

ASX ANNOUNCEMENT

3 April 2023

EXCELLENT METALLURGICAL TESTWORK RESULTS WILL SIGNIFICANTLY IMPROVE PEA OUTCOMES

Key Highlights

- MRG is progressing well with programs to significantly improve the NPV that will be generated from an updated Preliminary Economic Assessment (PEA).
- The Company has completed highly successful metallurgical testwork on non-magnetic concentrate that had been assigned a low value in the existing PEA.
- These metallurgy results are expected to significantly and positively impact the economic model to be associated with an updated PEA.
- TZMI calculated value for combined Zircon and Rutile non-magnetic products are now more than USD\$900 per ton, up from approximately USD\$350 per ton used in the PEA, with additional work to be done, including on the Monazite in the magnetic rejects, to determine value.
- Further metallurgy results are expected shortly from sighter testwork at newly discovered Azaria and Malambane deposits, where substantially higher VHM mineralogy has been discovered and is being progressed in anticipation of providing further upside into an updated PEA.

Technical Highlights:

- Using single stage RER magnetic separation, excellent results were returned on the non-magnetic fraction, including:
 - The RER processing reduced the mass of the non-magnetic fraction by 39.8% of the mass, in the process 97.5% of the Fe_2O_3 , 95.1% of the CeO_2 and 75.6% of the Al_2O_3 were removed to the magnetic stream with a loss of only 4% of the ZrO_2 .
 - Greater than 90% of the Monazite reported to the magnetic rejects, reducing the U and Th from 5,293ppm to 1,212ppm in the post RER concentrate.
 - The non-magnetic stream had a $\text{ZrO}_2+\text{HfO}_2$ grade of 47.87% equating to an approximate Zircon content of 72.5%, up from 45.5% Zircon in the pre-RER processing non-magnetic concentrate.
 - There was a recovery of 60.3% of the TiO_2 to the non-magnetic stream. The ratio of TiO_2 to Fe_2O_3 in the non-magnetic stream indicates that this is associated with high TiO_2 and low Fe_2O_3 mineral, rutile and HiTi/leucoxene. The TiO_2 reporting to the magnetic fraction is likely secondary type ilmenite.

- The grades and distributions of the Cr_2O_3 are notable with 98.3% of the Cr_2O_3 reporting to the magnetics at a grade of 4.05%.
- Post RER separation, the non-magnetic stream was further processed to isolate potential zircon and rutile products by primary stage of electrostatic separation to separate the TiO_2 -bearing minerals from the zircon. The two streams were then processed through stages of gravity, electrostatic and magnetic separation. Results from this processing indicates excellent Zircon and Rutile products:
 - The processing recovered a high-grade zircon product with a $\text{ZrO}_2+\text{HfO}_2$ grade of 66.2%. The grades of TiO_2 and Fe_2O_3 in this were less than 0.1% and the grade of Al_2O_3 was 0.12%. The combined grade of U and Th was 398ppm.
 - The processing recovered a high-grade rutile product with a TiO_2 grade of 95.5% and Fe_2O_3 grade of 0.49%. The product had a SiO_2 grade of 1.26% and a ZrO_2 grade of 0.5%. Other contaminants were V_2O_5 at 0.39% and Cr_2O_3 at 0.23%. The combined grade of U and Th was 60ppm.
 - Importantly, this non-optimised process testing clearly shows optimised processing will reduce the aluminosilicates in the Zircon product grade streams and the SiO_2 , Al_2O_3 and ZrO_2 in the rutile product grade streams.

MRG Metals Limited (“MRG” or “the Company”) (ASX Code: MRQ) is pleased to announce excellent sighter metallurgical test results from AML Laboratories on the non-magnetic fraction generated during bulk sample metallurgical testwork carried out by IHC Mining for the Scoping Study and PEA (refer ASX Announcements 31 August 2022 and 2 November 2022).

Previous Scoping and PEA testwork conducted at IHC Mining on a bulk sample generated from the Koko Massava deposit produced a non-magnetic concentrate as a potential product stream. The valuable mineral in the concentrate was predominantly zircon, with rutile as a secondary product. The concentrate was degraded by high grades of U and Th associated with monazite and with aluminosilicates.

The objective of the sighter testwork was to investigate potential product grades in the concentrate and to identify potential issues that would impact the grade and recoveries of those products. The sample used for the sighter testwork (**Figure 1**) was a composite of processing streams reconstituted to a non-magnetic concentrate by IHC Mining (**Table 1**).

MRG contracted Allied Mineral Laboratories Pty Ltd (AML) in Western Australia to conduct additional sighter metallurgical testwork on the non-magnetic fraction generated in the PEA metallurgical study to:

- Increase the concentration of Rutile and Zircon in the non-magnetic fraction by removing key contaminants, Fe_2O_3 and Al_2O_3 ;

- Reduce the amount of Monazite, and hence the U and Th in the non-magnetic fraction; and
- To study the post processing Zircon product quality.

The sighter metallurgical testing involved single stage RER magnetic separation on the non-magnetic concentrate, followed by primary stage of electrostatic separation on the nonmag stream to further isolate potential zircon and rutile products by to separate the TiO₂ bearing minerals from the zircon. The two streams were then processed through stages of gravity, electrostatic and magnetic separation to isolate potential zircon and rutile products.

The RER magnetic separation work resulted in upgrading the nonmag by a significant reduction in mass of the nonmag concentrate by removing deleterious minerals such as aluminosilicates and Monazite, as well as significant reductions in Fe₂O₃ and Cr₂O₃. The electrostatic separation, followed by gravity, electrostatic and magnetic separation, resulted in a number of near Zircon and Rutile product streams. Further optimised testing will result in upgrading the Zircon and Rutile streams further. Testwork on optimising a Monazite product from the reject magnetic stream needs to still take place.

TZMI estimated the unit prices of ZrO₂ and TiO₂ at US\$15.95 per % and US\$8.12 per % respectively, multiply the values against the ZrO₂ (47.9%) and TiO₂ (15.4%) content of the non-magnetic concentrate, to a total value of more than USD1,000 per ton.

