

Data Compilation Report Sulphide Creek EL 43/2004 Tasmania

Prepared for Shree Minerals Ltd.

by

Simon Tear

BSc (Hons), ARSM, PGEO, MAusIMM, MIOM3, Eur Geol

Hellman & Schofield Pty Ltd

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January 2011



Hellman & Schofield Pty Ltd

Technical specialists to the minerals industry

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Summary

The Sulphide Creek licence 43/2004 is located 6km SW of Queenstown in Western Tasmania. This report details a desktop study of the area including data compilation that has resulted in the identification of exploration targets. Road access to the area is via the sealed road from the Lyell Highway. Access to other parts of the tenement is by unsealed roads constructed for previous exploration and may be in a state of disrepair. It is likely that helicopter support may be required to access some of more difficult to access target areas.

The geology of the Sulphide Creek licence involves a complex arrangement of three structurally-bounded zones within the Dundas Stratotectonic Element. These are:

1. Stratigraphically conformable coarse to fine grained siliciclastics associated with Ordovician to Devonian marine sedimentation in the western half of the licence, bounded on the east by the N-S striking Harvey Creek Fault
2. In the NE sector of the licence on the east side of the fault, a more faulted sequence of coarse to fine grained siliciclastics and carbonates from Ordovician to Devonian age.
3. A thin sliver of fault bounded Cambrian Tyndall Group volcanoclastics overlain unconformably by the Ordovician Gordon Limestone occurs in the SE sector juxtaposed with basal Cambro-Ordovician clastics and conglomerates.

The area is structurally complex with a range of fault directions and levels of displacement including fault bifurcation and brittle deformation.

Structurally controlled gold mineralisation within the licence area comprises the Coupon and Davie prospects. The deposits are observed to be low grade gold-arsenopyrite-pyrite quartz vein stockworks hosted by fine grained siliciclastics of the Lower Ordovician Rinadeena Formation, in proximity to the Harvey Creek Fault, an inferred basement structure. Significant silica and sericite alteration is noted with the mineralisation. The base of oxidation is variable being up to 50-60m deep.

Historically the principal target types for gold mineralisation have included sediment hosted disseminated gold (Carlin-type USA) and structurally controlled gold (Henty-type). New possibilities include vein style (possibly sheeted veins) and structurally controlled gold (low grade bulk tonnage as stockwork veining). The preferred target for the Sulphide Creek licence is large scale, structurally controlled gold mineralisation associated with major lithological contacts juxtaposed with the Harvey Creek Fault.

Past exploration work for the licence area has included detailed stream sediment sampling, localised soil sampling grids, airborne magnetics and a localised ground magnetic survey. Historical drilling amounts to 23 RC and diamond drillholes for 2,683m on the Coupon prospect. Shree/Zelos have recently completed the drilling of 5 diamond holes for 742m at the Davie prospect.

Work completed in this report is an exhaustive data compilation in Mapinfo of historical exploration combined with assessment of recent Mineral Resources Tasmania geophysical data and recent diamond drilling (3D interpretation). This work has been used to reappraise the geology of the licence and in combination with new geological concepts been used to develop a list of targets for the licence.

A suggested exploration programme includes a detailed airborne magnetic and radiometric survey, follow up surface geochemical exploration and geological mapping, re-logging of the Coupon drillholes and diamond drilling. Drill targets already identified include extensions to the previous drilling at Davie and Coupon along with reconnaissance drill tests on peripheral soil anomalies for Coupon and the main 24-28 prospect.

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1 Introduction

The purpose of this report is to undertake a literature review of all relevant data for the Sulphide Creek area, held under licence by Shree Minerals Ltd as EL 43/2004. The review includes searching and summarising previous competitor activity in the general area from reports digitally available online from the Mineral Resources Tasmania (“MRT”) Library. In addition government data in the form of digital datasets was also used to formulate a geological synthesis of the area. From the data synthesis a series of exploration targets and target types was created, with the inclusion of a ground based exploration strategy and budget.

All figures in this report have the same grid projection of AGD66 Zone 55 except where stated.

2 Location

Exploration licence EL 43/2004 covers an area of 14km² near Lynchford, 5km south of Queenstown, West Tasmania.

There is good infrastructure with adjacent water, roads, power and labour supply. Road access to the general area is good comprising a combination of sealed roads and 4WD dirt tracks. However the area itself is quite hilly with typical west Tasmanian bush cover that has necessitated the use of helicopter supported drilling.

The historic ABT Railway line passes through the central and southern portion of the licence on its way from Queenstown (Mt Lyell Mine) to the coast at Strahan.

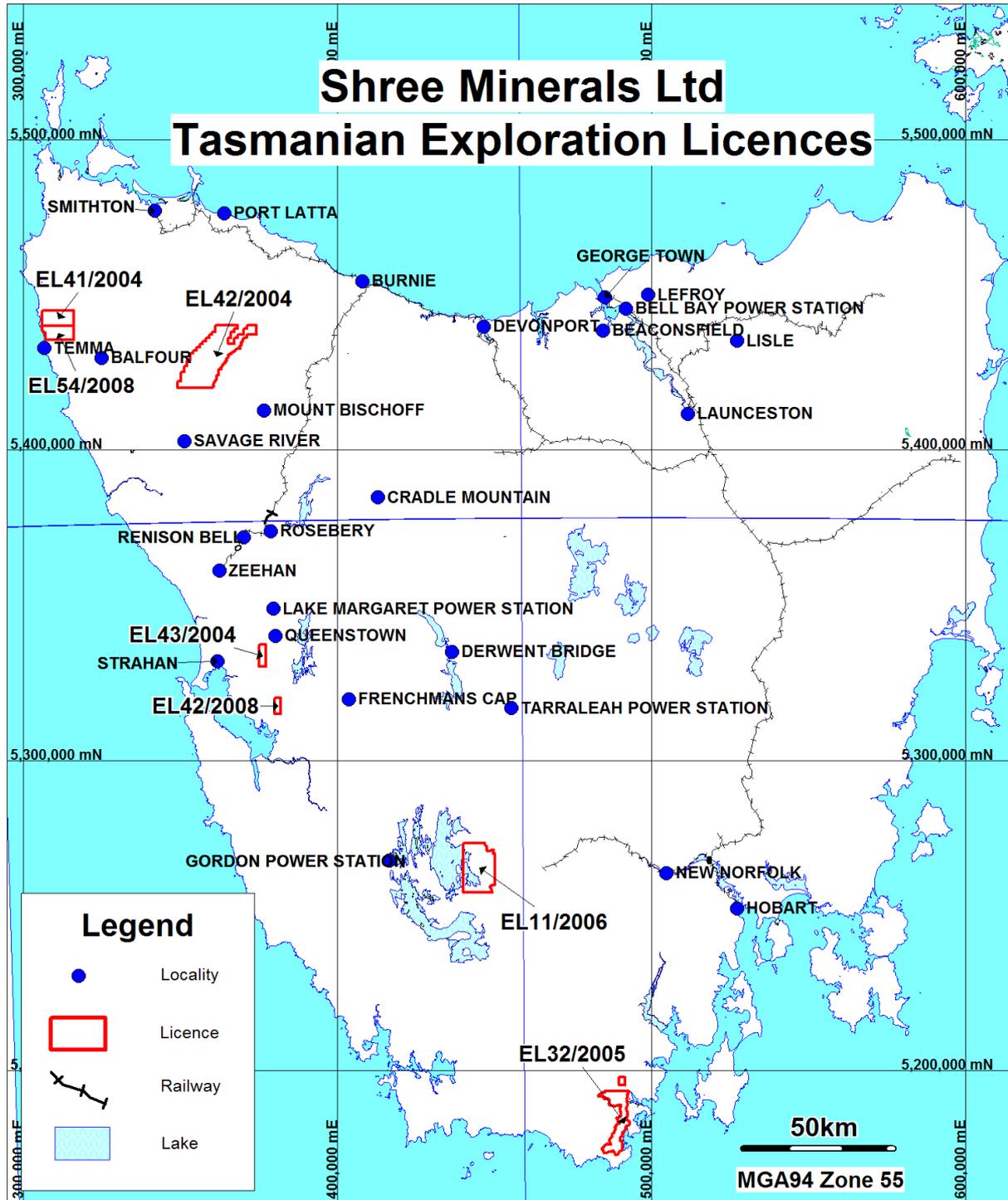
3 Physiography & Vegetation

The licence area has variable relief on a moderate height scale. It is characterised by a series of N-S striking valleys and ridges, often locally very steep (Figure 3). The digital elevation model is constructed from geophysical data gathered as part of MRT’s West Tasmanian Regional Minerals Program (“WTRMP”).

Vegetation comprises dense forestry (temperate rainforest) making access very difficult, necessitating substantial track cutting in order to reach target areas.

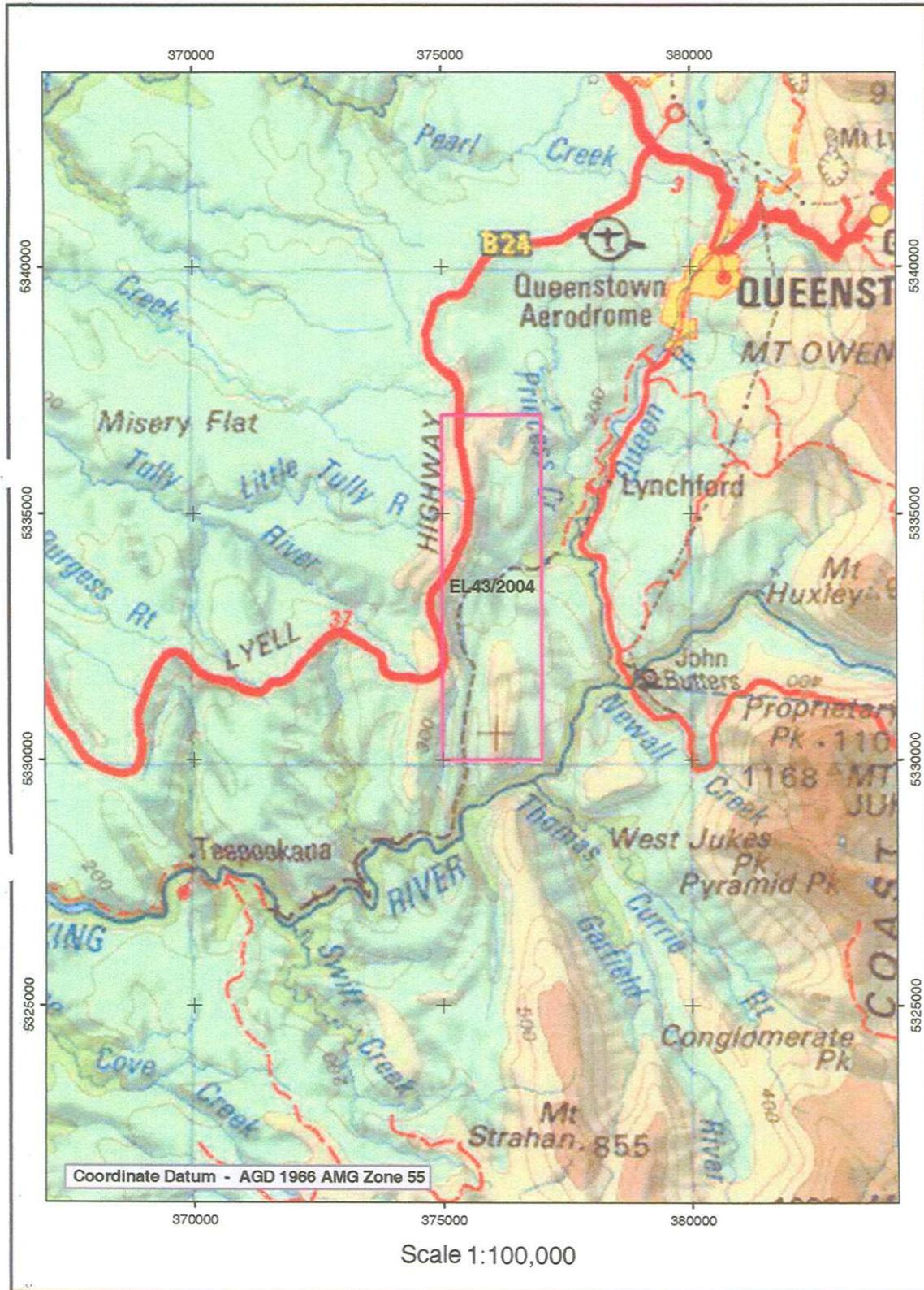
Climate is temperate with substantial annual rainfall typical of Western Tasmania. Temperature ranges from just above freezing in winter to a likely maximum of 30°C in summer.

Figure 1 Shree Tasmanian Licences Location Map



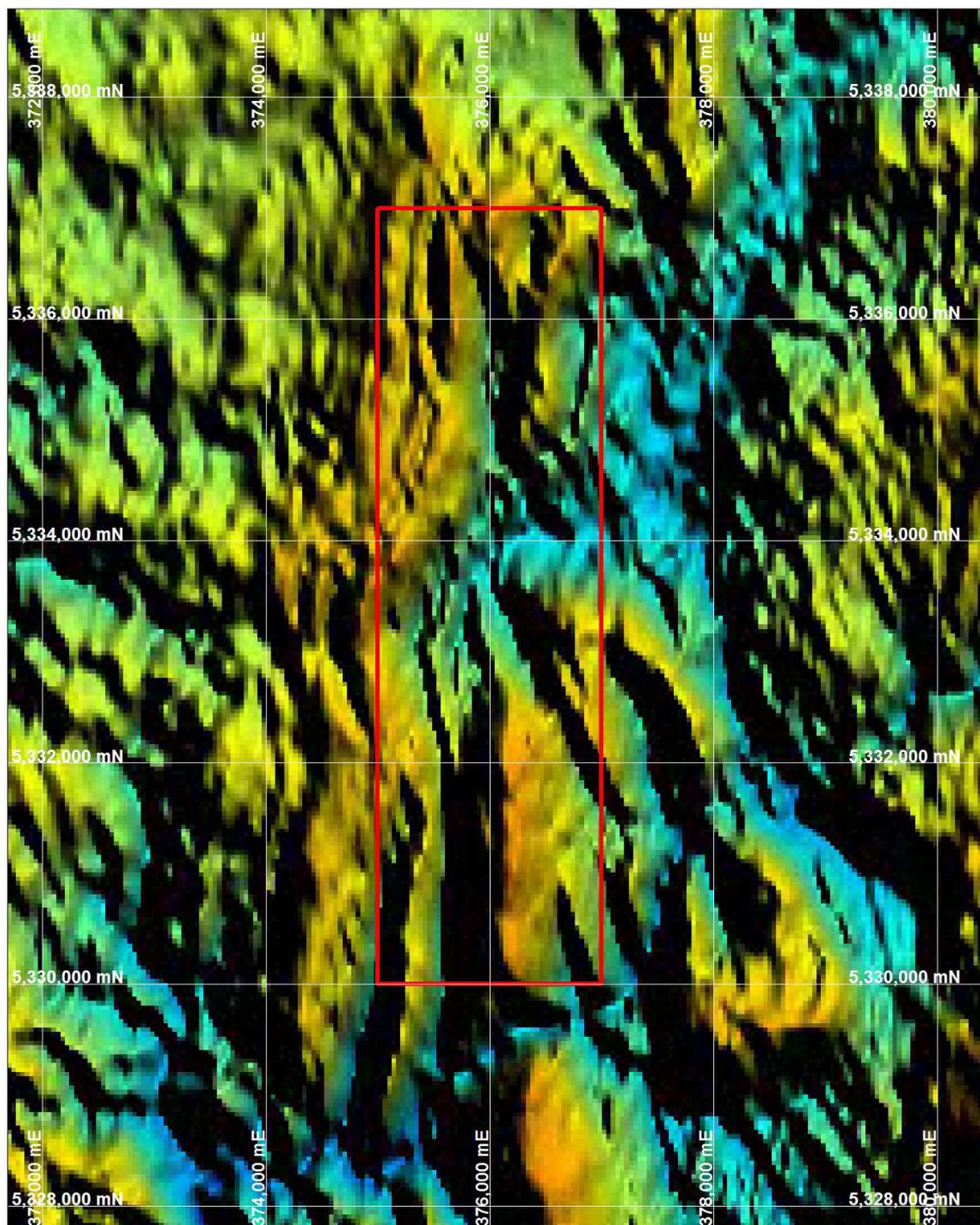
(source : Shree Prospectus 2009; MGA94 Zone 55)

Figure 2 Sulphide Creek EL 43/2004 Location Map



(supplied by MRT)

Figure 3 Licence Map with Digital Elevation Model



(image supplied by MRT; *dtm_nesun.tab*)

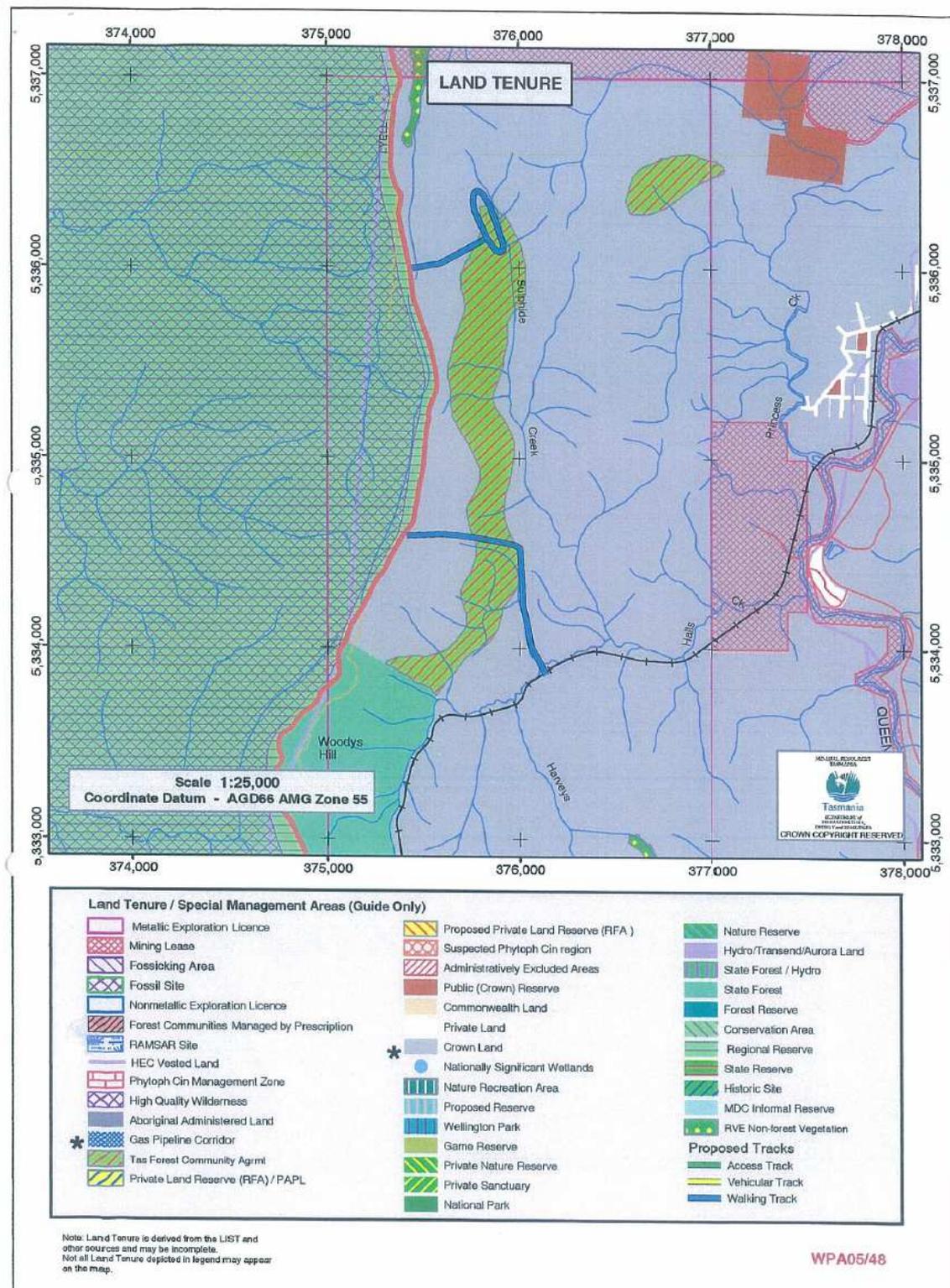
4 Tenure

The land tenure situation in Tasmania is based on a series of classifications that have resulted from the Regional Forestry Agreement (RFA). This act established, in conjunction with other stakeholders, which land is available for exploration and mining e.g. State Forest. Some of the main land use categories that are covered by the RFA, and which allow for mineral exploration and mining subject to a project activities review, are Nature Recreation Areas, Regional Reserves and Conservation Areas. These three categories can be regarded as the same for mineral exploration purposes; they have different objectives for other land users e.g. hunting, forestry etc. An exploration work programme that is planned within any of the above three categories triggers the Mineral Exploration Working Group (MEWG) which reviews the planned work programme, making recommendations and/or modifications to the plan. This group is convened by MRT on behalf of any applicant with the review process undertaken in a timely manner. Other land categories which allow mineral exploration/exploitation include a Forest Reserve which is not available for forestry use; and an MDC Informal Reserve which is a forestry-related category that has a very minor impact on mineral exploration. The main areas where mineral exploration is not permitted are Nature Reserves, State Reserves and National Parks.

For the Sulphide Creek licence 75% of the tenement is Crown Land with 12% classified as a Regional Reserve, mainly in the eastern half the licence (Figure 4). The remaining 15% is split between Tasmania Forestry Community Agreement (8%) and State Forest (5%).

The latest downloaded Mine Lease information from MRT indicates that there are no mine leases within Shree's tenements.

Figure 4 Sulphide Creek Land Tenure and Use Map



(supplied by MRT)

5 Geological Setting & Mineralisation

5.1 Regional Geology

Tasmania has been geologically divided by MRT into seven Proterozoic-Lower Palaeozoic regions or “Stratotectonic Elements”, each with a different geological history and economic mineral associations (Table 1). As a result of multiple subduction episodes these elements or terranes were welded together during geological history, which has produced the current geological framework. The Shree Sulphide Creek exploration licence lies within the Dundas element.

Table 1 Tasmanian Stratotectonic Elements

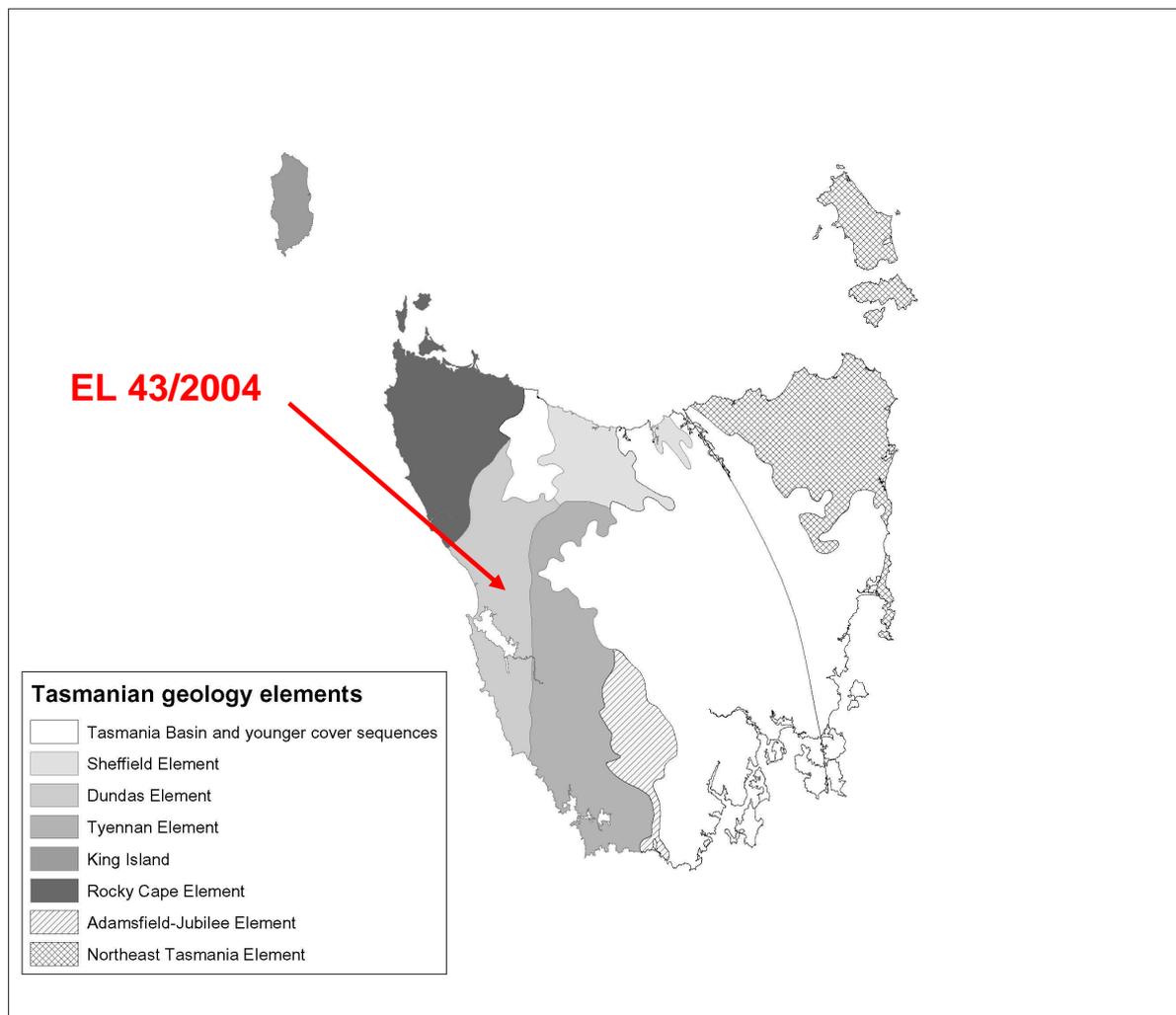
Element Name	Mineral Deposit Association
Rocky Cape	Savage River Iron Ore, Balfour Copper, Magnesite deposits
Dundas	Rosebery and Hellyer copper, lead & zinc mines, Mt Lyell Copper-Gold Mine, Henty Gold Mine, Renison Tin Mine, Avebury Nickel Deposit
Sheffield	Mount Bischoff Tin Deposit, tungsten skarns and numerous small scale skarn deposits & occurrences
Adamsfield-Jubilee	PGE mining
Northeast Tasmania	Beaconsfield Gold Mine, NE Tasmania Goldfields & Anderson’s Creek Nickel

An abbreviated stratotectonic history of Tasmania is detailed below (see also Figure 5):

1. Formation of basement as Early Neoproterozoic shelf clastic sedimentation with an age range of 900-1000 million years ago (ma) followed by a major orogenic event at 760ma, which included granite intrusions. This produced the Rocky Cape Element.
2. A failed rift episode then followed with its associated clastic sedimentation and volcanic inputs ensued by a second, successful rift event that happened in the Late Neoproterozoic to Early Cambrian. This added an assortment of units including mafic lavas to the Rocky Cape Element.
3. An island arc-continent collision east or northeast of Tasmania occurred in the late Early Cambrian and the emplacement of a series of allochthonous slices across Tasmania, including oceanic assemblages (ultramafics and associated mafic lavas) and other units. This formed the Dundas, Sheffield, Tyennan and Adamsfield-Jubilee Elements.
4. A series of Mid to Late Cambrian clastic basins developed post-collision and were concomitant with major calc-alkaline volcanism – the Mt Read Volcanics which contain a world class volcanogenic hosted massive sulphide (VHMS) province.
5. This was followed by Late Cambrian orogenesis comprising fold belt style tectonics at 500-510ma and includes some thrust stacking of units.
6. The establishment of a state wide clastic basin began in Late Cambrian times with initial basal conglomerates overlain by limestone lithologies followed by a gradually deepening marine clastic sequence up to Mid Devonian times. At the same time the Northeast Tasmanian Element developed as a turbiditic basin quite distinct from the other elements and lies east of an inferred subduction suture zone.

7. Cessation of sedimentation was caused by uplift and erosion associated with the Tabberabberan Orogeny (Mid-Devonian) and with a subsequent Late Devonian to Early Carboniferous phase of major granitic intrusions. This included the Heemskirk, Meredith and the Northeast Tasmanian Granites, with the first two causing modifications to the Cambrian morphology via structural overprints and hydrothermal alteration effects. These granite intrusions resulted in the formation of many skarn and vein deposits for tin, nickel, lead/zinc etc. The tectonism also resulted in the structurally controlled Henty gold deposit. . In Northeast Tasmania the Devonian-aged intrusions and deformation are associated with gold mineralisation
8. Minor sedimentation including glacial deposits and coal measures occurred in the post-Devonian Tasmania Basin. Substantial amounts of dolerite and basalt were formed as a result of continental break up associated with Jurassic and Tertiary global events. Continental extension and rifting began in Mid Jurassic times with separation occurring in the Mid Cretaceous. Major Jurassic dolerites related to a Gondwana event occur as sills across Tasmania and are similar to the Karoo series in Africa.

Figure 5 Stratotectonic Elements for Tasmania (MRT)



A list of Tasmanian mineral deposits is provided in Table 2.

