



# ZEEHAN WESTERN PROJECT

**Final Drilling Project  
Report for EDGI 2021  
Round 5**

**(Revised 20 May 2022)**



**Zeehan Western Project**  
**EL 13/2018**  
**Final Drilling Project Report for**  
**Exploration Drilling Grant Initiative**  
**Round 5, 2021**

**Zeehan**  
**Tasmania**

For  
Mineral Resources Tasmania

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April 2022

(Revised 20 May 2022)

**Title –Final Drilling Project Report EDGI Round 5 2022 – Zeehan Western Project**

**Report type – EDGI Final Report**

**Tenement number – Exploration Licence 13/2018**

**Original grant date – 26<sup>th</sup> November 2018**

**Expiry date – 25<sup>th</sup> of November 2023**

**Reporting period – 29th April 2022**

**Project name – Zeehan Western Project**

**Project operator – Stellar Resources Ltd**

**Tenement Holder – Columbus Metals Ltd (a wholly owned subsidiary of Stellar Resources Ltd)**

**Date of the report – 14<sup>th</sup> of April 2022**

**Author – Mark Dugmore**

**Verification signature –**



## EXECUTIVE SUMMARY

Stellar Resources Ltd (“Stellar”) was awarded four Exploration Drilling Co-Funding grants totalling \$185,000 under the Tasmanian Government’s Exploration Drilling Grant Initiative (EDGI Round 5) in June 2021. The grants awarded to Stellar were for the drill testing of four exploration prospects: Montana No. 1 (2 holes) and Queen No. 4 (1 hole) in ML2023P/M plus Zeehan Western (2 holes) and Oonah (2 holes) in EL13/2018.

This report details the results of diamond drill hole ZW145 drilled in November/December 2021 under the historic Zeehan Western Silver-Lead Mine. Two holes were originally planned to test for down dip transitional cassiterite mineralisation below the base metal mineralisation but only one hole was completed due to only minor base metal mineralisation being intersected in the first hole.

Metal zonation within granite related tin mineralising systems is well documented with proven examples within the Zeehan Mineral field. The Zeehan Western mine is located on the NNW trending Montana Fault Zone and consists of 11 large, continuous Ag-Pb-Zn fissure veins striking NNW to NE with steep E dips.

Hole ZW145 was drilled to a total depth of 372m and intersected two narrow high-grade Ag-Pb-Zn fissure veins. Mineralisation consists primarily of galena veins with disseminated sphalerite in a brecciated siderite zone within basalt and black shale of the Oonah Formation. No significant Sn mineralisation was observed.

The narrow nature of the Ag-Pb-Zn mineralisation intersected, and lack of significant tin mineralisation suggests deeper drilling is unlikely warranted to test for the transition down-dip to cassiterite mineralisation. Further desk top studies will be undertaken aimed at understanding the structural relationship of the Zeehan Western deposit with Queen Hill and Severn Deposit and an update of the stratigraphic models for the Zeehan Western Mine.

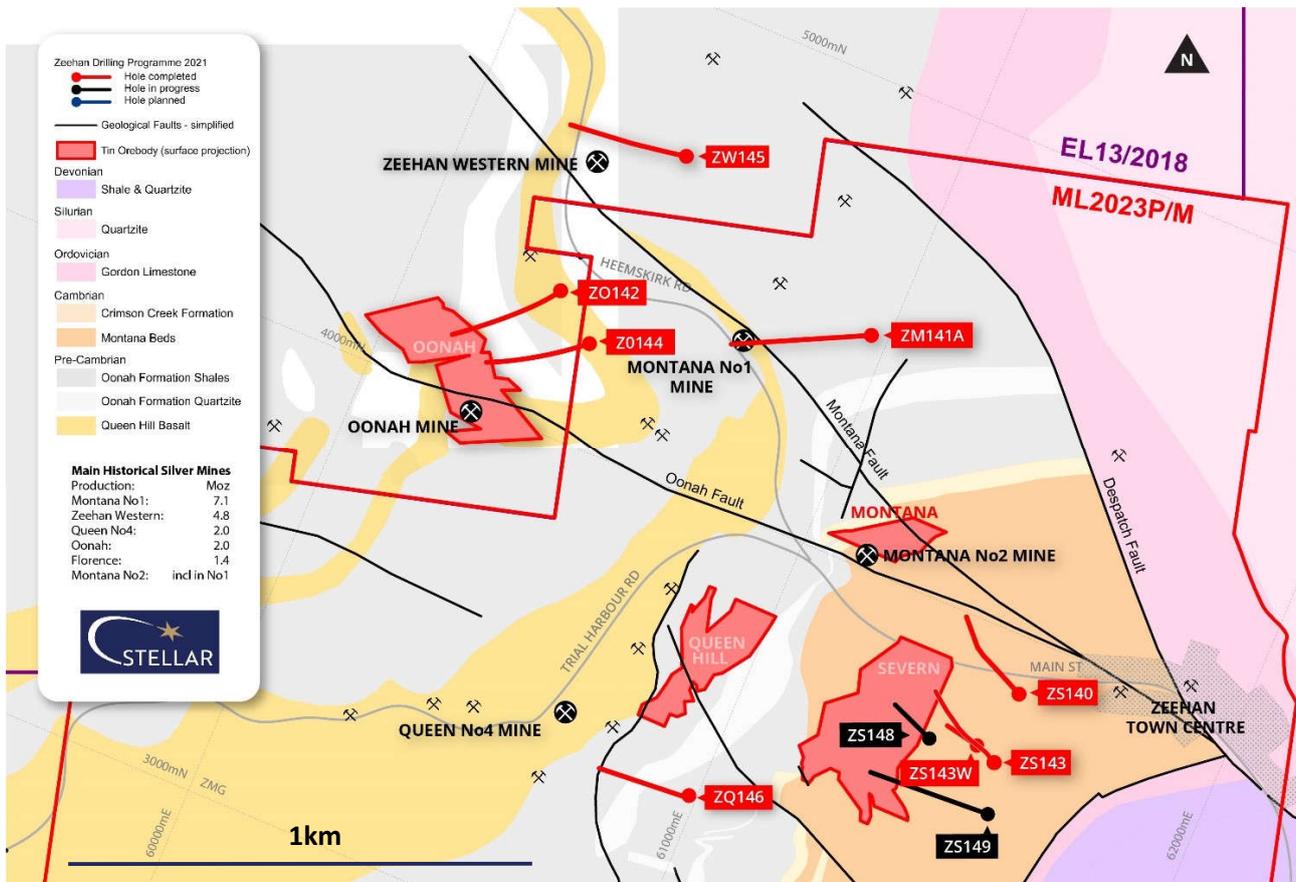


Figure 1. Exploration Index Map

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# 1. INTRODUCTION

## 1.1 Introduction

Stellar Resources Ltd (“Stellar”) was awarded four Exploration Drilling Co-Funding grants totalling \$185,000 under the Tasmanian Government’s Exploration Drilling Grant Initiative (EDGI Round 5) in June 2021. The grants awarded to Stellar were for the drill testing of four exploration prospects: Montana No. 1 (2 holes) and Queen No. 4 (1 hole) in ML2023P/M plus Zeehan Western (2 holes) and Oonah (2 holes) in EL13/2018. Funding awarded to each of the project areas comprised \$50,000 (Montana No 1), \$35,000 (Queen), \$50,000 (Zeehan Western) and \$50,000 (Oonah).

Stellar’s Heemskirk Tin Project is located 18km to the southwest of the Renison tin mine and access to the port of Burnie 150km to the north via sealed highway (Figure 2). The Heemskirk Tin Project includes 4 nearby tin deposits: Severn, Queen Hill, Montana and Oonah. Stellar holds secure Mining Leases over the Heemskirk Tin Project including the tailings pipeline route and tailings storage site and over the St Dizier satellite tin deposit.

In addition to the Heemskirk Tin Project, Stellar owns a portfolio of nearby Exploration Licences including the Montana Flats and Mount Razorback EL’s which contain several historic silver-lead-zinc mines with associated tin mineralization, and the St Dizier and Mount Razorback satellite tin deposits.

