



## CORE DRILLING RESULTS TO UNDERPIN KASIYA RESOURCE UPGRADE

Sovereign Metals Limited (*the Company or Sovereign*) is pleased to report results from its recent infill core drilling program at Kasiya, the Company's flagship, large, high-grade rutile deposit in Malawi. These results will underpin the pending upgrade of the Mineral Resource Estimate (**MRE**) which will target conversion of Inferred resources to the higher confidence Indicated category to feed into the upcoming Scoping Study.

### HIGHLIGHTS

**Kasiya Scoping Study** in final stages and **on track for completion next month.**

Results from infill core drilling targeting MRE category upgrades to Indicated confirm the **thick, continuous, and high-grade** nature of the Kasiya rutile deposit.

The first phase of results from 148 core holes covering ~23km<sup>2</sup> at Kasiya include;

- **12m @ 1.17% inc. 2m @ 1.87% rutile**
- **14m @ 1.13% inc. 4m @ 1.62% rutile**
- **10m @ 1.37% inc. 4m @ 1.68% rutile**
- **8m @ 1.42% inc. 2m @ 2.67% rutile**
- **10m @ 1.37% inc. 2m @ 1.66% rutile**
- **13m @ 1.12% inc. 2m @ 2.11% rutile**
- **10m @ 1.11% inc. 4m @ 1.41% rutile**
- **12m @ 1.12% inc. 2m @ 1.72% rutile**
- **14m @ 1.34% inc. 2m @ 1.61% rutile**
- **8m @ 1.36% inc. 4m @ 1.46% rutile**
- **10m @ 1.29% inc. 2m @ 1.46% rutile**
- **12m @ 1.23% inc. 2m @ 2.07% rutile**

**Sovereign's Managing Director Dr Julian Stephens commented:** "We are looking forward to the completion of the initial Scoping Study for Kasiya which will reveal the potential economics of this globally significant rutile discovery. This is timely as Sovereign completes its dual listing on the AIM Market of the London Stock Exchange in mid-December introducing new capital markets and generating greater exposure for the Company and the strong fundamentals of the Kasiya project."

#### ENQUIRIES

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**KASIYA RUTILE DEPOSIT – CORE DRILLING**

The core drilling program was completed at the Kasiya rutile deposit from July to September 2021. The program targeted high-grade zones of the existing Inferred MRE with the objective of upgrading these areas into the Indicated category in order to underpin the upcoming Scoping Study.

244 core holes for 2,484 metres were drilled across the Kasiya and Nsarur rutile deposits. The drilling was completed by two push-tube core rigs achieving near-100% recovery through the soft, friable, mineralised regolith profile. The average drill depth was approximately 10m with a number of holes reaching up to 15m.

Rutile and graphite assays for 148 holes (1,486m) in the central zone of the Kasiya deposit have been received and are detailed in this report. These holes cover ~23km<sup>2</sup> of the central existing Inferred MRE area at Kasiya. Results for the remaining 96 holes from Kasiya and Nsarur remain pending.

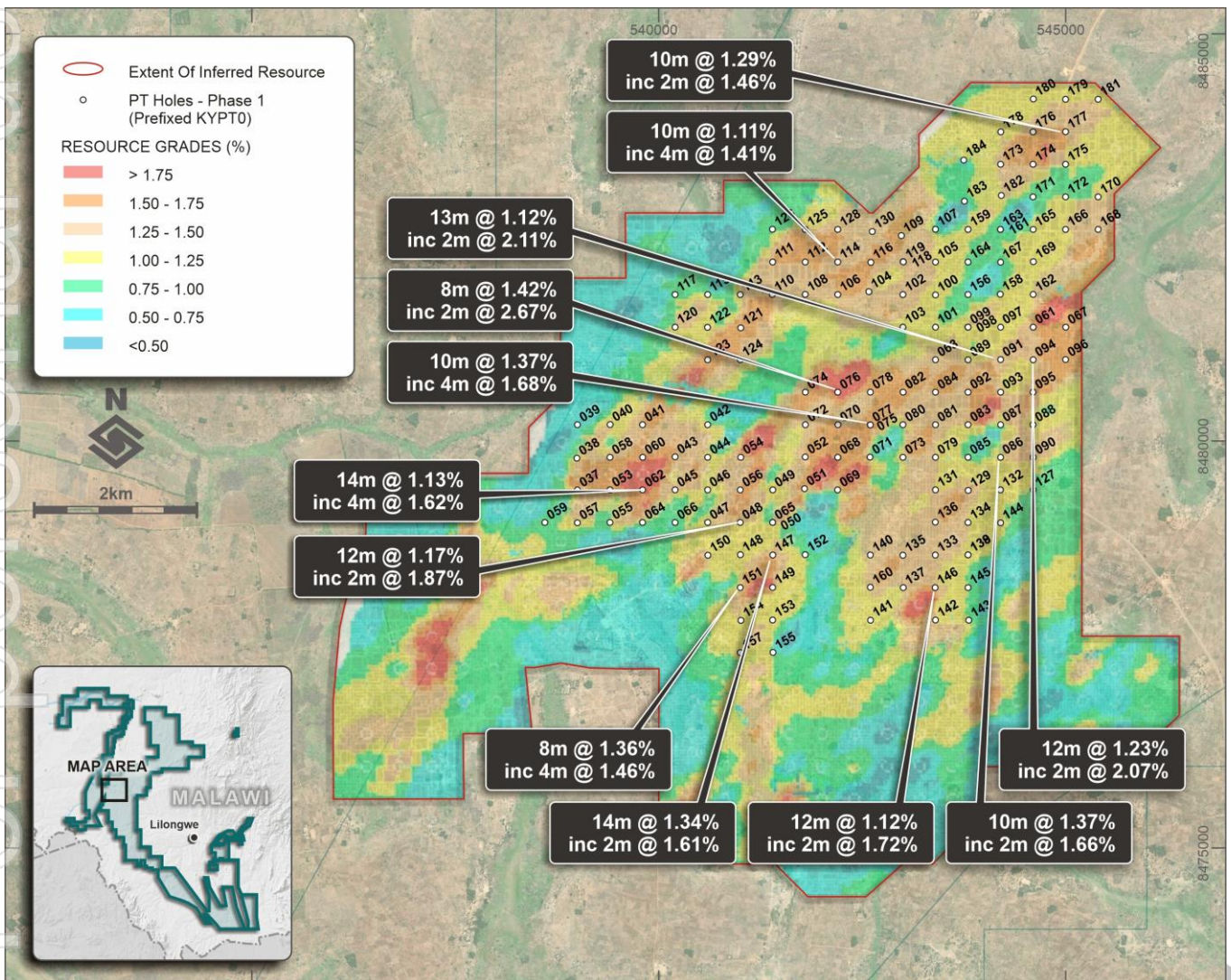


Figure 1: Kasiya core drilling plan over existing Inferred MRE block model (top block) with selected highlight hole results labelled.

The Kasiya core drilling results are in line with previous hand-auger drilling and continue to confirm widespread, high-grade mineralisation commonly grading 1.2% to 2.0% rutile in the top 3-5m from surface. Moderate grade mineralisation generally grading 0.5% to 1.2% rutile commonly extends from 5m to end of hole where it remains open at depths >10m in numerous drill-defined, NE-striking zones.

It is currently interpreted that these deeper, NE-striking zones of rutile mineralisation should extend to the base of the soft, friable saprolite estimated to be at approximately 25m depth. The Company will consider testing this deeper rutile mineralisation with sonic or air-core drilling in the 2022 field season.



Figure 2: Sampling drill core from the push-tube program



Figure 3: DL650 push-tube core drilling rig in operation at Kasiya

## GRAPHITE

A comprehensive graphite assaying program has been completed over the course of the year to systematically assay all hand-auger and core samples.

Assay results from the program show low-grade, coarse-flake graphite averaging about 1.2% TGC occurs throughout the Kasiya rutile MRE area. Higher grade graphite occurs at depths >5m in association with the NE-striking zones of deeper rutile mineralisation described in the previous section. All available graphite assay results are presented in Appendix 3.

Metallurgical test-work on a potential graphite by-product from Kasiya is now near completion. The Company is now confident it will be able to include a coarse-flake graphite by-product in the upcoming Scoping Study. The final graphite metallurgical results are expected to be available for reporting in the coming weeks.



Figures 4 & 5: Coarse-flake graphite in drill core sample from Kasiya (left) & very coarse-flake graphite in the +600µm coarse sand fraction of a sized, raw drill sample (right)

## SCOPING STUDY PROGRESS

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

Sovereign is looking forward to presenting the results of the Study next month.



Figure 5: Logging and sample preparation of drill core from Kasiya

### Competent Person's Statement

The information in this report that relates to Exploration Results is based on information compiled by Mr Samuel Moyle, a Competent Person who is a member of The Australasian Institute of Mining and Metallurgy (AusIMM). Mr Moyle is the Exploration Manager of Sovereign Metals Limited and a holder of ordinary shares, unlisted options and performance rights in Sovereign. Mr Moyle has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken, to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Moyle consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

### 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 – RUTILE DRILL RESULTS

Rutile results from infill push-tube core drilling at Kasiya are shown below in Table 1.

