

28 May 2020

# Mayur banks 40% resources upgrade at Orokolo Bay Mineral / Industrial Sands Project

Mayur Resources (ASX:MRL) today announced a significant JORC Code Compliant Mineral Resource upgrade at its Orokolo Bay Mineral/Industrial Sands Project in Papua New Guinea (PNG).

The overall resource estimate for the project (Western + Eastern Areas), which plans to produce titano-magnetite (associated with 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), has increased over 40 percent from 172.7 to 243 million tonnes. The upgrade was obtained in the Western Area of the Project, that lies within EL2305, following the last drilling program in 2019 which saw a rise from 139.2Mt to 209.5Mt (cut-off 5.25% Fe). The 2016 resource estimate for the Eastern Area, that lies within the adjacent EL2150, remains unchanged at 33.5Mt (cut-off 7% Fe, for a total Project Resource of 243 Mt).

#### 2020 Resource Estimate

#### Western Area 5.25% (Fe cut off)

#### Resource Estimates (Groundworks Plus)

Category	Mt	DTR %	Fe %	Ti %	Zircon ppm	DTR Mt	Fe Mt	Ti Mt	Zircon t
Measured	1.64	10.08	11.35	1.94	712	0.17	0.19	0.03	1,170
Indicated	70.1	6.82	9.13	1.17	508	4.78	6.40	0.82	35,587
Inferred	137.8	5.43	8.19	1.02	454	7.48	11.28	1.40	62,622
Total	209.5	5.93	8.53	1.08	474	12.42	17.87	2.25	99,378

#### Construction Sand Resource - Cut off 5.25% Fe (Western Area only)

Category	Mt
Indicated	38.6
Inferred	74.2
Total	112.8

#### 2016 Resource Estimate<sup>1</sup>

#### Western Area 5.25% (Fe cut off)

#### Resource Estimates (H&S Consultants)

Category	Mt	DTR %	Fe %	Ti %	Zircon ppm	DTR Mt	Fe Mt	Ti Mt	Zircon t
Indicated	23.8	6.78	10.12	1.38	622	1.62	2.41	0.33	14,800
Inferred	115.4	5.32	9.08	1.19	538	6.14	10.47	1.37	62,000
Total	139.2	5.57	9.26	1.22	552	7.75	12.89	1.70	76,800

<sup>1</sup> Previously reported p 96-98, Mayur Resources Prospectus, 21 July 2017



#### Eastern Area (7.0 % Fe cut off)

#### Resource Estimates (H&S Consultants)

Category	Mt	DTR %	Fe %	Ti %	Zircon ppm	DTR Mt	Fe Mt	Ti Mt	Zircon t
Indicated	7.0	5.7	9.33	1.44	923	0.40	0.65	0.10	6,500
Inferred	26.5	5.2	9.00	1.39	921	1.00	2.39	0.37	24,400
Total	33.5	5.32	9.07	1.40	921	1.40	3.04	0.47	30,900

#### Construction Sand Resource - Cut off 5.25% Fe (Western + Eastern Areas)

Category	Mt
Inferred	86.0
Total	86.0

#Note the 2020 upgraded construction sand resource of 112.8 mt refers only to the western area and the company may undertake further work to examine the previous eastern area already identified under JORC in 2016.

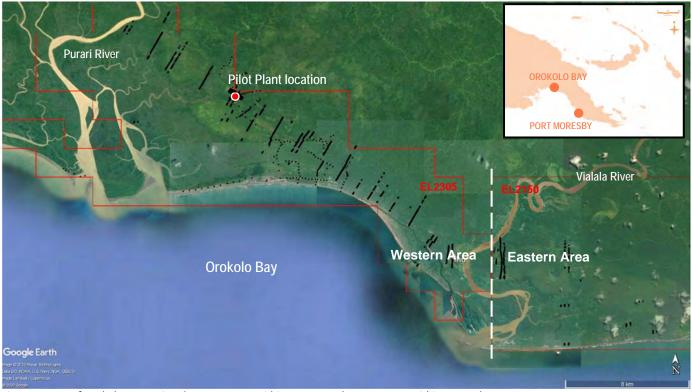


Figure 1: Map of Orokolo Bay Project (Western Area within EL2305 and Eastern Area within EL2150).

The increase in the resource estimate in the Western Area follows last year's completion of an infill drilling program as well as a light detection and ranging (LIDAR) survey and coincides with the ongoing construction of a small-scale bulk sampling pilot plant at Orokolo due for completion later this year. The pilot plant will produce up to 100,000 tonnes of iron ore sands per annum to provide test scale shipments of product to potential off takers. Successful testing of the trial shipments will remove a key precondition in the company's binding long-term offtake agreements for the planned full-scale plant.

This resource work which includes a maiden "Measured" resource also serves to finalise the Definitive Feasibility Study for the project, which will help firm up design and construction plans as well as mining and processing costs.