This report details the work completed under the EDGI 2021 Round 5 grant for the Zeehan Western Mine Project including drill testing of the Zeehan Western Mine target in November/December 2021.

## 1.2 Location and Access

EL13/2018 is located near Zeehan on the Queenstown (SK5505) 1:250,000 map sheet and Pieman (7914) 1:100,000 map sheet. The southeast boundary is 1.75 kilometres from the Zeehan PO. EL13/2018 adjoins the north and northwest boundary of Stellar Resources Mining Lease 2023P/M at Zeehan and extends north for seven kilometres. Main road access is from the Heemskirk Road which passes through the centre of EL13/2018 (Figure 3). Numerous unsealed tracks traverse the area.

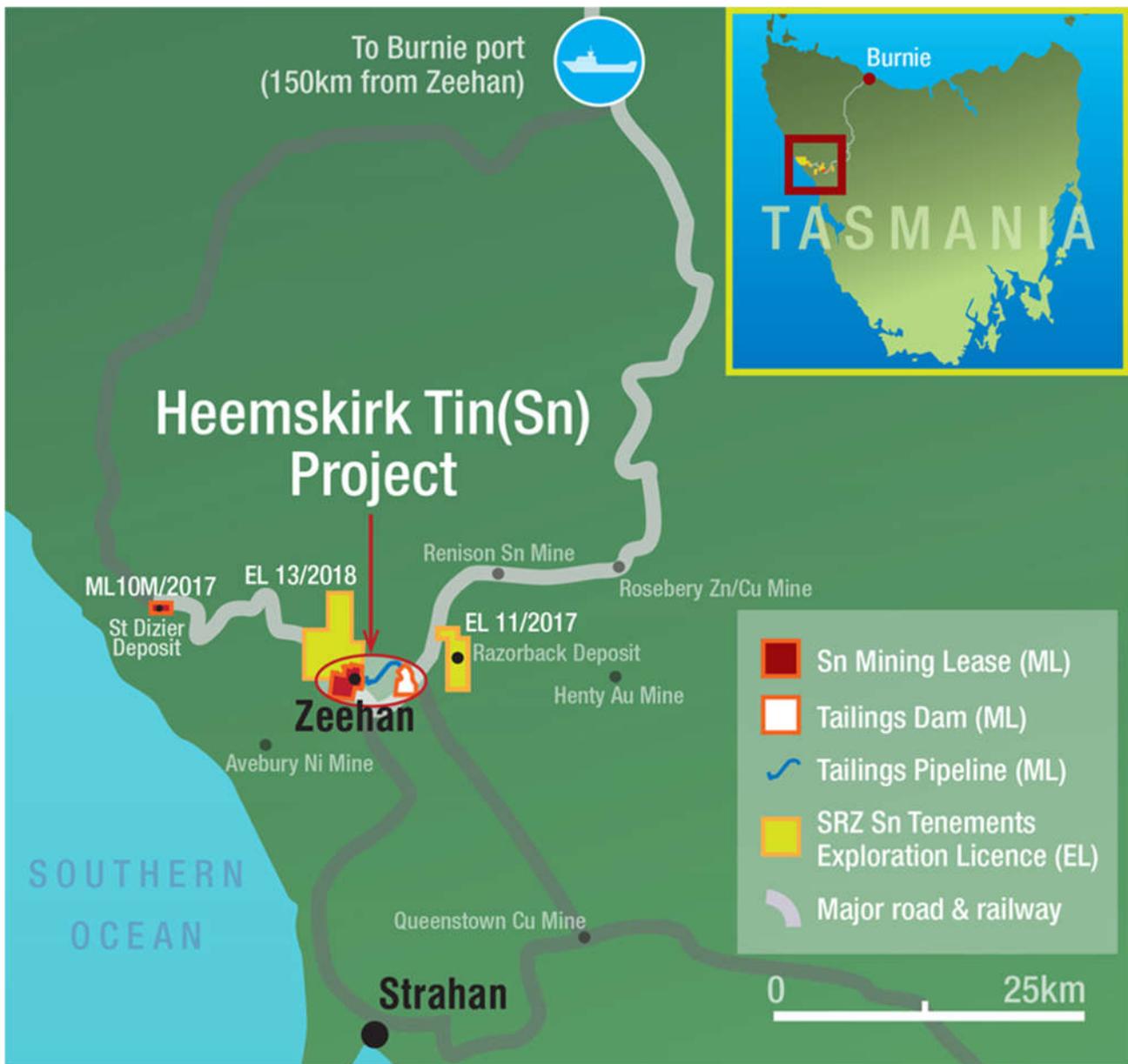


Figure 2. Location of Stellar Resources Projects, West Coast Tasmania

### 1.3 Tenement Details

ML2023P/M and EL13/2018 are 100% held by Columbus Metals Ltd, a wholly owned subsidiary of Stellar Resources Ltd. The mining lease was granted on 13 February 2017 for twelve years while the exploration licence was granted for five years on 26 November 2018 (see Table 1). The EL area is comprised entirely of crown land, with some coverage of the Mt Heemskirk Regional Reserve in the southwest, and the Parting Creek Regional Reserve in the northeast (Figure 3). The ML area comprises both cleared urban or farmland and regrowth forest after logging or burning (Figure 4). The operator of the tenements is Stellar Resources Ltd.

Table 1. Tenure details.

Title	Name	Area (km <sup>2</sup> )	Expiry Date
ML2023P/M	Zeehan	6	1/2/2029
EL13/2018	Montana Flats	24	25/11/2023

