SOVEREIGN
METALS LIMITED

8 June 2023

KASIYA GRAPHITE SHOWS EXCELLENT SUITABILITY FOR USE IN LITHIUM ION BATTERIES

- **Downstream testwork on Kasiya's graphite co-product demonstrated it to have superior qualities showing excellent suitability for use in lithium-ion batteries**
- **Key outcomes were:**
  - **Near perfect crystallinity – an indicator of battery anode performance**
  - **Above benchmark >99.95% carbon purity achieved**
  - **No critical impurities or deleterious elements commonly found in other natural graphite sources**
- **Further testwork underway to optimise concentrate grade and confirm optimal purification process**
- **In 2022, the lithium-ion battery anode market became the biggest end-market for natural flake graphite. Demand for anodes grew by 46% in 2022 compared to only 14% growth in natural flake graphite supply**

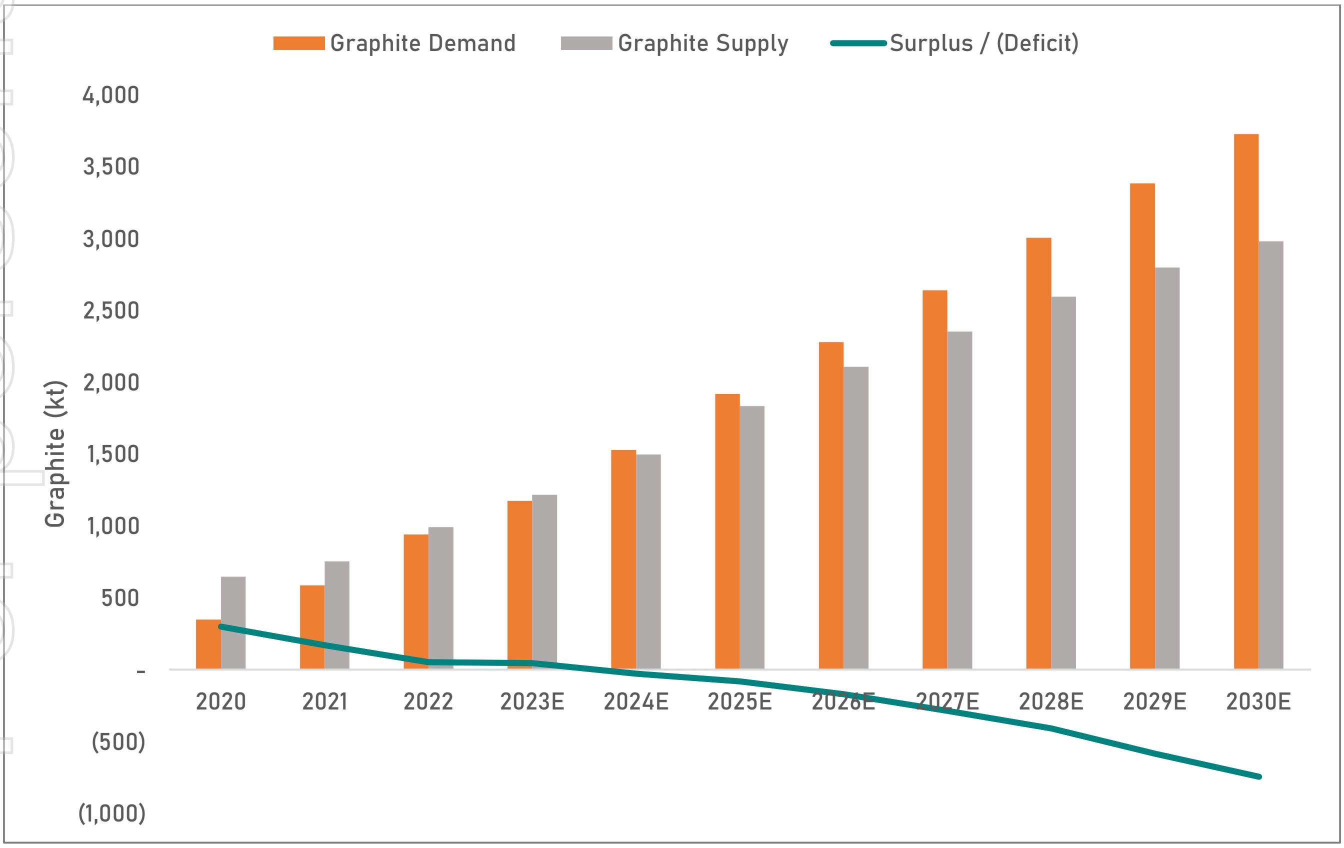

Figure 1: Graphite demand / supply showing market deficit beginning 2025E
Source: Macquarie Research (March 2023)

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Sovereign Metals Limited (ASX:SVM; AIM:SVML) (**the Company** or **Sovereign**) is pleased to report recent outcomes of downstream testwork on Kasiya's graphite co-product.

