ENTERPRISE METALS LIMITED

ASX ANNOUNCEMENT **27 June 2011**

ANOMALOUS URANIUM IN ROCKCHIP SAMPLES AT YALGOO

- **Values of 149 - 418 ppm U obtained from calcrete rockchip sampling**
- **Radiometric anomaly associated with extensive calcrete horizon**
- **12km of prospective channel identified to date**

Enterprise Metals Limited ("Enterprise", ASX: **"ENT"**) is pleased to announce highly anomalous uranium values from calcrete rockchip samples at the Yalgoo Project located 800km northeast of Perth (see Figure 1). 18 of 24 calcrete samples collected from within a drainage channel returned elevated uranium values ranging from 149ppm to 418ppm U.

The Project covers an area of 890km^2 and covers Archaean granites and greenstones of the northern Gullewa greenstone belt. The Company considers the Yalgoo Project to be prospective for palaeochannel/calcrete hosted uranium deposits, as well as gold and base metal deposits.

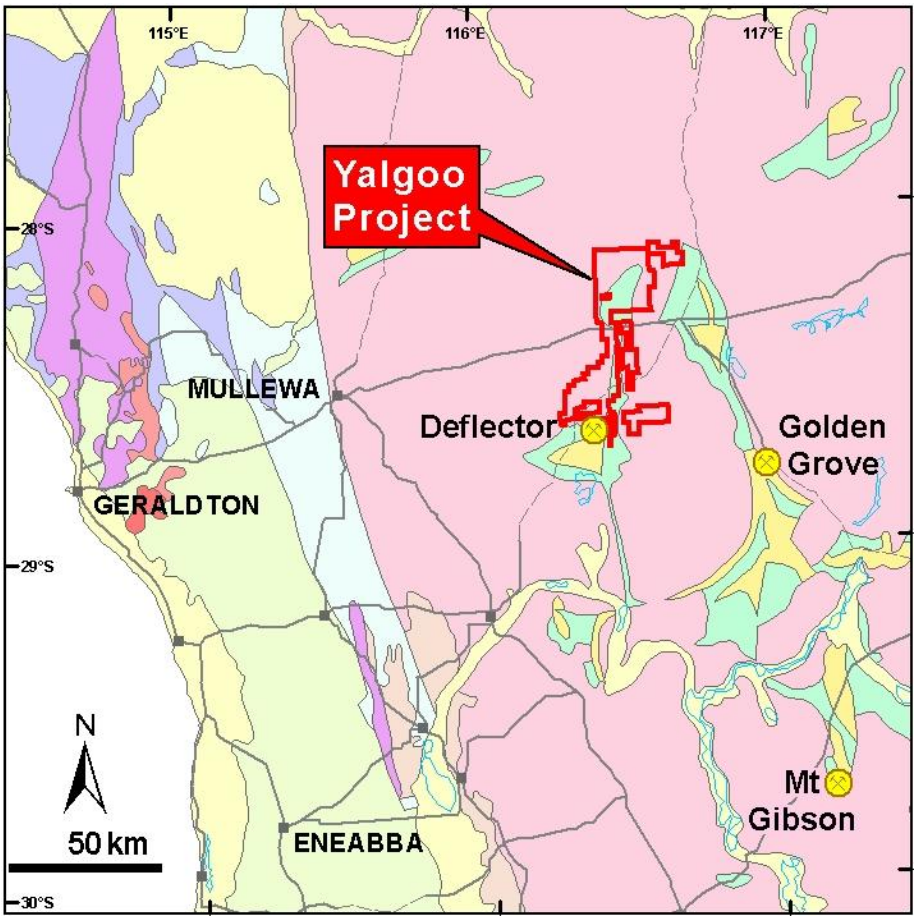

Figure 1: Yalgoo Project Location

Radiometric Data

Using public domain 400m line spaced radiometric and magnetic data, Enterprise identified several broad alluvium filled channels draining good uranium source rocks in the area immediately northwest of Yalgoo. A detailed 100m line spaced magnetic and radiometric survey was then flown over E59/1437 focussing on these channels and the associated calcrete occurrences identified in GSWA mapping.

