Frontier Resources Ltd.
(Tasmania)

EL 21/1999- Wanderer

Annual Report to 26 Dec 2006

Compiled by

Rob Reid M.Sc. (Econ. Geol.) Exploration Manager

John McDougall B.Sc. (Hons)

Nathan Allen B.Sc. (Hons)

Peter Ruzicka B.Sc. (Hons)

Contents

List of Figures and Tables

Summary

The Annual Report for EL21/1999 provides details of Frontier Resources' (previously TasGold's) exploration progress for the 2005/2006 field season. EL21/1999 "Wanderer River" is a three part exploration licence centred on an area inland of Elliot Bay in south west Tasmania.

A 38.4 line km 3D IP survey, with a claimed penetration depth of 300m+, was conducted to identify vectors to base metal rich VHMS mineralisation within the Wart Hill and Aldebaran (previously termed V34) prospect areas. This survey provided a complete dataset between the adjacent tenement EL20/1996 to the east and the area around the V34 prospect.

Interpretation of the geophysical results was an evolving process, with drilling providing ground truthing of modelled geophysical character. Analysis of results was undertaken using Frontier's GIS coverages in conjunction with three dimensional viewing software. Targeting was subsequently re-evaluated using a combination of geophysics and Frontier's strong understanding of the stratigraphy and mineralisation gleaned from previous drilling and mapping.

Five diamond drill holes were completed for 715.8m at the Aldebaran (V34) prospect. Drilling at Aldebaran occurred in the second half of the SMRV summer field program after drill testing of IP targets in the adjacent tenement. Holes were targeted utilising new 3D IP data combined with geochemistry data from previous field surveys and interpreted stratigraphic prospectivity. Base metal anomalous zones and VHMS style alteration were intersected at favourable stratigraphic positions in several drill holes, however no massive sulphide typical of economic style mineralisation was intersected in drill holes.

Field work undertaken in 2006 also included a C-horizon soil survey in the Hudson River Gold Zone (12300m gridding), results of this survey were disappointing, however interpretation of the alteration styles identified an area of possible footwall VHMS style chlorite rich alteration. The tenor of anomaly identified is considered to be too small to be a viable drill target despite strongly anomalous stream sediment samples being identified in previous surveys and visual inspection of test pan concentrates identifying visible Au. Zones of ferruginisation after sulphidation and chlorite alteration zones have been noted within volcaniclastic siltstones and sandstones, and weakly elevated gold assay values up to 71ppb Au have been returned from an area immediately adjacent to a cohesive NW trending chlorite alteration zone at the Hudson Prospect.

Location, Access and Land Use

EL 21/1999 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. The 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 Birches 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 and is now regularly frequented by four wheel motor bike enthusiasts each summer. The barging heavy equipment across Macquarie Harbour to access the track has been successful in the past. Previous exploration has seen bombardiers, excavators and drilling rigs (L38’s) unloaded and driven down to the Elliott Bay area. 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. Only one company presently lands on the air strip.

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. Frontier’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 Frontier after it was vandalised and burned in 2003. The camp has been reduced to 1 main (original) shed in order to minimise impact on the environment.

Frontier 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. This included removal of all rubbish and camp structures other than the original shed.

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 seasons 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 offsiders on a 2 week on, 1 week off roster. Geologists and field hands have typically rotated on a 2 in / 2 out roster.

Tenure

EL21/1999 was granted to Exploration & Management Consultants Pty Ltd and McNeil Associates Pty Ltd on 26 January 2001. Frontier acquired a 90% interest in this and the adjoining EL20/96 from Exploration & Management Consultants Pty Ltd and McNeil Associates Pty Ltd. The vendors retain a 10% free carried interest in the tenement to completion of a bankable feasibility study. The licence was reduced to $44km^2$ by partial relinquishment in September 2005. The location of the licence is shown in Figure 1.

Presently, Frontier Resources Ltd. is the sole tenement holder in the Elliott Bay Region. Areas surrounding EL21/1999 were successfully tendered for under the ERA process in June 2006.

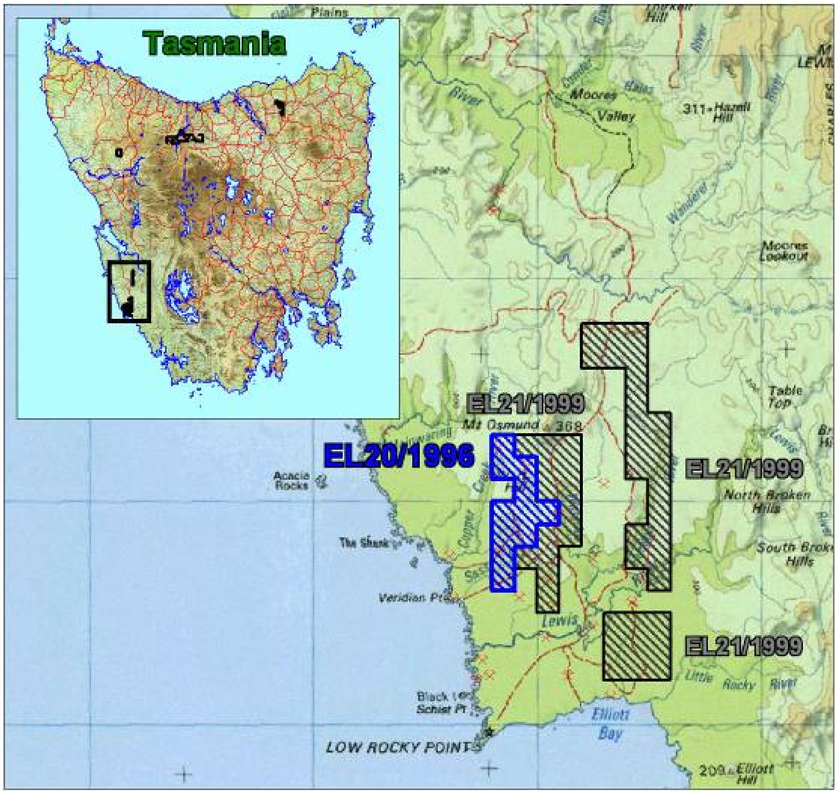


Figure 1: Location of EL21/1999

Environmental Concerns

Frontier 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 survey 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.

Frontier rehabilitated drill sites and access tracks in the Aldebaran area at the end of the 2006 field season using fertiliser blended for the purpose of natural regrowth of button grass and melaleuca squarrosa scrub. The fertiliser was designed by Incitec Pivot for the national parks and wildlife service. 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 Frontier's Annual Report on Exploration for EL20/96 for 2004 (Callaghan, 2004).

The targeted mineralisation style within EL21/1999 is VHMS - related base metal mineralisation. A model for mineralisation has evolved with geological assessment continuing to unravel the complex nature of mineralisation in the nearby Wart Hill prospect. Continuity is now demonstrated between intersections at Wart Hill 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.

Lithologies in the Aldebaran (V34) area are apparently a folded repeat or equivalent time horizon to VHMS hosting volcanics at Wart Hill, which is approximately 2km away on the western side of the Osmund Syncline. The area is dominated by variably quartz phyric volcanics with polymict breccia locally, quartz phyric and quartz-feldspar-biotite-phyric porphyry, fine volcaniclastic sediment (siltstone) and chloritic basalt.

Previous work at Aldebaran includes diamond drill hole V34/1 which targeted visible galena and sphalerite in augered samples. High in the hole at 21.8m, broken quartz-galena veins returned 1.2m @ 13g/t Ag, 1.24% Pb and 1.22% Zn. The major significant interval was 27m @0.1% Pb, 0.3% Zn from 106 to 133m), representing the entire interval of a volcaniclastic siltstone. The porphyry beneath the volcaniclastic siltstone is similarly Pb-Zn mineralised to that above. If the stratigraphic facing is west as inferred, then this mineralisation likely represents the footwall to a VHMS system. The base metal in soil anomaly immediately west of the V34/1 collar is stronger than the extensive elevated base metals in the footwall to the west, this target was eventually drilled late in the 2006 field program.

The dominant sedimentation style in the V34 area is high density turbidity flows and facies are typically finer that those at V19.

Footwall Feldspar-phyric Volcanics (FFV)

Mapping has revealed extensive regional VHMS-like footwall chlorite and sericite alteration with local pervasive silicification within a footwall unit similar to that at V19. Footwall lithologies are primarily characterised according to the relative abundance of feldspar crystals/phenocrysts, which commonly reach moderate intensity (20 to 60%), with quartz phenocrysts present at weak intensity (0 to 20%).

With overprinting alteration these lithologies are difficult to distinguish from porphyry. The principal example of this is the foliated and psueodo breccia-textured sericite-silica altered volcanics that crop out east of the base metal anomalism in the central eastern portion of the Aldebaran grid. These rocks locally have a hyaloclastite porphyry facies appearance, however the siliceous matrix and alteration as well as mapped continuation of less altered units into the area suggest they represent altered volcaniclastics.

Porphyry (P)

Porphyry commonly outcrops as a massive unit bearing weak coarse quartz phenocrysts, typically ~4mm in diameter and weak to moderate intensity feldspars with accessory biotite locally. The groundmass is typically pale green and aphanitic. Hyaloclastite was intersected in the upper portion of ALD004.

Host Sequence (HS)

The host sequence is represented by intercalated flows of the dominantly feldspar-phyric and crystal rich volcaniclastics. Finer facies in the HS reflect a period of relative quiescence, evidently lying at the time horizon equivalent to the Elliott Bay contact between the CVC and Tyndall Group.

The feldspar bearing FFV facies is commonly moderately feldspar phyric with very sparse quartz phenocrysts in the HS.

Variants of the HCV are fine grained apparently thin flows, that are well sorted and quartz grain packed; very similar to the epiclastic sandstones described from the V19 area. Minor volcaniclastic siltstone is evident locally and given its close spatial association with the epiclastic–like facies is included in the HS.

Hangingwall Crystal-rich Volcaniclastics (HCV)

Distinctive quartz-feldspar crystal rich volcaniclastic sandstones form the hanging wall and part of the host horizon at V34. These units are typically moderate to rich in rounded volcanic quartz crystals (0.5 to 6mm) with weak to moderate intensity feldspar crystals (1 to 3mm), commonly forming a crystal packed texture.

The HCV displays textural features that are typical of high density turbiditic mass flows. Basal weakly lapilli-lithic crystal volcaniclastic sandstone is sparse, but sometimes evident in the vicinity of finer facies from the underlying unit / flow. Massive moderately sorted medium to coarse grained crystal packed volcaniclastic sandstone is widespread, commonly forming intervals that likely exceed 50m in thickness. Flow tops are evidenced by thin regular bedded facies of commonly slightly finer grained volcaniclastic crystal sandstone.

High density mass flow turbidite facies form widespread blanketing deposits, with similar facies being evident throughout the Mount Read Volcanics within the Tyndall Group (eg. Comstock Tuff and mass flows at Burn's Peak, above the Rosebery mineralised horizon). Locally at V34 there is very strong silica alteration and intense quartz veining, this strong silicification has been identified in the hangwall at Wart Hill, typical examples are viewed in diamond drill holes WD012 and WWD003.

Tertiary Gravels

A silicified deposit comprising mostly angular to sub rounded milky vein quartz clasts (to 10cm) occurs over a magnetic lineament at ~381530mE, 5251650mN. This deposit is of probable Tertiary age - greybilly. Overlying quartz lag is abundant and many surficial deposits of this type may indicate that silicified Tertiary gravels lie beneath. Thus quartz vein distribution can only be faithfully tracked from outcrop and subcrop-bearing coarse boulders.

Quartz Lag and Quaternary Deposits

Surficial gravels bearing rounded Ordovician quartz sandstone and vein quartz clasts occur sporadically over the V34 area. These are readily recognised from the rounded clast form and composition.

Alteration

Strong chlorite is locally evident within finer units of the crystal rich volcaniclastics at and beneath the host horizon, within feldspar-phyric "footwall" volcaniclastics. Two principal zones of the most significant chloritic alteration are evident 1) in the far north, near V34/1; 2) the far SE of the IP grid occurring as weak to moderate chlorite flecks within feldspar crystal rich volcaniclastics of clear footwall affinity; no major porphyry outcrop is evident near here, although minor porphyry is logged in ALD003. The northern and V34/1 area occurrences lie both north and south of outcropping porphyry and likely represent good target areas if a porphyry margin style model typical of the Wart Hill mineralisation is assumed.

The northern chlorite zone is apparently conformable with outcropping fine grained quartz crystal rich oxidised volcaniclastic sandstone, located up stratigraphy to the east. Strong Fe and base metals coincide with the chlorite zone, which also hosts disseminated and near semi-massive sulphide locally. Test auger sampling at 5m spacing failed to locate significant sulphides or relict oxidation across the contact or in adjacent presumably stratigraphically lower stratigraphy.

Sericite is widespread, reaching moderate intensity locally within both the footwall and hangingwall lithologies. Sericite along with silica reaches moderate intensity proximal to probable Devonian quartz vein hosting fault structures. A unique occurrence of strong pervasive grey to translucent silica is evident along a later Devonian milky quartz veined structure orientated NNW through the south western portion of the V34 grid. Elsewhere, weak pervasive silicification is only locally evident.

The hangingwall crystal rich volcaniclastics are commonly iron oxidised, perhaps reflecting widespread oxidation following burial of a seafloor exposed VHMS system. Significant alteration vectors at V34 are:

- Fuchsite, a hangingwall alteration vector mineral has been noted in outcrop at V34.
- Strong chlorite is perhaps the best indicator of proximity to VHMS ores and is evident at V34, comparatively it is only sparsely distributed and weak intensity at V19.
- Sericitisation is widespread, but may provide vectors to VHMS where reaching moderate or stronger intensity and accompanied by sulphide.

