

## **EL20/96 – Elliott Bay**

### **Annual Report to April 11<sup>th</sup> 2006.**

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## Summary

The Annual Report for EL20/96 provides details TasGold's exploration progress for both the 2006 and the end of 2005's field program (from 31/3/2004).

A 38.4 line km 3D IP survey, with a claimed depth penetration of 300m+, was conducted to yield vectors to basemetal-rich VHMS mineralisation in the Wart Hill area. Interpretation of the geophysical results was an evolving process, with drilling providing ground truthing of modelled geophysical character. Targeting was subsequently re-evaluated using a combination of geophysics and TasGold's strong understanding of the stratigraphy and mineralisation gleaned from previous drilling and mapping. Analysis of results was undertaken using TasGold's GIS coverages in conjunction with three dimensional viewing software.

A principal area of interest highlighted by the 3D\_IP survey extends north – south at depth (partly coincident the interpreted host horizon) along the western margin of the V19 grid. This zone comprises an extensive resistivity high and three main discrete chargeability highs. Two peak resistive areas are located proximal to the south west and north west of the drilled V19 basemetal mineralisation (Notably, resistivity responses are far stronger from the V19 area with respect to V34). Sandwiched between these is an east – west aligned chargeability high, located within the porphyry stratigraphically beneath the down dip projected host horizon immediately west of V19. The main body of this anomaly is ~120m thick, 180m wide and ~200m long, centred ~130m below surface and extending off grid to the west. This was tested by WD016, intersecting disseminated sulphides coincident with the chargeability high and weakly mineralised polymict host horizon at much greater depth.

Further south, a significant chargeability high is evident immediately north of the West Wart Prospect and another high lies parallel and coincident with the host horizon in the Silver Trench area. Drill hole WWD003 showed that the peak chargeability anomaly at the Silver Trench corresponds to the polymict host horizon, bearing variable sulphide clasts and disseminations to 10% locally.

A total of 2 drill holes for 762m, targeted utilising new 3D IP data, were completed on the V19 and West Wart Prospects during the 2006 summer field season. Drill logs and details on a further 6 drill holes completed during the 2005 field season, subsequent to submission of last years annual report are also included.

Previously unreported 2005 field season drill holes focused upon evaluating the resource potential of the V19 prospect helped define an extensive base / precious metal mineralised horizon. The continuity of base/ precious metal mineralisation has now been documented by drilling over a minimum 270m distance down plunge on the host horizon, effectively from surface (Figure 1). The V19 mineralisation apparently plunges moderately to the south, on an overturned east facing and west dipping fold limb.

An inferred resource for the V19 mineralisation was calculated utilising a simple block model. Two inferred resource outcomes were generated; being a conservative 460,000tonnes @ 41.5g/t Ag, 0.72g/t Au, 1.81% Pb and 3.41% Zn and optimistic 600,000tonnes @ 40.5g/t Ag, 0.67g/t Au, 1.74% Pb and 3.30% Zn.

## **Introduction**

The following report details various aspects of TasGold Ltd.'s exploration within EL20/1996, including last field seasons unreported drilling, a 3D Induced Polarisation survey, recent drilling focused by the 3D IP and a non JORC compliant inferred resource calculation for V19 Ag-Pb-Zn mineralisation.

TasGold's exploration within EL20/1996 during the 2005 field season was primarily focused upon resource definition at the V19 Prospect at Wart Hill, with the 2006 drilling attempting wide step out in the area, partly based upon the 3D IP results.

## **Location, Access and Land Use**

EL 20/96 is located in the remote southwest of Tasmania (Figure 1) around 40 kilometres west of Strathgordon and 70 kilometres south of Strahan. Access to the area is difficult as infrastructure is minimal to non-existent. The southwest of Tasmania is exposed to the roaring forties and is often windy and wet even in mid-summer.

Much of the southwest of Tasmania is listed as a World Heritage Area and the land tenure is classified as National Park. However the strip of land between Elliott Bay in the south and the southern shore of Macquarie Harbour to the north has been deliberately excluded from the World Heritage Area on the basis of its prospectivity (and lesser wilderness values).

The Elliott Bay area remains classified as Conservation Area and as such is open to mineral exploration. Tasmanian Government proclaimed the prospective rocks south of Macquarie Harbour to be within the Sorell Peninsula Prospectivity Zone, a recognition of the mineral potential of the area. Under this act any change in the status of the land within the zone requires the approval of both houses of the Tasmanian parliament with any affected party entitled to compensation (this does not cover any decisions of the Federal government).

A rough 4WD track (Low Rocky Pt Track) runs from the southern end of Birch Inlet (south-eastern corner of Macquarie Harbour) to the unmanned lighthouse at Low Rocky Point. The track was initially constructed by Exploration companies in the 1950's and 1960's but has been rarely used since. The need to barge heavy equipment across Macquarie Harbour to access the track has occurred successfully in the past. Previous exploration has seen bombardiers, excavators and drilling rigs (L38's) unloaded and driven down to the Elliott Bay area. 4WD bike and motorbike enthusiasts occasionally use the track.

The alternative access is by air. The Moores Valley airstrip (10 kilometres north of Mt Osmund) was constructed in the 1950's and is serviceable by light aircraft.

Previous exploration campaigns have accessed the area by helicopter and light plane either from Strathgordon or Strahan. Large equipment has been transported down the coast by boat or barge and airlifted from the deck whilst the boat/barge is sheltered in

the mouth of the Mainwaring River or Cowrie Beach. TasGold's 2004 exploration campaign was mobilised in this manner.

A semi-permanent camp is located just south of Wart Hill. The Camp was first constructed by Geopeko Ltd. and is currently managed by Mineral Resources Tasmania. This facility was re-established by TasGold Ltd after it was vandalised and burned in 2003.

TasGold mobilised a significant quantity of equipment and supplies for the 2005 summer drilling campaign utilising the Hobart Ports barge "Kalundra", loaded in Hobart and unloaded inside the Lewis River mouth. The barge doors were lowered directly onto a sloping point, enabling egress for 4 quad bikes, 2 crawler dumpers, a trailer and an excavator. All other gear, including the company owned and operated drill rig, was sling loaded from the barge to camp and the Wart Hill drill site. The camp was completely demobilised at completion of the 2006 field season via the same procedure.

The crawler dumpers (one with 2.5tonne crane) and trailer were utilised for moving the drill rig between sites. The idea being to minimise the number of trips required, whilst significantly reducing helicopter expense. Quad bikes and trailers were used for personnel transport from camp to the drill sites. Vehicle movements were restricted to previously formed bombardier tracks as much as possible, with the rough main base line track from the camp to Wart Hill being improved for safety with the excavator. The excavator was utilised for drill pad and sump construction, as well as ongoing drill site rehabilitation and track drainage maintenance. Most rig sites were located within 200m of formed tracks minimising environmental disturbance.

A continuous presence has been maintained during field season's with weekly crew changes and supply runs via helicopter. The company owned and operated drill rig is operated 24 hours a day (2 shifts) with drillers and offsidiers on a 2 week on, 1 week off roster. Geologists and field hands have typically rotated on a 2 in / 2 out roster.

## **Tenure**

E.L. 20/1996 was granted to Exploration and Management Consultants (EMC) in 1997. After reviewing the historic data, EMC joint ventured the EL to Fimiston Ltd in 1998 who completed two drill holes at Wart Hill and then withdrew from the JV in 1999. Much of the former EL20/1996 has been relinquished with the current EL occupying a remnant 11 km<sup>2</sup> (Figure 1). Much of the former EL has been acquired by TasGold Ltd as EL21/1999. Terms of extension for the remaining EL20/1996 have been granted to TasGold Ltd annually on the proviso they completed expenditure commitments and return significant results. Presently, TasGold are the sole tenement holders in the Elliott Bay Region. A further request for a term of extension will be forwarded in the immediate future.

