



**Uranium Exploration
Australia Limited**

ABN 65 112 714 397

Quarterly Report

1st

Quarter September 2008







Quarterly Report

1st

Quarter September 2008

ASX : UXA

UXA was established to explore for, locate and develop commercial grade uranium mineralisation and associated copper and gold.

Inquiries regarding this report and company business may be directed to:

Patrick Mutz

Managing Director

Telephone: +61 8 8363 7970

Facsimile: +61 8 8363 7963

**Uranium Exploration
Australia Limited**

ABN 65 112 714 397

Registered office:

313 Payneham Road

Royston Park 5070

South Australia, Australia

Telephone: +61 8 8363 7970

Facsimile: +61 8 8363 7963

Email: info@uxa.com.au

Web: www.uxa.com.au

30 October 2008

OVERVIEW

- UXA signs Heads of Agreement to acquire the assets and business of Geoscience Associates Australia Pty Ltd
- Drilling programme on Yeelirrie South East tenement in Western Australia complete

SUMMARY

Proposed Acquisition

Uranium Exploration Australia Limited (ASX: UXA) signed a non-binding Heads of Agreement regarding its intention to acquire the business and assets of Geoscience Associates Australia Pty Ltd (GAA) (<http://www.geoscience.biz/>), a geophysical logging company located in Mount Barker, South Australia. GAA holds an exclusive distribution licence for Prompt Fission Neutron (PFN) tools and technology in Australia and is the only company in Australia offering commercial PFN logging services.

Drill Programme

UXA completed a 1,297 metre drilling programme at its EL 36/546 – Yeelirrie South East in Western Australia to test for calcrete and sediment hosted uranium mineralisation. This programme was supported by PFN wire-line logging. Chemical assays are pending.



PROPOSED ACQUISITION

On 29 September 2008, UXA signed a non-binding Heads of Agreement to acquire the business and assets of Geoscience Associates Australia Pty Ltd. GAA has been providing a full range of commercial wire-line logging services to the mining and exploration sectors, principally focused on uranium and more recently on coal, throughout Australia since 1971.

In addition to providing wire-line logging services for more than 30 years, GAA was involved with the importation of the original **Prompt Fission Neutron (PFN)** tools and technology into Australia in the late 1990s and has been providing on-going servicing of these tools.

Recently, GAA has acquired its own PFN tools and currently is the only company in Australia offering commercial PFN logging services. In addition, through its long-standing relationship with the sole commercial **PFN Tool** manufacturer in the western world, GeolInstruments Inc (<http://www.geoinstrumentsinc.com/>), located in the USA, GAA holds an exclusive distribution licence for PFN Technology in Australia.

UXA's decision to acquire the business and assets of GAA is grounded in a firm belief that based on its unique advantages, PFN technology is critical to the overall success of a uranium exploration company and even more critical in the event of discovery of a uranium resource and development using *In Situ* Recovery mining technology.

In addition to securing greater access to PFN technology for UXA, the proposed acquisition of GAA by UXA, which is subject to Shareholder approval and suitable financing arrangements, will result in the creation of an enlarged group with unique uranium exploration and general mining industry logging capabilities with greater market diversification and higher cash generating capability.

UXA believes the proposed acquisition of GAA, if completed, will strengthen the position of the Company relative to other grassroots exploration companies and thus provide a lower risk profile for existing Shareholders. The proposed acquisition will not detract from UXA's core business focus on uranium exploration. GAA will be held as a subsidiary company and will continue to operate independently with regards to the preservation of confidential information of GAA's clients.

PFN is a unique geophysical wire-line logging technology used for the direct measurement of uranium in boreholes. PFN technology can:

- Eliminate concern of missing uranium in the borehole, irrespective of disequilibrium;
- Provide immediate and fool-proof uranium analysis within the borehole which allows in-field drill programme adjustments to follow identified mineralisation;
- Analyse larger mass of host rock than core samples or drill cuttings;
- Reduce the cost of time-consuming chemical analyses; and
- Eliminate need for core sample collection in initial exploration stages.

In July 2008, UXA also acquired its own PFN tool for exclusive use in its drilling programmes. By purchasing its own tool, UXA became the third company in Australia to own the technology and the first grassroots exploration company in Australia to do so.