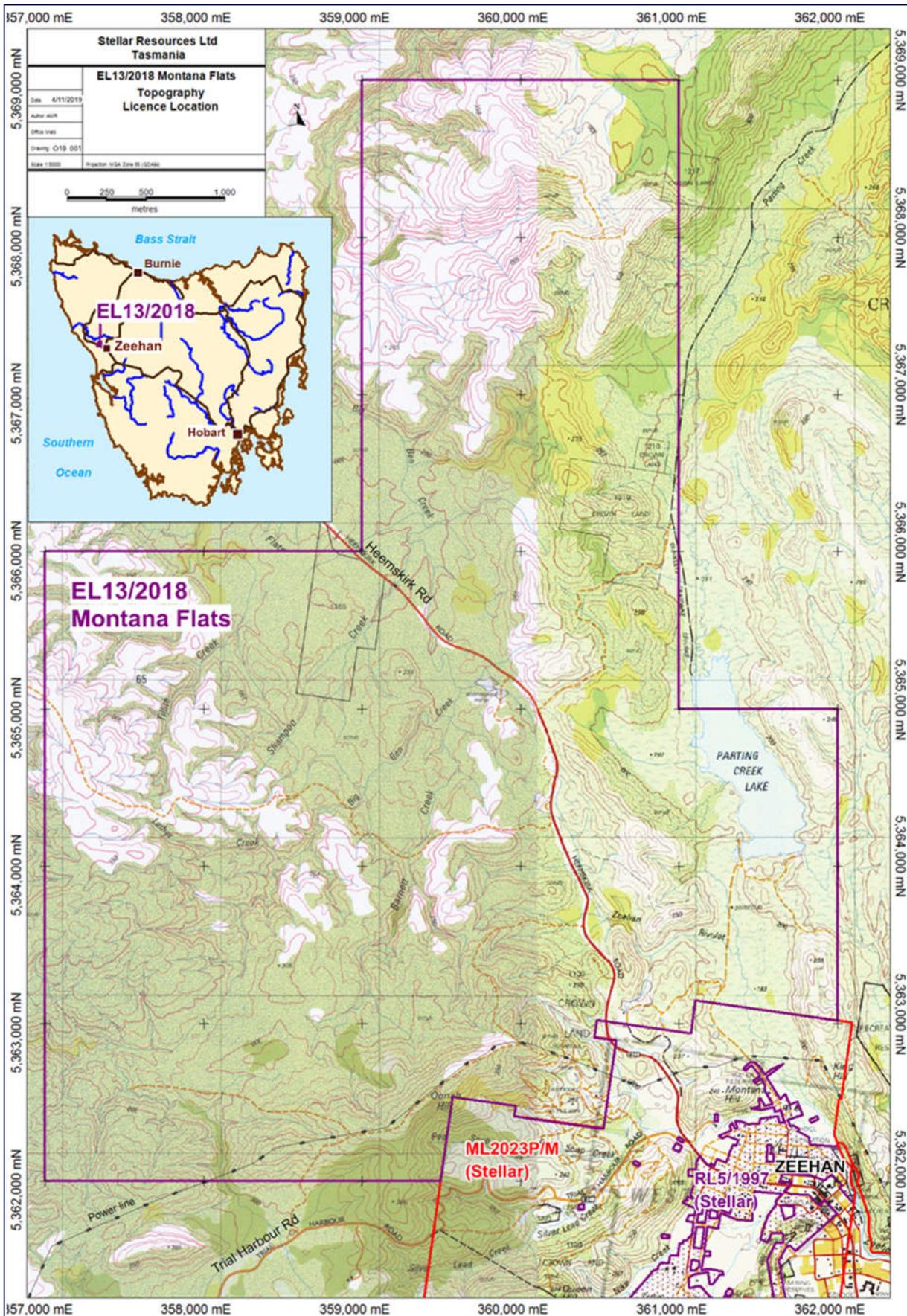


Figure 3. EL13/2018 Location Plan

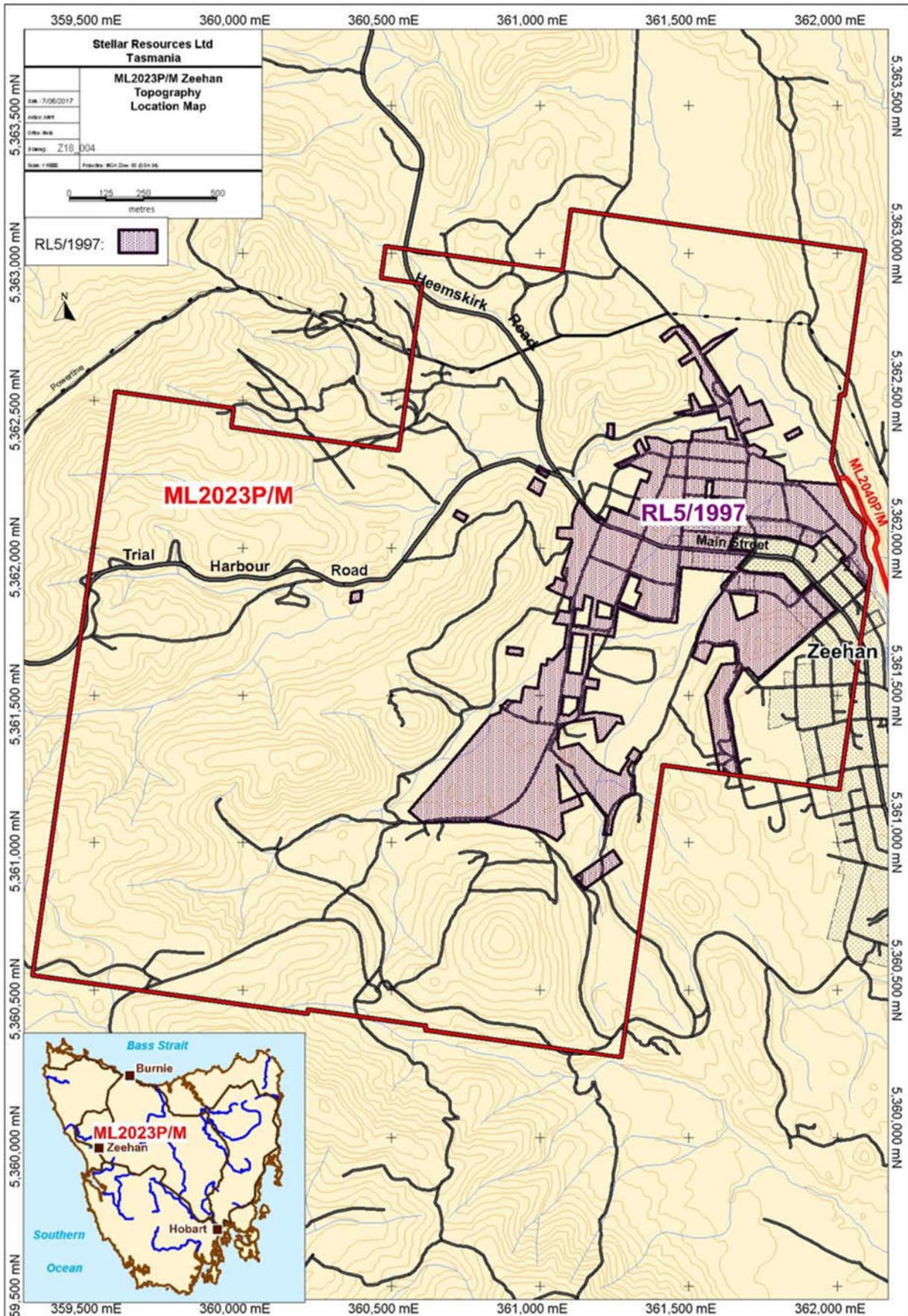


Figure 4. ML2023P/M Location Plan

## 1.4 Exploration Rationale

The principal objective of the program is to locate additional cassiterite mineralisation in proximity to the Queen Hill & Severn deposits to; (a) augment the current project resource base and extend the potential life of the Heemskirk Tin Project, and (b) potentially identify higher grade areas of tin mineralisation which may improve the project economics.

Subsidiary objectives are definition of project stratigraphy and structure and refinement of the geological model. Such information will assist further targeting and resource definition.

The (EDGI Round 5) holes were planned to test depth extensions below the historically significant Montana No. 1, Zeehan Western, Oonah and Zeehan Queen No. 4 mines (Figure 5 and Figure 6) which were amongst the largest silver-lead mines that made Zeehan one of the largest mining centres in Australia in the late 1800's. These mines had reported production grades of between 20 to 100 oz/t silver hosted in fissure veins ranging from a few cm up to 2.7m wide and mined over lengths of up to 300m.

None of these historic silver-lead mines have ever been drill tested, other than Oonah, where an Inferred Mineral Resource (0.59 Mt at 0.9% Sn, 0.8% Cu, 0.1% Pb, 0.1% Zn. Ag not included) has been defined above the depth of the planned holes. Drilling targeted depths below the historically mined silver-lead lodes where transition to tin mineralisation (cassiterite) is expected to have occurred.

Metal zonation from Sn-sulphide (stannite) to Ag-Pb-Zn within the Zeehan Mineral Field is well documented with proven examples at Montana No 2, Queen Hill and Oonah.

