

**TYSON RESOURCES PTY LTD**

**ANNUAL  
TECHNICAL REPORT**

**EL 25080 "LAKE AMADEUS"**

***Northern Territory***

**Annual Report for the year ending  
8 October 2008**

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**DATE** October 2008

**KEY WORDS**

EVAPORITES  
PROTEROZOIC  
AMADEUS FORMATION  
POTASH  
SALT  
PLAYA LAKES  
SALT LAKES

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**TYSON RESOURCES PTY LTD**  
**EL 25080 "LAKE AMADEUS"**  
**NORTHERN TERRITORY**  
**Annual Report for the**  
**Year Ending 8 October 2008**

**SUMMARY**

**AIM**

To explore and evaluate the potential for economic potash mineralisation within lake sediments.

**OBJECT of REPORT**

To document exploration activities and results achieved on Exploration Licence 25080 and to report these to DRDIFR, Northern Territory.

**LOCATION**

EL 25080 is located 210 kilometres south west of Alice Springs on the Kugera 1: 250 000 map sheet (SG 5305).

**TENURE**

EL 25080 was granted to Tyson Resources Pty Ltd on 8 October 2006 for a period of six years. It is bounded by Longitudes 132°23' and 137°35' and Latitudes 24°31' and 24°39'.

**PRECIS**

This report details all exploration activity carried out during the year ended 8 October 2008. During this period, a meeting was held with the Central Land Council to explain the exploration techniques for the testing of potash mineralisation within the salt brines of Lake Amadeus.

