4 June 2019

Markets Announcement Platform
Australian Stock Exchange

HEAVY MINERAL SANDS PROJECTS IN MOZAMBIQUE – RADIOMETRIC AIRBORNE SURVEY CONFIRMS EXTENSIVE ANOMALISM AND HIGH QUALITY DRILL TARGETS

Extensive radiometric Th-U anomalism correlates with historic high grade drill results.

Very large 4km X 2km, relatively discrete radiometric anomalies remain largely untested and likely represent zones of higher zircon concentration.

Radiometric anomalies represent additional high quality drill targets to be tested in the planned maiden aircore programme.

- **At least eleven radiometric anomalies have been interpreted from the greater Corridor project area, representing broad, diffuse zones of high Th-U concentration and notably containing very large, more discrete and coherent zones within them.**
- **Historic drill holes with high grades correlate with the Th-U anomalism and suggests those high grade zones may have a much larger footprint than already defined.**
- **Ground-truth work at selected sites using hand auger drilling on three different anomalies show near surface mineralisation up to 5.5% visual estimated THM.**
- **Field auger drilling continues, with renewed focus on areas identified by the airborne survey geophysical data.**
- **Mozambique export permit for auger samples has been approved and Australian biosecurity import permit is expected in early June.**
- **Magnetic airborne survey data is still being validated by the contractor, Geotech Limited and will be delivered in the first week of June.**
- **Detailed drill plan will be finalised after interpretation of magnetic survey data.**

Radiometric airborne survey data interpretation

The airborne survey was commenced by the contractor, Geotech, on 1 April 2019 and the final production flight was completed on 7 April 2019. The survey comprised a total of 2,442 line-kilometres, flown at a height above ground of 30m and airspeed of typically 250km/h. The radiometric data was collected with a Radiation Solutions Incorporated Spectrometer (RS-500) with 1,024 channels and equipped with 3 crystal packs. The RS-500 airborne spectrometer has a data-recording rate of 2Hz.

Data processing and quality checks have been undertaken by Geotech, with final data sets delivered in late May.

The radiometric data set includes equivalent ground concentrations of Thorium (Th) and Uranium (U) parts per million (ppm) and Potassium per cent (K%). Derived data including Dose rate (U+Th+K) and Th/K radioelement ratio are also included in the data package.

Zircon typically contains trace quantities of Th and U. Therefore, high intensity Th and U anomalies are interpreted to represent areas of heavy mineral sand (HMS) mineralisation where zircon content is likely to be at higher concentrations within the total heavy mineral assemblage. Similar radiometric survey data has been used by Rio Tinto in Mozambique to generate high-zircon HMS targets and more recently Strandline Resources has used radiometric data to expand mineral resources and define drill targets at the Fungoni at Tajiri deposits, respectively. The data presented here focuses on Th anomalism to summarise the findings. However the U and Dose (U+Th+K) data interpretation correlates very closely with that of the Th data.

Large, coherent Thorium anomalies up to 4km x 2km on the Corridor Central tenement (Figure 1) and 4.3km x 1.5km on the Corridor South tenement (Figure 2) occur within broader, more diffuse areas of anomalism. On the Corridor Central tenement, radiometric anomalism (Anomaly 1) correlates with areas where historic drill results (refer to ASX press release 14 May 2018) show high grade HMS mineralisation. Only one historic drill hole (CS101) with high grade total heavy mineral (THM) was drilled over a high intensity radiometric anomaly and strongly suggests that a much larger zone of HMS mineralisation, with potentially higher grade THM, occurs in the Anomaly 1 area.

