Mayur Resources

ASX Announcement

2 July 2020

Mayur converts Measured & Indicated JORC Resources into Ore Reserves at Orokolo Bay Project

Mayur Resources (**ASX:MRL**) today announced a maiden Ore Reserve at its Orokolo Bay Mineral/Industrial Sands Project in Papua New Guinea (PNG). The 30 million tonne (Mt) maiden Ore Reserve follows the recent upgrade to the Mineral Resource inventory (refer ASX announcement 28 May 2020: Mayur banks 40% resources upgrade at its Orokolo Bay/Industrial Sands Project).

The maiden in-situ Reserve estimate for the project has been prepared in accordance with JORC by Groundworks Plus, and is estimated at 30.6 Mt using a 5.5% Davis Tube Recovery (DTR) (approximately 8.2% Fe) cut-off, which is higher than the previously used 5.25% Fe cut off in the previous JORC Mineral Resource estimate. The planned mining rate for the project is 5 Mt per annum (Run of Mine) to produce several products, including titano-magnetite (used in steelmaking), dense medium separation (DMS) magnetite (predominantly used in coal washing), construction sands (for cement/concrete and asphalt production) and a zircon-rich valuable heavy mineral concentrate (utilised for many purposes in the foundry, ceramics and coating industries).

Groundworks Plus also completed an optimised mine schedule via running various mine plan scenarios that has resulted in achieving a higher DTR cut-off (i.e. 5.5% DTR), a longer Life of Mine (15 years) and also a higher average DTR grade of 10.58% (this compares to the 12 year LOM at an average DTR grade of 10.1% as included in the 2017 Orokolo Bay Pre-Feasibility Study). This new schedule was run at the same 5 Mtpa ROM mining rates as the 2017 PFS, however with the higher cut-off grade and longer mine life, has resulted in an increase of in-ground magnetite concentrate (57% Fe) from 5.77 Mt to 7.79 Mt. This represents an estimated life of project revenue stream from the Titano-magnetite product (excluding any revenue streams from the Zircon concentrate, DMS or construction sand products) of approximately US$607 million, calculated based off current China CFR iron ore spot prices.*

In determining the 15-year life of mine production target of 7.79 Mt of magnetite, Groundworks Plus allocated 1% from Proved Reserves, 40% from Probable Reserves and 59% from Inferred Resources^. However, Groundworks Plus' Competent Person is confident "that further Measured and Indicated Resources will be defined along strike of the current Mineral Resource with further infill drilling, due to the very consistent nature of the strandline deposits. It is highly likely that the current gaps in the Mineral Resource / Ore Reserves will eventually become continuous with extra drilling data."

**based on a calculated Mayur titanomagnetite product price of US$77.91/tonne. This price having been determined from the Platts 62% Fe CFR North China iron ore fines benchmark price of US$99.85/tonne as reported on 30 June 2020 and allowing for adjustments for Mayur's titano-magnetite product grade and impurity discounts*

^Note there is a low level of geological confidence associated with inferred mineral resources and there is no certainty that further exploration work will result in the determination of indicated mineral resources or that the production target itself will be realised

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2020 Ore Reserve Estimate

Category	Mt	DTR %	Fe %	Ti %	Zircon ppm	DTR Mt	Fe Mt	Ti Mt	Zircon t	Construction Sand Mt
Proved	1.0	13.99	14.01	2.46	900	0.14	0.14	0.02	900	-
Probable	29.6	11.36	12.22	1.69	682	3.36	3.62	0.5	20,200	15.2
Total	**30.6**	**11.45**	**12.28**	**1.72**	**689**	**3.51**	**3.76**	**0.53**	**21,100**	**15.2**

Measured Mineral Resources have been converted to Proved Ore Reserves and Indicated Mineral Resources have been converted to Probable Ore Reserves based on economic viability after the application of modifying factors.

Notes:

1. Ore Reserves are a sub-set of Mineral Resources
2. Tonnages are in-situ.
3. The figures stated are as at 30th June 2020.
4. Davis Tube Recovery (DTR) produces iron product at 57% Fe

