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Australian Stock Exchange

HEAVY MINERAL SANDS PROJECTS IN MOZAMBIQUE – HIGH QUALITY MINERAL ASSEMBLAGE ESTABLISHED

High quality and robust mineral assemblage comprising up to 57.35% valuable heavy mineral (VHM) established within the total heavy mineral (THM) assemblage from three representative samples sent to Canadian laboratory.

Definition of up to 54.72% ilmenite and up to 2.64% combined rutile+zircon within the total heavy mineral assemblage.

- **Ilmenite in THM ranges from 45.09%–54.72% in the three samples, with the bulk of ilmenite defined as mineral phases with 70-85% TiO_2. Dominant ilmenite grainsize is >100µm suggesting efficient pre-concentration of the product.**
- **Combined rutile+zircon content ranges from 2.45%–2.64% of THM, which will have a significant positive impact on potential project economics.**
- **This new mineral assemblage data from Corridor Central (6620L) and Corridor South (6621L) tenements correlates well and compares favourably with that of the Corridor Deposit 1 being mined by Deshing Minerals 10 km to the north.**
- **Australian sample import permit has been granted and Mozambique auger samples are now in transit to the Australian laboratory.**

Mineral Assemblage Characteristics

The Company is pleased to announce impressive results for mineral assemblage characterisation of three selected samples from the Corridor Central (6620L) and Corridor South (6621L) tenements. The samples were collected from trap sites as heavy mineral concentrates in order to obtain baseline data on the valuable heavy mineral (VHM) assemblage within the total heavy mineral (THM) concentrate (Figure 1), which can be used to inform estimates of the unit value of potential project ore.

The results demonstrate the robust and high quality nature of the valuable mineral assemblage within the tenements, with the best VHM result of 57.35% (CCHMC03; Table 1), being notably better than the results published for Corridor Deposit 1 (Table 2) where Deshing Minerals has committed to spend US$500m. This best VHM result comprises 54.72% ilmenite, 2.06% zircon and 0.58% rutile.

Samples were submitted to Process Mineralogical Consulting Limited in British Columbia, Canada, for preparation and analysis. Each sample was screened at -45µm to remove any slime material and +1mm to remove oversize sand. The -1mm to +45µm sample fraction then underwent heavy liquid separation at 2.90 g/cc to generate a clean heavy mineral concentrate (HMC). The HMC was magnetically separated at 0.6 Amps to produce magnetic and non-magnetic products which were then systematically analysed for mineral identification of a statistically meaningful grain population with a scanning electron microscope equipped with an energy dispersive spectrometer (TESCAN Integrated Mineral Analyser).

The ilmenite in the Corridor Central samples (CCHMC01 & CCHMC03) ranges from 45.09%–54.72%, whilst the Corridor South sample (CSHMC02) contains 52.40% ilmenite and demonstrates the robust nature of the assemblage over at least 18 km of strike. Importantly, the bulk of the ilmenite in each sample is characterised as ilmenite grain phases with 70-85% TiO_2, which underscores the high quality characteristics of the ilmenite. This characteristic is important as it suggests the bulk of the ilmenite has potential to be a high value feedstock product.

Each sample also contains between 19.7%–16.3% low TiO_2 (20%–50%) mineral phases which are highly likely to be lower-TiO_2 ilmenite. This will be verified with optical mineralogical analyses and has the potential to materially improve ilmenite proportions and the overall VHM content within the THM.

Ilmenite grainsize in each of the three samples shows between 70%–80% of grains are larger than 100µm. Larger Ilmenite grainsize is a key physical characteristic that enables optimum separation of the ilmenite mineral from slimes during the primary concentration process.

Combined rutile+zircon content ranges between 2.45%–2.64% of THM. This significant contribution of these high unit value mineral products will play an important role in the potential project economics.

Appreciable amounts of leucoxene (0.28%–0.44%) and Rare Earth Element minerals monazite and xenotime (0.1%–0.28%) are noted in the mineral assemblage and could also have positive impacts on any potential project economics.

Additional data for the mineral chemistry of ilmenite, rutile and zircon, plus overall TiO_2 deportment is still awaited from the laboratory. An update will be provided when this data is available.

