Serpentine Ridge
Exploration Licence 45/2010

Annual Technical Report for the period 31/05/2016 to 30/05/2017

T Holmes
S Owen
May 2017
Venture Minerals Ltd
PO Box 8234
Subiaco East WA 6008

Contents

Figures

Appendices

Appendix A: Rock Sample Results
Appendix B: Petrographic Summaries

1 Summary

Prospecting of the Merton Hill – Barnes Creek area failed to confirm the presence of previously reported and potentially tin mineralized porphyry dykes. Analysis of Merton Hill drill core shows strong sericite and siderite alteration with anomalous levels of fluorine (up to 1030 ppm) associated with pyrrhotite + arsenopyrite + galena + sphalerite + quartz + siderite + calcite veins. Budget reduction slowed progress of the proposed mineralogical work but initial results suggest a strong spatial relationship between garnet composition and cassiterite mineralization within skarns around the southern margin of the Meredith Granite. The current data suggests cassiterite-zone proximal garnets are high in Fe, Sn and to a lesser extent Mg, and relatively poor in Ca, Al and Si. It is hoped that with further work a cassiterite prospectivity index can be developed using the widespread garnet alteration. Further analytical work focused on garnets from the Big Wilson skarn is in progress. Broader work on the use of tourmaline, white mica alteration and established calcsilicate vectors to mineralisation is recommended. Approximately 15 km^2 of EL45/2010 has been delineated for relinquishment leaving a retained area of c. 30 km^2.

2 Introduction

Exploration Licence 45/2010 is located within the tin-tungsten province of western Tasmania and includes part of the Meredith Granite's southern margin. The Meredith Granite is part of a suite of Devonian granites which is very important to tin-tungsten mineralization in Tasmania, and deposits associated with this suite include Renison Bell (26 Mt at 1.46% Sn), Mount Bischoff (10.54 Mt at 1.1% Sn), Cleveland (12.4 Mt at 0.62% Sn, 0.25% Cu) and King Island (17 Mt at 0.85% WO_3). EL45/2010 is situated immediately east of Venture's EL21/2005 which includes the Main and No.2 Sn-W-magnetite deposits at Mt Lindsay and the Livingstone and Reward Sn-W-Fe deposits in the Stanley River area. Exploration Licence 45/2010 includes the Big Wilson Sn skarn and veined greisen deposit, Merton Hill Sn+Cu+Pb+Zn+Ag vein and carbonate replacement deposit, and several Sn, W and/or Cu geochemical anomalies in the Little Wilson River, Keenan Creek, Harman River, and Limestone Creek areas.

EL45/2010 also includes part of the Wilson River Ultramafic Complex which is prospective for nickel and PGM mineralisation. Most of the streams draining the Wilson River Ultramafic Complex were prospected and mined for alluvial osmiridium in the early 1900s, with some alluvial deposits also yielding small amounts of gold. Much of the ultramafic complex is covered with a thin, residual lateritic soil, and at several locations, most notably Riley Creek, Keenan Creek and Limestone Creek areas, there are residual and colluvial deposits of ferruginous laterite to several metres thick. The ferruginous laterite deposits at Riley Creek were previously evaluated by Callina NL for chromite and platinoids, and more recently Direct Shipping iron Ore (DSO) by Venture Minerals. The iron laterite deposits at Riley Creek have been excised from EL45/2010 into 5M/2012.

Exploration Licence 17/2012 covering 7 km^2 was amalgamated with EL45/2010 in February 2014, and in 2015 c. 17 km^2 was relinquished from EL45/2010.

3 Location and Access

EL45/2010 currently covers c. 45 km^2 and is located 100-130 km by road southwest of the port of Burnie, and c. 20 km by road from the nearest town Tullah (Figure 1). The southern boundary of the licence is approximately 4 km north of the Renison Bell tin mine. The licence is covered by the Pieman 1:100,000 map sheet, and Parsons and Roseberry 1:25,000 map sheets. Topography is moderately rugged and the most notable topographic features comprise of Serpentine Ridge and Websterite Hill. Average annual rainfall is approximately 2000 mm and vegetation is dominated by temperate rainforest, with dense scrub over ultramafic and granitic basement, and in areas of regenerating forest.

The bitumen HEC Pieman Road and Transend transmission lines traverse the southern half of EL45/2010, and a mixture of HEC, forestry and mineral exploration roads provide good access throughout much of the tenement south of the Wilson River. Access to the northern part of the licence is currently best obtained via a 4WD road from the Wilson River over Websterite Hill to the upper Harmen area, or by helicopter. Principal land uses include State Forest, Regional Reserve, and Forest Reserve. Parts of the State Forest area south of the Pieman Road are periodically being logged.

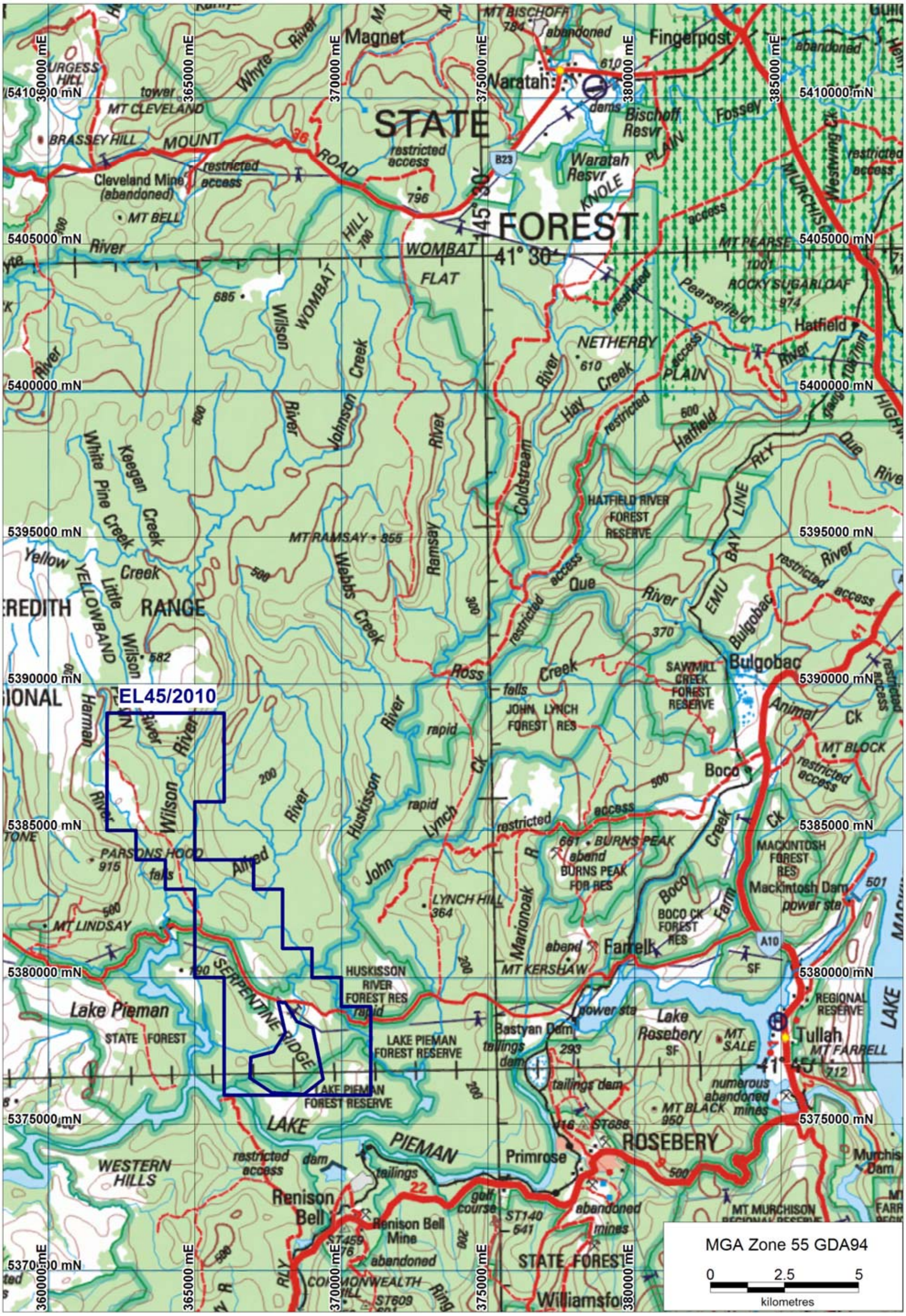


Figure 1: Location Map EL45/2010

4 Geological Setting

EL45/2010 is situated in the Dundas Trough of western Tasmania and underlain from west to east by the Crimson Creek Formation, the Wilson River Ultramafic Complex ("WRUC"), the Dundas and Gordon groups, and the Eldon Group (Figure 2). Sedimentary stratigraphy is moderately dipping to vertical. The Meredith Granite rims the northern extent of the licence and dips away at a modest angle beneath the sedimentary and ultramafic units, albeit complicated by numerous irregular granitic dykes, shelves and apophyses. Preliminary interpretation suggests several phases of granite intrusion culminating in late stage quartz-tourmaline veining and the localised development of quartz-tourmaline-topaz greisen and siderite-sericite greisen.

The Neoproterozoic - Early Cambrian Crimson Creek Formation comprises mainly of thin to thick bedded greenish grey lithic sandstones, siltstones and mudstones with scattered horizons of laminated to thin bedded light grey, green and pink felsic to mafic tuffites and thin to thick bedded calcareous sandstones, and rare tholeiitic basalt flows. Total thickness in the Mt Lindsay area is estimated at c. 5000 m, and EL45/2010 includes a narrow strip of the Crimson Creek Formation along its western edge (Figure 2).

The WRUC occupies the central NW-trending spine of the licence and general interpretation is that the WRUC is entirely fault bounded, the lower margin against Crimson Creek Formation, the upper margin against Devonian conglomerate, quartz arenite, siltstone and marl of the Eldon Group with localised slivers of the Ordovician Gordon Limestone. Radiometric dates are not available for the WRUC and a Neoproterozoic to Cambrian age has been estimated according to stratigraphic constraints (e.g. Brown 1986). A major episode of folding during the Devonian formed the northwest to north trending Huskisson Syncline, and contact metamorphism indicates emplacement of the WRUC into the current stratigraphic position prior to the intrusion of the Meredith Granite around 370 Ma. Vein and replacement-style tin and tungsten mineralization appears to be associated regionally with the intrusion of the Meredith Granite. The WRUC is part of a group of similar ultramafic bodies scattered along the Dundas and Adamsfield troughs in northwestern and western Tasmania. The WRUC is one of the largest exposed ultramafic bodies in the Dundas Trough at approx. 17 km long and up to 2 km wide, and was probably continuous with the Mt Stewart ultramafic body ca. 11 km to the north-northwest before intrusion of the Meredith Granite. Brown (1986) identified two petrogenetically distinct ultramafic successions within the WRUC, namely the Layered Dunite-Harzburgite succession (LDH) comprising dunite, orthopyroxene-bearing dunite, and harzburgite layered on a 10 mm to 400 mm scale, and the Layered Pyroxene-Dunite succession (LPD) consisting of thinly (<150 mm) layered orthopyroxenite, olivine orthopyroxenite, and dunite. Both units are partially serpentinised. Chromite is a ubiquitous accessory phase (1-5%) in the LDH, occurring as disseminated grains and locally in discontinuous laminations up to ca. 1-2 mm thick and 1-2 m long. The LPD has less chromite (1-2%) which is more common in the dunite layers. PGE-rich chromite nodules have been identified in the LDH of the Serpentine Ridge area (Brown 1986). The western 100-150 m of the LDH in the Harman River area consists of interlayered dunite and pyroxene-bearing dunite, and the eastern part layered harzburgite with minor thin dunite layers (Brown 1986). According to Brown (1986) serpentinite shears or faults separate the LDH and LPD everywhere and the original relationship of the two successions is unclear. The exposed WRUC is dominated by the LDH sequence. Two small, infaulted blocks of LPD have been mapped by Brown (1986) in the Websterite Hill area and the southern part of the complex comprises LPD. Work by Venture also suggests slivers of a third unit, the Layered Pyroxenite-Peridotite and associated Gabbro (LPG) succession recognised by Brown (1986) elsewhere in western Tasmania, may be present on the eastern edge of the WRUC in the Limestone Creek and Little Wilson River areas. The LPG as defined by Brown (1986) comprises disrupted blocks of layered orthopyroxenite in peridotite intruded by massive two-pyroxene gabbro.