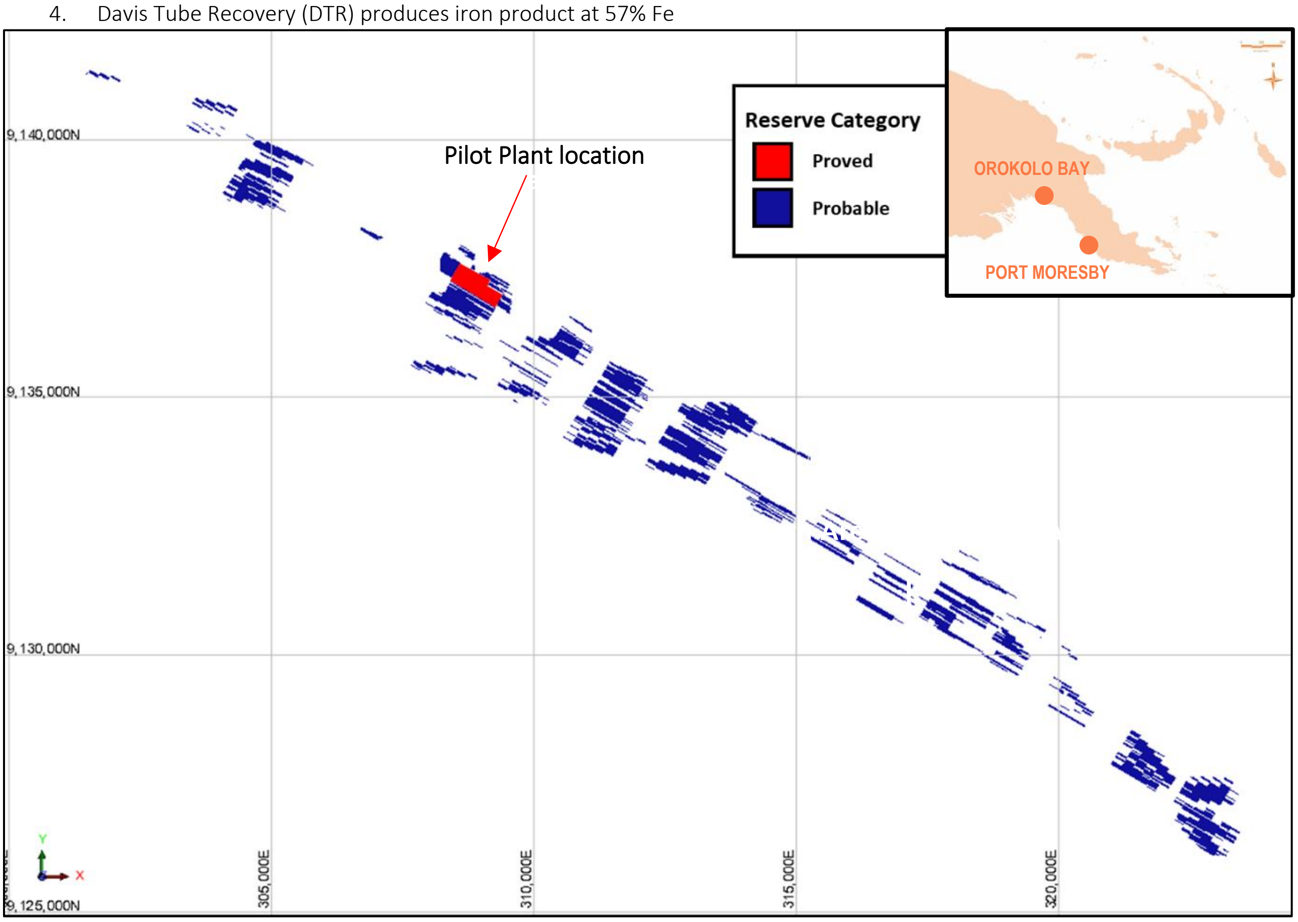

Figure 1: Orokolo Bay Western Area Ore Reserves Distribution.

This maiden Ore Reserve will be a key input into the Definitive Feasibility Study which is expected to be completed in August 2020. On the completion of the DFS and finalisation of land mapping, the company will then lodge its Mining Lease application. In parallel with these activities, and subject to COVID-19 travel restrictions, the company will be mobilising with its Chinese JV partners to commence the pilot plant test pit under its existing approvals.

As previously announced on 7 January 2019 the Orokolo Bay project is fully funded through the partnership between MRL's subsidiary Mayur Iron PNG Ltd and China Titanium Resource Holdings Ltd (CNTI) where CNTI is securing 49% in our mineral sands portfolio via expending up to US$25 million that is to achieve full scale production.

Managing Director Paul Mulder said "*this maiden ore reserve provides further confidence in the Orokolo Project and further vindicates the company's efforts to progress the development of PNG's first mineral sands project. The successful conversion of Resources to Reserves, where the company conducted in advance production drilling within the pilot plant test pit area, gives us a very high level of confidence that with additional closely spaced production drilling in the future the project can expect significant further upgrades to the reported Ore Reserves*".

<ENDS>

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Orokolo Bay Industrial Sands Project

Ore Reserves Notes

Pre-Feasibility Study:

A pre-feasibility study (PFS) of the project was prepared in 2016 and updated in 2017, with pricing and cost assumptions having been updated more recently. Numerous equipment types, products, product grades and capital intensity were analysed to best determine a refined go forward case for the bankability study. This work was independently conducted to demonstrate the financial performance of a range of options that were then optimised that took into account many of the aforementioned metrics whilst being conscious of the current economic climate with regard to reducing capital and operating costs as well as lower risks with smaller operations to ensure more certain availability and performance in the PNG environment.

Mining Study:

A mining study, together with scheduling and mine plans. were developed by MEC Mining consultants in 2016 based on the development of a 5 Mtpa mining operation. The mining and processing parameters used during the study are typical for mineral sand mining operations. The operating parameters, capital and operating costs, and revenue assumptions were provided by Mayur. The 2016 Resource block model was used as the basis for optimisations.
During the development of a suitable mining method for the Project MEC investigated both excavator and dredge mining methods. Considering the relative metrics of both the excavator and dredge options, the excavator option was considered as the strongest, utilising 2 excavators to target all products of construction sands, magnetite and zircon. The relative economics of a dry mining excavator-based method allowed better access to the shallower resource.
Optimisations were run for various mining scenarios in total which represent the combinations of mining, processing and product options. Each of these options were optimised and strategically scheduled to generate their optimal NPV scenario within the resource model. Once the initial results were generated the capital investment in each case was applied across the resource model. Each case demonstrated variability in the quantities of material mined, grades and resultant product. Because of this, selection of the go forward option was completed based on project NPV along with Project value per tonne mined, demonstrating the likely value of investment.

Processing:

The proposed processing circuit involves delivery of the ROM ore to one of two relocatable 2.5Mtpa concentrators by front end loader or haul trucks, where the material will be fed through a vibrating screen to remove +3mm organic and oversize material followed by desliming and two stage ore upgrading. The first stage is a gravity circuit (spirals) to remove lower density gangue material to produce a heavy mineral (HM) concentrate. The lower density material would be routed through an up-current classifier to remove fines and organic components, producing a material suitable for use as a construction sand. The HM concentrate would be treated by wet LIMS to make an iron rich magnetite HM concentrate and non-magnetic, zircon-rich HM concentrate. Plant tailings would be pumped to a previously mined area to backfill the void. Products would be trucked to the port for loadout onto transhipping barges. The barges would then transfer the product to larger vessels anchored offshore.

Infrastructure

The infrastructure and utilities required for the Project would include camp, workshops, administration facilities, maintenance facilities, accommodation, power, water, fuel, waste and communications. Whilst raw water has been assumed to be readily available on site, all other infrastructure and utilities would be constructed and installed by a

Mayur nominated construction group. Most materials and equipment would be barged to site from either Kerema (Provincial Capital) or Port Moresby.

Environmental and Social Impact Assessment:

Because the Project does not use chemicals in its processing and rehabilitation will occur as mining progresses it is considered to have less potential to cause environmental harm than other mining operations. The environmental assessment would record the baseline environmental conditions and assess the Project impacts based on the proposed design and operating plans. This would enable appropriate mitigation and management measures to avoid or minimise the risk. This approach would form the basis of the environmental management plan (EMP).

Operating and Capital Costs:

The operational costs assessments have been updated since the 2017 PFS and, similarly as the capital costs, have been made based on various combinations of the different products. The capital costs have been derived from the project development, manufacturers' quotations for specific equipment, quantities and industry factors for the installations of piping, electric services, and equipment. Extensive process design, general plant layout and design, environmental studies, and assessment of supplies, labour, and equipment required for mining, processing, and service operations have all supported the accuracy of the CAPEX estimate. Capital cost assessments for the PFS were made based on various combinations of the different products.

