Uranium Exploration Australia Limited

ABN 65 112 714 397

25 January 2010

The Manager
Company Announcements Office
Australian Stock Exchange
20 Bridge Street
SYDNEY NSW 2000

ASX ANNOUNCEMENT

CRYSTAL CREEK URANIUM PROJECT, NT

Drill results confirm mineralisation at depth

- **Uranium assay results confirm mineralisation at depth associated with ironstone at Anomaly B**
- **Highlights from the November 2009 drill program include:**

	6m @ 208ppm U3O8 from 11m in hole 09NT27
	2m @ 310ppm U3O8 from 55m in hole 09NT09
and	**3m @ 346ppm U3O8 from 63m**
including	**1m @ 490ppm U3O8 from 64m**
and	**18m @ 0.23% Cu from 48m**
including	**1m @ 1.1% Cu from 63m**

The Directors of Uranium Exploration Australia Limited ('UXA') are pleased to announce encouraging results from the November 2009 RC drilling program at its 100%-owned Crystal Creek project in the Northern Territory.

Crystal Creek is UXA's most advanced uranium project, located on Exploration Licence (EL) 24566 some 320km northwest of Alice Springs, and near to Energy Metals' Bigrlyi uranium deposit. In July 2009, UXA announced the discovery of a zone of outcropping uranium mineralisation spanning a strike distance in excess of 3,000m at Crystal Creek, with early field sampling indicating excellent U_3O_8 point concentrations of up to 4,120 ppm.

Crystal Creek Assay Results

All assay results for 2572 samples generated during the November 2009 RC drill program have been returned. Over half of the holes drilled at anomaly B returned anomalous uranium values >100ppm U3O8 (Table 1), the best drill incept being 3m @ 346ppm U3O8. The drill intercepts quoted are the down-hole intervals. There is insufficient information to yet determine the true width of mineralised intercepts, which may be narrower than the down-hole interval.

These results confirm structurally controlled uranium mineralisation to continue at depth with more significant values occurring at the western third of the 3 kilometre long ironstone structure (Figure1). Uranium mineralisation occurs in a number of parallel structures and remains open down dip. The Company will undertake structural studies at Anomaly B to help identify controls on mineralisation prior to embarking on further drilling.

UXA believes potential may exist to identify other mineralised structural features within the tenement in close proximity to Anomaly B. As such, the company will expand its exploration focus within the tenement in the year ahead.

Figure 1. Crystal Creek location map

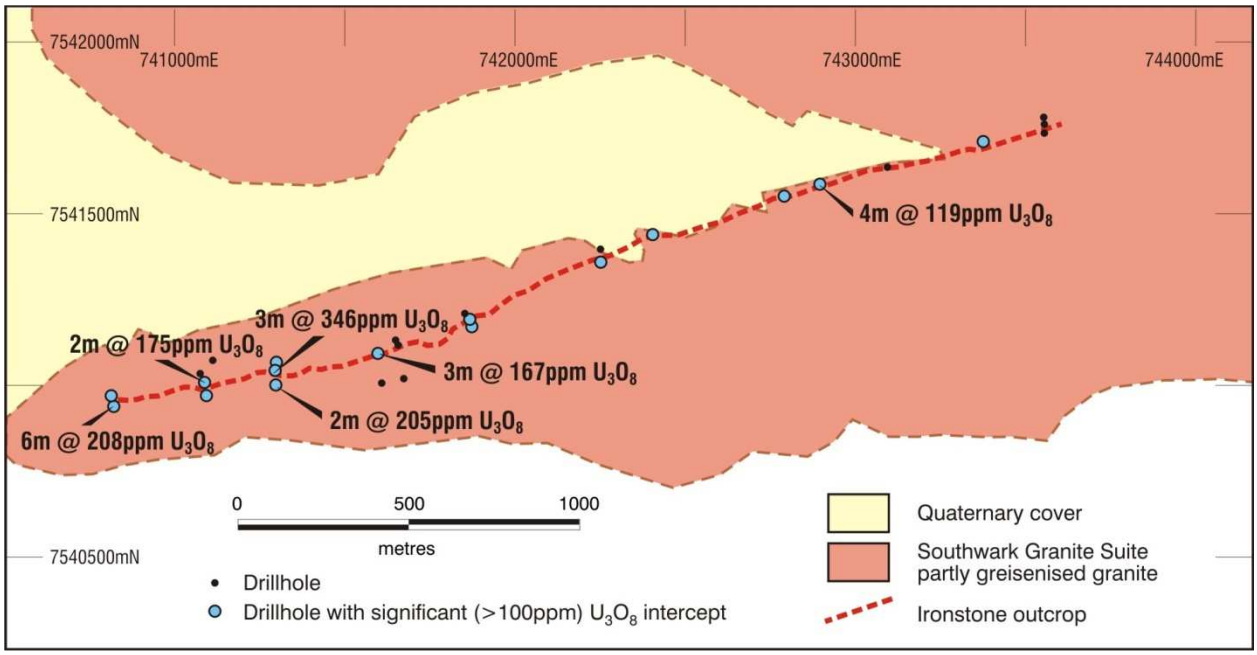
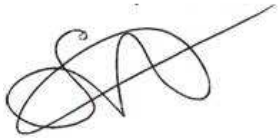


