

**Exploration Licence 17/2017**

**Poimena, NE Tasmania**

**EDGI Final Drilling Project Report**

May 2024



**Yunnan Tin Australia TDK Resources Pty Ltd**

**15 Gubbuteh Road Little Bay**

**NSW 2036**

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**Date:** May 2024

*Coordinate system used in maps and diagrams within this report is MGA55 (GDA94), unless otherwise specified.*

# Abstract

2 x 250m diamond core holes were drilled at Anchor to examine the tin and REE/critical element potential at depth associated with an interpreted regional-scale structural lineament.

An exploration work program was submitted to MRT for environmental approval in July 2023. The first EDGI drill hole, ATD1 was collared on 31/08/2023. Two drill holes for a total of 487m were drilled. Hole ATD2 was completed on 28/09/2023.

Drill hole ATD1 intersected a zone of lithium bearing mica-rich alteration with visual similarities to mineralisation typical at the large Cinovec lithium deposit on the Czechia-German border in Europe, however the lithium analyses returned overall low values.

It is believed that the two EDGI holes have confirmed the existence of the Crystal Creek Lineament feature in the vicinity of the Anchor deposit, and may be explained by a structural zone, that has been intruded by a distinctive quartz-feldspar-phyrlic intrusive in parts.

\$96,724 (**excluding** GST) was spent directly on drilling and assaying costs (Spauldings Drillers and SGS Laboratories) to complete the two holes.

Approval to deliver the drill core to the MRT Mornington core storage facility was received via email on 27/02/2024 from Lia Unwin. Core was delivered on 25/03/2024 by Tasfreight.

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- Appendix E: csv data files: csv format, zipped
- Appendix F: ATD1 and ATD2 plan view of drill traces

# 1. Introduction

EL17/2017 is located in north east Tasmania approximately 80 kilometres NE of Launceston and 25 km north-west of St. Helens (Figure 1).

The area can be accessed by minor roads and vehicle tracks originating from the Tasman Highway.

The historic Anchor Tin Mine consists of a series of open pit and underground workings covering an area of 50,000m<sup>2</sup> and lies on the southern slopes of the Blue Tier, a mountain plateau at an elevation of nearly 800m. The mine site is close to the abandoned township of Lottah, about 23km NNW of St Helens. The area is covered by the Tasmania North East 1:250,000 map sheet and the Georges Bay 1: 100,000 map sheet.

## 1.1. Tenement Details

Exploration Release Area (ERA) 1041 was offered for tender by Mineral Resources Tasmania following the expiry of EL 31/2010 Poimena, held by Jiyuan Mining Pty Ltd and TNT Mines Limited's RL 1/2009 Lottah, which enclosed the Anchor mine lease 55M/1989.

The licence (68 sq. km.) was granted as EL17/2017 on 6th December 2017 to Yunnan Tin Australia TDK Resources Pty Ltd for a period of five years.

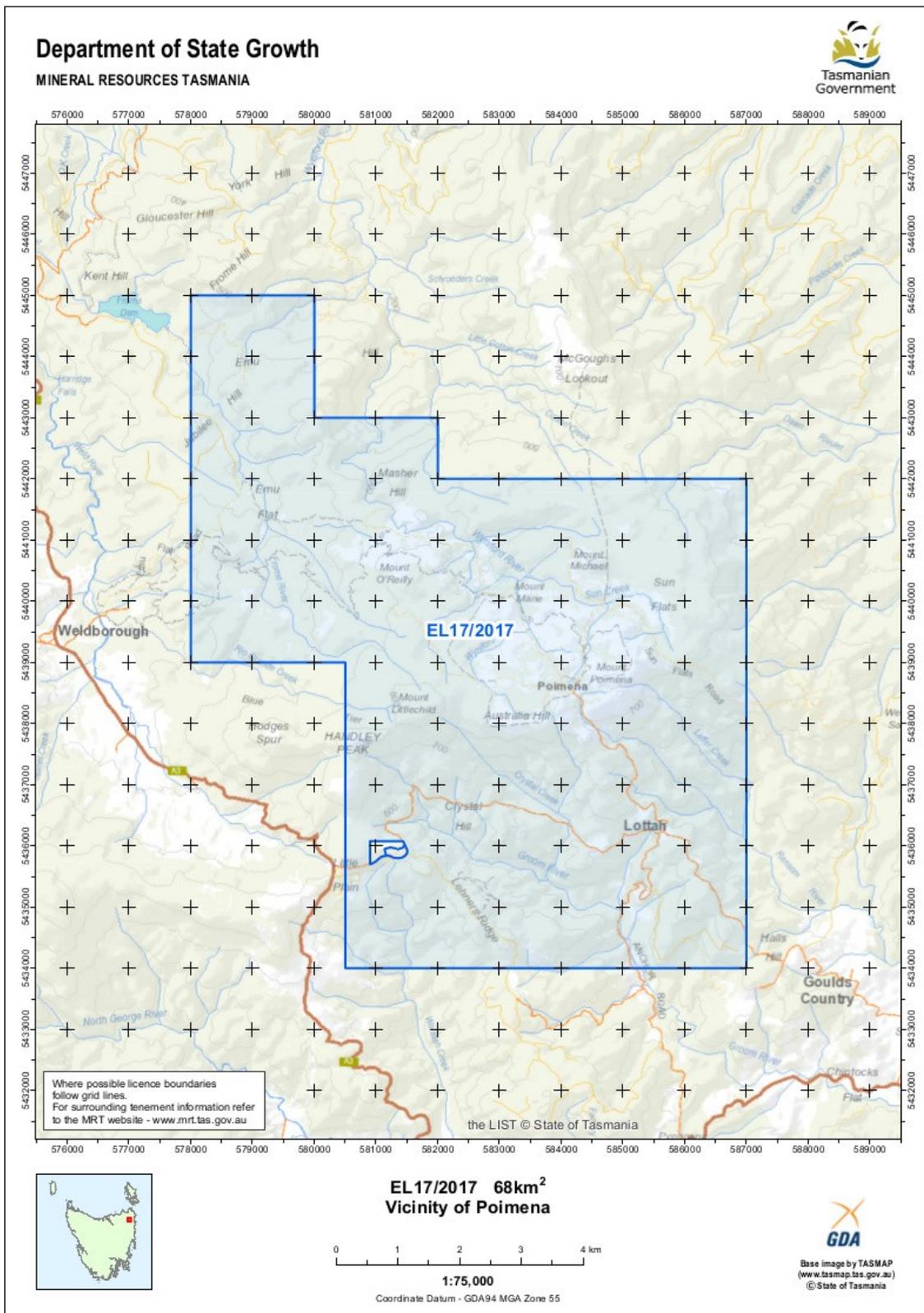


Figure 1: Location of EL17/2017

## 1.2. Land Tenure

The majority of the land in the Poimena licence is classified as either Future Potential Production Forest or Regional Reserve (Figure 2). A small stone and gravel mine lease is situated in the south-west of the licence area.