Mineralisation

Vein style massive and minor disseminated galena-sphalerite is evident within ALD001. The former bears dark brown sphalerite, unlike the honey colour often evident at V19 and probably represents Devonian remobilised mineralisation or "hangwall leakage" style mineralisation from a buried seafloor exhalative system. Thin irregular stringer pyrite, weakly disseminated base metal sulphide and carbonate spots and veins are likely related to VHMS forming processes.

Disseminated pyrite is not commonly evident in surface outcrop, however relict boxwork texture is locally preserved. Semi-massive pyrite reaching 15% is located within footwall feldspar-phyric chlorite altered volcanics in the central north of the grid.

"Leakage base metal anomalies" are commonly coincident with traces of mapped and inferred faults. The main N-S base metal soil anomaly is coincident with both quartz veined structure and the host horizon.

Strongest surface geochemistry is apparently located within the host horizon rather than at the base of the hangingwall crystal rich volcaniclastics, which bear widespread low level base metals (eg: ALD002). The latter mineralisation possibly represents poorly focused VHMS, resulting from large thicknesses of mass flow crystal-rich volcaniclastics continually covering / swamping the seafloor exhalative horizon.

Structure

All structure data is collated and presented as stereonets. Data scatter is strong for beds and bands with interpretation uncertain, reflecting the Devonian overprint on the Cambrian. Sterographic analysis for the entire Wart Hill area for bedding and banding reveals likely fold plunge of approximately 60° to 185°, influencing Cambrian aged rocks. This is at odds to the apparent Devonian trend reflected in Ordovician aged sediments; shallow/moderate to 350°, indicating that folding in the Cambrian was significant in this area. A weak Devonian fold trend of 60° to 345° is indicated by stereographic plots, but is apparently less intense. This difference could result from the influences of Cambrian and Devonian deformation as well as late wrench faulting.

By analogy to the V19 area, a series of west inclined folds with late west dipping faulting / shearing along fold limbs is also likely in the Aldebaran area.

A principal feature is the inferred syncline passing ~NNW, immediately west of the horizon drilled by V34/1, ALD001 and ALD002. This structure, whilst complicated by faulting, is evident within the 3D IP resistivity data. A further inferred parallel anticline is likely to be located east of the drilled host horizon and coincident with chargeability highs trending NNE.

Fault dislocations are readily evidenced at surface by strong foliation and psueodobreccia textures as well as widespread quartz veining. Dextral offset faults are evident in both the chargeability and resistivity data. An offset of approximately 100 to 150m is indicated for the NNW orientated fault in the south of the V34 IP grid. A good correlation exists between magnetic lineaments interpreted from regional data and mapped faults in many cases. Late brittle faults may be indicated by E-W trending drainages eg: adjacent to ALD003 and ALD004.

Foliation is variably developed and typically ranges from moderate to strong intensity; few massive un-foliated outcrops being evident. Foliation is shown to be relatively consistent throughout the V34 area striking predominantly NW dipping steeply east (70-85°).

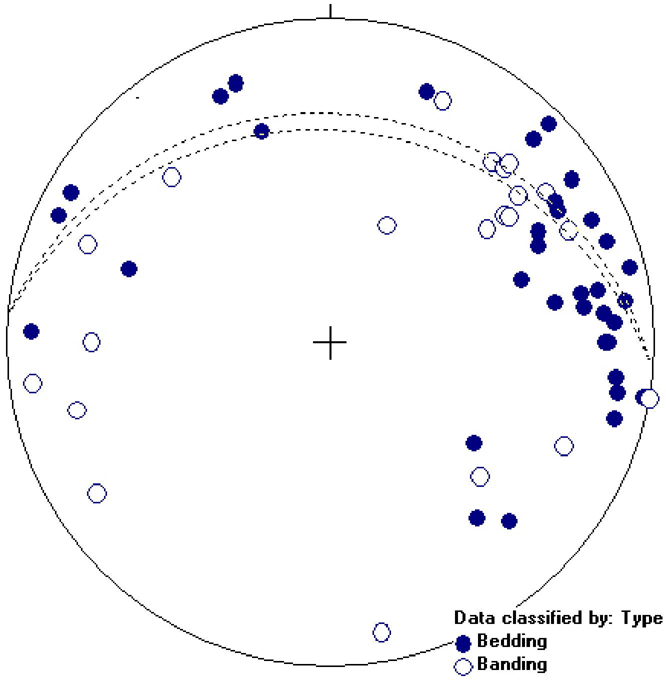


Figure 2: Stereographic Projection for all Wart Hill area beds and bands indicating influence from Cambrian folds plunging 60 to 185 degrees.

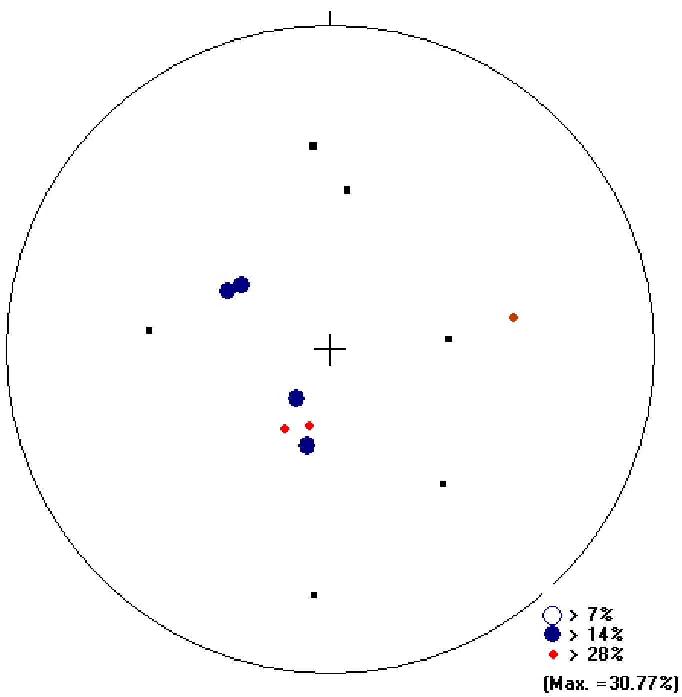


Figure 3: Stereographic Projection all Wart Hill Area fold hinges by point density, showing dominant microfold plunges of 70 to 200 (in agreement with S0 data) and 60 to 305 degrees (Devonian?).

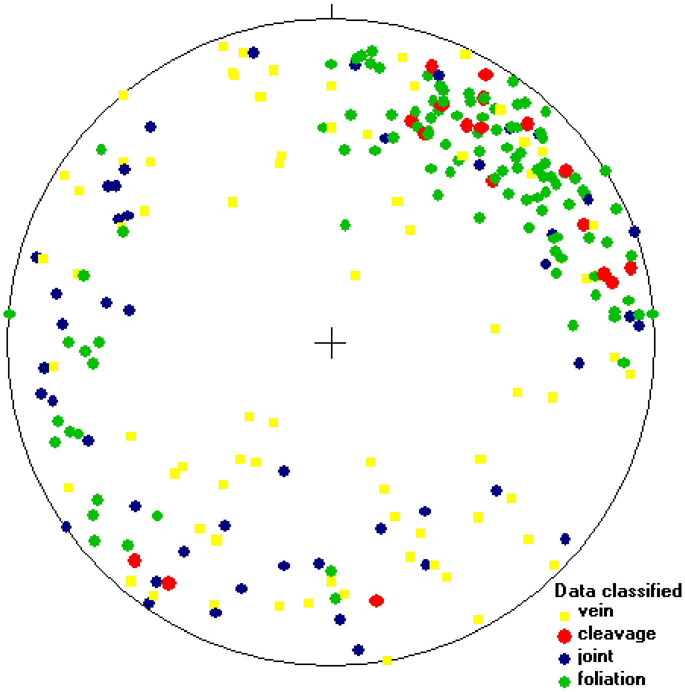


Figure 4: Stereographic projection for foliation, cleavage, joints and veins (all Wart Hill Data).

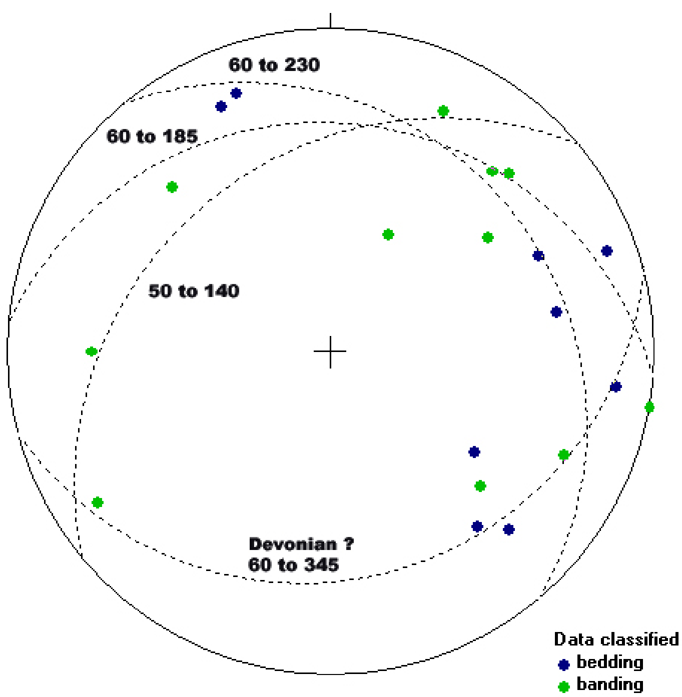


Figure 5: Stereographic Projection for the V34 area; beds and bands indicating influence from Cambrian folds plunging 60 to 185 degrees.

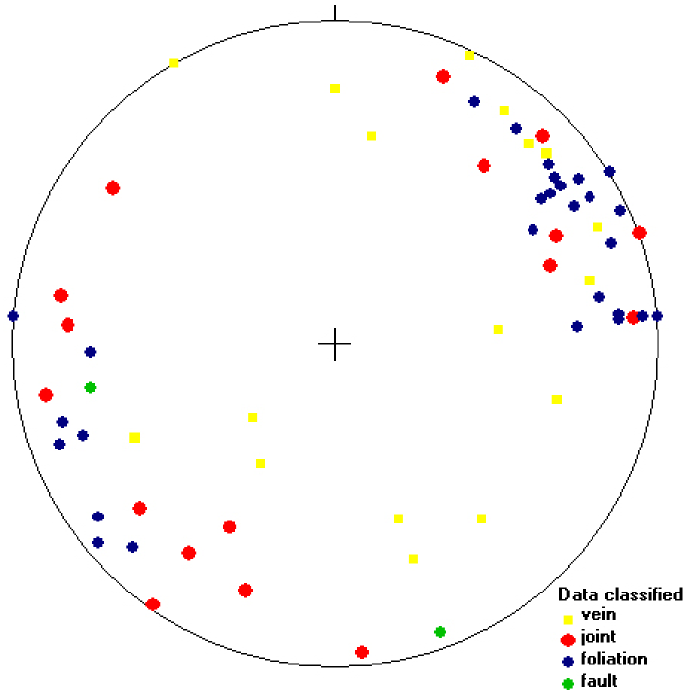


Figure 6: V34 Stereographic projection for faults, foliation, joints and veins.

Geochemistry

A principal base metal and iron anomaly trends NNE sub parallel to a fault through the central portion of the V34 area. Drilling from V34/1 and ALD001 returned low level Pb-Zn anomalism. High iron defines the quartz-feldspar crystal rich hangingwall volcaniclastics in many areas. Iron is less elevated although still high (to 2%) over some chargeable footwall / host horizon areas. An extensive zone of elevated Cu and Fe is evident in the south eastern portion of the grid and potentially reflects widespread alteration proximal to a VHMS system.

Pb-Zn anomalies coincident with quartz-feldspar crystal rich volcaniclastics (HCV) in the V34 area possibly reflect leakage from covered VHMS at depth. Feldspar-phyric CVC like units in the base of this interval representing a period of relative quiescence during which time VHMS mineralisation was poorly focused with fresh influxes of minor mass flows. Relative to the 3D IP defined geophysical anomalism, notably few base metal soil anomalies exist within chargeable areas, however a few exceptions are apparent.

Pb in soil anomalies apparently best reflect the surface expression of mineralisation. See Table 1 below.

Spl_ID	East	North	Ag_ppm	Cu_ppm	Pb_ppm	Zn_ppm	Fe_ppm
17604	381150	5252210	2	15	550	1450	8750
17605	381175	5252210	8	15	4150	3550	21500
17682	381250	5251810	0.5	20	1700	1800	3550
17693	381125	5251610	3	5	3950	1900	5000
17696	381050	5251610	0.5	10	1800	1500	19500
21366	380975	5251510	1	40	460	1300	5100
21395	381600	5251610	3	250	800	8000	24700
21545	381150	5252110	3	10	1300	1400	20900
21622	381200	5252310	2	5	460	1100	4900
21624	381150	5252310	2	30	1100	1500	8500
21655	381200	5252410	6	30	4000	5400	12800

Table 1: **Alderbaran** (V34) anomalous soils

Work Completed

ALDEBARAN (V34) Drilling

Frontier's work on EL21/1999 focused on drill testing defined IP anomalies with coincident soil geochemical anomalism in stratigraphically prospective positions. A total of 5 drill holes for 715.8m were completed on EL21/1999 (see Table 2).

