BROCKMAN MINING LIMITED
布萊克萬礦業有限公司*
(incorporated in Bermuda with limited liability)
(SEHK Stock Code: 159)
(ASX Stock Code: BCK)

ANNOUNCEMENT

MARILLANA MINERAL RESOURCES AND ORE RESERVES UPGRADED TO JORC 2012

Highlights

- Mineral Resources reported in accordance with the JORC Code (2012 Edition) now stand at 1.40 billion tonnes.
- Ore Reserves reported in accordance with the JORC Code (2012 Edition) now stand at 1.01 billion tonnes.
- The new Mineral Resources and Ore Reserves take into account geometallurgical parameters, which has resulted in the total exclusion from Resources of 117 Mt of pisolite mineralisation (for which the Company had determined that a product of acceptable quality could not be produced) and the downgrading of approximately 70Mt of Indicated and Measured Mineral Resources to Inferred category (meaning that they are now excluded from Ore Reserves) during the process of estimating final product grades.
- Other than these changes, the Mineral Resources and Ore Reserves are essentially unchanged from those previously reported under the JORC Code (2004 Edition) confirming the robustness of the Marillana project.

Brockman Mining Limited is pleased to announce an upgrade to the JORC 2012 Code for the Mineral Resources and Ore Reserves for its 100% owned Marillana Iron Ore Project located in the Pilbara region of Western Australia.

Mineral Resources and Ore Reserves were previously reported under the JORC 2004 Code and released to the market on 9 February 2010 and 9 September 2010 respectively by Brockman Resources Limited, now a wholly owned subsidiary of Brockman Mining Limited.

The updated Mineral Resources and Ore Reserves estimations were prepared by Perth-based Golder Associates Pty Ltd ("Golder") in accordance with the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code, 2012 Edition). Golder also prepared the JORC 2004 estimates in 2010.

The updated estimate of the Ore Reserves has been prepared in accordance with the JORC 2012 guidelines using the updated Mineral Resource model whilst constraining the mining area to within the 2010 DFS defined pit outline and adjusted for revised tenement boundaries (following survey). Revised input costs and Iron Ore price forecast have been used with the 2017 Mineral Resource model providing a basis for the 2018 Ore Reserves.

The methodology and procedures used for the Mineral Resource and Ore Reserve estimates are provided in the attached summary report by Golder, which also includes the JORC Code Assessment Criteria (JORC Code Table 1). Figure 1 shows drill hole locations and the extent of the pit optimization and Figure 2 shows a typical cross-section through the deposit.

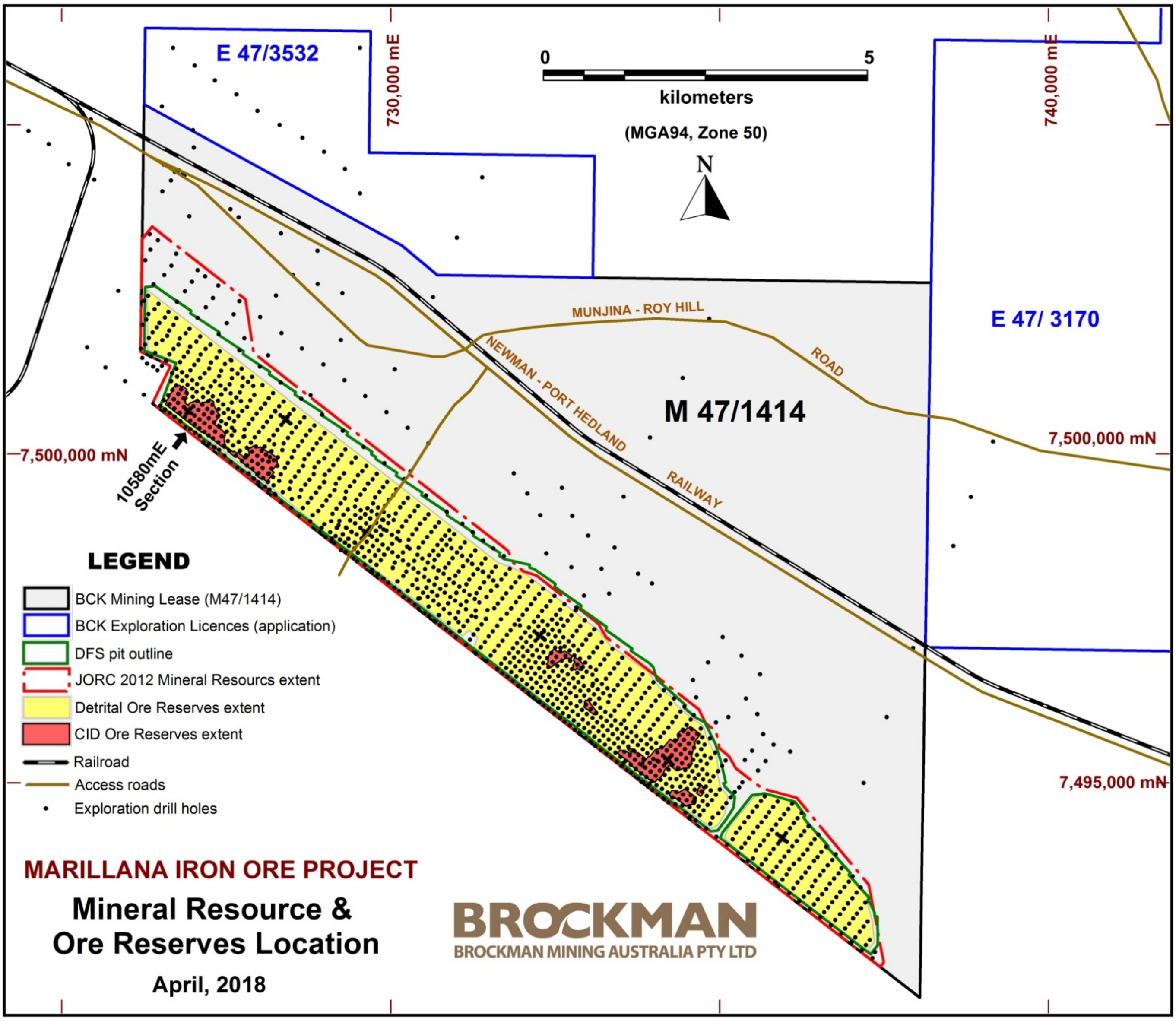

Figure 1: Plan showing extent of pit design in relation to Mineral Resources and Ore Reserves.

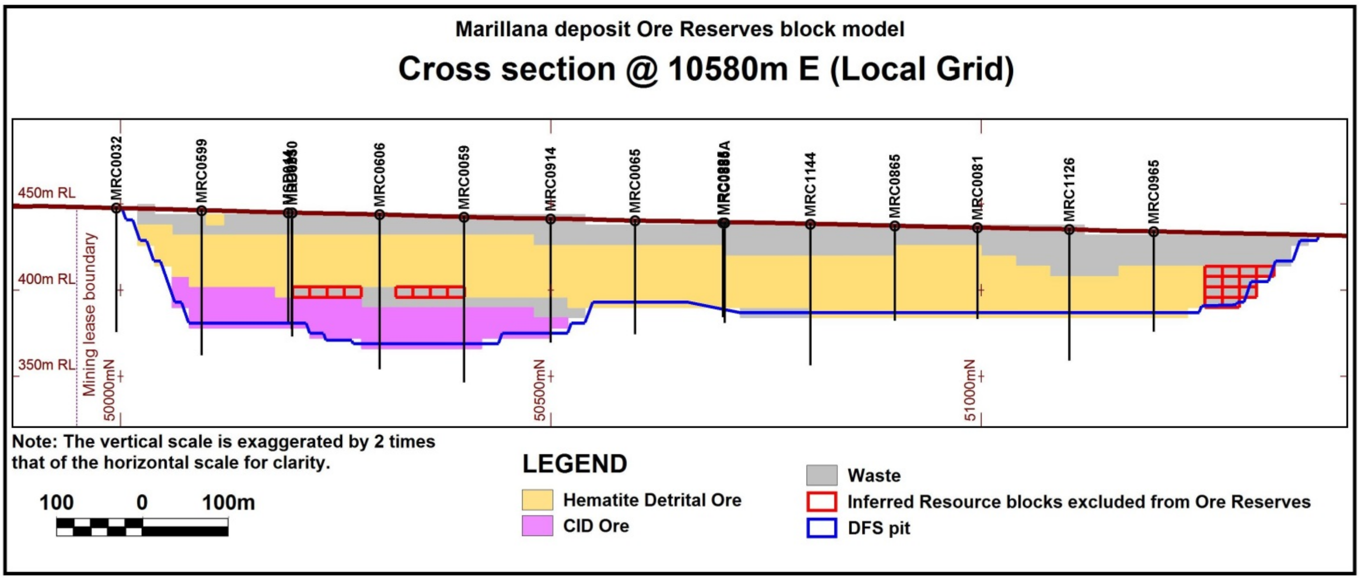

Figure 2: Typical cross-section showing spatial relationship of ore types and location of excluded Inferred blocks.

Mineral Resource Estimation

Since the previously reported JORC 2004 Mineral Resources, Brockman has carried out no additional exploration drilling but has completed a substantial metallurgical testwork programme (comprising PQ triple-tube diamond core drilling and large diameter Bauer drilling), the results of which have been used in the estimation of geometallurgical parameters. Estimation of mass recovery and concentrate grades for Fe, Al_2O_3, SiO_2, and LOI was carried out by Golder using a geostatistical technique called Projection Pursuit Multi-variate Transform (PPMT). This uses actual test work results to estimate block model metallurgical parameters. Where estimation is not possible due to outlier Al_2O_3 and SiO_2 grades (either higher or lower than the available range of data), a regression formula developed by Brockman was used. Blocks assigned grades using the regression formula are downgraded in classification to Inferred classification due to the lower confidence by Golder in the estimate of metallurgical parameters.

Brockman have also undertaken metallurgical testwork and determined that additional yield may be possible via processing the naturally occurring fines reject stream through a reflux classification circuit or by reducing the screen cut size to enable some of the fines reject stream to be processed through the DMS circuit. However, yield estimates in the Mineral Resource estimate by Golder exclude any product produced from processing of the fines reject stream.

The resource is based on an Ordinary Kriging interpolated block model. The Mineral Resource has been defined using geological boundaries and a cut-off of 38% Fe for DID mineralisation and a cut-off of 52% Fe for the CID mineralisation. The cut-off grades were selected based on the Mineral Resources achieving an acceptable product recovery and grade.

Table 1 and Table 2 present the Mineral Resources for the Project.

