ASX ANNOUNCEMENT

16 December 2021

WORLD CLASS HMS DEPOSIT CONFIRMED AT KOKO MASSAVA WITH POTENTIAL FOR 50+ YEAR MINE LIFE; UPDATED MRE REPORTING INTERNAL HIGH-GRADE ZONE OF 103 MT @ 6.6% THM

Key Highlights

- **The updated Koko Massava JORC Mineral Resource estimate has delivered a High-Grade Zone of 103 Mt @ 6.6% total heavy minerals (THM) at a 5.5% cut-off grade (refer Table 3).**

- **The High-Grade Zone is situated between the towns of Koko Massava and Malehice, outside town infrastructure. It presents a potential high-grade start-up mine opportunity, to be assessed during the Pit Optimisation study currently underway.**

- **The updated Mineral Resource estimate shows the global Koko Massava deposit to be exceptionally homogeneous. It has grown in both size and grade in the Indicated Resource category at the same 4% cut-off grade, compared to the maiden Koko Massava JORC Mineral Resource estimate (refer ASX Announcement: 22 April 2020). The key updated Mineral Resource estimate is presented in Tables 1 and 2 and is stated as:**
  - **An Indicated Mineral Resource of 557 Mt @ 5.1% THM; and**
  - **An Inferred Mineral Resource of 977 Mt @ 5.0% THM.**

- **This represents an increase in the Indicated Mineral Resource category in grade (from 4.9% to 5.1% THM) and tonnes (from 289 Mt to 557 Mt), compared with the maiden Mineral Resource estimate. Importantly, it includes the lowest strip portion of an area of 103 Mt @ 6.6% THM (5.5% THM cut-off grade).**

- **The Koko Massava deposit also comprises an Exploration Target of between 120 and 630 Mt @ between 4.5 and 6.0% THM for a total range of contained THM of between 7 and 30 Mt.**

- **Koko Massava is a "World class" deposit with potential to become a >50 year mine.**

- **Additional mineralogical characterisation on the THM of the High-Grade Zone returned positive mineral assemblage results (Table 4). The mineral assemblage in the Mineral Resource estimate (refer Table 3) contains: average ilmenite content at 39% (ilmenite plus altered ilmenite plus leucoxene); rutile at 1%, zircon at 1% and titanomagnetite at 33%. The valuable heavy mineral content (VHM) is therefore 74%. The average clay fines content (SLIMES) is 14% within the High-Grade Zone.**

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- **From previous 100 kg bulk sample metallurgical testwork and Ultra Low Temperature Roasting (ULTR) under reduced conditions, an ilmenite product with 47.1% TiO_2, 0.9% SiO_2, 0.5% Al_2O_3, 0.1% Cr_2O_3 and <20ppm U + Th was recovered. The ilmenite represents potential as direct feedstock for sulphate pigment manufacture or as feedstock for titanium slag manufacture (refer ASX Announcement: 13 July 2020).**

- **A 6.5 tonne bulk sample is currently in transit to Australia. IHC Mining will conduct comprehensive metallurgical process development test work on the bulk sample. This will allow the investigation of potential upside value as we test the full suite of potential VHM products.**

MRG Metals Limited ("**MRG**" or "**the Company**") (**ASX Code: MRQ**) is pleased to announce the results of the updated Joint Ore Reserve Committee (JORC) Mineral Resource estimate for the global Koko Massava deposit (refer Tables 1 and 2; Figures 1 and 2), as well as the excellent results from the Mineral Resource estimate of the infill aircore drilled High-Grade Zone within the global Koko Massava deposit (refer Table 3; Figure 4). As per the maiden global Koko Massava Mineral Resource estimate (Table 1, **refer ASX Announcement: 22 April 2020**) the Mineral Resource estimates were undertaken by IHC Mining in Perth, Australia. MRG is also pleased to release the results from a comprehensive mineralogical study within the infill drilled High-Grade Zone (refer Table 4).

MRG Metals Chairman, Mr Andrew Van Der Zwan said: *"The Koko Massava MRE is a significant step in meeting our exploration goal of 100mt of high-grade resource. The increase in Indicated Resource will facilitate the next steps towards feasibility studies. In addition, we await the MRE results at Poiombo and Nhacutsce to add to the high-grade tonnage. The MRE has allowed us to identify a potential start up mine area in the Koko Massava deposit, which is now being reviewed in a Pit Optimisation study.*

The metallurgy bench top study will provide the opportunity for us trial a number of different circuits and importantly create sample concentrates for potential Offtaker review. We are pleased to advise that this work is progressing through the planning phase and the test material is in transit, soon ready for processing. We will also take the opportunity to review the marketability of the Titanomagnetite stream and other value adding products.

Early 2022 will be a significant period for MRG with the continuation of development analysis at Corridor and the reprioritisation of exploration activities in MRG's growing Mozambique portfolio."

Updated Koko Massava Mineral Resource Estimate

A maiden JORC Mineral Resource estimate for the global Koko Massava deposit area was reported, showing the following results (**refer ASX Announcement: 22 April 2020**):

An infill aircore drilling program was carried out in 2021 in a High-Grade Zone within the Inferred Mineral Resource portion of the maiden Koko Massava Mineral Resource estimate. Receipt of all analytical results, including inter-laboratory QA/QC analysis (**refer ASX Announcement: 8 December 2021**) and results from a comprehensive mineralogical study (refer Table 4), has facilitated the preparation of an updated Mineral Resource estimate, again at a 4% THM cut-off for the Koko Massava deposit (Table 1 and Figure 2):

***Table 1**: Summary of the updated JORC Mineral Resource estimate for the global Koko Massava deposit area.*

Summary of Mineral Resources[1]							THM Assemblage[2]							
Mineral Resource Category	Material (Mt)	In Situ THM (Mt)	BD (gcm3)	THM (%)	SLIMES (%)	OS (%)	ILM (%)	RUT (%)	ZIR (%)	TIMAG (%)	CHROM (%)	MOTH (%)	ANDA (%)	NMOTH (%)
Indicated	557	28	1.7	5.1	17	1	39	1	1	32	4	13	8	3
Inferred	977	49	1.7	5.0	16	1	38	1	1	32	4	13	8	3
Grand Total	**1,534**	**78**	**1.7**	**5.1**	**17**	**1**	**38**	**1**	**1**	**32**	**4**	**13**	**8**	**3**

Notes:

(1) Mineral resources reported at a cut-off grade of 4% THM

(2) Mineral assemblage is reported as a percentage of in situ THM content.

The updated global Koko Massava Mineral Resource estimate comprises a total Mineral Resource of 1,534 Mt @ 5.1% THM, with 17% Slimes, containing 78 Mt of THM with an assemblage of 38% ilmenite, 32% titano-magnetite, 1% rutile and 1% zircon. The JORC categories are specifically stated as:

- an Indicated Mineral Resource of 557 Mt @ 5.1% THM and 17% Slimes containing 28 Mt of THM with an assemblage of 38% ilmenite, 32% titano-magnetite, 1% rutile and 1% zircon.
- an Inferred Mineral Resource of 977 Mt @ 5.0% THM and 16% Slimes containing 49 Mt of THM with an assemblage of 38% ilmenite, 32% titano-magnetite, 1% rutile and 1% zircon.

The total Mineral Resource inventory has increased by 110 Mt, with the Indicated Mineral Resource significantly higher (an increase of 268 Mt). The average grade of the Indicated Mineral Resource is also higher (an increase of 0.2% THM). The grade-tonnage curve for the total Koko Massava Mineral Resource area (Figure 3) shows remarkable grade consistency within the deposit.

The Mineral Resource estimate at Koko Massava deposit also delivered an Exploration Target in the range of 120 and 630 Mt @ between 4.5 and 6.0% THM at cut-off grades of 3% and 5% THM (refer Table 2; Figure 2). This Exploration Target was predominantly located within the boundaries of the Koko Massava and Malehice villages.

__Table 2__: Summary of Exploration Target for global Koko Massava area.

Summary of Exploration Target[1]							THM Assemblage[2]							
Target	Material (Mt)	In Situ THM (Mt)	BD (gcm3)	THM (%)	SLIMES (%)	OS (%)	ILM (%)	RUT (%)	ZIR (%)	TIMAG (%)	CHROM (%)	MOTH (%)	ANDA (%)	NMOTH (%)
Exploration Target	120 - 630	7 - 30	1.74	4.5 - 6.0	15	1	38	1	1	31	4	13	9	3
Grand Total	**120 - 630**	**7 - 30**	**1.74**	**4.5 - 6.0**	**15**	**1**	**38**	**1**	**1**	**31**	**4**	**13**	**9**	**3**

Notes:

(1) Exploration Target reported at a cut-off grade of 3% - 5% THM

(2) Mineral assemblage is reported as a percentage of in situ THM content.

Koko Massava High-Grade Zone Mineral Resource Estimate

The infill drilled High-Grade Zone, falling within the total Koko Massava Mineral Resource estimate area, was outlined as per Figure 4 and a Mineral Resource estimate was prepared for this confined area as per Table 3. The Mineral Resource estimate was reported at a range of cut-off grades in increments of 0.5% THM and this grade tonnage curve is presented in Figure 5, with the continuity of the high grades shown in the Mineral Resource estimate to be present up to a 5.5% THM cut-off. The High-Grade Zone has grades of +4% THM at surface for the entire modelled outlined area (Figure 6), with the majority of the area having +4.5% THM grades at surface (refer Figure 7). The grade-tonnage curve for the High-Grade Zone (Figure 5) also shows the significant continuity of the grades, but the ratio of material below cut-off grade to material above cut-off grade (stripping ratio) in the High-Grade Zone is generally lower and more continuous than for the rest of the Koko Massava Resource deposit, at 1.3:1.0 in the High-Grade Zone with a 5.5% THM cut-off. The stripping ratio is low in the High-Grade Zone even when higher cut-offs are used, with the ratio at the 4.0% THM cut-off being 0.20:1.0, at 4.5% THM being 0.33:1.0 and at 5.0% THM being 0.65:1.0. The stripping ratio for the 4.5% THM cut-off grade is shown in Figure 8.

