Bauxite Hills Mine Ore Reserve 92.2 Million tonnes

Metro Mining Limited announces its Bauxite Hills Mine Ore Reserve integrating the resources acquired from Gulf Alumina

Key Points

- **48.3 million tonnes Proved Ore Reserve*** (49.8% total Al_2O_3, 12.0% total SiO_2)

- **43.9 million tonnes Probable Ore Reserve*** (49.0% total Al_2O_3, 14.6 % total SiO_2)

- **Production of up to 6 million tonnes of Direct Shipping Ore (DSO) per year****

- **Mine Life of 17 years with potential for extension****

Bauxite Hills Project Summary

The Bauxite Hills Mine is situated 95 km north of Weipa on Queensland's Cape York Peninsula and five kilometres south-east of the port at Skardon River (see Figure 1). Western Cape York is world-renowned for its deposits of high-quality, export-grade bauxite.

The Company previously completed a Pre-Feasibility Study (PFS) for a 4Mtpa operation in March 2016. This study identified a Proved Ore Reserve of 41.8 million tonnes*** (50.7% total Al_2O_3, 10.9% total SiO_2) Direct Shipping Ore (DSO) and a Probable Ore Reserve of 6.4 million tonnes*** (49.3% total Al_2O_3, 13.4% total SiO_2) Direct Shipping Ore (DSO) compliant with the JORC 2012 code.

Since the completion of the 4Mtpa PFS, Metro has completed the analysis of the BH1 boreholes drilled previously at 80m centres and has updated the geological model to include these results. The geological model has also been updated to include the Gulf Alumina Limited resources acquired by Metro in January 2017.

The resource upgrade was announced to the ASX on 13 March 2017; refer Table 2.

MEC Mining have completed a Bankable Feasibility Study (BFS) confirming a total ore reserve of 92.2 Million tonnes. This study identified a Probable Ore Reserve of 43.9 million tonnes*** (49.0% total Al_2O_3, 14.6 % total SiO_2) Direct Shipping Ore (DSO) and a Proved Ore Reserve of 48.3 million tonnes (49.8% total Al_2O_3, 12.0% total SiO_2) Direct Shipping Ore (DSO) compliant with the JORC 2012 code and based on the borehole analysis and geological modelling completed up to that date.

*Reserve estimated in accordance with guidelines in JORC (2012)
**Refer ASX Release 15 March 2017.
*** Refer ASX Announcement 02 June 2015 Metro confirms all material assumptions underpinning the production target and corresponding financial information continue to apply and have not materially changed as per Listing Rule 5.19.2
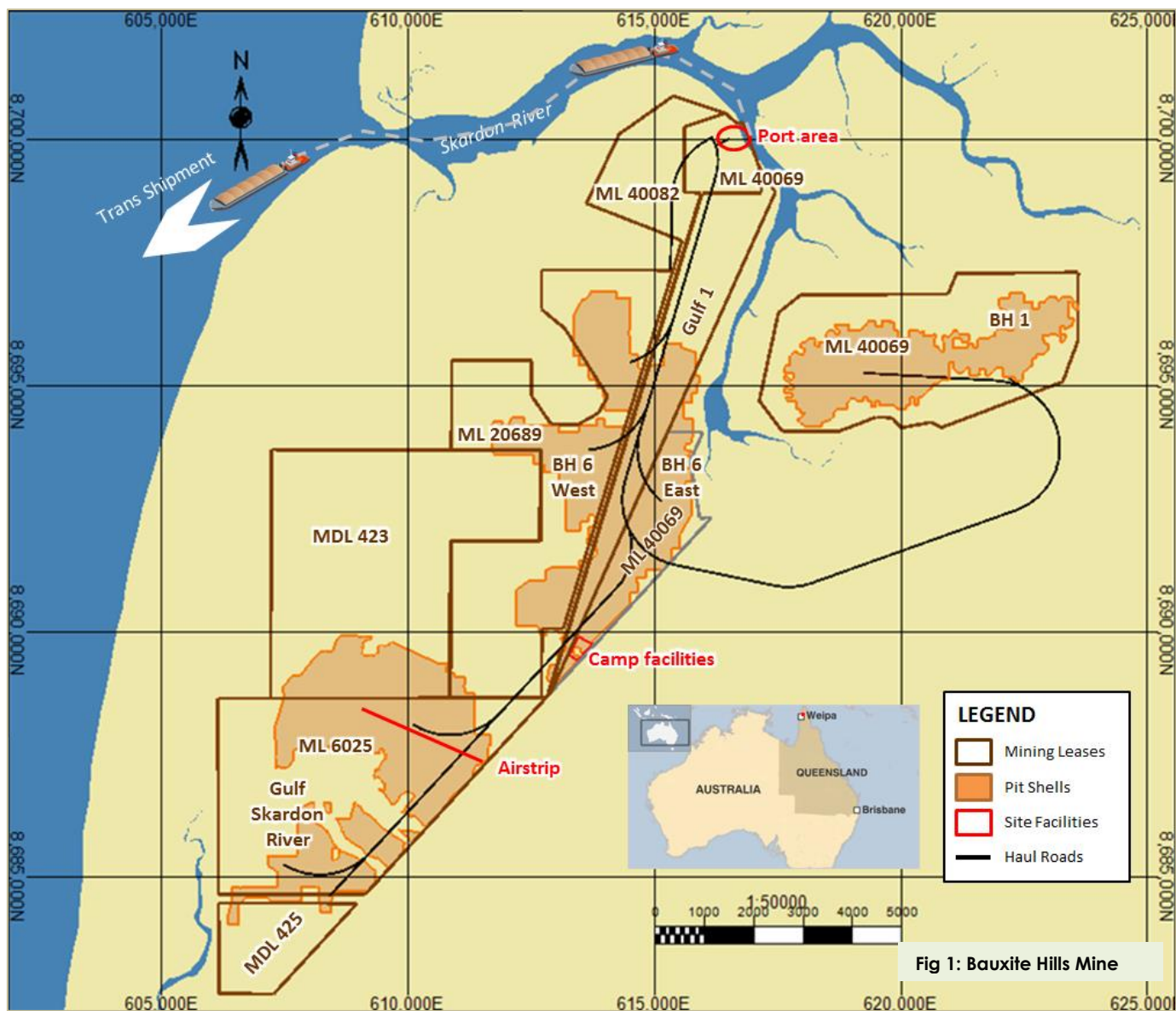
Fig 1: Bauxite Hills Mine

Mining at Bauxite Hills

Mining Method

The mining method involves the use of front end loaders that will load road trains to haul the ore to a barge loading facility on the Skardon River. The bauxite will be mined without blasting, however some ripping by dozers may be required in areas where cemented bauxite occurs. Wheel loaders have been chosen due to their size match with the ore haulers, maneuverability and selectivity around the floor of the mining horizon. Overburden waste material will be stripped ahead of mining and spread onto the mined out floor to establish the rehabilitated landform. The average stripping ratio is 1 m³ of overburden for 3.1 tonnes of bauxite ore. The bauxite ore will be hauled to the barge loading facility (BLF) where it will be screened to remove organic and oversize material before being directly loaded onto barges for transhipment to ocean going vessels.

Equipment Assumptions

The mine is planning to operate only through the dry season from April to November each year. The selected mining equipment is Caterpillar 988 sized front end loaders and double trailer road specification road trains with 100 tonne payload capacity. Equipment production rates contained in contractor

submissions to the mining tender were checked against benchmarks and first principles estimates and adopted in the BFS.

Mining Boundaries

The mining boundaries and exclusion zones adopted in the BFS study were set by lease boundaries, areas defined as Matters of State Environment Significance (MSES) and existing site infrastructure, particularly the mining camp. A 50m clearance setback was allowed at the Mining Lease boundaries. No mining is planned inside MSES zones and a 10m clearance setback has been allowed around the zones. Orebodies were generally not intersected by any water courses or standing water as the bauxite naturally occurs on plateaus.

Mining Loss & Dilution

The nature of the deposit was considered along with the selected equipment types to determine appropriate loss and dilution factors. The product is a Run of Mine Ore or Direct Shipping Ore (DSO) and in order to minimise the degradation of quality of product due to dilution, some losses of ore at the top and floor of the horizon are planned. The Reserves take into account losses of 0.1m at the roof and 0.15m at the floor of the Bauxite interval and dilution of 0.1m from the top horizon and 0.05m from the floor.

