

## MONAZITE CONTAINING CRITICAL HEAVY RARE EARTHS CONFIRMED ACROSS MULTIPLE PITS AT KASIYA

### KEY HIGHLIGHTS

- **Monazite concentrate containing the most critical and highly valuable heavy rare earth elements Dysprosium (Dy), Terbium (Tb) and Yttrium recovered from four planned pits** in the Kasiya DFS mine plan, including pits scheduled for Year 1 production.
- **DyTb and Yttrium oxide ratios in the Total Rare Earth Oxide (TREO) basket ~7-times higher than world's five largest rare earth producers.**
  - Average **2.5% DyTb and 11.8% Yttrium** within TREO basket vs. 0.4% DyTb and 1.7% Yttrium across the five largest rare earth producers.
  - Highest ratios of up to **3.1% DyTb and 17.2% Yttrium found near-surface (0-6m)**.
- U.S. Department of War describes **heavy rare earth supply chain risk as “a clear and present danger to our national security”** - Assistant Secretary of War for Industrial Base Policy Michael P. Cadenazzi Jr., testifying before the Senate Armed Services Committee, 24 February 2026.
  - MP Materials Corp., America's only fully integrated rare earth producer, reports no measurable Dy, Tb or Yttrium.
- **Western supply-chain decoupling has accelerated** as DyTb and Yttrium subject to Chinese export controls.
  - On 20 April 2026, USA Rare Earth, Inc. agreed to acquire Serra Verde Group for ~US\$2.8 billion, underpinned by a 15-year U.S. government-backed offtake with floor pricing.
- **Monazite potentially a third revenue stream from the non-conductor tailings stream** of the DFS flowsheet — potential for no additional mining and no new primary processing circuit – confirmation of this is in progress.
- **Independent report shows potential pricing of US\$16,000/t base case (US\$19,000/t high case)** in 2026 (real), vs April 2026 Shanghai Metals Market benchmark spot monazite price (min 54-55% TREO grade) of US\$6,142/t for a monazite product with identical TREO as these latest results.

### Managing Director and CEO Frank Eagar commented:

“These results confirm that the monazite-hosted rare earth content first reported in January 2026 is present in pits scheduled for the early years of production at Kasiya. The monazite concentrate contains all four magnetic rare earth elements — Neodymium, Praseodymium, Dysprosium and Terbium — plus highly critical Yttrium. These elements appear to be recoverable from the current tailings stream of our DFS flowsheet. We are advancing the additional mineralogical and metallurgical work required to quantify the potential economic upside to the DFS reported last month.”



**Sovereign Metals Limited (ASX:SVM; AIM:SVML; OTCQX:SVMLF) (Sovereign or the Company)** is pleased to announce significant heavy rare earth metallurgical testwork results at its Kasiya Rutile-Graphite Project (**Kasiya or the Project**) in Malawi. The testwork was conducted on monazite concentrates recovered from four pits in the Project's Definitive Feasibility Study (**DFS**) mine plan.

The results confirm that the heavy rare earth content of Dy, Tb and Yttrium first reported in January 2026 (See ASX Announcement dated 21 January 2026) is present in pits scheduled for the early years of production at Kasiya, with average TREO basket ratios approximately 7x higher than the world's five largest rare earth producers.

Heavy rare earth content is highest in the near-surface (0–6m) which returns DyTb and Yttrium ratios within the TREO basket materially above those of the deeper horizon.

**Table 1: Summary Results**

Pit	Light REE	Heavy REE	
	NdPr (%)	DyTb (%)	Y (%)
Babbler	21.0	2.6	11.7
Kingfisher	20.5	2.7	12.5
Sparrow	20.9	2.5	11.9
Mousebird	21.2	2.4	11.3
<b>Kasiya Four-pit Average</b>	<b>20.9</b>	<b>2.5</b>	<b>11.8</b>
Near Surface (0-6m)	19.3	2.9	15.4
Deeper (6m+)	21.6	2.3	10.3
<b>Top Five Producers Average REE Content</b>	<b>19.4</b>	<b>0.4</b>	<b>1.7</b>

Note: Kasiya Four-pit Average calculated as average of per-pit TREO basket ratios. See Appendix 1 & 2 for source detail.

The findings come as the U.S. accelerates efforts to decouple heavy rare earth supply chains from China — a supply-chain risk the U.S. Department of War has described as a matter of national security.

Kasiya, already at DFS stage with a US\$2.2 billion pre-tax NPV<sub>8</sub>, contains the four magnetic rare earth elements plus highly critical Yttrium recoverable from the DFS flowsheet as a potential by-product alongside rutile and graphite.

An independent price report for a monazite concentrate has been prepared based on the composition of a 60% TREO basket. Due to the exceptionally high proportion of heavy rare earths within Kasiya's TREO basket, the independent report has identified the potential for a premium to benchmark monazite prices. The 2026 forecast base-case price is US\$16,000/t (high case US\$19,000/t), against a current benchmark monazite concentrate (54-55% TREO grade) price of approximately US\$6,142/t based on the Shanghai Metals Market.



