

# ASX ANNOUNCEMENT 26 April 2013

URANIUM EQUITIES LIMITED ACN 009 799 553



**URANIUM**  
EQUITIES

ASX Market Announcements Office  
via electronic lodgement

## Quarterly Report Quarter ended 31 March 2013

### Highlights

#### PhosEnergy – Uranium Extraction Technology

- Independent, PFS-level engineering study completed on PhosEnergy Process.
- Estimated cash operating cost of less than US\$18 per pound of U<sub>3</sub>O<sub>8</sub>.
- Estimated capital cost for base-case commercial production facility of US\$156 million for production of 880,000 pounds of U<sub>3</sub>O<sub>8</sub> per annum.
- UEQ believes further opportunities exist for improvements in both capital and operating costs.
- Cameco re-affirms support with commitment of US\$4 million investment tranche for next phase of development - UEQ remains free carried.

#### Exploration – Australia

- Cost effective exploration strategy developed for the Nabarlek Project for the 2013 field season.
- Rudall River Project tenements granted – joint venture with Cameco Australia now unconditional.

#### Investment in Energia Minerals

- Energia Minerals (ASX:EMX) announce an expanded JORC compliant inferred resource of 16.7 million pounds at their Carley Bore Uranium Deposit in WA.
- Energia Minerals received a take-over offer from Cauldron Energy (ASX:CXU).

#### Corporate

- Announcement of a 1-for-3 non-renounceable pro-rata rights issue at 2.5 cents, with a Top-Up Facility, to raise up to \$2.2 million before issue costs.

#### Our Strengths

- Breakthrough PhosEnergy Process
- Nabarlek – rare near mine exploration portfolio
- Multiple near term growth opportunities

ASX: UEQ

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# ASX ANNOUNCEMENT

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## 1. URANIUM EXTRACTION TECHNOLOGY

On 5 March 2013 the Company announced the completion of an independent Pre-Feasibility Study (PFS) level Engineering Study of the PhosEnergy Process. The results supported the viability and low-cost nature of the Process for extracting uranium as a by-product from phosphate fertiliser production.

The Study estimated a capital cost of US\$156 million and a cash operating cost of less than US\$18 per pound for a base case PhosEnergy plant capable of producing approximately 880,000 pounds of uranium per annum<sup>(1)</sup>.

In UEQ's opinion the results of the PFS put the PhosEnergy Process in the bottom quartile for operating costs of all uranium production worldwide and at a considerable cost advantage over the bulk of new projects likely to come online over the next 5 to 10 years.

Following receipt of the PFS Cameco has committed to pursuing the next key phase of development of the jointly owned PhosEnergy Process by committing a further US\$4 million to the project. This investment finalises Cameco's earn into 73 per cent of the technology with UEQ retaining a 27 per cent interest.



*Figure 1 – PhosEnergy Processing Plant*

### Cash Operating Cost Estimate

Cash operating costs were derived using a methodology consistent with achieving an accuracy of +50%/-30% and an AACE Class IV estimate. The Study estimated operating costs to produce an intermediate product which can be toll-milled through any one of a number of facilities in the United States, for which quotes have been received.

The estimated cash operating cost including toll milling and product transport is estimated at less than US\$18 per pound of U<sub>3</sub>O<sub>8</sub> including contingency.

Intermediate product transport for toll-milling accounts for a substantial portion of the total cash operating costs. This represents a significant opportunity for cost-structure improvements both through improved contractual transport arrangements and contained uranium concentration of the intermediate product.

# ASX ANNOUNCEMENT

URANIUM EQUITIES LIMITED ACN 009 799 553



Other opportunities exist in the refinement of reagent usage and power consumption as the development progresses. Estimated operating costs do not include corporate office, marketing and downstream phosphate processing costs which may be incurred.

## Capital Cost Estimate

The capital cost estimate was derived from Process Flow Diagrams (PFDs), site plans, General Arrangements (GAs) and a detailed mechanical equipment list. A site layout of the PhosEnergy Processing plant as designed is shown in Figure 1.

Depending on the phosphate facility targeted for commercialisation, there may be additional capital required for infrastructure such as electrical sub-stations and reagent storage. It is estimated that these additional capital items may cost up to US\$9 million for a facility in the south east USA. Several opportunities for further optimising equipment, structural and civil capital components are under review and will be incorporated into subsequent studies.

