Mt Lindsay – Webbs Creek
Exploration Licence 21/2005

Annual Technical Report for the period 22/08/2008 to 22/08/2009

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1 Summary

Exploration Licence 21/2005 located in western Tasmania currently includes seven identified magnetite-tin-tungsten skarns within the sedimentary rocks adjacent to the contact of the Meredith Granite, namely the Main, No 1, No 2, Waterhouse, Livingstone, Stanley Reward and Webbs Creek skarns. Activities during the 2009 anniversary year included geological mapping, rock chip and stream sediment sampling, 3,644 m of diamond core drilling, 169 m of Reverse Circulation and Air Core drilling, down hole and collar surveying, logging and assaying of drill core, metallurgical test work, resource estimation and scoping studies, flora and fauna surveys and environmental baseline surveying. Drilling was suspended and other field activities reduced a period of several months following the October 2008 financial crisis and associated stock market collapse. Drilling resumed in mid-2009 and continues.

Drilling during 2008-2009 was focused on the delineation of the Main and No 2 zones at Mt Lindsay and the Livingstone Skarn in the adjacent Stanley River area. This work culminated in the estimation of Inferred Resources of 30 Mt at 33% Fe, 23 Mt at 0.2% Sn and 5.7 Mt at 0.3% WO3 for the Main and No 2 zones. The resource work indicates significant scope for the delineation of higher grade Sn and WO3 zones within both the Main Tin Zone and No 2 Zone. Resource definition drilling is currently in progress at the Livingstone Skarn. Preliminary metallurgical test work into magnetite, tin and tungsten recovery from the Main and No 2 zones has been positive and scoping studies suggest an open pit operation would be financially positive based on current commodity prices.

Geological mapping, rock chip sampling and stream sediment activities were focussed on the areas immediately adjacent to the currently identified skarns at Mt Lindsay and Stanley River with the objective of defining drill targets and potentially additional resources in the vicinity of the currently defined resources. Several targets were progressed to drill ready stage by this work, the most advanced being the Waterhouse and Stanley Reward skarns. Encouraging results have also been obtained from magnetic targets on the flank of Parsons Hood and lower reaches of News Creek but further mapping and sampling is required to bring these to drill ready status.

Flora and fauna surveys did not identify any significant issues to the current level of exploration activities, and environmental baseline studies were initiated in October 2008.

2 Introduction

Exploration Licence 21/2005 is situated in the tin-tungsten province of western Tasmania and covers the south eastern contact metamorphic aureole of the Meredith Granite. 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 the world class Renison Bell tin mine (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% W03).

Cleveland and Mount Bischoff are situated around the northern margin of the Meredith Granite, and Rension Bell is associated with the smaller Pine Hill Granite c. 15 km to the southeast of the Meredith Granite.

Previous exploration activities mainly for tin within the area now covered by E21/2005 also indicated the presence of potentially economic magnetite skarns. There are currently two producing magnetite mines in Tasmania, the Kara magnetite-scheelite mine located near Hampshire approximately 55 km in a direct line northeast of EL21/2005 and the Savage River magnetite mine (371 Mt at 31.9% Fe in magnetite) situated c. 25 km directly north northwest of the Mt Lindsay magnetite-tin-tungsten skarns within EL21/2005.

3 Location and Access

EL21/2005 is located approximately 130 km by road southwest of the coastal port of Burnie, and c. 35 km by road from the nearest town Tullah (Figure 1). Access to the licence is via the sealed (bitumen) Pieman Road which branches off the Murchison Highway c. 5 km north of Tullah, then approximately 3 km of 4WD vehicle track to the drill site. The drill site is c. 3 km from Hydro Tasmania transmission lines (adjacent to the Pieman Road) and 21 km from the Bastyan hydroelectric powerhouse and Emu Bay Railway which connects with the port of Burnie.

Elevation within the licence ranges from 100 m above median sea level where Lake Pieman winds around the south western corner up to 913 m at the top of Parsons Hood at the southern end of the Meredith Range. Other highpoints include Mt Lindsay (579 m) on a spur branching southwest off Parsons Hood, and Mt Livingstone (781 m) beyond the western boundary. Average annual rainfall is approximately 2000 mm and vegetation is dominated by temperate rainforest, with patches of dense sub-alpine scrub over granitic basement and in areas of regenerating forest.

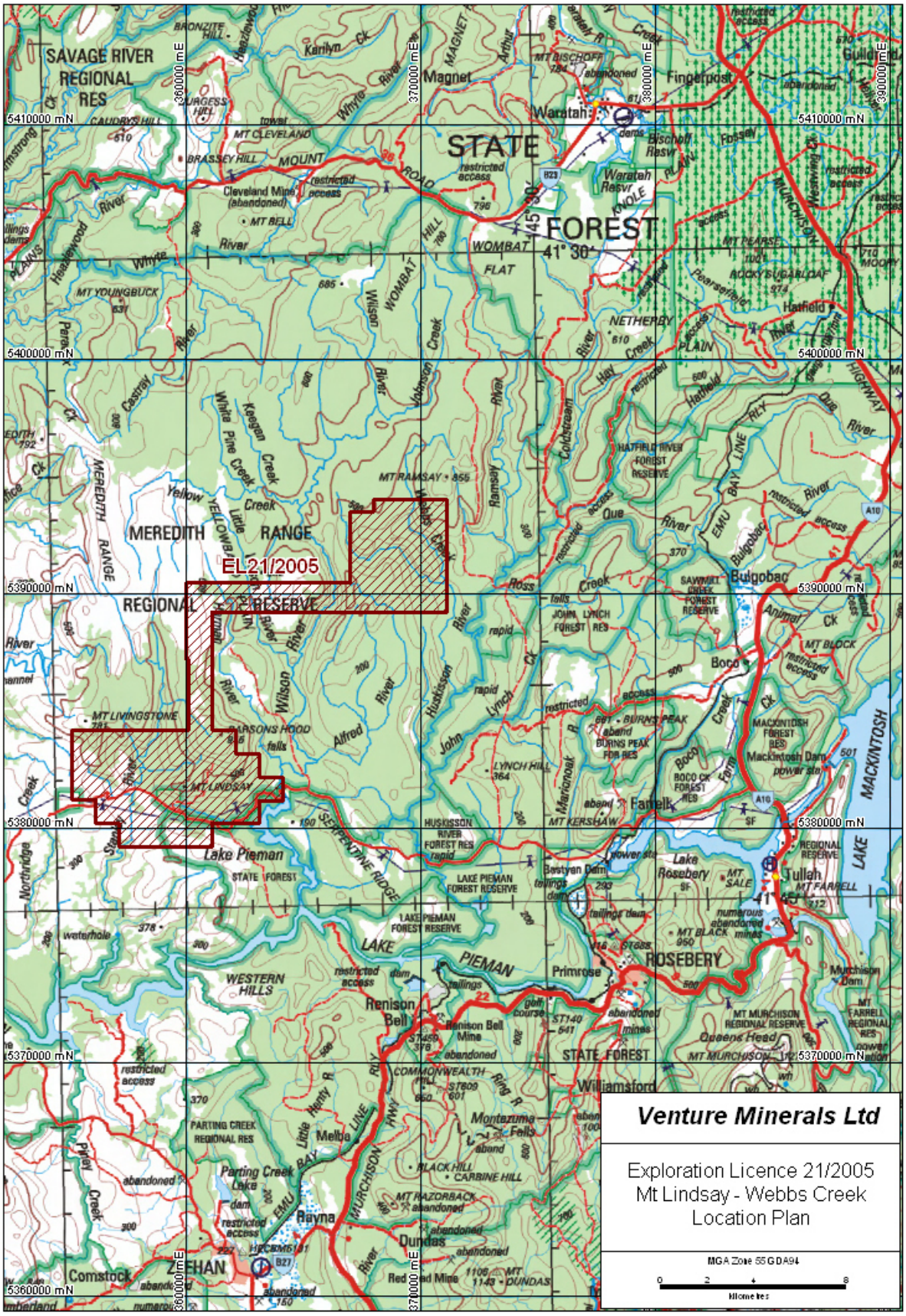


Figure 1: Location Plan

4 Exploration and Mining History

Alluvial tin was discovered in the nearby Stanley River area sometime around 1893 and subsequently developed into the Stanley River Tin Fields. The main alluvial tin field was located on the extensive river flats around the juncture of Livingstone Creek with Stanley River, with abundant quartz-tourmaline wash noted on the banks of the river close to the granite contact. Additional alluvial deposits were located a further 6-8 km upstream of the main Stanley River field, and in Castle, News and Minors creeks draining the flanks of Mt Livingstone and Parsons Hood. Early prospecting for the source of the alluvial tin then led to the location of several tin-bearing quartz-tourmaline veins within the granite on the flanks of Mt Livingstone (e.g. “Castle’s” lode) and Parsons Hood. Cassiterite-bearing gossans were then discovered at Stanley Reward, Livingstone Creek and Mt Lindsay in the early 1900s with minor small-scale open-cut and underground tin mining occurring to about 1932. Shafts at the Stanley Reward deposit reputedly reached 150 ft, and the Mt Lindsay orebody was one of the most extensive known in Tasmania at the time. Production records are incomplete, but included at least 59.8 tons of lode tin from Mt Lindsay, and at least 79.6 tons of alluvial tin.

Descriptions of mining activities and the deposit indicate the mineralisation at Mt Lindsay was mostly of the bedding-parallel sulphide and magnetite replacement type (after slate, tuff and carbonate) with some high-grade cross-cutting cassiterite veins. The stratigraphy-parallel sulphide and magnetite replacement mineralisation was evidently generally of low tin grade and most of the tin production came from the high-grade cassiterite-rich fissures. The Mt Lindsay Mining Company NL recorded small amounts of ore grading up to 25 % Sn, and sampling of the abandoned workings in the 1950s (Pearson, 1952) returned up to 3 feet at 27.6 % Sn. Mining activities at Mt Lindsay had largely ceased by 1923 by which stage the oxide ore had been worked over a zone 600 m long and averaging 30 m thick. Periodic tributing of the oxide ore continued until 1932. A potentially large body of lower grade replacement tin ore remained in which the primary mineral assemblage was noted to comprise mainly magnetite and/or pyrrhotite with variable amounts of cassiterite, pyrite, chalcopyrite, arsenopyrite, scheelite and a wide range of silicates.

In his bulletin on the Stanley River Tin Field of 1914 government geologist LL Waterhouse noted the occurrence of iron ores of possible economic value, describing a magnetite and hematite body approximately 40 m across protruding through the alluvial flats beneath Mt Livingstone (the Livingstone Creek gossan). At that time two adits had been driven into the Livingstone Creek gossan in search of tin. Waterhouse (1914) also described c. 10-20 m thickness of cassiterite-bearing banded magnetite mineralisation within the hangingwall (southern) side of the Mt Lindsay tin lode (the Main Tin Zone), and a parallel zone of magnetite c. 200 m north of the Main Tin Zone which is now called the No 2 Zone. However, while potentially significant hematite and magnetite mineralisation was recognised approximately 100 years ago, tin remained the focus for subsequent mineral exploration. Magnetite and/or hematite bodies were encountered during the course of this exploration but iron content was typically not quantified in the trenching and drilling activities.

In the 1950s Rio Tinto and Electrolytic Zinc covered the Mt Lindsay – Stanley River area as part of a regional inch to the mile photogeological and aeromagnetic survey covering most of western Tasmania. The anomalously magnetic zone around the south eastern edge of the Meredith Granite was identified by this survey. Some more detailed geophysical surveys were then conducted but the recommended drilling was never carried out.

Aberfoyle Tin Development Partnership ("Aberfoyle") took up the Mt Lindsay – Stanley River area in 1962 and over the following eight years conducted geological mapping, geophysical surveying, soil sampling, trenching and channel sampling, and 30 diamond core drill holes for 2936 m focussing on the old Mt Lindsay mine (the Main Tin Zone) but also including seven drill holes on three traverses targeting the No 2 Zone. Approximately 600 m of strike of the Main Tin Zone was covered by mainly single hole traverses approximately 40 m apart to a maximum vertical depth of 185 m beneath surface and mostly less than 70 m depth. Some of the better drill intercepts from the Main Tin Zone included 15 m at 0.77% Sn in ML01 and 14.1 m at 1.75% Sn in ML03. Magnetite zones were logged agreeing with descriptions by Waterhouse (1914) of the mineralisation exposed at surface, but the core was not assayed for iron. The drill holes into the No 2 Zone encountered low grade tin mineralisation (e.g. 12.8 m at 0.2% Sn in hole ML2/1) and while they were not assayed for iron the drill logs again indicate the presence of massive and banded magnetite mineralisation. Several magnetic anomalies were identified parallel to the Main and No 2 zones on Mt Lindsay but remained largely untested when Aberfoyle joint ventured the project to Rension Limited ("Renison") in 1972. The Stanley Reward and Livingstone Creek areas were surveyed with magnetometer and mapped, but the identified gossans and magnetic anomalies were not followed up and Aberfoyle released the area before the joint venture with Renison.

Renison drilled a further 30 diamond core holes for 10,753 m at Mt Lindsay mainly into the Main, No 1 and No 2 zones, extending considerably the identified tin mineralisation. The drilling confirmed the presence of multiple zoned skarns prospective for tin, tungsten, copper and, although Renison were not interested in it, magnetite. For the first time iron was included in the assay suite for some drill holes. Drill intercepts included 14 m at 36.2 % Fe from the Main Tin Zone and 30.2 m at 34.4 % Fe from ML37, and 23 m at 29.5 % Fe and from ML38 in the No 2 Zone. Metallurgical testwork and petrography on core from ML38 in the No 2 Zone suggested it would be amenable to normal extractive processes for tin but Renison did not consider the extractive potential the magnetite mineralisation. Renison abandoned the project in the mid 1980s after collapse of the tin price and there were no further drilling activities at Mt Lindsay until Venture Minerals Ltd ("Venture") took up the project.

The adjacent Stanley Reward and Livingstone Creek area (c. 2-4 km west of Mt Lindsay) was subject to an extensive exploration programme over the 1973-1986 period by Pacminex Pty Ltd (subsidiary of CSR Ltd) and Union Corporation Pty Ltd which became Gencor (Australia) Pty Ltd. Exploration activities included geological mapping, ground magnetic traverses, induced polarisation surveying, a trial gravity traverse, airborne EM surveying, stream sediment, soil, auger and rock chip sampling, and 19 diamond core drill holes for 3459 m. Geological mapping, geochemical sampling and geophysics indicated the presence of at least 3 km strike extent of magnetic stanniferous "Renison marker

sequence" striking northwest from Stanley River along Livingstone Creek beneath a partial cover of alluvial gravels up to 10 m thick. Interpretation of the magnetic imagery and CSR drilling suggests the "Renison marker sequence" is offset 300 m before continuing off around the flank of Mt Lindsay towards Renison Bell 14 km to the southeast. The exposed Livingstone Creek and Stanley Reward gossans reach 280 m long by 40 m wide, and are the surface expression of pyrrhotite-magnetite skarns replacing dolomite and shale horizons within the "Renison marker sequence". A small fault appears to cut the Livingstone Creek gossan into two roughly equal and slightly dextrally offset portions. Rock chip samples from the gossans returned up to 2.37% Sn (TCR84-2290). Chip sampling in an adit at the northern end of the Livingstone Creek gossan returned 20 m at 0.5% Sn and 0.3% Cu and diamond drill hole LCD002 returned 10 m at 0.4% Sn and 0.1% Cu. Gold in soils over the dolomitic horizons in the Stanley River area commonly report in the range 50-200 ppb.

The CSR and Gencor drilling was focussed on geophysical and geochemical targets within the "Renison marker sequence" and returned up to 41 m at 0.4% Sn in GSR10 along with anomalous Cu and W. Spacing between drill holes ranges from 100 to 350 m over 2 km of strike. Unfortunately most drill holes encountered granite at less than 100-200 m beneath surface, suggesting that the mineralised "Renison marker sequence" in the area is restricted to a wedge above the Meredith Granite. The north end of the Livingstone Creek gossan is underlain by granite at 15-30 m beneath surface, deepening to 140 m beneath surface around GSR10 approximately 170 m along strike to the southeast. Union interpretation suggests that the Stanley Reward gossan is a xenolith within the marginal zone of the Meredith Granite. The drilling also indicated numerous granite dykes, apophyses and/or fault slices beyond the main body of the Meredith Granite. Ground based magnetic surveys and airborne EM surveying highlighted a large number of non-magnetic electromagnetic anomalies in the Oonah Formation, although follow-up activities showed most were caused by unmineralised pyritic black shales and siltstones. Surface sampling also indicated anomalous zones in the Oonah Formation associated with a magnetic anomaly parallel to "Renison marker sequence", with soils returning up to 1000 ppm Zn, 300 ppm Sn, and 200 ppm Cu possibly associated with a mafic volcanic or intrusive body.

Renison also drilled 3 reconnaissance holes (WR1 to WR3) into magnetic anomalies in the Webbs Creek area in the north eastern corner of EL21/2005 (Figure 2), intersecting magnetite-tin-tungsten skarns within the Gordon Limestone adjacent to the Meredith Granite. The entire magnetic feature is c. 1.5 km long and the 3 drill holes were spaced approximately 300 m apart along the trend of the anomaly. WR1 intersected 8.8 m of massive magnetite skarn from 78.5 m downhole which assayed 50.7% Fe, <0.01% Sn and <0.01% WO3. WR2 encountered 17.2 m of a partly oxidised (gossanous) zoned magnetite-actinolite-garnet-sulphide skarn from 63 m downhole, including 8.5 m from 63 m which assayed 34.3% Fe, 0.35% Sn and 0.17% WO3. Scheelite grains up to 1.5 mm size were observed in this intercept. WR3 suffered very poor recoveries until altered granite was reached at 81 m down hole; the recovered material comprised a range of gossanous rubble, magnetite sand, limonitic clay and granitic debris that Rension geologists interpreted to represent karst fill associated with the deeply weathered skarn. The material infilling the karst was not assayed. Cassiterite was not observed in any of the Webbs Creek drill holes

and the stanniferous phase(s) were not conclusively identified (candidates include hulsite, ilvaite and garnet).

The entire Renison West project area was covered by 500 m line spacing aeromagnetic survey in 1981 and 200 m heliborne magnetic survey in 2001. Both surveys were flown on behalf of the Tasmanian Geological Survey and data is publicly available. Livingstone Creek – Stanley Reward and north western part of Mt Lindsay was covered by a 200 m line spacing heliborne EM survey flown by Geo Instruments Pty for the Tasmanian Geological Survey in 2001.

Symorgh Investments Pty Ltd was granted EL21/2005 in August 2006 about the same time as Symorgh was acquired by and became a subsidiary of Venture Minerals Ltd. Work during the first year of tenure included review of the numerous historic exploration reports, processing and imaging of open file aeromagnetic and EM data, compilation of historic drill hole data into GIS, and preliminary geological modelling. It was concluded that the magnetite skarns were a potentially economic source of iron ore, subject to metallurgical investigation of available historic drill core. Core from several historic drill holes was retrieved and preliminary metallurgical testwork indicated good mass recoveries and purity for magnetite using conventional magnetic separation techniques. On this basis a major follow-up exploration works were initiated in late 2007 to quantify the extent and quality of the magnetite-tin-tungsten mineralisation within the Mt Lindsay skarns.

5 Geology and Mineralisation

5.1 Geological Setting

The south western part of EL21/2005 is underlain by northwest striking sedimentary and volcanic rocks of the Crimson Creek Formation, Success Creek Group and Oonah Formation which are intruded to the northwest by the Meredith Granite (Figures 2 and 3). The north eastern corner of EL21/2005 (the Webbs Creek area) is underlain mainly by Silurian to Devonian quartz-rich sedimentary rocks of the Eldon Group, a narrow belt of the Ordovician Gordon Limestone, Cambrian volcanogenic sedimentary rocks to the far east and the Meredith Granite to the north. The sedimentary stratigraphy is largely steeply dipping to vertical.

The Neoproterozoic Oonah Formation comprises mainly strongly deformed (characteristically isoclinally folded) thin to medium bedded quartz sandstone with carbonaceous siltstone, shale, and phyllite. A fault separates the Oonah Formation and younger Success Creek Group within EL21/2005. This fault is well exposed in road cuttings next to the Stanley River bridge where it comprises a graphitic mylonite zone in which the mylonitic fabric has been subsequently folded indicating a relatively early timing.

The Neoproterozoic – Early Cambrian Success Creek Group is not as conspicuously deformed as the Oonah Formation and consists of quartz sandstone, siltstone, shale, carbonate, conglomerate and tuff. Four formations are generally recognised in the Success Creek Group for a combined thickness of 950 m: a basal conglomerate with sandstone

lenses, overlain by quartz sandstone with minor siltstone and conglomerate (Dalcoath Formation), then black mudstone, siltstone and minor quartz sandstone, and finally siliceous siltstone, red chert and mudstone with minor quartz sandstone, conglomerate and dolomite (Renison Bell Formation). Variations on this stratigraphy have been used in the Renison Bell mine area. Within EL21/2005, the Success Creek Group extends south eastwards from the foot of Mt Livingstone beneath Livingstone Creek, Stanley River and the southern foot of Mt Lindsay. Surface mapping and exploration drilling suggests the stratigraphic sequence comprises from southwest to northeast approximately 500 m of laminated to medium bedded quartz-wacke and dark grey siltstone correlated with Dalcoath Formation, overlain by c. 100 m of dolomite informally termed the Stanley dolomite, with minor quartz-wacke and siltstone and up to 50 m of polymict conglomerate with minor lithic sandstone and siltstone. The conglomeratic unit is overlain by a very poorly defined thickness of laminated to thin bedded reddish mudstone, siltstone and grey ?tuffaceous sandstone. The Stanley dolomite and overlying conglomerate can be assigned to the Renison Bell Formation, but it is currently unclear whether the overlying reddish mudstones are better assigned to the Red Rock Member of the Renison Bell Formation or the overlying Crimson Creek Formation as there is no clearly identified lithological break within this material.

The Early Cambrian Crimson Creek Formation in the Mt Lindsay area comprises mainly thin to thick bedded dark green 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.

Significant deformation is recognised in both the Success Creek Group and 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). There is also evidence for extensive soft sedimentary deformation, especially within the lower Crimson Creek Formation.

The intrusive contact of the Meredith Granite dips away at a modest angle beneath the various sedimentary units, but exploration drilling indicates that the contact is complicated by numerous granitic dykes, shelves and apophyses. There are also large rafts of Crimson Creek and Success Creek rocks within the margins of the Meredith Granite. Preliminary interpretation suggests several phases of granite intrusion culminating in late stage quartz-tourmaline veining and the localised development of quartz-tourmaline “greisen”.

5.2 Mineralisation

Six potentially economic magnetite-tin-tungsten skarns are currently identified within the sedimentary rocks adjacent to the contact of the Meredith Granite, namely the Main Tin Zone, No 1 Zone, No 2 Zone, Livingstone, Stanley Reward and Webbs Creek skarns. The former three skarns are hosted by calcareous sandstone horizons within the Crimson Creek Formation, and the Livingstone and Stanley Reward skarns by the Stanley dolomite in the

Success Creek Group, and the Webbs Creek skarn by the Gordon Limestone (Figure 2). Carbonate horizons in the upper Success Creek Group and basal Crimson Formation also host the massive Renison Bell Tin deposit 15 km along strike to the southeast. The Gordon Limestone is host to the Kara magnetite-scheelite skarns adjacent to the Housetop Granite approximately 45 km directly northeast of Webbs Creek. There are also several exploration targets beyond these known skarns which have returned rock chips assays of up to 0.64% Sn and 47% Fe (e.g. the Waterhouse Zone). Potentially commercial minerals in the various skarns are cassiterite, scheelite, chalcopyrite, magnetite and hematite.

Mineralogy is currently best understood for the Main Tin Zone and No 2 Zone which are calcic skarns and dominated by varying proportions of magnetite, Fe-amphiboles, calcite and/or siderite, pyrrhotite, biotite, garnet and pyroxene along with a wide range of minor to trace phases including vesuvianite, vonsenite, ilvaite, fluorite, cassiterite, scheelite, chalcopyrite, pyrite, arsenopyrite, potassium feldspar, quartz, titanite, ilmenite, annite and danalite. Livingstone and Stanley Reward are magnesian skarns and dominated by serpentine, olivine, and ?tourmaline (latter completely replaced by hematite) with minor to accessory magnetite, amphibole, garnet, pyroxene, calcite, ?ilvaite, titanite, scheelite and cassiterite. Not all of these minerals occur together within the skarns and a zonation scheme reflecting prograde and retrograde alteration stages was proposed for the No 2 Zone by Kwak (1983). Further drilling and petrology by Venture indicates some inadequacies with Kwak's zonation sceheme and a revision is in progress. Mineralogy and zonation of the Livingstone and Stanley Reward skarns is still relatively poorly know because of the deep weathering. Tin occurs in several minerals and current petrology and metallurgical test work suggests cassiterite and vonsenite are the main tin phases. Minor to accessory tin-bearing phases include ilvaite, titanite and amphibole. Scheelite is the only significant tungsten mineral identified to date.

The No 1, Main and No 2 zones strike east southeast (c. 120º MGA) away from contact with the Meredith Granite (Figures 2 & 3) and dip ranges from c. 75º NE to 65º SW (overturned). Livingstone and Stanley Reward skarns strike 135-145° sub-parallel to the margin of the Meredith Granite (Figures 2 & 3), and dip is c. 70-80° NE. The skarn at Webbs Creek strikes west northwest and was interpreted by Renison to dip at a moderate angle (30-50º) south southwest. The granite contact and lower margin of mineralisation dips to the southeast beneath the No 1, Main, No 2, Livingstone and Stanley Reward skarns at between c. 10º and 40º to the southeast. Granite dykes flank the down dip parts of all of these skarns so that they resemble keels within the granite.

Magnetite, tin and tungsten mineralisation is intermittently exposed at the surface through a thin (typically <1 m) humic regolith for at least 950 m along the Main Zone, c. 750 m for the No. 2 Zone and 40-50 m for the No1 Zone, then mineralisation plunges to the south east at c. 20-40º for at least a further 200-700 m for all three zones. The metasomatised zones broadly plunge away from the granite contact to the south east within the near vertical carbonate and tuffite host rocks so that the skarns become blind (do not reach the surface) with increasing distance from the granite contact. Both Main and No. 2 Zones are open down plunge to the southeast. An extension to the No. 2 Zone was encountered in ML38 (25 m at a 29% Fe, 0.79% Sn, and 0.04% WO_3 from 353 m down hole) some 200 m along strike beyond the end of the current resources. Drilling suggests at least c. 400-600 m dip extent of magnetite mineralization above the granite contact at the

south western end of the No. 2 Zone. Livingstone and Stanley Reward skarns both come to surface as banded and needle-textured hematitic gossans over strike extents of 100-300 m then mineralisation also plunges away to the south east at c. 20-40° for at least 500 m in the case of the Livingstone skarn. Plunge extent of Stanley Reward skarn is currently unknown.

True thickness of magnetite mineralization in the No 2 Zone averages 20-25 m and locally reaches up to 35 m. Magnetite and sulphide mineralization in the Main Zone is typically c. 15 m true, but thickens to c. 35 m and bifurcates into two 10-15 m thick zones at the western end of the skarn. True thickness of magnetite-hematite (latter presumably supergene) and tin mineralisation at Livingstone reaches 40-60 m, and Stanley Reward at least 10 m. According to the Renison interpretation true thickness of intersected magnetite-tin-tungsten mineralisation at Webbs Creek is 8-10 m immediately next to the Meredith Granite with a broader (c. 40 m?) calcsilicate-sulphide zone further from the granite contact. Tin mineralisation is typically more widespread than magnetite such that the volume of tin mineralised skarn in the Main Zone is almost double the volume of magnetite mineralised skarn. Scheelite occurrence is relatively erratic and at current drill density not well defined. Calcsilicate and/or sulphide alteration typically extends well beyond the magnetite and tin mineralisation zone in all identified skarns so that total thickness reaches up to c. 80 m. Approximately 150-200 m of hornfels and locally weakly iron metasomatised siltstone and lithic sandstone separate the No 1, Main Tin and No 2 zones.

The No 1, Main Tin and No 2 skarns are cut and offset approx. 55-60 m in a reverse sense by the southeast dipping Tulloch Fault. Several parallel faults of similar geometry are inferred from geophysical interpretation in the Mt Lindsay area. Aberfoyle's mapping of old drives in the adjacent Main Tin Zone indicates the Tulloch Fault in this area dips at c. 60º towards 160º MGA. Drilling indicates a slightly shallower dip of c. 40-50º towards 160º MGA where Tulloch Fault cuts the No 2 Zone. A prominent aerial photograph lineament coinciding with the lower part of News Creek and offsetting the Stanley Reward skarn is interpreted to represent the extension of Tulloch Fault beyond Mt Lindsay. Three smaller, and at this stage poorly defined, faults with a few metres displacement are recognised in the hanging and footwall of the Tulloch Fault, including a strongly fractured splay informally called Natalie's Fault dipping c. 60º to 170º with about 5-10 m offset which cuts both the main Tin Zone and No 2 Zone. The Livingstone skarn also appears to be offset by faulting but geometry remains unclear. Tulloch and Natalie's faults appear to post-date mineralisation and are characterised by several metres of fractured rock with narrow bands of weakly cemented (commonly stilbite) to incoherent breccia and gouge zones scattered over a true thickness of 5-15 m.

Deep weathering and karsting has complicated Livingstone and Stanley Reward so that the skarns are partially to completely altered to hematite, goethite and ferruginous clays to a depth of at least 150 m beneath surface and the wallrocks are widely weathered to saprolite. Clay-supported wallrock breccia fills caverns in the marble flanking both Livingstone and Stanley Reward skarns. Similar clay saprolite and karsting appears to be developed at Webbs Creek. Clay zones extending up to 100 m depth beneath surface are also locally present above and adjacent to the Main, No 1 and No 2 zones. Magnetite skarn appears to relatively resistant to weathering, commonly persisting to surface within clay zones, while sulphide rich skarn has produced gossan. The clay zones are best

developed above the down plunge extents of the known skarns and their identification is considered a useful feature in the exploration for concealed (blind) skarns. The deep weathering and karst development in wallrock is thought to have been enhanced by the breakdown of sulphides in the skarns during deep subtropical weathering in the Tertiary. Pleistocene erosion has probably removed most of the clay zones over the Main, No 1 and No 2 skarns on Mt Lindsay.

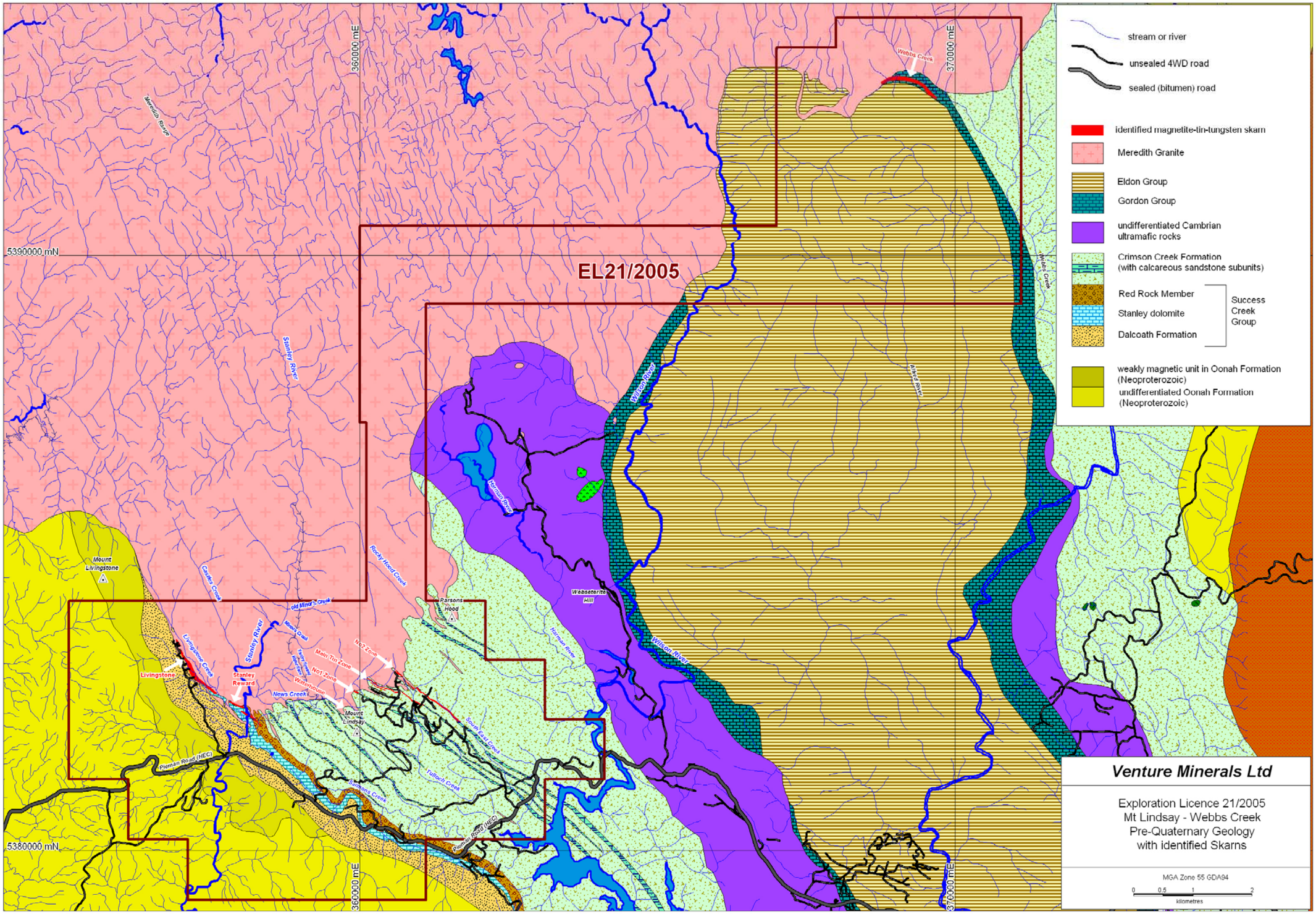


Figure 2: Project Geology

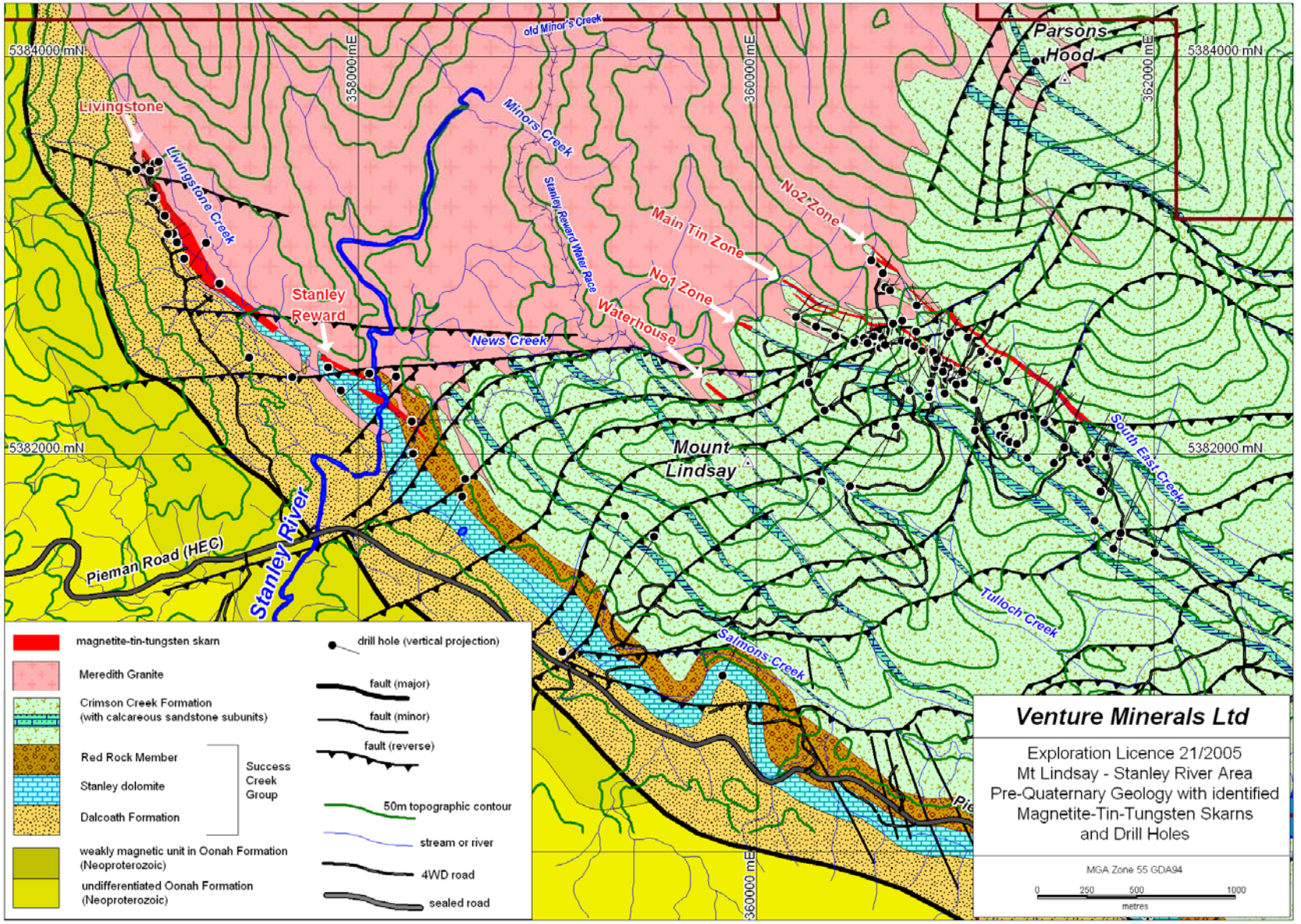


Figure 3. Mt Lindsay - Stanley River area Geology & Drill Holes

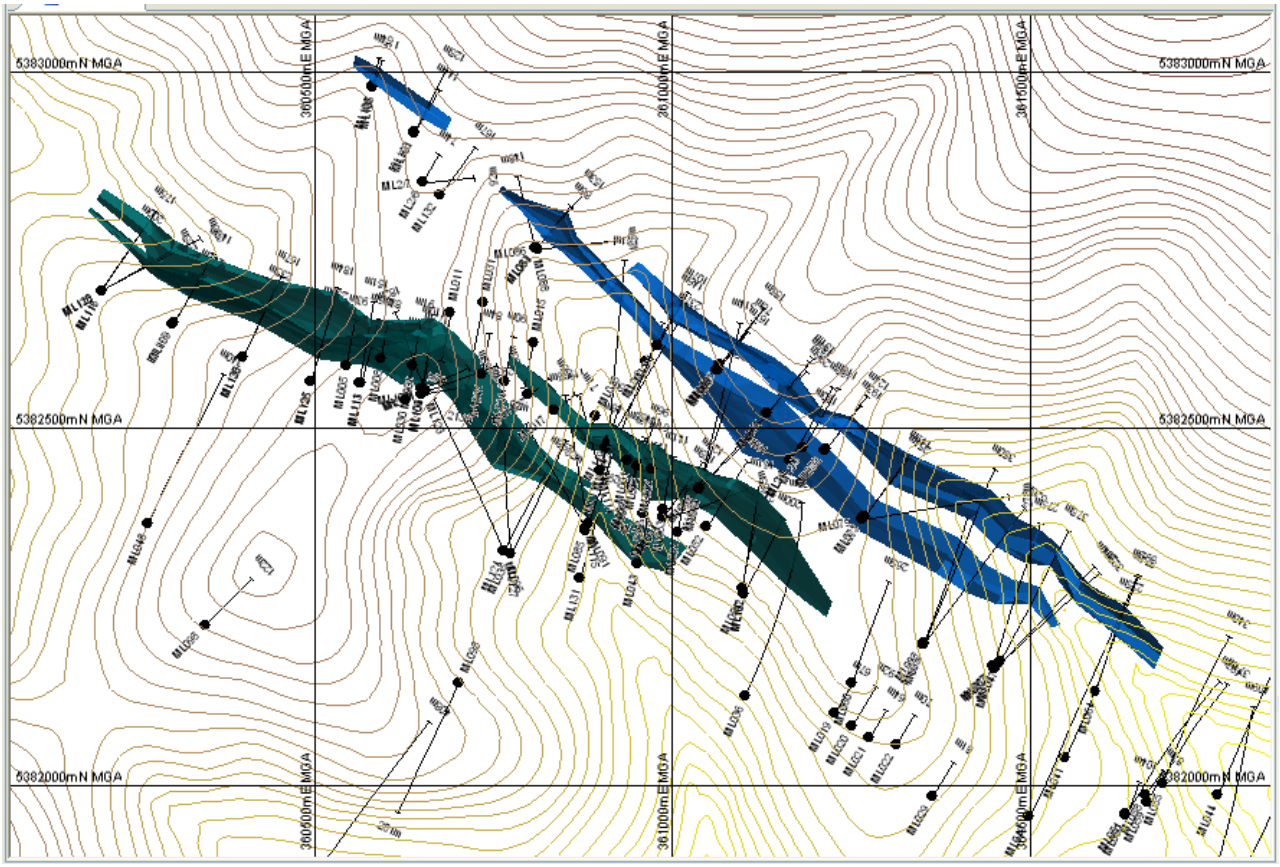


Figure 4: Main Zone and No. 2 Zone plan view showing drill holes (as vertical projections) and the mineralisation wireframes (Main Zone green, No. 2 Zone blue) used for the Sn and WO_3 resource estimation (Appendix H). The split in each zone is caused by Tulloch Fault, a southeast dipping reverse fault with c. 55-60 m offset. MGA Zone 55 GDA94, 10 m topographic contours.

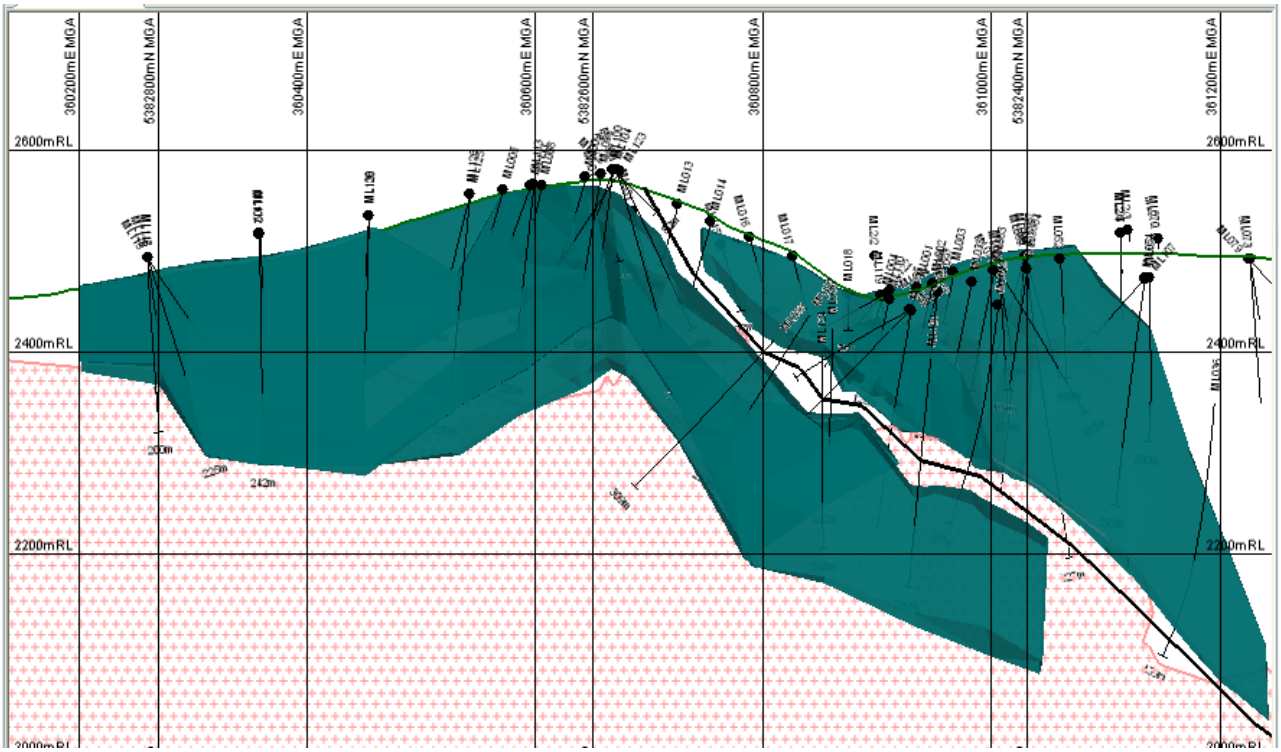


Figure 5: Long section (view towards 035° MGA) of Main Zone Sn and WO_3 mineralisation wireframes (green) with drill hole traces and main granite body (pink + pattern). Tulloch Fault (black line) separates the two major parts of the wireframe. Collars that appear above the topographic surface are not exactly on the line of section. X and Y coordinates MGA Zone 55 GDA94, RL AHD83 + 2000 m.

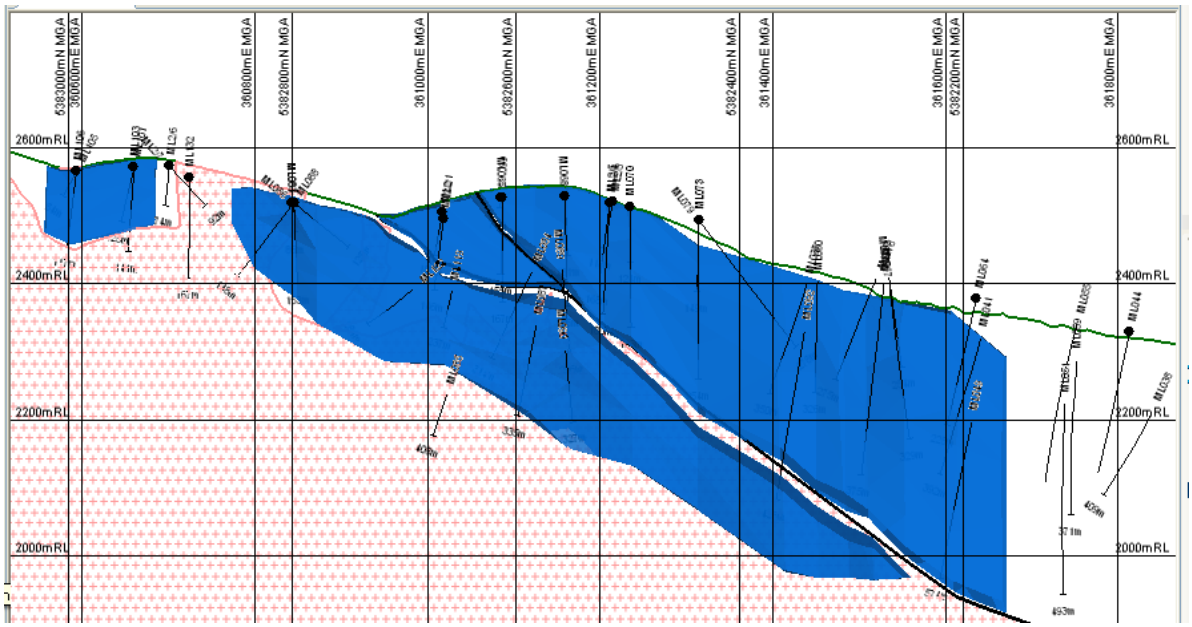


Figure 6: Long section (view towards 035° MGA) of No. 2 Zone Sn and WO_3 mineralisation wireframes (blue) with drill hole traces and main granite body (pink + pattern). Tulloch Fault (black line) separates the two major parts of the wireframe. The hanging wall splay, Natalie's Fault, is also shown. X and Y coordinates MGA Zone 55 GDA94, RL AHD83 + 2000 m.

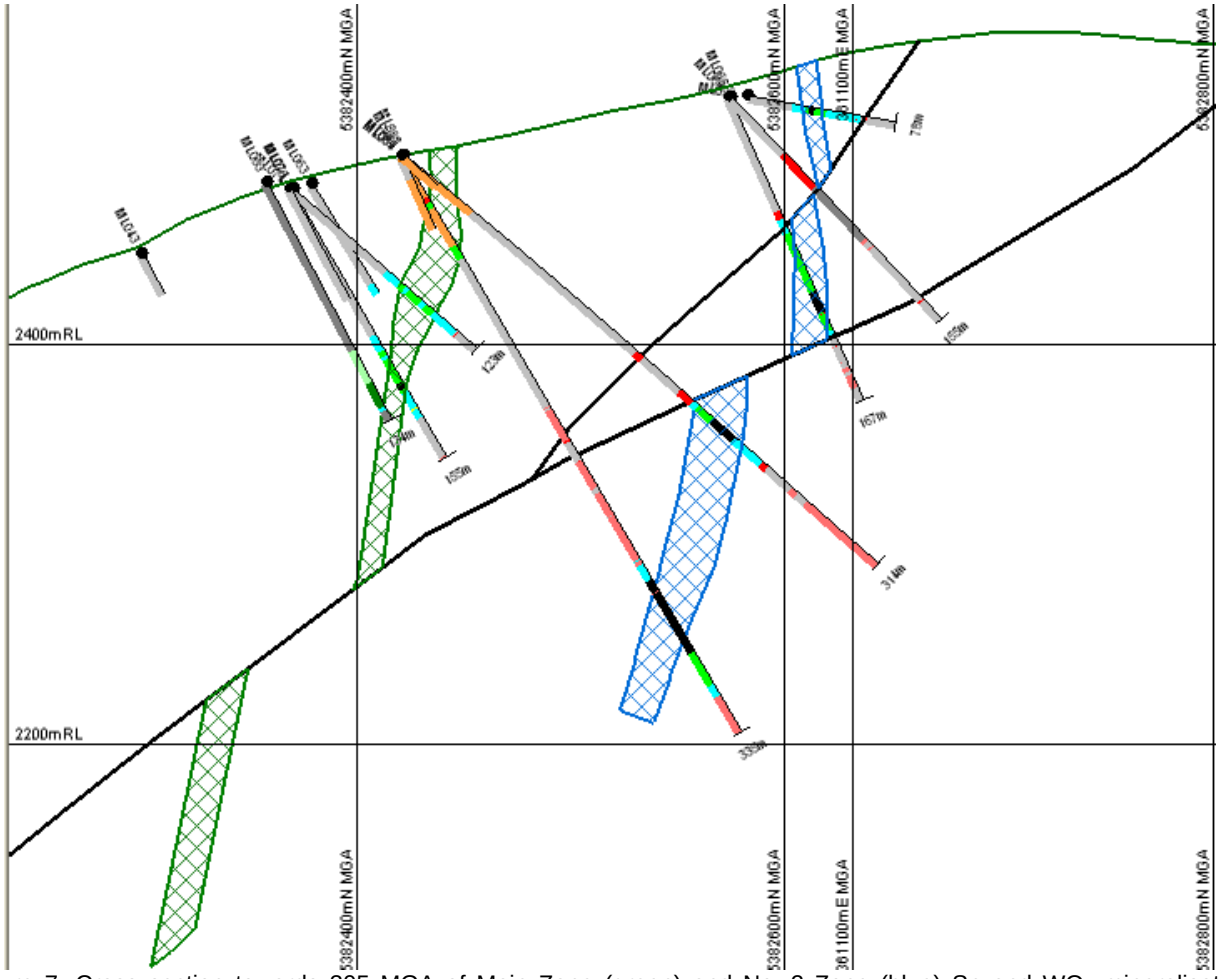


Figure 7: Cross section towards 305 MGA of Main Zone (green) and No. 2 Zone (blue) Sn and WO_3 mineralisation wireframes with drill hole traces coloured by lithology (pink = granite, grey = sandstone mudstone hornfels, red = fault zone, blue = tuff and pyroxene skarn, green = amphibole and magnetite skarn, black = magnetite skarn, orange = clay). Tulloch (lower) and Natalie's faults marked in black cause reverse offset of Main and No. 2 zones.

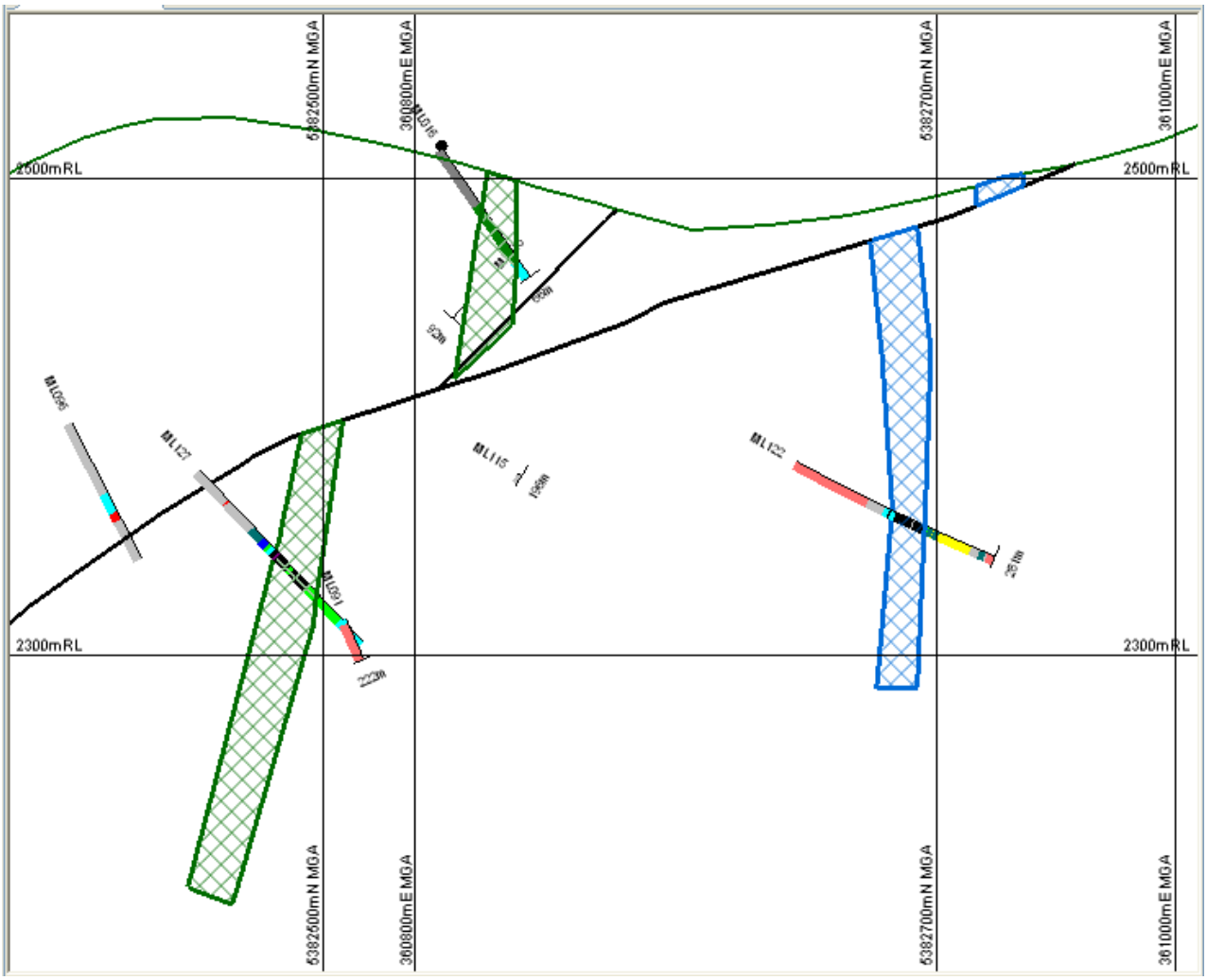


Figure 8: Cross section towards 310 MGA of Main Zone (green) and No. 2 Zone (blue) Fe mineralisation wireframes with drill hole traces coloured by lithology (pink = granite, grey = sandstone & mudstone hornfels, red = fault zone, blue = tuff and pyroxene skarn, green = amphibole and magnetite skarn, black = magnetite skarn, orange = clay). Tulloch (lower) and Natalie's faults marked in black causing reverse offset of Main and No. 2 Zones. X and Y coordinates MGA Zone 55 GDA94, RL AHD83 + 2000 m.

6 2008-2009 Anniversary Year Exploration Activities

Activities during the 2009 anniversary year within EL21/2005 included geological mapping, rock chip and stream sediment sampling, 3,644 m of diamond core drilling, 169 m of Reverse Circulation and Air Core drilling, down hole and collar surveying, logging and assaying of drill core, metallurgical test work, resource estimation and scoping studies, flora and fauna surveys and environmental baseline surveying. Drilling was suspended and other field activities reduced for several months following the October 2008 financial crisis and associated stock market collapse. Drilling resumed in mid-2009 and continues. The various anniversary year activities are summarised below. Note that consultant reports for the scoping studies and much of the metallurgical work are still pending.

6.1 Geological Mapping, Rock Chip and Stream Sediment Sampling

Geological mapping, rock chip sampling and stream sediment sampling continued intermittently throughout the 2009 anniversary year, focussing on investigating magnetic and previously identified geochemical anomalies. Several targets such as the Waterhouse skarn (Figure 3) with up to 0.64% Sn and 47% Fe have been prioritised for follow-up work including further rock chip sampling, stream sediment sampling and drill testing. Samples were submitted to the SGS laboratory at Renison Bell mine site or ALS Chemex's preparation facility in Adelaide for assay at ALS Chemex in Perth and Brisbane depending upon what suite of elements and assay methods were needed. Sampling details and assays are listed in Appendices A and B.

6.2 Drilling

Some 24 drill holes for 3,183 m were completed at the Mt Lindsay and Livingstone Creek prospects within EL21/2005 during the 2009 anniversary year. This included 3,644 m of diamond core from 21 holes and 169 m Reverse Circulation and Air Core from 4 holes (includes one RC precollar with a diamond core tail). The drilling has been conducted by Boart Longyear using an Onram and two LF70 diamond coring rigs, Gerald Spaulding Drillers using a G&K850 multipurpose Air Core, Reverse Circulation and diamond coring rig, OME Drilling using a diamond coring rig, and Van Dieman Holdings (Almac) using an AD900 diamond coring rig. Drilling was suspended in late October 2008 following the global collapse of stock markets earlier that month. Venture subsequently successfully raised exploration funds and resumed drilling in June 2009. Drilling is currently in progress at Livingstone Creek and is soon to resume at Mt Lindsay.

Drilling access is largely via rejuvenated Renison access tracks which have greatly reduced environmental impact, with the addition of approx. 3.5 km of new access track. The programme has involved a combination of new drill pads and rejuvenated Renison drill pads, the latter to in an effort to minimise environmental impact. Up to three excavators have been involved in access works, along with contract track cutters. Access and drilling has been conducted in accordance with Mineral Resources Tasmania's Mineral Exploration Code of Practise. MRT personnel have conducted periodic inspections of the drilling activities.

Most of Venture's drilling has been focussed on extending and quantifying the extent of magnetite-tin-tungsten mineralisation within the No 2, Main and Livingstone skarns. Drill hole data for the 2009 anniversary period is given in Appendices C to F.

Further details covering current drilling survey control, topographic control, down hole surveying, sampling procedures, sample preparation and assaying procedures and assay quality control (QC) are given in the following sections.

6.3 Surveying

The grid convention used for Venture's work at Mt Lindsay is MGA Zone 55 GDA94 and AHD83 +2000 m for elevation. Historic exploration and drilling work by Aberfoyle and Renison was done on a local grid and collars were surveyed using a total station system. Several of the Renison and Aberfoyle collar pipes were relocated by Venture allowing transformation of the historic local grid plans and collar positions to MGA Zone 55 GDA94 coordinates.

At this stage approximately 48% of Venture's drill hole have been surveyed to sub-metre xyz accuracy in MGA Zone 55 GDA94 by licensed surveyors Peacock, Darcey and Anderson Pty Ltd of Burnie, Tasmania using a Reflectorless Total Station tied into control points located by real time differential GPS, 16% of collars were surveyed by company personnel using differential GPS (typically 1-5m accuracy), and the remaining 36% of collars were surveyed using handheld GPS (typically 5-10 m accuracy).

6.4 Downhole Surveys

Some 55% of Venture Minerals Limited's drill holes were surveyed by north-seeking gyroinclinometer tool by independent contractor Northern Exploration Pty Ltd. Approximately 30% of Venture's drill holes were surveyed to fully depth with the gyroinclinometer, and the collar pipes (top 5 m) of another 60% were also surveyed with the gyroinclinometer so that 90% of Venture holes have at least a collar orientation survey free from magnetic influence. For Venture's drilling on the No. 2 Zone the gyroinclinometer shows a mean azimuth and plunge deviation of 1.3º and 0.6º per 100 m respectively, and maximum azimuth and plunge deviations of 3.2º and 1.2º per 100 m. The plunge generally becomes steeper down hole, but for Venture's drilling the azimuth shows no clear preference between clockwise and anticlockwise swing.

Gyroinclinometer orientations were given preference over magnetic tool orientations for Venture drilling, and the last gyroinclinometer azimuth reading for each hole was extrapolated to the end of the hole in the cases where data is not available for the entire hole. Where magnetic interference is suspected in the historic drill holes the azimuth was interpolated or extrapolated from the nearest acceptable orientation.

6.5 Densities

Over 1462 density measurements were made on the diamond core at one metre intervals through the mineralised zones. Density measurements were conducted on a 1 m basis through the fresh mineralised materials and adjacent wallrock by Venture personnel in Venture's Tullah exploration facilities using the weight in air versus weight in water method. Fresh drill core was weighed in 1 m intervals dry in air to 1 g accuracy then the sample was weighed again suspended in water. The density was then calculated using the formula Wair / (Wair – Wwater). In situations where core recoveries are less than 100% or

where the core was badly broken (fault zones) pieces of representative core were selected from the single metre intervals and weighed in the same manner. A minimum of 1 kg of rock was selected wherever possible to maximise weighing precision. The density of weathered materials (clay and saprock) were determined by using either callipers (for intact sticks of clay) or volumetric flask (for irregular core sealed with beeswax) to determine core volume and oven dried weight (minimum of 8 hours at 110° C) by 5 kg scales with an accuracy of 1 g.

6.6 Sampling of Drill Core

Only logged mineralised drill core was sampled for assay. Fresh Venture drill core (NQ and HQ) was sliver sampled by core saw at Venture's logging and storage shed in Tullah. The core was logged and typically marked up in 2 m intervals for sampling continuously across the mineralised zones plus some of the adjacent barren wall rock. A sliver was cut by core saw off the side of the fresh core to give a sample of around 20 % by volume. Several measurements of the cut slivers are taken for every hole to check that the volume of sample collected is as consistent as possible. One duplicate sample of the same sliver size was cut within each mineralised zone to evaluate sampling error. Completely weathered (clay) core was half core sampled by knife, partly weathered core (saprolite or saprock) was half core sampled using cold chisel or core saw.

6.7 Sample Preparation and Analytical Procedures

Venture core samples were collected in calico bags labelled with a unique sample number for submission to the assay laboratory. Depending upon what suite of elements and assay methods were needed the samples were submitted to the SGS laboratory at Renison Bell mine site or ALS Chemex's preparation facility in Adelaide for assay at ALS Chemex in Perth.

At ALS the samples were fine crushed to 70% passing 2 mm and split simultaneously through a rotary splitter set by weight to produce approx 100 g subsamples for pulverizing. The large -2 mm bulk residue was retained in the original calico bag, and the 100 g split was pulverised to 85% passing 75 microns using an LM2 machine. ALS Chemex then air freighted the pulps to their laboratory in Perth for assay according to the following schemes:

- Au by 30g charge fire assay, solvent extraction & AAS finish to 0.001ppm lower detection limit;
- Al, Fe, Mg, Ca, Ti, Na, K, P, S, W, Ag, As, Pb, Sr, Ni, Cr, Cu, & Zn by multi-acid digest with ICP-AES finish;
- Ce, Sn, Ta, Li, Nb & U by multiacid-digest with ICP-MS finish;
- Al2O3, As, Ba, CaO, Co, Cr, Cu, Fe, K2O, MgO, Mn, Na2O, Ni, P, Pb, S, SiO2, Sn, TiO2, U, V, W, Zn plus LOI by XRF on fused disks.

The coarse rejects and pulps are periodically returned for storage at Venture's Tullah facilities.

SGS Group opened an assay laboratory at the Renison Bell mine in mid 2008. Considerably improved transport and assaying time led Venture to switch to using the SGS Rension laboratory for routine assaying of drill core from August 2008. The bagged drill core samples were dropped off regularly by Venture personnel at the SGS Renison laboratory. Preparation at SGS comprised a 6 mm crush followed by 50:50 split to produce "A" and "B" coarse rejects. Approximately 100 g was split from the "B" coarse reject and pulverised to 80% passing 75 microns to produce the analytical pulp. A pressed powder disk was made from the pulp then Fe, Sn, W, S, As, Pb, and Zn was determined by XRF. Upon receipt of results Venture personnel retrieved the coarse rejects and pulps from SGS Renison for storage at Venture's Tullah facilities.

6.8 Assay Quality Control Procedures

A range of commercial Fe, Au and base metal standards were inserted at a rate of approximately 1 in every 20 Venture drilling samples, and a series of Fe and Fe-Sn-W standards were also inserted at a rate of one per skarn intercept (essentially one per drill hole).

Field duplicates comprised a second sample taken using the same sampling method as the primary sample. One field duplicate sample was taken within each mineralised zone which equates to a rate of approximately 1 in 35 samples of mineralised material. The duplicate sample was assigned the sample number subsequent to the primary sample and submitted for assay in the same batch as the primary sample. The field duplicates allow evaluation of sampling error.

Blanks were are inserted at approximately 1 in every 20 samples to track inter-sample contamination during sample preparation at the various assay laboratories. The blanks comprised approx. 200-1000g of high-purity silica flour (from the local Corinna silica mine).

Pulps and residues of 75 mineralised samples representing approx. 4% of the Venture assay data were retrieved from storage with ALS Chemex and submitted to SGS, Perth and Genalysis Laboratory Services, Maddington for umpire assaying by XRF on glass beads.

The most recent assessment of QC results is included in the resource report in Appendix H.

6.9 Metallurgical Test Work

As described in the previous annual technical report for EL21/2005 approximately 75 kg of No. 2 Zone drill core from four Aberfoyle and Renison drill holes (ML37, ML2/1, ML2/4 and ML2/5) was submitted to Promet Engineers PL (Promet) in late 2007 to evaluate the magnetite recovery. The testwork was conducted at Ammtec Pty Ltd, Perth and supervised by Promet. The core samples were crushed and composited, and testwork included industry standard Davis Tube Recovery (DTR), Davis Tube Washes (DTW), wet Low

Intensity Magnetic Separation (wet LIMS), Optimum Grind Testwork, and determination of Bondwork Indices (BWI). At a relatively coarse 150 micron grind a weight recovery of 39.85% was obtained and the concentrate graded 66.46% Fe, 3.36% Si, 1.01% Al, 0.04% P, and 1.75% S. Lower impurity levels were obtained at finer grind sizes. The high levels of sulphur in the concentrate indicate that sulphur treatment via flotation will be required to produce a saleable product. This first phase of metallurgical testwork indicates that the weight recoveries, concentrate grade and BWI for No. 2 Zone are within industry standard range for magnetite deposits. The results provide an indication of likely mass recoveries and quality of the No. 2 Zone magnetite concentrates but samples are not considered sufficiently spatially representative for further analysis and a considerably more detailed DTR programme was initiated in 2008 using coarse rejects from the primary assay samples and is nearing completion.

Several programmes were initiated in 2008 to determine Sn recoveries from a variety of mineralisation types. At this stage complete results are only available for a magnetite-rich composite sample from the No 2 Zone which was magnetically separated at Ammtec in Perth under supervision of Promet Engineers PL then gravity and float separated at Burnie Research Laboratory (a subsidiary of Ammtec) by Nick Moony of Esker Milling and Processing PL. The calculated head grade of sample was 34.9% Fe, 0.16% Sn, 0.31% W, 0.10% Cu, 0.33% As and 1.6% S. Recovery of scheelite exceeded 80% by both gravity and flotation but cassiterite liberation never exceeded 50% and the final tail was constant at between 0.11% and 0.16% Sn. Previous petrographical work and core logging indicates that this result is most likely related to the presence tin bearing vonsenite and locally also tin bearing silicates. The Esker report is included in Appendix I.

A composite sample with relatively low acid soluble Sn was selected from eleven holes drilled into the Main Zone and submitted to Esker to investigate tin and tungsten recoveries. Esker determined that magnetic separation, sulphide flotation and gravity separation could achieve at least 65% to 75% tin recovery to a +50% tin concentrate. The full Esker report is currently pending. Also pending are results from a QEMSCAN analysis of Main, No 2 and Livingstone skarn samples, and a series of magnetic separations on composites from the Main and No 2 zones.

6.10 Resource Estimation and Scoping

Aberfoyle made several estimates of the tin resources within central part of the Main Zone at Mt Lindsay in the 1960s, culminating in an estimate of 208,799 tons at 0.832% Sn. An Inferred Resource of 20 Mt at 33% Fe was estimated for the No 2 Zone by Venture in June 2008 and updated to 30 Mt at 33% Fe, 23 Mt at 0.2% Sn and 5.7 Mt at 0.3% WO_3 for the Main and No 2 zones in January 2009 (Appendix H). At a 0.5% Sn lower cut-off the Sn resource for the Main Zone was 1 Mt at 0.84% Sn. The relatively broad drill hole spacing mean that all of the currently estimated resources have been assigned to the Inferred category. The Inferred category is intended to cover situations where a mineral concentration or occurrence has been identified and limited measurements and sampling completed, but where the data are insufficient to allow the geological and/or grade continuity to be confidently interpreted (The JORC Code, 2004 edition).

Scoping studies suggest that the Main and No 2 zones could deliver net cash of AUD702 million over 7 years of open cut mine life with a 30% internal rate of return if all three commodities magnetite, tin and tungsten are exploited.

6.11 Environmental Studies

Philip Milner was contracted to conduct flora and fauna surveys of the various parts of the Mt Lindsay, Parsons Hood, Livingstone and Stanley drill sites in 2008 as part of the exploration approval process. Philip's reports are included in Appendix J.

Coffey Environments PL has been contracted by Venture to conduct and supervise environmental baseline studies on the Mt Lindsay – Stanley River area. Quarterly water monitoring was initiated in October 2008 and a copy of the most recent water monitoring report is included in Appendix K. Coffey engaged North Barker Ecosystem Services PL to conduct baseline flora and fauna surveying of the same area and the first assessment was conducted in December 2008. A copy of the North Barker report is included in Appendix L.

Mineral Resources Tasmania has recently begun requesting Tasmanian Devil surveys prior to construction of new 4WD vehicle access and North Barker has been conducting this work for Venture. A report on this is not yet available.

Rehabilitation activities during 2009 were restricted to the removal of RC sample bags from the Livingstone drill site and backfilling of unused sumps at the same site.

7 Conclusions and Recommendations

Exploration activities during the 2009 anniversary year within EL21/2005 focused on the delineation of the Main and No 2 zones at Mt Lindsay and the Livingstone Skarn in the adjacent Stanley River area. This work culminated in the estimation of Inferred Resources of 30 Mt at 33% Fe, 23 Mt at 0.2% Sn and 5.7 Mt at 0.3% WO_3 for the Main and No 2 zones. The resource work indicates significant scope for the delineation of higher grade Sn and WO_3 zones within both the Main Tin Zone and No 2 Zone. Resource definition drilling is currently in progress at the Livingstone Skarn. Preliminary metallurgical test work into magnetite, tin and tungsten recovery from the Main and No 2 zones has been positive and scoping studies suggest an open pit operation would be financially positive based on current commodity prices.

Geological mapping, rock chip sampling and stream sediment activities were focussed on the areas immediately adjacent to the currently identified skarns at Mt Lindsay and Stanley River with the objective of defining drill targets and potentially additional resources in the vicinity of the currently defined resources. Several targets were progressed to drill ready stage by this work, the most advanced being the Waterhouse and Stanley Reward skarns. Encouraging results have also been obtained from magnetic targets on the flank of Parsons Hood and lower reaches of News Creek but further mapping and sampling is required to bring these to drill ready status.

Flora and fauna surveys did not identify any significant issues to the current level of exploration activities, and environmental baseline studies were initiated in October 2008.

Significant infill drilling will be required to upgrade confidence of the Sn and WO_3 resource estimation to a level suitable for Prefeasibility studies but it is recommended that exploration activities in the coming year at least initially be directed towards identifying additional Inferred Resources and higher grade Sn and WO_3 zones within the current resources.

Recommendations for the 2010 anniversary year include:

- Complete drilling of the Livingstone Skarn and estimate resources;
- Drill test higher grade Sn and WO_3 shoots within (i.e. MacDonald Shoot) and immediately adjacent (i.e. ML38 zone) to the current resources;
- Drill test the No 1, Waterhouse and Stanley Reward skarns;
- Further surface investigation (mapping, rock chip sampling and stream sediment sampling) of additional skarn targets in the Mt Lindsay – Stanley River area to elevate them to drill ready targets and drill as appropriate;
- Reconnaissance field inspection and sampling of the Webbs Creek skarn;
- Continue geochemical, mineralogical and metallurgical characterisation of the currently identified resources and skarns;
- Continue environmental baseline work.

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Appendix A

Stream Sediment Samples and Assays

H0002	Version	3																																				
H0003	Date_generated	27/7/2009																																				
H0004	Reporting_period_end_date	22/8/2009																																				
H0005	State	TAS																																				
H0100	Tenement	EL21/2005																																				
H0101	Tenement_holder	Venture Minerals Ltd																																				
H0102	Project_name	Mt Lindsay																																				
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	3437 Stringer, 3438 Livingstone, 3637 Rosebury, 3638 Parsons, 3639 Ramsay																																				
H0200	Start_date_of_data_acquisition	22/8/2008																																				
H0201	End_date_of_data_acquisition	27/7/2009																																				
H0202	Data_format	SG3																																				
H0203	Number_of_data_records	21																																				
H0204	Date_of_metadata_update	27/7/2009																																				
H0500	Feature_Located	Sample Point																																				
H0501	Geodetic_datum	GDA94																																				
H0502	Vertical_datum	not applicable																																				
H0503	Projection	MGA																																				
H0531	Projection_zone	55																																				
H0532	Surveying_instrument	see data																																				
H0533	Surveying_Company	Venture Minerals Ltd																																				
H0600	Sample_code	STREAM SED																																				
H0601	Sample_type	Stream Sediment, see data																																				
H0602	Sample_description	see data																																				
H0700	Sample_preparation_code	PREP-21																																				
H0701	Sample_preparation_details	dry, crush, LM5 pulverise to approx P80 <75 microns																																				
H0702	Job_no	see data																																				
H0800	Assay_code	XRF05, ME-ICP61, B-ICP69																																				
H0801	Assay_company	ALS Chemex, samples prepared in Adelaide lab, assayed in Perth & Brisbane labs																																				
H0802	Assay_description	Sn & W by XRF on pressed powder disks (XRF05) at Brisbane lab, B by 3 acid digest with ICP OES finish (B-ICP69) at Perth lab, all other elements by 4 acid digest with ICP OES finish (ME-ICP61) at Perth lab.																																				
H0900	Remarks:																																					
H1000	Sample	E_MGA55	N_MGA55	Surv_method	Surv_accuracy	Sampling_description	Lith_description	Site_description	Sampled_by	Date	Sn_XRF05	W_ICP61	W_XRF05	Ag	As	B	Bi	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Na	Ni	P	Pb	S	Sb	Ti	U	Zn
H1001		metres	metres								ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	%	%	%	ppm	ppm	ppm	%	ppm	%	ppm	ppm
D	RNWSS028B	360503	5382861	Garmin GPS60	na	seived <1.4mm, not panned	Coarse poorly sorted granitic sand	na	EBG	6/11/2008	44	-10	-10	-0.5	-5	460	-2	0.1	-999	6	36	15	3	1.9	0.03	0.49	59	70	8	-0.01	-5	0.04	-10	8
D	RNWSS028P	360503	5382861	Garmin GPS60	na	panned concentrate	Coarse poorly sorted granitic sand	na	EBG	6/11/2008	14	-10	-10	-0.5	-5	150	-2	0.1	-999	1	13	8	1	2.1	0.04	0.53	3	50	9	-0.01	-5	0.02	-10	7
D	RNWSS029B	360280	5382777	Garmin GPS60	na	seived <1.4mm, not panned	Coarse poorly sorted granitic sand	na	EBG	6/11/2008	2110	10	10	-0.5	10	740	2	0.1	-999	2	22	14	4.1	1.9	0.05	0.52	5	100	8	0.01	-5	0.06	-10	17
D	RNWSS029P	360280	5382777	Garmin GPS60	na	panned concentrate	Coarse poorly sorted granitic sand	na	EBG	6/11/2008	2170	20	20	-0.5	20	410	4	0.3	-999	4	25	20	3.6	1.9	0.16	0.54	33	120	9	0.01	-5	0.08	-10	22
D	RNWSS030B	360112	5382876	Garmin GPS60	na	seived <1.4mm, not panned	Coarse poorly sorted granitic sand	na	EBG	6/11/2008	720	10	10	-0.5	23	440	3	0.1	-999	2	28	19	2.9	2	0.06	0.57	8	130	10	0.01	-5	0.08	-10	26
D	RNWSS030P	360112	5382876	Garmin GPS60	na	panned concentrate	Coarse poorly sorted granitic sand	na	EBG	6/11/2008	200	10	10	-0.5	22	410	3	0.2	-999	3	12	14	3	2.1	0.09	0.6	5	120	9	0.01	5	0.09	-10	26
D	RNWSS031B	365963	5382697	25k topo	na	seived <1.4mm, not panned	Coarse poorly sorted granitic sand	na	EBG	6/11/2008	-5	-10	-10	-0.5	-5	250	-2	0	-999	2	14	6	1.2	1.8	0.01	0.34	24	70	7	-0.01	-5	0.02	-10	4
D	RNWSS031P	365963	5382697	25k topo	na	panned concentrate	Coarse poorly sorted granitic sand	na	EBG	6/11/2008	-5	-10	-10	0.6	-5	240	-2	0	-999	1	16	9	1.1	1.9	0.01	0.34	4	50	8	-0.01	-5	0.01	-10	6
D	RNWSS032B	358908	5382365	Garmin GPS60	6m	seived <2mm, not panned	Poorly sorted lithic silt	Small, muddy, overgrown drainage with only modeate flow	EBG, CE	6/11/2008	13	-10	-10	-0.5	18	10	-2	0.1	-999	49	190	90	14	0.2	0.61	0.04	71	900	18	0.05	-5	1.13	-10	119
D	RNWSS032P	358908	5382365	Garmin GPS60	6m	panned concentrate	Poorly sorted lithic silt	Small, muddy, overgrown drainage with only moderate flow	EBG, CE	6/11/2008	22	-10	-10	-0.5	16	-10	3	0.1	-999	42	182	85	13	0.3	0.57	0.05	69	840	14	0.05	-5	1.05	-10	115
D	RNWSS033B	358697	5382478	Garmin GPS60	9m	seived <2mm, not panned	Poorly sorted coarse granitic sand	Fast flowing, rocky bottomed, sluiced section	EBG, CE	6/11/2008	57	-10	-10	-0.5	5	390	-2	0.1	-999	4	31	20	2.9	2.1	0.12	0.32	13	180	9	0.01	-5	0.17	-10	22

H1000	Sample	E_MGA55	N_MGA55	Surv_method	Surv_accuracy	Sampling_description	Lith_description	Site_description	Sampled_by	Date	Sn_XRF05	W_ICP61	W_XRF05	Ag	As	B	Bi	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Na	Ni	P	Pb	S	Sb	Ti	U	Zn
H1001		metres	metres								ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	%	%	%	ppm	ppm	ppm	%	ppm	%	ppm	ppm
D	RNWSS033P	358697	5382478	Garmin GPS60	9m	panned concentrate	Poorly sorted coarse granitic sand.	Fast flowing, rocky bottomed, sluiced section	EBG, CE	6/11/2008	93	10	10	-0.5	-5	410	-2	0.1	-999	4	23	15	2.9	1.7	0.16	0.32	13	240	9	0.01	-5	0.22	-10	24
D	RNWSS034B	358846	5382353	25k topo	na	seived <2mm, not panned	Poorly sorted angulat quartz sand	Slow flowing trib	EBG, CE	6/11/2008	-5	-10	-10	-0.5	-5	290	-2	0	-999	2	17	6	1.4	1.5	0.02	0.22	30	80	6	-0.01	-5	0.03	-10	4
D	RNWSS034P	358846	5382353	25k topo	na	panned concentrate	Poorly sorted angulat quartz sand	Slow flowing trib	EBG, CE	6/11/2008	-5	-10	-10	-0.5	-5	400	-2	0	-999	1	23	13	1.5	1.6	0.02	0.26	4	90	5	-0.01	-5	0.03	-10	6
D	RNWSS036	359966	5362895	Garmin GPS60	11m	<2mm sieved, not panned	Poorly sorted granitic sand	Moderately flowing	EBG, BD	20/01/2009	107	-10	-10	-0.5	11	-999	-2	-999	-0.5	1	135	8	1.1	2.4	0.04	0.62	2	140	11	0.01	-5	0.08	-10	19
D	RNWSS037	359920	5382813	Garmin GPS60	15m	<2mm sieved, not panned	Poorly sorted granitic sand	Main branch of News Creek	EBG, BD	20/01/2009	74	-10	-10	-0.5	19	-999	-2	-999	-0.5	1	154	10	1.3	2.2	0.04	0.42	8	100	8	0.01	-5	0.07	-10	22
D	RNWSS038	359925	5382830	Garmin GPS60	9m	<2mm sieved, not panned	Muddy sediment	Swampy, ill-defined drainage	EBG, BD	20/01/2009	173	-10	-10	-0.5	-5	-999	-2	-999	-0.5	2	153	3	0.8	1.1	0.03	0.23	4	120	5	0.01	-5	0.05	-10	7
D	RNWSS039	359909	5382785	Garmin GPS60	na	<2mm sieved, not panned		Trib, possibly draining N1Z	EBG, BD	20/01/2009	109	40	40	-0.5	28	-999	-2	-999	-0.5	5	193	19	4.7	0.6	0.22	0.1	16	320	7	0.02	-5	0.31	-10	36
D	RNWSS040	359763	5382722	25k topo	na	<2mm sieved, not panned	Coarse granitic sand	Fast flowing section of News Creek	EBG, BD	20/01/2009	593	-10	-10	-0.5	16	-999	3	-999	-0.5	1	104	7	1.4	1.8	0.04	0.33	3	90	7	-0.01	-5	0.05	-10	16
D	RNWSS041	359650	5382537	25k topo	na	<2mm sieved, not panned		Within series of waterfalls	EBG, BD	20/01/2009	253	10	10	-0.5	12	-999	-2	-999	-0.5	1	87	7	1.1	2.3	0.04	0.41	1	110	10	0.01	-5	0.07	-10	18
D	RNWSS042	359571	5382526	25k topo	na	<2mm sieved, not panned	Granitic sand, abundand yellow monazite?	Castles Creek, near junction with News Creek	EBG, BD	20/01/2009	19	10	10	-0.5	-5	-999	-2	-999	-0.5	-1	146	2	0.5	3.2	0.02	0.48	1	260	15	0.01	-5	0.03	-10	4
EOF																																		

Appendix B

Rock chip samples and assays

H0002	Version	3																						
H0003	Date_generated	27/7/2009																						
H0004	Reporting_period_end_date	22/8/2009																						
H0005	State	TAS																						
H0100	Tenement	EL21/2005																						
H0101	Tenement_holder	Venture Minerals Ltd																						
H0102	Project_name	Mt Lindsay																						
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	3437 Stringer, 3438 Livingstone, 3637 Rosebury, 3638 Parsons, 3639 Ramsay																						
H0200	Start_date_of_data_acquisition	22/8/2008																						
H0201	End_date_of_data_acquisition	27/7/2009																						
H0202	Data_format	SG3																						
H0203	Number_of_data_records	34																						
H0204	Date_of_metadata_update	27/7/2009																						
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 GPS60																						
H0533	Surveying_Company	Venture Minerals Ltd																						
H0600	Sample_code	ROCK																						
H0601	Sample_type	rock																						
H0602	Sample_description	see data																						
H0700	Sample_preparation_code	PREP-21																						
H0701	Sample_preparation_details	dry, crush, LM5 pulverise to approx P80 <75 microns																						
H0702	Job_no	see data																						
H0800	Assay_code	see Ascheme column																						
H0801	Assay_company	see Ascheme column: ALSAPB = ALS Chemex with samples prepared in Adelaide lab & assayed in Perth & Brisbane labs, SGSR = SGS Renison lab																						
H0802	Assay_description	see Ascheme column: XRF75E = assays by XRF on pressed powder disks, XRF05 = Sn & WO3 assays by XRF on pressed powder disks, ICP61 = 4 acid digest with ICP finish, ICP69 = B by 3 acid digest with ICP finish																						
H0900	Remarks:																							
H1000	Sample	E_MGA55	N_MGA55	Surv_accuracy	Description	Logged	Ascheme	Batch	Date	Magsus_10-3SI	Sn	WO3	Fe	Ag	As	B	Bi	Cu	Mo	Pb	S	Zn	AComments	
H1001		metres	metres								%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm		
D	LVRK001	356983	5383342	12m	coarsely acicular hematite gossan float on top edge of gossan "terrace" above adits	SO, EBG, GB	SGSR-XRF75E	BT002842	26/09/2008	-999	0.57	0.061	61.4	-999	600	-999	-999	-100	-999	-100	0.4	300		
D	LVRK002	356983	5383342	12m	coarsely acicular hematite gossan float on top edge of gossan "terrace" above adits	SO, EBG, GB	SGSR-XRF75E	BT002842	26/09/2008	-999	0.61	0.061	58.9	-999	500	-999	-999	-100	-999	-100	0.7	300		
D	LVRK003	357016	5383319	12m	fine & coarse acicular hematite gossan float on south edge of gossan "terrace"	SO, EBG, GB	SGSR-XRF75E	BT002842	26/09/2008	-999	0.6	0.05	59	-999	500	-999	-999	200	-999	-100	0.6	400		
D	LVRK004	356963	5383460	12m	abundant hematite gossan boulders on northern Livingstone Creek gossan, about 20m SSW of adit by Livingstone Creek	SO, EBG, GB	SGSR-XRF75E	BT002842	26/09/2008	-999	0.55	0.071	58.3	-999	500	-999	-999	-100	-999	-100	0.6	300		
D	LVRK005	356974	5383465	12m	mouth of adit directly into north gossan ridge, 44 gallon drum by entrance, gossan in walls	SO, EBG, GB	SGSR-XRF75E	BT002842	26/09/2008	-999	0.6	0.061	56.7	-999	700	-999	-999	200	-999	200	0.7	400		
D	LVRK006	357812	5382504	12m	fine grained hematite gossan from base of tree next to old alluvial workings	SO, EBG, GB	SGSR-XRF75E	BT002842	26/09/2008	-999	0.38	0.071	59.7	-999	1100	-999	-999	200	-999	300	0.1	300		
D	LVRK007	357838	5382489	5m	gossan from edge of Stanley Reward shaft	SO, EBG, GB	SGSR-XRF75E	BT002842	26/09/2008	-999	0.43	0.061	59.1	-999	800	-999	-999	200	-999	200	0.1	200		
D	RKEBG001	360280	5382777	na	Og weathering outcrop of mt-rich skarn in News Creek. Broken surfaces reveal coarse-grained mt weathering bl-gn with thin bands of svfg gn hornfels.	EBG	SGSR-XRF75E	BT003543	28/10/2008	-999	0.55	0.05	45.3	-999	400	-999	-999	300	-999	-100	-0.1	300		
D	RKEBG002	359946	5382639	12m	Gossanous magnetite skarn	EBG	SGSR-XRF75E	BT003924	16/11/2008	104	0.08	0.071	28.7	-999	400	-999	-999	400	-999	-100	0.4	300		
D	RNRK067	360918	5382482	10m	soft, weathered sulphide-quartz skarn with minor equant cassiterite	SO	SGSR-XRF75E	BT002842	26/09/2008	-999	5.05	0.05	11.8	-999	200	-999	-999	500	-999	-100	2.3	100		
D	RNWRK034	359960	5382640	8m	Hematitic gossanous ZSKM	EBG	SGSR-XRF75E	BT003930	16/11/2008	-999	0.2	0.05	38.2	-999	1000	-999	-999	-100	-999	300	0.1	200		
D	RNWRK035	359938	5382678	9m	Qz-tu-fd-ka rock	EBG	SGSR-XRF75E	BT003930	16/11/2008	-999	0.02	-0.01	3.9	-999	-100	-999	-999	-100	-999	-100	-0.1	-100		
D	RNWRK036	359952	5382662	14m	Tourmaline vein rock	EBG	SGSR-XRF75E	BT006196	13/02/2009	-999	0.06	0.03	17.1	-999	900	-999	-999	300	-999	-100	-0.1	100		
D	RNWRK037	359914	5382547	10m	Iron-stained VQT rock with vugs after sulphide	EBG	SGSR-XRF75E	BT006196	13/02/2009	-999	0.07	0.02	9.4	-999	200	-999	-999	100	-999	-100	-0.1	-100		
D	RNWRK038	360047	5382241	11m	Sulphide mineralised qz-tu vein and magnetite metasomatised selvage zone	SO	SGSR-XRF75E	BT006196	13/02/2009	-999	0.07	0.05	28.9	-999	13200	-999	-999	3300	-999	200	6.6	200		
D	RNWRK039	360047	5382241	11m	Qz vein and hornfels	SO	SGSR-XRF75E	BT006196	13/02/2009	-999	0.02	0.02	7.5	-999	12000	-999	-999	500	-999	100	0.8	-100		
D	RNWRK040	359866	5382411	9m	>5m thick qz-tu-bt vein cutting rotten siltstone of the Crimson Ck Fm	SO	SGSR-XRF75E	BT006196	13/02/2009	-999	0.02	0.02	2	-999	300	-999	-999	200	-999	100	0.1	200		

D	RNWRK041	359790	5382315	11m	gossanous calcsilicate skarn, locally with bands of fine ?actinolite rosettes, subcrop adjacent to outcrop of orange weathered siltstones	SO, EBG	SGSR-XRF75E	BT006982	23/03/2009	-999	0.64	0.05	47.2	-999	2400	-999	-999	500	-999	-100	0.3	300	
D	RNWRK042	359705	5382451	6m	10mm thick tourmaline vein with minor quartz from mullock heap around shafts	SO, EBG	SGSR-XRF75E	BT006982	23/03/2009	-999	-0.01	-0.01	9.7	-999	-100	-999	-999	-100	-999	-100	-0.1	100	
D	RNWRK043	359705	5382451	6m	qz-tu rock on mullock heaps around shafts, sugary textured qz with patches of tu pseudomorphing kspar megacrysts	SO, EBG	SGSR-XRF75E	BT006982	23/03/2009	-999	-0.01	0.01	5.5	-999	-100	-999	-999	-100	-999	-100	-0.1	-100	
D	SOLV113	357190	5382626	4m	jarositic planar laminated qzwacke with 5-10% oxidising dissem ?po & py, mm-scale tu veins, some thin (cm) VXTs, scattered decimetre-scale open folds	SO	ALSAPB-XRF05,ICP61,ICP69	AD09034208	24/04/2009	-999	0.0027	0.001	7.88	-0.5	38	140	24	802	19	288	8.56	507	
D	SOLV114	357217	5382555	5m	lt gy-cm planar laminated fg-mg qzwacke cut at low angle by numerous tu veins up to 50mm tk. Blotchy tu alteration spreads up to 200mm along some qzwacke beds from VTs. VTs dom strike NNW.	SO	ALSAPB-XRF05,ICP61,ICP69	AD09034208	24/04/2009	-999	0.0017	0.001	2.88	-0.5	-5	4630	3	3	-1	2	0.02	25	
D	SOLV115	357195	5382610	5m	10-30mm tk py-?po-?asp-?tu vein cutting wt qzwacke exposed in bank of Livingstone road	SO	ALSAPB-XRF05,ICP61,ICP69	AD09034208	24/04/2009	-999	0.0045	0.001	22.3	-0.5	56	20	38	1790	19	26	-1111	157	S >10% ULD by ICP61
D	SOLV117	357028	5383150	6m	float of subrounded cobbles & boulders of ZQT+unidentified green mineral, colluvial or coming out of alluvial fan 0.5-1m tk?	SO	ALSAPB-XRF05,ICP61,ICP69	AD09034208	24/04/2009	-999	0.0144	0.001	4.13	-0.5	-5	4610	2	4	1	15	0.03	25	
D	SOLV118	356941	5383377	12m	abundant angular to subangular float boulders to 0.4m size of tu-replaced mylonitic breccia.	SO	ALSAPB-XRF05,ICP61,ICP69	AD09034208	24/04/2009	-999	0.0028	0.001	2.23	-0.5	-5	4100	4	5	-1	5	0.08	17	
D	SOLV122A	356926	5383456	8m	subcrop of lt gy & dk gy tu-altered folded & mylonitic breccia in qzwacke	SO	ALSAPB-XRF05,ICP61,ICP69	AD09034208	24/04/2009	-999	0.0022	0.003	1.13	-0.5	-5	1460	10	2	-1	10	0.01	8	
D	SOLV122B	356926	5383456	8m	subcrop cm folded & mylonitic breccia in qzwacke	SO	ALSAPB-XRF05,ICP61,ICP69	AD09034208	24/04/2009	-999	0.0028	0.001	0.6	-0.5	-5	330	3	1	1	9	0.01	5	
D	SOML075	360000	5382716	27m	boulders of qz-tu metsomatite up to 50cm size in creek, abundant dk gy siltstone float with magsus 2-70x10-3SI.	SO, EBG	ALSAPB-XRF05,ICP61,ICP69	AD09034208	24/04/2009	-999	0.0039	0.001	3.66	-0.5	-5	3230	3	4	1	4	-0.01	20	
D	SOML076	360012	5382756	30m	subcrop of qz-tu metasomatite in fallen tree roots on NE side of creek.	SO, EBG	ALSAPB-XRF05,ICP61,ICP69	AD09034208	24/04/2009	1	0.0009	0.001	3.4	-0.5	94	2040	11	4	2	15	0.01	19	
D	SOML079	360166	5382854	25m	several metres of strike-subparallel (est. 2m thickness) exposure of thin bedded mt-calcsilicate skarn exposed in News Creek. Dip approx vertical. Magsus av 900x10-3SI	SO, EBG	ALSAPB-XRF05,ICP61,ICP69	AD09034208	24/04/2009	900	0.128	0.001	35.8	-0.5	69	3610	63	73	-1	5	0.26	318	
D	SOML080	360255	5382791	6m	2m thick exposure of thin bedded dk gn calcsilicate skarn with 10% po interbedded with lt gy vfg-mg tuffite. S0 approx vertical, ?vonsenite in ZSKCS. Sample of ZSKCS.	SO, EBG	ALSAPB-XRF05,ICP61,ICP69	AD09034208	24/04/2009	70	0.0826	0.004	16.7	-0.5	35	1840	10	1170	1	5	3.85	196	
D	SOML081	360590	5383032	9m	v hard contorted thin bedded calcsilicate skarn & tuffite well exposed in News Creek, max magsus 242x10-3SI, av 50x10-3SI. Ifg granite dyke intrudes skarn c 20m upstream of collar ML105.	SO, EBG	ALSAPB-XRF05,ICP61,ICP69	AD09034208	24/04/2009	50	0.383	0.004	18.9	-0.5	796	1040	40	407	-1	7	0.94	193	
D	SOML082	360677	5382946	17m	small (60cm) outcrop of hard magnetite skarn in Nothofagus forest about 5m from old collapsed trench which has calcsilicate skarn & minor thin bedded magnetite skarn on mullock.	SO, EBG	ALSAPB-XRF05,ICP61,ICP69	AD09034208	24/04/2009	1000	0.139	0.004	39.7	-0.5	193	2040	33	152	-1	-2	0.09	158	
D	SOML083	360697	5382955	19m	qz-tu vein & tu vein subcrop in head of old collapsed trench in Nothofagus forest, some blocks of qz-tu metasomatite cross-cut by VQT & VT.	SO, EBG	ALSAPB-XRF05,ICP61,ICP69	AD09034208	24/04/2009	-999	0.0031	-0.001	8.03	-0.5	87	9810	4	18	1	11	0.01	85	
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Appendix C

Drill hole collar details

H0002	Version	3															
H0003	Date_generated	27/7/2009															
H0004	Reporting_period_end_date	22/8/2009															
H0005	State	TAS															
H0100	Tenement	EL21/2005															
H0101	Tenement_holder	Venture Minerals Ltd															
H0102	Project_name	Mt Lindsay															
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	3437 Stringer, 3438 Livingstone, 3637 Rosebury, 3638 Parsons, 3639 Ramsay															
H0200	Start_date_of_data_acquisition	22/8/2008															
H0201	End_date_of_data_acquisition	27/7/2009															
H0202	Data_format	SG3															
H0203	Number_of_data_records	24															
H0204	Date_of_metadata_update	22/8/2008															
H0500	Feature_Located	Drill Hole Collar															
H0501	Geodetic_datum	GDA94															
H0502	Vertical_datum	AHD83 +2000m															
H0503	Projection	MGA															
H0531	Projection_zone	55															
H0532	Surveying_instrument	PDA_RTK-TS, Garmin GPS60, Trimble_RTK															
H0533	Surveying_Company	Venture Minerals Ltd															
H900	Remarks																
H1000	Hole	Prospect	E_MGA55	N_MGA55	RL_AHD83_+2000m	Azi_MGA	Plunge	EOH	Surv_grid	Surv_method	DContractor	DRig	Dsizes	Date_started	Date_finished	Logged	Comments
H1001			metres	metres	metres	degrees	degrees	metres									
D	LV002	Livingstone Skarn	356957	5383432	2312.00	50	-55	82	MGA Zone55 GDA94	Garmin GPS60	Spauldings	G&K850	RC & AC	25/09/2008	26/09/2008	GB WC	
D	LV003	Livingstone Skarn	356983	5383297	2294.70	60	-55	29	MGA Zone55 GDA94	Garmin GPS60	Spauldings	G&K850	RC & AC	29/09/2008	29/09/2008	EBG	Abandoned due to drilling difficulties
D	LV003A	Livingstone Skarn	356973	5383299	2294.70	60	-50	66.7	MGA Zone55 GDA94	Garmin GPS60	OME	OME	0-66.7m HQ	6/10/2008	8/10/2008	EBG	
D	LV004	Livingstone Skarn	357030	5383207	2284.00	60	-55	70	MGA Zone55 GDA94	Garmin GPS60	Spauldings	G&K850	0-53.4m RC, 53.4-70m NQ	29/09/2008	30/09/2008	EBG	Abandoned due to drilling difficulties
D	LV005	Livingstone Skarn	357073	5383113	2276.00	60	-55	5	MGA Zone55 GDA94	Garmin GPS60	Spauldings	G&K850	RC & AC	30/09/2008	30/09/2008	EBG	Abandoned due to drilling difficulties
D	LV006	Livingstone Skarn	357046	5383113	2283.00	60	-50	136	MGA Zone55 GDA94	Garmin GPS60	OME	OME	0-94.9m HQ; NQ 94.9-135.95m	9/10/2008	23/10/2008	GB EBG	Terminated early because of drilling difficulties
D	LV007	Livingstone Skarn	357103	5383021	2271.00	60	-65	47.9	MGA Zone55 GDA94	Garmin GPS60	Almac	AD900	0-47.9m HQ	7/06/2009	15/06/2009	EBG	Abandoned before target depth due to drilling difficulties
D	LV008	Livingstone Skarn	357125	5383029	2269.00	60	-75	148.3	MGA Zone55 GDA94	Garmin GPS60	Almac	AD900	0-41.8m PQ, HQ 41.8-131.9m, NQ 131.9-148.3m	18/06/2009	29/06/2009	EBG	
D	LV009	Livingstone Skarn	357131	5383029	2269.00	60	-50	75.8	MGA Zone55 GDA94	Garmin GPS60	Almac	AD900	0-30.5m PQ, 30.5-75.8m HQ	5/06/2009	10/06/2009	EBG	
D	LV010	Livingstone Skarn	357197	5382891	2262.00	37	-55	173.7	MGA Zone55 GDA94	Garmin GPS60	Almac	AD900	0-27.7m PQ, 27.7-125.7 HQ, 125.7-173.7 NQ	11/06/2009	25/06/2009	EBG	
D	LV011	Livingstone Skarn	357010	5383198	2286.00	60	-40	140	MGA Zone55 GDA94	Garmin GPS60	Almac	AD900	0-52.2m PQ, 52.2-87m HQ, 87-140m NQ	26/06/2009			
D	ML120	Main Tin Zone	360201.769	5382692.855	2493.22	60	-60	225	MGA Zone55 GDA94	Garmin GPS60	Boart Longyear	LF70_1	0-20.2m HQ, 20.2-225m NQ	24/07/2008	31/07/2008	WC	
D	ML121	Main Tin Zone	360655	5382552	2579.00	70	-55	188.4	MGA Zone55 GDA94	Garmin GPS60	Boart Longyear	LF70_1	0-48.4m HQ, 48.4-188.4m NQ	31/07/2008	8/08/2008	WC	
D	ML122	Main Tin Zone & No2 Zone	360910	5382480	2456.30	5	-25	281.3	MGA Zone55 GDA94	Garmin GPS60	Boart Longyear	Onram	0-281.2m NQ	7/08/2008	4/09/2008	GB JB	
D	ML123	Main Tin Zone	360655	5382552	2579.00	340	-50	182.2	MGA Zone55 GDA94	Garmin GPS60	Boart Longyear	LF70_1	0-65m HQ, 65-182.2m NQ	10/08/2008	18/08/2008	WC JB	
D	ML124	No1 Zone & Main Tin Zone	360764.4	5382326.8	2466.50	25	-65	297.6	MGA Zone55 GDA94	PDA_RTK-TS	OME	OME	0-67.5m, 67.5-297.6m NQ	18/08/2008	1/09/2008	JB GB EBG	
D	ML125	Main Tin Zone	360495	5382565	2556.00	15	-40	183.6	MGA Zone55 GDA94	Garmin GPS60	Boart Longyear	LF70_1	0-62.4m, 62.4-183.6m NQ	18/08/2008	27/08/2008	JB GB	
D	ML126	Main Tin Zone	360495	5382565	2556.00	15	-65	239.1	MGA Zone55 GDA94	Garmin GPS60	Boart Longyear	LF70_1	0-52.9m HQ, 52.9-239.1m NQ	27/08/2008	5/09/2008	WC	
D	ML127	No1 Zone & Main Tin Zone	360774	5382324	2472.50	355	-40	293.3	MGA Zone55 GDA94	Garmin GPS60	OME	OME	0-56.5m HQ, 56.5-293.2m NQ	2/09/2008	16/09/2008	EBG WC	Between 248-269.5m core position uncertain due to core falling out of trays
D	ML128	Main Tin Zone	360400	5382600	2535.00	25	-40	166.5	MGA Zone55 GDA94	Garmin GPS60	Boart Longyear	LF70_1	0-64.3m HQ, 64.3-166.5m NQ	7/09/2008	15/09/2008	GB	
D	ML129	Main Tin Zone	360650	5382555	2580.00	65	-30	81.9	MGA Zone55 GDA94	Garmin GPS60	Boart Longyear	Onram	0-81.9m NQ	8/09/2008	22/09/2008	EBG	Abandoned due to drilling difficulties
D	ML130	Main Tin Zone	360400	5382600	2535.00	25	-65	233.3	MGA Zone55 GDA94	Garmin GPS60	Boart Longyear	LF70_1	0-32.1m HQ, 32.1-233.3 NQ	15/09/2008	22/09/2008	WC	
D	ML131	No1 Zone & Main Tin Zone	360871	5382290	2442.00	15	-65	299.3	MGA Zone55 GDA94	Garmin GPS60	OME	OME	0-50.5m HQ; 50.5-299.3 NQ	17/09/2008	2/10/2008	GB WC	
D	ML132	No2 Zone	360675	5382827	2554.00	35	-60	167.4	MGA Zone55 GDA94	Garmin GPS60	Boart Longyear	LF70_1	0-29.2m HQ; 29.2-167.4 NQ	24/09/2008	1/10/2008	EBG	
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Appendix D

Down Hole Orientation Surveys

H0002	Version	3					
H0003	Date_generated	27/7/2009					
H0004	Reporting_period_end_date	22/8/2009					
H0005	State	TAS					
H0100	Tenement	EL21/2005					
H0101	Tenement_holder	Venture Minerals Ltd					
H0102	Project_name	Mt Lindsay					
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	3437 Stringer, 3438 Livingstone, 3637 Rosebury, 3638 Parsons, 3639 Ramsay					
H0200	Start_date_of_data_acquisition	22/8/2008					
H0201	End_date_of_data_acquisition	27/7/2009					
H0202	Data_format	SG3					
H0203	Number_of_data_records	83					
H0204	Date_of_metadata_update	22/8/2008					
H0500	Feature_Located	Down Hole Survey Point					
H0501	Geodetic_datum	GDA94					
H0502	Vertical_datum	not applicable					
H0503	Projection	MGA					
H0531	Projection_zone	55					
H0532	Surveying_instrument	see data					
H0533	Surveying_Company	see data					
H0900	Remarks:						
H1000	Hole	Depth_m	Azi_MGA	Plunge	Device	Surveyed_by	
D	LV006	30	60	-46	Reflex	OME	
D	LV006	60	60	-46	Reflex	OME	
D	LV006	90	58	-47.5	Reflex	OME	
D	LV006	120	54.9	-49	Reflex	OME	
D	ML120	32	60	-59.1	Reflex	Boart Longyear	
D	ML120	60	60	-59	Reflex	Boart Longyear	
D	ML120	92	60	-59.3	Reflex	Boart Longyear	
D	ML120	120	60	-59.1	Reflex	Boart Longyear	
D	ML120	150	60	-59.3	Reflex	Boart Longyear	
D	ML120	184	60	-59.1	Reflex	Boart Longyear	
D	ML120	215	60	-59.5	Reflex	Boart Longyear	
D	ML121	40	70	-55.1	Reflex	Boart Longyear	
D	ML121	74	70	-55.3	Reflex	Boart Longyear	
D	ML121	100	70	-55.7	Reflex	Boart Longyear	
D	ML121	140	70	-56	Reflex	Boart Longyear	
D	ML121	178	70	-56.6	Reflex	Boart Longyear	
D	ML122	15	5	-25	Reflex	Boart Longyear	
D	ML122	40	5	-25.2	Reflex	Boart Longyear	
D	ML122	70	5	-25.5	Reflex	Boart Longyear	
D	ML122	100	5	-26.6	Reflex	Boart Longyear	
D	ML122	130	5	-26.2	Reflex	Boart Longyear	
D	ML122	160	5	-25.3	Reflex	Boart Longyear	
D	ML122	190	5	-23.8	Reflex	Boart Longyear	
D	ML122	220	5	-21.8	Reflex	Boart Longyear	
D	ML122	250	5	-20.6	Reflex	Boart Longyear	
D	ML122	280	5	-19.2	Reflex	Boart Longyear	
D	ML123	30	336.6	-49.1	Reflex	Boart Longyear	
D	ML123	60	339.3	-48.5	Reflex	Boart Longyear	
D	ML123	90	339.3	-48.9	Reflex	Boart Longyear	
D	ML123	122	339.3	-49.2	Reflex	Boart Longyear	
D	ML123	150	339.3	-49.5	Reflex	Boart Longyear	
D	ML123	180	339.9	-49.1	Reflex	Boart Longyear	
D	ML124	30	25	-60.6	AUSMINE	OME	
D	ML124	60	26	-60	AUSMINE	OME	
D	ML124	90	27.9	-60	AUSMINE	OME	
D	ML124	120	27.9	-61	AUSMINE	OME	
D	ML124	150	27.9	-61	AUSMINE	OME	
D	ML124	180	27.9	-61	AUSMINE	OME	
D	ML124	210	29	-61.1	AUSMINE	OME	
D	ML124	240	29	-61.2	AUSMINE	OME	
D	ML124	270	30.9	-61.6	AUSMINE	OME	
D	ML125	50	15	-40.5	Reflex	Boart Longyear	
D	ML125	82	16.1	-40.4	Reflex	Boart Longyear	
D	ML125	110	16.1	-42.1	Reflex	Boart Longyear	

D	ML125	140	16.1	-43.4	Reflex	Boart Longyear	
D	ML125	172	16.1	-42.3	Reflex	Boart Longyear	
D	ML126	50	15.8	-64.7	Reflex	Boart Longyear	
D	ML126	80	15.8	-64.3	Reflex	Boart Longyear	
D	ML126	110	15.8	-64.1	Reflex	Boart Longyear	
D	ML126	140	15.8	-64.4	Reflex	Boart Longyear	
D	ML126	170	15.8	-64.6	Reflex	Boart Longyear	
D	ML126	205	15.8	-64.8	Reflex	Boart Longyear	
D	ML126	230	15.8	-64.2	Reflex	Boart Longyear	
D	ML126	239	15.8	-64.4	Reflex	Boart Longyear	
D	ML127	60	355	-39.2	AUSMINE	OME	
D	ML127	90	356.9	-39	AUSMINE	OME	
D	ML127	120	357.9	-38	AUSMINE	OME	
D	ML127	210	357.9	-38.5	AUSMINE	OME	
D	ML127	280	357.9	-38.5	AUSMINE	OME	
D	ML128	15	26	-39.6	Reflex	Boart Longyear	
D	ML128	30	25	-39.7	Reflex	Boart Longyear	
D	ML128	60	25.1	-40.2	Reflex	Boart Longyear	
D	ML128	90	25.1	-40.1	Reflex	Boart Longyear	
D	ML128	130	25.1	-42.9	Reflex	Boart Longyear	
D	ML128	160	25.1	-42.5	Reflex	Boart Longyear	
D	ML130	15	25.6	-64.4	Reflex	Boart Longyear	
D	ML130	35	25.5	-63.9	Reflex	Boart Longyear	
D	ML130	60	23.7	-63.9	Reflex	Boart Longyear	
D	ML130	90	23.3	-63.9	Reflex	Boart Longyear	
D	ML130	120	24	-63.4	Reflex	Boart Longyear	
D	ML130	155	24	-63	Reflex	Boart Longyear	
D	ML130	180	24	-63.2	Reflex	Boart Longyear	
D	ML130	210	24	-63	Reflex	Boart Longyear	
D	ML130	230	24	-62.9	Reflex	Boart Longyear	
D	ML131	150	15	-66.1	AUSMINE	OME	
D	ML131	180	15	-66.8	AUSMINE	OME	
D	ML131	210	15	-67	AUSMINE	OME	
D	ML132	17	35.5	-60.3	Reflex	Boart Longyear	
D	ML132	44.2	37.8	-60.1	Reflex	Boart Longyear	
D	ML132	70	38	-60.5	Reflex	Boart Longyear	
D	ML132	105	33.4	-60.1	Reflex	Boart Longyear	
D	ML132	130	35.8	-60.4	Reflex	Boart Longyear	
D	ML132	160	35.8	-60.3	Reflex	Boart Longyear	
EOF							

Appendix E

Drill core assays

H0002	Version	3																											
H0003	Date_generated	27/7/2009																											
H0004	Reporting_period_end_date	22/8/2009																											
H0005	State	TAS																											
H0100	Tenement	EL21/2005																											
H0101	Tenement_holder	Venture Minerals Ltd																											
H0102	Project_name	Mt Lindsay																											
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	3437 Stringer, 3438 Livingstone, 3637 Rosebury, 3638 Parsons, 3639 Ramsay																											
H0200	Start_date_of_data_acquisition	22/8/2008																											
H0201	End_date_of_data_acquisition	27/7/2009																											
H0202	Data_format	SG3																											
H0203	Number_of_data_records	511																											
H0204	Date_of_metadata_update	22/8/2008																											
H0500	Feature_Located	Drill Core Assay																											
H0501	Geodetic_datum	not applicable																											
H0502	Vertical_datum	not applicable																											
H0503	Projection	not applicable																											
H0531	Projection_zone	not applicable																											
H0600	Sample_code	DRILL CORE																											
H0601	Sample_type	drill core																											
H0602	Sample_description	drill core																											
H0700	Sample_preparation_code	PREP-21																											
H0701	Sample_preparation_details	dry, crush, LM5 pulverise to approx P80 <75 microns																											
H0702	Job_no	see data																											
H0800	Assay_code	as below																											
H0801	Assay_company	SGS Renison lab & ALS Chemex (sample preparation at Adelaide lab, assayed in Perth lab)																											
H0802	Assay_description1	Sn, WO3, Fe, S, As, Cu, Pb & Zn at SGS Renison by XRF on pressed powder disks (method XRF75E)																											
H0803	Assay_description2	LOI, Al, Ca, K, Mg, Na, P, Si, Ti at ALS Chemex, Perth by XRF on fused disks (ME-XRF12)																											
H0804	Assay_description3	Ag, Bi, Co, Ni at ALS Chemex, Perth by 4 acid digest with ICP finish (ME-ICP61s)																											
H0805	Assay_description4	B by ALS Chemex, Perth by 3 acid digest with ICP finish (B-ICP69)																											
H1000	Hole	From_m	To_m	Sample	Batch	Magsus_10-3SIU	Sn	WO3	Fe	LOI	Al	Ca	K	Mg	Na	P	Si	Ti	S	Ag	As	B	Bi	Co	Cu	Ni	Pb	Zn
H1001							%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
D	LV002	8	10	LVD1048	BT003925	13.8	0.09	0.03	22.20	-999	-999	-999	-999	-999	-999	-999	-999	-999	-0.1	-999	300	-999	-999	-999	200	-999	-100	600
D	LV002	10	12	LVD1049	BT003925	48.1	0.11	0.04	35.00	-999	-999	-999	-999	-999	-999	-999	-999	-999	-0.1	-999	400	-999	-999	-999	200	-999	-100	800
D	LV002	12	14	LVD1050	BT003925	72.2	0.06	0.05	38.60	-999	-999	-999	-999	-999	-999	-999	-999	-999	-0.1	-999	500	-999	-999	-999	200	-999	-100	900
D	LV002	14	16	LVD1051	BT003925	19.1	0.08	0.02	19.20	-999	-999	-999	-999	-999	-999	-999	-999	-999	-0.1	-999	300	-999	-999	-999	-100	-999	-100	400
D	LV002	16	18	LVD1052	BT003925	10.2	-0.01	0.02	12.30	-999	-999	-999	-999	-999	-999	-999	-999	-999	-0.1	-999	200	-999	-999	-999	-100	-999	-100	500
D	LV002	18	20	LVD1053	BT003925	4.89	-0.01	0.02	9.40	-999	-999	-999	-999	-999	-999	-999	-999	-999	-0.1	-999	400	-999	-999	-999	100	-999	100	600
D	LV002	20	22	LVD1054	BT003925	6.03	-0.01	0.03	12.70	-999	-999	-999	-999	-999	-999	-999	-999	-999	-0.1	-999	500	-999	-999	-999	100	-999	200	700
D	LV002	22	24	LVD1055	BT003925	8.18	0.01	0.03	20.20	-999	-999	-999	-999	-999	-999	-999	-999	-999	-0.1	-999	500	-999	-999	-999	200	-999	200	1000
D	LV002	24	26	LVD1056	BT003925	11.1	0.02	0.05	33.20	-999	-999	-999	-999	-999	-999	-999	-999	-999	-0.1	-999	700	-999	-999	-999	300	-999	200	1200
D	LV002	26	28	LVD1057	BT003923	28.03	0.04	0.04	32.00	-999	-999	-999	-999	-999	-999	-999	-999	-999	-0.1	-999	600	-999	-999	-999	200	-999	200	900
D	LV002	28	30	LVD1058	BT003923	32.43	0.05	0.06	49.60	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.3	-999	1000	-999	-999	-999	600	-999	300	1100
D	LV002	30	31	LVD1059	BT003923	39.63	0.13	0.05	44.00	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.2	-999	800	-999	-999	-999	400	-999	200	800
D	LV002	31	32	LVD1060	BT003923	131.67	0.29	0.05	43.80	-999	-999	-999	-999	-999	-999	-999	-999	-999	-0.1	-999	600	-999	-999	-999	300	-999	200	600
D	LV002	32	33	LVD1061	BT003923	254.67	0.30	0.06	55.10	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.1	-999	900	-999	-999	-999	500	-999	300	800
D	LV002	33	35	LVD1063	BT003923	393.33	0.33	0.06	56.30	-999	-999	-999	-999	-999	-999	-999	-999	-999	-0.1	-999	1200	-999	-999	-999	300	-999	300	700
D	LV002	35	36	LVD1064	BT003923	436.67	0.13	0.06	61.10	-999	-999	-999	-999	-999	-999	-999	-999	-999	-0.1	-999	800	-999	-999	-999	200	-999	200	600
D	LV002	36	38	LVD1065	BT003923	398	0.11	0.06	59.10	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.1	-999	900	-999	-999	-999	300	-999	200	700
D	LV002	38	40	LVD1066	BT003923	158	0.07	0.05	37.10	-999	-999	-999	-999	-999	-999	-999	-999	-999	-0.1	-999	600	-999	-999	-999	200	-999	100	700
D	LV003A	15	17	LVD1072	BT003925	0.31	0.01	0.05	42.00	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.2	-999	600	-999	-999	-999	200	-999	200	600
D	LV003A	17	19	LVD1073	BT003925	0.32	-0.01	0.06	51.10	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.2	-999	500	-999	-999	-999	200	-999	200	500
D	LV003A	19	21	LVD1074	BT003925	0.56	0.02	0.06	57.70	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.2	-999	800	-999	-999	-999	200	-999	200	500
D	LV003A	21	23	LVD1075	BT003925	0.29	0.01	0.06	57.10	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.1	-999	700	-999	-999	-999	200	-999	200	700
D	LV003A	23	25	LVD1076	BT003925	0.2	0.03	0.04	38.20	-999	-999	-999	-999	-999	-999	-999	-999	-999	-0.1	-999	500	-999	-999	-999	200	-999	100	400
D	LV003A	25	27	LVD1077	BT003925	0.17	-0.01	0.02	8.40	-999	-999	-999	-999	-999	-999	-999	-999	-999	-0.1	-999	200	-999	-999	-999	-100	-999	-100	200
D	LV003A	27	29	LVD1078	BT003925	0.49	0.01	0.01	13.00	-999	-999	-999	-999	-999	-999	-999	-999	-999	-0.1	-999	200	-999	-999	-999	-100	-999	-100	600
D	LV003A	29	31	LVD1079	BT003925	0.53	0.02	0.07	58.10	-999	-999	-999	-999	-999	-999	-999	-999	-999	-0.1	-999	900	-999	-999	-999	200	-999	300	1600

H1000	Hole	From_m	To_m	Sample	Batch	Magsus_10-3SIU	Sn	WO3	Fe	LOI	Al	Ca	K	Mg	Na	P	Si	Ti	S	Ag	As	B	Bi	Co	Cu	Ni	Pb	Zn
H1001							%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
D	LV003A	31	33	LVD1080	BT003925	0.35	0.34	0.08	55.20	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.4	-999	900	-999	-999	-999	300	-999	200	2400
D	LV003A	33	35	LVD1081	BT003925	2.77	0.02	0.07	53.80	-999	-999	-999	-999	-999	-999	-999	-999	-999	-0.1	-999	800	-999	-999	-999	300	-999	200	2500
D	LV003A	35	37	LVD1082	BT003925	0.01	0.01	0.03	12.60	-999	-999	-999	-999	-999	-999	-999	-999	-999	-0.1	-999	200	-999	-999	-999	200	-999	-100	600
D	LV003A	37	39	LVD1083	BT003925	18.87	0.02	0.03	16.10	-999	-999	-999	-999	-999	-999	-999	-999	-999	-0.1	-999	200	-999	-999	-999	100	-999	-100	600
D	LV003A	39	41	LVD1084	BT003925	1.36	0.02	0.03	20.40	-999	-999	-999	-999	-999	-999	-999	-999	-999	-0.1	-999	300	-999	-999	-999	100	-999	-100	800
D	LV003A	41	43	LVD1088	BT003925	15.53	0.04	0.04	30.20	-999	-999	-999	-999	-999	-999	-999	-999	-999	-0.1	-999	400	-999	-999	-999	200	-999	-100	900
D	LV003A	43	45	LVD1089	BT003925	20.14	0.04	0.04	29.60	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.2	-999	500	-999	-999	-999	200	-999	100	500
D	LV004	16	18	LVD1119	BT004461	0.92	0.05	-0.01	6.20	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.4	-999	-100	-999	-999	-999	-100	-999	-100	200
D	LV004	18	20	LVD1120	BT004461	0.91	0.06	-0.01	5.70	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.4	-999	-100	-999	-999	-999	-100	-999	-100	200
D	LV004	20	22	LVD1121	BT004461	1.25	0.08	0.03	10.40	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.4	-999	300	-999	-999	-999	200	-999	-100	500
D	LV004	22	24	LVD1122	BT004461	8.28	0.15	0.05	24.00	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.2	-999	400	-999	-999	-999	300	-999	100	600
D	LV004	24	26	LVD1067	BT003924	67.7	0.39	0.09	43.40	-999	-999	-999	-999	-999	-999	-999	-999	-999	-0.1	-999	700	-999	-999	-999	400	-999	200	800
D	LV004	26	28	LVD1068	BT003924	58.1	0.28	0.07	38.70	-999	-999	-999	-999	-999	-999	-999	-999	-999	-0.1	-999	500	-999	-999	-999	200	-999	200	600
D	LV004	28	30	LVD1069	BT003924	69.8	0.35	0.08	38.30	-999	-999	-999	-999	-999	-999	-999	-999	-999	-0.1	-999	600	-999	-999	-999	300	-999	200	600
D	LV004	30	32	LVD1070	BT003924	45.6	0.27	0.08	35.00	-999	-999	-999	-999	-999	-999	-999	-999	-999	-0.1	-999	500	-999	-999	-999	200	-999	200	600
D	LV004	32	34	LVD1071	BT003924	63.1	0.16	0.05	24.70	-999	-999	-999	-999	-999	-999	-999	-999	-999	-0.1	-999	400	-999	-999	-999	200	-999	100	400
D	LV004	34	36	LVD1123	BT004461	18.7	0.13	0.04	19.40	-999	-999	-999	-999	-999	-999	-999	-999	-999	-0.1	-999	300	-999	-999	-999	200	-999	100	400
D	LV004	36	38	LVD1124	BT004461	20.13	0.14	0.04	18.70	-999	-999	-999	-999	-999	-999	-999	-999	-999	-0.1	-999	300	-999	-999	-999	200	-999	100	500
D	LV004	38	40	LVD1125	BT004461	2.38	0.04	0.03	6.30	-999	-999	-999	-999	-999	-999	-999	-999	-999	-0.1	-999	300	-999	-999	-999	300	-999	-100	300
D	LV004	40	42	LVD1126	BT004461	4.85	0.05	0.03	9.50	-999	-999	-999	-999	-999	-999	-999	-999	-999	-0.1	-999	200	-999	-999	-999	200	-999	-100	400
D	LV004	42	44	LVD1127	BT004461	3.3	0.04	0.04	12.70	-999	-999	-999	-999	-999	-999	-999	-999	-999	-0.1	-999	500	-999	-999	-999	200	-999	100	600
D	LV004	44	46	LVD1128	BT004461	3.05	0.03	0.04	18.10	-999	-999	-999	-999	-999	-999	-999	-999	-999	-0.1	-999	400	-999	-999	-999	400	-999	200	800
D	LV004	46	48	LVD1129	BT004461	4.98	0.06	0.02	15.30	-999	-999	-999	-999	-999	-999	-999	-999	-999	-0.1	-999	200	-999	-999	-999	-100	-999	100	500
D	LV004	48	50	LVD1130	BT004461	4.25	0.06	0.03	22.20	-999	-999	-999	-999	-999	-999	-999	-999	-999	-0.1	-999	400	-999	-999	-999	200	-999	200	800
D	LV004	50	51	LVD1131	BT004461	3.71	0.06	0.05	30.10	-999	-999	-999	-999	-999	-999	-999	-999	-999	-0.1	-999	400	-999	-999	-999	200	-999	200	1400
D	LV004	53.35	69.2	LVD1132	BT004461	0.8	0.05	0.02	5.00	-999	-999	-999	-999	-999	-999	-999	-999	-999	-0.1	-999	200	-999	-999	-999	-100	-999	-100	300
D	LV006	78.2	81.2	LVD1090	na	3.34	-999.00	-999	-999.00	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999
D	LV006	81.2	84.4	LVD1091	BT004548	0.33	0.03	-0.01	3.00	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.1	-999	400	-999	-999	-999	-100	-999	-100	400
D	LV006	84.4	87.6	LVD1092	BT004548	2.46	0.02	0.02	10.80	-999	-999	-999	-999	-999	-999	-999	-999	-999	-0.1	-999	300	-999	-999	-999	-100	-999	-100	1200
D	LV006	87.6	89.85	LVD1093R	PH09011745	8.57	0.01	0.058	28.10	9.96	3.3	0.71	0.382	2.01	0.144	0.21	15.8	0.156	0.0224	-0.5	140	10	23	36	73	211	-10	2510
D	LV006	89.85	92.3	LVD1094R	PH09011745	6.43	0.01	0.054	28.40	9.25	4.95	0.19	1.382	0.57	0.075	0.1825	16.88	0.126	0.03	0.8	180	40	15	9	60	79	40	1160
D	LV006	92.3	93.4	LVD1095R	PH09011745	20.85	0.35	0.068	54.10	8.3	1.14	0.02	0.322	0.17	0.006	0.0818	4.64	0.018	0.0234	-0.5	130	70	6	1	15	14	40	340
D	LV006	93.4	94.9	LVD1096R	PH09011745	1.08	0.19	0.076	61.10	7.25	0.33	-0.01	0.072	0.16	-0.001	0.0754	1.45	-0.006	0.0152	-0.5	160	100	3	-1	5	6	80	280
D	LV006	94.9	97.6	LVD1097R	PH09011745	23.76	0.17	0.084	62.60	7.14	0.16	-0.01	0.001	0.17	-0.001	0.0675	0.72	-0.006	0.0131	-0.5	220	70	2	-1	11	7	60	220
D	LV006	97.6	98.9	LVD1098R	PH09011745	52.63	0.11	0.079	63.10	6.69	0.17	-0.01	-0.001	0.17	-0.001	0.0559	0.71	-0.006	0.0148	-0.5	270	150	-2	-1	2	-1	100	230
D	LV006	98.9	100.8	LVD1099R	PH09011745	96.39	0.10	0.076	63.20	6.75	0.12	-0.01	-0.001	0.17	-0.001	0.0435	0.65	-0.006	0.0259	-0.5	250	200	-2	-1	4	-1	110	210
D	LV006	100.8	101.9	LVD1100R	PH09011745	27.75	0.19	0.073	63.00	7.09	0.1	-0.01	-0.001	0.14	-0.001	0.0389	0.65	-0.006	0.0102	-0.5	180	-10	-2	-1	2	-1	100	210
D	LV006	101.9	103.6	LVD1101R	PH09011745	11.63	0.14	0.076	63.00	7.26	0.14	-0.01	-0.001	0.14	-0.001	0.0465	0.67	-0.006	0.009	-0.5	230	10	2	-1	1	-1	90	210
D	LV006	103.6	104.5	LVD1102R	PH09011745	9.07	0.11	0.078	64.30	5.89	0.1	-0.01	-0.001	0.11	-0.001	0.0394	0.49	-0.006	0.0093	-0.5	210	70	-2	-1	8	-1	110	190
D	LV006	104.5	107.6	LVD1103R	PH09011745	7.23	0.15	0.071	63.90	6.09	0.1	-0.01	-0.001	0.07	-0.001	0.0394	0.6	-0.006	0.0082	-0.5	190	100	6	-1	5	-1	70	190
D	LV006	107.6	110.65	LVD1104R	PH09011745	73.43	0.22	0.088	53.90	4.94	0.26	0.01	0.421	0.25	0.579	0.0691	0.4	-0.006	0.0056	-0.5	240	60	7	67	18	-1	-10	110
D	LV006	110.65	114.2	LVD1105R	PH09011745	234.43	0.43	0.084	62.60	3.95	0.25	0.01	0.071	0.27	0.105	0.0679	0.59	-0.006	0.0056	-0.5	180	490	2	10	14	-1	60	220
D	LV006	114.2	116.9	LVD1106R	PH09011745	41.89	0.35	0.071	59.90	8.18	0.34	-0.01	-0.001	0.82	-0.001	0.0882	1.18	-0.006	0.0059	-0.5	120	3030	5	-1	5	5	50	240
D	LV006	116.9	118.95	LVD1107R	PH09011745	136.51	0.34	0.106	66.30	1.71	0.35	-0.01	-0.001	0.37	0.004	0.0502	0.38	-0.006	0.0088	-0.5	140	90	4	-1	13	-1	80	220
D	LV006	118.95	122.1	LVD1108R	PH09011745	264.56	0.26	0.269	63.60	3.39	0.48	0.04	0.009	0.46	0.015	0.0618	0.89	0.012	0.0528	-0.5	110	200	81	2	100	-1	80	310
D	LV006	122.1	124.2	LVD1112	BT004548	9.63	0.13	0.06	35.20	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.2	-999	500	-999	-999	-999	400	-999	-100	400
D	LV006	124.2	126.2	LVD1113	BT004548	44.63	-0.01	0.04	30.00	-999	-999	-999	-999	-999	-999	-999	-999	-999	-0.1	-999	500	-999	-999	-999	300	-999	200	700
D	LV006	126.2	128.3	LVD1114	BT004548	14.13	0.03	0.02	21.80	-999	-999	-999	-999	-999	-999	-999	-999	-999	-0.1	-999	400	-999	-999	-999	400	-999	100	600
D	LV006	128.3	130.2	LVD1115	BT004548	33.07	0.04	0.05	34.20	-999	-999	-999	-999	-999	-999	-999	-999	-999	-0.1	-999	600	-999	-999	-999	800	-999	100	1500
D	LV006	130.2	131.6	LVD1116	BT004548	21.48	0.02	0.02	16.80	-999	-999	-999	-999	-999	-999	-999	-999	-999	-0.1	-999	100	-999	-999	-999	200	-999	-100	900
D	LV006	131.6	133.5	LVD1117	BT004548	2.45	-0.01	-0.01	4.70	-999	-999	-999	-999	-999	-999	-999	-999	-999	-0.1	-999	-100	-999	-999	-999	-100	-999	-100	500
D	LV006	133.5	135.95	LVD1118	BT004548	25.38	0.02	0.02	15.00	-999	-999	-999	-999	-999	-999	-999	-999	-999	-0.1	-999	200	-999	-999	-999	100	-999	-100	800
D	LV008	87.1	89.5	LVD1136	BT008825	-999	0.06	0.06	10.80	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.2	-999	300	-999	-999	-999	400	-999	100	500
D	LV008	89.5	91	LVD1137	BT008825	-999	0.15	0.3	34.70	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.1	-999	1100	-999	-999	-999	2200	-999	300	1700
D	LV008	91	92.4	LVD1138	BT008825	-999	0.11	0.13	42.70	-999	-999	-999	-999	-999	-999	-999	-999	-999	-0.1	-999	700	-999	-999	-999	1300	-999	300	1400
D	LV008	92.4	93.7	LVD1139	BT008825	-999	0.04	0.08	28.80	-999	-999	-999	-999	-999	-999	-999	-999	-999	-0.1	-999	400	-999	-999	-999	700	-999	100	2500
D	LV008	93.7	95.6	LVD1140	BT008825	-999	0.22	0.12	32.20	-999	-999	-999	-999	-999	-999	-999	-999	-999	-0.1	-999	800	-999	-999	-999	600	-999	200	1000
D	LV008	95.6	97.2	LVD1141	BT008825	-999	0.26	0.16	36.10	-999	-999	-999	-999	-999	-999	-999	-999	-999	-0.1	-999	1100	-999	-999	-999	700	-999	200	900
D	LV008	97.2	97.8	LVD1142	BT008825	-999	0.33	0.19	41.10	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.1	-999	2100	-999	-999	-999	900	-999	200	1300
D	LV008	97.8	99.3	LVD1143	BT008825	-999	0.14	0.08	22.80	-999	-999	-999	-999	-999	-999	-999	-999	-999	-0.1	-999	1200	-999	-999	-999	700	-999	-100	500