MRG Metals Chairman, Mr Andrew Van Der Zwan said: *“The Metallurgy test work completed as part of last year’s scoping study was a necessary early stage determination of the Corridor sands productivity. Our focus at the time was to refine the Magnetic concentration and separation process to deliver the best Ilmenite product possible. While we are confident that further refinement of the Magnetic process will deliver a desired Ilmenite product with greater than 50% TiO₂, we have now put further emphasis on the Non-Magnetic concentrate as the 20 MT/annum throughput designed in the scoping study produced almost 50KT/Year of low grade Non-magnetic concentrate. Due to timing we had to recognise this product in the Scoping study with a low valuation of product value, circa USD\$350/Tonne. Hence our work now with TZMI to move this product up the value curve. We are now confident that we will be able to deliver significant product enhancement such that the final Non-Magnetic product at above USD\$900/T, with only minor changes to the Non Mag process flow. Add to this product enhancement the fact that our recent discoveries at Azaria and Malambane promise to deliver twice the Zircon and Rutile content per % of HMS, we see considerable uplift in both quantity and value of Non-magnetic concentrate in the next stages of project evaluation.”*

Summary of testwork and results

The following comments are made based on the results of the initial sighter testwork on the non-magnetic concentrate:

- The grade of the reconstituted non-magnetic sample closely matched the results from IHC Mining for the same sample (**Table 1**). The exception to this is the CaO grade of 0.59% measured by AML compared to the 0.05% in the Reported (IHC) assay. While this may warrant further investigation, the distribution of CaO in the primary separation stage was 85% reporting to mag rejects, therefore did not adversely affect the grades of products in the context of this sighter.
- The non-magnetic concentrate had a $\text{ZrO}_2 + \text{HfO}_2$ grade of 30%, equating to an approximate zircon content of 45.5%. The grade of TiO_2 in the sample was 16.7% and the grade of Fe_2O_3 was 14.1% (**Refer ASX Announcement 31 August 2022**).
- The principle contaminant minerals in the concentrate were aluminosilicates, both para-magnetic and non-magnetic with the associated oxides Al_2O_3 , SiO_2 and Fe_2O_3 . Additionally, the sample had a high grade of monazite, associated with the oxides CeO_2 , P_2O_5 and Th. A calculation of the monazite content based on an approximate CeO_2 content of 26% in monazite was 7.1%. The combined grades of U and Th in the was 5,293 ppm.
- The primary process tested in the sighter metallurgical testwork was a single stage of magnetic separation using an RER magnetic separator (**Figure 1**). The process sought to reduce the grades of U and Th through the rejection of monazite to a magnetic reject. Additionally, this process would reduce the mass and increase the grades of zircon in rutile in the concentrate through the rejection of para-magnetic gangue mineral.

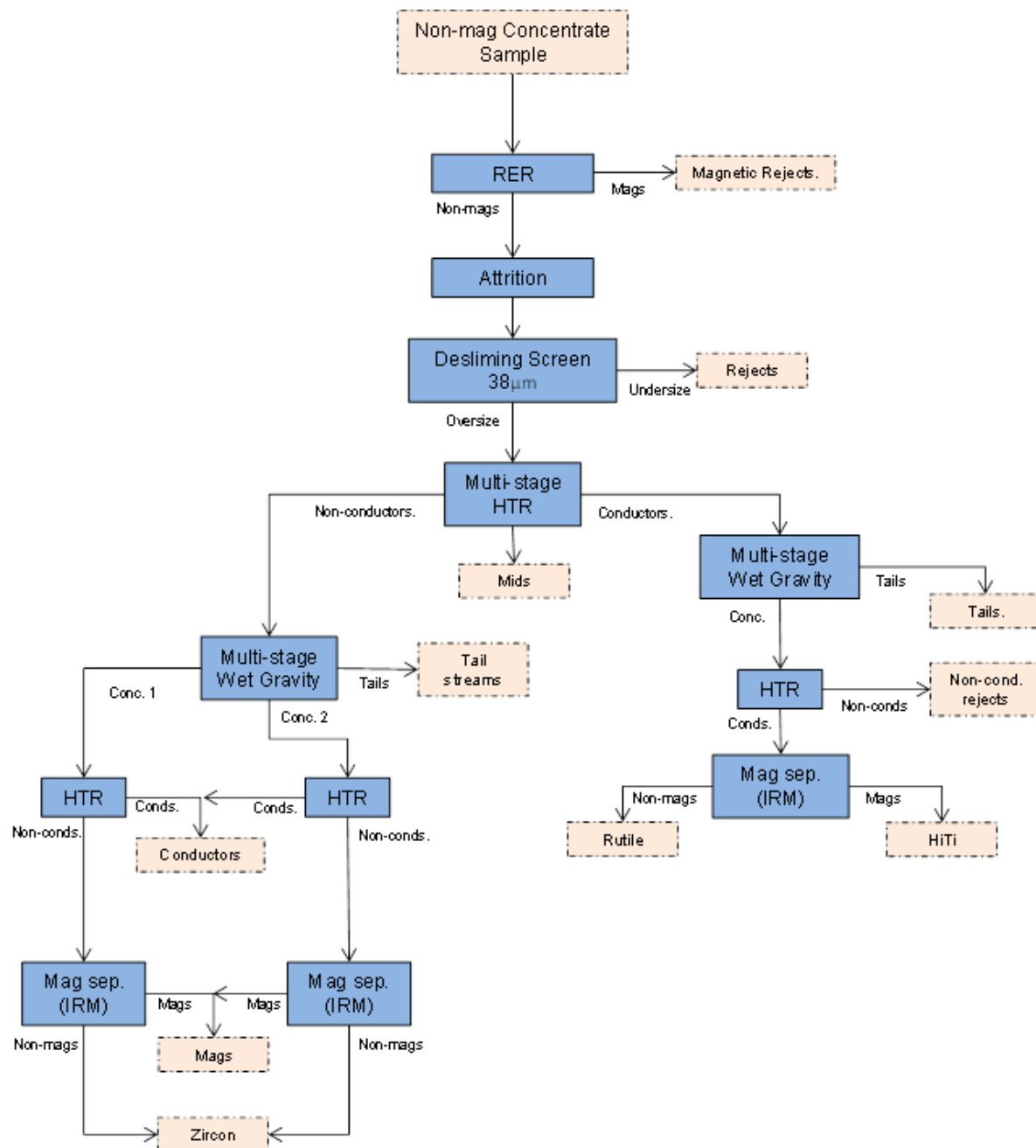


Figure 1: Met testwork flowsheet

- The processing rejected 39.8% of the mass, 97.5% of the Fe_2O_3 , 95.1% of the CeO_2 and 75.6% of the Al_2O_3 to the magnetic stream with a loss of 4% of the ZrO_2 (**Table 2**). The non-magnetic stream had a $\text{ZrO}_2+\text{HfO}_2$ grade of 47.87% equating to an approximate zircon content of 72.5%.
- There was a recovery of 60.3% of the TiO_2 to the non-magnetic stream (**Table 2**). The ratio of TiO_2 to Fe_2O_3 in the non-magnetic stream indicates that this is associated with high TiO_2 and

