



## TESTWORK DELIVERS SUPERIOR QUALITY, LOW IMPURITY GRAPHITE FOR BATTERY ANODES

- Graphite circuit feed prepared at Sovereign's existing Lilongwe laboratory facility has produced high quality concentrates in benchtop and pilot-scale flotation and cleaning
- Four independent laboratories all successfully produced high-grade graphite concentrate averaging over 97% Total Graphite Content (TGC) with flotation recoveries exceeding 90%
- Flotation results demonstrated 1.44% TGC run-of-mine Kasiya ore upgrades to more than 55% TGC rougher concentrate without crushing or milling, process steps typically required for producing graphite concentrates from hard-rock deposits; contributing to the unique low cost characteristics of Kasiya's saprolite hosted graphite
- Graphite concentrates indicate exceptionally low levels of sulphur compared to typical hard-rock graphite peers – a key metric to qualify as active anode material for lithium-ion batteries
- Results are part of ongoing testwork being undertaken as part of the Company's graphite marketing and active anode qualification strategy, supervised by Dr Surinder Ghag
- Downstream testwork to produce and characterise Coated Spherical Purified Graphite (CSPG) active anode material continues at German graphite consultancy ProGraphite GmbH

Sovereign Metals Limited (ASX:SVM; AIM:SVML) (the Company or Sovereign) is pleased to announce the results of graphite testwork completed at multiple independent laboratories in Australia, Canada and South Africa.

Graphite flotation and cleaning testwork was conducted on graphite circuit feed from Sovereign's Kasiya Rutile-Graphite Project (Kasiya or Project) at four different laboratories, which all successfully produced high-grade graphite concentrate (94.9%-97.8% TGC) at high flotation recoveries (91.2%-97.2%).

The testwork demonstrated excellent results using a conventional flowsheet that was consistent across all laboratories, thus confirming Sovereign's ability to produce a high quality graphite concentrate.

**Managing Director Frank Eagar commented:** "Our ability to upgrade Kasiya ore at 1.4% graphite to a 55% rougher concentrate without any crushing or milling, highlights more of the unique qualities of Kasiya. There are very limited other graphite projects with these characteristics. The pilot-scale results also confirm that Kasiya produces high-grade concentrates with very low sulphur levels at high recoveries. Simply put, Kasiya will be a standout producer of high-quality graphite concentrate at industry low operating costs."

### ENQUIRIES

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The graphite circuit feed provided to the various laboratories was produced at the Company's existing laboratory facility in Lilongwe, Malawi, where it was screened and separated over a wet shaking table.



Figure 1: Holman Wilfley 2000 wet shaking table in action demonstrating clear separation between Rutile HM, waste and Graphite

The graphite feed grades of 3.5%-4.0% TGC to the graphite circuit are significantly higher than the Mineral Resource Grade of 1.44%, highlighting the ~2.4-2.8-fold upgrading of graphite grades when ROM ore passes through the front-end rutile gravity separation circuit.

This demonstrates the ease of separating the rutile heavy mineral and graphite streams from the front end of the Kasiya Pre-feasibility Study process flowsheet. Subsequently, the two product streams pass into distinct, industry-standard, final product flowsheets. This further highlights the commercial benefits of having both rutile and graphite mineralisation co-existent in the same soft saprolite-hosted orebody.

The first stage of upgrading the graphite feed, rougher flotation, achieved very high rejection (>90%) of waste materials to rougher tails, producing a rougher concentrate with more than 55% TGC and very high recoveries (94%-98%) in laboratory scale testing consistently across all four laboratories. Upgrading the graphite feed at very high recoveries and rejection of non-graphitic minerals without run-of-mine milling is another of Kasiya's significant advantages, supporting the lowest cost graphite production.

The rougher concentrate was further upgraded through laboratory scale flotation, cleaning and polishing stages, producing high-grade concentrates at high graphite circuit recoveries.

