

5 January 2010

The Manager Companies  
ASX Limited  
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(5 pages by email)

Dear Madam

## **Callabonna receives highly anomalous Uranium and REE results from first pass reconnaissance field work on Denison Project, Northern Territory.**

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### **Summary**

- **Results of rock chip samples taken during first pass reconnaissance field work on the recently granted Denison lease (EL 28181) returned highly anomalous results ranging from 268ppm to 979ppm U<sub>3</sub>O<sub>8</sub> with elevated rare earth elements.**
- **These samples will be studied further to understand the nature of the uranium mineralisation and the uranium minerals present.**
- **A single grab sample from waste dumps at the old Wolfram Hill workings (within Mt Doreen lease, EL 26040) returned very high copper results with anomalous gold. We will review all historical data for the Wolfram Hill mine to determine what potential remains for economic mineralisation.**
- **Callabonna has been building an extensive tenement position within the under explored Arunta region and currently has 6 leases covering 2,328 km<sup>2</sup> in area.**

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Callabonna Uranium Limited ('Callabonna') holds six mineral leases covering some 2,328 square kilometres in the Arunta Region of Central Australia. All of these leases (and applications) are 100% owned by Callabonna with the exception of Mt Hay which is subject to a farm-in Joint Venture with NuPower Resources Ltd. ('NuPower'; refer NuPower ASX announcement 19 November 2007).

Callabonna geologists have undertaken a first pass reconnaissance field program on the granted leases within the Arunta region. Rock chip samples taken on this first pass program from the Denison lease have returned uranium oxide results of between 268ppm and 979ppm U<sub>3</sub>O<sub>8</sub> (see Table 1). These rock chip samples were predominantly veined and altered granitic gneisses of Proterozoic age and also contained elevated Rare Earth Elements ('REEs').

These results suggest there is potential for primary uranium mineralisation hosted within the Proterozoic aged granites of the area.

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First pass reconnaissance on Denison was focused on following up of previously identified uranium occurrences and other areas of highly elevated uranium channel response from airborne radiometric data. This was done by hand-held spectrometer with rock chip samples taken where areas were confirmed as anomalous on the ground.

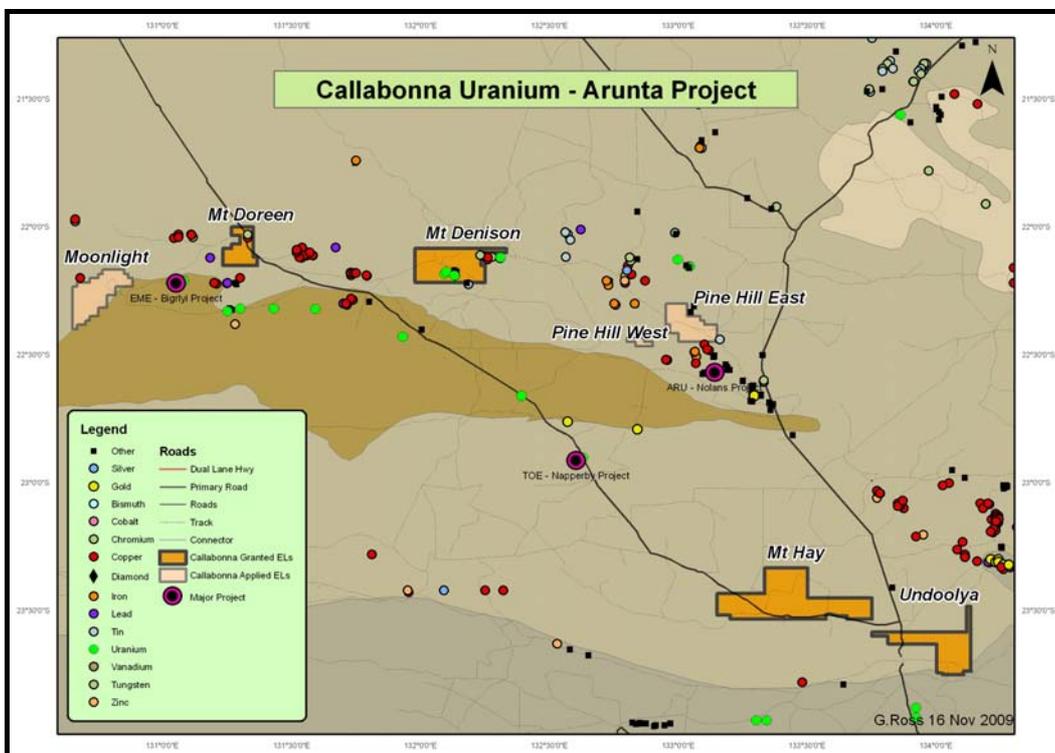


Figure 1: Location of Callabonna's leases within the Arunta Region, Northern Territory