__Table 3__: Summary of the JORC Mineral Resource estimate for the infill drilled High-Grade Zone within the global Koko Massava deposit area.

Summary of Mineral Resources[1]							THM Assemblage[2]							
Mineral Resource Category	Material (Mt)	In Situ THM (Mt)	BD (gcm3)	THM (%)	SLIMES (%)	OS (%)	ILM (%)	RUT (%)	ZIR (%)	TIMAG (%)	CHROM (%)	MOTH (%)	ANDA (%)	NMOTH (%)
Indicated	58	4	1.8	6.4	15	1	39	1	1	33	4	12	7	3
Inferred	45	3	1.8	6.8	12	1	39	1	1	34	4	13	5	2
Grand Total	**103**	**7**	**1.8**	**6.6**	**14**	**1**	**39**	**1**	**1**	**33**	**4**	**13**	**6**	**3**

Notes:

(1) Mineral resources reported at a cut-off grade of 5.5% THM

(2) Mineral assemblage is reported as a percentage of in situ THM content.

The Koko Massava High-Grade Zone comprises a Mineral Resource estimate of 103 Mt @ 6.6% THM, at 5.5% cut-off grade, containing 7 Mt of THM, with 14% Slimes, with an assemblage of 39% ilmenite, 33% titano-magnetite, 1% rutile and 1% zircon. The JORC categories are specifically stated as:

- an Indicated Mineral Resource of 58 Mt @ 6.4% THM and 15% Slimes containing 4 Mt of THM with an assemblage of 39% ilmenite, 33% titano-magnetite, 1% rutile and 1% zircon.
- an Inferred Mineral Resource of 45 Mt @ 6.8% THM and 12% Slimes containing 3 Mt of THM

with an assemblage of 38% ilmenite, 34% titano-magnetite, 1% rutile and 1% zircon.

Mineralogical Work Undertaken

Infill drilling program

Additional geological interpretive work identified a High-Grade Zone within the maiden Mineral Resource estimate reported in April 2020. The High-Grade Zone is situated between the towns of Koko Massava and Malehice, thus outside of any infrastructure. This zone was infill drilled during March and April 2021 with 31 aircore drillholes (Figure 4). The 31 aircore holes involved 1,342 m of drilling, with 1,398 samples (inclusive of QA/QC samples) collected at 1.5m intervals. Additionally, 3 twin aircore holes were drilled, these holes involved 72 m of drilling and 50 samples (inclusive of QA/QC samples) collected at 1.5m intervals (**refer ASX Announcement: 16 July 2021**).

High Grade Zone mineralogical study

On completion of the infill aircore drilling, additional mineralogical studies were conducted by SJMetMin on the global resource area, as well as on 21 composite samples representing 4 interpreted distinctly different lithological units (mainly based on THM grade, silt content and colour) within the High-Grade Zone. The composites of the THM sink concentrates (HMC) were formed from 29 of the infill aircore holes and the HMC of 1,200 individual 1.5 m samples. The study covered these different lithologies comprehensively at depths and on strike within the infill drilled High-Grade Zone. QEMSCAN analysis was done at the University of Cape Town (UCT) in South Africa, the QEM data was augmented with XRD and XRF analysis. The results of the study are shown in Table 4.

***Table 4**: Summary results for bulk modal mineral assemblage of 21 composite samples created from heavy mineral concentrated derived from infill aircore drillholes within the High-Grade Zone within the global Koko Massava deposit area.*

SAMPLE		KM001	KM002	KM003	KM004	KM005	KM006	KM007	KM008	KM009	KM010	KM011	KM012
MINERAL OR PHASE	Field Name	Mass%	Mass%	Mass%	Mass%	Mass%	Mass%	Mass%	Mass%	Mass%	Mass%	Mass%	Mass%
Zircon	ZIR	1.0	1.3	1.4	1.2	1.0	1.2	1.2	1.4	1.4	1.0	1.0	1.3
Rutile	RUT	1.1	1.0	1.5	1.0	1.3	1.2	1.2	1.5	0.9	0.9	1.0	1.1
Leucoxene	LX	0.3	0.3	0.4	0.3	0.4	0.3	0.3	0.4	0.3	0.2	0.3	0.3
Ilmenite & altered ilmenite	ILM	37.5	39.7	39.6	35.8	34.5	38.2	34.0	38.4	41.1	36.1	34.8	39.0
Titanomagnetite	TIMAG	32.0	30.9	28.1	28.3	28.8	31.1	30.5	32.1	32.6	37.4	35.8	33.4
Andalusite	ANDA	9.6	6.5	7.5	6.8	14.2	8.0	10.6	8.5	5.9	6.4	8.4	8.0
Chromite	CHROM	4.2	4.5	3.8	3.9	3.1	3.5	4.4	3.6	3.9	3.5	4.0	3.2
Magnetic Others	MOTH	11.2	12.9	13.5	18.8	12.3	14.0	13.8	12.2	12.1	11.5	11.0	11.3
Non-magnetic Others	NMOTH	3.2	2.8	4.0	3.9	4.5	2.4	4.1	2.0	1.8	3.1	3.7	2.4

SAMPLE		KM013	KM014	KM015	KM016	KM017	KM018	KM019	KM020	KM021	Min	Max	Ave(1)
MINERAL OR PHASE	Field Name	Mass%	Mass%	Mass%	Mass%	Mass%	Mass%	Mass%	Mass%	Mass%	Mass%	Mass%	Mass%
Zircon	ZIR	1.5	1.2	1.1	1.4	1.4	1.2	1.4	1.4	1.1	1.0	1.5	**1.2**
Rutile	RUT	1.1	1.0	1.0	1.2	1.4	1.1	1.4	1.2	1.2	0.9	1.5	**1.2**
Leucoxene	LX	0.3	0.2	0.2	0.4	0.3	0.3	0.3	0.3	0.3	0.2	0.4	**0.3**
Ilmenite & altered ilmenite	ILM	40.7	35.8	34.4	39.7	42.4	38.1	40.6	40.7	35.8	34.0	42.4	**38.0**
Titanomagnetite	TIMAG	32.9	35.1	35.3	27.4	28.6	27.9	27.5	30.4	34.7	27.4	37.4	**31.5**
Andalusite	ANDA	5.5	8.0	9.2	8.8	7.4	9.5	9.2	7.0	7.8	5.5	14.2	**8.2**
Chromite	CHROM	3.8	3.6	3.8	3.6	3.9	4.3	4.3	4.0	4.1	3.1	4.5	**3.9**
Magnetic Others	MOTH	12.1	12.0	10.7	14.9	12.1	13.5	12.4	12.3	11.9	10.7	18.8	**12.7**
Non-magnetic Others	NMOTH	2.1	3.1	4.2	2.7	2.6	4.1	2.8	2.8	3.1	1.8	4.5	**3.1**

(1) Averages are arithmetic and not weighted on THM - hence small differences will be observed between these averages and those reported in the Mineral Resource estimate in Tables 1 and 3 which are weighted on THM tonnes.

Summary of Resource Estimate and Reporting Criteria

A summary of the material information used to compile this Mineral Resource estimate is outlined in the sections below. More detailed information in presented in the JORC Table 1 attached.

Geology and geological interpretation

The coastal region of southern Mozambique forms part of the Mozambique basin, which is comprised of a complex succession of Cretaceous to Quaternary age sedimentary rocks and unconsolidated sand deposits which rest unconformably on Karoo Supergroup sediments and volcanics.

The Cenozoic deposits of the Mozambique basin are distinguished by shallow-marine facies typical of a passive continental margin with two main sedimentary cycles; a Palaeocene-Eocene cycle and Oligocene– Neogene cycle, separated by an unconformity.

The coastline of Mozambique is well known for massive dunal systems such as those developed near Inhambane, Xai Xai and in Nampula Province. Buried strandlines are likely in areas where palaeo-shorelines can be defined along coastal zones. The larger lower grade deposits are related to windblown strands while the thin high-grade strandlines could be related to marine or fluvial influences.

The heavy mineral sands at the Corridor Sands deposit are hosted by the palaeodunes in the Chongoene - Chibuto area. The palaeodunes are known to host significant HMS mineralisation. Recent drilling at Koko Massava has intersected high THM grades from surface extending to a depth of up to 55 m over a strike of 8 km. The mineralisation is hosted within red to brownish medium grained sand units. The mineralisation is geologically continuous along strike, with grades varying along and across strike. The Koko Massava deposit is predominantly ilmenite enriched.

Drilling techniques and holes spacing

Aircore drilling was completed by Bamboo Rock Drilling Limitada utilizing a purpose-built Thor Reverse Circulation aircore drill rig with 76 mm diameter rods and 80 mm diameter (NQ) Harlsan aircore bits. Aircore is considered a standard mineral sands industry technique for evaluating HM mineralisation where the sample is collected at the drill bit face and returned inside an inner tube. All holes were drilled vertically.

The High-Grade Zone within the global Koko Massava MRE area was infill drilled by aircore via 31 aircore drillholes (Figure 4). The original drill spacing for this area pre-drilling and reflected in the maiden global JORC MRE of April 2020 was at 500m between hole stations and 1,000m between drill lines. The Aircore infill drilling has reduced the spacing within this area to ~250m between hole stations and ~500m between drill lines; with some holes at ~250m spacing between the ~500m spaced drill lines as well (refer Figure 4). Drilling therefore only took place within the outline of the High-Grade Zone shown in Figure 4.