Other Mining Factors & Cut-off Grade

The geological model uses a cutoff grade at top and floor of the bauxite horizon of ≤15% total SiO_2 in BH1 and ≤20% total SiO_2 in BH6 and Gulf Skardon River resources. A minimum mining thickness of 0.5m is applied to the bauxite horizon.

Social and Environmental Factors

The Exploration Permits, Mining Leases (ML) and Mining Lease Applications (MLA) are all owned by 100% subsidiaries of Metro Mining Ltd, however due to the recent acquisition of Gulf Alumina by Metro, the environmental approvals are at slightly different stages.

The MLs held in Gulf Alumina Ltd have a valid Environmental Authority. An EIS study for the MLAs held by Metro has been completed by CDM Smith and a supplementary EIS has been issued. The Environmental Authority (EA) is expected to be issued in May 2017. There are several environmentally sensitive areas designated Matters of State Environments Significance (MSES) within the existing leases and leases under application. The location of MSES areas is accurately known and no bauxite resources within MSES areas have been included in the BFS or converted to reserves.

Ancillary Agreements have been entered into with all relevant Native Title parties and compensation has been agreed with the land owner.

Production and Processing

The Bauxite Hills BFS completed in March 2017 was based on annual production of up to 6 million tonnes of wet DSO (10% moisture) product over a mine life of 17 years. Inferred and non-categorized resources were not included in the mining schedule. The BH2 deposit was included in the March 2017 resource estimate but was not included in the reserves estimate or BFS.The ROM ore will be screened to remove organic material and reduce the top size to <100mm. No other beneficiation or processing is required. A screen loss of 0.5% of the mined tonnes has been assumed.

Economic Pit Boundary

A Margin Ranking exercise was completed as part of the BFS in order to determine the economic mining limit of the resource. The margin rank was conducted with a 20mx20m block size across only measured and indicated resource areas, excluding the BH2 deposit. The cash margin calculated as the difference

between the operating cost and product price was assigned to individual blocks taking into account the effect of quality and geological variations. The margin rank used costs supplied through the tender process for the mining and transshipment contracts. Revenue assumptions were sourced from the existing bauxite sales agreement with Xinfa and prices for other products were provided by bauxite market experts CM Group. All assumptions are consistent with those used in the March 2017 BFS. From a total of 96,000 20mx20m ore blocks that were margin ranked, only 65 blocks had a zero or negative margin.

Schedule & Financial Analysis

The economic resources were scheduled to generate yearly production quantities. The scheduled product tonnages for the life of the mine are depicted below:

Year	2018	2019	2020	2021	2022-2033	2034
Production (Mt)	2.0	3.0	4.9	6.2	~6.0	3.9

The production schedule was loaded into the project financial model to assess the economic viability of the mine. Contractor quotes were used to estimate operating costs. A. While no contingency was applied to the transshipment costs as the contract has been negotiated as a fixed rate contract, a 5% contingency was applied to the mining cost estimate provided by the mining contractor. Project CAPEX was determined by Wave Engineering, MEC Mining and MMI as part of the BFS.

Financial Modelling

The financial model was developed by Metro Mining, with the key input being mining schedule developed by MEC Mining. The model was reviewed by MEC Mining and demonstrated a positive NPV when full offsite cash costs and taxation were considered. The model was also sensitivity tested demonstrating positive project value for 20% variance modelling.

The initial development capital expenditure is A$35.8 million as determined by the BFS (see Table 1). Additional capital will be required to expand production from 2Mt per annum in 2018 to 6Mt per annum in 2021. Initial development capital expenditure will include the construction of the barge loading facility, other port infrastructure, haul roads, access roads, camp and mine site facilities. A contingency of 10% of total capital costs has also been included.

Table 1: CAPEX: Development Capital	
Category	**Cost AUD**
Site establishment and haul roads	A$3.1M
Key infrastructure including BLF and camp	A$25.8M
Other supporting infrastructure	A$1.6M
Logistics and other owner's costs	A$2.1M
Contingency @ 10%	A$3.2M
Development Capital Total	**A$35.8M**

Bauxite Quality and Market

Alumina refineries are configured specifically for the chemistry of the bauxite feed. Refineries can be defined as being high temperature and low temperature according to the process. Approximately 80% of Chinese Shandong refineries are low temp. An existing offtake agreement is in place for the sale of 7million dry metric tonnes of high temperature bauxite to Xinfa. Market analysis indicates that demand for seaborne bauxite from China is predicted to increase significantly over the coming decade. A market price assessment of MMI products was provided by CM Group as part of the BFS.

NB: expansion capital of $36.7M has been allowed to underpin the expansion from 2Mtpa to 6Mtpa including the construction of a truck dump station and purchase of floating crane platforms. All additional capital is assumed to be funded out of cash flows.

Reserve Estimate

Overview of Ore Reserves Estimation Processes

The ore reserves estimation process included completion of a margin rank with the resulting economic limits then used for detailed pit and stage design. The pit stages were reserved using appropriate modifying factors, and then scheduled and assessed through the financial model. This process was completed as part of the BFS.

Estimated JORC Reserves

MEC Mining calculated that 48.3 Mt of Proved and 43.9 Mt of Probable Marketable Ore Reserves is a reasonable and reliable estimate of the Reserves in the area of Bauxite Hills. On average, the Proved Reserves contains 49.8% of total Al_2O_3 and 12.0% of total silica while the Probable Reserves on average contains 49.0% of total Al_2O_3 and 14.6% of total silica; all qualities are reported on a dry basis. The stated reserve represents the marketable product tonnes on a wet basis (10% moisture).

Table 2: Bauxite Hills – DSO Mineral and Ore Reserve estimates				
Area	**Category**	**DSO[2] Tonnes (Mt)[1]**	**DSO Bauxite Qualities (Dry Basis)**	
			Total Al_2O_3 (%)	**Total SiO_2 (%)**
BH1 & BH6	Measured Resource (Dry *In-situ*)	54.7	50.0	11.9
BH1, BH2 & BH6	Indicated Resource (Dry *In-situ*)	66.4	49.2	14.5
BH1 & BH6	Inferred Resource (Dry *In-situ*)	23.7	47.4	16.0
TOTAL RESOURCE[5]		**144.8**	**49.2**	**13.9**
BH1 & BH6	Proved Reserve[3] (ROM @ 10% Moisture)	48.3	49.8	12.0
BH1 & BH6	Probable Reserve[4] (ROM @ 10% Moisture)	43.9	49.0	14.6
TOTAL MARKETABLE ORE RESERVES		**92.2**	**49.4**	**13.2**

[1] For BH1 and BH6 the tonnages are calculated using the following default bulk densities determined from a program of sonic drilling; 1.6g/cm3 for BH1, 1.92 g/cm3 for BH2and 2g/cm3 for BH6. Actual values are used where measurements have been taken
[2] DSO or "Direct shipping ore" is defined as bauxite that can be exported directly with minimal processing and beneficiation.
[3] Proved Reserve - the proved reserve is included in the BH1 & BH6 Measured resource
[4] Probable Reserve - the probable reserve is included in the BH1 & BH6 Indicated resource
[5]. Refer ASX Release 13 March 2017 "Bauxite Hills Mine Resource Expands"

FORWARD LOOKING STATEMENT

Statements and material contained in this ASX Announcement, particularly those regarding possible or assumed future performance, production levels or rates, commodity prices, resources or potential growth of Metro Mining Limited, industry growth or other trend projections are, or may be, forward looking statements. Such statements relate to future events and expectations and, as such, involve known and unknown risks and uncertainties. Graphs used in this ASX Announcement (including data used in the graphs) are sourced from third parties and Metro Mining has not independently verified the information. Metro Mining is at an early development stage and while it does not currently have an operating bauxite mine it is taking early and preliminary steps (such as but not limited to Prefeasibility studies etc.) that are intended to ultimately result in the building and construction of an operating mine at its project areas. Although reasonable care has been taken to ensure that the facts stated in this ASX Announcement are accurate and or that the opinions expressed are fair and reasonable, no reliance can be placed for any purpose whatsoever on the information contained in this document or on its completeness. Actual results and developments may differ materially from those expressed or implied by these forward looking statements depending on a variety of factors. Nothing in this ASX Announcement should be construed as either an offer to sell or a solicitation of an offer to buy or sell shares in any jurisdiction.