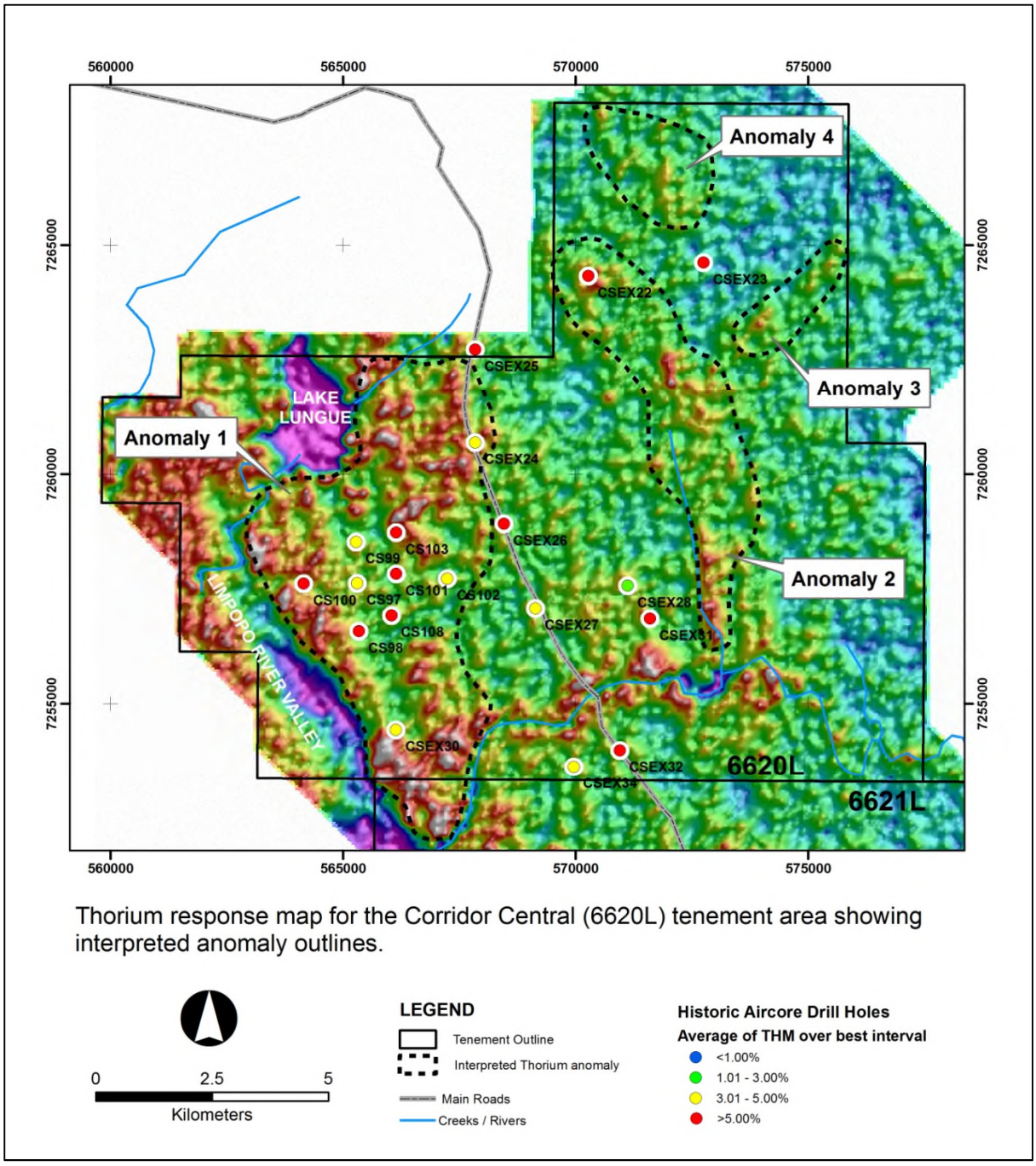
Anomaly 2 located on the Corridor Central tenement (Figure 1) correlates well with the high grade visual estimated THM obtained from the Company's recent auger drilling and a linear topographic high (refer to ASX press release 6 May 2019), interpreted as a palaeodune limb.