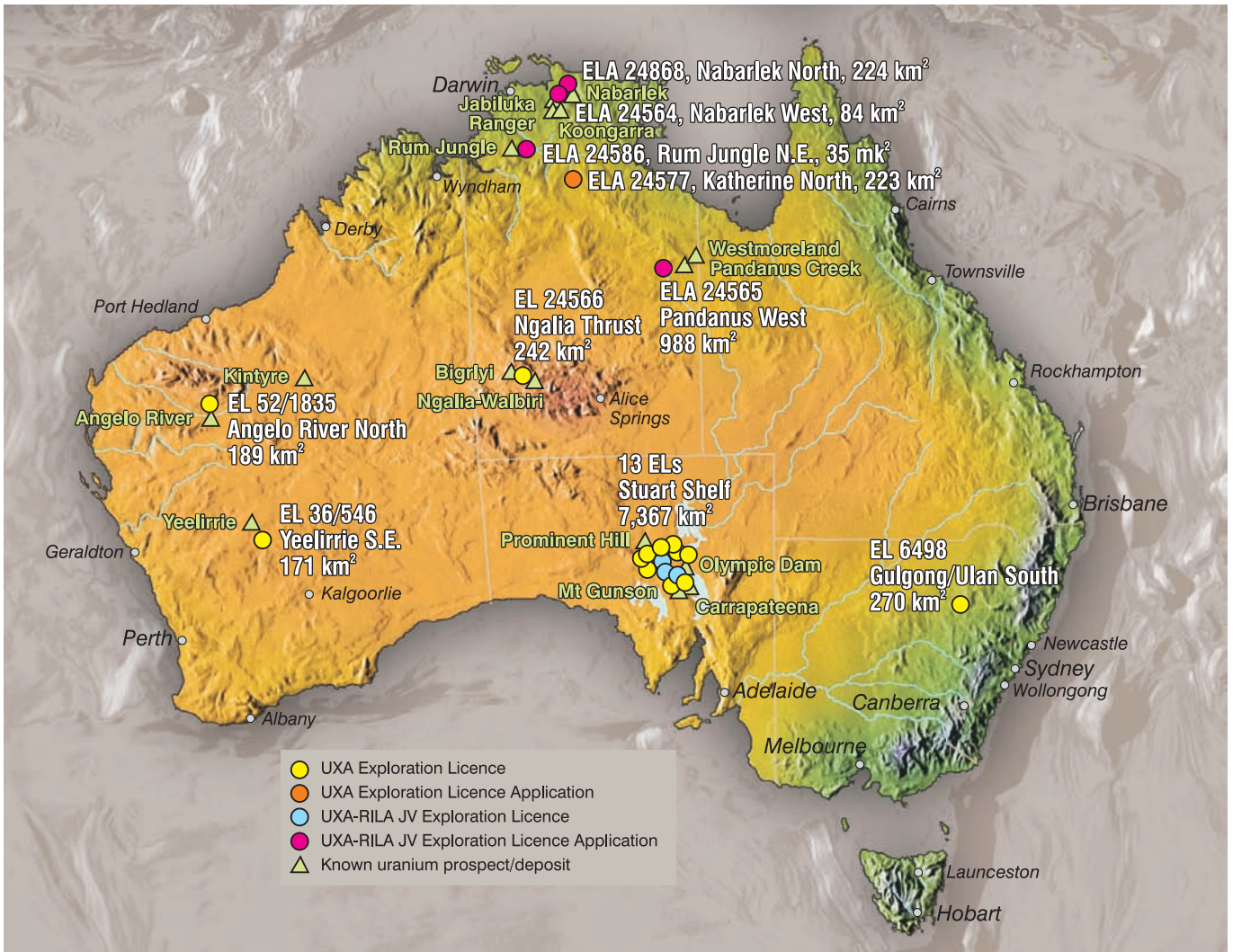


Figure 1. UXA tenement location map

EXPLORATION

UXA continued its aggressive exploration programme across its tenements in South Australia, Western Australia, Northern Territory and New South Wales (Figure 1). Defence Department access restrictions into the Woomera Prohibited Area (WPA) have had a significant impact on exploration activities on a number of UXA's and other companies' exploration licences in South Australia.