Table 1: Marillana DID *in situ* Mineral Resource at a cut-off grade of 38% Fe

Classification	Tonnes (Mt)	Fe%	Al_2O_3%	SiO_2%	P%	LOI%	Mass Recovery %
Measured	169.5	41.6	4.77	30.4	0.063	4.07	36.6
Indicated	961.9	42.3	5.22	29.7	0.056	3.39	37.8
Inferred	273.0	42.0	5.79	29.5	0.055	3.40	36.0
Total	**1,404.4**	**42.2**	**5.28**	**29.7**	**0.057**	**3.47**	**37.3**

Table 2: Marillana CID *in situ* Mineral Resource at a cut-off grade of 52% Fe

Classification	Tonnes (Mt)	Fe%	Al_2O_3%	SiO_2%	P%	LOI%
Indicated	84.2	55.8	3.58	5.0	0.097	9.76
Inferred	17.7	54.4	4.34	6.6	0.080	9.30
Total	**101.9**	**55.6**	**3.71**	**5.3**	**0.094**	**9.68**

The main variances between the new estimate and that previously reported are all in the detrital Mineral Resources (previously 1,528 Mt grading 42.6% Fe). The variance is due to the total exclusion of 117 Mt of pisolite mineralisation grading 47.4% Fe for which Brockman had determined that a product of acceptable quality could not be produced (product Al_2O_3 too high), together with minor changes in the recognised position of the tenement boundary (generally less than 10m) following survey of the mining lease.

Ore Reserves Estimation

The JORC 2012 Ore Reserve estimate is based on the revised JORC 2012 Mineral Resource model, and incorporates a number of factors and assumptions as outlined in the sections below.

The base case optimisation was determined as part of the original DFS study and was run using Measured and Indicated Resources only, with cut-off grades of 38% Fe for DID and 52%Fe for CIDs. Process costs and mining costs have been derived from the initial DFS with appropriate allowance for cost inflation since completion of the DFS.

The mining input model has been re-blocked from the Mineral Resource model using a re-block size of 20m × 20m × 6m. The 6m vertical height is deemed the minimum practical flitch height for bulk-mining with the proposed mining method. A comparison of re-blocked model compared to the parent mineral resources model indicated a 5.1% ore loss (4.7% on DID and 11.7% on the CID ore fraction). The use of the re-blocked mining model provides fair representation of the anticipated ore loss and dilution with the proposed mining method.

Metallurgical testwork results was used to estimate the recoverable fraction from the DID ore component. Recoveries of final product and grades (of iron, silica, alumina and LOI) were estimated in the block model. Based upon dense media separation (DMS) testwork, it is expected that the final product has an average of about 60% in Fe and 37.3% in mass recovery.

The Ore Reserves for the Marillana Project are classified in accordance with the Australasian Code for Reporting of Exploration results, Mineral Resources and Ore Reserves (JORC Code, 2012 Edition).

The classification of Ore Reserves is considered appropriate on the basis of Mineral Resource confidence and likely precision of modifying factors.

The Ore Reserves have been defined using a cut-off of 38% Fe for DID mineralisation and a cut-off of 52% Fe for the CID mineralisation within the final pit and tenement boundary limits.

The Marillana project has a total estimated Probable Ore Reserves of 967 Mt of DID plus 46 Mt of direct ship CID (Table 3). The total saleable product from the processed iron ore feed is estimated at 404 Mt averaging 60% Fe, 6.1% SiO_2, and 3.1% Al_2O_3 (Table 4). Life of mine strip ratio is 1.0:1 (tonnes of Waste to tonnes of Ore). Some 70 Mt of Inferred material (due to downgrading of the Mineral Resource classification during the PPMT process) is included within the total waste reported. The loss of this Inferred material (from previously Indicated or Measured categories) from this JORC 2012 Ore Reserve accounts entirely for the reduction from the previously reported JORC 2004 Ore Reserves.

Table 3 and Table 4 present the Ore Reserves for the Project.

Table 3: Marillana Project – Ore Reserves

Reserves Class	Ore Type	Tonnes (million)
Probable	CID[#]	46
Probable	DID[##]	967
Probable	Total Ore	1,013

[#] cut-off grade 52% Fe
[##] cut-off grade 38% Fe

Table 4: Marillana Project – Ore Reserves final product

Reserves Class	Ore Sale Type	Tonnes (million)	Fe (%)	SiO_2 (%)	Al_2O_3 (%)	LOI (%)
Probable	CID Product	**46**	**55.5**	**5.3**	**3.7**	**9.7**
Probable	DID Product	**358**	**60.3**	**6.2**	**3.0**	**2.5**
Probable	Total Ore	**404**	**59.8**	**6.1**	**3.1**	**3.3**

By order of the board of directors of
Brockman Mining Limited
Chan Kam Kwan, Jason
Company Secretary

Hong Kong, 25 May 2018

As at the date of this announcement, the board of directors of the Company comprises Mr. Kwai Sze Hoi (Chairman), Mr. Liu Zhengui (Vice Chairman) and Mr. Ross Stewart Norgard as non-executive directors; Mr. Chan Kam Kwan, Jason (Company Secretary), Mr. Kwai Kwun Lawrence and Mr Colin Paterson as executive directors; and Mr. Yap Fat Suan, Henry, Mr. Uwe Henke Von Parpart and Mr. Choi Yue Chun, Eugene as independent non-executive directors.

FURTHER INFORMATION:

Colin Paterson **Executive Director** **Tel: +61 8 9389 3000**

Competent Person's Statements

The information in this report which relates to Exploration results, geological interpretation, and drill hole data is based on information provided by Mr Aning Zhang. Mr Zhang is a full-time employee of Brockman Resources Ltd, is a Member of the Australasian Institute of Mining and Metallurgy. Mr Zhang has sufficient relevant experience to the style of mineralisation and type of deposits under consideration and to the activity for which he is undertaking to qualify as a Competent Person as defined in the JORC Code (2012 Edition). Mr Zhang consents to the inclusion in this report of the matters based on his information in the form and content in which it appears.

The information in this report which relates to Mineral Resources is based on information provided to and compiled by Dr Sia Khosrowshahi, who is a full-time employee of Golder Associates Pty Ltd, and a Member of the Australasian Institute of Mining and Metallurgy. Dr Khosrowshahi has sufficient relevant experience to the style of mineralisation and type of deposits under consideration and to the activity for which he is undertaking to qualify as a Competent Person as defined in the JORC Code (2012 Edition).

The information in this report which relates to Ore Reserves is based on information provided to and compiled by Mr Glenn Turnbull, who is a part-time employee of Golder Associates Pty Ltd, and a Member of the Australasian Institute of Mining and Metallurgy. Mr Turnbull has sufficient relevant experience to the style of mineralisation and type of deposits under consideration and to the activity for which he is undertaking to qualify as a Competent Person as defined in the JORC Code (2012 Edition).

REPORT

Brockman Mining Australia Pty Ltd

Marillana Iron Ore Project – Mineral Resource and Ore Reserve Statement

Submitted to:

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Distribution List

Electronic Copy – Brockman Mining (via email)

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APPENDICES

1.0 INTRODUCTION

Brockman Mining Australia Pty Ltd (Brockman) commissioned Golder Associates Pty Ltd (Golder) to assist with updating the Mineral Resource and Ore Reserve estimates for the Marillana Project in Western Australia.

Golder completed the previous resource estimate in August 2010 (Golder report “*097641377-005-R-Rev0 Marillana Resource Report.pdf*”, dated August 2010). Ore Reserves have been previously declared for the Marillana Project on completion of a Definitive Feasibility Study in 2010 (DFS). The Mineral Resources and Ore Reserves were previously estimated under the JORC 2004 guidelines. The project did not proceed at the time due to a softening of the Iron Ore price and general global market downturn of the time.

An updated estimate of the Mineral Resources has been prepared in accordance with the Australasian Code for Reporting of Exploration results, Mineral Resources and Ore Reserves (JORC Code, 2012 Edition) and incorporates metallurgical knowledge acquired by Brockman since 2010.

An updated estimate of the Ore Reserves has been prepared in accordance with the JORC 2012 guidelines using the updated Mineral Resource model whilst constraining the mining area to within the DFS defined pit outline and adjusted for revised tenement boundaries. Revised input costs and Iron Ore price forecast have been used with the 2017 Mineral Resource providing a basis for the 2018 Ore Reserves.

1.1 Liabilities

Brockman has informed Golder that there are no material liabilities associated with the Marillana Project beyond those set out in this report.

1.2 Sources of information and responsibility

The report relies upon various reports and other material prepared by Golder, Brockman and Brockman’s staff and consultants. The directors of Brockman have informed Golder that they have provided full access to all data available to them and have provided a guarantee of Golder’s independence prior to issue of the report. Further, Brockman has warranted to Golder that all material information is, to the best of Brockman’s knowledge and belief (including where it would reasonably be expected to be aware, even if it does not have actual knowledge) is complete and accurate in all material respects.

While Golder has reviewed the data and other information contained in the reports and other material provided to it and is not aware of any reason to doubt that such data and information is complete and accurate, Golder was not responsible for the preparation of those reports and other material. Brockman has reviewed a draft version of this report and advised Golder that all information contained herein fairly and accurately reflects the information provided to Golder by Brockman.

The report is also based on statutory tenement reports and information in the public domain. That information and the reports and other material provided by Brockman has been combined with information gathered independently by Golder during the course of the study.

Golder has taken reasonable care to ensure that the information contained in this report is in accordance with the facts and information available to it and is unaware of any omission likely to affect its import. Subject to the information provided above in this section and the statement of Important Information in Section 10.0 of the report, Golder accepts responsibility for the report provided that Golder does not accept responsibility for any loss or damage suffered by any person other than Golder’s client as a result of any reliance (whether actual or claimed) upon any part of this report, decisions made based upon this report or any other use of it. In this regard, the attention of any reader of the report is specifically drawn to Section 10.0 and APPENDIX A of the report.

2.0 PROJECT LOCATION AND LAND HOLDING

The Marillana Project is located in the Pilbara region of Western Australia, approximately 100 km north-north-west of the township of Newman. The project comprises a single granted Mining Licence (M47/1414) covering an area of approximately 82 km^2 (Figure 1 and Figure 2).

Exploration at the Marillana Project has predominantly been carried out using reverse circulation (RC) drilling, with selected drill holes twinned using sonic and diamond core to confirm the RC drill results and Calweld bucket drilling techniques to provide samples for metallurgical test work. Between mid-2006 and the end of 2009, Brockman completed 1292 RC drill holes for 75,494 m, 59 sonic core holes for 2,595 m, 34 diamond drill holes for 1,708 m, and 15 Calweld bucket drill holes for 220 m within the Marillana Project area.

Prior to the work by Brockman, limited reconnaissance drilling was carried out by Hamersley Iron (a subsidiary of Rio Tinto). A total of 31 holes were drilled within the current resource area and 19 other drill holes were completed within Brockman's tenement and did not intersect mineralisation.

