ASX ANNOUNCEMENT

12 December 2022

MAGONDE AIRCORE DRILLING DELIVERS VERY HIGH VHM MINERALOGY RESULTS

Key Highlights

- **Two of the first three aircore holes drilled into the Magonde target at the Marao Project have delivered very high Valuable Heavy Mineral (VHM) results in red sand from surface, averaging 60% VHM, corresponding to very high Total Heavy Mineral (THM) assays averaging 4.5% THM.**

- **One of these two holes, (22 MUAC003), previously assayed 27 metres @ 6.04% THM from surface (refer ASX Announcement 21 July 2022). This hole has now delivered corresponding VHM of 58.2% within the red sand portion of the hole, comprised of Ilmenite 47.6%, Altered Ilmenite 6%, Zircon 2.5%; Rutile 2%; Leucoxene 0.2%, as well as Titanomagnetite 15.1%.**

- **Magonde Target shows a mineralised footprint of high VHM/THM measuring 1.1 km² (refer Figure 3, yellow area), supported also from laboratory results of surrounding hand auger drillholes (refer Table 2; Figure 3) particularly the following two auger holes:**
  - **21MUHA014 Magonde 0 – 13.5m 13.5m @ 4.3 % THM, and**
  - **21MUHA015 Magonde 0 – 13.5m 13.5m @ 4.0 % THM.**

- **With the VHM results significantly higher than the average for the Koko Massava and Nhacutse/Poiombo MREs (refer ASX Announcements 16 December 2021 and 8 April 2022), Magonde Target has the potential to deliver HMS Mineral Resources of similar THM grade and significantly higher VHM % than Koko Massava, Nhacutse and Poiombo deposits.**

- **Infill/extension aircore drilling is planned at Magonde during 2023.**

MRG Metals Limited ("**MRG**" or "**the Company**") (**ASX Code: MRQ**) is pleased to announce the excellent mineralogy results from heavy mineral concentrate (HMC) samples sourced from three target testing aircore drillholes within MRG's Magonde Target in the Marao (6842L) Heavy Mineral Sands licence (**Figures 1, 2 and 3; refer ASX Announcements 16 March 2022 and 21 July 2022**). MRG is also pleased to announce the laboratory results for hand auger drillholes in the Magonde Target area (**refer Table 2**).

The Magonde Target was generated via visual estimated THM grade of reconnaissance hand auger grid drilling (**Figure 3**; **refer ASX Announcement 18 March 2021**). Three very widely spaced target testing aircore drillholes were then drilled during March 2022 within the Magonde Target (**Figures 2 and 3; refer ASX Announcement 16 March 2022**), with the highest laboratory derived grade of 6.04% THM over 27.0m from surface returned from 22MUAC003 within the Target (**Figures 2 and 3; refer ASX Announcement 21 July 2022**).

Laboratory grade from selected hand auger drillholes (**refer Table 2**) delivered five drillholes with >3% THM, which very clearly defines the Magonde Target as a >3% THM Target, with the target area 2.6 km² (**refer Figure 3**, red area). With two of the auger drillholes returning >4% THM results from surface (21MUHA014 and 21MUHA015, **refer Table 2**), a higher >4% THM grade target including the very high grade aircore drillhole 22MUAC003 has an area of 1.1km² (**refer Figure 3**, yellow area).

Five Composite samples were generated from HMC of all three aircore drillholes, covering all interpreted lithologies (red sand at surface, grey sand at depth, **refer Table 1**). The mineralogical results follow the very encouraging results from initial grab sample from within the Magonde target (sample 20MR03; **refer Figure 3 and ASX Announcement 27 April 2021)** that showed 50.05% VHM content results (Ilmenite, Altered Ilmenite, Rutile and Zircon) from Scanning Electron Microscopy (SEM).

The mineralogical results from the aircore HMC composites show even higher VHM results from the red sand lithology than the grab samples, with between 58.2% and 61.8% VHM in the Magonde Target. Additionally, Titanomagnetite content of the HMC in these samples are between 14.2% and 15.1%. The VHM + Titanomagnetite product is therefore in the 73.4% to 76.5% of the HMC range. The red sand portion of 22MUAC003 with the very high VHM has 5.25% THM from surface to 19.5m. This clearly shows the potential for high grade and high value HMC within the Magonde Target in Marao, with follow-up closer spaced aircore drilling and additional mineralogical work to follow in 2023.

The VHM % for the Magonde red sand lithology is significantly higher than results reported in MRG's updated Koko Massava JORC Mineral Resource estimate of average 41% VHM of the HMC for the high-grade area (**refer ASX Announcement 16 December 2021**) and from the updated Nhacutse and Poiombo JORC Mineral Resource Estimate at average 45% and 46 % VHM respectively of the HMC within the >4% THM areas (**refer ASX Announcement 8 April 2022**).

The low VHM grey sand lithology intersected at depth in Magonde (samples Mumin 02 and Mumin 05; **Table 1**) has not been seen in any other MRG Project to date. This low VHM lithology, that still has high VHM grade, will be studied further during infill aircore drilling.

MRG Metals Chairman, Mr Andrew Van Der Zwan said: *"Our aircore drilling program at the Magonde Target at Marao has been very successful with two of the three holes drilled delivering very high Valuable Heavy Mineral results from surface, averaging at an impressive 60% VHM (excluding Titanomagnetite at 15%). The mineralogical results showing higher VHM results from the red sand lithology and the higher grade Titanomagnetite content clearly demonstrate the potential for the Magonde target to host high grade and high value HMC. Impressively the VHM % reported in red sand*

at Magonde is significantly higher than that reported in our updated Koko Massava and Nhacutse/Poiombo JORC MREs. We look forward to following up this program with tighter spaced aircore drilling and additional mineralogical work in the new year which we hope will further unlock the potential of this significant target."

