



**Exploration Licence 1/2019
Salmons Creek**

Final Report for the period 4/12/2020 to 27/09/2024

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1 Summary

Exploration Licence 1/2019 was granted to Venture Minerals Limited (now Critica Ltd) in 2020. Due to changed financial and investor conditions Critica has elected not to extend the term of the lease. EL1/2019 includes prospective areas along strike from the Renison Bell tin deposit and the Mt Lindsay tin+tungsten+magnetite deposit. The principal exploration targets for Venture within EL1/2019 have been carbonate replacement, greisenised skarn, and vein and greisen style tin and tungsten mineralisation. Activities have included historical data search, data compilation and review, targeting, geological and structural field mapping and interpretation, and soil and rock sampling for concealed Sn-W-magnetite skarn targets within the upper Success Creek Group and lower Crimson Creek Formation.

2 Introduction

Exploration Licence EL1/2019 is located in the tin-tungsten province of western Tasmania and extends from the southwestern contact metamorphic aureole of the Meredith Granite to the north-eastern contact metamorphic aureole of the Pine Hill Granite. The Pine Hill and Meredith Granites are part of a suite of Devonian granites which are very important to tin and tungsten mineralisation in Tasmania. 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% WO₃). Cleveland and Mount Bischoff are situated around the northern margin of the Meredith Granite, and Renison Bell is associated with the Pine Hill Granite c. 15 km to the southeast of the Meredith Granite.

Whilst previous exploration activities within the area now covered by EL1/2019 have mainly focused on tin, there are also indications of potentially economic magnetite skarns. There are currently two producing magnetite mines in Tasmania, the Kara magnetite-scheelite mine located near Hampshire c. 60 km to the northeast of EL1/2019, and the Savage River magnetite mine (371 Mt at 31.9% Fe in magnetite) situated c. 40 km to the northwest.

3 Location and Access

Exploration Licence EL1/2019 covers 11 km² and is located within the Meredith Range Regional Reserve, c. 130 km by road southwest of the port of Burnie, and c. 35 km by road west of the nearest township, Tullah (figure 1). The extents of the tenement are loosely bounded by the Pieman Road to the north, Lake Pieman to the south, and gridlines 361000E and 366000E in the west and east respectively. The tenement is contiguous to the southeast boundary of EL21/2005. Access to the tenement is via the sealed Pieman Road which branches off the Murchison Highway c. 5 km north of Tullah. Various historic 4WD tracks and survey lines cut by previous tenement holders provide foot access to most of the tenement. The southern and eastern extents of the tenement can be accessed by watercraft from Lake Pieman and Wilson River.

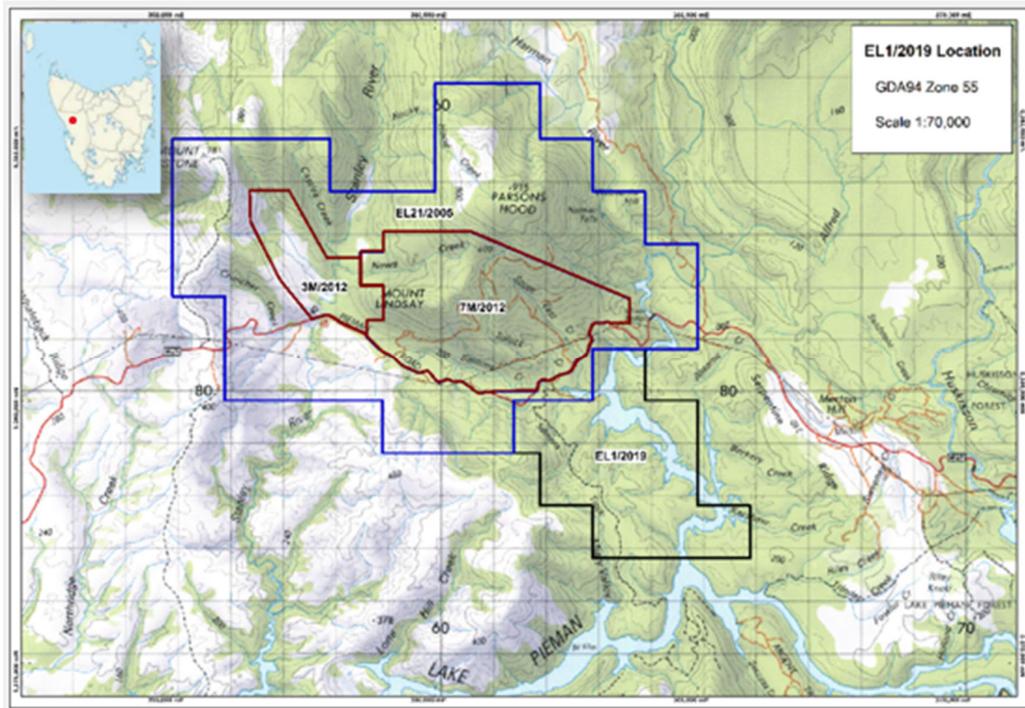


Figure 1: EL1/2019 location plan.

