SOVEREIGN METALS LIMITED

ASX ANNOUNCEMENT I 1 February 2024

EXTENSIONS TO RUTILE & GRAPHITE MINERALISATION AT KASIYA

- **Wide-spaced regional reconnaissance drilling, outside the current JORC (2012) compliant Mineral Resource Estimate (MRE) area, identifies a 8km extension of mineralisation to the south which remains open along strike and at depth**
- **Results are testament to the world-class scale of the Kasiya deposit and demonstrate potential for a future increase of the Kasiya's MRE, which is already the largest natural rutile deposit and second largest flake graphite deposit in the world**
- **Kasiya's current MRE of 1.8 Billion tonnes at 1.0% rutile and 1.4% graphite comprises broad and contiguous zones of high-grade rutile and graphite that occur across an area of over 201km^2**
- **Current focus at Kasiya remains the ongoing Optimisation Study alongside strategic investor Rio Tinto and permitting work streams working with the Malawian Interministerial Committee**

Sovereign Metals Limited (ASX:SVM; AIM:SVML) (**the Company** or **Sovereign**) is pleased to report southern extensions to the mineralised area at Kasiya. Hand-auger drilling has identified a number of zones ranging from ~400m to 2km wide over a strike length of approximately 8km. These results indicate potential to expand the already significant, high-grade rutile and graphite Mineral Resource Estimate at Kasiya.

Results of the Pre Feasibility Study (**PFS**) released in late 2023 demonstrated Kasiya's potential to become the world's largest rutile producer at an average of 222kt per annum and one of the world's largest natural graphite producers outside of China at an average of 244kt per annum based on an initial 25 year life-of-mine (**LOM**).

The Kasiya PFS delivered compelling economics with a post-tax NPV$_8$ of US$1.6 Billion and post-tax IRR of 28%. This long-life, multi-generational operation was modelled to initially generate over US$16 Billion of revenue and provide an average annual EBITDA of US$415 Million per annum.

The PFS modelling was limited to only 25 years with an initial Probable Ore Reserves declared of 538Mt, only representing 30% of the total Mineral Resource Estimate.

Managing Director, Frank Eagar commented: *"These drilling results re-confirm the significant scale of the Kasiya deposit with the strike now stretching over 37km long. Sovereign continues to test the extent of regional mineralisation via low-cost hand-auger drilling, which has the potential to increase the already very large Kasiya Resource."*

ENQUIRIES

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REGIONAL DRILLING PROGRAM

Regional hand-auger drilling south of the Kasiya MRE footprint has identified significant strike extensions of approximately 8km across a number of parallel mineralised zones ranging from 400m to 2km in width.

All newly defined mineralisation remains open at depth, due to the limitations of the hand-auger drilling method but are expected to continue to the saprock boundary normally between 20 and 30m vertical metres from surface. The multiple mineralised zones identified remain open along strike both to the north and south.

