



## OUTSTANDING METALLURGICAL RESULTS AT KASIYA

Sovereign Metals Limited (**the Company** or **Sovereign**) is pleased to report the results of further bulk scale metallurgy test-work from the large Kasiya Rutile Project in Malawi (**Kasiya**).

The test-work confirms the outstanding metallurgical results with modifications to the process flowsheet resulting in very high recoveries of premium quality rutile products and production of a high-grade, coarse flake graphite by-product.

### HIGHLIGHTS

- ❖ Premium grade rutile produced via **simple and conventional process flow sheet**
- ❖ **World-class specification** rutile products ranging from **95.0% to 97.2% TiO<sub>2</sub>** with low impurities
- ❖ **Stand-out metallurgical recoveries** ranging from **94% to 100%**
- ❖ **Outstanding results** now demonstrated over two separate bulk programs on samples representative of run-of-mine grade mineralisation at Kasiya
- ❖ Product marketing ramping up with **significant interest received from tier 1 rutile off-takers** in the pigment, titanium metal and welding industries
- ❖ **High-grade, coarse flake graphite by-product**, with 60% +150µm, recovered from rutile gravity tails fractions using a conventional graphite flowsheet

#### Sovereign's Managing Director Dr Julian Stephens commented:

*"Consistently achieving premium rutile specifications with stand-out recoveries via conventional "off the shelf" processing methods reinforces the robustness of metallurgical and processing performance of the Kasiya rutile mineralisation ahead of the upcoming Scoping Study."*

*"These continued very high-quality product specifications should generate further interest from end-users across the titanium sector as the global structural deficit in natural rutile supply continues to widen."*

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#### 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

7 December 2021

**RUTILE METALLURGICAL TEST-WORK PROGRAM**

This phase of bulk sample test-work was designed to confirm and improve on the previous, very successful, bulk metallurgy program completed in late 2020.

Results again confirm premium grade rutile can be produced via a simple and conventional process flow sheet and are consistent with previous results. World-class product chemical specifications are reported at 95.0% to 97.2% TiO<sub>2</sub> with low impurities and stand-out metallurgical recoveries ranging from 94% to 100%.

The test-work program was again conducted at globally recognised Allied Mineral Laboratories (AML) in Perth, Australia. A 1.6 tonne mineralised sample was produced from a composite of multiple drill holes across the core areas of the Kasiya Rutile Deposit. The sample was selected to be representative of run-of-mine material and had a head grade of 1.19% rutile.