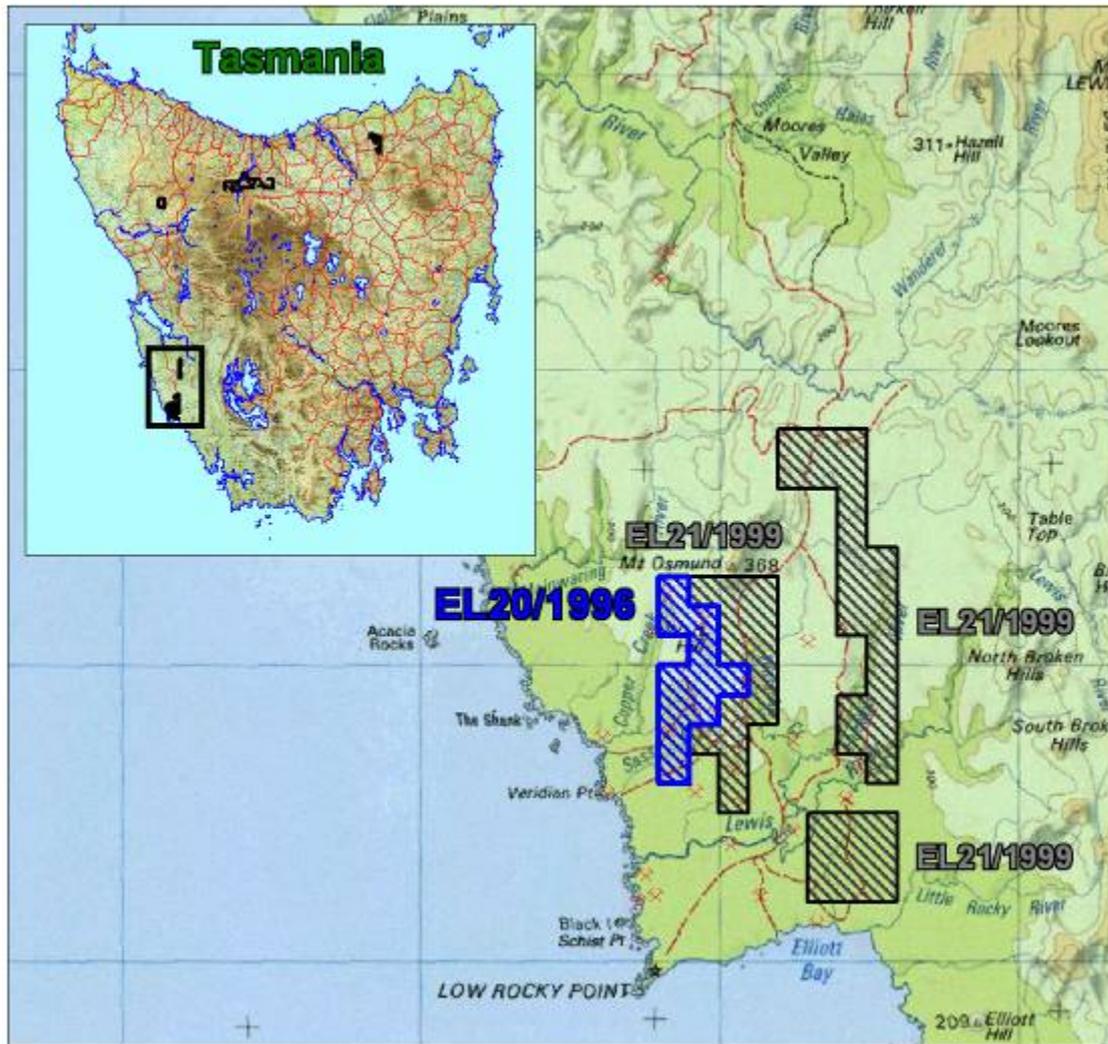


Figure 1: Location of EL20/1996

## Environmental Concerns

TasGold has undertaken environment surveys on an annual basis since 2003/2004 to comply with the requirements of the MEWG (Mineral Exploration Working Group). Orange Bellied Parrot and Wedge Tailed Eagle surveys investigating areas of planned exploration activity have been conducted by independent consultants prior to commencing work each field season. An Aboriginal heritage survey by independent consultants was also undertaken in late 2004, investigating the Lewis River landing and route to the Wart Hill camp.

Most recently, an Orange Bellied Parrot and Wedge Tailed Eagle was conducted from 22/11/2005 to 25/11/2006. As with past surveys, no parrots were sited and whilst eagles were seen, no evidence of nests has been observed. Results of this survey are appended.

TasGold completely rehabilitated drill sites and access tracks in the Wart Hill area at the end of the 2006 field season. A report on this work will be forwarded to MRT in the near future.

## Geology and Mineralisation

The regional geology of the Elliott Bay area is discussed in TasGold's Annual Report on Exploration for EL20/96 for 2004 (Callaghan, 2004). The geology, structure, mineralisation and alteration of the Wart Hill area is discussed by Reid (et. al. 2005), with further detail provided in Poltock (1989).

Mapping and interpretation is on going with significant advances in the understanding of the geology providing confidence and direction for further exploration. This work to-date suggests that the massive sulphide hosting polymict volcanoclastic unit in the Wart Hill area probably lies at the equivalent of the MRV's (Mount Read Volcanics) CVC – Tyndall Group boundary. The V19 mineralisation apparently plunges moderately to the south, on an overturned east facing and west dipping fold limb. Mapping indicates that the alteration over Wart Hill itself is located up dip and peripheral to the indicated mineralisation plunge.

The targeted mineralisation style within EL20/1996 is VHMS - related base metal mineralisation. Models for mineralisation are developing with geological assessment continuing to unravel the complex nature of mineralisation at V19. Continuity is now demonstrated between intersections with semi-massive to massive primary ore consistently identified in the same stratigraphic position, in part disproving the debris flow breccia model put forward by previous workers. Note that the debris flow model is still valid locally, but such mineralised intersections are spotty, irregular and generally of low grade.

The form and distribution of alteration and mineralisation suggests that the V19 mineralisation defined to-date lies at the periphery of a larger VHMS deposit, originally located at depth to the south. Mineralisation is demonstrated to extend from surface, down dip to the south for approximately 270m. The width of mineralised intersections typically varies up to 8m, with some reaching ~16m (eg. WD001 & 2). Near surface, fingers of VHMS are mixed with weaker or poorly mineralised intercepts, whilst thicker high-grade massive sulphide intersections are evident at depth, particularly in the vicinity of 13080mN (WD009). Also at depth beyond the main VHMS intersections is a broad zone of strong silica-pyrite alteration in WH12A. Overall, mineralisation and alteration weaken to the north. These factors possibly reflect proximity to a stronger hydrothermal focus for VHMS mineralisation to the south. The likely form of mineralisation is schematically represented in long projection (Figure 2). Similarities in style to the late stage discordant mineralisation at Hercules are evident. i.e. replacement of fold hinges.

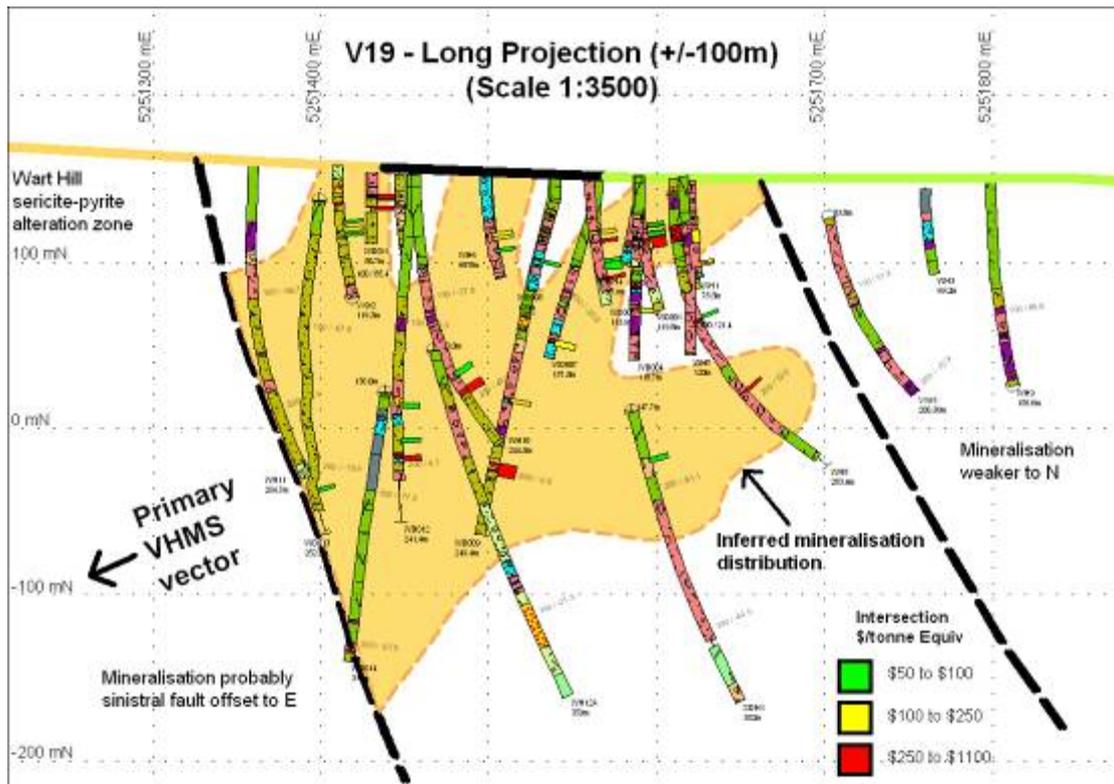


Figure 2: V19 Long Projection showing drill hole traces from a 10000mE (baseline) +/-100m search radius, inferred mineralisation distribution and intersection value per tonne equivalent.

## Work Completed

TasGold's work on EL20/1996 toward the end of 2005's field season focused upon extending the V19 base-metal sulphide resource, where drilling during the 2003/4 field season intersected a significant Ag-Pb-Zn intersection (3.9m at 124g/t Ag, 0.6g/t Au, 12.1% Zn, 7.3% Pb). To-date 15 holes have been drilled for 2493m in the immediate V19 area with best intersections listed in Table 1. In total, TasGold have drilled 34 drill holes for 5477.2m on EL20/1996.