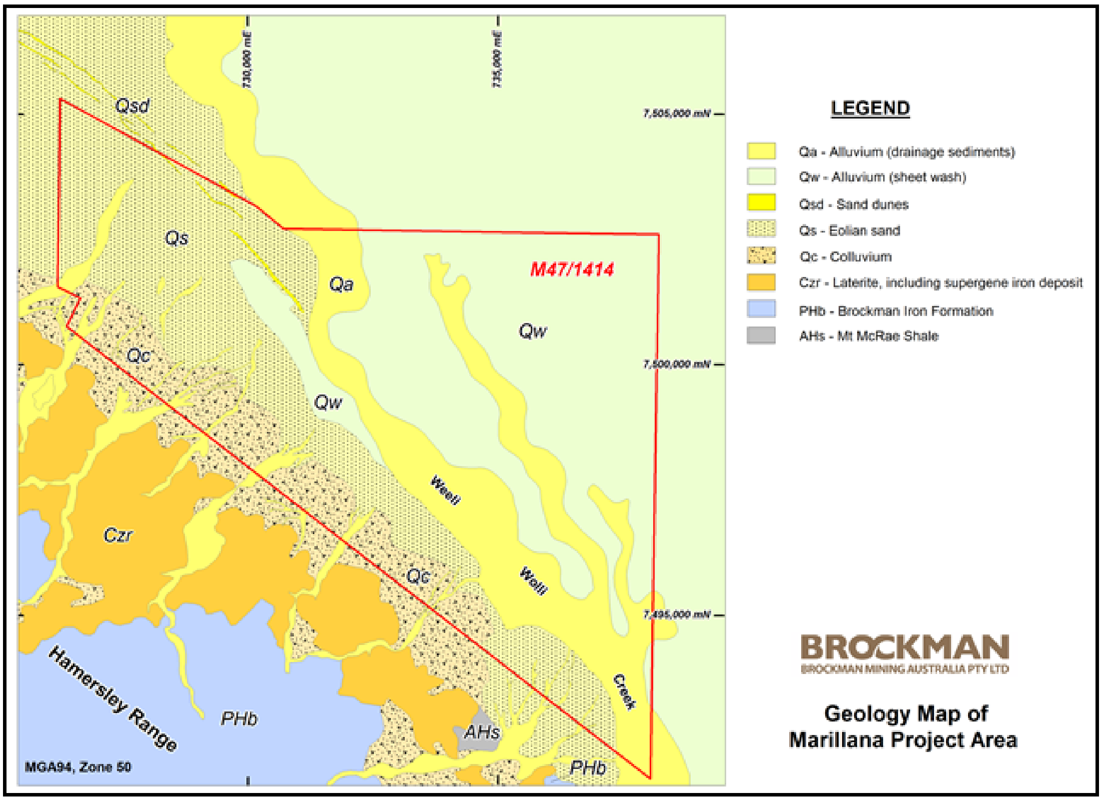

Figure 1: Regional Geology Plan showing the Project Tenement Boundary.

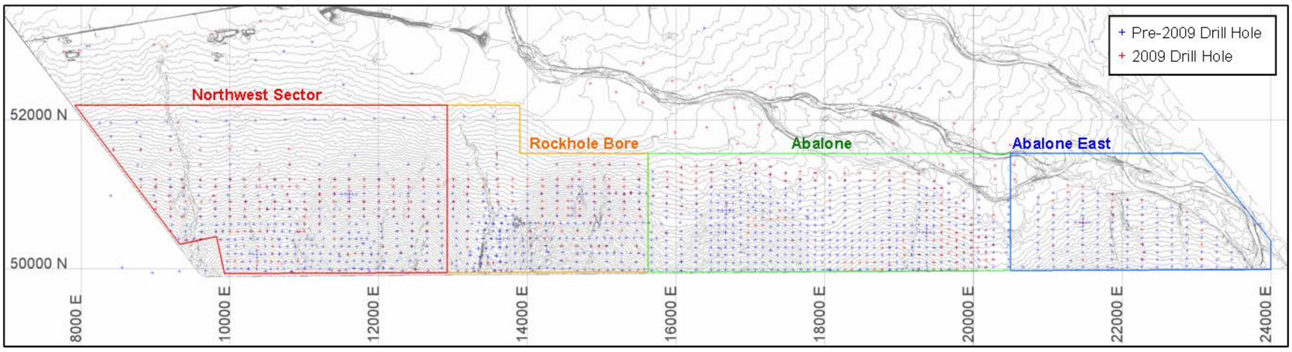

Figure 2: Drill Hole Locations, Deposits and 0.5 m Topographic Contours

3.0 GEOLOGY

The Marillana Project is located within the Hamersley Province on the southern Pilbara Craton of Western Australia (Figure 1). The Province is characterised by a thick succession of low grade metamorphic, late Archaean to early Paleoproterozoic rocks, known as the Mt Bruce Supergroup. The Mt Bruce Supergroup is composed of volcanic rocks, banded iron formations (BIFs), carbonate and clastic rocks, which unconformably overly an Archaean granite and greenstone basement. The Mt Bruce Supergroup is subdivided into four Groups; the basal Fortescue Group, which is overlain by the Hamersley Group, the Turee Creek Group and the uppermost Wyloo Group.

The Hamersley Group is approximately 2500 m thick sequence of BIF, shale, dolomite, mafic volcanics and dolerite sills, and is Archaean to Paleoproterozoic in age. A notable feature of this Group is the presence of five major BIF units that are laterally continuous throughout the Province with no apparent facies change. Two of these BIF units, the Marra Mamba Iron Formation and the Brockman Iron Formation host the major iron ore deposits in the Pilbara, and are the source for most detrital iron deposits.

The detrital deposits at Marillana are correlated with the regional Cenozoic detrital sequence consisting of the following units:

- CzD1: Palaeogene basal ferruginous silts and clays with minor DID (detrital iron deposit) gravels capped locally by DID hardcap zones.
- CzD2: Oligocene – Miocene mottled clays, silts conglomerates and sideritic-pyritic-organic horizons capped with a thin CID equivalent that is overlain by calcrete and silcrete.
- CzD3: Pliocene DID and Quaternary alluvials.

The Marillana stratigraphy consists of an upper sequence of alluvium and colluvium which contain the impure haematite detritals (correlated with CzD3) and a lower sequence of CID and calcrete (correlated with CzD2). The detrital sequence is contained within a series of colluvial fans.

Brockman have subdivided CzD3 and CzD2 into the following units:

- **Aeolian sand and gravels (TOB)** – The TOB consists of wind-blown sand, loose gravely sand or sandy gravels with rapid phase changes. It is composed of angular, totally unsorted, mainly chert, some BIF fragments and minor detrital hematite or goethite, in a silty matrix of varied proportion of sand and gravel ratios.
- **Siliceous Hematite Detritals (HDS)** – HDS is a low-grade or impure unconsolidated hematite detrital that contains up to about 50% detrital hematite and minor maghemite and goethite. The contact with the overlying TOB is gradational, and is recognisable due to the significant increase in hematite. The term 'siliceous' implies that this zone has significant siliceous fragments (mainly chert).
- **Hematite Detritals (HD)** – HD is characterised by its dark red brown colour and abundant (>50%, usually between 60% to 70%) detrital hematite and minor maghemite and goethite It is unconsolidated, moderately sorted, with sub to well-rounded granules of hematite. The pisolith content is generally less than 30%.
- **Pisolitic Hematite Detritals (HDP)** – HDP is similar to HD, but with significant increase of pisoliths, ranging from 30% to 70%.
- **Loose Pisolite (LP) & Pisolitic Clay (LPC)** – Loose Pisolite is underneath the HD or HDP zones. It is characterised by unconsolidated, well-sorted, well rounded 1-3 mm pelletoids (or ooids) in fine sand or

clays. LP may grade into Pisolitic Clay (LPC) as a result of a lateral facies change. The former usually over 70% pisoliths whereas the latter is essentially clays with minor fine grained (often <1 mm) pisoliths.

- **Channel Iron Deposit (CID)** – Buried CID occur at Northwest Sector, Rockhole Bore and Abalone (Figure 2). The types of CID encountered variy from a low-grade, weathered (or decomposed), siliceous CID (SCID) which usually contains minor quartz grains, to a high graded, red brown, strongly cemented CID, and to a low-grade, ochreous basal CID (BCID).
- **Calcrete** – An extensive calcrete zone occurs below the hematite detrital (and loose pisolite) sequence in the northern part of the deposit. At Abalone, a poorly mineralised lower CID zone occurs below or the main calcrete zone.

The contacts between the detrital stratigraphic units (i.e. TOB, HDS, HD, HDP and LP) are gradational with pisolite content (and Fe) increasing proportionally with depth. The TOB and HDS/HDS zones are mostly present and vary in thickness more rapidly in a north-south direction than the E-W direction. The HD zone is usually graded into the underlying pisolite zone. By comparison, the occurrence of buried CIDs is much more localised.

The haematite detrital (DID) mineralisation which comprises the HDS, HD, and HDP zones is the basis of the estimated Mineral Resources for the Marillana Project.

4.0 MINERAL RESOURCE ESTIMATION

This Mineral Resource estimate is based on a number of factors and assumptions as outlined in the sections below.

4.1 General

- All of the available drilling data was used for the Mineral Resource estimation.
- The survey control for collar positions was considered adequate for the purposes of this study.
- Stratigraphic horizons were interpreted on cross-section and modelled in three dimensions to define geological domains that were used to flag the sample data for statistical analysis and limit the resource estimation.
- A review of the analytical quality assurance and quality control (QA/QC) data was completed. The QA/QC program included company certified reference materials, field duplicates and laboratory repeats. No apparent discrepancies that would impact were identified.
- A comparison of the analytical results and sample recoveries from twin reverse circulation and diamond drill holes as well as twin reverse circulation and sonic drill holes was completed. The results of this review allowed Measured Resources to be classified for detrital mineralisation above the water table only.
- Statistical and geostatistical analysis was carried out on drilling data composited to 2 m downhole. This included variography to model spatial continuity relationships in the geological domains.
- The Ordinary Kriging interpolation method was used for the estimation of Fe, SiO_2, Al_2O_3, P and LOI, using variogram parameters defined from the geostatistical analysis.
- Dry bulk density was assigned to each of the geological domains. The density values were derived from geophysical logging of 22 diamond drill holes.