An image of the uranium channel radiometric data is presented in Figure 2. It clearly shows the uranium target, directly related to a broad drainage channel (both ancient and modern), approximately 3.5km long and up to 700m wide. The drainage channel is well defined in the detailed radiometric data, however the continuation of the channel is still evident on the 400m wide spaced survey data to the south-southeast.

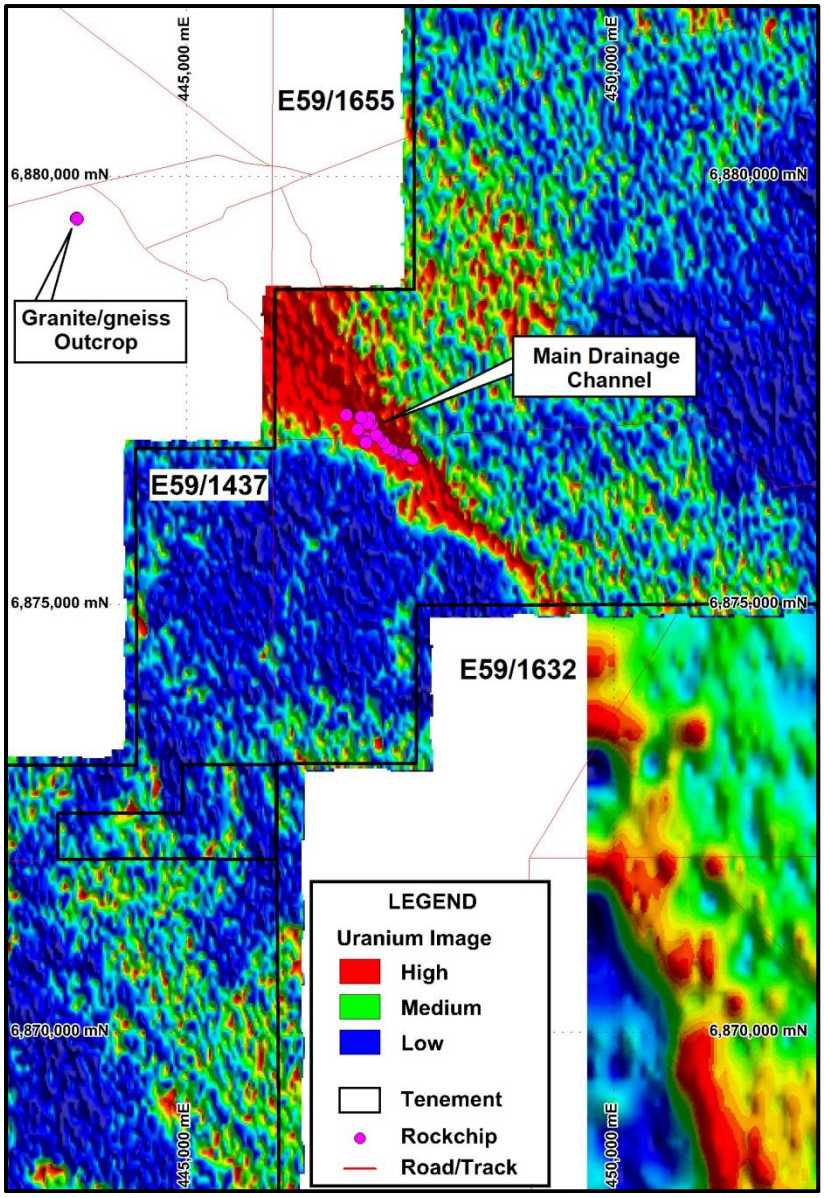

Figure 2: Uranium Channel Radiometric Image with Rockchip Locations

Rockchip Sampling

The majority of the airborne anomaly is covered by red-brown sandy alluvium with no outcrop and rare calcrete float. A modern drainage channel up to 30m wide and 2m deep has removed the alluvium, exposing a well developed "layered" calcrete profile (see Photos 1 & 2). It is likely that this calcrete unit is widespread in the region, but covered by alluvium.

