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HEAVY MINERAL SANDS PROJECTS IN MOZAMBIQUE – AUGER DRILLING UPDATE

High grade mineralisation from auger drilling verifies historic RC drilling at similar depths.

Reconnaissance auger drilling defines sizeable 2km X 2km zones at surface of high grade heavy mineral mineralisation.

- **Impressive high grade visual estimates of total heavy mineral from pan concentrates completed over zones of historic high grade drilling (refer ASX press release 23 January 2019). The shallow auger drilling validates historic RC drilling from the 1990's.**
- **The discovery of a significant new zone of mineralisation, >5% visual estimated THM from pans concentrates to the east of the historic RC drilling, controlled by a large palaeodune feature up to 7km long and 1km wide on the Corridor Central tenement.**
- **Best initial progress results are: hole 19CCHA015 with 12m from surface @ 8% visual estimated THM; hole 19CCHA013 with 12m from surface @ 7% visual estimated THM. Both holes were drilled to maximum penetration depth and ended in high grade THM.**
- **Significantly, the auger drilling in addition to planned AC drill programs will be used to establish further confidence in the historic RC data that will enable its use for JORC 2012 Mineral Resource Estimation.**

Details:

Verification and orientation auger drilling at Koko Masava

Shallow hand auger drilling has been conducted in the northwest of the Corridor Central (6620L) tenement on the Koko Masava Prospect for verification of previous, historic aircore drilling. The drilling was conducted on two drill traverses, one of which is still to be completed, with hole depths that range between 10.5 and 12 metres. Auger holes were drilled at 500 metre hole stations with the traverses 2,000 metres apart. Samples were collected at 1.5 metre intervals downhole, with each sample panned to estimate a visual total heavy mineral (THM) grade.

A total of 11 verification and orientation holes (19CCHA017 to 19CCHA026) have been drilled to date, for 106.5 metres and 71 samples, not including QA/QC samples (Table 1). The estimated visual THM grade range over the current sample batch is 1.5–4.5%, with an average of 3%. The best hole in 19CCHA021 with 10.5m @ 4.0% visual estimated THM (Figures 1 & 3). Due to the thickness of heavy mineral in pan concentrates it is likely that the visual estimations of THM could be conservative (Figure 1). Optical microscopy of field pan concentrates indicate that ilmenite is the dominant valuable heavy mineral (VHM), although rutile, zircon and leucoxene VHM species are also noted as part of the assemblage. Importantly, trash mineral contents in the pan concentrates appear to be very low.

In terms of the comparable depth historic aircore drilling (refer ASX announcement 23 January 2019), the range of laboratory derived grades from sample intervals between 0 to 12 metres depth within holes is 1.0–7.4% THM, with an overall sample average 3.38% THM from 47 samples. This correlates closely with the visual estimated THM% data obtained from the Company's auger drilling presented herein.

Auger samples are currently being prepared as a batch for export to Australia for heavy liquid separation analysis, in order to validate and calibrate the field-based visual estimations.



Figure 1: Field photos of heavy mineral pan concentrates from holes 19CCHA021 (LEFT: 3.5-4.5% visual estimated THM) and 19CCHA024 (RIGHT: 4.0-5.0% visual estimated THM) showing the significant heavy mineral volumes within each sample.

Reconnaissance auger drilling – new discovery over previously undrilled palaeodunes

Reconnaissance hand auger drilling to the east of historic RC drilling was conducted over interpreted palaeoshorelines at the Malehice Prospect within Corridor Central (6620L). Impressive visual estimated THM grades up to 12% from individual down hole samples were discovered at this new Prospect. Of particular note were 13 metre deep holes ending in high grade - > 5% visual estimated THM.

