SOVEREIGN METALS LIMITED

8 September 2022

KASIYA AIR-CORE DRILLING INDENTIFIES HIGH-GRADE MINERALISATION AT DEPTH

- First drilling results from the Company's deeper air-core (**AC**) program confirm rutile mineralisation extends at depth beneath previous drilling in most of the targeted areas
- Results demonstrate the growth potential of Kasiya at depth and confirm that **extensive rutile mineralisation remains outside of the current Mineral Resource Estimate (MRE) and pit shells**
- Core areas of the previously designed pit shells averaged about 15m depth with new drilling commonly extending mineralisation to between 20m and 30m depth
- The new deeper and thicker rutile intercepts highlight the potential to increase the mineral resource at depth
- Highlights include:
  - **28m @ 1.05% inc. 5m @ 1.78% rutile**
  - **25m @ 1.06% inc. 13m @ 1.15% rutile**
  - **20m @ 1.26% inc. 16m @ 1.37% rutile**
  - **22m @ 1.15% inc. 8m @ 1.51% rutile**
  - **20m @ 1.29% inc. 6m @ 1.27% rutile**
  - **26m @ 1.18% inc. 6m @ 1.66% rutile**
- Identification of high-grade mineralisation at depth is expected to contribute to the MRE update targeted for Q1 2023
- Kasiya's Pre-Feasibility Study (**PFS**) and Environmental and Social baseline workstreams are advancing with all major project and consultant teams appointed with a scheduled completion date in Q2 2023

Sovereign Metals Limited (**ASX:SVM; AIM:SVML**) (**Sovereign** or **the Company**) is pleased to report first results from its H1 2022 AC drilling program at the Kasiya Rutile Project (**Kasiya**), the world's largest rutile deposit in Malawi.

The results confirm that rutile mineralisation is continuous in many pit areas from surface down to the top of saprock, normally between 20m and 30m from surface. Results reveal the potential for mining pits to be extended at depth to the top of saprock in numerous areas.

Sovereign's Managing Director Dr Julian Stephens commented: "*The early results from this deeper drilling re-asserts the truly remarkable Tier 1 nature of Kasiya in terms of size, grade and mineralisation consistency. We have now answered the question on the potential to deliver additional tonnes for the mineral resource at depth. Kasiya continues to grow and will likely become a multi generational project capable of supplying a reliable and sustainable source of high-purity titanium as natural rutile.*"

ENQUIRIES

Dr Julian Stephens (Perth)
Managing Director
+61(8) 9322 6322

Sam Cordin (Perth)
+61(8) 9322 6322

Sapan Ghai (London)
+44 207 478 3900

KASIYA AIR CORE DRILLING

The 191-hole air-core drilling program at the Kasiya rutile deposit was completed in two phases from May to August 2022 by Thompson Drilling. The program was divided into an initial 32-hole sighter phase with results reported herein, and a second more expansive and targeted 159-hole phase. The drilling was completed on a nominal 200m x 200m grid spacing targeting upgrading of mineralisation into the Indicated category which could convert to Probable Reserves as part of the forthcoming PFS. A total of 32 drill-holes for 814m are reported (Figure 1) with results from the remaining 159 holes for 3,846m pending.