Hole_ID	Easting (m, AGD66)	Northing (m, AGD66)	Azimuth	Dip	Depth (m)	Date Commenced	Date Completed	Prospect	Exploration Licence
ALD001	381107	5252217	90	-50	184.3	05-Feb-06	11-Feb-06	Aldebaran	EL21/1999
ALD002	381069	5251653	90	-45	125.7	12-Feb-06	19-Feb-06	Aldebaran	EL21/1999
ALD003	381364	5251621	105	-60	195.8	20-Feb-06	09-Mar-06	Aldebaran	EL21/1999
ALD004	381220	5251817	100	-45	120	26-Feb-06	04-Mar-06	Aldebaran	EL21/1999
ALD005	381178	5252402	90	-55	90	05-Mar-06	07-Mar-06	Aldebaran	EL21/1999

Table 2: Aldebaran Collars (NB: ALD003 was originally completed on 25/2/06, then re-entered and deepened from 8th to 9/3/06.)

The drill logs appended (Appendix 2; with lookup tables in Appendix 3 & 4) include all holes completed during the past reporting year (ALD001-ALD005).

Hole_ID	Interval (m)	From (m)	Pb_%	Zn_%	Ag_ppm
ALD001	18	68	0.05	0.19	1.5
incl.	0.5	68	0.51	2.47	11
ALD002	15	110	0.11	0.06	1
incl.	4	112	0.28	0.05	1.5
ALD003	11	72	0.35	0.11	3.6
incl.	0.4	72.3	2.34	0.3	13
incl.	0.25	76.35	4.09	2.74	26

Table 3: EL21/1999 2006 significant drill intersections

Frontier drilled a number of prioritised anomalies via relatively short drill holes (to 195m) in order to test a variety of soil and geophysical anomalies (Figures 7 and 8). Aldebaran priority drill traces for ALD003, ALD004 and several other potential drill traces were soil augered first to assess priorities and confirm prospectivity via visual bedrock examination.

Overall, mineralisation intersected at Aldebaran was low tenor, with a few intervals returning several percent base metals combined over 1 to 2m. ALD002 returned a wide interval of low tenor lead mineralization. No significant Au analyses were returned (max 0.03ppm). Analytical results are returned for drill holes ALD001, ALD002 and ALD003, with significant intervals reported in Table 2. No significant intervals were obtained in ALD004 and ALD005.

Whilst the analysis results returned were modest, strong VHMS – related alteration was intersected indicating relative proximity to the fluid source, which provides strong encouragement and targeting vectors for further drilling. A combination of mapping and drilling has delineated extensive chlorite alteration with significant sulphide within footwall units, as well as widespread pervasive sericite, base metal bearing pervasive silicification and carbonate alteration. Further encouragement comes from the tenor of the footwall chlorite alteration at Aldebaran, which is commonly stronger than that at the nearby V19 prospect.

Interpretation of the IP survey results in conjunction with the mapped geology has provided significant insights into processes forming VHMS-related mineralisation. A key feature of the mineralisation in the Wart Hill / Aldebaran area is the interplay between mineralisation and alteration processes in relation to the active volcanic setting. The periodic influx of significant volumes of mass flow turbidite forming crystal-rich volcanic facies has apparently swamped the VHMS forming system at various stages, resulting in re-migration and focusing of hydrothermal fluids at progressively higher stratigraphic levels. Such processes are reflected in the chargeability data, with anomalous zones (/plumes) interpreted to extend between the original footwall, relatively feldspar-rich volcaniclastics, upward through the crystal-rich mass flows. Further, resistive zones have been correlated with pervasive silica+/- base metal zones, interpreted to originate via sub seafloor replacement (eg. ALD002).

Two main horizons potentially bearing exhalative VHMS have been identified. The deepest horizon with potential lies at the top of the relatively feldspar-rich volcanics with CVC (Mount Read Volcanics – Central Volcanic Complex) affinities. The top of this unit likely represents a disconformity surface, coincident with a period of relative quiescence, during which time seafloor VHMS formation was possible. Secondly, the occurrence of extrusive basalt, shale and significant sericite, silica and carbonate alteration within the crystal-rich volcaniclastics in ALD005 is indicative of another of the potential VHMS-exhalative horizons. This unit is located mid-level within the volcanics and spatially associated with porphyry. This second horizon is closely analogous to that which hosts base-metal resources at Wart Hill.

ALD001

ALD001 targeted a conductivity high at the northern end of a footwall chargeability anomaly, coincident with a 400m+ linear base metal C-horizon soil anomaly, that in the collar vicinity returned anomalous base metals to 8g/t Ag, 0.415% Pb and 0.355% Zn. Vein style massive and minor disseminated galena-sphalerite is evident, particularly within several chlorite bearing zones, within quartz-feldspar crystal rich volcaniclastics in ALD001. ALD001 returned 18m @ 0.05% Pb and 0.19% Zn and 1.5g/t Ag from 68m (See Table 3).

The drilled conductor was apparently sourced in hangingwall quartz-feldspar-crystal rich volcaniclastic sandstones. This unit is commonly oxidised at surface; a readily mappable feature.

ALD002

ALD002 targeted base metals in soils (to 3g/t Ag, 0.395% Pb & 0.12% Zn), coincident with the mapped host horizon and a resistivity high extending to 75m+ depth. Cu in soils is elevated in the inferred footwall, partly coincident with an extensive chargeability high that extends to depth.

ALD002 intersected the host horizon which comprises quartz crystal rich volcaniclastics, volcaniclastic siltstone and mudstone as well as minor black shale and grey chert interbeds. Beneath this unit is a significantly altered interval from 80 to 122m, comprising strong grey silica–sericite altered quartz-phyric volcanic (possible porphyry), crosscut by thin veinlets, disseminations, and spots and clots of galena+/-sphalerite. Base metal content varies from 1 to 2% combined through this interval which coincides very closely with an IP resistivity high. A relatively weak intersection of 15m @ 0.11% Pb and 0.06% Zn from 110m was returned (See Table 3). This alteration looks promising and likely represents sub seafloor pervasive stratabound alteration peripheral to a VHMS hydrothermal fluid focus. The intersected black shale interbeds are a positive result, indicating a relatively quiet environment favourable for seafloor massive sulphide deposition existed in the vicinity.

The hole was terminated after passing through the resistivity anomaly, coincident with the host horizon, but short of the main portion of the chargeability anomaly, since the hole was lifting resulting in difficulty getting the core tube to seat.

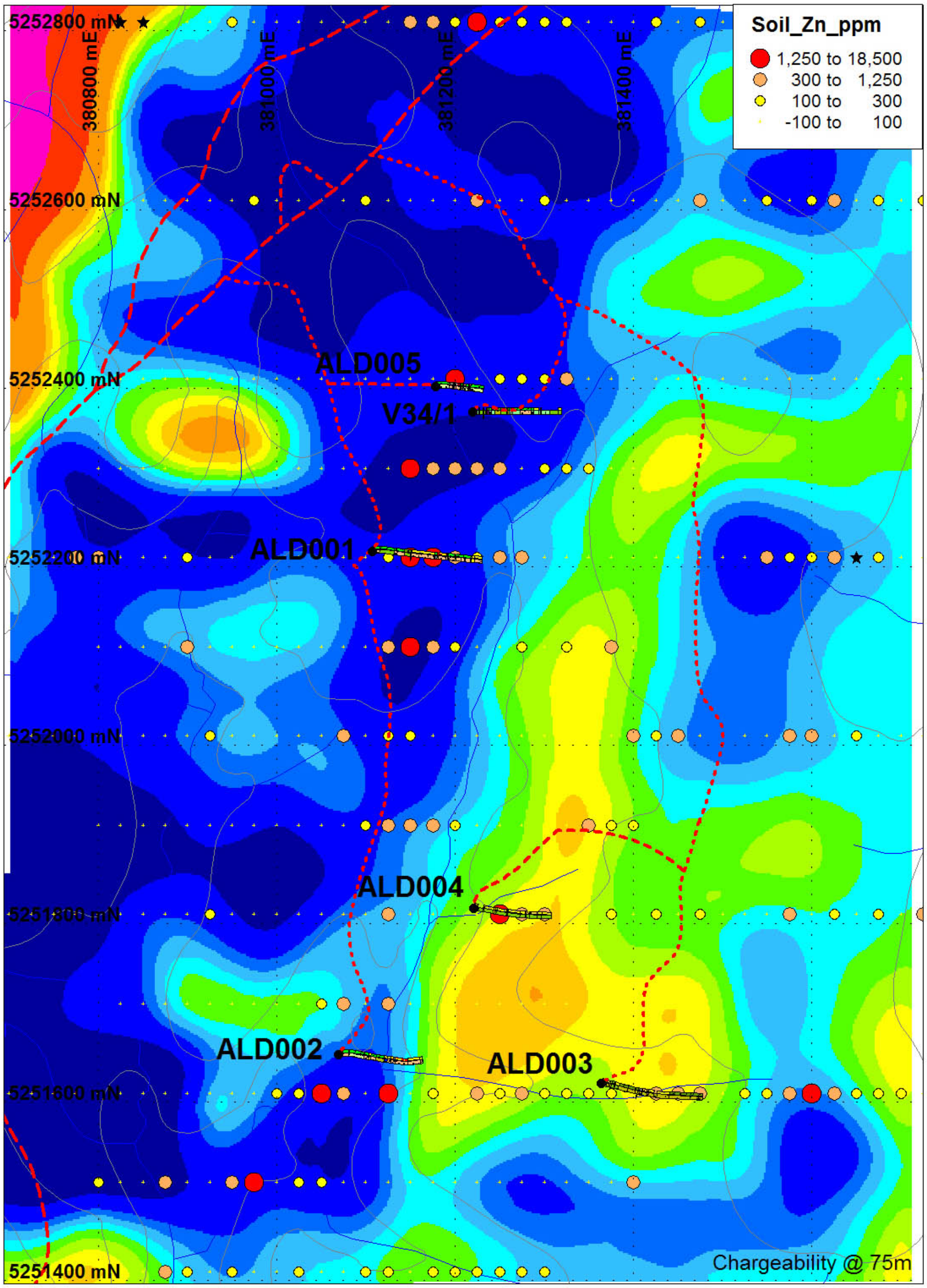


Figure 7: Drill Collars, over Zn thematic and gridded 75m depth Chargeability

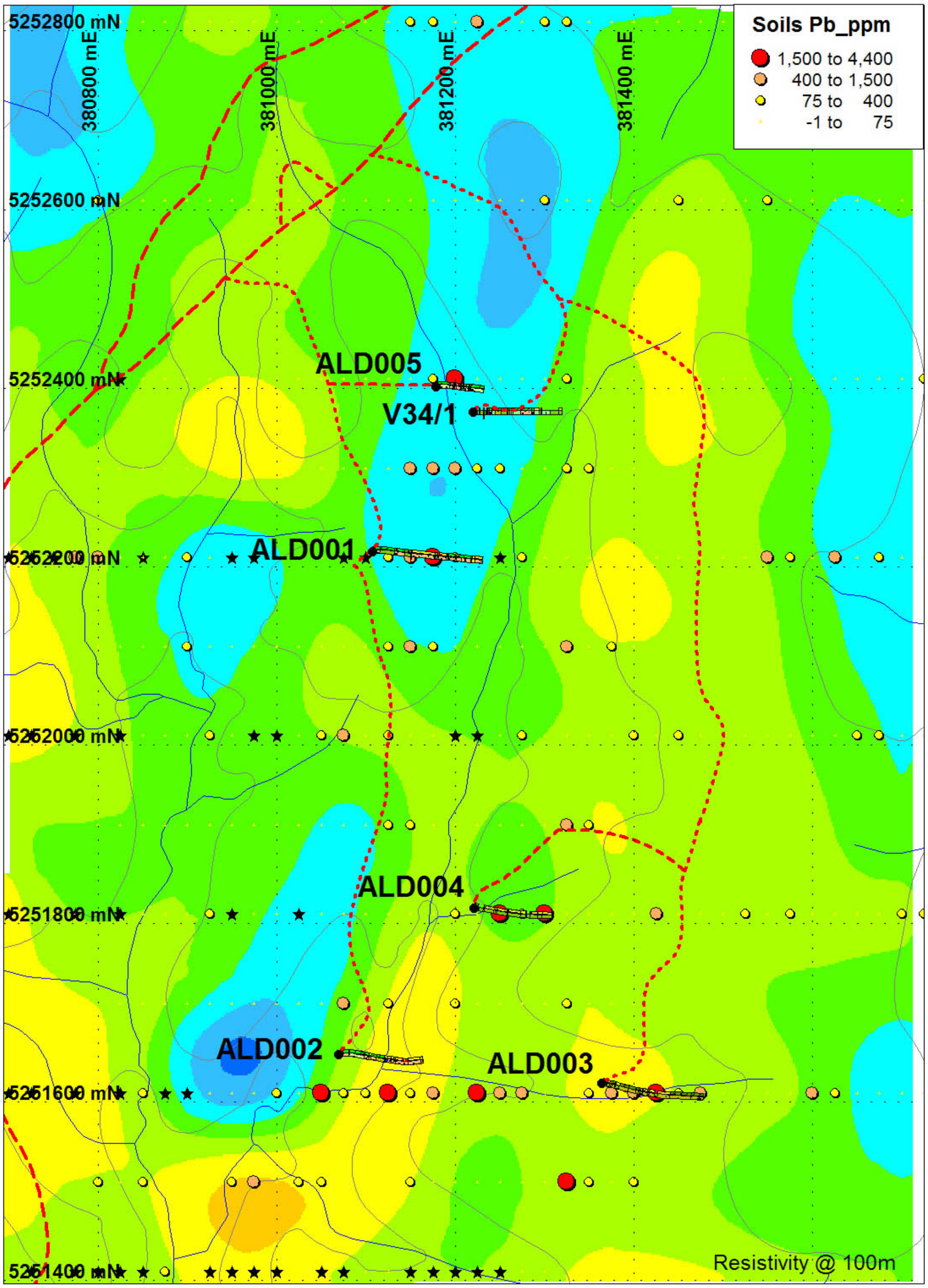


Figure 8: Drill Collars, over Pb thematic and gridded 100m depth Resistivity

ALD003

The principal target for ALD003 was the highest chargeability anomaly from the Aldebaran IP survey. This anomaly is strongest from 50m to 175m depth and reaches surface ~100m to the north in an area without comprehensive soil coverage. The hole also tested anomalous soils at surface, bearing up to 5g/t Ag, 0.44% Pb (the highest in the area) and Zn to 0.078%, derived from weakly oxidised, chloritic feldspar-quartz-phyric felsic volcanics bearing weak pervasive silicification, sericite and minor disseminated pyrite. A further ancillary target was a weak to moderate resistivity high extending to near surface in the collar vicinity.