H1000	Hole	From_m	To_m	Sample	Batch	Magsus_10-3SIU	Sn	WO3	Fe	LOI	Al	Ca	K	Mg	Na	P	Si	Ti	S	Ag	As	B	Bi	Co	Cu	Ni	Pb	Zn
H1001							%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
D	LV008	99.3	102.1	LVD1144	BT008825	-999	0.10	0.13	26.10	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.2	-999	1000	-999	-999	-999	1000	-999	200	1100
D	LV008	102.1	104.3	LVD1145	BT008825	-999	0.03	0.07	15.70	-999	-999	-999	-999	-999	-999	-999	-999	-999	-0.1	-999	600	-999	-999	-999	500	-999	100	800
D	LV008	104.3	105.3	LVD1149	BT008825	-999	-0.01	0.02	4.10	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.2	-999	100	-999	-999	-999	-100	-999	-100	300
D	LV008	105.3	106.8	LVD1150	BT008825	-999	-0.01	-0.01	0.90	-999	-999	-999	-999	-999	-999	-999	-999	-999	-0.1	-999	200	-999	-999	-999	100	-999	-100	100
D	LV008	106.8	108.4	LVD1151	BT008825	-999	-0.01	0.02	14.90	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.1	-999	200	-999	-999	-999	500	-999	200	1100
D	LV008	108.4	110.2	LVD1152	BT008825	-999	-0.01	0.02	8.80	-999	-999	-999	-999	-999	-999	-999	-999	-999	-0.1	-999	-100	-999	-999	-999	200	-999	200	1400
D	LV008	110.2	111.3	LVD1153	BT008825	-999	0.01	0.07	30.80	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.2	-999	500	-999	-999	-999	1600	-999	500	3100
D	LV008	111.3	112.2	LVD1154	BT008825	-999	0.40	0.14	53.90	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.2	-999	600	-999	-999	-999	900	-999	200	1200
D	LV008	112.2	114.3	LVD1155	BT008825	-999	0.41	0.14	55.30	-999	-999	-999	-999	-999	-999	-999	-999	-999	-0.1	-999	1000	-999	-999	-999	1300	-999	300	500
D	LV008	114.3	116	LVD1156	BT008825	-999	0.46	0.18	54.90	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.2	-999	1200	-999	-999	-999	1000	-999	400	700
D	LV008	116	117.3	LVD1157	BT008825	-999	0.53	0.13	56.80	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.1	-999	1100	-999	-999	-999	800	-999	300	600
D	LV008	117.3	119.5	LVD1158	BT008825	-999	0.50	0.14	57.80	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.1	-999	800	-999	-999	-999	1100	-999	300	600
D	LV008	119.5	120.6	LVD1159	BT008825	-999	0.42	0.28	52.70	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.1	-999	700	-999	-999	-999	1400	-999	300	600
D	LV008	120.6	121.5	LVD1160	BT008825	-999	0.19	0.07	35.80	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.1	-999	800	-999	-999	-999	2400	-999	200	700
D	LV008	121.5	123	LVD1161	BT008825	-999	0.30	0.23	44.00	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.1	-999	900	-999	-999	-999	2200	-999	200	600
D	LV008	123	125.2	LVD1162	BT008825	-999	0.04	0.01	10.00	-999	-999	-999	-999	-999	-999	-999	-999	-999	-0.1	-999	300	-999	-999	-999	1000	-999	100	400
D	LV008	125.2	127.4	LVD1163	BT008825	-999	0.04	0.04	23.90	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.1	-999	700	-999	-999	-999	1400	-999	200	700
D	LV008	127.4	128.4	LVD1164	BT008825	-999	0.01	-0.01	2.60	-999	-999	-999	-999	-999	-999	-999	-999	-999	-0.1	-999	-100	-999	-999	-999	-100	-999	-100	200
D	LV008	128.4	130	LVD1165	BT008825	-999	0.01	0.01	8.80	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.1	-999	200	-999	-999	-999	200	-999	-100	600
D	ML120	130	132	MLD2895	BT002843	4.56	-0.01	0.01	8.30	-999	-999	-999	-999	-999	-999	-999	-999	-999	1.3	-999	100	-999	-999	-999	-100	-999	-100	-100
D	ML120	132	134	MLD3557	BT006982	-999	0.73	0.02	9.00	-999	-999	-999	-999	-999	-999	-999	-999	-999	1.3	-999	200	-999	-999	-999	300	-999	-100	200
D	ML120	134	136	MLD3559	BT006982	-999	0.01	0.02	9.00	-999	-999	-999	-999	-999	-999	-999	-999	-999	2.6	-999	100	-999	-999	-999	200	-999	-100	100
D	ML120	136	138	MLD3563	BT006982	-999	0.01	0.02	9.10	-999	-999	-999	-999	-999	-999	-999	-999	-999	1.5	-999	100	-999	-999	-999	300	-999	-100	300
D	ML120	138	140	MLD2904	BT002843	8.82	0.01	0.01	8.20	-999	-999	-999	-999	-999	-999	-999	-999	-999	3.1	-999	200	-999	-999	-999	400	-999	-100	100
D	ML120	140	142	MLD2905	BT002843	4.76	-0.01	-0.01	5.40	-999	-999	-999	-999	-999	-999	-999	-999	-999	1.2	-999	100	-999	-999	-999	200	-999	-100	100
D	ML120	142	144	MLD2906	BT002843	8.1	-0.01	0.01	7.30	-999	-999	-999	-999	-999	-999	-999	-999	-999	2.1	-999	300	-999	-999	-999	200	-999	-100	100
D	ML120	144	146	MLD2907	BT002843	8.89	-0.01	0.01	7.80	-999	-999	-999	-999	-999	-999	-999	-999	-999	2.7	-999	200	-999	-999	-999	300	-999	-100	200
D	ML120	146	148	MLD2908	BT002843	6.53	-0.01	-0.01	6.70	-999	-999	-999	-999	-999	-999	-999	-999	-999	2.6	-999	200	-999	-999	-999	200	-999	-100	100
D	ML120	148	150	MLD2909	BT002843	6.32	-0.01	0.02	9.60	-999	-999	-999	-999	-999	-999	-999	-999	-999	3	-999	200	-999	-999	-999	400	-999	-100	300
D	ML120	150	152	MLD2910	BT002843	7.81	-0.01	0.01	9.60	-999	-999	-999	-999	-999	-999	-999	-999	-999	2.5	-999	300	-999	-999	-999	300	-999	-100	300
D	ML120	152	154	MLD2911	BT002843	6.78	-0.01	0.01	6.90	-999	-999	-999	-999	-999	-999	-999	-999	-999	2.4	-999	400	-999	-999	-999	300	-999	-100	400
D	ML120	154	156	MLD2912	BT002843	77.46	0.08	0.03	26.20	0.73	5.38	2.99	2.22	1.62	1.15	-999	18.7	0.648	2.5	-999	300	3870	8.01	-999	400	-999	-100	300
D	ML120	156	158	MLD2913	BT002843	280.44	0.13	0.05	47.50	-1.58	2.74	1.99	1.59	0.69	0.135	-999	7.89	0.38	1.6	-999	500	9570	29.9	-999	400	-999	-100	400
D	ML120	158	160	MLD2914	BT002843	287.49	0.15	0.05	39.70	-1.27	3.33	4.23	1.65	1.13	0.256	-999	10.6	0.564	1.1	-999	400	6880	11.55	-999	500	-999	-100	400
D	ML120	160	162	MLD2915	BT002843	532	0.16	0.04	40.50	-0.91	3.34	5.74	0.774	1.12	0.474	-999	12.25	0.565	1.6	-999	400	2280	86.6	-999	500	-999	-100	400
D	ML120	162	164	MLD2916	BT002843	200.83	0.18	0.04	38.10	-0.6	3.47	5.65	1.625	1.09	0.414	-999	12.95	0.604	1.1	-999	900	3220	175	-999	500	-999	200	400
D	ML120	164	166	MLD2917	BT002843	65.15	0.08	0.04	30.50	2.32	5.19	4.69	5.05	1.865	0.219	-999	13.75	0.684	0.5	-999	500	2180	27.3	-999	200	-999	-100	300
D	ML120	166	168	MLD2918	BT002843	54.48	0.10	0.03	29.70	2.08	4.93	5.62	3.75	1.965	0.312	-999	14.4	0.75	0.7	-999	400	3400	5.89	-999	200	-999	-100	300
D	ML120	168	170	MLD2919	BT002843	209.94	0.09	0.04	30.10	3.55	4.57	4.4	3.38	2.19	0.231	-999	13.3	0.87	3.1	-999	500	510	268	-999	500	-999	-100	300
D	ML120	170	172	MLD2920	BT002843	15.78	0.13	0.04	32.30	4.71	4.4	2.79	3.72	1.785	0.218	-999	12	0.675	9.2	-999	600	1420	2010	-999	1000	-999	-100	400
D	ML120	172	174	MLD2921	BT002843	147.22	0.16	0.04	34.40	0.7	4.59	4.32	4.02	1.795	0.23	-999	13	0.632	0.9	-999	900	3230	11.6	-999	300	-999	200	500
D	ML120	174	176	MLD2922	BT002843	282.78	0.21	0.04	37.00	0.06	4.06	4.47	2.32	2.01	0.388	-999	12.55	0.653	1.6	-999	1000	4830	132.5	-999	500	-999	300	400
D	ML120	176	178	MLD2931	BT002843	166.32	0.22	0.03	33.40	0.59	4.62	3.81	3.73	2.19	0.312	-999	12.5	0.676	1.8	-999	1300	4880	53.7	-999	400	-999	400	400
D	ML120	178	180	MLD2932	BT002843	413.34	0.28	0.05	42.30	-0.41	3.79	2.79	3.19	1.5	0.146	-999	9.42	0.482	1.1	-999	5800	6320	441	-999	400	-999	2200	500
D	ML120	180	182	MLD2933	BT002843	234.46	0.13	0.03	28.00	0.62	5.21	8.12	1.95	2.55	0.784	-999	16.45	0.761	0.8	-999	1000	1940	84.3	-999	400	-999	300	400
D	ML120	182	184	MLD2934	BT002843	149.05	0.11	0.06	20.90	1.47	5.55	9.72	2.01	2.66	0.636	-999	17.05	0.827	1	-999	900	600	6.17	-999	300	-999	-100	400
D	ML120	184	186	MLD2935	BT002843	187.62	0.04	0.02	20.20	0.81	5.52	9.75	1.085	2.59	0.813	-999	16.85	0.927	0.9	-999	300	-999	5	-999	100	-999	-100	400
D	ML120	186	188	MLD2936	BT002843	315.58	0.07	0.04	32.00	0.92	4.51	10.95	0.539	2.13	0.422	-999	13.95	0.801	1.6	-999	500	-999	17	-999	300	-999	-100	400
D	ML120	188	190	MLD2937	BT002843	52.71	0.08	0.02	19.80	1.25	5.74	9.24	1.265	3.15	0.989	-999	17.35	1.11	1.2	-999	200	-999	6	-999	200	-999	-100	300
D	ML120	190	192	MLD2938	BT002843	53.44	0.03	0.03	19.30	1.19	5.74	7.11	1.785	3.9	1.095	-999	17.25	1.23	1	-999	400	-999	2	-999	300	-999	-100	300
D	ML120	192	194	MLD2939	BT002843	133.55	0.03	0.02	21.80	0.98	5.89	8.13	1.55	3.05	1.075	-999	17.35	1.14	1.2	-999	200	-999	55	-999	200	-999	-100	300
D	ML120	194	196	MLD2940	BT002843	180.22	0.10	0.03	23.90	0.64	5.29	7.11	1.88	2.33	0.87	-999	15.65	0.995	0.8	-999	800	-999	52	-999	200	-999	200	300
D	ML120	196	198	MLD2941	BT002843	310.77	0.05	0.04	29.90	-0.2	4.88	7.4	0.822	2.33	0.896	-999	16.15	0.989	0.9	-999	400	-999	88	-999	200	-999	-100	300
D	ML120	198	200	MLD2942	BT002843	742.83	0.04	0.05	41.80	0.31	4.15	5.24	2.45	1.74	0.323	-999	11.45	0.727	0.3	-999	400	-999	-2	-999	200	-999	-100	500
D	ML120	200	202	MLD2943	BT002843	275.3	0.03	0.04	33.70	1.19	5.14	4.67	3.91	1.87	0.345	-999	11.85	0.862	0.6	-999	300	-999	-2	-999	300	-999	-100	400
D	ML120	202	204	MLD2944	BT002843	164.01	-0.01	0.03	26.90	2.32	6.76	5.26	5.47	2.41	0.503	-999	14.1	0.88	0.3	-999	300	-999	-2	-999	200	-999	-100	300
D	ML120	204	206	MLD2945	BT002843	305.25	0.04	0.03	27.30	2.36	6.12	7.4	3.38	1.6	0.619	-999	13.45	0.719	0.4	-999	300	-999	12	-999	200	-999	-100	400
D	ML120	206	208	MLD2946	BT002843	381.27	0.08	0.03	18.90	0.86	4.84	12.5	0.634	1.115	0.933	-999	17.9	0.551	0.2	-999	300	-999	6	-999	200	-999	-100	400
D	ML121	124	126	MLD2947	BT003257	0.38	-0.01	0.01	10.10	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.3	-999	200	-999	-999	-999	-100	-999	-100	100
D	ML121	126	128	MLD2948	BT003257	0.43	-0.01	0.02	13.90	-999	-999	-999	-999	-999	-999	-999	-999	-999	1.3	-999	300	-999	-999	-999	200	-999	-100	200

H1000	Hole	From_m	To_m	Sample	Batch	Magsus_10-3SIU	Sn	WO3	Fe	LOI	Al	Ca	K	Mg	Na	P	Si	Ti	S	Ag	As	B	Bi	Co	Cu	Ni	Pb	Zn
H1001							%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
D	ML121	128	130	MLD2949	BT003257	84.97	0.29	0.04	26.40	3.05	4.13	8.29	1.74	2.13	0.19	-999	14.5	0.77	2.2	-999	600	370	54.9	-999	100	-999	200	100
D	ML121	130	132	MLD2950	BT003257	222.16	0.51	0.39	35.10	8.82	3.09	2.27	3.03	1.605	0.0283	-999	12.45	0.668	3	-999	4600	20	7.05	-999	300	-999	1700	100
D	ML121	132	134	MLD2956	BT003257	316.33	1.33	0.05	32.60	2.86	3.88	2.84	4.09	1.995	0.0225	-999	13	0.823	1.8	-999	2300	30	31.2	-999	300	-999	800	200
D	ML121	134	136	MLD2957	BT003257	503.33	0.30	0.11	43.70	1.8	3.52	1.395	3.85	1.79	0.0371	-999	11.45	0.797	1.5	-999	1300	30	19.7	-999	100	-999	400	200
D	ML121	136	138	MLD2961	BT003257	389.55	0.18	0.1	36.00	1.55	0.1	20	-0.0008	8.91	0.0242	-999	21.1	0.013	1.4	-999	700	100	25.7	-999	300	-999	100	200
D	ML121	138	140	MLD2962	BT003257	111.84	0.32	0.06	33.80	4.07	0.279	21.3	-0.0008	10.45	0.0164	-999	9.85	0.013	7.2	-999	1700	120	39.3	-999	800	-999	600	200
D	ML121	140	142	MLD2963	BT003257	7.27	0.09	0.12	29.50	3.89	3.15	5.6	1.775	1.825	0.267	-999	10.4	0.703	12.6	-999	3800	270	86.6	-999	2200	-999	1400	200
D	ML121	142	144	MLD2964	BT003257	9.77	0.08	0.04	27.20	4.28	0.15	23.7	0.0105	1.47	0.0144	-999	21.6	0.012	12.9	-999	2200	270	43	-999	2900	-999	800	100
D	ML121	144	146	MLD2965	BT003257	10.86	0.07	0.03	24.20	5.7	4.33	7.22	1.455	3.03	0.669	-999	14.6	0.951	11.3	-999	2200	330	73.2	-999	4000	-999	800	100
D	ML121	146	148	MLD2966	BT003257	11.2	0.11	0.03	18.10	4.39	5.35	10.35	1.7	4.27	0.646	-999	15.1	1.005	6	-999	3800	520	132.5	-999	1000	-999	1500	100
D	ML121	148	150	MLD2967	BT003257	21.78	0.13	0.05	27.70	4.07	3.64	7.75	0.959	3.11	0.391	-999	10.6	0.799	9.6	-999	3300	2800	110.5	-999	1500	-999	1200	200
D	ML121	150	152	MLD2968	BT003257	10.69	0.16	0.06	19.10	2.9	5.63	9.11	0.66	3.63	0.897	-999	16.05	1.015	2.1	-999	1000	4200	21.4	-999	600	-999	300	200
D	ML121	152	154	MLD2969	BT003257	5.47	0.14	0.04	25.30	2.24	5.19	6.95	1.14	3.14	0.858	-999	14.8	0.963	3.2	-999	1700	5740	98.6	-999	700	-999	600	200
D	ML121	154	156	MLD2970	BT003257	11.82	0.09	0.03	21.00	2.56	5.3	8.47	1.195	3.06	0.699	-999	15.95	1.115	3.5	-999	700	730	81.1	-999	500	-999	200	200
D	ML121	156	158	MLD2971	BT003257	5.55	0.02	0.02	12.00	-999	-999	-999	-999	-999	-999	-999	-999	-999	2.6	-999	800	-999	-999	-999	300	-999	300	-100
D	ML121	158	160	MLD2972	BT003257	5.38	0.02	0.01	12.40	-999	-999	-999	-999	-999	-999	-999	-999	-999	3.3	-999	400	-999	-999	-999	300	-999	100	-100
D	ML121	160	162	MLD2973	BT003257	4.7	0.03	0.03	15.80	-999	-999	-999	-999	-999	-999	-999	-999	-999	2.9	-999	300	-999	-999	-999	400	-999	-100	100
D	ML121	162	164	MLD2974	BT003257	5.86	0.02	0.02	14.40	-999	-999	-999	-999	-999	-999	-999	-999	-999	2.8	-999	500	-999	-999	-999	400	-999	100	-100
D	ML121	164	166	MLD2975	BT003257	72.55	0.07	0.04	18.90	-999	-999	-999	-999	-999	-999	-999	-999	-999	2.8	-999	300	-999	-999	-999	500	-999	-100	100
D	ML121	166	168	MLD2976	BT003257	2.63	-0.01	0.01	9.30	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.9	-999	2000	-999	-999	-999	300	-999	700	-100
D	ML121	168	170	MLD2977	BT003257	1.56	-0.01	0.02	10.00	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.9	-999	2900	-999	-999	-999	300	-999	1100	-100
D	ML121	170	172	MLD2978	BT003257	1.26	0.01	-0.01	9.70	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.4	-999	2900	-999	-999	-999	-100	-999	1100	-100
D	ML121	172	174	MLD2979	BT003257	1.98	-0.01	0.01	11.70	-999	-999	-999	-999	-999	-999	-999	-999	-999	1.3	-999	5600	-999	-999	-999	300	-999	2200	-100
D	ML122	0	1	MLD3198	BT003543	412.67	0.23	0.04	40.40	-999	-999	-999	-999	-999	-999	-999	-999	-999	3.7	-999	1800	30	5.17	-999	1100	-999	600	200
D	ML122	1	3	MLD3199	BT003543	2.07	0.39	0.06	33.10	-999	-999	-999	-999	-999	-999	-999	-999	-999	15.4	-999	600	-10	4.26	-999	2900	-999	-100	200
D	ML122	3	5	MLD3200	BT003543	23.43	0.10	0.03	23.30	-999	-999	-999	-999	-999	-999	-999	-999	-999	4.8	-999	400	-10	0.93	-999	700	-999	-100	100
D	ML122	5	7	MLD3201	BT003543	197.64	0.16	0.04	32.10	-999	-999	-999	-999	-999	-999	-999	-999	-999	9.5	-999	400	-10	3.53	-999	1300	-999	-100	200
D	ML122	7	9	MLD3202	BT003543	7.54	0.07	0.02	12.70	-999	-999	-999	-999	-999	-999	-999	-999	-999	2.2	-999	400	110	0.8	-999	600	-999	-100	200
D	ML122	9	11	MLD3203	BT003543	5.15	0.03	0.03	11.90	-999	-999	-999	-999	-999	-999	-999	-999	-999	2.8	-999	700	20	1.2	-999	400	-999	200	200
D	ML122	11	13	MLD3204	BT003543	0.99	0.21	0.04	23.40	-999	-999	-999	-999	-999	-999	-999	-999	-999	9.6	-999	500	-10	1.52	-999	900	-999	-100	200
D	ML122	13	15	MLD3205	BT003543	7.54	4.38	0.06	29.80	-999	-999	-999	-999	-999	-999	-999	-999	-999	15.8	-999	900	-10	2.2	-999	1000	-999	200	200
D	ML122	15	17	MLD3206	BT003543	5.21	0.51	0.05	31.20	-999	-999	-999	-999	-999	-999	-999	-999	-999	14.3	-999	500	-10	2.02	-999	1700	-999	-100	200
D	ML122	17	19	MLD3207	BT003543	8.81	0.20	0.04	22.10	-999	-999	-999	-999	-999	-999	-999	-999	-999	5.4	-999	400	-10	6.88	-999	1200	-999	-100	200
D	ML122	19	21	MLD3208	BT003543	6.95	0.22	0.04	33.90	-999	-999	-999	-999	-999	-999	-999	-999	-999	15.3	-999	500	-10	1.89	-999	2300	-999	-100	200
D	ML122	21	23	MLD3209	BT003543	16.02	0.23	0.03	26.70	-999	-999	-999	-999	-999	-999	-999	-999	-999	8.1	-999	500	-10	1.48	-999	1800	-999	-100	200
D	ML122	23	25	MLD3210	BT003543	8.74	0.18	0.04	27.20	-999	-999	-999	-999	-999	-999	-999	-999	-999	8.5	-999	2100	-10	47	-999	1200	-999	700	200
D	ML122	25	27	MLD3216	BT003543	6.97	0.06	0.03	15.80	-999	-999	-999	-999	-999	-999	-999	-999	-999	3.2	-999	2700	-10	36.3	-999	700	-999	1000	200
D	ML122	27	29	MLD3217	BT003543	5.88	0.11	0.03	18.90	-999	-999	-999	-999	-999	-999	-999	-999	-999	4.6	-999	6600	-10	77.9	-999	1000	-999	2500	200
D	ML122	219	221	MLD3218	BT003543	2.78	-0.01	-0.01	8.00	-999	-999	-999	-999	-999	-999	-999	-999	-999	1.1	-999	200	-999	-999	-999	200	-999	-100	-100
D	ML122	221	223	MLD3219	BT003543	2.62	-0.01	-0.01	9.30	1.33	6.53	8.92	1.14	2.39	1.3	-999	22.4	0.97	1.4	-999	200	-999	-2	-999	200	-999	-100	200
D	ML122	223	225	MLD3220	BT003543	159.54	0.03	0.02	13.30	1.45	5.7	8.98	0.91	2.23	1.26	-999	20.2	0.81	1.5	-999	300	-999	4	-999	300	-999	-100	300
D	ML122	225	227	MLD3221	BT003543	234.12	0.03	0.02	19.00	0.99	5.02	10.65	0.619	2.31	1.19	-999	16.9	0.777	1.4	-999	400	-999	8	-999	400	-999	-100	400
D	ML122	227	229	MLD3222	BT003543	223.25	0.04	0.02	19.90	0.74	4.71	12.25	0.296	2.55	0.748	-999	15.8	0.803	1.4	-999	400	-999	69	-999	500	-999	-100	400
D	ML122	229	231	MLD3223	BT003543	790.16	0.06	0.04	40.30	-0.61	3.05	9.28	0.125	1.325	0.221	-999	9.12	0.49	1.1	-999	600	-999	280	-999	600	-999	-100	800
D	ML122	231	233	MLD3224	BT003543	875	0.07	0.05	45.60	-0.65	2.35	5.84	0.5	1.095	0.0595	-999	6.15	0.409	1.2	-999	700	-999	47	-999	600	-999	-100	700
D	ML122	233	235	MLD3225	BT003543	937.66	0.07	0.05	46.30	-1.06	2.16	6.04	0.1645	0.971	0.149	-999	5.99	0.452	1.1	-999	600	-999	186	-999	600	-999	-100	900
D	ML122	235	237	MLD3226	BT003543	1000	0.08	0.05	44.80	-1.35	2.19	7.85	-0.0008	0.862	0.0176	-999	5.75	0.429	1.1	-999	700	-999	29	-999	700	-999	-100	800
D	ML122	237	239	MLD3227	BT003543	431.08	0.06	0.03	29.10	0.48	4.65	9.79	0.721	1.915	0.875	-999	16.1	0.828	0.6	-999	700	-999	4	-999	400	-999	100	600
D	ML122	239	241	MLD3228	BT003543	608.5	0.12	0.03	29.90	0.12	3.05	13.2	0.01	1.44	0.0403	-999	10.35	0.838	0.5	-999	600	90	1.05	-999	400	-999	100	600
D	ML122	241	243	MLD3229	BT003543	657.16	0.16	0.03	30.10	-0.07	3	13.25	0.0826	1.795	0.1215	-999	11.9	0.814	0.3	-999	400	90	4.67	-999	200	-999	-100	500
D	ML122	243	245	MLD3232	BT003543	338	0.07	0.02	22.00	0.58	3.45	15.15	0.0994	2.53	0.204	-999	15.4	0.827	0.3	-999	500	-999	8	-999	200	-999	-100	400
D	ML122	245	247	MLD3233	BT003543	6.63	0.02	0.02	14.20	4.47	3.34	19.7	1.505	1.21	0.385	-999	16.65	0.372	-0.1	-999	200	-999	-2	-999	200	-999	-100	200
D	ML122	247	249	MLD3234	BT003543	7.04	0.02	0.02	14.30	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.3	-999	300	-999	-999	-999	100	-999	-100	200
D	ML122	249	251	MLD3240	BT003543	5.23	-0.01	0.01	16.70	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.2	-999	200	-999	-999	-999	100	-999	-100	200
D	ML122	251	253	MLD3241	BT003543	1.03	-0.01	0.01	14.20	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.4	-999	300	-999	-999	-999	200	-999	-100	200
D	ML122	253	255	MLD3242	BT003543	0.76	0.02	-0.01	9.80	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.3	-999	200	-999	-999	-999	100	-999	-100	100
D	ML122	255	257	MLD3243	BT003543	0.65	-0.01	0.01	9.70	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.3	-999	100	-999	-999	-999	200	-999	-100	200
D	ML122	257	259	MLD3244	BT003543	0.96	0.01	0.01	11.20	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.6	-999	300	-999	-999	-999	300	-999	-100	100
D	ML122	259	261	MLD3245	BT003543	1.99	0.01	0.01	12.00	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.6	-999	200	-999	-999	-999	200	-999	-100	200
D	ML122	261	263	MLD3246	BT003543	1.75	0.02	0.01	13.00	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.4	-999	200	-999	-999	-999	200	-999	-100	200

H1000	Hole	From_m	To_m	Sample	Batch	Magsus_10-3SIU	Sn	WO3	Fe	LOI	Al	Ca	K	Mg	Na	P	Si	Ti	S	Ag	As	B	Bi	Co	Cu	Ni	Pb	Zn
H1001							%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
D	ML122	263	265	MLD3247	BT003543	1.05	0.01	0.01	12.10	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.3	-999	300	-999	-999	-999	200	-999	-100	200
D	ML122	265	267	MLD3248	BT003543	2.99	0.02	0.02	15.30	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.5	-999	200	-999	-999	-999	200	-999	-100	200
D	ML122	267	269	MLD3249	BT003543	0.9	0.01	0.01	13.10	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.4	-999	200	-999	-999	-999	200	-999	-100	-100
D	ML122	269	271	MLD3250	BT003543	4.18	-0.01	0.03	13.40	-999	-999	-999	-999	-999	-999	-999	-999	-999	1.1	-999	200	-999	-999	-999	200	-999	-100	100
D	ML122	271	273	MLD3251	BT003543	7.53	-0.01	-0.01	10.00	-999	-999	-999	-999	-999	-999	-999	-999	-999	1.7	-999	200	-999	-999	-999	200	-999	-100	-100
D	ML122	273	275	MLD3252	BT003543	4.13	0.01	-0.01	18.20	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.6	-999	300	-999	-999	-999	200	-999	-100	200
D	ML122	275	277	MLD3253	BT003543	0.89	0.01	0.01	16.00	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.2	-999	200	-999	-999	-999	100	-999	-100	200
D	ML123	79	81	MLD3100	BT003257	0.62	-0.01	-0.01	8.20	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.5	-999	100	-999	-999	-999	200	-999	-100	-100
D	ML123	81	83	MLD3101	BT003257	4.54	0.02	0.02	16.30	-999	-999	-999	-999	-999	-999	-999	-999	-999	3.8	-999	400	-999	-999	-999	700	-999	-100	200
D	ML123	83	85	MLD3102	BT003257	1.95	0.03	0.02	13.90	-999	-999	-999	-999	-999	-999	-999	-999	-999	2.9	-999	300	-999	-999	-999	500	-999	-100	100
D	ML123	85	87	MLD3103	BT003257	669.67	0.05	0.06	49.30	7.22	1.78	3.09	1.01	0.674	0.0897	-999	7.33	0.302	0.9	-999	500	-999	9	-999	200	-999	-100	100
D	ML123	87	89	MLD3104	BT003257	99.41	0.02	0.02	8.40	5.35	4.48	22.7	0.367	2.11	0.0761	-999	15.65	0.789	0.3	-999	300	-999	8	-999	-100	-999	-100	100
D	ML123	89	91	MLD3105	BT003257	100.18	0.01	0.02	15.30	1.53	5.17	14.05	1.02	2.23	0.495	-999	17.6	0.843	0.9	-999	300	-999	7	-999	200	-999	-100	200
D	ML123	91	93	MLD3106	BT003257	377.08	0.57	0.03	30.70	8.14	3.12	5.16	2.38	1.595	0.0511	-999	10.95	0.551	0.9	-999	300	190	22.1	-999	200	-999	-100	200
D	ML123	93	95	MLD3107	BT003257	251.93	0.63	0.04	35.70	12.05	3.25	1.645	3.01	1.89	0.0791	-999	11.3	0.636	0.8	-999	300	70	5.65	-999	200	-999	-100	100
D	ML123	95	97	MLD3108	BT003257	80.64	0.14	0.03	26.70	9.57	4.24	6.62	2.43	2.05	0.274	-999	15.55	0.714	0.4	-999	300	150	1.79	-999	100	-999	-100	100
D	ML123	97	99	MLD3114	BT003257	136.79	0.25	0.03	22.10	7.91	3.48	2.56	3.06	2.21	0.0764	-999	14.35	0.829	1	-999	200	270	4.17	-999	200	-999	-100	200
D	ML123	99	101	MLD3115	BT003257	162.56	0.03	0.02	26.80	5.52	3.25	1.1	2.93	1.92	0.0838	-999	10.95	0.784	0.8	-999	200	310	12.5	-999	200	-999	-100	100
D	ML123	101	103	MLD3116	BT003257	24.72	0.12	0.02	15.20	6.01	2.81	0.672	2.98	1.47	0.0221	-999	9.6	0.553	0.9	-999	200	230	1.86	-999	200	-999	-100	100
D	ML123	103	105	MLD3117	BT003257	77.02	0.20	0.03	24.10	6.01	2.65	0.707	2.7	1.335	0.0346	-999	10.15	0.457	4.4	-999	200	220	8.82	-999	300	-999	-100	100
D	ML123	105	107	MLD3118	BT003257	23.37	0.37	0.03	31.60	10.2	3.69	0.908	4	1.9	0.0286	-999	11.3	0.908	9.8	-999	300	130	2.8	-999	300	-999	-100	100
D	ML123	107	109	MLD3119	BT003257	82.54	0.11	0.04	36.60	10.2	3.06	0.714	3.24	1.52	0.0434	-999	9.12	0.537	16.5	-999	300	100	7.56	-999	400	-999	-100	100
D	ML123	109	111	MLD3120	BT003257	22.68	0.13	0.03	30.40	9.87	3.35	2.53	2.96	2.04	0.0438	-999	13.8	0.827	8.3	-999	400	170	5.62	-999	400	-999	-100	100
D	ML123	111	113	MLD3121	BT003257	67.25	0.31	0.04	35.40	10.1	4.59	11.1	1.615	2.32	0.186	-999	14.45	0.884	13.2	-999	300	70	1.93	-999	500	-999	-100	200
D	ML123	113	115	MLD3122	BT003257	461.5	0.21	0.04	41.30	10.05	4.98	10.9	1.9	2.41	0.601	-999	16.5	0.945	3.5	-999	300	60	4.62	-999	400	-999	-100	200
D	ML123	115	117	MLD3123	BT003257	456.5	0.02	0.04	35.90	11	4.68	6.88	2.88	2.18	0.364	-999	16.1	1.065	4.5	-999	300	-999	-2	-999	700	-999	-100	100
D	ML123	117	119	MLD3124	BT003257	333.38	0.08	0.04	39.90	7.16	3.94	2.08	3.54	2.03	0.0683	-999	12.6	0.935	2.1	-999	300	-999	10	-999	300	-999	-100	200
D	ML123	119	121	MLD3125	BT003257	580.5	0.03	0.04	45.30	8.81	2.92	1	2.71	1.69	0.0608	-999	10.45	0.656	2.6	-999	300	-999	5	-999	400	-999	-100	200
D	ML123	121	123	MLD3128	BT003257	753.5	0.04	0.04	44.90	5.06	3.31	1.175	3.11	1.59	0.0934	-999	9.41	0.651	1.9	-999	300	-999	-2	-999	400	-999	-100	200
D	ML123	123	125	MLD3129	BT003257	417.69	0.03	0.04	40.50	10.05	3.23	1.115	3.42	1.57	0.0355	-999	10.2	0.626	1.8	-999	300	-999	-2	-999	300	-999	-100	200
D	ML123	125	127	MLD3130	BT003257	264.91	0.05	0.03	33.80	7.02	3.59	2.04	3.41	2.14	0.0854	-999	11.8	0.864	2.4	-999	300	-999	-2	-999	300	-999	-100	100
D	ML123	127	129	MLD3131	BT003257	79.33	0.07	0.04	34.10	2.93	4.18	1.615	4.12	2.73	0.107	-999	13.9	0.924	7.3	-999	400	-999	-2	-999	800	-999	-100	200
D	ML123	129	131	MLD3132	BT003257	11.26	0.17	0.04	34.30	6.18	2.75	1.895	2.63	1.35	0.0556	-999	9.19	0.588	16.7	-999	300	80	8.9	-999	2300	-999	-100	200
D	ML123	131	133	MLD3133	BT003257	10.05	0.33	0.04	33.50	3.87	3.88	2.34	3.8	2.26	0.0786	-999	13.05	1.215	10.8	-999	400	130	7.54	-999	1600	-999	-100	200
D	ML123	133	135	MLD3139	BT003257	13.97	0.18	0.03	25.50	3.85	4.63	7.14	1.385	2.1	0.455	-999	14.6	1.01	9.4	-999	3400	310	51.9	-999	1500	-999	1300	100
D	ML123	135	137	MLD3140	BT003257	10.59	0.09	0.03	18.60	3.96	5.02	7.79	1.705	2.3	0.938	-999	18.3	0.968	5.6	-999	3000	270	96.9	-999	1300	-999	1100	100
D	ML123	137	139	MLD3141	BT003257	30.95	0.09	0.04	23.80	3.15	4.3	6.76	1.015	1.87	0.664	-999	15.9	0.848	7.5	-999	5200	260	216	-999	1500	-999	2000	200
D	ML123	139	141	MLD3142	BT003257	17.58	0.05	0.07	27.20	5.14	3.93	5.07	1.545	1.96	0.474	-999	14.6	0.785	11.6	-999	7600	-999	190	-999	3500	-999	2900	200
D	ML123	141	143	MLD3143	BT003257	9.41	0.05	0.04	16.90	3.41	5.25	6.08	1.89	2.31	0.746	-999	17.75	1.07	4.1	-999	4300	-999	112	-999	1100	-999	1700	100
D	ML123	143	145	MLD3144	BT003257	8.02	0.07	0.03	17.30	3.44	5.01	7.93	1.27	2.3	0.655	-999	16.85	1.005	3.7	-999	3200	-999	92	-999	900	-999	1200	100
D	ML123	145	147	MLD3145	BT003257	10.13	0.13	0.04	20.20	2.27	4.84	7.64	1.525	2.27	0.564	-999	15.65	1.03	4.2	-999	1800	240	62.8	-999	800	-999	700	100
D	ML123	147	149	MLD3146	BT003257	17.04	0.10	0.05	26.00	2.91	4.18	6.98	1.44	2.07	0.374	-999	14.25	1.025	8.6	-999	3300	190	130	-999	2400	-999	1200	200
D	ML123	149	151	MLD3147	BT003257	20.03	0.08	0.04	23.00	3.56	4.53	6.82	1.49	2.42	0.432	-999	16.3	0.99	7.4	-999	5900	210	127.5	-999	1700	-999	2300	100
D	ML123	151	153	MLD3148	BT003257	9.45	0.05	0.03	17.10	-999	-999	-999	-999	-999	-999	-999	-999	-999	3.8	-999	10900	-999	-999	-999	700	-999	4300	100
D	ML123	153	155	MLD3149	BT003257	9.06	0.04	0.03	17.60	-999	-999	-999	-999	-999	-999	-999	-999	-999	3.8	-999	9400	-999	-999	-999	900	-999	3700	100
D	ML123	155	157	MLD3150	BT003257	3.02	0.01	0.02	10.20	-999	-999	-999	-999	-999	-999	-999	-999	-999	1.9	-999	3400	-999	-999	-999	600	-999	1300	200
D	ML123	157	159	MLD3151	BT003257	7.48	0.02	0.03	14.20	-999	-999	-999	-999	-999	-999	-999	-999	-999	3.7	-999	4100	-999	-999	-999	1200	-999	1600	100
D	ML123	159	161	MLD3152	BT003257	12.89	0.04	0.04	16.80	-999	-999	-999	-999	-999	-999	-999	-999	-999	4.7	-999	4800	-999	-999	-999	800	-999	1900	100
D	ML123	161	163	MLD3153	BT003257	6.14	0.01	0.03	12.80	-999	-999	-999	-999	-999	-999	-999	-999	-999	2.8	-999	11600	-999	-999	-999	700	-999	4600	200
D	ML123	163	165	MLD3154	BT003257	4.58	0.01	0.02	12.00	-999	-999	-999	-999	-999	-999	-999	-999	-999	2.3	-999	2700	-999	-999	-999	600	-999	1000	100
D	ML123	165	167	MLD3155	BT003257	1.02	-0.01	0.01	9.00	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.6	-999	800	-999	-999	-999	400	-999	300	-100
D	ML123	167	169	MLD3156	BT003257	1.83	-0.01	0.02	9.50	-999	-999	-999	-999	-999	-999	-999	-999	-999	1.1	-999	1800	-999	-999	-999	700	-999	700	100
D	ML123	169	171	MLD3157	BT003257	2.01	0.01	0.49	10.20	-999	-999	-999	-999	-999	-999	-999	-999	-999	1.9	-999	1600	-999	-999	-999	2000	-999	600	-100
D	ML123	171	173	MLD3158	BT003257	0.68	-0.01	0.02	9.40	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.5	-999	2300	-999	-999	-999	300	-999	900	-100
D	ML123	173	175	MLD3164	BT003257	0.54	-0.01	0.02	9.20	-999	-999	-999	-999	-999	-999	-999	-999	-999	1	-999	14300	-999	-999	-999	1500	-999	6000	100
D	ML123	175	177	MLD3165	BT003257	1.85	-0.01	0.02	7.60	-999	-999	-999	-999	-999	-999	-999	-999	-999	1.2	-999	800	-999	-999	-999	1100	-999	200	100
D	ML124	218	220	MLD3166	BT003543	156.47	0.10	0.03	26.80	-999	-999	-999	-999	-999	-999	-999	-999	-999	1.2	-999	600	10	114	-999	600	-999	100	200
D	ML124	220	222	MLD3167	BT003543	4.74	0.07	0.03	27.80	-999	-999	-999	-999	-999	-999	-999	-999	-999	3.2	-999	400	-999	-999	-999	900	-999	-100	300
D	ML124	222	224	MLD3168	BT003543	2.88	0.03	0.03	29.00	-999	-999	-999	-999	-999	-999	-999	-999	-999	6.1	-999	400	-999	-999	-999	700	-999	-100	200
D	ML124	224	226	MLD3169	BT003543	2.46	0.03	0.02	24.40	-999	-999	-999	-999	-999	-999	-999	-999	-999	2	-999	300	-999	-999	-999	300	-999	-100	200

H1000	Hole	From_m	To_m	Sample	Batch	Magsus_10-3SIU	Sn	WO3	Fe	LOI	Al	Ca	K	Mg	Na	P	Si	Ti	S	Ag	As	B	Bi	Co	Cu	Ni	Pb	Zn
H1001							%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
D	ML124	226	228	MLD3170	BT003543	3.12	0.03	0.02	26.80	-999	-999	-999	-999	-999	-999	-999	-999	-999	5	-999	400	-999	-999	-999	1100	-999	-100	200
D	ML124	228	230	MLD3171	BT003543	72.62	0.03	0.05	27.90	5.54	4.66	3.04	4.27	1.86	0.0683	-999	13.3	0.858	3.4	-999	400	-999	42	-999	1800	-999	-100	300
D	ML124	230	232	MLD3172	BT003543	104.21	0.17	0.07	34.70	0.5	3.88	3.48	3.52	1.58	0.1235	-999	12.55	0.655	2.1	-999	4000	-10	433	-999	1000	-999	1400	300
D	ML124	232	234	MLD3173	BT003543	241.07	0.04	0.06	33.50	1.59	4.12	3.17	3.75	1.705	0.1305	-999	11.95	0.674	0.9	-999	11100	-999	398	-999	1100	-999	4400	500
D	ML124	234	236	MLD3174	BT003543	57.72	0.04	0.07	26.00	1.92	5.36	6.02	3.94	1.86	0.258	-999	15.25	0.81	1.2	-999	400	-999	128	-999	1100	-999	-100	500
D	ML124	236	238	MLD3175	BT003543	148.26	0.06	0.05	27.10	0.84	4.87	6.63	2.64	1.915	0.458	-999	14.65	0.902	1.4	-999	500	-999	14	-999	900	-999	-100	400
D	ML124	238	240	MLD3176	BT003543	7.8	0.04	0.04	17.30	1.24	5.76	7.81	1.89	3.09	0.888	-999	18	1.285	1	-999	700	-999	38	-999	400	-999	200	200
D	ML124	240	242	MLD3177	BT003543	71.66	0.11	0.04	22.10	0.75	4.93	7.39	1.555	2.48	0.634	-999	16	1.14	1.1	-999	400	200	4.16	-999	500	-999	-100	200
D	ML124	242	244	MLD3178	BT003543	4.47	0.05	0.02	20.70	2.7	5.76	8.47	3.49	1.91	0.5	-999	15.6	0.908	1	-999	400	-10	675	-999	900	-999	-100	500
D	ML124	244	246	MLD3179	BT003543	1.55	0.03	0.03	19.20	4.05	5.87	12.5	4.06	1.33	0.212	-999	13.85	0.564	0.2	-999	600	-10	623	-999	400	-999	200	300
D	ML124	246	248	MLD3180	BT003543	17	0.13	0.04	20.10	1.55	5.28	9.98	1.23	2.39	0.569	-999	16.4	1.13	1	-999	500	710	22.9	-999	700	-999	100	300
D	ML124	248	250	MLD3181	BT003543	221.49	0.19	0.09	32.50	0.72	3.7	5.27	1.695	1.605	0.601	-999	12.25	0.825	1.4	-999	700	1120	52.2	-999	1100	-999	200	500
D	ML124	250	252	MLD3182	BT003543	518.6	0.12	0.08	37.30	-0.25	3.66	2.71	2.95	1.5	0.196	-999	10.9	0.798	1	-999	400	220	55.5	-999	600	-999	-100	300
D	ML124	252	254	MLD3190	BT003543	73.91	0.09	0.05	33.60	1.76	3.59	5.68	1.555	1.625	0.357	-999	11.65	0.836	1.2	-999	600	100	47.3	-999	700	-999	100	300
D	ML124	254	256	MLD3191	BT003543	307.96	0.19	0.06	35.60	2.22	3.74	5.69	2.48	1.35	0.223	-999	11.35	0.737	1.2	-999	800	1040	49.9	-999	500	-999	200	200
D	ML124	256	258	MLD3192	BT003543	130.63	0.14	0.04	29.50	2.5	4.56	4.34	3.77	1.595	0.1775	-999	12.45	0.897	2.2	-999	400	930	13.35	-999	700	-999	-100	200
D	ML124	258	260	MLD3193	BT003543	151.2	0.06	0.17	32.10	1.56	4.04	3.89	2.89	1.715	0.241	-999	11.95	0.872	2.3	-999	700	70	39.9	-999	900	-999	200	200
D	ML124	260	262	MLD3194	BT003543	337.03	0.11	0.08	37.40	0.46	3.25	3.77	2.11	1.73	0.238	-999	11.4	0.787	1.5	-999	800	1720	43.6	-999	600	-999	200	200
D	ML124	262	264	MLD3195	BT003543	11.1	0.12	0.04	29.70	0.64	4.57	4.87	2.95	1.97	0.329	-999	13.05	1.03	1.1	-999	4300	1870	208	-999	400	-999	1600	200
D	ML124	264	266	MLD3196	BT003543	12.58	0.16	0.05	28.50	1.46	4.66	6.93	1.945	1.9	0.48	-999	13.4	0.946	1.1	-999	1000	1960	97	-999	700	-999	300	200
D	ML124	266	268	MLD3197	BT003543	43.35	0.13	0.04	25.70	2.3	4.5	8.68	0.967	2.48	0.599	-999	14.75	1.17	0.8	-999	900	1380	77.7	-999	400	-999	200	200
D	ML125	76.2	85.2	MLD3254	BT003542	0.54	-0.01	0.02	16.20	-999	-999	-999	-999	-999	-999	-999	-999	-999	-0.1	-999	700	-999	-999	-999	-100	-999	200	-100
D	ML125	85.2	97.2	MLD3255	BT003542	0.02	-0.01	0.03	13.40	-999	-999	-999	-999	-999	-999	-999	-999	-999	-0.1	-999	100	-999	-999	-999	-100	-999	-100	800
D	ML125	97.2	100.2	MLD3256	BT003542	0.27	-0.01	0.01	11.60	-999	-999	-999	-999	-999	-999	-999	-999	-999	-0.1	-999	200	-999	-999	-999	-100	-999	-100	300
D	ML125	100.2	106.2	MLD3257	BT003542	0.21	-0.01	0.01	13.50	-999	-999	-999	-999	-999	-999	-999	-999	-999	-0.1	-999	200	-999	-999	-999	100	-999	-100	400
D	ML125	106.2	111.9	MLD3258	BT003542	0.16	-0.01	0.01	11.30	-999	-999	-999	-999	-999	-999	-999	-999	-999	-0.1	-999	-100	-999	-999	-999	-100	-999	-100	500
D	ML125	111.9	121.2	MLD3259	BT003542	121.85	-0.01	0.02	18.20	2.41	0.927	0.619	0.0096	6.27	0.0293	-999	5.67	1.115	1.2	-999	200	-999	-2	-999	-100	-999	-100	900
D	ML125	121.2	124.2	MLD3264	BT003542	310.78	0.03	0.04	38.90	6.48	3.12	0.575	3.19	1.7	0.0235	-999	12.25	0.722	0.2	-999	400	-999	3	-999	-100	-999	-100	-100
D	ML125	124.2	126	MLD3267	BT003542	3.64	0.01	0.03	31.70	-999	-999	-999	-999	-999	-999	-999	-999	-999	5.5	-999	200	-999	-999	-999	800	-999	-100	-100
D	ML125	126	128	MLD3268	BT003542	3.46	-0.01	0.03	33.40	-999	-999	-999	-999	-999	-999	-999	-999	-999	4.6	-999	200	-999	-999	-999	400	-999	-100	-100
D	ML125	128	130	MLD3269	BT003542	2.1	0.01	0.03	31.90	-999	-999	-999	-999	-999	-999	-999	-999	-999	4.8	-999	300	-999	-999	-999	800	-999	-100	-100
D	ML125	130	132	MLD3270	BT003542	4.34	-0.01	0.03	31.20	-999	-999	-999	-999	-999	-999	-999	-999	-999	8.6	-999	300	-999	-999	-999	1200	-999	-100	-100
D	ML125	132	134	MLD3271	BT003542	2.76	0.02	0.03	28.80	-999	-999	-999	-999	-999	-999	-999	-999	-999	10	-999	300	-999	-999	-999	1400	-999	-100	-100
D	ML125	134	136.2	MLD3272	BT003542	51.6	0.07	0.04	31.30	-999	-999	-999	-999	-999	-999	-999	-999	-999	4.2	-999	300	-999	-999	-999	600	-999	-100	-100
D	ML125	136.2	142	MLD3273	BT003542	0.43	0.18	0.09	22.20	-999	-999	-999	-999	-999	-999	-999	-999	-999	4.8	-999	1000	90	21.6	-999	1100	-999	300	300
D	ML125	142	144	MLD3274	BT003542	100.16	0.59	0.04	31.50	-999	-999	-999	-999	-999	-999	-999	-999	-999	7.6	-999	1700	4610	36.9	-999	1200	-999	600	200
D	ML125	144	146	MLD3275	BT003542	17.45	0.07	0.06	27.90	-999	-999	-999	-999	-999	-999	-999	-999	-999	9.9	-999	1800	10	62.9	-999	1400	-999	600	200
D	ML125	146	148	MLD3276	BT003542	18.13	0.10	0.05	28.60	-999	-999	-999	-999	-999	-999	-999	-999	-999	6.9	-999	2300	790	139	-999	800	-999	800	100
D	ML125	148	150	MLD3277	BT003542	5.66	0.10	0.05	19.50	-999	-999	-999	-999	-999	-999	-999	-999	-999	3.6	-999	1100	500	41	-999	600	-999	300	200
D	ML125	150	152	MLD3278	BT003542	3.19	0.16	0.06	28.60	-999	-999	-999	-999	-999	-999	-999	-999	-999	3.1	-999	1100	2280	22.6	-999	600	-999	400	200
D	ML125	152	154	MLD3279	BT003542	3.68	0.06	0.04	16.10	-999	-999	-999	-999	-999	-999	-999	-999	-999	2.1	-999	700	-999	-999	-999	600	-999	200	200
D	ML125	154	156	MLD3280	BT003542	12.26	0.03	0.03	17.80	-999	-999	-999	-999	-999	-999	-999	-999	-999	3.9	-999	1500	-999	-999	-999	500	-999	500	300
D	ML125	156	158	MLD3281	BT003542	2.37	0.06	0.03	16.20	-999	-999	-999	-999	-999	-999	-999	-999	-999	3.3	-999	1100	-999	-999	-999	800	-999	300	200
D	ML125	158	160	MLD3282	BT003542	3.29	0.05	0.05	21.90	-999	-999	-999	-999	-999	-999	-999	-999	-999	4.6	-999	1500	-999	-999	-999	1000	-999	500	300
D	ML125	160	162	MLD3283	BT003542	2.69	0.09	0.06	20.20	-999	-999	-999	-999	-999	-999	-999	-999	-999	3.3	-999	1600	-999	-999	-999	600	-999	600	200
D	ML125	162	164	MLD3287	BT003542	4.22	-0.01	0.01	9.90	-999	-999	-999	-999	-999	-999	-999	-999	-999	2.1	-999	900	-999	-999	-999	200	-999	300	-100
D	ML125	164	166	MLD3288	BT003542	4.28	0.03	0.02	12.20	-999	-999	-999	-999	-999	-999	-999	-999	-999	2.3	-999	900	-999	-999	-999	400	-999	300	200
D	ML125	166	168	MLD3289	BT003542	2.05	0.05	0.03	16.40	-999	-999	-999	-999	-999	-999	-999	-999	-999	3.4	-999	1900	-999	-999	-999	400	-999	800	-100
D	ML125	168	170	MLD3290	BT003542	0.44	0.02	0.02	11.30	-999	-999	-999	-999	-999	-999	-999	-999	-999	2.5	-999	1200	-999	-999	-999	100	-999	400	200
D	ML125	170	172	MLD3291	BT003542	2.35	-0.01	0.02	11.40	-999	-999	-999	-999	-999	-999	-999	-999	-999	2.5	-999	1200	-999	-999	-999	300	-999	400	-100
D	ML125	172	174	MLD3292	BT003542	3.14	0.01	0.03	12.30	-999	-999	-999	-999	-999	-999	-999	-999	-999	2.5	-999	600	-999	-999	-999	200	-999	200	-100
D	ML125	174	176	MLD3293	BT003542	0.56	-0.01	0.02	6.40	-999	-999	-999	-999	-999	-999	-999	-999	-999	1.1	-999	1300	-999	-999	-999	200	-999	500	-100
D	ML126	115	117	MLD3294	BT004300	3.01	-0.01	0.01	9.70	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.8	-999	300	-999	-999	-999	100	-999	-100	100
D	ML126	117	119	MLD3295	BT004300	5.71	0.01	0.02	7.70	-999	-999	-999	-999	-999	-999	-999	-999	-999	1	-999	200	-999	-999	-999	100	-999	-100	-100
D	ML126	119	121	MLD3296	BT004300	5.34	0.01	0.03	9.30	-999	-999	-999	-999	-999	-999	-999	-999	-999	1.6	-999	200	-999	-999	-999	100	-999	-100	200
D	ML126	121	123	MLD3297	BT004300	6.84	0.01	0.02	8.40	-999	-999	-999	-999	-999	-999	-999	-999	-999	1.7	-999	100	-999	-999	-999	200	-999	-100	100
D	ML126	123	125	MLD3298	BT004300	4.35	-0.01	-0.01	7.80	-999	-999	-999	-999	-999	-999	-999	-999	-999	1.3	-999	200	-999	-999	-999	200	-999	-100	100
D	ML126	125	127	MLD3299	BT004300	5.83	0.02	0.02	8.50	-999	-999	-999	-999	-999	-999	-999	-999	-999	1.1	-999	400	-999	-999	-999	300	-999	-100	100
D	ML126	127	129	MLD3300	BT004300	97.63	0.17	0.12	25.90	-999	-999	-999	-999	-999	-999	-999	-999	-999	4.2	-999	800	1380	121.5	-999	300	-999	200	200
D	ML126	129	131	MLD3301	BT004300	16.47	0.47	0.15	41.90	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.5	-999	6200	8560	294	-999	-100	-999	2400	300

H1000	Hole	From_m	To_m	Sample	Batch	Magsus_10-3SIU	Sn	WO3	Fe	LOI	Al	Ca	K	Mg	Na	P	Si	Ti	S	Ag	As	B	Bi	Co	Cu	Ni	Pb	Zn
H1001							%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
D	ML126	131	133	MLD3302	BT004300	26.19	0.23	0.07	38.50	-999	-999	-999	-999	-999	-999	-999	-999	-999	11.4	-999	1900	1870	143	-999	1300	-999	600	300
D	ML126	133	135	MLD3303	BT004300	8.29	0.13	0.09	29.60	-999	-999	-999	-999	-999	-999	-999	-999	-999	7.5	-999	62000	1120	245	-999	3100	-999	25300	300
D	ML126	135	137	MLD3304	BT004300	3.05	0.02	0.04	21.50	-999	-999	-999	-999	-999	-999	-999	-999	-999	1.7	-999	4600	800	26	-999	1200	-999	1800	200
D	ML126	137	139	MLD3305	BT004300	85.33	0.22	0.1	29.20	-999	-999	-999	-999	-999	-999	-999	-999	-999	2.6	-999	600	3660	36.9	-999	500	-999	100	300
D	ML126	139	141	MLD3306	BT004300	36.06	0.29	0.09	28.10	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.3	-999	900	5910	139.5	-999	400	-999	200	400
D	ML126	141	143	MLD3310	BT004300	24	0.31	0.11	27.50	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.6	-999	2600	5270	113.5	-999	300	-999	900	300
D	ML126	143	145	MLD3311	BT004300	3.69	0.64	0.19	29.50	-999	-999	-999	-999	-999	-999	-999	-999	-999	1.2	-999	1500	6590	268	-999	300	-999	500	300
D	ML126	145	147	MLD3312	BT004300	77.55	0.36	0.12	41.20	-0.9	3.25	4.91	1.425	1.26	0.388	-999	9.46	0.484	0.1	-999	500	5540	39	-999	200	-999	100	300
D	ML126	147	149	MLD3313	BT004300	230.03	0.25	0.24	32.40	1.27	4.01	6.71	0.966	1.695	0.547	-999	11.9	0.672	0.1	-999	400	3930	9.34	-999	-100	-999	-100	200
D	ML126	149	151	MLD3314	BT004300	93.74	0.27	0.1	31.20	-0.3	4.07	9.97	0.689	1.83	0.457	-999	13.65	0.71	0.4	-999	600	9570	23.4	-999	400	-999	100	400
D	ML126	151	153	MLD3315	BT004300	36.8	0.28	0.04	31.00	-0.3	3.18	12.1	0.108	1.785	0.1155	-999	10.55	0.593	0.3	-999	1100	4650	202	-999	300	-999	400	400
D	ML126	153	155	MLD3316	BT004300	14.66	0.17	0.03	21.00	3.22	3.98	15.55	0.233	2.11	0.273	-999	13.65	0.736	0.7	-999	700	5400	7.29	-999	400	-999	300	400
D	ML126	155	157	MLD3317	BT004300	7.98	0.15	0.03	16.70	2.83	4.65	18.8	0.0913	2.38	0.0947	-999	15.85	0.923	0.4	-999	700	4310	8.76	-999	300	-999	200	300
D	ML126	157	159	MLD3318	BT004300	63.6	0.12	0.03	20.00	2.72	4.66	14.7	0.1675	2.42	0.1585	-999	13.1	0.817	1.4	-999	700	6330	47.1	-999	700	-999	200	500
D	ML126	159	161	MLD3319	BT004300	177.43	0.32	0.28	35.10	1.16	3.76	11.3	0.481	1.51	0.1065	-999	9.15	0.569	0.4	-999	900	3780	115.5	-999	200	-999	200	400
D	ML126	161	163	MLD3320	BT004300	175.76	0.18	0.06	31.20	2.71	4.17	9.94	0.992	1.375	0.487	-999	11.95	0.535	0.6	-999	2100	3770	68	-999	400	-999	700	400
D	ML126	163	165	MLD3323	BT004300	86.19	0.33	0.59	29.20	1.66	3.93	10.3	0.964	1.34	0.555	-999	11.4	0.49	0.8	-999	3300	5190	132.5	-999	400	-999	1200	300
D	ML126	165	167	MLD3324	BT004300	24.41	0.08	0.03	19.10	1.68	5.67	9.21	2.11	2.46	0.869	-999	17.25	0.91	0.3	-999	500	1620	31.2	-999	300	-999	-100	200
D	ML126	167	169	MLD3325	BT004300	112.82	0.42	0.1	37.90	-0.3	4.13	5.7	3.1	1.66	0.276	-999	10.95	0.56	0.3	-999	4600	9510	266	-999	400	-999	1700	400
D	ML126	169	171	MLD3326	BT004300	154.23	0.21	0.08	27.60	1.33	4.3	9.25	0.932	2.16	0.506	-999	12.6	0.756	0.8	-999	1600	4820	99.2	-999	400	-999	500	400
D	ML126	171	173	MLD3327	BT004300	87.83	0.12	0.02	14.90	3.57	4.54	17.9	0.2	2.67	0.191	-999	13.05	0.975	1	-999	600	4010	11.95	-999	500	-999	200	300
D	ML126	173	175	MLD3328	BT004300	50.31	0.11	0.02	15.20	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.2	-999	700	6360	6.97	-999	300	-999	200	200
D	ML126	175	177	MLD3329	BT004300	23.29	0.16	0.03	18.80	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.2	-999	500	7010	4.97	-999	500	-999	100	200
D	ML126	177	179	MLD3330	BT004300	14.15	0.03	0.02	9.80	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.5	-999	300	1460	0.31	-999	300	-999	-100	200
D	ML126	179	181	MLD3331	BT004300	18	0.12	0.02	17.80	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.4	-999	500	6880	52.1	-999	400	-999	100	200
D	ML126	181	183	MLD3335	BT004300	15.92	0.10	0.02	17.30	-999	-999	-999	-999	-999	-999	-999	-999	-999	1.3	-999	800	6250	23.5	-999	300	-999	200	200
D	ML126	183	185	MLD3336	BT004300	14.15	0.13	0.03	21.20	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.4	-999	600	7050	15.95	-999	200	-999	200	200
D	ML126	185	187	MLD3337	BT004300	3.1	0.07	0.02	13.30	-999	-999	-999	-999	-999	-999	-999	-999	-999	1	-999	900	1180	22.4	-999	900	-999	300	1100
D	ML126	187	189	MLD3338	BT004300	28.32	0.09	0.02	16.90	-999	-999	-999	-999	-999	-999	-999	-999	-999	1.1	-999	400	3860	1.74	-999	300	-999	100	200
D	ML126	189	191	MLD3339	BT004300	1.77	0.03	0.02	13.10	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.9	-999	300	80	1.37	-999	400	-999	-100	400
D	ML126	191	193	MLD3340	BT004300	4.63	0.10	0.03	15.20	-999	-999	-999	-999	-999	-999	-999	-999	-999	1.1	-999	300	660	6.15	-999	500	-999	-100	900
D	ML126	193	195	MLD3341	BT004300	12.65	0.23	0.04	27.80	-999	-999	-999	-999	-999	-999	-999	-999	-999	2	-999	1100	3130	36.5	-999	500	-999	400	400
D	ML126	195	197	MLD3342	BT004300	3.51	0.10	0.5	25.20	-999	-999	-999	-999	-999	-999	-999	-999	-999	2.8	-999	1200	1590	30.4	-999	1900	-999	400	400
D	ML126	197	199	MLD3343	BT004300	76.42	0.05	0.05	16.90	-999	-999	-999	-999	-999	-999	-999	-999	-999	2.4	-999	1500	220	85.6	-999	500	-999	500	400
D	ML126	199	201	MLD3344	BT004300	44.52	0.28	0.04	27.70	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.7	-999	600	4730	62.9	-999	500	-999	200	500
D	ML126	201	203	MLD3345	BT004300	7.55	0.33	0.08	37.50	-999	-999	-999	-999	-999	-999	-999	-999	-999	1.3	-999	1200	4590	23.4	-999	700	-999	400	400
D	ML126	203	205	MLD3346	BT004300	6.8	0.21	0.07	34.20	-999	-999	-999	-999	-999	-999	-999	-999	-999	1.2	-999	1300	8320	69	-999	400	-999	400	300
D	ML126	205	207	MLD3347	BT004300	4.28	0.20	0.04	27.40	-999	-999	-999	-999	-999	-999	-999	-999	-999	1.6	-999	2300	6700	39.1	-999	600	-999	800	300
D	ML126	207	209	MLD3348	BT004300	7.46	0.18	0.04	25.40	-999	-999	-999	-999	-999	-999	-999	-999	-999	1.3	-999	600	9660	24.7	-999	900	-999	200	400
D	ML126	209	211	MLD3349	BT004300	18.61	0.21	0.04	32.20	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.5	-999	600	3430	30.9	-999	500	-999	200	400
D	ML126	211	213	MLD3350	BT004300	44.95	0.04	0.04	24.10	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.7	-999	300	-999	-999	-999	400	-999	-100	400
D	ML126	213	215	MLD3351	BT004300	8.11	0.08	0.02	14.20	-999	-999	-999	-999	-999	-999	-999	-999	-999	1.1	-999	300	-999	-999	-999	500	-999	100	300
D	ML126	215	217	MLD3352	BT004300	15.35	0.12	0.03	19.80	-999	-999	-999	-999	-999	-999	-999	-999	-999	1.6	-999	500	-999	-999	-999	700	-999	100	300
D	ML126	217	219	MLD3353	BT004300	8.96	0.04	0.02	11.40	-999	-999	-999	-999	-999	-999	-999	-999	-999	1.3	-999	300	-999	-999	-999	300	-999	-100	200
D	ML126	219	221	MLD3354	BT004300	4.57	0.06	0.02	16.00	-999	-999	-999	-999	-999	-999	-999	-999	-999	1.4	-999	500	-999	-999	-999	600	-999	200	300
D	ML126	221	223	MLD3358	BT004300	86.64	0.06	0.02	14.00	-999	-999	-999	-999	-999	-999	-999	-999	-999	1.7	-999	300	-999	-999	-999	400	-999	100	300
D	ML126	223	225	MLD3359	BT004300	52.93	0.06	0.03	15.00	-999	-999	-999	-999	-999	-999	-999	-999	-999	1.5	-999	600	-999	-999	-999	600	-999	200	400
D	ML126	225	227	MLD3360	BT004300	0.57	0.03	0.02	9.00	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.9	-999	200	-999	-999	-999	400	-999	-100	200
D	ML126	227	229	MLD3361	BT004300	3	0.02	0.02	14.00	-999	-999	-999	-999	-999	-999	-999	-999	-999	1.8	-999	200	-999	-999	-999	900	-999	-100	600
D	ML126	229	231	MLD3362	BT004300	28	0.02	0.05	24.00	-999	-999	-999	-999	-999	-999	-999	-999	-999	1.2	-999	400	-999	-999	-999	200	-999	-100	300
D	ML127	189	191	MLD3363	BT003924	0.59	-0.01	0.02	8.20	-999	-999	-999	-999	-999	-999	-999	-999	-999	-0.1	-999	200	-999	-999	-999	100	-999	-100	200
D	ML127	191	193	MLD3364	BT003924	0.49	-0.01	0.01	7.50	-999	-999	-999	-999	-999	-999	-999	-999	-999	-0.1	-999	-100	-999	-999	-999	100	-999	-100	100
D	ML127	193	195	MLD3365	BT003924	2.13	-0.01	0.01	9.30	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.7	-999	100	-999	-999	-999	100	-999	-100	200
D	ML127	195	197	MLD3366	BT003924	2.92	-0.01	0.01	7.60	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.8	-999	100	-999	-999	-999	100	-999	-100	200
D	ML127	197	199	MLD3367	BT003924	0.57	-0.01	0.02	6.50	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.1	-999	600	-999	-999	-999	-100	-999	200	100
D	ML127	199	201	MLD3368	BT003924	4.09	0.06	0.02	10.60	-999	-999	-999	-999	-999	-999	-999	-999	-999	-0.1	-999	500	-999	-999	-999	-100	-999	100	200
D	ML127	201	203	MLD3369	BT003924	15.76	0.07	0.01	13.90	-999	-999	-999	-999	-999	-999	-999	-999	-999	1.1	-999	300	-999	-999	-999	300	-999	100	100
D	ML127	203	205	MLD3370	BT003924	93.16	0.17	0.03	17.50	2.04	5.55	3.92	2.39	1.835	1.275	-999	19.45	0.695	2.7	-999	300	40	16.35	-999	300	-999	-100	100
D	ML127	205	207	MLD3371	BT003924	58.15	0.31	0.21	26.00	2.6	4.15	3.19	3.32	1.725	0.329	-999	14.55	0.671	3.8	-999	700	10	31.2	-999	800	-999	200	200
D	ML127	207	209	MLD3372	BT003924	245.84	0.89	0.61	36.10	2.4	3.66	1.48	4.06	1.67	0.106	-999	11.75	0.623	5.2	-999	3400	20	179	-999	1000	-999	1200	200

H1000	Hole	From_m	To_m	Sample	Batch	Magsus_10-3SIU	Sn	WO3	Fe	LOI	Al	Ca	K	Mg	Na	P	Si	Ti	S	Ag	As	B	Bi	Co	Cu	Ni	Pb	Zn
H1001							%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
D	ML127	209	211	MLD3373	BT003924	496.2	0.33	0.92	41.80	0.12	2.82	1.67	2.62	1.105	0.126	-999	9.65	0.455	2.2	-999	3800	590	134.5	-999	600	-999	1300	200
D	ML127	211	213	MLD3376	BT003924	266.13	0.03	0.08	32.10	0.75	4.32	6.04	2.72	1.98	0.307	-999	14.75	0.779	0.5	-999	2900	160	37.9	-999	200	-999	1000	200
D	ML127	213	215	MLD3377	BT003924	253.43	0.27	0.08	31.30	0.5	4.27	6.31	2.32	2.02	0.4	-999	14.75	0.848	0.4	-999	1600	1420	39	-999	100	-999	500	100
D	ML127	215	217	MLD3378	BT003924	85.06	0.08	0.06	24.00	1	4.78	7.33	1.865	2.34	0.668	-999	15.75	0.87	1.3	-999	2100	260	325	-999	400	-999	800	200
D	ML127	217	219	MLD3379	BT003924	68.69	0.09	0.06	26.20	1.21	4.87	6.32	2.77	2.78	0.349	-999	14.6	1.045	1.8	-999	800	50	63.8	-999	500	-999	300	400
D	ML127	219	221	MLD3383	BT003924	130.11	0.04	0.07	32.90	1.49	3.91	2.36	4.41	1.675	0.0915	-999	11.95	0.609	2	-999	5800	140	504	-999	600	-999	2200	200
D	ML127	221	223	MLD3384	BT003924	342.85	0.17	0.09	39.00	-0.37	3.46	4.69	1.84	1.835	0.391	-999	12.35	0.849	0.9	-999	700	1550	18.85	-999	300	-999	200	200
D	ML127	223	225	MLD3385	BT003924	292.47	0.17	0.04	32.50	-0.18	3.88	4.14	2.34	2.03	0.39	-999	12.6	0.937	0.6	-999	400	2650	25.3	-999	100	-999	-100	-100
D	ML127	225	227	MLD3386	BT003924	262.19	0.21	0.1	35.60	1.12	3.77	2.56	3.41	1.925	0.224	-999	11.15	0.772	1.9	-999	1000	2320	75.5	-999	500	-999	300	100
D	ML127	227	229	MLD3387	BT003924	187.72	0.47	0.14	37.00	0.47	3.71	2.3	3.31	1.86	0.173	-999	11.6	0.669	2.8	-999	1200	5290	229	-999	1200	-999	400	200
D	ML127	229	231	MLD3388	BT003924	32.49	0.51	0.06	36.10	-0.35	3.5	5.37	1.52	1.73	0.436	-999	11.85	0.72	1.9	-999	600	8440	67.2	-999	600	-999	100	100
D	ML127	231	233	MLD3389	BT003924	85.77	0.46	0.06	36.80	-1.28	3.9	3.84	2.47	1.935	0.387	-999	12.7	0.946	0.8	-999	500	9100	18	-999	100	-999	100	100
D	ML127	233	235	MLD3390	BT003924	227.01	0.25	0.08	39.40	-0.58	3.71	4.11	2.82	1.705	0.238	-999	11.95	0.74	1.1	-999	1100	7940	63.8	-999	300	-999	300	100
D	ML127	235	237	MLD3391	BT003924	55.45	0.26	0.05	35.40	-1.21	4.15	6.55	1.045	1.86	0.741	-999	13.05	0.85	1.6	-999	1700	4300	64.4	-999	500	-999	600	100
D	ML127	237	239	MLD3392	BT003924	13.97	0.18	0.05	26.80	0.81	4.61	5.53	2.23	1.96	0.645	-999	14.7	0.839	2	-999	800	3250	64	-999	400	-999	300	-100
D	ML127	239	241	MLD3393	BT003924	29.95	0.18	0.03	28.90	0.59	4.79	6.67	2.27	2.02	0.679	-999	15.1	0.821	1.3	-999	900	4540	137	-999	300	-999	300	200
D	ML127	241	243	MLD3394	BT003924	8.66	0.12	0.03	17.90	1.44	5.56	8.78	1.42	2.55	0.992	-999	17.35	1.045	1.7	-999	500	1120	34.3	-999	300	-999	100	100
D	ML127	243	245	MLD3395	BT003924	7.69	0.13	0.04	24.30	0.99	5.36	6.9	2.3	2.93	0.84	-999	15.65	1.02	1.1	-999	700	2580	67.9	-999	100	-999	200	100
D	ML127	245	247	MLD3396	BT003924	60.58	0.13	0.04	23.10	2.23	5.87	8.21	1.48	3.49	0.811	-999	15.25	1.21	2.1	-999	900	2490	43.9	-999	300	-999	300	100
D	ML127	247	249	MLD3397	BT003924	152.71	0.10	0.05	23.50	2.34	5.25	6.98	2.51	2.71	0.782	-999	15.95	0.986	1.4	-999	1100	870	52.7	-999	200	-999	300	-100
D	ML127	249	251	MLD3398	BT003924	72.72	0.08	0.04	18.60	1.03	5.25	9.59	1.12	3.07	0.814	-999	17.4	1.295	1.4	-999	500	-999	30	-999	200	-999	-100	200
D	ML127	251	253	MLD3399	BT003924	110.94	0.03	0.02	14.80	1.7	6.38	6.93	1.63	3.5	1.395	-999	20.2	1.26	2.1	-999	400	-999	2	-999	100	-999	-100	-100
D	ML127	253	255	MLD3400	BT003924	6.86	-0.01	0.01	10.40	-999	-999	-999	-999	-999	-999	-999	-999	-999	2.1	-999	400	-999	-999	-999	200	-999	100	-100
D	ML127	255	257	MLD3401	BT003924	9.34	0.02	0.02	13.20	-999	-999	-999	-999	-999	-999	-999	-999	-999	2.5	-999	400	-999	-999	-999	300	-999	100	-100
D	ML127	257	259	MLD3402	BT003924	9.91	0.02	0.03	15.00	-999	-999	-999	-999	-999	-999	-999	-999	-999	3	-999	400	-999	-999	-999	300	-999	-100	-100
D	ML127	259	261	MLD3406	BT003924	8.94	0.02	0.03	11.80	-999	-999	-999	-999	-999	-999	-999	-999	-999	3.7	-999	400	-999	-999	-999	300	-999	-100	-100
D	ML127	261	263	MLD3407	BT003924	4.74	-0.01	0.01	11.80	-999	-999	-999	-999	-999	-999	-999	-999	-999	3	-999	200	-999	-999	-999	200	-999	-100	-100
D	ML127	263	265	MLD3408	BT003924	1.45	0.01	0.02	9.60	-999	-999	-999	-999	-999	-999	-999	-999	-999	1.3	-999	300	-999	-999	-999	-100	-999	-100	-100
D	ML127	265	267	MLD3409	BT003924	1.45	-0.01	-0.01	7.90	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.2	-999	300	-999	-999	-999	-100	-999	100	-100
D	ML127	267	269	MLD3410	BT003924	7.73	-0.01	0.01	10.30	-999	-999	-999	-999	-999	-999	-999	-999	-999	2.3	-999	200	-999	-999	-999	300	-999	-100	100
D	ML127	269	271	MLD3411	BT003924	5.15	-0.01	0.01	8.40	-999	-999	-999	-999	-999	-999	-999	-999	-999	1.6	-999	300	-999	-999	-999	200	-999	-100	-100
D	ML127	271	273	MLD3412	BT003924	8.32	-0.01	0.02	13.50	-999	-999	-999	-999	-999	-999	-999	-999	-999	3.3	-999	300	-999	-999	-999	400	-999	-100	-100
D	ML127	273	275	MLD3413	BT003924	0.55	-0.01	-0.01	9.60	-999	-999	-999	-999	-999	-999	-999	-999	-999	-0.1	-999	-100	-999	-999	-999	-100	-999	-100	-100
D	ML127	275	277	MLD3414	BT003924	0.86	-0.01	0.01	9.70	-999	-999	-999	-999	-999	-999	-999	-999	-999	-0.1	-999	200	-999	-999	-999	-100	-999	-100	-100
D	ML128	93	97.1	MLD3415	BT004300	82.87	0.10	0.03	22.30	-999	-999	-999	-999	-999	-999	-999	-999	-999	1.7	-999	600	-999	-999	-999	400	-999	200	200
D	ML128	97.1	106.5	MLD3416	BT004300	5.1	-0.01	0.02	13.80	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.1	-999	300	-999	-999	-999	200	-999	-100	1100
D	ML128	106.5	109.5	MLD3417	BT004300	0.26	-0.01	0.02	14.50	-999	-999	-999	-999	-999	-999	-999	-999	-999	-0.1	-999	200	-999	-999	-999	100	-999	-100	700
D	ML128	109.5	115.5	MLD3418	BT004300	0.26	-0.01	0.02	14.60	-999	-999	-999	-999	-999	-999	-999	-999	-999	-0.1	-999	-100	-999	-999	-999	100	-999	-100	400
D	ML128	115.5	118.5	MLD3419	BT004300	1.52	-0.01	0.03	13.90	-999	-999	-999	-999	-999	-999	-999	-999	-999	-0.1	-999	200	-999	-999	-999	100	-999	-100	400
D	ML128	118.5	123	MLD3420	BT004300	0.88	-0.01	0.03	13.00	-999	-999	-999	-999	-999	-999	-999	-999	-999	1	-999	300	-999	-999	-999	200	-999	-100	400
D	ML128	123	125	MLD3421	BT004299	177.64	0.35	0.04	30.40	2.46	3.98	8.9	0.518	1.77	0.438	-999	12.6	0.893	1.6	-999	500	3510	6.09	-999	600	-999	-100	300
D	ML128	125	127	MLD3422	BT004299	252.82	0.24	0.04	28.10	2.69	3.51	11.65	0.353	1.525	0.281	-999	11.8	0.771	1.3	-999	500	2920	5.57	-999	500	-999	100	200
D	ML128	127	129	MLD3423	BT004299	219.35	0.30	0.05	30.50	2.4	3.58	10.45	0.498	2.09	0.445	-999	11.95	0.973	1.7	-999	700	2820	11.95	-999	500	-999	200	200
D	ML128	129	131	MLD3426	BT004299	145.57	0.29	0.05	31.50	1.68	3.46	9.96	0.518	2.05	0.434	-999	13.25	0.697	2.4	-999	600	4490	57	-999	500	-999	100	300
D	ML128	131	133	MLD3427	BT004299	168.16	0.27	0.11	38.40	-0.11	3.6	5.31	1.52	1.73	0.486	-999	13.1	0.85	1.1	-999	1000	5140	72.9	-999	500	-999	300	200
D	ML128	133	135	MLD3428	BT004299	103.32	0.53	0.09	35.00	-1.05	3.57	5.36	0.716	1.45	0.612	-999	11.25	0.715	2.2	-999	600	8880	23.8	-999	400	-999	100	200
D	ML128	135	137	MLD3432	BT004299	233.95	0.65	0.33	37.90	0.2	3.19	4.12	0.975	1.405	0.509	-999	10.35	0.658	2.6	-999	1100	7800	40.6	-999	400	-999	300	200
D	ML128	137	139	MLD3433	BT004299	148.41	0.10	0.08	22.80	1.24	4.92	6.8	1.31	1.885	1.005	-999	15.75	0.849	1.8	-999	1000	760	49.1	-999	600	-999	300	300
D	ML128	139	141	MLD3434	BT004299	111.21	0.11	0.1	26.20	1.46	4.79	7.68	1.215	1.845	0.841	-999	14.6	0.856	2	-999	1000	990	301	-999	400	-999	300	200
D	ML128	141	143	MLD3435	BT004299	5.75	0.04	0.08	17.60	-999	-999	-999	-999	-999	-999	-999	-999	-999	1.8	-999	800	-999	-999	-999	500	-999	300	200
D	ML128	143	145	MLD3436	BT004299	4.26	0.05	0.07	16.10	-999	-999	-999	-999	-999	-999	-999	-999	-999	1.9	-999	1000	-999	-999	-999	500	-999	300	200
D	ML128	145	147	MLD3437	BT004299	120.22	0.08	0.06	21.50	-999	-999	-999	-999	-999	-999	-999	-999	-999	3.4	-999	1300	-999	-999	-999	500	-999	500	200
D	ML128	147	149	MLD3438	BT004299	4.63	0.04	0.07	19.20	-999	-999	-999	-999	-999	-999	-999	-999	-999	2.8	-999	900	-999	-999	-999	800	-999	300	300
D	ML130	139	141	MLD3439	BT003932	2.53	0.02	0.01	8.90	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.6	-999	200	-999	-999	-999	200	-999	-100	200
D	ML130	141	143	MLD3440	BT003932	2.92	0.02	0.02	8.40	-999	-999	-999	-999	-999	-999	-999	-999	-999	1	-999	200	-999	-999	-999	100	-999	-100	100
D	ML130	143	145	MLD3441	BT003932	3.17	-0.01	-0.01	7.00	-999	-999	-999	-999	-999	-999	-999	-999	-999	1.1	-999	200	-999	-999	-999	200	-999	-100	100
D	ML130	145	147	MLD3442	BT003932	5.86	0.01	-0.01	8.60	-999	-999	-999	-999	-999	-999	-999	-999	-999	1.3	-999	200	-999	-999	-999	300	-999	-100	200
D	ML130	147	149	MLD3443	BT003932	6.87	-0.01	-0.01	7.00	-999	-999	-999	-999	-999	-999	-999	-999	-999	1.3	-999	100	-999	-999	-999	200	-999	-100	100
D	ML130	149	151	MLD3444	BT003932	3.43	0.17	0.02	18.30	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.6	-999	700	2870	76.6	-999	100	-999	200	200
D	ML130	151	153	MLD3445	BT003932	129.79	0.19	0.03	27.00	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.6	-999	700	9570	50.6	-999	400	-999	200	300

H1000	Hole	From_m	To_m	Sample	Batch	Magsus_10-3SIU	Sn	WO3	Fe	LOI	Al	Ca	K	Mg	Na	P	Si	Ti	S	Ag	As	B	Bi	Co	Cu	Ni	Pb	Zn
H1001							%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
D	ML130	153	155	MLD3446	BT003932	117.6	0.15	0.03	34.80	-999	-999	-999	-999	-999	-999	-999	-999	-999	1.1	-999	1000	5810	176.5	-999	500	-999	300	300
D	ML130	155	157	MLD3447	BT003932	49.66	0.20	0.03	29.80	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.8	-999	500	5270	9.74	-999	400	-999	100	300
D	ML130	157	159	MLD3448	BT003932	14.05	0.23	0.03	22.10	-999	-999	-999	-999	-999	-999	-999	-999	-999	1	-999	500	2490	50.6	-999	400	-999	200	200
D	ML130	159	161	MLD3449	BT003932	11.09	0.07	0.02	13.90	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.4	-999	300	2740	1.35	-999	200	-999	100	200
D	ML130	161	163	MLD3450	BT003932	21.86	0.11	0.02	17.60	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.8	-999	300	6020	1.12	-999	300	-999	-100	200
D	ML130	163	165	MLD3451	BT003932	43.2	0.09	0.02	16.90	-999	-999	-999	-999	-999	-999	-999	-999	-999	1.1	-999	500	4220	33.9	-999	500	-999	100	500
D	ML130	165	167	MLD3455	BT003932	101.29	0.08	0.02	14.70	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.8	-999	500	3170	1.58	-999	300	-999	100	200
D	ML130	167	169	MLD3456	BT003932	2.58	0.03	-0.01	9.70	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.9	-999	200	420	0.42	-999	300	-999	-100	200
D	ML130	169	171	MLD3457	BT003932	4.8	0.18	0.02	20.60	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.5	-999	200	5600	2.97	-999	500	-999	-100	400
D	ML130	171	173	MLD3458	BT003932	56.25	0.16	0.02	21.00	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.3	-999	300	5880	1.34	-999	100	-999	-100	200
D	ML130	173	175	MLD3459	BT003932	42.84	0.17	0.02	20.90	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.7	-999	300	3110	6.58	-999	300	-999	-100	400
D	ML130	175	177	MLD3460	BT003932	36.45	0.50	0.04	30.20	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.4	-999	500	7640	12.1	-999	200	-999	100	200
D	ML130	177	179	MLD3461	BT003932	92.16	0.50	0.04	36.70	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.3	-999	700	5830	27.8	-999	100	-999	200	200
D	ML130	179	181	MLD3462	BT003932	7.22	0.37	0.03	34.40	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.5	-999	600	9090	9.88	-999	-100	-999	200	200
D	ML130	181	183	MLD3463	BT003932	33.7	0.21	0.05	33.70	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.8	-999	700	6220	36.7	-999	300	-999	200	200
D	ML130	183	185	MLD3464	BT003932	520.33	0.06	0.11	42.10	0.28	3.18	2.41	2.17	1.845	0.133	-999	10.5	0.784	0.9	-999	1200	220	40.9	-999	400	-999	300	300
D	ML130	185	187	MLD3465	BT003932	591.34	0.09	0.05	38.80	0.09	3.34	2.84	2.08	2.08	0.208	-999	10.9	0.859	0.9	-999	800	240	36.8	-999	600	-999	200	400
D	ML130	187	189	MLD3466	BT003932	750.66	0.05	0.1	47.30	0.02	2.91	2.29	1.65	1.875	0.1575	-999	9.71	0.646	1.1	-999	800	170	24.3	-999	700	-999	200	300
D	ML130	189	191	MLD3469	BT003932	637.16	0.07	0.05	45.20	0.84	3.11	2.61	1.43	1.88	0.1615	-999	10.35	0.646	0.8	-999	2800	170	99	-999	200	-999	1000	300
D	ML130	191	193	MLD3470	BT003932	437.16	0.24	0.06	38.60	1.33	3.43	4.63	1.45	1.865	0.39	-999	11.65	0.734	1.1	-999	1300	520	41.7	-999	500	-999	400	300
D	ML130	193	195	MLD3471	BT003932	182.83	0.13	0.04	35.40	1.53	3.58	7.79	0.957	1.6	0.403	-999	12.4	0.699	2.1	-999	4800	220	50.9	-999	900	-999	1900	500
D	ML130	195	197	MLD3472	BT003932	212.23	0.31	0.03	23.60	1.86	3.37	12.25	0.61	1.485	0.331	-999	13.85	0.762	1.5	-999	900	1000	50.6	-999	600	-999	300	300
D	ML130	197	199	MLD3473	BT003932	74.63	0.18	0.01	9.90	1.39	5.37	9.99	2.44	0.738	1.24	-999	24.3	0.34	0.3	-999	200	360	13.65	-999	400	-999	-100	300
D	ML130	199	201	MLD3474	BT003932	29.67	0.03	0.03	27.80	-999	-999	-999	-999	-999	-999	-999	-999	-999	3.3	-999	2100	40	356	-999	1100	-999	800	400
D	ML130	201	203	MLD3475	BT003932	45.94	0.10	0.04	23.30	-999	-999	-999	-999	-999	-999	-999	-999	-999	1.8	-999	500	250	24.9	-999	1800	-999	100	300
D	ML130	203	205	MLD3479	BT003932	220.39	0.19	0.03	20.40	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.8	-999	500	170	40.7	-999	300	-999	100	200
D	ML130	205	207	MLD3480	BT003932	152.04	0.05	0.03	22.00	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.3	-999	300	-999	-999	-999	200	-999	-100	300
D	ML130	207	209	MLD3481	BT003932	52.98	0.05	0.03	17.80	-999	-999	-999	-999	-999	-999	-999	-999	-999	1.1	-999	200	-999	-999	-999	400	-999	-100	200
D	ML130	209	211	MLD3482	BT003932	59.75	0.03	0.02	15.20	-999	-999	-999	-999	-999	-999	-999	-999	-999	1.2	-999	300	-999	-999	-999	200	-999	-100	200
D	ML130	211	213	MLD3483	BT003932	21.2	0.09	0.02	19.30	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.8	-999	300	-999	-999	-999	100	-999	-100	200
D	ML130	213	215	MLD3484	BT003932	195.6	0.05	0.03	19.20	-999	-999	-999	-999	-999	-999	-999	-999	-999	1.1	-999	300	-999	-999	-999	300	-999	-100	400
D	ML130	215	217	MLD3485	BT003932	239.5	0.03	0.03	23.80	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.8	-999	200	-999	-999	-999	200	-999	-100	400
D	ML131	93	95	MLD3486	BT004298	72.97	-0.01	0.02	11.70	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.1	-999	1300	-999	-999	-999	200	-999	500	-100
D	ML131	95	97	MLD3487	BT004298	101.82	0.01	0.01	11.30	-999	-999	-999	-999	-999	-999	-999	-999	-999	-0.1	-999	200	-999	-999	-999	200	-999	-100	-100
D	ML131	97	99	MLD3488	BT004298	100.62	-0.01	0.02	11.70	-999	-999	-999	-999	-999	-999	-999	-999	-999	-0.1	-999	200	-999	-999	-999	500	-999	-100	200
D	ML131	99	101	MLD3489	BT004298	53.33	0.03	0.03	12.50	-999	-999	-999	-999	-999	-999	-999	-999	-999	-0.1	-999	400	-999	-999	-999	300	-999	-100	-100
D	ML131	101	103	MLD3490	BT004298	32.32	0.03	0.03	11.90	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.2	-999	300	-999	-999	-999	600	-999	-100	100
D	ML131	103	105	MLD3491	BT004298	80.35	0.02	0.02	11.00	-999	-999	-999	-999	-999	-999	-999	-999	-999	-0.1	-999	-100	-999	-999	-999	200	-999	-100	-100
D	ML131	105	107	MLD3492	BT004298	62.43	0.02	0.02	11.90	-999	-999	-999	-999	-999	-999	-999	-999	-999	-0.1	-999	200	-999	-999	-999	1600	-999	-100	900
D	ML131	107	109	MLD3493	BT004298	66.2	0.02	0.02	11.00	-999	-999	-999	-999	-999	-999	-999	-999	-999	-0.1	-999	100	-999	-999	-999	600	-999	-100	200
D	ML131	109	111	MLD3494	BT004298	68.97	-0.01	-0.01	11.60	-999	-999	-999	-999	-999	-999	-999	-999	-999	-0.1	-999	100	-999	-999	-999	200	-999	-100	-100
D	ML131	111	113	MLD3495	BT004298	84.87	-0.01	-0.01	11.40	-999	-999	-999	-999	-999	-999	-999	-999	-999	-0.1	-999	-100	-999	-999	-999	400	-999	-100	-100
D	ML131	113	115	MLD3496	BT004298	57.6	-0.01	0.01	11.30	-999	-999	-999	-999	-999	-999	-999	-999	-999	-0.1	-999	-100	-999	-999	-999	200	-999	-100	-100
D	ML131	233	235	MLD3497	BT004298	5.78	0.12	0.32	22.60	-999	-999	-999	-999	-999	-999	-999	-999	-999	1.3	-999	600	1900	61	-999	600	-999	200	-100
D	ML131	235	237	MLD3498	BT004298	39.19	0.18	0.44	27.80	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.5	-999	900	7340	47.9	-999	1300	-999	300	600
D	ML131	237	239	MLD3499	BT004298	47.03	0.08	0.04	16.10	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.3	-999	500	5530	9.8	-999	400	-999	200	-100
D	ML131	239	241	MLD3503	BT004298	9.06	0.13	0.09	18.00	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.4	-999	700	8130	130.5	-999	1300	-999	200	700
D	ML131	241	243	MLD3504	BT004298	39.23	0.16	0.13	23.00	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.4	-999	600	4770	88.8	-999	1000	-999	200	400
D	ML131	243	245	MLD3505	BT004298	4.01	0.16	0.06	22.90	-999	-999	-999	-999	-999	-999	-999	-999	-999	0.3	-999	600	5360	77.6	-999	300	-999	200	-100
D	ML131	245	247	MLD3506	BT004298	9.38	0.10	0.04	17.90	-999	-999	-999	-999	-999	-999	-999	-999	-999	1.9	-999	500	6440	24.2	-999	1200	-999	100	-100
D	ML131	247	249	MLD3507	BT004298	134.59	0.11	0.08	21.00	1.19	4.14	15.4	0.1765	1.955	0.1735	-999	12.8	0.985	1.4	-999	600	6760	84.4	-999	700	-999	200	200
D	ML131	249	251	MLD3508	BT004298	431.82	0.11	0.04	32.90	-0.06	2.81	11.2	0.101	1.165	0.0708	-999	9.58	0.608	2.2	-999	600	5220	74.8	-999	900	-999	100	200
D	ML131	251	253	MLD3509	BT004298	97.48	0.09	0.03	16.20	1.8	5	14.2	0.63	2.16	0.648	-999	17.35	0.911	1.3	-999	300	-999	64	-999	800	-999	-100	200
D	ML131	253	255	MLD3510	BT004298	244.73	0.12	0.55	25.50	0.93	3.75	12.2	0.436	1.585	0.274	-999	12.75	0.781	1.3	-999	500	-999	36	-999	600	-999	-100	-100
D	ML131	255	257	MLD3511	BT004298	185.24	0.09	0.04	22.90	1.24	4.16	10.4	0.6	1.845	0.496	-999	12.55	0.852	3.5	-999	400	-999	37	-999	1900	-999	-100	400
D	ML131	257	259	MLD3512	BT004298	425.58	0.19	0.06	40.30	1.15	1.53	8.06	0.0066	0.271	0.0126	-999	6.08	0.252	7.5	-999	600	-999	11	-999	2200	-999	-100	300
D	ML131	259	261	MLD3513	BT004298	438.7	0.13	0.05	37.20	0.55	2.71	11.2	0.0117	0.672	0.0049	-999	8.47	0.521	3.4	-999	700	-999	227	-999	1600	-999	100	300
D	ML131	261	263	MLD3514	BT004298	774.24	0.12	0.07	37.60	0.08	2.34	8.37	0.1655	0.73	0.1405	-999	7.77	0.509	1	-999	500	-999	7	-999	700	-999	-100	300
D	ML131	263	265	MLD3517	BT004298	236.21	0.06	0.02	18.50	2.25	4.65	13.25	0.549	1.92	0.398	-999	15	0.907	0.9	-999	300	-999	19	-999	500	-999	-100	-100
D	ML131	265	267	MLD3518	BT004298	173.32	0.05	0.03	18.30	1.32	4.06	14.6	0.279	1.99	0.364	-999	14.05	0.805	1.2	-999	600	-999	400	-999	900	-999	200	200

H1000	Hole	From_m	To_m	Sample	Batch	Magsus_10-3SIU	Sn	WO3	Fe	LOI	Al	Ca	K	Mg	Na	P	Si	Ti	S	Ag	As	B	Bi	Co	Cu	Ni	Pb	Zn
H1001							%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
D	ML131	267	269	MLD3519	BT004298	86.56	0.06	0.02	17.00	1.48	4.53	14.95	0.312	2.23	0.412	-999	15.65	0.898	1.3	-999	500	-999	273	-999	1300	-999	100	400
D	ML131	269	271	MLD3520	BT004298	45.77	0.03	0.02	12.30	1.11	5.12	14.1	0.513	2.59	0.705	-999	17.35	1.075	2.1	-999	600	-999	68	-999	600	-999	100	-100
D	ML131	271	273	MLD3521	BT004298	142.3	0.04	0.04	16.80	0.5	4.93	12.85	0.814	2.21	0.418	-999	14.8	0.965	1.5	-999	600	-999	56	-999	600	-999	100	200
D	ML131	273	275	MLD3522	BT004298	8.69	0.04	0.03	9.80	-999	-999	-999	-999	-999	-999	-999	-999	-999	1.6	-999	400	-999	-999	-999	400	-999	-100	-100
D	ML131	275	277	MLD3523	BT004298	4.25	0.03	0.02	10.90	-999	-999	-999	-999	-999	-999	-999	-999	-999	1	-999	300	-999	-999	-999	500	-999	-100	100
EOF																												

Appendix F

Drill core geology

Lithologic Codes	
Regolith (R*)	
R	undifferentiated regolith
RCAC	calcrete
RSIC	silcrete
RFEC	ferricrete
RL	undifferentiated laterite
RLG	lateritic gravel
RLI	in situ laterite
RLT	transported laterite
RCLY	in situ clay
RS	undifferentiated saprolite
RGOS	gossan
Unconsolidated Sediments (S*)	
S	undifferentiated sediment
SLG	lateritic gravel
SGVL	unconsolidated gravel
SPCS	unconsolidated pebbly or cobbly sands
SAND	unconsolidated sand
SILT	unconsolidated silt
SMUD	unconslidated mud
SCLY	unconsolidated clay
Sedimentary Rocks (S*)	
SS, qSS, vSS, lSS, cSS	>75% sandstone (undifferentiated) over minimum 5m logging interval, prefixes q = quartz, l = lithic, v = volcanogenic, c = calcareous
SM	>75% mudstone over minimum 5m logging interval
ST	>75% siltstone over minimum 5m logging interval
SSM	25-75% sandstone & mudstone over minimum 5m logging interval
SST	25-75% sandstone & siltstone over minimum 5m logging interval
SMH	shale
SML	slate
SMA	argillite (weakly metamorphosed mudstone)
SMP	phyllite
SGRT	grit
SSPC	pebbly or cobbly sandstone
SSIC	intraclastic sandstone and conglomerate
SCGM	monomict conglomerate
SCGP	polymict conglomerate
SBRM	monomict breccia
SBRP	polymict breccia
SCB	undifferentiated carbonate, prefixes o = oolitic, s = stromatolitic, b = bioclastic
SCBL	limestone
SCBD	dolomite
STIL	tillite
STUF	tuffite (redeposited)
SLAP	redeposited lapilli-stone
SCHT	chert
SBIF	banded iron formation
SLIG	lignite
Igneous Rocks (U* for Ultramafic, M* for Mafic, I* for Intermediate, F* for Felsic)	
U	undifferentiated ultramafic
UDUN	dunite
UHAR	harzburgite
UPX	pyroxenite
USERP	serpentinite
UKIM	kimberlite
ULAP	lamproite
ULAY	ultramafic lamprophyre
UK	komatiite
MG	gabbro
MGL	leucogabbro
MD	dolerite
MB	basalt
MBHM	high-magnesium basalt
MBP	pillow-basalt
MBHY	basaltic hyaloclastite
MLAP	mafic lapilli-stone
MTUF	mafic tuff
IA	andesite
ID	diorite
F	undifferentiated felsic rock

FG	undifferentiated granitoid
FGL	leucogranitoid
FGRA	granite
FGRD	granodiorite
FDIO	diorite
FMOZ	monzonite
FSYE	syenite
FTUF	felsic tuff
FV	undifferentiated felsic volcanic rock
FRHY	rhyolite
FDAC	dacite
Metamorphic Rocks (Z*)	
ZM	undifferentiated mafic schist
ZF	undifferentiated felsic schist
ZSCHT	undifferentiated schist
ZGNES	undifferentiated gneiss
ZMARB	marble
ZClTc	talc chlorite schist
ZCl	chlorite schist
ZClTi	chlorite - titanite schist
ZTc	talc schist
ZMI	mica schist
ZQZ	quartz schist
ZQSe	quartz - sericite schist
ZQTi	quartz - titanite schist
ZBt	biotite schist
ZBtCl	biotite chlorite schist
ZTr	tremolite rock
ZTrBt	tremolite-biotite rock
ZHF	hornfels
ZCS	calc-silicate
Metasomatic Rocks (Z*)	
ZSK	undifferentiated skarn
ZSKCS	calcsilicate skarn (>50% calcsilicate minerals)
ZSKM	magnetite skarn (>50% magnetite)
ZSKX	sulphide skarn (>50% sulphide)
ZG	undifferentiated greisen
Veins & Hydrothermal Breccias	
V*	Veins, Q = quartz, C = carbonate, X = sulphide, R = sericite, L = chlorite, T = tourmaline, F = flourite
Fault and Shear Rocks (X*)	
XMYL	mylonite
XFBI	incohesive fault breccia or fault gouge
XFBC	cataclasite or cohesive fault breccia
XHB	hydrothermal breccia
Cavities or No Recovery	
CAV	unidentified cavity
CAVW	workings
CAVD	drill hole
NREC	no sample recovery
NSAV	sample no longer available (applies to relogging)

Mineral & Alteration Codes			Texture Codes	
ac	actinolite		am	amygdaloidal
ak	ankerite		bn	boudins
ab	albite		bc	brecciated
al	almandine		bx	boxwork
an	anorthite		bz	breccia zone
am	amphibole		ds	disseminated
an	anatase		fr	fracture zone
asp	arsenopyrite		ft	fault
as	arsenates		fo	foliated (undiff)
az	azurite		fz	fault or fault zone
ba	baryte		lam	laminated
Bi	native bismuth		ms	massive
bt	biotite		pc	porphyroclastic
ca	carbonate		pb	porphyroblastic
cc	calcite		po	porphyritic
cd	cordierite		sc	cleaved
cdp	chrome diopside		sh	schistose
cl	chlorite		stwk	stockwork
cpy	chalcopyrite		sz	shear or shear zone
cpx	clinopyroxene		tf	tuffaceous
cr	chromite		vs	vesicular
cs	cassiterite		eu	euhedral
cv	chenevixite		su	subhedral
dd	diamond		an	anhedral
do	dolomite			
ep	epidote		lam	laminated (<10mm)
fe	fe-oxide or hydroxide		tnb	thin bedded (10-100mm)
fch	ferrocarpholite		mdb	medium bedded (100-300mm)
fl	flourite		tkb	thick bedded (>300mm)
fp	feldspar			
ga	galena		**Grainsize Codes**	
go	goethite		**Igneous & Metamorphic Grain Size**	
gr	graphitic		ifg	fine grained <1 mm
gt	garnet		img	medium grained 1-5 mm
he	hematite		icg	coarse grained 5-30 mm
hb	hornblende		ipg	pegamatitic >30 mm
il	ilmenite			
ka	kaolin			**Sedimentary Grain size**
ksp	undifferentiated k-feldspar		svfg	very fine grained <64 um (mud, silt & clay)
ky	kyanite		sfg	fine grained 64 um to 0.25 mm (fine sand)
lm	limonite (undifferentiated iron oxyhydroxide)		smg	medium grained 0.25 to 1 mm (medium sand)
lo	lollingite		scg	coarse grained 1 to 2 mm (coarse sand)
lw	ludwigite		svcg	very coarse grain >2mm (2 - 4mm granules, 4 - 16mm pebbles, 16-256 mm cobbles, >256 mm boulders)
lx	leucoxene			
mc	malachite		**Weathering Codes**	
mi	mica (undifferentiated)		vox	very oxidised (primary mineralogy & texture destroyed by weathering, no sulphide, generally dominated by Fe and Al oxides and/or silica) = laterite, duricrust, lateritic gravel
mg	magnesite		mox	moderately oxidised (primary texture but dominantly secondary clay-dominated mineralogy, sulphide oxidised) = saprolite
mn	mn-oxides		wox	weakly oxidised (mineralogy dominantly primary, low clay content, partially oxidised sulphide) = saprock, transition zone
ms	moissanite		fr	fresh
mt	magnetite			
mu	muscovite		**Moisture Codes**	
mz	monazite		S	Sloppy
ol	olivine		M	Moist
olg	oligoclase		D	Dry
or	orthoclase			
ph	phlogopite		**Abundance Codes**	
pl	plagioclase		e	entirely (nominally >90%)
po	pyrrhotite		d	dominant 50-90% (nominally 70%)
pp	pyrope		c	common 10-50% (nomninally 30%)
prh	prehnite		m	minor 1-10% (nominally 5%)
pv	perovskite		t	trace <1%
px	pyroxene			
py	pyrite		**Colour Codes**	
qz	quartz		l	light
rf	rock fragments		d	dark
ru	rutile		bk	black
sc	scorodite		bl	blue
se	sercite		bn	brown
sd	siderite			
sh	scheelite		cm	cream
si	siliceous		gn	green
sr	serpentine		gy	grey
sph	sphalerite		kk	khaki
sp	spinel		og	orange
sb	stilbite		ov	olive
st	stannite		pk	pink
sx	sulphide		pl	purple
sxo	oxidised sulphide		rd	red
tc	talc		wt	white
ti	titanite (sphene)		yw	yellow
tr	tremolite			
tu	tourmaline		**Alteration Intensity***	
tz	topaz		w	weak alteration, original lithology (protolith) obvious
vs	vesuvianite (idocrase)		m	moderately altered, distinct mineralogical change but protolith still easy to recognise
zr	zircon		s	strongly altered, near-complete to complete mineralogical reconstitution, protolith may be unrecognisable
			*alteration intensity is not degree of weathering (ie. wox, mox, vox, fr) or regional	
			Sample Recovery Codes	
			ideally measured as weight in kg, below codes for estimates	
			e	excessive
			g	good
			m	moderate
			p	poor
			n	none

H0002	Version	3														
H0003	Date_generated	27/7/2009														
H0004	Reporting_period_end_date	22/8/2009														
H0005	State	TAS														
H0100	Tenement	EL21/2005														
H0101	Tenement_holder	Venture Minerals Ltd														
H0102	Project_name	Mt Lindsay														
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	3437 Stringer, 3438 Livingstone, 3637 Rosebury, 3638 Parsons, 3639 Ramsay														
H0200	Start_date_of_data_acquisition	22/8/2008														
H0201	End_date_of_data_acquisition	27/7/2009														
H0202	Data_format	SG3														
H0203	Number_of_data_records	497														
H0204	Date_of_metadata_update	27/7/2009														
H0500	Feature_Located	Rock Unit Interval														
H0501	Geodetic_datum	not applicable														
H0502	Vertical_datum	not applicable														
H0503	Projection	not applicable														
H0531	Projection_zone	not applicable														
H0900	Remarks:															
H1000	Hole	From	To	Recovery	Colour	Weathering	Lith1	Lith2	Lith3	Vein	Vein	Magnetite	Sulfide	Description	Comments	
H1001		metres	metres	%							%	%	%			
D	LV002	0	4	na	gy	fr	SAND				0	0	0	SAND		
D	LV002	4	12	na	bn	mox	RCLY				0	0	0	weakly staniferrous skarn		
D	LV002	12	14	na	bn	mox	RCLY				0	0	0	ferrugenous clay		
D	LV002	14	22	na	bn	mox	ST				0	0	0	weathered ferrugenous ST		
D	LV002	22	30	na	bn	mox	RCLY				0	0	0	weakly staniferrous skarn		
D	LV002	30	38	na	bn	mox	RGOS				0	0	0	gossan		
D	LV002	38	40	na	bn	mox	srZXS				0	0	0	Sn-barren srZXS		
D	LV002	40	82	na	cm	mox	FG				0	0	0	Granite		
D	LV003	0	3	na	bn	mox	SAND				0	0	0	coarse angular qz- lithic- rich sand, lithics; qSS, dk gy ST and rare RGOS		
D	LV003	3	7	na	bn	mox	qzSS				0	0	0	decomposed, clayey qz-wacke		
D	LV003	7	9	na	og bn	vox	RCLY				0	0	0	clay		
D	LV003	9	14	na	gy	mox	ST				0	0	0	dk gy ST fragments in clay matrix		
D	LV003	14	15	na	bn	mox	qzSS				0	0	0	decomposed, clayey qz-wacke		
D	LV003	15	19	na	og bn	vox	RCLY				0	0	0	clay		
D	LV003	19	29	na	og bn	mox	ST	qzSS			0	0	0	dk gy ST and quartzose fragments in clay matrix	hole abandoned due to drilling difficulties	
D	LV003A	0	2.3	20	gy cm	fr	SAND				0	0	0	Gravely coarse angular sand (clasts: qz > qSS > dk gy ST > RGOS) and cored cobbles of gy ms qSS		
D	LV003A	2.3	6.45	50	gy	fr	qzSS				0	0	0	Gy sfg ms qSS		
D	LV003A	6.45	15	91	cm wt	vox	FG				0	0	0	Wt kaolin-rich saprolite with relict qz phenocrysts after FG.		
D	LV003A	15	19.1	80	bn	vox	RCLY				0	0	0	Rd - yw-bn ferrugenous clay with small areas cemented by supergene he		
D	LV003A	19.1	23	80	bn	vox	RGOS				0	0	0	Ms hematitic gossan with texture largely destroyed by supergene effects. Numerous small disolution cavities.		
D	LV003A	23	24.7	80	bn	vox	RCLY				0	0	0	Rd - yw-bn ferrugenous clay with small areas cemented by supergene he		
D	LV003A	24.7	27.4	90	cm yw	vox	ST				0	0	0	cm-yw clay weathered feldspathic ST and sfg SS		
D	LV003A	27.4	29	100	bn gn	mox	srZXS				0	0	0	Ferrugenous weathered srZXS		
D	LV003A	29	35.5	60	bn	vox	RCLY				0	0	0	Rd - yw-bn ferrugenous clay with small areas cemented by supergene he		
D	LV003A	35.5	38.2	88	cm	mox	FG				0	0	0	Img FG dyke with tu alteration.		
D	LV003A	38.2	43.3	85	gn yw	mox	srZXS				0	5	0	Ferrugenous weathered srZXS		
D	LV003A	43.3	44	100	rd	vox	RCLY				0	10	0	Rd clay; washed and sieved material reveals appreciable mt content.		
D	LV003A	44	44.6	90	bn	vox	RCLY				0	0	0	Bn clay.		
D	LV003A	44.6	66.7	55	cm	wox	FG				0	0	0	Icg FG with tu alteration.	EOH 66.7	
D	LV004	0	4	na	bn	mox	SAND				0	0	0	coarse angular qz- lithic- rich sand, lithics; qSS, dk gy ST and rare RGOS		
D	LV004	4	12	na	bn	mox	qzSS	ST			0	0	0	dominantly quartzose chips in clayey matrix with subordinate dk gy ST		
D	LV004	12	22	na	gy	mox	ST				0	0	0	dk gy clay-rich weathered ST		
D	LV004	22	24	na	gy	mox	RCLY				0	0	0	weakly staniferrous skarn		
D	LV004	24	32	na	bn	mox	mtZXS				0	30	0	magnetite skarn		
D	LV004	32	38	na	bn	mox	RCLY				0	0	0	weakly staniferrous skarn		
D	LV004	38	42	na	bn	mox	ST				0	0	0	clay weathered ST		
D	LV004	42	51	na	og bn	mox	RCLY				0	0	0	ferrugenous clay		
D	LV004	51	53.35	0	na	na	NREC				0	0	0	no recovery		
D	LV004	53.35	69.2	8	gy	mox	RCLY	qzSS			0	0	0	very poorly recovered zone of strongly si qz-wacke		
D	LV005	0	5	na	bn	fr	SAND				0	0	0	gravely coarse angular sand minor organic material present	hole abandoned due to drilling difficulties	
D	LV006	0	7	57	gy	fr	SAND				0	0	0	Predominantly poorly sorted pebbly sand with clayey matrix, lesser cored fr ms qSS boulders and a cored tree fern trunk.		
D	LV006	7	24.6	93	gy	wox	ST				0	0	0	Friable weathered clayey feldspathic siltstone and sfg sandstone. Bedding visible at 23m where S0 is c. 5-10 degs to CA.		
D	LV006	24.6	28.5	93	gy	wox	ooSCB				0	0	0	Oolite interbedded clay-rich feldspathic siltstone and sfg sandstone. Gentle folding on decimetre scale with fold axis c. 80degs to core axis. S0 0-10degs to CA.		

H1000	Hole	From	To	Recovery	Colour	Weathering	Lith1	Lith2	Lith3	Vein	Vein	Magnetite	Sulfide	Description	Comments
H1001		metres	metres	%							%	%	%		
D	LV006	28.5	61.3	93	gy	wox	ST				0	0	0	Friable weathered clayey feldspathic siltstone and sfg sandstone.	
D	LV006	61.3	71.3	na	cm	wox	qzSS				0	0	0	Zone of poor recovery containing blocks of strongly silicified qz-wacke with Fe-stained vugs after veins and clots of sulphide	
D	LV006	71.3	82	na	cm gn	mox	srZXS	qzSS			0	0	0	Interbedded si qz-wacke and serpentine-skarn	
D	LV006	82	87	na	cm	mox	SCB	qzSS			0	0	0	Weathered weakly sr-altered dolomitic marble with minor qz-wacke beds	
D	LV006	87	90.15	na	bn	mox	RCLY				0	0	0	Ferrugenous clays	
D	LV006	90.15	92.5	na	bn	mox	RGOS	FG			0	0	0	Limonitic gossan intruded by two small granite dykes	
D	LV006	92.5	92.7	100	og bn	mox	RCLY				0	0	0	dog-bn fe clay, non magnetic.	
D	LV006	92.7	109.5	76	rb bn	mox	RGOS				0	5	0	Rd-og hematitic gossan with accicular texture. Minor cavities present.	
D	LV006	109.5	122.7	59	bn gy	mox	RGOS			hm	2	30	0	Poorly recovered hematitic accicular gossan with moderate magnetite content.	
D	LV006	122.7	125.7	na	og cm	mox	endZXS				0	0	0	Leached orbicular garnet endo-skarn.	
D	LV006	125.7	127.1	na	bn	mox	srZXS				0	0	0	Ferrugenised serpentine skarn	
D	LV006	127.1	128.3	na	cm	mox	FG				0	0	0	ifg FG dyke	
D	LV006	128.3	129.4	na	bn	mox	srZXS				0	0	0	Fine-grained limonitic rock after serpentine skarn	
D	LV006	129.4	129.6	na	cm	mox	FG				0	0	0	ifg FG dyke	
D	LV006	129.6	132.3	na	bn	mox	srZXS				0	0	0	Ferrugenised serpentine skarn	
D	LV006	132.3	133	na	cm	mox	FG				0	0	0	ifg FG dyke	
D	LV006	133	136	na	cm	mox	olZXS				0	0	0	Weatherd micaceous biotite-olivine skarn	
D	LV007	0	4.3	0	na		NREC				0	0	0	NREC after SAND	
D	LV007	4.3	5.3	14	gy	fr	SGVL				0	0	0	3 pieces of ground gy si qz-wacke - colluvium	
D	LV007	5.3	17.9	98	wt	fr	SCB			ol tu cc	5	0	0	ms - tnb crystalline dolomitic marble, fine irregular blue-grey -green veinlets and disseminations of qz+/-tu?+/-cc	
D	LV007	17.9	21	25	gy	wox	SCB				0	0	0	increasingly fractured and broken dolomitic marble	
D	LV007	21	25.3	53	gn	mox	srZXS	qzSS			0	0	0	serpentine skarn containing broken pieces of lm tnb svfg gy px? si? sedimentary hornfels representing interbedded packages of quartzose sediment	
D	LV007	25.3	29.25	74	gy	fr	qzSS				0	0	0	rubbly core w/ some intact sections of svfg gy-purple tnb-lm px? si? hornfels, bedding approx. 25 to CA	
D	LV007	29.25	30.1	65	gn gy	mox	srZXS				0	0	0	serpentine skarn with blocks of mox cl-altered qz-wacke	
D	LV007	30.1	35.4	79	gy	wox	qzSS				0	0	0	ms variably clay weathered, variably si qz-wacke	
D	LV007	35.4	40.4	49	gy gn	mox	srZXS	qzSS			0	0	0	rubbly srZXS with blocks of gy-pl lm-tnb svfg hornfels as "floaters"	
D	LV007	40.4	47.9	54	cm	wox	qzSS				0	0	0	badly broken core of strongly si gy-pl lm-tnb hornfels w/ irregular yw-bn clay weathering	EOH; terminated after drilling difficulties
D	LV008	0	7	0	na	na	NREC				0	0	0	NREC after SAND	
D	LV008	7	7.5	32	gy	fr	SGVL				0	0	0	ground cobbles of gy si qz-wacke alluvium	
D	LV008	7.5	20.6	39	bk	mox	ST	qzSS			0	0	0	black clay weathered micaceous siltstone with minor floaters of gy si qz-wacke	
D	LV008	20.6	29.6	32	gn	mox	srZXS	qzSS			0	0	0	serpentine-bearing material after fosterite?-bearing marble/ skarn	
D	LV008	29.6	32.8	41	bn	mox	RGOS	qzSS			0	0	0	limonitic material w/ minor he interbedded with Fe-stained strongly si qz-wacke	
D	LV008	32.8	34.4	0			NREC				0	0	0	zone of no recovery	
D	LV008	34.4	39.6	30	cm	mox	SCB				0	0	0	weathered serpentine-altered dolomitic marble	
D	LV008	39.6	46.6	60	gn	mox	srZXS	qzSS			0	0	0	weathered serpentine-bearing material with minor beds of si qz-wacke	
D	LV008	46.6	87.1	79	cm gn	mox	SCB				5	0	0	weakly-moderately serpentinised dolomitic marble and polymict conglomerate. conglomerate contains rounded clasts of si qzwacke, angular clasts of green-pink altered volcanogenic material and carbonate. Zones of fine grained garnet + humite skarn develope	identification of humite vs fosterite uncertain - pending petrographic description
D	LV008	89.1	89.5	na	bn	mox	srZXS				0	0	0	ferrugenous sr- br- rich skarn	
D	LV008	89.5	93.5	na	bn	mox	RGOS				0	5	0	limonitic mt-he gossan with accicular texture	
D	LV008	93.5	99	na	bn	mox	srZXS	RGOS			0	5	0	interbedded mt-rich conglomeratic textured gossan and waxy ferrugenous serpentine-rich skarn	
D	LV008	99	99.3	na	cm	mox	FG				0	0	0	strongly weathered tu-altered po FG	
D	LV008	99.3	104.5	na	bn	mox	srZXS				0	0	0	clayey chocolate-bn waxy ferrugenous weathered serpentine-rick skarn, some ds mt occurs	
D	LV008	104.5	107	na	cm	mox	FG				0	0	0	strongly weathered po FG	
D	LV008	107	111.05	na	bn	mox	srZXS				0	0	0	clayey chocolate-bn waxy ferrugenous weathered serpentine-rick skarn, some ds mt occurs	
D	LV008	111.1	113.3	na	yw bn	mox	RGOS				0	0	0	yw-bn limonitic gossan	
D	LV008	113.3	120.85	na	bn	mox	RGOS				0	10	0	bn hematitic gossan displaying distinctive accicular texture	
D	LV008	120.9	128.4	na	bn	mox	srZXS				0	0	0	gn to dk chocolate-bn waxy ferrugenous sr- br-rich micaceous skarn	
D	LV008	128.4	129.43	na	og	wox	endZXS				0	0	0	og gt-sr rock (endoskarn?). fractured texture with serpentine +/- calcite infilling fractures in ms og gt. cm-scale patches of serpentine-rich material.	
D	LV008	129.4	130.3	na	gn	fr	endZXS				0	2	0	fine to medium grained dk gn endo-skarn(?) with patchy weak magnetism (associated with serpentinisation of fosterite?). gt and qz visible in matrix. Cut by cc veinlets.	overall mineralogy uncertain - pending petrographic description
D	LV008	130.3	130.72	na	gy	fr	FG				0	0	1	altered si margin of FG with diffuse, cloudy veins of qz-tu-am(?) inturn cut by am-po veinlets. minor ds po occurs in chilled margin.	
D	LV008	130.7	148.3	na	gy	fr	FG				0	0	0	v strongly po FG with si-tu-se alteration	
D	LV009	0	9.5	na	gy	fr	SGVL				0	0	0	large ground blocks of sometimes water-worn si qz-wacke.	
D	LV009	9.5	10.9	na	gn bn	mox	RCLY				0	5	0	gn bn ferrugenous clays carrying small blocks of magnetite-rich material	
D	LV009	10.9	11	na	cm	mox	FG				0	0	0	weatherd cm-coloured saprolite with relict qz-phenocrysts	
D	LV009	11	11.6	na	gn bn	mox	RCLY				0	5	0	gn bn ferrugenous clays carrying small blocks of magnetite-rich material	

H1000	Hole	From	To	Recovery	Colour	Weathering	Lith1	Lith2	Lith3	Vein	Vein	Magnetite	Sulfide	Description	Comments
H1001		metres	metres	%							%	%	%		
D	LV009	11.6	11.7	na	cm	mox	FG				0	0	0	weatherd cm-coloured saprolite with relict qz-phenocrysts	
D	LV009	11.7	16.3	na	gn bn	mox	RCLY				0	5	0	gn bn ferrugenous clays carrying small blocks of magnetite-rich material	
D	LV009	16.3	17	na	rd bn	mox	RGOS				0	10	0	moderately magnetic gossan with rare accicular texture,	
D	LV009	17	21.5	na	gn bn	mox	RCLY				0	5	0	gn bn ferrugenous clays carrying small blocks of magnetite-rich material	
D	LV009	21.5	26	na	gn bn	mox	cyRB				0	2	0	pebble-sized polymict clasts of granite, quartzose material and magnetite-rich material in ferrugenous clay matrix, interpreted as collapsed/ slumped material accumulated in a karstic depression near surface	
D	LV009	26	27.5	na	na	na	NREC				0	0	0	zone of no recovery	
D	LV009	27.5	32.6	na	gn bn	mox	cyRB				0	2	0	pebble-sized polymict clasts of granite, quartzose material and magnetite-rich material in ferrugenous clay matrix, interpreted as collapsed/ slumped material accumulated in a karstic depression near surface	
D	LV009	32.6	75.8	na	cm	mox	FG				0	0	0	weathered porphyritic FG with minor tu-alteration	EOH 75.8
D	LV010	0	6				NREC				0	0	0	zone of no recovery after alluvium	
D	LV010	6	11.5		gy	mox	SGVL				0	0	0	large blocks of gy qz-wacke and quartz-pebble conglomerate - alluvium/ coluvium	
D	LV010	11.5	16		gy	mox	FG				0	0	0	sasprolitic FG with relict qz phenocrysts	
D	LV010	16	28		gy	mox	qzSS				0	0	0	blocky, poorly recovered qz-wacke "floaters" in gy gn clay	
D	LV010	28	33		gn bn	mox	cyRB				0	0	0	gn bn poorly recovered clay matrix supported qz-wacke breccia, clasts are sub-rounded to angular	
D	LV010	33	34.7		na	na	NREC				0	0	0	no recovery	
D	LV010	34.7	77.7		yw bn	mox	cyRB				0	0	0	well recovered yw bn clay matrix supported polymict conglomerate. Matrix comprising 30% of unit. Clasts pebble- to boulder-sized sub-rounded to angular clasts of lt gy to dk gy sometimes lm, qz-wacke, minor rd-bn clay weathered hematitic siltstone (?) wit	
D	LV010	77.7	79.8		gy	fr	qzSS				0	0	0	broken zone of poorly recovered si qz-wacke	
D	LV010	79.8	116.35		yw bn	mox	cyRB				0	0	0	well recovered yw bn clay matrix supported polymict conglomerate. Matrix comprising 30% of unit. Clasts pebble- to boulder-sized sub-rounded to angular clasts of lt gy to dk gy qz-wacke, minor rd-bn clay weathered hematitic siltstone (?), rare weathered F	
D	LV010	116.4	119.1		bn	mox	RGOS				0	0	10	moderately magnetic conglomeratic gossan with minor relict fine-grained accicular texture	
D	LV010	119.1	120.6		bn	mox	srZXS				0	0	0	Clayey ferrugenous sr-bearing skarn.	
D	LV010	120.5	121.9		bn	mox	RGOS				0	0	0	Poorly recovered gossanous rubble - non-magnetic	
D	LV010	121.9	123		rb bn	mox	srZXS				0	0	0	rd bn clayey ferrugenous serpentine sakrn	
D	LV010	123	125.7		cm	mox	FG				0	0	0	strongly porphyritic FG dyke with qz-tu veins	
D	LV010	125.7	126.5		cm	mox	qzSS				0	0	0	extremely poor recovery, almost none, save 5 chips of extremely silicified qz-wacke	
D	LV010	126.5	127.7		cm	mox	FG				0	0	0	porphyritic FG dyke	
D	LV010	127.7	129.4		cm	mox	srZXS	qzSS			0	0	0	zone of very poor recovery and caved in material - a few cored sections of rd-bn ferrugenous clay and extremely si qz-wacke	
D	LV010	129.4	137.9		bn	mox	RGOS				0	0	5	rd bn hematitic gossan, only weakly magnetic, numerous disolution cavaties and seams	
D	LV010	137.9	139.2		bn	mox	RGOS				0	0	0	rubbly, poorly recovered clayey hematitic gossan	
D	LV010	139.2	139.9		na	na	NREC				0	0	0	NREC after void	
D	LV010	139.9	141.7		bn	mox	RGOS				0	0	0	rubbly, poorly recovered clayey hematitic gossan	
D	LV010	141.7	142.2		na	na	NREC				0	0	0	NREC after void	
D	LV010	142.2	143.8		bn	mox	RGOS				0	0	0	rubbly, poorly recovered clayey hematitic gossan	
D	LV010	143.8	149.25		bn	mox	RGOS				0	0	0	rd bn vuggy non-magnetic hematitic gossan with rubbly soft clayey zones	
D	LV010	149.3	157		bn	mox	RGOS				0	0	10	rd bn vuggy gossan with patchy magnetism	
D	LV010	157	158.4		bn	mox	olZXS				0	0	0	moderately hematitic serpentine bearing rock - after magnetie-olivine skarn?	
D	LV010	158.4	159.4		rd	mox	srZXS				0	0	0	ferrugenous coarse grained micaceous serpentine skarn	
D	LV010	159.4	165.4		gn	wox	FG				0	0	0	strongly se- cl- altered img FG with peachy pug coating joints	
D	LV010	165.4	173.7		cm	fr	FG				0	0	0	fr img FG with pk K-spar phenocrysts and notable bt-altered ferromags	
D	LV011	0	12.6		gy & yw bn	mox	qzSS				0	0	0	lbn & lgy weakly to strongly weathered qzwacke locally with jarositic staining after disseminated sulphides, minor hard qzite fragments towards base of interval, probably in situ	
D	LV011	12.6	12.7		dgy	wox	XMYL				0	0	0	10cm dgy tu-rich mylonitic breccia fragment, folliation approx 55 degrees to core axis, unclear whether cobble or in situ material	
D	LV011	12.7	15		gy	wox	qzSS				0	0	0	poorly recovered hard lgy qzite, yw bn gy qzwacke with jarositic staining & dgy tu-altered qzwacke?, probably in situ	
D	LV011	15	28.6		lbn gy	mox	qzSS				0	0	0	lt bn gy clay-rich weathered qzwacke & possibly siltstone	
D	LV011	28.6	34		yw bn	vox	RCLY				0	0	0	yw bn clay after magnesium skarn?	
D	LV011	34	36.3		yw gn	mox	srZXS				0	0	0	yw gn clay after serpentine skarn	
D	LV011	36.3	42		lbn gy	mox	qzSS				0	0	0	lt bn gy clay-rich weathered qzwacke & possibly siltstone & ground fragments of qzite	
D	LV011	42	49.65		dgn bn	vox	RCLY				0	0	0	gn bn & minor rd bn clay after magnesium skarn?, becoming darker downhole	
D	LV011	49.65	52.2		yw bn	vox	RCLY				0	0	0	lt yw bn clay after magnesium skarn?	
D	LV011	52.2	54.5		bn	vox	RGOS				0	0	0	vuggy bn gossan with dk bn layering (if bedding BCA = 30 degrees at 52.4m), minor soft yw pieces of core & a 10cm piece of qzite at start of interval	
D	LV011	54.5	59.9		lt bn	mox	FG				0	0	0	lyw bn img-icg ?granite saprolite	
D	LV011	59.9	73.6		bn	vox	RCLY	RGOS	qzSS		0	0	0	sloppy bn & yw clay and irregular dbn & rd bn ferruginous - gossanous pieces of core, one 10cm piece of qzite at start of interval	

H1000	Hole	From	To	Recovery	Colour	Weathering	Lith1	Lith2	Lith3	Vein	Vein	Magnetite	Sulfide	Description	Comments
H1001		metres	metres	%							%	%	%		
D	LV011	73.6	85.3		yw bn	vox	RCLY	qzSS			0	0	0	bn & yw bn clay & fragments of cm & gy qzite (some could be qz vein)	
D	LV011	85.3	97.8		dbn	mox	olZXS	RCLY			0	0	0	bn clay, dark bn clay saprolite after olivine skarn, minor relict pieces of cm - yw gn olivine skarn	
D	LV011	97.8	103		bn	vox	RGOS				0	0	0	vuggy bn & rd bn & yw bn gossan, some bright lt gn mineral lining vugs (scorodite or chenevixite?)	
D	LV011	103	117.2		bn & yw bn	vox	RCLY				0	0	0	medium bn & yw bn clay, locally mottled, after endoskarn?	
D	LV011	117.2	121.4		og	mox	FG				0	0	0	orange clay saprolite after icg granite, some relict wt clay pseuds of fspar pheocrysts, colour grades rapidly to lgn gy granite at bottom of interval	
D	LV011	121.4	125		lgn gy	wox	FG				0	0	0	lgn gy weakly weathered sericitic icg granite with gn sericitised fspar phenocrysts up to 15mm size	
D	LV011	125	140		lgy	fr	FG				0	0	0	largely fresh wt & lgy icg ?biotite granite, some irregular fspar-poor patches and decimetre banding increasing towards base of interval	
D	ML120	0	21	60	dgy og	wox	SST			qz cl	2	0	0	dominantly fine sandstone beds and siltstone beds with oxidised lm and he fractures. Minor ka alteration. Highly fractured, significant loss at start of hole.	
D	ML120	21	25.6	80	dgy gn	fr	SST				0	0	0	fine-med grained sandstone and siltstone beds, highly fractured, bn bt staining in beds.	
D	ML120	25.6	27.6	95	lgn bn	fr	STUF			cl	2	10	10	laminated bands of STUF with small (often rectangular) blebs of po. 5cm patchy zone of mt	
D	ML120	27.6	76.3	80	dgy gn	fr	SST	STUF		qz cl po	1	0	1	beds of fine sandstone and siltstone with minor thin-thick matrix supported mud clast conglomerate beds(clast size av.=~1cm). Minor sulphides often associated with VQL	
D	ML120	76.3	79.8	50	wt gn	wox	FG			qz tu	1	0	0	med-coarse grained qz-feld-tu rich granitoid, some feldspars altered to se. Poor recovery, highly fractured core where cl/se alteration high.	
D	ML120	79.8	82.4	80	gy gn	fr	SST				0	0	0	fine siltstone/sandstone beds moderately fractured	
D	ML120	82.4	82.5	80	gy gn	fr	XFB				0	0	0	clast (SST) supported incohesive fault breccia with cl matrix	
D	ML120	82.5	126.7	90	lgy bn	fr	SST	STUF		po py cl cc	1	0	5	siltstone/sandstone beds with patches containing blebs and veins of po and py in veins. Considerable bt throughout	
D	ML120	126.7	129.9	80	wt lgn	fr	FG	SST		qz tu	1	0	0	fine-coarse grained qz-feld rich granite with VQT. High se alteration of feldspars. 20cm thick SST horizon.	
D	ML120	129.9	145.5	100	gy bn	fr	STUF	SST		po py qz tu	0	0	10	variably altered tuffite? Minor laminated lgn bands. Largely dgy/bn bt and py/po rich sediments	
D	ML120	145.5	155.3	100	bn lgn gy	fr	STUF			po py cl	5	0	10	bt rich STUF, with ds po and py throughout. Laminated texture variably altered	
D	ML120	155.3	164.4	100	dgy bk	fr	mtZXS	amZXS			0	50	15	patchy often banded mt commonly occuring with po ± py	
D	ML120	164.4	169.6	100	dgy bn bk	fr	amZXS	STUF		cc	2	20	10	med-thick bands containing mt, am, po (±cpy?). Minor cc veins	
D	ML120	169.6	171.3	100	yw gy	fr	poZXS			po	2	5	50	dominantly po ds throughout, occurring with lesser py.	
D	ML120	171.3	180.8	100	gy bn bk	fr	mtZXS	amZXS		po	1	50	10	patchy /banded mt zones and lgn ZXSCS bands. Minor asp associated with a mt band	
D	ML120	180.8	184.6	100	lgn gy	fr	amZXS				0	15	5	ZXSCS with med thickness mt bands, dgn am and bt common	
D	ML120	184.6	184.7	100	wt bk	fr	FG				0	0	0	thin qz-feld-tu/bt rich fine grained granite dyke	
D	ML120	184.7	196.1	100	lgn bn	fr	amZXS	mtZXS			2	30	5	laminated ZXSCS with thin-med bands of mt. Thin (<2cm) veins/dykes of granitic compostion common	
D	ML120	196.1	207.3	100	bk bn gn	fr	mtZXS	amZXS			0	50	5	bands of fine-med grained mt occurring with am and minor po. Bt common throughout. Thin granite composition dykes close to granite contact	
D	ML120	207.3	225	80	wt lgn	fr	FG			qz tu	2	0	0	med-coarse grained qz-feld-tu rich granitoid, considerable alteration of feldspars to gn se throughout. Weak fe oxidation in places.	EOH - 225m
D	ML121	0	56.7	60	gy og wt	fr	SST			qz cl	1	0	1	sandstone and siltstone beds, highly fractured with an oxidised hematitic coating throughout. Common clay alteration. Minor po in patchy alteration zones downhole.	
D	ML121	56.7	114	90	dgy gn	fr	SST			cl po py	2	0	5	beds of fine sandstone and siltstone with weak bt alteration common. Po and py occurring in zones of alteration with qz and cl, and as thin veins. Core is moderately fractured throughout.	
D	ML121	114	121.4	50	dgy gn	fr	SST			qz cl	1	0	0	severly fractured siltstone/sandstone beds. Soft cl/clay on some fracture faces.	
D	ML121	121.4	121.8	70	dgy gn	fr	XFB				0	0	0	weakly brecciated zone, with minor cl gouge on fractured core	
D	ML121	121.8	122.8	50	dgy	fr	SST				0	0	0	highly fractured sandstone/siltstone beds	
D	ML121	122.8	124	40	dgy gn	fr	XFB	XFBI			0	0	0	highly fractured zone with moderate cohesive brecciation and incohesive fault zones. Core loss	
D	ML121	124	128	70	dgy gn	fr	SST	STUF		qz cl po	30	0	10	highly fractured SST/STUF bands with anastomosing networking veins of qz-cl-po. Minor cl gouge on some fractures and minor weak hydrothermal? Brecciation	
D	ML121	128	130.5	80	bk gn gy	fr	amZXS	mtZXS		mt po py cc	10	30	10	mod/highly fractured ZXSCS/ZSKM with networking cc veins with common po throughout. Minor flecks of sh present	
D	ML121	130.5	139.8	100	gy gn yw	fr	mtZXS	amZXS		cc po vs mt	5	40	15	patchy mt and sulphide dominant skarn, common cc in veins and throughout suggesting a carbonate protolith. Mt, po, py and vs in veins. Am, vs and gt common. Possible minor ap or st. Minor ds sh	
D	ML121	139.8	143.9	100	yw gn	fr	poZXS	amZXS		po py qz tu	5	10	40	dominantly po and py skarn with mt and am common. Minor qz-tu veins with sulphides associated	
D	ML121	143.9	150	100	gn gy yw	fr	amZXS	poZXS		qz tu po py cc	5	15	20	dgn am and po common throughout, mt occurs in patchy concentrations. Bt also common. Thin qz-tu veins occur often with minor sulphide.	
D	ML121	150	156.1	100	gy gn	fr	amZXS	STUF		cc po mt	5	5	10	bands of ZXSCS and STUF with 5-10% mt. Po common throughout in small veins and ds	

H1000	Hole	From	To	Recovery	Colour	Weathering	Lith1	Lith2	Lith3	Vein	Vein	Magnetite	Sulfide	Description	Comments
H1001		metres	metres	%							%	%	%		
D	ML121	156.1	173	90	bn gn cm	fr	STUF	amZXS	SST	qz tu po cc cl	15	10	5	banded STUF with common VQL and SST with po associated in veins and ds. Fine mt ds throughout making unit moderatel magnetic, 10-15% mt? Thin-thick bands of ZXSCS contain dominant am, mt and po	
D	ML121	173	173.4	100	bn gn	fr	XFB				0	0	0	40cm clast supported cohesive breccia, clasts of STUF in a cl matrix/gouge	
D	ML121	173.4	188.4	90	gy wt	fr	SST			cc cl qz	10	5	2	sandstone/siltstone beds with networking cc and qz-cl veins common throughout. Minor po and py, fine mt present due to weak patchy magnetism. At 175.9m depth there is a minor 2-3cm XFBC in SST.	EOH 188.4m
D	ML122	0	0.95	100	bk bz dgy	fr	mtZXS	poZXS	amZXS		0	50	10	mt-po rich ZXSM. Minor ap. Minor ca-am-bt banding.	
D	ML122	0.95	3	100	bz bk	fr	poZXS	amZXS		qz ca po	1	0	60	po-am rich sulphide skarn. Non magnetic. 2.8-3m contains qz-po-ca breccia (possibly hyrothermal breccia).	
D	ML122	3	4	100	bn gy bz	fr	amZXS	poZXS		po	2	0	10	bt-am-po rich calcsilicate/sulpide skarn. Minor ca. Po mainly veined. Non magnetic unit.	
D	ML122	4	4.9	100	lgn lbn gy	fr	STUF			cc cl	5	0	2	banded tuffaceous mudstone/siltstone. Veinlets of cl and cc throughout. Po disseminated in beds.	
D	ML122	4.9	7.2	100	bk bz	fr	poZXS	mtZXS	STUF	po ca	1	20	30	po-skarn and mt-skarn interbedded with minor banded beds of STUF. Minor cc	
D	ML122	7.2	11.4	100	lgn gy lpk	fr	STUF	amZXS		cc cl po qz	5	3	5	interbedded banded tuffaceous mudstone and calcsilicate skarn. Minor mt-cc beds. Cl, po and cc veinlets throughout.	
D	ML122	11.4	24.65	100	bz bk gy g	fr	poZXS	amZXS	STUF	ca po qz	1	2	40	po-rich ZXSX interbedded with am-ca-rich ZSKCS and minor banded STUF. Minor mt+-ca bands. Po banded, disseminated and in veins. Very minor bt-altered sediments. 16.25-16.55m ca vein (hexagonal crystals coarse and well developed). Po bands/dissemination be	
D	ML122	24.65	29.5	100	gn gy pk	fr	STUF	amZXS		qz ap cl po py	10	2	5	banded tuff and calcsilicate with zones of magnetic po.	
D	ML122	29.5	42	100	bn gy	fr	SST	STUF		ze qz cc cl po py	1	0	2	weakly bt-altered siltstones to sfg sandstone. STUF beds are slightly magnetic (due to disseminated po)	
D	ML122	42	59.9	100	dgy	fr	SST			am ap cp qz po cl bt	2	0	1	interbedded siltstone and sfg sandstone. From 42-44m is mod veined with qz-bt and ap-cp-am-qz veins. Weak bt alteration and silicification in patches. Minor tuff bed from 53.2-54.8m. Minor smg beds towards end of unit.	
D	ML122	59.9	62.1	100	dgy	fr	SS			cl	5	0	0	smg qz-rich greywacke. Very weakly bt altered in patches.	
D	ML122	62.1	70.1	100	dgy	fr	SST			cl ca	2	0	0	interbedded siltstone and sfg sandstone with minor smg beds. Minor weak bt alteration in some areas.	
D	ML122	70.1	70.3	80	gy	fr	XFB				0	0	0	20cm gy gougy fault breccia	
D	ML122	70.3	71.45	80	dgy	fr	SST			cl ze cc py	5	0	0.5	very fractured and rubbly SST. Cl, zeolite and cc coat fracture surfaces.	
D	ML122	71.45	71.55	80	gy gn	fr	XFB				0	0	0	10cm gy-gn gougy fault breccia.	
D	ML122	71.55	80.2	80	dgy	fr	SST				0	0	0	Strongly fractured and rubbly interval. Local carbonate and pyrite fracture coatings	
D	ML122	80.2	81.1	100	wt	fr	FG				0	0	0	Medium grained granite dyke overprinted by fine healed fractures.	
D	ML122	81.1	87.6	80	dgy	fr	SST				0	0	0	Strongly fractured to rubbly interval.	
D	ML122	87.6	89.1	100	wt log	fr	FG				0	0	0	Medium grained granite dyke.	
D	ML122	89.1	92.8	80	dgy	fr	SST			ca	1	0	0	Strongly fractured to rubbly interval is weakly magnetic. Minor carbonate veinlets.	
D	ML122	92.8	95.5	80	dgy	fr	XFB				0	0	0	Reactivated rubbly breccia zone. Healed sections are locally preserved. Subrounded to subangular SST clasts.	
D	ML122	95.5	118.9	100	dgy	fr	SST			qz cl ca	1	0	0	Moderate to locally strongly fractured interval. Weakly magnetic sections are common throughout.	
D	ML122	118.9	136.8	100	wt lgn	fr	FG				0	0	0.1	Coarse grained granite is medium grained near the upper contact. The upper contact is sharp at 43° TCA. Bands of tourmaline replacement / alt'n occur as fracture halos.	
D	ML122	136.8	144.2	100	lgn	fr	FG				0	0	0	Medium to fined grained granite is generally equigranular. Bands of tourmaline replacement / alt'n halo fractures. The interval is weakly green chlorite altered.	
D	ML122	144.2	178.6	100	wt lgn	fr	FG			tu	1	0	0	Coarse grained granite is weakly green chlorite and sericite altered. Local bands of tourmaline replacement / alt'n.	
D	ML122	178.6	184.8	100	gy cm	fr	FG			tu py ap cc	1	0	0.1	medium to fine grained qz-fp rich granite. Mostly equigranular. Minor phenocrysts of fp.	
D	ML122	184.8	188.9	100	gy cm	fr	FG			tu	1	0	0	as coarse grained granite above	
D	ML122	188.9	192.2	100	gy cm gn	fr	FG			tu	1	0	0.1	as above medium to coarse grained granite	
D	ML122	192.2	213.3	100	gy cm gn	fr	FG			tu	0.5	0	0.1	as above coarse grained granite.	
D	ML122	213.3	222.17	100	bn lgn gy	fr	SST	STUF		cl qz am px po	5	0	0.5	sharp contact between granite and bt altered SST. Bt rich SST interbedded with medium beds of sfg-smg STUF. SST beds have cl and qz veining. STUF beds have am-px veining.	
D	ML122	222.2	224.5	100	gy gn bn p	fr	STUF	amZXS		po cl	1	0.5	1	thinly bedded to laminated sfg-svfg STUF with minor ZXSCS. Minor bt-altered sediments and minor ca beds.	
D	ML122	224.5	225.8	100	bk gn	fr	mtZXS	amZXS		cl po	1	50	5	banded and dsm mt with ZXSCS and minor ca. Dsm po throughout.	
D	ML122	225.8	228	100	bn gy gn w	fr	STUF	mtZXS		cl po gt	0.5	5	1	laminated to thinly bedded svfg-svg STUF interbedded with minor mt-am-po bands. Trace gt in veins.	
D	ML122	228	237.25	100	bk dgy	fr	mtZXS				0.1	60	2	massive mt skarn interbedded with mt-am-px skarn. Mt banded and dsm with am-px. Very minor STUF beds. Minor dsm po and cpy.	
D	ML122	237.3	238.05	100	bn lgy	fr	SST	STUF		po am	10	0.1	2	bt altered SST with thin tuff beds. Dsm po and py	
D	ML122	238.1	239.3	100	bk gn gy	fr	mtZXS	STUF			0.1	50	1	mt-am-px skarn with minor ca and minor STUF beds.	
D	ML122	239.3	243.7	100	bk gn yw	fr	mtZXS	STUF			0.1	50	1	dolomite rich mt-am-px skarn.Gt commonly found in ca rich zones.Thin dark sediment beds common.	
D	ML122	243.7	244.95	100	gy pk	fr	mtZXS	STUF			0.1	50	0.1	gt rich mt-am-px skarn. Minor thin STUF beds.	
D	ML122	245	245.9	100	bk dgn	fr	amZXS				0.1	0.5	1	am-rich ZXSCS with minor gt and possibly sd.	