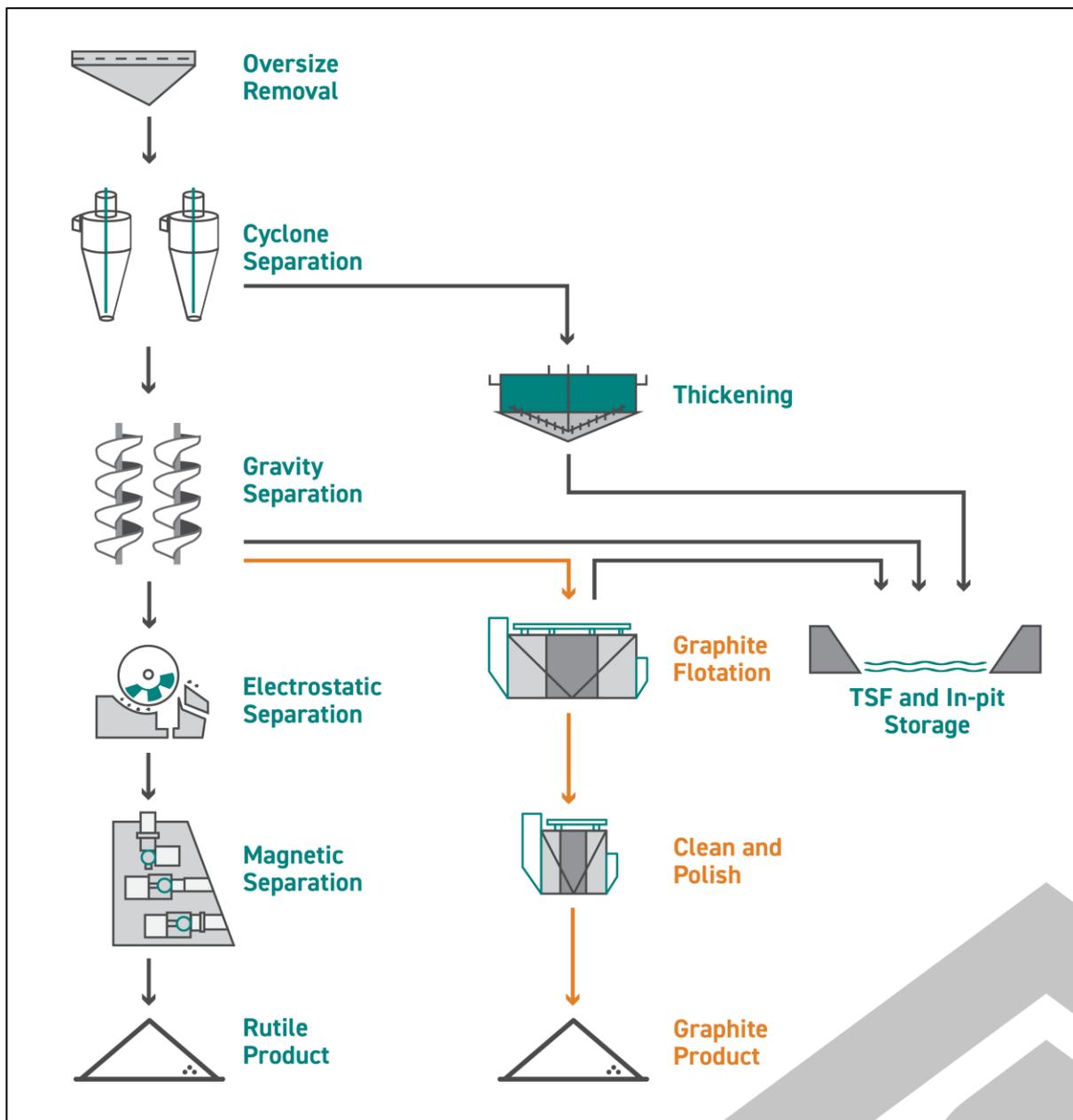


Figure 1: High-level flowsheet developed in the test-work program

7 December 2021

A simple two-stage cyclone circuit was used with over 92% of the -45µm material rejected at the deslime stage. Thickening and dewatering centrifuge test-work was undertaken on the fines fraction. Thickener underflow densities of 40% solids (w/w) were achieved during the test-work performed by Outotec Metso. The high underflow density negates the need to include centrifuge dewatering in the flowsheet.

Gravity separation using a combination of up-current classifier (**UCC**) and spirals efficiently separated rutile and other heavy minerals in the sand fraction. Gravity separation was effective at concentrating graphite to a "light mineral concentrate" spiral tail due to its low specific gravity (~2.2 t/m<sup>3</sup>).

The dry mineral separation (Mineral Separation Plant) test-work showed very high recoveries of rutile with premium chemical specifications using a very simple flowsheet incorporating electrostatic and magnetic methods.