In addition to the mineral sands resource upgrade reported here, a 34% increase in the tonnage of construction sands (5.25% Fe cut-off) from 86.0 to 112.8 million tonnes has also been estimated from the Western Area only (noting the 2016 construction sands JORC estimate covered both Western and Eastern areas), including for the first time an "Indicated" Construction Sands resource.

Managing Director Paul Mulder said "this resource upgrade is a great outcome and further endorses our focus in developing the Orokolo Bay nation building project. These updated Resources will provide key mine planning and value optimisation inputs as we work through the DFS. The DFS will also involve full re-examination of the project economics previously reported from our PFS in 2017, with the new options for materially larger scale up front production, mine life extension, together with higher long-term consensus Iron Ore prices."

The Mineral Resource has been reported in accordance with guidelines as set out in the Joint Ore Reserves Committee (JORC) Code (2012). Resource categories have been defined using definitive criteria determined during the validation of the grade estimates, with detailed consideration of the JORC Code categorisation guidelines.

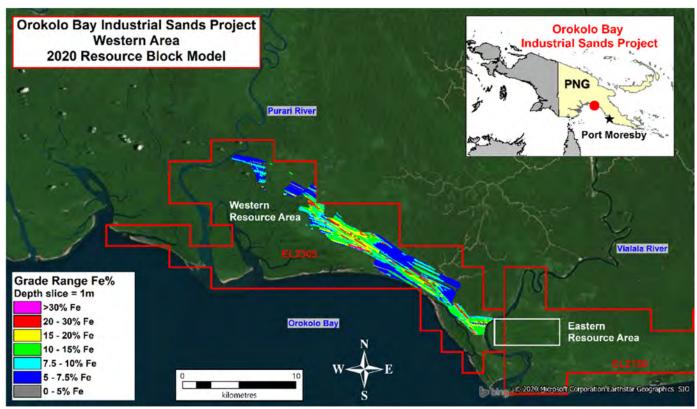


Figure 2: Orokolo Bay – Location map showing 2020 Resource Block Model (1m depth slice) within EL2305.

#### <ENDS>

#### For more information or photos:

Paul Mulder
Managing Director
Phone +61 (0)7 3157 4400
info@mayurresources.com.au

Gareth Quinn Corporate Affairs Manager Mobile: 0417 711 108 gareth@republicpr.com.au



# Orokolo Bay Industrial Sands Project

### Resource Estimate Upgrade Notes

#### Geology and Interpretation:

The Orokolo Bay prospect comprises a series of preserved southeast to northwest striking beach strands of recent age, around 20 to 100m wide and several kilometres long, with mineralised thicknesses up to 5m and lithology characterised by fine medium to medium grey to blue grey sands.

Individual strandlines vary in length from 100's of metres to many kilometres and can be broken by areas of higher relief or by past erosion by stream channels. The dimensions of the mineralised zones ranges from 10m to 80m wide, 0.5m to 4.5m thick and between 0 to 2m below the current surface (land or swamp). Lateral boundaries are diffuse and often merge with an adjacent strandline.

#### Mineralisation:

Mineralisation is generally confined to the upper 2-2.5m of the soil/sand profile as loose sand grains, but significant mineralisation can occur in swamp areas beneath the swamp itself and on the dune ridges. Sand size is generally <1mm with a combination of fully liberated and interlocked mineral grains. The mineralisation of economic interest from the recovered magnetic fraction occurs primarily as titanomagnetite with ilmenite, Ti-oxide phases and Fe oxides including hematite and alteration products. Significant zircon is contained in the non-magnetic fraction of the heavy mineral concentrate.

#### Sampling:

Mayur undertook drilling using a combination of cased auger drilling in dry material and cased sludging in waterlogged material. The drilling and sampling process can be summarised by the following:

- Samples were taken every 0.5m to allow detection of changes in lithology.
- Surface vegetation was cleared away to a clean soil surface.
- The first 0.5m of soil was sampled using a hand sand auger.
- The casing was inserted into the sand auger hole, casing clamp attached and the casing/clamp rotated until it had penetrated 100 -150mm. Water was added into the casing and the sludger lowered into the casing to retrieve the sample.
- The sample was poured into the sample bucket and the steps repeated until a full 0.5 m of penetration was achieved. The bucket was then passed over to the supervising geologist for logging.
- The percentage recovery of the sample was measured and recorded.
- A digital photograph of each sample in the sample bucket was recorded with the sample bag and sample tag numbering visible in the photograph.
- Sample recovery was recorded, the sample split if necessary, the sample put into a marked calico sample bag and the magnetic susceptibility recorded.



• Additional sections of casing were added, and drilling continued for up to 7m or until two consecutive magnetic susceptibility readings of <1000 units were recorded. This generally coincided with a change of sand colour to grey, a coarsening of the sand particles and a significant decrease in slimes.

