Annual Report on Loyetea EL12/2014

For:- Edrill Pty. Ltd.

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Summary

This second Annual Report for Loyetea (EL12/2014) details drilling, rock chip sampling and ground magnetic exploration activities for the period 29/7/2016 to 29/8/2017.

Drill hole LOY16-001 (EOH 169.6m) targeted a chargeability anomaly, ground magnetic high and rock chip of >50% Fe, as well as trace indications for Sn (97ppm) and Zn (909ppm). Minor disseminated pyrrhotite (locally 2%) associated with weak pervasive silicification corresponded roughly with the IP chargeability anomaly at surface. No significant analysis were returned.

Infill ground magnetic surveys (~3.4line Km) were undertaken by Edrill in the Peak Hill and Lunn's Farm areas to better characterise magnetic anomalies and magnetite distribution. 16 rock chip samples were collected from mostly ironstone outcrops with multielement analysis undertaken to assess metal potential. Data collation including historic drill holes and an IP survey improved GIS based understanding of the area.

Two richly mineralised massive sulphide rock chip sample highlights were collected by Edrill in the Puffers Creek and LOY16-002 drill hole area. A single boulder of base metal rich massive sulphide float/alluvium located in Puffers Creek returned 20.5%Pb, 27.1% Zn, 0.13% Cu, 485ppm Ag and 3.9g/t Au, whilst float fragments of massive galena from near LOY16-002. returned 52% Pb, 9.8% Zn, 1.4% Cu, 1g/t Au & 1980ppm Ag. Their origins are unclear, but a Devonian skarn and vein style origin is possible.

A very large fault zone (Lavell's Fault) bearing granite and magnetite clast breccia was identified along Loyetea Road in the Redwater Creek Prospect area. The recognition of this faulting explains enigmatic granite boulder distribution here as well as within and near the recently drilled LOY16-002.

Interpretation suggests the magnetite mineralisation in the Redwater Creek to Peak Hill area is located at a structural flexure where intersecting NW and NNW faulting coincides with an inferred northeast trending lineament along the south eastern Housetop Granite margin, forming a triple point junction. The Lavell Fault in the Loyetea Road vicinity may in part represent a linking damage zone within this dextral strike slip fault regime, with some strain taken up on granite margin parallel NE aligned faulting. A basin fold within the Gordon and Owen groups possibly developed in response to at least two deformations.

Faulting and magnetite skarn at the Redwater Creek Prospect is interpreted to be at or near the Gordon Limestone - Moina Sandstone contact; a similar stratigraphic position to the transition beds Au-Bi skarn hosting stratigraphy at Stormont, near Moina. Appreciable Au (0.21ppm) and Bi (861ppm) in Puffer's Creek magnetite alluvium supports this possible genetic link to Stormont mineralisation.

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Introduction

This is the second annual report for Loyetea (EL12/2014; 83^2km), granted to Edrill Pty. Ltd. on 30/7/2014. The tenement is located in NW Tasmania, approximately 20km south of Burnie (Figure 1). The datum used in the report is GDA94 and digital data files are appended.

Key exploration targets are granite related Sn-W magnetite skarn, as well as skarn and vein Pb-Zn mineralisation. Some VHMS potential also exists with Mount Read Volcanics mapped within the licence area.

This report provides detail for drill hole LOY16-002 (drill log appended). Results for rock chip sampling and further infill ground magnetics in the Peak Hill and Lunn's Farm area's by Edrill is detailed. Historic drilling data was digitised and incorporated with available GIS data to assist with further prospect and regional interpretation. Only cursory field geology was undertaken and more work is required to elucidate the apparently complex structure of the area.

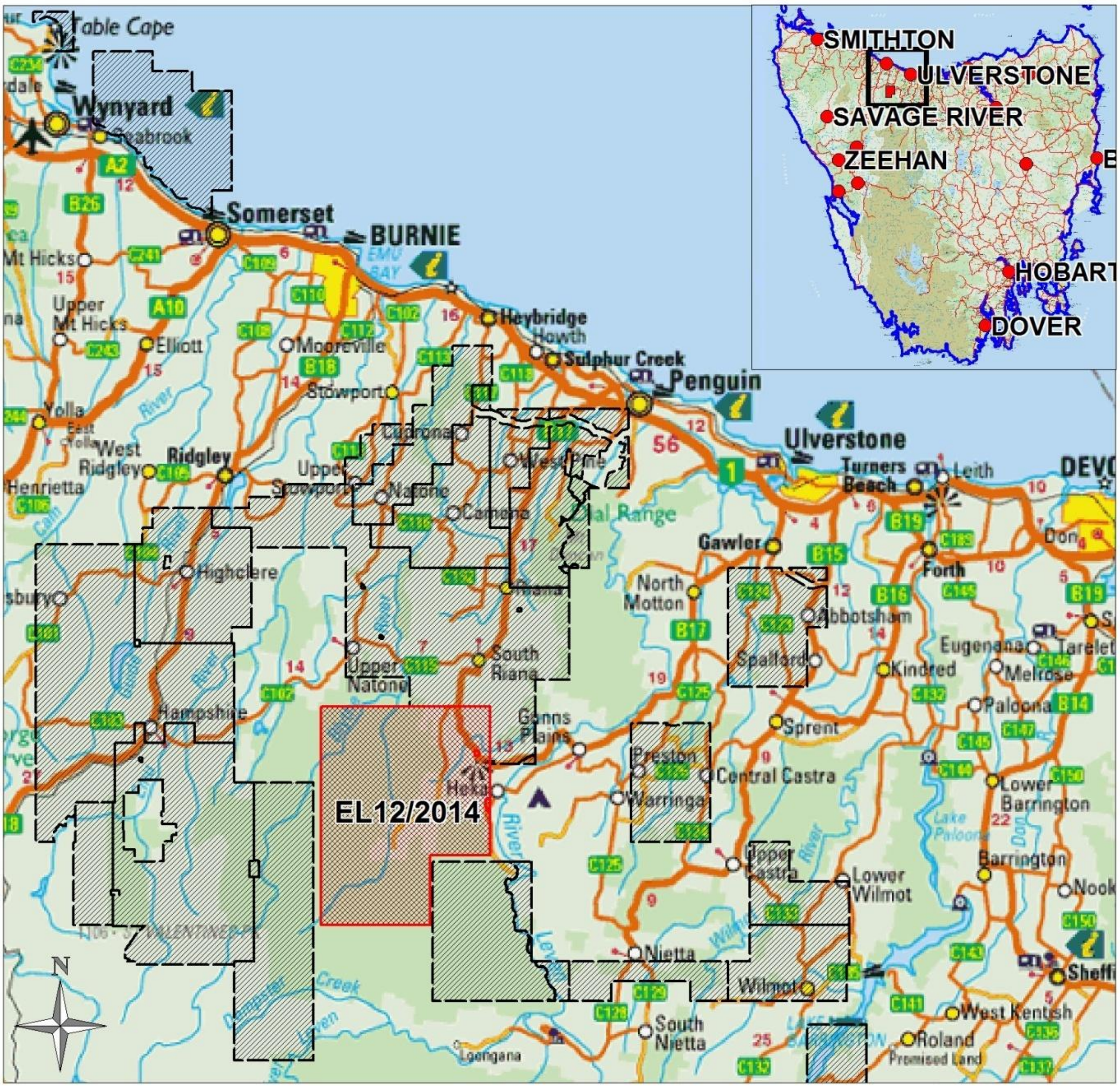

Figure 1: Location of Loyetea EL12/2014.

Review of Previous Work

Previous work undertaken prior to the granting of Loyetea EL12/2014 is detailed in Murphy and Bates (2009) and Hansen (2014). This report partly re-iterates these details, adding information pertinent to the current investigation. Significant geophysics of note is the Comalco Redwater Creek IP and Bass Metals commissioned VTEM survey extending across, as well as north and south of the tenement.

Comalco – Shell 1977 - 1981

Weste (1979) reported rock chip and auger sampling, with Sn to 490ppm and 1500ppm W in the latter. Comalco undertook grid based ground magnetics and IP in the Redwater Creek area.

Comalco drilled five diamond holes at Loyetea (RED1-5; see Figure 10) exploring for F, Sn & W. Comment and results follow:-

In RED1, analysis for Sn reached 150ppm and W reached 55ppm. Zn to 700ppm was returned. No other appreciable results were returned. There was poor core recovery over parts of the drill hole. The upper portion of the hole was logged as Tertiary breccias, whereas reported strained fabrics in clays and magnetite pebbles enables re-interpretation of these rocks correlating with the Puffers Creek / Loyetea Road fault zone.

Analysis in RED2 was more encouraging with Sn reaching 430ppm and W 760ppm. Zinc commonly hovers around 0.1% in most samples. Re-interpretation as largely faulted in the upper portion of the hole is warranted. Closer to the granite at depth is what reads as faulted but possibly near insitu magnetite then calc-silicate altered skarn. Notably the sediments adjacent to the granite in the Loyetea Road section are missing.

RED3 drilled Tertiary Basalts with basal deep lead deposits, over highly weathered granite. The granite base is faulted and 2m of limestone at the end of hole may be a fault clasts(?). Hole terminated in limestone. No sampling was undertaken but subsequent samples reported by Banwell (1982) were very low for Sn, W, Cu, Pb and Zn. Banwell (1982) notes that this hole was terminated early, prior to intersecting the magnetic anomaly on 6100N. RED5 tested the magnetic anomaly missed by RED3.

Banwell (TCR82_1784) reports further investigation of the Redwater Creek and Laurel Creek West prospects. Included further gridding extending south on the Redwater Creek Grid, but no soil sampling was undertaken due to extensive Tertiary basalt cover. RED4 testing an IP chargeability anomaly, was extensively sampled top to bottom of hole and returned nothing anomalous; Sn max 40ppm. No Fe analysis were undertaken. The basal 75m of this 349.6m hole possibly drilled down a fault.

Significant analysis from RED5 include 450ppm Sn, 150ppm W, 450ppm Zn, 0.23pm Au, 230ppm Bi and 31.8% Fe from magnetite skarn (167.8 to 168.2m). Fe values ranged from mostly 5 to 11, peaking at 34.4%. RED5 had a significant swing in azimuth toward holes end (261 to 283), which may have been magnetite influenced. It’s unclear if RED4 & 5 surveys are reported as true or magnetic north; actual drill logs are scantly reported.

Soil geochemistry was undertaken at Laurel Creek and Laurel Creek West with analysis for Cu, Pb & Zn. Ground magnetic at Laurel Creek West revealed a narrow anomaly targeted by drill hole PD1. This work is yet to be assessed.

Jervois Mining 1997

Jervois drilled 4 RC holes for 378m with a best return of 20m @ 0.17% Zn from RW4. Drilling was problematic with high water flows, clay zones and cavities. Significant sample contamination was reported. At the Pilbeam Road Prospect, a target below and slightly north of RW3 was suggested to follow up anomalous Zn. RW1 returned little basemetal or Sn and W.

Geology

Cambrian aged Tyndall Group volcanics representing the top of the Mount Read Volcanics (MRV) outcrop in the southern and central NE portions of EL12/2014. Overlying is an apparently complete sequence of Cambro-Ordovician Owen Group siliciclastics extending up to Moina Sandstone correlates, overlain by Gordon Limestone. The Housetop Granite which extensively covers the central and NW portion of the tenement belongs to a suite of tin bearing I and S type granitoids of Middle Devonian to Early Carboniferous age. Potential for granite intrusion related greisen and magnetite (+/-Sn – W) skarn mineralisation within the Gordon Limestone is known. Tertiary basalt outcrops within a NE aligned corridor, obscuring the potentially mineralised granite contact in the Redwater Creek Prospect area. The geology of the Loyetea Tenement Area is shown in Figure 2 and 10.

Known geology and interpretation indicates that the Loyetea area is structurally complex. A NE trending lineament along the south eastern Housetop Granite margin is interpreted as having significant influence upon patterns of faulting and folding in the area. Key is the development of a structural intersection in the Redwater Creek / Peak Hill area, where a NW aligned fault trending through the Loyetea Peak area intersects the NE trending lineament and deflects to a major NNW aligned fault zone passing into the granite to the north. Dextral fault offsets are apparent.

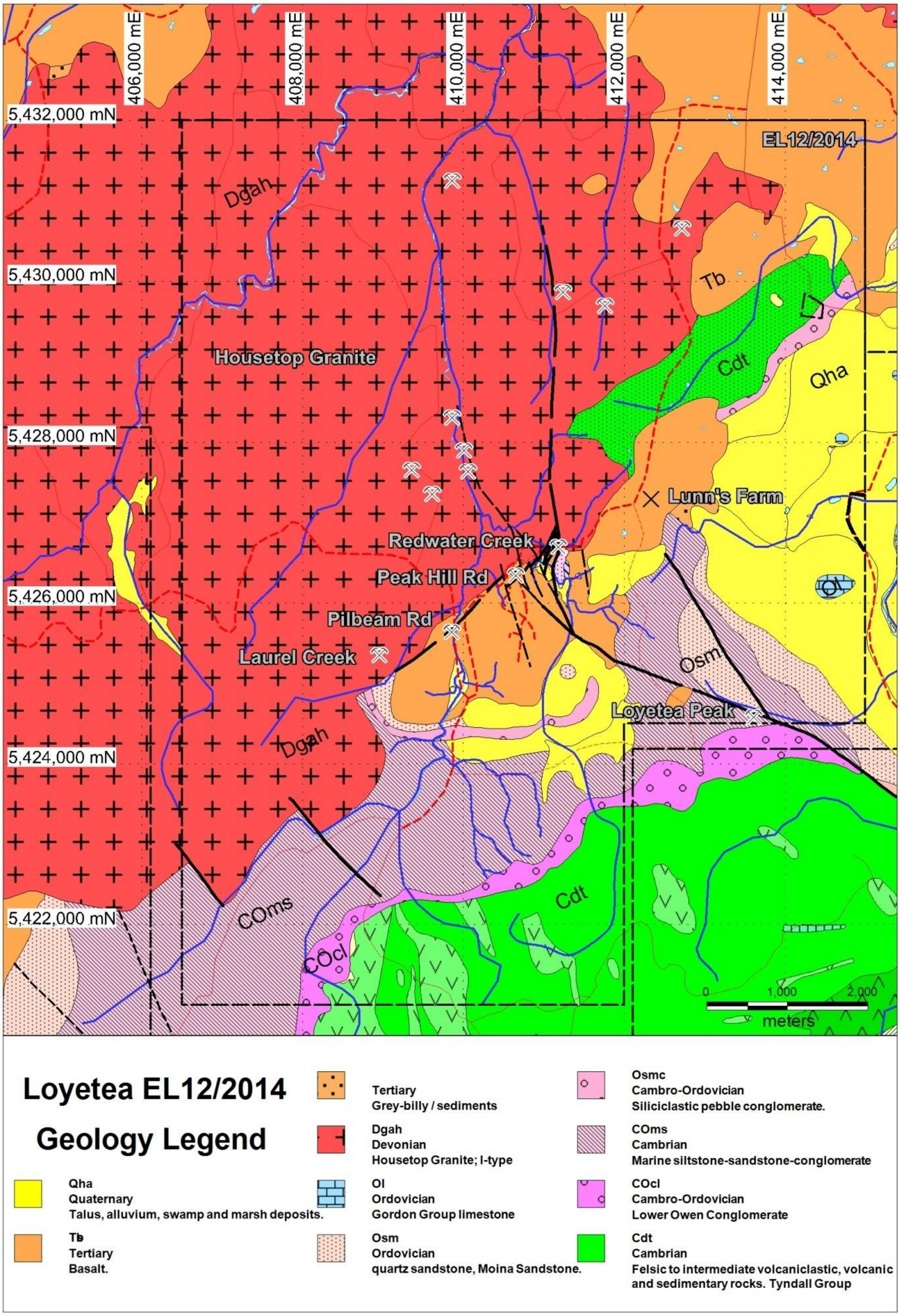

Figure 2: Geology of the Loyetea area highlighting key prospects (Geology modified from 1:25,000 Mineral Resources Tasmania digital geology).

Work Conducted

Edrill have undertaken general reconnaissance, rock chip sampling, infill ground magnetics and one drill hole (depth 169.6m) on EL12/2014 during the second tenure year to 29/8/2016. Focus has been in Redwater Creek, Puffers Creek and Lunn's Farm area's. The author's participation includes 2 field visits and logging of drill hole LOY16-002 (drill log appended). Historic drilling and IP survey data was digitised and incorporated with available GIS data enabling further prospect and regional interpretation.

An extensive fault zone, now termed Lavell's Fault, was identified on Loyetea Road on the east side of Puffers Creek in the area of previously recognised ironstone boulders and outcrop. The road gutter was extensively scoured by recent flooding rains leaving a near continuous 150m plus of fresh exposure. A small exposure of weathered granite clast supported fault breccia lies furthest west, in the road gutter, closest to Puffers Creek. Magnetite ironstone clasts (and oxide in the fault matrix) appear to become more prevalent toward the NE along the road cutting for approx 25m. Granite appears to have been increasingly milled (rounded) and included in the fault matrix to the east. Both granite and the more abundant magnetite clasts in the central section are subrounded reflecting milling and rotation. Further east, the faulting is dominated by contorted thinly bedded siltstone with lesser narrower ironstone clast breccias. Notably the extensive limestone drilled in RED1 beneath this zone is not present. The surface width of the faulted zone is at least 100m, but extends to 150m+ if faulting in the top of RED1 is included.

Extending a further 10m NE beyond the fault margin is pervasively silicified quartz sandstone with minor granule conglomerate, before a 20m granite dyke, a further 45m of sandstone including sparse granite - dykes and extensive granite outcrop thereon for 40m+. The possibility that the siliciclastics here represent the Transition Beds between the Gordon Limestone and Moina Sandstone of the Owen Group needs investigation. No obvious alteration is evident at the granite contacts.

The granite contact is NE orientated and likely faulted through the area extending SE of Redwater Creek. Contact orientation differs on Loyetea Road near Redwater Creek where dykes of NNW orientation are interpreted. Here, two granite contacts returned similar 340-355TN strike and dip of 80-86^{0}.

Up stream of the Loyetea Road within Puffer's Creek, alluvium includes scattered massive magnetite +/- hematite with minor dark green relict pyroxene(?) skarn. A single boulder of massive base metal sulphide was also located here, but repeated search has failed to locate further examples. Edrill continue to undertake field investigations in the area and have recently uncovered a new (magnetic high coincident) ironstone occurrence in a flood flushed old creek bed, beside Puffer's Creek, south of the Loyetea Road section. No sampling has been undertaken to-date.