Mining:

A previous mining study concluded the most profitable and effective way of mining the mineral sands is by excavator. Mining depths are between 0.5m and 5m, with over 90% of mining blocks less than 3m deep. Also, there is no overburden to remove, making the mining process very simple and straightforward. The key mining assumptions are as follows:

- Operation of two independent excavator / mobile processing plant units.
- Each unit capable of a production rate up to 400 tph.
- 2 x shifts per day, allowing 4hrs per day for shift change / handover. i.e. 20 hpd.
- 330 working days per year.
- 90% plant utilisation.
- Mining / processing rate of 5 Mtpa.
- Vegetation cleared in advance by local labour.
- 38t excavators
- Relatively shallow mining depths with all material mined in a single pass.

Cut Off Grade:

The basis of the adopted cut-off grade for magnetite was calculated by Mayur at 5.5% DTR based on the Orokolo Bay PFS Economic Model for Magnetite, DMS and Zircon products whereby a conservative discount rate of 10% was applied. The calculation excluded any revenue from construction sand sales.

Mining Factors:

It is assumed that mining recovery will be 95% and mining dilution will be 5%. These numbers are based on the variable depths of the mining blocks and shallow groundwater levels. Ore loss and dilution may occur when transitioning from one pit floor level to another, and when digging with the excavator bucket underwater. As mining is accomplished in a single pass there is no scope for the excavator to manoeuvre over any ore missed in the first pass. Dilution grades were based on the average block model grade of material not classified as ore after application of the mining cut-off grade.

Dilution grades were based on the average block model grade of material not classified as ore after application of the mining cut-off grade:

Mineral / Element	Dilution Grade - Test Pit Block Model	Dilution Grade - Main Block Model
DTR (magnetite)	2.5%	2.7%
Fe	6.2%	6.4%
Ti	0.9%	0.7%
Zircon	352 ppm	352 ppm
Density	1.71 t/m³	1.72 t/m³

Resource Block Model:

Two block models were created for the estimation of Mineral Resources at Orokolo Bay, a smaller model encompassing the more densely drilled test pit area and a larger model that covers the remaining western area (Figure 7). As these models were created with a normalised surface plane of 100mRL the first step in determining Ore Reserves was to transfer the block values to a block model whose surface blocks were aligned with the detailed topographic surface captured during a recent LiDAR survey. Before doing this the models were re-blocked to a smaller block size, 20m x 20m for the main model and 12.5m x 10m for the test pit model in the X and Y directions, to gain better definition in elevations (Z direction). The mining factors were then applied to each block and an optimisation run using Surpac mining software to define mining blocks above the cut-off grade. A mining block is a group of 20m x 20m (or 12.5m x 10m) blocks aligned vertically.

Ore Reserves:

Measured Mineral Resources have been converted to Proved Ore Reserves and Indicated Mineral Resources have been converted to Probable Ore Reserves based on economic viability after the application of modifying factors.

COMPETENT PERSONS STATEMENT

The Ore Reserve Report for the Orokolo Bay Mineral Sands Western Area has been compiled in accordance with the guidelines defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves' (2012 JORC Code).

The information in this report that relates to Exploration Results, Mineral Resources and Ore Reserves is based on information compiled by Troy Lowien, a Competent Person who is a Member of The Australasian Institute of Mining and Metallurgy Troy Lowien is employed by Groundwork Plus Pty Ltd.

Troy Lowien has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being 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'.

JORC Code, 2012 Edition – Table 1 report template

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.	• Each 0.5m sample was emptied into a sample bucket where water was decanted and the sample recovery was measured using a ruler. • A photograph was taken of each sample with sample bag and bucket for future reference. • Each sample was logged by the rig geologist. • The sample within each bucket was thoroughly mixed / homogenized with a wooden spoon, quartered, opposing quarters placed into a calico sample bag, and then hung up to dry. • Each sample was tested using a magnetic susceptibility meter whilst within the calico sample bag to get an indication of the magnetite content and this reading was recorded on the logging form. • Hole numbers were designated in incremental order as 'DHOBY001, DHOBY002' etc. Sample numbers were designated in incremental order as 'OBY0001', 'OBY0002' etc.
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).	• A combination of Auger - Bangka drilling was used to collect roughly 2-3kg samples at 0.5m intervals down-hole. The first 0.5m to 1m was sampled using a hand auger. After this the casing was inserted into the hole, the casing clamp was attached and the casing and clamp was rotated until it penetrated around 10-15cm. The sludger was lowered into the casing to retrieve the sample. • A total of 6 rigs were used during the program, however they were not always in use at the same time • Each drilling rig required a supervising Geologist to log the hole, a trained drilling foreman to supervise drilling activities and 3-4 field hands to assist with operating the rig.
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.	• Each 0.5m sample was poured into a bucket for sample recovery. The water was decanted by tapping the bucket with a wooden spoon (which brings the water to the surface), then pouring the water out. The volume of sand in the bucket was then measured using a ruler and this was then converted into the sample recovery. The sample recovery conversions were written on the side of each bucket, for example a ruler depth of 4.0cm = 100% sample recovery. • Within the groundwater zone, sample recoveries were maximised by a combination of pouring water down the hole and keeping downward pressure

Criteria	JORC Code explanation	Commentary
		on the drilling rig gear (to minimise the potential for rising sands).
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 drilling rig had it's own Geologist. • Each sample was logged by the Geologist supervising that specific rig. • Two logging forms were used – one was the 'Sample Run Sheet' and the 'Lithology Log Sheet'. These forms were filled in by hand, and then later photographed and digitised into an Excel spreadsheet. • The 'Sample Run Sheet' was recorded with the date, drillhole number, sample number, from and to depths, the hole co-ordinates, the sample recovery and magnetic susceptibility information. A 'comments' column was also provided. • The 'Lithology Log Sheet' was recorded with the Drillhole number, the proposed hole number, the date, the co-ordinates in WGS84, the hole depth, the sampler and the Geologist's name. The columns consisted of the 'from-to' depths, the Lith codes, the colour, weathering, clay content, and sand size. A 'comments' column was also provided. • A logging and sampling protocols procedure booklet was provided to each geologist with assigned logging codes for them to use.
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.	• All samples were collected at 0.5m intervals. • Each sample was thoroughly mixed and homogenised onsite using a wooden spoon. Recoveries done. Samples logged and photographed. Samples were homogenised in the field for more accurate magnetic susceptibility measurements. • Field duplicate samples were collected roughly every 20 samples. Duplicate samples were split and placed into two separate sample bags after the sample was thoroughly homogenised. The sample was marked as a duplicate sample on the sample run sheet. • Twin holes were drilled roughly every 40 holes (where the second twin hole was drilled 1m to the east). • Samples were placed into calico bags and hung up for drying and magnetic susceptibility measurements. The hole number, sample number and drill interval was written on each sample bag. Aluminium tags were inserted into each sample bag, with the sample number hand-written on each tag. • Samples were then taken back to the campsite and dried in covered drying sheds. • Once dry, the samples were packed into labelled polyweave bags with approximately 10 samples per bag. • All samples were sent via ship freight to Robmet/BV labs in Brisbane and dried / crushed / split and pulverised.
Quality of assay data and	• The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.	• All samples were sent to either Robmet/BV labs in Brisbane and dried / crushed / split and pulverised. These samples were pulped in the lab for