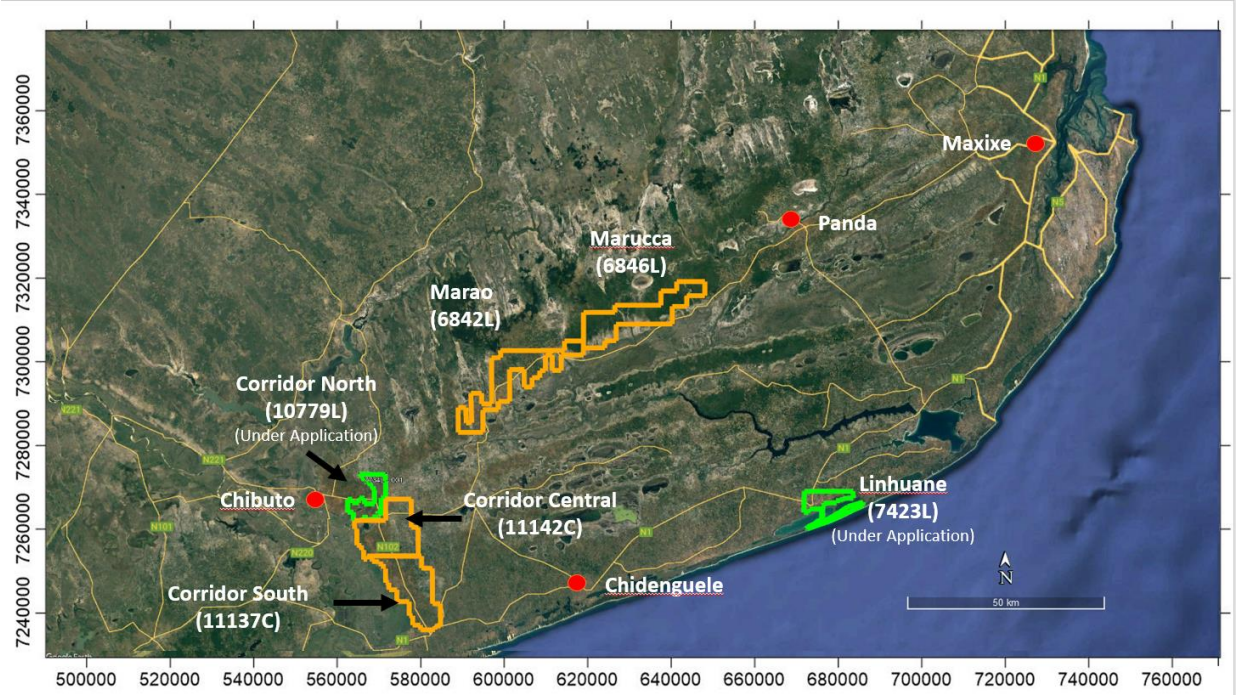


Figure 1: *MRG HMS Projects in Mozambique, reconnaissance aircore drilling took place within the Marao (6842L) Project.*

