#### **TYSON RESOURCES PTY LTD**

## ANNUAL TECHNICAL REPORT

EL 25080 "LAKE AMADEUS"

Northern Territory

Annual Report for the year ending 8 October 2007

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#### **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 2007

#### **SUMMARY**

#### **AIM**

To explore and evaluate the potential for economic potash mineralisation

#### **OBJECT of REPORT**

To document exploration activities and results achieved on Exploration Licence 25080 and to report these to the Department of Mines and Energy, Northern Territory.

#### **LOCATION**

EL 25080 is located 120 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 Longtitudes  $132^{0}23'$  and  $137^{0}35'$  and Latitudes  $24^{0}31'$  and  $24^{0}39'$ .

#### **PRECIS**

This report details all exploration activity carried out during the year ended 8 October 2007. During this period, investigations were completed with a view to selecting targets for potash exploration and limited sampling of the salt water brines.

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#### 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 150,000km² 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 270 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 Lasseter Highway which traverses the tenement area.

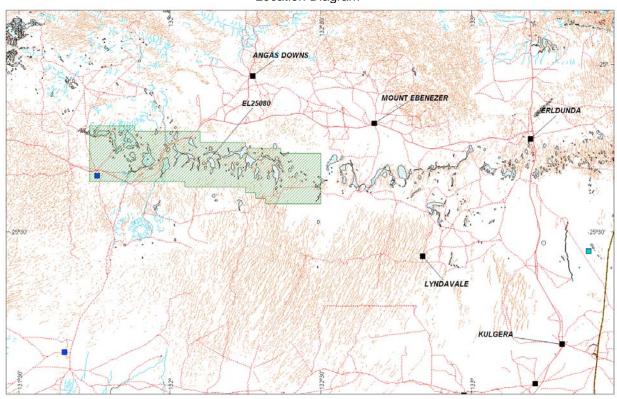


Fig 1 Location Diagram

#### 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 and ferricrete.

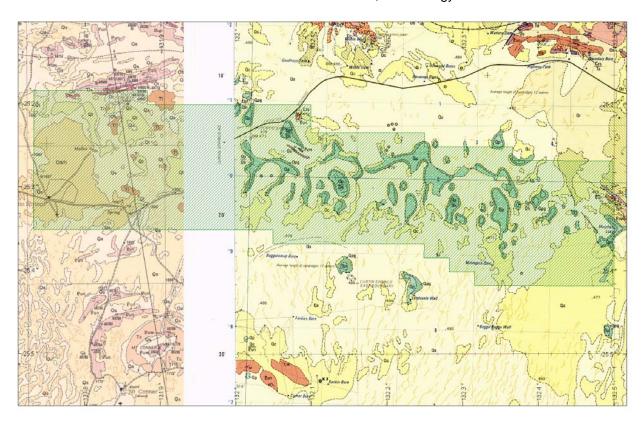


Figure 2
Tenement Location with 1:250,000 Geology

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.

#### 3. 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 ie 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 Ca SO4 2H2O content varying from 70 to 80%.

#### 4. WORK COMPLETED

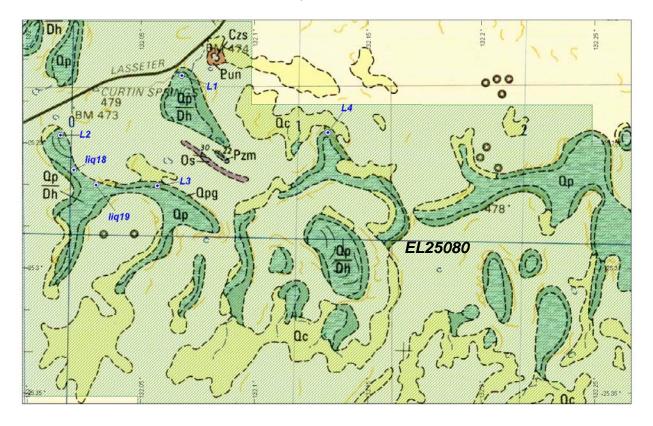
Work involved literature surveys, field visits, salt lake mapping, brine analyses of water and sampling of lacustrine sediments.

A total of 6 lacustrine sediment samples were taken. The locations of these samples is shown on Figure 3. The samples were analysed for NA, K, Ca, Mg, SO4, CL and TDS. The results are tabulated below:

Table 1
Analayses of Lacustrine samples

Sample	Na	K	Ca	Mg	SO4	рН	CI	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



#### **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 2007

SUPPLIES & SERVICE –OFFICE FIXED	1200
MISC GOVERNMENT CHARGES	220
SUPPLIES & SERVICE -GEOPHYSICAL DATA	
SUPPLIES & SERVICE -FIELD	720
TRAVEL & ACCOMMODATION	7827
DRILLING	0
CONTRACT & CONSULTANT SERVICES	38,000
INTERNAL GEOPHYSICS .	320
GEOPHYSICS	0
GEOCHEMICAL	325
RESEARCH	3222
LAND TENURE & ENVIRONMENT	345
TOTAL DIRECT COST	52,180
ADD: TECHNICAL SUPPORT & ADMINISTRATION	1,756
TOTAL CURRENT TERM	\$53,936

## **Tyson Resources Pty Ltd**

#### EL25080

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

SUPPLIES & SERVICE –OFFICE FIXED	1200	
MISC GOVERNMENT CHARGES	220	
SUPPLIES & SERVICE –GEOPHYSICAL DATA	320	
SUPPLIES & SERVICE -FIELD	0	
TRAVEL & ACCOMMODATION	9827	
DRILLING	5000	
CONTRACT & CONSULTANT SERVICES	38,000	
INTERNAL GEOPHYSICS .	220	
GEOPHYSICS	0	
GEOCHEMICAL	0	
RESEARCH	0	
LAND TENURE & ENVIRONMENT	345	
TOTAL DIRECT COST	55,132	
ADD: TECHNICAL SUPPORT & ADMINISTRATION	411	
TOTAL FUTURE TERM	55,543	