Criteria	JORC Code explanation	Commentary
laboratory tests	• 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.	greater XRF accuracy and placed into 50g sample bags. • All samples were split into the following sub-samples:- 1)- 50g sample for pulverizing and in house pXRF assay 2)- 50g reserve split (as a backup) 3)- 500g split for Davis Tube analysis 4)- Leftover residue for backup • These samples were then sent back to Mayur Head office in Brisbane in 20kg sample buckets for handheld portable XRF analysis. • A clean laboratory was setup within the Mayur office in Brisbane. A suitable 'in-house' XRF analytical procedure was developed by Mayur prior to the official commencement of sample analysis. • Elemental analysis included all the basic iron sand related elements such as Fe, Ti, Al, Si, V, P, Zr and S. • The pulverised 50g samples were then analysed by Mayur personnel using two portable XRF guns mounted in work stations. The instruments were supplied by Reflex who also supplied the data downloading software. • Three Orokolo Bay standards were created by Mayur (prepared and pulverised by Bureau Veritas Labs). These standards were created to monitor any matrix effects specific to the Orokolo Bay sands and were assayed at both ALS and Ultra-Trace independent certified laboratories. • Certified Stainless Steel disk standard and silica blanks supplied by Reflex together with the two Orokolo Bay standards were tested nominally every 25-30 drill samples to monitor instrument drift or equipment problems. • A sub group of the drilling samples comprising 268 samples underwent an additional level of analysis that allowed the slimes, oversize, heavy mineral and magnetics content of the ore to be determined. • 544 ore pulps were sent to ALS and Ultratrace for lab XRF analysis. The same set was analysed 'in-house' by Mayur using it's two portable XRF instruments
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.	• Twinned holes were drilled roughly every 1 in 40 holes. Each twin hole was situated exactly 1m to the east of it's partner hole. • A total of 28 holes were twinned during the field program, with moderate to good correlations. The hand written drillhole logs prepared by the field geologists were input into two Excel files that were proof read by the supervising Geologist for errors in data entry, logic and formatting. • 544 ore pulps were sent to ALS and Ultratrace for lab XRF analysis. The same set was analysed 'in-house' by Mayur using its two portable XRF instruments. The elemental concentrations reported by the portable XRF instruments were levelled to the laboratory results using statistical properties of each data set.. • A considerable amount of research work was conducted developing and

Criteria	JORC Code explanation	Commentary
		verifying the relationship between iron and magnetite or magnetics content which showed a relatively robust correlation. A selection of 268 low, medium and high grade samples were chosen in a 20:40:40 ratio based on magnetic susceptibility meter readings for use in an 'extended' assay procedure that involved extraction of heavy mineral followed by determination of % magnetics by Davis Tube analysis. • The relationship between %Fe in drill sample and %Magnetics extracted at 800 Gauss for all selected drill samples indicates a very good regression (R^2) of 0.94 for the entire data set. The regression formula was then applied to all database drill sample assays that had been corrected using the pXRF-laboratory levelling formula to determine the %DTR Magnetite content.
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.	• All holes were originally positioned using a GPS to measure the end of each segment and then holes were measured using tape measure and compass. • All holes were surveyed either during or following drilling using hand-held GPS units. • The data has been projected to UTM WGS84 55S. • Topographic control is provided by a LiDAR survey flown in 2019. Accuracy is considered very good..
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.	• High level drillhole planning and layout was guided by the aeromagnetic patterns that showed the various strandline patterns. Ground magnetics was then completed along each drill-line prior to drilling. • The drill pattern was based on paired lines 250m apart oriented either N-S or NE-SW with these line pairs spaced every 4-5km. • Survey teams went into each area approximately 1-2 weeks prior to drilling to mark and flag the location of all Proposed Holes. The majority of holes were positioned at 20m intervals along each line where ground magnetic anomalies were clearly evident. Where necessary, infill holes were done at 10m intervals. Holes in areas of very low grade or barren ground between strandlines were drilled at 40m intervals. • All holes were situated perpendicular to the orientation of the strandlines. It was decided that each strandline shall be intersected at least 3 times in any sequence; one intersection on the southern edge, one in the middle, and one on the northern edge. If only 2 holes intersected a strandline, then an infill hole was completed at 10m drillhole spacing. • The data density in some portions of the resource is sufficient to establish grade and thickness continuity of the mineralised units. In some portions of the resource, the data density is insufficient to establish grade and thickness continuity of the mineralised units. • Sample compositing has not been applied.

Criteria	JORC Code explanation	Commentary
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.	• All drillholes were drilled vertically, which is appropriate for the flat lying stratigraphy within the area being explored. • All drill lines were drilled perpendicular to the orientation of the mineralised strandlines.
Sample security	• The measures taken to ensure sample security.	• Mayur developed a 'chain of custody' flowsheet prior to the commencement of the programme that was strictly adhered to. • All drill samples were bagged and dried in supervised drying sheds onsite. • Following this they were repacked into polyweave bags ready for dispatch from site. • The Polybags were then transported to Kerema via banana boat with Mayur staff members on board. • The samples were then trucked to Port Moresby under the supervision of Mayur staff, either stored temporarily in the Mayur Container or taken directly to Mayur's freight forwarder in Port Moresby, Pacific Cargo Services, where a dispatch inventory was prepared and the samples either airfreighted by pallet or sea freighted FCL by container to Port of Brisbane. • The company's Australian freight logistics representative Aussie Freight then cleared the samples through customs and quarantine and transported them to Robbins Metallurgical Laboratory in Brisbane where the consignment was then split into samples that went to Perth for sample preparation or those that stayed at Robbins Metallurgical for sample preparation and assaying.
Audits or reviews	• The results of any audits or reviews of sampling techniques and data.	• A review of all the exploration plus QA/QC data was conducted by the company Geologist for the purposes of this resource estimate. No chronic or systematic errors were noted. • A review and audit of the data was conducted by GWP upon receipt of the data. Issues were identified and corrected. • No further audits are considered necessary at this stage of the project development.

