Samphire Uranium Project

9th South Australian Exploration & Mining Conference

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Russel Bluck Managing Director
Disclaimer

This presentation has been prepared by UraniumSA Limited in summary form and does not purport to be complete. The Company therefore gives no warranties as to the accuracy, reliability or completeness of the information (except to the extent liability under statute cannot be excluded).

The interpretations and conclusions presented herein are based on technical information and geological theory available to the Company and on materials provided to the market in releases to the Australian Securities Exchange which are available from the web sites of UraniumSA and Australian Securities Exchange. It is the nature of all scientific interpretations and conclusions that they are founded on an assessment of probabilities and there is no claim of complete certainty made and assumptions concerning the possible progress of exploration and development are conjectural.

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

The results mentioned above or given elsewhere in this presentation are preliminary and it should not be assumed that further exploration will result in an increase in Mineral Resources or the future development of a mining operation.

The technical terms and usage in this presentation are the same as those of the UraniumSA Limited report to the ASX for the September 2012 quarter and the reader is referred to that document which is available from either the UraniumSA Limited website at uraniumsa.com.au or from the ASX website.
Corporate Profile

- **Issued Securities**
  - 147.27m ordinary shares
  - 8.8m unlisted options
  - 5.5m directors options

- **Market Cap**
  - $10.0 (A$m @ $0.068)

- **2012 trading**
  - $0.15 high
  - $0.055 low
  - 3.4m avg vol per month

- **1 year price range**
  - $0.165 high
  - $0.055 low

- **Shareholder statistics**
  - total 1994
  - top 20 hold 44.97 %
  - top 50 hold 57.23 %

- **Top 10 shareholders as at 16 May**

<table>
<thead>
<tr>
<th>Shares</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>J P MORGAN NOMINEES AUS</td>
<td>17,772,902</td>
</tr>
<tr>
<td>HSBC CUSTODY NOMINEES</td>
<td>6,089,674</td>
</tr>
<tr>
<td>ESCOR INVESTMENTS PTY LTD</td>
<td>5,000,000</td>
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<tr>
<td>NATIONAL NOMINEES LIMITED</td>
<td>4,804,362</td>
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<tr>
<td>BLUCK HOLDINGS PTY LTD</td>
<td>4,634,233</td>
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<tr>
<td>HILTABA GOLD PTY LTD</td>
<td>3,888,238</td>
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<tr>
<td>MERRIWEEN PTY LTD</td>
<td>2,555,000</td>
</tr>
<tr>
<td>GREGORACH Pty LTD</td>
<td>2,509,819</td>
</tr>
<tr>
<td>BAYSTREET PTY LTD</td>
<td>2,450,174</td>
</tr>
<tr>
<td>MUTUAL TRUST PTY LTD</td>
<td>2,310,500</td>
</tr>
</tbody>
</table>

- **Shareholder categories as at 16 May 12**

<table>
<thead>
<tr>
<th>Shares</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aust Institutions</td>
<td>19,889,673</td>
</tr>
<tr>
<td>O/Seas Institutions</td>
<td>9,095,290</td>
</tr>
<tr>
<td>Corporates</td>
<td>8,288,238</td>
</tr>
<tr>
<td>Directors</td>
<td>7,455,608</td>
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<tr>
<td>Individual Aus (&gt;0.5m)</td>
<td>25,592,699</td>
</tr>
<tr>
<td>Individual O/Seas</td>
<td>3,617,620</td>
</tr>
<tr>
<td>Others</td>
<td>73,335,628</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>147,274,756</strong></td>
</tr>
</tbody>
</table>
Location
Only uranium. Only South Australia

South Australia
high uranium endowment

SAMPHIRE PROJECT
Blackbush and Plumbush deposits
**Location**

Samphire project

- South Australia
  - stable regulatory regime
- City of Whyalla
  - mining heritage and industry
- Infrastructure
  - industrial water, power, roads
- Perpetual Lease
  - land title extinguishes Native Title while Cultural Heritage continues
- Samphire Uranium
  - own the land at Blackbush
uranium spot prices are testing cyclic lows
but have steadied at a $40 resistance level
and supply-demand shows good upside post 2013

Why will prices rise?
Because the supply-demand pinch is from present capacity not future build. Because climate change is clearly manifest and nuclear is the only generation method that can deliver reductions

The must haves to ride out commodity price cycles are

- grade
- mining flexibility – the ability to benefit from change and innovation
Growing tonnes – our traditional focus