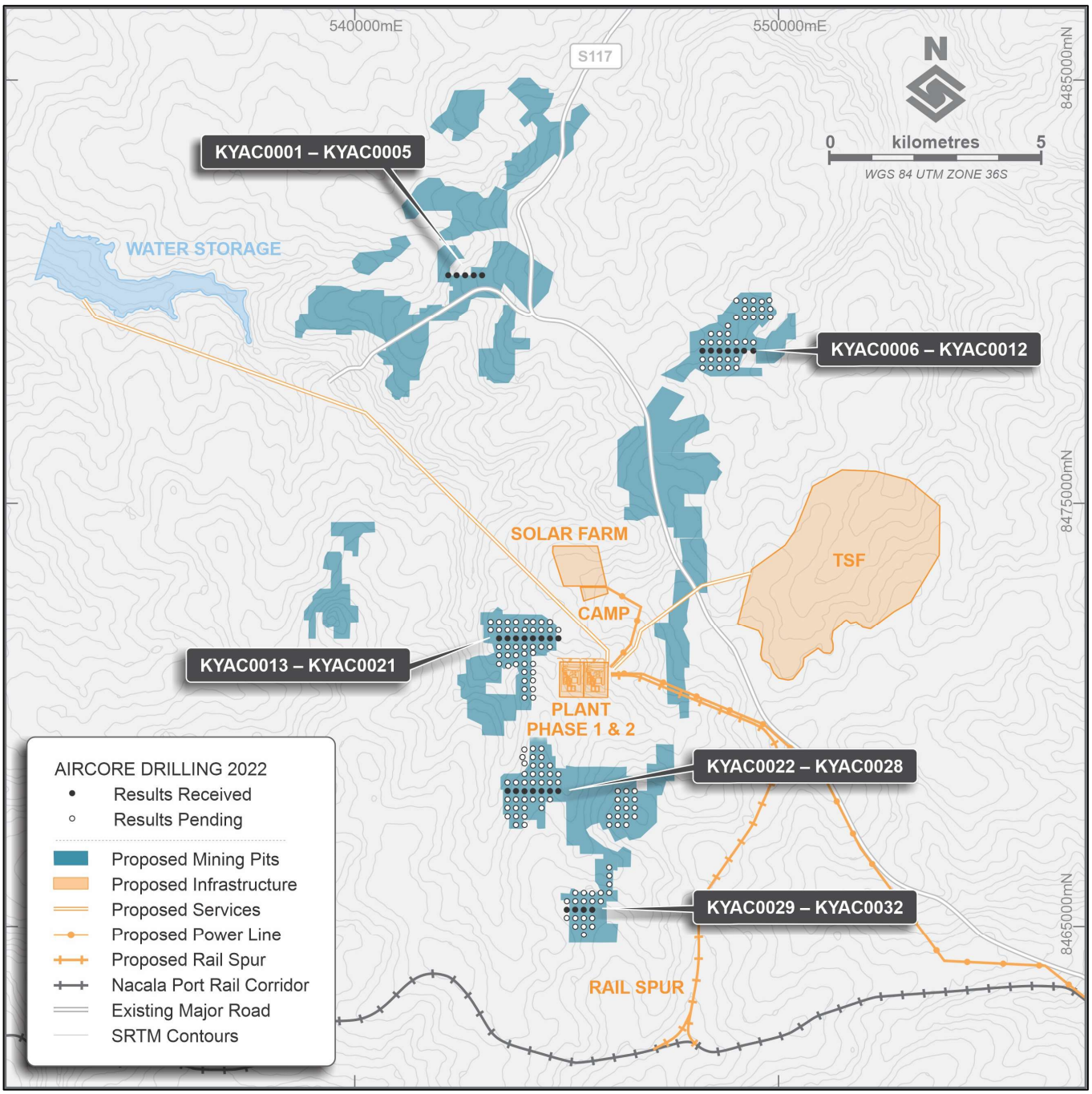

Figure 1: Kasiya AC drilling location map showing the drilling concentrated within Indicatd Pit Shells.

The initial sighter AC drilling program focused on mineralised corridors where high-grade rutile mineralisation was hypothesised to persist at depth, below the limit of the previous drilling. Results show that the mineralisation is pervasive throughout the saprolite zones with many holes showing mineralisation with 20-30m thickness from surface. Further MRE depth extensions are likely where the AC holes have extended known mineralisation beyond the base of the current MRE bound.

Second phase targeted drilling on the planned pit areas considered in the ESS has also been completed with the expectation that these pit designs may be modified if additional rutile mineralisation is encountered at depth.

Coarse flake graphite is present in all AC holes in association with rutile mineralisation. Graphite grades appear to improve with depth averaging +2% TGC in numerous holes.