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 mineral resource is situated entirely within Exploration Licence EL2305. • The licence was granted to Mayur Iron PNG Limited (a wholly owned subsidiary of Mayur Resources) on the 14th May 2014 and expires on the 13th May 2020. The two year extension application for EL2305 was filed by Mayur with the Mineral Resources Authority on 14th February 2020 (three months prior to the expiry date as per MRA guidelines), and is expected to be renewed through the normal MRA approval process as per communication with Mayur. • There are no known impediments to obtaining a Mining Lease (ML) in future in the area.
Exploration done by other parties	• Acknowledgment and appraisal of exploration by other parties.	• The Orokolo Bay project was explored and discovered by Katana Iron Ltd from February 2010 to February 2012. They drilled over 212 exploratory drillholes within the resource region, identifying heavy mineral concentrations of Vanadium Titanomagnetite and low levels of Zircon. They also flew an Aeromagnetics programme which Mayur has reprocessed and used in its exploration.
Geology	• Deposit type, geological setting and style of mineralisation.	• Orokolo Bay Project is situated within the sedimentary Papuan Basin of PNG. • The Orokolo Bay Resource comprises a series of semi-parallel preserved ESE-WNW striking narrow but strike-extensive multiple palaeo-strandline deposits formed by a combination of wave and aeolian action which dumps, then concentrates the heavy minerals (vanadium titanomagnetite and zircon) on the beach fore-dune. Other minerals present in small quantities are rutile, ilmenite, apatite, pyroxene, garnet, and silica sands. • The source of the magnetite is believed to be basaltic and andesitic volcanic rocks, the erosional products from which are transported down drainages to the coast where they are deposited and reworked by coastal wave and wind action. • In summary the 6 main layers identified within the sequence are in the following sequential order:- Soil, Fine grained sands, Medium-fine sands, Coarse gritty sands, Clays, Bedrock.
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: o easting and northing of the drill hole collar o elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar	• Exploration results are not being reported.

Criteria	JORC Code explanation	Commentary
	o dip and azimuth of the hole o down hole length and interception depth o 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.	• Exploration results are not being reported.
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 mineralisation is flat lying hence intercept widths can be considered as the 'true thickness'
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.	• Exploration results are not being reported. Plans and sections of drill hole locations provided in body of report.
Balanced reporting	• Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	• Exploration results are not being reported.
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.	• Exploration results are not being reported.
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.	• There is little scope to extend the mineralisation beyond the current boundaries. • Future work will involve in fill drilling to increase confidence levels in the mineralisation.

Section 3 Estimation and Reporting of Mineral Resources

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Database integrity	• Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes. • Data validation procedures used.	• Drilling data supplied by Mayur as a series of Excel spreadsheets • Responsibility for the data resides with Mayur • All relevant data were entered into an Access database where various validation checks were performed including duplicate entries, sample overlap, unusual assay values and missing data. • Visual reviews were conducted to confirm consistency in logging and drill hole trajectories. • Assessment of the data confirms that it is suitable for resource estimation. • A default collar elevation of 100m RL was used to facilitate block model development.
Site visits	• Comment on any site visits undertaken by the Competent Person and the outcome of those visits. • If no site visits have been undertaken indicate why this is the case.	• No site visit was completed by the CP due to time and budgetary constraints. The CP was involved in numerous discussions with geological personnel from Mayur. • Deposit area viewed in Google Earth 3D; confirms its reported flat-lying nature and vegetation cover. • Mayur supplied digital photos of drilling and sampling. • Mayor personnel, T Charlton and P Hinner have completed several visits to the property including supervising some of the sampling.
Geological interpretation	• Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit. • Nature of the data used and of any assumptions made. • The effect, if any, of alternative interpretations on Mineral Resource estimation. • The use of geology in guiding and controlling Mineral Resource estimation. • The factors affecting continuity both of grade and geology.	• The extents of the magnetite-bearing mineralisation are reasonably well defined from airborne and ground magnetic data interpretations and drilling information. • Ground magnetic data has been used to guide drilling. The interpretation of the ground magnetics has generated a relatively complex pattern of high amplitude linear features for the titanomagnetite-bearing strandlines. • Alternative interpretations are possible for individual strandlines, but any overall change is likely to be small. • The original depositional environment will have a fundamental control on mineral distribution, this can be complicated by the impact of cross bedding which has been reported by Mayur. Small areas in the north west of the deposit lie beneath 1-2m of swamp/organic vegetation. This may represent a sub-basin which may be a function of eustatic changes in sea level, tectonic subsidence or erosional processes. This infers a level of complexity to the deposit

Criteria	JORC Code explanation	Commentary
		• The strandlines may be broken with mineralisation absent due to localised areas of higher ground and/or due to palaeo-creek channels which have eroded the sands within. The mineralised strands often occur as slight topographic highs, however they are not always identifiable as such, as swamps ie geographical lows, have returned significant mineralisation in drilling. • High grade strandlines pass laterally into lower grade diffuse margins which may coalesce with the margins of the next strandline, giving a broad zone of low grade mineralisation hosting narrow bands of higher grade magnetite mineralisation.
Dimensions	• The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.	• Mineralisation is flat-lying • Mineralisation in the western section has a strike length of 25km on a 120° direction with an overall average width of 2.5km • The individual strandlines can vary from 100m to over 20km in strike length. The width of the individual mineralised zones varies from 10 to 80m wide, while the depth varies from 0.5 to 4.5m, averaging 2-2.5m in thickness, and lying on average 0 to 1m below the current land surface, often with minimal soil cover