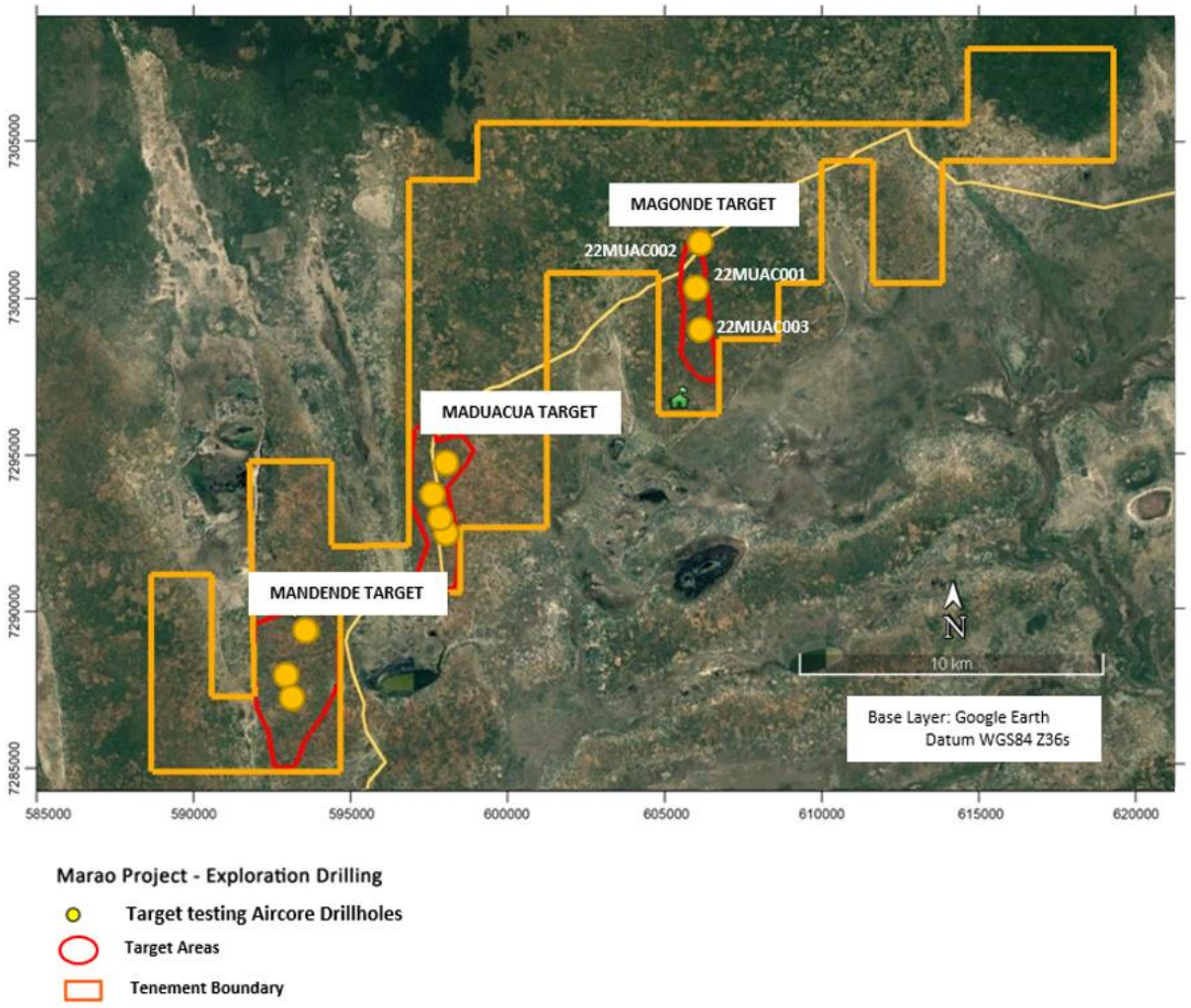


Figure 2: *Target testing aircore drillholes at Marao 6842L, with the 3 holes within Magonde Target clearly shown (22MUAC001 to 22MUAC003).*

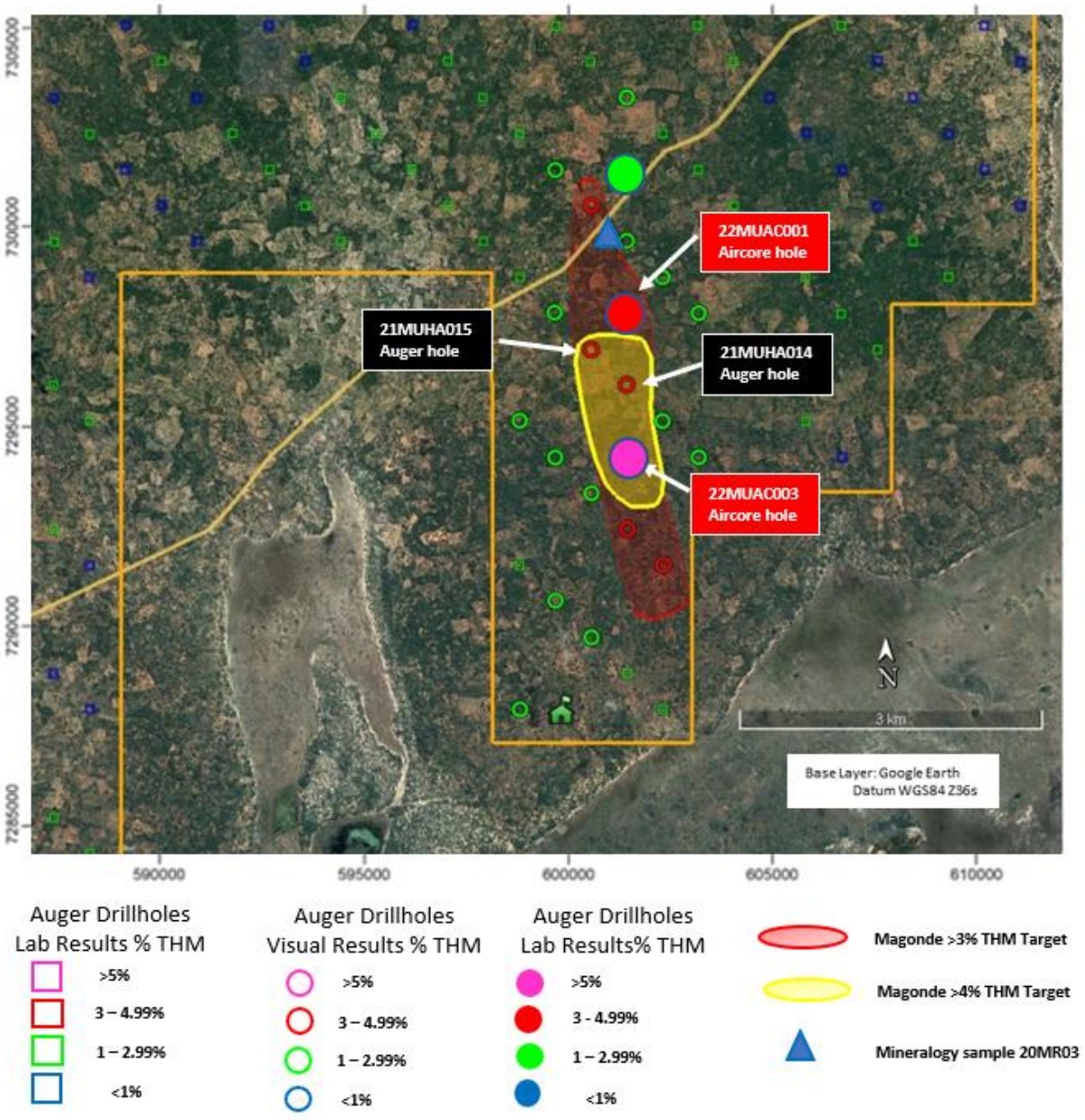


Figure 3: *Laboratory results for aircore holes and Visually Estimated (VIS EST) results for auger holes drilled at Marao (6842L) (**refer ASX Announcement 21 July 2022**).*

