# ASX ANNOUNCEMENT 27 October 2011

URANIUM EQUITIES LIMITED ACN 009 799 553

URANIUM EQUITIES

The Company Announcement Officer
Australian Securities Exchange Ltd
via electronic lodgement

# Quarterly Report
# Quarter ended 30 September 2011

## Highlights

### Uranium Exploration

- Ongoing diamond drilling at the **U40 Prospect** (NT) returns best intercept of **1.3m @ 0.88% (~8,800 ppm) $eU_3O_8$**[(1)].
- RC drilling on the Nabarlek Mineral Lease (NT) extends known mineralisation at the **Boomerang Prospect** including **5m @ 1,610ppm $U_3O_8$ from 121 metres**
- Widespread anomalous uranium intersected at Lake Blanche Project including **0.8m @ 200ppm $pU_3O_8$ from 123 metres** intersected in the **Eyre Formation**
- Anomalous uranium in favourable host sands intersected during reconnaissance **drilling campaign** on the **Frome Basin Project (SA)**
- Detailed ground gravity over U40 and the Quarry Fault Zone on the West Arnhem Joint Venture (NT) completed
- $40,000 co-funding grant awarded as part of the South Australian Government's PACE 2020 Initiative for a ground gravity survey on the **Marla Project**

### PhosEnergy – Uranium Extraction Technology

- Cameco purchased the Founders' 10 per cent interest in the technology for **US$4.5 million**
- Demonstration Plant transported to US and pre-commissioned, ready for proposed operation at a fertiliser facility

## Our Strengths

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


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## 1. Uranium Exploration Activities

*Uranium Equities has a focused exploration portfolio of eight key uranium projects in the Northern Territory, South Australia, Western Australia and Queensland. This portfolio includes Exploration Licences (and Applications) covering an area of over 24,000km², representing a number of different uranium deposit styles and targets.*

*A key focus for the Company is the West Arnhem Joint Venture with Cameco Australia (UEQ 40%) and the 100%-owned Nabarlek Mineral Lease, which represents a rare near-mine exploration opportunity surrounding the historical Nabarlek Uranium Deposit (24Mlbs @ 1.84% $U_3O_8$). The deposit lies within an extensive uranium mineral system which extends over more than 50km² within the Mineral Lease and the surrounding tenements.*

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

The 2011 drilling program is targeting extensions and structural repetitions to the known high-grade mineralisation at the **U40 Prospect** which includes an intercept of **6.8 metres @ 6.71% $U_3O_8$ from 75m** and interpreted extensions of known ore grade mineralisation identified in 2009 and 2010 at the **Coopers Prospect.**

Follow-up diamond drilling was completed during the quarter with thirteen diamond drill holes for 1,991.7m. Preliminary results supplied by Cameco from the U40 Prospect indicate extensions to the mineralisation discovered in 2010 and include (using a 0.1% $eU_3O_8$(1) cut-off):

| | |
|---|---|
| **NAD7501** | **1.3m @ 0.88% $eU_3O_8$** |
| **NAD7504** | **1.0m @ 0.65% $eU_3O_8$** |

Results on samples submitted for analysis are expected to be available in the December quarter.

The U40 Prospect lies within the prospective north northwest trending **Quarry Fault Zone (QFZ)** which extends over several kilometres (Figure 1). The QFZ has been identified as a similar prospective parallel structural zone to the Nabarlek Structural Corridor (Figure 1). A detailed **ground-based gravity survey** has been completed over the entire strike extent of the QFZ.

Data from the drilling and gravity survey is currently being collated, processed and interpreted and will provide important structural information for targeting future drilling at the U40 Prospect and elsewhere on the project.