low Fe_2O_3 mineral, rutile and HiTi/leucoxene. The TiO_2 reporting to the magnetic fraction is likely secondary type ilmenite although this could be further investigated in future testwork. The grades and distributions of the Cr_2O_3 are notable in regard to this with 98.3% of the Cr_2O_3 reporting to the magnetics at a grade of 4.05% (**Table 2**).

- The distributions of CeO_2 and P_2O_5 indicate that greater than 90% of the monazite has reported to the magnetic rejects (**Table 2**). The combined grades of U and Th in the non-magnetic concentrate are reduced from 5,293ppm in the pre-RER concentrate to 1,212ppm in the post RER concentrate (**Figure 2**). While this grade exceeds a typical target for shipping the results do indicate the potential to greatly reduce the U and Th through a stage of magnetic separation.
- Further sighter tests were conducted on a sub-split of the RER non-magnetic concentrate using an IRM (**Figure 1**). The results of these tests indicate that magnetic separation can be used to reduce the grades of U and Th in the non-magnetic concentrate with the additional benefit of increasing the grade of zircon (**Figure 3 and 4**). However, the recovery of zircon is likely to be impacted as lower grades are targeted.
- Post RER separation, the non-magnetic stream was processed to isolate potential zircon and rutile products (**Figure 1**). The processing involved a primary stage of electrostatic separation to separate the TiO_2 bearing minerals from the zircon. The two streams were then processed through stages of gravity, electrostatic and magnetic separation.
- The processing recovered a high-grade zircon product with a $\text{ZrO}_2+\text{HfO}_2$ grade of 66.2% (**Table 3**). The grades of TiO_2 and Fe_2O_3 in this were less than 0.1% and the grade of Al_2O_3 was 0.12%. The combined grade of U and Th was 398ppm (**Table 3**).
- A number of near zircon product grade streams were generated in the processing (**Table 4**). These were degraded by varying grades of TiO_2 , Fe_2O_3 , Al_2O_3 and U and Th. This initial processing indicates that aluminosilicates, notably kyanite, are likely to have the greatest impact on zircon recovery. The un-optimised wet gravity processing conducted in this initial sighter does however indicate that much of the Al_2O_3 should be rejectable through an optimised processing.
- The impact of monazite on the zircon product grade and recovery will likely be reduced with an optimised rejection of this mineral in the primary magnetic separation of the non-magnetic concentrate. It is not possible to comment on the potential to reduce the TiO_2 and Fe_2O_3 grades in the near zircon product grade streams in this stage of testwork, however it is notable that the final zircon stream recovered had grades of less than 0.1% without the inclusion of acid leaching.
- The processing recovered a high-grade rutile product with a TiO_2 grade of 95.5% and Fe_2O_3 grade of 0.49% (**Table 5**). The product had a SiO_2 grade of 1.26% and a ZrO_2 grade of 0.5%. Other contaminants were V_2O_5 at 0.39% and Cr_2O_3 at 0.23%. The combined grade of U and Th was 60ppm (**Figure 3**).
- A number of near rutile product grade streams were generated in the processing (**Table 6**). These were degraded by varying grades of SiO_2 , Al_2O_3 and ZrO_2 associated with misreporting

non-conductors from the primary electrostatic separation. It is likely that an optimised separation in this stage of separation will reduce the impact of these non-conductors on the grade and recoveries of rutile.

Table 1: Sighter test head grade

<i>Oxide</i>		<i>Reported (IHC)</i>	<i>Received</i>
Grades			
TiO ₂	%	16.7	15.35
Fe ₂ O ₃	%	14.3	14.1
Al ₂ O ₃	%	5.98	6.21
SiO ₂	%	23.5	23.2
Cr ₂ O ₃	%	1.42	1.64
ZrO ₂ +HfO ₂	%	29.5	30.0
CaO	%	0.05	0.59
MgO	%	0.47	0.53
MnO	%	0.25	0.27
CeO ₂	%	1.65	1.85
Th XRF	ppm	4634	4840
U XRF	ppm	464	453
K ₂ O	%	0.06	0.06
Nb ₂ O ₅	%	0.09	0.08
P ₂ O ₅	%	1.79	1.99
SO ₃	%	0.51	0.05
V ₂ O ₅	%	0.11	0.09
LOI @1000°C	%	N/R	0.47

Table 2: RER separation results

Stream	Mass (%)	TiO ₂ (%)		Fe ₂ O ₃ (%)		ZrO ₂ +HfO ₂ (%)		Al ₂ O ₃ (%)		SiO ₂ (%)	
		Grade	Distr.	Grade	Distr.	Grade	Distr.	Grade	Distr.	Grade	Distr.
Mag	39.8	15.30	39.7	34.50	97.5	3.03	4.0	11.8	75.6	11.4	19.5
Non-mag	60.2	15.35	60.3	0.58	2.5	47.87	96.0	2.52	24.4	31.1	80.5
Calc. Total	100.0	15.33	100.0	14.07	100.0	30.04	100.0	6.21	100.0	23.2	100.0

CeO ₂ (%)		P ₂ O ₅ (%)		Th (ppm)		U (ppm)		Cr ₂ O ₃ (%)	
Grade	Distr.	Grade	Distr.	Grade	Distr.	Grade	Distr.	Grade	Distr.
4.42	95.1	4.63	92.5	11000	90.4	470	41.3	4.05	98.3
0.15	4.9	0.25	7.5	770	9.6	442	58.7	0.05	1.7
1.85	100.0	1.99	100.0	4839	100.0	453	100.0	1.64	100.0