Hole ID	Interval Thickness	Rutile %	From (m) Downhole	Comments	Purpose
KYPT0037	11.0	1.02	2		resource
incl	2.0	1.05	2		
KYPT0038	12.0	0.96	surface		resource
incl	2.0	1.64	surface		
KYPT0039	2.0	0.79	surface		resource
KYPT0040	6.0	0.86	surface		resource
incl	2.0	1.36	surface		
KYPT0041	4.0	1.23	surface		resource
incl	2.0	1.71	surface		
KYPT0042	7.0	1.09	surface		resource
incl	2.0	1.01	surface		
KYPT0043	10.0	1.00	surface		resource
incl	2.0	1.72	surface		
KYPT0044	4.0	0.95	surface	open at depth	resource
incl	2.0	1.09	surface		
KYPT0045	12.0	0.97	surface	open at depth	resource
incl	2.0	1.42	surface		
KYPT0046	4.0	1.18	surface		resource
incl	2.0	1.51	surface		
KYPT0047	4.0	1.24	surface		resource
incl	2.0	1.54	surface		
<b>KYPT0048</b>	<b>12.0</b>	<b>1.17</b>	<b>surface</b>		<b>resource</b>
<b>incl</b>	<b>2.0</b>	<b>1.87</b>	<b>surface</b>		
KYPT0049	4.0	0.92	surface		resource
incl	2.0	1.24	surface		
KYPT0050	6.0	1.04	surface		resource
incl	4.0	1.17	surface		
KYPT0051	8.0	1.02	surface		resource
incl	2.0	1.55	surface		
incl	2.0	1.07	6		
KYPT0052	2.0	1.35	surface		resource
KYPT0053	4.0	0.99	surface		resource
incl	2.0	1.32	surface		
KYPT0054	3.9	1.49	surface		resource
KYPT0055	10.0	0.82	surface	open at depth	resource
incl	2.0	1.04	surface		
KYPT0056	4.0	1.22	surface	open at depth	resource
incl	2.0	1.84	surface		
KYPT0057	4.0	0.56	surface		resource
KYPT0058	14.0	1.06	surface	open at depth	resource
incl	12.0	1.15	surface		
KYPT0059	14.0	0.90	surface	open at depth	resource
incl	2.0	1.01	4		
KYPT0060	12.0	0.89	surface	open at depth	resource
incl	2.0	1.21	surface		
KYPT0061	10.0	1.04	surface	open at depth	resource
incl	2.0	1.79	surface		
<b>KYPT0062</b>	<b>14.0</b>	<b>1.13</b>	<b>surface</b>	<b>open at depth</b>	<b>resource</b>
<b>incl</b>	<b>4.0</b>	<b>1.62</b>	<b>surface</b>		
KYPT0063	4.0	1.15	surface		resource
incl	2.0	1.69	surface		
KYPT0064	2.0	1.70	surface		resource
KYPT0065	8.0	0.88	surface		resource
incl	4.0	1.16	surface		
KYPT0066	2.0	0.86	surface		resource
KYPT0067	1.0	1.47	surface		resource
KYPT0068	10.0	0.92	surface	open at depth	resource

Hole ID	Interval Thickness	Rutile %	From (m) Downhole	Comments	Purpose
incl	2.0	1.90	surface		
KYPT0069	9.0	0.96	surface	<i>open at depth</i>	<i>resource</i>
incl	2.0	1.72	surface		
KYPT0070		NSR			<i>resource</i>
KYPT0071	9.0	1.11	surface		<i>resource</i>
incl	2.0	1.63	surface		
incl	3.0	1.10	6		
KYPT0072		NSR			<i>resource</i>
KYPT0073	2.0	0.93	surface		<i>resource</i>
KYPT0074	5.0	1.01	surface	<i>open at depth</i>	<i>resource</i>
incl	2.0	1.60	surface		
<b>KYPT0075</b>	<b>10.0</b>	<b>1.37</b>	<b>surface</b>		<b>twin</b>
<b>incl</b>	<b>4.0</b>	<b>1.68</b>	<b>surface</b>		
<b>KYPT0076</b>	<b>8.0</b>	<b>1.42</b>	<b>surface</b>	<b>open at depth</b>	<b>resource</b>
<b>incl</b>	<b>2.0</b>	<b>2.67</b>	<b>surface</b>		
<b>incl</b>	<b>4.0</b>	<b>1.19</b>	<b>4</b>		
KYPT0077	11.0	1.29	surface	<i>open at depth</i>	<i>resource</i>
incl	8.0	1.44	surface		
incl	1.0	1.38	10		
KYPT0078	2.0	1.51	surface		<i>resource</i>
KYPT0079	6.0	0.73	surface	<i>open at depth</i>	<i>resource</i>
KYPT0080	4.0	1.49	surface		<i>resource</i>
KYPT0081	10.0	0.92	surface		<i>resource</i>
incl	2.0	1.51	surface		
KYPT0082	10.0	0.92	surface		<i>resource</i>
incl	2.0	1.86	surface		
incl	2.0	1.00	8		
KYPT0083	6.0	0.89	surface	<i>open at depth</i>	<i>resource</i>
incl	2.0	1.23	surface		
KYPT0084	11.0	1.04	surface	<i>open at depth</i>	<i>resource</i>
incl	2.0	1.81	surface		
KYPT0085	12.0	0.80	surface	<i>open at depth</i>	<i>resource</i>
incl	2.0	1.13	surface		
<b>KYPT0086</b>	<b>10.0</b>	<b>1.37</b>	<b>surface</b>	<b>open at depth</b>	<b>resource</b>
<b>incl</b>	<b>2.0</b>	<b>1.66</b>	<b>surface</b>		<b>resource</b>
KYPT0087	6.0	0.87	surface		<i>resource</i>
incl	2.0	1.27	surface		
KYPT0088	4.0	0.89	surface		<i>resource</i>
incl	2.0	1.21	surface		
KYPT0089	8.0	1.16	surface		<i>resource</i>
incl	4.0	1.69	surface		
KYPT0090	2.0	0.63	surface		<i>resource</i>
<b>KYPT0091</b>	<b>13.0</b>	<b>1.12</b>	<b>surface</b>	<b>open at depth</b>	<b>resource</b>
<b>incl</b>	<b>2.0</b>	<b>2.11</b>	<b>surface</b>		
KYPT0092	8.0	1.25	surface		<i>resource</i>
incl	2.0	2.09	surface		
incl	2.0	1.14	4		
KYPT0093	14.0	0.99	surface	<i>open at depth</i>	<i>resource</i>
incl	2.0	1.49	surface		
<b>KYPT0094</b>	<b>12.0</b>	<b>1.23</b>	<b>surface</b>	<b>open at depth</b>	<b>resource</b>
<b>incl</b>	<b>2.0</b>	<b>2.07</b>	<b>surface</b>		
<b>incl</b>	<b>8.0</b>	<b>1.08</b>	<b>4</b>		
KYPT0095	6.0	0.82	surface		<i>resource</i>
incl	2.0	1.25	surface		
KYPT0096	4.0	0.91	surface		<i>resource</i>
incl	2.0	1.18	surface		
KYPT0097	2.0	0.83	surface		<i>resource</i>
KYPT0098	6.0	0.67	surface		<i>resource</i>
and	4.0	0.77	8		<i>resource</i>
KYPT0099	12.0	0.69	surface		<i>resource</i>
KYPT0100	4.0	0.80	surface		<i>resource</i>
KYPT0101	4.0	1.18	surface		<i>resource</i>

Hole ID	Interval Thickness	Rutile %	From (m) Downhole	Comments	Purpose
incl	2.0	1.37	surface		
KYPT0102	6.0	1.06	surface	<i>open at depth</i>	<i>resource</i>
incl	2.0	1.70	surface		
KYPT0103	3.0	1.24	surface	<i>open at depth</i>	<i>resource</i>
incl	2.0	1.50	surface		
KYPT0104		NSR			<i>resource</i>
KYPT0105	12.0	0.89	surface		<i>resource</i>
incl	2.0	1.47	surface		
KYPT0106	2.0	1.02	surface		<i>resource</i>
KYPT0107	6.0	0.94	surface		<i>resource</i>
incl	2.0	1.40	surface		
KYPT0108	4.0	0.93	surface		<i>resource</i>
incl	2.0	1.25	surface		
KYPT0109	2.0	0.86	surface		<i>resource</i>
KYPT0110	4.0	1.35	surface	<i>open at depth</i>	<i>resource</i>
KYPT0111	12.0	0.92	surface	<i>open at depth</i>	<i>resource</i>
incl	2.0	1.70	surface		
KYPT0112	4.0	1.13	surface	<i>open at depth</i>	<i>resource</i>
incl	2.0	1.30	surface		
KYPT0113	2.0	0.87	surface		<i>resource</i>
<b>KYPT0114</b>	<b>10.0</b>	<b>1.11</b>	<b>surface</b>	<b><i>open at depth</i></b>	<b><i>resource</i></b>
<b>incl</b>	<b>4.0</b>	<b>1.41</b>	<b>surface</b>		
<i>incl</i>	2.0	1.02	8		
KYPT0115	4.0	0.74	surface		<i>resource</i>
KYPT0116	9.0	0.93	surface		<i>resource</i>
incl	2.0	1.70	surface		
KYPT0117	6.0	0.70	surface		<i>resource</i>
KYPT0118	4.0	1.16	surface	<i>open at depth</i>	<i>resource</i>
KYPT0119	4.0	1.20	surface	<i>open at depth</i>	<i>resource</i>
incl	2.0	1.40	surface		
KYPT0120	4.0	0.73	surface		<i>resource</i>
KYPT0121	8.0	1.12	surface		<i>resource</i>
incl	2.0	2.04	surface		
KYPT0122	4.0	0.85	surface		<i>resource</i>
incl	2.0	1.18	surface		
KYPT0123	2.7	1.17	surface	<i>open at depth</i>	<i>resource</i>
incl	2.0	1.26	surface		
KYPT0124	4.7	1.22	surface	<i>open at depth</i>	<i>resource</i>
incl	2.0	1.76	surface		
KYPT0125	11.0	0.89	surface		<i>resource</i>
incl	2.0	1.70	surface		
KYPT0126	4.0	0.76	surface		<i>resource</i>
KYPT0127	8.8	0.79	surface	<i>open at depth</i>	<i>resource</i>
incl	2.0	1.08	surface		
KYPT0128	4.0	0.89	surface		<i>resource</i>
incl	2.0	1.10	surface		
KYPT0129	8.0	0.94	surface		<i>resource</i>
incl	2.0	1.49	surface		
KYPT0130	1.0	1.19	surface		<i>resource</i>
KYPT0131	5.0	0.92	surface		<i>resource</i>
incl	2.0	1.27	surface		
KYPT0132	12.0	0.74	surface	<i>open at depth</i>	<i>resource</i>
KYPT0133	10.5	1.10	surface	<i>open at depth</i>	<i>resource</i>
incl	6.0	1.32	surface		
KYPT0134	4.0	0.98	surface		<i>resource</i>
incl	2.0	1.05	surface		
KYPT0135	5.6	1.14	surface		<i>resource</i>
incl	4.0	1.29	surface		
KYPT0136	13.7	0.91	surface	<i>open at depth</i>	<i>resource</i>
incl	6.0	1.31	surface		
KYPT0137	4.0	1.03	surface		<i>resource</i>
incl	2.0	1.38	surface		



