Low risk, Brownfield Expansion to 7 Million Tonnes Approved

Highlights

- **Metro has completed and the Board has approved, subject to financing, its Definitive Feasibility Study to expand capacity at the Bauxite Hills Mine from 4.0 to 7.0 Million Wet Metric Tonnes per annum;**

- **Binding offtake has already been secured for 5M WMT in 2023 and 6M WMT in 2024 to underpin payback in that time-frame;**

- **A second Floating Crane Barge (FCB) will be procured with land-side screens and conveyors expanded at a capital cost of A$28.3M, including contingency;**

- **Confirmation of significant economic benefits, NPV $372 m, IRR 78%, less than 2 year payback;**

- **Northern Australia Infrastructure Facility ("NAIF") has confirmed the extension of Metro's facility to 31 December 2022. Additional working capital secured to accelerate immediate implementation;**

- **All regulatory approvals are in place with intention to execute the expansion by Q4 2023.**

Metro Mining Limited (Metro) is pleased to announce that the Metro Board of Directors has approved a Final Investment Decision (FID), subject to financing - to expand the capacity of the Bauxite Hills Mine to 7.0 Million Wet Metric Tonnes per annum ("M WMT pa"). The approval for the expansion is underpinned by securing additional binding offtake with Xinfa Aluminium Group for 2023 and 2024. There are no further traditional owner, environmental or regulatory approvals required as Metro already has approval to mine up to 10.0 M WMT pa.

The economics of the Definitive Feasibility Study (DFS) have been run at a production/sales rate of 6.0 M WMT pa over a 15-year mine life, delivering strong returns with an NPV (10%) of $372 M, IRR 78%, payback in 2 years and average Site EBITDA margin of $83 M. The expansion capital of $28.3 M, takes productive capacity to 7.0 M WMT pa which, given the strong market outlook, provides flexibility to support upside spot demand as required and, at the same time, reducing implementation risk.

The choice to leverage Metro's established experience with a Floating Crane Barge (FCB), with a much lower capital cost than the previously considered floating terminal, allows a more rapid, lower risk and lower cost

implementation as well as significant operating risk reduction and synergy. Securing the access to a new crane is the critical path item for commissioning of the Second FCB by the end of Q3 2023. Metro has obtained an extension of the working capital facility announced in April 2022, to be able to secure a crane production slot, commence the FEED/detailed design and expand owners team EPCM capability.

The key outcomes of the DFS are:

Key Statistics		
Capacity	M WMT	7.0
Production rate	M WMT	6.0
NPV	A$ M	372
IRR	%	78
Payback	Years	2
Capital Cost	A$ M	28.3
Reserve	M WMT	92.9
Mine Life	Years	15
LOM Revenue	A$ Bn	4.6
LOM EBITDA	A$ Bn	1.3
Avg Annual Revenue*	A$ M	292
Avg Unit Site Opex*	A$/WMT	16.4
Avg Unit Site Margin*	A$/WMT	13.7

*First 10 years: 2023-2032

Metro's Managing Director and Chief Executive Officer Simon Wensley said:

"The completion of the expansion DFS confirms Bauxite Hills Mine as a highly profitable, low-cost, long life producer of good quality bauxite. This brownfield expansion is low risk and low capital expenditure, with 100% binding offtake now confirmed for 2023 and 2024 with our established customer Xinfa, and no further approvals required.

The choice of a Second Floating Crane Barge makes enormous sense given the experience we have gained and we expect to gain a number of operational efficiencies from running two Floating Cranes.

Expanding to 7 M WMT pa is perfectly timed to respond to bauxite market conditions expected to be very strong in the next few years.

The scale benefits mean that the prospective financial returns are outstanding and I thank Greenstone and Lambhill for their support to move immediately to accelerate implementation. "

DFS Update

The key components of the expansion are:

- Construction and mobilisation to Skardon River of a Second Floating Crane Barge (FCB), which when combined with the existing FCB provides Metro the ability to load in excess of 7.0 M WMT pa;

- Optimisation and upgrading of the existing screening, conveying and barge loading facilities to deliver of up to 7.0 M WMT pa.

- Scale up of the current haulage and transhipment fleets;

Capital expenditure estimates have been undertaken to an accuracy of +/- 10% and a 10% contingency has been applied across all costs. The table below details the expansion capital expenditure to deliver 7.0 M WMT is $28.3 Million.

Capital Cost Estimates (Assumed exchange rate of A$/US$0.72)	
Category	Cost (A$M)
2nd Floating Crane	
Direct Cost	19.0
Commissioning & Project Management	2.1
Contingency (10%)	2.2
Cost of 2nd Floating Crane	23.3
Upgrade Port and Barge Loading Facility	3.5
Additional trailers to operate quad configuration	1.1
Contingency (10%)	0.4
Total Estimated Cost	28.3

The DFS was completed by MEC Mining, an independent and highly reputable Mining Engineering and Consultancy firm who completed a previous feasibility study for Bauxite Hills. This was supported by a number of specialist consulting firms including:

- Braemar, a leading international Ship Broker which provided forward freight estimates.