Table 2 Major Mineral Deposits of Tasmania (Source MRT 2004)

Mine or Deposit	Mineral Style	Commodity	Tonnages (production + reserves)
Mt Lyell	Volcanic hosted disseminated	Cu, Au	135Mt @ 1.2%Cu and 0.4g/t Au
Rosebery	Volcanic hosted massive sulphide	Zn, Pb, Ag, Cu, Au	28Mt @ 0.6%Cu, 14.3%Zn, 4.3%Pb, 145g/t Ag & 2.4g/t Au
Hellyer	Volcanic hosted massive sulphide	Zn, Pb, Ag, Cu, Au	15.5Mt @ 0.4%Cu, 14.3%Zn, 5.9%Pb, 140g/t Ag & 2.2g/t Au
Que River	Volcanic hosted massive sulphide	Zn, Pb, Ag, Cu, Au	2.5Mt @ 0.45% Cu, 7.5%Pb, 13.6%Zn, 172g/t Ag and 2.8g/t Au
Hercules	Volcanic hosted massive sulphide	Zn, Pb, Ag, Cu, Au	2.6Mt @ 0.4%Cu, 16.7%Zn, 5.2%Pb, 159g/t Ag & 2.7g/t Au
Henty	Structurally controlled/vein	Au	0.5Mt @ 29g/t Au
Beaconsfield	Structurally controlled/veins	Au	1.085Mt @ 24.5g/t (production); 0.67Mt @ 24g/t (resource 1990)
Renison Bell	Skarn	Sn	28Mt @ 1.5% Sn approx
Cleveland	Skarn	Sn	10.3Mt @ 0.78% Sn and 0.45%Cu
Mt Bischoff	Skarn	Sn	10.32Mt @ 1.13% Sn
Queen Hill	Skarn	Sn	3.6Mt @ 1.2% Sn
Savage River	Massive magnetite	Fe	>330Mt @ 35%Fe
Mt Lindsay	Massive magnetite	Fe	20Mt @ 33% Fe
Nelson Bay	Massive magnetite	Fe	6.92Mt @ 38.2% magnetite
Main Creek	Magnesite	Mg	47.4Mt @ 43.4% MgO
Keith River	Magnesite	Mg	29Mt @ 42.8% MgO
King Island	Skarn	W	16.9Mt @ 0.78% WO ₃
Kara	Skarn	W	2.2Mt @ 0.8% WO ₃
Avebury	Skarn	Ni	14Mt @ 1.04%Ni
Melba Flats	Mafic hosted massive sulphide	Ni	7400t of ore @ 10% Ni & 5% Cu
Oceana	Carbonate hosted	Pb, Ag, Zn	2.15Mt @5.2%Pb, 1.63% Zn & 46g/t Ag
Mariposa	Carbonate hosted	Pb, Ag, Zn	0.57Mt @5.1%Pb, 1.92% Zn & 60g/t Ag
Zeehan Field	Lode/veins	Ag, Pb	0.19Mt Pb, 26Moz Ag, 71t Zn, 945t Cu & 5.3t Sn
Comstock	Carbonate Hosted	Zn, Pb	1.55Mt @3.0%Zn, 3.2% Pb & 66g/t Ag
Balfour	Structurally controlled	Cu	6177t of Cu Ore at 20-30% Cu
Grieves	Carbonate hosted and oxidised	Zn oxides	Small resource <1Mt

5.2 Local Geology

The Sulphide Creek licence lies peripheral to the western margin of the Mount Read Volcanics. It is within the Dundas stratotectonic element and has a metamorphic grade of lower greenschist. Deformation is related to the Tabberabberan Orogeny i.e. Devono-Carboniferous.

The geology of the Sulphide Creek tenement from the MRT published mapping consists of a moderately folded Lower Palaeozoic sequence of sediments with minor amounts of structurally emplaced Cambrian-aged volcanics. The oldest sedimentary package is a fault bounded sequence of undifferentiated conglomerates and pebbly sandstones of the Owen Conglomerate (Cambro-Ordovician age) that form a N-S 'spine' in the south of the licence. Juxtaposed with the faulted west side of this Cambro-Ordovician unit is a conformable sequence of Ordovician to Devonian siliciclastics ranging from medium grained sandstones to fine grained shales (Figure 6). The Rinadeena Formation is the basal Ordovician sequence and consists of medium grained sandstones to fine grained siltstones locally calcareous. Ordovician carbonates, as shallow water shelf limestones belonging to the Gordon Limestone, occur on the east side of the licence within the same Ordovician to Devonian clastic sequence. These carbonates lie unconformably on a Cambrian Tyndall Group felsic volcanoclastic sequence. Stratigraphy above the Rinadeena Fm/Gordon Limestone comprises the Crotty Quartzite, the Amber Slate, the Florence Quartzite and the Bell Shale.

The structural setting for the licence is characterised by a complicated arrangement of mapped and inferred faults. The area appears to be transected by a narrow N-S structural corridor that has been referred to as the Harvey Creek Fault ("HCF") that bends to the SSE near the centre of the licence. There is an additional splay fault/bifurcation close to the SSE bend that trends to the SE. Both faults appear to indicate substantial displacement with the SE fault showing additional bifurcation further east of the licence boundary. A second NE-striking fault direction is interpreted to exist east of the HCF within the basal Silurian sequence. There is a fault emplaced sliver of Cambrian volcanics overlain by Gordon Limestone associated with the SSE orientated HCF near Coupon.

West of the HCF, the Ordovician-Devonian sediments appear to have been drag folded along the fault to produce an antiform with a shallow north plunge. A synclinal feature, east of the HCF, in the central east of the licence has the Florence Quartzite at its core. This unit is underlain by the Amber Slate but no Crotty Quartzite or Gordon Limestone before encountering conformably the Rinadeena Formation.

The Rinadeena Formation is believed to host most of the gold mineralisation at Sulphide Creek. In some open file reports it is reported as comprising thinly bedded black calcareous siltstone and limestone and in others it comprises thinly bedded siltstones and thicker sandstone beds. It has been regraded as a lateral equivalent of the Gordon Limestone, although it may be the basal sequence to the Ordovician Gordon Limestone. However, in other parts of Western Tasmania, the Gordon Limestone is normally underlain by medium grained siliciclastics of the Moina (and Linda) Sandstone. One historical report for the licence has made reference to the Rinadeena sandstones as not being like the Moina Sandstone. At this stage H&S conclude that the stratigraphic position and the age of the Rinadeena Formation are uncertain.

In the NE of the licence MRT have delineated an undifferentiated sequence of Silurian-Devonian siliciclastics stratigraphically beneath the Silurian Florence Quartzite. Some historical mapping has indicated that this unit is the Rinadeena Formation although there should be some Crotty Quartzite at the top of this unit. The Crotty Quartzite is a very distinctive and consistent unit in this part of Western Tasmania. It is possible that the undifferentiated unit represents a continuation of the Rinadeena Formation, east of the HCF.

Underlying this undifferentiated unit is the Ordovician Gordon Limestone which lies unconformably on Cambrian volcanics and siliciclastics. There is no basal Cambro-Ordovician mapped despite there being a substantial amount of this material further north e.g. at Grieves Siding. This would indicate either incorrect mapping or that there is a major basin bounding/basement fault in the immediate area controlling sedimentation during the Ordovician, possibly the HCF.

The Coupon, 24-28 and Davie gold prospects are reported as hosted by the Ordovician siliciclastics and occur in close proximity to the HCF. Coupon is more complicated by being hosted by steeply E-dipping quartzites and siltstones on the eastern limb of a NW trending anticline (Newnham 1991). close to a fault bound wedge associated with a fault bifurcation of the HCF. This area is reported as being cut by NW-trending shears with a range of dips from 30 to 80° NE. The structural zones contain intense shearing, quartz veining and limonite. However later work (Newnham 1999) suggests the mineral bearing structures are oriented more E-W.

The 24-28 prospect is reported as being in the core of a north plunging anticline of harder Silurian sediments overlying softer Ordovician pelites of the Rinadeena Formation. The HCF was interpreted as being in the axial plane of this anticline, although Newnham notes that it is possible that the fault may not exist at all in this area.

[the following geological description for Davie is taken from Reid 2010]

The Davie Prospect is located within siliceous sandstone and siltstone of the Ordovician-aged Rinadeena Formation, which lies in faulted contact with fine to medium-grained quartz sandstone of the Silurian-aged Crotty Quartzite. The Harvey Creek and Harris Faults are two significant NW aligned structures separating these units and intersecting in the prospect vicinity. The geology of the Davie Prospect is summarised in Reid (2001). Further notes follow from recent investigation in 2010.

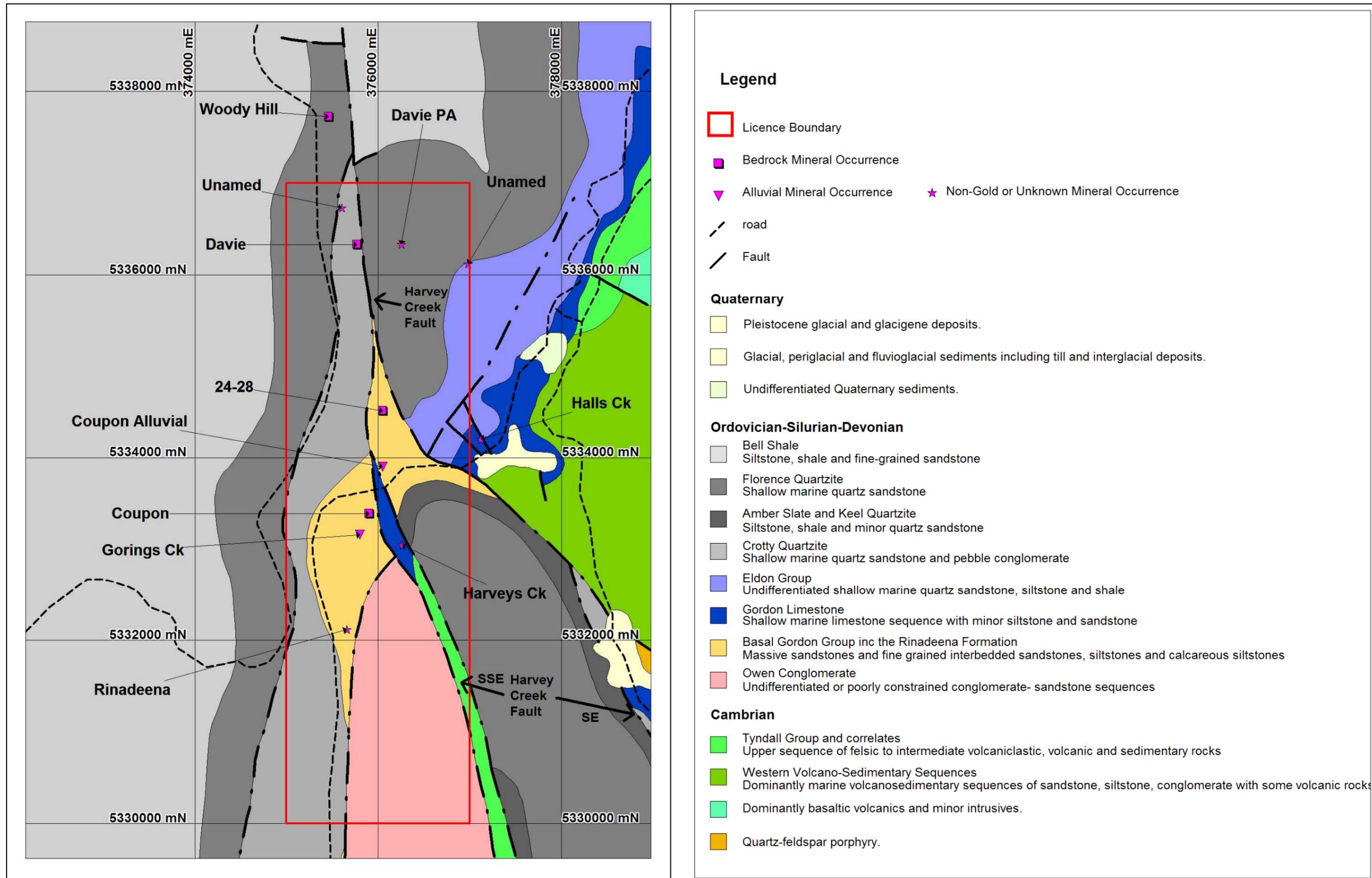
Medium to coarse grained sandstone, that notably bears disseminated chromite grains to several millimetres, is evident in subcrop immediately NW of the SCDDH4 drill pad as well as ~100m down slope to the SW. Here weak to moderate intensity pervasive silicification destroys protolith sandstone textures within weakly quartz veined coarse-grained float to small boulder size.

Reid (2001) inferred that the Harvey Creek Fault forms the western boundary of the siliceous sandstone and siltstone of the Ordovician-aged Rinadeena Formation, with the Harris Fault bounding to the west. This relationship remains to be resolved [as they are at a different orientation to the main HCF direction].

A significant fault (Harris or Harvey Creek Fault?) traverses ~N to NNW along the eastern margin of the anomalous gold in soil and rock chip at the Davie Prospect. This structure is an approximately 15m wide brittle fault zone comprising variable to large (to >2m) clasts within a largely clay matrix gouge breccia. Evidence of earlier more ductile strain in the form of weak foliation / shearing is locally evident. Broken core and brittle faulting extends up hole to the "Harvey Junior Fault", which hosts gold mineralisation. This fault is approximately 6 to 12m thick and trends N-S, on the basis of alignment of anomalous Au in soils. Long core axis angles from the drilling indicate the Harvey Creek Fault and Harvey Creek Junior Fault have approximate dip of -65°SW.

The tectonic history of faulting at Davie is likely to be long lived, as demonstrated by both ductile and brittle related fabrics. A sericitic shear fabric is evident in the recent drilling, forming a moderately steep SW dipping shear zone. A brittle fault breccia is annealed by cream silicate stockwork and semi-pervasive silica reflecting pre-alteration brittle deformation on the fault. Post mineralisation fault movement is evidenced by brecciated milky quartz veining within a fault zone.

Figure 6 Sulphide Creek Published Geology Map (MRT)



(modified from MRT mapping)

5.3 Mineralisation

According to Goldstream reports (1993-1995) alluvial gold was panned in many streams of the Sulphide Creek area and traced back to source. This resulted in the historical excavation of several shallow shafts and adits. The Woody Hill Gold Mine (just north of the current licence) is reported as producing 4.6kg of gold from 265 tonnes of ore at a grade of 17.6 g/t. The Davie workings appeared to consist of several shafts and adits developed on quartz reefs which recorded 14 g/t gold at surface. The Davie workings have not been properly located by contemporary exploration (Reid 2010 & Newnham 1993). The Coupon underground workings seemingly produced (in 1913) 32 tonnes of mined material at an average grade of 12 g/t. Au.

The mineralisation at Davie/Coupon/24-28 consists of a gold-arsenic-iron association with quartz vein stockwork systems within fractured sandstones of interpreted Ordovician age. At Coupon the most recent historical thinking is that gold mineralisation in fresh rock is associated with narrow (1-2m) shear zones in siltstones and narrow vein breccia zones in sandstones. There is the suggestion that the broader zones of mineralisation in the oxide zone are due to some form of chemical (supergene) or physical (dissolution) enrichment. The prospects have been interpreted as geochemical leakage zones from hydrothermal processes within a deeper volcanic environment adjacent to the deep seated Harvey Creek Fault. At Davie gold mineralisation is associated with iron oxide veining and pervasive silicification principally developed in the immediate hangingwalls of two major faults (Figure 7).

Figure 7 Sulphide Creek Typical Mineralisation at Davie



(from Reid 2010)

The Rinadeena Antimony deposit has been reported in the past as comprising a 41m long tunnel in black pug containing “stibnite nodules” with reported grades of 66% antimony and 1% lead. Significantly no gold is associated with the deposit and the black pug is likely to be weathered Gordon Limestone. This antimony feature is not considered by H&S as typical mineralisation for the Gordon Limestone.

5.4 Alteration

The following alteration description for Davie is from Reid 2010:

Principal alteration styles identified from macroscopic rock and drill core investigation include:-

- ◆ *Pervasive silicification (mostly of weak intensity)*
- ◆ *Semi-pervasive and veined cream coloured silica (+/-carbonate /calc-silicate?)*
- ◆ *Sericite veining / foliation (+/- fine-grained pyrite?)*
- ◆ *Quartz +/- FeO stockwork, locally bearing semi-pervasive silica-FeO vein selvages*
- ◆ *Quartz veining*

Pervasive silicification is commonly evident destroying protolith textures to varying degrees. This style is apparently best developed within coarser grained lithologies.

Semi-pervasive and veined silica – carbonate alteration is poorly identified at this stage. It's typically cream in colour and forms variably orientated, straight to irregular form vein stockwork that tends to semi-pervasive style in more strongly developed zones.

Sericite veining/foliation (+/- fine grained pyrite?) is evident in some of the stronger sericitic zones, locally forming / enveloping strong quartz development along what appears to be a structural foliation (potential similarities to Henty alteration marginal to the MQ are worth checking). Notably the sericitic foliation crosscuts Fe-quartz stockwork veining and another generation of quartz veining, however @130m in SCDDH4 grey quartz veining is offset by, but continuous through sericitic foliation suggesting these two generations may have been at least in part synchronous in formation. Sericite locally forms bands within fine grained sandstone that appear bedding-like; the origins of this form are unresolved in light of the other clearly structure related sericite form. The in part structural relationship for sericite is illustrated by puggy (minor) fault gouge at 30°LCA (130.5m SCDDH4) in an orientation similar to the sericitic bands/foliation/shear elsewhere (e.g. 130m in SCDDH4).

FeO-quartz veins are often quartz dominated and locally vuggy in form, whereas some fractures/veins are simply FeO bearing. FeO-quartz veins in the upper portion of the SCDDH4 are relatively regularly spaced at similar ~30°LCA orientation, whereas down hole their orientation becomes more random appearing in "genuine" stockwork vein form. At depth in SCDDH4 & 5, fresh rock reveals Arsenopyrite as a significant component within quartz (+/-carbonate) veins and presumably weathers to the FeO-quartz-vein form. Both logged vein types are classed the same for drill section presentation purposes.

At least two quartz dominated vein generations are apparent; early and late. For example quartz only veins are noted to be offset by and predate FeO-quartz veining in SCDDH4 (@127.35m). Whilst, early quartz veins are also noted to be cross cut and offset by sericitic foliation @ 126.5m. A further quartz veinlet generation crosscuts the FeO bearing quartz stockwork. These veins are typically up to 3mm in width and are commonly vuggy with fine drusy quartz. Further vein paragenesis is illustrated at 129.4m where a grey/cream 3mm quartz vein crosscuts tan/cream coloured FeO-carb? veinlets, both being cross cut by sericitic microfaults.

Complex vein paragenesis is reflected in SCDDH2; @ 111.2m where a 3cm milky quartz vein is crosscut by grey quartz +/- arsenopyrite veining, whilst at 114.9m milky quartz vein crosscuts earlier quartz-carbonate veining and at 131.2m grey quartz-pyrite-arsenopyrite veining crosscuts FeO-quartz-veining.

6 Previous Competitor Activity

Historical work completed on the current Sulphide Creek licence EL43/2004 is summarised in Table 3. Modern exploration of the area began in the late 1960's and initially comprised surface geochemical sampling and some minor ground magnetic surveying. There has been a substantial amount of drilling on the licence area at Coupon and Davie. To date no-one has used the recent WTMRP airborne geophysical data to assist with geological interpretation and target selection. A map detailing previous exploration is included as Figure 8 and a full listing of previous explorer's reports relevant to the area is included in Appendix 1.

Table 3 Sulphide Creek Summary of Competitor Activity

Company	Date	Licence	Work Done	MRT Report	Comment
Pickands Mather	Pre 1981		Regional stream sediment sampling		No gold assays
Trikon	1984-1987	9/84	Mapping, stream sediment, rock & soil sampling & ground magnetometry	87-2672	Carlin-style gold target
Cyprus	1988-1990	9/84	Infill soil sampling, rock sampling and channel sampling at Coupon. RC drilling at Coupon. Hole LT89CCRC01 to 13	89-3033	Drilling difficulties including wet samples, many targets not reached
Perilya	1991-1992	9/84	Infill soil sampling, rock sampling and channel sampling at Coupon. 1 diamond hole at Coupon LT-DD-91	91-3275	Drillhole abandoned before target reached
Goldstream/Titan	1993-1995	9/84	3 diamond drilling programs for 10 holes at Coupon LYN001 to LYN005 & LYN007 to LYN10 inc 10A	95-3796	Poor core recoveries locally
CRAE	1996-1998	29/96	Minimal work; minor rock sampling	98-4129	Reorganisation of company exploration strategy
ASARCO	1999-2001	15/99	Mapping, rock & soil sampling at Davie and 24-28 prospects	01-4597	No drilling
ZELOS	2006	43/2004	Diamond Drilling at Davie SCDDH001-3	n/a	
Shree	2010	43/2004	Diamond Drilling & prospecting at Davie SCDDH004-5	n/a	

Details of the historical drilling are included in Table 4 and for completeness the current Shree drilling is also included.

Table 4 Sulphide Creek Drilling Details

Company	Prospect	Year	Drill Type	No of Holes	Meters (m)
Cyprus	Coupon	1989	RC	13	736
Perilya	Coupon	1991	DD	1	61
Goldstream/Titan	Coupon	1993-5	DD	9	1886
Zelos	Davie	2006	DD	3	351
Shree	Davie	2010	DD	2	391
			Totals	28	3425

The nature of the drilling has indicated the potential for large low grade gold mineralisation as opposed to high grade, narrow, auriferous veins. As a result the broad intercepts included in Table 5 are indicative of the tenor of gold mineralised zones encountered in the drilling and adit sampling based on a gold cut off of 50ppb rather than potential economic grade intercepts. Also included are zones of higher grade gold mineralisation based on a 1g/t cut off gold.

Table 5 Sulphide Creek Summary of Mineralised Intercepts

Hole	Interval	Au g/t	As ppm	From	Comment
1400N080W	14	0.28	1014	0	Coupon Adit
1400N112W	24	0.35	600	24	Coupon Adit
1400N190W	10	0.88	1860	6	Coupon Adit
LT89CCRC02	18	0.08	1442	2	circa 80% recovery
LT89CCRC03	56	0.60	1688	0	circa 80% recovery
LT89CCRC04	12	0.29	8	24	Low arsenic; 100% recovery
LT89CCRC05	30	0.18	687	0	Bad recovery
LYN002	12	1.19	2018	12	Poss core loss
LYN004	17.5	0.82	1837	13	circa 85% recovery
LYN004	10.5	0.13	666	38.6	circa 60% recovery
LYN004	5	0.14	974	72	circa 95% recovery
LYN007	5	0.20	622	82	100% recovery
SCDDH1	60.8	0.13	280	38	Oxidised & poor recoveries
SCDDH2	106.5	0.33	1156	39	
SCDDH4	23.5	0.41	na	17	circa >90% recovery
SCDDH4	69	0.11	na	94	circa >90% recovery
SCDDH5	37	0.3	na	17	as for upper SCDDH4
SCDDH5	53	0.33	na	147	as for lower SCDDH4
High Grade Intercepts					
Hole	Interval	Au g/t	As ppm	From	
1400N112W	2	1.84	850	42	Coupon Adit
1400N190W	2	3.46	6250	12	Coupon Adit
LT89CCRC03	12	1.68	3775	26	
LT89CCRC04	2	1.06	11	28	Very low arsenic
LYN002	2	4.23	8800	18	
LYN004	2.5	2.67	2388	16	
SCDDH1	1.5	1.05	500	96	
SCDDH2	1	1	4650	121	
SCDDH4	3	1.26	na	31.5	
SCDDH5	3	1.29	na	164	

Details of relevant airborne geophysical surveys are included in Appendix 2 whilst relevant maps from some of the open file reports are included in Appendix 3. The main airborne geophysical survey is the MRT WTMRP survey released in 2001, which includes Total Magnetic Intensity ("TMI"), first vertical derivative and RGB radiometric images with NE and NW sun shading. The airborne EM component of this survey did not cover the Sulphide Creek area and neither did the 2003 Queenstown area HY-Map survey completed by CSIRO. It is unlikely that either of these two surveys would have been very informative on account of the awkward topography and the dense vegetation cover.

A map showing anomalism associated with the historical work is included as Figure 9.

Legend

- Licence Boundary
- Drillhole
- Adit
- Mineral Occurrence
- Rock Sample
- ★ Stream Sediment Sampling
- ~ Stream/Creek
- - - Road

Geochemical Sampling Legend

- - - >2ppm Channel Gold Contour
- - - 0.5ppm Channel Gold Contour
- - - 0.2ppm Channel Gold Contour
- - - >1500ppm Channel Arsenic Contour
- - - 600ppm Channel Arsenic Contour
- - - 250ppm Channel Arsenic Contour
- - - >100ppb Gold Soil Contour
- - - 50ppb Gold Soil Contour
- - - 10ppb Gold Soil Contour
- - - Arsenic Soil Contour >150ppm
- - - Arsenic Soil Contour 100ppm
- - - Arsenic Soil Contour 50ppm
- - - >50ppb Gold Davie Soil Contour
- - - 25ppb Gold Davie Soil Contour
- - - 10ppb Gold Davie Soil Contour
- - - >250ppm Arsenic Davie Soil Contour
- - - 75ppm Arsenic Davie Soil Contour
- - - 30ppm Arsenic Davie Soil Contour
- - - Airborne Magnetic Contour

Rock_Samples_91_3275 by Au	
	5 to 21.6 (2)
	1 to 5 (6)
	0.5 to 1 (2)
	0.1 to 0.5 (3)
	0 to 0.1 (30)

Legend

- - - Fault
- / / / Lithological Contact

Quaternary

- Pleistocene glacial and glaciogene deposits Qp
- Glacial, periglacial and fluvio-glacial sediments including till and interglacial deposits Qpg
- Undifferentiated Quaternary sediments Q

Ordovician-Silurian-Devonian

- Bell Shale SDb
Siltstone, shale and fine-grained sandstone
- Florence Quartzite SDf
Shallow marine quartz sandstone
- Amber Slate and Keel Quartzite SDa
Siltstone, shale and minor quartz sandstone
- Crotty Quartzite SDc
Shallow marine quartz sandstone and pebble conglomerate
- Eldon Group SD
Undifferentiated shallow marine quartz sandstone, siltstone and shale
- Gordon Limestone Oi
Shallow marine limestone sequence with minor siltstone and sandstone
- Basal Gordon Group inc the Rinadeena Formation Ola
Massive sandstones and fine grained interbedded sandstones, siltstones and calcareous siltstones
- Owen Conglomerate COcl
Undifferentiated or poorly constrained conglomerate- sandstone sequences

Cambrian

- Tyndall Group and correlates Cdt
Upper sequence of felsic to intermediate volcanoclastic, volcanic and sedimentary rocks
- Western Volcano-Sedimentary Sequences Cdsv
Dominantly marine volcanosedimentary sequences of sandstone, siltstone, conglomerate with some volcanic rocks
- Dominantly basaltic volcanics and minor intrusives Cdb
- Quartz-feldspar porphyry Cdv

AGD66 Grid Projection Zone 55

Hellman & Schofield Pty Ltd

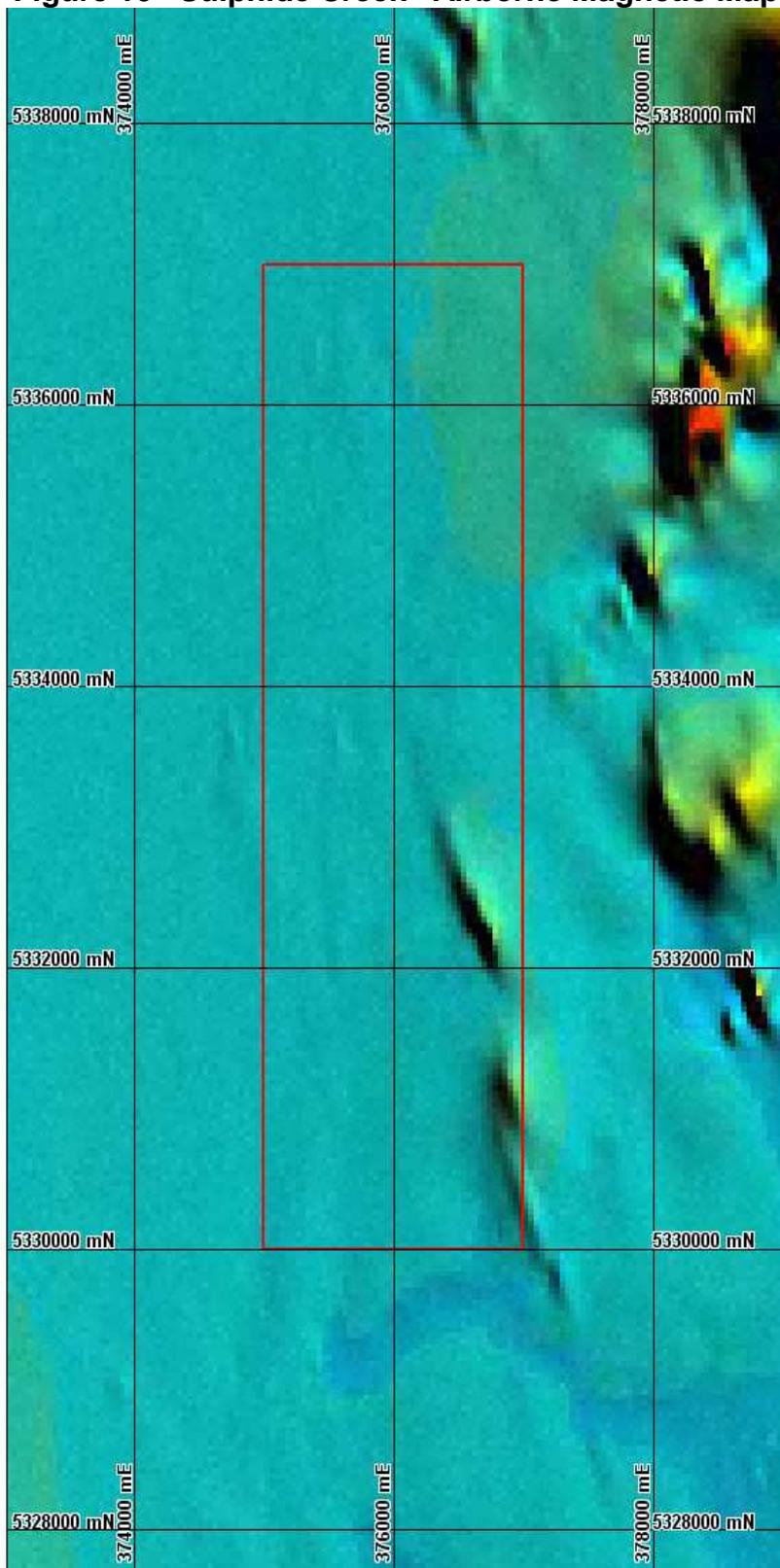
EL 43/2004 Sulphide Creek Project

Historical Anomaly Map

Drawn by : S.J.Tear January 2011 Scale 1:10,000

On a regional scale the area is magnetically very flat as shown in the MRT airborne magnetic data (Figure 10). Reprocessing of a subset of this data for the Sulphide Creek area may provide greater resolution of local features providing additional structural and lithological information to help in the search for gold mineralisation (see Chapter 8).

Figure 10 Sulphide Creek Airborne Magnetic Map



(NE Sun Direction; MRT image; Sulphide Creek licence outline in red)

A reasonable amount of geochemical coverage has been completed over the tenement with the main gold anomalies listed below in Table 6. An anomalous threshold of 10ppb Au and 50ppm As was used for anomaly definition

Table 6 Sulphide Creek Gold in Soil Anomalies

Prospect	Soil Anomaly Length (m)	Soil Anomaly Width (m)	Max float grade (gold ppm)
Coupon	1000	150	21.0
Anomaly 24-28	250	50	16.0
Davie	250	75	14.0

6.1 Trikon

Exploration work was completed in joint venture with Electrolytic Zinc ("EZ") and initially comprised testing the two magnetic anomalies in the SE corner of the licence. The magnetic anomalies are interpreted to be a reflection of mapped Cambrian volcanics which have traces of magnetite, although there is some uncertainty with the sectional modelling (Appendix 3 for map). The Cambrian volcanics are 60m wide and are thought to lie within the newly defined HCF although they show no obvious signs of alteration or deformation. H&S suspect that the feature may be a dolerite dyke, which are known to exist in the general area. There is no anomalous stream geochemistry associated with the magnetic anomalies and it was concluded by Trikon that they have no economic potential although magnetic modelling of the data suggested a steeply dipping body, perhaps worthy of a drill test.