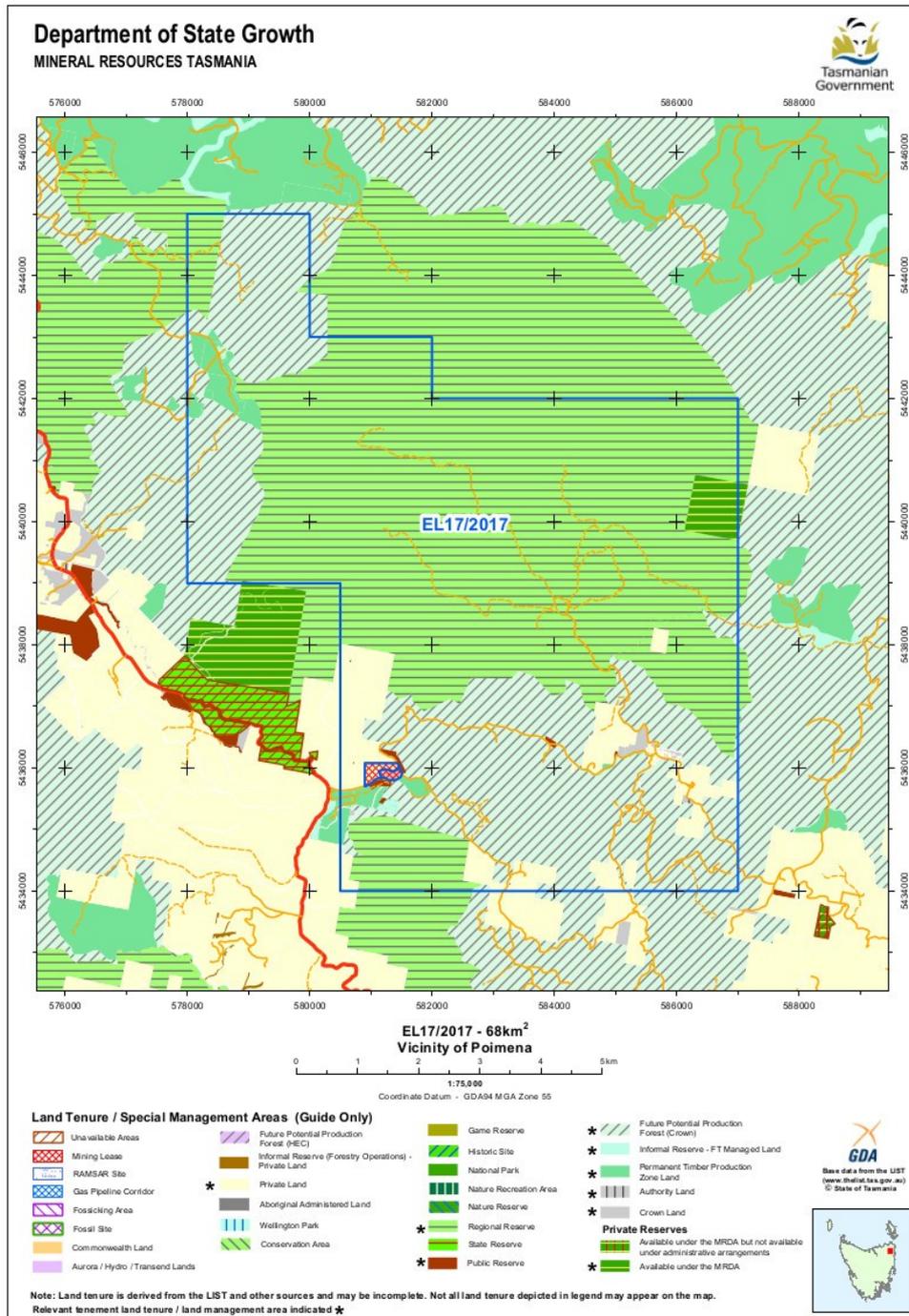


Figure 2: Land Tenure EL17/2017

## 2. Geology

### 2.1. Regional Geology

The north east of Tasmania contains extensive intrusions of biotite and biotite hornblende granite and granodiorite into moderately folded Lower Palaeozoic rocks. These granitic rocks are medium to coarse grained and porphyritic with phenocrysts of oligoclase up to 75mm long. The porphyritic granites are intruded by hydrothermally altered biotite-muscovite granite in which most of the tin mineralisation is found.