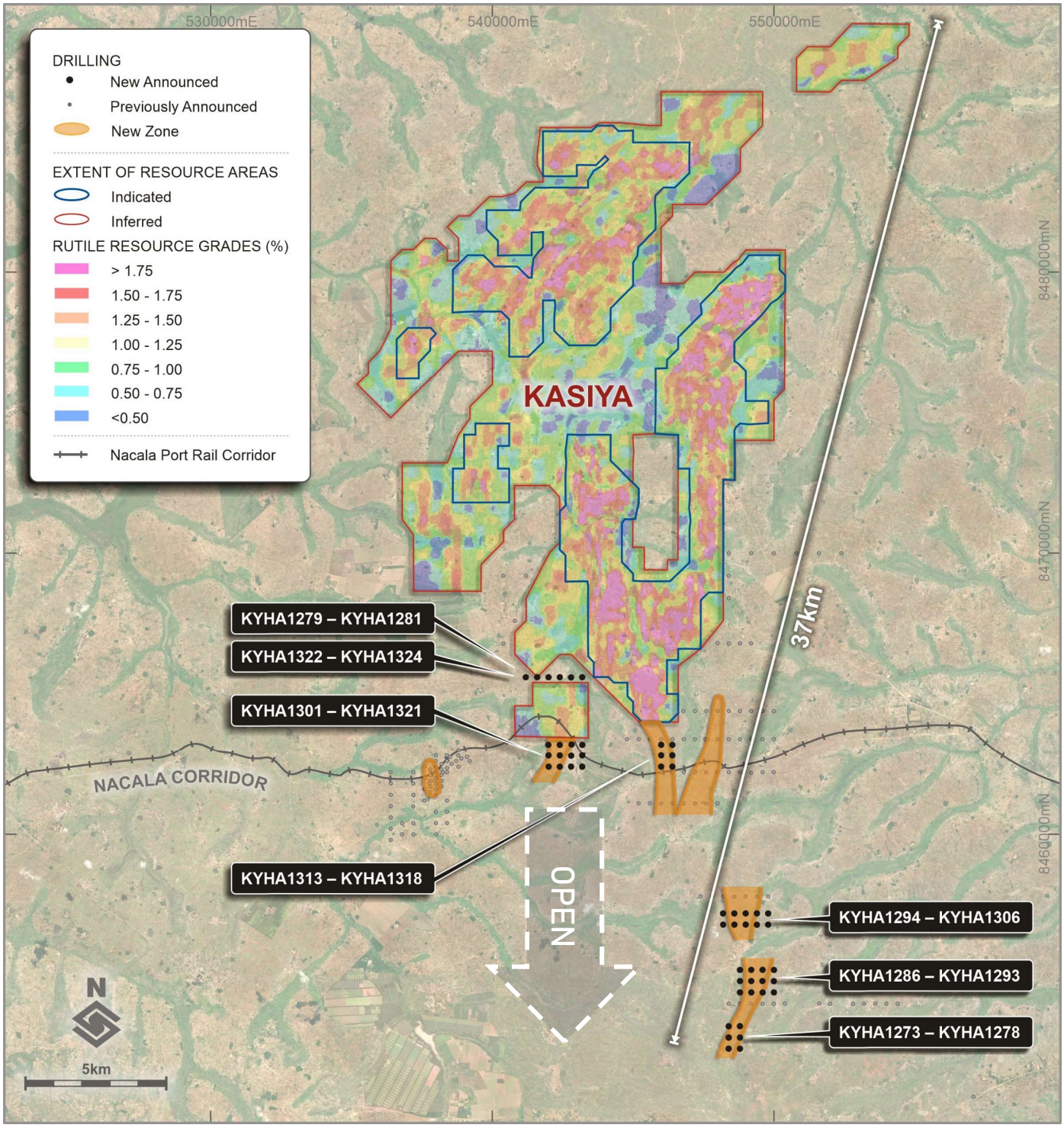

Figure 1: Southern newly defined mineralised extensions at Kasiya

Highlight drill results include;

- **14m @ 1.03% incl. 2m @ 1.35% rutile from surface**
- **17m @ 1.01% incl. 2m @ 1.42% rutile from surface**
- **9m @ 0.93% incl. 2m @1.58% rutile from surface**
- **12m @ 1.31% incl. 3m @ 1.97% rutile from surface**
- **13m @ 1.02% incl. 3m @ 1.16% rutile from surface**
- **12m @ 1.02% rutile & 4.5% graphite incl. 2m @ 1.41% rutile from surface**

Competent Person Statement

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' and as a Qualified Person under the AIM Rules. 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 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. 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. 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 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%
Total	**538**	**1.03%**	**5.5**	**1.66%**	**8.9**	**2.00%**

* 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 this Study ** 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
Total	**1,809**	**1.0%**	**17.9**	**1.4%**	**24.4**

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.

APPENDIX I – DRILL RESULTS – TABLE 2

Rutile and graphite drilling results from Kasiya are shown below in Table 2.