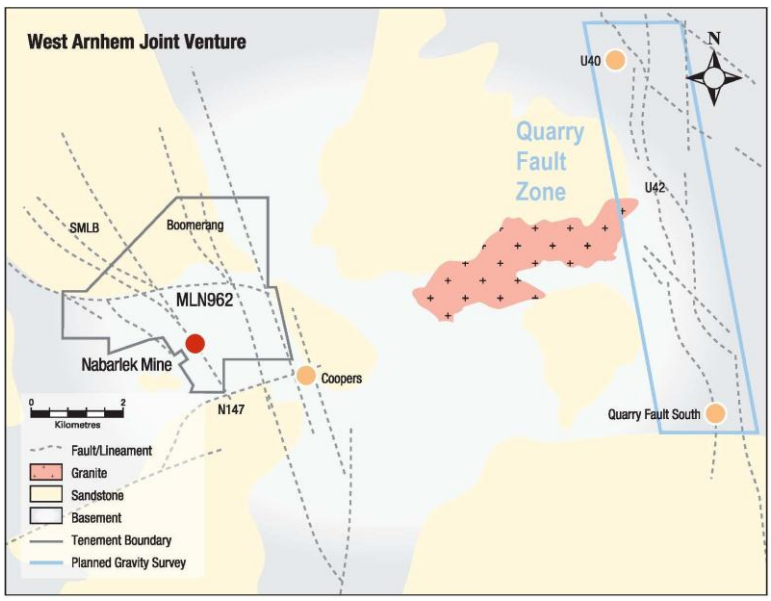


*Figure 1 (right) – West Arnhem JV Target Areas*

Diamond drilling at the Coopers Prospect intersected several narrow zones of mineralisation over a 16m interval within the Oenpelli Dolerite in one of the two holes drilled. Results supplied by Cameco showed the best intersection returning an equivalent grade (using a 0.1% $eU_3O_8$(1) cut-off) of:

| | |
|---|---|
| **NAD7496** | **3.55m @ 0.40% $eU_3O_8$** |

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

A total of 4,933 metres of RC drilling has been completed on the Nabarlek Mineral Lease, focussing on the **Nabarlek – Boomerang Corridor**, located in the central part of the Mineral Lease. Anomalous uranium at the Boomerang Prospect was identified through reconnaissance drilling completed during the 2010 field season.

2011 drilling has extended the systematic drill coverage over a previously untested area immediately east of the Boomerang Prospect, targeting unconformity related mineralisation below thin Kombolgie Sandstone cover. The program has identified uranium mineralisation within a dilational jog structure, which is also associated with strong alteration and quartz breccias, typical of uranium mineralisation found within the Alligator River Uranium Field.

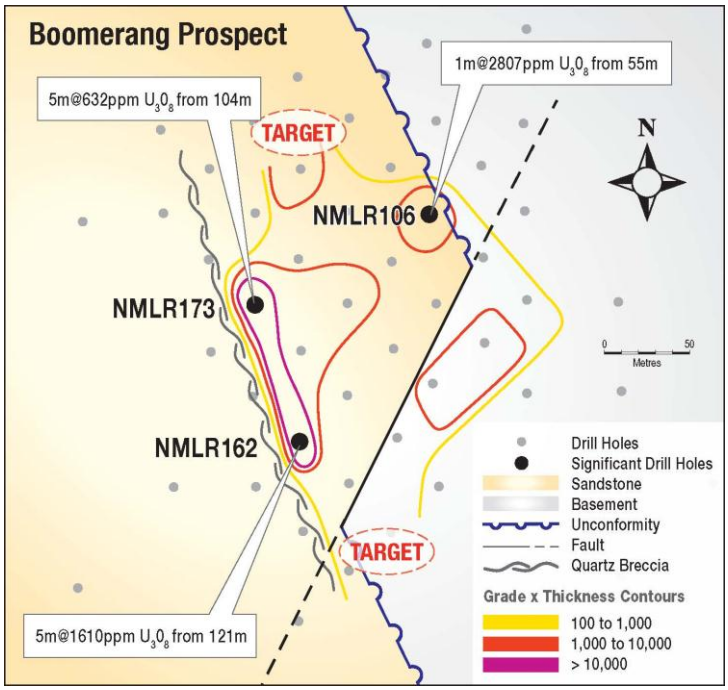


*Figure 2 – Boomerang Prospect GT contours*
*(sum of $U_3O_8$ grade (>20ppm) x metres thickness)*

Mineralisation is open to the south along the unconformity and to the north at depth within the basement providing targets for future drilling (Figure 2).

