AURORA GEOSCIENCES

NORTHERN GEOLOGICAL & GEOPHYSICAL CONSULTANTS

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MEMORANDUM

To: Roger Hulstein, Rackla Metals Inc. **Date:** March 26, 2012

From: Louis Rosenthal, Dave Hildes, Aurora Geosciences Ltd.

Re: 2011 Kennecott Trench IP survey – 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. 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 by Rackla Metals Inc. This memorandum 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.

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.

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.

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.

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).

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 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 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 3) hosted in the transition between a resistive zone above and conductive zone below (Figure 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.

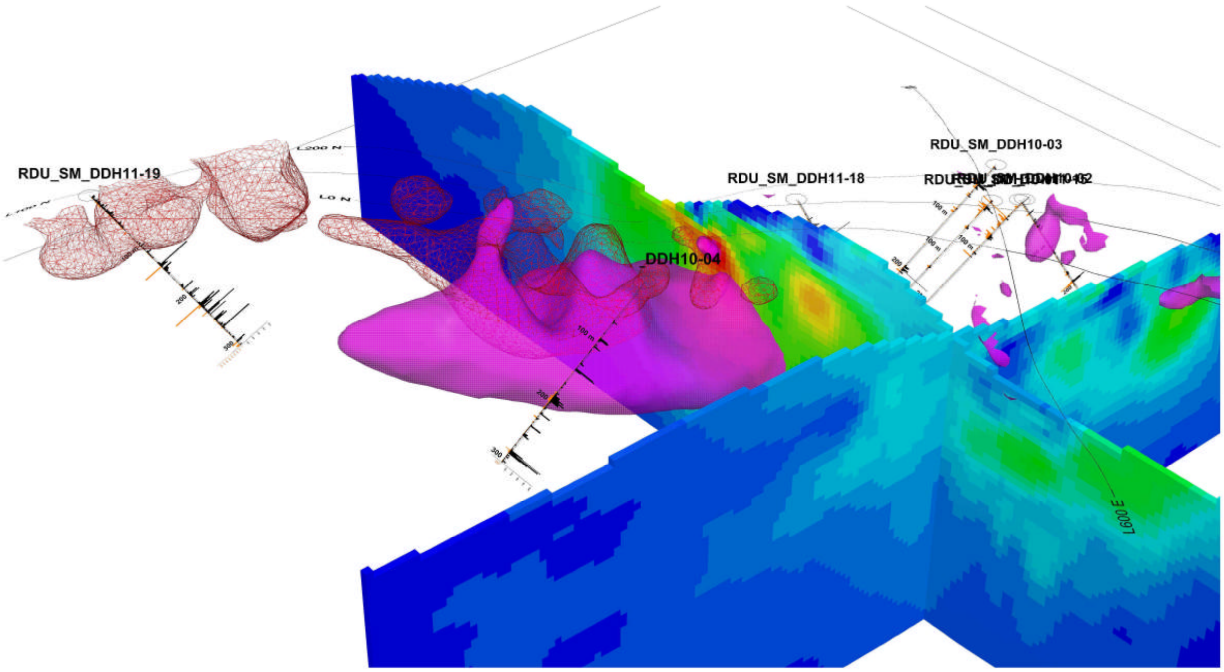

Figure 1: Zone of significant chargeability and conductivity in the NW extent of the grid area. Chargeability (wiremesh) and conductivity isosurfaces of 50 mV/V and 10 mS/m are plotted. The cross sections show the chargeability voxel, As values (black) and Au values (orange) are plotted beside the hole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

