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**ASX ANNOUNCEMENT** **ASX Code: MGX**

23 September 2020

# Mineral Resources & Ore Reserves Statement as at 30 June 2020

**Highlights:**

- Total Group Mineral Resources of **69.4Mt grading 61.7% Fe**, from 74.2Mt @ 61.8% Fe in the prior year, after mining depletion and removal of remnant material at Tallering Peak.
- Total Group Ore Reserves of **18.7Mt @ 65.2% Fe**, all at Koolan Island, a net reduction of 1.6Mt from the prior year, reflecting mining depletion of 3.1Mt and the addition of 1.5Mt following design improvements in the Koolan Island Main Pit.

## Comment

Mount Gibson Chief Executive Officer Peter Kerr said: "Mount Gibson's annual Mineral Resources and Ore Reserves statement underlines the quality of our mining assets, particularly the flagship Koolan Island mine following the first full year of high grade ore sales since commercial production recommenced in mid-2019. Koolan Island is the highest grade direct-shipping hematite iron ore mining operation in Australia, providing Mount Gibson with a unique platform to create long term value."

## Summary of information

This statement details the Mineral Resource and Ore Reserve estimates of Mount Gibson Iron Limited (**Mount Gibson**) as at 30 June 2020. Total Mineral Resources are estimated at **69.4 million tonnes** (**Mt**) **of iron ore at an average grade of 61.7% Fe** (30 June 2019: 74.2 Mt @ 61.8% Fe). Total Ore Reserves are **18.7Mt at 65.2% Fe** (30 June 2019: 20.3Mt at 65.5% Fe). The reductions in the estimates from a year ago largely reflect mining depletion, net of Koolan Island Ore Reserve additions, and the removal of remnant resources at the now-rehabilitated Tallering Peak mine site.

Refer to pages 4-5 of this release for Tables A and B depicting Mineral Resources and Ore Reserves by individual project and for the Group, and for Competent Person disclosures.

### *Mineral Resources*

Total Mineral Resources were reduced by approximately 4.8Mt in the year to 30 June 2020 through mining depletion of 3.1Mt at the Main Deposit at Koolan Island, and removal of final remnant resources totalling 1.7Mt at the now-rehabilitated Tallering Peak mine site.

Mineral Resources at Koolan Island at 30 June 2020 totalled 48.0 Mt grading 63.7% Fe, including 38.0Mt at 64.6% Fe in the Main Deposit. Refer Figure 1 for Koolan Island location and site layout details, and Figure 2 showing the Main Deposit Mineral Resources located outside the current pit design. Mineral Resources remain unchanged at the Acacia East and Mangrove satellite deposits at Koolan Island, and at the Extension Hill, Iron Hill and Shine deposits in the Mid-West.

The Company confirms that all material assumptions and technical parameters underpinning the estimates continue to apply and have not materially changed.

***Ore Reserves***

Mount Gibson's total Ore Reserves reduced over the year by approximately 1.6Mt to 18.7Mt grading 65.2% Fe, all at the Main Deposit at Koolan Island, reflecting depletion of 3.1Mt from mining and the addition of 1.5Mt arising from design improvements for the Main Pit.

The 1.5Mt increase in Ore Reserves followed a review of the Main Pit geotechnical parameters which resulted in an increased batter angle in the hanging-wall rock units from 75 degrees to 80 degrees being adopted in the Life of Mine pit design from approximately 25 metres from surface level. The revised design parameters were externally validated before being adopted in the Life of Mine pit design.

***Other Disclosures***

No other significant changes occurred during the reporting period with regards to Mount Gibson's Mineral Resources and Ore Reserves.

Reconciliation for all operations in the 2019/20 financial year provided confidence in the estimation methodology and results, with depletion from mining being in balance with production outputs and minor reductions from a small unmapped area of backfill from historic mining in the eastern end of Main Pit at Koolan Island.

As stated, all current Ore Reserves are at the Main Deposit at Koolan Island. However, the Company is investigating the potential development of the Shine Deposit in the Mid-West in light of optimised open pit mine planning and available transport options. Mount Gibson expects to complete its assessment and consider a development decision shortly.

Mount Gibson has maintained consistency and not changed sampling methods, sub-sampling techniques or sample assay analyses, drill and data spacing, estimation methodology, cut-off grade, or mining and metallurgical methods in any material way.

Mount Gibson's operations have been established for several years, and exploration results including sampling techniques and data analysis have previously been reported to the ASX under Joint Ore Reserves Committee (JORC) and ASX continuous disclosure requirements. All of Mount Gibson's Mineral Resources and Ore Reserves are reported in compliance with the JORC Code, 2012 Edition and the ASX Listing Rules.

