



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

**EL 46/2003 HEEMSKIRK**  
**ANNUAL REPORT FOR THE PERIOD**  
**10 JANUARY 2016 – 9 JANUARY 2017**

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**Stellar Resources Ltd - Melbourne**

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## **ABSTRACT**

This Annual Report for EL 46/2003, Heemskirk, covers the period from 10 January 2016 to 9 January 2017.

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 alternative source of tin ore for a Zeehan tin processing plant.

During 2016 the collection and collation of historic exploration data continued and targeted flora and fauna surveys were carried out over the St Dizier Prospect

Total expenditure on EL46/2003 during 2016 totalled **\$49,864**

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Targeted Surveys for Tasmanian Devils and Native Orchids in the St Dizier Exploration Lease EL 46/2003 for Stellar Resources Ltd – Summary & Recommendations.

## 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 mill feed for the proposed tin treatment plant at Zeehan. Activities during 2016 focused on the St Dizier Deposit with targeted seasonal flora and fauna surveys.

#### 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 (Figure 1). The northern block (129.5km<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 (12.5km<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 2016 to 9 January 2017.

Licence date: 10 February 2016 to 9 February 2017.

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 142km<sup>2</sup>  
HOLDER: RUBICON MIN TECH VENTURES PTY. LTD.

#### Northern block:

Commencing at a northwest corner at grid coordinates 335 000 metres E 5 380 000 metres N, thence grid east to 344 000 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*.

