



**Final Report for Cruncher Creek drill hole CR001
Exploration Drilling Grant Initiative
3M/2012 & EL21/2005**

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May 2023
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1 Summary

Cruncher is a coincident geochemical and geophysical (magnetic) target straddling the western boundary of 3M/2012 with EL21/2005. Venture Minerals was awarded MRT EDGI co-funding to drill test the target and one 695.5m diamond drill core hole CR001 was drilled by Delta Drilling during the November 2022 – February 2023 period. Although the targeted tin and/or REE mineralization was not encountered a previously unknown (concealed) +300m thick variably textured and altered granite dyke was intersected beneath the geochemical target and coincident with the magnetic anomaly. The minor amount of pyrrhotite observed is unlikely to explain the magnetic anomaly, and the only modest REE assays unlikely to explain the surface geochemistry. Several significant fault zones were also encountered and because of drill rig capacity limitations CR001 was terminated without penetrating the full thickness of the granite dyke. CR001 has substantially increased geological understanding of the Cruncher geochemical and geophysical anomalism and highlights the exploration potential south of the CR001 target zone. Coincident magnetic highs and VTEM conductors c. 2 km south southeast of the CR001 in the Stanley Bridge transmission line area formerly dismissed because of lack of clear non-transported geochemical anomalism should be re-evaluated as a matter of priority for drill testing.

The anticipated drilling time and budget was significantly increased due to difficult ground conditions. CR001 encountered several cavities and fault zones to c. 20 m thickness which slowed progress and caused failed core orientations & down hole surveys. Abrasive quartz sand flushing down the hole caused accelerated wear of drill bits and rods. Several days were also lost when protestors from the Bob Brown Foundation chained themselves to the drill rig and drilling could not resume until police were able to remove them. The drilling contractor charged standby during such no-drilling periods.

The CR001 drill pad and associated access track have been rehabilitated.

2 Introduction

Cruncher is a tin and REE target within the Oonah Formation ~700 m west of the Livingstone Sn-B-magnetite skarn, ~1.3 km north of the Pieman Rd. Soil sampling in the Cruncher Creek area shows a large (~1200 x 600m) boron anomaly which is considered prospective for concealed Sn skarn(s) in the stratigraphic footwall of the Livingstone skarn. Mapping shows the presence of tourmaline altered sandstones and local breccias within the B anomaly. A discrete ~1000 m long Pr-Nd-La-Ce, P and Mg geochemical anomaly has been identified in the core of the B and Rb soil anomaly where combined Ce+La+Nd+Pr in soil anomalism reaches 546 ppm and is coincident with coherent P anomalism to 1180 ppm.

A metasomatic source is the most likely, but it is also possible the coincident REE, P and Mg anomalism may be related to sedimentary phosphorite and REE enrichment. A 600 m long diamond drill core hole was initially proposed but the site was moved c. 100 m east for environmental reasons and consequently a shallower dipper hole was drilled to rig capacity to compensate for the adjustment. The drill hole was terminated at 695.9m.

3 Location and Physical Environment

The Cruncher exploration target is located within exploration lease EL21/2005, approximately 130 km by road southwest of the port of Burnie, and c. 35 km by road from the nearest town, Tullah (Figure 1). Vehicle access to the lease is via the sealed (bitumen) Pieman Road which branches off the Murchison Highway c. 5 km north of Tullah, then through a locked gate and along c. two km of gravel road to CR001 drill pad.

The central and southern parts of 3M/2012 within EL21/2005 comprise alluvial terraces Stanley River and Livingstone Creek (informal), while the western, northern and eastern sides of the lease include the thickly vegetated lower flanks of Mt Livingstone and Mt Lindsay. Livingstone Creek runs through the central section of 3M/2012. The Stanley River and the historic Stanley River Tin field (Waterhouse, 1914) is included in the central-eastern part of the lease. The main part of 3M/2012 extends north westwards from Stanley River towards the base of Mt Livingstone and includes all of the currently defined mineral resources.