Sampling and sub-sampling methodology

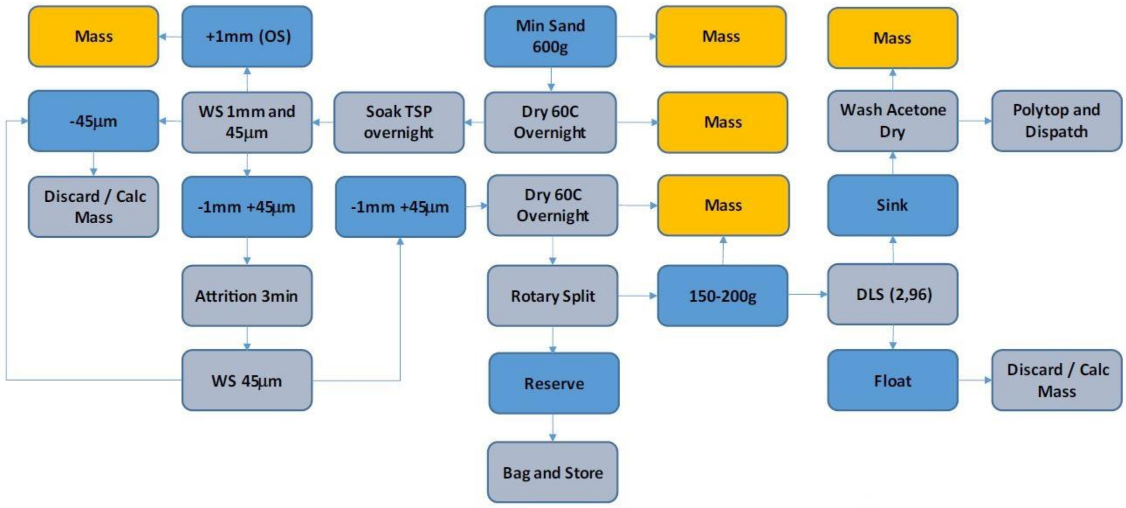
Aircore drill samples were collected at 1.5m intervals and generated approximately 10 kg of drill spoil. The entire 1.5m samples were collected at the rig and dispatched to the sample preparation facility. Each sample was air dried and then split down to between 400g and 600g using a three-tier riffle splitter for export to the primary laboratory.

All aircore samples were labeled and bagged for transport to the primary laboratory in South Africa, for processing. All sample intervals and the correlating sample mass were recorded onto log sheets and later transcribed to a master Excel spreadsheet. An access database was then constructed.

The sampling method and sample size dispatched for processing is considered appropriate and reliable based on accepted industry practices and experience.

Sample analysis methodology

All aircore samples were dispatched to MAK Analytical laboratory in South Africa, which followed the general assay process flow described as per the following flow sheet and description:



300g to 600g samples were received into the MAK Analytical check-in process, sample weighed.

The full sample were then oven dried overnight at 60 degrees Celsius until samples were completely dry, sample weighed.

Full sample is left to soak overnight.

Wet screening is undertaken on a static screen stack of the full sample with a 1mm top screen and a 45µm bottom screen. Water is added to the washing process and manual scrubbing of the sample is undertaken as the agitation process.

Every 25th sample was submitted to the same process as a laboratory repeat.

All samples were screened utilising a 1mm top screen and a 45µm bottom screen.

Material captured by the 1mm (OS) and 45µm (SAND) screens was individually captured, dried and weighed, whilst material passing through the 45µm (SLIMES) screen was lost to waste water streams.

This passing 45µm material (SLIMES) weight was then calculated by difference (SLIMES weight = sample split weight - OS - SAND).

The SAND fraction (1mm to 45µm) was split via rotary split to produce 150g to 200g, this was submitted to heavy liquid separation ('HLS') using tetrabromomethane ('TBE') as the liquid heavy media.

The settling time for HLS was 45 minutes with several stirs of the liquid to ensure adequate heavy mineral 'drop'.

Mineral assemblage composites were prepared for the Koko Massava deposit from THM sink concentrates and QEMSCAN analysis, supported by XRD and XRF analysis, was used to determine mineralogy for the deposit as a proportion of the THM. The QEMSCAN analyses were undertaken by the University of Cape Town (UCT) in South Africa.

All mineral assemblage composites were prepared by Solly Theron of SJMetMin in conjunction with MRG and are based on geological and stratigraphic interpretation of the primary drill holes, down hole geological logging and assaying constrained by identified geological domains. A total of 21 mineral assemblage composites were prepared across the High-Grade Zone of the Koko Massava deposit (Results in Table 4).

Resource estimation methodology

The geological grade model for Koko Massava was based on coding model cells below open wireframes surfaces, including topography, mineralisation and basement. The drill hole file was also flagged with the domains and used for grade estimation.

The dominant drill grid spacing for the Koko Massava deposit was 500m north-south and 250m east-west direction. However, some areas were drilled at 1000m spacing in the north-south and 500m spacing in the east-west direction. A parent cell dimension of 125m x 250m x 3m in XYZ was selected as this represents half the distance between drill hole spacing in the easting and northing directions for most of the model area.

Sub-cell splits of 5 x 5 in the X and Y and to the nearest 20cm in the Z direction were used to control sub-cell splitting of parent cells (as dictated by the modeling routine used in Studio RM). The smaller parent cell sizes were selected to give a better estimation of the volume of the deposit. It is not anticipated that this will have an adverse effect on the overall grade estimation. The smaller parent cell sizes are also not anticipated to result in an adverse effect on the overall grade estimation.

Inverse distance cubed was used along with nearest neighbour to interpolate grades and values into the block model. Part of the rationale for using ID3 is centred on the good continuity of the mineralisation, low nugget effect displayed by the experimental variograms, the regular drill hole and assay spacing and the nature of the sampling process.

Effectively there is an averaging over the length of the sample interval down hole (in this case being 3m). There is already a dilution effect on any potential high grade mineralisation leading to inverse distance being a less complex and more straight forward methodology.

A bulk density (BD) was applied to the model using a standard linear formula originally described by Baxter (1977). This approach was refined in a practical application by this author using the following first principles calculations. This regression formula was then used to determine the conversion of tonnes from each cell volume and from there the estimation of material, THM and SLIMES tonnes.

The bulk density formula is described as: Bulk Density = (0.009 * HM) + 1.698.

Cut-off grades

The selection of the THM cut-off grade used for reporting was based on the experience of the Competent Person and by considering the continuity of mineralisation at that cut-off grade as well as the inflection points on the grade tonnage curves (refer Figure 3) This cut-off grade is in line with other mineral sands operations in Africa and the overall ratio of VHM to trash.

The global Koko Massava Mineral Resource estimate is reported at a cut-off grade of 4% THM.

The Koko Massava High-Grade Zone Mineral Resource estimate is reported at cut-off grades of 4%, 4.5%, 5% and 5.5% THM for the resource model.

Classification criteria

The JORC classification for the Koko Massava deposit has taken into consideration the drill hole spacing in plan view, as well the sample support within domains, the size, weighting and distribution of the mineral assemblage composites and the variography results.

The deposit has been assigned JORC Mineral Resource classifications of Indicated and Inferred and is supported by the following criteria:

- regular drill hole spacing that defines the geology and THM mineralisation distribution and trends;
- variography for THM that supports the drill spacing for the classifications; and
- the distribution of mineral assemblage composites having adequately identified the various mineralogical domains as well as the variability within those domains.

The variography shows reasonable grade continuity in the across strike and downhole directions but limited sample relationship along strike, which warrants infill drilling between section lines to confidently determine the grade continuity in the north-south direction.

There has been industry standard QA/QC data supporting the assaying process, the use of a specialised and reputable mineral sands laboratory and the drilling, sampling and assaying procedures overall have fully supported the development of a Mineral Resource estimate. The use of commercially prepared standards has supported the QA/QC for the laboratory assaying and ongoing duplicates in both the field and laboratory.

The sample support and distribution of mineral assemblage composites is to an adequate level of density for the JORC Classification. Consideration of the operational mining rate and production of THM has been undertaken in order to assess whether the mineral assemblage composites are providing enough detailed coverage of potential variability in the mineral assemblage along the length of the deposit.

Mining and metallurgical methods and parameters

Additional mineral species chemistry and processing analysis is required from a representative, 6.5t bulk sample, currently in transit to Australia. The purpose is to understand product recoveries and specification of products required for marketing purposes. No mining studies have yet been undertaken on the Koko Massava deposit.