*Authorised by:*
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***Figure 1:*** *Koolan Island location and site layout.*

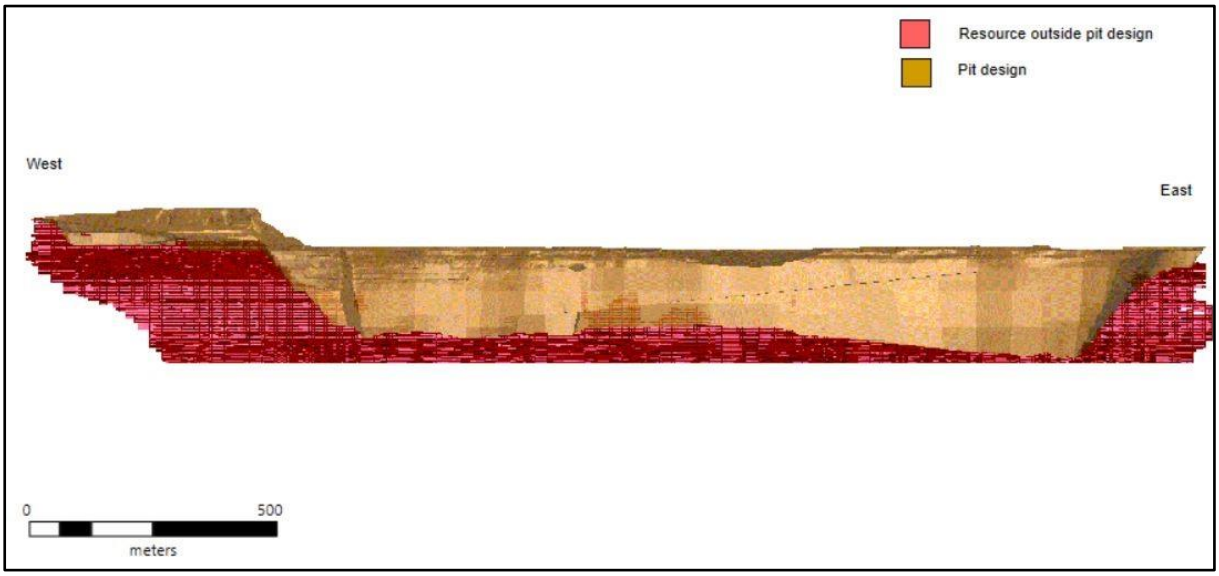


***Figure 2:*** *Koolan Island Main Deposit long-section showing Mineral Resources outside pit design.*

# Mineral Resources and Ore Reserves Statement as at 30 June 2020

## Table A: Mineral Resources and Ore Reserves by Project as at 30 June 2020

| **Koolan Island** | | | | | |
|---|---|---|---|---|---|
| | Tonnes millions | Fe % | $SiO_2$ % | $Al_2O_3$ % | P % |
| ***Mineral Resources, above 50% Fe*** | | | | | |
| Measured | 3.4 | 60.3 | 13.23 | 0.30 | 0.007 |
| Indicated | 34.8 | 64.9 | 5.76 | 0.65 | 0.013 |
| Inferred | 9.9 | 60.5 | 12.30 | 0.59 | 0.013 |
| **Total at 30 June 2020** | **48.0** | **63.7** | **7.63** | **0.61** | **0.013** |
| *Total at 30 June 2019* | *51.2* | *63.9* | *7.33* | *0.62* | *0.013* |
| ***Ore Reserves, above 50% Fe*** | | | | | |
| Proved | 0.2 | 58.5 | 15.61 | 0.45 | 0.006 |
| Probable | 18.5 | 65.3 | 4.86 | 0.88 | 0.013 |
| **Total at 30 June 2020** | **18.7** | **65.2** | **4.96** | **0.88** | **0.013** |
| *Total at 30 June 2019* | *20.3* | *65.5* | *4.56* | *0.88* | *0.012* |
| **Extension Hill** | | | | | |
| | Tonnes millions | Fe % | $SiO_2$ % | $Al_2O_3$ % | P % |
| ***Mineral Resources, above 50% Fe*** | | | | | |
| Measured | 1.3 | 55.3 | 9.16 | 2.76 | 0.077 |
| Indicated | 0.3 | 57.3 | 10.42 | 1.62 | 0.076 |
| Inferred | 0.2 | 56.6 | 10.49 | 1.66 | 0.055 |
| **Total at 30 June 2020** | **1.8** | **55.8** | **9.53** | **2.44** | **0.074** |
| *Total at 30 June 2019* | *1.8* | *55.8* | *9.53* | *2.44* | *0.074* |
| **Iron Hill** | | | | | |
| | Tonnes millions | Fe % | $SiO_2$ % | $Al_2O_3$ % | P % |
| ***Mineral Resources, above 50% Fe*** | | | | | |
| Measured | - | - | - | - | - |
| Indicated | 2.6 | 55.0 | 13.94 | 1.74 | 0.074 |
| Inferred | 1.1 | 55.0 | 9.86 | 2.61 | 0.081 |
| **Total at 30 June 2020** | **3.7** | **55.0** | **12.76** | **1.99** | **0.076** |
| *Total at 30 June 2019* | *3.7* | *55.0* | *12.76* | *1.99* | *0.076* |
| **Tallering Peak** | | | | | |
| | Tonnes millions | Fe % | $SiO_2$ % | $Al_2O_3$ % | P % |
| ***Mineral Resources, above 50% Fe*** | | | | | |
| **Total at 30 June 2020** | **-** | **-** | **-** | **-** | **-** |
| *Total at 30 June 2019* | *1.7* | *57.9* | *11.10* | *2.15* | *0.069* |

*Discrepancies may appear due to rounding. Mineral Resources are reported inclusive of Ore Reserves. All tonnages have been estimated as dry tonnages.*