## Next Steps in Commercialisation

Discussions are continuing with phosphate producers to allow on-site demonstration of the PhosEnergy Process using the existing containerised Demonstration Plant. This Demonstration Plant operation will allow for further refinement of capital and operating cost numbers and provide sufficient inputs to enable a Definitive Feasibility Study (DFS) to be completed.

Commercial discussions around the split in revenue on a commercial application of the PhosEnergy Process on an operating phosphate facility will be required to allow an investment decision to progress the project further. These commercial negotiations will consider the capital risk taken by both parties, the phosphate producer's appetite for exposure to the uranium market and the long mine life of phosphate projects – generally over 20 years.

*(1) 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 an investment of US\$16.5 million, with a further commitment to fund a minimum of 50 per cent of Uranium Equities' share of the capital cost for construction of the first commercial plant, should this occur.*

*An independent Pre-feasibility Level Engineering Study completed in March 2013 estimates the cash operating cost of uranium production employing the PhosEnergy Process to be below US\$18 per pound of U<sub>3</sub>O<sub>8</sub> based on a 1Mtpa P<sub>2</sub>O<sub>5</sub> phosphate production facility operating in south east USA. The initial focus of the development team is on the phosphate fertiliser industry in the USA, where we estimate there is an opportunity to recover approximately 6Mlbs of uranium per annum. The worldwide opportunity is in the region of 20Mlbs per annum. Operating in the USA also has several potential synergies with Cameco's existing US operations.*

# ASX ANNOUNCEMENT

URANIUM EQUITIES LIMITED ACN 009 799 553



## 2. EXPLORATION ACTIVITIES - AUSTRALIA

### 2.1 Project Summary

Name	State	Target	Area (km <sup>2</sup> )		Ownership
			Granted	Applic.	
West Arnhem JV	NT	Structurally controlled and unconformity style uranium	448	49	UEQ 40% – earning 100%: Cameco Australia 60%
Nabarlek ML	NT		12	-	UEQ 100%
Woodside, Cadel North & Aurari Bay	NT		-	164	UEQ 100%
Headwaters	NT	Coronation Hill-style gold – platinum – palladium – uranium	-	2,280	UEQ 100% (in moratorium)
Rudall River	WA	Kintyre style uranium	171	4	Cameco 85%:UEQ free carried 15% conditional JV
Narraweena	QLD	Ben Lomond style uranium	42	-	UEQ 100%
Marla	SA	IOCG+-U, Broken Hill style meta-sedimentary hosted Cu-Au	2,886	-	UEQ 100%
Oodnadatta	SA	IOCG+-U	4,860	-	UEQ 100%
			<b>8,419</b>	<b>2,497</b>	

Uranium Equities has a focused portfolio of high quality exploration projects in a number of Australian states and territories and including a number of different deposit styles and targets.

The West Arnhem Joint Venture, with Cameco Australia (Uranium Equities right to earn 100%) and the 100%-owned Nabarlek Mineral Lease, located in the Alligator Rivers Uranium Field in the Northern Territory, represent a rare near-mine uranium exploration opportunity surrounding the historic Nabarlek Uranium Deposit (previous production: 24Mlbs @ 1.84% U<sub>3</sub>O<sub>8</sub>) – the Nabarlek Project.

### 2.2 The Nabarlek Project

Target generation and planning for the 2013 field season continues, primarily focussing on drill ready targets in and around the Nabarlek Mineral Lease and along the Quarry Fault Zone – host to the U40 target where grades of well over 6% U<sub>3</sub>O<sub>8</sub> have been drilled (see ASX announcement dated 16 December 2010). To assist with drill targeting, detailed 3D geological modelling has been undertaken on these key prospect areas.

At the U40 Prospect, this work has identified the possible structural controls on the known mineralisation and provided some insight into the location of additional targets elsewhere within the Quarry Fault Zone. On the Nabarlek Mineral Lease the work has successfully modelled the geological setting of the area providing for the geometric analysis of potential targets.

