MayurResources

ASX RELEASE
19 February 2019

Test work successfully completed on Orokolo Bay magnetite, demonstrating suitability for use in dense media application

Amendment to 15 February Announcement to include additional JORC Table 1 information

HIGHLIGHTS:

- **Laboratory scale test work completed on magnetite sand product from Orokolo Bay confirms suitability for application as dense media in industrial mineral processing such as coal washing**
- **Results demonstrated that the product has excellent magnetic susceptibility qualities with no evidence of magnetisation and or agglomeration**
- **Subject to receipt of regulatory approvals for the pilot plant operations at Orokolo Bay, this successful test program now paves the way to undertake commercial scale product trials with interested customers**

Mayur Resources Ltd (ASX: MRL) (the Company) is pleased to announce the recent completion of a laboratory scale test program to test the suitability of the Orokolo Bay magnetite for use as dense media separation (DMS). The DMS test programme focussed on establishing the magnetic susceptibility and agglomeration of the magnetite from the Orokolo Bay project in Gulf Province. As disclosed at the IPO Mayur is targeting both the Asian steel industry and the Australian coal industry for its magnetite sands. This test work was specifically focussed on the suitability of the magnetite as dense media in coal washing.

The Company engaged highly experienced consulting process engineer Mr Paul Foote to design and supervise the programme that was conducted at CRL Energy laboratories in Wellington, New Zealand. The test program was designed to replicate the actual use of the magnetite in a dense media plant via a closed loop circuit. This also enabled a comparison of the performance the Orokolo Bay magnetite against that of an existing DMS magnetite product.

Magnetite concentrate on Low Intensity Magnets (LIMS)

Lab scale LIMS circuit

The material used for the DMS test work originated from the sample pits (pit 1 and 3) taken at Orokolo Bay (EL2305) as shown in Figure 1. This material was then homogenized and transported to New Zealand for the metallurgical test work. For further information please refer to the JORC Table 1 attached to this announcement.

