



**STELLAR RESOURCES LIMITED**  
Rubicon Min Tech Ventures Pty Ltd

**EL 46/2003 HEEMSKIRK**  
**ANNUAL REPORT FOR THE PERIOD**  
**10 JANUARY 2017 – 9 JANUARY 2018**

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**Mineral Resources Tasmania, a Division of the**  
**Department of Infrastructure, Energy and Resources - Hobart**  
**Stellar Resources Ltd - Melbourne**

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## **ABSTRACT**

This Annual Report for EL 46/2003, Heemskirk, covers the period from 10 January 2017 to 9 January 2018.

The Heemskirk licence area contains historical occurrences of copper, tin and gold. Previous exploration in the area includes extensive stream sediment sampling, especially in the central and southern areas, geological mapping and a range of geophysical surveys, which have revealed numerous anomalies. Some of these anomalies have been drill tested and some remain untested or inadequately drilled, the licence area is prospective for the discovery of base metal mineralisation.

With Stellar Resources' focus on the Heemskirk Tin Project at Zeehan the tin prospects on EL 46/2003 have assumed more significance. In particular the St Dizier Prospect has become a priority target due to its potential as an additional source of tin ore for a Zeehan tin processing plant.

In August 2017, Stellar applied for a mining lease (MLA 10M/2017) over the St Dizier Prospect. The application is pending.

Total expenditure on EL46/2003 during 2017 totalled **\$36,194**

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St Dizier Seasonal Surface Water Surveys

# 1. INTRODUCTION

## 1.1. EXPLORATION RATIONALE & GEOLOGICAL SETTING

The licence covers the southern end of the Arthur Lineament and the northern and eastern contacts and aureole of the Heemskirk Granite. The northern granite aureole hosts the St Dizier magnetite-tin Skarn Deposit and several other small skarns and is considered prospective for other similar deposits. In the southeast, the aureole also hosts the Avebury Nickel Deposit. The Heemskirk Granite itself also hosts several small greisen deposits, some of which are in the EL.

In the north the EL covers the southern end of the Arthur lineament, including the Bowry Formation. The Bowry Formation hosts scattered stratiform magnetite-pyrite-chalcopyrite-gold mineralisation. At Alpine significant copper mineralisation has been delineated. A VTEM survey has identified other targets, which warrant follow up exploration.

The licence is considered highly prospective for magnetite-pyrite-chalcopyrite-gold mineralisation in the north, for magnetite-tin skarn deposits in the aureole of the Heemskirk Granite and for tin greisen deposits in the granite in the southwest.

With Stellar's focus on the Heemskirk Tin Project at Zeehan the tin prospects in EL 46/2006 have assumed more importance as a potential source of additional mill feed for the proposed tin treatment plant at Zeehan. In August 2017, Stellar Resources applied for a mining lease (MLA 10M/2017) over the St Dizier Deposit. The application is pending.

### 1.1.1. Geological Setting

EL46/2003 covers part of the Meso-proterozoic rocks of the Zeehan-Waratah belt (mainly Oonah and Crimson Creek Formations) including the southern end of the Arthur Lineament Metamorphic Complex and the Dundas Trough. The Devonian Heemskirk Granite, a fractionated biotite granite - muscovite granite, intrudes these rocks. The interaction of this granite with reactive host rocks is the source of skarns and is thought to be the source of most of the base metal mineralisation in the Zeehan area.

The Proterozoic Oonah Formation rocks are mainly quartzite and shale but there are also some carbonate rich beds. All of these rocks have been regionally metamorphosed with some adjacent to the granite being affected by contact metamorphism. There are some Cambrian sedimentary and ultramafic rocks southeast of the licence, which have also been affected by the granite. These host the Avebury Nickel Deposit.