During the reporting period, UXA:

WESTERN AUSTRALIA

- Completed 1,297 metres of rotary mud drilling at 100% owned EL 36/546 - Yeelirrie South East to investigate potential for calcrete and subsurface soil hosted uranium mineralisation similar in style to BHP Billiton's world-class Yeelirrie uranium deposit.

SOUTH AUSTRALIA

- Completed magneto-telluric (MT) test survey on EL 3470 – Glenside

NORTHERN TERRITORY

- Completed successful heritage clearance survey on EL 24566 – Ngalia Thrust for planned drilling in November 2008.



WESTERN AUSTRALIA

Yeelirrie South East (EL 36/546)

This EL is 100% owned by UXA. It covers an area of approximately 171 km² and is located approximately 50 km southeast of BHP Billiton's Yeelirrie uranium deposit, which has an Indicated Resource of 52,500 tonnes U₃O₈ and is considered the world's largest calcrete hosted uranium deposit. It was discovered by Western Mining Corporation (WMC) in 1972.

Radiometric surveys over EL 36/546 highlight several radiometric anomalies in the northern and southern areas of this tenement.

In August 2008, following a successful heritage clearance survey, UXA conducted a 1,297m drilling programme designed to investigate the potential for calcrete and subsurface soil hosted uranium mineralisation similar in style to BHP Billiton's world-class Yeelirrie uranium deposit. Results of this drilling programme (Figure 2), which was supported by PFN logging technology, are pending chemical assays.