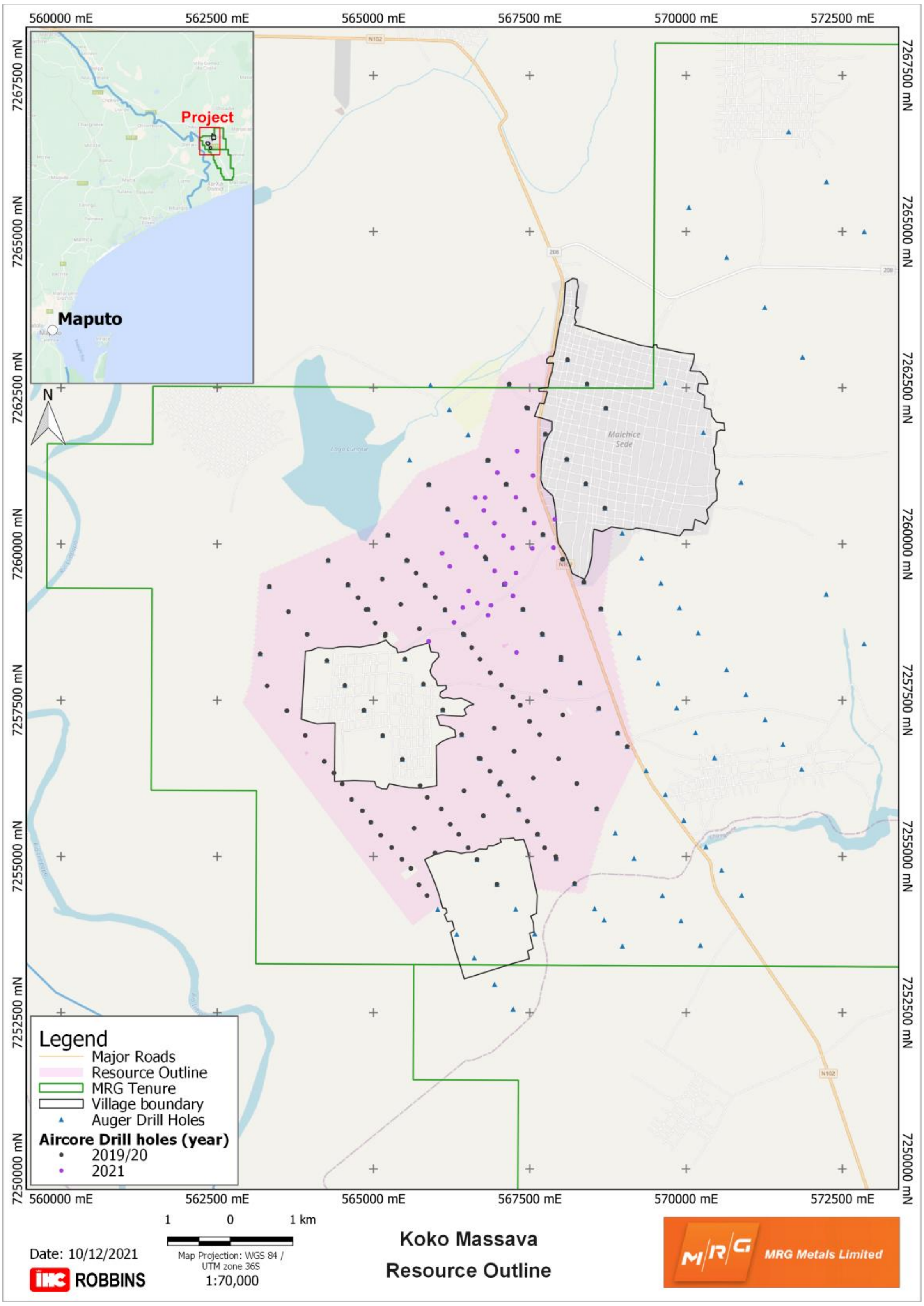


Figure 1: *Map showing the outline of the global Koko Massava Resource area within the Corridor Central (6620L) Licence.*

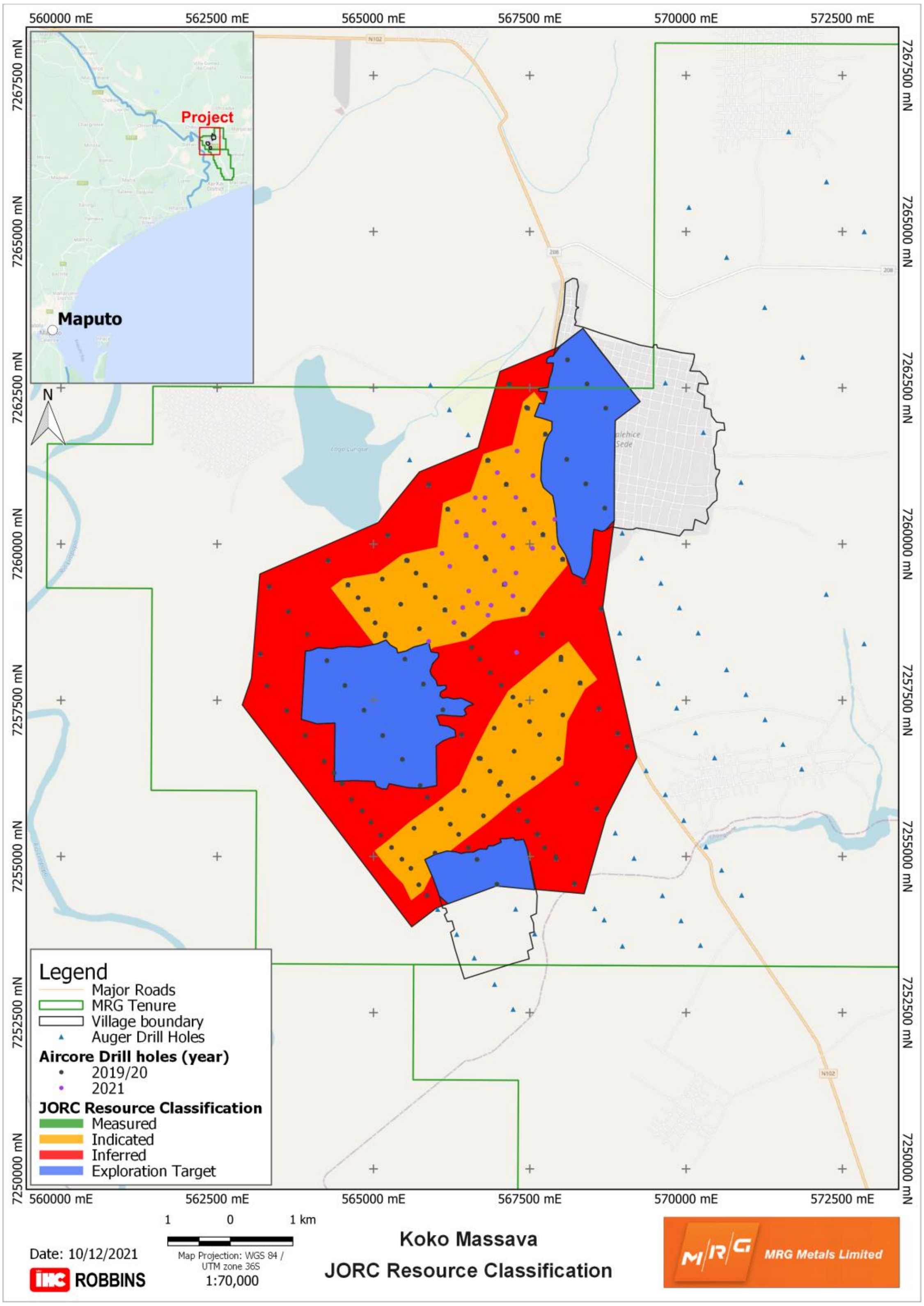
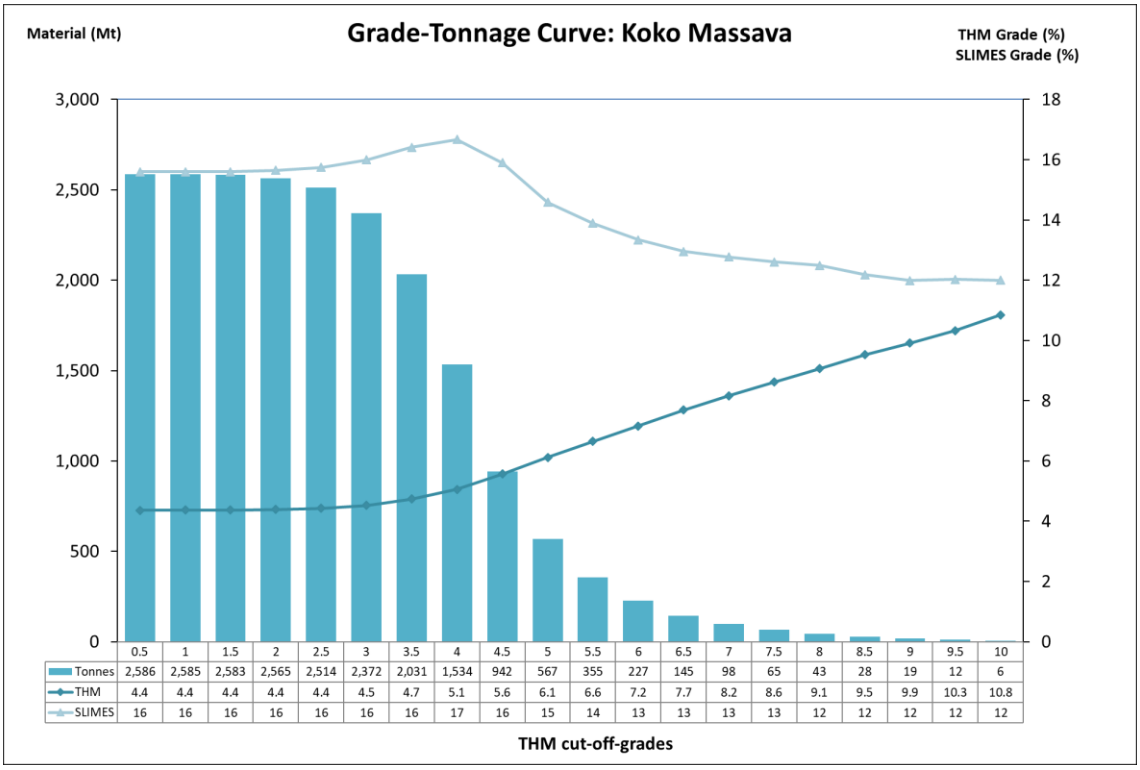


Figure 2: *Map showing the updated JORC Classification for the global Koko Massava Mineral Resource area within the Corridor Central (6620L) Licence.*



	0.5	1	1.5	2	2.5	3	3.5	4	4.5	5
Tonnes	2,586	2,585	2,583	2,565	2,514	2,372	2,031	1,534	942	567
THM	4.4	4.4	4.4	4.4	4.4	4.5	4.7	5.1	5.6	6.1
SLIMES	16	16	16	16	16	16	16	17	16	15

	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10
Tonnes	355	227	145	98	65	43	28	19	12	6
THM	6.6	7.2	7.7	8.2	8.6	9.1	9.5	9.9	10.3	10.8
SLIMES	14	13	13	13	13	12	12	12	12	12