Photo 1: Drainage Channel – Showing exposed Calcrete unit.

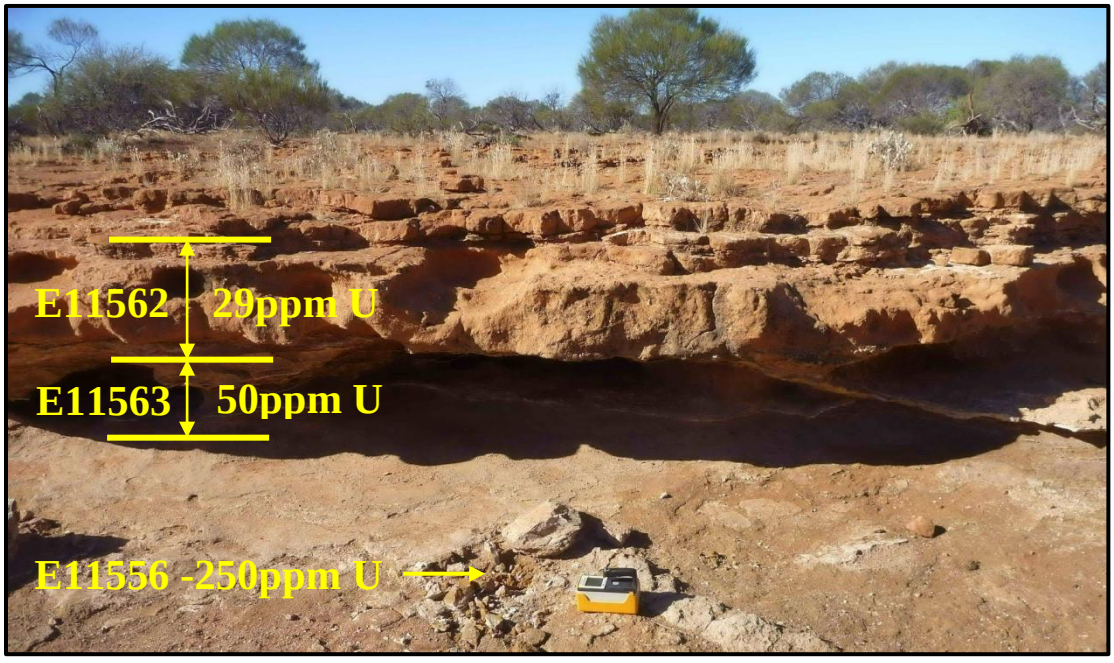

Photo 2: Drainage Channel Profile – Showing increase in uranium content from hardpan (0-60cm, 29ppm) to sand+calcrete (60-100cm, 50ppm) to calcrete (1.5m, 250ppm).

Non systematic rockchip grab sampling was undertaken within the drainage channel over a length of 950m. Figure 2 shows the location of the rockchip samples superimposed on the uranium channel data. Sampling was restricted to areas of exposed calcrete within the drainage channel and isolated occurrences of calcrete in areas of thin alluvial cover. Drilling will be required to define the extent, thickness and grade of the calcrete.

A total of 28 samples were analysed, of which 24 were calcrete, for a multi-element suite, utilising a four acid digest with ICP-MS and ICP_OES finish.

All uranium results are provided below.