Table 1: *Summary mineralogy data of 5 composite samples derived from QEMSCAN, XRF and XRD analyses for 3 target testing aircore drillholes at Magonde Target, Marao (6842L).*

Sample	Mumin 01	Mumin 02	Mumin 03	Mumin 04	Mumin 05	Min	Max	Ave	StDev	Average	
Locality	Marao		Marao	Marao							
Target	Magonde		Magonde	Magonde							
BH ID	22MUAC001		22MUAC002	22MUAC003							
Interval (m)	0.0 - 27.0	27.0 - 34.5	0.0 - 12.0	0.0 - 19.5	19.5 - 25.5						
Lithology	Red Sand	Gray Sand	Red Sand	Red Sand	Gray Sand						
Mineral											
Zircon	2.6	1.2	2.8	2.5	1.4	1.2	2.8	2.1	0.7	**48.16**	**Total VHM in HMC**
Rutile	2.0	1.2	2.4	2.0	1.2	1.2	2.4	1.8	0.5		
Leucoxene	0.3	0.1	0.4	0.2	0.2	0.1	0.4	0.3	0.1		
Altered Ilmenite	6.9	2.8	7.4	6.0	4.7	2.8	7.4	5.5	1.8		
Ilmenite	50.0	22.0	48.9	47.6	24.2	22.0	50.0	38.5	14.1		
Titanomagnetite	14.6	9.2	14.2	15.1	8.6	8.6	15.1	12.4	3.2	**12.35**	**Total Titanomagnetite in HMC**
Hematite	4.2	2.1	4.7	3.4	1.7	1.7	4.7	3.2	1.3	**39.49**	**Total Non-VHM in HMC**
Chromite	3.4	2.5	3.2	3.6	2.5	2.5	3.6	3.0	0.5		
Magnetic Others	2.1	27.1	1.6	5.7	30.1	1.6	30.1	13.3	14.1		
Andalusite	9.1	9.4	10.4	6.4	4.5	4.5	10.4	8.0	2.4		
Non-magnetic Others	4.8	22.6	4.1	7.5	20.9	4.1	22.6	12.0	9.0		
VHM in HMC	**61.8**	**27.2**	**61.8**	**58.2**	**31.7**						
Titanomagnetite in HMC	**14.6**	**9.2**	**14.2**	**15.1**	**8.6**						
Non-VHM in HMC	**23.5**	**63.6**	**24.0**	**26.6**	**59.7**						
Total	100.0	100.0	100.0	100.0	100.0						

Table 2: *Summary collar and Assay THM% results for 19 grid hand auger drillholes at Marao (6842L).*

DRILLHOLE INFORMATION						MINERALISATION LAB RESULTS			
HOLE ID	UTM EAST WGS84	UTM NORTH WGS84	ELEV'N (M)	EOH (M)	DRILL TYPE	FROM	TO	INTERSECTION (M)	% LAB THM
21MUHA001	7297180	604881	55	13.0	AUGER	0.0	13.0	13.0	1.3
21MUHA002	7297880	605590	64	13.0	AUGER	0.0	13.0	13.0	1.6
21MUHA003	7298584	606306	91	13.5	AUGER	0.0	13.5	13.5	3.6
21MUHA006	7298243	605238	71	13.5	AUGER	0.0	13.5	13.5	1.3
21MUHA008	7298940	605953	93	13.5	AUGER	0.0	13.5	13.5	3.0
21MUHA009	7299295	605601	85	13.5	AUGER	0.0	13.5	13.5	2.2
21MUHA010	7299648	605247	81	13.5	AUGER	0.0	13.5	13.5	1.8
21MUHA011	7300011	604899	84	13.5	AUGER	0.0	13.5	13.5	1.1
21MUHA012	7299639	606662	105	13.5	AUGER	0.0	13.5	13.5	2.0
21MUHA013	7299998	606308	173	13.5	AUGER	0.0	13.5	13.5	2.6
21MUHA014	7300356	605957	92	13.5	AUGER	0.0	13.5	13.5	4.3
21MUHA015	7300706	605608	89	13.5	AUGER	0.0	13.5	13.5	4.0
21MUHA016	7301071	605252	83	13.5	AUGER	0.0	13.5	13.5	1.7
21MUHA019	7301055	606674	82	13.5	AUGER	0.0	13.5	13.5	2.1
21MUHA020	7301410	606319	78	13.5	AUGER	0.0	13.5	13.5	1.2
21MUHA021	7301771	605969	86	13.5	AUGER	0.0	13.5	13.5	2.9
21MUHA022	7302122	605624	71	13.5	AUGER	0.0	13.5	13.5	3.5
21MUHA023	7302472	605270	69	13.5	AUGER	0.0	13.5	13.5	2.1
21MUHA025	7303181	605980	88	13.5	AUGER	0.0	13.5	13.5	2.3

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.

-ENDS-

Authorised by the Board of MRG Metals Ltd.

