

**ZZ EXPLORATION** Pty Ltd

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**EXPLORATION LICENCE 18/2003**

**ANNUAL REPORT**

**JANUARY 2006 - DECEMBER 2006**

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## **FOREWARD**

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### **Function of the Annual Report**

This Annual Report has been prepared as a public document for submission to Mineral resources Tasmania (MRT). The report provides a summary of the exploration activities undertaken by ZZ Exploration Pty Ltd (ZZ Exploration) over the Exploration Licence L18/2003 (EL18/2003) during January 2006 and December 2006.

### **Role in the Regulation Process**

This document fulfils the role of an annual Report for EL 18/2003 during January 2006 - December 2006 as required under section 28 of the *Mineral Resources Development Act 1995*, and as requested of ZZ Exploration by Mineral resources Tasmania (MRT) on 7 December, 2006.

## **EXECUTIVE SUMMARY**

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ZZ Exploration Pty Ltd (ZZ Exploration) currently hold Exploration Licence EL 18/2003 (EL 18/2003), which contains a number of known mineral deposits and the potential for new economic mineral deposits to be discovered. This document fulfils the role of an Annual Report for the period January 2006-December 2006.

During January-December 2006, ZZ Exploration have focused on the exploration of small to large scale (<0.5 to >100Mt) economic resources, based on extensive exploration of previously identified mineral deposits.

A summary of exploration activities undertaken is presented below.

### *Regional Exploration*

- Initiation of a study into possible outcrops (e.g. Gordon Limestone, Oonah formation, Bell shale) hosting small scale lead-zinc deposits, nickel mineralization (e.g. Avebury or Melba Flats style deposits), and the potential for iron-magnetite resources proximal to the Heemskirk Granite;
- Review of Geophysical data to define 'Target Areas' for on ground exploration;
- Construction of a 3D model presentation of geological models and proposed processing by CMA;
- Construction of ortho-corrected aerial photographs to assist with regional exploration;
- Preparation for a proposed soil sample survey to be conducted during 2007;
- Construction of detailed maps concentrating on enhanced magnetic anomaly.

*Prospect based mineralisation*

- Continuation of a study of known deposits and potential nickel host rocks of the Zeehan Zinc area;
- Desk top study into potential nickel deposits within EL 18/2003;
- Construction of a twelve month budget plan including 20 holes to target nickel within EL 18/2003;
- Regional exploration expedition to locate various nickel prospects known to exist in the area;
- Two day exploration by Dr Robert Findlay to locate and collect samples from a previously listed nickel mine.

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Construction Modelling Australia.

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MIRLOCH Mineral Locations

## **ABBREVIATIONS**

Ag	silver
Allegiance Mining	Allegiance Mining No Liabilities
Anderson and Schwab	Anderson and Schwab Australia Ltd
Coffey Geosciences	Coffey Geosciences Pty Ltd
DIER	Department of Infrastructure, Energy, and Resources
DRP	Decommissioning and Rehabilitation Plan
DTAE	Department of Tourism, Arts, and the Environment
GPS	Global Positioning System
ha	hectares
JORC	Joint Ore Resource Committee
MRT	Mineral Resources Tasmania
Ni	nickel
NPV	Net Present Value
Pb	lead
RGC	Renison Goldfields Consolidated Ltd
SEMF	SEMF Pty Ltd
SMG	Consultants SMG Consultants Pty Ltd
Western Metals	Western Metal Resources Ltd
Zeehan Zinc	Zeehan Zinc Ltd
ZZ Exploration	ZZ Exploration Pty Ltd
Zn	zinc

## **1 INTRODUCTION**

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### **1.1 PURPOSE OF THIS DOCUMENT**

ZZ Exploration Pty Ltd (ZZ Exploration) currently hold Exploration Licence EL 18/2003 (EL18/2003), which contains a number of known mineral deposits and the potential for new economic mineral deposits to be discovered.

This document fulfils the role of an Annual Report for EL 18/2003 during January 2006 – December 2006, as required under Section 28 of the *Mineral Resources Development Act 1995*, and as requested of ZZ Exploration by Mineral Resources Tasmania (MRT) on the 7 December, 2006.

### **1.2 THE PROPONENT**

ZZ Exploration is a wholly owned subsidiary of Zeehan Zinc Ltd (Zeehan Zinc). ZZ Exploration currently holds Exploration Licence EL 18/2003, which includes several known mineral deposits. ZZ Exploration's long term objective is to be one of the leading mineral exploration companies for Category 1 mineral deposits within the Zeehan area.