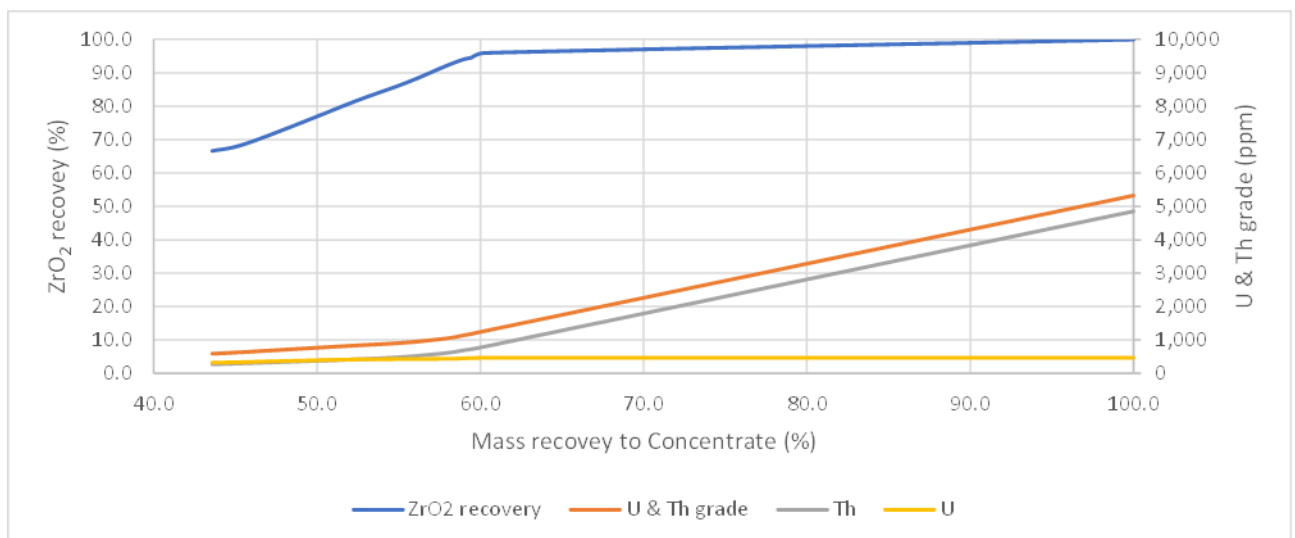


Figure 2: Magnetic separation of Concentrate: zircon recovery vs grades of U & Th

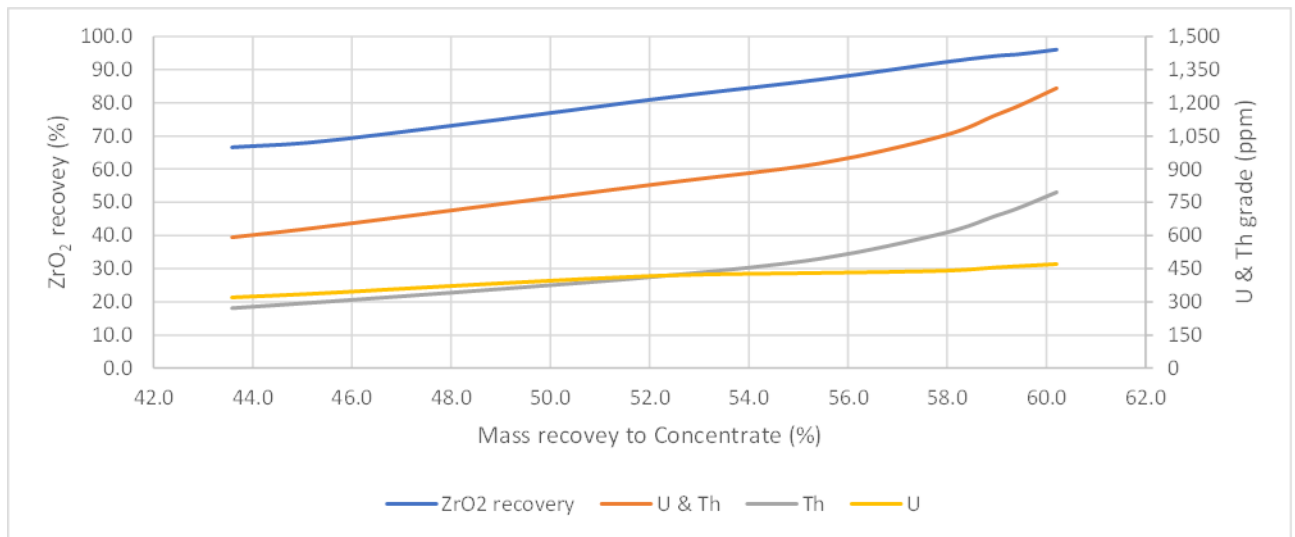


Figure 3: Post Primary RER magnetic separation of Concentrate: zircon recovery vs grades of U & Th