Drill pad Cruncher1 is sited at the base of a hillside at approximately 285m above sea level. The ridge to the west rises to c. 600m ASL. Mean annual rainfall is approximately 1950 mm per annum, maximum mean monthly temperature 16°C and minimum mean monthly temperature 7°C. Vegetation in the area surrounding Cruncher is primarily Smithton peppermint over tea tree with myrtle and celery top rainforest upslope to the west approaching the original planned site.

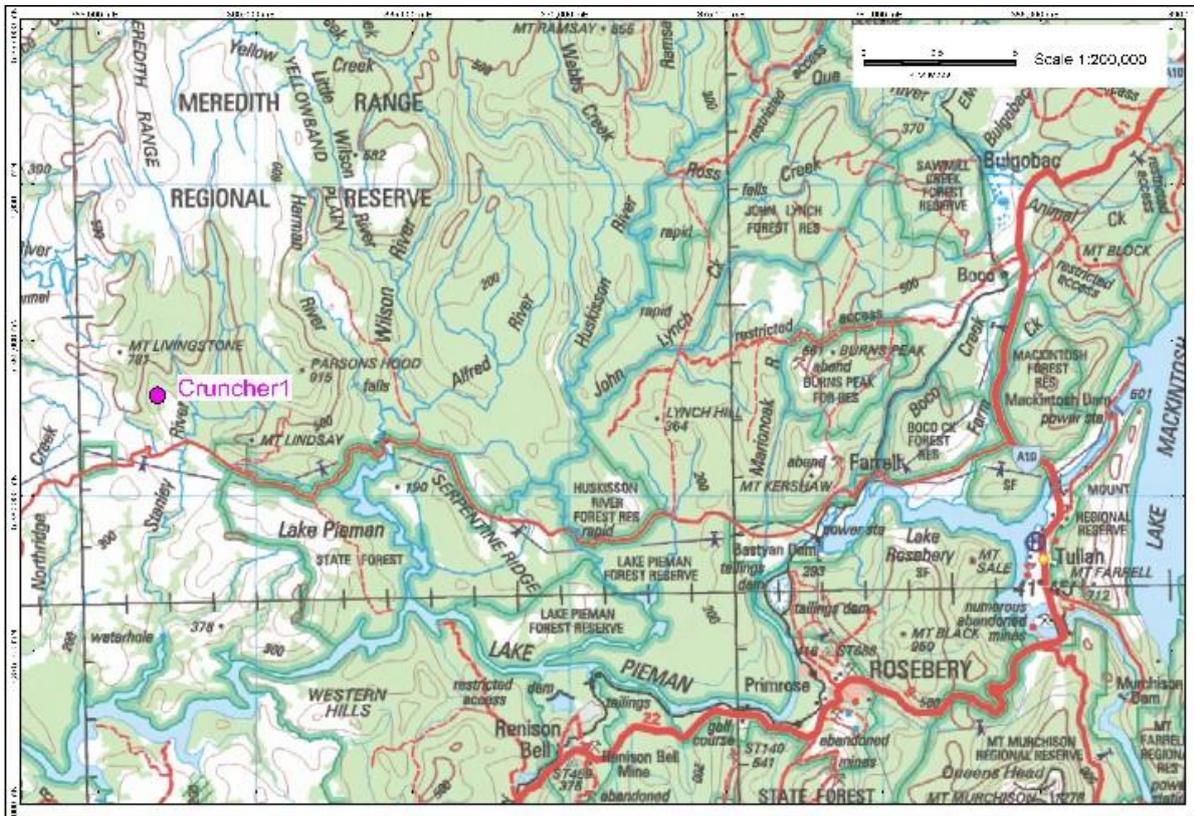


Figure 1: Location Plan



Figure 2: Delta Drilling LM75 drilling at Cruncher1

4 Geological Setting

The adjacent Livingstone DSO Deposit and Reward Tin Deposit are hosted by the Neoproterozoic Success Creek Group within the southern contact metamorphic aureole of the Meredith Granite. The Meredith Granite is part of a suite of Devonian granites which is associated with the formation of a range of significant mineral deposits in Tasmania, including the Renison Bell (26 Mt at 1.46% Sn), Mount Bischoff (10.54 Mt at 1.1% Sn), Cleveland (12.4 Mt at 0.62% Sn, 0.25% Cu) and King Island (17 Mt at 0.85% WO_3) mines.

