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BOARD AND TECHNICAL CHANGES

UraniumSA advises the following changes to its Board and to the technical direction of the Samphire uranium project.

Board

At a time of significant opportunity in the life of the Company changes to the Board have been undertaken to ensure that it has an optimal structure and range of skill and resources to manage and grow shareholder value.

Alice McCleary, has been appointed Chairman of Uranium SA Limited. Alice is an existing Director and one of the founders of the Company. She is closely involved with the operation of the Company and is presently Chairman of the UraniumSA operating subsidiaries Samphire Uranium Pty Ltd (owner of the Samphire uranium project), Fatjack Pty Ltd (owner of all the exploration assets) and Angus Resources Pty Ltd (our field operations company).

David Paterson has been appointed as a non-executive Director of UraniumSA Limited. David has extensive experience in geology, stockbroking and mining investment.

David will bring expertise in the overview, development and delivery of corporate, financial and technical programs. His experience with the development of mining operations in the South Australian jurisdiction and Australian and International project financing is particularly valuable at this time in the development of the Company.

The remainder of the Board comprises non-executive director Tom Phillips, and Managing Director Russel Bluck.

Samphire uranium project

Early in 2011 the Company announced the discovery of uranium in granite bedrock below the resource of sediment hosted mineralisation at the Blackbush deposit (ASX 25th May 2011). The granite mineralisation occurs immediately below and in contact with the sediment hosted mineralisation that comprises the existing Blackbush deposit Inferred Resources of ~28M lb U_3O_8. It has been uncertain whether the granite hosted mineralisation was simply a re-mobilisation from the overlying sedimentary material at the weathering interface with basement and therefore of limited importance, or whether it was a primary component of the granite basement assemblage and therefore a significant exploration/development opportunity.

Last Friday (ASX 2nd December 2011) the Company advised work which indicates that the granite hosted uranium mineralisation is associated with, or is a part of, a basement granite complex. A concurrent interpretation of the bottom-hole materials in holes drilled to define the overlying sediment hosted mineralisation shows that the granite hosted mineralisation covers an extensive area and has significant tonnage and grade potential. Additional information is provided in this release.

New directions

As a result of the recognition of the exploration significance and of the potential economic importance of uranium mineralisation in granite bedrock below the known Blackbush deposit, the Company is significantly changing its exploration and evaluation strategy.

Uranium mineralisation in granite basement underlying the known sediment-hosted mineralisation has the potential to entirely change the fundamental considerations for the evaluation of the development options for Blackbush deposit.

A targeted exploration program will commence to determine the extent, tonnes and grade of the granite hosted mineralisation.

Work on the technical evaluation of in-situ recovery as a mining method will continue; though the present focus on advancing to commencement of an in-situ recovery mining operation by 2012-2013 has been terminated. The circulation trial at Blackbush has recently been completed at the results are being complied and will be released shortly.

A comprehensive re-evaluation of all the data acquired to date will be undertaken to completely characterise all of the mineralisation within the resource estimates, scope all of the geological metallurgical and mining alternatives, and identify and rank the optimal mining method for all of the sediment hosted and granite hosted materials present.

To provide the support required to build and deliver a sustainable strategy to achieve the newly evolving opportunities the Board has expanded and re-structured itself as discussed on the previous page.

A technical over view of the project, of the potential of the granite hosted mineralisation is provided in the following pages.

The Samphire uranium project

The intention in this section is to summarise for the benefit of shareholders;

1. The status of the evaluation of the known sediment hosted uranium mineralisation. This has been extensively reported in previous ASX releases.

2. The information which is available on the granite-hosted mineralisation. This is the first discussion of this style of mineralisation provided to shareholders. The subject matter is technical and the text is unavoidably dense.

This information presented here is complementary to that contained in the ASX release of Friday 2nd December 2011 which is a static Adobe version of a PowerPoint presentation given to the 8th SA Explorers Conference in Adelaide. A location map of the area of the project and an outline of the Company is provided on the signature page at the end of this release.

Tenure

The Samphire uranium project comprises Exploration Licence 3652 owned by Samphire Uranium Pty Ltd and Joint Ventures over adjacent exploration titles with Stellar Resources Limited (ASX SRZ, USA earning 73%) and Adept Solutions Limited (ASX AAO, USA earning 70%).