North of the Heemskirk Granite the Proterozoic rocks have a northwest trend, paralleling the Heemskirk Anticlinorium. To the west, where visible, a sequence of Palaeozoic rocks form the north trending Duck Creek-Healy Creek Synclinal Zone but most of this portion of the tenement is obscured by Tertiary basalts and alluvial deposits. Jurassic dolerites of the Eureka Cone Sheet also cover a portion of the Proterozoic rocks along the northeast edge of the tenement.

The St Dizier Deposit is located at the western end of a 3km long skarn that parallels the east – west trending granite contact. To the east along the skarn are the Central and Big H prospects. The St Dizier Deposit is a carbonate metasomatic skarn hosted in hornfelsed Precambrian sedimentary rocks on the northern edge of the Devonian Heemskirk Granite. The deposit forms a roof pendant located in a tight synformal trough on the surface of the granite. Hornfelsed quartzite forms the hangingwall to the skarn and hornfelsed slates the footwall. The skarn is a vertically dipping, east-west striking stratabound body extending to a depth in excess of 200m from surface. Mineralisation extends over a 400 metre strike length and varies between 3 and 40 metres in thickness. The skarn consists of magnetite-serpentinite-diopside and actinolite with minor pyrrhotite-pyrite-arsenopyrite-cassiterite-schoenfliesite-sheelite-bismuthinite. Tin mineralisation is zoned with dominantly cassiterite in the west and increasing amounts of schoenfliesite and other exotic tin species to the east.

## 1.2. LICENCE

Tenement number: 46/2003

Tenement name: Heemskirk

Tenement location: The licence consists of two blocks, following the 2008 relinquishment of the central part of the licence and further relinquishment during 2017 (Figure 1). The northern block (80km<sup>2</sup>) is centred 24 km northwest of Zeehan with main road access from the Heemskirk Road, which passes centrally through the block. The southern block (13km<sup>2</sup>) is centred 7km west of Zeehan with access from the Trial Harbour Rd in the south of the block. Most of the EL area is Crown Land with approx. 5% being private agricultural land.

The crown land is covered by areas of nothofagus and eucalyptus rainforest, dry eucalyptus forest, scrub, heathland and button grass plain. Access is provided by the Heemskirk Road from Zeehan, the Trial Harbour Road, the Granville Harbour Road, the Corinna Road to Waratah in the north, and old bush tracks. Some areas of the licence are only accessible by foot.

Reporting period: 10 January 2017 to 9 January 2018.

Licence date: 10 February 2017 to 9 February 2018.

Tenement holder: Rubicon Min Tech Ventures Pty Ltd., a wholly owned subsidiary of Stellar Resources Ltd.