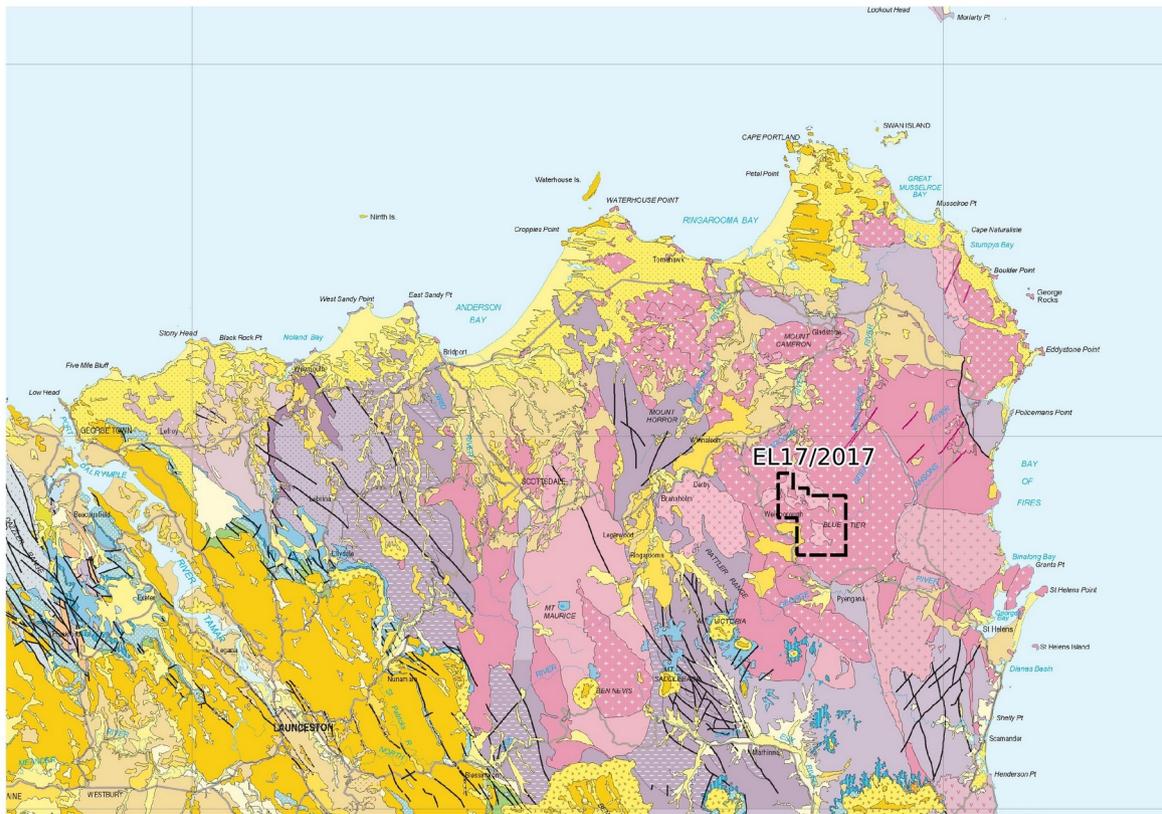


Figure 3: 1:250,000 Regional Geology

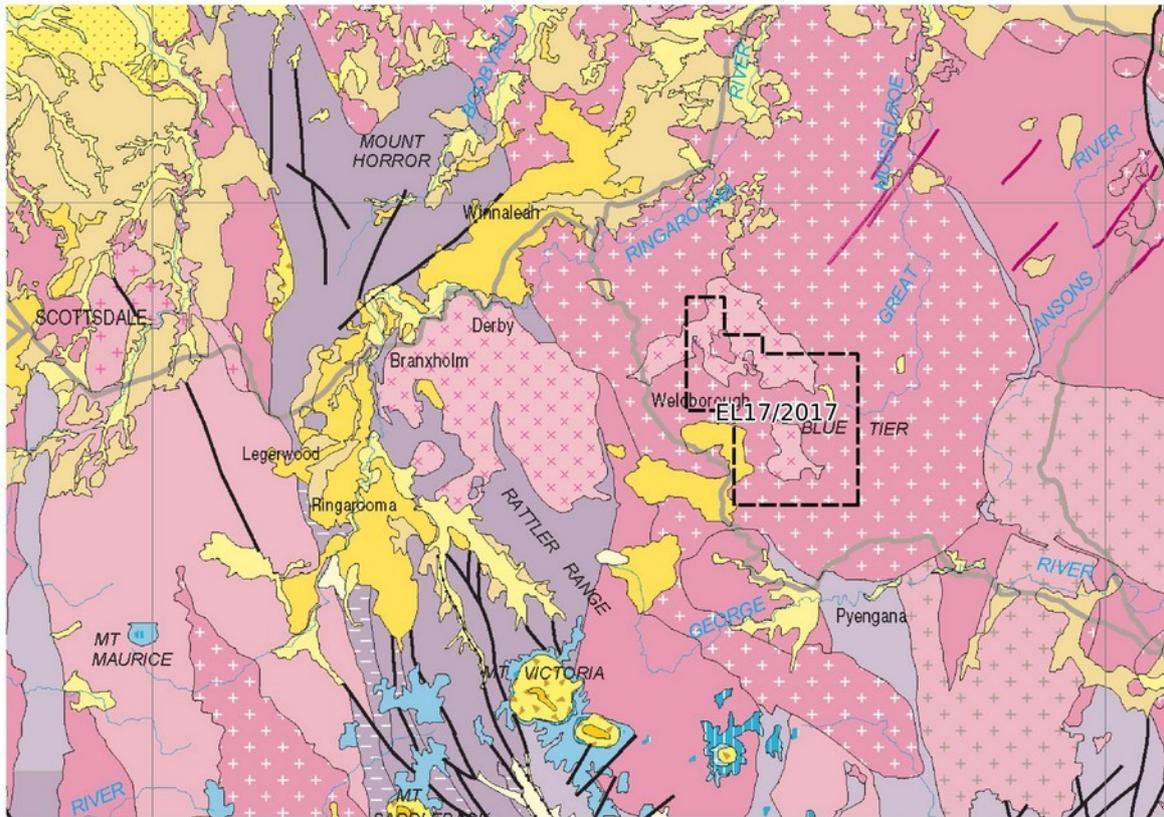
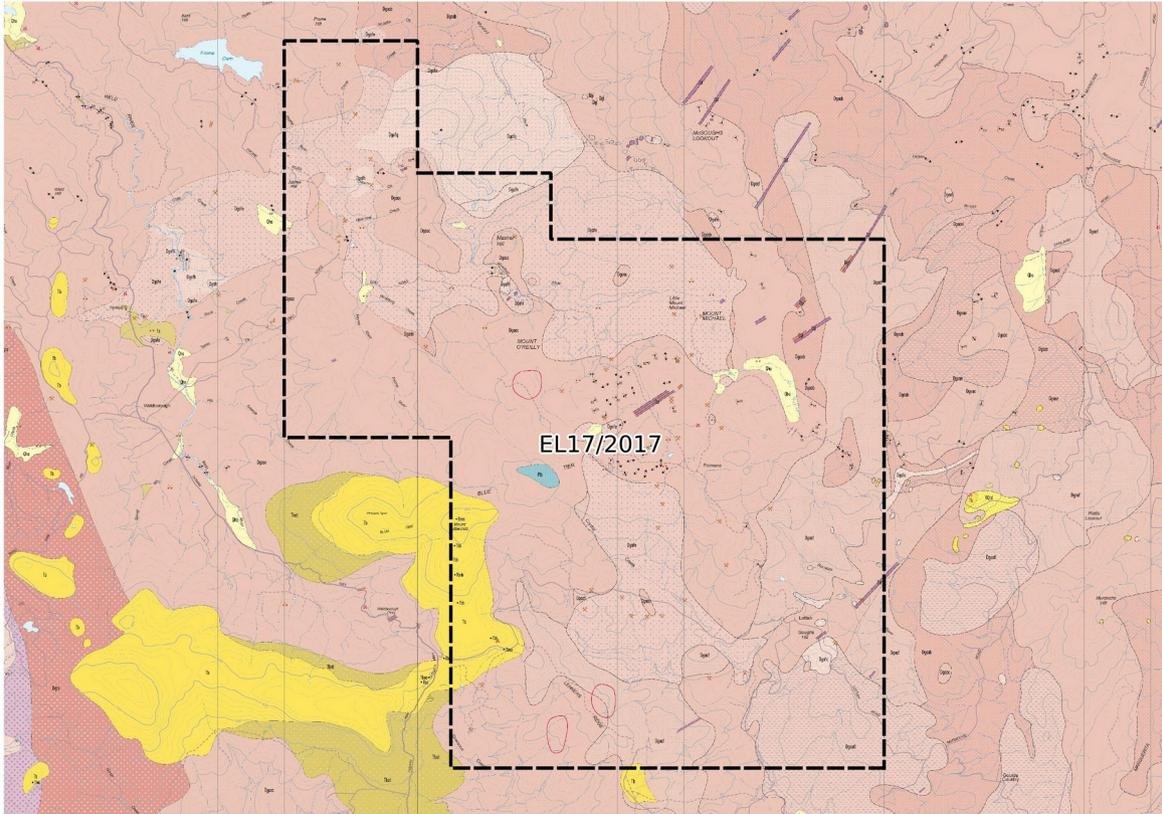


Figure 4: Regional 1:250,000 geology (zoomed in)

## 2.2. Local Geology and Mineralisation

The abandoned workings of the Anchor Mine occur in a series of Upper Devonian granitic intrusive rocks collectively known as the Blue Tier Batholith. Cassiterite mineralisation occurs in an altered zone approximately 750m in length x 100m wide x 40m thick located at the top of a medium-grained equi-granular alkali granite (Anchor Granite) and beneath the contact of this granite with an overlying coarse-grained porphyritic adamellite (Poimena Adamellite). This contact can be marked by a pegmatitic zone up to 200mm wide often richer in biotite. The tin granite normally exhibits a distinct foliation parallel to the contacts which results in close-set partings in weathered outcrops. The Anchor granite is intrusive (in more than one closely-timed phases) into the Poimena Adamellite and the altered mineralised zone is believed to have formed during the late-stage cooling of the younger intrusion – whereby late magmatic and hydrothermal fluids have been trapped in local structural highs.



