MayurResources

ASX Announcement

29 November 2022

Orokolo Bay roasting test work confirms presence of Additional Ilmenite Revenue Stream

Highlights

- Potential additional revenue stream identified at Orokolo Bay achieved through processing of waste stream into an Ilmenite product – likely to be sold as a crude concentrate;
- Recent oxidation flash roast test work has demonstrated a Hi Titanium - "Hi-Ti" 40% TiO2 stream can be isolated from what would otherwise be a waste stream – and expected to be at much lower cost than specific mining for Ilmenite;
- Further proposed test work aims to simplify and optimise the Hi-Ti processing circuit to further improve the final TiO_2 grade in the ilmenite product whilst maximising yield;
- Potential to unlock unrealised value for the Project via an additional high margin saleable product to compliment the Vandium Titano Magnetite, Construction Sand and Zircon products;
- New revenue stream to be in addition to current annual EBITDA of over US$25m with first revenues targeted in Q4 CY2023;
- Orokolo Bay Project is fully permitted and construction ready.

Mayur Resources Limited (ASX:MRL) is pleased to report positive results following the completion of a preliminary level roasting test program for its Orokolo Bay Project located in Gulf Province, Papua New Guinea. The material used for the roasting test work originated from bulk sample pits (Pit 1, Pit 3, Pit 4, and Pit 5) taken at Orokolo Bay (EL2305) as shown in Figure 1. This material was then homogenized and transported to IHC Mining and Roundhill Engineering for metallurgical test work. For further information please refer to the JORC Table 1 attached to this announcement.

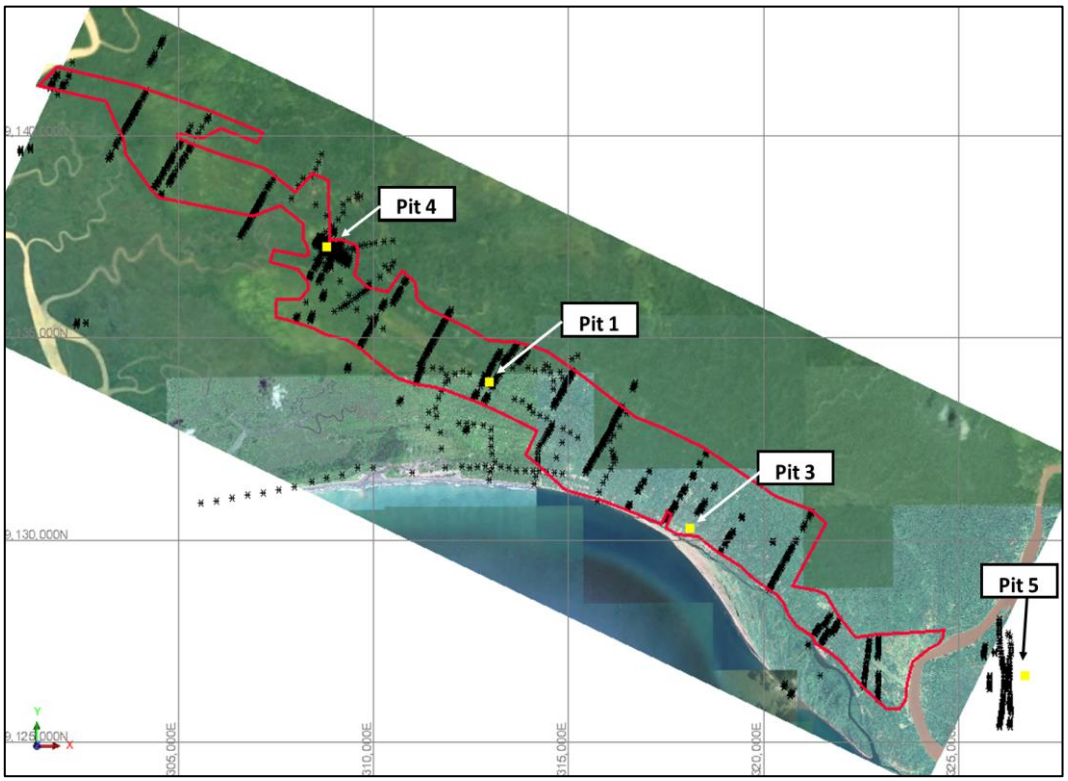

Figure 1 - Map of Pit Samples at Orokolo Bay within EL2305 & EL2150 used for test work.