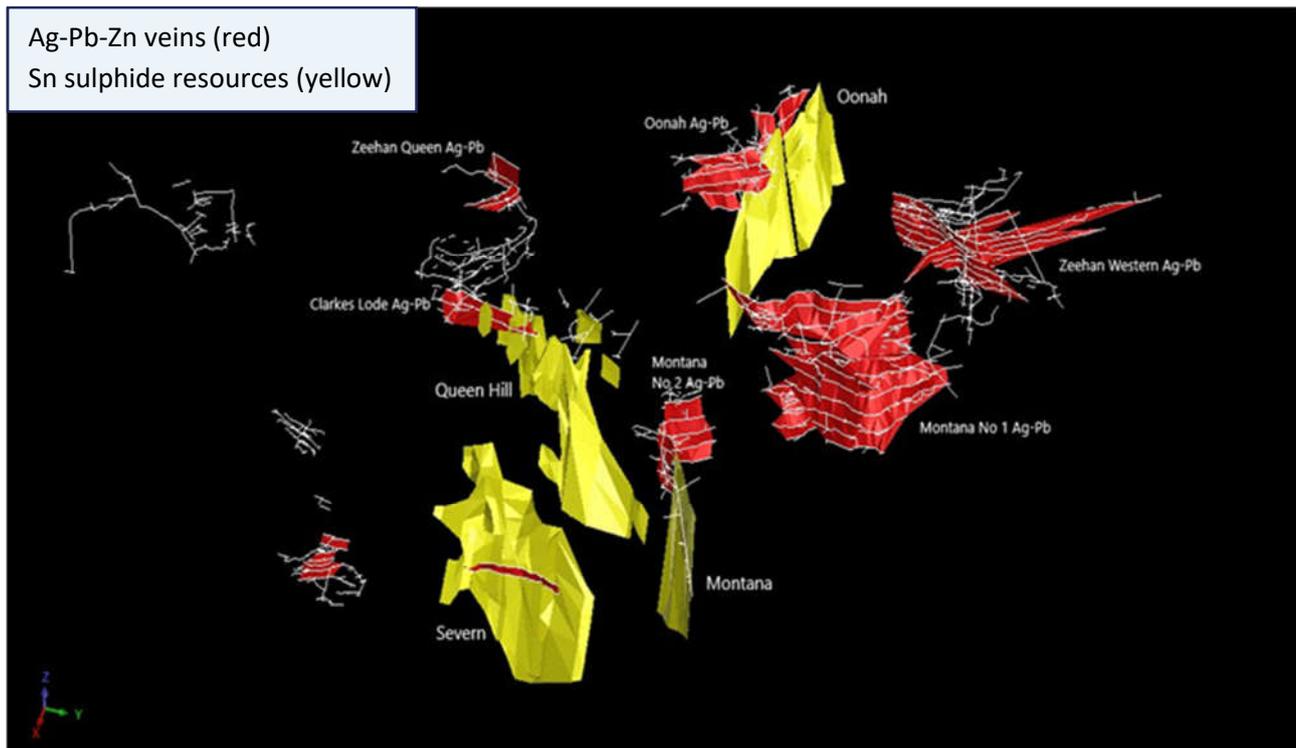


Figure 5. Zeehan Mineral Field Oblique View

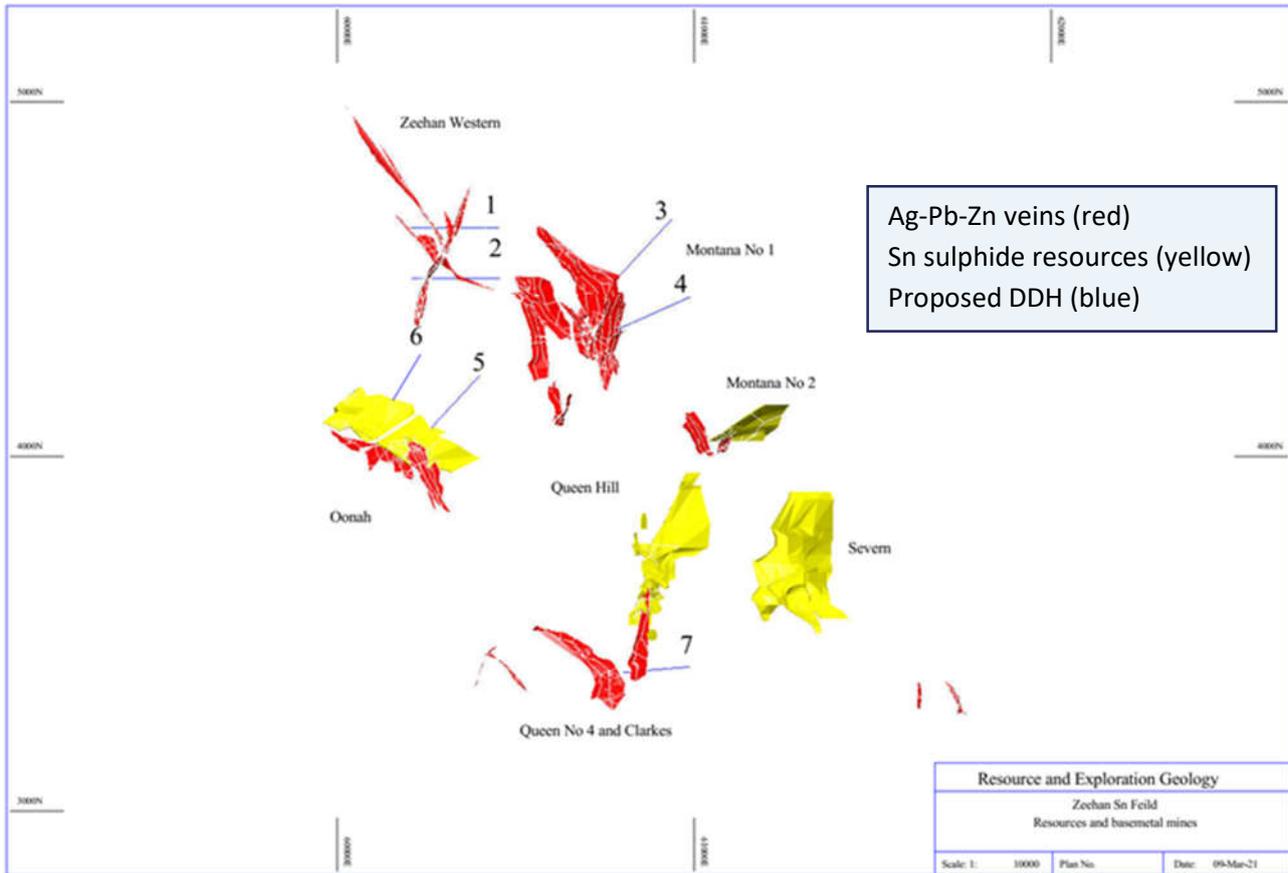


Figure 6. Zeehan Mineral Field Plan View: proposed drillhole locations

## 2. Previous Exploration

### 2.1 Prior to Stellar Resources

Previous exploration over EL13/2018 is described below.

**BMR (1963 – 1964)** geophysical surveys (IP, SP, Turam-EM & magnetic surveys)

**Placer Prospecting (1963 – 1965)** tested BMR anomalies via 7 dd holes. 4 holes at Oonah Mine intersected the Stannite Lode. 3 holes southwest of the Oonah Mine at Bradshaw's Lode were unsuccessful.

**Minops (1971)** drilled a further 10 dd holes, which tested along strike and down dip of the Stannite Lode. 5 holes intersected significant mineralisation.

**Aberfoyle-Gippsland Minerals JV (1974 – 1977)** drilled 1 dd hole at Bradshaw's Lode. It was unsuccessful.

**CRA Exploration (1979 – 1996)** joint ventured the project with Minops. They carried out detailed mapping, re-assayed core and drilled 12 more dd holes around the prospect.

**RGC Exploration (1987 – 1995)** were granted EL 42/1987, which surrounded the Queen Hill and Oonah Mine ML's. They carried out 1:10,000 scale mapping, rock chip sampling and a helicopter borne magnetic survey. In the 90's RGC drilled a 673m dd hole at Montana Hill, but it intersected nothing significant.

**Rio Tinto & Allegiance JV (1996 – 2002)** flew a high-resolution magnetic survey seeking nickel or shale hosted zinc deposits, with negative results.

**Mt Conqueror & Central West Gold (2002 – 2003)** reassessed the viability of the Stannite Lode but concluded it was “insufficient to support a stand-alone mining operation”.

**Bass Metals (2004 – 2009)** took up EL 63/2004 because of the Despatch Fault and the juxtaposition of the Gordon limestone against the Oonah formation and the potential for carbonate-replacement mineralisation and sampled and drilled the Montana Silver Lead Mine: Insufficient economic mineralisation was encountered.

**TNT Mines (2009 – 2017)** drilled two diamond holes at the Oonah Mine and a 200m diamond hole under Anomaly 370 north of Parting Lake. A ground magnetic survey was also carried out over the Anomaly 370 area.

Previous exploration over adjoining ML2023P/M is described below.

**Gippsland Minerals & Aberfoyle (1970 – 1989)** completed mapping, sampling, geophysics, and geochemistry. Drilling comprised 89 diamond drill holes for 23,000m. This work culminated in the discovery & definition of the Queen Hill, Montana & Severn (tin) Deposits with resource delineation of 7.3 million tonnes @ 0.69% Sn & 10.9 g/t Ag. Subsequent work involved metallurgical testing & Pre-Feasibility Study.

## 2.2 Exploration by Stellar Resources

Despite being one of the largest Ag-Pb producers in the district, very little modern exploration has been completed and no historic drilling has been completed in the vicinity of the Zeehan Western Mine.

