

## Quarterly Report Quarter ended 31 December 2007

### HIGHLIGHTS

#### Exploration

- Uranium anomalies identified from airborne radiometric survey at the 100% owned Naraweena project in the area of, and along trend from the high-grade Ben Lomond uranium-molybdenum deposit in North Queensland.
- A major new Central Australian “roll-front” uranium exploration initiative commenced with applications lodged for exploration title covering 34,971 km<sup>2</sup> in two major blocks – Simpson Project in the NT and Lake Blanche in SA.
- Review of the geology and exploration results at prospect N147 within the West Arnhem Joint Venture has highlighted potential to extend the high-grade uranium mineralisation intersected in the 2007 drilling campaign.

#### Uranium Extraction Technology Development

- The first Phase of a testing program to evaluate a new process to extract uranium from phosphoric acid in superphosphate production was completed with encouraging results. A second round of testwork was in progress at the end of the quarter.

### 1 EXPLORATION ACTIVITIES

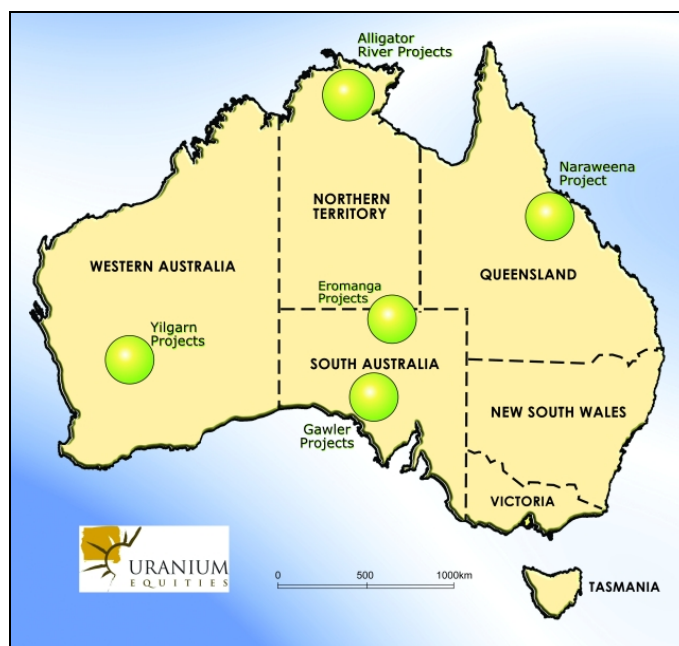


Figure 1: Exploration Project Locations in Australia

## NORTHERN TERRITORY

### WEST ARNHEM JOINT VENTURE PROJECT

(UEQ 40%: Cameco Australia Pty Ltd 60%)

High grade uranium mineralisation was intersected in drilling during the 2007 field season.

#### N147 PROSPECT

The N147 prospect lies 1.5km SSE of the historic Nabarlek Uranium Mine (production of 0.5M tonnes@1.95% U<sub>3</sub>O<sub>8</sub> for 24.4M lb U<sub>3</sub>O<sub>8</sub>).

Drilling results reported in September, 2007 included 22.1m @ 0.36% U<sub>3</sub>O<sub>8</sub> from 114.1m from core in drillhole NARD6017.

Analysis of core from hole NARD6016 returned the following results<sup>1</sup> at a 0.03% U<sub>3</sub>O<sub>8</sub> cut-off:

- 14.0m @ 0.18% U<sub>3</sub>O<sub>8</sub> from 71m
- 2.0m @ 0.15% U<sub>3</sub>O<sub>8</sub> from 102m
- 21.0m @ 0.21% U<sub>3</sub>O<sub>8</sub> from 108m

Follow-up drilling (3 holes) to test the extent of the mineralisation in a NE-SW direction along the strike of the dolerite host was not successful. This led to a re-interpretation of the recent and historical drilling which has highlighted the potential for high-grade mineralisation to extend along the trend of the Nabarlek shear zone. In this direction the mineralisation remains open at depth and along strike.