The Success Creek Group generally includes four formations for a combined thickness of 950 m, and both the Livingstone and Reward deposits are hosted by the c. 100 m thick Stanley dolomite (informal) within the Renison Bell Formation, upper Success Creek Group. The northeastern side of 3M/2012 is underlain by the Meredith Granite and the margin dips steeply away to the southwest beneath the Success Creek Group. Metasomatism associated with the granitic intrusions has converted parts of the Stanley dolomite and the Meredith Granite in the contact zone to skarn and greisen.

Drilling by Venture shows the margin of the Meredith Granite is highly irregular in detail with numerous dykes and apophyses which stope the meta-sedimentary units. Large rafts of skarn and hornfels also occur within the margins of the main granite body. Several phases of granite intrusion are evident, apparently culminating in late-stage quartz- tourmaline veining and the localised development of quartz-tourmaline greisen in which feldspars are partially to completely replaced by tourmaline and the groundmass a mixture of saccharoidal quartz and minor topaz and fine muscovite. The Livingstone and Reward deposits are partly exposed at surface but mostly covered with a thin (few metres) veneer of alluvial gravel.

The Livingstone and Reward deposits are zoned skarns, the bulk of both deposits comprising magnetite+borate+sulphide skarn which has been oxidised to hematitic gossan within c. 150 m of surface. Potentially economically exploitable cassiterite zones are also widespread within the Reward skarn and at the southern end of the Livingstone skarn. Both deposits plunge and remain open to the southeast where significant potential remains to increase the Sn and WO_3 resources.

5 Drill hole CR001

Drill hole CR001 was collared on a moderate slope c. 100m west of the Livingstone drill pad zone and access tracks. Approximately 100m of new track was constructed to reach the CR001 pad from the existing Livingstone drilling access tracks. The drilled site was c. 100m further east of the break of slope originally proposed following recommendations from Matt Rose, Natural State Environmental natural values assessment that the site be moved to avoid stands of *Richea pandanifolia* and freshwater crayfish burrows around a small tributary to Livingstone Creek.

All drill core was orientated, lithologically and structurally logged, tested for magnetic susceptibility, and photographed at Venture's core shed. Samples were selected on a lithological basis and submitted to ALS for multi-element assay via multi-acid digest and fusion methods. Selected lithologies have been sampled and submitted to Adelaide Petrographics for thin sections which will be petrographically examined to determine their mineralogy, protolith and alteration paragenesis. The core is available for scanning with the HyLogger at MRTs Mornington Core Library.