Hole ID	Interval Thickness	Rutile %	TGC %	From (m) Downhole	Hole Type
KYHA1273	8.0	1.52	0.7	9.0	HA
incl	5.0	2.08	0.3	12.0	
KYHA1274	**9.0**	**0.93**	**2.0**	**0.0**	**HA**
incl	**2.0**	**1.58**	**0.5**	**0.0**	
KYHA1275	3.0	0.96	1.0	0.0	HA
KYHA1276	6.0	0.83	0.9	0.0	HA
incl	2.0	1.25	0.3	0.0	
KYHA1277	10.0	0.74	2.0	0.0	HA
incl	2.0	1.32	0.3	0.0	
KYHA1278	2.0	0.95	0.3	0.0	HA
KYHA1279	7.0	0.78	0.8	0.0	HA
incl	3.0	1.02	0.3	0.0	
KYHA1280	12.0	0.85	0.8	0.0	HA
incl	3.0	1.27	0.2	0.0	
KYHA1281	3.0	0.78	0.2	0.0	HA
KYHA1282	**14.0**	**1.03**	**1.6**	**0.0**	**HA**
incl	**2.0**	**1.35**	**0.3**	**0.0**	
KYHA1283	5.0	0.80	0.3	0.0	HA
incl	2.0	1.26	0.3	0.0	
KYHA1284	2.5	0.65	4.8	7.0	HA
incl	2.0	1.09	0.8	0.0	
KYHA1285	2.0	1.03	0.3	0.0	HA
KYHA1286	7.0	0.73	0.3	0.0	HA
incl	2.0	1.21	0.4	0.0	
KYHA1287	10.0	0.91	3.2	0.0	HA
incl	2.0	1.54	0.5	0.0	
KYHA1288	2.0	1.30	0.4	0.0	HA
KYHA1289	2.0	0.67	0.2	0.0	HA
KYHA1290	3.0	0.59	0.0	0.0	HA
KYHA1291	2.0	0.70	0.2	0.0	HA
KYHA1292	5.0	0.91	0.4	0.0	HA
incl	2.0	1.28	0.3	0.0	
KYHA1293	11.0	0.71	3.3	0.0	HA
incl	2.0	1.18	0.3	0.0	
KYHA1294	7.0	0.74	0.4	0.0	HA
incl	3.0	1.01	0.4	0.0	
KYHA1295	3.0	0.71	0.1	0.0	HA
KYHA1296	13.0	0.76	2.7	0.0	HA
KYHA1297	NSR				HA
KYHA1298	4.0	0.84	0.2	0.0	HA
incl	2.0	1.11	0.2	0.0	