This above work contained evidence for the interpretation of the HCF, which was extrapolated across the length of the licence. Following the delineation of the HCF the target was changed to a Carlin-Au style i.e. a sediment hosted gold deposit in carbonate rocks with associated silicification. Soil sample lines across the interpreted strike of the fault identified three anomalies to the north of the magnetic features, at Coupon, 24-28 and Davie. Prospecting discovered limonitic quartz float material at 24-28 with a best gold assay of 16g/t and 0.44% arsenic. The #2 adit at Coupon was sampled with a best result of 6m @1.4g/t Au and individual rock samples up to 4g/t gold.

6.2 Cyprus

The exploration lease was transferred to Montroyal Mining NL (a subsidiary of Goldstream) who joint ventured it to Cyprus Gold Australia Corporation. Infill soil sampling was undertaken around the three main anomalies as per Trikon's work. Rock chip sampling yielded up to 21g/t Au from bedrock at Coupon and up to 14g/t Au in old dump material at Davie.

The target was still a Carlin-Au style and Coupon was considered the most prospective area, which was subject to an RC drill programme. This drilling is reported as having considerable difficulties with the suggestion that not all the targets were reached or had good sample collection. The results achieved by Cyprus were variable in their significance, in particular the gold mineralisation intersected in drillholes against the poor recoveries and drilling difficulties.

A significant issue is the location and direction of drillholes CRC003 and CRC010 which Newnham in later reports, strongly believed, with some justification on the evidence presented, to have been inadvertently swapped.

Significantly the high gold grade float/bedrock samples were not represented in the drilling results.

6.3 Perilya

Perilya replaced Cyprus in the Montroyal joint venture and re-evaluated the geology of the Coupon area. Whilst the Carlin-Au style still remained a target, the reappraisal of the geology suggested that a stronger structural control to the gold mineralisation existed and was linked to NW trending shear zones with minor pervasive mineralisation emanating from the fault structures into the host sediments.

A substantial amount of channel sampling along the access tracks for the Coupon drilling was completed as well as additional infill soil sampling. The best channel sample results include 5m @ 5.76g/t, 8m @ 2.32g/t, 25m @ 2g/t and 10m @ 1.45g/t gold.

One diamond drillhole, LT91-1 was designed to test the main interpreted NW structure but it is reported as being abandoned before reaching its target due to drilling difficulties.

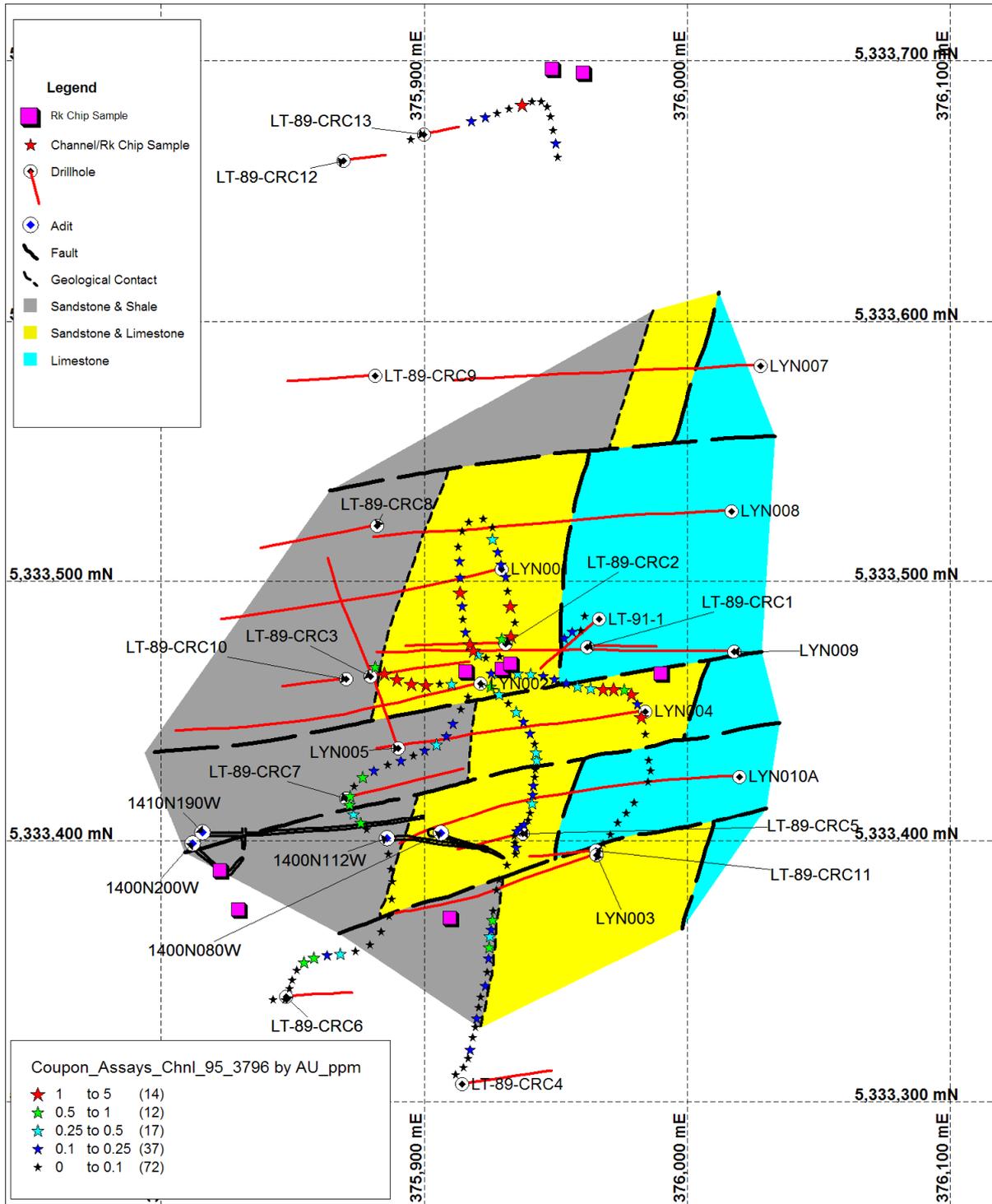
6.4 Goldstream/Titan

Montroyal's parent company Goldstream Mining NL took on the exploration licence in joint venture with Titan Resources NL. Exploration work consisted of some additional channel sampling and further diamond drilling at Coupon, 9 holes for 1886m (Figure 11). The first programme of three holes encountered poor recoveries, whilst the second two hole programme targeted an interpreted E-W shear zone with some success. LYN004 intersected 70m of leached limonitic sandstone and siltstone, anomalous in gold and arsenic, with a reported best intercept of 8m @ 1.24g/t Au. An additional programme of four holes tested this fault target at depth. The mineralisation subsequently intersected was restricted to a narrow fault with very little mineralisation pervading out into the host rock sandstones.

The general conclusion for the exploration work was that the drilling results were disappointing (extra details are included as a map in Appendix 3).

There have been some issues with the early drilling at Coupon as stated elsewhere e.g. poor recoveries and failure to reach intended target depths. There have also been issues on hole locations (as per Newnham) and there has been uncertainty on the azimuths for the Cyprus RC drilling. Because they were RC holes no downhole surveys were completed and field checks using a Brunton compass indicated different azimuths than originally reported. If it is assumed that the compass readings are magnetic then a correction for magnetic declination is required (approx 12° east). However in the logs the hole azimuths are listed as grid bearings but are the same numbers as the documented compass readings, hence does this mean there has been no correction or that the compass readings, recorded by Groves in Jones 1991, have the magnetic declination factored in? It has been assumed that the grid azimuths have taken into account the magnetic declination as the grid is an orthogonal N-S/E-W one.

Figure 11 Coupon Prospect Drilling Summary



(source TCR-95-3796; AGD66 Zone 55)

6.5 CRAE

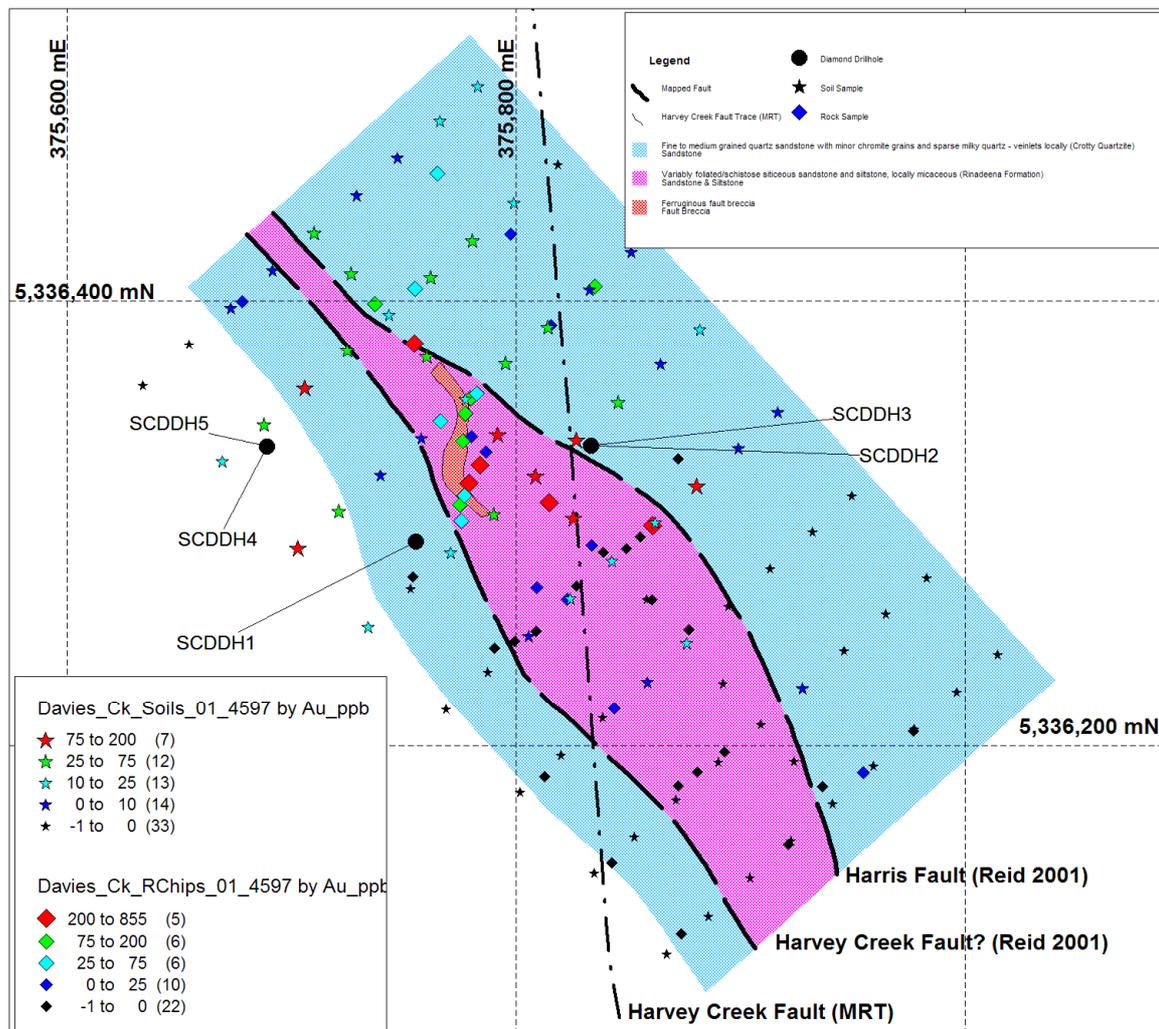
The exploration licence was acquired as part of a sediment hosted gold exploration initiative which included other licence applications around Tasmania. A minor amount of field inspections occurred before the company re-aligned its global exploration focus and the licences were dropped.

6.6 ASARCO

Another re-evaluation of the exploration work completed at Coupon was undertaken. This time the target-type emphasis was on a structural control aspect similar to the Henty gold deposit, located to the north of Queenstown. This study also concluded that there was significant variability in the depth of surface oxidation, that gold correlates with mustard coloured limonitic sandstone and that carbonate (quartz) veining was barren. There was a supposition that there was some supergene enrichment of the gold but it was clearly stated that there was considerable uncertainty to the orientation of the mineralisation at Coupon.

However Coupon was considered to have been properly tested and so exploration focus switched to the Davie (and 24-28) prospect(s). At Davie, a programme of soil and rock chip sampling was completed with a peak gold rock value of 0.86g/t and a peak gold soil value of 0.2g/t and with a strong arsenic association. Mapping of the area indicated a large hydrothermal alteration zone within a dextral wrench fault system linked to the Harvey Creek and Harris Faults (Figure 12). Attempts to locate the old Davie workings failed.

Figure 12 Davie Prospect Surface Mapping and Sampling



(source TCR-01-4597; Collar locations for the recent 2006 & 2010 drilling are included; AGD66 Zone 55)

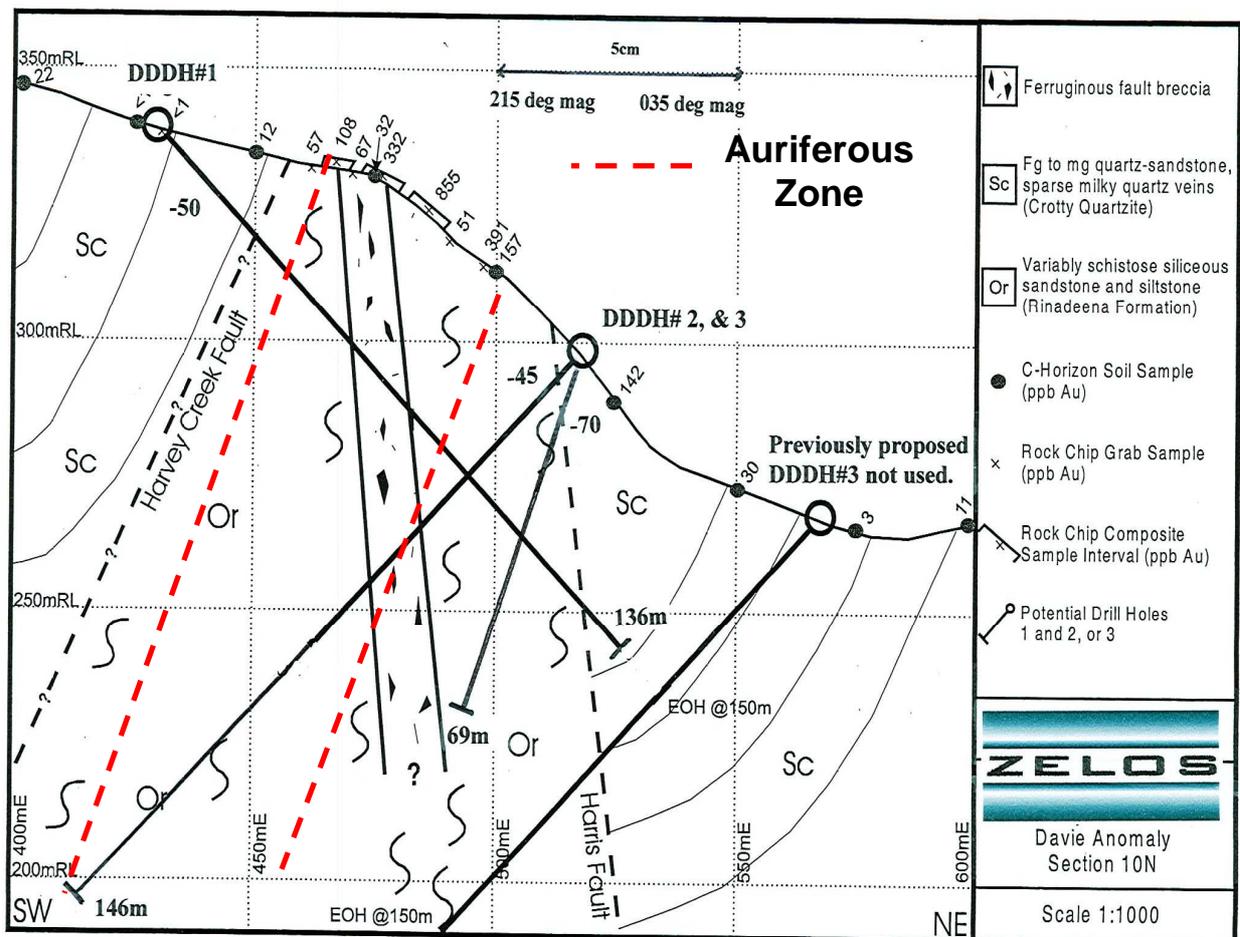
At the 24-28 adit, grab sample material yielded up to 0.5g/t Au, whilst attempts to locate the supposed 41m long drive on the Rinadeena Antimony deposit were unsuccessful.

6.7 Zelos

Exploration work was completed in 2005-6 following Zelos's successful IPO listing on the ASX in 2005. The work followed on from the ASARCO surface exploration work and consisted of three diamond drillholes for 351m.

This diamond drilling at Davie discovered a zone of auriferous quartz-sulphide stockwork veining up to 50m true width in silicified sandstones to a depth of 100m below surface (Figure 13). Drillhole DDH#2 (now renamed as SCDDH2) contained 16m @ 0.58g/t Au from 44m downhole and 4m @ 0.79g/t from 119m downhole. These two zones are within a zone of coherent mineralisation giving 82m @ 0.4g/t Au from 44m (peak gold value is 1m @ 1g/t). The gold mineralisation is associated with arsenopyrite mineralisation within a quartz vein stockwork system that is hosted within brecciated sandstones proximal to a steeply dipping fault breccia interpreted as belonging to the Harvey Creek Fault system. Drillhole DDH#1 (now SCDDH1) intersected the same gold zone at shallower depths relative to DDH#2 albeit oxidised with possible depletion and giving a best grade of 6.5m @ 0.49g/t Au from 91m within a 62m auriferous zone (downhole width). It should be noted that DDH#1 was drilled sub parallel to the ground surface and generally never exceeded below surface depths of 25m and that it remained within the oxide zone.

Figure 13 Davie Prospect Drilling Summary (Zelos)



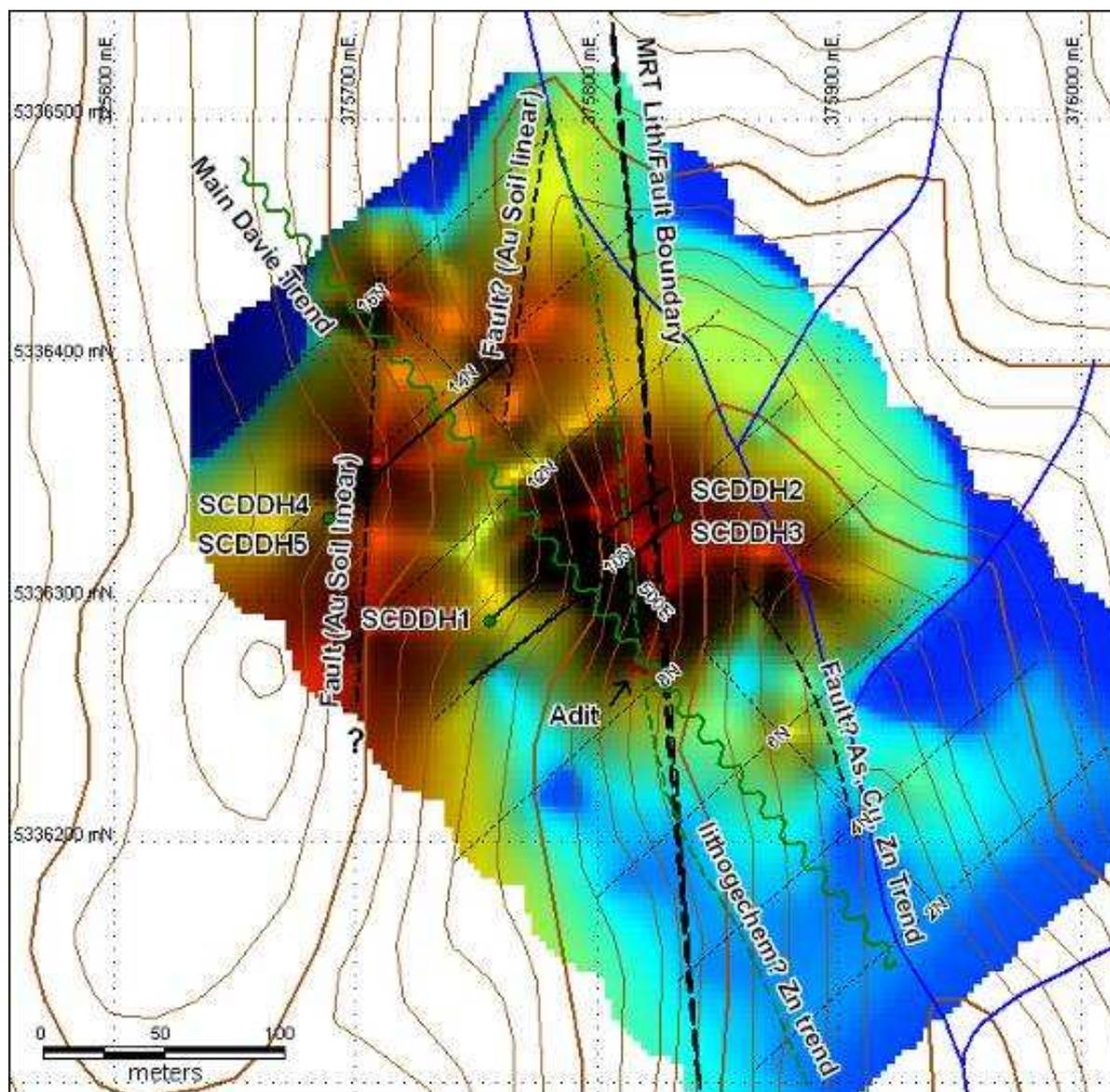
(from Shree prospectus 2009)

Multi-element assays were completed for these three drillholes. Arsenic is the only element that correlates with gold. The anomalous gold zone appears to cross a lithology boundary, with the deeper unit characterised by anomalous calcium and titanium and low iron – a sandstone?

6.8 Shree

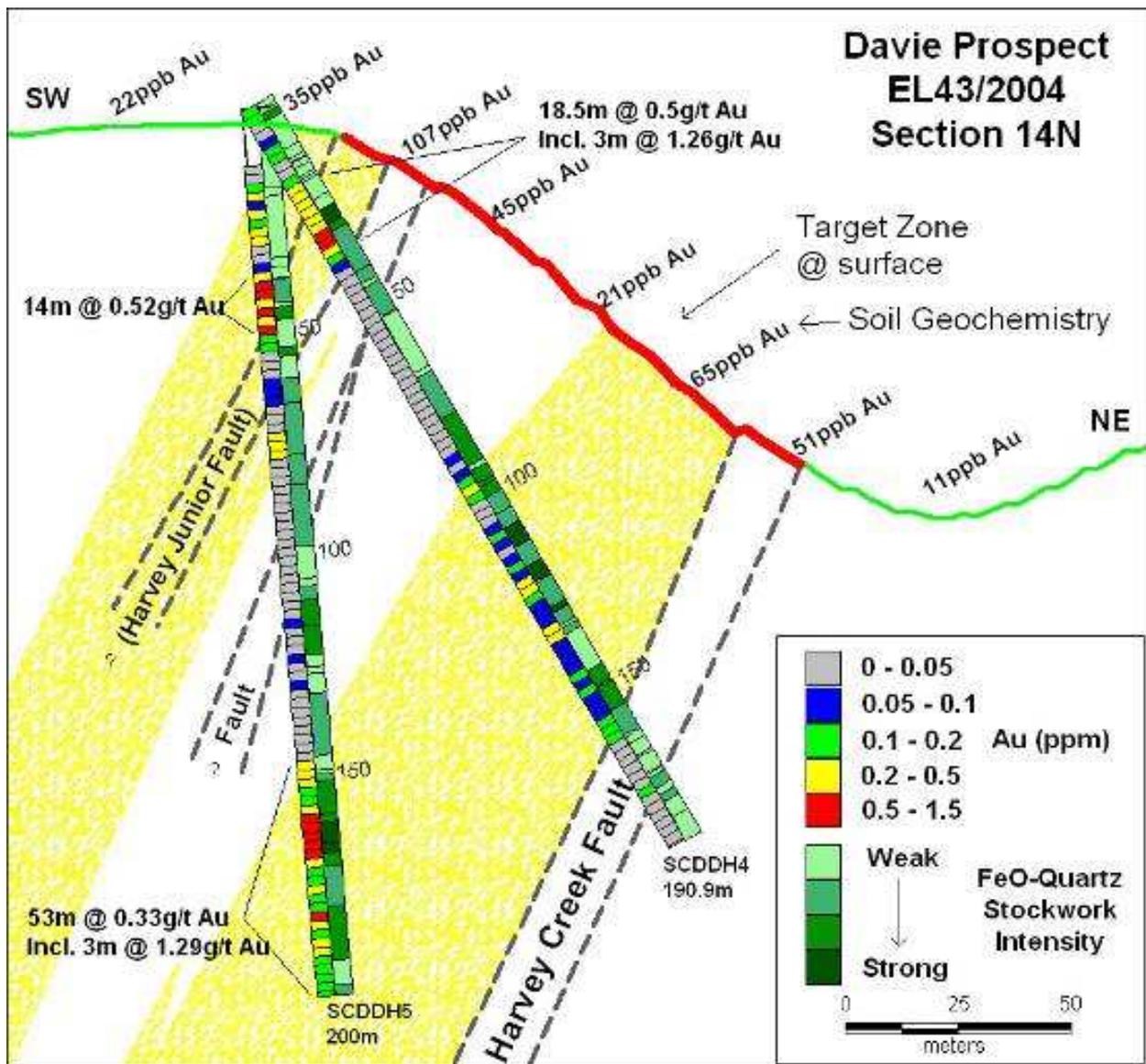
In 2010 Shree continued exploration on the Davie prospect with two more drillholes (SCDDH4-5) targeting possible down plunge mineralisation 100m to the NW of the earlier Zelos drilling results (SCDDH1-3). Details of this work are contained in the Reid 2010 drilling report with hole locations shown in Figure 14.

Figure 14 Davie Prospect Summary Plan



From Reid, 2010 drill holes on gridded Au in Soil (AGD66, Zone 55).

“Extensive limonitic and auriferous quartz stockwork was intersected from surface in both holes, with mineralisation the strongest in the hangingwalls of two significant faults (Figure 15). In SCDDH4, the hangingwall and upper fault included an intersection of 3m @ 1.26 g/t Au from 31.5m, whilst strong stockwork mineralisation extending from 94m down to the lower fault zone contained several low tenor (<0.5g/t) Au intervals. In SCDDH5, the hangingwall and upper fault returned 14m @ 0.52g/t Au from 37 to 51m. Further down hole, a broad intersection of 53m @ 0.33g/t Au extended from 147m and included 3m @ 1.29g/t Au from 164m. The upper Au anomalous zone is possibly up to 20m thick, whilst inference from sectional interpretation indicates that the lower zone could be up to 60m in true thickness.”

Figure 15 Davie Prospect Cross Section Summary 2010 Drilling

(from Reid 2010)

The upper mineralised sections in drillholes SCDDH4 and 5 are coherent with surface indications of mineralisation. They indicate a steeply SW dipping structure associated with the Harvey Junior Fault. However the soil sampling data suggests that this structure has a N-S orientation more in keeping with the N-S line associated with the interpreted main Harvey Creek Fault. The deeper mineralisation in drill hole SCDDH5 is essentially open downhole and appears to be of a stronger tenor to the interpreted related mineralisation in the shallower hole SCDDH4 (Figure 15 above). This would suggest that there maybe a higher grade component to the gold mineralisation at depth.

Shree decided to curtail the multi-element assaying with the analyses of hole SCDDH4 & 5 consisting of gold only. This will hinder any geological interpretation and possibly reduce the ability to properly assess the recently drilled gold mineralisation. H&S recommend that the multi-element assaying programme be continued.

7 Exploration Potential

Past explorers have used different geological models as gold exploration guides including:-

1. Vein style (possibly sheeted veins, e.g. quartz veining in siliceous sediments).
2. Sediment hosted disseminated gold (Carlin-type USA)
3. Structurally controlled gold (Henty-type).

In the recent past, the Carlin-Au type model has been used with limited success. Mineral grades encountered in the drilling do not appear comparable to those grades associated with the Henty style and drilling logs do not appear to mention thick, discrete auriferous veins or sheeted vein systems.

An alternative gold target model is a large scale, structurally controlled, low grade gold deposit with extensive silicic (and sericite) alteration located at major lithological competency contrasts e.g. between thick massive sandstones and thinly bedded siltstones, adjacent to major parallel faults. During deformation this setting can allow for differential dilatancy of the rocks and potential for brittle fracturing of host rocks e.g. sandstones, which are then infused with auriferous hydrothermal mineralisation forming disseminations and quartz-sulphide vein stockworks with associated alteration zones, possibly a silica core with a sericite envelope. Further refinements to the model include locating possible fold hinges of anticlines that are parallel to the main axis of dilation. An added complication would be if the fold hinge(s) has a plunge(s), such that any surface mineralisation may be an up-plunge expression of deeper, possibly higher grade mineralisation that may not be *in sensu stricto* evident at surface i.e. a blind orebody.

The host rocks to the gold mineralisation appear to be the basal Ordovician to Devonian sedimentary sequence, and not just confined to the Rinadeena Formation. The Harvey Creek Fault appears to be the main structure related to the mineralisation.

Exploration work completed to date has identified significant widths of sub-economic gold mineralisation at Coupon and Davie. However there is considerable uncertainty for the controls to mineralisation; drilling has struggled to establish grade continuity at Coupon. At Davie there appears to be some predictability to the orientation of the mineralisation i.e. to the NW, but the amount of drilling at this stage is insufficient to be conclusive.

Outcropping mineralisation is detectable from surface geochemistry, mainly rock chip and soil sampling, but appears in some instances to be of lower grade relative to deeper, fresher material e.g. between oxidised material in SCDDH1 and fresh material in SCDDH2 at Davie. Therefore low grade surface anomalies may indicate significant, possibly economic grade mineralisation at depth and need to be drill tested. High grade plunging ore shoots will not necessarily be detected at surface based on the current sample spacing, but alteration haloes might leave a big enough footprint to detect in geophysical or mapping data. Blind orebodies can also be missed if there is the additional structural complication of over-thrusting e.g. in the SW section of the licence with the Cambro-Ordovician sequence.