*Figure 5: 1:25,000 local geology*

The mineralised zone is defined as a body of stanniferous altered granite generally containing in excess of 150 – 500ppm Sn. Within this body there are zones of higher grade mineralisation which can be assessed at cut-off grades of 0.1 and 0.2% Sn for bulk-mining purposes. Using a cut-off grade of 0.2% Sn, a persistent zone of higher grade mineralisation (termed A-Lens) has been defined north-east of the old workings and immediately below the barren adamellite. In the remainder of the deposit that is essentially below A-Lens there are additional more erratic zones of 0.2% Sn, these zones comprising what is known as B-Lens.

Cassiterite and traces of sulphide and wolframite accompany the formation of alteration minerals in the Anchor Granite. Cassiterite is the only tin mineral present and occurs as disseminations and less commonly, as discrete clusters in mica-rich segregations. Sulphides, where present occur as disseminations and clusters, their overall abundance related to increased alteration – often resulting in anomalous levels of Ag associated with Cu (and occasionally Zn) sulphides.

Alteration in the Anchor Granite is characterised by the development of greisenised granite and granular greisens. Greisenised granites retain much of the primary feldspar and still display a granitic texture whereas granular greisens are often coarser grained than the

unaltered granite and are devoid of a granitic fabric and often have a stressed appearance. Colour changes are subtle and are generally characteristic of the intensity of alteration – from white to cream granite, through light grey-green greisen granite to dark grey-green greisen. A-Lens mineralisation is accompanied by intense alteration, the dominant lithology is a quartz-topaz-mica granular rock with minor greisen granite. The remainder of the deposit consists of dominantly greisen granite at various stages of alteration with minor amounts of intensely altered granular greisen.

### **2.3. Exploration Rationale**

The Anchor mine produced about 3,800t of tine from treatment of about 2Mt of ore at a recorded grade of 0.2% tin. Mineralisation was hosted by several relatively flat-lying deposits associated with granitic contacts.

Yunnan Tin Australia TDK Resources Pty Ltd (YTA) is interested in examining the potential for a large open-cuttable tin resource (at a low strip ratio) at Anchor, and also testing the tin potential in other parts of the tenement, particularly the Cream Creek area.

### **3. Review of Previous Exploration**

#### **3.1. Historic Mining (Anchor Deposit)**

Tin mining commenced in this area in 1875 with the sluicing of alluvial and eluvial tin. During exploitation of these surface deposits primary tin mineralisation was identified in the granites and mining of these deposits followed. Mining at the Anchor deposit commenced in 1895 and the treatment plant was powered by a large water wheel which ultimately powered two fifty head batteries of stamps capable of crushing up to 300 tons per day. Treatment was suspended in 1914 and very little work was undertaken until 1934. Tributers operated from 1914 to 1923 and again in 1928. The Anchor Tin Syndicate began production in October 1934 with a ten head battery of stamps that was soon increased to twenty heads. This operation was taken over by Tasman Tin NL and continued until 1942, with the mine being finally operated by tributers. Between 1934 and 1942 146,848t were treated for 243.2t of tin metal for a recovered grade of 0.17% Sn. Total production has been estimated at 1.94Mt of ore at 0.2% tin to produce about 3,000t of tin (other Blue Tier mines produced about 1,000t and sluicing produced about 5,000t of tin).

Between 1989 and 1991 Spectrum Resources Pty Ltd is estimated to have mined 124,000t at 0.61% tin and Mancala Pty Ltd 91,000t at 0.40% tin in 1995-96.

The Aberfoyle Tin Development Partnership undertook the first significant exploration of the area in 1963-1966. Thirty nine diamond core holes were drilled but the results did not meet their target for an economic operation. In 1976 Hellyer Mining and Exploration Ltd (Hellyer), a subsidiary of Santos Ltd, was granted EL 9/76 covering 76 km<sup>2</sup> including the Anchor Mine. In 1977 a joint venture with Renison Ltd was agreed and drilling of 105 holes in the vicinity of the Anchor Mine was carried out until 1981 followed by metallurgical investigations and feasibility studies. Further drilling of nearby prospects continued and some geochemical studies were undertaken to determine if favourable cupolas could be identified by chip sampling. Early in 1985 it was decided that the probability of finding significant quantities of concealed greisen mineralisation was low, and there were insufficient reserves to justify developing a mine. EL 9/76 was relinquished and a 10 km retention licence (RL 8713) around the Anchor deposit granted.

Renison's 60% interest in the JV was subsequently acquired by Spectrum Resources (Australia) Pty Ltd (Spectrum). The JV was granted along with a number of leases (55M/88 Anchor, 56M/88, 57M/88, 58M/88, 4W/88, and 5W/88). Spectrum then bought out Hellyer's 38% interest in the JV but the 2% interest of Nargun Pty Ltd was still held by that company. Spectrum then developed an underground mine and gravity concentrator at Anchor during 1988-89 with a capacity of 100,000 t/y and a projected life of six years. This was commissioned in January 1990. Unfortunately tin prices fell dramatically from over US\$10,000/t in 1988 to less than US\$6,000/t in 1991. Operations were suspended in December 1991 in response to grade problems, an under-performing mill, and the weak tin price. The operation was placed on care and maintenance.

In July 1994 Spectrum was purchased by Mancala Pty Ltd (Mancala) after a feasibility study of the Anchor deposit had been completed. Additional metallurgical testing was carried out along with some modifications to the mill. Mancala re-opened the mine during 1995–96 and also re-treated some tailings, but the mill still under-performed and head grades were below expectations, so the operation was again suspended.

In 2001 the mine was formally closed and rehabilitation work was carried out during the year. This included the sealing of underground workings, the dismantling of the concentrator and transport of it from site, and the disposal of rubbish. The tailings dam wall was stabilised and re-contoured and disturbed areas were seeded and fertilised.

### **3.2. Previous Exploration and Activities (Anchor Deposit)**

From 1904-07 the Mt Lyell Mining and Railway Co. carried out a program of trenching and drilling to produce a "value – contour plan" of the central part of the Blue Tier tin field. In 1960 the Electrolytic Zinc Company of Australasia Ltd. took an interest in the area and re-assessed available data and carried out some geological mapping. This work was designed to make a regional appraisal of the potential of the district and concluded no further work was justified. A considerable amount of exploratory work would have been undertaken by the various mining operations that operated, but most of this is unrecorded and was evaluating mineralisation that has since been mined.

The first significant modern exploration program was undertaken by the Aberfoyle Tin Development Partnership in 1963. This program of work was conducted by Aberfoyle Tin Ltd

and focussed on the Anchor deposit. Initial work consisted of five vertical channel samples on the eastern wall of the Anchor open pit. The work “identified a thin but well defined body of mineralisation averaging 4.25m thick, grading 0.57% tin, over a length of 130m and overlain by 24m of barren rock”. This was a minimum thickness since the bottom of the mineralisation was not exposed. Follow-up consisted of five (BX) diamond core vertical holes for 94m, at the channel sample locations, and was collared in the floor of the open pit. The program (holes BT 1 – 5) was conducted in 1964. Based on the results, only two layers of mineralisation were identified dipping gently to the south and were interpreted as flat east-west. Previous sampling of the east face of the open pit suggested that further zones might be present, and a second diamond core program of six (AXT) holes for 367.6m was drilled east of the Anchor open pit (BT 6 – 11). On completion of this work in 1965, four flat lying zones of cassiterite mineralisation were defined.