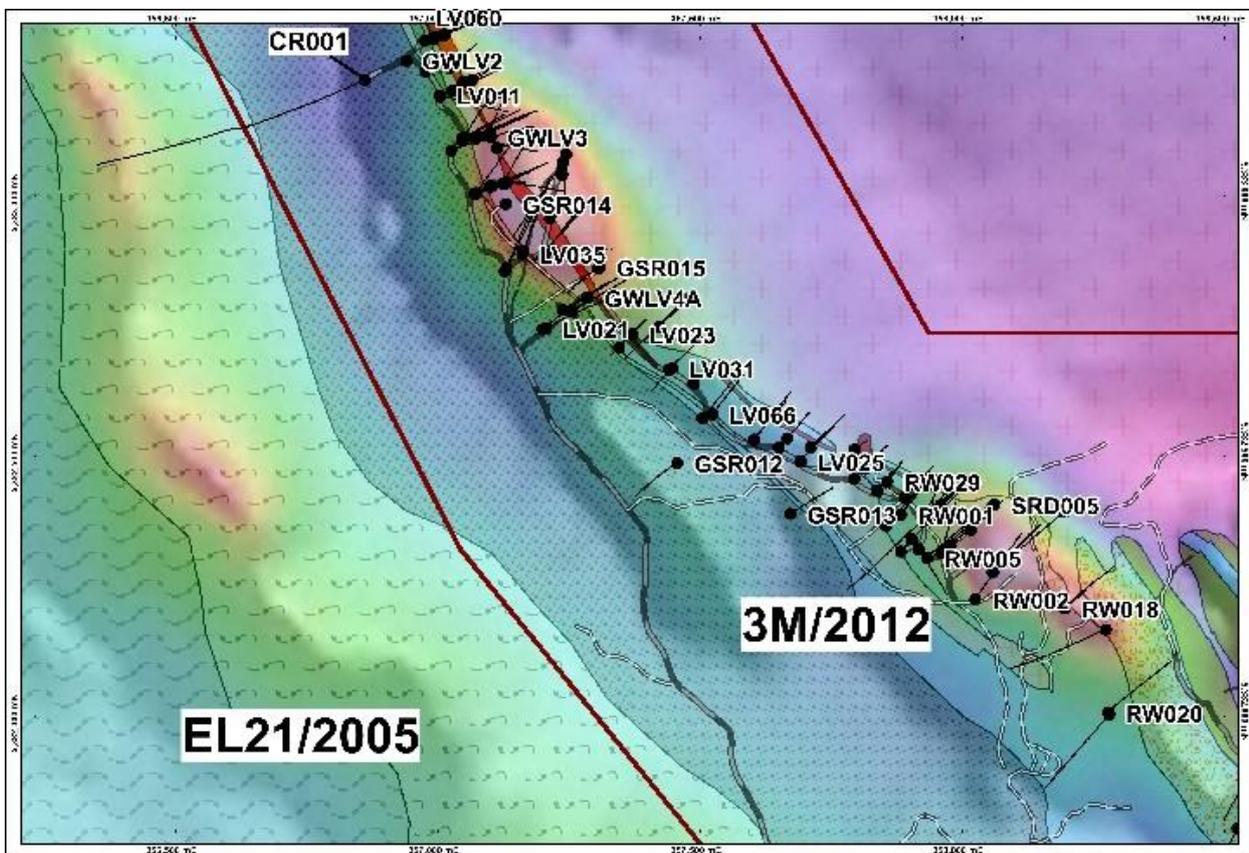


Figure 3: CR001 location on magnetic intensity reduced to pole image. The outcome of CR001 suggests the NNW trending magnetic ridge in the western part of the image within typically non-magnetic quartz wackes and argillites of the Oonah Fm is related to a major concealed (subsurface) granite dyke.

CR001 was collared by Delta drilling on 11 November 2022 and completed on 16 February 2023 after considerable slow drilling associated with several major broken and fault zones. The drillers worked day shift only because of personnel shortages and took a break over the Christmas – New Year period. The hole was collared at -40 degrees to compensate for the c. 100m step back from the originally proposed position (for environmental reasons as mentioned above) and

lifted strongly throughout to terminate at c. -20 degrees plunge. Stratigraphy and the encountered granite dykes both dipped moderately to steeply ENE such that the 20 degree lift fortunately improved the stratigraphic coverage. Azimuth was reasonably consistent, starting at 245° MGA and finishing at c. 255° MGA. CR001 was still producing water after completion and rod removal such that van Ruth plugs did not stop the flow. Delta drilling consequently cemented wooden plugs in to seal the hole. AJ Wilson Excavations completed the rehabilitation of the pad and new track on 19th March 2023 (see Rehabilitation section below).

CR001 was drilled through a thick package of laminated to thick bedded micaceous quartz wacke and siltstone to intersect a major variably textured and altered biotite granite intrusion from 366m down hole to the end of hole at 695.9m. The quartz wacke sequence is mainly consistently east-northeast dipping with minor small (metre) scale fold zones, scattered biotite granite dykes at various levels before the main granite dyke at 366m, minor quartz ± biotite ± pyrite vein and stockwork zones typically associated with modest biotite alteration, disseminated pyrite throughout. Tourmaline and/or biotite alteration is commonly associated with the granitic dykes. Biotite and pyrrhotite alteration, with an associated elevated magnetic susceptibility, increases from c. 320m to the main granite dyke contact at 366m. Thin pyrrhotite veins occur in the hornfels adjacent to the contact.