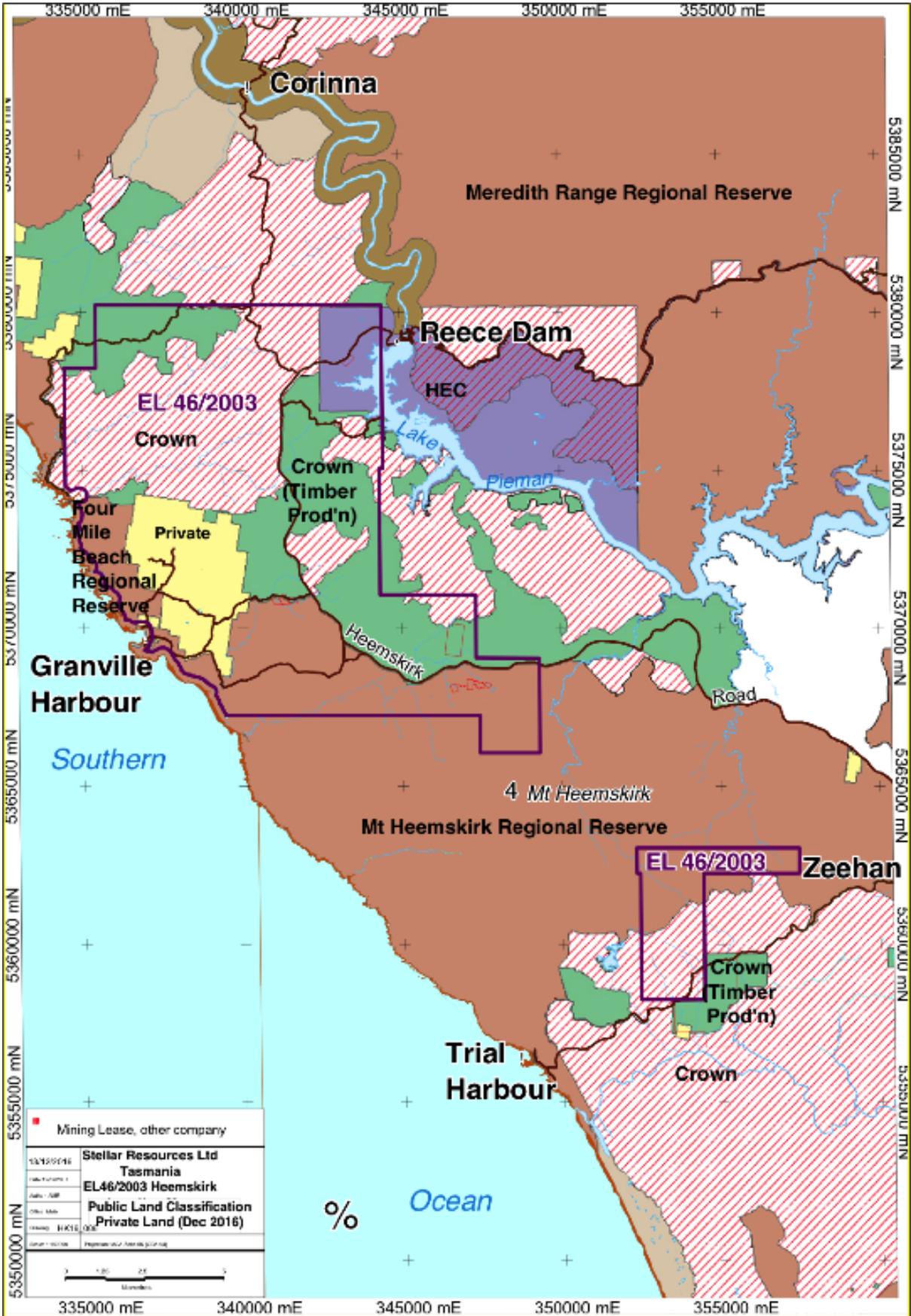


Figure 2. EL46/2003, Public Land Classification

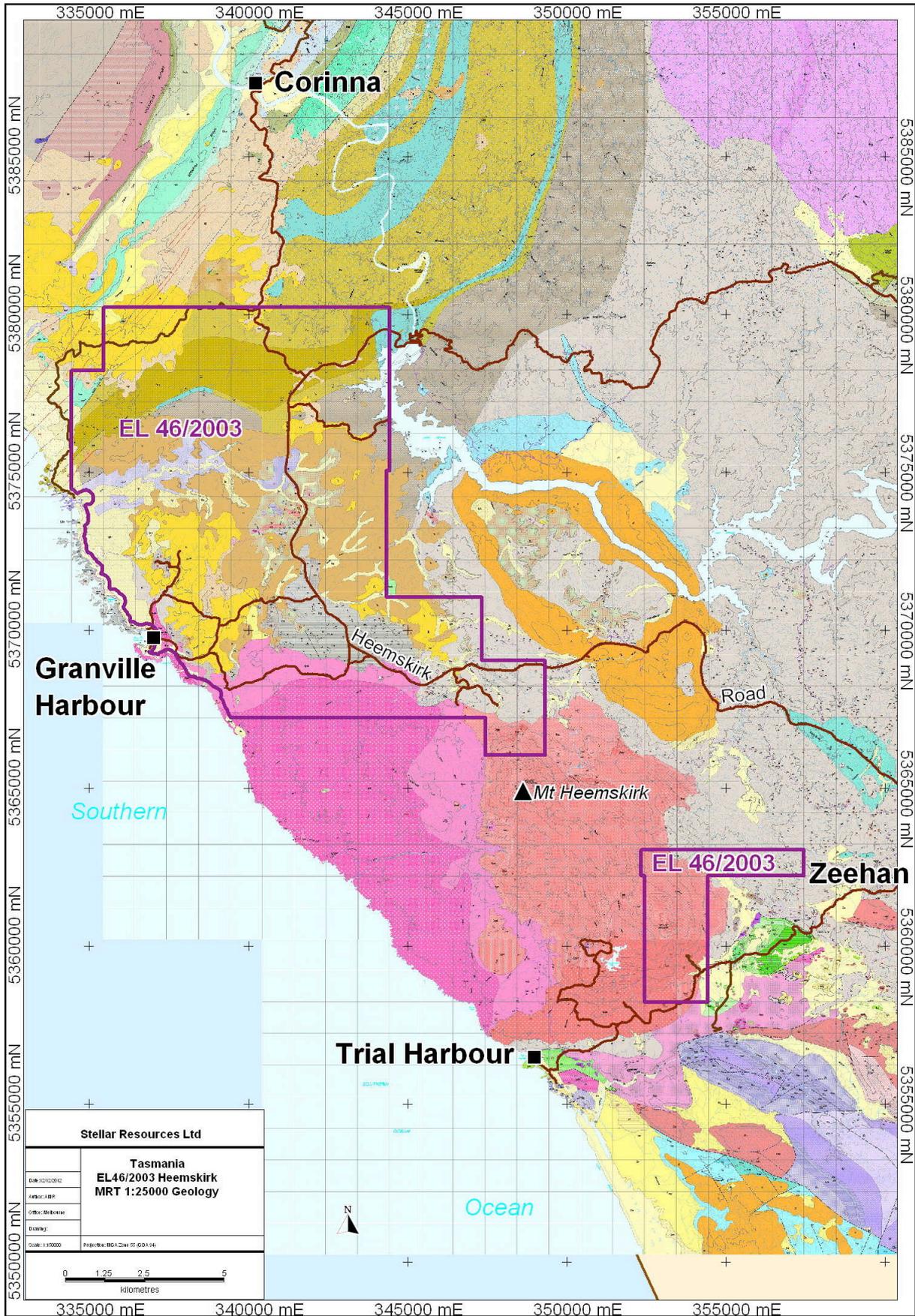


Figure 3. EL46/2003, Regional Geology (MRT)

## 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

### **3. ACTIVITIES COMPLETED DURING THE REPORTING PERIOD**

#### **3.1. EXPLORATION ACTIVITIES**

##### **3.1.1. Collection & Collation of Historic Data**

Throughout the year Stellar has continued to collect and collate historic exploration data relating to the EL.