Considering the prevailing tin prices at that time, it was estimated that 2Mt at 1% Sn could form the basis for a successful mining operation. A third diamond core drilling program of 35 (AXT) holes 60-75m deep on a roughly 50m square grid was undertaken with the objective of establishing a resource of this size/grade or better. Holes BT 12 - 39 were drilled during 1965 - 66. By hole BT 21, the drilling results had shown that the prospective mineralisation was trending to the north-east (Holes BT 7 & 9). The planned program was therefore suspended on 1st December 1965. A revised drilling plan was undertaken in February 1966. 27 holes were drilled in this third program for 2,331.7m bringing the total meterage drilled to 2,851m. The revised program included an extension of BT 19 and an extension and wedging of BT 21.

Hole 1A was drilled by the Tasmanian Department of Mines to the north of the Anchor open pit in January 1968 but failed to intersect any significant mineralisation. Based on the results of the drilling, Aberfoyle identified four sub-horizontal cassiterite bearing zones which fluctuated widely in thickness and tenor and possibly a fifth zone. Associated minerals included chalcopyrite, bornite, fluorite, and molybdenite. The mineralised zones also typically carried several grams per tonne of silver. These mineralised zones are developed beneath the domed upper contact of the tin granite. While some of the holes are widely spaced they are interpreted to establish that the higher grade mineralisation is present in a distinct band striking north-east from the Anchor open pit.

A pre-JORC resource was estimated in by Aberfoyle in 1966 : 430,000t at 0.64% Sn at a cut off of 0.4% Sn or 1.95Mt at 0.23% Sn at a cut off of 0.1% Sn. This was considerably below Aberfoyle’s target of 2Mt at 1% tin and therefore it was recommended that no further work be

undertaken, and the Aberfoyle Tin Development Partnership terminated the joint venture. In 1977 Hellyer Mining and Exploration Pty Ltd (Hellyer) held EL 9/76 (76 km<sup>2</sup>) covering the main tin prospects in the Blue Tier district. Hellyer approached Renison Ltd (Renison) a subsidiary of Consolidated Gold Fields Australia Ltd, and a joint venture was set up in December 1977. Under the JV Renison could earn a 60% interest with expenditure of \$500,000. By November 1978 twenty seven DC holes had been drilled for 3,332m together with associated surveying, mapping, assaying, metallurgical, and geophysical programs. A marginal greisen-style tin deposit was identified and a resource estimated of 2.5Mt at 0.27% Sn. It was suggested that a deposit of 5 - 6Mt of similar grade and metallurgical characteristics would be financially attractive. From August to December 1979 holes BT69 to BT77 were drilled by Renison, and from April to August 1980 holes BT79 to 89, BT 91 to 94, & BT 96 were drilled.

Renison made a pre-JORC assessment of the Anchor mineralisation as: 1.96Mt at 0.40% Sn trending NE from the present open pit, and 60,000t at 0.36% Sn in the floor of the present open pit giving a total resource of 2.02Mt at 0.39% Sn. A program for definitive assessment of the Anchor mineralisation was undertaken from November 1980 to June 1981. Holes BT97 to 111, 127 to 132, & 137 to 145 were small core (BQ) exploration holes. Holes BT 115 to 126, & 133 to 136 were large core PQ holes to provide material for metallurgical testing. The PQ holes were not sampled and reported on in the standard way. Other holes where no results were given only contained low levels of mineralisation. Holes from BT40 onwards were BQ size with half-core samples being assayed. On completion of this drilling program a pre-JORC total resource estimate of 8.8Mt at 0.18% Sn at a cut off 0.05% Sn was made. This grade was not considered to be economic at that time and Renison decided not to proceed with the project.

In 1988 Spectrum carried out a re-evaluation of the pre-JORC resources defined by Renison using different cut off grades. Spectrum undertook additional drilling between 1988 and 1991 with holes BT146 –180 being BQ size and from BT 181 to BT 230 holes were NQ size. In 1989 Spectrum applied for and was granted Mining Lease 55M/89. In September 1989 L.A. Newnham sent a memorandum to Spectrum with his revised pre-JORC estimates of the in situ resources of the western half of the Anchor mineralisation. It did not take into account any mineralisation remaining in pillars that could not be recovered and did not allow for dilution during mining. The rounded figure was 525,000t at 0.46% Sn ± 10%. Spectrum constructed a treatment plant and developed an underground mine during 1988-89 with some processing of development ore and commissioning of the plant in January 1990. As mining progressed, the two lenses of ore or tin floors, which had been interpreted to be flat

with a uniform shallow dip, were found to undulate up and down dip and the underground development was not parallel to the strike. The upper contact of the “A” Lens was well defined with a pegmatitic margin usually present, but the lower boundary of the “A” Lens and both the upper and lower boundaries of the “B” lens were diffuse and difficult to define. In early 1991 a short diamond drilling program and examination of the workings were undertaken to improve the positioning of the stope drives within the mineralisation. This was necessary because previous development had been located based solely on drilling information and had not been tightly controlled resulting in the dilution of ore with waste rock. These problems with mining, a treatment plant that was not performing, and major drop in the tin price led to the operation being suspended in December 1991 and put on care and maintenance. Detailed records are not available for this period of operation, but according to reports 151,387t of ore were treated to produce 720t of concentrate at 60.33% tin for 434t of contained tin in concentrate.

Mancala Pty Ltd (Mancala) auger sampled the two tailings dams with 26 holes and estimated the tailings resources as:- South Dam 93,000t at 0.18% Sn containing 167t of tin metal. North Dam 30,000t at 0.53% Sn containing 159t of tin metal. Using the above figures an estimate was made of the ore treated by Spectrum as:- 123,720t at 0.61% Sn containing 760t of tin metal of which 57% was recovered.

In April 1993 M.V. McKeown produced a revised feasibility report on the Anchor Mine with reserve statements making allowance for the ore already mined. In November 1993, three diamond drill holes (BT 231 – 233) were drilled by Mancala to investigate the tin mineralisation that appeared to form a pipe-shaped body extending down beneath the tin floors. In 1994 Spectrum and its assets of Anchor and Royal George were purchased by F.W. Lannen & Ass. Pty Ltd (owners of Mancala Pty Ltd). Subsequently some modifications were made to the treatment plant but details are not available. An additional 101 percussion drill holes were drilled, logged, and assayed, and a feasibility study conducted.

Mancala mounted a mining operation during 1995 and 1996. 91,000t of ore at 0.40% tin were extracted and processed. The estimated grade by Mancala before mining was 0.53% tin, so the achieved grade was 25% below that predicted. On the other hand it was within the forecast range by Newnham (1989) allowing for some dilution. Mancala described the plant as poorly designed and the modifications did not achieve a satisfactory performance. Mancala also treated 7,800t of tailings from the North Dam. The mine was closed in 2001.

In 2006-2007 Minemakers signed a Memorandum of Understanding in regards to supplying tungsten to an Austrian company, Wolfram Bergbau und Hutten GmbH (“WB”). The level of

tungsten associated with the Anchor deposit was uncertain so drill core was accessed at MRT Core Library facility in Hobart, split, and a 33kg sample was despatched to WB's metallurgical laboratories in Mittersill, Austria. Similarly, the tailings storage facility was auger sampled and the material was sent to WB for recovery test work. Unfortunately, the results of the test work were not made available to Minemakers TTT before WB ended their interest in Tasmania as a tungsten potential supplier.