Figure 3: *Grade-tonnage curve showing material tonnes versus THM grade (and Slime) at various cut-off grades for the global Mineral Resource at Koko Massava. Cut-off grade is shown in the top row of the table, with corresponding tonnage, average THM% grade and Slime % grade in the column below it.*

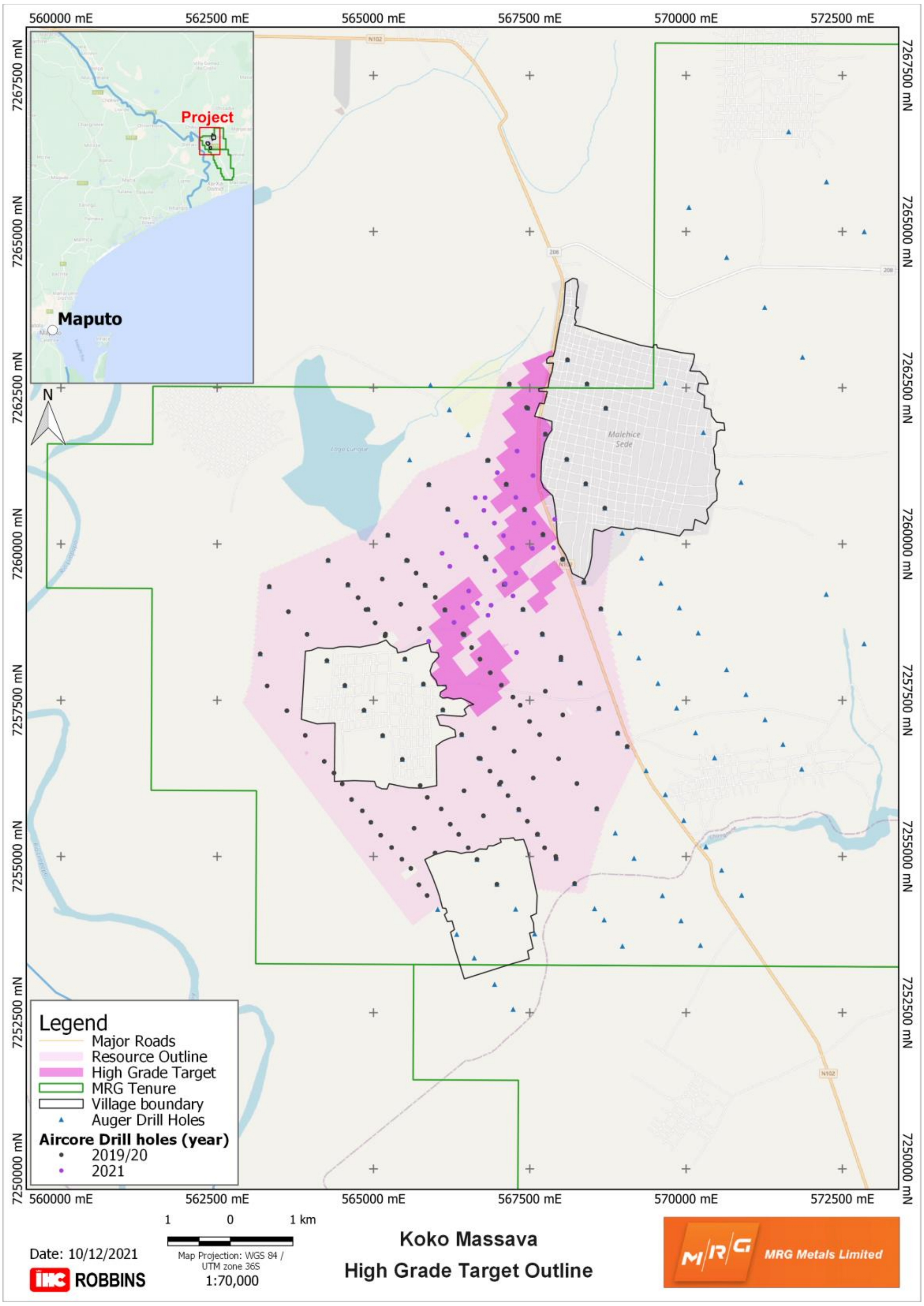
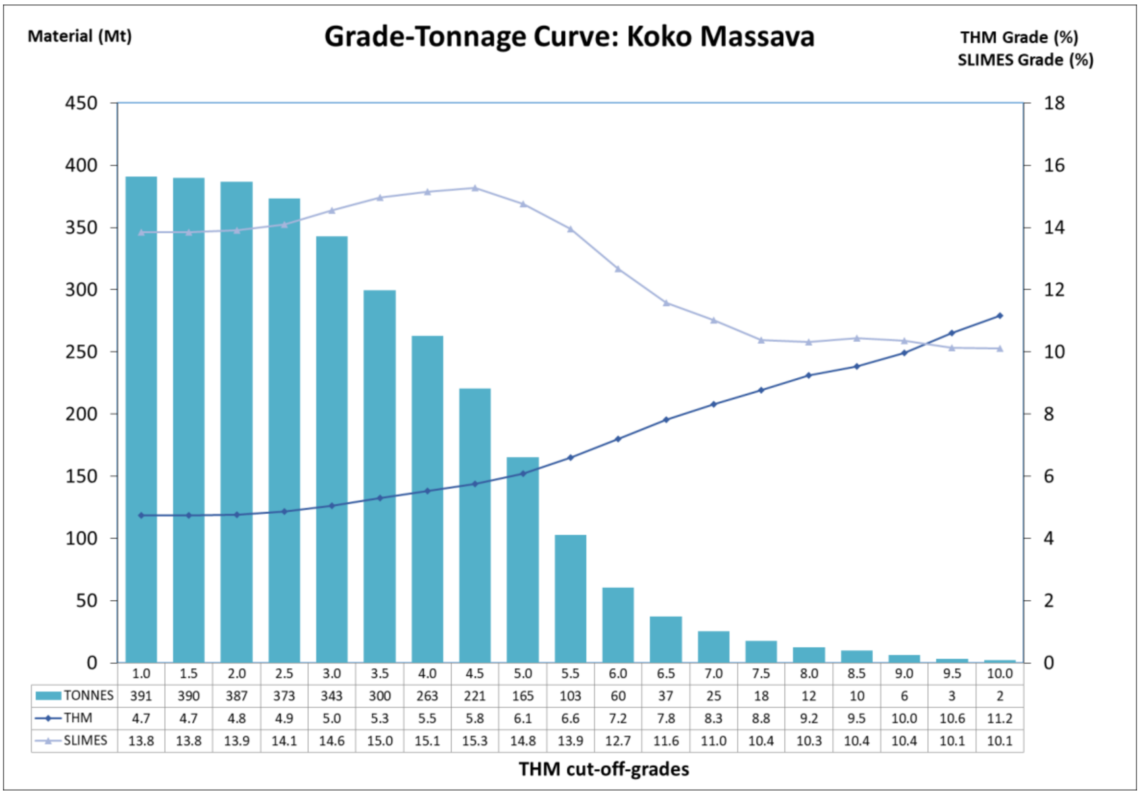


Figure 4: *Map of the Mineral Resource area of the High-Grade Zone at 4.0%THM cut-off THM grade within the Corridor Central (6620L) Licence.*



	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5	9.0	9.5	10.0
TONNES	391	390	387	373	343	300	263	221	165	103	60	37	25	18	12	10	6	3	2
THM	4.7	4.7	4.8	4.9	5.0	5.3	5.5	5.8	6.1	6.6	7.2	7.8	8.3	8.8	9.2	9.5	10.0	10.6	11.2
SLIMES	13.8	13.8	13.9	14.1	14.6	15.0	15.1	15.3	14.8	13.9	12.7	11.6	11.0	10.4	10.3	10.4	10.4	10.1	10.1

Figure 5: *Grade-tonnage curve showing material tonnes versus THM grade (and Slime) at various cut-off grades for the High-Grade Zone Mineral Resource at Koko Massava. Cut-off grade is shown in the top row of the table, with corresponding tonnage, average THM% grade and Slime % grade in the column below it.*

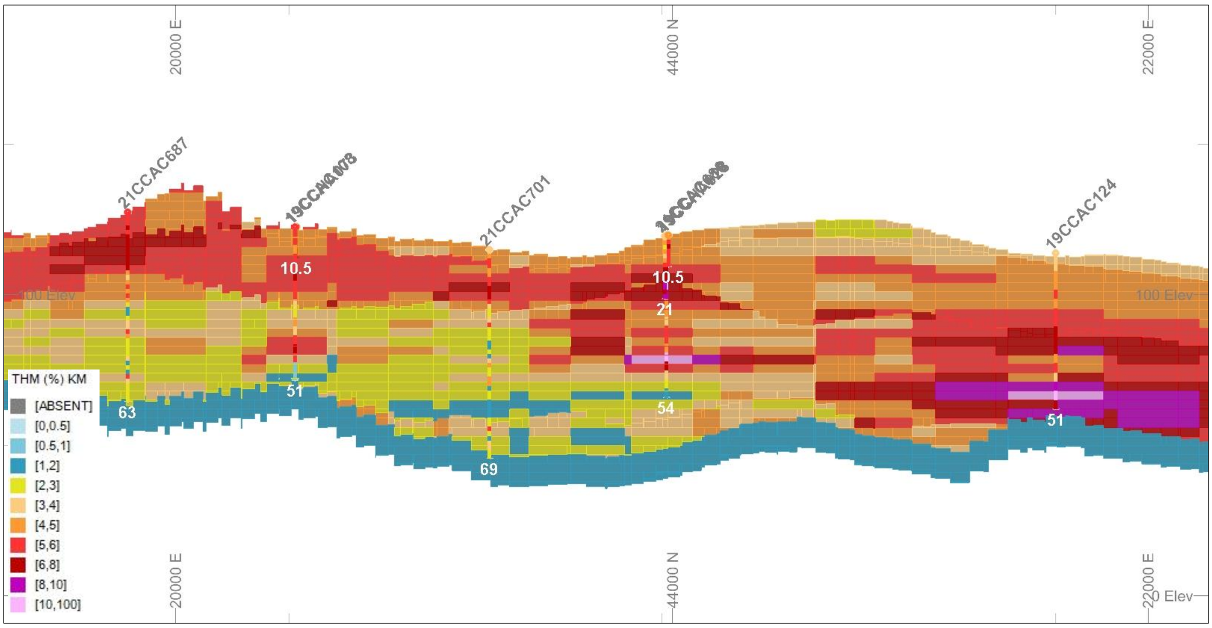


Figure 6: *Section through the High- Grade Zone area (looking east) 7x vertical exaggeration, local mine grid.*