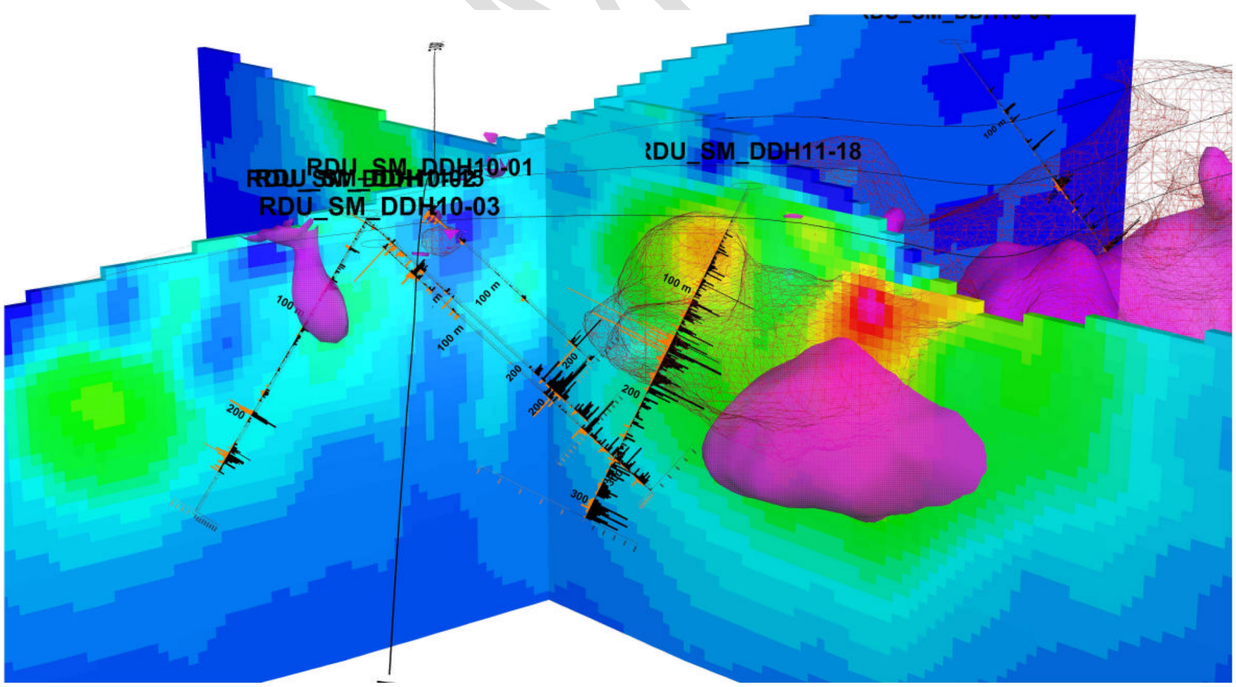

Figure 2: Southeast of the main chargeable zone where drillholes are concentrated. Chargeability (wiremesh) and conductivity isosurfaces of 30 mV/V and 10 mS/mare plotted. The cross sections show the chargeability voxel, As values (black) and Au values (orange) are plotted beside the hole traces. View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

view declination is 220˚.