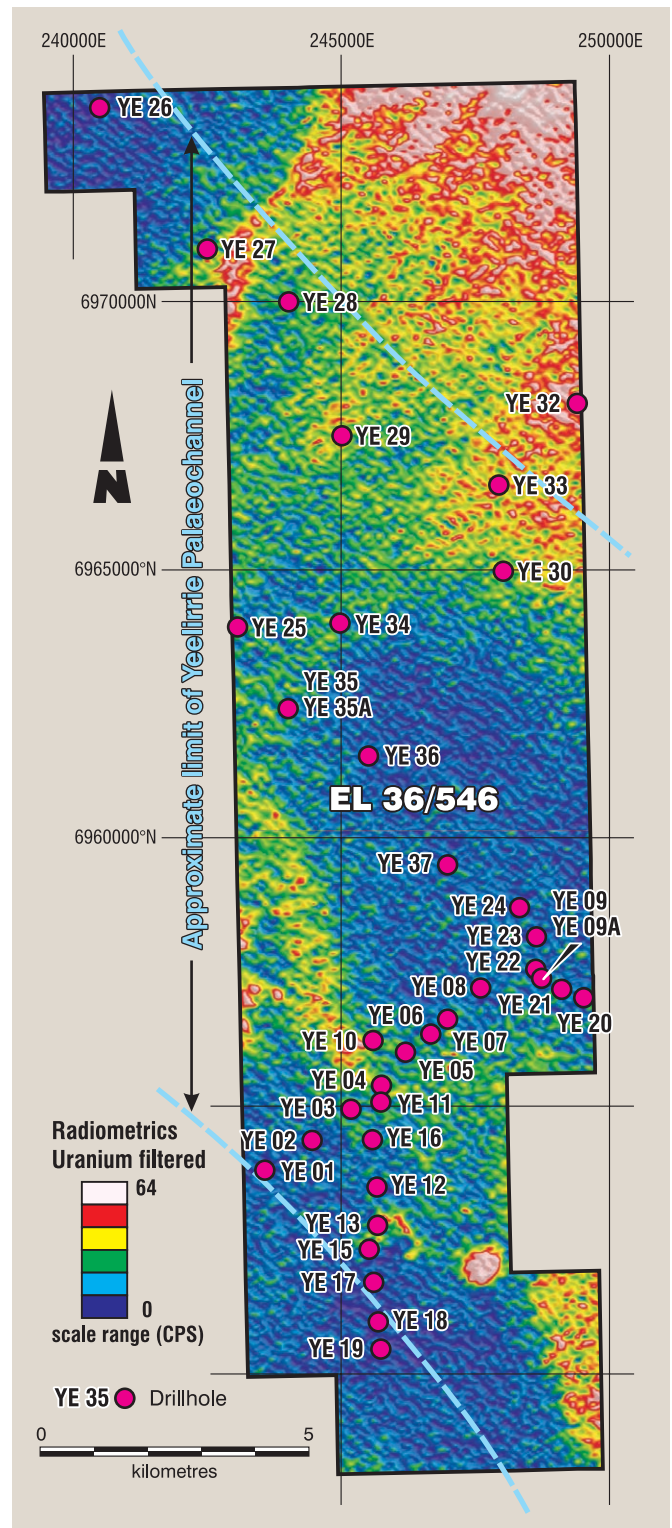


Figure 2. Drill hole locations and gravity targets, EL 36/546 - Yeelirrie South East



SOUTH AUSTRALIA

Access to certain ELs located within the Woomera Prohibited Area in South Australia has recently been restricted by the Defence Department. In a letter received on 6 August 2008, the Defence Department denied UXA access to its ELs located within the WPA and south of 30 degrees South Latitude. This restriction was immediate and for an indefinite period of time. The following ELs were affected by the access restriction:

100% UXA

- EL 3431 – Griffen Well (entire tenement)
- EL 3432 – Winjabbie (western half of tenement)
- EL 3429 – Prominent Hill South
(southern half of tenement)
- EL 3863 – Mount Morgan East
(southern limb of tenement)

51% UXA: 49% RILA (JV)

- EL 3430 – Playford (entire tenement)
- EL 3679 – Playford South East (entire tenement)
- EL 3428 – Roxby Downs (entire tenement)

In a subsequent letter from the Defence Department received on 23 September 2008, UXA was informed that the Defence Department's decision to restrict access had been revisited and that access to its ELs was permitted for the duration of the Deed of Access between UXA and the Commonwealth. However the Defence Department went on to indicate that after the expiry of the existing Deed of Access on 13 April 2009, all ELs within the WPA and south of 30 degrees South Latitude would be excluded from any Deed of Access renewal.

As a member company, UXA is working with the South Australian Chamber of Mines and Energy (SACOME) as well as PIRSA and the South Australian Government to identify a mechanism for relief from this implied longer term access restriction. UXA has also submitted a letter to Federal Minister Martin Ferguson requesting his support in this matter.

Glenside (EL 3470)

This licence is subject to a Farm-in and Joint Venture Agreement with RIL (Australia) and is 51% owned by UXA.

A test magneto-telluric (MT) survey was conducted in conjunction with a gravity survey to determine the potential and applicability for MT to be utilised as an exploration tool searching for conductive bodies in cover sequences and basement lithologies.

Zonge Engineering completed the MT survey over a 3 kilometre line with soundings completed every 200 metres along the line. Daishsat Surveys collected initial gravity data at 600m spacing over a northeast oriented grid in the southwest corner of Glenside tenement.

This test area was jointly chosen for coverage by UXA and RILA and is characterised with a weak magnetic and gravity signature and interpreted to be subjected to significant local faulting. Additional gravity data was also collected at 100m spaced infill gravity stations positioned along the length of the magneto-telluric test line, from a total of 145 gravity stations.

Both surveys were conducted over a 3 day period and completed by 28 July 2008. The gravity data has been processed and is currently being modelled and interpreted. The MT data has been reviewed and appears to be of good quality, but shows little variation at low frequencies or below 600m depth. The MT survey method appears to have mapped some stratigraphic variation in the cover sediments but was unable to detect the basement contact.

It is proposed to conduct an additional MT survey in mid-November by Zonge comprising 5 survey lines at 200m spacing with readings at 200m intervals along each line. Each line will be parallel to the original MT test line read in July and 3km in length, with two lines southwest and three to the northeast, forming a 1x3km grid.



Winjabbie (EL 3432)

This licence is 100% owned by UXA. It is located approximately 69 km south of BHP Billiton's Olympic Dam copper-gold-uranium-silver mine, 57 km west of the Carrapateena copper-gold prospect and 45 km north-northwest of the Mount Gunson copper mine on the highly prospective Stuart Shelf in the Gawler Craton.