**Table A: Mineral Resources and Ore Reserves by Project as at 30 June 2020 (continued)**

| **Shine** | | | | | |
|---|---|---|---|---|---|
| | Tonnes millions | Fe % | $SiO_2$ % | $Al_2O_3$ % | P % |
| ***Mineral Resources, above 50% Fe*** | | | | | |
| Measured | 5.7 | 58.9 | 9.04 | 1.81 | 0.076 |
| Indicated | 6.6 | 58.0 | 10.01 | 1.35 | 0.070 |
| Inferred | 3.6 | 56.8 | 9.61 | 1.18 | 0.063 |
| **Total at 30 June 2020** | **15.9** | **58.1** | **9.57** | **1.48** | **0.071** |
| *Total at 30 June 2019* | *15.9* | *58.1* | *9.57* | *1.48* | *0.071* |
| *Discrepancies may appear due to rounding. Mineral Resources are reported inclusive of Ore Reserves. All tonnages have been estimated as dry tonnages.* | | | | | |

**Table B: Total Group Mineral Resources and Ore Reserves as at 30 June 2020**

| **Total Group Mineral Resources and Ore Reserves at 30 June *(above 50% Fe)*** | | | | | |
|---|---|---|---|---|---|
| | Tonnes millions | Fe % | $SiO_2$ % | $Al_2O_3$ % | P % |
| **Total Mineral Resources at 30 June 2020** | **69.4** | **61.7** | **8.40** | **0.93** | **0.031** |
| **Total Ore Reserves at 30 June 2020** | **18.7** | **65.2** | **4.96** | **0.88** | **0.013** |
| *Total Mineral Resources at 30 June 2019* | *74.2* | *61.8* | *8.25* | *0.95* | *0.031* |
| *Total Ore Reserves at 30 June 2019* | *20.3* | *65.5* | *4.56* | *0.88* | *0.012* |
| *Discrepancies may appear due to rounding. Mineral Resources are reported inclusive of Ore Reserves. All tonnages have been estimated as dry tonnages.* | | | | | |

***Competent Persons and Responsibilities***

*Exploration Results:*
*The information in this report that relates to Exploration Results including sampling techniques and data management is based on information compiled by Brett Morey, a Competent Person who is a member of the Australasian Institute of Mining and Metallurgy. Mr Morey is a full-time employee of Mount Gibson Iron Limited, and he has sufficient experience relevant to the style of mineralisation and type of deposits under consideration and to the activity being undertaken, to qualify as a Competent Person as defined in the December 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Morey consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.*

*Mineral Resources:*
*The information in this report relating to Mineral Resources is based on information compiled by Elizabeth Haren, a Competent Person who is a member and Chartered Professional of the Australasian Institute of Mining and Metallurgy and member of the Australian Institute of Geoscientists. Ms Haren was a full-time employee of, and is a consultant to, Mount Gibson Iron Limited. Ms Haren has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves', and Ms Haren consents to the inclusion in this report of the matters based on her information in the form and context in which it appears.*

*Ore Reserves:*
*The information in this report relating to Ore Reserves at Koolan Island is based on information compiled by Brett Morey, a member of the Australasian Institute of Mining and Metallurgy. Mr Morey is a full-time employee of Mount Gibson Iron Limited. Mr Morey has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves', and Mr Morey consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.*

## Mineral Resources and Ore Reserves Explanatory Notes

## KOOLAN ISLAND

Total Koolan Island Mineral Resources and Ore Reserves at 30 June 2020, comprising the Main, Acacia East and Mangrove Deposits:

| **Koolan Island** | | | | | |
|---|---|---|---|---|---|
| | Tonnes millions | Fe % | $SiO_2$ % | $Al_2O_3$ % | P % |
| ***Mineral Resources, above 50% Fe*** | | | | | |
| Measured | 3.4 | 60.3 | 13.23 | 0.30 | 0.007 |
| Indicated | 34.8 | 64.9 | 5.76 | 0.65 | 0.013 |
| Inferred | 9.9 | 60.5 | 12.30 | 0.59 | 0.013 |
| **Total** | **48.0** | **63.7** | **7.63** | **0.61** | **0.013** |
| ***Ore Reserves, above 50% Fe*** | | | | | |
| Proved | 0.2 | 58.5 | 15.61 | 0.45 | 0.006 |
| Probable | 18.5 | 65.3 | 4.86 | 0.88 | 0.013 |
| **Total** | **18.7** | **65.2** | **4.96** | **0.88** | **0.013** |
| *Discrepancies may appear due to rounding. Mineral Resources are reported inclusive of Ore Reserves. All tonnages have been estimated as dry tonnages.* | | | | | |

- The Mineral Resource at Koolan Island has been depleted by approximately 3.1Mt through mining since 30 June 2019.

## Main Deposit

| **Main** | | | | | |
|---|---|---|---|---|---|
| | Tonnes millions | Fe % | $SiO_2$ % | $Al_2O_3$ % | P % |
| ***Mineral Resources, above 50% Fe*** | | | | | |
| Measured | 2.7 | 60.1 | 13.40 | 0.34 | 0.007 |
| Indicated | 30.0 | 65.6 | 4.83 | 0.67 | 0.012 |
| Inferred | 5.3 | 61.4 | 11.10 | 0.76 | 0.010 |
| **Total** | **38.0** | **64.6** | **6.30** | **0.66** | **0.011** |
| **Ore Reserves, above 50% Fe** | | | | | |
| Proved | 0.2 | 58.5 | 15.61 | 0.45 | 0.006 |
| Probable | 18.5 | 65.3 | 4.86 | 0.88 | 0.013 |
| **Total** | **18.7** | **65.2** | **4.96** | **0.88** | **0.013** |
| *Discrepancies may appear due to rounding. Mineral Resources are reported inclusive of Ore Reserves. All tonnages have been estimated as dry tonnages.* | | | | | |

- The Mineral Resource at the Main Deposit has been depleted by approximately 3.1Mt through mining since 30 June 2019.
- The reporting of the Mineral Resource of the Main Deposit is in compliance with the JORC Code, 2012 Edition and the ASX Listing Rules. A summary of the JORC Code, 2012 Edition Table 1 for Koolan Island Main is provided in Appendix 1.
- The Ore Reserves at the Main Deposit were depleted by approximately 3.1Mt through mining since 30 June 2019.