The main granite dyke is characterised by variably porphyritic to equigranular, with the medium to coarse grained mesostasis grain size increasing away from the 366m contact, and ubiquitous medium to coarse grained biotite content to c. 30%. Trace accessory phases observed include titanite, fluorite, pyrite and pyrrhotite. There are scattered aplitic zones and one pegmatitic zone <<1m thick. The dominant phenocrysts are potassium and plagioclase feldspars, within only minor quartz phenocrysts. The plagioclase phenocrysts are commonly weakly to strongly sericitized. Strong sericite alteration of plagioclase typically corresponds with strong chloritic alteration of biotite. Potassium feldspar phenocrysts typically appear fresh but in some they zones have a bleached appearance which may reflect a secondary potassium feldspar replacement of the magmatic phase. Sericite alteration is more conspicuous than the tourmaline and is strongest in the up-hole c. 120m of the main granite dyke. Tourmaline+quartz alteration zones are common but generally modest (few % at most) and less evident than sericite and sericite+chlorite alteration. Quartz and quartz+chlorite veinlets are common, and a calcite veined zone is present in a poorly recovered fault zone 590-594m with a basalt-andesite dyke. Two narrow plagioclase-amphibole-biotite phyric basalt or andesite dykes were encountered, the 0.8m thick dyke at 661.1m has conspicuous chilled margins against the host granite. Venture would have liked to have continued the hole to drill out of the dyke but the rig was reaching capacity by the 695.5m EOH.

Major fault and core loss zones (up to 20m downhole thickness) were encountered in the first 60m, then around 325m, 550m, 620m, 630m, 660m and 670m.

Table 1: CR001 collar details

Hole	East MGA Zone55 GDA94	North MGA Zone55 GDA94	RLm AHD	Azimuth MGA	Dip	EOH m	Rig	Date started	Date finished
CR001	356860	5383225	305	245	-40	695.9	LM75	21/11/2022	16/02/2023

Table 2: CR001 summary log

From m	To m	Interval m	Lith1	Structures	Description
0	4.3	4.3	NREC		quartz sand washed in by drilling at start of hole
4.3	62	57.7	qzSSW	numerous broken weathered zones with core loss, ?faults	moderately weathered to fresh laminated to thin bedded micaceous quartz wacke with minor disseminated pyrite, minor weak biotite alteration zones, bedding at high angle to perpendicular to core axis
62	138.5	76.5	btqzSSW & btFRGA		fresh greywacke with trace disseminated pyrite and mottled biotite alteration with common fine quartz+biotite veinlets and scattered thin (10-60cm) equigranular fine to medium grained biotite granite dykes commonly weakly tourmaline altered (locally nodular) and veined, some weak sericite alteration of plagioclase in dykes, disseminated pyrite throughout quartz wacke, especially around dykes.
138.5	189.5	51	qzSSW		fresh laminated to thin bedded quartz wacke, minor thin (<5mm) quartz biotite veins with narrow (<10mm) biotite alteration haloes, rare thin quartz+pyrrhotite veins
189.5	202.4	12.9	qzbtZHF		thin bedded quartz wacke with mottled biotite altered chaotic breccia zone, thin tourmaline veins with mottled tourmaline haloes
202.4	229	26.6	qzSSW		laminated to thin bedded quartz wacke with minor disseminated pyrite, pyritic joints, quartz pyrite veinlets, tourmaline veinlets, rare quartz & pyrrhotite veinlets
229	320.1	91.1	qzSSW & ZHF		thick bedded micaceous quartz wacke and hornfels, massive to distinctly laminated and bedded, pyritic joints, rare pyrrhotite veins <15mm thick, trace disseminated pyrrhotite
320.1	324.5	4.4	FGRA		pale grey-white granite dyke
324.5	358.4	33.9	ZHF	includes 18.4m fault zone with 95% core loss from from 340m	thick bedded micaceous quartz wacke and hornfels, massive to distinctly laminated and bedded, pyritic joints, rare pyrrhotite veins <15mm thick and minor disseminated pyrrhotite (elevated magsus), thin <10cm granite dykes 281.7-282.2m, broken zone with 5% recovery from 340 to 358.4m with biotite & trace pyrite & pyrrhotite
358.4	365.6	7.2	btZHF		thin bedded to laminated quartz sandstone with strong (c. 20%) biotite alteration especially from 359m onwards associated with quartz-Kfeldspar-tourmaline-titanite & quartz-pyrrhotite-tourmaline veins, elevated magsus zone associated with pyrrhotite
365.6	375.1	9.5	ppyFGRA		mostly K-feldspar and plagioclase porphyritic granite with c. 50cm equigranular granite intervals on edges and 10-30cm medium grained aplite zones at 365.8m & 374.6m, K-feldspar coarser than the lightly sericitised plagioclase phenocrysts
375.1	413	37.9	ppyFGRA		Kfeldspar and plagioclase porphyritic granite with phenocrysts, kfeldspar phenocrysts larger and plagioclase has weak sericite alteration. 40cm coarse equigranular granite with sericitised plagioclase at 398.8m, & small aplite patches from 406 to 408m. Increasing sericite from 425 to 430m.
413	430	17	ppyFGRA		weakly kfeldspar and plagioclase porphyritic granite with some equigranular areas, aplite dyke