The West Wart area was drilled during both the 2005 (WWD001, 2 and WD015) and 2006 (WWD003) field seasons (Figure 3). The 2006 holes followed up targets generated from the 38line km 3D IP survey (Table 2). This included the 468m deep WD016 drill hole targeting a chargeability high and the polymict host horizon at depth to the west of V19. A total of 762m in 2 drill holes was completed during the 2006 field season.

The drill logs appended (Appendix 2; with lookup tables in Appendix 3 & 4) include all holes completed during the past reporting year. This includes data partially reported from last years annual report that was compiled whilst exploration was still underway (WD010 to WD015).

BHID	From	To	Significant Interval
WD001	55	62	7m @78g/t Ag, 7.8% Zn, 4.4% Pb & 0.4g/t Au
incl.	55	58.9	3.9m @123g/t Ag, 12.6% Zn, 7.2% Pb & 0.6g/t Au
WD001	105	106	1m @3g/t Ag, 0.1% Zn, 0.1% Pb & 4.9g/t Au
WD002	58.1	71.5	13.4m @54g/t Ag, 4.9% Zn, 2.7% Pb & 0.3g/t Au
incl.	65.7	68.5	2.8m @122g/t Ag, 10.5% Zn, 5.1% Pb & 0.3g/t Au
WD003	80	81	1m @8g/t Ag, 1.1% Zn, 0.5% Pb & 0.1g/t Au
WD004	84	89	5m @43g/t Ag, 0.8% Zn, 0.4% Pb & 0.1g/t Au
incl.	84	85	1m @82g/t Ag, 1.6% Zn, 0.8% Pb & 0.2g/t Au
WD004	101.2	108	6.8m @1g/t Ag, 0.3% Zn, 0.2% Pb
WD005	76	78.2	2.2m @52g/t Ag, 1.3% Zn, 0.6% Pb & 0g/t Au
incl.	76	77	1m @108g/t Ag, 1.9% Zn, 0.8% Pb & 0g/t Au
WD006	73	82	9m @14g/t Ag, 1.3% Zn, 0.7% Pb & 0g/t Au
incl.	76	78.5	2.5m @20g/t Ag, 2.8% Zn, 1.6% Pb & 0g/t Au
WD007	133	134	1m @53g/t Ag, 0.5% Zn, 0.2% Pb & 0.6g/t Au
WD007	137	138	1m @15g/t Ag, 1% Zn, 0.5% Pb & 0.1g/t Au
WD007	140.8	144.3	3.5m @49g/t Ag, 3% Zn, 1.9% Pb & 0.2g/t Au
incl.	141.8	142.8	1m @94g/t Ag, 4.6% Zn, 3.3% Pb & 0.3g/t Au
WWD001			No Significant Intervals
WWD002			No Significant Intervals
<b>WWD003</b>			<b>No Significant Intervals; Host horizon weakly mineralised</b>
WD008	47.5	48.5	1m @7g/t Ag, 1.19% Zn, 0.48% Pb & 0.04g/t Au from 47.5m
WD008	47.5	50.5	3m @14g/t Ag, 0.74% Zn, 0.35% Pb & 0.05g/t Au from 47.5m
WD008	72	73	1m @25g/t Ag, 1.9% Zn, 1.03% Pb & 0.08g/t Au from 72m
WD009	152	153	1m @27g/t Ag, 3% Zn, 1.79% Pb & 0.05g/t Au from 152m
WD009	197	204	<b>7m @55.6g/t Ag, 6.16% Zn, 3.33% Pb, 0.22% Cu &amp; 1.81g/t Au from 197m</b>
incl.	198	199	1m @117g/t Ag, 19% Zn, 8.9% Pb, 0.88% Cu & 5.63g/t Au from 198m
incl.	197	199	2m @80.5g/t Ag, 11.82% Zn, 5.62% Pb, 0.56% Cu & 3.73g/t Au from 197m
incl.	202	204	2m @15g/t Ag, 0.96% Zn, 0.75% Pb & 0.16g/t Au from 202m
WD010	22.6	25	2.4m @162g/t Ag, 9.81% Zn, 5.11% Pb & 0.4g/t Au from 22.6m
incl.	24.5	25	0.5m @306g/t Ag, 27.9% Zn, 15.9% Pb & 0.95g/t Au from 24.5m
WD011	24.5	25	0.5m @158g/t Ag, 6.21% Zn, 3.87% Pb & 0.31g/t Au from 24.5m
WD011	17	18	1m @28g/t Ag, 2.75% Zn, 1.42% Pb & 0.09g/t Au from 17m
WD012	193	195	2m @47g/t Ag, 7.34% Zn, 3.64% Pb & 0.97g/t Au from 193m
<b>WD012</b>	<b>181</b>	<b>182</b>	<b>1m @7g/t Ag, 1.77% Zn, 0.56% Pb from 181m</b>
<b>WD013</b>	<b>218</b>	<b>219</b>	<b>1m @ 6g/t Ag, 1.28% Zn &amp; 0.41% Pb; Host horizon faulted off</b>
<b>WD014</b>			<b>No Significant Intervals; Host Horizon possibly faulted off</b>
<b>WD015</b>			<b>3m @18.7g/t Ag, 0.1% Pb &amp; 1.45% Zn; Pyritic chert intervals</b>
<b>WD016</b>			<b>No Significant Intervals; Polymict host horizon weakly mineralised</b>

Table 1: EL20/1996 2005/6 significant drill intersections (2006 results in bold)

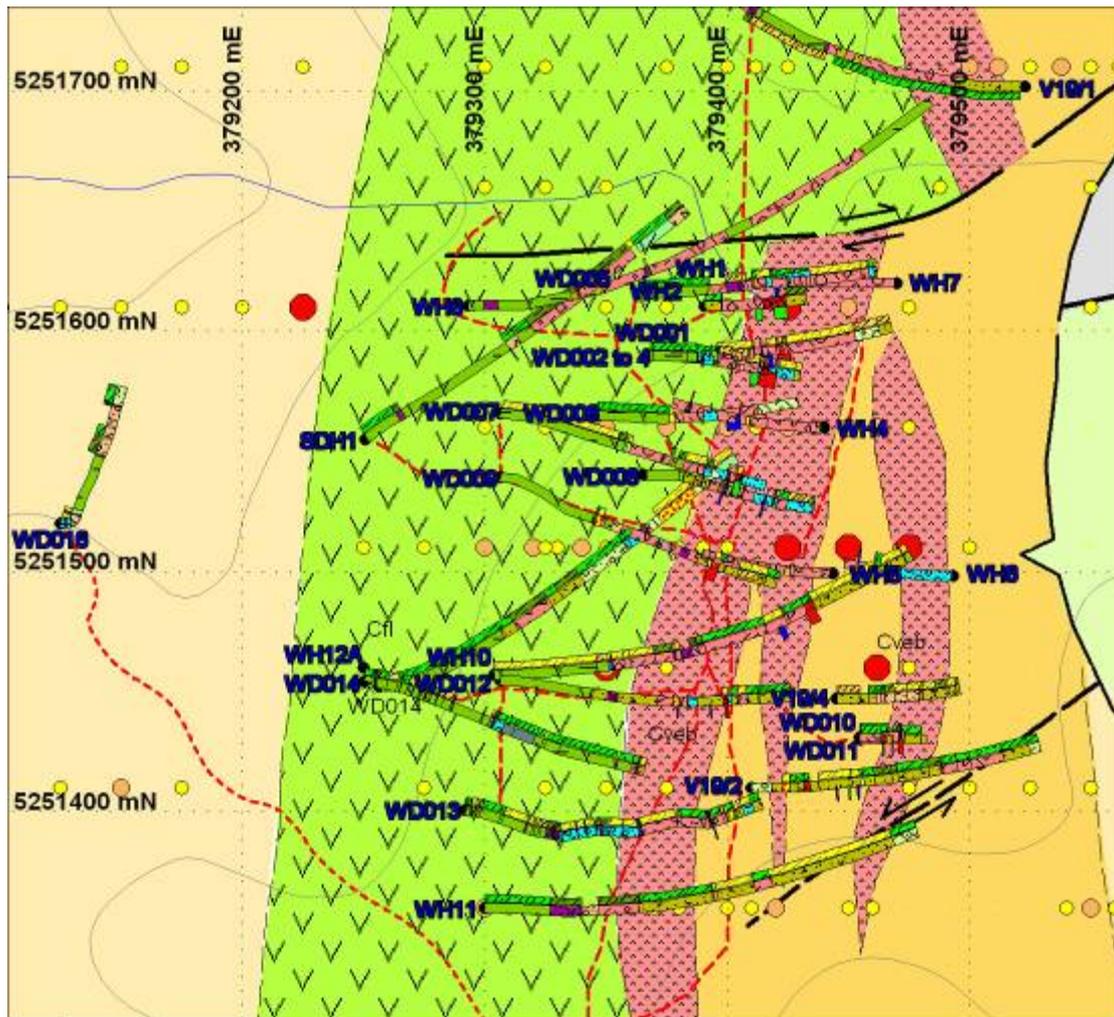


Figure 3: V19 Collar Plan showing Surface Geology, Zn in Soils and Drill holes displaying geology, alteration, down hole Zn and \$/tonne value (see legend below).