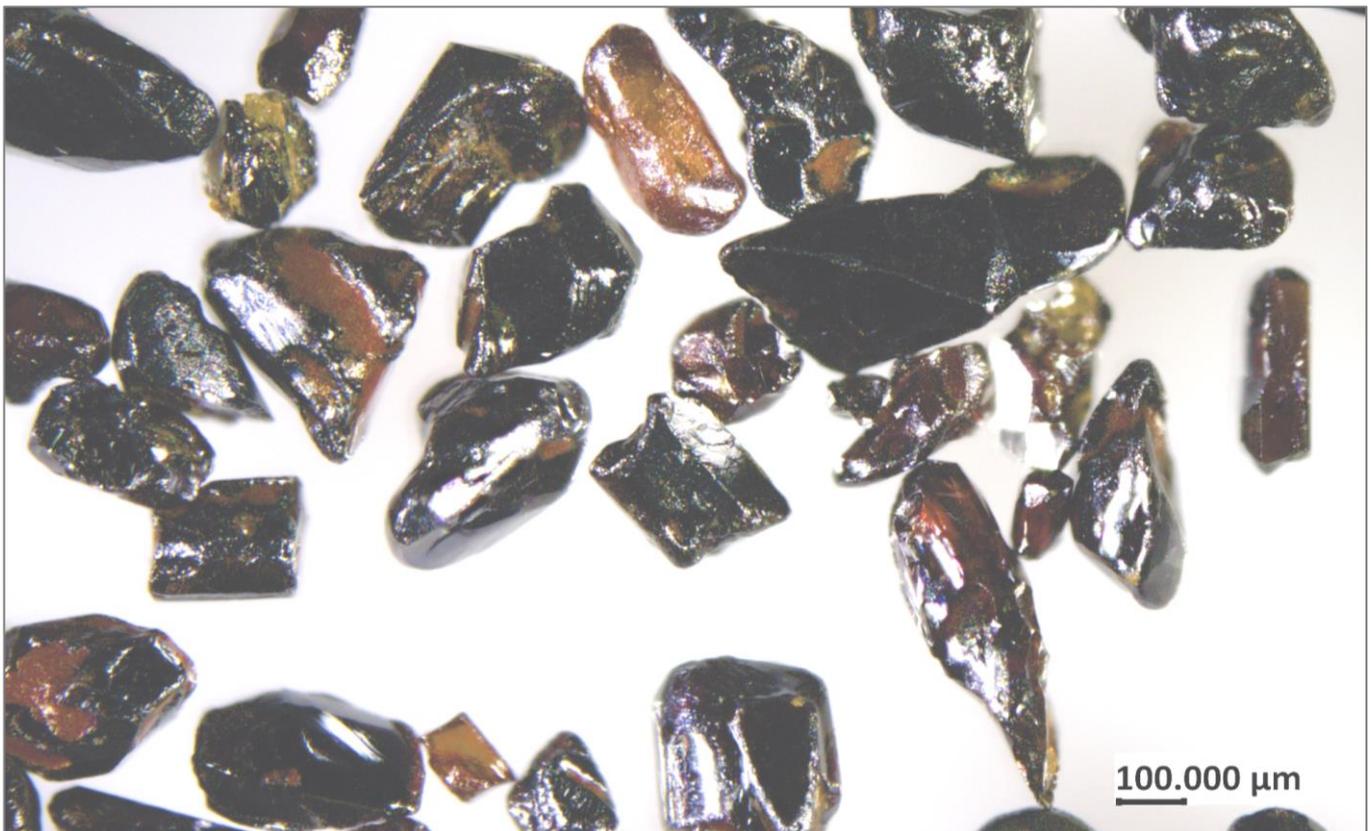


Figure 2: Photomicrograph of high purity rutile product 97.2% TiO<sub>2</sub>

## RUTILE MARKETING AND OFF-TAKE

The premium chemical parameters of the rutile produced indicates the product should be suitable for all major natural end-use markets including TiO<sub>2</sub> pigment feedstock, titanium metal and welding sectors. Demand and pricing for natural rutile are both very strong as the global structural deficit in supply continues to widen.

The Company is ramping up product marketing with significant interest received from tier 1 off-takers across all three market sectors.

7 December 2021

## GRAPHITE BY-PRODUCT

Coarse-flake graphite has been identified throughout the Kasiya rutile deposit with recent assays received confirming grades averaging about 1% TGC within the rutile MRE area.

Gravity separation was effective at concentrating graphite to a “light mineral pre-concentrate” due to its low specific gravity (~2.2 t/m<sup>3</sup>) at circa 6.3% TGC.

A program at SGS Lakefield in Canada was undertaken in order to confirm that the graphite gravity pre-concentrate can be upgraded into a coarse flake graphite by-product via a conventional graphite flotation flowsheet.

The test-work was extremely successful, and a very coarse-flake graphite concentrate at 96.3% TGC was produced. Greater than 60% of the graphite concentrate is in the large to super-jumbo fractions, suggesting a high combined basket value (Table 1). The overall graphite recovery from the raw sample to product was 62%.

Given the very successful results achieved via a simple and traditional flowsheet the Company now intends to incorporate a coarse-flake graphite by-product in the upcoming Scoping Study.

Table 1: Kasiya 2021 Graphite Results				
Particle size		Carbon (%)	Weight distribution (% w/w)	Flake category
Tyler mesh	micron (µm)			
+32	+500	96.0	5.4	<i>Super Jumbo</i>
-32 +48	-500 +300	96.6	25.1	<i>Jumbo</i>
-48 +80	-300 +180	96.7	30.9	<i>Large</i>
-80 +100	-180 +150	96.8	10.9	<i>Medium</i>
-100 +200	-150 +75	95.8	21.9	<i>Small</i>
-200	-75	93.8	5.8	<i>Amorphous</i>
<b>Total</b>		<b>96.3</b>	<b>100.0</b>	



Figures 3 & 4: Very coarse-flake graphite in +600µm sample fraction (L), graphite floating on soaking drill sample (R)

7 December 2021

## CONCLUSIONS

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The ability to repeat and improve on previous metallurgical test-work results consolidate Sovereign's view of the quality of the Kasiya project and the project's outstanding metallurgical characteristics.

