



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

**EL 46/2003 HEEMSKIRK**

**ANNUAL REPORT FOR THE PERIOD  
3 JANUARY 2011 – 2 JANUARY 2012**

**Compiled by/Author: R.K. Hazeldene & A.M. Rigg**

**DATE: January 2012**

**DISTRIBUTION:**

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

**Stellar Resources Limited  
(ACN 108 758 961)  
Level 17, 530 Collins Street,  
Melbourne,  
Victoria, 3000.**

## ABSTRACT

This Annual Report for EL 46/2003, Heemskirk, covers the period from 3 January 2011 to 2 January 2012.

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. Several drill holes have intersected mineralisation.

During 2011 Stellar targeted the southern Gourlay's Creek area where Stellar's geophysics consultant proposed three large aeromagnetics targets be drill tested. The two northernmost anomalies were tested by two diamond drill holes during January / February 2011.

### Drilling Specifications Summary

Hole No.	Collar					Depth	Start Date	Finish Date	Core Size
	MGA East	MGA North	RL	Incl.	Azimuth (MGA)				
SGC-01	337,040m	,371,662m	100m	-60°	250°	404.8m	5/1/2011	1/2/2011	HQ / NQ
SGC-02	337,174m	5,371,260m	98m	-54°	270°	373.0m	2/2/2011	17/2/2011	HQ / NQ

Magnetite / pyrrhotite skarn zones were intersected, together with some anomalous copper veining and minor tin mineralisation. No economic mineralisation was encountered.

Total expenditure on EL46/2003 during 2011 totalled \$370,896.

## TABLE OF CONTENTS

<b>ABSTRACT .....</b>	<b>1</b>
<b>1. INTRODUCTION .....</b>	<b>4</b>
1.1. EXPLORATION RATIONALE & GEOLOGICAL SETTING .....	4
1.1.1. Geological Setting.....	4
1.2. LICENCE .....	5
1.3. LOCATION OF LICENCE .....	6
1.4. LAND TENURE .....	7
<b>2. REVIEW OF PREVIOUS WORK.....</b>	<b>9</b>
<b>3. EXPLORATION COMPLETED DURING THE REPORTING PERIOD .....</b>	<b>11</b>
3.1. GOURLAY'S CREEK PROSPECT EXPLORATION ACTIVITIES .....	11
<b>4. DISCUSSION OF RESULTS .....</b>	<b>12</b>
4.1. GOURLAY'S CK. DRILLING PROGRAM .....	12
<b>5. CONCLUSIONS .....</b>	<b>16</b>
5.1. RECOMMENDATIONS .....	16
<b>6. ENVIRONMENT .....</b>	<b>16</b>
<b>7. EXPENDITURE .....</b>	<b>17</b>
<i>Keywords</i> .....	19

## List of Figures

· Figure 1. EL46/2003, Location Map with Main Prospects .....	6
· Figure 2. EL46/2003, Geology interpretation from aeromagnetics (D J Isles) .....	8
· Figure 3. EL46/2003, Historic grids, geology, partial geochemistry & geophysics.....	10
· Figure 4. EL46/2003, Gourlay's Creek South - Stellar drilling locations Jan/Feb 2011.....	13
· Figure 5. EL46/2003, Gourlay's Creek South satellite (Google Earth) imagery with Stellar January/February 2011 drilling & corrected location Geopeko grid. ....	14
· Figure 6. EL46/2003, Gourlay's Creek South aeromagnetics, ground magnetic traverses, IP anomaly zones & Stellar drilling January/February 2011. ....	15

## List of Tables

• Table 1. Drilling Specifications Summary.....	11
• Table 2. Drill Log Summary.....	11

## APPENDICES (refer to digital data disc)

1. Gourlay's Creek Prospect 2011 Drilling Results SGC-01 & SGC-02.

# 1. INTRODUCTION

## 1.1. EXPLORATION RATIONALE & GEOLOGICAL SETTING

The licence covers 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 and similar mineralisation has also been found at Gourlay's Creek. The recent 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, for tin greisen deposits in the granite and possibly for limited Avebury type mineralisation in the southwest.

### 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.

## 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 (131km<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. Areas of the licence are only accessible by foot.

Reporting period: 3 January 2011 to 2 January 2012.

