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No. 12,067

EL 3458

EUREKA BLUFF

FIRST PARTIAL SURRENDER REPORT FOR THE PERIOD 29/11/2005 TO 28/11/2009

Submitted by
Marmota Energy Ltd
2010

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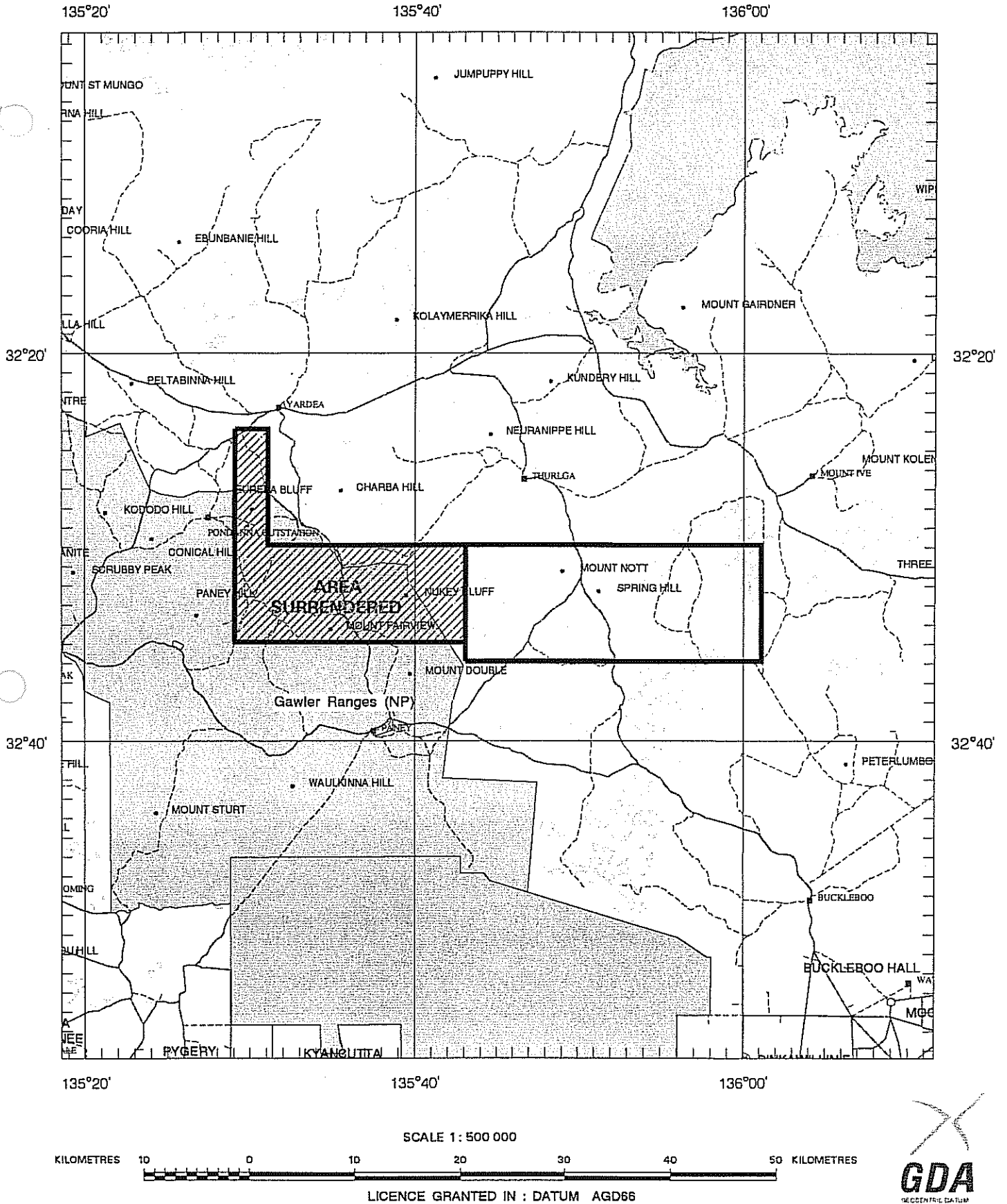
Enquiries: Customer Services Branch
Minerals and Energy Resources
7th Floor
101 Grenfell Street, Adelaide 5000