Work completed by Stellar Resources to define the target include the location of historic workings and the registration of old mine plans at Zeehan Western Mine. Data obtained from this work has been modelled in Surpac software. Digital models of registered workings and drilling from previous explorers have been used to construct a digital 3D model of the lodes.

## 3. GEOLOGICAL SETTING

### 3.1 Regional Geology

The oldest rocks in the project area are a sequence of volcanics and sediments equivalent to the Neoproterozoic Oonah Formation (708 +/-6 to 690 +/- 10Ma), the oldest stratigraphy in the Zeehan area. These are predominantly quartzites with some interbedded arenaceous siltstones and shales. The upper part of the Oonah Formation is predominantly pelite and/or carbonate, including some evaporites, mafic volcanic rocks and conglomerate. Basalt in the vicinity of Queen Hill is highly vesicular and altered to sericite-chlorite-quartz-dolomite assemblages (Bottrill and Woolley, 2013).

Overlying the Oonah Formation rocks is a sequence of dolomites, carbonaceous pyritic slates and minor volcanics equivalent to the Neoproterozoic Success Creek Group (700 to 600Ma). This group comprises reddish brown siltstones with intercalated limestones and dolomite, referred to locally as the Poverty Point Beds, they correlate to that part of the Success Creek Group which hosts the Renison replacement tin deposits.

The Success Creek Group rocks are overlain by the Cambrian Crimson Creek Formation, comprising basal pyroclastic volcanics overlain by a sequence of greywackes and argillites with minor tuffaceous slates and grits. Basalt in the vicinity of Severn are MORB-type tholeiitic basalts and altered to albite-chlorite-calcite-quartz assemblages (Bottrill and Woolley, 2013).

Ordovician Gordon Limestone crops out northeast of Queen Hill while Siluro-Devonian Eldon Group sandstones and siltstones underlie most of the Zeehan town site.

The Devonian Heemskirk Granite outcrops 7 kilometres west of Zeehan, forming Mt Agnew and Mt Heemskirk, with a ridge of granite believed to extend beneath Queen Hill at depth.

The structure of the rocks in the area is complex with intense folding and faulting at all scales. The deformation is thought to be due to the Tabberabberan Orogeny. Broadly the Zeehan tin deposits are associated with the wide hinge zone of the northwest trending Heemskirk Anticlinorium, which is thought to have been the focus of the intrusion of the Heemskirk Granite at depth in this area.

At Zeehan, the Oonah Formation and the Success Creek Group both host vein and replacement tin deposits. Tin mineralisation within the dolomitic Poverty Point Beds at Montana is of cassiterite sulphide replacement style. Mineralisation at Severn may be similar, being due to smeared-out Poverty Point carbonates along the Severn Fault. Simplified geology is shown in Figure 1 and regional geology in Figure 7.

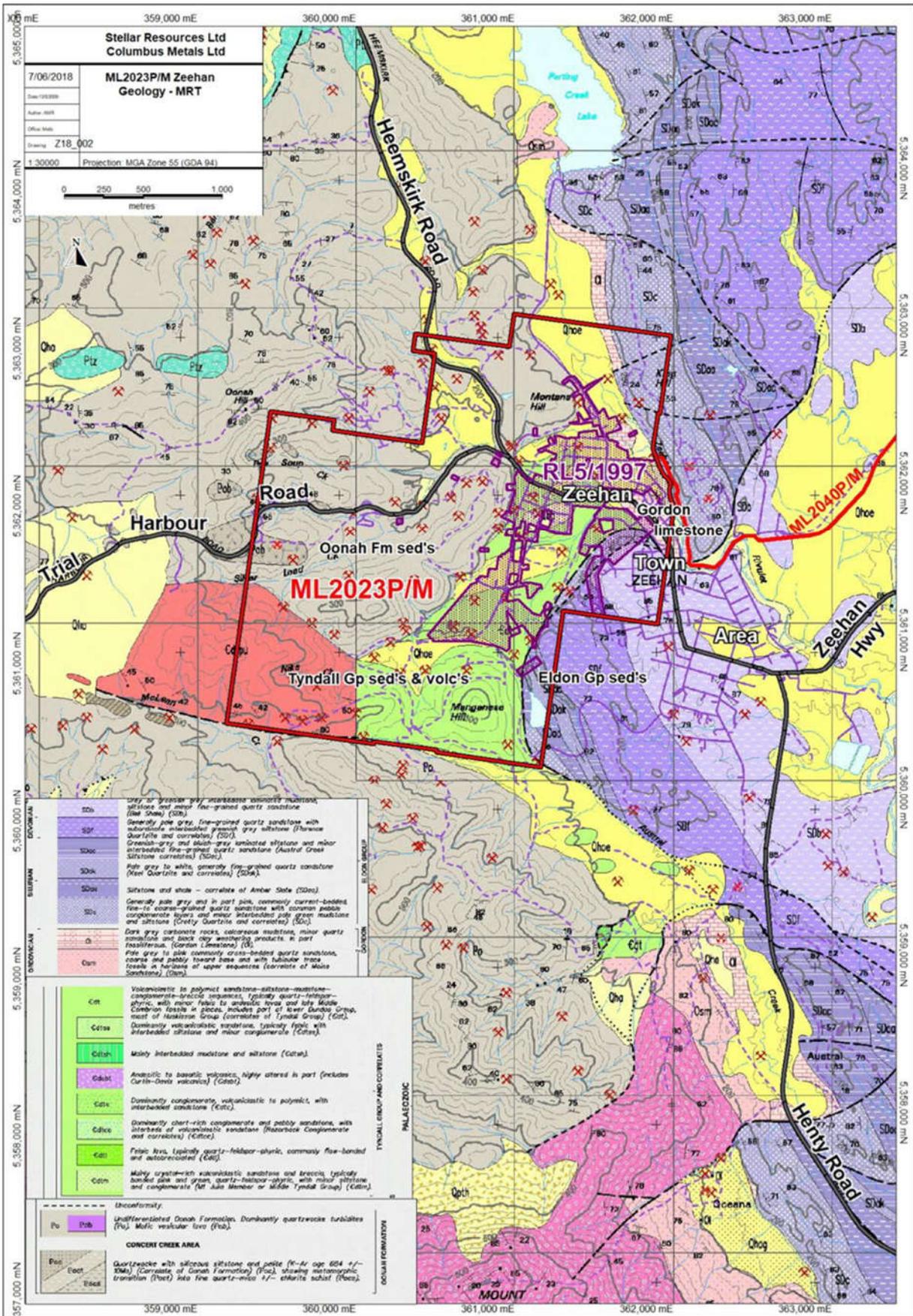


Figure 7. Regional Geology (MRT) Map

## 3.2 Mineralisation

Tin mineralisation at the Heemskirk Tin Project occurs as cassiterite in three main deposits: Severn, Queen Hill and Montana, with minor outcropping occurrences at Golf Course, Stormsdown and Poverty Point. The deposits are Renison Bell / Cleveland-type tin deposits in which granite-derived hydrothermal fluids, carrying tin, sulphur and other base metals, intruded along structural conduits and reacted with suitable lithologies, such as dolomite and carbonate rich volcanoclastic horizons, to precipitate generally sulphide-rich lodes containing cassiterite. Typical associated gangue minerals include pyrite, pyrrhotite, quartz, tourmaline, carbonates and fluorides.

In addition to the main high temperature tin-mineralising event, a later stage, cooler fluid event appears to have resulted in the formation of Pb-Zn-Ag sulphide lodes, which are not significantly tin-bearing. These lodes (Montana, Queen Hill and Oonah) were the focus of early 20th century silver-lead mining activity.

In all the Zeehan deposits cassiterite occurs as fine grained (20 - 70 microns) disseminations in stockworks and masses of fine-grained gangue comprising siderite, chlorite, silica, pyrite and pyrrhotite.

The four main lodes, including Queen Hill, Severn (Figure 8), Montana and Oonah deposits comprise a resource of 6.61Mt @ 1.1% Sn.

## 3.3 Historic Production

Between 1888 to 1925 the Oonah Mine produced 2.05 mill ozs Ag and 12,800 tonnes of Pb from 19,400t of high grade Pb-Ag ore (Galena Lode) and 20,000 of Cu-Sn-Ag ore (Stannite Lode).