The mineral assemblage data for Corridor Central and Corridor South tenements correlates closely with the data available for Corridor Deposit 1 (Table 2), which is currently being mined by Deshing Minerals only 10 km to the north. This correlation is strong evidence of VHM provenance continuity from the Deposit 1 area south into the Corridor Central and Corridor South areas. This new mineral assemblage data, together with high grade visual estimated THM grades in recent auger drilling of extensive geophysical anomalies (refer ASX announcement 25 June 2019), demonstrates the significant prospectivity of the tenements for large, high value HMS deposits and continues to build the Company's confidence, with the next phase being the undertaking of an Aircore drilling programme.

Table 1: Summary of the valuable heavy mineral contents within total heavy mineral for the three selected samples from Corridor Central and Corridor South tenements.

Sample_ID	Ilmenite (%)	Rutile (%)	Zircon (%)	TOTAL VHM (%)	Count (grains)
CCHMC01	45.09	0.58	1.87	47.54	32,468
CSHMC02	52.40	0.70	1.92	55.03	35,704
CCHMC03	54.72	0.58	2.06	57.36	33,655

Note: Ilmenite = altered ilmenite (70-85% TiO2) + ilmenite (50-70% TiO2).

Table 2: Summary data for the mineral assemblage related to the mineral resource at Corridor Deposit 1.

Corridor Deposit 1	Ilmenite (%)	Rutile (%)	Zircon (%)	TOTAL VHM (%)
West A+B block	53.13	0.63	2.19	55.94
West C block	53.62	0.72	2.17	56.52
East D block	51.72	0.80	2.87	55.40
East E block	51.81	0.84	2.89	55.54
East F block	51.95	0.78	2.86	55.58

Note: Data is summarised from the Southern Mining Corporation Annual Report for the year 2000.

The Australian Department of Agriculture and Water Resources granted the Company an import permit on 10 July 2019 for a 2-year period and Mozambique auger drill samples are now in transit to the Australian laboratory for quantitative THM analysis.

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.