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Appendix 1

JORC Code, 2012 Edition – Table 1

Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
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 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.*	**Aircore for mineralogy** • Aircore drilling was used to obtain samples at 1.5m intervals. • The larger 1.5m interval aircore drill samples were homogenized by rotating the sample bag prior to being grab sampled for panning. • A sample of sand, approximately 20g, was scooped from the sample bag of each sample interval for wet panning and visual estimation. • The same sample mass is used for every pan sample visual estimation. • The consistent sized pan sample is to ensure visual calibration is maintained for consistency in percentage visual estimation of total heavy mineral (THM). • Images of pan concentrate samples with associated laboratory THM results are used in the field as comparisons to further refine visual estimation of THM. • Geologists enter the laboratory THM results for each sample on field log sheets against the visual estimation of THM to refine and further calibrate field visual estimation of THM. • Geotagged photographs are taken of 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 and sample mass, and photographs are taken of samples for each hole to cross-reference with logging. • The large 1.5m drill samples have an average of about 7kg, range 1-21kg, and are being split down in Mozambique to approximately 300-600g using a three tier riffle splitter for export to the Primary processing laboratory. • Composite samples for QEMSCAN mineral assemblage analysis were created from heavy mineral concentrate (HMC) from each of the sample intervals in selected aircore holes. Samples were composited according to different lithologies identified during geological logging. • Each HMC was split with a Jones micro-riffle splitter and combined with other splits from a single hole and combined to create composite

Criteria	JORC Code explanation	Commentary
		sample. • Composite samples were prepared and submitted to SJTMetMin. **Auger sampling:** • A sample of sand, approximately 20g, was scooped from the sample bag of each sample interval for wet panning and visual estimation. • The same sample mass is used for every pan sample visual estimation. • The consistent sized pan sample is to ensure visual calibration is maintained for consistency in percentage visual estimation of total heavy mineral (THM). • Geotagged photographs are taken of each panned sample with the corresponding sample bag to enable easy reference at a later date • The larger 1.5m interval auger drill samples were homogenized prior to being grab sampled for panning. • Visual estimated THM% results are filtered to determine which holes are sent for laboratory analysis. Only holes with average uncut downhole grade ≥3% visual estimated THM are sent for heavy liquid separation laboratory analysis. • The large 1.5m drill samples have an average of about 4kg and were split down in Mozambique to approximately 300-600g by riffle splitter for export to the Primary processing laboratory. • At the laboratory the 300-600g laboratory sample was dried and split to 100g, de-slimed (removal of -45µm fraction) and oversize (+1mm fraction) removed, then subjected to heavy liquid separation using TBE to determine total heavy mineral (THM) content.
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).*	**Aircore for mineralogy** • Reverse Circulation 'Aircore' drilling with inner tubes for sample return was used. • Aircore drilling is considered a standard industry technique for heavy mineral sand (HMS) mineralization. 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 3m long. • Drill rods used were 76mm in diameter and NQ diameter (80mm) Harlsan aircore drill bits were used. • All drill holes were drilled vertical. • The drilling onsite is governed by an Aircore Drilling Guideline to ensure consistency in application of the method between geologists.

Criteria	JORC Code explanation	Commentary
		Hand Auger drilling is a manual hand operated system produced by Dormer Engineering in Australia. • Drill rods and drill bits are 1m long. • The auger is a 62mm open hole drilling technique. • All holes have been drilled vertically. • The drilling onsite is governed by a Hand Auger Drilling Guideline to ensure consistency in application of the method. • A wooden surface collar is placed on the ground at the beginning of each hole to prevent widening of the collar and material falling into the hole.
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 preferential loss/gain of fine/coarse material.*	• Drill sample recovery is monitored by measuring and recording the total mass of each 1.5m sample at the drill rig with a standard spring balance. • While initially collaring the hole, limited sample recovery can occur in the initial 0.0m to 3.0m sample intervals owing to sample and air loss into the surrounding loose soil. • The initial 0.0m to 3.0m sample intervals are drilled very slowly in order to achieve optimum sample recovery. • The entire 1.5m sample is collected at the drill rig in large numbered plastic bags for dispatch to the onsite initial 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. • Wet and moist samples are placed into large plastic basins to dry prior to splitting. • For preparation of QEMSCAN composite samples each HMC for each sample interval was split with a Jones micro-riffle splitter and combined with other splits from a single hole and combined to create the composite sample. • Composite samples have weights of between 15.85g and 40.96g. • **Auger** drilling is considered to be an early stage relatively unsophisticated technique of drilling. • The auger drill used is an open hole method and recovery of sample extracted from the holes is measured by spring balance at the drill site.

Criteria	JORC Code explanation	Commentary
		• Samples are consistently collected at 1.5m intervals. • No significant losses of auger sample were observed due to the shallow depths of drilling (<12m). • The initial 0–1.5m interval in each auger hole is drilled with care to maximize sample recovery. • There is potential for contamination in open hole drilling techniques but sample bias is not likely due to the shallow drill hole depths.
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.*	**Aircore** • The 1.5m aircore drill intervals are logged onto paper field log sheets at the drill site prior to transcribing into a Microsoft Excel spreadsheet at the field office. Field paper logs are scanned and archived digitally on a cloud storage site with the broader geological database. • The aircore samples were logged for lithology, colour, grainsize, rounding, sorting, estimated %THM, estimated %slimes and any relevant comments, such as slope and vegetation. • A representative portion of every sample interval is collected in a chip-tray and archived at the field base for any additional logging. A photograph is collected of the chip tray related to each hole and is digitally archived on a cloud storage site. • Geological logging is governed by an Aircore Drilling Guideline document with predefined log codes and guidance of what to include in data fields to ensure consistency between individuals logging data. • Data is backed-up each day at the field office to a cloud storage site. • Data from the Microsoft Excel spreadsheets is imported into a Microsoft Access database and the data is subjected to numerous validation queries to ensure data quality. **Hand Auger** • For **auger** the 1.5m auger drill intervals were logged onto paper field log sheets prior to transcribing into a Microsoft Excel spreadsheet. • The auger samples were logged for lithology, colour, grainsize, rounding, sorting, estimated %THM, estimated %slimes and any relevant comments, such as slope and vegetation. • Geological logging is governed by a Hand Auger Drilling Guideline with predefined log codes and guidance of what to include in log fields to ensure consistency between individuals logging data. • Field photographs are taken of each panned sample alongside the sample bag with sample number to track numbers of samples per hole and cross reference with laboratory data. • Data is backed-up each day at the field base to a cloud storage site.

