



## DRILLING TRIPLES MINERALISED AREA AT KASIYA

Sovereign Metals Limited (**the Company or Sovereign**) is pleased to announce Phase 7 drill results from Kasiya, the Company's flagship, large, high-grade rutile deposit in Malawi. This substantial batch of drill-holes has tripled the rutile-mineralised footprint to ~66km<sup>2</sup>.

### HIGHLIGHTS

- ◆ Phase 7 drilling has **substantially extended the strike length** of the rutile-mineralised envelope to **over 16km** with widths of up to **6km** (previously ~7.5km by up to 3km)
- ◆ Mineralised envelope has **tripled in footprint size** to **~66km<sup>2</sup>** (previously ~22km<sup>2</sup>)
- ◆ Numerous **new areas of high-grade rutile defined** (see highlight results on page 2)

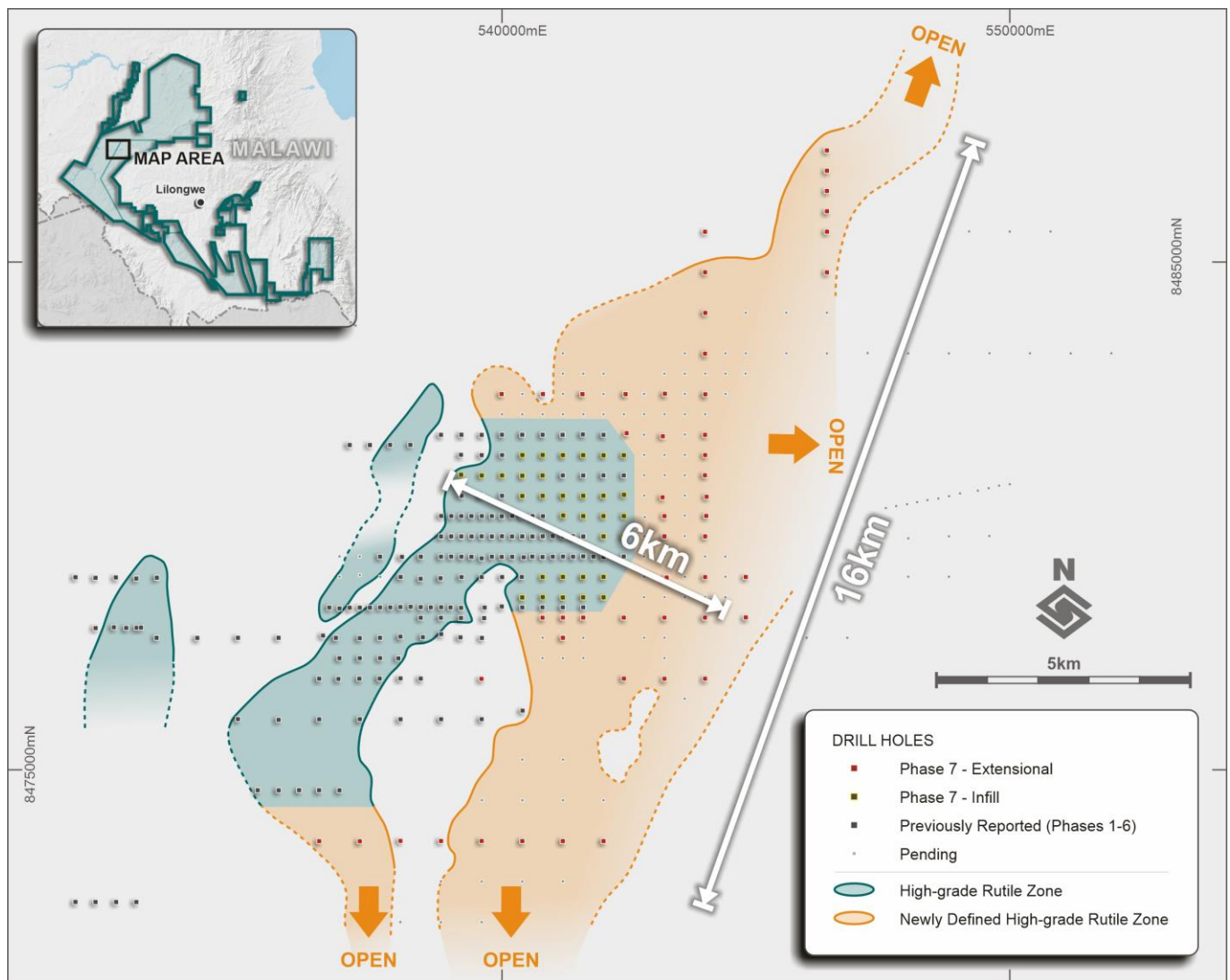


Figure 1. Kasiya drill plan showing rutile-mineralised envelope with the new extended areas identified in the Phase 7 extensional drill-holes.

◆ Key Phase 7 extensional and infill hand auger rutile drilling results include;

### Extensional drill-hole results

- 9m @ 1.02% inc. 4m @ 1.30% rutile
- 8m @ 1.43% inc. 5m @ 1.60% rutile
- 8m @ 1.15% inc. 4m @ 1.73% rutile
- 14m @ 0.96% inc. 4m @ 1.66% rutile
- 13m @ 1.02% inc. 5m @ 1.30% rutile
- 12m @ 1.47% inc. 4m @ 2.00% rutile
- 8m @ 0.81% inc. 4m @ 1.08% rutile
- 14m @ 0.86% inc. 4m @ 1.24% rutile
- 13m @ 1.01% inc. 3m @ 1.32% rutile
- 10m @ 1.41% inc. 4m @ 1.88% rutile
- 9m @ 1.00% inc. 4m @ 1.25% rutile
- 11m @ 1.05% inc. 5m @ 1.36% rutile
- 12m @ 0.79% inc. 4m @ 1.15% rutile
- 12m @ 1.07% inc. 4m @ 1.63% rutile
- 12m @ 0.99% inc. 2m @ 1.30% rutile
- 12m @ 1.07% inc. 8m @ 1.18% rutile