H1000	Hole	From	To	Recovery	Colour	Weathering	Lith1	Lith2	Lith3	Vein	Vein	Magnetite	Sulfide	Description	Comments
H1001		metres	metres	%							%	%	%		
D	ML122	245.9	248.32	100	bk gy	fr	btZXS	SST		qz bt	0.5	1	0.1	bt-qz-fl-am skarn with beds of dark sediment.	
D	ML122	248.3	248.7	100	gn yw bk	fr	tuV			tu fp cc ep cl	50	0	0	tu-fp-cc vein that has altered the surrounding sediment to dgn ep?	
D	ML122	248.7	251.64	100	bn yw dgy	fr	btZXS	SST	STUF	py cl	0	1	1	bt-am skarn with a yw needlt-like mineral also common. Beds of dark SST and STUF common.	
D	ML122	251.6	253.85	100	bn wt dgy	fr	qzbtflV	SST	STUF	bt qz fl ca	50	0	0.1	qz-bt +- fl bedding parallel granitic veins.dark SST beds and lgy STUF beds throughout.	
D	ML122	253.9	254.2	100	bk gn yw	fr	fltuqzV			fl tu qz fp	100	0	0	fl-tu-qz-fp vein with minor bt	
D	ML122	254.2	266	100	bn gy gn	fr	qzbtflV	SST	STUF	bt qz ca cl py	50	0	1	qz-bt +- fl +-ca bedding parallel granitic veins, with bt-am altered SST and STUF beds. Minor dsm po and cpy, and minor py in some veins.	
D	ML122	266	268.85	100	yw gy bn b	fr	tuV	SST	flpoV	qz tu fp fl po	40	0	0.5	layers of tu-fp-ca veins; sd amd am altered SST and bt-qz granitic veins.	
D	ML122	268.9	273.25	100	bn gn gy	fr	SST	STUF		qz bt po cl	2	0	3	bt-am altered SST and minor STUF. Thick (~2cm) qz veins common. Dsm and veined po.	
D	ML122	273.3	276.45	100	bn gn	fr	btZXS	STUF		qz cl	1	0	0.5	bt+-qz skarn with minor am-bt altered tuffite.	
D	ML122	276.5	277.3	100	bn gn	fr	SST	STUF		qz	1	0	2	as above SST	
D	ML122	277.3	279.36	100	yw bk	fr	FG			tu	0.5	0	0.1	ifg qz rich granite with tu and yw se?ep?alteration	
D	ML122	279.4	281.3	100	wt bk yw	fr	FG			tu se	0.1	0	0	img qz-fp rich slightly porphyritic granite, with fp phenocrysts.	EOH 281.3m
D	ML123	0	31.9	80	dgy og	fr	SST			qz cl	1	0	0	broken/rubbly SST with og oxidised fracture faces with rd he and wt ka alteration. Minor qz-cl veins	
D	ML123	31.9	36	90	dgy	fr	SST			qz cl	1	0	0	fine sandstone/siltstone beds with minor bt. Some fratures infilled with qz	
D	ML123	36	36.1	100	dgy gn	fr	XFB				0	0	0	fractured SST with v.minor XFBC	
D	ML123	36.1	48.5	90	dgy gn	fr	SST			qz cl po	2	0	1	beds of sandstone/siltstone, minor bt alteration in some beds	
D	ML123	48.5	53.3	100	lgn dgy bn	fr	STUF			po py cl qz	5	0	5	lgn/gy banded STUF with veins and ds po and py throughout, 5-10% X. Bt rich skarn from 51.3 to 53m. 53.1m - cl, am, po rich matrix with STUF clasts forming 4cm wide hydrothermal breccia	
D	ML123	53.3	67	80	dgy gn	fr	SST			cl qz py	2	0	1	siltstone/sandstone bed with minor sulphide veins. Bn bt ds in beds	
D	ML123	67	69.5	30	dgy gn	fr	XFB				0	0	0	incohesive breccia zone with SST clasts and cl gouge, 0.9m core loss therefore hard to determine extent of fault zone	
D	ML123	69.5	78.9	70	dgn bn	fr	SST			qz cl py po	10	0	2	fractured bt and VQL altered SST with networking VQ. Mostly py in small veinlets, 2-5%	
D	ML123	78.9	79.35	100	dgn	fr	XFB			qz cl	20	0	0	cohesive clast supported breccia, bt/cl altered SST clasts and cl matrix. Cl gouge zone at 79m. Networking VQL	
D	ML123	79.35	81	100	lgn cm	fr	STUF			qz cl	25	0	2	STUF with high concentration of VQL and minor X alteration. Bt alteration common.	
D	ML123	81	83.3	100	dgy bn	fr	amZXS	STUF		po py	1	2	5	bt rich ZXSCS with minor mt. Po common throughout. Altered STUF horizons with po veinlets	
D	ML123	83.3	85.1	100	gy wt	fr	ccSST	STUF		cc cl	5	0	1	weakly altered carbonate horizon with bt and minor X. Unit starts with 5-6cm brecciated cc vein with assimilated am rich ZXSCS clasts	
D	ML123	85.1	86.9	100	dgy bk	fr	mtZXS			cc py	5	50	10	mostly ms mt with py in veins. Cc veins with py repacing clasts. Do patches throughout. Rd gt? Or japer? Common at start of unit	
D	ML123	86.9	90.6	100	gy bn wt	fr	gtZXS	mtZXS		cc	5	2	0	mottled weakly altered carbonate unit rich in garnet or biotite? Marble and banded texture.	
D	ML123	90.6	95.8	100	dgy gn	fr	mtZXS	amZXS		py	1	50	10	ms and banded mt, horizons of banded mt are often patchy with am common. Py ds and veined throughout. Patchy do and banded ZXSCS horizons	
D	ML123	95.8	105	100	dgy gn	fr	amZXS	mtZXS		cc py	5	20	5	banded ZXSCS with patchy banded horizons of mt. Bt alteration throughout. Py and po in veins and ds in ZSKCS, 5-10% sx	
D	ML123	105	113.1				poZXS	amZXS	mtZXS	cc py	5	5	50	banded calcsilicate & sulphide skarn (py & po in veins and ds), patchy banded horizons of mt. Bt alteration throughout.	
D	ML123	113.1	128.2	100	dkgy gn	fr	mtZXS			po	5	35	40	Po rich magnetite skarn with local carbonate veinlets and blebs. Some bands of mt replacement contain carbonate blebs.	
D	ML123	128.2	141.3	100	gn	fr	poZXS	amZXS		qz tu po	5	0	50	Po rich calcsilicate skarn. Carbonate, quartz-tourmaline and po veins are common.	
D	ML123	141.3	153.7	100	gn	fr	amZXS	poZXS		qz tu po	5	0	15	Calcsilicate skarn with po rich sections. Quartz-tourmaline veins are common.	
D	ML123	153.7	158.3	100	gy gn	fr	ST	STUF		qz tu	5	0	1	Biotite altered siltstone with interbeds of STUF. Green cl alteration is common. Quartz-tourmaline veins occur throughout.	
D	ML123	158.3	162.5	100	gn	fr	amZXS	poZXS		po py	2	0	15	Calcsilicate skarn with po rich sections. Minor sulphide veining.	
D	ML123	162.5	176.2	100	dkgy bn	fr	SST			qz tu	5	0	4	Biotite altered SST with minor bands of calcsilicate alteration. Quartz-tourmaline veining is common. Minor blebs of po and lesser cp.	
D	ML123	176.2	182.2	100	wt og	wox	FG				0	0	0	Medium grained massive granite is moderately fractured. Limonite fracture coatings throughout. Vuggy dissolution and weak clay alteration is centred on a narrow gouge at 181.1 m. Tourmaline replacement is common above and below this gouge.	EOH 182.2m
D	ML124	0	60.9	85	og rd	vox	RCLY				0	0	0	Completely altered to clay with local sections of SST rubble. Unconsolidated sand occurs from 15.2 to 16.1 m.	
D	ML124	60.9	63	na	gy	wox	STUF				0	0	0	Banded STUF with broken / blocky sections.	
D	ML124	63	65.4	80	dgy gn	wox	XFB				0	0	0	Fault zone (?) is rubbly with clay gouge.	
D	ML124	65.4	73.7	na	gy gn	fr	STUF			ca	1	0	0	Silicified STUF. Locally banded. Local green cl altered patches.	
D	ML124	73.7	75	na	gn	fr	amZXS				1	0	0	Carbonate bearing calcsilicate skarn.	
D	ML124	75	97.3	na	gn	fr	STUF	amZXS		qz ca	1	0	0.1	Silicified tuff with minor bands of calcsilicate skarn. Minor disseminated fine pyrite occurs locally. Weak mt occurs in a ZXSCS band from 93.0 - 93.2 m.	
D	ML124	97.3	120.2	na	dgy gn	fr	SST			qz ca	1	0	0.5	SST with rare bands of STUF. Rare py blebs and rare po blebs associated with STUF bands.	
D	ML124	120.2	125.5	na	dgy	fr	SST				0	0.1	0	Weakly magnetic SST.	

H1000	Hole	From	To	Recovery	Colour	Weathering	Lith1	Lith2	Lith3	Vein	Vein	Magnetite	Sulfide	Description	Comments
H1001		metres	metres	%							%	%	%		
D	ML124	125.5	126.7	80	dgy	fr	XFB				0	0	0	Broken and rubbly fault zone with gouge.	
D	ML124	126.7	133.5	na	dgy	fr	SST			qz cl ze	1	0.1	0	Patchy weak to moderately magnetic SST. Moderately fractured with fracture surfaces coated with cl ca and very soft wt zeolite.	
D	ML124	133.5	134	100	pk	fr	FG				0	0	0	~50cm k-spar-qz rich granitic dyke with tu alteration.	
D	ML124	134	143.1	100	dgy	fr	SST			cl qz ze ca	1	0.1	0	A SST above	
D	ML124	143.1	147	100	dgy lgy	fr	SST			cl qz bt	1	0	0	Non-magnetic SST	
D	ML124	147	149.2	100	dgy	fr	SST			cl qz	0.5	0.1	0	Patchy weakly magnetic SST	
D	ML124	149.2	153.3	100	dgy	fr	SST			cl bt qz	1	0	0	Non-magnetic SST with minor bt alteration and veining.	
D	ML124	153.3	157.6	100	gy bn wt	fr	SST	STUF		po ca cl	2	0	1	Non-magnetic bt altered SST. Minor STUF beds.	
D	ML124	157.6	163.3	100	gy	fr	STUF			qz cl po	0.1	0	3	locally laminated STUF. Po blebs occur within narrow cl veinlets that are often bedding parallel. Minor ZXSCS bands.	
D	ML124	163.3	186.8	100	dgy bn	fr	SST			po	0.5	0	2	Non-magnetic SST with minor interbeds of STUF. Po stringers and veinlets.	
D	ML124	186.8	188.9	na	cm	fr	FG			si tu	0	0	0	Silicified fine-grained porphyritic FG	
D	ML124	188.9	189	na	gy	fr	SST			qz cl cc	1	0	0	Bt-cpx-altered SST, variably fractured and veined by crush zone. Late cl-cc-alteration accompanies fracturing.	
D	ML124	189	189.1	na	gn	fr	XFB				0	0	0	Cohesive chloritic fault breccia.	
D	ML124	189.1	191.6	na	gy	fr	SST			qz cl cc	1	0	0	Bt-cpx-altered SST, variably fractured and veined by crush zone. Late cl-cc-alteration accompanies fracturing.	
D	ML124	191.6	218.2	na	bn	fr	SST			qz tu fp	2	0	0	Tnb bt-cpx-altered tuffaceous SST cut by qz+/-fp+/-tu veinlets.	
D	ML124	218.2	220.4	na	gn	fr	amZXS	mtZXS			0	30	5	Fine-grained dk gn am?- mt-rich skarn with mt-rich bands. Po and lesser cpy ds. Minor hornfels bands.	
D	ML124	220.4	229.7	na	bn	fr	btZXS			qz tu fp po	1	0	10	Beautiful medium-grained resinous bt-fl-po-rich skarn.	
D	ML124	229.7	233.8	na	bk	fr	mtZXS	ZHF		qz tu po	2	50	5	Tnb fine-grained ZXSM with gn hornfels and sulphide-rich bands.	
D	ML124	233.8	243.5	na	gn gy	fr	STUF			qz tu	1	10	1	Tnb gn-gy altered tuffaceous siltstone with thin mt-rich replacement beds.	
D	ML124	243.5	245.6	na	bn	fr	btZXS				0	0	10	Bt-fl-po-rich skarn with glomerophyric clusters of gt.	
D	ML124	245.6	248.4	na	gn gy	fr	STUF			qz tu	1	5	2	Altered tuffaceous siltstone.	
D	ML124	248.4	252.1	na	bk	fr	mtZXS				0	50	2	Diffusely banded ZXSM.	
D	ML124	252.1	256.1	na	bk gn	fr	mtZXS			cl qz cc py	2	50	2	Broken zone of ZXSM with overprinting cl qz cc py alteration.	
D	ML124	256.1	261.3	na	bk gn	fr	mtZXS	ZHF			0	50	2	ZXSM with thin interbeds of cpx-altered vfg hornfels.	
D	ML124	261.3	266.9	na	dk gn	fr	amZXS	ZHF		cc po	1	5	2	Tnb-mdb dk-gn-gy am-rick skarn with thin interbeds of cpx-altered vfg hornfels.	
D	ML124	266.9	267.5	na	bk gn	fr	amZXS			cc	1	10	0	Cl-altered mt-am-rich ZXSCS	
D	ML124	267.5	268.5	na	dk gn	fr	amZXS	ZHF		po	1	0	1	Am-rich skarn with thin interbeds of cpx-altered vfg hornfels.	
D	ML124	268.5	271.4	na	dk gn	fr	SST			qz cc py	1	0	1	Broken zone of cl-altered tnb svfg-sfg SST with cl-cc-py coating fractures.	
D	ML124	271.4	285	na	gy	fr	SST			qz cc py	3	0	1	Fractured core of tnb gy cpx?-altered svfg-sfg SST with irregular networks of qz-cc-py veins related to early deformation producing micro-faulting.	
D	ML124	285	286.6	na	gy	fr	SST			qz cc py	1	0	0	Gy cpx?-altered ms sfg SST.	
D	ML124	286.6	287.2	na	bn	fr	SST				0	0	0	Bt-altered SST strongly impregnated by tu-rich segregations.	Forms part of an exo-greissen-like margin with FG
D	ML124	287.2	287.6	na	bk	fr	tuV				0	0	1	Coarse grained tu-rock (over 90%) with interstital cc+/-py.	Forms part of an exo-greissen-like margin with FG
D	ML124	287.6	287.8	na	wt bk	fr	qztuV				0	0	0	Massive qz-tu-rock.	Forms part of an exo-greissen-like margin with FG
D	ML124	287.8	297.6	na	cm	fr	FG			tu	2	0	0	Coarse grained FG with thin diffuse tu-veins and minor se-alteration.	EOH 297.6m
D	ML125	0	21.5	75	og	mox	SST				0	0	0	Clay altered limonitic SST. Rubble zones and lost core is common throughout.	
D	ML125	21.5	32.3	85	dgy og	wox	SST				0	0	0	Strongly fractured with rubble zones. Limonite fracture coatings throughout interval. Local clay alteration.	
D	ML125	32.3	76.2	95	dgy	fr	SST			qz cl py ze ba	3	0	0.1	Moderate to strongly fractured with local broken sections and minor core loss. Local brown altered patches. Minor lgy altered bands and tuff beds. Limonite coats most fracture surfaces. ~69.7-70m has intense networking of wt veins (ba?-no fizz or flouresc	
D	ML125	76.2	118.2	30	og yw gy	vox	RCLY	STUF	SST	cl	0.5	0	0	very weathered crumbly, rubbly og-yw material. Small patches of wox protolith SST and STUF further DH. No indication of relict badding in vox material.	
D	ML125	118.2	123.9	50	bk yw	fr	mtZXS	amZXS			0	50	1	patchy mt skarn with am-bt-sd? calcsilicate skarn. Banding in ZXSCS from 122-123.2m	
D	ML125	123.9	134	100	yw bn	fr	poZXS	amZXS		py sd qz	1	1	30	py-rich ZXSX with bn-gn ZSKCS. Sd in close relation with py distribution. Vuggy zones where py has weathered common. Non magnetic unit.	
D	ML125	134	142.2	na	dgn yw bn	fr	amZXS	poZXS		py cl	1	3	10	gn-banded ZXSCS dominant over py-rich ZSKX. Fe weathered bands from 134.2m are highly magnetic. From 132.2m-139.2m is 2.9m core loss due to cavity (suggested by core block)	
D	ML125	142.2	148	100	bz dgy dgn	fr	poZXS	amZXS	mtZXS	po sd	1	5	15	interbeds of po-rich ZXSX, calsilicate and bands of ZSKM, with minor STUF beds.	
D	ML125	148	161.75	100	dgy lgy pl	fr	STUF	amZXS	poZXS	cl po py qz sd tu	10	1	10	laminated to thin STUF beds, interbedded with am-rich bands. Some po bands are mod magnetic. 155.4m-155.8m has sd-py hydrothermal brecciation. Clasts are angular SST and STUF.	
D	ML125	161.8	175.2	100	bn gy	fr	STUF	SST	amZXS	py po tu cl sd qz bt	10	0.1	5	laminated to medium STUF beds and bt-altered SST, with minor sulphide-am-rich ZXSCS bands.	
D	ML125	175.2	183.6	100	wt gy bk o	wox	FG			tu	1	0	0.1	img equigranular felsic granite.fe-oxide weathering in the majority of fractures. Se alteration of fp crystals common. Tu alteration in veins and haloed. Fp phenocrysts increase DH and groundmass become finer. Trace py and ap.	EOH 183.6m
D	ML126	0	16.6	30	og bk	mox	RCLY			he	10	0	0	og/bk oxidised clay with hematitic staining, also present in veins. Poor recovery throughout.	

H1000	Hole	From	To	Recovery	Colour	Weathering	Lith1	Lith2	Lith3	Vein	Vein	Magnetite	Sulfide	Description	Comments
H1001		metres	metres	%							%	%	%		
D	ML126	16.6	28.2	90	dgy gn	fr	SST			qz cl	1	0	2	fine-med grained sandstone and siltstone beds. Fractured/broken core. Minor po and py in hydrothermal qz-cl veins	
D	ML126	28.2	28.3	100	lgn	fr	XFB				0	0	0	cohesive clast supported fault breccia, cl matrix	
D	ML126	28.3	86	90	gy gn	fr	SST			qz cl cc	1	0	1	fine-med grained sandstone and siltstone beds with minor bt alteration. Po, py and v.minor cpy in veins and on fracture faces. Small cc veins	
D	ML126	86	114.8	100	bn gy	fr	SST	STUF		qz cl cc po	5	0	2	bt altered sandstone/siltstone beds, po associated with qz-cl vein alteration	
D	ML126	114.8	127.4	100	bn gn	fr	STUF	SST		qz cl bt tu po cc	10	2	5	laminated STUF with significant bt alteration. Common qz-cl and cc veins and sulphide veinlets. Horizons of weakly altered sediments, bt and sulphide alteration throughout	
D	ML126	127.4	131.9	100	dgy bk	fr	amZXS	mtZXS		py po	2	20	15	dgn am rich calc-silicate skarn with patchy mt zones and significant ds po, po and py occurs in veins. Patchy concentrations of ap and gt. Vuggy coarse py rich vein at 128.2m	
D	ML126	131.9	135	na		na	poZXS			py po ap	5	10	50	py,po and ap common throughout unit and concentrated in veins, py/po rich rock passes into ap dominant ZXSX downhole of ~133.2m	
D	ML126	135	145.3	na		na	amZXS	STUF		po py cl	5	20	10	dgn clac-silicate skarn with bands of STUF and mt-gt and po-py rich bands. Veins of py-po ± siderite± cpy± tu	
D	ML126	145.3	148.6	100	bk gn	fr	mtZXS	amZXS	STUF	qz cl cc	2	40	2	mt-am rich skarn, mt is patchy and banded with other calc-silicate minerals and thin STUF horizons	
D	ML126	148.6	159.8	100	dgy lgn bk	fr	amZXS			qz cl cc	5	15	2	dgn-lgn am and px? Rich calc-silicate skarn, patchy mt common. Bn/yw do patches present. Minor cpy and py ds and in qz-cc veins	
D	ML126	159.8	163.6	100	bk	fr	mtZXS	amZXS		cc py po ap qz cl	1	40	2	ZXSM with thin horizons of ZSKCS, mt occurs in thin bands and with a weak patchy nature. Py-ap-po occurs in veins. Gradation into ZSKCS with bands of mt, Scheelite occurs in a concentrated patch between 160-161m	
D	ML126	163.6	166.9	100	lgn bn pl	fr	amZXS	STUF		cc	1	5	1	bands of ZXSCS and STUF, minor bt alteration of STUF. Mt occurs in some ZSKCS bands.	
D	ML126	166.9	170.1	100	dgy bk	fr	mtZXS	amZXS			0	35	5	35-40% mt and am rich skarn, mt mostly occurs in bands with am and minor ap + po, banded ZXSCS intervals between mt bands	
D	ML126	170.1	172.4	100	lgn gy bn	fr	amZXS				0	0	0	ZXSCS with thin patchy fine grained mt bands, minor py + po ds associated with a mt-am rich band	
D	ML126	172.4	173.6	100	lgy wt	fr	gtZXS			cc	5	0	2	lgy and wt limestone with common cc veins and po-py alteration on some joint faces. Gt aureole around fine grained sitlstone? Lens	
D	ML126	173.6	176.9	100	dgn lgy	fr	amZXS			cc	1	20	1	dominantly am, mt, cc rich rock with v.minor po-py	
D	ML126	176.9	185	na		na	amZXS	gtZXS		cc	1	5	1	banded calc-silcate with thin (up to ~5-6cm) carbonate bands (lgy limestone) which have weak gt/bt alteration. V.minor po + py on some joint faces. Patchy and banded mt	
D	ML126	185	187	70	lgy	fr	SST	STUF			0	5	5	broken/fractured magnetic sediments? Weak bt alteration	
D	ML126	187	187.9	90	gy gn	fr	amZXS				0	15	5	ZXSCS with significant mt and cl, rock feels soft and contains vugs	
D	ML126	187.9	192.8	90	bn gy	fr	SST	amZXS		py qz cl	2	2	5	bt altered sediments containing py and po ds and in veins and joint faces. Gradation into ZXSCS with bands of am rich ZSKCS and SST	
D	ML126	192.8	213.6	90	gn bn	fr	amZXS	STUF	poZXS	po py qz cl	2	15	10	am and mt rich calc-silicate skarn with concentrated horizons of po + py, intervals of banded bt altered STUF throughout. Patchy/banded mt mostly associated with am ± gt	
D	ML126	213.6	225.4	100	lgn gy bn	fr	STUF	amZXS		qz py po cl	2	15	10	banded STUF with weak bt alteration, thin intervals of am-mt-X rich ZXSCS throughout. 5-10cm qz-py-bt-tu rich vein with minor fl associated	
D	ML126	225.4	227.1	100	wt bk	fr	qztuV				0	0	2	mostly qz-tu-bt composition vein/dyke with small carbonate flecks in more qz rich zone near contact with ZXSB	
D	ML126	227.1	229.6	100	bn gy	fr	btZXS			qz fl	10	0	5	bt altered sediments, py ds along bedding planes and in veins	
D	ML126	229.6	230.2	100	bk	fr	mtZXS			qz cl	2	50	5	small mt rich horizon with ds py and weak bt alteration visible on fracture faces	
D	ML126	230.2	230.6	100	gn pl bn	fr	SST			py qz cl po	10	0	10	pl-bn bt and cl altered sediments with ds and veined py + po	
D	ML126	230.6	239.1	100	gy wt	fr	FG				0	0	0	qz-plag-tu-bt rich granitoid with phenocrysts of qz and plag, plag phenocrysts have often undergone varying degrees of se and cl alteration.	EOH 239.1m
D	ML127	0	12.9	na	bn	vox	RCLY				0	0	0	ms waterlogged dioherea bn clay, top 30cm wox rubble of gy SST	
D	ML127	12.9	19	na	gy	wox	SST				0	0	0	very poorly recovered rubbly wox gy SST	
D	ML127	19	21.7	na	bn	vox	RCLY				0	0	0	ms waterlogged dioherea bn clay	
D	ML127	21.7	51.9	na	og	vox	RCLY				0	0	0	ms og RCLY lower water content, cross sections of core show banding of Fe hydroxides	
D	ML127	51.9	54.8	na	yw	vox	RCLY				0	0	0	yw-og clay with rare relict structure preserved more copetent relative to above clays	
D	ML127	54.8	58.75	na	gy gn	wox	SST				0	0	0	wox altered tnb mdb SST fractures cl ± py coated	
D	ML127	58.75	62.2	na	gn	mox	SST				0	0	0	rubbly-fractured core with strong cl alteration	
D	ML127	62.2	73.7	na	cm	fr	STUF				1	0	1	tnb svfg altered STUF bedding disrupted by small scale faults dentritic masses of am ± po±cc post date	
D	ML127	73.7	81	na	bn	fr	SST	STUF			1	0	1	bn bt-altered sfg SST interbedded with packages of altered STUF, minor po-py veinlets/fracture coating SST has gn alteration patches	
D	ML127	81	94.6	na	bn	fr	SST				1	0	1	mdb bt altered sfg SST with gn am? Alteration patches, minor po-py veinlets/fracture coating	
D	ML127	94.6	136.7	na	py gn	fr	SST			qz am cl po	2	5	1	fine-med grained sandstone and siltstone beds, moderately magnetic horizons (most likely fine ds mt present), am ± X alteration associated with qz-cl veins.	
D	ML127	136.7	160	80	gy bn	fr	SST	STUF		po cl qz	5	2	2	Altered SST, thin intervals of STUF with po ds in possible relict bedding. Bt alteration occurs in concentrated horizons often >1m thickness near top of unit. Patchy magnetism. Core becomes highly fractured proximal to fault.	

H1000	Hole	From	To	Recovery	Colour	Weathering	Lith1	Lith2	Lith3	Vein	Vein	Magnetite	Sulfide	Description	Comments
H1001		metres	metres	%							%	%	%		
D	ML127	160	171	60	gn gy	fr	SST			qz cl	1	0	0	Fracture zone. Highly fractured broken SST, minor bt alteration halo around small qz vein. Cl infill on many fracture faces.	
D	ML127	171	171.8	100	lgn	fr	XFB			cc cl	5	1	5	clast supported cohesive breccia with cl, cc and py matrix, thin VC with angular clasts suggests associated hydrothermal brecciation.	
D	ML127	171.8	189.3	100	bn gy gn	fr	SST	STUF		py cc qz cl	5	0	2	weak bt alteration of SST, thin intervals of STUF containing fine grained px? Small veinlets of py at top of unit.	
D	ML127	189.3	196.5	100	bn	fr	btZXS	STUF		qz cl po	2	0	2	bt alteration of sandstone/siltstone beds is pervasive. Thin bl/gn STUF intervals common.	
D	ML127	196.5	200.1	100	cm gn	fr	gtZXS			cc	2	0	0	wt & pk bn ?garnet skarn	
D	ML127	200.1	202.2	100	dgn	fr	amZXS			cc po	1	15	5	dgn am dominant ZXSCS with patchy mt and po and minor py. Significant carbonate	
D	ML127	202.2	204.5	100	lgn	fr	STUF			qz cl po	5	0	5	laminated STUF with po occupying veinlets and in some bedding planes, cross cutting qz-cl veins	
D	ML127	204.5	206.4	100	dgy bn	fr	mtZXS	amZXS		qz ap po cpy ca	5	50	15	banded mt and po dominant skarn, mostly po occurring in veins throughout. ZXSCS horizon at bottom of unit.	
D	ML127	206.4	207.9	100	bn yw	fr	poZXS			ca po	2	5	40	ds sulphide concentrated in bands throughout unit with mt occurring near base of unit.	
D	ML127	207.9	211.7	100	bk gn	fr	mtZXS			po py ca	2	50	10	distinctly banded mt rich zones, bt alteration common throughout. Intervals of concentrated po.	
D	ML127	211.7	215.5	100	dgy gn	fr	mtZXS	amZXS		ca cl	2	40	5	thin-thick bands of mt and intervals of lgn ZXSCS containing mostly am, px and gt? ± po. Intervals up to 0.5m	
D	ML127	215.5	217.8	95	dgy gn	fr	amZXS			py po	1	10	15	dgn am dominant ZXSCS with pl/bn bt? Alteration in patches. Ds po and py throughout. Fine mt in patches.	
D	ML127	217.8	228	100	dgy dgn yw	fr	mtZXS	amZXS	poZXS	po py	1	40	15	mt occurs in concentrated bands several cm's thick throughout unit, fine-med grained mt. Mostly po plus py occurs ds throughout but concentrated in intervals.	
D	ML127	228	235.45	100	dgn gy	fr	amZXS	mtZXS		cl qz po	5	25	10	mt rich ZXSCS, patchy concentrations of mt throughout. Po rich intervals plus py.	
D	ML127	235.5	251.3	100	dgn lgn	fr	amZXS	STUF		qz cl tu	10	15	5	thin-thick bands of ZXSCS and laminated STUF intervals, ZSKCS intervals contain mostly am plus mt and po ± py ± gt	
D	ML127	251.3	276.4	100	bn gy	fr	STUF	btZXS		qz cl tu	5	5	10	interbedded bt altered sandstone/siltstone beds and STUF intervals. STUF bands contain qz-cl veins, po plus py alteration throughout. Core is weakly-mod magnetic	
D	ML127	276	293.3	100	wt lgn	fr	FG			qz tu	2	0	0	qz, feldspar, tu rich granitoid, plagioclase phenocrysts. Thin bk qz-tu rich veins throughout. Many feldspars phenocrysts have been altered to gn se. Minor py near contact with ZXSB.	EOH 293.3m
D	ML128	0	33.3	85	dgy og cm	wox	SST			qz cl fe	2	0	1	moderately to intensly fractured sfg sandstone and siltstone beds, with v.minor lgy STUF beds. Po + py ds and on fracture surfaces. Fe + ka on fracture surfaces with Fe. Minor beds of bt altered sed with felsic sfg clasts	
D	ML128	33.3	33.4	na	og	wox	XFB	SST			0	0	0	~10cm brecciated and gougy zone. Fine slickensides occurs on DH slip surface	
D	ML128	33.4	79.5	95	dgy og cm	wox	SST			qz cl am fe po py	2	0	1	mod-intensly fractured SST, with bt-am-cl altered beds increasing DH. Py common fracture surfaces, and po + py in veins	
D	ML128	79.5	80	100	lgy	fr	STUF				1	0	0	50cm lgy svfg STUF bed	
D	ML128	80	81.4	100	dgy bn	fr	SST				10	0	0	moderately ze-veined, bt altered SST	
D	ML128	81.4	85.4	75	bn og	mox	SST	XFBI			0	0	0	bt altered SST with fe alteration + clay weathering. 5cm gougy clay breccia's at 83.6 and 84.8m depth	
D	ML128	85.4	87.1	95	gy gn	fr	STUF			cl po	2	0	0	gy STUF beds with gn-cl veining and coating fracture surfaces. ~3cm clay gougy breccia at 87.1m. Minor clay and Fe weathering.	
D	ML128	87.1	89.2	75	bn gy	wox	SST				0	0	0	Fe weathered fractured, weakly bt altered SST unit.	
D	ML128	89.2	92.55	100	bn	fr	SST			qz py	5	0	0	laminated to thinnly bedded, bt altered SST. Thin qz veins throughout. Minor py + po veined and ds	
D	ML128	92.55	93.85	100	bn gn	fr	STUF				1	0	0	intensly convoluted bt altered STUF. Minor sulphides	
D	ML128	93.85	97.1	17	dgn bk	mox	XFB	mtZXS			1	60	0	cl gouge/breccia zone with mt skarn. Cl gouge is magnetic	
D	ML128	97.1	123	20	og yw	vox	RCLY				0	0	0	og-yw semi to consolidated clay material. Remnant laminations remain in consolidated yw clay	
D	ML128	123	123.7	100	bk gn	fr	amZXS	mtZXS		cl	0	5	0	ZXSCS with weak mt patches. Cl alteration in fracture zones	
D	ML128	123.7	130.2	100	gn bk	fr	mtZXS	amZXS		ca qz py sd	1	40	1	patchy banded + ds mt -ca in am rich ZXSCS. Common gy/bk non magnetic mineral (bk-gy streak; soft ~3)	
D	ML128	130	133	100	gn gy bk	fr	mtZXS	amZXS			1	30	5	as above, but not ca rich	
D	ML128	133	135.9	100	gn bk	fr	amZXS	mtZXS		ca am	0	10	2	am-rich calc-silicate with patchy mt and ds sulphides. Bk greasy mineral also present in unit above	
D	ML128	135.9	136.5	100	gy gn	fr	mtZXS			po am	0	60	2	mt skarn with am and sulphides	
D	ML128	136.5	148.7	100	lgy gn bn	fr	STUF	amZXS	mtZXS	qz sd am po py cpy ap fl	10	2	8	thin to laminated STUF and sediments, interbedded with am-po-py rich ZXSCS and mt. Mt mixed with ZSKCS patches. Numerous gn veins (am?) cutting STUF beds. Sd, X and qz veins common	
D	ML128	148.7	152.7	100	bn	fr	STUF	SST		qz tu po fl	5	0	2	less well bedded bt-po altered STUF and sediments. Granitic qz-tu-fl veining throughout and po veins	
D	ML128	152.7	156.2	100	gn bn	fr	amZXS	STUF		py qz fl	1	2	3	am-X rich skarn with interbeds of bt altered STUF. Granitic veining common. Po ds throughout.	
D	ML128	156.2	163.95	100	bn gn	fr	SST			qz tu bt sd	2	0	5	bt-po altered sediments with granitic veining throughout and minor am-po ZXSCS + STUF beds. Bedding difficult to detect. Minor laminated STUF beds.	

H1000	Hole	From	To	Recovery	Colour	Weathering	Lith1	Lith2	Lith3	Vein	Vein	Magnetite	Sulfide	Description	Comments
H1001		metres	metres	%							%	%	%		
D	ML128	164	165.45	100	bk bn wt	fr	FG			bt tu qz py	2	0	2	bt-tu-qz-py veining above granite body	
D	ML128	165.5	166.5	100	wt gy	fr	FG			py ap tu	1	0	1	equigranular qz-fp rich granite, minor se alteration + minor tu veins	EOH 166.5m
D	ML129	0	18.9	24	gy	fr	SST				0	0	0	Extensively fractured gy SST with lm coating fracture surfaces.	
D	ML129	18.9	24.8	8	yw og	mox	RCLY				5	0	0	Yw-og clay with relict fine-scale bedding and fine veinlets.	
D	ML129	24.8	28.4	61	kk	sox	SST				0	0	0	Oxidized clayey kk-coloured SST.	
D	ML129	28.4	81.9	52	gy	fr	SST				0	0	0	Extensively fractured gy SST with lm coating fracture surfaces.	EOH 81.9, abandoned due to drilling difficulties.
D	ML130	0	13.4	60	dgy og	wox	SST			ka cl	1	0	0	weakly weathered SST, rd/og limonitic and hematitic staining on many fracture faces. Wt ka common throughout	
D	ML130	13.4	15.8	90	dgy bn og	wox	STUF			qz cl	5	0	10	lgn/bn bt and po altered banded STUF, og lm on fracture faces	
D	ML130	15.8	25	95	dgy bn	wox	SST			qz cl py	1	0	1	interbedded sandstone/siltstone, significant bt alteration in top 1m of unit, lm staining on fracture faces. Minor qz-cl ± am-py-po alteration around thin veins	
D	ML130	25	75.8	100	dgy gn	fr	SST			qz cl py po	5	0	1	interbedded siltstone and fine-med sandstone beds, weak bt alteration common. Minor intervals of gn px? Or am? And sulphide rich alteration present but not common	
D	ML130	75.8	78	90	dgy bn	fr	SST			qz cl bt	2	0	2	intervals of bt altered sediments and SST, undulating contact between SST and fine bt altered sediments	
D	ML130	78	133.5	100	dgy gn bn	fr	SST			qz cl bt	2	0	1	dgy interbedded sandstone/siltstone beds with intervals of bt occupying bedding planes and around qz veins	
D	ML130	133.5	144.7	100	bn lgn	fr	SST	STUF		qz cl py	5	0	2	bt altered sediments with intervals of lgn px? Rich STUF with dgn qz-cl plus am? Veins	
D	ML130	144.7	149	100	lgn bn	fr	STUF	SST	amZXS	cc qz cl am py	5	5	5	intervals of lgn/cm laminated (often contorted laminations) STUF and bn bt altered SST. Minor interval of ca altered to ZXSCS, weakly magnetic throughout	
D	ML130	149	153.3	100	dgn gy	fr	amZXS			ca	2	10	10	dgn am rich ZXSCS with patchy mt, cm do present, po commonly ds throughout, banded non-magnetic fine grained bk mineral also common	
D	ML130	153.3	154.75	100	gy gn	fr	mtZXS	amZXS			0	40	20	dgn am and banded patchy mt common, ds and concentrated po and py throughout.	
D	ML130	154.8	163.4	100	dgn gy	fr	amZXS			ca am	2	15	10	distincly banded ZXSCS with thin bands of mt common. Ca present throughout and in veins. Po ds throughout and concentrated in bands often with py	
D	ML130	163.4	172.5	100	bn pl lgn	fr	SST	amZXS			0	5	5	altered sediment package, horizons of carbonate, weak bt alteration, thin intervals of ZXSCS with mt. Sulphides occur in veins and ds in beds	
D	ML130	172.5	182.7	100	dgn gy	fr	amZXS				0	15	10	dgn am dominant ZXSCS with patchy mt (~15-20%), ds po and py throughout	
D	ML130	182.7	193.7	100	dgy gn	fr	mtZXS			cc py po	1	50	10	dominantly mt and am rich ZXSM with po and py commonly ds throughout as small blebs. Mt occurs in ms horizons with am.	
D	ML130	193.7	197.7	100	dgn gy	fr	amZXS	mtZXS			0	35	10	dgn am and mt rich ZXSCS, mt occurs in bands throughout, po and py ds and concentrated in patches often with minor ap. Intervals of ca common.	
D	ML130	197.7	198.8	100	dgn gy	fr	FG				0	0	0	qz-feld-bt-tu rich fine-coarse grained granitoid dyke with bands that are am rich (hornblende?)	
D	ML130	198.8	201.5	100	dgn gy	fr	amZXS	FG		po py	2	10	20	ZXSCS with 20-30cm horizons of undulating FGRA dykes throughout. ZSKCS horizons rich in po and py ds and in veins	
D	ML130	201.5	208.2	100	dgn wt	fr	amZXS	FG		py po	2	20	5	ZXSCS with horizons of FGRA (20-30cm wide), patchy mt ds throughout. Weak bt alteration present. Py and po associated with ZSKCS horizons.	
D	ML130	208.2	212	100	bn gn	fr	STUF	amZXS		qz py po cl	10	10	5	bt altered STUF horizons, more intense bt alteration occurs arouns qz-X veins. ZXSCS horizons with dominant am often contain associated mt	
D	ML130	212	217.1	100	pl bn	fr	amZXS	FG		qz cl	2	35	10	ZXSCS with abundant fine grained mt, patchy and ms. 5-10% po and py ds and concentrated in thin bands and in fracture faces. Undulating FGRA dykes present	
D	ML130	217.1	233.3	100	gy wt gn	fr	FG			qz tu bt	2	0	0	porphritic qz-feld-tu-bt rich FGRA, phenocrysts of qz, plag and k-spar the latter of which often appear to be weakly altered by se. Possibly weak bt/tu alignment near contact. Coarse qz-feld rich pegmatite horizons, more common near contact.	
D	ML131	0	2	0	na	na	NREC				0	0	0		
D	ML131	2	15.5	80	og bn yw	vox	RCLY				0	0	0	og semiconsolidated to unconsolidated clay. Minor amounts of remnant bedding/veins visible. Non magnetic. Fairly good recovery. Pebbles of SST present in the clay at top of hole.	
D	ML131	15.5	16	90	og	mox	SAND				0	0.1	0	unconsolidated coarse fe weathered sand. The grains comprise of og clay, sandstone/siltstone and qz. Minor grains of clay and SST are weakly magnetic.	
D	ML131	16	39.5	50	og	vox	RCLY				0	0	0	as RCLY above, except only ~50% recovery	
D	ML131	39.5	40.8	90	lgy wt gn	sox	SST			cl	40	0	0	ka altering sediments. Intense chlorite networking causing cohesive brecciation in STUF beds. Moderately fractured.	
D	ML131	40.8	40.9		gn	sox	XFB				0	0	0	possible small 10cm fault zone; consists of gougy chloritic clay.	
D	ML131	40.9	42.9	90	lgy wt gn	sox	SST			cl	40	0	0	as SST above	
D	ML131	42.9	75.65	90	bn dgy dgn	fr	SST			qz cl ba py am cc	1	0	1	moderately to intensely fractured angular rubbly siltstone and fine sandstone, with patchy bt and am alteration throughout. From 56.25 to 57m has bt-po altered interbedded mudstone and siltstones. Non-magnetic to patchy moderate magnetism DH.	HQ to 50.5m
D	ML131	75.65	79.3	100	dgy wt	fr	SST			cc ze fe	15	2	0	cc-ze veined SST. Patchy cl flecks present. Patchy moderate magnetism. Minor fe staining in veins.	
D	ML131	79.3	104.4	100	dgy	fr	SST			ze cl cc qz fe am	2	5	0	patchy mod-strongly magnetic SST. Vze-cl-fe, Vze are common, with minor Vqz-am.	

H1000	Hole	From	To	Recovery	Colour	Weathering	Lith1	Lith2	Lith3	Vein	Vein	Magnetite	Sulfide	Description	Comments
H1001		metres	metres	%							%	%	%		
D	ML131	104.4	107.5	100	dgy gn	fr	SST			ze cl cc fe	10	3	0	patchy mod-strongly magnetic SST. Higher intensity of Vze-cl-fe and Vcc than above unit. Intensely fractured zone caused by wt ze veining from 106.6m-106.75m.	
D	ML131	107.5	115.3	100	dgy	fr	SST			cl sb fe py	2	3	1	patchy mod-strongly magnetic SST. Common Vcl+-py, and Vsb+-cl; minor Vcl-fe. Fracturing in SST increases DH as it gets closer to underlying fault zone.	
D	ML131	115.3	115.45	100	dgy gn	mox	XFB				0	1	0	cl-clay gougy fault breccia zone	
D	ML131	115.5	115.6	100	dgy	fr	SST			cl	40	1	0	intensely cl veined SST inbetween two XFBI zones. Fracturing occurs along cl veins.	
D	ML131	115.6	115.65	100	dgy gn	mox	XFB				0	1	0	as above XFBI	
D	ML131	115.7	117.35	100	dgy og	fr	SST			sb cl cc py	20	1	1	mod-intensely fractured, og-sb veined SST. Cc and cl+-py veins also common. Py is fine.	
D	ML131	117.4	117.5	100	gy	mox	XFB			cl clay	80	0.5	2	cohesive cl-clay-py altered fault breccia.	
D	ML131	117.5	118.1	100	dgy	fr	SST			cc cl	20	1	0	cc-cl veined, fractured SST. Minor cc hydrothermal brecciation of SST at 117.6m.	
D	ML131	118.1	118.2	100	gy	mox	XFB				0	0.5	0	fine grained SST-clay-cl gouge.	
D	ML131	118.2	118.85	100	dgy	fr	SST			cl	1	1	0	intensely fractured sub-rounded pebble sized SST with cl coating fracture surfaces.	
D	ML131	118.9	119	100	gy	mox	XFB				0	1	0	incohesive cl-clay fault breccia.	
D	ML131	119	120.8	100	dgy	fr	SST			cl sb	1	0	0	intensley fractured SST. Cl coats fracture surfaces. Minor sb veining.	
D	ML131	120.8	120.9	100	gy	mox	XFB				0	0.5	0	fine grained SST-clay-cl gouge.	
D	ML131	120.9	132.25	100	dgy dgn	fr	SST			cl qz cc am py po ze	3	0.5	1	intensely fractured SST from 120.9m to 122.1m. From 122.1m to end of unit os moderately fractured siltstone/fine sandstone. Non-magnetic to weakly magnetic DH. Vcl-cc, Vqz and Vcl-am-py common.	
D	ML131	132.3	135.25	100	dgy og	fr	SST			sb cl cc	20	2	0	moderately fractured, moderately magnetic SST, with moderate og-sb+-cc and cl veining.	
D	ML131	135.3	149.1	100	dgy	fr	SST			cl cc po qz ze py	10	2	0.1	moderately magnetic siltstone/fine sandstone (magnetism decreases DH). Cl and cc veining throughout. Very minor bt-am-si alteration from 146.4m to 149.1m.	
D	ML131	149.1	151.67	100	lgy bn	fr	SST			cl py qz	1	0	0.5	non magnetic si-altered +-weak bt altered SST. Mottled texture. Cl+-py and qz veining throughout.	
D	ML131	151.7	155.95	100	bn gy	fr	SST			cl py po	1	0	1	non magnetic, moderately bt-si altered SST. Cl-py veining common. Patchy mottled texture. Minor laminated tuffaceous mudstone at end of unit.	
D	ML131	156	162.3	100	bn	fr	SST	STUF		po py si cl qz	5	1	5	mod-intensely bt altered SST, with minor tuffite. Thin discontinuous po veining scattered throughout. Py in joints with cl. Si-am-px-cl alteration in tuff beds common. Patchy weak magnetism.	
D	ML131	162.3	173.1	100	bn dgy dgn	fr	SST			cl ze qz cc	1	0	1	moderately bt altered sediments interbedded with hornfelsic gy SST. Non magnetic.	
D	ML131	173.1	178.35	100	dgy	fr	SST			cl ze py	1	0	0.5	patchy weak bt altered smg sandstone and siltstones. Non magnetic. Minor veining. Intensely fractured zone at 177.6 to 177.75m	
D	ML131	178.4	179.2	100	bn gy wt	fr	SST			cc cl	50	0	0	intense cc-cl networking of bt-altered SST. Small areas of hydrothermal brecciation.	
D	ML131	179.2	182.5	100	dgy dgn	fr	SST			cc cl	5	0	0.1	moderately to intensely fractured SST with minor hydrothermal cc-cl veining	
D	ML131	182.5	208.6	100	dgy	fr	SST			cl cc	2	0	0.1	sfg sandstone and siltstone with minor cc and cl veining. Occasional smg sandstone beds. Minor lgy si altered beds. Cl flecks occur from 206.9 to 208.6m	
D	ML131	208.6	211.02	100	dgy	fr	SST			cl qz cc	3	0	0	very weakly bt altered, moderatley to intensely fractured siltstone/sandstone beds, with moderate Vcl	
D	ML131	211	211.12	100	dgy	fr	XFB			cl	50	0	0	brecciated SST with cl matrix	
D	ML131	211.1	211.7	100	dgy	fr	SST			cl	5	0	0	as SST above	
D	ML131	211.7	212.7	100	dgy	fr	XFB			cl	50	0	0	cohesive, weakly bt altered SST breccia with cl matrix	
D	ML131	212.7	214.85	100	dgy	fr	SST			cl	3	0	0	as SST above	
D	ML131	214.9	215.05		dgy	sox	XFB				0	0	0	incohesive breccia with minor clay-cl gouge	
D	ML131	215.1	215.65	90	dgy	fr	SST			cl	30	0	0	as SST above	
D	ML131	215.7	215.8	100	dgy	mox	XFB				0	0	0	semi-consolidated clay-cl gouge/breccia fault zone	
D	ML131	215.8	224.3	100	dgy bn	fr	SST			cl qz hm	20	0	0.1	patchy moderately bt-altered SST and gy SST. Moderate to intense cl veining. Vqz+-hm increasing DH. Patchy weakly magnetic.	
D	ML131	224.3	233.34	100	dgy	fr	SST			cl	2	2	0.1		
D	ML131	233.3	233.9	100	dgy gn	fr	XFB	XFBI			0	0	0	mostly clast supported cohesive breccia, clasts of qz and cl altered SST with incohesive breccia (gouge) at top and bottom of unit	
D	ML131	233.9	236.6	100	dgn gy	fr	amZXS			po ca py	2	20	15	am rich ZXSCS with patchy mt zones, po and py commonly ds throughout and in veins	
D	ML131	236.6	249.7	100	dgy gn	fr	amZXS			cc po py	2	25	5	distinctly banded ZXSCS with patchy/banded mt throughout. Py and po, dominant sulphides ds throughout ~5-10%. Common banded and patchy bk mineral throughout	
D	ML131	249.7	251.3	100	dgy lgy	fr	mtZXS	amZXS		py po	1	50	15	tn-tk bands of mt, common concentrated bands of po and py. Thn intervals od STUF present	
D	ML131	251.3	253.1	100	dgy lgn	fr	amZXS	mtZXS			0	10	10	banded ZXSCS with intervals of STUF common, patchy mt present in thin bands ~5-10%	
D	ML131	253.1	254.6	100	dgy lgn	fr	mtZXS	amZXS			0	40	15	ms bands of med grained mt and bands of ZXSCS	
D	ML131	254.6	256.3	100	lgy	fr	STUF	amZXS		py po	1	15	10	laminated STUF, minor bt alteration, bands of ZXSCS containing mt. Sulphide often concentrated along bedding planes	
D	ML131	256.3	258.4	100	dgy cm	fr	mtZXS	amZXS		cc cpy	1	60	15	mt-po skarn rich in do and with minor am. Thin Vcc+-cpy.	

H1000	Hole	From	To	Recovery	Colour	Weathering	Lith1	Lith2	Lith3	Vein	Vein	Magnetite	Sulfide	Description	Comments
H1001		metres	metres	%							%	%	%		
D	ML131	258.4	259.75	100	bz gy	fr	poZXS	amZXS	STUF	qz po	0.1	5	50	po-rich sulphide zone, with bands of gy-gn calsilicate. Minor mt.	
D	ML131	259.8	263.4	100	dgy dgn cm	fr	mtZXS	amZXS	STUF	cc	0.1	50	5	mainly banded mt, some disseminated. Po in bands with ZXSCS and disseminated. Do scattered throughout with mt and in ZSKCS bands. Gy STUF beds from 262.15m to 262.8m.	
D	ML131	263.4	266.2	100	dgy dgn pl	fr	STUF	amZXS		cl po	5	3	2	thinly bedded gy STUF, interbedded with gt-am-px ZXSCS beds+-mt. Some Vcl and po have alteration halo's. Bk mineral present in ZSKCS (~6 Moh, bk streak)	
D	ML131	266.2	268	100	gn bk gy	fr	mtZXS	amZXS	STUF	qz	1	50	10	dsm mt with am-px-po-ca. Mt becomes banded DH, interbbeded with STUF.	
D	ML131	268	271.55	100	lpl lgy gn	fr	amZXS	STUF		am cl	5	3	3	interbedded lpl calcsilicate (ifg gt?) and gy-gn-bk mottled beds with gy STUF. Do in ZXSCS. Vam, cl common-some halo's. Lbn beds (weakly altered bt STUF)	
D	ML131	271.6	272.78	100	gn yw bk	fr	mtZXS	amZXS			0	40	5	dsm and banded mt in ZXSCS. Po dsm throughout. Pl beds occur (ifg gt?)	
D	ML131	272.8	275.45	100	pl gy bn	fr	STUF	amZXS		am qz po	5	0.5	1	gt-bt-px-am altered STUF with minor am-x bands.	
D	ML131	275.5	276.45	100	dgn lgy	fr	amZXS			qz	0.5	0	1	dgn-lgy ifg am-px-ca bed.	
D	ML131	276.5	278.55	100	lbn gy	fr	STUF	SST		am py qz bt	5	0	0.5	bt-si altered STUF with minor sediments. Bt-qz granitic veins occur. Py in veins and on fracture surfaces. Vam common-halo's often occur around veins.	
D	ML131	278.6	281.2	100	bn	fr	SST			am py po qz bt	5	0.5	0.5	bn siltstone and sfg sandstones with minor STUF beds. Py-am veins throughout. Granitic qz-bt veins occur. Pactchy, weakly magnetic.	
D	ML131	281.2	283.55	100	gn pl gy	fr	STUF	amZXS	SST	cl po am	5	0	2	gt-px-do-si altered STUF and SST. Po in veins and dsm. From 282.82 to 283.38m is a dgn am-x bed.	
D	ML131	283.6	287.45	100	bn gy	fr	SST			qz bt po fl cc cl	1	0	2	bn bt-po altered sediments. Po is fine grained and dsm with bt. Vqz common. Patchy weakly magnetic-due to dsm po.	
D	ML131	287.5	291.75	100	bn	fr	SST			cc po cl py tu qz	5	0	3	as above except Vcc and Vpo very common.	
D	ML131	291.8	293.05	100	bn bk wt	fr	qztuV			bt tu qz cc	1	0	0	bt-tu-qz-cc medium grained granitic dyke	
D	ML131	296.1	296.52	100	gy yw gn	fr	SST	STUF		am po cl qz cc	2	0	1	bt altered sediments and am-si altered mottled STUF. Vam-cl common in STUF. Ifg qz-tu-bt dyke from 296.16m to 296.36m.	
D	ML131	296.5	299.3	100	wt bk	fr	FG			tu py	1	0	0.1	equigranular qz-fp-bt granite with minot se alteration of fp and tu veining. Trace py in tu veins.	EOH 299.3m
D	ML132	0	14.2	43	gy	fr	SST			qz fp	1	2	0	Fractured core of weakly to moderately magnetic sfg SST with minor qz-fp veinlets. Fractured surfaces strongly affected by alteration to a greenish clay.	
D	ML132	14.2	16.3	25	gn	vox	RCLY				0	0	0	Greenish clay arfter SST.	
D	ML132	16.3	32.9	100	gy	fr	SST			qz fp tu	1	2	0	Intact core of ms sfg moderately magnetic SST. Minor qz+/-fp+/-tu veins occur.	
D	ML132	32.9	39.7	100	gy	fr	FG				0	0	0	Ifg FG with strong tu-alteration throughout. Irregular pegamatitic patches are conspicuous.	
D	ML132	39.7	92.5	100	gy	fr	FG				0	0	0	Porphyritic gy FG.	
D	ML132	92.5	101.1	100	gy	fr	FG				0	0	0	Porphyritic gy FG with moderate Fe staining along J.	
D	ML132	101.1	117.8	82	gy og	fr	FG				0	0	0	Fractured porphyritic FG with strong Fe staining.	
D	ML132	117.8	167.4	100	gy	fr	FG				0	0	0	Porphyritic gy FG with areas of se- tu- alteration.	EOH 167.4
EOF															

Appendix G

Drill core densities

H0002	Version	3			
H0003	Date_generated	27/7/2009			
H0004	Reporting_period_end_date	22/8/2009			
H0005	State	TAS			
H0100	Tenement	EL21/2005			
H0101	Tenement_holder	Venture Minerals Ltd			
H0102	Project_name	Mt Lindsay			
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	3437 Stringer, 3438 Livingstone, 3637 Rosebury, 3638 Parsons, 3639 Ramsay			
H0200	Start_date_of_data_acquisition	22/8/2008			
H0201	End_date_of_data_acquisition	27/7/2009			
H0202	Data_format	SG3			
H0203	Number_of_data_records	761			
H0204	Date_of_metadata_update	27/7/2009			
H0500	Feature_Located	Drill Core Density			
H0501	Geodetic_datum	not applicable			
H0502	Vertical_datum	not applicable			
H0503	Projection	not applicable			
H0531	Projection_zone	not applicable			
H0900	Remarks:				
H1000	Hole	From_m	To_m	SG	Comments
H1001		metres	metres	g/cm3	
D	LV003a	4.15	5.1	2.8	
D	LV003a	7.5	9	1.6	
D	LV003a	12	13.5	1.6	
D	LV003a	17.7	18.3	1.5	
D	LV003a	19.7	20.5	3.4	
D	LV003a	22	22.7	1.2	
D	LV003a	24.7	25.5	1.4	
D	LV003a	25.5	27	1.4	
D	LV003a	27	28	1.4	
D	LV003a	28.5	29.4	1.3	
D	LV003a	34	35.2	1	
D	LV003a	37.5	39.5	1.1	
D	LV003a	40.25	41.2	1.2	
D	LV006	10.2	11.7	1.9	
D	LV006	13.5	14.2	1.9	
D	LV006	19.5	21	1.8	
D	LV006	21	22.1	2.1	
D	LV006	86.8	87.6	0.7	density for RECOVERED interval, assumes unrecovered material all cavity
D	LV006	87.6	88.5	0.8	density for RECOVERED interval, assumes unrecovered material all cavity
D	LV006	88.5	89.25	0.9	density for RECOVERED interval, assumes unrecovered material all cavity
D	LV006	89.25	89.85	0.9	density for RECOVERED interval, assumes unrecovered material all cavity
D	LV006	89.85	91.35	0.6	density for RECOVERED interval, assumes unrecovered material all cavity
D	LV006	91.35	92.3	1.3	density for RECOVERED interval, assumes unrecovered material all cavity
D	LV006	92.3	92.65	1.1	density for RECOVERED interval, assumes unrecovered material all cavity
D	LV006	92.65	93.4	2.9	density for RECOVERED interval, assumes unrecovered material all cavity
D	LV006	93.4	94.9	2.3	density for RECOVERED interval, assumes unrecovered material all cavity
D	LV006	94.9	95.9	2.7	density for RECOVERED interval, assumes unrecovered material all cavity
D	LV006	95.9	96.5	2.8	density for RECOVERED interval, assumes unrecovered material all cavity
D	LV006	96.5	97.6	2.3	density for RECOVERED interval, assumes unrecovered material all cavity
D	LV006	97.6	98.9	3	density for RECOVERED interval, assumes unrecovered material all cavity
D	LV006	98.9	100	3.2	density for RECOVERED interval, assumes unrecovered material all cavity
D	LV006	100	101	3.1	density for RECOVERED interval, assumes unrecovered material all cavity
D	LV006	101	102	3	density for RECOVERED interval, assumes unrecovered material all cavity
D	LV006	102	103	2.8	density for RECOVERED interval, assumes unrecovered material all cavity
D	LV006	103	104	3	density for RECOVERED interval, assumes unrecovered material all cavity
D	LV006	104	105	3.5	density for RECOVERED interval, assumes unrecovered material all cavity
D	LV006	105	106	3.1	density for RECOVERED interval, assumes unrecovered material all cavity
D	LV006	106	107	3.3	density for RECOVERED interval, assumes unrecovered material all cavity
D	LV006	107	108	2.9	density for RECOVERED interval, assumes unrecovered material all cavity
D	LV006	108	109	2.7	density for RECOVERED interval, assumes unrecovered material all cavity
D	LV006	109	110	2.1	density for RECOVERED interval, assumes unrecovered material all cavity
D	LV006	110	110.65	2.6	density for RECOVERED interval, assumes unrecovered material all cavity
D	LV006	110.65	112	0.6	density for RECOVERED interval, assumes unrecovered material all cavity
D	LV006	112	112.8	1.2	density for RECOVERED interval, assumes unrecovered material all cavity
D	LV006	112.8	113.5	0.3	density for RECOVERED interval, assumes unrecovered material all cavity
D	LV006	113.5	114.2	1.4	density for RECOVERED interval, assumes unrecovered material all cavity
D	LV006	114.2	115.75	2.5	density for RECOVERED interval, assumes unrecovered material all cavity
D	LV006	115.75	116.9	1.8	density for RECOVERED interval, assumes unrecovered material all cavity
D	LV006	116.9	117.65	1.3	density for RECOVERED interval, assumes unrecovered material all cavity
D	LV006	117.65	118.3	1.5	density for RECOVERED interval, assumes unrecovered material all cavity
D	LV006	118.3	118.85	1.9	density for RECOVERED interval, assumes unrecovered material all cavity
D	LV006	118.95	119.65	1.5	density for RECOVERED interval, assumes unrecovered material all cavity
D	LV006	119.65	120.3	0.6	density for RECOVERED interval, assumes unrecovered material all cavity
D	LV006	120.3	121.5	0.8	density for RECOVERED interval, assumes unrecovered material all cavity
D	LV006	121.5	122.1	1.3	density for RECOVERED interval, assumes unrecovered material all cavity
D	LV006	121.5	122.1	1.3	density for RECOVERED interval, assumes unrecovered material all cavity
D	LV006	122.1	122.5	2.2	density for RECOVERED interval, assumes unrecovered material all cavity
D	LV006	122.5	122.9	2.1	density for RECOVERED interval, assumes unrecovered material all cavity
D	LV006	122.9	123.5	1.9	density for RECOVERED interval, assumes unrecovered material all cavity
D	LV006	123.5	123.9	1.8	density for RECOVERED interval, assumes unrecovered material all cavity
D	LV006	123.9	124.2	2.2	density for RECOVERED interval, assumes unrecovered material all cavity
D	LV006	124.2	124.9	1.2	density for RECOVERED interval, assumes unrecovered material all cavity
D	LV006	124.9	125.6	1.3	density for RECOVERED interval, assumes unrecovered material all cavity
D	LV006	125.6	126.2	1.1	density for RECOVERED interval, assumes unrecovered material all cavity
D	LV006	126.2	126.9	1.5	density for RECOVERED interval, assumes unrecovered material all cavity
D	LV006	126.9	127.6	1.7	density for RECOVERED interval, assumes unrecovered material all cavity
D	LV006	127.6	128.3	1.9	density for RECOVERED interval, assumes unrecovered material all cavity
D	LV006	128.3	128.6	0.5	density for RECOVERED interval, assumes unrecovered material all cavity
D	LV006	128.6	129.4	0.7	density for RECOVERED interval, assumes unrecovered material all cavity
D	LV006	129.4	129.6	2.5	density for RECOVERED interval, assumes unrecovered material all cavity
D	LV006	129.6	130.2	1.2	density for RECOVERED interval, assumes unrecovered material all cavity
D	ML120	130	131	2.91	
D	ML120	131	132	2.8	
D	ML120	132	133	2.85	
D	ML120	133	134	3.67	
D	ML120	134	135	2.92	
D	ML120	135	136	2.91	
D	ML120	136	137	3.16	
D	ML120	137	138	2.98	
D	ML120	138	139	2.92	
D	ML120	139	140	3.02	
D	ML120	140	141	2.85	
D	ML120	141	142	2.75	
D	ML120	142	143	2.79	
D	ML120	143	144	2.8	
D	ML120	144	145	2.87	
D	ML120	145	146	2.81	
D	ML120	146	147	2.87	
D	ML120	147	148	2.87	
D	ML120	148	149	2.83	
D	ML120	149	150	3.13	
D	ML120	150	151	3.03	
D	ML120	151	152	2.93	
D	ML120	152	153	2.89	
D	ML120	153	154	2.78	
D	ML120	154	155	2.85	

H1000	Hole	From_m	To_m	SG	Comments
H1001		metres	metres	g/cm3	
D	ML120	155	156	3.43	
D	ML120	156	157	3.91	
D	ML120	157	158	3.98	
D	ML120	158	159	3.84	
D	ML120	159	160	3.74	
D	ML120	160	161	3.78	
D	ML120	162	163	3.85	
D	ML120	163	164	3.71	
D	ML120	164	165	3.3	
D	ML120	165	166	3.4	
D	ML120	166	167	3.34	
D	ML120	167	168	3.34	
D	ML120	168	169	3.46	
D	ML120	169	170	3.38	
D	ML120	170	171	3.45	
D	ML120	171	172	3.35	
D	ML120	172	173	3.49	
D	ML120	173	174	3.49	
D	ML120	174	175	3.83	
D	ML120	175	176	3.47	
D	ML120	176	177	3.55	
D	ML120	177	178	3.53	
D	ML120	178	179	3.87	
D	ML120	179	180	3.6	
D	ML120	180	181	3.7	
D	ML120	181	182	3.12	
D	ML120	182	183	3.3	
D	ML120	183	184	3.39	
D	ML120	184	185	3.26	
D	ML120	185	186	3.38	
D	ML120	186	187	3.61	
D	ML120	187	188	3.62	
D	ML120	188	189	3.38	
D	ML120	189	190	3.08	
D	ML120	190	191	3.5	
D	ML120	191	192	3.15	
D	ML120	192	193	3.18	
D	ML120	193	194	3.43	
D	ML120	194	195	3.4	
D	ML120	195	196	3.51	
D	ML120	196	197	3.34	
D	ML120	197	198	3.29	
D	ML120	198	199	3.64	
D	ML120	199	200	3.83	
D	ML120	200	201	3.55	
D	ML120	201	202	3.44	
D	ML120	202	203	3.32	
D	ML120	203	204	3.32	
D	ML120	204	205	3.39	
D	ML120	205	206	3.42	
D	ML120	206	207	3.76	
D	ML120	207	208	3.33	
D	ML121	124	125	2.76	
D	ML121	125	126	2.77	
D	ML121	126	127	2.92	
D	ML121	127	128	2.99	
D	ML121	128	129	3.36	
D	ML121	129	130	3.04	
D	ML121	130	131	3.21	
D	ML121	131	132	3.63	
D	ML121	132	133	3.43	
D	ML121	133	134	3.38	
D	ML121	134	135	3.7	
D	ML121	135	136	3.75	
D	ML121	136	137	3.88	
D	ML121	137	138	3.42	
D	ML121	138	139	3.31	
D	ML121	139	140	3.44	
D	ML121	140	141	3.61	
D	ML121	141	142	3.65	
D	ML121	142	143	3.54	
D	ML121	143	144	3.66	
D	ML121	144	145	3.19	
D	ML121	145	146	3.45	
D	ML121	146	147	3.49	
D	ML121	147	148	3.16	
D	ML121	148	149	3.35	
D	ML121	149	150	3.75	
D	ML121	150	151	3.27	
D	ML121	151	152	3.34	
D	ML121	152	153	3.39	
D	ML121	153	154	3.6	
D	ML121	154	155	3.3	
D	ML121	155	156	3.33	
D	ML121	156	157	2.98	
D	ML121	157	158	2.97	
D	ML121	158	159	2.93	
D	ML121	159	160	3.01	
D	ML121	160	161	3.22	
D	ML121	161	162	3.09	
D	ML121	162	163	3.19	
D	ML121	163	164	3	
D	ML121	164	165	3.1	
D	ML121	165	166	3.53	
D	ML121	166	167	2.99	
D	ML121	167	168	3.17	
D	ML121	168	169	2.89	
D	ML121	169	170	2.91	
D	ML121	170	171	2.91	
D	ML121	171	172	2.92	
D	ML121	172	173	2.97	
D	ML121	173	174	2.83	COMPLETE
D	ML122	0	1	4.07	
D	ML122	1	2	3.82	
D	ML122	2	3	3.6	
D	ML122	3	4	3.42	
D	ML122	4	5	3.19	
D	ML122	5	6	3.43	
D	ML122	6	7	3.65	
D	ML122	7	8	3.21	
D	ML122	8	9	3.16	
D	ML122	9	10	3.2	
D	ML122	10	11	3.16	
D	ML122	11	12	3.26	
D	ML122	12	13	3.22	
D	ML122	13	14	3.74	
D	ML122	14	15	3.58	
D	ML122	15	16	3.99	
D	ML122	16	17	3.34	

H1000	Hole	From_m	To_m	SG	Comments
H1001		metres	metres	g/cm3	
D	ML122	17	18	3.14	
D	ML122	18	19	3.35	
D	ML122	19	20	3.72	
D	ML122	20	21	3.85	
D	ML122	21	22	3.64	
D	ML122	22	23	3.59	
D	ML122	23	24	3.74	
D	ML122	24	25	3.44	
D	ML122	25	26	3.17	
D	ML122	26	27	3.24	
D	ML122	27	28	3.25	
D	ML122	28	29	3.29	
D	ML122	219	220	2.9	
D	ML122	220	221	2.89	
D	ML122	221	222	2.93	
D	ML122	222	223	3.12	
D	ML122	223	224	2.88	
D	ML122	224	225	3.39	
D	ML122	225	226	3.62	
D	ML122	226	227	3.14	
D	ML122	227	228	3.2	
D	ML122	228	229	3.75	
D	ML122	229	230	4.04	
D	ML122	230	231	4.07	
D	ML122	231	232	4.31	
D	ML122	232	233	4.13	
D	ML122	233	234	4.22	
D	ML122	234	235	4.41	
D	ML122	235	236	4.23	
D	ML122	236	237	4.31	
D	ML122	237	238	2.96	
D	ML122	238	239	3.66	
D	ML122	239	240	3.87	
D	ML122	240	241	4.11	
D	ML122	241	242	3.84	
D	ML122	242	243	3.86	
D	ML122	243	244	3.57	
D	ML122	244	245	3.47	
D	ML122	245	246	3.23	
D	ML122	246	247	3.16	
D	ML122	247	248	3.1	
D	ML122	248	249	3.11	
D	ML122	249	250	3.17	
D	ML122	250	251	3.12	
D	ML122	251	252	3.13	
D	ML122	252	253	3.11	
D	ML122	253	254	3.11	
D	ML122	254	255	3.01	
D	ML122	255	256	3.07	
D	ML122	256	257	2.98	
D	ML122	257	258	3.12	
D	ML122	258	259	3.01	
D	ML122	259	260	3	
D	ML122	260	261	3.03	
D	ML122	261	262	3.13	
D	ML122	262	263	3.1	
D	ML122	263	264	3.11	
D	ML122	264	265	3.11	
D	ML122	265	266	3.15	
D	ML122	266	267	3.1	
D	ML122	267	268	3.03	
D	ML122	268	269	3.07	
D	ML122	269	270	2.99	
D	ML122	270	271	2.96	
D	ML122	271	272	3.03	
D	ML122	272	273	2.96	
D	ML122	273	274	3.06	
D	ML122	274	275	3.02	
D	ML122	275	276	2.95	
D	ML122	276	277	3.2	COMPLETE
D	ML123	79	80	2.76	
D	ML123	80	81	2.91	
D	ML123	81	82	3.58	
D	ML123	82	83	3.58	
D	ML123	83	84	3.37	
D	ML123	84	85	3.26	
D	ML123	85	86	3.86	
D	ML123	86	87	3.7	
D	ML123	87	88	3.29	
D	ML123	88	89	3.32	
D	ML123	89	90	3.34	
D	ML123	90	91	3.28	
D	ML123	91	92	4.36	
D	ML123	92	93	3.36	
D	ML123	93	94	3.53	
D	ML123	94	95	3.51	
D	ML123	95	96	3.28	
D	ML123	96	97	3.22	
D	ML123	97	98	3.34	
D	ML123	98	99	3.16	
D	ML123	99	100	3.45	
D	ML123	100	101	3.19	
D	ML123	101	102	3.17	
D	ML123	102	103	3.16	
D	ML123	103	104	3.18	
D	ML123	104	105	3.26	
D	ML123	105	106	3.47	
D	ML123	106	107	3.36	
D	ML123	107	108	3.56	
D	ML123	108	109	3.64	
D	ML123	109	110	3.45	
D	ML123	110	111	3.36	
D	ML123	111	112	3.64	
D	ML123	112	113	3.38	
D	ML123	113	114	3.76	
D	ML123	114	115	3.62	
D	ML123	115	116	3.63	
D	ML123	116	117	3.45	
D	ML123	117	118	3.43	
D	ML123	118	119	3.45	
D	ML123	119	120	3.63	
D	ML123	120	121	3.65	
D	ML123	121	122	3.71	
D	ML123	122	123	3.94	
D	ML123	123	124	3.7	
D	ML123	124	125	3.45	
D	ML123	125	126	3.53	
D	ML123	126	127	3.35	
D	ML123	127	128	3.37	

H1000	Hole	From_m	To_m	SG	Comments
H1001		metres	metres	g/cm3	
D	ML123	128	129	3.32	
D	ML123	129	130	3.66	
D	ML123	130	131	3.68	
D	ML123	131	132	3.47	
D	ML123	132	133	3.36	
D	ML123	133	134	3.56	
D	ML123	134	135	3.4	
D	ML123	135	136	3.19	
D	ML123	136	137	3.06	
D	ML123	137	138	3.31	
D	ML123	138	139	3.3	
D	ML123	139	140	3.63	
D	ML123	140	141	3.31	
D	ML123	141	142	3.16	
D	ML123	142	143	3.1	
D	ML123	143	144	3.23	
D	ML123	144	145	3.18	
D	ML123	145	146	3.38	
D	ML123	146	147	3.32	
D	ML123	147	148	3.36	
D	ML123	148	149	3.48	
D	ML123	149	150	3.58	
D	ML123	150	151	3.14	
D	ML123	151	152	3.11	
D	ML123	152	153	3.18	
D	ML123	153	154	3.27	
D	ML123	154	155	3.22	
D	ML123	155	156	3	
D	ML123	156	157	2.97	
D	ML123	157	158	2.97	
D	ML123	158	159	3.17	
D	ML123	159	160	3.03	
D	ML123	160	161	3.22	
D	ML123	161	162	3	
D	ML123	162	163	3.09	
D	ML123	163	164	2.98	
D	ML123	164	165	2.95	
D	ML123	166	167	2.88	
D	ML123	168	169	2.91	
D	ML123	169	170	2.93	
D	ML123	170	171	2.94	
D	ML123	171	172	2.91	
D	ML123	172	173	2.87	
D	ML123	173	174	2.93	
D	ML123	174	175	3.08	
D	ML123	175	176	2.91	
D	ML123	176	177	2.86	COMPLETE
D	ML124	218	219	3.43	
D	ML124	219	220	3.78	
D	ML124	220	221	3.3	
D	ML124	221	222	3.33	
D	ML124	222	223	3.47	
D	ML124	223	224	3.31	
D	ML124	224	225	3.23	
D	ML124	225	226	3.25	
D	ML124	226	227	3.23	
D	ML124	227	228	2.93	
D	ML124	228	229	3.22	
D	ML124	229	230	3.35	
D	ML124	230	231	3.39	
D	ML124	231	232	3.5	
D	ML124	232	233	3.58	
D	ML124	233	234	3.48	
D	ML124	234	235	3.23	
D	ML124	235	236	3.36	
D	ML124	236	237	3.42	
D	ML124	237	238	3.42	
D	ML124	238	239	3.26	
D	ML124	239	240	3.14	
D	ML124	240	241	3.25	
D	ML124	241	242	3.5	
D	ML124	242	243	3.27	
D	ML124	243	244	3.26	
D	ML124	244	245	3.19	
D	ML124	245	246	3.19	data entry error - Wt in air assumed to be 1574g not 574g as entered
D	ML124	246	247	3.29	
D	ML124	247	248	3.29	
D	ML124	248	249	3.56	
D	ML124	249	250	3.58	
D	ML124	250	251	3.52	
D	ML124	251	252	3.78	
D	ML124	252	255	3.67	
D	ML124	255	256	3.72	
D	ML124	256	257	3.51	
D	ML124	257	258	3.44	
D	ML124	258	259	3.6	
D	ML124	259	260	3.41	
D	ML124	260	261	3.81	
D	ML124	261	262	3.6	
D	ML124	262	263	3.55	
D	ML124	263	264	3.41	
D	ML124	264	265	3.32	
D	ML124	265	266	3.58	
D	ML124	266	267	3.42	
D	ML124	267	268	3.34	COMPLETE EOH 297.6
D	ML125	121.2	124.2	3.14	
D	ML125	124.2	125	3.25	
D	ML125	125	126	3.28	
D	ML125	126	127	3.19	
D	ML125	127	128	3.19	
D	ML125	128	129	3.19	
D	ML125	129	130	3.01	
D	ML125	130	131	3.55	
D	ML125	131	132	3.17	
D	ML125	132	133	3.41	
D	ML125	133	134	3.19	
D	ML125	134	135	3.03	
D	ML125	135	136.2	3.05	
D	ML125	136.2	141	3.29	
D	ML125	141	142	3.3	
D	ML125	142	143	3.48	
D	ML125	143	144	3.92	
D	ML125	144	145	3.59	
D	ML125	145	146	3.39	
D	ML125	146	147	3.53	
D	ML125	147	148	3.65	
D	ML125	148	149	3.33	
D	ML125	149	150	3.26	
D	ML125	150	151	3.64	

H1000	Hole	From_m	To_m	SG	Comments
H1001		metres	metres	g/cm3	
D	ML125	151	152	3.57	
D	ML125	152	153	3.2	
D	ML125	153	154	3.26	
D	ML125	154	155	3.21	
D	ML125	155	156	3.07	
D	ML125	156	157	3.07	
D	ML125	157	158	3.4	
D	ML125	158	159	3.29	
D	ML125	159	160	3.28	
D	ML125	160	161	3.03	
D	ML125	161	162	3.47	
D	ML125	162	163	3.01	
D	ML125	163	164	2.92	
D	ML125	164	165	2.91	
D	ML125	165	166	3.24	
D	ML125	166	167	2.95	
D	ML125	167	169	3.27	Rubbly core
D	ML125	169	171	2.95	Rubbly core
D	ML125	171	172	3.02	
D	ML125	172	173	2.9	
D	ML125	173	174	2.97	
D	ML125	174	175	3.07	
D	ML125	175	176	2.62	COMPLETE EOH 183.6m
D	ML126	115	116	2.97	
D	ML126	116	117	2.8	
D	ML126	117	118	2.9	
D	ML126	118	119	2.89	
D	ML126	119	120	3.02	
D	ML126	120	121	3.03	
D	ML126	121	122	2.96	
D	ML126	122	123	2.9	
D	ML126	123	124	2.83	
D	ML126	124	125	2.82	
D	ML126	125	126	2.82	
D	ML126	126	127	2.92	
D	ML126	127	128	3.24	
D	ML126	128	129	3.59	
D	ML126	129	130	3.57	
D	ML126	130	131	3.86	
D	ML126	131	132	3.55	
D	ML126	132	133	3.91	
D	ML126	133	134	3.65	
D	ML126	134	135	3.54	
D	ML126	135	136	3.24	
D	ML126	136	137	3.21	
D	ML126	137	138	3.39	
D	ML126	138	139	3.6	
D	ML126	139	140	3.49	
D	ML126	140	141	3.52	
D	ML126	141	142	3.43	
D	ML126	142	143	3.35	
D	ML126	143	144	3.48	
D	ML126	144	145	3.46	
D	ML126	145	146	3.98	
D	ML126	146	147	3.74	
D	ML126	147	148	3.83	
D	ML126	148	149	3.65	
D	ML126	149	150	3.69	
D	ML126	150	151	3.82	
D	ML126	151	152	3.96	
D	ML126	152	153	3.57	
D	ML126	153	154	3.46	
D	ML126	154	155	3.39	
D	ML126	155	156	3.39	
D	ML126	156	157	3.42	
D	ML126	157	158	3.39	
D	ML126	158	159	3.48	
D	ML126	159	160	3.53	
D	ML126	160	161	4.13	
D	ML126	161	162	3.59	
D	ML126	162	163	3.56	
D	ML126	163	164	3.76	
D	ML126	164	165	3.72	
D	ML126	165	166	3.16	
D	ML126	166	167	3.47	
D	ML126	167	168	3.85	
D	ML126	168	169	3.55	
D	ML126	169	170	3.58	
D	ML126	170	171	3.58	
D	ML126	171	172	3.52	
D	ML126	172	173	3.28	
D	ML126	173	174	3.05	
D	ML126	174	175	3.23	
D	ML126	175	176	3.45	
D	ML126	176	177	3.51	
D	ML126	177	178	3.35	
D	ML126	178	179	3.32	
D	ML126	179	180	3.42	
D	ML126	180	181	3.55	
D	ML126	181	182	3.36	
D	ML126	182	183	3.34	
D	ML126	183	184	3.44	
D	ML126	184	185	3.36	
D	ML126	185	186	3.22	
D	ML126	186	187	3.28	
D	ML126	187	188	3.17	
D	ML126	188	189	3.08	
D	ML126	189	190	3.1	
D	ML126	190	191	3.11	
D	ML126	191	192	3.16	
D	ML126	192	193	3.26	
D	ML126	193	194	3.19	
D	ML126	194	195	3.62	
D	ML126	195	196	3.45	
D	ML126	196	197	3.41	
D	ML126	197	198	3.11	
D	ML126	198	199	3.19	
D	ML126	199	200	3.66	
D	ML126	200	201	3.78	
D	ML126	201	202	3.56	
D	ML126	202	203	3.65	
D	ML126	203	204	3.54	
D	ML126	204	205	3.76	
D	ML126	205	206	3.61	
D	ML126	206	207	3.52	
D	ML126	207	208	3.58	
D	ML126	208	209	3.61	
D	ML126	209	210	3.99	
D	ML126	210	211	3.46	

H1000	Hole	From_m	To_m	SG	Comments
H1001		metres	metres	g/cm3	
D	ML126	211	212	3.3	
D	ML126	212	213	3.11	
D	ML126	213	214	3.31	
D	ML126	214	215	3.33	
D	ML126	215	216	3.83	
D	ML126	216	217	3.34	
D	ML126	217	218	3.2	
D	ML126	218	219	3.37	
D	ML126	219	220	3.21	
D	ML126	220	221	3.33	
D	ML126	221	222	3.24	
D	ML126	222	223	3.59	
D	ML126	223	224	3.34	
D	ML126	224	225	3.22	
D	ML126	225	226	3.18	
D	ML126	226	227	2.81	
D	ML126	227	228	2.92	
D	ML126	228	229	2.97	
D	ML126	229	230	3.23	
D	ML127	189	190	2.83	
D	ML127	190	191	2.79	
D	ML127	191	192	2.77	
D	ML127	192	193	2.77	
D	ML127	193	194	2.83	
D	ML127	194	195	2.87	
D	ML127	195	196	2.83	
D	ML127	196	197	3.14	
D	ML127	197	198	3.24	
D	ML127	198	199	3.29	
D	ML127	199	200	3.26	
D	ML127	200	201	3.31	
D	ML127	201	202	3.38	
D	ML127	202	203	2.99	
D	ML127	203	204	2.86	
D	ML127	204	205	3.46	
D	ML127	205	206	3.32	
D	ML127	206	207	3.48	
D	ML127	207	208	3.77	
D	ML127	208	209	3.66	
D	ML127	209	210	3.86	
D	ML127	210	211	3.76	
D	ML127	211	212	3.36	
D	ML127	212	213	3.48	
D	ML127	213	214	3.46	
D	ML127	214	215	3.46	
D	ML127	215	216	3.49	
D	ML127	216	217	3.38	
D	ML127	217	218	3.39	
D	ML127	218	219	3.33	
D	ML127	219	220	3.44	
D	ML127	220	221	3.53	
D	ML127	221	222	3.71	
D	ML127	222	223	3.63	
D	ML127	223	224	3.54	
D	ML127	224	225	3.68	
D	ML127	225	226	3.67	
D	ML127	226	227	3.64	
D	ML127	227	228	3.49	
D	ML127	228	229	3.73	
D	ML127	229	230	3.65	
D	ML127	230	231	3.64	
D	ML127	231	232	3.37	
D	ML127	232	233	3.79	
D	ML127	233	234	3.54	
D	ML127	234	235	3.72	
D	ML127	235	236	3.67	
D	ML127	236	237	4.06	
D	ML127	237	238	3.52	
D	ML127	238	239	3.51	
D	ML127	239	240	3.57	
D	ML127	240	241	3.43	
D	ML127	241	242	3.33	
D	ML127	242	243	3.34	
D	ML127	243	244	3.45	
D	ML127	244	245	3.45	
D	ML127	245	246	3.33	
D	ML127	246	247	3.52	
D	ML127	247	248	3.47	
D	ML127	248	249	3.23	
D	ML127	249	250	3.33	
D	ML127	250	251	3.31	
D	ML127	251	252	3.35	
D	ML127	252	253	3.03	
D	ML127	253	254	2.98	
D	ML127	254	255	2.98	
D	ML127	255	256	3.08	
D	ML127	256	257	3.12	
D	ML127	257	258	3.1	
D	ML127	258	259	3.07	
D	ML127	259	260	2.99	
D	ML127	260	261	3	
D	ML127	261	262	3.02	
D	ML127	262	263	2.89	
D	ML127	263	264	2.94	
D	ML127	264	265	2.86	
D	ML127	265	266	2.83	
D	ML127	266	267	2.9	
D	ML127	267	268	2.88	
D	ML127	268	269	3.07	
D	ML127	269	270	2.9	
D	ML127	270	271	2.86	
D	ML127	271	272	2.9	
D	ML127	272	273	3.02	
D	ML127	273	274	2.92	
D	ML127	274	275	2.89	
D	ML127	275	276	2.82	EOH 276m
D	ML128	93.9	97.1	3.4	
D	ML128	97.1	100.5	1.1	
D	ML128	103.5	106.5	1.7	
D	ML128	106.5	109.5	1.9	
D	ML128	109.5	112.5	1.6	
D	ML128	112.5	115.5	1.5	
D	ML130	139	140	2.91	
D	ML130	140	141	2.94	
D	ML130	141	142	2.99	
D	ML130	142	143	2.89	
D	ML130	143	144	2.81	
D	ML130	144	145	2.91	
D	ML130	145	146	2.92	

H1000	Hole	From_m	To_m	SG	Comments
H1001		metres	metres	g/cm3	
D	ML130	146	147	2.91	
D	ML130	147	148	2.92	
D	ML130	148	149	2.93	
D	ML130	149	150	3.22	
D	ML130	150	151	3.42	
D	ML130	152	153	3.76	
D	ML130	153	154	3.54	
D	ML130	154	155	3.79	
D	ML130	155	156	3.75	
D	ML130	156	157	3.52	
D	ML130	157	158	3.37	
D	ML130	158	159	3.41	
D	ML130	159	160	3.28	
D	ML130	160	161	3.37	
D	ML130	161	162	3.62	
D	ML130	162	163	3.39	
D	ML130	163	164	3.62	
D	ML130	164	165	3.4	
D	ML130	165	166	3.61	
D	ML130	166	167	3.29	
D	ML130	167	168	3.15	
D	ML130	168	169	3.41	
D	ML130	169	170	3.54	
D	ML130	170	171	3.33	
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D	ML130	176	177	3.45	
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D	ML130	178	179	3.47	
D	ML130	179	180	3.63	
D	ML130	180	181	3.59	
D	ML130	181	182	3.55	
D	ML130	182	183	3.59	
D	ML130	183	184	3.87	
D	ML130	184	185	3.61	
D	ML130	185	186	3.7	
D	ML130	186	187	3.62	
D	ML130	187	188	3.67	
D	ML130	188	189	3.75	
D	ML130	189	190	3.74	
D	ML130	190	191	3.77	
D	ML130	191	192	3.46	
D	ML130	192	193	3.56	
D	ML130	193	194	3.5	
D	ML130	194	195	3.4	
D	ML130	195	196	3.5	
D	ML130	196	197	3.62	
D	ML130	197	198	3.58	
D	ML130	198	199	2.61	
D	ML130	199	200	3.38	
D	ML130	200	201	3.44	
D	ML130	201	202	3.61	
D	ML130	202	203	3.51	
D	ML130	203	204	2.97	
D	ML130	204	205	3.53	
D	ML130	205	206	3.42	
D	ML130	206	207	3.24	
D	ML130	207	208	3.2	
D	ML130	208	209	3.4	
D	ML130	209	210	3.02	
D	ML130	210	211	3.32	
D	ML130	211	212	3.1	
D	ML130	212	213	3.48	
D	ML130	213	214	3.32	
D	ML130	214	215	3.6	
D	ML130	215	216	3.62	
D	ML130	216	217	3.63	
EOF					

Appendix H

Resource report January 2009

Mt Lindsay Magnetite-Tin-Tungsten Project
Western Tasmania

Main Zone and No2 Zone
Fe, Sn & WO_3 Resource Estimates
January 2009

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Appendix B: Main Tin Zone and No. 2 Zone Fe Block Model Sections Block Model Sections

Appendix C: Main Tin Zone and No. 2 Zone Sn and WO_3 Block Model Sections

1 Introduction

1.1 Scope

The Main Tin Zone and No. 2 Zone are magnetite-tin-tungsten skarns located at Mt Lindsay in western Tasmania (Figure 1). Both zones were previously identified and drill tested for tin by Aberfoyle Tin Development Partnership and Renison Ltd, and Aberfoyle made several estimates of the tin resources within central part of the Main Tin Zone 1960s culminating in an estimate of 209 kt at 0.83% Sn. Venture has previously reported a JORC compliant Fe resource for the No. 2 Zone of 20 Mt at 33% Fe. This report documents the first iron resource estimation for the Main Tin Zone, upgrades the previous No. 2 Zone Fe estimate, the first Sn resource estimate for the No. 2 Zone, a significant upgrade to the Sn resources of the Main Tin Zone, and the first WO_3 resource estimate for both the Main Tin Zone and No. 2 Zone.

The information in this report from data collection to interpretation wireframes and geostatistical modelling for the Main Tin Zone and No. 2 Zone Inferred Mineral Resources is based on information compiled by or under the supervision of Mr Andrew Radonjic. Mr Radonjic is a full time employee of Venture Minerals and has sufficient experience to the style of mineralisation and type of deposit to qualify as competent person defined by the 2004 Edition of the "Australian Code for Reporting of Mineral Resources and Ore Reserves". Mr Radonjic consents to the inclusion in this report of the matters based on information in the form and context in which it appears.

1.2 Project Location and Access

The Mt Lindsay Magnetite-Tin-Tungsten Project is located in western Tasmania approximately 32 km by road from the nearest town Tullah, and is entirely included within Exploration Licence 21/2005 held 100% by Venture (Figure 1). Access to the prospect is via the sealed (bitumen) Pieman Road which branches off the Murchison Highway 4 km north of Tullah, then approximately 3 km of 4WD vehicle track to the drill site. The drill site is c. 3 km from Hydro Tasmania transmission lines (adjacent to the Pieman Road) and 21 km from the Bastyan hydroelectric powerhouse and Emu Bay Railway which connects with the port of Burnie approx. 95 km to the north.

Western Tasmania has over 100 years of mining history, and the most significant active or recently active mines in the region include Savage River (magnetite), Renison Bell (tin), Mount Bischoff (tin), Cleveland (tin and copper), King Island (tungsten), Rosebery (lead, zinc, silver and gold), Hellyer (lead, zinc, silver and gold), and Mt Lyell (copper). Mt Lindsay is 26 km in a direct line SSE of the Savage River magnetite mine and 14 km to the NNW of the Renison Bell tin mine.

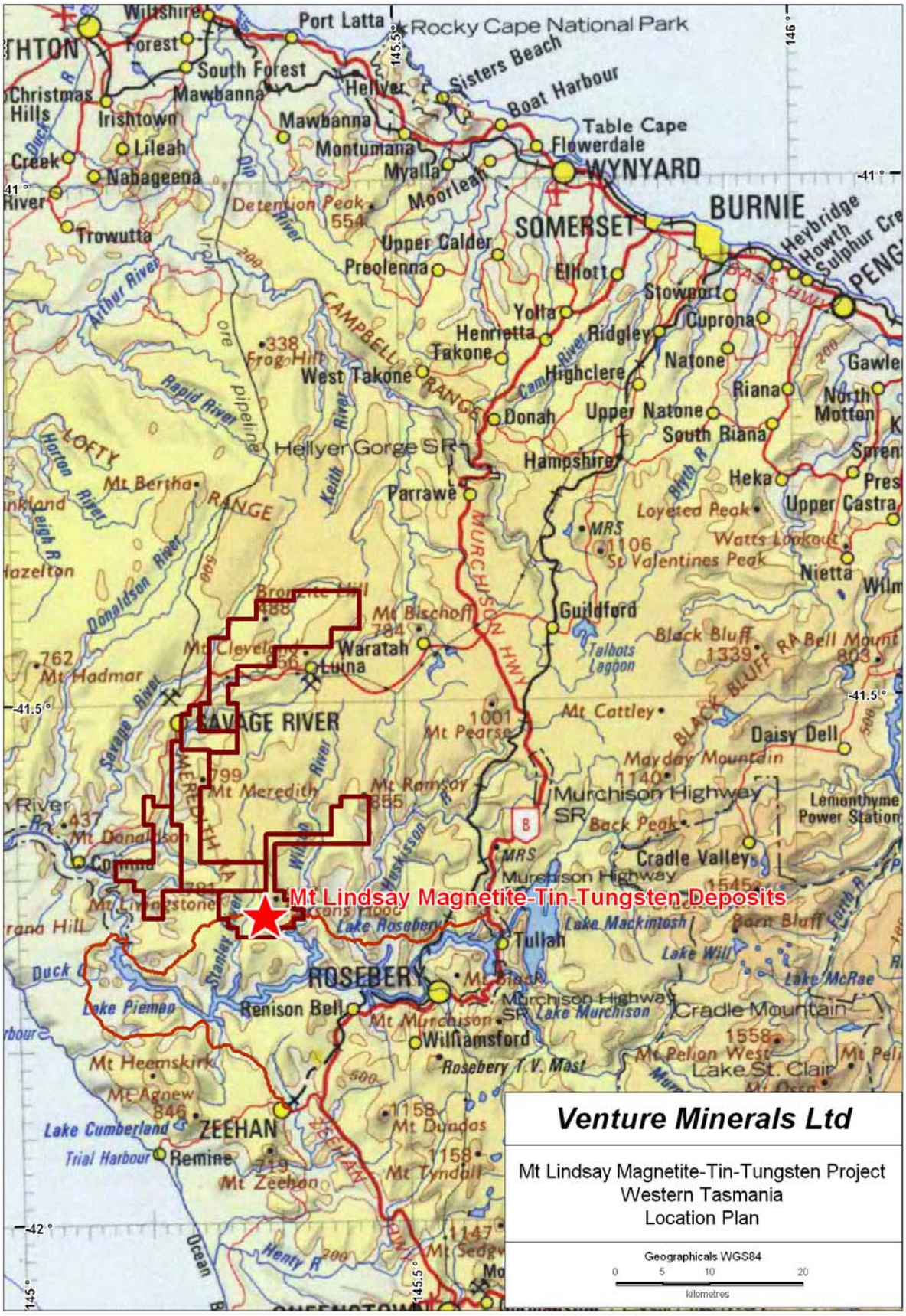


Figure 1: Location Plan

1.3 Exploration and Mining History

Alluvial tin was discovered in the nearby Stanley River area sometime around 1893 and subsequently developed into the Stanley River Tin Fields. Cassiterite-bearing gossans were then discovered at Stanley Reward, Livingstone Creek and Mt Lindsay in the early 1900s with minor small-scale open-cut and underground tin mining occurring to about 1932. Shafts at the Stanley Reward gossan reputedly reached 150 m, and shafts and adits into the main tin-bearing magnetite-sulfide body (subsequently referred to as the Main Zone) at Mt Lindsay reached about 30-40 m beneath surface over approx 1.1 km strike extent. Production records are incomplete, but included at least 59.8 tons of lode tin from Mt Lindsay, and at least 79.6 tons of alluvial tin.

Descriptions of mining activities and the deposit indicate the mineralisation at Mt Lindsay was mostly of the bedding-parallel sulphide and magnetite replacement type (after slate, tuff and carbonate) with some high-grade cross-cutting cassiterite veins. The stratigraphy-parallel sulphide and magnetite replacement mineralisation was evidently generally of low tin grade and most of the tin production came from the high-grade cassiterite-rich fissures. The Mt Lindsay Mining Company NL recorded small amounts of ore grading up to 25 % Sn, and sampling of the abandoned workings in the 1950s (Pearson, 1952) returned up to 3 feet at 27.6 % Sn. Mining activities at Mt Lindsay had largely ceased by 1923 by which stage the oxide ore had been worked over a zone 600 m long and averaging 30 m thick. Periodic tributing of the oxide ore continued until 1932. A potentially large body of lower grade replacement tin ore remained in which the primary mineral assemblage was noted to comprise mainly magnetite and/or pyrrhotite with variable amounts of cassiterite, pyrite, chalcopyrite, arsenopyrite, scheelite and a wide range of silicates.

In his bulletin on the Stanley River Tin Field of 1914 government geologist L. L. Waterhouse noted the occurrence of iron ores of possible economic value, describing a magnetite and hematite body approximately 40 m across protruding through the alluvial flats beneath Mt Livingstone (the Livingstone Creek gossan). At that time two adits had been driven into the Livingstone Creek gossan in search of tin. Waterhouse (1914) also described c. 10-20 m thickness of cassiterite-bearing banded magnetite mineralisation within the hangingwall (southern) side of the Mt Lindsay tin lode (the Main Tin Zone), and a parallel zone of magnetite c. 200 m north of the Main Tin Zone which is now called the No. 2 Zone and the subject of this resource report. However, while potentially significant hematite and magnetite mineralisation was recognised approximately 100 years ago, tin remained the focus for subsequent mineral exploration. Magnetite and/or hematite bodies were encountered during the course of this exploration but iron content was typically not quantified in the trenching and drilling activities. Nonetheless, the historic tin exploration has allowed rapid qualitative delineation of magnetite targets, and the retrieval and re-assay of some historic drill core from storage means that it is possible to include some of this work in the current iron resource estimate.

Aberfoyle Tin Development Partnership (“Aberfoyle”) took up the Mt Lindsay – Stanley River area in 1962 and over the following eight years conducted geological mapping, geophysical surveying, soil sampling, trenching and channel sampling, and 30 diamond core drill holes for 2936 m focussing on the old Mt Lindsay mine (the Main Tin Zone or Main Zone) but also including seven drill holes on three traverses targeting the No. 2 Zone.

Approximately 600 m of strike of the Main Tin Zone was covered by mainly single hole traverses approximately 40 m apart to a maximum vertical depth of 185 m beneath surface and mostly less than 70 m depth. Some of the better drill intercepts from the Main Tin Zone included 15 m at 0.77% Sn in ML01 and 14.1 m at 1.75% Sn in ML03. Magnetite zones were logged agreeing with descriptions by Waterhouse (1914) of the mineralisation exposed at surface, but the core was not assayed for iron. The drill holes into the No. 2 Zone encountered low grade tin mineralisation (e.g. 12.8 m at 0.2% Sn in hole ML2/1) and while they were not assayed for iron the drill logs again indicate the presence of massive and banded magnetite mineralisation. Several magnetic anomalies were identified parallel to the Main and No. 2 Zones on Mt Lindsay but remained largely untested when Aberfoyle joint ventured the project to Rension Limited ("Renison") in 1972. The Stanley Reward and Livingstone Creek areas were surveyed with magnetometer and mapped, but the identified gossans and magnetic anomalies were not followed up and Aberfoyle released the area before the joint venture with Renison.

Renison drilled a further 30 diamond core holes for 10,753 m at Mt Lindsay, mainly into the Main, No 1 and No. 2 Zones, extending considerably the identified tin mineralisation. The drilling confirmed the presence of multiple zoned skarns prospective for tin, tungsten, copper and, although Renison were not interested in it, magnetite. For the first time iron was included in the assay suite for some drill holes. Drill intercepts included 14 m at 36.2 % Fe from the Main Tin Zone and 30.2 m at 34.4 % Fe from ML37, and 23 m at 29.5 % Fe and from ML38 in the No. 2 Zone. Metallurgical testwork and petrography on core from ML38 in the No. 2 Zone suggested it would be amenable to normal extractive processes for tin but Renison did not consider the extractive potential the magnetite mineralisation. Renison abandoned the project in the mid 1980s after collapse of the tin price and there were no further drilling \activities at Mt Lindsay until Venture Minerals Ltd ("Venture") took up the project.

2 Geology and Mineralisation Controls

2.1 Geological Setting

The Mt Lindsay magnetite skarns are hosted by the Neoproterozoic to Early Cambrian Success Creek Group and Crimson Creek Formation within the southern contact metamorphic aureole of the Meredith Granite (Figure 2). 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 the world class Renison Bell tin mine (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% W03). Cleveland and Renison Bell are the closest mined Sn deposits to Mt Lindsay. Cleveland is located approx. 25 km to the north of Mt Lindsay and hosted by metasomatised carbonates within a correlate of the Crimson Creek Formation, while Rension Bell situated c. 14 km to the southeast of Mt Lindsay is hosted by the uppermost Success Creek Group and basal Crimson Creek Formation.

The western part of the Mt Lindsay magnetite-tin-tungsten project includes the Success Creek Group (Figure 2). Generally four formations are recognised in the Success Creek

Group for a combined thickness of 950 m: a basal conglomerate with sandstone lenses, overlain by quartz sandstone with minor siltstone and conglomerate (Dalcoath Formation), then black mudstone, siltstone and minor quartz sandstone, and finally siliceous siltstone, red chert and mudstone with minor quartz sandstone, conglomerate and dolomite (Renison Bell Formation). Most of the eastern part of the project area is underlain by the Crimson Creek Formation (Figure 2) which reaches c. 5000 m thickness and comprises mainly volcanogenic sandstone and siltstone with scattered laminated felsic tuffites, carbonate horizons and rare tholeiitic basalt. The Meredith Granite underlies the central northern part of the Mt Lindsay Project area (Figure 2).

Three magnetite skarns have been drilled at Mt Lindsay to date, namely the Main Tin Zone, No 1 Zone and No. 2 Zone all hosted by carbonate horizons within the Crimson Creek Formation (Figure 2). Two further magnetite-tin-tungsten skarns, namely Livingstone and Stanley, have been identified approximately 3 km to the west of Mt Lindsay hosted by the underlying Renison Bell Formation (Figure 2). Geological mapping, prospecting and magnetic surveys suggest the presence at several more magnetite skarns which have not been or are inadequately drill tested at this stage. The contact between the host Crimson Creek Formation and Meredith Granite in the vicinity of Mt Lindsay dips at a modest angle to the southeast but is highly irregular in detail with numerous dykes and apophyses extending up into the Crimson Creek Formation. Large rafts of skarn and hornfels also occur within the margins of the main granite body. Preliminary interpretation suggests several phases of granite intrusion culminating in late stage quartz-tourmaline veining and the localised development of quartz-tourmaline “greisen”.

2.2 Geology and Mineralisation Controls

The Main Tin Zone and No. 2 Zone are magnetite skarns with varying proportions of amphiboles, sulphides, calcsilicates, carbonates, and borates, and a wide range of minor to trace phases including cassiterite, scheelite, pyrrhotite, chalcopyrite, pyrite, arsenopyrite, biotite, fluorite, garnet, vesuvianite (idocrase), potassium feldspar, quartz, ilvaite, titanite (sphene), ilmenite, annite and danalite. Not all of these minerals occur together within the magnetite skarn and both lateral and vertical zonation reflecting prograde and retrograde alteration stages is recognised. Two thin to medium bedded calcarenite units up to 40 m thick each named the Main Carbonate and No 2 Carbonate are the protoliths for the Main Tin and No. 2 Zones respectively.

Strike of the Main and No. 2 Zones ranges from c. 110 to 135º MGA and dip c. 70º NE to 65º SW (overturned). The two zones are c. 150 m apart diverging to approximately 300 m apart with a progressively increasing thickness of intervening granite dykes approaching the north western abutment of both skarns against the Meredith Granite (Figure 2). Present drilling indicates that the magnetite, tin and tungsten mineralization extends for at least 1600 m along strike to the south east of the granite margin within the No. 2 Zone, and at least 1200 m from the granite contact for the Main Tin Zone. Approximately 1300 m of the 1600 m of identified strike extent of the No. 2 Zone is sufficiently drill tested to be included in the current resource model, and all (c. 1200 m) of the currently identified extent of the Main Tin Zone.

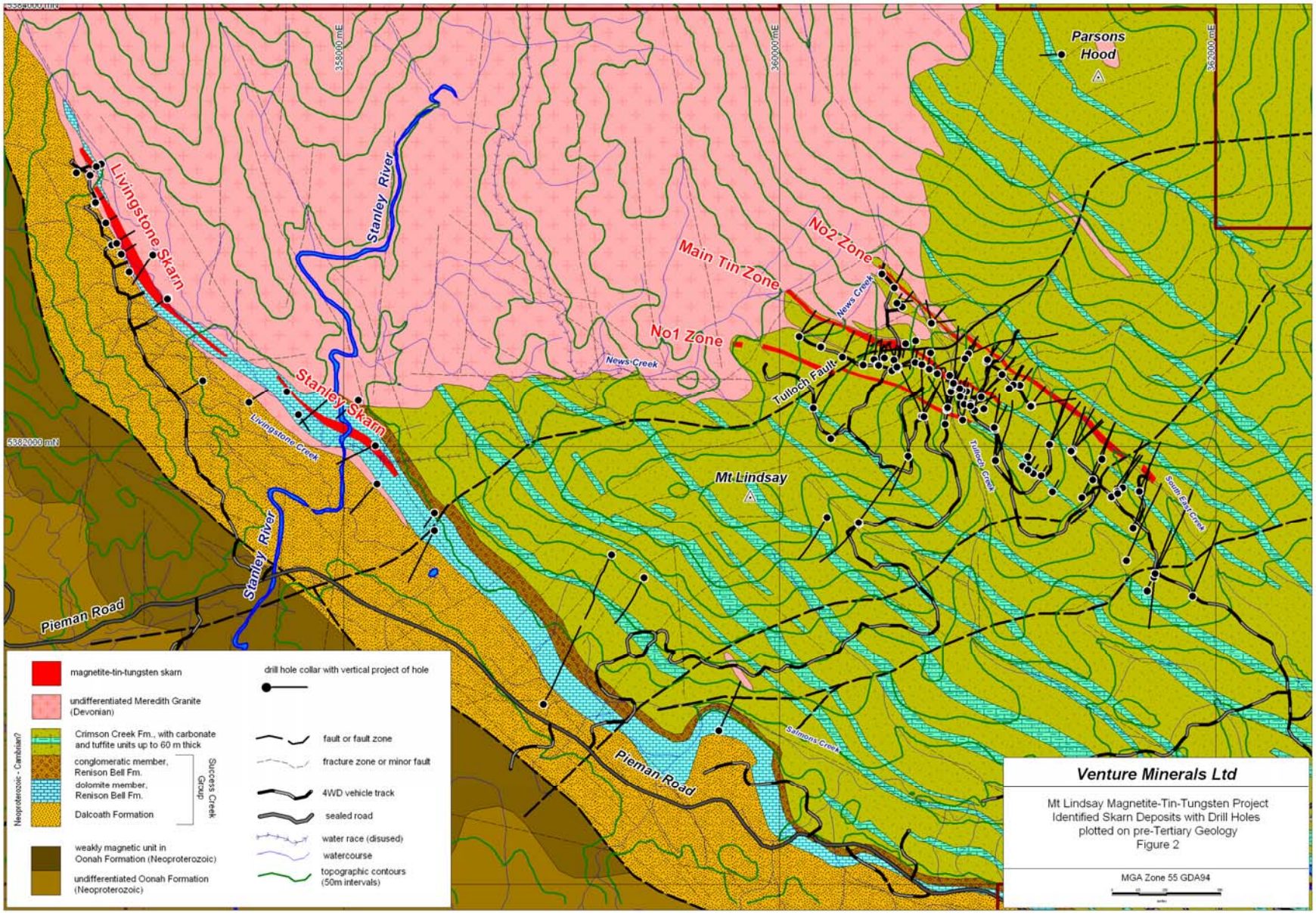


Figure 2: Project geology

The granite contact and lower margin of magnetite mineralisation dips to the southeast beneath the two skarns at between c. 10º and 40º to the southeast, and drilling suggests at least c. 400-600 m dip extent of magnetite mineralization above the granite contact at the south western end of the No. 2 Zone. Granite dykes flank the lower (down dip) parts of both skarns so that they have the appearance of keels within the granite. Magnetite, tin and tungsten mineralisation is intermittently exposed at the surface through a thin (<1-2 m) humic regolith for at least 950 m along the Main Zone and c. 750 m for the No. 2 Zone from the granite contacts, then mineralisation plunges to the south east at c. 20-40º for at least a further 200-700 m. Both Main and No. 2 Zones are open down plunge to the southeast. An extension to the No. 2 Zone was encountered in ML38 (25 m at a 29% Fe, 0.79% Sn, and 0.04% WO_3 from 353 m down hole) some 200 m along strike beyond the end of the current model, but understanding of this area is currently too poor to include it in the resource estimate.

The Main and No. 2 Zones cut and offset approx. 55-60 m in a reverse sense by the southeast dipping Tulloch Fault. Aberfoyle's mapping of old drives indicates a dip of c. 60º towards 160º MGA (strike 070º) for the Tulloch Fault. Diamond core drilling indicates a slightly shallower dip of c. 40-50º towards 160º MGA where Tulloch Fault cuts the No. 2 Zone. Tulloch Fault appears to post-date mineralisation and is characterised by narrow bands of weakly cemented (commonly stilbite) to incoherent breccia and gouge zones scattered through a broader zone (5-15 m true thickness) of fractured rock. A small but strongly fractured splay named Natalie's Fault dipping c. 60º to 170º with about 5-10 m offset is modelled in the hanging wall of Tulloch Fault.

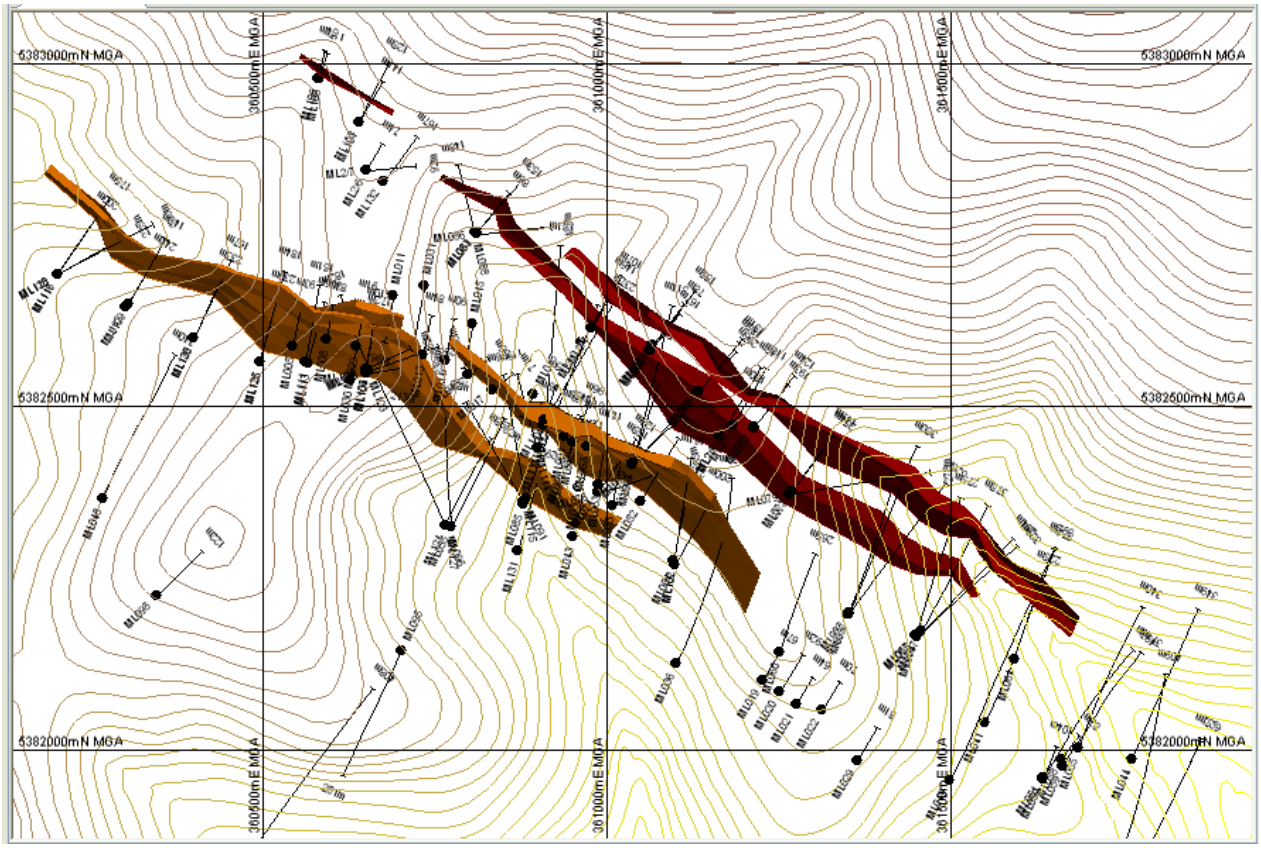


Figure 3: Plan view of Main Zone and No. 2 Zone showing drill holes traces (as vertical projections) and the mineralisation wireframes (Main Zone light brown, No. 2 Zone dark brown) used for the Fe resource estimation. The split in each zone is caused by Tulloch Fault, a southeast dipping reverse fault with c. 55-60 m offset. MGA Zone 55 GDA94, 10 m topographic contours.

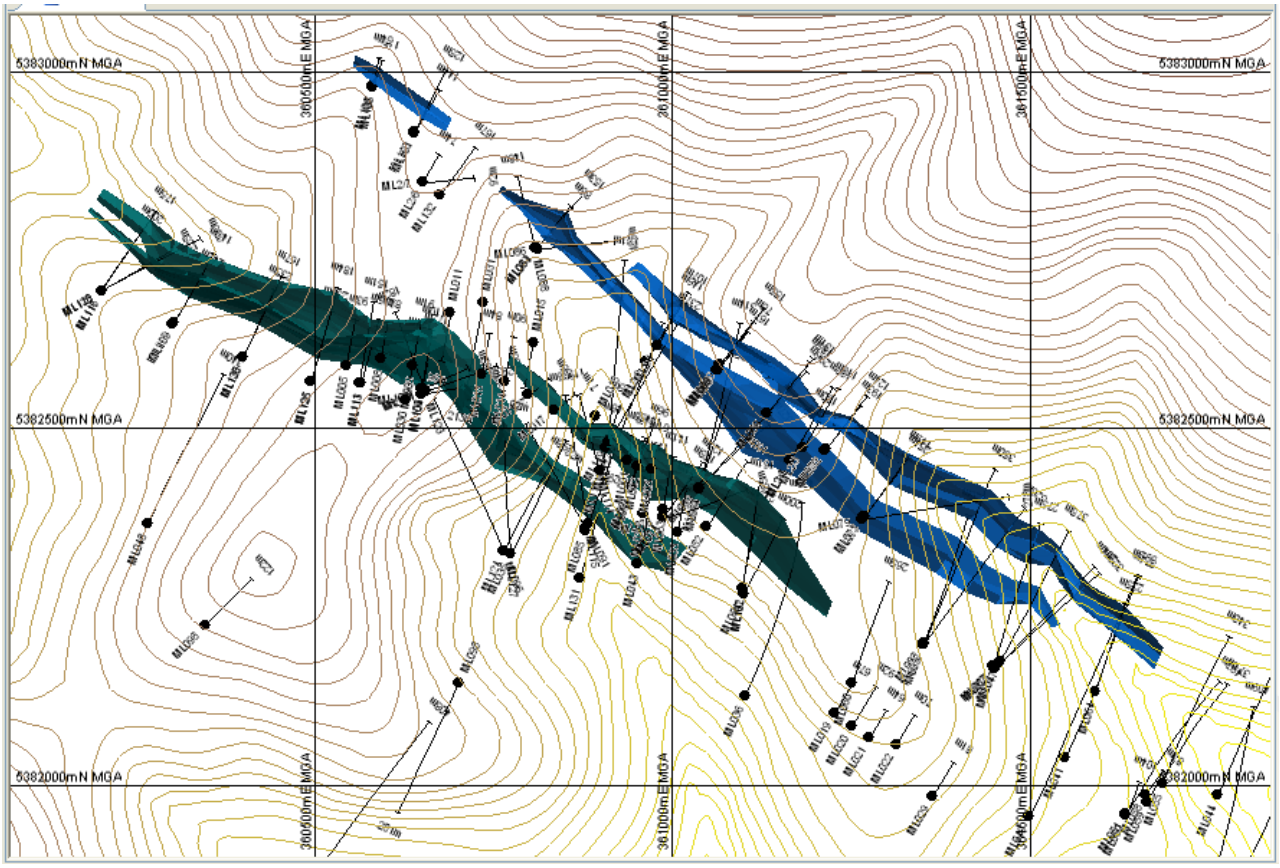


Figure 4: Main Zone and No. 2 Zone plan view showing drill holes (as vertical projections) and the mineralisation wireframes (Main Zone green, No. 2 Zone blue) used for the Sn and WO_3 resource estimation. The split in each zone is caused by Tulloch Fault, a southeast dipping reverse fault with c. 55-60 m offset. MGA Zone 55 GDA94, 10 m topographic contours.

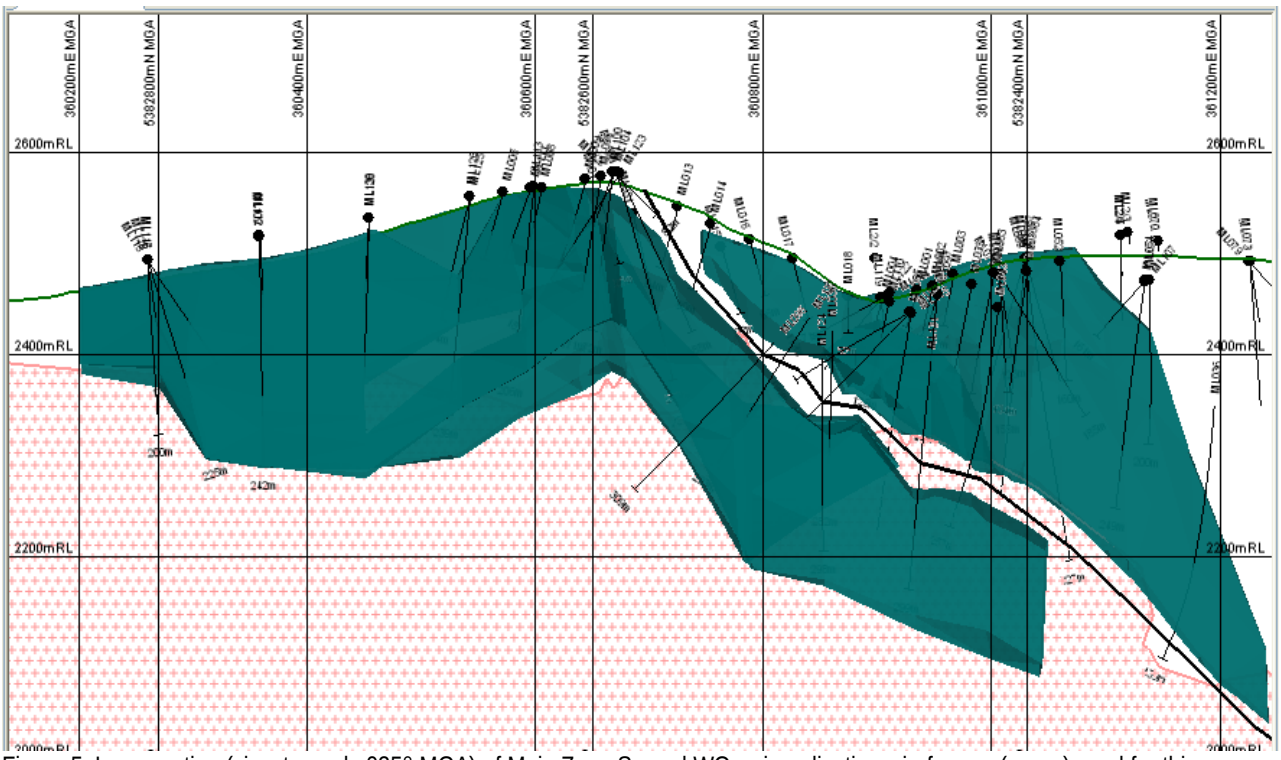


Figure 5: Long section (view towards 035° MGA) of Main Zone Sn and WO_3 mineralisation wireframes (green) used for this resource estimation, along with drill hole traces and main granite body (pink + pattern). Tulloch Fault (black line) separates the two major parts of the wireframe. The hanging wall splay, Natalie's Fault, is also shown. Some collars appear above the topographic surface because they are not exactly on the line of section. X and Y coordinates MGA Zone 55 GDA94, RL AHD83 + 2000 m.

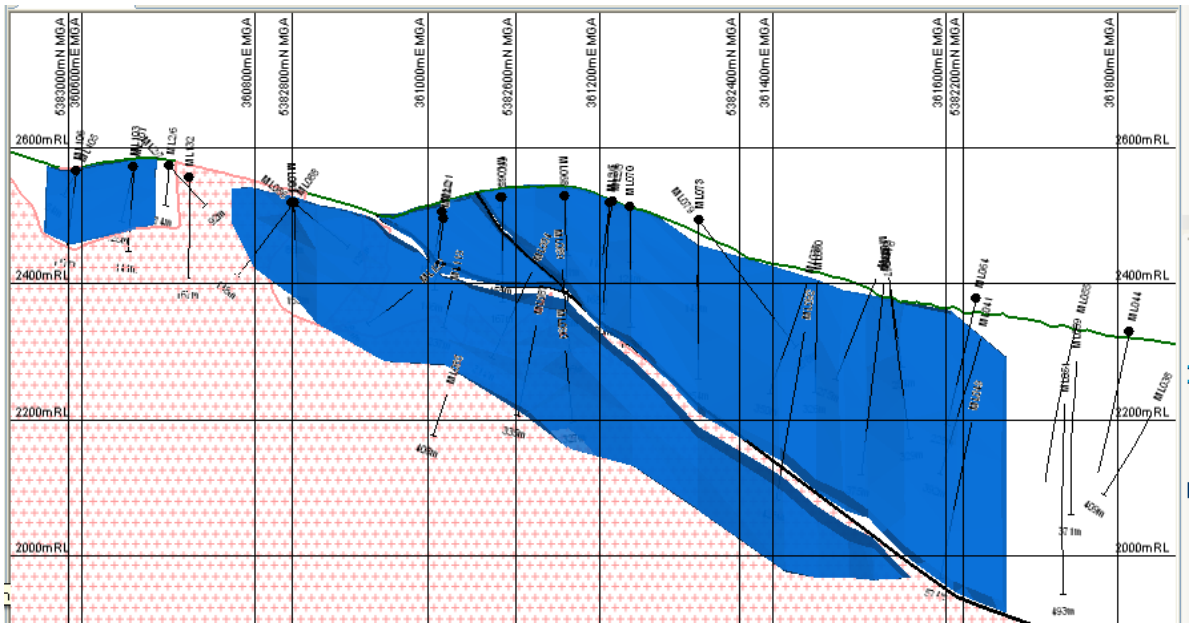


Figure 6: Long section (view towards 035° MGA) of No. 2 Zone Sn and WO_3 mineralisation wireframes (blue) used for this resource estimation, along with drill hole traces and main granite body (pink + pattern). Tulloch Fault (black line) separates the two major parts of the wireframe. The hanging wall splay, Natalie's Fault, is also shown. X and Y coordinates MGA Zone 55 GDA94, RL AHD83 + 2000 m.