Brown (1986) proposed intrusion of ultramafic bodies into the opening Dundas Trough during the Early Cambrian followed by tectonic re-emplacement prior to the Devonian. The presence of serpentinite pebbles and abundant detrital chromite within Huskisson Group sedimentary rocks at Merton Hill (Adamus observations) and Red Lead Conglomerate of the correlative Dundas Group in the Mt Razorback area (Brown 1986) suggests exposure and partial erosion of the ultramafic complexes prior to the Middle Cambrian.

Quaternary fluvioglacial sediments and Quaternary-Recent alluvial gravels cover minor parts of the WRUC. Osmiridium, gold, and chromite are locally concentrated in the Quaternary-Recent alluvial gravels. Patches of laterite and saprolite are locally present over the WRUC representing a mixture of in situ relicts of a more extensive Tertiary lateritic blanket and Quaternary-Recent colluvial-alluvial deposits. Goethitic soils are widespread over Serpentine Ridge and the Websterite Hill area.

Significant deformation is recognised in the Crimson Creek Formation with narrow zones of bedding-parallel isoclinal folding with an associated S0-parallel cleavage (S1), and a later generation of metre-scale gentle to open folds with north to north northeast striking axial planes and crenulation cleavage (S2).

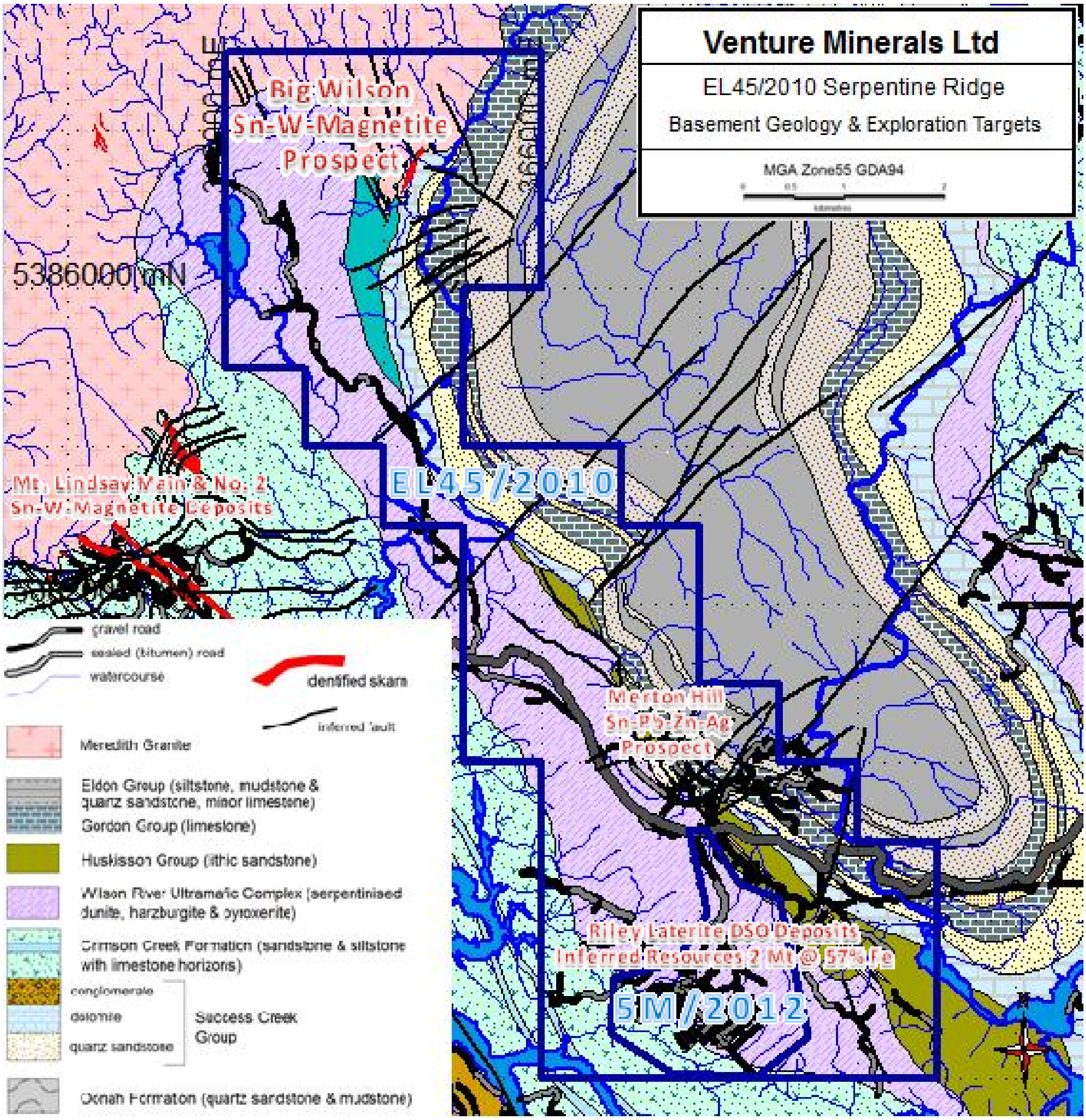


Figure 2: EL45/2010 basement geology and prospect location map

5 Exploration and Mining History

Osmiridium was first reported in Tasmania from the Wilson River valley in the 1876 by Surveyor-General Sprent, and the Riley, Trinder, Three Mile, Lippy Jane, Fowler, Sweeney, Osmiridium and Gold creeks were later extensively worked for detrital osmiridium. An exact osmiridium production figure for the Serpentine Ridge – Wilson River area is not available, but of the total 31,100 oz produced from Tasmania between 1910 and 1968 (first and last reported production) around half came from the Adamsfield area ca. 120 km to the southeast and much of the rest from the Heazlewood-Bald Hill area near Waratah approx. 30 km to the north. The detrital osmiridium typically occurs as flaky nuggets up to a few millimetres dimension, and petrographic work (Callina NL 1985-1990, Brown 1986) on material from the Riley Creek area also indicates occurrence as inclusions within chromite grains from the ultramafic basement. Numerous workers have identified small chromite lenses up to 20-30 mm thick and 1-2 m long within the ultramafics, and analyses of some primary chromitites indicate highly anomalous PGM levels (Brown 1986).

There was additionally minor alluvial tin and gold production from the Wilson and Huskisson valleys and during the 1970-1980s the area in the vicinity of the Meredith Granite was extensively explored for tin and tungsten mineralization. Tin-bearing alluvial gravels occur in many streams on the north-eastern side of Serpentine Ridge, including Barnes, Sweeney and Tin creeks and Alfred River. Occurrences of primary tin mineralization were identified in the Harman River and Merton Hill areas, and Reid (1921) reported narrow dykes of tinstone-bearing quartz-feldspar porphyry cropping out in the vicinity of Tin Creek and Merton Hill.

Merton Hill was tested with 3 small adits by prospectors in the early 1900s. Exploration activities by Rension Ltd in the 1979-1983 period identified the presence of an irregular +100 ppm tin in soil anomaly centred around the three small adits at Merton Hill. Seven (7) diamond core holes were drilled by Renison and the best result obtained was c. 3 m of gossanous breccia assaying 0.19% Sn, 1.27% Pb, 3.68% Zn & 53g/t Ag from 52.9 m down hole in MH1 directly beneath the old workings. The identified mineralization was associated with veins and breccias within the Devonian Eldon Group (specifically, within the Crotty Quartzite and unnamed limestone member of the Amber Shale) associated with a northeast dipping fault zone adjacent to the contact with the Wilson River ultramafic body. MH2 appears to have intersected the same fault-hosted mineralisation but recoveries were very poor (<8%). Very thin veins with sphalerite, galena and silver and rarely cassiterite were encountered by most of the drill holes within the limestone and shale of the Crotty Quartzite. Narrow granitic dykes with disseminated pyrrhotite were encountered in some of the drill holes.

Mapping, geophysics and soil sampling by Renison in the early 1980s around the upper Harman and lower Little Wilson rivers in the early 1980s also identified Sn targets at Tadpole Hill within the Meredith Granite, and around the confluence of the Wilson and Little Wilson rivers within the granite and adjacent Gordon Limestone. Renison planned several drill holes to test the Wilson River target but terminated the project when the tin price collapsed in the mid-1980s.

The source of the alluvial gold was not thoroughly investigated and while most is probably reworked from glacial gravels, work by Callina NL in the 1980s suggested there could also be an ultramafic source. Significant gold mineralization has not been reported from any of the identified tin prospects within EL45/2010, although it was not commonly assayed. Adit samples and some of the Renison drill core from the Merton Hill tin prospect was subsequently re-assayed for gold (Black Horse Mining, 1986-1987 and Cyprus Gold Australia Corp, 1987-1989) with a best result of 2 m at 0.165 ppm Au obtained in a magnetite skarn.

Lateritic nickel and cobalt mineralization was identified in the southern Serpentine Ridge area by Aberfoyle in the late 1960s by a program that included hand auger drilling and man-portable coring (5 core holes) to a maximum depth of 30 ft. Grades of up to ca. 2% Ni and 1.5% Co were obtained from thin (<1-5 m) patches of laterite and in the underlying saprolitic serpentinite assays of >0.5% Ni were commonly obtained. There was no systematic investigation for Ni-sulphide mineralization beyond the Serpentine Ridge area (Camp 30 area of Aberfoyle). Variably serpentinised dunite from the Wilson River ultramafic complex typically assay c. 0.2-0.4% Ni although Brown (1986) could not detect nickel in the silicate phases. The nickel sulphide healzewoodite and Ni-Fe alloy awaruite were identified by Renison in serpentinite drill core from Merton Hill, and awaruite in serpentinised dunite samples from the Riley Creek area by Callina.

Callina NL (1985-1990) defined a detrital chromite resource in the Riley Creek area which was also the focus of the historic osmiridium workings. While the chromite is premium quality (>60% Cr_2O_3) the Callina resource was small (approx 1.7 Mt at 1.9% chromite) and at the time not considered economic. The associated detrital PGM (Os and Ir, lesser Pt) and gold content were not assigned any economic value by Callina.

Adamus Resources Ltd explored the area for nickel sulphides in the mid-2000s, conducting rock chip, stream sediment and soil sampling. Relict nickel-rich lateritic soils made it very difficult to interpret the results and clear primary nickel targets could not be delineated. The soil sampling does indicate some geochemical anomalism (mainly As and Cu) in the lower Harmen River area which could be associated with tin-tungsten metasomatism.

6 2016-2017 Anniversary Year Exploration Activities

Activities during the tenement anniversary year included prospecting of the Merton Hill – Barnes Creek area, the continuation of an investigation into tourmaline colour and tourmaline elemental chemistry and the initiation of a mineralogical analysis programme aiming to identify geochemical vectors towards cassiterite mineralization using widely associated alteration phases such as white mica, carbonates, garnet, pyroxene and tourmaline.