Telephone: (08) 8463 3000
Facsimile: (08) 8204 1880



Government of South Australia
Primary Industries and Resources SA

SCHEDULE A



APPLICANT : **MONAX MINING LTD**

FILE REF : **59/05**

TYPE : **MINERAL ONLY**

AREA : **312 km² (approx.)**

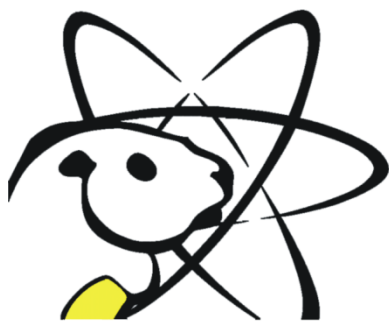
1:250000 MAPSHEETS : **YARDEA**

LOCALITY : **PINE LODGE AREA - Approximately 120 km ENE of Streaky Bay**

DATE GRANTED : **29-Nov-2005**

DATE EXPIRED : **28-Nov-2009**

EL NO : **3458**



**MARMOTA
ENERGY LIMITED**

A.B.N. 38 119 270 816

Exploration Office
Warehouse I, 5 Butler Blvd
Burbridge Business Park
Adelaide Airport SA 5950
Postal Address
PO Box 247 Export Park SA 5950

Ph: (08) 8375 4300
Fax: (08) 8375 3999
www.marmotaenergy.com.au

Partial Relinquishment Report

EL 3458 Eureka Bluff

For the period 29 November 2005 – 28 November 2009

Tenure holder | Monax Mining Limited
Compiled by | Greg Swain

Tenement operator | Marmota Energy Limited
Report date | 31 August 2010

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Summary

This partial relinquishment report details the work undertaken by Monax Mining Limited and Marmota Energy Limited on the relinquished area of EL 3458 - Eureka Bluff, during the period 29 November 2005 – 28 November 2009.

EL 3458 is located 50km NNE of Wudinna on the southern margin of the Gawler Craton. The licence area was reduced from 550.7 km² to 312.7 km² effective of the licence anniversary date of 28 November 2009. The main target in this area is Olympic Dam style copper-uranium-gold and Tanami style orogenic lode gold. Also of interest are palaeochannel systems that are present within the tenement area. These are prospective for roll front style sedimentary uranium deposits.

On 24 September 2007, Monax Mining entered into a joint venture arrangement with Marmota Energy Limited for the exploration of uranium on a number of tenements, including EL3458, held by Monax Mining. Under the terms of the agreement, Marmota became the operator of these tenements.

Exploration conducted on the relinquished area over the term of the licence included an airborne electromagnetic (AEM) survey, completed in June 2008.

Keywords

EL3458, Eureka Bluff, Olympic Dam style copper-uranium-gold, Tanami style orogenic lode gold

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	File size
EL3458_2009_P_01_ReportBody.pdf	214KB
EL3458_2009_Figure1_Tenement location.pdf	606KB
EL3458_2009_Figure2_Relinquishment area.pdf	847KB
EL3458_2009_Figure3_AEM depth slice.pdf	315KB

1. Introduction

EL 3458 is located 50km NNE of Wudinna (**Figure 1**) and covers an area of 550.7 km² over the southern margin of the Gawler Range Volcanics (GRV) within the central Gawler Craton. In the eastern Gawler Craton, the margin of the GRV is highly prospective for Iron Oxide Copper-Gold (IOCG) style mineralisation such as that at Olympic Dam, Prominent Hill, and Carrapateena, within the Olympic Cu-Au Province. The western margin of the GRV is highly prospective for gold mineralisation, known as the Central Gawler Gold Province. Exploration at Eureka Bluff is aimed at identifying these styles of mineralisation and/or a hybrid inbetween.

2. Tenure

Tenure details for EL 3458 are detailed below in **Table 1**

EL	Name	Area (km ²)	Tenement holder	Tenement operator	Grant Date	Expiry Date
3458	Eureka Bluff	550.7*	Monax Mining Limited	Marmota Energy Limited	29 November 2005	28 November 2010

* reduced to 312.7km² as at 28 November 2009

3. Geology

Basement geology at Eureka Bluff is mainly Mesoproterozoic upper GRV, although there is some lower GRV exposed. The tenement immediately abuts Palaeoproterozoic Sleaford Complex and Hutchison Group, lying to the south and probably separated by a faulted contact. The nearest mapped occurrence of Hiltaba Suite granite is about 10 km to the south, where it intrudes Palaeoproterozoic basement. Structure within the area is dominated by conjugate northeast and northwest trending lineaments, presumably faults, which form narrow depressions where bedrock is covered by Quaternary sediments. Elsewhere, outcrop of bedrock is excellent.