Photo 1: Granite – magnetite clast fault breccia (top) and sigmoidal folded foliation indicating dextral offset faulting in foliated hematitic fault zone (bottom); Loyetea Road.

Rock Chip Sampling

Edrill collected a total of 16 surface samples. This included 5 composite rock chips sampled at 10m intervals extending along Loyetea Road near Redwater Creek (See Figure 3). A further 5 samples came from float / alluvium in Puffer's Creek and the LOY16-002 drill hole area. A rock chip and soil sample were collected from the road side approximately 2km SSE of Redwater Creek. Many samples have not been inspected by the author at this stage.

Digital data is appended in EL122014_201608_09_SG_1.xls with original laboratory data reported in EL122014_201608_11_AnalysisBU15153268.pdf, EL122014_201608_12_AnalysisBU15183001.pdf and EL122014_201608_13_AnalysisBU16119577.pdf.

Two richly mineralised massive sulphide sample highlights were collected by Edrill in the Puffers Creek and LOY16-002 drill hole area. A single subangular massive galena-sphalerite boulder bearing trace pyrite and chalcopyrite with minor coarse grained carbonate patches / speckled zones and weak fracture control / banding was located in Puffer's Creek alluvium. This sample (250/15; Figure 3) returned 20.5% Pb, 27.1% Zn, 0.14% Cu, 3.9g/t Au & 485ppm Ag. Similarly, above drill hole LOY16-002, scattered float including a 5cm thick slabby (vein?) of green malachite stained galena - chalcopyrite ore returned 52% Pb, 9.8% Zn, 1.4% Cu, 1g/t Au & 1980ppm Ag (Sample 13). Notably Tl was high at >10ppm in both samples and Pb isotopes may help determine sample origins.

Relatively common magnetite boulders were composite sampled from Puffer's Creek, downstream from very recently located magnetite outcrop. Sample 250/14 (Figure 3) returned >50% Fe with weakly anomalous Sn (74ppm), W (31ppm) and Zn (766ppm) of similar tenor to that reported from previous drilling (Weste, 1979 & Banwell, 1982). Appreciable Au (0.21ppm) and Bi (861ppm) in this sample suggests a possible genetic link to mineralisation at the Stormont Prospect (Moina area). Mineralisation in both these locations occurs at a similar stratigraphic position; the Moina Sandstone – Gordon Limestone boundary.

Float of locally strongly hematitic – magnetite bearing gossan located near LOY16-002 returned similar anomalous metals to the magnetite in Puffer's Creek, including Sn (143ppm), Zn (844ppm) and minor W (22ppm), but lacked appreciable Au and Bi. Comparatively, grey pervasive cream to pale green silica with disseminated silvery hematite (25 to locally 50%) located in Loyetea Road outcrop (Sample 50014) contained 9% Fe and weakly anomalous Sn and W, but little Zn.

Grey and cream buck vein quartz with chlorite (to 20%; Sample 250/18) from the magnetite location did not return any anomalous metals.

Porphyritic granite located above the LOY16-002 drill trace was Pb (3730ppm), Zn (3730ppm), Ag (9ppm) and Au (0.04ppm) anomalous, but contained no significant Sn or W.

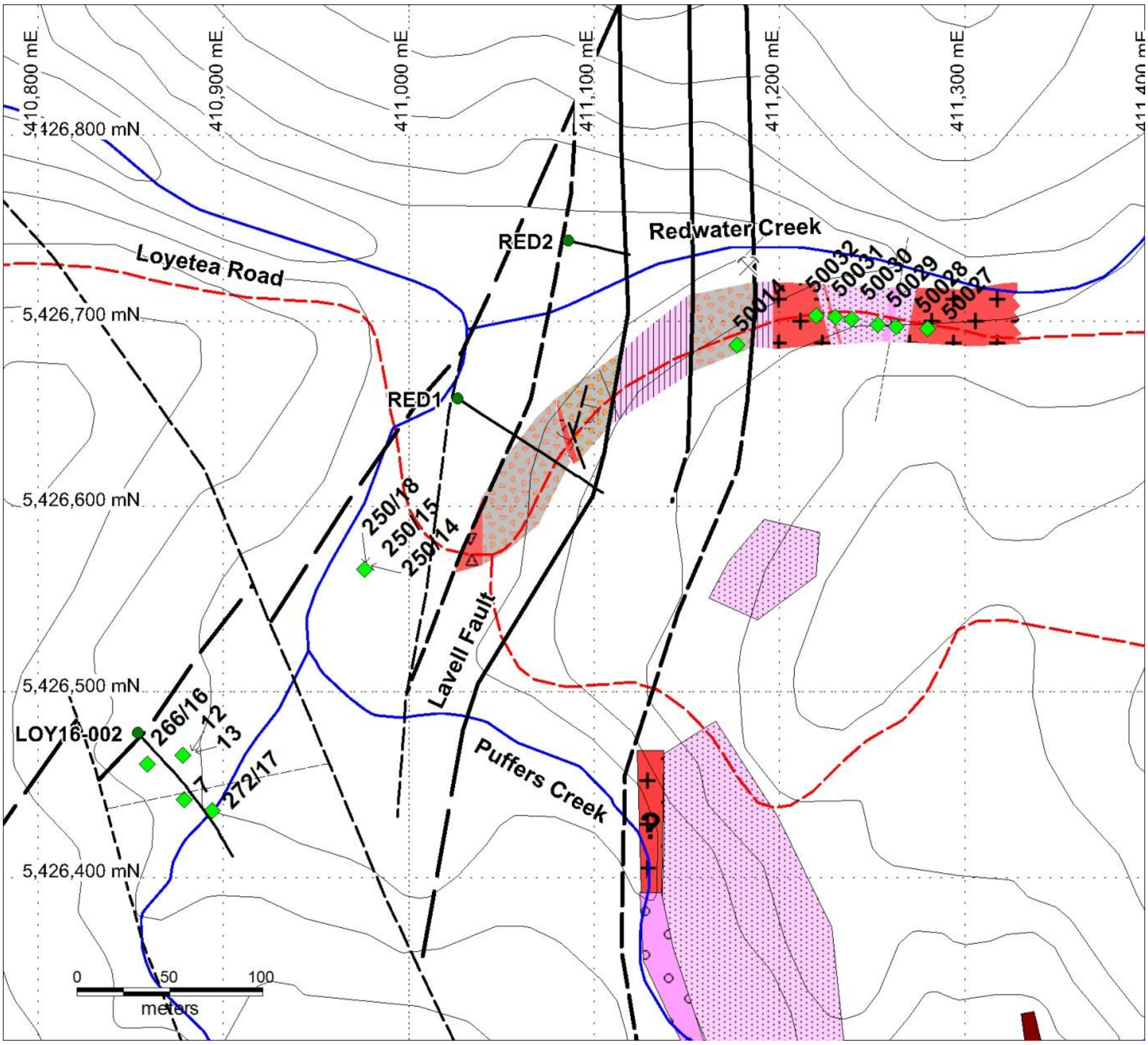

Figure 3: Edrill rock chip sample locations (green) near Loyetea Road, showing factual geology and structural interpretation.

Ground Magnetics

Ground magnetics extended and infilled the Peak Hill (~0.7line Km) and Lunn's Farm (~2.4line km) areas totalling ~3.1line km. Infill lines on W orientation were undertaken north of the Redwater Creek Prospect to better define the distribution of the known ironstone. Further lines extended the Lunn's Farm magnetic coverage to the SW. Further informal ground magnetic surveys are planned to infill north of RED1, link the Peak Hill and Lunn's Farm areas and in general cover granite margins and extend east to cover Lavell's Fault.

Edrill's Gary Lavell undertook the surveys on an ad hoc basis with a G856, covering readily accessed areas. The ground magnetic surveys aim to maintain an ~40m line spacing. Surveys used variable line orientations of mostly E-W alignment, with each station GPS located and later smoothed to eradicate erratic points. No base station was used for diurnal correction, however a base reference mark was measured daily on survey commencement and ending. Point data was digitised and roughly edited to create grids for Peak Hill and Lunn's Farm (Figure 4).

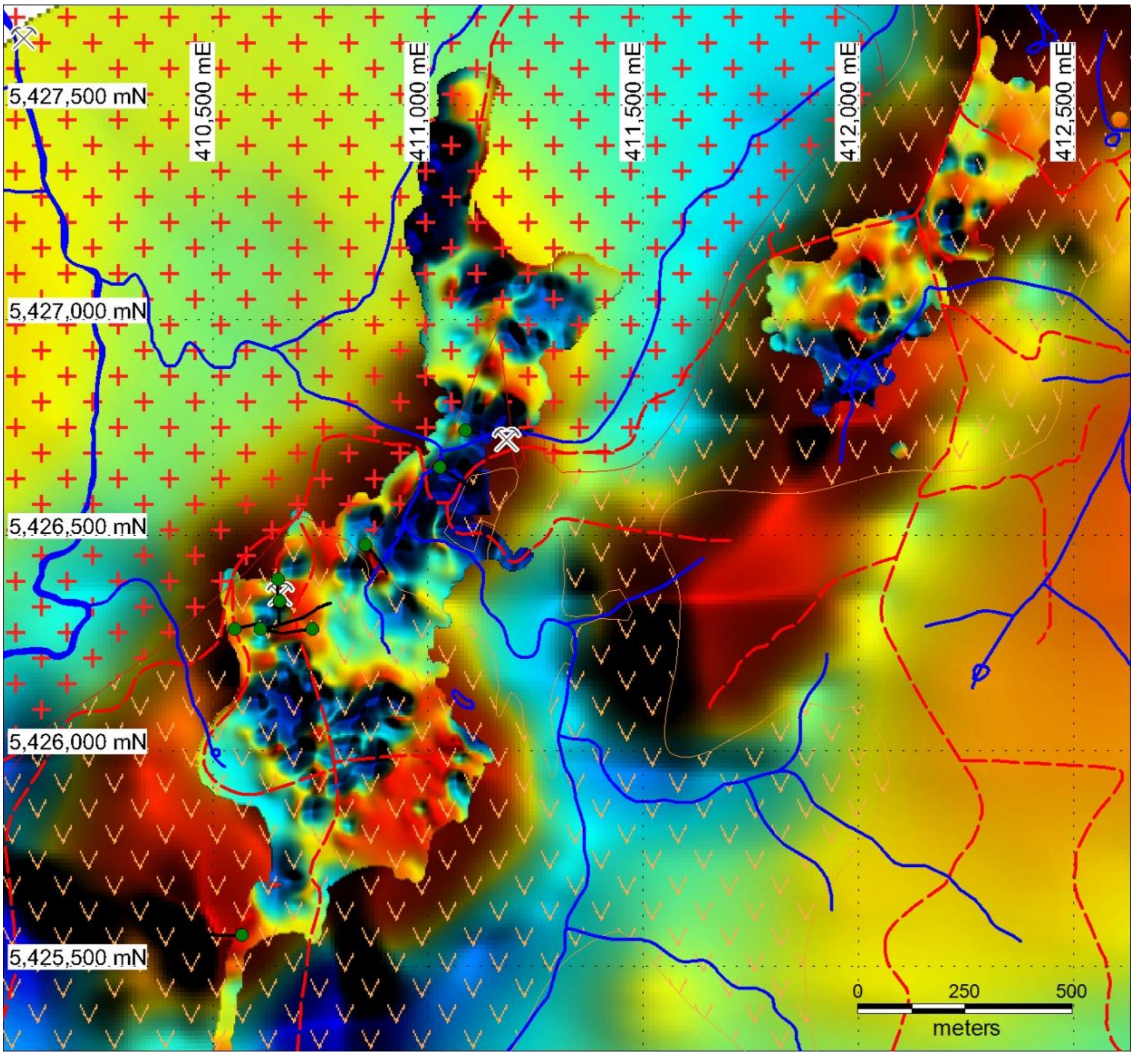

Figure 4: Ground magnetics total magnetic intensity grid over VTEM aeromagnetics TMI, with basalt (V) and granite (+) polygon overlay (Geology from MRT 1:25,000 digital geology).

Drilling

LOY16-002 collar details are 410854mE, 5426478mN (GDA, Z55; waypoint average), azimuth 137TN, Dip -60 and EOH 169.6m. LOY16-002 was drilled as HQ triple tube providing very good recovery and clear geological insight. Edrill commenced the hole on 11/5/2016 and completed it on 23/5/2016. The hole was designed to test a magnetic high, IP chargeability anomaly, porphyritic granite intrusion as well as scattered gossan and base metal anomalous rock chips (described above). It was drilled along strike between significant potentially Sn – W bearing magnetite occurrences at the Redwater Creek and Peak Hill Prospects.

Down hole camera surveys showed little (1^0) variation in dip however a significant swing in azimuth at 153m is possibly related to proximity to magnetite. A massive irregular edged ~30LCA magnetite vein with minor carbonate vein overprint extends from 139.87 to 139.93m. This minor insitu limestone-hosted magnetite veining lying footwall to a fault combined with the significant down hole azimuth swing possibly indicates that a larger magnetite source lies relatively proximal in the fault.

Extensive broken and fractured zones occur throughout the drill hole. Weathering locally extends to >50m depth on granites and fractures. Weathered granite extends approximately 5m from surface with massive broken goethitic hematite fragments in the top of a core loss zone, representing a faulted granite margin, also intruded by tertiary basalt. This fault extends to 21m, with broken limestone bearing no significant alteration forming a broad faulted zone, extending to ~135m. Little broken fresh limestone core extends beyond to the end of hole.

The limestone is largely massive, similar to in LOY15-001, and possibly more recrystallised with depth. Very thin / laminar interbeds of dark grey shale form a zone from 125 to 135m (Figure 5). This zone displays disrupted and faulted bedding textures superficially similar to sediment dominated sections adjacent to fault breccia in the Puffers Creek / Loyetea Road cutting. This suggests that less competent siltier / shaley units within the limestone could be a focus for folding and faulting.

Faults toward the top of hole are polymict, bearing limestone with lesser granite and magnetite clasts. Deeper down hole faulting propagated through the limestone is mostly limestone clast bearing. Two fault generations are evident within faulted limestone; an older consolidated cataclastic fault mill breccia with subrounded to angular clasts and a later stage unconsolidated clayey fault breccia with mostly angular limestone clasts (Photo 2). Two narrow granite intervals had poorly preserved contacts and it's not clear if these are intrusive or fault related clasts. This observation combined with the granite fault clasts at Redwater Creek suggests that the large porphyritic granite boulders at surface above the end of the LOY16-002 drill trace maybe fault hosted clasts.

Occasional enigmatic homogeneous slippery surfaced brown clay veinlets ranging from 1cm to >10cm occur within faulted and broken zones. In one instance a 1cm narrow zone could be interpreted as an injection like texture (Pseudotachylite?). The clays maybe partly remobilised from Tertiary aged sediments or cave deposits. In one example, observed feldspar and mafic crystal grains suggesting a basalt protolith but this does not fit with basalts typical little weathered form, as is evident in the top of hole fault.

No appreciable sulphide concentration is evident. Fine disseminated pyrrhotite occurs in trace quantities throughout the limestone, with minor zones of 2 to 3% pyrrhottite, extending over mid to deeper hole depths, roughly corresponding with the surface chargeability zone (Figure 5). Sulphides are generally in very finely disseminated form within silica / calc-silicate alteration. Disseminated pyrite to 3mm locally was generally at trace level only. Some sulphide is associated with dark grey/green irregular silica veinlet zones, but this accounts for a very minor portion of the core. Carbonate veinlets were sparse, being most common as straight and sometimes slightly irregular form within the limestone. Veinlets are commonly 1 to 2mm in width.

A narrow massive irregular edged ~30LCA magnetite vein from 139.87 to 139.93m. Magnetite has a minor cream/green carbonate-chlorite veinlet overprint but clearly crosscuts more diffuse edged carbonate veins.

Photo 2: Consolidated fault breccia with sub-angular to sub-rounded mostly limestone clasts (top, @103.4m) and poorly consolidated breccia with angular limestone clasts and brown clay matrix (bottom; @ 108.3m)

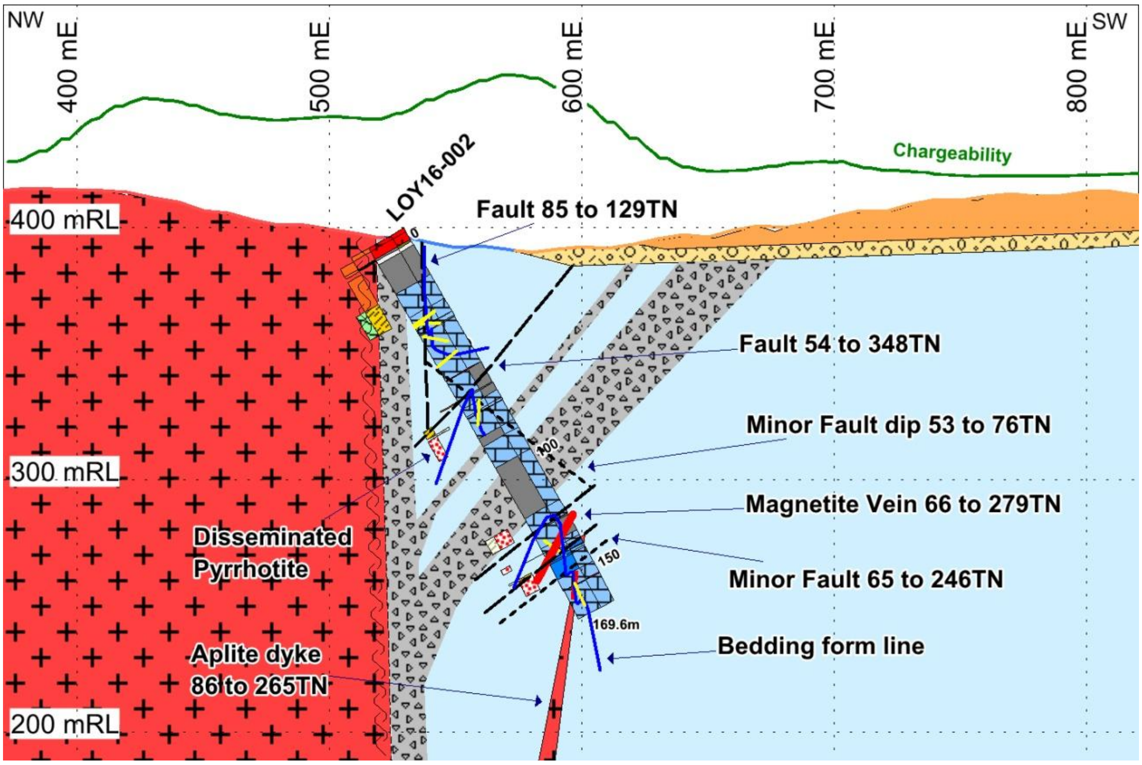

Figure 5: Section aligned NW-SE displaying LOY16-002 drill hole trace with basic geological interpretation. (Primary lithology has the thickest central representation with an adjacent to the right secondary and/or interpretive lithology. i.e. Limestone and Fault indicating faulted and broken limestone or Fault and Limestone indicating dominantly limestone in the fault clasts. Alteration types are qualitatively represented left of the drill traces; red dot = significant disseminated sulphide, yellow lines = veins. Chargeability (green) trace at surface.