The drilling was completed on lines 2,000 metres apart with hole stations 1,000 metres apart, and between 10.5–13 metres deep. A total of 16 holes were drilled (19CCHA001 to 19CCHA016) for a total of 192 metres and 130 samples, not including QA/QC samples (Table 1). Samples were collected at 1.5 metre intervals downhole. The visual estimated THM grades over the sample batch ranges from 0.5–12%, with an average of 4.3%. The best results are from hole 19CCHA015 with 12m @ 8% visual estimated THM, plus 19CCHA013 and 19CCHA006 containing 12m @ 7% and 13m @ 7% visual estimated THM, respectively (Figures 2 & 4). Each of the three afore-mentioned holes ended in mineralisation >5% visual estimated THM grades. Whilst the holes are considered wide spaced, the discovery of these new zones of mineralisation that is open at depth is significant and show strong potential for further deeper mineralisation.

The sand lithology in the eastern reconnaissance holes comprises relatively well sorted, fine-medium grained, grey-brown sand, which contrasts with sand in the west of the tenement area closer to the Limpopo River valley, which is medium-coarse grained, moderately sorted, red-brown sand. There is a correlation of the high grade heavy mineral results from the recent reconnaissance auger drilling and linear, sub-parallel NNW-SSE topographic features defined by the new high resolution digital elevation data obtained by the Company from the airborne survey completed in April, 2019 (Figure 4). The newly defined linear features are interpreted as limbs of parabolic coastal palaeodunes that overprint older shorelines, deposited subsequent to coastal progradation. Discrete sections of the palaeodune limbs are 5–7km long and 1km wide and present exciting additional high quality exploration targets on the east side of both Corridor Central (6620L) and Corridor South (6621L) tenements which has not previously been explored.

These additional topographic targets will be complied and ranked together with the geophysical targets that will be generated from the final processed airborne data later in May, and will be progressively tested with auger drilling.



Figure 2: Field photos of heavy mineral pan concentrates from holes 19CCHA006 (LEFT: 6.0-8.0% visual estimated THM, sample 1900604) and 19CCHA015 (RIGHT: 6.0-7.5% visual estimated THM, sample 1901507) showing the significant heavy mineral volumes within each sample.

Competent Persons' Statement

The information in this report, as it relates to Mozambique Exploration Results is based on information compiled and/or reviewed by Dr Mark Alvin, who is a member of The Australasian Institute of Mining and Metallurgy. Dr Alvin is an employee 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". Dr Alvin consents to the inclusion in this report of the matters based on the information in the form and context in which they appear.