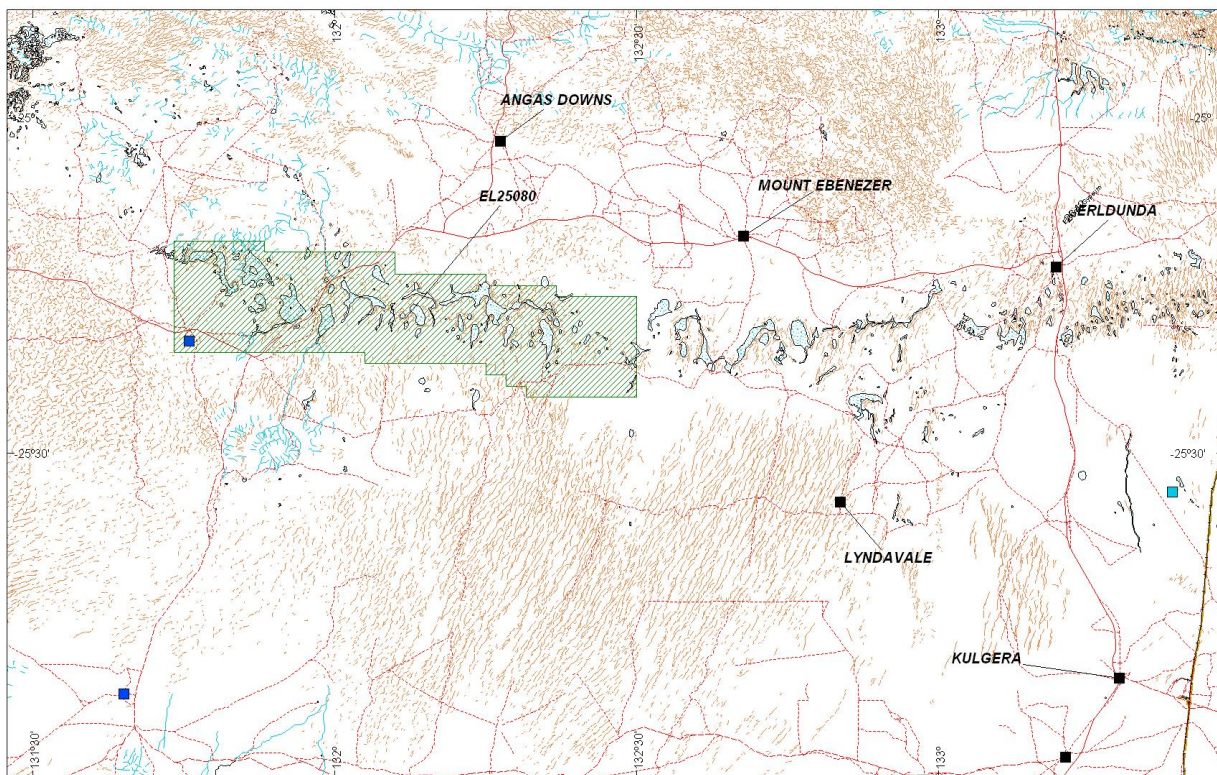
## 1. INTRODUCTION

Exploration Licence 25080, "Lake Amadeus", is located in the southwestern sector of the Amadeus Basin in the Northern Territory. The Amadeus Basin covers approximately 150,000km<sup>2</sup> and is located in the southwestern part of the Northern Territory extending into Western Australia. It is comprised of a Neoproterozoic to mid-Palaeozoic succession of shallow marine sediments and attains a thickness of up to 14,000m.

## 2. LOCATION and ACCESS

EL 25080 is located 210 kilometres south west of Alice Springs on the Kulgera 1:250,000 map sheet. ( See Figure 1). Access is via the main Stuart Highway to the Lasseter Highway which traverses the tenement area.

Fig 1  
Location Diagram



## 3. TENURE

EL 25080 was granted to Tyson Resources Pty Ltd on 8 October 2006 for a period of six years. It comprises 418 blocks encompassing a total area of 1304 sq km. In October 2005 Tyson Resources sold the tenement to Holocene Pty Ltd, a wholly subsidiary of Reward Minerals Ltd.

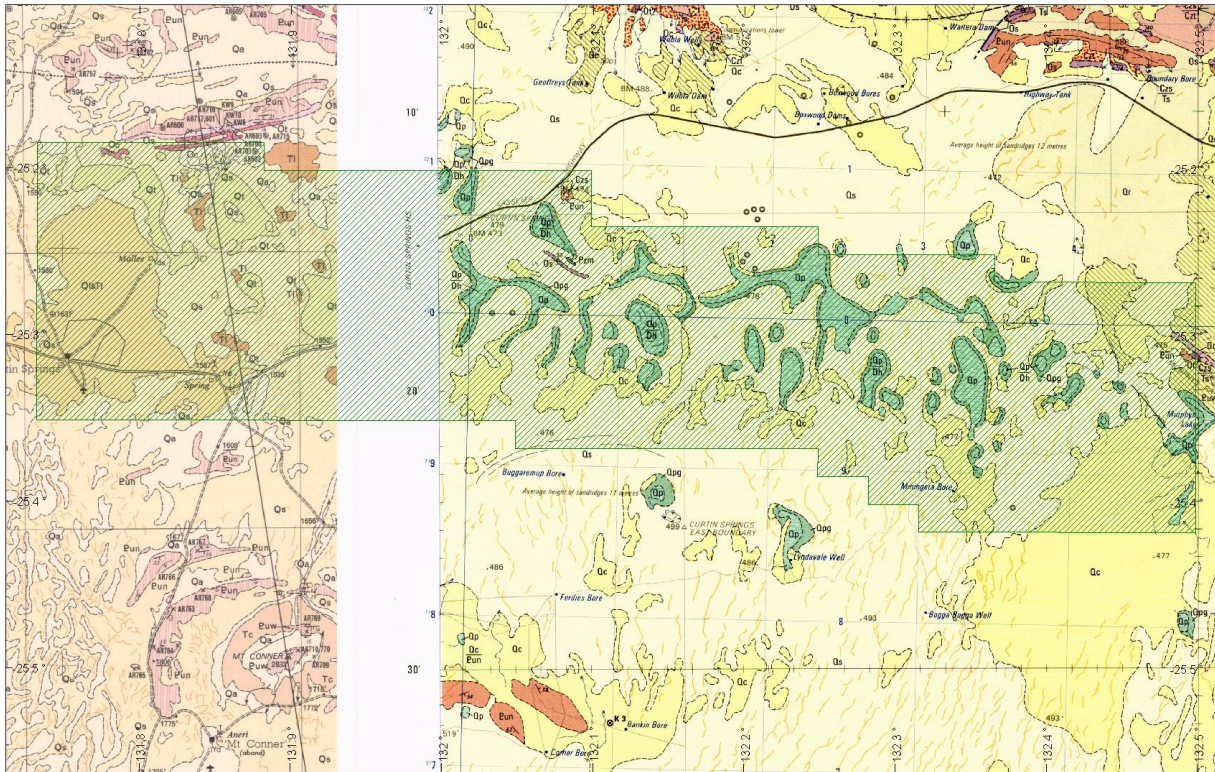
Reward Minerals is the operator/manager.