### Infill drill-hole results

- 12m @ 1.01% inc. 4m @ 1.24% rutile
- 9m @ 1.27% inc. 2m @ 2.00% rutile
- 10m @ 1.19% inc. 2m @ 1.31% rutile
- 13m @ 0.94% inc. 3m @ 1.76% rutile
- 16m @ 1.16% inc. 4m @ 1.60% rutile
- 6m @ 1.17% inc. 2m @ 2.18% rutile
- 7m @ 1.27% inc. 2m @ 1.92% rutile
- 8m @ 1.47% inc. 2m @ 1.60% rutile

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

*"This is an incredible outcome with a three-fold increase of the rutile-mineralised footprint to over 66km<sup>2</sup>. These new drill results show a step-change increase in the potential size of Kasiya and highlight that it could well develop into one of the largest rutile deposits in the world. In conjunction with the recent exceptional metallurgical outcomes, these results confirm our view that Kasiya is quickly becoming a globally significant rutile deposit."*

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#### **ENQUIRIES**

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## KASIYA DRILLING – PHASE 7

The Phase 7 results include extensional and infill drilling comprising a further 82 hand-auger holes (50 extensional and 32 infill) for a total of 819m. With the inclusion of Phase 7 the total number of holes reported from Kasiya to date is now 233 with 2,298m drilled.

This drilling has substantially extended the strike length of the rutile-mineralised envelope to over 16km and expanded the width to up to 6km (Figures 1, 2 and 3) from the previous 7.5km by up to 3km.

In terms of area, the mineralised envelope has approximately tripled in footprint size to ~66km<sup>2</sup> from the previous ~22km<sup>2</sup>. The mineralised envelope continues to remain open along strike to the north and south, and laterally at its widest zone to the east.

A number of the extensional holes were drilled to the east, north and south-east of the core mineralised zone at a nominal 400m x 400m drill spacing and fall within the targeted area for the upcoming Mineral Resource Estimate (MRE) (Figure 2). These extensional holes have provided a significant expansion to the widest, central core zone of high-grade rutile mineralisation. A significant number of high-grade rutile drill intercepts from surface were encountered in these holes.

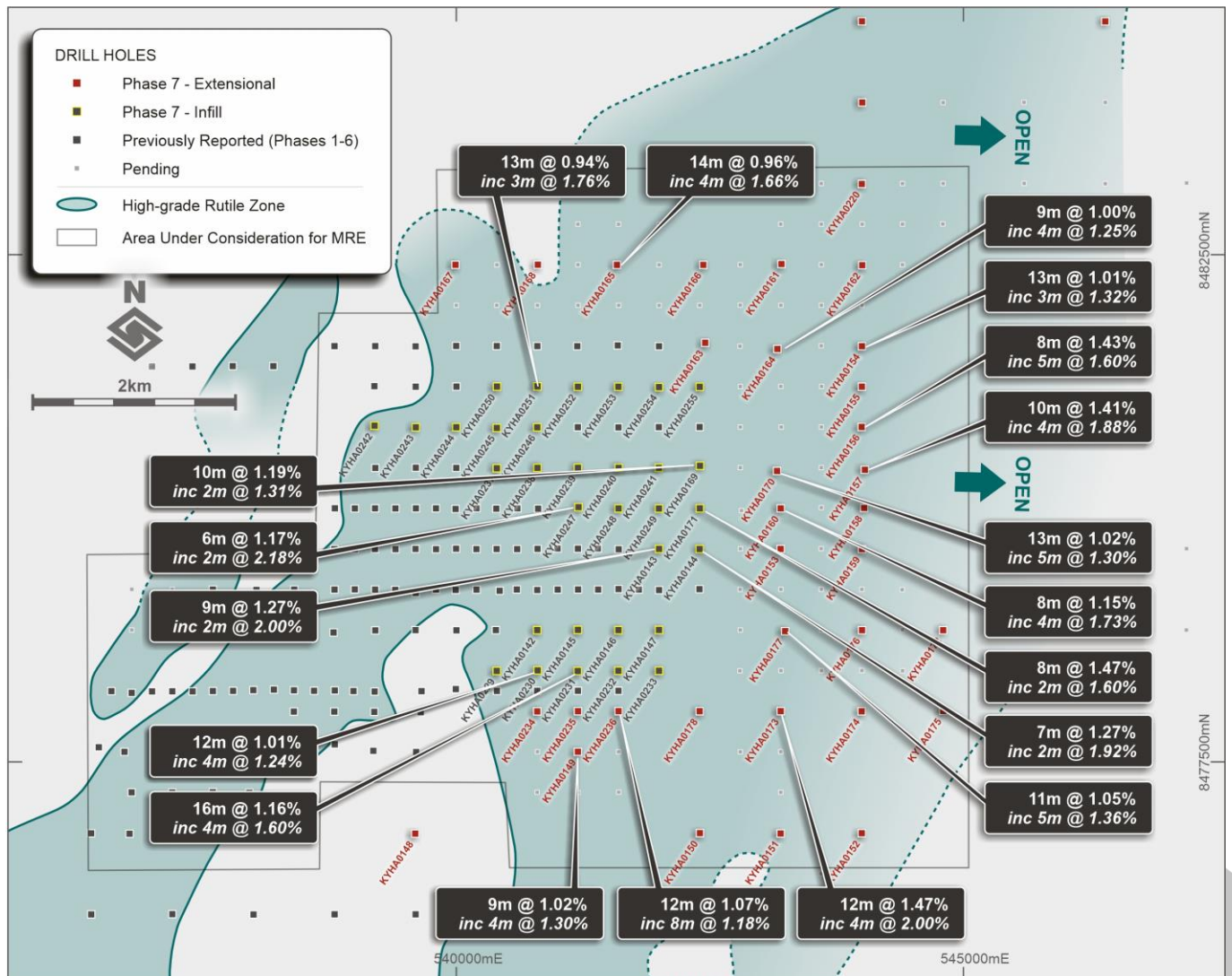


Figure 2. Close-up of the central zone of Kasiya showing the area designated for consideration in the maiden MRE.

The infill drilling results continue to show high rutile grades from surface, as expected, with the infill drill holes limited to the central portion of the main resource target area.