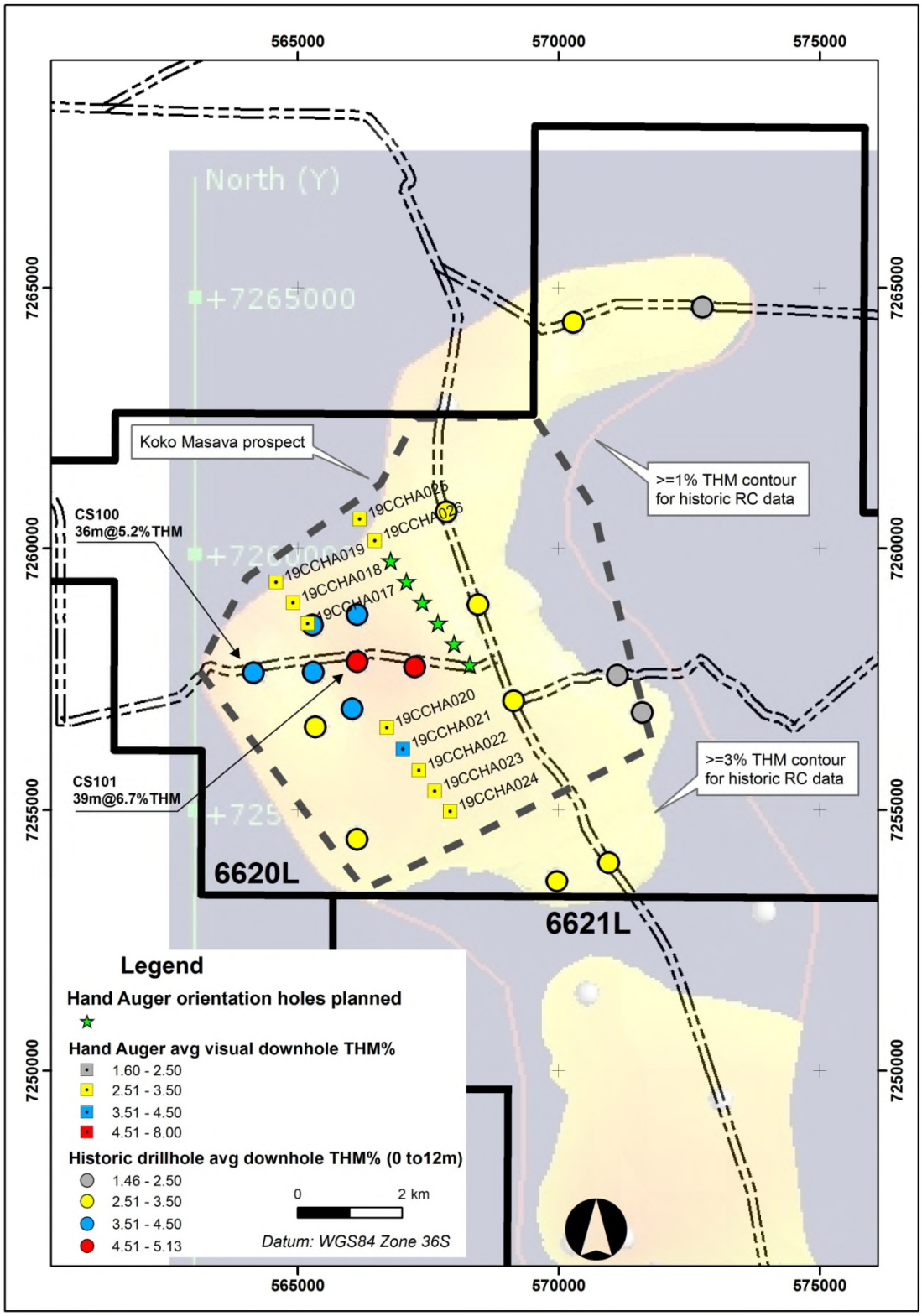

Figure 3: Hand auger drillhole location map of the Company's verification and orientation holes overlain on the historic RC hole grade contours.