- A design improvement added 1.5Mt to the Ore Reserves from a review of the geotechnical parameters of Main Pit which resulted in an increased batter angle in the hanging-wall rock units from 75 degrees to 80 degrees being adopted in the Life of Mine pit design from the 978RL, approximately 25 metres from surface level. The revised design parameters were externally validated before being adopted in the Life of Mine pit design.

- The reporting of the Ore Reserve of Koolan Main is in compliance with the JORC Code, 2012 Edition and the ASX Listing Rules. A summary of the JORC Code, 2012 Edition Table 1 for Koolan Island Main is provided in Appendix 1.

## Acacia East Deposit

| **Acacia East** | | | | | |
|---|---|---|---|---|---|
| | Tonnes millions | Fe % | $SiO_2$ % | $Al_2O_3$ % | P % |
| ***Mineral Resources, above 50% Fe*** | | | | | |
| Measured | 0.7 | 60.9 | 12.63 | 0.15 | 0.008 |
| Indicated | 2.7 | 61.3 | 11.84 | 0.26 | 0.011 |
| Inferred | 3.4 | 60.0 | 13.70 | 0.19 | 0.010 |
| **Total** | **6.8** | **60.6** | **12.85** | **0.21** | **0.010** |
| *Discrepancies may appear due to rounding. Mineral Resources are reported inclusive of Ore Reserves. All tonnages have been estimated as dry tonnages.* | | | | | |

- The Mineral Resource at Koolan Island Acacia East deposit has not been re-interpreted or re-estimated since 30 June 2019.

- The reporting of the Mineral Resource of Acacia East is in compliance with the JORC Code, 2012 Edition and the ASX Listing Rules. A summary of the JORC Code, 2012 Edition Table 1 for Koolan Island Acacia East is provided in Appendix 2.

## Mangrove Deposit

| **Mangrove** | | | | | |
|---|---|---|---|---|---|
| | Tonnes millions | Fe % | $SiO_2$ % | $Al_2O_3$ % | P % |
| ***Mineral Resources, above 50% Fe*** | | | | | |
| Measured | - | - | - | - | - |
| Indicated | 2.1 | 59.9 | 11.36 | 0.80 | 0.039 |
| Inferred | 1.2 | 58.2 | 13.70 | 0.97 | 0.038 |
| **Total** | **3.3** | **59.3** | **12.21** | **0.86** | **0.039** |
| *Discrepancies may appear due to rounding. All tonnages have been estimated as dry tonnages.* | | | | | |

- The Mineral Resource at Koolan Island Mangrove deposit has not changed since 30 June 2019.

- The reporting of the Mangrove Mineral Resource is in compliance with the JORC Code, 2012 Edition and the ASX Listing Rules. A summary of the JORC Code, 2012 Edition Table 1 for Koolan Island Mangrove is provided in Appendix 3.

## EXTENSION HILL

### Extension Hill Deposit

Total Extension Hill Mineral Resources at 30 June 2020:

| **Extension Hill** | | | | | |
|---|---|---|---|---|---|
| | Tonnes millions | Fe % | $SiO_2$ % | $Al_2O_3$ % | P % |
| ***Mineral Resources, above 50% Fe*** | | | | | |
| Measured | 1.3 | 55.3 | 9.16 | 2.76 | 0.077 |
| Indicated | 0.3 | 57.3 | 10.42 | 1.62 | 0.076 |
| Inferred | 0.2 | 56.6 | 10.49 | 1.66 | 0.055 |
| **Total** | **1.8** | **55.8** | **9.53** | **2.44** | **0.074** |
| *Discrepancies may appear due to rounding. Mineral Resources are reported inclusive of Ore Reserves. All tonnages have been estimated as dry tonnages.* | | | | | |

- The Mineral Resource at the Extension Hill deposit has not been re-interpreted or re-estimated since 30 June 2019.
- The reporting of the Extension Hill Mineral Resource is in compliance with the JORC Code, 2012 Edition and the ASX Listing Rules. A summary of the JORC Code, 2012 Edition Table 1 for Extension Hill is provided in Appendix 4.

## IRON HILL

### Iron Hill Deposit

Total Iron Hill Mineral Resources at 30 June 2020:

| **Iron Hill** | | | | | |
|---|---|---|---|---|---|
| | Tonnes millions | Fe % | $SiO_2$ % | $Al_2O_3$ % | P % |
| ***Mineral Resources, above 50% Fe*** | | | | | |
| Measured | - | - | - | - | - |
| Indicated | 2.6 | 55.0 | 13.94 | 1.74 | 0.074 |
| Inferred | 1.1 | 55.0 | 9.86 | 2.61 | 0.081 |
| **Total** | **3.7** | **55.0** | **12.76** | **1.99** | **0.076** |
| *Discrepancies may appear due to rounding. Mineral Resources are reported inclusive of Ore Reserves. All tonnages have been estimated as dry tonnages.* | | | | | |

- The Mineral Resource at the Iron Hill deposit has not been re-interpreted or re-estimated since 30 June 2019.
- The reporting of the Iron Hill Mineral Resource is in compliance with the JORC Code, 2012 Edition and the ASX Listing Rules. A summary of the JORC Code, 2012 Edition Table 1 for Iron Hill is provided in Appendix 5.