4.2 Mining and Geometallurgical Considerations

- The geometry of the deposit is amenable to open pit mining and Brockman have completed a significant body of work that demonstrates the feasibility of a mining operation at the site.
- Included in the studies has been a substantial metallurgical test work programme. From these studies, Brockman has chosen a preferred processing option using Dense Media Separation (DMS) for DID ores. CID ore is expected to be direct shipping ore (DSO).
- Estimation of geometallurgical parameters is based on 44 samples collected throughout the ore zone stratigraphy. Samples were collected using PQ triple-tube drilling techniques.
- Estimation of mass recovery and concentrate grades for Fe, Al_2O_3, SiO_2, and LOI was by a geostatistical technique called Projection Pursuit Multi-variate Transform (PPMT). This uses actual test work results to estimate block model metallurgical parameters. Where estimation is not possible due to outlier Al_2O_3 and SiO_2 grades, a regression formula developed by Brockman is used. Blocks assigned grades are downgraded in classification due to the uncertainty in the estimate of metallurgical parameters.
- Mineral Resources for the DID require beneficiation and are reported at a cut-off grade of 38% Fe. This cut-off grade is selected based on the Mineral Resources having sufficient mass recovery to warrant processing and achieve an acceptable product grade of at least 60% Fe, ~3% Al_2O_3, and 6.5% SiO_2.

- Brockman have undertaken metallurgical test work and determined that additional yield may be possible via processing the naturally occurring fines reject stream through a reflux classification circuit or by reducing the screen cut size to enable some of the fines reject stream to be processed through the DMS circuit. Yield estimates in the Mineral Resource exclude estimates of secondary product streams.
- The CID Mineral Resources are reported at a cut-off grade of 52% Fe. This cut-off grade is selected based on the Mineral Resources achieving an acceptable product grade.

4.3 Resource Classification

- The Mineral Resources on the Marillana Project are classified in accordance with the Australasian Code for Reporting of Exploration results, Mineral Resources and Ore Reserves (JORC Code, 2012 Edition).
- The classification of Mineral Resources is on the basis of data density and quality, representativeness of sampling, geological confidence criteria, the position of the water table, estimation performance parameters, and confidence in the estimates of metallurgical parameters.

5.0 MINERAL RESOURCE STATEMENT

The Mineral Resources on the Marillana Project are classified in accordance with the Australasian Code for Reporting of Exploration results, Mineral Resources and Ore Reserves (JORC Code, 2012 Edition).

The classification of Mineral Resources is considered appropriate on the basis of data density and quality, representativeness of sampling, geological confidence criteria, the position of the water table, estimation performance parameters, and metallurgical performance.

The resource is based on an Ordinary Kriging interpolated block model. The Mineral Resource has been defined using geological boundaries and a cut-off of 38% Fe for DID mineralisation and a cut-off of 52% Fe for the CID mineralisation. The cut-off grades were selected based on the Mineral Resources achieving an acceptable product recovery and grade.

Table 1 and Table 2 present the Mineral Resources for the Project as at 30 November 2016.

Table 1: Marillana DID *in situ* Mineral Resource at a cut-off grade of 38% Fe

Classification	Tonnes (Mt)	Fe%	Al_2O_3%	SiO_2%	P%	LOI%	Mass Recovery %
Measured	170	41.6	4.8	30.4	0.06	4.1	36.6
Indicated	962	42.3	5.2	29.7	0.06	3.4	37.8
Inferred	273	42.0	5.8	29.5	0.06	3.4	36.0
Total	**1 404**	**42.2**	**5.3**	**29.7**	**0.06**	**3.5**	**37.3**

Table 2: Marillana CID *in situ* Mineral Resource at a cut-off grade of 52% Fe

Classification	Tonnes (Mt)	Fe%	Al_2O_3%	SiO_2%	P%	LOI%
Indicated	84	55.8	3.6	5.0	0.10	9.8
Inferred	18	54.4	4.3	6.6	0.08	9.3
Total	**102**	**55.6**	**3.7**	**5.3**	**0.09**	**9.7**

6.0 ORE RESERVES ESTIMATION

This Ore Reserve estimate is based on a number of factors and assumptions as outlined in the sections below.

6.1 Mining Model

- The updated 2017 mineral resource model is the basis for the mining model used for Life of Mine (LOM) planning and assessment reporting.
- The mining input model has been re-blocked from the Mineral Resource model (Section 5.0) using a re-block size of 20 m × 20 m × 6 m. The 6 m vertical height is deemed the minimum practical flitch height for bulk-mining with the proposed mining method. A comparison of re-blocked model compared to the parent mineral resources model indicated a 5.1% ore loss (4.7% on DID and 11.7% on the CID ore fraction). The use of the re-blocked mining model provides fair representation of the anticipated ore loss and dilution with the proposed mining method.
- An estimated marginal cut-off grade has been used at 38% Fe for the DID and 52% Fe for the CID ore.
- Iron ore royalties of 5% of the CFR price were considered for LOM planning and assessment purposes.
- Metallurgical test work results were used to estimate the recoverable fraction from the DID ore component, with estimated product grade of iron, silica and alumina estimates being coded in the block model based upon dense media separation (DMS) test work expected outputs for a 60% Fe product.
- An input process cost has been estimated at $4.52/t for DID ore processing and $4.91/t for CID ore processing plus an additional $1.50/t has been allowed for stockpile (s/p) reclaim – all tonnes are assumed to be on a dry basis. Process costs, and mining costs have been derived from the initial DFS with appropriate allowance for cost inflation since completion of the DFS.

6.2 Pit Optimisation

- The base case optimisation was determined as part of the DFS study and was ran using Measured and Indicated Resources only, with cut-off grades of 38% Fe for DID and 52%Fe for CIDs.
- No cut-off has been applied for Al_2O_3, SiO_2 or P.

6.3 Mine Scheduling

Mine scheduling aims to maximise value through the deferring of larger strip-ratio cut backs until later in the mine life. A commercial linear programming software package (Minemax Scheduler) is used to model the mining sequence, the processing plant, and different ore feeds to maximise Net Present Value (NPV) for the nominated parameters and constraints. Major constraints include the process plant throughput, ore and total rock mining limits. The material selection to satisfy processing requirements is based on a cut-off grade, ore definition derived from mining, processing and selling costs.

- The maximum value pit was selected using a discounted average Net Present Value and determined to align with a 0.8 revenue factor shell using estimated LOM input prices and costs.
- The LOM final pit was staged such that there are three identified phases operating over multiple pit areas within the LOM pit. Though the general mining removal method using Bucket Wheel Excavators remains as an option, it is likely that a trade-off with large electric rope shovels may show similar costing and volume capacity equivalence.

- Three mining systems have been incorporated in the mine plan with the second system becoming operational in year 7 and the third mining system becoming operational in year 16. The planned mining operational movement is shown in Figure 3.

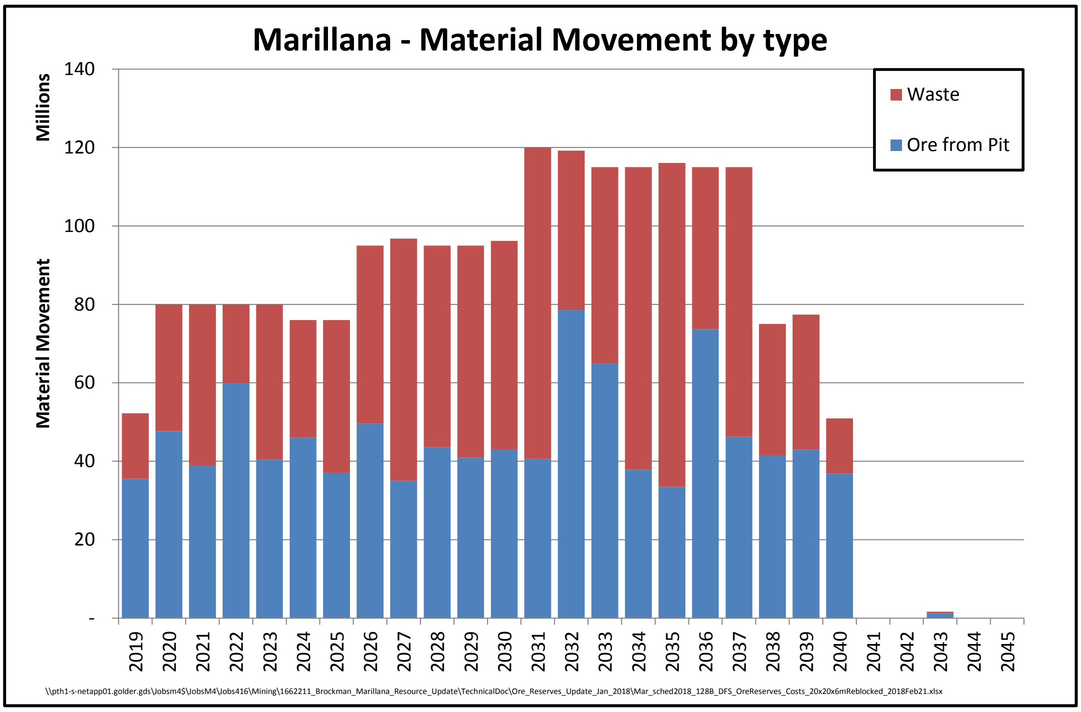

Figure 3: Marillana planned annual material movement

- The material movement profile is aimed at producing a targeted maximum 15 Mtpa of DID ore product, with supplemental CID product being limited to an additional 3.5 Mtpa, giving a total annual maximum movement of 18.5 Mt. The annual material movement of exported ore products from the Marillana project can be seen in Figure 4.

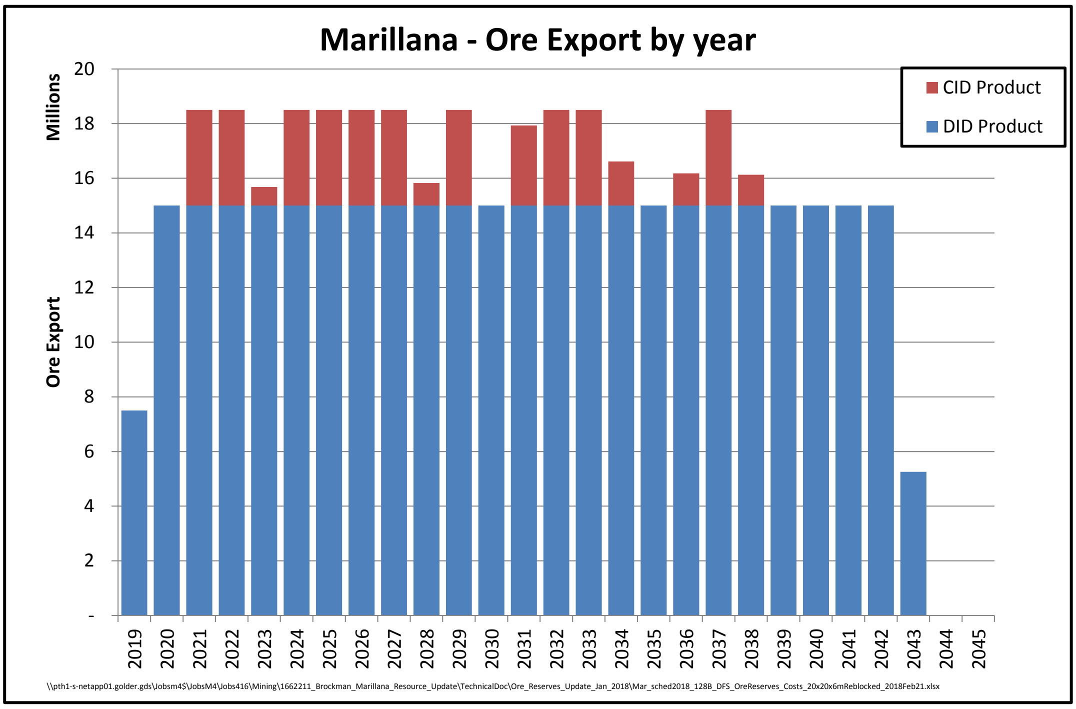

Figure 4: Marillana planned annual ore export

6.4 Financial Analysis

The scheduling programme includes revenue and cost information to maximise NPV. The schedule software assesses the value generated by each block to determine whether the block is fed directly to the plant, stockpiled or treated as waste. Further financial analysis to determine more realistic absolute financial indicators and sensitivity analysis are performed separately using the tonnes and grades extracted from the schedule.

