satisfy the depth and resolution requirements and result in increased production and therefore lower survey costs.

5.5 Products

The following files are included with the digital version of this report

\UBC	Final UBC models with mesh file
\3D PDF	3D PDFs of all Figures. With an appropriate PDF reader, displayed layers can be chose and the figures can be rotated by the user.
\DXF	Selected isosurfaces of final models in DXF format
\Voxel	Final models in Geosoft voxel format
\Geosoft map	A packed Geosoft map which can be viewed with the freely available Geosoft viewer.
\Pred vs Obs	PDF of predicted vs observed Stacked sections

6 SUMMARY & RECOMMENDATIONS

The results suggest that the margins chargeability / conductivity highs represent a contact which acted as a fluid conduit and that conditions were favorable for precipitation of gold within the quartz-rich unit adjacent to this conduit. This result is most strongly supported at Kennecott Trench where there is the most drill control, but the results are consistent with the limited data at the Miller Creek and Layfield grids. Several holes are recommended to test this in Sections 4.2.2 and 5.4.

Additionally, although the focus of exploration has been on the quartz-rich schists and quartzites on the southeastern portion of the Kennecott Trench, Miller Creek and Layfield grids, there has been significant gold intervals (up to 4.4 ppm) and extensive elevated arsenic in the schists to the northwest. Several holes are recommended to test this in Sections 4.2.2 and 5.4.

The limited drill control suggests that the IP method can guide future drilling and an expansion of the survey is recommended at the Kennecott Trench, Miller Creek and Layfield zones if warranted by favorable drill results. A n=10, 50 metre dipole survey would satisfy the depth and resolution requirements and result in increased production and therefore lower survey costs.

There has been limited work done at the Cholach grid, but the IP-resistivity shows an area of moderate, but elevated chargeability within the central area bounded by resistivity lows and centered on the gold-in-soil anomaly and favorable RAB drilling results. It is recommended that the chargeability highs be drill tested and the IP–resistivity grid be infilled and extended if warranted by favorable drill results.

The ELF-EM performed well compared to the CSAMT survey. With no cut-lines required and a 2 person crew able to collect approximately 2.5 line-km daily, the ELF-EM offers a cost-effective, deep-EM alternative.

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