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28 January 2009

Quarterly Activities Report

For the period ended 31 December 2008

Highlights:

- **Strong cash-in-bank position – A$5.47 million**
- **Preparatory work completed for major West Roxby IOCGU drill targets**
- **Increasing priority on most prospective copper gold targets**
- **A$1 million exploration budget set for calendar 2009**

Summary:

Archer Exploration Limited (ASX code: "AXE") has made significant progress during the 3 month period to 31 December, 2008, on preparatory work necessary to implement the Company's 2009 exploration schedule across its copper, gold and IOCGU targets within South Australia.

The refinement of the 2009 work program, which included during the December quarter considerable modelling of geophysical data and a prioritising of projects considered best likely to deliver near-term results, was achieved against the ongoing and unprecedented collapse and pressures on global financial markets and metals commodity prices.

Pleasingly, and despite these adverse global circumstances, Archer has commenced calendar 2009 in a strong cash position with around $5.47 million in the bank as of 31 December, 2008 and with a budgeted forward exploration program of approximately $1 million, in place for 2009, to be implemented from next month (February).

The Company continues to adopt a prudent attitude to expenditure and as a result, believes that the Company's current focus on its suite of wholly owned copper, gold and copper-gold targets offers the best opportunity for success given the current global conditions in the resources sector.

A detailed summary of December quarter work activity follows:

CARAPPEE HILL PROJECT (Central Eyre Peninsula - SA)

Copper and Gold, / 100% owned / EL 3711

Selected initially due to an extensive base metal anomaly, first pass drilling results generated significant gold and copper outcomes, particularly at the Bender Prospect, now thought to be related to an igneous intrusive (like a granite).

Copper and graphite was mined historically underground at Bender but only to a depth of 30 metres. Archer intends to deep drill the area to locate the source of the surface copper and gold.

Figure 1 below, shows the gold distribution generated from soil sampling around the Bender structure. Important to note is the strike length of the anomaly which is more than 2km long.

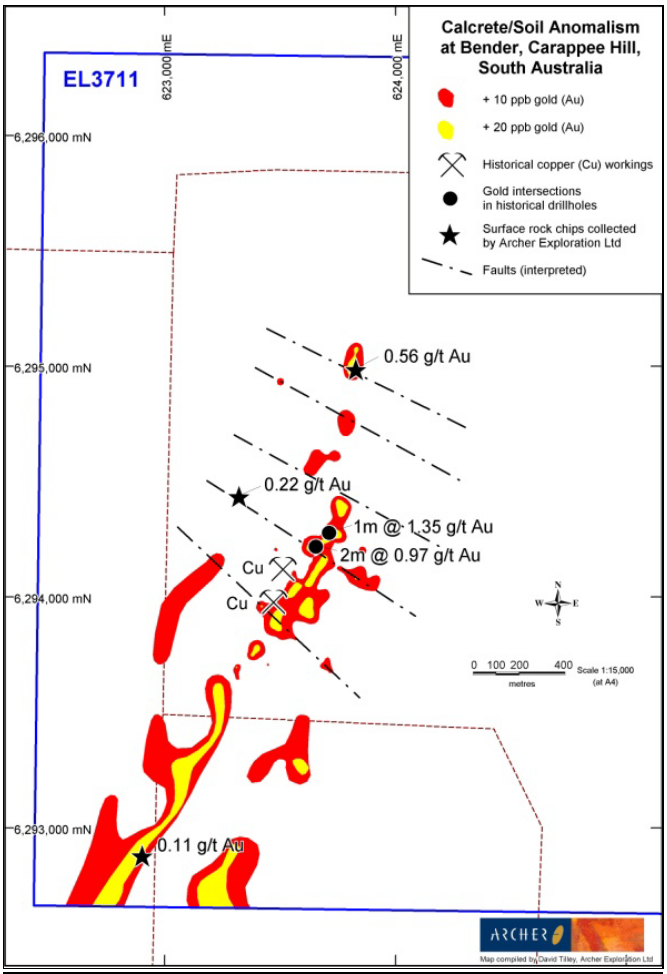

Figure 1 Soil and rock chip contour map, highlighting the size of the gold anomaly, only +0.1g/t samples shown.