Anomalous results (using a 200ppm $U_3O_8$ cut-off) include:

| | |
|---|---|
| **NMLR162** | **3m @ 827ppm $U_3O_8$ from 97m** |
| | **2m @ 540ppm $U_3O_8$ from 116m** |
| | **5m @ 1610ppm $U_3O_8$ from 121m** |
| **NMLR173** | **5m @ 632ppm $U_3O_8$ from 104m** |
| | **5m @ 554ppm $U_3O_8$ from 113m** |
| | **4m @ 371ppm $U_3O_8$ from 156m** |
| | **4m @ 352ppm $U_3O_8$ from 192m** |

Future evaluation of the Boomerang Prospect may include diamond drilling to define the structural intersections within the dilational zone, targeting high-grade shoots typical of that found with unconformity-style uranium mineralisation. In addition, a number of other prospects identified in earlier reconnaissance drilling are yet to be fully tested.

### 1.3. Frome Basin (SA)

*Uranium Equities has consolidated a large (2,397km²) strategic ground position in one of Australia's most prospective uranium provinces, South Australia's Frome Basin. The ground position comprises the West Lake Frome Joint Venture, a farm-in agreement with Cauldron Energy Limited (ASX: CXU), and three UEQ 100%-owned exploration licences.*

A broad-spaced reconnaissance rotary mud drilling program (20 drillholes for 3,426m on nominal 3.2km centres) was completed during the quarter to test stratigraphy and regional structural features along the western margin of the Frome Basin (Figure 3).

The areas targeted were located in the zones of divergence between the Arrowie and Wertaloona Fault systems where there are interpreted embayments of Tertiary sediments and the likelihood of possible redox traps. Faulting along the basin margin can create favourable environments for sandstone hosted uranium mineralisation.

The drilling has provided greater insight into the geological framework of the region and confirmed the interpreted structural setting. In addition to the obvious displacements along the Arrowie and Wertaloona Faults, the location and extent of some of the lesser intermediate faults has also become clearer and will assist with interpretation and targeting.

Anomalous downhole gamma was encountered in eight of the 20 drillholes drilled, with some of the better gamma peaks proximal to the major fault structures in the region.

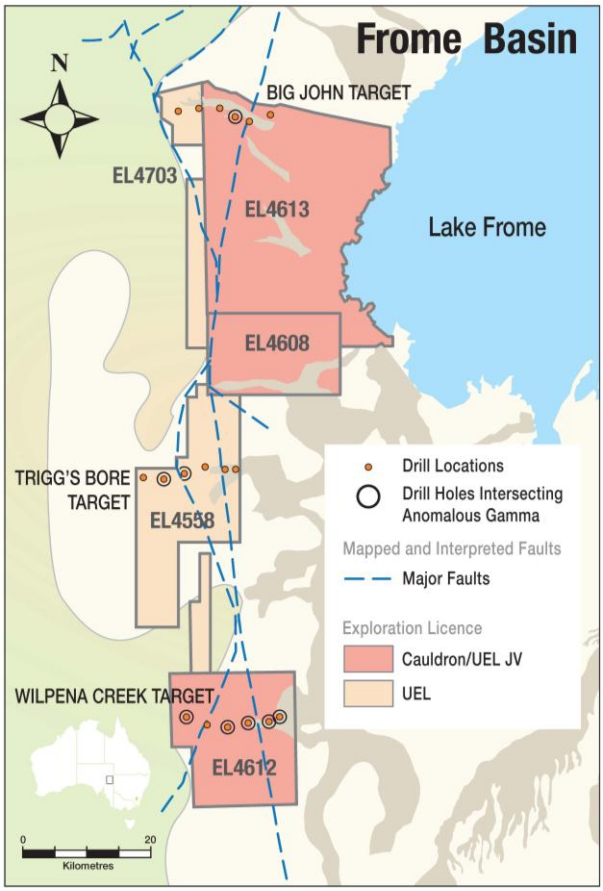


*Figure 3*

Best downhole gamma(2) results returned from the drill program include:

| | |
|---|---|
| **WC004** | **0.37m @ 143ppm $eU_3O_8$ from 194.5m (peak of 186.7ppm $eU_3O_8$)**<br>**1.09m @ 152ppm $eU_3O_8$ from 197.2m (peak of 291.2ppm $eU_3O_8$)** |
| **TB002** | **0.84m @ 87.3ppm $eU_3O_8$ from 147.75m (peak of 241.3ppm $eU_3O_8$)** |