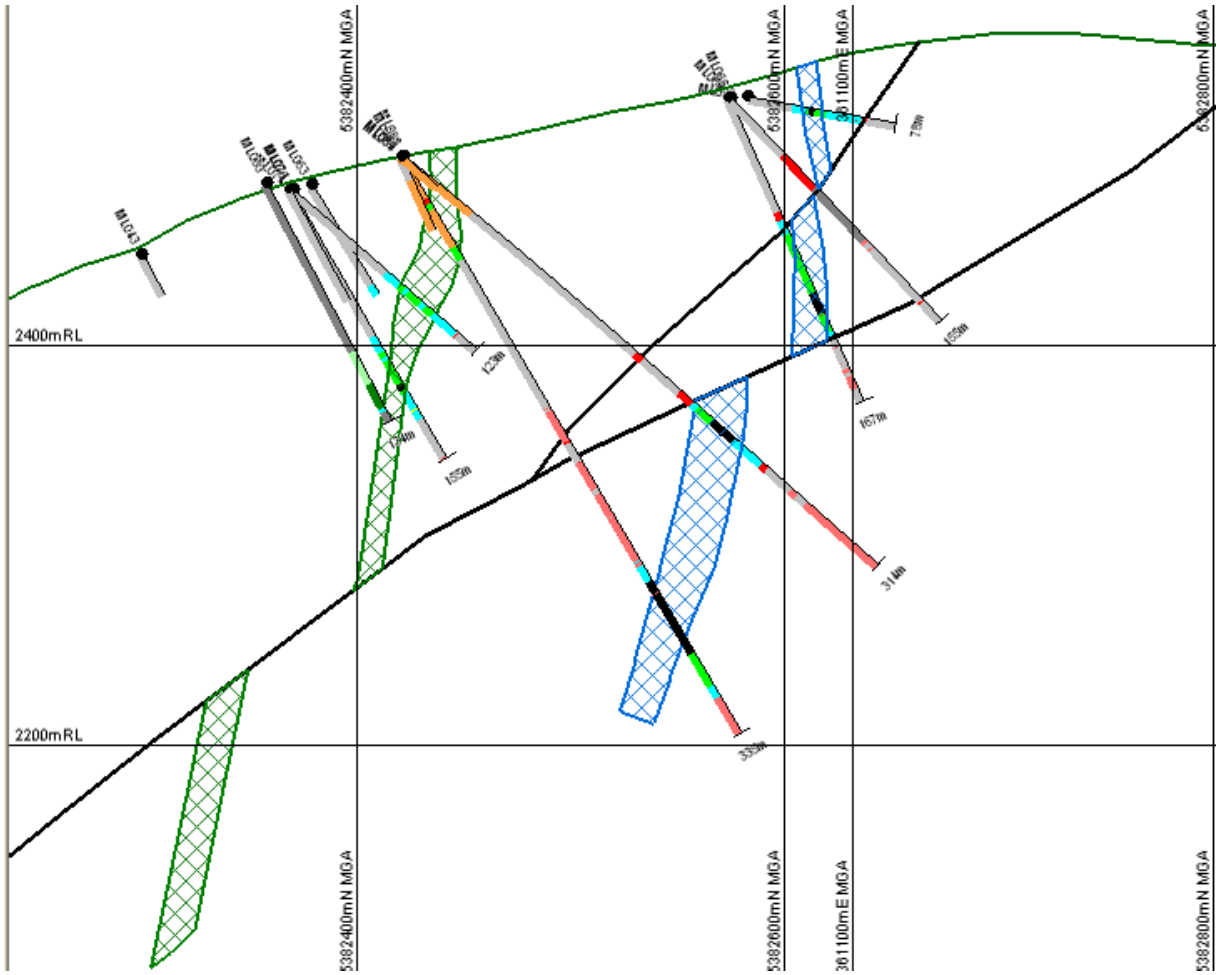


Figure 7: Cross section towards 305 MGA of Main Zone (green) and No. 2 Zone (blue) Sn and WO_3 mineralisation wireframes with drill hole traces coloured by lithology (pink = granite, grey = sandstone mudstone hornfels, red = fault zone, blue = tuff and pyroxene skarn, green = amphibole and magnetite skarn, black = magnetite skarn, orange = clay). Tulloch (lower) and Natalie's Fault marked in black cause reverse offset of Main and No. 2 Zones.

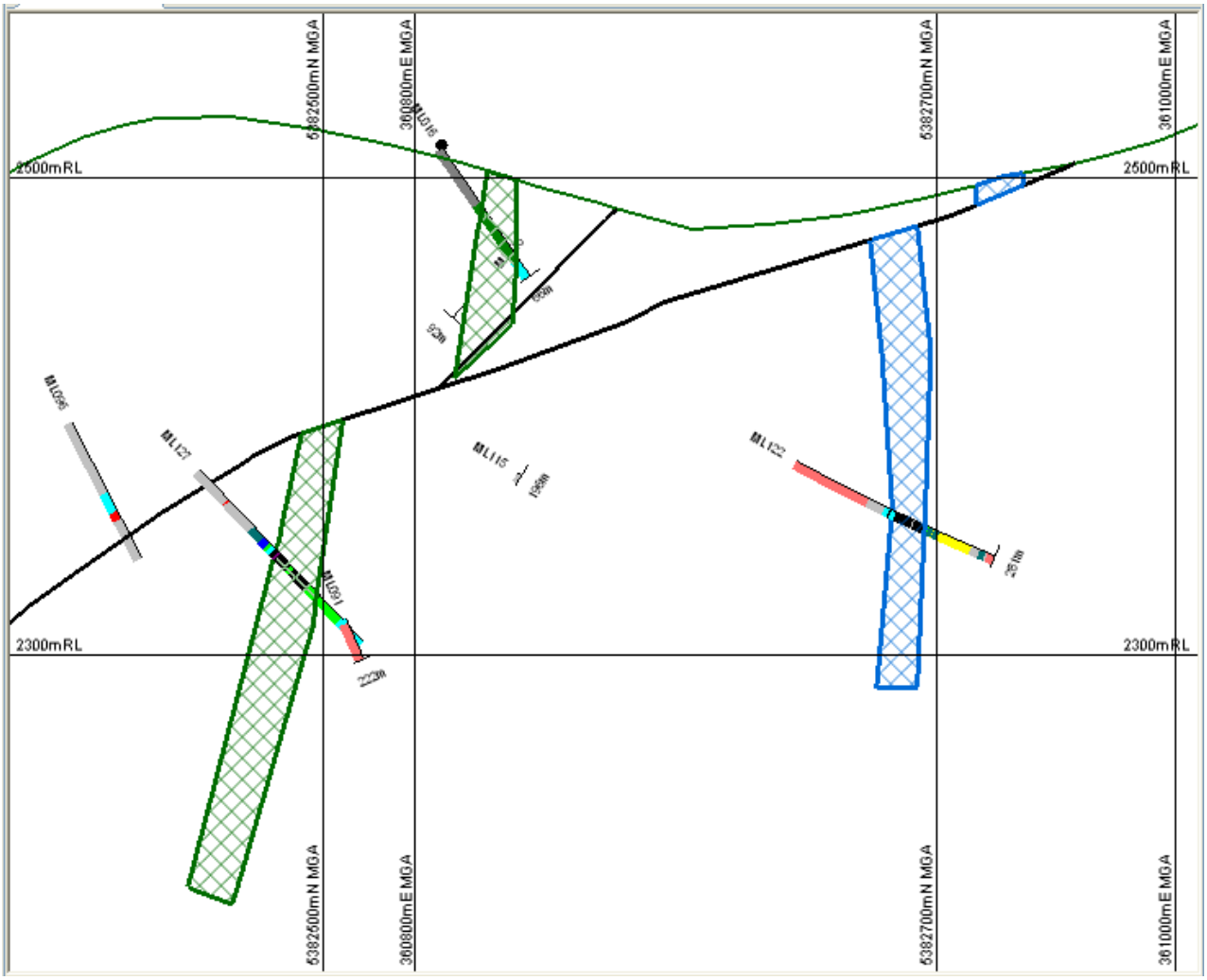


Figure 8: Cross section towards 310 MGA of Main Zone (green) and No. 2 Zone (blue) Fe mineralisation wireframes with drill hole traces coloured by lithology (pink = granite, grey = sandstone mudstone hornfels, red = fault zone, blue = tuff and pyroxene skarn, green = amphibole and magnetite skarn, black = magnetite skarn, orange = clay). Tulloch (lower) and Natalie's Fault marked in black causing reverse offset of Main and No. 2 Zones. X and Y coordinates MGA Zone 55 GDA94, RL AHD83 + 2000 m.

2.3 Mineralised Intersections

Down hole Fe, Sn and WO_3 intersections from within the wireframes used for this resource estimate are listed in Tables 1 and 2. There is a minor amount of Fe mineralization beyond the wireframes, either low grade or in narrow bands of higher grade material separated from the main body by several metres of low grade, which are excluded from this resource estimate.

Table 1: Fe intercepts within the Fe wireframes (cut off 20%).

Zone	Hole	From (m)	To (m)	Interval (m)	Fe %
No. 2 Zone	ML2/1	71	87	16	28.2
No. 2 Zone	ML2/2	100.28	108.2	7.92	27.3
No. 2 Zone	ML2/3	54.25	63.4	9.15	34.4
No. 2 Zone	ML2/4	107.5	119.5	12	21
No. 2 Zone	ML2/5	159.72	179.53	19.81	36
Main Tin Zone	ML016	28.3	56.7	28.4	31.8
Main Tin Zone	ML018	7.3	42.4	35.1	35.8
Main Tin Zone	ML032	82.91	90.83	7.92	20.3
Main Tin Zone	ML032	91.74	96.93	5.19	25.6
Main Tin Zone	ML035	196	210	14	36.2
Main Tin Zone	ML036	304	310	6	20.4
No. 2 Zone	ML037	268.5	295	26.5	42
No. 2 Zone	ML041	270.5	325	54.5	34.8
No. 2 Zone	ML047	297.5	318.5	21	41.9
Main Tin Zone	ML063	85.4	101.3	15.9	26
No. 2 Zone	ML064	153	196	43	29
No. 2 Zone	ML065	84	122	38	23.5
No. 2 Zone	ML067	248	294	46	36.9
No. 2 Zone	ML068	90	134	44	44.4
No. 2 Zone	ML069	45	63	18	35.2
No. 2 Zone	ML070	99	145	46	37.4
Main Tin Zone	ML071	98	114	16	29.2
No. 2 Zone	ML072	46	72	26	34.2
No. 2 Zone	ML073	196	222	26	30.7
No. 2 Zone	ML075	187	213	26	34.8
Main Tin Zone	ML076	126	146	20	24.9
No. 2 Zone	ML077	139	143	4	25.3
No. 2 Zone	ML078	225	263	38	38.3
No. 2 Zone	ML079	216	252	36	42.8
No. 2 Zone	ML080	258	284	26	33.3
Main Tin Zone	ML084	16.7	31.7	15	31.5
No. 2 Zone	ML084	201	223	22	35.2
Main Tin Zone	ML085	148	154	6	22.4
Main Tin Zone	ML087	26.3	58	31.7	31.4
No. 2 Zone	ML087	245	277	32	41.8
No. 2 Zone	ML088	99	104	5	29.2
No. 2 Zone	ML089	213	221	8	27.2
Main Tin Zone	ML090	36	70	34	26.9
No. 2 Zone	ML090	263	277	14	30.9
Main Tin Zone	ML094	52	68	16	24.4
Main Tin Zone	ML094	80	110	30	22.4
Main Tin Zone	ML097	45	69	24	28.4
No. 2 Zone	ML099	31	39	8	26.4
Main Tin Zone	ML100	90	98	8	33.1
Main Tin Zone	ML100	108	122	14	28
Main Tin Zone	ML102	184	218	34	21.7
No. 2 Zone	ML103	69	83	14	27.7
Main Tin Zone	ML104	75	77	2	24.4
Main Tin Zone	ML104	85	99	14	38.3
No. 2 Zone	ML106	33	45	12	27.7
Main Tin Zone	ML108	147	163	16	28.4
Main Tin Zone	ML110	46	56	10	28.2
Main Tin Zone	ML110	70	92	22	26.9
Main Tin Zone	ML111	76.1	86	9.9	29.6
Main Tin Zone	ML112	191	217	26	23.1
Main Tin Zone	ML113	104	110	6	32.5
Main Tin Zone	ML113	164	180	16	28.7
Main Tin Zone	ML114	45	75	30	24.5
Main Tin Zone	ML116	129	155	26	24.6
Main Tin Zone	ML118	133	153	20	33.5
Main Tin Zone	ML119	0	28	28	21.5
No. 2 Zone	ML119	184	198	14	30.3
Main Tin Zone	ML120	156	206	50	31.2
Main Tin Zone	ML121	128	140	12	34.6
Main Tin Zone	ML122	0	29	29	25
No. 2 Zone	ML122	225	245	20	32.7
Main Tin Zone	ML123	85	95	10	27.9
Main Tin Zone	ML123	113	129	16	39.5
Main Tin Zone	ML124	248	262	14	34
Main Tin Zone	ML125	121.2	124.2	3	38.9
Main Tin Zone	ML126	145	171	26	28.7
Main Tin Zone	ML127	205	235	30	33.8
Main Tin Zone	ML128	123	141	18	31.2
Main Tin Zone	ML130	183	217	34	27.6
Main Tin Zone	ML131	247	263	16	29.2

Table 2: Sn & WO_3 intercepts within the Sn wireframes (cut offs 0.2% for Sn & 0.1% for WO_3).

Zone	Hole	From (m)	To (m)	Interval (m)	Sn %	WO_3 %
Main Tin Zone	ML001	8.8	23.8	15	0.77	no assay
Main Tin Zone	ML002	18.4	54.6	36.2	0.49	no assay
Main Tin Zone	ML003	27.4	43.5	16.1	1.55	no assay
Main Tin Zone	ML004	10.9	19.2	8.3	0.24	no assay
Main Tin Zone	ML009	49.5	60.4	10.9	1.72	no assay
Main Tin Zone	ML009	77	82.6	5.6	0.29	no assay
Main Tin Zone	ML011	46.3	47.2	0.9	0.67	no assay
Main Tin Zone	ML011	54.9	56.7	1.8	0.30	no assay
Main Tin Zone	ML011	59.3	73.2	13.9	0.44	no assay
Main Tin Zone	ML016	28.3	56.7	28.4	0.25	0.01
Main Tin Zone	ML018	7.3	42.4	35.1	0.24	0.01
Main Tin Zone	ML030	114	116.8	2.8	0.33	no assay
Main Tin Zone	ML032	82.9	110.6	27.7	0.32	0.01
Main Tin Zone	ML035	198	210	12	0.25	0.03
Main Tin Zone	ML036	304	310	6	0.41	0.05
Main Tin Zone	ML063	85.4	101.3	15.9	0.22	0.03
No. 2 Zone	ML070	99	145	46	0.09	0.61
Main Tin Zone	ML071	98	114	16	0.17	0.78
Main Tin Zone	ML074	72	96	24	0.30	0.05
Main Tin Zone	ML076	126	146	20	0.37	0.01
No. 2 Zone	ML077	139	143	4	0.10	0.16
No. 2 Zone	ML079	216	252	36	0.07	0.37
Main Tin Zone	ML084	16.7	31.7	15	0.18	0.20
Main Tin Zone	ML090	60	70	10	0.35	0.02
Main Tin Zone	ML097	45	69	24	0.36	0.05
Main Tin Zone	ML100	84	92	8	0.30	0.01
No. 2 Zone	ML101	36	58	22	0.20	0.01
Main Tin Zone	ML102	184	218	34	0.80	0.16
Main Tin Zone	ML104	67	85	18	0.55	0.00
Main Tin Zone	ML104	89	109	20	0.20	0.02
Main Tin Zone	ML107	134.6	137.6	3	0.11	0.14
Main Tin Zone	ML108	147	163	16	0.10	0.17
Main Tin Zone	ML119	0	28	28	0.22	0.04
Main Tin Zone	ML120	134	136	2	2.53	0.09
Main Tin Zone	ML121	128	154	26	0.29	0.09
Main Tin Zone	ML122	0	29	29	0.48	0.04
Main Tin Zone	ML123	91	115	24	0.26	0.03
Main Tin Zone	ML126	127	137	10	0.20	0.09
Main Tin Zone	ML126	139	211	72	0.20	0.09
Main Tin Zone	ML127	205	215	10	0.37	0.38
Main Tin Zone	ML127	221	249	28	0.24	0.06
Main Tin Zone	ML128	123	141	18	0.32	0.10
Main Tin Zone	ML131	233	263	30	0.13	0.14

3 Previous Resource Estimates

Aberfoyle made several estimates of the tin resources within central part of the Main Tin Zone at Mt Lindsay in the 1960s, culminating in an estimate of 208,799 tons at 0.832% Sn. The resource does not comply with the JORC guidelines and details of the extent and estimation methodology and parameters are not available.

An Inferred Resource of 20 Mt at 33% Fe was estimated for the No2 Zone by Venture in June 2008. The resource estimate presented here represents the first JORC compliant quantification of the iron mineralisation in the Main Zone and Sn and WO_3 mineralisation within both the Main and No. 2 Zones. The No. 2 Zone Fe estimate has also been updated to include 5 holes drilled subsequent to Venture's June 2008 estimate.

4 Available Data

4.1 Grid Convention and Survey Control

The grid convention used for Venture's work at Mt Lindsay is MGA Zone 55 GDA94 and AHD83 +2000 m for elevation. Historic exploration and drilling work by Aberfoyle and Renison was done on a local grid and collars were surveyed using a total station system. Several of the Renison and Aberfoyle collar pipes were relocated by Venture allowing transformation of the historic local grid plans and collar positions to MGA Zone 55 GDA94 coordinates.

Of Venture's 64 drill hole collars relevant to this resource estimate some 35 were surveyed in MGA Zone 55 GDA94 by licensed surveyors Peacock, Darcey and Anderson Pty Ltd of Burnie, Tasmania using a Reflectorless Total Station tied into control points located by real time differential GPS to give sub-metre xyz accuracy, 13 collars were surveyed by company personnel using differential GPS, and the remaining 16 collars were surveyed using handheld GPS.

4.2 Drill Hole Data

Some 105 diamond core drill holes for a total of 20,462m were used to define the Main Tin Zone and No. 2 Zone for this resource estimate. Of this drilling some 63 holes for 11,418m pierced the Main Tin Zone and 47 holes for 10,723m pierced the No. 2 Zone (some holes pierced both zones). Of the total 105 drill holes some 41 holes for 7,504m core of mainly BQ size (36.5mm diameter) were drilled by the previous owners Aberfoyle Tin Development Partnership and Renison Limited; the other 64 drill holes for 12,958m were drilled by Venture Minerals Limited with most of the core being NQ size (47.6mm diameter).

To reduce access construction and environmental impact Venture drill holes have been fanned off existing pads wherever practical. Drill hole azimuths range from 005º to 355º MGA, with most in the range 020º to 040º MGA. Drill hole plunges range from -10° to -70°. Drill hole density in the Main Tin Zone ranges from approximately 30m by 30m to a maximum of c. 150m, and the No.2 Zone from approximately 50m by 50m to a maximum of c. 200m. Overall drill hole spacing for both zones is very approximately 100m by 100m.

One trench, MLT01 exposing c. 22 m of the No. 2 Zone was made by a 25 tonne excavator for Venture during the course of 4WD track construction. The trench was geologically logged and the magnetite zone channel sampled then backfilled upon completion.

4.3 Downhole Surveys

The 25 Aberfoyle drill holes were not down hole surveyed but 64 % were less than 100 m long and all less than 215 m long; down hole deviation is not expected to be large. All of the Renison and Venture drill holes have been surveyed in approximately 30-60 m intervals to the end of the hole using standard magnetic survey instruments (such as Eastman single shot down hole camera and Reflex electronic multi-shot tool). While the plunge

measurements from such tools are reliable the magnetic ground conditions means that many of the down hole azimuth surveys have been rejected.

Some 55% of Venture Minerals Limited's drill holes were also surveyed by north-seeking gyroinclinometer tool by independent contractor Northern Exploration Pty Ltd. Approximately 30% of Venture's drill holes were surveyed to fully depth with the gyroinclinometer, and the collar pipes (top 5 m) of another 60% were also surveyed with the gyroinclinometer so that 90% of Venture holes have at least a collar orientation survey free from magnetic influence. For Venture's drilling on the No. 2 Zone the gyroinclinometer shows a mean azimuth and plunge deviation of 1.3º and 0.6º per 100 m respectively, and maximum azimuth and plunge deviations of 3.2º and 1.2º per 100 m. The plunge generally becomes steeper down hole, but for Venture's drilling the azimuth shows no clear preference between clockwise and anticlockwise swing.

Gyroinclinometer orientations were given preference over magnetic tool orientations for Venture drilling, and the last gyroinclinometer azimuth reading for each hole was extrapolated to the end of the hole in the cases where data is not available for the entire hole. Where magnetic interference is suspected in the historic drill holes the azimuth was interpolated or extrapolated from the nearest acceptable orientation.

4.4 Bulk Densities

Within the Main Tin Zone and No. 2 Zone fresh rock widely comes to surface or to the base of the humic soil horizon (generally <1 m beneath surface). Drilling indicates the presence of two discrete zones of deep weathering (clays) in the hanging wall of the western and eastern ends of the Main Tin Zone. The weathered zones were wireframed and assigned a separate density to the fresh materials.

The densities used in the resource estimation were based on 1462 specific gravity measurements made on the diamond core at one metre intervals through the mineralised zones. Density measurements were conducted on a 1 m basis through the fresh mineralised materials and adjacent wallrock by Venture personnel in Venture's Tullah exploration facilities using the weight in air versus weight in water method. Fresh drill core was weighed in 1 m intervals dry in air to 1 g accuracy then the sample was weighed again suspended in water. The density was then calculated using the formula Wair / (Wair – Wwater). In situations where core recoveries are less than 100% or where the core was badly broken (fault zones) pieces of representative core were selected from the single metre intervals and weighed in the same manner. A minimum of 1 kg of rock was selected wherever possible to maximise weighing precision. The density of weathered materials (clay and saprock) were determined by using either callipers (for intact sticks of clay) or volumetric flask (for irregular core sealed with beeswax) to determine core volume and oven dried weight (minimum of 8 hours at 110° C) by 5 kg scales with an accuracy of 1 g.

4.5 Topographic Control

A Digital Terrain Model (DTM) for the project area was derived from the 2nd Edition Tasmanian 25 m Digital Elevation Model spot heights obtained from Land Information Services Tasmania (the LIST), a division of the Department of Primary Industries, Water and Environment, Tasmania. Surveying of selected local topographic features by Peacock, Darcey and Anderson indicated minor discrepancy with the LIST DTM and +17 m easting, -15 m northing and +6 m adjustment was made. A further 2000 m was added to the DTM elevation to match the drill collar data. 1:25,000 scale 2D watercourses and water body polygons, transport, infrastructure and cultural features were similarly obtained from the LIST.

5 Sampling Methods and Assaying Quality

5.1 Drill core sampling methods

Only logged mineralised drill core was sampled for assay. The Aberfoyle drill core (AX and BQ) was variously half or quarter core sampled by a longitudinal splitter, and the Renison drill core (largely BQ) was half core sampled with a core saw. It is not known what sampling interval was used by Aberfoyle as the only available assays are composites of the entire mineralised zone(s) in each hole. Renison typically assayed 1 m intervals across the mineralised zone(s).

Venture was able to retrieve from outdoor storage at the Renison Mine site and reassay some 22 of 41 Aberfoyle and Renison drill holes involved in this resource estimate. Venture re-sampled and assayed the Renison core in 2 m intervals principally to confirm the original assays which typically included Sn, W, Fe, Cu and As. The Aberfoyle drill holes were only assayed for Sn, Cu and As hence needed to be re-assayed for Fe. Unfortunately not all of the mineralised zones were complete (especially the Aberfoyle drill holes) because of previous re-sampling and/or core loss in storage. Where only quarter BQ or AX core was left Venture re-sampled all the remaining core in approximately 6 feet or 2 m intervals according to available core markings. Where half BQ core remained quarter core was sampled by core saw in 2 m intervals, except for ML37 from which all remaining mineralised core was composite sampled for metallurgical testwork.

Fresh Venture drill core (NQ and HQ) was sliver sampled by core saw at Venture's logging and storage shed in Tullah. The core was logged and typically marked up in 2 m intervals for sampling continuously across the mineralised zones plus some of the adjacent barren wall rock. A sliver was cut by core saw off the side of the fresh core to give a sample of around 20 % by volume. Several measurements of the cut slivers are taken for every hole to check that the volume of sample collected is as consistent as possible. One duplicate sample of the same sliver size is cut within each magnetite zone to evaluate sampling error. Weathered core (generally HQ, some NQ) was half core sampled by knife for clay and cold chisel or core saw for saprock.

Table 3: Assaying proportions by company and laboratory

Company	Number of Sn assays	% of Sn assays	Number of Fe assays	% of Fe assays
Aberfoyle	23	1	3	<1
Renison	575	21	437	16
Venture - ALS Chemex	1297	48	1450	54
Venture - SGS Renison	790	29	790	29
Venture - Ultratrace	0	0	8	<1
TOTAL	2685	100	2688	100

5.2 Sample Preparation and Analytical Procedures

There is no information available on sample preparation and analytical procedures employed by Aberfoyle and Renison.

The Venture core samples were collected in calico bags labelled with a unique sample number for submission to the assay laboratory. Samples were initially submitted to ALS Chemex's preparation facility in Adelaide for assay at ALS Chemex in Perth, then about two thirds (ML109 onwards) of the way through Venture's drilling programme sample preparation and assaying was switched to the newly opened SGS laboratory at Renison Bell. Eight (8) samples of historic (Aberfoyle) drill core were assayed at Ultratrace, Perth as part of the metallurgical testwork programme on the No. 2 Zone.

At ALS the samples are fine crushed to 70% passing 2 mm and split simultaneously through a rotary splitter set by weight to produce approx 100 g subsamples for pulverizing. The large -2 mm bulk residue is retained in the original calico bag, and the 100 g split is pulverised using an LM2 machine to 85% passing 75 microns. ALS Chemex then air freights the pulps to their laboratory in Perth for assay according to the following schemes:

Assay scheme 1 (2007 to April 2008): Au by 30g charge fire assay, solvent extraction & AAS finish to 0.001ppm lower detection limit; Al, Fe, Mg, Ca, Ti, Na, K, P, S, W, Ag, As, Pb, Sr, Ni, Cr, Cu, & Zn by multi-acid digest with ICP-AES finish; Ce, Sn, Ta, Li, Nb & U by multiacid-digest with ICP-MS finish.

Assay scheme 2 (April 2008 onwards); Al2O3, As, Ba, CaO, Co, Cr, Cu, Fe, K2O, MgO, Mn, Na2O, Ni, P, Pb, S, SiO2, Sn, TiO2, U, V, W, Zn plus LOI by XRF on fused disks; Au by lower scheme fire assay; Ag & As by 4 acid digest.

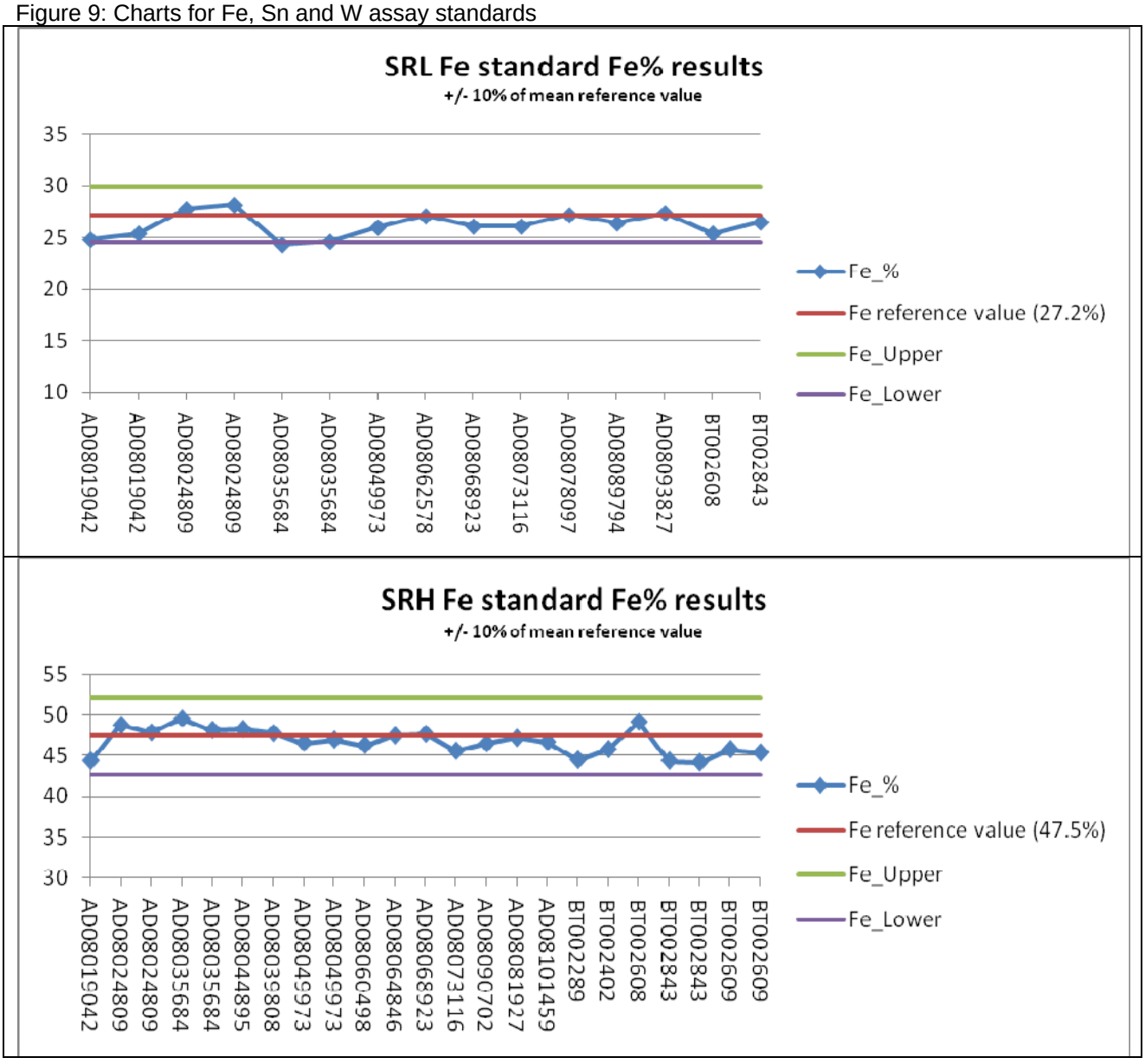
SGS Group opened an assay laboratory at the Renison Bell mine in mid 2008. Considerably improved transport and assaying time led Venture to switch to using the SGS Rension laboratory for routine assaying of drill core from August 2008. The bagged drill core samples were dropped off regularly by Venture personnel at the SGS Renison laboratory. Preparation at SGS comprised a 6 mm crush followed by 50:50 split to produce "A" and "B" coarse rejects. A c. 100g split was then taken from the "B" coarse reject and pulverised to p80 <75 microns to produce the analytical pulp. The elements Fe, Sn, W, S, As, Pb, and Zn were determined at SGS Renison by XRF on pressed powder disks. Upon

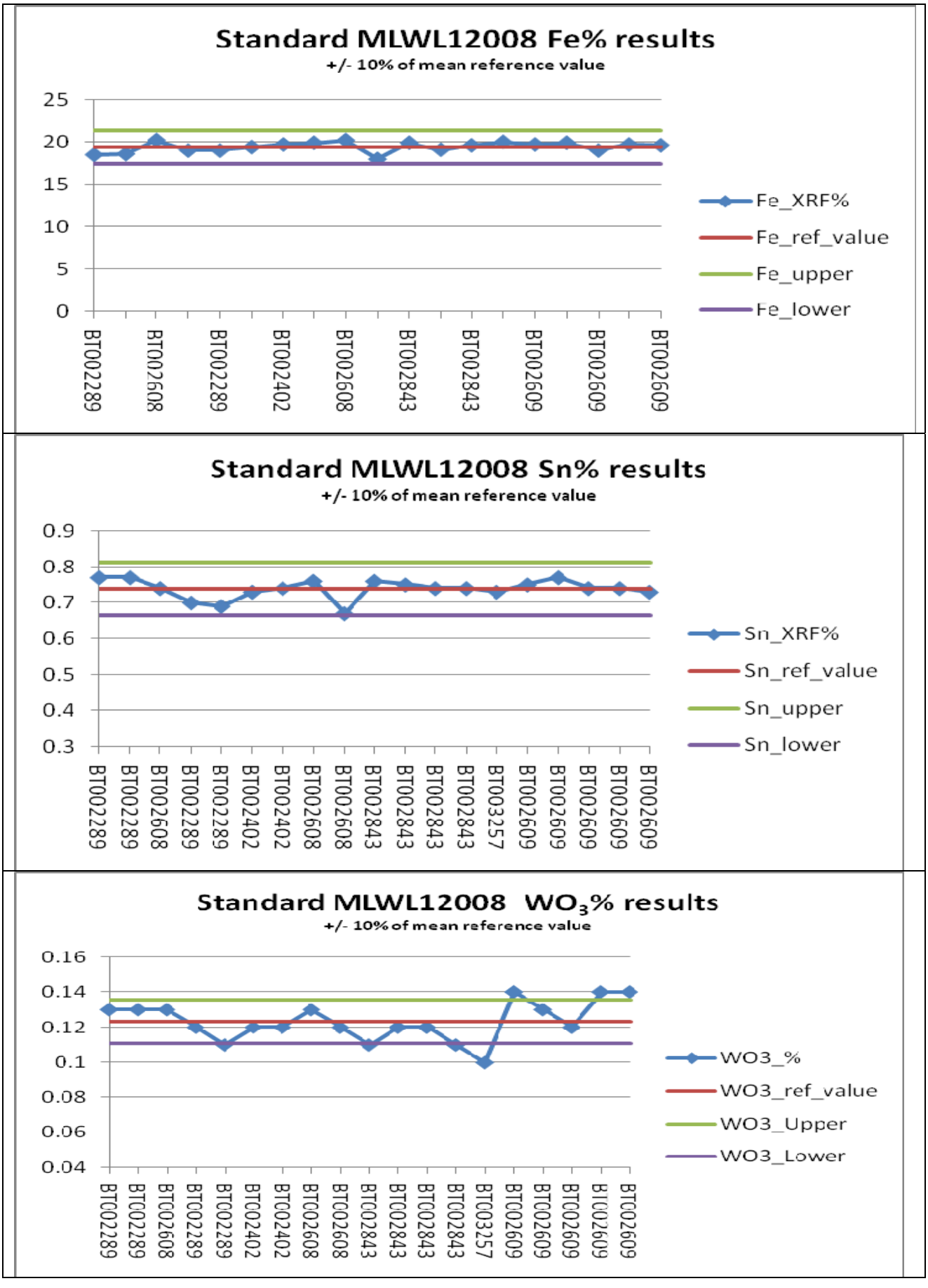
receipt of results Venture personnel retrieved the coarse rejects and pulps from SGS Renison for storage at Venture's Tullah facilities.

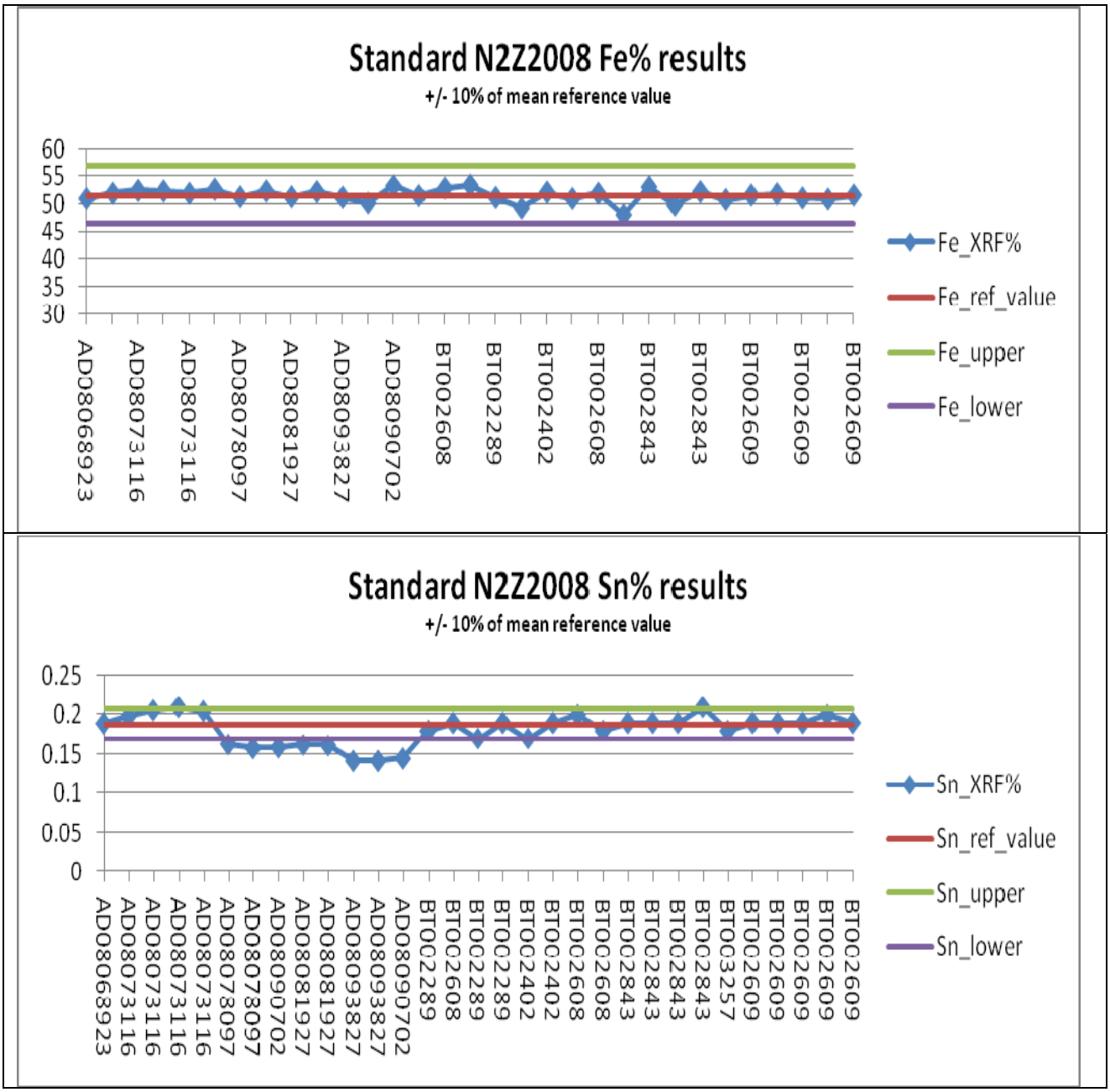
5.3 Assay Quality Control Procedures and Results

A range of commercial Fe, Au and base metal standards were inserted at a rate of approximately 1 in every 20 Venture drilling samples, and a series of Fe and Fe-Sn-W standards were also inserted at a rate of one per skarn intercept (essentially one per drill hole). Results for the Fe, Sn and W standards are all within 10% of the reference values except for ALS Chemex batches AD08078097, AD08090702, AD08081927 and AD08093827 as shown in Figure 9. ALS Chemex batches are prefixed AD in Figure 9, SGS Renison batches are prefixed BT. Under reporting of Sn by multi-acid digest (including HF) which fails to dissolve cassiterite is a separate issue and discussed further in the section covering the umpire assaying below.

Figure 9: Charts for Fe, Sn and W assay standards

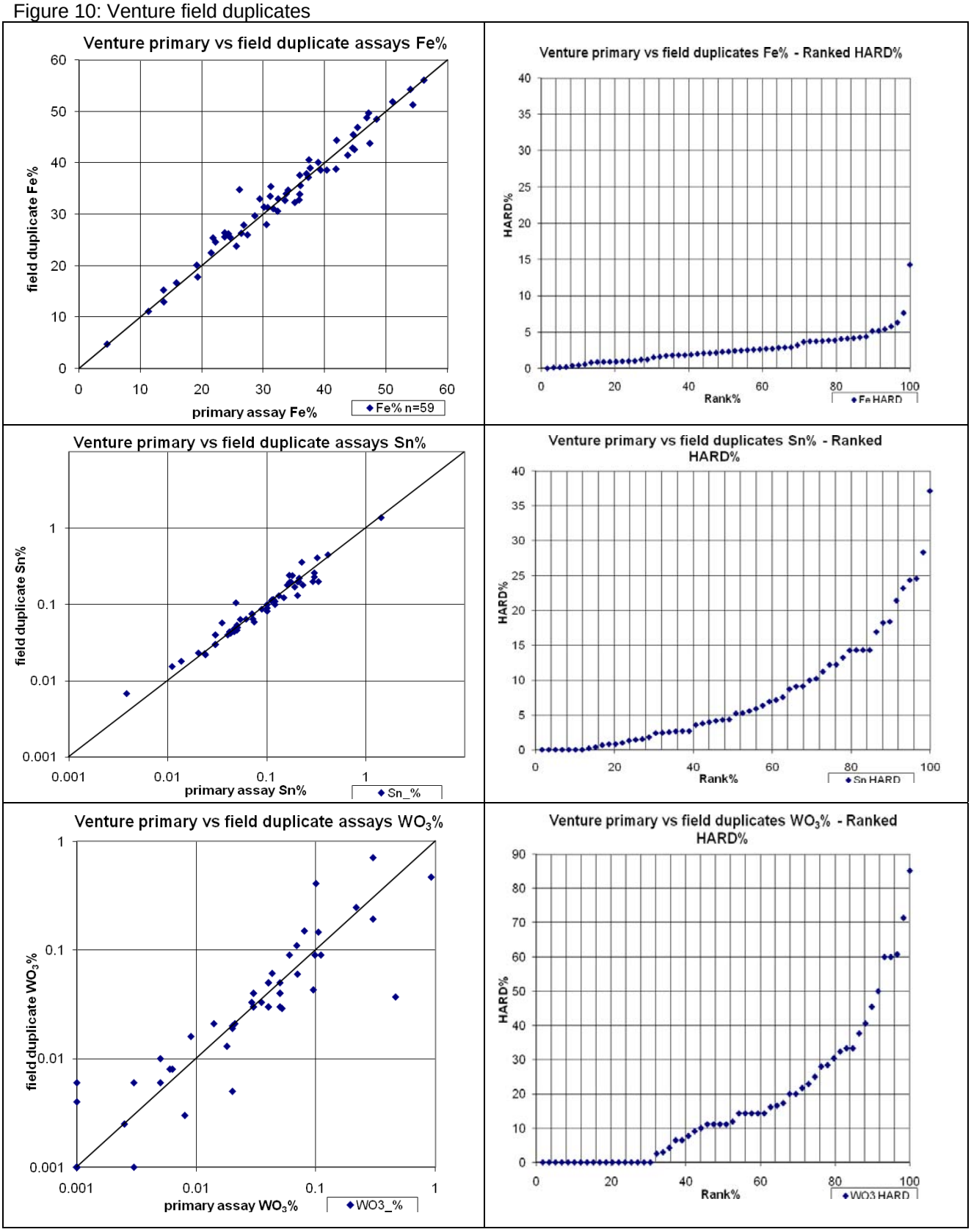



Standard MLWL12008 Fe% results
+/- 10% of mean reference value
25
20
15
10
5
0
BT002289
BT002608
BT002289
BT002402
BT002608
BT002843
BT002843
BT002609
BT002609
BT002609
Fe_XRF%
Fe_ref_value
Fe_upper
Fe_lower
Standard MLWL12008 Sn% results
+/- 10% of mean reference value
0.9
0.8
0.7
0.6
0.5
0.4
0.3
BT002289
BT002289
BT002608
BT002289
BT002289
BT002402
BT002402
BT002608
BT002608
BT002843
BT002843
BT002843
BT002843
BT003257
BT002609
BT002609
BT002609
BT002609
BT002609
Sn_XRF%
Sn_ref_value
Sn_upper
Sn_lower
Standard MLWL12008 WO3% results
+/- 10% of mean reference value
0.16
0.14
0.12
0.1
0.08
0.06
0.04
BT002289
BT002289
BT002608
BT002289
BT002289
BT002402
BT002402
BT002608
BT002608
BT002843
BT002843
BT002843
BT002843
BT003257
BT002609
BT002609
BT002609
BT002609
BT002609
WO3_%
WO3_ref_value
WO3_Upper
WO3_Lower



Field duplicates comprised a second sample taken using the same sampling method as the primary sample. Venture took one duplicate sample for each mineralised zone which equates to a rate of approximately 1 in 35 samples of mineralised material. The duplicate sample was assigned the sample number subsequent to the primary sample and was submitted in the same batch as the primary sample. The field duplicates allow evaluation of sampling error and, as shown by Figure 10, indicate low sampling variance for Fe and increasing nugget effect for Sn and WO_3. The greater nugget effect for Sn no doubt reflects the particulate nature of cassiterite, and the very high sampling variance for WO_3 is not surprising given the commonly coarsely patchy occurrence of scheelite in the Mt Lindsay skarns.

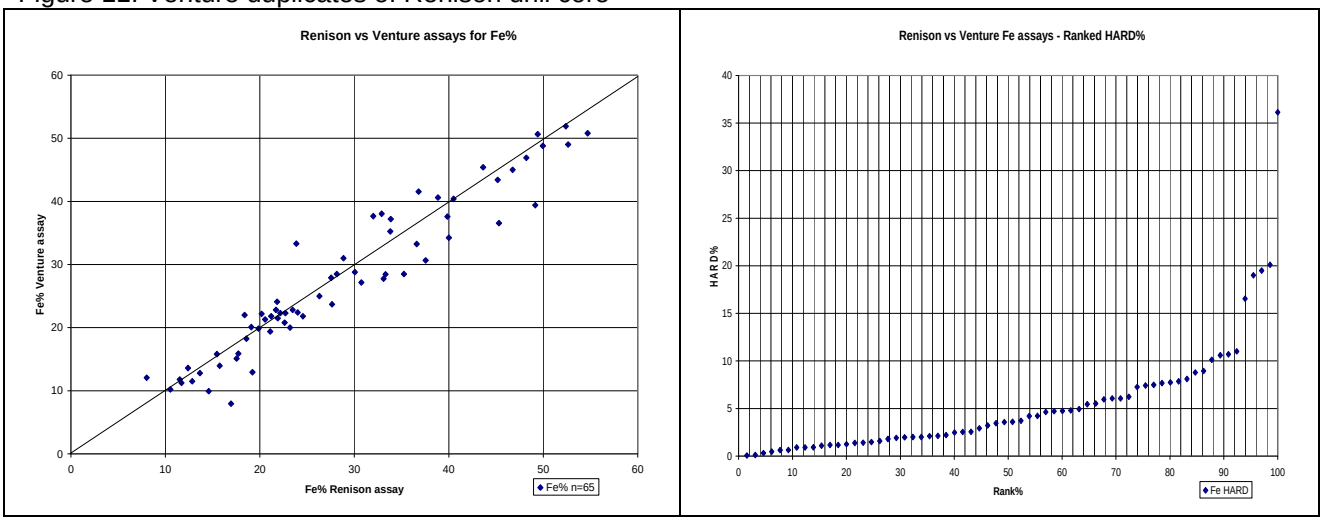
Figure 10: Venture field duplicates



There is no QC information available for the Aberfoyle and Renison assays. The recovery of Aberfoyle and Renison drill core from outside storage at Rension Bell allows some verification of the historic assays. Of the 25 holes resampled by Venture only 4 were

originally assayed for Fe: Aberfoyle did not assay for Fe and Rension assayed for Fe inconsistently. The Renison sampling was conducted in intervals ranging from c. 1 to 35 metres, while most of the Venture resampling was largely conducted in 6 foot intervals where core blocks were in feet and 2 m intervals for metric holes. A significant amount of missing core was noted, especially for Aberfoyle holes which have been previously resampled by Renison. To allow comparison of the Renison and Venture results the assays were composited to 2 m intervals using a weighted average function in Micromine. Half Relative and Half Absolute Relative Differences (HRD and HARD respectively) were calculated for interval pairs, and the composites were plotted on a standard scatter graph. Approx. 90% of the composite pairs have HARDs of less than 10%, and once outliers are removed (probably the result of sample boundary discrepancies) the HRD is approximately +1.6% for the Renison assays. The sampling variance for Fe is conspicuously higher than for the Venture field duplicates (compare Figures 11 & 12) and is expected to primarily reflect issues associated with the resampling of core stored in less than ideal outdoor conditions for 20-30 years. For this reason the Renison Fe assays were given priority over the Venture reassays in this resource estimate.

Figure 11: Venture duplicates of Renison drill core



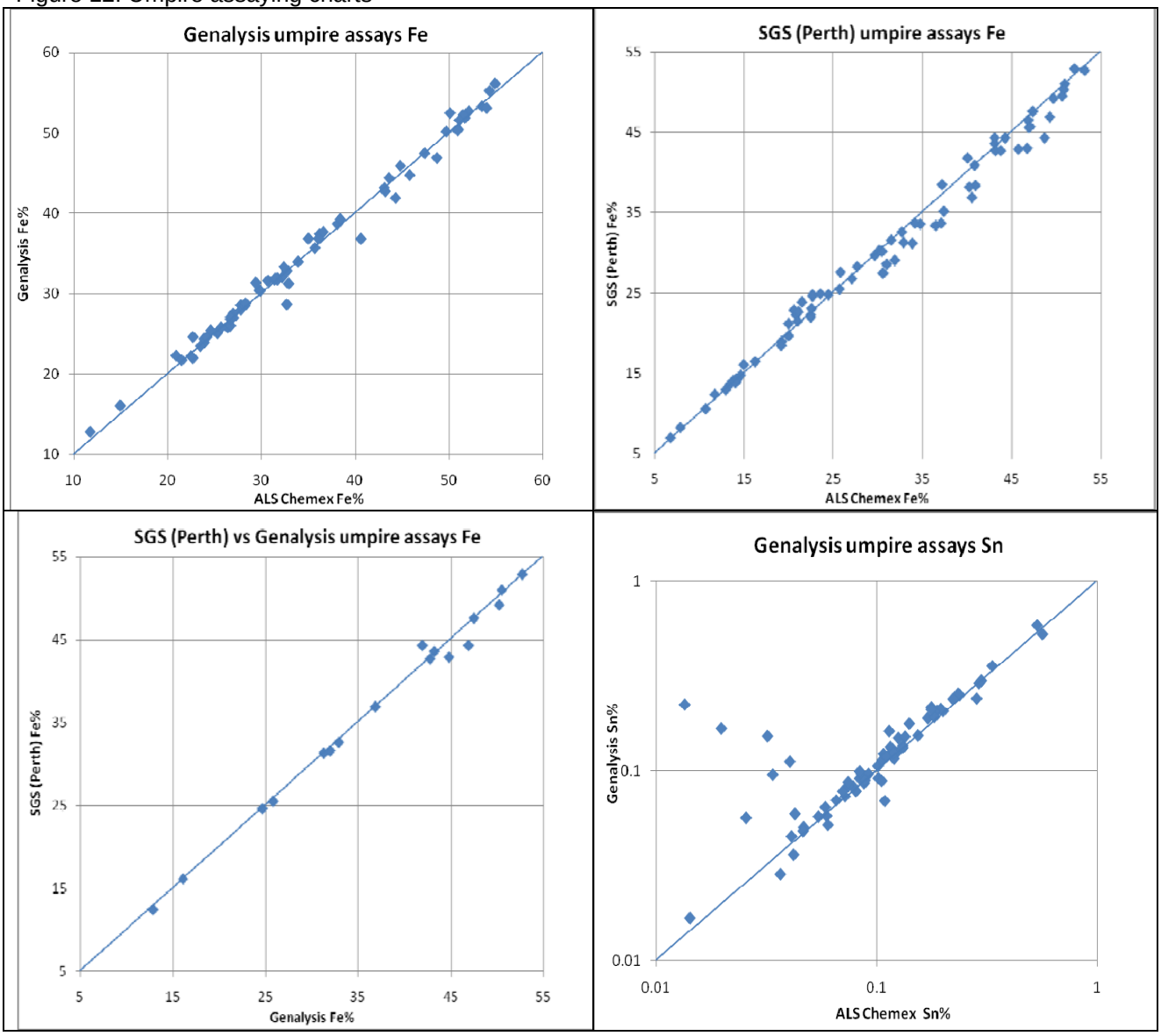
Venture also inserted blanks are inserted c. 1 every 20 samples to track inter-sample contamination during sample preparation at the various assay laboratories. The blanks comprised approx. 200-1000g of high-purity silica flour (from the local Corinna silica mine). One incidence of cross sample Sn contamination is recognised amongst 78 blanks (1% of blank data), and is currently being followed up by Venture.

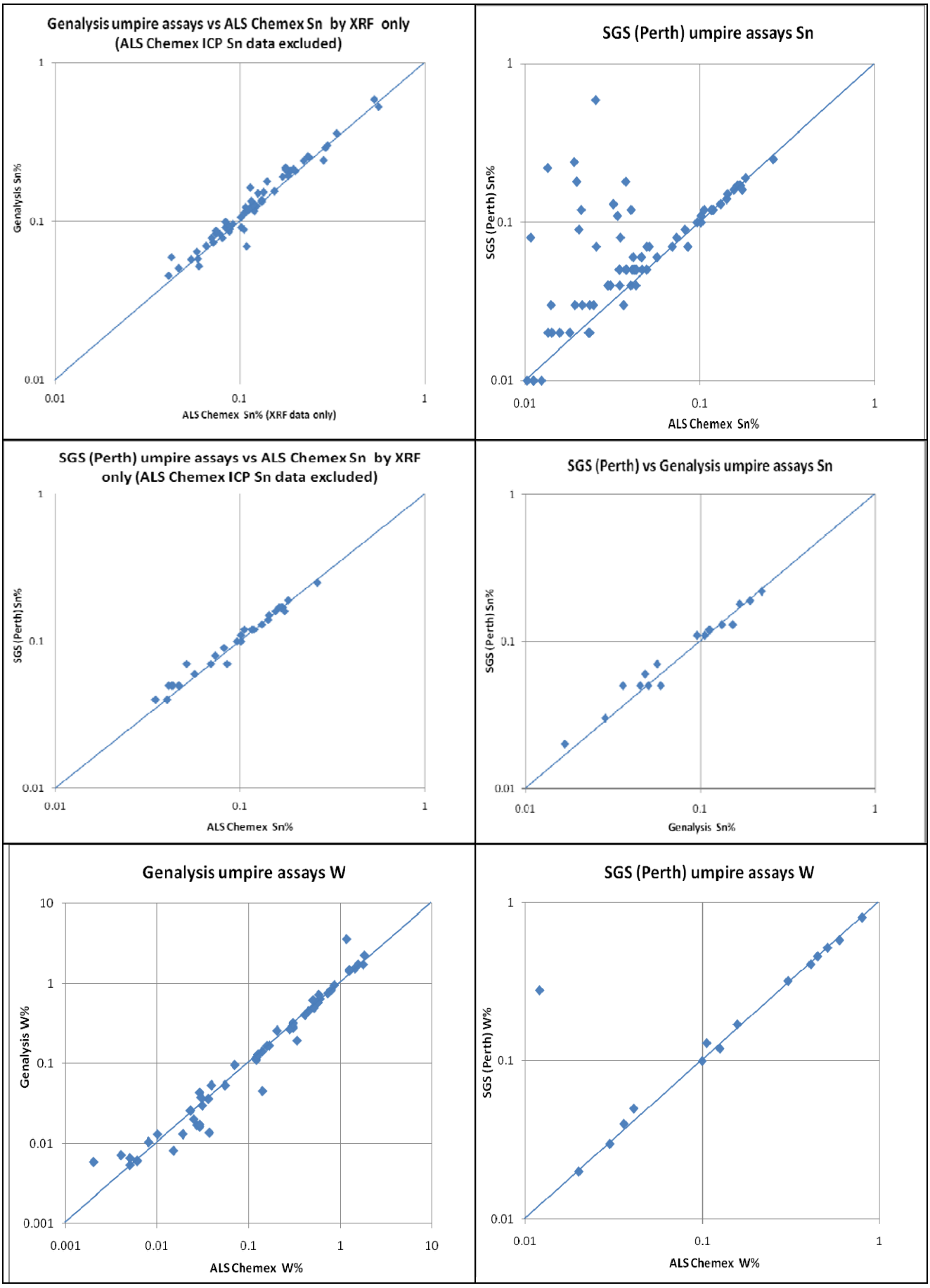
Pulps and residues of 75 mineralised samples representing approx. 4% of the Venture assay data were retrieved from storage with ALS Chemex and submitted to SGS, Perth and Genalysis Laboratory Services, Maddington and for umpire assaying by XRF on glass beads. Unfortunately there was not enough pulp for duplication of all assays at both labs but the results (Figure 12) do verify that the ALS Chemex Fe and W assays are acceptable for the current status of Inferred Resources.

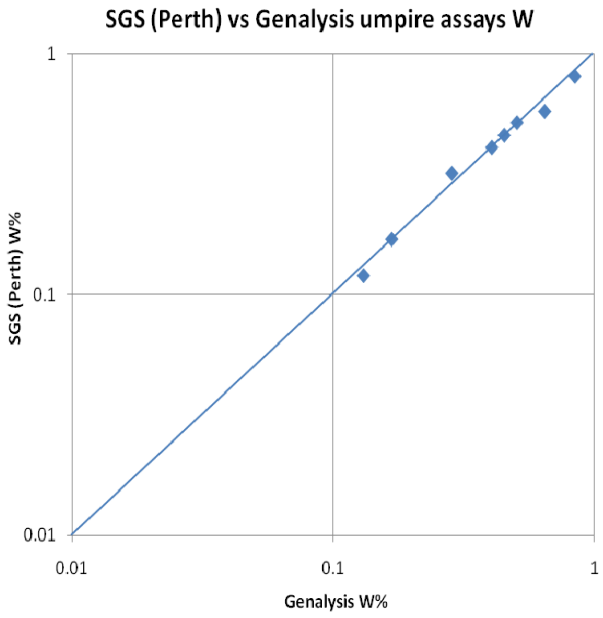
The ALS Chemex Sn assays by XRF exhibit a slight negative bias compared with both SGS Perth and Genalysis (Figure 12), in agreement with the slight negative bias observed for standard N2Z2008 in ALS Chemex batches AD08078097, AD08090702, AD08081927

and AD08093827 (Figure 9). Figure 12 also shows a much more significant under reporting of Sn in the multi-acid digest with ICP finish assays performed at ALS Chemex which is attributed to incomplete dissolution of Sn minerals, especially cassiterite, even in hydrofluoric acid. Approximately 12% (c. 5% of the Main Tin Zone and 32% of the No. 2 Zone) of the assays used in this current resource estimation were by multi-acid digest with ICP finish, whilst the remaining 88% of assays were done by the XRF on fused glass beads or pressed pellets. This assay deficiency is being addressed as part of Venture's ongoing Davis Tube Recovery (DTR) testwork and reassaying program, and could obviously lead to a significant upgrade in the Sn resource for the No. 2 Zone in particular.

Figure 12: Umpire assaying charts




Genalysis umpire assays vs ALS Chemex Sn by XRF only
(ALS Chemex ICP Sn data excluded)
Genalysis Sn%
ALS Chemex Sn% (XRF data only)
1
0.1
0.01
0.01
0.1
1
SGS (Perth) umpire assays Sn
SGS (Perth) Sn%
ALS Chemex Sn%
SGS (Perth) umpire assays vs ALS Chemex Sn by XRF only (ALS Chemex ICP Sn data excluded)
SGS (Perth) Sn%
ALS Chemex Sn%
SGS (Perth) vs Genalysis umpire assays Sn
SGS (Perth) Sn%
Genalysis Sn%
Genalysis umpire assays W
Genalysis W%
ALS Chemex W%
10
1
0.1
0.01
0.001
SGS (Perth) umpire assays W
SGS (Perth) W%
ALS Chemex W%



6 Potential for Economic Exploitation

6.1 Magnetite Recovery

Approximately 75 kg of No. 2 Zone drill core from four Aberfoyle and Renison drill holes (ML37, ML2/1, ML2/4 and ML2/5) was submitted to ProMet Engineers Pty Ltd (Promet) in late 2007 to evaluate the magnetite recovery. The testwork was conducted at Ammtec Pty Ltd, Perth and supervised by ProMet. The core samples were crushed and composited, and testwork included industry standard Davis Tube Recovery (DTR), Davis Tube Washes (DTW), wet Low Intensity Magnetic Separation (wet LIMS), Optimum Grind Testwork, and determination of Bondwork Indices (BWI). Head Fe grades, DTR mass recoveries and DTR concentrate Fe, SiO_2, Al_2O_3, TiO_2, P, K_2O and S grades for the 11 composites are listed in Table 2.

Optimal grind testwork on a composite made from all of the samples listed in Table 2 indicates that at a relatively coarse 150 micron grind a weight recovery of 39.85% was obtained and the concentrate graded 66.46% Fe, 3.36% Si, 1.01% Al, 0.04% P, and 1.75% S. Lower impurity levels were obtained at finer grind sizes. The high levels of sulphur in the concentrate indicate that sulphur treatment via flotation will be required to produce a saleable product. This first phase of metallurgical testwork indicates that the weight recoveries, concentrate grade and BWI for No. 2 Zone are within industry standard range for magnetite deposits. The data in listed in Table 2 provides an indication of likely mass recoveries and quality of the No. 2 Zone magnetite concentrates but are not sufficiently spatially representative for further analysis and a considerably more detailed metallurgical programme is in progress.

Table 4: Summary DTR results for the 11 composite drill core samples from the No. 2 Zone.

Sample	Head %Fe	Davis Tube Magnetic Concentrate							
		Weight Recovery (%)	%Fe	%SiO_2	%Al_2O_3	%TiO_2	%P	%K_2O	%S
ML37 274.5-286.5	44.3	42.1	68.3	2	0.7	0.63	0.018	0.09	0.66
ML37 286.5-295.5	45.5	43.9	67.8	2.08	0.62	0.47	0.019	0.13	3.31
ML37 295.5-298.7	30.4	21.3	68.8	1.73	0.66	0.64	0.022	0.13	0.48
ML2/4 115.5-117.5 (Comp1)	25.56	28.27	67.59	1.77	0.9	na	0.011	<0.001	1.69
ML2/1 71-75 (Comp2)	29.1	24.38	67.31	2.06	0.81	na	0.013	0.027	2.62
ML2/1 83-87 (Comp3)	31.51	24.73	66.89	3.12	1.18	na	0.019	0.044	0.26
ML2/5 159.72-163.37 (Comp4)	38.87	43.91	67.94	1.81	0.74	na	0.015	0.029	3.19
ML2/5 163.37-167.03 (Comp5)	38	38.36	68.22	1.33	0.64	na	0.015	0.021	4.28
ML2/5 167.03-170.69 (Comp6)	37.6	43.56	68.15	1.41	0.66	na	0.017	0.023	4.48
ML2/5 170.69-174.35 (Comp7)	39.4	46.85	68.22	1.27	0.62	na	0.016	0.02	4.48
ML2/5 174.35-178 (Comp8)	32.25	33.67	67.87	1.3	0.65	na	0.012	0.021	5.08
Average	35.68	35.55	67.92	1.81	0.74	0.58	0.02	0.049	2.78
Length weighted average	38.35	37.65	67.96	1.88	0.72	na	0.02	0.064	2.53

Note the DTRs for ML37 composites were all conducted at P100 -53 microns, while DTRs on the remaining composites were conducted at P100 -75 microns. Arithmetic and length weighted averages are listed.

6.2 Conceptual Mining Scenarios

The current conceptual mining scenario is that a conventional open pit will be excavated to an optimised depth which is expected to be between 150 and 200 m below surface. The pit will start on the north-western half of the No. 2 Zone which almost outcrops on a ridge line adjacent and parallel to Mount Lindsay. The material to be dug will require drill and blast from the surface as there appears to be only a few metres of semi-weathered rock. The ore will be trucked directly to the plant which will be less than 4 km away, whilst the waste material will be dumped within 500 m of the top of the pit exit.

Whilst the open pit is being mined, work can begin immediately on a ca. 1500 to 2000m decline from the south-eastern side of Mt Lindsay down to the bottom of the currently understood level of mineralisation in the No. 2 Zone. Given the sloping topography, the portal to the decline can be located in close proximity to possible treatment plant locations and allow a conveyor system to be installed from an underground crusher to the surface.

With the advantage of being able to develop the mine from the bottom up, a multitude of mining methods can be employed depending upon a geotechnical investigation into the competency of the ore and surrounding waste rock. Given the vertical orientation of the mineralisation of No. 2 Zone and initial width indications being between 15 and 25 m, a high-volume mining method such as sub-level stoping or caving could be employed if required.

7 Data Preparation and Treatment

7.1 Data Spacing and Mineralised Wireframes

Difficult access (rough terrain and environmental considerations) means that the drilling has not been conducted on a regular grid over the mineralised zones (see Figures 2-8). Drilling pierce points are somewhat clustered and range from approximately 30 by 30 m to a maximum of c. 150 m centres within the Main Tin Zone, and c. 50 m by 50 m to a maximum of c. 200 m centres within the No. 2 Zone (Figures 3-8). Overall drill hole spacing for both zones is very approximately 100 m by 100 m. The mineralisation wireframes were extended approximately half section spacing beyond the final mineralised drill section.

The magnetite and Sn-W mineralisation is not completely coincident at Mt Lindsay and two overlapping 3-dimensional wireframe sets were created in Micromine to facilitate estimation of magnetite-associated Fe resources and Sn-WO_3 resources. The Sn-WO_3 resource wireframes are more expansive than the Fe wireframes and include sulphide and amphibole as well as magnetite hosted Sn-WO_3 mineralisation. Drill hole collar, down hole survey and geology data sets are the same for both Fe and Sn-WO3 wireframe sets, but separate assay and density files were created and are referred to as the Fe and Sn-WO_3 data sets below.

7.2 Sample Lengths and Compositing

Venture's drill core was sampled over 2 m intervals accounting for c. 83% of the Fe and 77% of the Sn-WO_3 assay datasets. Drilling by Renison was generally sampled in 1 m lengths and accounts for c. 16% of the Fe and 21% of the Sn-W assay dataset. Only composite or summary assays representing intervals ranging from 0.5 m to 32.1 m length were available for the original Aberfoyle drill holes but this accounts of <1% of the assay dataset.

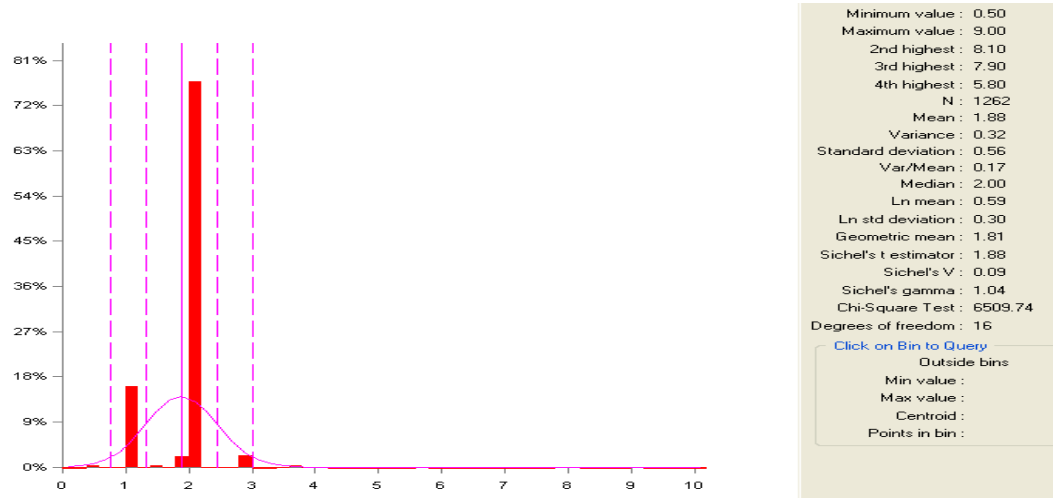


Figure 13: Sample length histogram Fe data set

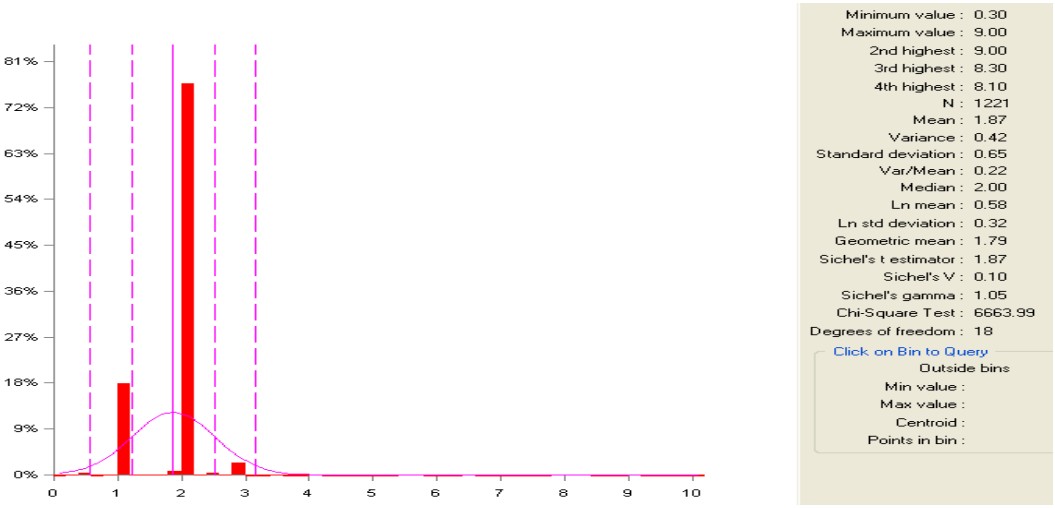


Figure 14: Sample length histogram Sn-WO_3 data set

For the resource estimation samples were composited to 2 m using the weighted average compositing function in Micromine. Composite length was selected from the dominant sample interval. Some 418 composites were produced and honour the strings used to create the wireframes enclosing the mineralization. Because the mineralization wireframes were created from raw down hole data a few composites of irregular length were created at the edges of the interpretation. Irregular composites do not account for a significant proportion of the final data sets (Tables 5 & 6) and will not significantly affect the resource estimate. Each composite was flagged according to wireframe domain.

Summary Fe, Sn and WO_3 grade statistics for the length weighted composites are presented in Figures 15-17.

Table 5: Fe data set wireframed composite lengths

Composite Length	Number of Composites	Minimum length m	Maximum length m	Mean length m	Total length m	Proportion of Composites	Proportion of metres
<2m	22	0.4	1.92	1.19	26.27	2.59%	1.56%
2m	829	2	2	2	1658	97.41%	98.44%
>2m	0	0	0	0	0	0.00%	0.00%
TOTAL	851	0.4	2	1.98	1684.27	100.00%	100.00%

Table 6: Sn-WO_3 data set wireframed composite lengths

Composite Length	Number of Composites	Minimum length m	Maximum length m	Mean length m	Total length m	Proportion of Composites	Proportion of metres
<2m	44	0.1	1.9	0.95	41.59	3.62%	1.74%
2m	1172	2	2	2	2344	96.38%	98.26%
>2m	0	0	0	0	0	0.00%	0.00%
TOTAL	1216			1.96	2385.59	100.00%	100.00%

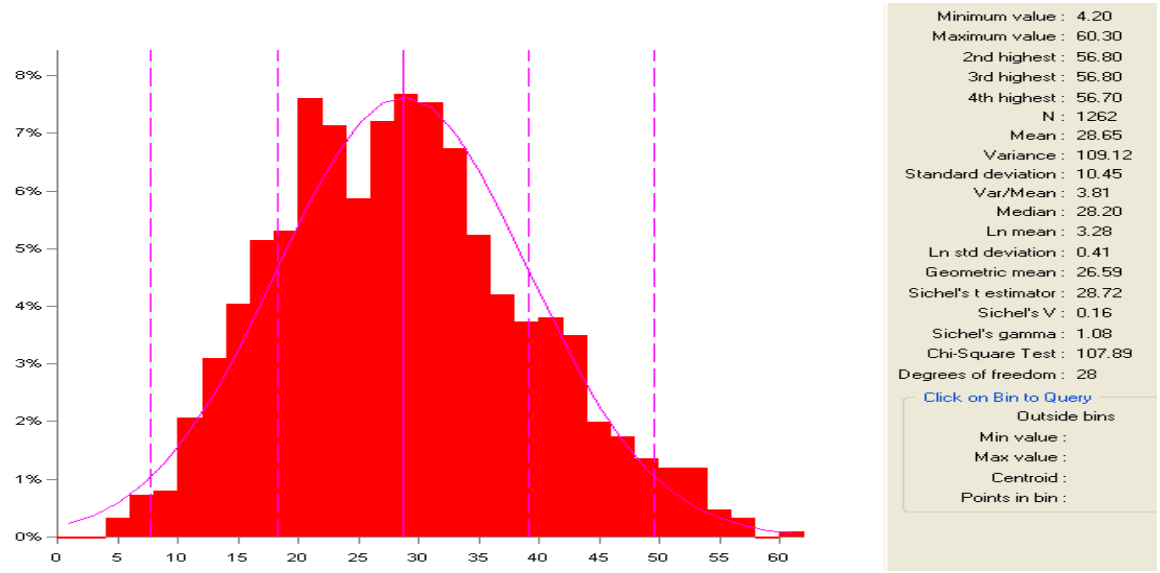


Figure 15: Summary statistics and histogram for composite Fe grades

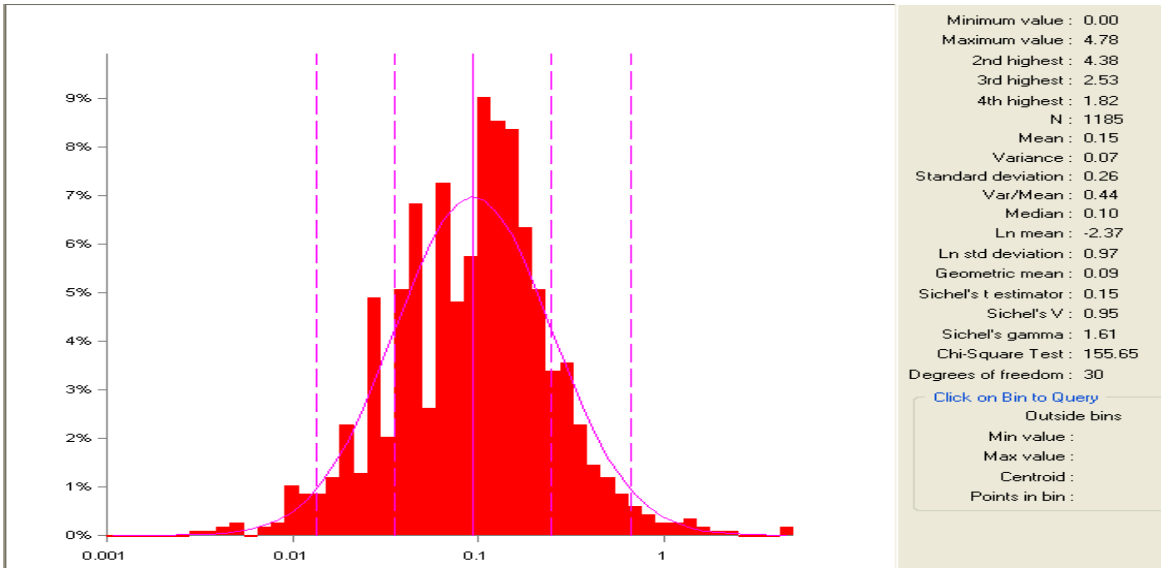


Figure 16: Summary statistics and histogram for composite Sn grades

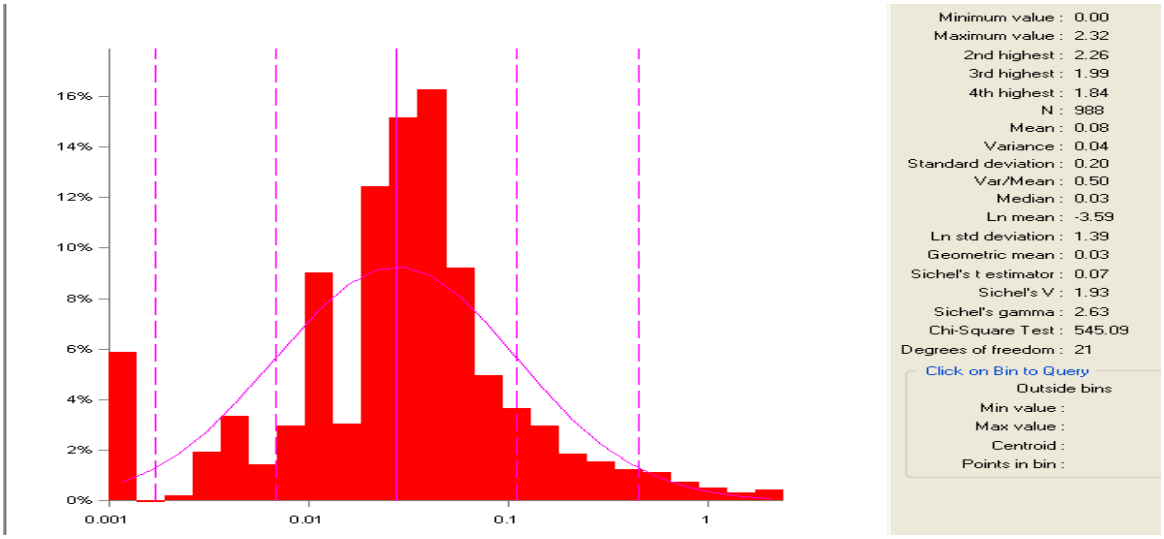


Figure 17: Summary statistics and histogram for composite WO_3 grades

7.3 Density

Density collected on a 1 m basis from the Venture drill holes was composited and merged with the 2 m Fe and Sn-WO_3 assay composite files for summary statistics. The Main Tin Zone contains a significantly greater proportion of sulphide compared with the No. 2 Zone (magnetite dominant) and consequently has a significantly lower average density and weaker correlation with Fe grade. For fresh materials the mean densities for the Main Tin Zone and No. 2 Zone Fe wireframes are 3.50 t/m^3, and 3.72 t/m^3 respectively, and for the Sn-WO3 wireframes 3.45 t/m^3 and 3.71 t/m^3 respectively. Composite density and grade show reasonably consistent positive correlations (Figures 18-21) and the following formulae were used to assign densities to the appropriate Fe and Sn-WO_3 data sets. For intervals without Fe assays (some of the Aberfoyle and Renison drill holes drill holes) the appropriate mean density was assigned.

Fe wireframes Main Tin Zone fresh density = 3.01 + 0.02 * Fe% (Figure 18)
Fe wireframes No. 2 Zone fresh density = 2.97 + 0.02 * Fe% (Figure 19)
Sn-WO_3 wireframes Main Tin Zone fresh density = 2.97 + 0.02 * Fe% (Figure 20)
Sn-WO_3 wireframes No. 2 Zone fresh density = 2.94 + 0.02 * Fe% (Figure 21)

Some of the sulphide skarn within the main Tin Zone has been significantly weathered and, as previously mentioned, a weathered zone was wireframed and used to domain the Sn-WO_3 wireframes. Relatively few density determinations were available for the weathered core and in the absence of correlation with Fe grade (Figure 22) a simple average density of 1.8 was assigned to all material falling within the weathered zone wireframes. The wireframed weathering zones do not encroach significantly on the Fe wireframes and the magnetite skarn appears to have been relatively resistant to weathering. Only fresh densities were modelled for the Fe resource estimate.

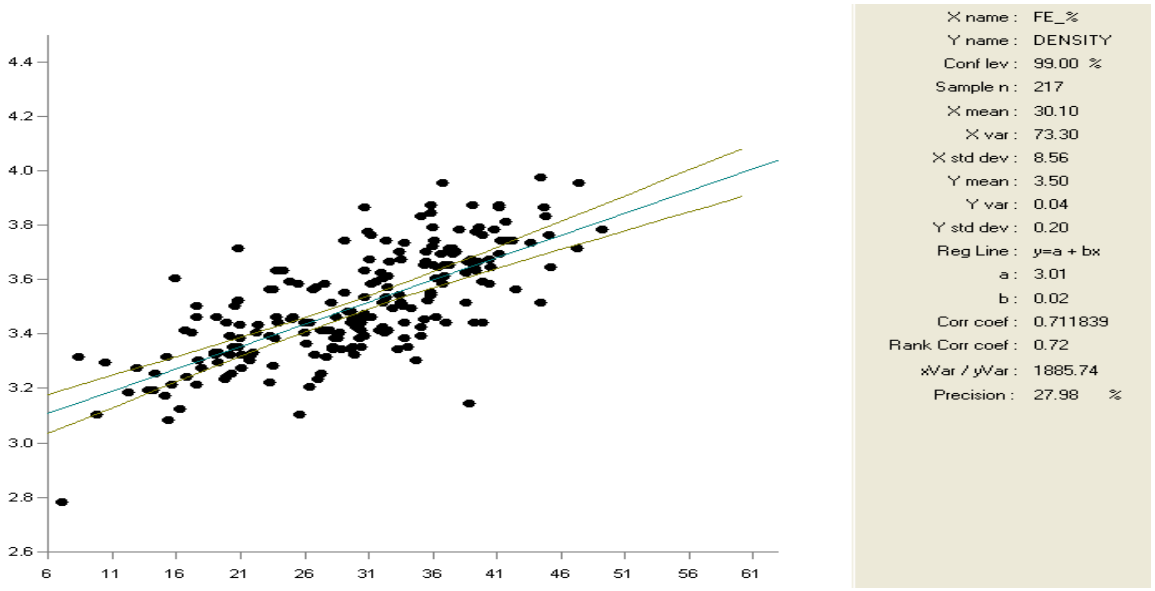


Figure 18: Main Tin Zone Fe wireframes density correlation with Fe grade

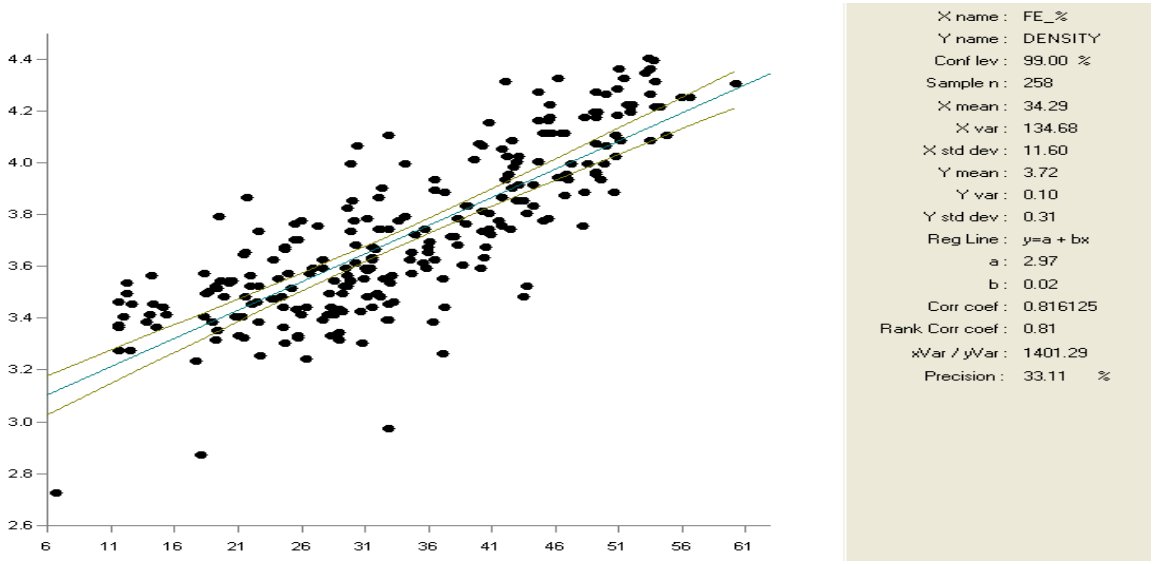


Figure 19: No. 2 Zone Fe wireframes density correlation with Fe grade

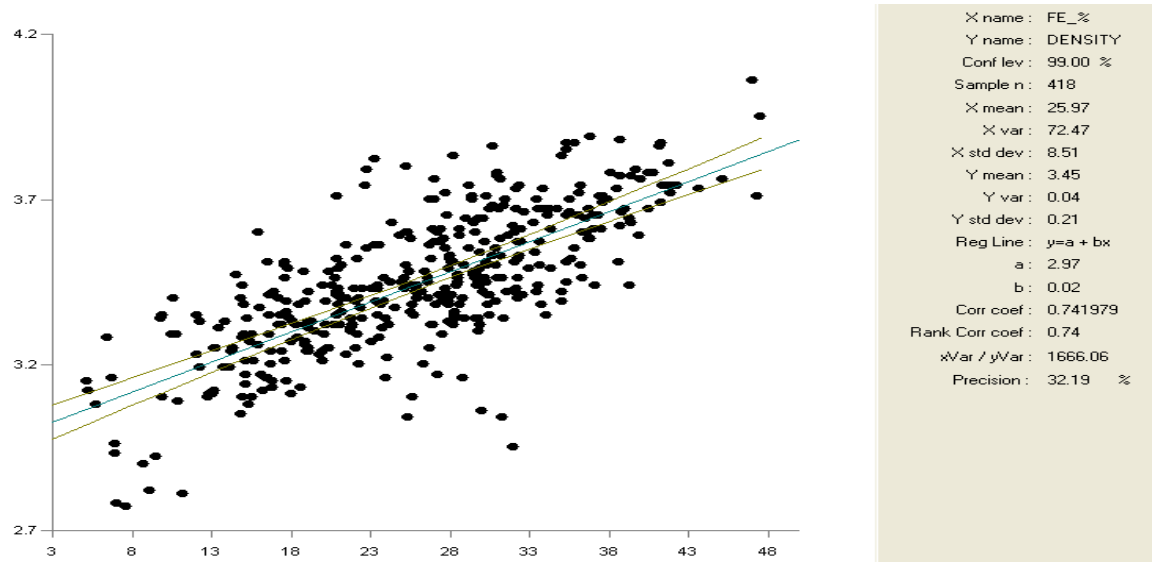


Figure 20: Main Tin Zone Sn-WO_3 wireframes density correlation with Fe grade

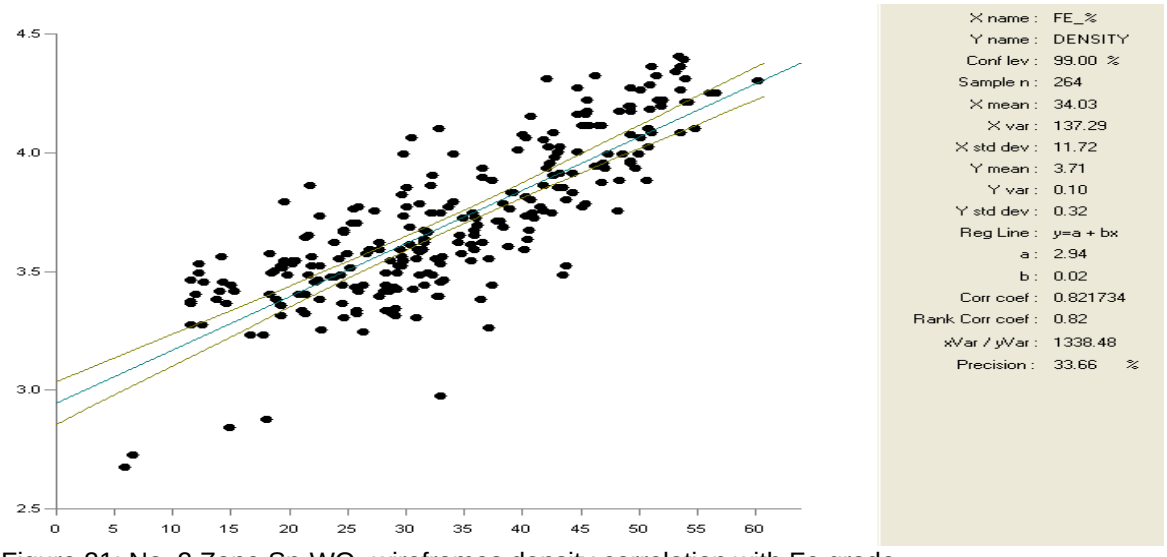


Figure 21: No. 2 Zone Sn-WO_3 wireframes density correlation with Fe grade

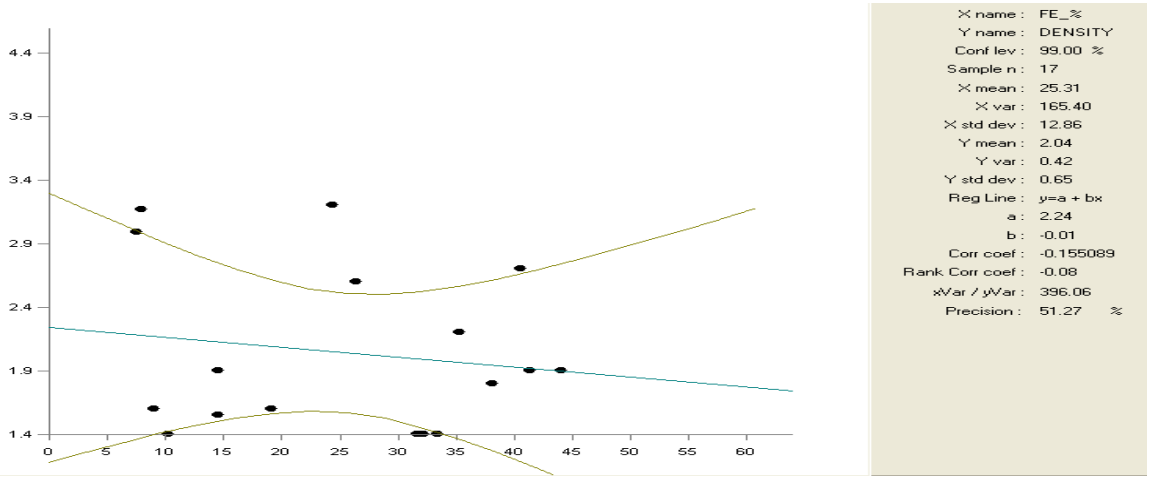


Figure 22: Main Tin Zone Sn-WO_3 wireframes weathered zone density correlation with Fe grade

8 Resource Modeling

8.1 Modelling Domains and Block Model Extents

As mentioned in Section 7.1 the magnetite and Sn-W mineralisation is not completely coincident at Mt Lindsay and two overlapping 3-dimensional wireframe sets were created in Micromine by digitising strings onto the irregularly spaced drill sections. A threshold of c. 20% Fe with significant (>200 SI units) magnetic susceptability was used to digitise the Fe resource wireframes, and a Sn or WO_3 grade of c. 0.1% was used for the Sn-WO_3 wireframes beyond the magnetite zones. The resulting Sn-WO_3 mineralisation wireframes are more expansive than the Fe wireframes and include sulphide and amphibole as well as magnetite-hosted Sn-WO_3 mineralisation. Seven (7) discrete mineralisation wireframes divided into 11 geometrically distinct domains were created for the Fe resource estimate, and 6 mineralisation wireframes divided into 12 geometric domains were constructed for the Sn-WO_3 resource. The top of the wireframes were clipped to the topographic DTM. Volumes for the various domains are listed in Table 7.

Table 7: Wireframe volumes by geometric domain

Fe mineralisation wireframes			Sn-WO_3 mineralisation wireframes	
Domain	m^3		Domain	m^3
MTZ3m_BTF1	732,321		MTZ3sn_ATF1	341,057
MTZ3m_BTF2	473,573		MTZ3sn_ATF2	1,014,411
MTZ3m_BTF3	812,169		MTZ3sn_BTF1	1,389,912
MTZ3m_BTFN	258,806		MTZ3sn_BTF2	792,617
MTZ3m_ATF	1,533,516		MTZ3sn_BTF3	636,460
N2Z8m_W	53,368		MTZ3sn_BTF4	972,370
N2Z8m_BTF1	488,033		N2Z8sn_W	206,019
N2Z8m_BTF2	1,711,722		N2Z8sn_ATF1	562,687
N2Z8m_ATF1	562,687		N2Z8sn_ATF2	3,351,010
N2Z8m_ATF2	2,886,176		N2Z8sn_TNF	320,134
N2Z8m_TNF	259,362		N2Z8sn_BTF1	542,107
TOTAL	9,771,731		N2Z8sn_BTF2	1,740,424
			TOTAL	11,869,207

Two models, Fe and Sn-WO_3, with blocks of 25m x 10m x 25m xyz dimension were created using the parameters in Table 8 and trimmed to the wireframes using 10 x 10 x 10 m sub-blocking with a discretisation factor of 2 in Micromine (roughly equating to 1.5-2.5 m discretisation along margins of wireframes). Each sub-block was estimated separately then averaged to give the block grade.

Table 8: Block Model extents

	Origin block centre	Block dimensions	Number of blocks	End block centre
East	360100	25	69	361800
North	5382100	10	101	5383100
RL2000	1800	25	37	2700

8.2 Search Geometry and Criteria

The Fe, Sn and WO_3 grades were interpolated to the blocks using the Inverse Distance Squared method, with an initial 50x50x10m search ellipse oriented approximately parallel to the strike and dip of the mineralised domains followed by progressively more relaxed searches until all blocks were assigned an iron grade (Table 9). Because of the ultimately relaxed search ellipse all blocks were assigned grades. Search orientations are given in Table 10. Four sectors were used for each search ellipse with a maximum of 4 points per sector, and a minimum of 3 points per sector for the first two searches followed by a minimum of 1 point per sector for subsequent searches. The boundaries between domains are hard.

Variograms were briefly examined but were too poorly structured to of use. The short range strike and dip continuity is close to the minimum drill hole spacing, and additional more regular drilling will be necessary to improve the variogram models.

Table 9: Search criteria

Search Pass	Search radius (x, y, z)	Minimum drill holes	Sectors	Minimum points (total)	Maximum points per sector	Inverse Distance Power
1	50,50,10	2	4	3	4	2
2	100,100,20	2	4	3	4	2
3	150,150,30	1	4	1	4	2
4	200,200,40	1	4	1	4	2
5	250,250,50	1	4	1	4	2
6	300,300,60	1	4	1	4	2
7	350,350,70	1	4	1	4	2
8	400,400,80	1	4	1	4	2

Table 10: Search ellipse orientations by domain (azimuth MGA)

Fe mineralisation wireframes					Sn-WO_3 mineralisation wireframes			
Domain	Dip	Azimuth	Plunge		Domain	Dip	Azimuth	Plunge
MTZ3m_BTF1	-80	120	0		MTZ3sn_ATF1	-87	125	-35
MTZ3m_BTF2	-65	120	0		MTZ3sn_ATF2	-77	115	-35
MTZ3m_BTF3	-75	130	-35		MTZ3sn_BTF1	-83	115	0
MTZ3m_BTFN	-70	120	0		MTZ3sn_BTF2	-75	115	0
MTZ3m_ATF	-80	125	-30		MTZ3sn_BTF3	-65	110	-40
N2Z8m_W	85	125	0		MTZ3sn_BTF4	-80	120	-40
N2Z8m_BTF1	85	130	-30		N2Z8sn_W	85	125	0
N2Z8m_BTF2	-75	130	-30		N2Z8sn_BTF1	85	130	-30
N2Z8m_ATF1	85	125	-30		N2Z8sn_BTF2	-75	125	-30
N2Z8m_ATF2	-85	125	-30		N2Z8sn_ATF1	85	125	-30
N2Z8m_TNF	83	130	-30		N2Z8sn_ATF2	-88	128	-30
					N2Z8sn_TNF	83	128	-30

9 Estimated Resources and Recommendations

9.1 Classification

The relatively broad drill hole spacing and mean that all of the currently estimated resources have been assigned to the Inferred category. The Inferred category is intended to cover situations where a mineral concentration or occurrence has been identified and limited measurements and sampling completed, but where the data are insufficient to allow the geological and/or grade continuity to be confidently interpreted (The JORC Code, 2004 edition). It is reasonable to expect but it can not be assumed that with further drilling an upgrade from to Indicated resources will occur (The JORC Code, 2004 edition).

9.2 Estimated Resources

Lower and upper cut-off grades were not used for the grade estimations. Tonnages were estimated to each block by the grade-density functions given in Section 7.3. Estimated Fe, Sn and WO_3 grades and tonnages by Inverse Distance Weighting Squared are listed in Tables 11, 12 and 13. The results are rounded to 2 significant figures to reflect the accuracy of the estimates.

Table 11: Estimated Fe resources Main Tin Zone and No. 2 Zone

Prospect	**Category**	**Fe% cut off**	**Volume (m3x106)**	**Tonnage (Mt)**	**Grade Fe%**
No2 Zone	Inferred	0	5.7	20.9	34
No2 Zone	Inferred	10	5.7	20.9	34
No2 Zone	Inferred	20	5.6	20.4	34
No2 Zone	Inferred	30	4.1	15.2	36
No2 Zone	Inferred	40	1.0	3.7	44
Main Tin Zone	Inferred	0	2.7	10.0	31
Main Tin Zone	Inferred	10	2.7	10.0	31
Main Tin Zone	Inferred	20	2.7	9.9	31
Main Tin Zone	Inferred	30	1.6	6.0	34
Main Tin Zone & No2 Zone (combined)	Inferred	0	8.5	30.8	33
Main Tin Zone & No2 Zone (combined)	Inferred	10	8.5	30.8	33
Main Tin Zone & No2 Zone (combined)	Inferred	20	8.3	30.3	33
Main Tin Zone & No2 Zone (combined)	Inferred	30	5.8	21.2	35
Main Tin Zone & No2 Zone (combined)	Inferred	40	1.0	3.8	43

Table 12: Estimated Sn & WO_3 resources Main Tin Zone and No. 2 Zone using Sn cut offs

Prospect	Category	%Sn cut off	Volume (m^3x10^6)	Tonnage (Mt)	Sn%	WO_3%	Sn tonnes	WO_3 tonnes
Main Tin Zone	Inferred	0	5.1	17.2	0.23	0.08	40,000	13,000
Main Tin Zone	Inferred	0.05	5.1	17.1	0.23	0.08	39,000	13,000
Main Tin Zone	Inferred	0.1	4.7	15.8	0.24	0.08	38,000	13,000
Main Tin Zone	Inferred	0.15	3.1	10.3	0.31	0.08	32,000	8,200
Main Tin Zone	Inferred	0.2	2.1	7.2	0.36	0.09	26,000	6,300
Main Tin Zone	Inferred	0.25	1.4	4.9	0.43	0.09	21,000	4,400
Main Tin Zone	Inferred	0.3	0.9	3.1	0.52	0.09	16,000	2,900
Main Tin Zone	Inferred	0.35	0.6	2.0	0.63	0.09	13,000	1,700
Main Tin Zone	Inferred	0.4	0.4	1.5	0.72	0.09	11,000	1,300
Main Tin Zone	Inferred	0.45	0.3	1.2	0.80	0.09	9,300	1,100
Main Tin Zone	Inferred	0.5	0.3	1.0	0.84	0.09	8,600	970
No. 2 Zone	Inferred	0	6.6	23.5	0.09	0.05	20,000	11,000
No. 2 Zone	Inferred	0.05	5.1	18.1	0.10	0.05	18,000	10,000
No. 2 Zone	Inferred	0.1	2.2	7.6	0.14	0.04	10,000	3,200
No. 2 Zone	Inferred	0.15	0.6	2.3	0.18	0.01	4,100	230
No. 2 Zone	Inferred	0.2	0.1	0.4	0.21	0.01	750	30

Table 13: Estimated WO_3 & Sn resources Main Tin Zone and No. 2 Zone using WO_3 cut offs

Prospect	Category	%WO_3 cut off	Volume (m3x106)	Tonnage (Mt)	WO_3%	Sn%	Sn tonnes	WO_3 tonnes
Main Tin Zone	Inferred	0	5.1	17.2	0.08	0.23	40,000	13,000
Main Tin Zone	Inferred	0.05	2.5	8.5	0.12	0.26	22,000	11,000
Main Tin Zone	Inferred	0.1	1.2	3.9	0.19	0.29	11,000	7,300
Main Tin Zone	Inferred	0.15	0.6	2.0	0.25	0.31	6,200	4,900
Main Tin Zone	Inferred	0.2	0.4	1.3	0.29	0.29	3,700	3,700
Main Tin Zone	Inferred	0.25	0.1	0.5	0.40	0.27	1,300	2,000
Main Tin Zone	Inferred	0.3	0.1	0.4	0.45	0.27	960	1,600
Main Tin Zone	Inferred	0.35	0.1	0.3	0.49	0.26	710	1,300
Main Tin Zone	Inferred	0.4	0.1	0.2	0.54	0.23	430	1,000
No. 2 Zone	Inferred	0	5.7	20.8	0.05	0.08	18,000	11,000
No. 2 Zone	Inferred	0.05	0.8	3.0	0.25	0.08	2,400	7,700
No. 2 Zone	Inferred	0.1	0.6	2.1	0.33	0.08	1,800	7,100
No. 2 Zone	Inferred	0.15	0.5	1.7	0.39	0.09	1,500	6,600
No. 2 Zone	Inferred	0.2	0.4	1.3	0.45	0.09	1,200	6,000
No. 2 Zone	Inferred	0.25	0.3	1.1	0.50	0.09	1,000	5,400
No. 2 Zone	Inferred	0.3	0.2	0.9	0.54	0.09	840	4,900
No. 2 Zone	Inferred	0.35	0.2	0.7	0.59	0.09	680	4,400
No. 2 Zone	Inferred	0.4	0.1	0.6	0.66	0.10	540	3,700
No. 2 Zone	Inferred	0.45	0.1	0.4	0.72	0.10	440	3,200
No. 2 Zone	Inferred	0.5	0.1	0.3	0.81	0.11	350	2,700

9.3 Recommendations

The current resource estimation indicates the presence of significant Sn, WO_3 and Fe resources within the Main Tin Zone and No. 2 Zone skarns at Mt Lindsay, and is intended to provide the justification and basis for preliminary scoping of project economics. Investigations into the extractability of Sn, WO_3 and Fe have been initiated with highly encouraging indications that magnetite, cassiterite and scheelite can all be recovered in significant quantities. Significant infill drilling will be required to upgrade confidence of the Sn and WO_3 resource estimation (see the high sampling variance for these elements) but it is recommended that the current scoping work is concluded before significant infill drilling is done.

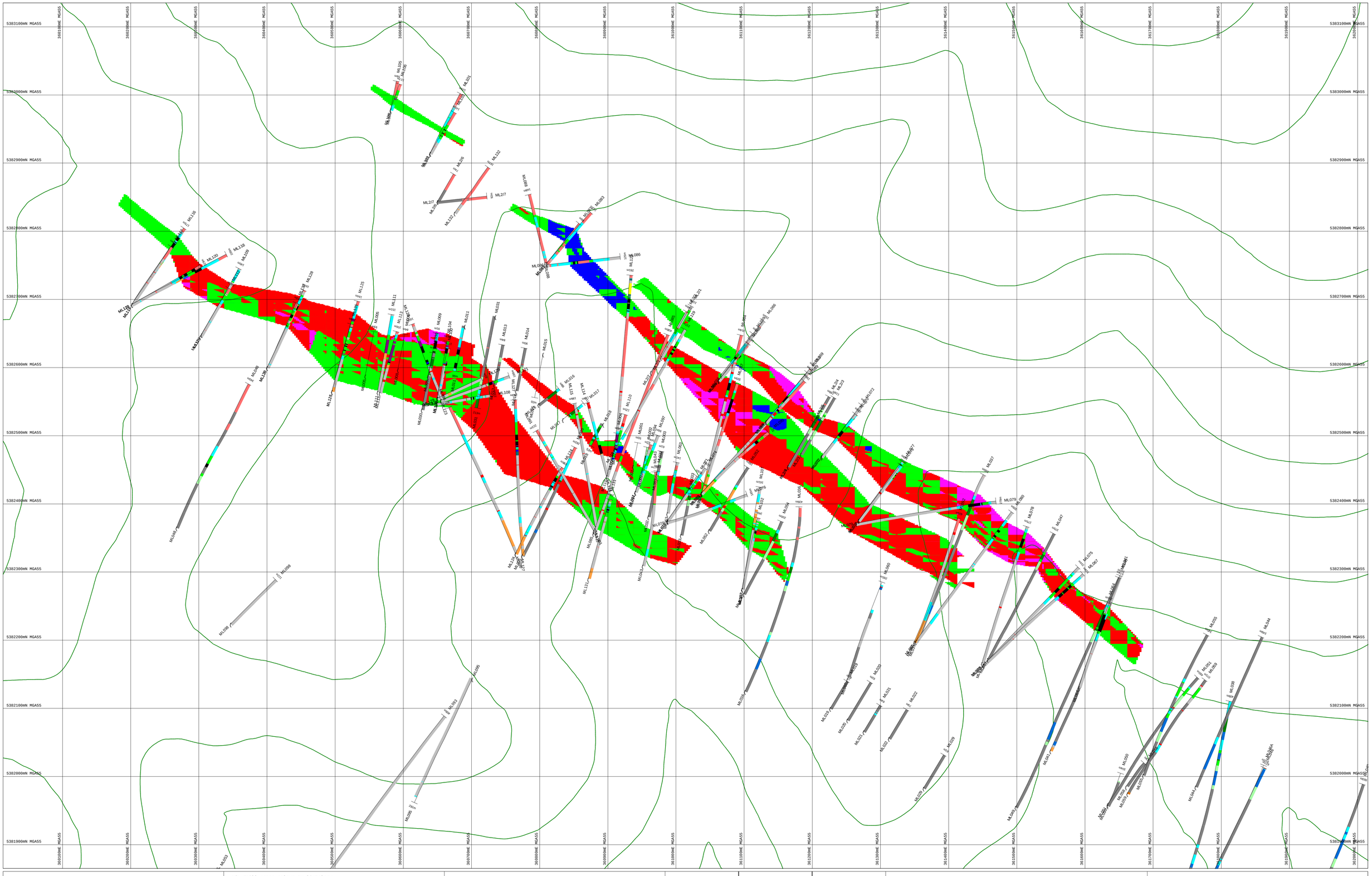
There is significant scope for the delineation of higher grade Sn and WO3 zones within both the Main Tin Zone and No. 2 Zone (eg the McDonald Shoot). Further exploration drilling for these higher grade zones is recommended.

There is a minor amount of Fe mineralization beyond the wireframes, either low grade or in narrow bands of higher grade material separated from the main body by several metres of low grade, which are excluded from this resource estimate.

Approximately 12% of the assays used for this resource estimate are not total Sn techniques and it is recommended that the ongoing programme of replacing these with a XRF assays be completed. An significant upgrade to the Sn resource may be obtained once this work is completed, especially for the No. 2 Zone.

Appendix A

Main Tin Zone and No. 2 Zone Drill Plans with Fe & Sn-WO_3 wireframes



Plotted with

MICROMINE

Resources Software
Perth, Australia
Tel +61 8 9423 9000
Fax +61 8 9423 9001
www.micromine.com.au

Left drill trace colour by lithology
dark brown = mudstone & siltstone
lt grey = lithic sandstone
pale yellow = quartz wacke
lt blue = tuffite, blue = carbonate
lt pink = granite, red = faulted zone
lt green = calcsilicate-magnetite skarn
dk green = undifferentiated skarn
black = magnetite skarn
bright pink = sulphide skarn
purple = gossan, yellow = veins

Block model coloured by Fe%
black <10%
blue 10-20%
green 20-30%
red 30-40%
pink >40%

Scale	DATE	SHEET
1:2500	3/3/2009	1 of 1
	REF No. 1	FILE BM_Fe_dplan

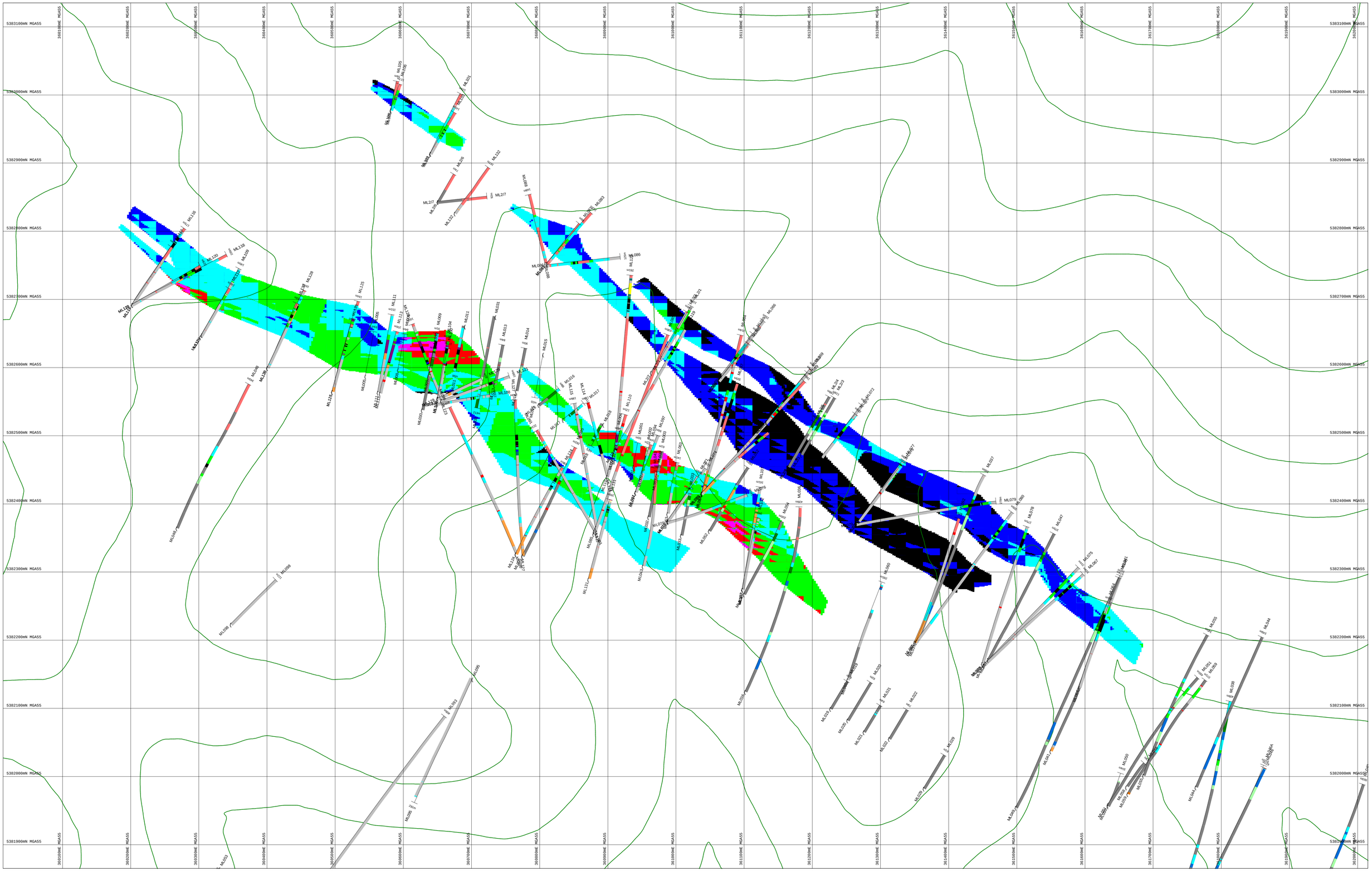
0 100 200m

Fe Block Model & Drill Hole Plan

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Fe Block Model January 2009



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Left drill trace colour by lithology
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lt blue = tuffite, blue = carbonate
lt pink = granite, red = faulted zone
lt green = calcsilicate-magnetite skarn
dk green = undifferentiated skarn
black = magnetite skarn
bright pink = sulphide skarn
purple = gossan, yellow = veins

Block model coloured by Sn%
black <0.05%
dark blue 0.05-0.1%
pale blue 0.1-0.2%
green 0.2-0.5%
red 0.5-1%
pink >1%

Scale	DATE	SHEET
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	REF No. 1	FILE BM_Sn_dplan

0 100 200m

Sn Block Model & Drill Hole Plan

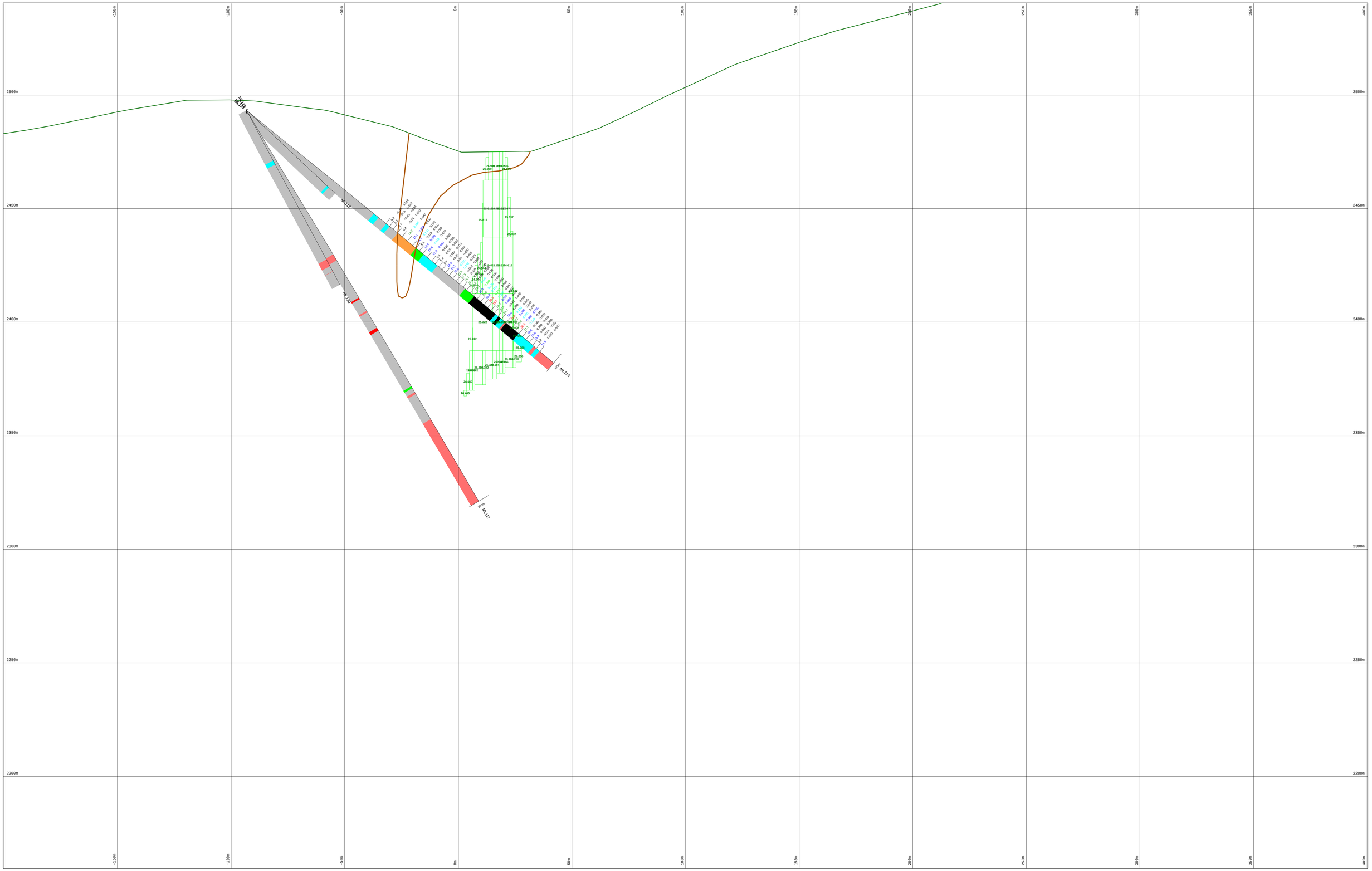
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Sn & WO3 Block Model January 2009

Appendix B

Main Tin Zone and No. 2 Zone Fe Block Model Sections



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black = magnetite skarn
bright pink = sulphide skarn
purple = gossan, yellow = veins

Brown profile = base of localised deep weathering (clay) zone

Assays on drill traces left to right
Fe%, Sn%, WO3%

Block model labelled & coloured by Fe%
black <10%
blue 10-20%
green 20-30%
red 30-40%
pink >40%

Scale	DATE	SHEET
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	REF No. 1	FILE BM_Fe_01

0 40 80m

Fe Block Model section 1

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black = magnetite skarn
bright pink = sulphide skarn
purple = gossan, yellow = veins

Brown profile = base of localised
deep weathering (clay) zone

Assays on drill traces left to right
Fe%, Sn%, WO3%

Block model labelled & coloured by Fe%
black <10%
blue 10-20%
green 20-30%
red 30-40%
pink >40%

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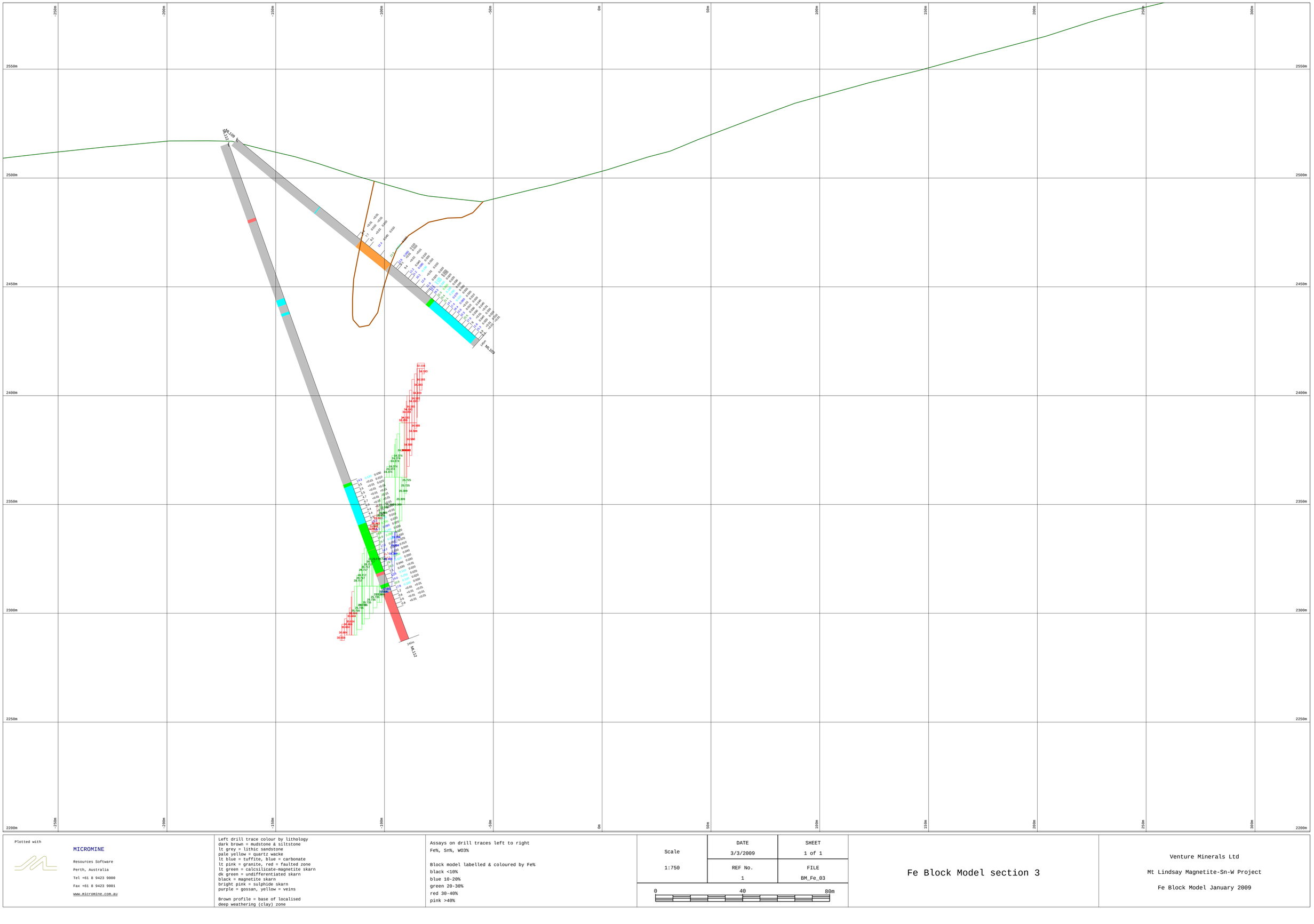
0 40 80m

Fe Block Model section 2

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Left drill trace colour by lithology
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black = magnetite skarn
bright pink = sulphide skarn
purple = gossan, yellow = veins

Brown profile = base of localised
deep weathering (clay) zone

Assays on drill traces left to right
Fe%, Sn%, WO3%

Block model labelled & coloured by Fe%
black <10%
blue 10-20%
green 20-30%
red 30-40%
pink >40%

Scale	DATE	SHEET
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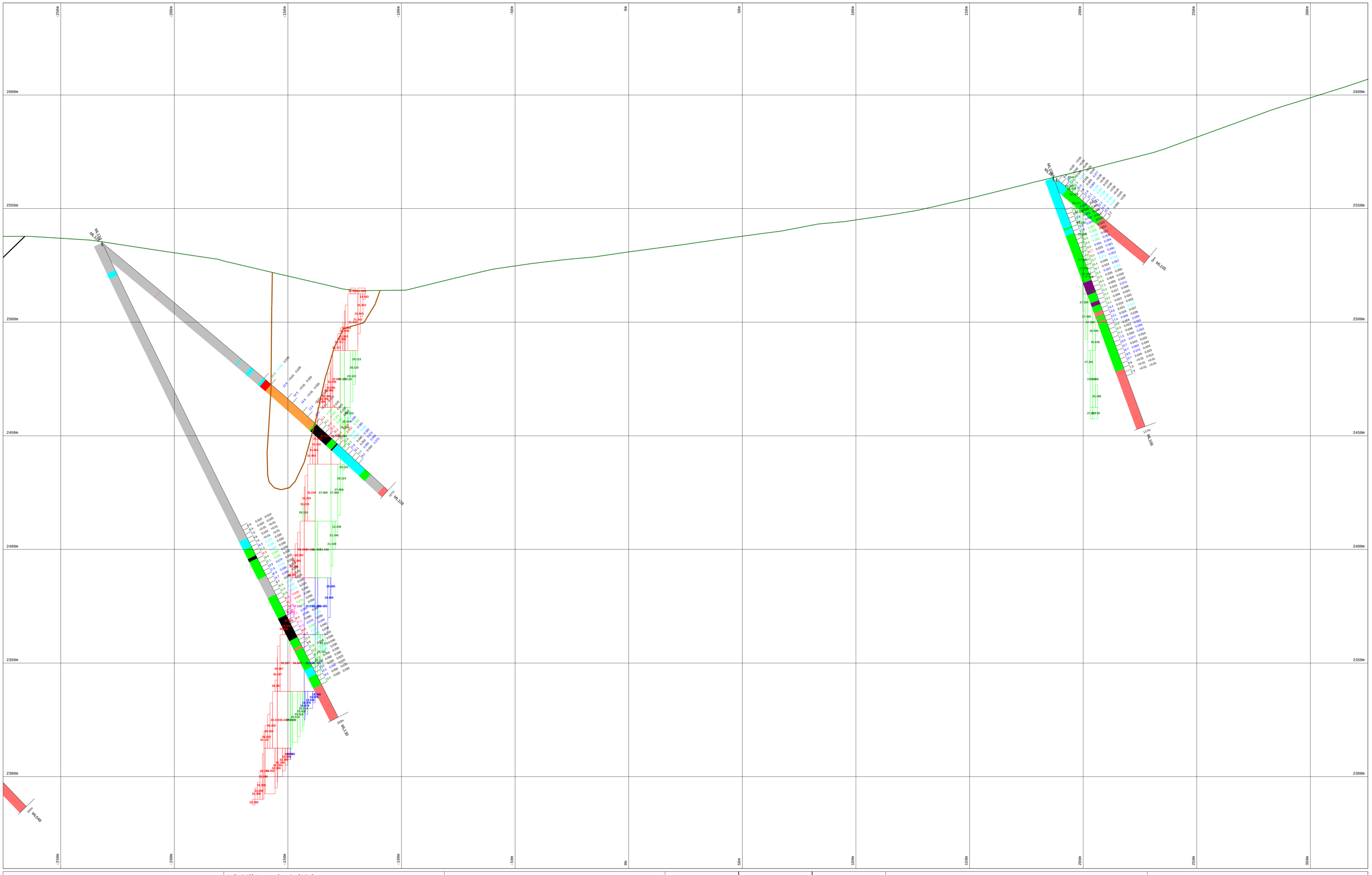
0 40 80m

Fe Block Model section 3

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Fe Block Model January 2009



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dk green = undifferentiated skarn
black = magnetite skarn
bright pink = sulphide skarn
purple = gossan, yellow = veins

Brown profile = base of localised
deep weathering (clay) zone

Assays on drill traces left to right
Fe%, Sn%, WO3%

Block model labelled & coloured by Fe%
black <10%
blue 10-20%
green 20-30%
red 30-40%
pink >40%

Scale	DATE	SHEET
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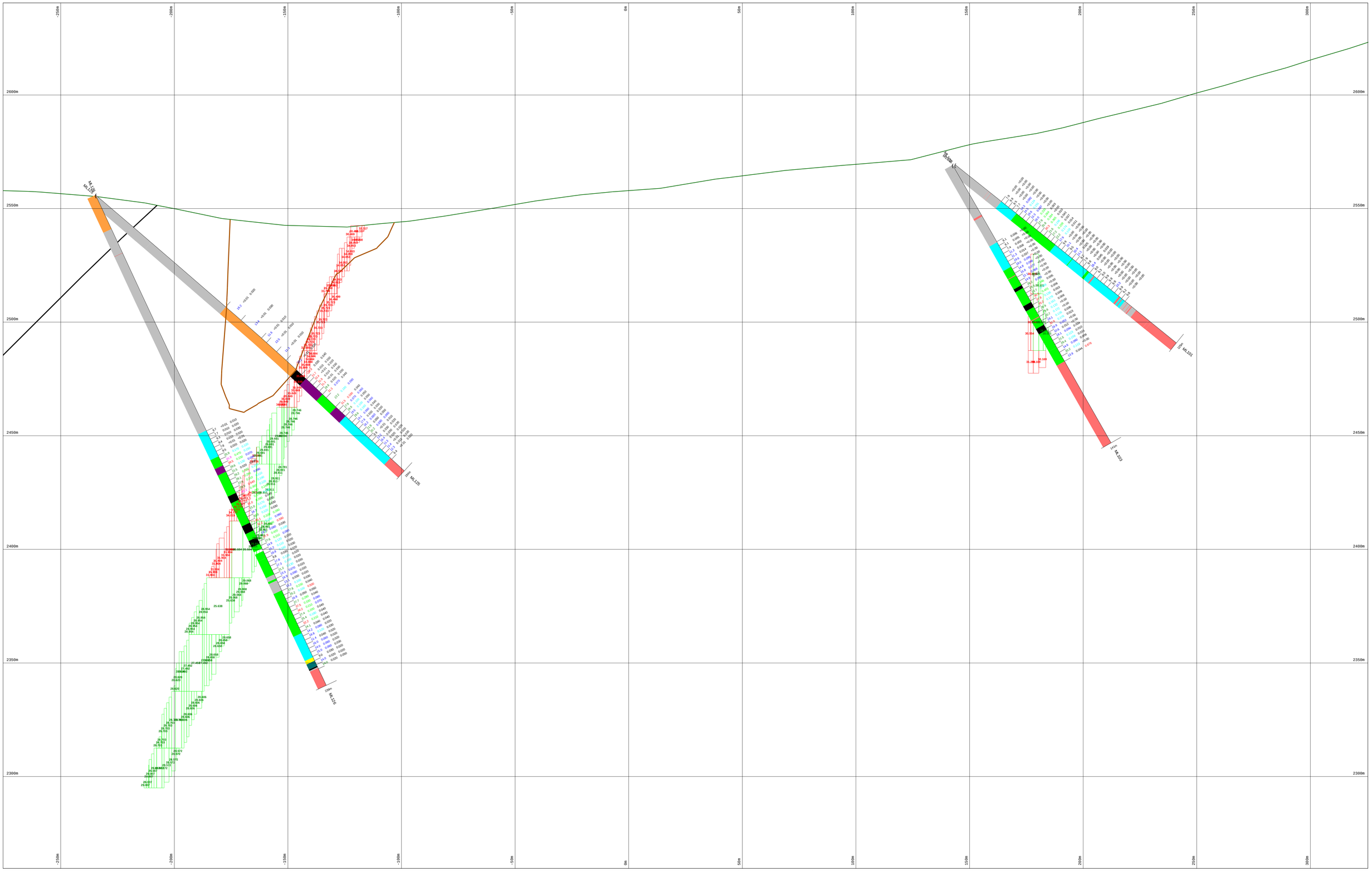
0 40 80m

Fe Block Model section 4

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black = magnetite skarn
bright pink = sulphide skarn
purple = gossan, yellow = veins

Brown profile = base of localised
deep weathering (clay) zone

Assays on drill traces left to right
Fe%, Sn%, WO3%

Block model labelled & coloured by Fe%
black <10%
blue 10-20%
green 20-30%
red 30-40%
pink >40%

Scale	DATE	SHEET
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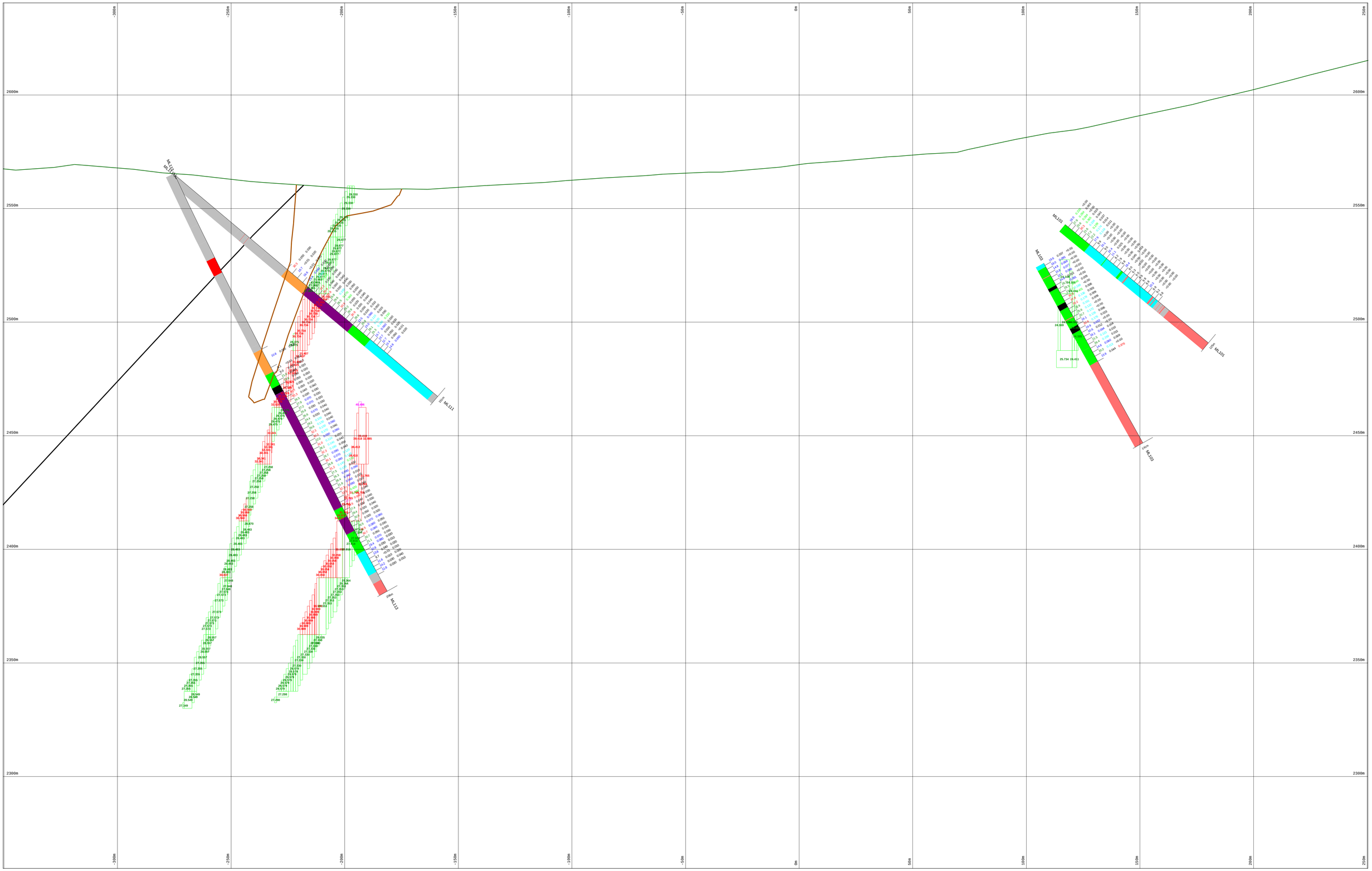
0 40 80m

Fe Block Model section 5

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Left drill trace colour by lithology
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bright pink = sulphide skarn
purple = gossan, yellow = veins

Brown profile = base of localised
deep weathering (clay) zone

Assays on drill traces left to right
Fe%, Sn%, WO3%

Block model labelled & coloured by Fe%
black <10%
blue 10-20%
green 20-30%
red 30-40%
pink >40%