Samples were air dried in the calico bags at the field camp to approximately 5% moisture. Once dried each sample was placed individually into plastic sample bags and then packed 8 - 10 per polyweave bag for transport.



Figure 3: Drilling at Orokolo Bay.

#### Drilling:

Drilling of the Orokolo Bay Mineral Sands deposit has been undertaken during numerous exploration programs by various companies. Data used in this estimation study has been collected by two different companies, Katana and Mayur, between 2009 and 2019.

During 2009 and 2010 Katana carried out drilling, ground truthing aeromagnetic targets with the aim of confirming the mineralisation potential and character of the geophysical targets. Drilling was either by man portable percussion samplers (wacker drills) or hand augers which could drill down to a maximum of nine meters but more generally six meters. A total of 138 holes were drilled for 650mover the larger magnetic anomalies returning visually encouraging results.

Mayur undertook drilling programs in 2015, 2018 and 2019. The holes were drilled using auger in the dry sand and then sludger and bailer in the wet sand. Some of the 2015 holes were drilled along parallel twin lines that were 250m apart. These sets of twin lines were positioned at locations 3 to 5km apart. The majority of holes were positioned at 20m intervals along each line (measured by tape measure and GPS) where ground magnetic anomalies were clearly evident. Where necessary, infill holes were completed at 10m intervals.

Holes drilled in 2018 and 2019 by Mayur were designed to infill areas of low data density as well as very closed spaced drilling in an area proposed as the location of a bulk sampling and pilot plant trial. The overall spacing of drill lines in the project area is no more than about 2km apart, with line spacing in the Pilot Plant bulk sample pit area down to 50m.



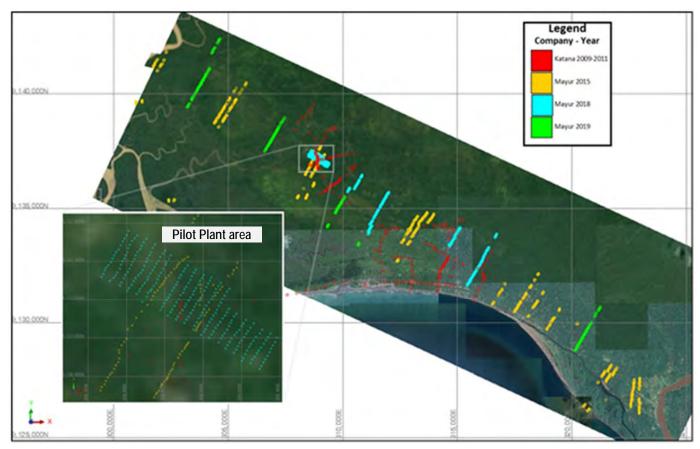


Figure 4: Orokolo Bay historical drilling programmes (Western domain).

Table 1: Drilling and sampling statistics (Western area)—additional holes used in updated resource estimate in highlight.

Drilling	Commonii	Number	of holes	Average length	Total I	No. accessor	
Program	Company	Auger	Cased sludged	(m)	Auger	Case Sludged	No. assays
2009	Katana	128	-	2.0	251	-	257
2011	Katana	-	65	4.5	-	287	289
2015	Mayur	-	713	3.5	-	2,507	4,586
2018	Mayur	-	542	3.5	-	1,944	3,778
2019	Mayur	-	256	2.5	-	690	1,271
	Total	128	1,576	3.5	251	5,428	10,181



#### Sampling Preparation and Analysis:

All Mayur drill samples underwent basic ore preparation on arrival in Australia, where a small split was then pulverised and analysed by Mayur using a Mayur developed XRF analysis procedure broadly described in the following:

All drill samples were oven dried as a whole sample, crushed if lumpy due to clays or high slimes and then split into various subsamples which are described below:

- 50g sample for pulverising and XRF assay
- 50g reserve split
- 500g split for possible Davis tube analysis or metallurgical compositing
- Residue for backup

Drill sample consignments from PNG were divided into two lots at RobMet as they arrived in Australia, one for treatment by Robbins Metallurgical in Brisbane and one lot for Bureau Veritas in Perth.

Following preparation, a 50g split was dispatched to Bureau Veritas (BVM) for pulverising in preparation for XRF analysis and the pulverised samples put into geochemical bags and returned to Mayur in batches. The pulverised samples were then analysed by Mayur personnel using two portable XRF guns mounted in workstations.