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

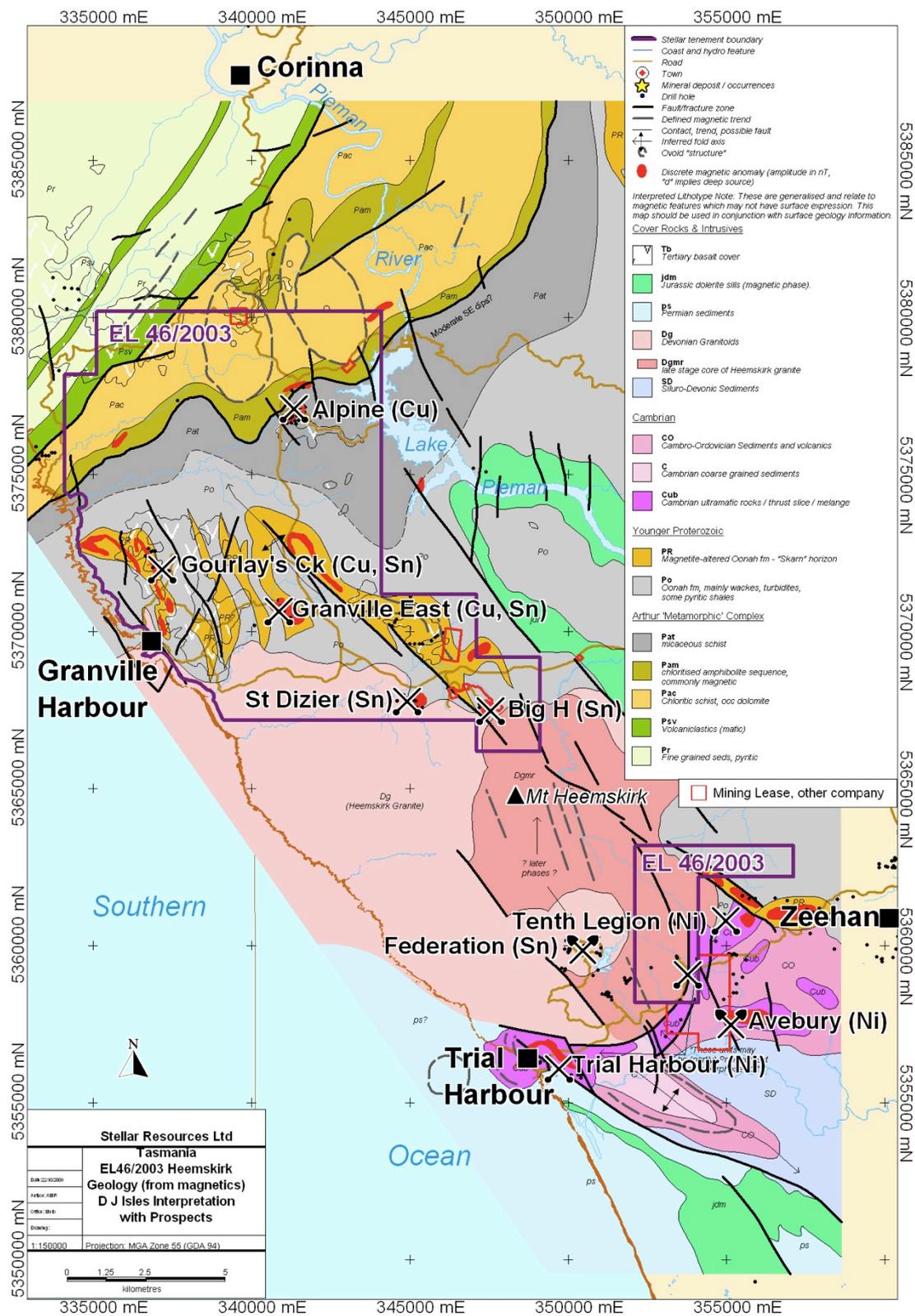
- (a) Any land owned or leased by the Commonwealth of Australia.
- (b) Mining Leases amounting to 79ha (more or less) which were applied for or in force prior to the date of application for this licence.
- (c) Areas of private land which either have been, or are in the process of being, purchased by 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
- 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, Geology interpretation from aeromagnetics (D J Isles) with HEM and VTEM targets, and prospects.