ALD003 intersected very promising strong carbonate, chlorite and pervasive grey silica-sulphide altered CVC-like feldspar-quartz-phyric volcaniclastics, massive quartz-rich volcaniclastics and moderately silicified, chlorite stringer veined quartz-feldspar-biotite porphyry in the upper portion of the hole (to ~85m). The best mineralization comprising disseminated and veined pyrite, galena and sphalerite was intersected in this region, coincident with the zone of elevated resistivity. Mineralisation and alteration decreased significantly at depth, with increased chargeability. Weak chlorite and minor disseminated sulphide continued within mostly fine grained volcaniclastic sandstone and lesser pumiceous volcaniclastics to the end of hole.

ALD003 was completed in two stages, being later re-entered and deepened in an attempt to intersect CVC-like chloritic volcaniclastics at depth. The hole had previously ended at 149.8m in weakly altered fine grained crystal volcaniclastic sandstones, very similar to those adjacent to Zn in soil anomalous (0.8%) chloritic feldspar-phyric volcanics of CVC like affinities, located ~200m to the east. The deepening of ALD003 attempted to intersect this horizon, which potentially represents a quiescent interval at the transitional unconformity between the CVC and Tyndall Group. This contact is evidently mineralised at surface, however soil augering across the contact failed to locate extensive sulphides and combined with other IP and alteration vectors, the source is most likely at depth to the west. Deepening ALD003 pushed the hole further through a chargeable anomaly at depth, the base of which possible corresponds with vicinity of the footwall feldspar-phyric volcanics. The chargeability anomaly intersected by ALD003 likely reflects chloritic – sulphidic alteration related to a VHMS foci at depth, with it's form being indicative of lateral bleeds along select horizons, following mass flow turbidite burial.

The hole was finally ended at 195.8m, due to time constraints related to demobilization from the Elliott Bay area. Evidently the strongest portion of the chargeability anomaly was tested and the extension of drill hole ALD003 did not warrant further sampling.

ALD004

ALD004 targeted a Pb (to 0.305%) – Zn (0.18%) soil anomaly coincident with a southerly plunging high chargeability zone extending from surface. Little geological control was available at surface, with augering returning no sample from hard bedrock, which presumably reflects strong silicification of the underlying volcanics. Favourable chlorite alteration, associated with a weak Pb anomaly, and nearby disseminated pyrite in crystal-rich volcaniclastics (coincident with a weak plume in the chargeability) was located in outcrop ~100m to the north. Further, a regional scale fault plots ~40m south of the drill trace.

The dominant lithology within ALD004 was a felsic porphyry as both coherent and breccia facies. Mineralisation and alteration was generally low tenor, expressed as widespread pervasive sericite and weak pervasive silicification. Disseminated pyrite to 1% is widespread, with galena and sphalerite in trace quantities forming late veinlets. Strongly broken ground was intersected in the upper part of the hole to 40m, with trace sphalerite evident within quartz veins. The lithologies encountered are typical porphyry and may represent intrusions into the unconsolidated footwall as indicated by hyaloclastite textures.

ALD005

This was a short hole testing the geochemical soil anomaly missed in the previous V34/1 drill hole, located ~40m to the east. The geochemical anomaly targeted is one of the strongest in the area, bearing up to 6g/t Ag, 0.4% Pb and 0.54% Zn with weak Cu to 300ppm. Key features in the drill hole vicinity are:-

- footwall disseminated sulphides and chlorite alteration west of and near the V34/1 collar.
- Proximal to a porphyry margin, located to north ~50m, with an E-W orientated chargeability high at surface and extending to ~75m depth, possibly representing a sulphide focus near the porphyry margin.
- Favourable stratigraphy / potential host horizon as evidenced by chlorite altered fine grained epiclastic and quartz-crystal-rich volcaniclastic sandstone and basaltic andesite near the top of V34/1.
- A strong inferred footwall resistivity high beneath this area dipping steeply west and extending to depth.

The volcanic sequence intersected in ALD005 has many similarities with the Wart Hill host sequence, however despite bearing strong pervasive sericite and silica, the setting appears distal compared to the more chloritic alteration intersected in ALD003.

Highly altered volcaniclastics mostly comprising quartz crystal-rich volcaniclastic sandstone with volcaniclastic siltstone interbeds and minor basalt were intersected. The volcaniclastic siltstones clearly reflect quiescent periods during active VHMS formation, shown by laminar haematitic interbeds, one of which presented as a 1cm hematite-silica / jasper band. Disseminated flecks of specular hematite are evident along with minor pyrite within the massive crystal-rich volcaniclastic sandstones. The latter hematite occurrence helps explain the oxidised outcrops of similar lithology, present through out the area, which likely reflect zones of diffuse - cool hangingwall alteration over an active but recently mass flow turbidite swamped / buried VHMS system. Sericite alteration is moderate to strong in intensity, particularly within the finer units, whereas a weak pervasive silica overprint is apparent within lesser sericite altered coarser lithologies.

A minor interval of lithic bearing volcaniclastic sandstone bears carbonate - hematite lithics and extensive bands and veinlets of galena bearing carbonate are evident within siltstone and basalt lens. Despite very encouraging lithologies and alteration, mineralisation was low tenor, with no analysis available at this stage.

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 contract geophysics company SJ Geophysics during late November and December 2005 (28 days). The survey covered 38.4km of gridded and surveyed lines; entailing 19.3km on EL21/1999 and 18.7km on the adjacent EL20/1996 (Figure 9). 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 9). 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 Frontier'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 7). The format for the final information presented for the SMRV 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.

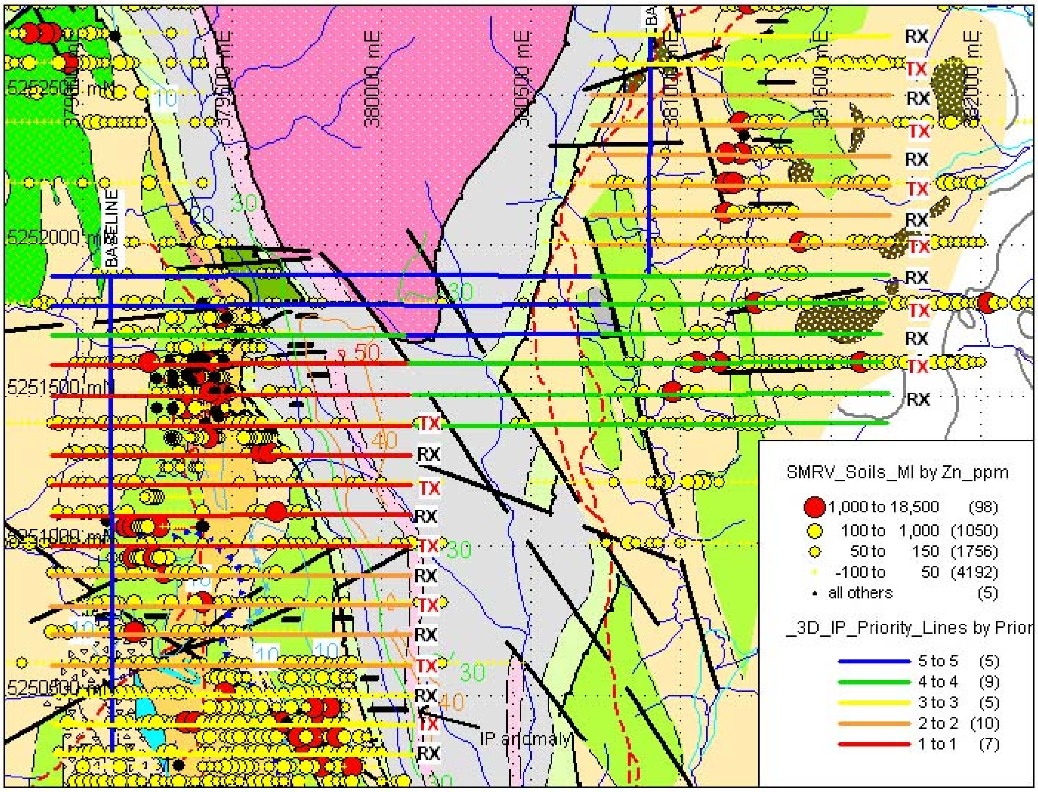


Figure 9: Prioritised 3D_IP Survey Lines for V19 (West) and V34 (East)

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 7).

3D IP interpretation

At V34 (Aldebaran) a significant 600m long ~N-S aligned chargeability anomaly is located in the southern central portion of the grid. This anomaly extends to depth at both ends. At shallow to moderate depths the chargeability anomaly has tails directed to the east that possibly reflect footwall feeder zones to VHMS. This is in agreement with an initial interpretation of a west dipping and facing volcanic sequence. Notably an elevated Cu in soils zone exists west of and partly coincident with the southern end of the chargeability anomaly. Highly anomalous base metals to 0.8% Zn and 0.4% Pb are evident proximal to the west of the anomaly at both ends, within weakly conductive zones.

Resistivity responses are far stronger from the Wart Hill area with respect to V34.

A significant chargeability anomaly lies at depth in the southern central portion of the V34 grid.

Chargeability

Chargeability highs appear to reflect disseminated sulphides resulting from VHMS-forming fluids permeating both upward and laterally within a relatively thick volcanic pile, characterised by regular influx of thick mass flow turbiditic sediments. A logical VHMS target is MX2, in the south of the V34 IP grid, which extends to depth within the stratigraphy in an area of chloritic volcanics.

Outcrop over chargeable zones at surface locally shows evidence of disseminated sulphides, such as at MX1. Sericite and weak pervasive silicification is also locally evident. Pervasive chlorite and minor sulphide occurs both within and marginal to such anomalies locally. An example of the later is location 381450mE, 5251610mN where chlorite alteration with trace disseminated sulphide is coincident with ~0.4% Pb in soils. More distal to an extensive chargeable anomaly, but coincident with a weak shallow anomaly is the chlorite, disseminated and locally semi-massive pyrite and local pervasive silicification, evident at 381240mE 5252810mN and coincident with anomalous Zn in soils (0.25%).

A significant 600m long chargeable zone (V34 mx3) extending to depth at its northern and southern ends (V34 mx2) lies in the central southern portion of the V34 IP grid. At shallow depths the chargeability has tails directed to the east that are possibly indicative of footwall feeder zones. This is in agreement with the interpretation of regional scale mapping that indicates a west facing and dipping volcanic sequence in this vicinity. Highly anomalous basemetal values are evident in soil surveys proximal to (and west of) the anomaly at both ends, within low chargeability zones (see table 1 for anomalous soil locations). The chargeability anomaly appears stratiform and may reflect footwall stringer alteration.

The stratiform chargeability anomaly has depth extent; plunging moderate to steeply to the west and linking to an extensive chargeability anomaly at depth to the NW. This anomaly is possibly located on a shallow NNW dipping syncline, as reflected in the fold pattern of the adjacent Denison Group sediments of the Osmund syncline. This may reflect a site for VHMS mineralisation, given that strong alteration (including chlorite, semi-massive sulphide, silica and sericite) is located up dip on the eastern limb in the north of the V34 grid. Elsewhere strong chlorite, one of the best indicators for proximity to VHMS ore, is localised on the margins of chargeability anomalies.

Given this scenario, the northern conductor (Cond2) and associated base metal mineralisation is possibly an up dip to the east expression of the VHMS system. Mineralisation is apparently low tenor here in disseminated and late vein style form, reflecting distal alteration and remobilised leakage respectively.

Probable leakage plumes of sulphide are evident as shallow chargeability anomalies in the hangingwall crystal volcaniclastics, particularly to the west of the V34 mx2 (Figure 7) chargeability target.

A weak chargeability anomaly extends along the eastern margin of the survey area. This is in agreement with an inferred anticline, located between this and the principal drilled base metal host horizon.

V34 mx1 chargeability target

Potential drill hole **V34-P5** targets high chargeability coincident with a strong resistivity high contained on it's eastern margin. This target possibly represents a resistive mineralised porphyry intrusion with associated disseminated sulphide. No significant soil geochemistry is associated with this target. Further ground truthing via mapping and auger test sampling is recommended.

There is no supporting base metal geochemistry (Pb <40, Zn<70ppm), however samples directly above the chargeability anomaly are notably Fe deficient, supporting the possibility of a different lithology here. The coincident chargeability and resistivity apparently doesn't provide a good drill target, however weakly anomalous base metals in soils are coincident with a shallowly south dipping conductivity anomaly to the south (Figure 10). And Cu is anomalous a further 100m south. Infill soils and possibly a northerly orientated drill hole stepped back to the south may be warranted.

The chargeability anomaly has a semi-coincident resistivity anomaly on its eastern margin. Disseminated sulphides are noted at surface within porphyry outcrop. This anomaly likely lies well up in the hangingwall above the main VHMS horizon.