Re-interpretation of rock units encountered in UXA's drill hole 08WJ02 is being undertaken. It is now considered that the basal unit previously interpreted as Gawler Range Volcanic may be of sedimentary origin and therefore this lithology could be identified as lower Pandurra sandstone or possibly an equivalent of the Corunna Conglomerate. This implies that there is a possibility that basement may not have been intersected.

Interpretation and understanding of the mineralising event at Winjabbie is continuing with pending analytical and petrological assay work.

Playford (EL 3430) and Playford South East (EL 3679)

These licences are subject to a Farm-in and Joint Venture Agreement with RIL (Australia) and are 51% owned by UXA.

In the previous quarter, UXA reported that geochemical analyses of core from UXA's drill hole 08PD04c were completed by AMDEL on 6 June 2008 for an initial set of assay results for 1 metre core samples collected every alternate metre. A significant interval of uranium mineralisation was intersected from 616m to 631m depth. Uranium is associated with coarse pebble conglomerate and averages 113ppm over a true thickness of approximately 14m. UXA has now completed infill sampling of every alternate metre and submitted samples for chemical assay. This will provide for continuous assay data over the mineralised interval. Several uraniumiferous samples have been submitted to Amdel for autoradiograph and QEMSCAN analyses to determine uranium mineralogy and distribution within the core. Autoradiograph is a technique used to determine "hotspots" within the core whereas QEMSCAN is a technique used to determine chemistry and mode of occurrence of uranium within the core aided by scanning electron microscope.

Initial results from autoradiograph indicate the hotspots to be concentrated within some conglomerate clasts as opposed to being disseminated throughout the conglomerate matrix. These initial findings will be confirmed with follow up QEMSCAN and petrography analyses.

Evidence of elevated uranium values over similar thicknesses occurring within Pandurra Formation coarse pebble conglomerate at similar depths has been noted in other UXA drill holes. Drill core from this interval is currently being re sampled prior to additional chemical assay and petrological evaluation in order to better understand this style of mineralisation.

Porter Hill (EL 3865)

This licence is 100% owned by UXA.

A gravity survey was completed by Daishsat Surveys on 5 July 2008. A total of 1,271 stations were collected at 100-800m grid spacing. Extensive processing and interpretation work has been carried out on the acquired data including calculating terrain corrections to account for gravitational effects due to steeper topography, and merging the data with the 2007 PIRSA Northern Olympic Domain gravity survey. Various types of processing techniques have been performed to account for the spatial variations of the gravity stations and enhance data at all frequencies, including residual computations.

In addition, further treatment has been performed on open-file magnetic data to enhance any subtle fine details. Structural interpretation is underway based on the new gravity and magnetic information derived from these treatments.

The Porter Hill tenement is considered suitable for paleochannel hosted uranium mineralisation given the tenement is located along a north east structure that hosts the Roxby Downs Suite granite. Algebuckina sandstone is a potential target stratigraphy along with redox boundaries associated with the Yarloo Shale and Andamooka Limestone.



NORTHERN TERRITORY

Ngalia Thrust (EL 24566)

This licence is 100% owned by UXA.

Heritage clearance surveys for proposed drilling have been completed by the Central Lands Council and a contract driller (McKay Drilling) has been selected to undertake the drill program comprising approximately 2000m HQ diamond core. Drilling will investigate subsurface occurrence of uranium in the Crystal Creek region and potential mineralisation associated with the Annie Spring magnetic anomaly. Drilling is scheduled to commence in late October 2008. The drilling programme will be supported by PFN wire-line logging technology.

Field mapping and re-logging of previous explorers' drill core was undertaken. Drill core from drill hole AS001 previously drilled by Rio Tinto in the late 90's was retrieved from the Department of Primary Industry Fishery & Mining's core library for inspection. AS001 was located on the Annie Spring magnetic anomaly and comprises megacrystic granite with occasional mafic xenoliths in contact with banded iron formation (BIF) at a depth of ~112m. The BIF comprises coarse and fine laminated magnetite bands with lighter coloured siliceous layers. Banding displays some primary sedimentary structures such as slump folding. Patchy sulphide mineralisation is present (as mostly pyrite) and occurs concordant with banding but also shows overprinting relationships in places.