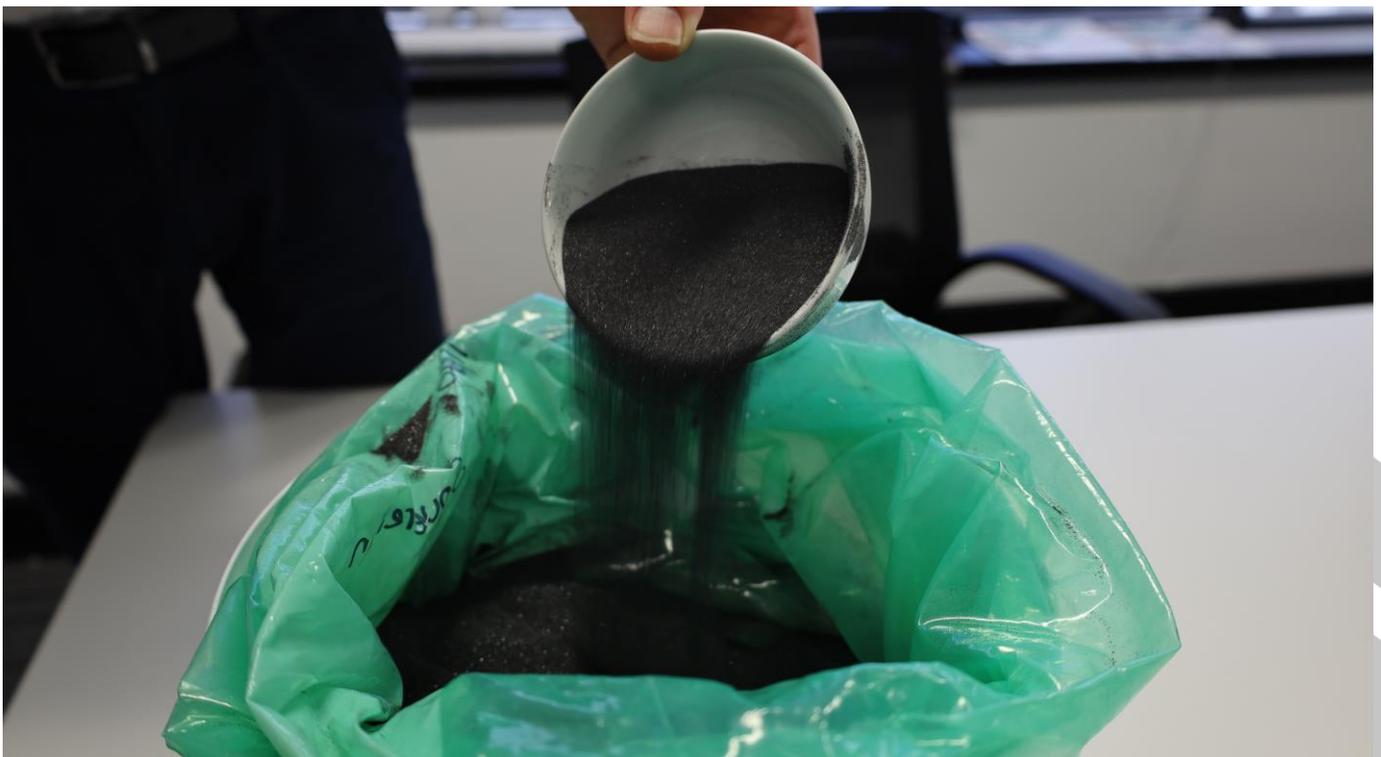
The successful graphite by-product test-work adds valuable product stream to the operation, enhancing the commercial potential of this globally significant rutile project. This test-work has confirmed that rutile and graphite mineralisation at Kasiya is highly amenable to processing via conventional metallurgical flowsheets utilising "off the shelf" components.

Overall, the superior metallurgical performance overall is likely due to;

- Coarse, highly crystalline rutile grains that are naturally well-liberated and largely free of inclusions or attachments
- Low chemical impurities in the rutile crystal lattices
- Simple Heavy Mineral Concentrate (**HMC**) mineralogy with very little difficult or near-density gangue minerals present
- Deslimed and very coarse, well liberated graphite flakes present in the graphite gravity pre-concentrate

Sovereign is now well advanced with the Scoping Study (**Study**) for Kasiya which is targeting a large-scale natural rutile operation to fill part of the major existing supply deficit with the purest and most environmentally sustainable titanium feedstock. The majority of technical disciplines for the Study have now been completed with the JORC MRE, mining optimisation and capital and operating cost estimations currently being finalised.

The Company looks forward to presenting the results of the Study in the coming weeks which will incorporate the excellent results achieved in the recent rutile and graphite by-product test-work programs. Additionally, the premium chemical parameters of the rutile produced indicates the products should be suitable for all major natural end-use markets including TiO<sub>2</sub> pigment feedstock, titanium metal and welding sectors. Sovereign is ramping up product marketing with significant interest received from tier 1 off-takers across all three market sectors.



*Figure 5: Final rutile product from the test-work ready for despatch to potential off-takers*