COMPETENT PERSON'S STATEMENT

The information in this report that relates to Exploration Results is based on information compiled by Neil McLean who is a consultant to Metro Mining and a Fellow of the Australian Institute of Mining and Metallurgy (F.AusIMM). Mr McLean 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'. Mr McLean consents to the inclusion in the report of the matters based on information in the form and context in which it appears.

The information in this report to which this statement is attached that relates to the "Metro Mining – Bauxite Hills" Reserves is based on information compiled by MEC Mining and reviewed by Edward Bolton, a Competent Person who is a Member of the Australasian Institute of Mining and Metallurgy. Edward Bolton is a full-time employee of MEC Mining Pty Ltd. Edward Bolton has sufficient experience that is relevant to the style of mineralization, 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'. Edward Bolton consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

APPENDIX 1 - JORC CODE 2012 EDITION - TABLE 1 REPORT

BAUXITE HILLS MINE – MINERAL RESOURCE ESTIMATES

SECTION 1 SAMPLING TECHNIQUES AND DATA (Criteria In This Section Apply To All Succeeding Sections.)

Criteria	JORC Code explanation - DSO ("Direct Shipping Ore")
Sampling Techniques	• *Nature and quality of sampling (e.g. 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 (e.g. '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 (e.g. submarine nodules) may warrant disclosure of detailed information.* ## Commentary **Metro Mining Limited**. BH1, BH2 and BH6 Reverse Circulation aircore drill hole samples were collected in plastic bags over 0.25m intervals through a cyclone. All the material within the interval was collected. All samples were geologically logged at time of collection to determine 1) the type of bauxite material, 2) when to stop the hole, 3) which samples to retain for analyses and 4) which samples to composite over 0.5m intervals. Samples were composited, at the time of collection, over 0.5m intervals where the geologically logged material was similar or collected as individual 0.25m samples. The entire sample was collected to ensure, as much as possible, the representivity of the drilled material. Sample weights were between 2kg and 5kg depending on whether they were composited at the time of collection. Samples that contained pisolites, in any volume, were assumed to be bauxitic and were retained for analyses. **Gulf Alumina Limited.** Both sonic and aircore drilling methods were used in several drilling programs between 2005 and 2015. In the sampling technique used in the aircore method the entire sample was collected at 0.25m intervals via the hollow rods, connecting hose and then into a cyclone. Clear plastic bags, tightly fitted to the cyclone outlet, ensured collection of the entire sample. Samples were immediately logged then the airtight bags were sealed with cable ties to retain moisture. Sample depth accuracy is estimated to be +- 5cm. With the Sonic drilling method sampling was carried out in 0.25m intervals. Samples were collected within a custom designed 'sausage' bag that is inserted into the barrel. The sample is retrieved after completing the drilling run which varies from 0.5m to 1.5m. The 'sausage' is laid out on a table then the length measured and compared to the actual down hole depth. The sample is then divided into equal lengths of 0.25m, immediately logged then placed into airtight clear plastic bags and sealed with cable ties to retain moisture. Sample depth accuracy is estimated to be +- 5cm. Drill rods are 1.5m in length and used as a reference for the sampling. Bulk density determinations were carried out where there was no observable damage to the 'sausage' bags. The diameter of the 'sausage' was measured with a Vernier scale and once the sample was placed into airtight plastic bags it was weighed with allowance for the weight of the bag. Field measurements of wet bulk density were made but most samples were also weighed wet and dry in the laboratory to obtain more accurate dry bulk

Criteria	JORC Code explanation - DSO ("Direct Shipping Ore")
	density values. Some samples were dried prior to wet weighing and in these cases, field measurements have been used
Drilling Techniques	• *Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. 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.).* ## Commentary The resource evaluation drilling was carried out by Wallis Drilling Pty Ltd using a Mantis 100 Reverse Circulation aircore drill rig mounted on a light 4x4 truck. Shallow (4-6m) holes were drilled vertically using HQ rods with an aircore drill bit with a diameter of 96mm. Drilling to collect samples for bulk density and moisture determinations was undertaken by GeoSonic Drilling Pty Ltd using a small trailer-mounted sonic drill rig with an internal bit diameter of 65mm.
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.* ## Commentary Reverse Circulation aircore drilling was used by both Metro Mining and Gulf Alumina because of its proven reliability in producing high sample recoveries and accurate interval depths. No formal method of measuring and recording recoveries was adopted. To ensure representivity of the material being drilled the entire sample was collected from the drill hole. The aircore drilling method was used to ensure collection of as representative a sample as possible. Sonic samples are collected at the rig through an inner plastic 'sausage' bag. The length of the recovered sample depends on the hardness of the material; very hard cemented material heats up the road and bag and causes melting of the bag. In this case the sample is recovered almost intact but there is some expansion and internal contamination. All material is knocked out of the rod and the bit cleaned with a wire brush. The sonic drilling method was used to collect samples for bulk density determinations as it is a proven method of collecting continuous and intact samples that can be measured to determine volumes and weighed to determine densities.
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.* ## Commentary All drilled intervals were geologically logged at 0.25m intervals. The logging was done in a qualitative manner and focused on documenting the amount of pisolitic material, soil, clays and ironstone. In the field the bauxitic horizons were defined by the presence of pisolites and the absence of ferricrete. Data was recorded on a field portable laptop.

Criteria	JORC Code explanation - DSO ("Direct Shipping Ore")
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 maximize 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.*

Commentary

No sub-sampling of material was undertaken at the time of collection. The entire sample was collected over 0.25 m intervals directly from the cyclone on the drill rig. The samples did not require any drying prior to bagging.

For the analyses of DSO bauxite two sample preparation protocols were used as follows:

1. For samples from drill holes on a nominal 320m by 320m grid that were previously screened (+1.2mm) and analysed
    - Create a composite sample (or samples) over the bauxite interval in each hole to be analysed using all the material in sample splits retained from earlier analyses of screened (beneficiated) samples (undertaken either under the supervision of the company or at ALS's laboratory).
    - Report weight of received sample.
    - Riffle split each sample down to an acceptable size for pulverizing and return split to original bag for storage (undertaken by ALS's Virginia laboratory in Brisbane).
    - Pulverise the smaller portion of the split to a nominal 85% passing 75 microns (undertaken by ALS's Virginia laboratory in Brisbane).

2. For samples from in-fill drill holes on a nominal 160m by 160m grid that had not been previously prepared or analysed.
    - Report weight of received sample.
    - Riffle split each sample down to an acceptable size for pulverising and return split to original bag for storage (undertaken by ALS's Virginia laboratory in Brisbane)
    - Pulverise the smaller portion of the split to a nominal 85% passing 75 microns (undertaken by ALS's Virginia laboratory in Brisbane).
    - Approximately 15% of the samples are composite samples that have been prepared in the laboratory by riffle splitting and combining. The composites do not include more than two samples.

This preparation is regarded as being appropriate for bauxite analyses.

As the entire sample was collected in the field no duplicate sampling was possible or deemed to be required.

In the case of Gulf Alumina's sonic drilling samples was collected in full directly from the 'sausage' bag and varied from 0.9kg to 1.8kg in weight when collected. Duplicate samples were collected every 20 samples by cone and quarter method in the field at the time of drilling.