## 2. REVIEW OF PREVIOUS WORK

2005: MRT digital geology and geophysics datasets, DPIWE topographic data as well as data captured from open-file company reports was reviewed with significant data summarised and tabulated in spread sheet form. Information from reports of previous tenement holders, in particular those of CRAE, Aberfoyle, Cominco, Placer, Minops, Pickands Mather, ACI, "Consolidated Syndicate", ANZECO, Geophoto Resources, Goldfields/RGC, Geopeko, New Holland Mining, Outokumpu, Goldstream Mining and Titan Resources was captured from MRT open-file reports. This work is ongoing

2006: Drilling: 1 DD hole at East Granville  
10 DD holes at the Alpine Prospect  
6 DD holes at 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 Prospect  
1 DD hole at Devises Prospect

2008: VTEM Survey over northern portion of EL.

2009: Partial relinquishment of portion of Licence deemed unprospective.

2010: Reinterpretation of Geophysical data  
Ground magnetic survey of South Gourlay's Ck targets

Since granting in 2005 Stellar has systematically analysed and drill tested a number of prospective targets on EL 46/2003. During 2006/2007 this work concentrated on the Alpine Prospect, which initially provided significant results.

Changes in commodity prices and economic conditions over time have modified the parameters used to evaluate the various prospects on the EL and rate their potential. This work is ongoing.



### 3. EXPLORATION COMPLETED DURING THE REPORTING PERIOD

#### 3.1. GOURLAY'S CREEK PROSPECT EXPLORATION ACTIVITIES

Some further historic surface geochemical assay data was captured for the east of the licence. No other mapping or analysis work was done.

In 2010 Dr Tom Whiting (consulting geophysicist) designed three drill holes, to test three intense aeromagnetic anomalies in the southern part of the Gourlay's Creek prospect. The holes were sited on local intense magnetic anomalies highlighted from the integration of aeromagnetics data (Stellar), historic ground magnetic and IP data (Geopeko 1982). The anomalies appear to be due to alteration and structural dislocation leading to the addition or localisation of magnetite within local structures. This appears to possibly occur along a pre-existing sulphide rich horizon highlighted from the historic UTEM and IP data. Dr Whiting made similar observations from mineralised sections of the Alpine Prospect to the northeast.

During January/February 2011 Stellar drilled the two most prospective and northernmost anomalies.

• **Table 1. Drilling Specifications Summary**

Hole No.	Collar					Depth	Start Date	Finish Date	Core Size
	MGA East	MGA North	RL	Incl.	Azimuth (MGA)				
SGC-01	337,040m	5,371,662m	100m	-60°	250°	404.8m	5/1/2011	1/2/2011	HQ / NQ
SGC-02	337,174m	5,371,260m	98m	-54°	270°	373.0m	2/2/2001	17/2/2011	HQ / NQ

Both holes were drilled by E Drill of Wynyard using their P4 rig. Senior driller Wayne Goodwin was the driller. Core was processed at Stellar Resources core shed in Zeehan.

Selected core was analysed for Ag, As, Au, Bi, Co, Cu, Fe, Ni, Pb, Sn, WO<sub>3</sub> & Zn by ALS at their Burnie lab by analytical methods ME-ICP61, ME-XRF05 & AA25 (Au). Refer to the appendices for down hole surveys, lithological logs and full assay results.

• **Table 2. Drill Log Summary**

Hole No.	LITHOLOGY				ASSAY				
	From (m)	To (m)	Interval (m)	Lithology	From (m)	To (m)	Interval (m)	Sn %	Cu %
SGC-01	0.00	155.50	155.50	Hornfels	31.55	32.00	0.45	2.12	-
	31.55	37.92	6.37	Py/Mg Skarn	57.00	58.00	1.00	-	1.25
	40.95	43.85	2.90	Mg/Py Skarn	139.00	140.00	1.00	-	4.13
	81.40	92.00	10.60	Po/Py/Mg Skarn & MS					
	155.50	340.00	184.45	Hornfels & Quartzite					
	208.50	210.15	1.65	Sd/Py HA					
	215.40	216.40	1.00	Py HA					
	340.00	404.80	64.80	Quartzite	401.20	401.60	0.40	-	1.79
	391.50	391.90	0.40	Aplite					
	400.30	400.47	0.17	Aplite					
SGC-02	0.00	81.00	81.00	Schist & Hornfels					
	52.08	52.45	0.37	Py HA					
	81.00	330.00	249.00	Quartzite & Hornfels	97.00	98.00	1.00	-	0.80
	115.75	118.08	2.33	MS (Po & Mg)	133.00	134.00	1.00	0.20	-
	120.75	122.96	2.21	MS (Po & Mg)	146.00	147.00	1.00	-	0.80
	128.00	136.00	8.00	MS (Po & Mg & Py)					
	330.00	373.00	43.00	Granite					