The Company has applied for various underlying mining titles to support its progression towards the commencement of a field trail of the in-situ recovery mining process. It is anticipated that a Retention License for this purpose will be granted shortly.

Existing resources

The Company discovered uranium at the Samphire project in Eocene aged sediments in 2007 and by 2010 had identified and drilled out the Blackbush deposit and part of the Plumbush deposit (ASX 14th April 2011). This growth of our inventory of mineralisation has been an outstanding achievement, firmly establishing the significance of the discovery and providing the critical mass required to confidently move to the project forward.

	Million tonnes mineralisation	Average grade ppm eU_3O_8	Estimated contained tonnes U_3O_8	Estimated contained M lb U_3O_8
Blackbush Deposit	45.5	280	12,700	28
Plumbush Deposit	21.8	292	6,300	14
Aggregate	**67.2**	**284**	**19,000**	**42**

These are Inferred Resource estimates. The cut-off grade applied is 100 ppm eU_3O_8 over a minimum intercept thickness 0.40m. Numeric discrepancies arise from rounding of underlying figures. Refer to previous ASX announcements for schedules of assumptions and methodologies.

These resources are contained within Eocene aged sediments which unconformably overlie a weathering surface which, in the area of the resources, is predominantly logged in drill cuttings as clay altered granite.

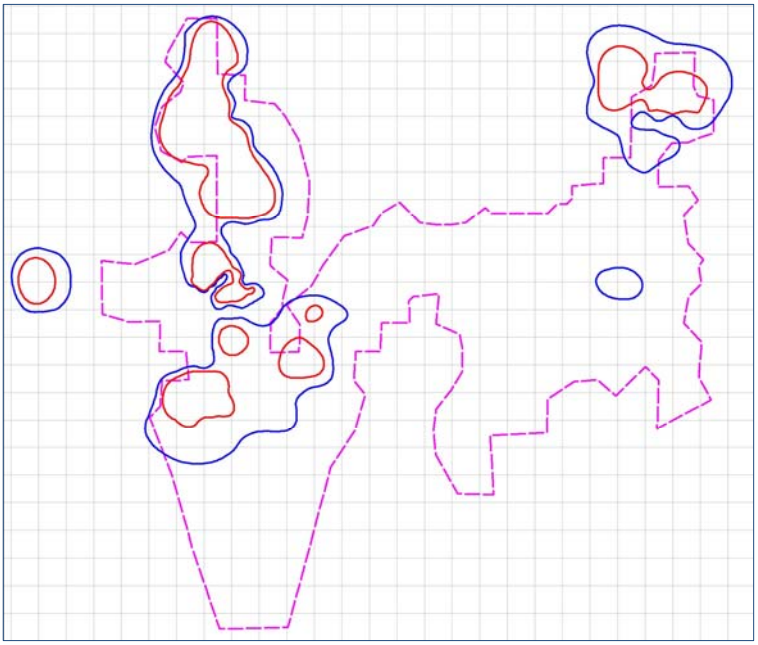
Metallurgy

The formation waters in the Eocene sediments which contain the above resources are saline to hyper-saline with high levels of dissolved salts. At the time of discovery the extraction of uranium from saline solutions was not commercially practicable. The Company is in the final stages of a very successful research and development program that has identified and tested resins in sea-water based systems demonstrating that uranium can be loaded from solution, stripped, and a high grade yellowcake product precipitated.

UraniumSA has engaged the Australian Nuclear Science and Technology Organisation laboratories in Sydney (ANSTO) to complete 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. Our innovation has been to identify products from established resin manufactures, and to then retain ANSTO to run test work programs to confirm their performance in our specific application extracting uranium from saline solutions. This process-focussed approach has delivered outstanding world-first results for the uranium industry and mitigated the risks that often accompany new technologies. Resins which are emerging as the best performers are able to be used in industry standard equipment, use industry standard processes, and deliver outstanding results.