Lycopodium Engineering Limited, a Perth based engineering and plant construction consultancy, was engaged to provide a desk-top financial model for the project. The report was finalised in November 2007. The overall aim was to determine capital and operating cost estimates and the tin price necessary, under these cost estimates, for justification of commitment to a feasibility study.

At 2007 tin prices the project economics were deemed to be unattractive.

A program of re-assaying of drill core was undertaken with the purpose of testing for economic levels of potential co-product commodity elements in 2007. The samples were taken from a range of low to high grade areas at the Anchor deposit and indicated the presence of significant levels of zinc and copper, but relatively low tungsten values. 95 samples of core were cut from 6 diamond-cored holes stored at the MRT core shed and submitted to ALS in Brisbane for multi-element analysis. The Tin levels were very encouraging, averaging 0.33% and with eight samples returning between 1.00-2.85%.

Auger sampling of the Anchor tailings (97 samples taken from 31 holes) was carried out in 2010/11 by TNT Mines to ascertain what level of potentially deleterious elements was present and to test the tenor of tungsten reporting to the tailings. Wolframite is known to occur within the mineralised area at the Anchor deposit but there are not a lot of historical assays. There was no production of a wolframite concentrate during the last phase of underground mining by Mancala in the 1990s so most of it should have reported to the tailings dam.

The analytical results displayed low levels of tungsten in the tailings which was consistent with the results obtained from re-assaying of old core in 2007 which returned average tungsten values of around 115 ppm.

No published remnant resource estimate was available for the Anchor deposit (until Veska 2020), with the most recent documented resource estimate (non JORC) completed in 1993,

indicating 517,000 tonnes at approximately 0.5% tin (strict cut-off grade not used). Since that estimate 91,000 tonnes at 0.4% tin were mined in 1995-96.

## 4. EDGI Drilling Results

Two EDGI diamond drill holes were completed at the Anchor deposit.

*Table 1: Drill hole details*

Hole	GDA94 X	GDA94 Y	X Local	Y Local	RL (m)	Length (m)	Azimuth (mag.)	Dip (degrees)
ATD1	585035	5435507	929	892	263	246.4	170	-50
ATD2	584894	5435353	938	683	252	240.5	345	-55

Note: 15 degree difference between Magnetic and True North. To convert from magnetic bearing shown above to Anchor local mine grid bearing, subtract 30 degrees.

The two diamond drill holes were drilled to examine the tin and REE/critical element potential at depth, and associated with an interpreted regional-scale structural lineament.

The first EDGI drill hole, ATD1 was collared on 31/08/2023. Hole ATD2 was completed on 28/09/2023 with 487m drilled in total for the two holes.