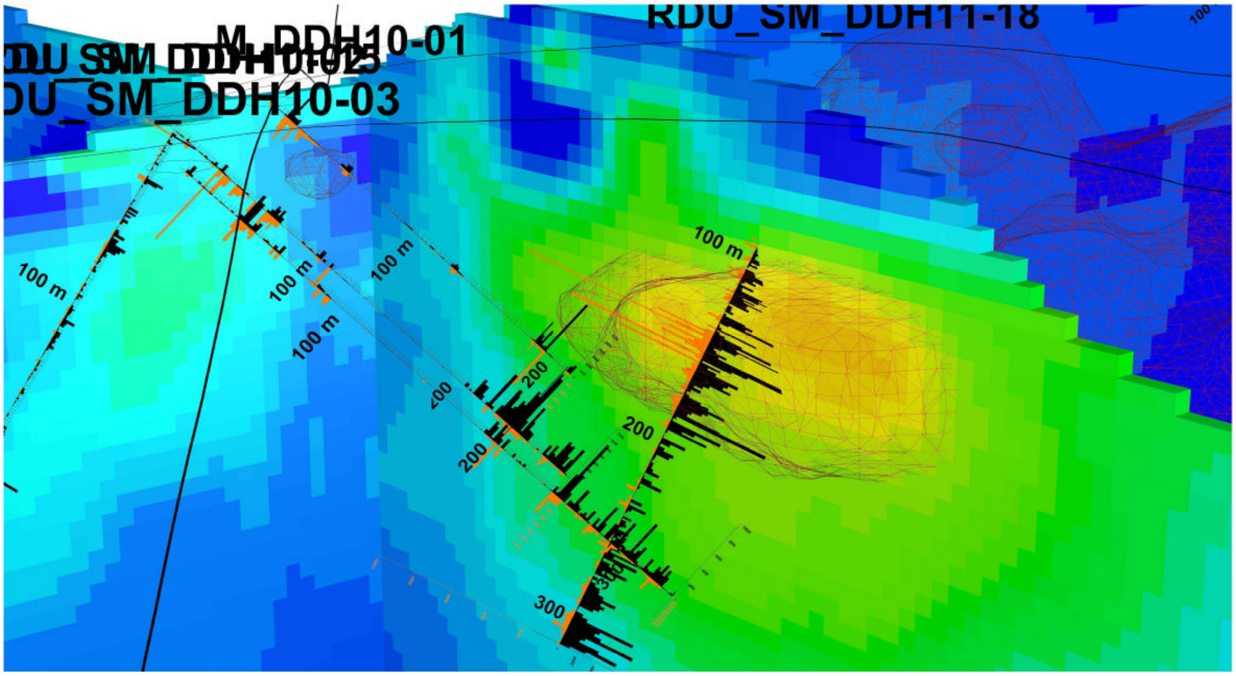

Figure 3: Focus on DDH11-18, chargeability isosurface (wiremesh) of 30 mV/V is plotted and a cross sections of the chargeability voxel, As values (black) and Au values (orange) are plotted beside the hole traces. View inclination is 15˚ and view declination is 220˚.