## 2005 Drilling

**WD012** drilled during the 2005 field program was collared very close to the WH10 drill pad (Figure 4), thus reducing environmental impact by not creating a new track. This drill hole was planned to intersect the host horizon approximately 50m south of and at the same RL (-175m ASL) as WD009 and it successfully accomplished this, intersecting 2m of semi massive & massive base metal sulphides from 193.3m.

Assay results from WD012 returned 3m@35.3g/t Ag, 5.15% Zn, 2.59% Pb & 0.67g/t Au from 193m including 2m@47g/t Ag, 7.34% Zn, 3.64% Pb & 0.97g/t Au from 193m. This mineralisation comprised very high grade 15-50cm bands of sphalerite-rich massive and semi-massive sulphide interbedded with minor weakly mineralised chert and volcanoclastic sandstone. Another interval from 181-182m returned 1m@7g/tAg, 1.77% Zn, 0.56% Pb from a volcanic breccia bearing ~4% disseminated sphalerite and 3% disseminated galena.

## **WD013**

Drill hole WD013 tested the plunge of the mineralisation 75m vertically below and 50m horizontally further south of the WD012 intersection; with the host horizon being faulted off at ~230m down hole near the expected intersection location.

Drilling WD013 was difficult at depth in the vicinity of the fault, where problems were encountered trying to drive NQ back through the fault following a bit change. BQ was tried with no success, then hole cementing and re-drilling with NQ managed to get through the faulted ground.

A minor interval of polymict breccia was intersected from 88 to 90.5m, followed by considerable broken ground from ~100 to 125m and minor epiclastic sandstone (145 to 147m). Strong carbonate alteration was a feature down hole from basalt at ~169.1 to 169.3m and adjacent to this was 3% sphalerite over 15cm only. A massive sulphide clast-bearing lapilli lithic unit is evident between 218.25 and 228.4m (bearing 1m @ 6g/t Ag, 1.28% Zn & 0.41% Pb from 218m), with an included interval of basalt between 218.6 and 218.85. The host horizon is faulted off at 228.4m, the fault being characterised by low angle to core quartz veining with trace galena. Minor brittle style fracturing / faulting occurs from 231 to 234.5m, accompanied by sericite, silica and disseminated pyrite. The hole passed through the fault into possible footwall porphyry clast-bearing lithic volcanoclastic sandstone. Given this scenario, there is low confidence for drilling further down plunge on the mineralisation at this stage.

A further 150m of drilling was estimated to be required to cover an interpreted extension of the host horizon, located to the east. This interpreted host horizon extension is characterised at surface by a coherent Fe and Zn in soils anomaly, accompanied by less obvious but elevated Ag, Mn and Pb. A magnetic high forms a coherent prominent feature immediately west of the soil anomaly. This combination of features is repeated at V19. Extending WD013 is likely to intersect the horizon at a favourable depth, the mineralisation plunging to the south. The East Wart surface anomaly is most likely an alteration expression of the base metal mineralisation at depth. Wart Hill itself also represents an altered topographic high and is likely to cover the main VHMS body.

## **WD014**

WD014 was targeted beneath the WD012 intersection. Given the problems encountered when trying to drill the fault in WD013, WD014 was placed to the north west of WD013 to avoid complications. Thus the planned WD014 was anticipated to intercept the host horizon prior to intersecting the fault at greater depth.

Interpretted hangingwall volcanoclastics were encountered at depth near the end of hole, possibly indicating that the host horizon was faulted off. WD014 was terminated at 312m, when NQ drilling slowed to impractical. Reassessment is required with the possibility of extended the hole to be contemplated.

## WD015

WD015 was designed to test outcropping silver-rich mineralization recorded in historic trench sampling, where previous explorers Cyprus reported an interval of 2m @ 348g/t Ag and 8.15% Pb. The best silver grades assayed 1m @ 620g/t Ag, 0.285g/t Au and 0.11% Pb, whilst a grab sample assayed 16.2% Pb, 13.3% Zn, 76g/t Ag and 1.46g/t Au (Poltock, 1989).

WD015 intersected encouragingly similar alteration and lithologies to that at V19, but significant base metal sulphides were not encountered. Lithologies intersected include massive pyrite clast-bearing lapilli lithic polymict felsic volcanoclastic sandstone with interbedded mudstone, bearing disseminated pyrite to 2% and numerous cherty interbeds bearing disseminated pyrite to 5%.

Assays from several weakly mineralized intervals returned somewhat disappointing results. Silver as well as gold and basemetal anomalism was intersected at depth but at subeconomic widths/grades. A significant interval returned 3m @ 0.07 g/t Au, 18.7g/t Ag, 0.07% Cu, 0.1% Pb and 1.45% Zn from 31m, including 1m @ 0.14 g/t Au, 29g/t Ag, 0.19% Cu, 0.2% Pb and 4.67% Zn from 32m. A short (30cm) but significant interval higher in the hole (from 29.7 m) contained 1.11% Zn, 4 g/t Ag, and 0.04% Pb.

The 3D induced polarization survey conducted by SJ Geophysics for Tasgold in December 2005 located a chargeability anomaly which reaches surface at the Ag-anomalous trench and extends to a depth of at least 150 meters. WD015 incompletely tested the eastern margin of this anomaly, with TasGold subsequently testing this anomaly at depth in 2006 by drilling WWD003.

## 2006 Drilling

TasGold completed 2 drill holes totalling 762m on EL20/96 during 2006 field season (Table 2). These were WD016 located immediately west of V19 targeting a chargeability anomaly and the polymict host horizon at depth and WWD003 with a similar targeting philosophy, located in the Silver Trench area, south of V19. These drill holes are discussed in conjunction with the 3D IP data in the following section.

Hole_ID	Easting	Northing	RL	Azimuth	Dip	Depth	Date Commenced	Date Completed	Prospect
WD012	379306.6	5251454.7	157.56	94	-64	241.4	27-Mar-05	10-Apr-05	V19
WD013	379291.9	5251400.5	158.28	96	-70	252.5	11-Apr-05	25-Apr-05	V19
WD014	379250.6	5251454.2	152.34	95.5	-70	312	26-Apr-05	09-May-05	V19
WD015	379259.4	5250907.8	171.04	90	-45	53.2	11-May-05	14-May-05	West Wart
<b>WD016</b>	379125	5251520	136	91.5	-85	468	13-Jan-06	02-Feb-06	V19
<b>WWD003</b>	379209.1	5250877.4	167.43	90	-60	294	29-Dec-05	11-Jan-06	West Wart

Table 3: Drill Hole Summary 2005/6

## 3D IP

### **3D IP Introduction**

This report provides cursory observations pertaining to the recent 3D\_IP survey and subsequent drill holes. A 3D IP survey was conducted to yield important vectors to sulphides beneath Wart Hill, particularly considering the claimed depth penetration of 300m+.

The 3D IP survey was conducted by Canadian contractors SJGeophysics during late November and December 2005 (28 days). The survey covered 38.4km of gridded and surveyed lines; entailing 18.7km on EL2/1996 and 19.3km on the adjacent EL21/1999 (Figure 4). The entire 3D IP grid, including all reading stations, drill holes and other features was differential GPS surveyed to centimetre accuracy.

The 3D IP grid was prioritised according to constraints perceived from geological and geochemical reasoning (/anomalies; Figure 4). Fortunately, efficient work rates for both gridding and IP surveying enabled all planned grids to be covered during the survey. 3D IP coverage over the known V19 mineralisation was achieved to define the mineralisation's IP signature. The V34 and V19 areas were connected via gridding across the Osmund Syncline, providing a significant insight into what's happening on the margins of and beneath the west inclined Osmund Syncline. The survey also targeted a 1km long base metal anomaly in the V34 (Aldebaran; EL21/1999) area, east of the syncline.

Following is detail on geophysical data interpretation in relation to the geology and mineralisation in the Wart Hill Area. Key mineralisation targeting vectors are outlined. Analysis of results was undertaken utilising TasGold's GIS coverages in conjunction with three dimensional viewing software including Discover 3D (a Mapinfo add-on), ParaView and Mesh 3D. Survey specifications and processing procedure are outlined in the report by SJ Geophysics in Appendix 6. Notably, the most reliable IP data is considered to be derived from the 50 to 250m depth range. Interpretation outside this range may be validated in conjunction with other reasoning (ie. geological).

Raw Data files, plans and sections and are appended in digital form (Appendix 8). The format for the final information presented for the Wart Hill project was:-

1. Logistics Report in PDF Format.
2. Finemesh 12.5m inversion of all the IP/Resistivity data utilising the DGPS data. The data was modeled in four overlapping blocks with the final model presented as both one spliced file (Paraview and Mesh3D) and also as two separate blocks covering each of V19(EL20/1996) and V34(EL21/1999; Mesh 3D format only). Paraview (.vtk) and UBC Mesh3D (.com) formats cover Resistivity, Conductivity and Chargeability.