Granite hosted mineralisation

Precis. Uranium mineralisation contained in granites below the Blackbush deposit is separate to the mineralisation in the overlying Eocene sediments. When drilling for sediment-hosted mineralisation holes are stopped as soon as basement granite is recognised – this means that there are very few useable granite intersections. However, re-logging and re-interpretation of the available materials has enabled an indicative outline of granite hosted mineralisation to be constructed.



Blackbush deposit

Inferred Resource estimate boundary in purple. This is effectively sediment-hosted mineralisation overlying granite basement.

Mineralisation in granite
blue outline – 0.05m% contour
red outline - 0.10m% contour.

View north, field 2.7km east to west
Graticules are 100m grid

For the location of the Samphire project refer to the general location map on the last page of this release.

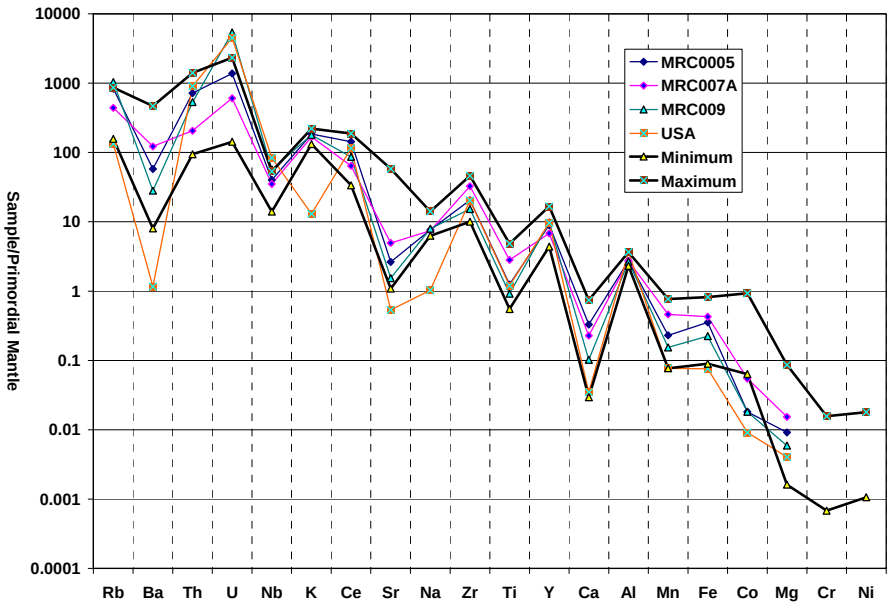
A figure of 0.05 m% (the number is the product of the multiplication of the grade and the length of an intercept) is regarded as an indicator of possibly significant mineralisation. A figure of >0.10 m% is an indicator of significant mineralisation and exploration potential. Values range up to 0.60m%. The area of bedrock mineralisation is largely but not entirely coincident with the sediment-hosted mineralisation.

Discovery and investigation. During routine pattern drilling at the Blackbush deposit the field geologist, Callan Brown, recognised that basement granite cutting from drill hole MRM778 contained significant uranium mineralisation. The observation was confirmed by subsequent geophysical logging and a decision was made to twin the intersection with a short core run, drill hole MRC006.

Hole ID	hole information	summary of intercepts
MRM 778	the discovery hole which was paired by MRC 006, mineralisation was open at eoh 84m	**3.9m at 328ppm pU_3O_8** (100ppm cut-off) **peak grade 1,376ppm pU_3O_8**
MRC 006	confirmation paired hole, cored clay altered granite 78.00 to 79.00m, eoh 101.5m	**5.4m @ 434ppm pU_3O_8** (100ppm cut-off) **peak grade 2,485ppm pU_3O_8**

Core recovery was not good but a stick of material was recovered from within the uranium mineralised zone. Visual appraisal and subsequent petrology indicated the material was a clay altered granite comprised of kaolinite clay pseudomorphs after feldspar with muscovite, quartz, and rare fine grained sulphides. The material was generally indistinguishable from the granite saprolite which is regionally present at the basal Eocene unconformity surface.