Through the continued exploration for mineral deposits, ZZ Exploration aim to provide Zeehan Zinc's gravity separation plant at the Comstock mine with mineral resources for further processing over the medium to long-term period.

### **1.3 EXPLORATION LICENCE SCHEDULE**

Details of EL 18/2003, including grid coordinates, are provided in Appendix A.

## **1.4 EXPLORATION LICENCE LOCATION AND OPERATIONS**

### **1.4.1 Site Location and Mineral Exploration area**

EL 18/2003 covers approximately 14 square kilometres. 12 square kilometres of the licence is located four kilometres southeast from Zeehan, with an additional 2 square kilometres located eight kilometres west from Zeehan, western Tasmania (Figure 1).

The main access to EL 18/2003 is via Trial Harbour Road and a 4WD is required to negotiate the numerous partially overgrown former tramways and tracks that cross the area.

Vegetation cover over EL 18/2003, is dominated by button grass, with dense tea-tree and eucalypt scrub occurring along creek lines.

Exploration activities undertaken by ZZ Exploration during the reporting period have included regional explorations with interest towards potential ultra-mafic hosted nickel deposits, granite-related carbonate replacement deposits and Irish-type deposits.

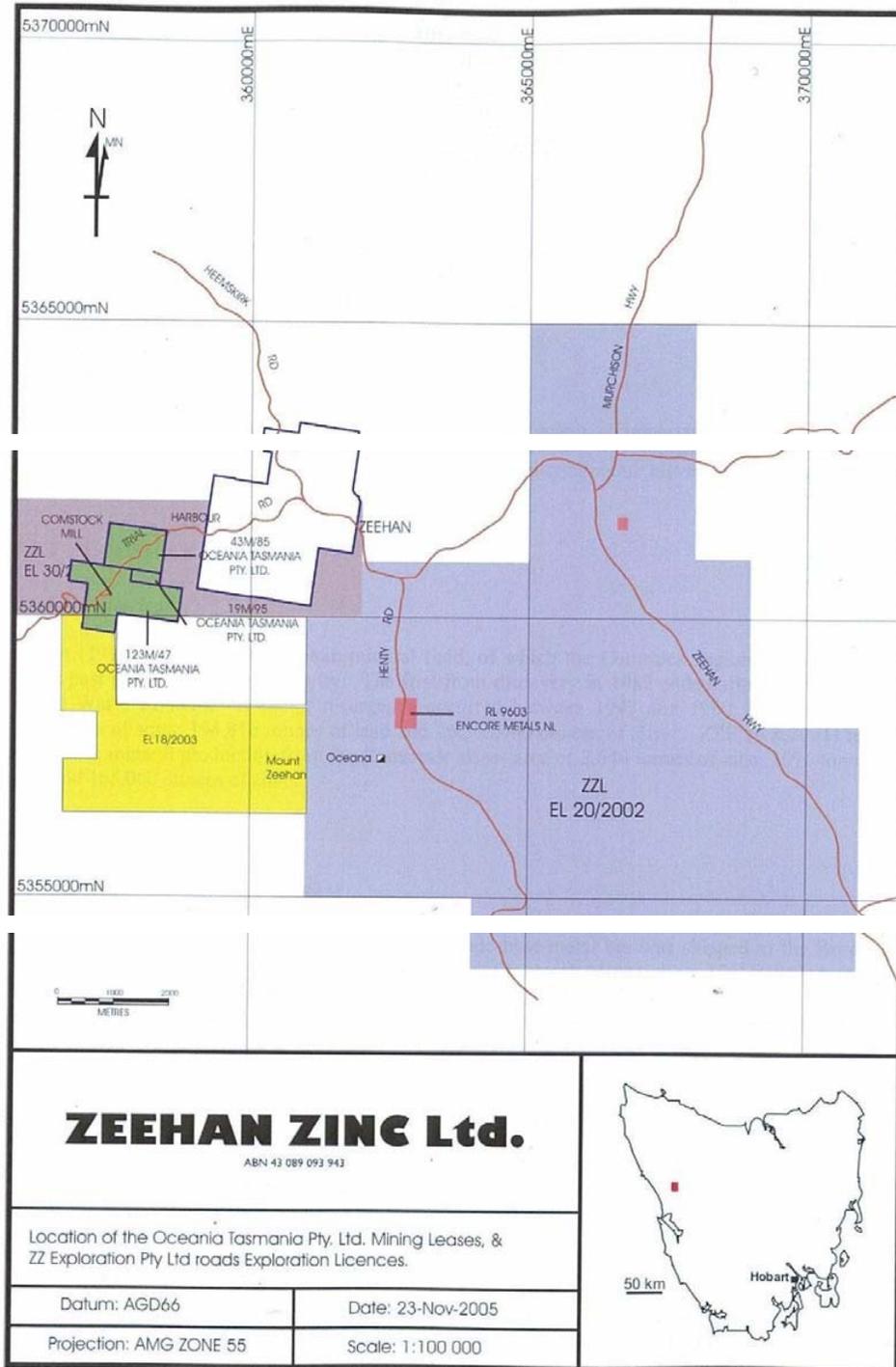


Figure 1. Location of ZZ Exploration Pty Ltd EL18/2003

### **1.4.2 Exploration Lease Tenure**

EL 18/2003 was granted to ZZ exploration on the 3 February 2005 for a period of five years and applies to all category 1, 3, 4 and 5, minerals. The licence covers 14 square kilometres (fig 1), and excluded areas include:

- Any land owned or leased by the Commonwealth of Australia;
- Mining Leases;
- Retention Licences; and
- Crown Reservations.

The current land tenure in and around EL 18/2003 is provided in Figure 2.