In trying to fully assess the gold potential of the Sulphide Creek licence a key element is to generate a reinterpreted geological map based on the relatively new airborne geophysical data from MRT in conjunction with historical mapping and drilling. It would be hoped that alteration zones indicative of extensions to the drilled mineral systems, and possibly higher grade mineralisation, could be detected and drilled in accordance with plausible 3D geological modelling.

A review of the known drilling at Coupon and Davie may elucidate additional drilling targets for gold. In addition there are untested areas of the surface soil anomalies for gold and arsenic, particularly at Coupon that warrant follow up drilling. Drill testing the surface anomaly at the 24-28 prospect is a definite option whilst other targets based on geological modelling rather than being geochemical anomalies may also warrant drill testing. There may be potential for gold mineralisation to exist within the fault-related sliver of Tyndall Group adjacent to the HCF.

It is concluded at this stage that the Sulphide Creek area represents a large, elongated N-S zone of low grade gold mineralisation possibly some 3-4 km long which has potential for localised higher grade zones and possible higher grade offshoots comprising quartz-sulphide stockwork veining. The gold-arsenic relationship is important in that arsenic soil anomalies can be used to invoke possible gold mineralisation.

In an area of such structural complexity the presence and possible effect of thrust faulting is unknown, but may need to be considered when field mapping and drill target proposing.

8 Data Compilation

Recent work completed by H&S has focussed on compiling historical open file and recent geo-scientific data to produce a new geological interpretation for the licence area. This has included a review of the available MRT airborne geophysical data, both TMI, first vertical derivatives and radiometrics, and the digitising of numerous geological maps and geochemical data, including contoured anomaly maps from open file reports. In addition to this a drillhole database has been created along with the purchase of a topographic surface to allow for a 3D data review using the Surpac mining software. A list of digitised data is included below as Table 7.

Table 7 Sulphide Creek Digitised Data

Data	Mapinfo File	Comment
Geology Map	Cyprus_Geol_Interp_Bnds_91_3275.TAB Cyprus_Geol_Interp_Flts_91_3275.TAB Cyprus_Geol_Interp_Regs_91_3275.TAB	Map covers upper half of current licence
Geology Map	Coupon_Geol_Interp_Bnds_95_3796.TAB Coupon_Geol_Interp_Flts_95_3796.TAB Coupon_Geol_Interp_Regs_95_3796.TAB	Covers immediate Coupon area
Geology Map	DaviesCk_Geol_Interp_Bnds_01_4597.TAB DaviesCk_Geol_Interp_Flts_01_4597.TAB DaviesCk_Geol_Interp_Regs_01_4597.TAB	Covers immediate Davie area
Geology Map	Rinadeena_Geol_Interp_Bnds_85_2460.TAB Rinadeena_Geol_Interp_Flts_85_2460.TAB Rinadeena_Geol_Interp_Regs_85_2460.TAB	Geology map covers lower third of current licence
Rock Geochem	Coupon_Assays_Chnl_95_3796.TAB	Channel Sampling at Coupon
Rock Geochem	Rock_Samples_91_3275.TAB	Licence wide rocks
Rock Geochem	Davies_Ck_RChips_01_4597.TAB	ASARCO's sampling
Soil Geochem	Soil_Samples_91_3275.TAB	Licence wide soils
Soil Geochem	Davies_Ck_Soils_01_4597.TAB	ASARCO's Grid
Gnd Magnetics	Rinadeena_Grnd_Mag_85_2460_Linework.TAB & Rinadeena_Grnd_Mag_Conts_85_2460.TAB	Trikon's data
Air Magnetics	Air_mag_83_2008_Contours.TAB	Airborne magnetic contours
Adit	Coupon_adit_drill_collars.TAB	
Drillholes	Historic_Drill.TAB, Historic_Drill_AGD66.TAB, EL432004_201102_04_DH_data.TAB, Davies_Ck_Collars.TAB, coupon_dh_tracesTAB.TAB	Coupon and Davie drillholes; Coupon adits are included
Anomaly Maps	Soil_Au_Contours_91_3275.TAB, Soil_As_Contours_91_3275.TAB davie_soil_anomaliesTAB.TAB davie_soil_as_anomalies.TAB	Regional soil sampling and detailed Davie grid
	Coupon_channels_Au.TAB Coupon_channels_As.TAB	Channel & systematic rock chip sampling
Topography	MRT_AGD66_Contours10m_Clip.TAB	From DPIW data

A drillhole database has been created in Access and connected to Surpac in both AGD66 and MGA94 grid projections ([sulphide_ck.mdb](#) and [sulphide_ck_agd66.ddb](#) & [sulphide_ck.ddb](#))

Due to the flat magnetic nature of the regional MRT image, data was extracted for the general Sulphide Creek area and reprocessed with the colour contrast stretched to allow for more litho-type definition. This reprocessing work was completed by Consulting Geophysicist D.Cowen of Perth, Western Australia, and was supplied to H&S as a set of Mapinfo image maps (AGD66 grid projection), which are listed in Table 8.

Table 8 Sulphide Creek Reprocessed Geophysical Data Images & Interps

Mapinfo File	Comment
SulphideCreek_Tmi-NEshade.TAB	Total Magnetic Intensity with NE sun-shading
SulphideCreek_Tmicontours.TAB	Total Magnetic Intensity contours
SulphideCreek_Dz05-NEshade.TAB	Fractional order 0.5 vertical derivative colour
SulphideCreek_ProfileCurvature.TAB	2nd vertical derivative
sulph_ck_dc_tmi_interp.TAB	Identified magnetic domains from TMI data
sulph_ck_newflt_interp1.TAB	Linear/structural interpretation for 1VD data
sulph_ck_geophys_interp1_domains.TAB	Structure and domain interpretation from Dz05
sulph_ck_radiometrics_linework.TAB	Lithology interpretation map from RGB image

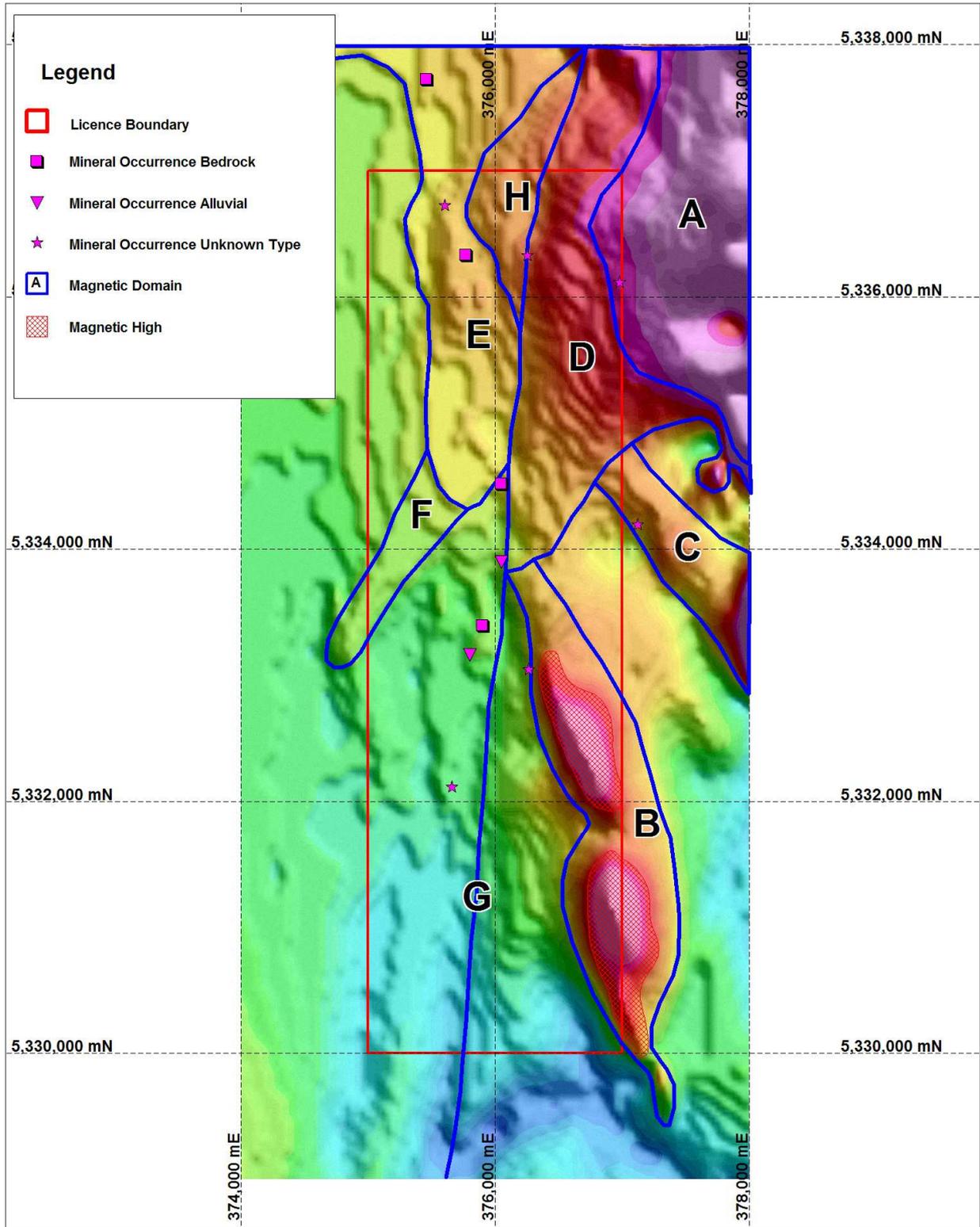
A series of magnetic domains are identified from the image of the reprocessed MRT TMI data (Figure 16). Magnetic characterisation of the domains is included below as Table 9.

Table 9 Characterisation of Magnetic Domains

Unit	Magnetic Character	Host MRT Unit	Comment
A	A relatively high magnetic zone	Silurian Siliciclastics	The margin of the high zone is on the periphery of the licence; maybe a deep anomaly related to Cambrian volcanics; possibly indicating a complicated thrust relationship
B	A zone of discrete magnetic highs	Cambrian volcanics	The exact relationship between the mapped geology and the anomalies is unclear
C	A NW striking moderate anomaly	Cambrian volcanics	Either distinct stratigraphy in Cambrian or fault bounded unit
D	A broad relatively moderate to high anomaly	Silurian Siliciclastics	Anomaly colouring maybe due to a deep anomaly associated with domain A; but herringbone feature is quite distinct
E	Moderate to low anomaly	Silurian Siliciclastics	There may be a sub-zone immediately west of the Davie prospect; may be part of domain D
F	A narrow NE striking feature of magnetic discordance	Silurian Siliciclastics	
G	The most distinct linear in the image	Fault	Has sections of strike different to the published Harvey Creek Fault
H	Moderate to low anomaly	Silurian Siliciclastics	May be part of domain D but is on the other side of linear G

The dominant linear G represents in part the Harvey Creek Fault especially for the northern half of the licence. The southern half of the linear coincides with the interpreted western fault boundary of the Cambro-Ordovician sequence.

Figure 16 Sulphide Creek Magnetic Domains TMI (Cowen)

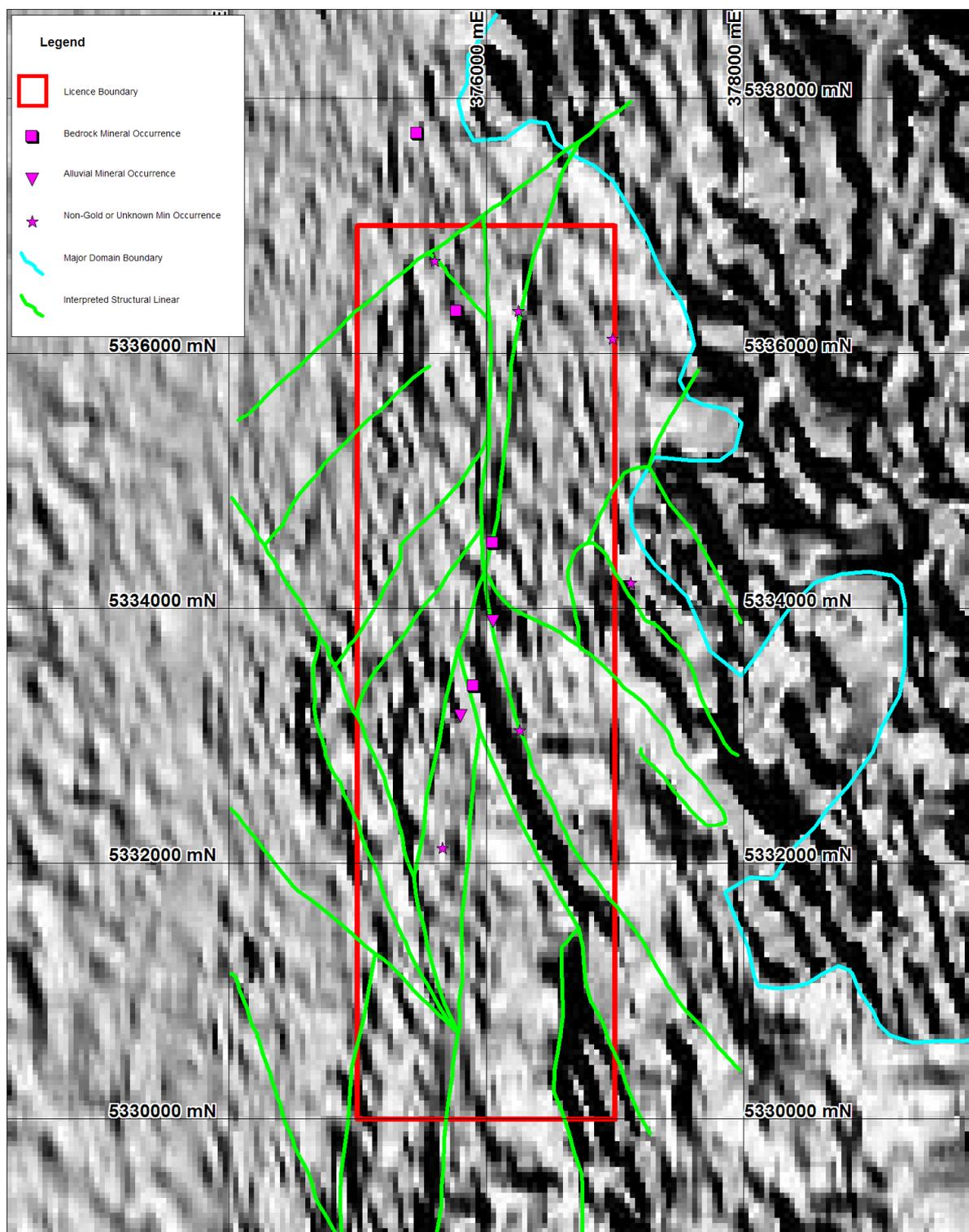


Caution must be exercised with the discrete anomalies associated with domain B; they are colour coded relative anomalies but regionally do not indicate strongly magnetic material. The anomalies are believed to correspond to a 60m wide, fault bounded Cambrian volcanoclastic sequence, although H&S has some doubt about this conclusion.

Use of the MRT 1st vertical derivative image `tmi_1vd_nesun` has enabled the completion of a structural interpretation for the general licence area (Figure 17). This combined with the

magnetic domain interpretation appears to contradict some of the original MRT geological mapping.

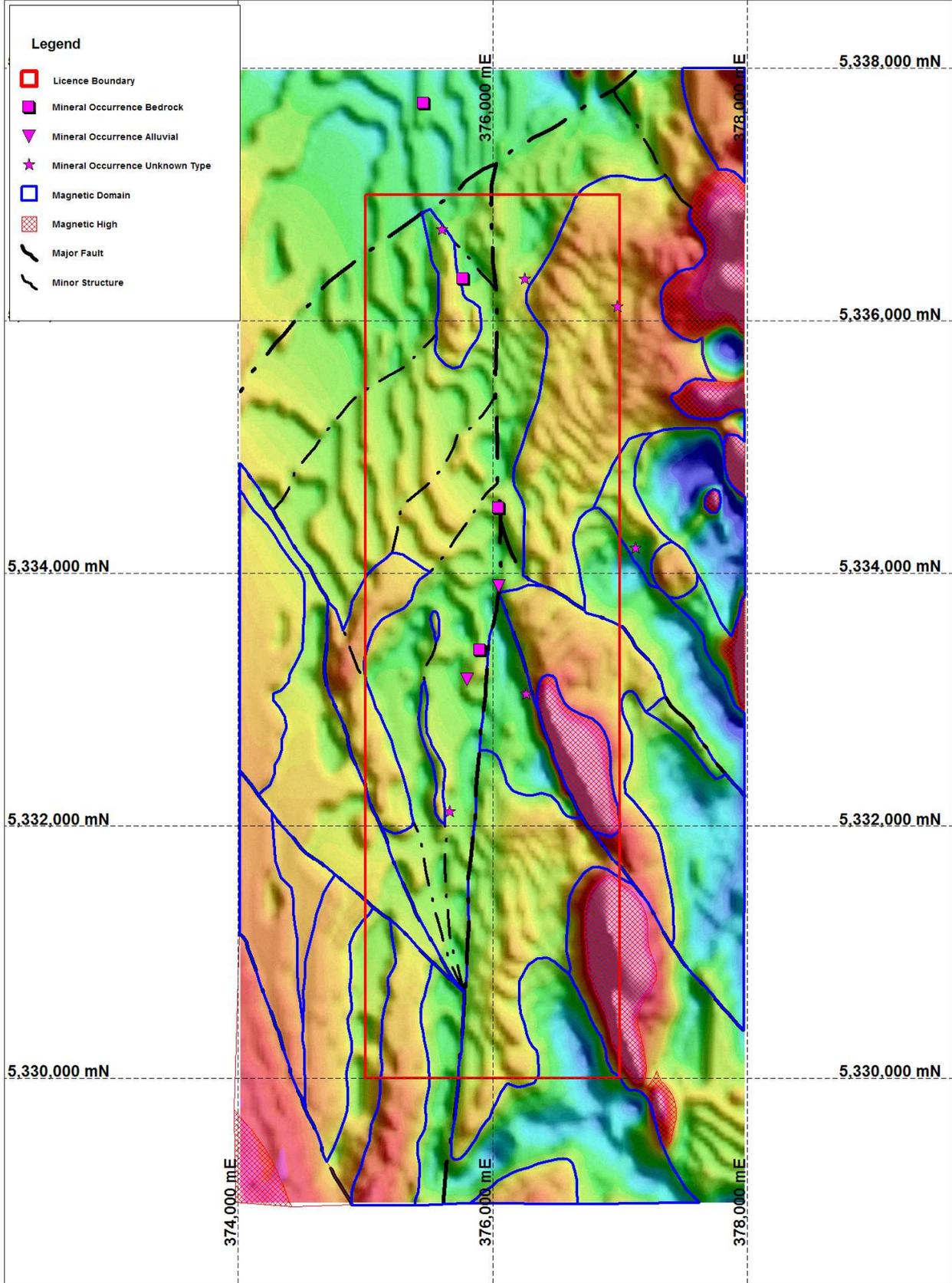
Figure 17 Sulphide Creek Structural Interpretation (MRT 1VD)



(NE Sun Direction; image supplied by MRT)

A second derived data image from Cowen ([SulphideCreek_Dz05-NEshade.TAB](#)) was used to provide more structural information and is included as Figure 18. This seemed to confirm the outcomes observed in Figure 17 above.

Figure 18 Sulphide Creek Magnetic Domains & Structure (Cowen)



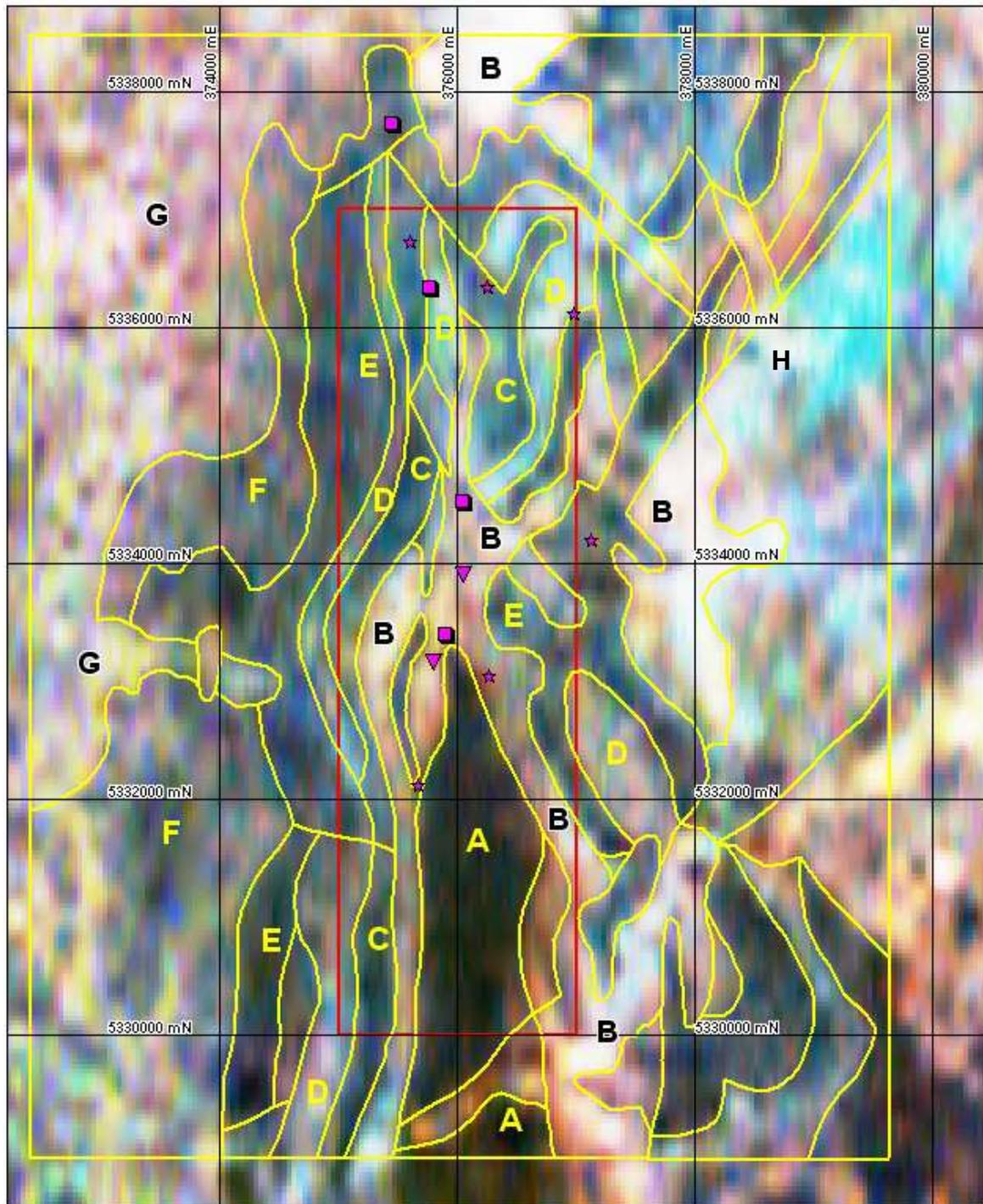
Key features to the structural interpretation are:

1. There is a dominant N-S striking structure, with some complicating bifurcations, which runs for the length of the licence. Gold mineralisation appears confined to the proximity of this structure.
2. There is an interpreted bifurcation of this structure to the SE in the middle of the licence. This was regraded as the continuation from the north of the HCF from on historical mapping.
3. The sense of movement on this structure is difficult to define.
4. The magnetic signatures for the lithologies appear to be different for both sides of the fault with the variation of the magnetic relief much greater on its eastern side. This is used to identify a major domain boundary immediately east of the licence.
5. There are two sets of subordinate structures on the west side of the fault, striking NE and NW which may be a conjugate set. The NW striking faults appear to be the dominant ones.
6. On the east side of the fault, it is more difficult to be sure of the NE striking structures as indicated on the MRT published geology. The NW striking features are strongly delineated including the historically interpreted HCF.
7. A set of identified NNW to WNW striking structural discontinuities on the west side of the fault appear to fan out from a point on the HCF near the southern margin of the licence.
8. The Coupon and 24-28 prospects appear to lie immediately west of the HCF linear. The Davie prospect appears to lie 300-400m away to the west of the linear close to a modest NW-striking structure. This is at odds with previous interpretations e.g. MRT and Reid 2001

To assist with a reassessment of the geology of the licence the RGB radiometric image, [k_th_u_r_g_b.tab](#), as produced by MRT, was used with its original colour scale format (Figure 19). It is possible, despite the coarse pixilation of the image, to identify different lithotypes and these are described below in Table 10.

Table 10 Characterisation of Radiometric Domains

Formation	Code	Character
Owen	A	Distinct dark brown colour; different to Owen elsewhere
Rinadeena	B	Light yellowish colour
Gordon Limestone		Nothing distinctive
Crotty Quartzite	C	Darker zones
Amber Slate	D	Narrow, light coloured-bluish zone
Florence Quartzite	E	Dark zone similar to the Crotty Quartzite
Florence Quartzite	F	Moderately dark zone
Bell Shale	G	Widespread, light coloured-reddish zone
Cambrian	H	Lighter colours perhaps similar to Rinadeena in parts; elsewhere dominantly cyan coloured

Figure 19 Sulphide Creek Radiometric RGB Image Interpretation

(image supplied by MRT; yellow lines = colour domains)

In the RGB image the central spine of Cambro-Ordovician undefined coarse grained siliciclastics in the southern half of the licence shows up with a distinctive dark brown colour. This colour is at odds with other known outcrops of the Owen Conglomerate e.g. to the north around Grieves Siding and suggests that there is something different about this unit and that it may not be Cambro-Ordovician age at all.

The Gordon Limestone unit overlying Cambrian volcanics in the fault sliver at Coupon (MRT mapping) is possibly recognisable as something different from surrounding lithotypes, but is not very distinctive. There is a zone of lithology/colour confusion associated with an area beyond

the NE corner of the licence which includes the undifferentiated Siluro-Devonian sequence (MRT mapping) and the Gordon Limestone.

The Coupon and 24-28 prospects appear to be in a similar lithological unit presumed to be the finer grained clastics of the Rinadeena Formation. The Davie prospect appears to be in a different unit, perhaps a fine grained sandstone belonging to either the Crotty or the Florence Quartzites.

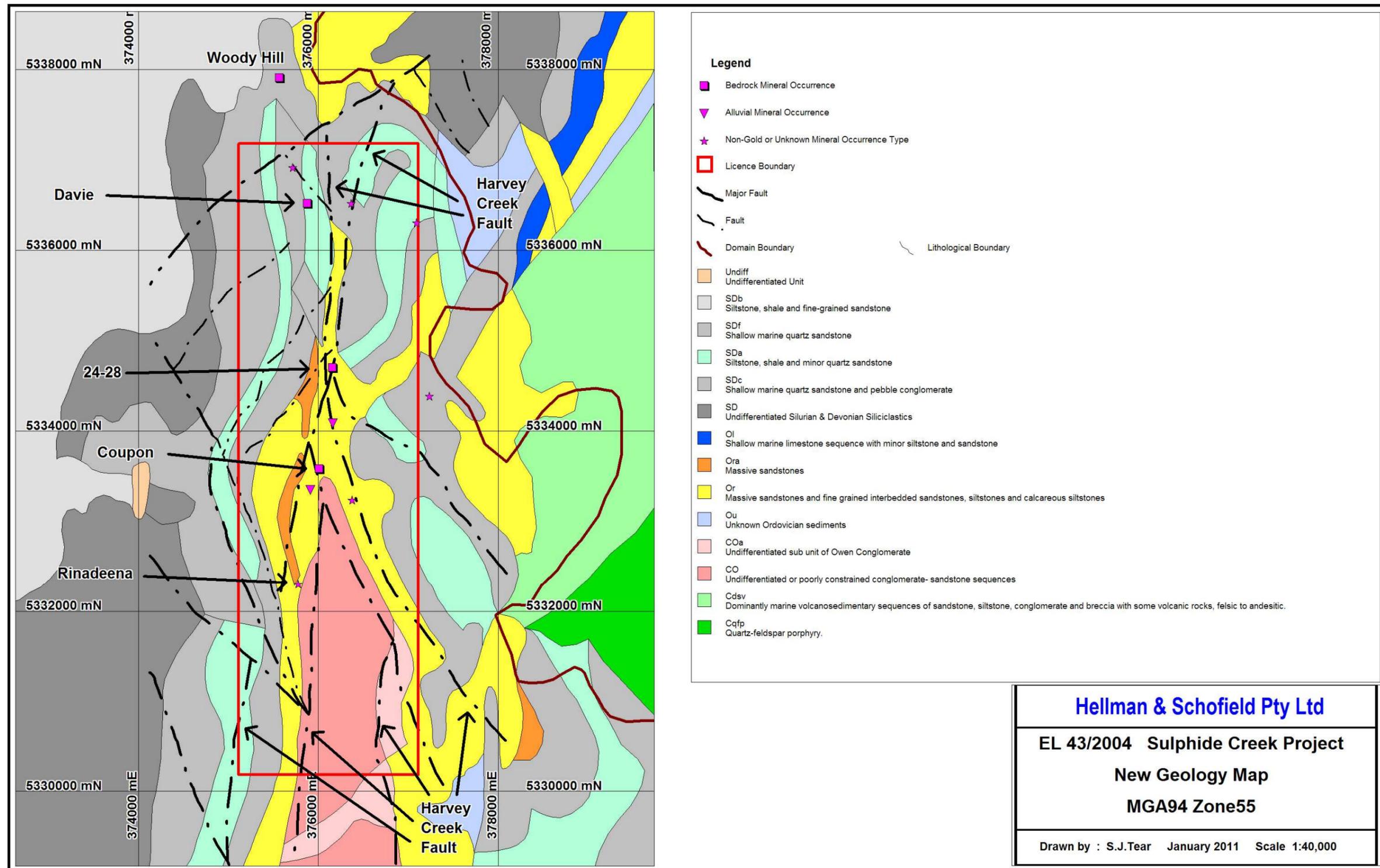
The D unit that hosts the Davie prospect is a markedly light cyan colour relative to other D units (The Amber Slate) and may imply either a different lithotype e.g. the chromite-rich sandstone identified by Reid 2010 or possibly some form of alteration that could be related to gold mineralisation. Interestingly enough more of this unit appears to occur east of Davie in the NE corner of the licence, possibly in conjunction with NW-striking structures.