Hole ID	Interval Thickness	Rutile %	From (m) Downhole	Comments	Purpose
KYPT0138	6.0	0.77	surface		resource
KYPT0139	6.0	0.83	surface		resource
KYPT0140	1.5	1.14	surface		resource
KYPT0141	0.6	1.29	surface		resource
KYPT0142	8.0	1.12	surface	open at depth	resource
incl	6.0	1.19	surface		
KYPT0143	2.0	1.16	surface		resource
KYPT0144	6.0	1.05	surface		resource
incl	2.0	1.53	surface		
KYPT0144	1.0	0.74	8		resource
KYPT0145	8.7	0.87	surface	open at depth	resource
incl	2.0	1.28	surface		
<b>KYPT0146</b>	<b>12.0</b>	<b>1.12</b>	<b>surface</b>	<b>open at depth</b>	<b>resource</b>
<b>incl</b>	<b>2.0</b>	<b>1.72</b>	<b>surface</b>		
<b>KYPT0147</b>	<b>14.0</b>	<b>1.34</b>	<b>surface</b>	<b>open at depth</b>	<b>resource</b>
<b>incl</b>	<b>2.0</b>	<b>1.61</b>	<b>surface</b>		
KYPT0148	4.0	0.78	surface		resource
incl	2.0	1.00	surface		
KYPT0149	12.0	1.04	surface	open at depth	resource
incl	4.0	1.60	surface		
KYPT0150	4.4	1.24	surface		resource
incl	2.0	1.78	surface		
<b>KYPT0151</b>	<b>8.0</b>	<b>1.36</b>	<b>surface</b>	<b>open at depth</b>	<b>resource</b>
<b>incl</b>	<b>4.0</b>	<b>1.46</b>	<b>surface</b>		
KYPT0152	2.0	0.54	surface		resource
KYPT0153	2.0	0.77	surface		resource
KYPT0154	2.0	1.42	surface	open at depth	resource
incl	2.0	1.05	8		
KYPT0155	2.0	0.56	surface		resource
KYPT0156		NSR			resource
KYPT0157	9.5	0.93	surface	open at depth	resource
incl	2.0	1.22	surface		
KYPT0158	1.9	1.21	surface		resource
KYPT0159	4.4	1.04	surface		resource
incl	2.0	1.34	surface		
KYPT0160	0.3	0.97	surface		resource
KYPT0161	2.0	0.70	surface		resource
KYPT0162	2.0	0.93	surface		resource
KYPT0163	2.0	0.50	surface		resource
KYPT0164	4.0	0.84	surface		resource
KYPT0165	4.0	0.88	surface		resource
KYPT0166	12.0	0.92	surface	open at depth	resource
incl	4.0	1.19	surface		
KYPT0167	2.0	0.90	surface		resource
KYPT0168	7.0	0.90	surface		resource
incl	2.0	1.42	surface		
KYPT0169	2.0	1.03	surface		resource
KYPT0170	1.8	1.36	surface	open at depth	resource
KYPT0171	6.0	0.83	surface		resource
incl	2.0	1.21	surface		
KYPT0172	6.0	0.85	surface		resource
incl	2.0	1.43	surface		
KYPT0173	2.3	1.70	surface		resource
incl	2.0	1.84	surface		
KYPT0174	4.0	1.08	surface	open at depth	resource
incl	2.0	1.48	surface		
KYPT0175	4.0	1.10	surface		resource
incl	2.0	1.34	surface		
KYPT0176	8.0	1.11	surface	open at depth	resource
incl	4.0	1.51	surface		
<b>KYPT0177</b>	<b>10.0</b>	<b>1.29</b>	<b>surface</b>	<b>open at depth</b>	<b>resource</b>
<b>incl</b>	<b>2.0</b>	<b>1.46</b>	<b>surface</b>		

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Hole ID	Interval Thickness	Rutile %	From (m) Downhole	Comments	Purpose
KYPT0178	8.0	0.85	surface		resource
incl	2.0	1.32	surface		
KYPT0179	4.0	0.84	surface		resource
KYPT0180	2.0	0.61	surface		resource
KYPT0181	7.0	1.03	surface		resource
incl	2.0	1.79	surface		
KYPT0182	1.0	1.50	surface		resource
KYPT0183	2.5	1.84	surface	open at depth	resource
KYPT0184	2.0	1.12	surface		resource

## APPENDIX 2: RUTILE DRILL HOLE DATA

Hole ID	Easting	Northing	RL	Depth
KYPT0037	539000	8479400	1094	14.0
KYPT0038	538994	8479789	1093	14.0
KYPT0039	539000	8480200	1086	10.0
KYPT0040	539402	8480203	1090	12.0
KYPT0041	539800	8480200	1093	11.0
KYPT0042	540600	8480201	1097	9.7
KYPT0043	540201	8479806	1101	12.0
KYPT0044	540600	8479800	1104	12.0
KYPT0045	540200	8479400	1100	12.0
KYPT0046	540600	8479400	1106	13.0
KYPT0047	540600	8479000	1104	12.0
KYPT0048	541000	8479000	1112	13.0
KYPT0049	541400	8479400	1115	10.0
KYPT0050	541400	8479000	1117	13.0
KYPT0051	541791	8479415	1118	9.0
KYPT0052	541799	8479804	1112	4.0
KYPT0053	539400	8479400	1097	13.0
KYPT0054	541008	8479801	1106	12.0
KYPT0055	539400	8479000	1088	10.0
KYPT0056	541001	8479400	1111	11.0
KYPT0057	538999	8478996	1089	8.5
KYPT0058	539400	8479800	1096	14.0
KYPT0059	538600	8479000	1084	14.0
KYPT0060	539802	8479800	1099	12.0
KYPT0061	544600	8481400	1138	10.0
KYPT0062	539800	8479400	1098	14.0
KYPT0063	543400	8481000	1131	8.0
KYPT0064	539800	8479000	1086	7.0
KYPT0065	541399	8478999	1117	13.0
KYPT0066	540200	8479000	1090	5.0
KYPT0067	545002	8481399	1131	9.4
KYPT0068	542200	8479800	1122	10.0
KYPT0069	542197	8479399	1119	9.0
KYPT0070	542203	8480200	1121	9.0
KYPT0071	542597	8479802	1125	10.0
KYPT0072	541802	8480200	1108	4.0
KYPT0073	543000	8479800	1127	8.0
KYPT0074	541800	8480600	1105	5.0
KYPT0075	542599	8480199	1127	11.0
KYPT0076	542200	8480600	1114	8.0
KYPT0077	542600	8480199	1128	11.0
KYPT0078	542600	8480600	1122	10.0
KYPT0079	543400	8479800	1133	6.0
KYPT0080	543000	8480200	1132	11.6
KYPT0081	543400	8480200	1137	13.0
KYPT0082	543001	8480602	1130	11.0
KYPT0083	543800	8480200	1143	14.0
KYPT0084	543400	8480600	1137	11.0

Hole ID	Easting	Northing	RL	Depth
KYPT0085	543800	8479800	1142	12.0
KYPT0086	544200	8479800	1145	12.0
KYPT0087	544200	8480200	1146	12.0
KYPT0088	544600	8480200	1142	12.0
KYPT0089	543800	8481000	1141	12.0
KYPT0090	544600	8479800	1143	11.0
KYPT0091	544201	8481000	1145	13.0
KYPT0092	543800	8480600	1144	13.0
KYPT0093	544200	8480600	1147	14.0
KYPT0094	544600	8481000	1141	12.0
KYPT0095	544600	8480600	1142	13.0
KYPT0096	545000	8481000	1134	7.0
KYPT0097	544200	8481400	1142	13.0
KYPT0098	543799	8481399	1141	13.0
KYPT0099	543800	8481400	1141	13.8
KYPT0100	543400	8481795	1135	13.0
KYPT0101	543400	8481400	1133	10.1
KYPT0102	543000	8481800	1128	11.0
KYPT0103	543000	8481400	1121	3.0
KYPT0104	542581	8481836	1121	3.0
KYPT0105	543400	8482200	1131	13.0
KYPT0106	542200	8481800	1117	11.0
KYPT0107	543400	8482603	1125	7.8
KYPT0108	541799	8481801	1114	10.0
KYPT0109	542980	8482524	1115	4.0
KYPT0110	541395	8481801	1112	10.0
KYPT0111	541400	8482200	1113	12.0
KYPT0112	541800	8482200	1116	10.0
KYPT0113	541000	8481800	1110	8.6
KYPT0114	542200	8482200	1118	10.0
KYPT0115	540600	8481800	1110	10.0
KYPT0116	542607	8482196	1121	10.0
KYPT0117	540200	8481800	1110	11.7
KYPT0118	543004	8482203	1124	10.0
KYPT0119	543004	8482203	1124	10.0
KYPT0120	540200	8481400	1104	10.9
KYPT0121	541007	8481390	1107	9.0
KYPT0122	540598	8481397	1105	10.0
KYPT0123	540600	8481000	1096	2.7
KYPT0124	541000	8481000	1099	4.7
KYPT0125	541800	8482600	1112	13.0
KYPT0126	541398	8482602	1110	11.0
KYPT0127	544600	8479400	1144	8.8
KYPT0128	542200	8482600	1114	9.5
KYPT0129	543804	8479393	1144	12.5
KYPT0130	542623	8482575	1115	8.0
KYPT0131	543400	8479400	1136	7.4
KYPT0132	544198	8479400	1146	12.0
KYPT0133	543398	8478599	1137	10.5
KYPT0134	543800	8479000	1146	9.8
KYPT0135	543001	8478597	1127	12.5
KYPT0136	543399	8479004	1138	13.7
KYPT0137	543004	8478199	1124	11.9
KYPT0138	543800	8478602	1143	13.5
KYPT0139	543801	8478603	1143	13.7
KYPT0140	542600	8478600	1111	8.1
KYPT0141	542602	8477800	1108	7.4
KYPT0142	543401	8477800	1124	11.0
KYPT0143	543810	8477799	1124	4.2
KYPT0144	544201	8478995	1145	9.3
KYPT0145	543800	8478200	1135	8.7
KYPT0146	543397	8478199	1133	12.0