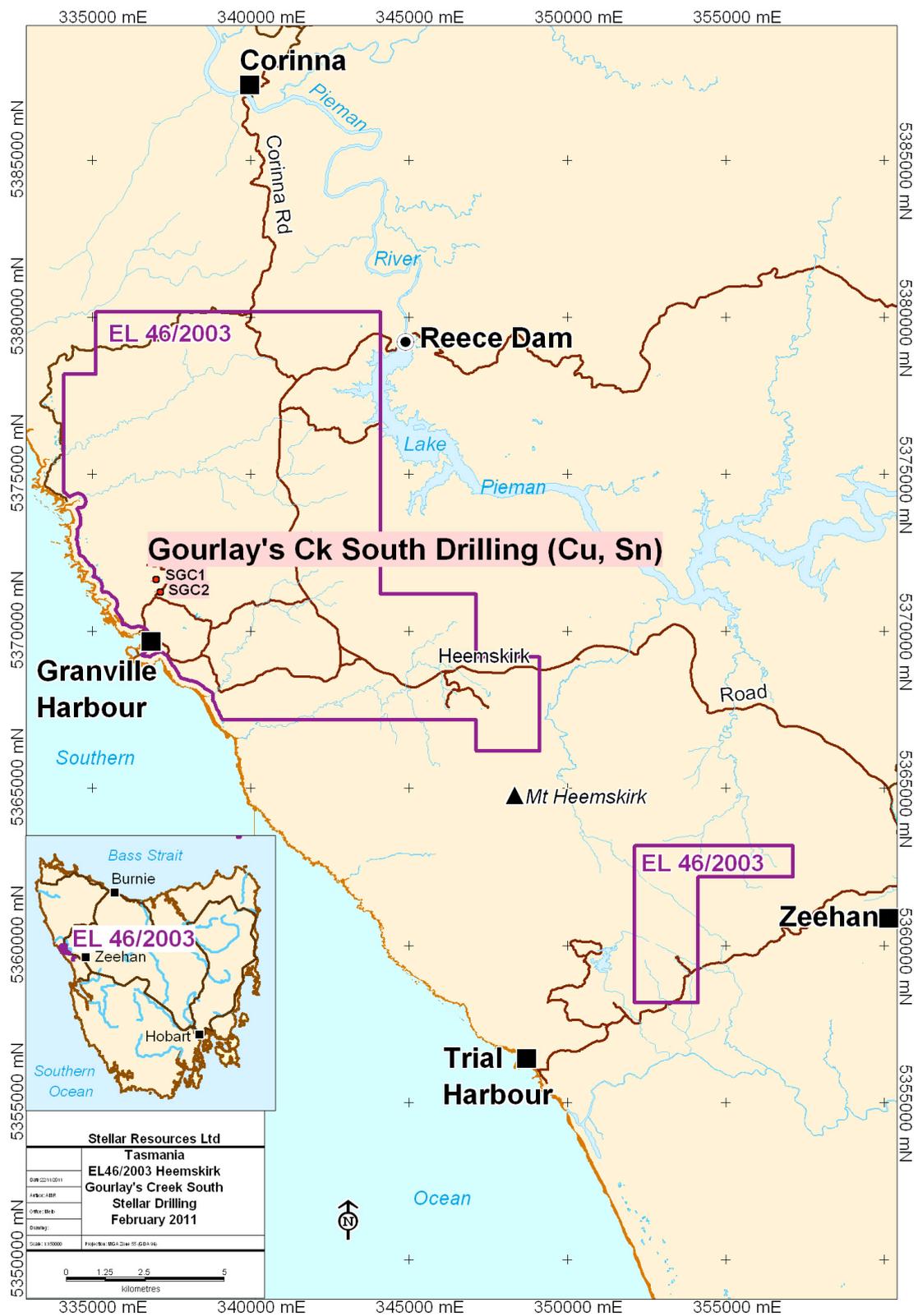
## **4. DISCUSSION OF RESULTS**

### **4.1. GOURLAY'S CK. DRILLING PROGRAM**

The Stellar drilling results this year at Gourlay's Creek reproduced earlier drilling results on this prospect, intersecting significant but patchy copper mineralisation and minor tin mineralisation. No other mineralisation was intersected. The source of the magnetic anomaly, which was the target of the drilling, is the magnetite / pyrrhotite skarns which were intersected in both holes. Unfortunately the skarns are generally poorly to unmineralised. The significant copper mineralisation intersected comprised narrow zones of thin chalcopyrite veining.