Prospecting of the Merton Hill – Barnes Creek area failed to confirm the presence of previously reported and potentially tin mineralized porphyry dykes. Instead field observations and petrography of Merton Hill core (six samples) and surface (two samples) samples shows the presence of quartz+feldspar crystal-virtric tuffs and tuffaceous sandstones assignable to the Huskisson Group. The six petrographic samples from drill holes MT001 and MT003 show strong sericite and siderite alteration associated with pyrrhotite + arsenopyrite + galena + sphalerite + quartz + siderite + calcite veins in a bioclastic limestone and calcareous mudstone host. Assays of two samples MT001_177m and MT001_190.6 show distinct F enrichment (to 1030 ppm).

Budget constraints slowed progress of the proposed mineralogical work but initial results suggest a relationship between garnet composition and cassiterite mineralization within skarns around the southern margin of the Meredith Granite. The investigation into tourmaline chemistry was expanded to compare tourmaline from EL45-2010 with tourmaline from surrounding prospects held by Venture Minerals and found that colour & mineral chemistry relationships were consistent across the southern Meredith Granite with green tourmaline being higher in Fe and Sn than black tourmaline in the region.

Forty-eight (48) thin sections were analyzed with a Cameca SX100 electron microprobe located at the University of Tasmania Central Science Laboratory using a 15keV beam with a 5µm spot size and 1 thin section was analyzed by LA-ICPMS at the adjacent CODES facility. Garnet, pyroxene, carbonate and vesuvianite were initially targeted for the microprobe work because of their widespread presence in various skarn prospects within EL45/2010 and other Venture tenure in the South Meredith area. However, only garnet has produced meaningful spatial geochemical relationships at this stage and analytical work on the other three mineral groups has been suspended.

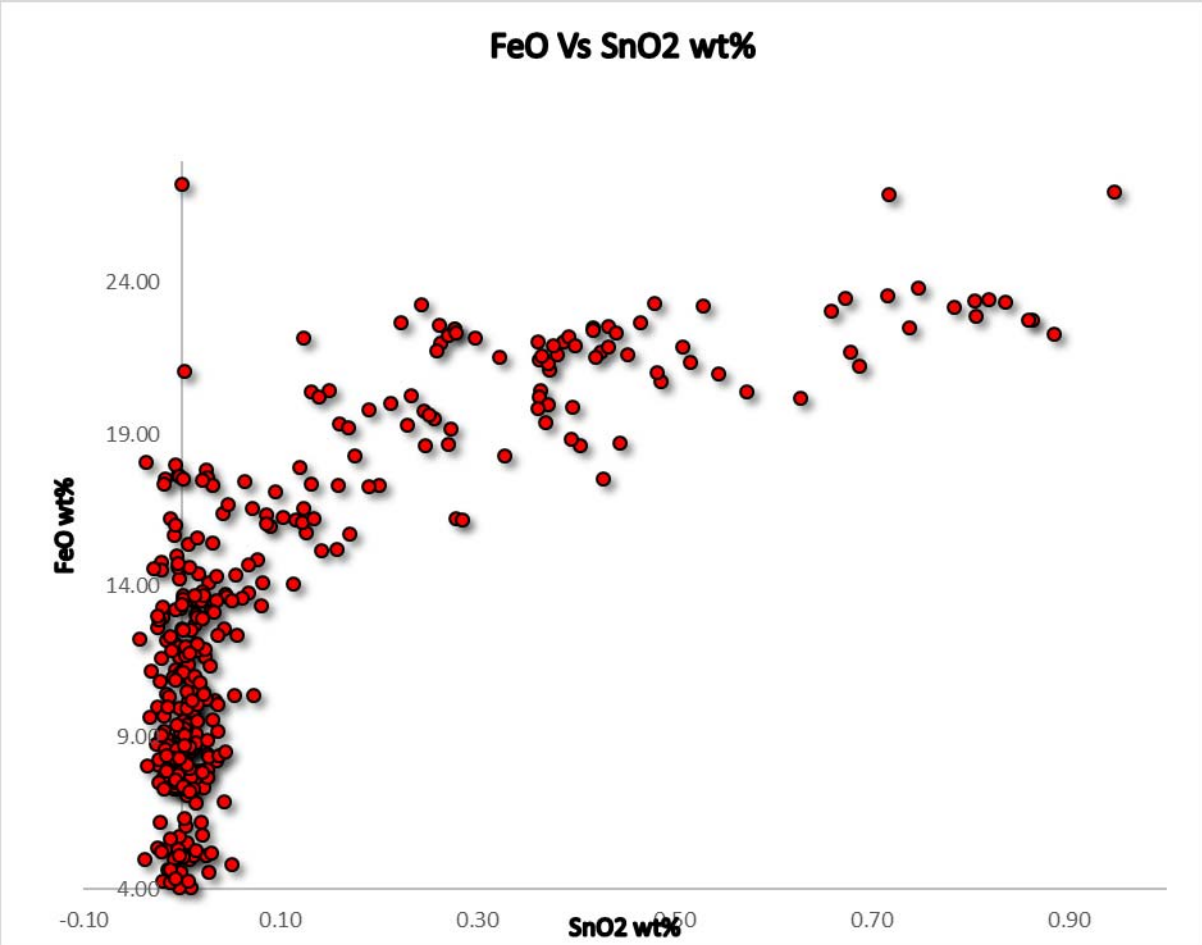


Figure 3: South Meredith skarns garnet Fe vs Sn composition trend

Figure 4: South Meredith skarns garnet Al vs Si composition trend

Section ML134 from the Main Skarn at Mt Lindsay best illustrates the spatial relationship between garnet composition and cassiterite mineralization at this stage. Andradite and grossular end members dominate and Fe, Sn, Al and Si trends currently appear to offer the most potential as vectors to cassiterite mineralization. Cassiterite-zone proximal garnets appear to be distinctly enriched in Sn, Fe and to a lesser extent Mg, and relatively depleted in Ca, Al and Si.