Elevation ranges from 100 m above mean sea level to almost 400 m in the southwest corner. The tenement has relatively low relief compared to surrounding areas with Mt Lindsay culminating at 579 m. Average rainfall for the region is approximately 2000 mm per annum and vegetation is dominated by short rainforest and related scrub in the southwest, and by *Nothofagus* - *Atherosperma* rainforest in the northeast. Extensive forest clearing and fires have occurred throughout EL1/2019 from early to mid-20th century. Pockets of wet *Eucalyptus obliqua* and *Eucalyptus nitida* forest remain throughout the tenement.

4 Exploration and Mining History

Alluvial tin was discovered in the Stanley River area, approximately 6 km to the northwest of the tenement sometime around 1893 and this area subsequently developed into the Stanley River Tin Fields. The main alluvial tin field was located on the extensive river flats around the confluence 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 and Parsons Hood. Cassiterite-bearing gossans were later discovered at Stanley Reward, Livingstone Creek and Mt Lindsay in the early 1900s with minor small-scale open-cut and underground tin mining until c. 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 considered of generally 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 haematite 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, now known as No 2 Skarn.

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 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 not carried out.

The adjacent Stanley Reward and Livingstone Creek area (c. 5 km northwest of EL1/2019) 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 were reported 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 (DDH GSR10) along with anomalous Cu and W. Spacing between drill holes ranges from 100 to 350 m over 2 km of strike. 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.

In 2007, tenement EL15/2007, which wholly includes the now EL1/2019, was granted to ASF Resources Ltd. In 2011, ASF Resources Ltd entered into a joint venture with China Coal Geology Engineering Corporation to explore for polymetallic mineralisation over the tenement under the joint venture company China Coal Resources Pty Ltd (CCR). From 2011 – 2013 the joint venture explored for epigenetic base metal mineralisation associated with Devonian granite emplacement, with Renison Bell type mineralisation and skarn mineralisation being the primary exploration models (Yap, 2013). EL15/2007 was relinquished in 2015 (Derriman, 2015).

In 2019 VMS conducted a heliborne VTEM (Versatile Time Domain Electromagnetic) Max conductivity survey over its entire Mt Lindsay Project (MLP), with surveys lines extending over the north-west part of EL1/2019 (Figure 2).

5 Geological Setting

The geology of the Mt Lindsay area is dominated by the steeply dipping, northwest-southeast striking sedimentary and volcanic rocks of the Early Cambrian – Neo-Proterozoic Crimson Creek Formation, Success Creek Group and Oonah Formation, intruded by the Devonian Meredith Granite. The late Neoproterozoic - early Cambrian Crimson Creek Formation comprises mainly of thin to thick bedded greenish grey lithic sandstones, siltstones and mudstones with scattered horizons of laminated to thinly bedded light grey, green and pink felsic to mafic tuffites with rare tholeiitic basalt flows, and thin to thick bedded calcareous sandstone. Total thickness in the nearby Mt Lindsay area is estimated at c. 5000 m (Owen, 2008). The early Cambrian Success Creek Formation comprises a sequence of sandstones, siltstones, volcanoclastics with minor carbonate beds and tholeiitic basalts.