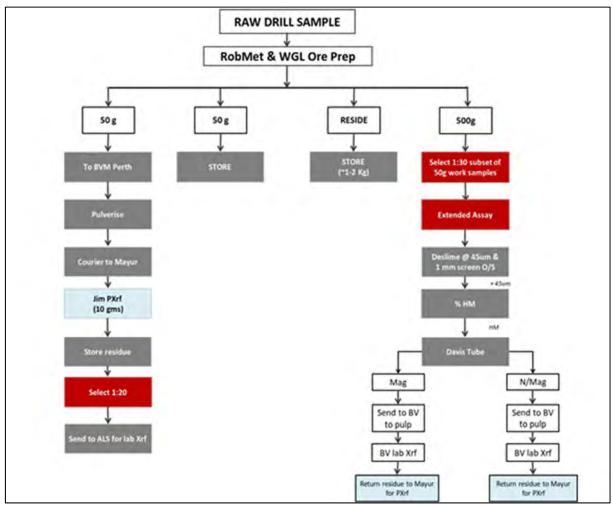


Figure 5: Mayur drill sample protocol.



#### Quality Control:

The QAQC program included the use of:

- Blanks Actual insertion rate of 1 in 15.
- In-house standards Actual insertion rate of 1 in 25.
- Field duplicates Actual insertion rate of 1 in 26.
- Repeat XRF analyses Actual insertion rate of 1 in 20.
- Drill hole twinning.

543 samples were also submitted to a third-party laboratory for chemical XRF analysis as part of a calibration exercise. A subset of these samples was also submitted for recovered magnetic fraction analysis (Davis Tube Recovery).

The three standards were created by Mayur and 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 Bureau Veritas independent certified laboratories.

#### **Grade Estimation:**

Based on the summary statistics for the composite data, Inverse Distance Squared (ID2) was chosen as an appropriate estimation method for iron, titanium, zirconium and DTR grades.

Search ellipse orientations were based on interpreted strandline trends. A number of regions were created within the mineralised zone, with each region containing similar strand line strike directions. The regions were coded into the block model.

The estimates were completed using whole block discretisation of 3 points in the east-west dimension, 3 points in the north-south dimension, and 2 points in the vertical dimension for a total of 18 discretisation points per whole block estimate. Any sub-blocks within the 3-D limit of each whole block were assigned the whole block estimate.

No domain control was used for the input composite data or block selections (i.e. soft boundaries). None of the applied search regimes involved octant methodology. The inverse distance weights were raised to the power of 2.

The estimates were completed using Surpac mining software. In estimating grade, the standard fields relating to the search neighbourhood used, number of composites selected, the distance to the nearest composite, the average distance of composites and the number of drill holes from which the selected composites were derived were recorded.

A multiple search strategy was used during the estimation process as shown in Table 3 below.



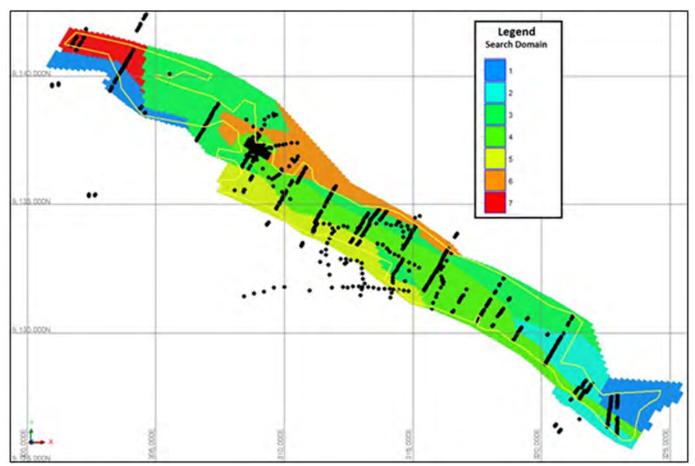


Figure 6: Block Model Search Orientation Domains.

Table 2: Search Domain Orientations.

Search Domain	Bearing 95°
1	95°
2	140°
3	115°
4	121°
5	107°
6	126°
7	103°

Table 3: Sample search parameters applied for each estimation pass.

Pass	Ellipsoid Extents						Sample C	onstraints
	Major Axis (m) Semi-Major Axis (m				) Minor Axis (m)		14. 4.0	TOTAL CHES.
	Main	Test Pit	Main	Test Pit	Main	Test Pit	Min Samp	Max Samp
1.	500	100	25	20	-3	1.	6	15
2	1000	200	40	40	1	1 -	6	15
3	1500	500	40	50		1	4	15
4	1500		40	Let I	1	- 2	2	15



#### Validation:

Validation of the estimate was completed and included both interactive and statistical review. The validation methods included:

- A visual comparison of the input data against the block model grade in plan and cross section.
- Comparison of global statistics.

The visual assessment of block model grades compared to composite grades did not highlight any particular issues. Block grades display good correlation with nearby drill hole composite grades and acceptable representation of vertical grade zonation.

#### Resource Reporting:

The Resource estimate has been classified as Indicated and Inferred Mineral Resources in accordance with guidelines as set out in the Joint Ore Reserves Committee (JORC) Code (2012). Resource categories have been defined using definitive criteria determined during the validation of the grade estimates, with detailed consideration of the JORC Code categorisation guidelines.

