




## TESTWORK CONFIRMS SUITABILITY OF MALINGUNDE CONCENTRATES FOR ALL MAJOR END MARKETS.

Sovereign Metals Limited (“the Company” or “Sovereign”) is pleased to report that Malingunde graphite concentrates show strong potential to meet specifications for all major graphite end markets, including lithium-ion (Li-ion) batteries.

Recent spheroidisation test-work results highlight a compelling opportunity for entry into developing graphite markets such as the Li-ion battery supply chain, providing attractive future value upside for the Company.

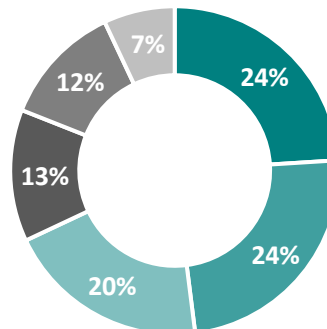
### SOVEREIGN’S MARKETING STRATEGY

-  Sovereign’s primary focus is sales to high-volume, high-value, traditional markets such as refractories, foundries and other industrial applications, enabled by Sovereign’s exceptionally low operating cost.
-  Future entry to the Li-ion battery market provides further value upside, with property testing highlighting that Malingunde products have strong potential to be suitable as Li-ion battery feedstock.
-  The Malingunde Scoping Study business case centres on near term cash flows from existing traditional markets with future access to Li-ion battery markets.

| Natural graphite application | Malingunde suitability |
|------------------------------|------------------------|
| Refractories & foundries     | ✓                      |
| Recarburiser                 | ✓                      |
| Batteries                    | ✓                      |
| Industrials (incl. expanded) | ✓                      |
| Lubricants                   | ✓                      |
| Other                        | TBD                    |

Market share source: Canaccord

2016 market share (by volume)



*Sovereign’s Managing Director, Dr Julian Stephens, said “The Company is in the enviable position of being able to compete with traditional graphite supply by virtue of our very low cost of production, whilst also retaining significant upside to the exciting future growth in energy storage. When combined with Sovereign’s very low capex, this strategy provides the lowest-risk path to development and most compelling investment case amongst all peers.”*

### ENQUIRIES

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**Dr Julian Stephens – Managing Director**

**Dominic Allen – Business Development Manager**

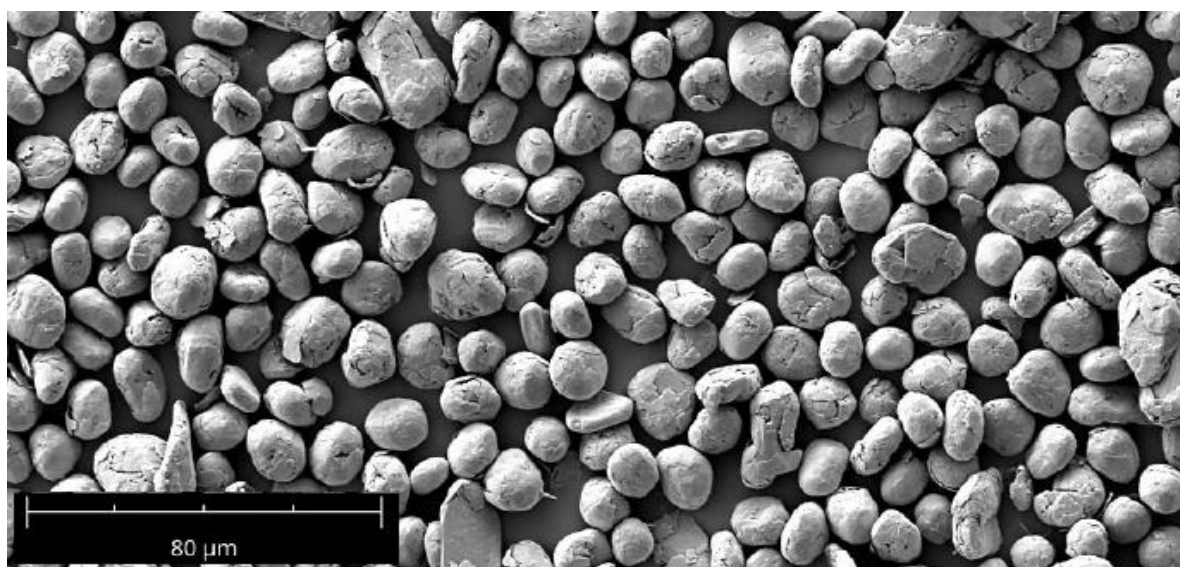
## SPECIALTY APPLICATIONS – BATTERIES

An initial laboratory test-work program conducted by an independent German industrial minerals specialist demonstrated that spherical graphite with suitable benchmark specifications for lithium-ion battery anodes can be produced from Malingunde concentrates. Highlights of results achieved across the program include:

| Parameter                               | SVM result  | Benchmark value <sup>1</sup> | Measure                              |
|---|-------------|------------------------------|--------------------------------------|
| BET ( $m^2/g$ )                         | 6.6         | 4 – 8                        | Surface area of the particles        |
| Tap Density ( $g/cm^3$ )                | 0.90 – 0.93 | > 0.90                       | Ability for the particles to compact |
| D <sub>50</sub> ( $\mu m$ )             | 13.4 – 21.8 | 10 – 25                      | Size of particles                    |
| D <sub>90</sub> : D <sub>10</sub> ratio | 2.1 – 4.0   | < 3                          | Distribution of particle size        |
| Purity                                  | >99.95%     | >99.95%                      | Total graphitic carbon content       |
| Yield                                   | 21% – 51%   | > 30%                        | Yield of particles produced          |

1. Per test work provider

These promising results are based upon Sovereign’s first spheroidisation tests on Malingunde concentrates, and warrant significant further battery suitability development test work, planned to commence shortly.



**Figure 1: Electron micrograph of Malingunde spherical graphite. Magnification 1,000x**

## CONCLUSION

Sovereign has now identified the opportunity for Malingunde concentrates to be sold into all major graphite end markets. The project is at the bottom of the capital and operating cost curves, allowing Sovereign to compete with traditional graphite supply and enter existing industrial markets at a competitive price point. Significant upside is retained to the future growth in energy storage, and specifically the ability of Malingunde flake to be sold to the emerging Li-ion battery market.

## **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.*