Criteria	JORC Code explanation - DSO ("Direct Shipping Ore")
Quality of Assay Data & 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 (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.* ## Commentary For both Metro Mining and Gulf Alumina sample analyses were undertaken by ALS at its Stafford laboratory in Brisbane. The analytical methods applied to the pulverised sample were as follows: • Total oxides by XRF (ALS code ME-XRF13b). Al_2O_3, BaO, CaO, Cr_2O_3, Fe_2O_3, K_2O, MgO, Na_2O, P_2O_5, SiO_2, SO_3, SrO, TiO_2, V_2O_5, Zn, ZrO_20. • H_2O/LOI by TGA furnace (ALS code ME-GRA05) • Available alumina in bauxite by ALS method Al-LICP01 (150^0C) **(Metro Mining)** • Reactive silica by ALS method Si-LOCP01 (150^0C) **(Metro Mining)** • Available alumina by SGS using method ICP05 (148^0C) **(Gulf Alumina)** • Reactive silica by SGS using method ICP05 (148^0C) **(Gulf Alumina)** Two standard reference samples for bauxite were obtained from Geostats Pty Ltd, renumbered, and provided to the laboratory to insert in each batch. One of each sample was inserted approximately every twenty (20) samples. This was regarded as a measure of the accuracy of the laboratory. The results were all within one standard deviation of the certified values indicating no significant bias between sample batches. No field duplicate samples were collected as the total sample was submitted for analysis. In the laboratory as a Quality Control measure, every 10th sample was completed in duplicate and four laboratory standards and one blank were run in conjunction with the samples and data reported to the company.
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.* ## Commentary In the laboratory every 10th sample was completed in duplicate as listed above. Analyses from 21 twinned drill holes have been completed. Duplicate holes had very high correlation coefficients for the total silica, reactive silica, total alumina and available alumina grades that indicated no inherent problems in the sampling or laboratory protocol.

Criteria	JORC Code explanation - DSO ("Direct Shipping Ore")
	Duplicate holes that were submitted in the BH6 and BH1 blocks during the field drilling programs that covered this BH2 resource showed excellent correlation. No actual duplicate holed from BH2 were submitted and hence the results of from these other nearby blocks are considered relevant.
	Analytical data were provided by the laboratory in csv format and as pdf. The data have been compiled by the company into Excel spreadsheets and merged with drill hole location data and sample intervals.
	The Gulf Skardon River Assayed data has been viewed by S. Border of Geos Mining and W. Zhang of Gulf Alumina. The 2014 drilling program included some close spaced drilling to determine local variations in bauxite thickness and cementation. Data was entered into one single database from which all estimation work is carried out. There is no duplication of tables. The database was then exported from access and merged with the cape alumina BH6 database.
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.* ## Commentary **Metro Mining Limited.** Drill hole collar positions were surveyed by Fugro Spatial Solutions Pty Ltd using Trimble RTK GPS units. Three units were used; one base station and two rovers. Easting and Northing co-ordinates were quoted to three decimal places based on datum GDA94 using zone 54. Elevation was quoted to two decimal places using an adopted AHD from Ausgeoid'09. **Gulf Alumina Limited.** Hole collars have been surveyed using a differential GPS which has horizontal accuracy of +- 40cm. Vertical accuracy is much greater at ~80cm. Data is collected with reference to the GDA94 datum and recorded as Zone 54 metric coordinates. In late 2014 LiDAR data was acquired by both companies which provide more accurate elevation data. This data has been used in the resource modelling.
Data Spacing & 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.* ## Commentary In the BH1 area 1,482 holes were drilled on a nominal 80m x 80m north-south, east-west grid. In the BH2 area 142 holes were drilled on a nominal 160m x 160m north-south, east-west grid. In the BH6 area 505 holes were completed on a 160m x 160m grid. Gulf Alumina's drill hole spacing was variable but was designed so that samples could be analysed from ~400m spaced holes. Samples have been submitted for analyses from all drill holes either as individual samples or composites. Approximately 15% of the samples from Metro Mining's 160m x 160m drilling were composites prepared in the laboratory by riffle splitting and combining a maximum of two samples. All other samples were the original 0.2 m or 0.5m samples. In February 2015 the sonic drilling program established a series of holes through the area allowing the certainty to assign Measured Resource within 800m of the dry bulk density analysis.

Criteria	JORC Code explanation - DSO ("Direct Shipping Ore")
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 mineralized structures is considered to have introduced a sampling bias, this should be assessed and reported if material.* ## Commentary All drill holes are vertical and intersect the mineralisation at an approximate 90^0 angle. The mineralisation is known to be near horizontal with a tabular attitude. This is typical of bauxite deposits in the Weipa area. There is therefore no sampling bias resulting from the orientation of the drilling and that of the mineralised body.
Sample Security	• *The measures taken to ensure sample security.* ## Commentary The samples were collected in large plastic sample bags on site which were secured with industrial quality duct tape and then placed, along with other samples from the drill hole, in large polyweave bags which were secured with cable ties. Due to the nature of bauxite mineralisation there is little opportunity to tamper with or otherwise modify the sample. The samples used in the DSO bauxite Mineral Resource estimates were stored in secure containers in a locked shed in a secured industrial estate in Raceview, Ipswich, Queensland.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data* ## Commentary No independent audits of the aircore drilling and sampling procedures have been undertaken. Geos Mining has reviewed the data and modelling methodology and provided recommendations to enable sign off as a Competent Person for the Mineral Resources at both BH1 and BH6 deposits. The BH2 drilling including rotary and sonic were carried out in the same manner as part of the same programs that gathered the BH1 and BH6 data. A review of the bulk density determinations derived from the sonic drilling program has been undertaken by Xstract Mining Consultants Pty Ltd. They supported the idea of applying an average Relative Density to a block based on the samples. In practice the Relative Density has been modelled to improve definition of the estimation. With regard the data generated by Gulf Alumina Geos Mining state that In house auditing of QC has shown no irregularities although it is noted that: • *There is a moderate variability in bauxite thickness (relating to silica abundance)* • *There is a marked variation in recoveries of samples from which assays are measured* • *There is a bias in the measurement of samples for bulk density where cemented material causes rupturing of the sample 'sausage*

SECTION 2 REPORTING OF EXPLORATION RESULTS

(CRITERIA LISTED IN THE PRECEDING SECTION ALSO APPLY TO THIS SECTION.)

Criteria	JORC Code explanation – DSO ("Direct Shipping Ore")
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.* ## Commentary BH6 is located within EPM 16899 and BH1 within EPM 15376. The EPMs are held by Cape Alumina Limited a wholly owned subsidiary of Metro Mining Limited. The underlying tenements are in good standing. BH2 is located within EPM 15376. The EPMs are held by Cape Alumina Pty Ltd a wholly owned subsidiary of Metro Mining Limited. The tenements lie within the Old Mapoon DOGIT with whom the company has a Conduct and Compensation agreement. The underlying tenements are in good standing.
Exploration Done by Other Parties	• *Acknowledgment and appraisal of exploration by other parties.* ## Commentary An appraisal has been undertaken of previous exploration for bauxite. Although some widespread sampling existed there was no evidence of systematic, grid-based drilling. Early exploration of the area was undertaken by Comalco for bauxite. Other companies explored to the north of Skardon River (Pacminex for bauxite in the early 1970s) or to the south of Mapoon (Shell and Comalco explored the Pennefather area for kaolin in the 1980s and early 1990s). Probably due to the remoteness of the region, it appears there was no other exploration over the area of this EPM. The only recorded work carried out by Australian Kaolin Limited (AKL) and its predecessor Venture Kaolin outside the area of the Mining Leases was five percussion holes drilled in 1986. AKL went into receivership and the project was acquired by Queensland Kaolin Limited which subsequently changed its name to Australian China Clays Limited (ACC). ACC have carried out intermittent kaolin mining and processing operations since 2002. Infrastructure for the kaolin operation included two kaolin processing plants (now sold), an airstrip, a haul-road and pipeline linking the kaolin mine and wet processing plant with the dry plant and a barge wharf at the Skardon River landing. Additional infrastructure includes bulk water and fuel storage, diesel power generators and a staff camp, designed to accommodate 50 people.
Geology	• *Deposit type, geological setting and style of mineralization* ## Commentary The deposit type is lateritic bauxite derived from the weathering of aluminous sediments in a tropical to sub-tropical environment. The project area forms part of the Weipa Plateau and is underlain by rocks of the Carpentaria Basin. The oldest rocks intersected by drilling in the area