The Kasiya Project (**Kasiya**) has the potential to be the one of the world's lowest cost and lowest global warming potential (**GWP**) sources of natural graphite. The Kasiya project is the largest natural rutile deposit and one of the largest flake graphite deposits in the world. Both minerals are critical to several of the world's economies and decarbonisation targets.

Kasiya has a geological benefit with both natural graphite and rutile hosted in soft, friable saprolite material at surface that can be mined, beneficiated, and purified with a considerably lower carbon footprint than hard-rock operations or synthetic graphite production.

The results of the recent initial downstream testwork conducted by an independent German industrial mineral specialist demonstrated superior qualities and excellent suitability as feedstock for use in lithium-ion batteries.

In 2022, the lithium-ion battery anode market became the biggest end-market for natural flake graphite. Greater capacity batteries, such as those required for electric vehicles, are expected to drive significant demand for graphite over the coming years.

Sovereign's Managing Director Dr Julian Stephens commented:

"The latest graphite downstream testwork confirms the superior crystallinity and purity of Kasiya's natural graphite. Kasiya will potentially be one of the lowest cost flake graphite projects in the world and is also estimated to have one of the lowest global warming potentials of any current and future graphite projects. Producers and end users of lithium-ion batteries are already closely monitoring the carbon footprint associated with the raw materials that feed into battery technology.

"These results bolster Kasiya's competitive advantage, indicating that not only does the project have the potential to be a dominant rutile supplier, but also a dominant supplier of graphite suitable for the lithium-ion battery industry. Kasiya's PFS is progressing well with the Company looking forward to releasing the outcomes of the study in coming months."

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KEY OUTCOMES

Downstream testwork was conducted by an independent German industrial mineral specialist across crystallinity and purity - two key attributes of natural graphite used for anode feedstock in lithium-ion battery anodes.

Crystallinity

Crystallinity is an indicator of electrical conductivity which affects battery performance. This result is critical to the usability in the lithium-ion battery sector as the higher the crystallinity i.e. the more "perfect" the flakes/crystals, the better the electrical conductivity and battery performance.

The testwork shows that Kasiya graphite is classed as near perfect, fully ordered graphite, confirming it should possess the best electrical conductivity attributes.

Purity

Purity denotes the product's total carbon content and the amount of residual key impurities including sulphur and iron which are important in anodes. Purification is achieved via either leaching or heat treatment.

Testwork achieved >99.95% purity which is above the benchmark required for graphite in lithium-ion batteries. The results also demonstrated very low sulphur content in this material due to the graphite being hosted in soft saprolite - a key differential from graphite purified from hard-rock deposits.

TECHNICAL BACKGROUND

Graphitic carbon exhibits a large range of structures and chemical compositions, from amorphous-like compounds through to crystalline graphite in high-grade metamorphic belts. Broadly, these reflect the geological setting and conditions under which the graphite formed. Flake graphite is associated mostly with high grade metamorphic rocks where original organic carbon deposited within sediment was transformed into graphite by pressures typically exceeding 5 kbar and temperatures above 650 °C.

The widely varying structure and chemistry of graphitic carbon controls the remarkably diverse range in its physical properties. Natural graphite is a key component in high-performance refractory linings for steel manufacture, high-charge capacity anodes for lithium-ion batteries, and a feedstock for graphene.

Crystallinity

The original paragneiss host rocks at Kasiya have experienced high grade metamorphism having been heated to above 650°C and subject to very high pressures above 13kbar. The rocks experienced very slow cooling which has resulted in growth of coarsely crystalline graphite and rutile.

