

## Up to 99.98% C Ultra-high Purity Graphite Concentrate Produced

Sovereign Metals Limited (“Sovereign” or “Company”) is pleased to report the results from its initial chemical leach purification test on graphite concentrates from the major Duwi Flake Graphite Prospect (“Duwi Prospect”) within its 100%-owned Central Malawi Graphite Project (“CMGP”). Ultra-pure graphite has been produced across all flake size fractions of concentrates generated from the previously reported flotation test-work program.

### Highlights:

- Upgrade of flotation concentrates to between 99.97 and 99.98 %C ultra-pure graphite achieved across all flake size fractions
- Chemical upgrading achieved using 3-stage alkaline roast-acid leach process
- No re-grinding of original flotation concentrates required to achieve ultra-pure concentrates
- Results indicate that Duwi Prospect concentrates may be suitable for the growing market of high-value ultra-pure graphite applications in addition to traditional high volume applications
- Results are not considered to be optimised and further purification testing is underway

Table 1: Final Test Results (3-Stage Chemical Leach)

Size Fraction Analysis		Final Purified Grade		Flake Category
Fraction	Fraction	*Impurities (Actual)	**C <sub>t</sub> (calc.)	
Mesh	Microns (µm)	(ppm)	(%)	
+35	+425	151.61	<b>99.985</b>	Extra Large ('Jumbo')
-35/+48	-425/+300	170.60	<b>99.983</b>	
-48/+100	-300/+150	188.92	<b>99.981</b>	Large-Medium
-100/+200	-150/+75	232.75	<b>99.977</b>	Small
-200	-75	319.36	<b>99.968</b>	Amorphous

\*The total impurities in each fraction are calculated using the Glow Discharge Mass Spectrometry (GDMS) results and taking into account only the elements above the detection limit. Precision and bias typical of GDMS measurements are discussed under ASTM F1593.\*\*The estimated purity of the graphite is calculated using the GDMS results and taking into account only the elements above the detection limit.

**Enquiries:**

**Matthew Syme – Managing Director**

**+618 9322 6322**

## Purification Leach Test Details

The objective of the initial chemical purification test was to investigate the upgrading of the graphite concentrate product previously produced via flotation of Duwi fresh rock material. A 131g sample (unsized) of final flotation concentrate from a reproducibility test was dispatched to SGS Canada Inc. (SGS) in Lakefield. SGS completed the following:

- Initial Size Fraction Analysis (SFA) of the entire 131g sample and head analysis (see Table 2)
- Recombining of all fractions to generate feed concentrate sample
- 60g split of the concentrate was then subject to staged chemical leach process
- SFA of final chemically purified leach residue (see Table 3)
- Individual fractions submitted for analysis of 74 element suite using the Glow Discharge Mass Spectrometry (GDMS) (see Table 3)

The assay results of the flotation concentrate used for the purification tests and the purified concentrate are presented in Table 2 and Table 3, respectively.

Table 2: Test Results (3-Stage Chemical Leach)				
Initial Flotation Concentrate Grade				
Size Fraction Analysis			C(t) %	Total Impurities ppm
Fraction mesh	Fraction Microns (µm)	Distribution %		
+35	+425	12.5	94.9	NA
-35/+48	-425/+300	23.7	93.1	NA
-48/+100	-300/+150	22.4	94.3	NA
-100/+200	-150/+75	21.7	92.7	NA
-200	-75	19.7	89.4	NA
<b>Total</b>		<b>100.0</b>	<b>92.8</b>	

All reported results have an associated measurement uncertainty (MU) 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. Testing by party and/or umpire analysis will reduce, but not remove measurement uncertainty of the method. The estimated MU for C(t) using a LECO SC-632 analyser are 1.4% relative for grades between 95 and <100% C(t) and 1.7% relative for grades between 90.0 and <95% C(t).

Table 3: Test Results (3-Stage Chemical Leach)				
Final Purified Grade				
Size Fraction Analysis			C(t) %	Total Impurities ppm
Fraction mesh	Fraction Microns (µm)	Distribution %		
+35	+425	12.1	99.985	151.61
-35/+48	-425/+300	27.0	99.983	170.60
-48/+100	-300/+150	26.4	99.981	188.92
-100/+200	-150/+75	19.8	99.977	232.75
-200	-75	14.7	99.968	319.36
<b>Total</b>		<b>100.0</b>	<b>99.979</b>	<b>224.68</b>

**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.*