Scale	DATE	SHEET
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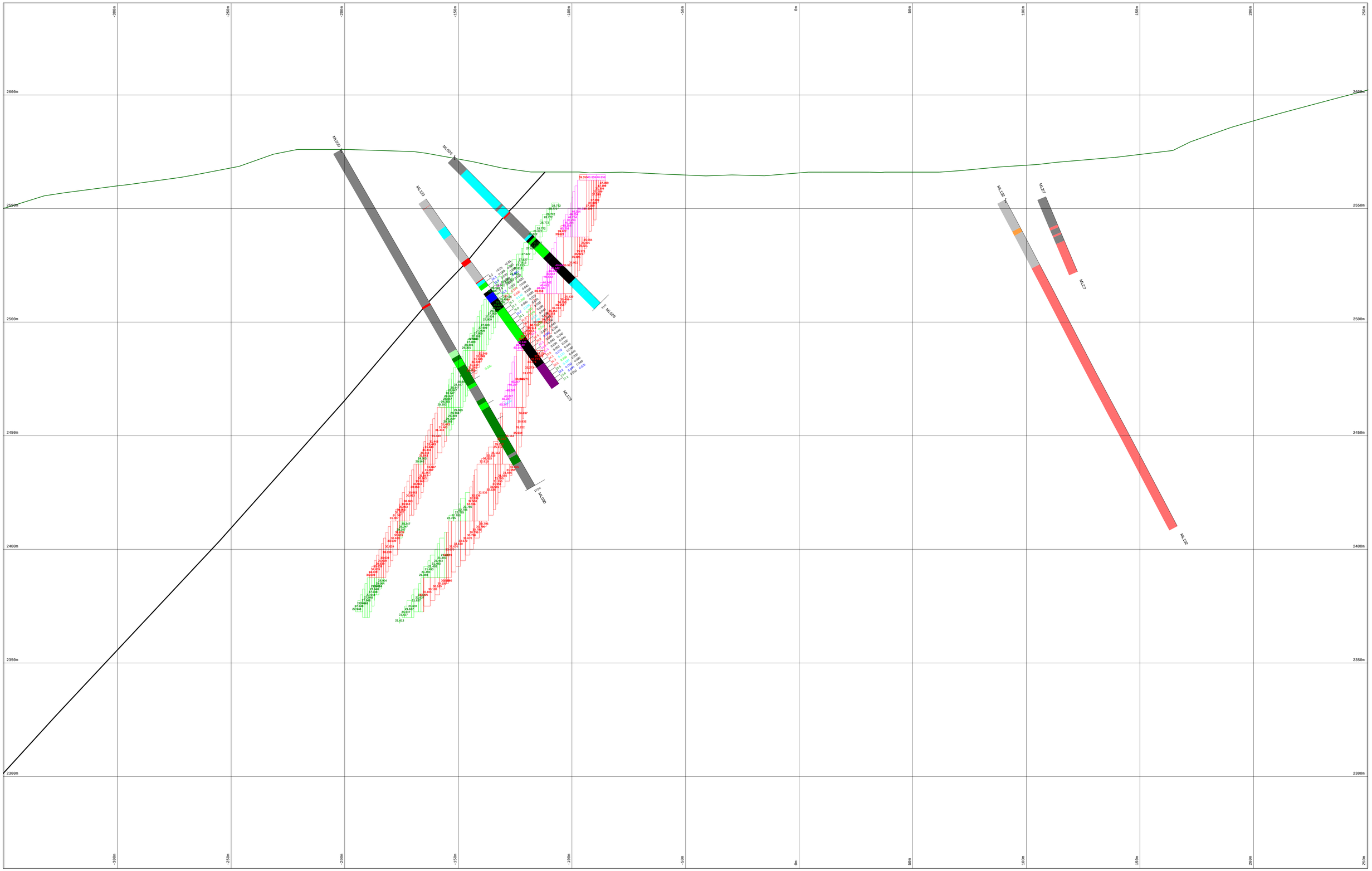
0 40 80m

Fe Block Model section 6

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Left drill trace colour by lithology
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black = magnetite skarn
bright pink = sulphide skarn
purple = gossan, yellow = veins

Brown profile = base of localised
deep weathering (clay) zone

Assays on drill traces left to right
Fe%, Sn%, WO3%

Block model labelled & coloured by Fe%
black <10%
blue 10-20%
green 20-30%
red 30-40%
pink >40%

Scale	DATE	SHEET
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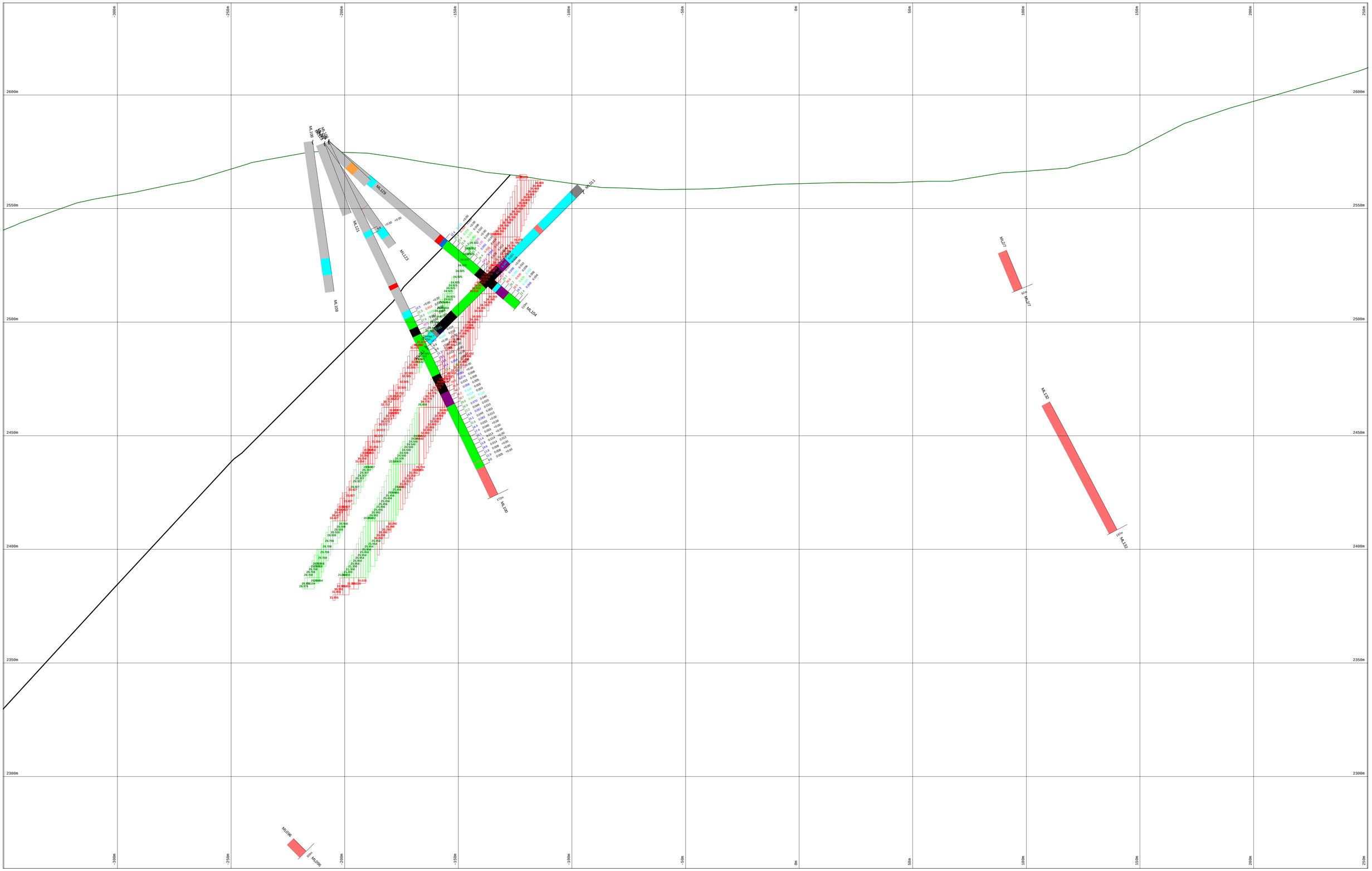
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Fe Block Model section 7

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bright pink = sulphide skarn
purple = gossan, yellow = veins

Brown profile = base of localised
deep weathering (clay) zone

Assays on drill traces left to right
Fe%, Sn%, WO3%

Block model labelled & coloured by Fe%
black <10%
blue 10-20%
green 20-30%
red 30-40%
pink >40%

Scale	DATE	SHEET
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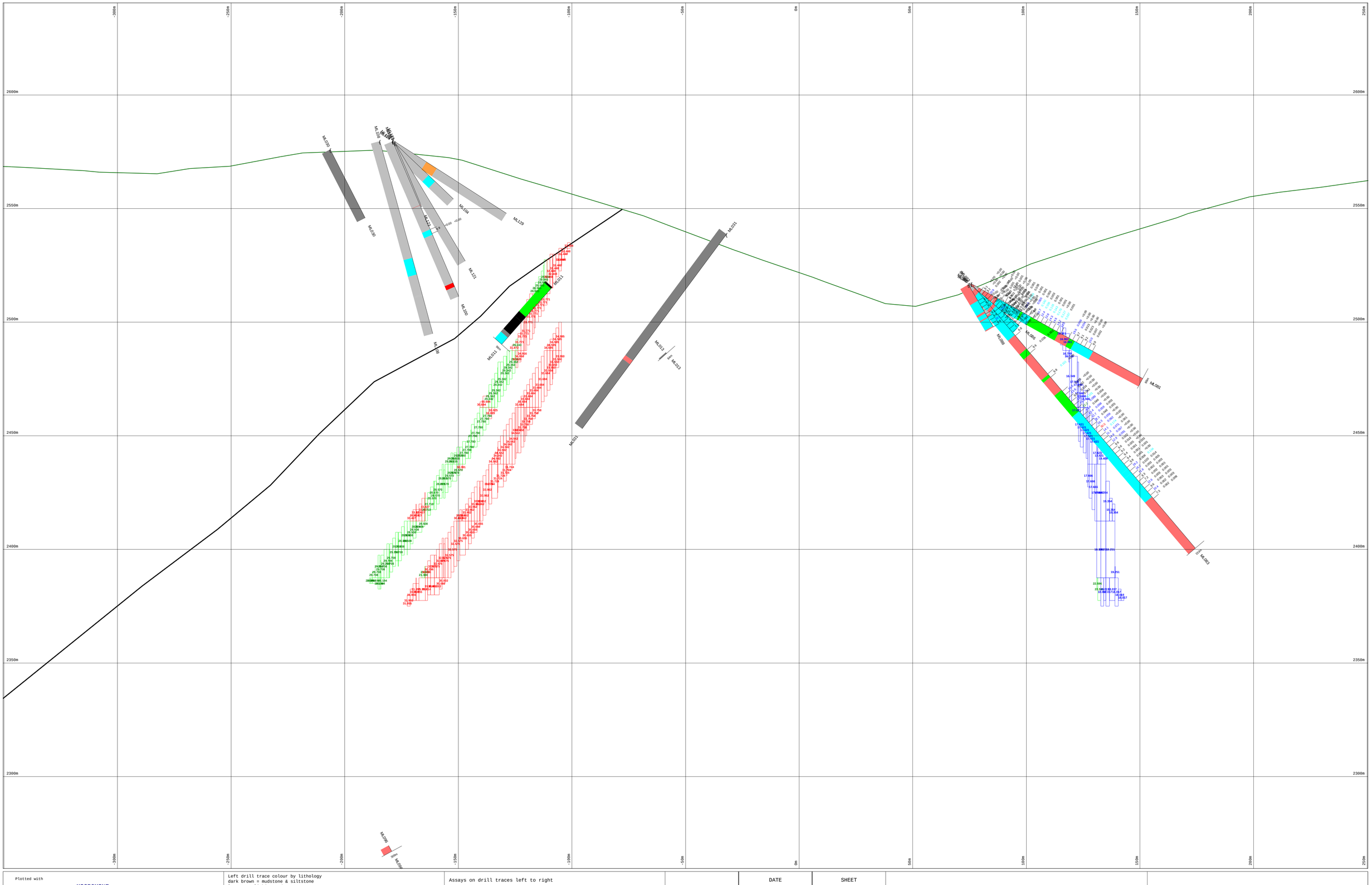
0 40 80m

Fe Block Model section 8

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Left drill trace colour by lithology
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black = magnetite skarn
bright pink = sulphide skarn
purple = gossan, yellow = veins

Brown profile = base of localised
deep weathering (clay) zone

Assays on drill traces left to right
Fe%, Sn%, WO3%

Block model labelled & coloured by Fe%
black <10%
blue 10-20%
green 20-30%
red 30-40%
pink >40%

Scale	DATE	SHEET
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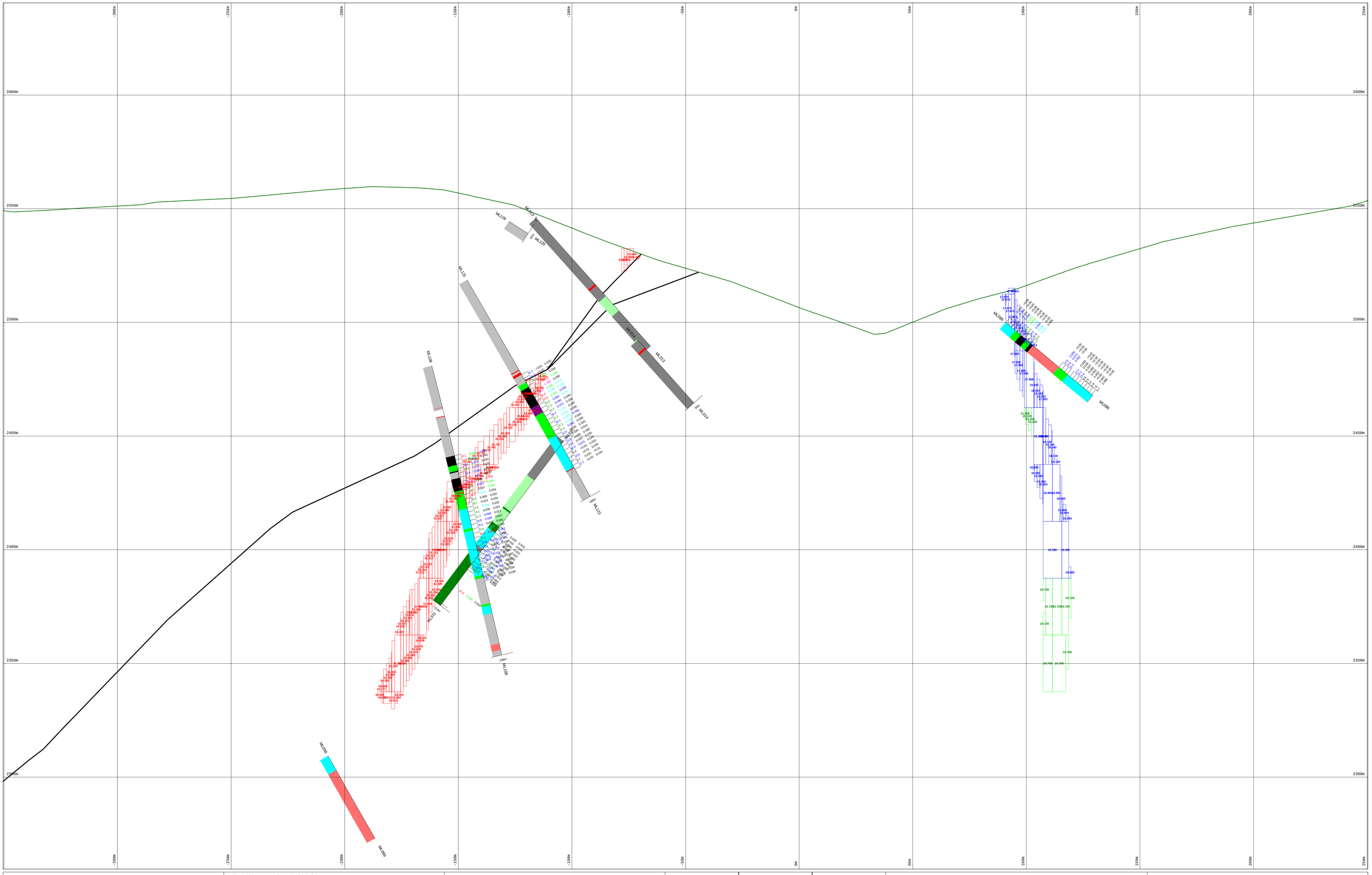
0 40 80m

Fe Block Model section 9

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Left drill trace colour by lithology
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dk green = undifferentiated skarn
black = magnetite skarn
bright pink = sulphide skarn
purple = gossan, yellow = veins

Brown profile = base of localised
deep weathering (clay) zone

Assays on drill traces left to right
Fe%, Sn%, WO3%

Block model labelled & coloured by Fe%
black <10%
blue 10-20%
green 20-30%
red 30-40%
pink >40%

Scale	DATE	SHEET
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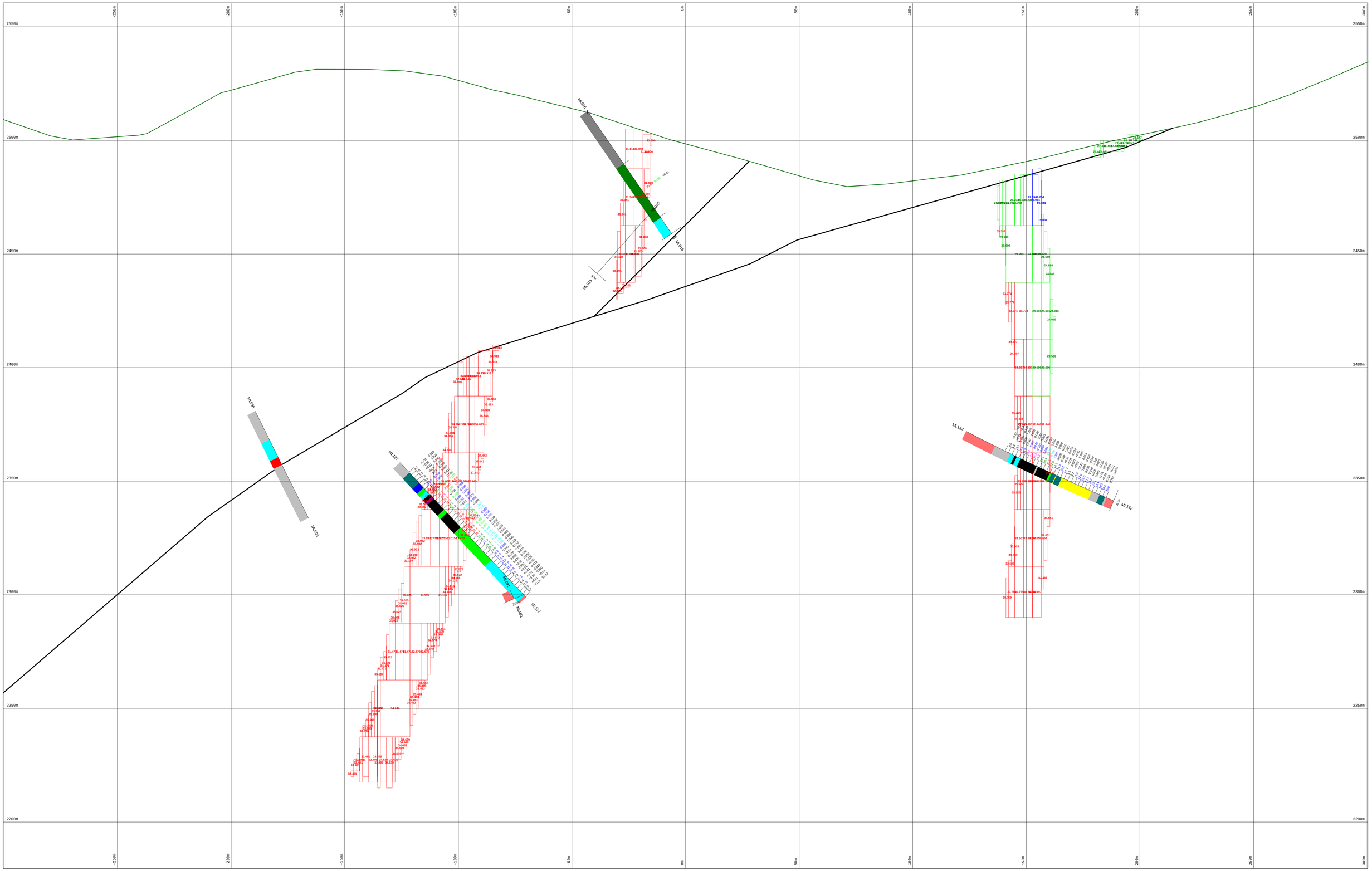
0 40 80m

Fe Block Model section 10

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Left drill trace colour by lithology
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dk green = undifferentiated skarn
black = magnetite skarn
bright pink = sulphide skarn
purple = gossan, yellow = veins

Brown profile = base of localised
deep weathering (clay) zone

Assays on drill traces left to right
Fe%, Sn%, WO3%

Block model labelled & coloured by Fe%
black <10%
blue 10-20%
green 20-30%
red 30-40%
pink >40%

Scale	DATE	SHEET
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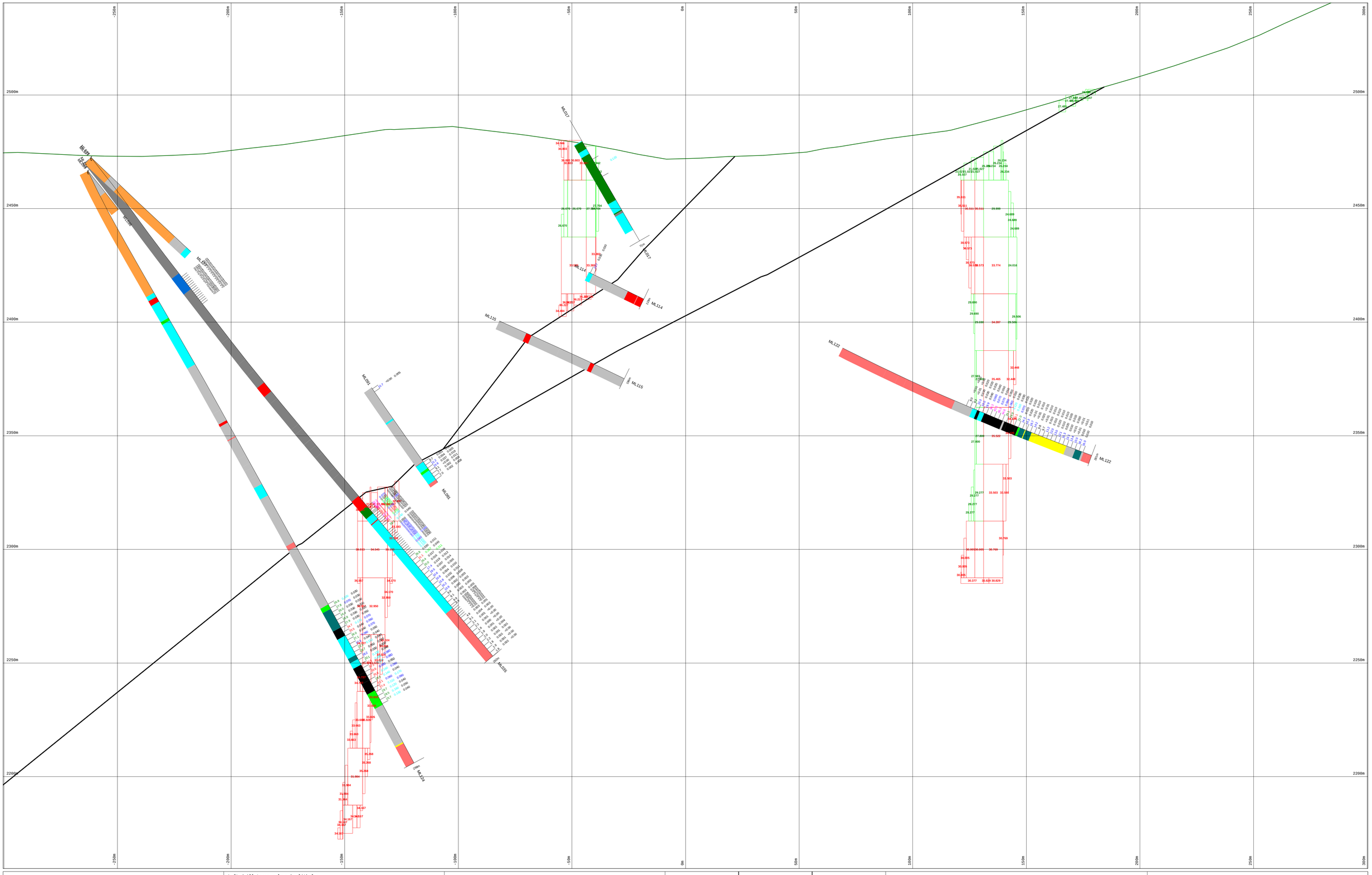
0 40 80m

Fe Block Model section 11

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pale yellow = quartz wacke
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black = magnetite skarn
bright pink = sulphide skarn
purple = gossan, yellow = veins

Brown profile = base of localised
deep weathering (clay) zone

Assays on drill traces left to right
Fe%, Sn%, WO3%

Block model labelled & coloured by Fe%
black <10%
blue 10-20%
green 20-30%
red 30-40%
pink >40%

Scale	DATE	SHEET
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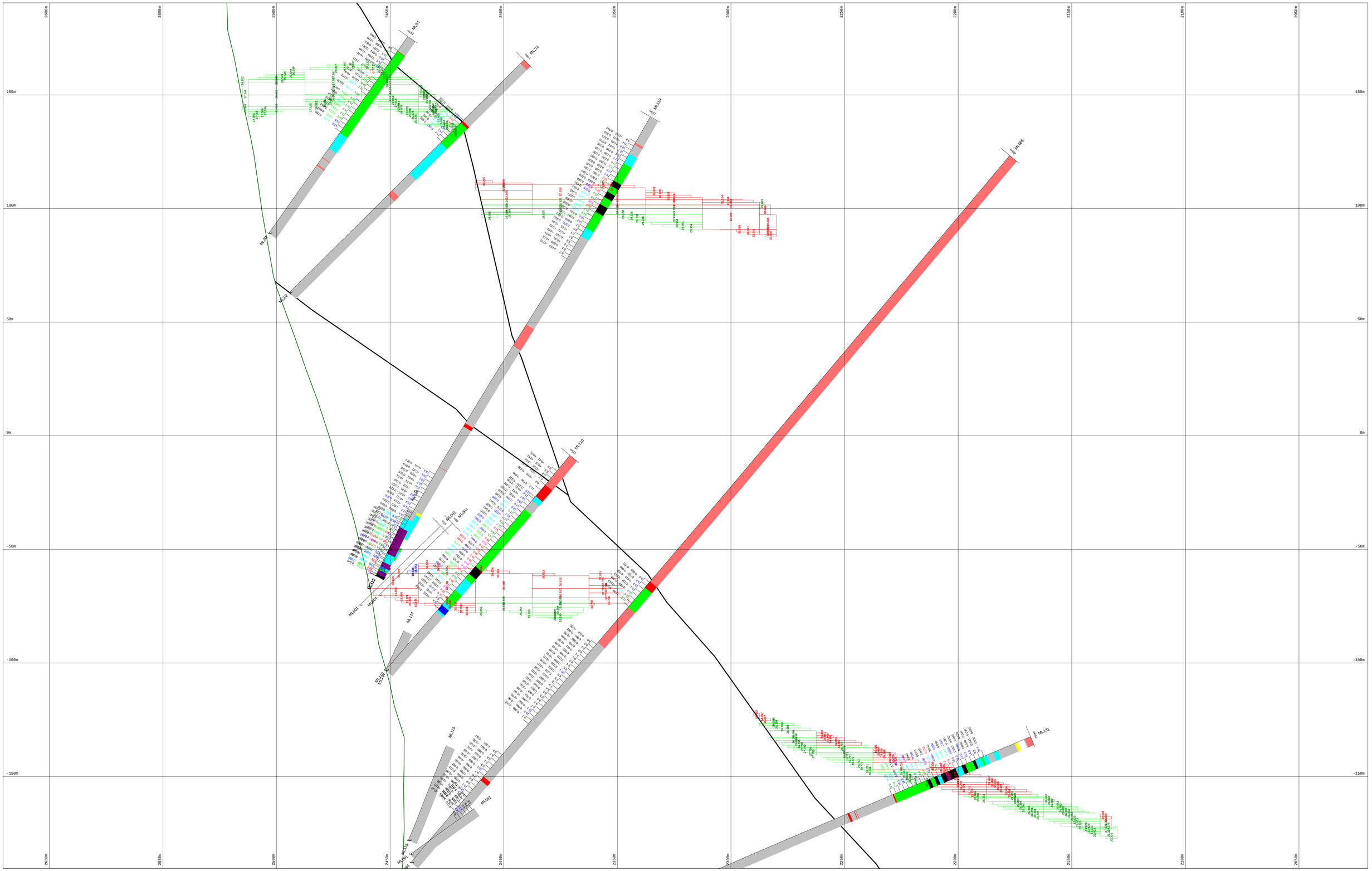
0 40 80m

Fe Block Model section 12

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Left drill trace colour by lithology
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dk green = undifferentiated skarn
black = magnetite skarn
bright pink = sulphide skarn
purple = gossan, yellow = veins

Brown profile = base of localised
deep weathering (clay) zone

Assays on drill traces left to right
Fe%, Sn%, WO3%

Block model labelled & coloured by Fe%
black <10%
blue 10-20%
green 20-30%
red 30-40%
pink >40%

Scale	DATE	SHEET
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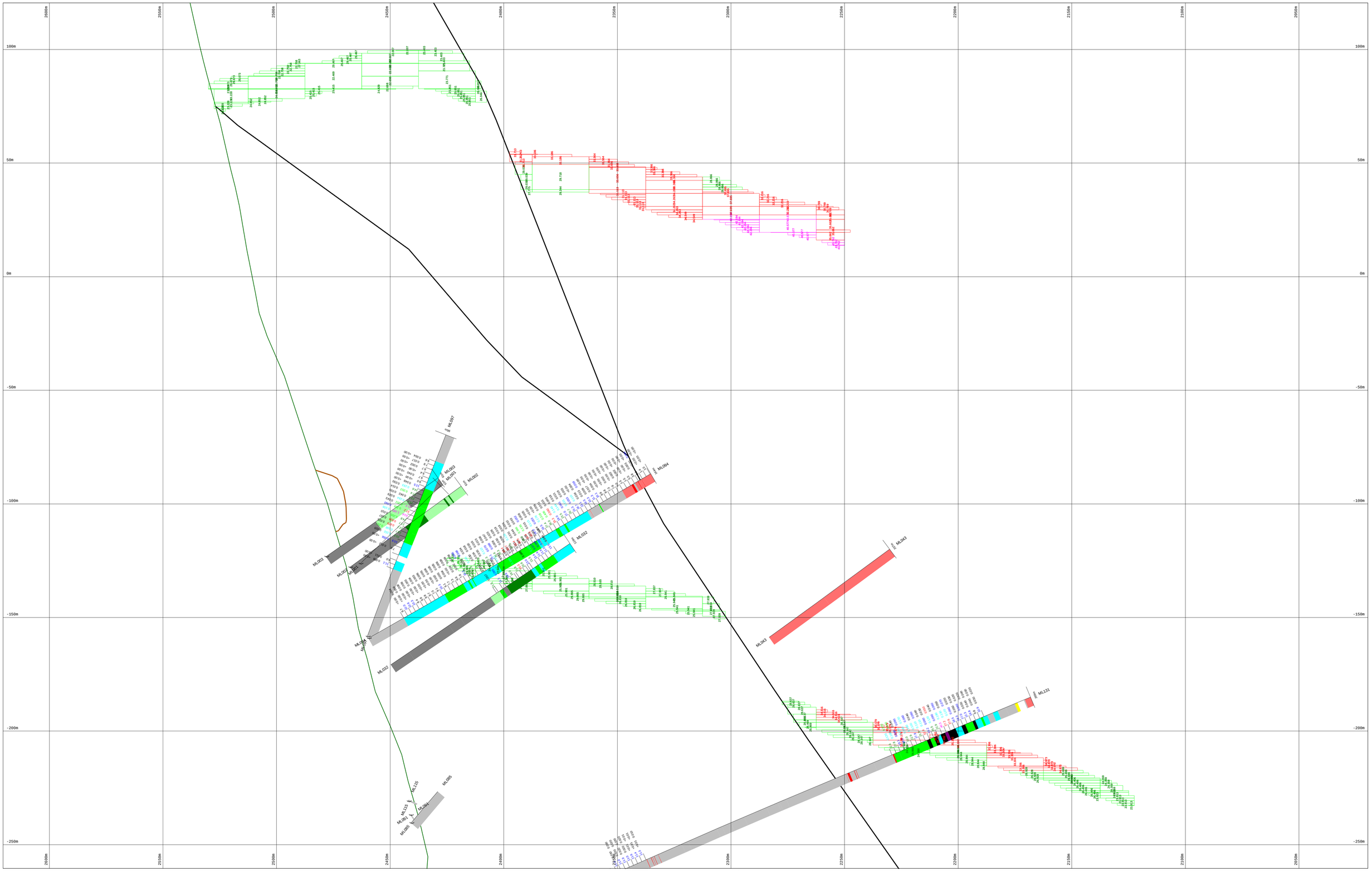
0 40 80m

Fe Block Model section 13

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pale yellow = quartz wacke
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lt green = calcsilicate-magnetite skarn
dk green = undifferentiated skarn
black = magnetite skarn
bright pink = sulphide skarn
purple = gossan, yellow = veins

Brown profile = base of localised
deep weathering (clay) zone

Assays on drill traces left to right
Fe%, Sn%, WO3%

Block model labelled & coloured by Fe%
black <10%
blue 10-20%
green 20-30%
red 30-40%
pink >40%

Scale	DATE	SHEET
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	REF No. 1	FILE BM_Fe_14

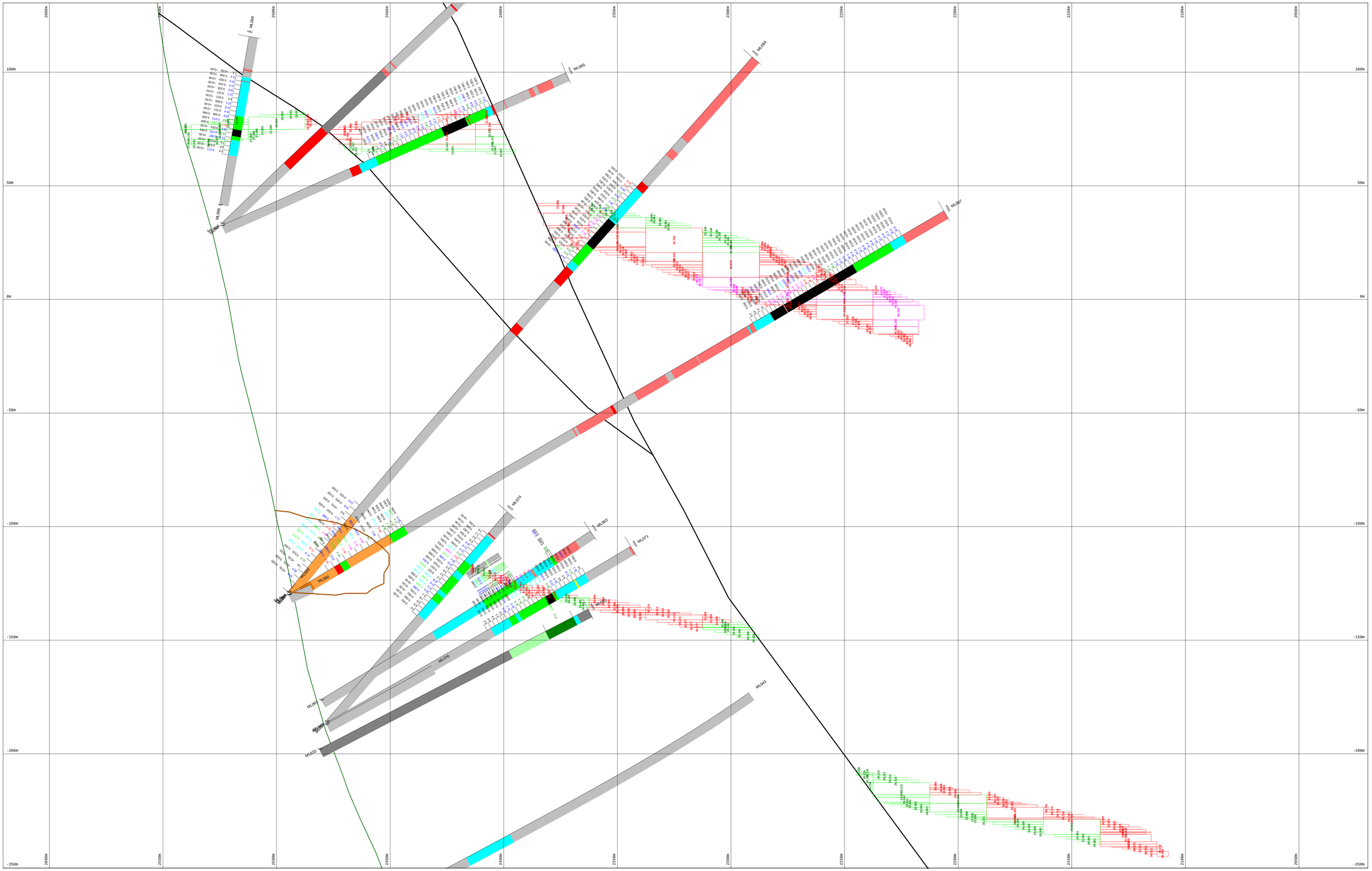
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Fe Block Model section 14

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Fe Block Model January 2009



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Left drill trace colour by lithology
dark brown = mudstone & siltstone
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pale yellow = quartz wacke
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black = magnetite skarn
bright pink = sulphide skarn
purple = gossan, yellow = veins

Brown profile = base of localised
deep weathering (clay) zone

Assays on drill traces left to right
Fe%, Sn%, WO3%

Block model labelled & coloured by Fe%
black <10%
blue 10-20%
green 20-30%
red 30-40%
pink >40%

Scale	DATE	SHEET
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	REF No. 1	FILE BM_Fe_15

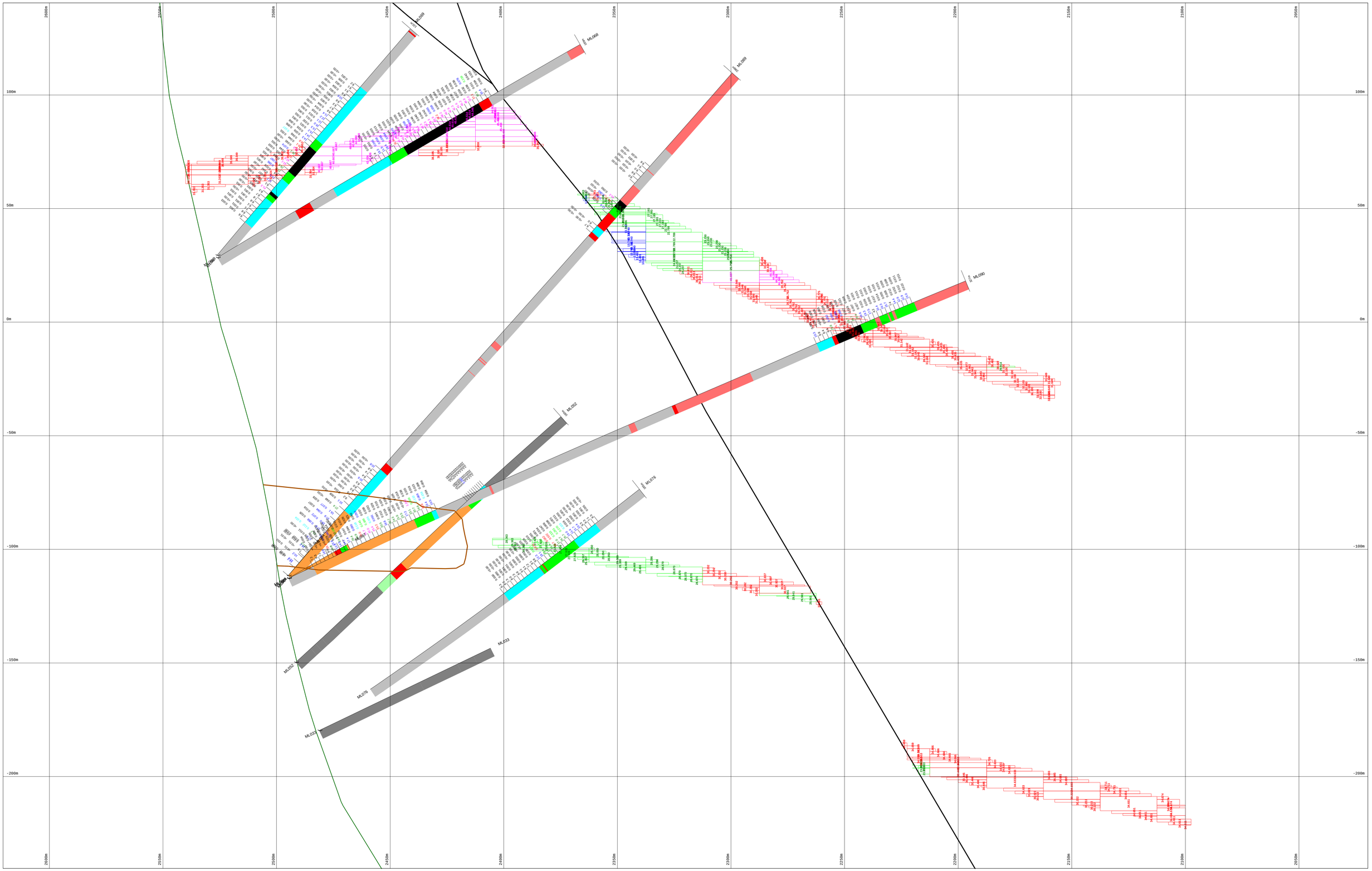
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Fe Block Model section 15

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Left drill trace colour by lithology
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purple = gossan, yellow = veins

Brown profile = base of localised
deep weathering (clay) zone

Assays on drill traces left to right
Fe%, Sn%, WO3%

Block model labelled & coloured by Fe%
black <10%
blue 10-20%
green 20-30%
red 30-40%
pink >40%

Scale	DATE	SHEET
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	REF No. 1	FILE BM_Fe_16

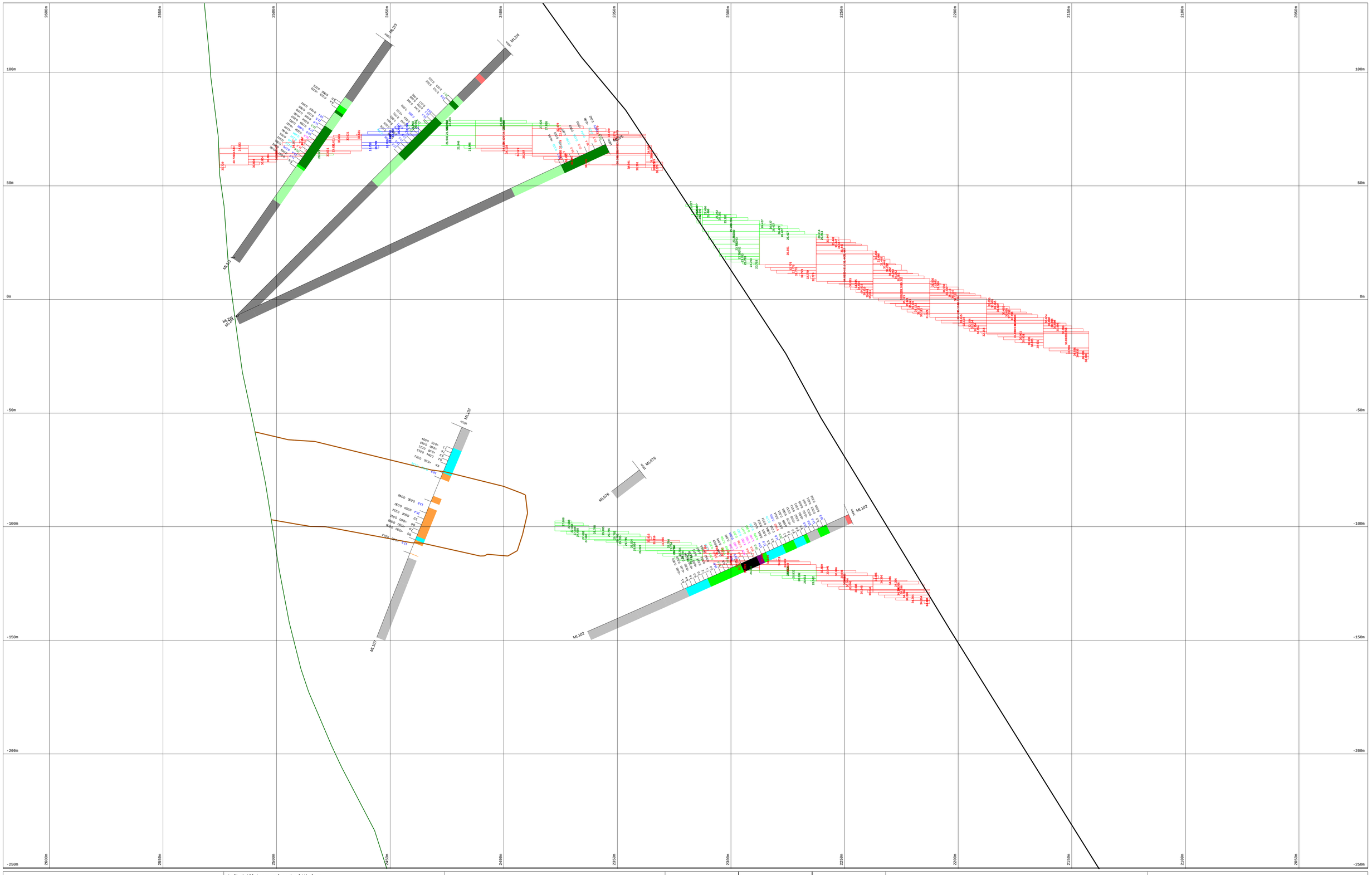
0 40 80m

Fe Block Model section 16

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Fe Block Model January 2009



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Resources Software

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Left drill trace colour by lithology
dark brown = mudstone & siltstone
lt grey = lithic sandstone
pale yellow = quartz wacke
lt blue = tuffite, blue = carbonate
lt pink = granite, red = faulted zone
lt green = calcsilicate-magnetite skarn
dk green = undifferentiated skarn
black = magnetite skarn
bright pink = sulphide skarn
purple = gossan, yellow = veins

Brown profile = base of localised
deep weathering (clay) zone

Assays on drill traces left to right
Fe%, Sn%, WO3%

Block model labelled & coloured by Fe%
black <10%
blue 10-20%
green 20-30%
red 30-40%
pink >40%

Scale	DATE	SHEET
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	REF No. 1	FILE BM_Fe_17

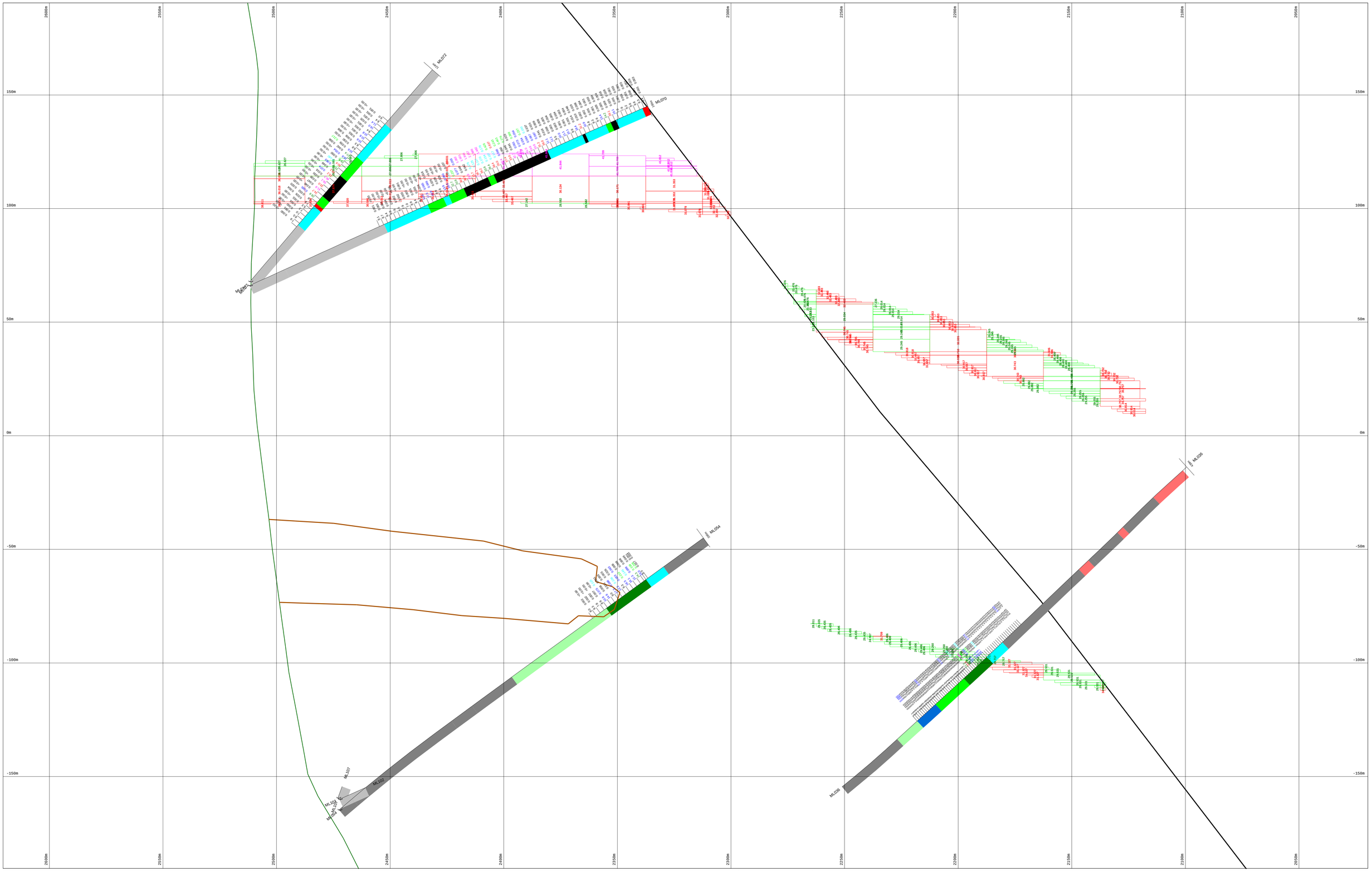
0 40 80m

Fe Block Model section 17

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purple = gossan, yellow = veins

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Assays on drill traces left to right
Fe%, Sn%, WO3%

Block model labelled & coloured by Fe%
black <10%
blue 10-20%
green 20-30%
red 30-40%
pink >40%

Scale	DATE	SHEET
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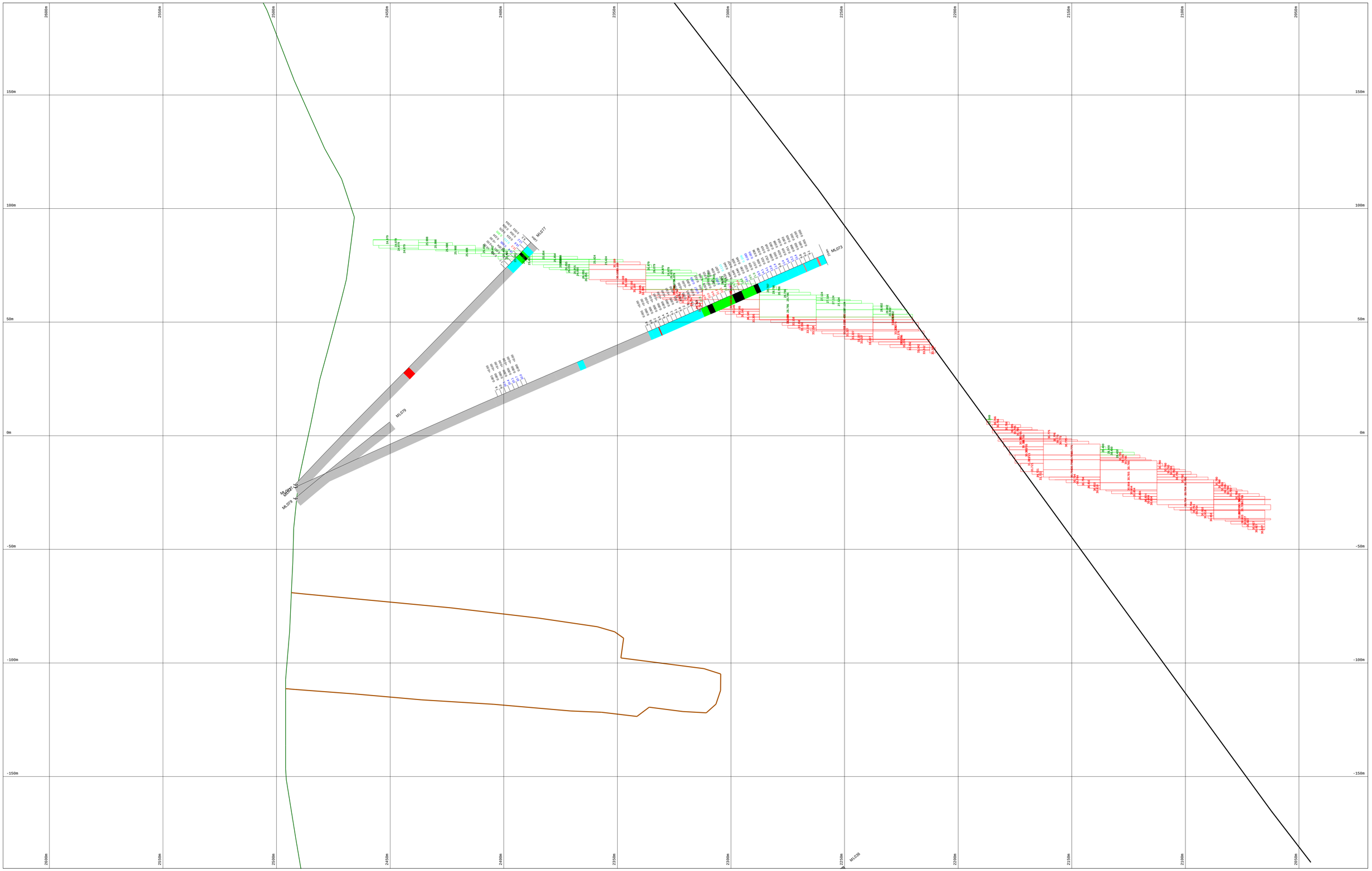
0 40 80m

Fe Block Model section 18

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dk green = undifferentiated skarn
black = magnetite skarn
bright pink = sulphide skarn
purple = gossan, yellow = veins

Brown profile = base of localised
deep weathering (clay) zone

Assays on drill traces left to right
Fe%, Sn%, WO3%

Block model labelled & coloured by Fe%
black <10%
blue 10-20%
green 20-30%
red 30-40%
pink >40%

Scale	DATE	SHEET
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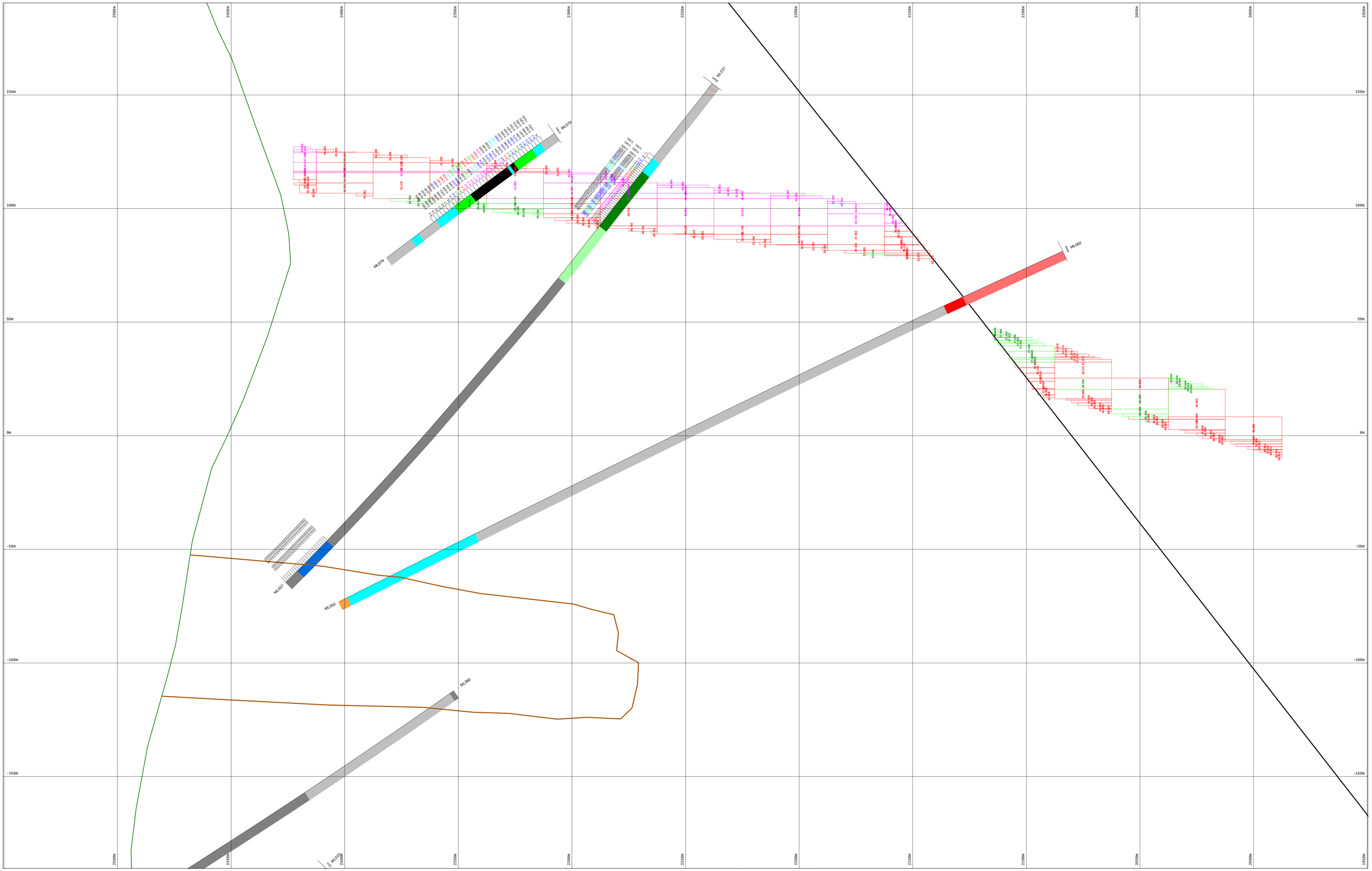
0 40 80m

Fe Block Model section 19

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pale yellow = quartz wacke
lt blue = tuffite, blue = carbonate
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dk green = undifferentiated skarn
black = magnetite skarn
bright pink = sulphide skarn
purple = gossan, yellow = veins

Brown profile = base of localised
deep weathering (clay) zone

Assays on drill traces left to right
Fe%, Sn%, WO3%

Block model labelled & coloured by Fe%
black <10%
blue 10-20%
green 20-30%
red 30-40%
pink >40%

Scale	DATE	SHEET
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	REF No. 1	FILE BM_Fe_20

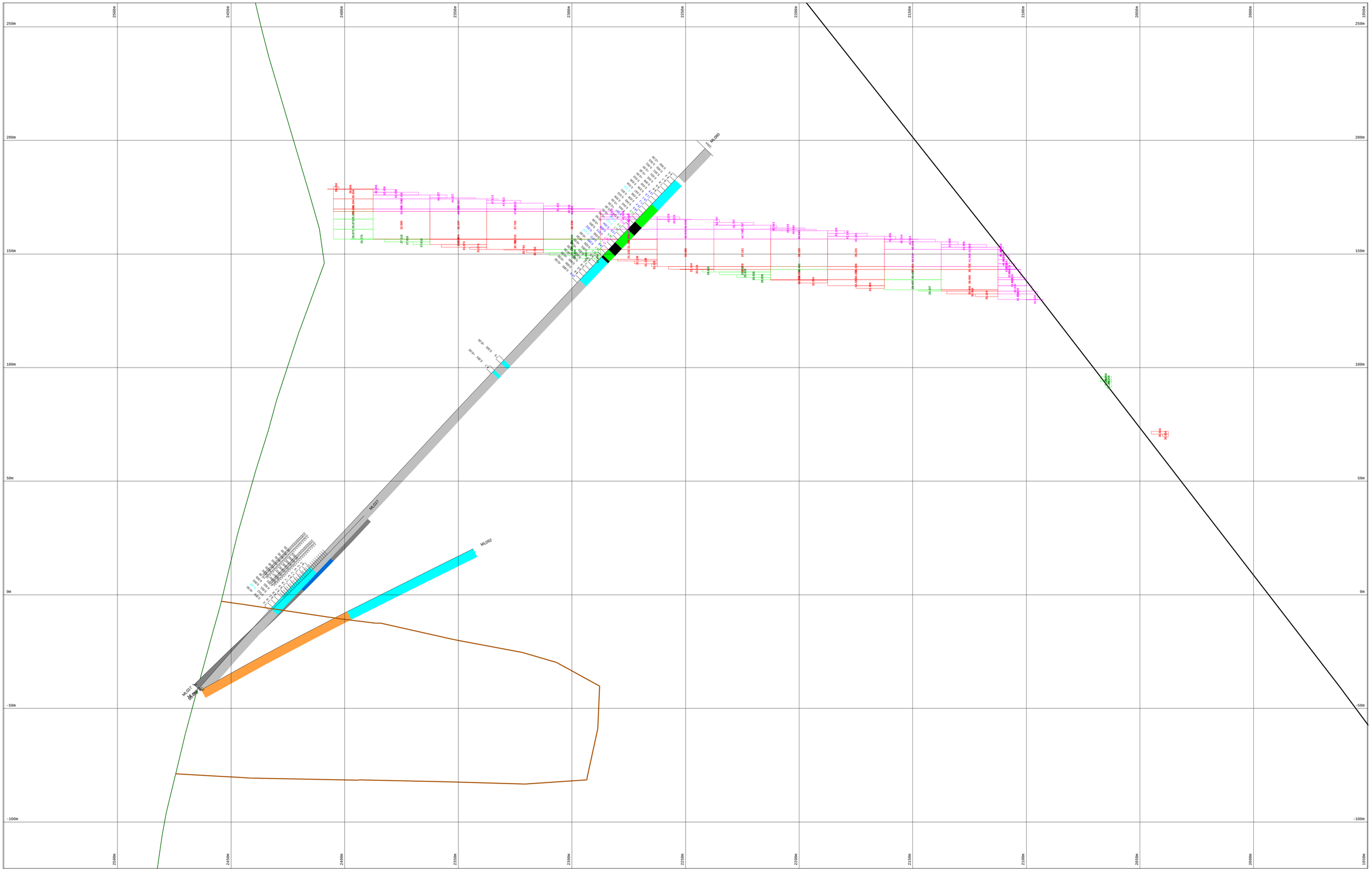
0 40 80m

Fe Block Model section 20

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dk green = undifferentiated skarn
black = magnetite skarn
bright pink = sulphide skarn
purple = gossan, yellow = veins

Brown profile = base of localised
deep weathering (clay) zone

Assays on drill traces left to right
Fe%, Sn%, WO3%

Block model labelled & coloured by Fe%
black <10%
blue 10-20%
green 20-30%
red 30-40%
pink >40%

Scale	DATE	SHEET
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	REF No. 1	FILE BM_Fe_21

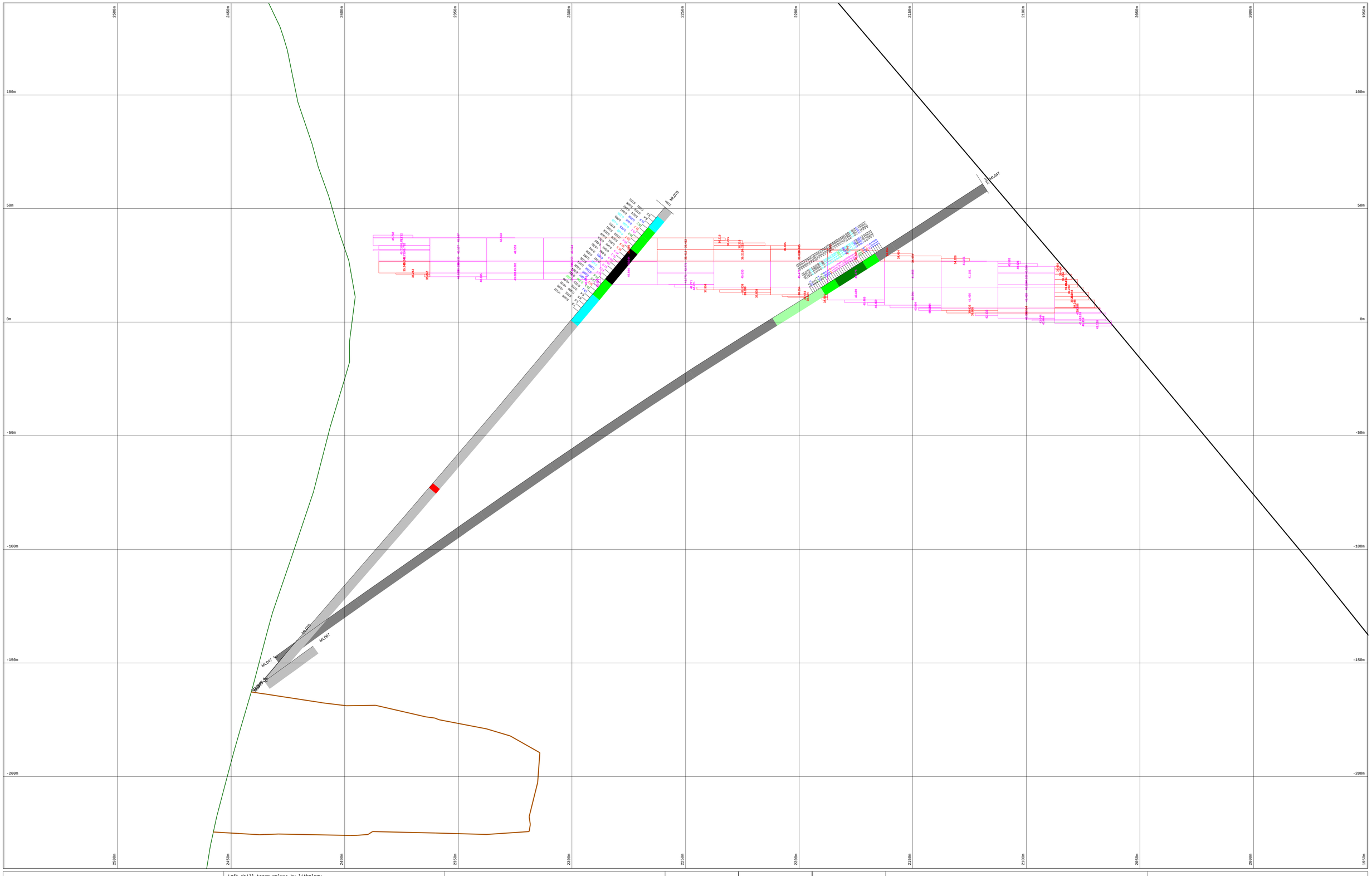
0 40 80m

Fe Block Model section 21

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bright pink = sulphide skarn
purple = gossan, yellow = veins

Brown profile = base of localised
deep weathering (clay) zone

Assays on drill traces left to right
Fe%, Sn%, WO3%

Block model labelled & coloured by Fe%
black <10%
blue 10-20%
green 20-30%
red 30-40%
pink >40%

Scale	DATE	SHEET
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	REF No. 1	FILE BM_Fe_22

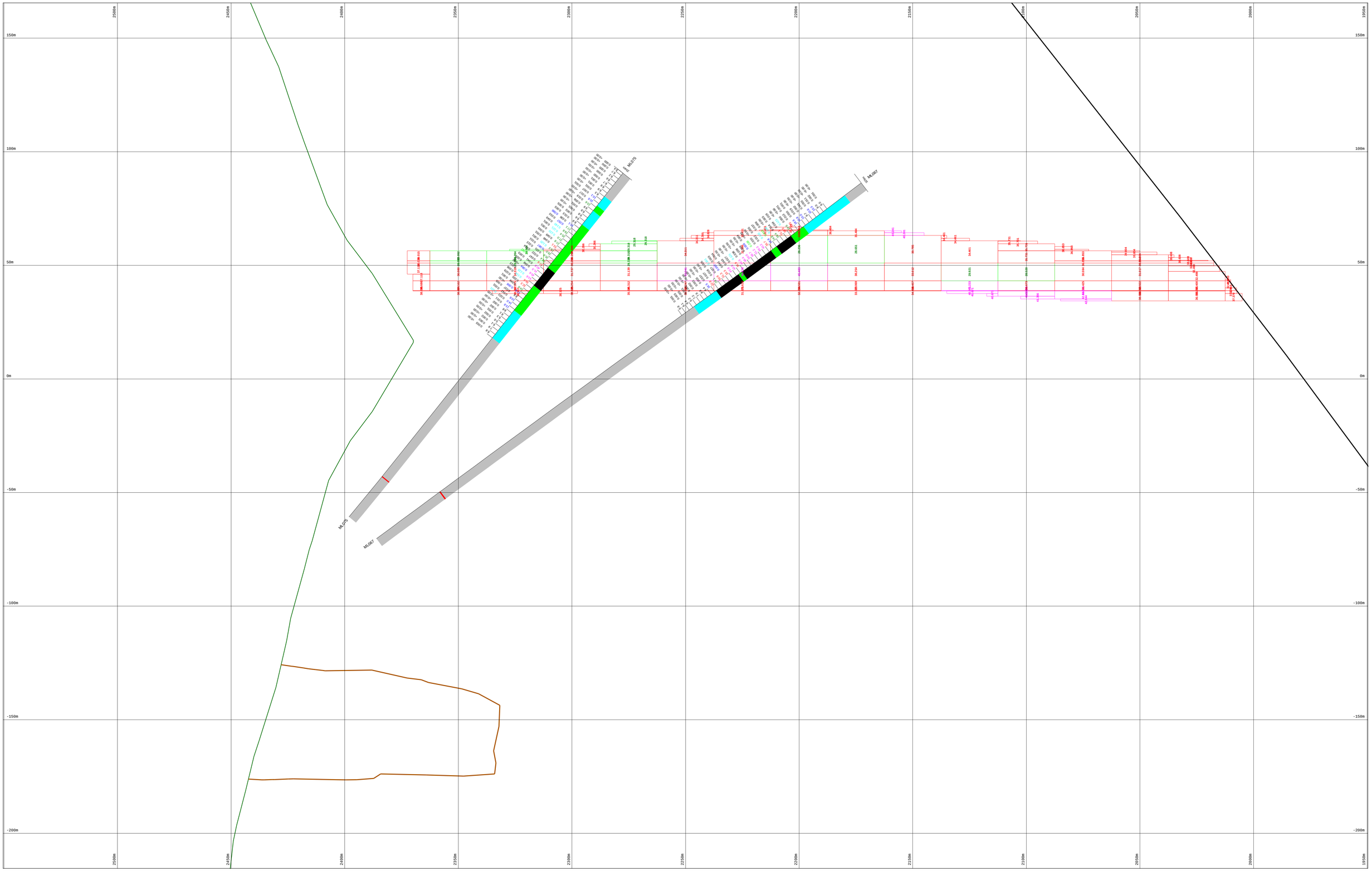
0 40 80m

Fe Block Model section 22

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purple = gossan, yellow = veins

Brown profile = base of localised
deep weathering (clay) zone

Assays on drill traces left to right
Fe%, Sn%, WO3%

Block model labelled & coloured by Fe%
black <10%
blue 10-20%
green 20-30%
red 30-40%
pink >40%

Scale	DATE	SHEET
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	REF No. 1	FILE BM_Fe_23

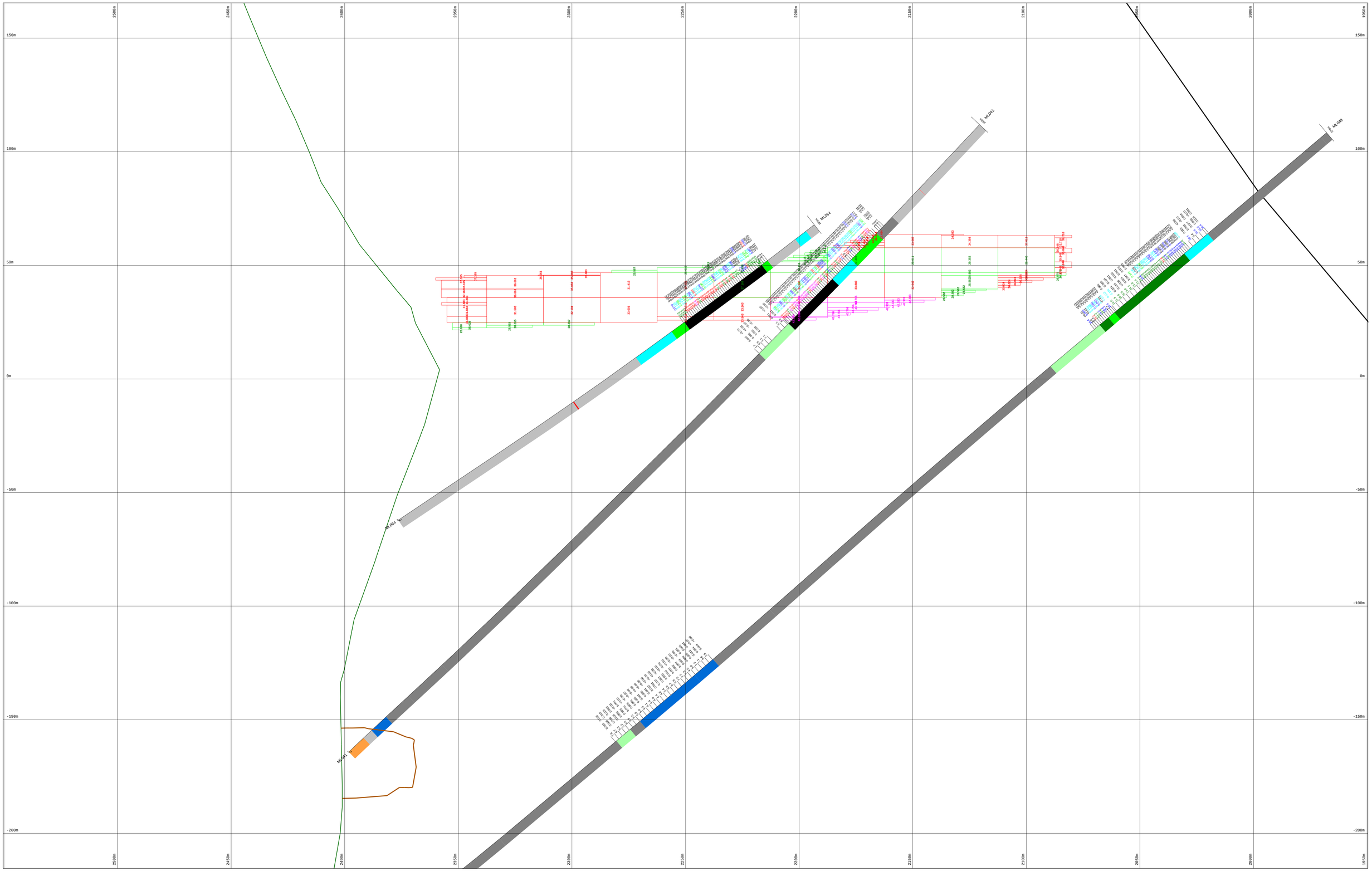
0 40 80m

Fe Block Model section 23

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bright pink = sulphide skarn
purple = gossan, yellow = veins

Brown profile = base of localised
deep weathering (clay) zone

Assays on drill traces left to right
Fe%, Sn%, WO3%

Block model labelled & coloured by Fe%
black <10%
blue 10-20%
green 20-30%
red 30-40%
pink >40%

Scale	DATE	SHEET
1:750	3/3/2009	1 of 1
	REF No. 1	FILE BM_Fe_24

0 40 80m

Fe Block Model section 24

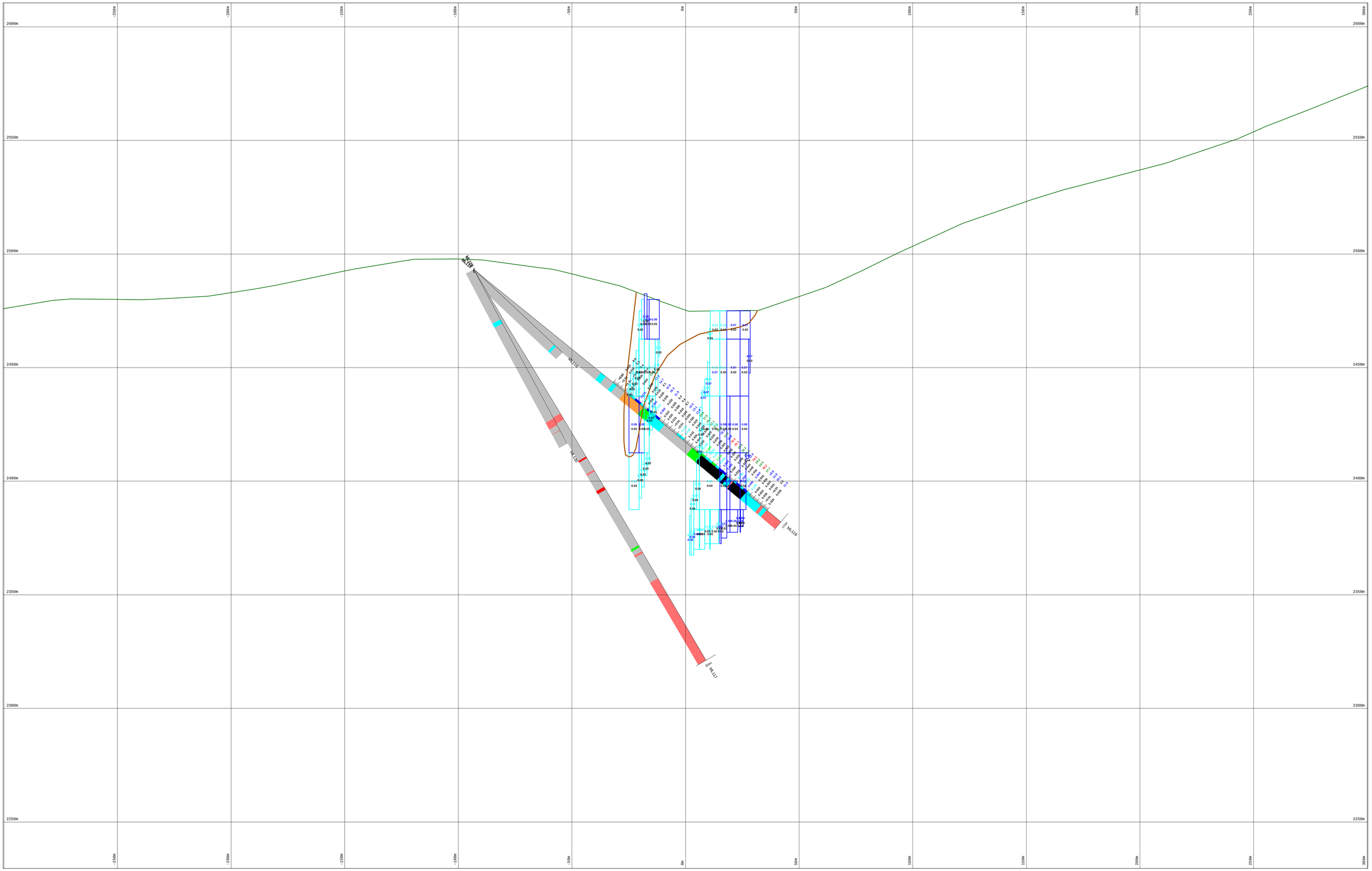
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Fe Block Model January 2009

Appendix C

Main Tin Zone and No. 2 Zone Sn and WO_3 Block Model Sections



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lt blue = tuffite, blue = carbonate
lt pink = granite, red = faulted zone
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dk green = undifferentiated skarn
black = magnetite skarn
bright pink = sulphide skarn
purple = gossan, yellow = veins

Brown profile = base of localised
deep weathering (clay) zone

Assays on drill traces left to right
Sn%, WO3%, Fe%

Block labels Sn%(top)& WO3% (bottom)

Block model coloured by Sn%
black <0.05%
dark blue 0.05-0.1%
pale blue 0.1-0.2%
green 0.2-0.5%
red 0.5-1%
pink >1%

Scale	DATE	SHEET
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	REF No. 1	FILE BM_01

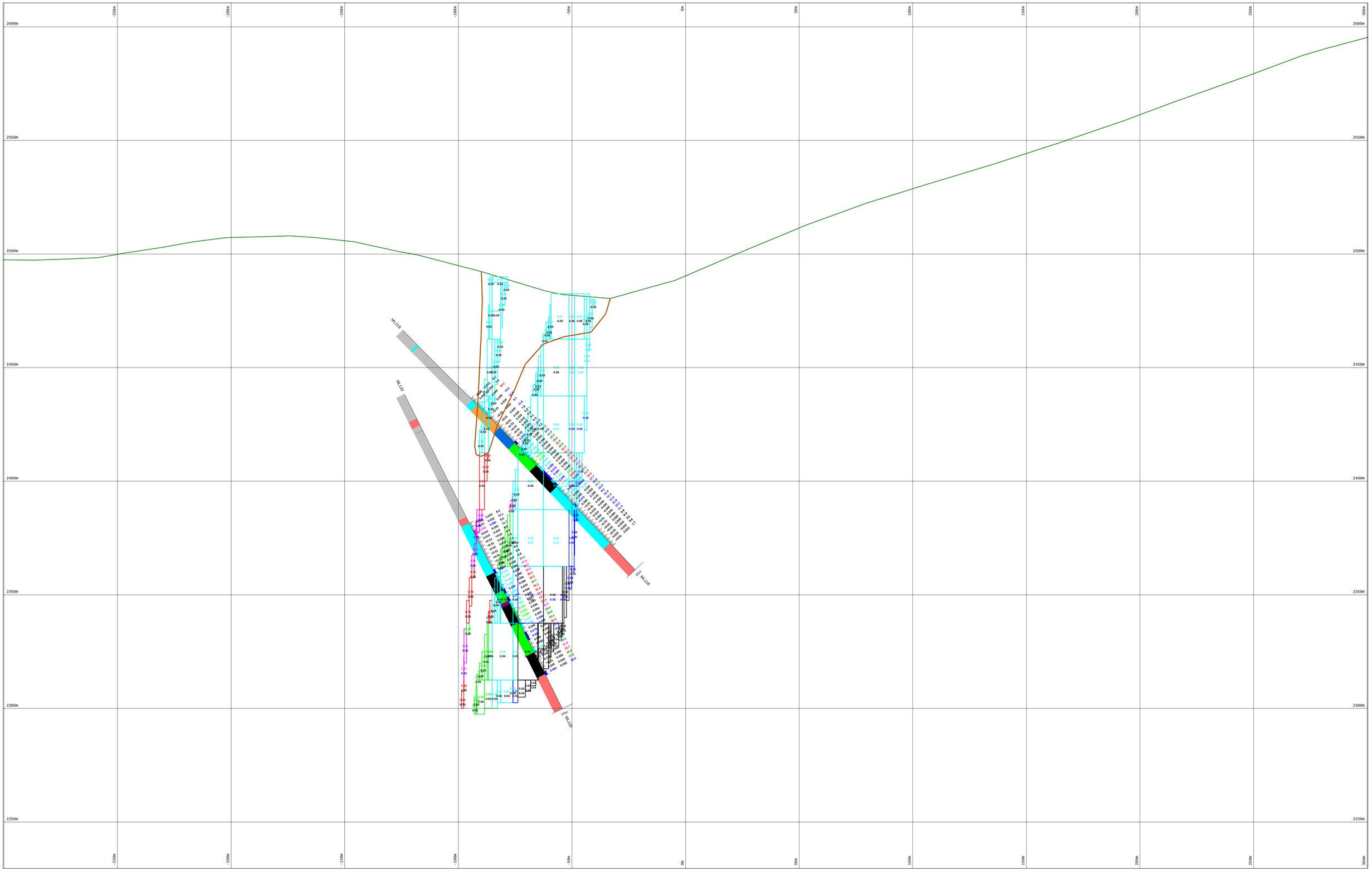
0 40 80m

Sn & WO3 Block Model section 1

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Sn & WO3 Block Model January 2009



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Left drill trace colour by lithology
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bright pink = sulphide skarn
purple = gossan, yellow = veins

Brown profile = base of localised
deep weathering (clay) zone

Assays on drill traces left to right
Sn%, WO3%, Fe%

Block labels Sn%(top)& WO3% (bottom)

Block model coloured by Sn%
black <0.05%
dark blue 0.05-0.1%
pale blue 0.1-0.2%
green 0.2-0.5%
red 0.5-1%
pink >1%

Scale	DATE	SHEET
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	REF No.	FILE
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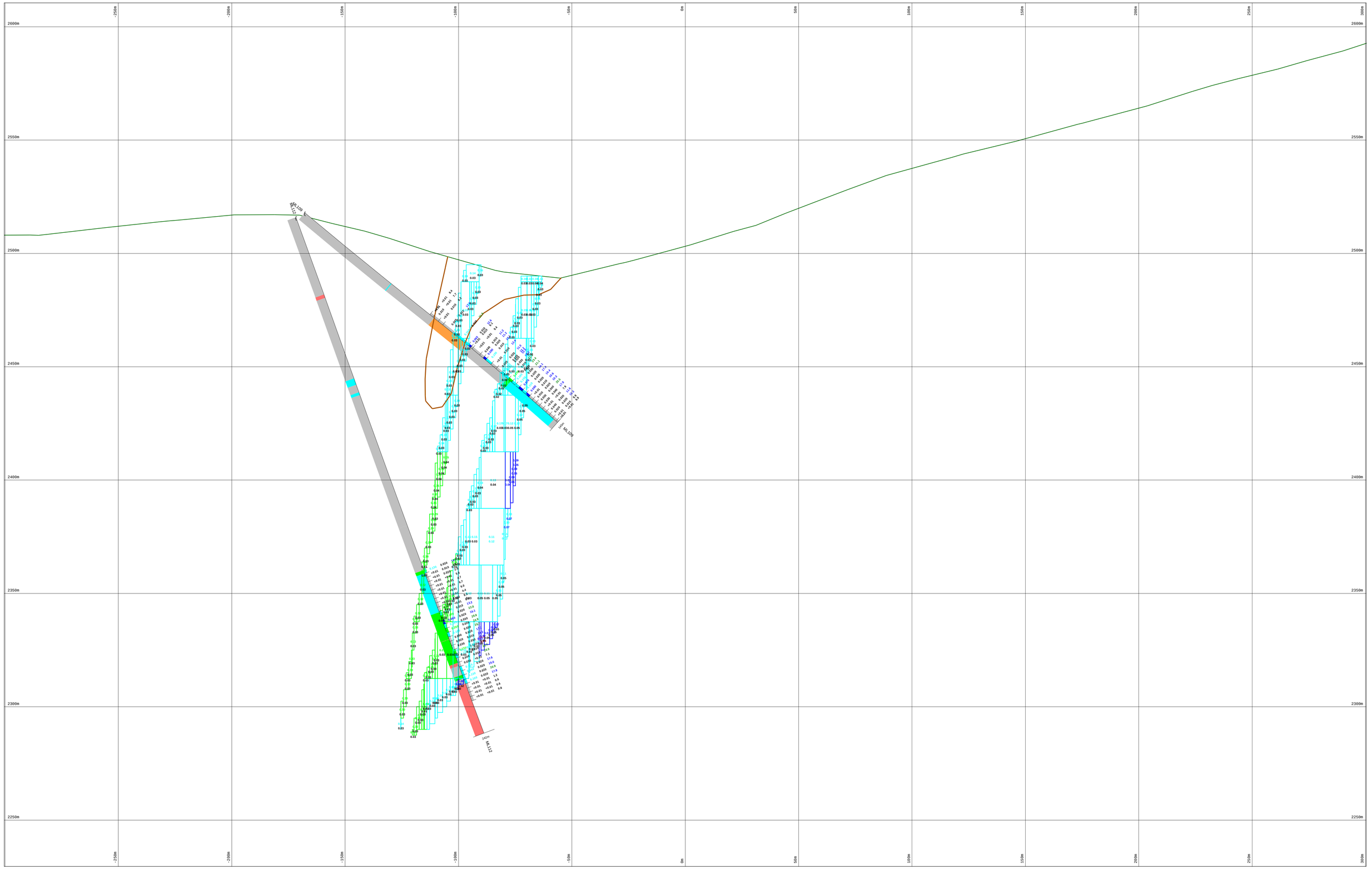
0 40 80m

Sn & WO3 Block Model section 2

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Sn & WO3 Block Model January 2009



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lt grey = lithic sandstone
pale yellow = quartz wacke
lt blue = tuffite, blue = carbonate
lt pink = granite, red = faulted zone
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dk green = undifferentiated skarn
black = magnetite skarn
bright pink = sulphide skarn
purple = gossan, yellow = veins

Brown profile = base of localised
deep weathering (clay) zone

Assays on drill traces left to right
Sn%, WO3%, Fe%

Block labels Sn%(top)& WO3% (bottom)

Block model coloured by Sn%
black <0.05%
dark blue 0.05-0.1%
pale blue 0.1-0.2%
green 0.2-0.5%
red 0.5-1%
pink >1%

Scale	DATE	SHEET
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	REF No. 1	FILE BM_03

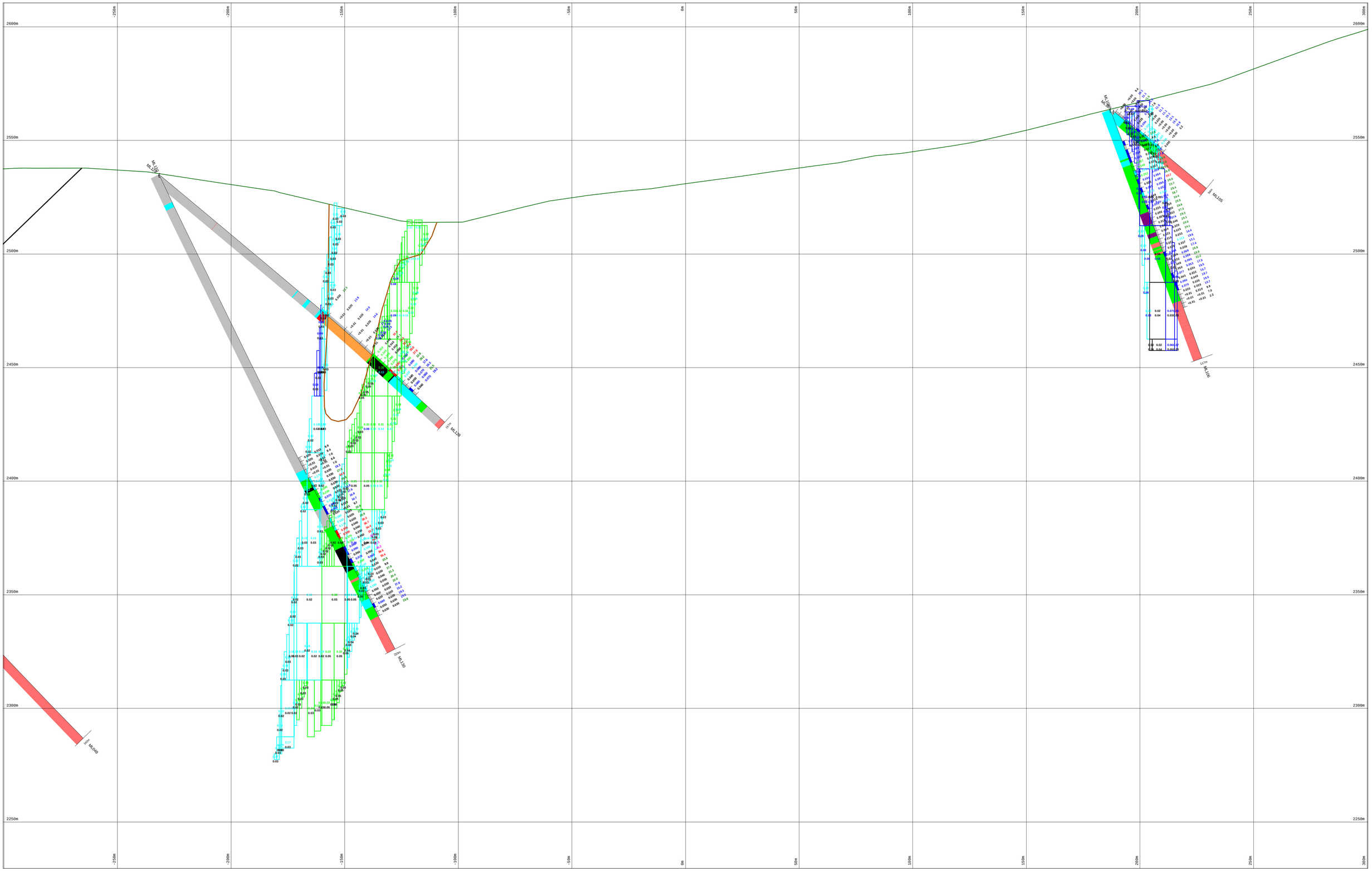
0 40 80m

Sn & WO3 Block Model section 3

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Sn & WO3 Block Model January 2009



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pale yellow = quartz wacke
lt blue = tuffite, blue = carbonate
lt pink = granite, red = faulted zone
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dk green = undifferentiated skarn
black = magnetite skarn
bright pink = sulphide skarn
purple = gossan, yellow = veins

Brown profile = base of localised
deep weathering (clay) zone

Assays on drill traces left to right
Sn%, WO3%, Fe%

Block labels Sn%(top)& WO3% (bottom)

Block model coloured by Sn%
black <0.05%
dark blue 0.05-0.1%
pale blue 0.1-0.2%
green 0.2-0.5%
red 0.5-1%
pink >1%

Scale	DATE	SHEET
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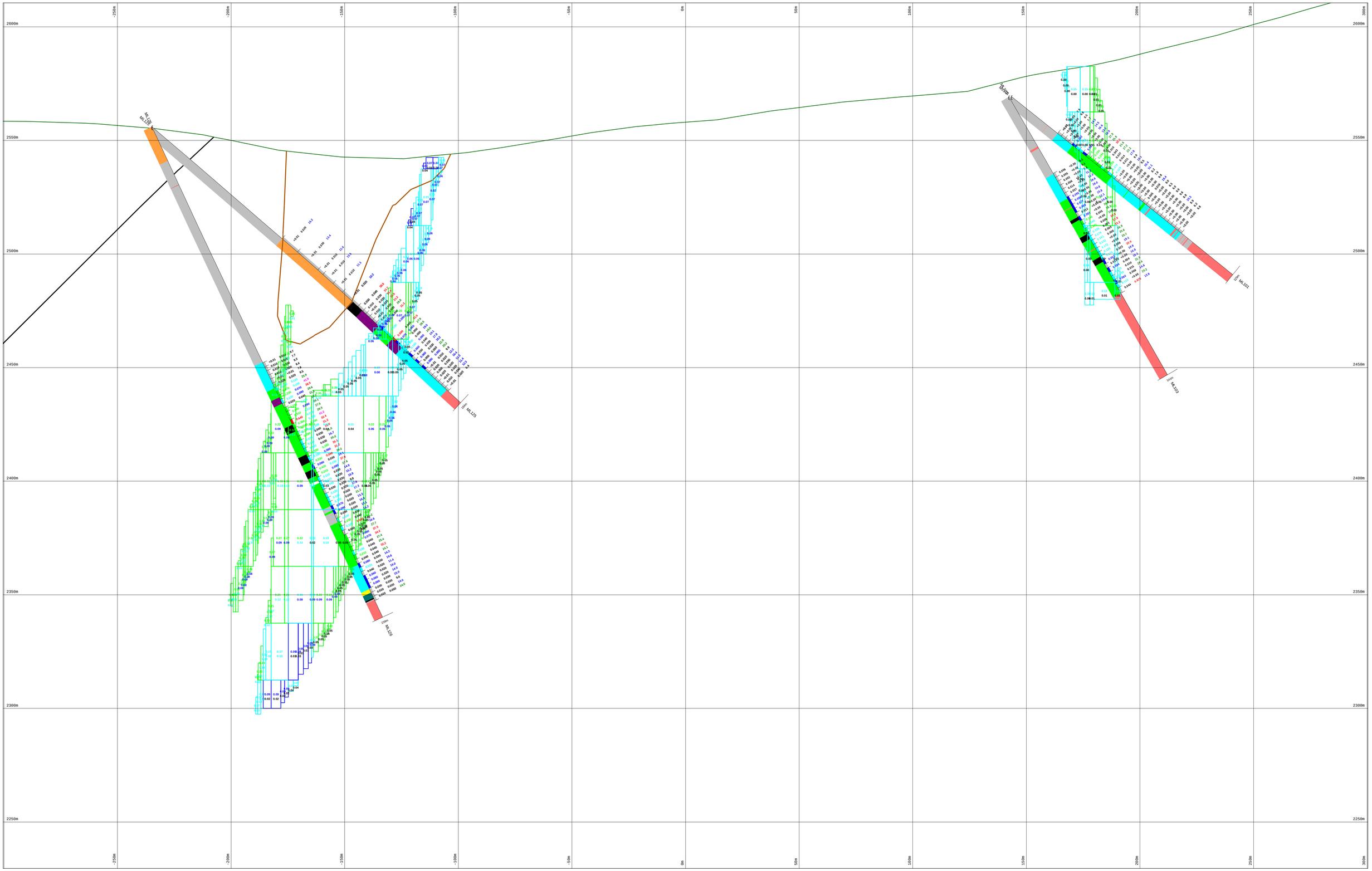
0 40 80m

Sn & WO3 Block Model section 4

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Sn & WO3 Block Model January 2009



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lt blue = tuffite, blue = carbonate
lt pink = granite, red = faulted zone
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dk green = undifferentiated skarn
black = magnetite skarn
bright pink = sulphide skarn
purple = gossan, yellow = veins

Brown profile = base of localised
deep weathering (clay) zone

Assays on drill traces left to right
Sn%, WO3%, Fe%

Block labels Sn%(top)& WO3% (bottom)

Block model coloured by Sn%
black <0.05%
dark blue 0.05-0.1%
pale blue 0.1-0.2%
green 0.2-0.5%
red 0.5-1%
pink >1%

Scale	DATE	SHEET
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	REF No. 1	FILE BM_05

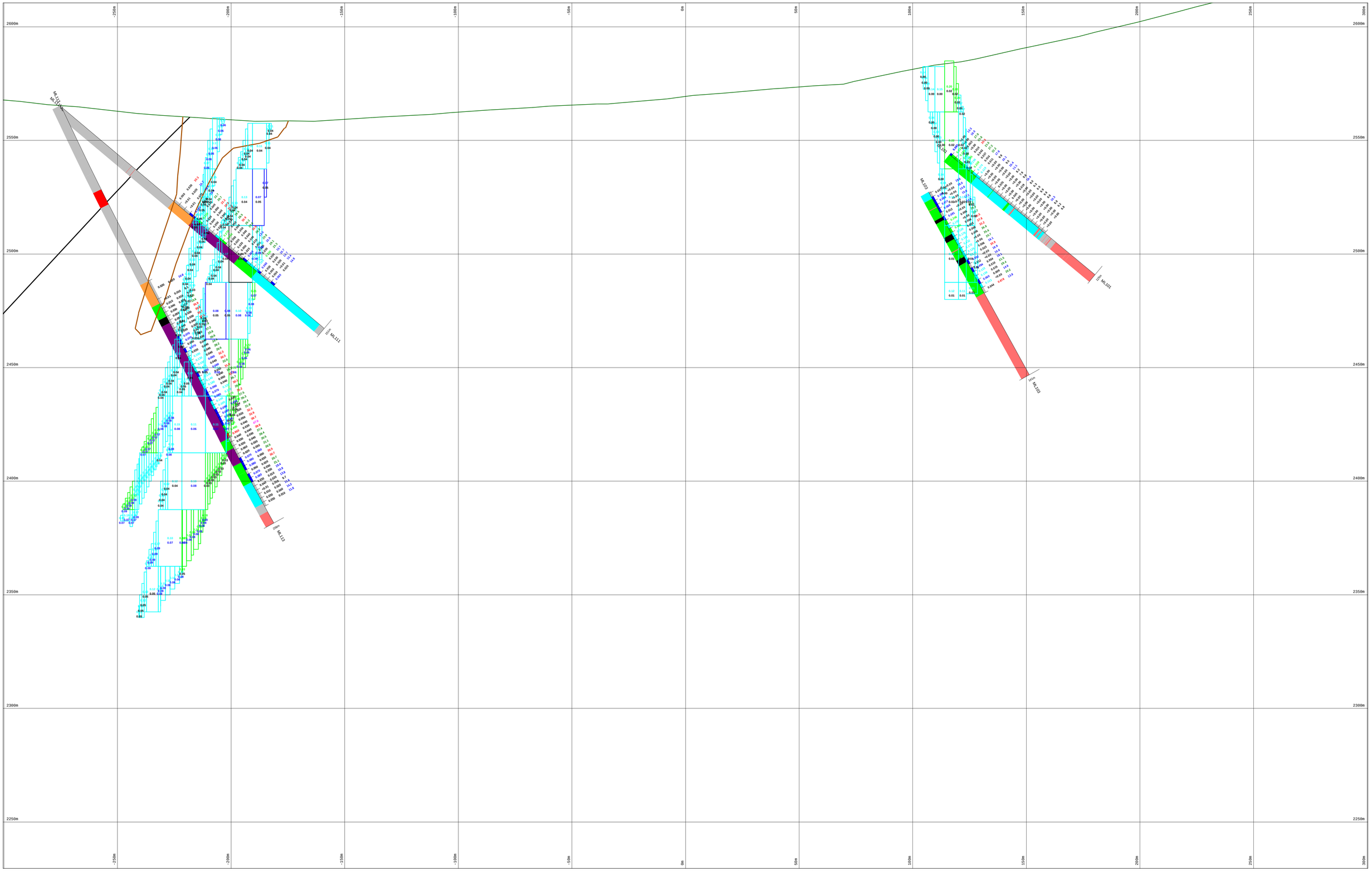
0 40 80m

Sn & WO3 Block Model section 5

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purple = gossan, yellow = veins

Brown profile = base of localised
deep weathering (clay) zone

Assays on drill traces left to right
Sn%, WO3%, Fe%

Block labels Sn%(top)& WO3% (bottom)

Block model coloured by Sn%
black <0.05%
dark blue 0.05-0.1%
pale blue 0.1-0.2%
green 0.2-0.5%
red 0.5-1%
pink >1%

Scale	DATE	SHEET
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	REF No. 1	FILE BM_06

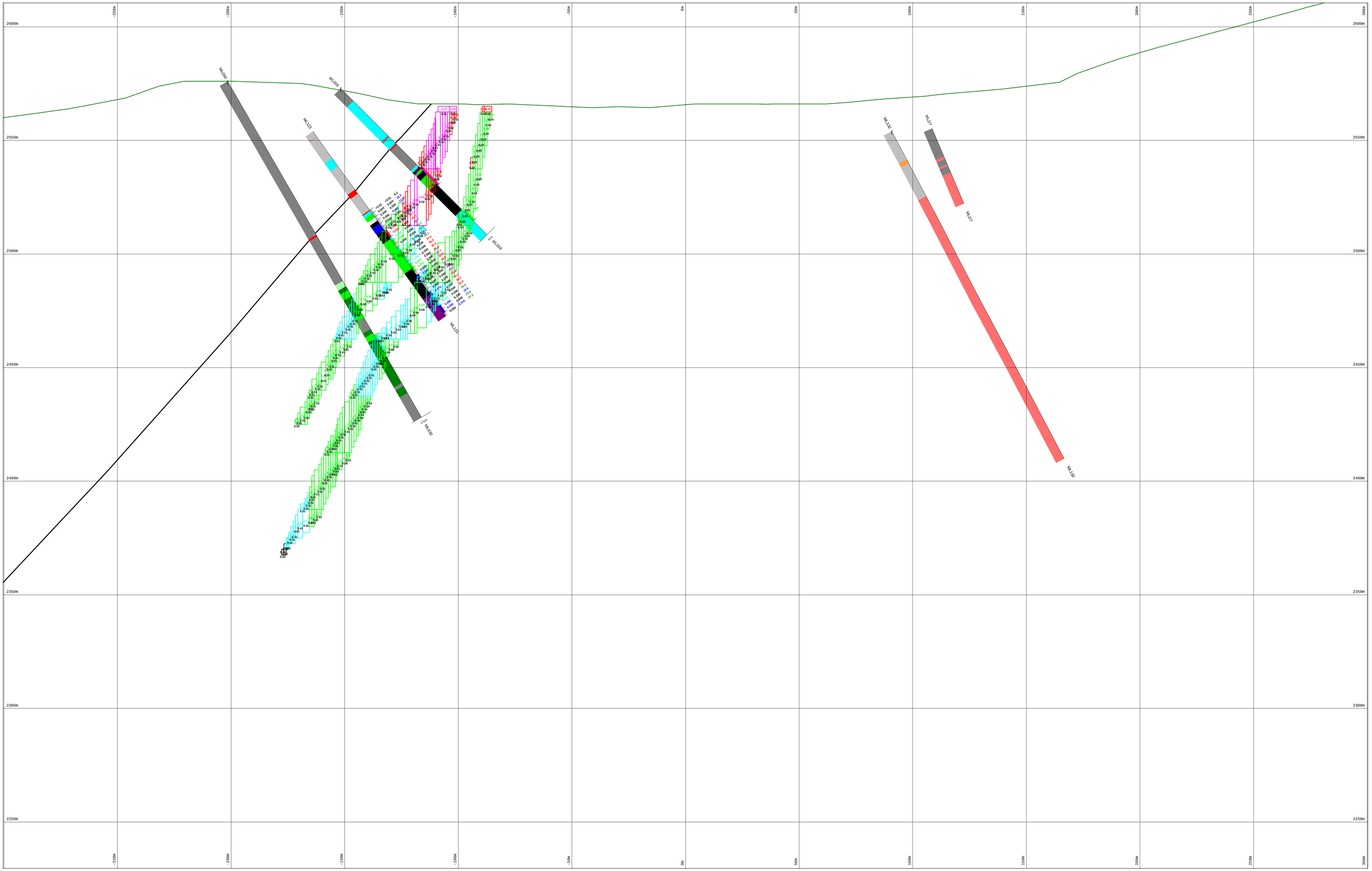
0 40 80m

Sn & WO3 Block Model section 6

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Sn & WO3 Block Model January 2009



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pale yellow = quartz wacke
lt blue = tuffite, blue = carbonate
lt pink = granite, red = faulted zone
lt green = calcsilicate-magnetite skarn
dk green = undifferentiated skarn
black = magnetite skarn
bright pink = sulphide skarn
purple = gossan, yellow = veins

Brown profile = base of localised
deep weathering (clay) zone

Assays on drill traces left to right
Sn%, WO3%, Fe%

Block labels Sn%(top)& WO3% (bottom)

Block model coloured by Sn%
black <0.05%
dark blue 0.05-0.1%
pale blue 0.1-0.2%
green 0.2-0.5%
red 0.5-1%
pink >1%

Scale	DATE	SHEET
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	REF No. 1	FILE BM_07

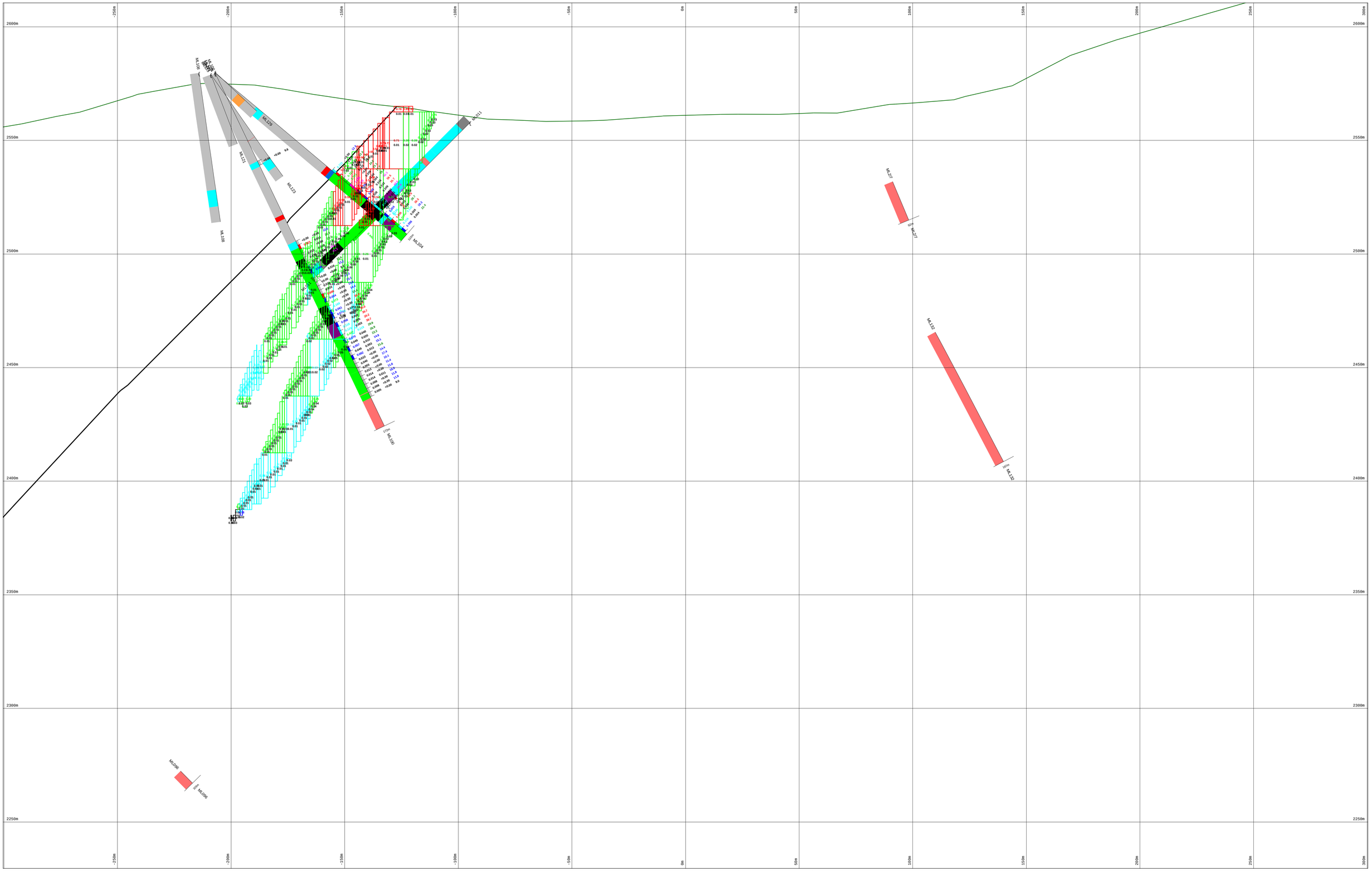
0 40 80m

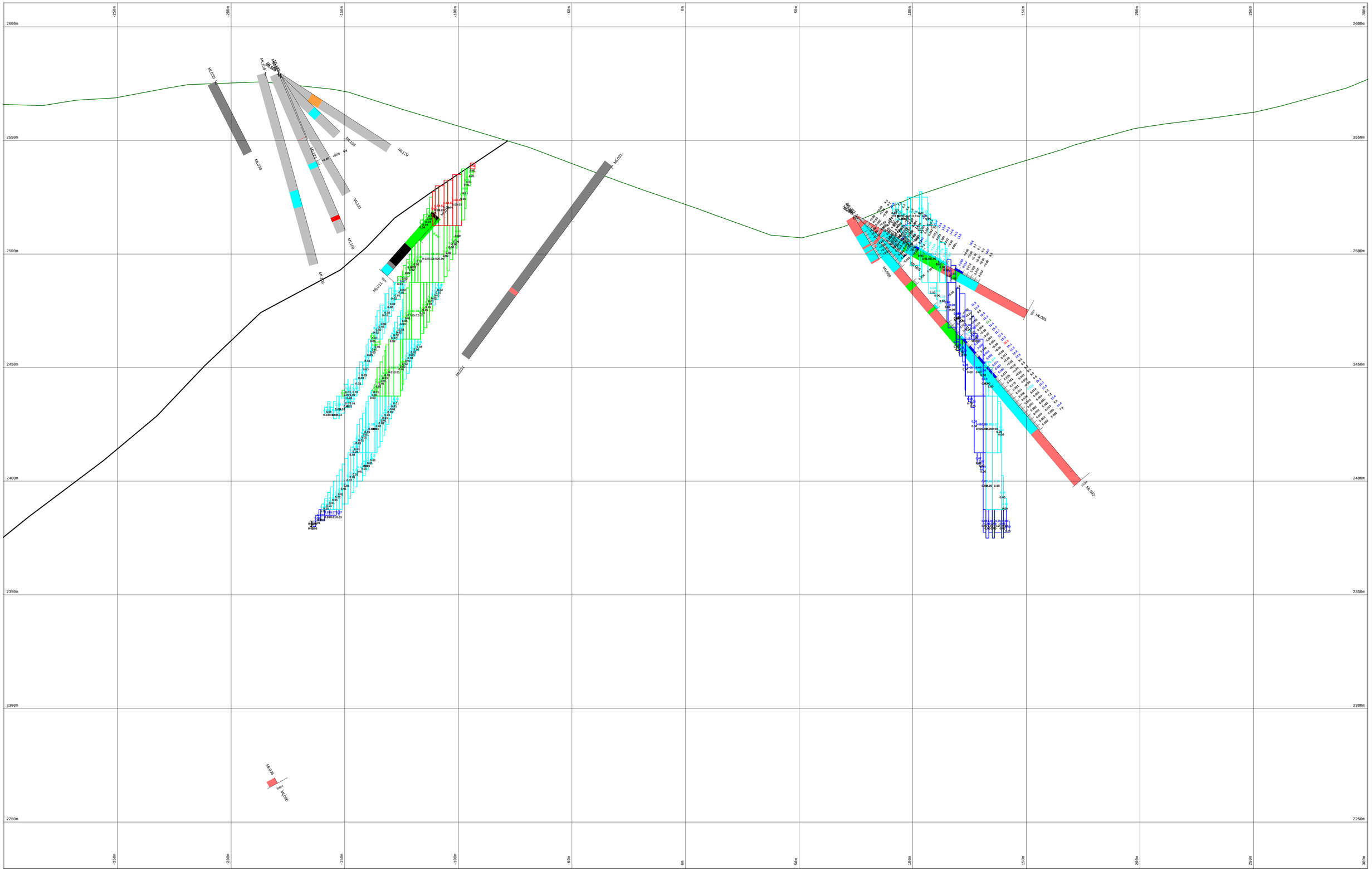
Sn & WO3 Block Model section 7

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Sn & WO3 Block Model January 2009


-250m
-200m
-150m
-100m
-50m
0m
50m
100m
150m
200m
250m
300m
2600m
2550m
2500m
2450m
2400m
2350m
2300m
2250m
ML011
ML104
ML100
ML108
ML109
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ML144
ML145
ML146
ML147



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Sn%, WO3%, Fe%

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Block model coloured by Sn%
black <0.05%
dark blue 0.05-0.1%
pale blue 0.1-0.2%
green 0.2-0.5%
red 0.5-1%
pink >1%

Scale	DATE	SHEET
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	REF No. 1	FILE BM_09

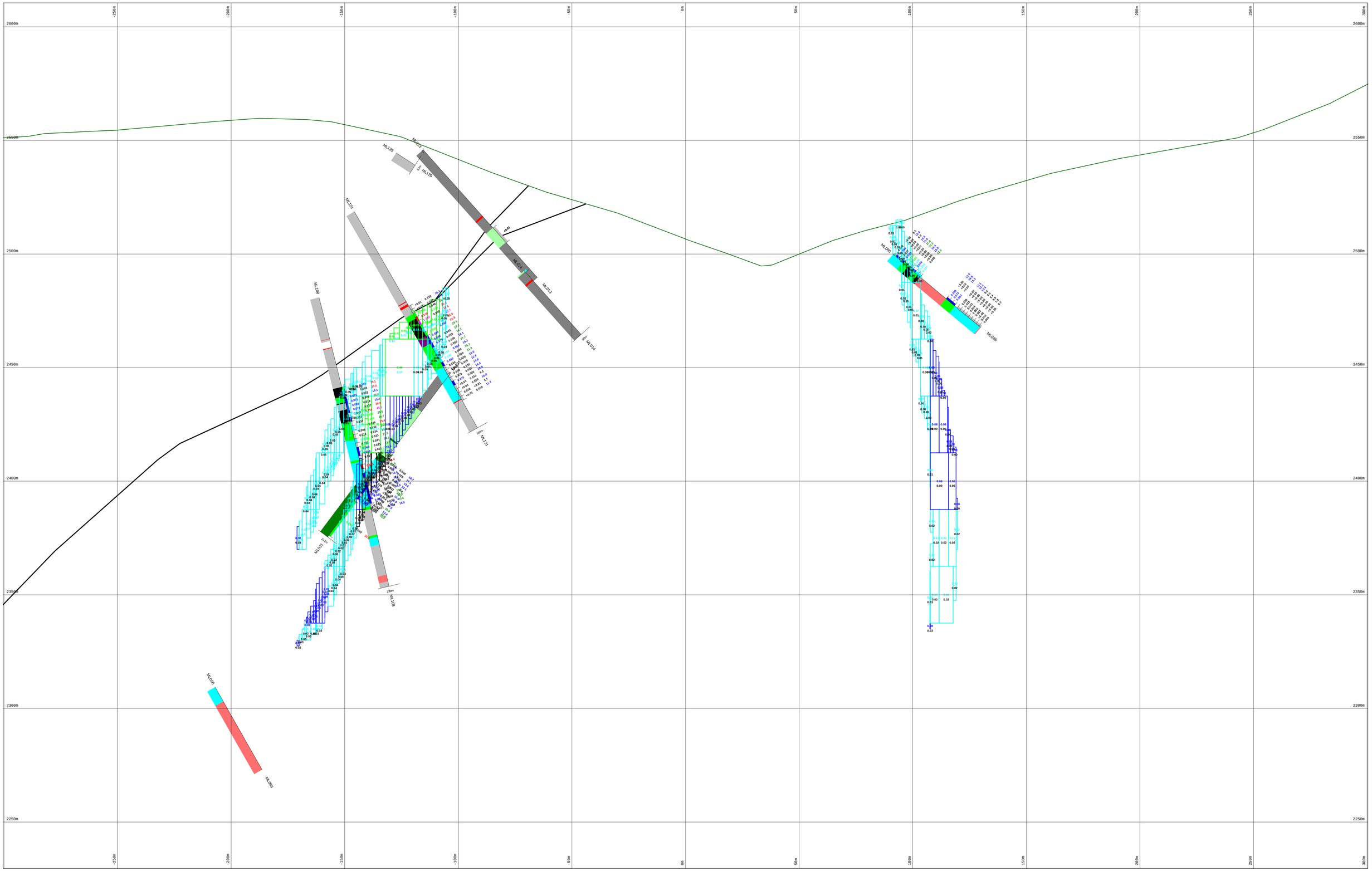
0 40 80m

Sn & WO3 Block Model section 9

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Mt Lindsay Magnetite-Sn-W Project

Sn & WO3 Block Model January 2009



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Left drill trace colour by lithology
dark brown = mudstone & siltstone
lt grey = lithic sandstone
pale yellow = quartz wacke
lt blue = tuffite, blue = carbonate
lt pink = granite, red = faulted zone
lt green = calcsilicate-magnetite skarn
dk green = undifferentiated skarn
black = magnetite skarn
bright pink = sulphide skarn
purple = gossan, yellow = veins

Brown profile = base of localised
deep weathering (clay) zone

Assays on drill traces left to right
Sn%, WO3%, Fe%

Block labels Sn%(top)& WO3% (bottom)

Block model coloured by Sn%
black <0.05%
dark blue 0.05-0.1%
pale blue 0.1-0.2%
green 0.2-0.5%
red 0.5-1%
pink >1%

Scale	DATE	SHEET
1:750	3/3/2009	1 of 1
	REF No. 1	FILE BM_10

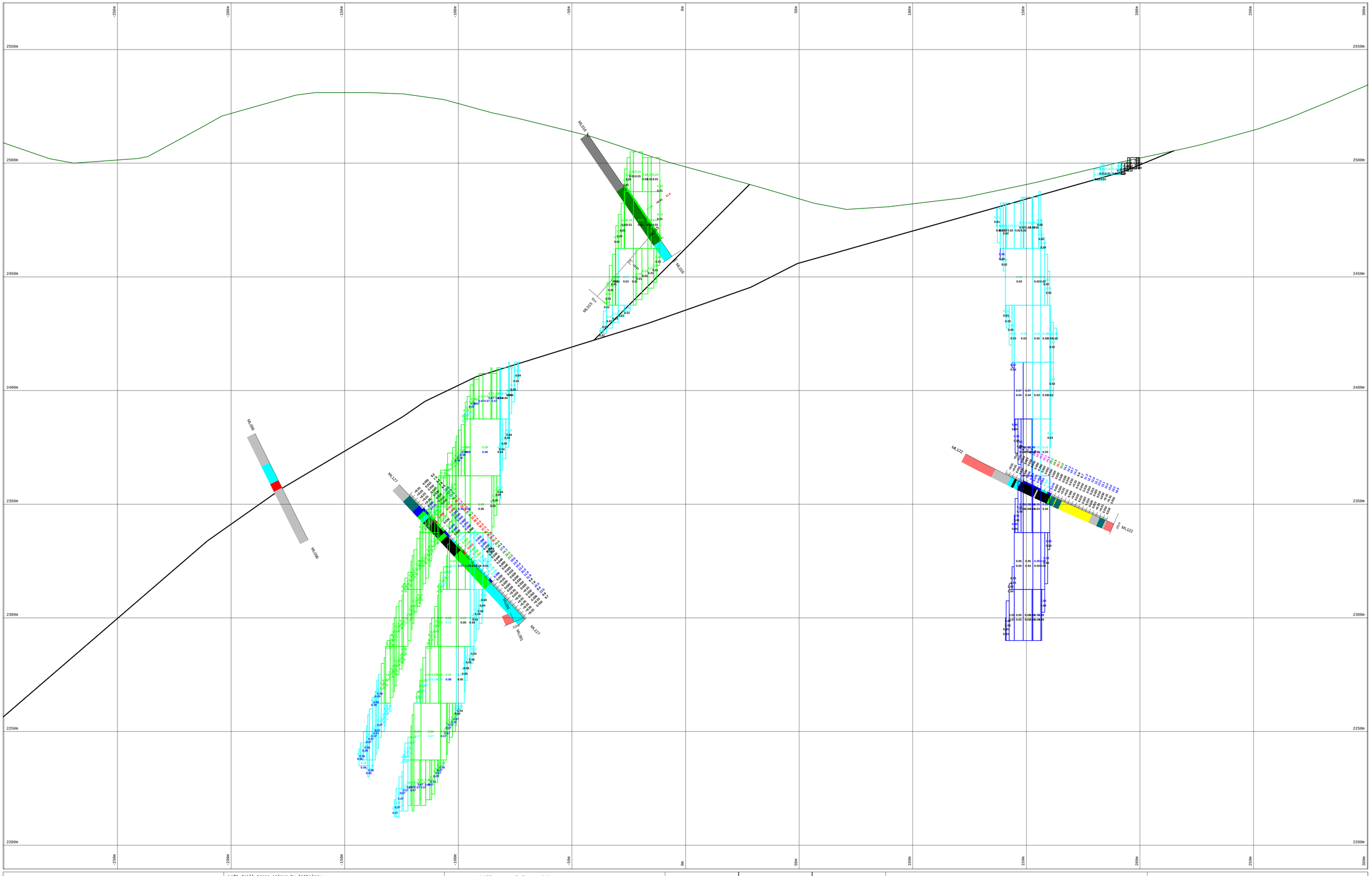
0 40 80m

Sn & WO3 Block Model section 10

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Sn & WO3 Block Model January 2009



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lt pink = granite, red = faulted zone
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dk green = undifferentiated skarn
black = magnetite skarn
bright pink = sulphide skarn
purple = gossan, yellow = veins

Brown profile = base of localised
deep weathering (clay) zone

Assays on drill traces left to right
Sn%, WO3%, Fe%

Block labels Sn%(top)& WO3% (bottom)

Block model coloured by Sn%
black <0.05%
dark blue 0.05-0.1%
pale blue 0.1-0.2%
green 0.2-0.5%
red 0.5-1%
pink >1%

Scale	DATE	SHEET
1:750	3/3/2009	1 of 1
	REF No. 1	FILE BM_11

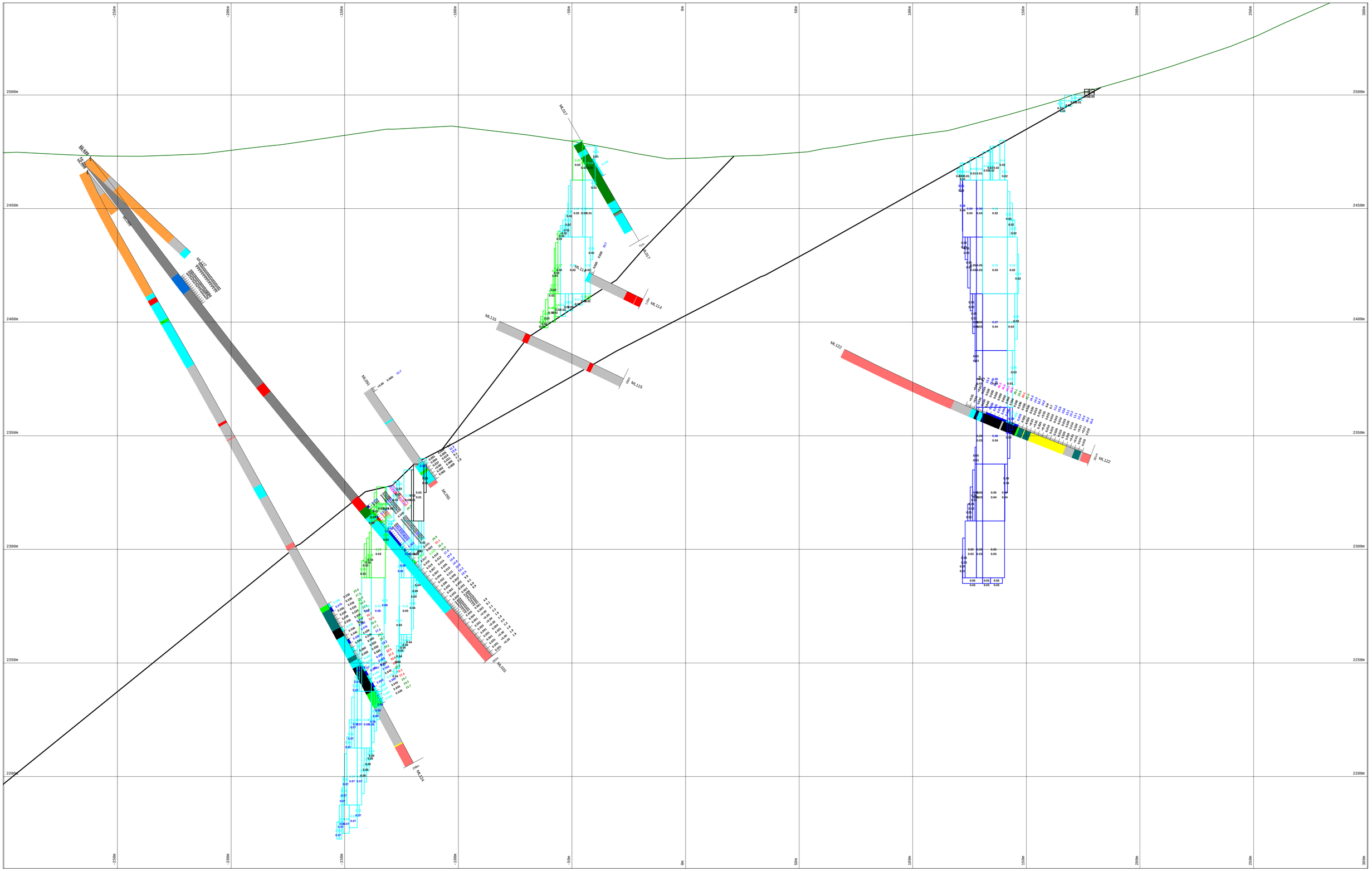
0 40 80m

Sn & WO3 Block Model section 11

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Sn & WO3 Block Model January 2009



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Left drill trace colour by lithology
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lt blue = tuffite, blue = carbonate
lt pink = granite, red = faulted zone
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dk green = undifferentiated skarn
black = magnetite skarn
bright pink = sulphide skarn
purple = gossan, yellow = veins

Brown profile = base of localised
deep weathering (clay) zone

Assays on drill traces left to right
Sn%, WO3%, Fe%

Block labels Sn%(top)& WO3% (bottom)

Block model coloured by Sn%
black <0.05%
dark blue 0.05-0.1%
pale blue 0.1-0.2%
green 0.2-0.5%
red 0.5-1%
pink >1%

Scale	DATE	SHEET
1:750	3/3/2009	1 of 1
	REF No. 1	FILE BM_12

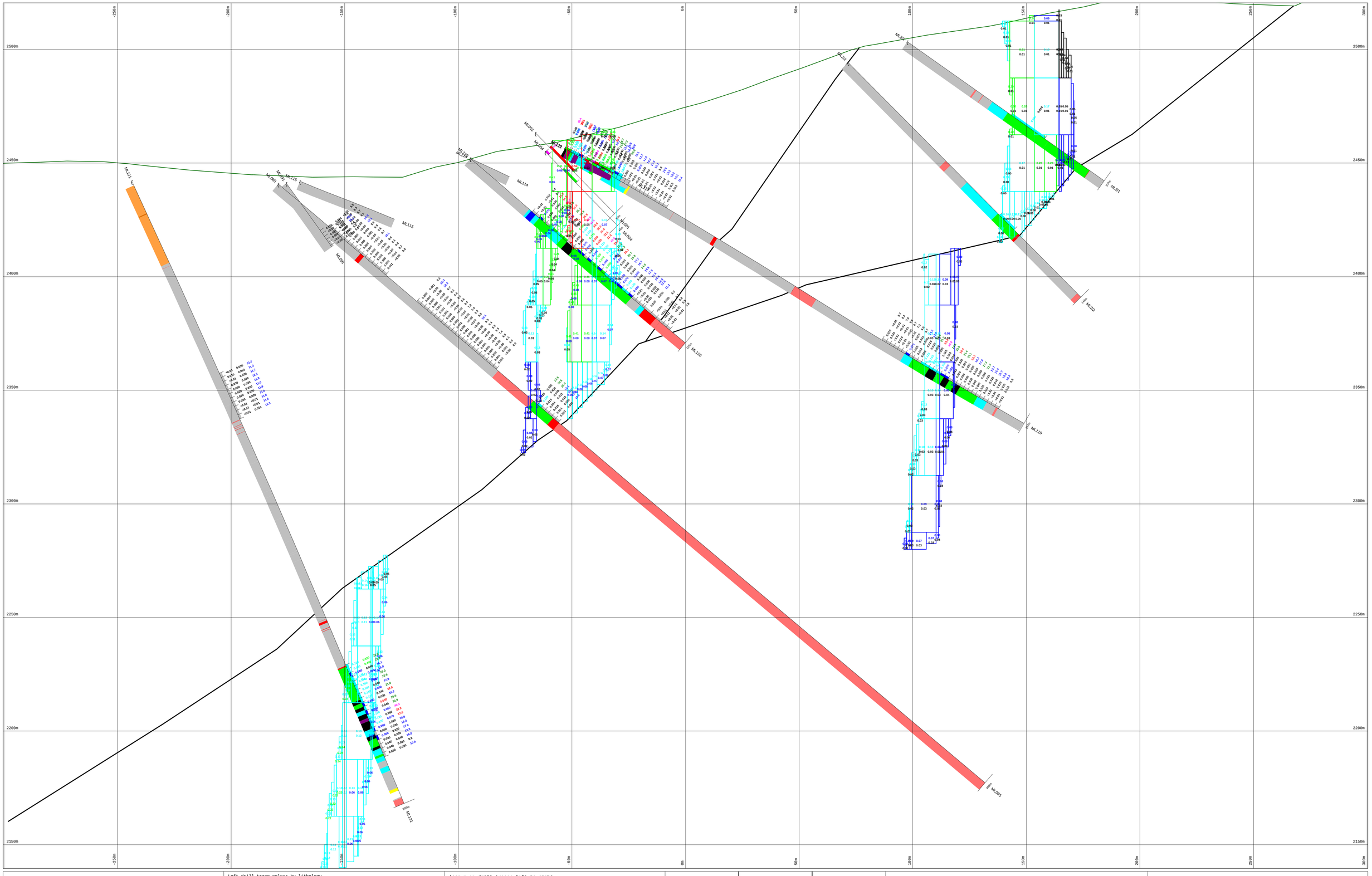
0 40 80m

Sn & WO3 Block Model section 12

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Sn & WO3 Block Model January 2009