Electromagnetic data was collected during the December quarter and this data is still in the process of being modelled. The modelling will aid the Company in the determination of the structural controls and potential sources of the Bender mineralisation.

WEST ROXBY PROJECTS (Gawler Craton, south of Olympic Dam mine)

IOCGU / 100% owned / ELs 3851, 3869, 3722, 3724 and 3721

These tenements comprise the two main IOCGU targets, Evelyn Dam and Island Lagoon. A third gravity target, Apollo is to be drill tested to determine the source of the gravity low anomaly, see figure 2.

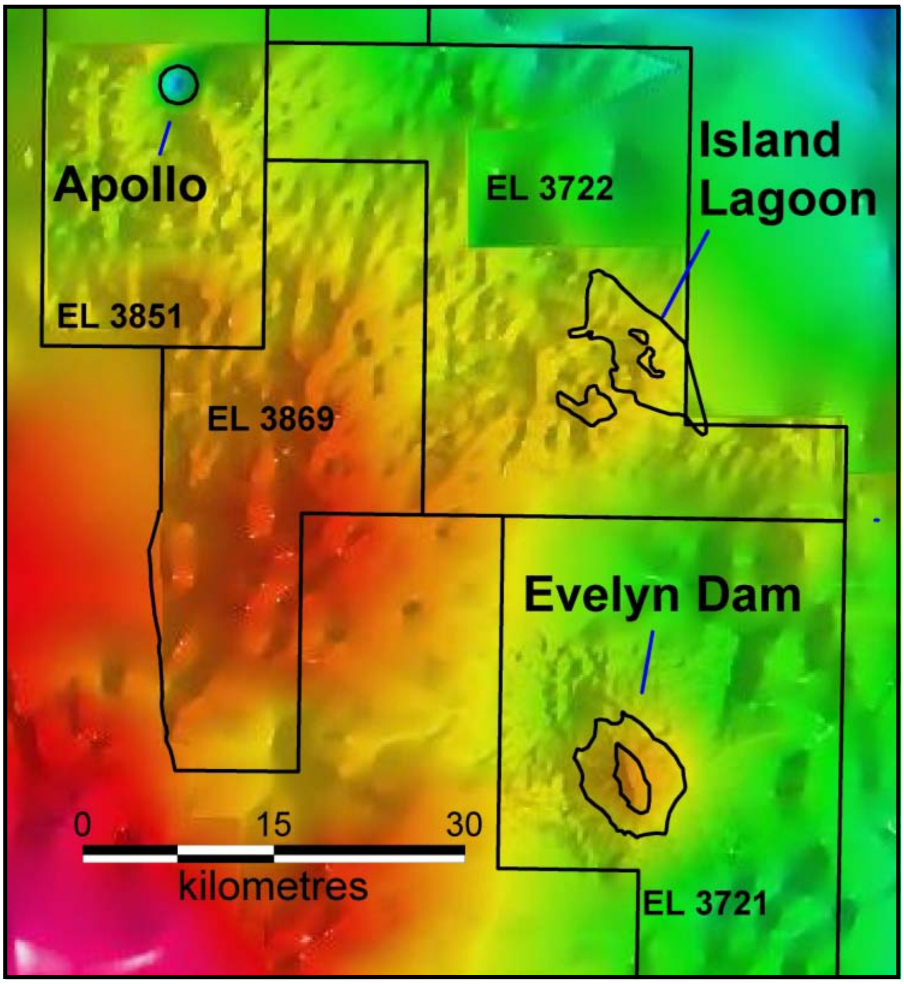

Figure 2 West Roxby tenements, highlighting the large gravity targets identified by Archer.

Evelyn Dam

Archer intends to drill test the Evelyn Dam target early this year. Modelling of magnetic data during the quarter has given continued support to the belief that it is an IOGCU (Iron Oxide Copper Gold Uranium) target which may be of similar style to nearby Olympic Dam. The source of the anomaly is estimated to be somewhere between 600 to 800m deep.