The Phase 7 drill results continue to show high-grade rutile from surface to as deep as 16m. Significant rutile enrichment is generally present in the 0-8m from surface range. In most cases, drill depth was restricted by the hand-auger drilling equipment capacity and it is assumed that free-dig rutile mineralisation should continue vertically to the base of saprolite estimated at approximately 25m depth from surface.

These results continue to validate the Company's geological exploration model and provide a step-change in the potential size of Kasiya. It is now clear that Sovereign's geological team has the ability to predict, with some accuracy, new areas of rutile mineralisation prior to any on-ground soil sampling or drilling. If the Company's geological exploration model continues to hold true regionally, the rutile potential across Sovereign's exploration licences in Malawi is immense.

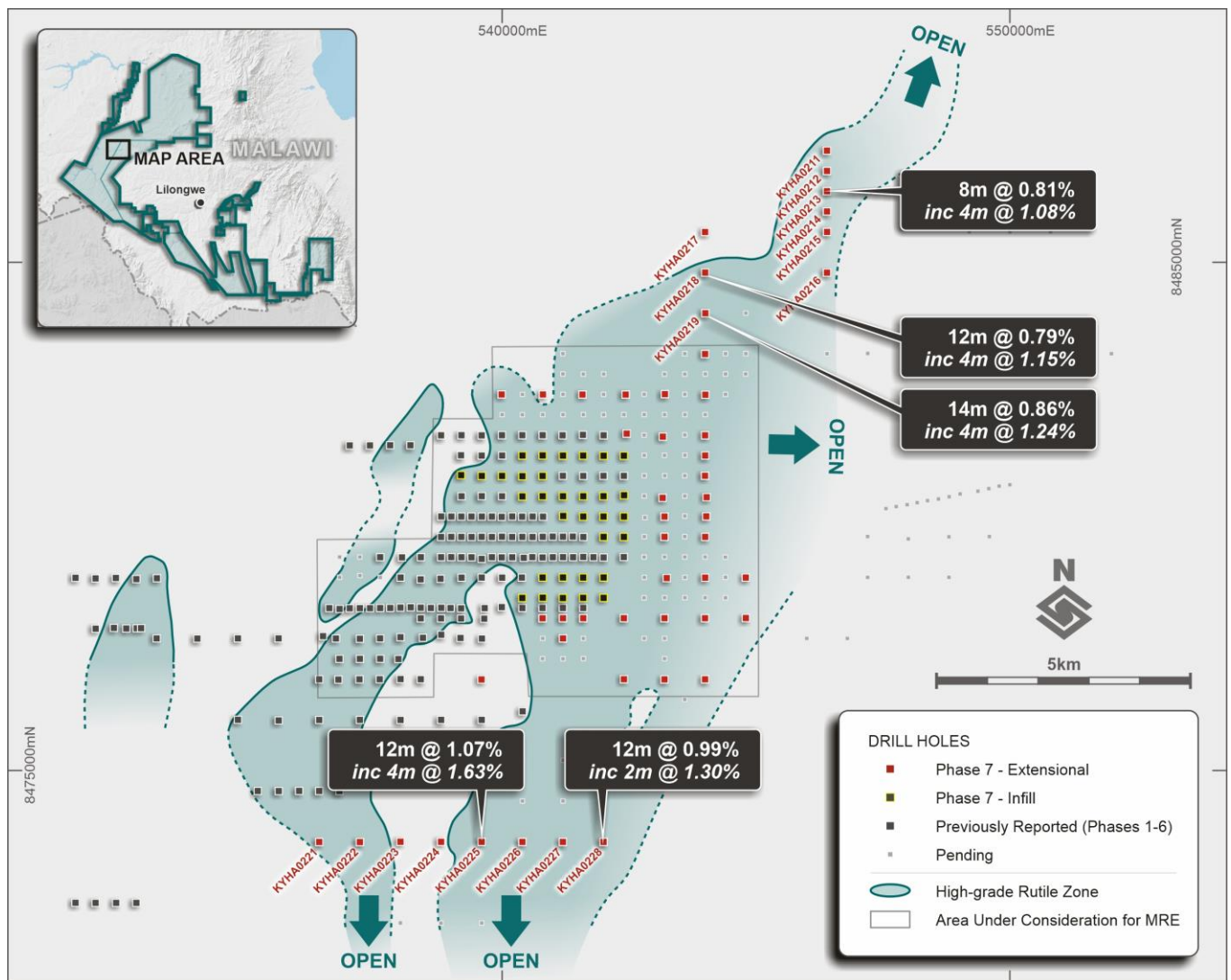


Figure 3. Kasiya map outlining the extensional mineralisation outside of the area under consideration for the MRE and showing the considerable expansion of the mineralised footprint.

## CONCLUSIONS & FORWARD PLAN

In a step-change for Kasiya, this substantial batch of the Phase 7 drill results has increased the mineralised footprint area three-fold. The results continue to build on the previous phases of drilling with high-grade rutile consistently intercepted from surface across the now 66km<sup>2</sup> mineralisation footprint.

The central zone of ~30km<sup>2</sup>, where the nominal drill spacing is 400m x 400m or closer, will be under consideration for the maiden MRE. The Company's objective is to delineate a large rutile resource that could support a long-life, large-scale rutile operation.

Additionally, Sovereign has recently achieved exceptional outcomes from its bulk scale metallurgy program. Premium chemical and sizing parameters were produced with over 98% recovery, via simple, conventional "off the shelf" processing methods. This continues to consolidate our view that we have discovered a potentially globally significant rutile deposit at Kasiya in Malawi that forms part of a new rutile province.

The ongoing work programs for Kasiya and the other prospects within the Company's large ground package include;

- ❖ Reporting of one further batch of mainly infill drill holes over the coming weeks ahead of the maiden Mineral Resource Estimate for Kasiya targeted for Q4 2020;
- ❖ Step-out and extensional drilling at Kasiya and the broader surrounding area to identify extensions and discover new regional mineralised zones;
- ❖ Push-tube drilling at Kasiya to twin hand-auger holes and to obtain cored samples for specific gravity (SG) determination and initial geotechnical and mining studies;
- ❖ Mining and tailings studies continue and will feed into a future Scoping Study targeted for H1 2021;
- ❖ Feedback from rutile product sample assessment by major industry end-users to be incorporated into marketing studies in support of the upcoming Scoping Study; and
- ❖ Investigation of the potential for a coarse-flake graphite by-product from Kasiya.