Table 1 Significant and anomalous uranium values – Anomaly B

drill hole number	easting amg94 mE	northing amg94 mN	drill hole Azimuth (mag°)	drill hole Dip (°)	down hole depth (m)	from (m)	to (m)	down hole interval (m)	U_3O_8* ppm	Cu** %
09NT04	741871	7541180	332	-60	36	18	19	1	145	
09NT05	741861	7541203	140	-70	84	55	56	1	115	
09NT09	741295	7541043	169	-70	78	13	14	1	135	
and						27	30	3	203	
and						50	51	1	105	0.1
and						52	53	1	110	0.3
and						55	57	2	310	0.3
and						63	66	3	346	0.6
including						63	64	1	380	1.1
including						64	65	1	490	0.1
09NT10	741294	7541051	169	-60	108	35	36	1	165	0.1
09NT12	742250	7541364	164	-60	36	16	17	1	115	
09NT14	743376	7541715	177	-60	84	56	57	1	215	
09NT16	740819	7540966	150	-60	132	39	40	1	140	
and						49	51	2	163	
and						108	109	1	100	
and						122	123	1	130	
09NT18	742406	7541440	164	-60	48	29	30	1	135	
09NT19	742895	7541592	164	-60	42	11	12	1	130	
and						14	15	1	135	
and						16	20	4	119	
and						26	27	1	215	
09NT21	741089	7541011	169	-60	96	11	12	1	145	
and						27	29	2	175	
and						34	35	1	100	
and						37	38	1	235	
and						41	42	1	240	
and						43	44	1	100	
and						79	80	1	135	
09NT23	741598	7541095	157	-60	54	25	26	1	135	0.1
and						29	32	3	167	0.1
and						38	39	1	135	0.2
and						42	43	1	185	
09NT24	742791	7541556	157	-60	36	15	16	1	110	
09NT25	741298	7541002	349	-60	84	37	39	2	205	
and						50	53	3	130	
09NT26	741096	7540969	349	-60	66	26	27	1	110	
09NT27	740822	754938	349	-60	54	11	17	6	208	0.1
and						41	43	2	148	

* Uranium assay by press powder XRF (detection limit 4ppm)
** Copper assay by ICP OES (detection limit 2ppm)

For further information, contact.



Russell Penney
Managing Director.

Tel: +61 8 8363 7970
Email: info@uxa.com.au

Website: www.uxa.com.au
Media: Farrington National +612 9332 4448

Technical Information in this report is based on information compiled by Mr Simon Powell who is employed by Uranium Exploration Australia Limited and who is a Member of The Australasian Institute of Mining and Metallurgy. Mr Powell has sufficient exploration experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking 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' ("JORC 2004"). Mr Powell consents to the inclusion in this release of the matters based on his information in the form and context in which it appears.

About UXA

Uranium Exploration Australia Limited was formed to explore for and develop uranium and associated base and precious metal deposits, focusing principally on its ground holdings in the world class uranium provinces in South Australia and Northern Territory. UXA has an exploration joint venture with RIL Australia Pty Ltd, a subsidiary of Reliance Industries Limited, the largest private sector company in India.

In July 2009 UXA announced the discovery of uranium mineralisation in a 3,000m long structure within granite at Crystal Creek, on its Ngalia Thrust exploration licence in the Northern Territory. Recent RC percussion drilling returned intercepts up to 3m @ 346ppm U3O8.

In October 2009 UXA announced the completion of the purchase of a borehole logging business, Geoscience Associates (Australia) Pty Ltd (GAA). GAA is continuing to operate as a separate business and provide cash flow for UXA's exploration activities. GAA provides logging services to the coal and uranium industries (both gamma and PFN logging) throughout Australia. GAA has the sole distribution rights in Australia to the Prompt Fission Neutron device, a specialised tool for directly measuring the content of uranium in boreholes, thereby overcoming the problem of disequilibrium. UXA has today announced the signing of an agreement to purchase the PFN business outright from its US manufacturer.

More information on UXA can be found on our website at www.uxa.com.au