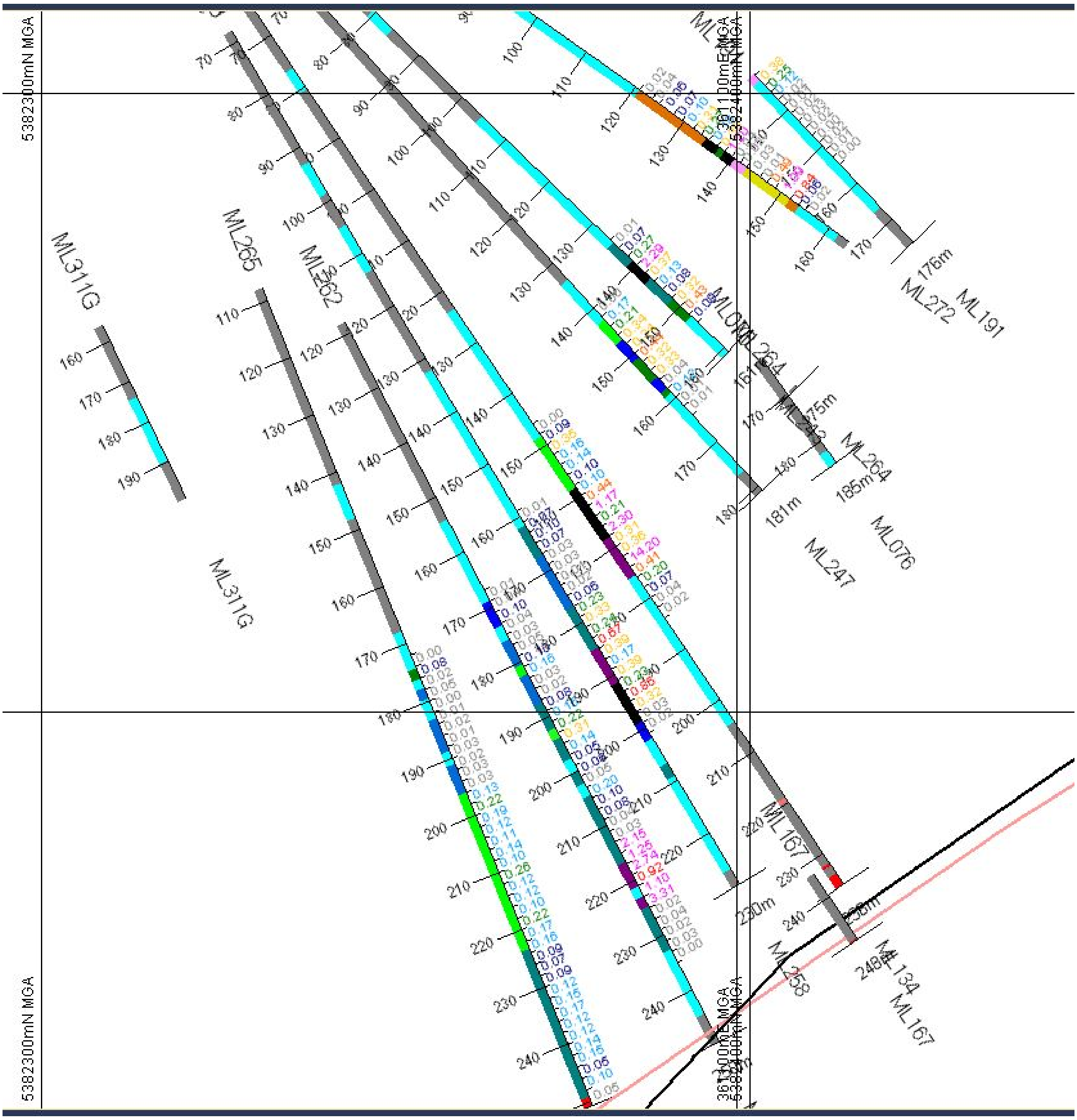


Figure 5: Lindsay Main Skarn ML134 section

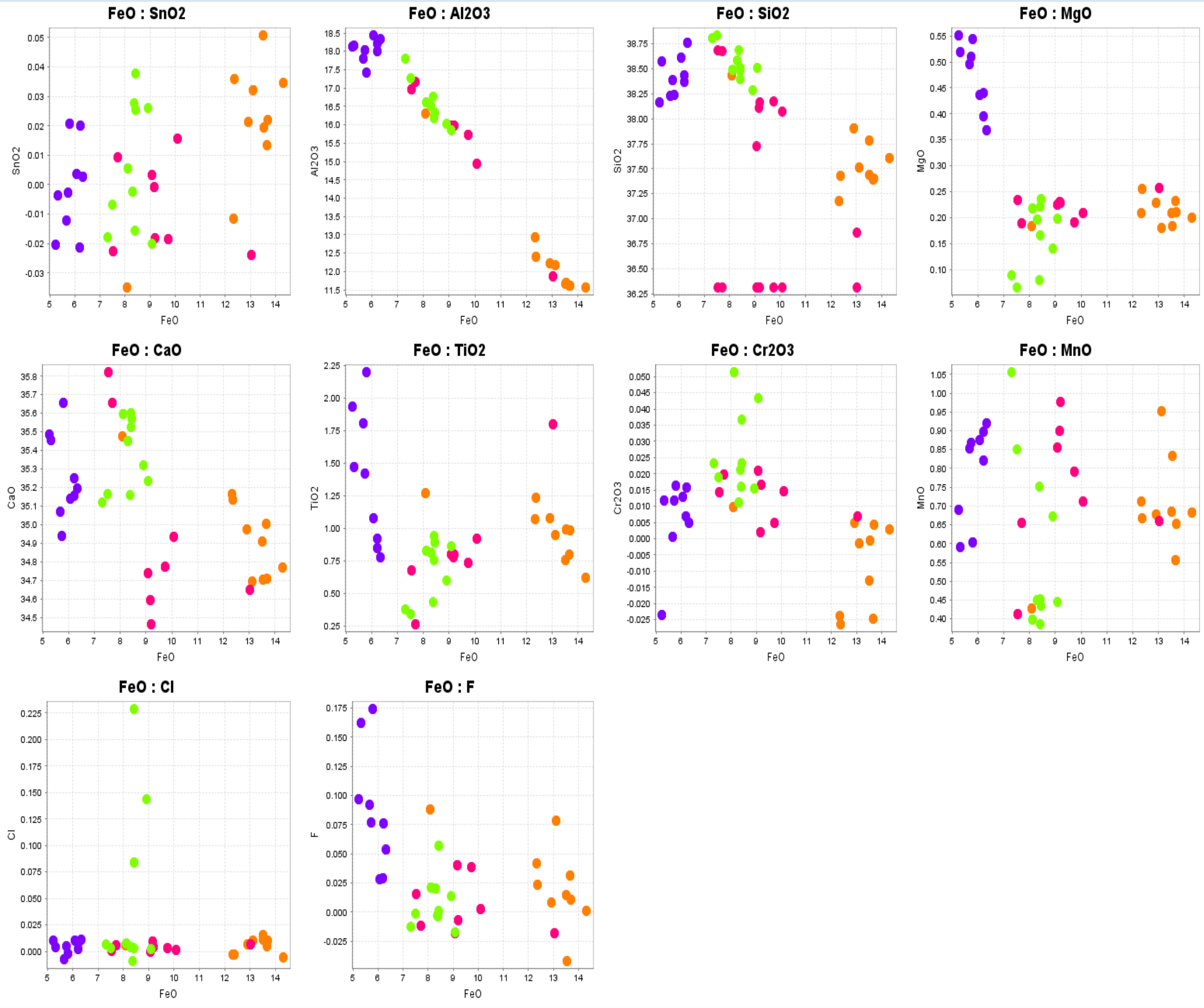
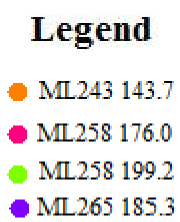


Figure 6: ML134 section garnet Fe trends



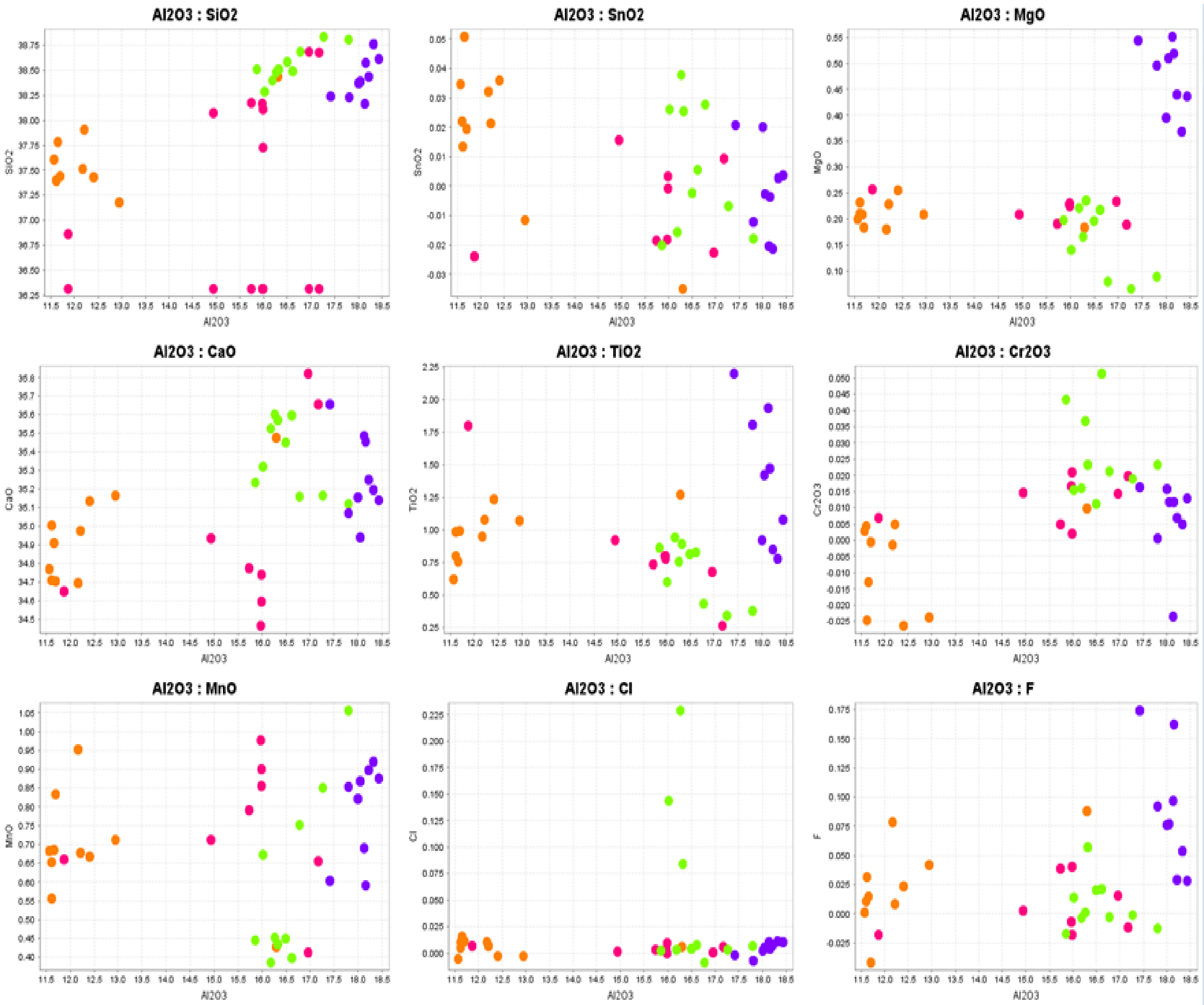
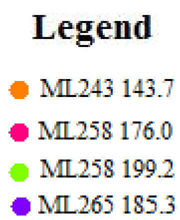


Figure 7: ML134 section garnet Al trends



While the apparent positive spatial relationship between cassiterite mineralisation and high Fe+Sn and low Al+Si is encouraging the widespread partial alteration of garnet to vesuvianite and F trends suggest the garnet-cassiterite relationship may be more complicated.

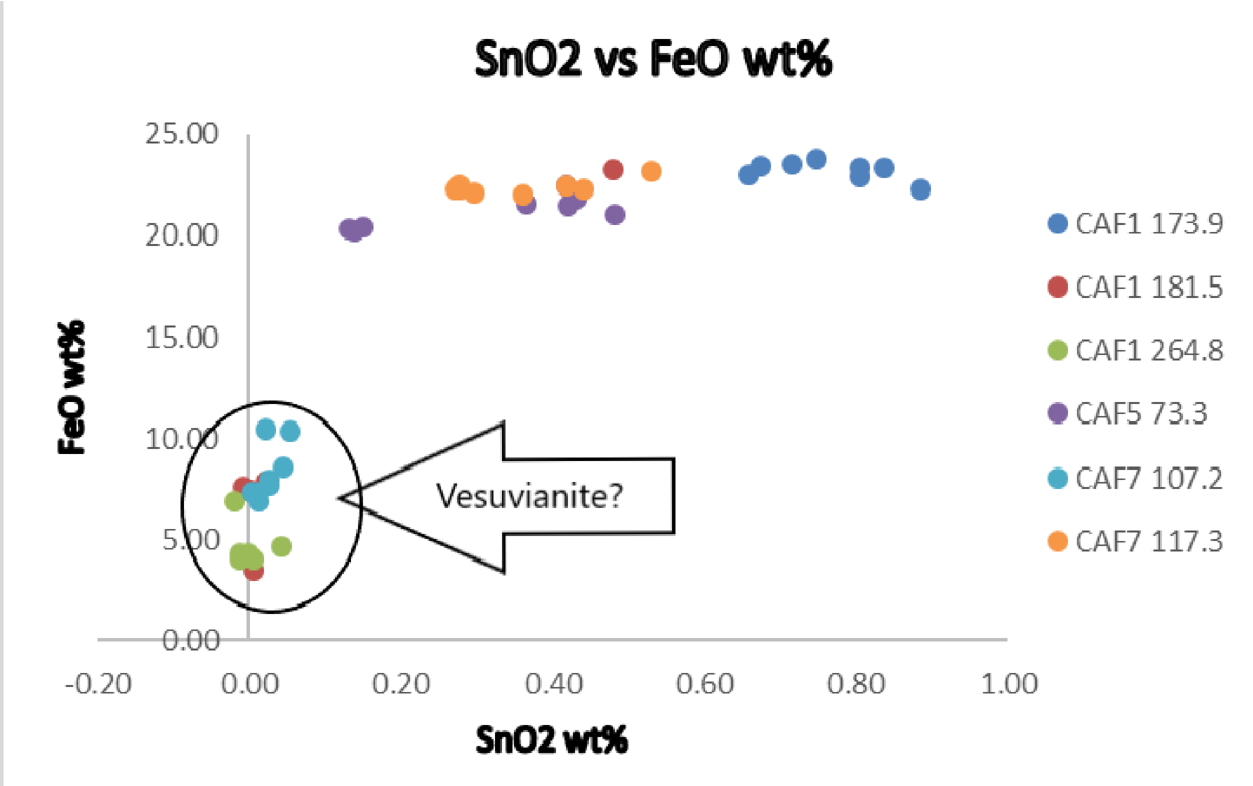


Figure 8: Vesuvianite alteration of garnet - impact on Sn and Fe trend

It is hoped that further analytical work on cassiterite proximal and distal garnets will verify the proposed geochemical vectoring. Fifteen (15) thin sections of garnets from the Big Wilson prospect are currently scheduled for microprobe analysis as part of a broader programme to further evaluate the use of garnet vectors. Microprobe results will be reported on completion of the Big Wilson garnet analyses.

Work reported on tourmaline from the Big Wilson deposit in the previous tenement year showed significant association between tourmaline mineral chemistry and colour. During the current tenement anniversary year this work was expanded to compare the Big Wilson tourmaline chemistry with tourmalines from the nearby Livingstone greisen. Mineral chemistry trends were found to be consistent between the two sites with green tourmaline being enriched in Fe, Sn, Sr and Sb and relatively depleted in Zn and Li compared with black/brown tourmaline. Tourmaline in the Livingstone greisen is distinctly zoned, with green Sn-rich tourmaline rimming brown Sn-poor tourmaline.