Figure 4. Sovereign's field team hand-auger drilling for rutile.

**A NEW RUTILE PROVINCE**

The Central Malawi Rutile Project (**Project**) features two confirmed, discrete rutile mineralisation styles hosted saprolite (soft, friable weathered material) and sand. Both styles are amenable to conventional processing.

In addition to the flagship Kasiya, the Company has identified numerous other saprolite-hosted rutile prospects and targets. The Bua Channel is the Company’s high-grade, rutile dominant, sand-hosted placer prospect along a 50km length of a fluvial channel system. Drilling in the southern part of the Bua Channel over ~8km confirmed excellent rutile grades with accessory ilmenite.

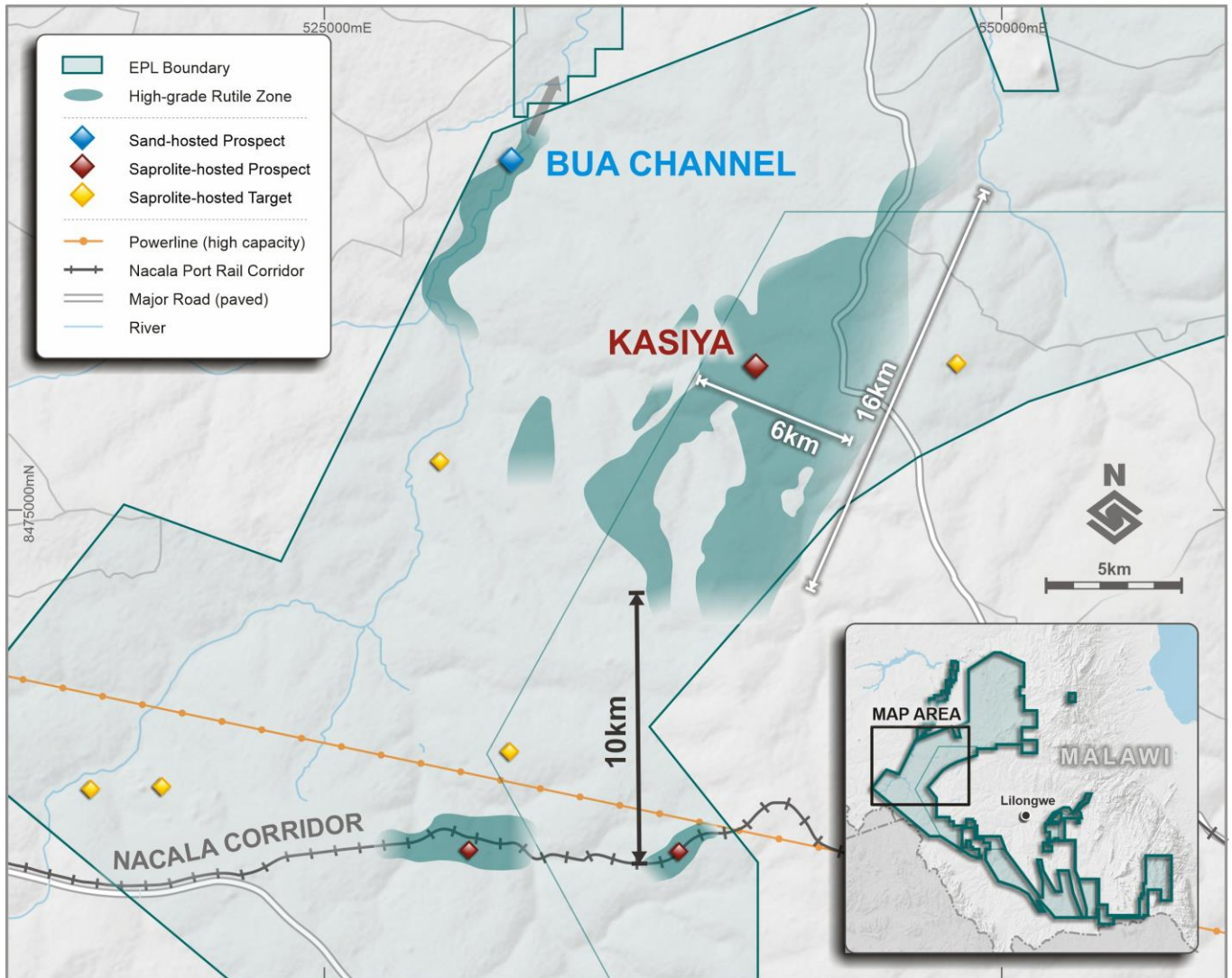


Figure 5. Map of the broader Kasiya and Bua Channel area showing the multiple rutile prospects and targets and their proximity to the Nacala Rail Corridor.

This potentially globally significant rutile province is located in Malawi, a stable, transparent jurisdiction. Malawi is increasingly attracting international investment with substantial potential for mining to contribute to the country’s economic growth and development. Central Malawi boasts excellent existing infrastructure including grid power and an excellent sealed road network. The Project is strategically located in close-proximity to the capital city of Lilongwe, providing access to a skilled workforce and mining and industrial services. The location provides access to the operating Nacala Rail Corridor linking to the Indian Ocean port of Nacala in Mozambique, providing a low-cost transport solution and access to major international markets.

## DRILL RESULTS

Drilling results from Phase 7 at Kasiya are shown below in Table 1.