In addition to correlation with existing drill results, interpretation of the radiometric data has defined numerous other anomalies (e.g. Anomalies 3, 4, 5, 8, 10 & 11) on both tenements that represent high quality drill targets beyond the areas previously known.

Ground-truth sampling within Anomalies 1, 6 & 7 involved hand auger drilling to a depth of 3m, at locations where the most intense radiometric anomalism occurs (Table 1). Results from visual estimation of THM% in pan concentrates range from 3.5–5.5% THM (Figure 3) and further confirms that the radiometric anomalism correlates with near-surface high grade HMS mineralisation.

The high intensity radiometric anomalism on the western side of Corridor Central tenement correlates with significant areas of black clay within the Limpopo River valley (see Figure 1).

Airborne survey magnetic data is still being validated by Geotech Limited, and is expected to be delivered in the first week of June 2019. The interpretation of the magnetic data will be reported separately.



Thorium response map for the Corridor Central (6620L) tenement area showing interpreted anomaly outlines.

Figure 1: Map of equivalent ground concentration response for Thorium (ppm) for the Corridor Central (6620L) tenement area, showing extensive diffuse anomalies which contain very large (4km x 2km) more coherent anomalies. White-red response is high concentration and purple-blue is low concentration Th.

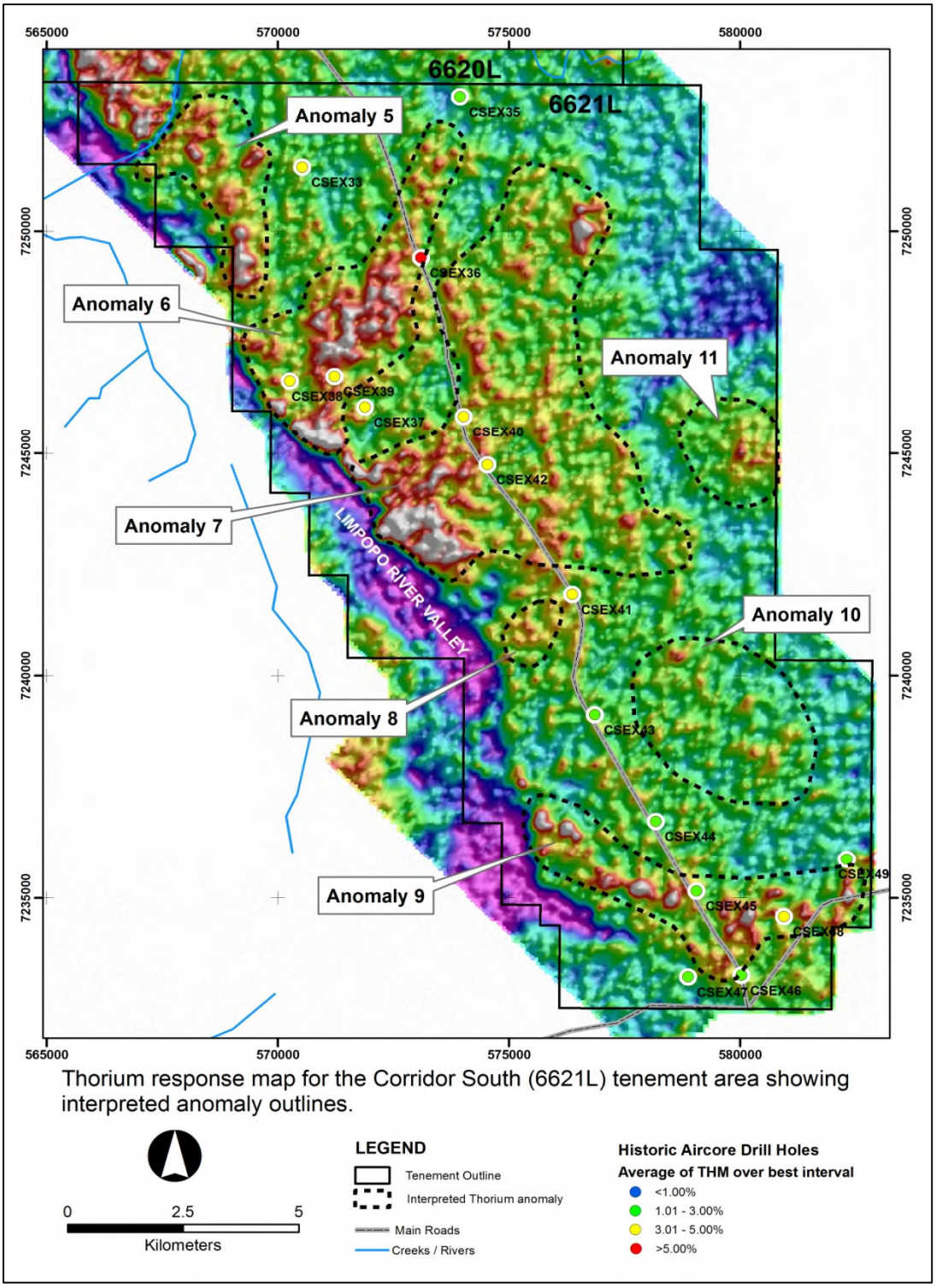


Figure 2: Map of equivalent ground concentration response for Thorium (ppm) for the Corridor South (6621L) tenement area, showing extensive diffuse anomalies which contain very large (4.3km x 1.5km) more coherent anomalies. White-red response is high concentration and purple-blue is low concentration Th.