Government approvals have been given for drilling, with landowner approvals also granted.

Apollo

Geophysical modelling has also been ongoing to refine the depth and extent of the Apollo Prospect. Archer intends to explore Apollo further in 2009, with the intention to drill test the target in early 2009 to determine the source of the anomaly.

Significantly, Apollo appears to be a considerably lighter rock that had the strength to deform pre-existing rocks (Gairdner Dykes, in red) to an extreme degree, see figure 3**.** It can also be seen that the target is large, roughly circular and may be pipe like.

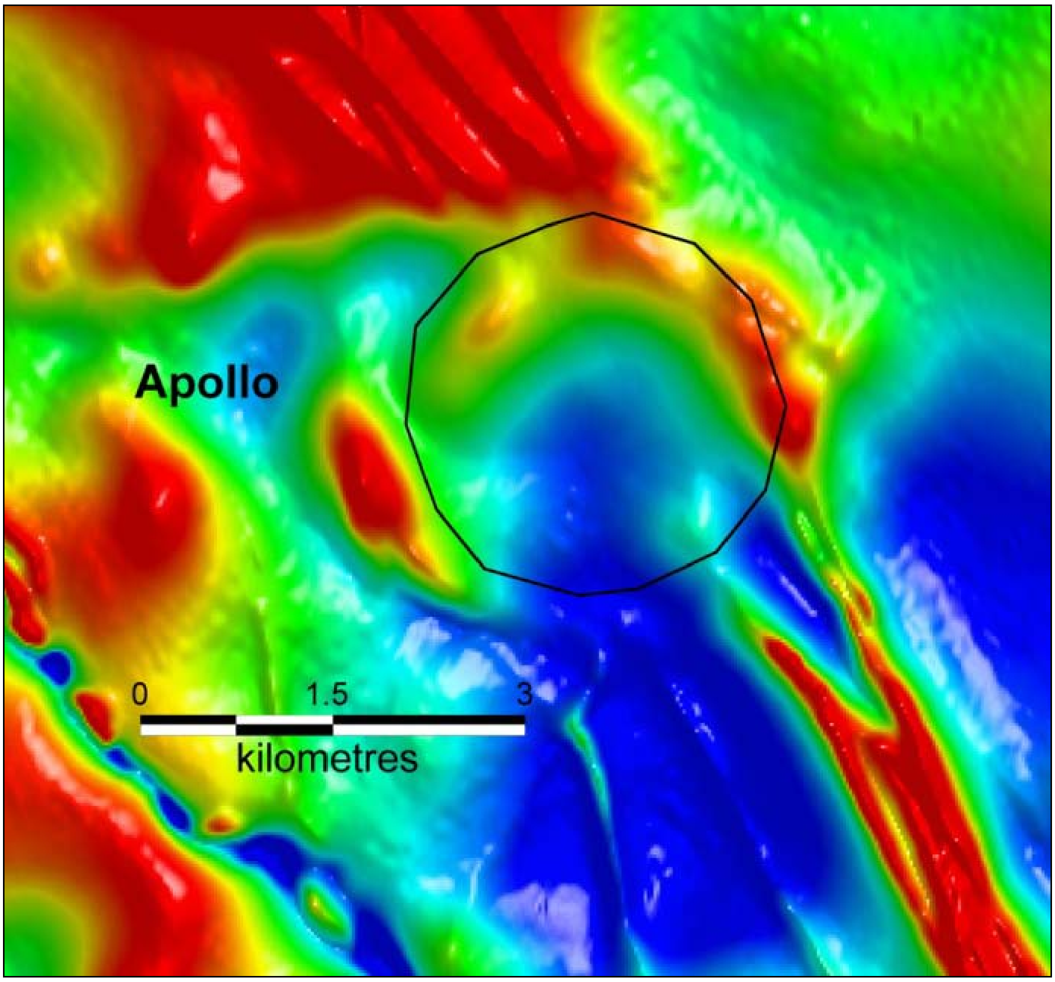

Figure 3 Recently acquired magnetic data with the gravity low outlined in black for Apollo.