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Ilmenite Overview

Ilmenite is a one of the most commonly found and abundant forms of titanium ore in the world and is predominantly produced from Mineral Sand mining operations. Ilmenite, being a titanium oxide mineral, is used to produce high-performance metal alloys commonly used in the aerospace and aviation industry, the medical industry for surgical tools & implants, and for other high-performance products such as sporting equipment and the automotive industry. Ilmenite is also an important feedstock to produce titanium dioxide pigments which are commonly used as pigment in whitening paper, paints, toothpaste, adhesive, plastic, foods and nanotechnologies.

The Ilmenite spot price on 14th of November 2022 is US$278 and is based on long-term consensus pricing from Bell Potter (54% TiO2, FOB Australia).

Downstream Processing Results

Bureau Veritas performed mineralogical testing on the dry mill magnetic concentrate which demonstrated the sample to contain 19.2wt% of Ilmenite grade grains defined as minerals containing TiO_2 between 40% to 60% (See Appendix 1 for QEMSCAN results). Subsequent roasting test work completed by Roundhill Engineering and metallurgical processing completed by IHC Mining successfully upgraded the dry mill magnetic concentrate into a marketable ilmenite product with ~40% TiO_2 grade (See Figure 2 for PFD).

Table 1 below outlines the certified assay results achieved in the High Temperature Roasting Circuit (HTR) while Table 2 outlines the assay results achieved in the Low Temperature Roasting Circuit (LTR). For the full suite analysis of the dry mill magnetic concentrates please refer to Appendix 2 and Appendix 3.

The results from this work are encouraging and will be used to inform and optimise the downstream processing through further testing.

Table 1: Potential Hi-Ti and Fe-Oxide products from High Temperature flash Roasting.

Assay	TiO_2	Fe	SiO_2	Al_2O_3	Cr_2O_3	MgO	Zr	P	V	CaO	S	K_2O
UoM	%	%	%	%	%	%	%	%	%	%	%	%
Ilmenite	40.80	38.36	1.84	0.57	0.14	1.23	0.08	0.03	0.12	0.36	0.002	0.03
Hematite	11.15	55.15	3.31	2.60	0.49	1.82	0.04	0.04	0.22	0.42	0.003	0.09

Table 2: Potential Hi-Ti and Fe-Oxide products from Low Temperature Roasting.

Assay	TiO_2	Fe	SiO_2	Al_2O_3	Cr_2O_3	MgO	Zr	P	V	CaO	S	K_2O
UoM	%	%	%	%	%	%	%	%	%	%	%	%
Ilmenite	41.50	35.46	3.97	1.46	0.83	1.79	0.07	0.03	0.18	1.22	0.000	0.06
Hematite	15.20	54.27	3.04	2.31	0.13	1.73	0.03	0.05	0.23	0.47	0.000	0.09