Hole ID	Interval Thickness	Rutile %	From (m) Downhole	Comments	Purpose
KYHA0142	7	0.81	3m	open at depth	Infill
incl	3	1.11	3m		
<b>KYHA0143</b>	<b>9</b>	<b>1.27</b>	<b>surface</b>	<b>open at depth</b>	<b>infill</b>
<b>incl</b>	<b>6</b>	<b>1.35</b>	<b>surface</b>		
<b>incl</b>	<b>2</b>	<b>2.00</b>	<b>surface</b>		
<b>KYHA0144</b>	<b>7</b>	<b>1.27</b>	<b>surface</b>	<b>open at depth</b>	<b>infill</b>
<b>incl</b>	<b>5</b>	<b>1.40</b>	<b>surface</b>		
<b>incl</b>	<b>2</b>	<b>1.92</b>	<b>surface</b>		
KYHA0145	11	0.76	surface	open at depth	Infill
incl	5	1.03	surface		
KYHA0146	6	1.10	2m	open at depth	Infill
KYHA0147	2	0.64	surface		Infill
KYHA0148	No significant results				Extensional
<b>KYHA0149</b>	<b>9</b>	<b>1.02</b>	<b>surface</b>	<b>open at depth</b>	<b>Extensional</b>
<b>incl</b>	<b>4</b>	<b>1.30</b>	<b>surface</b>		
KYHA0150	2	1.18	1m		Extensional
KYHA0151	5	0.52	surface		Extensional
KYHA0152	10	0.84	surface	open at depth	Extensional
incl	6	1.04	surface		
incl	2	1.72	surface		
KYHA0153	6	0.99	surface		Extensional
incl	2	1.43	surface		
<b>KYHA0154</b>	<b>13</b>	<b>1.01</b>	<b>surface</b>	<b>open at depth</b>	<b>Extensional</b>
<b>incl</b>	<b>3</b>	<b>1.32</b>	<b>surface</b>		
KYHA0155	13	0.76	surface	open at depth	Extensional
incl	3	1.29	surface		
<b>KYHA0156</b>	<b>8</b>	<b>1.43</b>	<b>surface</b>	<b>open at depth</b>	<b>Extensional</b>
<b>incl</b>	<b>5</b>	<b>1.60</b>	<b>surface</b>		
<b>KYHA0157</b>	<b>10</b>	<b>1.41</b>	<b>surface</b>	<b>open at depth</b>	<b>Extensional</b>
<b>incl</b>	<b>4</b>	<b>1.88</b>	<b>surface</b>		
KYHA0158	7	0.66	surface		Extensional
KYHA0159	7	0.99	surface	open at depth	Extensional
incl	3	1.24	surface		
<b>KYHA0160</b>	<b>8</b>	<b>1.15</b>	<b>surface</b>	<b>open at depth</b>	<b>Extensional</b>
<b>incl</b>	<b>4</b>	<b>1.73</b>	<b>surface</b>		
KYHA0161	4	1.48	surface	Hole failed at 4m	Extensional
KYHA0162	10	0.92	surface	open at depth	Extensional
incl	3	1.10	surface		
KYHA0163	2	1.45	surface		Extensional
<b>KYHA0164</b>	<b>9</b>	<b>1.00</b>	<b>surface</b>	<b>open at depth</b>	<b>Extensional</b>
<b>incl</b>	<b>4</b>	<b>1.25</b>	<b>surface</b>		
<b>KYHA0165</b>	<b>14</b>	<b>0.96</b>	<b>surface</b>	<b>open at depth</b>	<b>Extensional</b>
<b>incl</b>	<b>4</b>	<b>1.66</b>	<b>surface</b>		

Hole ID	Interval Thickness	Rutile %	From (m) Downhole	Comments	Purpose
KYHA0166	5	1.25	surface		Extensional
KYHA0167	7	0.69	surface		Extensional
KYHA0168	<i>No significant results</i>				Extensional
<b>KYHA0169</b>	<b>10</b>	<b>1.19</b>	<b>surface</b>	<b>open at depth</b>	<b>infill</b>
<b>incl</b>	<b>2</b>	<b>1.31</b>	<b>surface</b>		
<b>KYHA0170</b>	<b>13</b>	<b>1.02</b>	<b>surface</b>	<b>open at depth</b>	<b>Extensional</b>
<b>incl</b>	<b>8</b>	<b>1.20</b>	<b>surface</b>		
<b>incl</b>	<b>5</b>	<b>1.30</b>	<b>surface</b>		
<b>KYHA0171</b>	<b>8</b>	<b>1.47</b>	<b>1m</b>	<b>open at depth</b>	<b>infill</b>
<b>incl</b>	<b>2</b>	<b>1.60</b>	<b>1m</b>		
KYHA0172	5	0.91	surface		Extensional
<b>KYHA0173</b>	<b>12</b>	<b>1.47</b>	<b>surface</b>	<b>open at depth</b>	<b>Extensional</b>
<b>incl</b>	<b>7</b>	<b>1.72</b>	<b>surface</b>		
<b>incl</b>	<b>4</b>	<b>2.00</b>	<b>surface</b>		
KYHA0174	3	0.69	surface		Extensional
KYHA0175	6	0.94	surface		Extensional
incl	2	1.28	surface		
KYHA0176	10	0.97	1m	open at depth	Extensional
incl	5	1.07	1m		
incl	2	1.24	1m		
<b>KYHA0177</b>	<b>11</b>	<b>1.05</b>	<b>surface</b>	<b>open at depth</b>	<b>Extensional</b>
<b>incl</b>	<b>7</b>	<b>1.20</b>	<b>surface</b>		
<b>incl</b>	<b>5</b>	<b>1.36</b>	<b>surface</b>		
KYHA0178	6	0.83	1m	open at depth	Extensional
incl	2	1.13	1m		
KYHA0211	9	0.74	surface	open at depth	Extensional
KYHA0212	4	0.70	surface		Extensional
<b>KYHA0213</b>	<b>8</b>	<b>0.81</b>	<b>surface</b>		<b>Extensional</b>
<b>incl</b>	<b>4</b>	<b>1.08</b>	<b>surface</b>		
KYHA0214	<i>No significant results</i>				Extensional
KYHA0215	8	0.70	surface		Extensional
KYHA0216	5	0.56	surface	open at depth	Extensional
KYHA0217	2	0.70	surface		Extensional
<b>KYHA0218</b>	<b>12</b>	<b>0.79</b>	<b>surface</b>	<b>open at depth</b>	<b>Extensional</b>
<b>incl</b>	<b>8</b>	<b>0.94</b>	<b>from 4m</b>		
<b>incl</b>	<b>4</b>	<b>1.15</b>	<b>from 8m</b>		
<b>KYHA0219</b>	<b>14</b>	<b>0.86</b>	<b>surface</b>	<b>open at depth</b>	<b>Extensional</b>
<b>incl</b>	<b>8</b>	<b>0.96</b>	<b>surface</b>		
<b>incl</b>	<b>4</b>	<b>1.24</b>	<b>surface</b>		
KYHA0220	11	0.96	surface	open at depth	Extensional
incl	8	1.02	surface		
incl	4	1.18	surface		
KYHA0221	5	0.65	surface		Extensional
KYHA0222	9	0.77	surface		Extensional
incl	5	0.96	surface		
KYHA0223	<i>No significant results</i>				Extensional