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black = magnetite skarn
bright pink = sulphide skarn
purple = gossan, yellow = veins

Brown profile = base of localised deep weathering (clay) zone

Assays on drill traces left to right
Sn%, WO3%, Fe%

Block labels Sn%(top)& WO3% (bottom)

Block model coloured by Sn%
black <0.05%
dark blue 0.05-0.1%
pale blue 0.1-0.2%
green 0.2-0.5%
red 0.5-1%
pink >1%

Scale	DATE	SHEET
1:750	3/3/2009	1 of 1
	REF No. 1	FILE BM_13

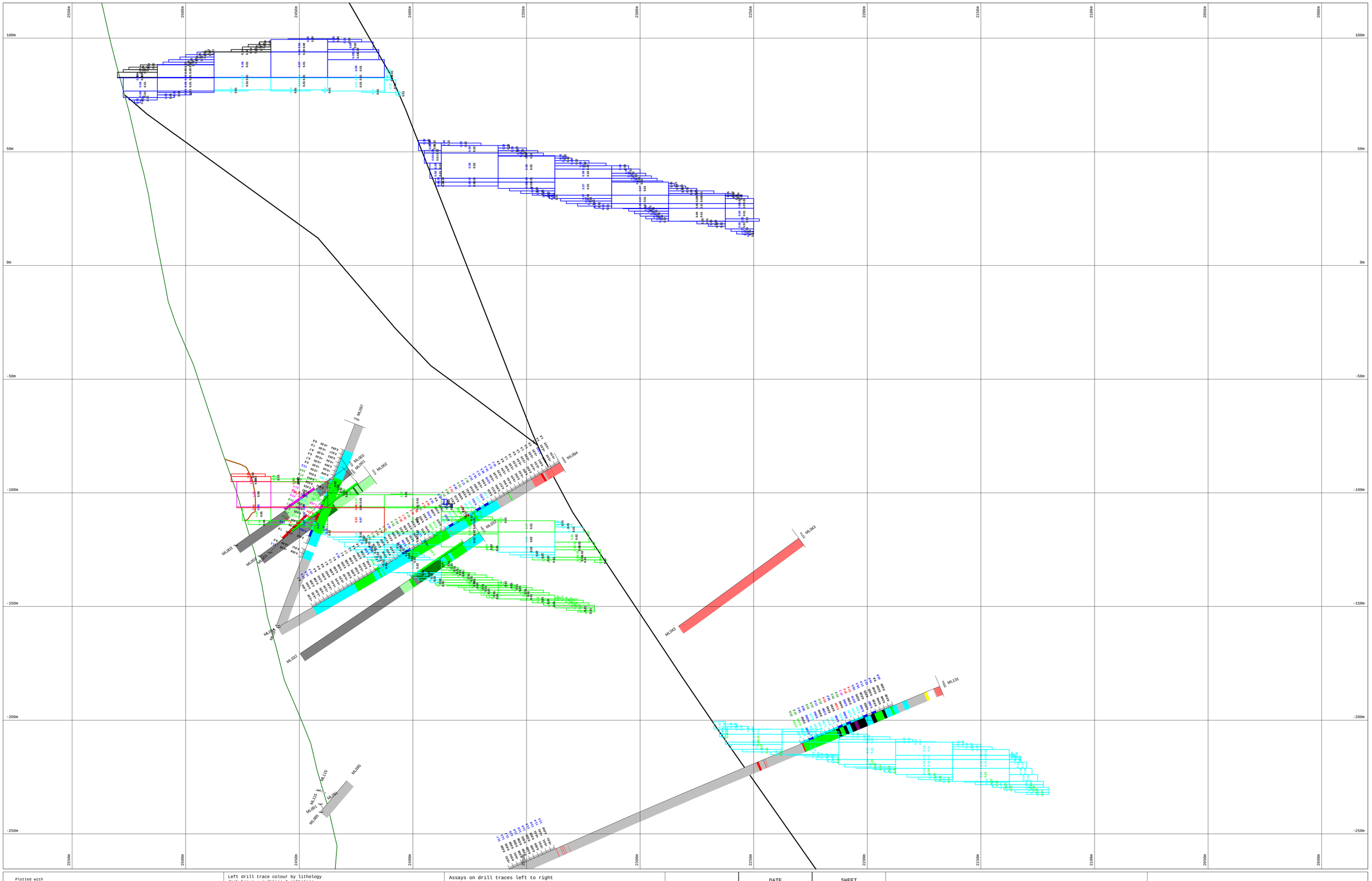
0 40 80m

Sn & WO3 Block Model section 13

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Sn & WO3 Block Model January 2009



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black = magnetite skarn
bright pink = sulphide skarn
purple = gossan, yellow = veins

Brown profile = base of localised
deep weathering (clay) zone

Assays on drill traces left to right
Sn%, WO3%, Fe%

Block labels Sn%(top)& WO3% (bottom)

Block model coloured by Sn%
black <0.05%
dark blue 0.05-0.1%
pale blue 0.1-0.2%
green 0.2-0.5%
red 0.5-1%
pink >1%

Scale	DATE	SHEET
1:750	3/3/2009	1 of 1
	REF No. 1	FILE BM_14

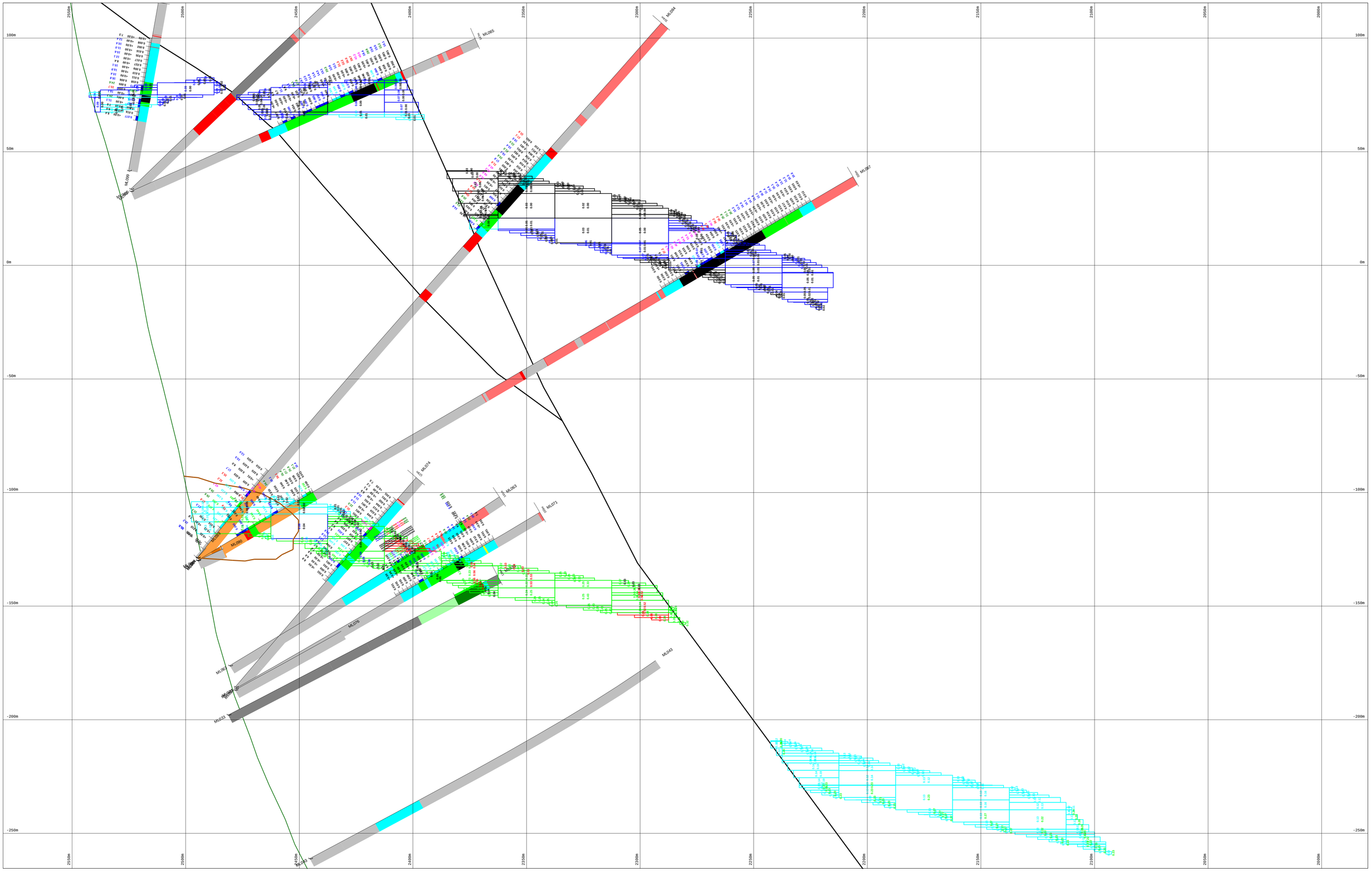
0 40 80m

Sn & WO3 Block Model section 14

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Sn & WO3 Block Model January 2009



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Brown profile = base of localised
deep weathering (clay) zone

Assays on drill traces left to right
Sn%, WO3%, Fe%

Block labels Sn%(top)& WO3% (bottom)

Block model coloured by Sn%
black <0.05%
dark blue 0.05-0.1%
pale blue 0.1-0.2%
green 0.2-0.5%
red 0.5-1%
pink >1%

Scale	DATE	SHEET
1:750	3/3/2009	1 of 1
	REF No. 1	FILE BM_15

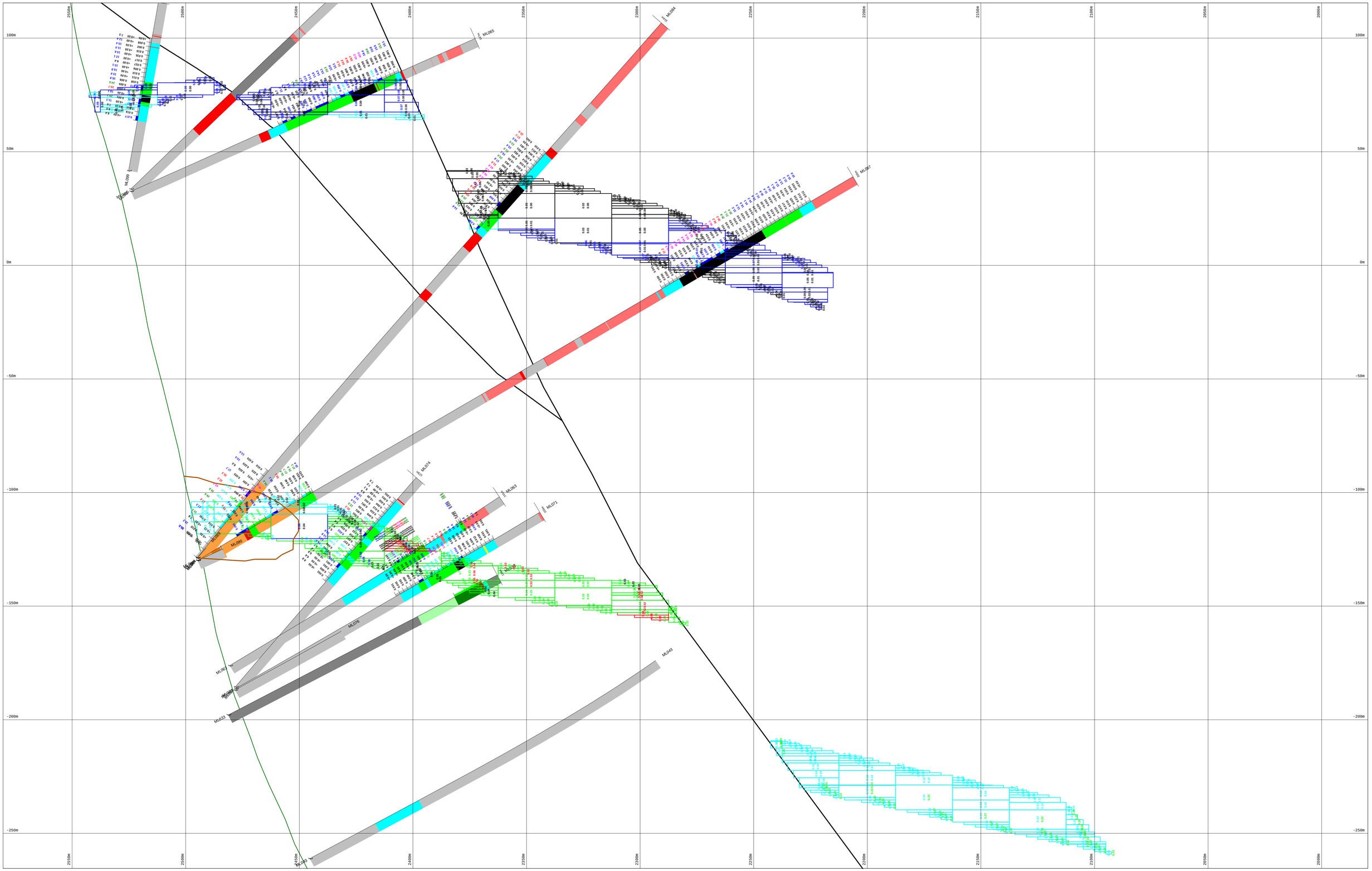
0 40 80m

Sn & WO3 Block Model section 15

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Sn & WO3 Block Model January 2009



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lt blue = tuffite, blue = carbonate
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deep weathering (clay) zone

Assays on drill traces left to right
Sn%, WO3%, Fe%

Block labels Sn%(top)& WO3% (bottom)

Block model coloured by Sn%
black <0.05%
dark blue 0.05-0.1%
pale blue 0.1-0.2%
green 0.2-0.5%
red 0.5-1%
pink >1%

Scale	DATE	SHEET
1:750	3/3/2009	1 of 1
	REF No. 1	FILE BM_15

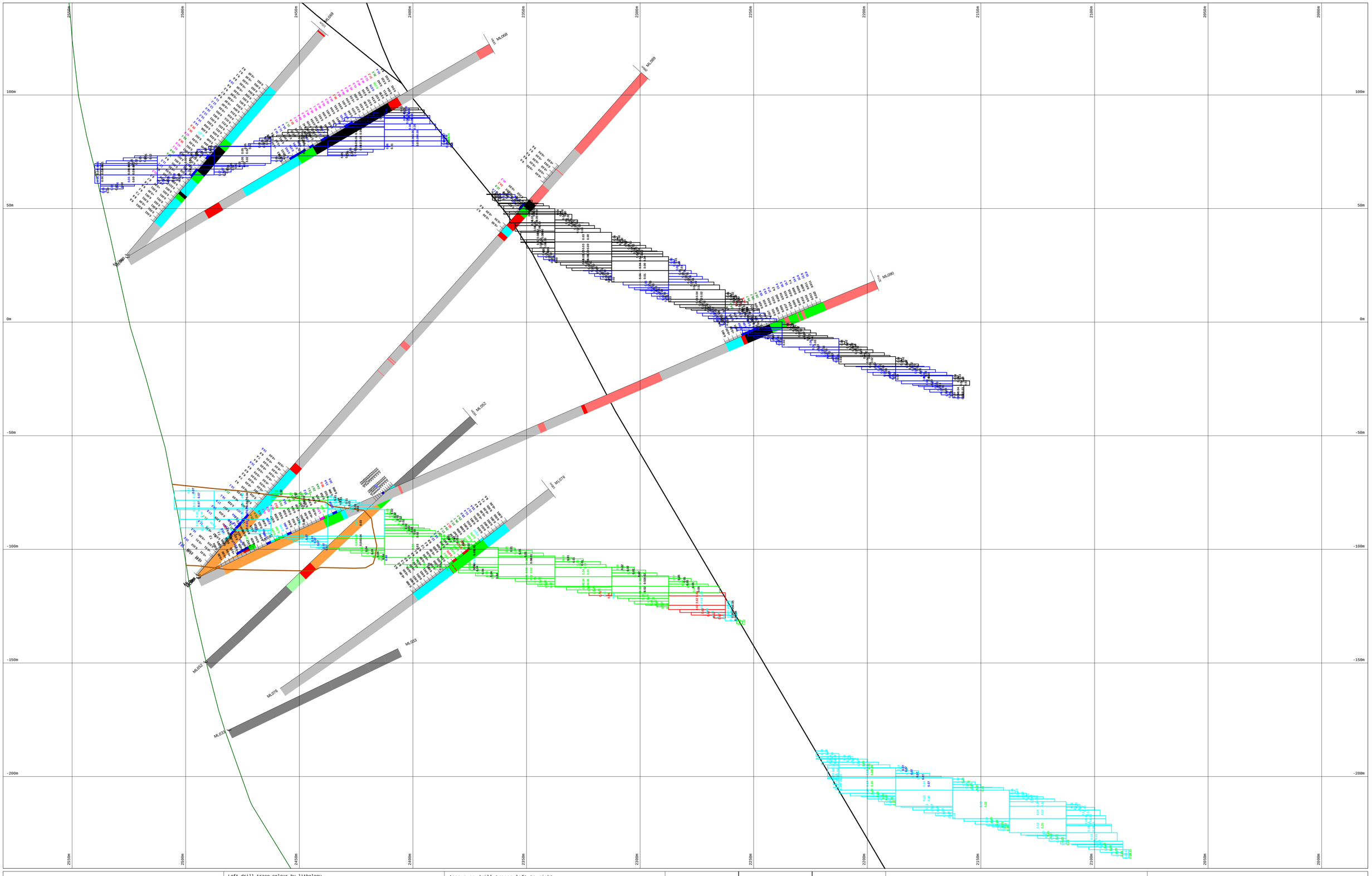
0 40 80m

Sn & WO3 Block Model section 15

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Left drill trace colour by lithology
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black = magnetite skarn
bright pink = sulphide skarn
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deep weathering (clay) zone

Assays on drill traces left to right
Sn%, WO3%, Fe%

Block labels Sn%(top)& WO3% (bottom)

Block model coloured by Sn%
black <0.05%
dark blue 0.05-0.1%
pale blue 0.1-0.2%
green 0.2-0.5%
red 0.5-1%
pink >1%

Scale	DATE	SHEET
1:750	3/3/2009	1 of 1
	REF No. 1	FILE BM_16

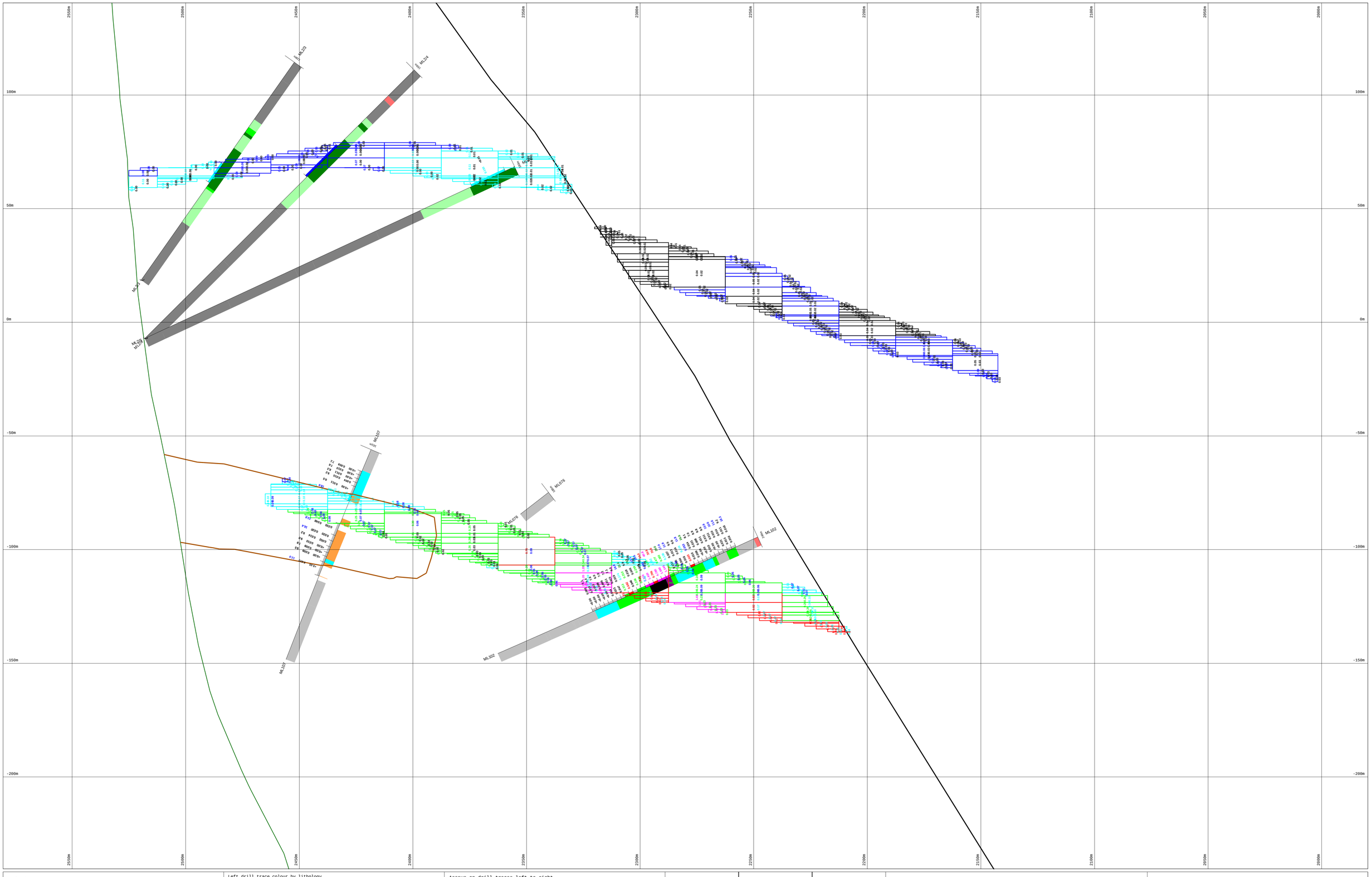
0 40 80m

Sn & WO3 Block Model section 16

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Sn & WO3 Block Model January 2009



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Left drill trace colour by lithology
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pale yellow = quartz wacke
lt blue = tuffite, blue = carbonate
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bright pink = sulphide skarn
purple = gossan, yellow = veins

Brown profile = base of localised
deep weathering (clay) zone

Assays on drill traces left to right
Sn%, WO3%, Fe%

Block labels Sn%(top)& WO3% (bottom)

Block model coloured by Sn%
black <0.05%
dark blue 0.05-0.1%
pale blue 0.1-0.2%
green 0.2-0.5%
red 0.5-1%
pink >1%

Scale	DATE	SHEET
1:750	3/3/2009	1 of 1
	REF No. 1	FILE BM_17

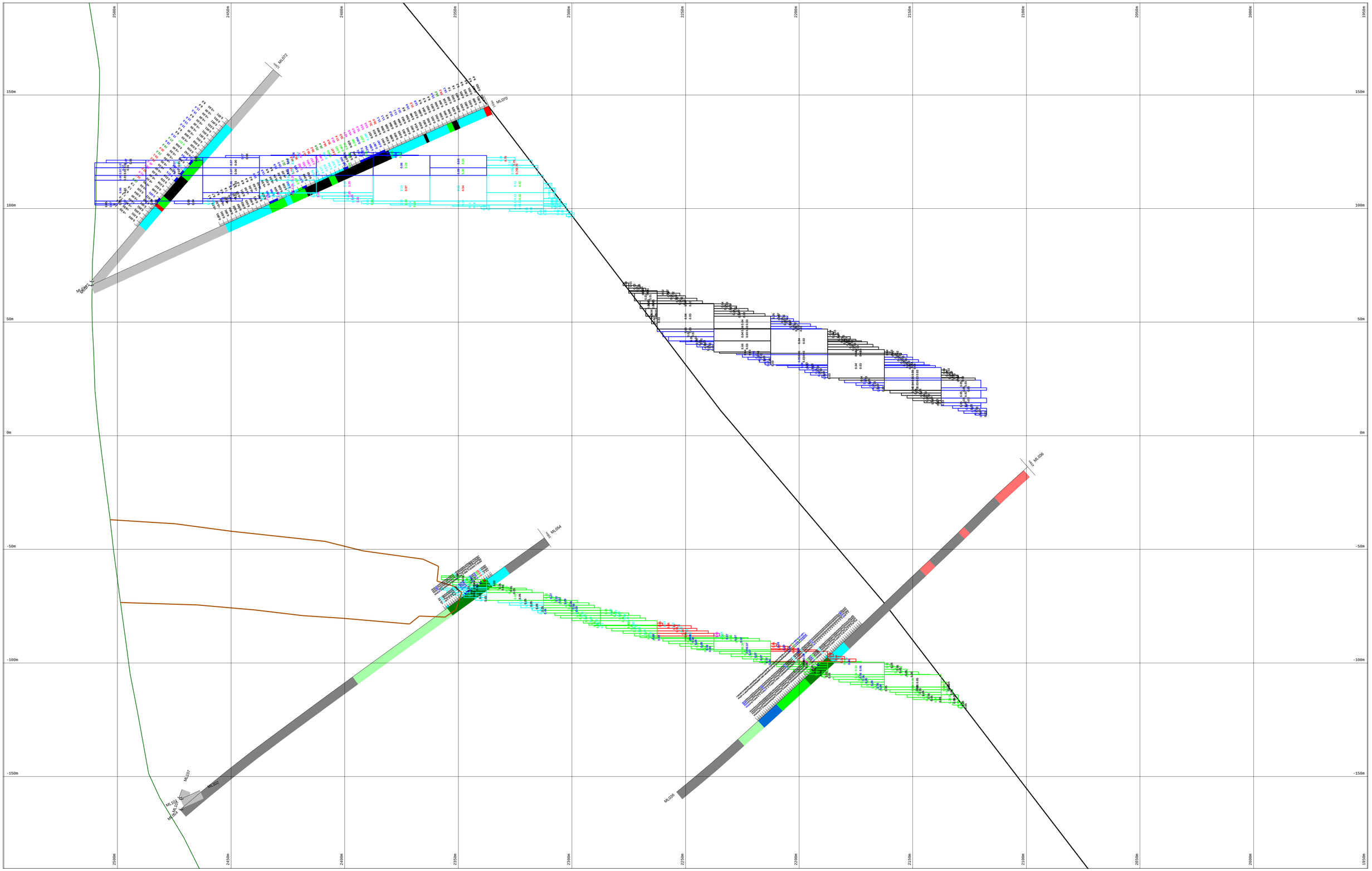
0 40 80m

Sn & WO3 Block Model section 17

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Sn & WO3 Block Model January 2009



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Left drill trace colour by lithology
dark brown = mudstone & siltstone
lt grey = lithic sandstone
pale yellow = quartz wacke
lt blue = tuffite, blue = carbonate
lt pink = granite, red = faulted zone
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dk green = undifferentiated skarn
black = magnetite skarn
bright pink = sulphide skarn
purple = gossan, yellow = veins

Brown profile = base of localised
deep weathering (clay) zone

Assays on drill traces left to right
Sn%, WO3%, Fe%

Block labels Sn%(top)& WO3% (bottom)

Block model coloured by Sn%
black <0.05%
dark blue 0.05-0.1%
pale blue 0.1-0.2%
green 0.2-0.5%
red 0.5-1%
pink >1%

Scale	DATE	SHEET
1:750	3/3/2009	1 of 1
	REF No. 1	FILE BM_18

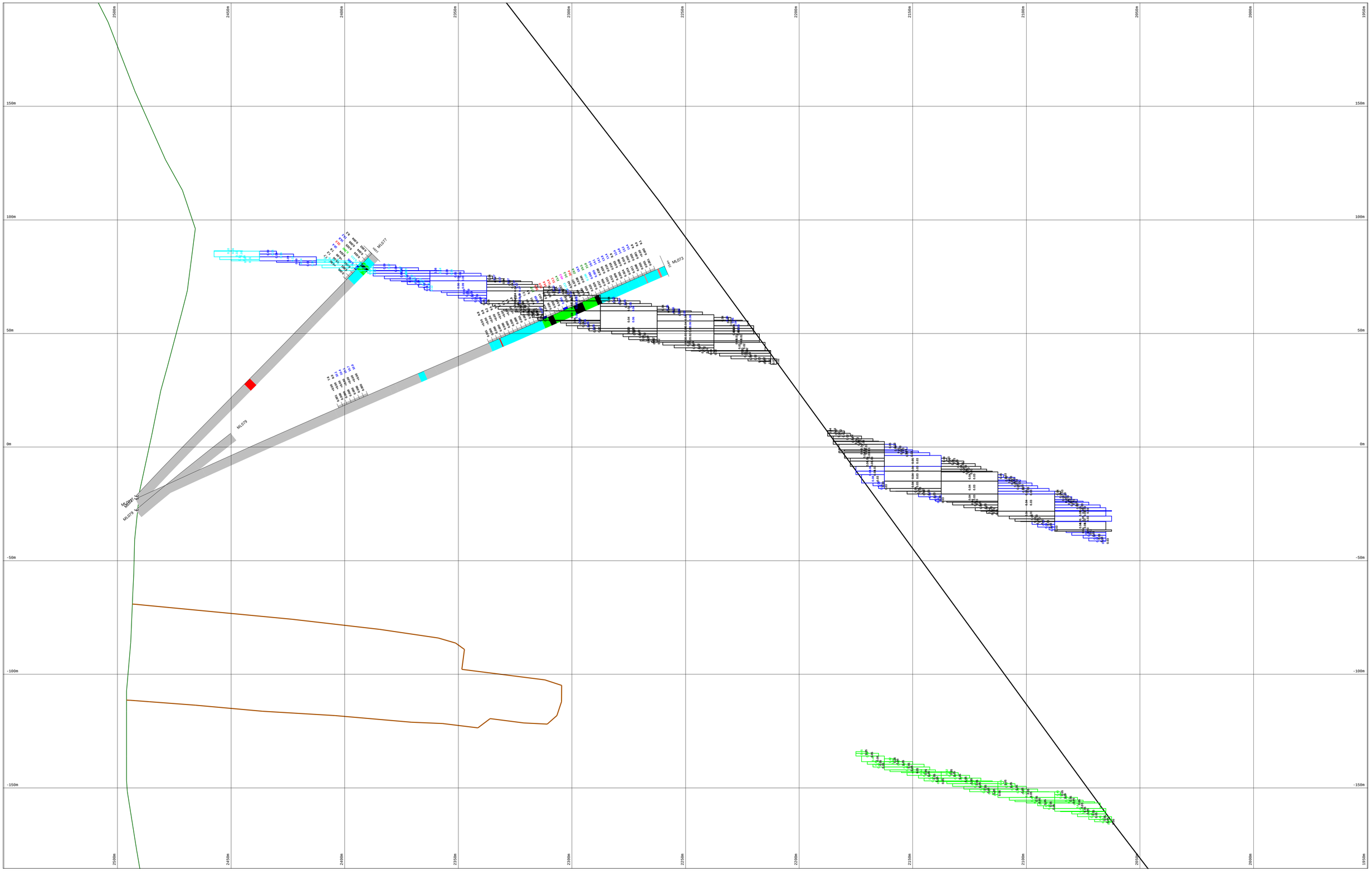
0 40 80m

Sn & WO3 Block Model section 18

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Sn & WO3 Block Model January 2009



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Left drill trace colour by lithology
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pale yellow = quartz wacke
lt blue = tuffite, blue = carbonate
lt pink = granite, red = faulted zone
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dk green = undifferentiated skarn
black = magnetite skarn
bright pink = sulphide skarn
purple = gossan, yellow = veins

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Assays on drill traces left to right
Sn%, WO3%, Fe%

Block labels Sn%(top)& WO3% (bottom)

Block model coloured by Sn%
black <0.05%
dark blue 0.05-0.1%
pale blue 0.1-0.2%
green 0.2-0.5%
red 0.5-1%
pink >1%

Scale	DATE	SHEET
1:750	3/3/2009	1 of 1
	REF No. 1	FILE BM_19

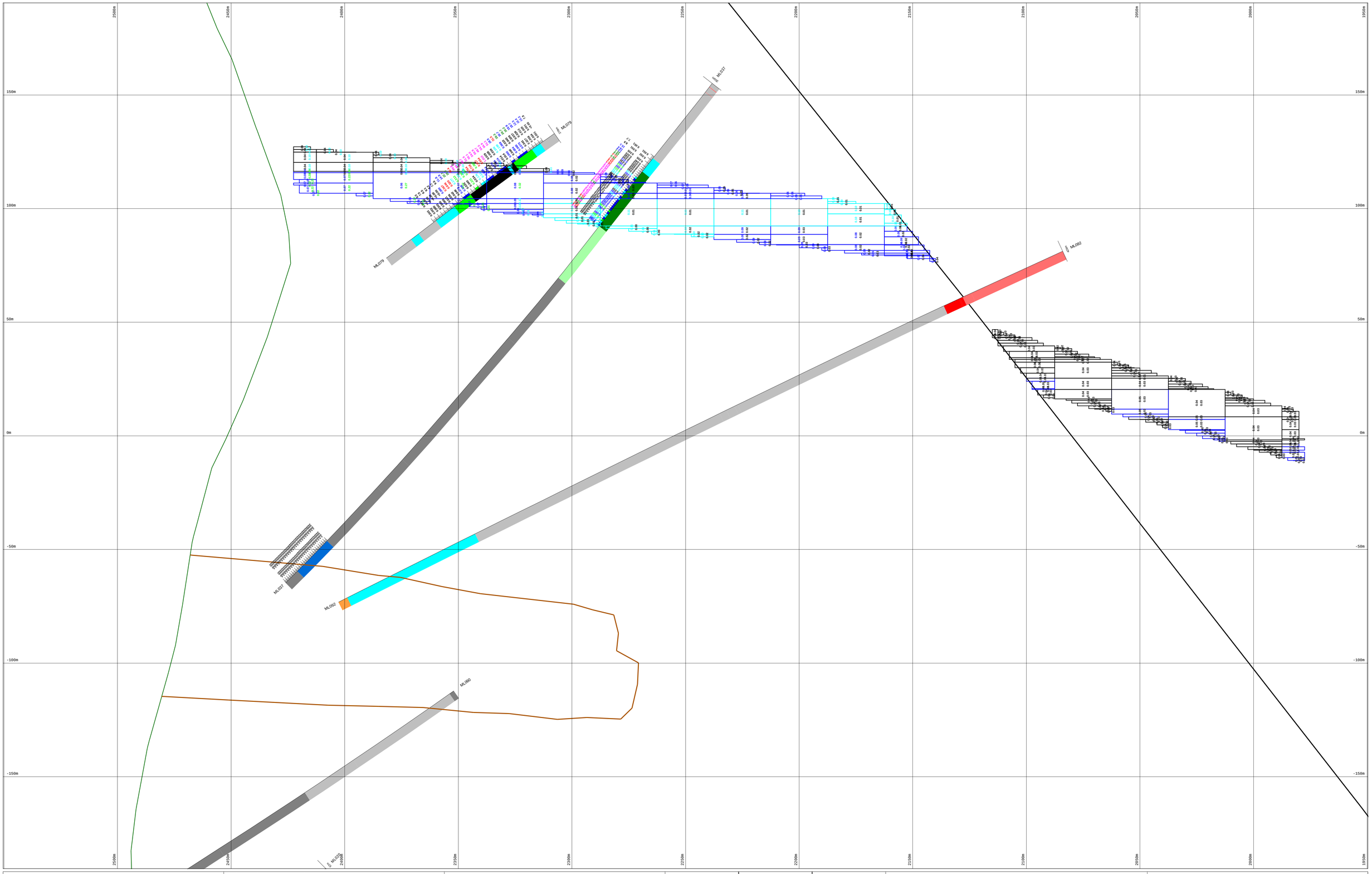
0 40 80m

Sn & WO3 Block Model section 19

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Sn & WO3 Block Model January 2009



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Left drill trace colour by lithology
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pale yellow = quartz wacke
lt blue = tuffite, blue = carbonate
lt pink = granite, red = faulted zone
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dk green = undifferentiated skarn
black = magnetite skarn
bright pink = sulphide skarn
purple = gossan, yellow = veins

Brown profile = base of localised
deep weathering (clay) zone

Assays on drill traces left to right
Sn%, WO3%, Fe%

Block labels Sn%(top)& WO3% (bottom)

Block model coloured by Sn%
black <0.05%
dark blue 0.05-0.1%
pale blue 0.1-0.2%
green 0.2-0.5%
red 0.5-1%
pink >1%

Scale	DATE	SHEET
1:750	3/3/2009	1 of 1
	REF No. 1	FILE BM_20

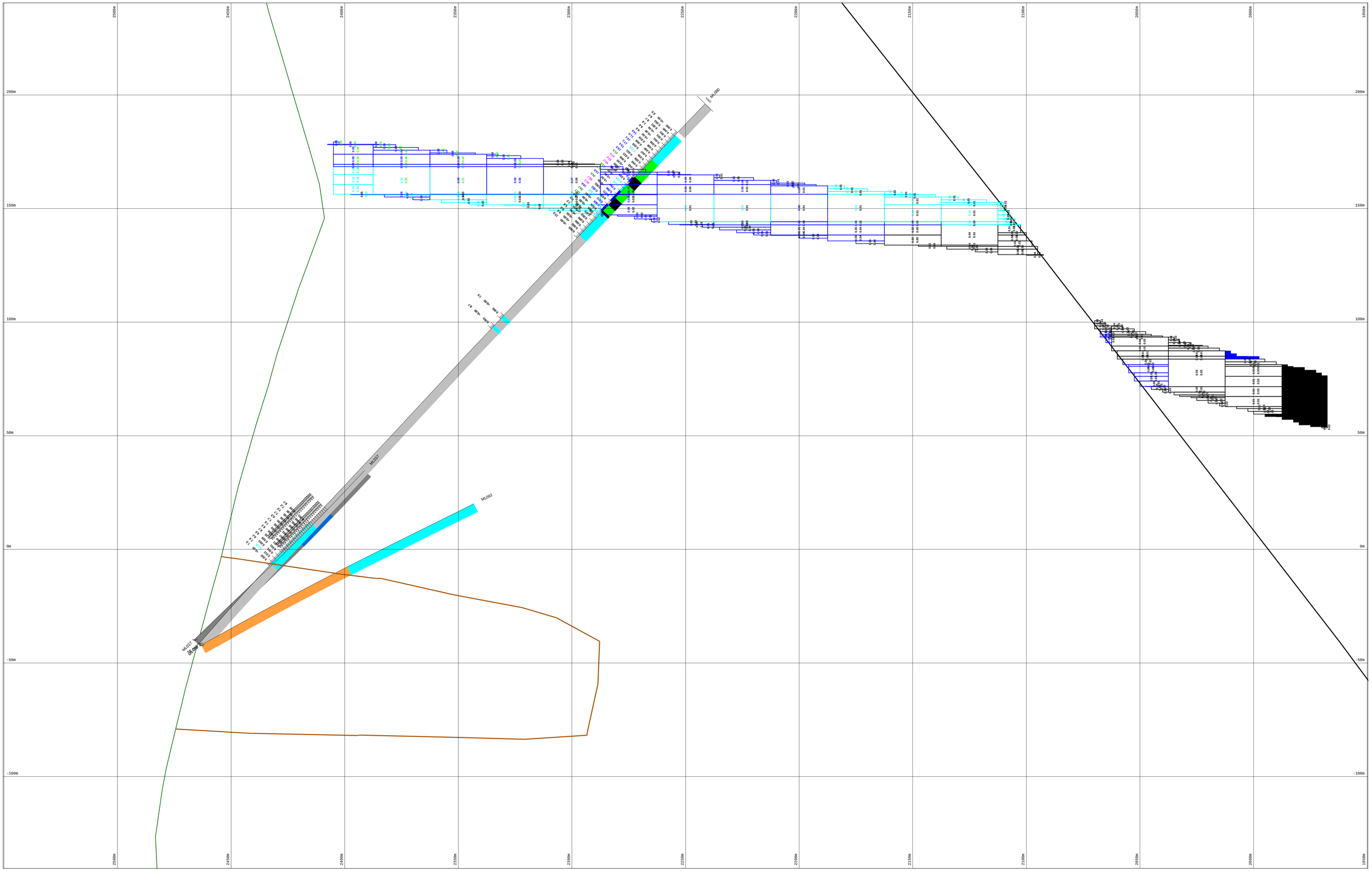
0 40 80m

Sn & WO3 Block Model section 20

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Sn & WO3 Block Model January 2009



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Left drill trace colour by lithology
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lt grey = lithic sandstone
pale yellow = quartz wacke
lt blue = tuffite, blue = carbonate
lt pink = granite, red = faulted zone
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dk green = undifferentiated skarn
black = magnetite skarn
bright pink = sulphide skarn
purple = gossan, yellow = veins

Brown profile = base of localised
deep weathering (clay) zone

Assays on drill traces left to right
Sn%, WO3%, Fe%

Block labels Sn%(top)& WO3% (bottom)

Block model coloured by Sn%
black <0.05%
dark blue 0.05-0.1%
pale blue 0.1-0.2%
green 0.2-0.5%
red 0.5-1%
pink >1%

Scale	DATE	SHEET
1:750	3/3/2009	1 of 1
	REF No. 1	FILE BM_21

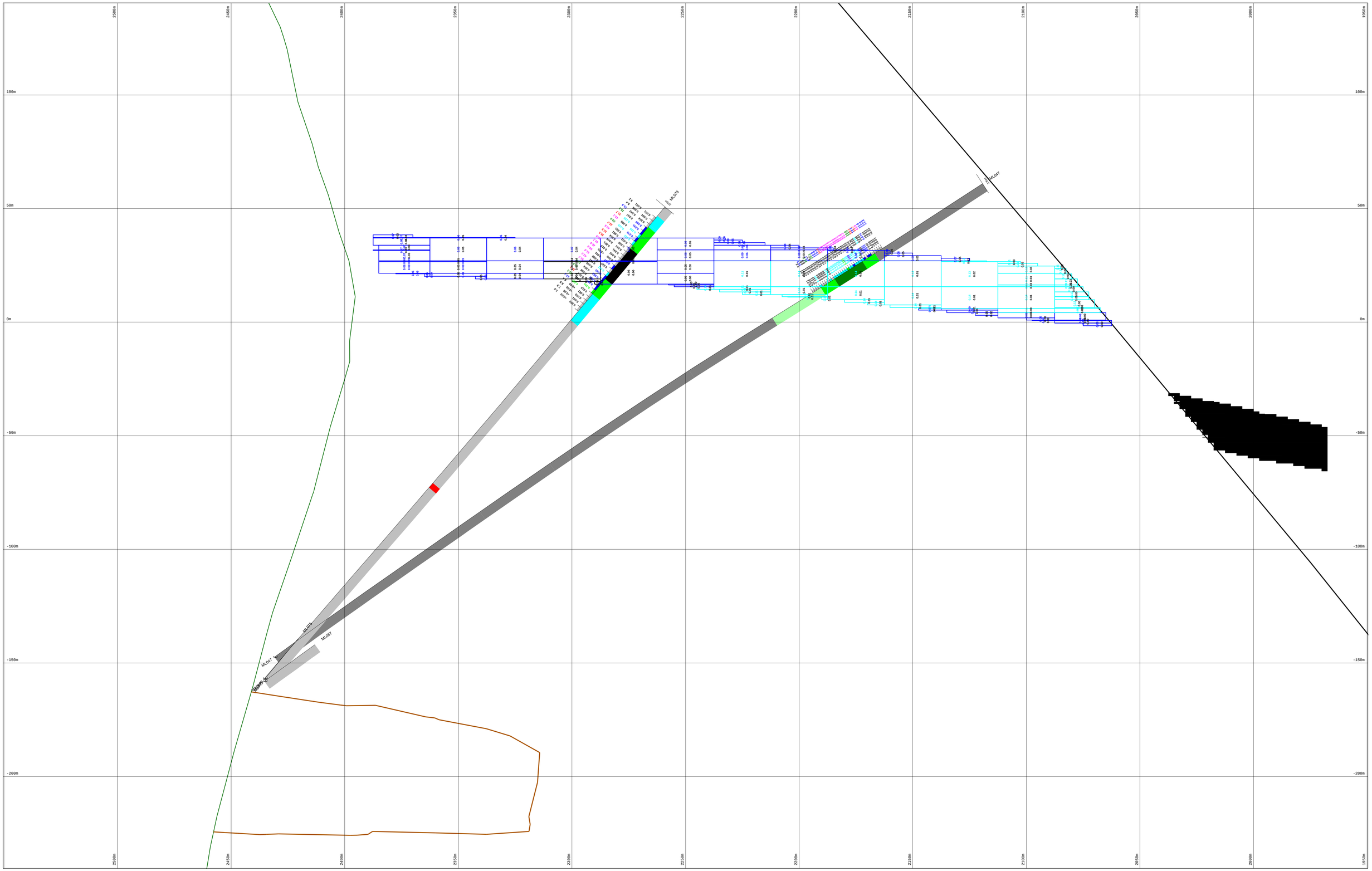
0 40 80m

Sn & WO3 Block Model section 21

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Sn & WO3 Block Model January 2009



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pale yellow = quartz wacke
lt blue = tuffite, blue = carbonate
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bright pink = sulphide skarn
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Assays on drill traces left to right
Sn%, WO3%, Fe%

Block labels Sn%(top)& WO3% (bottom)

Block model coloured by Sn%
black <0.05%
dark blue 0.05-0.1%
pale blue 0.1-0.2%
green 0.2-0.5%
red 0.5-1%
pink >1%

Scale	DATE	SHEET
1:750	3/3/2009	1 of 1
	REF No. 1	FILE BM_22

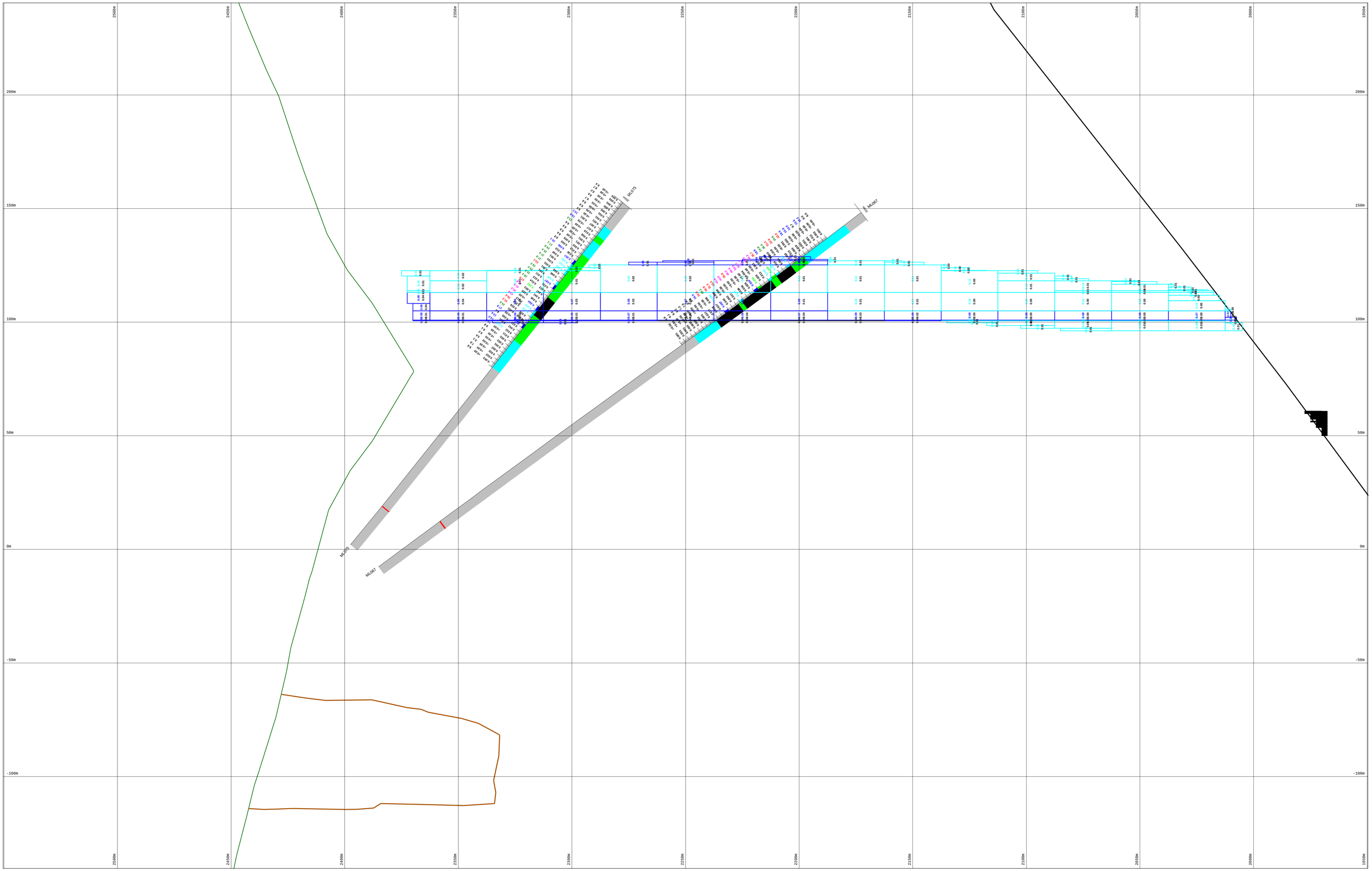
0 40 80m

Sn & WO3 Block Model section 22

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Sn & WO3 Block Model January 2009



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pale yellow = quartz wacke
lt blue = tuffite, blue = carbonate
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dk green = undifferentiated skarn
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purple = gossan, yellow = veins

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deep weathering (clay) zone

Assays on drill traces left to right
Sn%, WO3%, Fe%

Block labels Sn%(top)& WO3% (bottom)

Block model coloured by Sn%
black <0.05%
dark blue 0.05-0.1%
pale blue 0.1-0.2%
green 0.2-0.5%
red 0.5-1%
pink >1%

Scale	DATE	SHEET
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	REF No.	FILE
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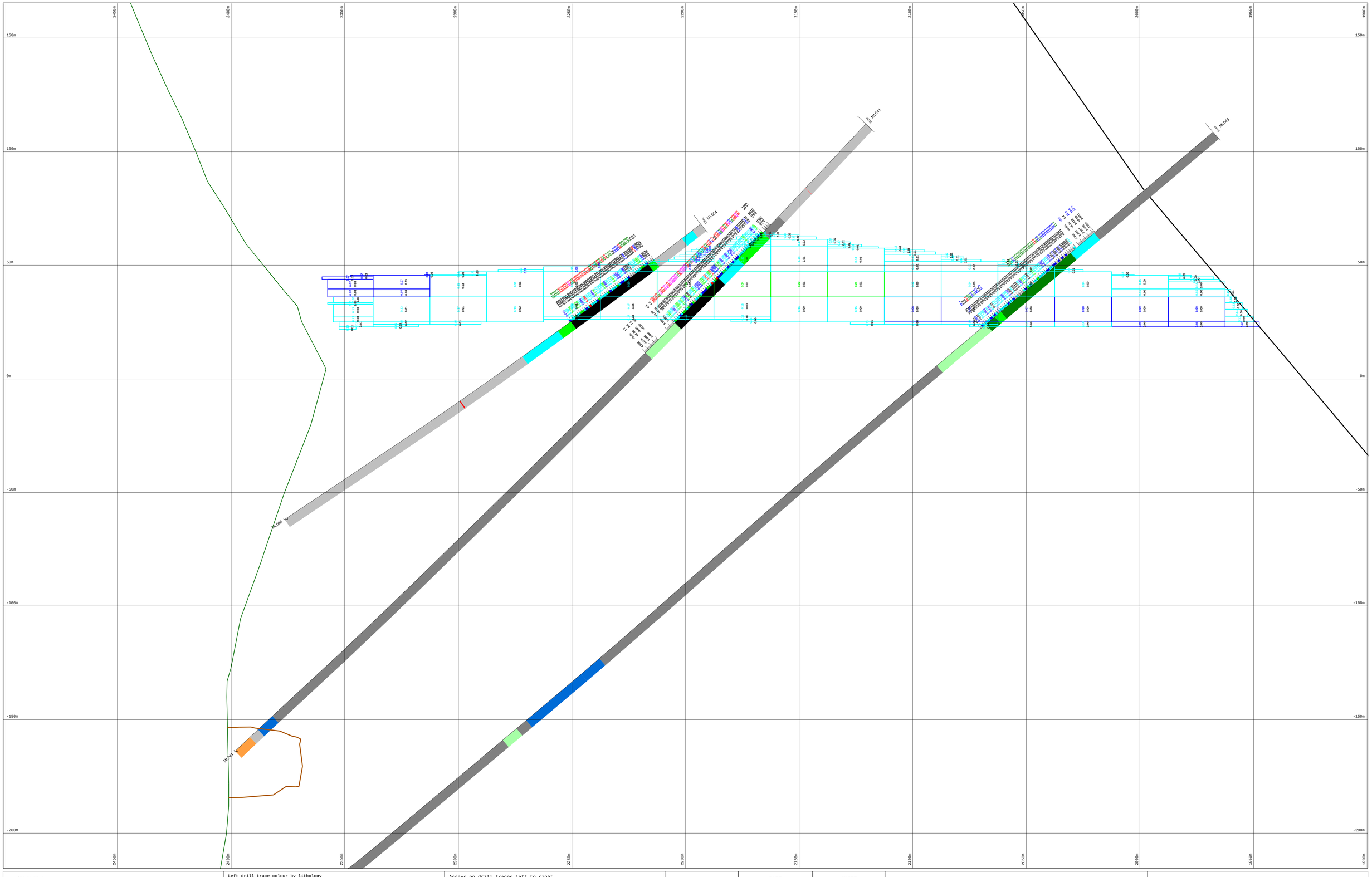
0 40 80m

Sn & WO3 Block Model section 23

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Sn%, WO3%, Fe%

Block labels Sn%(top)& WO3% (bottom)

Block model coloured by Sn%
black <0.05%
dark blue 0.05-0.1%
pale blue 0.1-0.2%
green 0.2-0.5%
red 0.5-1%
pink >1%

Scale	DATE	SHEET
1:750	3/3/2009	1 of 1
	REF No. 1	FILE BM_24

0 40 80m

Sn & WO3 Block Model section 24

Venture Minerals Ltd

Mt Lindsay Magnetite-Sn-W Project

Sn & WO3 Block Model January 2009

Appendix I

Esker metallurgical report

ESKER

Release Analysis for Scheelite and Cassiterite

on

Mt. Lindsay Zone Two Drill Core

in

Western Tasmania

for

Venture Minerals Ltd.

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Interim Report: **Release Analysis for Scheelite and Cassiterite from Mt. Lindsay Number Two Zone.**

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Subject: Carry out a release analysis on Zone Two ore from Mount Lindsay to find out at what size cssiterite and scheelite are liberated and what recovery can be expected to a saleable concentrate.

By: Nick Moony.

Date: 4th of March 2009.

SUMMARY

Results of this investigation show that scheelite recovery should exceed 80% in a conventional gravity/ flotation circuit but saleable grades were not obtained due to the small sample sizes. A final concentrate grade has yet to be determined.

Tin recovery was moderate at best. More work is required to understand the reason for this but, from the interpretation of the results of the testwork, it is likely that tin occurs in more than one mineral or cassiterite is bound up in gangue as ultra fine flour tin. It is recommended that superpanning products be mineralogically identified to determine tin species present.

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INTRODUCTION

Seven non magnetic rejects were selected from a series of tests that were carried out by Promet MetallurgIcal Laboratories/AMMTEC in Perth. These magnetic separation tests were carried out at different sizes ranging from 1,180μm to 38μm to determine magnetite liberation from pyrite and silica. The sample batch was named AA11537 Zone 2. The non magnetic rejects were shipped to BRL in Tamania in January 2009.

The magnetic separation tests had been carried out at 1,180μm, 500μm, 250μm, 150μm, 75μm, 45μm and 38μm. The 1,180μm and 150μm non magnetic tests were selected for this sighter release analysis; each sample weighed about 2 kilograms.

The selected samples were then screened at each screen size down to 7μm and each of these fractions was individually superpanned

Super panning is one of the best ways to determinate the economic potential of oxide minerals when treating smaller sample lots for minerals such as wolfram,scheelite and cassiterite**.** Super panning on a size by size basis defines a grade recovery curve, liberation size, variability between ore zones, contaminates and regrinding requirements.

The results from the superpanning of the the two Zone 2 samples were very good for scheelite and problematic for tin.

Results show that gravity separation will recover up to 90% of the scheelite at both grind sizes and any middlings produced from 850 μm down will contain most of the composite scheelite. This allows for up to 80% of the weight to be rejected at around 1,000μm down to 7μm.

At some stage sulphide removal is essential as arsenopyrite dominated all concentrates in the 1,180μm grind. Sulphide removal is not difficult but must be done judiciously to prevent over grinding of scheelite.

Results indicate that a simple two stage grinding circuit will be used to maximise scheelite recovery and remove suplhides.

Tin recovery is another matter altogether. Cassiterite liberation never exceeded 50% on normalised screen fractions for both grinds sizes .The final tail was constant, always assaying between 0.11% Sn and 0.16% Sn. This and a few other circumstantial observations suggest that there could be more than one tin mineral present in the ore.

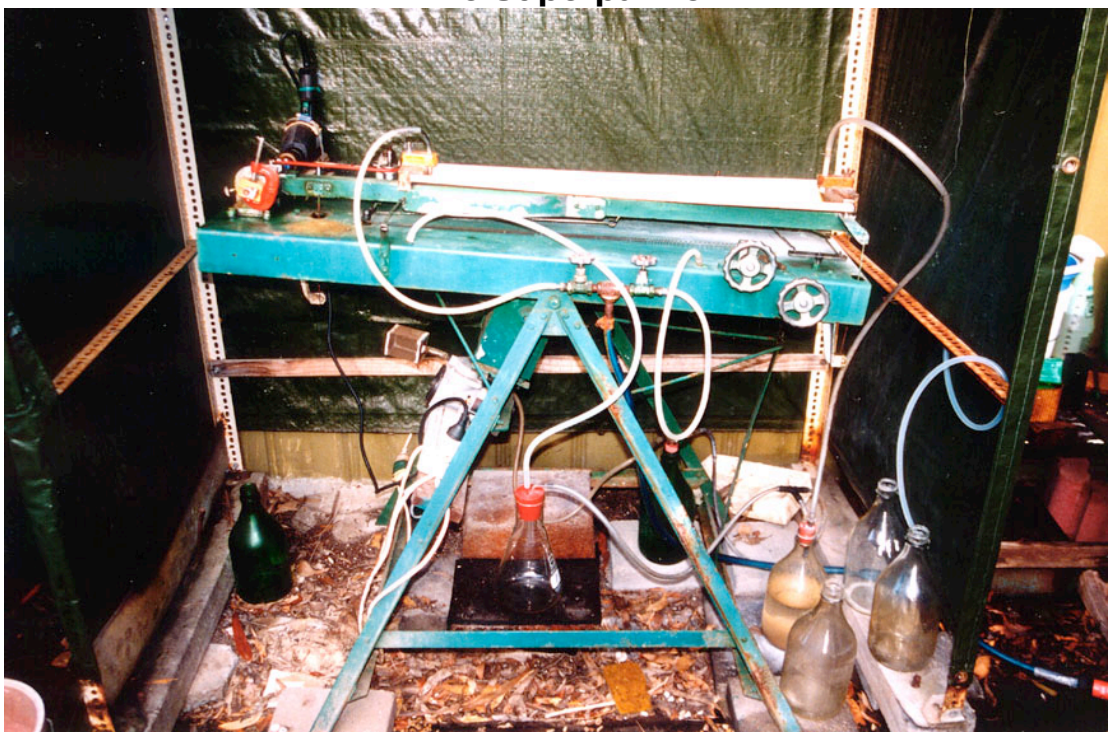
Combined cassiterite scheelite concentrates are a rare occurrence. Separation on coarser sizes (+53μm) is by electro static separation. Clean separation on finer sizes may have to be carried out by acid digestion and re-precipitation of the scheelite.

1.0 - Discussion of Results
1.1 - Superpanning

Each fraction was re screened and cyclosized down to about 7μm and all screen sizes were superpanned separately.

Plate One

The Superpanner



The University of Toronto developed Superpanning in the early 1940s to help the war effort by understanding how to recover the fine cassiterite from the zinc tailings at the Sullivan mine in BC Canada. This is the most elegant device for understanding Economic Oxide Minerals (EOM) metallurgical performance on -1,250μm material, especially where sample weight is limited. A picture of a super panner is shown above in **Plate One**. The superpanner can produce highly sophisticated grade recovery curves, define flowsheet design data for new ore bodies, compare new ore types to mill performance in existing mills and produce EOM specimens for assaying and mineralogical examination. A vanning plaque can be used instead of a superpanner. If neither of these tools is available laboratory tables can be used as an alternative but they are not as accurate or precise as a superpanner. Superpanning at mines such as Renison are mostly carried out on samples where sulphides have been removed. Panning closely sized fractions greatly improves results. The Mozley separator is also used in **realise** analysis of EOM's when larger samples are available and is an excellent roughing tool.

It is important to understand that when liberating EOMs almost all the losses that occur are due to unliberated fines, misplaced fines or as -30μm free particles which at this size are lost as slimes due to Stokes Law in gravity circuits. Knowing this is vital if improvements are to be made such as using flotation or centrifuges which can pre concentrate 30μm fines.

1.2 - Description Of Work

1.21-150μm Grind Results

This grind size ferro non-magnetics, that had been shipped from AMMTEC in Perth, was selected for sulphide removal as it was expected that this grind was coarse enough to retain the integrity of the cassiterite and scheelite, but would be fine enough to ensure successful sulphide removal.

Table 1

Sulphide Flotation

			Sn	WO3	S	Fe	As	Sn	WO3	S	Fe	As
Product	Wt.	Wt%	%	%	%	%	%	%DISTRIBUTION				
Conc.	95.28	15.88	0.13	0.173	7.59	23.4	3.12	8.9	8.5	90.5	20	93.7
Tail	504.72	84.12	0.25	0.349	0.15	17.6	0.04	91.1	91.5	9.5	80	6.3
Feed Calc.	600.00	100.00	0.23	0.32	1.31	18.5	0.53	100.0	100.0	100.0	100	100.0

Comments.

The sulphide flotation proved to be difficult and very slow as the sulphides must have been somewhat oxidised or tarnished and about 2.0 kg per tonne of p. a. x. (collector) had to be added over a 45 minutes flotation time and, as can be seen in the super pannings, the coarser pyrite and arsenopyrite did not float.

Table 2

300μm eperation

							% Distribution			
	Wt	Wt%	%Sn	%WO3	%S	%Fe	Sn	WO3	S	Fe
300μm(A)		12.5		*0.17*	*0.051*	*0.46*	*15.0*			
Conc	0.11	1.05	2.05	3.74	6.24	27.6	13.6	41.2	12.7	3.9
Mids 1	1.27	12.19	0.37	0.404	0.97	18.3	27.8	50	22.6	14.9
Tail	9.04	86.756	0.11	0.008	0.39	14.0	58.6	8.8	64.7	81.2
Calc	10.42	100.00	0.16	0.09	0.51	15.0	100.0	100.0	100.0	100.0

Comments.

Because of the interference of sulphides, especially arsenopyrite, the sulphides were removed before superpanning. It is noted that in this fraction the Sulphide level was still high in the concentrate and tarnished pyrite was observed under the microscope. Free minor scheelite was observed under the UV light. It is not known why the Fe content is so high as no iron minerals were observed. The low scheelite grade in both the feed and tail suggest that all the scheelite has already been liberated. Panning of all fractions was slow as the gangue minerals tended to bunch, suggesting that the gangue minerals are heavy. No quartz was observed. The original weight contained in each fraction is given beside the head assay. The difference in weight occurred because a small head sample was taken.

Table 3

212μm seperation

		Wt	Wt%	%Sn	%W03	%S	%Fe	% Distribution Sn	WO3	S	Fe
212μm(A)		**40.6**		***0.24***	***0.128***	***0.35***	***17.0***				
Conc		0.30	0.78	8.27	**17.49**	11.43	24.1	28.8	76.2	18.5	1.1
Mids	1	1.14	2.95	0.57	0.857	2.92	21.6	7.6	14.2	17.9	3.8
Mids	2	5.83	15.08	0.2	0.055	0.43	17.7	63.6	9.6	63.6	96.1
Calc.		**38.65**	**100.00**	**0.22**	**0.17**	**0.48**	**16.72**	100.0	100.0	100.0	100.0

Comments.

No cassiterite could be readiily detected in the concentrate. Major free scheelite was observed as well as tarnished free pyrite and untarnished arsenopyrite was conspicuous. No scheelite could be detected in the middlings under UV light.

Table 4

150μm Seperation

	Wt	Wt%	%Sn	%W03	%S	%Fe	% Distribution Sn	WO3	S	Fe
*150μm(A)*61.4		***0.29***	***0.282***	***0.22***	***17.0***					
Conc	0.56	0.94	10.97	**29.48**	2.91	14.5	38.96	88.5	13.3	0.8
Mids 1	0.45	0.75	1.19	2.47	1.51	20.2	3.4	6	5.4	0.9
Mids 2	7.73	12.92	0.19	0.066	0.25	17.8	9.2	3	15.5	13.5
Tail	51.11	85.39	0.15	0.01	0.16	16.9	48.4	2.5	65.8	84.8
Calc.	59.85	100	0.26	0.31	2.08	17.01	99.96	100.0	100.0	100.0

Comments.

Minor free cassiterite was detected in the concentrate, major free scheelite was observed, minor free pyrite was found but no arsenoypyrite was observed.. No scheelite could be detected in the middlings under UV light.

Table 5

106μm Seperation

	Wt	Wt%	%Sn	%W03	%S	%Fe	% Distribution Sn	WO3	S	Fe
106μm(A)55.2		***0.33***	***0.474***	***0.08***	***17.3***					
Conc	0.86	1.59	8.35	**25.99**	0.48	15.1	48.5	93.0	6.5	1.5
Mids 1	1.64	3.04	0.29	0.367	0.21	17.8	3.0	2.5	5.5	3.0
Tail	51.48	95.37	0.14	0.02	0.11	17.1	48.5	4.5	88	95.5
Calc	53.98	100.00	0.28	0.44	0.12	17.0	100.0	100.0	100.0	100.0

Comments.

Minor free cassiterite was detected, major free scheelite was conspicuous, no sulphides were seen. Minor small scheelite inclusions could be detected in the middlings.

Table 6

75μm Seperation

		Wt	Wt%	%Sn	%W03	%S	%Fe	% Distribution Sn	WO3	S	Fe
75μm (A)		***45.8***		***0.3***	***0.482***	***0.05***	***18.1***				
Conc		0.96	2.17	6.74	**23.42**	0.38	17.0	51.0	92.0	22.0	2
Midds	1	2.36	5.35	0.21	0.164	0.03	17.3	4.0	1.5	4.0	5
Tail		40.8	92.48	0.14	0.042	0.03	17.5	45.0	6.5	74.0	93
Calc		44.12	100.00	0.29	0.55	0.04	17.5	100.0	100.0	100.0	100

Comments.

Free cassiterite was detected and major free scheelite dominated the concentrate, no sulphides were seen. No scheelite or cassiterite inclusions could be detected in the middlings.

Table 7

53µm seperation

							% Distribution			
	Wt	Wt%	%Sn	%WO3	%S	%Fe	Sn	WO3	S	Fe
53µm (A)	*40.2*		*0.3*	*0.526*	*0.03*	*18.3*				
Conc.	0.63	1.63	7.13	**28.36**	0.48	14.2	44.0	87	13	1.0
Mids .1	1.33	3.43	0.23	0.456	0.05	17.4	3.0	3	3	3.5
Mids. 2	7.01	18.08	0.18	0.115	0.07	17.9	12.5	4	21	18.0
Tail	29.79	76.86	0.14	0.043	0.05	18.3	40.5	6	63	77.5
Calc	38.76	100	0.26	0.53	0.06	18.14	100.0	100	100	100.0

Comments.

Free cassiterite was detected? but major free scheelite dominated the concentrate. No sulphides were seen. No scheelite orcassiterite inclusions could be detected in the middlings.

Table 8

38µm seperation

							% Distribution			
	Wt	Wt%	%Sn	%WO3	%S	%Fe	Sn	WO3	S	Fe
38µm (A)	*27.4*		*0.27*	*0.536*	*0.06*	*18.1*				
Conc.	0.49	1.91	6.00	**23.73**	0.66	14	41.8	74.2	17.5	1.5
Conc. 2	0.2	0.78	0.47	2.49	0.14	17.7	1.3	3.2	1.5	0.7
Mids. 1	5.2	20.19	0.22	0.334	0.04	18.0	16.3	11.0	11.3	20.0
Mids. 2	3.1	12.04	0.11	0.223	0.09	18.8	4.9	4.3	15.2	12.5
Tail	16.76	65.08	0.15	0.066	0.06	18.5	35.7	7.3	54.5	65.3
+ Calc	25.75	100.00	0.27	0.61	0.07	18.3	100.0	100.0	100	100.0

Comments.

As above.

Table 9

26µm seperation

							% Distribution			
	Wt	Wt%	%Sn	%WO3	%S	%Fe	Sn	WO3	S	Fe
26µm (A)6.20		*0.97*	*3.37*	*0.19*	*17.3*					
Conc 1	0.30	6.3	7.49	**31.82**	1.36	9.7	61.6	76.7	36.5	3.5
Conc 2	0.30	6.3	0.92	3.16	0.39	18.6	7.6	7.6	9.8	6.7
Mids 1	1.15	23.9	0.56	1.38	0.13	17.2	17.5	12.6	13.2	23.5
Mids 2	3.05	63.5	0.16	0.132	0.15	18.3	13.3	3.2	40.5	66.3
Calc	4.80	100	0.76	2.620	0.23	17.51	100.0	100.0	100.0	100.0

Comments.

Observations of conc. 1 under the UV light and microscope suggested a +50% scheelite concentrate. Minor cassiterite and minor pyrite was also observed and no cassiterite or scheelite was seen in the middlings.

Table 10

20μm Seperation

	Wt	Wt%	%Sn	%W03	%S	%Fe	% Distribution Sn	W03	S	Fe
20μm (A)	*14.3*		*0.23*	*0.312*	*0.04*	*18.2*				
Conc	0.12	0.86	5.34	**29.78**	1.65	14.9	22.0	69	19	1
Mids 1	0.36	2.93	0.43	1.65	0.06	18.3	6.0	13	2	4
Mids 2	0.50	4.23	0.32	0.711	2.71	19.4	6.5	8	18	3
Tail	11.25	91.98	0.15	0.036	0.05	18.1	65.5	10	61	92
Calc	12.23	100.00	0.21	0.37	0.07	18.1	100.0	100	100	100

Comments.

At this size range meaningful observations under the binocular microscope are difficult, the UV light still detects scheelite which tends to be pale purple in colour.

Table 11

14μm Seperation

	Wt	Wt%	%Sn	%W03	%S	%Fe	% Distribution Sn	W03	S	Fe
14μm(A)15.3		*0.18*	*0.208*	*0.06*	*18.4*					
Conc	0.09	0.7	3.14	**16.98**	0.78	16.2	12.0	44	10	0.5
Mids 1	0.26	2.0	0.67	2.02	0.19	17.6	7.0	15	7	2.0
Mids 2	2.23	17.1	0.25	0.368	0.07	17.3	23.5	23	23	16.0
Tail	10.42	80.2	0.13	0.067	0.04	18.9	57.5	18	60	81.5
Calc	13.00	100.0	0.18	0.27	0.05	18.6	100.0	100	100	100.0

Table 12

10μm Seperation

	Wt	Wt%	%Sn	%W03	%S	%Fe	% Distribution Sn	W03	S
10μm (A)	*14.1*		*0.17*	*0.224*	*0.08*	*19.1*			
Conc	0.06	0.5	3.0	**18.000**	0.95	16	9.0	44	6	1
Mids 1	0.79	6.5	0.24	0.322	0.14	16.9	9.5	11	11	6
Tail	11.55	93.0	0.14	0.093	0.07	19	81.5	45	83	93
	12.40	100.0	0.16	0.19	0.08	18.9	100.0	100	100	100
+7μm	**9.28**		*0.16*	*0.16*	*0.17*	*19.0*				
-7μm	**50.66**		**0.14**	**0.09**	**0.12**	**17.0**				

Figure 1

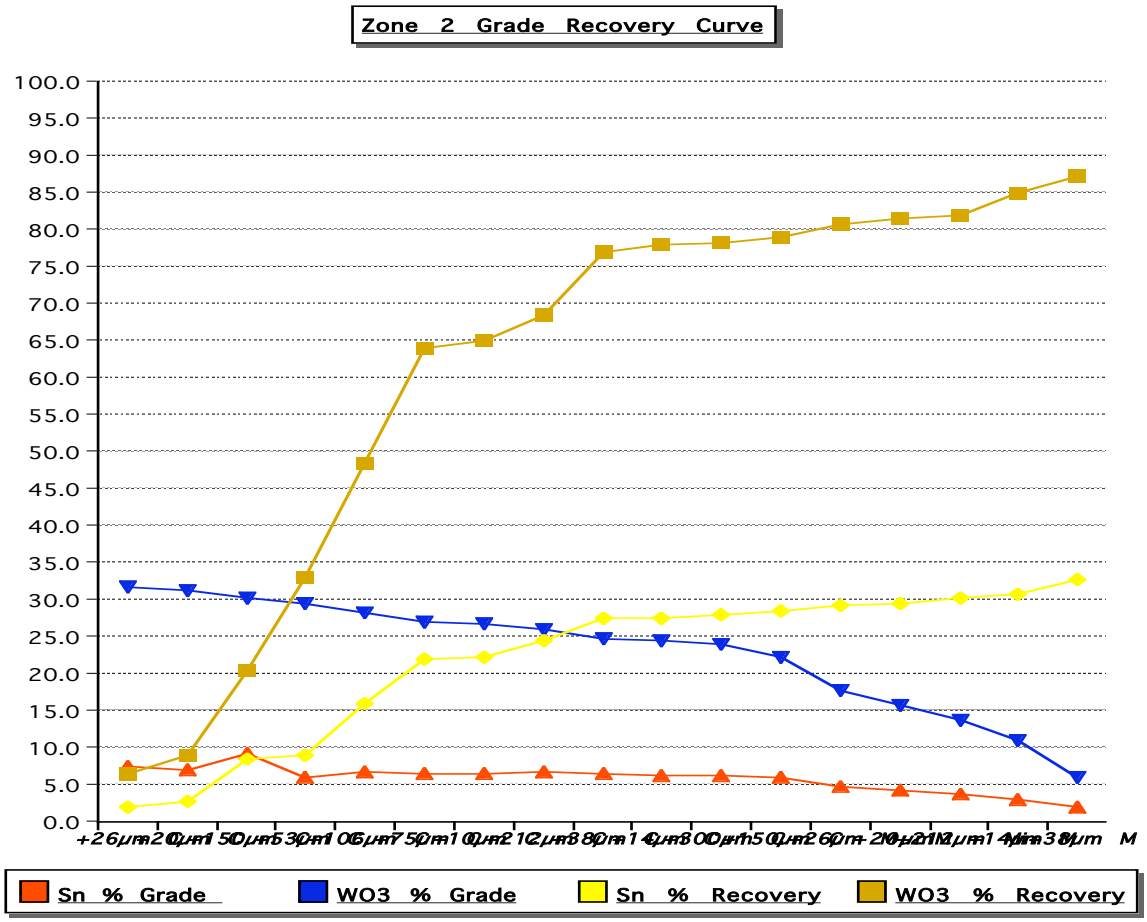


Figure 2

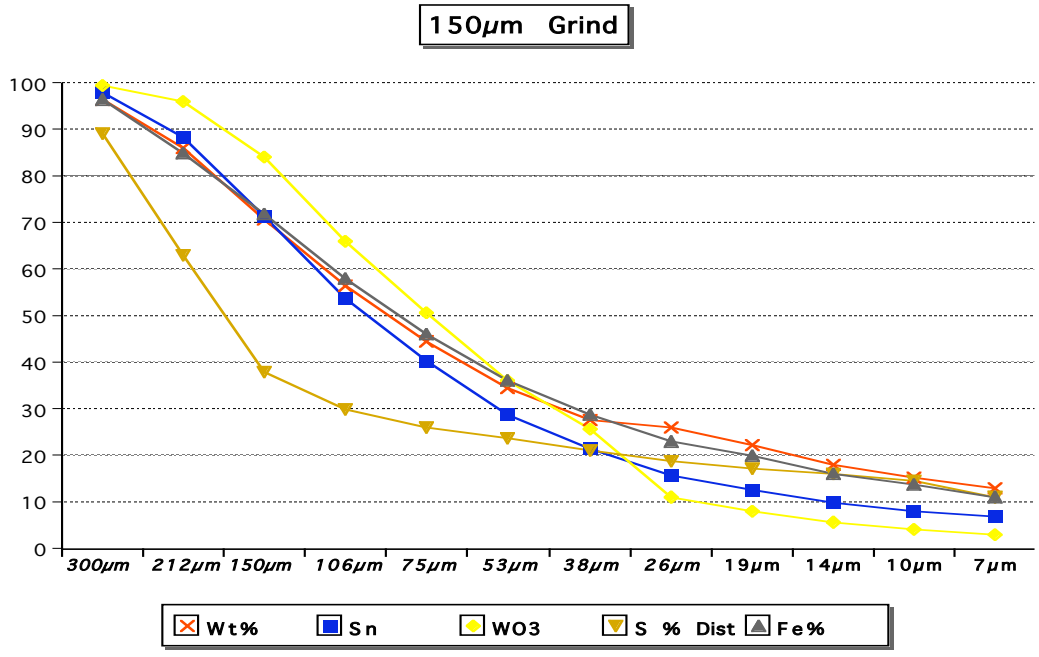


Figure 3

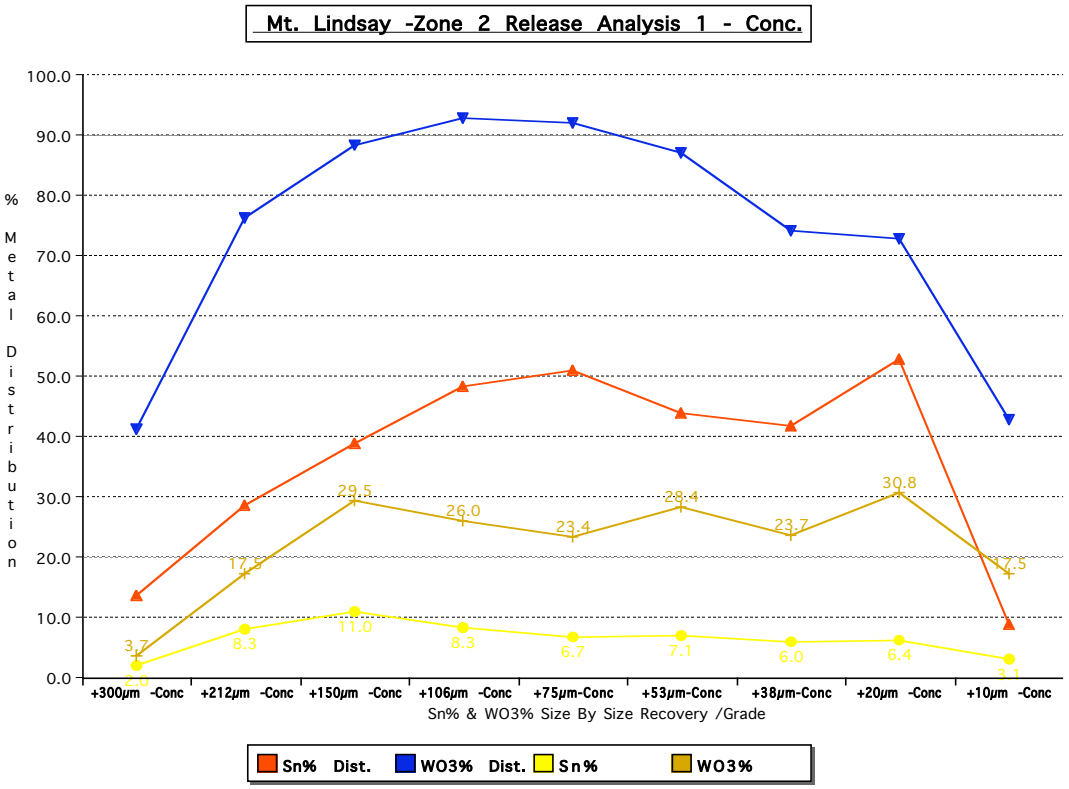


Figure 4

General Comments On The 150µm Grind Results

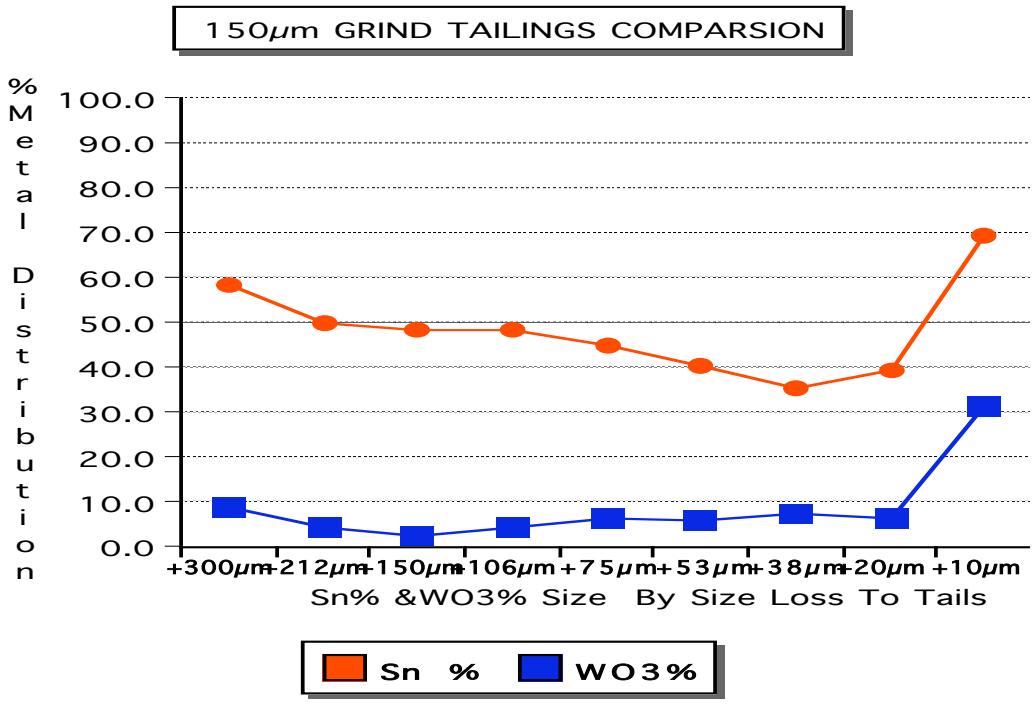
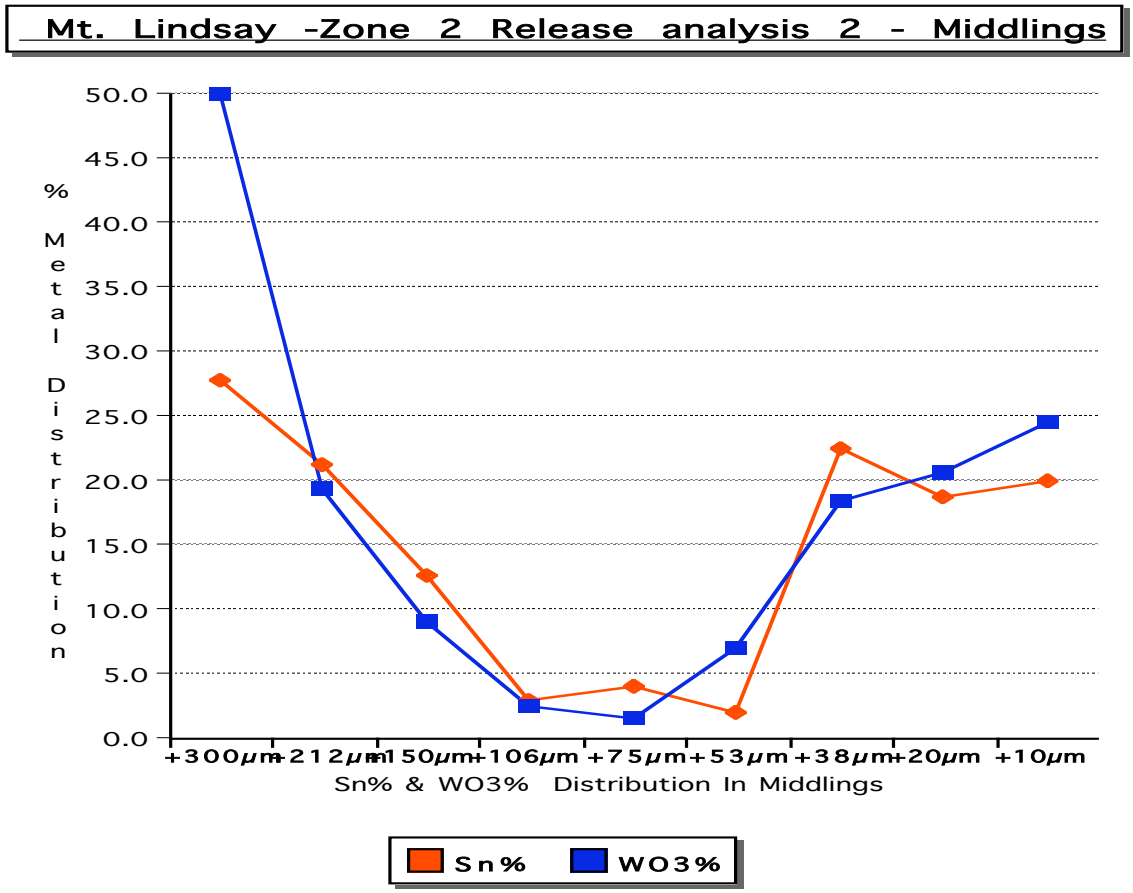


Figure 5



1.22 - General Observations on the 150µm Grind results

- It can be seen in **Figure 1** above that the liberation for scheelite is good and the overall recovery was very high at about 86% to 4% WO3 and, from the 300µm fraction, tail grades were very low.

- In **Figure 3** it can be seen that when fully liberated scheelite recovery reaches over 90% and recovery only seems to drop in the sub gravity zone which occurs about 38µm for both scheelite and cassiterite.

- This can also be observed in **Figure 4** where it seems scheelite fully liberates at about 106µm and any composite scheelite that is present will be bound up in a small middlings of the coarser fraction allowing at least 80% of the weight to be rejected at less than 0.05% WO3.

- In **Figure 2** it can be seen that while the scheelite liberates first, it also slimes less than the other heavy minerals. This is remarkable as scheelite tends to slime in other deposits. Also note the poor sulphide rejection in the coarser fractions. **Tables 2 and 3** show that at least some of the sulphides are free.

- In contrast tin recovery was very poor at about 40% to 4% Sn, tin grades never exceeded 10% Sn.

- The tin assay in the tails was very flat at 0.12%Sn to 0.15%Sn, as shown in **Figure 4,** suggesting that there is another tin mineral present which is lighter than cassiterite or some cassiterite occurs as flour tin tied up in light gangue, but this is unlikely.

- This interpretation is reinforced by observing the reduction in middlings below 150μm (see **Figure 5).** Any increase in the tin or tugsten content in the finer middlings fractions is related to Stokes Law and is very likely that any cassiterite or scheelite present in the -53μm middlings is just free and held up in heavy gangue.

- Soluble tin analyses are now being undertaken on the tails samples.

- The production of high grade concentrates was not attempted because of the tiny weights involved which could be as low as 0.06 grams in some concentrates.

- Very slow and poorer sulphide removal in the coarser fractions is almost certainly due to the sulphides being oxidised.

- Full pyrite liberation also occurs at about 75μm, which may have implications for magnatite recovery.

1.31- 1,800μm Grind results.

This grind size was selected **first** from a suite of different non magnetic rejects having a range of sizes sent to BRL in Burnie from AMMTEC in perth WA. The aim in choosing the coarsest grind was to see if scheelite or cassiterite liberated at a size coarser than 1,000μm. Super pannings were carried out on most size fractions down to 10μm.

Table 13

850μm Seperation

Product		Wt.	Wt%	Sn %	WO3 %	S %	Sn% DISTRIBUTION	WO3%	S%
850μm(A)				0.16	0.08	1.02			
850 Conc	1.45	1.62		0.16	1.44	3.79	1.5	35.3	6.8
1180 Conc	5.07	5.65		0.15	0.114	1.52	4.5	8.5	8.5
1180/850 Tail	83.22	92.73		0.17	0.043	0.83	94.0	56.2	84.7
Feed Calc	89.74	100.00		0.16	0.07	0.91	100.0	100.0	100.0

Comments

Superpanning at this coarse size was difficult, nevertheless some coarse scheelite, tarnished pyrite and arsenopyrite were observed. Note that the tail contained over 90% of the weight, with an assay of less than 0.05% WO3 and is reject able.

Table 14

600μm Seperation

Product	Wt.	Wt%	Sn %	WO3 %	S %	Sn% DISTRIBUTION	WO3%	S%
600μm(A)			*0.21*	*0.165*	*1.29*			
600 Conc	3.33	10.24	0.53	2.59	4.32	26.2	85.5	40.0
600 Tail	29.18	89.76	0.17	0.048	0.74	73.8	14.5	60.0
Feed Calc	32.51	100	0.21	0.31	1.11	100.0	100.0	100.0

Comments

Superpanning at this size was not as difficult. Coarse scheelite, tarnished pyrite and arsenopyrite were observed and the sulphides tend to restrict the ability to be selective. Again tail contained just under 90% of the weight, but the assay is less than 0.05% WO3 and is reject able.

Table 15

425µm Seperation

Product		Wt.	Wt%	Sn	WO3	S	Sn%	WO3%	S%
			%	%	%		DISTRIBUTION		
425µm(A)	*23.5*			*0.21*	*0.473*	*1.88*			
425 Conc	0.93	4.38		1.78	7.61	13.78	40.3	83.0	40
425 Mids	7.78	36.68		0.19	0.173	1.79	8.5	15.5	43
Tails	12.5	58.94		0.13	0.014	0.43	51.2	1.5	17
Feed Calc	21.21	100.00		0.15	0.400	1.51	100.0	100.0	100

Comments

In Superpanning this fraction it was attempted to see if any light fraction could be removed and it was found that about 60% of the weight seems to occur as real lights and contains very little WO3, but a lot of tin is locked up in this light fraction. Sulphides dominated the concentrate and picking the cut point for determining concentrate grade was not easy. The UV light did help in detecting a cut off point for scheelite. All the scheelite in the concentrate was free.

Table 16

300µm Seperation

Product	Wt.	Wt%	Sn	WO3	S	Sn%	WO3%	S%
		%	%	%		DISTRIBUTION		
300µm(A)			0.26	0.702	1.78			
300 Conc	3.11	19.33	0.99	3.79	9.19	63.3	97.3	78.1
300 Mids 1	1.96	12.18	0.18	0.11	1.686	7.2	1.8	9.0
300 Tail	11.02	68.49	0.13	0.014	0.43	29.5	0.9	12.9
Feed Calc	16.09	100.00	0.30	0.75	2.27	100.0	100.0	100.0

Comments

In Superpanning this fraction it was attempted to reduce the middlings and see if the tails grade deteriorated. Recovery improved, but concentrate grade was lower again. Sulphide interference was observed, all the scheelite in the concentrate was free, no cassiterite could be detected.

Table 17

212µm Seperation

Product	Wt.	Wt%	Sn	WO3	S	Sn%	WO3%	S%
			%	%	%	DISTRIBUTION		
212µm(A)			0.31	0.581	1.83			
212 Conc 1	1.51	5.24	2.39	9.52	17.22	45.3	86.6	51.9
212 Mids 1	3.27	11.34	0.30	0.53	3.27	12.3	10.4	21.3
212 Tail	24.05	83.42	0.14	0.02	0.56	42.4	3.0	26.8
Feed Calc	28.83	100.00	0.28	0.57	1.73	100.0	100.0	100.0

Comments

In Superpanning this fraction it was attempted to increase concentrate grade and separate the sulphide away from the cassiterite and scheelite, arsenopyrite interference was significant and made this separation impossible. Major free scheelite was observed and there seemed to be a trace of free cassiterite present. Minor free scheelite was observed in the middlings as a tiny rim or tail on the vanning plaque. While this did not help recovery the concentrate grade was marginally better.

Table 18

150μm Seperation

Product	Number	Weight	Wt%	Sn %	WO3 %	S %	Sn UNITS	WO3 UNITS	S UNITS	Sn% DISTRIBUTON	WO3% DISTRIBUTON	S% DISTRIBUTON
150μm(A)	454024			0.31	0.716	1.96						
150 Conc	1454025	1.36	5.62	2.37	10.43	18.29	13.31	58.62	102.79	46.6	75.2	56.5
150 Mids	454026/027	4.18	17.28	0.26	1.03	3.41	4.49	17.79	58.92	15.7	22.8	32.4
150 Tail	454028	18.63	77.10	0.14	0.018	0.26	10.79	1.54	20.05	37.7	2.0	11.1
Feed Calc.		24.17	100.00	0.29	0.78	1.82	28.59	77.95	181.76	100.0	100.0	100.0

Comments

In Superpanning this fraction it was attempted to again increase concentrate grade and separate the sulphide away from the cassiterite and scheelite. Arsenonpyrite interference was again significant and made this separation very difficult. Major free scheelite was observed in the concentrate and there was a trace of free cassiterite present in the middlings. No cassiterite was observed in the concentrate.

Table 19

75μm Seperation

Product	Number	Weight	Wt%	Sn %	WO3 %	S %	Fe %	As %	Sn% DISTRIBUTON	WO3% DISTRIBUTON	S% DISTRIBUTON	Fe% DISTRIBUTON	As% DISTRIBUTON
75μm(A)	*454036*			*0.32*	*0.671*	*1.7*	*19.1*	*0.74*					
75 Conc 1	037/38	1.12	5.11	2.17	11.71	17.5	27.0	13.90	45.4	90.9	51.8	7.1	91.5
75 Mids 1	039/040	5.3	24.14	0.17	0.19	1.95	19.6	0.20	16.8	7.1	27.3	24.5	6.5
75 Tail	454041	15.53	70.75	0.13	0.023	0.51	18.6	0.02	37.8	2.0	20.9	68.4	2.0
Feed Calc		21.95	100.00	0.24	0.66	1.72	19.3	0.77	100.0	100.0	100.0	100.0	100.0

Comments

Due to small concentrate weights the 106μm and 75μm fractions were combined; this also allowed Fe and As assays to be carried out on the concentrate and shows the difficulty in stark terms. The minerals assayed make up 90% of the concentrate, say 3% cassiterite, 15% scheelite, 34% pyrite, 24% iron mineral sand and 23% arsenopyrite **and** leaves little room for anything else. In panning, all the effort was to achieve recovery and major free scheelite was observed in the concentrate as well as major arsenopyrite and minor cassiterite?? Minor free scheelite was observed in the middlings and extraction of scheelite was very slow.

Table 20

38μm Seperation

Product	Number	Weight	Wt%	Sn %	WO3 %	S %	Fe %	As %	Sn% DISTRIBUTON	WO3% DISTRIBUTON	S% DISTRIBUTON	Fe% DISTRIBUTON	As% DISTRIBUTON
38μm(A)	*454047*			*0.23*	*0.581*	*1.43*	*19.5*	*0.59*					
38 Conc 1	048/49	0.56	3.22	2.55	13.5	13.5	18.5	10	36.0	92.1	32.8	3	84
38 Mids	454050	1.14	6.57	0.17	0.162	1.99	18.9	0.14	4.9	2.2	9.9	6	3
38 Tail	454051	15.65	90.21	0.15	(0.03)	0.84	19.1	0.06	59.1	5.7	57.3	91	13
		17.35	100.00	0.27	0.58	1.45	19.1	0.38	100.0	100.0	100.0	100	100

Comments

Due to small concentrate weights, the 53μm and 38μm fractions were combined and results were much the same as the previous fraction.

Table 21

20µm Seperation

Product	Number	Weight	Wt%	Sn %	WO3 %	S %	Fe %	As %	Sn%	WO3%	S%	Fe%	As%
											DISTRIBUTON		
+20µm(A)052/057				*0.62*	*2.34*	*7.96*	*18.5*	*2.21*					
Conc	1054/055/053	2.57	26.22	2.14	8.92	18.00	23.0	15.83	75.4	93.9	77.8	29	97
Midds.	059/056	3.51	35.82	0.34	0.26	2.62	20.7	0.23	16.4	3.7	15.5	35	2
CS2 Tail	454060	3.72	37.96	0.16	0.159	1.08	20.2	0.11	8.2	2.4	6.7	36	1
Feed Calc		9.8	100.00	0.74	2.5	6.1	19.0	4.65	100.0	100.0	100.0	100	100

Comments

Due to small concentrate weights the 26µm and 20µm fractions were combined. The +26µm concentrate WO3 assay was wrong at 3.57%sn, 4.06%WO3,13.69%S, 23.0%Fe and 15.83%As. This resulted in the low grade.

Table 22

10µm Seperation

Product	Number	Weight	Wt%	Sn %	WO3 %	S %	Fe %	As %	Sn%	WO3%	S%	Fe%	As%
											DISTRIBUTON		
+10µm(A)	061/065			*0.17*	*0.26*	*0.93*	*20.1*	*0.31*					
CS3 Conc	062//065	1.18	10.53	0.60	2.15	3.33	20.07	12.18	31.0	48.9	31.8	11	86
CS3 Mids	454063	2.26	20.18	0.22	0.695	1.50	19.6	0.69	21.6	30.2	27.4	19	8
CS3 Tail	064/067	7.76	69.29	0.14	0.14	0.65	20.3	0.1	47.4	20.9	40.8	70	6
Feed Calc		11.2	100.00	0.20	0.46	1.29	20.1	1.51	100.0	100.0	100.0	100	100
100													

Comments

No comments as this fraction is too fine to observe under the microscope.

Figure 6

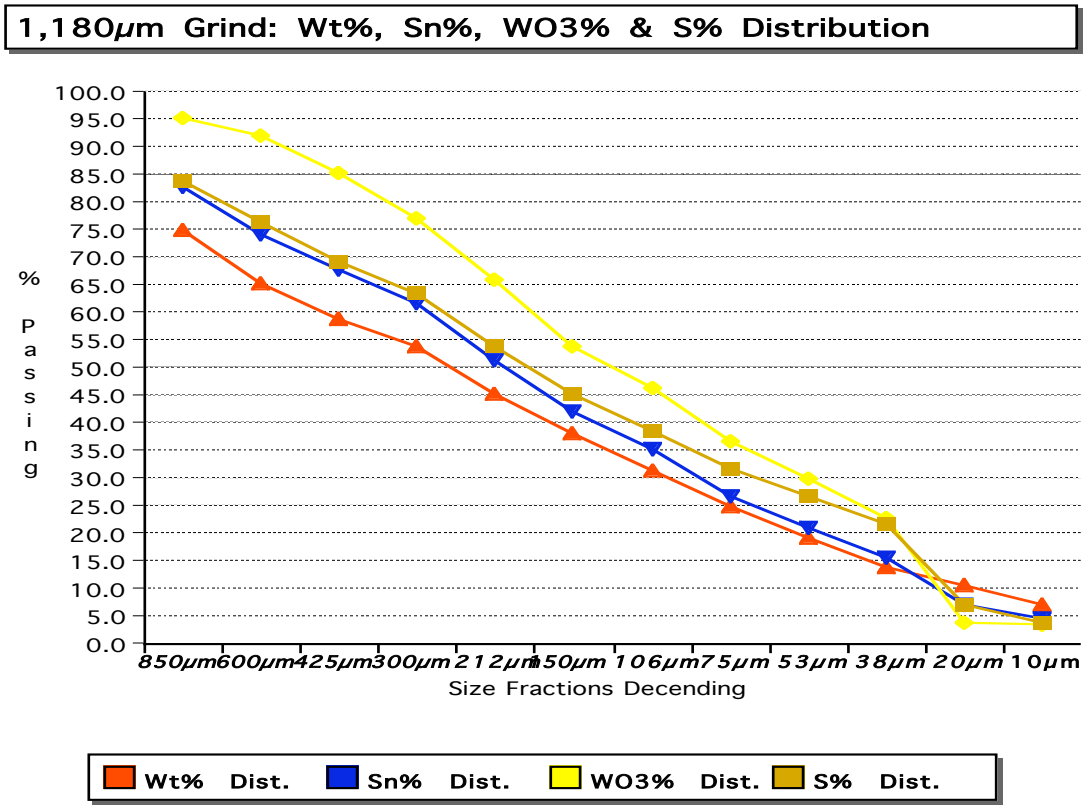
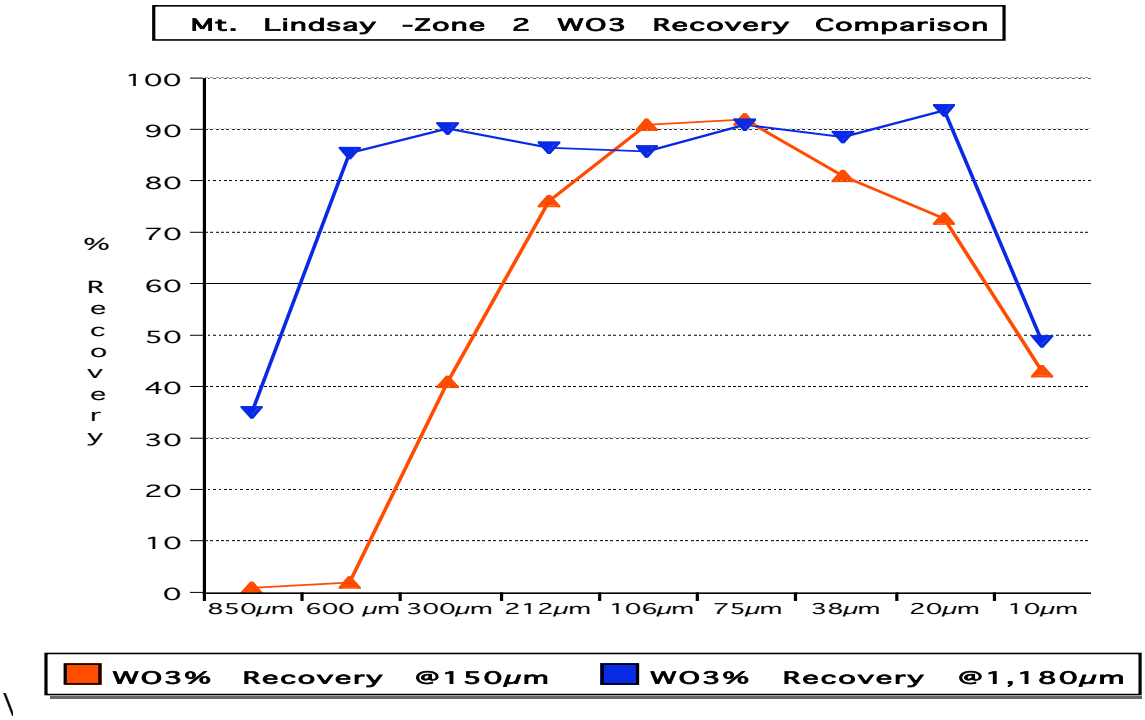


Figure 7



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Figure 8

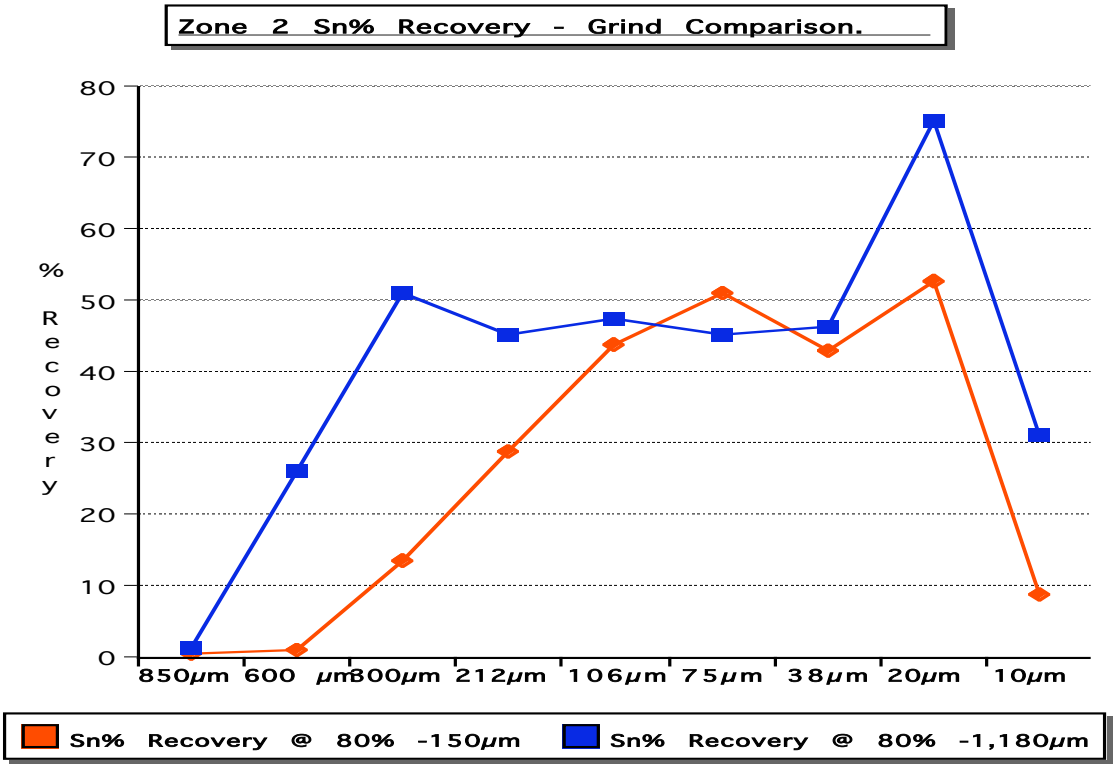


Figure 9

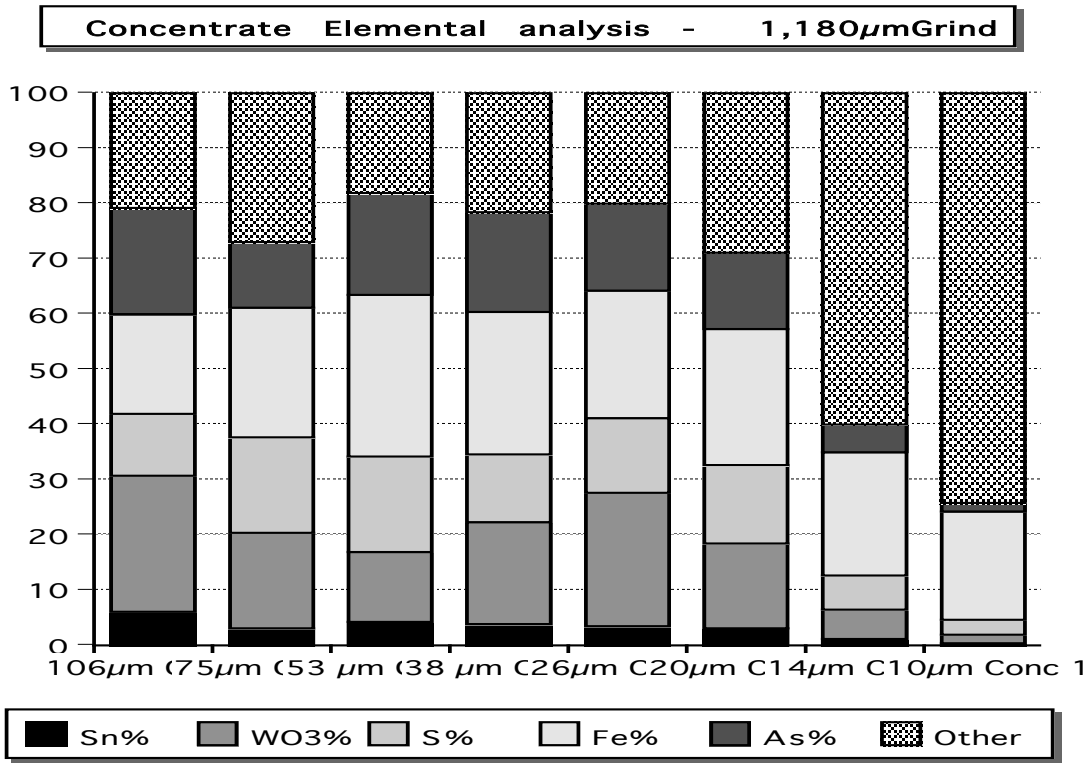
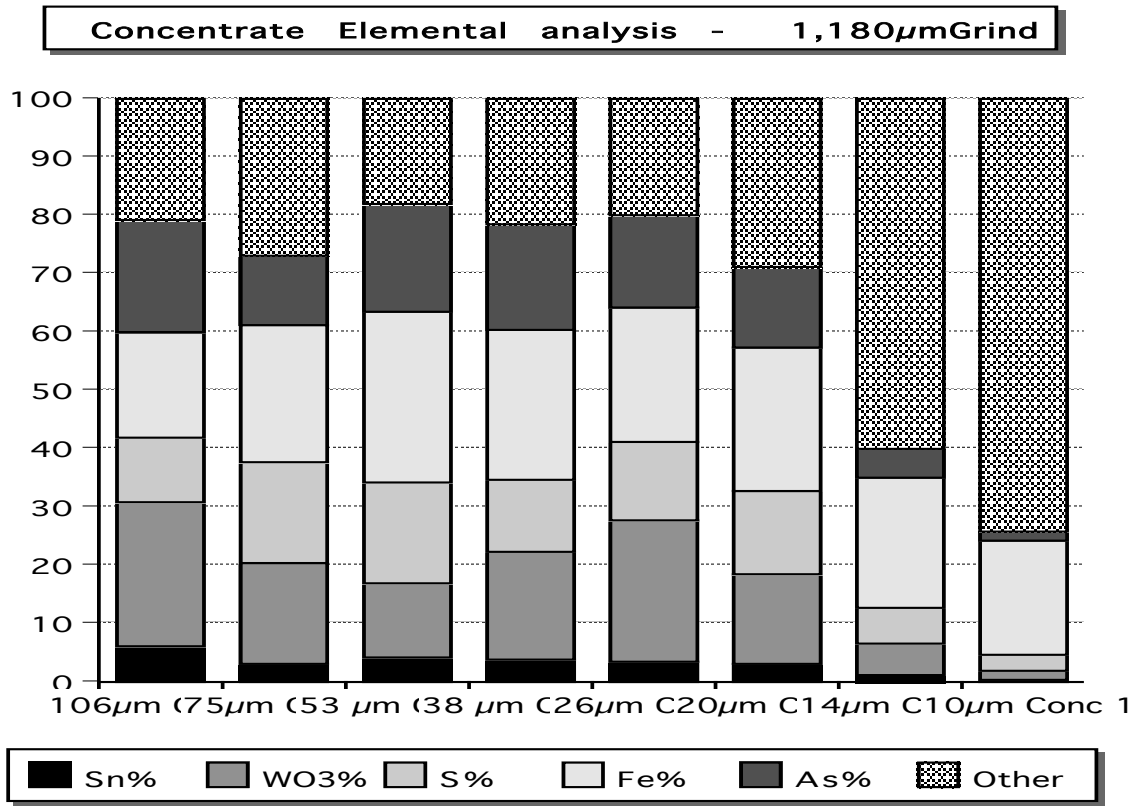


Figure 10



1.32 - General observations on the 1,180m Grind

- It can be seen in **Figure 8** above that at the liberation for scheelite is good and the overall recovery was very high at about about 88% to 90% from 600μm down. In **Table 13** most of the recoverable scheelite is contained in a small mddlings fraction in the +850μm fraction. This fraction is bereft of scheelite anyway as the grinding process has already liberated the scheelite and distributed it into finer sizes. This graph also strongly suggests that a two stage grinding circuit would be beneficial for scheelite.

- In **Figure 9** it is shown that tin recovery is slightly better in the 1,180μm grind at about 50% overall. In reality the cassiterite is very likley fully liberated at about 75μm. Very little free cassiterite was observed in any of the +150μm concentrates and it seems probable that the pyrite and cassiterite both liberated at around 75μm.

- It can also be observed in **Figure 6** that scheelite liberates from 850μm down and rejectable tails can be obtained from this size and there are also indications that scheelite slimes less than any other heavy mineral.

- Figures 10 and 11 show the effect of sulphides on concen- trate grades.

CONCLUSIONS

This investigation shows that the recovery of scheelite in Zone 2 will be high and should exceed 80%.using both gravity separation and flotation.

To maximise scheelite only recovery, it is likely that a two stage grinding circuit will be required as rejectable tungsten grades in tailings occur from 850μm downwards.

IT seems any composite scheelite is bound up in a small middling fraction in the coarser sizes.

While sulphide removal is essential, this is not a problem and is very easy to handle. It is probable that the coarser gravity concentrates will be reground to about 80% passing 210μm and combined with fine concentrates to float off the sulphides before cleaning

Whole ore flotation for scheelite will need to be investigated; this is somewhat complicated by the presence of cassiterite which is more difficult and selective in the flotation process than scheelite.

Producing a saleable concentrate was not addressed in this preliminary investigation.

Tin recovery is far more ambiguous; recovery never exceeds 50% and the tin tails grades are flat irrespective of size.

Because of the domination of scheelite and the very small concentrate weights, high grade tin concentrates could not be produced in this sighter investigation.

The reason for the low tin recovery is not clear, but the flat or consistent concentrate grades suggest that there is more than one tin mineral present in this ore body.

One unique aspect of the Zone 2 ore body is that it is certain that a combined scheelite/ cassiterite concentrate will be produced. Separation of these two minerals at sizes coarser than 53μm can be carried out by electro static separation on the finer sizes. Where electro static separation does not work acid digestion and re-precipitation of artificial scheelite will be necessary.

RECOMMENDATIONS

Scheelite results for this ore body are very encouraging. Assuming that the samples tested are representative, then the testwork can be lifted to the next stage. This means testing larger samples and producing enough bulk concentrate to allow scheelite / cassiterite separation to take place.

A two stage grinding/ gravity circuit needs to be investigated, taking into account that magnetite is the principle economic mineral in this deposit.

Cassiterite/Scheelite flotation is essential if high recoveries are to be obtained. It is known that the best cassiterite collectors recover wolfram, therefore, it is likely (but unknown) that they will also recover scheelite.

In conjunction with flotation, Kelsey jigs and Falcons will also need to be investigated.

The investigation of acid digestion of scheelite and re-precipitation of high grade artificial scheelite may be required. In addition acid digestion should also be tried to ascertain if different tin minerals can be identified by this method.

Tin recovery for Zone 2 is much more difficult and results have to be considered as moderate at best and the following is suggested:

- Repeat the super panning at selected sizes and submit each product for mineralogical examination and assay all products for acid soluble tin.

- Carry out a high intensity magnetic separation test on one of the rejects at BRL to observe the tin distribution in the various products. This test could yield some unexpected results.

Appendix J

Philip Milner flora and fauna survey reports

BOTANICAL SURVEY

LIVINGSTONE CREEK PROSPECT, NW TASMANIA

FOR VENTURE MINERALS LTD

29th June 2008

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APPENDIX 1: Plant Communities and Species Recorded

APPENDIX 2: Checklist of Species Recorded by Family

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MAP 1: Plan of Proposed Track Extension & Drill Sites and Existing Drill Holes

MAP 2: Aerial Photo of Survey Area

1.0 INTRODUCTION

1.1 Background

Venture Minerals is proposing to undertake an 18 hole drilling exploration programme at Livingstone Creek which will involve the extension of the current 4WD access track to each of the drill sites.

1.2 Objectives

The objectives of this survey are to determine the botanical and other natural values present within the study area, to determine the possible impacts of the proposed drilling program on those values and to make recommendations on how the possible impacts on those values can be minimized and managed.
The natural values to be surveyed include the indigenous vegetation, the plant communities and species each comprise. The fauna known or considered likely to occur in the locality are also considered.

1.3 Study Area

The site covers an approximate area of approximately 1.5 km east to west and 4.0 km north to south about one kilometre west of the Stanley River with access via a 4WD track off the Reece Dam Road.
Refer to the attached map for coordinate details.

1.4 Site Description

The survey area follows the existing and proposed 4WD track and the valley of Livingstone Creek in a north/north-westerly direction on the lower hill slopes and to the immediate west of Livingstone Creek itself. The grade is undulating and the track crosses a number of small unnamed creeks which flow into Livingstone Creek.
The soil is organic in nature with a siliceous gravelly sub-base and exposed rock in places. It is generally well drained along the main track line but becomes swampy with closer proximity to Livingstone Creek.

2.0 DESKTOP SURVEY OF NATURAL VALUES

2.1 Background Research

The DPIW database, The Natural Values Atlas was accessed for the known biological records of the study area, which included a 500 metre buffer zone around the site. Records of threatened species known to occur within a 5000 metre radius of the site were also accessed.
Data sourced included the occurrence of threatened plant communities, the locations of threatened plant species and threatened fauna known or expected to occur in the vicinity.

2.2 Desktop Survey Results

PLANT COMMUNITIES: There was no plant community data or Tasveg map for the location available on the Natural Values Atlas database.

THREATENED VEGETATION COMMUNITIES: No vegetation community listed under the Tasmanian Threatened Native Vegetation Communities Act of 2006 is recorded as occurring within or adjacent to the study area.

THREATENED FLORA: No threatened species of flora was recorded as occurring within 500 metres of the study area.

Two species of plants listed under the Threatened Species Protection Act 1995 were recorded as occurring within 5000 metres of the study area.

- ***Epacris curtisiae*** the Northwest Heath is endemic to Tasmania and is listed as being rare under the Tasmanian Act. The species is not listed under the Commonwealth Environment Protection and Biodiversity Conservation Act of 1999. It occurs on peaty soils or on undulating terrain in heathlands, graminoid heaths and scrub below 300 metres altitude in the north-west, and is recorded as occurring within the Meridith Range Regional Reserve. There are approximately 27 known populations of the species and it can be locally common within these locations. The occurrence in this area forms the southern most extremity of its known range.
- ***Senecio velleioides,*** the Forest Groundsel is listed as being rare under the Tasmanian Act but is not listed under the Commonwealth Act. The species has a scattered distribution across Tasmania and has been recorded in a number of reserves. It is found in moist places on hills, particularly after disturbance by fire.

NON-THREATENED FLORA OF CONSERVATION SIGNIFICANCE: The following species of non-threatened flora are recorded on the Natural Values Atlas as occurring in or within a 500 metre radius of the study area. Conservation significance may simply refer to a species being endemic to Tasmania.

- *Anodopetalum biglandulosum* Horizontal
- *Anopterus glandulosa* Tasmanian Laurel
- *Archeria eriocarpa* Hairy Rainforest Heath
- *Aristotelia peduncularis* Heartberry
- *Billardiera longiflora* Climbing Blueberry
- *Cenarrhenes nitida* Native Plum
- *Eucalyptus nitida* Western Peppermint
- *Eucryphia lucida* Leatherwood
- *Hakea epiglottis* subsp. *epiglottis* Beaked Needlebush
- *Lagarostrobus franklinii* Huon Pine
- *Leptospermum glaucescens* Smoky Teatree
- *Olearia persoonioides* Geebung Daisybush
- *Phyllocladus asplenifolius* Celery-top Pine
- *Pimelea cinerea* Grey Riceflower
- *Richea pandanifolia* Pandani
- *Telopea truncata* Tasmanian Waratah
- *Trochocarpa cunninghamii* Straggling Purpleberry
- *Trochocarpa gunnii* Fragrant Purpleberry

THREATENED FAUNA: According to the Natural Values Atlas database the following threatened species of fauna could occur within 500 metres of the study area based on the geographic range of each species.

- *Aquila audax* Wedge-tailed Eagle is provisionally listed as endangered under both State and Commonwealth Acts
- *Accipiter novaehollandiae* Grey (White) Goshawk, listed as endangered under State Act
- *Haliaeetus leucogaster* White-bellied Sea-eagle, listed as vulnerable under State Act.
- *Prototroctes maraena* Australian Grayling. A fish listed as vulnerable, both Acts.

3.0 FIELD SURVEY

3.1 Survey Methodology

The survey was undertaken on foot along the existing 4WD track as shown on the attached map. The route of the proposed extension of the 4WD track was then followed to the vicinity of proposed drill site 12.
A side track to the existing drill site LV001 was also followed.
Vascular plant species were recorded, plant communities were observed and cross referenced with the TasVeg reference "From Forest to Fjaeldmark".
The survey was conducted on Monday 20th June 2008.

3.2 Limitations

The survey was undertaken in early winter. No botanical survey can guarantee that all vascular flora will be observed and recorded during a single survey in one year, due to seasonal and annual variation in abundance and the possible absence of flowers and fertile material for identification. Ephemeral species that may have been present includes species of orchids, lilies, grasses and other graminoids. However all significant species known to occur in the study area and its environs are considered in this report.

3.3 Field Survey Results

The predominant vegetation type and plant community observed in the study area and along the existing 4WD track was **Western Wet Scrub (SWW)** which is a widespread and abundant community in western Tasmania. Smaller patches of ***Leptospermum* Scrub (SLW)** occurred through the wet scrub vegetation and **Buttongrass Moorland (MBU)** was observed where Buttongrass *Gymnoschoenus sphaerocephalus* predominated the ground level vegetation.
The low lying and poorly drained valley floor and terraces along Livingstone Creek are largely **Buttongrass Moorland (MBU)** and with some localized occurrences of ***Leptospermum* Scrub (SLW).** The vegetation along the proposed extended route of the 4WD track begins as Western Wet Scrub before becoming a rainforest community, ***Nothofagus/Phyllocladus* Short Rainforest (RMS).**

VEGETATION COMMUNITIES:

- **Western Wet Scrub (SWW)** is the predominant vegetation type and plant community observed in the study area and along the existing 4WD track. It is a widespread and abundant community on the thin organic soils over a skeletal sub-base in western Tasmania and its conservation status is secure. The 4WD track, its proposed extension and access to the drill sites will not have a significant impact on this vegetation community.
- ***Leptospermum* Scrub (SLW)** occurred in the study area as occasional patches in the wet scrub and Buttongrass moorland communities and along minor creeklines but it was not the predominant vegetation type. As with the previous community *Leptospermum* Scrub is a common community in western Tasmania and the proposed exploration program will not impact on the community to any extent.
- **Buttongrass Moorland (MBU)** was most prevalent on the low lying valley floor of Livingstone Creek but it also became a more dominant component of the wet scrub community on the upper hill slopes which is most likely a reflection of the fire history of the location. This community along Livingstone Creek included patches of emergent shrubs, mainly species of Leptospermum. Again, this community is abundant in western Tasmania and the proposed drilling program should have limited impact.

- ***Nothofagus / Phyllocladus* Short Rainforest (RMS)** The proposed route of the extension to the 4WD access track passes through an area of the above rainforest community which includes a number of endemic species such as Leatherwood *Eucryphia lucida,* Horizontal *Anodopetalum biglandulosum,* Celery-top Pine *Phyllocladus asplenifolius* and Pandani *Richea pandanifolia.* While not a threatened vegetation community in itself the presence of emergent trees of old-growth Celery-top Pine means that this community does have conservation significance. For this reason the route of the proposed 4WD track should be re-sited downslope and to the immediate east of these trees to ensure there is no direct impact to the trees and their root zone. Depending on the re-routing and realignment of the proposed 4WD track it may be necessary to further survey the extent of the old-growth Celery-top Pines and plot the locations of individual trees adjacent to the route.

THREATENED VEGETATION COMMUNITY:
No vegetation community listed under the Tasmanian Native Vegetation Communities Act of 2006 was observed during the field survey.

THREATENED FLORA:
No vascular plant species listed under the Tasmanian Threatened Species Act 1995 or the Commonwealth Environment Protection and Biodiversity Conservation Act of 1999 was observed within the study area during the field survey.

- ***Epacris curtisiae,* Northwest Heath** is a listed threatened species and is recorded as occurring within 5000 metres of the study area. While the plant was not recorded within the study area during this field survey it could potentially be present as it is recorded as occurring in similar scrub vegetation to that within the study area and the plant would be more observable during its flowering season in September.

A secondary survey was undertaken in a high tension power line easement outside of and to the west of this exploration area and *Epacris curtisiae* was located and observed growing within low heathland/sedgy vegetation on an elevated gravelly slope, alongside the easement access track. Approximately 40 individual plants were observed in 3 adjacent patches with one plant observed with some open flowers. Grid Refernce: 355665E – 5381120N (WGS 84).
A follow-up survey to determine the possible presence of this species in the exploration area would be desirable during its flowering season in September.

- ***Senecio vellioides,* Forest Groundsel** is a listed threatened species recorded as occurring within 5000 metres of the study area. This species was not observed during the field survey and no suitable habitat was observed within the study area where this species may potentially occur.

FLORA OF CONSERVATION SIGNIFICANCE: OLD-GROWTH CELERY-TOP PINE

- The presence of emergent trees of old-growth **Celery Top Pine *Phyllocladus asplenifolius*** in the vegetation community *Nothofagus/ Phyllocladus* Short Rainforest located along the route of the proposed 4WD track extension is considered to be significant. It is recommended that the route and alignment of the 4WD track be re-sited downslope, to the immediate east and around the periphery of the community as much as possible to avoid impacting on these trees and their root zones.
- GRID REF Point: 356935E – 5382950N (WGS 84)

Depending on the re-routing and realignment of the proposed 4WD track it may be necessary to further survey the extent of the old-growth Celery-top Pines and plot the locations of individual trees adjacent to the route.

PHYTOPHTHORA

No symptomatic evidence was observed during the field survey of the presence of the root rot disease *Phytophthora cinnamomi* in the study area. It is therefore important to avoid introducing the disease into a clean area by observing strict protocols at the entry point with a treatment station to ensure that infected material such as soil or mud adhered to tyres, vehicles, machinery or boots is not introduced.

Tim Rudman of the DPIW's Biodiversity Conservation Branch has produced a very useful report titled "Interim *Phytophthora cinnamomi* Management Guidelines" which provides prescriptions for managing the disease in the field including hygiene and washdown procedures. It is available to download from the DPIW website at www.dpiw.tas.gov.au and go to weeds, pests and diseases. There is also a further report available from the site which provides more detail in regard to washdown procedures.

4.0 CONCLUSIONS

The drilling exploration program as proposed will have limited impact on the botanical values of the following vegetation communities;

- Western Wet Scrub
- *Leptospermum* Scrub
- Buttongrass Moorland

The proposed extension to the 4WD track has the potential to impact on the emergent old-growth Celery-top Pine growing within the vegetation community;

- *Nothofagus/Phyllocladus* Short Rainforest

No threatened species were observed or recorded within the study area during the field survey.

5.0 RECOMMENDATIONS

5.1 Proposed 4WD track extension:

- Realign the route of the proposed extension to the 4WD track through the vegetation community *Nothofagus / Phyllocladus* Short Rainforest downslope and around the eastern periphery of the community to avoid and to limit impacts on the emergent old-growth Celery-top Pines *Phyllocladus asplenifolius*.
- Determine and undertake if necessary a further survey of the extent of the old-growth Celery-top Pines and plot the locations of individual trees adjacent to the realigned route.

5.2 Listed Species: *Epacris curtisiae,* Northwest Heath:

- Undertake a follow-up botanical survey during the spring flowering season to determine the possible presence of the Epacris within the exploration area.

5.3 Phytophthora Management:

- Maintain a treatment station at the entry point to the exploration area and ensure that personnel observe strict protocols in treating boots, equipment, vehicles and machinery before proceeding along the track.

APPENDIX 1: Plant Communities and Species Recorded

1. Western Wet Scrub (TasVeg Code SWW)

This community is widespread and abundant in the high rainfall area of western Tasmania from near sea level up to an altitude of about 750 metres. It is a dense shrubby community of variable height often with the Western Peppermint *Eucalyptus nitida* as an emergent and with species of Leptospermum and Melaleuca being well represented and with graminoids such as Buttongrass a component of the ground layer vegetation.

EMERGENT TREES	
Eucalyptus nitida	Western Peppermint
MEDIUM SHRUBS	
Acacia mucronata	Caterpillar Wattle
Banksia marginata	Silver Banksia
Cenarrhenes nitida	Native Plum
Hakea epiglottis	Beaked Needlebush
Leptospermum glaucescens	Smoky Teatree
Leptospermum nitidum	Shiny Teatree
Leptospermum scoparium	Manuka
Melaleuca squarrosa	Scented Paperbark
Telopea truncata	Waratah
SMALL SHRUBS	
Allocasuarina monilifera	Necklace Sheoak
Baeckia leptocaulis	Slender Heathmyrtle
Bauera rubioides	Wiry Bauera
Boronia pilosa	Hairy Boronia
Comesperma retusum	Mountain Milkwort
Dillwynia glaberimma	Smooth Parrotpea
Epacris lanuginosa	Swamp Heath
Melaleuca squamea	Swamp Honeymyrtle
Persoonia juniperina	Prickly Geebung
Philotheca virgata	Twiggy Waxflower
Pimelea linifolia	Slender Riceflower
Sprengelia incarnata	Pink Swampheath
GRASSES & GRAMINOIDS	
Baloskion tetraphyllum	Tassel Cordrush
Empodisma minus	Spreading Roperush
Gahnia grandis	Cutting Grass
Gymnoschoenus sphaerocephalus	Button Grass
Leptocarpus tenax	Slender Twinerush
Patersonia fragilis	Short Purpleflag
Stylidium graminifolium	Triggerplant
Xyris sp.	A Yelloweye

Appendix 1 (cont) Western Wet Scrub

FERNS & ALLIED PLANTS	
Gleichenia dicarpa	Pouched Coralfern
Lycopodinella lateralis	Slender Clubmoss
Selaginella uliginosa	Swamp Spikemoss
Sticherus tener	Silky Fanfern

2. *Leptospermum* Scrub (TasVeg Code SLW)

Leptospermum Scrub is a widespread community found throughout Tasmania in its many forms and varied species composition but in each case the dominant plants are species of *Leptospermum* and/or *Melaleuca* which tend to form a closed canopy which excludes light and therefore limits the ground layer vegetation. In this location it was observed as smaller patches within the Wet Scrub community, along minor creeklines and within the Buttongrass Moorland.

DOMINANT TALL SHRUBS	
Leptospermum glaucescens	Smoky Teatree
Leptospermum scoparium	Manuka
Melaleuca squarrosa	Scented Paperbark
OTHER TALL SHRUBS	
Acacia mucronata	Caterpillar Wattle
Leptospermum nitidum	Shiny Teatree
MEDIUM SHRUBS	
Bauera rubioides	Wiry Bauera
Philotheca virgata	Twiggy Waxflower
Phyllocladus asplenifolius (seedlings)	Celery-top Pine
GRASSES & GRAMINOIDS	
Baloskion tetraphyllum	Tassel Cordrush
Gahnia grandis	Cutting Grass
FERNS & ALLIED PLANTS	
Pteridium esculentum	Bracken

3. Buttongrass Moorland (TasVeg Code MBU)

Buttongrass Moorland vegetation is widespread and extensive in Tasmania but is most common in the west. In the study area this community extended over the valley floor of Livingstone Creek where drainage was impeded but also occurred as patches within the Wet Scrub community.