- CM Group, a market leading bauxite industry specialist which supplied forward price decks specifically for Bauxite Hill's bauxite product specification.

- Wave Engineering a highly experienced engineering firm which was involved in the initial construction of the Bauxite Hills mine and previous feasibility studies.

- Rocktree Logistics and Warringa Marine, both experts in dry bulk supply chain logistics and trans-shipment.

- Metro is engaging with leading FCB suppliers such as Damen and MacGregor to finalise procurement of the FCB and MEC Mining regarding the completion of the engineering, design and procurement of land side plant to enable works to be performed at Skardon River in Q1 2023, during the upcoming wet season.

Second Floating Crane

The second floating crane barge (FCB) will be identical or substantially similar to the FCB procured in 2021, TSA Skardon, already commissioned and operating at nameplate capacity of approx. 4.0 M WMT pa at Skardon River. This will give the opportunity to maximise synergy and operating/maintenance costs. The previous crane was purchased on a substantially complete basis, so this new build option will allow Metro to include optimisation lessons from the first FCB such as services, accommodation and design elements fit for purpose for the Gulf of Carpentaria location.

Due to the elevated coal price, the market for trans-shipment assets is tight and Metro has been advised that delivery could be 12 to 15 months from firm order placement.

Land and Water Supply Chain Assets

The production and logistics chain at Bauxite Hills will be supplemented to ensure mining and transhipment rates can match the increased loading capacity of 7.0 M WMT pa, delivered by two floating crane barges.

Modifications will be required at the port and barge loading facility to ensure the capacity to load up to 7.0 M WMT pa, namely:

- Construction of a third screening plant;

- Optimisation and upgrading of existing screening and conveyor assets to meet sustainable loading rates of 2,000 tph;

Mobile fleet will be added incrementally as required:

- Replacement of current haulage fleet with higher powered Scania prime movers (funding through sustaining capital, excluded from DFS). This fleet will be enabled for next generation technology which Metro will be exploring to improve productivity, fuel consumption and maintenance in 2023.

- Addition of 6 x B trailers to the trailer fleet to allow quad trailer haulage over entire truck fleet.

- Addition of a 3rd tow tug and replace 3 x 3,000t barges with 3 x 7,000t barges. The study contemplates the tug and barges will be supplied by the current transhipment contractor, TSA. Metro will incur the mobilisation costs to site.

The current operation is running with 3 panels on a 2 and 2 roster. A fourth panel will be added. The mining and support fleet will be substantially the same and power, camp and services are all sufficient to run at the expanded scale.

Operating Costs

Unit operating costs are forecast to fall by approximately 20% once Stage 2 is fully commissioned. Operating expenditure estimates have been completed and are supported by existing operating data from Bauxite Hills and where needed by first principles engineering estimates and direct industry quotes.

Costs	(A$/WMT)
Land Activities	5.3
Transhipment	8.6
Site Services	2.5
Ocean Freight	12.1
Royalties	5.2
Total Operating Costs	**33.7**

Sales Update

The market for bauxite is now recovering from COVID-19 lows with recent months experiencing record import volumes to China and Metro's expected sales contracted at 3.8 M WMT for 2022. As domestic bauxite inevitably depletes further, CM Group is forecasting that Chinese imports to grow by approx. 74 M Dry Metric Tonnes (approx. 85 M WMT) over the next 10 years – or more than 8 M WMT pa at a time when 15 M WMT pa of Indonesian capacity is likely to exit the traded market. The vast bulk of China's bauxite will then be supplied by 2 countries: Guinea and Australia, thereby emphasizing the strategic nature of Australian bauxite supply into China's aluminium value chain.