					at 417.6-418.1m, spotted tourmaline patches 415.4m and strong sericite alteration zone around 428m.
430	471	41	ppyFGRA & FPEG		strongly Kfeldspar-plagioclase-quartz porphyritic granite, moderately sericitised, subhedral to euhedral quartz phenocrysts, quartz+chlorite veinlets around 453.8m, 20cm massive tourmaline zone at 459.8m, pegmatitic quartz+feldspar zone 465.2-465.7m
471	487.5	16.5	ppyFGRA & FAP		Porphyritic granite with 2.3m aplitic zone from 471m, 40cm strongly sericite altered (of plagioclase) zone from 482.6m
487.5	499.5	12	seclFGRA		Weakly porphyritic granite with increasing sericite-chlorite alteration (up to 3%) and several 10cm tourmaline patches (blueish at the edges), variable biotite from c. 3% to 30%, 1m Kfeldspar getting becoming cream-opaque (alteration, secondary kfeldspar?) from 497.4m with chlorite-quartz veinlets
499.5	550.7	51.2	ppyFGRA		porphyritic granite with variably sized quartz-plagioclase phenocrysts, small biotite-rich patches and sericite alteration of plagioclase
550.7	601.5	50.8	FGRA & MB	includes 4m fault zone from 590m	equigranular granite with quartz+chlorite+sericite alteration zones, fault zone from 590 to 594m with 70cm fractured basalt dyke from 590.6m cut by numerous (20%) calcite veinlets
601.5	618.8	17.3	FGRA & FAP		20cm aplite zone followed by progressively more porphyritic granite, massive quartz 603.65m with calcite surrounding sericitised plagioclase, minor quartz and quartz+chlorite veins, diss tourmaline+quartz+calcite at 604.8m & 610.1m
618.8	621.4	2.6	NREC	fault zone & core loss	fault zone core loss with 20cm cavity at 621.4m
621.4	634	12.6	FGRA		egg FGRA with low-mod ser alt, qz-cl-ser Vnlt alt around 10cm total Kfsp, plag to ser + qz only Vlts. Trace py in qz vlts, creating a 0.5cm fg qz-bt contact aureole @627m. 3.1m porph granite @627.9m. vfg on contact with next ppyFGRA interval
634	661.1	27.1	ppyFGRA	includes several fracture or fault zones	porphyritic granite with trace disseminated tourmaline and small quartz tourmaline patch at 639m, faults at 634.1-636m, 651-653.6m & 658-658.7m
661.1	661.9	0.8	MB		Plagioclase-biotite-amphibole phyric basalt dyke with trace magnetite, less porphyritic at margins and chilled margins against granite, carbonate veinlets.
661.9	673.7	11.8	ppyFGRA	includes 2 fracture or fault zones	porphyritic granite with increasing sericite through interval, 50-60cm cavities (?faults) at 667.3m & 670.7m
673.7	681.4	7.7	FGRA	includes several fracture or fault zones	equigranular granite with minor 50cm porphyritic zones, minor quartz+tourmaline+biotite patches and sericite alteration, very fractured with 0.5-1m core loss (?faults) at 673.7m, 675.3m, 677.3m & 678.2m
681.4	687.1	5.7	ppyFGRA		porphyritic granite with moderate sericite alteration and small biotite-tourmaline-quartz patches along interval, 50cm of equigranular granite in centre of interval