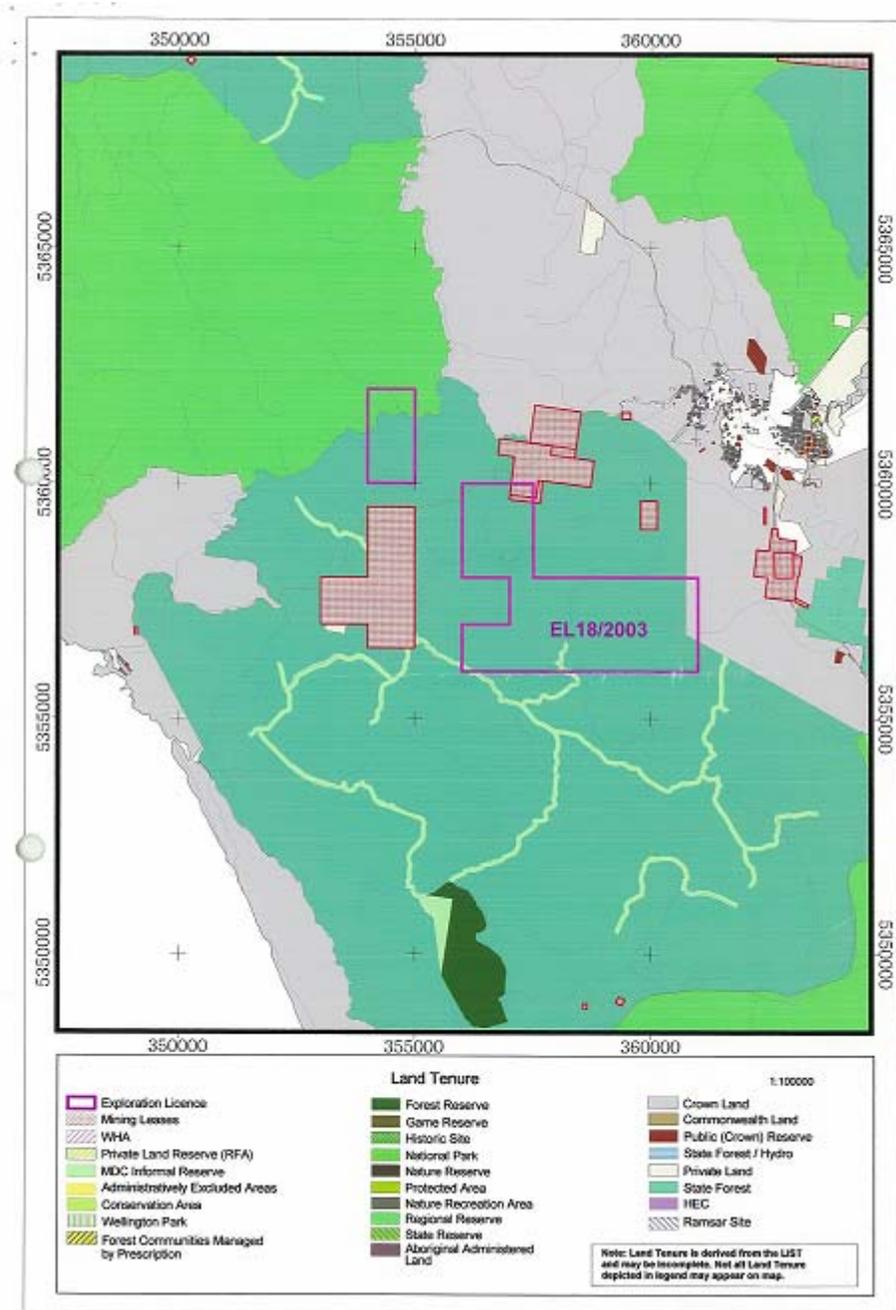


Figure 2: Land Tenure for EL 18/2003

## **1.5 STRUCTURE OF THIS DOCUMENT**

A brief description of the structure of this report is provided in Table 1.

**Table 1:** Brief description of the report structure

<b>Section Heading</b>	<b>Brief Description of the Information Provided</b>
Executive Summary	A summary of the exploration activities undertaken within Exploration Licence 18/2003.
1.0 Introduction	Brief description of the proponent, the exploration licence location and tenure.
2.0 Summary of Previous Work	Summary of geological exploration previously undertaken within the area covered by EL 18/2003.
3.0 Regional Exploration Undertaken during 2006	Description of exploration activities by ZZ Exploration on a regional scale within EL 18/2003 during the reporting period.
4.0 Prospect based exploration during 2006	Details of exploration activities by ZZ Exploration during the reporting period.
5.0 Exploration Expenditure	Summary of exploration expenditure by ZZ Exploration over EL 18/2003 during the reporting period.
6.0 Proposed Work Program	Description of the proposed exploration program within EL 18/2003 during 2006.

## **2 SUMMARY OF PREVIOUS WORK**

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### **2.1 Previous Mining and Exploration Within EL18/2003**

For all Previous Mining and exploration within EL18/2003 refer to Blisset, A.H. 1962.

### **3 REGIONAL EXPLORATION UNDERTAKEN DURING 2006**

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ZZ Exploration has undertaken regional and prospect based exploration activities within EL 18/2003, during January 2006 – Dec 2006. Prospect based exploration activities are discussed in detail in subsequent sections.

As part of the regional exploration of EL 18/2003, ZZ Exploration have initiated a detailed study focussing on:

- The possibility of outcrops (e.g. Gordon Limestone, Oonah formation, Bell shale) hosting small scale lead-zinc deposits;
- The possibility of nickel mineralization (e.g. Avebury or Melba Flats style deposits);
- The potential for iron-magnetite resources proximal to the Heemskirk Granite.

Investigations into mineral resources other than lead – silver - zinc deposits within ZZ Exploration licences have resulted in the construction of detailed maps for all licences.