Hole ID	Interval Thickness	Rutile %	TGC %	From (m) Downhole	Hole Type
KYHA1299	4.0	0.85	0.4	0.0	HA
incl	2.0	1.15	0.4	0.0	
KYHA1300	14.0	0.78	4.2	0.0	HA
incl	2.0	1.00	0.4	0.0	
KYHA1301	6.0	0.74	0.3	0.0	HA
KYHA1302	4.0	0.99	0.2	0.0	HA
incl	2.0	1.30	0.1	0.0	
KYHA1303	**13.0**	**1.02**	**2.4**	**0.0**	**HA**
incl	**3.0**	**1.16**	**0.3**	**0.0**	
incl	**2.0**	**1.22**	**4.1**	**8.0**	
KYHA1304	4.0	0.84	0.3	0.0	HA
incl	2.0	1.13	0.3	0.0	
KYHA1305	**17.0**	**1.01**	**1.3**	**0.0**	**HA**
incl	**2.0**	**1.42**	**0.3**	**0.0**	
incl	4.0	1.43	3.2	13.0	
KYHA1306	6.0	0.79	0.3	0.0	HA
incl	3.0	1.08	0.3	0.0	
KYHA1307	11.0	0.77	2.7	0.0	HA
incl	2.0	1.31	0.4	0.0	
KYHA1308	12.0	0.81	0.9	0.0	HA
incl	3.0	1.27	0.2	0.0	
KYHA1309	2.0	0.56	0.0	0.0	HA
KYHA1310	8.0	0.86	2.0	0.0	HA
incl	2.0	1.35	0.3	0.0	
KYHA1311	3.0	1.07	0.3	0.0	HA
incl	3.0	1.07	0.3	0.0	
KYHA1312	NSR				HA
KYHA1313	6.0	0.77	0.5	0.0	HA
incl	2.0	1.19	0.2	0.0	
KYHA1314	**12.0**	**1.02**	**4.5**	**0.0**	**HA**
incl	**2.0**	**1.41**	**0.5**	**0.0**	
incl	**3.0**	**1.05**	**6.9**	**6.0**	
KYHA1315	**12.0**	**1.31**	**1.6**	**0.0**	**HA**
incl	**3.0**	**1.97**	**0.4**	**0.0**	
incl	**6.0**	**1.14**	**2.3**	**6.0**	
KYHA1316	6.0	1.16	1.5	0.0	HA
incl	2.0	1.49	0.3	0.0	
incl	2.0	1.12	3.6	4.0	
KYHA1317	10.0	0.75	3.2	0.0	HA
incl	2.0	1.02	0.5	0.0	
KYHA1318	10.0	0.90	0.9	0.0	HA
incl	2.0	1.75	0.2	0.0	
KYHA1319	NSR				HA
KYHA1320	6.0	0.94	4.2	3.0	HA

Hole ID	Interval Thickness	Rutile %	TGC %	From (m) Downhole	Hole Type
incl	3.0	1.15	5.6	6.0	
KYHA1321	2.0	0.68	0.1	0.0	HA
KYHA1322	15.0	0.66	2.0	0.0	HA
KYHA1323	2.0	0.66	0.6	3.0	HA
KYHA1324	6.0	0.92	1.1	0.0	HA
incl	2.0	1.35	0.6	0.0	
KYHA1324	4.0	0.76	3.7	8.0	HA
KYHA1325	5.0	0.81	0.4	0.0	HA
incl	5.0	1.32	0.4	12.0	

APPENDIX II: DRILL HOLE COLLAR DATA – TABLE 3

Hole ID	Easting	Northing	RL	Depth
KYHA1273	548398	8452800	1209	17.0
KYHA1274	548397	8452407	1205	9.0
KYHA1275	548798	8452405	1207	12.0
KYHA1276	548796	8453205	1209	13.0
KYHA1277	548799	8452800	1208	10.0
KYHA1278	548399	8453201	1209	13.0
KYHA1279	541598	8465602	1156	12.0
KYHA1280	542001	8465598	1151	12.0
KYHA1281	542402	8465601	1146	12.0
KYHA1282	548800	8454400	1215	15.0
KYHA1283	549201	8454401	1225	11.0
KYHA1284	549603	8454397	1218	9.5
KYHA1285	550004	8454400	1205	12.0
KYHA1286	550000	8454801	1209	15.0
KYHA1287	549597	8454801	1219	10.0
KYHA1288	549198	8454801	1219	17.0
KYHA1289	548799	8454801	1211	13.0
KYHA1290	548800	8455196	1208	13.0
KYHA1291	549199	8455199	1212	16.0
KYHA1292	549601	8455199	1214	16.0
KYHA1293	550005	8455196	1208	15.0
KYHA1294	548200	8456800	1204	14.0
KYHA1295	548600	8456801	1213	12.0
KYHA1296	549003	8456803	1217	13.0
KYHA1297	549399	8456797	1209	14.0
KYHA1298	549800	8456801	1200	12.0
KYHA1299	549800	8457199	1199	11.0