Estimation and modelling techniques	• The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.
	  • The availability of check estimates, previous estimates and/or mine Inverse distance squared was considered as an appropriate
	  • modelling technique based on the relatively normal/lognormal
	  • distribution of the data and the relatively low coefficients of
	  • variation.
	  • • Grade interpolation was completed using the Surpac mining
	  • software package.
	  • • Elements modelled included iron, titanium, zircon assays, calculated
	  • DTR values and hand held magnetic susceptibility data. No
	  • assumptions were made regarding the recovery of by-products.
	  • • A single composite file of 8,423 by 0.5m composites derived from all
	  • the drillholes was used for the block grade interpolation.
	  • • The summary statistics for the composites for all elements generallyproduction records and whether the Mineral Resource estimate takes appropriate account of such data.
	• The assumptions made regarding recovery of by-products.
		• Inverse distance squared was considered as an appropriate modelling technique based on the relatively normal/lognormal distribution of the data and the relatively low coefficients of variation.
		• Grade interpolation was completed using the Surpac mining software package.
		• Elements modelled included iron, titanium, zircon assays, and calculated DTR values. No assumptions were made regarding the recovery of by-products.
		• A single composite file of 10,646 by 0.5m composites derived from all the drill holes was used for the block grade interpolation.
		• The summary statistics for the composites for all elements generally show moderately low coefficients of variation on modestly positively skewed data. No domaining of the data was considered necessary.
		• Correlation between titanium and iron is strong indicating presence of titanomagnetite as the main iron-bearing material.
		• Examination of the higher grades show that they are generally well structured, i.e. there is a lateral gradation from low to high grades. This combined with the low CVs suggests that grade cutting is not considered to be necessary
		• In the more drilled test mining area, variography for the iron grade indicated that just under 70% of the variance in the grade for the complete dataset in the strike direction occurs in the first lag ie around 100m in distance. The mineralisation is interpreted to sill out at around 750-1000m distance. This is

Criteria	JORC Code explanation	Commentary
	• Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation). • In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed. • Any assumptions behind modelling of selective mining units. • Any assumptions about correlation between variables. • Description of how the geological interpretation was used to control the resource estimates. • Discussion of basis for using or not using grade cutting or capping. • The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.	considered to be close to the maximum search distance for grade interpolation. The across-strike direction indicates the broad nature to the mineralisation but also shows the width limit of the individual strandlines to about 20m. The downhole variogram shows about 2 to 2.5m as the average thickness for mineralisation. Both these last two observations are consistent with the current geological understanding. • Domaining consisted of search orientation domains derived as wireframes based on the strike direction of the strandlines as interpreted from high amplitude axes in the ground magnetic data. All domain boundaries were treated as soft boundaries. • No constraints were applied to the composites in the modelling save for the orientation domains • Two block models were created, one for test mining area and one for the remaining western area, both with a 31° anticlockwise rotation about the z-axis. This test mining area block model measures 1.2km by 0.5km with a maximum depth of 20m. The main western block model measures 28.4km by 6.7km with a maximum depth of 20m. • The test mining area block model has a parent block size of 25m by 10m by 0.5m. The main western block model has a parent block size of 200m by 20m by 0.5m. • Sample spacing ranges between 50m by 20m in the test mining area to 250m between the paired sample lines and 4 to 5km between sample line pairs. Hole spacing along fence lines varies between 25 and 100m. Downhole sampling is generally 0.5m for the Mayur drilling and 1m for the Katana drilling. • Estimation of the main western model consisted of 4 search passes with Pass 1 being 500m by 25m by 1m; Pass 2 1000m by 40m by 1m; Pass 3 & 4 1500m by 40m by 1m. Minimum number of data for Pass 1 & 2 is 6, with 4 and 2 for Passes 3 and 4. A maximum of 15 data was applied in all cases. • Estimation of the test mining area model consisted of 3 search passes with Pass 1 being 100m by 20m by 1m; Pass 2 200m by 40m by 1m; Pass 3 500m by 40m by 1m. Minimum number of data for Pass 1 & 2 is 6, with 4 Pass 3. A maximum of 15 data was applied in all cases. • The maximum extrapolation in the strike direction is 1500m for the main western model and 500m for the test mining area model, and 40m across strike, unless constrained by the magnetic domain. The maximum vertical extrapolation is zero due to the base of drilling surface. • Model validation consisted of comparing block grades with composite grades. This was reported on both a visual basis and summary statistical comparison for composites and block grades. Grade-tonnage curves were also used to

Criteria	JORC Code explanation	Commentary
		validate the model. Validation confirmed the modelling strategy as acceptable with no significant issues. • No production has taken place so no reconciliation data is available.
Moisture	• Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	• Tonnages are estimated on a dry weight basis
Cut-off parameters	• The basis of the adopted cut-off grade(s) or quality parameters applied.	• Mayur is taking responsibility for the cut off grades. These are based on their mining studies. • The resource estimates are reported at an iron cut off grade of 5.25%.
Mining factors or assumptions	• Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.	• The intended mining method will be by excavator and haul truck. • Processing of mined material is expected to use typical and conventional mineral sands equipment and circuitry beginning with the extraction of heavy mineral, recovery of magnetite using wet drum magnets and upgrading of the non-magnetic by-product to produce a crude concentrate for export that will contain zircon, ilmenite, hematite and free gold. A component of the waste gravity tailings will be removed prior to deposition in the tailings area and sold for use as construction and concrete sands
Metallurgical factors or assumptions	• The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.	• A 3 tonne bulk sample was produced by compositing material from 4 test pits spread evenly across the east-west breadth of the project area. A metallurgical process was developed to a pre-feasibility level resulting in a detailed process flowsheet to demonstrate the production of several products including magnetite, zircon, ilmenite, rutile, free gold and also sands suitable for construction. The flowsheet was essentially similar to typical mineral sands flowsheets and all testwork carried out at an internationally recognised metallurgical laboratory. • The primary products of magnetite and zircon produced from the • testwork all meet typical international market qualities and grades of >57% Fe and 66% ZrO2 respectively • A robust correlation was developed between the iron grade as measured by XRF and recoverable magnetite and whilst Fe grades are in situ, magnetite grades (%DTR) are recovered grades. Zircon recovery in an exported non-magnetic concentrate based on the 3 tonne bulk sample work was 72% and magnetite recovery was 96.0%. • Two other regional drill composite samples were also processed and provided very similar recoveries and products grades as the larger bulk sample
Environmental factors or assumptions	• Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts,	• The area comprises low–lying beach sand covered with relatively dense vegetation with a typical high rainfall tropical climate. • The water table is generally 0.6m below surface; some areas have the water table at surface • Human habitation is limited