#### **Resource Categorisation:**

The key parameters considered during the resource categorisation are as follows:

- Geological knowledge and interpretation.
- Deposit style.
- Confidence in the sampling and assay data.
- The spacing of the exploration drill holes.
- Variogram model ranges in relation to the local data spacing and the estimation variance.
- Prospects for eventual economic extraction.

The exploration data used for the Orokolo Bay Mineral Sands grade estimate is robust and appropriate for resource estimation purposes, with the current data spacing sufficient to generate robust grade domains.

The mineral sands have reasonable prospects for eventual economic extraction for the following reasons:

- Metallurgical testwork has shown that separation of a saleable concentrate is viable.
- A Pre-feasibility study in 2017 indicated an NPV of US\$106M and IRR of 93.5% as disclosed in Mayur Resources Prospectus dated 21 July 2017.

Based on the consideration of items listed above, and review of the resource block model estimate quality, classification criteria were determined as summarised in the following:

Measured – All blocks contained in the test pit model boundary (red area below).

Indicated – Blocks in the main model estimated in Pass 1.

Inferred – Blocks in the main model estimated in Pass 2, 3 or 4.





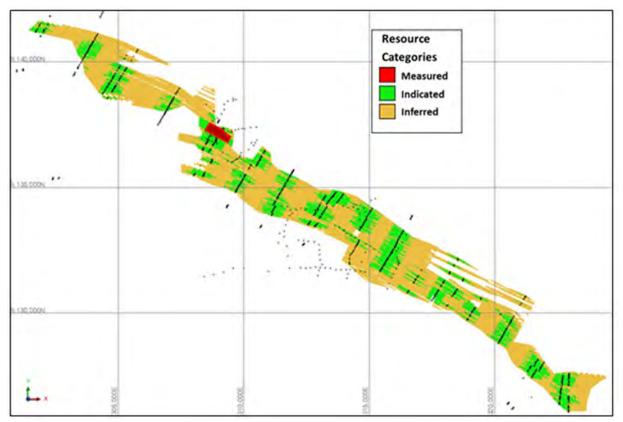


Figure 7: Plan showing the distribution of Resource categories.

The selection of mining method and economic cut-off grade of 5.25% Fe was determined in the 2017 pre-feasibility mentioned above.

The reporting is also constrained by the reference elevation of 100mRL, the base of drilling, not including areas modelled as swamps and inside the interpreted mineralised boundary.

The quantities of iron and titanium reported above are in situ and occur in minerals other than titanomagnetite. Some of the contained metal will not be recoverable from these other minerals or be economically viable if mined and processed.

#### Comparisons with Previous Estimates:

The Orokolo Bay Mineral Sands Western Area Resource was previously estimated in 2016. This updated estimate has seen increases in tonnes (51%) and DTR grade (6%) and a reduction in iron (-8%), titanium (-11%) and zircon (-14%) grades. These changes can be summarised as follows:

- The increase in tonnes is mainly due to the 2018 and 2019 drilling programs having infilled areas of the deposit that were not estimated in 2016 due to the lack of drilling data.
- The increase in DTR can be attributed to changes made to the formula used to calculate DTR form portable XRF iron assays.



• The decrease in grade for the other elements is mostly due to the assay results from drilling completed since the last resource estimate (excluding drill results from the test pit area) having a lower mean grade – due to the infill drilling being within lower grade areas of the deposit.

#### **Construction Sand Resource:**

A by-product of the mineral sands HM separation process is a tailings stream containing size fractions that could potentially be used as a fine aggregate component in construction materials such as concrete, asphalt and unbound pavements.

Petrographic analysis carried out by Groundwork Plus, and materials testing carried out by Monier, both indicate the sand contained within the tailings is suitable for use as a fine aggregate in concrete, asphalt and unbound pavements if suitably graded with coarser sands.

Mayur has also undertaken a market assessment to supply the Sydney market with the sand, Financial modelling has indicated the sand could be sold into the Sydney market at a profit.

Estimations were based on a qualitative assessment of the sand vs clay content within the 0.5m logged intervals from drilling (each description of clay content (Intense, Abundant, Moderate, Weak and Trace) were assigned a number from 1 to 5 (clay intensity value), followed by estimating the sand content by regression.

For samples with slimes >50%, there is a linear relationship between slimes and non-magnetic sand:

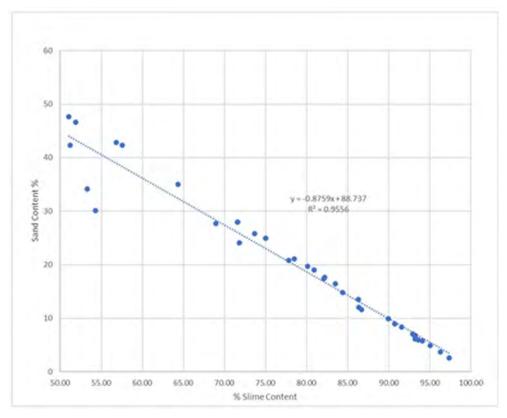


Figure 8: Percentage of slimes content vs percentage of sand content.