687.1	695.5	8.4	FGRA	coarse grained less porphyritic granite with 0.5% sericite alteration, 30cm Kfeldpar zone and patches of recrystallised tourmaline+quartz+biotite alteration. Kfeldpar phenocrysts becoming larger with depth & trace sericite to EOH at 695.5m
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Assaying of selected altered intervals did not identify tin or tungsten anomalism of note, but weak REE anomalism to 493 ppm TREYO (Total Rare Earths plus Yttrium expressed as oxides) is noted in the central part of the drilled granite dyke. Weak As anomalism (to c.24 ppm) is also noted in the up-hole c. 100m of the main granite body corresponding with the strongest sericite+chlorite alteration observed.

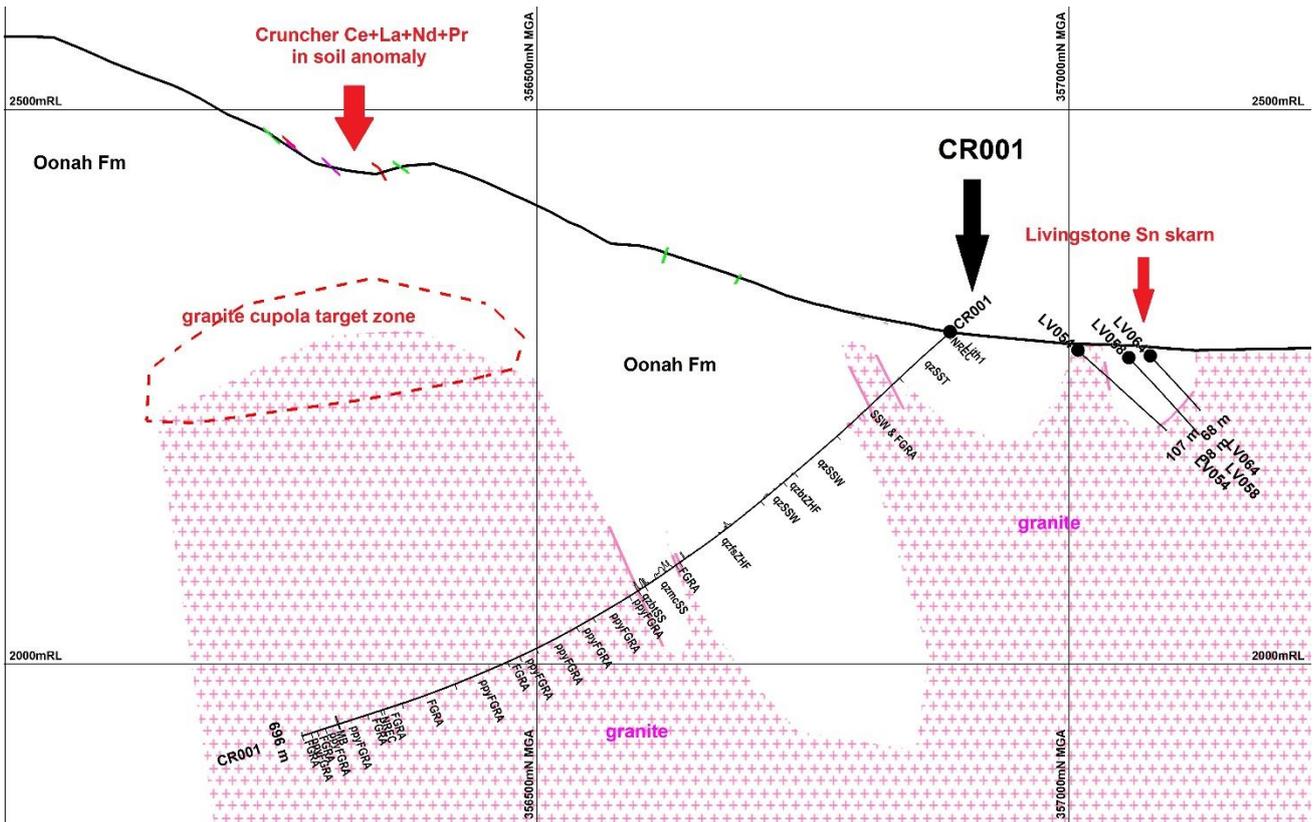


Figure 4: CR001 summary cross section with granite intrusion interpretation. This CR001 granite dyke does not crop out and there are no other drill holes that penetrate this body. Pyrrhotite and sericite alteration appears stronger towards the up-hole contact (the down hole contact was never reached) and if significant mineralising fluids were present they may have been concentrated at the cupola.

6 Rehabilitation

A 5.5t Kubota excavator was used to create a c. 90 m track from the existing pad GWLV2 to the CR001 pad site. Diamond drill hole CR001 was collared on 18th November 2023 and not completed until 16th February 2023. The hole started making water at 47.3m but a van Ruth plug emplaced to stem water flow failed. Water flowed intermittently throughout drilling, stopping entirely after several days without rain, flowing again when weather deteriorated. The hole was making water when end of hole was reached so Delta Drilling custom made wooden plugs at their Zeehan workshop and cemented in place to seal the hole before the drill rig was demobilised.

The 5.5t Kubota excavator was returned to site upon completion of the drill hole to scrape back the gravel, return the topsoil and pull the fallen, seed-laden vegetation to the pad and track constructed in November 2022. The rehabilitation was completed on 20th March 2023. Construction and post rehabilitation photographs are shown below:



Figure 5: Cruncher1 drill pad and track during construction



Figure 6: Cruncher1 drill pad and track following rehabilitation

7 Conclusion and Recommendations

Although CR001 did not encounter significant tin or REE mineralization it did significantly advance the geological understanding and future exploration of the Cruncher Creek – Stanley Bridge area immediately adjacent to the Mt Lindsay, Livingstone and Reward tin-tungsten-magnetite skarns. Significant implications of CR001:

- A blind (concealed) +300m thick dyke of the Meredith Granite has now been identified c. 700m southwest of the main granite body
- The granite dyke has not been mapped at surface and the concealed cupola is prospective for greisen, sheeted vein and stockwork style tin mineralization
- The intersected dyke and alteration is probably not sufficient to explain the magnetic and surface REE anomalism, there may be more significant alteration or mineralization in the interpreted cupola in the 300-500m between the CR001 granite intersection and surface
- The magnetic anomalism is currently attributed to pyrrhotite veining and alteration in the hornfels contact zone adjacent to the granite dyke
- The outcome of CR001 suggests the long unexplained magnetic zone within the Oonah Fm extending SSE from Cruncher Creek to Stanley River bridge area reflects the extension of this same body. While the surface geochemical anomalism decreases southwards from the CR001 target zone the magnetic and electromagnetic anomalism increases potentially reflecting a greater abundance of pyrrhotite alteration

The coincident magnetic highs and VTEM conductors in the Stanley transmission line area (south of Stanley Bridge) formerly dismissed because of lack of clear non-transported geochemical anomalism should be re-evaluated for drill testing as a matter of priority. Recommended activities should include:

- Resampling of the Stanley Bridge Sn in soil anomalies and re-prospecting of the previously identified quartz+pyrite veins in the area
- Mapping and petrological investigation of alteration in the Stanley Bridge area
- Magnetic inversion modelling using pyrrhotite magnetic susceptibilities gathered from CR001