### 1.4. Lake Blanche (SA) (Cameco Earning up to 60%)

*The Lake Blanche Project is targeting sandstone-hosted uranium located within the Eromanga Basin, 80 to 190km north-east of the highly uraniferous Mt Painter Block, in South Australia. The tenement package comprises seven exploration licences totalling 6,074km². The Lake Blanche Project is in joint venture with and managed by Cameco Australia Pty Ltd, where Cameco has the right to earn up to a 60% interest in the Project.*

A total of 41 mud rotary holes were drilled for 9,057 metres during a 7 week program completed in the quarter. The program was planned to confirm the presence and dimensions of the Namba channel, determine palaeodrainage and modern groundwater flow directions and to test for the redox state in the vicinity of the anomalous holes. The drillholes extended through the entire Eyre Formation into the underlying Cretaceous stratigraphy to ensure that the holes simultaneously provided important information on the geology and redox state of the Eyre Formation.

GAA Wireline were contracted to complete a suite of downhole geophysical logs for each hole which included natural gamma (MST), density, sonic and magnetic susceptibility. Those holes that returned natural gamma results greater than 100ppm were re-logged with a PFN tool.

Significant widespread anomalism was detected in many of the holes (Figure 4), confirming groundwater and uranium migration through sandstone channels within both the Namba and the upper Eyre Formations.

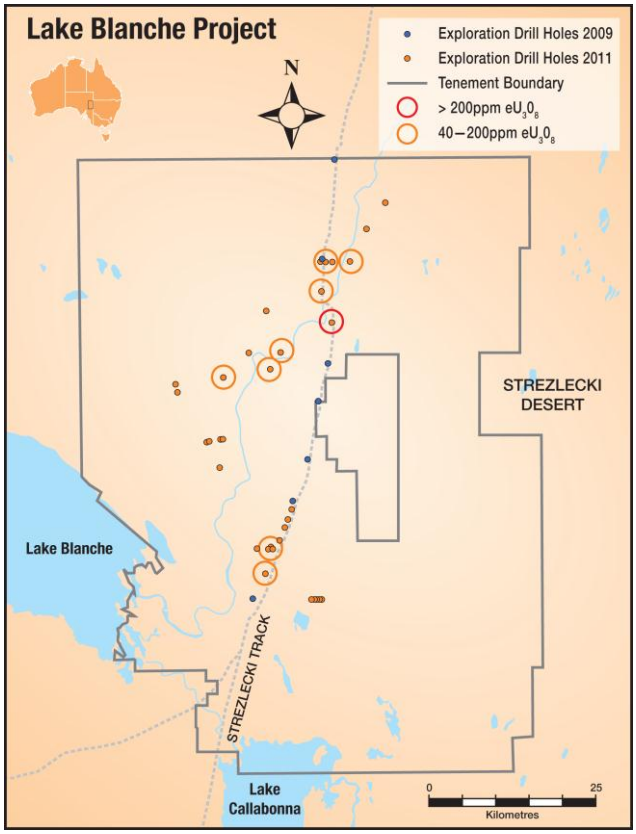


*Figure 4*

The best result of **0.8m @ 200ppm $pU_3O_8$** was returned from drillhole LB015_2011. The uranium was hosted by an altered siltstone at the top of an oxidised channel in the Eyre Formation at a depth of 123 metres. Follow-up holes drilled within the immediate area returned results of a similar tenor within the same unit.

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

*The Headwaters Project, including 2,672km² of granted tenements, is located within the Arnhem Land Plateau along the western margin of the Proterozoic McArthur Basin. 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.*

Following access for the 2011 field season work program being granted, a field reconnaissance program was undertaken to assess the prospectivity of radiometric anomalies, associated with regional structures, identified following a detailed airborne magnetic-radiometric survey flown for the Company during 2010.

The results from this program are currently being analysed and will provide input into the next phase of exploration in the area.