V34 mx 2

- High chargeability zone extending to depth at the southern end of a 600m long chargeable zone
- Proximal to east of northern end of a mapped porphyry
- Coincident with elevated Pb, Zn and Ag, with high Cu proximal to east (footwall alteration). Base metals to east conform with a resistivity high.
- Coincident with chloritic feldspar-phyric volcanics

V34 mx3/4

- High chargeability zone extending to depth at the northern end of a 600m long chargeable zone
- Proximal to west of southern end of a mapped porphyry
- Coincident with elevated Pb, Zn and Ag. Base metals to west conform with a resistivity low / conductivity high (Possible conductive VHMS target?)

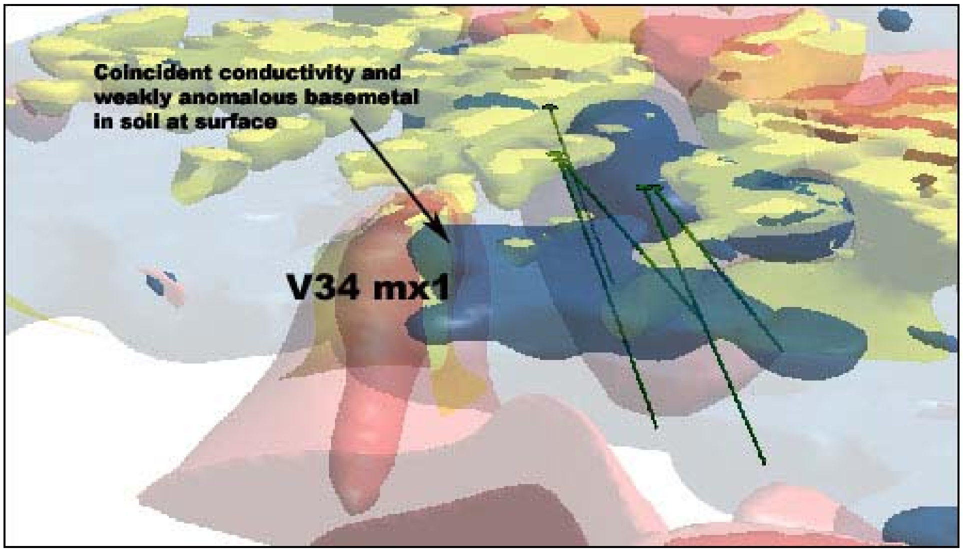


Figure 10: V34 mx1, view to NE, Showing resistivity (red) coincident with chargeability(yellow) with proximal to south high conductivity(blue) that is coincident with weakly anomalous base metal in soil.

Resistivity

Resistivity is partly coincident with mapped porphyry and weak pervasive footwall silicification. It is also coincident with late faulting and silicification occurring in close proximity to quartz veined faults.

Resistivity was found to be coincident with base metals in ALD002 and ALD003, whereas ALD004 drilling a chargeability anomaly did not intersect base metals until deep in the hole after crossing a fault and verging toward a resistivity anomaly at depth. Similarly V34/1 intersected a weak resistivity anomaly at depth, returning 27m @ 0.1% Pb and 0.34% Zn (106-133m), but a resistive zone was not intersected in ALD002.

Resistivity targets are now considered to be significant, particularly in the vicinity of WD016 and between ALD002/ALD003.

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 highly variable IP response. They also noted that Zn rich systems are not located by EM methods, due these ores being highly resistive with respect to more Cu-Rich VHMS.

Chargeability highs do correspond to zones of elevated disseminated sulphide at V34, as expected. However, careful consideration of the geology is required for drill hole targeting as experience incorporated from this seasons drilling of IP targets suggests that 8 to 10ms chargeability anomalies are sourced from both footwall alteration and hangingwall plumes and coincident with disseminated and vein pyrite.

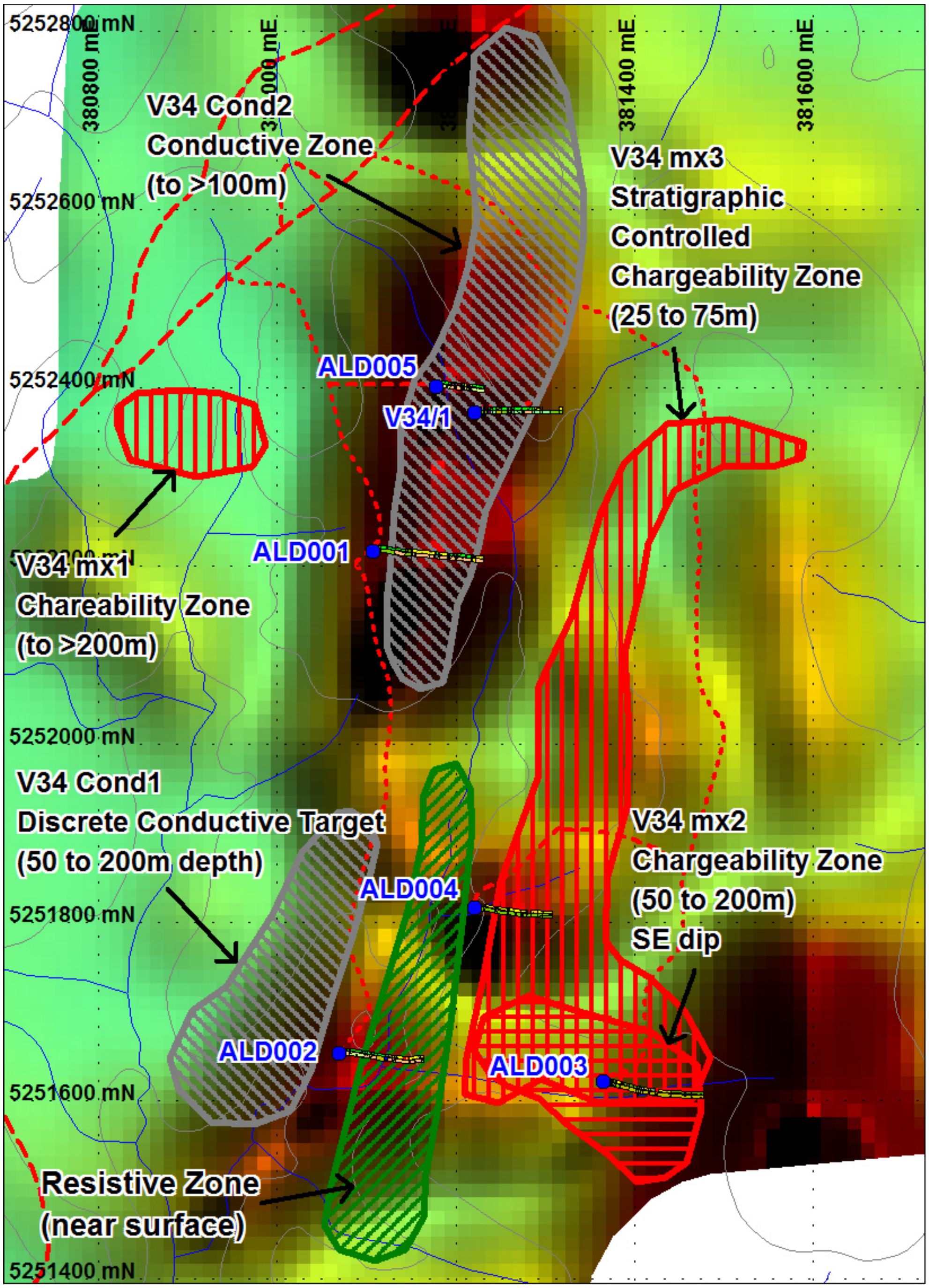


Figure 11: V34 (Aldebarran) Prospectivity showing IP interpretation, drill holes and Zn in soils grid.

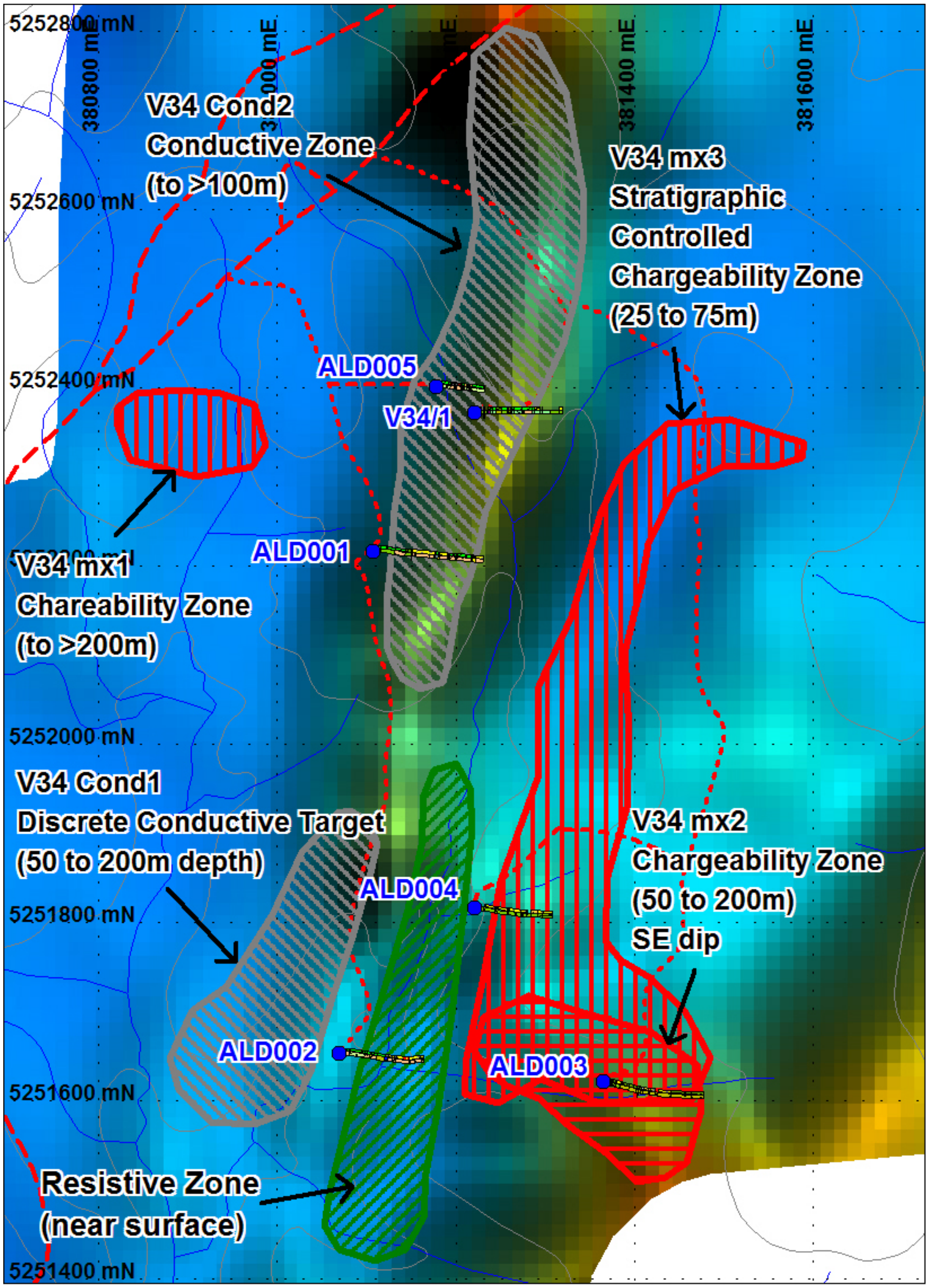


Figure 12: V34 (Aldebarran) Prospectivity showing IP interpretation, drill holes and Fe in soils grid.

Discussion

Ground Electromagnetic and IP surveys have seldom been used as a mapping technique, however the survey has provided a truly three dimensional mapping tool and data has been collected on a sub-regional grid. Reasonable depth imaging has been formed by creating conductivity, resistivity and chargeability shells. The value to targeting is undoubted, given that 3D modelling can indicate piercement points on data shells, however the data has also proved invaluable in defining potential thrust surfaces and fold orientations where there is geophysical contrast between juxtaposed or adjacent lithologies.

It is envisaged that map production will be drafted from the results of the IP survey along with structural measurements and new lithological mapping. Greater confidence can now be placed on the orientations of lithologies sub-surface, particularly the location of synclinal keels, however confident interpretation is obviously limited by the penetration depth which is a claimed 300m+.

Hudson River C-Horizon Soil Sampling

During January and February 2006 grid based C-Horizon hydraulic auger soil sampling was conducted over a cohesive zone of elevated panned concentrate gold broadly defined as the Hudson River gold zone within TasGold's "Wanderer" Exploration Licence in south-western Tasmania. A total of 530 soil auger samples were collected on an east-west GPS controlled grid, totalling 12300m of gridding. Further detail is provided in the appended report.

The peak gold value recorded in the survey was 105 ppb adjacent to a discreet chlorite alteration zone at the Hudson prospect. Three other anomalous samples of 60, 71 and 73ppb Au were also located adjacent to this area, however the results are considered to be indicative of low grade mineralisation.

Targets

The Hudson River zone is separated into 5 separate targets, the Cooper, Barrel, Barrel 2, Little Rocky 1 and Hudson prospects. The Little Rocky 1 prospect had previously been tested by soil sampling and received a lower sampling priority and was not tested by the program. Each of the other prospects were comprehensively tested by the grid except for the lower priority Barrel 2 prospect which is geographically isolated. This target was tested by one reconnaissance soil line. Sample points are located on Figure 13, with white points representing samples with no detectable gold (<1ppb Au), yellow points with detectable gold and large yellow circles representing samples of anomalous gold.