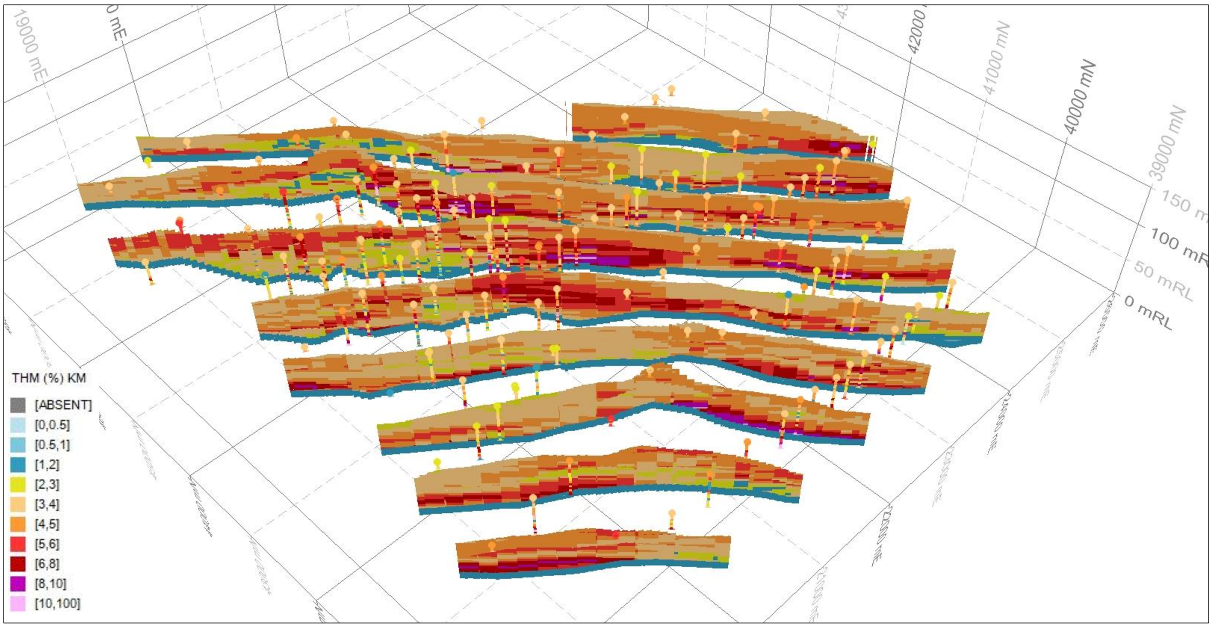


Figure 7: *Multiple section slices through the Koko Massava deposit sub-parallel to the strike of the High-Grade Zone (looking due east) 7x vertical exaggeration, local mine grid.*

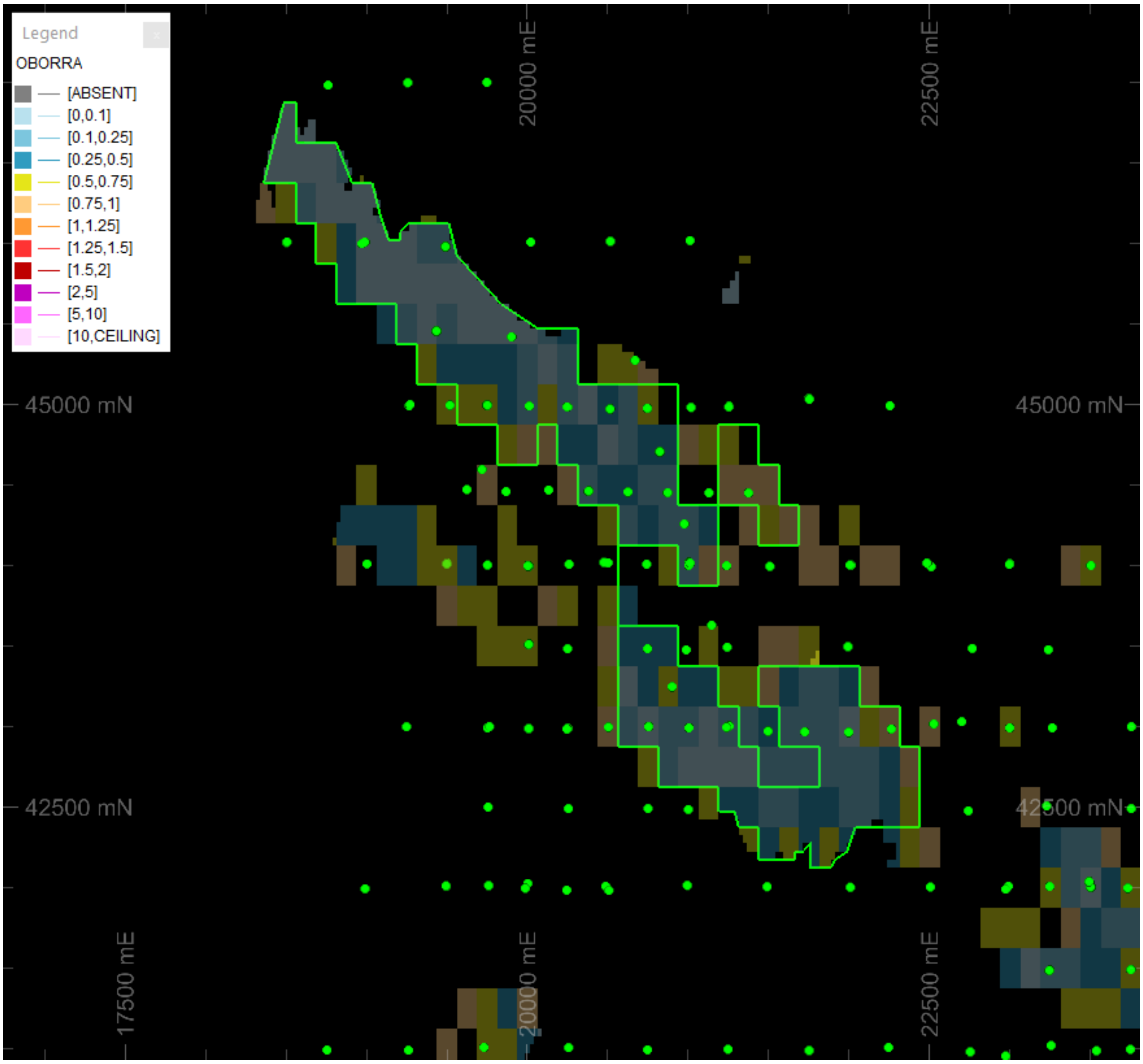


Figure 8: *Plan view of High-Grade Zone (green outline) showing stripping ratio at a 4.5% THM cut-off grade, local mine grid.*

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.

The information in this announcement that relates to Mineral Resource estimates and Exploration Targets is based on and fairly represents information and supporting documentation prepared, compiled and reviewed by Mr. Greg Jones (FAusIMM) who is an employee of IHC Mining and is acting as a consultant to the Company. Mr. Jones is a Fellow of the Australasian Institute of Mining and Metallurgy and has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity that is being reported on 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. Jones has reviewed this report and consents to the inclusion in the report of the matters in the form and context with which it appears.

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	*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.* *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* *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*	*Aircore drilling were used to obtain samples at 1.5 m intervals for the 2021 infill drilling programme.* *The following information covers the sampling process:* • *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* • *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.*

Criteria	Explanation	Comment
	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.	
Drilling techniques	*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).*	• *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.*
Drill sample recovery	*Method of recording and assessing core and chip sample recoveries and results assessed.* *Measures taken to maximise sample recovery and ensure representative nature of the samples.* *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to*	• *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 weiged.* • *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.*

Criteria	Explanation	Comment
	preferential loss/gain of fine/coarse material.	• *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	*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.* *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* *The total length and percentage of the relevant intersections logged.*	• *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 ensure consistent and systematic data collection.*
Sub-sampling techniques and sample preparation	*If core, whether cut or sawn and whether quarter, half or all core taken.* *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* *Quality control procedures adopted for all sub-*	• *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.* • *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.* • *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.* • *A total of ~300 g to ~600 g of each sample was placed into calico sample bags and exported to MAK Analytical is South Africa for THM analysis.*

Criteria	Explanation	Comment
	sampling stages to maximise representivity of samples. *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.* *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• *All the samples are sand or sandy in nature and this sample preparation method is considered appropriate.* • *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.* • *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* • *A geologist supervises the sample splitting process.*
Quality of assay data and laboratory tests	*The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* *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.* *Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias)*	• *The wet panning of samples provides an estimate of the THM% which is sufficient for the purpose of determining approximate concentrations of THM in the first instance.* • *The field visual THM estimates are compared to actual THM assays and this allows the geologist to calibrate the visual estimates with known grades.* • *The 300g-600g aircore sub-samples were assayed by MAK Analytical is South Africa, which is considered the Primary laboratory.* • *The aircore samples were initially oven dried at 60 degrees Celsius overnight until samples were completely dry. Samples were primarily sieved to remove the +3 mm fraction and the weight recorded.* • *Full sample is left to soak overnight. Wet screening is undertaken on a static screen stack of the full sample with a 1mm top screen and a 45µm bottom screen. Water is added to the washing process and manual scrubbing of the sample is undertaken as the agitation process* • *All samples were then wet washed and sieved on vibrating screens using a top screen of +1 mm to remove the very coarse sand, pebbles or grits. The bottom screen used 45 µm mesh for removal*

