# ASX ANNOUNCEMENT 17 July 2012

URANIUM EQUITIES LIMITED ACN 009 799 553



The Company Announcement Officer Australian Securities Exchange Ltd via electronic lodgement

# Quarterly Report Quarter ended 30 June 2012

#### **Highlights**

#### PhosEnergy – Uranium Extraction Technology

- USA Demonstration Plant commenced operations in May with several weeks of trials completed
- Preliminary results confirm high (>90%) uranium recovery
- Engineering Study to begin as results from Demonstration Plant are evaluated
- Results expected before the end of the year, paving the way for potential development of a commercial plant

#### **Exploration – Australia**

- Detailed ground gravity program at the Marla Project (South Australia) identifies multiple IOCGU targets
- \$90,000 PACE funding grant received for drilling on the Marla Project in South Australia
- Drilling to commence on the Headwaters JV with Vale
- \$100,000 co-funding grant awarded for drilling on the Nabarlek Project

#### Our Strengths

- Breakthrough PhosEnergy Process
- Extensive exploration portfolio >24,000km²
- Multiple near term growth opportunities

#### **HEAD OFFICE**

Level 5
29 King William Street
Adelaide, SA 5000
T: +61 8 8110 0700
F: +61 8 8110 0777
E: reception@uel.com.au

#### PERTH OFFICE

Level 2, 1292 Hay Street West Perth, WA 6005 GPO Box 2890 Perth, WA 6001 T: +61 8 9322 3990 F: +61 8 9322 5800

URANIUM EQUITIES LIMITED ACN 009 799 553



#### 1. URANIUM EXTRACTION TECHNOLOGY

Uranium Equities and global uranium leader Cameco Corporation have jointly developed a potentially industry-changing process for the extraction of uranium from phosphoric acid streams produced in the production of phosphate-based fertilisers, "the PhosEnergy Process". Cameco is funding the development of this Process through a staged investment of up to US\$16.5 million, with a further commitment to fund a minimum of 50 per cent of UEQ's share of the capital cost for construction of the first commercial plant, should this occur. Cameco have invested US\$12.5 million to date.

UEQ estimates the cash operating cost of uranium production employing the PhosEnergy Process to be **US\$20-25** per pound of  $U_3O_8$  based on a 1Mtpa  $P_2O_5$  phosphate production facility operating in the USA (including a 40 per cent contingency). The initial focus of the development team is on the phosphate fertiliser industry in the USA, where it estimates there is an opportunity to recover approximately 6Mlbs of uranium per annum with the worldwide opportunity being in the region of 20Mlbs per annum. Operating in the USA also has several potential synergies with Cameco's existing US operations through its subsidiary Cameco Resources.

Operation of the PhosEnergy Demonstration Plant in the United States began during the Quarter, with trials starting on schedule in May 2012 (*Figure 1*). The plant is scheduled to continue to operate for a further two months to evaluate the process efficiency for a number of feed variations from various sources. Initial results confirm the >90% uranium recovery achieved in the laboratory.

The Demonstration Plant operation is a joint effort between Cameco and UEQ staff with Cameco lending significant resources to the project.

The Demonstration Plant will collect information for a pre-feasibility level engineering study including chemical consumption rates, equipment design criteria and energy inputs. The study is scheduled to be completed in parallel with the Demonstration Plant with results expected before the end of the year.

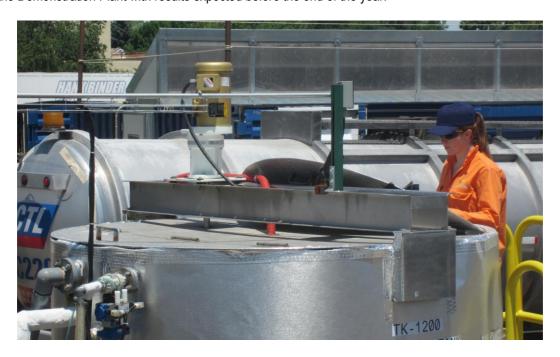


Figure 1 – Uranium Equities Engineer sampling the feed tank on the PhosEnergy Demonstration Plant





#### **EXPLORATION ACTIVITIES**

Uranium Equities has an extensive exploration portfolio comprising eight uranium exploration projects covering a total area in excess of  $24,000 \text{km}^2$  in the Northern Territory, South Australia, Western Australia and Queensland and including a number of different uranium deposit styles and targets. The West Arnhem Joint Venture, with Cameco Australia (UEQ 40%) and the 100%-owned Nabarlek Mineral Lease, located in the Alligator Rivers Uranium Field in the Northern Territory, represents a rare near-mine uranium exploration opportunity surrounding the historic Nabarlek Uranium Deposit (previous production:  $24Mlbs @ 1.84\% U_3O_8$ ).