Hole ID	Easting	Northing	RL	Depth
KYPT0147	541400	8478599	1114	14.0
KYPT0148	541003	8478603	1110	12.0
KYPT0149	541399	8478202	1109	12.0
KYPT0150	540603	8478597	1103	10.7
KYPT0151	541000	8478200	1106	8.7
KYPT0152	541799	8478604	1110	7.6
KYPT0153	541400	8477800	1103	8.9
KYPT0154	541009	8477797	1102	10.0
KYPT0155	541404	8477402	1096	9.0
KYPT0156	543800	8481800	1144	11.0
KYPT0157	541000	8477400	1096	9.5
KYPT0158	544197	8481804	1140	12.0
KYPT0159	543800	8482600	1128	11.0
KYPT0160	542600	8478202	1112	9.0
KYPT0161	544200	8482600	1133	8.9
KYPT0162	544602	8481802	1132	2.3
KYPT0163	544200	8482600	1133	8.5
KYPT0164	543800	8482200	1137	8.6
KYPT0165	544600	8482600	1136	14.0
KYPT0166	545000	8482600	1133	12.0
KYPT0167	544200	8482199	1138	9.0
KYPT0168	545400	8482600	1126	8.0
KYPT0169	544603	8482203	1133	9.0
KYPT0170	545400	8483000	1127	1.8
KYPT0171	544600	8483000	1133	12.0
KYPT0172	545000	8483000	1133	10.0
KYPT0173	544200	8483400	1124	4.5
KYPT0174	544600	8483400	1131	11.0
KYPT0175	545000	8483400	1132	11.0
KYPT0176	544600	8483800	1130	11.0
KYPT0177	545000	8483800	1131	10.0
KYPT0178	544203	8483800	1126	10.0
KYPT0179	545000	8484200	1128	11.6
KYPT0180	544602	8484203	1127	10.0
KYPT0181	545400	8484200	1126	7.1
KYPT0182	544209	8483018	1126	1.3
KYPT0183	543757	8482948	1118	2.5
KYPT0184	543748	8483451	1113	7.0

## APPENDIX 3 - GRAPHITE SAMPLING

Graphite results from infill push-tube core drilling at Kasiya are shown below in Table 3.

Hole ID	Interval Thickness	Average TGC%	Hole ID	Interval Thickness	Average TGC%
KYPT0037	14.0	2.57	KYPT0077	11.0	1.97
KYPT0038	14.0	2.25	KYPT0078	10.0	0.05
KYPT0039	10.0	0.44	KYPT0079	6.0	0.23
KYPT0040	12.0	1.18	KYPT0080	11.6	1.00
KYPT0041	11.0	2.18	KYPT0081	13.0	0.92
KYPT0042	9.7	2.85	KYPT0082	11.0	0.70
KYPT0043	12.0	2.87	KYPT0083	14.0	0.26
KYPT0044	12.0	1.80	KYPT0084	11.0	2.60
KYPT0045	12.0	2.48	KYPT0085	12.0	2.02
KYPT0046	13.0	1.11	KYPT0086	12.0	1.40
KYPT0047	12.0	0.53	KYPT0087	12.0	1.33
KYPT0048	13.0	1.47	KYPT0088	12.0	0.26
KYPT0049	No significant results		KYPT0089	12.0	0.38
KYPT0050	13.0	0.83	KYPT0090	11.0	0.12
KYPT0051	9.0	1.90	KYPT0091	13.0	2.24
KYPT0052	4.0	0.25	KYPT0092	13.0	0.97
KYPT0053	13.0	1.53	KYPT0093	14.0	0.94
KYPT0054	No significant results		KYPT0094	12.0	1.85
KYPT0055	10.0	3.52	KYPT0095	13.0	0.33
KYPT0056	11.0	0.08	KYPT0096	7.0	0.33
KYPT0057	8.5	0.22	KYPT0097	13.0	0.67
KYPT0058	14.0	4.00	KYPT0098	13.0	2.66
KYPT0059	14.0	2.71	KYPT0099	13.8	2.84
KYPT0060	12.0	2.88	KYPT0100	13.0	1.58
KYPT0061	10.0	0.58	KYPT0101	10.1	0.27
KYPT0062	14.0	1.53	KYPT0102	11.0	0.85
KYPT0063	8.0	0.10	KYPT0103	3.0	0.35
KYPT0064	7.0	0.80	KYPT0104	No significant results	
KYPT0065	13.0	0.84	KYPT0105	13.0	1.20
KYPT0066	5.0	0.10	KYPT0106	11.0	0.37
KYPT0067	No significant results		KYPT0107	7.8	0.85
KYPT0068	10.0	0.08	KYPT0108	10.0	1.74
KYPT0069	9.0	1.84	KYPT0109	4.0	0.20
KYPT0070	No significant results		KYPT0110	10.0	2.42
KYPT0071	10.0	1.10	KYPT0111	12.0	1.33
KYPT0072	No significant results		KYPT0112	10.0	2.20
KYPT0073	8.0	0.03	KYPT0113	8.6	0.20
KYPT0074	5.0	0.57	KYPT0114	10.0	1.14
KYPT0075	11.0	2.02	KYPT0115	10.0	0.20
KYPT0076	8.0	1.08	KYPT0116	10.0	0.72
KYPT0117	11.7	0.28	KYPT0160	No significant results	

Hole ID	Interval Thickness	Average TGC%	Hole ID	Interval Thickness	Average TGC%
KYPT0118	10.0	0.66	KYPT0161	8.9	1.20
KYPT0119	10.0	0.50	KYPT0162	2.3	0.30
KYPT0120	10.9	0.18	KYPT0163	8.5	0.70
KYPT0121	9.0	0.26	KYPT0164	8.6	0.44
KYPT0122	10.0	2.44	KYPT0165	14.0	0.89
KYPT0123	2.7	0.30	KYPT0166	12.0	2.78
KYPT0124	4.7	1.70	KYPT0167	9.0	0.58
KYPT0125	13.0	1.15	KYPT0168	8.0	0.57
KYPT0126	11.0	0.62	KYPT0169	9.0	0.20
KYPT0127	8.8	1.72	KYPT0170	1.8	0.30
KYPT0128	9.5	0.55	KYPT0171	12.0	0.60
KYPT0129	12.5	1.47	KYPT0172	10.0	0.32
KYPT0130	8.0	0.20	KYPT0173	4.5	0.30
KYPT0131	7.4	0.37	KYPT0174	11.0	0.63
KYPT0132	12.0	1.12	KYPT0175	11.0	1.72
KYPT0133	10.5	2.67	KYPT0176	11.0	0.56
KYPT0134	9.8	0.66	KYPT0177	10.0	1.18
KYPT0135	12.5	0.37	KYPT0178	10.0	1.12
KYPT0136	13.7	0.86	KYPT0179	11.6	1.07
KYPT0137	11.9	0.23	KYPT0180	10.0	0.82
KYPT0138	13.5	1.34	KYPT0181	7.1	0.23
KYPT0139	13.7	1.30	KYPT0182	1.3	0.30
KYPT0140	8.1	0.20	KYPT0183	2.5	0.20
KYPT0141	7.4	0.30	KYPT0184	7.0	0.37
KYPT0142	11.0	1.87			
KYPT0143	4.2	0.25			
KYPT0144	9.3	1.10			
KYPT0145	8.7	1.30			
KYPT0146	12.0	1.77			
KYPT0147	14.0	2.01			
KYPT0148	12.0	0.17			
KYPT0149	12.0	1.37			
KYPT0150	10.7	0.80			
KYPT0151	8.7	1.98			
KYPT0152	7.6	0.08			
KYPT0153	8.9	0.20			
KYPT0154	10.0	1.54			
KYPT0155	9.0	0.98			
KYPT0156	11.0	0.13			
KYPT0157	9.5	1.30			
KYPT0158	<i>No significant results</i>				
KYPT0159	<i>No significant results</i>				

Graphite results from previous hand-auger drilling at Kasiya are shown below in Table 4 and reported as whole of hole composites.

Hole ID	Easting	Northing	RL	Interval Thickness	TGC%	From (m) Downhole
KYHA0020	539195	8478195	1075	11.0	1.00	surface
KYHA0021	538986	8478200	1075	13.0	1.20	surface
KYHA0022	538802	8478206	1074	9.0	0.90	surface
KYHA0023	538598	8478203	1073	14.0	1.90	surface
KYHA0024	538400	8478208	1072	12.0	2.60	surface
KYHA0025	538202	8478215	1069	12.0	2.90	surface
KYHA0026	537999	8478210	1063	8.0	2.20	surface
KYHA0027	537800	8478202	1066	7.0	1.70	surface
KYHA0028	537600	8478200	1067	7.0	1.20	surface
KYHA0029	537400	8478197	1070	6.0	1.10	surface
KYHA0030	537200	8478198	1077	9.0	1.20	surface
KYHA0031	537001	8478196	1082	10.0	0.30	surface
KYHA0032	536800	8478182	1082	14.0	1.80	surface
KYHA0035	538800	8479200	1090	10.0	1.60	surface
KYHA0036	538402	8479200	1085	6.0	0.80	surface
KYHA0037	537600	8479201	1068	10.0	0.10	surface
KYHA0038	538030	8479197	1080	11.0	1.60	surface
KYHA0053	537200	8477595	1088	12.0	1.40	surface
KYHA0054	537599	8477602	1085	11.0	2.30	surface
KYHA0055	538000	8477627	1076	9.5	3.10	surface
KYHA0056	538442	8477615	1069	10.0	0.10	surface
KYHA0057	538802	8477675	1083	13.0	0.10	surface
KYHA0058	539182	8477611	1087	14.0	0.10	surface
KYHA0059	539598	8478801	1079	8.0	0.40	surface
KYHA0060	539202	8478798	1079	10.0	2.40	surface
KYHA0061	538790	8478778	1079	11.0	3.90	surface
KYHA0062	538397	8478765	1074	9.0	2.10	surface
KYHA0063	538003	8478801	1072	11.0	2.70	surface
KYHA0064	540427	8479188	1101	14.0	1.00	surface
KYHA0065	539994	8479197	1092	9.0	1.80	surface
KYHA0066	539600	8479167	1093	15.0	1.30	surface
KYHA0067	540395	8479998	1100	13.0	2.60	surface
KYHA0068	539993	8479995	1098	12.0	0.70	surface
KYHA0069	539602	8480001	1095	12.0	1.40	surface
KYHA0070	539199	8480001	1092	13.0	1.40	surface
KYHA0071	538803	8480002	1088	14.0	0.60	surface
KYHA0072	538800	8481600	1097	6.0	0.10	surface
KYHA0073	539202	8481600	1101	14.0	0.40	surface
KYHA0074	539599	8481597	1104	12.0	0.20	surface
KYHA0075	539999	8481602	1106	12.0	0.50	surface
KYHA0076	540399	8481601	1108	13.0	2.60	surface
KYHA0077	540799	8481600	1109	8.0	0.10	surface
KYHA0078	541194	8481600	1110	10.0	2.30	surface

