

## **MEDIA RELEASE**

Monday 19 September 2011

Australian Securities Exchange  
Company Announcements Platform  
ASX Code: USA

# **Robust Financial Models for the proposed Blackbush Uranium Mine Development**

The first financial models for the development of the proposed Blackbush uranium mine in South Australia have been released. The figures indicate very favourable capital and operating costs and high potential rates of return on the investment over a range of scenarios.

The modelling was released today by ASX-listed uranium developer, UraniumSA Limited (ASX: USA) for the Blackbush deposit in the Company's wholly-owned Samphire project (formerly Mullaquana), 20 kilometres south of Whyalla on Eyre Peninsula in South Australia.

The mid-range case of a 600 tonnes per annum (tpa) in-situ recovery (ISR) uranium mining operation would require AU\$75.8M of capital and have an operating cost of AU\$25.90/lb of product.

In this mid-range case, capital would be paid back within 3 ½ years and the investment would generate an internal rate of return of 39% at a price of US\$60/lb. Uranium is presently trading at ~US\$52/lb in the spot market and at ~US\$64/lb for long term contract delivery.

The financial models examined a range of cases, starting at 400tpa and scaling up through 600tpa to 800tpa. Technical work on the Blackbush deposit is still in progress and the optimal size and operating parameters have not yet been determined, nor have the external inputs been optimised.

The Samphire project (formerly called Mullaquana) has an existing total resource of 19,000 tonnes of U<sub>3</sub>O<sub>8</sub> (~42 million pounds) in the Blackbush and Plumbush deposits. UraniumSA, through its subsidiary Samphire Uranium Pty Ltd, has applied for a Retention Lease to conduct an ISR field trial at the Blackbush deposit early in 2012 and subject to results of this work, has an objective of first production in 2013.

UraniumSA Managing Director, Mr Russel Bluck:

*“These initial financial models are an excellent indication of the robustness of the discovery which we made at Samphire, and of the potential for the Blackbush deposit to develop as its first profitable mining operation. Over the course of this year we have successfully:*

- *Clearly established the significance of Samphire as a new uranium district with ~42 million pounds of U<sub>3</sub>O<sub>8</sub> mineralisation drilled out.*
- *Completed a full cycle proof-of-concept for the extraction of uranium in saline systems with the completion of work confirming acid extraction of uranium in sea water, loading uranium from sea water lixiviant to resins, stripping uranium from the resins, and precipitating a high grade uranium yellowcake product.*
- *Progressed through a rigorous and effective social, environmental, technical and regulatory process to lodge an application for a Retention Lease.*

*This flow of project gains has now been consolidated by the results of this first financial modelling. Together, these four headline events significantly lower the risk profile of Blackbush, and it is now firmly in the development pipeline towards achieving near-term production of yellowcake.”*

Details of the financial models are attached.

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## FINANCIAL MODELS

### Blackbush deposit, Eyre Peninsula, South Australia

UraniumSA is pleased to provide the results of initial financial modelling for an in-situ recovery (ISR) uranium mining operation based on the Blackbush deposit within its wholly owned Samphire uranium project (formerly Mullaquana) located south of Whyalla in South Australia.

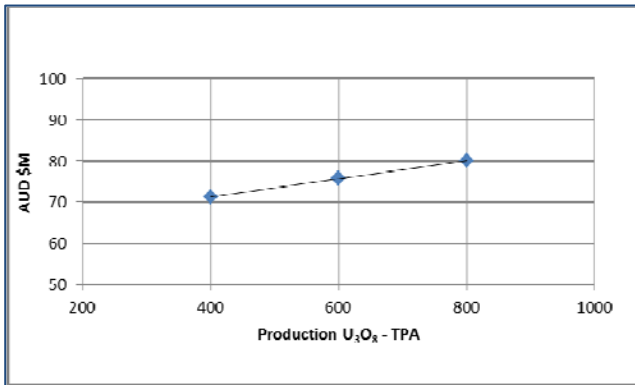
The indicative financial modelling shows that an ISR operation at Blackbush has the potential to deliver robust returns on invested capital. The highlights of the modelling are:

<b>Production model</b>	<b>400tpa</b> (tonnes per annum)	<b>600tpa</b> (tonnes per annum)	<b>800tpa</b> (tonnes per annum)
Project Capital AU\$	\$ 71.4M	\$ 75.8M	\$ 80.1M
Operating Cost AU\$/lb U <sub>3</sub> O <sub>8</sub>	\$ 30.30	\$ 25.90	\$ 23.90
Payback period, years	4.9	3.5	2.9
Net Present Value @ 8% discount rate	\$52.9M	\$134.7M	\$212.6M
Internal Rate of Return	22%	39%	52%

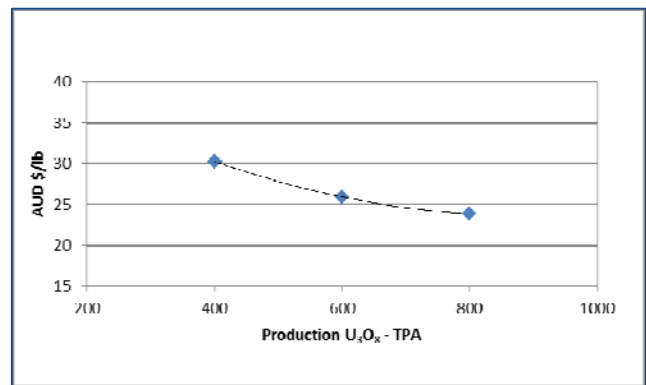
**NOTE:** The figures are estimates based on review of available data carried out in-house by UraniumSA. These financial models are a management tool and are not a statement of financial viability.

## Major Components

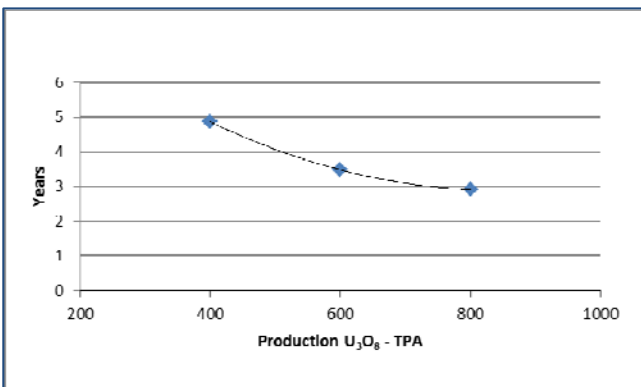
### Project Capital



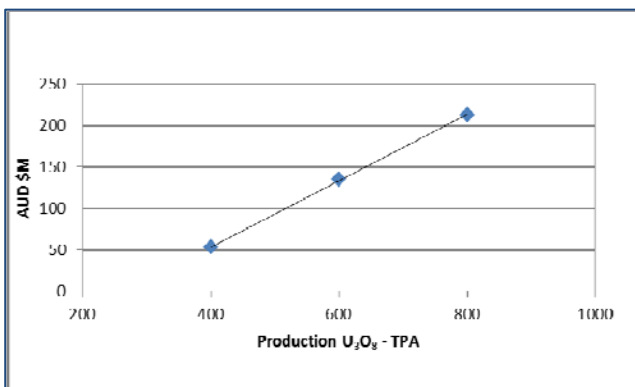
### Operating Cost



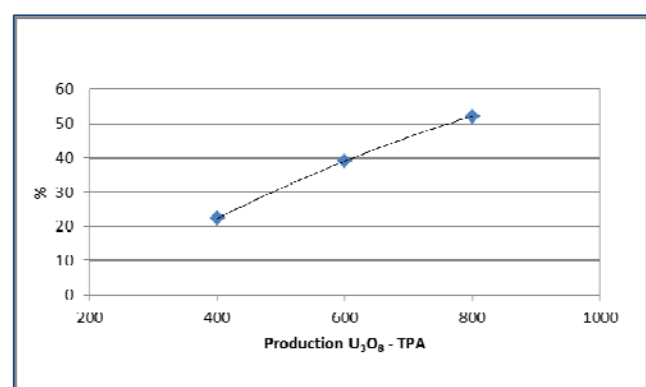
### Payback Period



### Net Present Value



### Internal Rate of Return



## Assumptions

The major underlying assumptions used in the development of the financial models are:

1. A contracted delivery price of US\$60 per pound. In mid-September 2011 the spot price was quoted at US\$52 and the contract price at US\$64.
2. The rate of exchange is assumed at parity (AU\$1 = US\$1). Calculations, tables and graphs show AU\$ numbers.
3. The model assumes a 10 year mine life. Initial assessment of the Blackbush deposit indicates that this is potentially feasible.
4. Project Capital comprises the total of capital expenditure for the construction of a plant with 1,000tpa capacity and sufficient working capital for initial production.
5. Increases in production above 400tpa will incur additional wellfield development costs and marginal increases in other inputs.
6. Operating cost per pound excludes royalties, sales commissions and mine closure cost.
7. Grade within operating wellfields is assumed at 0.08% U<sub>3</sub>O<sub>8</sub> across 3 roll-front horizons per drill hole. The grade of targeted intervals within wellfields is increasing above deposit average grade as data intensity improves, and estimation methods move from reliance on natural gamma to include PFN and assay information.
8. A wellfield recovery of 70% based on laboratory work in progress at the Australian Nuclear Science and Technology Organisation (ANSTO) laboratories in Sydney, and a generalisation of industry experience in South Australia.
9. UraniumSA has successfully identified and is test proving a suite of resins able to extract uranium from saline solutions. This work is being conducted at the ANSTO laboratories. The models assume the use of these resins at indicated commercial costs and tested performance.
10. The calculation of Net Present Value (NPV) uses a discount rate of 8% on the assumption of a 10 year Government Bond Rate of 5% plus a risk premium 3%.
11. Taxation is assumed at 30%.

## Variables Considered

In developing the model, some 220 variables have been interrogated to generate 102 overriding assumption domains which have driven the calculations. Variables which are deposit-specific have been derived from work and results from the Blackbush deposit. Other variables are those generally applying in the ISR industry in South Australia. Third parties have provided indicative estimates for the supply of goods and services.

### Financial variables

NPV Discount Rate, Internal Rate of Return (IRR), Payback Period, Exchange Rate, Sale Contracts, Sales Price (US\$/lb), Taxation, Cash Flow, Working Capital, Consumer Price

Index (CPI), Debt Interest Expense/Capital Repayment, Production Start Date, Production Years, Life of Mine, Depreciation/ Amortisation.

**Wellfield Operations**

Ore horizons, Grade (ppm), Wellfield Recovery (%), Pattern Size, Pattern Spacing, Density, Porosity, Pore Volume Flushes, Reagents – Injection, Wellfield Development, Drilling Services, Logging Services, Well house, Trunk line to Plant, Pumps, Delineation Drilling, Production Wells - Primary Drilling, Production Wells - Recomplete Drilling, Injection & Extraction, Wellhead infrastructure, Electrical and Plumbing.

**Treatment Plant**

Treatment Plant and Process, Reagents – Elution, Reagents – Precipitation, Resin – Initial Loading and Replacement, Calcium Removal.

**Shipping & Transport**

Pounds Per Drum, Drums Per Container, Shipping, Road, Rail, Weighing & Sampling.

**Staffing**

Start and Termination dates, Employees – Numbers and Cost, On-costs, Shifts, Contract Staff.

**Maintenance**

Plant, Wellfield, Camp, Roads, General.

**Vehicles**

Number and Type, Operating Costs, Depreciation/life.

**Power**

Power Infrastructure and Pricing, Back-up Supply, Wellfield, Plant, Camp.

**Water**

Water Infrastructure and Pricing, Wellfield, Plant, Camp, Other, Other Water Supply.

**Royalties and Sales Commissions**

State Government, Native Title, Sales Commissions.

**Licenses and Fees**

South Australia Government – Mining Lease Rental, Australian Safeguards and Non-Proliferation Office (ASNO) – Fee, Environmental Protection Authority- License to Mine and Mill, Export License.

**Audit and Verification**

The financial models have been constructed in-house by UraniumSA. An extensive internal due diligence process has tested the integrity of the assumptions used and systematically examined the function of the mathematical model.