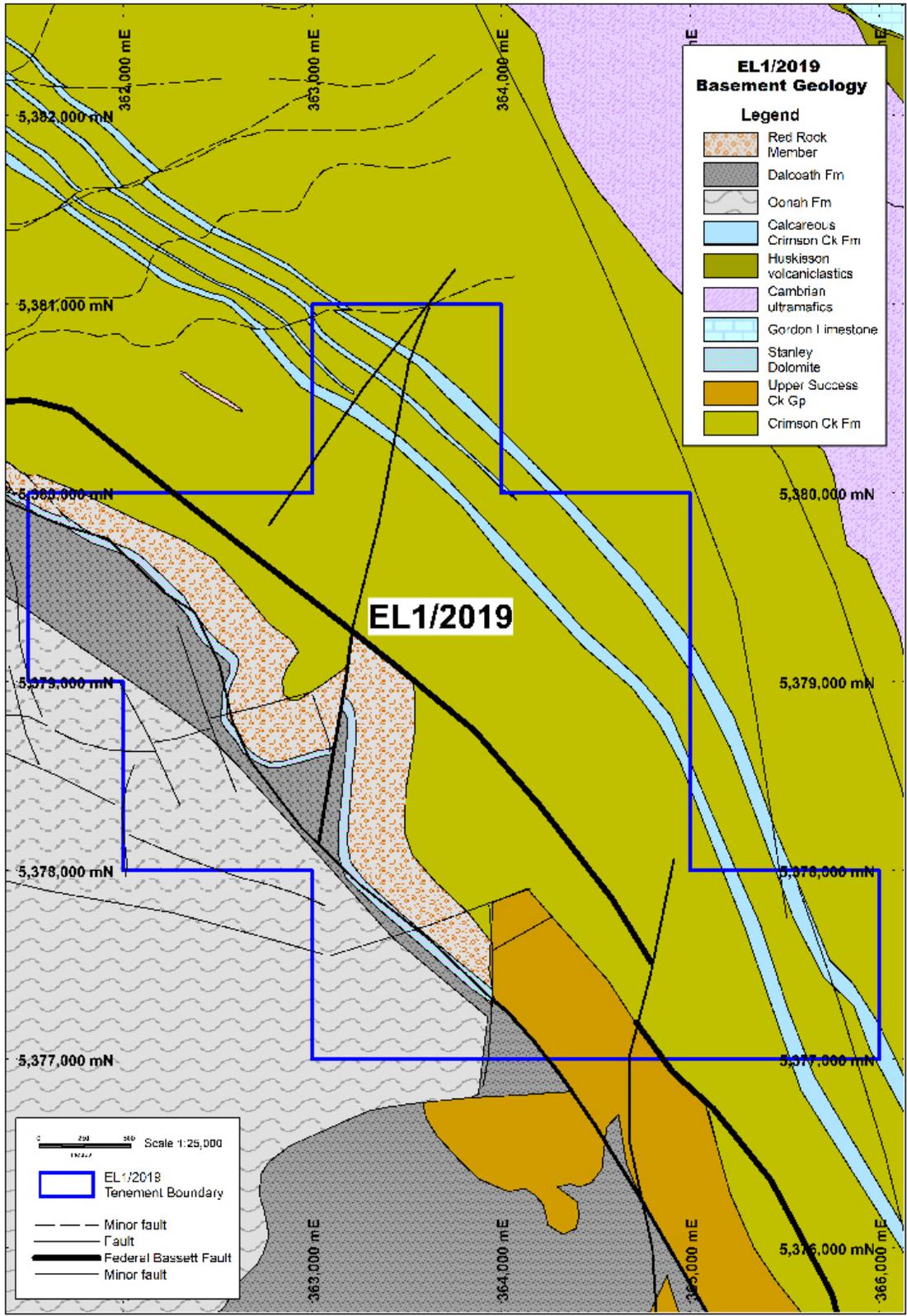


Figure 2: EL1/2019 basement geology

Red Rock Member of the Success Creek Formation is a significant marker horizon which outcrops in the vicinity of Salmons track. Although mostly recessive at surface, some of the conformable Stanley dolomite which underlies the Red Rock Member also outcrops. The Success Creek Group is underlain by the Neo-Proterozoic (1000-750Ma) Oonah Formation, a sequence of greywacke, pelites, siltstones and quartz sandstones. This unit was probably the precursor to the Dundas Trough (Zhang, 2011). Up to 2km² in the north of the tenement are covered by quaternary stream alluvium, swamp and marsh deposits, beneath Lake Pieman (figure 3).

A broad contact metamorphic aureole is developed around the Meredith Granite, characterised by the development of fine-grained amphibole, cordierite, biotite and pyroxene hornfels (Owen, 2008). Carbonate units are locally present within the enclosing sedimentary units and locally form the protolith to a variety of proximal contact skarns, greisenised skarns and more distal carbonate replacement bodies.

