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ASX/Media Announcement

Metallurgy Update – Kanyika Niobium Project

Highlights

- **Mini-pilot metallurgical program to produce steel grade ferro-niobium (FeNb) well underway with further encouraging results**
- **Improvement in concentrate grade to ~30% Nb₂O₅ (from ~22%) and mass reduction by ~27% through weak acid leach**
- **Possibility to produce high-grade iron (magnetite) by-product identified**
- **Bulk sample now at SGS Lakefield (Canada) for major flotation work**

Summary

Globe Metals & Mining is pleased to report that its metallurgical pilot program, a key component of the Pre-Feasibility Study (PFS) for the Kanyika Niobium Project, is well underway.

The program entails treatment of 6 tonnes of Kanyika run-of-mine grade mineralised material, to produce approximately 60kg of a niobium-rich pyrochlore concentrate, and ultimately 5 to 10kg of FeNb. In addition to demonstrating that steel grade FeNb can be produced from Kanyika, the final product will be made available to potential off-take partners for evaluation. Results are due toward the end of Q3 2009.

Further objectives of the FeNb testwork program will be to assess the viability of economically recovering and producing tantalum, iron (magnetite) and uranium by-products.

Approximately 90% of annual niobium production is consumed by the steel industry, predominantly in high-strength low alloy (HSLA) steel products for major civil engineering and construction projects, oil and gas pipelines and the automobile and shipping industries.

Globe's planned level of niobium production from Kanyika is 3,000tpa (Nb metal content), primarily in the form of steel grade FeNb, will represent no more than 3-4% of global niobium production per annum (scheduled to commence in 2012).

The mini-pilot metallurgical program now underway is a precursor to a much larger, 100t to 200t, pilot program to be conducted during the Bankable Feasibility Study, to commence immediately after successful completion of the PFS.



Mini-Pilot Plant

The Company is pleased to report good progress of the mini-pilot plant test work which comprises four main components:

1. Gravity and magnetic separation and concentration at Nagrom Laboratories, Perth (complete)
2. Flotation of gravity concentrate and tail at SGS Lakefield, Canada (underway)
3. Acid leach and solvent extraction to produce metal oxides at SGS Lakefield, Canada
4. Smelting to produce FeNb (ferro-niobium) at Keech Furnace Technologies, South Africa

The Company expects the mini-pilot program to be complete toward the end of Q3 2009. At this point, it will provide product samples to its potential off take partners for their evaluation.

1. Gravity and Magnetic Separation

A 6 tonne sample of near surface fresh rock mainly from the Milenje Zone mineralisation has undergone physical processing at Nagrom Laboratories in Perth, Australia. Calculated head grades averaged 0.49% Nb₂O₅ and 0.40% ZrO₂.

The processing included:

- crushing to -1mm
- feeding crushed sample over primary and secondary spirals, with primary scavenger tails
- regrind to -500µm
- magnetic separation of spiral concentrates
- primary and secondary zircon float to enhance Nb₂O₅ grade of concentrate

Results from the gravity separation (spirals) for the bulk 6 tonne sample showed improvements on the previous spiral test conducted on a smaller 120kg sample. Mass pull for the concentrate was improved to 5% (from 8%), containing 29.4% of the Nb₂O₅ (27.2%), 34.7% of the Ta₂O₅ (31.0%), 30.1% of the U₃O₈ (26.3%) and 87.3% of the ZrO₂ (86.2%).

The spiral concentrate was then significantly upgraded by removal of a further 16% of its mass by magnetic separation, having an Fe₂O₃ grade of up to 95% and averaging 81%. Ongoing testwork will evaluate the potential to upgrade this magnetite product by regrind of the +500µm fraction and further magnetic separation, to produce a saleable iron product. This regrind may also liberate much of the 1% pyrochlore contained within the magnetic product, further adding to niobium and tantalum recoveries.

Simple screening at 500µm of the non-magnetic fraction of the concentrate showed that a significant amount of the zircon could be removed (31%) in the coarse fraction, with only a minor loss of niobium (0.9%). The niobium grade of the fine screened concentrate was increased markedly as a result.

2. Flotation

Globe's consulting metallurgist, Mr John MacIntyre, of MacIntyre and Associates, is at SGS Lakefield, Canada overseeing the flotation program, which is targeting production of 50-70kg of pyrochlore concentrate grading ~22% Nb₂O₅. Both products from Nagrom gravity/magnetic testwork, being the non-magnetic spiral concentrate (150kg), and the spiral tail (4,800kg) are included in this program.

Preliminary results show that further upgrading of the non-magnetic spiral concentrate (150kg) produced by Nagrom has been achieved by removal of zircon by flotation. Results should be available in late July, 2009.