7 December 2021

## APPENDIX 1: RUTILE SPECIFICATIONS

Comparison of Sovereign's rutile specifications from current test-work to leading global producers							
Constituent		Malawi Rutile (Sovereign)	Malawi Rutile (Sovereign)	Sierra Rutile (Iluka)	RBM (Rio Tinto)	Kwale (Base Resources)	Namakwa Sands (Tronox)
Recovery		<b>100%</b>	<b>94%</b>				
TiO <sub>2</sub>	%	<b>95.0</b>	<b>97.2</b>	96.3	93.3	96.2	94.5
ZrO <sub>2</sub> +HfO <sub>2</sub>	%	<b>0.20</b>	<b>0.21</b>	0.78	1.30	0.72	1.10
SiO <sub>2</sub>	%	<b>0.67</b>	<b>0.61</b>	0.62	2.00	0.94	2.00
Fe <sub>2</sub> O <sub>3</sub>	%	<b>0.99</b>	<b>0.42</b>	0.38	0.70	1.25	0.8
Al <sub>2</sub> O <sub>3</sub>	%	<b>0.45</b>	<b>0.38</b>	0.31	0.90	0.23	0.6
Cr <sub>2</sub> O <sub>3</sub>	%	<b>0.13</b>	<b>0.13</b>	0.19	0.11	0.17	0.14
V <sub>2</sub> O <sub>5</sub>	%	<b>0.67</b>	<b>0.70</b>	0.58	0.40	0.52	0.33
Nb <sub>2</sub> O <sub>5</sub>	%	<b>0.37</b>	<b>0.39</b>	0.15	0.30	-	0.04
P <sub>2</sub> O <sub>5</sub>	%	<b>0.01</b>	<b>0.001</b>	0.01	0.03	0.00	0.02
MnO	%	<b>0.02</b>	<b>0.01</b>	0.01	-	0.03	0.4
MgO	%	<b>0.003</b>	<i>b/d</i>	0.01	-	0.10	0.01
CaO	%	<b>0.003</b>	<b>0.001</b>	0.01	-	0.04	0.04
S	%	<b>0.01</b>	<b>0.01</b>	<0.01	<0.05	-	0.01
U+Th	ppm	<b>31</b>	<b>23</b>	26	100	53	-
d <sub>50</sub> sizing	µm	<i>Pending</i>	<b>118</b>	-	124	-	124
<75µm	%	<i>Pending</i>	<b>8.3</b>	-	-	-	-

"Iluka" is Iluka Resources Limited; "Rio Tinto" is Rio Tinto plc; "Base Resources" is Base Resources Limited; "Tronox" is Tronox Holdings plc. "b/d" is below the analytical level of detection, "-" is not disclosed. Sources: RBM data from World Titanium Resources Ltd TZMI Conference Presentation November 2011 (Updated January 2012); Sierra Rutile, Kwale and Namakwa Sands data from BGR Assessment Manual titled "Heavy Minerals of Economic Importance" 2010.