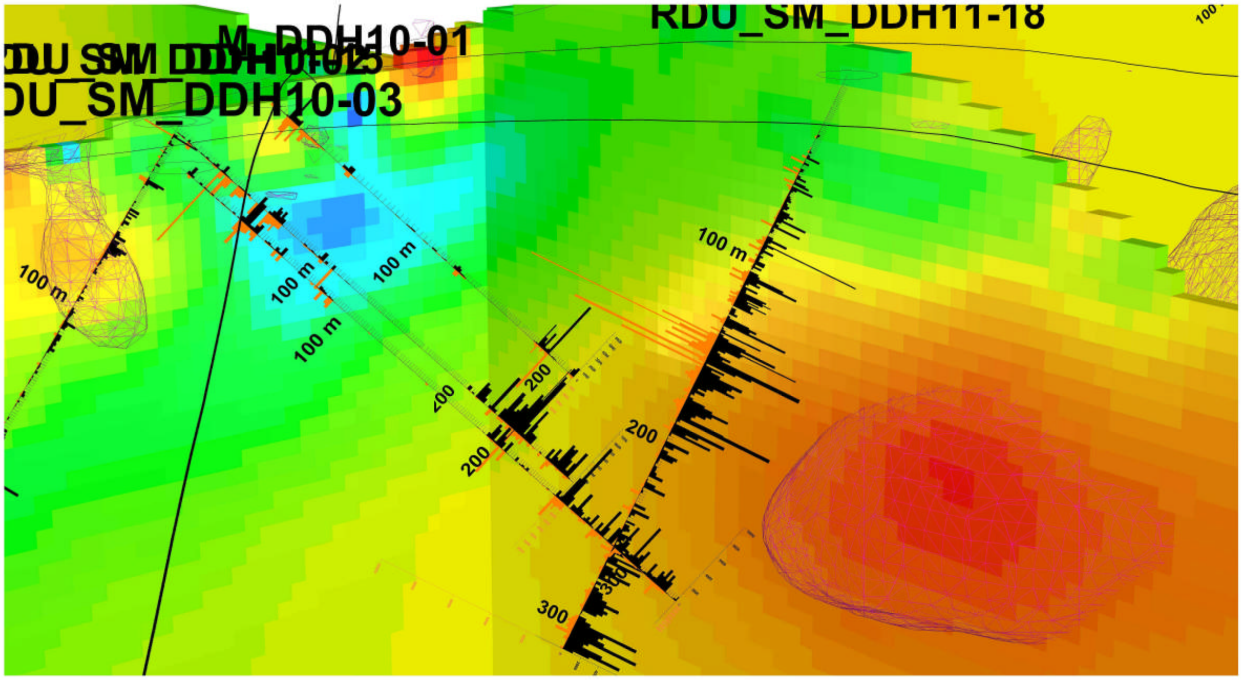

Figure 4: Focus on DDH11-18, conductivity isosurface (wiremesh) of 10 mS/m is plotted and a cross section of the conductivity voxel, As values (black) and Au values (orange) are plotted beside the hole traces. View inclination is 15˚ and view declination is 220˚.

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 favourable 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. 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.

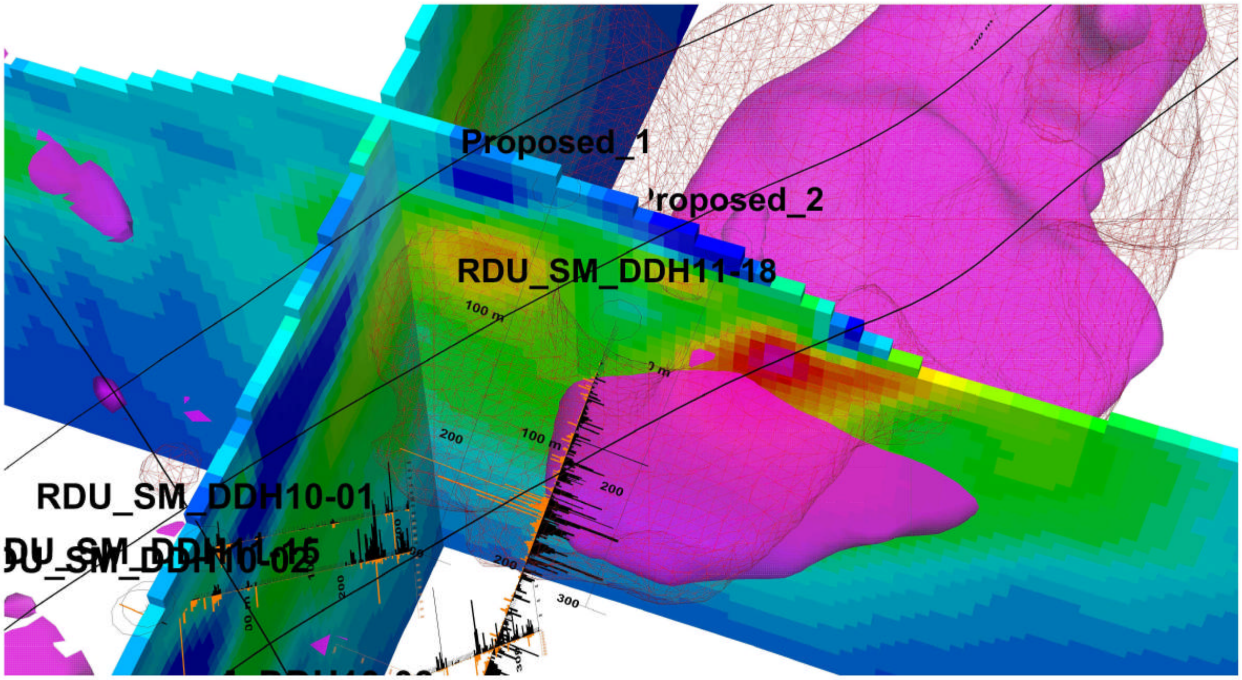

Figure 5: Proposed holes 1 & 2. Chargeability (wiremesh) and conductivity isosurfaces of 30 mV/V and 10 mS/m are plotted. The cross sections show the chargeability voxel, As values (black) and Au values (orange) are plotted beside the hole traces. View inclination is 55˚ and view declination is 250˚.