China bauxite demand by source (Million DMT)
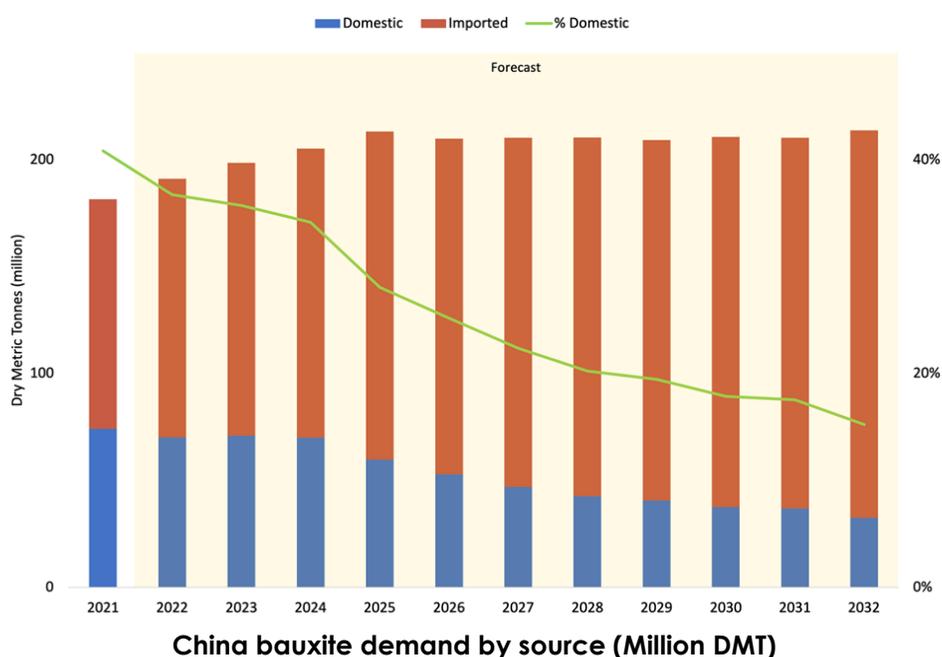
On the back of this positive market sentiment, Metro is pleased to announce the signing of an additional Binding Offtake Agreement with China's Xinfa Group to underpin the expansion. Xinfa was Metro's foundation customer and is one of the largest integrated aluminium companies in China with significant refining and smelting operations in Shandong, Shanxi, Guangxi and Xinjiang Provinces.

Metro has agreed to supply an additional 1.1 M WMT in 2023 on CIF basis and 2.2 M WMT in 2024 on FOB basis to Xinfa at fixed prices. This is in addition to the existing 3 year 2.2 M WMT pa FOB contract which has quarterly pricing mechanism to reflect the market. Reflecting the relationship between the two companies, Xinfa has agreed to rollover the tonnage to later periods if there is any delay to the delivery of the second FCB.

To underpin the additional CIF volume, Metro has signed an additional Contract of Affreightment (CoA) with SwissMarine Pte Ltd, Singapore, to secure nine forward capesize cargoes for 2022 and 2023, to add to its existing forward freight book. Metro now has cover for approx. 90% of its delivered/CIF sales commitments from 2022 to 2024 at rates significantly below spot.

SwissMarine was established in 2001 and operates a drybulk fleet of approximately 160 vessels (mainly capesize, babycape, panamax and supramax) and transports annually about 120 million metric tons of cargo worldwide.

The margin locked in by the additional binding sales contracts and incremental freight CoA ensures that the payback in less than 2 years is assured.

Financing

FID of the expansion has been approved by the Metro Board, subject to financing, with financing planned to come from a combination of both internal (operating cashflow) and external sources.

NAIF

Metro confirms that the Northern Australia Infrastructure Facility ("NAIF") loan facility sunset date has been extended to 31 December 2022.

Metro has continued to engage with NAIF on the expansion project. With the completion of the DFS, Metro will refresh the credit approval process with NAIF and look to achieve financial closure for the majority of the expansion capital as soon as possible in H2 2022.

"NAIF are an ideal partner for Metro to assist with the funding of expansion capital given the location of the mine and its long life. Metro has a deep connection with Far North Queensland, with 31% of the work force being indigenous. In addition, Metro conduct a significant amount of business with companies located in Far North Queensland" **said Simon Wensley, CEO Metro Mining**.

Debt financing Process

Metro is working with ICA Partners, one of Australia's leading boutique advisory firms to manage the debt funding for the expansion with NAIF and refinancing of the current secured and unsecured debt, so as to better align with production ramp up and cashflow generation.

ICA Partners has recently arranged project finance for a number of natural resources projects, including Iluka's Eneabba Rare Earths Refinery and Pembroke's Olive Downs Coking Coal Project.

Metro has had preliminary engagement with a number of prospective debt financiers and aims to progress these discussions during Q3 2022 and achieve financial close in Q4 2022.

Debt Funding for Preliminary Work

Metro has reached an agreement with Greenstone and Lambhill to extend the current working capital loan by $4.5 million. These funds will accelerate:

- The deposit for the crane order, which is the longest lead item;
- The detailed design and FEED studies for the floating crane barge and port / loading upgrade; and
- Secure additional owner/EPCM capabilities to manage the execution of the expansion.

Terms for the extension of the working capital loan are summarised in Appendix 1.