7 December 2021

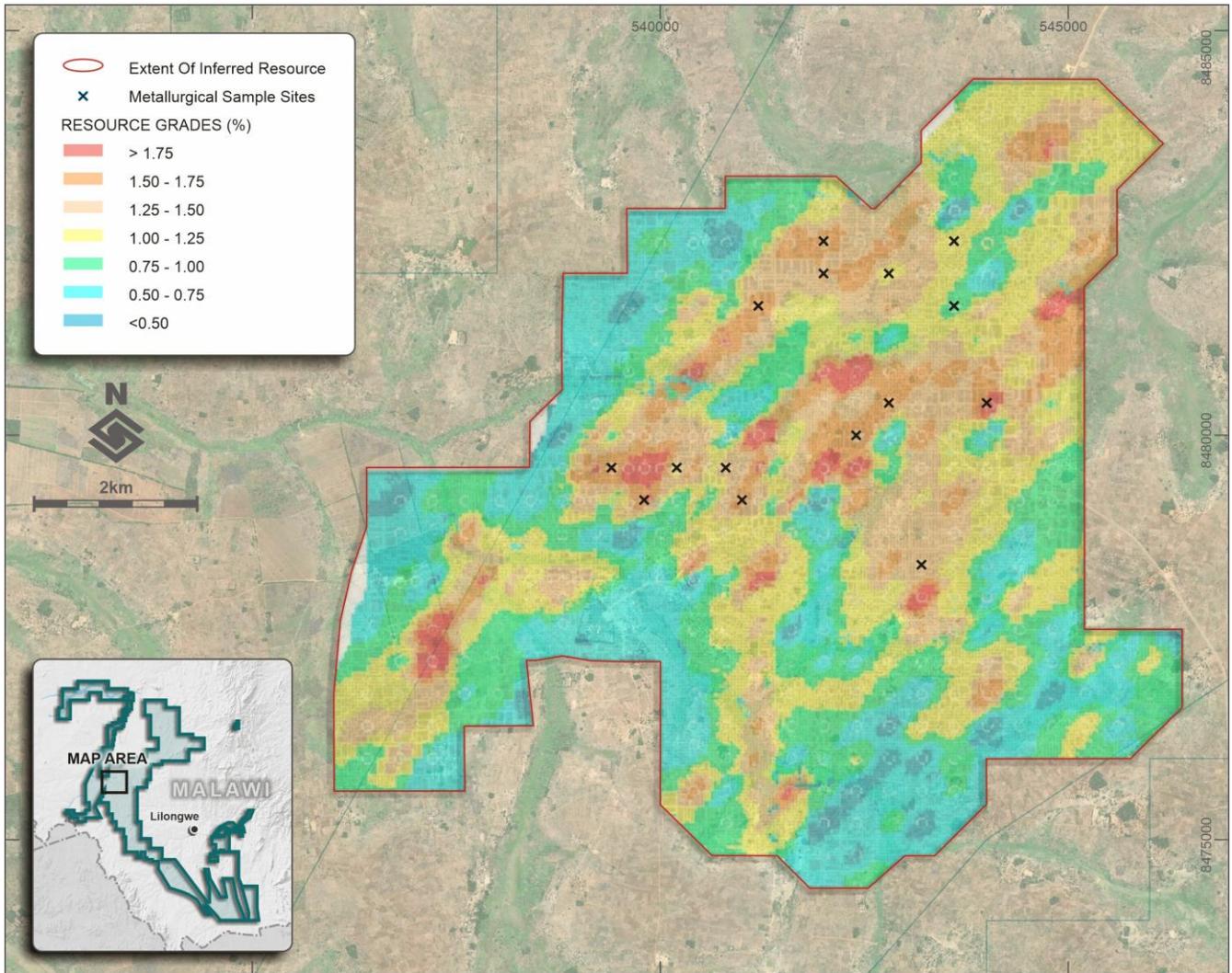


Figure 6: Location of drill holes used in the bulk sample composite.



**7 December 2021****Competent Persons' Statements**

*The information in this report that relates to Metallurgical test-work Results - Rutile 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 and a holder of performance rights in Sovereign. 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.*

*The information in this report that relates to Metallurgical test-work Results – Graphite is based on information compiled by Mr Oliver Peters, M.Sc., P.Eng., MBA, who is a Member of the Professional Engineers of Ontario (PEO), a 'Recognised Professional Organisation' (RPO) included in a list promulgated by the ASX from time to time. Mr Peters is a consultant of SGS Canada Inc. (SGS). SGS is engaged as a consultant by Sovereign Metals Limited. Mr Peters has sufficient experience, which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking, to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Peters 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 Exploration Results - Rutile are extracted from announcements dated 26 May 2020, 22 June 2020, 13 July 2020, 21 September 2020 and 4 February 2021. These announcements are available to view on [www.sovereignmetals.com.au](http://www.sovereignmetals.com.au). Sovereign confirms that a) it is not aware of any new information or data that materially affects the information included in the announcements; 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 announcements.*

*The information in this announcement that relates to Exploration Results - Graphite are extracted from the announcement dated 22 November 2021. The announcement is available to view on [www.sovereignmetals.com.au](http://www.sovereignmetals.com.au). Sovereign confirms that a) it is not aware of any new information or data that materially affects the information included in the 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.*

*The information in this announcement that relates to the Mineral Resource Estimate is extracted from the announcement dated 9 June 2021. The announcement is available to view on [www.sovereignmetals.com.au](http://www.sovereignmetals.com.au). Sovereign confirms that a) it is not aware of any new information or data that materially affects the information included in the 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.*

**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, Julian Stephens.*



7 December 2021

APPENDIX 2: JORC CODE, 2012 EDITION – TABLE 1

SECTION 1 - SAMPLING TECHNIQUES AND DATA

Criteria	JORC Code explanation	Commentary
<b>Sampling Techniques</b>	<i>Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</i>	<p>A total of ~150 hand auger cluster holes were newly drilled and composited as the raw, primary sample for this metallurgical test-work.</p> <p>Individual 1-metre raw samples were used to create a composite sample of mass circa ~1,650kg and 1.19% recoverable rutile.</p>
	<i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i>	<p>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.</p> <p>Drilling and sampling activities are supervised by a suitably qualified Company geologist who is present at all times. All bulk 1-metre drill samples are geologically logged by the geologist at the drill site.</p> <p>Each 1m sample is sun dried and homogenised. Sub-samples are carefully riffle split to ensure representivity ~1.5kg composite samples are processed. An equivalent mass is taken from each 1m sample to make up the composite.</p> <p>The primary composite sample is considered representative for this style of rutile and graphite mineralisation.</p> <p>A calibration schedule is in place for laboratory scales, sieves and field XRF equipment.</p>
	<i>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.</i>	<p>Existing rutile exploration results were used to determine the 1-metre intervals suitable to contribute to the 1,650kg bulk sample composite.</p>
<b>Drilling Techniques</b>	<i>Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).</i>	<p>Placer has reviewed SOPs for hand-auger drilling and found them to be fit for purpose.</p> <p>Hand-auger 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.</p> <p>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.</p>
<b>Drill Sample Recovery</b>	<i>Method of recording and assessing core and chip sample recoveries and results assessed.</i>	<p>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.</p>
	<i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i>	<p>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.</p>
	<i>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</i>	<p>No bias related to preferential loss or gain of different materials has occurred.</p>
<b>Logging</b>	<i>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation mining studies and metallurgical studies.</i>	<p>All individual 1-metre auger intervals are geologically logged, recording relevant data to a set template using company codes.</p>
	<i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.</i>	<p>All logging includes lithological features and estimates of basic mineralogy. Logging is generally qualitative.</p>
	<i>The total length and percentage of the relevant intersection logged</i>	<p>100% of samples are geologically logged.</p>

