



Archer Exploration Ltd  
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ASX code: AXE

## QUARTERLY ACTIVITIES REPORT

For the period ended 31 December 2007

### HIGHLIGHTS:

- Two high priority drill targets at Evelyn Dam and Island Lagoon that warrant drilling have been identified and a third previously unidentified target at the Apollo prospect has also been discovered.
- PACE funding applications made for the drilling of Island Lagoon and Evelyn Dam prospects.
- Regional in-fill gravity survey over Island Lagoon prospect (part of West Roxby Project) completed during October and drill target defined.
- Modeling of in-fill gravity data at Evelyn Dam prospect was completed and drill target defined.
- Regional in-fill gravity survey over Lake Gairdner North Project (part of West Roxby Project) completed and Apollo prospect identified.
- An airborne magnetic and radiometric survey was completed over Carrapee Hill.
- The Company holds a 100% interest in 5,693km<sup>2</sup> of copper, gold and uranium prospective ground in South Australia with only 848km<sup>2</sup> yet to be granted.
- The Company held \$6. 539 million in cash reserves at the end of the quarter.

## **EXPLORATION:**

### **West Roxby Project (AXE 100%)**

The West Roxby Project comprises five granted tenements which form a contiguous group commencing approximately 100 km southwest of Olympic Dam, running 30km southwest of Woomera ending about 100km northwest of Port Augusta. The Stuart Highway traverses the northern portion of the area.

The West Roxby project lies on the Gawler Craton, covering sections of the Gawler Range Volcanics.

During December processing and interpretation work on the exploration data acquired during the previous quarter continued, this included modeling of the infill gravity data to determine locations for follow-up drilling. Upon completion of this work, two applications were made for PACE funding through PIRSA, these were for both the Island Lagoon and the Evelyn Dam prospects.

#### Apollo prospect

One significant feature to be highlighted by the recent infill gravity survey undertaken by the Company is the extreme gravity low in the central part of EL 3851. This high amplitude circular shaped anomaly appears to be in the order of 10mGal with an approximate diameter of 2.5km, depth of 200 to 300m and a density range of 2.1 to 2.2 g/cc.

The Company intends to undertake further exploration to better define this exciting new exploration target.

#### Evelyn Dam prospect

The Evelyn Dam prospect is located on the western shore of Lake MacFarlane on Yalymboo Station within EL 3721. The gravity anomaly was originally discovered by the analysis and interpretation of data obtained from a PIRSA funded gravity survey and lies some 74km south-southwest of Woomera and 65km west of the Stuart Highway, see Figure 1.

After completion of recent processing of the infill gravity data the Evelyn Dam prospect can be seen as a well defined, moderate to high amplitude, isolated, gravity only anomaly, see Figure 1. There is no significant discernable associated magnetic signature with the gravity anomaly.

The geophysical interpretation assumes an essentially cylindrical body as the source of the gravity high, with flanking gravity lows reflecting proximal granite intrusive bodies. There are a very limited range of possible source rock assemblages that can account for the geophysical signature in this geological setting. The most probable cause of the anomaly is considered to be a body of disseminated to massive hematite flanked by granite stocks.

Island Lagoon prospect

The proposition to be tested at Island Lagoon is that iron-oxide-copper-gold (“**IOCG**”) style alteration and mineralisation developed at the intersection of regional northwest-southeast and southwest-northeast trends, and that this position has also been a focus for subsequent Gairdner dyke intrusion. Integration of the gravity and magnetic models has identified locations where there is significant excess mass not associated with magnetic dykes and these will be tested for IOCG style alteration/mineralisation.

