



### Abstract

Zeehan 6 EL 2/96 was granted to Rio Tinto Exploration Pty. Limited on 12th April 1996. The licence covers 29sq km and covers an area extending west from Zeehan township.

Rio Tinto Exploration Pty. Limited took out EL 2/96, Zeehan 6 to explore for shale-hosted zinc mineralisation within the Proterozoic Oonah Formation and zinc-lead deposits within the Ordovician carbonates of western Tasmania.

During recent project rationalisation and prioritisation, Rio Tinto Exploration Pty. Limited downgraded priority of this EL. Rio Tinto sought to attract a partner to advance exploration and recently negotiated a farm-in and joint venture agreement with Allegiance Mining NL.

Allegiance plans to undertake a review of all previous work, paying particular attention to ground mapping and sampling over the Legion-McIvor Hill area. If results of this reconnaissance work are encouraging, a high resolution aeromagnetic survey may be flown over the area.

Under the terms of the agreement Allegiance will manage the exploration programme and tenement.

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<b>Plan No.</b>	<b>Title</b>	<b>Scale</b>
Tv1205	EL 2/96 Zeehan 6 Location Plan	1:100,000

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## 1. Conclusions and Recommendations

- During recent project rationalisation and prioritisation, Rio Tinto Exploration Pty. Limited downgraded priority of this EL.
- No exploration work was conducted in the area during the reporting period.
- Rio Tinto has recently negotiated a farm-in and joint venture agreement with Allegiance Mining NL.
- Allegiance plans to undertake a review of all previous work, paying particular attention to ground mapping and sampling over the Legion-McIvor Hill area. If results of this reconnaissance work are encouraging, a high resolution aeromagnetic survey may be flown over the area. A detailed 1998 - 1999 budget and work programme from Lindsay Newnham on behalf of Allegiance Mining is included in Appendix 1.

## 2. Introduction

Zeehan 6 EL 2/96 was granted to Rio Tinto Exploration Pty. Limited on 12th April 1996. The licence covers 29sq km (Plan Tv 1205) and covers an area extending west from Zeehan township.

Rio Tinto Exploration Pty. Limited acquired the Zeehan 6 licence with two main targets in mind.

1. Shale hosted mineralisation in the Late Proterozoic Oonah formation.
  - Drilling on adjacent licence EL 28/88 at Stonehenge has identified significant but sub-economic massive sulphide mineralisation in black shales in the Upper Oonah Formation (1km or so south of the southern boundary of EL 2/96).
  - The abundance of mineral occurrences and small scale mines in the area has similarities to the Lawn Hill area which hosts the Century deposit in Queensland.
  - The area has similarities with the German Sedex deposits of Rammelsberg and Meggen.
2. Irish-style Pb-Zn mineralisation in the Ordovician Gordon Group carbonates. Rio Tinto Exploration Pty. Limited's preceding exploration of the Gordon Group carbonates in the Zeehan area resulted in several encouraging Pb-Zn intersections. Hence Rio Tinto Exploration Pty. Limited expanded exploration efforts to other areas of poorly explored Gordon Group carbonates with potential to host economic Irish-style Pb-Zn mineralisation.

During recent project rationalisation and prioritisation, Rio Tinto Exploration Pty. Limited downgraded priority of this EL, and sought to attract a farm-in partner to further advance exploration.

Rio Tinto has recently negotiated a farm-in and joint venture agreement with Allegiance Mining NL.

### **3. Review of Previous Work**

#### **3.1 Geology**

The Precambrian Oonah Formation covers most of the area and is comprised of quartzite, siltstone, carbonate, black shale and mafic lavas. A wedge of Lower Dundas Group epiclastic sediments crops out in the south east of the licence, while ultramafic gabbroic rocks crop out in the southwest. A granitoid spine is believed to extend beneath the area in an east-west direction from the Heemskirk granite. The Balstrup fault and Tenth Legion thrust are regarded as providing fluid access to the Oonah carbonates.

Significant mineralisation is known from the Queen Hill area, with 3.2 million tonnes of 1.2% Sn. Diamond by Renison in the Comstock-Sylvester area discovered a massive sulphide replacement body in the footwall of the Balstrup fault. An inferred resource, from a limited number of drill holes has been quoted as 6 million tonnes at 3.3% Pb, 5.5% Zn and 40g/t Ag. Potential exists for extensions and higher grades to this orebody at the eastern end where massive sulphides have replaced dolomite.

Other significant prospects within the bounds of the EL are Tenth Legion and Oonah where Rio Tinto Exploration Pty. Limited conducted considerable work in the past.