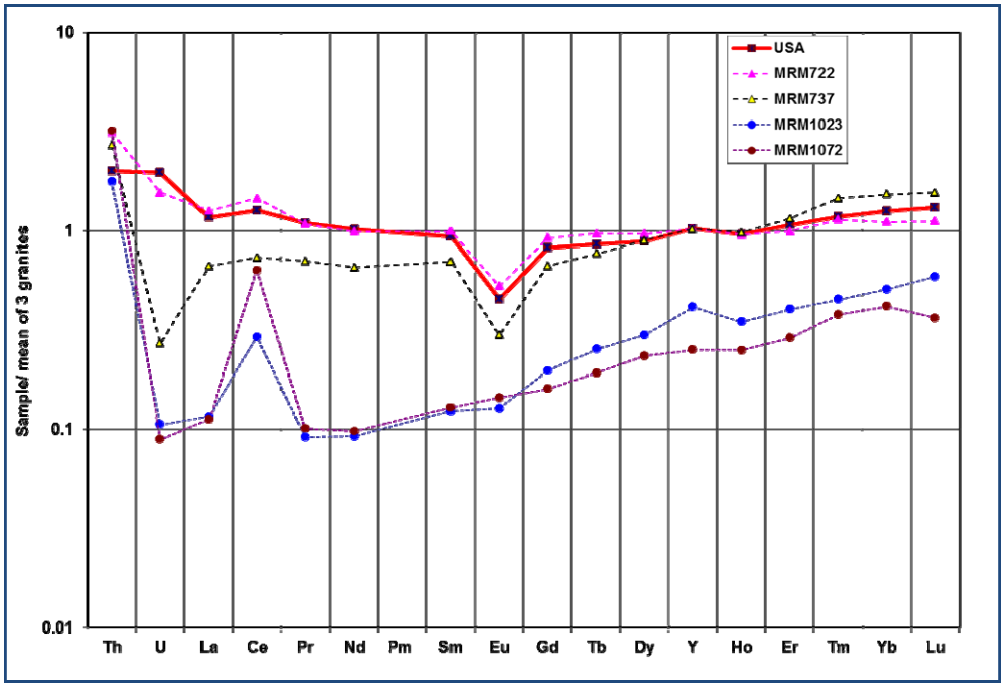
Work on three cores of granite from below the weathering surface identified the granite body as belonging to the Roxby Downs type within the Hiltaba Suite Granites (the black top and bottom bounding lines in the spidergram below). These are a particular type of granite which is closely associated with Cu-Ag+/-U mineralisation across South Australia (Roxby Downs, Prominent Hill) and Queensland (Earnest Henry).



The spidergram plots the geochemical indicator elements of the three cores (labelled MRC005, MRC007A, MRC009 in the figure) and of the clay altered uranium mineralised material (orange line labelled USA) places all four samples – the three granites and the mineralised clay altered material - within the same ranges.

A review of the available literature on the formation of saprolite on granite, and in particular the associated changes in trace element chemistry, clearly indicated that saprolite formation was invariably associated with a 20 – 30% reduction in the trace element signature.

To investigate the origin of the clay alteration at the weathering surface bottom hole samples from four drill holes, selected from close to the mineralised intersection and well away from it, and across two magnetic domains, were recovered from storage and submitted for analysis.



The results are presented in the adjacent spidergram where the raw values have been normalised to the average value of the granites previously discussed – the line 1.0 represents this average.

The sample of clay mineralisation from hole MRC006 and a clay from an exploration holes several hundred meters away both plot on the local granite average, strongly suggesting these materials are a product of a granite related alteration/mineralisation process. A third sample (MRM722) was collected 2 kilometres way but in the same magnetic domain and is similar but shows partial depletion indicating another process may be operating. The final two samples were collected several kilometres away and show a very clear depletion signature indicating a saprolite weathering process.

It is concluded that the uranium mineralised clay material is an alteration product associated with the granite and not a saprolite resulting from pre-Eocene weathering. The mineralisation is a primary feature of the granite bedrock, and not a result of an interaction between a pre-existing saprolite and the overlying mineralised Eocene sediments.

Potential of the granite hosted mineralisation at Samphire. The host rocks to this mineralisation in granite at Blackbush are “A” type granites that are a particular type of granite which is specifically associated with the Cu-Au+/-U mineralisation styles. The best known examples of the style would probably be the Roxby Downs, Prominent Hill and Carapateena deposits in South Australia, and the Earnest Henry deposit in Queensland. The presence of these granites is an indicator of potential for mineralisation, and their value is in enabling work to be focussed on particular aspects of the system being examined.