• For samples with slimes <50% there is also a relationship between Fe % and sand content %:

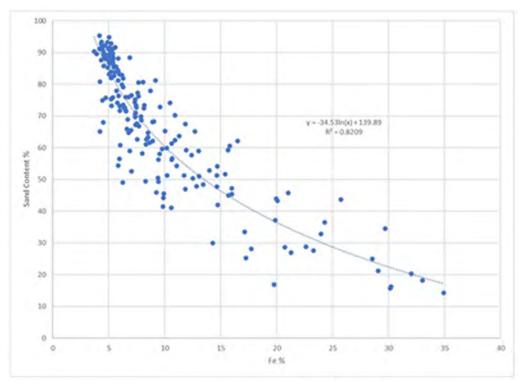


Figure 9: Fe % XRF vs Sand Content.

The qualitative clay content integer values were interpolated into the block model cells using the same parameters as iron etc., resulting in cells having a value in the range of 1 to 5.

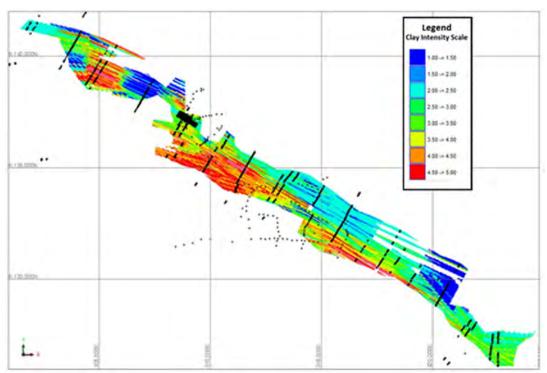


Figure 10: Interpolated clay content = 1 (intense) to 5 (weak).



The amounts of sand can then be estimated by using the regression formula and block model sand values, resulting in the sand proportions as displayed below:

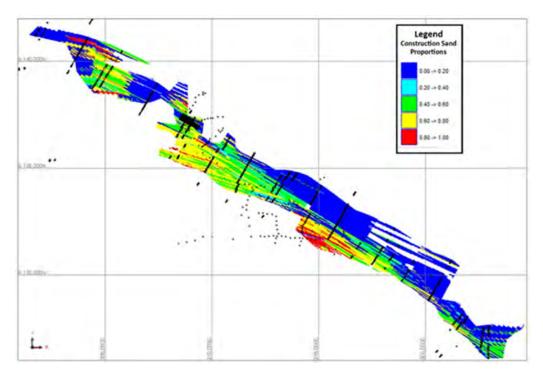


Figure 11: Estimated construction sand proportions.

The amount of construction sand in the Resource, reported using a cut of grade of 5.25 % Fe, is displayed below:

#### 2020 Western Area Resource Estimates (Groundworks Plus) Construction Sand Resource - cut off 5.25% Fe

Table 4: Orokolo Bay Construction Sands Resource.

Category	Mt
Indicated	38.6
Inferred	74.2
Total	112.8



#### **COMPETENT PERSONS STATEMENT**

The Mineral Resources (2020) 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 announcement that relates to Exploration Results and Mineral Resources 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.

Mr 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

# Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul> <li>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.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>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.</li> </ul>	<ul> <li>Each 0.5m sample was emptied into a sample bucket where water was decanted and the sample recovery was measured using a ruler.</li> <li>A photograph was taken of each sample with sample bag and bucket for future reference.</li> <li>Each sample was logged by the rig geologist.</li> <li>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.</li> <li>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.</li> <li>Hole numbers were designated in incremental order as 'DHOBY001, DHOBY002' etc. Sample numbers were designated in incremental order as 'OBY0001', 'OBY0002' etc.</li> </ul>
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).	<ul> <li>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.</li> <li>A total of 6 rigs were used during the program, however they were not always in use at the same time</li> <li>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.</li> </ul>

Criteria	JORC Code explanation	Commentary
Drill sample recovery	<ul> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>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.</li> </ul>	<ul> <li>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.</li> <li>Within the groundwater zone, sample recoveries were maximised by a combination of pouring water down the hole and keeping downward pressure on the drilling rig gear (to minimise the potential for rising sands).</li> </ul>
Logging	<ul> <li>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.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul> <li>Each drilling rig had it's own Geologist.</li> <li>Each sample was logged by the Geologist supervising that specific rig.</li> <li>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.</li> <li>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.</li> <li>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.</li> <li>A logging and sampling protocols procedure booklet was provided to each geologist with assigned logging codes for them to use.</li> </ul>