Sample No.	MGA94_E	MGA94_N	U ppm*	Description
E11552	447112	6876940	409	Calcrete - alluvial plain
E11553	447113	6876940	138	Calcrete - alluvial plain
E11554	447470	6876765	251	Calcrete -main drainage channel
E11555	447525	6876748	183	Calcrete -main drainage channel
E11556	447581	6876742	247	Calcrete -main drainage channel
E11557	447088	6876900	60	Calcrete - alluvial plain
E11558	447100	6876888	149	Calcrete - alluvial plain
E11559	447446	6876773	263	Calcrete -main drainage channel
E11560	447460	6876769	266	Calcrete -main drainage channel
E11561	447568	6876751	188	Calcrete -main drainage channel
E11562	447581	6876742	29	Hardpan - surface to 60cm depth
E11563	447581	6876742	50	Sand/calcrete - 60cm to 100m depth
E11564	447640	6876697	319	Calcrete -main drainage channel
E11565	447416	6876784	418	Calcrete -main drainage channel
E11566	447402	6876796	231	Calcrete -main drainage channel
E11567	447355	6876826	248	Calcrete -main drainage channel
E11568	447304	6876897	179	Calcrete -main drainage channel
E11569	447246	6876949	232	Calcrete -main drainage channel
E11570	447220	6876980	262	Calcrete -main drainage channel
E11571	447168	6877101	193	Calcrete - minor drainage channel
E11572	447141	6877146	<0.1**	Calcrete - minor drainage channel
E11573	447138	6877180	215	Calcrete - minor drainage channel
E11574	447112	6877119	177	Calcrete - minor drainage channel
E11575	447039	6877189	181	Calcrete - minor drainage channel
E11576	446866	6877213	112	Calcrete - alluvial plain
E11577	447003	6877043	220	Calcrete - alluvial plain
E11578	443715	6879506	37	Granite/gneiss
E11579	443722	6879500	89	Granite/gneiss

** Uranium analysis – four acid digest with mass spectrometer finish – Quantum Analytical Services*
*** Presumed Laboratory error.*

Figure 3 shows the uranium values for the rockchip samples plotted over a Google Earth image. This figure demonstrates the limited extent of "exposed" calcrete (white areas on image) associated with the modern drainage channel.