A combination of the magnetic and radiometric domaining, the structural interpretation and the MRT geology has been used to generate a revised geological interpretation (Figure 20). The new geology map can be used to assess the exploration potential for additional gold mineralisation targets.

A series of geological observations for the Shree licence area derived from the new geological interpretation and the open file review are included below:

- An increase in the spatial distribution of the Rinadeena Formation. The interpretation may be considered optimistic, but has aimed to highlight possible areas for field checking as the Rinadeena seems to be the most significant gold mineralisation-hosting unit. It is accepted that some of the interpreted Rinadeena particularly on the east side of the HCF may not be correct and may be Cambrian volcanics and clastics.
- The HCF is presented as a much more complicated structure. There is a risk that it has overcomplicated the geological picture, but the relative lack of geological understanding for the gold mineralisation may be due to the complex nature of the faulting.
- There is potential mis-mapping associated with the MRT data; particularly where there are inconsistencies with the stratigraphic arrangement. The new map has tried to read-just for this.
- There is an increased level of possible fault resolution that has resulted in increased structural complexity. Fault sets include a major 010° direction, NW and NE conjugate pair?
- There is a level of stratigraphic simplicity on the western side of the HCF. On the eastern side of the fault the lithological and stratigraphical arrangement is more complicated.

Figure 20 Sulphide Creek Revised Geology Map



In the course of the data compilation it has become apparent that there is considerable uncertainty as the exact nature of and controls to the gold mineralisation, particularly at Coupon. In an effort to try and resolve the issue some statistical analysis, autocorrelation, was completed on the Coupon and Davie data.

Autocorrelation is a technique that is used to simplify and analyse data so that trends which were not particularly obvious in the data can be revealed, and is a mathematical method of analysing data in map form. Analysis deals with the recognition, isolation and measurement of trends that can be represented by lines or surfaces and constitutes a segment of the larger statistical field of regression analysis.

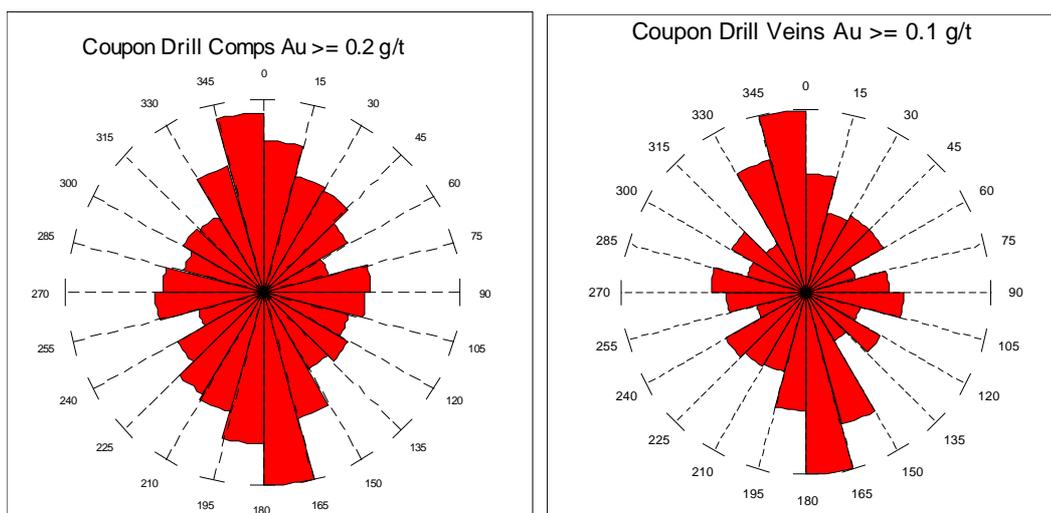
Fry analysis is a geometrical method of spatial autocorrelation analysis of point objects. The method plots translations, known as Fry plots, of point objects by using each and every point as an origin for translation. A Fry plot not only enhances subtleties in a pattern of points but it also allows recording of distances and orientations between pairs of translated points, which can be used to construct a rose diagram as a complementary tool for visual analysis of trends in the point pattern. A rose diagram can be created for orientations and frequency of orientations between (a) all pairs of translated points and (b) pairs of translated points within specified distances from each other.

The former case may reveal trends due to processes that operated at the regional scale, whereas the latter case may reveal trends due to processes that operated at the prospect scale.

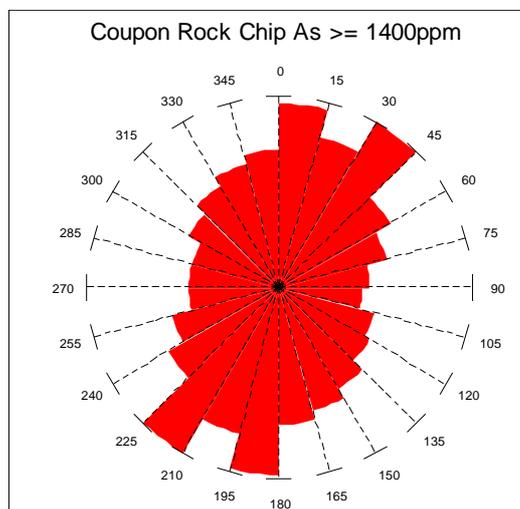
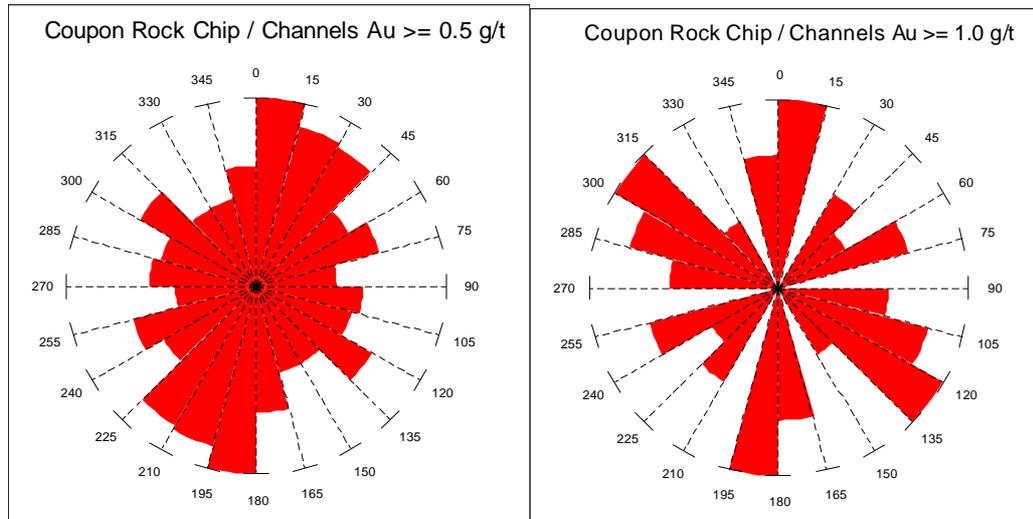
A number of different 3D and 2D datasets from the Coupon and Davie prospects were analysed using the Fry analysis method as described above. Cut-off grades for the analysed datasets were chosen to reflect population breaks identified during preliminary geostatistical reviews. The population subsets range between 10-55 individual points and represent a compromise between ensuring a representative sample set while ensuring the processing did not become overly cumbersome.

Rose diagrams resulting from the analysis are reproduced below.

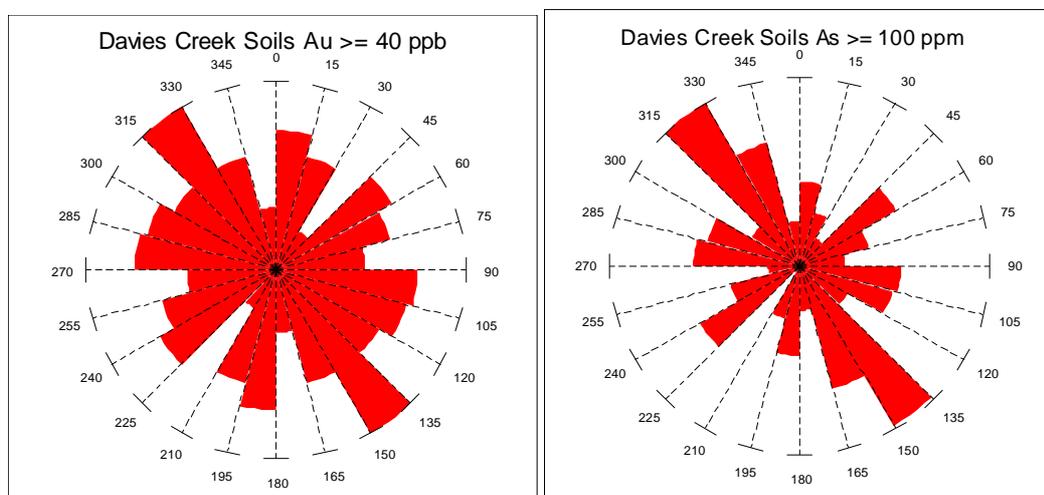
- Coupon Drillhole Trends (3D): Primary approx NNW-SSE, Secondary approx E-W



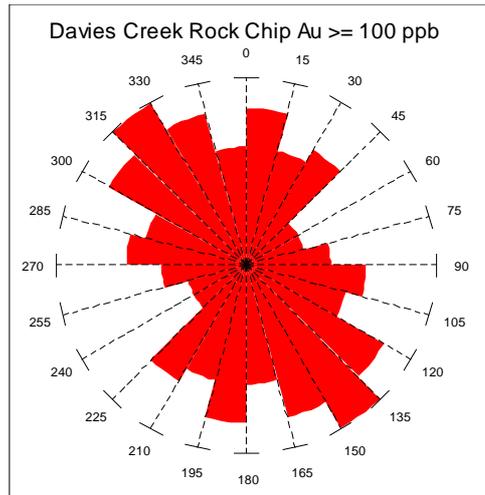
- Coupon Rock Chip and Channel Sample Trends (2D): Primary approx NNE-SSW and NE-SW, Secondary approx NW-SE



- Davie Soil Trends: Primary approx NW-SE, Secondary approx. NE-SW and NNE-SSW



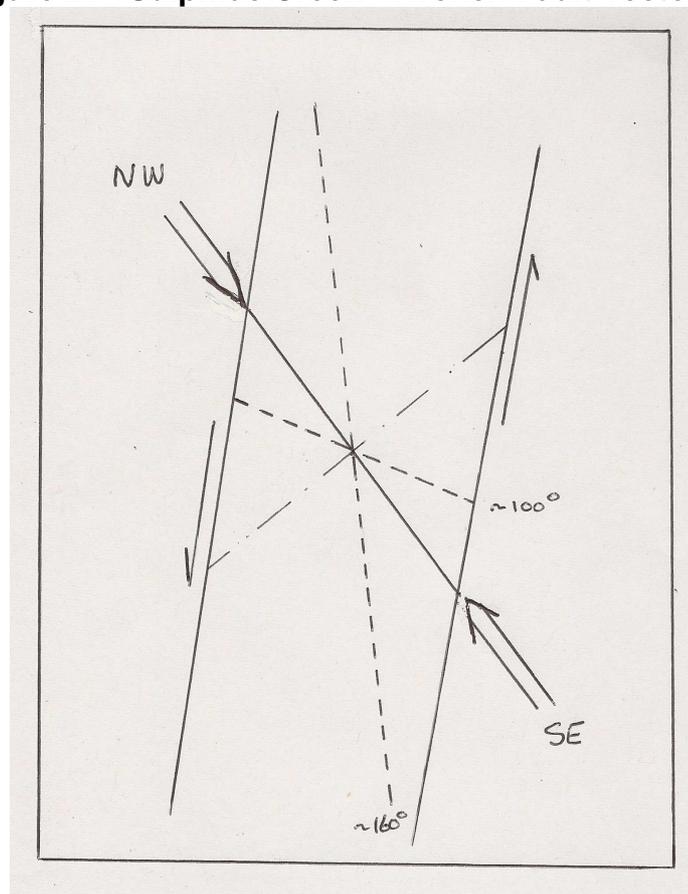
- Davie Rock Chip Trends: Primary approx NW-SE, Secondary approx NNE-SSW



The picture for Davie appears relatively straightforward with a NW-SE dominant structural direction for gold and arsenic mineralisation with subordinate directions of 010° , 060° and 100° . However Coupon is more complicated with the drilling indicating a 350° dominant mineralisation trend with a subordinate E-W trend. Whereas the surface rock and soil sampling indicates a 010° dominant trend (and possibly 035° for arsenic) with subordinate trends NW-SE and 070° trends. The high grade gold samples appear to indicate a NW-SE dominant trend comparable with the Davie trend.

Taking the above directions it is possible to resolve the principle components of stress assuming wrench fault tectonics associated with the HCF (Figure 21).

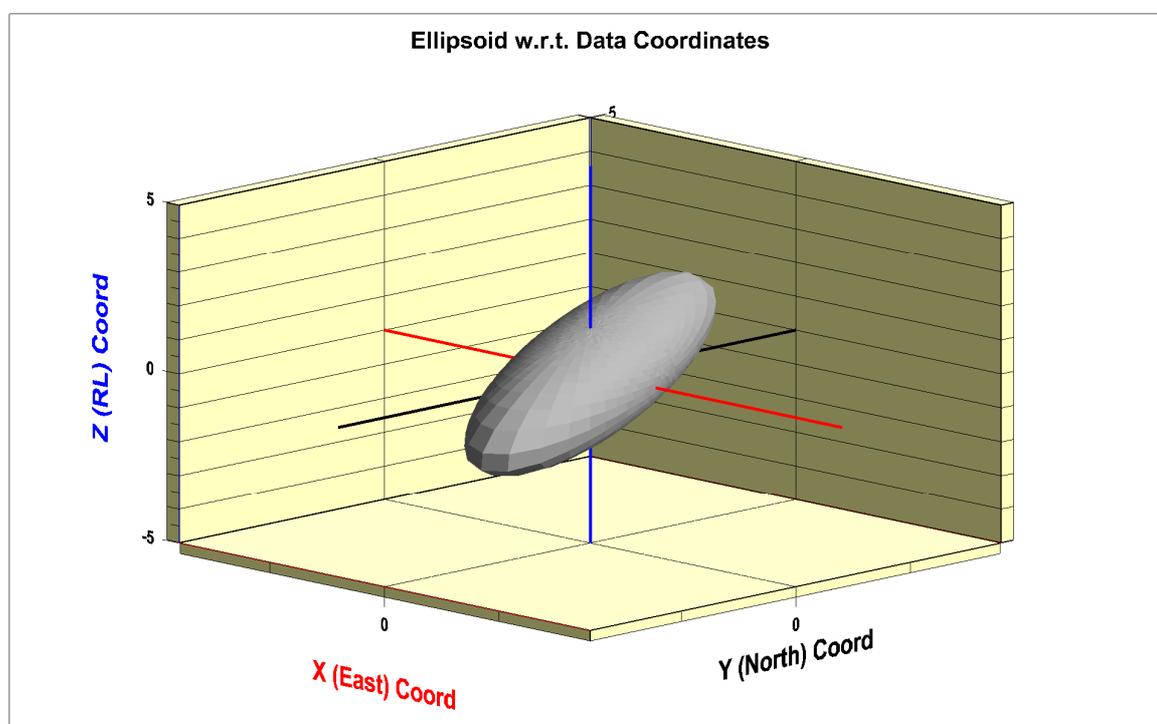
Figure 21 Sulphide Creek Wrench Fault Tectonics



If the NW direction is the line of compression consistent with the regional Tabberabberan deformation, this will be the axis of dilation and possible loci for auriferous hydrothermal fluids. The 010° line in the figure is the HCF and the dashed lines represent the reidal shears. This suggests that the dominant line for gold mineralisation is where NW striking structures are in close proximity to the relatively N-S striking Harvey Creek Fault. If this point coincides with a significant lithological (and hence rheological) competency contrast e.g. massive sandstones and shales then there is an opportunity for brittle fracturing in the more massive unit allowing for the deposition of gold-bearing quartz-sulphide veins.

2m composites were extracted from the drillhole database for the drilling at Coupon. Variogram modelling of the data has indicated a dominant gold direction of approximately 150° i.e. reasonably close to the NW-SE line with a relatively gentle plunge to the SE (Figure 22). This is consistent with a structural model proposed in the paragraph above.

Figure 22 Coupon 3D Variogram Modelling of Drill Composites

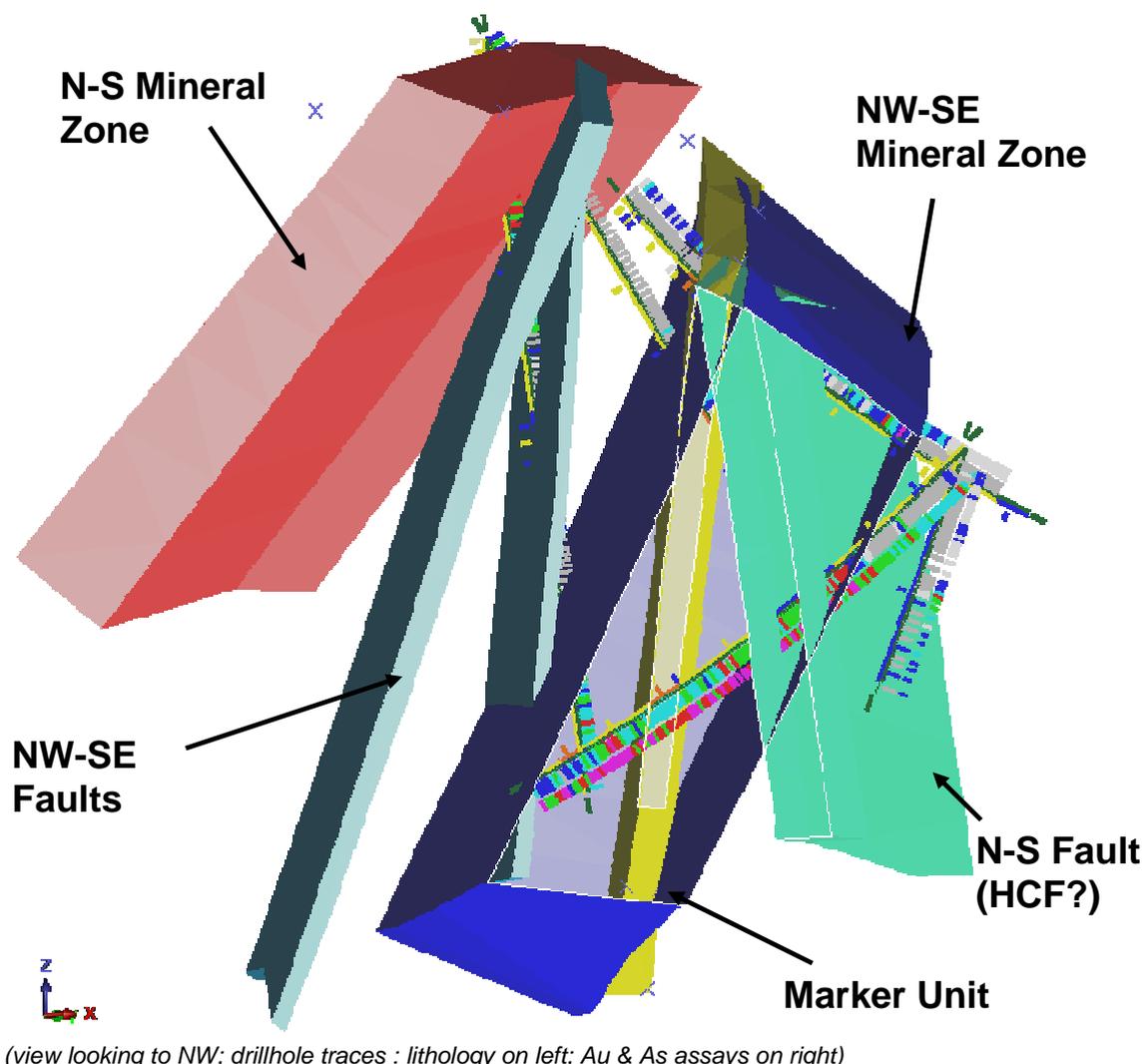


The creation of the drillhole database and topographic surfaces for AGD66 and MGA94 grid projections has allowed for 3D interpretations of the Davie and Coupon prospects. The amount of drilling and drillhole assays at Davie is limited and care should be exercised with any interpretation.

At Davie there are two mineral zones, a large low grade zone striking NW-SE interpreted to be abutted at the NW end of the drilling by a narrower N-S interpreted zone. Both zones are believed to dip moderately steep to the SW (Figure 23).

A major fault is believed to strike N-S at the SE end of the prospect. There are bifurcating subsidiary faults interpreted at this stage to have a NW-SE strike and a steep dip to the SW.

A marker stratigraphic unit, foliated siltstones, is interpreted to strike NW-SE at a steeper dip than the mineralisation and is sub-parallel to the subsidiary fault.

Figure 23 Davie Prospect 3D Interpretation

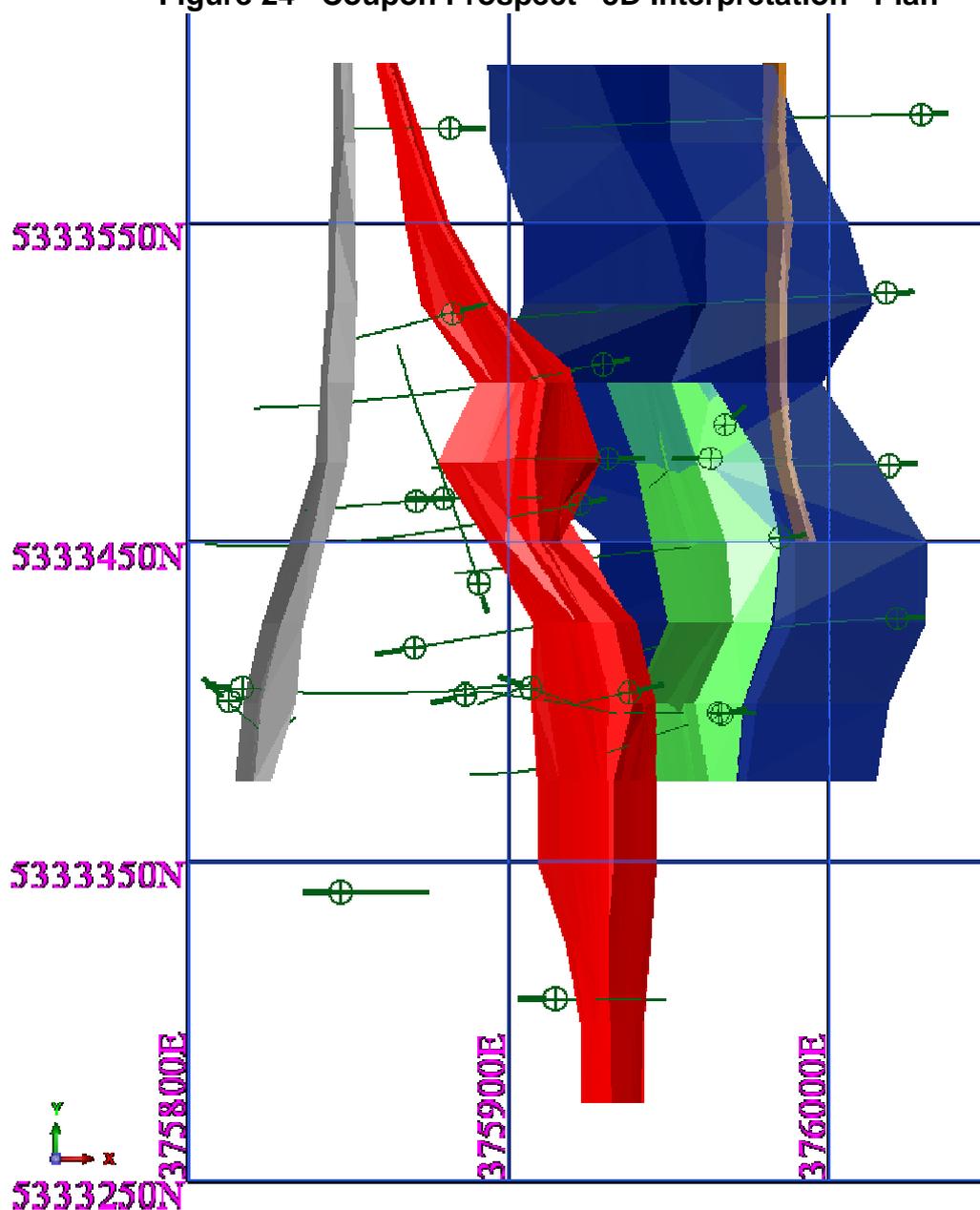
At Coupon there seems to be multiple mineralised zones some apparently transgressing lithologies the latter of which are apparently offset by faulting as per Newnham's map of 1995. This has created considerable difficulties in completing a 3D interpretation. Various attempts were made using low order gold grades and/or arsenic grades for mineralisation definition but coherency was difficult to achieve. The following mineralisation bodies have been interpreted (Table 11 & Figures 24 and 25).

Table 11 Coupon Prospects Interpreted Mineral Bodies

Lode Name	Characteristics
West Lode	<ul style="list-style-type: none"> • North-south striking • Narrow lode found in one of the old adits • Dips very steep to west
Central lode	<ul style="list-style-type: none"> • A very broad zone near surface which tends to taper at depth; wide zone might be due oxidation effects • Has a low grade halo • Corresponds to a trough in the base of oxidation surface • Has a NNW strike in the area of the most drilling, tends to N-S strike at southern end; NNW strike is similar to the variography model • Dip is sub-vertical

Lode Name	Characteristics
East Lode	<ul style="list-style-type: none"> Moderately wide zone with limited strike length due to a lack of drilling Parallel to bedding Transgresses from sediment above limestone into the limestone Dips steeply to west
East Lode 2	<ul style="list-style-type: none"> Narrow Lode Vertical dip Arsenic dominant except at north end with 0.4g/t Au
North Lode	<ul style="list-style-type: none"> Extension of the main Coupon mineralisation End of hole mineralisation in CCRC013 Lines up with NW-striking surface gold/arsenic anomalism Appears to have a much shallower dip based on surface anomaly

Figure 24 Coupon Prospect 3D Interpretation Plan



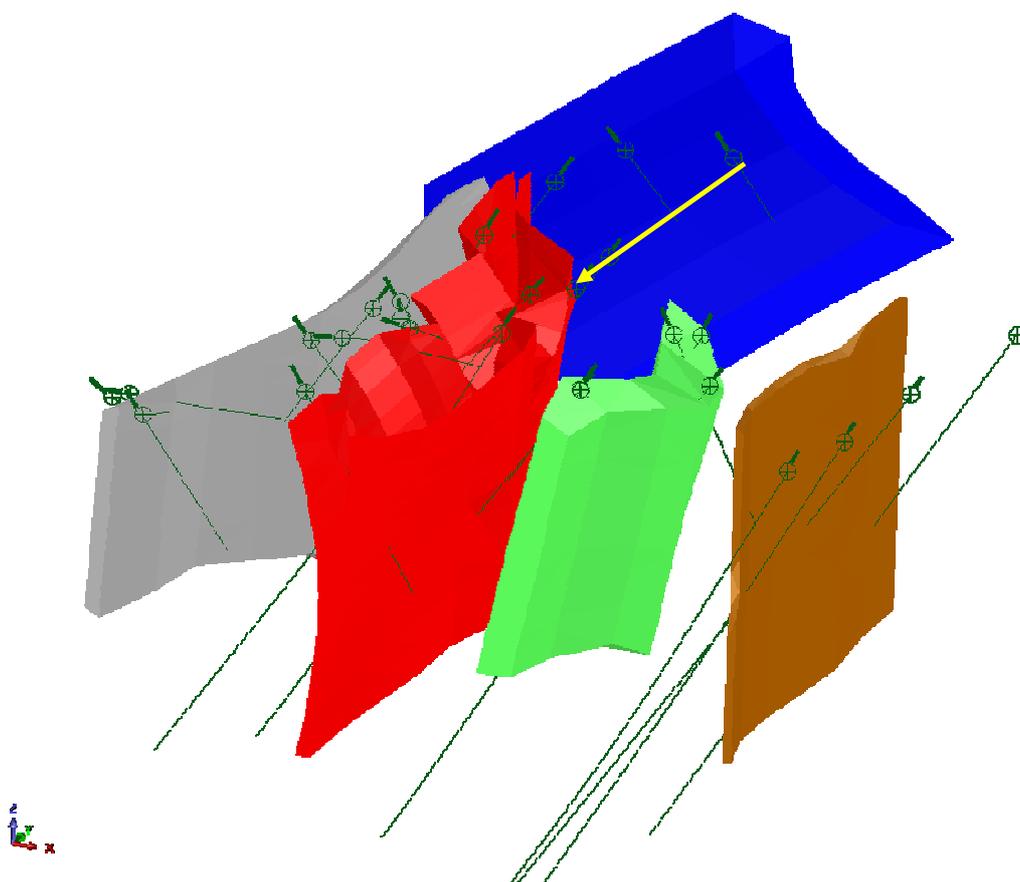
Grey = West Lode, Red = Central Lode, Green = East Lode, Brown = East Lode2, blue = limestone unit

The plan view of the lodes suggests that the Central Lode is a dilatatory zone with a NNW axis, which is consistent with other structural observations and the proposed pattern of deformation. It is interesting to speculate that there may be several of these NW/NNW zones within the bounding West Lode and East Lode2 structures producing an en echelon array of gold mineral bodies. The figure shows the Central Lode striking N-S but is really only based on the mineralisation in the southernmost hole, which may in fact be the next 'tension gash'.

Another feature noted during the interpretation is that the deeper diamond holes appear to indicate a shallow termination to the mineralisation. The reason for this unclear, it may be that the mineral just dies off, or there may be a shallow offsetting fault (the apparent continuity of the limestone counts against this) or it may be the effect of oxidation and a form of supergene enrichment.

Figure 25 shows an oblique view of the Coupon mineralisation, of particular note is the North Lode which shown as a blue shape with a yellow arrow indicating the shallow down dip direction.

Figure 25 Coupon Prospect 3D Interpretation



There is a real concern with some of the collar locations for the 1989 RC drilling. There has already been mention of the RC holes LT89CCRC03 and 10 being swapped over by Newnham. Even now hole 3 still looks a little suspect, but there is another hole that looks out of sorts, namely hole LT89CCRC01. There is little that can be done at this stage, but a possible problem has at least been identified.

9 Exploration Targets

Following the data compilation exercise and geological review a series of drill targets have been designed. The assumptions from the previous work are that there is a large zone of diffuse mineralisation including pervasive silica alteration associated with a complex fault pattern (NW, NE and N-S structural interaction) immediately proximal to the Harvey Creek Fault within the Rinadeena Formation and Lower Silurian clastic sediments. The suggested exploration strategy is to continue drilling on the Coupon and Davie prospects, generally following up either significant previous drill intercepts or untested surface geochemical anomalies. The 24-28 prospect is included for initial drilling based on the anomalous surface geochemistry generated by previous explorers. The aim is to intersect higher grade gold mineralisation, as per the previous drilling, for comparably large widths.