As described by Ken Morrison in 2007 at the conclusion of the RC drilling program: "the prospect is hosted in a sequence of NW striking Proterozoic schistose meta turbidites, which can be sub divided into a western magnetite rich association with a probable basaltic component to the stratigraphy, and an eastern association dominated by calc silicate style alteration and including probable carbonate units in the stratigraphy. The western zone sources a strong magnetic high and to date most exploration has focussed on that anomaly. The eastern zone is non magnetic but tends to source more EM and IP conductive anomalies than the magnetic rocks."

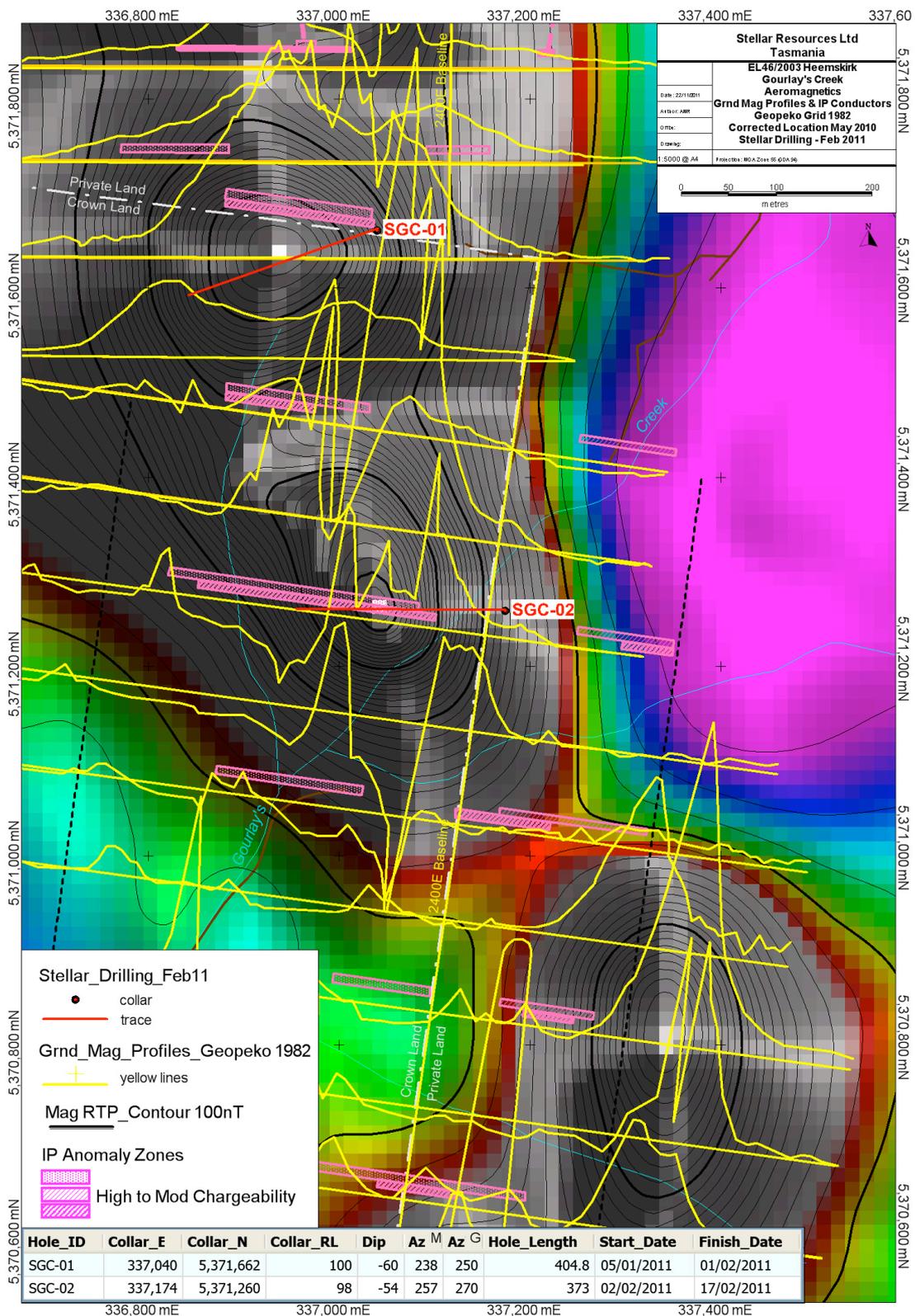
The 2011 program results have reinforced Ken's analysis of the prospect from the 2007 program.