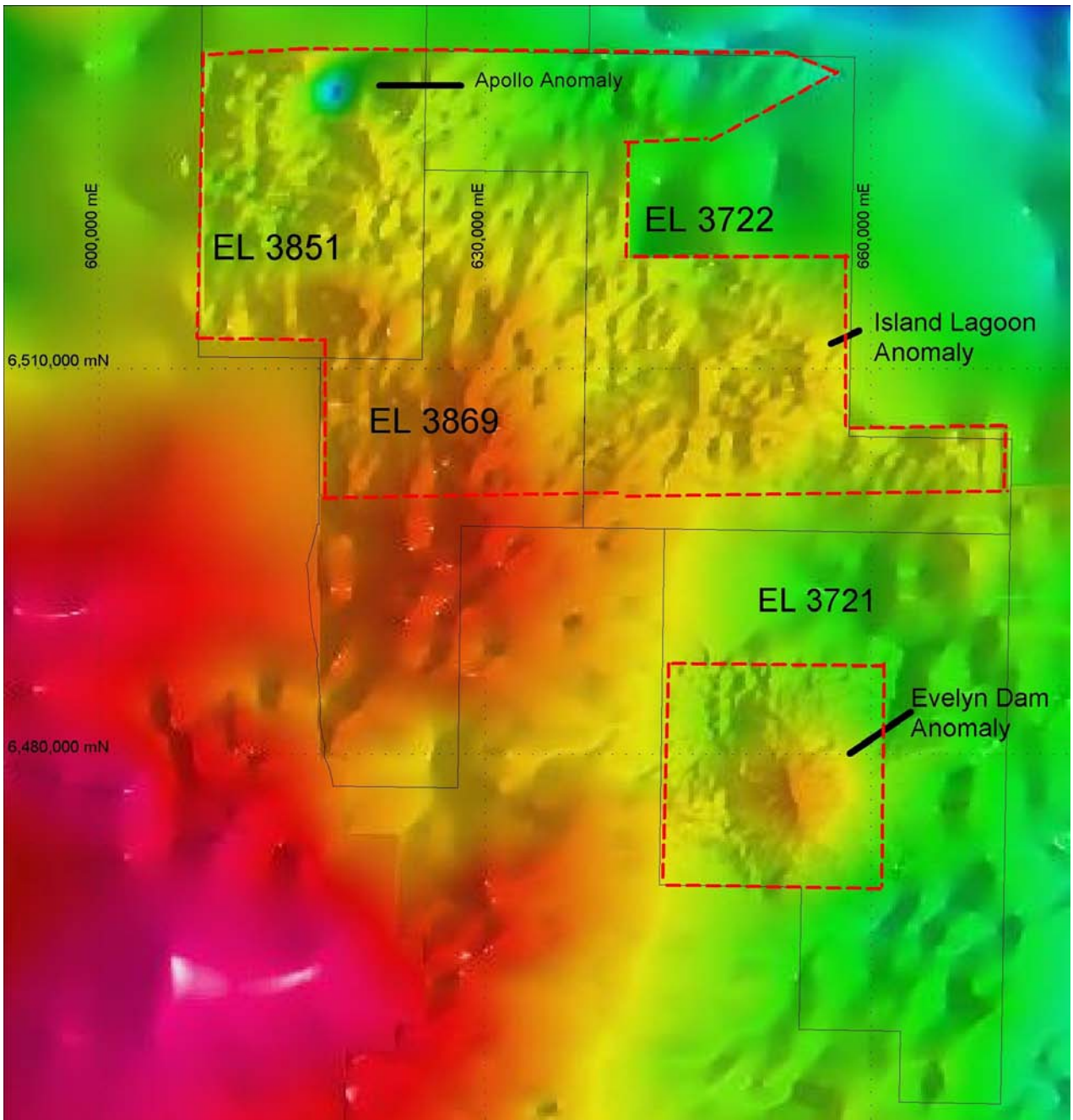


Figure 1: West Roxby Project gravity image and location of drill targets.



### **Cariewerloo Project (AXE 100%)**

The Cariewerloo Project is located approximately 60km north west of Port Augusta, South Australia and comprises EL 3852 which was granted to the Company on 23 July 2007. Archer considers the Cariewerloo Project to be prospective for the discovery of unconformity style uranium mineralisation.