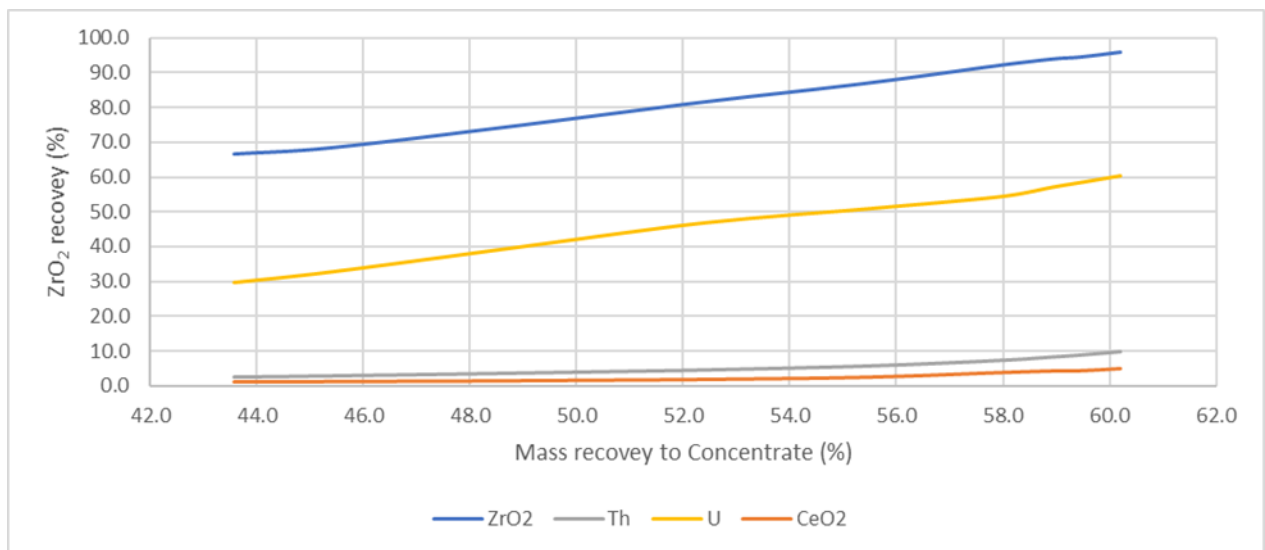


Figure 4: Post Primary RER magnetic separation of Concentrate: recovery ZrO₂, CeO₂, U & Th

Table 3: Initial sighter zircon processing; individual stream grades and recoveries

<i>Oxide</i>		<i>Zircon</i>	<i>Zircon Conductors</i>	<i>Zircon Gravity Tail 1</i>	<i>Zircon Mags</i>	<i>Zircon Gravity Tail 2</i>
Recoveries						
Mass	% N/M conc.	7.46	1.60	2.49	13.93	13.80
ZrO ₂ +HfO ₂	%	16.4	3.45	5.1	29.26	27.5
Grades						
TiO ₂	%	0.07	0.6	0.11	0.1	0.22
Fe ₂ O ₃	%	0.09	0.25	0.41	0.34	0.42
Al ₂ O ₃	%	0.12	0.21	0.42	1.41	2.69
SiO ₂	%	32.8	32.3	31.4	32.7	34.2
Cr ₂ O ₃	%	0.00	0.01	0.01	0.01	0.01
ZrO ₂ +HfO ₂	%	66.2	64.6	61.9	63.1	59.9
CaO	%	0.04	0.10	0.20	0.15	0.19
MgO	%	0.00	0.0	0.02	0.0	0.02
MnO	%	0.01	0.02	0.02	0.02	0.03
CeO ₂	%	0.02	0.2	1.01	0.1	0.12
Th XRF	ppm	152	893	3188	793	750
U XRF	ppm	246	373	657	527	580
K ₂ O	%	0.01	0.01	0.02	0.02	0.03
Nb ₂ O ₅	%	0.00	0.01	0.01	0.01	<0.01
P ₂ O ₅	%	0.11	0.3	1.12	0.3	0.24
SO ₃	%	0.09	0.2	0.10	0.0	0.05
V ₂ O ₅	%	0.00	0.01	0.02	0.01	0.01
LOI @1000°C	%	0.30	0.45	0.81	0.62	0.76

Table 4: Initial sighter zircon processing streams; cumulative grades and recoveries

Oxide		Zircon	Zircon 2	Zircon 3	Zircon 4	Zircon 5
Recoveries						
Mass	% N/M conc.	7.46	9.06	11.55	25.48	39.29
ZrO ₂ +HfO ₂	%	16.4	19.89	25.0	54.27	81.8
Grades						
TiO ₂	%	0.07	0.2	0.15	0.1	0.17
Fe ₂ O ₃	%	0.09	0.12	0.18	0.27	0.32
Al ₂ O ₃	%	0.12	0.13	0.20	0.86	1.50
SiO ₂	%	33	33	32	33	33
Cr ₂ O ₃	%	<0.01	<0.01	<0.01	<0.01	0.01
ZrO ₂ +HfO ₂	%	66.2	65.9	65.0	63.9	62.5
CaO	%	0.04	0.05	0.08	0.12	0.14
MgO	%	<0.01	<0.01	0.01	0.01	0.01
MnO	%	0.01	0.01	0.01	0.02	0.02
CeO ₂	%	0.02	0.1	0.26	0.2	0.17
Th XRF	ppm	152	283	909	846	812
U XRF	ppm	246	268	352	448	494
K ₂ O	%	0.01	0.01	0.01	0.02	0.02
Nb ₂ O ₅	%	0.00	0.00	0.01	0.01	0.00
P ₂ O ₅	%	0.11	0.2	0.36	0.3	0.28
SO ₃	%	0.09	0.1	0.10	0.1	0.06
V ₂ O ₅	%	0.00	0.00	0.01	0.01	0.01
LOI @ 1000°C	%	0.30	0.32	0.43	0.53	0.61

Table 5: Initial sighter zircon processing streams; cumulative grades and recoveries

<i>Oxide</i>		<i>Rutile</i>	<i>Rutile para-mag</i>	<i>Rutile HTR Mid</i>	<i>Rutile IRM Mag</i>	<i>Rutile Non-cond.</i>	<i>Rutile Gravity Tail 2</i>	<i>Rutile Gravity Tail 1</i>
Recoveries								
Mass	% N/M conc.	1.01	0.72	0.33	0.09	2.51	1.93	5.18
TiO ₂ (total)	%	6.28	4.41	1.99	0.48	12.17	10.11	21.67
TiO ₂ (non-mag post RER)	%	10.4	7.32	3.3	0.80	20.2	16.76	35.9
Grades								
TiO ₂	%	95.50	93.4	92.50	80.6	74.40	80.2	64.10
Fe ₂ O ₃	%	0.49	1.11	0.94	10.70	0.90	1.34	1.75
Al ₂ O ₃	%	0.26	0.48	0.48	0.88	0.57	0.95	2.36
SiO ₂	%	1.3	1.9	2.6	2.8	8.2	7.8	14.2
Cr ₂ O ₃	%	0.23	0.23	0.25	0.58	0.19	0.20	0.17
ZrO ₂ +HfO ₂	%	0.46	0.47	1.77	1.04	12.56	7.19	14.42
CaO	%	0.02	0.03	0.03	0.08	0.10	0.08	0.14
MgO	%	<0.01	<0.01	<0.01	0.1	<0.01	0.0	0.03
MnO	%	0.01	0.02	0.02	0.20	0.02	0.03	0.04
CeO ₂	%	<0.01	0.01	<0.01	0.02	0.09	0.07	0.09
Th XRF	ppm	30	40	80	100	500	320	480
U XRF	ppm	30	40	60	40	260	180	330
K ₂ O	%	0.04	0.08	0.07	0.09	0.08	0.13	0.16
Nb ₂ O ₅	%	0.35	0.61	0.42	0.62	0.32	0.39	0.35
P ₂ O ₅	%	<0.01	0.01	0.02	0.04	0.12	0.09	0.13
SO ₃	%	<0.01	0.01	<0.01	0.06	0.03	0.02	0.05
V ₂ O ₅	%	0.39	0.30	0.32	0.22	0.26	0.22	0.16
LOI @1000°C	%	0.08	0.16	0.22	0.07	0.52	0.58	0.84