## TALLERING PEAK

Total Tallering Peak Mineral Resources at 30 June 2020:

| Tallering Peak | | | | | |
|---|---|---|---|---|---|
| | Tonnes millions | Fe % | $SiO_2$ % | $Al_2O_3$ % | P % |
| ***Mineral Resources, above 50% Fe*** | | | | | |
| **Total** | **-** | **-** | **-** | **-** | **-** |
| *Discrepancies may appear due to rounding. Mineral Resources are reported inclusive of Ore Reserves. All tonnages have been estimated as dry tonnages.* | | | | | |

- The remnant Mineral Resource at the Tallering Peak mine site, located in the T1 and T6 deposits, has been removed from the Mineral Resource inventory due to the site being rehabilitated and there not being a reasonable prospect of economic extraction.

## SHINE

Total Shine Mineral Resources at 30 June 2020, comprising the Shine Hematite and Magnetite Deposits:

| Shine | | | | | |
|---|---|---|---|---|---|
| | Tonnes millions | Fe % | $SiO_2$ % | $Al_2O_3$ % | P % |
| ***Mineral Resources, above 50% Fe*** | | | | | |
| Measured | 5.7 | 58.9 | 9.04 | 1.81 | 0.076 |
| Indicated | 6.6 | 58.0 | 10.01 | 1.35 | 0.070 |
| Inferred | 3.6 | 56.8 | 9.61 | 1.18 | 0.063 |
| **Total** | **15.9** | **58.1** | **9.57** | **1.48** | **0.071** |
| *Discrepancies may appear due to rounding. Mineral Resources are reported inclusive of Ore Reserves. All tonnages have been estimated as dry tonnages.* | | | | | |

- The Mineral Resource at the Shine deposit has not changed since 30 June 2019.
- The reporting of the Shine Mineral Resource is in compliance with the JORC Code, 2012 Edition and the ASX Listing Rules. A summary of the JORC Code, 2012 Edition Table 1 for Shine is provided in Appendix 6.

| Shine Hematite | | | | | |
|---|---|---|---|---|---|
| | Tonnes millions | Fe % | $SiO_2$ % | $Al_2O_3$ % | P % |
| ***Mineral Resources, above 50% Fe*** | | | | | |
| Measured | 4.9 | 59.0 | 9.11 | 1.96 | 0.081 |
| Indicated | 5.3 | 58.0 | 10.39 | 1.44 | 0.071 |
| Inferred | 0.5 | 56.3 | 12.76 | 1.64 | 0.084 |
| **Total** | **10.8** | **58.2** | **10.16** | **1.70** | **0.076** |
| *Discrepancies may appear due to rounding. Mineral Resources are reported inclusive of Ore Reserves. All tonnages have been estimated as dry tonnages.* | | | | | |

| **Shine Magnetite** | | | | | |
|---|---|---|---|---|---|
| | Tonnes millions | Fe % | $SiO_2$ % | $Al_2O_3$ % | P % |
| ***Mineral Resources, above 50% Fe*** | | | | | |
| Measured | 0.8 | 58.5 | 8.62 | 0.89 | 0.050 |
| Indicated | 1.2 | 58.2 | 8.39 | 0.92 | 0.063 |
| Inferred | 3.1 | 56.9 | 9.10 | 1.11 | 0.060 |
| **Total** | **5.1** | **57.5** | **8.42** | **1.03** | **0.059** |
| *Discrepancies may appear due to rounding. Mineral Resources are reported inclusive of Ore Reserves. All tonnages have been estimated as dry tonnages*. | | | | | |

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# APPENDIX 1 – Koolan Island, Main Deposit

## Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections)