Target maps showing the proposed drillholes are included as Figures 26, 27 and 28 with the proposed hole collar coordinates detailed in Table 12.

Table 12 List of Proposed Exploration Drillholes

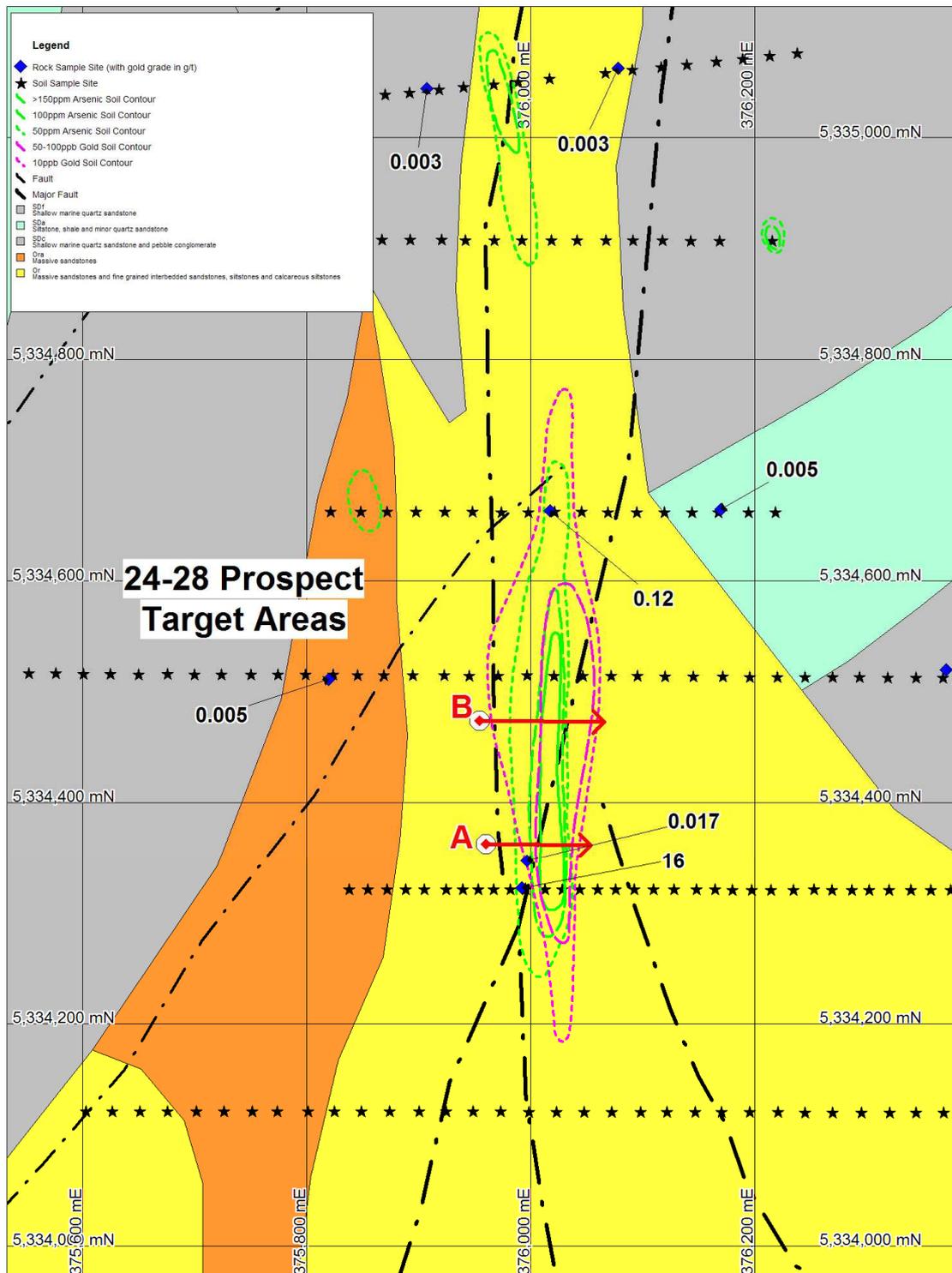
Prospect	Prop Hole	MGA94 E	MGA94 N	Comment
24-28	A	375960	5334360	50° to grid east
	B	375955	5334475	50° to grid east
Coupon	C	375835	5333755	50° to grid east; NW striking anomaly possibly open in hole CCRC013
	D	375860	5333165	50° to grid east; south extension of Coupon Au & As anomaly near fault junction
	E	375835	5333930	50° to grid east south extension of Coupon Au & As anomaly near fault junction
	F	375600	5333030	50° to grid east; arsenic anomaly on fault line and lithology contact
Davie	H	375640	5336415	50° to grid north east; NW extension of outcomes of holes SCDDH4 & 5
	I	375780	5336200	50° to grid north east; SE extension of outcomes in holes SCDDH1 & 2
	J	375665	5336240	50° to grid east; southern extension of outcomes in holes SCDDH4 & 5 and open Au/As N-S geochem anomaly

Drilling should be diamond coring to gain as much geological information as possible. This should include multi-element assaying and core orientations. The latter may be difficult to achieve on account of the broken nature of the core.

All the targets included in this report are regarded as high risk with no certainty of the existence of economic mineralisation.

The proposed drillholes shown below in Figure 26 are straightforward tests of surface geochemical anomalism. Hole A is recommended first as it also targets underground workings.

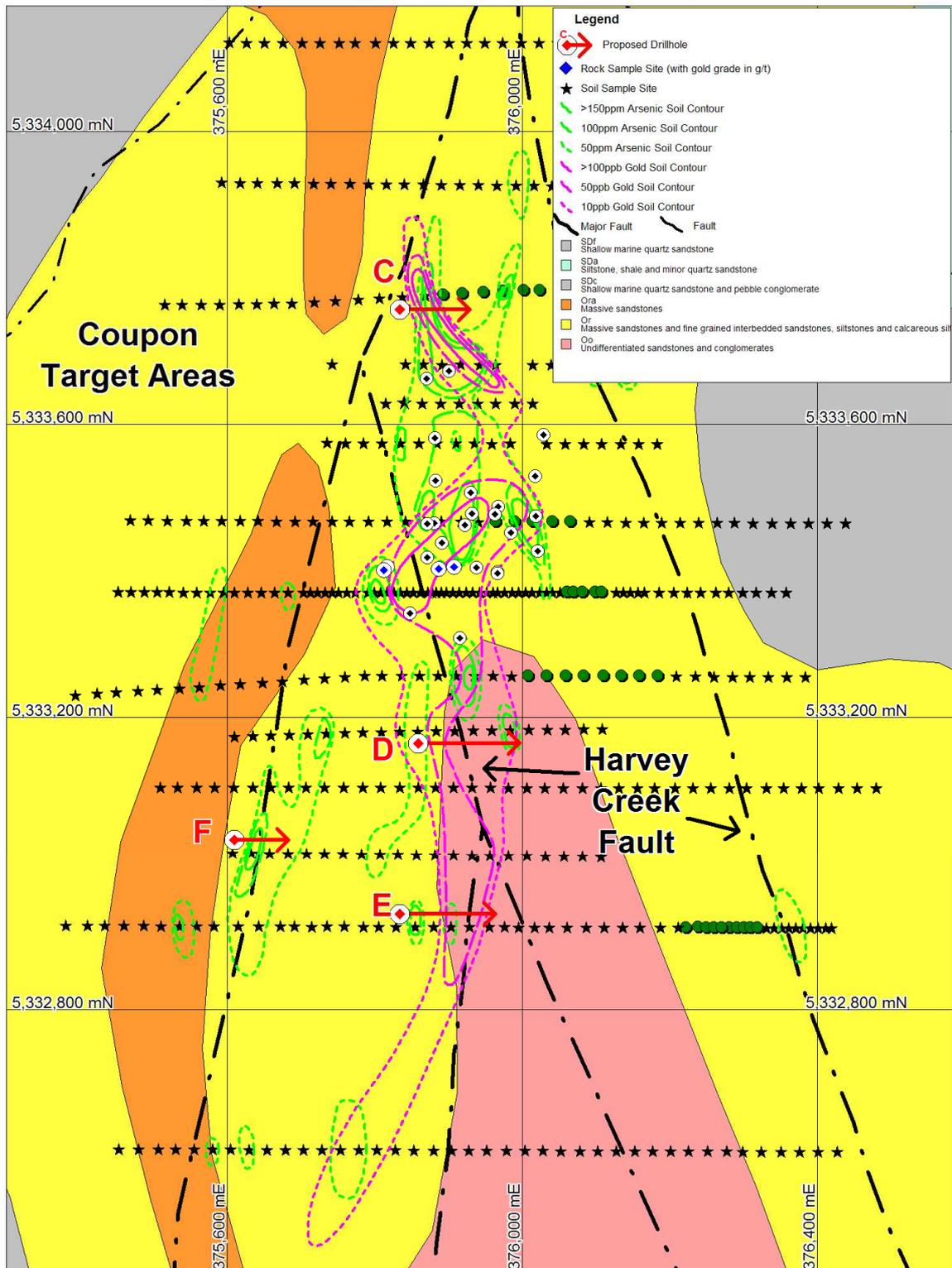
Figure 26 Sulphide Creek 24-28 Target Map



(MGA94 Zone 55 grid projection)

Proposed hole C is testing an NW-SE gold/arsenic anomaly (Figure 27). The nearest historical holes to C, CCRC012 and 13, were very shallow holes with hole 13 stopping in moderate grade mineralisation at 35m. Ground checking may suggest that the azimuth of the hole should be more perpendicular to the anomaly i.e. to grid NE.

Figure 27 Sulphide Creek Coupon Target Map



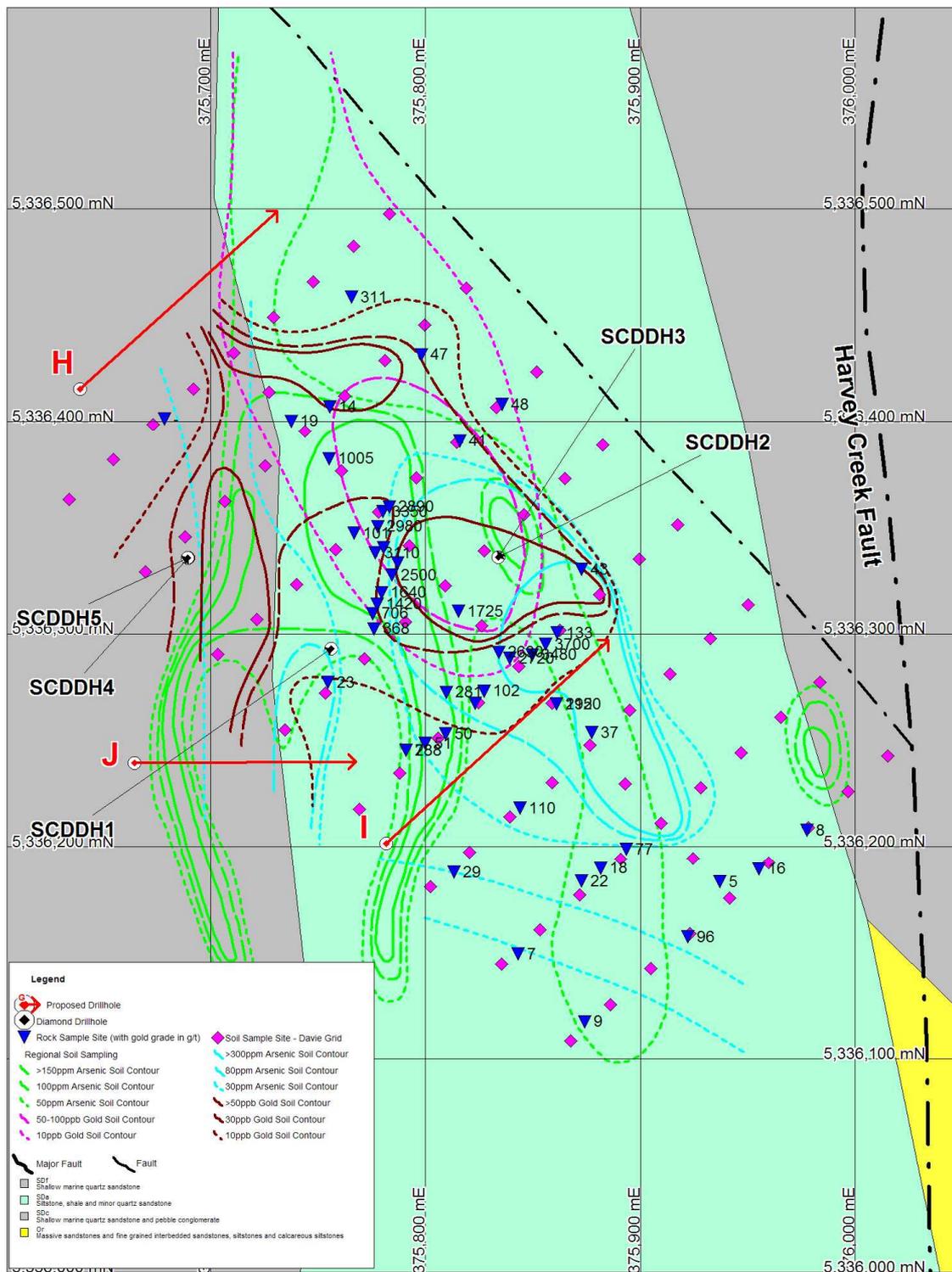
(MGA94 Zone 55 grid projection)

Holes D and E test the same southern extension of the Coupon soil anomaly, close to an interpreted fault junction. Ground checking may suggest that these holes should be oriented more to grid NE rather than grid east. Hole F is targeting a discrete 300m long arsenic anomaly that coincides with the dominant NNE structure – the Harvey Creek Fault?

At Davie proposed hole H is a simple extension test to mineralisation intersected in drill-holes SCDDH4 & 5, possibly where the interpreted N-S mineral zone intersects the NW

trending mineralisation at a lithological contact between sandstones and siltstones. Proposed hole I is simply a SE extension test for mineralisation encountered in drillhole SCDDH2. The hole is also looking to test discrete arsenic and base metal anomalies possibly related to the N-S Harvey Creek Fault (Reid pers. comm.). Hole J is planned to test the interpreted N-S gold structure from the SCDDH4-5 drilling that coincides with the historical soil sampling arsenic anomaly.

Figure 28 Sulphide Creek Davie Target Map

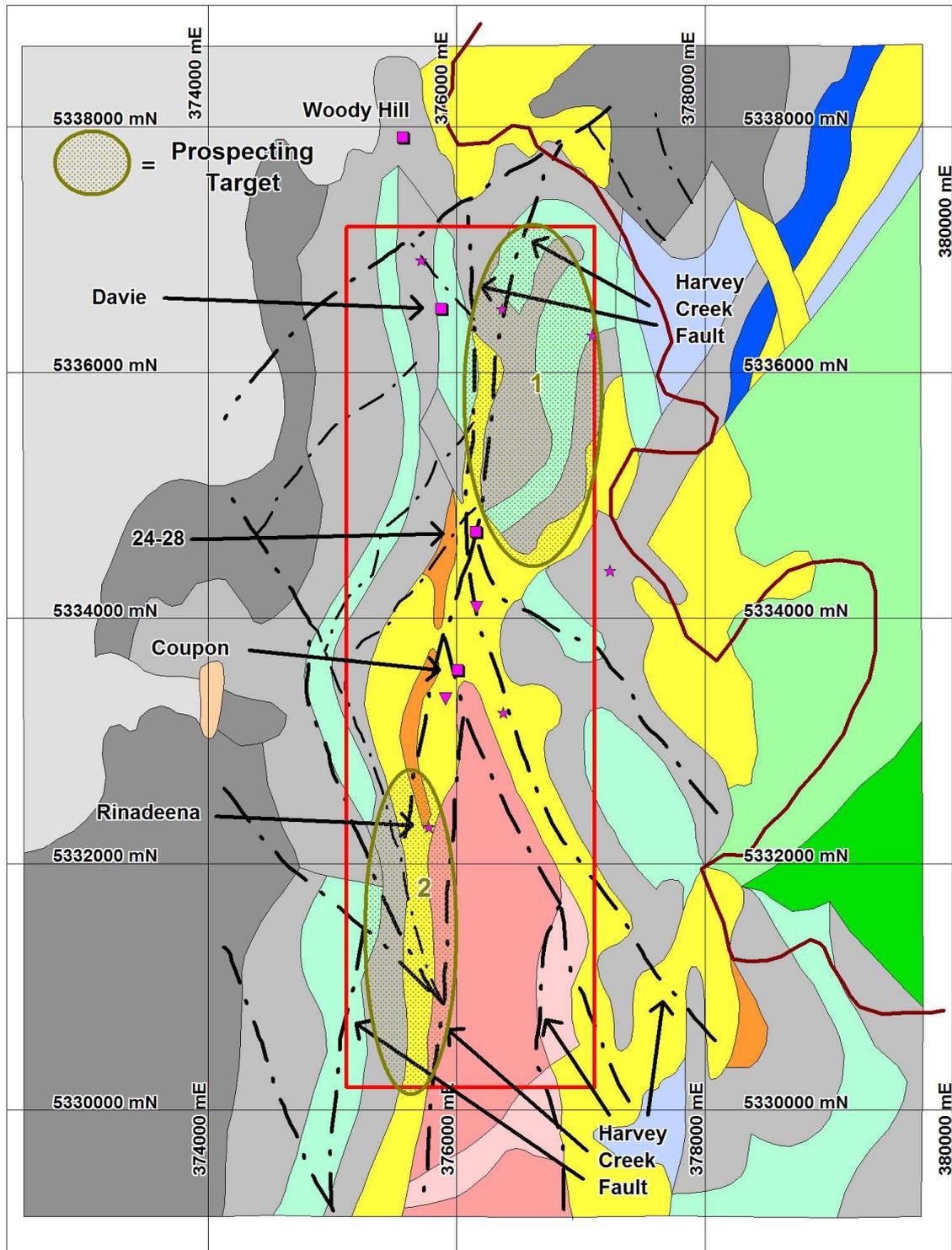


(MGA94 Zone 55 grid projection)

In addition to the drilling there are additional areas that require field checking and surface geochemical sampling. These are listed below and are shown in Figure 29.

1. The area of similar looking host rocks to the Davie area in the NE of the licence.
2. Along strike indications of the Rinadeena Formation adjacent to the N-S line of the Harvey Creek Fault. This is mainly in the SW corner of the licence

Figure 29 Sulphide Creek Target Map



(MGA94 Zone 55 grid projection)

10 Proposed Work

Shree's exploration strategy for this tenement recognises the complex geology and that this provides opportunities for reinterpreting historical exploration using new geological concepts. Previous work has identified significant areas of gold-arsenic mineralisation associated with substantial alteration zones over a strike length of 3-4km. It has also suggested specific structural controls to the mineralisation. Thus better delineation of structure, spatial distribution of likely host rocks and the recognition of alteration zones for the licence are the keys to possible success. To do this a high resolution airborne magnetic survey is recommended.

Anomalous areas identified in this report and from the airborne survey should be subject to a series of site visits which may include reconnaissance mapping and some geochemical sampling, and may require helicopter support. Encouraging outcomes will result in detailed mapping and geochemical sampling (if applicable) and ground geophysical surveys e.g. ground magnetic, ground EM and/or IP, aiming to delineate drill targets. It may be possible to move from encouraging detailed surface geochemical sampling straight to exploratory drilling. A review of the Coupon drillcore is recommended paying particular attention the style and intensity of alteration associated with the mineralisation.

The following work programme is suggested:

1. A detailed airborne magnetic and radiometric survey be completed over the licence area; if possible 50m flight line spacing and altitude clearance on E-W lines. The aim of this work is to identify alteration zones related to gold mineralisation and to provide better geological resolution for possible gold mineralisation.
2. Follow up anomalies and favourable geological settings from the airborne survey with mapping and surface geochemical sampling. It is anticipated that the two reconnaissance target areas will contain areas for field checking
3. Drilling to comprise three aspects: A] Follow up previous drilling at Coupon and Davie; B] Exploratory drilling of soil geochemical anomalies on the periphery of Coupon; C] Reconnaissance drilling of the 24-28 prospect and any other anomalies generated from the airborne geophysical survey

11 Conclusions

Shree have commissioned Hellman & Schofield to undertake a data compilation and geological review exercise for their Sulphide Creek licence EL 43/2004 in West Tasmania. The outcome of the work has generated a list of exploration targets for gold mineralisation including proposed drillholes. An indicative budget has been supplied for a suggested exploration programme.

The geology of the general Sulphide Creek licence involves a complex arrangement of three structurally-bound zones within the Dundas Stratotectonic Element. These are:

1. Coarse to fine grained clastics associated with Ordovician to Devonian marine sedimentation in the western half of the licence; the east-west divide is the N-S striking Harvey Creek Fault
2. In the NE sector of the licence on the east side of the Harvey Creek Fault, coarse to fine grained clastics occur associated with Ordovician to Devonian sedimentation, including substantial Gordon Limestone thicknesses.
3. A thin sliver of fault bounded Cambrian Tyndall Group volcanoclastics overlain unconformably by the Ordovician Gordon Limestone occurs in the SE sector juxtaposed with basal Cambro-Ordovician clastics and conglomerates.

In addition there are localised zones of Quaternary cover.

The area is structurally complex with a range of fault directions and levels of displacement including fault bifurcation and brittle deformation fracture zones.

Structurally controlled gold mineralisation within the licence area comprises the Coupon and Davie prospects. The deposits are observed to be low grade gold-arsenopyrite-pyrite quartz vein stockworks hosted by fine grained siliciclastics of the Lower Ordovician Rinadeena Formation, in proximity to the Harvey Creek Fault, an inferred basement structure. Significant silica and sericite alteration is noted with the mineralisation. There is a reasonable level of uncertainty on the geological interpretation and historical exploration targeting for Coupon such that the previous drilling may have been ineffective.

The current gold target model is a large scale, structurally controlled, low grade gold/arsenic deposit with silicic alteration located at major lithological competency contrasts e.g. between thick massive sandstones and thinly bedded siltstones, adjacent to major parallel faults. During deformation this setting can allow for differential dilatancy of the rocks and potential for brittle fracturing of host rocks e.g. sandstones, which are then infused with auriferous hydrothermal mineralisation forming quartz-sulphide vein stockworks with associated alteration zones, possibly a silica core with a sericite envelope.

Past exploration work for the licence area has included stream sediment sampling, localised soil sampling grids, airborne magnetics and a localised ground magnetic survey. Historical drilling amounts to 23 RC and diamond drillholes for 2,683m on the Coupon prospect. Recent drilling of 5 holes for 742m has been completed by Shree/Zelos at the Davie prospect.

Work completed for this report includes an exhaustive data compilation of historical exploration in Mapinfo combined with an assessment of recent Mineral Resources Tasmania geophysical data and recent diamond drilling including 3D interpretation. This work was used to reappraise the geology of the licence and in combination with new geological concepts to develop a list of targets, including proposed drillholes, for the licence.

12 Expert Competency

Hellman & Schofield Pty Ltd (“H & S”), a geological consulting company based in Sydney, Brisbane and Perth, Australia, prepared this geological report at the behest of the directors of Shree. Simon Tear, a Consulting Geologist, has a BSc (Hons) in Mining Geology from The Royal School of Mines, London, U.K. and has over 27 years worldwide experience in the mining & mineral exploration industry. He is a member of the IMM (22 years), the AusIMM (12 years) and the Institute of Geologists of Ireland (PGEO and EurGeol, both 16 years). He was Team Leader for CRAE Pty Limited’s Tasmanian exploration program from 1995-1996. That program successfully explored Western Tasmania, accounting for nickel and lead/zinc discoveries.

The Author’s Tasmanian experience consists of:-

- Led the CRAE field team in the discovery of the Avebury Nickel deposit (1996).
- Devised and executed CRAE’s and Noranda Pacific’s carbonate hosted base metal programmes in the Gordon Limestone near Zeehan (1995-6 and 2001 respectively).
- Undertook exploration on CRAE’s Balfour copper licences in NW Tasmania (1996)
- Worked on the Lynchford/Sulphide Creek gold project for CRAE (1996).
- Project generation for sediment hosted gold targets for CRAE in Northern Tasmania (1996)
- Consulting Geologist for the Zeehan Zinc Ltd (now Creat) Comstock Ni & base metal projects (1999-2007)
- Nickel project generation for Tasmania for Falconbridge (2002)
- Literature Study and Resource Assessment of the Nelson Bay Iron Project for Zelos Resources NL (2006-7)
- Literature Study of the Mt Bertha Project for Zelos Resources NL (2006)
- Literature Study and Resource Assessment of the Adamsfield PGE Project for Zelos Resources NL (2006)
- Literature Study of the Whyte River Project for Manasia (2009)
- Literature Study of the Vale River Project for Manasia (2009)

Other relevant experiences include:-

- Exploration experience in Cambro-Ordovician island arc related volcanic terranes similar to the Mt Read Volcanics in SE Ireland; explored around the Avoca Copper Mine (very similar scenario to Mt Lyell).
- Nine years of Lower Palaeozoic gold hosted exploration experience, mainly field related, including VHMS, vein and ‘Slate Belt’ styles.

- Independent Geologists Report for Zinico (now Zelos) Resources NL successful IPO in 2005.
- Independent Geologists Report for Shree Minerals successful IPO in 2009.

The above experiences and qualifications make Simon Tear adjudged to be a competent person under the JORC Code and has completed this report in accordance with the VALMIN Code.

The digital geological and geophysical information used in this report was supplied by the directors of Shree. Additional open file information was sourced from Mineral Resources Tasmania via their websites and through personal communication. H&S has relied upon and assumed without verification the accuracy and completeness of all information provided and cannot take any responsibility to guarantee its accuracy.

Limitations and Consent

This assessment has been based on data, reports and other information made available by Shree or otherwise obtained through publicly available sources. A draft copy of this report has been provided to Shree for comment as to errors of fact, omissions or incorrect assumptions. H&S has no reason to believe that the information provided by Shree is misleading or that any material facts have been withheld.

The opinions expressed herein are given in good faith and H&S believes that any assumptions or interpretations are reasonable.

This report is provided to Shree for the purpose of assessing its Sulphide Creek exploration licence. Neither the whole nor any part of this report, nor any reference thereto, may be included in, or with, or attached to any document or used for any purpose without H&S's written consent to the form and context in which it appears.

Respectfully submitted,

Simon Tear

BSc (Hons), ARSM, PGEO, MAusIMM, EurGeol, MIMM
Consulting Geologist
Hellman & Schofield Pty Limited

20th January 2011

13 References

Some selected references are included here for additional information.

Name	Initial	Date	Title
General			
Bottrill et al	RS	1998	A Summary of the Economic Geology and Mineral Potential of the Late Proterozoic and Palaeozoic Provinces in Tasmania
Burrett	C	1989	The Geology & Mineralisation of Tasmania
Martin (eds)	L		
Leaman	DE	2002	Mineral Resources Tasmania. Tasmanian Geological Survey Record 2002/15. Quantitative interpretation of magnetic and gravity data for the Western Tasmanian Regional Minerals Program. Part 1.
McClenaghan	MP	1996	Tasmanian Geological Survey. Record 1996/16. Combined interpretation of new aerial-survey geophysical datasets for northwestern Tasmania.
Seymour	DB		
Morrison	KC	2002	Mineral Resources Tasmania. Tasmanian Geological Survey Record 2002/18. Western Tasmanian Regional Minerals Program Mount Read Volcanics Compilation. Report on field investigations Mt Darwin-Mt Murchison Region.
Seymour	DB	1995	Mineral Resources Tasmania. Tasmanian Geological Survey Record 1995/01. TASGO NGMA Project. Sub-Project 1: Geological Synthesis. Explanatory notes for the Time-Space Diagram and Stratotectonic Elements Map of Tasmania.
Calver	CR		
Seymour et al		2006	The Geology and Mineral Deposits of Tasmania : a summary MRT Bulletin 72
Sulphide Creek			
Harder	WM	2006	Year 1 Annual Report, EL43/2004 Sulphide Creek. Zelos Resources NL
Harder	W	2008	EL 43/2004 Sulphide Creek Year 3 Annual Report
Jones	P	1991	Perilya Progress Report TCR 91_3275
Newnham	LA	1994	EL 9/84 Lynchford Area, Annual Report 1993-94. TCR 94_3574
Newnham	LA	1995	EL 9/84 Lynchford Area Annual Report. TCR 95_3796
Newnham	LA	1993	Results of A Core Drilling Programme-Completed April-May 1993, EL 9/84 TCR 96_3915.
Newnham	LA	2000	In ASARCO Annual Report TCR 00_4480
Poltock	R	1986	Harvey Creek Magnetic Anomaly TCR 86_2582
Poltock	R	1987	Trikon Annual Report TCR 87_2672
Poltock	R	1989	Cyprus Progress Report TCR 89_3033
Reid	R	2001	Report on Geological Mapping, Rock Chip and Soil Sampling at the Davie Anomaly – Lynchford Project, EL15/1999. Asarco. TCR 01_4597.
Reid	R	2010	EL432004_2010DrillingReport.doc
Autocorrelation			
Easton Wren	A		Trend Surface Analysis – A Review
Carranza	E.J.M		Controls on mineral deposit occurrence inferred from analysis of their spatial pattern and spatial association with geological features

Appendix 1
Open File Listing of Competitor Reports

Document	Author	Comment	Reviewed	Downloaded	Maps Extracted (digitise / registered)	Data Available
81_1651 - SPL806, Report for 6 Months ended 10th September, 1981	Nyelt, J	Very hard to read the sample sheets, so hopefully the figure in 85_2441 will do for locations.	Y	Y		Petrological reports. Rock chips, stream sed and tailings sample sheets with coords and assays.
83_2008 - SPL806, Report of Exploration Activities for the 12 months to 10th March 1983	McDonald, I.R.	Appears likely that the sampling is already captured in the MRT dataset, but probably check against sample sheets. Figure 1 in Appendix 3 shows location of anomaly from 1981 aeromag survey.	Y	Y		Minor stream sed, rock and tailings sample sheets. Includes a Preliminary Interpretation of Mines Department Aeromagnetic Survey.
83_2054 - EL51/80, Misery Flat, Final Report on Exploration Activity	McDonald, I.R.	Apparently some of the sampling has not been previously reported, but it's hard to tell at first glance which ones they are. The samples sheets are the hard to read ones for 81_1651.	Y	Y		Plans showing samples locations and geology and sample data sheets for previous EZ sampling.
85_2441 - Annual Report for Exploration Licence 9/84 (Woody Hill Area) Western Tasmania	Summons, T.G.	Appears likely that the sampling is already captured in the MRT dataset, but probably worth registering the figure to check. Does an interesting geostatistical review of the previous sampling data.	Y	Y		Provides details of EZ Coy (1981/3) rock chip, stream sed, tailings and panned gravel sample results, but no locational data.
85_2441A - Stream Sediments - Reconnaissance Geology	Poltock, R.	This appendix to 85_2441 contains the Figure 1 that shows all of the sampling.	Y	Y	Need figures 1, 7 and 8	Figure 1 shows all of the historic sampling mentioned in the report, while Figure 7 shows all the "current" sampling. Figure 8 - "Interpretation of Geology and Geochemistry" has some potentially useful geochemical anomalies highlighted and shows an area of magnetic anomalism, possibly from the 1981 survey.
85_2454 - First and Final Report Exploration Licence 4/84, Strahan, Tasmania 85_2454A - Heavy Mineral Exploration EL 4/84 (Newmont Holdings Pty Ltd) Western Tasmania.	Offenberg, A.C, Summons, T.G. Summons, T.G.					Ground mag, geol mapping, geochem sample data
85_2460 - Exploration Licence 31/83 Macquarie, Reports on Exploration Activity October, 1984 to June, 1985.	Hopton, D.L., Mathison, I.J.	Rinadeena grid within EL - Following up 1981 aeromag anomalies. Some stream sed already captured in MRT dataset.	Y	Y		Rinadeena_RChip_85_2460.tif; Rinadeena_SSeds_85_2460.tif; Rinadeena_Geol_Interp_85_2460.tif; Rinadeena_Geol_Fact_85_2460.tif; Rinadeena_Soil_85_2460.tif; Rinadeena_Grnd_Mag_85_2460.tif
86_2582 - The Harvey's Creek Magnetic Anomaly Compilation of Geology and Mineral Potential	Poltock, R.	Appendix (see 86_2582A below) contains the only potentially interesting data in this report.	Y	Y		"Significant Exploration Features" figure of interest, but a later version is available in 87_2672.
86_2582A - Interpretation of the Harvey's Creek Magnetic Anomaly (E.L. 9/84)	Bishop, J.R.	Mitre Geophysics PL report on 4 ground mag traverses over northern most mag anomaly picked up in Govt Dighem survey.	Y	Y		Magnetometer data for 4 ground traverses.
86_2594 - Exploration Licence No. 6/85, Jukes-Darwin Progress Report on Exploration Activity October, 1985 to 19 September, 1986	Mathison, I.J., Taylor, S.					
87_2636 - E.L. 47/83 Lynchford, West Tasmania, Report on Exploration for 12 Months to February 1987.	Sheppard, W.A.					