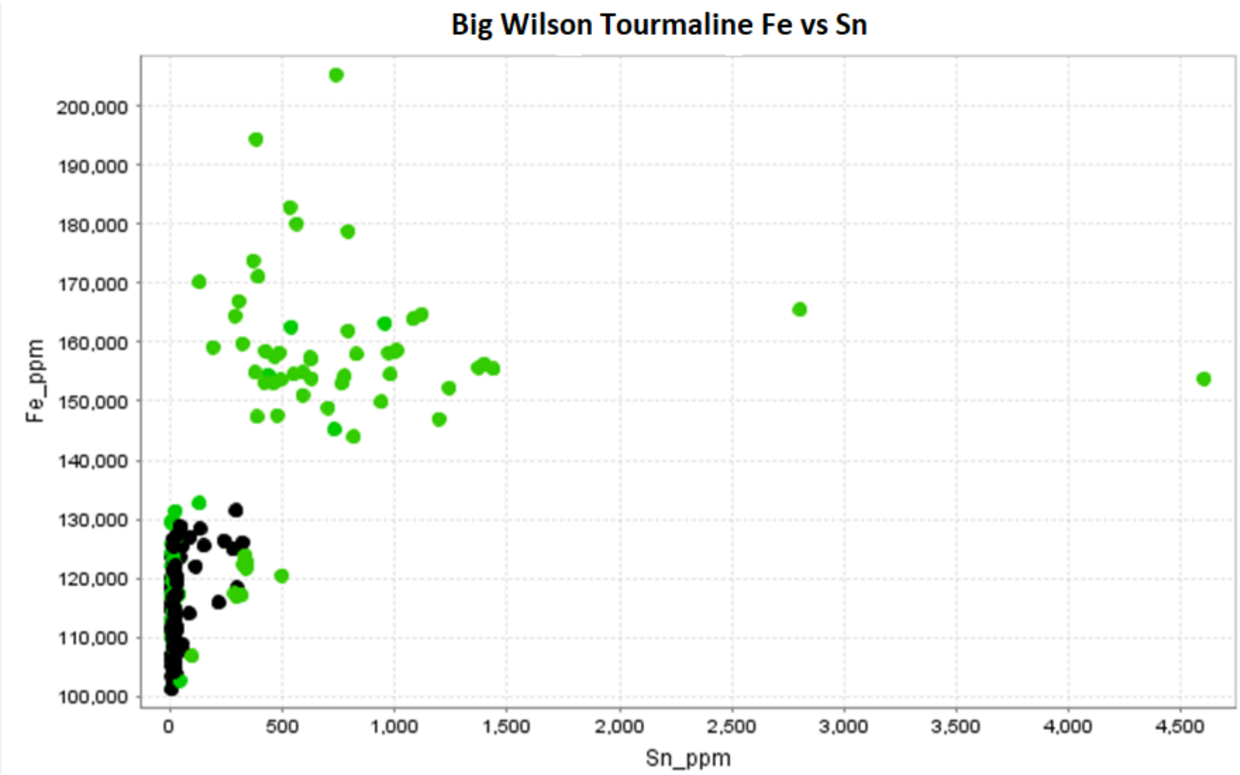


Figure 9: LA-ICPMS data from Big Wilson greisen showing Fe & Sn enrichment in green tourmaline compared with black tourmaline

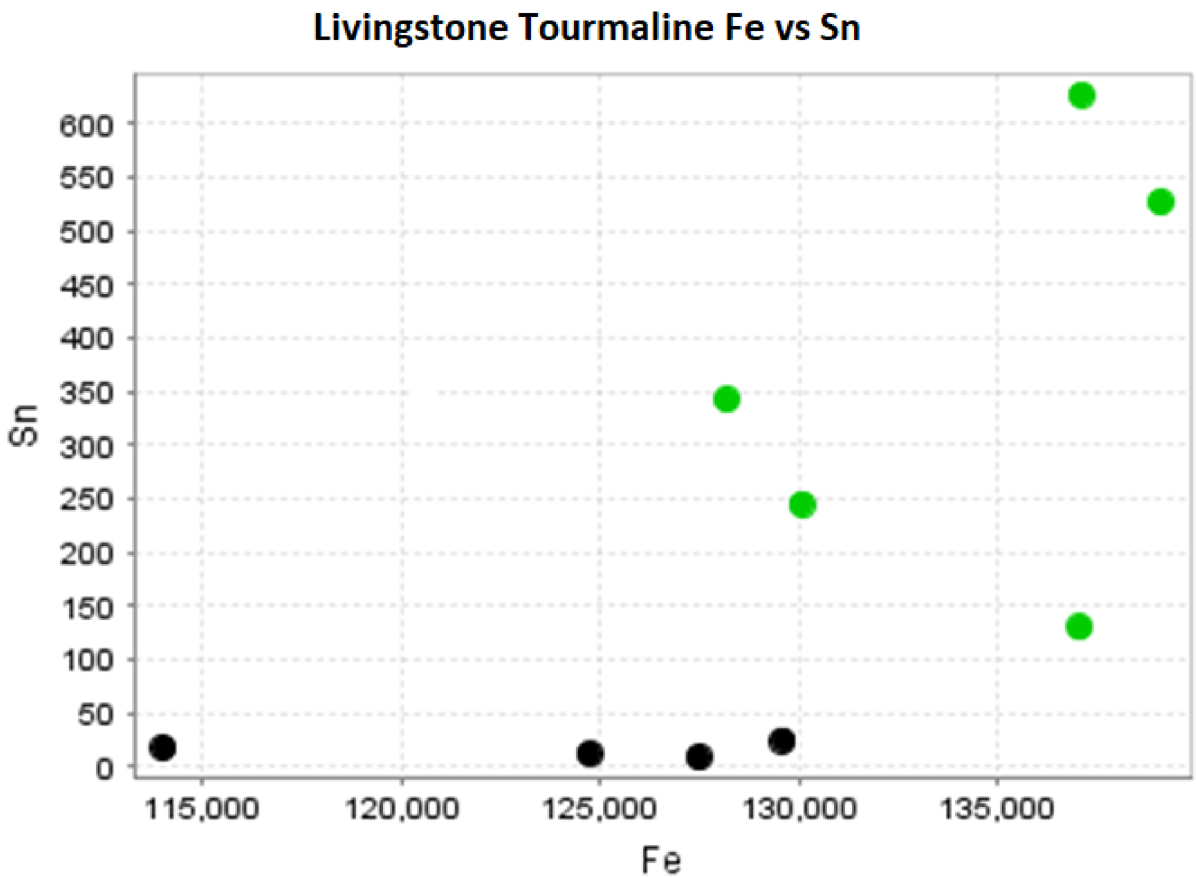


Figure 10: LA-ICPMS data from Livingstone greisen showing the same Fe and Sn enrichment in green tourmaline as observed at Big Wilson.

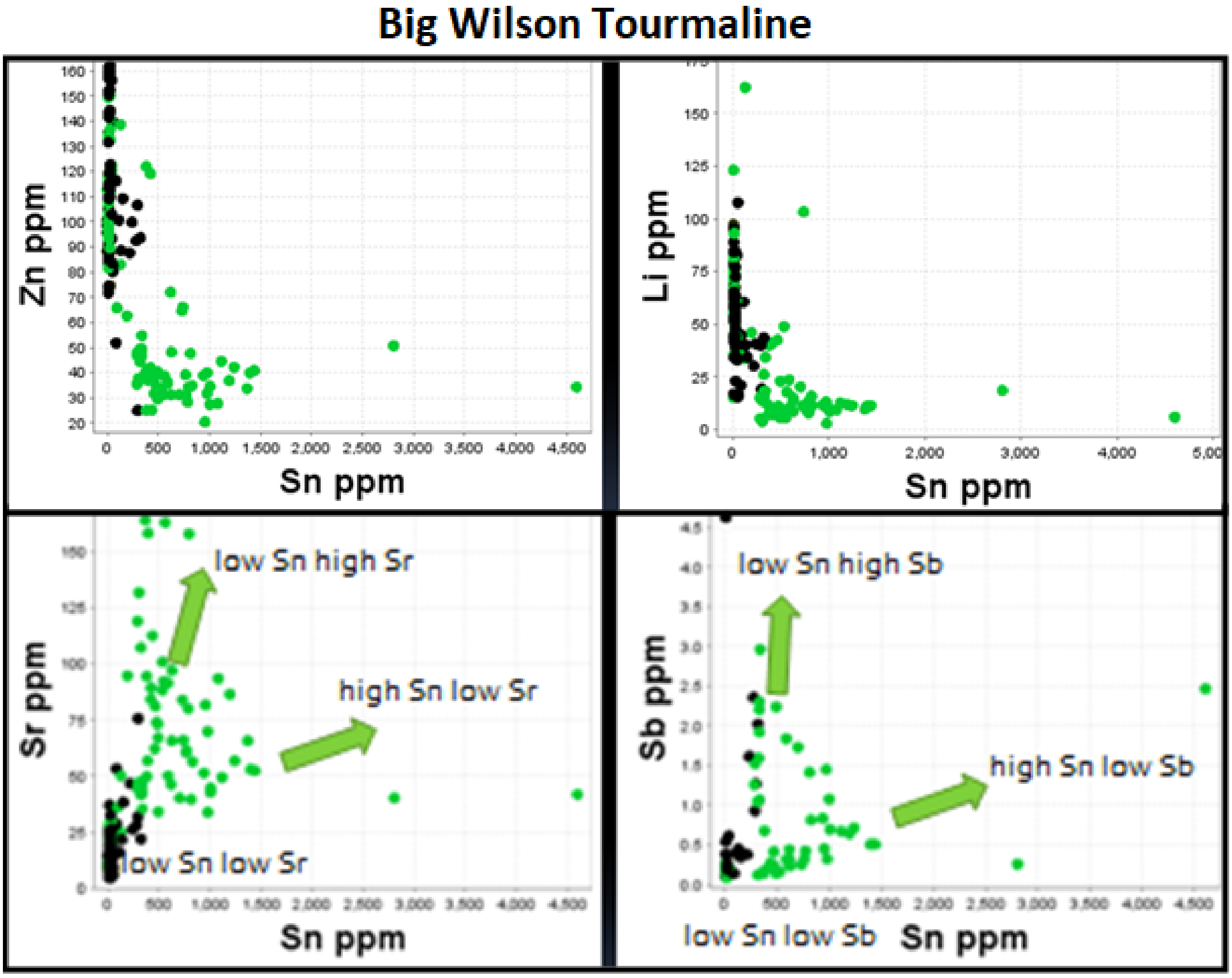


Figure 11: Tourmaline trace element trends from Big Wilson greisen showing Sr & Sb enrichment and Zn & Li depletion in green tourmaline