Structure

Numerous drill core orientations utilising a spear and chinagraph crayon marker to determine bottom dead centre were undertaken on LOY16-002. Measured orientated structures can be considered as +/-~5^0 in accuracy. This data is described, but the following also includes an expanded structural discussion incorporating data from LOY15-001 and Loyetea Road outcrop. The orientated measurements provided great insight into the structural architecture of the Loyetea area, but more information and interpretation will provide better confidence in mineralisation orientations and the character of the less defined NE trending lineament.

Most bedding in LOY16-002 dips 80^0 to 114TN; NNE strike. Folding with plunge ~70^0 to 190TN is interpreted from a girdle fitting poles to bedding data (Figure 6).

Analysis of poles to bedding for all Loyetea drill holes (LOY15-001 & LOY16-002) and outcrops appears to delineate two structural domains (Figure 6). Fold plunges for the Loyetea Road (Redwater Creek) outcrop and nearby drill hole LOY16-002 appear to belong to the same fault proximal structural domain. Indicated fold plunges are 55^0 to 210^0 and 70^0 to 190^0 respectively. Whereas a 50^0 plunge to 310^0 indicated for folding in LOY15-001 appears unrelated and likely fits with regional late NW fold trends. Interestingly, if the steeply north dipping beds are not considered then a 45^o plunge to 240^{o}TN can be interpreted for the remaining LOY015-001 beds, roughly conforming with the fault proximal domain.

Assessment of the areas mapped geology, combined with new structural data suggests a fold basin in the Peak Hill area (Figure 2) may have resulted from the interference of two or more deformation events. The Loyetea 1:25000 geology map (Vicary, 2004) shows three phases of deformation including minor folds and cleavage of various orientations, but dominantly SE striking S4 (steep NE dip) and NNW to N for S3 (steep W dip). The 50^{0} to 310^{0} fold plunge in LOY15-001 data roughly corresponds with late F4 folds, whilst the Loyetea Road and LOY16-002 folds have similar strike to F3 folds.

Regionally, E-W trending symmetrical open D1 folds are reported from the area SE of the Housetop Granite, whereas west and north of the Housetop Granite are more northerly and NNE aligned fold hinges (Seymour, et. al. 2014). On a local scale, folding trends from NW orientated in LOY15-001, becoming NNE orientated proximal to Lavell's fault. This scenario could be interpreted as dome and basin folding, as per above. Another possibility is rotation of fold hinge lines, making drag folds of folds, related to dextral movement on the NE aligned lineament. Notably the Henty Fault extension strikes NE past the SE margin of the Housetop Granite, extending toward the Beecraft MegaBreccia on Tasmania's north coast. It's possible that some dextral fault movement is accommodated along this transition zone between the western and northern regions of Tasmania. Comparing the regions; dextral movement on early faults and NE directed thrusting characterise the Queenstown area, whereas in the central north SW directed thrusting dominates (Seymour, et. al. 2014).

A thin aplitic granite dyke in LOY16-002 dips 88^{0} to 265TN, similar to a 10cm dyke on the Loyetea Road section (80^{0} to 250TN). Conversely the bulk of the granite margin in the area is NE orientated.

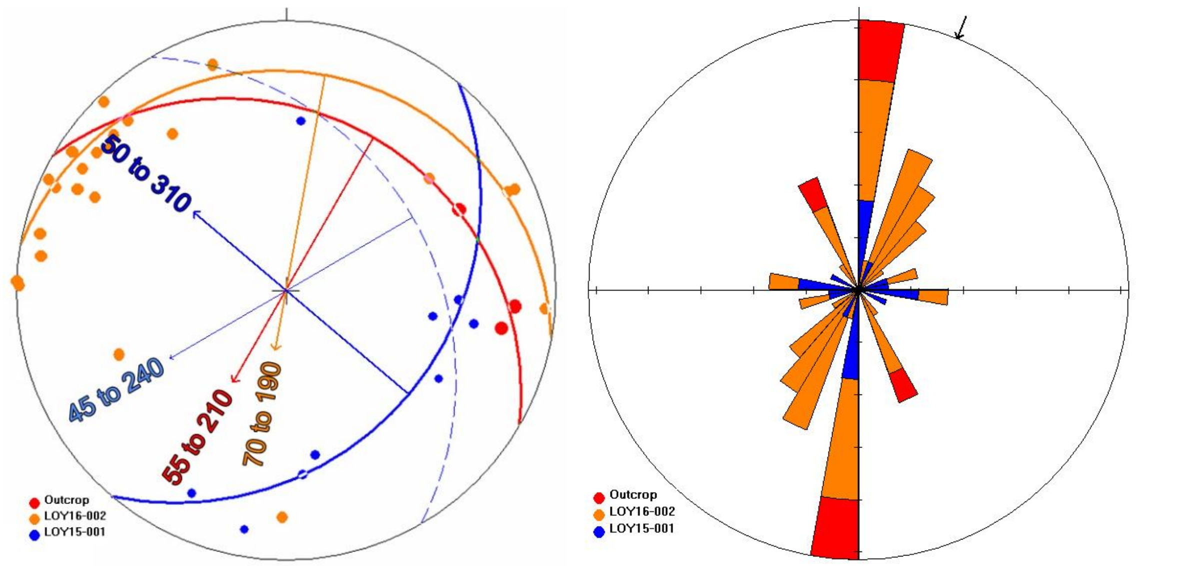

Figure 6: Stereographic projection of poles to bedding (No. 34) classified by location, showing best fit girdles and calculated fold plunges for drill holes and outcrop readings (left), and Rose Diagram for all bedding (right).

Faults and associated foliation form two main trends of NNW and ~NE orientation and relatively steep dip (Figure 7). The NE fault orientation is difficult to define spatially, but likely follows the granite margin, dipping steeply east. A minor fault surface proximal to the top of hole LOY16-002 fault is orientated 85 to 129TN reflecting this. Fault surfaces further down hole in LOY16-002 dip 65^0 to 245TN, similar to a 78^0 to 290 fault measure in Loyetea Road outcrop.

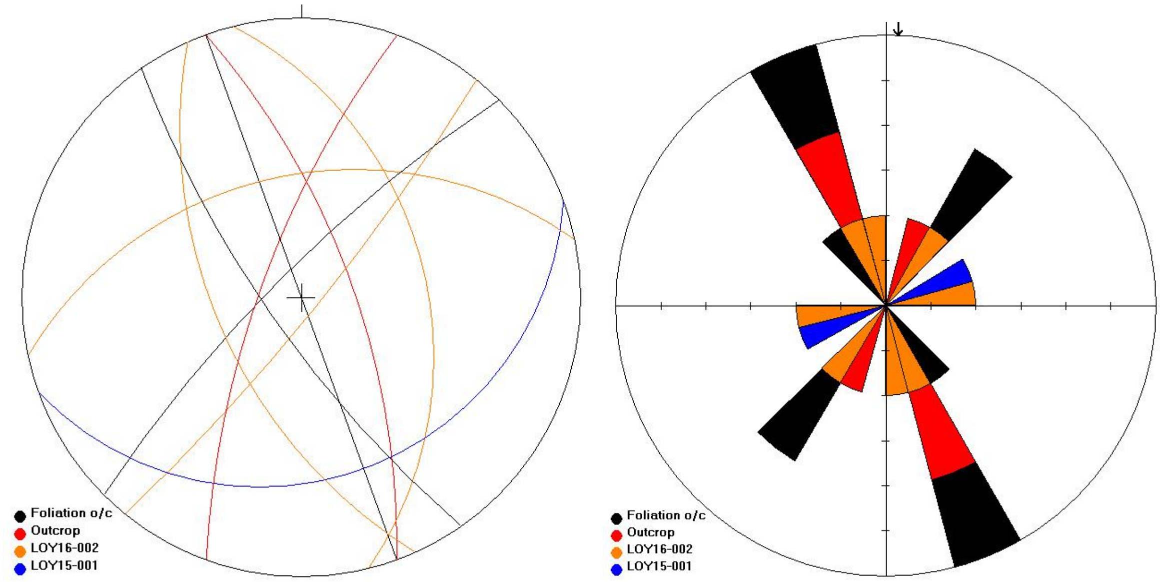

Figure 7: Stereographic projection of great circles (left) and Rose Diagram (right) for all Faults (No. 7) and foliations (No. 3) classified by location.

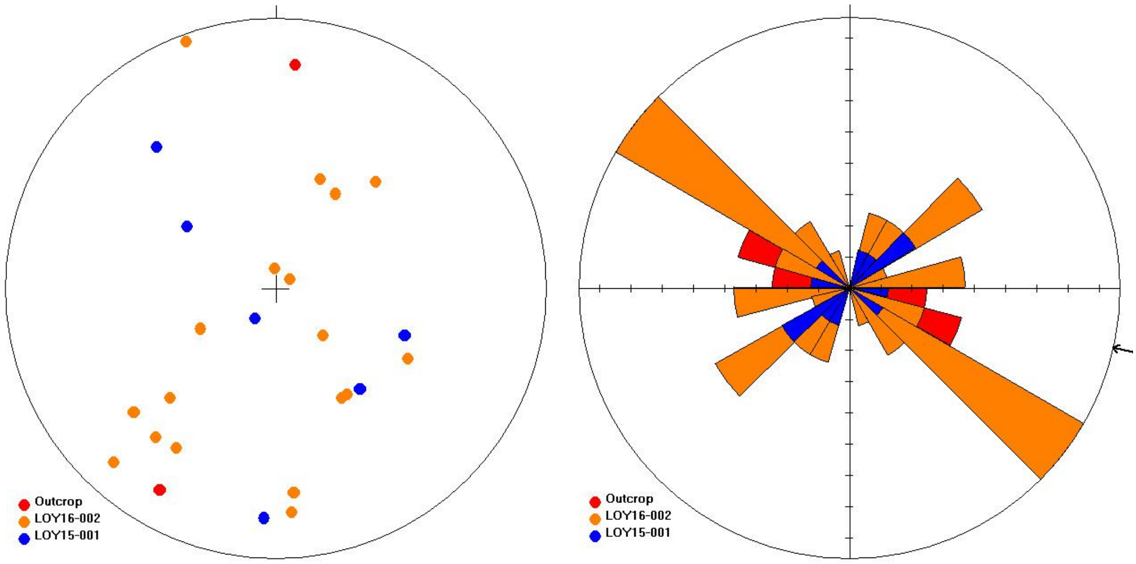

Figure 8: Stereographic projection of poles to planes and Rose Diagram for all Fractures (No. 27) classified by location.

Fractures evidently form weakly clusters when sterographically projected. In the fault proximal LOY16-002 and outcrop areas, fractures commonly strike NW with mostly NE (60^0 to 40TN) and lesser SW dip (35^0 to 210TN, Figure 8). LOY15-001 is interpreted as more distal to significant NNW faulting but fractures cluster with LOY16-002 results. Key fracture orientations these zones have in common are NE aligned (40^0 to 320TN), E-W (70dip to 360TN) and shallow (2^0 to 205TN) dipping. These fracture sets likely correspond to Reidel shear sets related to the two key NNW and NE fault orientations.

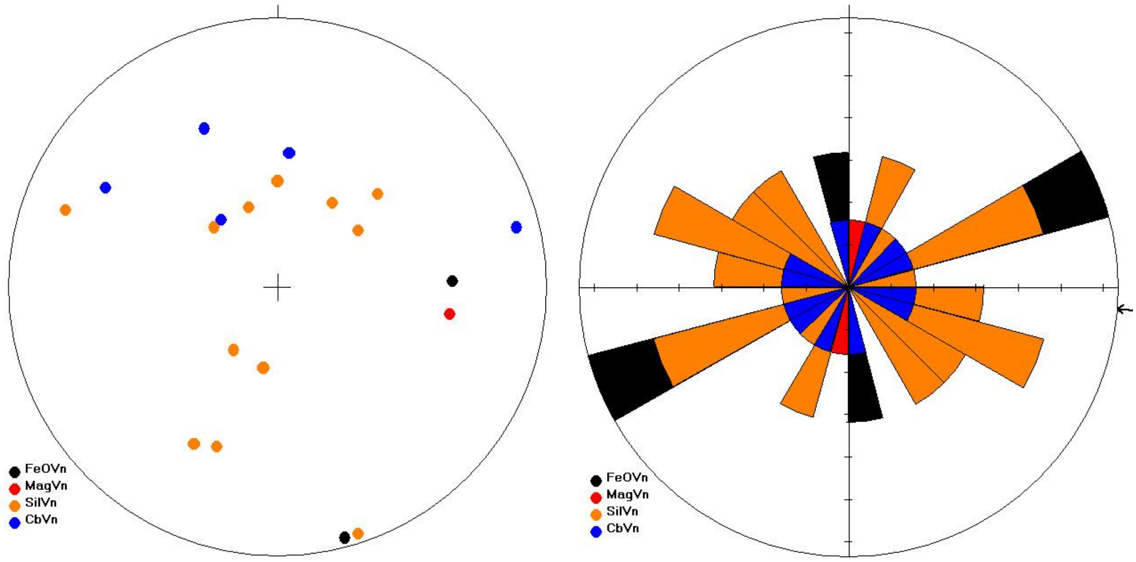

Figure 9: Stereographic projection of poles to planes and Rose Diagram for all Veins (No. 21) classified by type; FeO, Magnetite, Silica and Carbonate dominated veins.

Veins are correspondingly at similar general strike to fractures, but are commonly acutely offset from fault strike (Figure 9). The main vein orientations are similarly represented for all locations. Carbonate vein orientations are scattered with a weakly preferred strike.

Magnetite veining in LOY16-002 and a single FeO vein in outcrop closely correspond on a northerly orientation of 65^0dip to 275^0TN. This is comparatively similar to the general NNE trend of magnetite distribution (Figure 10). Whilst, an FeO vein in granite on Loyetea Road differs markedly, striking roughly NE (255TN; 88^0 to 345^0TN).

Magnetite and FeO veining may have formed syn to post deformation, since orientations fit with extension orientations on Reidel shears formed during dextral (Late Devonian, NE-SW compression) movement on NW to NNW aligned faults (which have clear dextral offset indicators). Fault dissection of IP chargeability distribution shows that pyrrhotite and likely magnetite mineralisation pre-dates the latest (Tertiary) Faulting. Faulting was evidently active pre and post granite intrusion since dyke margins are similarly NNW striking (but steeper dip) and granite clasts are entrained in fault breccia. Carbonate vein orientations fit loosely with extension on Reidel shears related to NW/NNW dextral faulting and are noted to overprint both limestone and Tertiary basalt in LOY15-001 and possibly magnetite in LOY16-002, indicating that at least some dextral offset faulting could be as late as Tertiary aged. Extensive late stage brittle faulting of likely Tertiary age is clearly evident in drill core. The Lavell Fault / Redwater Creek to Peak Hill area may form a linking damage zone in a dextral strike slip fault regime, focusing NNW and NW faults at a triple point junction with some strain taken up on granite margin parallel NE aligned faulting. The later is possibly a re-activated Cambrian structure.

Analysis

Core sampling aimed to test the main rock and alteration types, with the view to further sampling as warranted by the results. Sampling tested granite, oxidised and micaceous faults and disseminated pyrrhotite bearing limestone. An Ultraviolet light scan / survey of the core did not detect any Scheelite or Flourite. Analysis are digitally appended in EL122014_201608_06_DG_1.xls with original laboratory data reported in EL122014_201608_13_AnalysisBU16119577.pdf

12 better mineralised half core samples were collected from LOY16-002 and analysed via multielement ICPMS and fire assay for Au (see drill log and digital data appended). No significant analyses were returned. Comments relating to mineralisation and alteration geochemistry follow.

Granite sampled in the top of hole was little mineralised compared to Pb-Zn anomalous weakly porphyritic granite at surface.

The faulted granite margin at top of hole (5.2 to 6.1m) returned appreciable Fe (35%) with weakly elevated Sn (74ppm), Zn (739ppm) and Cu. Magnetite veining within the interval 139.7 to 140.3m returned 7.5% Fe and 23ppm Sn. The geochemical character of these magnetite occurrences is comparable to magnetite sampled in surface rock chips (i.e. weakly anomalous in Sn, W & Zn in particular).

Micaceous clayey fault gouge, immediately down hole (7.6 to 8.6m) from the magnetite bearing fault is weakly elevated in Zn (1220ppm), Bi (22ppm) and Au (0.004ppm), as well as Sn and W metals common to the magnetite association.

Limestone bearing weak pervasive silica with disseminated pyrrhotite and minor patchy carbonate sampled from the intervals 25.2 to 28.2m and 140 to 145m returned little of obvious interest geochemically. Moderate intensity carbonate veining within laminar bedded shale was similarly not metal anomalous.

Drilling Data Review

Historic drill hole data for the Loyetea EL was digitised from original logs and incorporated with available GIS data to assist with ongoing prospect and regional interpretation. Poor core recoveries from earlier drill holes combined with new information leaves scope for re-interpretation. Notes follow:-

Analysis were composited to obtain significant intervals with Zn >500ppm, allowing 1m of internal dilution. Note that LOY15-001 and LOY16-002 are incompletely sampled with reported intervals providing a comparable tenor only. 10m composites were also created to illustrate Zn and Sn distribution. Analysis collation from RW drill holes is partial, only including Zn, Sn and W. The remaining, generally less than weakly anomalous, Au, Cu, Ag and Pb were not digitised and Fe was not analysed.

In general Sn and Zn in all drill holes to-date is weakly elevated but forms extensive intervals as shown in Table 1. The RW3 & 4 and RED2 drill holes return best analysis overall. Collation of historic analysis data returned little for Fe and no DTR (Davis Tube Recovery) for magnetite is reported.