# ASX ANNOUNCEMENT

URANIUM EQUITIES LIMITED ACN 009 799 553



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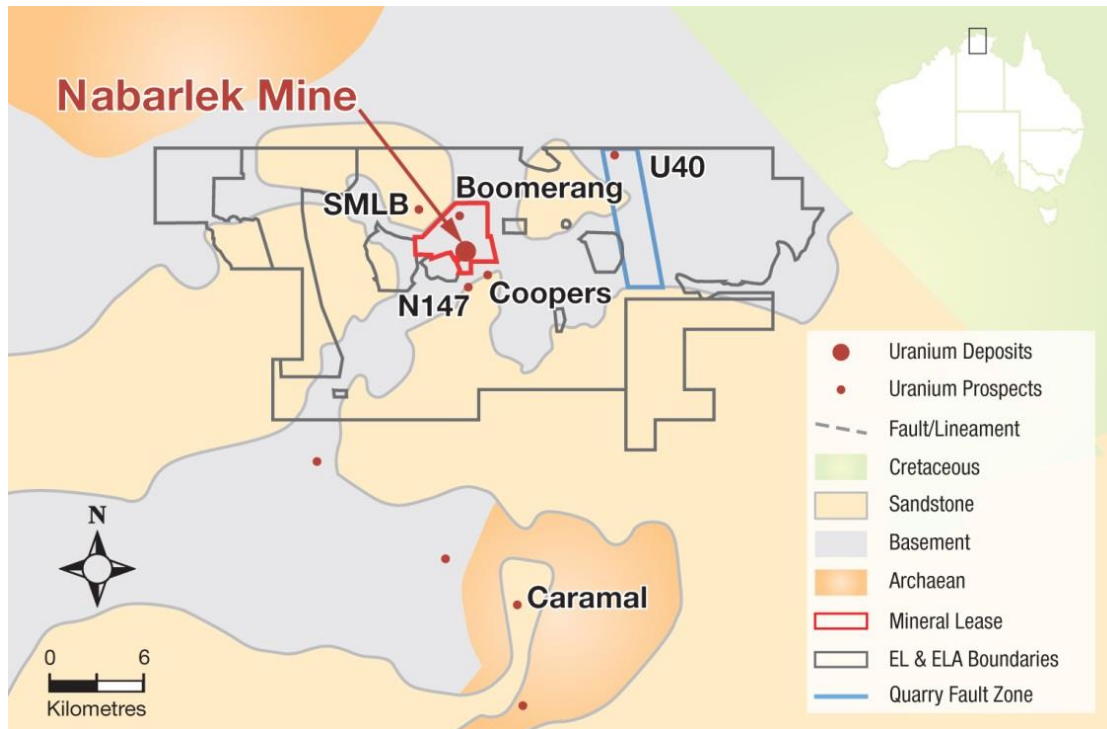


Figure 2 – Nabarlek Project Prospects

## 2.3 Oodnadatta & Marla Projects (SA)

The Oodnadatta and Marla Projects cover a total area of 7,746 km<sup>2</sup> in the northern Gawler Craton in South Australia (Figure 3) and are considered prospective for IOCGU (iron-oxide-copper-gold-uranium) deposits, possible Broken Hill-style meta-sedimentary hosted copper – gold mineralisation and Kazakhstan-style sandstone-hosted uranium deposits.

Additional geophysical targeting was completed during the quarter focussing on the Marla Project.

A 3D inversion of the gravity dataset collected by UEQ in 2012 was completed during the quarter. A first inversion was carried out using the entire data set to get a general idea of the different trends (Figure 3) and smaller inversions were setup for the individual blocks to get more details in areas of interest. Six targets zones were examined in detail – Bacup, Clough-Lydgate, Cornholm, Rochdale, Todmorden and Walsden.