Table 6: Initial sighter rutile processing streams; cumulative grades and recoveries

Oxide		Rutile 1	Rutile 2	Rutile 3	Rutile 4	Rutile 5	Rutile 6	Rutile 7
Recoveries								
Mass	% N/M conc.	1.0	1.7	2.1	2.2	4.7	6.6	11.8
TiO ₂ (total)	%	6.3	10.7	12.7	13.2	25.3	35.4	57.1
TiO ₂ (non-mag post RER)	%	10.4	17.7	21.0	21.8	42.0	58.8	94.7
Grades								
TiO ₂	%	95.50	94.6	94.28	93.7	83.32	82.4	74.35
Fe ₂ O ₃	%	0.49	0.75	0.78	1.20	1.04	1.13	1.40
Al ₂ O ₃	%	0.26	0.35	0.37	0.39	0.49	0.62	1.39
SiO ₂	%	1.26	1.51	1.69	1.73	5.22	5.98	9.60
Cr ₂ O ₃	%	0.23	0.23	0.23	0.25	0.22	0.21	0.19
ZrO ₂ +HfO ₂	%	0.5	0.5	0.7	0.7	7.1	7.1	10.3
CaO	%	0.02	0.02	0.03	0.03	0.07	0.07	0.10
MgO	%	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02
MnO	%	0.01	0.01	0.01	0.02	0.02	0.02	0.03
CeO ₂	%	<0.01	<0.01	<0.01	<0.01	0.05	0.06	0.07
Th XRF	ppm	30	34	41	44	289	298	378
U XRF	ppm	30	34	38	38	158	164	237
K ₂ O	%	0.04	0.05	0.05	0.06	0.07	0.08	0.12
Nb ₂ O ₅	%	0.35	0.46	0.45	0.46	0.38	0.39	0.37
P ₂ O ₅	%	<0.01	0.0	0.01	0.01	0.07	0.07	0.10
SO ₃	%	<0.01	<0.01	<0.01	0.01	0.02	0.02	0.03
V ₂ O ₅	%	0.39	0.35	0.35	0.34	0.30	0.27	0.22
LOI @1000°C	%	0.08	0.11	0.13	0.13	0.34	0.41	0.60

Competent Persons' Statement

The information in this report, as it relates to Mozambique Exploration Results is based on information compiled and/or reviewed by Mr JN Badenhorst, who is a member of the South African Council for Natural Scientific Professions (SACNASP) and the Geological Society of South Africa (GSSA). Mr Badenhorst is a consultant of the Company and has sufficient experience which is relevant to the style of mineralisation and type of deposits under consideration and to the activity which has been 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 Badenhorst consents to the inclusion in this report of the matters based on the information in the form and context in which they appear.

This release is authorized by the Board of MRG Metals Ltd.



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Section 1 Sampling Techniques and Data

Criteria	Explanation	Comment
Sampling techniques	<p>Nature and quality of sampling (eg 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.</p> <p>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</p> <p>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 (eg '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</p>	<p>Aircore drilling at the Koko Massava deposit was used to obtain samples at 1.5 m intervals, a bulk sample of 6.5 ton was constituted from the remaining stored drilling material covering all holes and depths with initial metallurgical analysis and processing work taking place by IHC Mining on the bulk sample. After metallurgical and processing work by IHM Mining, the non-magnetig processing stream fractions were sent to AML Laboratory for further metallurgical testing on a reconstituted non-magnetic concentrate. The non-magnetic fractions received by AML from IHC Mining were reconstituted into a non-magnetic concentrate, head grade analysis shows the results on the concentrate comparable to the head grade results from IHC Mining (Table 1 in main body, closely matched results). The non-magnetic concentrate sample size was sufficient for this sighter metallurgical testwork on the Zircon and Rutile streams by AML, but the sample size of the magnetic rejects generated during the testwork was not sufficient for additional metallurgical work on the Monazite and TiO₂ material in this stream.</p> <p>The following information covers the Aircore drilling and sampling process used for generating the bulk sample:</p> <ul style="list-style-type: none"> a sample of sand, approx. 20 g, is scooped from the sample bag for visual THM% and SLIMES% estimation and logging. The same sample mass is used for every pan sample for visual THM% and SLIMES% estimation; the standard sized sample is to ensure calibration is maintained for consistency in visual estimation; geotagged photographs are taken for each panned sample with the corresponding sample bag to enable easy reference at a later date

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	<i>required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.</i>	<ul style="list-style-type: none"> • a sample ledger is kept at the drill rig for recording sample intervals; • the 1.5 m Aircore drill samples have an average mass of about 10 kg. • all samples were split down to approximately ~300 to ~600 g by a 3-tier rifle splitter for export to the primary processing laboratory; • the laboratory sample was oven dried at 60 degrees overnight, hand crushed and screened to remove +3 mm fraction. Full sample wet screened, then the -1mm +45µm samples split by Jones splitter to between 150 and 200g. A laboratory repeat was taken at ~ 1 in 25 samples; • all drill hole sub-samples were screened using vibrating screens with a top screen of 1 mm and a bottom screen of 45 µm. Oversize (+1 mm fraction) was removed and -45 µm fraction (SLIMES) discarded. The sand fraction (1 mm to +45 µm) was then submitted for heavy liquid separation using TBE to determine total heavy mineral content. • field duplicates were taken at a rate of ~1 in 25 and are inserted blindly into the sample batches. • Lab obtained standards were inserted at a rate of ~ 1 in 50 into the sample.
<i>Drilling techniques</i>	<i>Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg 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>The following information covers the Aircore drilling technique used for generating the bulk sample:</p> <ul style="list-style-type: none"> • Bamboo rock drilling Limitada was the contractor used for the aircore drilling program. • Aircore drilling with inner tubes for sample return was used for the infill drilling program. • Aircore drilling is considered a standard industry technique for HMS mineralisation. Aircore drilling is a form of reverse circulation drilling where the sample is collected at the face and returned inside the inner tube. • Aircore drill rods used were 3 m long. • NQ diameter (76 mm) drill bits and rods were used. • All drill holes were vertical. • The drilling is governed by the Aircore Drilling Guideline procedure to ensure consistency in the application of the method.