Reserves Update

Metro is pleased to provide an update with respect to its JORC reserves and resources for the Bauxite Hills mine. Following completion of the DFS, Metro has undertaken an update of its JORC Reserve and Resource to the end of December 2021. The results are displayed in the table below:

Reserves	Direct Shipping Ore ("DSO") Wet Tonnes (Mt)	$Al_2O_3\%$	$SiO_2\%$
Proved	64.1	50.1	12.4
Probable	28.8	49.6	13.6
Total	**92.9**	**50.0**	**12.8**

Resources	Dry Tonnes (Mt)	$Al_2O_3\%$	$SiO_2\%$
Measured	68.0	50.0	12.5
Indicated	40.0	49.2	14.4
Inferred	19.8	45.5	16.6
Total	**127.8**	**49.1**	**13.8**

Note: Refer to JORC Table 1 in Appendix 2

The decrease in Reserve is due to:

- Bauxite ore mined since previous reserve statement December 2020
- Ore not recovered due to blending decisions to date;
- No additional conversion of resource to reserve during this period

APPENDIX 1: KEY TERMS OF THE WORKING CAPITAL EXTENSION

Metro Mining Limited (ASX: MMI) (Metro or the Company) has signed a $4.5 million, short term working capital facility with Greenstone Resources II (Australia) Holdings L.P. (Greenstone) and Lambhill Pty Limited (Lambhill), on the following key terms:

- Amount - $4.5 million, funded $2.5 million by Greenstone and $2.0 million by Lambhill.
- Term – Maturing 14 October 2022, in line with the original working capital facility.
- Rate – 14% coupon, capitalised monthly and paid on maturity.
- Draw down – Single draw within 72 hours of signing.
- Security – Unsecured loan.
- Conversion - Option for lenders to convert to equity, up to current equity interest.

APPENDIX 2 : JORC CODE 2012 EDITION - TABLE 1 REPORT

BAUXITE HILLS MINE – 31ST DECEMBER 2021 MINERAL RESOURCE AND ORE RESERVE ESTIMATE

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*** **Drilling undertaken by Cape Alumina Limited on its tenements prior to its acquisition by Metro Mining Limited.** BH1, BH2 and BH6 Reverse Circulation (RC) aircore drill hole samples were collected in plastic bags over 0.25 m 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 0.5 m intervals. Samples were composited, at the time of collection, over 0.5 m intervals where the geologically logged material was similar. All other samples were collected over 0.25 m intervals. The entire sample was collected to ensure, as much as possible, the representivity of the drilled material. Sample weights were between 2 and 5 kg 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. **Drilling undertaken by Gulf Alumina Limited on its tenements prior to its acquisition by Metro Mining Limited** Both sonic and aircore drilling methods were used in several drilling programs between 2005 and 2017. The sampling method employed for the aircore drilling was similar to that adopted by Cape Alumina Limited as described above with the exception that samples were not composited over 0.5 m intervals. For the Sonic drilling method sampling was carried out in 0.25 m intervals. Samples were collected within a custom designed 'sausage' bag that is inserted into the barrel. The sample was retrieved after completing the drilling run which varied from 0.5 m to 1.5 m. The 'sausage' was laid out on a table and

	the length measured and compared to the actual down hole depth. The sample was then divided into equal lengths of 0.25 m, immediately logged then placed into airtight clear plastic bags and sealed with cable ties to retain moisture. 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 density values. Some samples were dried prior to wet weighing and in these cases, field measurements have been used.
	Drilling undertaken by Metro Mining in 2018.
	A small program of drilling using the vacuum method was completed in 2018. Samples were collected at 0.25 m intervals within the vacuum flask attached to the tractor-mounted drill rig. All the material from the interval was collected, geologically logged and bagged. No compositing of intervals was undertaken.
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 majority of 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 (4-6 m) holes were drilled vertically using HQ rods with an aircore drill bit with an outside diameter of 96 mm.
	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 65 mm.
	Vacuum drilling was undertaken by Yearlong Contracting using a tractor-mounted drill rig. The bit diameter was 48 mm.
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 and vacuum drilling were used because of their proven reliability in producing high sample recoveries and accurate interval depths in bauxite exploration. 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 and vacuum drilling methods were used to ensure collection of as representative a sample as possible.
	Sonic samples were collected at the rig through an inner plastic 'sausage' bag. The entire sample was recovered by this method. 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 0.25 m 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 were recorded on field sheets or on a field portable laptop.

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 320 m by 320 m grid that were previously screened (+1. 2 mm) and analysed in 2011:
	
	   • Create a composite sample (or samples) over the bauxite interval in each hole using all the material in unscreened (raw) sample splits retained from the initial analyses of screened (beneficiated) samples (undertaken either under the supervision of the company or at ALS's Virginia laboratory in Brisbane).
	
	   • 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 nominal 160 m by 160 m and 80 m by 80 m grids 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.