### 1.3. LOCATION OF LICENCE

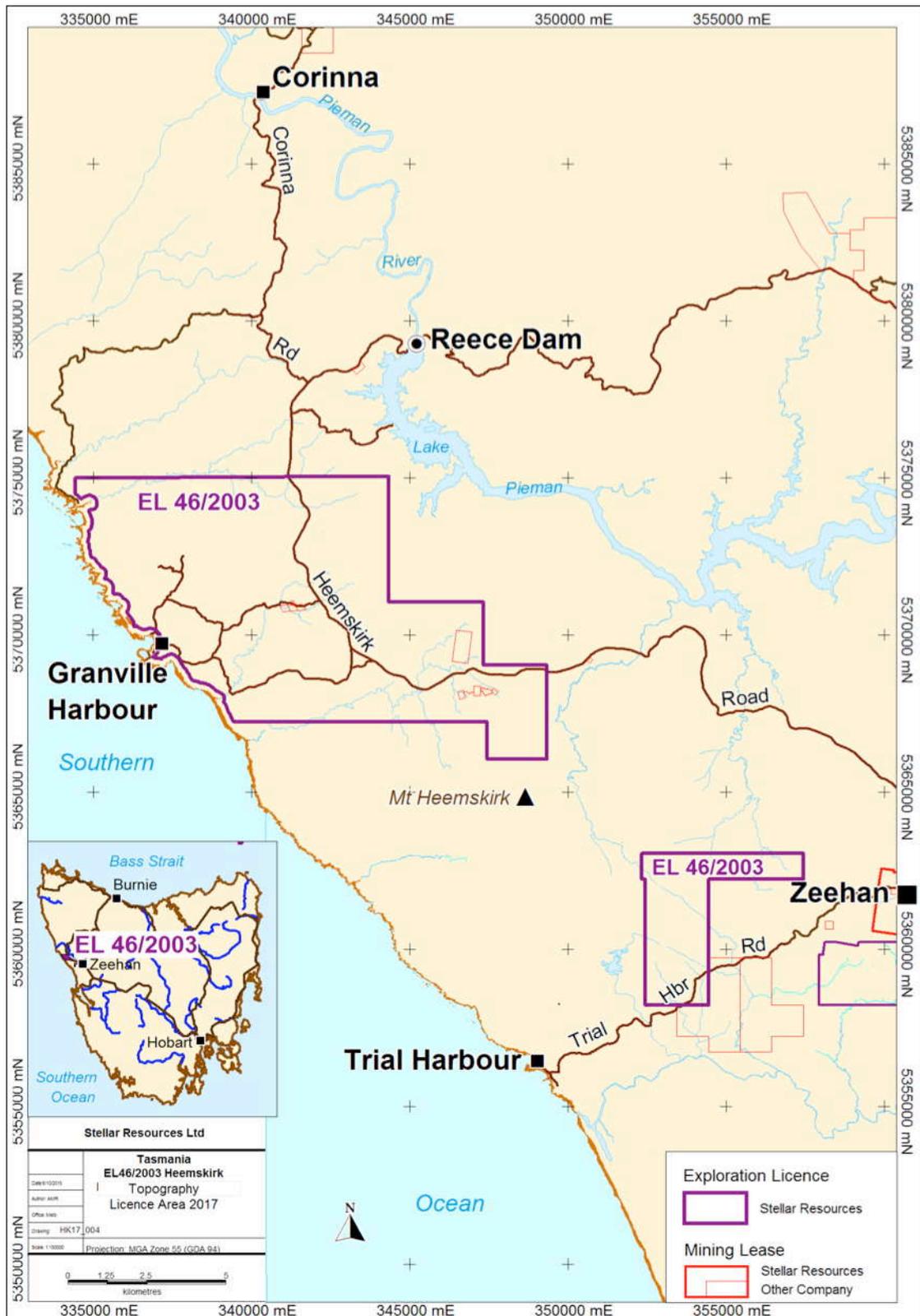


Figure 1. EL46/2003, Location Map with Main Prospects

## 1.4. LAND TENURE

### SCHEDULE

LAND DISTRICT: MONTAGU  
VICINITY: HEEMSKIRK RIVER (centred 24km NW, and 7km W of ZEEHAN)  
MUNICIPALITY: WEST COAST  
TENEMENT: EXPLORATION LICENCE 46/2003 93km<sup>2</sup>  
HOLDER: RUBICON MIN TECH VENTURES PTY. LTD.

#### Northern block:

Commencing at a northwest corner at grid coordinates 334 000 metres E 5 374 800 metres N, thence grid east to 343 890 metres E, grid south to 5 375 000 metres N, again grid east to 345 000 metres E, again grid south to 5 373 000 metres N, again grid east to 347 000 metres E, again grid south to 5 371 000 metres N, again grid east to 349 000 metres E, again grid south to 5 369 000 metres N, again grid east to 349 000 metres E, again grid south to 5 366 000 metres N, again grid west to 347 000 metres E, again grid north to 5 367 000 metres N, again grid west to 339 000 metres E, to a point 200 metres inland from the high water mark on the West Coast of Tasmania, thence in a general north-westerly direction 200 metres inland from, and parallel to, that high water mark to 334 000 metres E, again grid north to 5 378 000 metres N, again grid east to 335 000 metres E aforesaid, thence again grid north to the point of commencement.