Hole ID	Easting	Northing	RL	Interval Thickness	TGC%	From (m) Downhole
KYHA0079	541593	8481607	1111	14.0	2.40	surface
KYHA0080	541999	8481599	1112	2.0	0.10	surface
KYHA0081	539193	8481206	1094	3.0	0.10	surface
KYHA0082	539600	8481200	1097	11.0	0.30	surface
KYHA0083	540002	8481201	1099	10.0	0.70	surface
KYHA0084	539202	8480399	1081	10.0	0.30	surface
KYHA0085	539601	8480401	1085	10.0	0.10	surface
KYHA0086	540000	8480400	1089	13.0	2.10	surface
KYHA0087	540807	8479998	1102	8.0	1.30	surface
KYHA0088	541602	8479598	1114	12.0	1.60	surface
KYHA0089	541200	8479603	1111	11.0	0.70	surface
KYHA0090	540801	8479602	1107	14.0	0.10	surface
KYHA0091	540398	8479600	1103	13.0	2.90	surface
KYHA0092	539998	8479604	1100	14.0	0.10	surface
KYHA0093	539599	8479601	1099	11.0	1.40	surface
KYHA0094	539199	8479600	1096	11.0	1.60	surface
KYHA0095	538799	8479599	1091	10.0	1.10	surface
KYHA0096	540799	8479196	1109	11.0	0.90	surface
KYHA0097	541201	8479202	1115	12.0	1.40	surface
KYHA0098	541600	8479206	1118	13.0	1.40	surface
KYHA0099	542000	8479196	1116	9.0	0.20	surface
KYHA0100	542398	8479204	1114	11.0	0.60	surface
KYHA0101	540002	8478799	1082	7.0	0.10	surface
KYHA0102	540390	8478801	1099	11.0	0.10	surface
KYHA0103	538399	8477997	1074	13.0	3.30	surface
KYHA0104	538798	8477998	1080	12.0	0.10	surface
KYHA0105	539192	8477995	1081	14.0	0.10	surface
KYHA0106	539650	8477992	1068	8.0	0.40	surface
KYHA0107	539658	8478199	1065	3.0	0.20	surface
KYHA0108	539996	8478219	1078	6.0	0.10	surface
KYHA0109	540400	8478201	1091	8.0	0.40	surface
KYHA0110	540798	8478202	1099	9.0	0.90	surface
KYHA0111	541199	8478202	1108	14.0	2.30	surface
KYHA0112	541599	8478203	1106	14.0	0.10	surface
KYHA0128	539604	8477599	1080	8.0	0.10	surface
KYHA0131	536728	8477601	1084	9.0	1.00	surface
KYHA0132	536799	8477201	1087	8.0	0.60	surface
KYHA0133	537200	8477201	1091	10.0	2.30	surface
KYHA0134	537599	8477203	1089	11.0	1.40	surface
KYHA0135	537960	8477198	1082	11.0	0.50	surface
KYHA0136	536779	8476794	1093	10.0	2.00	surface
KYHA0137	537191	8476799	1095	11.0	0.40	surface
KYHA0138	537592	8476800	1092	12.0	0.10	surface
KYHA0140	538400	8476800	1085	6.0	0.10	surface
KYHA0141	536400	8476798	1090	10.0	0.30	surface
KYHA0142	540799	8478800	1108	16.0	0.10	surface



Hole ID	Easting	Northing	RL	Interval Thickness	TGC%	From (m) Downhole
KYHA0143	542000	8479601	1119	11.0	1.00	surface
KYHA0144	542399	8479600	1122	8.0	1.10	surface
KYHA0145	541200	8478803	1115	11.0	1.50	surface
KYHA0146	541599	8478801	1116	8.0	2.60	surface
KYHA0147	541999	8478802	1112	7.0	0.40	surface
KYHA0148	539596	8476794	1094	12.0	0.10	surface
KYHA0149	541199	8477602	1100	11.0	0.40	surface
KYHA0150	542402	8476799	1106	11.0	0.20	surface
KYHA0151	543199	8476796	1117	11.0	0.50	surface
KYHA0152	543999	8476799	1124	10.0	1.10	surface
KYHA0153	543199	8479601	1129	10.0	0.20	surface
KYHA0154	544000	8481599	1143	14.0	2.40	surface
KYHA0155	544000	8481201	1144	13.0	0.40	surface
KYHA0156	543997	8480803	1145	8.0	1.70	surface
KYHA0157	544029	8480382	1146	10.0	2.50	surface
KYHA0158	544022	8480004	1144	12.0	0.20	surface
KYHA0159	544001	8479599	1145	9.0	1.20	surface
KYHA0160	543199	8480001	1132	8.0	0.60	surface
KYHA0161	543207	8482409	1123	7.0	0.10	surface
KYHA0162	544004	8482398	1135	11.0	1.30	surface
KYHA0163	542455	8481633	1115	4.0	0.10	surface
KYHA0164	543167	8481572	1129	11.0	0.80	surface
KYHA0165	541584	8482401	1113	15.0	2.10	surface
KYHA0166	542436	8482401	1117	11.0	0.10	surface
KYHA0167	539992	8482402	1109	11.0	0.30	surface
KYHA0168	540805	8482403	1104	10.0	0.10	surface
KYHA0169	542404	8480420	1122	10.0	2.90	surface
KYHA0170	543163	8480369	1135	13.0	0.80	surface
KYHA0171	542401	8480001	1125	10.0	1.40	surface
KYHA0172	544801	8478800	1142	12.0	0.20	surface
KYHA0173	543199	8478002	1127	12.0	1.70	surface
KYHA0174	543998	8478000	1129	8.0	0.30	surface
KYHA0175	544802	8478004	1136	13.0	1.00	surface
KYHA0176	544001	8478800	1145	11.0	1.40	surface
KYHA0177	543243	8478790	1134	11.0	0.70	surface
KYHA0178	542399	8478001	1108	8.0	0.80	surface
KYHA0179	538999	8479600	1094	14.0	2.70	surface
KYHA0180	539401	8479599	1098	13.0	3.10	surface
KYHA0181	539801	8479598	1100	11.0	1.90	surface
KYHA0182	540199	8479599	1102	12.0	2.10	surface
KYHA0183	540600	8479599	1105	11.0	2.70	surface
KYHA0184	540998	8479605	1109	11.0	1.70	surface
KYHA0185	541396	8479605	1112	9.0	1.60	surface
KYHA0186	534799	8476001	1092	12.0	0.10	surface
KYHA0187	535601	8475988	1095	3.0	0.20	surface
KYHA0188	536401	8475999	1096	10.0	1.20	surface

Hole ID	Easting	Northing	RL	Interval Thickness	TGC%	From (m) Downhole
KYHA0189	537201	8476001	1099	11.0	0.30	surface
KYHA0190	538001	8475998	1094	8.0	0.50	surface
KYHA0191	538800	8475999	1089	3.0	0.10	surface
KYHA0192	539599	8475999	1097	7.0	0.30	surface
KYHA0193	540406	8476168	1093	3.0	0.20	surface
KYHA0194	542400	8480802	1114	3.0	0.30	surface
KYHA0195	541997	8480801	1107	8.0	0.90	surface
KYHA0196	541599	8480799	1101	7.0	0.50	surface
KYHA0197	541199	8480801	1097	7.0	2.40	surface
KYHA0198	541000	8479200	1112	12.0	0.80	surface
KYHA0199	541400	8479200	1117	10.0	0.80	surface
KYHA0200	541800	8479200	1117	8.0	0.20	surface
KYHA0201	539000	8479202	1093	11.0	3.20	surface
KYHA0202	539399	8479198	1094	13.0	0.50	surface
KYHA0203	539800	8479201	1094	11.0	2.70	surface
KYHA0204	540200	8479199	1096	11.0	1.70	surface
KYHA0205	540598	8479202	1105	8.0	1.80	surface
KYHA0206	539000	8480000	1091	11.0	0.30	surface
KYHA0207	539400	8480000	1094	12.0	1.10	surface
KYHA0208	539800	8480001	1097	11.0	3.00	surface
KYHA0209	540200	8480002	1099	11.0	1.40	surface
KYHA0210	540602	8480000	1101	7.0	1.30	surface
KYHA0211	546400	8487200	1113	9.0	1.30	surface
KYHA0212	546400	8486801	1113	11.0	1.20	surface
KYHA0213	546400	8486401	1115	12.0	0.40	surface
KYHA0214	546399	8486002	1117	12.0	0.20	surface
KYHA0215	546400	8485601	1116	12.0	0.50	surface
KYHA0216	546400	8484800	1108	5.0	0.40	surface
KYHA0217	543998	8485600	1103	6.0	0.20	surface
KYHA0218	544001	8484801	1116	12.0	1.30	surface
KYHA0219	544004	8484002	1124	14.0	0.80	surface
KYHA0220	543999	8483199	1118	11.0	0.70	surface
KYHA0221	536400	8473598	1112	7.0	0.30	surface
KYHA0222	537200	8473597	1119	12.0	1.10	surface
KYHA0223	537999	8473602	1104	6.0	0.30	surface
KYHA0224	538800	8473600	1108	6.0	0.20	surface
KYHA0225	539600	8473601	1125	12.0	2.20	surface
KYHA0226	540400	8473599	1123	13.0	0.20	surface
KYHA0227	541199	8473600	1114	8.0	0.30	surface
KYHA0228	542000	8473599	1115	12.0	1.50	surface
KYHA0229	540399	8478399	1095	8.0	0.20	surface
KYHA0230	540802	8478403	1103	12.0	0.80	surface
KYHA0231	541198	8478397	1110	16.0	1.80	surface
KYHA0232	541599	8478400	1110	14.0	2.20	surface
KYHA0233	541999	8478400	1103	6.0	0.20	surface
KYHA0234	540799	8477999	1099	11.0	2.20	surface