Criteria	JORC Code explanation	Commentary
Sub-sampling techniques and sample preparation	<ul> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>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.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul> <li>All samples were collected at 0.5m intervals.</li> <li>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.</li> <li>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.</li> <li>Twin holes were drilled roughly every 40 holes (where the second twin hole was drilled 1m to the east).</li> <li>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.</li> <li>Samples were then taken back to the campsite and dried in covered drying sheds.</li> <li>Once dry, the samples were packed into labelled polyweave bags with approximately 10 samples per bag.</li> <li>All samples were sent via ship freight to Robmet/BV labs in Brisbane and dried / crushed / split and pulverised.</li> </ul>

Criteria	JORC Code explanation	Commentary
Quality of assay data and laboratory tests	<ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>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.</li> <li>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.</li> </ul>	<ul> <li>3)- 500g split for Davis Tube analysis</li> <li>4)- Leftover residue for backup</li> <li>These samples were then sent back to Mayur Head office in</li> </ul>

Criteria	JORC Code explanation	Commentary
Verification of sampling and assaying	<ul> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul> <li>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.</li> <li>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.</li> <li>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.</li> <li>A considerable amount of research work was conducted developing and 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.</li> <li>The relationship between %Fe in drill sample and %Magnetics extracted at 800 Gauss for all selected drill samples indicates a very good regression (R²) 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.</li> </ul>
Location of data points	<ul> <li>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.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul> <li>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.</li> <li>All holes were surveyed either during or following drilling using hand-held GPS units.</li> <li>The data has been projected to UTM WGS84 55S.</li> <li>Topographic control is provided by a LIDAR survey flown in 2019. Accuracy is considered very good.</li> </ul>

Criteria	JORC Code explanation	Commentary
Data spacing and distribution	<ul> <li>Data spacing for reporting of Exploration Results.</li> <li>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.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul> <li>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.</li> <li>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.</li> <li>Survey teams went into each area approximately 1-2 weeks prior to drilling to mark and flag the location of all Proposed Holes. Most 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.</li> <li>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.</li> <li>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.</li> <li>Sample compositing has not been applied.</li> </ul>
Orientation of data in relation to geological structure	<ul> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>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.</li> </ul>	

Criteria	JORC Code explanation	Commentary
Sample security	The measures taken to ensure sample security.	<ul> <li>Mayur developed a 'chain of custody' flowsheet prior to the commencement of the programme that was strictly adhered to.</li> <li>All drill samples were bagged and dried in supervised drying sheds onsite.</li> <li>Following this they were repacked into polyweave bags ready for dispatch from site.</li> <li>The Polybags were then transported to Kerema via banana boat with Mayur staff members on board.</li> <li>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.</li> <li>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.</li> </ul>
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	<ul> <li>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.</li> <li>A review and audit of the data was conducted by GWP upon receipt of the data. Issues were identified and corrected.</li> <li>No further audits are considered necessary at this stage of the project development.</li> </ul>

# 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	<ul> <li>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.</li> <li>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.</li> </ul>	<ul> <li>The Western Area mineral resource is situated entirely within Exploration Licence EL2305.</li> <li>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.</li> <li>There are no known impediments to obtaining a Mining Lease (ML) in future in the area.</li> </ul>
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.

Criteria	JORC Code explanation	Commentary
Geology	Deposit type, geological setting and style of mineralisation.	<ul> <li>Orokolo Bay Project is situated within the sedimentary Papuan Basin of PNG.</li> <li>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.</li> <li>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.</li> <li>In summary the 6 main layers identified within the sequence are in the following sequential order:- Soil, Fine grained sands, Mediumfine sands, Coarse gritty sands, Clays, Bedrock.</li> </ul>
Drill hole Information	<ul> <li>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:         <ul> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>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.</li> </ul>	

Criteria	JORC Code explanation	Commentary
Data aggregation methods	<ul> <li>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.</li> <li>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.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	Exploration results are not being reported.
Relationship between mineralisation widths and intercept lengths	<ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>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').</li> </ul>	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.

Criteria	JORC Code explanation	Commentary
Further work	The nature and scale of planned further work (eg tests for lateral	There is little scope to extend the mineralisation beyond the current
	extensions or depth extensions or large-scale step-out drilling).	boundaries.
	• Diagrams clearly highlighting the areas of possible extensions,	Future work will involve in fill drilling to increase confidence levels
	including the main geological interpretations and future drilling	in the mineralisation.
	areas, provided this information is not commercially sensitive.	