Hole ID	Interval Thickness	Rutile %	From (m) Downhole	Comments	Purpose
KYHA0224	3	0.53	surface		Extensional
<b>KYHA0225</b>	<b>12</b>	<b>1.07</b>	<b>surface</b>	<b>open at depth</b>	<b>Extensional</b>
<b>incl</b>	<b>8</b>	<b>1.23</b>	<b>surface</b>		
<b>incl</b>	<b>4</b>	<b>1.63</b>	<b>surface</b>		
KYHA0226	3	0.74	surface	open at depth	Extensional
KYHA0227	5	0.82	surface		Extensional
incl	2	1.18	surface		
<b>KYHA0228</b>	<b>12</b>	<b>0.99</b>	<b>surface</b>	<b>open at depth</b>	<b>Extensional</b>
<b>incl</b>	<b>2</b>	<b>1.30</b>	<b>surface</b>		
KYHA0229	8	0.95	surface	open at depth	Infill
incl	5	1.19	surface		
incl	2	1.76	surface		
<b>KYHA0230</b>	<b>12</b>	<b>1.01</b>	<b>surface</b>	<b>open at depth</b>	<b>Infill</b>
<b>incl</b>	<b>4</b>	<b>1.24</b>	<b>surface</b>		
<b>KYHA0231</b>	<b>16</b>	<b>1.16</b>	<b>surface</b>	<b>open at depth</b>	<b>Infill</b>
<b>incl</b>	<b>8</b>	<b>1.35</b>	<b>surface</b>		
<b>incl</b>	<b>4</b>	<b>1.60</b>	<b>surface</b>		
KYHA0232	14	0.91	surface	open at depth	Infill
incl	8	1.08	surface		
incl	4	1.23	surface		
KYHA0233	6	0.70	surface	open at depth	Infill
KYHA0234	11	0.92	surface	open at depth	extensional
incl	3	1.24	surface		
KYHA0235	10	0.84	surface		extensional
incl	5	1.11	surface		
<b>KYHA0236</b>	<b>12</b>	<b>1.07</b>	<b>surface</b>	<b>open at depth</b>	<b>extensional</b>
<b>incl</b>	<b>8</b>	<b>1.18</b>	<b>surface</b>		
KYHA0237	6	0.81	surface	open at depth	Infill
incl	2	1.18	surface		
KYHA0238	<i>No significant results</i>				Infill
KYHA0239	4	0.56	surface		Infill
KYHA0240	3	1.57	surface	Hole failed at 3m	Infill
KYHA0241	4	1.39	surface		Infill
KYHA0242	2	0.71	surface		Infill
KYHA0243	7	0.65	surface	open at depth	Infill
incl	2	0.85	surface		
KYHA0244	6	0.87	surface	open at depth	Infill
incl	2	1.20	surface		
KYHA0245	4	1.29	surface	open at depth	Infill
incl	2	1.83	surface		
KYHA0246	9	0.91	surface	open at depth	Infill
incl	5	1.00	surface		
incl	2	1.27	surface		
<b>KYHA0247</b>	<b>6</b>	<b>1.17</b>	<b>surface</b>		<b>Infill</b>
<b>incl</b>	<b>2</b>	<b>2.18</b>	<b>surface</b>		
KYHA0248	5	0.88	surface	open at depth	Infill

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Hole ID	Interval Thickness	Rutile %	From (m) Downhole	Comments	Purpose
incl	2	1.15	surface		
KYHA0249	6	1.10	surface	open at depth	Infill
incl	2	1.70	surface		
KYHA0250	2	1.15	surface		Infill
<b>KYHA0251</b>	<b>13</b>	<b>0.94</b>	<b>surface</b>		<b>Infill</b>
<b>incl</b>	<b>7</b>	<b>1.13</b>	<b>surface</b>		
<b>incl</b>	<b>3</b>	<b>1.76</b>	<b>surface</b>		
KYHA0252	5	1.38	surface		Infill
KYHA0253	4	0.77	surface		Infill
KYHA0254	10	0.74	surface	open at depth	Infill
incl	4	1.16	surface		
KYHA0255	7	0.76	surface	open at depth	Infill
incl	3	0.97	surface		
KYHA0240	3	1.57	surface	Hole failed at 3m	Infill
KYHA0241	4	1.39	surface		Infill
KYHA0242	2	0.71	surface		Infill
KYHA0243	7	0.65	surface	open at depth	Infill
incl	2	0.85	surface		
KYHA0244	6	0.87	surface	open at depth	Infill
incl	2	1.20	surface		
KYHA0245	4	1.29	surface	open at depth	Infill
incl	2	1.83	surface		
KYHA0246	9	0.91	surface	open at depth	Infill
incl	5	1.00	surface		
incl	2	1.27	surface		
KYHA0247	6	1.17	surface		Infill
incl	2	2.18	surface		
KYHA0248	5	0.88	surface	open at depth	infill
incl	2	1.15	surface		
KYHA0249	6	1.10	surface	open at depth	infill
incl	2	1.70	surface		
KYHA0250	2	1.15	surface		infill
KYHA0251	13	0.94	surface		infill
incl	7	1.13	surface		
incl	3	1.76	surface		
KYHA0252	5	1.38	surface		infill
KYHA0253	4	0.77	surface		infill
KYHA0254	10	0.74	surface	open at depth	infill
incl	4	1.16	surface		
KYHA0255	7	0.76	surface	open at depth	infill
incl	3	0.97	surface		