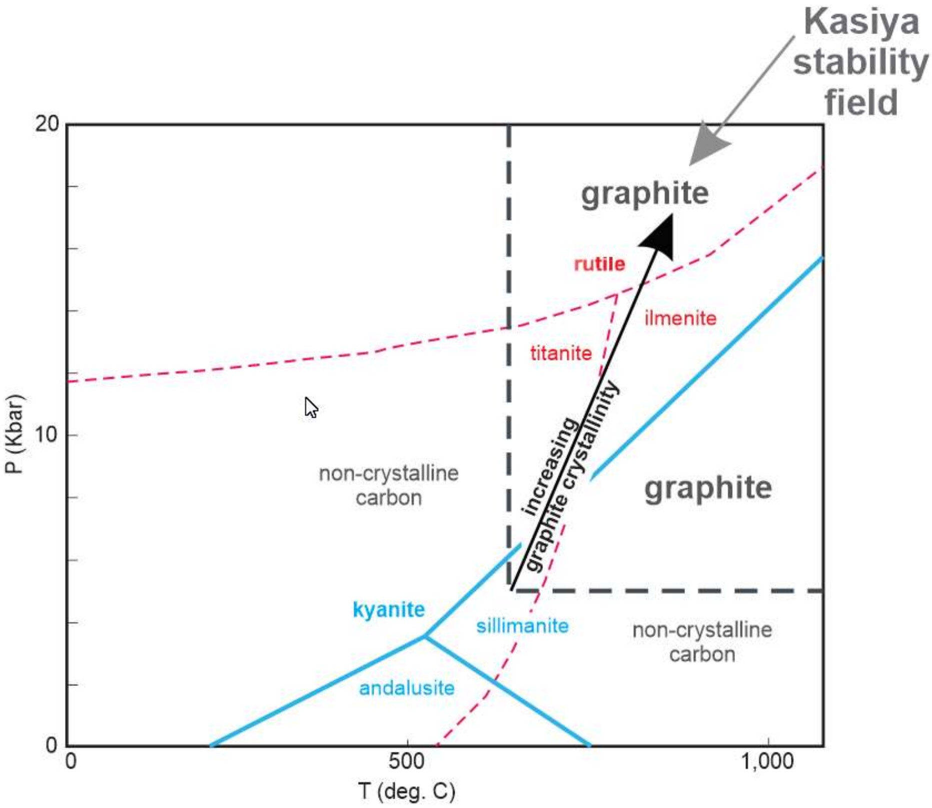

Figure 2. Metamorphic stability fields for graphite, rutile and kyanite in metasedimentary rocks and the defined metamorphic stability field for Kasiya with the key indicator minerals graphite, rutile and kyanite.

In graphite, the degree of crystallinity is exhibited by the interlayer distance between individual graphite layers - denoted d_{002} when measured in Raman spectroscopy. Values of d_{002} of near 3.35 Å are considered fully ordered or highly crystalline graphite. Kasiya graphite has a measured d_{002} of 3.348, classifying it as near perfect, fully ordered graphite.

Fully ordered graphite, mostly free of natural defects, such as that from Kasiya has the best electrical conductivity attributes of all natural graphite types and thus shows excellent suitability as feedstock for lithium-ion battery anodes. The other obvious and more easily observed attribute of fully ordered graphite is the shape, where hexagonal flakes indicate perfect or near-perfect crystallinity – another attribute of the Kasiya graphite products.

Purity

Purification of graphite concentrates grading 95-98% $C^{(t)}$ can be performed by either heat treatment or reagent leaching. It is desirable to have very low levels of critical impurities including sulphur and metal ions – specifically iron in the final product which should also grade +99.95% $C^{(t)}$. Heat treatment purification tests on Kasiya graphite have been successful in achieving high levels of purification up to "four 9s" i.e. 99.995%+ purity, with very low levels of critical impurities.

For purifying via reagent leaching, hydrofluoric acid (**HF**) has traditionally been used as a key reagent. Due to HF's high reactivity and dangerous nature current leaching test work in the battery anode sector is focusing on reagent regimes containing no HF. Sovereign has trialled some of these regimes and had success with caustic bake and sulphuric acid leach stages achieving 99.92% $C^{(t)}$ – very close to the 99.95% required for commercial products. Further optimisation of this reagent regime is planned in order to achieve commercial purity for lithium-ion battery anode feedstock.

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KASIYA'S GWP TO BE AMONGST THE LOWEST IN THE WORLD

The GWP of producing one tonne of flake graphite concentrate at Kasiya estimated to be 0.2 tonnes of CO_2 equivalent emissions (**CO_2e**). Kasiya has the lowest GWP compared with currently known and planned future natural graphite projects:

- Up to 60% lower than currently reported GWP of graphite producers and developers, including suppliers to Tesla Inc.
- 3x less polluting than proposed Tanzanian natural graphite production from hard rock sources.
- 6x less polluting than current Chinese natural graphite production which accounts for up to 80% of current global graphite supply.