Potential nickel deposits have been identified using the known location of old workings and aeromagnetic data obtained from Mineral Resources Tasmania.

The aeromagnetic survey identified a number of large magnetic anomalies within ZZ Exploration Licences. The combination of the magnetic anomalies, old workings, and drilling results assisted in establishing detailed maps for planning and drilling programs to commence in 2007.

In addition to the construction of maps identifying magnetic anomalies, ZZ Exploration have recently created a series of ortho-corrected aerial photographs to assist with regional exploration.

ZZ Exploration in conjunction with Construction Modelling Australia have developed a 3D model presentation of simplified geological forms that exist within ZZ exploration licences.

The 3D model was developed as a tool to assist in the understanding of the known deposits, as well as demonstrate future processing plans (Appendix B).

A review of geophysical data previously performed in the area assisted in defining potential target areas for future prospects. A series of on ground exploration and drilling for these areas have been listed as proposed programs during 2007.

#### **4 PROSPECT BASED EXPLORATION**

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ZZ Exploration have expanded investigations into potential and known nickel deposits within the exploration licences of EL 18/2003, EL 20/2002, EL 30/2002.

In July 2006, a desktop study into previous nickel exploration of the Zeehan area identified eleven potential nickel prospects within ZZ Exploration Licences. Further exploration during 2007 will involve identifying the location of previously worked areas and defining the prospect areas using ground surveys and proposed drilling.

A list of known deposits that occur within the Zeehan area are included in Appendix C.

During 2006, Dr Robert Findlay led a two day nickel exploration over EL 18/2003. The focus of the expedition was for collection of samples and identification of previously mined areas and potential nickel prospects within EL18/2003.

In September 2006 ZZ Exploration conducted a second expedition to locate the old workings, spoil dumps and outcropping rock of potential mineral prospects. Points of interest were photographed and GPS readings taken to assist further exploration.