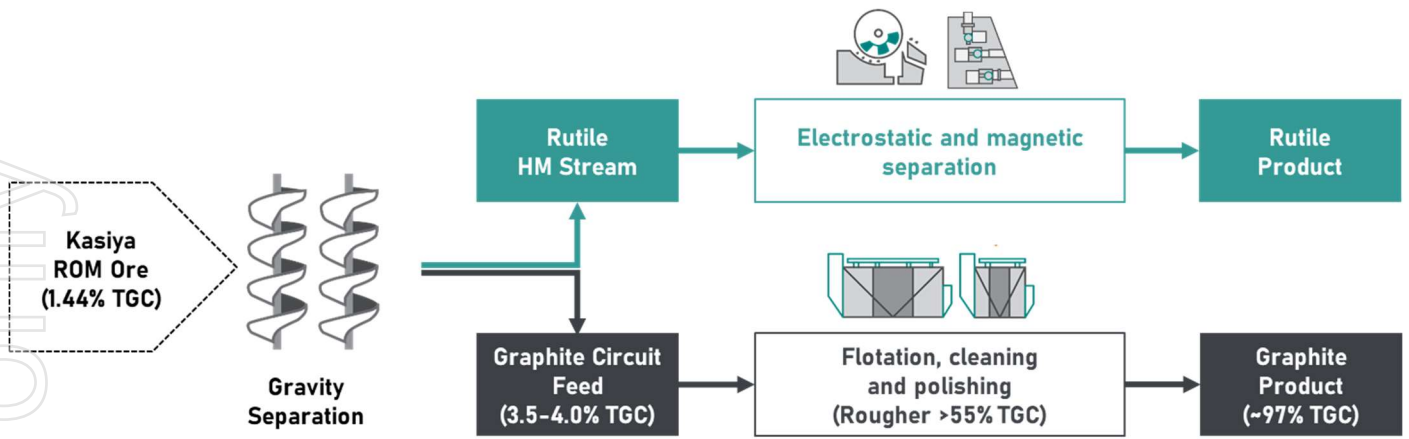


Figure 2: High-level process flowsheet for rutile and graphite production at Kasiya

Pilot-scale testwork confirmed the laboratory-scale results with >90% TGC recovery to high-grade graphite concentrates (<180-micron concentrate at 96.9% TGC and >180-micron concentrate at 97.2% TGC).



Figure 2: Graphite flotation test work at Australia-based ALS Global

## HIGHLY FAVOURABLE IMPURITY PROFILE

Kasiya concentrates have very low levels of sulphur. Sulphur can be difficult to remove in the purification processes required to produce anode materials. Other major impurities important for anode material purification processes are iron (Fe), silicon (Si) and aluminium (Al). The Kasiya material has exceptionally low levels of all of these impurities. Benchmarked against the Chinese Standard (China dominates the supply of graphite for battery anodes) this could potentially lead to significant commercial advantages during purification and Kasiya's potential as a long term secure source of graphite ex-China.

	Kasiya			Benchmarks	
	Concentrate <180 µm	Concentrate >180 µm	Combined	China Standard <sup>1</sup>	Example Chinese Product <sup>2</sup>
Graphite (TGC%)	96.9%	97.2%	97.0%	>94%	96.0%
Sulphur (S) (%)	<0.02%	<0.02%	<0.02%	<0.5%	0.23%
Iron (Fe) (%)	0.48%	0.46%	0.47%	<1.00%	0.55%
Silicon (Si) (%)	0.60%	0.80%	0.68%	n/d	1.25%
Aluminium (Al) (%)	0.24%	0.28%	0.26%	n/d	0.38%

1. National Standard of China – Flake Graphite (GB/T 3518-2023)

2. Asbury Carbons – A Study Comparing the Performance of Natural Flake Graphite from Two Different Geographical Regions (<https://asbury.com/media/1170/a-study-comparing-the-performance-of-natural-flake-graphite.pdf>)

## CONTINUING DOWNSTREAM TEST WORK

Kasiya concentrate has been sent for downstream testwork at respected graphite consultancy ProGraphite to produce and characterise CSPG active anode material for lithium-ion batteries. ProGraphite is conducting shaping, purification, and coating testwork to produce CSPG and evaluate the electrochemical performance of Kasiya CSPG. This will provide baseline data for further optimisation and engagement with off-takers. Initial outcomes of this test work are expected to be released in the coming weeks.