An escalated total capital expenditure of A$2.11B has been applied in the economic schedule evaluation using a discount rate of 8% p.a. the project is shown to be commercially viable and technically sound. The project shows an internal rate of return of 15.8% with a projected Net Present Value at 8% discount of A$1 188M. The estimated undiscounted cumulative cashflow for the project is some A$4.59B.

The project cumulative discounted and cumulative undiscounted cashflows are shown in Figure 5 below along with the annual net income.

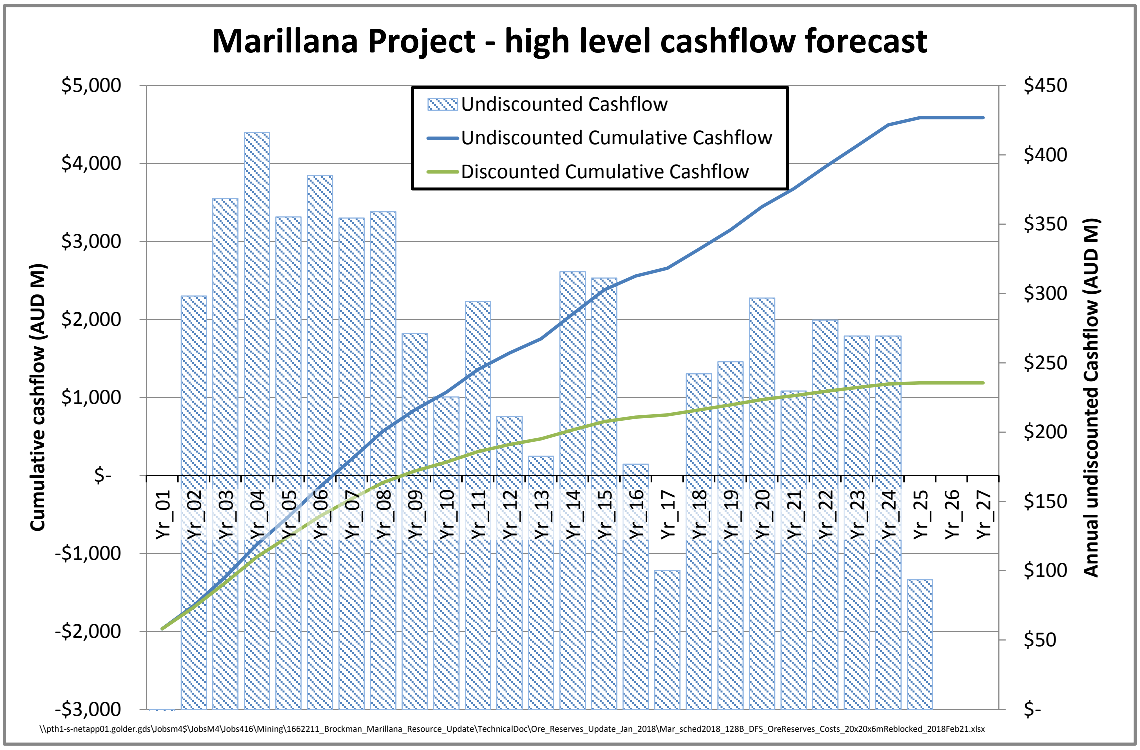

Figure 5: Marillana project cumulative discounted and undiscounted project cashflows

The project shows notable financial improvement with further reduction in ex-pit railing costs. The options associated with rail access and material handling ex-mine is a considered key success factor to the project. The project sensitivity graph shown in Figure 6, shows the project is very sensitive to the key cost driver of 'transport cost'; that being the ex-mine transportation total rail, port and handling costs. The project is then next most sensitive to mining costs, and equally sensitive to capex and processing cost.

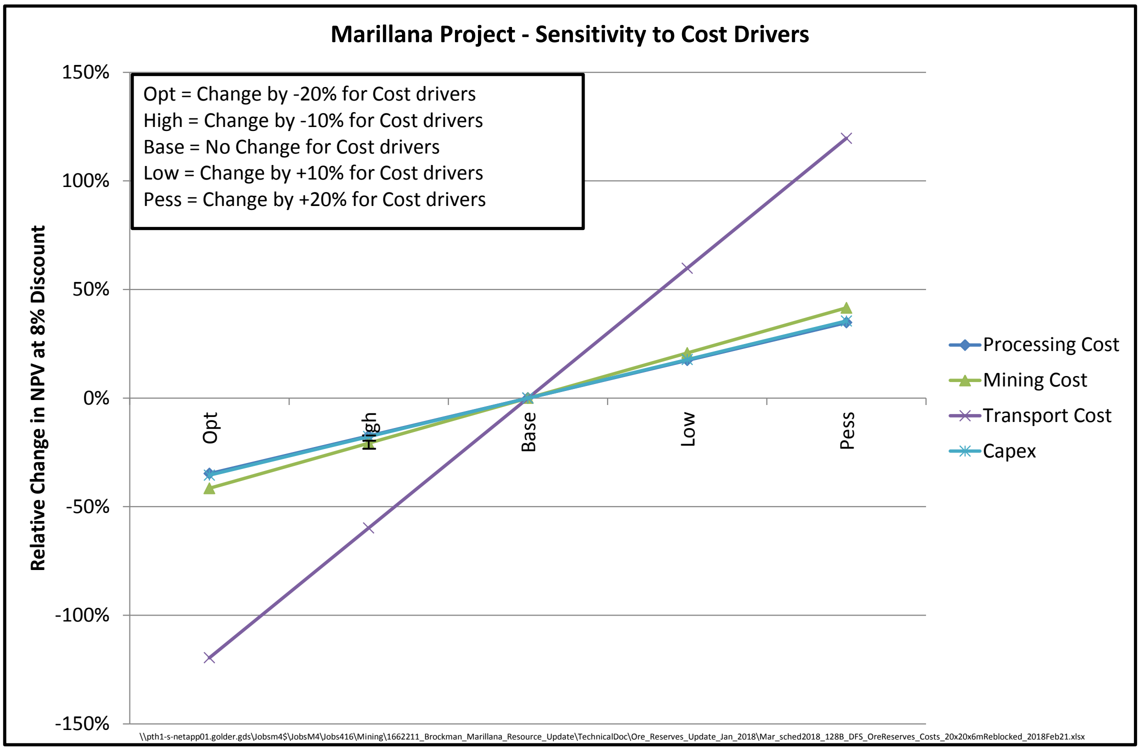

Figure 6: Marillana Project sensitivity to cost drivers

The project is very sensitive to the Iron Ore Price as would be expected with a large capital project. The relative sensitivity to the long-term iron ore price is shown in Figure 7.

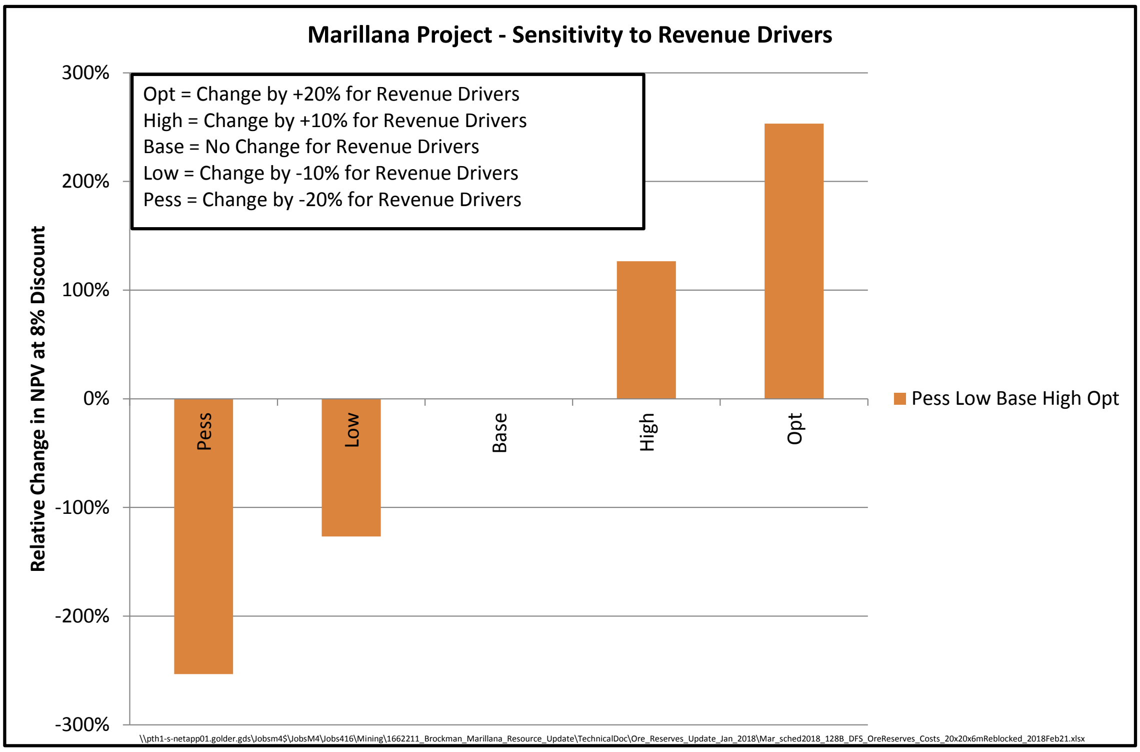

Figure 7: Marillana project sensitivity to long-term iron ore price

6.5 Ore Reserve Classification

All of the Ore Reserves at Marillana are derived from Measured and Indicated Resources. The Mineral Resource estimate reported is inclusive of the Ore Reserves. Inferred Mineral Resource is treated as waste in the pit optimisation process.