The large Federal – Bassett fault zone is inferred to strike northwest – southeast through EL1/2019. Although there are no known mineral occurrences within the tenement, the large replacement tin deposit of Renison Bell, associated with the Federal-Bassett fault, is located approximately 5 km to the southeast of the tenement's southern boundary. Southwest of the tenement, tin mineralisation is developed within the aureole of the Devonian Heemskirk Granite, both as veins associated with tourmaline and as alluvial deposits (Laffers, St. Dizier and Tasman River). Similar tin mineralisation also occurs to the immediate north of the tenement at Livingstone Creek.

6 Summary of Venture Minerals Exploration Activities 2019-2024

The initial period of Venture's tenure over Salmons Ck was spent collating historical records, and reassessing historic geological maps overlain with newer geophysical data. Rock sampling, and geological and structural mapping of outcrop was undertaken across the breadth and most of the length of EL1/2019 during Venture Minerals leasehold period (Figure 6). Mapping was focussed on locating outcrop of carbonate units within the Crimson Creek Fm, and in particular identifying thin bedded pyroxene-pyrrhotite hornfels and flakestone facies which are generally indicative of the typically poorly exposed Crimson Creek carbonates. The geological mapping centred around conductive zones identified from a 2019 VTEM survey to test if these correlated with pyrrhotite bearing hornfels (figure 6). A secondary focus was locating conglomerate and diamictite of the Red Rock Member, the basal lithology of the Success Creek Fm. Petrological work on field samples was then undertaken from to better define lithological boundaries on basement maps. Soil sampling areas targeted zones identified from magnetic and Versatile Time Domain Electromagnetic (VTEM) geophysical interpretations (Figure 5). Traverses were designed to cross perpendicular to stratigraphy, using a reinterpretation of basement geology and major structures following data review and relogging of rock chip samples from EL1/2019 (Figure 4).

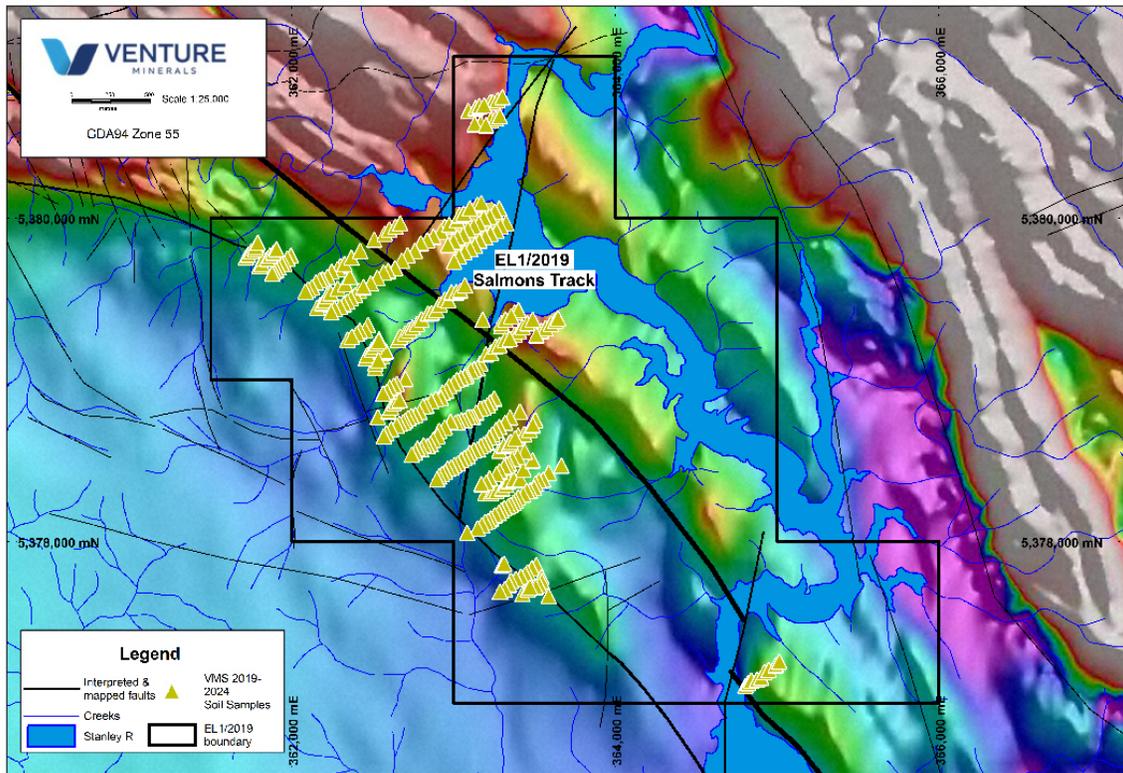


Figure 3: VMS 2019-2024 soil sample locations over magnetic TMI reduced to pole NE sun angle image with mapped and interpreted faults