#### Southern block:

Commencing at a northwest corner at grid coordinates 352 000 metres E 5 363 000 metres N, thence grid east to 357 000 metres E, grid south to 5 362 000 metres N, again grid west to 354 000 metres E, again grid south to 5 358 000 metres N, again grid west to 352 000 metres E, thence again grid north to the point of commencement.

Coordinate datum - AGD66, AMG Zone 55.

### EXCLUSIONS

- (a) Any land owned or leased by the Commonwealth of Australia.
- (b) Mining Leases amounting to 79ha (more or less) which were applied for or in force prior to the date of application for this licence.
- (c) Areas of private land which either have been, or are in the process of being, purchased by the Crown under the Regional Forest Agreement - Private Forests Reserves Program and / or private land over which the landowners have agreed, or are in the process of agreeing, to place a covenant or management agreement for conservation purposes under the Regional Forest Agreement - Private Forests Reserves Program.

### LAND TENURE

The area comprises:

- Private Property
- Crown land
- Multiple Use State Forest
- Mount Heemskirk Regional Reserve
- Four Mile Beach Regional Reserve
- MDC Informal Reserves
- HEC Land

The licence area contains areas, which are listed (including listed on an interim basis) on the Register of the National Estate kept under the *Australian Heritage Commission Act 1975*.