Magnetite skarn is preserved at a granite contact in RED5, with a significant fault located ~20m above. This hole returned the highest Sn analysis of the program, including 320 and 450ppm from magnetite skarn at the granite contact, within a weakly mineralised interval of 5.9m @150ppm Sn (0.015%) and 279ppm Zn (from 162.3m). In the granite, Zn drops to below detection, whilst Sn is erratic. Fe was not analysed in RED series drill holes.

Hole_ID	From (m)	To (m)	Interval (m)	Sn_ppm	Zn_ppm
LOY15-001	399.8	400.8	1	0	547
LOY16-002	7.6	8.6	1	26	1220
RED1	58.29	60.7	2.41	108	664
RED2	2	6	4	110	500
RED2	25.7	38.8	13.1	216	1152
RW-1	68	72	4	8	674
RW-1	118	120	2	0	784
RW-2	75	76	1	18	1320
RW-3	16	20	4	25	538
RW-3	24	28	4	10	762
RW-3	52	72	20	14	1702
RW-4	26	38	12	24	962
RW-4	46	54	8	12	924

Table 1: Significant intervals in drill holes with 500ppm Zn cut off. Note LOY15-001 and LOY16-002 were only partially sampled.

RED4 returned numerous basalt intrusions from 275 to 329m. Relatively close proximity to a significant basalt feeder is implied with intrusions likely following a fault outwards from an intrusive centre (Possibly the Bass No1 conductor?). Curiously, the RED5 drill log does not mention basalt intrusions, which suggest they may dominantly dip W, sub parallel to RED5. This fits with a fault in LOY16-002, suggesting this orientation is related to extension during the Tertiary.

The logging of the Jervois 4 hole 1997 RC program can readily be re-interpreted given current knowledge and the problematic conditions reported by Purvis (TCR97_4012; high water flows, clay zones, cavities and sample contamination). RW1 & 2 off Peak Hill Rd, returned little basemetal or Sn and W. Whereas, the Pilbeam Rd Prospect returned 20m @ 0.17% Zn. And, extensive low level Zn anomalism was reported from the RW3 drill hole, returning 65m @ 786ppm Zn (almost 0.1% !). A target below and slightly north of RW3 was suggested to follow up anomalous Zn. Purvis (TCR97_4012) noted that overall, Zn occurs in partly skarnified limestone, the palaeosoil developed on it in (RW1&2) and the oxidised sediments overlying it (RW3&4). Given the current interpretation, the palaeosoil and oxidised sediments from RW RC holes could be re-interpreted as granite margin parallel fault zones, along strike from the Puffer's Creek area. A further fault supporting note is that above 107m in RW1, alteration is noted to be largely fracture controlled.

Discussion

The area's geology is enigmatic and complex. A compilation and revision of the Redwater Creek - Peak Hill area geology was undertaken utilising MRT 1:25,000 digital geology, Comalco geology (Weste, 1979), new field mapping and drill geology and structure, as well as IP, magnetics and VTEM data (Figure 10). Discussion following outlines some of the interpretation.

Misfit geological occurrences include:-

- Granite was not intersected at depth within LOY16-002 when this hole drilled beneath large boulders / subcropping granite.
- An erratic and pody ground magnetic high distribution is evident in the Puffers Creek / Loyetea Road area (Figure 4). No appreciable magnetic response came from the ironstone outcrop on the Loyetea Road. Could the magnetic low /-ve effect in the ground magnetics here result from multiply orientated magnetite clasts; the combined fields cancelling at close proximity due to magnetic domain effect?
- Limestone is the dominant lithology aside from faults in RED1 whereas fault breccia and Owen Group sandstone and minor conglomerate crop out extensively on the Puffers Creek / Loyetea Road section above the surface projected base of the hole. Weste (1979) had considered the possibility of Tertiary aged magnetite agglomerates, but current interpretation doesn't favour this as the ironstone and granite bearing fault breccias appear steep dipping with foliated zones and penetrative fractures / joints through parts of the outcrop.

A mega breccia fault with clasts potential to 10's of metres in size is a plausible explanation for these misfits. The faulted section indicated by outcrop is potentially in the order of 150m in thickness. Such a thick fault melange breccia maybe akin to the Beacraft Megabreccia located on the Penguin foreshore to the NE.

Faulting and magnetite skarn at the Redwater Creek Prospect is interpreted to be at or near the Gordon Limestone - Moina Sandstone contact. Magnetite formation associated with the Housetop Granite could be expected to form via direct contact metasomatism within Gordon Limestone as well as skarn formation along the chemical and fault focusing rheological contrast presented by the Gordon Limestone – Moina Sandstone contact. This is the same stratigraphic position as the Transition Beds hosting Au-Bi skarn at Stormont, near Moina. Appreciable Au (0.21ppm) and Bi (861ppm) in Puffer's Creek magnetite alluvium (Sample 250/14) supports a possible genetic link to Stormont mineralisation.

Re-interpretation suggests that the historic drill holes RED1 and RED2 likely terminated within the fault and didn't fully test it's width. Both holes terminated shortly into granite; being possible clasts. The weak intersections in previous drilling may in part reflect the faulted dissected nature of mineralisation.

Chargeability appears to mostly reflect pyrrhotite mineralisation in LOY16-002, but is roughly coincident with the magnetite footwall and possibly the magnetite in the Redwater Creek Prospect vicinity (Figure 11). The strongest chargeability anomalies are generally NNE aligned with their distribution reflecting a series of dextral fault offsets (within the NE lineament corridor). Basalt cover masks the underlying geology with chargeability appearing to be attenuated where basalt is known to be relatively thick. Regardless relatively moderate IP chargeability anomalies are coincident with NNW oriented faults and interpreted lineaments suggesting these faults were concurrently mineralised. Some breaks in the strong chargeability trend are not associated with chargeability and are inferred to be related to later, possibly Tertiary aged faulting, which is clearly evident in core.

IP resistivity has proven use full to interpret lithological distribution. IP resistivity contours (digitised from Weste, 1979) were also gridded with an emphasis on relative resistivity lows, potentially equating to sulphide conductors. Figure 12 shows the high resistivity (blue) end of the data clipped to enhance relative conductors (red). IP responses on the low resistivity end of the histogram are relatively low amplitude/weak, but they do appear to reflect interpretation. Offsets in low resistivity blocks fit with structural interpretation in the western half of the survey. These zones generally correspond to limestone and Tertiary basalt. Very low resistivity loosely corresponds to granite, particularly at the far western survey margin. High IP Resistivity clearly reflects the distribution of siliceous sandstone and conglomerate (including. Moina Sandstone) continuing south of the Housetop Granite and Redwater Creek Prospect. In the NE of the IP grid, high chargeability diverges away from this significant N-S trending resistivity high trend, suggesting that chargeability is largely structure and mineralisation rather than lithology related.

Re-interpretation of historic drill holes RED1 and RED2 finds they likely terminated within the fault and didn't fully test it's width.

Mineralisation

Magnetite and FeO veining is apparently formed on NNW and NE aligned structure, as discussed above. However, the origin of base metal clasts in Puffers Creek and near the LOY16-002 drill hole remains enigmatic. The mega fault breccia hypothesis could explain the massive sulphide samples as displaced mineralised clasts. Pb isotopes could be usefully undertaken on the sampled base metal sulphide clasts to determine their age; are they Devonian or Cambrian aged, given the possibility of entrainment in fault breccia? A Cambrian age would raise potential for a deep Cambrian VHMS target.

The NNW aligned linear low resistivity IP features could also be conductive Devonian base metal vein sulphide targets, parallel to moderate NNW and crosscutting earlier stronger NW chargeability trends. Notably the LOY16-002 proximal location returns a strong SF15 channel response in VTEM, whereas few other locations do. The fault parallel NNW aligned lowest resistivity zones in the Peak Hill – LOY16-002 area (Figure 12) could also reflect granitic dyke intrusions, but this also supports a Devonian vein hypothesis, since weakly porphyritic granite at surface near LOY16-002 is base-metal anomalous.

Investigation of stream sediment samples in the Puffers Creek area highlights weakly elevated values (<50ppm Zn & Pb) along the creek in the area where the lineament / NW fault passes, providing encouragement for Potential Pb-Zn mineralisation host on this structure. Further southeast the Loyatea Peak Pb-Zn Prospect is identified as a comparatively much more anomalous stream sediment anomaly, returning up to 70000ppm Fe, 190ppm Pb and 600ppm Zn from the vicinity of the NW fault.

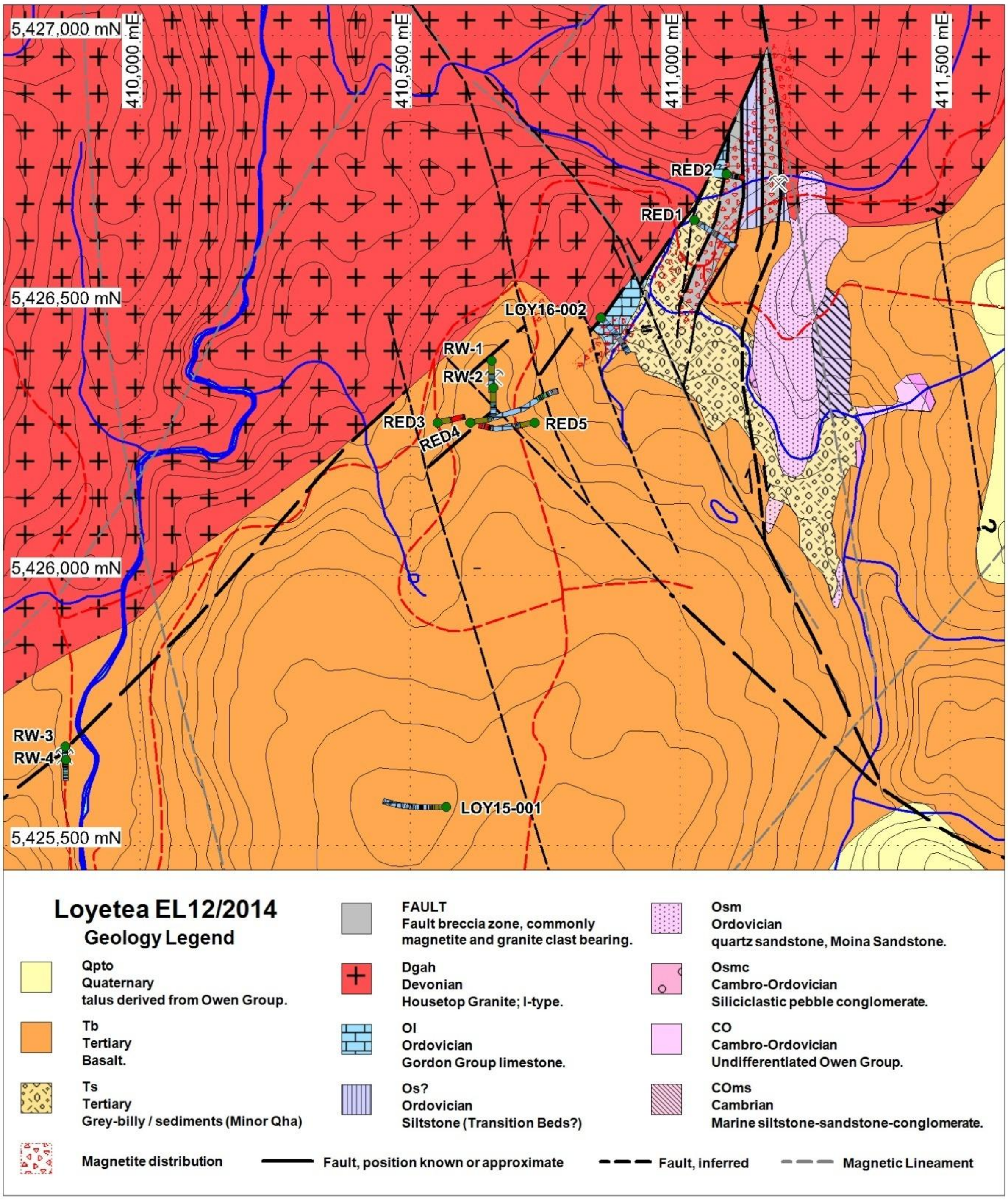

Figure 10: Geological and structural interpretation for the Peak Hill / Redwater Creek Area, also showing drill holes and surface projected lithology.

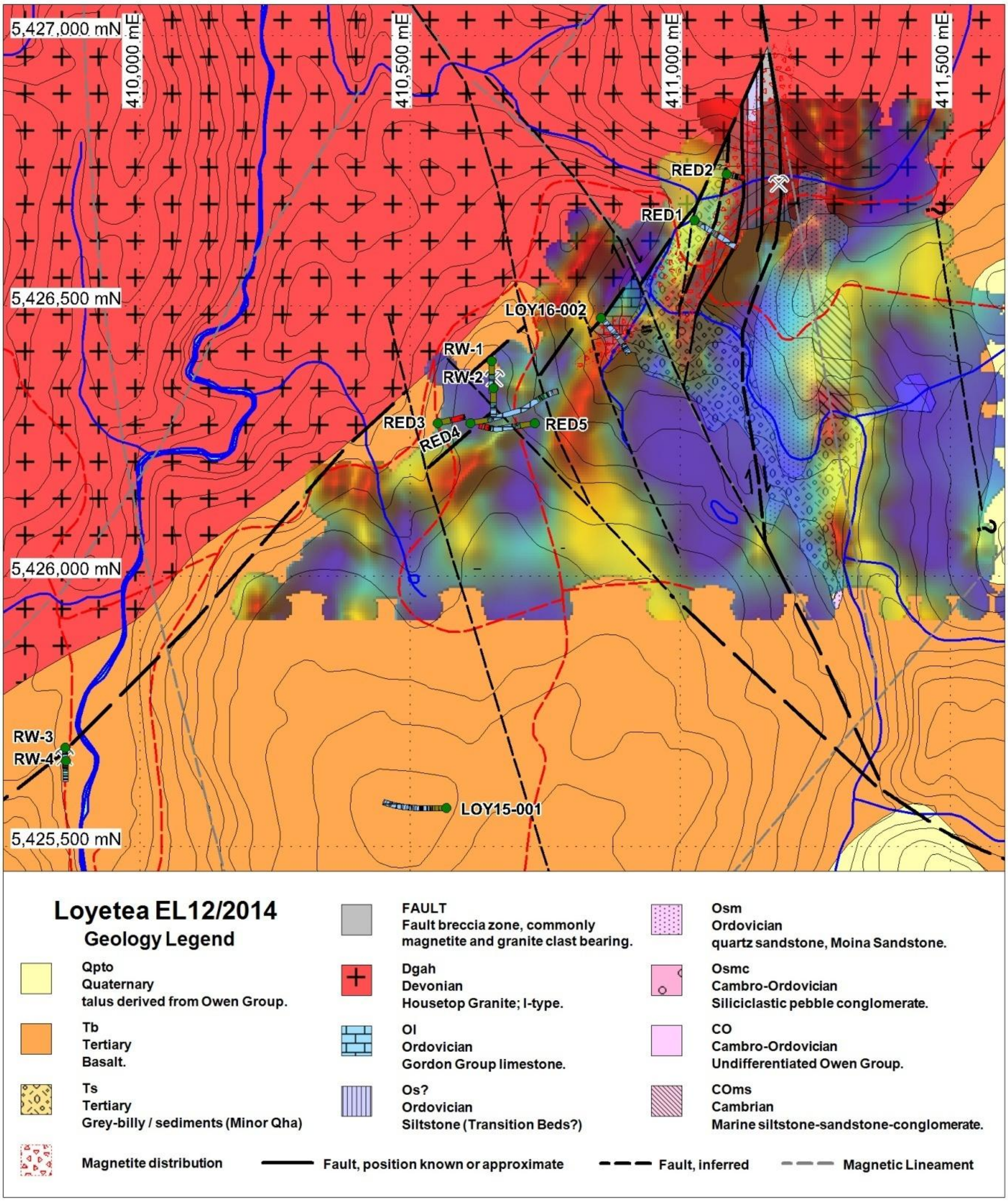

Figure 11: IP Chargeability grid transparency (from Weste, 1979) overlain on geology interpretation.

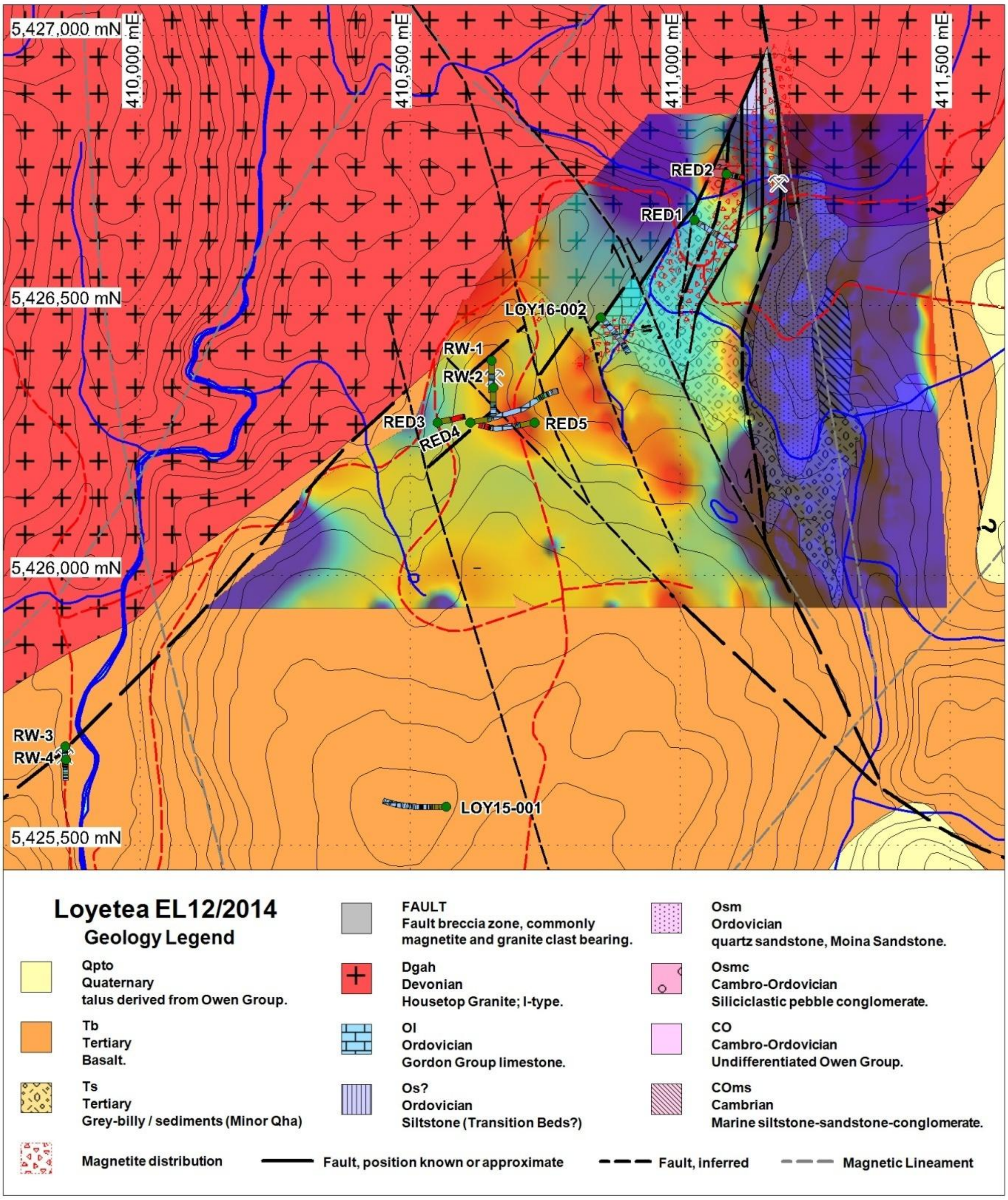

Figure 12: Resistivity grid (from Weste, 1979) in reverse psueodocolour highlighting relative conductors (red), enhanced by 50% clipping highly resistive values (blue); overlain on geology interpretation.