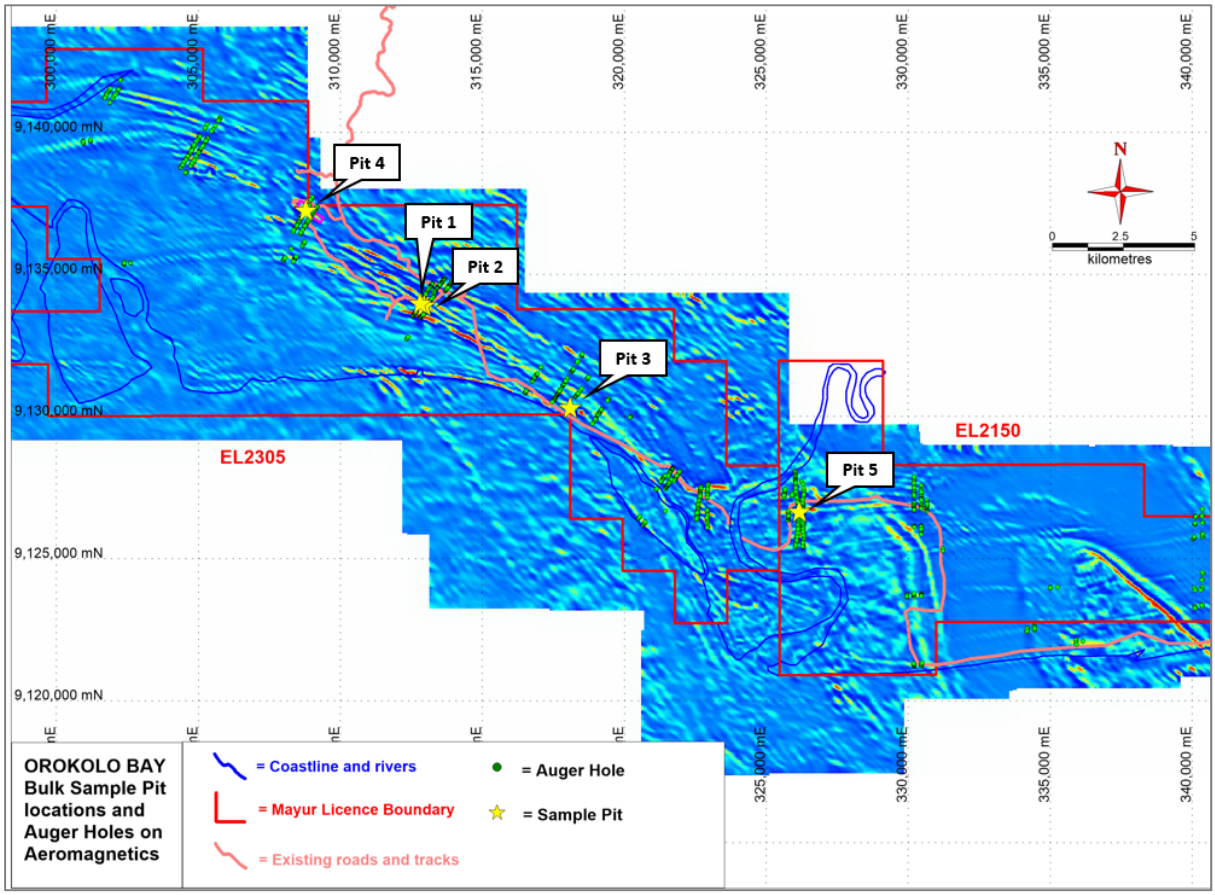


Figure 1 - Map of Pit Samples at Orokolo Bay within EL2305 used for testwork

The key outcomes from the work established that the Orokolo Bay magnetite was relatively easily upgraded to produce a dense media product with 93% magnetics. The size distribution and physical properties compared extremely favourably to the comparable magnetite product, and although the Orokolo Bay magnetite exhibited different chemical properties (given it is a titano-magnetite) there was no noticeable difference in the magnetic susceptibility with both products being highly susceptible minerals.

The Orokolo Bay magnetite was tested through a closed loop circuit and continually run for 30 hours, exposed to the low intensity magnet (LIMS) and there was no evidence of the product magnetizing or agglomerating, thus yielding a positive outcome for the programme.

Managing Director Paul Mulder said “this DMS test work is a great result and on the back of this Mayur can now confidently move forward in providing pilot plant samples for further testing by an interested customer base of coal washeries in Queensland’s Bowen Basin”.

The Company recently announced a Joint Venture with China Titanium Resources Holdings Limited (CTRH) to develop the Orokolo Bay project[1] and the definitive transaction documents were expected to be concluded by the end of January 2019. By way of an update, these definitive transaction documents are substantially complete with a revised completion target date of 28 February 2019.

COMPETENT PERSON'S STATEMENT

Information in this announcement relates to metallurgical results reviewed by Mr David Stone. Mr Stone is a member of the Australasian Institute of Mining and Metallurgy (AusIMM) and has sufficient experience relevant to the nature of the work and style of mineralisation under consideration to qualify as a Competent Person as defined in the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC) Code 2012. Mr Stone is an independent consultant and consents to the inclusion of the metallurgical matters based on his information in the form and context in which it appears.

_____

Enquiries
Paul Mulder – Managing Director
info@mayurresources.com
+61 7 3157 4400

[1] Refer to ASX announcement dated 7 January 2019 - "Up to $25m funding for the Orokolo Bay Industrial Sands Project – Pilot Plant & Full-Scale Operation"

About Mayur Resources

Mayur Resources is a diversified mineral exploration and energy development company operating in Papua New Guinea (PNG) across the following divisions:

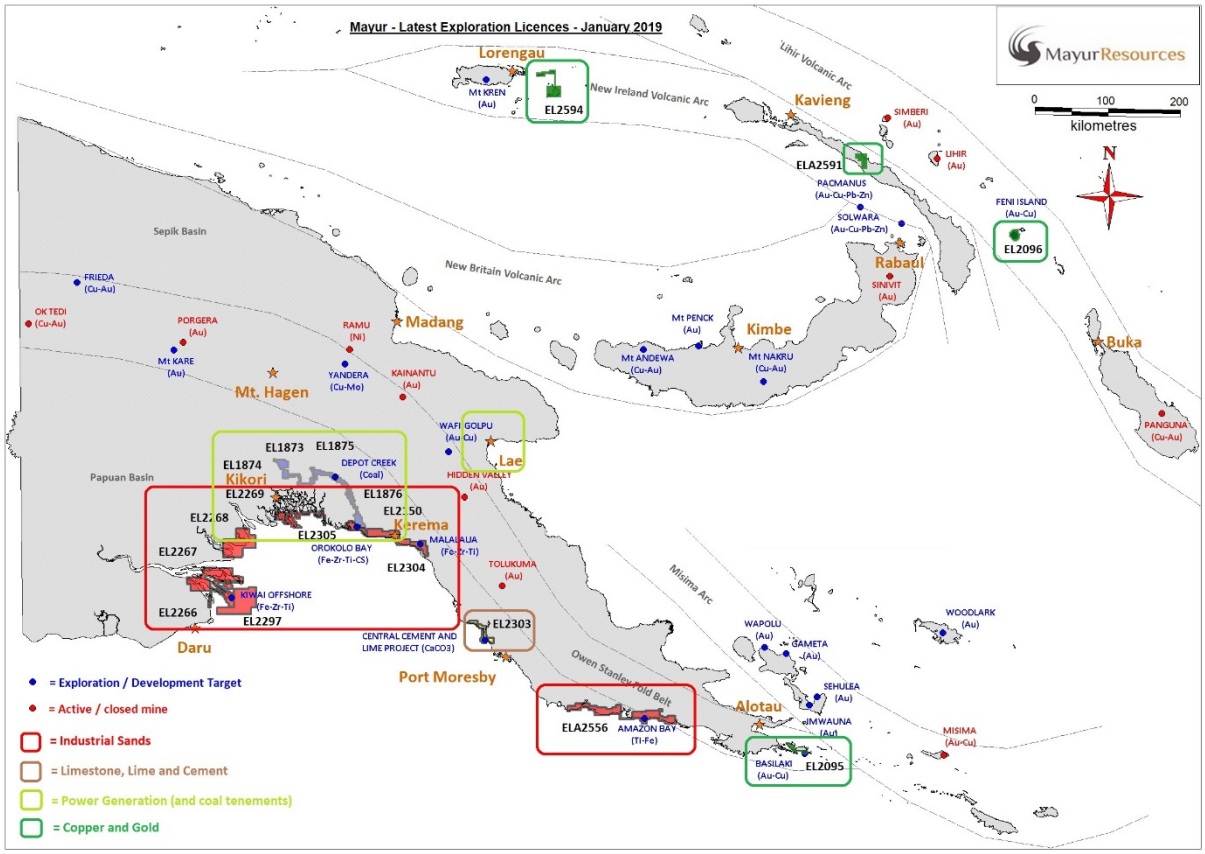
(a) **Industrial Mineral Sands (construction sands, magnetite sands, heavy mineral sands).** The Company is advancing the Orokolo Bay Industrial Sands Project along the southern coast of PNG. A pre-feasibility study has been completed which identified an opportunity to establish a project producing fine grain construction sands, titanomagnetite (iron sands) and a zircon-rich Valuable Heavy Mineral Concentrate by-product. The next steps include preparation of a Definitive Feasibility Study and, subject to the requisite regulatory approvals, the construction of a pilot scale demonstration plant.