Grade v Tonnes Profile - International Uranium Projects

- Operating Mines
- Pre-feasibility and Feasibility Projects
- Olympic Dam, Australia
- Cigar Lake & McArthur River, Canada
- Samphire Uranium Project

Samphire traditional resource growth
12Mt to 63.3Mt at 290ppm

Information from UxC for 55 projects: the trend lines are interpretations
Growing Grade – our focus since mid-2011

- there are more tonnes to be discovered – but at present grade is king

Information from UxC for 55 projects: the trend lines are interpretations
Grade – continual improvement at 100ppm cutoff

- **2007 December**
  - Discovery

- **2009 May**
  - **Blackbush** Inferred Resource
    - 12Mt at **200ppm** sediment hosted avg eU₃O₈

- **2011 April**
  - Samphire project total Inferred Resource
    - 67.2Mt at **284ppm** sediment hosted avg eU₃O₈
    - **Blackbush 280ppm**

- **2012 July**
  - Samphire project total Inferred Resource
    - 63.3Mt at **290ppm** whole resource avg eU₃O₈
    - **Blackbush 289ppm** whole resource avg eU₃O₈
    - **Blackbush 322ppm** sediment resource avg eU₃O₈

and even better bulk grades at higher cutoffs
Blackbush deposit – data density

all drill holes (n=447)
20m x 20m x 2m blocks (n=55,850)
100ppm cut-off
the grey surface is the basal Eocene unconformity
Blackbush deposit – tonnes/grade curve

The original polygonal method and current block model give similar results at the 100ppm cut-off giving confidence in the geological and other assumptions which have been used.
Blackbush deposit – the next steps

- The Inferred Resources is estimated at very high levels of confidence
- Once a mining method is selected a significant portion can be migrated to an Indicated Resource classification
- Geotechnical parameters – grade, density, volume - are adequately known and future information needs well understood
- Metallurgical parameters – mineralogy, dissolution, recovery - are adequately known, future information needs are well understood and process development has commenced
- High potential for the discovery of more high grade mineralisation (>1,000ppm)
Blackbush deposit – extensive mineralisation

blue shells at a **100ppm** cutoff - bulk average grade **235ppm** $\text{U}_3\text{O}_8$

grey surface is the basal Eocene unconformity
Blackbush deposit – robust grades

green shells at a **300ppm** cutoff - bulk average grade **626ppm** $\text{U}_3\text{O}_8$

grey surface is the basal Eocene unconformity

**plunge +30, azimuth 036, scale as shown**
Blackbush deposit – multiple styles

- granite hosted mineralisation
- sediment hosted mineralisation

- green shells at a 300ppm cutoff
- grey surface is the basal Eocene unconformity

plunge +15 degrees
azimuth 036, scale as shown

plunge 00 degrees
azimuth 036, scale as shown
Blackbush deposit – and high grades

red shells at a 1,000 ppm cutoff - bulk average grade 1,800 ppm U₃O₈
grey surface is the basal Eocene unconformity
Blackbush deposit – and lots of opportunity
Section ~63243500N, a single continuous section, view north, slice width ~50m, vertical exaggeration 5:1

**western** zone mineralisation
- basal Eocene unconformity controls distribution and grade
- grade extends up-structure into sediments
- grade extends down structure into the granite

**eastern** zone mineralisation
- mineralisation in conventional sediment settings
- basement structure influences grade distribution
Samphire Batholith – uranium mineralisation

Uranium Mineralisation (yellow)
- In the granite
- At the unconformity
- In conventional roll-fronts

For personal use only
Metallurgy – getting product into drums

- Completed proof-of-concept for extraction from saline waters
- High grade low impurity uranium yellowcake product assayed at 84% $\text{U}_3\text{O}_8$ (commercial specification 65%)
- Continuing work with three different resins each of which has a different capex and opex outcome which gives us high levels of development flexibility
- MOU with Clean-Teq and working on design parameters for a pilot plant
- Ongoing test work, continuing innovation and new process options
Outlook for 2013

- The uranium spot price will languish through the year before climbing sharply as the known supply-demand constraints become inescapable.
- The uranium supply-demand pinch is not dependant on future build.
- Uranium mineralisation is tied to the Samphire Granite.
- Blackbush will continue to build its inventory of high grade mineralisation.
- Plumbush will deliver more mineralised tonnes to the project.
- As we understand the geology/mineralisation of the Samphire Granite I am confident that it will deliver good quality hard-rock discoveries.

Blackbush has the tonnes/grade to be a sound development proposition under nearly any price scenario.

The Samphire project has the uranium endowment, geological attributes and discovery track record of a significant uranium district.