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Drill sample recovery	<p>Method of recording and assessing core and chip sample recoveries and results assessed.</p> <p>Measures taken to maximise sample recovery and ensure representative nature of the samples.</p> <p>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.</p>	<p>The following information applies to the drilling used for the samples used in the bulk sample:</p> <ul style="list-style-type: none"> All 1.5 m aircore samples are weighed with a spring scale at the drill rig, if the sample is wet it is air dried at the enclosed storage facility and weighed. While initially collaring the aircore hole, limited sample recovery can occur in the initial 0 m to 3 m drill depth interval owing to sample and air loss into the surrounding loose soil. The initial 0 m to 1.5 m and 1.5 m to 3 m sample intervals are drilled very slowly in order to achieve optimum sample recovery. The entire 1.5 m sample is collected at the drill rig in large numbered plastic bags for dispatch to the onsite split preparation facility. At the end of each drill rod, the drill string is cleaned by blowing down with air to remove any clay and silt potentially built up in the sample pipes and cyclone. The twin-tube aircore drilling technique is known to provide high quality samples from the face of the drill hole (in ideal conditions). All wet and moist sample are placed into large clean open plastic bags to sun-dry prior to riffle splitting the sub-sample.
Logging	<p>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.</p> <p>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</p>	<ul style="list-style-type: none"> The 1.5 m aircore samples were each qualitatively logged onto paper field log sheets prior to transcribing into Microsoft Excel spreadsheet. The data was uploaded to the Microsoft Access database and subjected to numerous validation queries. An access database is then produced, with additional validation checks. The aircore samples were logged for lithology, colour, grainsize, sorting, hardness, estimated THM%, estimated SLIMES% and any relevant comments such as slope, vegetation, or cultural activity. Every drill hole was logged in full. Logging is undertaken with reference to a Drilling Guideline (Hand Auger Drilling Guideline and Aircore Drilling Guideline) with codes prescribed and guidance on description to

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	<i>The total length and percentage of the relevant intersections logged.</i>	<i>ensure consistent and systematic data collection.</i>
<i>Sub-sampling techniques and sample preparation</i>	<p><i>If core, whether cut or sawn and whether quarter, half or all core taken.</i></p> <p><i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i></p> <p><i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i></p> <p><i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i></p> <p><i>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance duplicate/second-half sampling.</i></p> <p><i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i></p>	<p><i>On the drilling samples:</i></p> <ul style="list-style-type: none"> <i>The entire 1.5 m aircore sample collected at the rig was dispatched to the sample preparation facility where each sample was split down to 300 to 600 g using a three-tier riffle splitter. The split samples were labelled and bagged for export to the primary laboratory for processing.</i> <i>Any wet samples were dried on clean plastic bags at the enclosed storage facility prior to splitting and the water table depth was noted in all geological logs if intersected.</i> <i>The remaining portion of both the 1.5 m aircore samples was returned to their original bags and stored at the onsite secure warehouse for future reference.</i> <i>A total of ~300 g to ~600 g of each sample was placed into calico sample bags and exported to MAK Analytical in South Africa for THM analysis.</i> <i>All the samples are sand or sandy in nature and this sample preparation method is considered appropriate.</i> <i>The sample sizes were deemed suitable to reliably capture THM, slime, and oversize characteristics, based on industry experience of the geologists involved and consultation with laboratory staff.</i> <i>Field duplicates of all the samples were completed at a frequency of 1 per 25 primary samples. Standard reference Material (SRM) samples were inserted into the aircore sample batches at a frequency rate of 1 per 50 samples</i> <i>A geologist supervises the sample splitting process.</i> <p><i>On the different non-magnetic stream fractions received by AML from IHC Mining:</i></p> <p><i>After reconstitution into a non-magnetic concentrate, head grade analysis shows the results</i></p>

Criteria	Explanation	Comment
		<p>on the concentrate comparable to the head grade results from IHC Mining (Table 1 in main body, closely matched results). The non-magnetic concentrate sample size was sufficient for work on the Zircon and Rutile streams, but the sample size of the magnetic rejects not sufficient for additional metallurgical work on the Monazite and TiO₂ material in this stream.</p> <p>Figure 1 in the main body shows the testwork flowsheet.</p>
Quality of assay data and laboratory tests	<p>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</p> <p>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.</p> <p>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</p>	<p>Figure 1 in the main body shows the testwork flowsheet.</p> <p>Analytical analysis undertaken by AML, as presented in Tables 1 to 6 in the main body, were done on all phases of the testwork set out in Figure 1. All analysis and data is seen as appropriate and accurate for this sighter metallurgical testwork on the non-magnetic concentrate.</p>

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Verification of sampling and assaying	<p>The verification of significant intersections by either independent or alternative company personnel.</p> <p>The use of twinned holes.</p> <p>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</p> <p>Discuss any adjustment to assay data.</p>	<p>The head grade analysis of the reconstituted non-magnetic concentrate shows the results on the concentrate comparable to the head grade results from IHC Mining (Table 1 in main body, closely matched results). All data from analysis done was supplied from AML.</p>
Location of data points	<p>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.</p> <p>Specification of the grid system used.</p> <p>Quality and adequacy of topographic control.</p>	<p>The location data from the Aircore holes used in the bulk sample:</p> <ul style="list-style-type: none"> • Down hole surveys for shallow vertical aircore holes are not required. • A handheld Garmin GPS was used to identify the positions of the drill holes in the field. The handheld GPS has an accuracy of +/-5m in the horizontal. • The datum used is WGS84 zone 36 and coordinates are projected as UTM zone 36S. • Topographic surface generated using the contours from the differential GPS navigation system of the airborne magnetic and radiometric geophysical survey carried out by Geotech Ltd in April 2019. • To account for the disparity between collars and the topographic DTM all drill hole collars were pinned to the supplied topography wireframe surface. • The accuracy of the locations is sufficient for this