#### Other Drilling

A program of systematic RAB/Aircore drilling was completed in a number of prospects within the Joint Venture Project area to locate subsurface uranium geochemical anomalies over areas in favourable structural positions. A total of 280 aircore drillholes for 4,272 metres was completed by mid November. The majority of assays are still pending and results will form the basis of follow-up drilling programs in 2008.

## NORTHERN TERRITORY – SOUTH AUSTRALIA

### EROMANGA BASIN PROJECTS

#### SIMPSONS & LAKE BLANCHE PROJECTS

(100% UEQ)

Uranium Equities has secured a significant landholding (27 Exploration Licenses covering 34,971km<sup>2</sup>) in the Eromanga Basin in both the Northern Territory (Simpson Project), and South Australia (Lake Blanche Project).

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<sup>1</sup> ICP-OES analyses at Northern Territory Environmental Laboratory (NTEL) for uranium.

The Eromanga Basin in central Australia is a major sedimentary basin which includes sequences of prospective sedimentary host rocks adjoining the uraniferous basement rocks of the Arunta Block in the NT and the Mt Painter Block in SA. The geological environment is similar to that in the world class Kazakhstan Chu-Saryssu and Syrdarya uranium-bearing basins in Kazakhstan, where a significant portion of the world's production is sourced.

A review of all regional subsurface data (petroleum wells, seismic data and historical exploration drilling) has commenced. The objective is to map target areas of reduced sands and identify key basin structures that may act as fluid pathways for migrating uranium-bearing fluids.

Titles for all Lake Blanche tenements were granted on the 17<sup>th</sup> December 2007. An application has also been made to the Department of Primary Industries and Resources, South Australia (PIRSA), for funding of Lake Blanche drilling costs through its PACE initiative.

## QUEENSLAND

### NARRAWEENA PROJECT

*(100% UEQ)*

A helicopter-borne, high-resolution, magnetic and radiometric geophysical survey (1,971 line km) was completed over the southern portion of the Narraweena project (EPM15101) located 50 km WSW of Townsville, North Queensland. The survey was designed to locate uranium anomalies as well as assist in the geological and structural interpretation of the area.

The survey was extended to cover an area outside the tenement which included the high-grade Ben Lomond uranium-molybdenum deposit.

Four areas of uranium anomalism were identified (Figure 2):

**Area 1:** Lies within the Ben Lomond Mining Lease and is not included within the company's Narraweena tenement. The intensity of the anomalies reflects near-surface uranium mineralisation as well as the effects of past activity (surface drilling and underground exploratory mining).

**Area 2:** Lies 3km South-East of Area 1 in a magnetic domain with similar geological and structural setting to that observed at the Ben Lomond deposit.

**Area 3:** A lower order cluster of radiometric anomalies related to a granite and located 3 km further to the South-East.

**Area 4:** An anomaly 2-3km in diameter, elevated in all three radiogenic elements (U, K, Th) occurs over granite. The core of the anomaly is significantly elevated in uranium compared to the other elements. The intensity of the uranium signature within the core is similar to that at the Ben Lomond ("Area 1") and the "Area 2" anomalies.