Criteria	JORC Code explanation	Commentary
	particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.	• Vehicular access is generally quite limited
Bulk density	• Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples. • The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit. • Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.	• In situ dry bulk density values were completed for samples packed into a container of known volume and weighed. Each sample then had water added and was allowed to settle to give a 'wet' volume. A density value was developed using the dry weight and the wet volume. Mayur concluded that this too conservative a method as it yielded results that appeared to understate the likely true density value. • Mayur calculated bulk density values from heavy mineral analysis and slimes data using an industry standard formula. The bulk density data was then plotted against levelled iron data from the portable XRF assaying. GWP considered this method would overestimate bulk density at higher Fe grades so a compromise was chosen that incorporates the theoretical bulk densities of pure quartz sand and pure magnetite sand as end members. Bulk density block vaules were calculated from iron block grades. • The average density for the deposit increases slightly with increasing iron cut off grade • Density values are considered reasonable.
Classification	• The basis for the classification of the Mineral Resources into varying confidence categories. • Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data). • Whether the result appropriately reflects the Competent Person's view of the deposit.	• The deposit consists of Measured, Indicated and Inferred Resources. The classification is based on the grade continuity exhibited in the variography and the search passes used in the grade interpolation subject to assessment of other impacting factors such as sampling procedures, QAQC outcomes, density measurements and the geological model • The entirety of the test mining area model is classified as Measured because of the closely spaced sampling (50m x 20m). • Search Pass 1 is used to classify Indicated Resources in the main western model which is essentially confined to the area between the paired fence lines and the immediate periphery. • Passes 2, 3 & 4 are classed as Inferred in the main western model. • The classification appropriately reflects the Competent Person's view • of the deposit.
Audits or reviews	• The results of any audits or reviews of Mineral Resource estimates.	• No audits or reviews of the resource estimates have been completed
Discussion of relative accuracy/ confidence	• Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the	• The Mineral Resources have been classified using a qualitative assessment of a number of factors including the data quality and distribution, complexity of mineralisation/geology, the drillhole spacing, QAQC data, historical data and sampling methods.

Criteria	JORC Code explanation	Commentary
	resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate. • The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used. • These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	• The Mineral Resource estimates are considered to be accurate globally, but there is some uncertainty in the local estimates due to the wide along strike drill spacing over most of the main western model, the complexity of the coalescing strandlines and possible sub-basin development. • The geological nature of the deposit, composite/block grade comparison and the modest coefficients of variation lend themselves to reasonable level of confidence in the resource estimates.

Section 4 Estimation and Reporting of Ore Reserves

(Criteria listed in section 1, and where relevant in sections 2 and 3, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral Resource estimate for conversion to Ore Reserves	• *Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.* • *Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.*	• The Ore Reserve (2020) is based on the Mineral Resource and associated block models dated May 2020. • The Mineral Resources are reported inclusive of Ore Reserves.
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	• The competent person has not visited the site due to time and budgetary constraints. • The CP was involved in numerous discussions with personnel from Mayur and is comfortable with the level of detail provided.
Study status	• *The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.* • *The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.*	• A Pre-Feasibility Study was completed on the project in 2016 and updated in 2017. • Modifying factors applied to the PFS were at a degree of detail appropriate to the study level. The study concluded that the mine plan is technically achievable and economically viable.
Cut-off parameters	• *The basis of the cut-off grade(s) or quality parameters applied.*	• The basis of the adopted cut-off grade for magnetite was calculated by Mayur at 5.5% DTR based on the Orokolo Bay PFS Economic Model for Magnetite, DMS and Zircon products whereby a conservative discount rate of 10% was applied. The calculation excluded any revenue from construction sand sales
Mining factors or assumptions	• *The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design).* • *The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc.* • *The assumptions made regarding geotechnical parameters (eg pit slopes, stope sizes, etc), grade control and pre-production drilling.* • *The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).* • *The mining dilution factors used.* • *The mining recovery factors used.* • *Any minimum mining widths used.* • *The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.*	• Conversion of Mineral Resources to Ore Reserves was carried out by applying dilution and recovery factors to blocks and selecting those bocks that could be mined economically once any overlying blocks with grade below cut off were considered. No detailed pit designs were created as the ore is at surface and shallow (average 2m depth). Mining would follow the mining block outlines and designated depths. • The chosen mining method is by excavator, with haul trucks transporting the ore to a nearby relocatable processing module. Mining areas would be cleared by local labour ahead of the mining front. As the ore occurs at surface (including soil), there is no overburden to pre-strip. • As the mining depths are very shallow, and the sands are relatively stiff due to clay content, mining batters will be near vertical. Prior to mining, closely spaced infill drilling would be undertaken similar to the density of drilling locations in the test pit area. • A recovery factor of 95% and a dilution factor of 5% were used in the estimation of Ore Reserves.

Criteria	JORC Code explanation	Commentary
	• *The infrastructure requirements of the selected mining methods.*	• No minimum mining width was applied. Regularised mining blocks were created measuring 20m x 20m with variable depths. • Inferred material was included in the initial mining study (2016) and PFS economic evaluation. The initial mining study included approximately 78% Inferred material. The mining schedule associated with this Ore Reserve estimate contains 59% Inferred material. The Ore Reserves (not including Inferred material) contains enough ore to sustain a 6 year mine life. Mining of Ore Reserves could be completed without having to mine any Inferred material. • The infrastructure and utilities required for the Project would include camp, workshops, administration facilities, maintenance facilities, accommodation, power, water, fuel, waste and communications. Most materials and equipment would be barged to site from either Kerema (Provincial Capital) or Port Moresby.
Metallurgical factors or assumptions	• *The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.* • *Whether the metallurgical process is well-tested technology or novel in nature.* • *The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.* • *Any assumptions or allowances made for deleterious elements.* • *The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole.* • *For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?*	• The proposed processing circuit involves delivery of the ROM ore to one of two relocatable 2.5Mtpa concentrators where the material will be screened to remove +3mm organic and oversize material followed by desliming and two stage ore upgrading. The first stage is a gravity circuit (spirals) to remove lower density gangue material to produce a heavy mineral (HM) concentrate. The lower density material would be routed through an up-current classifier to remove fines and organic components, producing a material suitable for use as a construction sand. The HM concentrate would be treated by wet LIMS to make an iron rich magnetite HM concentrate and non-magnetic, zircon-rich HM concentrate. • The process is well tested and used on similar deposits throughout the world. • Metallurgical testwork was conducted based on a 12 tonne bulk sample that was excavated from four pits located about 5km apart along the length of the deposit. • The primary products of magnetite and zircon produced from the testwork all meet typical international market qualities with grades of >57% Fe and 66% ZrO2 respectively. • The Ore Reserve estimate is based on the appropriate mineralogy to meet the product specifications.
Environmental	• *The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.*	• The proposed mining and processing operation will have minimal environmental impacts. Mayur were issued an Environment Permit, EOL-L2(68), on the 15th March 2019 for a period of 25 Years. The permit applies to the bulk mining activities to be carried out within the EL2305 and the adjacent El 2150 licences. It covers the discharge of wastes into the environment from its premises while carrying out activities associated with