#### 4. GEOLOGICAL SETTING

EL 25080 lies on the Kulgera 1: 250,000 map sheet, for which geological notes are available. The area forms part of a lacustrine/playa system, consisting of salt deposits, Quaternary sands, silcrete, ferricrete and gypsum.

Figure 2  
Tenement Location with 1:250,000 Geology



The lakes are part of both a modern drainage system and a much larger palaeo-drainage system, which during the Tertiary discharged to Lake Eyre via the ancestral Finke River. Cainozoic sediments in the study area are tens of metres thick and comprise alluvial-aeolian clay and sand interbedded with lacustrine deposits. Bedded dolomite, limestone, siltstone and evaporates (mainly gypsum and anhydrite) of Proterozoic age underlie the Cainozoic sediments at Lake Amadeus. Both Cainozoic and fractured bed-rock aquifers appear to be present. The playas are essentially discharging/recharging outcrops of shallow groundwater aquifers with brines derived from both modern and Proterozoic sources.

#### 5 PREVIOUS EXPLORATION

Between 1990 and 1998, Emily Enterprises/Northern Territory Evaporites investigated possibilities of harvesting evaporite minerals and other useful products from playa salt lake sediments or from the evaporation of the brines. They found that large reserves of micritic calcite were available in the calcrete deposits of the area. A trial to produce mirabilite was conducted in 1997 by the construction of a small pan i.e. 3.5m x 8m x 0.3m which was filled with brine, with the removal of the brine producing 1680kg of mirabilite. A small drilling program was carried out to test brine levels. A total of 18 shallow holes were drilled to test for playa type shallow gypsum deposits. Gypsum was intersected within 1m and was generally 3 to 4 metres thick. The gypsum content was generally 70-85%. Trench samples obtained indicated a  $\text{Ca SO}_4 \cdot 2\text{H}_2\text{O}$  content varying from 70 to 80%.