A final decision on the transportation method and costing for exporting the iron ore product from site to port and port handling with trans-shipment is to be completed. The project remains sensitive to material transport costs and the effective implementation of a suitable rail transport solution is an important aspect of the project value.

The Ore Reserves have been classified as Probable in that several aspects of the DFS study although technically valid will require cost estimate updates or confirmation.

7.0 ORE RESERVES STATEMENT

The Ore Reserves for the Marillana Project are classified in accordance with the Australasian Code for Reporting of Exploration results, Mineral Resources and Ore Reserves (JORC Code, 2012 Edition).

The classification of Ore Reserves is considered appropriate on the basis of Mineral Resource confidence and likely precision of modifying factors.

The Ore Reserves have been defined using a cut-off of 38% Fe for DID mineralisation and a cut-off of 52% Fe for the CID mineralisation within the final pit and tenement boundary limits.

As of 21 February 2018, the Marillana project has a total estimated Probable Ore Reserves of 967 Mt of DID plus 46 Mt of direct ship CID (Table 3). The total saleable product from the processed iron ore feed is estimated at 404 Mt at 60% Fe, with an average SiO2 grade of 6.1% and an Al2O3 grade of 3.1% (Table 4).

Table 3: Marillana Project – Ore Reserves – 21 February 2018

Reserves Class	Ore Type	Fe Cut-Off Grade (%)	Tonnes (Mt)
Probable	CID	52%	46
Probable	DID	38%	967
Probable	Total Ore		1013
Waste			1007

LOM Strip ratio = 1.0:1 (W:O t:t)

Some 70 Mt of Inferred material is included within the total waste reported above.

Table 4: Marillana Project – Ore Reserves export product – 21 February 2018

Reserves Class	Ore Sale Type	Tonnes (Mt)	Fe (%)	SiO_2 (%)	Al_2O_3 (%)	LOI (%)
Probable	CID Product	**46**	**55.5**	**5.3**	**3.7**	**9.7**
Probable	DID Product	**358**	**60.3**	**6.2**	**3.0**	**2.5**
Probable	Total Ore	**404**	**59.8**	**6.1**	**3.1**	**3.3**

8.0 THE JORC CODE ASSESSMENT CRITERIA

The JORC Code, 2012 Edition describes a number of criteria, which must be addressed in the Public Reporting of Mineral Resource estimates. These criteria provide a means of assessing whether or not parts of or the entire data inventory used in the estimate are adequate for that purpose. The Mineral Resource estimates stated in this document were based on the criteria set out in Table 1 of that Code. These criteria are discussed in Table 5 as follows.

Table 5: JORC Code Table 1

JORC Code Assessment Criteria	Comment
Section 1 Sampling Techniques and Data	
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 downhole 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.*	■ Exploration at the Marillana Project has predominantly been carried out using reverse circulation (RC) drilling, with selected drill holes twinned using sonic core to confirm the RC drill results and Calweld bucket drilling techniques to provide samples for metallurgical test work. ■ Between mid-2006 and the end of 2009, Brockman completed 1292 RC drill holes for 75 494 m, 59 sonic core holes for 2 595 m, 34 diamond drill holes for 1 708 m, and 15 Calweld bucket drill holes for 220 m within the Marillana Project area.
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.).*	■ Drilling has been completed using the RC technique. A limited number of holes have been drilled using diamond, sonic and Caldwell techniques to collect bulk samples and for comparative purposes with the RC drill holes.
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.*	■ Drill sample recovery has been recorded predominantly as estimated percentage recovery. Sample recoveries for RC samples logged as dry, moist and wet are (on average) approximately 65%, 55% and 45%, respectively. Lower RC sample recoveries and the potential loss of fine material has resulted in lower Al2O3 and LOI values below the water table. A relationship is apparent between sample loss and Al2O3 grade. When sample recovery is poor, the Al2O3 grade is lower. This may be due to loss of fines in the recovered

JORC Code Assessment Criteria	Comment
	material.
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.*	■ All Brockman drill holes were geologically logged for colour, shade, weathering, lithology, grainsize percentage in each fine, medium, coarse and very coarse fraction, roundness and pisolite percentage. ■ Logging information from the 65 Hamersley Iron drill holes is included in the Marillana database. The logging includes colour and shade information as well as a historical code for lithology that has not been converted to the current database format.
Sub-Sampling Techniques and Sample Preparation *If core, whether cut or sawn and whether quarter, half or all core taken.* *If non-core, whether riffled, tube sampled, rotary split, etc., and whether sampled wet or dry.* *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.* *Whether sample sizes are appropriate to the grain size of the material being sampled.*	■ Samples from RC drilling were collected in calico bags at the drill rig from a fixed cone splitter. The samples have been collected on one, two and four metre intervals. The one metre length samples were used for the majority of the hematite detrital and CID. The two metre length or longer samples were primarily used for the Tertiary overburden. ■ Sample preparation, including drying, crushing, splitting, etc., was completed by the analytical laboratory (Ultra Trace).
Quality of Assay Data and Laboratory Tests *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* *For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.* *Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.*	■ Certified Reference Materials were routinely inserted at a rate of one standard for every 30 routine samples. Precision and accuracy of the analytical results were considered to be acceptable. Mislabelling of approximately 5% of standards and inadequate follow up of spurious standard results was noted by Golder. ■ Reasonable correlation between the routine and duplicated sample is observed for the field duplicates, and excellent correlation is observed for the laboratory duplicates. However, there is evidence of sample swaps and assay errors that have not been corrected or followed-up by Brockman.

JORC Code Assessment Criteria	Comment
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.*	■ Twinned holes are drilled next to pre-existing holes to enable checks on repeatability of drilling results and to enable assessment of very short scale geology and grade variability. 54 pairs of drill holes have been identified that are less than 5 m apart. ■ When analysing the grade profile down each pair of twinned holes, it was found that while the twinned diamond drill holes and RC drill holes have similar grade profiles, RC appear to return a lower grade of detrital mineralization below the water table. ■ No adjustments are made to data, but differences below the water table are considered during resource classification.
Location of Data Points *Accuracy and quality of surveys used to locate drill holes (collar and downhole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* *Specification of the grid system used.* *Quality and adequacy of topographic control.*	■ The majority of the recent drill holes have collar surveys completed by DGPS and GPS. The historical drill hole collars were also surveyed, however, the surveying technique is not known by Golder. Golder believes there may be a degree of uncertainty (possibly ±20 m) for the collar coordinates for historical drill holes. ■ Downhole surveying has not been completed for any of the drill holes. For the current resource estimate which is based on drill holes on 100 m x 100 m and 100 m x 200 m centres, the confidence in classification has not been materially impacted by the lack of downhole surveying. For definition of channel margins for the CID, downhole surveying may be required for future resource estimations. ■ Topographic contours at 0.5 m intervals cover the majority of Brockman's tenement. The accuracy of the topographic data is appropriate for the current resource estimate.
Data Spacing and Distribution *Data spacing for reporting of Exploration Results.* *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* *Whether sample compositing has been applied.*	■ Drill holes have been completed at several different patterns; an overview of these patterns is as follows: ■ Abalone East: 200 m spaced cross-sections, with drill holes at 100 m centres on each cross-section. ■ Abalone: 100 m by 100 m spaced drilling. The northern and western extensions to Abalone are drilled on 200 m spaced cross-sections, with drill holes at 100 m centres on each cross-section. ■ Rockhole Bore: 200 m by 100 m spaced drilling on east-west and north-south orientated sections (northern extensions). A small area has been drilled using a 100 m by 100 m pattern. ■ North-west Sector: 200 m spaced cross-sections, with drill holes at 100 m centres on each cross-section as well as an area of 100 m by 100 m spaced drilling in the south. The northern extensions of North-west Sector has 400 m spaced cross-sections, with drill holes at 200 m centres on each cross-section. ■ Each area also contains an east-west and north-south orientated cross of five drill holes on

JORC Code Assessment Criteria	Comment
	50 m centres in each direction. ■ The geological continuity for the detrital sequence has been established by the current drilling density and is supported by the variography. ■ The geological continuity for the CID has been established with a lower level of confidence. Infill drilling is required to improve the confidence in the geological continuity for the CID. ■ All samples have been composited to a 2 m length.
Orientation of Data in Relation to Geological Structure *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	■ The orientation of drill holes is approximately perpendicular to the orientation of the mineralisation and is considered to be unbiased.
Sample Security *The measures taken to ensure sample security.*	■ Brockman state that all sample collection was supervised by Brockman staff and that samples were transported to the Ultra Trace laboratory (Perth) via regular courier and freight services.
Audits and Reviews *The results of any audits or reviews of sampling techniques and data.*	■ An independent review of the Snowden (2008b) and Coffey (2009a) resource estimates was completed by CSA Global (2009). The purpose of the review was to assess the classification approaches adopted by Snowden and Coffey and to address any issues raised. The review also provided recommendations for appropriate drill densities for classification of Measured and Indicated Resources for the Marillana. ■ CSA Global (2009) identified and investigated numerous items that should be addressed for classification of Mineral Resources. These included: ■ Appropriateness of drilling style for this style of mineralisation. ■ Appropriateness of physical sampling technique. ■ Sampling recovery. ■ Geological interpretation, logging vs. Chemistry. ■ Analytical QA/QC. ■ Appropriateness of drill spacing. ■ Continuity of geological interpretation. ■ Estimation method. ■ Bulk density. ■ CSA Global (2009) concluded that the appropriateness of drilling and sampling is confirmed, and assuming the conservative bulk density values, a significant portion of the Marillana project should be classified at least Indicated level, with the peripheral and more sparsely drilled areas

JORC Code Assessment Criteria	Comment
	classified as Inferred. CSA Global (2009) also concluded that several issues identified by Snowden (2008b) and Coffey (2009a) were not sufficient to downgrade resources from Indicated to Inferred.
Section 2 Reporting of Exploration Results	
Mineral Tenement and Land Tenure Status *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	■ The Marillana Project is located in the Pilbara region of Western Australia, approximately 100 km north north-west of the township of Newman. The project comprises a single granted Mining License (M47/1414) covering an area of approximately 82 km2 ■ To Golder's knowledge, there are no historical sites, National Parks and environmentally sensitive area within the lease or within any such distance to form any impediment to the development to the project.
Exploration Done by Other Parties *Acknowledgment and appraisal of exploration by other parties.*	■ Limited reconnaissance drilling was carried out by Hamersley Iron (a subsidiary of Rio Tinto). A total of 31 holes were drilled within the current resource area and 19 other drill holes were completed within Brockman's tenement and did not intersect mineralisation.
Geology *Deposit type, geological setting and style of mineralisation.*	■ The Marillana stratigraphy consists of an upper sequence of alluvium and colluvium which contains the impure haematite detrital iron ore (DID) and a lower sequence of channel iron deposits (CID)
Drill hole information	■ Not applicable. This Table relates to the reporting of the Mineral Resource estimates.
Data aggregation methods	■ Not applicable. This Table relates to the reporting of the Mineral Resource estimates.
Relationship between mineralisation widths and intercept lengths	■ Drill intersections are not reported as true widths.
Diagrams	■ Not applicable. This Table relates to the reporting of the Mineral Resource estimates.
Balance reporting	■ Not applicable. This Table relates to the reporting of the Mineral Resource estimates.
Other substantive exploration data	■ Not applicable. This Table relates to the reporting of the Mineral Resource estimates.
Further work	■ Brockman plan further detailed engineering and feasibility studies. This resource update also suggests that further metallurgical sampling is required to adequately cover all potential feed quality variation.