Criteria	JORC Code explanation – DSO ("Direct Shipping Ore")
	are grey-black marine shales, which have been assigned to the Cretaceous Rolling Downs Group. This is up to 250m thick and is underlain by sandstones of the Helby Beds. These rocks are a source of artesian water. The bauxite deposits generally consist of a single bauxite layer, generally 0.5m – 3m thick that is underlain by a kaolin horizon. Within the Gulf SK resource area, the average bauxite thickness is 1.6m and within the BH6 tenement the average is 2.3m and at BH1 the bauxite profile averages 1.8m. The bauxite deposits are overlain by lateritic overburden and topsoil. Under the bauxite deposits there is often an ironstone cementation and a kaolin clay layer. Kaolin, sandy clays and minor quartz sand deposits occur beneath the bauxite layer and extend beyond the bauxite areas, beneath the Namaleta Creek flood plain. Bauxite occurs over the majority of the plateau areas. It is pisolitic in form and is generally covered only by a thin layer of soil, but in the western parts of the project area bauxite is sometimes found beneath sand dunes at depths of up to 6m. The bauxite passes down into an iron rich horizon (ferricrete) and then into mottled, bleached Bulimba Formation sandy clays. Bauxite pisoliths generally form 55-80% of high quality bauxite, with the remainder being sand, silt and clay. The pisoliths are well rounded, and generally 5mm to 20mm in size, although larger pisoliths of up to 30 mm do occur in the bauxite horizon. Larger, irregular shaped pisoliths and concretions are typical of the underlying ironstone horizon and form a visual marker of the base of the bauxite. Most of the bauxite is loose and free flowing although a proportion is cemented. The aircore drilling method used for exploration is efficient at drilling through thin layers of cemented bauxite, so from the exploration drilling alone it is impossible to make any accurate assessment of the proportion of cemented bauxite in this deposit. Mining experience in Weipa and Andoom has demonstrated that cemented bauxite is typically only a very small percentage of the total bauxite in this region.
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.* ## Commentary All Metro Mining's drill hole information, including surveyed collars with easting, northing, elevation and depth, geological logs and analytical data are presented in Excel spreadsheets. These data were used in the estimation of the Mineral Resources. The data are stored within Metro Mining's server which is regularly backed-up. Data sourced from Gulf Alumina were contained within a comprehensive database that has been validated.
Data Aggregation Methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. 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.*

Criteria	JORC Code explanation – DSO ("Direct Shipping Ore")
	• *The assumptions used for any reporting of metal equivalent values should be clearly stated.* ## Commentary For BH1 and BH6 the bauxite intervals are based on a cut-off of ≥45% total Al_2O_3 and ≤15% SiO_2 and a cut-off of ≥45% total Al_2O_3 and ≤8% reactive SiO_2 (at 150^0C) respectively. For BH6 and the adjacent Gulf Alumina area the bauxite intervals are based on a cut-off of ≥45% total Al_2O_3 and ≤20% SiO_2. A minimum thickness of 0.5m was applied and the top 0.25m was considered to be overburden and was not aggregated. Down-hole assays were weighted on the basis of both intercept thickness and intercept recovery (wt% +1.2mm material) to determine the weighted average assay for the bauxite zone in each drill intercept. No upper cut-off grades were applied. Some DSO bauxite samples used in the Mineral Resource estimates were created by compositing the splits over the entire bauxite interval, as defined by the cut-offs described above, for each hole. The remainder (~80%) are non-composited 0.25m or 0.5m samples. A number of analyses from the Gulf Alumina drill holes are from screened (>1.2mm) samples that have been converted to DSO analyses using correlation coefficients generated from samples that have both screened and DSO analyses.
Relationship between Mineralization Widths and Intercept Lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralization 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 (e.g. 'down hole length, true width not known')* ## Commentary All drill holes are vertical and intersect the mineralisation at an approximate 90^0 angle. The mineralisation is known to be near horizontal with a tabular attitude. Intercept lengths are therefore approximately the same as the true widths of the mineralisation This is typical of bauxite deposits in the Weipa area.
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.* ## Commentary Due to the high density of drilling it is difficult to display on a plan.
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.* ## Commentary This is not deemed to be Material for the reporting of the Mineral Resources which considers all the analytical data. All resource estimation work is based on the entire database, except where areas such as environmentally sensitive areas and areas of no bauxite have been excluded.
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.*

Criteria	JORC Code explanation – DSO ("Direct Shipping Ore")
	Commentary
	Apart from the samples obtained from the Reverse Circulation aircore drilling a small number of bulk samples were collected over 1 m intervals from the aircore drilling for dispatch to potential customers.
	Aircore drilling has been the main exploration method used in the drilling programs, apart from very limited backhoe and hand sampling. Samples have been analysed mainly by ALS Laboratories in Brisbane.
Further Work	• *The nature and scale of planned further work (e.g. 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.*
	Commentary
	No further resource-focused drilling is planned for BH1. Close-spaced drilling, to an 80m x 80m grid, is planned for BH6, the adjacent Gulf Alumina areas and BH2.

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 – DSO ("Direct Shipping Ore")
Database Integrity	• *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.*
	*Data **validation** procedures used.*
	Commentary
	Analytical data was received from the laboratory in csv format and merged with drill hole locational and from-to data in Excel spreadsheets. Checks were run to look for and correct duplicated intervals, gaps and typing errors. Vulcan's database import and compositing routines generated validation log files that were all checked in detail. All issues identified were verified, checked and corrected.
	Gulf Alumina's survey data has been directly downloaded from the GPS instrument to the Access database. Elevation data has been compiled from recently flown LiDAR data. Sampling and logging data has similarly been copied directly from the field geologist's digital logs Assay data has been also downloaded directly from ALS csv files. Validation of all data has been undertaken through in-built functions of the modelling software (Micromine), together with visual checks by the resource geologist.
	Upon combining the model all data has also been validated by importing into Vulcan can generating composites. Any horizons out of sequence or over lapping intervals and gaps are reported by the software and then checked against source data and corrected.

Criteria	JORC Code explanation – DSO ("Direct Shipping Ore")
Site Visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.* ### Commentary The Competent Person for exploration results, Neil McLean, supervised the drilling program and was on site a number of times during the program. The Competent Person for the resource modelling, Ed Radley, was not working on the project during the exploration phase and as such could see little benefit in a field visit that has not been related in photographs and presentation from others. In the case of the data derived from Gulf Alumina the Competent Person whom signed off on the previous resource (2014) visited the site on four occasions; three of which three of which involved the supervision of drilling programs. He viewed surveying methods, geological and sample collection procedures on all these occasions.
Geological Interpretation	• *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.* • *Nature of the data used and of any assumptions made.* • *The effect, if any, of alternative interpretations on Mineral Resource estimation.* • *The use of geology in guiding and controlling Mineral Resource estimation.* • *The factors affecting continuity both of grade and geology.* ### Commentary The geological interpretations is grade-based using a threshold of ≥45% total Al_2O_3 and ≤15% total SiO_2 for BH1, a threshold of ≥45% total Al_2O_3 and ≤8% reactive SiO_2 (at 150^0C) at BH2 and a threshold of ≥45% total Al_2O_3 and ≤20% total SiO_2 for BH6 and the Gulf Alumina area, to define economic bauxite. The continuity of the geological interpretation is confirmed with a reasonable degree of confidence. The data points are spaced at 80m in a nominal grid pattern for almost the entire BH1 deposit and at 160m in a nominal grid pattern over the BH2 and BH6 deposits. The data points for the Gulf Alumina area are more variable but generally less than 400m on a nominal grid. Information from other deposits in the Weipa area provides additional confidence in the geological model. The regional geological setting has been well known since discovery of the Weipa deposits, 80km to the south. The considerable drilling already completed has given confidence in the local geological setting although it is noted that the definition of bauxite is essentially a chemical one, initially guided by lithological logging. The deposit type is lateritic bauxite derived from the weathering of aluminous sediments in a tropical to sub-tropical environment. The mineralisation within the Bauxite Hills Mine Project forms part of the Weipa Plateau, a widespread area of aluminous laterite on the west coast of Cape York Peninsula that includes Rio Tinto Alcan's Weipa, Andoom and Amrun bauxite deposits. The bauxite deposits generally consist of a single flat-lying pisolitic bauxite layer, 0.5m – 3m thick that is underlain by a kaolin horizon. Within the resource area the average bauxite thickness is 1.6m. The bauxite deposits are overlain by lateritic overburden and topsoil. Under the bauxite deposits there is often a ferruginous cemented layer and a kaolin clay layer. Kaolin, sandy clays and minor quartz sand deposits occur beneath the bauxite layer and extend beyond the bauxite areas.