Between 1892 to 1936 the Montana No 1 Mine produced 7.1mill ozs Ag and 49,580 tons of Pb from 8 levels to a depth of 253m, where the lode had diminished to a small uneconomic size.

Between 1901 to 1928 the Zeehan Western Mine produced 4.8mill ozs Ag and 26,300 tons of Pb from 13 levels to a depth of 330m, where the lode had diminished to a small uneconomic size.

Between 1902 to 1929 the Queen No 4 Mine produced 2mill ozs Ag and 16,530 tons of Pb from 4 levels to a depth of 70m.

In the 1920's several Pb/Ag prospects northwest of Zeehan were tested, and three small fissure style Pb/Ag mines (Barnett's, Quigley's and Big Ben) were operated sporadically.

From 1925 to 1954 the Oonah Mine was under lease but little production and from 1937 to 1950's the Montana Silver Lead Mine was worked.

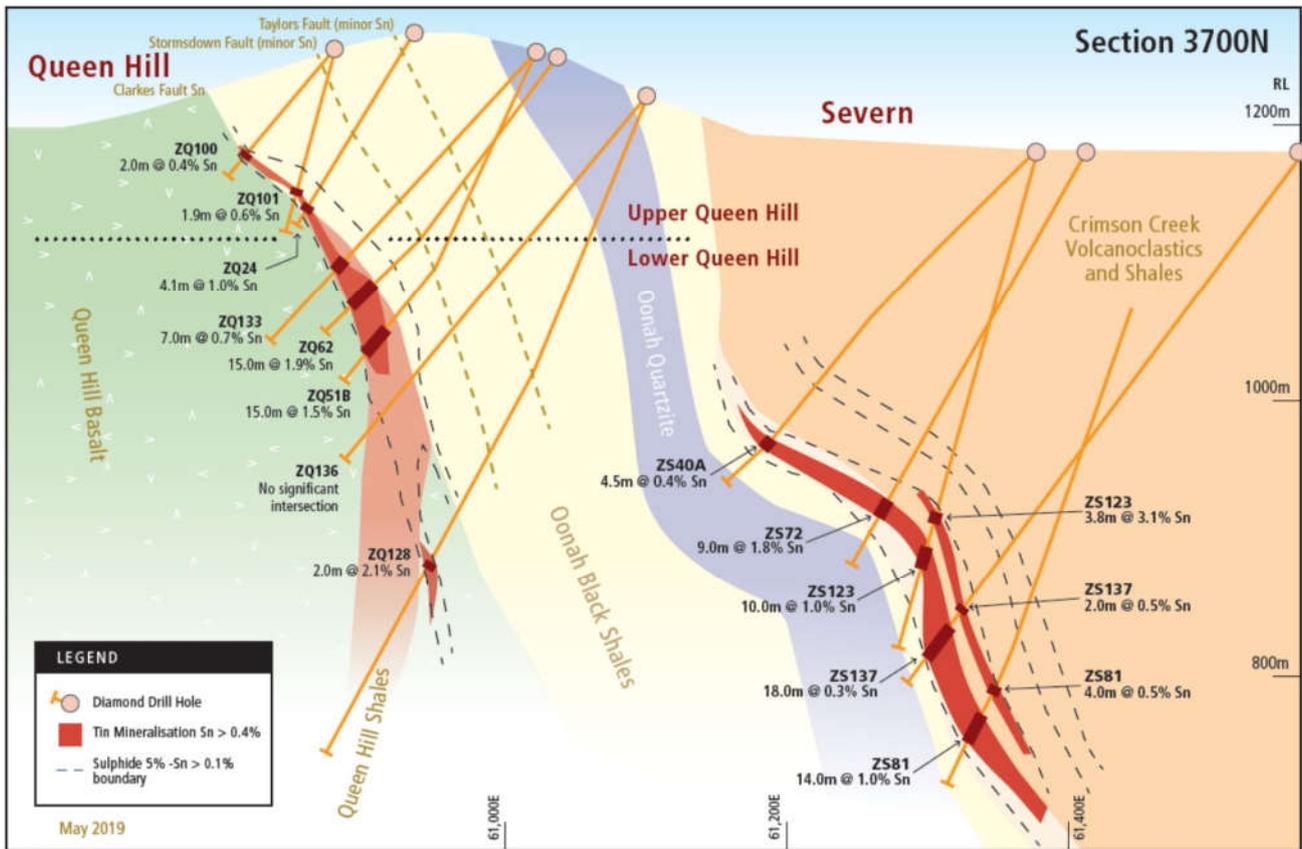


Figure 8. Schematic W-E cross-section 3700N, Queen Hill and Severn tin deposits

## 3.4 Geology of the Target

### 3.4.1 Zeehan Western Mine Target

The Zeehan Western mine is located on the NNW trending Montana Fault Zone (Figure 1) and consists of multiple sub parallel Ag-Pb-Zn fissure lodes. Historic mining extended to approximately 300m depth producing 4.8 Moz Ag and 26,300 tonnes Pb. Ore grades ranged from 86 to 100 Oz/t Ag (Blissett, 1962).

Together with the Montana No1 (7.1Moz Ag) Mine, the Zeehan Western Mines (4.8Moz Ag) were the largest producing Pb-Ag Mines in the Zeehan field. The deposits are considered to have potential to transition to pyrite hosted Sn deposits at depth.

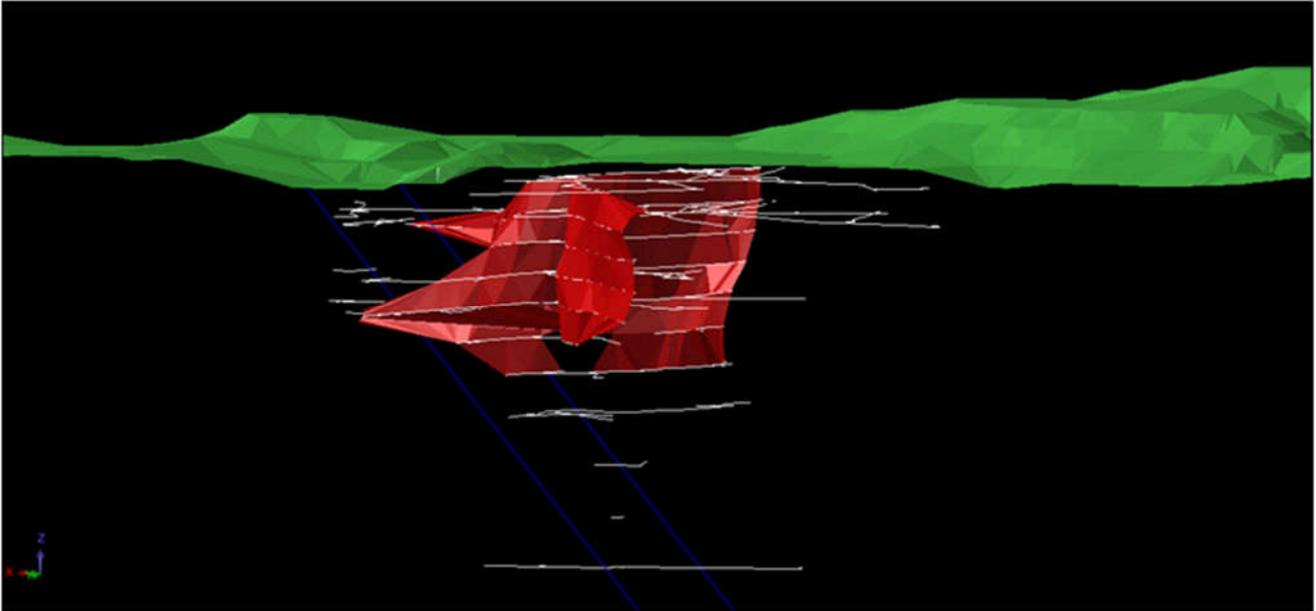
The Zeehan Western deposit is reasonably well understood from historic workings. The Government funded a 304m deep shaft, the deepest in the district. Multiple lodes (up to 11) were recorded striking NNW to NE with steep E dips, the most important was No 1 (Main) Lode. The lodes ranged from <1cm to 2.5m thick. Most production was from the upper 5 levels (<88m) from 5 lodes mined over lengths up to 300m (Blissett, 1962).