Environment

LOY16-002 Drill Abandonment Report

Hole designed to:- Test magnetics high, IP chargeability anomaly and anomalous rock chips (potential base metal veins in creek).

East GDA: 410853.7mE, North GDA: 5426477.9mN, RL: 394.5m (GPS average)

Az: 135TN, Dip: -60, Length: 169.6m

Drilling was undertaken within open forestry plantation. The site inspected after demobilisation was clean (rubbish free) with no trees having been removed or disturbed. Upon hole completion, the collar was filled with cuttings, then cemented before a final dirt/soil cover. The collar was not making any water and there was little evidence of the collar (Photo 3).

The tracked rig was brought in via an ~300m existing track route along the plantation margin. Daily access for drilling followed a more direct shorter route along a rough thinning track. Rig maintenance was supported by tracked Marooka vehicle.

Photo 3: LOY16-002 collar area (looking west)

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Appendices

Appendix 1:- Appended Digital data

Exploration Work Type	Filename	File format
Report	EL122014_201608_01_Report.pdf	*pdf*
Drilling		
	EL122014_201608_02_SL_1.xls	xls
	EL122014_201608_03_DS_1.xls	xls
	EL122014_201608_04_DL_1.xls	xls
	EL122014_201608_05_Lithologycodes.xls	xls
	EL122014_201608_06_DG_1.xls	xls
	EL122014_201608_07_DStructure_1.xls	xls
	EL122014_201608_08_DGeoTech_1.xls	xls
Surface sampling		
	EL122014_201608_09_SG_1.xls	xls
	EL122014_201608_10_SGroundMagnetics_1.xls	xls
	EL122014_201608_11_AnalysisBU15153268.pdf	*pdf*
	EL122014_201608_12_AnalysisBU15183001.pdf	*pdf*
	EL122014_201608_13_AnalysisBU16119577.pdf	*pdf*
File Verification Listing *(this file)*	EL122014_201608_14_FileListing.xls	xls

Appendix 2:- Rock Chip Analysis

Sample_ID	East__GDA	North__GDA	Date	Sample_Type	Sample_Type2	Sample_Form	Description	Geology_Description	Geol_Code	Mag_Sus(SI)	Batch_Number	Recvd Wt.	Au_ppm	Ag_ppm	Al_%
12	410878	5426466	8/10/2015	rock chip	comp rc	subcrop	hole dug with sliver taken off side for analysis				BU15153268	2.47	-0.01	0.46	8.29
13	410878	5426466	8/10/2015	rock chip	comp rc	subcrop	hole dug for scattered float; 52% Pb, 9.8% Zn, 1.4% Cu, 1g/t Au & 1980ppm Ag Sulphide Rock Chip	green malachite? Stained galena - chalcopyrite ore; 5cm thick & slabby (vein)?	MSSX		BU15153268	4.11	1.03	1980	0.18
250/15	410976	5426566	26/11/2015	rock chip	grab rc	float	gossanous alluvium site	subangular massive galena with trace py-cpy sulphide and coarse grained carbonate patches / speckled zones(w), weak fracture control / banding; as single Edrill collected boulder in alluvium	MSSX	0.11	BU15183001	1.62	3.9	485	0.24
250/14	410976	5426566	26/11/2015	rock chip	comp rc	float	gossanous alluvium site	scattered massive magnetite+/-hematite(locally specular) with minor zones relict gark green pyroxene skarn; boulders in alluvium	GOSSAN	313	BU15183001	3.06	0.21	0.12	0.52
266/16	410859	5426461	26/11/2015	rock chip	comp rc	float		float bn locally hem(s)-magnetite - gossan	GOSSAN	232	BU15183001	2.62	0.01	0.2	1.5
272/17	410894	5426436	26/11/2015	rock chip	comp rc	float		weakly porphyritic granite float boulders, bearing sub rndd to rounded quartz eyes 5 - 7mm (15%) & local feldspar to 13mm in a medium grained groundmass.	DGP	0.03	BU15183001	0.54	0.04	8.76	5.25
250/18	410976	5426566	26/11/2015	rock chip	grab rc	float	wp 250 sample site	sample alluvial grey & cream buck vein quartz - chlorite (m, 20%) to 15cm	QVN	0.11	BU15183001	1.27	-0.01	0.16	0.5
50014	411177	5426687	20/07/2016	rock chip	grab rc	outcrop	HemSil clast approx location	clast specular Hematite with cream to tan pervassive silica matrix; lht brown and grey pervassive cream to pgn silica with disseminated silvery hematite(25% to locally 50%).	HemSil		BU16119577	1.35	0.001	0.02	6.5
50027	411280	5426696	26/07/2016	rock chip	comp rc	outcrop	1m comp				BU16119577	2.56	0.001	0.02	3.18
50028	411263	5426697	26/07/2016	rock chip	comp rc	outcrop	10m comp RC to 0411255mE, 5426713mN				BU16119577	2.25	-0.001	0.02	1.9
50029	411253	5426698	26/07/2016	rock chip	comp rc	outcrop	10m comp RC to 0411245mE, 5426708mN				BU16119577	1.94	0.001	0.01	2.62
50030	411239	5426701	26/07/2016	rock chip	comp rc	outcrop	10m comp RC to 0411236mE, 5426707mN				BU16119577	1.8	0.001	0.02	2.95
50031	411230	5426702	26/07/2016	rock chip	comp rc	outcrop	10m comp RC to 0411221mE, 5426699mN				BU16119577	2.4	0.001	0.04	3.73
50032	411220	5426703	26/07/2016	rock chip	comp rc	outcrop	10m comp RC to 0411217mE, 5426708mN				BU16119577	2.36	0.001	0.02	3.71
50033	412125	5424556	27/07/2016	rock chip	comp rc	float	used magnet to pick spot and then handpicked sample				BU16119577	2.29	0.001	0.13	7.63
50034	412124	5424287	27/07/2016	soil	C-horiz		used eyes and magnet to pick spot, hand augured a hole to approx 600mm first 200mm was magnetic last 400 wasn't it was a yellowish clay. There is a creek about 10 metres away from where I took sample which I believe is a contact between different rock types.				BU16119577	1.66	0.003	0.3	7.87

Sample_ID	As_ppm	Ba_ppm	Be_ppm	Bi_ppm	Ca_%	Cd_ppm	Ce_ppm	Co_ppm	Cr_ppm	Cs_ppm	Cu_ppm	Fe_%	Ga_ppm	Ge_ppm	Hf_ppm	In_ppm	K_%	La_ppm	Li_ppm	Mg_%	Mn_ppm	Mo_ppm	Na_%	Nb_ppm	Ni_ppm	P_ppm
12	10.4	130	4.34	0.72	0.17	0.33	59.8	37.8	245	3.03	66	7.88	21	0.31	5	0.13	0.23	22.4	21.7	0.42	695	1.74	0.04	35.9	190	1170
13	535	60	0.07	50.5	0.04	466	7.2	1.3	3	0.24	13700	6.39	4.83	0.12	0.2	18.6	0.06	3.4	1.6	0.04	8960	2.47	0.01	0.5	2.7	10
250/15	372	80	0.14	0.7	2.26	958	17	0.8	4	0.1	1350	3.71	8.87	0.56	0.6	0.061	0.1	8.7	0.4	0.83	1080	2.7	0.01	1.2	1.2	10
250/14	61.8	10	1.1	861	0.01	-0.02	10.2	29.3	5	0.23	13.4	>50	20.2	1.2	0.2	1.19	-0.01	1.2	2.4	0.19	7670	8.71	0.01	5.3	13.2	110
266/16	266	10	3.21	12.15	0.01	0.02	47.6	36.6	13	0.26	25.5	>50	20.4	4.24	1	1.885	0.01	4.5	8.2	0.23	9830	11.5	0.01	8.2	13.4	180
272/17	11.9	210	2.69	1.2	0.41	14.7	42.4	3.4	16	5.87	69.6	1.93	16.2	0.19	4.8	0.04	4.09	10.2	25.8	0.05	425	0.79	1.63	19.8	6.7	60
250/18	6.7	10	0.09	1.97	-0.01	0.21	2.78	5.1	15	0.16	13.3	2.57	1.83	0.11	0.1	0.035	0.035	1	4.2	0.28	263	0.46	0.01	0.4	13.1	20
50014	19.1	150	3.36	1	0.05	-0.02	22.7	3.3	48	7.24	22	8.97	16.9	0.19	3.3	0.235	3.04	24.2	10.5	0.07	245	1.77	0.05	20.9	11	200
50027	3.3	360	1.91	0.06	0.02	-0.02	170	3.9	882	10.55	14.7	5.42	10.15	0.43	3	0.02	1.12	282	30.4	0.15	129	0.41	0.07	6.9	22.5	650
50028	1.4	50	0.67	0.1	0.01	-0.02	40.6	2.6	710	2.28	6.2	1.33	5.6	0.05	2.6	0.008	0.59	19.8	17.6	0.05	77	0.23	0.04	5.2	16.5	130
50029	6.2	120	1.01	0.07	0.02	-0.02	52.3	3.7	207	5.63	7.8	1.62	7.69	0.07	2	0.02	1.05	23.1	17.1	0.15	50	0.51	0.04	2.7	22.3	230
50030	4.5	130	0.91	0.11	0.02	-0.02	62.4	4	274	5.01	8.7	1.57	8.33	0.08	2.6	0.02	1.43	32.2	19.6	0.16	62	0.36	0.06	4.5	31.1	220
50031	5.1	150	1.25	0.15	0.13	0.03	54.3	9.8	140	5.72	39.1	1.81	10.25	0.07	3.4	0.04	1.6	24.2	26.6	0.31	166	1.09	0.09	13.6	36.9	380
50032	6.7	150	1.08	0.16	1.72	0.03	81.9	12.5	163	3.83	20.3	2.08	10	0.1	2.8	0.087	0.97	32.9	20.6	1.21	366	0.57	0.08	9.3	51.9	1350
50033	17.2	470	1.35	0.91	0.05	0.1	68.1	1.6	83	17.5	22.1	4.7	22.6	0.24	3.7	0.115	1.86	33.3	21.6	0.39	36	1.02	0.04	10.5	14.9	280
50034	69.8	170	0.8	0.39	0.08	0.08	63.4	2.1	74	19.4	125.5	4.54	17.05	0.32	3.2	0.081	0.5	22.1	31.1	0.15	113	1.6	0.04	9.4	14.5	490

Sample_ID	Pb_ppm	Rb_ppm	Re_ppm	S_%	Sb_ppm	Sc_ppm	Se_ppm	Sn_ppm	Sr_ppm	Ta_ppm	Te_ppm	Th_ppm	Ti_%	Tl_ppm	U_ppm	V_ppm	W_ppm	Y_ppm	Zn_ppm	Zr_ppm
12	189.5	17.1	-0.002	0.08	2.51	18.9	3	6.8	33.9	2.35	0.06	12.35	1.025	0.2	4	155	4	13.4	164	188
13	523000	3.5	-0.002	>10	3420	0.5	9	99.4	2.4	-0.05	0.05	0.5	0.014	12.75	0.6	5	2.9	2	97500	5.8
250/15	205000	3.9	-0.002	18.75	828	0.3	6	10.1	31.4	0.08	0.05	2.02	0.022	10.15	1.5	2	2.3	4.8	271000	20.3
250/14	6	0.5	-0.002	-0.01	4.37	0.5	-1	74	0.8	0.25	9.96	1.48	0.054	0.03	5.4	19	30.8	2.3	766	8.1
266/16	59.3	0.9	-0.002	0.01	22	2.7	1	143	1.5	0.41	0.14	7.29	0.103	0.07	10.1	26	21.7	7.8	844	37.4
272/17	3730	315	-0.002	0.27	16.45	1.8	1	5.9	37.4	1.94	0.05	44.3	0.085	0.98	6.3	5	1.6	21.6	3730	125
250/18	43.2	1	-0.002	0.01	0.91	0.2	-1	2.3	1.2	-0.05	-0.05	0.35	0.007	-0.02	0.3	6	0.6	0.8	104	2.6
50014	9.8	600	-0.002	0.01	2.24	4.4	1	42.7	8.7	1.85	-0.05	38.4	0.076	3.83	2.7	7	16.8	29.7	69	81.1
50027	27.1	127.5	0.002	0.01	0.72	7.1	5	2.5	107	0.56	0.06	33.3	0.192	0.5	7.3	44	6.4	120	30	101
50028	8.1	53.6	-0.002	0.01	0.75	2.3	1	1.2	19.9	0.47	-0.05	14.55	0.074	0.2	2	18	2.5	9.7	31	76.3
50029	10.7	67.6	-0.002	-0.01	2.19	6	-1	1.3	25.1	0.18	-0.05	7.5	0.149	0.36	2.6	41	3.1	8.8	19	71.5
50030	8.6	66.2	-0.002	0.01	1.67	6.4	1	1.1	25.3	0.34	0.05	9.75	0.192	0.33	2.5	42	1.7	11	20	88.2
50031	16.8	111.5	-0.002	0.05	1.54	5.7	1	2	30.8	1.73	0.07	14.05	0.194	0.48	3.1	37	1.1	10.8	26	96.1
50032	9.5	60.9	-0.002	0.09	2.85	8.5	1	2.8	56.6	0.72	0.07	11.8	0.299	0.27	2.7	47	0.8	31.9	33	95.9
50033	140	190	-0.002	0.04	1.21	13.8	2	3.3	17.9	0.74	0.06	13.4	0.346	0.87	3.3	144	1.8	14.2	39	136.5
50034	273	40.2	-0.002	0.1	2.22	16.2	5	2.3	24.8	0.66	0.1	12.15	0.338	0.59	7	100	1.5	23.3	86	118

Appendix 3:- LOY16-002 Drill Log

Drill Log — Edrill Australia Ltd.

PROJECT:	Loyetea		**HOLE NO:**	LOY16-002	**DRILL TYPE:**		Diamond
PROSPECT:	Peak Hill		**DATE COMMENCED:**	11/05/2016	**DRILLER:**		Edrill
TENEMENT:	EL12/2014		**DATE COMPLETED:**	23/05/2016	**LOGGED BY:**		R Reid
EASTING (GDA94)	410853.7	GPS	**TOTAL DEPTH (m):**	169.6	**LOGGING DATE:**		19/07/2016
NORTHING (GDA94)	5426477.9	GPS	**AZIMUTH (TN):**	137	**OXIDATION**	BOCO:	21.2
COLLAR RL:	394.5	GPS	**DIP:**	-60		BOPO:	111

Drilling details

Core Size	From	To
PQ		
HQ	0.00	169.60
NQ		
BQ		

Comments

Hole designed to:- Test magnetics high, IP chargeability anomaly and base-metal anomalous rock chips (potential base metal veins in creek).