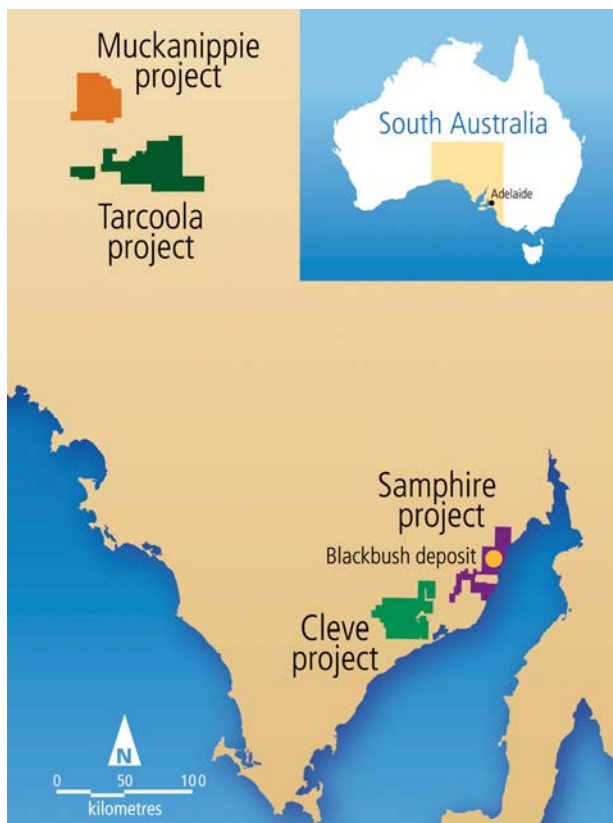
Several external parties informally reviewed sections of the model during its development.

## **Statements of Competence**

The Financial Models reported herein are based on information compiled by Mr Damien Connor, Bachelor of Commerce, Member of the Institute of Chartered Accountants Australia, and Chief Financial Officer, UraniumSA Limited. Mr Connor has sufficient experience relevant to the financial modelling work which is being reported to qualify as competent to undertake the activity which is being reported, and specifically has several years of direct experience in the financial management and reporting of in-situ uranium mining operations in South Australia. Mr Connor consents to the inclusion in the report of matters based on his information in the form and context in which it appears.

The exploration results and mineral resources reported herein, insofar as they relate to mineralisation, are based on information compiled by Mr Russel Bluck, Managing Director, UraniumSA Limited who is a Member of the Australian Institute of Geoscientists and has sufficient experience relevant to the style of mineralisation and type of deposits being considered, and to the activity which is reported to qualify as a Competent Person as defined by the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the JORC Code, 2004 Edition). Mr Bluck consents to the inclusion in the report of matters based on his information in the form and context in which it appears.

## About UraniumSA Limited



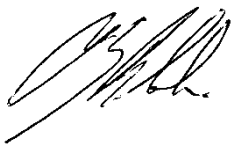
UraniumSA is an Adelaide based uranium only explorer specialising in sediment hosted styles of uranium mineralisation within a substantial portfolio of properties in South Australia's Gawler Craton.

The Company has discovered sediment hosted uranium mineralisation within Exploration Licence 3652, Samphire (previously Mullaquana), which is located 20km south of the industrial city of Whyalla on the eastern Eyre Peninsula in South Australia. The exploration Licence is owned and operated by Samphire Uranium Pty Ltd, a wholly owned subsidiary of UraniumSA Limited.

The inventory of sediment-hosted uranium mineralisation in the Blackbush and Plumbush deposits within the Samphire project (previously the Mullaquana project) is some 19,000 tonnes of  $U_3O_8$  (equivalent to approximately 42 million pounds).

Application has been made for a Retention Lease for an in-situ recovery field trial at the Blackbush deposit and work is being scheduled to commence on the ground in early 2012. Subject to the results of the field trial and further tenure application, first production is anticipated for 2013.

Through its own tenure and by Joint Venture the Company has exploration control over what it considers the most prospective portions of the Pirie Basin.



Russel Bluck

Managing Director  
UraniumSA Limited