Figure 2: THR001 air-core drilling rig in operation at Kasiya, showing drill pads lightly cleared in the background

Figure 3: THR001 air-core drilling KYAC0001 to 23m EOH at Kasiya

Figure 4 and 5: Kasiya drilling sample collection under the cyclone and mineralised weathering profile displayed in a chip tray

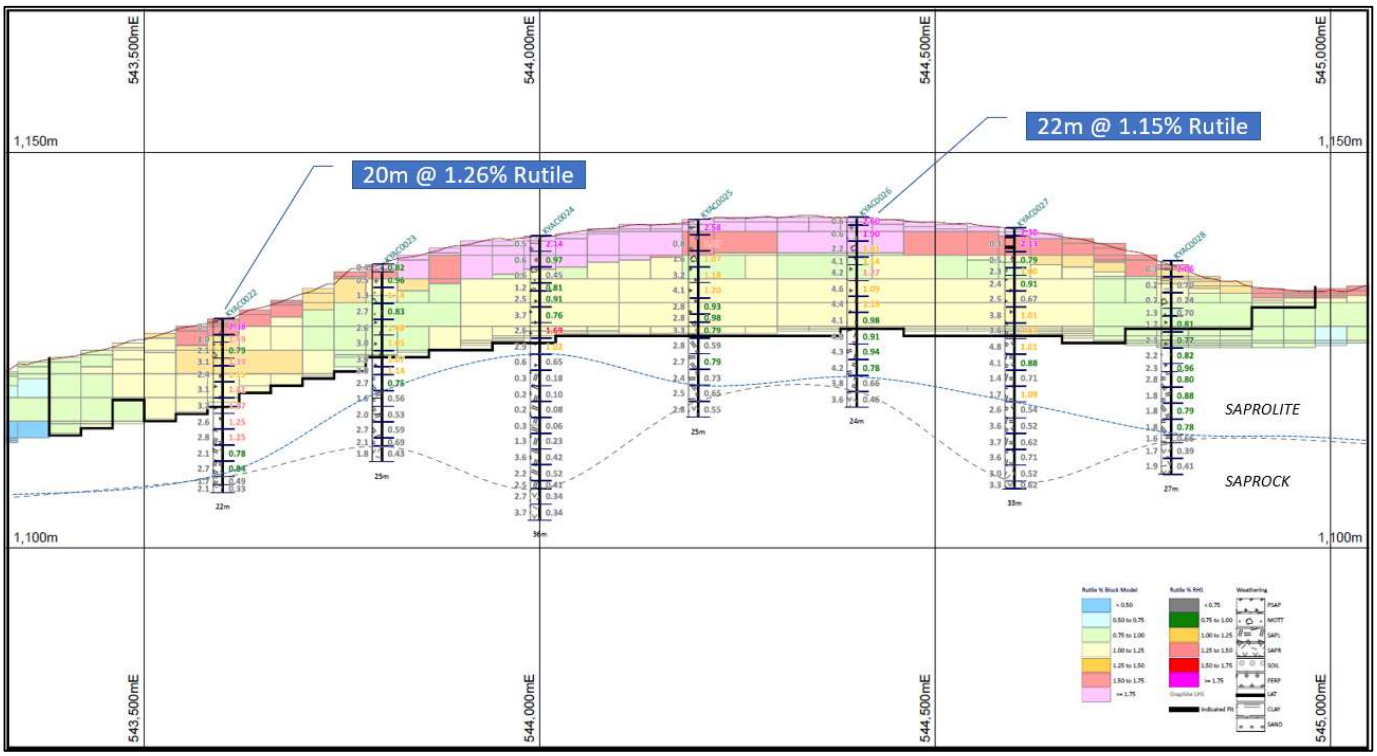

Figure 6: Cross section 8,478,200mN including KYAC0022 to KYAC0028. Refer Figure 1.