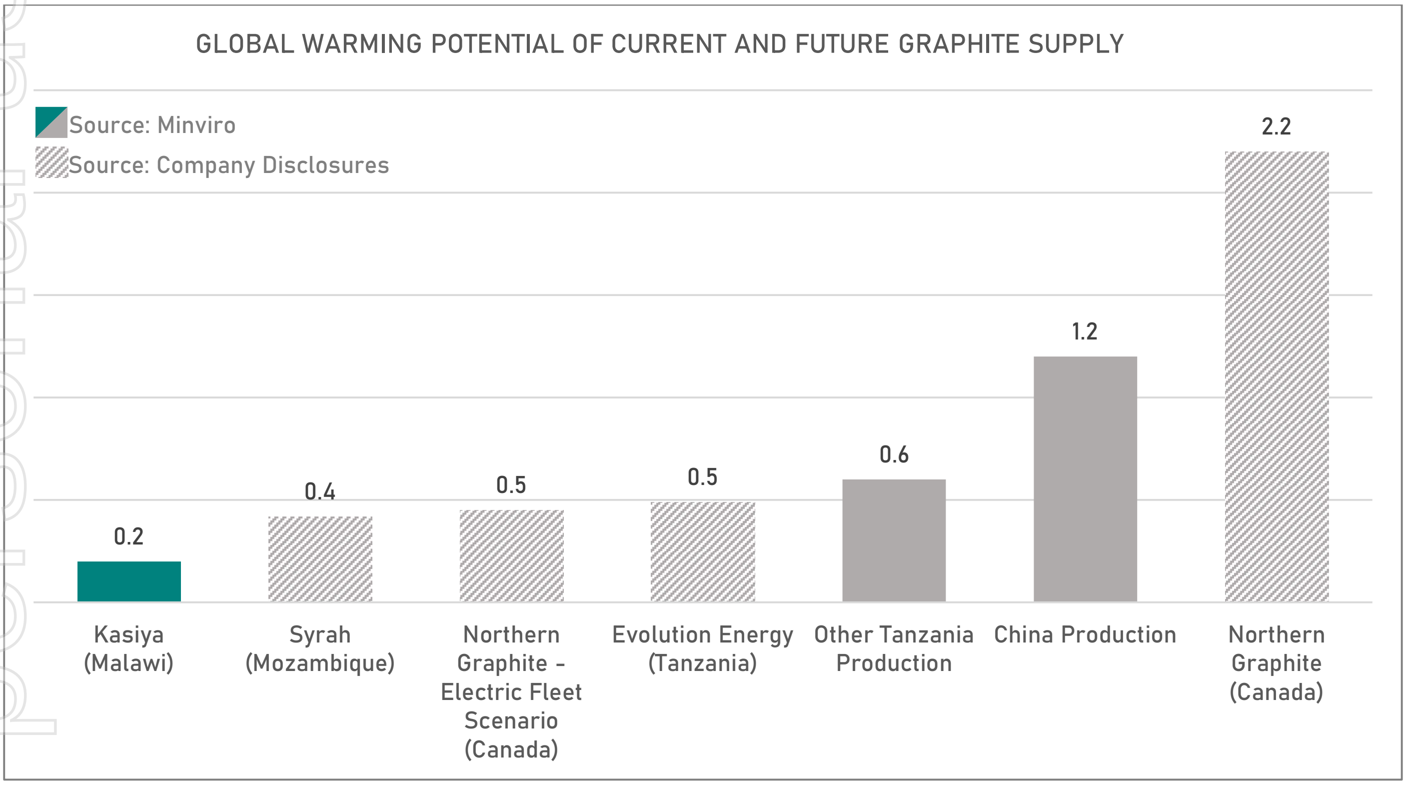

Figure 3: Global Warming Potential per tonne of graphite product (CO_2e/t)

(Sources: see Appendix)

(Note: All figures are cradle-to-gate except for Syrah Resources which includes transportation to the port of Nacala; transportation of Kasiya's graphite to the port of Nacala would add an estimated incremental 0.04CO_2e to its GWP)

The cradle-to-gate life cycle assessment (**LCA**) was carried out by Minviro comparing current natural graphite production from China which produces almost 80% of the world's natural graphite, and proposed near-term production from Tanzania, which offers a regional benchmark against Kasiya in Malawi. The LCA study followed ISO 14067:2008 guidelines and was critically reviewed by a panel of three independent experts.