| Criteria | Commentary |
|---|---|
| ***Sampling techniques*** | All of the data used for resource estimation is based on the logging and sampling of RC and diamond core drilling.<br>Percussion samples were composited over 2m intervals.<br>Diamond samples were taken at 1m intervals.<br>Reverse Circulation samples were taken over 1m intervals. Historical sampling (pre 1993) is of lower quality and where any ambiguity exists is excluded from the database for estimation. |
| ***Drilling techniques*** | Historic BHP drill hole data from 1957 to 1986 was mostly percussion drilled. BHP drilled 1 diamond hole, 25 RC holes with diamond tails, 44 RC holes and an adit. The BHP data makes up 26% of the total database.<br>Aztec drilled 32 reverse circulation holes which make up 10% of the database.<br>Mount Gibson Iron (MGX) has drilled 243 reverse circulation drill holes and four diamond holes since 2007. The MGX holes make up the majority of the database. |
| ***Drill sample recovery*** | Geologist or driller records sample recovery during drilling. No issues were detected.<br>Standard drilling techniques were adequate for sample recovery.<br>No relationship between sample recovery and grade has been demonstrated. No bias to material size has been demonstrated. |
| ***Logging*** | All drill holes have been geologically logged appropriately to the mineralisation style to support Mineral Resource estimation with logging subsequently confirmed through mining.<br>The total length of drill holes is 49,834.5m with approximately 98% of the drill holes logged. |
| ***Sub-sampling techniques and sample preparation*** | Samples are received and prepared at the SGS run Koolan Island lab as 2 to 5 kg RC chip samples. They are dried for 12 hours at 105°C, crushed to <2mm and split and reduced using rotary sampling devices to 300 grams. The 300 gram sample is pulverised to 75µm, from which an aliquot is taken for XRF and LOI analysis.<br>Sample preparation from historical drilling prior to 1993 by BHP is not clearly understood, however this makes up 26% of the drill database, and less than 10% of sample and assay data used for the remaining Mineral Resource. |
| ***Quality of assay data and laboratory tests*** | The nature, quality and appropriateness of the sample preparation techniques employed by MGX are to industry standard.<br>Most BHP holes were shallow and the areas have since been mined out. No QAQC information is available for these holes. Comparison between BHP holes and Aztec holes in 2005 showed there is good agreement between both datasets for Fe, and QA/QC data supports the accuracy of the Aztec data across the assay suite. While the BHP $SiO_2$ and $Al_2O_3$ data differs, there is no good reason to doubt its quality given that the company was able to operate and successfully meet sales contracts.<br>Aztec Resources Ltd holes had field duplicates, lab duplicates and site made standards as QA checks. Results were of acceptable quality.<br>MGX uses certified reference material as a standard, along with field and laboratory duplicates. MGX QAQC procedures and results are of acceptable quality. |
| ***Verification of sampling and assaying*** | No external verification was completed.<br>Historical BHP data was twinned by Aztec RC holes and found to be acceptable<br>Drill hole data found to be spurious was excluded from the database<br>Adjustments to data were made where required after data validation processes. |
| ***Location of data points*** | Survey control of hole locations have been established through the mine survey department, while detailed down hole surveys of accessible holes have been conducted by contractors, Surtron. |

| Criteria | Commentary |
|---|---|
| | Koolan Island Mine Grid (KIMG) is aligned consistent with average strike trends of the mineralisation at most of the known deposits, and the Main deposit in particular. The marked variants from this are the Eastern and Mullet limbs. All directional references in the Mineral Resources reports are according to the KIMG, which is rotated +30.18° relative to the Map Grid of Australia (MGA94_51).<br><br>Topographic and survey control has been undertaken by either the mine-based survey team, or contract survey companies and is considered high quality. |
| ***Data spacing and distribution*** | The data spacing is approximately 50m along the strike of the mineralisation.<br><br>The data spacing and distribution is more than adequate to establish the degree of geological and grade continuity appropriate for the Mineral Resource estimation and classifications applied. |
| ***Orientation of data in relation to geological structure*** | The orientation of the mineralisation is well defined and drill holes were oriented to intersect mineralisation at an appropriate angle. |
| ***Sample security*** | Sample security was not considered a significant risk to the project. No specific measures have been taken by MGX to ensure sample security. |
| ***Audits or reviews*** | A formal audit of BHP drilling and survey data was carried out by Snowden Mining consultants in 2004. The historical BHP and Aztec data is generally of moderate quality as inferred by nearby MGX drill holes confirming broadly the extent and tenor of Fe mineralisation. Most historical data is in mined out areas and has little influence on remaining Mineral Resources. Ongoing reconciliations have not to date indicated an urgent need for external audits of the resource database. An audit of the Koolan mineral laboratory was conducted in May 2014 by an external group with no material concerns or problems identified. |

## Section 2 Reporting of Exploration Results

(Criteria listed in Section 1, and where relevant, in Sections 3 and 4, also apply to this section)

| Criteria | Commentary |
|---|---|
| ***Mineral tenement and land tenure status*** | Main Mineral Resource is located on Mining Lease M04/417-I held by Koolan Iron Ore Pty Ltd, a 100% owned subsidiary of MGX. The mining tenement is granted under the Western Australian Mining Act, 1978. Koolan Iron Ore Pty Ltd has a native title and heritage agreement with the Dambimangari Native title group |
| ***Exploration done by other parties*** | Exploration has been conducted in the area of the Main resource since 1922, with active exploration (and mining) by BHP from 1957 to 1993, Aztec Resources from 2004 to 2006 and MGX from 2006 to 2012. |
| ***Geology*** | The mineralised zone is an overturned enriched haematitic sandstone horizon within the Yampi Sandstone Member unconformably overlying the Elgee Siltstone. It is between 12 and 30 metres thick, and dips 55 to 80º to the south. |
| ***Drill hole Information*** | As outlined in Drilling techniques of Section 1, there are more than 300 drill holes at or around the Main deposit dating back to 1957 forming the basis for the Mineral Resource estimate outlined in Section 3. Material drill results for Main pit have previously been announced to the market as required under the reporting requirements of the ASX Listing Rules. All material exploration results relevant to the Main area have been considered in establishing the Mineral Resource discussed in section 3. |
| ***Data aggregation methods*** | Not Applicable - No exploration results or drill hole intercepts are discussed in this ASX announcement. |
| ***Relationship between mineralisation*** | No exploration results or drill hole intercepts are discussed in this ASX announcement, however as the deposit has been mined for a number of years the true mineralisation widths are well known and understood. |

| Criteria | Commentary |
|---|---|
| ***widths and intercept lengths*** | |
| ***Diagrams*** | Cross Sections, long sections and photos of the geology, mineralisation and mineral resource have been released in previous ASX announcements. |
| ***Balanced reporting*** | Not Applicable - No exploration results or drill hole intercepts are discussed in this ASX announcement. |
| ***Other substantive exploration data*** | Not Applicable - No exploration results or drill hole intercepts are discussed in this ASX announcement. |