## Heavy Rare Earth Ratios: Kasiya vs World's Five Largest Rare Earth Producers

Combined DyTb and Yttrium oxide ratios in reported TREO basket (%)

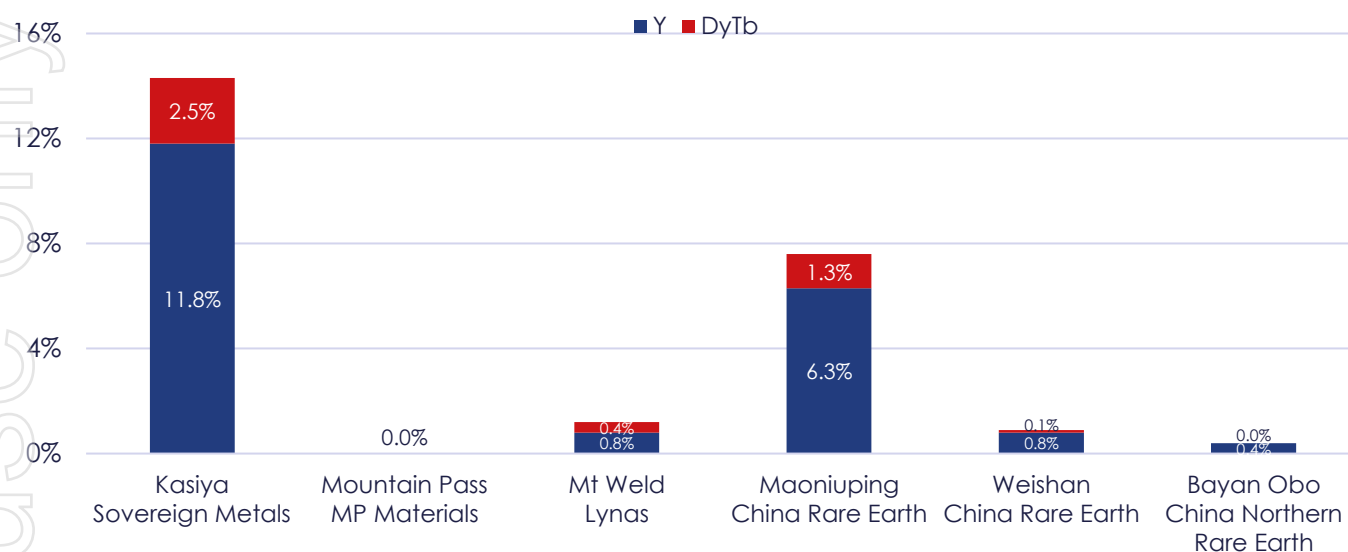


Figure 1: Combined DyTb and Yttrium content in the TREO basket of Kasiya monazite concentrate (four-pit weighted average) vs the rare earth assemblages reported by the five largest global rare earth producers (Sources: See Appendix 2)

### STRATEGIC IMPORTANCE OF DYSPROSIUM-TERBIUM AND YTTRIUM

**Dy and Tb are heavy magnet rare earths** essential for high-temperature permanent magnets used in advanced defence systems, precision weapons, aerospace applications and next-generation electric drivetrains.

**Yttrium is a high-impact rare earth element** critical for aerospace thermal barrier coatings, radar and laser systems, high-performance alloys and semiconductor manufacturing.

On 24 February 2026, the U.S. Assistant Secretary of War for Industrial Base Policy, Michael P. Cadenazzi Jr., testified before the Senate Armed Services Committee that on heavy rare earths China controls 95% of global output, with the U.S. importing almost 100% of what it uses — 90% of that from China. Mr Cadenazzi stated that this control provides Beijing with the ability to weaponize these supply chains, describing the situation as **“a clear and present danger to our national security.”**

China's April 2025 export controls on Dy, Tb and Yttrium created immediate supply tightness for Western manufacturers. On 6 January 2026, China announced strengthened export controls on dual-use items to Japan, effective immediately. Despite 15 years of diversification efforts, Japan remains approximately 60% dependent on Chinese rare earth imports, and for heavy rare earths Japan's dependence on China approaches 100%. The U.S. is 100% reliant on imports for its Yttrium requirements.

### Western Supply-Chain Strategy: Market Context

The strategic value of non-Chinese heavy rare earth supply has been crystallised by recent corporate activity. On 20 April 2026, Nasdaq-listed USA Rare Earth, Inc. (**USA Rare Earth**) announced a definitive agreement to acquire Brazil's Serra Verde Group (**Serra Verde**) for approximately US\$2.8 billion. The acquisition is underpinned by a 15-year 100% U.S. Government backed offtake agreement, with contractual price floors of US\$110/kg for both Neodymium (**Nd**) and Praseodymium (**Pr**), US\$575/kg for Dy and US\$2,050/kg for Tb.



Upon announcing the acquisition, USA Rare Earth described Serra Verde's product as containing a high percentage of all four magnetic rare earths, **"including the most critical and highly valuable heavy rare earths Dysprosium, Terbium and Yttrium."** USA Rare Earth also positioned Serra Verde as the only producer outside Asia capable of supplying all four magnetic rare earths at scale, and noted that Serra Verde has secured a US\$565 million mine development finance package from the U.S. International Development Finance Corporation.