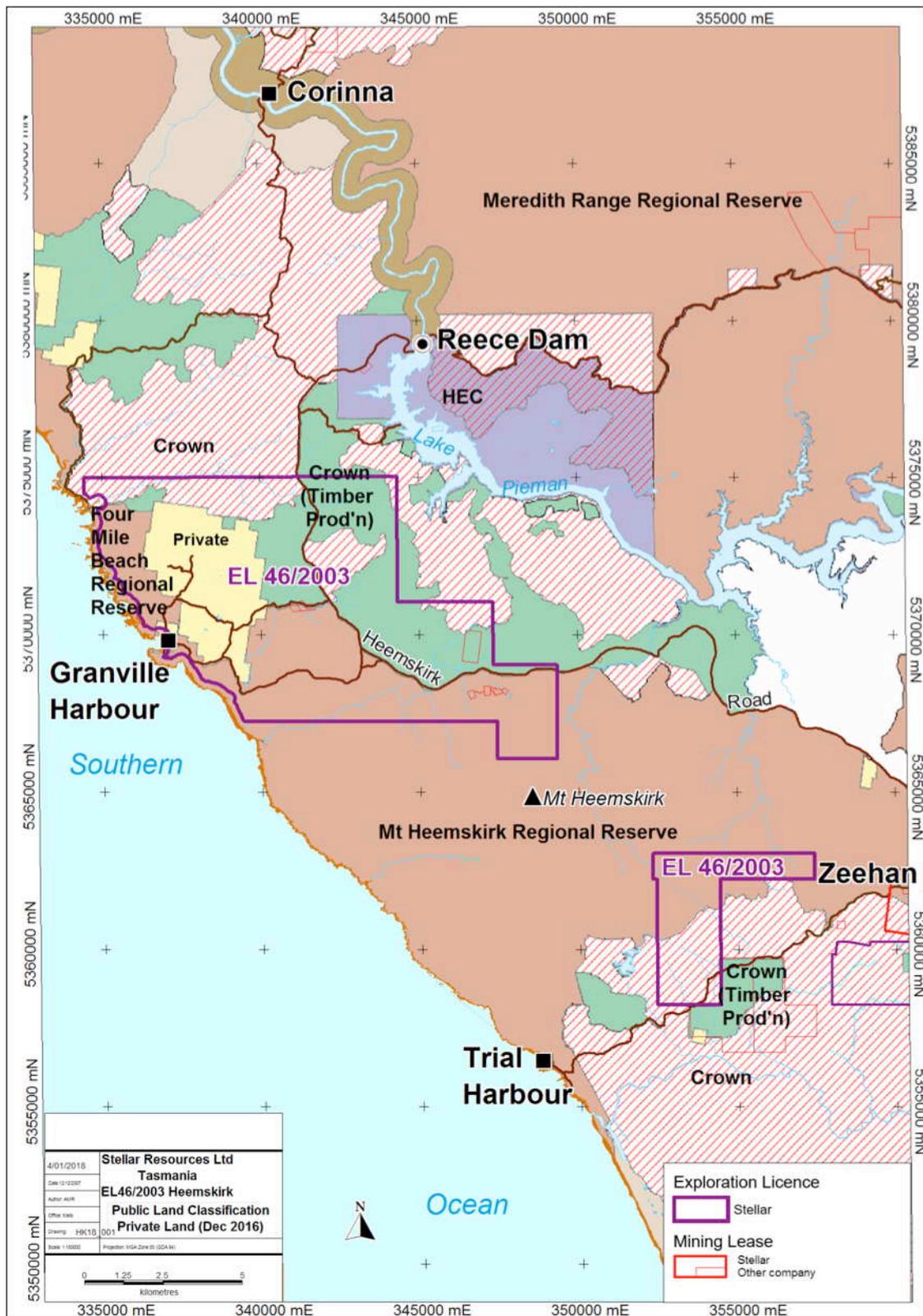


Figure 2. EL46/2003, Public Land Classification

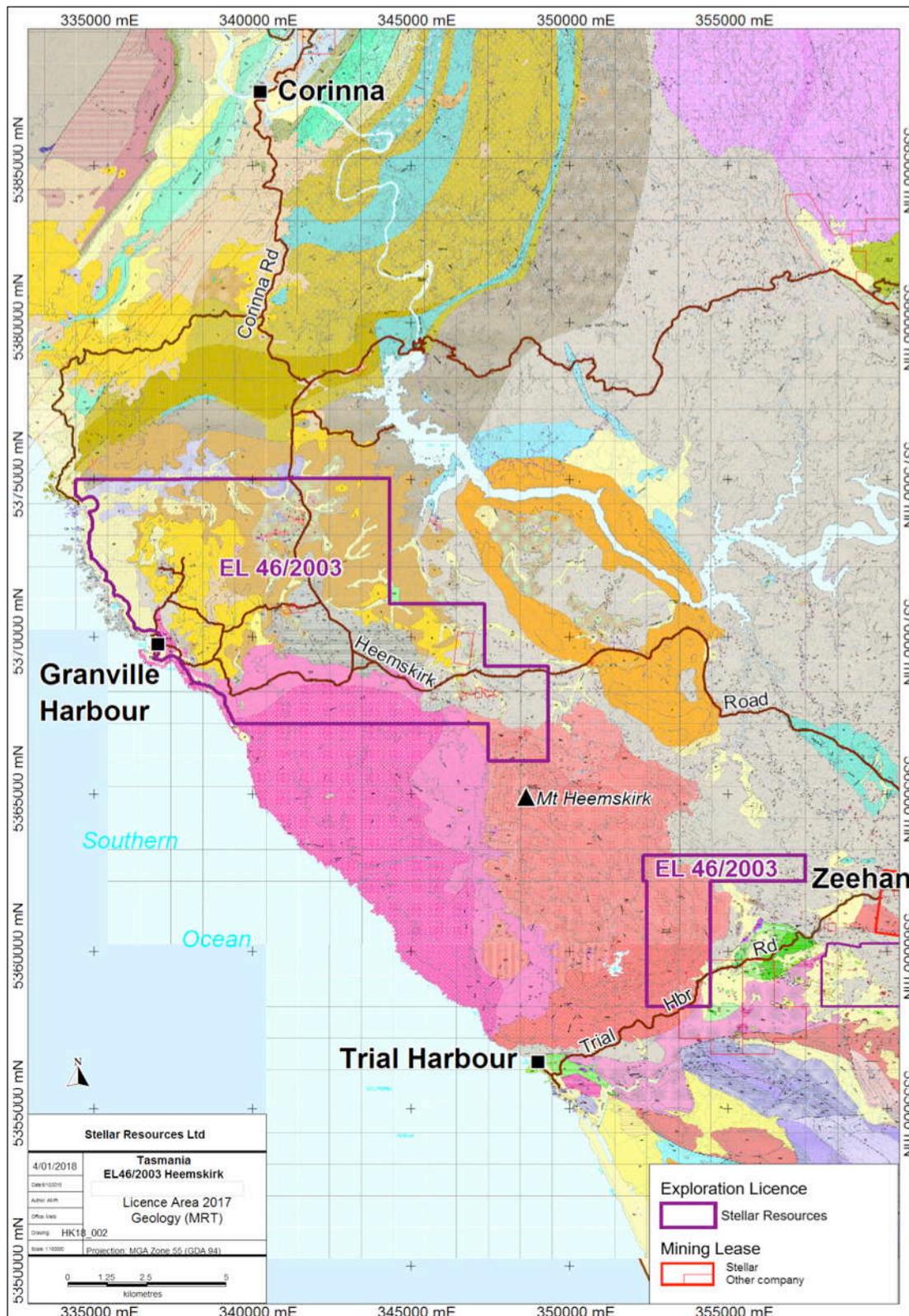


Figure 3. EL46/2003, Regional Geology (MRT)

## 2. REVIEW OF PREVIOUS WORK

### **Stellar Resources Exploration Work:**

2005 - 2010: MRT digital geology and geophysics datasets, DPIWE topographic data as well as data captured from open-file company reports were reviewed. The capture of information from previous tenement holders (CRAE, Aberfoyle, Cominco, Placer, Minops, Pickands Mather, ACI, "Consolidated Syndicate", ANZECCO, Geophoto Resources, Goldfields/RGC, Geopeko, New Holland Mining, Outokumpu, Goldstream Mining and Titan Resources) from MRT open-file reports has been completed.

2006: Drilling: 1 DD hole at East Granville  
16 DD holes at the Alpine Prospect

2007: Drilling: 3 DD holes at Alpine Prospect  
7 RC holes at North Gourlay's Ck. Prospect  
3 DD holes at St. Dizier Deposit  
1 DD hole at Devises Prospect

Geophysics: Aeromagnetics survey over area north of 5399800mN, in northern part of EL.

2008: Geophysics: VTEM Survey over Bowry Formation/Gourlay's Ck area in northwest of EL.

2009: Partial relinquishment of portion of Licence deemed unprospective.

2010: Geophysics: Re-interpretation of Geophysical data  