UBC Mesh3D format files were imported into the Discover 3D Mapinfo add on module to good effect. However the software is slower than using Paraview hence the need to split the model into two blocks.

3. Mapinfo Format plan view slices of Resistivity and Chargeability with new format colour scheme. Note that the registered Mapinfo JPEG's show depth below surface rather than RL depth slices.

4. Tiff and PDF files of sections of Resistivity and Chargeability along each Tx and Rx line.

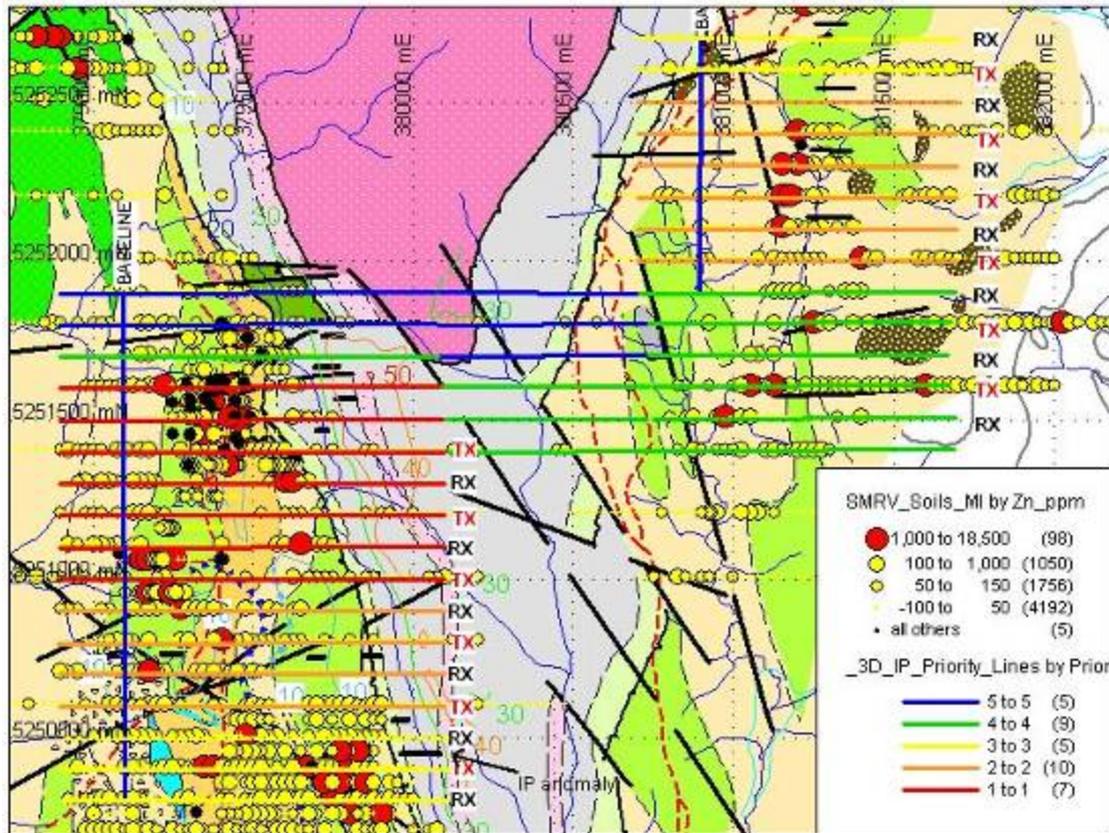


Figure 4: Prioritised 3D\_IP Survey Lines for V19 (West) and V34 (East)

### **DGPS Survey**

The entire 3D IP grid, including all reading stations, was surveyed with a Lieca DGPS system. This survey utilised a base station on the Wart Hill summit live relaying positional data to the roving GPS receiver. A centimetre accurate OSPOS position for the hill top base station was acquired via lengthy initial surveying. This resulted in centimetre accurate positioning of the roving receiver, which recorded IP survey stations, drill collar pick ups, other features and track routes with the data also utilised to produce an accurate digital elevation model (Appendix 8).

## Wart Hill Block - 3D IP Interpretation

A principal area of interest highlighted by the 3D\_IP survey extends north – south at depth (partly coincident the interpreted host horizon) along the western margin of the V19 grid. This zone comprises an extensive resistivity high and three main discrete chargeability highs (Figure 5).

Two peak resistive areas are located proximal to the south west and north west of the drilled V19 basemetal mineralisation. Sandwiched between these is an east – west aligned chargeability high, located within the porphyry stratigraphically beneath the down dip projected host horizon immediately west of V19. The main body of this anomaly is ~120m thick, 180m wide and ~200m long, centred ~130m below surface and extending off grid to the west (Figure 5). This was tested by WD016, intersecting disseminated sulphides coincident with the chargeability high and weakly mineralised polymict host horizon at much greater depth.

Further south, a significant chargeability high is evident immediately north of the West Wart Prospect and another high lies parallel and coincident with the host horizon in the Silver Trench area. Drill hole WWD003 showed that the peak chargeability anomaly at the Silver Trench corresponds to the polymict host horizon, bearing variable sulphide clasts and disseminations to 10% locally.

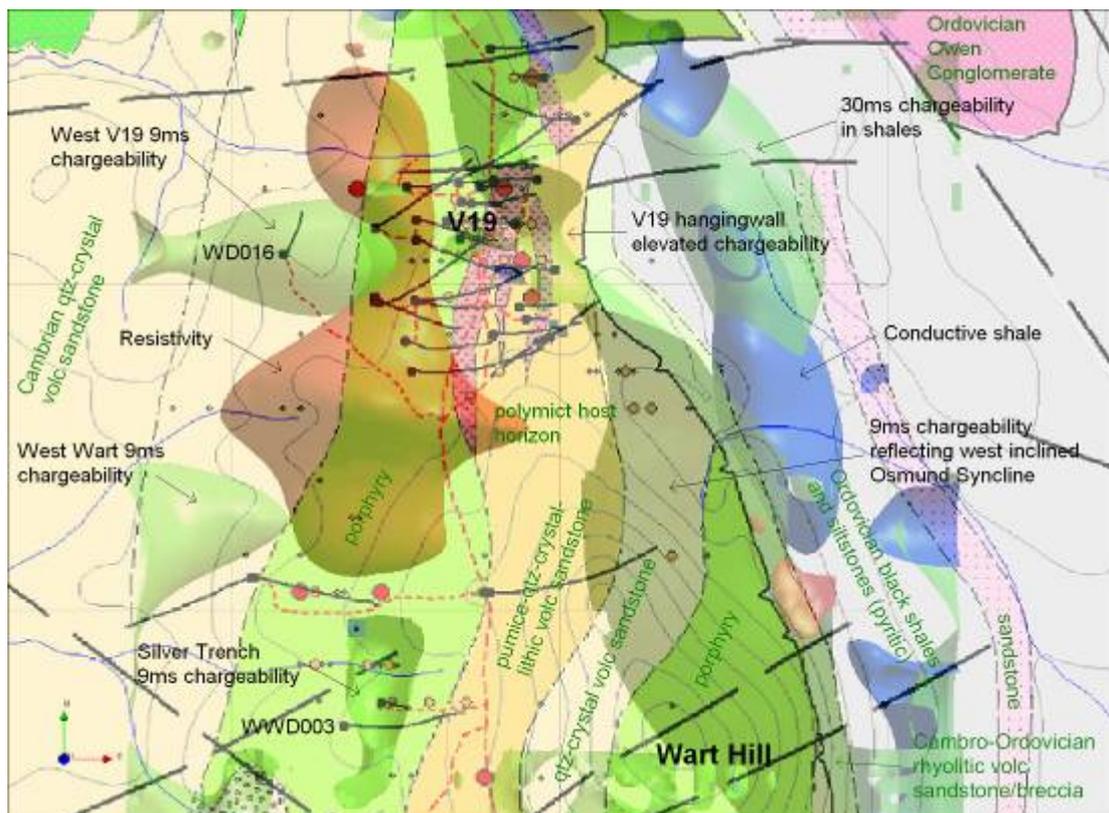


Figure 5: Summary Wart Hill 3D IP showing principal anomalies and surface geology; Resistivity (red, 4200ohmm), Chargeability (green, 9 & 30ms) and Conductivity (blue, 0.0024sm<sup>-1</sup>).

A broad chargeable zone is defined within the Ordovician black shales and adjacent hangingwall volcanoclastics, located east of the V19 prospect (Figure 5). A highly conductive zone attributable to the black shales is also evident along the eastern side of the V19 block (0.003 to 0.0037sm-1).