## Section 3 Estimation and Reporting of Mineral Resources

(Criteria listed in Section 1, and where relevant in Sections 2 and 4, also apply to this section)

| Criteria | Commentary |
|---|---|
| ***Database integrity*** | Data extracted from the database for Mineral Resource estimation purposes is run through general checks to ensure data validity. The database is maintained by MGX with automated validation and extraction processes in place.<br><br>Checks on data include sensible ranges of values for attributes, drill hole collars matching topography and within expected limits, overlapping sample intervals, depths, azimuths, dips and co-ordinates for consistency. Any inconsistent information is either modified or excluded from use in the estimation.<br><br>Further checks are completed during the importing of the data into the mine planning software prior to modelling and estimation. |
| ***Site visits*** | Elizabeth Haren, the Competent Person for Mineral Resources, has made several visits to Koolan Island. Elizabeth Haren was a full-time employee of, and is now a consultant to, Mount Gibson Iron Limited. |
| ***Geological interpretation*** | There is an extremely high degree of confidence with the mineralisation interpretation. The mineralisation and geology is very consistent and has been proven by historical and current mining on Koolan Island.<br><br>Interpretation used in the Mineral Resource estimate uses the drill holes exclusively.<br><br>There are limited alternative interpretations possible for the mineralisation which would have a minimal impact on the Mineral Resource.<br><br>The mineralisation is in the Yampi Sandstone directly above the unconformity of the Elgee Siltstone.<br><br>The continuity of grade and geology is very good. |
| ***Dimensions*** | The Main deposit mineralisation is approximately 2,000 m in length and is currently modelled to approximately 215 m in depth below mean sea level. Mineralisation continues and extends beyond this depth however further infill drilling is required to define this area with confidence. The resource is open at depth. |
| ***Estimation and modelling techniques*** | Ordinary Kriging of a suite of Iron Ore elements (Fe, $SiO_2$, $Al_2O_3$, LOI, P, S, CaO, MnO, MgO, $Na_2O$, TiO) was completed using CAE Studio software. Minor domains of limited extent and information were estimated using Inverse Distance.<br><br>Waste material was estimated where enough quality data was present however the majority of waste material is assigned default grades.<br><br>While the mineralisation tends to be planar in most cases, care was taken to ensure orientation changes were honoured by the sample search and estimation orientation regimes. Estimation parameter selection was guided by the results of mining reconciliation.<br><br>No assumptions were made regarding recovery of by-products. |

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| | A full suite of Iron Ore elements were estimated.<br>Block sizes used are 25 mE, 6 mN and 8 mRL. The bulk of the drilling data is at a nominal 25 m x 25 m spacing at the western end of the deposit and increases to nominally 50 m x 50 m in the eastern end.<br>No local estimation or SMU correction has been undertaken.<br>Correlations between elements were considered and while co-kriging was not implemented, using similar estimation parameters for correlated elements allows some reproduction of correlations.<br>All estimation was completed within mineralisation units using "hard" boundaries.<br>In general, most element distributions did not have extreme outliers therefore minimal top-cutting was used. Where top-cutting occurred this was done prior to sample compositing.<br>Validation was completed by checking the global averages of composites versus model from each domain, by creating trend plots of composites versus model from each domain and by visual validation of grade trends in the model to ensure they honoured the input data. |
| ***Moisture*** | All tonnages have been estimated as dry tonnages. |
| ***Cut-off parameters*** | The 50% Fe cut-off is determined by the combined grade-tonnage characteristics as the minimum iron grade and/or maximum contaminant grades which will allow production to maintain contract-specified qualities for Lump and Fines products as currently occurring at Koolan Island.<br>A cut-off study was completed by Coffey International Ltd (mining consultants) supporting the choice of 50% Fe as the cut-off. |
| ***Mining factors or assumptions*** | The mining factors assumed correlate directly to recent operations at Koolan Island. |
| ***Metallurgical factors or assumptions*** | The metallurgical factors assumed correlate directly to recent operations at Koolan Island. |
| ***Environmental factors or assumptions*** | Environmental factors are already considered as part of the recent mining operations at Koolan Island. |
| ***Bulk density*** | Surtron down hole survey data has been used to measure densities on all deposits at Koolan Island.<br>In all cases the Surtron data confirms the positive relationship between Fe and density.<br>Regression formulas have been used to assign densities with respect to Fe estimates. In 2013, review of reconciliation information between production and the Mineral Resource estimate led to a review of bulk density. On this basis the regression was modified to reflect higher densities for the 2013 Mineral resource. This method was reviewed and continued for subsequent Mineral Resource estimations. |
| ***Classification*** | The basis for the classification of the Mineral Resource has included:<br>a. Quality and reliability of raw data;<br>b. Confidence in the geological interpretation;<br>c. Number, spacing and orientation of intercepts in each mineralised zone;<br>d. Confidence concerning the known limits of mining;<br>e. Knowledge of grade and density continuities gained from observations and;<br>f. Geostatistical analyses.<br>This information was used to code blocks meeting confidence criteria such as which estimation pass it was estimated in and the kriging variance of a block to define Measured, Indicated and Inferred material. |
| ***Audits or reviews*** | The Mineral Resource estimates are reviewed internally within MGX on a three levelled assessment structure. Periodic updates are completed when new information and understanding is required to be reflected in the Mineral Resource. |