Criteria	JORC Code explanation	Commentary
		• Data from the Microsoft Excel spreadsheets is imported into a Microsoft Access database and the data is subjected to numerous validation queries to ensure data quality.
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-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.*	**Aircore** • The entire 1.5m aircore drill sample collected at the rig was dispatched to a sample preparation facility to split with a three tier riffle splitter to reduce sample mass. • The water table depth was noted in all geological logs if intersected. • Employees undertaking the primary sampling and splitting are closely monitored by a geologist to ensure sampling quality is maintained. • Almost all of the samples are sand, silty sand, sandy silt, clayey sand or sandy clay 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 the samples are completed at a frequency of 1 per 25 primary samples. • Standard Reference Material (SRM) samples are inserted into the sample stream at a frequency of 1 per 50 samples. **Auger** • For Auger the 1.5m drill sample composites were homogenized at the drill site and then cone-and-quarter split onsite and inserted into clean calico sample bags with metal sample tag according to the Hand Auger Drilling Guideline. • At the field base, the samples were homogenized within the calico bag by rotating it and then fed through a single tier riffle splitter that is placed on a hard surface and levelled, to reduce samples to 300-600g sub-samples for export to the Primary processing laboratory. • The 300-600g sub-sample is deposited into a new labelled calico sample bag with metal sample tag and prepared to be sent to the Primary laboratory for analysis. • Where samples were wet when sampled, they were dried in clean plastic basins prior to riffle splitting. • All of the samples collected have been sand or silty-sand and the preparation techniques are considered appropriate for this sample type.

Criteria	JORC Code explanation	Commentary
		• The sample sizes were deemed suitable based on industry experience of the geologists involved and consultation with laboratory staff. • Field duplicates of the samples were completed at a rate of 5%, or at a frequency of approximately 1 per 25 primary samples. • Standard Reference Material (SRM) samples are inserted into the sample stream at a frequency of 1 per 50 samples. • Employees undertaking the primary sampling and splitting are closely monitored by a geologist to ensure sampling quality is maintained.
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) and precision have been established.*	**Auger data** • The wet panning of samples provides an estimate of the %THM content within the sample which is sufficient for the purpose of determining approximate concentrations of %THM. • The field derived visual panned THM estimates are compared to a range of laboratory derived THM images of pan concentrates. This allows the field geologists to calibrate the field panned visual estimated THM with known laboratory measured THM grades. **Mineralogy Data** • The wet panning of samples provides an estimate of the %THM content within the sample which is sufficient for the purpose of determining approximate concentrations of %THM. • The field derived visual panned THM estimates are compared to a range of laboratory derived THM images of pan concentrates. This allows the field geologists to calibrate the field panned visual estimated THM with known laboratory measured THM grades. • The laboratory analyses and procedures are consistent with and applicable to the heavy sand analysis. • Each composite sample was split using a 2-way splitter at SJTMetMin Services to produce representative sub-samples for X-ray fluorescence (XRF) analyses, X-ray diffraction (XRD) analyses and polished sections preparation for microscopic examination. • Chemical assays were done by SJTMetMin using X-Ray Fluorescence (XRF) spectroscopy conducted on a Rigaku Mini 200 XRF on fused beads. The beads were prepared by conducting a loss on ignition at 950degrees C and the beads were cast using a Claisse M4 Fluxer, utilizing the Claisse borate flux. A full calibration for the elements reported was conducted using international certified material. • The bulk mineralogical compositions were determined by X-ray

Criteria	JORC Code explanation	Commentary

diffraction (XRD) analyses using a Panalytical diffractometer and Co-radiation. The phases were identified using Panalytical Highscore Plus software and phase quantification was performed using the Rietveld Refinement method.

- Polished sections for light and electron microscopic examinations were prepared by SJTMetMin Services.
- SJTMetMin Services used quantitative evaluation of minerals by scanning electron microscopy (QEMSCAN) to determine the bulk modal mineralogical (BMA) composition, mineralogical calculated chemical composition, particle characteristics and associated particle size distribution of each sample.
- SJTMet Min uses QAQC standards based on their internal systems and processes and industry standards.
- Particle type definition is shown in table below:

Mineral	**Mineral Formula**
Fe-oxides	Fe_2O_3
Fe(HiTi)-oxides	$(FeTi)_2O_3/(Fe,Ti)_3O_4$
Total Fe(Ti)-oxides:	
Ilmenite (TiO_2 52%)	$FeTiO_3$
Alt-Ilmenite I (TiO_2 62%)	$Fe_2Ti_3O_9$
Alt-Ilmenite II (TiO_2 74%)	Fe_2-xTi_3+xO_9+y
Total Ti(Fe)-oxides:	
Rutile	TiO_2
Sphene	$CaTiSiO_4$
Goethite	FeO(OH)
Zircon	$ZrSiO_4$
Total Zircon:	
Quartz	SiO_2
Feldspar	$NaAlSi_3O_8$