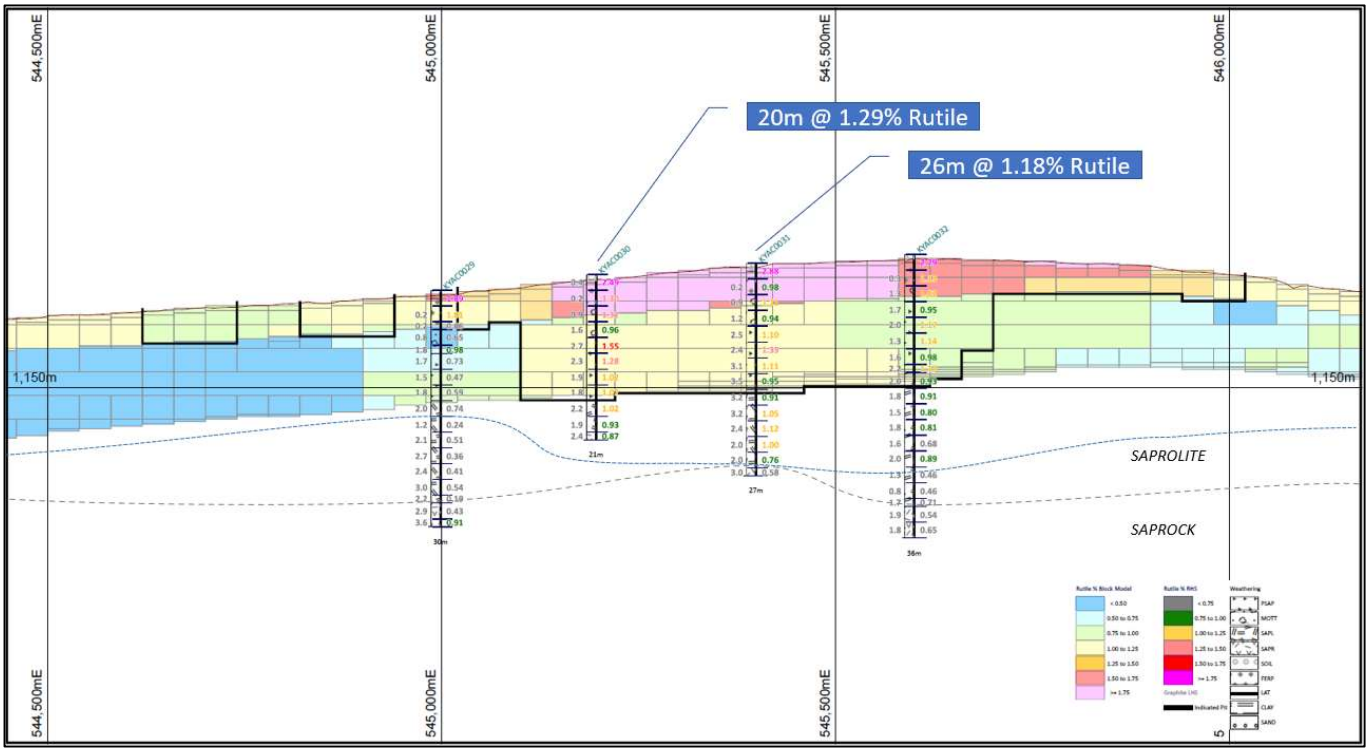

Figure 7: Cross section 8,465,400mN including KYAC0029 to KYAC0032. Refer Figure 1.

PRE-FEASIBILITY STUDY PROGRESS

There are numerous technical work packages in progress for the Kasiya PFS including;

- Further drilling to refine and extend the MRE and then the final PFS mining inventory
- Preliminary hydrogeological pilot and test boreholes
- Continued metallurgical test-work focused on the planned first 10 years of mining
- Site visits throughout September by the principal PFS consultants
- Updated JORC resource estimate planned for Q1 2023
- Ongoing product marketing with further offtake MOUs expected to be executed

PERFORMANCE RIGHTS PLAN

The Company will seek shareholder approval to amend the terms of all existing performance rights currently on issue to amend the performance conditions as detailed in the table below (**Amendment**).

The Amendment is being sought to ensure that management are not disadvantaged by the impacts of COVID and the Company's decision to complete the Expanded Scoping Study (**ESS**) which was underpinned by the substantial MRE update as announced in April 2022. The decision to complete the ESS has further enhanced the Kasiya economics but delayed the commencement of the PFS and subsequent Definitive Feasibility Study (**DFS**).