	These preparations are regarded as being appropriate for bauxite analyses.
	As the entire sample was collected in the field no duplicate sampling was possible or deemed necessary.
	Gulf Alumina's sonic drilling samples were collected in full directly from the 'sausage' bag and varied from 0.9 kg to 1.8 kg in weight when collected. Duplicate samples were collected every 20 samples by cone and quarter method in the field at the time of drilling.
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 for total oxides were undertaken by ALS at its Stafford laboratory in Brisbane. Available alumina and reactive silica analyses were undertaken by ALS for Metro Mining and SGS for Gulf Alumina.
	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 by ALS method Al-LICP01 (150^0C) (Metro Mining)
	• Reactive silica by ALS method Si-LICP01 (150^0C) (Metro Mining)
	• Available alumina by SGS method ICP05 (148^0C) (Gulf Alumina)
	• Reactive silica by SGS 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 described above.
	Analyses from 21 twinned drill holes were undertaken. Duplicate holes had very high correlation coefficients for the total silica, reactive silica, total alumina and available alumina grades that signified no inherent problems in the sampling or laboratory protocol.
	Analytical data were provided by the laboratory in csv and pdf formats. The data were compiled by the company into Excel spreadsheets and merged with drill hole location data, geological logs and sample intervals.
	The Gulf Alumina data was 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 *Metro Mining 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.** RC aircore drill hole collar positions from the 2011 drilling program 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. Vacuum drill hole collars from the 2018 drilling program were surveyed by the qualified surveyor at the bauxite Hills mine using an RTK GPS unit. **Gulf Alumina Limited.** Hole collars were surveyed using a differential GPS with a horizontal accuracy of ± 40 cm. Vertical accuracy is lower at ~80 cm. Data was 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 provided more accurate elevation data. This data has been used in the resource modelling by registering drill hole collars onto the LiDAR based topography surface.
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 80 m x 80 m north-south, east-west grid. In the BH2 area 142 holes were drilled on a nominal 160 m x 160 m north-south, east-west grid. In the BH6 area 505 holes were completed on a 160 m x 160 m grid. Gulf Alumina's drill hole spacing was variable being from 80 m x 80 m to 400 m x 400 m. In 2018 Metro Mining drilled an additional 221 holes in the BH6 area on a 160 m x 160 m grid. Samples were submitted for analyses from all drill holes either as individual samples or composites. Approximately 15% of the samples from Metro Mining's 160 m x 160 m drilling were composites prepared in the laboratory by riffle splitting and combining a maximum of two samples. All other

	samples were the original 0.25 m or 0.5 m samples.
	In February 2015 the sonic drilling program established a series of holes through the area allowing the certainty to assign Measured Resource within 800 m of the dry bulk density analysis.
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 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 in 2015. The BH2 drilling, including RC and sonic, were carried out in the same manner as part of the same programmes that gathered the BH1 and BH6 data. A review of the bulk density determinations derived from the sonic drilling program was 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 to 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
	
	The Bauxite Hills Mine Mineral Resources and associated infrastructure are located within the following granted tenements:
	
	    • ML 6025 (Gulf Alumina Pty Ltd)
	    • ML 20676 (Aldoga Minerals Pty Ltd (99%) and Cape Alumina Pty Ltd (1%))
	    • ML 20688 (Aldoga Minerals Pty Ltd (99%) and Cape Alumina Pty Ltd (1%))
	    • ML 20689 (Aldoga Minerals Pty Ltd (99%) and Cape Alumina Pty Ltd (1%))
	    • ML 40069 (Gulf Alumina Pty Ltd)
	    • ML 40082 (Gulf Alumina Pty Ltd)
	    • ML 100130 (Aldoga Minerals Pty Ltd (99%) and Cape Alumina Pty Ltd (1%))
	    • MDL 423 (Gulf Alumina Pty Ltd)
	    • MDL 425 (Gulf Alumina Pty Ltd)
	    • EPM 15376 (Cape Alumina Pty Ltd)
	    • EPM 16899 (Cape Alumina Pty Ltd)
	    • EPM 18242 (Gulf Alumina Pty Ltd)
	    • EPM 26198 (Gulf Alumina Pty Ltd)
	
	All the tenement titleholders are wholly-owned subsidiaries of Metro Mining Limited.
	
	The underlying tenements are in good standing.
	
	The tenements lie within the Old Mapoon DOGIT with which the company has a Conduct and Compensation agreement. The company has an Ancillary Agreement with the Native Title parties and the Trustees of the Land.