Ground magnetic survey of Gourlay's Ck south targets.

2011: Drilling: 2 DD holes at Gourlay's Ck south targets.

2012: Capture of remaining MRT open-file data.

2013: Database development and resource modelling of St Dizier Deposit.

2014: Resource Estimate Release, St Dizier Deposit  
Geochemical Surveys, St Dizier Deposit  
Environmental Studies, St Dizier Deposit  
Archaeology Survey, St Dizier Deposit  
Costeaming & Bulk Sampling, St Dizier Deposit  
Drilling: 6 DD holes, One (BH01) at Big H Prospect and five (ST04 – ST08) at St Dizier  
Metallurgical Testwork, St Dizier Deposit  
Mine Planning & Project Scoping Study, St Dizier Deposit

2015: Completion of Metallurgical Testwork, St Dizier Deposit  
Completion of Mine Planning & Project Scoping Study, St Dizier Deposit  
Surface water flow monitoring  
Review of exploration targets

2016: Seasonal surface water surveys  
Seasonal flora and fauna surveys

### 3. ACTIVITIES COMPLETED DURING THE REPORTING PERIOD

#### 3.1. ENVIRONMENTAL STUDIES

##### 3.1.1. St Dizier Seasonal Surface Water Surveys

Stellar Resources Ltd, through John Miedecke and Partners P/L, engaged Todd Walsh, of Kanunnah Pty Ltd, to undertake seasonal in-stream biota surveys at four established surface water monitoring stations around Zeehan, including St Dizier Creek on EL46/2003.