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		<i>stage of exploration.</i>
<i>Data spacing and distribution</i>	<p><i>Data spacing for reporting of Exploration Results.</i></p> <p><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></p> <p><i>Whether sample compositing has been applied.</i></p>	<i>The bulk sample of 6.5 ton was constituted by using all Aircore holes and material from all different depths within the Koko Massava deposit. The bulk sample therefore represents the Koko Massava deposit well.</i>
<i>Orientation of data in relation to geological structure</i>	<p><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></p> <p><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></p>	<p><i>On the orientation of the Aircore drillholes used for the bulk sample:</i></p> <ul style="list-style-type: none"> <i>Aircore drilling in the Koko Massava deposit area was oriented perpendicular to the strike of mineralisation defined by auger and aircore drill data and geophysical data interpretation.</i> <i>The strike of the mineralisation is northeast-southwest.</i> <i>All drill holes were vertical and the orientation of the mineralisation is relatively horizontal.</i> <i>The orientation of the drilling is considered appropriate for testing the lateral and vertical extent of mineralisation without any bias.</i>
<i>Sample security</i>	<i>The measures taken to ensure sample security.</i>	<ul style="list-style-type: none"> <i>All samples remain in the custody of Company representatives for all transport to Maputo for final packaging and securing, as well as transport to South Africa .</i>

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		<ul style="list-style-type: none"> The samples were dispatched to Perth using DHL commercial shipping company and delivered directly to IHC Mining.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	<p>On the sighter metallurgical work on the non-magnetic concentrate:</p> <p>Internal reviews took place by AML, but no review was undertaken by MRG or their Competent Person of AML or the metallurgical sighter work.</p>

Section 2 Reporting of Exploration Results

Criteria	Explanation	Comment
Mineral tenement and land tenure status	<p>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 environmental settings.</p> <p>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.</p>	<ul style="list-style-type: none"> The metallurgical work was completed on non-magnetic concentrate sourced from a bulk sample within the Koko Massava deposit in the Corridor Central tenement, now under Mining Licence Application (MLA) and re-numbered from 6621L to 11142C. The licence is 100% owned by the Company through its 100% ownership of its subsidiary, Sofala Mining & Exploration Limitada, in Mozambique. The licence is in MLA process. MLA was submitted and accepted in early November 2022. Representatives from the Provincial Directorate of Mineral Resources and Directorate of Lands, Environment and Rural Development, and District Planning and Infrastructure Departments are also part of the consent and consultation process. An Environment Management Plan was prepared by an independent consultant and submitted to the Gaza Provincial Directorate of

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		<i>Lands, Environment and Rural Development in accordance with Mining Law and Regulations. An Environmental License has been obtained by the Company.</i>
<i>Exploration done by other parties</i>	<i>Acknowledgment and appraisal of exploration by other parties.</i>	<ul style="list-style-type: none"> <i>Historic exploration work was completed by Corridor Sands Limitada, a subsidiary of Southern Mining Corporation and subsequently Western Mining Corporation, in 1989. BHP-Billiton acquired Western Mining Corporation and undertook a Bankable Feasibility study of the Corridor Deposit 1 about 15 km north of the Company's tenements.</i> <i>The Company has obtained digital data in relation to historic information as part of its historical review in preparation for their current work program.</i> <i>The historic data comprises limited Aircore/Reverse Circulation drilling.</i> <i>The historic results are not reportable under JORC 2012.</i>
<i>Geology</i>	<i>Deposit type, geological setting and style of mineralisation.</i>	<ul style="list-style-type: none"> <i>Two types of heavy mineral sand mineralisation styles are possible along coastal Mozambique:</i> <ol style="list-style-type: none"> <i>1. Thin but high grade strandlines which may be related to marine or fluvial influences.</i> <i>2. Large but lower grade deposits related to windblown sands.</i> <i>The coastline of Mozambique is well known for massive dunal systems such as those developed near Inhamitanga, near Xai, Xai and in Nampula Province. Buried strandlines are likely in areas where palaeoshorelines can be defined along coastal zone.</i>

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Drill hole Information	<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:</p> <ul style="list-style-type: none"> - easting and northing 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 - hole length. <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>All relevant drill hole data has been reported regarding all the drilling programs undertaken within the Koko Massava deposit.</p> <p>All relevant drill hole data associated with the bulk sample has been reported.</p>

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<i>Data aggregation methods</i>	<p><i>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</i></p> <p><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></p> <p><i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i></p>	<i>No data aggregation methods were utilised.</i>
<i>Relationship between mineralisation widths and intercept lengths</i>	<p><i>These relationships are particularly important in the reporting of Exploration Results.</i></p> <p><i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i></p> <p><i>If it is not known and only the down hole lengths are reported, there should be a clear statement to this</i></p>	<i>The sighter metallurgical testwork used the non-magnetic concentrate from a bulk sample representing all depths and grades within the deposit.</i>

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	<i>effect (eg 'down hole length, true width not known').</i>	
<i>Diagrams</i>	<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 drill hole collar locations and appropriate sectional views.</i>	<i>All tables (Tables 1 to 6) and figures (Figures 1 to 4) are in the main body, Refer to the main body of the report.</i>
<i>Balanced reporting</i>	<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>	<i>All exploration results linked to the bulk sample area, as well as work done on the bulk sample has been reported.</i>
<i>Other substantive exploration data</i>	<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>	<i>A metallurgical study based on a 6.5 ton bulk sample was performed by IHC Mining, with the results previously reported. Additional sighter metallurgical testwork has now been undertaken by AML laboratories on the non-magnetic concentrate. The work was done to further evaluate the removal of contaminants from the non-magnetic concentrate, as well as the reduction of Monazite from the product and to study the Zircon product post processing.</i>

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Further work	<p><i>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</i></p> <p><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></p>	<p><i>Due to insufficient sample size of the magnetic reject stream during the sighter metallurgical testwork on the non-magnetic concentrate, additional bulk sample work must take place to generate additional non-magnetic concentrate. Work can then take place on the magnetic reject stream to determine the quantity and quality of Monazite and TiO₂ from this stream as products.</i></p>