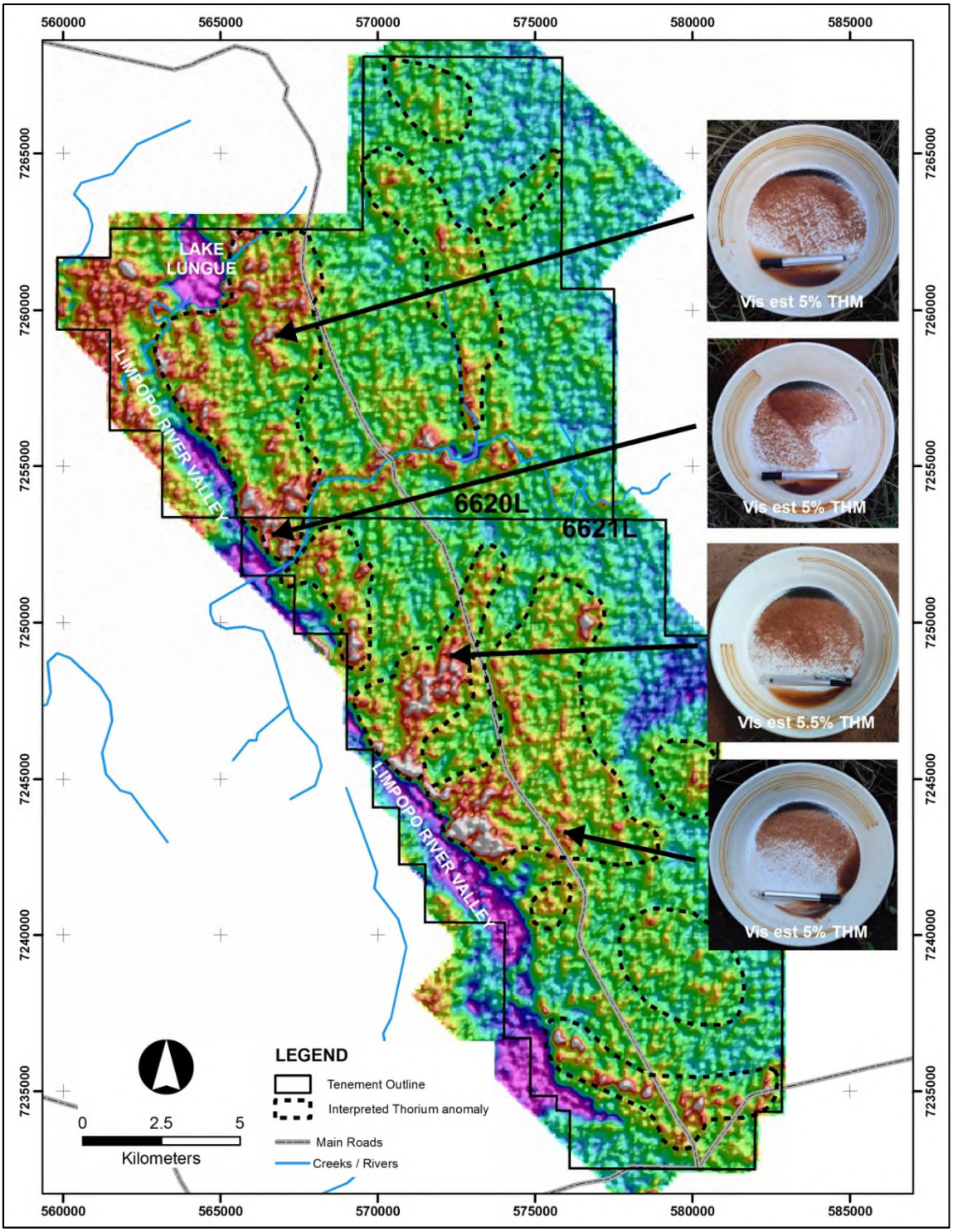


Figure 3: Map of equivalent ground concentration response for Thorium (ppm) for the Corridor tenements, showing field photos of pan concentrate samples from drill holes collared on selected high intensity Th anomalism. White-red response is higher Th concentration and purple-blue is lower Th concentration. 'Vis est' = visual estimated.

Table 1: Summary data for auger drill holes to ground truth geophysical anomalies on the Corridor Central and Corridor South tenements.

HOLE_ID	EAST_WGS84	NORTH_WGS84	FROM (m)	TO (m)	INTERVAL (m)	Vis est THM (%)
POIOMBO_WEST1	575500	7242974	0	1.5	1.5	4
POIOMBO_WEST2	575500	7242974	1.5	3	1.5	3.5
POIOMBO_WEST2	573318	7243626	0	1.5	1.5	3.5
POIOMBO_WEST3	573318	7243626	1.5	3	1.5	4
NHACUTSE	571780	7248240	0	1.5	1.5	4
NHACUTSE	571780	7248240	1.5	3	1.5	5.5
GUEMELE	566560	7253100	0	1.5	1.5	4
GUEMELE	566560	7253100	1.5	3	1.5	5
MALAHICE	566460	7259378	0	1.5	1.5	4
MALAHICE	566460	7259378	1.5	3	1.5	4

Note: Vis est = visual estimated

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.

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 the corresponding sample bag to enable easy reference at a later date • The larger auger 1.5m interval drill samples were homogenized prior to being grab sampled for panning • For the airborne geophysical survey, commercially available industry standard equipment was used to collect magnetic, radiometric and elevation data • The radiometric data set includes equivalent ground concentrations of Thorium (Th) and Uranium (U) in parts per million (ppm), and Potassium per cent (K%). Derived data including Dose rate (U+Th+K) and Th/K radioelement ratio are also included in the data package
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 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.*	• Auger drilling is considered to be an early stage relatively unsophisticated technique of drilling

Criteria	JORC Code explanation	Commentary
	• *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.*	• 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 auger sample were observed due to the shallow depths of drilling (<6m) • 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.*	• 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 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 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.*	• No Sub-sampling was undertaken during this ground-truth drill sample panning programme • 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
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*	• 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