#### 1.1. West Arnhem Joint Venture – 40% UEQ: 60% Cameco Australia (Manager) (NT)

Processing of the detailed ground gravity data over the **Quarry Fault Zone (QFZ)** has been completed. The QFZ extends over a distance of several kilometres and has been identified by UEQ as a similar prospective parallel structural zone to the Nabarlek Structural Corridor, which hosts the Nabarlek Mine.

An evaluation of the Joint Venture area, investigating the regional geological and structural framework around the Quarry Fault Zone (QFZ) is ongoing. A preliminary structural interpretation has identified a series of U40 Prospect-style targets within the QFZ trend.

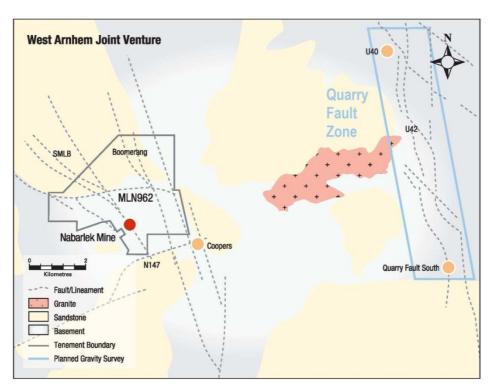


Figure 2 – West Arnhem JV and Quarry Fault Zone (QFZ)





#### 1.2. Nabarlek Mineral Lease (100% UEQ) (NT)

The company recently made a successful submission for a \$100,000 co-funding grant under the NT Government drilling collaborations program 'Bringing Forward Discovery' to test the Nabarlek Deeps Concept. The submission relates to an exploration model based on recent exploration success at the Ranger Mine and the discovery of the Ranger 3 Deeps mineralisation. Recent interpretation is that there is a strong structural control on mineralisation, possibly independent of the regional unconformity position which has been the primary exploration target to date.

The Nabarlek Deeps concept is to test beneath the barren dolerite with angled diamond drillholes, assuming the mineralised Nabarlek Shear has been displaced and is obscured by the intrusion of the Oenpelli Dolerite (Figure 3). Due to this offset, the historical deep drillholes completed in the Nabarlek Pit environs would not have tested the extension of the Nabarlek mineralised system at depth.

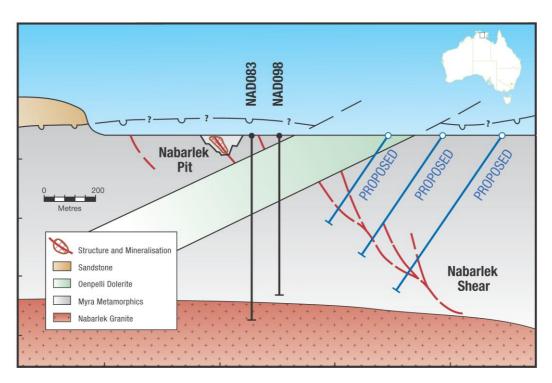


Figure 3 - Nabarlek Deeps Concept Cross-section

The co-funding grant deed has been signed, with planning underway to complete the drill program during the current field season.





#### 1.3. Oodnadatta & Marla Projects (SA)

The Oodnadatta and Marla Projects cover a total area of 15,283 km<sup>2</sup> in the northern Gawler Craton in South Australia (Figure 4) and are considered prospective for IOCGU (iron-oxide-copper-gold-uranium) deposits and Kazakhstan-style sandstone-hosted uranium deposits.