The Company does not envisage that it will require the full life of each tranche of performance rights to satisfy the relevant performance conditions, but the Amendment provides the Company with maximum flexibility to ensure the highest quality PFS and DFS can be completed whilst also allowing time to consider any funding opportunities or other corporate transactions that may present themselves as the Company approaches the completion of a PFS and DFS. The Company expects to complete the PFS in the June 2023 quarter.

The Board believes that the Amendment is required to ensure that the performance rights currently on issue continue to incentivise and retain existing key management personnel and to ensure continuing alignment between the strategic goals of the Company and the creation of shareholder value.

The Company will seek shareholder approval in November at its 2022 Annual General Meeting to make the Amendment as follows:

TRANCHE	ORIGINAL PERFORMANCE CONDITIONS	ORIGINAL EXPIRY DATE	AMENDED PERFORMANCE CONDITIONS	AMENDED EXPIRY DATE	No. of Performance Rights
2	**Feasibility Study Milestone** means announcement of a positive Feasibility Study for the Malawi Rutile Project in accordance with the provisions of the JORC Code. **Feasibility Study** has the meaning given in the JORC Code.	31 December 2023	**Pre-Feasibility Study Milestone** means announcement of a positive Pre-Feasibility Study for the Malawi Rutile Project in accordance with the provisions of the JORC Code. **Pre-Feasibility Study** has the meaning given in the JORC Code.	30 September 2023	5,120,000
3	**Decision to Mine Milestone** means announcement of a Decision to Mine for the Malawi Rutile Project. **Decision to Mine** means a decision to commence mining operations.	31 October 2025	**Feasibility Study Milestone** means announcement of a positive Feasibility (DFS) Study for the Malawi Rutile Project in accordance with the provisions of the JORC Code. **Feasibility Study** has the meaning given in the JORC Code.	31 October 2025	7,320,000

Further, and subject to shareholder approval following his appointment as Chairman, the Company will also issue an additional 240,000 tranche 2 (PFS) performance rights and 120,000 tranche 3 (DFS) performance rights to director, Mr Ben Stoikovich.

Following the change in focus from exploration to development activities and the associated requirement for additional human resources, the Company will also issue, subject to shareholder approval of the Amendment, 1,140,000 tranche 2 (PFS) performance rights and 1,520,000 tranche 3 (DFS) performance rights to existing and incoming staff.

Competent Persons 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'. 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 the announcement dated 5 April 2022. The 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 announcement; b) all material assumptions included in the 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 report have not been materially changed from the announcement.

Table 1: Kasiya Mineral Resource Estimate at 0.7% Rutile Cut-off

Mineral Resource Category	Material Tonnes (millions)	Rutile (%)	Rutile Tonnes (millions)	Total Contained Graphite (TGC) (%)	TGC Tonnes (millions)	RutEq. Grade* (%)
Indicated	662	1.05%	6.9	1.43%	9.5	1.76%
Inferred	1,113	0.99%	11.0	1.26%	14.0	1.61%
Total	**1,775**	**1.01%**	**18.0**	**1.32%**	**23.4**	**1.67%**

* RutEq. Formula: Rutile Grade x Recovery (98%) x Rutile Price (US$1,308/t) + Graphite Grade x Recovery (62%) x Graphite Price (US$1,085/t) / Rutile Price (US$1,308/t). All assumptions are taken from this Study ** Any minor summation inconsistencies are due to rounding