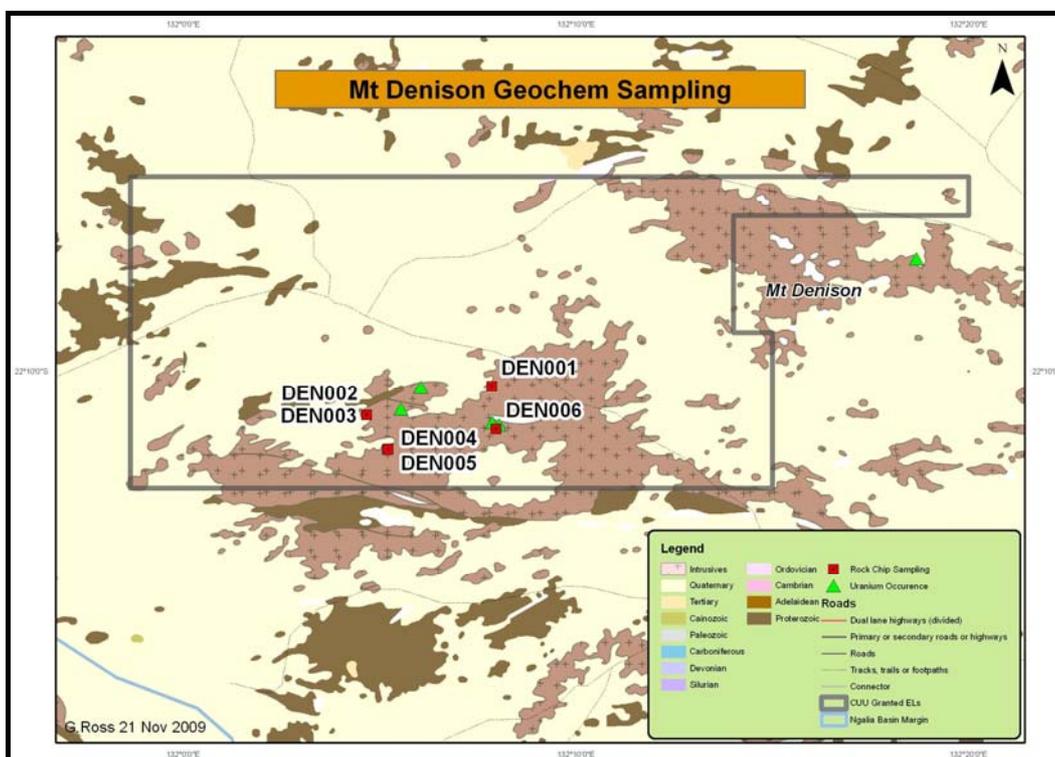
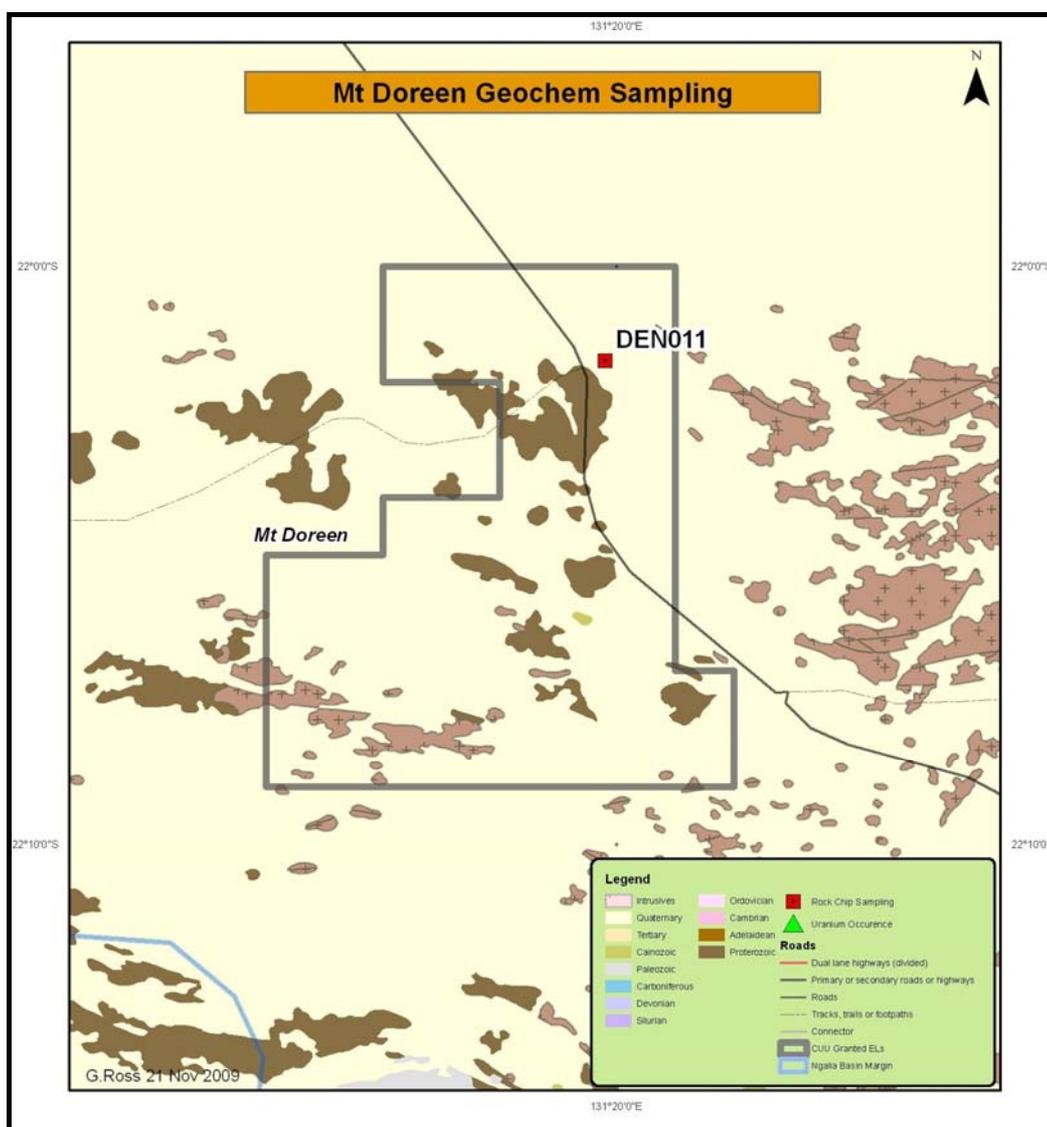