A number of graphite producers and explorers/developers have conducted their own LCAs, with conclusions of a select number being made public (Figure 3). Kasiya's graphite product currently has the lowest GWP of publicly reported current and future potential graphite production.

The benchmarking study found that the total GWP of 0.2 tonnes CO_2e per tonne of natural flake graphite concentrate produced at Kasiya is significantly lower than the total GWP per tonne produced in Heilongjiang Province, China (1.2 tonnes CO_2e) and the total GWP per tonne produced in Tanzania (0.6 tonnes CO_2e).

Why is Kasiya's Graphite able to achieve such a low carbon-footprint?

The GWP for Kasiya's flake graphite product was based on the ESS. The significantly lower GWP for Kasiya graphite is due to the fact that it is hosted in soft, friable saprolite material which will be mined via hydro methods (high pressure water monitors) powered by predominantly renewable energy sources – hydro power from the Malawi grid and on-site solar power. This is opposed to the production in Heilongjiang Province, China where hard-rock ore requires drilling, blasting, excavation, trucking, crushing, and grinding – overall high CO_2e activities.

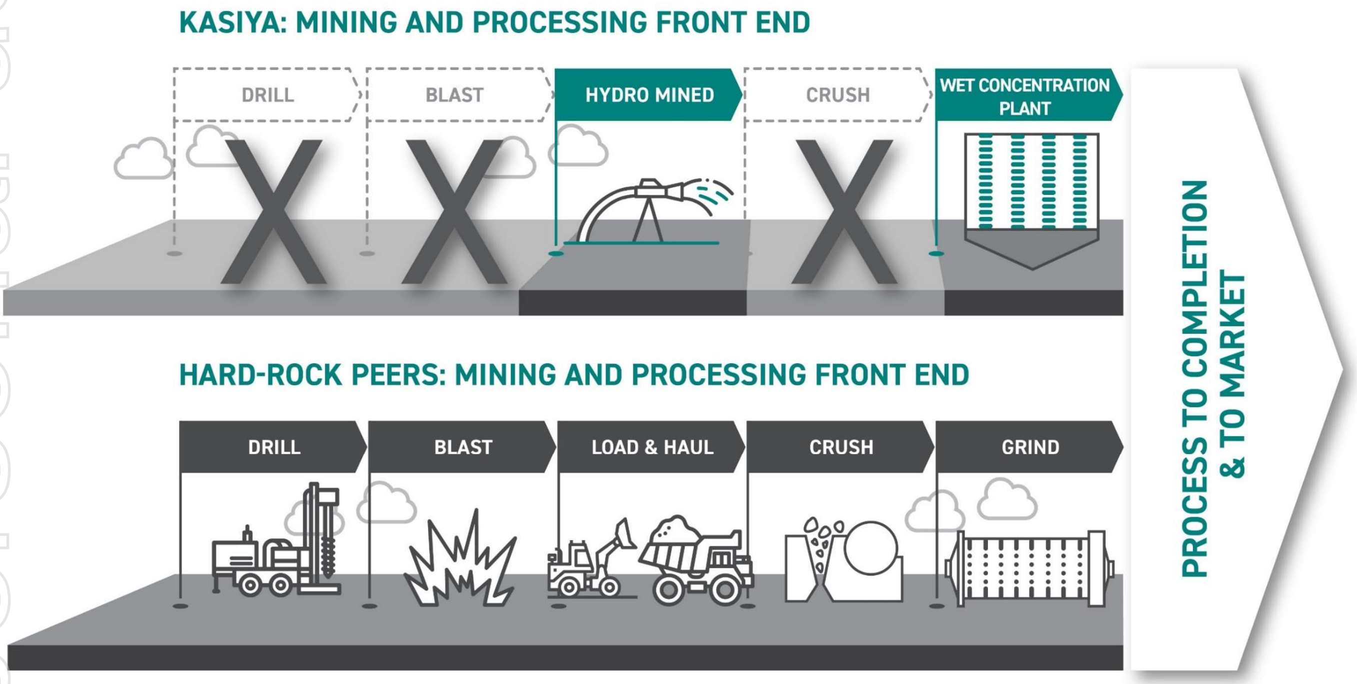

Figure 4: Kasiya's co-product graphite mining and processing front end compared to hard-rock peers

NEXT STEPS

Sovereign has further testwork underway as the Company continues to qualify the graphite product for possible markets. Key activities include:

- Optimisation of process flowsheet to increase the concentrate grade
- Analysis of purification process to optimise parameters focusing on achieving the most sustainable outcome
- Micronisation, spheronisation and coating testwork
- Bulk sample generation program

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Competent Persons' Statements

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 report that relates to Metallurgical Results is based on information compiled by Mr Paul Marcos, a Competent Person who is a member of the AusIMM. Mr Marcos is an employee of Sovereign Metals Limited and a holder of ordinary shares and unlisted performance rights in Sovereign Metals Limited. Mr Marcos 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 Marcos 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.