Significant Analysis Intervals:

Hole_ID	From	To	Interval
LOY16-002	7.60	8.60	1m @ 26ppm Sn and 1220ppm Zn

Summary Log

From	To	Description
0.00	5.95	strongly weathered clayey granite
5.95	7.70	Faulted magnetite altered granite margin? stongly broken zone bearing fragments strongly oxidised goethitic hematitic - magnetite(w/m). No core recovery from 6.1m
7.70	21.20	weathered and leached clayey Fault zone bearing mostly disrupted thin bedded limestone / sediment texture, with minor relict granite (18.6 to 18.95m)
21.20	32.10	grey limestone, dark green patches and irregular veins pyroxene? Skarn like veins(w/m), local patches cream semipervasive calc silicate(w, overall)
32.10	100.80	mostly grey limestone with common broken and faulted zones
100.80	124.00	Fault Zone with common strongly broken zones with interspersed limestone "clasts". Granite zone/clast from 115.1 To 115.6m. Locally unconsolidated clayey matrix breccia bears angular limestone clasts, whereas an older fault generation comprises consolidated breccia with sub rounded to angular clasts
124.00	144.00	mostly massive grey limestone with common broken zones; 5cm irregular magnetite vein at ~140m
143.00	150.00	dominantly laminar banded black and dark grey shale/limey slst with interbedded limestone. Disseminated fg pyrrhotite (1%) mag(w) in darker shale dominated zones.
150.00	169.6	mostly massive little broken limestone with trace dss py locally and sparse <25cm strongly broken zones

HOLE_ID	From_(m)	To_(m)	Lith1	Lith2	Primary_Altn	2nd_Altn	3rd_Altn	Description	Colour	Oxidn_Style	Oxidn_Amount	Leaching_Amount	Broken(1-6)	Skarn(1-6)	Calc-Silicate(1-6)	SilSkn (1-6)	SilCal(1-6)	Silicification (1-6)	Carbonate_Style	Carbonate(1-6)	QuartzVein(1-6)	Py(%)	Pyrrh(%)	Mag(1-6)	Chlorite(1-6)
LOY16-002	0.00	1.60	GRANITE	GRANITE	OX			dark brown strongly weathered clayey relict granite with sparse relict quartz grains to 3mm	dbn	p	4	5	2												
LOY16-002	1.60	5.25	GRANITE	GRANITE		OX		tan strongly weathered clayey granite, with abundant mg quartz grains to 3mm and relict cream feldspar crystals 1 - 3mm, Quartz crystal rich from 4.7 to 5m; after equigranular mg granite. Weak indication of finer grained chilled ? margin over basal 20cm. basal contact irregular at ~45LCA. Photo @4.8m quartz rich with weak/m intergranular sericite with dgrey flecks(w/m) greissenised? FeO(m)	tan	p	3	5	2												
LOY16-002	5.25	6.10	FAULT	Tb	MAG	OX		Faulted magnetite altered granite margin? dark brown stongly broken zone bearing fragments strongly oxidised goethitic hematitic - magnetite(w/m), some frags quartz rich Granite with interstitial oxidation; two fragments dark green / grey very fine grained basalt with scattered cream / yellow feldspars to 2mm and locally olive green olivine? phenocrysts and sparse sparky possible sulphide, also grey sub rounded metallic magnetite(vw) to 3mm.	dbn	p	5		6											3	
LOY16-002	6.10	7.70	CLOSS	CLOSS				complete core loss																	
LOY16-002	7.70	21.20	FAULT	FAULT		OX	SER	sectile stongly weathered and leached clayey tan Fault zone bearing mostly disrupted thin bedded limestone / sediment texture, with minor relict granite (18.6 to 18.95m). Slickensides noted locally. fg Mica(w/m) from 7.7m to 8.7m. Includes 14.45 to 14.75m bearing brown homogeneous clay (after Tertiary clay / basalt?). Sectile clayey with strongly fragmented zone from 11.45 to 12.7m and localy weakly weathered clayey limestone in the basal 2m. grey and cream irregular foliation / bedding similar to within fault zone in Puffers creek road cut. Core commonly displays a weathered 5 to 6mm rind suggesting post drilling weathering?. Commonly bears reddish brown hematitic irregular semi pervasive veinlet to locally pervasive hematite(m) alteration. Very fine grained mica is evident within the weathered limestone. Also local cream zones possibly after calc-silicate(w/m)? Includes 18.1 to 19.6m of pale green pervasive sericite(m) weathered limestone. Lower contact is irregular and broken with weak fragmental / breccia texture over last 15cm.		p	3		4		w										
LOY16-002	21.20	32.10	SLMST	SLMST		CBVN	SILCAL	Upper contact at ~60LCA irregular, cream and grey limestone, locally thin bedded, common irregular semi-pervasive often bedding parallel zones but locally crosscutting bedding of light green often vfg green silica-skarn - like veinlets (w overall) and zones creamy light brown carbonate semi-pervasive zones (w, overall) to ~5cm width, bearing common dark grey dendritic like mineral growth (w/m within zones). 25 to 26.3m is possibly weakly pervasively silicified with sparse quartz veinlets bearing trace pyrhotite. This zone is enveloped by patchy carbonate altn. 31.6 to 31.8m is diffuse irregular edged carbonate veined with irregular red hematite(w, overall). Broken w/m as local zones to 25cm. At 31.2m broken zone bears brown slightly greasy feeling locally feld xtal? bearing rock - possibly intrusive fingers of basalt or Tertiary clays?					3	w		p	vw	v	w/m						
LOY16-002	32.10	37.90	SLMST	SLMST				grey limestone, bk(w), mostly fairly massive with weakly fragmental textures locally. Sparse cream carbonate veins(w), sparse pyrite(tr) in dark grey / green irregulsr veinlet zones / patches					2												
LOY16-002	37.90	38.10	FAULT	FAULT				broken zone possibly weakly faulted					6												
LOY16-002	38.10	39.90	SLMST	SLMST				Limestone, commonly thinnly bedded @ ~20LCA with cream / lht bn semi pervasive cb zones bearing sparses red hematite and very sparse dentritic dark mineral.					2												
LOY16-002	39.90	40.40	FAULT	FAULT				clayey pale olive green limestone clast bearing fault? Minor quartz grains in the clayey matrix of granite derivation?					6												
LOY16-002	40.40	60.95	SLMST	SLMST			SER	grey limestone, commonly fg/mg recrystallised appearance, green/grey irregular sericitic zones locally bear trace pyrite. 48.1 to 48.5 is a bn 7mm thick 5LCA zone of possible basalt intrusive on an irregular / wavy fracture. Another probable basalt intrusive is at 57.4 to 57.45 on an approx 30LCA fracture. Patches mottled lht bn hematite and green sericite(w overall) eg 54 to 54.6m. Overall weakly broken with minor/sparse strongly broken fractured zones, particularly over the basal few meters.					2												

HOLE_ID	From_(m)	To_(m)	Lith1	Lith2	Primary_Altn	2nd_Altn	3rd_Altn	Description	Colour	Oxidn_Style	Oxidn_Amount	Leaching_Amount	Broken(1-6)	Skarn(1-6)	Calc-Silicate(1-6)	SilSkn (1-6)	SilCal(1-6)	Silicification (1-6)	Carbonate_Style	Carbonate(1-6)	QuartzVein(1-6)	Py(%)	Pyrrh(%)	Mag(1-6)	Chlorite(1-6)
LOY16-002	60.95	61.2	GRANITE	GRANITE				cream and pgn weakly quartz porphyritic fg granite intrusive. Lower contact ~80LCA and upper contact ill defined. No appreciable alteration at margins fits with a possible origin as a fault bounded clast					2												
LOY16-002	61.20	70.25	SLMST	FAULT			SER	grey Limestone within common clayey (sericitic?) broken fractured zones of 10cm to 100cm. 30 and 60 to 70LCA fractures common. Contacts broken. At 69.5 undulating bedding at low (~5LCA) with weak Cb veining					4												
LOY16-002	70.25	70.7	FAULT	FAULT	OX			dark brown hematitic vfg homogeneous clays. Minor contained fragments of limestone. Broken contacts with low LCA fracs at upper margin wallrock and high LCA fracture immediatelly uphole.					5												
LOY16-002	70.7	74	SLMST	FAULT			SER	AA 61.2 to 70.25					5												
LOY16-002	74	77.4	SLMST	SLMST			CBVN	grey largely relatively massive fragmental textured limestone with few breaks, cb veinlets to 5mm (w)					2												
LOY16-002	77.4	78.25	SLMST	SLMST		SIL		leached silicified? but still carbonate(m) homogeneous texture destructuve alteration patch. Gradational upper contact. Basal contact is abrupt and faulted, ~25LCA; un broken					1												
LOY16-002	78.25	78.45	FAULT	FAULT		SER		pale green clayey zone with lower contact ~25LCA and upper weakly fragmental ~45LCA contact; sericitic minor fault zone					6												
LOY16-002	78.45	87.3	SLMST	SLMST			DSX	grey largely relatively massive weakly fragmental textured and locally weakly thinly bedded limestone with few breaks, cream cb-sil semi perv altn over upper 10cm near fault, very weakly broken, dss py(tr) to locally 0.5%. @82.85 is open parasitic folds and disjointed laminar silstone interbeds. possiblle vergence to an anticline uphole to the west.					1									0.01			
LOY16-002	87.3	90.95	FAULT	SLMST				grey and lht bn strongly broken fragmental Fault zone bearing limestone clasts to 15cm. 10cm brown homogeneous clayey / basalt at upper contact. Immediatelly uphole basalt is on an ~5LCA fracture. Upper contact ~60LCA, basal contact ~45LCA. FeOx(w) mostly on fractures. Matrix mostly clayey and locally limestone fragment bearing cataclastic textures such as at ~88.4m. @89.5m bedding is 60LCA at odds to 20LCA above interval = fault rotated?			2		6												
LOY16-002	90.95	100.8	SLMST	SLMST				mostly massive little broken limestone with minor strongly broken brecciated zones; ill defined lower contact zone / structurally gradational. ~5LCA bedding whick is locally open wavy @ 92.7m. No sulphide					1												
LOY16-002	100.8	124.1	FAULT	SLMST			.	Fault Zone; relatively much more broken zone with common strongly broken zones with interspersed limestone "clasts". Locally bn homogeneous clay are at 111m. A granite zone / clasts exists from 115.1 To 115.6m but has ill defined contacts with no alteration in the contact zones. Locally within the broken zones are unconsolidated clayey matrix breccia bearing angular limestone clasts to 5cm, such as at 106.3m and 120.6m. Whereas an older fault generation is exhibited as consolidated breccia bearing sub rounded to angular clasts, reflecting some milling associated with the older faulting. @107.5m 1cm green semi-pervasive skarn like altn(tr). Bedding LCA angles are variable compared to uphole (5 to 45LCLA) possibly indicating some fault block rotation.					6												
LOY16-002	124.1	130.15	SLMST	SLMST		DSX	SIL	grey limestone, largelly little broken, very fine grained dss pyrrhotite (0.5%) but locally 2% in dark grey/gn irregular diffuse veinlets(w overall) to 1.5cm width. Mag(w). pervasive silica?(w) overprint. Cubic dss Py(tr) to 1.5mm locally. Aspy?(tr) (Chargeability anomaly?)					2									0.01	0.50		
LOY16-002	130.15	130.6	FAULT	FAULT				Fault breccia bearing variable shape (commonly sub rounded to sub angular clasts) limestone clasts. Cataclasite mill breccia of an older generation. Some clasts display carbonate alteration dating the faulting to post alteration. Upper contact is ~60LCA but irregular, with the lower contact ill defined and broken.																	
LOY16-002	130.6	137.8	SLMST	FAULT				Limestone with common strongly broken and clayey zones, fg dss pyrhotite(tr) in coherent limestone sections. Included 132.95 to 134.8m of laminar bedded silty limestone with disrupted and faulted bedding.					5												

HOLE_ID	From_(m)	To_(m)	Lith1	Lith2	Primary_Altn	2nd_Altn	3rd_Altn	Description	Colour	Oxidn_Style	Oxidn_Amount	Leaching_Amount	Broken(1-6)	Skarn(1-6)	Calc-Silicate(1-6)	SilSkn (1-6)	SilCal(1-6)	Silicification (1-6)	Carbonate_Style	Carbonate(1-6)	QuartzVein(1-6)	Py(%)	Pyrrh(%)	Mag(1-6)	Chlorite(1-6)
LOY16-002	137.8	139.87	SLMST	SLMST			DSX	Limestone weakly broken. dss fg pyrrhotite/pyrite(tr) overall, arsenopyrite?(tr).					3										0.01		
LOY16-002	139.87	139.93	MAG	MAG	MAG		CBVN	Massive irregular edged ~30LCA magnetite vein from 139.87 to 139.93m. Magnetite has minor cream/green carbonate-chlorite veinlet overprint but magnetite clearly crosscuts more difuse edged carbonate veins(w overall).					1						Vn	2				5	1
LOY16-002	139.93	141.2	SLMST	SLMST				Limestone weakly broken, but moderate to strongly broken basal ~30cm					4												
LOY16-002	141.2	141.7	SLMST	SLMST		CALCSIL		Limestone with lht bn semi-pervasive carbonate / calc-silicate alteration bearing numerous black flecks, mag(w).					2		4									1	
LOY16-002	141.7	143.3	SLMST	SSHALE				dominantly laminar banded black and dark grey shale/limey slst with limestone interbedded																	
LOY16-002	143.3	143.5	FAULT	FAULT		MICA		20cm light green micaceous clayey (faulted?) zone					6												
LOY16-002	143.5	144.4	SSHALE	SLMST				dominantly laminar banded black and dark grey shale/limey slst with limestone interbedded																	
LOY16-002	144.4	145.1	SSHALE	SLMST		CBVN	SIL	laminar bedded shale/limestone with cream irregular but commonly ~45LCA carbonate vein(m) overprint. Minor cream / lht bn/gn pervasive silica(w overall) appears to be overprinted by later cream carbonate locally. Much of the dark flecky material in the psueudo shale textured portions maybe tourmaline alteration?					3					2	Vn	4					
LOY16-002	145.1	151.8	SSHALE	SLMST		DSX		dominantly laminar banded black and dark grey shale/limey slst with interbedded limestone (dominantly limestone from 149.2m). Disseminated fg pyrrhotite (1%) mag(w) in darker shale dominated zones. At 145.3m a 30LCA frac is pyrite vein coated (~1mm). Mostly massive little broken. At 150.48 to 150.55m is a minor fault subparralel to bedding bearing limestone and cream silicified limestone? clasts orientated parallel to the fault. matrix is weakly consolidated.					2									0.01	1.00		
LOY16-002	151.8	156.83	SLMST	SLMST				mostly massive little broken limestone with trace dss py locally. minor <25cm strongly broken zones.					2									0.01			
LOY16-002	156.83	157.1	GRANITE	GRANITE				light brown clayey weathered fg aplite dyke? Possibly weakly porphyritic with quartz phenocrysts to 2mm. sharp contacts @ 15LCA				w/m	3												
LOY16-002	157.1	169.6	SLMST	SLMST				mostly massive little broken limestone with trace dss py locally and sparse <25cm strongly broken zones (eg. 160.4 to 160.6m). @ 157.35m is an open fold closure					2									0.01			

Down Hole Surveys								
Hole_ID	Depth	Azimuth(TN)	Dip	Azimuth(Mag)	Type	Verified	Comment	Date
LOY16-002	0	137	-60	124	1	Y		23/05/2016
LOY16-002	51	138	-60	125	1	Y		23/05/2016
LOY16-002	105	144	-60	131	1	Y	165MN actual reading suggests near magnetite / fault breccia; average used	23/05/2016
LOY16-002	155	150	-61	137	1	Y		23/05/2016

Hole_ID	At(m)	Core angle (LCA) alpha	Beta_Angle	Structure_Code	Structure Code2	Comments	Dip	Dip_Direction
LOY16-002	21.2	60		Fr	FrStr	straight frac with slightly rough surface		
LOY16-002	25.75	60		Vn	SilVn	green sil-serp vn		
LOY16-002	25.8	15		Bd	Bd			
LOY16-002	26.5	50		Ft	Ft	approx upper fault contact		
LOY16-002	28.05	35		Vn	SilVn	green sil-serp vn		
LOY16-002	29.8	60		Fr	Fr	frac start broken zone / fault?		
LOY16-002	31.8	15		Bd	Bd	Cb - hm replaced bedding		
LOY16-002	31.81	20		Vn	CbVn	Cb - hm replaced bedding		
LOY16-002	35.05	30	85	Vn	SilVn	pgn silca vein on stepped fracture	67	28
LOY16-002	35.1	40	225	Fr	FrIrreg	frac weakly irregular	34	212
LOY16-002	35.25	25	350	Ft	Ft	irregular uphole fault surface	85	129
LOY16-002	35.4	35	80	Vn	CbVn	3mm cream carbonate vein	65	21
LOY16-002	36.65	25	335	Bd	Bd	weakly defined bedding	87	115
LOY16-002	37.3	20	335	Bd	Bd	weakly defined bedding	83	114
LOY16-002	37.4	30	250	Vn	SilVn	pgn sil-ser? vein on straight frac	54	227
LOY16-002	38.3	15		Fr	Fr	frac lined with gn clay @ 90 to S0		
LOY16-002	38.45	25		Bd	Bd	thin bdd lmst		
LOY16-002	40.6	80	30	Fr	FrUnd	weakly undulating irreg frac	39	326
LOY16-002	40.9	25	310	Bd	Bd	weakly defined bedding	86	274
LOY16-002	41.1	35	220	Fr	FrStr	straight fracture	36	202
LOY16-002	41.35	70	315	Fr	FrStr	straight frac	46	298
LOY16-002	42.35	20	310	Bd	Bd	bedding	90	92
LOY16-002	43.15	35	220	Fr	FrStr	straight fracture	36	202
LOY16-002	43.25	40	50	Fr	FrStr	straight fracture	72	356
LOY16-002	44.4	35	230	Vn	SilVn	pgn sil? Vn	41	213
LOY16-002	44.9	20	125	Bd	Bd		56	69
LOY16-002	45.1	80	185	Fr	FrIrreg	core break slightly irreg	20	315
LOY16-002	48.1	5		Fr	Fr	brown homogeneous clay? 7mm on irregular frac		
LOY16-002	50.8	60		Fr	FrStr	straight frac with pgn coating		
LOY16-002	52.85	35	240	Fr	Fr	frac with pgn coating	45	223
LOY16-002	53.65	35	80	Vn	SilVn	pgn 1mm sil? Vein	65	21
LOY16-002	54.35	20		Bd	Bd			
LOY16-002	56.6	20		Bd	Bd			
LOY16-002	59.65	85		Fr	Fr	frac at end minor broken zone		
LOY16-002	60.95	75		Con	Con	up hole granite contact		
LOY16-002	61.5	70		Fr	FrIrreg	slightly irregular frac at down hole end broken possiblly brittle faulted zone		
LOY16-002	62.75	58		Ft	Ft	straight frac surface at start recent unconsolidated fault zone		
LOY16-002	67.1	15		Bd	Bd			
LOY16-002	68	60	50	Ft	Ft	lower contact clayey broken Ft zone?	54	348
LOY16-002	69.25	15	280	Bd	Bd	poorly defined bedding	82	246
LOY16-002	70.05	20	130	Ft	Ft	possible fault surface; str frac at end pgn clayeyey faulted zone	53	76
LOY16-002	74.2	52		Vn	CbVn	5mm cb vein on str frac		
LOY16-002	76.4	15	340	Bd	Bd	thin bedded	77	121
LOY16-002	76.8	15	90	Fr	FrStr	str frac	77	43
LOY16-002	78.1	30	25	Vn	SilVn	1mm sil veinlet on str frac	88	342
LOY16-002	79.35	15	345	Bd	Bd		76	126
LOY16-002	82.85	12	335	Bd	Bd	@82.85 is weak open parasitic folds and disjointed laminar silstone interbeds. possiblle vergence to an anticline uphole to the west. Fold axis perpendicular to the drill orientation.	75	116
LOY16-002	83.8	15	355	Bd	Bd	poor reading	75	137
LOY16-002	84.3	40	110	Fr	FrIrreg	slightly irreg frac, pgn clay coated	47	44
LOY16-002	84.9	15	20	Bd	Bd		77	162
LOY16-002	86.5	16	320	Bd	Bd		83	103
LOY16-002	87	25	20	Fr	Fr		87	160
LOY16-002	89.5	60		Bd	Bd			
LOY16-002	92.2	5	335	Bd	Bd	poor alpha / LCA	68	116
LOY16-002	98.5	10		Bd	Bd			
LOY16-002	103.8	10		Bd	Bd			
LOY16-002	113.5	5		Bd	Bd			
LOY16-002	114.4	35		Bd	Bd	rotated bedding in fault zone?		
LOY16-002	115.6	45		Bd	Bd			
LOY16-002	125.6	40	45	Bd	Bd	poor reading	73	1
LOY16-002	128.2	60	190	Fr	SilVn	frac with pgn altn halo	5	236
LOY16-002	128.53	30	100	Fr	FrUnd	undulating fracture	59	49
LOY16-002	129.65	50	138	Fr	FrIrreg	slightly irregular but planar frac	26	62