Criteria	JORC Code explanation	Commentary
	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.*	geologists to calibrate the field panned visual estimate with known THM grades. • The airborne geophysical survey was conducted by an independent contractor, Geotech Limited of Ontario, Canada. • The survey utilized a Cessna Caravan C208B aircraft with qualified and experienced personnel who were responsible for collection, validation, and processing the raw data. The survey was flown in April 2019 • Flight specifications include: 30m altitude with allowance for tree canopy and communication tower locations, and 200m line spacing. Airspeed was approximately 250km/h **Survey Instruments** • Magnetometer system: Three Geometrics G822 / Scintrex CS3 high-sensitivity cesium magnetometers (tail stinger and each wing-tip) were utilized, with a sampling interval of 10 Hz and an in-flight sensitivity of 0.02 nT • Spectrometer system: A Radiation Solutions Incorporated Spectrometer (RS-500) with 1024 channels equipped with three (3) crystal packs was utilized (total of 63 liters; 50.4 down and 12.6 up) • Navigation system: A real time GPS system utilizing the Novatel Propak V3 with OEMV-3 GPS receiver provided in-flight navigation control. This system determines the absolute position of the aircraft in three dimensions. As many as 14 L1 and 14 L2 GPS satellites may be monitored at any one time. The position accuracy (CEP) is 1.2 m with dual-frequency (L1/L2) or better, GPS satellite coverage dependent • Radar, Laser and Barometric Altimeter systems: A Bendix King KRA 405B altimeter system recorded ground clearance to an accuracy of approximately 1 m. An AR3000 laser altimeter sensor, with an accuracy of ± 20 mm and a 1 mm resolution was used at a sampling interval of 10 Hz. A Honeywell PPT20 barometer and temperature sensor was utilised to record the pressure (+/-20 psi with an accuracy of +/-0.05% full scale) and temperature (-40 to 85ºC with an accuracy of +/-1ºC). The altimeters are interfaced to the data acquisition system with an output repetition rate of every 0.5 seconds. • Base station system: The base station was a standalone base station magnetometer, a GPS receiver, and a data acquisition system. The base station magnetometer was mounted on a non-magnetic tower, 2 meters (7 ft.) above the ground, in a magnetically quiet area, away

Criteria	JORC Code explanation	Commentary
		from power lines, roads, electrical equipment, other metal objects, at a location where the field crew could check for magnetic storms. The base station magnetometer was sampled at 1 Hz • All geophysical and navigational equipment was subjected to pre-mobilisation, pre-production and daily calibration tests where appropriate to ensure they met manufacturer recommendations. These included Magnetometer Figure of Merit, noise test, heading test, parallax (Lag) test and altimeter test. • Any flight lines or parts of flight lines with data outside the specified tolerances were re-flown. All re-flown lines or portions of lines were tied to the closest tie lines at both ends.
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 THM 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 • 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 • Daily data sets were checked by an independent geophysical consultant, Core Geophysics, who was employed by the Company to ensure external oversight of the primary contractor
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*	• Auger holes were drilled at selected sites that correlate with high intensity radiometric anomalism • The auger hole spacing was not systematic but hole locations were designed to test whether the occurrence of a radiometric anomaly

Criteria	JORC Code explanation	Commentary
	classifications applied. • *Whether sample compositing has been applied.*	correlates with heavy mineral sand mineralisation • Closer spaced and systematic 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 placed near the centre of a radiometric anomaly obtained from an airborne survey undertaken by the Company during April 2019 • The airborne survey geophysical production flight lines were oriented at 135°-315°, which is oblique to interpreted palaeoshoreline and palaeodune features
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 Company does not intend to dispatch these ground-truth samples to the laboratory
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 • Final geophysical data sets were processed by Geotech Limited geophysicists and not released to the Company until all data had been validated by them. • Final geophysical data sets were checked by an independent geophysical consultant, Core Geophysics, who was employed by the Company to ensure external oversight of the primary contractor

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 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 • 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 extensions or depth extensions or large-scale step-out drilling).*	• Further work will include additional auger drilling and sampling, infill auger sampling and heavy liquid separation analysis

Criteria	JORC Code explanation	Commentary
	• *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	• 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