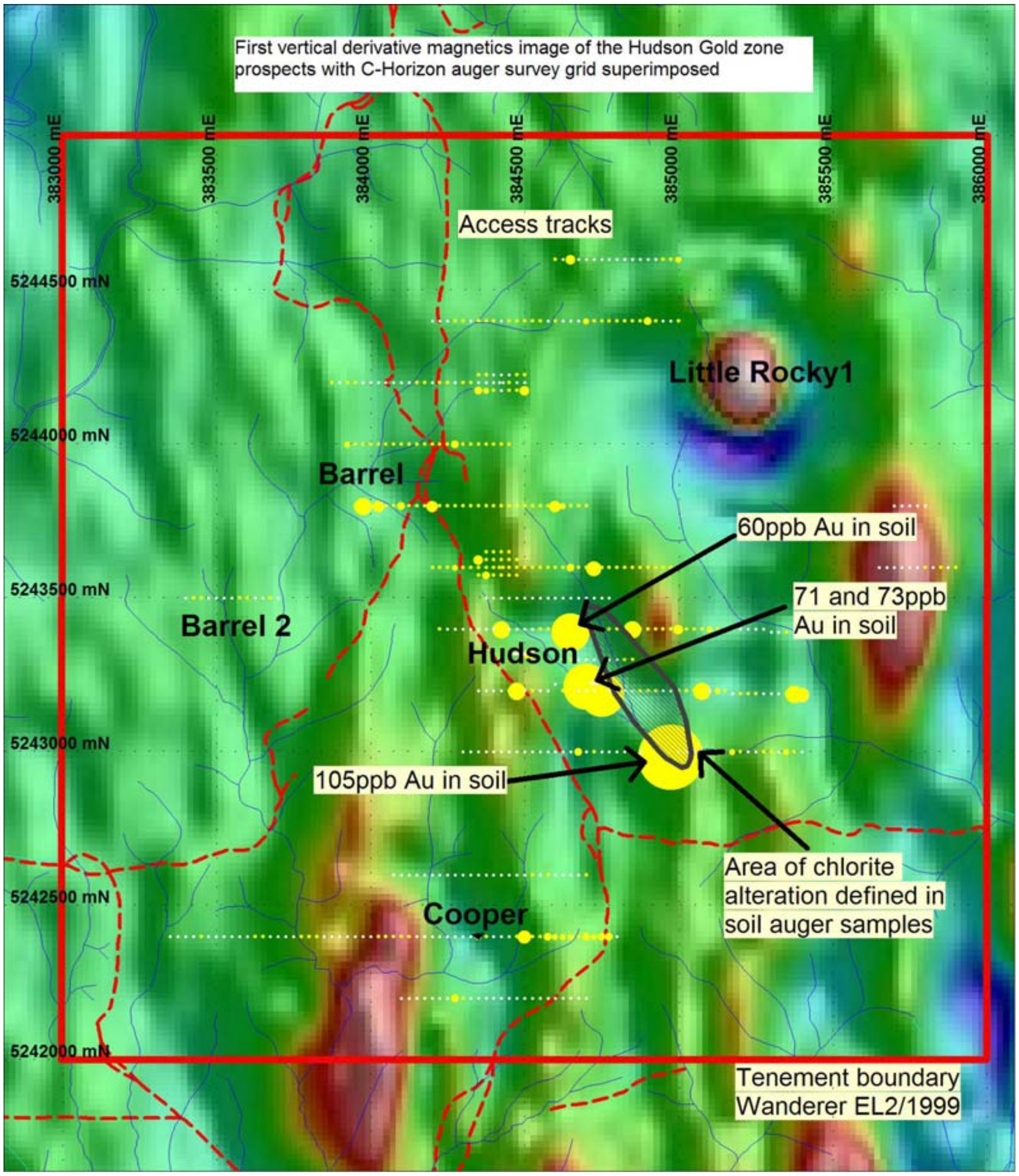


Figure 13: Hudson Gold Zone; first vertical derivative magnetics with C-horizon Au in auger samples.

Sampling Technique

Priority east-west grid lines were drafted with samples to be collected every 25m on lines with northings 200m apart. The east-west sampling ensured that the broadly north-south striking stratigraphy was adequately tested. Two auger holes were drilled at each sample site, 6m east and 6m west of the central point. Samples were composited and allocated the central coordinate, this provided greater coverage of ground (effectively a 12.5m sample spacing).

Follow up lines spaced at 25m were sampled in two areas where ferruginous/gossanous samples were initially returned. Some infill lines were also completed at 100m line spacings in a zone of chlorite alteration and weakly anomalous gold indicated from preliminary assays. Two close spaced traverses at 5m sample spacing were also completed over specific areas of interest.

Geological Interpretation

During the soil sampling program brief descriptions of lithology and alteration were made from rock chips recovered from the auger. The Hudson River zone appears to be dominated by volcaniclastic siltstones and sandstones, with discrete areas of quartz veining indicative of faulting. Areas of Tertiary gravels are present within and the Hudson River zone and the depth of this cover ranges up to two metres, with a few individual auger holes unable to penetrate this cover.

The Hudson River zone is coincident with a circular feature in first vertical derivative magnetics. To the south-west of this feature the magnetics show a distinct break that trends north westerly across the base of the circular feature. The orientation of quartz veins noted in the area also corresponds to two main orientations, a north-south set and north west trending set consistent with the break in magnetics and possibly indicative of faulting in this orientation.

A NNW trending zone of cohesive chlorite alteration was identified over a 400m strike length on three lines and the gold results were elevated both east and west of this zone (Figure 1). Base metals were assayed on select sulphide bearing samples with peak Zinc of 1490ppm in one isolated sample. This level of anomalism is weaker than TasGold's other base metal prospects within the area.

Conclusions

Soil auger sampling of the Hudson River gold zone has identified low priority weakly anomalous coherent gold targets. No follow up testing is likely to be conducted in the short term with significant base and precious metal anomalism more significant at other TasGold prospects within the Southern Mt Read Volcanics.

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 7 for digital data)

Appendix 2: Drill Hole Logs

(See Appendix 7 for digital data)

Appendix 3: Lithologies Lookup Table

Lith Code	Lithology	Lith_ID
	Clastic	
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 3: Lithologies Lookup Table (cont.)

Lith Code	Lithology	Lith_ID
	Coherent Rocks	
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
	Undifferentiated	
UR	felsic volcanic (undiferentiated)	44
URQQ	quartz-crystal-rich felsic volcanic (undiferentiated)	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
	Structure	
FALT	fault	50
	Mineralisation and Alteration	
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 - pervassive	59
Fk	Fuchsite	60

Appendix 4: Geochemical Analysis

(See Appendix 7 for digital data)

Appendix 5: 3D IP Logistics Report

(See Appendix 7 for digital data)

Appendix 6: Report on Soil Auger Sampling of the Hudson River Area - EL21/1999

PETER RUZICKA, FEBRUARY 10th 2006

Introduction and Summary of Work Completed

This report briefly documents a program of soil auger sampling conducted in the Hudson River area of EL21/1999, southwestern Tasmania, commencing 17th January and completed 10th February. During this period the author, accompanied by Andrew Eastaugh (10 days), Stanley Isikel and Ronnie Keven, undertook a program planned by Rob Reid and approved by Peter McNeil. A total of 530 soil auger samples (201101-201500, 499401-499500, 498701-498730) were collected by power auger on a predominantly GPS controlled 200m x 25m grid pattern, covering 12300m of gridding. Average progress of approximately 30 samples (60 holes) per day was achieved with 2 days lost to miscellaneous breakdowns and 1.5 days for bushfires. Average maximum auger depth penetration was 1.08m.

Two auger holes were drilled 6m either side (east and west) of a central 25m point and samples were composited and allocated the central coordinate. Close spaced sampling at 25m x 25m was conducted in two areas where ferruginous/gossanous samples were initially returned. Some infill lines at 100m x 25m line spacing were conducted late in the program in areas of alteration and weakly anomalous preliminary gold results from P1 sampling. Two close spaced traverses at 5m sample spacing over specific areas of interest were also prescribed by Rob Reid.

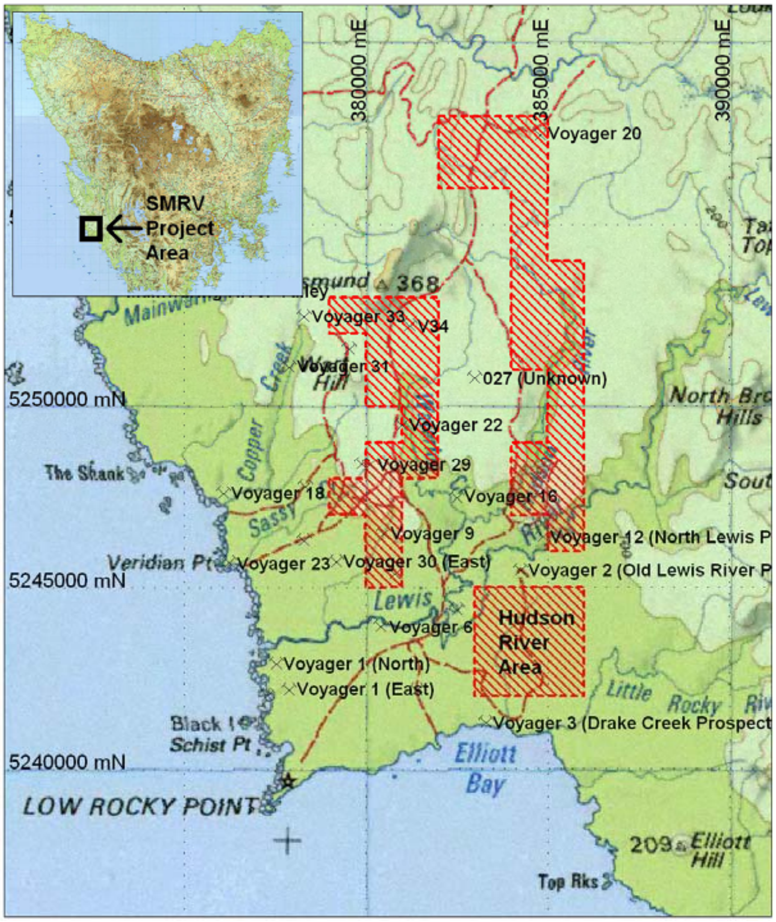
The program was prioritized from highest priority one (P1) down to lowest priority five (P5). Priorities P1 to P3 were completed and some of the P4 program. Additional infill lines were then planned based on gold results and logged alteration in the P1 program.

The sampling grid covered drainage areas which had returned anomalous gold and base metals results from historic -80# and pan concentrate samples. All sample details, coordinates, and logged geology accompany this report. Only very basic lithological differentiation was possible given the nature of auger chips.

At the time of writing, preliminary gold results for P1 sampling only were available and indicated elevated gold values up to 71ppb adjacent to a NW trending cohesive chloritic alteration zone at the Hudson Prospect area. Some ferruginous (gossanous?) areas have been identified however preliminary gold results from these areas are not encouraging.

Elsewhere (immediately south of the southern tenement boundary) reconnaissance has indicated extensional vein arrays with individual veins up to 1m thick containing abundant pyrite with quartz-chlorite within a coarse grained quartz-feldspar-biotite porphyry exposed along the shoreline.

No obvious correlation with known stratigraphy in the Wart Hill area can be positively determined although quartz crystal packed volcaniclastic sandstone over a magnetic high feature to the east of the Hudson Prospect have been compared by R.Reid to similar stratigraphy at the Voyager 34 and 19 Prospects. In general the rocks from the Hudson area can be described as more distal facies equivalents of the Wart Hill area and as such could be inferred as being less prospective for significant VHMS mineralisation.



Location of EL21/1999 Showing Hudson River Area (from Reid 2005)

Location and Access

The Hudson River Area is the southernmost portion of EL21/1999. The area is located in southwest Tasmania, 40 kilometres west of Strathgordon and 70 kilometres south of Strahan. Access to the area from Macquarie Harbour is via the 4WD/ quad bike ‘Low Rocky Point Track’ or alternatively via the Moore’s Valley airstrip located 10 kilometres north of Mt Osmund.

The Elliott Bay area is a Conservation Area subdivided from the southwestern World Heritage National Park and as such is open to exploration but subject to stringent environmental conditions and restrictions.

Regolith and Topography

Much of the tenement area consists of broad low hills or hilly ridges incised by local drainages. Vegetation cover is predominantly low button grass, but forested/ treed areas are present and drainage areas are generally heavily vegetated. Access to the area is either directly by helicopter, or by quad bike from Wart Hill via the Low Rocky Point Track. Access within the Hudson River area is on pre-existing quad bike tracks.

Areas of Tertiary gravels encroach the tenement area from the east and west. The depth of this cover ranges up to more than 2m within the tenement area with a few individual auger holes unable to penetrate this cover. In general areas of gravel tend to form elevated but flat topographic plateaus. Two distinct gravel types were intersected – the first in the middle eastern portion of the sampling grid comprises dirty ferruginous lithic and quartz pebbles, the second occurs in the southern and southwestern sampling areas and is composed of clean quartz pebbles and coarse cobbles. It is possible that variations of the second gravel type have been miss-logged in places as volcaniclastic sandstones.

Local areas of subcrop are not uncommon in higher areas away from the gravels. Exposed rocks indicate a stripped or weakly weathered in-situ profile with any geochemical dispersion from mineralised sources likely to be areally restrictive in soil auger sampling.

Auger samples have been collected from the c horizon, equivalent to the standard CSIRO saprolite or saprock terminology, situated at the base of the in-situ weathering profile and immediately above fresh rock.

Soil Auger Sampling Methodology, and Background

Historic drainage geochemical surveys by Geopeko have included -80# and pan con sampling. This work has generated anomalous gold and base metal results and the intention of the current soil auger and mapping program was to cover and test geochemically anomalous drainage catchment areas on a 200m x 25m grid pattern, controlled by hand held GPS traverse in relatively open country, and compass and pacing survey in forested areas. Two auger holes were drilled 6m either side (east and west) of a central point located 25m from adjacent sampling centre points, samples were composited and the single composited sample was allocated coordinates of the central point. Where strong alteration was encountered, the two auger holes around the sample point were sampled separately as a form of infill. Only very basic geological differentiation of auger chips was possible given their fine nature and common strong clay component.