Criteria	JORC Code explanation	Commentary

Mica*	$KAl_2(Si_3Al)O_{10}(OH,F)_2$
Kaolinite/Clay	$Al_2Si_2O_5(OH)_4$
Kaolinite (Fe)	$(Al,Fe)_2Si_2O_5(OH)_5$
Pyroxene/Amphibole	$NaCa_2Mg_3FeSi_6Al_3O_{22}(OH)_2$
Tourmaline	$Al_6B_3Fe_3H10NaO_{31}Si_6$
Andalusite	Al_2SiO_5
Garnet (Ca,Fe)	$Ca_3(Al,Fe)_2(SiO_4)_3$
Total Silicates:	
Chromite	$FeCr_2O_4$
Corundum	Al_2O_3
Mn-hydroxides	$(Ba,Ce)_{1-y}(MnO_2)_{2-x}(OH)_{2-2y+2x} \bullet n(H_2O)$
Other Oxides	$MgAl_2O_4$
Total Oxides:	
Monazite	$(Ce,La,Nd,Th)PO_4$
Others	$CaCO3$; $BaSO_4$; $Ca_5(PO_4)_3F$

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.*	**Aircore and Mineralogy** • Selected visual estimated THM field data are checked by the Chief Geologist. • Significant visual estimated THM >5% are verified by the Chief Geologist. This is done either in the field or via field photographs of the pan sample. • The Chief Geologist has made numerous visits to the field drill sites to train and embed process and procedure with field staff. • The geologic field data is manually transcribed into a master Microsoft Excel spreadsheet which is appropriate for this stage in the exploration program. • The raw field data is checked in the Microsoft Excel format first to identify any obvious errors or outlier data. The data is then imported into a Microsoft Access database where it is subjected to various validation queries. • The QEMSCAN data are checked by SJTMetMin laboratory for correctness before provision to the Company, and then checked by the

Criteria	JORC Code explanation	Commentary
		Company consulting mineralogist. **Auger** • Selected visual estimated THM field data are checked by the Chief Geologist. • Significant visual estimated THM >5% are verified by the Chief Geologist. This is done either in the field or via field photographs of the pan sample. • The Chief Geologist has made numerous visits to the field drill sites to train and embed process and procedure with field staff. • No twinned holes have been completed during this programme to date but twin holes are planned. • The geologic field data is manually transcribed into a master Microsoft Excel spreadsheet which is appropriate for this stage in the exploration program. • The raw field data is checked in the Microsoft Excel format first to identify any obvious errors or outlier data. The data is then imported into a Microsoft Access database where it is subjected to various validation queries.
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.* • *Quality and adequacy of topographic control.*	• Downhole surveys for these aircore holes are not required due to the relatively shallow nature. • A handheld 16 channel Garmin GPS is used to record the positions of the aircore holes in the field. • The handheld Garmin GPS has an accuracy of +/- 5m in the horizontal. • The datum used for coordinates is WGS84 zone 36S. • The accuracy of the drillhole locations is sufficient for this early stage 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.*	**Aircore** • Hole spacing between the 3 aircore holes is in the 1,400m range. • The spacing between aircore holes and between lines combined with that of the previously drilled auger holes is sufficient to provide a good degree of confidence in geological models and mineralogy continuity between holes for aeolian style HMS deposits. • Each aircore drill sample is a single 1.5m sample of sand intersected down the hole. • No compositing has been applied to values of THM, slime and oversize. • Aircore holes were composited as a top 1-15m and a bottom 15-30m composite on each of the 5 drillholes.

Criteria	JORC Code explanation	Commentary
		• The mineralogy composites were done lithologically based on interpreted different lithologies. **Auger** • Hole spacing used in this reconnaissance drill program is 500m by 1000m spacing between auger drillholes hole stations. The holes were located from a regular grid but are reconnaissance phase holes. • The spacing between auger holes and between lines is sufficient to provide a reasonable degree of confidence in geological models and grade continuity between holes for aeolian style HMS deposits during this reconnaissance drilling phase. • Closer spaced drilling in follow-up drilling phases (250m x 500m and 250m x 1000m spaced holes) will provide a higher confidence in geological models and grade continuity between the holes. • Each auger drill sample is a single 1.5m sample of sand intersected down the hole. • No compositing has been applied to values of THM, slime and oversize.
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.*	**Aircore** • The aircore drilling was located at selected sites along the interpreted strike of mineralization defined by reconnaissance auger drill data and geophysical data interpretation. • Drill holes were vertical and the nature of the mineralisation is relatively horizontal. • The orientation of the drilling is considered appropriate for testing the lateral and vertical extent of mineralization without any bias. Auger • Hole spacing used in this grid drill program is 500m by 1000m spacing between auger drillholes hole stations. The holes were located from a regular grid but are reconnaissance phase holes. • The spacing between auger holes and between lines is sufficient to provide a reasonable degree of confidence in geological models and grade continuity between holes for aeolian style HMS deposits during this reconnaissance drilling phase. • Closer spaced drilling in follow-up drilling phases (250m x 500m and 250m x 1000m spaced holes) will provide a higher confidence in geological models and grade continuity between the holes. • Each auger drill sample is a single 1.5m sample of sand intersected down the hole. • No compositing has been applied to values of THM, slime and