## Competent Person Statement

The information in this report that relates to Metallurgical Testwork is based on information compiled by Dr Surinder Ghag, PhD, B. Eng, MBA, M.Sc., who is a Member of the Australasian Institute of Mining and Metallurgy (MAusIMM). Dr Ghag is engaged as a consultant by Sovereign Metals Limited. Dr Ghag 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'. Dr Ghag consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The information in this report that relates to Exploration Results is based on information compiled by Mr Samuel Moyle, a Competent Person who is a member of The Australasian Institute of Mining and Metallurgy (AusIMM). Mr Moyle is the Exploration Manager of Sovereign Metals Limited and a holder of ordinary shares and unlisted performance rights in Sovereign Metals Limited. Mr Moyle has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken, 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 Moyle consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The information in this announcement that relates to the Mineral Resource Estimate is extracted from an announcement dated 5 April 2023 entitled 'Kasiya Indicated Resource Increased by over 80%' which is available to view at [www.sovereignmetals.com.au](http://www.sovereignmetals.com.au) and is based on, and fairly represents information compiled by Mr Richard Stockwell, a Competent Person, who is a fellow of the Australian Institute of Geoscientists (AIG). Mr Stockwell is a principal of Placer Consulting Pty Ltd, an independent consulting company. The original announcement is available to view on [www.sovereignmetals.com.au](http://www.sovereignmetals.com.au). Sovereign confirms that a) it is not aware of any new information or data that materially affects the information included in the original announcement; b) all material assumptions included in the original announcement continue to apply and have not materially changed; and c) the form and context in which the relevant Competent Persons' findings are presented in this announcement have not been materially changed from the original announcement.

The information in this announcement that relates to Production Targets, Ore Reserves, Processing, Infrastructure and Capital Operating Costs, Metallurgy (rutile and graphite) is extracted from an announcement dated 28 September 2023 entitled 'Kasiya Pre-Feasibility Study Results' which is available to view at [www.sovereignmetals.com.au](http://www.sovereignmetals.com.au). Sovereign confirms that: a) it is not aware of any new information or data that materially affects the information included in the original announcement; b) all material assumptions and technical parameters underpinning the Production Target, and related forecast financial information derived from the Production Target included in the original announcement continue to apply and have not materially changed; and c) the form and context in which the relevant Competent Persons' findings are presented in this presentation have not been materially modified from the original announcement.

### Ore Reserve for the Kasiya Deposit

Classification	Tonnes (Mt)	Rutile Grade (%)	Contained Rutile (Mt)	Graphite Grade (TGC) (%)	Contained Graphite (Mt)	RutEq. Grade* (%)
Proved	-	-	-	-	-	-
Probable	538	1.03%	5.5	1.66%	8.9	2.00%
<b>Total</b>	<b>538</b>	<b>1.03%</b>	<b>5.5</b>	<b>1.66%</b>	<b>8.9</b>	<b>2.00%</b>

\* RutEq. Formula: Rutile Grade x Recovery (100%) x Rutile Price (US\$1,484/t) + Graphite Grade x Recovery (67.5%) x Graphite Price (US\$1,290/t) / Rutile Price (US\$1,484/t). All assumptions are taken from the PFS \*\* Any minor summation inconsistencies are due to rounding

### Kasiya Total Indicated + Inferred Mineral Resource Estimate at 0.7% rutile cut-off grade

Classification	Resource (Mt)	Rutile Grade (%)	Contained Rutile (Mt)	Graphite Grade (TGC) (%)	Contained Graphite (Mt)
Indicated	1,200	1.0%	12.2	1.5%	18.0
Inferred	609	0.9%	5.7	1.1%	6.5
<b>Total</b>	<b>1,809</b>	<b>1.0%</b>	<b>17.9</b>	<b>1.4%</b>	<b>24.4</b>

## 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.*

*This announcement has been approved and authorised for release by the Company's Managing Director & CEO, Frank Eagar.*