Criteria	JORC Code explanation	Commentary
		mechanised mining involving the non-chemical processing of more than 50 000 tonnes per annum. It also covers the extraction of water from surface and groundwater resources.
Infrastructure	• *The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.*	• The infrastructure and utilities required for the Project would include camp, workshops, administration facilities, maintenance facilities, accommodation, power, water, fuel, waste and communications. Most materials and equipment would be barged to site from either Kerema (Provincial Capital) or Port Moresby.
Costs	• *The derivation of, or assumptions made, regarding projected capital costs in the study.* • *The methodology used to estimate operating costs.* • *Allowances made for the content of deleterious elements.* • *The source of exchange rates used in the study.* • *Derivation of transportation charges.* • *The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.* • *The allowances made for royalties payable, both Government and private.*	• The capital and operating costs have been derived from the project development, manufacturers' quotations for specific equipment, quantities and industry factors for the installations of piping, electric services, and equipment. • Extensive process design, general plant layout and design, environmental studies, and assessment of supplies, labour, and equipment required for mining, processing, and service operations have all supported the accuracy of the CAPEX and OPEX estimates. • Capital and operating cost assessments for the PFS were made based on various combinations of the different products. • All estimates of pricing and costs are based in United States dollars wherever possible. Where rates were obtained in other currencies, exchange rates have been used based on World Bank and KPMG consensus March 2020. • Shipping charges are based on industry estimates. • Penalties for failure to meet specification etc are based on off-take agreements with various customers. • Government royalties and mining levee are calculated as 3% of the mine gate value of all material extracted. • Compensation agreements are in place with local landholders for the initial test mining area.
Revenue factors	• *The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc.* • *The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.*	• Head grade is based on a life of mine schedule. • Commodity prices are based on market analyst consensus and confidential market testing. • Exchange rates based on World Bank and KPMG consensus March 2020. • Shipping charges are based on industry estimates. • Penalties for failure to meet specification etc are based on off-take agreements with various customers.
Market assessment	• *The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.* • *A customer and competitor analysis along with the identification of likely*	• China has been identified as a key target market for the titanomagnetite and heavy mineral concentrate (zircon) products due to dominant market size, future demand growth prospects, tolerance, and acceptance of variable VTM quality. Given PNG's relative proximity to China and end consumers should

Criteria	JORC Code explanation	Commentary
	market windows for the product. • *Price and volume forecasts and the basis for these forecasts.* • *For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.*	agree to favourable contract conditions that takes advantage of the projects combined low FOB cost and freight advantage over countries such as Australia and New Zealand. Mayur has signed numerous Letters of Intent with potential customers for trial shipments of magnetite for steel making and DMS as well as zircon. An offtake agreement is also in place for 25,000 tonnes of magnetite from the mining trial and 200,000 tpa for two years thereafter if the trial shipment performs to satisfaction. • The construction sands would be sold to customers in the Sydney market where an opportunity has been identified due to rising demand (from major infrastructure projects and population and housing growth forecasts) coupled with supply side challenges due to current sand sources approaching the end of their life The company is currently assessing Sydney based established tier 1 end user customer enquiries about bringing construction sand into existing Sydney port locations whilst assessing its long term options around its course of action(s) as it relates to Port Botany..
Economic	• *The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc.* • *NPV ranges and sensitivity to variations in the significant assumptions and inputs.*	• Inputs into the NPV calculation include size of Resource, stripping ratio, project life, adjustments of commodity pricing to account for impurities, concentrate grades, Government royalties, tax free status for initial period, even repayment of debt over first 9 years, discount rate of 10% post tax, inflation rate of 2%, sustaining capital of 10% of direct capital spread over LOM from year two. • NPV results were positive for all combinations of product. • A detailed NPV sensitivity analysis was completed, which found the Project is most susceptible to fluctuations in the operating cost and the prices of the construction sand the magnetite product.
Social	• *The status of agreements with key stakeholders and matters leading to social licence to operate.*	• Compensation agreements are in place with local landholders for the initial test mining area. • Community awareness and relations work has been conducted over the last five years. • As part of the company's social licence to operate, once operations commence, the company shall only employ locals from the Orokolo Bay region and mostly the local villages to work on the project. The company estimates to employ approximately 50-60 local villagers to work on the main mining operations

Criteria	JORC Code explanation	Commentary
Other	• *To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:* • *Any identified material naturally occurring risks.* • *The status of material legal agreements and marketing arrangements.* • *The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.*	• No identifiable naturally occurring risks have been identified that would impact the classification of Ore Reserves. • Various letters of intent and offtake agreements have been signed with customers. • Mayur has secured approval to implement a bulk sampling and processing facility for up to 100,000 tonnes p.a. to enable commercial scale customer product testing. • As part of the Mining Lease submission Mayur would negotiate a right to occupy land on commercial terms from underlying-land owners in the same manner as any other individual or entity would in accord with the applicable mining legislation. Most land in PNG is customary and not subject to legal title hence these agreements would be with the legitimate landowners that would be finalised during the project development process
Classification	• *The basis for the classification of the Ore Reserves into varying confidence categories.* • *Whether the result appropriately reflects the Competent Person's view of the deposit.* • *The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).*	• Measured Resource have been converted to Proved Reserves and Indicated Resource have been converted to Probable Reserves based on economic viability after the application of modifying factors. • The result appropriately reflects the Competent Person's view of the deposit. • No Probable Ore Reserves have been derived form Measured Mineral Resources.
Audits or reviews	• *The results of any audits or reviews of Ore Reserve estimates.*	• The Ore Reserves have not been audited or reviewed.
Discussion of relative accuracy/ confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate.* • *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* • *Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage.* • *It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	• The Ore Reserves are based on the application of standard mining and processing methods for this type of deposit. The mineral sands occur at surface and at shallow depths. As such it is considered the estimate of Ore Reserves to be of acceptable accuracy and confidence. • During the PFS the main project risks were identified and analysed, with proposed mitigating strategies proposed. The risk assessment did not yield any critical risks to the project. • The Ore Reserves relates to global estimates.