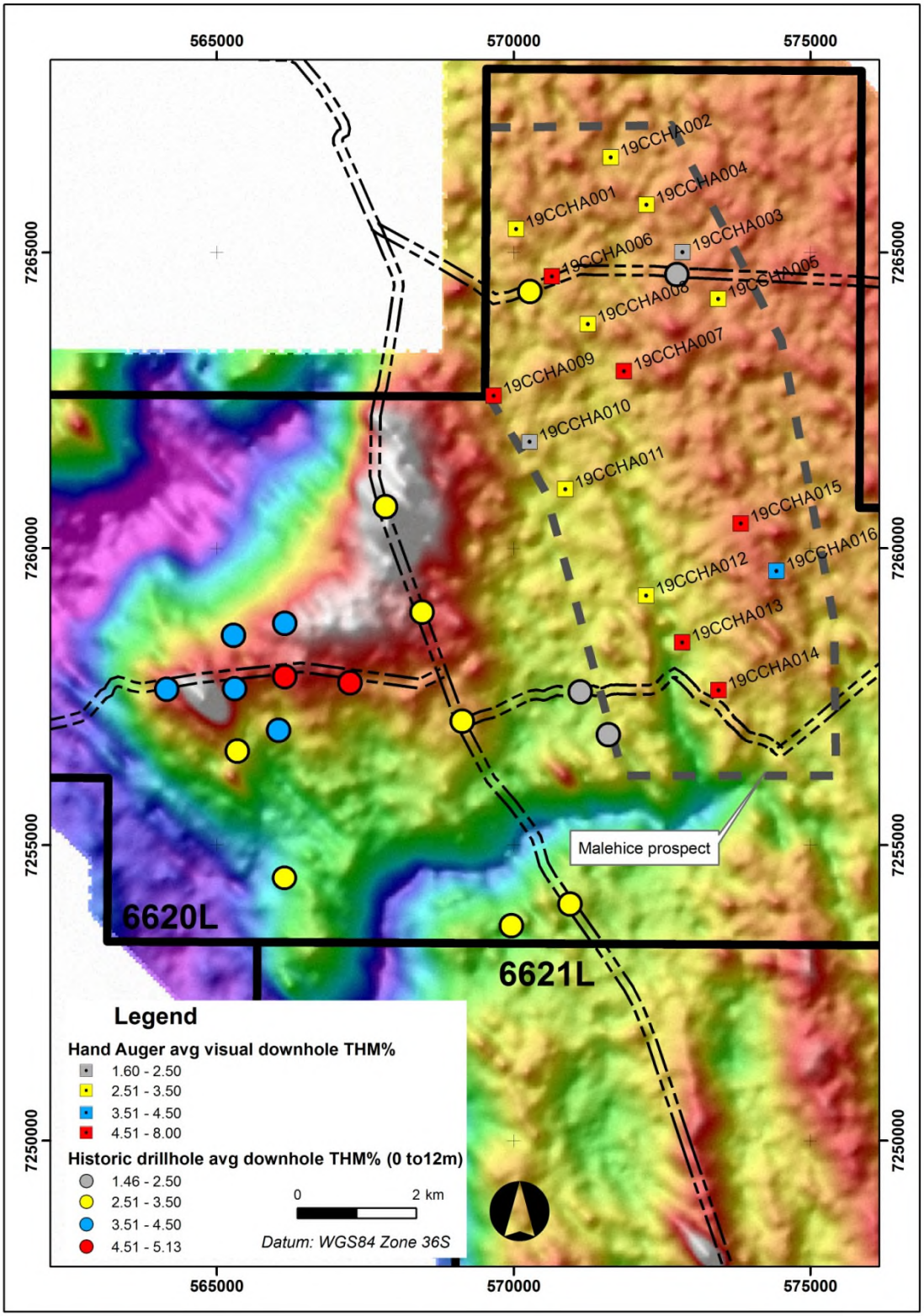

Figure 4: Hand auger drillhole location map of reconnaissance holes at Malehice prospect overlain on the preliminary digital elevation data obtained from the Company's airborne survey completed in April, 2019.

Table 1: Summary collar and visual estimated % THM data for hand auger drilling on the Corridor Central (6620L) tenement.