Hole ID	Easting	Northing	RL	Interval Thickness	TGC%	From (m) Downhole
KYHA0235	541201	8478001	1106	15.0	0.50	surface
KYHA0236	541600	8478002	1103	12.0	2.10	surface
KYHA0237	540400	8480396	1090	6.0	1.70	surface
KYHA0238	540801	8480400	1091	11.0	2.60	surface
KYHA0239	541200	8480400	1095	10.0	1.20	surface
KYHA0240	541601	8480400	1102	3.0	0.30	surface
KYHA0241	541998	8480401	1112	8.0	0.60	surface
KYHA0242	539194	8480815	1083	6.0	0.80	surface
KYHA0243	539601	8480800	1084	7.0	0.70	surface
KYHA0244	540000	8480800	1086	6.0	0.80	surface
KYHA0245	540400	8480794	1090	4.0	0.30	surface
KYHA0246	540799	8480800	1095	9.0	1.90	surface
KYHA0247	541205	8480012	1103	11.0	0.80	surface
KYHA0248	541600	8480000	1105	5.0	0.50	surface
KYHA0249	541999	8480000	1116	6.0	2.70	surface
KYHA0250	540402	8481201	1101	10.0	1.70	surface
KYHA0251	540801	8481203	1104	15.0	1.70	surface
KYHA0252	541199	8481199	1103	14.0	1.30	surface
KYHA0253	541598	8481199	1103	10.0	1.80	surface
KYHA0254	541999	8481196	1106	10.0	0.40	surface
KYHA0255	542400	8481199	1110	7.0	1.00	surface
KYHA0263	540399	8475200	1104	8.0	0.40	surface
KYHA0264	541201	8475200	1095	7.0	0.80	surface
KYHA0265	539600	8474400	1118	11.0	2.00	surface
KYHA0266	540400	8474399	1119	13.0	0.80	surface
KYHA0267	541199	8474399	1111	10.0	1.90	surface
KYHA0268	541999	8474399	1109	10.0	0.60	surface
KYHA0269	538800	8472801	1123	13.0	0.20	surface
KYHA0270	539600	8472800	1137	8.0	3.10	surface
KYHA0271	540399	8472798	1129	10.0	1.10	surface
KYHA0272	541198	8472803	1123	11.0	0.80	surface
KYHA0273	539599	8471999	1153	8.0	3.80	surface
KYHA0274	538798	8471998	1133	14.0	0.10	surface
KYHA0275	537997	8472000	1118	5.0	0.10	surface
KYHA0276	542800	8477599	1108	8.0	2.20	surface
KYHA0278	543199	8477200	1109	7.0	0.20	surface
KYHA0280	547200	8479601	1146	12.0	1.70	surface
KYHA0281	547199	8478799	1153	13.0	0.50	surface
KYHA0282	545598	8484001	1126	10.0	1.40	surface
KYHA0283	545600	8483201	1124	5.0	0.10	surface
KYHA0284	546799	8477598	1150	11.0	0.10	surface
KYHA0285	546000	8477598	1138	7.0	0.30	surface
KYHA0287	544801	8483998	1130	14.0	0.50	surface
KYHA0292	537601	8478799	1063	8.0	1.70	surface
KYHA0293	540801	8477599	1096	11.0	1.80	surface
KYHA0294	541600	8477598	1096	7.0	0.00	surface

Hole ID	Easting	Northing	RL	Interval Thickness	TGC%	From (m) Downhole
KYHA0295	540797	8477200	1085	12.0	0.70	surface
KYHA0296	541199	8477198	1093	12.0	0.20	surface
KYHA0297	541601	8477201	1087	11.0	0.10	surface
KYHA0298	541198	8483199	1103	12.0	0.10	surface
KYHA0299	541199	8482800	1107	12.0	0.10	surface
KYHA0300	540400	8482399	1106	12.0	0.10	surface
KYHA0301	541600	8482799	1108	11.0	0.10	surface
KYHA0302	542001	8482798	1110	10.0	0.60	surface
KYHA0303	541200	8482400	1110	13.0	0.20	surface
KYHA0304	542000	8482399	1116	11.0	1.40	surface
KYHA0305	540000	8482000	1110	13.0	0.20	surface
KYHA0306	540399	8482000	1110	11.0	0.60	surface
KYHA0307	540800	8482000	1109	10.0	0.20	surface
KYHA0308	541200	8482000	1111	4.0	0.10	surface
KYHA0309	541601	8482000	1115	12.0	4.10	surface
KYHA0310	542000	8481999	1117	11.0	2.20	surface
KYHA0311	543598	8479601	1139	13.0	1.00	surface
KYHA0312	543599	8480005	1138	14.0	0.10	surface
KYHA0313	543599	8480400	1141	13.0	0.10	surface
KYHA0314	543599	8479200	1142	13.0	2.00	surface
KYHA0315	542812	8479977	1129	9.0	2.90	surface
KYHA0316	542800	8480400	1129	12.0	1.10	surface
KYHA0318	543200	8479200	1132	15.0	0.30	surface
KYHA0319	542801	8479601	1121	8.0	0.20	surface
KYHA0320	543999	8479200	1147	12.0	1.00	surface
KYHA0321	543601	8478798	1145	12.0	2.40	surface
KYHA0322	543600	8478399	1139	9.0	1.30	surface
KYHA0323	542798	8479199	1118	7.0	0.30	surface
KYHA0324	542800	8478800	1118	7.0	0.50	surface
KYHA0325	543600	8480799	1139	12.0	1.10	surface
KYHA0326	543204	8480800	1131	12.0	1.40	surface
KYHA0327	543601	8481201	1137	12.0	0.30	surface
KYHA0328	543199	8481200	1124	4.0	0.20	surface
KYHA0329	543599	8481601	1139	12.0	2.80	surface
KYHA0330	542800	8481200	1116	10.0	0.40	surface
KYHA0331	542797	8481597	1122	8.0	1.00	surface
KYHA0332	543201	8478399	1131	11.0	0.70	surface
KYHA0333	542796	8478397	1117	4.0	0.10	surface
KYHA0334	544396	8479197	1145	12.0	1.50	surface
KYHA0335	544400	8478801	1140	12.0	0.50	surface
KYHA0336	543999	8478400	1137	12.0	0.10	surface
KYHA0337	544001	8482000	1142	11.0	0.30	surface
KYHA0338	544400	8478398	1132	7.0	0.10	surface
KYHA0339	543598	8483201	1112	6.0	1.40	surface
KYHA0340	544400	8483200	1129	10.0	1.70	surface
KYHA0341	543199	8482799	1115	8.0	0.20	surface

Hole ID	Easting	Northing	RL	Interval Thickness	TGC%	From (m) Downhole
KYHA0342	543599	8482799	1123	12.0	0.70	surface
KYHA0343	544003	8482800	1125	5.0	0.10	surface
KYHA0344	544400	8482800	1133	12.0	0.10	surface
KYHA0345	544797	8482801	1135	14.0	3.10	surface
KYHA0346	542800	8482400	1118	10.0	0.60	surface
KYHA0347	543599	8482401	1131	12.0	1.20	surface
KYHA0348	544400	8482400	1136	10.0	1.00	surface
KYHA0349	542400	8482000	1120	12.0	0.30	surface
KYHA0350	542800	8482002	1124	13.0	0.30	surface
KYHA0351	543200	8482000	1130	12.0	0.60	surface
KYHA0352	543600	8482000	1137	12.0	0.90	surface
KYHA0353	548000	8478800	1147	13.0	1.00	surface
KYHA0354	548800	8478800	1138	11.0	1.00	surface
KYHA0355	548000	8479557	1136	4.0	0.10	surface
KYHA0356	548801	8479597	1133	12.0	1.00	surface
KYHA0357	549597	8479602	1129	11.0	1.30	surface
KYHA0358	552000	8483200	1105	11.0	2.90	surface
KYHA0359	551198	8483199	1117	13.0	0.80	surface
KYHA0360	550398	8483200	1118	8.0	0.50	surface
KYHA0361	549600	8483201	1134	12.0	0.10	surface
KYHA0362	548800	8483199	1128	12.0	2.10	surface
KYHA0363	547999	8483199	1112	3.0	0.20	surface
KYHA0364	547201	8483205	1111	11.0	2.10	surface
KYHA0365	546400	8483198	1116	10.0	0.90	surface
KYHA0366	546400	8484000	1119	14.0	1.40	surface
KYHA0367	549198	8485599	1109	12.0	1.70	surface
KYHA0368	549999	8485598	1103	10.0	0.80	surface
KYHA0369	550803	8485600	1084	5.0	0.70	surface
KYHA0370	544400	8479600	1145	15.0	0.10	surface
KYHA0371	544400	8480000	1145	15.0	0.50	surface
KYHA0372	544800	8480000	1139	6.0	0.10	surface
KYHA0373	544801	8480402	1138	11.0	0.40	surface
KYHA0374	544799	8480800	1138	8.0	0.60	surface
KYHA0375	544400	8480401	1145	11.0	0.50	surface
KYHA0376	544400	8480800	1145	15.0	0.10	surface
KYHA0377	544801	8479602	1141	8.0	0.40	surface
KYHA0378	544806	8479194	1143	7.0	0.10	surface
KYHA0379	545200	8482800	1131	13.0	0.10	surface
KYHA0380	544800	8482400	1134	14.0	1.10	surface
KYHA0381	545200	8482400	1128	11.0	0.40	surface
KYHA0382	544399	8482000	1136	9.0	0.10	surface
KYHA0383	544799	8482000	1126	11.0	0.90	surface
KYHA0384	544400	8481600	1138	11.0	0.10	surface
KYHA0385	544400	8481200	1142	15.0	0.60	surface
KYHA0386	544803	8481200	1137	11.0	0.80	surface
KYHA0387	544800	8481600	1132	9.0	0.20	surface