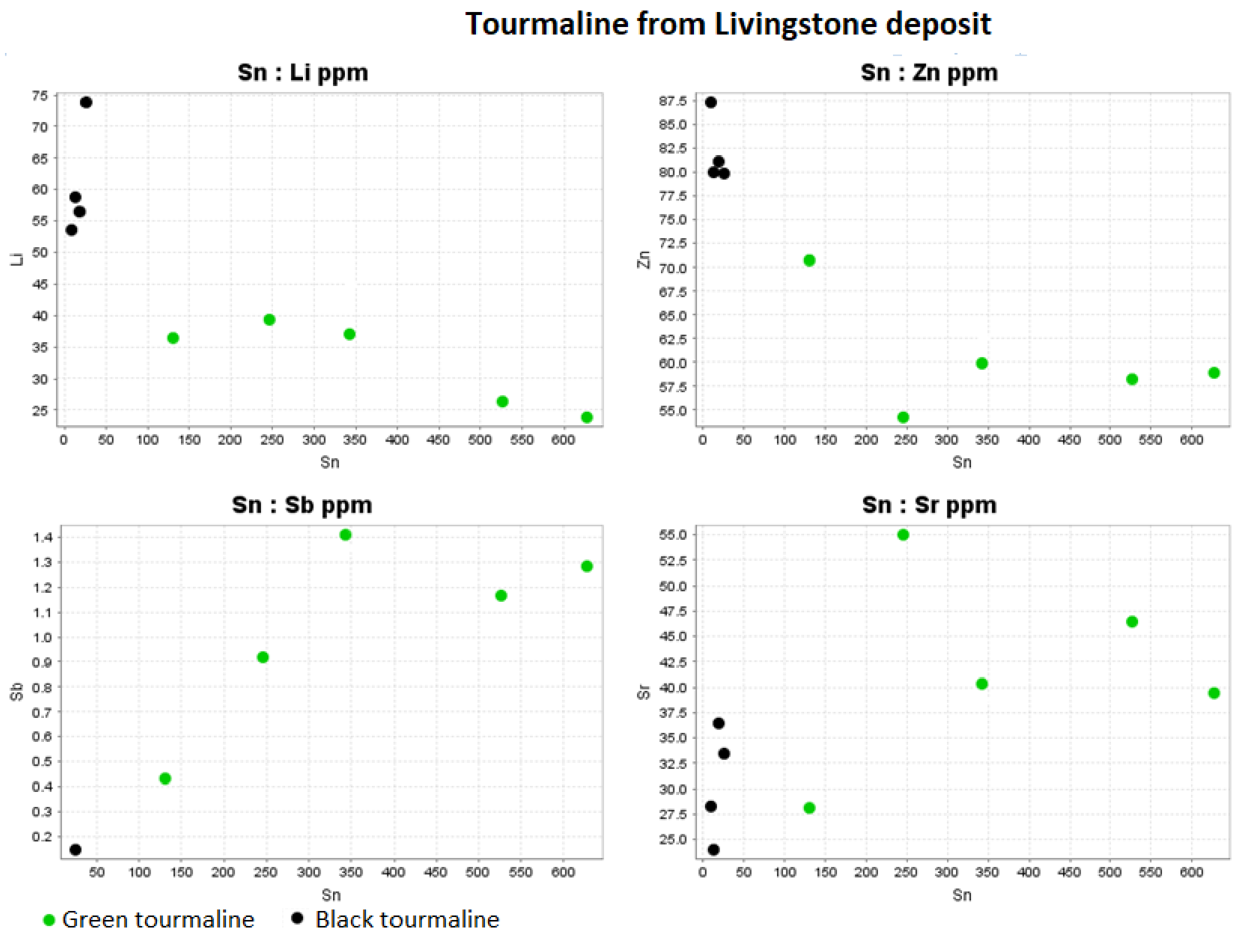


Figure 12: Comparative tourmaline trace element trends from Livingstone and Big Wilson greisens

7 Conclusions and Recommendations

Prospecting of the Merton Hill – Barnes Creek area failed to confirm the presence of previously reported and potentially tin mineralized porphyry dykes. All potential porphyritic granite dyke occurrences inspected turned out to be quartz+feldspar crystal-vitric tuffs and tuffaceous sandstone assignable to the Huskisson Group.

Petrography of Merton Hill drill core (MT001 & MT003) shows strong sericite and siderite alteration associated with pyrrhotite + arsenopyrite + galena + sphalerite + quartz + siderite + calcite veins in a bioclastic limestone and calcareous mudstone host. Assays of two strongly sericite altered tuff samples from drill hole MT001 show distinct F enrichment (to 1030 ppm).

Budget reduction slowed progress of the proposed mineralogical work but initial results suggest a strong spatial relationship between garnet composition and cassiterite mineralization within skarns around the southern margin of the Meredith Granite. The current data suggests cassiterite-zone proximal garnets are enriched in Sn, Fe and to a lesser extent Mg, and relatively depleted in Ca, Al and Si. It is hoped that with further work a cassiterite prospectivity index can be developed using the widespread garnet alteration.

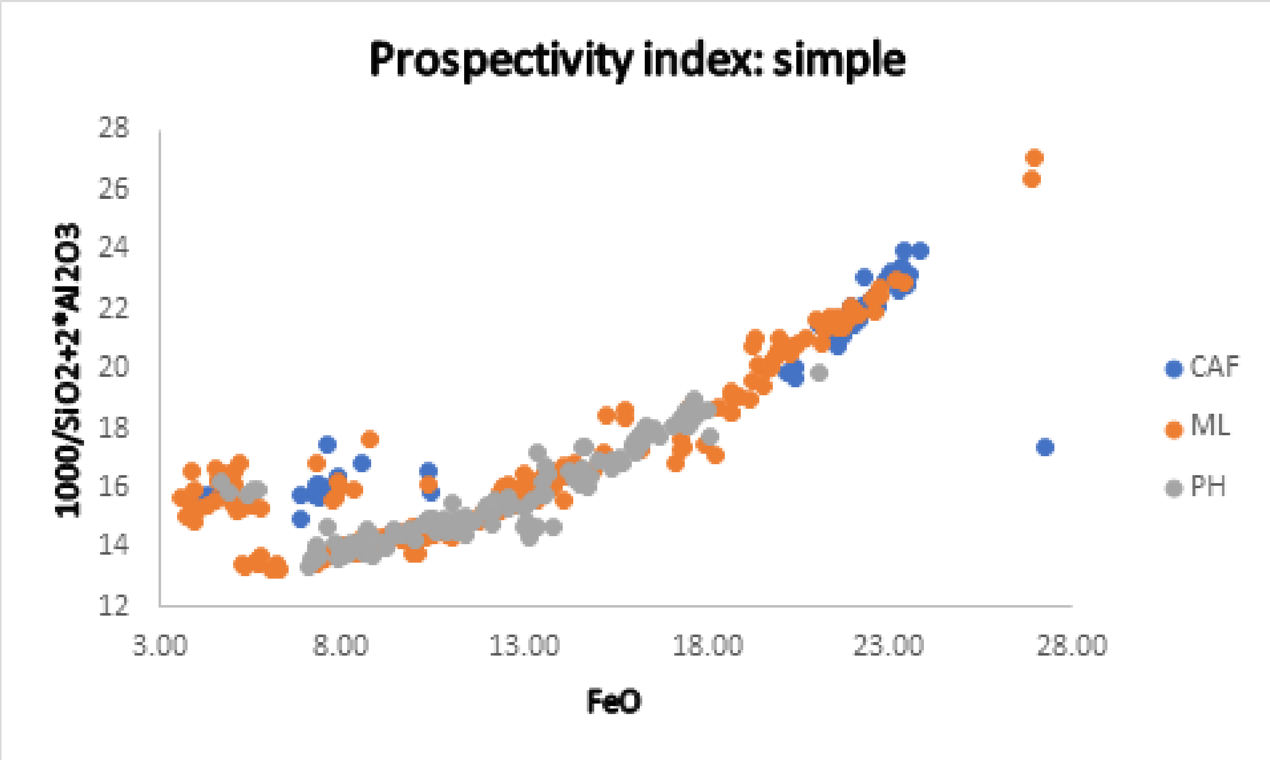


Figure 13: Preliminary garnet prospectivity index for cassiterite mineralisation

The apparent spatial relationship is treated with caution at this stage, especially because the genetic association between garnet and cassiterite remains to be demonstrated.

Recommendations and proposed exploration activities for 2017-2018 tenement anniversary year:

- Completion of microprobe analysis of Big Wilson garnet samples, integration of resultant data within broader South Meredith garnet database and potentially confirm cassiterite proximal garnet geochemical vectors.
- Sampling and microprobe analysis of tourmaline veins and associated alteration zones within the margins of the Meredith Granite to investigate in particular spatial variation of tourmaline and white mica chemistry to vector towards high grade intersections with the Big Wilson skarn. Work on the major and trace element chemistry of tourmaline should focus on obtaining more samples around known mineralisation centres to develop a better understanding of the spatial variation in tourmaline chemistry (e.g. Al, Fe, Mg, Sn, Zn, Li, Sb, Sr) with distance from mineralisation. Analysis of zoned brown to green tourmaline from the Livingstone greisen during the anniversary year confirmed the green Sn-rich tourmaline vs brown Sn-poor tourmaline relationship.

Approximately 15 km^2 of EL45/2010 has been delineated for relinquishment leaving a retained area of c. 30 km^2 (Figures 10 and 11).