Criteria	JORC Code explanation – DSO ("Direct Shipping Ore")
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.

Commentary

The mineralisation within the bauxite plateaus is flat lying and tabular in form. The Mineral Resource has the following surface area, average bauxite thickness and average overburden thicknesses.

BH1: Area 6.8km^2. Bauxite thickness 1.7m. Overburden 0.6m

BH2: Area 3.1km^2. Bauxite thickness 1.6m. Overburden 0.5m

BH6/Gulf Alumina: Area 39km^2. Bauxite thickness 1.4m. Overburden 0.76m

Criteria	
Estimation & Modelling Techniques	• The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.
	• The availability of check estimates, previous estimates and/or mine production 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 (e.g. sulphur for acid mine drainage characterisation).
	• In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.
	• Any assumptions behind modelling of selective mining units.
	• Any assumptions about correlation between variables.
	• Description of how the geological interpretation was used to control the resource estimates.
	• Discussion of basis for using or not using grade cutting or capping.
	• The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.

Commentary

A block model was created by constructing a DTM and surface model of the soil, bauxite and transition zone. The block model was cut to tenement boundaries, environmentally sensitive areas and bauxitic plateaus then filled with assay and bulk density data using an Ordinary Kriging algorithm with variograms created for total silica/ alumina, available alumina, reactive silica and dry bulk density. LOI, Ti_2O_3 and Fe_2O_3 were also modelled.

Estimation parameters used included:

• Grid size 40m x 40m

• Omnidirectional search ellipse with maximum search distance of 800m

• Lag intervals 100, 200, 400, 800, 1200m.

Criteria	JORC Code explanation – DSO ("Direct Shipping Ore")
	• *Nugget, major/ minor ranges determined by best fit variograms*
Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.* ### Commentary The tonnes are quoted on a dry basis. The moisture contents were measured by ALS on the sonic drill samples. Following drying the samples were re-weighed to provide a weight to use in the bulk density calculations.
Cut-off Parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.* ### Commentary Mineralised zones in the BH1 portion of the model are defined by grades ≥45% total Al_2O_3 and ≤15% SiO_2. Mineralised zones in the BH2 portion of the model are defined by grades ≥45% total Al_2O_3 and ≤8% reactive SiO_2 (at 150^0C). Within the combined BH6 and Gulf Alumina model mineralised zones are defined by grades ≥45% total Al_2O_3 and ≤20% total SiO_2. Silica cut-off grades have also been assigned on the basis of the maximum reactive silica acceptable to refineries. This is generally accepted as 8% which approximately equates to a total silica value of ~16-20%. However, where reactive silica assays are available these have been used to determine whether material is classified as bauxite or waste.
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.* ### Commentary The resource model assumes open pit mining for all defined resources using loaders and trucks. No blasting is envisaged based on bauxite mining operations elsewhere in the Weipa area. Grade control will be assisted by ground penetrating radar (GPR), laser levelling equipment fitted to mining equipment with face grade control measured by the use of portable XRF equipment and/or field laboratory. The mining method is influenced by the flat terrain, the tabular nature of the bauxite occurrence and its material characteristics. A conventional truck and excavator equipment will be used as proven by Rio Tinto Alcan in the neighbouring Weipa mine, handling a similar ore body. No blasting is required and scrapers will be used to remove topsoil and overburden which will be placed in mined out areas. Conventional open cut mining will be used with low stripping ratios (less than 1:1).
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.*

Criteria	JORC Code explanation – DSO ("Direct Shipping Ore")
	Commentary
	THA (trihydrate alumina) and RxSi (reactive silica at 150^0C) analyses have been undertaken on a routine basis throughout the deposits. A small number of TAA (total available alumina) and RxSi (reactive silica at 250^0C) analyses have also been generated. CSIRO has undertaken detail bauxite characterisation analyses on a small number of samples that have been composited from a number of holes within the BH1 and BH6 deposits. The results of this work indicate that the characteristics of the bauxite are geographically variable and could be suitable for both low and high temperature Bayer processing.
	A direct shipping product (DSO) will be supplied without the need for any beneficiation (i.e. wet screening to remove fines).
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.*
	Commentary
	An EIS has been submitted over the Bauxite Hills Mine Project and is currently in the assessment process. Small-scale mining of kaolin has been undertaken at the Skardon Mine located to the north of the BH2 deposit indicating that the district is not necessary regarded as 'greenfields'.
	There are several environmentally sensitive areas surrounding the bauxite deposit but their location is accurately known; no bauxite resources have been included within these areas.
	At present there are no communities on the mining leases. Good relations have been established with the Aboriginal Traditional Owners and relevant Queensland Government authorities.
Bulk Density	• *Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.*
	• *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc.), moisture and differences between rock and alteration zones within the deposit.*
	• *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*
	Commentary
	Bulk density data specific to BH1, BH2 and BH6 have been determined from measurements undertaken on 325 samples collected from 34 sonic drill holes.
	The Metro Mining methods of sample collection, measurement and determination, as well as the results, have been independently reviewed by Xstract Mining Consultants Pty Ltd. The dry bulk density analysis was used to build a model using an inverse distance method to generate a surface fit to the composite derived from the samples density values. The sonic drilling method was used to collect core samples for bulk density determinations as it is a proven method of collecting continuous and intact samples that can be measured to determine volumes and weighed to determine densities
	With regard to Gulf Alumina the 2014 drilling program enabled the measurement of 144 bulk density values from bauxitic material and this data was

Criteria	JORC Code explanation – DSO ("Direct Shipping Ore")
	used in the 2017 resource estimate. An average default value of 1.8 was used (compared to previous conservative estimates of 1.6). The inclusion of an additional 204 measurements from field data has increased the default bulk density to 1.93. Composites based on the bulk density of the BH6 and Gulf Alumina sonic samples were used to generate a density grid which produced a resource-wide bauxite average relative density of 1.92 based on the zones within the classified blocks.
Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.* • *Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).* • *Whether the result appropriately reflects the Competent Person's view of the deposit.* ## Commentary The Mineral Resource has been classified as Measured, Indicated and Inferred. This reflects the density of drill hole sampling that varies from 80m to 160m to ~400m centres, the availability of bulk density data and the modelling method utilised. LiDAR survey covers the entire deposit and adds confidence to the definition of the plateaus and hence helps justify the classification categories. Measured resource required a bulk density composite value within 800m and both Indicated and Measures categories required a DSO analysis within 220 m of the point being classified. Simulated DSO grades were applied to all composite samples that had beneficiated analyses (screened at >1.2mm) using a correlation coefficient generated from paired DSO and beneficiated analyses. The correlation in simulating these grades was considered strong within the bauxite horizon and as such the zone of influence was relaxed from a 200m radius used previously to the 220m radius reflecting more confidence in the data. In accordance with the classification as Measured Resources, the Competent Person considers that there is moderate confidence in the bulk density of each block represented in the model based on analytical data. Measured resources were limited to portions of the model within 800m of sonic drill holes with bulk density data. Significant variability has been noted within the deposits dry bulk density analyses. In accordance with the classification as Indicated Resources, the Competent Person considers that there is moderate confidence that the total silica and alumina grades in each block are as estimated. This confidence is underpinned by the close spaced (160 m) drill holes, some of which have been assayed, and results of the variography that suggest spatial continuity over distances of up to 3km. There is however a moderately high nugget that suggests significant local variability in grade that must be considered in further upgrades of resource classification.
Audits or Reviews	• *The results of any audits or reviews of Mineral Resource estimates.* ## Commentary Geos Mining has carried out an independent review of the Mineral Resource data and techniques used to estimate the BH1 and BH6 resources. The techniques used to estimate the BH2 and Gulf Alumina resources are identical in that the same method and systems were used. With regard the Gulf Alumina resource Geos Mining has carried out resource estimations since 2008. In 2012 a consultant was commissioned by an international aluminium producer to review the resource. No adverse comments were received.
Discussion of Relative Accuracy/ Confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the 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.*

Criteria	JORC Code explanation – DSO ("Direct Shipping Ore")
	• *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.*
	• *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*
	### *Commentary*
	In accordance with the classification as Indicated Resources, the Competent Person considers that there is moderate confidence in the bulk density of each block represented in the model based on analytical data. Indicated Resources were also limited to portions of the model within 800 m of sonic drill holes with bulk density data.
	In accordance with the classification as Indicated Resources, the Competent Person considers that there is moderate confidence that the total silica and alumina grades in each block are as estimated. This confidence is underpinned by the close spaced (160 m) drill holes, most of which have been assayed, and results of the variography that suggest spatial continuity over distances of up to 3km. There is however a moderately high nugget that suggests significant local variability in grade that must be considered in further upgrades of resource classification.
	With regard the Gulf Alumina data confidence in the global resource is considered high given the extensive drilling completed and assay data available. Limitations on the categorised resource relate to the lack of raw, unscreened, sample assays in certain areas of the deposit.