## **Chargeability**

A principal feature is the 9ms chargeability isosurface which forms a shell reflecting the distribution of the interpreted west inclined syncline passing beneath Wart Hill. This high chargeability in part reflects the shales beneath, with silica – disseminated pyrite alteration located in the hangingwall to the V19 mineralisation probably accounting for the chargeability envelope extending west away from the shales to ~6ms (Figure 6). Peak chargeability (>30ms) is evident within black shale, proximal to the east of V19 and corresponding with the northern extension of the highest conductivity (~0.0025 sm<sup>-1</sup>; Figure 5).

Four coherent depth extensive chargeability anomalies in the range 8 to 10ms were located along the western side of the Wart Hill 3D IP block. The West V19 anomaly notably links to the hangingwall chargeable volcanics east of V19 (Figure 6). Further chargeability anomalies were located near the Silver Trench and at West Wart (Figure 7). Drill holes WWD001 & 2 apparently narrowly missed the latter anomaly, being located immediately to the south. Notably the Ag in soil anomaly to the SW of the Silver Trench (Silver Trench Extended) corresponds to the surface expression of a chargeability anomaly, plunging SW from surface and opening at depth (Figure 7).

A weak chargeability signature is evident at surface over the V19 mineralisation. Thus the mineralisation is possible weakly detectable by the 25m electrode spaced 3D\_IP survey. Geopeko (Herrmann and Sumpton, 1984) previously showed that V19 base metal sulphide lenses are chargeable at narrow electrode spacings (~10m) and therefore the anomalies detected via 3D IP potentially indicate more widespread mineralisation.

Bishop and Lewis (1992) note that IP is most successful on Zn rich VHMS ores and is useful to define large zones of alteration related to VHMS. This apparently worked for Rosebery, but also defined the black shale which had a highly variable IP response. They also note that Zn rich systems are not located by EM methods, due to these ores being highly resistive with respect to more Cu rich VHMS.

Chargeability highs have not unexpectedly been shown to correspond to zones of elevated disseminated sulphide. However, careful consideration of the geology is required for drill hole targeting with experience incorporated from drilling IP targets on the adjacent EL21/1999 showing that 8 to 10ms chargeability anomalies are sourced from both footwall alteration and hangingwall plumes.

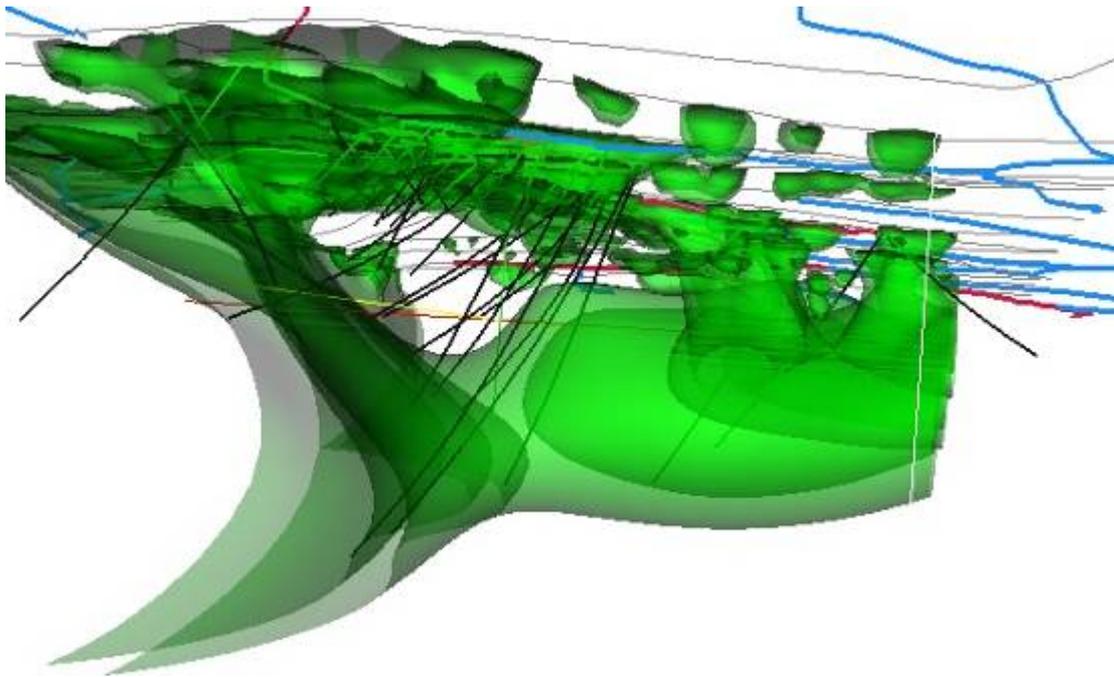


Figure 6: View to SSE from below showing Chargeability (green) linking W to E at depth beneath V19.

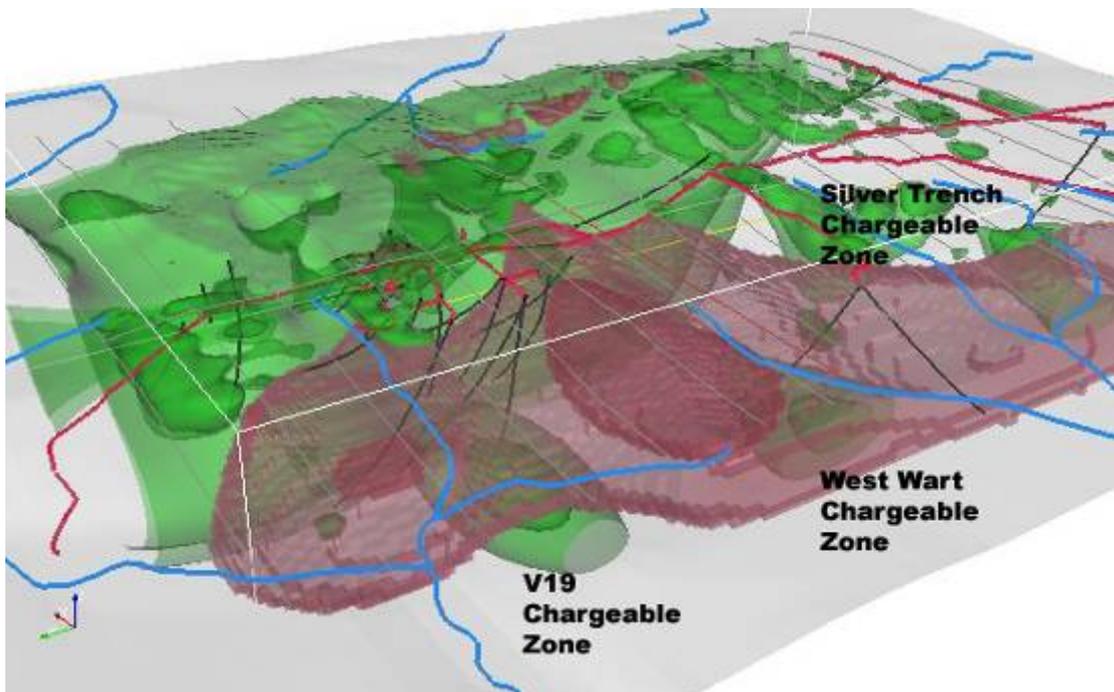


Figure 7: View SE showing high resistivity proximal to the SW of V19 with weak surficial chargeability of the Polymict host horizon; Chargeability (green; 7 to 9), Resistivity (low pink & high red; range 2700 to 5100).

## Resistivity

A principal resistive tabular zone lies at depth along the western side of the V19 3D\_IP grid (2700 to 5100 ohm metres). Two peak resistive areas are located within this, proximal to the south west and north of V19 (shown by range 4000 to 7700 Ohm metres; Figure 7). The south western resistivity high extends to surface in the vicinity of a WNW orientated structural domain / foliated zone, potentially representing a zone of focused hydrothermal fluid flow. This structure could also reflect the site of a relict faulted graben margin; a potential basalt conduit with thick basalt intersected in WWD002, located nearby to the south. In general, the drilled occurrences of porphyry lie outside the bounds of anomalous resistivity (>3500ohmm), with the strongest resistivity evident stratigraphically above (/below in drill holes) the porphyry (Figure 8).

The most intense resistivity has not been intersected by drilling to-date. However where drilled, high resistivity commonly corresponds to zones of silicification in both the footwall and hangingwall. The deeper, western most drill holes at V19 evidently intersect more resistive rocks than the shallower eastern drill holes. WH12A in particular is noted to bear silicified semi-massive sulphide at depth and this is coincident with the margins of the moderately elevated 3600ohmm resistivity isosurface (Figure 9); the strongest resistivity corresponding to the footwall. WD014 also intersects this envelope in an area of silicified undifferentiated volcanics, located in the footwall. In the West Wart area, WWD001 passed through the 3600ohmm isosurface anomaly, corresponding to the entire interval between the porphyry and the hangingwall down hole. Similarly, WWD002 intersected this isosurface at depth, here corresponding with silicified hangingwall volcanoclastic conglomerates (Figure 9). The WWD003 hangingwall is similarly resistive, as discussed below.