7 December 2021

Criteria	JORC Code explanation	Commentary
<b>Sub-sampling techniques and sample preparation</b>	<i>If core, whether cut or sawn and whether quarter, half or all core taken.</i>	Not applicable – no core drilling conducted.
	<i>If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.</i>	Primary individual 1-metre samples from all HA holes drilled were sun dried and homogenised.  The sample was combined and homogenised for dispatch to Perth, Australia. Metallurgical test-work subsamples were taken by splitting the relevant materials using a suitable riffle splitter.
	<i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i>	The sample preparation techniques and QA/QC protocols are considered appropriate for the nature of this test-work.
	<i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i>	No sub sampling has taken place.
	<i>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</i>	The sampling best represents the material in situ.
	<i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i>	The sample size is considered appropriate for the nature of the test-work.
<b>Quality of assay data and laboratory tests</b>	<i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i>	The following workflow was used to assess the recoverability of rutile and specifications on the final product; <ul style="list-style-type: none"> <li>Wet screen at 2mm and cyclone at a cut size of 45µm to remove oversize and -45µm material</li> <li>Pass +45µm -2mm (sand) fraction through Up current Classifier (UCC)</li> <li>Pass UCC O/F through cyclone at cut point of 45µm</li> <li>Pass UCC O/F cyclone U/F over spiral</li> <li>UCC O/F cyclone U/F over spiral con combined with UCC underflow spiral con</li> <li>Pass UCC underflow (i.e. denser materials) across series of gravity spirals and wet tables to generate a heavy mineral concentrate (HMC).</li> <li>Attrition HMC fractions in water using Freevis reagent, then deslime and dry</li> <li>Dry separation circuit comprising a 3-stage electrostatic circuit</li> <li>Low intensity magnetic removal of magnetite and other high iron mineral species at &lt;1000 gauss</li> <li>Rare earth drum magnetic separation</li> <li>Screening of rutile concentrate to remove +355µm material</li> </ul> Sovereign's rutile product is currently being analysed by QEMSCAN in Australia by leading independent laboratory services provider ALS Limited.  The following workflow was used to assess the recoverability of graphite and specifications on the final product; <ul style="list-style-type: none"> <li>A gravity tailings sample generated from test-work performed at AML with 6.3% TGC was sent to SGS Canada for graphite flotation test-work</li> <li>The sample comprised a combination of UCC underflow, scavenger spiral tail and UCC overflow material and underwent the following;                             <ul style="list-style-type: none"> <li>single stage of rougher flotation</li> <li>polishing</li> <li>three stages of primary cleaner flotation</li> <li>sizing at 180µm</li> <li>regrind of separate +180µm/-180µm fractions</li> <li>secondary cleaner flotation</li> </ul> </li> </ul>
	<i>For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</i>	Acceptable levels of accuracy and precision have been established. No handheld methods are used for quantitative determination.
	<i>Nature of quality control procedures adopted (e.g. standards, blanks, duplicate, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</i>	Accuracy monitoring is achieved through submission of certified reference materials (CRM's).  Ultra-Trace and ALS both use internal CRMs and duplicates on XRF and NC425 analyses.

7 December 2021

Criteria	JORC Code explanation	Commentary
<b>Verification of sampling &amp; assaying</b>	<i>The verification of significant intersections by either independent or alternative company personnel.</i>	No drilling intersections are being reported.
	<i>The use of twinned holes.</i>	Several holes were identified to twin or cluster for the sole purpose of collecting primary material to contribute to the bulk sample.
	<i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i>	All data was collected initially on paper logging sheets and codified to the Company's templates. This data was hand entered to spreadsheets and validated by Company geologists. This data was then imported to a Microsoft Access Database then validated automatically and manually.
	<i>Discuss any adjustment to assay data.</i>	No adjustment to assay data has been made.
<b>Location of data points</b>	<i>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</i>	A Trimble R2 Differential GPS 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.
	<i>Specification of the grid system used.</i>	WGS84 UTM Zone 36 South.
	<i>Quality and adequacy of topographic control.</i>	DGPS pickups are considered to be high quality topographic control measures.
<b>Data spacing &amp; distribution</b>	<i>Data spacing for reporting of Exploration Results.</i>	The hand-auger holes contributing to the bulk sample have been selected across the broader Kasiya deposit. It is deemed that these holes should be broadly representative of the mineralisation style in the general area.
	<i>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</i>	Not applicable, no Mineral Resource or Ore Reserve estimations are covered by new data in this report.
	<i>Whether sample compositing has been applied.</i>	Raw primary 1-metre sample from ~150 hand auger cluster holes drilled for the purpose of metallurgical sample collection have been composited together to create a circa 1,650kg sample for metallurgical analysis.
<b>Orientation of data in relation to geological structure</b>	<i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known considering the deposit type</i>	No bias attributable to orientation of sampling has been identified.
	<i>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</i>	All holes were drilled vertically as the nature of the mineralisation is horizontal. No bias attributable to orientation of drilling has been identified.
<b>Sample security</b>	<i>The measures taken to ensure sample security</i>	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.
<b>Audits or reviews</b>	<i>The results of any audits or reviews of sampling techniques and data</i>	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
<b>Mineral tenement &amp; land tenure status</b>	<i>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environment settings.</i>	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: EL0372, EL0492, EL0528, EL0545, EL0561, EL0582, EL0609 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