JORC Code Assessment Criteria	Comment
Section 3 Estimation and Reporting of Mineral Resources	
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.*	■ The drill hole database for Marillana was managed by St Arnaud Data Management (Expedio). Data validation has periodically been completed by Expedio and Brockman ■ On loading the database for modelling, Golder performed additional data checks. These checked included the verification of: ■ Collar depth with final sample depth. ■ Collar RLs with topographic data where possible. ■ Any overlapping intervals or gaps in the downhole data. ■ Grid survey problems. ■ Duplicate drill hole numbers and coordinates. ■ Duplicate geological and assay intervals. ■ Nominal surveys vs. precise surveys.
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.*	■ Golder did not visit site for this resource update. Previously, Golder has visited the site and as this update only involves inclusion of additional metallurgical test work, no further visit was considered necessary at this stage.
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.*	■ The geology interpretation for Marillana was completed by Brockman personnel on hardcopy cross-sections and long-sections. The geology interpretation was based on a combination of logged lithology, Fe, SiO_2, Al_2O_3 and LOI geochemistry as well as the mass recovery for the >1 mm fraction (B sample). ■ The interpretation parameters have been progressively updated and improved as geological knowledge has increased with each infill drilling campaign. The major updates for 2010 interpretation include changing the nominal lower Fe cut-off grade to 36% and the nominal upper cut-off grade for Al_2O_3 to 7% for detrital mineralisation. ■ The geological continuity for the detrital sequence has been established by the current drilling density and is supported by the variography. ■ The geological continuity for the CID has been established with a lower level of confidence. Infill drilling is required to improve the confidence in the geological continuity for the CID. ■ The grade estimation was subdivided based on the agreement of the geological domains with the historical data wherever such data were available.
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.*	■ The Marillana Project is separated into four deposits, North-west Sector, Rockhole Bore, Abalone and Abalone East. ■ The modelled stratigraphy has a strike length of 14.7 km and a maximum plan width of 2.3 km. The

JORC Code Assessment Criteria	Comment
	deposits are thinner toward the north, with a minimum thickness of approximately 10 m. The thickness along the southern boundary may be up to 40 m, or approximately 60 m thick when the CID is present. The CID has a maximum thickness of approximately 30 m. ■ The Mineral Resources estimates have been constrained by stratigraphic boundaries within the overall mineralised sequence.
Estimation and 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. sulfur 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.*	■ The block dimensions for the Marillana Project were determined on the basis of drilling density, geological controls and mining assumptions. ■ Grade estimation was completed using Ordinary Kriging (OK) and Golder proprietary software. Grades were estimated for Fe, Al_2O_3, SiO_2, P, S, LOI400, LOI600, LOI1000, CaO, Mg, MnO and TiO_2 using 2 m composites. Grade estimation was completed in three passes. ■ Geometallurgical parameters have been estimated using a geostatistical technique that matches testwork results to block model head grade estimates. ■ All domains were estimated using hard boundaries for all variables with the exception of STRAT=45 (hematite detrital) and STRAT=55 (upper hematite Detrital) both of which used a soft boundary and used composites from the other hematite detrital domains (STRAT=43, 46 and 55) in addition to the data within each domain. STRAT=5 (basal unmineralised sequence) was not estimated. The estimation for each stratigraphy was run on a global basis with a soft boundary (i.e. no partitioning) between individual deposits or the water table. ■ Grade estimates were made to the parent block volume of 50 × 50 × 6 m and sub-cells within the model received the parent cell estimate. The 2 m composite dataset were weighted by their length to account for any short samples created in the compositing process (e.g. end of hole composites). ■ No high-grade cutting or spatial restraining was applied to the grade estimation process for any variable. ■ Pass 1 search ellipsoid distances were defined as the distance equal to 80% of the average variogram range of influence for each variography group. Passes 2 and 3 were defined by using an expansion factor of the Pass 1 and Pass2 ellipsoid of 1.3.
Moisture *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of*	■ The tonnages were estimated using dry bulk density. ■ Moisture determinations were completed on 172

JORC Code Assessment Criteria	Comment
determination of the moisture content.	samples from 11 sonic drill holes submitted to Ammtec Limited. For calculation of dry bulk density from *in situ* wireline density data, Golder used the mean moisture determinations, 4.5% moisture above the water table and 8.5% moisture below the water table.
Cut-off Parameters *The basis of the adopted cut-off grade(s) or quality parameters applied.*	■ Mineral Resources for DID were reported at a cut-off grade of 38% Fe. ■ Mineral Resources for CID were reported at a cut-off grade of 52% Fe. ■ These cut-off grades were selected based on the Mineral Resources achieving an acceptable product grade.
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.*	■ This Mineral Resource statement assumes mining by conventional open pit techniques.
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.*	■ Brockman has completed substantial metallurgical studies of the Project which have shown the potential viability of DMS processing. ■ Estimates of mass recovery and concentrate grades for Fe, Al2O3, SiO2, and LOI for Brockman's selected flowsheet are derived from 44 samples collected spatially over the deposit and within the most important ore domains. ■ Where block model grades are beyond the limits of the test work sample ranges, metallurgical parameters are calculated using regression formulae developed by Brockman.
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*	■ Golder is not aware of any environmental issues that would affect the eventual economic extraction of the deposit.

JORC Code Assessment Criteria	Comment
made.	

JORC Code Assessment Criteria	Comment
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.*	■ Golder assigned the moisture corrected wireline dry bulk densities to the block model by geological domain. The wireline bulk densities were derived from 22 diamond drill holes across the Marillana Project. ■ Density data was not available for three domains (18, 65 and 99). These domains were assigned dry bulk densities from geologically similar units.
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.*	■ Mineral Resources were classified in accordance with the Australasian Code for the Reporting of Identified Mineral Resources and Ore Reserves (JORC, 2012). ■ The classification of the Mineral Resource was completed by Golder geologists'. The classification of Mineral Resources was considered appropriate on the basis of data density and quality, representativeness of sampling, geological confidence criteria, the position of the water table, estimation performance parameters, and confidence in the estimates of metallurgical parameters.
Audits or Reviews *The results of any audits or reviews of Mineral Resource estimates.*	■ No audits or reviews have been undertaken on this Mineral Resource estimate.
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.*	■ The Marillana Mineral Resources are an estimate of the *in situ* grades and metallurgical recovery. No production data or tests are available to compare with this resource estimate. ■ The quality of the mineralisation model and the resource estimate is directly associated with the risks inherent to the deposit. ■ The relative accuracy is reflected in the Mineral Resource classification discussed above that is in line with industry acceptable standards. ■ Recommendations to improve the quality of future model updates are: ■ Infill drilling of the Inferred portions. ■ Additional metallurgical test work on samples with SiO_2<17% and Al_2O_3>8%.

JORC Code Assessment Criteria	Comment
Section 4 Estimation and Reporting of Ore Reserves	
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.*	▪ Mineral Resources for DID were reported at a cut-off of 38% Fe. ▪ Mineral Resources for CID were reported at a cut-off grade of 52% Fe. ▪ Mineral Resources are wholly inclusive of Ore Reserves estimated tonnes.
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.*	Iain Cooper, Aleks Mihailovic and James Holme of Golder undertook a site visit to Marillana on 6 November 2009, no site-based work has been carried out in relation to the feasibility study since that time.
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.*	▪ The Marillana project has been the subject of a Definitive Feasibility study (2010) and has been the subject of ongoing investigations to determine optimum transport solutions for ore export since that time. ▪ Suitable material modifying factors have been incorporated into the mining model prior to scheduling to determine a mine plan that is technically achievable and economically viable.
Cut-off parameters *The basis of the cut-off grade(s) or quality parameters applied.*	▪ Mineral Resources for DID were reported at a cut-off of 38% Fe. ▪ Mineral Resources for CID were reported at a cut-off grade of 52% Fe. ▪ Any inferred resources included within the mine plan have been regarded as waste.
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 Marillana Resource model was regularised to a block size of 20 m by 20 m by 6 m. The regularisation introduced a gross 4.7% DID ore loss and a gross 11.7% CID ore loss. The 20 × 20 × 6 m re-blocked mining model is deemed representative for the bulk mining operation planned for the Marillana project. ▪ The Ore Reserves are reported within pit outline which are based on open pit optimisations. The optimisations were carried out including Measured and Indicated Mineral Resource categories. ▪ The overall pit slopes used are 37° as per DFS Geotechnical Report supplied by Brockman. ▪ Re-blocking of the mineral resource model to 6 m minimum mining flitch heights resulted in a mining ore loss of 5% ore loss and 2.3% dilution ▪ No further loss and dilution have been applied during the scheduling estimate, the application of the minimum vertical flitch height of 6 m controls