# ASX ANNOUNCEMENT

URANIUM EQUITIES LIMITED ACN 009 799 553

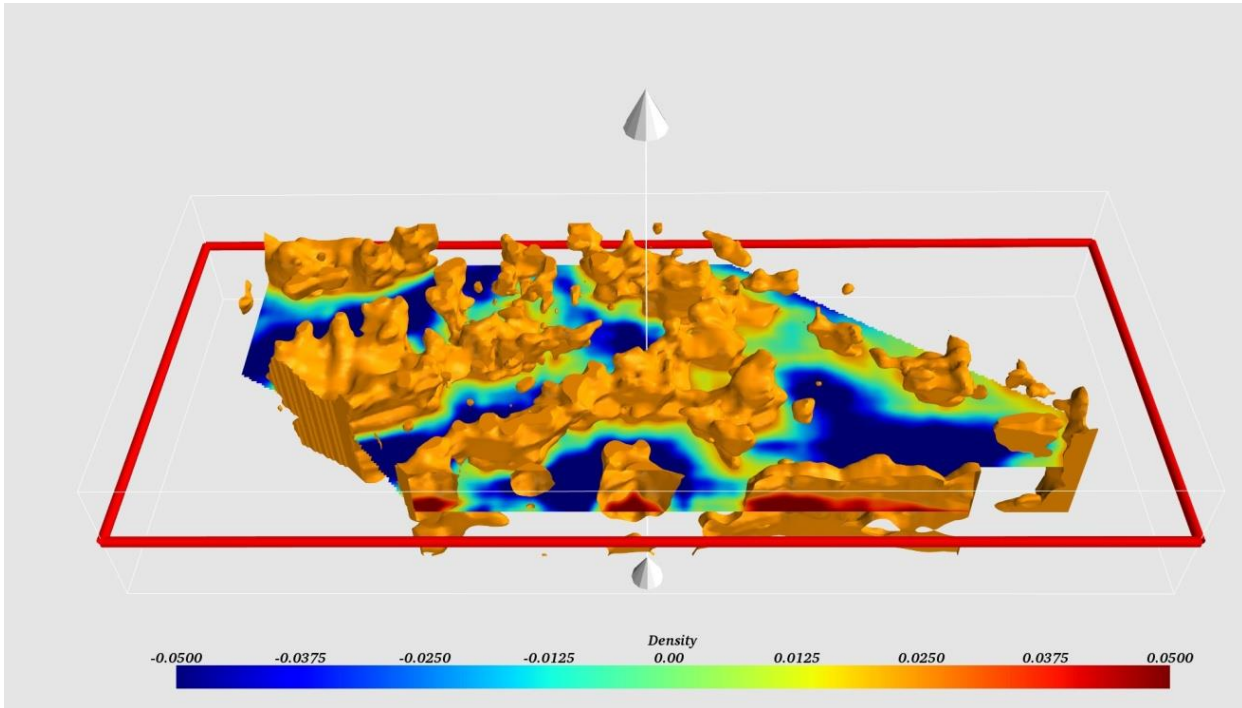


Figure 3 – Inverted Marla Model Represented as Isocontour

The modelling revealed Bacup and Rochdale as high density targets which has upgraded their prospectivity.

The 3D inversion modelling of the Bacup Target shows a possible high density body consisting of three main units linked in a boudinaged arrangement on the margin of an interpreted granitic intrusion. The three main units of the dense body coincide with three interpreted en-echelon east – west trending structures which are located within structural corridor trending towards the northeast. The dense body is believed to be at a depth of approximately 300m. This target will be included in future drill planning.

The Rochdale Target has also been modelled to be a dense body which extends from approximately 100m – 700m below the surface. This target was included in the previous drill proposals.

## 2.4 Rudall River (WA) (Cameco 85% : UEQ free carried 15% conditional JV)

*The Rudall River Project (Uranium Equities free carried 15% interest) consists of three Exploration Licences and three Prospecting Licence Applications covering a total area of 175km<sup>2</sup>. The western-most Exploration Licence adjoins the Cameco/Mitsubishi Kintyre Project (current published NI43-101 compliant measured and indicated resource estimate of 55Mlbs @ 0.58% U<sub>3</sub>O<sub>8</sub>).*

The Western Desert Lands Aboriginal Corporation (WDLAC) Board has approved the final access agreement for the Rudall River Project and have withdrawn their objection to the granting of the exploration licences.

Subsequently, the WA Department of Mines and Petroleum have advised that E45/3118, E45/3119 and E45/3126 have been granted for a period of 5 years from the 26th February 2013. The granting of the Rudall River

# ASX ANNOUNCEMENT

URANIUM EQUITIES LIMITED ACN 009 799 553



exploration licences has now formalised the joint venture agreement with Cameco Australia on the Rudall River Project – UEQ retains a free carried 15% interest.