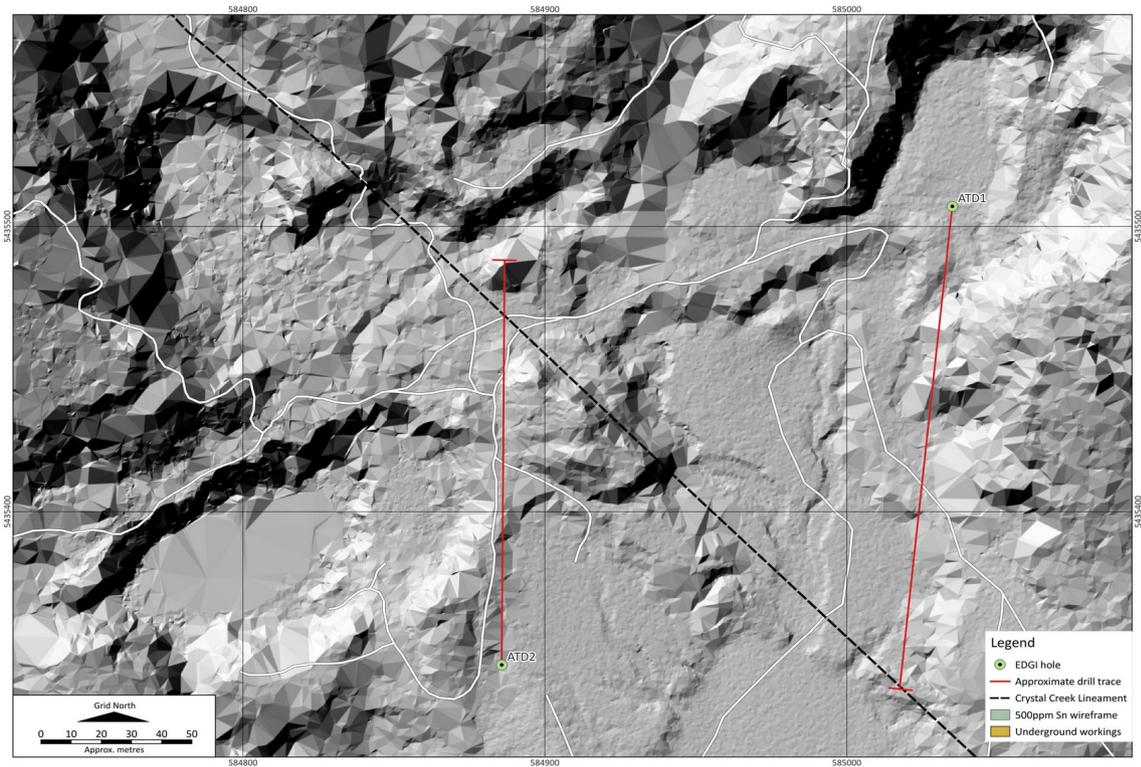


Figure 6: EDGI hole locations on LiDAR hillshade, approx. drill trace shown

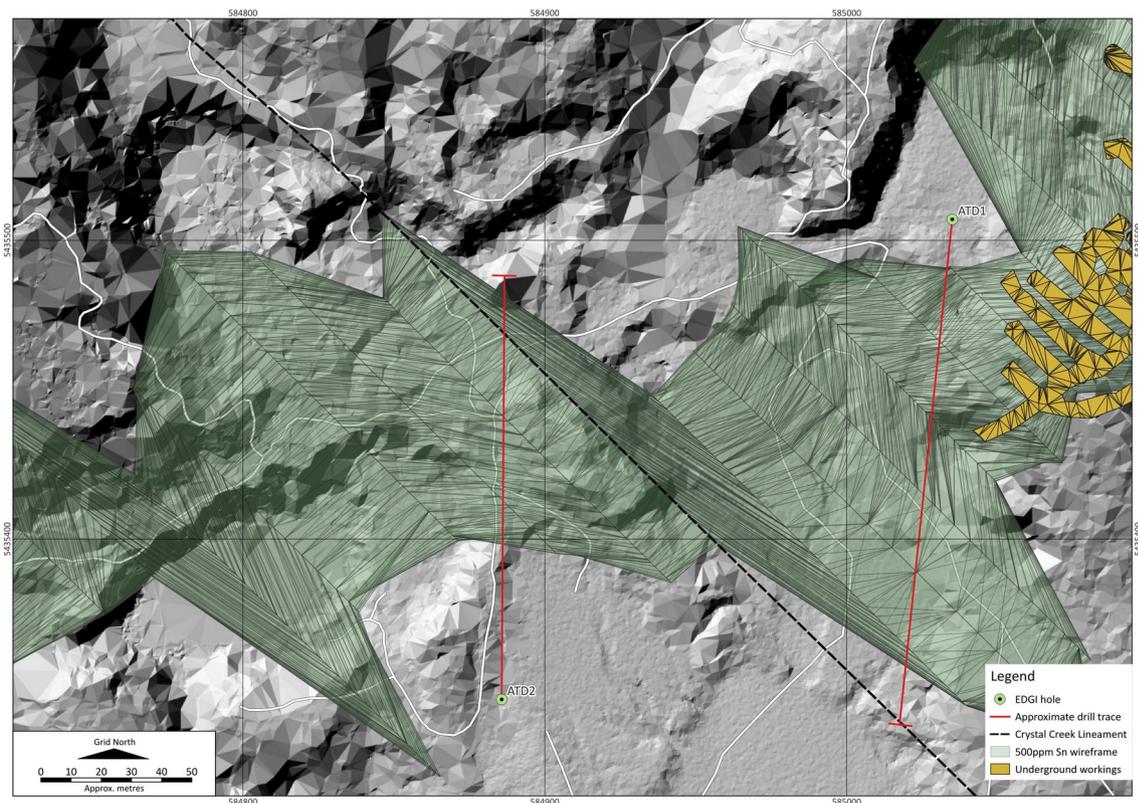


Figure 7: Locations on LiDAR hillshade with projected 500ppm wireframe and underground workings

Drilling conditions were generally favourable, with good recovery, averaging over 96% for the two EDGI holes. The holes kept fairly straight, deviating a little clockwise in both cases whilst lifting marginally.

The exploration model(s) that were considered for the EDGI drilling at Anchor include drilling at the margin of a major regional lineament structure. This situation is common in the Erzgebirge tin province of Eastern Europe e.g. the Altenberg and Sadisdorf deposits - areas of older granite adjacent to major lineaments around and/or above cupolas of younger tin-bearing granites.

It is believed that holes ATD1 and ATD2 confirm that the Crystal Creek Lineament, in the vicinity of the Anchor deposit at least, exists as a bona-fide geological feature in the area shown, and can be explained by a structural zone, that has been intruded by a distinctive quartz-feldspar-phyrlic porphyry intrusive in parts. These features could act as focuses for increased weathering, and also possibly a slightly more indurated, less weathered feature in the case of the porphyry, assuming it is present in other localities regionally along the trace of the lineament.



*Figure 8: Quartz-feldspar porphyry lithology in hole ATD1 (170m down hole).*

The porphyry unit in hole ATD1 extends for over 40m in drill core (162.8 – 206.4m), and hole ATD2 ended in a visually similar porphyry unit: 218.7 – 240.5m (EOH).



*Figure 9: Quartz-feldspar porphyry lithology at end of hole ATD2*

The holes drilled at Anchor intersected large volumes of variably greisen-altered granite. The degree of alteration corresponds very closely with the drilling rate, with hard, fresh unaltered granite (such as at the end of hole ATD1) really slowing down the rate of penetration. True greisen is typically present very close to the contacts between granite phases at Anchor.

At the end of the drilling program, FMG geologists examined the YTA core in St Helens. With their focus on lithium, specifically micas, certain sections of the drill core displayed encouraging signs (e.g. Figure 11 and Figure 12) Accumulations of dark-green to black zinnwaldite mica, over quite large widths (e.g. 16 – 115m in hole ATD1) displayed elevated lithium values, with specific mica grains targeted with a SciAps handheld LIBS analyser. This interval in ATD1 largely coincided with the current resource wireframe through which the hole traversed.

Lithium values were much lower than expected, with the highest sample returning 870ppm Li, with an average closer to 300ppm for the altered zone(s). Sample pulps and residues were obtained back from SGS Renison laboratories, with duplicate and 2<sup>nd</sup> lab checks to be undertaken, including another lab. A different analysis technique may be used to confirm the Li readings.

It was commented by Chris Cook, head of battery metals exploration at FMG, that the dark-coloured quartz-zinnwaldite(+topaz?) alteration at Anchor had visual similarities to the large Cinovec lithium deposit on the Czechia/Germany border, personally visited by Chris (Figure 10).



*Figure 10: Cinovec lithium mineralisation from Czechia*



Figure 11: ATD1 (39.8 – 54m). Centre of image displays most intense alteration

Hole ATD1 intersected the Anchor tin resource/500ppm wireframe between 28-67m. The degree of alteration present, see Figure 11 and Figure 12, correlated well with the tin assay results and wireframe from the 2020 resource, providing a measure of confidence in the modelling.

Observations at Anchor suggest that good tin grades do not occur without (greisen) alteration, however alteration does not necessarily indicate good tin grades.



*Figure 12: ATD1, 54 - 61.1m displaying further dark zinnwaldite-quartz alteration*

Drill hole ATD1 was primarily designed to test the Crystal Creek Lineament and the existence of a possible pipe structure from the north. In many tin fields worldwide, pipe and fissure deposits have proved to be the main producers (e.g. Bushveld granites - Bushveld Igneous Complex South Africa). They are usually located on, or near, steeply dipping fractures. Typical features of this type of deposit are a very irregular shape, numerous breaks and unusually high grade. Alteration of the wall rock is common, the pipes are long, roughly cylindrical bodies varying in diameter from 10m to 12m, their attitude may vary from horizontal to vertical, have an annular structure, and a sharp contact with the enclosing granite.

The core of a pipe is usually composed of granite in various stages of alteration. All the quartz may be replaced by cassiterite and fluorite. Feldspar may be replaced by sericite and chlorite.



*Figure 13: Hole ATD1 porphyry unit, replacement of feldspar phenocryst (168.4m)*

The question as to whether any evidence was unearthed during the EDGI drilling supporting the existence of a pipe-like structure at depth. The existence of a structural zone and quartz feldspar porphyry intrusive in ATD1 could support this idea. The interpreted structural zone is characterised by increased weathering, the rock being more fractured and the presence of abundant light green mica and occasional thin 2-3mm purple fluorite veins (Figure 14). Note that in the part of the core tray shown in Figure 14, a band of more granitic-textured rock can be seen in the bottom metre. This type of structural zone can be seen in a number of the other holes, with and without the presence of the quartz-feldspar-phyric porphyry unit. There was no brecciation, shearing, or other signs of significant movement observed in these zones. The relationship between the porphyry unit and greisen alteration and/or mineralisation at Anchor is not clear at this stage.

Drill hole ATD2 was similarly designed to test the Crystal Creek Lineament and the existence of a possible pipe structure, this time from the south. The hole was collared on top of the tailings dam area, with coring commencing at 9.6m (Figure 15). The contact between old and new (tin) granite was interpreted to be at 12.2m. The intensity of alteration in ATD2 near the known resource was generally at a lower tenor than that seen in hole ATD1, however

there was a small piece of almost total greisen at the contact that returned good readings that coincided with a zone of core loss. Given that hole ATD2 was marginal to the known resource wireframe (Figure 7), this observation of weak alteration probably indicates low tin grades in this interval of the hole.