#### **3.2 Exploration**

Apart from the prospect specific work mentioned above, exploration conducted in the area includes general exploration by Renison and Aberfoyle which is covered in detail in the statutory reports of those companies.

### **4. Exploration Completed In Reporting Period**

No exploration work was conducted in the area during the reporting period.

During recent project rationalisation and prioritisation, Rio Tinto Exploration Pty. Limited downgraded priority of this EL.

Rio Tinto has recently negotiated a farm-in and joint venture agreement with Allegiance Mining NL.

Allegiance plans to undertake a review of all previous work, paying particular attention to ground mapping and sampling over the Legion-McIvor Hill area. If results of this reconnaissance work are encouraging, a high resolution aeromagnetic survey may be flown over the area. A detailed 1998 - 1999 budget and work programme from Lindsay Newnham on behalf of Allegiance Mining is included in Appendix 1.

#### 5. Rehabilitation

No field exploration programmes were completed during the tenure period hence no rehabilitation was required.

#### 6. Expenditure

Expenditure by Rio Tinto for the Zeehan 6 exploration licence (EL 2/96) for the 12 month ending 11 March 1998 is \$3,466.

During the reporting period Allegiance Mining NL spent \$6,516 on EL 2/96, Zeehan 6. Total expenditure on the licence is \$11,464.

#### 7. References

- |                                       |      |   |
|---------------------------------------|------|---|
| von Strokirch T                       | 1997 | First Annual Report for the Period<br>Ending 12 March 1997 EL 2/96, Zeehan<br>6, Tasmania<br><i>Rio Tinto Report Number 23342</i> |
| Tasmania Development<br>and Resources | 1995 | Exploration Tender Area closing 23<br>November 1995   |

#### 8. Location

- |            |        |           |
|------------|--------|-----------|
| Queenstown | SK55-5 | 1:250,000 |
| Pieman     | 7914   | 1:100,000 |

#### 9. Keywords

Tasmania \* Base Metals \* Precambrian \* Ordovician \* Carbonate Hosted \*  
literature review

Table 1

## Rio Tinto Expenditure Statement for EL 2/96 Zeehan 6

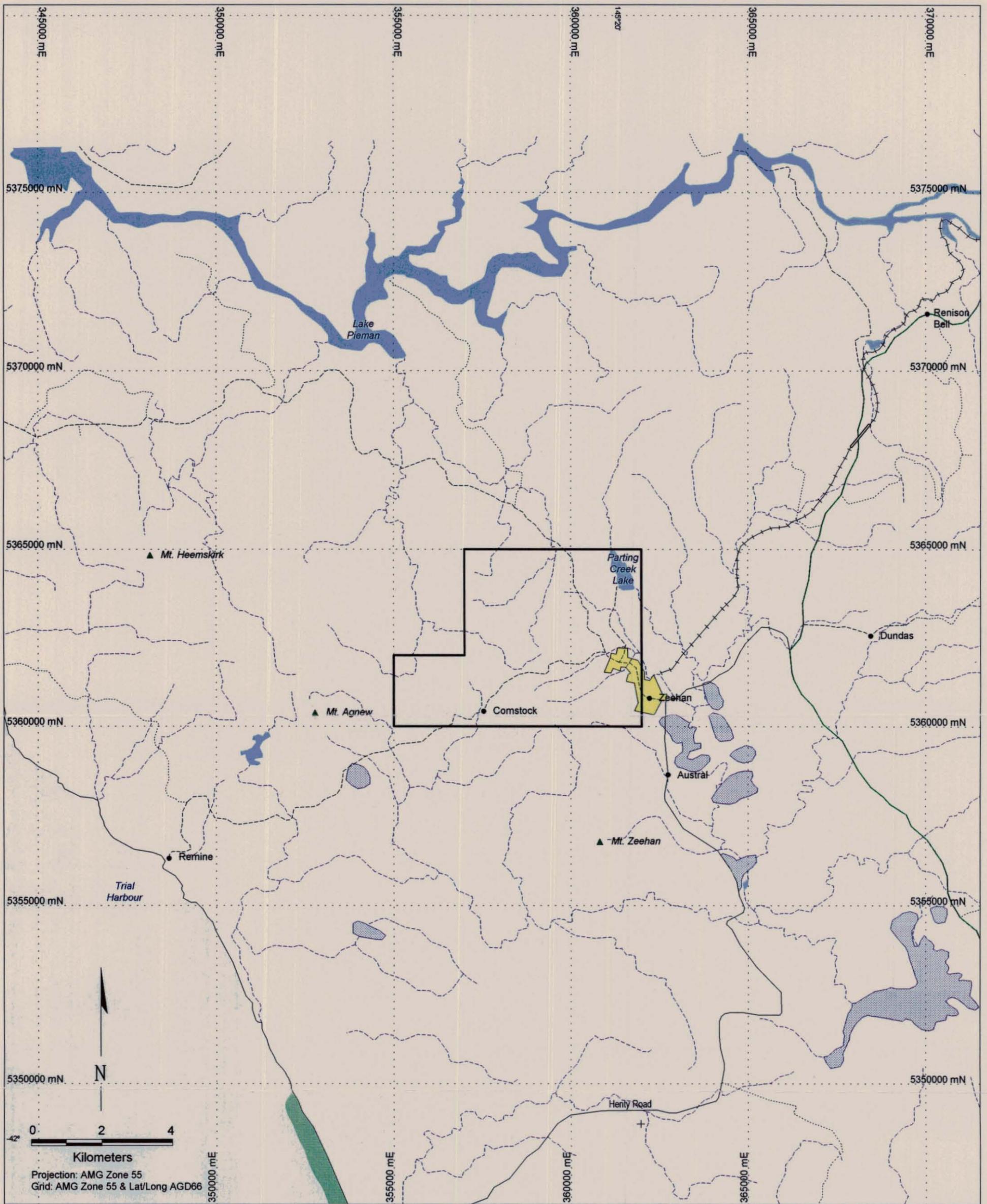
	1/3/97 - 28/2/98	TOTAL
Drilling	0	0
Contractors	0	0
Laboratory	0	0
Rent & Property	71	71
Payroll & Benefits	1,022	1,121
Field & Transport	133	151
Travel & Accommodation	0	0
Computer Services	74	74
Professional	0	330
Office & Miscellaneous	1,006	1,726
District Administration	255	255
Regional Costs	231	231
Tenements	674	989
<b>TOTAL</b>	<b>\$3,466</b>	<b>\$4,948</b>