• Figure 4. EL46/2003, Gourlay's Creek South - Stellar drilling locations Jan/Feb 2011.



• Figure 5. EL46/2003, Gourlay's Creek South satellite (Google Earth) imagery with Stellar January/February 2011 drilling & corrected location Geopeko grid.



• Figure 6. EL46/2003, Gourlay's Creek South aeromagnetics, ground magnetic traverses, IP anomaly zones & Stellar drilling January/February 2011.

## **5. CONCLUSIONS**

- Sufficient drilling has now been carried out at Gourlay's Ck. to show that the magnetite-copper prospect is sub economic in the areas tested. The magnetic anomalies continue along strike for many kilometres but much of it is under Tertiary basalt cover and there is little incentive from the 2011 program to conduct step out drilling through cover rocks, without a specific target.
- There is no support from results to date (2007 or 2011 programs) for ranking Gourlay's Creek as a tin prospect. So far Gourlay's Creek looks like a copper-magnetite equivalent to the St Dizier and Tenth Legion magnetite skarns around the Heemskirk Granite.
- There are other prospects on EL 46/2003 which warrant a higher ranking for followup work than Gourlay's Ck.

### **5.1. RECOMMENDATIONS**

Focus future activities at EL 46/2003 on the St Dizier Deposit by:

- Developing a drilling database for the St Dizier Deposit
- Constructing a 3D computer model of St Dizier Deposit to assist in drill design
- Drilling the St Dizier Deposit for metallurgical samples and to increase the resource.

## **6. ENVIRONMENT**

The drill sites at Granville were both on cleared farmland. The landowner has rehabilitated both sites to his satisfaction. Sumps were filled in and consolidated then the sites cultivated and sown back to pasture.

## 7. EXPENDITURE

Transaction Report						
Rubicon Limited						Page: 1
Job No	Job Details	Department	Class	Group		
Tran. Date		Doc Ref - Description			Posting Ref	Amount
Job Code: 6501	EL 46/2003 Heemskirk	D1	RUB	GROUP		
	1053	Technical			Total	AUS\$13,781.69
Phase Total	105	STAFF COSTS				AUS\$13,781.69
	1061	Professional Technical			Total	AUS\$41,552.54
	1062	Labour			Total	AUS\$15,097.50
Phase Total	106	CONTRACT PERSONNEL				AUS\$56,650.04
	1071	Administration & Computing			Total	AUS\$4,309.85
	1072	Geoscientist			Total	AUS\$41,724.00
Phase Total	107	CONSULTANT PERSONNEL				AUS\$46,033.85
	1154	Diamond			Total	AUS\$138,844.80
Phase Total	115	DRILLING				AUS\$138,844.80
	1161	Analytical/Sample analysis			Total	AUS\$8,330.85
Phase Total	116	ASSAYS				AUS\$8,330.85
	1201	Geophysical Airphoto Surveys			Total	AUS\$0.00
Phase Total	120	DATA ACQUISITION				AUS\$0.00
	1251	Vehicle Costs All			Total	AUS\$7,652.96
	1252	Office Costs			Total	AUS\$753.64
	1253	Field Operations Consumables			Total	AUS\$11,646.90
	1254	Safety Equipment			Total	AUS\$767.75
Phase Total	125	SUPPORT COSTS				AUS\$20,821.25
	1505	Rents/ Other Utilities			Total	AUS\$5,828.72
Phase Total	150	TENEMENT COSTS				AUS\$5,828.72
	1551	Meals and Accomodation			Total	AUS\$8,512.20
	1552	Airfares			Total	AUS\$1,133.08
	1553	Vehicle Hire			Total	AUS\$143.48
	1554	General Expense			Total	AUS\$825.32
Phase Total	155	TRAVEL				AUS\$10,614.08
	1651	Administration			Total	AUS\$69,990.38
Phase Total	165	OVERHEADS				AUS\$69,990.38
Job Total : 6501	Class RUB					AUS\$370,895.66