Mineralisation on deeper levels, below 88m, was regarded to be poor or erratically distributed. The No 11 level intersected a very narrow low-grade Ag-Pb lode which was traced for 300m with little workable ore except for small rich patches stoped out by tributors. Galena ore from 243m level assayed 77% Pb and 148 ounces of silver per tonne. Three thin veins were intersected on the bottom No 12 (304m) level but were unworkable and the mine was abandoned in 1908 (Blissett, 1962).

Zeehan Western is an attractive drilling target for depth extensions transitioning into tin mineralisation as it contains a number (11 recorded) of silver-lead fissure vein lodes within the Montana Fault Zone. No pyrite lodes were recorded.

Two reconnaissance diamond drillholes were designed to test for down dip transitional cassiterite mineralisation below the base metal veins and the mine workings (as modelled by Stellar Resources). The holes aimed to test approximately 100 m below the lowest mine level (Figure 5, Figure 6 and Figure 9).

The proposed drillholes testing the depth extensions of the Zeehan Western deposit are displayed as a plan in Figure 6 and in oblique section in Figure 9.



*Figure 9. Zeehan Western oblique NE view with proposed drillholes*

## 4. WORK COMPLETED

In November and December 2021, a single diamond hole (ZW145) was completed on EL13/2018 as part of Mineral Resources Tasmania's (MRT) Exploration Drilling Grant Initiative Program (Round 5) to test for down dip transitional cassiterite mineralisation below the base metal veins at the Zeehan Western Mine. The hole tested approximately 30m below the lowest mine level.

### 4.1 Drilling

Between the 3rd of November 2021 and the 7th of December 2021, Spaulding Drillers Pty Ltd of Devonport drilled one angled diamond hole, for a total of 372 metres within EL13/2018. Drill hole ZW145 is detailed in Table 2 and location shown in Figure 1. The hole was drilled to the west-northwest at roughly right-angles to the NNW trending/E dipping mineralisation. The hole was drilled by triple tube HQ diamond drilling to 174m and then triple tube NQ diamond drilling to the end of hole. The original EDGI proposal was for two 400m holes (total 800m) however, the second hole was cancelled due to narrow mineralisation intersected in the first hole (ZW145).

**Table 2. Drillhole location – Zeehan Western Mine (GDA94 MGA 54 grid)**

Hole	East	North	Elevation (mRL)	Azimuth	Inclination	Total Depth
<b>ZW145</b>	360,811	5,363,106	221.2	282.82	-50.51	<b>372.0m</b>

### 4.2 Surveying

Collar coordinates (E & N) are recorded by GPS and are yet to be surveyed. The RL's have been determined by pressing the collar onto the Lidar topography surface due to inaccuracy in GPS Z values.

The hole was drilled triple tube (HQ3, NQ3) with oriented core using digital Ori tool.

The hole was surveyed with a single shot magnetic survey instrument at 30 metre intervals.

The downhole surveys are provided in Appendix 1.

### 4.3 Logging and Photography

The hole was geologically logged in full for core recovery, RQD, weathering, oxidation, lithology, alteration, mineralisation, vein types and vein intensity. Primary data was collected digitally using a field laptop computer using in-house logging codes. The data was checked and verified prior to entering into a master database. Logging codes are provided in Appendix 2.

The drill core was photographed while wet and before cutting (full core). Photos of core trays are presented in Appendix 3.

Magnetic readings were collected and on 1m intervals over the core using a magnetic susceptibility meter.

pXRF readings were taken at irregular intervals down the hole.

Digital drilling data, including collar, survey, lithology, alteration, veining, mineralisation, recoveries and magnetic susceptibility are provided in Appendix 1.

## 4.4 Sampling and Analysis

HQ and NQ drill core was cut on site and ½ core samples collected. Core was sampled to mostly 1 metre lengths but also to geological boundaries where relevant.

A total of 12 samples for ZW145 (plus 3 QA/QC samples) were sent to ALS in Burnie for sample preparation and total Fe, S, Sn and WO<sub>3</sub> analysis using the ME-XRF15d fused disc XRF method before being on-sent to ALS Brisbane for acid soluble aqua regia digestion ICP-MS multi-element analysis (ME-ICP41a method), and, where required, overlimit Pb, Zn & Ag analysis by acid soluble aqua regia digestion (ME-OG46 method) and, where required, overlimit Pb analysis using the fused disc XRF technique (ME-XRF15d method) (see Table 3).

Assay results are in are provided in Appendix 1.

**Table 3. Analytical Methods.**

ALS Code	Digestion	Analysis	Elements
ME-XRF15d	NA	XRF fusion	Fe, S, Sn, WO <sub>3</sub>
ME-ICP41a	Aqua Regia Digestion on 0.4g sample	ICP-MS	Ag, Al, As, Ba, Be, Bi, Ca, Co, Cr, Cu, Fe, Ga, K, La, Li, Mg, Mn, Mo, Na, Ni, P, Pb, S, Sb, Sc, Sn Sr, Th, Ti, Tl, U, V, W, Zn.
ME-OG46 (Overlimit Base Metals Method where over ME-ICP41a limits)	Aqua Regia Digestion on 0.4g sample	ICP-MS	Pb, Zn, Ag
ME-XRF15d (Pb Overlimit Method where Pb over ME-OG46 limits)	NA	XRF fusion	Pb

## 5. RESULTS

### 5.1 Summary of Results

A summary of the lithology, alteration and veining within the drill hole is given below together with commentary on the analytical results.

### 5.2 Hole ZW145

Drillhole ZW145 was designed to test the depth extensions of the E-dipping Ag-Pb-Zn vein mineralisation where the base metal mineralisation was inferred to transition down-dip to pyrite-hosted cassiterite mineralisation below the lowest mine level.

The hole intersected lithologies of the Oonah Formation with black shale the predominant lithology and basalt in two zones between 127.8m to 226.3m and 339.5m to 342m.

The narrow (0.4m) mineralised interval from 55.6m comprises semi-massive sphalerite associated with siderite veins within brecciated black shale.

The narrow (0.4m) mineralised interval from 226.3m to 226.8m consists primarily of galena veins with disseminated sphalerite in a brecciated siderite zone within basalt.

From 320.85m to 321.05m (0.2m length) a narrow vein of siderite has blebs of galena within black shale. No significant Sn mineralisation is observed in this hole ZW145.

The hole was stopped short of the planned depth of 400m due to only minor silver-lead-zinc fissure vein mineralisation observed in core over narrow intervals shallower than the expected depth.

Assay results from drillhole ZW145 targeting depth extensions of the Zeehan Western historic mine completed in December 2021 confirm narrow high-grade silver-lead-zinc fissure veins with significant intercepts as shown in Table 4. The results did not confirm the continuation of tin mineralisation ~30m below the historical Zeehan Western silver lead mine as shown in Figure 10.