Criteria	Explanation	Comment
	and precision have been established.	*and determination of the -45 µm fraction (SLIMES).* • *The -1 mm +45 µm fraction was reduced on a Jones splitter to between 150g and 200g and then submitted to heavy liquid separation ('HLS').* • *The laboratory used TBE as the heavy liquid medium – with density of 2.96 g/ml. This is an industry standard technique for HLS.* • *Field duplicates of the samples were collected and submitted at a frequency of 1 per 25 primary samples;* • *MAK Analytical completed its own internal QA/QC checks that included a Laboratory repeat every250th sample prior to the results being released;* • *Analysis of QA/QC samples show the laboratory data to be of acceptable accuracy and precision;* • *The density of the heavy liquid was checked every day.* • *The adopted QA/QC protocols are acceptable for this stage of test work.*
Verification of sampling and assaying	*The verification of significant intersections by either independent or alternative company personnel.* *The use of twinned holes.* *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* *Discuss any adjustment to assay data.*	• *All results are checked by the company's Chief Geologist* • *Significant visual estimated THM values > 6% are verified by the Chief geologist in the field or via field photographs of the pan sample.* • *The company's General Manager and independent Resource geologist (Greg Jones) have visited Western Geolabs to observe sample processing and procedure.* • *A process of laboratory data validation using mass balance is undertaken to identify entry errors or questionable data.* • *Field and laboratory duplicate data pairs (THM/OS/SLIME) of each batch are plotted to identify potential quality control issues.* • *Standard Reference Material sample results are checked from each sample batch to ensure they are within tolerance (<3SD) and that there is no bias.* • *Field data was manually transcribed from paper logs into a master Microsoft Excel spread sheet.*

Criteria	Explanation	Comment
		Data is then imported into Microsoft Access Database where it is subject to validation. • *The field and laboratory data was exported from the MRG Microsoft Access database and imported into Datamine by IHC Robbins which is appropriate for this stage in the program. Data validation criteria are included to check for overlapping sample intervals, end of hole match between 'Lithology', 'Sample', 'Survey' files and other common errors.* • *No twin holes were drilled in the programmes.* • *No adjustments have been made to the primary assay data.* *Inter-laboratory and twin drilling QA/QC* • *Three twin aircore drilled holes of previously drilled aircore holes were done.* • *A three-way inter-laboratory QA/QC analytical check process of >5% of the samples (92 samples exclusive of QA/QC samples) between MAK Analytical in South Africa, Western Geolabs and Diamantina from Western Australia was undertaken.* • *Good (results of MAK vs Geolabs and Diamantina) to very good (results of Geolabs vs Diamantina) correlation were established.* • *Additionally, 40 samples from one aircore holes drilled as twin drillholes at Koko Massava were analysed by MAK Analytical and Western Geolabs.* • *Good correlation was established from the analytical results.*
Location of data points	*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.* *Specification of the grid system used.*	• *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*

Criteria	Explanation	Comment
	Quality and adequacy of topographic control.	*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 stage of exploration.*
Data spacing and distribution	*Data spacing for reporting of Exploration Results.* *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.* *Whether sample compositing has been applied.*	• *Additional geological interpretive work identified a High Grade Zone within the Global MRE area reported in April 2020. Infill aircore drilling took place within this area only.* • *The infill aircore drilling reduced the spacing within this area to ~250m between hole stations and ~500m between drill lines; with some holes at ~250m spacing between the ~500m spaced drill lines as well.* • *The drilling program for 31 infill auger holes, as well as 3 twin auger holes, was conducted during March and April 2021 to determine the mineralisation extent of the deposit.* • *The 250 m x 500 m spaced aicore holes and regular grid on the infill drilled area of the deposit confirm the mineralisation continuity along strike.* • *Each aircore sample is a 1.5 m single sample of sand intersected down the hole.* • *No down hole compositing has been applied to models for values of THM, slime and oversize.* • *Compositing of samples (21 composite samples) was undertaken on THM concentrates for mineral assemblage determination. The mineral assemblage composite samples were determined by geological domains.*

Criteria	Explanation	Comment
Orientation of data in relation to geological structure	*Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* *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.*	• *The infill aircore drilling in a portion of the Global Koko Massava area was oriented perpendicular to the strike of mineralisation defined by auger and aircore drill data and geophysical data interpretation.* • *The strike of the mineralisation is northeast-southwest.* • *All drill holes were vertical and the orientation of the mineralisation is relatively horizontal.* • *The orientation of the drilling is considered appropriate for testing the lateral and vertical extent of mineralisation without any bias.*
Sample security	*The measures taken to ensure sample security.*	• *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 to MAK Analytical laboratory.* • *The samples for iter-laboratory QA/QA work were dispatched to Perth using a commercial shipping company and delivered directly to Western Geolabs and then to Diamantina.* • *The laboratories inspected the packages and did not report tampering or any other problems with the samples.*
Audits or reviews	*The results of any audits or reviews of sampling techniques and data.*	• *Internal reviews, and reviews by IHC Mining, were undertaken during the geological interpretation and throughout the modelling process.*

Section 2 Reporting of Exploration Results		
Criteria	**Explanation**	**Comment**
Mineral tenement and land tenure status	*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.* *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.*	• *The exploration work was completed on the Corridor Central tenement (6620 L) which is 100% owned by the company through its subsidiary, Sofala Mining and Exploration Limitada, in Mozambique.* • *The drill samples for this Mineral Resource estimate were taken from tenement 6620 L.* • *The Exploration License original date of grant was 14/01/2016 with an expiry date of 14/01/2021 and comprises an area of 17 881.59 hectares (178.8 km²).* • *A renewal application was submitted within Year 5 on the 12th of November 2020, renewal of the licence 6620L is pending.*
Exploration done by other parties	*Acknowledgment and appraisal of exploration by other parties.*	• *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.* • *The Company has obtained digital data in relation to historic information as part of its historical review in preparation for their current work program.* • *The historic data comprises limited Aircore/Reverse Circulation drilling.* • *The historic results are not reportable under JORC 2012.*
Geology	*Deposit type, geological setting and style of mineralisation.*	• *Two types of heavy mineral sand mineralisation styles are possible along coastal Mozambique:* 1. *Thin but high grade strandlines which may be related to marine or fluvial influences.*

Criteria	Explanation	Comment
		2. Large but lower grade deposits related to windblown sands. • *The coastline of Mozambique is well known for massive dunal systems such as those developed near Inhamabane, near Xai, Xai and in Nampula Province. Buried strandlines are likely in areas where palaeoshorelines can be defined along coastal zone.*
Drill hole Information	*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 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.* *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.*	• *All relevant drill hole data is reported regarding the 2021 drilling programs.* • *All relevant drill hole data is reported associated with the model build.*

Criteria	Explanation	Comment
Data aggregation methods	*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.* *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.* *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	• *No data aggregation methods were utilised, no top cuts were employed and all cut-off grades have been reported.* • *For the updated Global resource, Total Heavy Mineral (THM) >4% was used to provide cut-off grade for reporting the Mineral Resource estimate.*
Relationship between mineralisation widths and intercept lengths	*These relationships are particularly important in the reporting of Exploration Results.* *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* *If it is not known and only the down hole lengths are reported, there should be a clear statement to this*	• *The nature of the mineralisation is broadly horizontal / has a low dip angle, thus vertical aircore holes are thought to represent close to true thicknesses of the mineralisation.* • *Downhole widths are reported.*

Criteria	Explanation	Comment
	effect (eg 'down hole length, true width not known').	
Diagrams	*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.*	• *Refer to Appendices 2 and 3 the main body of the report.*
Balanced reporting	*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.*	• *Exploration Target results have been reported at THM>3% and 5% to indicate a range of potential tonnes and grade (refer to Table 2.)*
Other substantive exploration data	*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.*	• *Detailed mineral assemblage work was undertaken on composite samples for the Project by SJMetMin, based in Gauteng, South Africa. Quantitative Evaluation of Minerals by Scanning Electron Microscopy (QEMSCAN) was used to analyse the mineralogy for the deposit. This was to gain a quantitative understanding of the elemental composition and mineralogical assemblage (refer to Section 4, Tables 4.3, 4.4, and 4.5 and Appendix 7).* • *Sample preparation required each sub-sample was mixed with size-graded, high purity graphite to ensure particle separation and discourage density segregation. These sample-graphite mixtures were then set into moulds using a two-part epoxy resin, producing a representative sub-sample of randomly orientated particles.*

Criteria	Explanation	Comment
		Once cured, the resin blocks were then cut to expose a fresh surface which is then gradually ground and polished. Once QA/QC checks are completed the sections are then carbon coated for electron beam conductivity and presented to QEMScan for analysis. • *The samples were analysed using QEMScan technology in Field Scan Mode (FS) and Particle Mineralogical Analysis (PMA) mode.* • *Detailed logging of heavy mineral sinks from the drill assay process was carried out to determine regions of gross mineralogy as well as an overall consideration of valuable heavy mineral (VHM) content. Other considerations undertaken during the detailed logging were the sorting and grain size and any moisture content in relation to ground water table.* • *Geological logging then had partial input into the geological/mineralogical/THM grade interpretation which then assisted with domain control for modelling, as well as providing guidance for the allocation of mineral assemblage composites.* • *Various individual domains were identified for the Koko Massava deposit for the purpose of guiding the allocation of composites.* • *A total of 32 mineral assemblage composites were used to characterise the mineralogy and chemistry for the deposit.* • *All the mineral assemblage composites were completed by the IHC in conjunction with MRG.* • *Individual drill hole samples were selected based on whether they fell within a particular domain, and were then proportioned against contained THM grade in order to specify the weight of THM that each sample would contribute to the entire composite.* • *Once all of the sample compositing was completed, the sample identification and mineral assemblage composite number was submitted to CSIRO in Perth, Australia for sample collation and processing.* • *Preparing the mineral assemblage composites in this manner allows for composite results to be applied to the resource block model and for*