Several days of field mapping identified east west trending fine to medium grained aplite dykes containing sparse K-spar megacrysts with highly elevated scintolometer values ranging from 1000cps up to 1600cps.

Approximately 40 samples were collected from the field and AS001 drill core. Representative samples of granites, sedimentary units and BIF have been submitted for petrology and geochemical assay.

Katherine North (ELA 24577)

This tenement is 100% owned by UXA. UXA is currently in negotiations for an exploration agreement with the Northern Land Council (NLC) regarding this tenement.

Pandanus West (ELA 24565), Nabarlek North (ELA 24868) and Nabarlek West (ELA 24564)

Each of these tenements is subject to a Farm-in and Joint Venture agreement with RIL (Australia) upon grant to EL status. UXA continues to work with the Northern Land Council (NLC) to expedite the granting of these licence applications to EL status. No meetings were conducted with Traditional Owners or the NLC during the reporting period.

Rum Jungle NE (ELA 24586)

This tenement is subject to a Farm-in and Joint Venture agreement with RIL (Australia) upon its grant to EL status. The licence application is currently under 5-year moratorium.



CORPORATE ACTIVITIES

UXA continued its marketing efforts through attendance, participation and sponsorship in the Excellence in Mining and Exploration Conference 2008 held in Sydney on 14-16 September 2008. The Company hosted a marketing booth and presented a paper entitled "On the Road to Discovery" designed to highlight UXA's current exploration and strategic activities.

For further information contact:

A handwritten signature in blue ink, appearing to read "Patrick Mutz".

Patrick Mutz
Managing Director

URANIUM EXPLORATION AUSTRALIA LIMITED

Tel: +61 8 8363 7970

Email: info@uxa.com.au

Website: www.uxa.com.au

Media: Farrington +612 9332 4448

JORC COMPLIANCE STATEMENT

Technical Information in this report is based on information compiled by Dr Rodney Boucher who is employed by Linex Pty Ltd and who is a Member of The Australasian Institute of Mining and Metallurgy and a Member of the Australian Institute of Geoscientists. Dr Boucher has sufficient exploration experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2004 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves' ("JORC 2004"). Dr Boucher consents to the inclusion in this release of the matters based on his information in the form and context in which it appears.

UXA listed on the ASX in November 2005 and was established to explore for, locate and develop commercial grade uranium mineralisation and associated copper and gold. UXA has 17 exploration licences (ELs) and 5 exploration licence applications (ELAs) located in South Australia, Western Australia, Northern Territory, and New South Wales. These exploration tenements cover approximately 9,800 km² and are predominantly located in areas of known mineral deposits.



MINING EXPLORATION ENTITY QUARTERLY REPORT

Appendix 5B

Quarter Ended ("current quarter") 30 September 2008

Consolidated statement of cash flows

	Current quarter \$A'000	Year to date (3 mths to September 08) \$A'000
Cash flows related to operating activities		
1.1	-	-
1.2	-	-
(a) exploration and evaluation	(553)	(553)
(b) development	-	-
(c) production	-	-
(d) administration	(378)	(378)
1.3	-	-
1.4	113	113
1.5	-	-
1.6	-	-
1.7	(4)	(4)
Net Operating Cash Flows	(822)	(822)
Cash flows related to investing activities		
1.8	-	-
(a) prospects	-	-
(b) equity investments	-	-
(c) other fixed assets	(221)	(221)
1.9	-	-
(a) prospects (UXA-RILA JV)	-	-
(b) equity investments	-	-
(c) other fixed assets	-	-
1.10	-	-
1.11	-	-
1.12	-	-
Net Investing Cash Flows	(221)	(221)
1.13	(1,043)	(1,043)
Cash flows related to financing activities		
1.14	-	-
1.15	-	-
1.16	-	-
1.17	-	-
1.18	-	-
1.19	-	-
Net financing cash flows	-	-
Net increase (decrease) in cash held	(1,043)	(1,043)
1.20	6,252	6,252
1.21	-	-
1.22 Cash at end of quarter	5,209	5,209



Payments to directors of the entity and associates of the directors
Payments to related entities of the entity and associates of the related entities

Current quarter \$A'000

1.23	Aggregate amount of payments to the parties included in item 1.2	40
1.24	Aggregate amount of loans to the parties included in item 1.10	-
1.25	Explanation necessary for an understanding of the transactions	Non-Executive Directors' Fees