## **Competent Person's Statement**

*The information in this report that relates to Exploration Results is based on information compiled by Dr Julian Stephens, a Competent Person who is a member of the Australian Institute of Geoscientists (AIG). Dr Stephens is the Managing Director of Sovereign Metals Limited and a holder of ordinary shares and unlisted options in Sovereign Metals Limited. Dr Stephens 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'. Dr Stephens consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.*

## **Forward Looking Statement**

*This release may include forward-looking statements, which may be identified by words such as "expects", "anticipates", "believes", "projects", "plans", and similar expressions. These forward-looking statements are based on Sovereign's expectations and beliefs concerning future events. Forward looking statements are necessarily subject to risks, uncertainties and other factors, many of which are outside the control of Sovereign, which could cause actual results to differ materially from such statements. There can be no assurance that forward-looking statements will prove to be correct. Sovereign makes no undertaking to subsequently update or revise the forward-looking statements made in this release, to reflect the circumstances or events after the date of that release.*

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



## APPENDIX 1: DRILL HOLE DATA

Hole ID	East	North	RL	Depth (m)
KYHA0142	540800	8478800	1108	16
KYHA0143	542000	8479600	1119	11
KYHA0144	542400	8479600	1122	8
KYHA0145	541200	8478800	1115	11
KYHA0146	541600	8478800	1116	8
KYHA0147	542000	8478800	1112	7
KYHA0148	539600	8476800	1094	12
KYHA0149	541200	8477600	1100	11
KYHA0150	542400	8476800	1106	11
KYHA0151	543200	8476800	1117	11
KYHA0152	544000	8476800	1124	10
KYHA0153	543200	8479600	1129	10
KYHA0154	544000	8481600	1143	14
KYHA0155	544000	8481200	1144	13
KYHA0156	544000	8480800	1145	8
KYHA0157	544000	8480400	1146	10
KYHA0158	544000	8480000	1144	12
KYHA0159	544000	8479600	1145	9
KYHA0160	543200	8480000	1132	8
KYHA0161	543200	8482400	1123	7
KYHA0162	544000	8482400	1135	11
KYHA0163	542400	8481600	1115	4
KYHA0164	543200	8481600	1129	11
KYHA0165	541600	8482400	1113	15
KYHA0166	542400	8482400	1117	11
KYHA0167	540000	8482400	1109	11
KYHA0168	540800	8482400	1104	10
KYHA0169	542400	8480400	1122	10
KYHA0170	543200	8480400	1135	13
KYHA0171	542400	8480000	1125	10
KYHA0172	544800	8478800	1142	12
KYHA0173	543200	8478000	1127	12
KYHA0174	544000	8478000	1129	8
KYHA0175	544800	8478000	1136	13
KYHA0176	544000	8478800	1145	11
KYHA0177	543200	8478800	1134	11
KYHA0178	542400	8478000	1108	8
KYHA0211	546400	8487200	1113	9
KYHA0212	546400	8486800	1113	11
KYHA0213	546400	8486400	1115	12
KYHA0214	546400	8486000	1117	12
KYHA0215	546400	8485600	1116	12
KYHA0216	546400	8484800	1108	5
KYHA0217	544000	8485600	1103	6

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Hole ID	East	North	RL	Depth (m)
KYHA0218	544000	8484800	1116	12
KYHA0219	544000	8484000	1124	14
KYHA0220	544000	8483200	1118	11
KYHA0221	536400	8473600	1112	7
KYHA0222	537200	8473600	1119	12
KYHA0223	537999	8473602	1104	6
KYHA0224	538800	8473600	1108	6
KYHA0225	539600	8473600	1125	12
KYHA0226	540400	8473600	1123	13
KYHA0227	541200	8473600	1114	8
KYHA0228	542000	8473600	1115	12
KYHA0229	540400	8478400	1095	8
KYHA0230	540800	8478400	1103	12
KYHA0231	541200	8478400	1110	16
KYHA0232	541600	8478400	1110	14
KYHA0233	542000	8478400	1103	6
KYHA0234	540800	8478000	1099	11
KYHA0235	541200	8478000	1106	15
KYHA0236	541600	8478000	1103	11
KYHA0237	540400	8480400	1090	6
KYHA0238	540800	8480400	1091	11
KYHA0239	541200	8480400	1095	10
KYHA0240	541600	8480400	1102	3
KYHA0241	542000	8480400	1112	8
KYHA0242	539200	8480800	1083	6
KYHA0243	539600	8480800	1084	7
KYHA0244	540000	8480800	1086	6
KYHA0245	540400	8480800	1090	4
KYHA0246	540800	8480800	1095	9
KYHA0247	541200	8480000	1103	11
KYHA0248	541600	8480000	1105	5
KYHA0249	542000	8480000	1116	6
KYHA0250	540400	8481200	1101	10
KYHA0251	540800	8481200	1104	15
KYHA0252	541200	8481200	1103	14
KYHA0253	541600	8481200	1103	10
KYHA0254	542000	8481200	1106	10
KYHA0255	542400	8481200	1110	7

\* All holes were vertical.

APPENDIX 2: JORC CODE, 2012 EDITION – TABLE 1

SECTION 1 - SAMPLING TECHNIQUES AND DATA

Criteria	JORC Code explanation	Hand Auger Drilling 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>	A total of 82 hand auger holes for 819m were drilled at Kasiya to obtain samples for quantitative mineralogical determination.  Samples were composited based on regolith boundaries and chemistry generated by hand-held XRF, generally at 3, 4 or 5m intervals.
	<i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i>	Drilling and sampling activities were supervised by a suitably qualified Company geologist who was present at all times. All bulk 1-metre drill samples were geologically logged by the geologist at the drill site  Each 1m sample was sun dried and homogenised. Sub-samples were carefully riffle split to ensure representivity. ~1.5kg composite samples were processed.  Extreme care is taken to ensure an equivalent mass is taken from each 1m sample to make up the composite. The primary composite sample is considered representative for this style of rutile mineralisation.
	<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>	Logged mineralogy percentages, lithology information and TiO <sub>2</sub> % obtained from handheld XRF were used to determine compositing intervals. Care is taken to ensure that only lithological units with similar geological and grade characteristics are composited together.
<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>	Hand-auger drilling with 62mm diameter spiral bits with 1-metre long steel rods. Each 1m of drill sample is collected into separate sample bags and set aside. The auger bits and flights are cleaned between each metre of sampling to avoid contamination.
<b>Drill Sample Recovery</b>	<i>Method of recording and assessing core and chip sample recoveries and results assessed.</i>	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.
	<i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i>	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.
	<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 bias related to preferential loss or gain of different materials has occurred.
<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>	All individual 1-metre auger intervals are geologically logged, recording relevant data to a set 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.
	<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 generally qualitative.
	<i>The total length and percentage of the relevant intersection logged</i>	100% of samples are geologically logged.
<b>Sub-sampling techniques</b>	<i>If core, whether cut or sawn and whether quarter, half or all core taken.</i>	Not applicable – no core drilling conducted.