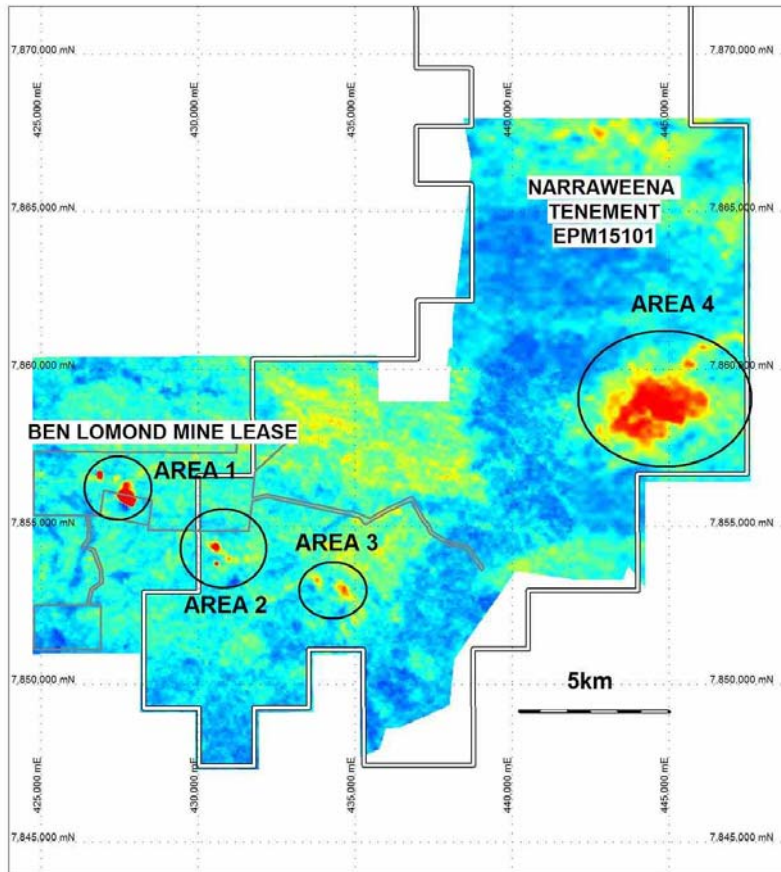


Figure 2: Uranium channel image highlighting identified uranium anomalies

Areas 2 and 4 are considered high priority targets.

Ground reconnaissance of the target areas will be undertaken once northern Queensland rains subside and access is possible.

## WESTERN AUSTRALIA

### MOORARIE PROJECT

*(UEQ earning 60% under the Moorarie Joint Venture Agreement with Independence Group Ltd)*

Assessment of the recently acquired, high-resolution, aeromagnetic and radiometric data continued.

### LAKE BARLEE PROJECT

*(UEQ 100%)*

An aircore drilling and wireline logging program (124 holes for 1,739m) tested the margins of a calcrete-hosted uranium target, historically known as the Deborah Prospect, within the Lake Barlee tenement.

Drilling by Uranium Equities near the lake margin show several holes intersecting in excess of 0.01%  $eU_3O_8$  (Table 1). Geochemical assay results are pending.

HOLE ID	DEPTH FROM (m)	THICKNESS (m)	eU3O8 (%)
L005	2.71	0.74	0.0124
L006	1.46	1.54	0.0222
L017	0.88	0.52	0.0135
L018	0.28	1.34	0.0141
L021	0.76	2.16	0.0252
L023	0.82	2.78	0.0256
L024	0.7	2.02	0.0231
L025	0.59	2.2	0.0148
L026	1.21	1.56	0.0136
L026	4.39	1.92	0.0347
L035	1.23	1.04	0.0252
L035	3.57	0.58	0.0284
L043	2.89	1.3	0.0163
L085	2.37	0.82	0.0164
L086	1.2	0.92	0.0146

**Table 1: Uranium grades (% eU<sub>3</sub>O<sub>8</sub>) estimated from gamma ray logs<sup>2</sup>, Deborah Prospect, 2007 drilling.**

These results are encouraging given there are several other radiometric anomalies requiring testing within the lake itself. Historical drilling has reported grades in excess of 1,000ppm U<sub>3</sub>O<sub>8</sub>.

## **SOUTH AUSTRALIA**

### **WATSON PROJECT**

*(UEQ earning 51% interest in uranium from Intermet Resources Ltd)*

Processing and interpretation of 2,162 line km of airborne EM data over the Watson Project has identified a new Tertiary palaeochannel network beneath Nullabor Limestone. The system has a strike in excess of 40km (Figure 3) and this is present in all tenements.

The palaeochannel is largely unexplored by drilling and has many features in common with other uraniumiferous palaeochannels in South Australia, such as uraniumiferous source rocks, oxidized and reduced sediments necessary for the formation of uranium roll-fronts and the presence of anomalous uranium in palaeochannel waters.