Non-cash financing and investing activities

2.1	Details of financing and investing transactions which have had a material effect on consolidated assets and liabilities but did not involve cash flows	N/A
2.2	Details of outlays made by other entities to establish or increase their share in projects in which the reporting entity has an interest	N/A

Financing facilities available

	<i>Amount available \$A'000</i>	<i>Amount used \$A'000</i>
3.1	Loan facilities	-
3.2	Credit standby arrangements	-

Estimated cash outflows for next quarter

	<i>\$A'000</i>
4.1	Exploration and evaluation
4.2	Development
Total	1,000

Reconciliation of cash

Reconciliation of cash at the end of the quarter
(as shown in the consolidated statement of cash flows)
to the related items in the accounts is as follows.

	<i>Current quarter \$A'000</i>	<i>Previous quarter \$A'000</i>
5.1	Cash on hand and at bank	41
5.2	Deposits at call	5,168
5.3	Bank overdraft	-
5.4	Other	-
Total: cash at end of quarter (item 1.22)	5,209	6,252

Changes in interests in mining tenements

	<i>Tenement reference</i>	<i>Nature of interest (note (2))</i>	<i>Interest at beginning of quarter</i>	<i>Interest at end of quarter</i>
6.1	Interests in mining tenements relinquished, reduced or lapsed	-	-	-
6.2	Interests in mining tenements acquired or increased	-	-	-



Issued and quoted securities at end of current quarter

Description includes rate of interest and any redemption or conversion rights together with prices and dates.

		<i>Total number</i>	<i>Number quoted</i>	<i>Issue price per security (see note 3) (cents)</i>	<i>Amount paid up per security (see note 3) (cents)</i>
7.1	Preference + securities (description)	-	-	-	-
7.2	Changes during quarter				
	(a) Increases through issues				
	(b) Decreases through returns of capital, buy-backs, redemptions	-	-	-	-
7.3	Ordinary securities	88,802,623	88,802,623	-	-
7.4	Changes during quarter				
	(a) Increases through issues	-	-	-	-
	(b) Decreases through returns of capital, buy-backs	-	-	-	-
7.5	Convertible debt securities (description)	-	-	-	-
7.6	Changes during quarter				
	(a) Increases through issues	-	-	-	-
	(b) Decreases through securities matured, converted	-	-	-	-
7.7	Options (description and conversion factor)	-	-	Exercise price	Expiry date
7.8	Issued during quarter	-	-	-	-
7.9	Exercised during quarter	-	-	-	-
7.10	Expired during quarter	-	-	-	-
7.11	Debentures (totals only)	-	-	-	-
7.12	Unsecured notes (totals only)	-	-	-	-



Compliance Statement

- 1 This statement has been prepared under accounting policies, which comply with accounting standards as defined in the Corporations Act or other standards acceptable to ASX (see note 4).
- 2 This statement does /does not give a true and fair view of the matters disclosed.

Signed: Date: 30 OCTOBER 2008

(Company Secretary)

Print name: DAVID GODFREY

Notes

- 1 The quarterly report provides a basis for informing the market how the entity's activities have been financed for the past quarter and the effect on its cash position. An entity wanting to disclose additional information is encouraged to do so, in a note or notes attached to this report.
- 2 The "Nature of interest" (items 6.1 and 6.2) includes options in respect of interests in mining tenements acquired, exercised or lapsed during the reporting period. If the entity is involved in a joint venture agreement and there are conditions precedent which will change its percentage interest in a mining tenement, it should disclose the change of percentage interest and conditions precedent in the list required for items 6.1 and 6.2.
- 3 **Issued and quoted securities.** The issue price and amount paid up is not required in items 7.1 and 7.3 for fully paid securities.
- 4 The definitions in, and provisions of, *AASB 1022: Accounting for Extractive Industries* and *AASB 1026: Statement of Cash Flows* apply to this report.
- 5 **Accounting Standards** ASX will accept, for example, the use of International Accounting Standards for foreign entities. If the standards used do not address a topic, the Australian standard on that topic (if any) must be complied with.





Uranium Exploration
Australia Limited