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). There is no documented evidence of previous exploration over the area of the Bauxite Hills Mine. 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 carried out intermittent kaolin mining and processing operations before abandoning work in the early 2000s.
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 are grey-black marine shales, which have been assigned to the Cretaceous Rolling Downs Group. This is up to 250 m 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, 0.5 m – 3 m thick, that is underlain by a kaolin horizon. The bauxite deposits are overlain by lateritic overburden and topsoil. Under the bauxite there is often a cemented ironstone 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 6 m. 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 5 to 20 mm 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 difficult 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 a 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:*
	o *easting and northing of the drill hole collar*
	o *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar*
	o *dip and azimuth of the hole*
	o *down hole length and interception depth*
	o *drill 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 in a cloud-based Microsoft Azure database that is managed by data consultant Oliver Willetts for Metro Mining and backed-up

	in an office-based server.
	Data sourced from Gulf Alumina were contained within a comprehensive database that has been validated and merged into the Microsoft Azure database.
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.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.* **Commentary** For the BH1 and BH2 deposits the bauxite intervals are based on a cut-off of ≥45% total Al_2O_3 and ≤15% SiO_2. For the BH6 deposit (including the former Gulf Alumina areas) the bauxite intervals are based on a cut-off of ≥45% total Al_2O_3 and ≤20% SiO_2. A minimum thickness of 0.5 m was applied and the top 0.25 m was considered to be overburden and was not aggregated. Down-hole assays were weighted on the basis of both intercept thickness and intercept recovery 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 0.25 m or 0.5 m samples. A small number of analyses from the Gulf Alumina drill holes are from screened (>1.2 mm) samples that Gulf converted to DSO analyses using correlation coefficients generated from samples that had both screened and DSO analyses.
Relationship between Mineralizatio n 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. All but a small number of drill holes penetrated the base of the bauxite horizon with the transition to waste occurring in a 0.25 cm sample interval.
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 the data 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.
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.*
	Commentary
	Apart from the regular samples obtained from the drilling a small number of bulk samples were collected over 1 m intervals from the aircore drilling for dispatch to potential customers.
	A combination of RC aircore, sonic and vacuum drilling has been the main exploration method used in the drilling programs, apart from very limited backhoe and hand sampling. Samples have been prepared and 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 in-fill drilling is planned for the resource assessment apart from routine grade-control drilling as part of the mine scheduling. A small amount of drilling in areas of Inferred Resources will be undertaken as required to improve the confidence of the resource category.

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 LiDAR data. Sampling and logging data have 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. Any horizons out of sequence or over lapping intervals and gaps are reported by the software and then checked against source data and corrected.
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 initial Cape Alumina drilling program and was on site a number of times during the program. He has made a number of visits to the mine site since mining commenced. 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 acquired by Gulf Alumina the Competent Person, Jeff Randell, who signed off on the previous resource (2014) visited the site on four occasions; 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 interpretation is grade-based using a threshold of ≥45% total Al_2O_3 and ≤15% total SiO_2 for the BH1 and BH2 deposits and of ≥45% total Al_2O_3 and ≤20% total SiO_2 for the BH6 deposit (including the old Gulf Alumina areas), to define economic bauxite. The continuity of the geological

interpretation is confirmed with a reasonable degree of confidence. The data points are spaced at 80 m in a nominal grid pattern for almost the entire BH1 deposit and at 160 m 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 400 m 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, 80 km 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 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, 0.5 m – 3 m thick, which is underlain by a kaolin horizon. Within the resource area the average bauxite thickness is 1.6 m. 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.

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 8.4 km^2. Bauxite thickness 1.6 m. Overburden 0.6 m BH2: Area 4.2 km^2. Bauxite thickness 1.4 m. Overburden 0.5 m BH6/Gulf Alumina: Area 39.6 km^2. Bauxite thickness 1.33 m. Overburden 0.76 m
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 and total 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 40 m x 40 m
	• Omnidirectional search ellipse with maximum search distance of 800 m
	• Lag intervals 100, 200, 400, 800, 1200 m.
	• 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 and BH2 portion of the model are defined by grades ≥45% total Al_2O_3 and ≤15% SiO_2.
	Within the combined BH6 and Gulf Alumina model mineralised zones are defined by grades ≥45% total Al_2O_3 and ≤20% total SiO_2.
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 mining of bauxite at Bauxite Hills commenced in April 2018. The operation is a conventional truck and front-end loader process. No blasting is required. Minor ripping is undertaken where cemented pisolitic bauxite is present. Overburden is removed by bull dozers or graders and placed in mined-out areas. The learnings from the existing operation have been considered in this updated Resource estimate. Mined areas have been excluded from this resource estimation.
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.
	Commentary
	THA (trihydrate alumina) and RxSi (reactive silica at 150^{0}C) analyses have been undertaken on a routine basis throughout the deposits with the exception of BH2. A small number of TAA (total available alumina) and RxSi (reactive silica at 250^{0}C) analyses have also been generated. CSIRO has undertaken detailed bauxite characterisation analyses on a small number of bulk samples that have been composited from a number of holes within the BH1 and BH6 deposits. The results have shown that the bauxite can be economically treated in a low temperature Bayer process plant but is predominantly a product that is better suited to a high temperature Bayer process plant. A direct shipping product (DSO) is mined and shipped 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
	There are several small environmentally sensitive areas around the edges of the bauxite deposit that have been included in the Resource estimation. Some of these areas may be realised as Reserves with additional approvals.
	At present there are no communities on the mining leases. Good relations have been established with the Indigenous 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 completed by Cape Alumina and 144 samples collected by Gulf Alumina from sonic drill holes.
	The Metro Mining (Cape Alumina) methods of sample collection, measurement and determination, as well as the results obtained from the measurements, were independently reviewed by Xstract Mining Consultants Pty Ltd in 2016. 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
	A resource-wide average relative density of 1.83 was used for the updated April 2019 Resource estimate and has been retained for the December 2021 updated estimate. This was generated from