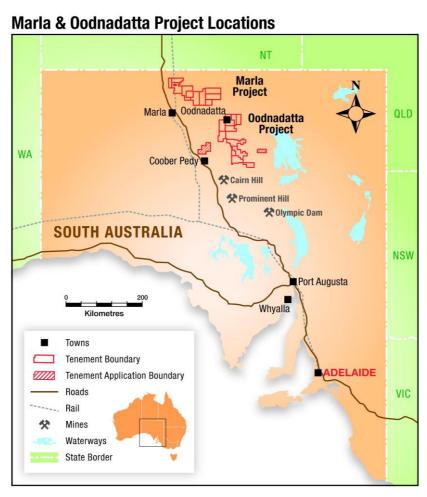


Figure 4

State-based aeromagnetic and gravity data have been reprocessed on a prospect scale to better define IOCGU targets identified by the Company. A review of existing geophysical data has identified a number of significant coincident magnetic (Figure 5) and gravity features (Figure 6) which will be systematically explored in coming months. The Todmorden region has been targeted due to the presence of well-defined, large-scale structural lineaments and comparatively shallow basement depths.





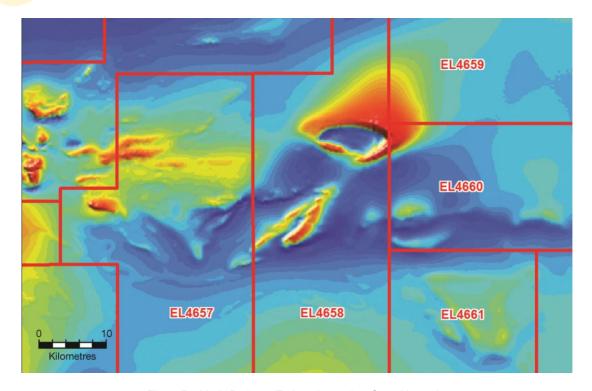


Figure 5 – Marla Project – Todmorden region: State Magnetics

Following heli-assisted heritage clearances with senior representatives of the Eringa and Yankunyjatara People, Perth based geophysical contractor Atlas Geophysics commenced the ground gravity survey over the Todmorden Region.

The program was completed over 11 days with a total of 2,142 gravity stations recorded. The survey area was initially examined on a 1km x 1km grid, with additional infill gravity stations collected over a number of discrete coincident magnetic and gravity anomalies. The survey was partly funded by the South Australian Government's PACE 2020 Initiative with a \$40,000 grant.

Preliminary interpretation of the dataset has revealed a number of possible target areas with coincident magnetic and gravity anomalies (up to 5mGals) that warrant further investigation and modelling. In addition to Marla's IOCGU potential, the region is also being assessed for possible meta-sedimentary hosted copper – gold mineralisation.





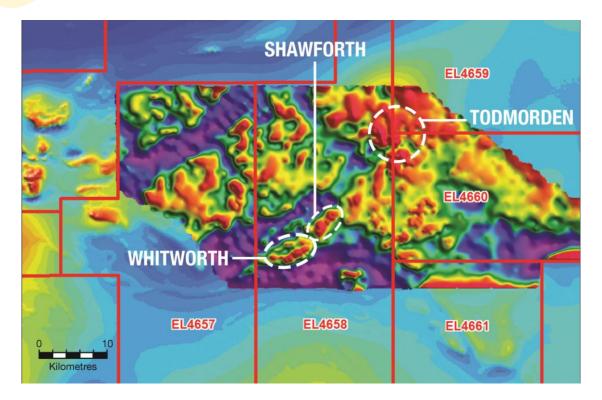


Figure 6 - Marla - Todmorden region: Ground Gravity

DMITRE has advised that PACE Drilling co-funding proposal for a rotary mud and diamond drilling program on the Marla Project has been successful and that they will provide a \$90,000 co-funding grant as part of the South Australian Government's PACE 2020 Initiative. This drilling program will focus on the most prospective targets generated from the ground gravity survey and planning is underway to commence this program late in the third quarter 2012.

#### 1.4. Headwaters Project (NT) (Vale Earning 70%)

The Headwaters Project, including 1,880km² of granted tenements, is located within the Arnhem Land Plateau along the western margin of the Proterozoic McArthur Basin and has the potential for Coronation Hill-style gold – platinum – palladium – uranium mineralisation. The Project is being funded by Vale Exploration Pty Ltd ("Vale"), a wholly-owned Australian subsidiary of Vale S.A, under a JV agreement. Vale has elected to proceed to Phase 2 of the Project, whereby Vale may earn a 70% interest over the next five years by sole funding expenditure to completion of a Pre-Feasibility Study.

UEQ and Vale have agreed on a program of exploration for the 2012 field season.