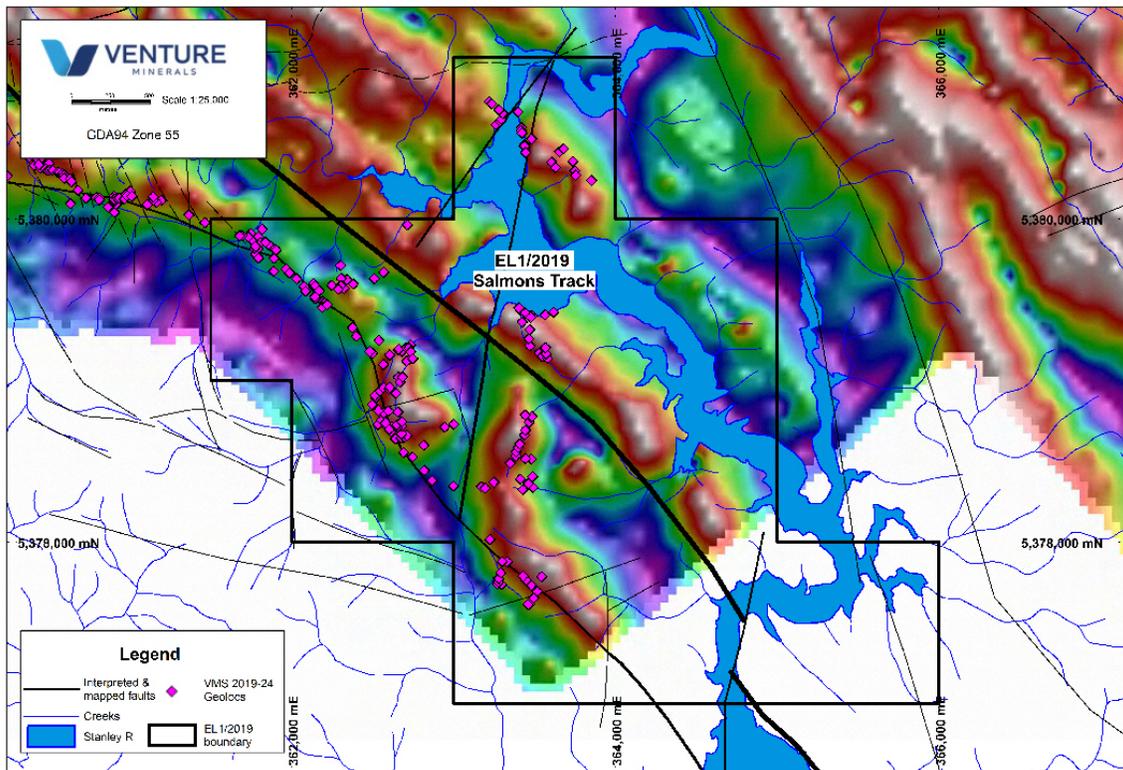


Figure 4: VMS 2019-2024 geological mapping locations over VTEM TMI reduced to pole NE sun angle image with mapped and interpreted faults.

7 Conclusions and Recommendations

The geology of EL1/2019 includes stratigraphy of the Renison Mine sequence and interpreted extension of the Federal-Bassett fault zone. It lies between Renison Bell mine and the Mt Lindsay – Stanley – Livingstone Sn-W-magnetite skarns and was granted to Venture Minerals Ltd in 2020. Exploration activities by Venture Minerals from 2020-2024 include VTEM survey, geological & structural mapping, and soil and rock sampling. Currently identified targets for further work are shown in Figure 7.