On 20 January 2026, U.S. uranium and rare earth producer Energy Fuels Inc. announced a US\$299 million acquisition of ASX-listed Australian Strategic Materials Limited, expanding its mine-to-metal-and-alloy rare earth platform with the stated aim of becoming "the largest fully integrated producer of REE materials outside of China."

**These transactions crystallise the value that Western governments and capital markets now ascribe to scaled, non-Chinese rare earth supply.** Kasiya's monazite concentrate contains all four magnetic rare earth elements — plus Yttrium — at TREO basket ratios consistent with or exceeding benchmark operations, potentially recovered as a by-product of a project that is already at DFS stage with a US\$2.2 billion pre-tax NPV<sub>8</sub>.

### BY-PRODUCT ECONOMICS: NEAR-ZERO INCREMENTAL COST

The monazite concentrates reported above are recovered from the non-conductor tailings stream of the processing flowsheet specified in the Kasiya DFS. This is material that would otherwise report to tailings.

Recovery as a by-product of the DFS-specified flowsheet could potentially mean:

- No additional mining — the mine plan remains unchanged
- No new primary processing circuits
- No parallel rare-earth processing plant of the kind required by primary rare earth producers
- Monazite is isolated from the existing non-conductor product stream
- No additional reagents required

In aggregate, monazite concentrate recovery is potentially achievable at near-zero incremental costs relative to the DFS base case. Further work is required to assess the capital and operating cost implications of any downstream product separation or refining, and to characterise the mineralogy, deportment, liberation and radioactive element (uranium and thorium) handling requirements of the Kasiya monazite.

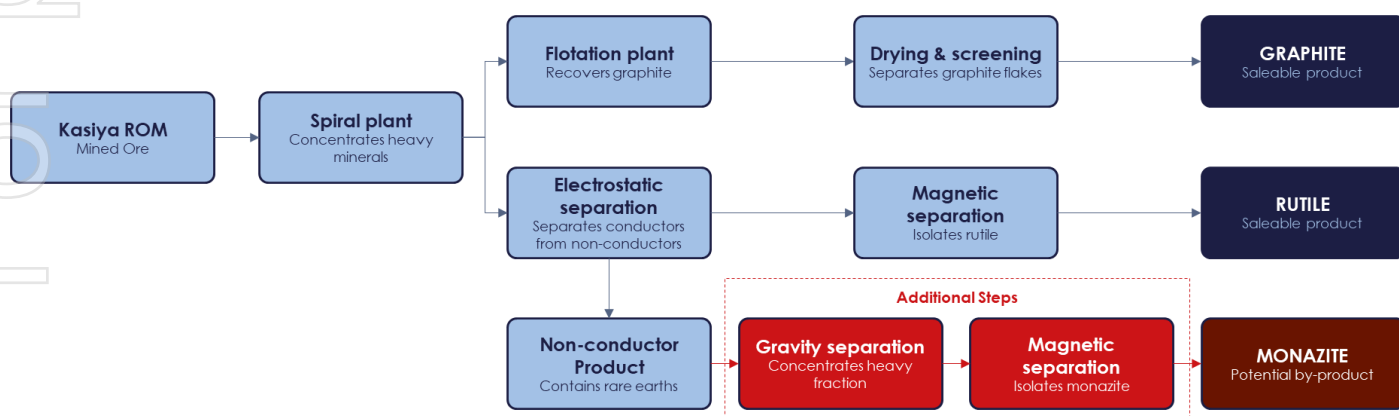


Figure 2: High-level DFS process flowsheet and additional potential steps required for a monazite by-product



## KASIYA MONAZITE INDEPENDENT PRICE FORECAST

Project Blue Group Limited (**Project Blue**), a specialist in critical minerals market intelligence, prepared an independent price forecast for a monazite mineral concentrate containing 60% TREO.

Project Blue's methodology values a contained Mixed Rare Earth Compound (**MREC**) within a concentrate using ex-China rare earth oxide prices, applies a payability factor reflecting commercial discounts, deducts for downstream processing and transportation to Japan as a Western-aligned ex-China proxy, and other realisation costs.

**Table 2: Project Blue 2026 price estimates for a monazite concentrate with TREO distribution in line with that observed in Sovereign's monazite testwork to date**

Scenario	Payability factor	MREC value (US\$/kg)	Monazite concentrate (US\$/kg)
Base case	60%	39.49	16.00
High case	70%	46.07	19.00
April 2026 monazite concentrate price (54-55% TREO grade)			6.14

Sources: Project Blue; Shanghai Metal Exchange (<https://www.metal.com/Concentrate/202403260008>).

Project Blue's base-case forecast prices range from US\$15.81/kg to US\$16.00/kg over 2026–2028. High-case prices range from US\$18.78/kg to US\$19.00/kg over the same period.

Project Blue notes that prices for key rare earth products including NdPr oxide, Tb oxide, Dy oxide and Yttrium oxide are commanding a premium in ex-China markets relative to Chinese domestic prices, reflecting the limited pool of non-Chinese suppliers and ongoing decoupling of Western and Chinese rare earth supply chains.