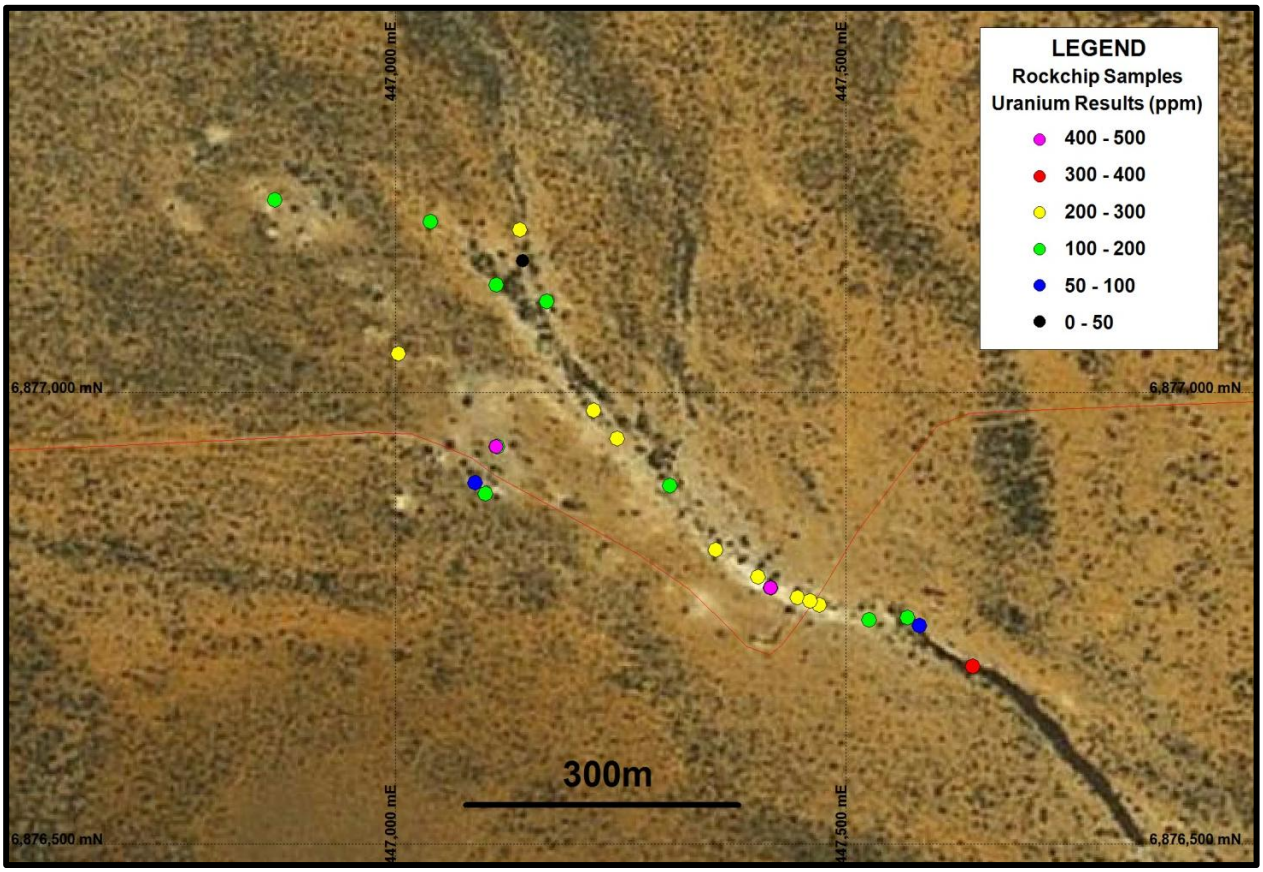

Figure 3: Uranium Rockchip Sample Results Plotted on Google Earth Image

Eighteen calcrete samples were collected from the drainage channel and ranged in character from brown "earthy" fragmented calcrete to white massive/fragmented porcellaneous calcrete. All samples returned elevated uranium values ranging from 149ppm to 418ppm U.

Sampling of isolated calcrete occurrences within the alluvial flat to the southwest of the drainage system returned a maximum uranium value of 409ppm U. This indicates that the anomalous calcrete layer is not restricted to the drainage channel and is far more extensive under the alluvial cover.

Two rockchip samples of granite gneiss (E11578 & E11579) were collected some 4km upstream and to the northwest of the main calcrete channel (Figure 2). The samples were taken to provide an indication of "background" uranium levels in basement. Sample E11579 was taken from a 50cm wide sheared zone within the granite gneiss, which recorded 5,000cps on the spectrometer. The samples returned elevated values of 37ppm and 89 ppm U respectively, which suggests the local granite gneiss basement is the source of the uranium detected downstream.

The results of the preliminary field work to date support Enterprise's exploration model, which is presented in detail below. In summary, the Yalgoo Project has a potential uranium source (granite gneiss) adjacent to an extensive drainage system (fluid pathway/conduit), which contains a favourable host rock in the form of calcrete.

Proposed Exploration

An aircore drilling programme has been designed to test the lateral extent and uranium content of the calcrete layer identified by the radiometric survey.

A Radiation Management Plan ("RMP") has been submitted to the DMP for approval, and this is to be followed by a Programme of Works and a Heritage survey prior to commencement of drill testing.

Exploration Model

The northern Yilgarn catchments cover an extensive area of Archaean granitic rocks which contain between 2 and 25ppm uranium. Oxidising conditions have prevailed in places to depths of up to several hundred metres and under these conditions uranium is mobilised as uranyl ion complexes and transported laterally in groundwater. Where groundwaters reach drainage valleys, the water table rises to 1-5m below surface.

Evaporation and loss of carbon dioxide promotes precipitation, particularly of calcium and magnesium carbonates. Gaskin et al (1981) stated that where the solubility product of the concentration of active ion species of uranium, vanadium and potassium exceeds the solubility product of carnotite, this mineral is precipitated in fissures or between carbonate and clay particles.

Butt et al (1984) further distinguished types of calcrete-hosted uranium based on the location of the mineralisation. Calcrete-hosted uranium is found either in the main drainage channel itself or in the calcrete delta or platform in which case it is called a valley deposit (e.g. Yeelirrie, Lake Way), or in the alluvial playa sediments (e.g. Lake Maitland), or in terraces (e.g. Minindi Creek).