87_2672 - E.L. 9/84 Lynchford Tasmania Annual Report July 1986 - June, 1987	Poltock, R.	Sampling (except sseds) undertaken in local grid, although with good descriptions and tabulated coordinates. Local grid lines plotted on project scale map. Probably need adit maps from another report to assist with locating samples.	Y	Y	Sign_Expl_Feat_87-2672.tif , Geol_Interp_87-2672.jpg	Fig 1 for local grid and "significant exploration" features (including mag anom locn), Fig 2 for some "new" geological interp. Fig 3 and 4 for interpretive sections/traverses. Lots of soil, rock chip and BC sample data, including u.g.
88_2763 - Swift Creek EL 26/86, Progress Report on Exploration for the 12 Months to 10th December, 1987	Funnell, F.R.					
88_2817 - EL 9/84 Lynchford Tasmania. Annual Report, July 1987 - June 1988.	Poltock, R.	Nothing reported except a stock market collapse and JV arrangements	Y	Y		
88_2851 - EL 29/87, Strahan, Tasmania, Annual Report Year 1 (19.9.87 - 18.9.88)	Cromer, W.C.					
89_2918 - Exploration Licence 26/86, Swift Creek, Tasmania. Report on Exploration Activity to 4th January 1989.	Henham, R.J.					
89_2927 - Exploration Licence 102/87, Queenstown, N.W. Tasmania. Report for the Year Ended 21st April 1989.	Anon					
89_2977 - Exploration Licence 47/83, Lynchford, Tasmania. Progress Report for Year Ended April, 30th, 1989	Noonan, D.J.					
89_3001 - Relinquishment Report, Part of EL 9/84, June, 1989.	Poltock, R.	Nothing new reported	Y	Y		
89_3024 - Progress Report, 12 Months to August 1989, Yolande, EL 11/85, Tas.	Poltock, R.	Report is actually on the Cyprus tenement to the north, but two "orientation" rock samples were taken from the Coupon deposit.	Y	Y		Rock chip sample sheets and assays.
89_3033 - Progress Report, 12 Months to July 1989, Exploration Licence 9/84, Lynchford, Tasmania.	Poltock, R.	Drillholes avail in MRT data set, but dip and az need capturing from tabulated data. Once local to MGA conversion is established, it's prob worth checking coords. Most sample locations are recorded in tables in local grid. Local grid lines and geological interp for northern sheet can be digitised off Encl 1, but south sheet will have to come from 91_3275. Encl 7 (Coupon fact/interp map) might be useful if able to be registered in MGA.	Y	Y	Geol_Nth_89-3033.tif ; Interp_Geol_89_3033.tif	Drilling CRC1-13 Coupon, CRC7 Lynchford: Collars (local coords), sample sheets and assay certs. Hundreds of BC, Rchip and Soil sample sheets and assay certificates. Mineralogical report. Encl 7 - Fact/Interp geol plan possibly unique.
89_3064 - Exploration Licence 30/87 King River, N.W. Tasmania. Report for the Year Ended 15th January, 1990.	Kerr, T.L., Whiting, T., Wilde, A.R.					
90_3076 - Exploration Licence 29/87 - Strahan, N.W. Tasmania Interim Report, December 1989	Wilde, A.R.					
90_3086 - Exploration Licence 47/83, Lynchford Tasmania. Report on Exploration in the Area to be Relinquished 10th March, 1990.	Noonan, D.J.					
90_3152 - Exploration Licence 47/83 Lynchford Tasmania. Progress Report for Year Ended 20 June, 1990.	Noonan, D.J.					
90_3184 - Final Report EL 29/87 Strahan Western Tasmania.	Read, J.J.					
90_3186 - Final Report EL 30/87 King River Western Tasmania	Read, J.J.					
91_3228 - Exploration Licence 47/83 Lynchford Tasmania Progress Report for the Eight Month Period to 10 February, 1991.	Noonan, D.J.					
91_3275 - Exploration Licence 9/84 - Lynchford Progress Report on Exploration Activity March 1991 to July 1991.	Jones, P.A.	Some interesting detailed geological mapping, but might be hard to register and digitise. Digitise geol (Encl 5/6) as well as locations for gridlines and soil (Encl 1/2, 7) and rock chip (Encl 8) samples.	Y	Y	As_Soil_Sht1_91_3275.tif ; As_Soil_Sht2_91_3275.tif ; Coupon_DDH_91-3275-6_0001.jpg ; Coupon_Geol_91_3275.tif ; Geol_Sth_91_3275.tif ; Gold_north_91-3275_0001.jpg ; Gold_RChips_91-3275.tif ; Gold_south_91-3275-2_0001.jpg	Drill logs (CRC1-13, LT-91-1) and assays, Coupon geology prob worth digitising, Geochem assay data and locations (via plan) available.

91_3278 - EL 11/85 Yolande Joint Venture. Annual Report for 12 Months to July 1991	Fitzgerald, F.G., Poltock, R.					
92_3361 - EL 9/84 and EL 8/91 Lynchford Area Western Tasmania Annual Report 1991-1992	Newnham, L.A.	Good summary of previous exploration and discussion of potential.	Y	Y	HCK_Geol_92_3361.jpg	Fig 5 - Harveys Crk Fault Zone is worth digitising for project geology and possible local grid lines.
93_3418 - EL 9/84 Lynchford Area, Western Tasmania. Progress Report and Revised Recommended Drilling Program	Newnham, L.A.	Original report of Goldstream rock chip samples, but location info is plotted on Fig 2 and needs to be digitised. Figures are in local grid and have not been related to AMG.	Y	Y		
93_3438 - Relinquishment Report May 1993	Wallace, D.B.					
93_3442 - Annual Report 1993	Newnham, L.A.	Second report of Goldstream rock chip samples, but this one includes some location descriptions on sample sheets.	Y	Y		Figure 2 - Assay Results are probably worth extracting for digitising. Assay certificates and descriptive sample sheets are included in report
94_3539 - Lynchford EL 47/83 Tasmania-Technical Progress Report for the Period March 1993 to March 1994.	Sharpe, R.					
94_3574 - EL 9/84 Lynchford Area, Annual Report 1993-94	Newnham, L.A.	Twinning of previous RC drilling with core holes showed little correspondence. Author concluded that locations for CRC 3 and CRC10 were swapped.	Y	Y		Drill logs (LYN004-5), assays and inter-p sections (1-5). Surface and sub-surface geology factual and Interpretative (Fig 6) is probably worth digitising.
94_3578 - EL 9/84 Lynchford Western Tasmania-Partial Relinquishment Report.	Newnham, L.A.	The report briefly summarises previous work. No data.	Y	Y		
94_3581 - List of Transparencies of Plans from Portions EL`s 9/66, 10/69, 14/71 and 41/71 relinquished by Goldfields Exploration. Tyndall Project.	Anon					
94_3611 - A List of Transparencies of Plans from EL 31/83, South of Queenstown.	Anon					
94_3620 - List of Transparencies from the Getty-EZ-Lyell Compilation of Central Western Tasmania.	Anon					
94_3622 - A List of Transparencies Plans from the Jukes-Darwin Area.	Anon					
95_3706 - Lynchford EL 47/83 Tasmania. Relinquishment Report.	Lewis, R.					
95_3732 - Annual Report Tasmanian Base Metals. Project EL 2/94 Queen River.	Corlett, S.J., Vicary, M.J.					
95_3740 - A Preliminary Report on Geoelectrochemical Investigations in the Area Zeehan(Tasmania). Area of Investigation Involves Henty River ETA 349, Mt Zeehan ETA 348, Bluestone Creek ETA 344.	Goldberg, I.					
95_3754 - Pasminco Exploration Yolande EL 11/85 Joint Venture Annual and Final Report August 1985-August 1995	Quayle, P.M.					
95_3785 - EL 9/84 Lynchford Area Relinquishment Report October 1995	Newnham, L.A.	Summary of previous exploration but has no new data	Y	Y		
95_3796 - EL 9/84 Lynchford Area Annual Report	Newnham, L.A.	Geochem sampling on "Assay" maps are all available in tabular form in earlier Cyprus (89_3033), Perilya (91_3275) and Goldstream (93_3442) reports.	Y	Y	Coupon_Geology_95-3796_0001.jpg ; Coupon_rkchip_95-3796-2_0001.jpg ; Pages from 95-3796.pdf; Pages from 95-3796-2.pdf	Drill logs (LYN007-10A) and assays, Coupon geology and roads worth digitising from Figure 1
96_3834 - Annual Report 1995/96 Tasmanian Base Metals ELs 102/87, 55/89 and 12/92 Queenstown, Mt Darwin, Queenstown South	Corlett, S.J., Halley, S.W., Vicary, M.J., Wyman, B.					
96_3865 - Annual Report Tasmanian Base Metals Project EL 2/94 Lynchford 1996	Denwer, K.	Comments on Aberfoyle aeromag and 1995 Helimag data being stitched together to give full coverage of the EL. No new data.	y	Y		Relog of Aberfoyle hole LF001 which is prob not inside EL region.
96_3915 - Results of A Core Drilling Programme - Completed April-May 1993, EL 9/84	Newnham, L.A.	Interpretive sections on Figure 8 may be a useful guide to adit sampling.	Y	Y		Drill logs (LYN001-3), assays and sections.
96_3920A - Report on BLEG Drainage Sampling	Duncan, D.McP.					

96_3927A - Preliminary Report on Geoelectrochemical Investigations in the Zeehan Area - EL 14/94 and EL 15/94.	Goldberg, I.					
97_4016 - Annual Report - Lynchford - EL 2/94	Denwer, K., Gregory, D.	No work undertaken in the area covered by EL43/2004	Y	Y		
98_4129 - EL29/96 Cape Sorrell No. 1, First Annual and Final Report for Period from 18 January 1997 to 11 November 1997.	Russell, S.A.J.	Relinquished by Rio Tinto without any exploration being undertaken.	Y	Y		
98_4200 - Annual Report - May 1997-May 1998 - Tasmanian Base Metals Project, EL 2/94 - Lynchford	Stockwell, R.					
99_4318 - Annual Report - EL 5/98 - Queenstown	Harbon, P.G.					
00_4480A - Lynchford Project - Initial Investigations of Davie and 24-28 Anomalies - EL15/1999		No data in main body of report, but the appendix (00_4480A) has rock sample sheets and assay certificates.	Y	Y	Davies_Ck_Geol_00_4480.tif; 2428_Anom_Geol_00_4480.tif	Rock chip location, geology and assays. Some simple geol and workings mapping at Davies Ck and 24-28 showing sample locations.
00_4480A - Lynchford Project - Initial Investigations of Davie and 24-28 Anomalies - EL15/1999	Newnham, L.A.	See above	Y	Y		
01_4597 - Report of Geological Mapping, Rock Chip and Soil Sampling Davie Anomaly-Lynchford Project EL15/1999	Reid, R	Davies Creek (v simple) geological interp plus structural measurements may be useful. Detailed fact map also available for review if necessary. Rock chip and soil sample location data provided in tabulated form in AMG coordinates, although a related NEM coordinate needs to be reviewed to determine significance.	Y	Y	Davies_Ck_Geol_Interp_01_4597.jpg; Davies_Ck_Geol_Fact_01_4597.jpg	Davies Ck Geological mapping. Tabulated rock chip and soil sampling data.
02_4819 - Tasmania - Regional Bulk Sampling - Inter-Office Memorandum	Ellis, P.D.					
03_4836 - EL15/99 Lynchford Area Relinquishment Report	Newnham, L.A.	Regional geophys review - Doesn't have any detailed mapping or sampling.	Y	Y		
03_4912 - Old Mine Plans	Green, D.	Plans for mines believed to be outside area of EL43/2004 - Macquarie, Woody Hill, Chester, North Pieman, Ring River, Jukes, Scamander, Orieco, Dunns, Ringarooma, Red Hills, Souter, Mt Ellen, Lake Dora, Darwin	Y	Y		
06_5363 - EL 9/1984, Lynchford Area, Relinquishment Rehabilitation Proposal	Newnham, L.A.	A very brief outline is given of the proposed rehabilitation	Y	N		
07_5440 - Lynchford Project Tasmania EL2/2005 Annual Progress Report 8/8/2005 to 7/8/2006	Turnbull, C.	Nothing of interest relevant to EL43/2004. The ASTER report makes interesting reading though.	Y	Y		
UR2006_06 - The geochemistry of Tasmanian Devonian-Carboniferous granites and implications for the composition of their source rocks	McClenaghan, M.P.	Nothing obviously relevant	Y	Y		
UR2009_03 - Geology of the southwestern and north?central parts of the Lyell 1:50 000 scale quadrangle	Calver, C.R.	The report was written, mainly in 1990, as a contribution to the explanatory notes for the Lyell 1:50000 scale geological map. Nothing obviously relevant to EL43/2004, although there is discussion about the geology in the area.	Y	Y		
EL 43/2004 Sulphide Creek, Year 2 Annual Report, 05/03/07	Harder, W.M.	drillhole data already provided	Y	NA		Davies drilling DDDH1-3 - No logs or sample sheets, but has analytical reports. Collars from drill plan

Report Date	MRT Report No.	Data Type	Data Format	Capture method	Priority	Comment	Mapinfo Status	Validation
1983	83_2008	Aeromag- netic Interp	Map	Digitise	1	Preliminary Interpretation of Mines Department Aeromag- netic Survey - Figure 1 shows location of anomaly from 1981 aeromag survey.	Need to register map for digitising	
1985	85_2441	Aeromag- netic Interp	Map	Digitise (from Geol_Interp_85_2441.jpg)	2	Figure 8 - "Interpretation of Geology and Geochemistry" has some potentially useful geochemical anomalies high- lighted and shows an area of magnetic anomalism, pos- sibly from the 1981 survey.		
1989	89_3033	Drilling	Sample Sheets and Assay Cer- tificates	Collar Az and Dip and Assay data entry	1	Collars in local coords - CRC1-13 Coupon, CRC7 Lynchford. Drillholes avail in MRT data set. Once local to MGA conversion is established, it's prob worth checking coords.	Collars with Azimuth, Dip and Depth available in MRT drilling dataset.	
1991	91_3275	Drilling	Drill Logs and Assay certifi- cates	Location and Assay data entry	1	Drill logs (CRC1-13, LT-91-1) and assays. Geochem as- say data and locations (via plan) available.	Collars with Azimuth, Dip and Depth available in MRT drilling dataset.	
1994	94_3574	Drilling	Drill Logs and Assay certifi- cates	Location and Assay data entry	1	Drill logs (LYN004-5), assays and interp sections (1-5). Twinning of previous RC drilling with core holes showed little correspondence. Author concluded that locations for CRC 3 and CRC10 were swapped.	Collars with Azimuth, Dip and Depth available in MRT drilling dataset.	
1995	95_3796	Drilling	Drill Logs and Assay certifi- cates	Location and Assay data entry	1	Drill logs (LYN007-10A) and assays,	Collars with Depth available in MRT drilling dataset.	
1996	96_3915	Drilling	Drill Logs and Assay certifi- cates	Location and Assay data entry		Drill logs (LYN001-3), assays and sections.	Collars with Depth available in MRT drilling dataset.	
2007	na	Drilling	Analytical re- ports and Maps	Assay data entry	1	Davies drilling DDDH1-3 - No logs or sample sheets, but has analytical reports. Drillhole data already provided by ST in spreadsheet.		
1983	83_2054	Geology	Map	Digitise	3			
1985	85_2460	Geology	Map	Digitise (from Ri- nadeena_Geol_Interp_85_246 0.tif)	1	Rinadeena grid - Fact map available, but interp map recommended for digitising.	Need to register map for digitising	
1987	87_2672	Geology	Map	Digitise (from Geol_Interp_87- 2672.jpg)	2		Need to register map for digitising	
1989	89_3033	Geology	Map	Digitise (from Geol_Nth_89- 3033.tif; In- terp_Geol_89_3033.tif)	1	Local grid lines and geological interp for northern sheet can be digitised off Encl 1, but south sheet will have to- come from 91_3275. . Encl 7 (Coupon fact/interp map) might be useful if able to be registered in MGA.	Need to register maps for digitis- ing	
1991	91_3275	Geology	Map	Digitise (from Cou- pon_Geol_91_3275.tif; Geol_Sth_91_3275.tif)	1	Some interesting detailed geological mapping, but might be hard to register and digitise. Digitise Coupon geol (Encl 5/6) as well as locations for local gridlines	Need to register maps for digitis- ing	
1992	92_3361	Geology	Map	Digitise (from HCK_Geol_92_3361.jpg)	1	Fig 5 - Harveys Crk Fault Zone is worth digitising for pro- ject geology and possible local grid lines.	Need to register map for digitising	

1994	94_3574	Geology	Map	Digitise	2	Coupon - Surface and subsurface geology factual and Interpretative (Fig 6) is probably worth digitising.	Need to register map for digitising?
1995	95_3796	Geology	Map	Digitise	1	Coupon geology and roads worth digitising from Figure 1	Need to register map for digitising?
2000	00_4480	Geology	Map	Digitise (from Davies_Ck_Geol_00_4480.tif; 2428_Anom_Geol_00_4480.tif)	1	Some simple geol and workings mapping at Davies Ck and 24-28 showing sample locations.	Need to register map for digitising
2001	01_4597	Geology	Map	Digitise (from Davies_Ck_Geol_Interp_01_4597.jpg)	1	Davies Creek (v simple) geological interp plus structural measurements may be useful. Detailed fact map also available for review if necessary.	Need to register map for digitising
1985	85_2460	Ground mag	Profiles and Map	Digitise	1	Rinadeena grid within EL - Following up 1981 aeromag anomalies.	Need to register maps for digitising
1986	86_2582	Ground mag	Profiles and Map	na		Appendix contains Mitre Geophysics PL report on 4 ground mag traverses over northern most mag anomaly picked up in Govt Dighem survey. "Significant Exploration Features" figure of interest, but a later version is available in 87_2672.	
1987	87_2672	Ground mag local grid lines	Map	Digitise (from Sign_Expl_Feat_87-2672.tif)	1	Fig 1 for local grid and "significant exploration" features (including mag anom locn). Use grid lines to convert local sample locations to AMG.	Need to register maps for digitising
1985	85_2441	Panned Gravel Samples	Map	Digitise locations (from Prev_Sampling1_85_2441.tif; Prev_Sampling2_85_2441.tif; New_Samples_2441.jpg)	1	Figure 1 shows all of the historic sampling mentioned in the report, while Figure 7 shows all the "current" sampling. Appears likely that the sampling is already captured in the MRT dataset, but probably worth registering the figure to check.	
1981	81_1651	Petrology	Document	na	3		
1986	85_2461	Petrology	Document	na	3		
1989	89_3033	Petrology	Document	na	3	Mineralogical report.	
1981	81_1651	Rock Samples	Sample Sheets	Assay data entry	2	Very hard to read the sample sheets, so hopefully the figure in 85_2441 will do for locations.	
1983	83_2008	Rock Samples	Sample Sheets	Assay data entry	2		
1983	83_2054	Rock Samples	Sample Sheets	Assay data entry. Possibly minor location data entry.	2	Apparently some of the sampling has not been previously reported, but it's hard to tell at first glance which ones they are. Most of the samples sheets are the hard to read ones from 81_1651.	
1985	85_2441	Rock Samples	Map	Digitise locations (from Prev_Sampling1_85_2441.tif; Prev_Sampling2_85_2441.tif; New_Samples_2441.jpg)	1	Figure 1 shows all of the historic sampling mentioned in the report, while Figure 7 shows all the "current" sampling.	Need to register maps for digitising
1985	85_2460	Rock Samples	Sample Sheets and Maps	Location and Assay data entry	1	Rinadeena grid	

1987	87_2672	Rock Samples	Sample Sheets and Maps	Location and Assay data entry	1	Sampling undertaken in local grid, although with good descriptions and tabulated coordinates. Probably need adit maps from another report to assist with locating underground samples.	
1989	89_3033	Rock Samples	Sample Sheets and Assay Certificates	Location and Assay data entry	1	Most sample locations are recorded in tables in local grid, but conversion should be able to be calculated from grid lines on geology map.	
1991	91_3275	Rock Samples	Sample Sheets and Maps	Assay data entry. Digitise locations (from Gold_RChips_91-3275.tif)	1		Need to register map for digitising
1993	93_3418	Rock Samples	Sample Sheets and Maps	Assay data entry and digitising from (Coupon_RChips_93_3418.jpg)	1	Original report of Goldstream rock chip samples, but location info is only available graphically and needs to be digitised. Figures are in local grid and have not been related to AMG, but this should be able to be remedied.	Need to register map for digitising
1993	93_3442	Rock Samples	Sample Sheets and Maps	Possible manual relocation of existing positions.	1	Second report of Goldstream rock chip samples, but this one includes some location descriptions on sample sheets. Assay certificates and descriptive sample sheets are included in report Figure 2 - might be worth extracting for digitising of any missing sample locations.	
1995	95_3796	Rock Samples	Map	na		Geochem sampling on "Assay" maps are all available in tabular form in earlier Cyprus (89_3033), Perilya (91_3275) and Goldstream (93_3442) reports.	
2000	00_4480	Rock Samples	Sample Sheets and Assay Certificates	Location and Assay data entry		Rock chip location and assays. Locations may have to come off geology maps.	
2001	01_4597	Rock Samples	Tables			Location data provided in tabulated form in AMG coordinates, although a related NEM coordinate needs to be reviewed to determine significance.	
1985	85_2460	Auger (Soil)	Sample Sheets and Maps	Location and Assay data entry	1	Rinadeena grid	
1987	87_2672	Soil Samples	Sample Sheets and Maps	Location and Assay data entry	1	Sampling undertaken in local grid, although with good descriptions and tabulated coordinates	
1989	89_3033	Soil Samples	Sample Sheets and Assay Certificates	Location and Assay data entry	1	Most sample locations are recorded in tables in local grid, but conversion should be able to be calculated from grid lines on geology map.	
1991	91_3275	Soil Samples	Sample Sheets and Maps	Assay data entry. Digitise locations (from As_Soil_Sht1_91_3275.tif; As_Soil_Sht2_91_3275.tif)	1	Maps registered and ready for digitising.	Locations being digitised.
2001	01_4597	Soil Samples	Tables			Location data provided in tabulated form in AMG coordinates, although a related NEM coordinate needs to be reviewed to determine significance.	
1981	81_1651	Stream Sediments	Sample Sheets	Assay data entry	2	Very hard to read the sample sheets, so hopefully the figure in 85_2441 will do for locations.	

1983	83_2008	Stream Sediments	Sample Sheets	na (check MRT)	2	Appears likely that the sampling is already captured in the MRT dataset, but probably check against sample sheets.	19 samples exist in MRT Ssed dataset: 43825-32, 43834-8, 43840-1, 43843-57.	
1983	83_2054	Stream Sediments	Sample Sheets	Assay data entry. Possibly minor location data entry.	2	Apparently some of the sampling has not been previously reported, but it's hard to tell at first glance which ones they are. Most of the samples sheets are the hard to read ones from 81_1651.	6 samples exist in MRT Ssed dataset: 43521-5 43537.	
1985	85_2441	Stream Sediments	Map	Digitise locations (from Prev_Sampling1_85_2441.tif; Prev_Sampling2_85_2441.tif; New_Samples_2441.jpg)	1	Figure 1 shows all of the historic sampling mentioned in the report, while Figure 7 shows all the "current" sampling. Appears likely that the sampling is already captured in the MRT dataset, but probably worth registering the figure to check.	Need to register map for possible digitising	
1985	85_2460	Stream Sediments	Sample Sheets and Maps	Location and Assay data entry	1	Rinadeena grid	9 samples exist in MRT Ssed dataset: 64109-10, 64121-3, 64125, 64129, 64154, 64156.	Quick visual check shows that the assays seem ok, but the coordinates don't match the sample sheet.
1987	87_2672	Stream Sediments	Sample Sheets and Maps	Location and Assay data entry	1	Good descriptions and tabulated coordinates		
1989	89_3024	Stream Sediments	Sample Sheets and Maps	NR	1	Report is actually on the Cyprus tenement to the north, but two "orientation" rock samples were taken from the Coupon deposit. Rock chip sample sheets and assays.	Both samples, 286751-2, are captured in MRT SSed dataset.	Both locations and a sample ID had to be corrected to match reported data.
1981	81_1651	Tailings Samples	Sample Sheets	Assay data entry	2	Very hard to read the sample sheets, so hopefully the figure in 85_2441 will do for locations.		
1983	83_2008	Tailings Samples	Sample Sheets	na (check MRT)	2	Appears likely that the sampling is already captured in the MRT dataset, but probably check against sample sheets.		
1985	85_2441	Tailings Samples	Map	Digitise locations (from Prev_Sampling1_85_2441.tif; Prev_Sampling2_85_2441.tif; New_Samples_2441.jpg)	1	Figure 1 shows all of the historic sampling mentioned in the report, while Figure 7 shows all the "current" sampling.	Need to register maps for digitising	
1987	87_2672	Wacker BC Samples	Sample Sheets and Maps	Location and Assay data entry	1	Sampling undertaken in local grid, although with good descriptions and tabulated coordinates		
1989	89_3033	Wacker BC Samples	Sample Sheets and Assay Certificates	Location and Assay data entry	1	Most sample locations are recorded in tables in local grid, but conversion should be able to be calculated from grid lines on geology map.		
1997	96_3916	Workings	Map	na		Interpretive sections on Figure 8 may be a useful guide to adit sampling.		