Criteria	Explanation	Comment
		those results to then be reported and weighted on THM in the final Mineral Resource estimate. • *Details of summary drill hole composites are presented in Appendix 13, mineral assemblage composite IDs and associated results are presented in Appendix 7.*
Further work	*The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).* *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	• *Pit-optimization studies, additional aircore drilling and sampling, infill drilling and sampling and HLS analysis is planned to further improve the Mineral Resource confidence.* • *High quality targets generated from reconnaissance work are planned to be drilled with aircore techniques.* • *Mineral Assemblage composite analysis to determine the valuable heavy mineral component of the deposit* • *TIO2 and contaminant test work analyses are planned for the future.*

Section 3 Estimation and Reporting of Mineral Resources		
Criteria	**Explanation**	**Comment**
Database integrity	*Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.* *Data validation procedures used.*	• *Exploration data was provided by the company to IHC Robbins in the form a Microsoft Access database.* • *Checks of data by visually inspecting on screen (to identify translation of samples), duplicate assays was visually examined to check the reproducibility of assays.* • *Database assay values have been subjected to random reconciliation with laboratory certified value is to ensure agreement.* • *Visual and statistical comparison was undertaken to check the validity of results.*

Criteria	Explanation	Comment
Site visits	*Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* *If no site visits have been undertaken indicate why this is the case.*	• *Regular site trips before and during the resource drilling programme were undertaken by was undertaken by Mr Kobus Badenhorst to observe the drilling data collection, and sampling activities.*
Geological interpretation	*Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.* *Nature of the data used and of any assumptions made.* *The effect, if any, of alternative interpretations on Mineral Resource.* *The use of geology in guiding and controlling Mineral Resource estimation.* *The factors affecting continuity both of grade and geology.*	• *The geological interpretation was undertaken by IHC Robbins in collaboration with the company's Chief Geologist and then validated using all logging and sampling data and observations.* • *Current data spacing and quality is sufficient to indicate grade continuity.* • *Interpretation of modelling domains was restricted to the main mineralised envelopes utilising THM, SLIMES, oversize, mineralogy and geological logging. The interpretation of domains was also aided by the utilisation lithological colour logging which assisted with distinguishing domain boundaries.* • *The Mineral Resource estimate was controlled by the geological surfaces, and basement surfaces.* • *There are two main sheet-like horizons of mineralisation within the Project area which are predominantly ilmenite enriched. The two zones are geologically continuous with variable THM grades along and across strike. Zone 1 is immediately below the topography and is reddish in colour while Zone 2 is brownish in colour and sits between Zone 1 and the basement.* • *The contact between the two mineralised zones is gradational. There are elevated SLIMES values around the contact and mostly confined to Zone 1.*
Dimensions	*The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below*	• *The Mineral Resource field for the Project is approximately 8 km in length (at the longest point) and 7 km wide (at the widest point).*

Criteria	Explanation	Comment
	surface to the upper and lower limits of the Mineral Resource.	
Estimation and modelling techniques	*The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.* *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.* *The assumptions made regarding recovery of by-products.* *Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).* *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.*	• *The Mineral Resource estimate was conducted using CAE mining software (also known as Datamine Studio). Inverse distance weighting techniques and ordinary kriging were used to interpolate assay grades from drill hole samples into the block model and nearest neighbour techniques were used to interpolate index values and nonnumeric sample identification into the block model. The mostly regular dimensions of the drill grid and the anisotropy of the drilling and sampling grid allowed for the use of inverse distance methodologies as no de-clustering of samples was required. Appropriate and industry standard search ellipses were used to search for data for the interpolation and suitable limitations on the number of samples and the impact of those samples was maintained. An inverse distance weighting power of 3 was used so as not to over smooth the grade interpolations. Hard domain boundaries were used and these were defined by the geological wireframes that were interpreted.* • *No assumptions were made during the resource estimation as to the recovery of by-products.* • *SLIMES and oversize contents are estimated at the same time as estimating the THM grade.* • *Further detailed geochemistry is required to ascertain deleterious elements that may affect the marketability of the heavy mineral products.* • *The average parent cell size used for the interpolation was half the standard drill hole width and half the standard drill hole section line spacing.* • *No assumptions were made regarding the modelling of selective mining units however it is assumed that a form of dry mining will be undertaken and the cell size and the sub cell splitting will allow for an appropriate dry*

Criteria	Explanation	Comment
	Any assumptions behind modelling of selective mining units. *Any assumptions about correlation between variables.* *Description of how the geological interpretation was used to control the resource estimates.* *Discussion of basis for using or not using grade cutting or capping.* *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.*	*mining preliminary reserve to be prepared. Any other mining methodology will be more than adequately catered for with the parent cell size that was selected for the modelling exercise.* • *No assumptions were made about correlation between variables.* • *The Mineral Resource estimates were controlled to an extent by the geological / mineralisation and basement surfaces.* • *Grade cutting or capping was not used during the interpolation because of the regular nature of sample spacing and the fact that samples were not clustered nor wide spaced to an extent where elevated samples could have a deleterious impact on the resource estimation.* • *Sample distributions were reviewed and no extreme outliers were identified either high or low that necessitated any grade cutting or capping.* • *The sample length of 1.5 m and 3 m does result in a degree of grade smoothing, also negating the requirement for grade cutting or capping.* • *Validation of grade interpolations were done visually In CAE Studio (Datamine) software by loading model and drill hole files and annotating and colouring and using filtering to check for the appropriateness of interpolations.* • *Statistical distributions were prepared for model zones from drill hole and model files to compare the effectiveness of the interpolation. Along strike distributions of section line averages (swath plots) for drill holes and models were also prepared for comparison purposes.*
Moisture	*Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	• *Tonnages were estimated an assumed dry basis.*

Criteria	Explanation	Comment
Cut-off parameters	*The basis of the adopted cut-off grade(s) or quality parameters applied.*	• *Cut-off grades for THM were used to prepare the reported resource estimates. These cut-off grades were defined by the Competent Person by considering the continuity of mineralisation at that cut-off-grade as well as the inflection points on the grade tonnage curves of the Koko Massava deposit. This was used to report the block model on material >4% THM for the global Mineral Resource estimate, and at 5.5% THM for the high grade infill drilled area.* • *Consideration was taken into account for a modest stripping ratio to ensure that deeply buried material with a very low likelihood of eventual economic extraction was not selected for reporting in the Mineral Resource estimate. The average stripping ratio considered for the Mineral Resource estimate was between 0.75 and 1.25.* • *The selected cut-off grades are also in line with other deposits of similar mineral assemblage.*
Mining factors or assumptions	*Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.*	• *No specific mining method is assumed other than potentially the use of dry mining methods.* • *Dozer trap or hydraulic monitoring mining could be amenable mining techniques given the high faces, moderate SLIMES and continuous THM grades.*

Criteria	Explanation	Comment
Metallurgical factors or assumptions	*The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.*	• *Metallurgical assumptions were used based on mineral assemblage composites which at this stage only allow for preliminary commentary with no final products being defined from the reported mineral species.*
Environmental factors or assumptions	*Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not*	• *No assumptions have been made regarding possible waste and process residue however disposal of by products such as SLIMES, sand and oversize are normally part of capture and disposal back into the mining void for eventual rehabilitation. This also applies to mineral products recovered and waste products recovered from metallurgical processing of heavy mineral.*

Criteria	Explanation	Comment
	been considered this should be reported with an explanation of the environmental assumptions made.	
Bulk density	*Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.* *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.* *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	• *A bulk density algorithm was prepared using first principles techniques coupled with industry experience that is exclusive to IHC Robbins. We believe the bulk density formula to be conservative and fit for purpose at this level of confidence for the Mineral Resource estimates and based on our experience and we would also recommend that bulk density test work be undertaken going forward.* • *A bulk density (BD) was applied to the model using a standard linear formula originally described by Baxter (1977). This approach was refined in a practical application by this author using the following first principles calculations to develop a regression formula. This regression formula was then used to calculate the conversion of tonnes from each cell volume and from there the calculation of material, THM and SLIMES tonnes.* • *The bulk density formula is described as:* • *Bulk Density = (0.009 * HM) + 1.698*
Classification	*The basis for the classification of the Mineral Resources into varying confidence categories.* *Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).*	• *The Mineral Resource classification for the Koko Massava deposit was based on the following criteria: drill hole spacing, geological and grade continuity, variography of primary assay grades and the distribution of bulk samples.* • *The classification of the Indicated and Inferred Mineral Resources was supported by all of the supporting criteria as noted above.* • *As a Competent Person, Greg Jones considers that the result appropriately reflects a reasonable view of the deposit categorisation.*

Criteria	Explanation	Comment
	Whether the result appropriately reflects the Competent Person's view of the deposit.	
Audits or reviews.	*The results of any audits or reviews of Mineral Resource estimates.*	• *No audits or reviews of the Mineral Resource estimate have been undertaken at this point in time.*
Discussion of relative accuracy/ confidence	*Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.* *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* *These statements of relative accuracy and confidence of the*	• *Local (nearest neighbour) estimates were undertaken as a preliminary evaluation process. The overall grade interpolation for this method was a fair comparison with inverse distance weighting methodology.* • *A comparision of the ordinary kriging was also made with the IDW method and both results were shown to be comparable.* • *Validation of the model vs drill hole grades by observation, swathe plot and population distribution analysis was favourable* • *The statement refers to global estimates for the entire known extent of the Koko Massava deposit.* • *No production data is available for comparison with the Koko Massava deposit.*

Criteria	Explanation	Comment
	estimate should be compared with production data, where available.	

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