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# APPENDIX 1: JORC CODE, 2012 EDITION – TABLE 1

## SECTION 1 - SAMPLING TECHNIQUES AND DATA

Criteria	JORC Code explanation	Commentary
<b>Sampling Techniques</b>	<p><i>Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</i></p>	<p><b>Metallurgical Composite Sample 1:</b></p> <p>The sample was a composite of 24 Hand Auger (<b>HA</b>) and Push Tube (<b>PT</b>) holes drilled in 2022 in the Kingfisher pit.</p> <p>All drilling samples within the pit shell were added to the composite resulting in a sample of 2,498kg.</p> <p>Specifically, the composite sample consisted of selected rutile mineralised zones from holes, NSHA0009, 0010, 0056, 0060, 0061, 0074, 0119, 0311, 0343, 0344, 0345, 0350 and NSPT 0011, 0013, 0014, 0015, 0017, 0020, 0021, 0023, 0024, 0025, 0026, 0027.</p> <p>The following workflow was used to generate a pre-concentrate graphite feed at AML:</p> <ul style="list-style-type: none"> <li>• Wet screen at 2mm to remove oversize</li> <li>• Two stage cyclone separation at a cut size of 45µm to remove -45µm material</li> <li>• Pass +45µm -2mm (sand) fraction through Up Current Classifier (UCC)</li> <li>• Pass UCC O/F through cyclone at cut point of 45µm</li> <li>• Pass UCC O/F cyclone U/F (fine) over MG12 Mineral Technologies Spiral</li> <li>• Pass UCC U/F (coarse) over MG12 Mineral Technologies Spiral</li> <li>• Spiral cons are combined for further processing.</li> </ul> <p>Fine and coarse gravity tailing samples contain approximately 75%-80% of the graphite present in the feed sample. The majority of the graphite lost is contained in the -45µm fines.</p> <p><b>Metallurgical Composite Sample 2:</b></p> <p>The sample was a composite of 152 Hand Auger (<b>HA</b>) holes drilled in eight locations within Kingfisher to 12 metres depth. Equal quantity (~8.5kg) was split from each individual metre to prepare a 0-12m composite per hole. Holes were drilled in 2023 for the sole purpose of preparing this composite sample.</p> <p>The drilling program produced a 15,766kg raw composite sample which was then processed in 100kg lots through the Sovereign Lilongwe Laboratory through the following stages:</p> <ul style="list-style-type: none"> <li>• Screening</li> <li>• +2mm screen</li> <li>• +1mm screen</li> <li>• 600µm screen</li> <li>• 45µm deslime screen</li> <li>• 45µm to 600µm sand fraction was processed over the shaking tables to produce: <ul style="list-style-type: none"> <li>○ HM conc</li> <li>○ Middling fraction</li> <li>○ Graphite tailings conc</li> </ul> </li> </ul> <p>The +600µm -1000µm (1mm) was added to the graphite tailings concentrate to form the total graphite gravity preconcentrate (<b>GGPC</b>) for a total of 4,870kg.</p> <p>Three 100kg splits were then taken from the GGPC sample and sent to Maelgwyn, Core and SGS for downstream testwork.</p>
	<p><i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i></p>	<p>Placer Consulting (<b>Placer</b>) Resource Geologists have reviewed Standard Operating Procedures (<b>SOPs</b>) for the collection of HA and PT drill samples and found them to be fit for purpose.</p> <p>Drilling and sampling activities are supervised by a suitably qualified Company geologist who is present at all times. All bulk 1-metre drill samples are geologically logged by the geologist at the drill site.</p> <p>The primary metallurgical composite sample is considered representative for this style of mineralisation.</p>
	<p><i>Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done</i></p>	<p>HA drilling was used to obtain 1-metre samples. The bulk metallurgical sample was a composite of selected samples from routine resource drilling.</p>