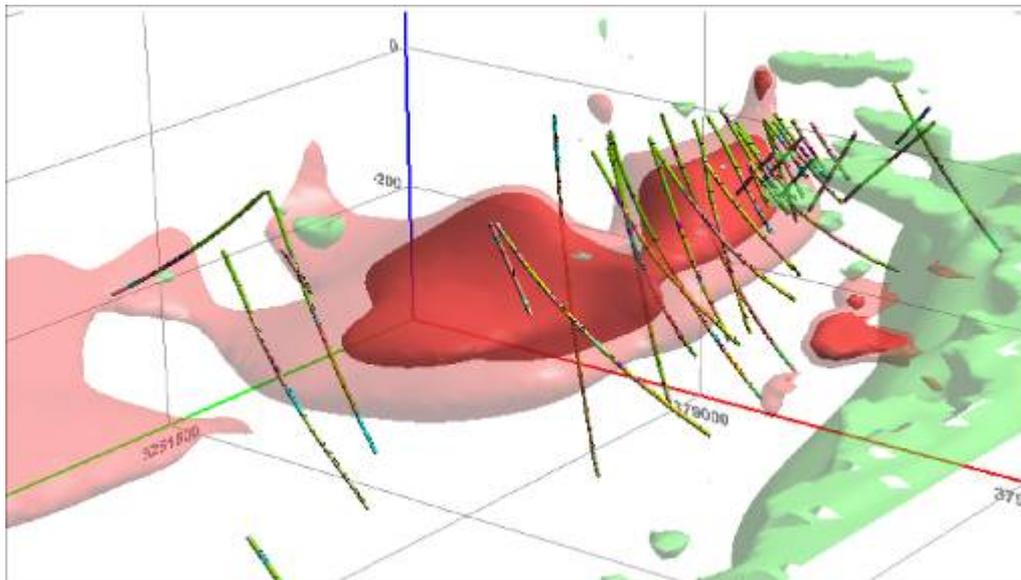


Figure 8: View from SE showing resistivity (red; 4400 & 3600ohmm), chargeability (green; 15ms) and down hole geology with porphyry in green.



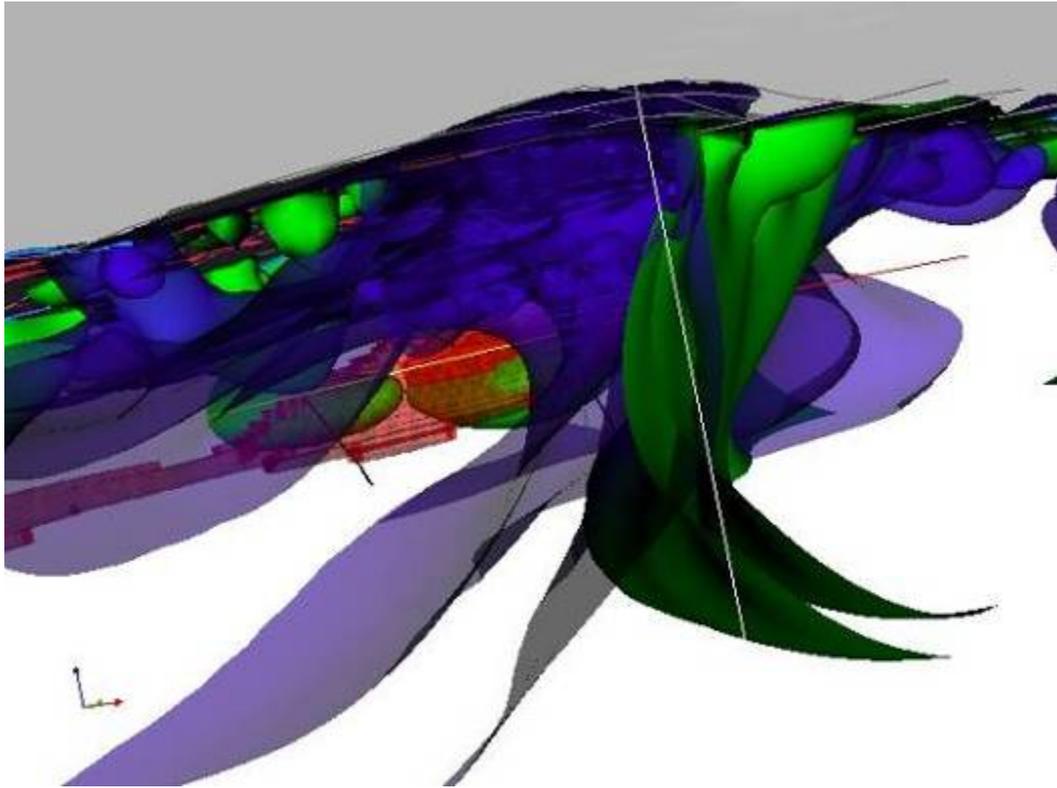


Figure 10: View S to N showing Chargeability (green; 9ms), Resistivity (red; 3500ohmm) and Conductivity (blue; 10 and 15sm<sup>-1</sup>).

## ***Targets***

The 3D\_IP survey provides three new data sets, chargeability, resistivity and conductivity, to utilise for mineralisation targeting. Interpretation of the results and subsequent drill hole targeting needed to strongly consider TasGold's existing data, geological understanding and mineralisation models.

Salient points relating to the principal targets generated utilising the 3D IP data and tested during the 2006 field season are outlined below with discussion on the holes drilled. Results were disappointing, with no significant intervals returned, however the geological understanding of the area was significantly enhanced.

### **1. West V19 Chargeability Zone**

Salient features of the chargeability drill target located west of V19 are summarised below:-

- Coincident with a Sirotem anomaly in the V19 footwall
- The polymict host horizon dips west beneath the porphyry
- Chargeability high lies sandwiched between high resistivity zones and is open to the west
- Significant palaeo topographic relief or a fault is likely given the variation in porphyry depth between SDH1 (north/thick) and WH12A (south/thin); potential porphyry margin target.

- Dimensions at 9ms chargeability are 120m thick, 180m wide and ~200m long cigar shaped at 75m below surface and extending off grid to the west (Figure 9).

Drill hole WD016, collared in porphyry west of the existing V19 drilling, was planned to extend to some 300 to 350m depth, below the chargeability anomaly to intersect the polymict host horizon. Given the depth of this hole, WD016 was planned as a steeply east inclined DDH to enable both efficiently reaching the target depth and a later wedge hole to get a second intersection if warranted. The significant northerly hole deviation evident in past drilling was not a problem with this steeply inclined hole. Unfortunately, significant sulphides and mineralisation was not intersected in WD016. Also, the polymict host horizon was located at greater depth than anticipated (~435m).

WD016 intersected overturned interbedded epiclastic sandstone, grey mudstone and thin polymict breccia units in the top of the hole, extending to 122m, where a brittle fault forms the contact with the porphyry. The upper volcanoclastic part of the hole corresponds with a weakly conductive zone (0.0006 to 0.0009sm<sup>-1</sup>) above the chargeability zone. Porphyry extended from 122 to 326m. The targeted chargeability zone was explained by minor disseminated sulphides within both the volcanoclastics and porphyry. Lithologies down hole from the porphyry were broadly similar to those up hole above the porphyry. Minor volcanoclastic mudstone and quartz poor volcanoclastics extended to 433m. A thin V19 host horizon equivalent was evident from 433 to 436m in the form of pyritic limestone, lapilli lithic polymict volc sst and breccia bearing massive sulphide clasts. Monotonous volcanoclastic sandstone with minor silicified zones over several metres extended from here to the end of hole at 468m.

## **2. Silver Trench Chargeability Zone**

A high chargeability zone of some 300m strike length is centred upon the Silver Trench area. This anomaly is strongest at approximately 50m depth and extends to surface in three zones located at either end and in the central portion of the anomaly.

The Silver Trench contains a two metre wide sulphide vein bearing 348g/t silver and 8.15% lead as well as outcrop assays to 620g/t silver, 1.46g/t gold, 16.18% lead and 13.28% zinc. This mineralisation was tested by drill hole WD015, prior to the 3D IP survey during 2005. The hole was collared slightly east of the centre of the Silver Trench chargeability high. Notably polymict lithic volcanoclastic, a correlate of the host horizon, is located south and west of the collar. The footwall porphyry is not evident at surface. This drill hole intersected the polymict debris flow host horizon, bearing widespread disseminated pyrite and cherty silicification zones, which may represent exhalite proximal to a VHMS mound.

A subsequent drill hole WWD003 was planned to step back from WD015, intersecting the chargeable zone at approximately 50m depth, near it's peak. WWD003 intersected the polymict host horizon, bearing variable sulphide clasts and disseminations to 10% locally. The 9ms chargeability isosurface was found to correspond to the interval between the porphyry and hangingwall, effectively delineating the host horizon (Figure 11).



## **Geochemistry**

2005 samples were submitted to SGS Burnie for analysis for Au via 50gram fire assay (Method FAA505) and base metals via AAS (Cu, Pb, Zn, As & Ag; Method AAS42S). Over range elements were analysed via method AAS43B as required. 2006 samples were analysed at Burnie Research Laboratories via similar methods.