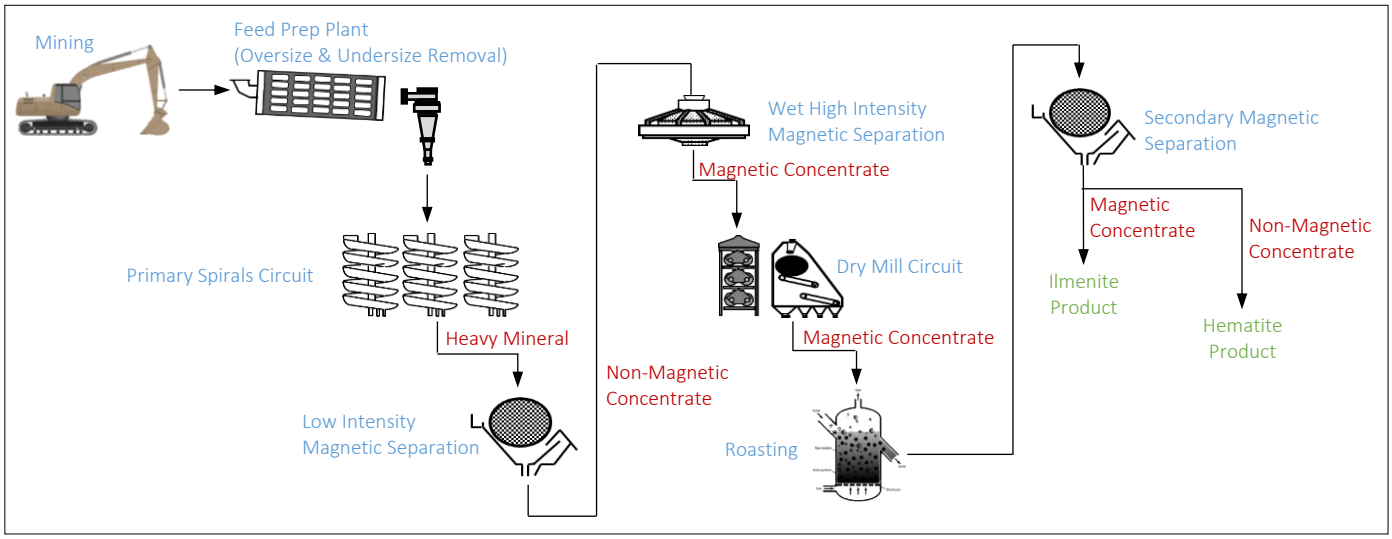

Figure 2 - Simplified Process Flow Diagram for Orokolo Bay.

Managing Director Paul Mulder said

"This work demonstrates the potential for a further by product revenue stream for the Orokolo Bay Project and further confirms the potential ability of the project to produce high value bi-products in addition to the magnetite, construction sand and zircon already slated to be produced in Q4 2023.

"As the cost to mine the products has already been incurred, being able to extract bi product revenue is an extremely attractive attribute for the project. To keep our processes simple on site Mayur will most likely market the product as a crude concentrate.

"Mayur is committed to unlocking further unrealised value in this project by investigating all downstream processing opportunities. Further test work will look to optimise and improve on these preliminary results and will be presented to the market when available".

This announcement was authorised by Mr Paul Mulder, Managing Director of Mayur Resources Limited.

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ABOUT MAYUR RESOURCES

Mayur Resources Limited is focused on the development of natural resources and renewable energy in Papua New Guinea. Our diversified asset portfolio spans iron and industrial sands, lime and cement, nature based forestry carbon credits, battery minerals and renewable power generation (geothermal and solar). Mayur also holds a 43% interest in copper gold explorer/developer Adyton Resources, a company listed on the TSX-V (TSXV:ADY).

Mayur's strategy is to serve PNG and the wider Asia Pacific region's path to decarbonisation by developing mineral projects that deliver higher quality, lower cost, and "net zero" inputs for the mining and construction industries, as well as constructing a renewable energy portfolio of solar, wind, geothermal, nature based forestry carbon credit estates, and battery storage.

Mayur is committed to engaging with host communities throughout the lifecycle of its projects, as well as incorporating internationally recognised Environmental, Social and Governance (ESG) standards into its strategy and business practices.

Competent Persons Statement

Information in this announcement relating to Metallurgical Test Results has been reviewed by Mr Julian Graham, a Competent Person who is a Member of the Australasian Institute of Mining and Metallurgy. IHC Mining was engaged by Mayur Resources Limited to conduct the metallurgical processing testwork in conjunction with the roasting testwork completed by Roundhill Engineering. All metallurgical factors reported herein have been reviewed and accepted by Mr Graham. Mr Graham 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'.

Appendix 1: Dry Mill Magnetic Concentrate (waste stream) QEMSCAN Results.