Hole_ID	At(m)	Core angle (LCA) alpha	Beta_Angle	Structure_Code	Structure Code2	Comments	Dip	Dip_Direction
LOY16-002	131.9	60		Ft	Ft	lower fault contact		
LOY16-002	139.6	35	90	Fr	Fr	weakly irreg frac	60	39
LOY16-002	139.75	10	310	Bd	Bd	bedding ill defined	81	98
LOY16-002	139.8	25	170	Vn	SilVn	1mm sil? Vein with bk(tourmaline/mag?) selvages	36	133
LOY16-002	139.95	40	295	Vn	MagVn	mag veining crosscutts earlier weakly difuse edged cb vn; stepped frac innacurate reading	66	279
LOY16-002	140	25	175	Vn	CbVn	2mm weakly difuse edged cb vein	36	140
LOY16-002	140.15	55	185	Fr	FrIrreg	irregular frac	6	175
LOY16-002	140.45	15	300	Bd	Bd	thinn / laminar beddedbedding	89	91
LOY16-002	140.75	50	40	Fr	FrIrreg	irregular frac	65	355
LOY16-002	144.25	20		Bd	Bd			
LOY16-002	145.3	20		Fr	Fr	py coated		
LOY16-002	149.45	80	357	Fr	FrUnd	very weakly undulating frac	39	329
LOY16-002	149.6	20	332	Bd	Bd		84	123
LOY16-002	150.48	25	263	Ft	Ft	flat planar down hole fault margin	65	246
LOY16-002	151.1	25	247	Bd	Bd	bedding in shale	57	232
LOY16-002	156.35	0	175	Bd	Bd	fold closure open	61	144
LOY16-002	156.4	12	282	Vn	CbVn	12mm Cb vein	85	256
LOY16-002	156.83	15	290	Con	Con	fg granite / aplite dyke	86	265
LOY16-002	157.95	25	345	Bd	Bd		87	136
LOY16-002	161	5	5	Vn	CbVn	cb vn	66	155
LOY16-002	162.8	13	270	Bd	Bd		79	246
LOY16-002	163	40	82	Fr	Fr		59	32
LOY16-002	164.65	10	340	Bd	Bd	poor reading LCA	73	129
LOY16-002	166.85	13	342	Bd	Bd		75	132

Hole_ID	Sample_ID	from	to	Sample_type	Batch_Number	recovery(m)	Recvd Wt.	Ag_ppm	Al_%	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr ppm	Cs ppm	Cu ppm	Fe %
LOY16-002	50015	4.2	5.2	half core	BU16119577		1.8	<0.01	7.17	20.9	50	2.43	0.88	0.05	0.04	83.8	20.5	165	2.2	46.7	5.41
LOY16-002	50016	5.2	6.1	half core	BU16119577	0.15	0.31	0.08	3.58	125.5	320	7.94	5.02	1.29	<0.02	67.3	37.5	106	1.94	52.2	35.4
LOY16-002	50017	7.6	8.6	half core	BU16119577		1.88	0.19	9.98	20.2	220	34.8	22.9	0.13	4.26	194.5	22.4	56	20.6	89.3	7.76
LOY16-002	50018	25.2	26.2	half core	BU16119577	0.92	3.54	0.03	3.35	1.8	270	2.05	0.1	22.5	0.14	39.3	4.8	26	7.09	7.7	1.2
LOY16-002	50019	26.2	27.2	half core	BU16119577		2.3	0.11	1.71	7.8	120	9.71	1	26.8	3.96	35.6	3.9	13	3.84	7.3	1.04
LOY16-002	50020	27.2	28.2	half core	BU16119577	0.75	4.48	0.15	1.66	2.2	130	5.89	0.14	27.8	2.32	28.4	2.8	13	7.16	4.9	0.77
LOY16-002	50021	138.7	139.7	half core	BU16119577		3.19	0.4	0.64	28.3	40	1.17	0.12	32.9	0.64	12.25	1.9	8	2.51	6.4	0.49
LOY16-002	50022	139.7	140.2	half core	BU16119577		2.06	0.21	0.58	23.6	20	1.06	0.04	27.7	0.5	10.45	4.8	8	3.28	16	7.42
LOY16-002	50023	140.2	141.2	half core	BU16119577		3.35	0.01	0.37	3	20	0.33	0.03	31.1	0.03	7.02	1.3	4	1.84	2.6	0.53
LOY16-002	50024	141.2	141.7	half core	BU16119577		1.59	0.04	0.76	72.8	40	1.89	0.19	32.5	0.35	14.85	4.6	9	4.5	3.3	0.85
LOY16-002	50025	124.7	125.7	half core	BU16119577		3.56	0.03	2.02	2.2	150	1.06	0.11	27.8	0.2	27.9	4.6	21	16.7	7.5	0.92
LOY16-002	50026	144.4	145.4	half core	BU16119577		3.47	0.01	0.8	3.2	50	0.73	0.06	26	0.02	12.35	2.1	7	3.95	3.1	0.89

Hole_ID	Sample_ID	from	to	Ga ppm	Ge ppm	Hf ppm	In ppm	K %	La pp	Li ppm	Mg %	Mn ppm	Mo ppm	Na %	Nb ppm	Ni ppm	P ppm	Pb ppm	Rb ppm	Re ppm	S %
LOY16-002	50015	4.2	5.2	22.6	0.26	5.3	0.142	0.28	21.4	24.6	0.31	706	1.99	0.04	36.9	118.5	290	12.3	16.6	<0.002	0.02
LOY16-002	50016	5.2	6.1	22	1.77	2.7	1.275	0.38	18.4	8.6	1.18	4570	7.82	0.37	20.9	97.1	930	15.2	16.8	<0.002	0.01
LOY16-002	50017	7.6	8.6	28.6	0.51	7.7	0.469	1.75	250	69.4	1.83	1440	1.28	0.04	30.4	68.2	420	99.5	75.3	0.002	0.02
LOY16-002	50018	25.2	26.2	9.17	0.12	1.7	0.032	1.8	20.1	21.4	1.91	309	0.24	0.2	7.5	13.8	410	6.3	102.5	<0.002	0.21
LOY16-002	50019	26.2	27.2	3.9	0.11	1.2	0.036	0.95	32.9	12.8	0.6	1200	0.2	0.03	4.6	11.4	330	23.1	56.7	<0.002	0.02
LOY16-002	50020	27.2	28.2	4.18	0.1	0.9	0.018	0.92	20.9	17.3	1.46	628	0.19	0.09	3.8	8.1	260	10.5	53.7	<0.002	0.1
LOY16-002	50021	138.7	139.7	1.82	0.1	0.6	0.013	0.32	6.9	8.5	1.31	307	0.28	0.04	1.8	4.5	110	52.3	18.5	<0.002	0.08
LOY16-002	50022	139.7	140.2	3.65	0.16	0.7	0.451	0.21	5.6	4.7	2.39	1300	3.87	0.03	3.3	6.1	70	49.6	25.3	<0.002	0.12
LOY16-002	50023	140.2	141.2	0.96	0.07	0.3	0.007	0.19	3.7	3.6	2.5	151	0.73	0.02	1.1	3.5	60	3.6	14.2	<0.002	0.21
LOY16-002	50024	141.2	141.7	2.05	0.08	0.7	0.012	0.38	7.9	10	1.14	416	0.43	0.03	2.3	9.9	150	22.4	22.6	<0.002	<0.01
LOY16-002	50025	124.7	125.7	5.2	0.1	1.6	0.02	1.24	14.1	10	1	167	0.22	0.24	5.4	12.7	150	7.7	60.5	<0.002	0.31
LOY16-002	50026	144.4	145.4	2.19	0.09	0.6	0.012	0.36	6.4	14.8	5.55	314	0.67	0.02	2.3	5.7	150	3.8	19.9	<0.002	0.36

Hole_ID	Sample_ID	from	to	Sb ppm	Sc ppm	Se ppm	Sn ppm	Sr ppm	Ta pp	Te ppm	Th ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Y ppm	Zn ppm	Zr ppm	Au ppm
LOY16-002	50015	4.2	5.2	1.24	17.9	2	9.5	16.2	2.45	0.05	17.15	0.915	0.21	5.3	145	6.9	15	151	191.5	0.001
LOY16-002	50016	5.2	6.1	12.95	10.7	1	74.4	234	1.2	0.05	7.04	0.496	0.22	7.6	101	14.5	18.7	739	107.5	0.001
LOY16-002	50017	7.6	8.6	7.35	21	3	26	96.6	2.28	0.24	29.2	0.628	1.15	13.6	89	10.6	280	1220	245	0.004
LOY16-002	50018	25.2	26.2	0.25	6.4	<1	2	397	0.53	<0.05	8.3	0.171	7.1	1.3	36	0.9	14.7	36	60	<0.001
LOY16-002	50019	26.2	27.2	0.67	3.6	<1	1.8	441	0.33	0.06	6.12	0.093	0.98	2.3	11	1.3	40.6	165	41.3	0.001
LOY16-002	50020	27.2	28.2	0.34	3.3	<1	1	595	0.26	<0.05	4.36	0.084	1.13	1	17	0.6	22.2	67	32.5	0.001
LOY16-002	50021	138.7	139.7	4.83	1.5	<1	0.7	385	0.12	<0.05	1.91	0.043	0.32	2.4	7	1.1	6.3	128	25.3	<0.001
LOY16-002	50022	139.7	140.2	2.91	1.8	<1	23.1	315	0.22	<0.05	1.74	0.049	0.25	0.9	8	0.7	4.5	233	29.3	<0.001
LOY16-002	50023	140.2	141.2	0.55	1.1	<1	0.3	436	0.07	<0.05	1.14	0.026	0.15	1	5	0.2	3.1	15	10.6	<0.001
LOY16-002	50024	141.2	141.7	3.55	1.8	<1	0.7	249	0.14	<0.05	2.44	0.054	0.61	2.5	10	1.2	7.7	125	27.9	<0.001
LOY16-002	50025	124.7	125.7	0.28	4.5	<1	1.1	476	0.36	0.05	5.86	0.135	0.39	1.3	22	0.9	11.5	29	59.4	<0.001
LOY16-002	50026	144.4	145.4	0.34	2	<1	0.5	437	0.16	<0.05	2.51	0.052	0.17	0.7	9	0.4	5	8	23	<0.001

Drill Core Recovery & RQD Log

Hole_ID	From	To	Interval	Measured	Recovery%	Lengths>10cm	RQD %
LOY16-002	0	1.6	1.6	1.37	86%	0	0.00
LOY16-002	1.6	3.2	1.6	0.72	45%	0	0.00
LOY16-002	3.2	4.6	1.4	1.27	91%	0	0.00
LOY16-002	4.6	6.1	1.5	0.8	53%	0	0.00
LOY16-002	6.1	7.6	1.5	0	0%	0	0.00
LOY16-002	7.6	9.1	1.5	1.4	93%	0	0.00
LOY16-002	9.1	10.6	1.5	1.54	103%	0	0.00
LOY16-002	10.6	12.1	1.5	1.4	93%	0	0.00
LOY16-002	12.1	15.1	3	1.68	56%	0	0.00
LOY16-002	15.1	16.6	1.5	0.27	18%	0	0.00
LOY16-002	16.6	18.1	1.5	0.35	23%	0	0.00
LOY16-002	18.1	19.6	1.5	1.4	93%	0	0.00
LOY16-002	19.6	20.3	0.7	0.44	63%	0	0.00
LOY16-002	20.3	21.2	0.9	0.89	99%	0	0.00
LOY16-002	21.2	22.6	1.4	1.21	86%	0.9	64.29
LOY16-002	22.6	24.1	1.5	0.65	43%	0.12	8.00
LOY16-002	24.1	25.2	1.1	0.83	75%	0.31	28.18
LOY16-002	25.2	25.6	0.4	0.5	125%	0.12	30.00
LOY16-002	25.6	26.3	0.7	0.71	101%	0.62	88.57
LOY16-002	26.3	27.8	1.5	1.47	98%	0.82	54.67
LOY16-002	27.8	28.6	0.8	0.87	109%	0.63	78.75
LOY16-002	28.6	29.9	1.3	1.27	98%	0.19	14.62
LOY16-002	29.9	31.4	1.5	1.46	97%	1.06	70.67
LOY16-002	31.4	32.1	0.7	0.56	80%	0.28	40.00
LOY16-002	32.1	33.3	1.2	1.34	112%	0.93	77.50
LOY16-002	33.3	34.6	1.3	1.2	92%	0.96	73.85
LOY16-002	34.6	35.5	0.9	0.99	110%	0.81	90.00
LOY16-002	35.5	37.1	1.6	1.51	94%	1.45	90.62
LOY16-002	37.1	38.1	1	1.11	111%	0.86	86.00
LOY16-002	38.1	39.3	1.2	0.96	80%	0.38	31.67
LOY16-002	39.3	40.6	1.3	1.34	103%	0.85	65.38
LOY16-002	40.6	42.1	1.5	1.43	95%	1.43	95.33
LOY16-002	42.1	43.6	1.5	1.52	101%	1.43	95.33
LOY16-002	43.6	45.1	1.5	1.56	104%	1.31	87.33
LOY16-002	45.1	46.6	1.5	1.42	95%	1.22	81.33
LOY16-002	46.6	48.1	1.5				
LOY16-002	48.1	51.1	3				
LOY16-002	51.1	52.6	1.5				
LOY16-002	52.6	54.1	1.5				
LOY16-002	54.1	57.1	3				
LOY16-002	57.1	58.5	1.4				
LOY16-002	58.5	60	1.5				
LOY16-002	60	61.5	1.5				
LOY16-002	61.5	63	1.5				
LOY16-002	63	63.5	0.5				
LOY16-002	63.5	64.6	1.1				
LOY16-002	64.6	65.9	1.3				
LOY16-002	65.9	66.4	0.5				
LOY16-002	66.4	67.6	1.2				
LOY16-002	67.6	69.1	1.5				
LOY16-002	69.1	70.6	1.5				
LOY16-002	70.6	71.7	1.1				
LOY16-002	71.7	73.2	1.5				

Drill Core Recovery & RQD Log							
Hole_ID	From	To	Interval	Measured	Recovery%	Lengths>10cm	RQD %
LOY16-002	73.2	74	0.8				
LOY16-002	74	75.5	1.5				
LOY16-002	75.5	76.6	1.1				
LOY16-002	76.6	78.1	1.5				
LOY16-002	78.1	79.6	1.5				
LOY16-002	79.6	81.1	1.5				
LOY16-002	81.1	82.6	1.5				
LOY16-002	82.6	84.1	1.5				
LOY16-002	84.1	85.6	1.5				
LOY16-002	85.6	87.1	1.5				
LOY16-002	87.1	88.1	1				
LOY16-002	88.1	88.6	0.5				
LOY16-002	88.6	88.8	0.2				
LOY16-002	88.8	89.8	1				
LOY16-002	89.8	90.5	0.7				
LOY16-002	90.5	91.6	1.1				
LOY16-002	91.6	93.1	1.5				
LOY16-002	93.1	94.4	1.3				
LOY16-002	94.4	95.3	0.9				
LOY16-002	95.3	96	0.7				
LOY16-002	96	97.5	1.5				
LOY16-002	97.5	100.6	3.1				
LOY16-002	100.6	101.1	0.5				
LOY16-002	101.1	102.6	1.5				
LOY16-002	102.6	103.6	1				
LOY16-002	103.6	105.6	2				
LOY16-002	105.6	107.4	1.8				
LOY16-002	107.4	108.8	1.4				
LOY16-002	108.8	109.6	0.8				
LOY16-002	109.6	110.4	0.8				
LOY16-002	110.4	111.1	0.7				
LOY16-002	111.1	112.6	1.5				
LOY16-002	112.6	115.6	3				
LOY16-002	115.6	117.1	1.5				
LOY16-002	117.1	118.2	1.1				
LOY16-002	118.2	118.7	0.5				
LOY16-002	118.7	120.1	1.4				
LOY16-002	120.1	120.8	0.7				
LOY16-002	120.8	121.6	0.8				
LOY16-002	121.6	122.6	1				
LOY16-002	122.6	124.1	1.5				
LOY16-002	124.1	125.7	1.6				
LOY16-002	125.7	127.2	1.5				
LOY16-002	127.2	128.7	1.5				
LOY16-002	128.7	130	1.3				
LOY16-002	130	130.6	0.6				
LOY16-002	130.6	131.9	1.3				
LOY16-002	131.9	133.4	1.5				
LOY16-002	133.4	134.9	1.5				
LOY16-002	134.9	136.4	1.5	1.03	69%	0.37	24.67
LOY16-002	136.4	138	1.6	1.6	100%	0.91	56.88
LOY16-002	138	139.5	1.5	1.47	98%	0.91	60.67
LOY16-002	139.5	141.1	1.6	1.6	100%	1.25	78.13

Drill Core Recovery & RQD Log

Hole_ID	From	To	Interval	Measured	Recovery%	Lengths>10cm	RQD %
LOY16-002	141.1	142.6	1.5	1.46	97%	1.4	93.33
LOY16-002	142.6	144	1.4	0.92	66%	0.46	32.86
LOY16-002	144	145.5	1.5	1.5	100%	1.4	93.33
LOY16-002	145.5	147.1	1.6	1.5	94%	1.19	74.38
LOY16-002	147.1	148.6	1.5	1.55	103%	1.41	94.00
LOY16-002	148.6	150.1	1.5				
LOY16-002	150.1	151.6	1.5				
LOY16-002	151.6	153.1	1.5				
LOY16-002	153.1	154.6	1.5				
LOY16-002	154.6	155.9	1.3				
LOY16-002	155.9	157.5	1.6				
LOY16-002	157.5	159.1	1.6				
LOY16-002	159.1	160.6	1.5				
LOY16-002	160.6	162.1	1.5				
LOY16-002	162.1	163.6	1.5				
LOY16-002	163.6	165.1	1.5				
LOY16-002	165.1	166.6	1.5				
LOY16-002	166.6	168.1	1.5				
LOY16-002	168.1	169.6	1.5				