Original laboratory analysis reports are appended (Appendix 5), along a digital compilation of TasGold's current drill hole analysis and other related data (geology and surveys) for EL20/96 (Appendix 8).

## References

- Bishop, J. R., and Lewis, R. J. G., 1992, Geophysical signatures of Australian volcanic-hosted massive sulfide deposits. *Economic Geology*, May 1992; vol87: pp913 - 930.
- Callaghan, T., 2004. Annual Report on Exploration EL20/96 – Elliot Bay: Annual Report to March 31 2004. TasGold Ltd.
- Herrmann, W and Sumpton, J., 1984. Exploration Licence 27/76, Elliott Bay, SW Tasmania, Annual Report, 1983-84 Field Season. Geopeko (Tasmanian Company Report 85-2318).
- Poltock, R. 1989. Progress report, twelve months to June 1989, Exploration Licence 40/85, Elliott Bay, Tasmania. Cyprus Gold Australia Corporation (Tasmanian Company Report 89-3032).
- Reid, R., 2005. EL20/96 – Elliot Bay, Annual Report to March 31 2005. TasGold Ltd.

# Appendices

## ***Appendix 1: Environmental Survey Reports***

(See Appendix 8 for digital data)

## ***Appendix 2: Drill Hole Logs***

(See Appendix 8 for digital data)

## Appendix 3: Drill Hole Geology Legend

<b>V19 Drill Holes Geology Legend</b>			
	Os Ordovician quartz sandstone		Cvc Volcaniclastic Conglomerate (Cambro-Ordovician?)
	Cll Quartz-feldspar-(biotite) porphyritic lava		FALT Fault
	Ccb Basalt		QVN Quartz vein (+/-chlorite, carbonate & sulphides)
	Cod Dolerite		MEX Chert / Exhalative
	Csh Shale		MSSX Massive base metal sulphide
	Cvl Limestone		SMSX Semi-massive sulphide
	Cve Epistatic Sandstones		SISX Pervasive silica-sulphide
	Cqvs Quartz crystal-rich felsic volcaniclastics		Si Pervasive silica alteration
	Cv Felsic volcaniclastics, variably quartz and feldspar phytic / crystal bearing		Cb Carbonate alteration
	Cllq Quartz porphyritic lava		Ch Chlorite alteration
	Cvelb Polymict Lithic Volcaniclastic Sandstone and Breccia commonly sulphide clast bearing		Ser Sericite alteration

## Appendix 4: Lithologies Lookup Table

Lith Code	Lithology	Lith_ID
	<b>Clastic</b>	
Sh	shale	1
Lmst	limestone	2
Mdst	mudstone	3
Slst	siltstone	4
Sst	sandstone	5
SSst	siliciclastic sandstone	6
Congl	conglomerate	7
ESst	epiclastic sandstone	8
VMdst	volcaniclastic mudstone	9
VSlst	felsic volcaniclastic siltstone	10
VSst	felsic volcaniclastic sandstone	11
VQFSst	felsic quartz-crystal-rich volcaniclastic sandstone	12
VFQSst	feldspar-quartz-phyric felsic volcaniclastic sandstone	13
VQFSst	quartz-feldspar-phyric felsic volcaniclastic sandstone	14
VPSst	felsic pumiceous volcaniclastic sandstone	15
VLSst	felsic lithic volcaniclastic sandstone	16
VLLSst	felsic lapilli lithic volcaniclastic sandstone	17
VBLSst	felsic block lithic volcaniclastic sandstone	18
VQQLSst	felsic quartz-crystal-rich lithic volcaniclastic sandstone	19
VPLLSst	polymict lapilli lithic volcaniclastic sandstone	20
VPBLSst	polymict block lithic volcaniclastic sandstone	21
VCPLSst	polymict carbonate clast-bearing lithic volcaniclastic sandstone	22
VMPLSst	polymict MS clast-bearing lithic volcaniclastic sandstone	23
VB	volcanic breccia (undifferentiated)	24
VH	felsic monomict volcanic breccia (hyaloclastite?)	25
VLB	felsic lapilli volcanic breccia	26
VQLB	felsic quartz-crystal-rich lapilli volcanic breccia	27
VBB	felsic block volcanic breccia	28
VQQB	felsic quartz-crystal-rich block volcanic breccia	29
VPB	polymict volcanic breccia	30
VPLB	polymict lapilli volcanic breccia	31
VPBB	polymict block volcanic breccia	32
VCPB	polymict carbonate clast-bearing volcaniclastic breccia	33
VMPB	polymict MS clast-bearing volcaniclastic breccia	34
VC	volcaniclastic conglomerate	35

## Appendix 4: Lithologies Lookup Table (cont.)

Lith Code	Lithology	Lith_ID
	<b>Coherent Rocks</b>	
LR	felsic porphyry	36
LQR	quartz-phyric rhyolitic porphyry (/lava)	37
LQFR	quartz-feldspar-phyric rhyolitic porphyry (/lava)	38
LQFBD	quartz-feldspar-biotite-phyric dacite porphyry (/lava)	39
LQFHD	quartz-feldspar-hornblende-phyric dacite porphyry (/lava)	40
LB	basalt	41
IB	dolerite	42
IG	granite	43
	<b>Undifferentiated</b>	
UR	felsic volcanic (undifferentiated)	44
URQQ	quartz-crystal-rich felsic volcanic (undifferentiated)	45
URQ	quartz-phyric felsic volcanics	46
UFQR	feldspar-quartz-phyric felsic volcanics	47
UQFR	quartz-feldspar-phyric felsic volcanics	48
UB	mafic (undifferentiated)	49
	<b>Structure</b>	
FALT	fault	50
	<b>Mineralisation and Alteration</b>	
VN	Vein	51
QVN	quartz veining	52
SQV	sulphide-bearing quartz vein	53
MSSX	massive sulphide	54
SMSX	semi-massive sulphide	55
DSS	disseminated sulphides	56
Ch	chlorite	57
Ser	sericite	58
Si	silica - pervasive	59
Fk	Fuchsite	60

## ***Appendix 5: Geochemical Analysis***

(See Appendix 8 for digital data)

## ***Appendix 6: 3D IP Logistics Report***

(See Appendix 8 for digital data)

## ***Appendix 7: V19 Inferred Resource Report***

(See Appendix 8 for digital data)

## **Appendix 8: Digital Data**

List of appended digital data files:-

EL201996\_200604\_01\_Digital\_Files.txt  
EL201996\_200604\_02\_Report.pdf  
EL201996\_200604\_03\_Parrot and Eagle Survey.pdf  
EL201996\_200604\_04\_Drill\_Logs.pdf  
EL201996\_200604\_05\_Analysis\_Requisition\_Req No. 94.pdf  
EL201996\_200604\_06\_Analysis\_WM085254 eReport Final.pdf  
EL201996\_200604\_07\_Analysis\_WM085865 eReport Final\_071.pdf  
EL201996\_200604\_08\_Analysis\_WM086062 eReport Final.pdf  
EL201996\_200604\_09\_Analysis\_WM086226 eReport Final.pdf  
EL201996\_200604\_10\_Analysis\_WM086461 eReport Final.pdf  
EL201996\_200604\_11\_DH\_Assay.txt  
EL201996\_200604\_12\_DH\_Collar.txt  
EL201996\_200604\_13\_DH\_lith.txt  
EL201996\_200604\_14\_DH\_Survey.txt  
EL201996\_200604\_15\_GeolCodelookup.txt  
EL201996\_200604\_16\_LithCodelookup.txt  
EL201996\_200604\_17\_3D\_IP Logistics Report.pdf  
EL201996\_200604\_18\_3D\_IP GridsV19-V34\_Chg.pdf  
EL201996\_200604\_19\_3D\_IP GridsV19-V34\_Res.pdf  
EL201996\_200604\_20\_3D\_IP GridsV19-V34\_GeoTIFFs.zip  
EL201996\_200604\_21\_3D\_IP\_GridV19\_3DSections.pdf  
EL201996\_200604\_22\_3D\_IP\_GridV19\_3DSections\_TIFFs.zip  
EL201996\_200604\_23\_3D\_IP\_GridV34\_3DSections.pdf  
EL201996\_200604\_24\_3D\_IP\_GridV34\_3DSections\_TIFFs.zip  
EL201996\_200604\_25\_3D\_IP\_UBCmodel\_All.zip  
EL201996\_200604\_26\_3D\_IP\_UBCmodel\_V19.zip  
EL201996\_200604\_27\_3D\_IP\_UBCmodel\_V34.zip  
EL201996\_200604\_28\_3D\_IP\_VTKmodel\_All.zip  
EL201996\_200604\_29\_3D\_IP\_VTKmodel\_V19.zip  
EL201996\_200604\_30\_3D\_IP\_VTKmodel\_V34.zip  
EL201996\_200604\_31\_3D\_IP\_IP Points.txt  
EL201996\_200604\_32\_3D\_IP\_V19 Inferred Resource.pdf