# 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	<ul> <li>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.</li> <li>Data validation procedures used.</li> </ul>	<ul> <li>Drilling data supplied by Mayur as a series of Excel spreadsheets</li> <li>Responsibility for the data resides with Mayur</li> <li>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.</li> <li>Visual reviews were conducted to confirm consistency in logging and drill hole trajectories.</li> <li>Assessment of the data confirms that it is suitable for resource estimation.</li> <li>A default collar elevation of 100m RL was used to facilitate block model development.</li> </ul>
Site visits	<ul> <li>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</li> <li>If no site visits have been undertaken indicate why this is the case.</li> </ul>	<ul> <li>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.</li> <li>Deposit area viewed in Google Earth 3D; confirms its reported flatlying nature and vegetation cover.</li> <li>Mayur supplied digital photos of drilling and sampling.</li> <li>Mayor personnel, T Charlton and P Hinner have completed several visits to the property including supervising some of the sampling.</li> </ul>

Criteria	JORC Code explanation	Commentary
Geological interpretation	<ul> <li>Confidence in (or conversely, the uncertainty of ) the geological interpretation of the mineral deposit.</li> <li>Nature of the data used and of any assumptions made.</li> <li>The effect, if any, of alternative interpretations on Mineral Resource estimation.</li> <li>The use of geology in guiding and controlling Mineral Resource estimation.</li> <li>The factors affecting continuity both of grade and geology.</li> </ul>	<ul> <li>The extents of the magnetite-bearing mineralisation are reasonably well defined from airborne and ground magnetic data interpretations and drilling information.</li> <li>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.</li> <li>Alternative interpretations are possible for individual strandlines, but any overall change is likely to be small.</li> <li>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</li> <li>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.</li> <li>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.</li> </ul>
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.	<ul> <li>Mineralisation is flat-lying</li> <li>Mineralisation in the western section has a strike length of 25km on a 120° direction with an overall average width of 2.5km</li> <li>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</li> </ul>

Estimation and modelling techniques

#### JORC Code explanation

- 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 byproducts.
  - 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.
- 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.

#### Commentary

- 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 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

Criteria JORC Code explanation	Commentary
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.	<ul> <li>interpreted from high amplitude axes in the ground magnetic data. All domain boundaries were treated as soft boundaries.</li> <li>No constraints were applied to the composites in the modelling save for the orientation domains</li> <li>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.</li> <li>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.</li> <li>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.</li> <li>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 &amp; 4 1500m by 40m by 1m. Minimum number of data for Pass 1 &amp; 2 is 6, with 4 and 2 for Passes 3 and 4. A maximum of 15 data was applied in all cases.</li> <li>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 &amp; 2 is 6, with 4 Pass 3. A maximum of 15 data was applied in all cases.</li> <li>The maximum extrapolation in the strike direction is 1500m for the maximum vertical extrapolation is zero due to the base of drilling surface.</li> <li>Model validation consisted of comparing block grades with composite grades. This was reported on both a visual basis and</li> </ul>

Criteria	JORC Code explanation	Commentary
		summary statistical comparison for composites and block grades. Grade-tonnage curves were also used to 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.	<ul> <li>Mayur is taking responsibility for the cut off grades. These are based on their financial modelling sensitivities.</li> <li>The resource estimates are reported at an iron cut off grade of 5.25%.</li> </ul>
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.	<ul> <li>The intended mining method will be by excavator and haul truck.</li> <li>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. 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</li> </ul>

Criteria	JORC Code explanation	Commentary
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.	<ul> <li>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, rutileand 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.</li> <li>The primary products of magnetite and zircon produced from the testwork all meet typical international market qualities and grades of &gt;57% Fe and 66% ZrO2 respectively</li> <li>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%.</li> <li>Two other regional drill composite samples were also processed and provided very similar recoveries and products grades as the larger bulk sample</li> </ul>
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, 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.	<ul> <li>The area comprises low-lying beach sand covered with relatively dense vegetation with a typical high rainfall tropical climate.</li> <li>The water table is generally 0.6m below surface; some areas have the water table at surface</li> <li>Human habitation is limited</li> <li>Vehicular access is generally quite limited</li> </ul>

Criteria	JORC Code explanation	Commentary
Bulk density	<ul> <li>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.</li> <li>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.</li> <li>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</li> </ul>	<ul> <li>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.</li> <li>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.</li> <li>The average density for the deposit increases slightly with increasing iron cut off grade</li> <li>Density values are considered reasonable.</li> </ul>
Classification	<ul> <li>The basis for the classification of the Mineral Resources into varying confidence categories.</li> <li>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).</li> <li>Whether the result appropriately reflects the Competent Person's view of the deposit.</li> </ul>	<ul> <li>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</li> <li>The entirety of the test mining area model is classified as Measured because of the closely spaced sampling (50m x 20m).</li> <li>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.</li> <li>Passes 2, 3 &amp; 4 are classed as Inferred in the main western model.</li> <li>The classification appropriately reflects the Competent Person's view of the deposit.</li> </ul>
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

Criteria	JORC Code explanation	Commentary
Discussion of relative accuracy/ confidence	<ul> <li>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 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.</li> <li>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.</li> <li>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</li> </ul>	<ul> <li>spacing, QAQC data, historical data and sampling methods.</li> <li>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.</li> <li>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.</li> </ul>