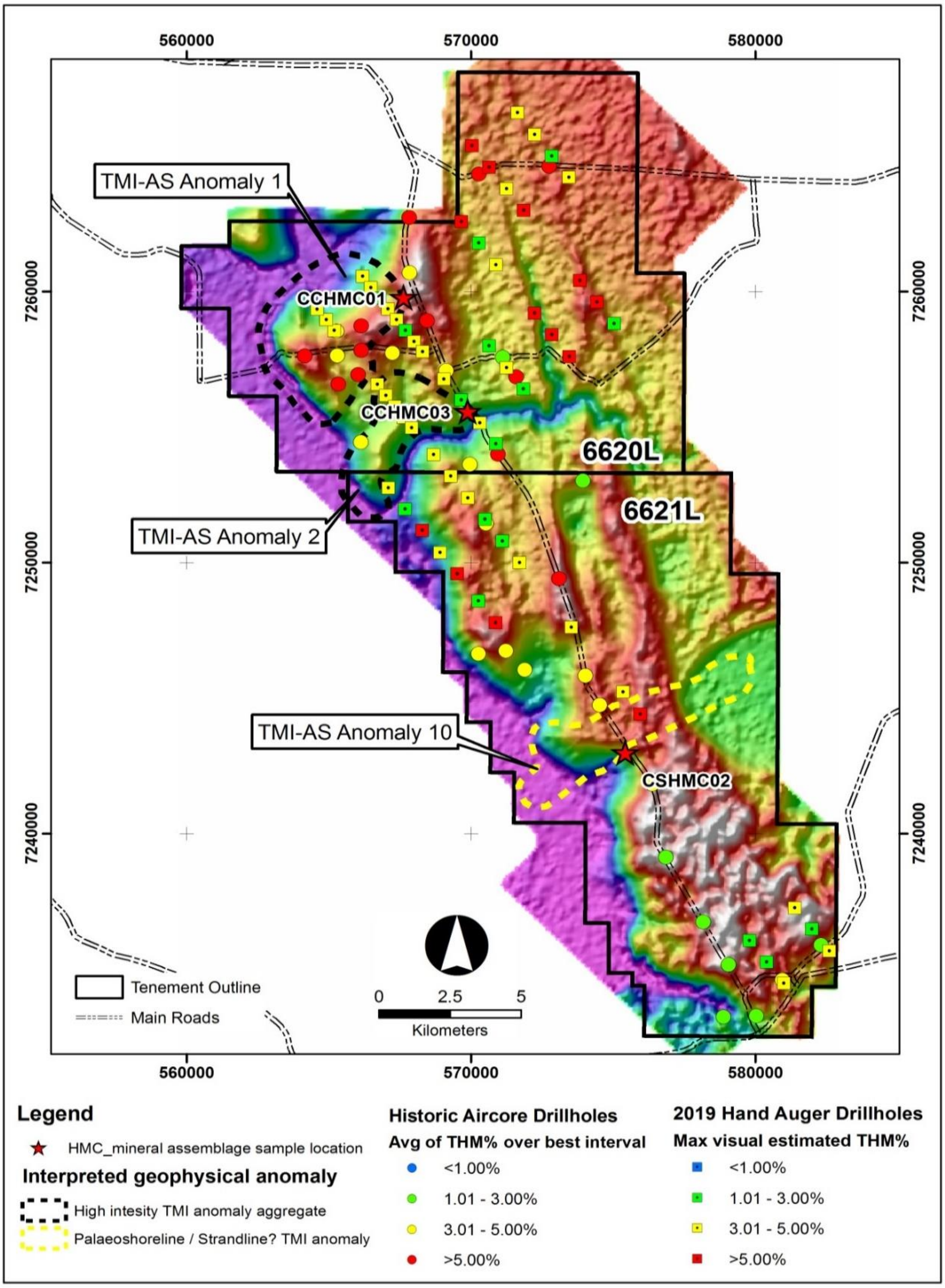

Figure 1: Location map of samples used for mineral assemblage analyses. Base image data is the 2019 digital elevation model (purple = low elevation, white = high elevation).

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 4000g, was scooped from heavy mineral trap sites where heavy mineral concentrates exceed 50% heavy mineral. • Heavy mineral concentrates in trap sites within a coastal areas comprising unconsolidated sand, within an area of interest, are considered to be derived from very nearby (ie <500m) the trap site and therefore have mineral assemblage similar to mineralisation that may occur in the area. • Geotagged photographs are taken of each sample with the corresponding sample bag to enable easy reference at a later date. • Samples were collected in areas coincident with geophysical anomalies interpreted from the Company's April 2019 survey.
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).*	• Samples for mineral assemblage characterisation related to this announcement were derived from surface trap sites. • Samples for this announcement on mineral assemblage were not from drillhole samples.
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.*	• Samples were collected with a small shovel with the object of obtaining significant heavy mineral concentrate for metallurgical analysis. • Recovery was not a factor for this sampling for mineral assemblage characterisation. • Samples were collected away from roads where road-base material could have been eroded to contribute to the heavy mineral

Criteria	JORC Code explanation	Commentary
		concentrate and may have been brought into the area from somewhere else.
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.*	• Each heavy mineral concentrate sample was wet panned to identify typical mineral assemblage for comparison with laboratory data. • Logging of the wet panned samples was qualitative using a pocket microscope with x60 to x100 magnifications.
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.*	• Each approximately 4000g sample was wet screed at 45µm to remove slime (-45µm; de-slime) material included in the concentrate and mass recorded. • After the de-slime process, each sample was screened again at 1mm to remove oversize material (+1mm) and mass recorded. • The +45µm to -1mm sample fraction was then riffle split with a Jones riffler to produce about 500g sub-samples for heavy liquid separation (HLS) analysis. • Each 500g sub-sample was subjected to heavy liquid separation at 2.90cc/g. • Sink and float material mass from each HLS analysis was recorded to determine THM concentrate grade. • The THM sink material was then riffle split again with a Jones riffler to produce sub-samples of about 200g. • The 200g sink sample was subjected to magnetic separation at 0.6 Amp to create magnetic and non-magnetic fractions. • Each magnetic fraction was submitted for whole rock XRF analysis. • Polished sections were prepared of representative portions of each magnetic and non-magnetic fraction and were then analysed by a TESCAN Integrated Mineral Analyser. • All of the samples collected have been concentrated heavy mineral sand and the preparation techniques are considered appropriate for this sample type. • The sample sizes were deemed suitable based on industry experience of the geologists involved and consultation with laboratory staff. • A geologist supervised the sample collection in the field.