*The Project Blue forecast is independent commentary on potential pricing for a monazite concentrate with a 60% TREO. Sovereign has not entered into any offtake or sales agreement for monazite concentrate. Realised prices will depend on commercial negotiation, market conditions at the time of sale, the actual specifications of any concentrate produced and the terms of any offtake agreement.*

## SAMPLE PROCESSING AND METHODOLOGY

Monazite concentrates were produced from bulk sampling sites across four pits within the Kasiya DFS mine plan, namely Babbler, Kingfisher, Sparrow and Mousebird.

The Babbler bulk samples were extracted at two locations using a 700mm spiral auger and composited to represent planned pit depth or ROM feed material at each borehole location. The bulk samples were processed through the company's pilot plant to produce a 45µm to 2mm spiral Heavy Mineral Concentrate (**HMC**). A 200kg portion of the spiral HMC was screened at 600µm and the resultant 45µm to 600µm sand fraction was processed over the Wilfley wet table to produce an HMC.

The Kingfisher, Sparrow and Mousebird bulk samples were composited from twin pit and Air Core (**AC**) samples at several sites within each pit. The pit composite bulk samples represent the 0m to 6m Ferruginous Pedolith (**FERP**) and Mottled Clay (**MOTT**) weathering units, while the AC bulk composites represent the +6m Pallid Saprolite (**PSAP**) and Saprolite (**SAPL**) weathering units.



The bulk composite samples of between 200kg and 1000kg were processed using mechanical vibrating screens to produce a 45µm to 600µm sand fraction which was further processed over the Wilfley wet table to produce an HMC.



**Figure 3: Monazite rich HMC clearly observable from gravity separation of non-conductor tailings (taken from samples disclosed in this announcement)**

The Wilfley HMC of each bulk sample from the four pits were then processed through the Corona Stat electrostatic separator to produce a monazite-bearing, non-conductor product. A monazite-rich, non-conductor HMC was produced from the Wilfley table processing of each non-conductor product from which a final magnetic monazite concentrate was produced by magnetic separation. The monazite concentrates were sent for X-ray fluorescence (**XRF**) and Inductively Coupled Plasma (**ICP**) analysis.



## NEXT STEPS

- Further detailed mineralogical characterisation of the monazite across the pits tested, including liberation, grain size and deportment of uranium and thorium.
- Additional metallurgical testwork to assess potential downstream processing pathways for the monazite concentrate.
- Characterisation of monazite grades and recoveries and marketable product volumes
- Study to assess the economic uplift from incorporating monazite as a bolt-on to the existing DFS flowsheet.
- Continued engagement with potential offtake partners and government stakeholders in relation to the heavy rare earth co-product opportunity.

## Enquiries

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## Competent Persons Statement

The information in this report that relates to Metallurgical Testwork is based on information compiled by Mr Andries Willem Kruger, a Competent Person, who is a Member of the South African Council for Natural Scientific Professions, a Recognised Professional Organisation' (**RPO**) included in a list promulgated by ASX from time to time. Mr Kruger is employed by Sovereign and is a holder of ordinary shares and unlisted performance rights in Sovereign. Mr Kruger 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 Kruger 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 DFS (including Mine Engineering, Mine Scheduling, Processing, Infrastructure, Capital and Operating Costs, Production Target and Ore Reserves) is extracted from an announcement dated 16 April 2026, which is available to view at [www.sovereignmetals.com.au](http://www.sovereignmetals.com.au). Sovereign confirms that a) it is not aware of any new information or data that materially affects the information included in the original announcement; b) all material assumptions 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.



## 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 1: ANALYSIS OF REE DISTRIBUTION IN KASIYA MONAZITE SAMPLES (%)

Pit	Kingfisher	Kingfisher	Mousebird	Mousebird	Sparrow	Sparrow	Babbler	Babbler
Interval	0-6m	6-20m	0-6m	6-20m	0-6m	6-20m	0-8m	8-20m
Origin	2 x pit composites	2 x AC composites	3 x pit composites	3 x AC composites	4 x pit composites	4 x AC composites	KYSA0068	KYSA0069
La <sub>2</sub> O <sub>3</sub> (%)	15.4	18.0	17.1	18.2	16.2	18.5	18.1	17.5
CeO <sub>2</sub> (%)	35.7	39.2	37.7	39.2	36.1	39.3	37.6	38.7
Pr <sub>3</sub> O <sub>11</sub> (%)	4.3	5.0	4.7	4.9	4.4	5.0	4.9	4.8
Nd <sub>2</sub> O <sub>3</sub> (%)	14.1	16.5	15.7	16.6	14.6	16.7	16.4	15.9
Dy <sub>2</sub> O <sub>3</sub> (%)	2.6	1.9	2.2	1.7	2.4	1.7	2.1	2.1
Sm <sub>2</sub> O <sub>3</sub> (%)	2.9	3.2	3.1	3.3	2.9	3.2	3.2	3.1
Er <sub>2</sub> O <sub>3</sub> (%)	1.6	1.0	1.2	0.8	1.5	0.8	1.1	1.1
Eu <sub>2</sub> O <sub>3</sub> (%)	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1
Gd <sub>2</sub> O <sub>3</sub> (%)	2.5	2.6	2.5	2.6	2.6	2.6	2.6	2.5
Ho <sub>2</sub> O <sub>3</sub> (%)	0.5	0.3	0.4	0.3	0.5	0.3	0.4	0.4
Lu <sub>2</sub> O <sub>3</sub> (%)	0.3	0.1	0.2	0.1	0.2	0.1	0.1	0.2
Tb <sub>4</sub> O <sub>7</sub> (%)	0.6	0.5	0.5	0.5	0.6	0.5	0.5	0.5
Tm <sub>2</sub> O <sub>3</sub> (%)	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.1
Yb <sub>2</sub> O <sub>3</sub>	1.9	0.9	1.3	0.9	1.7	0.8	1.0	1.1
Y <sub>2</sub> O <sub>3</sub> (%)	17.2	10.4	13.1	10.5	16.0	10.1	11.5	11.9
TREO (%)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
U (ppm)	7,471	5,482	7,064	5,872	8,143	6,184	6,250	6,307
Th (ppm)	17,587	16,962	18,334	16,315	18,417	16,839	15,854	17,296