This ASX Announcement has been approved and authorised for release by the Company's Managing Director, Dr Julian Stephens.

APPENDIX 1 – PEER SOURCE INFORMATION

SOURCE 1 – GRAPHITE RESOURCE GLOBAL WARMING POTENTIAL (Figure 3)

Ref	Company	Project	Project Status	GWP (CO_2e)	LCA Boundary	Source
1	Syrah Resources	Balama	Production	0.42	FOB Nacala	ASX Announcement: Syrah approves Balama solar and battery system final investment decision (released 6 Apr 2022)
2	Northern Graphite (Electric Fleet Scenario)	Bisset Creek	FS & PEA	0.45	Cradle-to-gate	TSX Announcement: Northern Graphite Plans to Further Reduce Carbon Footprint of Bissett Creek Project (released 9 Mar 2022)
3	Evolution Energy	Chilalo	DFS Underway	0.49	Cradle-to-gate	ASX Announcement: Independent life cycle assessment demonstrates Chilalo's low carbon footprint (released 6 Oct 2022)
4	Other Tanzania Production	n/a	n/a	0.60	Cradle-to-gate	Provided by LCA Manager, Minviro Ltd
5	China Production	n/a	n/a	1.20	Cradle-to-gate	Provided by LCA Manager, Minviro Ltd
6	Northern Graphite	Bisset Creek	FS & PEA	2.20	Cradle-to-gate	TSX Announcement: Northern Graphite Plans to Further Reduce Carbon Footprint of Bissett Creek Project (released 9 Mar 2022)

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APPENDIX 2: JORC CODE, 2012 EDITION – TABLE 1

SECTION 1 - SAMPLING TECHNIQUES AND DATA

Criteria	JORC Code explanation	Commentary
Sampling Techniques	*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.*	**Metallurgical Composite Sample:** Graphite product test work was completed on a composited sample from raw primary 1-metre reserve material from the Kasiya Deposit. The sample was a composite of 13 Hand Auger (**HA**) holes reserve material drilled in 2020 and 2021. Samples were selected based on rutile grade, weathering, and location within pit areas 13, 15 and 16. The weathering units contributed the following percentages, SOIL/FERP 42%, MOTT 39% and PSAP 19%. Specifically, the composite sample consisted of selected rutile mineralised zones from holes, NSHA0004, 0009, 0035, 0055, 0056, 0095, 0119, 0200, 0222, 0224, 0225, 0261 and 0262. These holes are located in the southern area of the mineralised footprint. The reserve 1-metre raw samples were used to create a composite sample of mass circa ~237kg with a grade of 1.16% TGC modelled from the mineral resource sample assays as a weighted average.
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	Placer Consulting (**Placer**) Resource Geologists have reviewed Standard Operating Procedures (**SOPs**) for the collection of drill samples and found them to be fit for purpose. 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. Each 1m of sample is dried and riffle-split to generate a total sample weight of 3kg for analysis, generally at 2 - 5m intervals. This primary sample is then split again to create a 3kg composite to provide a 1.5kg sample for both rutile and graphite analyses. The excess material is then stored as reserve. The primary metallurgical composite sample is considered representative for this style of mineralisation.
	Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done 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.	HA drilling was used to obtain 1-metre samples. The bulk metallurgical sample was a composite of selected reserve samples from routine resource drilling. Existing rutile exploration results were used to determine the 1-metre intervals suitable to contribute to the 237kg bulk sample composite.
Drilling Techniques	*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).*	Placer has reviewed SOPs for HA drilling and found them to be fit for purpose. HA drilling with 75mm diameter enclosed spiral bits (**SOS**) with 1-metre long steel rods and with 62mm diameter open spiral bits (**SP**) with 1-metre long steel rods. Drilling is oriented vertically by eye. 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.
Drill Sample Recovery	*Method of recording and assessing core and chip sample recoveries and results assessed.*	Samples are assessed visually for recoveries. Overall, recovery is very good. Drilling is ceased when recoveries become poor once the water table has been reached.