### 1.6. Marla Project (SA)

*The Marla Project* consists of nine granted *exploration licences totalling 6,858 km$^2$. Situated at the northern margin of the Gawler Craton, the Marla Project lies approximately 300 km northwest of the world's largest uranium resource, Olympic Dam. The company considers the Marla Project tenements to be highly prospective for the discovery of economic Iron – Oxide – Copper – Gold ± Uranium (IOCGU) deposits. The sedimentary units overlying the crystalline basement also present outstanding targets for Kazakhstan-style sandstone hosted uranium deposits.*

A $40,000 co-funding grant has been awarded to the company as part of the South Australian Government's PACE 2020 Initiative. The funding will be applied to a detailed ground gravity program in the Marla Project area focussing on the Todmorden Target Area (Figure 5) where reprocessing of the regional magnetic image reveals a series of complex magnetic features coincident with high intensity gravity features and regionally extensive structural corridors at the margin of the Gawler Craton.

Preliminary interpretation of the regional geophysics indicates modest target depths when compared to other prospects in the region. The planned gravity survey will be designed to confirm target locations and depths assisting in the design of future drilling programs.

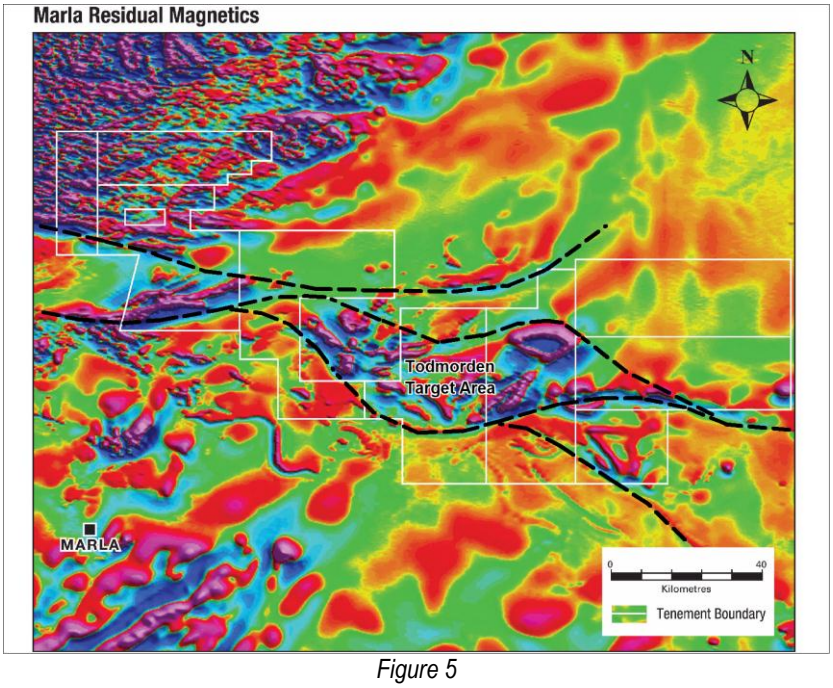


*Figure 5*

### 1.7. Rudall River (WA)

*The Rudall River Project consists of three Exploration Licence Applications covering 162km², the western-most of which adjoins the Cameco/Mitsubishi Kintyre Project (Figure 6).*

The native title negotiation process continued with the Traditional Owners of the Rudall River region. A successful outcome from this process will allow the applications to proceed to grant. The Company believes the region is prospective for additional Kintyre-type mineralisation.