JORC Code Assessment Criteria	Comment
■ *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 possible selectivity within the laminar nature of the detrital ore zones. ■ Any Inferred resource material within the mining model is regarded as waste material. ■ The mining operation will require conventional infrastructure as well as electrical power requirements for powering the IPCC and mining excavators. Workshops, offices, stores, and change rooms have been identified within the DFS.
Metallurgical factors or assumptions ■ *The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.* ■ *Whether the metallurgical process is well-tested technology or novel in nature.* ■ *The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.* ■ *Any assumptions or allowances made for deleterious elements.* ■ *The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole.* ■ *For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?*	■ The metallurgical recoveries for the detritals are based on test work, and are based on beneficiation of the detrital ore. ■ The CID ore is a direct shipping ore (DSO) and will be crushed and blended with the detrital product. ■ Extensive testwork was completed under the direction of Ausenco as part of the Marillana DFS project. ■ Definitive metallurgical testing yielded significant insight into the metallurgy of the Marillana deposit. The DFS test work program consisted of phases 4, 5 and 6, which followed on from previous (PFS and earlier) test work phases 1, 2 and 3. ■ Pricing estimates for the product have allowed for the expected silica and alumina in the product specification, no other deleterious elements are notable in the product specification. ■ The phase 5 component included the production of some 2 t of product used for vendor testing and CSIRO sinter testwork. ■ The Ore Reserve has been based upon a targeted 60% Fe product with a maximum 6.5% Silica and maximum 5.5% Alumina in product. ■ The Direct Ship Ore (CSO) has been estimated based upon a 6.0% Fe product with maximum 6.5% Silica and maximum 4% Alumina.
Environmental The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.	■ An environmental impact assessment was completed as part of the Marillana DFS study by Ecologia under the direction of Ausenco. ■ The mine waste geochemistry (Graeme Campbell & Associates Pty Ltd, 2009) has been evaluated and indicates a very low risk of any acid mine drainage issues would exist at closure. No special allowance has been made for selective placement of any waste.
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.	On-site infrastructure including accommodation village, mine operations centre, main site access road, pit access ramps, ROM pad and crusher area, stockpile areas, product stockpiling and load out yard, waste dumps, weighbridge area, contractors laydown yard, power station, workshops and explosives storage have been identified as requirements within the DFS
Costs	■ The production rates and operating costs have

JORC Code Assessment Criteria	Comment
■ *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.*	been applied from factored estimates provided in the DFS. ■ Operating costs include allowances for mining, processing, administration, haulage to the port and shipping. Port and shipping costs are developed from existing contracts. ■ All costs and revenues are in AUD, with exchange rates derived from external market analysts forecasts. ■ Exchange rates used are 1.0 AUD: 0.75 USD over the life of the mine. ■ The application of product quality penalties are based on historic and current prices public information. ■ Allowances have been made for royalties payable including Government and private parties.
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.*	■ Forecast sales price are based on the average of three external forecasting analysts, Platts forecast, the 2017 WA Treasury forecast and the LFJ Consulting forecast over the life of mine based on the CFR 62% Platts index of USD62/t CFR (A$82.67/t). ■ In generating the sales price applicable to the Marillana product, the sales price is discounted by: ■ Government and other stakeholder royalties and ■ Shipping costs. ■ Where necessary all revenues are converted from USD to AUD based on exchange rates derived from external market analysts. ■ Exchange rates of 0.75 have been assumed over the life of the mine. ■ Within the life of mine schedule for Marillana, the element grades of ore to be sold are forecast to stay within the contracted specifications.
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.*	■ Brockman have provided a market assessment forecast and pricing estimate from April 2017 conducted by LFJ Consulting. ■ At project volumes of up 20 Mt per annum of iron ore product no anticipated volume price change is expected as a result of the Marillana project output. ■ Price forecast estimates have been taken from the PLATTS and WA Treasury Forecast public documents.
Economic ■ *The inputs to the economic analysis to*	■ The high-level economic assessments have used a discount rate of 8%, with the NPV also estimated at

JORC Code Assessment Criteria	Comment
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.*	10% and 12%. ▪ Sensitivity estimates have been carried out on the primary cost drivers iron ore input costs, capital cost, process plant operating costs, mining costs and ore transport and shipping costs.
Social *The status of agreements with key stakeholders and matters leading to social licence to operate.*	Continued negotiations with the native title holders and state authorities have been undertaken since completion of the DFS. Pending a decision on the final project configuration and timing, further negotiations will be undertaken to ensure full compliance with the license to operate.
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.*	▪ As the cost estimates undertaken for the DFS are now considered to be dated being some 8 years old, it is recommended that the configuration and cost estimate revisions would form any planned progression of the Marillana project. ▪ Transport costs and rail access remain a key component to the financial value of the project, port and rail capacity being a fundamental part of the export options for the project. ▪ Government approvals and permissions remain valid however confirmation of the timing and final configuration will require resubmission to the WA DMIRS on completion of a feasibility study update.
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 proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).*	The Ore Reserves for the Marillana project have been classified as Probable in that there remain some key aspects to the off-mine handling and export of the Iron Ore product that require further study. Costing aspects related to the existing DFS will require confirmation or amendment; it is acknowledged that the majority of the cost estimates were completed for the Marillana project in 2009 at a time of very high project cost demand in Australia. It is anticipated that many costs will have reduced, whilst some other costs will have increased. Detailed understanding of the total project cost requires updating prior to a commitment for development of the project into an operating mine
Audits or reviews *The results of any audits or reviews of Ore Reserve estimates.*	The DFS and Ore Reserves have been the subject of several independent audits since completion of the DFS in 2010.
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*	▪ The DFS relating to the Marillana project is considered detailed and relatively complete; however, given the lengthy period since completion of the DFS, it is expected that the cost estimates will require updating with some negative and some

JORC Code Assessment Criteria	Comment
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 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.* ■ *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.*	positive cost changes anticipated. ■ Rail and Port access with the attendant cost of handling and transport of the ore ex-mine to the port remains a key value driver to the project.

9.0 QUALIFICATIONS AND BASIS OF OPINION

9.1 Competent person and corporation

The information in this report which relates to Exploration results, geological interpretation, and drill hole data is based on information provided by Mr Aning Zhang. Mr Zhang is a full-time employee of Brockman Resources Ltd, is a Member of the Australasian Institute of Mining and Metallurgy. Mr Zhang has sufficient relevant experience to the style of mineralisation and type of deposits under consideration and to the activity for which he is undertaking to qualify as a Competent Person as defined in the JORC Code (2012 Edition). Mr Zhang consents to the inclusion in this report of the matters based on his information in the form and content in which it appears.

The information in this report which relates to Mineral Resources is based on information provided to and compiled by Dr Sia Khosrowshahi, who is a full-time employee of Golder Associates Pty Ltd, and a Member of the Australasian Institute of Mining and Metallurgy. Dr Khosrowshahi has sufficient relevant experience to the style of mineralisation and type of deposits under consideration and to the activity for which he is undertaking to qualify as a Competent Person as defined in the JORC Code (2012 Edition).

The information in this report which relates to Ore Reserves is based on information provided to and compiled by Mr Glenn Turnbull, who is a part-time employee of Golder Associates Pty Ltd, and a Member of the Australasian Institute of Mining and Metallurgy. Mr Turnbull has sufficient relevant experience to the style of mineralisation and type of deposits under consideration and to the activity for which he is undertaking to qualify as a Competent Person as defined in the JORC Code (2012 Edition).

9.2 Statement of independence

Golder is an independent consulting company that provides a range of services to the minerals industry, including feasibility studies. Our integrated consulting, design and construction solutions can be applied to every stage of a mining project and are provided by teams with experience in mine planning and ore evaluation, integrated tailings and waste management, rock mechanics and mine geotechnical engineering, mine environment, mine water, and mine infrastructure.

The authors do not hold any interest in Brockman or their subsidiaries and/or associated parties or in any of the assets which are the subject of this report.

Fees for the preparation of this report are being charged at Golder's standard schedule of rates, with expenses being reimbursed at cost. Payment of fees and expenses is in no way contingent upon the conclusions of this report.

Based on the information provided to Golder and to the best of its knowledge, Golder has not become aware of any material change or matter affecting the validity of the report.

10.0 IMPORTANT INFORMATION

Your attention is drawn to the document titled – “Important Information Relating to this Report”, which is included in Appendix A of this report. The statements presented in that document are intended to inform a reader of the report about its proper use. There are important limitations as to who can use the report and how it can be used. It is important that a reader of the report understands and has realistic expectations about those matters. The Important Information document does not alter the obligations Golder Associates has under the contract between it and its client.

Signature Page

Golder Associates Pty Ltd

Glenn Turnbull
Principal Mining Engineer

Dr Sia Khosrowshahi
Principal Geostatistician

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APPENDIX A

Important Information

The document ("Report") to which this page is attached and which this page forms a part of, has been issued by Golder Associates Pty Ltd ("Golder") subject to the important limitations and other qualifications set out below.

This Report constitutes or is part of services ("Services") provided by Golder to its client ("Client") under and subject to a contract between Golder and its Client ("Contract"). The contents of this page are not intended to and do not alter Golder's obligations (including any limits on those obligations) to its Client under the Contract.

This Report is provided for use solely by Golder's Client and persons acting on the Client's behalf, such as its professional advisers. Golder is responsible only to its Client for this Report. Golder has no responsibility to any other person who relies or makes decisions based upon this Report or who makes any other use of this Report. Golder accepts no responsibility for any loss or damage suffered by any person other than its Client as a result of any reliance upon any part of this Report, decisions made based upon this Report or any other use of it.

This Report has been prepared in the context of the circumstances and purposes referred to in, or derived from, the Contract and Golder accepts no responsibility for use of the Report, in whole or in part, in any other context or circumstance or for any other purpose.

The scope of Golder's Services and the period of time they relate to are determined by the Contract and are subject to restrictions and limitations set out in the Contract. If a service or other work is not expressly referred to in this Report. do not assume that it has been provided or performed. If a matter is not addressed in this Report, do not assume that any determination has been made by Golder in regards to it.

At any location relevant to the Services conditions may exist which were not detected by Golder. in particular due to the specific scope of the investigation Golder has been engaged to undertake. Conditions can only be verified at the exact location of any tests undertaken. Variations in conditions may occur between tested locations and there may be conditions which have not been revealed by the investigation and which have not therefore been taken into account in this Report.

Golder accepts no responsibility for and makes no representation as to the accuracy or completeness of the information provided to it by or on behalf of the Client or sourced from any third party. Golder has assumed that such information is correct unless otherwise stated and no responsibility is accepted by Golder for incomplete or inaccurate data supplied by its Client or any other person for whom Golder is not responsible. Golder has not taken account of matters that may have existed when the Report was prepared but which were only later disclosed to Golder.

Having regard to the matters referred to in the previous paragraphs on this page in particular, carrying out the Services has allowed Golder to form no more than an opinion as to the actual conditions at any relevant location. That opinion is necessarily constrained by the extent of the information collected by Golder or otherwise made available to Golder. Further, the passage of time may affect the accuracy, applicability or usefulness of the opinions, assessments or other information in this Report. This Report is based upon the information and other circumstances that existed and were known to Golder when the Services were performed and this Report was prepared. Golder has not considered the effect of any possible future developments including physical changes to any relevant location or changes to any laws or regulations relevant to such location.

Where permitted by the Contract, Golder may have retained subconsultants affiliated with Golder to provide some or all of the Services. However, it is Golder which remains solely responsible for the Services and there is no legal recourse against any of Golder's affiliated companies or the employees, officers or directors of any of them.

By date, or revision, the Report supersedes any prior report or other document issued by Golder dealing with any matter that is addressed in the Report.

Any uncertainty as to the extent to which this Report can be used or relied upon in any respect should be referred to Golder for clarification

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