Table 2

## Allegiance Expenditure Statement for EL 2/96 Zeehan 6

	1/3/97 - 28/2/98
Geology	5,792
Administration	724
<b>TOTAL</b>	<b>\$6,516</b>

Total Expenditure on the licence is \$11,464.



Location Diagram

SK55-20 NW-Tas			
Conical Rocks 7814	Pieman 7914	Sophia 8014	
	Cape Sorell 7913	Franklin 8013	
SK55-22 SW-Tas			

Mapsheet Reference

Legend

- Town
- ▲ Mountain
- - - EL Boundary
- Perennial Drainage
- - - Non-Perennial Drainage
- Highway
- Secondary Road
- Minor Road
- Track
- Railway
- Lake
- Swamp
- Urban

RIO TINTO EXPLORATION PTY. LIMITED

5 cm

EL2/96 Zeehan 6  
Location Plan

Author: T. von Strokirch	Reference: SW Tasmania SK55-22
Drawn: N. Waterman	File Name: Tv1205.wor
Date: July 1997	Report No: 23724
Scale: 1:100,000	Plan No: Tv1205

**Appendix 1**

**Proposed 1998 - 1999 Work Programme and Budget  
for EL 2/96 Zeehan 6**

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EL 2/96

**PROPOSED EXPLORATION APRIL, 1998 - MARCH, 1999**

EL 2/96 is considered prospective for two types of deposits:

- Nickel sulfides associated with mafic and ultramafic formations altered by the intrusion of the Heemskirk Granite in the Tenth Legion-Kynance-Melvor Hill area.
- Sediment-hosted Pb-Zn mineralisation in proterozoic sediments west of Zeehan.

To further evaluate this potential for these mineralisation styles, the following work is proposed over the next 12 months:

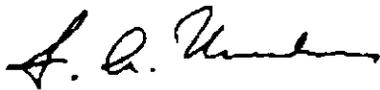
- Acquire all existing data, including drilling data over the Tenth Legion-Melvor Hill area, and determine the extent of previous Ni exploration.
- Ground mapping and sampling in this area.
- If results of the above work are encouraging, a high resolution aeromagnetic survey may be flown over this area and the adjacent EL 22/97.
- Assessment of previous exploration in the Proterozoic to identify areas warranting more detailed ground studies. Particular attention will be directed towards assessing data in the Sylvester-Comstock-Stonchenge area.

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**Budget for the above work is:**

Project geologist for 8 weeks @ \$2,000/week	16,000
Travel, accommodation (to Hobart & Zeehan)	3,000
Assaying	1,000
Preparation of maps, data bases, etc	5,000
Field supplies associated with locating and checking old cores	2,000
Possible Hellmag survey	<u>4,000</u>
<b><u>Estimate</u></b>	<b><u>\$31,000</u></b>



Lindsay Newnham

Cunt/PropWorkProgs