Appendix 2
Details of Relevant Airborne Surveys

Mineral Resources Tasmania - Airborne Survey Details

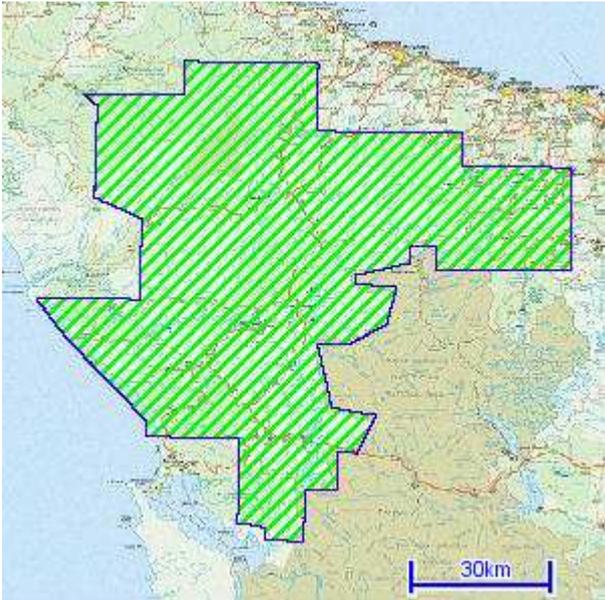
Survey Name	2001 West Tasmania (WTRMP Area C)
State	TAS
Operator	Tasmanian Geological Survey
Contractor	Geo Instruments Pty Ltd
Processor	Geo Instruments Pty Ltd
Custodian	Tasmanian Geological Survey
Start Date	05 January 2001
End Date	22 March 2001
Total Km	43535
Survey Type	Regional
Vessel Name	VH-JWF Bell 206B3
Vessel Type	Helicopter
On/off shore	Onshore
Crystal Volume (l)	16.800
Upward Crystal Volume (l)	
Mean AGL (m)	76.000
Description	
Data Sampled	Elevation, Magnetics, Radiometrics
Digital Data Sampled	Elevation, Magnetics, Radiometrics

Tie Spacing Tie Numbers

2000m 70021-71051

Traverse Direction Spacing Numbers

90 200m 10011-17375

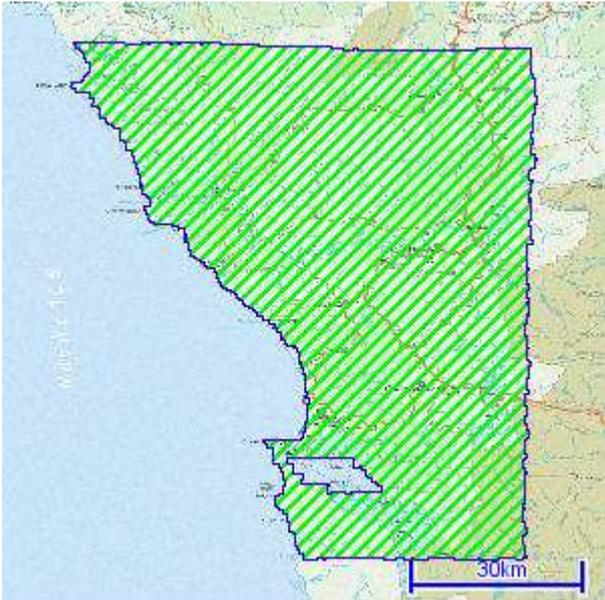


Mineral Resources Tasmania - Airborne Survey Details

Survey Name	1981 West Tasmania
State	TAS
Operator	Tasmanian Geological Survey
Contractor	Geoex
Processor	Geoex
Custodian	Tasmanian Geological Survey
Start Date	22 May 1981
End Date	18 March 1982
Total Km	14710
Survey Type	Regional
Vessel Name	VH-RKZ, VH-ESE Cessna
Vessel Type	Plane
On/off shore	Onshore
Crystal Volume (l)	
Upward Crystal Volume (l)	
Mean AGL (m)	197.000
Description	Precise levelled version available.
Data Sampled	Magnetics
Digital Data Sampled	Magnetics

Tie Spacing Tie Numbers
10000m 9000-10000

Traverse Direction Spacing Numbers
90 500m 0-8900



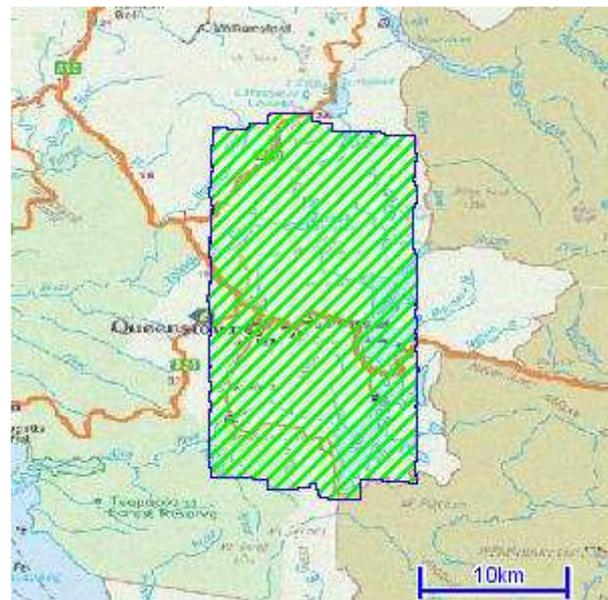
Mineral Resources Tasmania - Airborne Survey Details

Survey Name	2003 Queenstown Area Hymap Survey
State	TAS
Operator	CSIRO Exploration and Mining
Contractor	HyVista Corporation
Processor	CSIRO Exploration and Mining Also some by HyVista Corporation
Custodian	CSIRO Exploration and Mining
Start Date	23 February 2003
End Date	23 February 2003
Total Km	245
Survey Type	Detailed
Vessel Name	
Vessel Type	Plane
On/off shore	Onshore
Crystal Volume (l)	
Upward Crystal Volume (l)	
Mean AGL (m)	-9999.000
Description	126 bands, spectral range 40-2500nm. MRT can distribute basic data only. For processed data contact CSIRO. Flown at 2 500 metres barometric altitude.
Data Sampled	Hyperspectral
Digital Data Sampled	Hyperspectral

Traverse Direction Spacing Numbers

180 2500m N/A

No Related Reports were found



Appendix 3

Selected Maps from Open File Reports

Rinadeena Mapping Trikon (TCR 85_2460)
Coupon Summary Map(TCR 95_3796)

Legend

- Mineral Occurrence
- Airborne Magnetic Contour
- Licence Boundary

-LEGEND-

D	Interbedded fine grained quartz sandstone and mudstone (Corralle of Ball Sals).
Df	Dominantly fine grained quartz sandstone sequences. (Corralle of Florence Quartzite).
S	Dominantly grey mudstone, siltstone and some fine grained fine to coarse grained quartz sandstone, minor mudstone and conglomerates. (Corralle of Croby Quartzite).
Sa	Dominantly interbedded grey shale, siltstone with some impure limestone horizons.
Sc	Limestone and impure limestone.
O	Quartz sandstone with minor siltstone.
Og	Dominantly siliceous conglomerate.
Oo	Acid to intermediate volcanics and associated sediments.
Oc	

Rinodendro

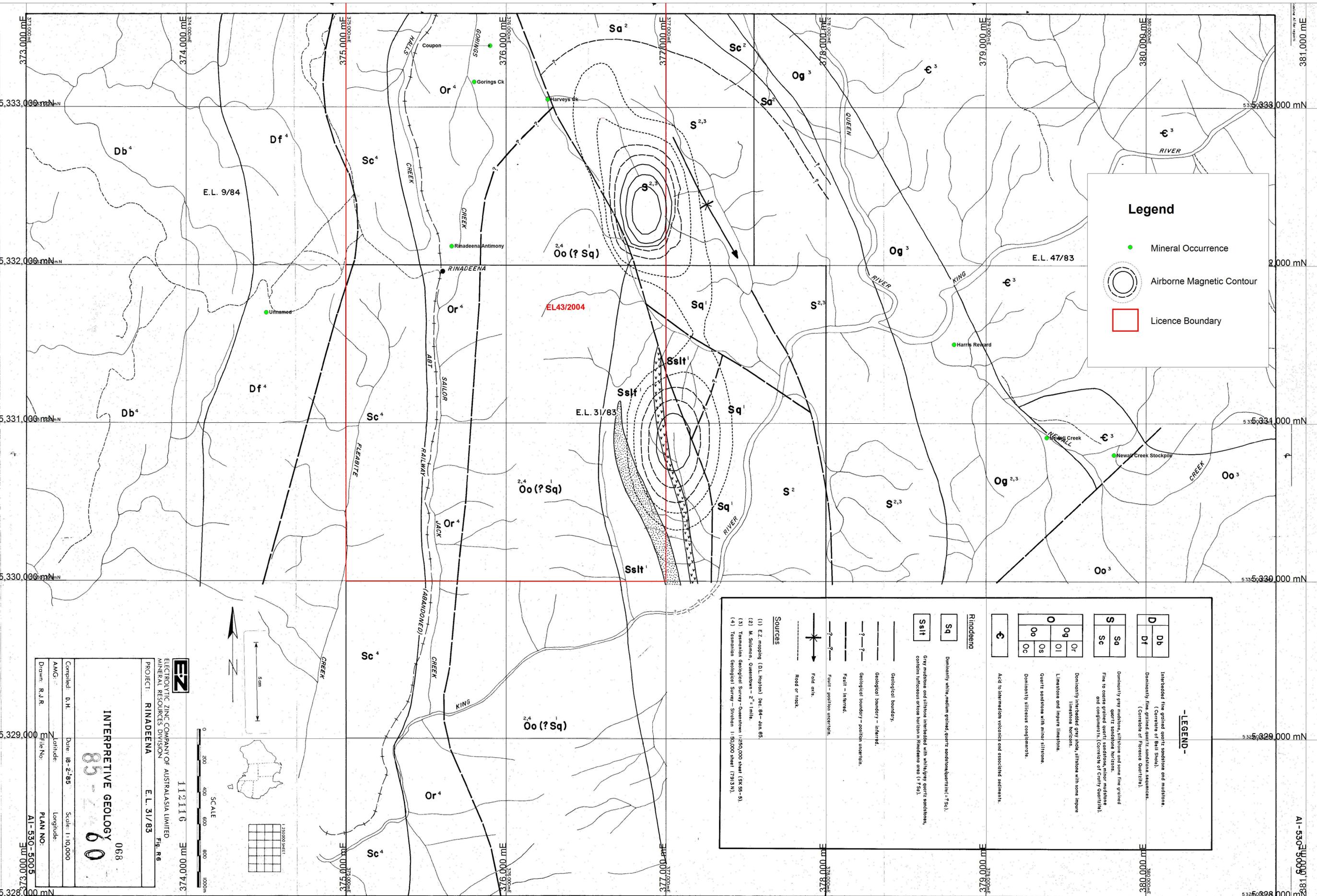
- Sq** Dominantly white medium grained quartz sandstone/quartzite. (F.Sq).
- Sq'** Grey mudstone and siltstone interbedded with white/grey quartz sandstone, contains turbidite or flow horizon in Rinodendro area. (F.Sq).
- SsIt**

Sources

- (1) E.Z. mapping (D.L. Hooper) Dec 84 - Jan 85.
- (2) M. Solomon, Queensland - 2° x 1 mile.
- (3) Tasmannian Geological Survey - Queensland 1:250,000 sheet (SK 55-5).
- (4) Tasmannian Geological Survey - Strahan 1:50,000 sheet (7913 N1).

Geological Features:

- Geological boundary.
- Geological boundary - Inferred.
- Geological boundary - position uncertain.
- Fault - Inferred.
- Fault - position uncertain.
- Fold axis.
- Road or track.



EN
ELECTROLYTIC ZINC COMPANY OF AUSTRALASIA LIMITED
MINERAL RESOURCES DIVISION
PROJECT: RINADEENA E.L. 31/83
Fig. R8

INTERPRETIVE GEOLOGY 068
85-2160

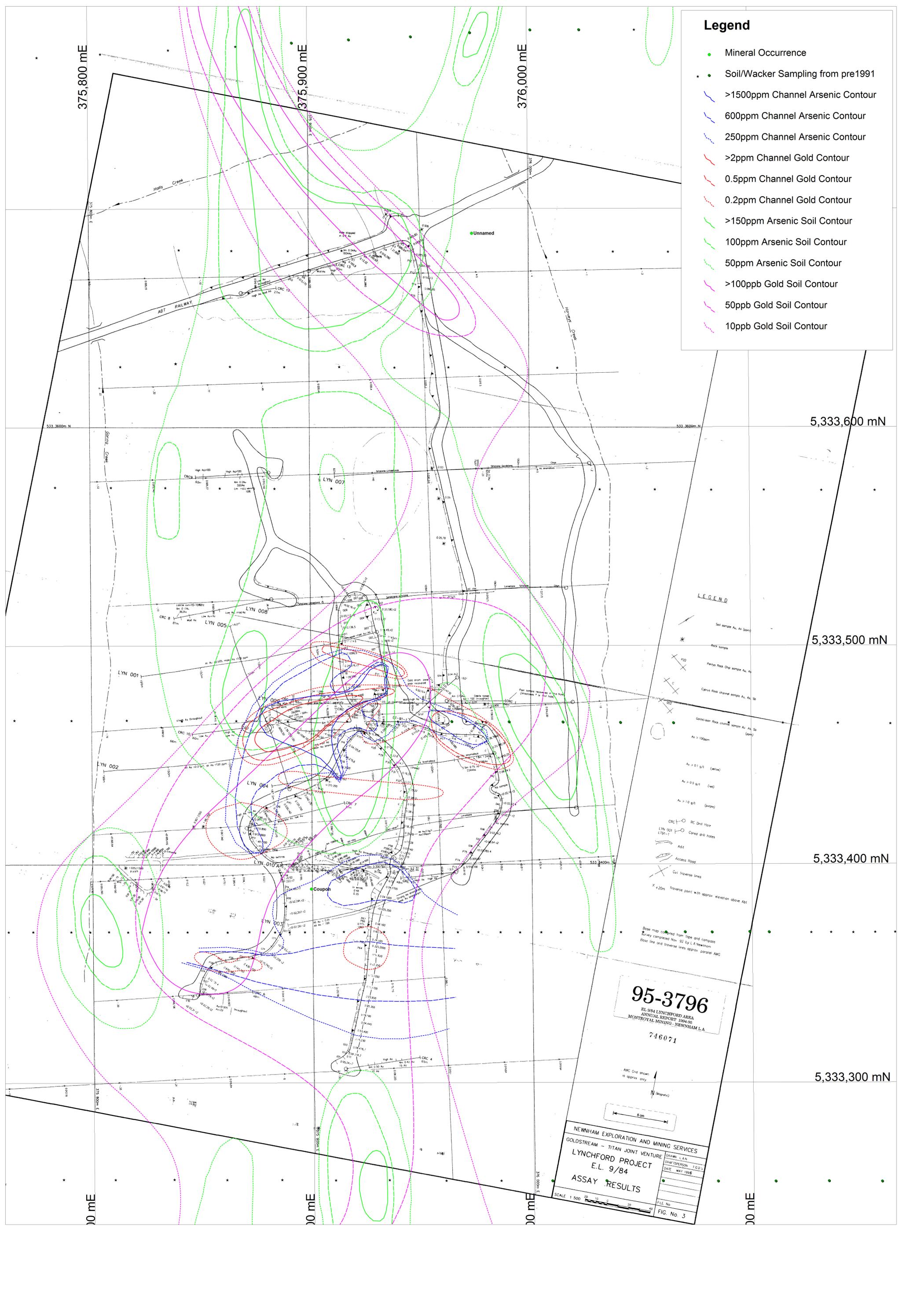
Compiled: D.H. Date: 18-2-85 Scale: 1:10,000
AMC: Longitude:
Drawn: R.J.R. PLAN NO: AI-530-5005
File No: 31/83-5005

1:250,000 SHEET
SCALE
0 200 400 600 800 1000m

AI-530-5005-1881

Legend

- Mineral Occurrence
- * Soil/Wacker Sampling from pre1991
- >1500ppm Channel Arsenic Contour
- 600ppm Channel Arsenic Contour
- 250ppm Channel Arsenic Contour
- >2ppm Channel Gold Contour
- 0.5ppm Channel Gold Contour
- 0.2ppm Channel Gold Contour
- >150ppm Arsenic Soil Contour
- 100ppm Arsenic Soil Contour
- 50ppm Arsenic Soil Contour
- >100ppb Gold Soil Contour
- 50ppb Gold Soil Contour
- 10ppb Gold Soil Contour



LEGEND

- Soil sample Au, As (ppm)
 - * Rock sample
 - ✕ Petro Rock Chip sample Au, As
 - ✕ Cyanus Rock channel sample Au, As
 - Gold stream Rock channel sample Au, As (ppm)
 - As > 100ppm
 - Au > 0.1 g/t (yellow)
 - Au > 0.3 g/t (red)
 - Au > 1.0 g/t (orange)
 - RC Drill Hole
 - Core drill holes
 - Adit
 - Access Road
 - Cui traverse lines
 - ✕ +20m traverse point with approx elevation above ABEI
- Base map compiled from logs and compass
Survey completed Nov. 92 by L.A. Newham
Base line and traverse lines approx parallel AMC

95-3796

EL 984 LYNCHFORD AREA
ANNUAL REPORT 1984-85
MONTROYAL MINING - NEWNHAM L.A.

746071

AMC Grid shown
is approx only



NEWNHAM EXPLORATION AND MINING SERVICES
GOLDSTREAM - TITAN JOINT VENTURE
LYNCHFORD PROJECT
E.L. 9/84
ASSAY RESULTS

DATE	1984
DATE	MAY 1985
FILE No.	
FIG. No.	3

SCALE 1:500

5,333,600 mN

5,333,500 mN

5,333,400 mN

5,333,300 mN

375,800 mE

375,900 mE

376,000 mE

00 mE

00 mE

00 mE

00 mE

Glossary

Abbreviation	Explanation & Units of Measure
cm	Centimetre - 100 centimetres = 1 metre
g	Gram - 1000 grams = 1 kilogram
g/t	Gram/tonne, 1g/t = 1ppm
km	Kilometre - 1 kilometre = 1000metres
m	Metre
ma	Million years ago
oz	Troy ounce - 12 troy ounces = 1 Avoirdupois pound (lb), 1oz = 31.103477g
sq.km.or km ²	Square kilometre - an area equal to 1000 metres by 1000 metres
t	Tonne - a metric tonne, 1 tonne = 1000 kilograms
ppm	Parts per million, 1ppm = 1 g/t
ppb	Parts per billion, 1000ppb = 1 ppm
Ag	Silver
Au	Gold
Cu	Copper
Fe	Iron
Ir	Iridium (a platinum group element)
Ni	Nickel
Os	Osmium (a platinum group element)
Pb	Lead
Sn	Tin
W	Tungsten
Zn	Zinc
Technical Name	Explanation of Term
Adit	Horizontal passage from the surface into a mine.
Aeromagnetic survey	An aerial survey made for the purpose of recording magnetic characteristics of rocks.
Allochthonous	A block of rock (any scale) transported to its current position usually by tectonic forces
Alluvial	Deposited by a stream or river. Said of a placer deposit formed by the action of running water.
Alteration	Change in the mineralogical and chemical composition of a rock, generally produced by hydrothermal fluids or by weathering.
Amphibole	A calcium, iron, magnesium silicate mineral usually dark green
Andesite	A dark coloured, fine-grained, usually extrusive rock of intermediate composition. The fine-grained equivalent to gabbro.
Ankerite	An iron, magnesium carbonate mineral
Anomaly	Value higher or lower than the expected norm.
Archaean	Geological era >2400 million years old
Arsenic	A common element associated with gold; elemental analysis used as a pathfinder for gold mineralisation
Auriferous	Gold bearing.
Autochthonous	A block of rock (any scale) that was formed in its current position and was not transported
Basalt/basaltic	A fine-grained dark extrusive volcanic rock with a low silica content.
Base metal	Generally a non-ferrous metal inferior in value to the precious metals; usually and especially copper, lead, zinc and nickel.
Bifurcating	A single structure which splits into two
Biotite	A rock forming mineral of the ring silicate group
Breccia	A coarse-grained rock consisting of angular broken rock fragments held together by a fine-grained matrix, distinct from conglomerate.

Technical Name	Explanation of Term
Brownfield	Of exploration; generally an area with previous work undertaken, often close to a mine or deposit
Calc-alkaline	Calcium-rich feldspar igneous rock
Cambrian (Cambro-)	A geological time period from 435 to 395ma
Carbonaceous	Containing carbon - often of organic origin.
Carboniferous	A geological time period ranging from 345 and 280 million years ago.
Chalcopyrite	A sulphide of copper and iron.
Channel sample	A sample obtained by cutting a rectangular channel across a rock face: more representative than a chip sample or a grab sample.
Chert	A quartz-rich sedimentary rock formed by chemical precipitation
Chlorite (-ic)	Iron rich alteration mineral
Clastic	of sediments derived by erosion of landmasses
Cleavage	A rock fabric of fine fractures imparted during deformation
Colluvial (-ium)	A general term applied to loose and incoherent deposits usually at the foot of a slope.
Complex	A stratigraphic unit that includes a mass of structurally complicated rocks.
Conformable	One package of sediments lying on top of another with no discernible difference in bedding angles
Conglomerate	A sedimentary rock formed by the cementing together of rounded, water-worn pebbles, distinct from breccia.
Craton	A major structural unit of the Earth's crust characterised by a large stable mass of crystalline rock
Detection limits	In laboratory analysis the lowest and highest level at which an element concentration can be accurately measured
Devonian	A geological time period from approximately 410 to 345 million years ago.
Dip	The angle that a stratum or planer feature such as a fault makes with the horizontal, measured perpendicular to the strike and in the vertical plane.
Disseminated	Descriptive of mineral grains which are scattered throughout the host rock.
Dolerite	An igneous iron-rich rock usually found as dykes
Dunite	An igneous ultramafic rock composed 90% of olivine minerals
Dyke	A tabular igneous intrusion which cuts across the bedding or other planer structure in the enclosing rock.
Epithermal	A deposit formed by low temperature hydrothermal fluids at shallow depths in the earth's crust; associated with volcanic rocks
Evaporitic	Relating to minerals form from evaporation of shallow seas and lakes e.g. salt, gypsum
Exposure	A place where rocks can be seen in situ
Facing	Used to describe which way the sedimentary rocks are younging
Fault bounded	A group of rocks that are constrained by geological faults
Feldspar	A common group of aluminium silicate minerals.
Felsic	Igneous rock composed mainly of light coloured minerals like quartz and feldspar (opposite of mafic; synonymous with acid); relatively high in silica and alumina and low in iron and magnesium.
Fissure vein	A cleft or crack in solid rock, commonly filled with mineral matter different from the enclosing walls.
Fluviatile	Of sediments deposited within a river system and its flood plain
Fold belt	A somewhat linear or curvilinear group of rocks, of sub-continental scale, that have suffered a common history of deformation (folding) and other geological events, such as mineralisation.
Formation	A (named) succession of sedimentary beds having some common characteristics.
Gabbro	A mafic intrusive igneous rock.
Galena	Lead sulphur mineral
Garnet	A calcium, iron, magnesium silicate mineral with different extra elements producing different colours
Geochemical sampling	Systematic collection of rock or soil samples in order to study their chemistry.
Geochemical survey	A systematic study of the variation of chemical elements in rocks or soils.

Technical Name	Explanation of Term
Geochemically anomalous	An area having elevated levels of specified elements in rocks or soils.
Geophysics	Study of the earth by quantitative methods.
Geoscientific	A term used to describe a range of disciplines related to the study of the earth
Geosynclinal	Relating to a major structural and sedimentological unit of the Earth's crust which exhibits substantial deformation
Glacial deposits	Accumulation and deposition of debris associated with glacier movements
Glaciomarine	A sediment derived from glacial deposits formed offshore
Gondwana	A supercontinent that existed in the Mesozoic Era
Graben	A downthrown block between faults
Grade	Average quantity of ore or metal in a specified quantity of rock.
Granite (-ic)	Course-grained felsic igneous rock containing quartz and feldspar.
Granulite	Usually a high grade metamorphic rock with a granular texture
Greenfield	Of exploration; generally were there has been no previous work or only very minor amounts
Greenschist	A moderate to low grade of regional metamorphism, usually involves the formation of green chlorite
Ground EM	An electromagnetic (EM) ground based geophysical method for detecting sulphide mineral accumulations
Ground magnetic survey	Surface geophysical survey investigating variations in the earth's magnetic field intensity.
Group	The formal stratigraphic unit next in rank above Formation. A Group contains two or more associated Formations with significant features in common.
Hydrothermal	Of, or pertaining to, heated waters which transport minerals in solution.
Igneous	Rocks formed from solidification of molten material either at surface (volcanic) or at depth (intrusive).
Induced Polarisation ("IP")	A surface electrical geophysical surveying method.
Inlier	A collection of older rocks (or a region) surrounded by a much younger sequence of rocks
Intermediate	Descriptive of igneous rocks lying midway between acid and basic (or felsic and mafic) in composition
Intrusive	An igneous rock mass emplaced in a largely molten state within surrounding older rock.
Island Arc	A chain of islands formed by volcanic activity related to subduction
Isoclinally	Of a fold where the two fold limbs are strongly deformed to be parallel
Jurassic	A time period from approximately 205 to 141 million years ago.
Limestones	Calcium carbonate-rich sedimentary rocks
Lithological competency contrast	Packages of rocks that display different physical properties when deformed; usually associated with structurally controlled deposits
Lithology (-ies)	The same as rock type, the description of rocks.
Lode	Aggregate of minerals in a mineral deposit.
Mafic	Igneous rocks with dark colouration due to high magnesium and iron content (opposite of felsic; synonymous with basic.
Magma chambers	Cavernous area formed and filled by molten rock deep within the earth
Magnesite	Magnesium carbonate mineral (listed as MS on the included maps)
Magnetite	An iron oxide mineral that is magnetic
Mesoproterozoic	A geological era from 1000 to 1600ma
Meta-	A prefix indicating that the rock-type has been metamorphosed
Metalliferous	Of or pertaining to metals; metal-rich or metal-bearing.
Mineral occurrence	An existence of a mineral accumulation; can range in size from a small solitary vein to a large mine
Mining lease ("ML")	A tenement on which mining may take place.
Mudstone	A fine grained sedimentary rock in which the proportion of clay and silt are approximately equal.
Neoproterozoic	A geological era from 570 to 1000ma
Obduction	A process that causes large blocks of rocks (many kms) to be scrapped off a subsiding geological plate (from subduction) and welded on to the opposite plate

Technical Name	Explanation of Term
Olivine	A calcium, iron, magnesium silicate
Ophiolites	Iron and magnesium-rich rocks formed on the seafloor and magma chambers, and then caught up in subduction
Ordovician	A geological time period from 500 to 435ma
Orogeny	A major phase of upheaval in the earth's crust
Ounce (oz)	Refers here to a troy ounce which is a unit of measure for precious metals, there are 12 troy ounces to one avoirdupois pound
Outcrop	Rock that comes to surface; can be covered by unconsolidated material and not visible
Palaeo-	A combining form meaning old or ancient.
Palaeoproterozoic	A geological subdivision of the Proterozoic era 1800Ma to 2400Ma
Palaeozoic	A geological era from 570 to 250ma
Palladium	A precious metal usually associated with ultramafic rocks (a platinum group element)
Pelite	A metamorphosed fine grained siltstone or mudstone
Permian	A time period from approximately 280 to 248 million years ago.
Permo-Carboniferous	Strata not differentiated between the Permian and Carboniferous systems, particularly in regions where there is no conspicuous stratigraphic break and fossils are transitional.
Phanerozoic	Part of geological time represented by rocks in which the evidence of life is abundant i.e. from 540Ma to present day
Phyllite	A metamorphosed fine grained siltstone or mudstone usually with a strong cleavage
Placer deposit	River derived sediment rich in economic minerals e.g. gold, diamonds
Platinum	A precious metal usually associated with ultramafic rocks
Platinum Group Elements (PGE)	A group of rare and precious metals; includes platinum, palladium, rhodium, ruthenium, osmium and iridium
Platinum Group Minerals (PGM)	Minerals containing platinum group elements
Pluton	A high level, cylindrical mass of granitic rock which was emplaced at low temperature in a near solid state.
Polymetallic	A number of different metallic species, applied to a vein or other type of deposit.
Porphyry (-itic)	An igneous rock in which large crystals ("phenocrysts") are scattered through a matrix of smaller crystals ("groundmass"); rocks displaying such textures.
Precious metals	Includes gold, silver and the platinum group metals.
Proterozoic	A geological eon from 570 to 2500ma
Province	A geological region with a common theme
Pyrite	Common iron sulphide mineral.
Pyroxene	A calcium, iron, magnesium silicate
Pyroxenite	An igneous ultramafic rock composed mainly of pyroxene minerals
Pyrrhotite	A magnetic iron sulphide mineral
Quartz	A mineral composed of silicon and oxygen.
RC Drilling	Reverse Circulation Drilling - A percussion drilling technique in which the cuttings are recovered up the inside of the drill rods to minimize contamination from the wall of the hole.
Radiometric Data	Data that measures the concentrations of certain different radioactive isotopes found within rocks; usually an aerial survey
Regional metamorphism	Large scale alteration of existing rocks by fluids generated by being buried, heated and deformed
Reserve	The economically mineable part of a resource.
Resource	An estimate of the total amount of a commodity or mineral in a given place, province, country etc.
Rhyolite	An acid igneous extrusive rock
Rifting	Splitting and separation of very large landmasses thro' geological forces
Rock chip sampling	Obtaining a sample, generally for assay, by breaking chips off a rock face.
Schist	Regionally metamorphosed rock characterised by parallel arrangement of mineral constituents

Technical Name	Explanation of Term
Sericite	A fine grained form of mica formed by the chemical alteration of other minerals.
Serpentinite	An ultramafic rock that has been wholly altered to serpentine mineral
Shaft	A vertical or steeply-inclined excavation used for access to a mine.
Shale	A very fine grained clastic rock
Silicic	Said of a silica rich igneous rock or magma.
Silicified	The introduction of, or replacement by, silica, which may replace existing minerals
Siltstone	Sedimentary rock composed of silt-sized particles.
Silurian (Siluro-)	A geological time period from 570 to 500ma
Sinistral	Used to describe apparent fault movement in this case to the left
Sinter	Silica deposited by hot springs
Skarn	Metamorphosed calcareous sediment into which silica and other elements, often including metals, have been introduced from an adjoining intrusive body.
Soil geochemistry	A systematic sampling and chemical analysis of soils.
Sphalerite	A sulphide mineral of zinc and iron, the main ore mineral of zinc.
Splay	A subsidiary fault that splits off from a main fault
Stratiform	Monominerallic layers usually parallel to bedding and sediment deposition
Stratigraphy (-ic)	The study of stratified rocks and the rock beds relationships
Stratotectonic	A unique combination of stratigraphy and structural history for a particular large section of rock mass
Stream sediment geochemistry	Systematic sampling and chemical analysis of sediments within drainage channels.
Strike	Trend or direction of rock strata in a horizontal plane; to extend in that direction.
Structurally controlled	A general term for geological features formed by faulting and/or deformation
Structure	A general term used to describe a linear feature e.g. a vein, fault, dyke, fissure
Subduction zone	A region where oceanic crust descends into the Earth's mantle.
Suite	A particular arrangement of associated rock types
Sulphide	A mineral compound characterised by the linkage of sulphur with metal.
Swamping'	An image effect on a geophysical map whereby a large and intense magnetic anomaly masks subtle geological detail on the surrounding imaged data
Syncline	A basin shaped fold in the rocks
Syn depositional fault	A fault penetrating deep into the earth that is moving whilst sedimentation is going on; often related to orebody formation
Synvolcanic	Movement of a fault during volcanic activity
Tectonic	General term descriptive of all movement of the Earth's crust caused by directed pressures.
Tectonic suture	A linear feature or zone that marks the welded junction of two geological plates (can be terranes)
Tenement	A land use instrument issued by state governments for regulation of mineral exploration and mining.
Terrane	A term to denote a group of formations with a linked heritage
Tertiary	A geological time period between 65 and 2 million years ago.
Tholeiite	A type of basalt of distinct mineral composition
Thrust stacking	A sequence of shallow dipping faults overlying each other
Triassic	A time period from approximately 251 to 205 million years ago.
Tuff (-aceous)	Volcanic ash strata (derived from weathering of, or containing, tuff strata).
Turbidite	A quartz-mica sediment deposited in a rapid fashion at great distances offshore
Ultramafic	Igneous rocks containing a high proportion of iron and magnesium silicate minerals with no quartz
Unconformable (-y)	Descriptive of rocks on either side of an unconformity.
Unconformity	Lack of parallelism between rock strata in sequential contact, caused by a time break in sedimentation.

Technical Name	Explanation of Term
Vein	Generally tabular mineral deposit, usually relatively narrow and occurring between well defined walls.
Volcanic hosted massive sulphide	A major accumulation of sulphide minerals, usually pyrite, sphalerite and galena, within and parallel to the stratification of volcanic material
Volcanic(s)	Pertaining to volcanoes, a rock produced by volcanic activity.
Volcaniclastics	A clastic rock containing material derived from volcanic source rocks.
Younging	The direction to which the youngest rocks occur in a sedimentary layered sequence