# **ASX** ANNOUNCEMENT 30 April 2010

URANIUM EQUITIES LIMITED ACN 009 799 553



The Company Announcement Officer Australian Securities Exchange Ltd via electronic lodgement

# Quarterly Report Quarter ended 31 March 2010

### Highlights

#### PhosEnergy - Uranium Extraction Technology

- Cameco continues to fund development
- Phosphoric acid testing supports cost and operating assumptions
- New process developments have been patented that potentially offer significant improvements in capital and operating costs.

#### **Exploration**

- Field program for the Nabarlek Project is planned for late May
- The company has applied for two exploration licences in the prospective Frome Basin covering 819km<sup>2</sup>.
- Three Exploration Licences granted at Headwaters in the East Alligator Uranium Field bringing the total granted area to over 3000km². Exploration Agreement with Vale Exploration now unconditional.

#### Corporate

• Cash Balance at the end of the Quarter was \$11.8M.

### Our Strengths

- Breakthrough PhosEnergy Process
- Nabarlek Project A rare investment opportunity
- Multiple near term growth opportunities

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#### 1 URANIUM EXTRACTION TECHNOLOGY

#### 1.1 Background

Uranium Equities through USA registered Urtek LLC ("Urtek") is developing a new technology for the extraction of uranium from phosphoric acid streams produced in the production of phosphate based fertilizers ("the PhosEnergy Process").

Non-provisional patent applications have been filed in the USA, Jordan and the Patent Cooperation Treaty (PCT) signatory countries. An additional provisional patent application for a process complimentary to the PhosEnergy Process has been filed in Australia.

The PhosEnergy Process holds the potential to substantially reduce the capital and operating costs of the extraction of by-product uranium from phosphate streams when compared to existing technologies. The PhosEnergy Process also improves the operability of the extraction process and reduces the production of radioactive process wastes when compared to the extraction processes historically applied.

#### 1.2 Activities

#### **Funding**

Cameco Corporation (TSX:CCO, NYSE:CCJ) (Cameco) continues to fund the ongoing development and commercialisation of the PhosEnergy Process through a staged investment of up to US\$16.5M

Cameco has the right to earn up to 70% of UEQ's right to earn a 90% stake in the technology.

If Cameco earns its interest it has agreed to provide funding for a minimum of 50% of UEQ's portion of capital expenditure for the construction of the first commercial plant repayable out of earnings.

UEQ manages the development.

#### **Business Development**

Discussions with phosphate fertilizer producers on commercialisation of the PhosEnergy Process progressed during the guarter.

Testing of phosphoric acid streams from three different overseas fertilizer facilities has confirmed the robust and flexible nature of the PhosEnergy Process and supports the cost and operating assumptions used in UEQ's process model.

#### Technical Development

Laboratory scale testwork to refine the PhosEnergy Process continued during the quarter with significant advances being achieved which offer the opportunity to substantially improve the projected Process operating and capital costs. Previous pilot plant test work indicated potential operating costs in the range of US\$25 to US\$30 per pound.

A patent application to protect the process improvements was lodged subsequent to the end of the Quarter.





### 2 Exploration Activities

#### 2.1 Nabarlek Project (NT) – 2010 Field Season

Exploration activities on the Nabarlek Project are planned to commence at the beginning of the dry season, in late May, on the Nabarlek Mineral Lease (UEQ 100%) with activities on the West Arnhem Land Joint Venture (WALJV) with Cameco Australia (UEQ 40%, Cameco 60%) to begin shortly thereafter.

This year's drilling program on the Mineral Lease will test targets beneath shallow sandstone or transported alluvial cover in areas of the Lease which have had little or no effective drilling.

The WALJV program will focus on the Coopers Prospect where shallow aircore bedrock geochemical drilling conducted in the 2009 field season returned strongly anomalous uranium results with a peak value of  $1544ppm\ U_3O_8^1$  in weathered bedrock. The prospect as defined extends over more than 400 metres and remains open to the north. (Figure 1).

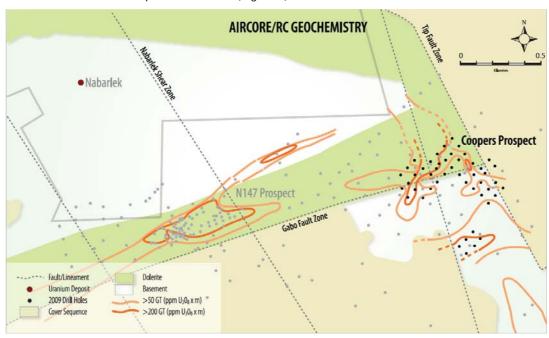


Figure 1 – Geochemical anomaly over the Coopers Prospect.

As announced on 10<sup>th</sup> November, 2009 Mitsui & Co., Ltd (Mitsui) paid a \$2 million option fee to secure the right, until the end of July 2010, to purchase a stake in the Nabarlek Project situated in the world-class Alligator Rivers Uranium Field. Mitsui's option fee will be applied towards the 2010 exploration program.

If Mitsui exercises the Option it will purchase, from UEQ, a 25% interest in the Nabarlek Mineral Lease and a 9% interest in the West Arnhem Land Joint Venture (WALJV). Consideration for the purchase will be \$15M or a value determined by an agreed valuation model, whichever is the greater.