Criteria	JORC Code explanation	Commentary
	<i>this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.</i>	Existing rutile and graphite exploration results were used to determine the 1-metre intervals suitable to contribute to the two bulk sample composites.
<b>Drilling Techniques</b>	<i>Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).</i>	Hand-auger drilling is completed with 75mm diameter enclosed spiral bits with 1-metre long steel rods. Each 1m of drill sample is collected into separate sample bags and set aside. The auger bits and flights are cleaned between each metre of sampling to avoid contamination.  Placer has reviewed SOPs for hand-auger drilling and found them to be fit for purpose and support the resource classifications as applied to the MRE.
<b>Drill Sample Recovery</b>	<i>Method of recording and assessing core and chip sample recoveries and results assessed.</i>	The configuration of drilling and nature of materials encountered results in negligible sample loss or contamination.  Samples are assessed visually for recoveries. Overall, recovery is good. Drilling is ceased when recoveries become poor generally once the water table has been encountered.  Auger drilling samples are actively assessed by the geologist onsite for recoveries and contamination.
	<i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i>	The Company's trained geologists supervise auger drilling on a 1 team 1 geologist basis and are responsible for monitoring all aspects of the drilling and sampling process.
	<i>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</i>	No bias related to preferential loss or gain of different materials has occurred.
<b>Logging</b>	<i>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation mining studies and metallurgical studies.</i>	All individual 1-metre auger intervals are geologically logged, recording relevant data to a set template using company codes.
	<i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.</i>	All logging includes lithological features and estimates of basic mineralogy. Logging is generally qualitative.
	<i>The total length and percentage of the relevant intersection logged</i>	100% of samples are geologically logged.
<b>Sub-sampling techniques and sample preparation</b>	<i>If core, whether cut or sawn and whether quarter, half or all core taken.</i>	Not applicable – no core drilling conducted.
	<i>If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.</i>	Primary individual 1-metre samples from all HA and PT holes drilled are sun dried, homogenised and riffle split.
	<i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i>	<b>Metallurgical Composite Sample 1:</b>  1-metre intervals selected for the 2,498kg metallurgical sample were divided into weathering units.  MOTT and PSAP material were combined and homogenised in preparation for dispatch to Australian laboratory Intertek for TGC assay.  Per Australian import quarantine requirements the contributing SOIL/FERP material from within 2m of surface was kept separate to undergo quarantine heat treatment at Intertek Laboratory on arrival into Australia.  The two sub samples (SOIL/FERP and MOTT/PSAP) were then dispatched from Intertek to AML Laboratory (AML). AML sub-sampled and assayed the individual lithologies prior to combining and homogenising the sample in preparation for test-work.  <b>Metallurgical Composite Sample 2:</b>



Criteria	JORC Code explanation	Commentary
		100kg GGPC samples were split at the Lilongwe laboratory and dispatched via airfreight to the three metallurgical laboratories Core, Maeigwyn and SGS laboratories.
	<i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i>	The sample preparation techniques and QA/QC protocols are considered appropriate for the nature of this test-work.
	<i>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</i>	The sampling best represents the material in situ.
	<i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i>	The sample size is considered appropriate for the nature of the test-work.
<b>Quality of assay data and laboratory tests</b>	<i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i>	<b>Metallurgical Composite Sample 1 &amp; 2:</b> The following workflow was used to generate a graphite product; <ul style="list-style-type: none"> <li>○ Coarse and fine rougher graphite flotation</li> <li>○ Polishing grind of coarse and fine rougher graphite concentrate</li> <li>○ Cleaner flotation of coarse and fine graphite</li> <li>○ Cleaner concentrate sizing at 180µm</li> <li>○ Regrind of separate +180µm/-180µm fractions</li> <li>○ Three stage recleaner flotation of +180µm/-180µm fractions</li> </ul>
	<i>For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</i>	Acceptable levels of accuracy and precision have been established. No handheld methods are used for quantitative determination.
	<i>Nature of quality control procedures adopted (e.g. standards, blanks, duplicate, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</i>	Acceptable levels of accuracy and precision have been established in the preparation of the bulk sample composites.
<b>Verification of sampling &amp; assaying</b>	<i>The verification of significant intersections by either independent or alternative company personnel.</i>	No drilling intersections are being reported.
	<i>The use of twinned holes.</i>	No twin holes completed in this program.
	<i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i>	All data was collected initially on paper logging sheets and codified to the Company's templates. This data was hand entered to spreadsheets and validated by Company geologists.
	<i>Discuss any adjustment to assay data.</i>	No adjustment to assay data has been made.
<b>Location of data points</b>	<i>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</i>	A Trimble R2 Differential GPS is used to pick up the collars. Daily capture at a registered reference marker ensures equipment remains in calibration.  No downhole surveying is completed. Given the vertical nature and shallow depths of the holes, drill hole deviation is not considered to significantly affect the downhole location of samples.
	<i>Specification of the grid system used.</i>	WGS84 UTM Zone 36 South.
	<i>Quality and adequacy of topographic control.</i>	DGPS pickups are considered to be high quality topographic control measures.
<b>Data spacing &amp; distribution</b>	<i>Data spacing for reporting of Exploration Results.</i>	<b>Metallurgical Composite Sample:</b> The hand-auger holes contributing to this metallurgical were selected from pit area Kingfisher and broadly represent early years of mining as contemplated in the PFS (Approximately the first three years).  It is deemed that these holes should be broadly representative of the mineralisation style in the general area.
	<i>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</i>	Not applicable, no Mineral Resource or Ore Reserve estimations are covered by new data in this report.
	<i>Whether sample compositing has been applied.</i>	<b>Metallurgical Composite Sample 1:</b>  The sample was composited as described under Sampling Techniques in this Table.