## APPENDIX 2: COMPANY SPECIFIC SOURCES

Project	Company	Status	Source Data	Link
Bayan Obo	China Northern Rare Earth (Group) High-Tech CO. Ltd	Producing	Rare Earth Exchanges (8-Feb-25)	rareearthexchanges.com/project/bayan-obo/
Maoniuping	China Rare Earth Group	Producing	Rare Earth Exchanges (8-Feb-25)	https://rareearthexchanges.com/project/maoniuping/
Mt Weld	Lynas Rare Earths Ltd.	Producing	Vara Mada Feasibility Study NI43-101 & S-K 1300 Technical Summary (7-Jan-26)	https://www.energyfuels.com/wp-content/uploads/2026/01/FS-Vara-Mada-Project-Report-NI43-101-FINAL-01.07.2026.pdf
Mountain Pass	MP Materials Corp.	Producing	SEC FILING: 10-K - Mineral Resource Estimate (28-Feb-25)	https://d18m0p25nwr6d.cloudfront.net/CIK-0001801368/37126578-26fe-49e0-b0d2-12c6053a5a1b.pdf
Weishan	China Rare Earth Group	Producing	Rare Earth Exchanges (8-Feb-25)	rareearthexchanges.com/project/weishan/

## APPENDIX 3: DRILL HOLE COLLAR DATA AND LOCATION MAP

Borehole ID	Type	Easting	Northing	Elevation	Dip	Depth
KYSA0068	Spiral Auger(700mm)	543797	8470001	1117	-90	15
KYSA0069	Spiral Auger(700mm)	543899	8470502	1122	-90	21
KYAC0479	Air Core	543499	8471502	1118	-90	20
KYAC0480	Air Core	543299	8472101	1120	-90	18
KYAC0481	Air Core	544299	8471700	1125	-90	19
KYAC0482	Air Core	544700	8472099	1132	-90	20
KYAC0483	Air Core	543200	8470200	1120	-90	20
KYAC0484	Air Core	543100	8469901	1125	-90	20
KYAC0485	Air Core	543400	8469601	1121	-90	14
KYAC0486	Air Core	543900	8468101	1139	-90	20
KYAC0487	Air Core	544500	8468699	1138	-90	20
KYPIT0176	Pit	544300	8471701	1125	-90	6
KYPIT0177	Pit	544701	8472099	1132	-90	6
KYPIT0178	Pit	543299	8472102	1120	-90	6
KYPIT0179	Pit	543498	8471502	1119	-90	6
KYPIT0180	Pit	543200	8470201	1120	-90	6
KYPIT0181	Pit	543101	8469901	1126	-90	6
KYPIT0182	Pit	543399	8469601	1121	-90	6
KYPIT0183	Pit	543900	8468102	1139	-90	6
KYPIT0184	Pit	544500	8468698	1138	-90	6