Criteria	JORC Code explanation	Commentary
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.*	• Samples were submitted to Process Mineralogical Consulting Ltd in British Columbia, Canada for preparation and analysis. • The TESCAN Integrated Mineral Analyser (TIMA) is fitted with a scanning electron microscope (SEM) and energy dispersive spectrometer (EDX) used for grain analysis to determine chemistry and mineral speciation, and is capable of searching and quantifying the elemental composition of a statistically representative number of Ti-mineral species including rutile, ilmenite, Ti-magnetite, pseudorutile and leucoxene. • Duplicate splits of each magnetic sample fraction were submitted to a second laboratory, MSA Labs of Brisitsh Columbia, Canada, to compare derived SEM whole oxide results with XRF (lithium borate fusion) total whole rock oxide results. • Both laboratories used duplicate, standard and blank samples to ensure QA/QC.
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.*	• The data is checked by each laboratory for correctness before provision to the Company. • Once data is provided, the results are checked by the Chief Geologist by mass balance to identify errors and other potential flaws. • Data is stored in MS Excel files and imported to MS Access database software for validation.
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.*	• A handheld 16 channel Garmin GPS was used to record the positions of the sample locations. • The handheld Garmin GPS has an accuracy of +/- 5m. • The datum used is WGS84 zone 36S. • The accuracy of the sample 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.*	• Samples were spaced about 5km and 13km from each other. • The sample spacing was designed to test broad variations in heavy mineral sand mineral assemblage, establish an initial baseline, and compare with nearby deposit data. • Closer spaced and systematic mineral assemblage sampling 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	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known,*	• The samples were collected from easily accessible trap sites within geophysical anomalies defined from an airborne survey undertaken

Criteria	JORC Code explanation	Commentary
relation to geological structure	*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.*	by the Company during April 2019.
Sample security	• *The measures taken to ensure sample security.*	• Samples remained in the custody of Company representatives until they were transported to Maputo for final packaging and securing in plastic buckets from air transport. • The Company used the commercial transport company, DHL air cargo, to ship the samples from Maputo to Canada with ability to track the samples remotely. • The receiving laboratory indicate the sample shipment arrive in good condition.
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 (6621L) and Corridor South tenement (6621L) which are 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 sampling programme and were supportive of the programme.
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. BHP-Billiton acquired Western Mining Corporation and undertook a Bankable Feasibility Study of the Corridor Deposit 1 about 15km north of the Company's tenements. • The Company has obtained digital data in relation to this historic information. • The historic data comprises limited Aircore/Reverse Circulation drilling (35 holes) with Slimes, Oversize, THM% data. • 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:*	• Mineral assemblage information for the Corridor Central and Corridor South tenements is presented in Table 1.

Criteria	JORC Code explanation	Commentary
	○ *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.*	
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.*	• Individual mineral assemblage proportions are presented as a percentage of total heavy mineral.
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').*	• The samples were collected from trap sites where heavy mineral concentrates can be >90% THM. • The samples comprise heavy mineral concentrates that are likely derived from up to 500m from the trap site. The sample mineral was not in-situ but is considered representative of mineralisation that could be nearby.
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 of this announcement, showing the location of the samples.
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 mineral assemblage data is presented in Table 1 of the main part of the announcement, comprising modal mineral assemblage of valuable heavy minerals related to heavy mineral sand deposits.
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,*	• No other additional material exploration information has been gathered by the Company.

Criteria	JORC Code explanation	Commentary
	groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	
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 additional auger drilling and sampling, infill auger sampling and heavy liquid separation analysis. • High quality targets generated from reconnaissance work are planned to be drilled with Aircore techniques. • Additional mineral assemblage by optical microscopy grain counting will be undertaken to conform and support existing TIMA data. • Ilmenite mineral chemistry analyses will also be undertaken on suitable composite HM samples to determine a potential feedstock product type. • As the project advances TiO2 and contaminant test work analyses will also be undertaken.