HOLE_ID	EASTING UTM_WGS84	NORTHING UTM_WGS84	EOH (m)	ELEVAT'N (m)	DIP	AZI	PROSPECT	Downhole Avg % visual est THM	Min of % visual est THM	Max of % visual est THM
19CCHA001	570044	7265390	11.0	75	-90	360	MALEHICE	3.0	1.5	5.5
19CCHA002	571639	7266600	12.0	74	-90	360	MALEHICE	3.1	2.0	4.5
19CCHA003	572848	7265001	10.5	77	-90	360	MALEHICE	1.6	1.5	2.0
19CCHA004	572244	7265799	12.0	74	-90	360	MALEHICE	3.1	2.5	4.0
19CCHA005	573453	7264212	12.0	73	-90	360	MALEHICE	3.1	1.5	4.0
19CCHA006	**570647**	**7264590**	**13.0**	**69**	**-90**	**360**	MALEHICE	**7.1**	**5.0**	**11.0**
19CCHA007	**571861**	**7262994**	**13.0**	**73**	**-90**	**360**	MALEHICE	**4.9**	**3.5**	**6.0**
19CCHA008	571256	7263789	13.0	69	-90	360	MALEHICE	3.2	2.0	4.0
19CCHA009	569667	7262580	13.0	66	-90	360	MALEHICE	4.8	2.0	6.0
19CCHA010	570275	7261788	12.0	68	-90	360	MALEHICE	2.3	1.5	3.0
19CCHA011	570877	7260991	10.5	59	-90	360	MALEHICE	2.9	2.5	3.5
19CCHA012	572240	7259198	12.0	65	-90	360	MALEHICE	3.4	0.5	6.0
19CCHA013	**572846**	**7258407**	**12.0**	**67**	**-90**	**360**	**MALEHICE**	**7.4**	**5.0**	**12.0**
19CCHA014	**573458**	**7257602**	**12.0**	**65**	**-90**	**360**	**MALEHICE**	**5.3**	**3.0**	**7.0**
19CCHA015	**573830**	**7260410**	**12.0**	**76**	**-90**	**360**	**MALEHICE**	**8.0**	**4.0**	**12.0**
19CCHA016	574436	7259612	12.0	76	-90	360	MALEHICE	4.2	2.0	7.0
19CCHA017	565191	7258562	10.5	72	-90	360	KOKA MISSAVA	3.1	2.0	4.0
19CCHA018	564911	7258958	12.0	41	-90	360	KOKA MISSAVA	2.6	1.5	4.0
19CCHA019	564590	7259349	10.5	38	-90	360	KOKA MISSAVA	3.1	2.0	3.5
19CCHA020	566708	7256572	10.5	66	-90	360	KOKA MISSAVA	2.8	1.5	3.5
19CCHA021	**567014**	**7256163**	**10.5**	**62**	**-90**	**360**	**KOKA MISSAVA**	**3.6**	**2.0**	**4.5**
19CCHA022	567323	7255754	10.5	60	-90	360	KOKA MISSAVA	2.7	2.0	3.5
19CCHA023	567624	7255359	10.5	50	-90	360	KOKA MISSAVA	2.7	2.0	3.5
19CCHA024	567920	7254972	10.5	50	-90	360	KOKA MISSAVA	2.6	2.0	3.5
19CCHA025	**566189**	**7260561**	**10.5**	**47**	**-90**	**360**	**KOKA MISSAVA**	**3.4**	**2.5**	**4.0**
19CCHA026	566481	7260147	10.5	47	-90	360	KOKA MISSAVA	3.1	2.5	4.0

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.*	• A sample of sand, approximately 20gm, was scooped from the sample bag of each sample interval for wet panning • The same sample mass is used for every pan sample • The consistent sized pan sample is to ensure visual calibration is maintained for consistency in percentage visual estimation of total heavy mineral • Geotagged photographs are taken of each panned sample with it corresponding sample bag to enable easy reference at a later date • The larger auger 1.5m interval drill samples were homogenized prior to being split down in the field at the drill site to approximately 2-3kg sub-samples by the cone-and-quarter method and inserted into a pre-labeled calico sample bag with metal tag and corresponding sample number. Sample mass is weighed on site with a simple spring balance • A sample book is kept at the drill site to record sub-sample split mass and ensure correlation with log sheets • 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 leveled, to reduce samples to 300-600gm for export to the processing laboratory • Sub-samples produced from the riffle splitter are weighed on a digital scale tared for sample bag mass and details recorded in the 'split sample' book
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).*	• Auger drilling using a manual hand operated system produced by Dormer Engineering in Australia • Drill rods and drill bits are 1m long • 62mm open hole drilling technique • All holes have been drilled vertically • The drilling onsite is governed by a Hand Auger Drilling Guideline to

Criteria	JORC Code explanation	Commentary
		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.*	• Auger drilling is considered to be an early stage relatively unsophisticated technique of drilling • The auger drill used is an open hole method and drill recoveries are estimated according to the volume of sample extracted from the holes • No significant losses of sample were observed due to the shallow depths of drilling (<13m) • The initial 0 – 1.5m interval in each hole is drilled with care to maximize sample recovery • Auger drilling is stopped when the drill string begins to get stuck down the hole or when no additional rods are available to advance further • 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.*	• 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 Drilling Guideline with predefined codes and guidance of what to include in log fields to ensure consistency between individuals logging data • Data is backed-up each day at the field base 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
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*	• The 1.5m drill sample composites were homogenized at the drill site and then cone-and-quarter split onsite according to the 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 leveled, to reduce samples to 300-600gm for export to the processing laboratory • The 300-600gm sub-sample was deposited into labeled calico sample bags with metal sample tag and prepared to be sent to the laboratory