Table 2: Expanded Mineral List

	Sample ID	Dry Mill - Mag Con
Mineral Mass %	Rutile/Anatase	0.1
	TiO2 98%	0.0
	TiO2 95%	0.0
	TiO2 90%	0.1
	TiO2 85%	0.1
	TiO2 80%	0.1
	TiO2 75%	0.1
	TiO2 70%	0.2
	TiO2 65%	0.4
	TiO2 60%	0.8
	TiO2 55%	3.1
	TiO2 50%	8.2
	TiO2 45%	5.0
	TiO2 40%	2.9
	TiO2 30%	10.8
	TiO2 20%	7.4
	TiO2 10%	22.0
	TiO2 5%	20.2
	Ti Fe Si Intergrowths	2.3
	Quartz	0.6
	Zircon	0.3
	Chromite	1.9
	Monazite	0.0
	Xenotime	0.0
	Kaolinite	0.0
	Fe Ox/OH	1.4
	Other Silicates	11.7
	Others	0.4
TOTAL		100.0

Table 1: Mineral Abundance

	Sample ID	Dry Mill - Mag Con
Mineral Mass %	Rutile/Anatase	0.1
	High Ti Leucoxene	0.1
	Leucoxene	0.5
	Altered Ilmenite	1.2
	Ilmenite	19.2
	Titano Fe Oxide	60.4
	Ti Fe Si Intergrowths	2.3
	Quartz	0.6
	Zircon	0.3
	Chromite	1.9
	Monazite	0.0
	Xenotime	0.0
	Kaolinite	0.0
	Fe Ox/OH	1.4
	Other Silicates	11.7
	Others	0.4
TOTAL		100.0

Table 3: Liberation of TiO_2 Minerals

	Liberation		Dry Mill - Mag Con
Mineral Mass % (Liberation Break Points)	100%	Liberated	15
	90-100%		52
	80-90%	High Middling	9
	70-80%		6
	60-70%		5
	50-60%	Low Middling	3
	40-50%		3
	30-40%		2
	20-30%	Locked	2
	10-20%		2
	<=10%		2
	TOTAL	TOTAL	100

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Appendix 2: High Temperature Roasting Results (Feed is Roasted Dry Mill Magnetic Concentrate).

HTR 900/90s	Wt	Assay																							
		Al2O3	As	Ba	CaO	Cl	Co	Cr2O3	Cu	Fe	K2O	MgO	Mn	Na2O	Ni	P	Pb	S	SiO2	Sn	Sr	TiO2	V	Zn	Zr
	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
Mag 1 (500 ss)	16.45	0.57	0	0.10	0.36	0.00	0.01	0.14	0.00	38.36	0.03	1.23	1.09	0.04	0.01	0.03	0.003	0.002	1.84	0.001	0.004	40.8	0.12	0.03	0.08
Mag 2 (1000 Gauss)	22.79	1.04	0	0.08	0.43	0.01	0.01	0.19	0.00	43.95	0.03	1.06	0.92	0.05	0.01	0.04	0.003	0.002	2.04	0	0.003	32.1	0.16	0.03	0.07
Mag 3 (2000 Gauss)	6.01	1.64	0	0.05	0.43	0.01	0.01	0.30	0.00	49.69	0.03	1.26	0.61	0.05	0.01	0.04	0.001	0.003	2.51	0	0.002	22.4	0.21	0.04	0.06
Mag 4 (4000 Gauss)	9.35	2.24	0.001	0.04	0.42	0.01	0.01	0.45	0.00	53.38	0.05	1.55	0.48	0.06	0.01	0.04	0	0.003	3.06	0	0.001	15.15	0.24	0.05	0.04
Mag 5 (8000 Gauss)	28.24	2.6	0.001	0.03	0.42	0.01	0.01	0.49	0.01	55.15	0.09	1.82	0.44	0.09	0.01	0.04	0.002	0.003	3.31	0	0.002	11.15	0.22	0.06	0.04
Mag 6 (16000 Gauss)	15.90	2.54	0.001	0.04	0.57	0.01	0.01	1.02	0.01	51.17	0.09	1.92	0.50	0.12	0.01	0.05	0.001	0.002	3.93	0.001	0.002	15.75	0.18	0.06	0.05
Mag 7 (20000 Gauss)	1.15	2.22	0	0.07	0.93	0.01	0.01	1.40	0.01	43.17	0.09	1.9	0.65	0.13	0.01	0.05	0.004	0.003	5.57	0.002	0.004	25	0.15	0.05	0.07
N/M	0.11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Feed (calc)	100.0	1.80	0.00	0.06	0.44	0.01	0.01	0.44	0.00	48.51	0.06	1.51	0.68	0.07	0.01	0.04	0.00	0.00	2.83	0.00	0.00	22.73	0.18	0.05	0.05