Criteria	JORC Code explanation	Hand Auger Drilling Commentary
<b>Sub-sampling techniques and sample preparation</b>	<i>If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.</i>	Samples from the 82 auger holes drilled were composited. Each 1m sample was sun dried and homogenised. Sub-samples were carefully riffle split to ensure sample representivity. ~1.5kg composite samples were processed.  Extreme care is taken to ensure an equivalent mass is taken from each 1m sample to make up the composite.  The primary composite sample is considered representative for this style of rutile mineralisation and is consistent with industry standard practice.
	<i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i>	Use of the above compositing and sampling technique is deemed appropriate given the dry nature of the samples.
	<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>	Extreme care is taken to ensure an equivalent mass is taken from each 1m sample to make up each composite.
	<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>	The Malawi onsite laboratories sample preparation methods are considered quantitative to the point where a heavy mineral concentrate (HMC) is generated.  Final results generated are for recovered rutile i.e. the % mass of the sample that is rutile that can be recovered to a heavy mineral concentrate.  The following workflow for the samples was undertaken on-site in Malawi; <ul style="list-style-type: none"> <li>• Dry sample in oven for 1 hour at 105°C</li> <li>• Soak in water and lightly agitate</li> <li>• Wet screen at 5mm, 600mm and 45µm to remove oversize and slimes material</li> <li>• Dry +45µm -600mm (sand fraction) in oven for 1 hour at 105°C</li> </ul> The following workflow for the samples was then undertaken at Perth based Laboratories. <ul style="list-style-type: none"> <li>• Split ~150g off Sand fraction for Heavy Liquid Separation (HLS) at a specific gravity of SG 2.96g/cc undertaken at Diamantina Laboratories.</li> <li>• Magnetic separation of the THM Sinks by Carpc magnet @ 16,800G (2.9Amps) into a magnetic (M) and non-magnetic (NM) fraction. Work undertaken at Allied Mineral Laboratories (AML) in Perth.</li> <li>• The NM fractions were sent to Intertek Genalysis Perth for quantitative XRF analysis.</li> <li>• Rutile is reported as: rutile mineral recovered to the total NM concentrate fraction as a % of the total primary, dry raw sample mass.</li> <li>• QEMSCAN mineralogy is used as a check against the chemical results of the NM concentrate to validate that &gt;99% of TiO<sub>2</sub> units are in the form of rutile.</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>	Intertek Genalysis used internal XRF standards and duplicates. The overall quality of QA/QC is considered to be good.
<b>Verification of sampling &amp; assaying</b>	<i>The verification of significant intersections by either independent or alternative company personnel.</i>	Significant mineralisation intersections were verified by qualified, alternative company personnel.
	<i>The use of twinned holes.</i>	No twin holes have been used.
	<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

Criteria	JORC Code explanation	Hand Auger Drilling Commentary
		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>	Rutile is reported as: rutile mineral recovered to the total NM concentrate fraction as a % of the total primary, dry raw sample mass.
<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 collars are spaced at approximately 400m along the extensional drill-lines and 200m along the infill lines. All extensional holes are designed to provide systematic strike and width extension of the anomalous lines of hand auger drilling previously reported along this same trend.  It is deemed that these holes should be broadly representative of the mineralisation style in the general area. More work is required to accurately determine the variability of the mineralisation in the Kasiya region.
	<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>	Individual 1-metre auger intervals have been composited over a determined interval of interest for the 82 auger holes drilled in order to obtain a primary sample of ~1.5kg mass for mineralogical 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 8 Exclusive Prospecting Licences (EPLs) in Malawi. EPL0355 renewed in 2019 for 2 years, EPL0372 (under renewal application) and EL0413 renewed in 2019 for 2 years. EPL0492 and EPL0528 were granted in 2018 for an initial period of three years (renewable). EPL0537 and EPL0545 were granted in 2019 for an initial period of three years (renewable). EL0561 was granted in January 2020 for an initial 3 years (renewable) with field work permits subject to an acceptable Environmental and Social Management Plan – a new requirement under the Mining Act 2019.
	<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.



Criteria	Explanation	Commentary
<b>Exploration done by other parties</b>	<i>Acknowledgement and appraisal of exploration by other parties.</i>	No other parties were involved in exploration.
<b>Geology</b>	<i>Deposit type, geological setting and style of mineralisation</i>	The rutile deposit type could be termed a residual placer formed by the intense weathering of rutile-rich basement paragneisses.  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).
<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>	All collar and composite data is provided in the body and Appendices of this report. All holes were drilled vertically.
	<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>	All results reported are of a length-weighted average. The results reported in the body of the report are on a lower cut-off of 0.5% Rutile.
	<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>	It is considered that the mineralisation lies in laterally extensive, near surface, flat "blanket" style bodies in areas where the entire weathering profile is preserved and not significantly eroded.
	<i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i>	The mineralisation lies in laterally extensive, near surface, flat "blanket" style bodies.
	<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. Some mineralisation currently remains open at depth.
<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 the body of this report.
<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 have been reported in this report.

Criteria	Explanation	Commentary
<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 and within Sovereign's ground package. The company continues to examine all areas within the large tenement package for rutile mineralisation.
<b>Further work</b>	The nature and scale of planned further work (e.g. test for lateral extensions or depth extensions or large-scale step-out drilling).	Laboratory processing of 2020 drilling samples on the saprolite prospects continues.  Drilling is ongoing at the Kasiya prospect 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.