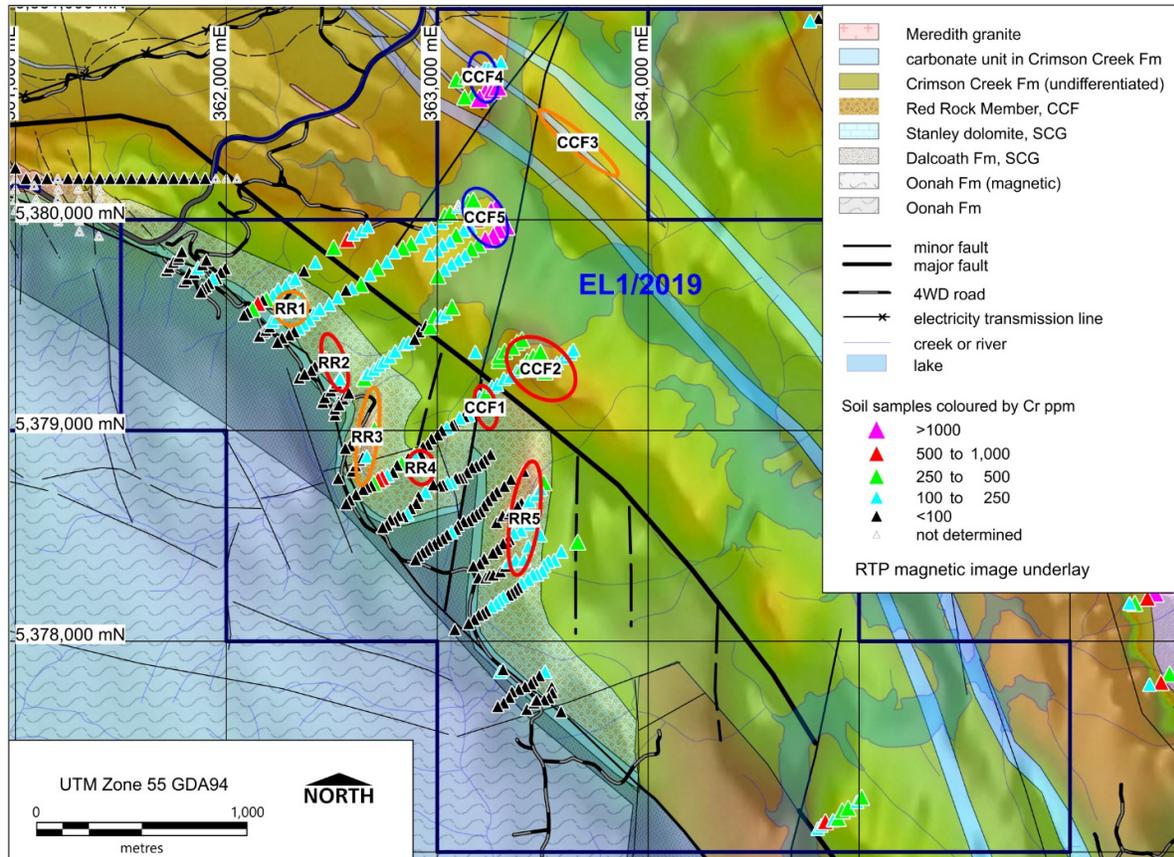


Figure 5: EL1/2019 targets with Cr soil geochemistry on interpreted basement geology and reduced to pole magnetic image.

Magnetic highs coincident with the Red Rock Member are priority concealed (blind) skarn targets. Soil Cr >100ppm and Cu > 50 ppm are good indicators of the transition from Success Creek Group to Crimson Creek Formation, and Cr locally spikes up to 770 ppm in the vicinity (over) the Red Rock Member.

Concealed (blind) Sn-W-magnetite skarn targets:

- RR1 magnetic high in Red Rock Mbr with up to 114 ppm Cu in soils
- RR2 weak magnetic ridge in Red Rock Mbr with soil Pb to 264 ppm, weak soil As to 41 ppm
- RR3 magnetic ridge within Red Rock Mbr, no obvious soil geochemical anomalism
- RR4 small magnetic high in Red Rock Mbr with up to 174 ppm Pb in soils

- CCF1 single spot 92 ppm W anomaly on NNE fault Crimson Creek Fm
- CCF2 magnetic ridge in Crimson Creek Fm, ?carbonate unit, soil Cu to 160 ppm and soil Zn up to 223 ppm
- CCF3 magnetic anomaly in Crimson Creek Fm (Main Skarn carbonate unit?), needs surface geochem & prospecting for pyroxene-pyrrhotite hornfels and flakestone
- CCF4 & CCF5 interpreted carbonate units in CCF, soil Sn to 67 ppm but >1000ppm Cr - soil geochemistry reflects presence of perched quaternary terrace gravels (with strong chromite source Wilson River Ultramafic in the catchment) in area (close to current reservoir level).

Further soil geochemistry and prospecting for key stratigraphic markers is recommended to help resolve structure, especially Red Rock Member and ?imbricated faulted zone extending southeast of RR3, RR4 and RR5.

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