Hole ID	Easting	Northing	RL	Interval Thickness	TGC%	From (m) Downhole
KYHA0388	540402	8478002	1084	6.0	0.90	surface
KYHA0389	542432	8478816	1107	3.0	0.20	surface
KYHA0390	542400	8478400	1107	7.0	0.40	surface
KYHA0391	542800	8478000	1115	8.0	0.80	surface
KYHA0392	542001	8478000	1097	3.0	0.10	surface
KYHA0393	540404	8477601	1083	5.0	0.10	surface
KYHA0394	542400	8477600	1101	6.0	0.80	surface
KYHA0395	542000	8477600	1093	5.0	0.10	surface
KYHA0396	543600	8478000	1131	11.0	1.60	surface
KYHA0397	544400	8478000	1128	7.0	0.20	surface
KYHA0398	544799	8478402	1141	12.0	1.90	surface
KYHA0399	542400	8477201	1099	2.0	0.10	surface
KYHA0400	542000	8476800	1099	13.0	1.50	surface
KYHA0401	541600	8476801	1087	9.0	0.10	surface
KYHA0402	541199	8476799	1082	7.0	1.50	surface
KYHA0403	541999	8477201	1093	2.0	0.10	surface
KYHA0404	542795	8477200	1101	7.0	1.20	surface
KYHA0405	543600	8477600	1117	6.0	1.10	surface
KYHA0406	540415	8476800	1078	7.0	0.10	surface
KYHA0407	540398	8476401	1089	6.0	0.10	surface
KYHA0408	540797	8476401	1084	8.0	0.80	surface
KYHA0409	544000	8477599	1118	6.0	0.60	surface
KYHA0410	544400	8477600	1129	8.0	0.40	surface
KYHA0411	544000	8477200	1126	11.0	1.70	surface
KYHA0412	544800	8477600	1130	10.0	0.60	surface
KYHA0413	544800	8477200	1120	6.0	0.90	surface
KYHA0414	544400	8477200	1127	10.0	1.80	surface
KYHA0415	540800	8476003	1093	10.0	1.50	surface
KYHA0416	540800	8475600	1094	8.0	2.70	surface
KYHA0417	540400	8475600	1103	10.0	2.20	surface
KYHA0418	546000	8477200	1138	11.0	1.10	surface
KYHA0419	545600	8477200	1131	9.0	2.00	surface
KYHA0420	545200	8477200	1123	5.0	0.80	surface
KYHA0421	540399	8477199	1071	5.0	0.20	surface
KYHA0422	539997	8475598	1105	10.0	0.10	surface
KYHA0423	541198	8475600	1088	9.0	1.50	surface
KYHA0424	541174	8476006	1079	8.0	1.00	surface
KYHA0425	543600	8477200	1119	5.0	0.50	surface
KYHA0426	542800	8476802	1112	12.0	1.00	surface
KYHA0427	544400	8476800	1121	10.0	0.80	surface
KYHA0428	543600	8476800	1122	12.0	0.20	surface
KYHA0429	540874	8476817	1073	4.0	1.40	surface
KYHA0430	543200	8476400	1116	8.0	0.60	surface
KYHA0431	542800	8476402	1110	12.0	0.40	surface
KYHA0432	542400	8476400	1105	9.0	0.40	surface
KYHA0433	543201	8476001	1110	10.0	0.50	surface

Hole ID	Easting	Northing	RL	Interval Thickness	TGC%	From (m) Downhole
KYHA0434	542800	8476000	1100	10.0	0.50	surface
KYHA0435	542396	8475598	1084	3.0	0.10	surface
KYHA0436	541998	8475601	1089	4.0	0.20	surface
KYHA0437	541598	8475601	1088	6.0	0.60	surface
KYHA0438	542800	8475600	1089	4.0	0.50	surface
KYHA0439	542400	8475994	1093	11.0	2.50	surface
KYHA0440	541990	8475984	1086	9.0	1.80	surface
KYHA0441	541600	8476000	1083	10.0	2.00	surface
KYHA0442	542000	8476401	1099	12.0	2.70	surface
KYHA0443	541600	8476400	1092	12.0	0.50	surface
KYHA0444	541201	8476402	1075	7.0	0.30	surface
KYHA0445	543200	8475600	1093	6.0	1.50	surface
KYHA0446	542848	8475200	1084	5.0	1.40	surface
KYHA0447	543200	8475200	1096	8.0	0.30	surface
KYHA0448	543600	8475600	1101	7.0	1.60	surface
KYHA0449	545600	8476400	1129	8.0	1.20	surface
KYHA0450	545200	8476400	1125	5.0	0.20	surface
KYHA0451	544800	8476400	1115	3.0	0.10	surface
KYHA0452	545600	8476800	1124	8.0	1.60	surface
KYHA0453	545205	8476800	1118	3.0	0.20	surface
KYHA0454	544800	8476800	1112	4.0	0.60	surface
KYHA0455	544400	8476403	1108	4.0	1.00	surface
KYHA0456	544000	8476400	1112	4.0	0.50	surface
KYHA0457	543599	8475999	1101	7.0	1.20	surface
KYHA0458	544400	8483602	1128	15.0	1.40	surface
KYHA0459	544798	8483602	1132	14.0	1.00	surface
KYHA0460	544399	8484000	1128	13.0	0.60	surface
KYHA0461	546399	8477600	1147	12.0	0.30	surface
KYHA0462	546398	8477247	1145	10.0	0.20	surface
KYHA0463	546404	8478005	1149	12.0	0.80	surface
KYHA0464	546800	8477998	1153	6.0	0.10	surface
KYHA0465	547200	8477999	1147	3.0	0.10	surface
KYHA0466	540399	8474003	1123	11.0	0.10	surface
KYHA0467	539592	8475207	1105	3.0	0.20	surface
KYHA0468	540000	8475200	1109	13.0	1.60	surface
KYHA0469	540000	8474800	1115	13.0	0.80	surface
KYHA0470	539999	8474400	1122	8.0	2.90	surface
KYHA0471	540000	8474000	1127	13.0	2.20	surface
KYHA0472	540801	8475202	1100	8.0	0.40	surface
KYHA0473	541600	8475200	1098	13.0	0.20	surface
KYHA0475	543991	8483600	1120	10.0	0.20	surface
KYHA0476	545199	8483601	1132	10.0	0.20	surface
KYHA0477	545601	8483601	1128	11.0	0.50	surface
KYHA0478	545198	8483998	1130	12.0	2.90	surface
KYHA0479	545200	8483200	1131	5.0	0.10	surface
KYHA0480	539999	8473601	1127	13.0	0.60	surface

Hole ID	Easting	Northing	RL	Interval Thickness	TGC%	From (m) Downhole
KYHA0481	539602	8473203	1128	8.0	1.80	surface
KYHA0482	539595	8473983	1123	13.0	0.50	surface
KYHA0483	539199	8474000	1116	3.0	0.10	surface
KYHA0484	536400	8476400	1095	12.0	0.20	surface
KYHA0485	536797	8476401	1098	13.0	1.90	surface
KYHA0486	537199	8476401	1098	10.0	1.10	surface
KYHA0487	536799	8476000	1100	11.0	0.70	surface
KYHA0488	542396	8474000	1103	8.0	0.50	surface
KYHA0489	541999	8474801	1106	6.0	0.70	surface
KYHA0490	542400	8474400	1101	7.0	0.60	surface
KYHA0491	541999	8475199	1100	10.0	0.30	surface
KYHA0492	542401	8475199	1098	9.0	0.20	surface
KYHA0493	542001	8474007	1113	9.0	1.10	surface
KYHA0494	542800	8474402	1092	7.0	0.90	surface
KYHA0495	542399	8474801	1101	12.0	0.50	surface
KYHA0496	542397	8473616	1102	10.0	2.40	surface
KYHA0497	541999	8473200	1115	11.0	2.40	surface
KYHA0498	535599	8475204	1110	4.0	0.30	surface
KYHA0499	534799	8475204	1090	8.0	0.70	surface
KYHA0500	536380	8475208	1099	4.0	0.80	surface
KYHA0501	537200	8475200	1104	8.0	1.70	surface
KYHA0502	545200	8484400	1125	12.0	0.80	surface
KYHA0503	545600	8484400	1121	10.0	0.50	surface
KYHA0504	545600	8485600	1117	12.0	0.50	surface
KYHA0505	540000	8472801	1135	13.0	0.70	surface
KYHA0506	540000	8472400	1142	9.0	1.40	surface
KYHA0507	540000	8472000	1145	10.0	0.50	surface
KYHA0508	539595	8472402	1152	11.0	2.60	surface
KYHA0509	539202	8473600	1118	11.0	1.40	surface
KYHA0510	539201	8472801	1131	6.0	1.20	surface
KYHA0511	539201	8472402	1142	10.0	0.50	surface
KYHA0512	539201	8472001	1144	8.0	0.40	surface
KYHA0513	537996	8472803	1111	8.0	0.20	surface
KYHA0514	540400	8472000	1137	5.0	0.60	surface
KYHA0515	537201	8472797	1118	11.0	1.70	surface
KYHA0516	538800	8471200	1130	6.0	5.10	surface
KYHA0517	539600	8471201	1143	8.0	1.50	surface
KYHA0518	540400	8471200	1139	4.0	0.10	surface
KYHA0519	539601	8470403	1133	6.0	0.20	surface
KYHA0520	538798	8469600	1134	10.0	0.40	surface
KYHA0521	538004	8471200	1124	5.0	1.10	surface
KYHA0522	537263	8471202	1113	1.0	0.10	surface
KYHA0523	538799	8470399	1122	6.0	0.70	surface
KYHA0524	538000	8470421	1110	4.0	0.20	surface
KYHA0525	546000	8476800	1130	3.0	0.10	surface
KYHA0526	545600	8484800	1113	2.0	0.20	surface