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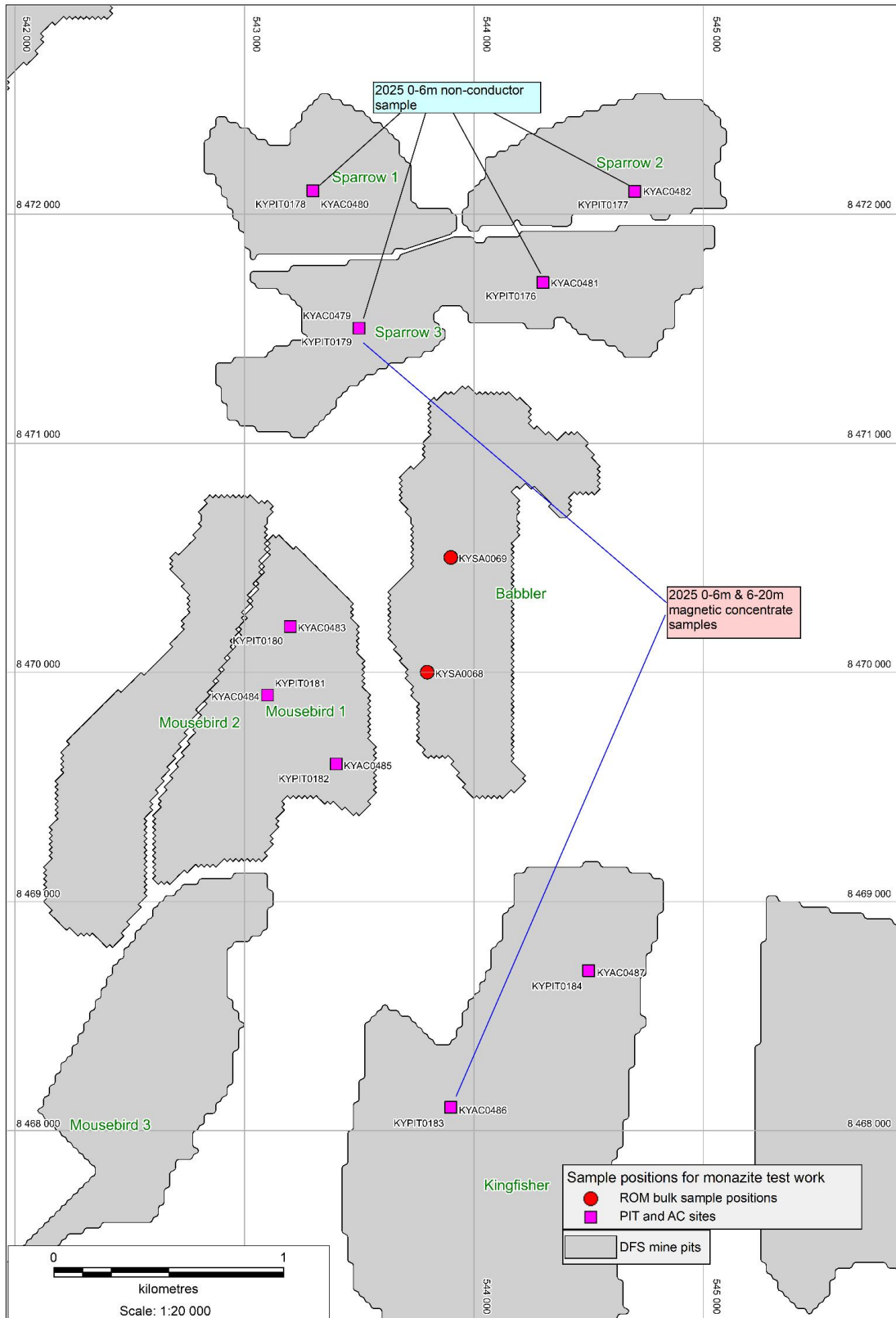


Figure 3: Plan view of drill locations at the Kasiya Project



## APPENDIX 4: RAW ASSAY DATA

Pit		Kingfisher	Kingfisher	Mousebird	Mousebird	Sparrow	Sparrow	Babbler	Babbler
Interval		0 - 6m	+6m	0 - 6m	+6m	0 - 6m	+6m	0 - 8m	1 - 20m
Origin		2 x pit composites	2 x AC composites	3 x pit composites	3 x AC composites	4 x pit composites	4 x AC composites	KYSA0068 ROM	KYSA0069 ROM
Ld	%	1.37	1.91	2.29	0.89	1.55	1.39	3.62	1.78
Ce	%	3.03	3.97	4.81	1.83	3.29	2.82	7.17	3.77
Pr	%	0.37	0.51	0.62	0.23	0.41	0.36	0.96	0.47
Nd	%	1.26	1.76	2.11	0.82	1.4	1.26	3.29	1.63
Dy	%	0.23	0.21	0.29	0.09	0.23	0.13	0.43	0.21
Sm	%	0.26	0.35	0.42	0.16	0.28	0.25	0.65	0.32
Er	%	0.15	0.11	0.17	0.04	0.15	0.06	0.22	0.12
Eu	%	0.02	0.02	0.03	0.01	0.02	0.01	0.04	0.01
Gd	%	0.23	0.28	0.34	0.13	0.25	0.2	0.52	0.26
Ho	%	0.05	0.03	0.06	0.01	0.05	0.02	0.07	0.04
Lu	%	0.03	0.01	0.03	0.01	0.02	0.01	0.03	0.02
Tb	%	0.05	0.06	0.07	0.03	0.05	0.04	0.1	0.05
Tm	%	0.02	0.01	0.02	0.01	0.02	0.01	0.02	0.01
Yb	%	0.17	0.1	0.18	0.05	0.17	0.07	0.21	0.12
Y	%	1.42	1.02	1.61	0.48	1.41	0.7	2.11	1.12