Criteria	JORC Code explanation	Commentary
	Measures taken to maximise sample recovery and ensure representative nature of the samples.	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.
	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.	No bias related to preferential loss or gain of different materials has occurred.
Logging	*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.*	All individual 1-metre auger intervals are geologically logged, recording relevant data to a set template using company codes.
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.	All logging includes lithological features and estimates of basic mineralogy. Logging is generally qualitative.
	The total length and percentage of the relevant intersection logged	100% of samples are geologically logged.
Sub-sampling techniques and sample preparation	*If core, whether cut or sawn and whether quarter, half or all core taken.*	Not applicable – no core drilling conducted.
	If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.	Primary individual 1-metre samples from all HA holes drilled were sun dried and homogenised. The 1-metre raw sample not used in the generation of a primary assay composite are stored as reserve.
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	**Metallurgical Composite Sample:** 1-metre intervals selected for the 237kg 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 ~100kg of 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.
	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	The sample preparation techniques and QA/QC protocols are considered appropriate for the nature of this test-work.
	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.	The sampling best represents the material in situ.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	The sample size is considered appropriate for the nature of the test-work.
Quality of assay data and laboratory tests	*The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.*	**Metallurgical Composite Sample**: The following workflow was used to generate a pre-concentrate graphite feed at AML: • Wet screen at 2mm to remove oversize • Two stage cyclone separation at a cut size of 45µm to remove -45µm material • Pass +45µm -2mm (sand) fraction through Up Current Classifier (UCC) • Pass UCC O/F through cyclone at cut point of 45µm • Pass UCC O/F cyclone U/F (fine) over MG12 Mineral Technologies Spiral • Pass UCC U/F (coarse) over MG12 Mineral Technologies Spiral • Spiral cons are combined for further processing. 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. Coarse and fine gravity tailings are sent to ALS for graphite flotation testwork.

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Criteria	JORC Code explanation	Commentary

		The following workflow at ALS was used to generate a graphite product;
		• The gravity tail from AML underwent the following processing at ALS in two differing flowsheets;
		• Flowsheet 1 (ALS tests AM3358 and AM3359)
		  o Separate coarse and fine rougher graphite flotation
		  o Separate polishing grind of coarse and fine rougher graphite concentrate
		  o Separate cleaner flotation of coarse and fine graphite
		  o Cleaner concentrate sizing at 180µm
		  o Regrind of separate +180µm/-180µm fractions
		  o Separate three stage recleaner flotation of +180µm/-180µm fractions
		• Flowsheet 2 (ALS tests AM3360, AM3361, AM3362 and AM3359)
		  o Combined coarse and fine rougher graphite flotation
		  o Combined polishing grind of rougher graphite concentrate
		  o Combined cleaner flotation
		  o Floatation of cleaner concentrate sizing at 180µm
		  o regrind of separate +180µm/-180µm fractions
		  o Separate three stage recleaner flotation of +180µm/-180µm fractions
		
		The grade of the concentrate was 94.3% TGC (ALS). A 506.7 gram sample of this concentrate was provided to Dorfner Anzaplan for the downstream testwork

	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.	Acceptable levels of accuracy and precision have been established. No handheld methods are used for quantitative determination.
	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.	Accuracy monitoring is achieved through submission of certified reference materials (CRM's). Intertek uses internal CRMs and duplicates and SVM inserts randomized certified bespoke graphite CRMs at 1 in 20.
Verification of sampling & assaying	*The verification of significant intersections by either independent or alternative company personnel.*	No drilling intersections are being reported.
	The use of twinned holes.	No twin holes complete.
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	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. This data was then imported to a Microsoft Access Database then validated automatically and manually.
	Discuss any adjustment to assay data.	No adjustment to assay data has been made.
Location of data points	*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.*	A Trimble R2 Differential GPS was used to pick up the hand auger collars. No downhole surveying of auger holes is completed. Given the vertical nature and shallow depths of the auger holes drill hole deviation is not considered to significantly affect the downhole location of samples.
	Specification of the grid system used.	WGS84 UTM Zone 36 South.
	Quality and adequacy of topographic control.	DGPS pickups are considered to be high quality topographic control measures.
Data spacing & distribution	*Data spacing for reporting of Exploration Results.*	**Metallurgical Composite Sample**: The hand-auger holes contributing to this metallurgical were selected from pit area, 13, 15 and 16 (as per the Expanded Scoping Study mine plan) and broadly represent the early years of mining. It is deemed that these holes should be broadly representative of the mineralisation style in the general area.
	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.	Not applicable, no Mineral Resource or Ore Reserve estimations are covered by new data in this report.
	Whether sample compositing has been applied.	**Metallurgical Composite Sample**: Raw primary 1-metre sample reserve from 13 hand auger holes drilled for the purpose of mineral exploration have been composited together to create a circa 237kg sample for metallurgical analysis.