3. Acid Leach and Solvent Extraction

Approximately 30kg or half of the pyrochlore float concentrate will be leached with strong acids to produce relatively pure metal oxides using solvent extraction technology. Approximately 3-6kg of Nb₂O₅ will be produced from this phase of the program, in addition to smaller amounts of Ta₂O₅ and U₃O₈. This work will be completed at SGS Lakefield, Canada.

4. Smelting

The remaining 30kg of pyrochlore float concentrate will be directly smelted in a DC arc furnace at Keech Furnace Technologies in Johannesburg, South Africa. The aim is to establish whether a commercially acceptable ferro-niobium can be produced through direct smelting of the concentrate.

The 3-6kg of high purity Nb₂O₅ produced by acid leach/solvent extraction will also be smelted at Keech Furnace Technologies to produce high-purity ferro-niobium.

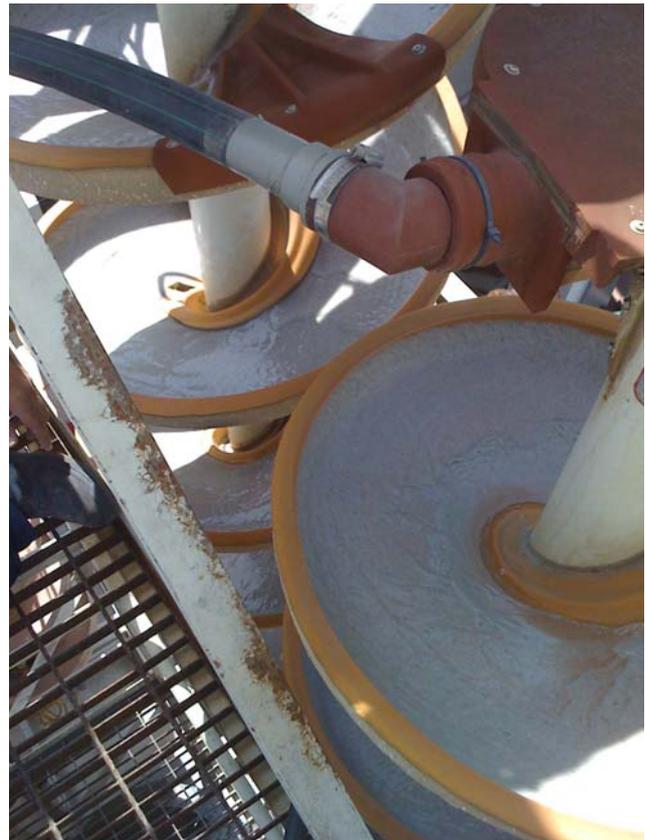
This final part of the pilot-program should be completed by September 2009.

Concentrate Upgrade

A small lab-scale program designed to upgrade the gravity concentrate and remove unwanted impurities such as phosphorous, using hydrochloric acid, caustic soda and nitric acid has been highly successful. This was conducted at AMMTEC Laboratories in Perth.

Overall, the gravity concentrate treated had a grade of ~22% Nb₂O₅. After treatment with 5M HCl and caustic soda bake, the mass of the concentrate was reduced by 27% and the grade was increased to ~30% Nb₂O₅. Approximately 98% of the phosphorous was also leached out of the sample with negligible loss of niobium, tantalum and uranium. This has resulted in a much purer and higher grade sample.

Further weak acid leach tests to optimise acid consumption and impurity removal are ongoing.



Photographs of Roche Spirals in operation treating Globe's 6 tonne Kanyika sample at Nagrom Laboratories, Perth.

About Globe Metals & Mining

Globe Metals & Mining is an African-focused uranium and specialty metals resource company. Its main focus is the multi-commodity (niobium, uranium, tantalum and zircon) Kanyika Niobium Project in central Malawi, which contains a 55.3Mt Inferred and Indicated JORC resource @ 3,000ppm Nb₂O₅, including a higher grade 24.0Mt component @ 3,800ppm Nb₂O₅. The Indicated Resource is 13.2Mt @ 3,600ppm Nb₂O₅, including a higher grade 8.5Mt component @ 4,200ppm Nb₂O₅, and the Inferred Resource is 42.1Mt @ 2,800ppm Nb₂O₅. A Pre-Feasibility Study was commissioned in September 2008 and production is planned to commence in 2012 at a rate of 3,000tpa niobium metal, principally in the form of ferro-niobium.

Globe has a number of uranium and other projects in Malawi, which it manages from its regional exploration office in Lilongwe, the capital of Malawi. The Company has been listed on the ASX since December 2005 (Code: GBE), and has its corporate head office in Perth, Australia.

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