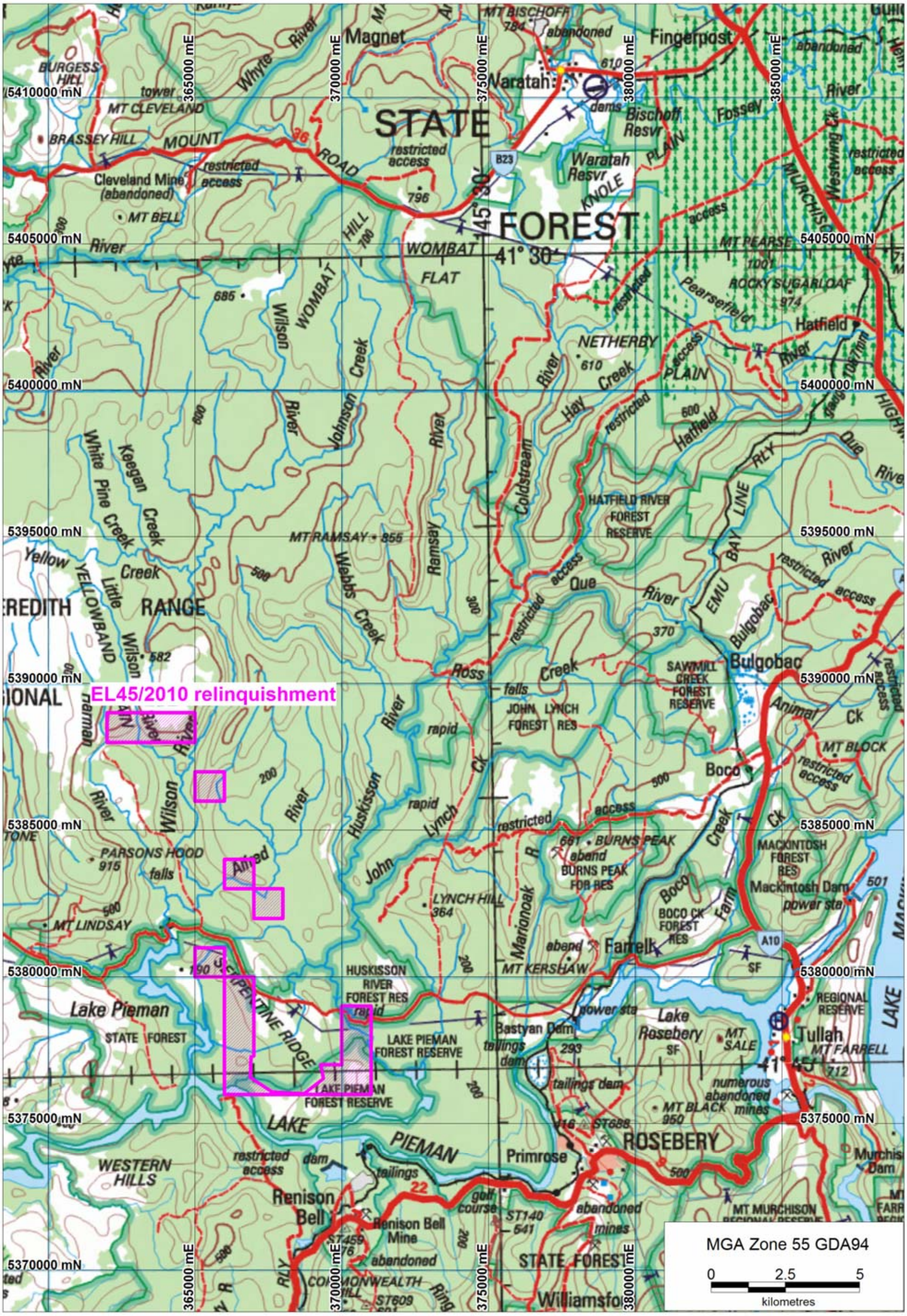


Figure 14: Proposed partial relinquishment from EL45/2010

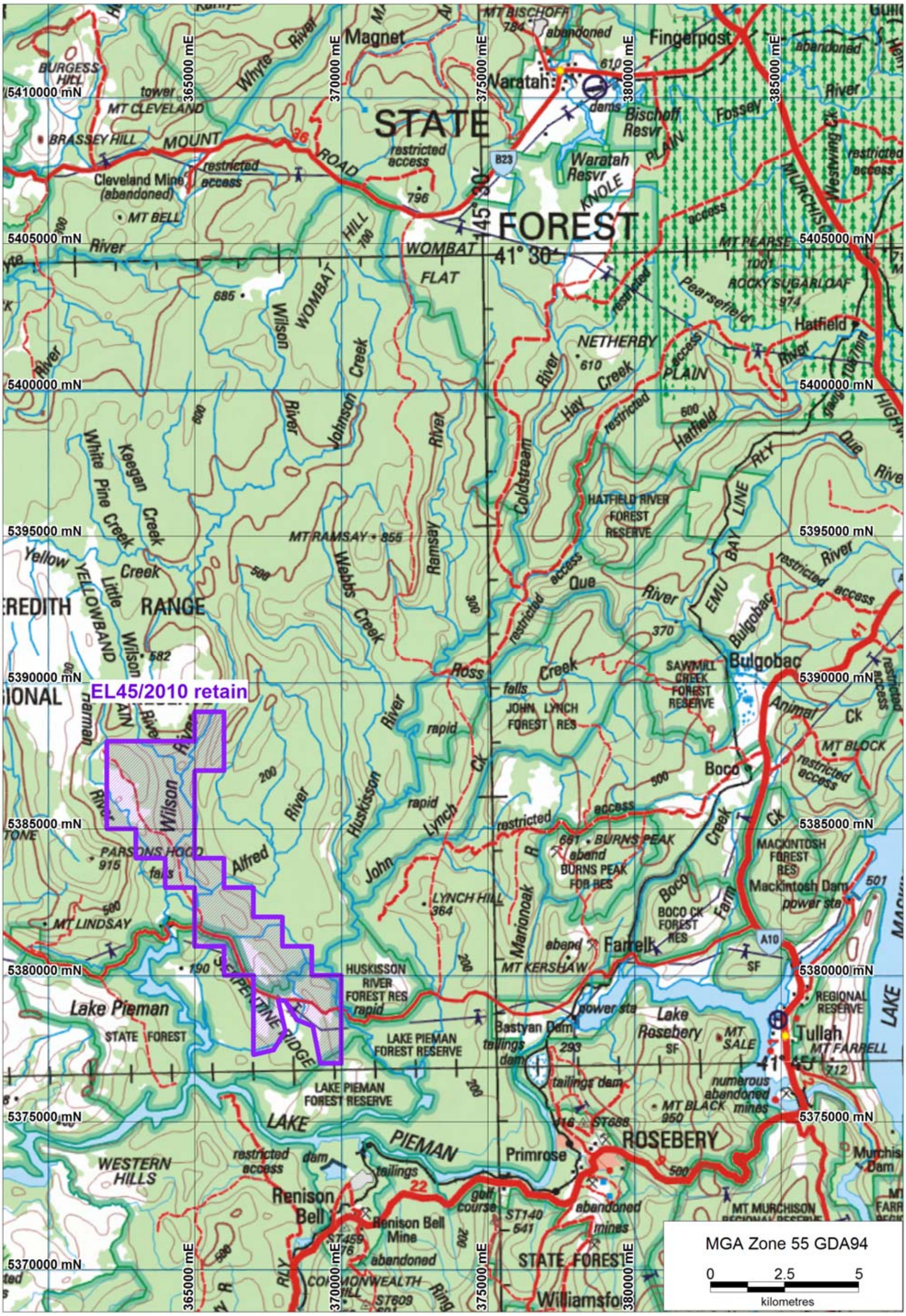


Figure 15: Proposed retained area for EL45/2010

8 Bibliography

Blanks, R, 1989. Annual Report 1989/89 EL24/85 Wilson River – Riley Knob, Western Tasmania. Callina NL. Annual report to the Tasmanian Mines Department 89-3044.

Brown, A. V., 1986. Geology of the Dundas – Mt Lindsay – Mt Youngbuck Region. Tasmania Department of Mines. Geological Survey Bulletin 62.

Browne, C, & Richards, J., 1988. Wilson River Project: Evaluation of Database. Callina NL. Report to the Board of Directors. Unpublished report 89-2903 held by MRT.

Callina NL 1986 Technical Report, Wilson River, NW Tasmania 1986. Annual report to the Tasmanian Mines Department 87-2633.

Callina NL 1987 Annual Report 1/12/86 – 1/12/87 Wilson River Exploration Licence 24/85. Annual report to the Tasmanian Mines Department 87-2744.

Callina NL 1990. Annual Report 1/12/1989 – 1/12/1990, Exploration Licence 24/85, Wilson River. Callina NL. Annual report to the Tasmanian Mines Dept.

Davis, N., 1987. Annual Report EL14/86 Huskisson River Area Western Tasmania 1986-1987. Black Horse Mining NL. Annual report to the Tasmanian Mines Department.

Davis, N., 1988. Interim Report EL24/85 Wilson Annual Report EL14/86 Huskisson River Area Western Tasmania 1986-1987. Black Horse Mining NL. Annual report to the Tasmanian Mines Department 88-2879.

Glasson, K. R., 1969. Report on the Trinder/Camp 30 area, Exploration Licence 2/63. Aberfoyle. Annual report to the Tasmanian Mines Dept.

Gregory, R., 1987. Exploration Licence 9/86 Alfred River Area Annual Report 2 Jul 86 to 31 May 87. Timron Mining. Annual report to the Tasmanian Mines Dept.

Hall, D. B., 1987. EL31/85 Mt Stewart. Progress Report on Exploration for the Period 23/1/1986 to 22/1/1987. Billiton Australia. Annual Report to the Tasmanian Mines Dept.

Holmes, T., 2016. Serpentine Ridge Exploration Licence 45/2010 Annual Technical Report for the period 30/05/2015 to 30/05/2016. Annual Report for Mineral Resources Tasmania

Jessup, A., & Chenhall, B., 1968. Interim report on the Camp 30 merton Area, Tasmania. Aberfoyle Tin Development Partnership. Annual report to the Tasmanian Mines Dept.

Jessup, A., 1969. Review of the summer exploration program undertaken in EL2/63, West Coast, Tasmania. Aberfoyle Ltd. Annual report to the Tasmanian Mines Dept.

Jordan, M., 1969. Camp 30 Report. EL2/1963. Aberfoyle Tin NL. Annual report for the Tasmanian Mines Dept.

Joughin, S., & Owen, S., 2013. Serpentine Ridge Exploration Licence 45/2010 Annual Technical Report for the period 30/05/2012 to 30/05/2013. Annual Report for Mineral Resources Tasmania.

King,G., 1995. Final Report EL12/94 Renison Bell, Western Tasmania. Bruce Resources NL. Final report for EL12/94 to the Tasmanian Mines Dept.

Krummei, G., 1972. EL2/63 Tasmania. End of Project Report, Wilson River – Pieman Area. Aberfoyle Ltd. Report to the Tasmanian Mines Dept.

Komyshan, P., 1985. EL2/63 and EL17/77 Mt Lindsay and Wilson River Areas Annual Report 1984-85. Gold Fields Exploration Pty Ltd. Annual report to the Tasmanian Mine Dept.

Martin, A., 2015. Serpentine Ridge Exploration Licence 45/2010 Annual Technical Report for the period 30/05/2014 to 30/05/2015. Annual Report for Mineral Resources Tasmania

Nye, P. B., 1929. The Osmiridium Deposits of the Adamsfield District. Tasmania Department of Mines. Geological Survey Bulletin 39.

Owen, S., & Pfeifenberger, S. 2012. Serpentine Ridge Exploration Licence 45/2010 Annual Technical Report for the period 30/05/2011 to 30/05/2012. Annual Report for Mineral Resources Tasmania.

Owen, S., 2014. Serpentine Ridge Exploration Licence 45/2010 Annual Technical Report for the period 30/05/2013 to 30/05/2014. Annual Report for Mineral Resources Tasmania.

Overton R., & Jordan, M., 1969. Report on the Geology of the Ahearne's Creek Area. EL2/1963. Foundation & Geological Services Pty Ltd for Aberfoyle Tin NL. Annual report for the Tasmanian Mines Dept.

Poltock, R., 1989. Combined Final Report and Progress Report Twelve Months to February 1989 Mt Lindsay Exploration Licence 87/87 Tasmania. Cyprus Gold Australia Corporation. Annual & relinquishment report to the Tasmanian Mines Dept.

Poltock, R., 1989. Combined Annual and Relinquishment Report Twelve Months to January 1989 Exploration Licence 35/87 Savage River Tasmania. Cyprus Gold Australia Corporation. Annual & relinquishment report to the Tasmanian Mines Dept.

Reid, A. M., 1921. Osmiridium in Tasmania. Tasmania Department of Mines, Geological Survey Bulletin 32.

Roberts, P. A., 1985. EL2/63 Merton Hill – Alfred River Final Report. Gold Fields Exploration Pty Ltd. Final report to the Tasmanian Mine Dept.

Roberts, P. A., 1985. EL17/77 Wilson River Area, Final Report. Gold Fields Exploration Pty Ltd. Final report to the Tasmanian Mine Dept.

Roetz, M., Cameron, P., Allen, B., 1969. Geology of the Wilson River Area. EL2/1963. Aberfoyle Tin NL. Annual report for the Tasmanian Mines Dept.

Schellekens, R., 1978. Progress Report - September 1978, EL17/77 – Wilson River Area, Western Tasmania. Renison Ltd. Annual report to the Tasmanian Mines Dept.

Tester, D. K. 1970. Mt Lindsay area. A summary of Exploration Activities undertaken by the Aberfoyle Group. Annual Report for the EL2/1963 to Tasmanian Mines Dept.

Appendix A: Rock Sample Results

Appendix A: Rock Sample Results

H0002	Version	3												
H0003	Date_generated	24/05/2017												
H0004	Reporting_period_end_date	30/05/2017												
H0005	State	TAS												
H0100	Tenement	EL45/2010												
H0101	Tenement_holder	Venture Minerals Ltd												
H0102	Project_name	Serpentine Ridge												
H0106	Tenement_operator	Venture Minerals Ltd												
H0150	250K_map_sheet	SK5503 Burnie												
H0151	100K_map_sheet	7914 Pieman												
H0152	50K_map_sheet	na												
H0153	25K_map_sheet	3637 Rosebery, 3638 Parsons												
H0200	Start_date_of_data_acquisition	30/05/2016												
H0201	End_date_of_data_acquisition	30/05/2017												
H0202	Data_format	SG3												
H0203	Number_of_data_records	2												
H0204	Date_of_metadata_update	24/05/2017												
H0500	Feature_Located	Sample Point												
H0501	Geodetic_datum	GDA94												
H0502	Vertical_datum	not applicable												
H0503	Projection	MGA												
H0531	Projection_zone	55												
H0532	Surveying_instrument	Garmin GPS64												
H0533	Surveying_Company	Venture Minerals Ltd												
H0600	Sample_code	ROCK												
H0601	Sample_type	drill core												
H0602	Sample_description	see data												
H0700	Sample_preparation_code	na												
H0701	Sample_preparation_details	na												
H0702	Job_no	PH16112710												
H0800	Assay_code	see data												
H0801	Assay_company	ALS Global												
H0802	Assay_description1	MS42 aqua regia digestion with ICP-MS Finish												
H0803	Assay_description2	MS81 perchloric, nitric, hydrofluoric and hydrochloric acid digestion with ICP-MS finish												
H0804	Assay_description3	4ACD81 perchloric, nitric, hydrofluoric and hydrochloric acid digestion with ICP-AES finish												
H0805	Assay_description4	F-IC881 potassium hydroxide fusion with ion chromatography finish												
H0806	Assay_description5	B-ICP69 by HNO3-HF digestion ICP-AES finish												
H0807	Assay_description6	ICP06 lithium borate fusion followed by nitric, hydrochloric and hydrofluoric acid digets and ICP-AES Finish												
H0808	Assay_description7	GRA05 LOI 1g at 1000 deg C for 1 hour												
H0809	Assay_description8	C-IR07 LECO Induction Furnace												
H0810	Assay_description9	S-IR08 LECO Induction Furnace												
H0900	Remarks:	- designates assay below lower limit of detection												
H1000	Sample	Prospect	E_MGA55GDA94	N_MGA55GDA94	Description	F	B	Si	Al	Fe	Ca	Mg	Na	K
H1001			m	m		ppm	ppm	%	%	%	%	%	%	%
H1002						F-IC881	B-ICP69	ICP06	ICP06	ICP06	ICP06	ICP06	ICP06	ICP06
D	MT001_177	Merton Hill	367686	5379672	felsic volcanogenic wacke with shell fragments, strong sericite replacement of feldspar, minor quartz+calcite veinlets, chlorite-cemented breccia zone	670	70	27.9	7.23	5.01	2.27	2.03	1.14	2.4
D	MT001_190.6	Merton Hill	367686	5379672	strongly chlorite+sericite altered crystal-vitric tuff - ?welded tuff, minor calcite+quartz pyrrhotite+pyrite+sphalerite+titanite, and calcite+pyrite veinlets	1030	100	33.3	7.36	1.78	0.21	1.07	0.53	3.82
EOF														