Section 4 Table 1 Estimation and Reporting of Ore Reserves
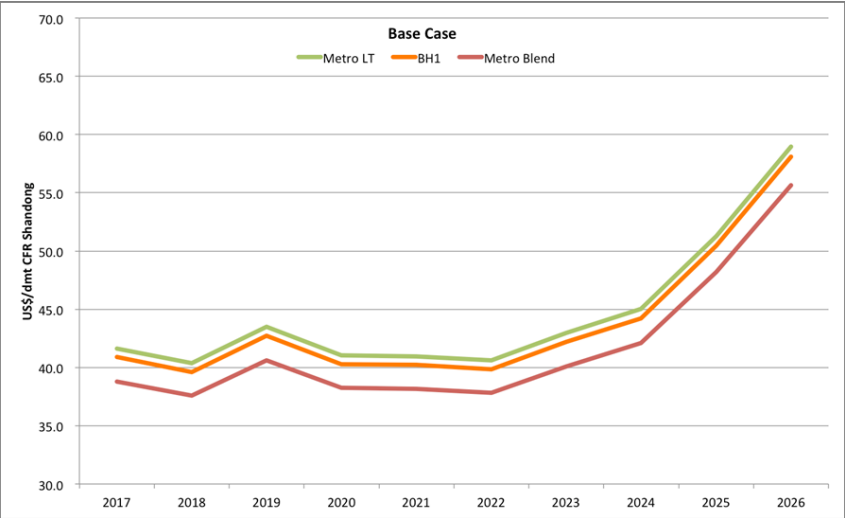
Criteria	JORC Code explanation	CP Comments
Mineral Resource estimate for conversion to Ore Reserves	• *Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.* • *Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves*	• The Ore Reserve estimate is based on the Mineral Resource estimate released on13th March 2017 as a market update of the Resource Statement – see below: **Measured, Indicated & Inferred Resources for Bauxite Hills Mine Project** **Bauxite Hills Mine Project – Total Resource** | Resource Type	Dry Tonnes (Mt)	$Al_2O_3\%$	$SiO_2\%$
---	---	---	---
Measured	54.7	50.0	11.9
Indicated	66.4	49.2	14.7
Inferred	23.7	47.4	16.0
Total	**144.8**	**49.2**	**13.9**	 • The mineral resources in the 13 March 2017 Mineral Resource estimate are inclusive of the ore reserves.
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	• Site visit was conducted by the CP on 6th March 2017. Areas inspected include the airstrip, BLF area at Skardon River, the major roads on site, mining camp and trench locations through the orebody in BH6. A flyover of the site was completed on approach in the charter plane, giving a good perspective of the site. • The bauxite provides an excellent building material for roads and other civils which gives confidence in the ability to achieve forecast operating hours and rates even during wet weather.
Study status	• *The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.* • *The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.*	• A Bankable feasibility study has been completed (March 2017) by MEC Mining on the basis of the updated geological model and resource (March 2017). This study included a margin rank, final and pit stage designs, reserving and detailed mine production scheduling inclusive of haulage modelling and economic analysis in a detailed financial model. This study demonstrated economic viability of the stated reserves at individual block basis and when assessed as a project. Modifying factors including economics viability, cutoff grades, environmental and infrastructure considerations have been applied. • The Mar 2017 bankable study builds on the June 2015 pre-feasibility study revision (June 2015). This study included open pit optimisation, final and pit stage designs, reserving and detailed mine production scheduling inclusive of haulage modelling and economic analysis in a detailed financial model. This study demonstrated economic viability of the stated reserves at individual basis and full project schedule, based on industry acceptable modifying factors.

Cut-off parameters	• *The basis of the cut-off grade(s) or quality parameters applied.*	• Mineralised zones in the BH1 and BH2 portion of the model are defined by grades ≥45% total Al2O3 and ≤15% SiO2 within the resource model which was carried through into the reserve model.
		• Within the combined BH6 and Gulf Alumina model, mineralised zones are defined by grades ≥45% total Al2O3 and ≤20% total SiO_2 within the resource model which was carried through into the reserve model.
		• A minimum mining thickness of 0.5m was applied to the bauxite horizon
Mining factors or *assumptions*	• *The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design).*	• The Margin Rank was completed to determine the extent of economically mineable ore reserves. Each block is evaluated based on the Metro Mining's base sales price and the price discount factor based on grade variability. The margin rank was completed on the model used for the resource statement released on 13th March 2017.
	• *The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc.*	• Simple mining method will be adopted to mine the bauxite ore using front end loaders. Waste will be stripped by scrapers and placed on the mined out floor to establish rehabilitation. Once the bauxite ore is exposed the FEL will mine the bauxite down to the transition material using kinematic GPS to locate the mining horizon floor.
	• *The assumptions made regarding geotechnical parameters (e.g. pit slopes, stope sizes, etc.), grade control and pre-production drilling.*	• Shallow deposit – pit slope parameters are to the natural angle of repose. The mined out pit will be back-filled with overburden.
	• *The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).*	• Ore Roof loss = 0.1m; Ore Floor loss = 0.15m. Total loss = 0.25m incorporated in the ROM tonnes
	• *The mining dilution factors used.*	
	• *The mining recovery factors used.*	
	• *Any minimum mining widths used.*	
	• *The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.*	
	• *The infrastructure requirements of the selected mining methods.*	

Criteria	JORC Code explanation	CP Comments
Mining factors or *assumptions*		• Ore Roof dilution = 0.1m and Floor dilution = 0.05m incorporated in the ROM tonnes • 50m minimum mining width is used. • 0.5m minimum mining thickness • The infrastructure required for the mining and transshipment method was costed in detail by Wave Engineering and Metro Mining Limited and includes a workshop, mine infrastructure area, mining accommodation camp, water reticulation, haulroads, product screening, product stockpiling and handling system, barge loading facility and fuel storage facility, • Initial development capital was $35.8 million (see table below for breakdown), with additional expansion capital of $36.7 million in the second and third year of mining. The expansion capital is to install a truck dump hopper at the barge loading facility and upgrade roads ($16.4m) during year 2 of operation to save operating cost and accommodate additional tonnage throughput. In year 3 an allowance is made to purchase a floating crane and associated marine side upgrades ($20.3m) to increase transshipment rates and allow ungeared ocean going vessels to be used. <table><tr><td>**Category**</td><td>**Cost AUD**</td></tr><tr><td>Site establishment and haul roads</td><td>A$3.1M</td></tr><tr><td>Key infrastructure including BLF and camp</td><td>A$25.8M</td></tr><tr><td>Other supporting infrastructure</td><td>A$1.6M</td></tr><tr><td>Logistics and other owner's costs</td><td>A$2.1M</td></tr><tr><td>Contingency @ 10%</td><td>A$3.2M</td></tr><tr><td>**Development Capital Total**</td><td>**A$35.8M**</td></tr></table> • Sustaining capital was allowed (in addition to mobile equipment sustaining capital) at $1m per annum in the first year, rising to $2m per annum once at full production 6mtpa.