7 December 2021

Criteria	Explanation	Commentary
	<i>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</i>	The tenements are in good standing and no known impediments to exploration or mining exist.
<b>Exploration done by other parties</b>	<i>Acknowledgement and appraisal of exploration by other parties.</i>	Sovereign Metals Ltd is a first-mover in the discovery and definition of residual rutile and graphite resources in Malawi. No other parties are involved in exploration.
<b>Geology</b>	<i>Deposit type, geological setting and style of mineralisation</i>	<p>The rutile deposit type is considered a residual placer formed by the intense weathering of rutile-rich basement paragneisses and variable enrichment by eluvial processes.</p> <p>Rutile occurs in a mostly topographically flat area west of Malawi's capital, known as the Lilongwe Plain, where a deep tropical weathering profile is preserved. A typical profile from top to base is generally soil ("SOIL" 0-1m) ferruginous pedolith ("FERP", 1-4m), mottled zone ("MOTT", 4-7m), pallid saprolite ("PSAP", 7-9m), saprolite ("SAPL", 9-25m), saprock ("SAPR", 25-35m) and fresh rock ("FRESH" &gt;35m).</p> <p>The low-grade graphite mineralisation occurs as multiple bands of graphite gneisses, hosted within a broader Proterozoic paragneiss package. In the Kasiya and Nsaru areas specifically, the preserved weathering profile hosts significant vertical thicknesses from near surface of graphite mineralisation.</p>
<b>Drill hole information</b>	<i>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: easting and northings of the drill hole collar; elevation or RL (Reduced Level-elevation above sea level in metres of the drill hole collar); dip and azimuth of the hole; down hole length and interception depth; and hole length</i>	<p>~150 cluster holes were drilled around the following existing drill holes: KYHA0078, 90, 157, 171, 180, 182, 198, 203, 304, 310, 316, 329, 332, 347 and 350.</p> <p>Collar information can be found in the in the following ASX announcements.</p> <ul style="list-style-type: none"> <li>- 26 May 2020</li> <li>- 22 June 2020</li> <li>- 13 July 2020</li> <li>- 21 September 2020</li> <li>- 4 February 2021</li> </ul>
	<i>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case</i>	No information has been excluded.
<b>Data aggregation methods</b>	<i>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high-grades) and cut-off grades are usually Material and should be stated.</i>	No significant intercepts have been reported.
	<i>Where aggregate intercepts incorporate short lengths of high-grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</i>	No significant aggregate intercepts have been reported.
	<i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i>	No metal equivalent values are used in this report.
<b>Relationship between mineralisation widths &amp; intercept lengths</b>	<i>These relationships are particularly important in the reporting of Exploration Results.</i>	The rutile 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°.
	<i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i>	The mineralisation is laterally extensive where the entire weathering profile is preserved and not significantly eroded. Minor removal of the mineralised profile has occurred in alluvial channels. These areas are adequately defined by the drilling pattern and topographical control.
	<i>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known'.</i>	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.

7 December 2021

Criteria	Explanation	Commentary
<b>Diagrams</b>	<i>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of the drill collar locations and appropriate sectional views.</i>	Refer to figures in this report and in previous releases. These are accessible on the Company's webpage.
<b>Balanced reporting</b>	<i>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high-grades and/or widths should be practiced to avoid misleading reporting of exploration results.</i>	All results are included in this report and in previous releases. These are accessible on the Company's webpage.
<b>Other substantive exploration data</b>	<i>Other exploration data, if meaningful and material, should be reported including (but not limited to: geological observations; geophysical survey results; geochemical survey results; bulk samples - size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</i>	Rutile has been determined to be the major TiO <sub>2</sub> -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 mineralisation.
<b>Further work</b>	<i>The nature and scale of planned further work (e.g. test for lateral extensions or depth extensions or large-scale step-out drilling).</i>	Laboratory processing of 2021 drilling samples continues.  Drilling is ongoing at Kasiya and Nsaru to further expand the area of known rutile mineralisation.
	<i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i>	Refer to diagrams in the body of this report and in previous releases. These are accessible on the Company's webpage.