Criteria	JORC Code explanation	Commentary
		oversize. **Auger** • The auger drilling was located on a grid drilling pattern covering the entire licence along the interpreted strike of mineralization. • Drill holes were vertical and the nature of the mineralisation is relatively horizontal. • The orientation of the drilling is considered appropriate for testing the lateral and vertical extent of mineralization without any bias.
Sample security	• *The measures taken to ensure sample security.*	• Field photographs are taken of each sample bag with corresponding sample number and panned sample in order to track numbers of samples per hole and per batch. • Aircore samples remained in the custody of Company representatives while they were transported from the field drill site to Chibuto field camp for splitting and other processing. • Aircore samples remain in the custody of Company representatives until they are transported to Maputo for final packaging and securing. • The Company uses a commercial shipping company, Deugro or DHL, to ship samples from Mozambique to Perth. • DHL was also used to transport the samples to SJTMetMin.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• Internal data and procedure reviews are undertaken. • No external audits or reviews have been undertaken.

Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
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 Marao tenement (6842L) which is 100% owned by the Company through its 100% ownership of its subsidiary, Sofala Mining & Exploration Limitada, in Mozambique. • All granted tenements have initial 5 year terms, renewable for 3 years. • Traditional landowners and village Chiefs within the areas of influence were consulted prior to the aircore drilling programme and were supportive of the programme. • 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 is currently being prepared by an independent consultant and will be submitted to the Gaza Provincial Directorate of Lands, Environment and Rural Development in accordance with Mining Law and Regulations.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• Historic exploration work was completed by Rio Tinto. • The Company has obtained digital data in relation to this historic information. • The historic data comprises very limited Auger 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, and 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 Inhambane (Rio Tinto's Mutamba deposit), near Xai Xai (Rio Tinto's Chilubane deposit) and in Nampula Province (Kenmare's Moma deposit). Buried strandlines are likely in areas where palaeoshorelines can be defined along coastal zones.
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:*	• Summary auger drill hole information is presented within Table 2 of the main body of text of this announcement.

<table>
<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
<tr><td></td><td>

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.
</td><td></td></tr>
<tr><td>Data aggregation methods</td><td>
• 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.
</td><td>
• No cut-offs were used in the downhole averaging of results.
• The visual estimated THM% averaging is grade-weighted.
• An example of data averaging is shown below.
<table>
<tr><th>HOLE_ID</th><th>FROM</th><th>TO</th><th>PCT VIS THM</th><th>Average visTHM</th><th>Average visTHM</th></tr>
<tr><td>19CCAC104</td><td>0.0</td><td>3.0</td><td>6.0</td><td rowspan="13">37.5m @ 4.9%</td><td rowspan="10">27m @ 6.3%</td></tr>
<tr><td>19CCAC104</td><td>3.0</td><td>6.0</td><td>6.0</td></tr>
<tr><td>19CCAC104</td><td>6.0</td><td>9.0</td><td>6.0</td></tr>
<tr><td>19CCAC104</td><td>9.0</td><td>12.0</td><td>8.0</td></tr>
<tr><td>19CCAC104</td><td>12.0</td><td>15.0</td><td>6.2</td></tr>
<tr><td>19CCAC104</td><td>15.0</td><td>18.0</td><td>6.6</td></tr>
<tr><td>19CCAC104</td><td>18.0</td><td>21.0</td><td>5.5</td></tr>
<tr><td>19CCAC104</td><td>21.0</td><td>24.0</td><td>8.0</td></tr>
<tr><td>19CCAC104</td><td>24.0</td><td>27.0</td><td>4.0</td></tr>
<tr><td>19CCAC104</td><td>27.0</td><td>30.0</td><td>2.5</td></tr>
<tr><td>19CCAC104</td><td>30.0</td><td>33.0</td><td>2.0</td></tr>
<tr><td>19CCAC104</td><td>33.0</td><td>36.0</td><td>1.7</td></tr>
<tr><td>19CCAC104</td><td>36.0</td><td>37.5</td><td>1.5</td></tr>
</table>
</td></tr>
<tr><td>Relationship between mineralisation widths and intercept lengths</td><td>
• 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 effect (eg 'down hole length, true width not known').
</td><td>
• The nature of the mineralisation is broadly horizontal, thus vertical aircore holes are thought to represent close to true thicknesses of the mineralisation.
• Downhole widths are reported.
</td></tr>
<tr><td>Diagrams</td><td>
• 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.
</td><td>
• Figures are displayed in the main text.
</td></tr>
<tr><td>Balanced reporting</td><td>
• Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades
</td><td>
• A summary of the mineralogical data is presented in Table 1 of the main part of the announcement. The data was derived from
</td></tr>
</table>

Criteria	JORC Code explanation	Commentary
	and/or widths should be practiced to avoid misleading reporting of Exploration Results.	QEMSCAN, XRF and XRD analyses. • A summary of the laboratory derived THM% data is presented in Table 2 of the main part of the announcement, comprising downhole averages, together with maximum and minimum estimated THM values in each hole.
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.*	• No other material exploration information has been gathered by the Company.
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.*	• Further work will include closer spaced additional Aircore drilling. • Additional mineral assemblage and ilmenite mineral chemistry analyses will also be undertaken on suitable composite HM samples to determine valuable heavy mineral components. • As the project advances, TiO2 and contaminant test work analyses will also be undertaken.