This work is presented on a series of maps appended as digital files.

Plans appended comprise:

- Revised EL46/2003 North Block Plans
- Revised EL 46/2003 South Block Plans
- Updated St Dizier Prospect Tenement Plans
- Updated Granville East Tenement Plan
- Revised /Updated Prospect plans for the:
  - Alpine Prospect
  - Piney Creek Prospect
  - Donnelly East Prospect

#### **3.2. ENVIRONMENTAL STUDIES**

##### **3.2.1. St Dizier Project Flora & Fauna Surveys**

Stellar Resources Ltd, through John Miedecke and Partners P/L, engaged Philip Milner Landscape Consultant Pty Ltd to undertake targeted seasonal field surveys for evidence of the presence of Tasmanian Devils and species of orchids, particularly threatened species, within, and adjacent to, the St Dizier Project site in Exploration Lease EL 46/2003. This was done in response to the recommendations of the previous desktop survey and field survey dated 6th May 2014, reported on 18th June 2014.

The full report is in preparation but the summary appended presents the findings and conclusions of field surveys undertaken on the 17th and 18th February 2016 and the 25th November 2016. It should be read in conjunction with, and reference to, previous reports.

## 4. DISCUSSION OF RESULTS

### 4.1. ENVIRONMENTAL STUDIES

#### 4.1.1. St Dizier Project Flora & Fauna Surveys

The area proposed for the development of the mine infrastructure and part of the resource area within the lease was burnt in the autumn of 2016 and little regrowth had yet occurred.

One species of flora which is listed under both the Tasmanian *Threatened Species Protection Act 1995* and/or the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* was observed during the survey. The Tall Golden Moth (orchid) *Diuris lanceolata*. was observed on the verge of the Heemskirk Road, outside of the proposed development area.

No threatened species of flora were observed within proposed development area of the lease, including *Diuris lanceolata* and the Horned Orchid *Orthoceras strictum*.

Six species of non-threatened orchids were observed within proposed development area of the lease, and three species were observed in the area adjacent to the Tasman River.

Evidence was observed of the presence of devils within and adjacent to proposed development area, as well as the area adjacent to the Tasman River, however the scats observed were not recent or frequent. It could therefore be concluded that the lease and adjacent area is part of the home range of one or more individual devils but not key habitat or a key location for the species.

No potential den habitat was observed for the devil in either of the two survey areas. Evidence of the presence of wombats was observed within the lease and adjacent area although no wombat burrows, as potential devil den habitat were found. The conclusion being that wombats frequent the area on a regular basis but it is not a key location for the species given the lack of burrows.

### 4.2. FUTURE WORK

Activities on EL46/2003 will continue to focus on the St Dizier Deposit during 2017 but some work will be carried out on other prospects.

Likely activities will including

- Application for an ML 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

2016 expenditure on EL46/2003 totals **\$49,864**. See expenditure break down below in Table 2.

**Table 1. EL46/2003, 2016 Expenditure Breakdown**

<b>Rubicon Ltd.</b>			
Transaction Report Dec'15 – Nov'16			
<b>Job: EL46/2003 Heemskirk</b>		<b>Description</b>	<b>Amount</b>
		Administration Management	\$2,378.75
		Technical	\$20,104.05
		Labour	\$1,937.94
		<b>STAFF COSTS</b>	<b>\$24,420.74</b>
		Professional Technical	\$7,163.75
		<b>CONTRACT PERSONNEL</b>	<b>\$7,163.75</b>
		Vehicle Costs	\$720.00
		Office Costs	\$84.09
		<b>SUPPORT COSTS</b>	<b>\$804.09</b>
		Legal Costs	\$3,302.40
		Rents / Other Utilities	\$7,936.17
		<b>TENEMENT COSTS</b>	<b>\$10,968.57</b>
		Administration	\$6,507.00
		<b>OVERHEADS</b>	<b>\$6,507.00</b>
<b>Report Total:</b>			<b>\$49,864.15</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 & Big H  
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 2016 program

## **APPENDICES**

STELLAR RESOURCES LTD

January 2017

EL 46/2003, St Dizier

Targeted Surveys for Tasmanian Devils and Native Orchids in the St Dizier Exploration Lease EL 46/2003 for Stellar Resources Ltd – Summary & Recommendations.