In the Samphire project, the granites are a part of a much larger intrusive system which has been given the informal name of the Samphire Batholith. A batholith is a body of granitic intrusive rock which covers an area greater than 100km^2 (the Samphire Batholith has an area of ~700km^2) which is commonly composed of a number of distinct sequentially emplaced phases called plutons, which are themselves frequently intruded by smaller sub-vertical bodies known as stocks. An interpretation of these components is given in the ASX release of 2 December 2011. Batholiths are commonly interpreted as the roof zones of large volcanic systems and can be associated with a very broad range of mineralisation styles.

The Samphire Batholith appears to comprise three main plutons, and a larger number of later stocks. The known mineralisation in the overlying Eocene sediment section has a strong spatial association with first plutonic phases, particularly along and below the east dipping contact of the second plutonic phase. This zone has a distinct magnetic signature, appears to be extensively altered and is possibly widely anomalous.

The granite hosted mineralisation at Blackbush appears to be primarily uranium. The chemistry of the mineralisation of other deposits and mines associated with similar A type host rocks in the Gawler Craton indicates there should be significant copper and gold and variable base metals associated with the occurrence.

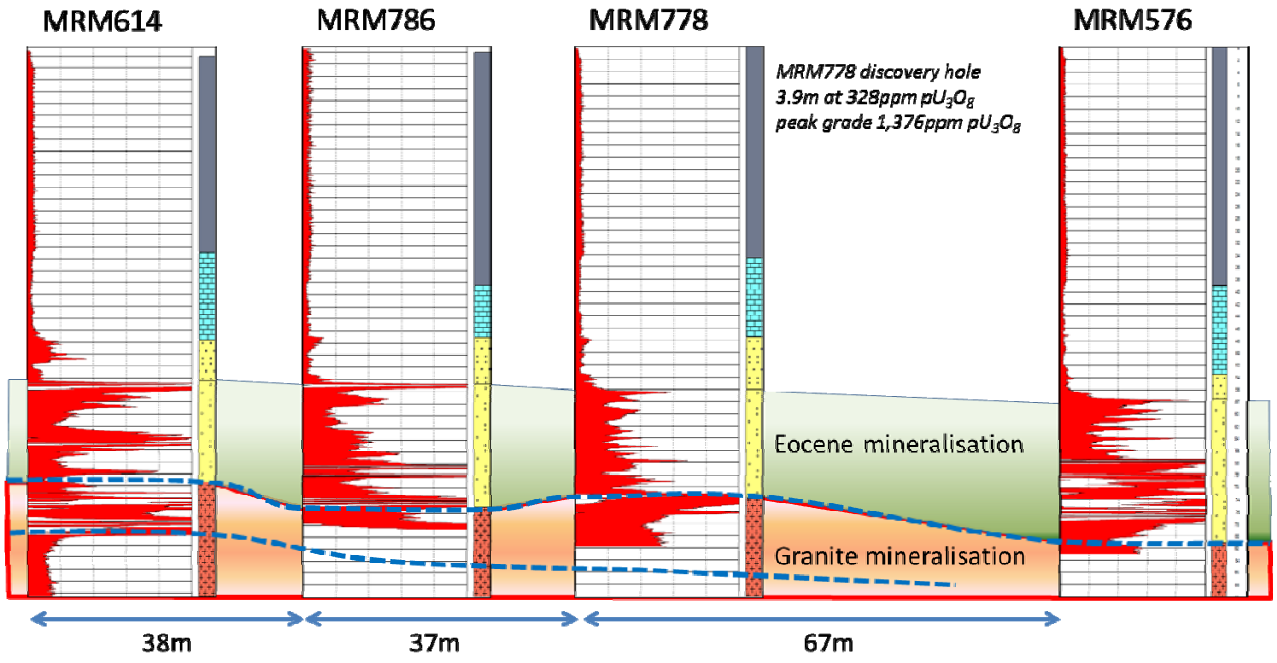
The mineralised drill core is comprised of kaolinite, muscovite and quartz. There are none of the alteration signatures which are generally associated with other deposits in similar A type host rocks in the Gawler Craton. A systematic program of sampling and assaying is required to characterise the base metal and gold signature of this mineralisation.