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 I – DRILL RESULTS

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

Hole ID	Interval Thickness	Rutile %	TGC %	From (m) Downhole	Hole Type
KYAC0001	19.0	0.88	1.8	0.0	AC
incl	6.0	1.23	1.5	0.0	
KYAC0002	16.0	0.84	1.3	0.0	AC
incl	5.0	1.12	0.7	0.0	
KYAC0003	11.0	0.84	0.8	1.0	AC
incl	3.0	1.27	0.3	1.0	
KYAC0004	16.0	1.05	1.9	2.0	AC
incl	13.0	1.10	1.8	2.0	
KYAC0005	22.0	1.06	1.5	1.0	AC
incl	15.0	1.16	1.4	1.0	
KYAC0006	28.0	1.05	2.0	2.0	AC
incl	5.0	1.78	2.4	10.0	
KYAC0007	5.0	1.15	0.2	1.0	AC
incl	3.0	1.36	0.1	1.0	
KYAC0008	19.0	0.95	1.5	1.0	AC
incl	3.0	1.24	0.2	1.0	
KYAC0009		NSR			AC
KYAC0010	24.0	1.03	1.9	0.0	AC
incl	5.0	1.87	0.3	0.0	
KYAC0011	20.0	1.17	2.1	0.0	AC
incl	11.0	1.21	1.7	0.0	
KYAC0012	20.0	0.70	1.2	1.0	AC
KYAC0013	20.0	1.03	1.5	1.0	AC
incl	6.0	1.46	1.1	1.0	
KYAC0014	7.0	1.64	1.0	0.0	AC
KYAC0015	19.0	0.97	1.7	1.0	AC
incl	10.0	1.12	1.9	3.0	
KYAC0016	7.0	1.16	0.5	0.0	AC
KYAC0017	20.0	0.97	1.5	0.0	AC
incl	4.0	1.53	0.4	0.0	
KYAC0018	25.0	1.06	2.5	0.0	AC
incl	13.0	1.15	2.5	0.0	
KYAC0019	20.0	0.98	1.6	0.0	AC
incl	3.0	1.67	0.3	0.0	
KYAC0020	14.0	0.95	2.1	0.0	AC
incl	3.0	1.51	0.0	0.0	
KYAC0021	14.0	0.99	2.2	0.0	Twin AC
incl	3.0	1.37	0.0	0.0	
KYAC0022	20.0	1.26	2.4	0.0	AC

Hole ID	Interval Thickness	Rutile %	TGC %	From (m) Downhole	Hole Type
incl	16.0	1.37	2.4	0.0	
KYAC0023	23.0	0.86	2.2	0.0	AC
incl	7.0	1.08	2.9	7.0	
KYAC0024	17.0	1.06	1.7	0.0	AC
incl	4.0	1.56	0.6	0.0	
KYAC0025	23.0	1.08	2.4	0.0	AC
incl	10.0	1.50	1.9	0.0	
KYAC0026	22.0	1.15	3.5	0.0	AC
incl	8.0	1.51	2.3	0.0	
KYAC0027	30.0	0.95	2.7	0.0	AC
incl	3.0	2.19	0.2	0.0	
KYAC0028	23.0	0.85	1.6	0.0	AC
incl	2.0	2.06	0.3	0.0	
KYAC0029	16.0	0.86	1.1	0.0	AC
incl	4.0	1.45	0.1	0.0	
KYAC0030	20.0	1.29	1.6	0.0	AC
incl	6.0	1.70	0.5	0.0	
KYAC0031	26.0	1.18	2.1	0.0	AC
incl	6.0	1.66	0.4	0.0	
KYAC0032	27.0	1.06	1.5	0.0	AC
incl	6.0	1.48	0.5	0.0	

APPENDIX II: DRILL HOLE COLLAR DATA – TABLE 3

Hole ID	Easting	Northing	RL	Depth
KYAC0001	542200	8480400	1117	23.0
KYAC0002	542399	8480401	1123	18.0
KYAC0003	542601	8480400	1126	25.0
KYAC0004	542800	8480402	1129	21.0
KYAC0005	543001	8480400	1132	26.0
KYAC0006	548200	8478600	1144	32.0
KYAC0007	548399	8478603	1143	33.0
KYAC0008	548600	8478600	1140	24.0
KYAC0009	548800	8478600	1137	18.0
KYAC0010	549000	8478600	1134	26.0
KYAC0011	549180	8478600	1130	21.0
KYAC0012	549400	8478600	1125	23.0
KYAC0013	543400	8471800	1121	23.0
KYAC0014	543600	8471800	1123	21.0
KYAC0015	543800	8471800	1124	21.0
KYAC0016	544000	8471800	1125	29.0

