



27 February 2008

ASX/Media Announcement

## Positive Initial Metallurgical Results - Kanyika, Malawi

### Highlights

- **Highly favourable initial metallurgical test results received**
- **Independent JORC resource on target for March 2008 completion**

Globe Uranium is pleased to report highly favourable results from initial metallurgical test work at the Company's 100% owned Kanyika Nb-U-Ta-Zr project in central Malawi.

- 72% of the target mineral pyrochlore, which contains Nb-U-Ta, together with 89% of the zircon, reported to a concentrate in the initial locked cycle test (LCT).
- This concentrate constituted 1.2% by weight of the original bulk sample.
- Chemical leaching of the concentrate resulted in 98.6% of the Nb<sub>2</sub>O<sub>5</sub>, 98.9% of the Ta<sub>2</sub>O<sub>5</sub>, and 89.5% of the U<sub>3</sub>O<sub>8</sub> being successfully dissolved into solution.

Globe Uranium's Managing Director, Mr. Mark Sumich, said "these are highly encouraging initial results for the first pass at the metallurgy. There is also considerable potential for optimisation of metal recoveries as the Kanyika Project develops".

"These results will now feed into our Scoping Study, which is on track for completion in Q2 2008. Other aspects of the Study – such as the Marketing & Pricing and Mining & Processing components – are also progressing very well".

Results of initial metallurgical test work on two Kanyika bulk samples of varying grade indicate that target commodities can be physically and chemically separated with good recoveries using conventional methods. The Company is particularly encouraged by these findings because metallurgy is one of the main considerations for project development.

### For further information please contact:

Mark Sumich, Managing Director, Globe Uranium:

+61 8 9486 1779



## Metallurgical Results

SGS Minerals (Lakefield, Canada) is progressing initial metallurgical test work under the direction of metallurgical consultants Alta Metallurgical Services (Castlemaine, Victoria). Conceptual process flow-sheets have been established for all components of the metallurgical separation of metals.

The metallurgical extraction process is divided into three major parts:

1. Liberation and physical concentration of the target minerals - pyrochlore and zircon. At Kanyika, all of the Nb, Ta and most of the U is contained within pyrochlore.
2. Chemical leaching of the concentrate for Nb<sub>2</sub>O<sub>5</sub>, U<sub>3</sub>O<sub>8</sub> and Ta<sub>2</sub>O<sub>5</sub> into solution.
3. Separate extraction of Nb<sub>2</sub>O<sub>5</sub>, U<sub>3</sub>O<sub>8</sub> and Ta<sub>2</sub>O<sub>5</sub> from the solution.

### 1. Physical Concentration

SGS Minerals has completed initial sighter work on two bulk samples (A & B) and the first of three planned locked-cycle tests (LCT) with respect to liberation and physical concentration of pyrochlore and zircon. The head grade for samples A and B was 0.4% and 1% Nb<sub>2</sub>O<sub>5</sub> respectively.

The sighter work concluded that only a moderate grind size (80% passing 70µm), was required to effectively liberate the majority of the pyrochlore and zircon. This grind size resulted in an average of 95% of the pyrochlore reporting to the sand fraction (coarse) from both sample A and B, with the balance to the slime fraction (fine).

The initial LCT was performed on Sample A, and showed highly encouraging physical concentration results. The grade of the final concentrate was 25.0% combined Nb<sub>2</sub>O<sub>5</sub>+Ta<sub>2</sub>O<sub>5</sub> and 0.65% U<sub>3</sub>O<sub>8</sub> (Table 1). The total weight of the concentrate was 1.2% of the initial input sample weight.

The concentrate produced is considered to be of typical hydrometallurgical grade and demonstrates that the Kanyika mineralisation is very favourable for mineral concentrate production. The main non-pyrochlore mineral in the concentrate was zircon, a potentially economic component in its own right. Further physical separation work will focus on separating the pyrochlore and zircon into individual concentrates.

The initial LCT showed overall physical recovery of the potentially economic pyrochlore mineral in the concentrate was 72% (Table 2).

**Table 1: Physical recovery results by metal content - LCT #1, Sample A**

	Grade of Concentrate	Total Metal Recovered
Nb <sub>2</sub> O <sub>5</sub>	23.90%	72.2%
Ta <sub>2</sub> O <sub>5</sub>	1.08%	65.8%
U <sub>3</sub> O <sub>8</sub>	0.65%	62.6%
ZrO <sub>2</sub>	18.30%	89.3%

**Table 2: Physical recovery results by mineral content - LCT #1, Sample A**

	Proportion in Concentrate	Total Mineral Recovered
Pyrochlore	39.0%	72.0%
Zircon	27.2%	89.3%
Gangue Minerals	33.8%	
<b>Total</b>	<b>100.0%</b>	

\*Pyrochlore and zircon percentages are estimates based on the assumption that 100% of Nb<sub>2</sub>O<sub>5</sub> and Ta<sub>2</sub>O<sub>5</sub> occur in pyrochlore and 100% of ZrO<sub>2</sub> occurs in zircon.



The relatively coarse grain size, and simple mineralogy at Kanyika are considered to be significant advantages in the physical and chemical metallurgical recovery process. The Company believes that this is borne out by the highly encouraging physical separation results received to date. Results from the next 2 LCTs currently being undertaken by SGS Lakefield should be available shortly.

## 2. Chemical Leaching

SGS conducted an initial sighter test to investigate whether the concentrate was amenable to conventional leaching with sulphuric and hydrofluoric acid. The test was performed on a combined pyrochlore concentrate derived from both Samples A & B.

The results indicate that the pyrochlore concentrate is highly amenable to sulphuric/hydrofluoric acid leaching with the vast majority of the target economic minerals being dissolved (Table 3).

**Table 3: Proportion of economic elements dissolved in leach test #1.**

	Proportion of Initial Metal Content in Solution
<b>Nb<sub>2</sub>O<sub>5</sub></b>	<b>98.6%</b>
<b>Ta<sub>2</sub>O<sub>5</sub></b>	<b>98.9%</b>
<b>U<sub>3</sub>O<sub>8</sub></b>	<b>89.5%</b>

## 3. Extraction

Metal extraction from solution tests are planned but have not yet been undertaken. A commercially proven technique for extraction of metals from these types of ores, solvent extraction (SX), will be used for precipitation of Nb<sub>2</sub>O<sub>5</sub>, U<sub>3</sub>O<sub>8</sub> and Ta<sub>2</sub>O<sub>5</sub> from solution.

### **Resource Estimate Progress**

Runge Limited (formerly ResEval) has completed initial geological and mineralisation wire-framing for the central and northern parts of the Kanyika deposit. Laboratory analytical results for the last drillholes completed in December 2007 are expected by early March 2008, with the JORC classified resource estimate due soon thereafter.

**Competent Persons:** *The contents of this report relating to geology and exploration results are based on information compiled by Dr Julian Stephens, Member of the Australian Institute of Geoscientists and Exploration Manager for Globe Uranium. Dr Stephens has sufficient experience related to the activity being undertaken 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. Dr Stephens consents to the inclusion in this report of the matters compiled by him in the form and context in which they appear.*