Subsequent to the end of the quarter, an RC drill rig has mobilised to the southernmost exploration licence of Headwaters. The drill program will test three targets that have been defined from radiometrics, magnetics and ground truthing.



URANIUM EQUITIES LIMITED ACN 009 799 553

Target 1a is a radiometric anomaly associated with the Bonanza Creek Formation and is associated with a regionally extensive fault system. Angled drillholes are planned to traverse across the anomaly with the drilling designed to test the anomaly beneath overlying regolith and to test the position of the fault.

Targets 12c and 12d were chosen based on the geochemistry returned from elevated rock chip samples and its association with a pronounced radiometric anomaly. Drilling is designed to traverse across the radiometric anomalies with angled drillholes.

#### 1.5. Lake Blanche Project (SA)

The Lake Blanche Project, covering a total area of 6,074km<sup>2</sup> in the Eromanga Basin in South Australia, is prospective for sandstone-hosted uranium.

During the quarter, an airborne electromagnetic (AEM) survey using the SkyTEM508 system was flown over the Lake Blanche Project area. A total of 530 line kilometres of data were collected, over three separate blocks and two individual transects consisting of 2 to 3 line swaths. The aim of the AEM survey was to acquire electromagnetic data to map palaeochannels within the Namba and Eyre Formation sediments and possible structures within the underlying predominantly shale based Winton Formation.

The SkyTEM survey successfully mapped the Namba Formation and imaged the top portion of the Eyre Formation. The depth of penetration is estimated to be from 105 to 140 metres. Despite not penetrating to the Winton Formation at 200 metres, there is a degree of high spatial variability within the top 100 metres, suggesting facies variations with the Namba and Upper Eyre Formation. The SkyTEM system also mapped subtle structural features within the upper 100 metres that may influence mineralisation pathways.

Subsequent to the end of the Quarter, Joint Venture partner Cameco Australia Limited has advised it has withdrawn from the Lake Blanche Joint Venture.

#### 1.6. Rudall River (WA) (Cameco 60%: UEQ 40% conditional JV)

The Rudall River Project consists of three Exploration Licence Applications covering 162km<sup>2</sup>, the western-most of which adjoins the Cameco/Mitsubishi Kintyre Project. The Company believes the region is prospective for additional Kintyre-style vein-type mineralisation.

The native title negotiation process continued with the Traditional Owners of the Rudall River region. The licence applications have been advertised under the Department of Mines and Petroleum's expedited procedure provisions. The native title objection period for all applications now closed with objections recorded against all three licence areas. The company will continue to negotiate to allow exploration access.

#### 2. CORPORATE

The Group's cash balance at the end of the quarter was \$2.1 million (refer Appendix 5B for further information).





Allers

Bryn Jones Managing Director

#### **Competent Person Statement**

The information in this report that relates to Exploration Results is based on information compiled by Mr. Grant Williamson, Geology Manager - Exploration of Uranium Equities Limited, who is a Member of the Australian Institute of Geoscientists. Information on the West Arnhem Joint Venture and Lake Blanche Project is based on information supplied by Joint Venture operator Cameco Australia. Mr. Williamson has sufficient experience in the field of activity being reported 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, and consents to the release of information in the form and context in which it appears here.

#### **About Uranium Equities**

Uranium Equities Limited (UEQ) has two main areas of focus: The development of the PhosEnergy Process; and exploration activities directed at high quality exploration assets covering more than 24,000km² in a number of Australian states and territories and various deposit styles.

The PhosEnergy Process is an innovative patented process for the extraction of uranium as a by-product from phosphate in the production of phosphate based fertilisers.

The global annual production potential of uranium from the phosphate industry is in the order of 20 Mlbs  $U_3O_8$ . This quantity of uranium is mined in phosphate ores but not recovered annually on a worldwide basis. The major phosphate based fertiliser producers are located in Northern Africa, North America and Asia.

The PhosEnergy Process has been proven to pilot scale with results establishing a robust process capable of achieving high levels of uranium recovery at the lower end of the cost curve.

The Nabarlek Project provides a rare near mine exploration opportunity surrounding the historic Nabarlek uranium deposit (24 Mlbs @ 1.84% U<sub>3</sub>O<sub>8</sub>). The deposit lies within an extensive uranium mineral system which extends over more than 50 square kilometres within the Mineral Lease and the surrounding tenements. The mineral system which contains widespread anomalous uranium geochemistry and ore grade mineralisation at several locations remains largely untested.