Hole ID	Easting	Northing	RL	Depth
KYAC0017	544200	8471800	1126	20.0
KYAC0018	544400	8471800	1128	27.0
KYAC0019	544600	8471800	1130	23.0
KYAC0020	544800	8471800	1132	27.0
KYAC0021	544801	8471800	1132	27.0
KYAC0022	543599	8468204	1129	22.0
KYAC0023	543800	8468200	1136	25.0
KYAC0024	544000	8468197	1139	36.0
KYAC0025	544200	8468200	1142	25.0
KYAC0026	544401	8468200	1142	24.0
KYAC0027	544600	8468200	1140	33.0
KYAC0028	544798	8468201	1136	27.0
KYAC0029	544998	8465399	1162	30.0
KYAC0030	545196	8465401	1164	21.0
KYAC0031	545399	8465398	1166	27.0
KYAC0032	545600	8465400	1167	36.0

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.*	Air-Core 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 2m 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, lithology information and TiO_2% obtained from handheld XRF are 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 32 Air-Core holes for 814m are reported here from drilling at the Kasiya Rutile Deposit to obtain samples for quantitative determination of recoverable rutile and Total Graphitic Carbon (TGC). Placer has reviewed SOPs for Air-Core 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. Air-Core drilling recovery in the top few metres are moderate to good. Extra care is taken to ensure sample is recovered best as possible in these metres. Recoveries are recorded on the rig at the time of drilling by the geologist. Drilling is ceased when recoveries become poor once Sap rock has been encountered.
	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. Air-core drilling samples are recovered in 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*	Geologically, data is collected in detail, sufficient to aid in Mineral Resource estimation.

Criteria	JORC Code explanation	Commentary
	level of detail to support appropriate Mineral Resource estimation mining studies and metallurgical studies.	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.	Air-Core samples 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 • 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.

Criteria	JORC Code explanation	Commentary
		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. Three <u>Rutile</u> CRMs used by Sovereign. Rutile A (AMIS0602) containing TiO_2 XRF 90.62%. The CRM is supplied by African Mineral Standards (AMIS), South Africa. Rutile B containing TiO_2 XRF 70.71%. The CRM is supplied by OREAS and has been designed and matrix matched specifically for Sovereign. Rutile C containing TiO_2 XRF 40.76%. The CRM is supplied by OREAS and has been designed and matrix matched specifically for Sovereign. Two <u>Graphite</u> Standards are used by Sovereign. MPHLG1 containing 3.22% TGC TCMG1 containing 7.54% TGC Both these CRMs are supplied by OREAS and has been designed and matrix matched specifically for Sovereign. 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. Significant mineralisation intersections.
	The use of twinned holes.	Twinned holes are drilled across a geographically-dispersed area to determine short-range geological and assay field variability. Twin drilling is applied at a rate of 1 in 20 routine holes. Acceptable levels of precision are displayed in the geostatistical analysis of twin drilling data. No twin holes are reported here.
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	All data are collected initially on paper logging sheets and codified to the Company's templates. This data is hand entered to spreadsheets and validated by Company geologists. This data is then imported to a Datashed5 and validated automatically and then manually. A transition to electronic field and laboratory data capture is underway.
	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 Air-Core collars. Daily capture at a registered reference marker ensures equipment remains in calibration. No downhole surveying of Air-Core holes is completed. Given the vertical nature and shallow depths of the Air-Core 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 Air-Core collars are spaced on a 200m x 200m grid which is deemed to adequately define the mineralisation.
	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, at a max 2m sample interval for the 32 air-core 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.

Criteria	JORC Code explanation	Commentary
		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 (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. 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 2019, held in the Company's wholly-owned, Malawi-registered subsidiaries: EL0609, EL0492, EL0528, EL0545, EL0561, EL0582 and RL0012. 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 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 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	No information has been excluded.

Criteria	Explanation	Commentary
	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 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 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.	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. 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 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).	Core-drilling and water exploratory drilling is planned and ongoing throughout the remainder for 2022.

Criteria	Explanation	Commentary
	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.