DOMINANT SPECIES	
Gymnoschoenus sphaerocephalus	Buttongrass

Appendix 1 (cont) Buttongrass Moorland

SHRUBS

Bauera rubioides	Wiry Bauera
Leptospermum nitidum	Shiny Teatree
Leptospermum scoparium	Manuka
Melaleuca squamea	Swamp Honeymyrtle
Sprengelia incarnata	Pink Swampheath

GRASSES & GRAMINOIDS

Baloskion tetraphyllum	Tassel Cordrush
Leptocarpus tenax	Slender Twinerush

FERNS & ALLIED PLANTS

Gleichenia dicarpa	Pouched Coralfern

4. *Nothofagus / Phyllocladus* Short Rainforest (TasVeg Code RMS)

This rainforest community is widespread in western and north-western Tasmania and is distinguished from other rainforest communities by the presence of endemic species such as Leatherwood, Horizontal and Celery-top Pine and it typically has a tangled understorey layer which includes the Horizontal. It occurs on acid peat soils overlying siliceous rock in situations protected from fire. This community in the study area is significant due to the presence of emergent trees of old-growth Celery-top Pine *Phyllocladus asplenifolius.*

EMERGENT TREES

Phyllocladus asplenifolius	Celery-top Pine

TREES

Atherosperma moschatum	Sassafras
Eucryphia lucida	Leatherwood
Leptospermum nitidum (old growth trees)	Shiny Teatree
Nothofagus cunninghamii	Myrtle

TALL SHRUBS

Anodopetalum biglandulosum	Horizontal
Cenarrhenes nitida	Native Plum
Pittosporum bicolor	Cheesewood
Richea pandanifolia	Pandani

SHRUBS

Anopteris glandulosa	
Leptecophylla juniperina	Mountain Pinkberry
Trochocarpa cunninghamii	Straggling Purpleberry

Appendix 1 (cont)	*Nothofagus/ Phyllocladus* Short Rainforest
GRASSES & GRAMINOIDS	
Gahnia grandis	Cutting Grass
FERNS & ALLIED PLANTS	
Blechnum wattsii	Hard Waterfern

APPENDIX 2: Checklist of Species Recorded by Family

Dicotyledonae	TasVeg Community Recorded
CASUARINACEAE	
Allocasuarina monilifera	SWW
CUNONIACEAE	
Anodopetalum biglandulosum	RMS
Bauera rubioides	SWW, SLW, MBU
EPACRIDACEAE	
Epacris lanuginosa	SWW
Leptecophylla juniperina	RMS
Richea pandanifolia	RMS
Sprengelia incarnata	SWW, MBU
Trochocarpa cunninghamii	RMS
ESCALLONIACEAE	
Anopteris glandulosa	RMS
EUCRYPHIACEAE	
Eucryphia lucida	RMS
FABACEAE	
Dillwynia glaberimma	SWW
FAGACEAE	
Nothofagus cunninghamii	RMS
MIMOSACEAE	
Acacia mucronata	SWW, SLW
MONIMIACEAE	
Atherosperma moschatum	RMS

Appendix 2 (cont) Checklist by Family

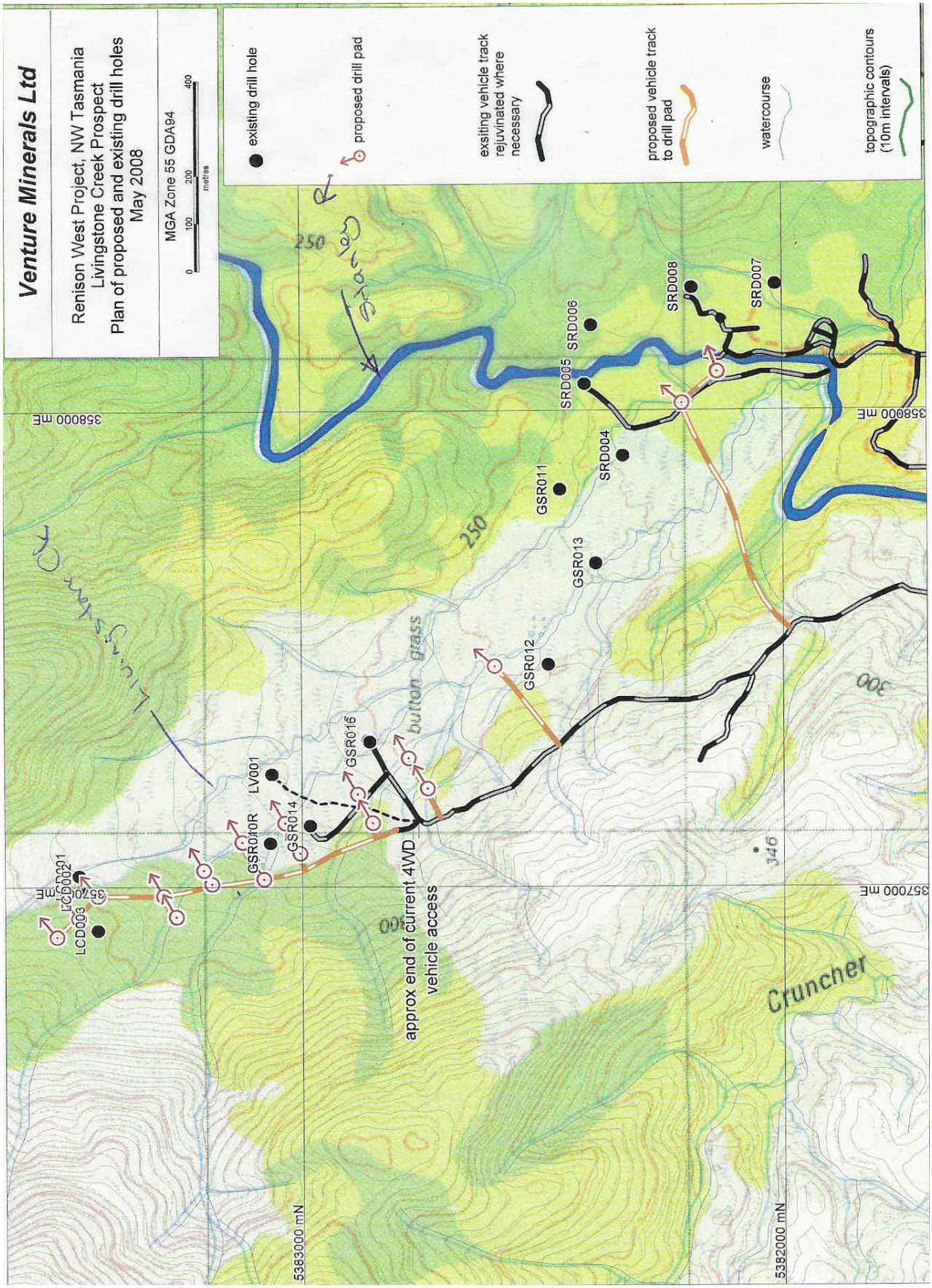
MYRTACEAE	
Baeckia leptocaulis	SWW
Eucalyptus nitida	SWW
Leptospermum glaucescens	SWW, SLW
Leptospermum nitidum	SWW, SLW, RMS, MBU
Leptosepermum scoparium	SWW, SLW, MBU
Melaleuca squamea	SWW, MBU
Melaleuca squarrosa	SWW, SLW
PITTOSPORACEAE	
Pittosporum bicolor	RMS
POLYGALACEAE	
Comesperma retusum	SWW
PROTEACEAE	
Banksia marginata	SWW
Cenarrhenes nitida	RMS, SWW
Hakea epiglottis	SWW
Persoonia juniperina	SWW
Telopea truncata	SWW
RUTACEAE	
Boronia pilosa	SWW
Philotheca virgata	SWW, SLW
STYLIDIACEAE	
Stylidium graminifolium	SWW
THYMELAEACEAE	
Pimelea linifolia	SWW
Monocotyledonae	
CYPERACEAE	
Gahnia grandis	SWW, RMS, SLW
Gymnoschoenus sphaerocephalus	SWW, MBU
IRIDACEAE	
Patersonia fragilis	SWW
RESTIONACEAE	
Baloskion tetraphyllum	SWW, SLW, MBU
Empodisma minus	SWW
Leptocarpus tenax	SWW, MBU

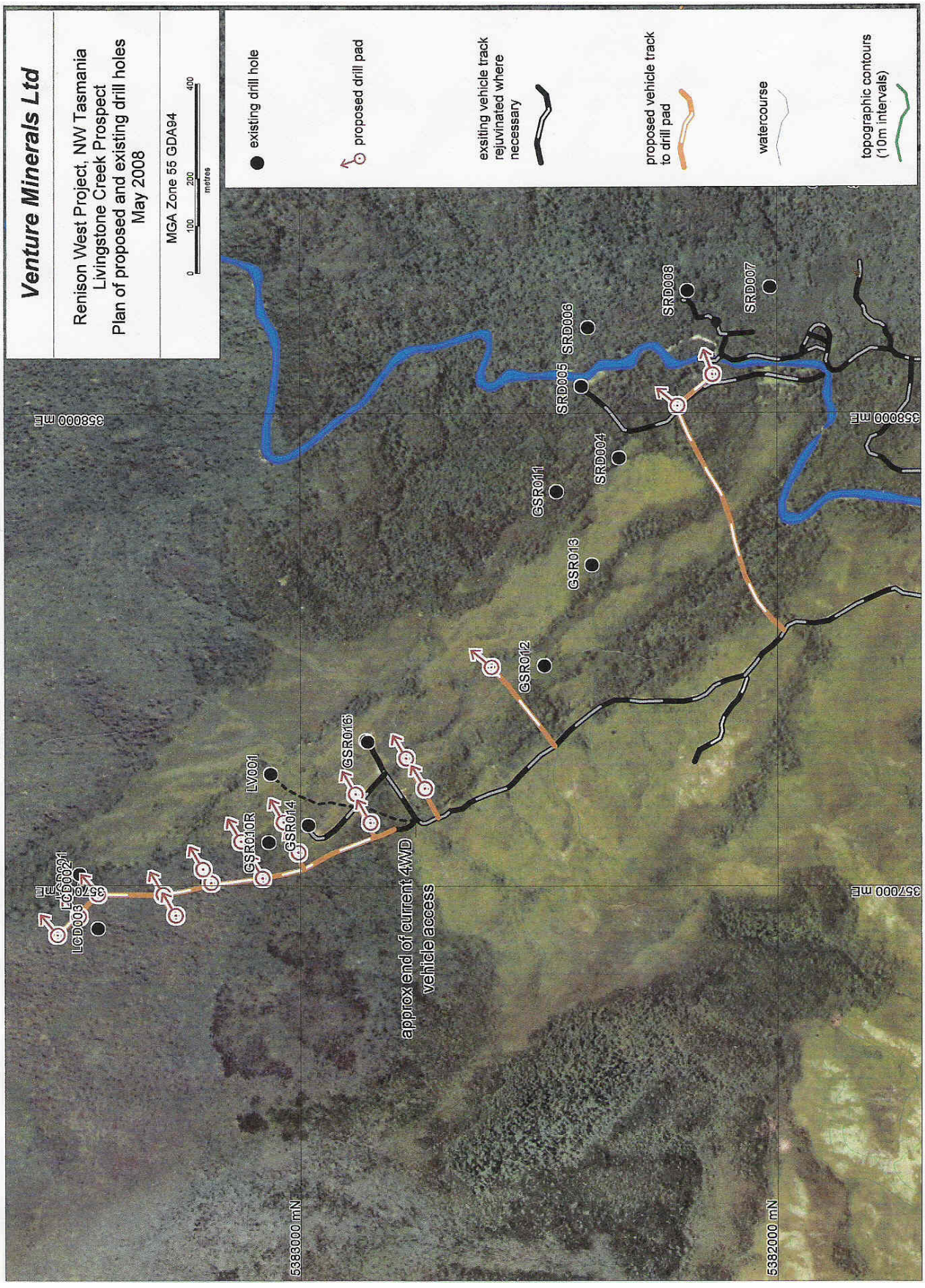
Appendix 2 (cont) Checklist by Family

XYRIDACEAE	
Xyris sp.	SWW
Gymnospermae	
PODOCARPACEAE	
Phyllocladus asplenifolius	SLW, RMS
Pteridophyta	
BLECHNACEAE	
Blechnum wattsii	RMS
DENNSTAEDTIACEAE	
Pteridium esculentum	SLW
GLEICHENIACEAE	
Gleichenia dicarpa	SWW, MBU
Sticherus tener	SWW
LYCOPODIACEAE	
Lycopodinella lateralis	SWW
SELAGINELLACEAE	
Selaginella uliginosa	SWW

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Venture Minerals Ltd
Renison West Project, NW Tasmania
Livingstone Creek Prospect
Plan of proposed and existing drill holes
May 2008
MGA Zone 55 GDA94
0
100
200
400
metres
existing drill hole
proposed drill pad
exsiting vehicle track rejuvinated where necessary
proposed vehicle track to drill pad
watercourse
topographic contours (10m intervals)
LCD003
LCD002
LCD001
GSR017oR
LV001
GSR014
GSR016
GSR012
GSR013
GSR011
SRD004
SRD005
SRD006
SRD007
SRD008
approx end of current 4WD vehicle access
button grass
Cruncher
358000 mE
357000 mE
5383000 mN
5382000 mN
250
300
146


Venture Minerals Ltd
Renison West Project, NW Tasmania
Livingstone Creek Prospect
Plan of proposed and existing drill holes
May 2008
MGA Zone 55 GDA94
0
100
200
400
metres
existing drill hole
proposed drill pad
exsiting vehicle track rejuvinated where necessary
proposed vehicle track to drill pad
watercourse
topographic contours (10m intervals)
358000 mE
357000 mE
5383000 mN
5382000 mN
LCD003
LCD002
LCD001
CSR010R
CSR014
LV001
CSR016
CSR012
CSR011
CSR013
SRD004
SRD005
SRD006
SRD008
SRD007
approx end of current 4WD vehicle access

Stuart Owen

From:	Philip Milner [milner.p@bigpond.com]	**Sent:**	Mon 20/10/2008 5:47 AM
To:	Brendan Dempsey		
Cc:	Stuart Owen		
Subject:	Re: Livingstone Creek		
Attachments:			

Hi Brendan,
I had to clarify and update you in regard to the Epacris adjacent to the 4WD track into Livingstone Creek. The Herbarium took a while to get back to me with a confirmed ID because their Epacris specialist Ron Crowden was away apparently.
Ron has identified the sample I collected from that spot as Epacris corymbiflora, a species which is not on the threatened species list and therefore not covered by the Act. So in light of that we do not need the barrier to protect it.
Regards
Philip

BOTANICAL SURVEY

PARSONS HOOD PROSPECT

FOR VENTURE MINERALS LTD

2nd August 2008

Philip Milner
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1.0 INTRODUCTION

1.1 Background

Venture Minerals is undertaking an exploration program on the southern mid slopes of Parsons Hood north of Lake Pieman in north-west Tasmania.and are intending to extend the program with 4 drill sites near and on the summit of Parsons Hood. This program extension will involve the clearing of 4 drill sites suitable for a helicopter transportable rig and a walking track for access from the existing program area on the lower slopes.

1.2 Objectives

The objectives of this survey are to determine the botanical and other natural values present within the study area, to determine the possible impacts of the proposed exploration program on those values and to make recommendations on how the possible impacts on those values can be minimized and managed. The natural values to be surveyed include the indigenous vegetation, the plant communities and the species each comprise. The fauna known or considered likely to occur in the locality are also considered.

1.3 Study Area

The survey area covers the southern portion of the Parsons Hood summit and the upper south facing slopes of the mountain. Parsons Hood has the appearance of a large rounded hill rather than a mountain and is covered in vegetation. The summit is 915 metres above sea level.

1.4 Site Description

The field survey commenced from an existing but overgrown 4WD track which extends around the mid slopes on the southern side of Parsons Hood. From this track a flagged route followed a ridgeline in a north-easterly direction and then a north-westerly direction up towards the summit linking 2 proposed drill sites and then extending to a further two drill sites in the summit zone.
The grade was relatively steep but became more undulating in the summit area.
The soil was organic in nature, well drained but relatively shallow and moreso on the top of the mountain and with a minor amount of exposed rock.

2.0 DESKTOP SURVEY OF NATURAL VALUES

2.1 Background Research

The DPIW database, The Natural Values Atlas was accessed for the known biological records of the study area, which included a 1000 metre buffer zone around the site. Records of threatened species known to occur within a 5000 metre radius of the site were also accessed.
Data sourced included the occurrence of threatened vegetation communities, the locations of threatened plant species, and threatened fauna known or expected to occur in the vicinity.

2.2 Desktop Survey Results

PLANT COMMUNITIES: The following vegetation communities are mapped as per TasVeg as occurring within a 1000 metre radius of the study area.

TasVeg Community	TasVeg Code	Extent in Study Area
Nothofagus- Atherosperma Rainforest	RMT	Widespread on upper slopes
Nothofaus- Phyllocladus Rainforest	RMS	Widespread on lower and mid slopes
Leptospermum Scrub	SLW	Widespread summit & western slopes
Buttongrass Moorland (undifferentiated)	MBU	Widespread on western slopes

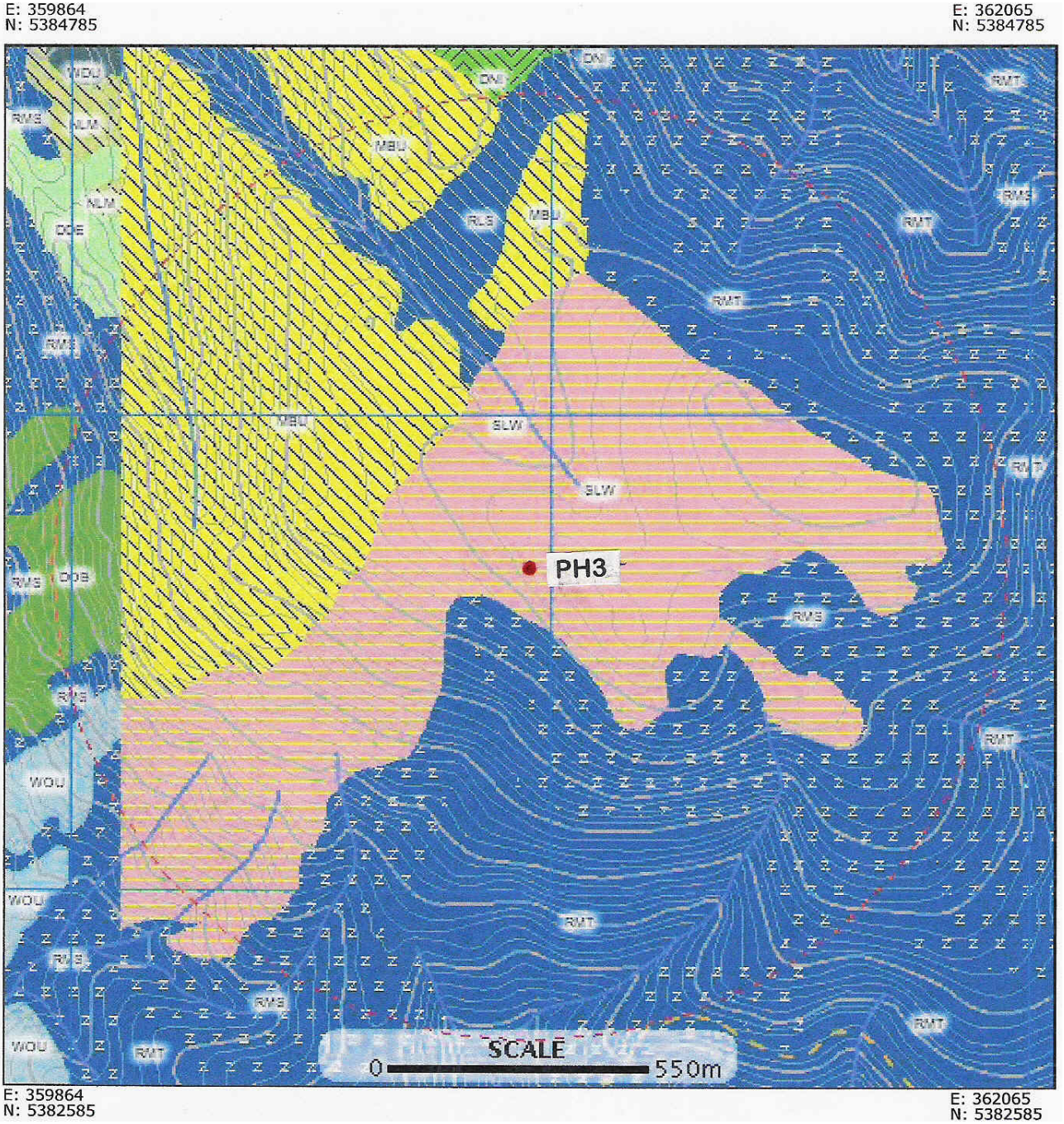


FIGURE 1: Vegetation Communities per TasVeg Mapping

THREATENED VEGETATION COMMUNITIES: No vegetation community listed under the Tasmanian Threatened Native Vegetation Communities Act of 2006 is mapped as occurring within or adjacent to the study area.

THREATENED FLORA: No threatened species of vascular plants were recorded on the data base as occurring within the study area or within a 500 metre buffer zone of the study area.
The threatened species *Micranthuem serpentinum* is recorded as occurring within 5000 metres of the study area.

NON-THREATENED FLORA OF CONSERVATION SIGNIFICANCE: No non-threatened flora of conservation significance was recorded on the data base as occurring within a 500 metre radius of the study area. This indicates that a formal botanical survey has not been previously undertaken on this area of Parsons Hood.

THREATENED FAUNA: No threatened fauna was recorded within 500 metres of the study area. According to the Natural Values Atlas data base there are two records of the Wedgetailed Eagle within 5000 metres of the study area with approximate dates of the 1980's and 1996. There is also a record of a Thylacine sighting about 1974.

- *Aquila audax* Wedgetailed Eagle is listed as endangered under both State and Commonwealth Acts.
- *Thylacinus cynocephalus* Thylacine is listed as extinct under both Acts.

3.0 FIELD SURVEY

3.1 Survey Methodology

The survey was undertaken on foot commencing from an existing but overgrown 4WD track which traverses the mid southern slopes of the mountain. The survey followed a flagged route up a southern facing ridge to two proposed drill sites PH1 and PH2 and then linked to two further drill sites on the top of Parsons Hood but to the immediate west of the actual summit. These drill sites are identified as PH3 and PH4. Refer to the map attached to this report for Drill site locations.
Vascular plant species were recorded, plant communities were observed and cross referenced with the TasVeg map.
The survey was undertaken on Tuesday 29th July 2008.
DRILL SITE and SURVEY LOCATIONS:
PH1: 361653E – 5383099N
PH2: 361553E – 5383485N
PH3: 360965E – 5383685N
PH4: 361405E – 5383980N
Datum: WGS 84

3.2 Limitations

The survey was undertaken in winter. No botanical survey can guarantee that all vascular flora will be observed and recorded during a single survey in one year , due to seasonal and annual variation in abundance and the possible absence of flowers and fertile material for identification. Ephemeral species that may have been present includes species of orchids, lilies, grasses and other graminoids. However all significant species known to occur in the locality and its environs have been considered in this report.

3.3 Field Survey Results

The first stage of the survey following the flagged route up the ridgeline to Drill sites PH1 and PH2 was through the tall Myrtle and Sassafras rainforest community ***Nothofagus-Atherosperma* Rainforest (RMT)** which is a widespread community in western Tasmania. The vegetation on the upper slopes of Parsons Hood and at Drill sites PH3 and PH4 became a much shorter rainforest community dominated by Myrtle, *Nothofagus cunninghamii.* This community fits within the definition of **Highland Low Rainforest (and Scrub) (RSH)** rather than the *Nothofagus-Phyllocladus* Short Rainforest (RMS) which has been previously mapped under TasVeg. One of the main indicators is that the Celery-top Pine *Phyllocladus asplenifolius* is not present in this rainforest community. No *Leptospermum* Scrub (SLW) community was observed in the area surveyed although this community is mapped under TasVeg as being in the locality. It may be located more on the western slopes of the mountain.

VEGETATION COMMUNITIES:

- ***Nothofagus – Atherosperma* Rainforest (RMT)** was widespread on the lower slopes of Parsons Hood and was characterized by a medium to tall closed canopy of Myrtle although Sassafrass was also prominent as a canopy tree. The community had the appearance of mixed age as there were occasional large and old trees, occasional dead standing trees as well as regrowth saplings of varying ages. The understorey also varied in density and diversity with broad-leafed shrubs and ferns prominent. The community in this location fits within the definition of a thamnic type rainforest community where there is a degree of diversity in the shrubby mid-storey.
This community is widespread and well conserved in western Tasmania.
- **Highland Low Rainforest (and Scrub) (RSH)** A distinctive community dominated by Myrtle, *Nothofagus cunninghamii* as small trees generally less than 8 metres tall with multi-stems arising from large ancient bases and forming a dense closed canopy and a tangled branched understorey. There was very little diversity although Horizontal *Anodopetalum biglandulosum* and *Richea pandanifolia* were present. *Richea scoparia* was also observed as an occasional mature plant.
This community is known to occur between 800 and 1200 metres altitude in well drained locations on reasonably good soils in locations which have had long fire-free intervals.
The community does regenerate from localized disturbance and there was evidence of good regrowth of *Nothofagus cunninghamii* and *Richea pandanifolia* during this survey from a previous drilling program (during the early 80's) in the vicinity of Drill site PH4.
This community is not a listed threatened community but it does have some conservation significance due to its intactness and extended period without fire.

THREATENED VEGETATION COMMUNITY:
No vegetation community listed under the Tasmanian Native Vegetation Communities Act of 2006 was observed during the field survey.

THREATENED FLORA:
No vascular plant species listed under the Tasmanian Threatened Species Act 1995 or the Commonwealth Environment Protection and Biodiversity Conservation Act of 1999 was observed during the field survey. There was no suitable habitat for the threatened species *Micrantheum serpentinum* in the area surveyed and it was not present.

4.0 CONCLUSIONS

The proposed extension to the drilling program onto the upper slopes and summit area of Parsons Hood which will involve a walking access track and 4 drill pads accessible to a helicopter transportable drill rig will have limited impact on the botanical values of the location providing minimal disturbance practices are followed and adhered to. In particular disturbance should be kept to a minimum in the summit area in the vicinity of Drill sites PH3 and PH4.

No threatened vegetation communities or threatened vascular plants were observed during the field survey, although it is considered that the Highland Low Rainforest of the summit area does have some conservation significance. Even though this community is not highly flammable, particularly during the cooler weather, precautions should be taken to ensure that there is no risk of fire during the field activities.

5.0 RECOMMENDATIONS

5.1 Access Track linking each proposed drill pad

- Limit ground disturbance and avoid large or old trees in the clearing and formation of the walk track through the tall rainforest.
- Limit the clearing of vegetation to pedestrian track width through the summit rainforest in order to maintain a closed canopy as much as possible. Avoid cutting Pandani's *Richea pandanifolia* and Scoparia *Richea scoparia* during track clearance work.

5.2 Drill Pad Sites PH1 and PH2

- Site drill pads on natural benches if possible, avoiding steep slopes.
- Site drill pads to avoid large mature trees of Myrtle or Sassafras if possible
- Site drill pads to avoid drainage lines or seepage areas if possible.

5.3 Drill Pad Sites PH3 and PH4

- Clear drill pad sites to the minimum requirement and limit ground disturbance as much as possible.
- Ensure that there is no use of fire or risk of accidental fires during the field operations in the summit area and ensure that personnel are fully briefed about limits on fire use.

APPENDIX 1: Plant Communities and Species Recorded

1: *Nothofagus – Atherosperma* Rainforest (TasVeg Code RMT)

This community is widespread on the lower slopes of Parsons Hood and is a widespread community in western Tasmania. The community in this location tends towards a thamnic type of rainforest with a mid storey of large leafed shrubs and greater diversity of species than in callidendrous rainforest which has a more open mid storey. The closed canopy and upper storey is of medium height co-dominated by Myrtle and Sassafras although it does include some larger old-growth trees in this location. There was greater diversity in the understorey on the lower slopes where there had been previous disturbance and a diversity of ferns. With increased altitude this community intergrades with the Highland Low Rainforest community where there is an overlap of species.

DOMINANT TREES	
Nothofagus cunninghamii	Myrtle-beech
Atherosperma moschatum	Sassafras
SECONDARY TREES	
Anodopetalum biglandulosum	Horizontal
Eucryphia lucida	Leatherwood
SHRUBS	
Anopterus glandulosus	Tasmanian Laurel
Leptecophylla juniperina subsp. *parvifolia*	Mountain Pinkberry
Prostanthera lasianthos	Christmas Mintbush
Tasmannia lanceolata	Pepperberry
Trochocarpa cunninghamii	Straggling Purpleberry
Richea pandanifolia	Pandani
GRASSES and GRAMINOIDS	
Gahnia grandis	Cutting Grass
FERNS and ALLIED PLANTS	
Blechnum wattsii	Hard Waterfern
Dicksonia antarctia	Soft Treefern
Grammitis billardierei	Common Fingerfern
Histiopteris incisa	Bat’swing Fern
Hymenophyllum australe	Austral Filmyfern
Hypolepis rugulosa	Ruddy Groundfern
Microsorium pustulatum	Kangaroo Fern
Polystichum proliferum	Mother Shieldfern
Rumohra adiantiformis	Leathery Shieldfern
Sticherus tener	Silky Fanfern

2. Highland Low Rainforest (and Scrub) (TasVeg Code RSH)

This distinctive low rainforest community covered the higher altitude zone, 900 metres +/-, of Parsons Hood that was surveyed. The community comes in various forms but in this location it is a closed community with a dense canopy less than 8 metres tall, dominated by a multi-stemmed form of *Nothofagus cunninghamii* and characterized by low species diversity, with very few understorey plants in the low light conditions, and ferns were largely replaced by mosses in the groundlayer. The multi stems of the Myrtle arise from ancient bases and the understorey is a tangle of interwoven branches. It is distinct from *Nothofagus – Phyllocladus* Short Rainforest (RMS) by a complete absence of Celery-top Pine *Phyllocladus asplenifolius.*

DOMINANT TREES	
Nothofagus cunninghamii	Myrtle-beech
SECONDARY TREES	
Anodopetalum biglandulosum	Horizontal
Atherosperma moschatum	Sassafras
Richea pandanifolia	Pandani
SHRUBS	
Anopterus glandulosus	Tasmanian Laurel
Olearia persoonioides	Geebung Daisybush
Richea scoparia	Scoparia
Tasmannia lanceolata	Pepperberry
Telopea truncata	Waratah
Trochocarpa cunninghamii	Straggling Purpleberry
GRASSES and GRAMINOIDS	
Libertia pulchella	Pretty Grassflag
FERNS and ALLIED PLANTS	
Blechnum wattsii	Hard Waterfern
Polystichum proliferum	Mother Shieldfern

APPENDIX 2: Checklist of Species Recorded by Family

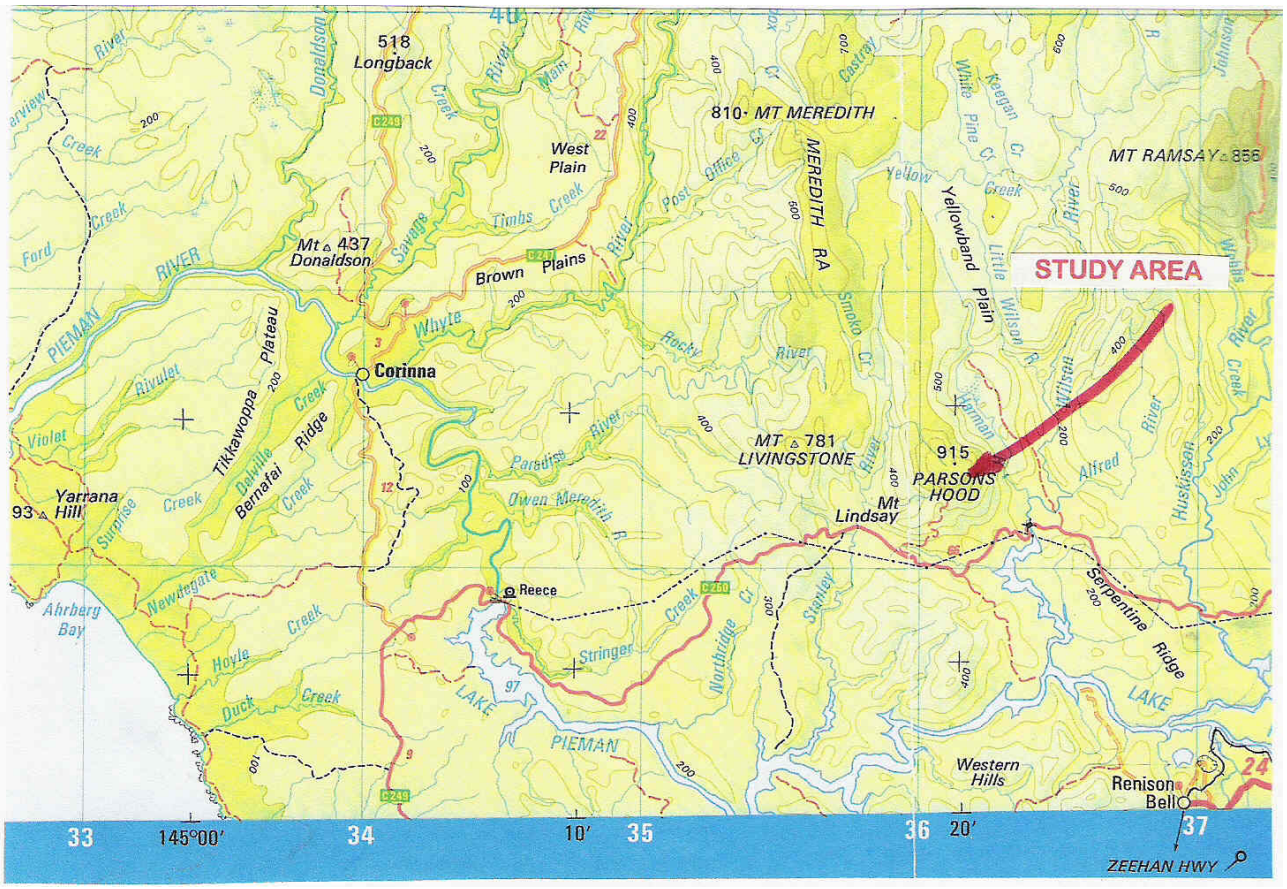
Dicotyledonae	
ASTERACEAE	
Olearia persoonioides	RSH
CUNONIACEAE	
Anodopetalum biglandulosum	RMT, RSH
EPACRIDACEAE	
Leptecophylla juniperina subsp. *parvifolia*	RMT
Richea pandanifolia	RMT, RSH
Richea scoparia	RSH
Trochocarpa cunninghamii	RMT, RSH
ESCALLONIACEAE	
Anopterus glandulosus	RMT, RSH
EUCRYPHIACEAE	
Eucryphia lucida	RMT
FAGACEAE	
Nothofagus cunninghamii	RMT, RSH
LAMIACEAE	
Prostanthera lasianthos	RMT
MONIMIACEAE	
Atherosperma moschatum	RMT, RSH
PROTEACEAE	
Telopea truncata	RSH
WINTERACEAE	
Tasmannia lanceolata	RSH
Monocotyledonae	
CYPERACEAE	
Gahnia grandis	RMT
IRIDACEAE	
Libertia pulchella	RSH

Appendix 2 (cont)
Checklist of species by Family

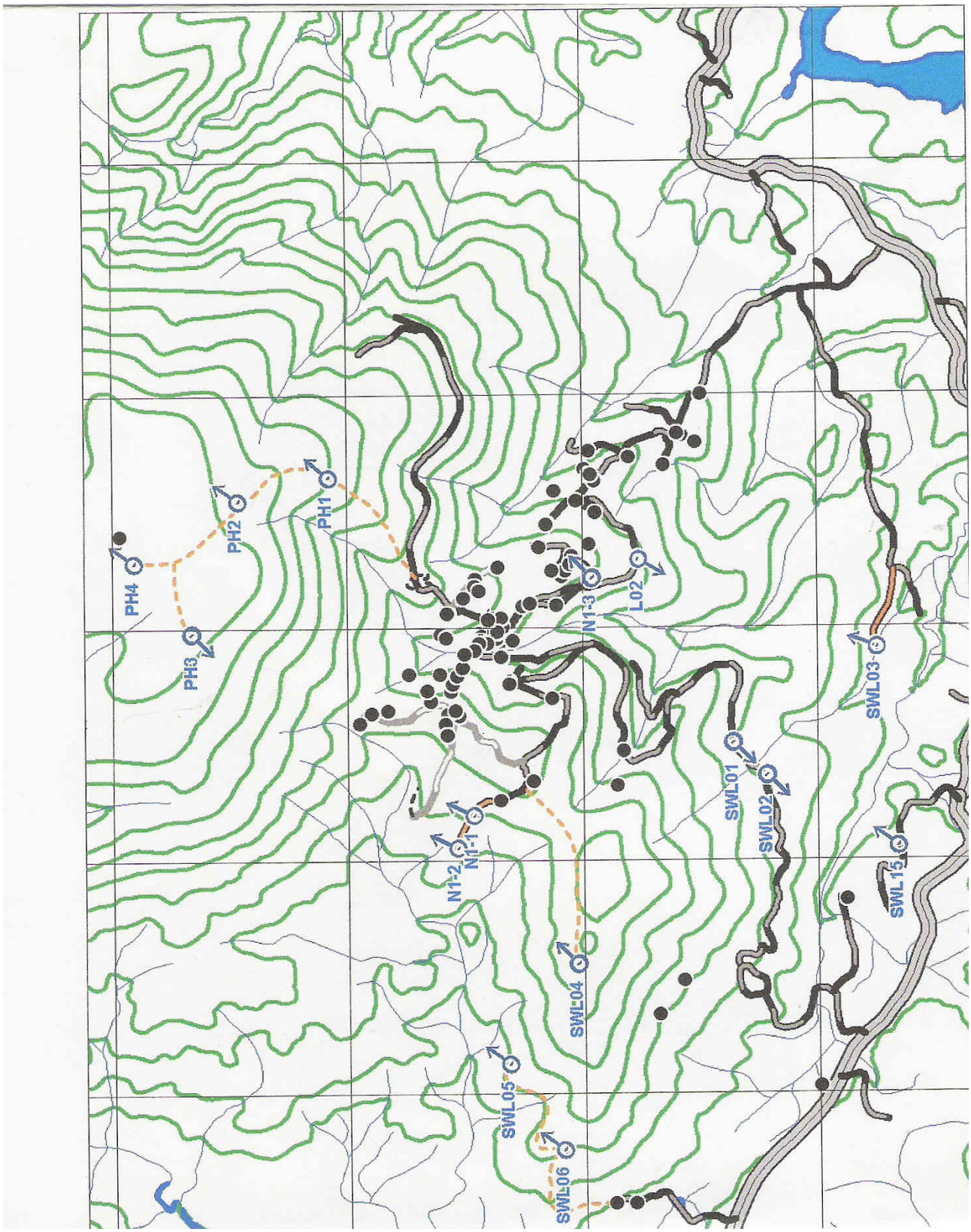
Pteridophyta	
BLECHNACEAE	
Blechnum nudum	RMT
Blechnum wattsii	RMT, RSH
DENNSTAEDTIACEAE	
Histiopteris incisa	RMT
Hypolepis rugulosa	RMT
DRYOPTERIDACEAE	
Polystichum proliferum	RMT, RSH
Rumohra adiantiformis	RMT
GLEICHENIACEAE	
Sticherus tener	RMT
GRAMMITIDACEAE	
Grammitis billardierei	RMT
HYMENOPHYLLACEAE	
Hymenophyllum australe	RMT
POLYPODIACEAE	
Microsorium pustulatum	RMT

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2. Harris, Kitchener A. (2005) From Forest to Fjaeldmark, DPIW Tasmania
3. Harries C, (Ed) (2001) The Environmental Law Handbook
4. Garret M, (1996) The Ferns of Tasmania, Tasmanian Forest Research Council
5. Wapstra H, A & M, Gilfedder L, The Little Book of Common Names for Tasmanian Plants



MAP 1: Location of Study Area at Parsons Hood



MAP 2: SURVEY AREA AT PARSONS HOOD. SPOT REF: PH4: 361405E – 5383980N

BOTANICAL SURVEY

MT. LINDSAY WEST PROSPECT

FOR VENTURE MINERALS LTD

16th September 2008

AMENDED REPORT: 1st October 2008

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MAP 2: Study Area

1.0 INTRODUCTION

1.1 Background

Venture Minerals is proposing to undertake the drilling of two exploratory holes on the western facing slopes of Mt. Lindsay. The drilling program is to be carried out utilizing a helicopter transportable rig and drill pads at each of the sites will require clearing to enable access.
The proposed drill sites are identified as SWL 05 and SWL 06. A walking access track is to be cut to each of the drill sites from the disused quarry on Mt Lindsay West Road for ground access.

1.2 Objectives

The objectives of this survey are to determine the botanical and other natural values present within the study area, to determine the possible impacts of the proposed drilling program, clearing and track cutting on those values, and to make recommendations on how the possible impacts on those values can be minimized and managed.
The natural values to be surveyed include the indigenous vegetation, the plant communities and species each comprise. The fauna known or considered likely to occur in the locality are also considered.

1.3 Study Area

The study area is located on the western facing slopes of Mt Lindsay and to the east of the Stanley River.
Refer to the attached map for site location. Spot Grid Ref: 358700E – 5382100N (GDA 94)
REF: TasMap 1:25,000 Livingstone, 3438.

1.4 Site Description

The survey commenced from the disused quarry located on Mt Lindsay West Road and followed the newly foot cut access track around the approximate contour towards the proposed drill site locations. This access track followed an old overgrown 4WD track to two drill sites from a previous exploration program, for the first 200m +/-. The vegetation in the vicinity of the proposed drill holes SWL 05 and SWL 06 was surveyed and assessed.
The site is an elevated slope which is generally well drained but with a number of small drainage lines and seepage areas.

2.0 DESKTOP SURVEY OF NATURAL VALUES

2.1 Background Research

The DPIW database, The Natural Values Atlas was accessed for the known biological records of the locality and within a 2,000 metre radius of the proposed drill sites.
Data sourced included the occurrence of threatened plant communities, the locations of threatened species of plants and threatened fauna known or expected to occur in the vicinity.

2.2 Desktop Survey Results

PLANT COMMUNITIES: The following vegetation communities are mapped under the TasVeg vegetation mapping program as occurring within a 1,000 metre radius of the central point of the study area.

TasVeg Community	**TasVeg Code**	**Extent in Study Area**
Nothofagus / Phyllocladus Short Rainforest	RMS	Widespread
Eucalyptus nitida Wet Forest (undifferentiated)	WNU	Small area to the north-west of the study area
Eucalyptus obliqua Dry Forest	WOU	Localized areas in the NE, NW & SW of the study area
Lagarostrobus franklinii Rainforest & Scrub	RHP	On lower slopes and along streams
Buttongrass Moorland	MBU	South-west portion of the study area
Eucalyptus obliqua Wet Forest	WOU	Small area on the north, north-west edge of study area
Leptospermum Scrub	SLW	Small patch on northern edge of study area

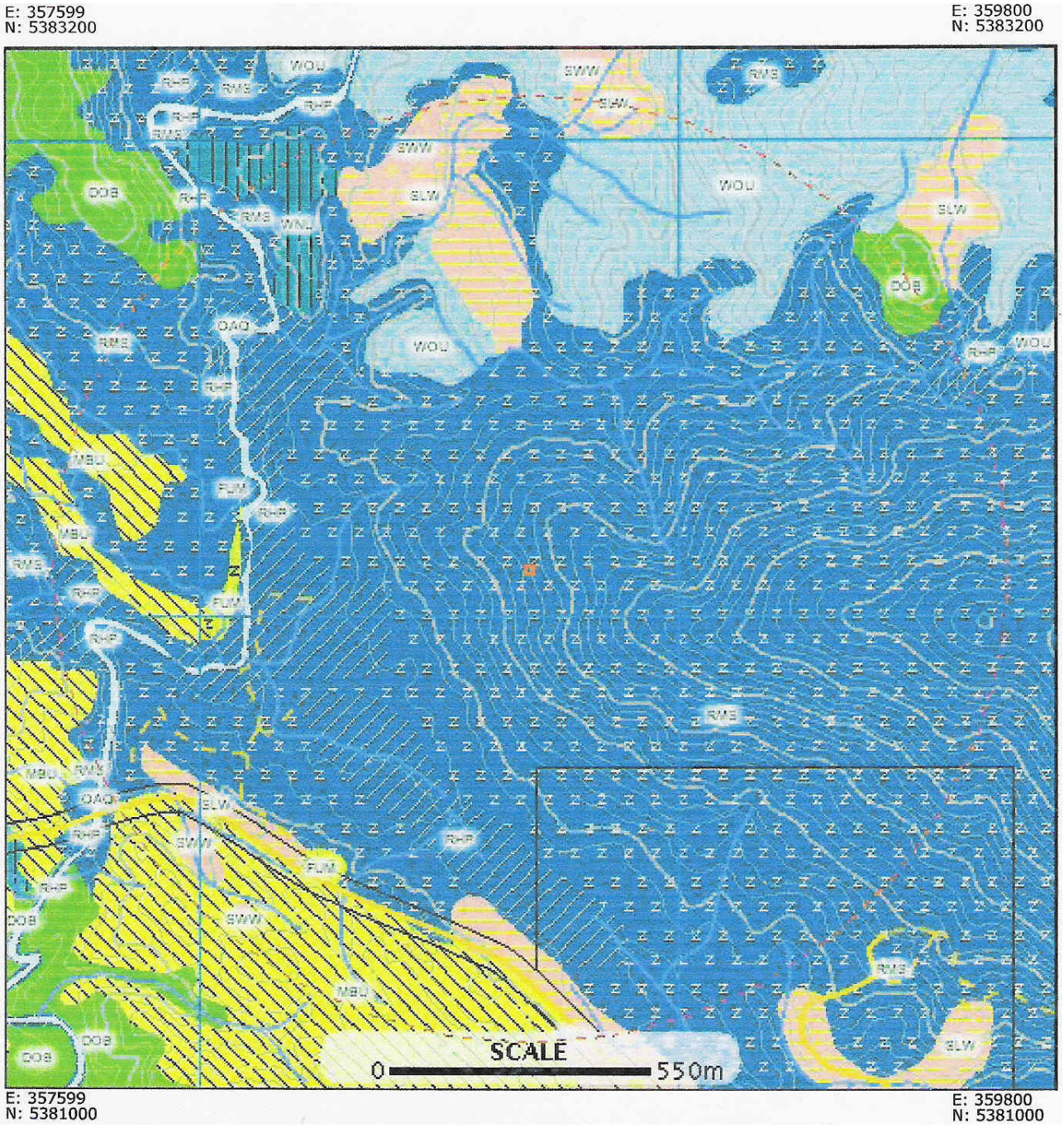


Figure 1: Vegetation Communities as per TasVeg Mapping

THREATENED VEGETATION COMMUNITIES: No vegetation community listed under the Tasmanian Threatened Native Vegetation Communities Act of 2006 is recorded as occurring within the study area. The community *Lagarostrobus franklinii* Rainforest is considered to be of conservation significance and particularly so when old growth trees are present.

THREATENED FLORA: The following species of vascular plant is listed under the Tasmanian Threatened Species Protection Act of 1995 and is recorded on the Natural Values Atlas database as occurring within 2,000 metres of the centre of the study area.

- ***Senecio velleioides*** Forest Groundsel is listed as rare under the Act and has been recorded in one location adjacent to a creek along Mt Lindsay West Road.
  Grid Ref: 359312E - 5380983N (+/- 2,000m) Date 1983.

THREATENED FAUNA: No species of fauna listed under the Tasmanian Threatened Species Protection Act of 1995 or the Commonwealth Environment Protection and Biodiversity Conservation Act of 1999 are recorded on the Natural Values Atlas database as occurring within 2,000 metres of the centre of the study area.
According to the data base the following species of threatened fauna could occur within the study area based on the known geographic range of each species.

- ***Aquila audax*** Wedge-tailed Eagle is provisionally listed as endangered under both State and Federal Acts.
- ***Halialeetus leucogaster*** White-bellied Sea-eagle is listed as vulnerable under the Tasmanian Act.
- ***Accipiter novaehollandiae*** White (Grey) Goshawk is listed as endangered under the State Act.
- ***Prototroctes maraena*** Australian Grayling is a fish listed as vulnerable under both Acts.

3.0 FIELD SURVEY

3.1 Survey Methodology

The survey was conducted along the route of the proposed foot access track from the old quarry on Mt Lindsay West Road to the proposed drill site SWL06. The route followed an overgrown 4WD track for part of the way and followed the approximate contour.
DRILL SITE LOCATIONS (Datum GDA94)
SWL05……. 359130E – 5382338N
SWL06 …….358763E – 5382108N
Vascular plant species were recorded, plant communities were observed and cross referenced with the TasVeg vegetation communities map.
The survey was conducted on Tuesday August 26th.

3.2 Limitations

The survey was undertaken in late winter. No botanical survey can guarantee that all vascular flora will be observed and recorded during a single survey in any one year, due to seasonal and annual variation in abundance and the possible absence of flowers and fertile material for identification. Ephemeral species that may have been present includes species of orchids, lilies, grasses and other graminoids. However all significant species known to occur in the study area and its environs are considered in this report.

3.3 Field Survey Results

The west and south-western slopes of Mt Lindsay are covered in rainforest communities however the communities observed along the survey route were at variance with the vegetation mapped under the TasVeg mapping program which describes it as being *Nothofagus / Phyllocladus* Short Rainforest. The vegetation observed in the study area was ***Nothofagus / Atherosperma*** **Rainforest (RMT)** which varied in age from 25 +/- *Nothofagus cunninghamii* regrowth to tall old-growth trees. Sassafras and Leatherwood were both present as canopy trees but neither were co-dominant with the Myrtle. Only one juvenile plant of *Phyllocladus asplenifolius* was observed.

A localized area of **Dogwood, *Pomaderris apetala* Forest** was observed to the immediate south-east of proposed drill site SWL06. This community fits within the definition of the western form of **Broad-leaf Scrub (SBR)** and appeared to be of a similar age to the adjoining rainforest community.

None of the communities which are detailed on the TasVeg map as occurring within 1,000 metres of the centre of the study area included with this report were observed during the actual field survey.

VEGETATION COMMUNITIES:

- ***Nothofagus /Atherosperma*** **Rainforest (RMT)** was the predominant vegetation type and plant community observed during the survey of this locality. It was a callidendrous type forest with tall single boled trees of Myrtle which was the predominant canopy species. Regrowth of Myrtle estimated to be about 25 years old was evident as a corridor along the old 4WD track and in the environs of drill site SWL06 which may be post fire regeneration as no past logging activity was evident. There was a limited diversity of species in the understorey which is typical of this type of forest.

Nothofagus /Atherosperma Rainforest is a widespread community in the vicinity of Mt Lindsay and nearby Parsons Hood and throughout western Tasmania although its extent has been reduced by wild fire since white settlement.

- **Broad-leaf Scrub (SBR)** A localized area of Dogwood forest was observed within 100 metres, upslope and to the south-east of proposed Drill site SWL06. This community is described under TasVeg as being Broad-leaf Scrub which typically has a dense closed canopy of either this species or in association with a number of other small trees such as *Notelaea ligustrina, Nematolepis squamea, Prostanthera lasianthos, Bedfordia salicina* or *Beyeria viscosa.* It often occurs as small stands within other forest types where there has been a low frequency of fire. This community is widespread as scattered patches across Tasmania
- DRILL SITE SWL06: The vegetation in the vicinity of Drill Site SWL06 was *Nothofagus /Atherosperma* Rainforest in its regrowth form and the clearing of the drill pad site for helicopter access should not have a significant impact on the community as a whole.
- DRILL SITE SWL05: The actual drill site proposed for Drill Site SWL05 was not surveyed at this time. It was reported by the track cutters that it is a location of large old-growth Myrtle trees, *Nothofagus cunninghamii.* Old growth trees should be avoided if at all possible in the clearing of this drill pad.

THREATENED VEGETATION COMMUNITY:

No threatened vegetation communities were observed in the locality.

THREATENED FLORA:
No species of vascular plant listed under the Tasmanian Threatened Species Act of 1995 or the Commonwealth Environment Protection and Biodiversity Conservation Act of 1999 was observed during the field survey.

4.0 CONCLUSIONS

The proposed extension to the Mt Lindsay drilling program to the western facing slopes of Mt Lindsay which will involve a walking track access from the Mt Lindsay West Road and the two drill pads SWL05 and SWL06 accessible for a helicopter transportable drill rig will have a limited impact on the botanical values of the location providing minimal disturbance practices are followed and adhered to. Care will need to be taken in the vicinity of SWL05 and SWL06 to avoid large old-growth trees of Myrtle *Nothofagus cunninghamii.*
Even though this vegetation is not highly flammable, particularly during cooler, wetter weather, precautions should be taken to ensure that there is no risk of fire during field activities.

5.0 RECOMMENDATIONS

5.1 Foot Track Access from Mt Lindsay West Road to proposed drill pad sites.

- Follow contour and old 4WD track where ever possible to limit ground disturbance and impact on any old growth Myrtles along the route.

5.2 Drill Pad Site SWL05.

- Site drill pad on a natural bench if possible, avoiding steep slopes
- Site drill pad to avoid large, mature old-growth trees of Myrtle, *Nothofagus cunninghamii* if possible.
- Site drill pad to avoid drainage lines or seepage areas if possible.

5.3 Drill Pad Site SWL06.

- Site drill pad on a natural bench if possible, avoiding steep slopes.
- Site drill pad to avoid large, mature old-growth trees of Myrtle, *Nothofagus cunninghamii* if possible.
- Site drill pad to avoid drainage lines or seepage areas if possible.

APPENDIX 1: Plant Communities and Species Recorded

1: *Nothofagus /Atherosperma* Rainforest (TasVeg Code RMT)

This community covered most of the area surveyed and is the predominant vegetation type on the western facing slopes of Mt Lindsay. *Nothofagus cunninghamii* was the principal canopy species and both Leatherwood *Eucryphia lucida* and Sassafras *Atherosperma moschatum* were only occasional as secondary trees. Myrtle was present as regrowth along the old 4WD track and in the vicinity of Drill site SWL06 and was estimated to be about 25 years old.
This rainforest community is widespread in western Tasmania.

DOMINANT TREES	
Nothofagus cunninghamii	Myrtle
SECONDARY TREES	
Atherosperma moschatum	Sassafras
Eucryphia lucida	Leatherwood
TALL SHRUBS	
Anodopetalum biglandulosum	Horizontal
Anopteris glandulosus	Tasmanian Laurel
Pomaderris apetala	Dogwood
SHRUBS	
Coprosma quadrifida	Native Currant
Leptospermum lanigerum	Woolly Teatree (juveniles near quarry)
Phyllocladus asplenifolius	Celery-top Pine (one juvenile only)
Trochocarpa cunninghamii	Scrambling Purpleberry
GRASSES & GRAMINOIDS	
Gahnia grandis	Cutting Grass
FERNS & ALLIED PLANTS	
Crepidomanes venosum	Bristle Filmyfern
Dicksonia antarctia	Soft Treefern
Grammitis billardierei	Finger Fern
Histiopteris incisa	Bat’swing Fern
Hypolepis rugulosus	Ruddy Groundfern
Microsorium pustulatum	Kangaroo Fern
Polystichum proliferum	Mother Shieldfern

APPENDIX 1 (cont)

2. *Pomaderris apetala* Forest (TasVeg Code NNP)

A localized area of Dogwood forest was observed during the survey to the south-east of Drill site SWL06. The adjacent vegetation community is *Nothofagus* Rainforest in a regrowth form and it is likely that this Dogwood community has regenerated over the same time frame estimated to be about 25 years. The community typically occurs as small stands within other forest types and is often too small to map under aerial interpretation systems such as TasVeg. The plant diversity within the community was extremely low.

DOMINANT TREES	
Pomaderris apetala	Dogwood
SHRUBS	
Tasmannia lanceolata	Native Pepperbush
FERNS & ALLIED PLANTS	
Polystichum proliferum	Mother Shieldfern

APPENDIX 2: Checklist of Species Recorded by Family

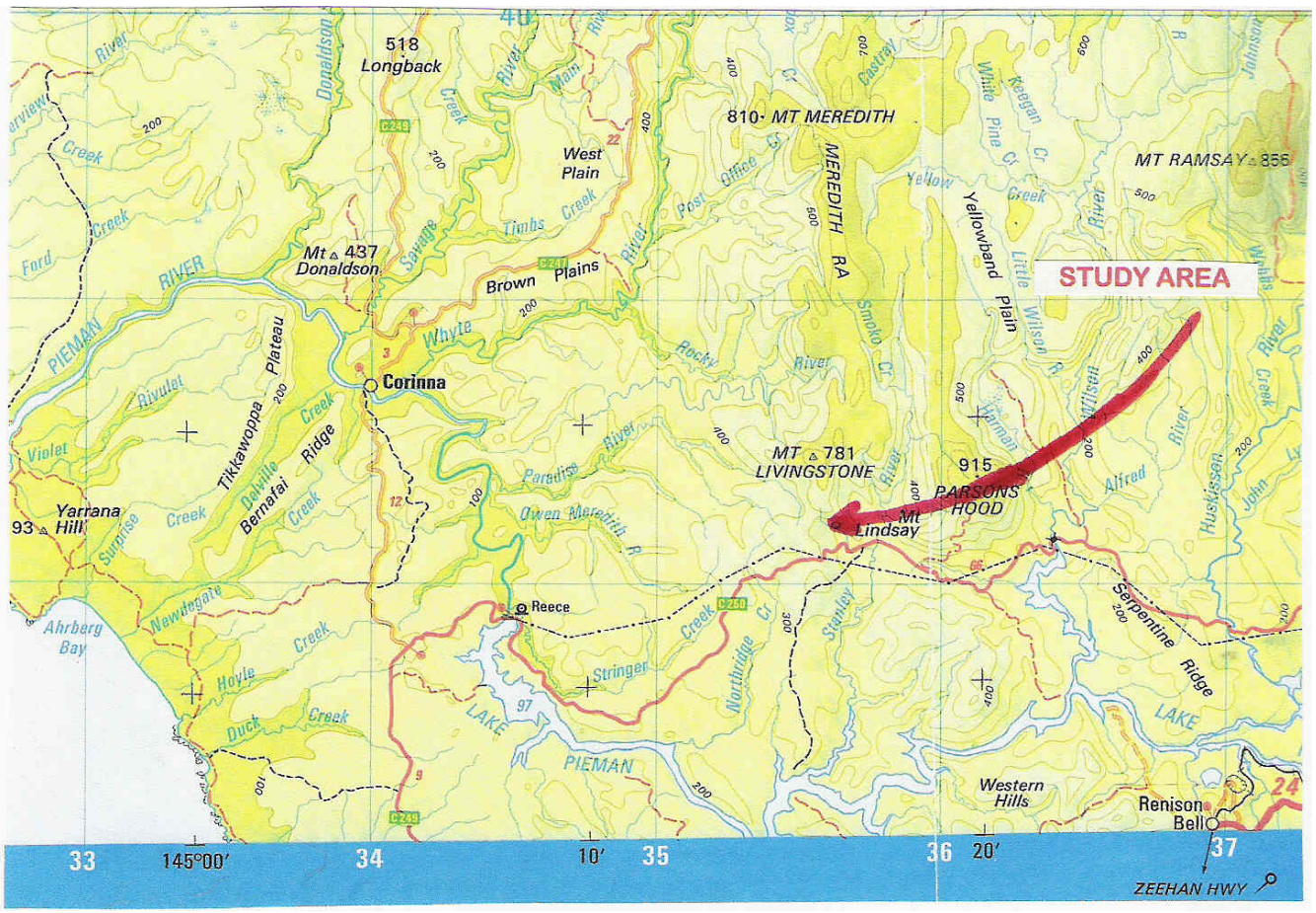
Dicotyledonae	
CUNONIACEAE	Recorded in Community
Anodopetalum biglandulosum	RMT
EPACRIDACEAE	
Trochocarpa cunninghamii	RMT
ESCALLONIACEAE	
Anopterus glandulosus	RMT
EUCRYPHIACEAE	
Eucryphia lucida	RMT
FAGACEAE	
Nothofagus cunninghamii	RMT
MONIMIACEAE	
Atherosperms moschatum	RMT
MYRTACEAE	
Leptospermum lanigerum	RMT
RHAMNACEAE	
Pomaderris apetala	RMT, NNP
RUBIACEAE	
Coprosma quadrifida	RMT
WINTERACEAE	
Tasmannia lanceolata	NNP
Monocotyledonae	
CYPERACEAE	
Gahnia grandis	RMT
Gymnospermae	
PODOCARPACEAE	
Phyllocladus asplenifolius	RMT
Pteridophyta	
DENNSTAEDTIACEAE	
Histiopteris incisa	RMT
Hypolepis rugulosus	RMT

APPENDIX 2 (cont)

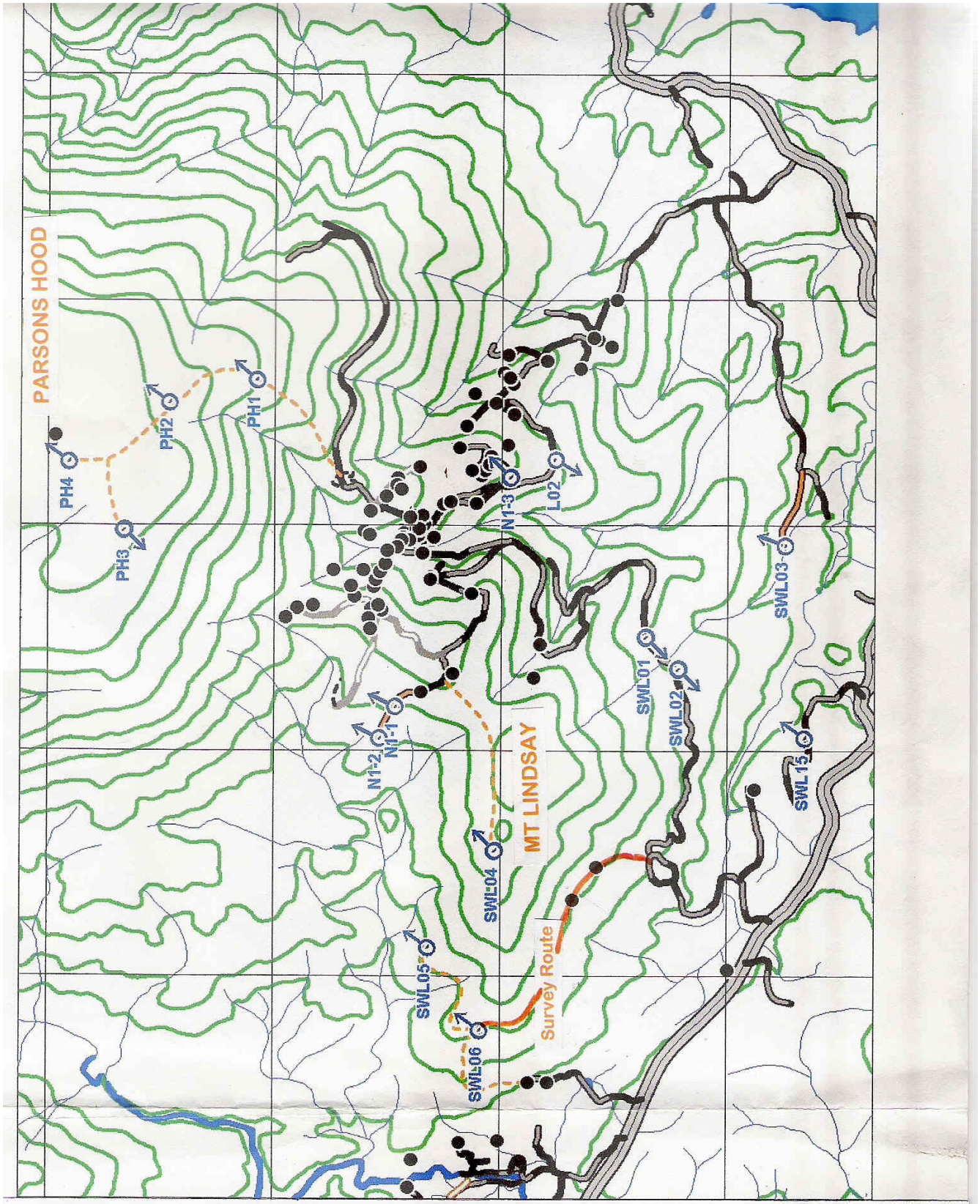
DICKSONIACEAE	
Dicksonia antarctia	RMT
DRYOPTERIDACEAE	
Polystichum proliferum	RMT, NNP
GRAMMITIDACEAE	
Grammitis billardierei	RMT
HYMENOPHYLLACEAE	
Crepidomanea venosum	RMT
POLYPODIACEAE	
Microsorium pustulatum	RMT

REFERENCES

1. DPIW Website …….. www.naturalvaluesatlas.dpiw.tas.gov.au
2. Harris S, Kitchener A, (2005) *From Forest to Fjaeldmark*, DPIW Tasmania
3. Harries C, (1996) *The Environmental Law Handbook*, Environmental Defenders Office, Tas
4. Wapstra H, A, & M, Gilfedder L, *The Little Book of Common Names for Tasmanian Plants*



MAP 1: Location of Mt Lindsay Study Area



MAP 2: MT LINDSAY PROSPECT and Survey Route to SWL05 & SWL06

You replied on 1/10/2008 7:40 PM.
Attachments can contain viruses that may harm your computer. Attachments may not display correctly.

Stuart Owen

From: Philip Milner [milner.p@bigpond.com] **Sent:** Wed 1/10/2008 10:33 AM
To: Stuart Owen
Cc: Brendan Dempsey; RON GREGORY
Subject: Re: Mt Lindsay West: Botanical Survey
Attachments: REPORT MT LINDSAY WEST VENTURE MINERALS Aug 08.doc(1MB)

Dear Stuart,
in my botanical report for Mt Lindsay I referred to a particular Dogwood (Pomaderris apelala) Community which I observed and which is listed under the Threatened Native Vegetation Communities Act, namely Notelaea - Pomaderris - Beyeria Forest.
I had some doubts about my identification and definition of this community and sought a second opinion from Sib Corbett who is the Vegetation Mapping Officer with DPIW.
From my description of the community her opinion was that it was a similar community but different in key elements, and is more reasonably assigned to a form of Broad-leaf Scrub (SBR).
Broad-leaf Scrub is widespread as scattered patches across Tasmania and is not listed as a threatened community under the Act.
I have therefore amended my report in regard to the Dogwood community to reflect that advice.
I have attached a copy of the amended report.
Regards
Philip

STANLEY REWARD EXPLORATION PROGRAM

PROPOSED DRILL SITES AT STANLEY RIVER

BOTANICAL AND FAUNA HABITAT SURVEY

FOR VENTURE MINERALS LTD

17th July 2009

PHILIP MILNER LANDSCAPE CONSULTANT PTY LTD

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Introduction: Venture Minerals Ltd is undertaking an exploratory drilling program within the Stanley Reward prospect EL21/2005 which will involve two drill sites adjacent to the Stanley River. The work program will involve the clearing of a drill pad at each site which will be accessed by helicopter. A flora and fauna habitat survey is required as part of the MRT license conditions to determine any likely impacts on threatened species or threatened vegetation communities within the target areas.

Objectives: The objectives of this survey were to;

- Undertake a desktop survey to confirm the known biological records and the natural values which may be present in the exploration target area or in the vicinity.
- Undertake a field survey of the exploration target area to observe and record the natural values present, including the vegetation types and plant communities, the flora and in particular and threatened species, and the presence of any species of threatened fauna or of potential habitat.
- Determine the possible impacts of the proposed exploration program on the natural values present and make recommendations on how those impacts can be minimized.

Location of Study Area: The two proposed drill sites are located to the immediate west of the Stanley River and within the catchment of the Pieman River.
SRTEMP01…… GRID REF: 357920E – 5382440N
SRTEMP02 ……GRID REF: 358100E – 5382280N

The above locations are the preferred drill site locations, however if there is found to be a major problem with either site the following alternative sites are proposed.
SRTEMP01A……..GRID REF: 357885E – 5382400N
SRTEMP02A …….GRID REF: 358050E – 5382230N
MGA Zone 55 GDA94

Site Description: The exploration target area is located to the immediate west of the Stanley River and to the west of Mount Lindsay within the Meredith Range Regional Reserve. Most of the area is low lying and poorly drained as the flood plain of the Stanley River as well as a number of smaller creeks which flow into it. The area is largely composed of alluvium of varying ages and times of deposition although SRTEMP01 itself is located on a rise.
There is evidence of past mineral exploration activities in the location, and evidence of previous bushfires.

Desktop Survey of Natural Values: The DPIW database "The Natural Values Atlas" was accessed for the known biological records of the locality and environs. Records of threatened species known to occur within a 5,000 metre radius of the location were also accessed. Data sourced included the vegetation types and plant communities, the occurrence of any threatened vegetation communities, the locations of any threatened species of plants, and threatened fauna known or expected to occur in the vicinity.

Desktop Survey Results:
VEGETATION COMMUNITIES: The following vegetation communities are mapped under the TasVeg mapping program as occurring within 500 metres of the study area reference point.

VEGETATION COMMUNITY	TasVeg Code/ Map Colour	EXTENT IN STUDY AREA
Nothofagus_ Phyllocladus Short Rainforest (undifferentiated)	RMS / RMU / dark blue	The most extensive community in the study area
Lagarostrobus franklinii Rainforest & Scrub	RHP / dark blue with diagonal lines	Along the river and streams and areas of alluvium
Buttongrass Moorland (undifferentiated)	MBU / yellow with diagonal lines	Along valley floor in western half of study area
Eucalyptus nitida Wet Forest (undifferentiated)	WNU / bright blue with vertical lines	Small area on northern edge of study area
Eucalyptus obliqua Wet Forest (undifferentiated)	WOU / pale blue	Small area on north-east edge of study area
Extra-urban miscellaneous	FUM / Yellow/green with "z"	Denotes disturbed areas of vegetation

THREATENED VEGETATION COMMUNITIES:

- None of the above communities are listed as threatened under the Tasmanian *Nature Conservation Act 2002.*
- *Nothofagus – Phyllocladus* Short Rainforest is considered to be well reserved however in its old-growth form it is considered to be under-reserved in some regions of the state.
- *Lagarostrobus franklinii* Rainforest and Scrub community is considered to be under-reserved in Tasmania and it is being targeted under the RFA for further reservation.
- Buttongrass Moorland is a widespread and common community in western Tasmania.
- *Eucalyptus nitida* Wet Forest is well reserved in Tasmania, however it is under-reserved in some regions of the state in its old-growth condition. Old-growth forest of this type is being targeted under the RFA for further reservation.
- *Eucalyptus obliqua* Wet Forest is under-reserved in some areas of the state including in its old-growth form. Further reservation of this forest community is required under the RFA.

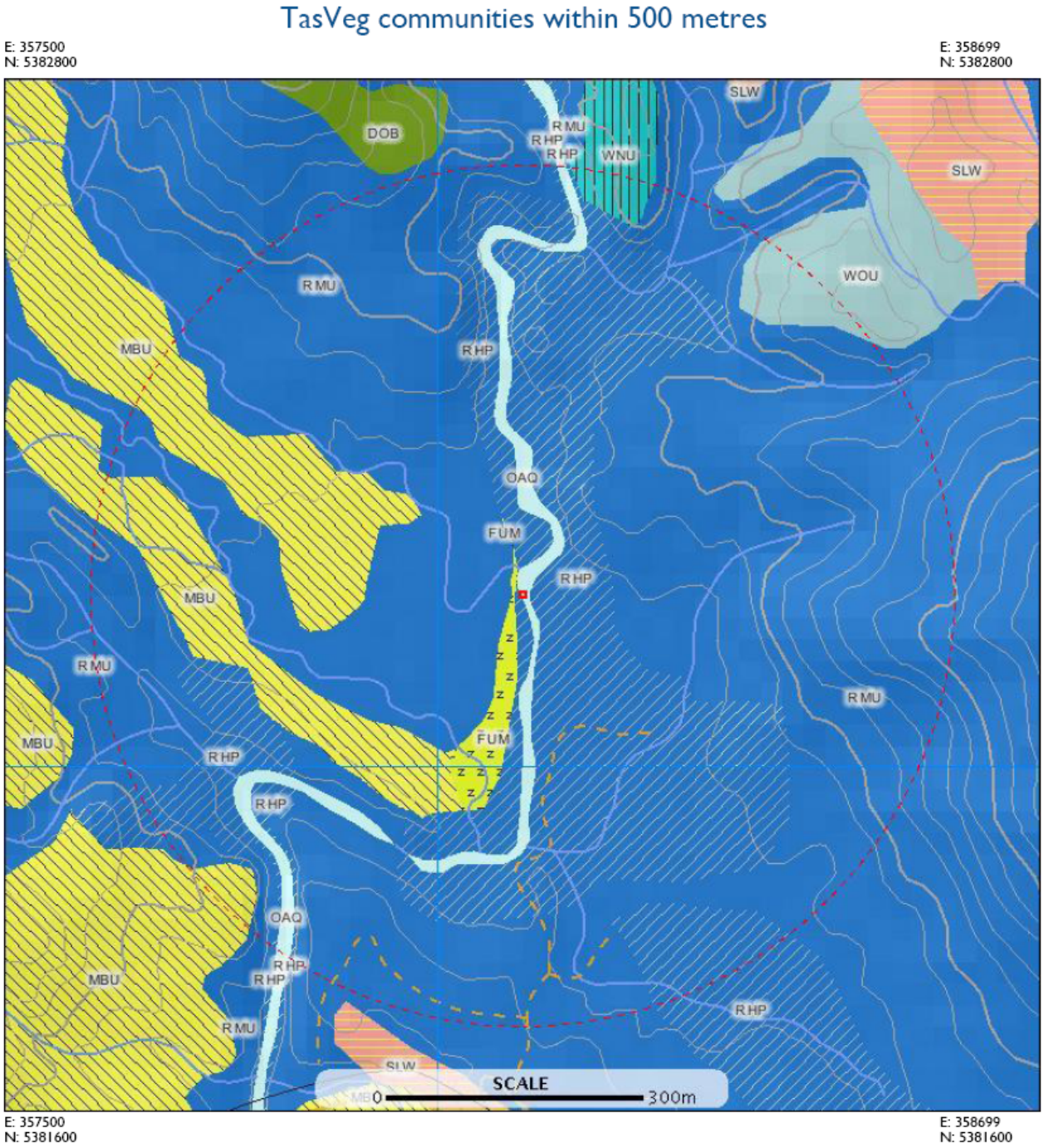


FIGURE 1: Vegetation communities as per TasVeg mapping program within 500 metres of study area reference point.
Code: RMU… *Nothofagus- Phyllocladus* Short Rainforest (undifferentiated) / RHP … *Lagarostrobus franklinii* Rainforest & Scrub / MBU … Buttongrass Moorland (undifferentiated) / WNU … *Eucalyptus nitida* Wet Forest (undifferentiated) / *Eucalyptus obliqua* Wet Forest (undifferentiated) / FUM … Disturbed vegetation

THREATENED FLORA:

- No species of threatened flora listed under the Tasmanian *Threatened Species Conservation Act 1995* and /or the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* are recorded on the Natural Values Atlas database as occurring within 500 metres of the study area reference point.
- There are two species of threatened flora recorded on the database as occurring within 5,000 metres of the study area reference point.
- *Epacris curtisae,* Northwest Heath. There is one 1995 record of the species from the locality, and the author has observed the species on elevated well-drained slopes within buttongrass moorland about 5km to the west of this site. This species is listed as being rare under the Tasmanian Act. The species is endemic to Tasmania and is known to occur on undulating terrain in association with common heathy species within buttongrass moorlands. It occurs only in the far north-west of the state and the Meredith Range Regional Reserve is one of its key sites.
- *Senecio vellieoides,* Forest Groundsel. There is one record of the species from the area dated 1983. The species is listed as rare under the Tasmanian Act. It is a short lived perennial herb up to 2 metres in height which is found in moist places on hill slopes particularly after disturbance by fire. The species has been recorded in scattered locations across the state with key locations in this region being Tullah, Rosebery and the Arthur River Forest Reserve.

THREATENED FAUNA: There were no species of threatened fauna recorded on the database as occurring within 5,000 metres of the study area.
The following species of fauna which are listed under the State and/or Commonwealth Acts have potential to occur within the study area based on habitat mapping within the known geographical range of each.

- The Wedge-tailed Eagle, *Aquila audax* ssp *fleayii*. The Tasmanian subspecies is listed as endangered under both the Tasmanian and Commonwealth Acts. The species requires large trees within tracts of old-growth forest for successful nesting.
- The White-bellied Sea-eagle, *Haliaeetus leucogaster* is considered to be vulnerable in Tasmania and is listed under the State Act. It can be found over inland waterways and rivers as well as around the coastline.
- The White (Grey) Goshawk, *Accipiter novae-hollandiae,* is endangered in Tasmania and requires mature wet forest as habitat.
- The Masked Owl, *Tyoto novae-hollandiae* ssp *castanops.* The Tasmanian subspecies is listed as endangered under the State Act. It requires large tree hollows for nesting and old-growth forest for its survival.
- The Azure Kingfisher, *Ceyx azurea* is endangered in Tasmania and is restricted to riparian habitat along western and north-western rivers.
- The Australian Grayling, *Prototroctes mareana* is a fish which is listed as being vulnerable under both State and Commonwealth Acts.

Field Survey:
Methodology: The field survey was undertaken on foot and focused on the two locations targeted for proposed drill sites SRTEMP01 and SRTEMP02 which are located to the immediate west of the Stanley River.
Two other nearby sites were also surveyed SRTEMP01A and SRTEMP02A as alternative drill sites should there be any major problems with the preferred sites 01 or 02.

An area of approximately 100 metres diameter was surveyed around each drill site location. The drill sites are to be accessed by helicopter so there will be no development or construction of an access road or vehicular track as part of this exploration program.
Vascular plant species were recorded, vegetation communities were observed and cross-referenced with the TasVeg map sourced from the Natural Values Atlas data base. Suitable habitat for threatened species of fauna was also observed.
The survey was conducted on Friday 10th July 2009.

Limitations: The survey was conducted in winter when most species of plants are not flowering. No botanical survey can guarantee that all flora will be observed and recorded in a single survey in one year due to seasonal and annual variation in abundance and the possible absence of flowers and fertile material for identification. Ephemeral species which may have been present includes species of orchids, lilies, herbs, grasses and other graminoids. However all significant species known to occur in the study area and its environs have been considered in this report.

Field Survey Results:
VEGETATION COMMUNITIES: The vegetation communities observed along the flagged route towards the proposed drill sites was largely Buttongrass Moorland (MBU) with adjoining patches of Western Wet Scrub (SWW). The Buttongrass Moorland is in accordance with the TasVeg mapping however the western Wet Scrub is more extensive in the location than mapped.
The vegetation in the vicinity of drill site SRTEMP01 and SRTEMP01A is also Western Wet Scrub (SWW) but as it is located on a rise other understorey species which require better drainage are present including low mainly regrowth trees of emergent *Eucalyptus nitida*, which is largely absent from the Wet Scrub and the Buttongrass Moorland where drainage is impeded. Western Wet Scrub is widespread and abundant in western Tasmania.
The proposed drill site SRTEMP02 is located to the immediate west and on the floodplain of the Stanley River itself, in a location with a granular alluvium type soil. The vegetation in this location fits within the definition of *Leptospermum* with Rainforest Scrub (RLS) rather than the *Lagarostrobus franklinii* Rainforest and Scrub (RHP) as mapped under TasVeg. The canopy is dominated by *Leptospermum lanigerum* 4 to 6 metres tall with a scrubby understorey which includes a number of rainforest species. *Lagarostrobus franklinii* is present but only as juveniles and saplings under the Leptospermum canopy and along the river and stream banks.
The vegetation in this community is likely to have been induced by a previous bushfire but has the potential to develop over time into a forest dominated by the rainforest species present including the Huon Pine. *Leptospermum* with Rainforest Scrub (RLS) is a community which is widespread in the western half of Tasmania.
SRTEMP02A is also located on a low lying section of the flood plain and adjacent to a minor creekline and is located within a natural clearing which has a ground layer of the Fishbone Waterfern *Blechnum nudum.* The surrounding vegetation community is again *Leptospermum* with Rainforest Scrub (RLS) although there is less diversity in this location with the rainforest species present. A relatively mature Blackwood *Acacia melanoxylon* is located on the edge of the clearing and an emergent *Eucalyptus nitida* is also located nearby.

THREATENED VEGETATION COMMUNITIES: No community listed under the Tasmanian *Nature Conservation Act 2002* was observed during the field survey.

THREATENED FLORA: No plant species listed under the Tasmanian *Threatened Species Conservation Act 1995* and/or the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* was observed or recorded during the field survey.

FLORA OF CONSERVATION SIGNIFICANCE: No mature or old-growth trees of Huon Pine *Lagarostrobus franklinii,* were observed or recorded during the field survey and no old-growth Eucalypt trees were observed within or adjacent to each of the proposed drill sites.

THREATENED FAUNA: No species of threatened fauna listed under the State or Commonwealth Acts was observed during the field survey.

THREATENED FAUNA HABITAT: Potential habitat such as old-growth forest, large mature trees or trees with large hollows for species such as the Wedge-tailed Eagle, Masked Owl and White (Grey) Goshawk was not observed or present in the survey area
No suitable habitat was observed for the White-bellied Sea-eagle although it may be present over the nearby Pieman River hydro impoundments.
Suitable habitat for the Azure Kingfisher is present along the Stanley River however the proposed drilling program will not impact of the riverbank vegetation. The Stanley River may also provide suitable habitat for the Australian Grayling.

ENVIRONMENTAL WEEDS: Two small plants of Blackberry *Rubus fruticosa* were observed during the field survey, one in the vicinity of SRTEMP01 and one in the vicinity of SRTEMP2A. Both were hand pulled at the time of observation.

PHYTOPHTHORA: There was no symptomatic field evidence of the presence of the root pathogen *Phytophthora cinnamoni* within the area covered by the survey.

Survey Conclusions:
No vegetation community listed as threatened under the Tasmanian *Nature Conservation Act 2002* was observed during the survey.
No vegetation community of conservation significance such as *Lagarostrobus franklinii* Rainforest or old-growth Eucalypt communities were present in the survey area.
No species of flora which is listed under the Tasmanian *Threatened Species Conservation Act 1995* and/or the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* was observed during the field survey.
No species of threatened fauna listed under the above threatened species Acts was observed during the field survey.
The proposed exploration program will not impact on potential habitat for any species of threatened fauna which has the potential to occur in the locality.
Environmental weeds are present at very low levels. Two plants of one species of environmental weed were observed during the survey, ie Blackberry, *Rubus fruticosa.*
No Phytophthora was present in the survey area.

Recommendations:

VEGETATION COMMUNITIES: Limit clearing for each drill pad to the minimum specification for safe helicopter access in order to minimize environmental impact to the surrounding vegetation. Avoid removing mature trees if at all possible and in particular the mature Blackwood adjacent to proposed alternative drill site STTEMP01A.

THREATENED VEGETATION COMMUNITIES: No threatened vegetation community was observed during the field survey and no specific action is requited.

THREATENED FLORA: No species of threatened flora was observed or recorded during the field survey and no specific action is required.

FLORA OF CONSERVATION SIGNIFICANCE: Any mature tree adjacent to the proposed drill pads including the mature Blackwood adjacent to 2A are considered to have some conservation significance and should be retained unless there are OH&S issues. Regrowth Huon Pines are also considered to be significant and should be avoided if possible.

THREATENED FAUNA: No species of threatened fauna was observed during the field survey and no specific action is required.

THREATENED FAUNA HABITAT: The Stanley River is potential habitat for the Azure Kingfisher. Ensure that there is no disturbance to the river bank vegetation during activities associated with the exploration program.

ENVIRONMENTAL WEEDS: Field workers clearing for the drill pads should be made aware that Blackberries have been recorded in the locations. If any are found they should be manually removed.

PHYTOPHTHORA: Follow accepted protocols in regard to hygiene and washdown procedures for machinery and equipment, including the drill rig which is to be flown in, to ensure that the pathogen is not inadvertently introduced to these work sites, by way of extraneous soil, mud or gravel adhered to tyres, workboots etc.

Philip Milner

Vegetation Consultant

APPENDIX 1: Vegetation Communities and Species Recorded

1. *Leptospermum* with Rainforest Scrub (TasVeg Code RLS)

The community observed in the vicinity of proposed drill site SRTEMP02 was characterized by a relatively open canopy of *Leptospermum lanigerum* about 5 to 6 metres high, with an occasional emergent tree of *Acacia melanoxylon* and *Eucalyptus nitida* and with an open understorey composed of regrowth trees of a large diversity of mainly rainforest species.
This community may be in a rainforest regrowth phase following a previous bushfire and has the potential in the absence of further fire to once again over time develop into a pure rainforest community. Facies of this community are found throughout rainforest communities across Tasmania, but it mainly occurs in the western half of the State.

DOMINANT TREES		
Leptospermum lanigerum	Woolly Teatree	abundant
EMERGENT TREES		
Acacia melanoxylon	Blackwood	occasional
Eucalyptus nitida	Western Peppermint	occasional
UNDERSTOREY SMALL TREES / LARGE SHRUBS		
Acacia mucronata	Caterpillar Wattle	occasional
Atherosperma moschatum	Sassafras	occasional
Eucryphia lucida	Leatherwood	occasional
Hakea lissosperma	Mountain Needlebush	uncommon
Lagarostrobus franklinii	Huon Pine	occasional (sapling)
Melaleuca squarrosa	Scented Paperbark	occasional
Nothofagus cunninghamii	Myrtle	occasional
Phyllocladus asplenifolius	Celery-top Pine	occasional
Pittosporum bicolor	Cheesewood	occasional
MEDIUM SHRUBS		
Anopterus glandulosa	Tasmanian Laurel	occasional
Cenarrhenes nitida	Native Plum	occasional
Nematolepis squamea	Satinwood	occasional
Prostanthera lasianthos	Mint Bush	occasional
Tasmannia lanceolata	Native Pepper	occasional
Telopea truncata	Waratah	occasional
SMALL SHRUBS		
Bauera rubioides	Wiry Bauera	common
CLIMBERS		
Clematis aristata	Native Clematis	uncommon

GRASSES & GRAMINOIDS

Baloskion tetraphyllum	Tassel Cordrush	common
Empodisma minus	Spreading Roperush	occasional
Gahnia grandis	Cutting Grass	occasional

FERNS & ALLIED PLANTS

Blechnum nudum	Fishbone Waterfern	very common
Blechnum wattsii	Hard Waterfern	occasional
Dicksonia antarctia	Soft Treefern	occasional
Gleichenia dicarpa	Pouched Coralfern	occasional
Histiopteris incisa	Bats-wing fern	occasional

ENVIRONMENTAL WEEDS

Rubus fruticosa	Blackberry	uncommon

2. Western Wet Scrub (TasVeg Code SWW)

This is typically a dense uneven scrub community with species of Leptospermum and/or Melaleuca predominating and with emergent saplings of *Eucalyptus nitida.* It often occurs adjacent to Buttongrass Moorland and to the Leptospermum with Rainforest Scrub community

SWW is a widespread and abundant community in the western half of Tasmania from sea level up to about 750 metres.

DOMINANT CANOPY TREE

Leptospermum lanigerum	Woolly Teatree	common

EMERGENT TREES

Eucalyptus nitida	Western Peppermint	common (mainly as saplings)

SMALL TREES / LARGE SHRUBS

Acacia mucronata	Caterpillar Wattle	occasional
Eucryphia lucida	Leatherwood	occasional
Nothofagus cunninghamii	Myrtle	occasional

MEDIUM SHRUBS

Cenarrhenes nitida	Native Plum	occasional
Monotoca submutica	Roundleaf Broomheath	occasional
Nematolepis squamea	Satinwood	occasional
Oxylobium arborescens	Tall Shaggypea	occasional

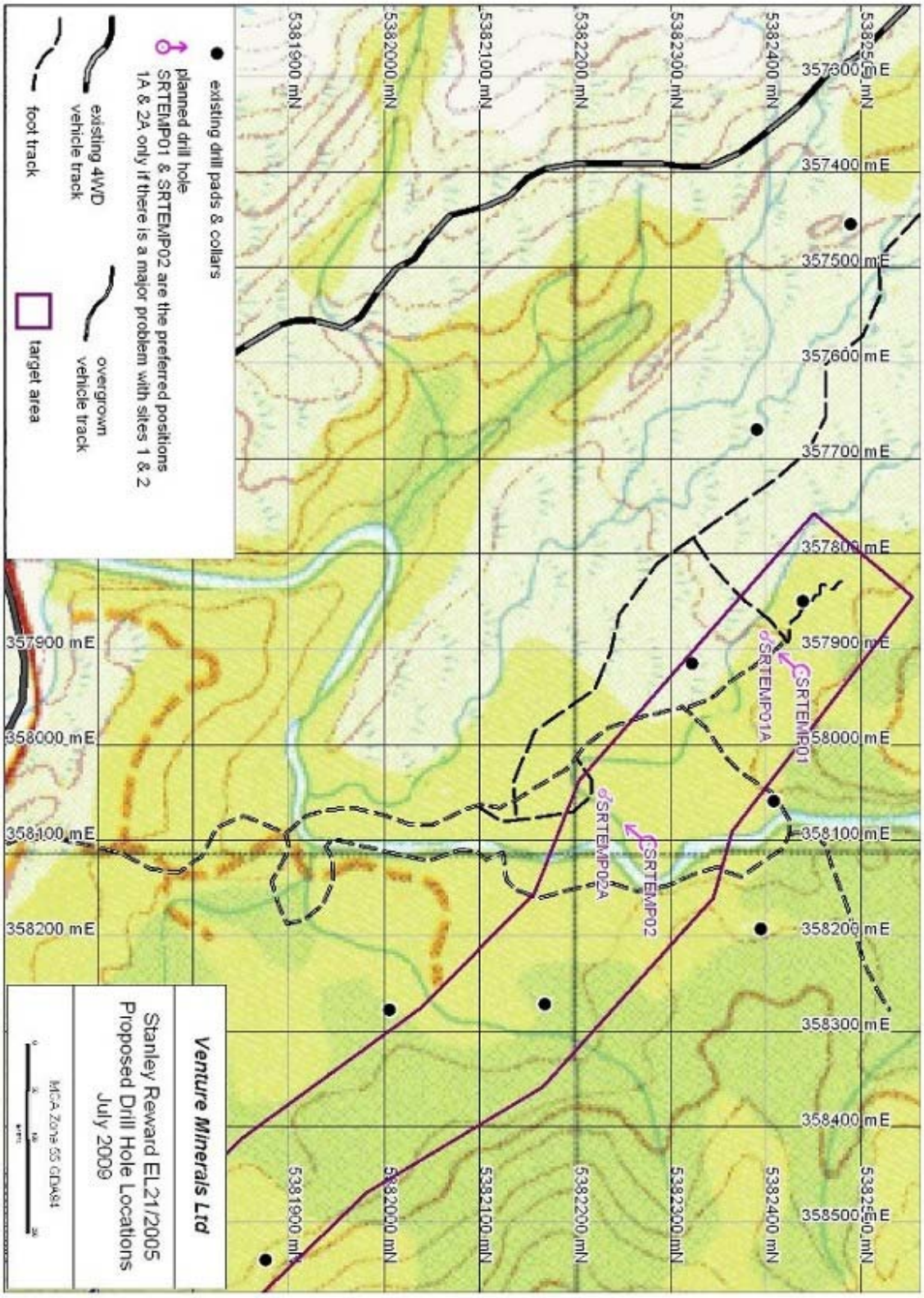
SMALL SHRUBS

Bauera rubioides	Wiry Bauera	common
Leptecophylla juniperina	Pink Mountainberry	occasional

CLIMBERS

Billardiera longiflora	Climbing Blueberry	uncommon

GRASSES & GRAMINOIDS		
Drymophila cyanocarpa	Turquoise-berry	occasional
Empodisma minus	Spreading Roperush	occasional
Gahnia grandis	Cuttingrass	common
FERNS & ALLIED PLANTS		
Polystichum proliferum	Mother Shieldfern	occasional
ENVIRONMENTAL WEEDS		
Rubus fruticosa	Blackberry	uncommon


existing drill pads & collars
planned drill hole
SRTEMP01 & SRTEMP02 are the preferred positions
1A & 2A only if there is a major problem with sites 1 & 2
existing 4WD vehicle track
overgrown vehicle track
foot track
target area
SRTEMP01A
SRTEMP01
SRTEMP02A
SRTEMP02
Venture Minerals Ltd
Stanley Reward EL21/2005
Proposed Drill Hole Locations
July 2009
MGA Zone 55 GDA94
357300 mE
357400 mE
357500 mE
357600 mE
357700 mE
357800 mE
357900 mE
358000 mE
358100 mE
358200 mE
358300 mE
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5382000 mN
5381900 mN

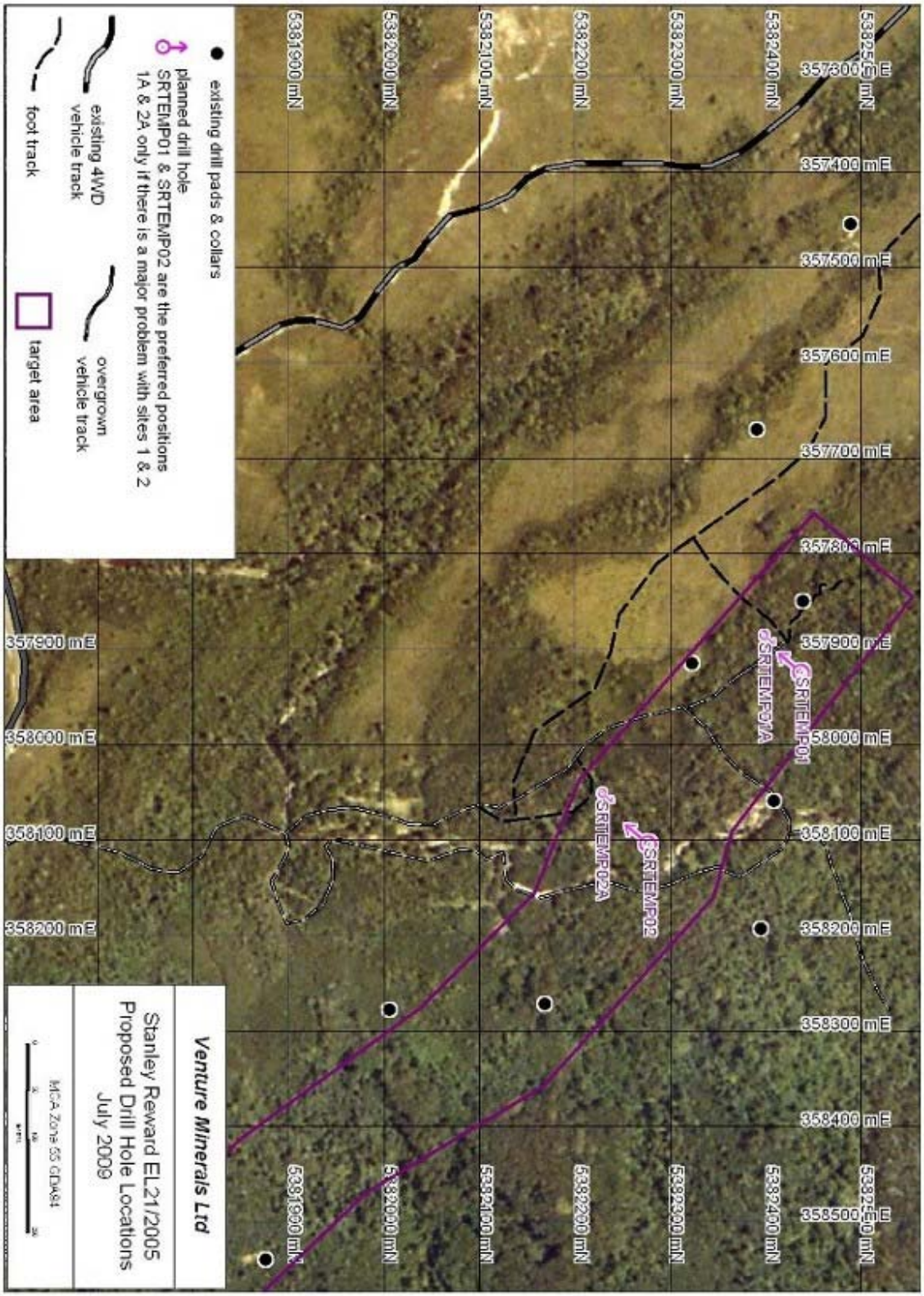

existing drill pads & collars
planned drill hole
SRTEMP01 & SRTEMP02 are the preferred positions
1A & 2A only if there is a major problem with sites 1 & 2
existing 4WD vehicle track
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SRTEMP01A
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July 2009
MGA Zone 55 GDA94
5382500 mN
5382400 mN
5382300 mN
5382200 mN
5382100 mN
5382000 mN
5381900 mN
357300 mE
357400 mE
357500 mE
357600 mE
357700 mE
357800 mE
357900 mE
358000 mE
358100 mE
358200 mE
358300 mE
358400 mE
358500 mE



PHOTO 1: SRTEMP02



PHOTO 2: SRTEMP02A



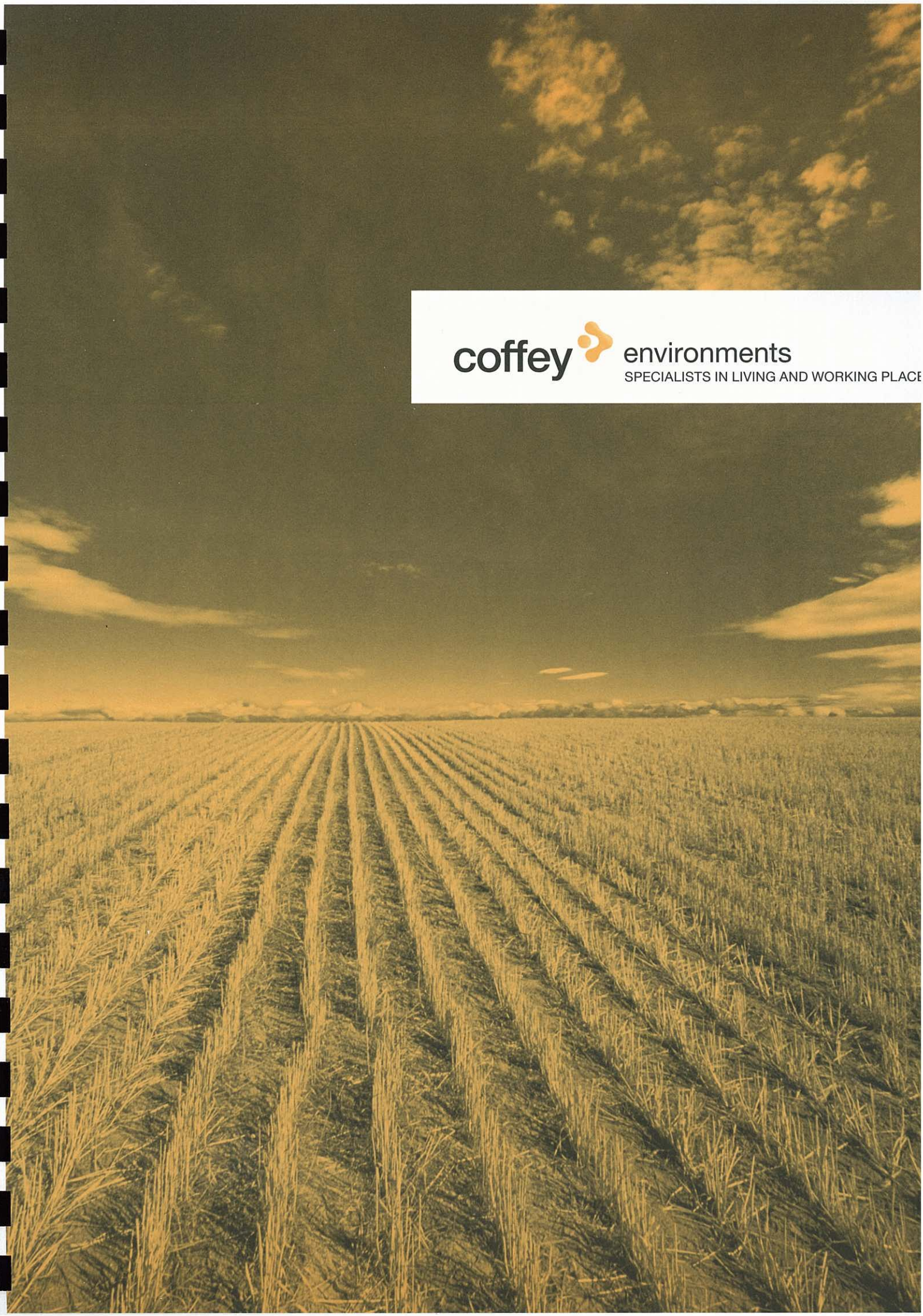
PHOTO 3: SRTEMP01



PHOTO 4: Stanley River near SRTEMP02

Appendix K

Coffey Environments PL baseline water report


coffey
environments
SPECIALISTS IN LIVING AND WORKING PLACE

coffey environments
SPECIALISTS IN LIVING AND WORKING PLACES

WATER MONITORING REPORT -BASE LINE STUDY, JANRUARY 2009

Prepared for:

Venture Minerals

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Field Work Date: 28-29 January 2009
Report Date: 11 March 2009
Project Ref: ENVIHOBA06804AA-R02

Written/Submitted by:	Reviewed/Approved by:
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Appendix D	Field Data Observation Sheet
Appendix E	Sampling Location Photograph

ABBREVIATIONS

ANZECC	Australian and New Zealand Environment and Conservation Council
BH	Borehole
COC	Chain of Custody
LOR	Limit of Reporting
µg/L	micrograms per litre
mg/L	milligrams per litre
NATA	National Association of Testing Authorities
NEPM	National Environment Protection Measure
ppm	parts per million
QA	Quality Assurance
QC	Quality Control
RPD	Relative Percent Difference
TDS	Total Dissolved Solid

EXECUTIVE SUMMARY

Coffey Environments Pty Ltd (Coffey Environments) has been commissioned by Venture Minerals Limited Pty Ltd (Venture Minerals) to conduct quarterly base-line water quality monitoring at predetermined locations positioned within the proposed Mt Lindsay Magnetite / Tin Mine within the Meredith Range Regional Reserve, North West Tasmania (the site). This report details the results from the second monitoring event which was conducted on 28 and 29 January 2009.

Groundwater and surface water sampling points have been established at 8 locations in the vicinity of the proposed Mt Lindsey project. The objective of this round of sampling was to collect base-line values for metals, anions and cations in surface waters near Mt Lindsey which will add to the data collected during the first round of monitoring. This data (as well as data collected during subsequent monitoring events) will be used to establish existing water quality characteristics. After base-line water quality characteristics are established they will be used in quantifying the potential impact of water extraction (if required) and discharge water on surrounding waterways and identifying mitigation strategies for addressing these impacts.

Water quality sampling was successfully completed at eight sites as outlined in the methodology. The results were compared with ANZECC 2000 standards. They were not compared with any guidelines relating to human health or any other possible receptors and therefore should not be used as an indicator for impact on human health.

1 INTRODUCTION

1.1 Background

Venture Minerals Limited Pty Ltd have proposed to establish a mine for the extraction of tin and tungsten in North-West Tasmania.

The proposed Mt Lindsay site is located within the Meredith Range Regional Reserve north west of the existing Renison Bell Mine. The site is characterised by steep, densely vegetated slopes. The soil is organic in nature with a siliceous gravelly sub-base and exposed rock on higher slopes. The site is generally well drained becoming swampy close to Livingston creek. The site is dominated by dense wet sclerophyll forest, wet scrub and button grass moorland.

Three deposits have been identified within the Mt Lindsay site. The sites are referred to as; the Mt Lindsay Deposit, the Number 2 Deposit and the Livingston Creek Deposit. Both the No. 2 Zone and Main Zone ore bodies are skarn type deposits hosted in the Crimson Creek Formation at the margin of the Devonian Meredith Granite. These deposits are fresh and outcrop in the valleys below Mt Lindsey (~640 m) and Parsons Hood (915 m). A third deposit, Livingstone Creek, forms as a skarn deposit where the Renison Bell Formation is on the margins with the Meredith Granite.

A requirement for the environmental approvals process is to assess the impacts of the development on water quality and quantity of immediate and surrounding water ways. Understanding existing water quality characteristics will assist in quantifying the potential impact of discharge water in surrounding waterways.

Coffey Environments Pty Ltd (Coffey Environments) was commissioned by Venture Minerals Limited Pty Ltd (Venture Minerals) to conduct quarterly surface monitoring at predetermined locations. This report will detail the results from the second monitoring event which was conducted on the 28-29 January 2009.

1.2 Objectives

The objective of the quarterly monitoring program is to collect base-line data on metals, anions and cations in surface waters and groundwaters near Mt Lindsey. This data will be used in combination with data collected in the past and in the future to establish base-line water quality characteristics in the vicinity of the proposed Mt. Lindsey Project.

2 SCOPE OF WORKS

A number of suitable locations were identified to commence the background monitoring of surface and ground water chemistry and flow. Photographs of each location sampled are presented in Appendix E. Data collected from these sites will be used to provide baseline conditions prior to mining. Appendix A (Figures 1 & 2) illustrates the location of the My Lindsay Project and location of sampling points respectively. The sampling schedule for these locations is presented in Table 1.

Field parameters monitored at all sites included: pH, electrical conductivity, temperature, water flow and turbidity. Anions, cations and metals monitored at all sites included dissolved and total: Al (µg/L) As (µg/L) Cd (µg/L); Cu Total (µg/L); Fe (µg/L); Pb (µg/L); Mn (µg/L); Ni (µg/L); Zn (µg/L); Ag (µg/L); Hg (µg/L); Se (µg/L); Sb (µg/L); and W (µg/L). Major cations and anions include: Ca (mg/L); Mg (mg/L); K (mg/L); Na (mg/L); Cl (mg/L); sulphate (mg/L); acidity (mg $CaCO_3$/L) carbonate (mg/L); and bicarbonate (mg/L).

Table 1: Sampling Schedule and Locations

Sample Point	Location	Analyses	Sampling Frequency
MLSW01	Tulloch Creek above exploration track	Field parameters Metals Major anions/ cations	Quarterly
MLSW02	Tulloch Creek at Pieman Road	Field parameters Metals Major anions/ cations	Quarterly
MLSW03	Stanley River	Field parameters Metals Major anions/ cations	Quarterly
MLSW04	Salmon Creek	Field parameters Metals Major anions/ cations	Quarterly
MLSW05	South East Creek at Pieman Road	Field parameters Metals Major anions/ cations	Quarterly
MLSW06	Livingstone Creek	Field parameters Metals Major anions/ cations	Quarterly
MLGW01	Drill hole outflow	Field parameters Metals Major anions/ cations	Quarterly
MLGW02	Drill hole outflow	Field parameters Metals Major anions/ cations	Quarterly

3 METHODOLOGY

Table 2 summarises the methodology used for sampling at each location.

Table 2: Summery of Water Sampling Activities

Activity	Detail / Comments
Date of Field Activity	28th and 29th January 2009
Sampling Method	Sample jars and disposable gloves were used to obtain water samples at all sampling locations. Measurement of water quality parameters was conducted using a TPS Water Quality Meter – 90FLMV at each sampling location. A separate monitoring device (Flow Watch) was used to monitor water flow rate.
Decontamination Procedure	Water sampling equipment such as field filters and the TPS Water Quality Meter – 90FLMV, were decontaminated with laboratory grade detergent and rinsed with deionised water between each sample location.
Sample Preservation	Samples were placed in laboratory supplied bottles, no preservatives were required. Samples were stored on ice (<4°C) in an esky while on site and in transit to the laboratory. Samples collected for dissolved metals analysis were field filtered.
Sample holding times	Sample holding times were within acceptable range (based on USEPA SW846, NEPM B3-1999) from collection to extraction: • Cations/Anions: less than or equal to 28 days • Metals: less than or equal to 28 days

4 INVESTIGATION LEVELS

This study presents the baseline results from the second round of water quality and flow monitoring for the region surrounding the proposed Mt Lindsay mining project. Comparisons of metal results have been made with ANZECC (2000) criteria for fresh and marine water (Table 3). The aim of comparison with this guideline is to give a general indication of the water quality at these sites at this point in time.

No comparison has been made with any guidelines relating to human health or any other possible surface water receptors and therefore comparisons of analytical results to ANZECC 2000 criteria should not be used as an indicator for impact on human health.

Table 3: Investigation Levels (ANZECC 2000 criteria guidelines) - 95% Level of Protection

Analyte	Investigation Level (μgL^{-1})
Aluminium	55
Antimony	NA
Arsenic	13
Cadmium	0.2
Copper	1.4
Iron	NA
Lead	3.4
Manganese	1900
Mercury	0.6
Nickel	11
Selenium	11
Silver	0.05
Tungsten	NA
Zinc	8.0

Note: NA - indicates no investigation level exists; values are for dissolved metals; the investigation level for silver exceeds the laboratory limit of reporting (1 μgL^{-1}).

5 RESULTS

A complete copy of the Laboratory Analysis Results and Field Data Observation Sheets have been included in Appendices B and D respectively.

5.1 Field parameters

Table 4 includes base line results for each field parameter at each site sampled and Table 5 lists the historical data recorded for all sites.

Table 4: Field Water Quality Parameters

Location	Date	pH	Temperature (°C)	Conductivity (µS/cm)	Turbidy (NTU)	Flow (L/s)
MLSW01	29/01/2009	6.74	10.20	41.80	~	2.14
MLSW02	28/01/2009	5.74	12.50	68.20	~	110.10
MLSW03	28/01/2009	4.37	14.10	42.50	~	220.00
MLSW04	28/01/2009	5.72	13.40	78.40	~	104.24
MLSW05	28/01/2009	5.73	12.50	57.30	~	19.79
MLSW06	29/01/2009	3.50	12.90	47.70	~	36.40
MLGW01	29/01/2009	6.44	11.60	206.70	~	-
MLGW02	29/01/2009	5.47	8.80	125.70	~	-

~	Parametres were not recorded due to faulty sampling equipment
-	unable to measure flow at this location due to shallow water

Note: µS/cm = Microsiemens per centimetre; NTU = Nephelemetric Turbidity Units; mph = metres per hour. Flow = litres per second (L/s). Due to limited water quantities no flow readings were possible for MLGWO2 and MLGWO1.

Table 5: Historical Field Water Quality Parameters

Location	Date	pH	Temperature(°C)	Conductivity (µS/cm)	Turbidy (NTU)	Flow
MLSW01	28/10/2008	5.91	10.3	33.13	-0.6	0.84 (mph)
	29/01/2009	6.74	10.2	41.80	~	2.14 (L/s)
MLSW02	28/10/2008	6.47	9.6	55.07	68.1 (suspect)	0.68 (mph)
	28/01/2009	5.74	12.5	68.20	~	110.1 (L/s)
MLSW03	28/10/2008	4.24	11.8	44.9	1.4	0.16 (mph)
	28/01/2009	4.37	14.1	42.50	~	220 (L/s)
MLSW04	28/10/2008	6.86	11.5	64.03	1.6	0.47 (mph)
	28/01/2009	5.72	13.4	78.40	~	104.24 (L/s)
MLSW05	28/10/2008	6.04	10.8	50.3	0.5	0.73 (mph)
	28/01/2009	5.73	12.5	57.30	~	19.79 (L/s)
MLSW06	28/10/2008	4	7.8	43.88	-0.1	0.67 (mph)
	29/01/2009	3.50	12.9	47.70	~	36.4 (L/s)
MLGW01	28/10/2008	7.63	13.8	168.96	-0.3	-
	29/01/2009	6.44	11.6	206.70	~	-
MLGW02	28/10/2008	6.23	12.0	119.4	9.8	-
	29/01/2009	5.47	8.8	125.70	~	-

-	unable to measure flow at this location due to shallow water
~	Parametres were not recorded due to faulty sampling equipment

Note: µS/cm = Microsiemens per centimetre; NTU = Nephelemetric Turbidity Units; mph = miles per hour; L/S = litres per second. Due to limited water quantities no flow readings were possible for MLGWO2 and MLGWO1

5.2 Metals Analytical Results

The results in Table 6 include values that exceed the investigations levels (IL) provided in the ANZECC (2000) guidelines for fresh and marine water quality with moderately disturbed ecosystems. The exceedences for dissolved metals have been discussed below.

Table 6: Exceedences of ANZECC 2000 Guidelines

Analyte	Investigation Level (µg/L)	Sample ID	Exceedence of IL's (µg/L)
Aluminium – Total	55	MLSW01 MLSW03 QC1 (Duplicate of MLSW03) QC2 (Triplicate of MLSW03) MLSW04 MLSW05 MLSW06 MLGW02	280 530 550 460 320 110 670 140
Aluminium – Dissolved	55	MLSW03 QC1 (Duplicate of MLSW03) QC2 (Triplicate of MLSW03) MLSW04 MLSW06	320 340 450 130 390
Cadmium - Dissolved	0.2	QC2 (Triplicate of MLSW03)	1.5
Copper – Total	1.4	MLSW02 MLSW03 QC1 (Duplicate of MLSW03) MLSW05 MLGW01 MLGW02	9 3 2 14 11 5
Copper – Dissolved	1.4	MLSW02 MLSW04 MLSW06	3 2 2
Silver – Total	0.05	QC2 (Triplicate of MLSW03)	1
Silver – Dissolved	0.05	QC2 (Triplicate of MLSW03)	1
Zinc – Total	8	MLSW01 MLSW02 MLSW03 QC1 (Duplicate of MLSW03) MLSW04 MLSW05 MLSW06 MLGW01 MLGW02	41 13 32 35 33 23 21 36 45
Zinc - Dissolved	8	MLSW02 MLSW03 QC1 (Duplicate of MLSW03) MLSW04 MLSW06 MLGW01 MLGW02	9 26 28 29 180 11 40

All samples were analysed for a suite of metals which included total and dissolved aluminium, antimony, arsenic, cadmium, copper, iron, lead, manganese, mercury, nickel, selenium, silver, tungsten and zinc.

The IL for total and dissolved aluminium (55 ug/L) was exceeded in samples from six sample locations. Total aluminium concentrations which exceeded the IL ranged from 110 to 670 ug/L and dissolved aluminium concentrations which exceeded the IL ranged from 130 to 450 ug/L.

The IL for total and dissolved cadmium (0.2 ug/L) was exceeded in the triplicate sample from MLSW03, which had a concentration of 1.5 ug/L.

The IL for total and dissolved copper (1.4 ug/L) was exceeded in samples from seven sample locations. Total copper concentrations which exceeded the IL ranged from 2 to 14 ug/L and dissolved copper concentrations which exceeded the IL ranged from 2 to 3 ug/L.

The IL for total and dissolved silver (0.05 ug/L) was exceeded in the triplicate sample from MLSW03, which had a concentration of 1 ug/L for total and dissolved silver. It should be noted that the laboratory limit of reporting (LOR) for total and dissolved silver was elevated by MGT to 5 ug/L, thus making it unclear whether concentrations of silver in samples from MGT have exceeded the IL.

The IL for total and dissolved zinc (8 ug/L) was exceeded in samples from all eight sample locations. Total zinc concentrations which exceeded the IL ranged from 13 to 45 ug/L and dissolved zinc concentrations which exceeded the IL ranged from 9 to 180 ug/L.

During the previous round of monitoring in October 2008, aluminium concentrations exceeded the IL at three sample locations, copper concentrations exceeded the IL at one sample location and zinc exceeded the IL at four sample locations. All of the locations with metals concentrations present in exceedence of the ILs in October 2008 had concentrations present in exceedence of ILs for the same metals during the current round of monitoring.

It should be noted that this area is highly mineralised zone and currently has no known activity within the catchment which would cause elevated metal levels in surface water and groundwater to occur. Therefore the exceedences displayed in Table 6 are considered to be naturally occurring background concentrations.

5.3 Other Analytical Results

All samples were analysed for a suite of cations (calcium, magnesium, potassium and sodium) and anions (ammonia, chloride, nitrate and sulphate) and were analysed for alkalinity (as bicarbonate and carbonate). There are no investigation levels for these analytes.

Calcium was detected in samples from all locations at concentrations ranging from 1.1 milligrams per litre (mg/L) to 26 mg/L and was highest in samples MLGW01 and MLGW02 (the drill outflow locations). Magnesium was detected in samples from all locations except MLGW01 and MLGW02 at concentrations ranging from 1.1 mg/L to 3.2 mg/L. However, the laboratory LOR for magnesium was elevated to 5 mg/L for these two samples. Potassium was detected in samples from all locations except MLGW01 and MLGW02 at concentrations ranging from 0.7 mg/L to 1.1 mg/L. As with magnesium, the laboratory LOR for potassium was elevated to 5 mg/L for these two samples. Sodium was detected in samples from all locations at concentrations ranging from 6.0 mg/L to 15 mg/L.

Bicarbonate alkalinity ranged from <10 mg/L to 71 mg/L and was highest in the two samples from the drill hole outflows (MLGW01 and MLGW02). Carbonate alkalinity was <10 mg/L at all sample locations.

The concentration ranges for cations, anions and alkalinity are relatively consistent with the previous round of monitoring.

6 QUALITY OF ANALYTICAL DATA.

National Association of Testing Authority (NATA) accredits laboratories on a parameter by parameter basis and the laboratories must provide quantitative evidence of their ability and competence to produce reliable results against recognised benchmarks (i.e. NATA proficiency programs, other national and international proficiency programs, and performance against certified reference materials). Accredited laboratories are able to demonstrate the ability to produce reliable, repeatable results for a range of parameters within a range of sample matrices.

Laboratories performing analyses for environmental purposes will normally base their methods on a range of guidelines and 'standard methods' including:

- National Environment Protection (Assessment of Site Contamination) Measure 1999;
- A guide to the Sampling and Analysis of Waters, Wastewater, Soil and Wastes - EPA Publication 441 (2000);
- Australian Standard 4482.1 (Guide to the sampling and investigation of potentially contaminated soil – Part 1: Non-volatile and semi-volatile compounds) & Australian Standard 4482.2 (Guide to the sampling and investigation of potentially contaminated soil – Part 2: Volatile substances);
- American Public Health Association (APHA), American Water Works Association and WPCF "Standard Methods for the Examination of Waters and Waste Waters" (Latest Publication);
- United States Environmental Protection Agency (US EPA) Test Methods for Evaluating Solid Waste, Laboratory Manual, Physical/Chemical Methods, SW846 (Latest Edition);
- US EPA Contract Laboratory Program for Organic (1999) and Inorganic (2002) Data Review;
- US EPA Guidance on Environmental Data Verification and Data Validation (2002); and
- Other Publications (eg. ASTM) or accredited in house methods as may be developed and accredited for specific parameters.

Analysis of samples requires a number of important steps including sub-sampling, pre-treatment including digestion/extraction, and physical/chemical/biological measurement of specific parameters against relevant standard materials.

With regard to the specific issue of specified recoveries, the EPA and APHA methods nominate acceptable broad recovery ranges for both soils and waters. However, it must be emphasized that certain parameter recoveries can vary significantly depending on sample type and matrix. The 'APHA Standard Methods' provide a discussion at the end of most methods on precision and bias. Similarly the US EPA Methods SW-846 provides quantitative data for precision and accuracy for most methods.

The adoption of the general advisory ranges for specific recoveries has been used to screen laboratory data. Where recoveries are outside these ranges the data was assessed in relation to specific laboratory comments, published industry 'norms' for specific parameters and/or the likely impact on the interpretation of the meaning of the results. If significant doubt exists regarding a laboratories performance then data can be requested on their estimates of uncertainty of measurement, control chart information and proficiency program performance. Laboratories must maintain this information as a requirement of their NATA accreditation.

It must be emphasised that as a normal practice and as required by Australian Standard AS4482.1, check samples are collected during sampling programs. These samples are sent to a second, independent, NATA accredited laboratory for analysis.

The value of these samples is that they provide an additional level of quality control over and above that provided by the primary laboratory data. The use of check sample results is often very important in assessing whether or not to accept a data set from a primary laboratory.

The following sections outline a consideration of the QC information provided as part of this environmental assessment.

6.1 Field Quality Control

Precision of analytical techniques is measured by the relative percent difference (RPD) between duplicate results. However, for field duplicates there is no universally accepted method for comparing results. This is mainly due to the high likelihood for heterogeneous analyte distribution within the sample, hence, results can only be reviewed qualitatively. Acceptance targets for laboratory duplicates are dependant on matrix type, analyte type and analyte concentrations and are as follows:

- Water (Metals): 10% for concentrations more than 20 times the laboratory limit of reporting (LOR) and 25% for concentrations less than 20 times the LOR (APHA 1992).

6.2 Water

One QC field duplicate sample was collected and submitted for laboratory analysis to MGT Environmental Consulting Pty (MGT). One triplicate sample was collected and submitted for laboratory analysis to SGS Environmental Services (SGS). Primary, duplicate and triplicate sample combinations are listed in Table 7.

Table 7: QC Samples Collected

Primary Sample	Duplicate Sample	Laboratory	Triplicate Sample	Laboratory
MLSW03	QC1	MGT	QC2	SGS

Field QC analytical results are summarised Table 8.

With the exception of the samples listed below, remaining calculated RPDs were acceptable for all primary, duplicate and triplicate samples.

Table 8: Field QC Analytical Results

Primary Sample	Dupuplicate/ Triplicate	Laboratory	Analyte	RPD %	Explanation Code
MLSW03	QC1	MGT	Copper - Total	40	1
			Nickle - Total	67	1
			Nitrate	100	1
			Sulphate	70	1
	QC2	SGS	Aluminium - Total	14	1
			Aluminium - Dissolved	34	1
			Cadmium - Dissolved	175	2
			Copper - Total	143	2
			Copper - Dissolved	67	2
			Managnese - Total	67	2
			Managnese - Dissolved	105	2
			Nickle - Total	86	2
			Zinc - Total	166	1
			Zinc - Dissolved	125	1
			Silver - Total	86	2
			Silver - Dissolved	86	2
			Sulphate	70	1
			Calcium - Dissolved	44	1
			Sodium - Dissolved	33	1

Where RPDs were outside the acceptable range, sampling procedures, laboratory analytical methods and laboratory results were investigated. A detailed review of analytical results with RPD exceedences indicates that all unacceptable results can be attributed to one or more explanations listed below and are not considered to compromise the integrity of the analytical results.

1. Low analyte concentrations have exaggerated the percentage differences with respect to small total concentration differences. The calculated RPD values are not considered to affect the integrity of the results as both results remain well below adopted criteria.

2. Sample variation is exaggerated where only one of the sample pair has been detected given the adopted calculation method for RPD (i.e. half the laboratory detection limit concentration for the non-detectable sample).

The RPD was unable to be calculated for acidity because it was not tested at the Primary Laboratory. A result of 2.4 mg/L was recorded at the Secondary Laboratory.

The RPD could only be calculated for the Nitrate from the Primary Laboratory results (100) because the Secondary Laboratory did not analyse for Nitrate.

Trip Blanks and Equipment Rinsate Blanks

Two equipment rinsate blanks (QC3 and QC4) were submitted to MGT for heavy metal analysis. All concentrations for all analytes were below the laboratory LOR for QC4. Table 9 lists the analytes detected in rinsate sample QC3.

Table 9: Rinsate Blank Detections

Anaylyte	LOR (µg/L)	Analytical Results (µg/L)
Aluminium - Total	10	460
Aluminium - Dissolved	10	310
Arsenic - Total	1	4
Copper - Total	1	3
Copper - Dissolved	1	2
Nickel	1	2
Iron - Total	10	260
Iron - Dissolved	50	190
Zinc - Total	1	30
Zinc - Dissolved	1	24

Rinsate blanks were collected from deionised water which was pored over the water quality probes. Water quality parameters are measured by collecting water into a cup and placing the probes into the cup. Given that the water quality meter probes do not come into contact with any of the water samples, the presence of metals in one of the rinsate blanks is not expected to impact the analytical results.

In summary, Coffey Environments considers that the field QC results are acceptable for the purposes of this investigation.

7 SUMMARY AND CONCLUSIONS

Results for surface water quality were successfully collected, analysed and compared to the ANZECC 2000 standard. These results will serve for use as baseline water values for future comparisons during the development and workings of the Mt Lindsay mining project.

Water quality parameters were varied between sampling events. Generally conductivity was 10% greater in the January 2009 sampling event than October 2008 sampling event; pH fluxuated within 10% between events; and temperature was generally higher in the January 2009 sampling event than October 2008 sampling event.

Analytical results of samples also varied between sampling events. Generally a lager number of samples exceeded investigation levels and most readings for analytes were 10-20% higher in the January 2009 sampling event than October 2008 sampling event, with the exception of bi-carbonate which was higher in the October 2008 event.

8 REFERENCES

American Public Health Association (APHA 1992) Collection and preservation of samples. pp.1-18 - 1-23. In, Standard Methods for the Examination of Water and Wastewater. American Public Health Association, Washington, DC USA.

ANZECC (2000). Australian Water Quality Guidelines for Fresh and Marine Waters. Australian and New Zealand Environment & Conservation Council. ISBN 0-642-18297-3.

Australian Standard 4482.1 (Guide to the sampling and investigation of potentially contaminated soil – Part 1: Non-volatile and semi-volatile compounds).

Australian Standard 4482.2 (Guide to the sampling and investigation of potentially contaminated soil – Part 2: Volatile substances).

National Environment Protection Measure (1999) National Environment Protection Council (Assessment of Site Contamination), December 1999.

United States Environmental Protection Agency (US EPA) Test Methods for Evaluating Solid Waste, Laboratory Manual, Physical/Chemical Methods, SW846 (Latest Edition).

US EPA (2000). A guide to the Sampling and Analysis of Waters, Wastewater, Soil and Wastes - EPA Publication 441 (2000).

US EPA Contract Laboratory Program for Organic (1999) and Inorganic (2002) Data Review

US EPA 2002. Guidance on Environmental Data Verification and Data Validation (2002).

coffey environments
SPECIALISTS IN LIVING AND WORKING PLACES

Important information about your **Coffey** Environmental Report

Uncertainties as to what lies below the ground on potentially contaminated sites can lead to remediation costs blow outs, reduction in the value of the land and to delays in the redevelopment of land. These uncertainties are an inherent part of dealing with land contamination. The following notes have been prepared by Coffey to help you interpret and understand the limitations of your report.

Your report has been written for a specific purpose

Your report has been developed on the basis of a specific purpose as understood by Coffey and applies only to the site or area investigated. For example, the purpose of your report may be:

- To assess the environmental effects of an on-going operation.
- To provide due diligence on behalf of a property vendor.
- To provide due diligence on behalf of a property purchaser.
- To provide information related to redevelopment of the site due to a proposed change in use, for example, industrial use to a residential use.
- To assess the existing baseline environmental, and sometimes geological and hydrological conditions or constraints of a site prior to an activity which may alter the sites environmental, geological or hydrological condition.

For each purpose, a specific approach to the assessment of potential soil and groundwater contamination is required. In most cases, a key objective is to identify, and if possible, quantify risks that both recognised and unrecognised contamination pose to the proposed activity. Such risks may be both financial (for example, clean up costs or limitations to the site use) and physical (for example, potential health risks to users of the site or the general public).

Scope of Investigations

The work was conducted, and the report has been prepared, in response to specific instructions from the client to whom this report is addressed, within practical time and budgetary constraints, and in reliance on certain data and information made available to Coffey. The analyses, evaluations, opinions and conclusions presented in this report are based on those instructions, requirements, data or information, and they could change if such instructions etc. are in fact inaccurate or incomplete.

Subsurface conditions can change

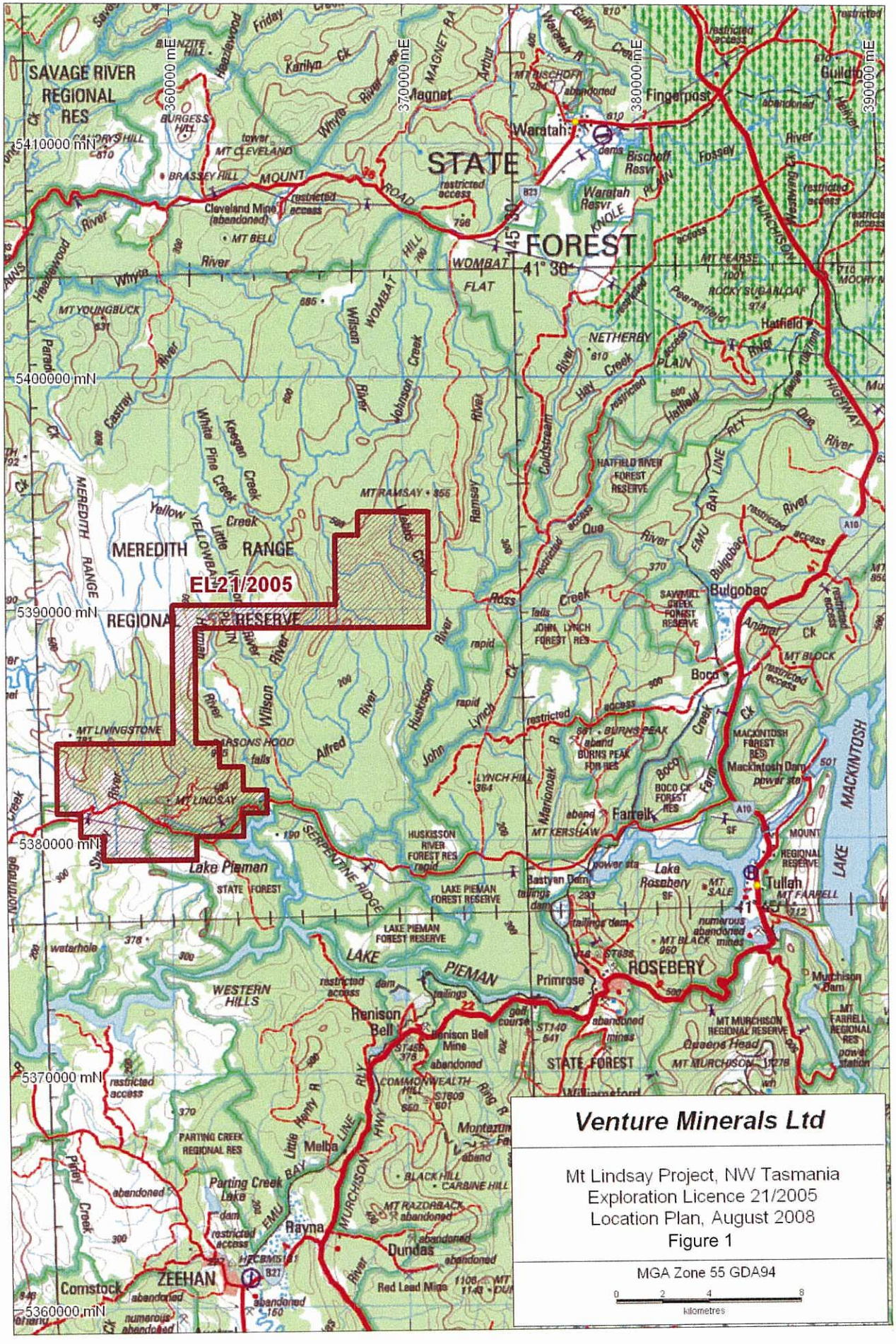
Subsurface conditions are created by natural processes and the activity of man and may change with time. For example, groundwater levels can vary with time, fill may be placed on a site and pollutants may migrate with time. Because a report is based on conditions which existed at the time of the subsurface exploration, decisions should not be based on a report whose adequacy may have been affected by time. Consult Coffey to be advised how time may have impacted on the project and/or on the property.

Interpretation of factual data

Environmental site assessments identify actual subsurface conditions only at those points where samples are taken and when they are taken. Data derived from indirect field measurements and sometimes other reports on the site are interpreted by geologists, engineers or scientists to provide an opinion about overall site conditions, their likely impact with respect to the report purpose and recommended actions. Actual conditions may differ from those inferred to exist, because no professional, no matter how well qualified, can reveal what is hidden by earth, rock and time. The actual interface between materials may be far more gradual or abrupt than assumed based on the facts obtained. Nothing can be done to change the actual site conditions which exist, but steps can be taken to reduce the impact of unexpected conditions. For this reason, parties involved with land acquisition, management and/or redevelopment should retain the services of Coffey through the development and use of the site to identify variances, conduct additional tests if required, and recommend solutions to unexpected conditions or other problems encountered on site.