The objective of these surveys being to establish a baseline database of river health using the AusRivAS system (Australian Rivers Assessment System).

#### 3.2. MINING LEASE APPLICATION

A mining lease application over the St Dizier Deposit (see figure 4) was posted on 23/8/17, submitted on the 25/8/17 and registered on the 5/9/17. The MRT have allocated the MLA number ML10M/2017.

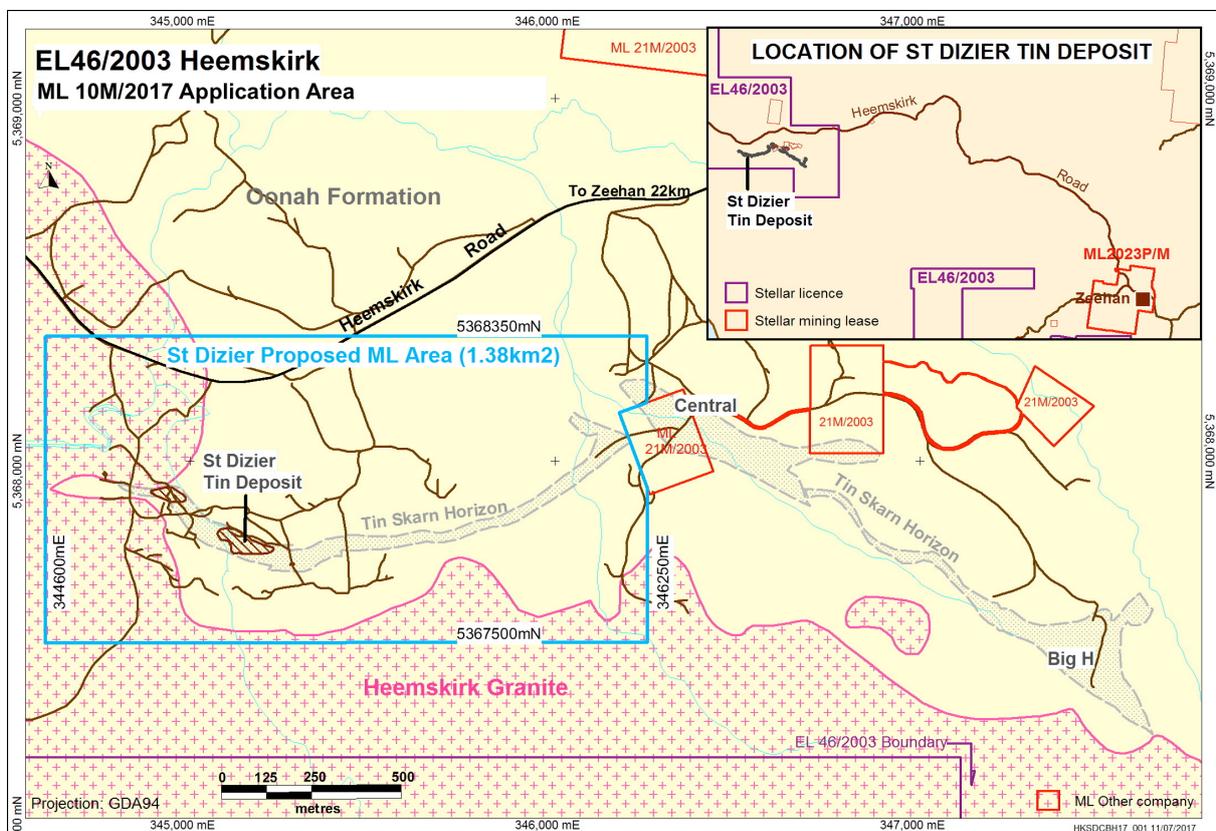


Figure 4. MLA 10M/2017 Plan

## **4. DISCUSSION OF RESULTS**

### **4.1. ENVIRONMENTAL STUDIES**

#### **4.1.1. St Dizier Seasonal Surface Water Surveys**

In the initial autumn survey in April '17 Todd Walsh found that St Dizier Creek has historical mining impacts, the creek itself having been lowered by more than 2m in areas due to mining. The Ausrivas (Australian Rivers Assessment System) score was 0.84, only 0.02 from gaining an A rating. There is sufficient large boulder and cobble habitat, but disturbing the creek bed proved difficult due to the larger substrate. This can affect a score as some macroinvertebrates such as certain fly larvae tend to bury themselves in the substrate.

In the spring survey (Sept.'17) Todd found the Ausrivas score was lower than autumn, but still maintained a "B" rating. The embeddedness of the creek is still quite evident, with regular sampling, the embeddedness can be lowered, and may reflect in later sample scores. St Dizier has obvious impacts from historical mining and has been artificially lowered due to those mining processes.

The autumn and spring Ausrivas survey reports are appended.

### **4.2. FUTURE WORK**

Activities on EL46/2003 will continue to focus on the St Dizier Deposit during 2018 but some work will be carried out on other prospects.

Likely activities will include

- Granting of ML10M/2017 over the St Dizier Prospect
- Ongoing mining and environmental studies at St Dizier including:
  - a detailed topographic survey of the project area,
  - surface & subsurface hydrology studies (including piezometer installation),
  - surface & subsurface water chemistry studies,
  - geotechnical studies (including geotechnical drilling),
  - extended archaeological survey and
  - extended rock geochemistry testing
- Possibly drill testing of other proximal targets along the St Dizier Skarn.
- Possibly drill testing of the Globe Prospect in the South Block of the EL.

## 5. EXPENDITURE

2017 expenditure on EL46/2003 totalled **\$36,194**. See expenditure break down below in Table 1.

**Table 1. EL46/2003, 2017 Expenditure Breakdown**

<b>Rubicon Ltd.</b>			
Transaction Report Dec'16 – Nov'17			
<b>Job: EL46/2003 Heemskirk</b>		<b>Description</b>	<b>Amount</b>
		Technical -Geology	\$11,304.10
		Technical - GIS	\$2,557.50
		<b>STAFF COSTS</b>	<b>\$13,861.60</b>
		Professional Technical	\$16,805.66
		<b>CONTRACT PERSONNEL</b>	<b>\$16,805.66</b>
		<b>SUPPORT COSTS</b>	<b>\$5,526.67</b>
<b>Report Total:</b>			<b>\$36,194</b>

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## **Keywords**

Location: Heemskirk  
Mineralisation environment: Skarns, Greisens  
Minerals: Chalcopyrite, Gold, Cassiterite, Arsenopyrite, Magnetite  
Exploration methods: Geochemistry, Costeaning, Bulk sampling, Drilling  
Mine/prospect name: St Dizier  
Stratigraphic name: Oonah Formation, Arthur Metamorphic Complex, Bowry Formation, Heemskirk Granite  
Lithologic name: sandstone, quartzite, phyllite, schist, granite, magnetite-serpentine-diopside skarn, quartz  
Geological Province: Dundas Trough, Arthur Lineament  
Geological age: Lower Neoproterozoic, Palaeozoic

STELLAR RESOURCES LTD

January 2017

RL 5/1997 Zeehan – Report on 2017 program

## **APPENDICES**

STELLAR RESOURCES LTD

January 2017

EL 46/2003, St Dizier

Seasonal Surface Water Surveys