HTR 900/90s	Wt	Distribution																							
		Al2O3	As	Ba	CaO	Cl	Co	Cr2O3	Cu	Fe	K2O	MgO	Mn	Na2O	Ni	P	Pb	S	SiO2	Sn	Sr	TiO2	V	Zn	Zr
	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
Mag 1 (500 Gauss)	16.45	5.2	0.0	28.6	13.4	7.8	14.2	5.2	10.8	13.0	7.1	13.4	26.3	10.0	28.3	13.2	24.6	13.5	10.7	47.5	26.5	29.5	10.6	10.0	23.9
Mag 2 (1000 Gauss)	22.79	13.1	0.0	31.4	22.2	18.1	19.7	9.8	9.9	20.6	11.3	16.0	30.7	15.1	19.6	22.2	34.1	18.6	16.4	0.0	27.5	32.2	19.8	16.3	29.7
Mag 3 (2000 Gauss)	6.01	5.5	0.0	5.3	5.8	4.8	5.2	4.0	2.6	6.2	3.5	5.0	5.4	3.7	4.3	6.4	3.0	7.4	5.3	0.0	4.8	5.9	7.0	5.5	6.3
Mag 4 (4000 Gauss)	9.35	11.6	17.5	6.2	8.9	8.9	9.1	9.6	4.1	10.3	8.3	9.6	6.6	7.6	6.7	9.8	0.0	11.5	10.1	0.0	3.8	6.2	12.3	10.1	7.0
Mag 5 (8000 Gauss)	28.24	40.7	52.8	15.2	26.8	35.9	33.5	31.1	43.1	32.1	42.7	34.1	18.4	36.2	24.3	29.5	28.1	34.7	33.1	0.0	22.7	13.9	33.4	38.0	18.2
Mag 6 (16000 Gauss)	15.90	22.4	29.7	12.0	20.5	22.7	17.2	36.8	27.7	16.8	25.4	20.3	11.6	25.4	15.9	17.4	7.9	13.0	22.1	45.9	12.8	11.0	16.0	19.0	13.4
Mag 7 (20000 Gauss)	1.15	1.4	0.0	1.4	2.4	1.8	1.1	3.6	1.7	1.0	1.7	1.4	1.1	2.1	1.0	1.5	2.3	1.4	2.3	6.6	1.8	1.3	0.9	1.1	1.5
N/M	0.11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Feed	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

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Appendix 3: Low Temperature Roasting Result (Feed is Roasted Dry Mill Magnetic Concentrate)[1].

LTR 600/15m	Wt %	Assay																	
		TiO2	Fe2O3	Fe	SiO2	Al2O3	Cr2O3	MgO	MnO	ZrO2	P2O5	U XRF	Th XRF	V2O5	Nb2O5	CaO	SO3	K2O	CeO2
	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	%	%	%	%	%	%
T 1000 H/S	68.45	15.20	77.60	54.27	3.04	2.31	0.13	1.73	0.71	0.04	0.11	11.00	11.00	0.41	0.01	0.47	-	0.09	0.01
T 1001 Mag 1	13.74	34.10	58.80	41.12	3.34	1.41	0.41	1.60	1.42	0.09	0.10	-	-	0.37	0.02	0.96	-	0.06	0.01
T 1001 Mag 2	9.55	41.50	50.70	35.46	3.97	1.46	0.83	1.79	1.47	0.10	0.07	15.00	-	0.33	0.02	1.22	-	0.06	0.01
T 1001 Mag 3	5.43	40.50	46.90	32.80	5.57	2.18	2.02	2.39	1.37	0.10	0.07	-	-	0.31	0.02	1.67	-	0.08	0.01
T 1001 N/M	2.83	35.20	42.90	30.00	8.44	3.72	4.64	3.53	1.24	0.09	0.08	-	-	0.27	0.02	2.44	-	0.11	0.01
Feed Back Calculated	100.00	22.25	69.80	48.82	3.46	2.14	0.47	1.80	0.93	0.06	0.10	8.96	7.53	0.39	0.01	0.73	0.00	0.08	0.01