Island Lagoon

From modelling, Archer believes that the Island Lagoon anomaly is due to the presence of multiple intrusions occurring in one location. Figure 4 shows the recently acquired magnetic data with the outline of the gravity target. The occurrence of the gravity and magnetics together suggests that the gravity anomaly could largely be due to the mass of intrusive rocks (Gairdner Dykes).

At this stage, Archer does not plan to drill test this target, which is modelled at 900m below the land surface. However, should drilling at Evelyn Dam prove to be successful in identifying IOCGU mineralisation, then Archer will revisit the gravity anomaly in the southwest corner of figure 4.

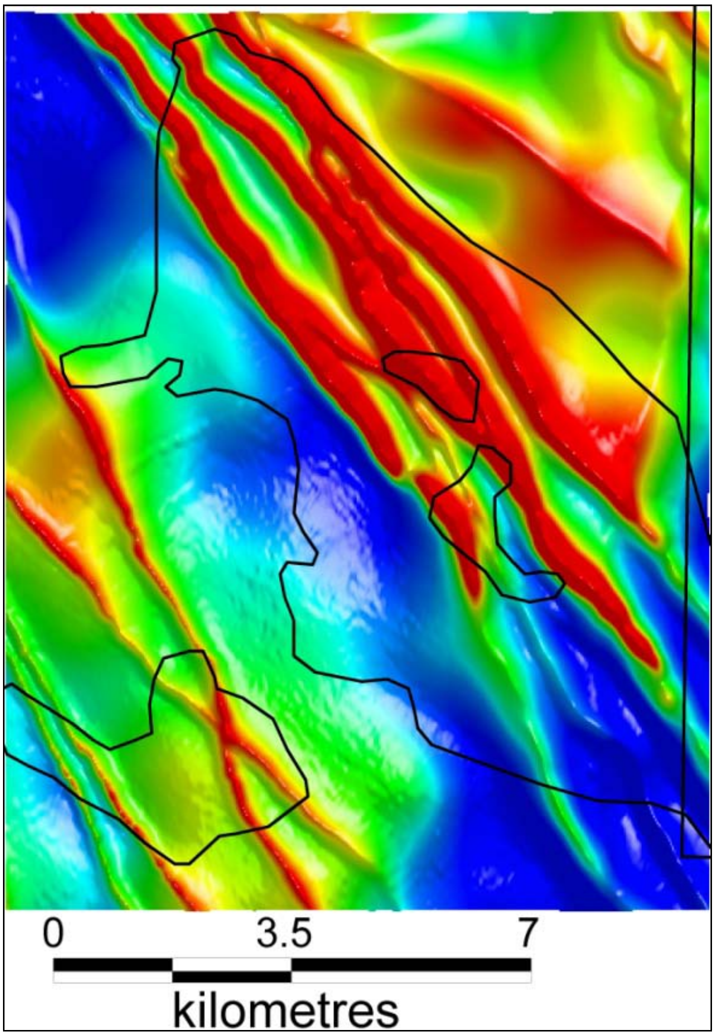

Figure 4 Recently acquired magnetic data with the gravity high outlined in black for Island Lagoon.

WILMINGTON (East of Port Augusta – SA)

Copper / 100% owned / ELs 4201 and 4292 and ELA 116/08

During the December quarter, the Pinda (EL 4201) and Barootа (EL 4202) tenements were granted to Archer for exploration of all minerals. Open file gravity data over the tenement area is very wide spaced and a greater resolution is necessary to define exploration target areas. Archer plans to fly geophysics over the tenement area and commence on ground activities around areas of known mineralisation to evaluate the geological setting.

Spring Creek

This tenement has not been granted yet by PIRSA. The tenement area covers the historic Spring Creek underground copper mine which the Company believes to have significant modern-day exploration potential. Historical drilling (1969) in the area identified a zone of 21m @1.8% copper, see figure 5.

Archer intends to infill drill the area between this intercept and the old workings, which were terminated some 80m above this significant interval.