A generator powered, hydraulic auger drilling machine with attachable 0.5m and 1m length screw rods was mounted on the back of a quad bike for the program. In forested areas the auger machine was hand carried.

Where possible each auger hole was drilled to bedrock refusal however in practice, boulders within the Tertiary gravels would occasionally halt progress, or alternatively the holes would have to be terminated in in-situ saprolitic clays due to frequent bogging of the auger rods in wet clayey areas. In many of these instances a second hole was attempted nearby, but if the second hole also failed, the deepest material from both holes was sampled.

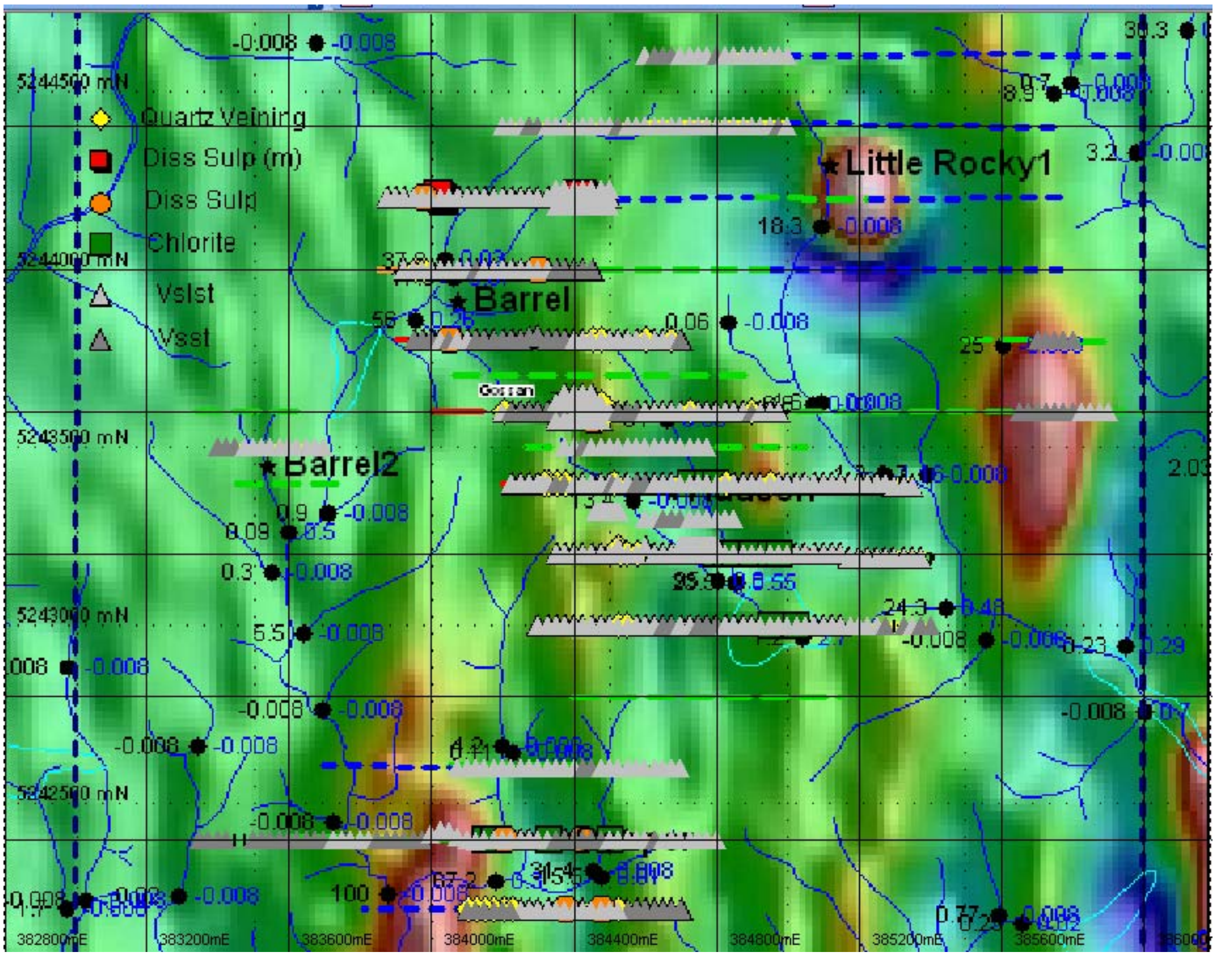
For each auger hole a 500g to maximum 1kg bulk (unsieved) sample was collected, with bedrock material from the deepest levels of the hole included as a priority where available, and material from shallower levels included to make up the bulk. Each sample was numbered. Sample coordinates, hole depth and lithology were logged and recorded for each hole. A piece of flagging tape was used to mark the location, sample number and AMG coordinates of each point. Sample location was generally GPS controlled however in forested areas where satellite signal was weak, compass and pacing was used as an alternative. Standard tables and codes used by Tasgold staff were used to record all data. All AMG coordinates are referenced to AGD66 zone 55, UTM projection.

In areas where strong alteration was evident – the hole spacing was closed in to 6m either side of the altered hole.

Two close-spaced traverses (5m sample spacing) were selected by Rob Reid at the Hudson Prospect, namely 5,243,320N over a quartz blow, and 5,243,225N – 25m north of the initial P1 line which returned 71ppb Au. Weak chlorite and some weak goethitic staining were the only interest noted on these close spaced follow-up traverses.

Two short traverses were also conducted over a magnetic high feature to the east of the main sampling area (5,243,600N and 5,243,800N). Outcrop at this locality consisted of abundant vein quartz blows (330-350 degree strike trend) and strongly quartz phyric packed volcaniclastic sandstone with euhedral cubic pits (probably after magnetite?). Pitting was also noted by R.Reid in the main Hudson Prospect area where it could reflect weathered pyrite.

Two purely geological traverses were undertaken during bushfire abstinence along the shoreline to the east and west of the campsite in order to gain some appreciation of stratigraphy to the north within the tenement area. Excellent, relatively continuous outcrop is exposed along the shoreline.



Auger Sampling Coverage (Grey Triangles) over Aeromagnetics and Au stream geochemistry (Panned concentrate, -80#).

Prospect Areas

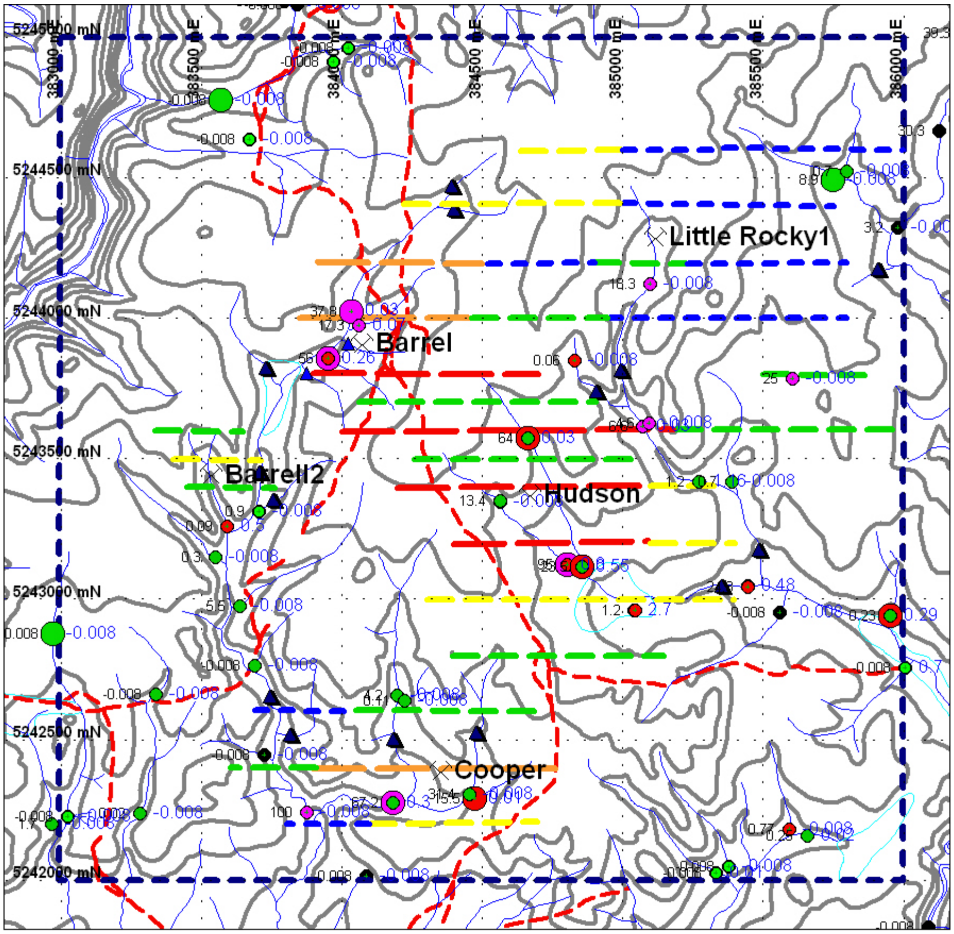
Primary target prospects previously identified and documented by Rob Reid (‘SMRV Proposed Work Program – 100106’, 2005’) include: Little Rocky River, Hudson, Barrel (1 & 2) and Cooper.

Little Rocky River – A discrete magnetic high with anomalous results up to 460ppm Cu, 1,600ppm Pb and 1,740ppm Zn from historic Geopeko soil sampling. A Self Potential Conductivity survey recorded a coincident north-south trending conductive zone.

Hudson - Situated on the SW margin of a circular feature on the VD1 magnetic image, this prospect contains anomalous gold (maximum 2.7ppm in -80#, 64ppm in pan conconcentrate) and elevated Ag (20-40ppm), Pb (20ppm) and Cu (15ppm) in drainage sampling, and up to 1,260ppm Zn and 400ppm Pb in Geopeko soil sampling.

Barrel (1 & 2) – A NW structure cutting the southern portion of circular magnetic feature has returned anomalous stream geochemistry up to 37ppm gold in pan concentrate samples. Anomalism may be continuous along the NW structure linking this prospect with Hudson.

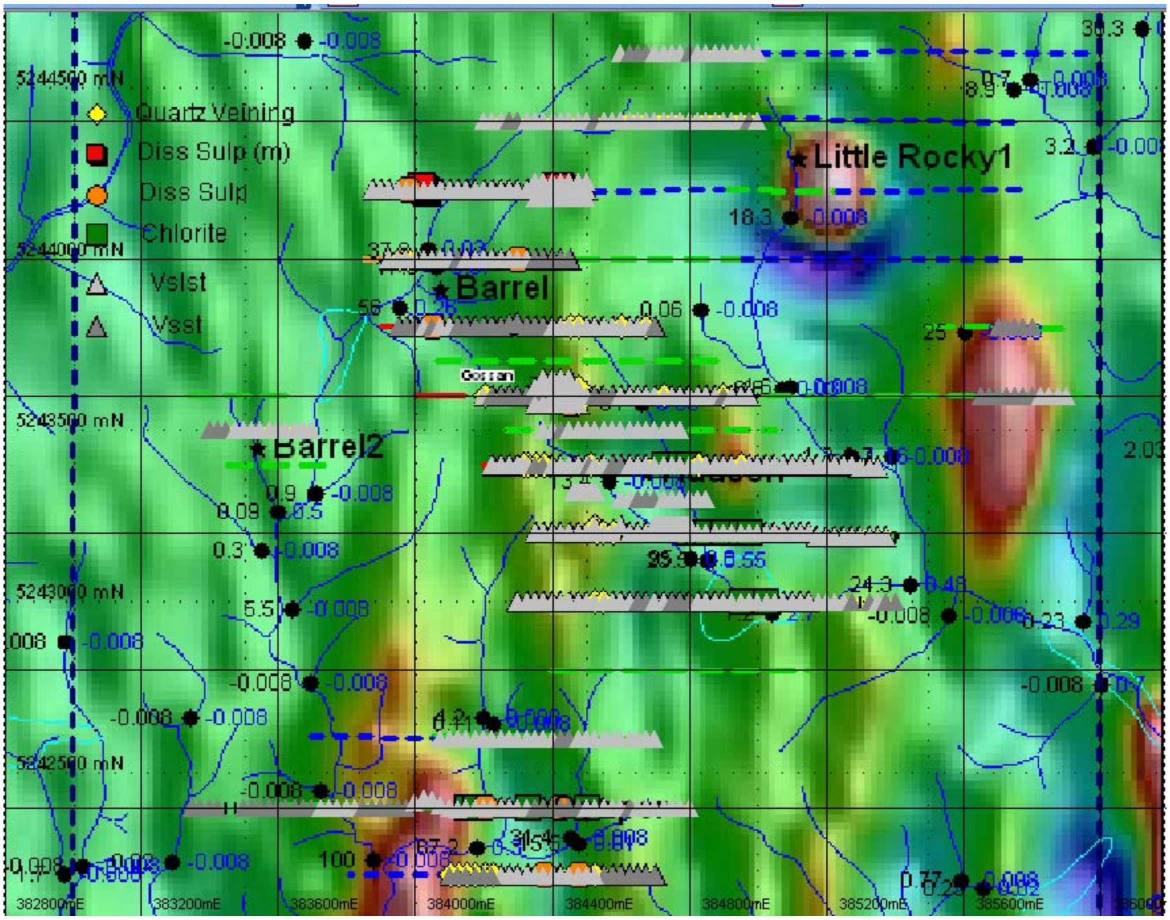
Cooper – Anomalous gold and base metals in drainage sampling up to 100ppm gold in pan concentrates could be interpreted as being associated NW structures similar to that identified between the Hudson and Barrel Prospects.