**Table 4. ZW145 Significant Intersections**

Hole	From (m)	To (m)	Length (m)	Sn (%)	Cassiterite Total Sn	% of	Cu (%)	Pb (%)	Zn (%)	Ag (g/t)
ZW145	55.6	56.0	0.4	0.01	100.0%		0.03	0.05	11.25	24.0
ZW145	226.3	226.8	0.4	<0.01	-		0.01	6.15	0.33	235.0

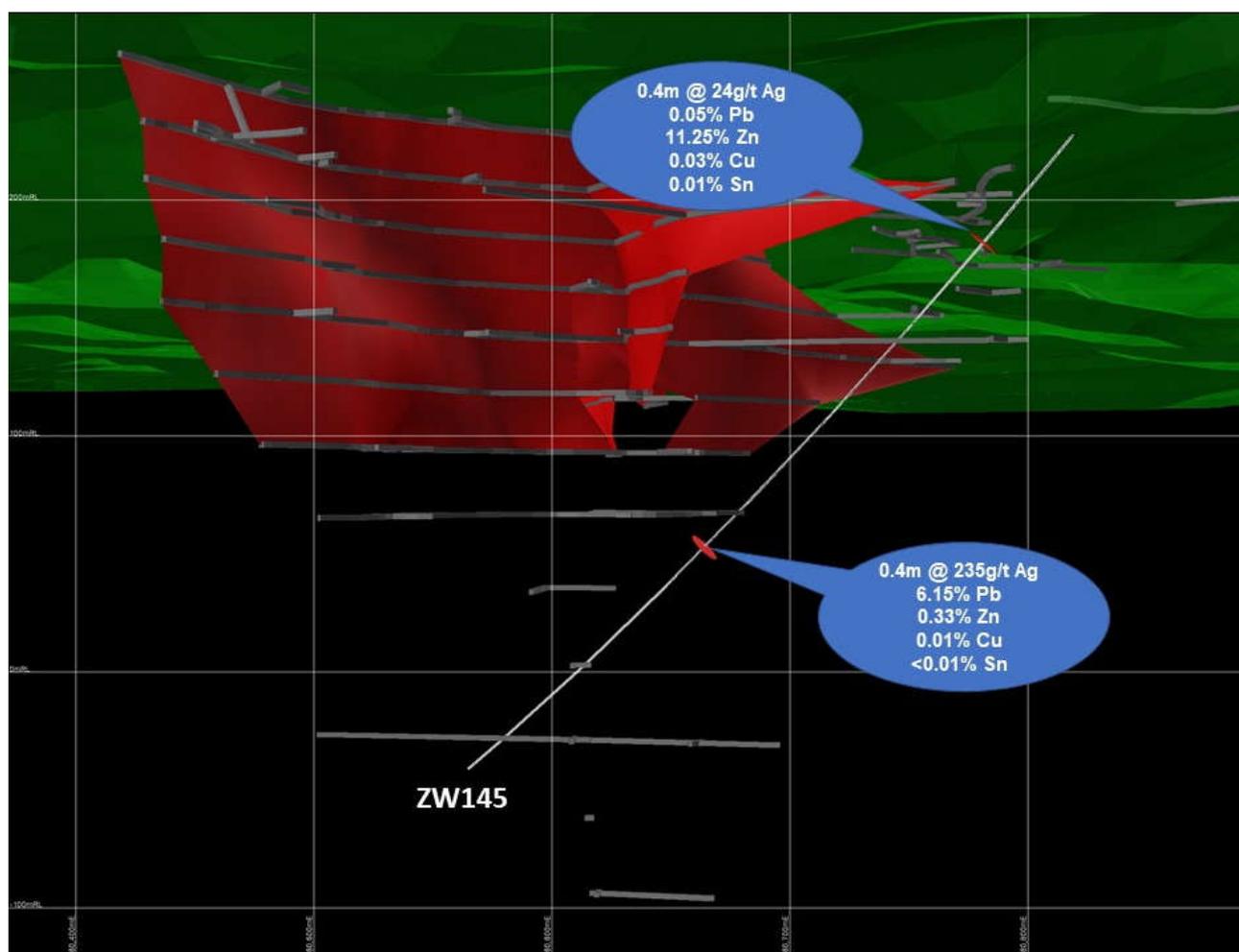


Figure 10. Zeehan Western West-East Cross-section 5363100mN (GDA) showing Hole ZW145

### 5.3 QA/QC

OREAS certified reference material standards are inserted approximately every 20 samples using Sn standards SZSt.1, SZSt.2 and SZSt.3 and Pb-Zn standard Std. 630b. One (1) OREAS\_SZ\_St.3 standard (Pb-Zn reference material) was submitted.

Course blanks and fine blanks are also inserted after mineralised zones. One (1) coarse blank was submitted. Duplicate samples are requested approximately 20 samples for the lab to repeat the sample. One (1) Duplicate was sampled.

Analyses for the certified reference material, blanks and duplicates returned values within acceptable limits for all standards and the duplicate assays showed very good precision.

## 6. DISCUSSION OF RESULTS

A single diamond drillhole (ZW145) co-funded under EDGI 2021 Round 5 was unsuccessful in intersecting tin mineralisation below the base of the existing workings at the Zeehan Western Mine. The Zeehan Western mine was historically known for Ag-Pb production as one of the largest producers in the Zeehan field. The hole was stopped short of the planned depth of 400m due to only minor silver-lead-zinc fissure vein mineralisation observed over narrow intervals in core shallower than the expected depth.

The assay results of the drillhole ZW145 confirm two narrow high-grade silver-lead-zinc fissure veins with best intersection of 0.4m @ 235 g/t Ag, 6.15% Pb, 0.33% Zn from 226.3m depth. Tin was not anomalous, and the results do not confirm the continuation of tin mineralisation below the depth of the historic workings.

While it was considered that at depth that cassiterite will transition from Ag-Pb-Zn mineralisation, the drilling confirmed that this transition is expected below the current depths of this EDGI 2021 Round 5 drilling, but the expected width of tin mineralisation may be narrow.

The drilling program at Zeehan Western has added important geological information regarding the tin and silver-lead-zinc zonation together with stratigraphy, structure, alteration, and controls to mineralisation of the prospect area. The company will continue to use the data collected to make further interpretations, particularly with the use of multielement data and detailed stratigraphic data.

## 7. RECOMMENDATIONS FOR FURTHER WORK

Further work would be required to elucidate the significance of the high grade, but narrow Ag-Pb-Zn mineralisation and whether the Company consider the tenor of alteration, mineralisation and veining too narrow to warrant any further drill testing. This work would involve structural studies and updating the stratigraphic and zonation model for the Zeehan Western Mine ahead of a commitment of deeper drill testing.

## 8. ENVIRONMENTAL MANAGEMENT

Two diamond holes were planned but only one hole was drilled at Zeehan Western Mine as part of EDGI Round 5 in 2021 with hole ZW145 collared on EL13/2018. The Zeehan Western drill sites required the construction of two drill pads with only one being utilised.

Pad preparation, drilling and rehabilitation was conducted in accordance with the Mineral Exploration Code of Practice. The completed ZW145 drill collar has yet to be capped, as it is awaiting a survey pickup for a measured collar location. The drill site has yet to be rehabilitated, with this activity scheduled to be undertaken once the collar survey has been completed. Site rehabilitation for the unused drill site will be undertaken concurrently with rehabilitation work at the ZW145 drill site.

## 9. EXPENDITURE

Stellar Resources Ltd (Stellar) was successful in its application for an Exploration Drilling Co-funding grant (\$50,000) under the Tasmanian Government's Exploration Drilling Grant Initiative Program 2021, Round 5 for the Zeehan Western Mine Project.

The total direct drilling costs, excluding mobilisation, for the one hole drilled at Western Zeehan (ZW145) was \$77,667. The total eligible direct drilling costs (50%) were \$38,833 (Table 5).

The final EDGI grant amount is \$38,833.

The Approved Purpose is: Zeehan Western Mine Drilling Project - 2 x Exploration drillholes for 800m as specified in the EDGI Proposal.

*Table 5. Expenditure (excl GST)*

Drillhole	Total Direct Drilling Costs	Eligible Direct Drilling Costs
ZW145	\$77,667	\$38,833

An Excel spreadsheet which calculates the direct drilling cost for each hole from daily drill plod and invoice data has been provided along with this report. Copies of the drilling invoices and drill plods have also been provided.

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## 11. LIST OF FILES ACCOMPANYING THIS REPORT

Exploration Work Type	Filename	File format
<b>Report</b>	EL132018_202204_EDGI_Zeehan Western_01_Report.pdf	<i>pdf</i>
<b>Drilling</b>		
	EL132018_202204_EDGI_Zeehan Western_02_Appendix 1_data-submission.accdb	accdb
	EL132018_202204_EDGI_Zeehan Western_03_Appendix 2_Logging Codes.pdf	pdf
	EL132018_202204_EDGI_Zeehan Western_04_Appendix 3_Core Photos.jpg	jpg
	EL132018_202204_EDGI_Zeehan Western_05_ZW145_Tabulated Core Photo Index.xls	xls

## APPENDIX 1 - Digital Data

## APPENDIX 2 – Logging Codes

## APPENDIX 3 – Core Photos