Re-exanimation and reinterpretation of the data which is available for basement from the existing exploration drilling has outlined potentially significant mineralisation over an area extending ~ 2.7 km along magnetic strike and ~1.7 across strike. The area of bedrock mineralisation is largely but not entirely coincident with the sediment-hosted mineralisation and there appear to be a combination of basement compositional and structural controls determining the distribution of mineralisation.

The northeast-southwest trend extends sub-parallel with magnetic strike. Geophysical modelling indicates a 45 degree east dip for bodies at a depth of ~380m. The rare exploration holes that have drilled down into granite basement often have characteristically “stepped’ radiometric profiles consistent with drilling through tabular bodies with variable radiometric backgrounds. The granite cores also show shallow dipping compositional contacts which are reflected in significant changes in magnetic susceptibility. The available evidence is that there compositional layering in the granite dips 30-45 degrees to the east, and the strike extensive character of the mineralisation would suggest the possibility of a similar dip component.

The northwest-southeast trending mineralisation is associated with a sub-parallel zone of negative magnetic anomalism, possibly reflecting magnetic destructive alteration associated with the clay alteration and mineralisation. Dip attitudes are less certain but may be shallow and to the north.

On the basis of the reinterpreted logs, and assuming a northeast-southwest strike, one area of mineralisation can be correlated for ~140m.



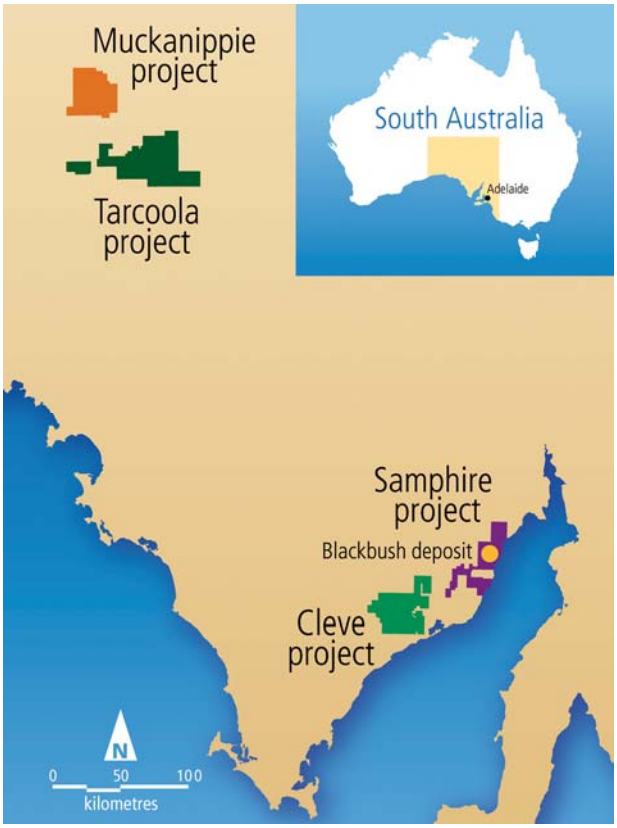
All of these holes exploration holes were directed at evaluating the overlying sediment hosted mineralisation.

Conclusion. On the basis of present information the system is unusual – it is associated with intense clay-only alterations and is only uranium. The occurrence does not have any immediately apparent analogues, and there are no recognisably similar deposits which can be used to make an assessment of the size/grade potential. However, given the size and grade potential which can be inferred from the existing data there is significant exploration potential for:

1. The identification and delineation of significant tonnages of medium grade mineralisation (~500ppm) of granite hosted mineralisation below the existing Blackbush deposit resource of sediment hosted mineralisation.

2. The identification of high grade zones of mineralisation (>1,000ppm) of unknown size in structures associated with magnetic destructive alteration, and at the intersections of zones of magnetic destructive alteration and strike extensive mineralisation.

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, 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 planned to commence on the ground in early 2013.

The recent discovery of uranium in granite basement is being evaluated as a potentially significant new exploration/development opportunity.

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

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. It should be noted that the abovementioned exploration results are preliminary.