Future work programs will include a detailed soil survey in and around identified prospects and preparation for a detailed drilling program.

**5 EXPLORATION EXPENDTURE**

**5.1 EXPENDITURE DURING THIS REPORTING PERIOD**

Table 2 lists a summary of expenditure by ZZ Exploration over EL18/2003 during this reporting period. Expenditure is defined by category for each quarter during January 2006 through to December 2006 with a category total and grand total included.

**Table 2:** Summary of expenditure over EL 18/2003 during 2006.

<b>Expenditure Statement</b>	<b>2006</b>				<b>Total</b>
<b>Category</b>	<b>March Quarter</b>	<b>June Quarter</b>	<b>September Quarter</b>	<b>December Quarter</b>	<b>Category Total</b>
Geology	\$2,200.00	\$5,700.00	\$ 8,528.48	\$10,832.66	\$27,261.14
Geochemistry					
Geophysics- Air					
Geophysics- Ground			\$ 816.66		\$ 816.66
Feasibility Studies					
Rehabilitation					
Drilling (m)					
Gridding Line (km)					
Administration					
Other		\$ 635.63	\$ 4,014.20	\$ 3,612.60	\$ 8,262.43
<b>Grand Total</b>	\$2,200.00	\$6,335.63	\$13,359.34	\$14,445.26	\$36,340.23

**5.2 EXPENDITURE COMMITMENTS**

EL 18/2003 was granted to ZZ exploration on the 3 February 2005 for a period of five years with an attaching expenditure commitment of \$10,500 for the first two years. As the exploration licence was granted in the March quarter of 2005, expenditure is therefore reported from (and including) the March quarter of one year, through to the March quarter of the next year (e.g. March quarter 2003 – March quarter 2004) (Table 3).

**Table 3 :** Expenditure Commitments by ZZ Exploration over EL18/2003

<b>Expenditure required (minimum)</b>	<b>EL18/2003 (km<sub>2</sub>)</b>	<b>Minimum Expenditure</b>
Years 1&2 (3/2/05-3/2/07)	\$10,500	\$ 10,500
Year 3 (3/2/07-3/2/08)	\$1000 per km <sup>2</sup> per annum	\$ 14,000
Year 4 (3/2/08-3/2/09)	\$2000 per km <sup>2</sup> per annum	\$ 28,000
Year 5 (3/2/09-3/2/10)	\$5000 per km <sup>2</sup> per annum	\$ 70,000

**Table 4:** Expenditure over EL 18/2003 by ZZ Exploration during 2005 -2006.

<b>Expenditure Statement</b>	<b>2005</b>	<b>2006</b>	<b>2005-2006</b>
<b>Category</b>	<b>Total</b>	<b>Total</b>	<b>Category Total</b>
Geology	\$10,200.00	\$27,261.14	<b>\$37,461.14</b>
Geochemistry			
Geophysics-Air			
Geophysics-Ground		\$ 816.66	<b>\$ 816.66</b>
Feasibility Studies	\$ 2,272.72		<b>\$ 2,272.72</b>
Rehabilitation			
Drilling (m)			
Gridding line (km)			
Administration			
Other		\$ 8,262.43	<b>\$ 8,262.43</b>
GST Error			
<b>Grand Total</b>			<b>\$48,812.95</b>

## **6 PROPOSED WORK PROGRAMS**

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- Review of Geophysical data to define 'Target Areas' for on ground exploration.
- Preparation for a proposed soil sample survey to be conducted during 2007;
- Regional exploration expedition to locate various nickel prospects known to exist within the area
- Construction of detailed maps focusing on enhanced magnetic anomalies and mapped outcrops.

**7 REFERENCES**

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Blisset, A.H. 196. *Geology of the Zeehan sheet, 1- mile Geological Map Series K/55-5-50, Explanatory Report, Geological Survey of Tasmania.*

Ochre Australia., 2003. *Investigation of geophysical and image data over the Zeehan field. Unpublished. In: Heath, P., 2003. 2003 annual exploration report, ZZ Exploration Pty Ltd. Appendix 4.*

**8 APPENDICES**

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Appendix A: *Schedule from Exploration Licence EL18/2003;*

Appendix B: *3D model presentation of ZZ Exploration Licences;*  
Construction Modelling Australia

Appendix C: *Location of Mineral Deposits within EL 18/2003;*  
MIRLOCH Mineral Locations

Appendix D: *Valuation of the Mineral Assets of Zeehan Zinc Limited*