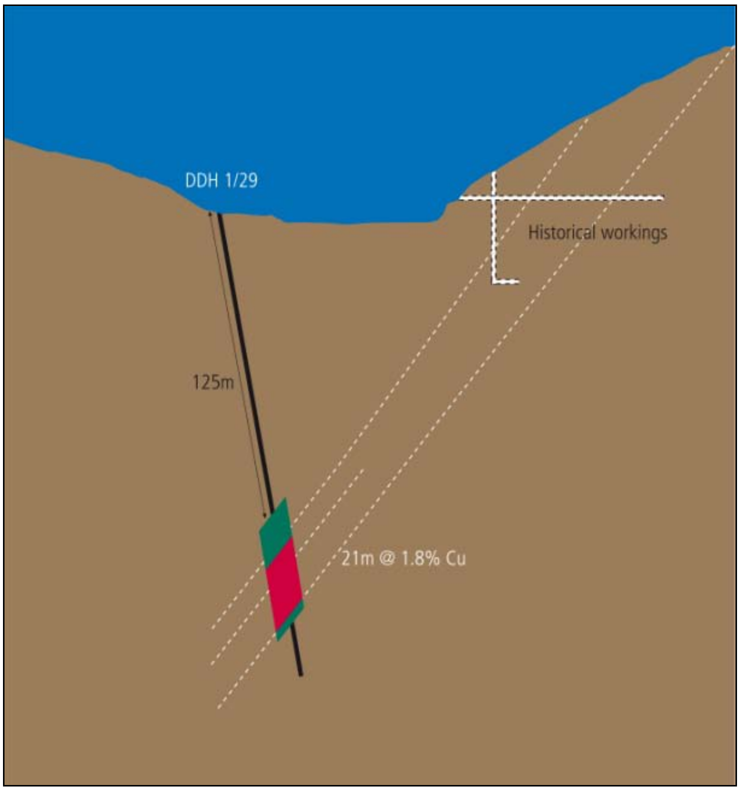

Figure 5 Copper intercept at Spring Creek below the historical underground workings.

BURRA (Mid north of SA)

World's End

This tenement, 15 kms southeast of Burra, is expected to be granted to Archer early in 2009. The tenement is prospective for copper due to the presence of historically mined copper deposits and the underlying geology. Archer intends to use geophysics and on-ground work to better understand the geology to identify important areas for new exploration.

The Company will explore for gold in the north western part of the tenement where the Cox Sandstone is interpreted to occur. This is the same rock unit that hosts the Mongolata Goldfield to the north, but outside of the tenement area.

North Burra

Located 30kms north of the World's End tenement, North Burra (ELA 432/08), see figure 6, is a current tenement application. It is prospective for both gold and copper. Two geological units have been identified – the Cox Sandstone and the Skillogalee Dolomite that may be preferential hosts to gold mineralisation. Archer needs to identify, through geophysics, the structure that hosts the economic occurrences of these gold deposits and the source of the gold. After identifying these important structures Archer will then test them with drilling.