A drilling program is scheduled for early 2008 pending Native Title heritage clearances. An application has also been made to the Department of Primary Industries and Resources, South Australia (PIRSA), for a contribution to Watson drilling costs through its PACE initiative.

<sup>2</sup> *Equivalent grades (eU<sub>3</sub>O<sub>8</sub>) from Uranium Equities Geovista 38mm gamma tool, in open hole, calibrated at Adelaide Model Test Pits, Dead Time 2.46874E-05, k factor 4.40078E-06, composite minimum of 0.5m, internal dilution of 0.5m, assumed disequilibrium d=1 and 0.01% eU<sub>3</sub>O<sub>8</sub> cutoff.*

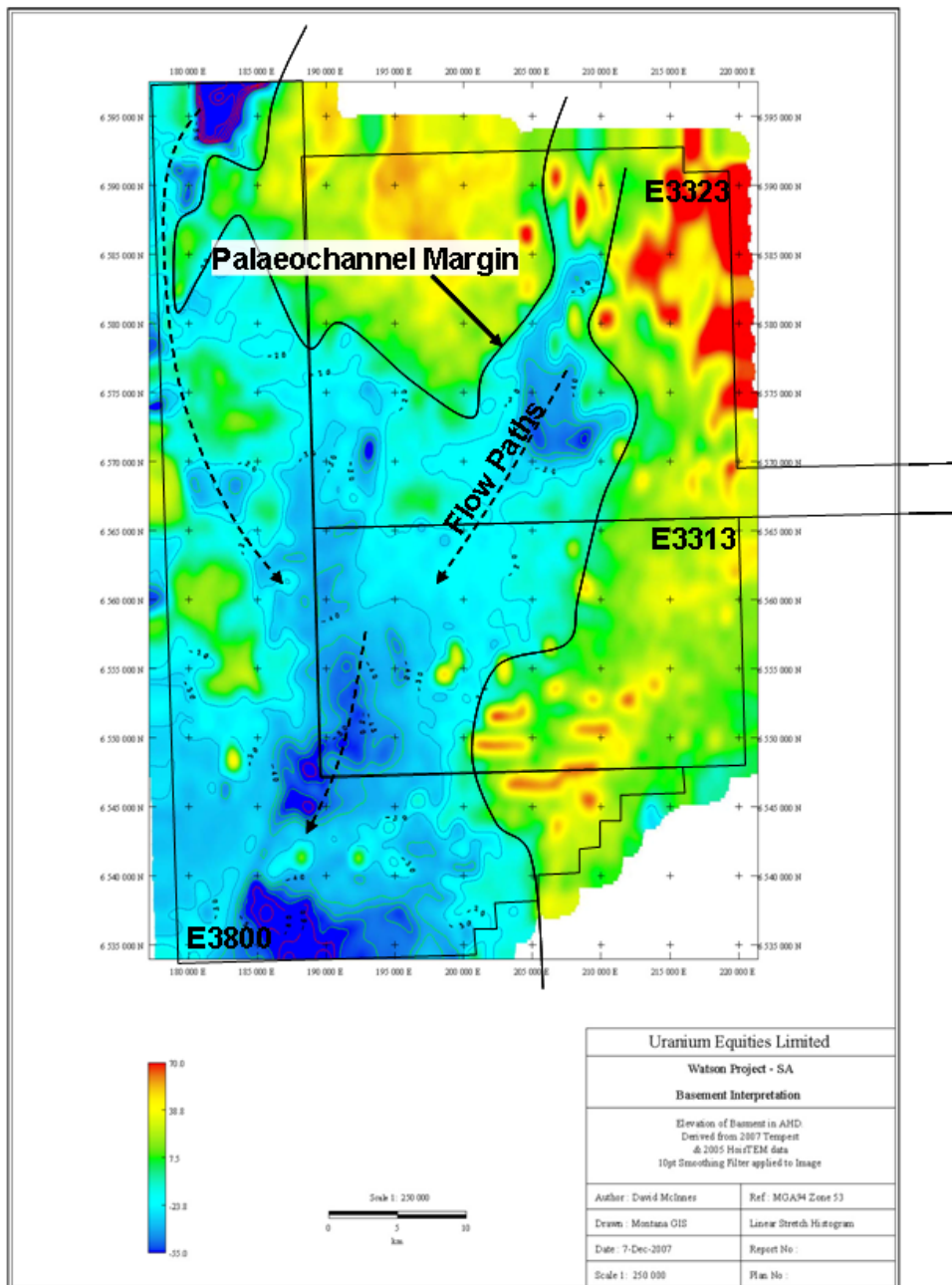


Figure 3: Watson palaeochannel showing depth to basement variances within the channel as calculated from Airborne EM data.

## 2 URANIUM EXTRACTION TECHNOLOGY DEVELOPMENT

### ABOUT URTEK

Urtek LLC, in which Uranium Equities Limited holds a 16.66% equity interest with the right to increase to 90% through funding of up to US\$15.0 million, is party to a Technology Development Agreement (TDA) with a significant phosphoric acid producer to jointly develop process technology to extract uranium from wet phosphoric acid streams from phosphate rock.



## **COMPLETION OF PHASE 1**

Phase 1 of the TDA comprised the evaluation of available technologies via significant lab scale testing (US\$500,000 spent) to develop a prime process model to be carried into the next phase of the development. As of November 1, 2007 it has been agreed by both parties that the Phase 1 work has been successfully completed, with both parties encouraged by the results thus far.

## **PHASE 1 B – ADDITIONAL WORK**

Before committing to the next work program in Phase 2 the parties agreed to amend the TDA to include an intermediate phase of development denoted as Phase 1 b. The focus of this intermediate phase was to further define areas of the process which have the potential to improve the economics and operability of the process as a whole. These areas required continuous bench scale piloting late in 2007, by UEL personnel, on live phosphoric acid liquor.

The Phase 1 b work has now been successfully completed.

The Phase 1 b work was funded 50:50 between the two parties and cost approximately US\$300,000.