LTR 600/15m	Wt %	Distribution																	
		TiO2	Fe2O3	Fe	SiO2	Al2O3	Cr2O3	MgO	MnO	ZrO2	P2O5	U XRF	Th XRF	V2O5	Nb2O5	CaO	SO3	K2O	CeO2
	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	%	%	%	%	%	%
T 1000 H/S	68.45	46.77	76.10	76.10	60.14	73.96	19.38	65.62	52.20	47.81	74.04	84.02	100.00	72.43	33.53	44.08	-	75.66	64.83
T 1001 Mag 1	13.74	21.06	11.58	11.58	13.26	9.06	11.94	12.18	20.96	21.59	13.20	-	-	13.12	29.61	18.07	-	9.08	13.01
T 1001 Mag 2	9.55	17.81	6.93	6.93	10.95	6.52	16.98	9.47	15.07	16.67	6.85	15.98	-	8.13	21.51	15.96	-	6.42	9.04
T 1001 Mag 3	5.43	9.88	3.65	3.65	8.74	5.54	23.53	7.19	7.99	9.48	3.62	-	-	4.34	10.64	12.42	-	5.02	6.86
T 1001 N/M	2.83	4.48	1.74	1.74	6.90	4.93	28.17	5.54	3.77	4.45	2.29	-	-	1.97	4.71	9.46	-	3.81	6.26
Feed Back Calculated	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	-	100.00	100.00

[1] Similar approach was taken for the magnetic separation in the LTR as the HTR outlined in Appendix 1. For further details refer to Figure 2 for the simplified PFD.

JORC Code, 2012 Edition – Table 1 (Orokolo Bay Roasting Pit Sample Test Work)
Section 1 Sampling Techniques and Data

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.*	• The sample used in the Roasting test work used material from the bulk pits originally excavated in 2015 • Mayur excavated four bulk sample test pits in 2015 from within the Orokolo Bay iron sand mineral resource. The resource estimation was undertaken in 2016, by an independent geologist (H&SC Consulting). Refer to Appendix 1 of the Independent Technical Assessment Report (JORC Table 1 Orokolo Bay) as disclosed in the Mayur Resources Prospectus dated 21 July 2017. • This Resource was then updated in 2020 by an independent geologist (Groundworks Plus) as outlined in ASX Announcement made on 28 May 2020 entitled 'Mayur banks 40% resources upgrade at Orokolo Bay'. • The bulk pit samples were collected by manual excavation using shovels, spades and pickaxes. • Approximately 2.5-3 tonnes of ROM Ore was removed from each test pit. • A Geologist was onsite at each Pit location to ensure that the samples collected were representative. • The bulk pit sample was placed in a dry storage area and manually homogenized using shovels. • The bulk pit sample was then put into labelled polyweave bags ready for dispatch to Port Moresby.
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).*	• Not applicable as the samples were obtained from a bulk test pit. • The location of the test pits was based on the results of previous drilling data and the Orokolo Bay Iron Sand Mineral Resource (Refer to Appendix 1 of the Independent Technical Assessment Report (JORC Table 1 Orokolo Bay) as disclosed in the Mayur Resources Prospectus dated 21 July 2017.)
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.*	• Not applicable, however all the bulk sample was recovered from the pit and homogenized to represent a typical run of mine sample for metallurgical testing. • Refer to Section 3 *Metallurgical factors or assumptions*, in the JORC Table 1 Orokolo Bay as disclosed in the Mayur Resources Prospectus dated 21 July 2017.