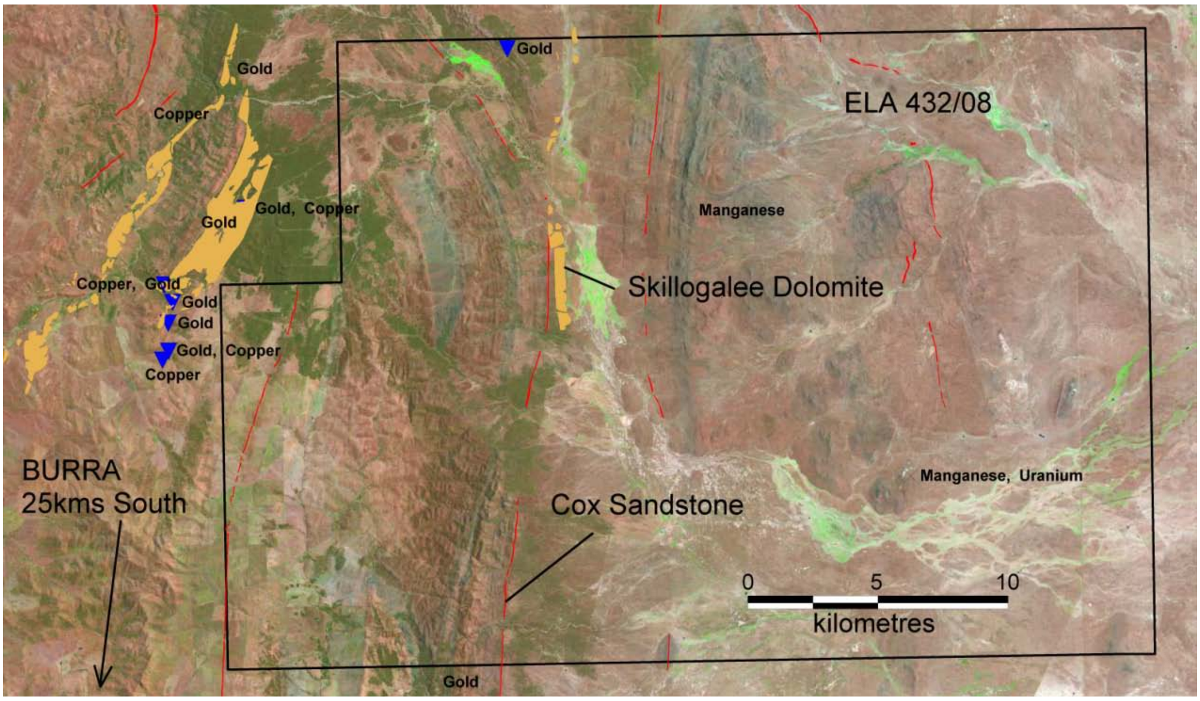

Figure 6 North Burra tenement area showing location of main geological units.

Archer appreciates the continued support of its shareholders whilst it continues to explore for mineral deposits with world-class development potential.

For further information please contact:

Mr Greg English
Executive Chairman
Archer Exploration Limited
Tel: (08) 8332 5033

The exploration results reported herein, insofar as they relate to mineralisation, are based on information compiled by Mr. Wade Bollenhagen, Exploration Manager of Archer Exploration Limited. Mr. Bollenhagen is a Member of the Australasian Institute of Mining and Metallurgy who has more than fourteen years experience in the field of activity being reported. Mr. Bollenhagen 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

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

Company Secretary

Craig Gooden

Registered and Principal Office

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Email: executive@archerexploration.com.au

ASX Code

Archer's ASX code is "AXE".

Major Shareholders

The share register records the following as major Shareholders at 31 December 2008:

GDE Exploration (SA) Pty Ltd	11,604,798
Tigermoth Investments	3,729,521
Valentina Nowak	3,430,000
Sakura Capital Limited	2,758,094
UraniumSA Limited	2,000,000
Deborah Rossiter	1,883,679
Alice McCleary	1,500,000
Ganesan Sivanandam	1,150,000
Craig & Virginia Gooden	850,000
Bluck Holdings Pty Ltd	750,000
Chin Huan Ng	750,000

Number of Shareholders

As at 31 December 2008, Archer had 815 shareholders.

Issued Capital

As at 31 December 2008, Archer had 64,418,477 fully paid shares and 32,205,201 options with an exercise price of $0.25 and expiring 13 February 2010 on issue.

Cash balance

As at 31 December 2008, Archer's cash balance was approximately $5.47 million. The attached Appendix 5B provides details of cash flows during the three month period ending 31 December 2008.