Hole ID	Easting	Northing	RL	Depth
KYHA1300	549400	8457202	1207	14.0
KYHA1301	541997	8463199	1151	10.0
KYHA1302	542401	8463198	1158	11.0
KYHA1303	542819	8463208	1159	13.0
KYHA1304	548999	8457201	1210	19.0
KYHA1305	548598	8457197	1207	17.0
KYHA1306	548198	8457199	1198	6.0
KYHA1307	542000	8462801	1151	11.0
KYHA1308	542401	8462800	1158	12.0
KYHA1309	542806	8462792	1158	10.0
KYHA1310	542003	8462400	1149	8.0
KYHA1311	542402	8462400	1153	8.0
KYHA1312	542800	8462401	1154	7.0
KYHA1313	546399	8463199	1182	14.0
KYHA1314	546000	8462801	1183	12.0
KYHA1315	546398	8462803	1184	12.0
KYHA1316	546002	8463201	1183	13.0
KYHA1317	545999	8462402	1182	10.0
KYHA1318	546399	8462403	1185	10.0
KYHA1319	543198	8462401	1156	10.0
KYHA1320	543198	8462803	1155	9.0
KYHA1321	543201	8463199	1154	6.0
KYHA1322	542800	8465593	1141	15.0
KYHA1323	543198	8465598	1138	5.0
KYHA1324	541193	8465601	1160	12.0
KYHA1325	548398	8452801	1209	17.0

APPENDIX III: 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.*	A total of 53 hand-auger holes for 639m were drilled at the Kasiya Project to obtain samples for quantitative mineralogical determination. Hand-Auger samples are composited based on regolith boundaries and sample chemistry, generated by hand-held XRF analysis. Each 1m of sample is dried and riffle-split to generate a total sample weight of 3kg for analysis, generally at 1m-4m intervals. This primary sample is then split again to provide a 1.5kg sample for both rutile and graphite analyses.
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	Drilling and sampling activities are supervised by a suitably qualified Company geologist who is present at all times. All drill samples are geologically logged by the geologist at the drill site/core yard. Each sample is sun dried and homogenised. Sub-samples are carefully riffle split to ensure representivity. The 1.5kg composite samples are then processed. An equivalent mass is taken from each sample to make up the composite. A calibration schedule is in place for laboratory scales, sieves and field XRF equipment. Placer Consulting Pty Ltd (Placer) Resource Geologists have reviewed Standard Operating Procedures (SOPs) for the collection and processing of drill samples and found them to be fit for purpose. The primary composite sample is considered representative for this style of rutile 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.	Logged mineralogy percentages and lithology information is used to determine compositing intervals. Care is taken to ensure that only samples with similar geological characteristics are composited together.
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).*	A total of 53 hand-auger holes for 639m were drilled at the Kasiya Project to obtain samples for quantitative determination of recoverable rutile and Total Graphitic Carbon (TGC). Hand-auger drilling 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.
Drill Sample Recovery	*Method of recording and assessing core and chip sample recoveries and results assessed.*	Samples are assessed visually for recoveries. 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 once the water table has been reached. Auger drilling samples are actively assessed by the geologist onsite for recoveries and contamination.
	Measures taken to maximise sample recovery and ensure representative nature of the samples.	The Company's trained geologists supervise drilling on a 1 team 1 geologist basis and are responsible for monitoring all aspects of the drilling and sampling process.