Figure 2: Location of rock chip samples within Callabonna's Denison Lease

Further work will be conducted to understand the nature and distribution of uranium mineralisation in these granitic gneisses and the species of uranium minerals present and their potential processing characteristics. This will provide further information on the attractiveness of the potential target in the Denison lease area.

Reconnaissance work on the Mt Doreen project did not locate the source of historical elevated uranium assays in the Mt Doreen Granite, although it must be remembered this was only a first pass reconnaissance program.

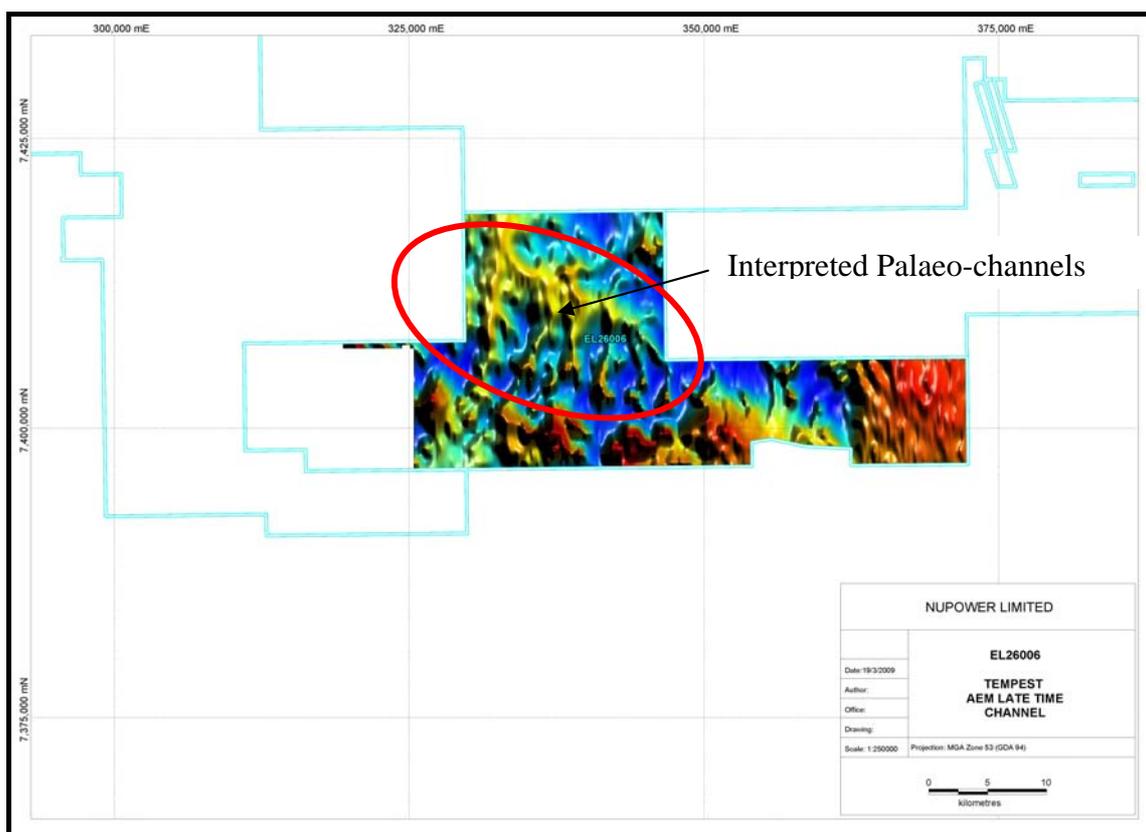
A sample taken from the Wolfram Hill workings in the north of the lease area returned copper assays of 15.1% copper, 0.185 g/t gold and 45 g/t silver (see Table 1). All available data from the Wolfram Hill area will be reviewed in detail over the summer to determine nature of the mineralisation and what potential remains for economic mineralisation.



