

CONTINUED METALLURGY IMPROVEMENTS FOR MALINGUNDE SAPROLITE

Sovereign Metals Limited ("the Company" or "Sovereign") is pleased to report the final results from the recently completed laboratory flotation test-work program for the Malingunde saprolite (clay)-hosted flake graphite deposit.

The initial test results reported in September 2016 showed high grade concentrates with excellent flake distribution could be produced with a simple process flowsheet. Continued bench-scale metallurgical test-work with refinements to the flowsheet show further improvements in grade and flake size distribution.

Highlights:

- > The new results show:
 - Combined concentrate grade across all flake size fractions increased from 97.3% C(t) to 98.2% C(t).
 - The percentage of the concentrate in the +149μm medium, large & jumbo flake size fractions **increased from ~49% to ~55%.**
- Overall consistency of results across 8 separate tests indicates robust metallurgical behaviour which significantly de-risks the processing component for a potential future flake graphite operation at Malingunde.
- The process flowsheet incorporates an upfront scrubber (similar to a trommel) to wash & disaggregate the graphite flakes from the host material prior to flotation. This provides significant capital & operational cost benefits over traditional hard-rock crushing & milling equipment.

Table 1. Results of flotation test #6 on Malingunde saprolite hosted graphite mineralisation.

MALINGUNDE 2016 FLOTATION RESULTS						
		TEST #1 (INITIAL)		TEST #6 (NEW)		
PARTICLE SIZE		С	Distribution	С	Distribution	Flake Category
Tyler Mesh	(μm)	(%)	(wt. %)	(%)	(wt. %)	Trake Category
+ 48	+ 297	96.8	20.4	98.4	21.9	Extra Large (Jumbo)
-48 + 100	- 297 + 149	97.8	28.3	98.1	33.3	Large-Medium
-100 + 200	- 149 + 74	97.6	27.6	98.4	28.6	Small
-200	- 74	96.4	23.7	97.7	16.2	Amorphous
TOTAL		97.3	100.0	98.2	100.0	



Managing Director Dr Julian Stephens commented,

"The consistency of results shows that the flowsheet for processing the soft saprolite material at Malingunde is robust. Additionally, we have been able to improve both the grade and flake size distribution of the final concentrates. The results continue to highlight the attractiveness of Malingunde where the Company is targeting a low capex and low opex model of flake graphite production".

FREE DIG OPEN PIT MINE

PLANT FEED STOCK PILE

POLISHING

FLOTATION

FLOTATION

BAG AND PALLETISE

FLOTATION

Figure 1. Simplified initial Malingunde saprolite-hosted graphite flowsheet

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Metallurgical testwork

Sovereign's independent metallurgical test-work program for the Malingunde saprolite-hosted flake graphite project was conducted at SGS Lakefield Canada under the supervision of Mr Oliver Peters (MSc, P.Eng, MBA).

The test-work was performed on a saprolite composite sample obtained through hand auger sampling with a head grade of 11.3% TGC (Holes MGHA0894-MGHA0898).

Initial disaggregation of the saprolite composite was conducted under conditions representative of a scrubber with ceramic media. This was followed by standard rougher flotation, polishing grind, cleaner flotation stages a gentle attrition scrubbing or stirred media mill stage, then a final cleaner flotation stage (Figure 1).

The 4 tests carried out on each of the 2 separate composite samples used slightly different final attritioning conditions and resulted in consistent overall results. This indicates very robust metallurgical behaviour, which significantly de-risks the processing component of a potential future flake graphite operation.

The planned process flowsheet does not contain an upfront crushing or grinding circuit. Instead, the flowsheet incorporates a scrubber (similar to a trommel) to wash & disaggregate the graphite flakes from the host material prior to flotation. This provides significant capital & operational cost benefits over traditional hard-rock crushing & milling equipment.

Figure 2. A scrubber of the type that would be used for the Malingunde saprolite-hosted flake graphite deposit in a production scenario.





Concluding Comments

Saprolite-hosted flake graphite deposits are sought after as they generally have substantially lower capital and operational costs compared with hard rock operations. This is primarily due to their free-dig nature, low life-of-mine stripping ratios and simplified processing plants that do not require more expensive crushing or primary milling circuits.

The highly attractive attributes of the Malingunde saprolite-hosted flake graphite deposit include:

- Thick and extensive zones of saprolite-hosted flake graphite mineralisation identified over 3.4km strike, 140m average cumulative widths and 20-30m average vertical thicknesses.
- The mineralisation will be free-dig with a very low strip ratio.
- A simple process flowsheet using an upfront scrubber will have very significant capital and operational cost benefits over traditional hard-rock crushing and milling equipment.
- Graphite concentrates of premium grade and flake size distribution can be easily produced.
- Malingunde has excellent infrastructure availability, being just 15km from the capital city of Lilongwe, 25km from rail access, 15km from high-capacity power-lines and with plentiful fresh water.

Sovereign is targeting a low capital, low capital intensity and low operating cost model for the development of the Malingunde saprolite-hosted graphite project.

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Competent Person Statement

The information in this report that relates to Metallurgical Testwork Results is based on information compiled by Mr Oliver Peters, M.Sc., P.Eng., MBA, who is a Member of the Professional Engineers of Ontario (PEO), a 'Recognised Professional Organisation' (RPO) included in a list promulgated by the ASX from time to time. Mr Peters is a consultant of SGS Canada Inc. ("SGS"). SGS is engaged as a consultant by Sovereign Metals Limited. Mr Peters 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, to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Peters consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

Forward Looking Statement

This release may include forward-looking statements, which may be identified by words such as "expects", "anticipates", "believes", "projects", "plans", and similar expressions. These forward-looking statements are based on Sovereign's expectations and beliefs concerning future events. Forward looking statements are necessarily subject to risks, uncertainties and other factors, many of which are outside the control of Sovereign, which could cause actual results to differ materially from such statements. There can be no assurance that forward-looking statements will prove to be correct. Sovereign makes no undertaking to subsequently update or revise the forward-looking statements made in this release, to reflect the circumstances or events after the date of that release.

Footnote to Table 1.

The chemical analysis used to determine the total carbon content employs combustion of a sample followed by infrared detection on a LECO SC-632 instrument. All reported analytical results have an associated measurement uncertainty based on the expected precision and accuracy relating to the method and sample concentration. Values at 100% should not be treated as pure products without additional impurity testing. The estimated measurement uncertainty for total carbon values greater than 90% C is 1.7% (relative) with a resolution of 1 significant figure.