	composites of the bulk density measurements across all the deposits that were used to generate density grids. This global density is less than that used in the previous 2017 Resource. This follows a review of the original density data and the consideration of limited data from mining reconciliations undertaken in 2018. During the review the estimation behaviour of composites, including incomplete intervals, was corrected by filling in blank intervals using general defaults based on the histograms of each of the 5 layers modelled. A top cut of 2.4 and bottom cut of 1.3 was applied to samples contributing to the composites as the modeller had little faith in low values, especially those below 1.0. Heavy samples, over 2.4, were capped at 2.4 so as not to give too much influence to occasional samples that likely had ironstone cement.
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 80 m to 160 m to ~400 m 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 800 m and both Indicated and Measured categories required a DSO analysis within 220 m of the point being classified. Simulated DSO grades were applied to all composite samples that had only beneficiated analyses (screened at >1.2 mm) 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 200 m radius used previously to the 220 m 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 800 m 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 3 km. 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 undertook an independent review of the Mineral Resource data and techniques used to estimate the BH1 and BH6 resources in 2015. 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.
	MEC Mining (MEC) has carried out a review and check of the updated April 2019 iteration of the Bauxite Hills Resource model. MEC has checked data quality, structural overlaps and investigated general variability in the updated model.
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.*
	• *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 Measured 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 3 kms. 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 RESOURCES

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 as at the end of December 2021 – see below: **Bauxite Hills Mine – Total Resource** | Resource Type	Dry Tonnes (Mt)	Al2O3%	SiO2%
---	---	---	---
Measured	68.0	50.0	12.5
Indicated	40.0	49.2	14.4
Inferred	19.8	45.5	16.6
Total	127.8	49.1	13.8	 • The mineral resources in the 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 mine plan has been completed (June 2022) by MEC Mining on the basis of the geological model and resource estimate (June 2022). This mine plan included a margin rank, final and pit stage designs and detailed mine production scheduling inclusive of haulage modelling and economic analysis in a detailed financial model. The mine plan demonstrated economic viability of the stated reserves at individual block basis and when assessed as an operation. Modifying factors including economic viability, cutoff grades, environmental and infrastructure considerations have been applied. The Bauxite Hills mine had been operating for four full years and actual costs and productivities were used to inform the 2022 mine plan.
Cut-off parameters	• *The basis of the cut-off grade(s) or quality parameters applied.*	Ore in BH1 and BH2 are defined by grades ≥45% total Al2O3 and ≤15% SiO2 within the resource model which was carried through into the reserve model. Ore in BH6 is defined by grades ≥45% total Al2O3 and ≤20% total SiO2 within the resource model which was carried through into the reserve model.

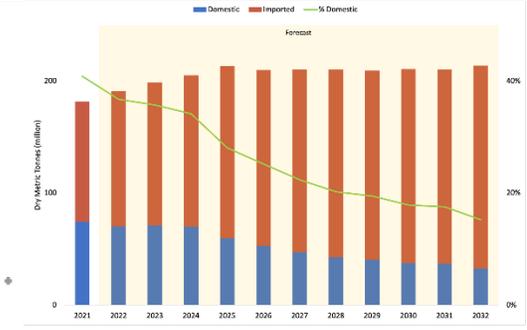| Mining factors or assumptions | • The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design).

• The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc.

• The assumptions made regarding geotechnical parameters (e.g. pit slopes, stope sizes, etc.), grade control and pre-production drilling.

• The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).

• The mining dilution factors used.

• The mining recovery factors used.

• Any minimum mining widths used.

• The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.

• The infrastructure requirements of the selected mining methods. | 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 a price discount factor of US\$1 per 1 percent of silica content over 12%.

Bauxite ore is mined using front end loaders as per the existing operation. Waste will be stripped by dozers and placed on the mined-out floor by an excavator and truck fleet 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.

Shallow deposit – pit slope parameters are to the natural angle of repose. Overburden will be returned to the pit void.