A complex regional E-W fault network cross cuts the project area which controls basin development. These regional fault networks potentially control the location of iron oxide hosted copper-uranium-gold deposits. NW-SE and NE-SW structures were active during the formation of Hiltaba Suite rocks and the orientations are favourable to produce zones of structural dilatancy in which Tanami style orogenic lode gold could be formed. The structural complexity can be seen in the total magnetic intensity (TMI).

4. Exploration Rationale

The project area falls on the southern margin of the GRV, which may have formed a seal for mineralising fluids. Zones of demagnetisation along structures and flow fronts suggest alteration and escape of these fluids from the sealed system. This setting has the potential to form large gold deposits due to the focussing of mineralising fluids over a long time span.

Structural interpretation of detailed magnetics will define targets for potential IOCG and gold mineralisation. Soil and calcrete geochemistry of these targets will be undertaken, aimed at identifying coincident geochemical-structural anomalism for drill testing.

The detailed radiometrics has indicated a palaeodrainage system in the far east of the tenement. This has defined targets for potential sedimentary hosted uranium deposits.

5. Previous Exploration

After early diamond exploration, beginning in 1981, the tenement area has been the focus for mainly base metals and gold investigations. Stockdale Prospecting Ltd (Stockdale) searched the region for diamonds between 1981 and 1988, resulting in the drill testing of two anomalies. Stockdale also explored for stratabound lead-zinc-silver deposits in Palaeoproterozoic Hutchison Group rocks. Follow-up included drilling of 383 RAB and percussion drillholes and two diamond core holes, one of which made minor lead-zinc intersections. However, little of this exploration appears to have impacted on the Eureka Bluff area. In partnership with Western Mining Corporation Ltd (WMC), Stockdale sought epithermal vein style gold, undertaking regional stream sediment BLEG sampling.

CRA Exploration (CRAE) also explored for diamonds, from 1985 to 1991, discovering one microdiamond, but no further indicators. From 1989 to 1991 CRAE explored for gold and base metals associated with possible volcanic centres in the Gawler Range Volcanics. Several interpreted eruptive centres were recognised. Minor base metal mineralisation was detected at Sherry Dam, about 40 km north of Eureka Bluff area. CRAE also recognised similarities between the Gawler Range Volcanics and other alkaline igneous rocks of similar age in Sweden, Missouri and Canada. A secondary target was Olympic Dam style Iron Oxide Copper Gold (IOCG) deposits.

Helix Resources NL (Helix) and Anglogold Australasia Ltd (Anglogold) searched for gold and base metals in the western sector of the tenement from 1995 to 2001. Gold mineralisation was anticipated in fracture zones and associated with a possible volcanic vent in Gawler Range Volcanics. Regional stream sediment and calcrete geochemical surveys detected only minor gold anomalism. A possible volcanic vent was drill tested, yielding low-level gold and base metals, with inconclusive results.

Rasp Resources NL (Rasp) explored the western sector of the tenement for base and precious metals from 1977 to 2000. Appraisal of existing geological data generated several promising targets, including a quartz-veined northwest trending lineament. However, Rasp undertook no further work.

6. Relinquishment Area

6.1. Relinquishment Area

The area of EL 3458 which has been relinquished is the western portion covering 238 km² and is shown in **Figure 2**. The majority of this area overlaps the Gawler Ranges National Park, and is deemed difficult for exploration due to access restrictions

7. Exploration Conducted

7.1. Airborne Electromagnetic Survey (see Envelope 11411)

Work carried out on the relinquished portion EL 3458 during the reporting period comprised of an airborne electromagnetic (AEM) survey completed in June 2008. The survey was conducted by Fugro Airborne Surveys Pty Ltd on 400m line spacing. The line directions were 090 – 270 and the sensor height was 220m. The entire survey comprised a total of 1745 line kilometres. No other exploration was conducted on this relinquished portion of the tenement.

Figure 3 shows a near surface depth slice of the airborne electromagnetic data. The entire AEM data was submitted in the November 2008 Annual Technical Report. Monax and Marmota agree to release the entire dataset for public access.

8. Conclusions

Monax and Marmota have agreed that the overlap of the western part of Eureka Bluff with the Gawler Ranges National Park would cause access restrictions to exploration. As well as this, no significant anomalies were highlighted in the AEM data.

Figures

Marmota Energy Limited

Partial Relinquishment Report for EL3458 – Eureka Bluff

29 November 2005 – 28 November 2009

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