Stream Sediment Geochemistry, Prospect Locations and prioritized grids (P1 = Red to P5 = Blue; from Reid 2005)

Observed Prospect Geology

The figure below summarises lithological distribution as logged in the auger program. Lithological differentiation is often difficult in very fine auger chips however as a broad generalization, the eastern and western margins of the sampling area contain more common volcaniclastic sandstones while the central corridor can be described as more volcaniclastic siltstone dominated.



Auger Sampling Location Points and Lithology (Pale Grey – Volcaniclastic Silstone, Dark Grey – Volcaniclastic Sandstone)

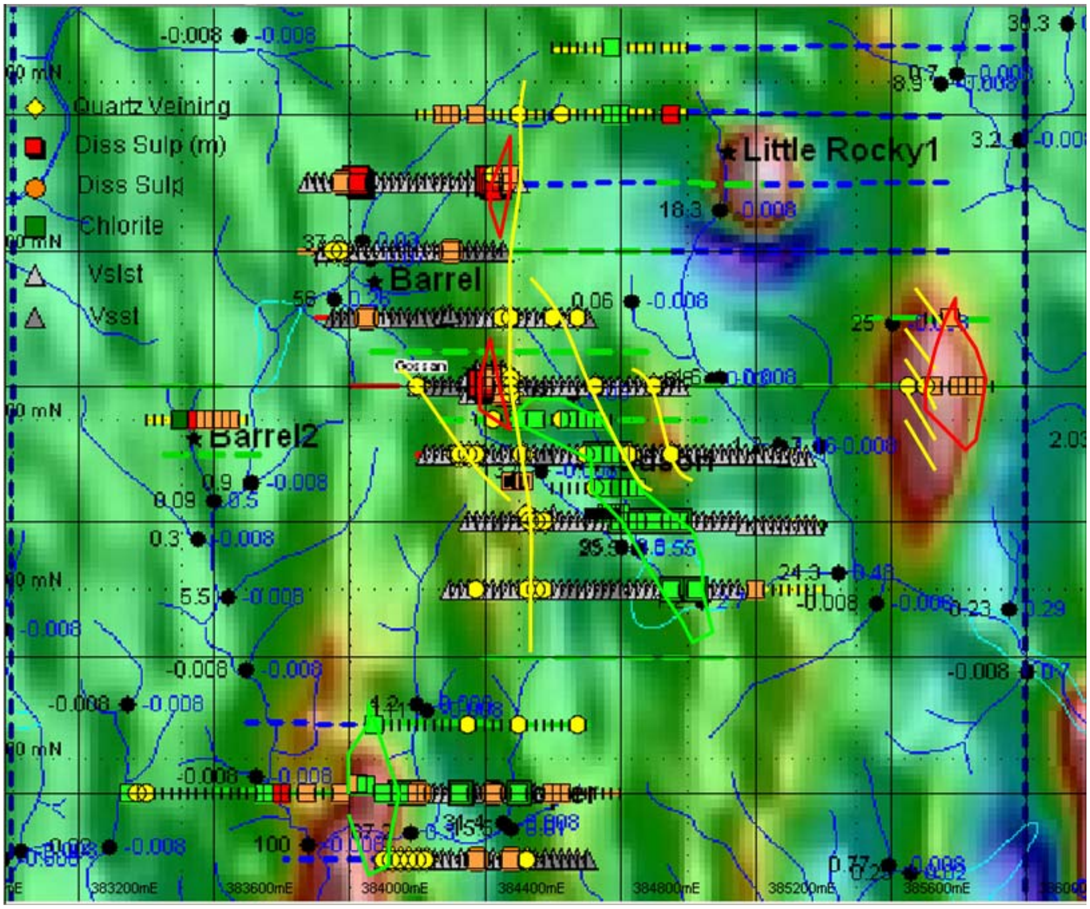
Geology of the Hudson River auger sampling area as observed in outcrop and in auger holes is dominated by volcaniclastic siltstone with abundant but less common volcaniclastic sandstone. All units are quartz phyric to some degree although there is a very cherty/ silicic volcaniclastic siltstone unit which appears to be aphyric, or only weakly quartz phyric. Only very rare feldspar phenocrysts have been observed, generally in the finer grained units. R.Reid has commented that the finer grain-size, grossly less phyric nature of the volcaniclastics, absence of lappili flows, volcanics and porphyries of this area in comparison to the Wart Hill area suggest that the Hudson River area may be more distal mass flow facies equivalents, and may consequently be less favourable for volcanogenic hosted and associated mineralisation.

Quartz crystal rich volcaniclastic sandstones over a magnetic high to the east of the Hudson Prospect have been compared by R.Reid to similar stratigraphy at the Voyager 34 and 19 Prospects.

Outcrop is common on low rises scattered across the sampling area. Most topographic rises appear to be dominated by more resistant bucky vein quartz (Devonian), volcaniclastic sandstone, or cherty/ silicic volcaniclastic siltstone. More weatherable volcaniclastic siltstones occupy the intervening areas.

Alteration and Mineralisation

The figure below summarises areas of interest as noted from logging during the process of auger sampling.



Logged Alteration Zone Outlines – Red – Sulphidation, Green – Chlorite, Yellow – Vein Quartz Blows

At the Hudson Prospect area adjacent hematitic/ goethitic (gossanous?) auger samples were returned from traverse 5,243,600N, at 384,400E, 384,419E and 384,431E. A close spaced (25m x 25m) sampling grid (5,243,575N, 5,243,625N and 5,243,650N) was placed around the ferruginous samples in an effort to define continuity and trend to the zone. Only very weakly ferruginous samples were identified directly north and south of the initial samples. The zone appears to be focused on the western margin of an outcropping northerly trending quartz blow.

Another zone of ferruginisation was observed on traverse 5,244,200N (384,419E – 384,450E). This particular zone is located immediately west of the same quartz blow associated with ferruginisation on traverse 5,243,600N. The quartz blow is indicative of a Devonian structure, and the implication is that possible remobilization of massive sulphide has occurred along the structure.

Elsewhere single localized samples of weakly ferruginous material were observed in a few localities and one sample at 5,244,200N, 384,025E, contained abundant disseminated pyrite but was otherwise unaltered.

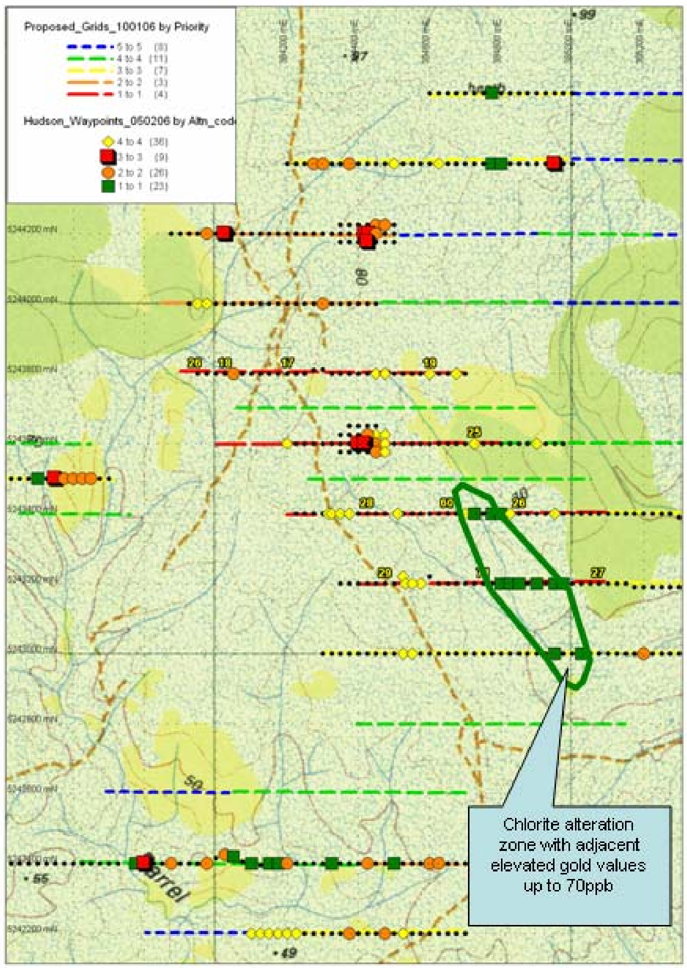
A NW trending zone of cohesive chlorite alteration lies between 5,243,000N and 5,243,400N and best preliminary gold results from P1 sampling returned elevated values up to 71ppb Au adjacent (both east and west) of this zone.

Several weaker scattered individual occurrences of chlorite±carbonate alteration zones have also been observed. These alteration zones occur within both volcaniclastic sandstone and siltstone units.

Some of the logged chloritic samples may simply represent more mafic composition lithologies or alternatively a regional alteration event and in these cases may not be associated with mineralisation. Correlation with analytical results will need to be evaluated to assess their significance.

Two close (5m spaced) traverses were selected by Rob Reid at the Hudson Prospect, namely 5,243,320N over a quartz blow, and 5,243,225N – 25m north of the initial P1 line which returned 71ppb Au. Weak chlorite and some weak goethitic staining were the only interest noted on these close spaced follow-up traverses.

Two short traverses were also conducted over a magnetic high feature to the east of the main sampling area (5,243,600N and 5,243,800N). Outcrop at this locality consisted of abundant vein quartz blows (330-350 degree strike trend) and strongly quartz phyric packed volcaniclastic sandstone with euhedral cubic pits (probably after magnetite?). Pitting was also noted by R.Reid in the main Hudson Prospect area where it could reflect weathered pyrite. Some ferruginisation of samples after sulphide was also noted over the magnetic high.



Abundant Devonian vein quartz blows occur throughout the project area. These typically have a barren/ bucky monominerallic quartz assemblage and tend to crop out as low ridges where they infill structures. These generally have a northwest or northerly trending orientation.

Conclusions

Soil auger sampling of the Hudson River area has not identified any obvious, outstanding targets for significant mineralisation however zones of ferruginisation after sulphidation and chlorite alteration zones have been noted within volcaniclastic siltstones and sandstones, and weakly elevated gold assay values up to 71ppb Au have been returned from an area immediately adjacent to a cohesive NW trending chlorite alteration zone at the Hudson Prospect.

The finer grain-size, grossly less phyric nature of the volcaniclastic sediments, absence of lappili flows, volcanics and porphyries of this area in comparison to the Wart Hill area suggest that the Hudson River area may represent more distal, mass flow facies equivalents and may consequently be less favourable for volcanogenic hosted and associated mineralisation.

No strong positive correlation of the Hudson stratigraphy with that of the Wart Hill area can be noted at this stage however quartz crystal rich volcaniclastic sandstones over a magnetic high to the east of the Hudson Prospect have been compared to similar stratigraphy at the Voyager 34 and 19 Prospects.

Further work on the porphyry unit outcropping along the shoreline near camp could be warranted if a pyritic quartz vein sample collected by John McDougall returns anomalous gold results. Further ground acquisition would be necessary if this is the case.

All initially identified prospect areas in the Hudson River area have returned some degree of alteration in soil auger sampling and a full review of past and current results will need to be conducted once all assay results have been returned from the program.

References

MacDougall, J., Reid, R., & Allan, N., 2005: EL21/1999 – Wanderer Annual Report to December 26th 2005. Tasgold

Mudge, S.T., 1979: Induced Polarisation Survey, Voyager 10 Elliot Bay, Tasmania. Geopeko

Reid, R., 2005: SMRV Proposed Work Program – 100106',2005'

Strickland C.D., 1980: Elliott Bay Area – Tasmania. Progress Report: Exploration Licence 27/76. Voyager10 Prospect. Geopeko

Appendix 7: Digital Data

List of appended digital data files:-

EL211999_200612_01_Digital_Files.txt
EL211999_200612_02_Report.pdf
EL211996_200612_03_Environmental_Survey.pdf
EL211999_200612_04_Drill_Logs.pdf
EL211999_200612_05_Hudson_Soil_Sampling.pdf
EL201996_200604_06_Analysis_Requisitions.pdf
EL211999_200612_07_DH_Assay.txt
EL211999_200612_08_DH_Collar.txt
EL211999_200612_09_DH_lith.txt
EL211999_200612_10_DH_Survey.txt
EL211999_200612_11_GeolCodelookup.txt
EL211999_200612_12_LithCodelookup.txt
EL211999_200612_13_3D_IP Logistics Report.pdf
EL211999_200612_14_3D_IP GridsV19-V34_Chg.pdf
EL211999_200612_15_3D_IP GridsV19-V34_Res.pdf
EL211999_200612_16_3D_IP GridsV19-V34_GeoTIFFs.zip
EL211999_200612_17_3D_IP_GridV19_3DSections.pdf
EL211999_200612_18_3D_IP_GridV19_3DSections_TIFFs.zip
EL211999_200612_19_3D_IP_GridV34_3DSections.pdf
EL211999_200612_20_3D_IP_GridV34_3DSections_TIFFs.zip
EL211999_200612_21_3D_IP_UBCmodel_All.zip
EL211999_200612_22_3D_IP_UBCmodel_V19.zip
EL211999_200612_23_3D_IP_UBCmodel_V34.zip
EL211999_200612_24_3D_IP_VTKmodel_All.zip
EL211999_200612_25_3D_IP_VTKmodel_V19.zip
EL211999_200612_26_3D_IP_VTKmodel_V34.zip
EL211999_200612_27_3D_IP_IP Points.txt