## APPENDIX 5: 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>Bulk samples are prepared using material extracted from manual dug pits, AC drilling and 700mm spiral auger drilling.</p> <ul style="list-style-type: none"> <li>0-6m composites are composited from equal weights of 1m pit face samples.</li> <li>+6m composites are composited from equal weights of 1m AC samples.</li> </ul> <p>ROM mines are composited from equal weights of 1m spiral auger samples.</p>
	<i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i>	<p>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.</p> <p>Each sample is sun dried and homogenised. Sub-samples are carefully riffle split to ensure representivity.</p> <p>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.</p> <p>MSA Group Resource Geologists completed site visits and reviewed Standard Operating Procedures (<b>SOPs</b>) 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 HM and graphite mineralisation.</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>Logged mineralogy percentages and lithology/regolith information are used to assist in determining compositing intervals where required.</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>All sampling was carried out vertically to best intersect the horizontal weathering and grade layers.</p> <p>All material of interest is in the weathered zones located above the saprock boundary, so no collection of oriented core was possible or warranted.</p>
<b>Drill Sample Recovery</b>	<i>Method of recording and assessing core and chip sample recoveries and results assessed.</i>	<p>All sampling was carried out vertically to best intersect the horizontal weathering and grade layers.</p> <p>All material of interest is in the weathered zones located above the saprock boundary, so no collection of oriented core was possible or warranted.</p>



	<i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i>	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.  AC samples are recovered in large plastic bags. The bags are clearly labelled and delivered back to sovereign's laydown yard at the end of shift for processing.
	<i>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</i>	No 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.
<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>	AC 1m intervals are geologically logged using company codes. A small representative sample is collected for each 1m interval and placed in chip trays for future reference
	<i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.</i>	All logging includes lithological features and estimates of basic mineralogy. Logging is qualitative.
	<i>The total length and percentage of the relevant intersection logged</i>	100% of samples are geologically logged.
<b>Sub-sampling techniques and sample preparation</b>	<i>If core, whether cut or sawn and whether quarter, half or all core taken.</i>	Not applicable – no core drilling conducted.
	<i>If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.</i>	AC hole 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.  Where drillhole lengths are composited into longer samples for processing, 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.



	<i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i>	Techniques for sample preparation are detailed on SOP documents MSA 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 and support the resource classifications as stated.
	<i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i>	The sampling equipment is cleaned after each sub-sample is taken.
	<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>	Sample size analysis is completed to verify sampling accuracy. Field duplicates are collected for precision analysis of riffle splitting. SOPs consider sample representivity.
	<i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i>	The sample size is considered appropriate for the material sampled.
<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>	<u>Monazite (Magnetic concentrate)</u>  All sample preparation is completed at Sovereign Metals Malawi onsite laboratory (SSL) located in Lilongwe. The sample preparation methods are considered quantitative to the point where a non-conductor magnetic concentrate is generated.  Heavy Mineral Concentrates (HMC) are produced from bulk samples by gravity separation from spirals and wet table processing. The HMC is processed through a Corona Stat electromagnetic separator to produce a monazite-bearing non-conductor product. The non-conductor product is further processed over a Wilfley wet table to produce a non-conductor HMC.  A monazite-rich magnetic concentrate is produced by processing the non-conductor HMC at 16800G (2.9Amps) through a Carpcoc magnetic separator.  The magnetic concentrates are sent to Scientific Servies South Africa for quantitative XRF analysis. Samples are analysed for: TiO <sub>2</sub> , Nd <sub>2</sub> O <sub>3</sub> , CeO <sub>2</sub> , La <sub>2</sub> O <sub>3</sub> , BaO, HfO <sub>2</sub> , Nb <sub>2</sub> O <sub>5</sub> , ZrO <sub>2</sub> , Y <sub>2</sub> O <sub>3</sub> , Fe <sub>2</sub> O <sub>3</sub> , MnO, Cr <sub>2</sub> O <sub>3</sub> , V <sub>2</sub> O <sub>5</sub> , CaO, K <sub>2</sub> O, P <sub>2</sub> O <sub>5</sub> , SiO <sub>2</sub> , Al <sub>2</sub> O <sub>3</sub> , MgO, Na <sub>2</sub> O, Th and U.  The magnetic concentrates are sent to Scientific Servies South Africa for quantitative ICP-OES analysis. Samples are analysed for REE and Y.



	<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>	No pXRF 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>	Mass balance checks are used as a quality control measure in bulk sample processing; sample are taken at various stages of the flowsheet. Standard Reference Material is included in all sample batched sent to external laboratories.
<b>Verification of sampling &amp; assaying</b>	<i>The verification of significant intersections by either independent or alternative company personnel.</i>	Bulk processing and REE results are reviewed internally by Sovereign technical personnel as well as consultants.
	<i>The use of twinned holes.</i>	Bulk sample composites are generated from AC, pit and spiral auger where twin holes were drilled during Resource Estimation drilling programs.
	<i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i>	Drilling data is collected electronically using coded templates and logging software. This data is then imported to a SQL Database and validated both automatically (on upload) and manually (by viewing sections).  Bulk sample processing data and assay results are recorded in internal data files.
	<i>Discuss any adjustment to assay data.</i>	No adjustments are made to assay data.
<b>Location of data points</b>	<i>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</i>	A Trimble R2 Differential GPS is used to pick up the collars. Daily capture at a registered reference marker ensures equipment remains in calibration.  No downhole surveying of any holes 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.	The digital terrain model ( <b>DTM</b> ) was generated by wireframing a 20m-by-20m lidar drone survey point array, commissioned by Sovereign in March 2022. Major cultural features were removed from the survey points file prior to generating the topographical wireframe for resource model construction. The ultra-high resolution 3D drone aerial survey was executed utilising a RTK GPS equipped Zenith aircraft with accuracy of <10cm ground sampling distance (GSD). Post-processing includes the removal of cultural features that do not reflect material movements (cemeteries, pits, mounds, etc.)
<b>Data spacing &amp; distribution</b>	Data spacing for reporting of Exploration Results.	Not applicable for current REE assessment work. Samples from existing resource drilling and pitting is used to generate bulk samples.
	Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.	Not applicable for current REE assessment work. Samples from existing resource drilling and pitting is used to generate bulk samples where geological continuity is deemed sufficient.
	Whether sample compositing has been applied.	ROM bulk samples are composited to represent the planned DFS pit depth at the material extraction location.  Bulk samples were composited to represent pedolith and saprolith weathering units.
<b>Orientation of data in relation to geological structure</b>	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 grid.
	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.