Criteria	JORC Code explanation	Commentary
		<p><b>Metallurgical Composite Sample 2:</b></p> <p>The sample was composited as described under Sampling Techniques in this Table</p>
<b>Orientation of data in relation to geological structure</b>	<i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known considering the deposit type</i>	No bias attributable to orientation of sampling has been identified.
	<i>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</i>	All holes were drilled vertically as the nature of the mineralisation is horizontal. No bias attributable to orientation of drilling has been identified.
<b>Sample security</b>	<i>The measures taken to ensure sample security</i>	<p>Samples are stored in secure storage from the time of drilling, through gathering, compositing and analysis. The samples are sealed as soon as site preparation is complete.</p> <p>A reputable international transport company with shipment tracking enables a chain of custody to be maintained while the samples move from Malawi to Australia or Malawi to Johannesburg. Samples are again securely stored once they arrive and are processed at Australian laboratories. A reputable domestic courier company manages the movement of samples within Perth, Australia.</p> <p>At each point of the sample workflow the samples are inspected by a company representative to monitor sample condition. Each laboratory confirms the integrity of the samples upon receipt.</p>
<b>Audits or reviews</b>	<i>The results of any audits or reviews of sampling techniques and data</i>	<p>It is considered by the Company that industry best practice methods have been employed at all stages of the exploration.</p> <p>Malawi Field and Laboratory visits have been completed by Richard Stockwell in May 2022. A high standard of operation, procedure and personnel was observed and reported.</p>

## SECTION 2 - REPORTING OF EXPLORATION RESULTS

Criteria	Explanation	Commentary
<b>Mineral tenement &amp; land tenure status</b>	<i>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environment settings.</i>	<p>The Company owns 100% of the following Exploration Licences (ELs) under the Mines and Minerals Act 2019 (Malawi), held in the Company's wholly-owned, Malawi-registered subsidiaries: EL0609, EL0582, EL0492, EL0528, EL0545, EL0561, EL0657 and EL0710.</p> <p>A 5% royalty is payable to the government upon mining and a 2% of net profit royalty is payable to the original project vendor.</p> <p>No significant native vegetation or reserves exist in the area. The region is intensively cultivated for agricultural crops.</p>
	<i>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</i>	The tenements are in good standing and no known impediments to exploration or mining exist.
<b>Exploration done by other parties</b>	<i>Acknowledgement and appraisal of exploration by other parties.</i>	Sovereign Metals Ltd is a first-mover in the discovery and definition of residual rutile and graphite deposits in Malawi.
<b>Geology</b>	<i>Deposit type, geological setting and style of mineralisation</i>	<p>The rutile deposit type is considered a residual placer formed by the intense weathering of rutile-rich basement paragneisses and variable enrichment by eluvial processes.</p> <p>Rutile occurs in a mostly topographically flat area west of Malawi's capital, known as the Lilongwe Plain, where a deep tropical weathering profile is preserved. A typical profile from top to base is generally soil ("SOIL" 0-1m) ferruginous pedolith ("FERP", 1-4m), mottled zone ("MOTT", 4-7m), pallid saprolite ("PSAP", 7-9m), saprolite ("SAPL", 9-25m), saprock ("SAPR", 25-35m) and fresh rock ("FRESH" &gt;35m).</p> <p>The low-grade graphite mineralisation occurs as multiple bands of graphite gneisses, hosted within a broader Proterozoic paragneiss package. In the Kasiya areas specifically, the preserved weathering profile hosts significant vertical thicknesses from near surface of graphite mineralisation.</p>