Criteria	JORC Code explanation	CP Comments
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.*	• The ore has been considered a DSO (direct shipping ore). Screening is undertaken to remove oversize, however no beneficiation as such is undertaken. The orebody is known to contain a portion of cemented bauxite, estimated to make up 5% of the total reserve. The cemented bauxite does not break up as easily as the non-cemented bauxite. It is expected that most of the cemented bauxite will break up as it is handled by the mining equipment or upon screening. Any cemented bauxite over 100mm fragment size will be screened off at the port. The study financial model conservatively allows the full 5% to of cemented bauxite to report to screen reject as oversize although it is likely that a fair proportion of the cemented bauxite will be broken down to less than 100mm as it is handled. Oversize screen reject will be recovered by wheel rolling by a front end loader and re-feeding over the screen to recover oversize ore. When there are excessive organics in the screen reject (tree roots), the ore will be designated waste and backhauled to the pit to avoid product penalties. It is assumed in the Reserve estimate that 0.5% of the ore mined will be lost in this manner. • THA (trihydrate alumina) and RxSi (reactive silica) analyses have been undertaken an all beneficiated (+1.2mm) samples from BH6 as well as the composited, DSO bauxite samples from BH6. These results are used together with the results from the XRF analyses to calculate an estimated BA (boehmite alumina) content. The calculation makes the assumption that all Al_2O_3 is contained within gibbsite, boehmite and kaolinite and that all SiO_2 occurs in kaolinite and quartz. A small proportion of Al_2O_3 may occur in an amorphous form and result in a small error in the amount of calculated BA. A small number of negative BA numbers were reported from the calculation.
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.*	• An EIS study is currently being completed by CDM Smith • There are several environmentally sensitive areas surrounding the bauxite deposit which have been mapped and declared sensitive areas. While the resource model overlaps environmentally sensitive areas, no resources in these areas have been included within the reserve estimate.

Infrastructure	• *The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.*	• A detailed infrastructure study has been undertaken by Wave Engineering as part of the BFS. The study is based on upgrading the existing facilities that are on the leases acquired through the takeover of Gulf Alunima. The study takes into account access to the site and accommodation for workers, supplies of power, water, concrete and materials. The site is remote and both barge and air transport of people, materials and equipment has been allowed within the capital cost estimate. The construction period will be during the latter part of the 2017 dry season (April to November) with some activities continuing through the wet season.
Costs	• *The derivation of, or assumptions made, regarding projected capital costs in the study.* • *The methodology used to estimate operating costs.* • *Allowances made for the content of deleterious elements.* • *The derivation of assumptions made of metal or commodity price(s), for the principal minerals and co-products.* • *The source of exchange rates used in the study.* • *Derivation of transportation charges.* • *The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.* • *The allowances made for royalties payable, both Government and private.*	• The projected capital costs are provided by Wave Engineering Metro Mining based on the infrastructure and project implementation plans (see Mining Factors or Assumptions). • Major operating costs including transshipment, mining, camp operations and maintenance of facilities have been quoted by contractors. MMI management, overheads and incidental costs have been drawn from quotes or built up from first principles. The average life of mine operating cost including royalties FOB is $23 per tonne. • The Metro Mining's sales base price has been advised by CM Group for all products other than Xinfa • AUD 1.00 = USD 0.75 • AUD 1.00 = RMB 6.88 • The ore haulage cost is calculated by determining the truck haul hours through a haulage simulation, then multiplying by the contractor truck operating cost rate. Transportation cost from the load out point to the ship is done by barges for which a fixed price contract is in place. • The penalties/bonuses for the ore below/above specification has been incorporated into both the margin and financial modelling • The Government royalties (10% of product) and traditional land owner's royalty (2.23% below US$45/t, $2.63 between US$45/t & US$55/t, 3.30% between US$55/t & US$65/t, 4.0% > US$65/t) has been accounted for in the model.

Criteria	JORC Code explanation	CP Comments
Revenue factors	- *The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc.* - *The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.*	- Base price assmptions (delivered to customer port) are shown in the graph below as provided by CM group. Life of mine product mix is Xinfa spec(BH1) 7.7mt, Metro Blend 42.2 Mt, Metro LT 42.1Mt. - Ocean vessel transport assumed to be US$8.66 per tonne, demurrage US$25,000 per day (assumed 1 day per month), shipping agents fees approx US$25,000 per month.

Market assessment	• *The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.* • *A customer and competitor analysis along with the identification of likely market windows for the product.* • *Price and volume forecasts and the basis for these forecasts.* • *For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.*	 • The market study completed by CM group for Metro Mining considered product specification options, market demand and global trade. The graph above shows forecast Chinese bauxite demand. Source: CM Group. • A detailed customer analysis and marketing plan was developed.
Economic	• *The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc.* • *NPV ranges and sensitivity to variations in the significant assumptions and inputs.*	• NPV (10%) real after tax = $601million and demonstrated a positive NPV in sensitivity testing. • IRR = 86% • The mine production schedule results were incorporated for revenue/cash flow and the NPV is calculated based on the capital expenditure and sustaining capital expenditure for each monthly period.
Social	• *The status of agreements with key stakeholders and matters leading to social licence to operate.*	• The EPM is owned by Metro Mining. Some Mining Leases are granted and some are in "Application" status. Two native title claims have been lodged. The Right to Negotiate (RTN) process has been completed by both Cape Alumina Pty Ltd and Gulf Alumina Ltd resulting in executed Ancillary Agreements with the Traditional Owners. Both agreements are essentially identical and under these agreements, MMI has undertaken to pay royalties as listed in the Revenue Factors section of Table 1, Section 4.

Other	*To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:* *Any identified material naturally occurring risks.* *The status of material legal agreements and marketing arrangements.* *The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.*	- The Mine schedule was completed on the 92.2MT of proved and probable reserve. - Presently this project is at a bankable feasibility study level. Quotes have received for the mining, haulage, and barging operations to be conducted on site. - Two mining leases are granted and several other under application or renewal. Some lease boundaries were recently altered to exclude riverine areas as part of the application process. - There is no reason to believe that the leases won't be granted before mining is scheduled to take place.
*Classification*n	*The basis for the classification of the Ore Reserves into varying confidence categories.* *Whether the result appropriately reflects the Competent Person's view of the deposit.* *The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).*	- The Proved reserves are derived only from Measured resources and no Measured resources were declared Probable reserve. In the 13 Mar 2017 resource statement, a large portion of the previously declared Measured resource in the BH6 orebody within the Gulf Alumina tenements was downgraded by the Resources CP from Measured to Indicated status to reflect the lower density of drilling compared to BH1 and MMI's pre-merger holdings in the BH6 orebody. - The resource modelling confidence is accurate in Edward Boulton's opinion - The stated Reserve represents the marketable product tonnes as this is a direct shipping ore, with no beneficiation and is saleable at ROM moistures

Criteria	JORC Code explanation	CP Comments
Audits or reviews	• *The results of any audits or reviews of Ore Reserve estimates.*	• MEC mining conducted internal peer review of the reserve estimate. The calculations were compiled by Ian Wallace and peer reviewed by Edward Boulton of MEC Mining.
Discussion of relative accuracy/ confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate.* • *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* • *Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage.* • *It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	• At the advanced status of the project, the geological model is considered to be a mature model. The model is a composite of the pre-merger models of Metro Mining Limited and Gulf Alumina Limited. The pre-merger Metro Mining Limited model was reviewed by SRK as part of due diligence process at the time of publication of the PFS in 2015. Steps have been taken to address the items raised in the SRK review and improvements are reflected in the current model. The changes to the per-merger Metro Mining Limited model are not considered material. The pre-merger Gulf Alumina Limited model was reviewed by SRK at the time of the merger and some issues were identified around resource confidence which lead to the downgrading of measured resources in the pre-merger Gulf Alumina model from measured to indicated. • The pre-merger Gulf Alunima Limited model was mostly sampled as a beneficiated ore (sieved to remove fines before testing) which was converted in the model to an un-beneficiated basis using a calculation. This process introduces some uncertainty, although this is partly mitigated as the pre-merger Metro Mining Limited model used DSO sampling process and straddles a large part of the pre-merger Gulf Alunima Limited model, providing additional confidence in the model conversion process. • No statistical or geostatistical procedures have been used to estimate the confidence level of the Reserves. • There are no remaining areas of material uncertainty relating to modifying factors that could have an impact on Reserve viability.