It is worth mentioning that a hand-held Niton XL3t XRF unit was available throughout the drilling program, but given the nature of the tin mineralisation at Anchor, the XRF unit was of limited use in detecting mineralised core intervals. Quoting Baker (1988), the cassiterite at Anchor is generally coarse-grained as a rule, and of a similar grain size to the gangue minerals. Cassiterite within pegmatite occurring between the greisen and the overlying porphyritic adamellite is coarse-grained. Just below the pegmatite it is of equal grain size to the gangue minerals, and further away it occurs in part as coarse grains, but in a greater proportion as minute grains filling cleavages in the crystals of mica and feldspar.



*Figure 14: Example of hole ATD1 structural and porphyry zone (171.3 - 174.4m)*

At a bulk resource grade of 0.17% Sn at Anchor, the cassiterite grains are going to be well separated, so accordingly a handheld XRF unit that can typically only analyse a small pinpoint area, is going to serially understate the tin grade.

The YTA P/L Niton XL3t XRF unit was most usefully employed as a means of quantifying the degree of alteration of the drilled granite, with elements such as Rubidium proving to be the

most useful indicator - of the suite of elements detectable by the unit at hand. Unfortunately lithium was not a detectable element with the Niton handheld unit.



Figure 15: Hole ATD2 tray 1 (0 - 13.9m)

The other main point of interest in hole ATD2 (as already mentioned) was the intersection of a visibly similar porphyry intrusive to that seen in hole ATD1. In Figure 16 intermittent finer-grained aplitic segregations can also be seen at and near the contact.



Figure 16: Hole ATD2 (220.8 - 224.5m) Porphyry contact at ~ 218.7m

The quartz-feldspar-phyrlic porphyry unit persisted to the end of hole at 240.5m and represented an approximately 185m lateral distance between the intersections of the unit in the two drill holes along the interpreted lineament zone.



*Figure 17: Drill hole ATD1 in progress*



*Figure 18: Drill hole ATD2 in progress*

## 5. Work Plan

The main activities proposed for the next 12 months include:

- Further assessment of the EDGI drill hole results
- Updating resource to include results of 2023 drilling
- Metallurgical test-work for critical metal recovery
- Review of the tin and other critical metals markets

## **6. Environment**

Yunnan Tin Australia TDK Resources Pty Ltd has environmental policies in place to always ensure minimisation of the impact that exploration activities have on the environment. All vehicular travel within the tenement has been on existing tracks.

Drill hole collar ATD1 was situated on a flat, clear area where the old plant was previously located at Anchor. ATD1 was plugged using wooden plugs, and then topped with concrete. Drill hole collar ATD2 was located on the Anchor tailings dam, and was back-filled with sand. Neither drill hole was making any water.

## 7. Expenditure Statement

Expenditure for the project directly attributable to drilling (**excluding** GST):

<b>Expenditure</b>	<b>\$AUD</b>
Geochemistry (assaying)	7,325
Geophysics	
Drilling	89,399
Rehabilitation Costs	
Other Cost	
<b>TOTAL</b>	<b>\$ 96,724</b>

*Table 2: EL17/2017 EDGI Expenditure – drilling and assaying*

## 8. References

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- Veska, L.T., 2019. Exploration Licence 17/2017 Poimena, NE Tasmania Second Annual Progress Report, 6th December 2018 to 5th December 2019. Unpub. YTA P/L company report.
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- Veska, L.T., 2022b. Exploration Licence 17/2017 Poimena, NE Tasmania Fifth Annual Progress Report, 6th December 2021 to 5th December 2022. Unpub. YTA P/L company report.
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# Appendix

**Collar Information**
Cancel    Apply Changes

**Drillhole Name** ATD1      **Parent Hole (for re-entries)**

**Property** EL17/2017      **Prospect** Anchor Deposit

**Datum** MGA94 Zone55      **Primary Drill Type** Diamond

**Wedge Depth (m)**       **Underground/Surface** Surface

**X** 585035      **Y** 5435507

**X Local Grid** 929      **Y Local Grid** 892

**Coord. Accuracy** 2m      **RL Accuracy** 2m

**Position Method** Handheld GPS      **Collar Dip** -50

**RL (m)** 263      **Collar Azimuth (Mag)** 170

**Drill Length (m)** 246.4      **Drill Length (m)** 246.4

**Hole Complete Date** 18-SEP-2023      **Date Precision** Day

**QA Level** Complete and correct      **Enter Date** 31/AUG/23

**Last Update Date** 02/OCT/23      **Last User** LVESKA

**Drill Comments**

EDGI Hole commenced 31/08/2023  
 Testing the Crystal Creek Lineament and possible pipe structure from the north.  
 15 degree difference between Magnetic and True North assumed. 45 degree angle between Anchor local grid and True North. 0 degrees local = 45T

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Figure 19: EDGI hole ATD1 details

**Collar Information**
Cancel    Apply Changes

**Drillhole Name** ATD2      **Parent Hole (for re-entries)**

**Property** EL17/2017      **Prospect** Anchor Deposit

**Datum** MGA94 Zone55      **Primary Drill Type** Diamond

**Wedge Depth (m)**       **Underground/Surface** Surface

**X** 584894      **Y** 5435353

**X Local Grid** 938      **Y Local Grid** 683

**Coord. Accuracy** 2m      **RL Accuracy** 2m

**Position Method** Handheld GPS      **Collar Dip** -55

**RL (m)** 252      **Collar Azimuth (Mag)** 345

**Drill Length (m)** 240.5      **Drill Length (m)** 240.5

**Hole Complete Date** 28-SEP-2023      **Date Precision** Day

**QA Level** Complete and correct      **Enter Date** 13/SEP/23

**Last Update Date** 05/DEC/23      **Last User** LVESKA

**Drill Comments**

EDGI Hole commenced 19/09/2023.  
 Testing the Crystal Creek Lineament and possible pipe structure from the south.  
 15 degree difference between Magnetic and True North assumed. 45 degree angle between Anchor

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Figure 20: EDGI hole ATD2 details

**Downhole Survey Details** [Create Survey](#)

Eastman Camera (or similar) survey data down hole.

Depth (m)	Dip (degrees)	Azimuth (degrees)	Azimuth Datum
0	-50	170	Magnetic
30	-49.5	171.9	Magnetic
60	-49.3	172.9	Magnetic
90	-48.8	174.9	Magnetic
120	-48.8	176.1	Magnetic
150	-48.6	176.8	Magnetic
180	-48.4	177.5	Magnetic
210	-48.1	178.4	Magnetic
240	-47.9	178.4	Magnetic

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Figure 21: Hole ATD1 down-hole surveys

**Downhole Survey Details** [Create Survey](#)

Eastman Camera (or similar) survey data down hole.

Depth (m)	Dip (degrees)	Azimuth (degrees)	Azimuth Datum
0	-55	345	Magnetic
30	-55.5	347.8	Magnetic
60	-55.3	349.6	Magnetic
90	-54.9	350.8	Magnetic
120	-54.7	352.6	Magnetic
150	-54.9	353.4	Magnetic
180	-54.8	354.5	Magnetic
210	-54.5	355.2	Magnetic
240	-54.3	355.3	Magnetic

[Export to Spread Sheet](#) 1 - 9

Figure 22: Hole ATD2 down-hole surveys