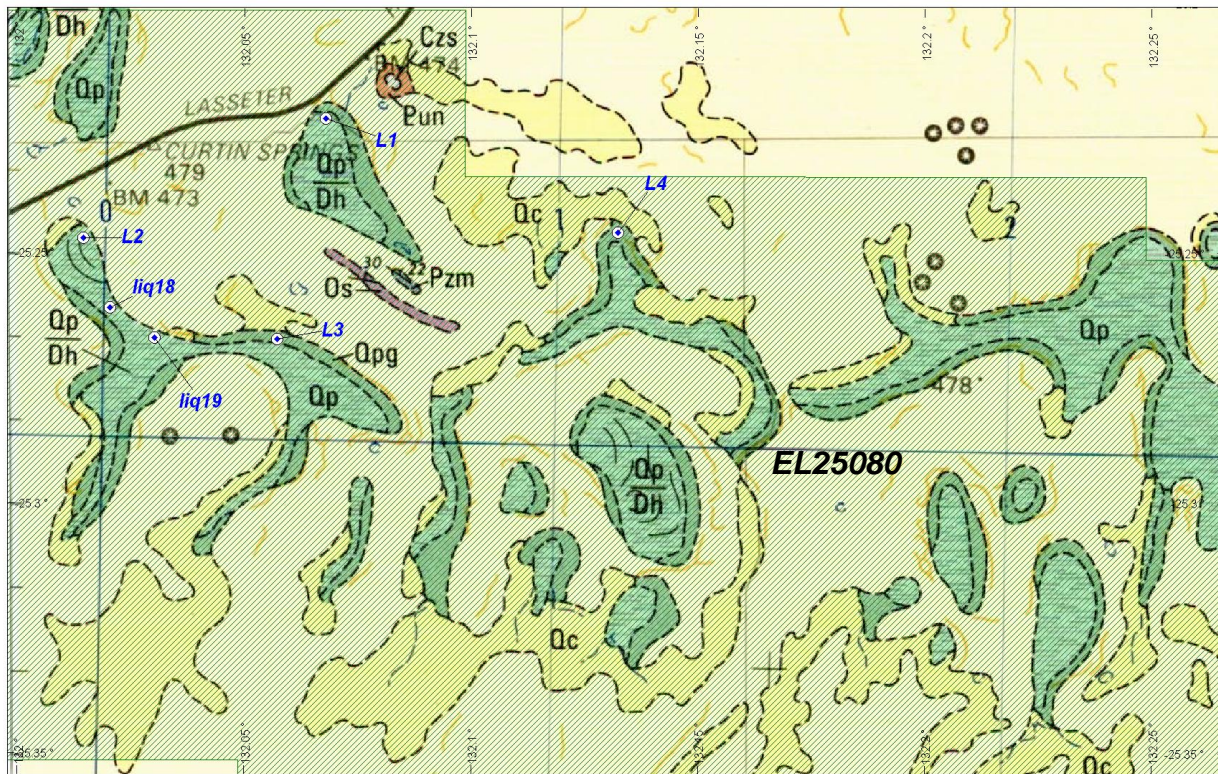


During 2006-2007 a total of 6 lacustrine sediment samples were taken. The sample locations are shown on Figure 3. The samples were analysed for Na, K, Ca, Mg, SO<sub>4</sub>, Cl and TDS. The results are tabulated below:

Table 1  
Analyses of Lacustrine samples

Sample	Na	K	Ca	Mg	SO <sub>4</sub>	pH	Cl	Cond	TDS	SG
	mg/l	mg/l	mg/l	mg/l	mg/l		mg/l		gm/l	gm/cc
LL1	7800	450	235	206	3850	7.9	11200	40	24	1.01
LL2	6000	260	455	130	3400	7.5	8600	32.2	19	1.01
LL3	7350	340	450	140	4000	7.6	10400	38.6	23	1
LL4	11700	7520	125	5570	54000	7.4	173200	553	335	1.22
LIQ18	5500		5	4						
LIQ19	10900		65	52						

Figure 3  
Sample Locations



## 6 WORK COMPLETED

In October 2007 a meeting was held with the Central Land Council (CLC) to explain to traditional owners the nature of the exploration program and the mineralisation being sought on EL 25080. Despite a favourable response from the CLC, i.e. a fertiliser product rather than uranium, no written response from the CLC has been forthcoming, despite phone calls, on the outcome of the meeting regarding approval for the exploration program.

Consequently no exploration has been possible.



**REFERENCES**

- Arakel AV, 1989      Annual Report EL's 5689 and 5801 Kulgera for the period 1988 to 1989. Emily Enterprises, NT Evaporites. 1989
- Arakel AV, 1998      Exploration Report for period 1 July 1997 to June 1998 for Authority S 162. Emily Enterprises, NT Evaporites. 1998

## **Tyson Resources Pty Ltd**

### **EL25080**

#### **STATEMENT OF EXPENDITURE FOR 12 MONTHS ENDED OCTOBER 8 2008**

SUPPLIES & SERVICE –OFFICE FIXED	200
MISC GOVERNMENT CHARGES	20
SUPPLIES & SERVICE -FIELD	720
TRAVEL & ACCOMMODATION	1827
DRILLING	0
CONTRACT & CONSULTANT SERVICES	3,000
GEOPHYSICS	0
GEOCHEMICAL	0
RESEARCH	120
LAND TENURE, NATIVE TITLE AND ENVIRONMENT (includes meeting fee)	6177
<b>TOTAL DIRECT COST</b>	<b>12,064</b>
ADD: TECHNICAL SUPPORT & ADMINISTRATION	356
<b>TOTAL CURRENT TERM</b>	<b>\$12,420</b>

## **Tyson Resources Pty Ltd**

### **EL25080**

#### **STATEMENT OF PLANNED EXPENDITURE FOR 12 MONTHS ENDED OCTOBER 8 2009**

SUPPLIES & SERVICE –OFFICE FIXED	1200
MISC GOVERNMENT CHARGES	220
SUPPLIES & SERVICE -FIELD	320
TRAVEL & ACCOMMODATION	9827
DRILLING	5000
CONTRACT & CONSULTANT SERVICES	18,000
GEOPHYSICS	0
GEOCHEMICAL	0
RESEARCH	0
LAND TENURE & ENVIRONMENT	345
<b>TOTAL DIRECT COST</b>	<b>34,912</b>
ADD: TECHNICAL SUPPORT & ADMINISTRATION	411
<b>TOTAL FUTURE TERM</b>	<b>35,323</b>