No exploration activities were undertaken by the Company on the Cariewerloo Project during the December quarter.

### **South Gawler Ranges Project (AXE 100%)**

The South Gawler Ranges Project is located approximately 35km north west of Kimba, South Australia and comprises ELA 647/06 which is separated into three discrete blocks lying along the southern margin of the Gawler Ranges.

Reprocessing of the available airborne magnetic and radiometric data has commenced to define palaeodrainage uranium targets that will be assessed on the ground and prioritised for aircore drill testing.

The objective is to be in a position to commence drill testing as soon as practicable after the tenement is granted.

### **Carrappee Hill Project (AXE 100%)**

Exploration of the area of EL 3711- Carrappee Hill Project by previous tenement holders has defined a 3.5 km long surface base metal geochemical anomaly at the Sugarloaf Hill Prospect. The anomaly has been tested by shallow air-core drilling returning several strongly anomalous results. This work has established the existence of a mineralised zone with sufficient surface dimensions to contain significant mineralisation.

The Company completed a UTS aerial survey of the Carrappee Hill tenement in December, aero magnetic and radiometric data were collected. This data is to be modeled and an exploration program for this tenement is to be developed.

**CORPORATE:**

- The Company's cash balance at the end of the quarter was \$6.539 million.

Tom Phillips AM  
Chairman  
Archer Exploration Limited

date: 29 January 2008

*The exploration results reported herein, insofar as they relate to mineralisation, are based on information compiled by Mr. Wade Bollenbagen, Chief Geologist of UraniumSA Limited (which has a service contract with Archer Exploration Limited) and a Member of the Australasian Institute of Mining and Metallurgy who has more than twelve years experience in the field of activity being reported. Mr. Bollenbagen consents to the inclusion in the report of matters based on his information in the form and context in which it appears.*



# Archer Exploration Limited Company Snapshot

## Directors

Tom Phillips AM    Chairman  
Alice McCleary    Non-Executive Director  
Greg English      Non-Executive Director

## Company Secretary

Craig Gooden

## Registered and Principal Office

32 Beulah Road  
Norwood SA 5067  
Telephone:      (08) 8132 0003  
Facsimile:      (08) 8132 0766  
Email: [executive@archerexploration.com.au](mailto:executive@archerexploration.com.au)

## ASX Code

Archer's ASX code is "AXE".

## Number of Shareholders

As at 31 December 2007, Archer had 889 shareholders.

## Major Shareholders

The share register records the following as major Shareholders at 31 December 2007:

|                              |            |
|------------------------------|------------|
| GDE Exploration (SA) Pty Ltd | 11,604,798 |
| Valentina Nowak              | 3,430,000  |
| Ganesan Sivanandam           | 2,375,000  |
| Tigermoth Investments        | 2,000,000  |
| UraniumSA Limited            | 2,000,000  |
| Deborah Rossiter             | 1,883,679  |
| Bluck Holdings Pty Ltd       | 750,000    |
| Craig & Virginia Gooden      | 750,000    |
| Alice & Brian McCleary       | 750,000    |
| Chin Huan Ng                 | 750,000    |
| Alice McCleary               | 730,000    |

## Issued Capital

As at 31 December 2007, Archer had 64,418,477 shares and no options on issue.

## Cash balance

As at 31 December 2007, Archer's cash balance was approximately \$6.539 million. The attached Appendix 5B provides details of cash flows during the three month period ending 31 December 2007.

## Shareholder Enquiries

Matters relating to shares held and change of address should be directed to the Company's share registrar at:  
Computershare Investor Services Pty Ltd  
Level 5, 115 Grenfell Street  
Adelaide SA 5000  
Telephone:      1300 738 349

## Website

Please visit Archer's website featuring the latest on Archer at  
[www.archerexploration.com.au](http://www.archerexploration.com.au)

## Enquires

Media enquiries contact:    Tom Phillips AM  
General Enquiries contact: (08) 8132 0003



# Archer Exploration Limited Company Projects