Cameco expects to begin preliminary exploration on the Rudall River Project in 2013 to investigate a number of radiometric, geochemical and geophysical targets.

## 2.5 Other Projects

### Aurari Bay (NT)

A new exploration licence application covering approximately 109km<sup>2</sup> has been made in Arnhem Land (ELA 29897) in an area identified as having similar structural and geological setting to the adjacent Angularli Uranium Project operated by Cameco Australia Pty Ltd. Uranium Equities believes a similar parallel structural position within Cahill Formation basement lithologies may provide an opportunity for a repetition of the significant uranium mineralisation in this region.

This new exploration licence application area lies 60km to the north of the Nabarlek Project area.

# ASX ANNOUNCEMENT

URANIUM EQUITIES LIMITED ACN 009 799 553



### 3. STRATEGIC INVESTMENT IN ENERGIA MINERALS LIMITED (ASX: EMX)

*The Company holds a 21.15% interest in ASX-listed uranium explorer Energia Minerals Limited (ASX: EMX). Energia's flagship project is their 100%-owned Nyang Uranium Project, host to the 16.7 million pound Carley Bore Uranium Deposit, in the emerging Carnarvon Basin uranium province which also includes Paladin's Manyingee and Cauldron Energy's Bennett Well projects. The Carley Bore resource is a sedimentary hosted roll-front deposit that may be amenable to the relatively low cost In-Situ Recovery (ISR) production method.*

On 26 February 2013 Energia Minerals announced a 33% increase in the JORC compliant Inferred Resource estimate for the Carley Bore Uranium Deposit in Western Australia following successful in-fill and extensional drilling programs completed late 2012.

Using a 150ppm U<sub>3</sub>O<sub>8</sub> cut-off, the updated Inferred Resource calculated independently by Coffey Mining Pty Ltd is 23 million tonnes grading 330ppm U<sub>3</sub>O<sub>8</sub> for 16.7 million pounds of contained U<sub>3</sub>O<sub>8</sub>.

The Carley Bore resource is a sedimentary hosted roll-front deposit that may be amenable to the relatively low cost In-Situ Recovery (ISR) production method.

On 18<sup>th</sup> March 2013 Cauldron Energy Limited (ASX: CXU) announced that it intends to make a conditional offer for all the shares in Energia Minerals under which Cauldron Energy offered 1 Cauldron Energy share for every 8 Energia Mineral shares held. Uranium Equities has written to Energia Minerals confirming that the offer will not be accepted in its current form.

### 4. CORPORATE

The Group's cash balance at the end of the quarter was \$0.46 million (refer Appendix 5B for further information).

On 10 April 2013 the Company announced a 1-for-3 non-renounceable rights issue to eligible shareholders at 2.5 cents for each new share to raise up to \$2.2 million before issue costs. Directors, accounting for approximately 16.4% of total Shares on issue have committed to fully take up their entitlements.

It is currently proposed to use the net proceeds from the Offer to further progress our key Nabarlek Project and for general working capital requirements.

Shareholders at the Record Date (other than Directors and related parties of the Company) may apply for additional shares, over and above their entitlement at 2.5 cents per share.

Please refer to the Offer Document dated 10 April 2013 on our website, [www.uel.com.au](http://www.uel.com.au), or the ASX website for further information.

A handwritten signature in black ink, appearing to read "Bryn Jones".

Bryn Jones  
Managing Director



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## 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. 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) is positioned for growth in the uranium sector through the development of the PhosEnergy Process and exploration activities directed at high quality exploration assets in Australia's premier uranium districts.

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 demonstration plant scale with results establishing a robust process capable of achieving high levels of uranium recovery at the lower end of the cost curve. An independent PFS level engineering study has estimated cash operating costs of less than US\$18 per pound of uranium, putting it in the lowest quartile for operating costs of worldwide uranium production expected to come on line in the next 5 to 10 years.

The Nabarlek Project provides a rare near mine exploration opportunity surrounding the historic Nabarlek Uranium Deposit (previous production: 24 Mlbs @ 1.84%  $U_3O_8$ ). The previously mined 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.