Appendix A: Rock Sample Results

Cr	Ti	Mn	P	Sr	Ba	LOI	Total	C	S	Ba	Ce	Cr	Cs	Dy	Er	Eu	Ga	Gd	Ge	Hf	Ho	La	Lu	Nb	Nd	Pr	Rb	Sm	Sn	Sr	Ta	Tb	Th	Tm
ppm	%	ppm	ppm	ppm	ppm	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
ICP06	ICP06	ICP06	ICP06	ICP06	ICP06	GRA05	ICP06	C-IR07	S-IR08	MS81	MS81	MS81	MS81	MS81	MS81	MS81	MS81	MS81	MS81	MS81	MS81	MS81	MS81	MS81	MS81	MS81	MS81	MS81	MS81	MS81	MS81	MS81	MS81	MS81
68	0.61	620	655	-85	1074	5.24	97.98	0.77	0.8	1030	70.7	110	10.6	4.83	2.96	1.15	16.4	4.77	-5	5	1.03	35.5	0.44	13.5	28.4	7.73	109	5.54	2	58.6	0.9	0.86	9.63	0.46
-68	0.23	155	131	-85	1611	2.62	98.28	0.05	0.05	1580	132	20	15.55	6.78	4.15	1.92	16.6	8.1	-5	7.2	1.46	65.1	0.66	13	52	14.1	150.5	9.87	2	41.9	0.8	1.08	19	0.62

U	V	W	Y	Yb	Zr	As	Bi	Hg	In	Re	Sb	Se	Te	Tl	Ag	Cd	Co	Cu	Li	Mo	Ni	Pb	Sc	Zn
ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
MS81	MS81	MS81	MS81	MS81	MS81	MS42	MS42	MS42	MS42	MS42	MS42	MS42	MS42	MS42	4ACD81	4ACD81	4ACD81	4ACD81	4ACD81	4ACD81	4ACD81	4ACD81	4ACD81	4ACD81
3.45	136	-1	27.2	2.97	197	9.3	0.2	0.018	0.037	0.001	2.93	0.7	0.03	0.13	-0.5	-0.5	18	50	40	1	52	23	17	52
4.86	24	-1	36.6	4.36	282	0.9	0.23	-0.005	0.017	-0.001	1.85	0.9	-0.01	0.08	-0.5	-0.5	3	4	20	-1	6	3	7	24

Appendix B: Petrographic Summaries

H0002	Version	3					
H0003	Date_generated	24/05/2017					
H0004	Reporting_period_end_date	30/05/2017					
H0005	State	TAS					
H0100	Tenement	EL45/2010					
H0101	Tenement_holder	Venture Minerals Ltd					
H0102	Project_name	Serpentine Ridge					
H0106	Tenement_operator	Venture Minerals Ltd					
H0150	250K_map_sheet	SK5503 Burnie					
H0151	100K_map_sheet	7914 Pieman					
H0152	50K_map_sheet	na					
H0153	25K_map_sheet	3637 Rosebery, 3638 Parsons					
H0200	Start_date_of_data_acquisition	30/05/2016					
H0201	End_date_of_data_acquisition	30/05/2017					
H0202	Data_format	SG3					
H0203	Number_of_data_records	8					
H0204	Date_of_metadata_update	24/05/2017					
H0500	Feature_Located	Petrographic summary					
H0501	Geodetic_datum	GDA94					
H0502	Vertical_datum	not applicable					
H0503	Projection	MGA					
H0531	Projection_zone	55					
H0532	Surveying_instrument	Garmin GPS64					
H0533	Surveying_Company	Venture Minerals Ltd					
H0600	Sample_code	Petrography					
H0601	Sample_type	Drill core, rock					
H0700	Sample_preparation_code	Cover slipped thin sections					
H0800	Assay_code	not applicable					
H0900	Remarks:						
H1000	Sample	Hole	Depth_m	Summary	Description	E_MGA55GDA94	N_MGA55GDA94
D	THML043	na	0	quartz+feldspar crystal vitric tuff	Medium grained clastic rock comprising monocrystalline volcanic quartz, plagioclase and kspar crystals to 2mm size (est 35% of rock) in matrix mainly comprising devitrified cuspate shards. Quartz crystals commonly embayed. Abundant angular devitrified vesicular quartz+feldspar phyric lithics, minor rounded trachytic textured volcanic lithics. Mostly cognate rhyolitic volcanic material. Weak sericite replacement of feldspar. Volcanic glass devitrified to polycrystalline quartz, ?kspar, albite, dusty calcite, sericite & titanite. Rare ferromagnesium phases replaced by chlorite and titanite. Minor veinlets to few mm thick of polycrystalline quartz, chlorite and ?kspar. Minor clay weathered patches.	368026	5379485

H1000	Sample	Hole	Depth_m	Summary	Description	E_MGA55GDA94	N_MGA55GDA94
D	THML044	na	0	quartz+feldspar crystal vitric ?welded tuff	Medium grained ?welded tuff comprising 25% monocrystalline volcanic quartz, plagioclase and kspar crystals to 2mm size in dusty matrix of fine to very fine anhedral quartz and feldspar, dusty carbonate, titanite, ?chlorite and minor sericite after volcanic glass with rare cuspate ghosts. Quartz crystals commonly embayed and angular, fragmental shapes. Largely cognate material. Rare rounded trachytic textured volcanic lithics. Modest sericite replacement of feldspar. Volcanic glass devitrified to polycrystalline quartz, ?kspar, albite, dusty calcite, sericite & titanite. Rare ferromagnesium phases replaced by chlorite and titanite. Minor veinlets to few mm thick of polycrystalline quartz, chlorite and ?kspar. Rare prehnite replacement. Minor clay weathered patches.	368301	5379188
D	MT001_177m	MT001	177	felsic volcanogenic wacke with shell fragments, strong sericite replacement of feldspar, minor quartz+calcite veinlets, chlorite-cemented breccia zone	Poorly sorted medium grained quartz+feldspar+volcanic lithic wacke, 30% matrix. Embayed monocrystalline volcanic quartz abundant. Feldspar heavily sericitised. Lithics commonly rounded, mainly rhyolitic-dacitic, minor pilotaxitic chlorite+feldspar intermediate volcanics. Minor detrital ferromags entirely replaced by chlorite. Indeterminate recrystallized calcite shell fragments to +5mm size. Minor detrital muscovite, rare biotite. Stylolitic dusty matrix of angular poorly sorted quartz, feldspar & volcanic lithic fragments dusted with authigenic titanite, calcite, sericite, chlorite & opaques. Rare prehnite replacement. Veinlets to few mm thick of polycrystalline quartz and calcite. Chloritic (deep anomalous blue) cemented breccia zone along one side of TS. Common calcite, minor chlorite replacement throughout.	367686	5379672
D	MT001_178.2m	MT001	178.2	tuffaceous sandstone or crystal-lithic tuff, irregular quartz+calcite+chlorite veining	Moderately sorted medium grained (1-2mm) feldspar+quartz+volc lithic sandstone with abundant irregular polycrystalline quartz+calcite and chlorite (anomalous blue to grey brown) filled fractures and veins. Feldspar modestly sericitised. Minor fine opaques (?pyrite). Volcanic lithics felsic to intermediate. Minor matrix recrystallised to anhedral quartz, chlorite, titanite and calcite probably originally included glassy detritus.	367686	5379672
D	MT001_190.6m	MT001	190.6	strongly chlorite+sericite altered crystal-vitric tuff - ?welded tuff, minor calcite+quartz pyrrhotite+pyrite+sphalerite+titanite, and calcite+pyrite veinlets	Medium grained euhedral feldspar (20%) and embayed volcanic quartz (5%) in devitrified cuspate & vesicular shard matrix. Probably welded tuff/ignimbrite. Common micro-mosaic felsic volcanic and devitrified qz+feldspar phyric volcanic fragments. Feldspars largely replaced with sericite and dusty carbonate, glass replaced by chlorite + sericite + quartz + dusty titanite and carbonate. Minor polycrystalline quartz + calcite + pyrrhotite + pyrite + sphalerite + titanite, and calcite+pyrite veinlets.	367686	5379672
D	MT001_205.7m	MT001	205.7	sericite altered sandy limestone cut by calcite + pyrite + pyrrhotite + galena + sphalerite + prismatic quartz veins	Coarse grained (1-5mm) calcite + pyrite + pyrrhotite + galena + sphalerite + prismatic quartz veins to 20mm thick cutting fossiliferous fg stylolitic sandy (quartz) limestone. Modest fine pale green ?chlorite alteration of sandy limestone. Rare sphalerite replacement in sandy limestone, most in veins. Minor chlorite veinlets crosscutting carbonate+sulphide veins.	367686	5379672

H1000	Sample	Hole	Depth_m	Summary	Description	E_MGA55GDA94	N_MGA55GDA94
D	MT001_308.6m	MT001	308.6	Sphalerite+siderite veins in bedded limestone, disseminate sphalerite and galena in chlorite & ?sericite alteration haloe around vein	Sphalerite + siderite veins cutting bedded stylolitic limestone, disseminated zoned sphalerite & galena in chlorite + ?sericite alteration haloe around vein. Core of zoned sphalerites pocked with relict calcite and quartz inclusions. Siderite lining edge of veins undulose rhombs. Siderite + sulphide vein cut by thin white calcite veins.	367686	5379672
D	MT003_353.3m	MT003	353.3	siderite + sphalerite veined limestone with sphalerite alteration halo, modest white mica + quartz + pyrite alteration, late calcite corrosion of sphalerite	Siderite + sphalerite + quartz (minor) veins cutting crystalline limestone with abundant disseminated sphalerite around vein. Minor fine anhedral to prismatic quartz patches in the veins. Siderite occurs as coarse undulose rhombs. Sphalerite conspicuously zoned, grainsize up to 4mm in siderite vein. Sphalerite in limestone wallrock is slightly corroded by calcite, and locally cut by calcite veins. Cores of sphalerite in wallrock pocked with relict calcite and quartz inclusions, cores of sphalerite in veins are clean. Modest white mica, quartz and ?pyrite alteration immediately adjacent to veins.	367794	5379483
EOF							