Criteria	JORC Code explanation	Commentary
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* • *The total length and percentage of the relevant intersections logged.*	• The samples were qualitatively logged, weighed and labelled. • The 2.5 tonne bulk samples were homogenized by placing each bulk sample on to a tarpaulin and manually shoveling / raking it back and forth for a 6 hour period. After a 6-hour period, the bulk sample was then tested with a magnetic susceptibility meter at 20 points around it's perimeter until it was deemed homogenous.
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.*	• The ROM Head feed provided to IHC Mining for Metallurgical processing represented a subset of the bulk test pits, taken from Pit 1, Pit 3, Pit 4, and Pit 5. • The sample used in the roasting tests work was an upgraded heavy mineral product of the pilot bulk testing program which processed the ROM over several stages of gravity and magnetic separation. • This concentrate was then roasted by Roundhill Engineering. Before each test samples were homogenized and riffle split to obtain a representative sample for analysis. • Subsequent magnetic separation of the roasted samples was performed by IHC Mining.
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.* • *Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.*	• All assaying, analysis, and metallurgical processing was completed by certified laboratories and metallurgical labs who have their own procedures, standards, and QAQC protocols.

Criteria	JORC Code explanation	Commentary
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.*	• All test pit information was collected by a Mayur geologist and approved by Mayur's consulting Metallurgist, at the time of the samples been taken.

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.*
		• The bulk test pits are located at the following locations. The test pits locations were surveyed using a hand-held Garmin GPS (model GPSmap 64S). This is considered to be accurate for the purposes of surveying the location of the test pit sites.
		• Location of these test pits are shown in the attached location map.
		• Co-ordinates (WGS84 – UTM55S) of the test pits used in the iron sand Roasting Tests:
		  • Pit 1 = 312814E, 9134006N
		  • Pit 3 = 318086E, 9130326N
		  • Pit 4 = 308781E, 9137278N
		  • Pit 5 = 326157E, 9126673N

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.*	• The spacing of the test pit samples used in the test work is appropriate and were spaced 5km to 8km apart along the length of the deposit (See Figure 1 for further details).
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.*	• Bulk samples were taken to assess mineralogy and produce concentrates for further testing plus the mineralized structures are strandlines and samples were taken on the strandlines down to visible basement

Criteria	JORC Code explanation	Commentary
Sample security	• *The measures taken to ensure sample security.*	• Mayur has a chain of custody procedure and flow sheet, which is an adaption of the auger drilling samples chain of custody. • All samples were placed into polyweave bags on site and were supervised by qualified geologists. • The polybags were transported to Kerema via banana boat with Mayur staff onboard. • The samples were dispatched to Port Moresby under supervision of Mayur staff and were stored in a secure container before pick up from the freight forwarder in Port Moresby. A dispatch inventory was then prepared, and the samples were sea freighted to the Port of Brisbane. • The Bulk samples were managed by ALS laboratory, who Mayur use for importing permits and quarantine services. • Once cleared the bulk samples were stored in a secured warehouse in Brisbane. • The bulk samples were used in the initial bulk testing program and then provided to other recognized metallurgical facilities for processing and roasting tests.
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 the 2016 Orokolo Bay Resource Estimation. No chronic or systematic errors were noted. • No further audits are considered necessary at this stage of the project development.

Section 2 Reporting of Exploration Results

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 test pits (pit 1, pit 3, pit 4, & pit 5) used for this testwork are located within EL2305 & EL2150 which are held 100% by 'Mayur Iron PNG Ltd' and currently under a renewal process with the Mineral Resources Authority. • Test pits 1 & 3 used in this testwork are located within ML541 which is held 100% by 'Mayur Iron PNG Ltd'.

Criteria	JORC Code explanation	Commentary
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• Refer to Appendix 1 of the Independent Technical Assessment Report (JORC Table 1 Orokolo Bay) as disclosed in the Mayur Resources Prospectus dated 21 July 2017.
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* 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.*	• Not applicable. See Section 1 of Table 1 for location of the test pits
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*	• Not applicable. The sample taken is a bulk sample and the assays presented are from discrete concentrates as outlined in Appendix 1 and Appendix 2.

Criteria	JORC Code explanation	Commentary
	be clearly stated.	
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'. Therefore, the bulk test pit was not biased.
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.*	• These are included within the statement and 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.*	• Not applicable.
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.*	• All relevant exploration data has been reported previously for the purposes of the representative nature and location of the test pit samples.
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.*	• Confirmatory test work is planned to be undertaken to validate the grade and recovery of the current roasting test work. This will be undertaken on a drill hole composite that is representative of the average resource grade.