#### 2.2 Headwaters Project (NT) – 2010 Field Season

Following completed land access negotiations with the Northern Land Council on behalf of Traditional Owners and the NT Government EL24711, EL24712 and EL24713 located in the prospective East Alligator Uranium Field, West Arnhem Land, NT have been granted.

The new exploration licences cover an area of 2679km<sup>2</sup> and when added to the granted EL25220, bring the total project area to 3070km<sup>2</sup> (Figure 2).

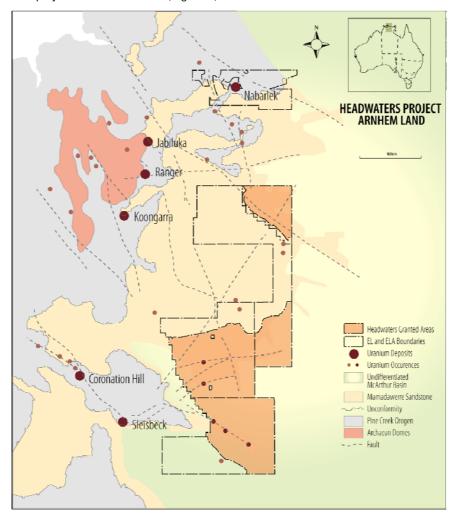


Figure 2 – The Headwaters Project

As announced in March 2010 the granting of the Exploration Licences satisfies the pre condition to the Exploration Agreement with Vale Exploration Pty Ltd ("Vale"), a wholly owned Australian subsidiary of Vale S.A.

The Terms of Agreement provide for Vale to earn a 70% interest in the Headwaters Project through sole funding exploration expenditure to a decision to undertake a Bankable Feasibility Study ("BFS").

Vale's minimum expenditure will be \$1 million within two years of the commencement of the joint venture with on-ground exploration to commence in the 2010 field season.





UEQ shall continue as project manager during the initial commitment period, but Vale may elect to become project manager at any time subsequent.

The tenements lie within the Arnhem Land Plateau along the western margin of the Proterozoic McArthur Basin (Figure 2). Rocks consist of fluvial sandstone with minor interbedded volcanic sequences overlying the strongly deformed and metamorphosed basement rocks which host the major unconformity-related uranium deposits of the Alligator Rivers Region.

A review of the exploration potential of the Headwaters Project has identified geological environments that hold similarities to the style of uranium mineralisation present at Westmoreland in north-west Queensland.

Mineralisation at Westmoreland is associated with regional structures and volcanic rocks within McArthur Basin sequences which are equivalent to the sequences widely distributed throughout the Headwaters Project area. Previous exploration in the Headwaters region from 1996 – 2000 identified significant uranium, gold and platinum group mineralisation within the near surface environment, associated with outcropping volcanic lithologies of the McArthur River Basin sequences.

#### 2.3 Frome Basin (SA)

The company has made application for two exploration licences, covering 819km2 in the prospective Frome Basin, South Australia. The area offers potential for the development of sandstone-hosted rollfront and palaeochannel targets of the type developed at the Four Mile and Beverley Deposits in the western Frome basin less than 100km from UEQ's Mt Frome tenement.

The acquisition of these tenements results from the company's ongoing strategy of consolidating land positions in highly prospective yet under-explored Australian uranium provinces such as the Alliquetor Rivers region, the Frome Basin and the Rudall River - Kintyre region.

#### 2.4 Rudall River

Data review and target generation on the Rudall River Uranium Project (UEQ 40%: Cameco 60%) has begun and UEQ plans to commence negotiations on Native Title agreements in the second quarter of 2010. The Project lies to the east and directly adjacent to the lease containing the Kintyre Deposit (70% Cameco: 30% Mitsubishi Development Pty Ltd). The Kintyre deposit from published reports may host 62 to 80 million pounds  $U_3O_8$  with an average grade of 0.30 - 0.40%  $U_3O_8$ .

The Rudall River Uranium Project lies within the northwest tending Paterson Orogen at the eastern edge of the Pilbara Craton. The Orogen comprises two major components: an older highly deformed crystalline basement, the Palaeoproterozoic Rudall Metamorphic Complex (RMC), and a younger (Proterozoic-Phanerozoic), less-deformed, sedimentary cover sequence comprising Yeneena Supergroup.

The Project tenements cover historic uranium prospects with the western tenements having analogous structural settings to that seen at Kintyre. TEMPEST electromagnetic targets have been identified and remain to be systematically tested.





#### 3.0 CORPORATE

The Company's cash position at 31 March 2010 stood at \$11.8M, inclusive of a restricted \$1.8M performance bond.

Bryn Jones Managing Director

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#### **Competent Person Statement**

The information in this announcement 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 Australasian Institute of Mining and Metallurgy Inc. and 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) has two main areas of focus: The development of the **PhosEnergy Process**; and exploration activities directed at a small core of high quality exploration assets which include the key **Nabarlek Project**.

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 $_3$ O $_8$ ). 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.

<sup>&</sup>lt;sup>1</sup> Uranium (U3O8) analyses were obtained on-site using a calibrated Niton handheld X-Ray Fluorescence ("XRF") Analyser. Statistical comparison of independent laboratory analyses (ICP method) and Niton XRF values for 140 samples indicates replication of results between the two methods to +/- 11 ppm U3O8 for values up to 100 ppm U3O8. From 100 to 500 ppm U3O8 the values were in the range +/- 22 ppm U3O8.