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 information on Archer at www.archerexploration.com.au

Enquires

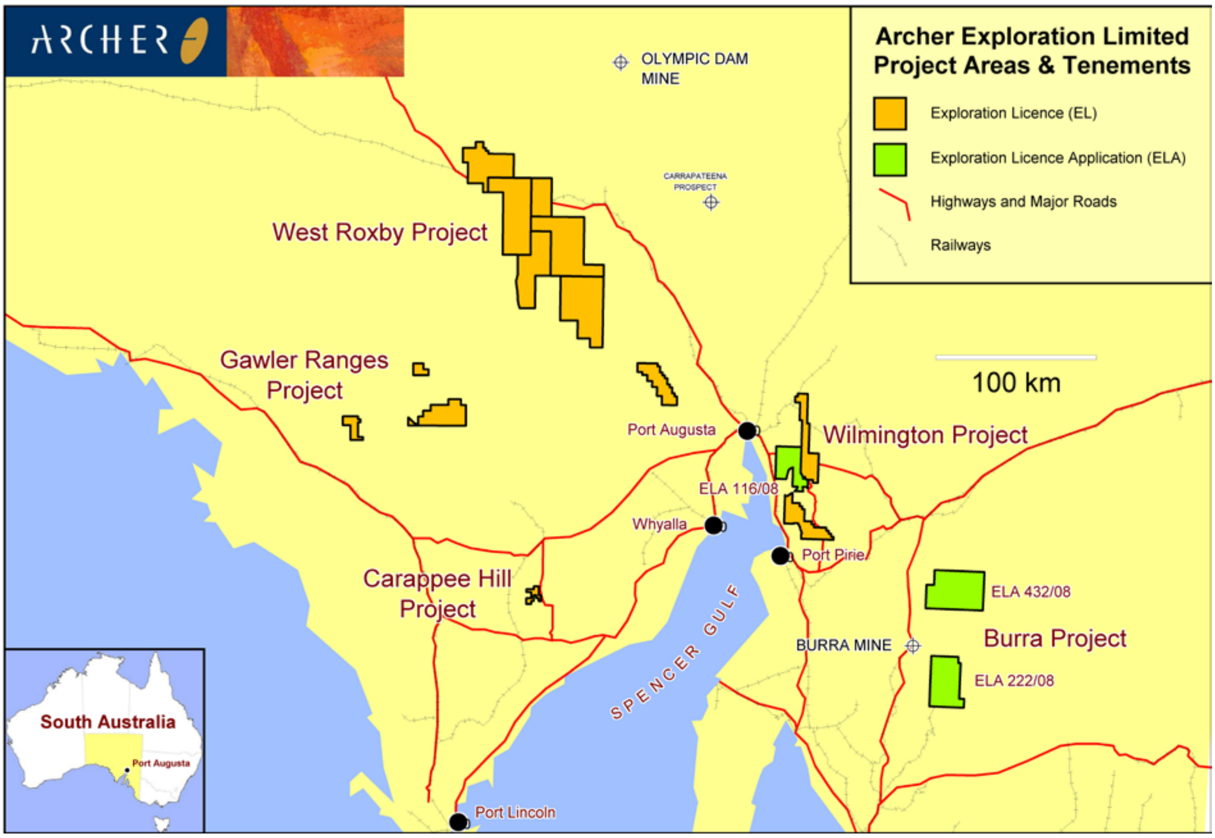
Media enquiries contact: Greg English
General Enquiries contact: (08) 8332 5033

ABOUT ARCHER EXPLORATION

Archer Exploration Limited is a copper and gold explorer focused on the discovery of world-class deposits. The Company has carefully acquired a portfolio of wholly-owned projects in the highly prospective Gawler Craton and Adelaide Fold Belt region of South Australia.

The Company's Carappee Hill Project on South Australia's Eyre Peninsula contains a large (2 km) copper and gold mineralised prospect named Bender. The Company is also well advanced on the exploration of its Olympic Dam style iron oxide-copper-gold-uranium (IOCG-U) deposit at Evelyn Dam. The Evelyn Dam anomaly has early geophysical characteristics similar to those of the nearby Olympic Dam Operations and the recent Carrapateena discovery. Nearby to this, is the Apollo anomaly, which has gravity signature similar to a large late intrusive body.

The Burra Project includes the North Burra and World's End projects both located near the historic mining town of Burra. The World's End Project area covers the historic Robertstown Copper mine and is highly prospective for copper. Both tenements are also prospective for gold mineralisation.



Archer's wholly project areas and tenements, covering prospective copper and gold areas of the Gawler Craton and Adelaide Fold regions of South Australia.