Criteria	Explanation	Commentary
<b>Drill hole information</b>	<i>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: easting and northings of the drill hole collar; elevation or RL (Reduced Level-elevation above sea level in metres of the drill hole collar); dip and azimuth of the hole; down hole length and interception depth; and hole length</i>	All intercepts relating to the Kasiya Deposit have been included in public releases during each phase of exploration and in this report. Releases included all collar and composite data and these can be viewed on the Company website.  There are no further drill hole results that are considered material to the understanding of the exploration results. Identification of the broad zone of mineralisation is made via multiple intersections of drill holes and to list them all would not give the reader any further clarification of the distribution of mineralisation throughout the deposit.
	<i>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case</i>	No information has been excluded.
<b>Data aggregation methods</b>	<i>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high-grades) and cut-off grades are usually Material and should be stated.</i>	No data aggregation was required.
	<i>Where aggregate intercepts incorporate short lengths of high-grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</i>	No data aggregation was required.
	<i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i>	Not applicable
<b>Relationship between mineralisation widths &amp; intercept lengths</b>	<i>These relationships are particularly important in the reporting of Exploration Results.</i>	The mineralisation has been released by weathering of the underlying, layered gneissic bedrock that broadly trends NE-SW at Kasiya North and N-S at Kasiya South. It lies in a laterally extensive superficial blanket with high-grade zones reflecting the broad bedrock strike orientation of ~045° in the North of Kasiya and 360° in the South of Kasiya.  No drilling intercepts are being reported.
	<i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i>	The mineralisation is laterally extensive where the entire weathering profile is preserved and not significantly eroded. Minor removal of the mineralised profile has occurred where alluvial channels cut the surface of the deposit. These areas are adequately defined by the drilling pattern and topographical control for the resource estimate.
	<i>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').</i>	No drilling intercepts are being reported.
<b>Diagrams</b>	<i>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of the drill collar locations and appropriate sectional views.</i>	Refer to figures in previous releases. These are accessible on the Company's webpage.
<b>Balanced reporting</b>	<i>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high-grades and/or widths should be practiced to avoid misleading reporting of exploration results.</i>	All results are included in this report and in previous releases. These are accessible on the Company's webpage.
<b>Other substantive exploration data</b>	<i>Other exploration data, if meaningful and material, should be reported including (but not limited to: geological observations; geophysical survey results; geochemical survey results; bulk samples - size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics;</i>	Limited lateritic duricrust has been variably developed at Kasiya, as is customary in tropical highland areas subjected to seasonal wet/dry cycles. Lithological logs record drilling refusal in just under 2% of the HA/PT drill database. No drilling refusal was recorded above the saprock interface by AC drilling.  Sample quality (representivity) is established by geostatistical analysis of comparable sample intervals.

Criteria	Explanation	Commentary
	<i>potential deleterious or contaminating substances.</i>	
<b>Further work</b>	<i>The nature and scale of planned further work (e.g. test for lateral extensions or depth extensions or large-scale step-out drilling).</i>	The Company is currently in a project optimisation phase with various work programs underway.
	<i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i>	Refer to diagrams in previous releases. These are accessible on the Company's webpage.

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