The Yeelirrie uranium deposit, discovered by Western Mining Corporation (now BHP Billiton) in 1972 contains 52,500t of U_3O_8 at a grade of 1.5 kg/t U_30_8 using a 0.5 kg/t cut-off grade and is considered a model for most explorers. Calcrete hosted uranium mineralisation is comprised of the soluble hydrated potassium-uranium vanadate mineral carnotite, $K_2(UO_2)_2(VO4)_2.3H_2O$.

The carnotite post-dates the calcrete, commonly occurring as void linings in porcellanous varieties, as seams and disseminations in earthy varieties, as fracture 'paint' on slip planes around the margin of mounds, and as grain coatings within the clay-sand host beneath the calcrete.

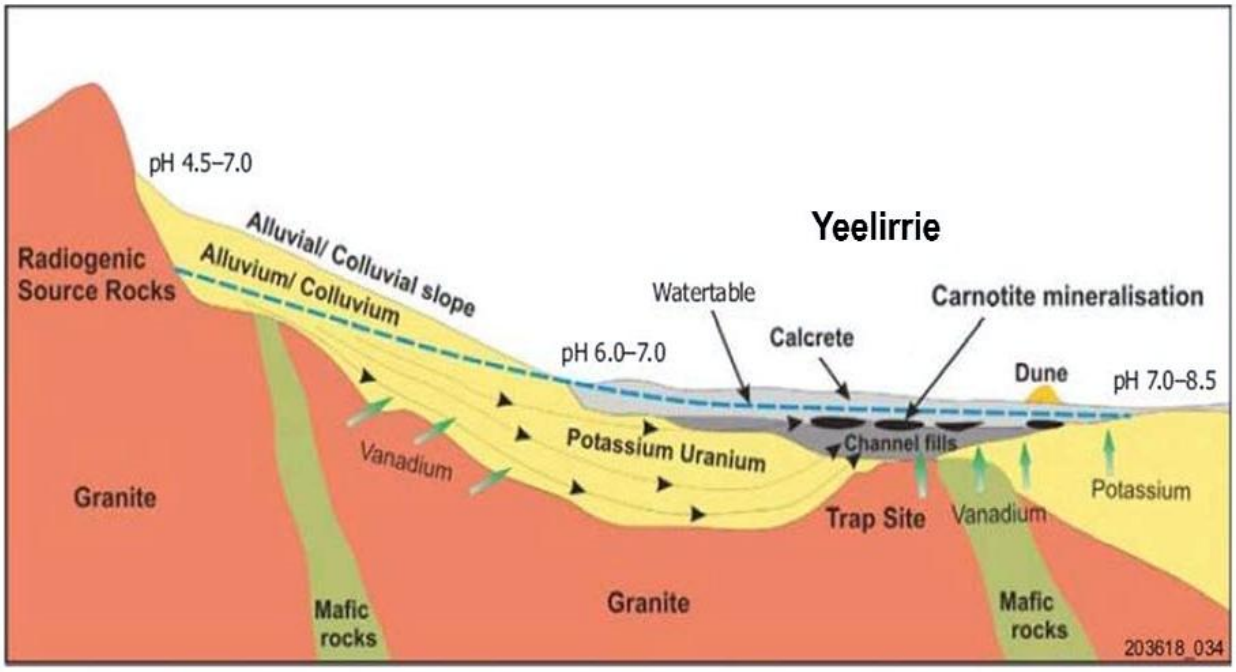

Figure 4 . Generic Model: Formation of calcrete hosted uranium deposits over greenstone belts
Source: Roberts, I (GSWA Seminar 2009) Modified from: Hou et al., MESA Journal 46

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The information in this announcement that relates to Exploration Results is based on information compiled by Mr Derek Waterfield, a Member of the Australian Institute of Geoscientists and a full time employee of Enterprise Metals Limited. Mr Waterfield has sufficient relevant experience in the styles of mineralisation and types of deposit under consideration, and in the activity he is undertaking, to qualify as a Competent Person as defined in the 2004 Edition of the "Australian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves" (the JORC Code), and consents to the inclusion of the information in the form and context in which it appears.