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 6 shows these two proposed holes.

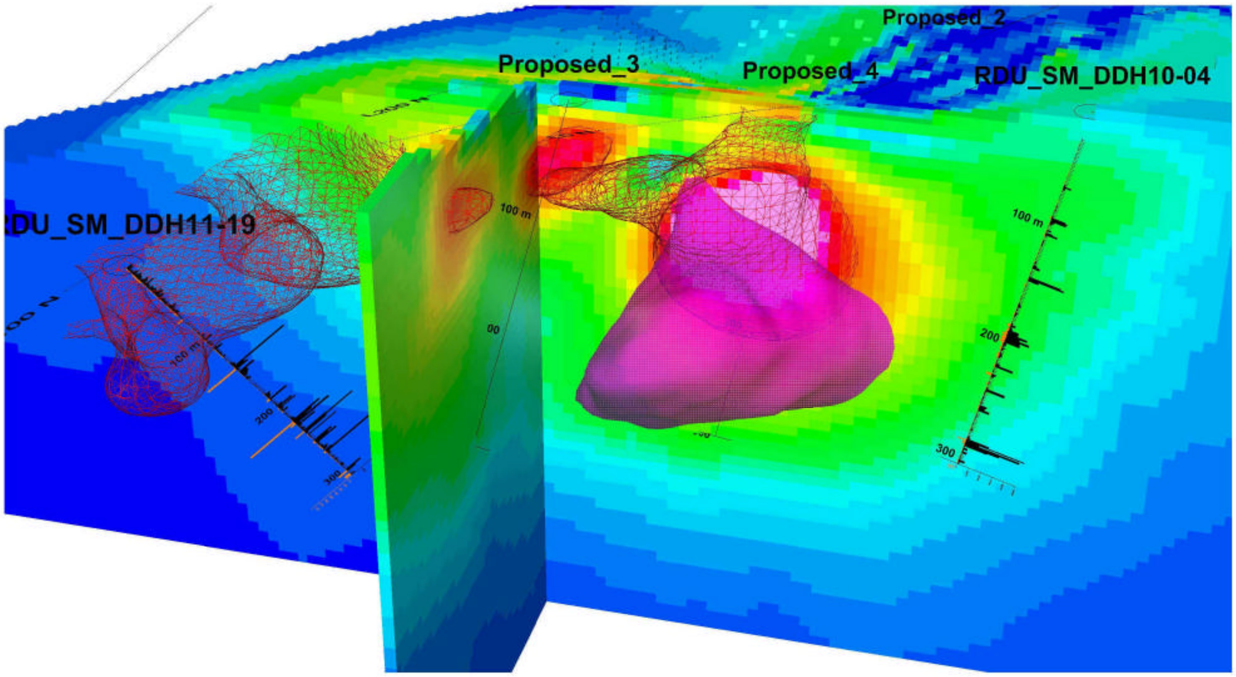

Figure 6: Proposed holes 3 & 4. Chargeability (wiremesh) and conductivity isosurfaces of 50 mV/V and 10 mS/m are plotted. The cross sections show the chargeability voxel, As values (black) and Au values (orange) are plotted beside the hole traces. View inclination is 30˚ and view declination is 75˚.

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) 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
2011 Kennecott Trench IP - 3D Inversion Report.pdf	A copy of this report

Respectfully submitted,

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