(b) **Lime and Cement.** The company has completed a DFS for the Central Cement and Lime Project which contemplates, subject to the requisite regulatory approvals, the quarrying of large-scale high-grade limestone deposits together with the development of a vertically integrated downstream processing quicklime and clinker / cement plant for domestic (import replacement) and export markets.

(c) **Copper and Gold.** The Company holds exploration licences at the Feni Islands in New Ireland Province as well as Basilaki and Sideia Islands in Milne Bay Province.

(d) **Power Generation.** The Company has proposed a vertically integrated domestic power project at PNG's second largest city of Lae. A detailed Power Purchase Agreement has been submitted to PNG Power, the state-owned power entity, for a 52.5MW (net) power facility (with future scalability to 200MW). A definitive feasibility study has been completed for the Lae project that contemplates the use of multi fuels (Enviro Energy Park) including renewables and potentially coal, subject to the requisite regulatory approvals, from the Company's Depot Creek project in Gulf Province.

(e) **Coal Exploration.** The Company holds a portfolio of exploration licenses in Gulf Province that includes the Depot Creek Coal project.



Mayur's mineral exploration licence (EL) and project portfolio in PNG

JORC Code, 2012 Edition – Table 1 (Orokolo Bay Dense Media 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 Dense Media test work was from the 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. • 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 shovelling / 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 metre at 20 points around it's perimeter until it was deemed homogenous. • At the CRL laboratory in New Zealand, the samples were homogenized and sampled through a rotary sampler. Representative samples were taken for assay and size analysis.
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 sample used in the testing for the Dense Media Separation was a representative subset of the bulk test pits, taken from Pits 1 and 3. • Approximately 1 tonne of bulk sample was provided to CRL laboratories for testing.
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.*	• A chemical analysis and the testing of physical properties of this material was carried out at CRL laboratories. • A representative sample was taken during the process flow testing to determine the chemical properties and the PSD (Particle Size Distribution) of the bulk sample. • CRL used XRF for chemical assaying of the bulk sample and wet sieve testing to determine the PSD. • CRL are an IANZ accredited laboratory (ISO17025). • It should be noted that the tests conducted are specific to magnetite use as dense media. The results were positive in that the magnetite particles did not magnetise and therefore no agglomeration occurred. The test for agglomeration is visual observation of a slurry. No agglomeration of the slurry occurred after 30 hours of magnetite exposure to the industrial magnets.

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 two 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 Dense Media Separation Testing: Pit 1 = 312,814E, 9,134,006N Pit 3 = 318,086E, 9,130,326N
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 represent the iron sand run of mine grade and sizing for Orokolo Bay.
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	• The bulk sampling was completed to ensure there was no sampling bias in the drilling sampling data and to test the metallurgical proprieties of the iron sand resource.

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. • All 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. • Mayur staff then collected the bulk sample that was then collected by a freight forwarder to the lab in New Zealand that undertook the Dense Media Separation work.
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. • A minor review and audit of the data was conducted by H&SC upon receipt of the data. • 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 mineral resource in which the test pits are situated is within EL2305 and 2150 • The test pits (pit 1 and 3) used for this DMS bulk sampling testwork are located within EL2305 • These licences are located within the Gulf Province of PNG, along the coastline to the west of the provincial capital Kerema. • EL2305 and 2150 are held 100% by 'Mayur Iron PNG Ltd' and are currently under renewal process with the Mineral Resources Authority

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:*
	  ○ *easting and northing of the drill hole collar*
	  ○ *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar*
	  ○ *dip and azimuth of the hole*
	  ○ *down hole length and interception depth*
	  ○ *hole length.*
	• *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*
		• 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 was taken was a bulk sample and a representative assay was taken during the metallurgical test work.

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.*	• Work related to upgrading the Orokolo Bay resource is dependent on the outcomes of scoping-level mining studies, including the metallurgical test work.