Hole ID	Easting	Northing	RL	Interval Thickness	TGC%	From (m) Downhole
KYHA0527	537200	8472000	1119	10.0	0.20	surface
KYHA0528	548800	8485600	1110	11.0	1.50	surface
KYHA0529	548001	8485600	1103	12.0	1.20	surface
KYHA0530	548802	8486400	1095	12.0	0.40	surface
KYHA0531	549599	8486401	1089	7.0	2.40	surface
KYHA0532	548798	8484801	1118	12.0	0.30	surface
KYHA0533	548001	8484805	1109	3.0	0.10	surface
KYHA0534	547191	8485588	1098	5.0	0.70	surface
KYHA0535	547200	8484800	1102	10.0	1.00	surface
KYHA0536	547200	8484000	1104	9.0	1.20	surface

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APPENDIX 4: 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 467 hand auger holes were re-sampled at the Kasiya Rutile Deposit to obtain samples for quantitative determination of total graphitic carbon (TGC).</p> <p>HA samples are composited based on regolith boundaries and chemistry generated by hand-held XRF, generally at 3, 4 or 5m intervals.</p> <p>A total of 148 core holes for 1,486m were drilled at the Kasiya Rutile Deposit to obtain samples for quantitative determination of recoverable rutile and TGC.</p> <p>Core (PT) samples are composited on regular 2m intervals.</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>Logged mineralogy percentages, lithology information and TiO<sub>2</sub>% obtained from handheld XRF are used to determine compositing intervals for HA samples. Care is taken to ensure that only samples with similar geological characteristics are composited together</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 and push-tube drilling and found them to be fit for purpose.</p> <p>Two similar designs of hand auger drilling equipment are employed. 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> <p>Core-drilling is undertaken using a drop hammer Dando Terrier MK1 and a drop hammer DL650. The drilling generated 1-metre runs of 83mm PQ core in the first 2m and then transitioned to 72mm core for the remainder of the hole. Core drilling is oriented vertically by spirit level.</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. The configuration of drilling and nature of materials encountered results in negligible sample loss or contamination.</p> <p>Hand-auger drilling is ceased when recoveries become poor once the water table has been reached. Water table and recovery information is included in lithological logs.</p> <p>Core drilling samples are actively assessed by the driller and geologist onsite for recoveries and contamination.</p>
	<i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i>	<p>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.</p> <p>For push-tube drilling, core is extruded into core trays; slough is actively removed by the driller at the drilling rig and core recovery and quality is recorded by the geologist.</p>

Criteria	JORC Code explanation	Commentary
	<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.  No bias related to preferential loss or gain of different materials is observed.
<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>	Geologically, data is collected in detail, sufficient to aid in Mineral Resource estimation.  All individual 1-metre auger and 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.  All individual 1-metre core intervals are geologically logged, recording relevant data to a set template using company codes.  Half core remains in the trays and is securely stored in the company warehouse.
	<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.  The core is photographed dry, after logging and sampling is completed.
	<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>	Due to the soft nature of the material, core samples are carefully cut in half by hand tools. The half core is then halved again by hand to create quarter core for sampling.
	<i>If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.</i>	Samples from the 467 auger holes and 148 core holes drilled are composited. Each 1m sample is sun dried and homogenised. Sub-samples are carefully riffle split to ensure sample representivity. ~1.5kg composite samples are processed.  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 and graphite mineralisation mineralisation and is consistent with industry standard practice.
	<i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i>	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.  Field duplicate, laboratory replicate and standard sample geostatistical analysis is employed to manage sample precision and analysis accuracy.
	<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.
	<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>

Criteria	JORC Code explanation	Commentary
		<p><b>Graphite</b> Each entire sample was pulverised to 85% -75µm. Approximately 100g pulp is collected for analysis at Intertek-Genalysis Perth via method C72/CSA.</p> <p>A sample of 0.2g is removed from the 100-gram pulp, first digested in HCl to remove carbon attributed to carbonate, and is then heated to 450°C to remove any organic carbon. An Eltra CS-2000 induction furnace infra-red CS analyser is then used to determine the remaining carbon which is reported as Total Graphitic Carbon (TGC) as a percentage.</p>
	<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 XRF 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>	<p>Sovereign uses internal and externally sourced wet screening reference material inserted into samples batches at a rate of 1 in 20. The externally sourced, certified standard reference material is provided by Placer Consulting.</p> <p>An external laboratory raw sample check duplicate is sent to laboratories in Perth, Australia as an external check of the full workflow. These duplicates are produced at a rate of 1 in 20.</p> <p>Accuracy monitoring is achieved through submission of certified reference materials (CRM's).</p> <p>ALS and Intertek both use internal CRMs and duplicates on XRF analyses.</p> <p>Sovereign also inserts CRMs into the sample batches at a rate of 1 in 20.</p> <p>The TiO<sub>2</sub> CRMs used by Sovereign are supplied by African Mineral Standards (AMIS), South Africa. AMIS0602 is used containing TiO<sub>2</sub> XRF 90.62%.</p> <p>The graphitic carbon CRMs used by Sovereign were commissioned and produced by the company utilising material and are DWHG1, MPHLG1 and TCMG1.</p> <p>Acceptable levels of accuracy and precision have been established.</p>
<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>	<p>Twin drilling is completed routinely with hand-auger v hand-auger, hand-auger v core drilling and core drilling v core drilling at a frequency of 1 in 20.</p> <p>Acceptable levels of precision and accuracy are displayed in the geostatistical analysis of twin drilling data.</p>
	<i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i>	<p>All data are collected initially on paper logging sheets and codified to the Company's templates. This data is hand entered to spreadsheets and validated by Company geologists. This data is then imported into Datashed 5 and validated automatically and manually.</p> <p>A transition to electronic field and laboratory data capture is in planning.</p>
	<i>Discuss any adjustment to assay data.</i>	<p>Assay data adjustments are made to convert laboratory collected weights to assay field percentages and to account for moisture.</p> <p>QEMSCAN of the NM fraction shows dominantly clean and liberated rutile grains and confirms rutile is the only titanium species in the NM fraction.</p> <p>Recovered rutile is therefore defined and reported here as: TiO<sub>2</sub> recovered in the +45 to -600um range to the NM concentrate fraction as a % of the total primary, dry, raw sample mass divided by 95% (to represent an approximation of final product specifications). i.e recoverable rutile within the whole sample.</p>
<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>	<p>A Trimble R2 Differential GPS is used to pick up the collars. Daily capture at a registered reference marker ensures equipment remains in calibration.</p> <p>No downhole surveying of hand-auger holes or core drilling 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.</p>
	<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 methods.
<b>Data spacing &amp; distribution</b>	<i>Data spacing for reporting of Exploration Results.</i>	The push-tube core drill holes are spaced on a 400m x 400m infill dice pattern. It is deemed that this hole spacing should adequately infill the inferred rutile mineralisation style in the area.

Criteria	JORC Code explanation	Commentary
	<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>	The drill spacing and distribution is considered to be sufficient to establish a degree of geological and grade continuity appropriate for current future Mineral Resource estimations.
	<i>Whether sample compositing has been applied.</i>	Individual 1-metre auger and core intervals have been composited over a determined interval of interest for the 467 auger holes and 148 core 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>	Sample orientation is vertical and approximately perpendicular to the orientation of the mineralisation, which results in true thickness estimates, limited by the sampling interval as applied. Drilling and sampling are carried out on a regular square grid. There is no apparent bias arising from the orientation of the drill holes with respect to the orientation of the deposit.
	<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>	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 Australia. Samples are again securely stored once they arrive and are processed at Australian laboratories. A reputable domestic courier company manages the movement of samples within Perth, Australia.</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>	<p>Placer Consulting has advised on all stages of data collection, sample processing, QA protocol and mineral resource estimation. Methods employed are considered industry best-practice.</p> <p>Sovereign Metals Exploration Manager and CP for exploration results Samuel Moyle has been onsite in Malawi numerous times since the discovery of the Kasiya Deposit.</p>

**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) under the Mines and Minerals Act 2019, held in the Company's wholly-owned, Malawi-registered subsidiary, Sovereign Services Limited: EL0372, EL0413, EL0492, EL0528, EL0545, EL0561, EL0582.</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 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</p>

		<p>("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>	<p>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</p>	<p>All collar and composite data are provided in the body and appendices of this report. All holes were drilled vertically.</p> <p>Intercept tables are included in the body of this announcement.</p>
	<p>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</p>	<p>No information has been excluded.</p>
<b>Data aggregation methods</b>	<p>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.</p>	<p>All results reported are of a length-weighted average of in-situ grades. The results reported in the body of this report are on a nominal lower cut-off of 0.5% Rutile.</p>
	<p>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.</p>	<p>No data aggregation was required.</p>
	<p>The assumptions used for any reporting of metal equivalent values should be clearly stated.</p>	<p>No metal equivalent values are used in this report.</p>
<b>Relationship between mineralisation widths &amp; intercept lengths</b>	<p>These relationships are particularly important in the reporting of Exploration Results.</p>	<p>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°.</p>
	<p>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</p>	<p>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.</p>
	<p>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').</p>	<p>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.</p>
<b>Diagrams</b>	<p>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.</p>	<p>Refer to figures in this report and in previous releases. These are accessible on the Company's webpage.</p>
<b>Balanced reporting</b>	<p>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.</p>	<p>All results are included in this report and in previous releases. These are accessible on the Company's webpage.</p>
<b>Other substantive exploration data</b>	<p>Other exploration data, if meaningful and material, should be reported including (but not limited to: geological observations; geophysical survey results; geochemical</p>	<p>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</p>

	<i>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>	continues to examine 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 2021 drilling sample 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.

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