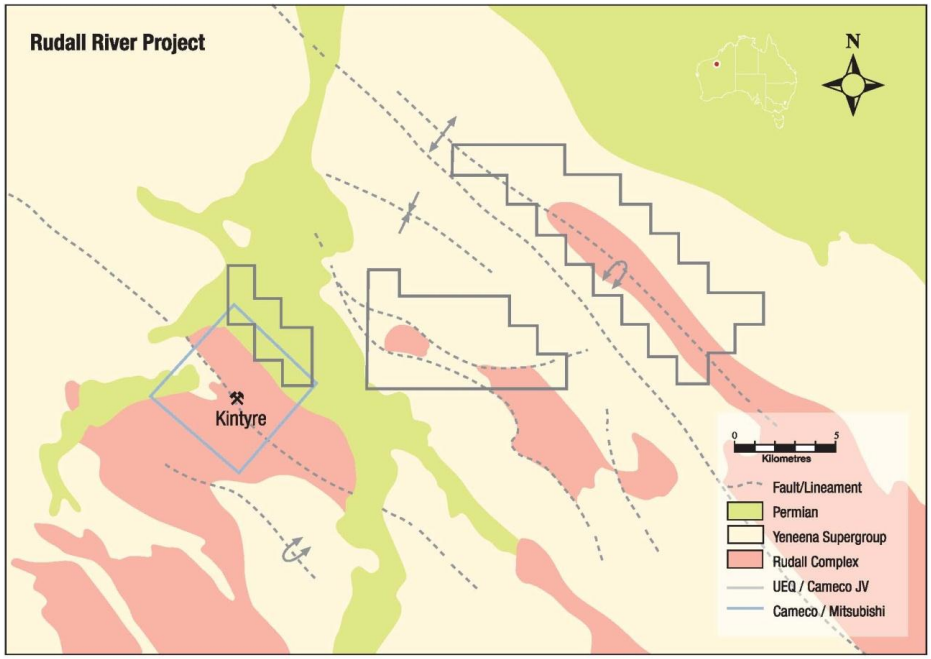


*Figure 6*

## 2. URANIUM EXTRACTION TECHNOLOGY

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

*Cameco Corporation is funding the ongoing development and commercialisation of the PhosEnergy Process through a staged investment of up to US$16.5 million. If Cameco earns its interest it has agreed to provide funding for a minimum of 50% of UEQ's portion of capital expenditure, under terms to be agreed, for the construction of the first commercial plant, repayable out of earnings.*

*UEQ estimates the cash operating cost of uranium production employing the PhosEnergy Process to be* ***US$20 to US$25*** *per pound of $U_3O_8$. This cost estimate is based on a 1 million tonne per annum $P_2O_5$ phosphate production facility operating in the USA and incorporates a significant contingency of 40%.*

### 2.1. Funding

On 31st August 2011 the Company announced that international uranium company **Cameco Corporation** ("Cameco") had consolidated its ownership in the PhosEnergy Process through the purchase of the Founders' 10% shareholding (the Founders' Shares) for US$4.5 million.

The consideration of US$4.5 million represents a substantial 80% premium to the pro-rata earn-in which Cameco and Uranium Equities have completed in the PhosEnergy Process.

Uranium Equities has a six month option to acquire 30% of these Founders' Shares for US$1.35 million payable to Cameco plus reasonable cash holding costs.

In addition to this direct purchase Cameco has invested US$12.5 million through its Strategic Alliance with UEQ, of which ~US$5 million remains on hand for ongoing development. Cameco's total investment in the technology to date is US$17 million.

Cameco has the right to invest a final tranche of US$4 million in the PhosEnergy Process to complete its 70 per cent earn-in to UEQ's ownership in the Process.

### 2.2. Activities – Technical and Business Development

A Demonstration Plant to test the efficacy of all of the key aspects of the PhosEnergy process, within two 40-foot shipping containers (*Figure 7*), was transported to the USA during the quarter and underwent final pre-commissioning. Additional site specific infrastructure has also been constructed in the USA which will enable the Demonstration Plant to commence planned operations at a phosphate fertilizer facility once final regulatory approval and commercial negotiations have been completed.

*Figure 7 – PhosEnergy Process Demonstration Plant*

Further process refinements and technical developments have also been progressed at the Company's Adelaide based laboratories and at the Australian Nuclear Science and Technology Organisation (ANSTO).

## 3.0 CORPORATE

The Group's cash balance at the end of the quarter was $1.7 million - refer Appendix 5B for further information.

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(1) All holes were logged with Auslog Total Gamma 32mm slimline probes through the drill rods and grades calculated using proprietary Cameco gamma logging software. Tool Serial Numbers 092 (Dead Time Correction Factor 2.072500E-05 and Calibration Constant (k) 4.061125E-05), 837 (DT = 1.69079E-05 and k = 9.04529E-06) and 838 (DT = 1.56773E-05 and k = 4.65202E-05); Logging Speeds=4 m/min. Tools were calibrated in the South Australia Glenside test pits in February 2011

(2) All holes were logged by downhole logging consultants Borehole Wireline Pty Ltd using Total Gamma Probe Serial Number GR3355; Dead Time Correction Factor 4.38753E-06 and Calibration Constant (k) 2.35501E-05. Logging Speed 5m/min. Probe calibrated in Adelaide Test Pits AM1, AM2 and AM3 in December 2010.

## 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 and of the Australasian Institute of Mining and Metallurgy Inc. 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 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% $U_3O_8$). 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.