Criteria	JORC Code explanation	Commentary
		Hand-auger drilling samples are retrieved and placed into large plastic bags. The bags are clearly labelled and delivered back to the laydown at the end of shift for processing.
	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 relationship is believed to exist between grade and sample recovery. The high percentage of silt and absence of hydraulic inflow from groundwater at this deposit results in a sample size that is well within the expected size range. No bias related to preferential loss or gain of different materials is observed.
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.*	Geologically, data is collected in detail, sufficient to aid in Mineral Resource estimation. All individual 1-metre intervals are geologically logged, recording relevant data to a set log-chief template using company codes. A small representative sample is collected for each 1-metre interval and placed in appropriately labelled chip trays for future reference.
	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.*	N/A
	If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.	Hand-auger samples from the 53 holes drilled are dried, riffle split and composited. Samples are collected and homogenised prior to splitting to ensure sample representivity. ~1.5kg composite samples are processed. An equivalent mass is taken from each primary sample to make up the composite. The primary composite sample is considered representative for this style of mineralisation and is consistent with industry standard practice.
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	Techniques for sample preparation are detailed on SOP documents verified by Placer Resource Geologists. Sample preparation is recorded on a standard flow sheet and detailed QA/QC is undertaken on all samples. Sample preparation techniques and QA/QC protocols are appropriate for mineral determination.
	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	The sampling equipment is cleaned after each sub-sample is taken. Field duplicate, laboratory replicate and standard sample geostatistical analysis is employed to manage sample precision and analysis accuracy.
	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.	Sample size analysis is completed to verify sampling accuracy. Field duplicates are collected for precision analysis of riffle splitting. SOPs consider sample representivity. Results indicate a sufficient level of precision for the resource classification.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	The sample size is considered appropriate for the material sampled.
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.*	<u>Rutile</u> The Malawi onsite laboratory sample preparation methods are considered quantitative to the point where a non-magnetic mineral concentrate (NM) is generated. Final results generated are for recovered rutile i.e. the % mass of the sample that is rutile that can be recovered to the non-magnetic component of a HMC. The HMC is prepared via wet-table, gravity separation at the Lilongwe Laboratory which provides an ideal sample for subsequent magnetic separation and XRF. All samples (incl. QA) included in this announcement received the following workflow undertaken on-site in Malawi; • Dry sample in oven for 1 hour at 105℃ • Soak in water and lightly agitate

Criteria	JORC Code explanation	Commentary
		• Wet screen at 5mm, 600µm and 45µm to remove oversize and slimes material • Dry +45µm -600mm (sand fraction) in oven for 1 hour at 105℃ • Pass +45µm -600mm (sand fraction) across wet table to generate a heavy mineral concentrate (HMC) • Pan HMC to remove retained light minerals • Dry HMC in oven for 30 minutes at 105℃ • Magnetic separation of the HMC by Carpco magnet @ 16,800G (2.9Amps) into a magnetic (M) and non-magnetic (NM) fraction. Bag NM fraction and send to Perth, Australia for quantitative chemical and mineralogical determination. • The NM fractions were sent to ALS Metallurgy Perth for quantitative XRF analysis. Samples received XRF_MS. <u>Graphite</u> All samples are initially checked in and processed to pulp at Intertek-Genalysis Johannesburg. The pulp samples are then dispatched to Intertek-Genalysis Perth where they undergo TGC assay via method C72/CSA. A portion of each test sample is dissolved in dilute hydrochloric acid to liberate carbonate carbon. The solution is filtered using a filter paper and the collected residue is the dried to 425°C in a muffle oven to drive off organic carbon. The dried sample is then combusted in a Carbon/ Sulphur analyser to yield total graphitic or elemental carbon (TGC). The graphitic carbon content is determined by eliminating other carbon forms from the total carbon content. The addition of acid to the sample liberates carbon dioxide thus removing carbonate carbon. Soluble organic carbon will also be removed. Insoluble organic carbon is removed by heating the samples at 425°C in an oxidising environment. The "dried" carbon-bearing sample that is analysed in the resistance furnace is considered to contain only graphitic carbon. An Eltra CS-800 induction furnace infra-red CS analyser is then used to determine the remaining carbon which is reported as Total Graphitic Carbon (TGC) as a percentage.
	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 XRF 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.	Sovereign uses internal and externally sourced wet screening reference material inserted into samples batches at a rate of 1 in 20. The externally sourced, certified standard reference material for HM and Slimes assessment is provided by Placer Consulting. Accuracy monitoring is achieved through submission of certified reference materials (CRM's). ALS and Intertek both use internal CRMs and duplicates on XRF analyses. Sovereign also inserts CRMs into the sample batches at a rate of 1 in 20. Analysis of sample duplicates is undertaken by standard geostatistical methodologies (Scatter, Pair Difference and QQ Plots) to test for bias and to ensure that sample splitting is representative. Standards determine assay accuracy performance, monitored on control charts, where failure (beyond 3SD from the mean) may trigger re-assay of the affected batch. Examination of the QA/QC sample data indicates satisfactory performance of field sampling protocols and assay laboratories providing acceptable levels of precision and accuracy. Acceptable levels of accuracy and precision are displayed in geostatistical analyses.