Criteria	JORC Code explanation	Commentary
	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.*	for analysis • No samples from this programme were wet when sampled • All of the samples collected have been sand or silty-sand and the preparation techniques are considered appropriate this sample type • 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 • A geologist supervises both the sample splitting processes
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.*	• The wet panning of samples provides an estimate of the %THM content within the sample which was sufficient for the purpose of determining approximate concentrations of THM at this stage • The field derived visual panned HM estimates are compared to a range of laboratory derived THM images of pans. This allows the field geologists to calibrate the field panned visual estimate with known THM grades. **Auger Composites:** • The individual 1.5m auger samples will be dispatched to a primary laboratory in Australia • The auger samples will be analysed for %Total Heavy Mineral (-1mm to +45µm), %Slimes (-45µm), %Oversize (+1mm), Float (-1mm to +45µm) and a mass balance check • This is an industry standard technique known as heavy liquid separation analysis • Field duplicates of the samples were completed at a rate of 5% or at a frequency of approximately 1 per 25 primary samples • The adopted QA/QC protocols are acceptable for this early stage exploratory testwork
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.*	• Selected visual estimated field data are checked by the Chief Geologist • Significant visual estimated THM >6% are verified by the Chief Geologist • The Chief Geologist makes regular visits to the field drill sites to check on process and procedure • No twinned holes have been completed due to the early nature of the auger drilling technique

Criteria	JORC Code explanation	Commentary
		• The data has been manually transcribed into a master Microsoft Excel spreadsheet which is appropriate for this early stage in the exploration program. Data is then imported into an 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 shallow auger holes are not required due to the very shallow nature • A handheld 16 channel Garmin GPS was used to record the positions of the auger holes in the field • The handheld Garmin GPS has an accuracy of +/- 5m • The datum used 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.*	• Various grid spacing was used in the auger program including 2000 x 500m and 2000m x 1000m • The auger hole spacing is sufficient to provide a moderate degree of confidence in geological models and grade continuity within the top 10.5-13m • Closer spaced drilling will be undertaken at the appropriate stage of exploration to increase confidence • The data has not been used for resource estimation
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 auger drilling was oriented perpendicular to the orientation of interpreted palaeo-shorelines and palaeo-dunal structures
Sample security	• *The measures taken to ensure sample security.*	• Auger samples remain in the custody of Company representatives until they are transported to Maputo for final packaging and securing • The samples will be sent using DHL to Perth, Australia, and will be delivered directly to the laboratory • The laboratory will inspect the samples for any evidence of tampering or being compromised.
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 Corridor Central tenement (6620L) 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 auger programme and were supportive of the program
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 1999 • The Company has obtained digital data in relation to this historic information • 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 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:* ○ *easting and northing of the drill hole collar* ○ *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar*	• Drill hole information is presented in Table 1.

Criteria	JORC Code explanation	Commentary
	○ *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.*	
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 cut-offs were used in the downhole averaging of results.
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 effect (eg 'down hole length, true width not known').*	• Auger holes are thought to represent close to true thicknesses of the mineralisation • Downhole widths are reported
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.*	• Figures are displayed in the main text
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.*	• A summary of the drill data is presented in Table 1 comprising downhole averages, together with maximum and minimum 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*	• Further work will include additional auger drilling and sampling, infill

Criteria	JORC Code explanation	Commentary
	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.*	auger sampling and heavy liquid separation analysis • High quality targets generated from reconnaissance work are planned to be drilled with aircore techniques • 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