Appendix A
Figures

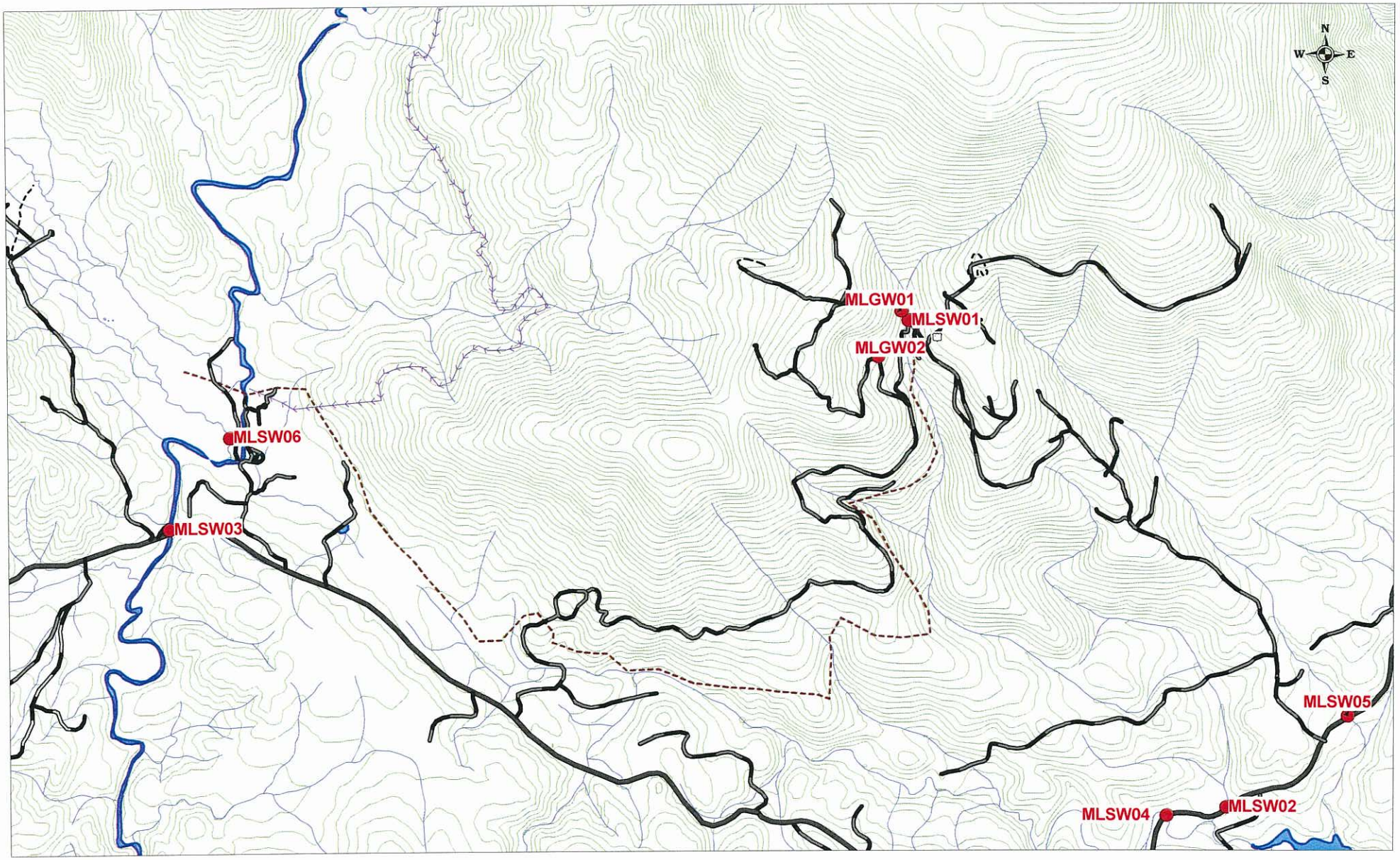
Water Monitoring Report-Base Line Study
Venture Minerals



Venture Minerals Ltd

Mt Lindsay Project, NW Tasmania
Exploration Licence 21/2005
Location Plan, August 2008
Figure 1

MGA Zone 55 GDA94



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9/9/08
date
scale
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coffey environments
SPECIALISTS IN LIVING AND WORKING PLACES

client: VENTURE
project: Mt Lindsey
title: Proposed background sampling points
project no: ENVIHOBA06804AA
figure no: FIGURE 2

Appendix B
Laboratory Analytical Results

Water Monitoring Report-Base Line Study
Venture Minerals



mgt Environmental Consulting Pty. Ltd.

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CERTIFICATE OF ANALYSIS

Coffey Environments Pty Ltd
2 Melville Street
Hobart
Tasmania 7000
Site: VENTURE MINERALS ENVIHOBA06804AA

Report Number: 240557 Page 1 of 9
Order Number:
Date Received: Feb 05, 2009
Date Sampled: Jan 28, 2009
Date Reported: Feb 25, 2009
Contact: Anne Hellie

Methods

- USEPA 6020 Heavy Metals & USEPA 7470/71 Mercury
- APHA 4500-Cl (Cl by Discrete Analyser)
- APHA 4500-NH3 Ammonia Nitrogen by FIA
- APHA 4500-NO3 Nitrate Nitrogen by FIA
- APHA 4500-SO4 (SO4 by Discrete Analyser)
- APHA 2320 Alkalinity by Titration

Comments

Notes

1. The results in this report supersede any previously corresponded results.
2. All Soil Results are reported on a dry basis.
3. Samples are analysed on an as received basis.
4. LOR's are matrix dependent. Stated LOR's may be raised where sample extracts are diluted due to interferences.

ABBREVIATIONS
mg/kg : milligrams per kilograms, mg/L : milligrams per litre, ppm : parts per million,
LOR : Limit of Reporting
RPD : Relative Percent Difference
CRM : Certified Reference Material
LCS : Laboratory Control Sample

Authorised

Report Number: 240557

Michael Wright
Laboratory Manager
NATA Signatory

Onur Mehmet
Client Manager
NATA Signatory

Tammy Lakeland
Chief Inorganic Chemist

NATA
WORLD RECOGNISED ACCREDITATION

NATA Accredited
Laboratory Number 1261
The tests, calibrations or measurements covered by this document have been performed in accordance with NATA requirements which include the requirements of ISO/IEC 17025 and are traceable to national standards of measurement. This document shall not be reproduced, except in full.

Environmental Laboratory Industry Group
Member

mgt Environmental Consulting Pty. Ltd.

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Coffey Environments Pty Ltd 2 Melville Street Hobart Tasmania 7000	Client Sample ID		MLSW03	QC1	MLSW04	MLSW02
	Lab Number		M09-FE01112	M09-FE01113	M09-FE01114	M09-FE01115
	Matrix		Water	Water	Water	Water
	Sample Date		Jan 28, 2009	Jan 28, 2009	Jan 28, 2009	Jan 28, 2009
Analysis Type	**LOR**	**Units**				
Heavy Metals						
Calcium	0.5	mg/L	1.1	1.1	4.0	3.8
Magnesium	0.5	mg/L	1.1	1.1	3.2	1.9
Potassium	0.5	mg/L	0.9	0.8	1.1	1.0
Sodium	0.5	mg/L	7.0	7.0	9.7	10
Ammonia(N)	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
Chloride	5	mg/L	19	19	23	20
Nitrate (as N)	0.02	mg/L	< 0.02	0.03	< 0.02	0.03
Sulphate (S)	5	mg/L	< 5	< 5	< 5	< 5
Alkalinity						
Bicarbonate Alkalinity-mg CaCO3/L	10	mg/L	< 10	< 10	16	12
Carbonate Alkalinity-mg CaCO3/L	10	mg/L	< 10	< 10	< 10	< 10
Heavy Metals						
Aluminium	0.01	mg/L	0.53	0.55	0.32	0.03
Aluminium (soluble)	0.01	mg/L	0.32	0.34	0.13	0.02
Antimony	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Antimony (soluble)	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Arsenic	0.001	mg/L	0.005	0.005	0.003	0.008
Arsenic (soluble)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Cadmium	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Cadmium (soluble)	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Copper	0.001	mg/L	0.003	0.002	< 0.001	0.009
Copper (soluble)	0.001	mg/L	0.001	0.001	0.002	0.003
Iron	0.01	mg/L	0.25	0.27	0.52	0.08
Iron (soluble)	0.05	mg/L	0.18	0.18	0.38	0.06
Lead	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Lead (soluble)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Manganese	0.005	mg/L	0.005	0.005	0.016	< 0.005
Manganese (soluble)	0.005	mg/L	< 0.005	< 0.005	0.015	< 0.005
Mercury	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001

COMMENTS:

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Coffey Environments Pty Ltd	Client Sample ID		MLSW03	QC1	MLSW04	MLSW02
2 Melville Street	Lab Number		M09-FE01112	M09-FE01113	M09-FE01114	M09-FE01115
Hobart	Matrix		Water	Water	Water	Water
Tasmania 7000	Sample Date		Jan 28, 2009	Jan 28, 2009	Jan 28, 2009	Jan 28, 2009
Analysis Type	**LOR**	**Units**				
Mercury (soluble)	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Nickel	0.001	mg/L	0.002	0.001	0.002	0.002
Nickel (soluble)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Selenium	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Selenium (soluble)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Silver	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Silver (soluble)	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Tungsten (soluble)*	0.5	mg/L	< 0.5	< 0.5	< 0.5	< 0.5
Tungsten*	0.5	mg/L	< 0.5	< 0.5	< 0.5	< 0.5
Zinc	0.001	mg/L	0.032	0.035	0.033	0.013
Zinc (soluble)	0.001	mg/L	0.026	0.028	0.029	0.009

COMMENTS: * Non NATA Endorsed analysis

mgt

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Coffey Environments Pty Ltd	Client Sample ID		MLSW05	QC3	QC4	MLSW06
2 Melville Street	Lab Number		M09-FE01116	M09-FE01117	M09-FE01118	M09-FE01119
Hobart	Matrix		Water	Water	Water	Water
Tasmania 7000	Sample Date		Jan 28, 2009	Jan 28, 2009	Jan 29, 2009	Jan 29, 2009
Analysis Type	**LOR**	**Units**				
Heavy Metals						
Calcium	0.5	mg/L	2.2	-	-	1.2
Magnesium	0.5	mg/L	1.7	-	-	1.3
Potassium	0.5	mg/L	0.9	-	-	1.1
Sodium	0.5	mg/L	7.0	-	-	6.0
Ammonia(N)	0.05	mg/L	< 0.05	-	-	< 0.05
Chloride	5	mg/L	21	-	-	20
Nitrate (as N)	0.02	mg/L	0.03	-	-	< 0.02
Sulphate (S)	5	mg/L	< 5	-	-	< 5
Alkalinity						
Bicarbonate Alkalinity-mg CaCO3/L	10	mg/L	< 10	-	-	< 10
Carbonate Alkalinity-mg CaCO3/L	10	mg/L	< 10	-	-	< 10
Heavy Metals						
Aluminium	0.01	mg/L	0.11	0.46	< 0.01	0.67
Aluminium (soluble)	0.01	mg/L	0.02	0.31	< 0.01	0.39
Antimony	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Antimony (soluble)	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Arsenic	0.001	mg/L	0.003	0.004	< 0.001	0.005
Arsenic (soluble)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Cadmium	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Cadmium (soluble)	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Copper	0.001	mg/L	0.014	0.003	< 0.001	< 0.001
Copper (soluble)	0.001	mg/L	0.001	0.002	< 0.001	0.002
Iron	0.01	mg/L	0.07	0.26	< 0.01	0.70
Iron (soluble)	0.05	mg/L	< 0.05	0.19	< 0.05	0.51
Lead	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Lead (soluble)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Manganese	0.005	mg/L	< 0.005	< 0.005	< 0.005	0.006
Manganese (soluble)	0.005	mg/L	< 0.005	< 0.005	< 0.005	0.006
Mercury	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001

COMMENTS:

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Coffey Environments Pty Ltd	Client Sample ID		MLSW05	QC3	QC4	MLSW06
2 Melville Street	Lab Number		M09-FE01116	M09-FE01117	M09-FE01118	M09-FE01119
Hobart	Matrix		Water	Water	Water	Water
Tasmania 7000	Sample Date		Jan 28, 2009	Jan 28, 2009	Jan 29, 2009	Jan 29, 2009
Analysis Type	**LOR**	**Units**				
Mercury (soluble)	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Nickel	0.001	mg/L	0.002	0.002	< 0.001	0.002
Nickel (soluble)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Selenium	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Selenium (soluble)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Silver	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Silver (soluble)	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Tungsten (soluble)*	0.5	mg/L	< 0.5	< 0.5	< 0.5	< 0.5
Tungsten*	0.5	mg/L	< 0.5	< 0.5	< 0.5	< 0.5
Zinc	0.001	mg/L	0.023	0.030	< 0.001	0.021
Zinc (soluble)	0.001	mg/L	0.005	0.024	< 0.001	0.18

COMMENTS: * Non NATA Endorsed analysis

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Coffey Environments Pty Ltd	Client Sample ID		MLSW01	MLGW01	MLGW02
2 Melville Street	Lab Number		M09-FE01120	M09-FE01121	M09-FE01122
Hobart	Matrix		Water	Water	Water
Tasmania 7000	Sample Date		Jan 29, 2009	Jan 29, 2009	Jan 29, 2009
Analysis Type	**LOR**	**Units**			
Heavy Metals					
Calcium	0.5	mg/L	1.2	26	14
Magnesium	0.5	mg/L	1.2	< 5	< 5
Potassium	0.5	mg/L	0.7	< 5	< 5
Sodium	0.5	mg/L	7.5	15	15
Ammonia(N)	0.05	mg/L	< 0.05	< 0.05	< 0.05
Chloride	5	mg/L	19	20	14
Nitrate (as N)	0.02	mg/L	0.05	< 0.02	0.17
Sulphate (S)	5	mg/L	< 5	< 5	< 5
Alkalinity					
Bicarbonate Alkalinity-mg CaCO3/L	10	mg/L	< 10	71	50
Carbonate Alkalinity-mg CaCO3/L	10	mg/L	< 10	< 10	< 10
Heavy Metals					
Aluminium	0.01	mg/L	0.28	0.04	0.14
Aluminium (soluble)	0.01	mg/L	0.03	0.04	< 0.01
Antimony	0.005	mg/L	< 0.005	< 0.005	< 0.005
Antimony (soluble)	0.005	mg/L	< 0.005	< 0.005	< 0.005
Arsenic	0.001	mg/L	0.010	0.005	0.007
Arsenic (soluble)	0.001	mg/L	< 0.001	0.002	< 0.001
Cadmium	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002
Cadmium (soluble)	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002
Copper	0.001	mg/L	< 0.001	0.011	0.005
Copper (soluble)	0.001	mg/L	0.001	0.001	0.001
Iron	0.01	mg/L	0.08	0.11	0.11
Iron (soluble)	0.05	mg/L	< 0.05	0.06	< 0.05
Lead	0.001	mg/L	< 0.001	< 0.001	< 0.001
Lead (soluble)	0.001	mg/L	< 0.001	< 0.001	< 0.001
Manganese	0.005	mg/L	< 0.005	0.033	0.55
Manganese (soluble)	0.005	mg/L	< 0.005	0.030	0.51
Mercury	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001

COMMENTS:

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Coffey Environments Pty Ltd	Client Sample ID		MLSW01	MLGW01	MLGW02
2 Melville Street	Lab Number		M09-FE01120	M09-FE01121	M09-FE01122
Hobart	Matrix		Water	Water	Water
Tasmania 7000	Sample Date		Jan 29, 2009	Jan 29, 2009	Jan 29, 2009
Analysis Type	**LOR**	**Units**			
Mercury (soluble)	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001
Nickel	0.001	mg/L	0.001	< 0.001	< 0.001
Nickel (soluble)	0.001	mg/L	< 0.001	< 0.001	< 0.001
Selenium	0.001	mg/L	< 0.001	< 0.001	< 0.001
Selenium (soluble)	0.001	mg/L	< 0.001	< 0.001	< 0.001
Silver	0.005	mg/L	< 0.005	< 0.005	< 0.005
Silver (soluble)	0.005	mg/L	< 0.005	< 0.005	< 0.005
Tungsten (soluble)*	0.5	mg/L	< 0.5	< 0.5	< 0.5
Tungsten*	0.5	mg/L	< 0.5	< 0.5	< 0.5
Zinc	0.001	mg/L	0.041	0.036	0.045
Zinc (soluble)	0.001	mg/L	0.008	0.011	0.040

COMMENTS: * Non NATA Endorsed analysis

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Coffey Environments Pty Ltd 2 Melville Street Hobart Tasmania 7000	Client Sample ID	MLSW03	MLSW03	RPD	SPIKE	LCS	Method blank
	Lab Number	09-FE01112	09-FE01112	09-FE01112	09-FE01112	Batch	Batch
	QA Description		Duplicate	Duplicate % RPD	Spike % Recovery	% Recovery	
	Matrix	Water	Water	Water	Water	Water	Water
	Sample Date	Jan 28, 2009	Jan 28, 2009	Jan 28, 2009	Jan 28, 2009	Jan 28, 2009	Jan 28, 2009
Analysis Type	Units			% RPD	% Recovery	% Recovery	mg/L
Ammonia(N)		-	-	20	99	98	< 0.05
Chloride		-	-	2.4	105	108	< 5
Nitrate (as N)		-	-	17	103	101	< 0.02
Sulphate (S)		-	-	1.2	105	115	< 5
Heavy Metals							
Aluminium		-	-	-	-	-	< 0.005
Aluminium (soluble)		-	-	3.5	98	-	< 0.01
Antimony		-	-	-	87	87	< 0.001
Antimony (soluble)		-	-	< 1	92	-	< 0.005
Arsenic		-	-	-	91	83	< 0.001
Arsenic (soluble)		< 0.001	< 0.001	< 1	101	-	< 0.001
Cadmium		-	-	1.0	90	86	< 0.0002
Cadmium (soluble)		-	-	< 1	95	-	< 0.0002
Calcium		-	-	< 1	113	99	< 0.5
Copper		-	-	2.8	86	98	< 0.001
Copper (soluble)		-	-	2.4	92	-	< 0.001
Iron		-	-	6.0	-	-	< 0.05
Iron (soluble)		-	-	2.5	95	-	< 0.05
Lead		< 0.001	-	-	-	80	< 0.001
Lead (soluble)		-	-	< 1	88	92	< 0.001
Magnesium		-	-	< 1	121	99	< 0.5
Manganese		-	-	1.5	87	87	< 0.005
Manganese (soluble)		-	-	2.1	93	-	< 0.005
Mercury		-	-	< 1	89	81	< 0.0001
Mercury (soluble)		-	-	< 1	89	81	< 0.0001
Nickel		-	-	< 1	86	88	< 0.001
Nickel (soluble)		-	-	8.1	97	-	< 0.001
Potassium		0.9	-	-	-	93	< 0.5
Selenium		-	-	-	92	80	< 0.001

COMMENTS:

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Coffey Environments Pty Ltd
2 Melville Street
Hobart

Tasmania 7000

	Client Sample	MLSW03	MLSW03	RPD	SPIKE	LCS	Method blank
	Lab Number	09-FE01112	09-FE01112	09-FE01112	09-FE01112	Batch	Batch
	QA Description		Duplicate	Duplicate % RPD	Spike % Recovery	% Recovery	
	Matrix	Water	Water	Water	Water	Water	Water
	Sample Date	Jan 28, 2009	Jan 28, 2009	Jan 28, 2009	Jan 28, 2009	Jan 28, 2009	Jan 28, 2009
Analysis Type	Units			% RPD	% Recovery	% Recovery	mg/L
Heavy Metals							
Selenium (soluble)		-	-	19	96	-	< 0.001
Silver		-	-	-	-	-	< 0.005
Sodium		7.0	-	-	-	104	< 0.5
Zinc		0.032	-	-	-	80	< 0.01
Zinc (soluble)		-	-	2.2	96	-	< 0.001
Alkalinity							
Bicarbonate Alkalinity-mg CaCO3/L		-	-	< 1	-	-	< 10
Carbonate Alkalinity-mg CaCO3/L		-	-	< 1	-	-	< 10

COMMENTS:

ANALYTICAL REPORT

24 February 2009

Coffey Environments Pty Ltd
2 Melville Street
HOBART
TAS 7000

Attention: **Anne Hellie**

Your Reference: ENVIHOBA06804AA - Venture Minerals

Our Reference: 67117 Samples: 1 Water
Received: 3/2/09

Preliminary Report Sent: 10/02/09

These samples were analysed in accordance with your written instructions.

For and on Behalf of:
SGS ENVIRONMENTAL SERVICES

Client Services:	Simon Matthews	Simon.Matthews@sgs.com
Sample Receipt:	Angela Mamalicos	AU.SampleReceipt.Sydney@sgs.com
Laboratory Manager:	Edward Ibrahim	Edward.Ibrahim@sgs.com
Business Manager:	Con Benikos	Con.Benikos@sgs.com

Results Approved and/or Authorised by:

Nick Salermis
Inorganics Signatory

Huong Crawford
Metals Signatory

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SGS Australia Pty Ltd
ABN 44 000 964 278

Environmental Services Unit 16/33 Maddox Street Alexandria NSW 2015 Australia
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Anions in water Our Reference: Your Reference Sample Matrix	UNITS ---------- ---------- ----------	67117-1 QC2 Water
Date Extracted		5/02/2009
Date Analysed		5/02/2009
Chloride, Cl	mg/L	15
Sulphate, SO4	mg/L	1.2

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Inorganics Our Reference: Your Reference Sample Matrix	UNITS ---------- ----------	67117-1 QC2 Water
Date Extracted (Acidity)		6/02/2009
Date Analysed (Acidity)		6/02/2009
Acidity as $CaCO_3$	mg/L	2.4
Date Extracted (Alkalinity)		5/02/2009
Date Analysed (Alkalinity)		5/02/2009
Bicarbonate, HCO_3^-	mg/L	<2.0
Carbonate, CO_3^{2-}	mg/L	<2.0

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Trace HM (ICP-MS)-Dissolved Our Reference: Your Reference Sample Matrix	UNITS ---------- ----------	67117-1 QC2 Water
Date Extracted (Metals-ICPMS)		7/02/2009
Date Analysed (Metals-ICPMS)		7/02/2009
Aluminium	µg/L	450
Arsenic	µg/L	<1
Cadmium	µg/L	1.5
Copper	µg/L	<1
Iron	µg/L	220
Lead	µg/L	<1
Manganese	µg/L	8
Nickel	µg/L	<1
Zinc	µg/L	6
Silver	µg/L	1
Selenium	µg/L	<2
Antimony	µg/L	<1
Tungsten*	µg/L	<1

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Trace HM (ICP-MS)-Totals Our Reference: Your Reference Sample Matrix	UNITS ---------- ----------	67117-1 QC2 Water
Date Extracted (Metals-ICPMS)		7/02/2009
Date Analysed (Metals-ICPMS)		7/02/2009
Aluminium (Total)	µg/L	460
Arsenic (Total)	µg/L	<1
Cadmium (Total)	µg/L	<0.1
Copper (Total)	µg/L	<1
Iron (Total)	µg/L	250
Lead (Total)	µg/L	<1
Manganese (Total)	µg/L	5
Nickel (Total)	µg/L	<1
Zinc (Total)	µg/L	3
Silver (Total)	µg/L	1
Selenium (Total)	µg/L	<2
Antimony (Total)	µg/L	<1
Tungsten* (Total)	µg/L	<1

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Metals in water by ICP-OES Our Reference: Your Reference Sample Matrix	UNITS ---------- ----------	67117-1 QC2 Water
Date Extracted (Metals)		5/02/2009
Date Analysed (Metals)		5/02/2009
Calcium (Dissolvedl)	mg/L	0.7
Magnesium (Dissolved)	mg/L	0.99
Potassium (Dissolved)	mg/L	0.9
Sodium (Dissolved)	mg/L	9.8

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Mercury Cold Vapor/Hg Analyser Our Reference: Your Reference Sample Matrix	UNITS ---------- ----------	67117-1 QC2 Water
Date Extracted (Mercury)		5/02/2009
Date Analysed (Mercury)		5/02/2009
Mercury (Dissolved)	mg/L	<0.0005
Date Extracted (Mercury)		5/02/2009
Date Analysed (Mercury)		5/02/2009
Mercury (Total)	mg/L	<0.0005

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Method ID	Methodology Summary
SEI-038	Anions - a range of anions are determined by Ion Chromatography, in accordance with APHA 21st Edition, 4110B.
SEI-013	Acidity - determined by titration with standard sodium hydroxide, in accordance with APHA 21st Edition, 2310B.
SEI-012	Alkalinity - determined by titration with standard hydrochloric acid, in accordance with APHA 21st Edition, 2320B.
AN318	Determination of elements at trace level in waters by ICP-MS technique, in accordance with USEPA 6020A.
SEP-015	Digestion of Waters - Samples are digested by heating with nitric acid for the analysis of total metals by ICPMS, based on APHA 21st Edition, 3030E.
SEM-010	Determination of elements by ICP-OES following appropriate sample preparation / digestion process. Based on USEPA 6010C / APHA 21st Edition, 3120B.
SEM-005	Mercury - determined by Cold-Vapour AAS following appropriate sample preparation or digestion process. Based on APHA 21st Edition, 3112B.

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QUALITY CONTROL Anions in water	UNITS	LOR	METHOD	Blank	Duplicate Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Matrix Spike % Recovery Duplicate + %RPD
Date Extracted				5/02/2009	[NT]	[NT]	LCS	5/02/2009%
Date Analysed				5/02/2009	[NT]	[NT]	LCS	5/02/2009%
Chloride, Cl	mg/L	0.1	SEI-038	<0.1	[NT]	[NT]	LCS	112%
Sulphate, SO4	mg/L	0.4	SEI-038	<0.4	[NT]	[NT]	LCS	107%

QUALITY CONTROL Inorganics	UNITS	LOR	METHOD	Blank
Acidity as $CaCO_3$	mg/L	0	SEI-013	0.0
Date Extracted (Alkalinity)				5/2/09
Date Analysed (Alkalinity)				5/2/09
Bicarbonate, HCO_3^-	mg/L	2	SEI-012	<2.0
Carbonate, CO_3^{2-}	mg/L	2	SEI-012	<2.0

QUALITY CONTROL Trace HM (ICP-MS)-Dissolved	UNITS	LOR	METHOD	Blank	Duplicate Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Matrix Spike % Recovery Duplicate + %RPD
Date Extracted (Metals-ICPMS)				07/02/09	[NT]	[NT]	67117-1	07/02/09%
Date Analysed (Metals-ICPMS)				07/02/09	[NT]	[NT]	67117-1	07/02/09%
Aluminium	µg/L	1	AN318	<1	[NT]	[NT]	67117-1	111%
Arsenic	µg/L	1	AN318	<1	[NT]	[NT]	67117-1	102%
Cadmium	µg/L	0.1	AN318	<0.1	[NT]	[NT]	67117-1	107%
Copper	µg/L	1	AN318	<1	[NT]	[NT]	67117-1	106%
Iron	µg/L	5	AN318	<5	[NT]	[NT]	67117-1	110%
Lead	µg/L	1	AN318	<1	[NT]	[NT]	67117-1	101%
Manganese	µg/L	1	AN318	<1	[NT]	[NT]	67117-1	107%
Nickel	µg/L	1	AN318	<1	[NT]	[NT]	67117-1	106%
Zinc	µg/L	1	AN318	<1	[NT]	[NT]	67117-1	103%
Silver	µg/L	1	AN318	<1	[NT]	[NT]	67117-1	70%
Selenium	µg/L	2	AN318	<2	[NT]	[NT]	67117-1	104%
Antimony	µg/L	1	AN318	<1	[NT]	[NT]	67117-1	109%
Tungsten*	µg/L	1	AN318	<1	[NT]	[NT]	67117-1	108%

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QUALITY CONTROL Trace HM (ICP-MS)-Totals	UNITS	LOR	METHOD	Blank	Duplicate Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Matrix Spike % Recovery Duplicate + %RPD
Date Extracted (Metals-ICPMS)			SEP-015	07/02/09	[NT]	[NT]	67117-1	07/02/09%
Date Analysed (Metals-ICPMS)			SEP-015	07/02/09	[NT]	[NT]	67117-1	07/02/09%
Aluminium (Total)	µg/L	1	AN318	<1	[NT]	[NT]	67117-1	117%
Arsenic (Total)	µg/L	1	AN318	<1	[NT]	[NT]	67117-1	103%
Cadmium (Total)	µg/L	0.1	AN318	<0.1	[NT]	[NT]	67117-1	82%
Copper (Total)	µg/L	1	AN318	<1	[NT]	[NT]	67117-1	107%
Iron (Total)	µg/L	5	AN318	<5	[NT]	[NT]	67117-1	116%
Lead (Total)	µg/L	1	AN318	<1	[NT]	[NT]	67117-1	103%
Manganese (Total)	µg/L	1	AN318	<1	[NT]	[NT]	67117-1	108%
Nickel (Total)	µg/L	1	AN318	<1	[NT]	[NT]	67117-1	101%
Zinc (Total)	µg/L	1	AN318	<1	[NT]	[NT]	67117-1	110%
Silver (Total)	µg/L	1	AN318	<1	[NT]	[NT]	67117-1	130%
Selenium (Total)	µg/L	2	AN318	<2	[NT]	[NT]	67117-1	102%
Antimony (Total)	µg/L	1	AN318	<1	[NT]	[NT]	67117-1	114%
Tungsten* (Total)	µg/L	1	AN318	<1	[NT]	[NT]	67117-1	108%
QUALITY CONTROL Metals in water by ICP-OES	UNITS	LOR	METHOD	Blank	Duplicate Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Matrix Spike % Recovery Duplicate + %RPD
Date Extracted (Metals)				5/02/2009	[NT]	[NT]	LCS	5/02/2009%
Date Analysed (Metals)				5/02/2009	[NT]	[NT]	LCS	5/02/2009%
Calcium (Dissolvedl)	mg/L	0.1	SEM-010	<0.1	[NT]	[NT]	LCS	95%
Magnesium (Dissolved)	mg/L	0.1	SEM-010	<0.1	[NT]	[NT]	LCS	93%
Potassium (Dissolved)	mg/L	0.2	SEM-010	<0.2	[NT]	[NT]	LCS	99%
Sodium (Dissolved)	mg/L	0.1	SEM-010	<0.1	[NT]	[NT]	LCS	88%
QUALITY CONTROL Mercury Cold Vapor/Hg Analyser	UNITS	LOR	METHOD	Blank	Duplicate Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Matrix Spike % Recovery Duplicate + %RPD
Date Extracted (Mercury)				5/02/2009	[NT]	[NT]	LCS	5/02/2009%
Date Analysed (Mercury)				5/02/2009	[NT]	[NT]	LCS	5/02/2009%
Mercury (Dissolved)	mg/L	0.0005	SEM-005	<0.0005	[NT]	[NT]	LCS	110%
Date Extracted (Mercury)				5/02/2009	[NT]	[NT]	LCS	5/02/2009%
Date Analysed (Mercury)				5/02/2009	[NT]	[NT]	LCS	5/02/2009%
Mercury (Total)	mg/L	0.0005	SEM-005	<0.0005	[NT]	[NT]	LCS	110%

NATA
WORLD RECOGNISED ACCREDITATION

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SGS Australia Pty Ltd
ABN 44 000 964 278
Environmental Services Unit 16/33 Maddox Street Alexandria NSW 2015 Australia
t +61 (0)2 8594 0400 f + 61 (0)2 8594 0499 www.au.sgs.com

Result Codes

[INS]	:	Insufficient Sample for this test	[RPD]	:	Relative Percentage Difference
[NR]	:	Not Requested	*	:	Not part of NATA Accreditation
[NT]	:	Not tested	[N/A]	:	Not Applicable

Report Comments

Samples analysed as received. Solid samples expressed on a dry weight basis.
Date Organics extraction commenced:
NATA Corporate Accreditation No. 2562, Site No 4354
Note: Test results are not corrected for recovery (excluding Dioxins/Furans*)
This document is issued, on the Client's behalf, by the Company under its General Conditions of Service available on request and accessible at http://www.sgs.com/terms_and_conditions.htm. The Client's attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

Any other holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents.

Quality Control Protocol

Method Blank: An analyte free matrix to which all reagents are added in the same volume or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. A method blank is prepared every 20 samples.
Duplicate: A separate portion of a sample being analysed that is treated the same as the other samples in the batch. One duplicate is processed at least every 10 samples.
Surrogate Spike: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. Surrogates are added to samples before extraction to monitor extraction efficiency and percent recovery in each sample.
Internal Standard: Added to all samples requiring analysis for organics (where relevant) or metals by ICP after the extraction/digestion process; the compounds/elements serve to give a standard of retention time and/or response, which is invariant from run-to-run with the instruments.
Laboratory Control Sample: A known matrix spiked with compound(s) representative of the target analytes. It is used to document laboratory performance. When the results of the matrix spike analysis indicates a potential problem due to the sample matrix itself, the LCS results are used to verify that the laboratory can perform the analysis in a clean matrix.
Matrix Spike: An aliquot of sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

Quality Acceptance Criteria

The QC criteria are subject to internal review and can be provided on request.

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Appendix C
Chain of Custody Documentation

Water Monitoring Report-Base Line Study
Venture Minerals

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

83683

coffey environments

Philippines: ☐ 3rd Floor, JMT Bldg, ADB Ave, Ortigas Ctr, Pasig City, Metro Manila; Philippines ..... Tel (+63) (2) 638 9686 ..... Fax (+63) (2) 687 3518
ACT: ☐ 2/54 Northbourne Ave, Canberra ACT 2601 ..... Tel (02) 6248 7366 ..... Fax (02) 6248 7157
NSW: ☐ Level 1, 3 Rider Blvd, Rhodes NSW 2138 ..... Tel (02) 8083 1600 ..... Fax (02) 8765 0762
☐ Lot 101, 19 Warabrook Blvd, Warabrook NSW 2304 ..... Tel (02) 4016 2300 ..... Fax (02) 4016 2380
☐ 1/222 Berkeley Rd, Unanderra NSW 2526 ..... Tel (02) 4272 6071 ..... Fax (02) 4272 6075

QLD: ☐ 47 Doggett St, Newstead QLD 4006 ..... Tel (07) 3608 2500 ..... Fax (07) 3852 2805
SA: ☐ Level 1, 2-3 Greenhill Rd, Wayville SA 5034 ..... Tel (08) 7221 3500 ..... Fax (08) 8172 1968
TAS: ☑ Coffey Business Centre, 2 Melville St, Hobart TAS 7000 ..... Tel (03) 6108 0100 ..... Fax (03) 6108 0199
VIC: ☐ 126 Trenerry Cres, Abbotsford VIC 3067 ..... Tel (03) 9473 1400 ..... Fax (03) 9473 1450
☐ 12 Bellerine St, Geelong VIC 3220 ..... Tel (03) 5215 4600 ..... Fax (03) 5224 1368
WA: ☐ 61 Duke St, Albany WA 6330 ..... Tel (08) 9892 6400 ..... Fax (08) 9892 6444
☐ 89-91 Burswood Rd, Burswood WA 6100 ..... Tel (08) 9355 7100 ..... Fax (08) 9355 7197
☐ Suite 3 & 4, 236 Naturaliste Tce, Dunsborough WA 6281 ..... Tel (08) 9756 7869 ..... Fax (08) 9756 8878
☐ Dilhorn House, 2 Bulwer St, Perth WA 6000 ..... Tel (08) 9328 3488 ..... Fax (08) 9328 3588

Project No: ENV140BA06804AA
Task No: Fieldwork
Project Name: Venture Minerals
Laboratory: MGT
Samplers Name: Sarah Joyce
Project Manager: Anne Hellie
Special Instructions: metals: dissolved are filtered. Total not filtered. Include for analysis: Al, As, Cd, Cu total, Fe, Pb, Mn, Ni, Zn, Ag, Hg Se, Sb and W. All in µg/L. Major Cations + Anions →

Analysis Request Section

Lab. No.	Sample ID	Sample Location	Sample Depth	Sample Date	Time	Matrix (Soil ... etc)	Container Type & Preservative*	T-A-T (Specify)	BTEX / TPH	METALS (Specify)	PAHs / PHENOLS	OCs / OPs	Metals (total + dissolved)	Cations + Anions	NOTES
	MLSW03	Pieman Rd area	Surface	28.1.09	1340	W	2x150mL P, 1x1litre P	5-7days					✓	✓	
	QC1				⊥		⊥	⊥					✓	✓	
	MLSW04				1450								✓	✓	
	MLSW02				1520								✓	✓	
	MLSW05				1600								✓	✓	
	QC3			⊥	1355		2x150mL P						✓	✓	
	QC4			29.1.09	0955		Ag/As ~~2x150mL P 1x1litre P~~						✓	✓	
	MLSW06				0845		2x150mL P 1x1L P						✓	✓	
	MLSW01				1020								✓	✓	
	MLGW01				1015								✓	✓	
	MLGW02				0952		⊥	⊥					✓	✓	

→ Ca, Mg, K, Na, Cl, Sulphate, acidity ($MgCO_3$/L) carbonate + bicarbonate
→ All in mg/L except acidity

RELINQUISHED BY:

Signature:	Sarah Joyce	Date:	2.2.09
Company:	Coffey Environments	Time:	1630
Signature:		Date:	
Company:		Time:	

RECEIVED BY:

Signature:		Date:	
Company:		Time:	
Signature:		Date:	
Company:		Time:	

Sample Receipt Advice: *(Lab Use Only)*

All Samples Received in Good Condition . . . ☐
All Documentation is in Proper Order . . . . . ☐
Samples Received Properly Chilled . . . . . ☐
Lab. Ref/Batch No.

*** Container Type & Preservation Codes:** P - Plastic, G - Solvent Washed Acid Rinsed Glass Bottle, V - Vial, N - Nitric Acid Preserved
C - Hydrochloric Acid Preserved, S - Sulphuric Acid Preserved, I - Ice

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

83684

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Philippines: ☐ 3rd Floor, JMT Bldg, ADB Ave, Ortigas Ctr, Pasig City, Metro Manila; Philippines ..... Tel (+63) (2) 638 9686 ..... Fax (+63) (2) 687 3518
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☐ Lot 101, 19 Warabrook Blvd, Warabrook NSW 2304 ..... Tel (02) 4016 2300 ..... Fax (02) 4016 2380
☐ 1/222 Berkeley Rd, Unanderra NSW 2526 ..... Tel (02) 4272 6071 ..... Fax (02) 4272 6075

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☐ 89-91 Burswood Rd, Burswood WA 6100 ..... Tel (08) 9355 7100 ..... Fax (08) 9355 7197
☐ Suite 3 & 4, 236 Naturaliste Tce, Dunsborough WA 6281 ..... Tel (08) 9756 7869 ..... Fax (08) 9756 8878
☐ Dilhorn House, 2 Bulwer St, Perth WA 6000 ..... Tel (08) 9328 3488 ..... Fax (08) 9328 3588

Project No: ENVIHOBA06304AA
Task No: Fieldwork
Project Name: Venture Minerals.
Laboratory: SGS
Samplers Name: Sarah Joyce
Project Manager: Anne Hellie
Special Instructions: Metals: Dissolved filtered; total not filtered. Include Al, As, Cd, Cu total, Fe, Pb, Mn, Ni, Zn, Ag, Hg, Se, Sb + W. all in µg/L.

Analysis Request Section

Lab. No.	Sample ID	Sample Location	Sample Depth	Sample Date	Time	Matrix (Soil ... etc)	Container Type & Preservative*	T-A-T (Specify)	BTEX / TPH	METALS (Specify)	PAHs / PHENOLS	OCs / OPs	Metals (total + dissolved)	Cations + Anions	NOTES
	QC2	Piemen Road	Surface	28.1.09	1340	W	2 x 150 mL P 1 x 1 L P	5-7 days					✓	✓	

Major Cations + Anions: Ca, Mg, K, Na, Cl, Sulphate, Acidity (MgCaCO3/L) Carbonate + bi Carbonate,
→ All mg/L except acidity

RELINQUISHED BY:

Signature: [signature] Date: 2.2.09
Company: Coffey environments Time: 1630
Signature: Date:
Company: Time:

RECEIVED BY:

Signature: Date:
Company: Time:
Signature: Date:
Company: Time:

Sample Receipt Advice: *(Lab Use Only)*

All Samples Received in Good Condition . . . ☐
All Documentation is in Proper Order . . . . . ☐
Samples Received Properly Chilled . . . . . ☐
Lab. Ref/Batch No.

*** Container Type & Preservation Codes:** P - Plastic, G - Solvent Washed Acid Rinsed Glass Bottle, V - Vial, N - Nitric Acid Preserved
C - Hydrochloric Acid Preserved, S - Sulphuric Acid Preserved, I - Ice

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Appendix D
Field Data Observation Sheets

Water Monitoring Report-Base Line Study
Venture Minerals



coffey environments

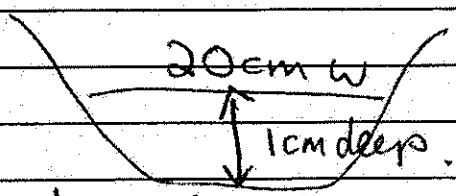
DAILY FIELD SUMMARY

Project No.	ENVIHOBA06804AA
Date:	29-1-09
Page	of

Project Name: VENTURE MINERALS GROUNDWATER SAMPLING

Field Personnel (Initials): SARAH JOYCE

Project Manager (Initials): ANNE HELLIE

Time	Description of Tasks Undertaken: (Include details onsite, all personnel, standby, phone calls)
	Site MLGW02
	Sampled @ 0952
	
	Insufficient water to measure flow.

coffey environments

DAILY FIELD SUMMARY

Project No.	ENVIHOBA06804AA
Date:	29·1·09
Page	of

Project Name: VENTURE MINERALS GROUNDWATER SAMPLING

Field Personnel (Initials): SARAH JOYCE

Project Manager (Initials): ANNE HELLIE

Time	Description of Tasks Undertaken: (Include details onsite, all personnel, standby, phone calls)
	Site MLGW01
	– Collected samples at 1015
	– Water coming from drill pipe. Unable to measure flow.

coffey environments

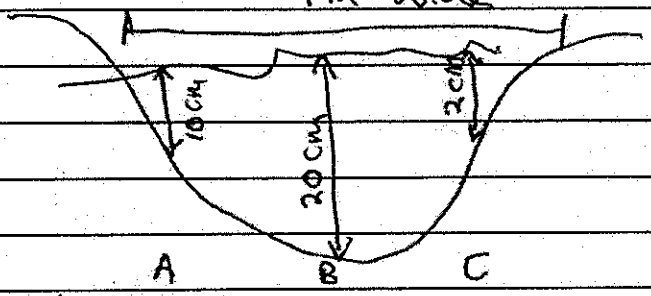
DAILY FIELD SUMMARY

Project No.	ENVIHOBA06804AA
Date:	29·1·09
Page	of

Project Name: VENTURE MINERALS GROUNDWATER SAMPLING

Field Personnel (Initials): SARAH JOYCE

Project Manager (Initials): ANNE HELLIE

Time	Description of Tasks Undertaken: (Include details onsite, all personnel, standby, phone calls)
	Site MLSW06
	Sampled @ 845
	Flow A = 0.6 km/h B = 1.3 km/h C = 1.3 km/h
	1m wide
	
	Small Stream
	Tannin discolocration.

coffey environments

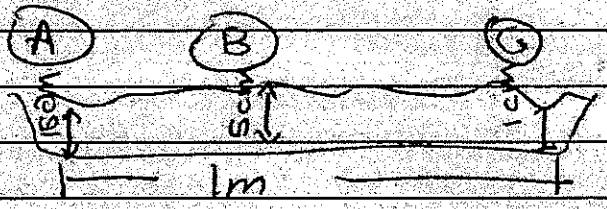
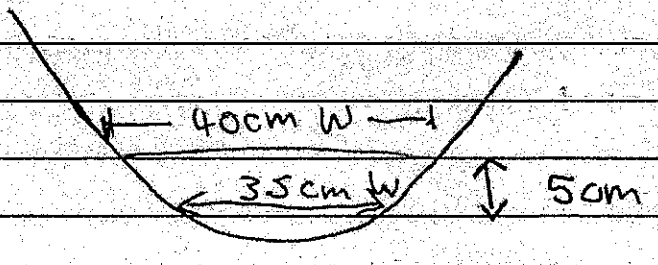
DAILY FIELD SUMMARY

Project No.	ENVIHOBA06804AA
Date:	28·1·09
Page	1 of

Project Name: VENTURE MINERALS GROUNDWATER SAMPLING

Field Personnel (Initials): SARAH JOYCE

Project Manager (Initials): ANNE HELLIE

Time	Description of Tasks Undertaken: (Include details onsite, all personnel, standby, phone calls)
	Site : MLSW05
	Sampled @ 1600
	Flow @ A=1·3 km/h B=0·6 km/h C= Insufficient water to measure
	
	-Stream bed quite rocky 2cm ~ 20cm diameter cobbles
	-Water clear, no tanning
	- All water flowing into culvert
	
	Flow 3·2 km/h on edge
	1·9 km/h in centre.

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DAILY FIELD SUMMARY

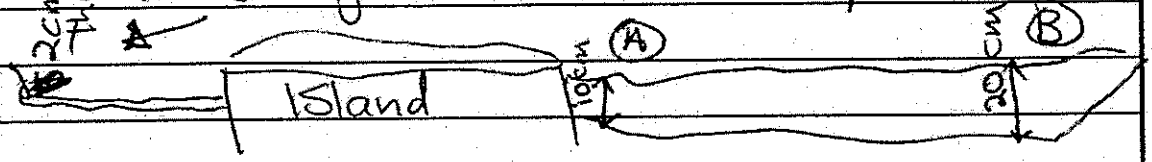
Project No.	ENVIHOBA06804AA
Date:	28.1.09
Page	1 of

Project Name: VENTURE MINERALS GROUNDWATER SAMPLING

Field Personnel (Initials): SARAH JOYCE

Project Manager (Initials): ANNE HELLIE

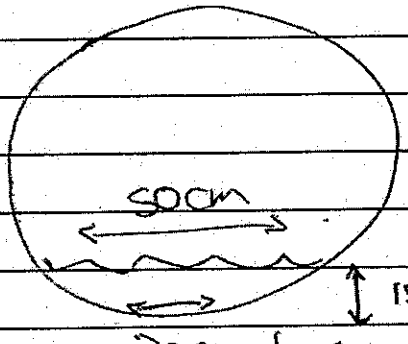
Time	Description of Tasks Undertaken: (Include details onsite, all personnel, standby, phone calls)
	SITE: MLSW04
	Sampled @ 1450
	Braided Stream
	not enough water to measure flow



Small pebbles on bottom of Streams 2 → 20 cm diametre.

Flow @ A = 1.3 km/h B = 0.6 km/h

Water is flowing into 3 culverts.
Flow speed through culvert is 1.9km/h
Water in culverts is 50cm wide @ top
20cm wide @ base
15 cm deep.



coffey environments

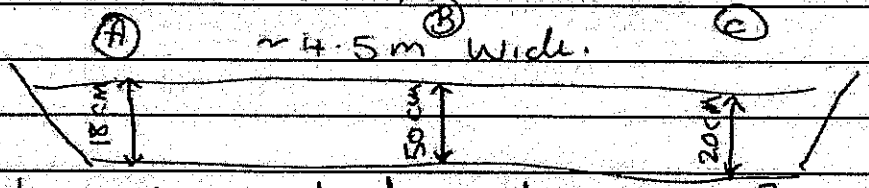
DAILY FIELD SUMMARY

Project No.	ENVIHOBA06804AA
Date:	28.1.09
Page	____ of ____

Project Name: VENTURE MINERALS GROUNDWATER SAMPLING

Field Personnel (Initials): SARAH JOYCE

Project Manager (Initials): ANNE HELLIE

Time	Description of Tasks Undertaken: (Include details onsite, all personnel, standby, phone calls)
	SITE: MLSW03
-	Sampled @ 1340
-	Collected duplicate QC1 + triplicate QC2
-	Collected water quality parameters @ 1355.
-	Water tannin Stained.
	
-	rocky stream bed made up of anglar rocks
-	Flow Rate: Instant Speed in A 0.3 kmphs B 0.5 kmphs C 0.3 kmphs
	A, B, C } All 0.6 km/h.
-	Flow appears to be fairly even across Stream.

coffey environments

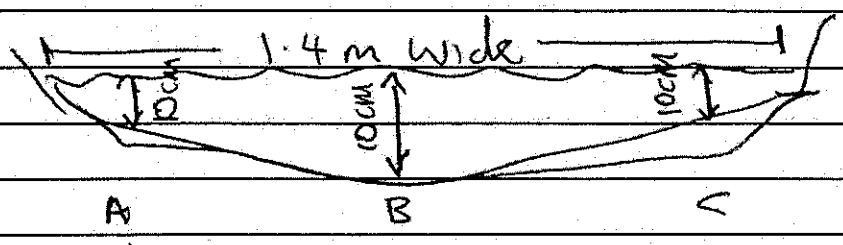
DAILY FIELD SUMMARY

Project No.	ENVIHOBA06804AA
Date:	28·1·09
Page	of

Project Name: VENTURE MINERALS GROUNDWATER SAMPLING

Field Personnel (Initials): SARAH JOYCE

Project Manager (Initials): ANNE HELLIE

Time	Description of Tasks Undertaken: (Include details onsite, all personnel, standby, phone calls)
	SITE: MLSW02
	Sampled at 1520
	
	Flow @ A = 4.6 km/h B = 2.6 km/h C = 1.3 km/h.
	- Stream base is bed rock. Smoothed over time. mosses growing on rock in stream
	- no tannin.

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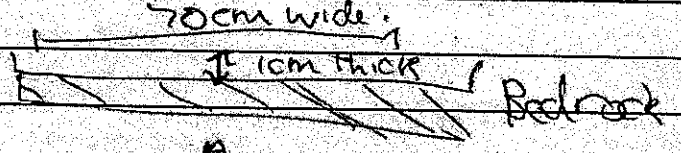
DAILY FIELD SUMMARY

Project No.	ENVIHOBA06804AA
Date:	29.1.09
Page	of

Project Name: VENTURE MINERALS GROUNDWATER SAMPLING

Field Personnel (Initials): SARAH JOYCE

Project Manager (Initials): ANNE HELLIE

Time	Description of Tasks Undertaken: (Include details onsite, all personnel, standby, phone calls)
	Site MLSW01
	Sampled @ 1020
	Small fast flowing stream. Water flowing over bed rock
	
	A = 1.1 km/h.

coffey environments

GROUNDWATER SAMPLING FORM (A)

PAGE ____ OF ____

PROJECT NAME: VENTURE MINERALS

PROJECT NUMBER: ENVIHOBA06804AA

FIELD PERSONNEL: Sarah Joyce

DATE: 29·1·09

PROJECT MANAGER: ANNE HELLIE

WELL ID: MLGW02 METER ID: _____ TOTAL WELL DEPTH: _____ SCREEN INTERVAL: _____

EQUIPMENT USED: BAILER ☐ WATERRA ☐ Other: _____ WELL DIAMETER: _____ WELL STICK-UP: _____

WELL GAUGING AND PURGE VOLUME CALCULATIONS

TOTAL WELL DEPTH (-) WATER LEVEL (=) WATER COLUMN

_____m (-) _____ (=) _____m

Using the water column calculation on the left, refer to the Well Volume Calculation Form for the correct volume to be removed from the well and enter it on the right

LITRES PER 1 WELL VOLUME

_____L

TIME OF DAY	CYCLE/ PUMP RATE (ml/min)	VOLUME (L)	DEPTH TO WATER (m)	DISSOLVED OXYGEN (mg/l)		ELECTRICAL CONDUCTIVITY (mS or µS/cm)		pH (pH units)		REDOX POTENTIAL (mV)		TEMPERATURE (°C)		COMMENTS (ODOUR/ COLOUR/ SEDIMENTS/ PSH COLLECTED?)
				READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	
0	NA													
0950	—	—	—	3·18		125.7		5.47		193		8·8		
STABILISATION CRITERIA (3 Readings within following Ranges)			± 0.05	± 10%		± 10 mv		± 10%		± 10%		± 0.1°C		

DUPLICATE COLLECTED: Y ☐ N ☑ DUPLICATE ID: _____ TRIPLICATE COLLECTED: Y ☐ N ☑ TRIPLICATE ID: _____

WERE METALS FIELD FILTERED? Y ☑ N ☐ (UNFILTERED SAMPLES MUST NOT BE PUT INTO A PRESERVED CONTAINER (IE. 'METALS' BOTTLE))

coffey environments

GROUNDWATER SAMPLING FORM (A)

PROJECT NAME: VENTURE MINERALS

PROJECT NUMBER: ENVIHOBA06804AA

FIELD PERSONNEL: Sarah Joyce

DATE: 29.1.09

PROJECT MANAGER: ANNE HELLIE

WELL ID: MLGW01 METER ID: _____ TOTAL WELL DEPTH: _____ SCREEN INTERVAL: _____

EQUIPMENT USED: BAILER ☐ WATERRA ☐ Other: _____ WELL DIAMETER: _____ WELL STICK-UP: _____

WELL GAUGING AND PURGE VOLUME CALCULATIONS

TOTAL WELL DEPTH (-) WATER LEVEL (=) WATER COLUMN

_____m (-) _____ (=) _____m

Using the water column calculation on the left, refer to the Well Volume Calculation Form for the correct volume to be removed from the well and enter it on the right

LITRES PER 1 WELL VOLUME

_____L

TIME OF DAY	CYCLE/ PUMP RATE (ml/min)	VOLUME (L)	DEPTH TO WATER (m)	DISSOLVED OXYGEN (mg/l)		ELECTRICAL CONDUCTIVITY (mS or µS/cm)		pH (pH units)		REDOX POTENTIAL (mV)		TEMPERATURE (°C)		COMMENTS (ODOUR/ COLOUR/ SEDIMENTS/ PSH COLLECTED?)
				READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	
0	NA													
1012	—	—	—	6.19	ppm	206.7 uS		6.44		-7		11.6	°C.	
STABILISATION CRITERIA (3 Readings within following Ranges)			± 0.05	± 10%		± 10 mv		± 10%		± 10%		± 0.1°C		

DUPLICATE COLLECTED: Y ☐ N ☑ DUPLICATE ID: _____ TRIPLICATE COLLECTED: Y ☐ N ☑ TRIPLICATE ID: _____

WERE METALS FIELD FILTERED? Y ☑ N ☐ (UNFILTERED SAMPLES MUST NOT BE PUT INTO A PRESERVED CONTAINER (IE. 'METALS' BOTTLE))

coffey environments

GROUNDWATER SAMPLING FORM (A)

PAGE ____ OF ____

PROJECT NAME: VENTURE MINERALS

PROJECT NUMBER: ENVIHOBA06804AA

FIELD PERSONNEL: Sarah Joyce

DATE: 29·1·09

PROJECT MANAGER: ANNE HELLIE

~~SAMPLE~~ WELL ID: MLSW06 METER ID: _____ TOTAL WELL DEPTH: _____ SCREEN INTERVAL: _____

EQUIPMENT USED: BAILER ☐ WATERRA ☐ Other: _____ WELL DIAMETER: _____ WELL STICK-UP: _____

WELL GAUGING AND PURGE VOLUME CALCULATIONS

TOTAL WELL DEPTH (-) WATER LEVEL (=) WATER COLUMN

_____m (-) _____ (=) _____m

Using the water column calculation on the left, refer to the Well Volume Calculation Form for the correct volume to be removed from the well and enter it on the right

LITRES PER 1 WELL VOLUME

_____L

TIME OF DAY	CYCLE/ PUMP RATE (ml/min)	VOLUME (L)	DEPTH TO WATER (m)	DISSOLVED OXYGEN (mg/l)		ELECTRICAL CONDUCTIVITY (mS or µS/cm)		pH (pH units)		REDOX POTENTIAL (mV)		TEMPERATURE (°C)		COMMENTS (ODOUR/ COLOUR/ SEDIMENTS/ PSH COLLECTED?)
				READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	
0	NA													
0847	~~~~		~~~~	16·58		47·7		3.50		326		12·9		
STABILISATION CRITERIA (3 Readings within following Ranges)			± 0.05	± 10%		± 10 mv		± 10%		± 10%		± 0.1°C		

DUPLICATE COLLECTED: Y ☐ N ☑ DUPLICATE ID: _____ TRIPLICATE COLLECTED: Y ☐ N ☑ TRIPLICATE ID: _____

WERE METALS FIELD FILTERED? Y ☑ N ☐ (UNFILTERED SAMPLES MUST NOT BE PUT INTO A PRESERVED CONTAINER (IE. 'METALS' BOTTLE))

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GROUNDWATER SAMPLING FORM (A)

PROJECT NAME: VENTURE MINERALS

PROJECT NUMBER: ENVIHOBA06804AA

FIELD PERSONNEL: Sarah Joyce

DATE: 28.1.09

PROJECT MANAGER: ANNE HELLIE

WELL ID: MLSW05 METER ID: _____ TOTAL WELL DEPTH: _____ SCREEN INTERVAL: _____

EQUIPMENT USED: BAILER ☐ WATERRA ☐ Other: _____ WELL DIAMETER: _____ WELL STICK-UP: _____

WELL GAUGING AND PURGE VOLUME CALCULATIONS

TOTAL WELL DEPTH (-) WATER LEVEL (=) WATER COLUMN

_____m (-) _____ (=) _____m

Using the water column calculation on the left, refer to the Well Volume Calculation Form for the correct volume to be removed from the well and enter it on the right

LITRES PER 1 WELL VOLUME

_____L

TIME OF DAY	CYCLE/ PUMP RATE (ml/min)	VOLUME (L)	DEPTH TO WATER (m)	DISSOLVED OXYGEN (mg/l)		ELECTRICAL CONDUCTIVITY (mS or µS/cm)		pH (pH units)		REDOX POTENTIAL (mV)		TEMPERATURE (°C)		COMMENTS (ODOUR/ COLOUR/ SEDIMENTS/ PSH COLLECTED?)
				READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	
0	NA													
15 55	—	—	—	17.74	ppM	57.3	µS	5.73		154		12.5		
STABILISATION CRITERIA (3 Readings within following Ranges)		± 0.05		± 10%		± 10 mv		± 10%		± 10%		± 0.1°C		

DUPLICATE COLLECTED: Y ☐ N ☑ DUPLICATE ID: _____ TRIPLICATE COLLECTED: Y ☐ N ☑ TRIPLICATE ID: _____

WERE METALS FIELD FILTERED? Y ☑ N ☐ (UNFILTERED SAMPLES MUST NOT BE PUT INTO A PRESERVED CONTAINER (IE. 'METALS' BOTTLE))

coffey environments

GROUNDWATER SAMPLING FORM (A)

PROJECT NAME: VENTURE MINERALS

PROJECT NUMBER: ENVIHOBA06804AA

FIELD PERSONNEL: Sarah Joyce

DATE: 28.1.09

PROJECT MANAGER: ANNE HELLIE

WELL ID: MLSW04 METER ID: _____ TOTAL WELL DEPTH: _____ SCREEN INTERVAL: _____

EQUIPMENT USED: BAILER ☐ WATERRA ☐ Other: _____ WELL DIAMETER: _____ WELL STICK-UP: _____

WELL GAUGING AND PURGE VOLUME CALCULATIONS

TOTAL WELL DEPTH (-) WATER LEVEL (=) WATER COLUMN

_____m (-) _____ (=) _____m

Using the water column calculation on the left, refer to the Well Volume Calculation Form for the correct volume to be removed from the well and enter it on the right

LITRES PER 1 WELL VOLUME

_____L

TIME OF DAY	CYCLE/ PUMP RATE (ml/min)	VOLUME (L)	DEPTH TO WATER (m)	DISSOLVED OXYGEN (mg/l)		ELECTRICAL CONDUCTIVITY (mS or µS/cm)		pH (pH units)		REDOX POTENTIAL (mV)		TEMPERATURE (°C)		COMMENTS (ODOUR/ COLOUR/ SEDIMENTS/ PSH COLLECTED?)
				READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	
0	NA													
1453	—	—	—	17.17	ppM	78.4	uS	5.72		157		13.4		
STABILISATION CRITERIA (3 Readings within following Ranges)			± 0.05	± 10%		± 10 mv		± 10%		± 10%		± 0.1°C		

DUPLICATE COLLECTED: Y ☐ N ☐ DUPLICATE ID: _____ TRIPLICATE COLLECTED: Y ☐ N ☐ TRIPLICATE ID: _____

WERE METALS FIELD FILTERED? Y ☐ N ☐ (UNFILTERED SAMPLES MUST NOT BE PUT INTO A PRESERVED CONTAINER (IE. 'METALS' BOTTLE))

coffey environments

GROUNDWATER SAMPLING FORM (A)

PAGE ___ OF ___

PROJECT NAME: VENTURE MINERALS

PROJECT NUMBER: ENVIHOBA06804AA

FIELD PERSONNEL: Sarah Joyce

DATE: 28·1·09

PROJECT MANAGER: ANNE HELLIE

~~Site ID~~: MLSW03 METER ID: ___ TOTAL WELL DEPTH: ___ SCREEN INTERVAL: ___

EQUIPMENT USED: BAILER ☐ WATERRA ☒ Other: ___ WELL DIAMETER: ___ WELL STICK-UP: ___

WELL GAUGING AND PURGE VOLUME CALCULATIONS

TOTAL WELL DEPTH (-) WATER LEVEL (=) WATER COLUMN

___m (-) ___ (=) ___m

Using the water column calculation on the left, refer to the Well Volume Calculation Form for the correct volume to be removed from the well and enter it on the right

LITRES PER 1 WELL VOLUME ___L

TIME OF DAY	CYCLE/ PUMP RATE (ml/min)	VOLUME (L)	DEPTH TO WATER (m)	DISSOLVED OXYGEN (mg/l)		ELECTRICAL CONDUCTIVITY (mS or µS/cm)		pH (pH units)		REDOX POTENTIAL (mV)		TEMPERATURE (°C)		COMMENTS (ODOUR/ COLOUR/ SEDIMENTS/ PSH COLLECTED?)
				READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	
0	NA													
1355	—		—	14·57		42·5	uS	4·37		176	mV	14·1		
STABILISATION CRITERIA (3 Readings within following Ranges)			± 0.05	± 10%		± 10 mv		± 10%		± 10%		± 0.1°C		

DUPLICATE COLLECTED: Y ☑ N ☐ DUPLICATE ID: QC1

TRIPLICATE COLLECTED: Y ☑ N ☐ TRIPLICATE ID: QC2

WERE METALS FIELD FILTERED? Y ☐ N ☐ (UNFILTERED SAMPLES MUST NOT BE PUT INTO A PRESERVED CONTAINER (IE. 'METALS' BOTTLE))

coffey environments

GROUNDWATER SAMPLING FORM (A)

PAGE ___ OF ___

PROJECT NAME: VENTURE MINERALS

PROJECT NUMBER: ENVIHOBA06804AA

FIELD PERSONNEL: Sarah Joyce

DATE: 28.1.09

PROJECT MANAGER: ANNE HELLIE

WELL ID: MLSW02 METER ID: _____ TOTAL WELL DEPTH: _____ SCREEN INTERVAL: _____

EQUIPMENT USED: BAILER ☐ WATERRA ☐ Other: _____ WELL DIAMETER: _____ WELL STICK-UP: _____

WELL GAUGING AND PURGE VOLUME CALCULATIONS

TOTAL WELL DEPTH (-) WATER LEVEL (=) WATER COLUMN

_____m (-) _____ (=) _____m

Using the water column calculation on the left, refer to the Well Volume Calculation Form for the correct volume to be removed from the well and enter it on the right

LITRES PER 1 WELL VOLUME

_____L

TIME OF DAY	CYCLE/ PUMP RATE (ml/min)	VOLUME (L)	DEPTH TO WATER (m)	DISSOLVED OXYGEN (mg/l)		ELECTRICAL CONDUCTIVITY (mS or µS/cm)		pH (pH units)		REDOX POTENTIAL (mV)		TEMPERATURE (°C)		COMMENTS (ODOUR/ COLOUR/ SEDIMENTS/ PSH COLLECTED?)
				READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	
0	NA													
1525	—	—	—	16.27	ppm	68.2	mS	5.74		162		12.5		
STABILISATION CRITERIA (3 Readings within following Ranges)			± 0.05	± 10%		± 10 mv		± 10%		± 10%		± 0.1°C		

DUPLICATE COLLECTED: Y ☐ N ☑ DUPLICATE ID: _____ TRIPLICATE COLLECTED: Y ☐ N ☑ TRIPLICATE ID: _____

WERE METALS FIELD FILTERED? Y ☑ N ☐ (UNFILTERED SAMPLES MUST NOT BE PUT INTO A PRESERVED CONTAINER (IE. 'METALS' BOTTLE))

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GROUNDWATER SAMPLING FORM (A)

PROJECT NAME: VENTURE MINERALS

PROJECT NUMBER: ENVIHOBA06804AA

FIELD PERSONNEL: Sarah Joyce

DATE: 29·1·09

PROJECT MANAGER: ANNE HELLIE

WELL ID: ML5W01 METER ID: _____ TOTAL WELL DEPTH: _____ SCREEN INTERVAL: _____

EQUIPMENT USED: BAILER ☐ WATERRA ☐ Other: _____ WELL DIAMETER: _____ WELL STICK-UP: _____

WELL GAUGING AND PURGE VOLUME CALCULATIONS

TOTAL WELL DEPTH (-) WATER LEVEL (=) WATER COLUMN

_____m (-) _____ (=) _____m

Using the water column calculation on the left, refer to the Well Volume Calculation Form for the correct volume to be removed from the well and enter it on the right

LITRES PER 1 WELL VOLUME

_____L

TIME OF DAY	CYCLE/ PUMP RATE (ml/min)	VOLUME (L)	DEPTH TO WATER (m)	DISSOLVED OXYGEN (mg/l)		ELECTRICAL CONDUCTIVITY (mS or µS/cm)		pH (pH units)		REDOX POTENTIAL (mV)		TEMPERATURE (°C)		COMMENTS (ODOUR/ COLOUR/ SEDIMENTS/ PSH COLLECTED?)
				READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	
0	NA													
1023	—			19·54		41·8		6·74		65		10·2		
STABILISATION CRITERIA (3 Readings within following Ranges)			± 0.05	± 10%		± 10 mv		± 10%		± 10%		± 0.1°C		

DUPLICATE COLLECTED: Y ☐ N ☑ DUPLICATE ID: _____ TRIPLICATE COLLECTED: Y ☐ N ☑ TRIPLICATE ID: _____

WERE METALS FIELD FILTERED? Y ☑ N ☐ (UNFILTERED SAMPLES MUST NOT BE PUT INTO A PRESERVED CONTAINER (IE. 'METALS' BOTTLE))

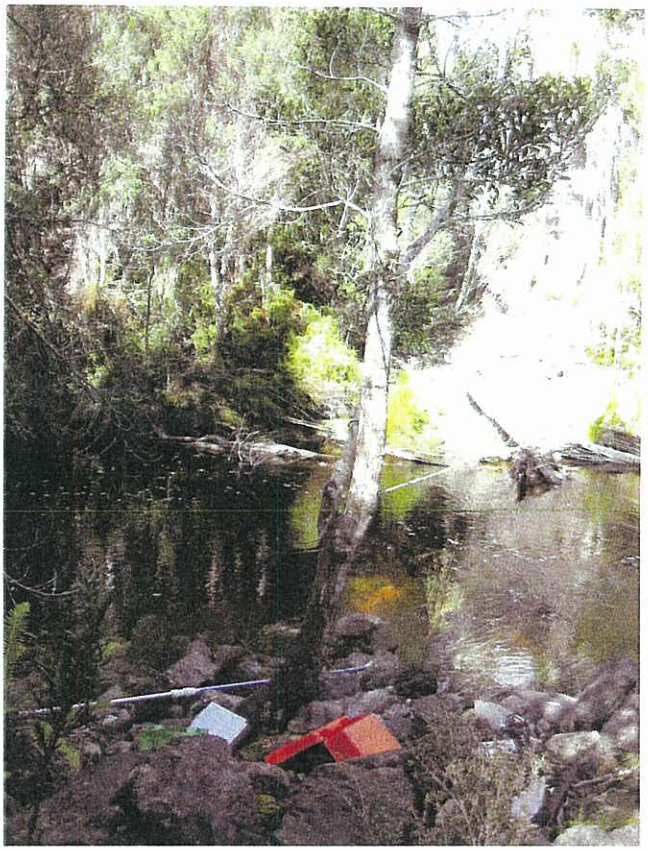


Photo 1: MLSWO3 View East.



Photo 2: MLSWO3 View East including bridge.

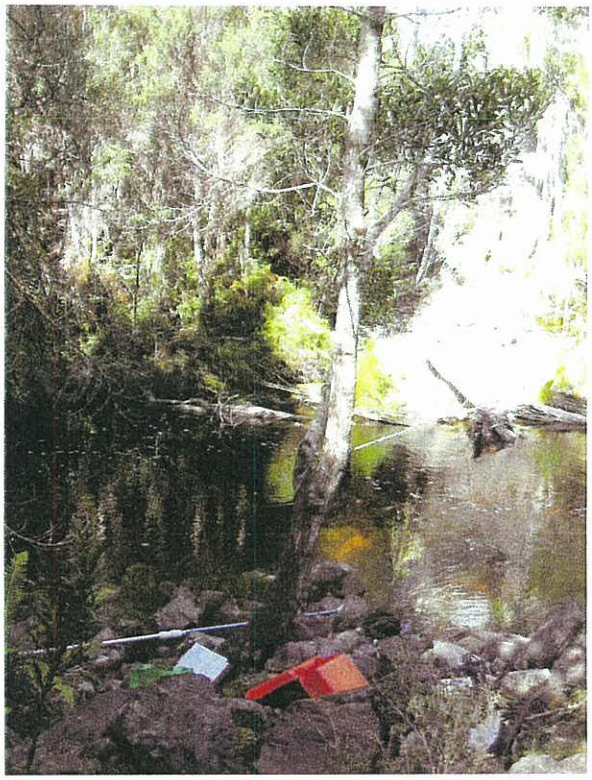


Photo 3: MLSWO5 View East.

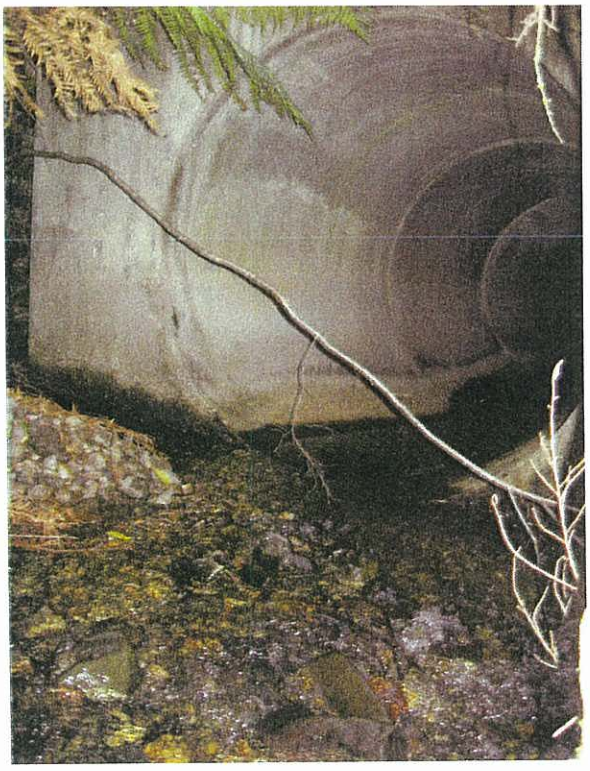


Photo 4: MLSWO5 View South East culvert.

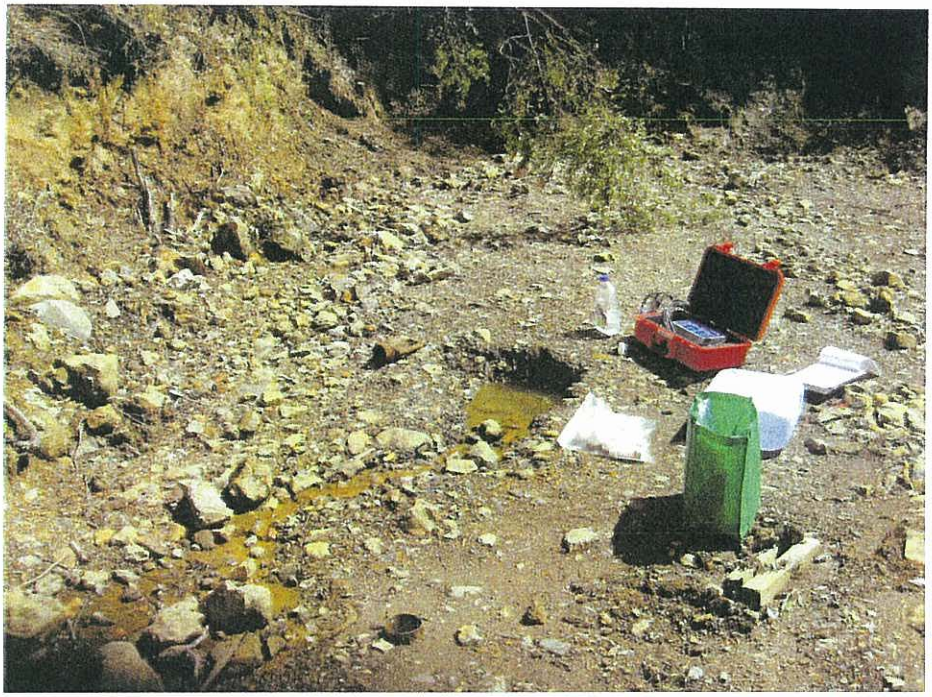


Photo 7: MLGWO2 Area view of drill hole outflow.



Photo 8: MLGWO2 close view of drill hole outflow.



Photo 9: MLGWO1 Site over view looking north and drill hole out flow.

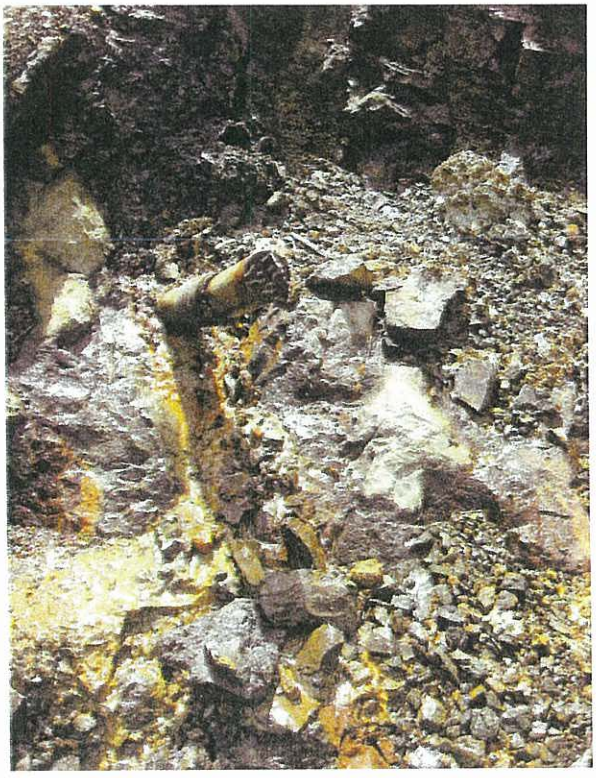


Photo 10: MLGWO1 Close up of drill hole out flow.

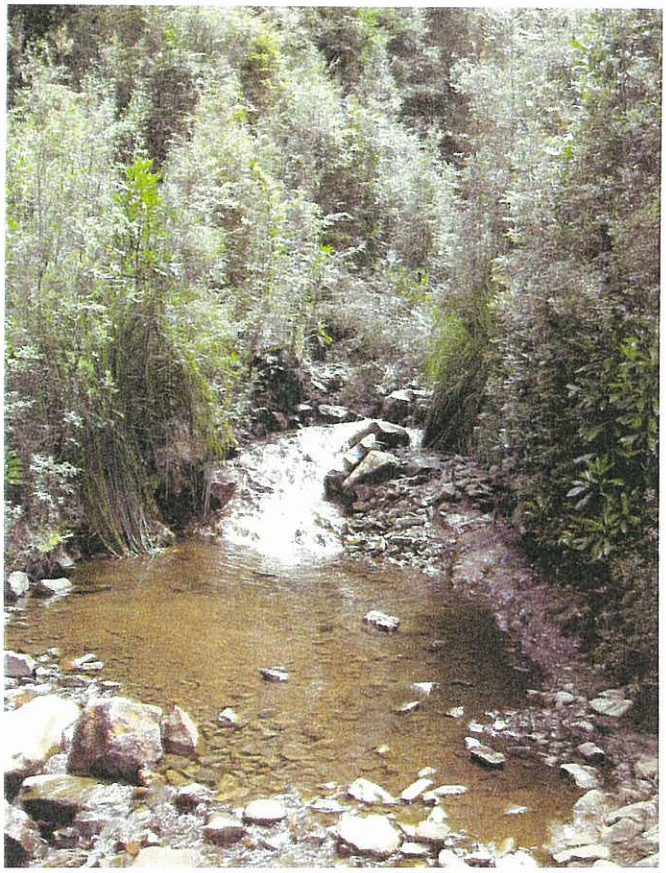


Photo 11: MLGWO1 View of stream facing north.



Photo 12: MLSWO1 View of stream facing north.



Photo 13: MLSWO4 View south east towards road.



Photo 14: MLSWO4 View south east towards road showing 3 culverts.



Photo 15: MLSWO2

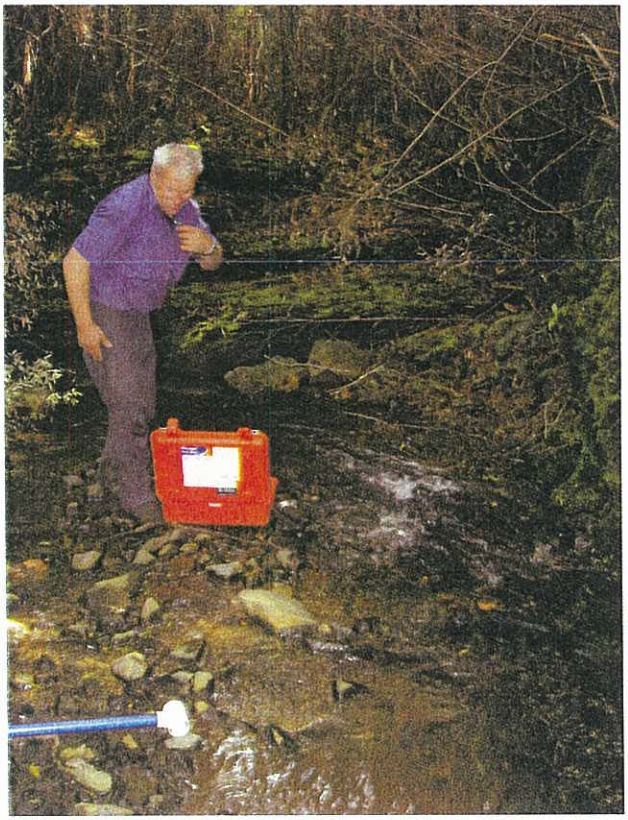


Photo 16: MLSWO2

Appendix L

North Barker Ecosystem Services PL baseline flora and fauna report

northbarker

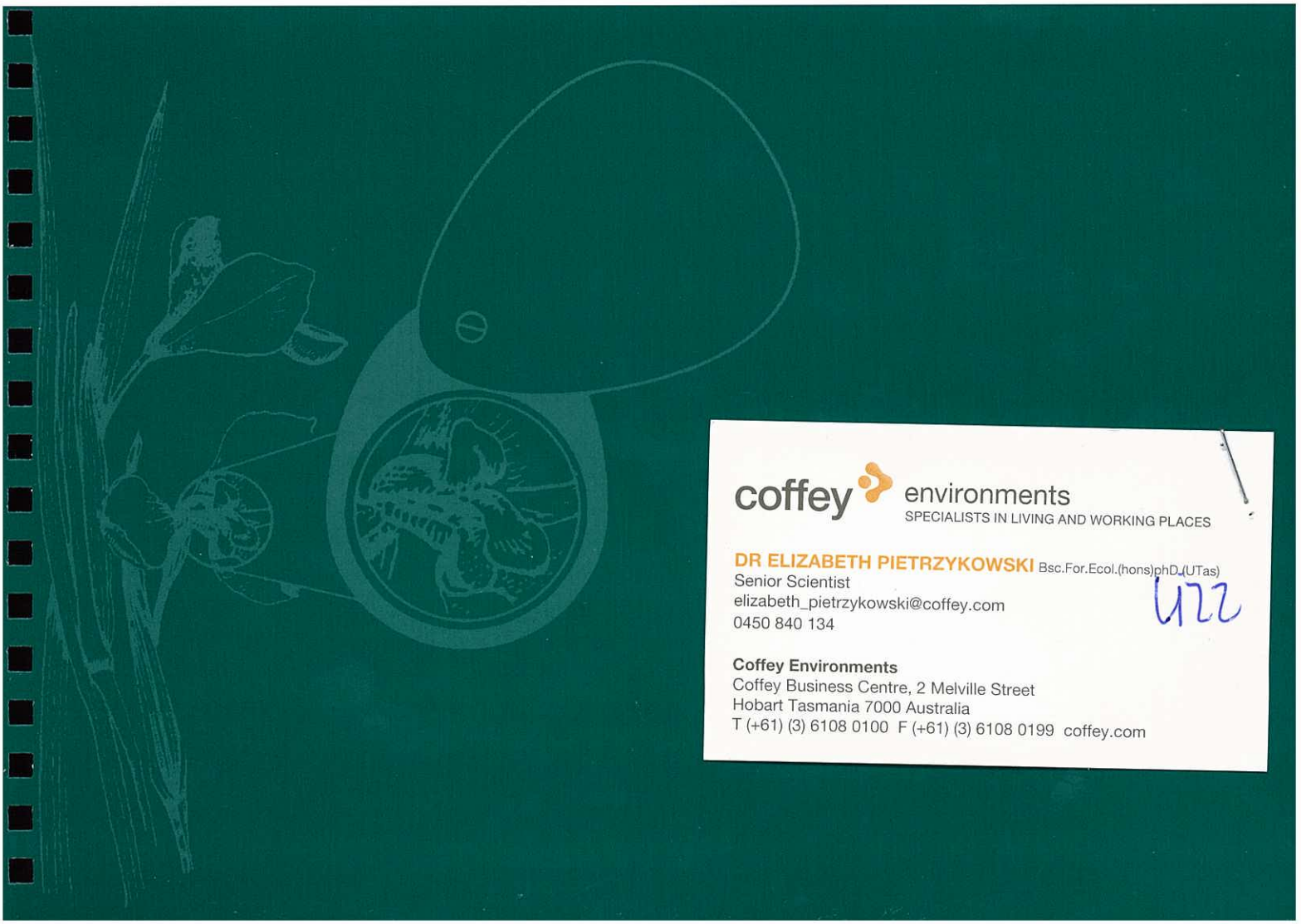
ECOSYSTEM SERVICES

Venture Minerals Mt Lindsay Magnetite/ Tin Project

Flora and Fauna Habitat Assessment and Constraints Analysis.

February 2nd 2009

For Coffey International Limited/ Balance Consulting Australia



coffey environments
SPECIALISTS IN LIVING AND WORKING PLACES

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northbarker
ECOSYSTEM SERVICES

Venture Minerals Mt Lindsay Magnetite/ Tin Project

Flora and Fauna Habitat Assessment and Constraints Analysis.

February 2nd 2009

For Coffey International Limited/ Balance Consulting Australia

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Introduction

Venture Minerals Limited has commissioned Coffey Mining to undertake a Scoping Study for the proposed Mt Lindsay Magnetite/Tin project. The proposed Mt Lindsay site is located within the Meredith Range Regional Reserve north west of the existing Renison Bell Mine, on the west coast of Tasmania.

Coffey Mining has engaged North Barker Ecosystem Services to undertake a preliminary flora and fauna habitat assessment to assess the natural values of the study area and to use this information to complete a Constraints analysis of the site. This information will then be used to inform the location of infrastructure associated with the mine. This report presents the findings of a vegetation and habitat assessment and the resulting constraints analysis.

Aims

This report presents the findings of a site reconnaissance survey undertaken in early December 2008 and subsequent desktop and GIS analysis. The study area has been assessed as to the likelihood of occurrence of significant biodiversity values. The aim of the assessment is to produce a significance map indicating the known and potential occurrence of significant biodiversity values ranked according to their importance. This constraints analysis in turn represents the highest constraints to development at the site.

Survey and Limitations

A survey was undertaken in December 2008. During this survey the following information was collected:

- The distribution of vegetation communities
- Flora species lists for all vegetation communities
- Potential location of threatened flora species
- Potential location of threatened fauna species and suitable habitat for these species
- Location of weeds

Given that this survey was the basis of a risk assessment, the intention was to highlight the potential values of the study area, rather than providing a detailed inventory of species present. This approach was taken due to the dense and difficult terrain once off tracks and the limited area affected with in the lease area by the mine proposal. Consequently the analysis carried out for this survey is based on limited access to the site and visual examination of the vegetation from vantage points in the field, combined with aerial photo interpretation. All vegetation communities identified in the field had at least one vegetation survey plot carried out within them, and this is what the vegetation community species lists are based on (see Appendix 2 and 3). Figure 1 below shows the location of the study area.

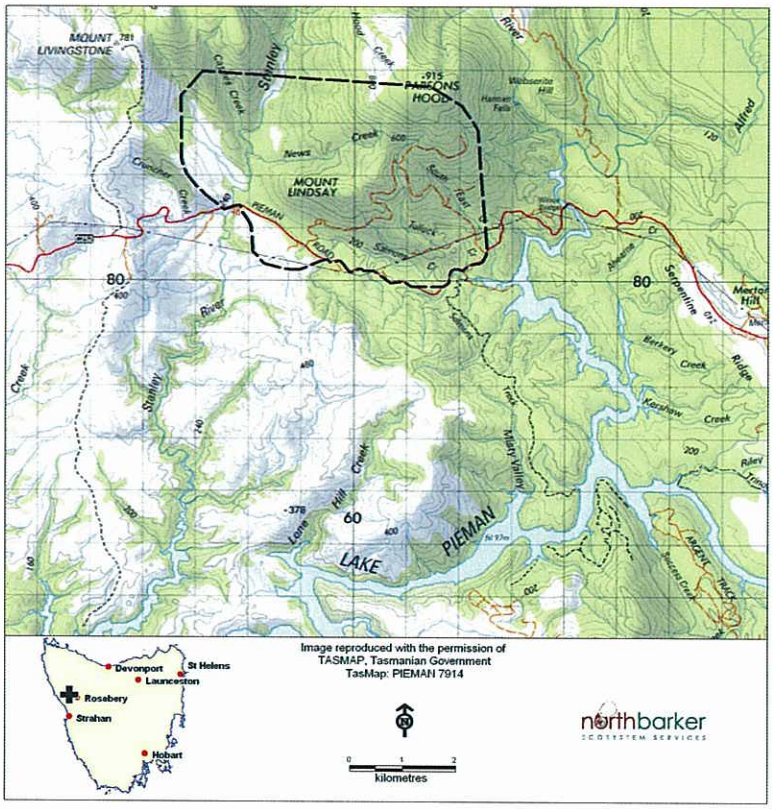


Figure 1. The location and extent of the study area.

Results

Vegetation Communities

Seven vegetation communities were recorded during the survey over the study area which covered 1,857 hectares. *Nothofagus - Atherosperma* rainforest was the most common vegetation community found within the study area covering 859 hectares or 46% of the site. Table 1 below gives a brief summary of the vegetation communities found, their areas and their reservation status within the bioregion and within Tasmania.

Of the vegetation communities surveyed and mapped, none are listed as threatened under the *Nature Conservation Act 2002,* or under the *Commonwealth Environmental Protection and Biodiversity Conservation Act 1999,* and all are considered to be well conserved. Full species lists for each survey site and their associated vegetation communities are shown in Appendices 1 and 2.

Figure 2 illustrates the vegetation communities that were recorded in the study area.

Table 1: Native Vegetation Communities within the study area.

Equivalent described floristic community [1][2]	Equivalent Mapped Community[3]	State Wide Conservation Status[4][5]	Bioregional Conservation Priority[6]
Acacia melanoxylon on rises – 93.2 hectares			
D6. Riparian blackwood rainforest	*Acacia melanoxylon* on rises NAR	19,008 ha intact 7,912 ha reserved Well reserved	8,887 ha intact 5,930 ha reserved Well reserved
Buttongrass moorland with emergent shrubs – 142.6 hectares			
B1a. Standard peat buttongrass moorland	Buttongrass moorland with emergent shrubs MBS	86,000 ha intact 84,300 ha reserved Well reserved	70,400 ha intact 69,300 ha reserved Well reserved
Eucalyptus nitida forest over *Leptospermum* – 251.2 hectares			

[1] Kirkpatrick *et al* 1995.
[2] TasVeg 2003
[3] TasVeg 2003
[4] Tasmanian Regional Forest Agreement
[5] TasVeg Tenure Report 2006
[6] Tasmanian Regional Forest Agreement

Equivalent described floristic community [1,2]	Equivalent Mapped Community[3]	State Wide Conservation Status[4,5]	Bioregional Conservation Priority[6]
NITo *Eucalyptus nitida – Anodopetalum biglandulosum – Leptospermum glaucescens* mixed forest	*Eucalyptus nitida* forest over *Leptospermum* WNL	242,797 ha intact 221,121 ha reserved Well reserved	191,298 ha intact 177,489 ha reserved Well reserved
Eucalyptus nitida forest over rainforest – 4.1 hectares			
NITo *Eucalyptus nitida – Anodopetalum biglandulosum – Leptospermum glaucescens* mixed forest	*Eucalyptus nitida* forest over rainforest WNR	242,797 ha intact 221,121 ha reserved Well reserved	191,298 ha intact 177,489 ha reserved Well reserved
Leptospermum Scrub – 85.8 hectares			
1. *Leptospermum nitidum* closed-forest	*Leptospermum* Scrub SLW	76,400 ha intact 51,000 ha reserved Well reserved	42,000 ha intact 35,800 ha reserved Well reserved
Nothofagus - Atherosperma rainforest – 859.4 hectares			
T5.1 *Nothofagus cunninghamii – Atherosperma moschatum- Eucryphia lucida* over *Trochocarpa gunnii*	*Nothofagus - Atherosperma* rainforest RMT	441,204 ha intact 385,601 ha reserved Well reserved	274,092 ha intact 255,655 ha reserved Well reserved
Nothofagus / Phyllocladus short rainforest – 420.6 hectares			
T5.1 *Nothofagus cunninghamii – Atherosperma moschatum- Eucryphia lucida* over *Trochocarpa gunnii*	*Nothofagus / Phyllocladus* short rainforest RMS	200,624 ha intact 152,097 ha reserved Well reserved	131,202 ha intact 109,022 ha reserved Well reserved

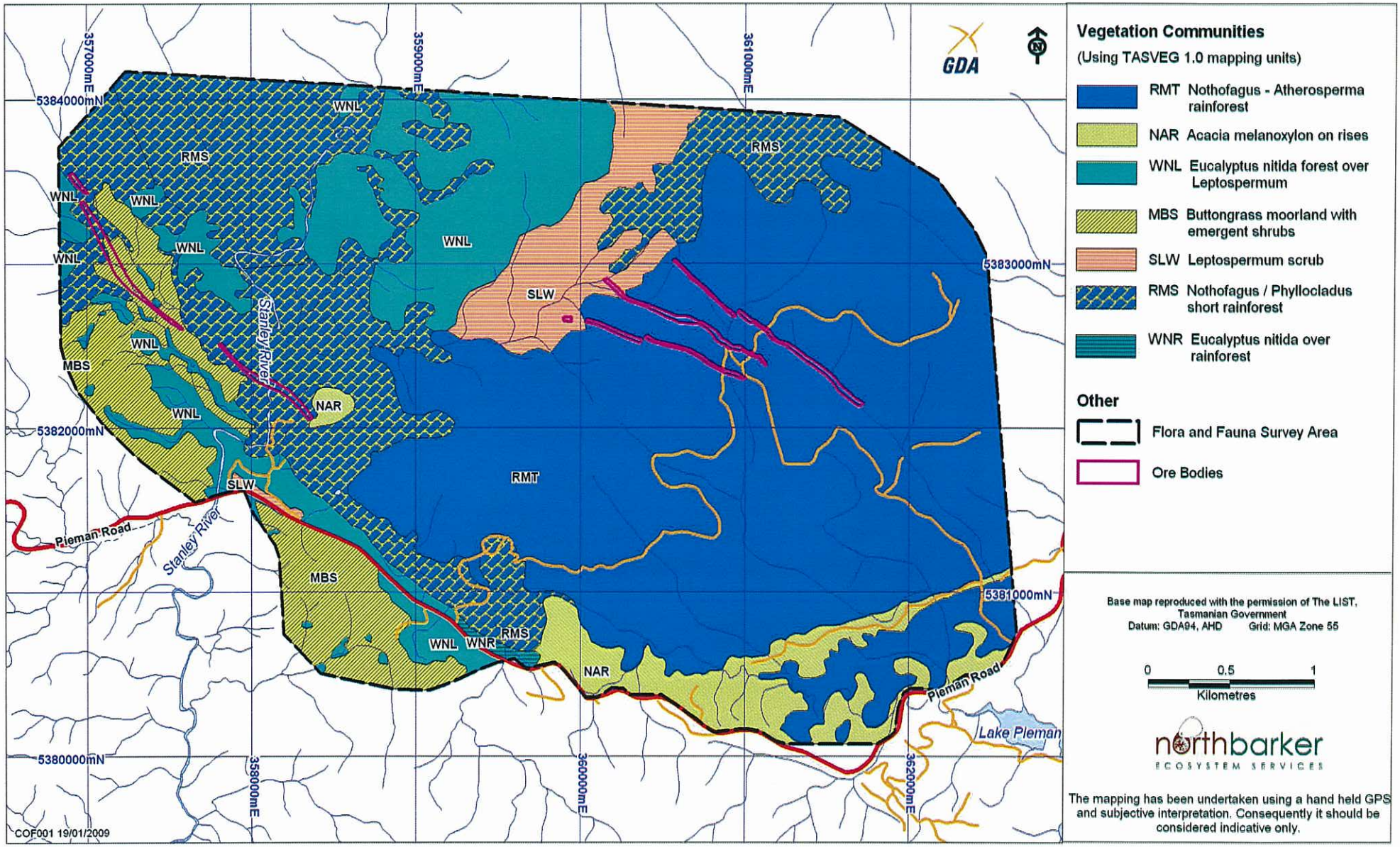


Figure 2 – Vegetation Communities

Flora Species

The survey revealed 115 native plant species and only two exotic plant species within the study area. Twenty four species are endemic to Tasmania. Appendix 2 shows a complete species list for the whole study area.

Threatened Flora Species

Previous surveys within 5 km of the property have identified 3 species of threatened flora variously listed under the TSPA and EPBCA. These are detailed in Table 2 together with a description of their preferred habitat and an assessment of their likely occurrence on the property.

Table 2: Threatened Flora Species previously recorded in the vicinity (within 5km)[7].

Species Name	Conservation Status[8]		Previous records, preferred habitat and other observations[9]
	TSPA/ EPBC	Potential to occur	
Epacris curtisiae (northwest heath)	Rare/-	Moderate	This species is endemic to Tasmania and occurs in peaty soils or undulating terrain in association with locally common heathlands, graminoid heaths and scrub in the northwest. It occurs in altitudes below 300 m. One previous record occurs approximately 2.3km to the SW of the study area. Could occur here in buttongrass or heathland habitat although the stronghold for the species is further to the NW.
Micrantheum serpentinum (western tridentbush)	Vulnerable/-	Very Low	This species is restricted to Cambrian serpentinite substrate, typically on rocky hillsides at approximately 170 to 480 m above sea level. Habitat includes heathy shrubland, shrubby Eucalyptus nitida woodland, and moist, shaded gullies or creek banks. 50 previous records occur to the east of the study area, with the closest being 2.5km away. As the Cambrian serpentinite substrate does not occur in the study area it is highly unlikely that it would occur.
Senecio velleioides (forest groundsel)	Rare/-	Low/ Moderate	This species is widespread and is found in moist places on hills particularly after disturbance by fire. One previous record exists within the study area just north of the Pieman Road, although its precision is low. This species is unlikely to be found in the study area in areas of mature, intact native vegetation, however it could be found in areas that have been recently disturbed by fire or other disturbance events such as vegetation clearance or along tracks. It was not observed.

[7] Natural Values Report 25/11/2008, DPIW
[8] Tasmanian *Threatened Species Protection Act 1995/ Environmental Protection and Biodiversity Conservation Act 1999.*
[9] Tasmanian State Government 2008a,b,c

Other Threatened Flora Species

Menegazzia minuta is a species of lichen known to occur within the rainforests of north-western Tasmania. It is a tiny, flat, leafy lichen that forms rosettes rarely more than 1 cm wide[10]. This lichen is classified as endangered under the *Tasmanian Threatened Species Protection Act 1995* and is endemic to Tasmania. It occurs in the canopy of leatherwood (*Eucryphia lucida*) trees in thamnic rainforest. It has previously only been found in two locations - one in the Tarkine region and the other near Tullah. Both of these collections were made from logging coupes in felled trees. Leatherwood trees were commonly recorded in the study area within rainforest vegetation associations. Given that there is extensive habitat within the region, and that only two records exist despite a long period of survey by the states lichen specialist, the likelihood of it occurring in the study area is low.

Weeds

Only two weed species were recorded within the study area – canary broom (*Genista monspessulana*) and gorse (*Ulex europeaus*). Both of these weeds are listed as Declared under the Tasmanian *Weed Management Act 1999*[11].

Threatened Fauna Species

Threatened fauna species previously recorded within 5 km of the study area, or which may potentially occur there, are listed in Table 3 together with a description of their preferred habitat and an assessment of their likely occurrence in the study area.

Table 3: Fauna species of conservation significance previously recorded, or which may potentially occur, within 5 km of the property[12].

Species	Status TSPA/EPBCA	Likelihood of occurrence	Preferred Habitat[13] and Observations[14]	Required Buffer Zone
BIRDS				
Azure kingfisher *Alcedo azurea diemenensis*	Endangered/-	MODERATE	Inhabits tree-lined waterways, lakes, ponds and other wetlands with dense streamside vegetation, in particular in western and north-western Tasmania[15]. It is historically also known from eastern Tasmania. No known nest sites or records occur within 5km of the study area. Suitable habitat is considered to occur along streams and creeks within and adjacent to the study area.	50m buffer from creekline.
Grey goshawk *Accipiter novaehollandiae*	Endangered/-	MODERATE	Inhabits large tracts of wet forest with blackwood and requires old trees for nesting. No known nest sites or records occur within 5km of the study area. Suitable habitat for breeding was recorded on site, and the area is also suitable for foraging.	100m buffer from active nest.
Swift Parrot *Lathamus disolor*	Endangered/ Endangered	LOW	Requires tree hollows for nesting and feeds on nectar of blue gum (*E. globulus*) and black gum (*E. ovata*) flowers. Three records of this species have been recorded within 5km of the study area. The survey area is not considered suitable nesting habitat, but may provide suitable foraging habitat during the species annual migration back to the Australian mainland. May be a temporary visitor to the site for short periods of time.	Not applicable to this site.

[10] Tasmanian State Government (2004)
[11] Tasmanian State Government (1999)
[12] Natural Values Report 25/11/08, DPIW
[13] Bryant & Jackson (1999)
[14] Natural Values Report 25/11/08, DPIW
[15] Higgins (1999)

Species	Status TSPA/EPBCA	Likelihood of occurrence	Preferred Habitat[13] and Observations[14]	Required Buffer Zone[15]
Wedge-tailed eagle *Aquila audax*	Endangered/ Endangered	LOW	Requires large sheltered trees for nesting and is highly sensitive to disturbance during the breeding season. One nest site and two records of this species have been recorded within 5km of the study area. The survey area is considered unlikely to contain trees of an adequate size to support nests. The survey area is likely to be utilised for hunting and foraging but not for breeding. Nevertheless the DPIW model of potential nesting habitat does indicate a number of areas that would require a nest search if disturbance is to occur within 500 m or 1 km line of sight.	No activity is to occur within 500m or 1km line of sight of an active nest during the breeding season. Active nests require a 10 hectare buffer at all times.
White-bellied Sea-eagle *Haliaeetus leucogaster*	Vulnerable/-	LOW	This species nests and forages mainly near the coast but will also live near large rivers and inland lakes, often moving on a seasonal basis. The nearby Lake Pieman is considered potential habitat for this species. No records of this species have been recorded within 5km of the study area.	No activity is to occur within 500m or 1km line of sight of an active nest during the breeding season. Active nests require a 10 hectare buffer at all times.
MAMMALS				
Spotted-tailed quoll Dasyurus maculatus ssp. Maculatus	Rare/Vulnerable	HIGH	This naturally rare forest-dweller most commonly inhabits rainforest, wet forest and blackwood swamp forest. It forages and hunts on farmland and pasture, travelling up to 20 km at night, and shelters in logs, rocks or thick vegetation. No records of this species have been recorded within 5km of the study area. Is highly likely to be present and one possible den site was observed during this survey.	100m buffer of maternal den site.
Tasmanian devil Sarcophilus harrisii	Endangered/ Vulnerable	HIGH	Inhabits a range of forest types, usually within extensive tracts of remnant native vegetation. Three records of this species have been recorded within 5km of the study area. Is highly likely to be present and a devil scat was found during this survey at one location.	100m buffer of maternal den site.
FISH				
Australian grayling Prototroctes maraena	Vulnerable/ Vulnerable	VERY LOW	Inhabits the middle and lower reaches of rivers and streams that open to the sea. Although the species has been recorded as high as 1000 m altitude in Victoria16. However the survey area is above the Reece dam and so is no longer possible for the sea dependant breeding cycle to operate.	Not applicable to this site.

Other Threatened Fauna Species

Several other species that were not recorded in database searches of the study area warrant inclusion in this discussion. These species are Hydrobiid snails and burrowing crayfish.

Hydrobiid Snails

37 species of Hydrobiid Snails (*Beddomeia* spp.) that occur in Tasmania are listed on the *Tasmanian Threatened Species Protection Act 1995*. The conservation rating for these species varies from rare to vulnerable to endangered. Hydrobiid snails live in sheltered habitats such as under rock slabs in streams, and each species has an extremely limited distribution often being found in only one stream[17]. Their distribution in Tasmania occurs in the northern and western parts of the state, including within the study area. As such there is a high possibility that one or more species of Hydrobiid snails could occur within the study area.

[16] Jean Jackson pers. comm.
[17] Forest Practices Authority (2002)

Any known habitat of Hydrobiid snails should have a buffer of 10m on Class 4 streams, and a buffer of 30m on Class 3 streams in order to protect this species[18].

Burrowing Crayfish

Evidence (burrows and excavated soil) of a species of burrowing crayfish was found at five locations in the survey area, occurring particularly in rainforest vegetation. Several different species of burrowing crayfish occur in Tasmania, including five species of the Engaeus genus which are threatened. The distribution of these five burrowing crayfish occurs along the north coast of Tasmania and on Flinders Island so they are considered very unlikely to occur in the study area. In areas where they do occur it is recommended that no disturbance to riparian areas within the catchment occur.

Based on this information and the assessment provided in Table 3, there is a high probability that at least five of the above threatened fauna species utilise habitats within the study area, with three species likely to be occasional visitors, and one highly unlikely to occur.

[18] Forest Practices Authority

Constraints Analysis

All of the information collected during the field survey has been collated with the most recent database records and information on threatened species and communities to produce a constraints analysis map.

From our analysis the main constraints based on the biodiversity values likely to be found in the study area are:

- Potential habitat of threatened fauna species listed under the *Commonwealth Environmental Protection and Biodiversity Conservation Act 1999* (*EPBCA*), in particular;
    - Wedge-tailed eagle (*Aquila audax*) (Endangered, *EPBCA*)
    - Spotted-tailed quoll (*Dasyurus maculatus* ssp. *maculatus*) (Vulnerable, *EPBCA*)
    - Tasmanian devil (*Sarcophilus harrisii*) (Vulnerable, *EPBCA*)
- Potential habitat of threatened fauna species listed under the *Tasmanian Threatened Species Protection Act 1995* (*TSPA*), in particular;
    - Azure kingfisher (*Alcedo azurea diemenensis*) (Endangered, *TSPA*)
    - Grey goshawk (*Accipiter novaehollandiae*) (Endangered, *TSPA*)
    - White-bellied Sea-eagle (*Haliaeetus leucogaster*) (Vulnerable, *TSPA*)
    - Hydrobiid snails (*Beddomeia* sp.) (Rare, Vulnerable and Endangered depending on the species, *TSPA*)
- Potential habitat for the endangered lichen *Menegazzia minuta* listed under the *Tasmanian Threatened Species Protection Act 1995*

A brief description of the constraints levels follows, with a more detailed explanation on the following page. The highest level of constraint (Level 1) is reserved for species or communities listed under the *EPBCA 1999*. A high level of constraint (Level 2) is reserved for species or communities listed under the *TSPA 1999* and the *Tasmanian Nature Conservation Act 2002* (*NCA 2002*). The main criteria for a medium level of constraint (Level 3) is the occurrence of habitat that has the potential for species not already covered or specifically listed in the highest or high categories. All other native vegetation communities within the study area were given a low level of constraint (Level 4).

The spotted-tailed quoll and Tasmanian devil are both listed on the *EPBCA 1999*. Normally habitat of these species would be attributed to the highest level of constraint. However, because they range across widespread and abundant foraging habitat the focus for this study is on potential maternal denning habitat. Therefore all quoll/devil foraging habitat has been downgraded to a medium level of constraint. Given more detailed surveys of the study area it is possible that actual den sites for these species could be found. If this occurred then a buffer zone around confirmed sites would need to be elevated to the highest level of constraint. Buffer zones around maternal den sites for these species would be 100m.

The management measures required to deal with any of the above constraints are varied and primarily depend on the species present and whether the sites are active

breeding areas. Management prescriptions are likely to involve a combination of the following methods; total avoidance of the area, avoiding disturbance during breeding seasons, application of buffer zones, relocation of infrastructure and applying for permits to disturb threatened species (both at a state and federal level). As this project progresses further into the planning and implementation phases and development areas are more accurately known, more targeted surveys would be required to accurately identify these sites. At this stage a more detailed management plan would be required in order to adequately prescribe appropriate management strategies.

The ranked range of values and associated constraint levels are:

1. Highest
   - Records of flora species listed on the *Commonwealth Environmental Protection and Biodiversity Conservation Act 1999* (*EPBCA 1999*).
   - Habitat of fauna species listed on the *EPBCA 1999*. This includes confirmed records, den sites or active nest sites.
   - Wedge-tailed Eagle Nest Site Habitat – high quality
   - Vegetation communities listed on the *EPBCA 1999*.

2. High
   - Records of flora species listed on the *Tasmanian Threatened Species Protection Act 1995* (*TSPA 1995*) as vulnerable or endangered.
   - Habitat of fauna species listed on the *TSPA 1995*. This includes confirmed records, den sites or active nest sites.
   - Wedge-tailed Eagle Potential Nest Site Habitat – marginal
   - Azure Kingfisher Habitat
   - Grey Goshawk Nest Site Habitat – mature
   - White-bellied Sea-eagle Habitat – marginal and high quality
   - Hydrobiid Snail Habitat
   - Vegetation communities listed on the *Tasmanian Nature Conservation Act 2002* (*NCA 2002*).

3. Medium
   - Records of flora species listed on the *TSPA 1995* as rare.
   - Potential habitat of fauna species listed on the *EPBCA 1999* or the *TSPA 1995*. This includes the Tasmanian Devil and Spotted-tailed Quoll foraging habitat.
   - Potential habitat for the endangered lichen *Menegazzia minuta* listed on the *TSPA 1995*.
   - Grey Goshawk Nest Site Habitat – immature

4. Low
   - Non-threatened Native vegetation communities.

Figure 3 shows the location of the different constraint levels, including the location of the ore deposits and the current track infrastructure. See Appendix 1 for a description of the criteria used for each species to determine the constraint levels for different habitat types.

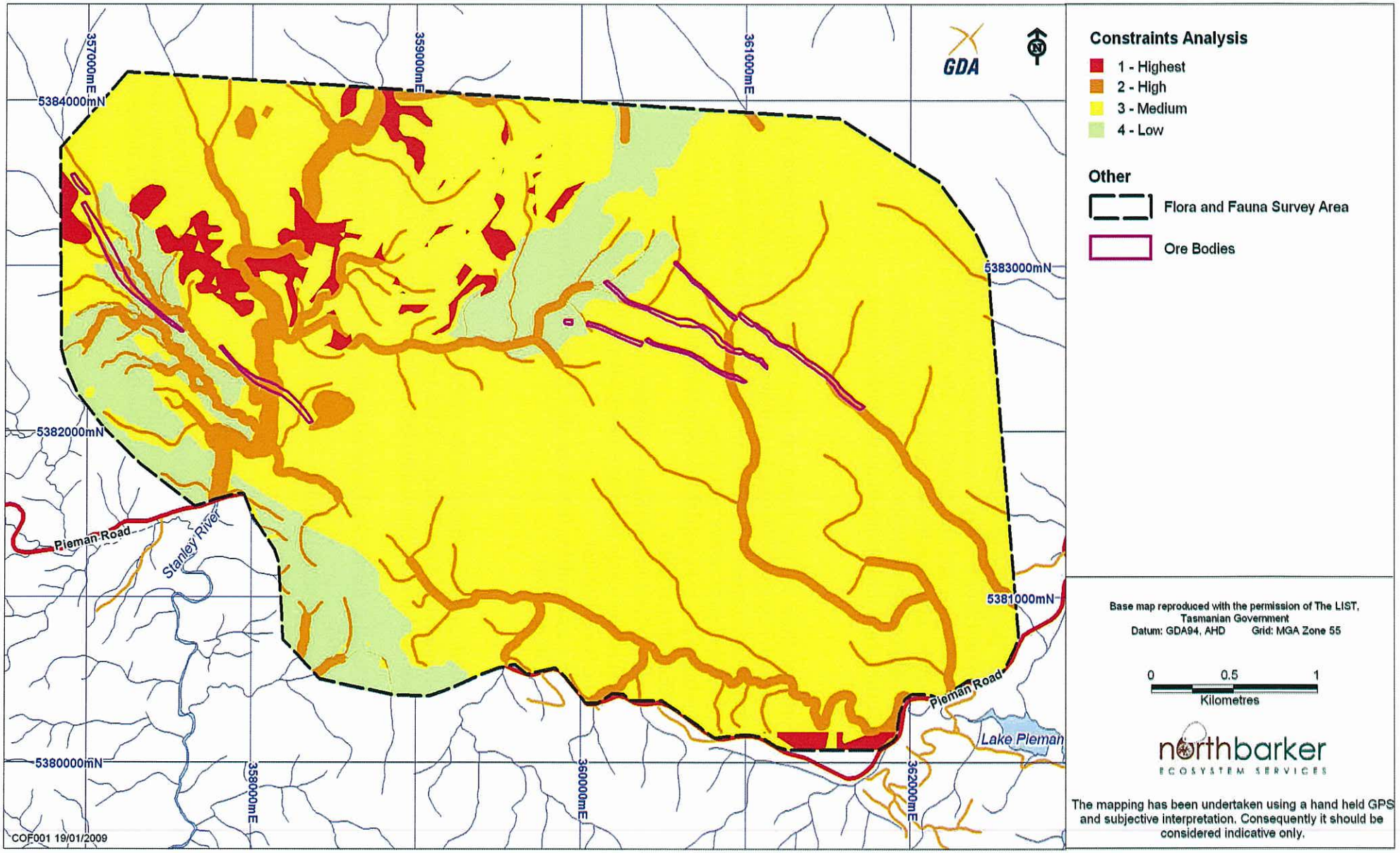


Figure 3 – Constraints Analysis

Discussion

The desktop and field reconnaissance survey returned a range of potential flora and fauna values within the lease area. The values are variously listed on the EPBC and TSPA as endangered, vulnerable or rare. No threatened vegetation types were recorded. The constraints analysis is a useful planning and risk assessment tool.

The main biodiversity constraints that have been identified as a result of the survey occur in the area of fauna habitat for state (*TSPA 2005*) and nationally (*EPBCA 1999*) listed species. No vegetation communities or threatened flora species that were recorded are listed as threatened under state or commonwealth legislation.

In order to fully understand the distribution of threatened species on site additional surveys are considered necessary to locate values in the vicinity of mining and infrastructure;

- Wedge-tailed eagle nests within 500 m or 1 km line of sight
- Spotted-tailed quoll dens within 100 m
- Tasmanian devil dens within 100 m
- Grey goshawk nests, within 100 m
- White-bellied Sea-eagle nests within 500 m.

and to confirm the presence of;

- Azure kingfishers within 500 m.
- Hydrobiid snails, within 30 m
- *Menegazzia minuta* in suitable habitat in the direct impact footprints.

If any of the above values are found to occur on site, additional constraints may be imposed upon the development of this project. These constraints are likely to involve one or more of the following methods; total avoidance of the area, avoiding disturbance during breeding seasons, application of buffer zones, relocation of infrastructure and applying for permits to disturb threatened species. As an example if any Wedge-tailed eagle nests were found, development infrastructure should not be visible within a 1km buffer of a nest. Additional measures may also be prescribed by state or federal authorities. Most of the above species have similar requirements in needing buffers around their known locations (see Table 3 for details on each species). This is more likely to result in buffers being incorporated in to the project design, rather than not permitting any development.

The issue of weeds while not considered part of the constraints analysis is considered to be a very important issue that needs addressing. A weed management plan would need to be written and implemented to address this management issue before weeds are spread throughout this otherwise largely weed free area. The two weed species recorded within the study area are canary broom (*Genista monspessulana*) and gorse (*Ulex europeaus*), both of which are listed as Declared under the Tasmanian *Weed Management Act 1999*, which means that by law they are required to be controlled. It is understood that a weed control program of sorts is now in place to control these species, however this should be formalised and resourced within the management plan for this project should it proceed.

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Appendix 1 – Constraints Analysis Criteria

The constraints analysis mapping has been based on the following information and reasoning for each of the following species. Sources of information have been supplied where an external source of information has been used.

Wedge-tailed eagle (*Aquila audax*)

- High quality habitat mapping for this species is available from DPIW, Tasmania.
- A habitat map for the study area was supplied by Bill Brown, DPIW.

Spotted-tailed quoll (*Dasyurus maculatus* ssp. *maculatus*)

- High quality habitat is likely to occur in Nothofagus - Atherosperma rainforest (RMT), Nothofagus / Phyllocladus short rainforest (RMS), Eucalyptus nitida forest over Leptospermum (WNL), Eucalyptus nitida forest over rainforest (WNR) and Acacia melanoxylon forest on rises (NAR)

Tasmanian devil (*Sarcophilus harrisii*)

- High quality habitat is likely to occur in Nothofagus - Atherosperma rainforest (RMT), Nothofagus / Phyllocladus short rainforest (RMS), Eucalyptus nitida forest over Leptospermum (WNL), Eucalyptus nitida forest over rainforest (WNR) and Acacia melanoxylon forest on rises (NAR)

Azure kingfisher (*Alcedo azurea diemenensis*)

- Large streams within the study area are considered likely habitat, i.e. the Stanley River.
- A streamside reserve width of 50m has been allocated for the habitat of this species.

Grey goshawk (*Accipiter novaehollandiae*)

- High quality habitat occurs in mature *Acacia melanoxylon* forest on rises (NAR).
- This habitat type occurred in one patch in the study area.

White-bellied Sea-eagle (*Haliaeetus leucogaster*)

- High quality habitat mapping for this species is available from DPIW, Tasmania.
- A habitat map for the study area was supplied by Bill Brown, DPIW.

Hydrobiid snails (*Beddomeia* sp.)

- All streams within the study area are considered likely habitat.
- The Threatened Fauna Advisor software (Forest Practices Authority) advises that Class 4 streams should have a buffer of 10m, and Class 3 streams should have a buffer of 30m to protect this species.

Lichen (*Menegazzia minuta*)

- High quality habitat is likely to occur in Nothofagus - Atherosperma rainforest (RMT) and Nothofagus / Phyllocladus short rainforest (RMS).

6	*Acaena sp.*	sheep's burr	
	RUBIACEAE		
2 12 13	*Coprosma quadrifida*	native currant	
11	*Opercularia varia*	variable stinkweed	
	RUTACEAE		
1 8 11	*Boronia citriodora*	lemon boronia	
11	*Boronia parviflora*	swamp boronia	
7	*Nematolepis squamea*	satinwood	
12	*Nematolepis squamea subsp. squamea*	satinwood	
1 11	*Philotheca virgata*	twiggy waxflower	
	STYLIDIACEAE		
8 11	*Stylidium graminifolium*	narrowleaf triggerplant	
	THYMELAEACEAE		
1 2	*Pimelea linifolia subsp. linifolia*	slender riceflower	
	VIOLACEAE		
2	*Viola hederacea*	ivyleaf violet	
	WINTERACEAE		
4 5	*Tasmannia lanceolata*	mountain pepper	
	GYMNOSPERMAE		
	PHYLLOCLADACEAE		
2 5 9 10	*Phyllocladus aspleniifolius*	celerytop pine	en
	MONOCOTYLEDONAE		
	CYPERACEAE		
1 2 3 4 5 6 7 9 10 12	*Gahnia grandis*	cutting grass	
1 8 11	*Gymnoschoenus sphaerocephalus*	buttongrass	
7	*Isolepis sp.*	club rush	
1 8 11	*Lepidosperma filiforme*	common rapiersedge	
11	*Lepidosperma sp.*	sword sedge	
1 8	*Schoenus lepidosperma subsp. lepidosperma*	slender bogsedge	
13	*Uncinia tenella*	delicate hooksedge	
	IRIDACEAE		
1 8 11	*Patersonia fragilis*	short purpleflag	
	JUNCACEAE		
2	*Juncus procerus*	tall rush	
7	*Luzula flaccida*	pale woodrush	
	ORCHIDACEAE		
12	*Chiloglottis gunnii*	tall bird-orchid	en
6 10 13	*Pterostylis sp.*	greenhood	
11	*Thelymitra pauciflora*	slender sun-orchid	
	POACEAE		
1 11	*Ehrharta tasmanica var. subalpina*	blue-green ricegrass	en
	RESTIONACEAE		
8 11	*Baloskion australe*	southern cordrush	
2 9	*Baloskion tetraphyllum subsp.*	tassel cordrush	
1 8 11	*Chordifex hookeri*	woolly buttonrush	en
11	*Empodisma minus*	spreading roperush	
1	*Eurychorda complanata*	flat cordrush	
8	*Hypolaena fastigiata*	tassel roperush	
1 8 11	*Leptocarpus tenax*	slender twinerush	
11	*Sporadanthus tasmanicus*	branching scalerush	

	XYRIDACEAE		
1 8 11	*Xyris marginata*	alpine yelloweye	en
11	*Xyris sp.*	yelloweye	

PTERIDOPHYTA

	ASPIDIACEAE		
3 6 12	*Polystichum proliferum*	mother shieldfern	
2 3 6 7 12 13	*Rumohra adiantiformis*	leathery shieldfern	
	ASPLENIACEAE		
13	*Asplenium appendiculatum subsp. appendiculatum*	narrow spleenwort	
	BLECHNACEAE		
2	*Blechnum nudum*	fishbone waterfern	
2 4 5 10	*Blechnum wattsii*	hard waterfern	
	DENNSTAEDTIACEAE		
2 3 6 13	*Histiopteris incisa*	batswing fern	
12	*Hypolepis rugosula*	ruddy groundfern	
2 7 12	*Pteridium esculentum*	bracken	
	DICKSONIACEAE		
2 3 12 13	*Dicksonia antarctica*	soft treefern	
	GLEICHENIACEAE		
8 9 11	*Gleichenia dicarpa*	pouched coralfern	
1	*Gleichenia microphylla*	scrambling coralfern	
2 4	*Sticherus tener*	silky fanfern	
	GRAMMITIDACEAE		
4	*Grammitis billardierei*	common fingerfern	
3 4 6 12	*Grammitis magellanica subsp. nothofageti*	beech fingerfern	
	HYMENOPHYLLACEAE		
4	*Hymenophyllum australe*	southern filmyfern	
2 3 12 13	*Hymenophyllum cupressiforme*	common filmyfern	
3	*Hymenophyllum flabellatum*	shiny filmyfern	
13	*Hymenophyllum peltatum*	alpine filmyfern	
2 3 4 6 10 13	*Hymenophyllum rarum*	narrow filmyfern	
	LINDSAEACEAE		
11	*Lindsaea linearis*	screw fern	
	LYCOPODIACEAE		
8 11	*Lycopodiella sp.*	clubmoss	
	POLYPODIACEAE		
2 3 6 13	*Microsorum pustulatum subsp. pustulatum*	kangaroo fern	
	SELAGINELLACEAE		
1 8 11	*Selaginella uliginosa*	swamp spikemoss	
	TMESIPTERIDACEAE		
3 13	*Tmesipteris obliqua*	common forkfern	

Appendix 3 – Vegetation Communities

Site: 1 Leptospermum Scrub

Grid Reference:	358118E, 5381589N
Accuracy:	GPS (within 10 metres)
Recorder:	Karen Ziegler
Date of Survey:	1 Dec 2008
Trees:	*Eucalyptus nitida*
Tall Shrubs:	*Acacia mucronata subsp. Mucronata, Banksia marginata, Leptospermum nitidum, Melaleuca squarrosa*
Shrubs:	*Bauera rubioides, Boronia citriodora, Dillwynia glaberrima, Epacris impressa, Epacris lanuginosa, Melaleuca squamea, Persoonia juniperina, Philotheca virgata, Pimelea linifolia subsp. linifolia, Sprengelia incarnata*
Low Shrubs:	*Hibbertia procumbens*
Herbs:	*Drosera binata, Drosera pygmaea, Wahlenbergia sp.*
Graminoids:	*Chordifex hookeri, Eurychorda complanata, Gahnia grandis, Gymnoschoenus sphaerocephalus, Lepidosperma filiforme, Leptocarpus tenax, Patersonia fragilis,Schoenus lepidosperma subsp. lepidosperma, Xyris marginata*
Grasses:	*Ehrharta tasmanica var. subalpina*
Ferns:	*Gleichenia microphylla, Selaginella uliginosa*

Site: 2 Eucalyptus nitida forest over Leptospermum

Grid Reference:	358109E, 5381695N
Accuracy:	GPS (within 10 metres)
Recorder:	Karen Ziegler
Date of Survey:	1 Dec 2008
Trees:	*Acacia melanoxylon, Eucalyptus nitida, Eucryphia lucida, Nothofagus cunninghamii, Phyllocladus aspleniifolius*
Tall Shrubs:	*Acacia mucronata subsp. Mucronata, Anopterus glandulosus, Leptospermum lanigerum, Monotoca glauca, Prostanthera lasianthos*
Shrubs:	*Bauera rubioides, Cenarrhenes nitida, Coprosma quadrifida, Epacris impressa, Leptecophylla juniperina, Pimelea linifolia subsp. linifolia, Trochocarpa*
Herbs:	*Drosera peltata subsp. auriculata, Gonocarpus tetragynus, Hydrocotyle hirta, Viola hederacea*
Graminoids:	*Baloskion tetraphyllum subsp. tetraphyllum, Gahnia grandis, Juncus procerus*
Ferns:	*Blechnum nudum, Blechnum wattsii, Dicksonia antarctica, Histiopteris incisa, Hymenophyllum cupressiforme, Hymenophyllum rarum, Microsorum pustulatum subsp. pustulatum, Pteridium esculentum, Rumohra adiantiformis, Sticherus tener*
Climbers:	*Billardiera longiflora*

Site: 3 Nothofagus - Atherosperma rainforest

Grid Reference:	360643E, 5382542N
Accuracy:	GPS (within 10 metres)
Recorder:	Karen Ziegler
Date of Survey:	2 Dec 2008
Trees:	*Atherosperma moschatum, Eucryphia lucida, Nothofagus cunninghamii*
Tall Shrubs:	*Anodopetalum biglandulosum, Anopterus glandulosus, Prostanthera lasianthos*
Shrubs:	*Aristotelia peduncularis, Cenarrhenes nitida*
Graminoids:	*Gahnia grandis*
Ferns:	*Dicksonia antarctica, Grammitis magellanica subsp. nothofageti, Histiopteris incisa, Hymenophyllum cupressiforme, Hymenophyllum flabellatum, Hymenophyllum rarum, Microsorum pustulatum subsp. pustulatum, Polystichum proliferum, Rumohra adiantiformis, Tmesipteris obliqua*
Climbers:	*Clematis aristata*

Site: 4 Nothofagus - Atherosperma rainforest

Grid Reference:	360567E, 5382989N
Accuracy:	GPS (within 10 metres)
Recorder:	Karen Ziegler
Date of Survey:	2 Dec 2008
Trees:	*Atherosperma moschatum, Eucryphia lucida, Nothofagus cunninghamii*
Tall Shrubs:	*Anodopetalum biglandulosum, Anopterus glandulosus, Richea pandanifolia subsp. pandanifolia, Telopea truncata*
Shrubs:	*Agastachys odorata, Cenarrhenes nitida, Tasmannia lanceolata, Trochocarpa cunninghamii, Trochocarpa gunnii*
Graminoids:	*Gahnia grandis*
Ferns:	*Blechnum wattsii, Grammitis billardierei, Grammitis magellanica subsp. nothofageti, Hymenophyllum australe, Hymenophyllum rarum, Sticherus tener*

Site: 5 Leptospermum Scrub

Grid Reference:	360514E, 5383117N
Accuracy:	GPS (within 10 metres)
Recorder:	Karen Ziegler
Date of Survey:	2 Dec 2008
Trees:	*Eucalyptus nitida, Eucryphia lucida, Nothofagus cunninghamii, Phyllocladus aspleniifolius*
Tall Shrubs:	*Anodopetalum biglandulosum, Anopterus glandulosus, Leptospermum lanigerum, Richea pandanifolia subsp. pandanifolia*
Shrubs:	*Agastachys odorata, Eucryphia milliganii subsp. milliganii, Leptecophylla juniperina, Tasmannia lanceolata, Trochocarpa cunninghamii, Trochocarpa gunnii*
Graminoids:	*Gahnia grandis*
Ferns:	*Blechnum wattsii*
Climbers:	*Billardiera longiflora*

Site: 6 Nothofagus - Atherosperma rainforest

Grid Reference:	360458E, 5382307N
Accuracy:	GPS (within 10 metres)
Recorder:	Karen Ziegler
Date of Survey:	2 Dec 2008
Trees:	*Atherosperma moschatum, Nothofagus cunninghamii*
Shrubs:	*Aristotelia peduncularis, Cenarrhenes nitida, Trochocarpa cunninghamii*
Herbs:	*Acaena sp., Hydrocotyle hirta, Pterostylis sp.*
Graminoids:	*Gahnia grandis*
Ferns:	*Grammitis magellanica subsp. nothofageti, Histiopteris incisa, Hymenophyllum rarum, Microsorum pustulatum subsp. pustulatum, Polystichum proliferum, Rumohra adiantiformis*

Site: 7 Acacia melanoxylon forest on rises

Grid Reference:	360179E, 5380624N
Accuracy:	GPS (within 10 metres)
Recorder:	Karen Ziegler
Date of Survey:	2 Dec 2008
Trees:	*Acacia melanoxylon, Eucryphia lucida, Nothofagus cunninghamii*
Tall Shrubs:	*Anopterus glandulosus, Nematolepis squamea*
Herbs:	*Hydrocotyle hirta, Isolepis sp.*
Graminoids:	*Gahnia grandis, Luzula flaccida*
Ferns:	*Pteridium esculentum, Rumohra adiantiformis*

Site: 8 Buttongrass moorland with emergent shrubs

Grid Reference:	357572E, 5381873N
Accuracy:	GPS (within 10 metres)
Recorder:	Karen Ziegler
Date of Survey:	3 Dec 2008

Trees:	*Allocasuarina monilifera, Eucalyptus nitida*
Tall Shrubs:	*Banksia marginata, Leptospermum nitidum*
Shrubs:	*Baeckea leptocaulis, Bauera rubioides, Boronia citriodora, Dillwynia glaberrima, Epacris lanuginosa, Hakea epiglottis, Melaleuca squamea, Sprengelia incarnata*
Herbs:	*Actinotus bellidioides, Drosera binata, Drosera peltata subsp. auriculata, Drosera pygmaea, Drosera sp., Stylidium graminifolium*
Graminoids:	*Baloskion australe, Chordifex hookeri, Gymnoschoenus sphaerocephalus, Hypolaena fastigiata, Lepidosperma filiforme, Leptocarpus tenax, Patersonia fragilis, Schoenus lepidosperma subsp. lepidosperma, Xyris marginata*
Ferns:	*Gleichenia dicarpa, Lycopodiella sp., Selaginella uliginosa*

Site: 9 Eucalyptus nitida forest over Leptospermum

Grid Reference:	356855E, 5383489N
Accuracy:	GPS (within 10 metres)
Recorder:	Karen Ziegler
Date of Survey:	3 Dec 2008
Trees:	*Eucalyptus nitida, Phyllocladus aspleniifolius*
Tall Shrubs:	*Anodopetalum biglandulosum, Leptospermum glaucescens, Leptospermum*
Shrubs:	*Agastachys odorata, Bauera rubioides, Cenarrhenes nitida, Eucryphia milliganii subsp. milliganii, Melaleuca squamea*
Graminoids:	*Baloskion tetraphyllum subsp. tetraphyllum, Gahnia grandis*
Ferns:	*Gleichenia dicarpa*

Site: 10 Nothofagus / Phyllocladus short rainforest

Grid Reference:	356958E, 5383348N
Accuracy:	GPS (within 10 metres)
Recorder:	Karen Ziegler
Date of Survey:	3 Dec 2008
Trees:	*Atherosperma moschatum, Eucryphia lucida, Nothofagus cunninghamii, Phyllocladus aspleniifolius*
Tall Shrubs:	*Anodopetalum biglandulosum, Anopterus glandulosus, Leptospermum lanigerum, Richea pandanifolia subsp. pandanifolia*
Shrubs:	*Agastachys odorata, Cenarrhenes nitida, Eucryphia milliganii subsp. milliganii, Trochocarpa cunninghamii*
Herbs:	*Pterostylis sp.*
Graminoids:	*Gahnia grandis*
Ferns:	*Blechnum wattsii, Hymenophyllum rarum*

Site: 11 Buttongrass moorland with emergent shrubs

Grid Reference:	358346E, 5381367N
Accuracy:	GPS (within 10 metres)
Recorder:	Karen Ziegler
Date of Survey:	3 Dec 2008
Tall Shrubs:	*Banksia marginata, Leptospermum nitidum*
Shrubs:	*Bauera rubioides, Boronia citriodora, Boronia parviflora, Bossiaea riparia, Dillwynia glaberrima, Epacris lanuginosa, Persoonia juniperina, Philotheca virgata, Sprengelia incarnata*
Low Shrubs:	*Hibbertia procumbens*
Herbs:	*Comesperma retusum, Drosera peltata subsp. auriculata, Drosera pygmaea, Gompholobium huegelii, Opercularia varia, Stylidium graminifolium, Thelymitra pauciflora*
Graminoids:	*Baloskion australe, Chordifex hookeri, Empodisma minus, Gymnoschoenus sphaerocephalus, Lepidosperma filiforme, Lepidosperma sp., Leptocarpus tenax, Patersonia fragilis, Sporadanthus tasmanicus, Xyris marginata, Xyris sp.*
Grasses:	*Ehrharta tasmanica var. subalpina*
Ferns:	*Gleichenia dicarpa, Lindsaea linearis, Lycopodiella sp., Selaginella uliginosa*
Climbers:	*Cassytha glabella*

Site: 12 Acacia melanoxylon forest on rises

Grid Reference:	360692E, 5380379N
Accuracy:	GPS (within 10 metres)
Recorder:	Karen Ziegler
Date of Survey:	3 Dec 2008
Trees:	*Acacia melanoxylon, Atherosperma moschatum, Eucryphia lucida, Nothofagus cunninghamii*
Tall Shrubs:	*Anopterus glandulosus, Leptospermum scoparium, Nematolepis squamea subsp. squamea, Olearia argophylla*
Shrubs:	*Cassinia aculeata, Coprosma quadrifida, Leptecophylla juniperina*
Herbs:	*Chiloglottis gunnii, Hydrocotyle hirta*
Graminoids:	*Gahnia grandis*
Ferns:	*Dicksonia antarctica, Grammitis magellanica subsp. nothofageti, Hymenophyllum cupressiforme, Hypolepis rugosula, Polystichum proliferum, Pteridium esculentum, Rumohra adiantiformis*
Climbers:	*Clematis aristata*

Site: 13 Nothofagus - Atherosperma rainforest

Grid Reference:	362376E, 5381172N
Accuracy:	GPS (within 10 metres)
Recorder:	Karen Ziegler
Date of Survey:	3 Dec 2008
Trees:	*Acacia melanoxylon, Atherosperma moschatum, Eucryphia lucida, Nothofagus cunninghamii*
Tall Shrubs:	*Anodopetalum biglandulosum, Anopterus glandulosus*
Shrubs:	*Aristotelia peduncularis, Coprosma quadrifida*
Herbs:	*Pterostylis sp.*
Graminoids:	*Uncinia tenella*
Ferns:	*Asplenium appendiculatum subsp. appendiculatum, Dicksonia antarctica, Histiopteris incisa, Hymenophyllum cupressiforme, Hymenophyllum peltatum, Hymenophyllum rarum, Microsorum pustulatum subsp. pustulatum, Rumohra adiantiformis, Tmesipteris obliqua*

Eucalyptus nitida forest over rainforest

Grid Reference:	359267E, 5380800N
Accuracy:	GPS (within 10 metres)
Recorder:	Karen Ziegler
Date of Survey:	3 Dec 2008
Trees:	*Acacia melanoxylon, Eucalyptus nitida, Eucryphia lucida, Nothofagus cunninghamii, Phyllocladus aspleniifolius*
Tall Shrubs:	*Acacia mucronata subsp. Mucronata, Anopterus glandulosus, Leptospermum lanigerum, Monotoca glauca, Prostanthera lasianthos*
Shrubs:	*Bauera rubioides, Cenarrhenes nitida, Coprosma quadrifida, Epacris impressa, Leptecophylla juniperina, Pimelea linifolia subsp. linifolia, Trochocarpa*
Herbs:	*Drosera peltata subsp. auriculata, Gonocarpus tetragynus, Hydrocotyle hirta, Viola hederacea*
Graminoids:	*Baloskion tetraphyllum subsp. tetraphyllum, Gahnia grandis, Juncus procerus*
Ferns:	*Blechnum nudum, Blechnum wattsii, Dicksonia antarctica, Histiopteris incisa, Hymenophyllum cupressiforme, Hymenophyllum rarum, Microsorum pustulatum subsp. pustulatum, Pteridium esculentum, Rumohra adiantiformis, Sticherus tener*
Climbers:	*Billardiera longiflora*