**Figure 3: Location of rock chip samples and geology of Mt Doreen Lease**

The Mount Hay lease (EL 26006 – see Figure 1) is the subject of a Farm-In JV Agreement with NuPower (ASX: NUP) where NuPower have the right to earn 51% of the project by spending \$500,000 towards exploration within the first 2 years and, subject to Callabonna not exercising a right to contribute 49% towards exploration, can earn a further 29% by spending \$2 million on exploration within 5 years of commencement.

The Mt Hay lease forms part of a greater contiguous package of ground (Aileron Project) being explored by NuPower for sandstone and calcrete channel type deposits within the younger sediments of the region. NuPower has previously announced the completion of a regional electro-magnetic (EM) survey (NUP: ASX announcement 24 September 2008) which identified several previously unknown palaeo-channels which are not coincident with modern drainage locations, suggesting they are buried and would not have been explored previously. These channels are potentially prospective for sandstone hosted uranium deposits similar to the Beverley or Four Mile types of uranium deposits.



**Figure 4: Airborne EM image of Mt Hay JV Lease showing location of interpreted Palaeo-channels**

NuPower are currently seeking a farm-in partner for their entire Aileron Project. Callabonna will keep abreast of these efforts with a view to ensuring these channels are drill tested in the near future.

Work completed on the Undoolya lease (EL 26012) has not led to any significant uranium mineralisation being located and the poor development of drainages in the area has led to the lease being downgraded. It will be reviewed for possible relinquishment.

Yours sincerely



Stephen McCaughey  
Managing Director

Table 1 – Selected Assay Results from Rock Chip Samples

Sample Number	Tenement	Project	U <sub>3</sub> O <sub>8</sub> (ppm)	U <sub>3</sub> O <sub>8</sub> (ppm)	Au (g/t)	Ag (g/t)	Cu (ppm)	Cu (%)	Sn (ppm)	REO total (ppm)	Comments
Analysis Method			ICP-MS	XRF	ICP-AES	ICP-MS	ICP-MS	Cu-Ore Grade62	ICP-MS	ICP-MS	
DEN001	EL 27181	Denison	>1179.2*	979.0		9	15		74	>1948*	Biotite and dark mineral veining in foliated plagioclase porphyritic granite.
DEN002	EL 27182	Denison	674.5			1	16		21		Pegmatic material intruding coarse plagioclase granite.
DEN003	EL 27183	Denison	311.3			1	16		17		Anomalous patch in coarse feldspathic granite
DEN004	EL 27184	Denison	402.1			1	27		25		Pegmatic vein 1x10m extent intruding coarse grain granite.
DEN005	EL 27185	Denison	267.7			1	17		23		Coarse grained plagioclase granite with elevated background gamma response.
DEN006	EL 27186	Denison	491.7			<1	17		26		Weathered granite from creek area.
DEN011	EL26042	Doreen	3.0		0.185	45	>10,000*	15.1	947		Grab sample from waste dump area with malachite and azurite.

(\* Above Detection Limit)

*The information in this report that relates to Exploration Results, Mineral Resources, or Ore Reserves is based on information compiled by Stephen McCaughey. Mr McCaughey has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking. This qualifies Mr McCaughey as a Competent Person as defined in the 2004 edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr McCaughey consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.*