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Criteria	JORC Code explanation	Commentary
Orientation of data in relation to geological structure	*Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known considering the deposit type*	No bias attributable to orientation of sampling has been identified.
	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.	All holes were drilled vertically as the nature of the mineralisation is horizontal. No bias attributable to orientation of drilling has been identified.
Sample security	*The measures taken to ensure sample security*	Samples were stored in secure storage from the time of drilling, through gathering, compositing and analysis. The samples were sealed as soon as site preparation was completed, and again securely stored during shipment and while at Australian laboratories.
Audits or reviews	*The results of any audits or reviews of sampling techniques and data*	It is considered by the Company that industry best practice methods have been employed at all stages of the exploration.

SECTION 2 - REPORTING OF EXPLORATION RESULTS

Criteria	Explanation	Commentary
Mineral tenement & land tenure status	*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.*	The Company owns 100% of the following Exploration Licences (**ELs**) and Licence Applications (**APLs**) under the Mines and Minerals Act 2019, held in the Company's wholly-owned, Malawi-registered subsidiaries: EL0561, EL0492, EL0609, EL0582, EL0545, EL0528, EL0657 and APL0404. A 5% royalty is payable to the government upon mining and a 2% of net profit royalty is payable to the original project vendor. No significant native vegetation or reserves exist in the area. The region is intensively cultivated for agricultural crops.
	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.	The tenements are in good standing and no known impediments to exploration or mining exist.
Exploration done by other parties	*Acknowledgement and appraisal of exploration by other parties.*	Sovereign Metals Ltd is a first-mover in the discovery and definition of residual rutile and graphite resources in Malawi. No other parties are, or have been, involved in exploration.
Geology	*Deposit type, geological setting and style of mineralisation*	The rutile deposit type is considered a residual placer formed by the intense weathering of rutile-rich basement paragneisses and variable enrichment by elluvial processes. 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" >35m). 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.
Drill hole information	*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*	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.
	If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract	No information has been excluded.

Criteria	Explanation	Commentary
	from the understanding of the report, the Competent Person should clearly explain why this is the case	
Data aggregation methods	*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.*	All results reported are of a length-weighted average of in-situ grades. The resource is reported at a range of bottom cut-off grades in recognition that optimisation and financial assessment is outstanding. A nominal bottom cut of 0.7% rutile is offered, based on preliminary assessment of resource product value and anticipated cost of operations.
	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.	No data aggregation was required.
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	Not applicable
Relationship between mineralisation widths & intercept lengths	*These relationships are particularly important in the reporting of Exploration Results.*	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.
	If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.	The mineralisation is laterally extensive where the entire weathering profile is preserved and not significantly eroded. Minor removal of the mineralised profile has occurred in alluvial channels. These areas are adequately defined by the drilling pattern and topographical control for the resource estimate.
	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'.	Downhole widths approximate true widths limited to the sample intervals applied. Mineralisation remains open at depth and in areas coincident with high-rutile grade lithologies in basement rocks, is increasing with depth. Graphite results are approximate true width as defined by the sample interval and typically increase with depth.
Diagrams	*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.*	Refer to figures in previous releases. These are accessible on the Company's webpage.
Balanced reporting	*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.*	All results are included in this report and in previous releases. These are accessible on the Company's webpage.
Other substantive exploration data	*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; potential deleterious or contaminating substances.*	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.
Further work	*The nature and scale of planned further work (e.g. test for lateral extensions or depth extensions or large-scale step-out drilling).*	Further AC drilling will allow the definition of a more extensive saprock-interface basement and should continue to deliver additional resources below the HA/PT-drilled regions. A greater understanding of the lithological character and extent of those basement units, where high-grade (>1%) rutile persists at the saprock interface, may assist in focussing further resource definition and exploration targeting.

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Criteria	Explanation	Commentary
		Further metallurgical assessment is suggested to characterise rutile quality and establish whether any chemical variability is inherent across the deposit. Trialling drill definition at a 100m spacing is suggested for Measured Resource assessment.
	Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	Refer to diagrams in previous releases. These are accessible on the Company's webpage.

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