Lithology CODE	Lithology Description
CFIL	Undifferentiated fill eg: drill pad/road rubble
CLOS	Core loss - no lithology
CELUV	Elluvium
KANGA	Kanga
CGOSS	Gossan !
FCLAY	ferruginous clay
FALT	Fault
TFBX	Fault breccia
TFS	Fault Shear
TCATA	Cataclasite
TMYO	Myolinite
TFG	Fault gouge
SSHALE	shale (includes carbonaceous/graphitic fine layered sediments
SMDST	mudstone
SSILT	siltstone
SSHSST	Interbedded Shale and Sandstone
SSAND	sandstone - grain size not measured
SCONG	conglomerate - grainsize not measured
SGWAC	greywacke
SFSAND	Fine sandstone (0.06-0.25mm)
SMSAND	Medium sandstone (0.25-0.5mm)
SCSAND	Coarse sandstone (0.5-2mm)
SFBSAND	Fine sandstone (0.06-0.25mm), commonly thin bedded
OSKARN	Skarn
SKVN	Skarn dominated veining with calc-silicate, commonly mag selvages
GAR	garnet dominated skarn
CALSVN	calc-sil dominated veining with minor skarn vein centres
MAG	semi-pervassive to massive magnetite replacement
MAGB	banded / veined magnetite replacement
MAGVN	magnetite veining on fractures
HORN	Hornfelsing
CALS	Calc-silicate replacement (commonly amphibole dominated - trm/act-qtz-cal-dol)
CSP	Calc-Silicate/ Skarn (pyroxene dominated - cpx-qtz-cal-dol-wol-ves-gnt-mnt)
SKARN	Skarn alteration (eg: diopside-Garnet)
GREISEN	Greisenisation (eg: flourite, beryl, topaz, sericite etc)
HEM	Hematisation
SER	Serpentinisation
QVN	Quartz veining
SQV	sulphide-bearing quartz vein
SiSX	pervasive silica - sulphide
MSSX	massive sulphide
SMSX	semi-massive sulphide
DSX	Disseminated sulphides
Ch	chlorite
Ser	sericite
Sil	silica - pervassive
SILI	Intense silicifiation
KSP	Potassic (kspar dominated- bio-ser-act-kspar-qtz-mag-cpx)
Fuc	Fuchsite
Cb	Carbonate
OX	Oxidised, including FeO
Phyl	Phyllic (qtz-ser-py-fpr-ch-and-corr-kfp)
Prop	Propylitic (epd-cb-chl-mag-sme-sil-zeo-ill-alb-adu)
Arg	Argillic (ch-all-sme-cb-qtz-kao-dic-dia-ill)
KBI	Potassic (biotite dominated - bio-ser-act-kfp-qtz-mag-cpx)
KSE	Potassic (sericite dominated - bio-ser-act-kfp-qtz-mag-cpx)
ADA	Advanced Argillic (qtz-all-and-cor-py-dia-mic)
ODP	Mill breccia, "pebble dyke"
ODF	Felsic dyke
ODM	Mafic dyke
FP	Fluidised Porphyry
OVEIN	Vein
OHBX	Hydrothermal breccia
BX	Breccia
CSOILA	A horizon soil
CSOILB	B horizon soil
CAEOL	Aeolian
CHRD	Hardpan
CFCT	Ferricrete
CCCT	Calcrete
CSCT	Silcrete
CALUV	Alluvium
CCOL	Colluvium
SUCHEM	sedimentary undifferntiated chemical
SGRANSAND	Granule sandstone - max detrital qtz grains 2-4mm
SGRANCONG	Granule conglomerate >50% 2-4mm grains/clasts

SPEBSAND	Pebble sandstone - max detrital qtz grains 4-64mm
SPEBCONG	Pebble conglomerate >50% 4-64mm clasts
SCOBCONG	Cobble conglomerate clasts > 64mm commonly present
SVCONG	Conglomerate with dominant volcanic clasts
STILL	Tillite / Greybilly
SARK	arkose
SBREC	Sedimentary breccia
SCHERT	Chert
SDOLM	Dolomite
SLMST	Limestone
SLMST	Limestone
SBIFOX	Banded Iron Formation - Oxide Facies
SBIFCB	Banded Iron Formation - Carbonate Facies
SBIFSX	Banded Iron Formation - Sulphide Facies
SCOAL	Coal
SUCLAST	sedimentary undifferentiated clastic
SESST	Epiclastic sandstone
VMDST	volcaniclastic mudstone
VSLST	volcaniclastic siltstone
VSST	volcaniclastic sandstone
VQXSST	quartz-crystal-rich volcaniclastic sandstone
VPSST	Pumecious volcaniclastic sandstone
VLLSST	Lapilli lithic volcaniclastic sandstone (lapilli size lithics)
VBLSST	Block lithic volcaniclastic sandstone (block sized lithics)
VB	volcanic breccia (undifferentiated origin)
VBB	volcanic block breccia (undifferentiated origin)
VUND	Undifferentiated volcaniclastic
LFR	Rhyolite lava
LFD	Dacite lava
LIT	Trachyte - typically packed feldspars
LIA	Andesite lava
LMB	Basalt lava
LFUND	Undifferentiated felsic
LIUND	Undifferentiated intermediate
LMUND	Undifferentiated mafic
IFUND	Felsic undifferentiated intrusive
IIUND	Intrusive intermediate undifferentiated
IMUND	Mafic intrusive - undifferentiated
LUUND	Ultramafic lava - undifferentiated
LUKOMT	Komatiite
IFGRAD	Granite
IFGRAD	Granodiorite
IFADAM	Adamellite
IFPEG	Pegmatite
IFGA	Intrusive fine grained granite - aplite or microgranite
FUB	fuberite - f'd up beyond recognition
IISY	Syenite
IID	Diorite (plag dominant, includes porphyry)
IID1	Weakly mineralised feld-biot porphyry
IID2	Unmineralised quartz bearing q-feld-biot poyphyry "Dykes"
IID3	Feldspar crowded porphyry, commonly mineralised; porphyritic diorite/monzodiorite
IIM	Monzonite (typically k-felds 35-65%, includes porphyry)
IIT	Tonalite (qtz bearing [>20%] diorite, includes porphyry)
IIMDI	monzodiorite (plag rich up to 90%, includes porphyry)
IID4	Feld(w)-biot porpyhyry, commonly xenolith bearing (Dykes, later than IID3)
IIA	Anorthosite
IMGB	Gabbro
IMDL	Dolerite
IMN	Norite
IUUND	Ultramafic intrusive undiferentiated
IUPYRX	Pyroxenite
IUPERID	Peridotite
IUDUNT	Dunite
MUSED	Undifferentiated metasediments
MSLAT	Slate
MPHYL	Phyllite
MSHST	Schist
MQTZ	Quartzite
MHORN	Hornfels
MMBL	Marble
MGN	Gneiss
MFGN	Felsic Gneiss
MIGN	Intermediate gneiss
MMSHST	Mafic schist
MMGN	Mafic Gneiss
MMA	Amphibolite
MUMSHST	Ultramafic schist
MUMSERP	Serpentinite
OIL	Lamprophyre
OIK	Kimberlite
OIC	Carbonatite

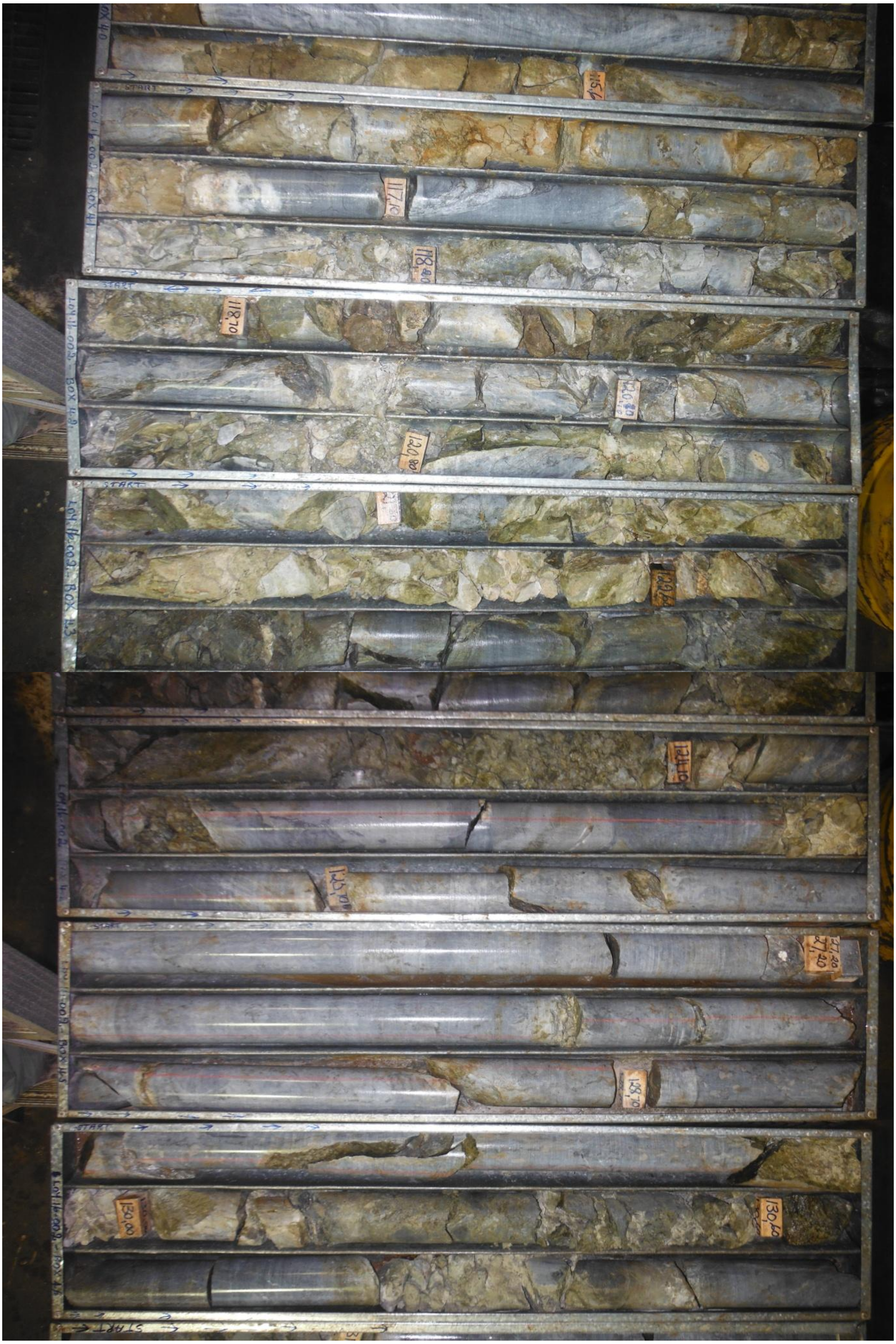
OIP	Pepperite (dercribe phases fully)
OIBX	Intrusive Breccia
MSSX	Massive Sulphide
Mineralisation Code	Mineralisation and Alteration Description
QVN	quartz veining - incl. epithermal style, vuggy, drusy, banded
QSV	sulphide-bearing quartz vein(/veinlets)
QCBSV	Sil-Cb Stockwork (mostly stockwork veined & locally Semi-Perv)
Sil	silica - pervassive and semi-pervassive alteration
Ser	sericite
SKARN	Skarn alteration (eg: diopside-Garnet-pyroxene-magnetite)
SKVN	Skarn dominated veining with calc-silicate, commonly mag selvages
Amph	Amphibole alteration in skarn
PX	pyroxene dominated skarn
Actinolite	Actinolite alteration (in skarn)
GAR	garnet dominated skarn
MAG	semi-pervassive to massive magnetite replacement / Skarn
Geoth	geothite - semi massive to massive
HEM	Hematisation
Ch	chlorite
Cb	Carbonate
CLY	Clay alteration
MAGB	banded / veined magnetite replacement
MAGVN	magnetite veining on fractures
HORN	Hornfelsing
CSP	Calc-Silicate/ Skarn (pyroxene dominated - cpx-qtz-cal-dol-wol-ves-gnt-mnt)
GREISEN	Greisenisation (eg: flourite, beryl, topaz, sericite etc)
FeQSV	FeO-Quartz stockwork veining, commonly vuggy
FeSilSP	Semi- Perv Sil-FeO Selvages
MSSX	massive sulphide
SMSX	semi-massive sulphide
DSX	disseminated sulphides
VSX	Sulphide veining, commonly straight along joints
OX	Oxidised, including FeO pervassive and semipervassive in matrix/groundmass
OXMnO	black Manganese oxide, veins, spots
CALSVN	calc-sil dominated veining with minor skarn vein centres
QSVB	Broken / brecciated quartz vein zone / faulted
QOVSX	Oxidised FeO (geothite & limonite) within quartz stockwork, likely after veined sulphide
OVSX	Oxidised FeO (/geothite & limonite) likely after veined sulphide
CbVN	Carbonate +/- quartz vein(/s)
SiSX	Pervasive silica - disseminated sulphide alteration
CALS	Calc-silicate replacement (commonly veined and semi-perv)
SILCAL	Pervassive silica/Calc-Silicate alteration
KSP	Potassic (kfp dominated- bio-ser-act-kfp-qtz-mnt-cpx)
Phyl	Phyllic (qtz-ser-pyr-fpr-cht-and-corr-kfp)
Prop	Propylitic (epd-crb-chl-mnt-sme-sil-zeo-ill-alb-adu)
Arg	Argillic (chy-all-sme-crb-qtz-kao-dic-dia-ill)
Fuc	Fuchsite
Vmica	bright green Vanadium? Mica, commonly flecked or pervasive
HORN	Hornfelsing
CALS	Calc-silicate replacement (commonly amphibole dominated - trm/act-qtz-cal-dol)
CSP	Calc-Silicate/ Skarn (pyroxene dominated - cpx-qtz-cal-dol-wol-ves-gnt-mnt)
SKARN	Skarn alteration (eg: Garnet-diopside)
KBI	Potassic (biotite dominated - bio-ser-act-kfp-qtz-mnt-cpx)
KSE	Potassic (sericite dominated - bio-ser-act-kfp-qtz-mnt-cpx)
ADA	Advanced Argillic (qtz-all-and-cor-pyr-dia-mic)
GREISEN	Greisenisation (eg: flourite, beryl, topaz, sericite etc)
SER	Serpentinisation
Intensity CODE	Intensity DESCRIPTION
1	very weak
2	weak
3	moderate
4	strong
5	very strong
AMOUNT CODE	%
0.1	trace
0.5	0.005
1	0.01

2	0.02
3	0.03
4	0.04
5	0.05
6	0.06
7	0.07
8	0.08
9	0.09
10	0.1
15	0.15
20	0.2
25	0.25
30	0.3
40	0.4
50	0.5
60	0.6
70	0.7
80	0.8
90	0.9
100	1
Mineral Style CODE	Description
P	Pervasive
D	Disseminated
Vn	Vein
Svn	stringer veined
Spt	Spots and clots
Eu	Euhedral crystals
Sv	Selvedge
SP	Semi-pervassive
Gr	Greisen
Br	Breccia
Rp	Replacement
Sk	Skarn
Bnd	Banded
Den	Dendritic
Mineral Type Code	Mineral
Py	Pyrite
Aspy	Arsenopyrite
Sb	Stibnite
Ga	Galena
Sp	Sphalerite
Cpy	Chalcopyrite
Cv	Covellite
Cc	Chalcocite
Bn	Bornite
Mo	Molybdenite
Pn	Pentlandite
Po	Pyrrhotite
Mc	Marcasite
Bism	Bismuthinite
Tetn	Tetrahedrite-Tennantite
Mag	Magnetite
He	Hematite
Wolf	Wolframite
Cst	Cassiterite
Cw	Cuprite
Mal	Malachite
Cs	Cerrusite
Au	Visible Au
Cu	Native Copper
Ag	Native Silver
Ad	Adularia
Al	Alunite
Dik	Dickite
Il	Illite
Ka	Kaolinite
Pry	Pyrophyllite
Chd	Chalcedony
Qz	Quartz
Zeo	Zeolite
Sm	Smectite
Se	Sericite
Ch	Chlorite
Ep	Epidote
Cb	Carbonate
Ci	Calcite
Dol	Dolomite
Rh	Rhodochrosite
Sd	Siderite
Mgs	Magnesite
Ahd	Anhydrite
Ba	Barite
En	Enargite
Pyr	Pyrargite
Tml	Tourmaline
Fl	Flourite
Act	Actinolite
Tr	Tremolite
Wo	Wollastinite
Ves	Vesuvianite

Fuch	Fuchsite	
Mu	Muscovite	
Bi	Biotite	
Ap	Apatite	
Cd	Cordierite	
Im	Ilmenite	
Rt	Rutile	
Gt	Garnet	
Si	Silicification	
Am	Amphibole	
Hb	Hornblende	
Cpx	Clinopyroxene	
Di	Diopside	
Alb	Albite	
Kf	K-Feldspar	
Ck	Chrysocolla	
Pi	Psilomelane	
Mn	Pyrolusite	
Li	Limonote	
Go	Goethite	
Jr	Jarosite	
FMag	ferromagnesian minerals	
Vmica	green Vanadium Mica	
Colours CODE	Colour	
Br	Brown	
G	Grey	
B	Black	
Y	Yellow	
R	Red	
Gr	Green	
W	White	
O	Orange	
Bl	Blue	
P	Purple	
C	Cream	
Pk	Pink	
Shade		
1	Pale	
2		
3		
4		
5	Dark	
Weathering - Oxidation CODE	Amount	Descriptive Guide
1	Trace	Oxidation only visible in a couple of hand lens area; <1%
2	Weak	~1 to 10% FeO
3	Moderate	~10 to 60% FeO
4	Strong	~60 to 90% FeO
5	Intense	>90% FeO
Weathering - Leaching CODE	Amount	Descriptive Guide
1	Trace	Weathering only visible in a couple of hand lens area
2	Occasional	Weathering visible over a number of hand lens areas
3	Weak	Fresh rock only visible in couple of hand lens areas
4	Moderate	No fresh rock visible, but rock still intact
5	Strong	No fresh rock visible, parts of rock broken down to soft material
6	Intense	Nearly all rock broken down to soft material or clay
DH_Survey type	Description	
1	Single shot down hole camera	
2	Measured at collar	
3	Inferred survey for display	
4	Other - see comments	
Verified		
Y	yes	
N	no	

Structure Code	Description
Face	Facing
Ft	Fault
Sh	shear
Vn	vein
Fo	Foliation
Fr	fracture
Jt	Joint
Bd	Bedding
Fold	Fold
con	contact
lay	layering
bnd	banding
Ln	Lineation
CATA	Cataclasite
Slck	Slickensides
Pu	Puggy seam
Cl	Cleavage

Appendix 4:- LOY16-002 Drill Core Photographs




START
150.10
START
153.10
154.60
CAVITY


154.60
CAVITY
START
START