Ore roof and floor loss is incorporated into the reserves. In Year 1 the ore roof loss is 0.35m and the ore floor loss is 0.2m. Once the upgrade of the GPS system is operational in Year 2 the ore roof loss was reduced to 0.2m and the ore floor loss was reduced to 0.1m.

Ore Roof dilution = 0.05m and Floor dilution = 0.05m incorporated in the ROM tonnes

50m minimum mining width is used.

The infrastructure required for the mining and transshipment method was costed in detail by Wave Engineering and Metro Mining Limited and includes additional items as listed below on top of existing facilities including a workshop, mine infrastructure area, mining accommodation camp, water reticulation, haul roads, product screening, product stockpiling and handling system, barge loading facility and fuel storage facility,

Site is operating with initial capital work completed. Additional expansion capital of \$28.3 million to achieve 6.0M WMT of annual production is planned. The expansion capital is to purchase a second floating crane (\$23.3m), load out upgrade (\$3.5m) and mobile plant increase (\$1.1m) to increase transshipment rates. |

Category	Cost AUD
Second Floating Crane	21,100,000
Screening Plant	1,800,000
Port Upgrade	1,700,000
Additional Trailers	1,100,000
Total ex-Contingency	25,700,000
Contingency	2,600,000
Total incl Contingency	**28,300,000**

Sustaining capital was allowed (in addition to mobile equipment sustaining capital) at \$1.8m per annum.

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. Oversize cemented bauxite is crushed and re-fed over the screen until it passes.
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 was completed by CDM Smith and environmental approvals were granted 29th August 2017. • 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.*	The additional infrastructure and transshipping equipment to ramp up to 6Mtpa has been assessed by Metro Mining, Wave Engineering and Rocktree Consulting Services, a specialist transshipping company, and allowed for in the financial model including a 10% contingency. All of the additional equipment required for the expansion is identical or substantively similar to that currently in operation at the site.
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 projected capital costs are provided by Wave Engineering and Metro Mining based on the infrastructure and project implementation plans (see Mining Factors or Assumptions).* • *Major operating costs including transshipment, camp operations and maintenance of facilities have been quoted by contractors. Metro*

	- *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.* - *Basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.* - *The allowances made for royalties payable, both Govt and private.*	*management, mining, overheads and incidental costs have been drawn from actual values, quotes or built up from first principles. The average life of mine operating cash cost including royalties FOB in the 2022 DFS is $35.28 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 0.72* - *The ore haulage cost is calculated by determining the truck haul hours through a haulage simulation, then multiplying by the 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* - *Govt royalties (10% of product) and traditional land owner's royalty (2.23% below US$45/t, 2.64% 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 model.*
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.*	- *Price assumptions have been made for the two products Metro plans to sell, being Xinfa spec and Metro Blend spec.* - *The Xinfa spec volume is all part of a binding contract. Prices have an agreed fixed component and a component to be negotiated on a quarterly basis.* - *The Metro Blend price assumptions are initially based on an agreed contract and pricing but for most of the period are based on price assumptions received from CM Group for the specification of this product* - *Life of mine product mix is Xinfa spec(BH1) 11.2Mt, Metro Blend 81.8Mt.*
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 updated graph above shows forecast Chinese bauxite demand. Source: CM Group. The original market study completed by CM group for Metro Mining considered product specification

		options, market demand and global trade. A detailed customer analysis and marketing plan was developed at the time of mining commencement and has evolved as the market has changed over time.
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 of the 2022 DFS was calculated to be sufficiently positive in order to declare a Reserves estimate.* • *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 leases are owned by Metro Mining. 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, Metro 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 93.0Mt of proved and probable reserve.* • *Presently this project is an operating mine.* • *The mine is covered by 7 mining leases, 2 mineral development leases and 4 exploration leases.* • *All the Reserve is part of a mining lease.* • *There is no reason to believe that should resources be converted to reserve that the leases won't be granted before mining is scheduled to take place.*
Classification	• *The basis for the classification of the Ore Reserves into varying confidence categories.* • *Whether the result appropriately reflects the Competent Person's view of the deposit.*	The Proved reserves are derived only from Measured resources and no Measured resources were declared Probable reserve. The stated Reserve estimate represents the marketable product tonnes as this is a direct shipping ore, with no beneficiation at ROM moisture

	• *The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).*	
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 Lukman Hakim and peer reviewed by Grant Malcolm 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 a mature model.* • *Sections of the model were 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 areas are straddled by model used DSO sampling process 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.* • *The silica content of the product rises above the Metro Blend (current product specification) of 12% Si from 2030. A total of 38.4 Mt of product is above 12% Si. While the margin rank model shows these tonnes being profitable after applying price penalties, some uncertainty exists around marketing of a higher silica product.*