Criteria	JORC Code explanation	Commentary
Verification of sampling & assaying	*The verification of significant intersections by either independent or alternative company personnel.*	Results are reviewed in cross-section using Micromine software and any spurious results are investigated. The deposit type and consistency of mineralisation leaves little room for unexplained variance. Extreme high grades are not encountered.
	The use of twinned holes.	Twinned holes are not reported here.
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	All geological field logging data is collected in LogChief logging software. This data is then imported to Datashed5 and validated automatically and then manually. Sovereigns' laboratory data is captured onto paper templates or excel and transferred manually to the database.
	Discuss any adjustment to assay data.	QEMSCAN of the NM fraction shows dominantly clean and liberated rutile grains and confirms rutile is the only titanium species in the NM fraction. Recovered rutile is therefore defined and reported here as: TiO_2 recovered in the +45 to -600um range to the NM concentrate fraction as a % of the total primary, dry, raw sample mass divided by 95% (to represent an approximation of final product specifications). i.e. recoverable rutile within the whole sample.
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 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.
	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.*	The hand-auger holes are spaced on a on a regular grid which is deemed to adequately define the mineralisation under investigation.
	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.	The drill spacing and distribution is considered to be sufficient to establish a degree of geological and grade continuity appropriate for further future Mineral Resource estimation.
	Whether sample compositing has been applied.	Individual 1m intervals have been composited, based on lithology for the 53 hand-auger holes.
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*	Sample orientation is vertical and approximately perpendicular to the orientation of the mineralisation, which results in true thickness estimates, limited by the sampling interval as applied. Drilling and sampling are carried out on a regular square grid. There is no apparent bias arising from the orientation of the drill holes with respect to the orientation of the deposit.
	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.	There is no apparent bias arising from the orientation of the drill holes with respect to the orientation of the deposit.
Sample security	*The measures taken to ensure sample security*	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. 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. 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.
Audits or reviews	*The results of any audits or reviews of sampling techniques and data*	Richard Stockwell (resource CP) has reviewed and advised on all stages of data collection, sample processing, QA protocol and mineral resource estimation. Methods employed are considered industry best-practice.

Criteria	JORC Code explanation	Commentary
		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.

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 Retention Licence (RL) under the Mines and Minerals Act (No 8. of 2019), held in the Company's wholly-owned, Malawi-registered subsidiaries: EL0609, EL0582, EL0492, EL0528, EL0545, EL0561, and EL0657. 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 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 eluvial 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 collar and composite data are provided in the body and appendices of this report.
	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	No information has been excluded.
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 results reported in the body of the report are on a nominal lower cut-off of 0.5% Rutile and exclude bottom of hole samples where saprock has been geologically logged.
	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	No data aggregation was required.

Criteria	Explanation	Commentary
	and some typical examples of such aggregations should be shown in detail.	
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	No metal equivalent values are used in this report.
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. It lies in a laterally extensive superficial blanket with high-grade zones reflecting the broad bedrock strike orientation of ~045°.
	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.
	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. 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 the body of this report.
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.
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.*	Rutile has been determined, by QEMSCAN, to be the major TiO_2-bearing mineral at and around several rutile prospects within Sovereign's ground package. The Company continues to examine areas within the large tenement package for rutile and graphite by-product mineralisation.
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).	No further exploration is planned at this stage.
	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 the body of this report.