<b>Sample security</b>	<i>The measures taken to ensure sample security</i>	<p>Samples are stored in secure storage from the time of drilling, through gathering, compositing and analysis. The samples are sealed as soon as site preparation is complete.</p> <p>A reputable international transport company with shipment tracking enables a chain of custody to be maintained while the samples move from Malawi to South Africa and Australia. Samples are again securely stored once they arrive and are processed at respective laboratories.</p> <p>At each point of the sample workflow the samples are inspected by a company representative to monitor sample condition. Each laboratory confirms the integrity of the samples upon receipt.</p>
<b>Audits or reviews</b>	<i>The results of any audits or reviews of sampling techniques and data</i>	No audits of the Monazite work have been completed. Independent consultant Chris Le Roux of Pro Nexus Consult has peer reviewed the results relating to Monazite.

## Section 2 – Reporting of Exploration Results

Criteria	Explanation	Commentary
<b>Mineral tenement &amp; land tenure status</b>	<i>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environment settings.</i>	<p>The Company owns 100% of the following Exploration Licences (ELs) and Retention Licences (RLs) under the Mines and Minerals Act 2019 (Malawi), held in the Company's wholly-owned, Malawi-registered subsidiaries: EL0609, EL0582, EL0561, EL0657, EL0710 and RL0035-0046.</p> <p>A 5% royalty is payable to the government upon mining and a 2% of net profit royalty is payable to the original project vendor.</p> <p>No significant native vegetation or reserves exist in the area. The region is intensively cultivated for agricultural crops.</p>
	<i>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</i>	The tenements are in good standing and no known impediments to exploration or mining exist.
<b>Exploration done by other parties</b>	<i>Acknowledgement and appraisal of exploration by other parties.</i>	Sovereign is a first-mover in the discovery and definition of residual rutile, monazite and graphite resources in Malawi. No other parties are, or have been, involved in exploration.
<b>Geology</b>	<i>Deposit type, geological setting and style of mineralisation</i>	<p>The deposit type is considered a residual placer formed by the intense weathering of rutile-rich basement paragneisses and variable enrichment by elluvial processes.</p> <p>Rutile and Monazite 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>
<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>All intercepts relating to the Kasiya Deposit have been included in public releases during each phase of exploration. Releases included all collar and composite data and these can be viewed on the Company website.</p> <p>There are no further drill hole results that are considered material to the understanding of the exploration results. Identification of the broad zone of mineralisation is made via multiple intersections of drill holes and to list them all would not give the reader any further clarification of the distribution of mineralisation throughout the deposit.</p>



	<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 relevant Monazite data 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>	All results reported are of a length-weighted average of in-situ grades.  No cutting has been applied
	<i>Where aggregate intercepts incorporate short lengths of high-grade results and longer lengths of low-grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</i>	No data aggregation was required.
	<i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i>	N/A
<b>Relationship between mineralisation widths &amp; intercept lengths</b>	<i>These relationships are particularly important in the reporting of Exploration Results.</i>	The mineralisation has been released by weathering of the underlying, layered gneissic bedrock that broadly trends NE-SW at Kasiya North and N-S at Kasiya South and far North. It lies in a laterally extensive superficial blanket with high- grade zones reflecting the broad bedrock strike orientation of ~045° in the North of Kasiya and 360° in the South and far North of Kasiya.
	<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 for the resource estimate.
	<i>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').</i>	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.
<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 Appendices 3 & 4.
<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>	n/a
<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>	Sample quality (representivity) is established by statistical analysis of comparable sample intervals.



<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>	<p>Planned work to include XRF, ICP and Qemscan analysis on magnetic fractions produced in Lilongwe from the 2025 Measure Resource AC drilling. Focus will be in REE ratios related to weathering zones as well as Th and U content as well as mineralogical characteristics of the REE hosting minerals.</p> <p>Further work will include bulk sample processing to isolate monazite/xenotime product using the electrostatic flow sheet developed for Kasiya and gravity and magmatic processing of non-conductor fraction.</p>
	<i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is</i>	<p>Refer to and plan views disclosed in previous announcements. These are accessible on the Company's website as discussed above.</p>

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