The parties are now settling the scope and scale of the Phase 2 piloting stage.

## **PHASE 2 - PILOTING**

The main focus of the Phase 2 pilot program will be to further prove up the unit operations and technologies under development and integrate each of these steps.

Worldwide, phosphate deposits are known to contain commercially extractable levels of  $U_3O_8$ . Historically, production of up to 4.5 million pounds of  $U_3O_8$  per annum has been derived from phosphoric acid. Past uranium production, as a by-product of phosphoric acid, substantially ceased globally in the late 1990's as the price of uranium declined below US\$20 per pound. It is believed that there is potential to produce between 10 – 15 million pounds of  $U_3O_8$  per annum worldwide.

## **MULGA ROCK COURT CASE**

The Company's appeal from the earlier decision of the Supreme Court dismissing its claim in relation to the Mulga Rock mining project was heard by the Court of Appeal of the Supreme Court on 18 and 19 October, 2007.

The Court of Appeal has reserved its decision.

## **ANGELA – PAMELA URANIUM DEPOSITS**

Additional data was made available by the NT Department of Primary Industries, Fisheries and Mines to Uranium Equities and 36 other applicants. The company was invited to re-lodge its application for an EL covering the area reserved from occupation and covering these known uranium resources. A revised application was prepared during the quarter and lodged prior to the closing date, 19<sup>th</sup> October 2007.

## BUSINESS DEVELOPMENT

The company continued to evaluate business development opportunities in the uranium sector in various parts of Australia and overseas.



MARK CHALMERS  
Managing Director  
Mobile: 0417 861 482

*The information in this report that relates to Exploration Results is based upon information compiled by or approved by Mr David A. Brunt, a full-time employee of Uranium Equities Limited, who is a Fellow of the Australasian Institute of Mining and Metallurgy Inc. Mr. Brunt 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, Minerals Resources and Ore Reserves, and consents to the release of information in the form and context in which it appears here.*