## REFERENCES

- Effler, M. 1982. Explanatory Report of the Geological Map of the Northern Mt Heemskirk Granite/Granville Harbour. CRA Exploration Proprietary Limited, Geopeko Limited. MRT Open File Report.
- Hazeldene, R.K. 2008. EL 46/2003, Heemskirk, Annual Report for the Period 3 January 2007 – 2 January 2008.
- Hazeldene, R.K. 2009. EL 46/2003, Heemskirk, Annual Report for the Period 3 January 2008 – 2 January 2009.
- Hazeldene, R.K. 2010 & Rigg, A.R. EL 46/2003, Heemskirk, Annual Report for the Period 3 January 2009 – 2 January 2010.
- Heithersay, P.S. 1983. Progress Report EL 1/77, Tasmania. Granville East Prospect, “11000” Prospect, Big Rocky Creek Prospect. Geopeko Limited, a division of Peko-Wallsend Operations Limited, CRA Exploration Proprietary Limited. MRT Open File Report.
- Heithersay, P.S., 1982. Progress Report EL 1/77, Granville East Prospect, Gourlay’s Sumpton, J.D.H. Creek Prospect. Geopeko Limited, a division of Peko-Wallsend Operations Limited, CRA Exploration Proprietary Limited. MRT Open File Report.
- Leaman, D. E. 1988. EL 28/87 Granville Harbour - Regional Geophysical Review for New Holland Mining NL. MRT Open File Report.
- Leaman, D. E., 2003. A Geophysical Model of the Major Tasmanian Granitoids. MRT, Richardson, R.G. Tasmanian Geological Survey Record 2003/11.
- Mineral Resources Tasmania. 2003. Mineral exploration opportunities in Tasmania. A summary of opportunities for mineral exploration and mineral resource development in Tasmania. February 2003.
- Parkinson, R. G. 1993. Zeehan No.2. EL 34/88. Report on Exploration in Relinquished Areas for the Period 9/12/88 to 9/11 93. CRA Exploration Pty Limited. November 1993. MRT Open File Report.
- Rombouts, M.J. 1983. Annual Report Exploration Licence 47/71, Queen Hill, Tasmania for 12 Months to December 21, 1983. Aberfoyle Exploration Proprietary Limited, Gippsland Oil and Minerals NL. MRT Open File Report.
- Weir, M. 2004. Avebury’s potential shapes up. Resource Stocks pp70-71 February/March 2004. Published by Aspermont Ltd, Leederville, Western Australia.
- Young, C.H. 1980. Progress Report Queen Hill Joint Venture EL 47/71 Tasmania November 17, 1980. Aberfoyle Exploration Proprietary Limited, Gippsland Minerals NL. MRT Open File Report.
- Young, C.H. 1980. Progress Report, Queen Hill Joint Venture, EL 47/71, Tasmania, Quarter to 31 March 1980. Aberfoyle Exploration Proprietary Limited, Gippsland Minerals NL. MRT Open File Report.

## **Keywords**

Location: Heemskirk  
Mineralisation environment: Skarns, Greisens  
Minerals: Chalcopyrite, Gold, Cassiterite, Arsenopyrite, Magnetite  
Exploration methods: Historic Research, Aeromagnetics, Geochemistry, Drilling  
Mine/prospect name: Gourlay's Creek  
Stratigraphic name: Oonah Formation, Crimson Creek Formation,  
Arthur Metamorphic Complex, Bowry Formation, Heemskirk Granite  
Lithologic name: sandstone, quartzite, phyllite, schist, granite, massive sulphides, quartz  
Geological Province: Dundas Trough, Arthur Lineament  
Geological age: Lower Neoproterozoic, Palaeozoic

STELLAR RESOURCES LTD

January 2012

## **APPENDICES**

Refer to digital data disc.