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| ***Discussion of relative accuracy/ confidence*** | The block model grade estimates were validated against the drill hole composites to ensure that the model reflects the input data. Monthly, quarterly and annual reconciliations are conducted, assessed and reported.<br>The Koolan Island Mineral Resource models are provided as a basis for long term planning and mine design, and are not necessarily sufficient for shorter term planning and scheduling. |

## Section 4 Estimation and Reporting of Ore Reserves

(Criteria listed in Section 1, and where relevant in Sections 2 and 3, also apply to this section)

| Criteria | Commentary |
|---|---|
| ***Mineral Resource estimate for conversion to Ore Reserves*** | The Mineral Resource for Main deposit has not been re-interpreted or re-estimated since 30 June 2020. There has been no additional data or information to alter the Mineral Resource estimate. This Mineral Resource statement was signed by Elizabeth Haren, a consultant to Mount Gibson Iron Limited and an AusIMM member with sufficient relevant experience to qualify as a Competent Person.<br>The Mineral Resource is inclusive of these Ore Reserves. |
| ***Site visits*** | Brett Morey, Technical Services Manager with Mount Gibson Iron worked at Koolan Island for four years from 2012 to 2015 and in the Corporate office since 2016. |
| ***Study status*** | A detailed and practical mine plan was developed within the previously established Main Pit. The Main Pit was optimised using Whittle software.<br>Conventional open pit mining is planned to continue as per previous operations using hydraulic excavators and dump trucks.<br>Standard modifying factors used for open pit mining were applied. |
| ***Cut-off parameters*** | A cut-off grade of 50% Fe was used. This cut-off grade reflects current mining practice, blending, and product sales. A cut-off grade study was undertaken in 2014 which supports the use of the 50% cut off used in this statement.<br>MGX uses the definition of marginal cut-off grade as follows: "material that would produce a more positive cash flow if processed than when treated as waste in the process of mining towards the defined pit limits. It applies to material that will be mined or stockpiled in the process of gaining access to economic material." |
| ***Mining factors or assumptions*** | The 2018 Feasibility Study converted the Mineral Resource in Main pit deposit to an Ore Reserve.<br>The deposit has been mined by conventional open pit mining methods, utilising industry standard practices of drilling, blasting, and load and haul using hydraulic backhoe excavators. The overburden waste has been removed by large size excavators with bulk mining method. Where required medium size excavators have been used for selective mining of ore.<br>Known mining parameters from Main pit were used in the optimisation and pit design.<br>A review of the geotechnical parameters was completed by Mount Gibson Iron Limited technical staff in 2019 which resulted in an increased slope angle from 75 degrees to 80 degrees in the hanging-wall rock units from approximately 25 metres below surface level (978 RL). The revised design parameters were validated by Mining One Consultants before being adopted in the Life of Mine pit design.<br>Modelling of mining dilution in three dimensions is by the digital application of a dilution skin around the ore in the Mineral Resource model.<br>Metallurgical parameters are then added to the diluted model.<br>The final diluted mining block model is used directly for pit optimisation and scheduling, without the further application of global factors.<br>Ore Reserves are reported directly from the diluted mining block model, with consideration of grade, topography and pit design.<br>Inferred Mineral Resources do not form part of the Ore Reserves.<br>Mine infrastructure is well established following 9 years of mining operations.<br>The physical width and therefore depth of Main Pit is constrained by the final hanging wall pit limit relative to the position of the seawall. |

| Criteria | Commentary |
|---|---|
| | Main pit has an overall strip ratio of 2.7:1 Waste: Ore |
| ***Metallurgical factors or assumptions*** | Ore from the Main deposit is crushed and screened at the existing Koolan Island process plant.<br>Metallurgical characteristics of Main Pit ore are known from seven years of recent actual production data, and 30 years of historical mining and crushing prior to 1993. |
| ***Environmental*** | All statutory and regulatory approvals have been received for mining, occupational health and safety, environmental, and native title rights. |
| ***Infrastructure*** | Existing site infrastructure in place includes haul roads, pumping, crusher plant, stockpile areas, port, offices, workshop, warehouse, camp, water supply, airstrip, power generation, barge landing and associated facilities. |
| ***Costs*** | All costs for mining, processing and shipping were derived from the operating mine and existing contracts.<br>Royalties currently paid to the State Government were included in cost modelling.<br>Penalties and premiums currently applying to impurities levels in product sales to customers were included in cost modelling. |
| ***Revenue factors*** | Ore Reserves were calculated based on MGX FY2020 financial modelling. Financial assumptions used in cost modelling are derived from the operating mine and existing contracts and include:<br>• forecast consensus benchmark iron ore prices<br>• impurity penalties<br>• freight<br>• currency exchange rates<br>• royalties<br>Lump yield and product quality are derived from the LOM schedule. |
| ***Market assessment*** | MGX has customer contracts in place for all of Koolan Island's production volume.<br>Koolan Island product is a very high quality ore that is sought after by customers.<br>Crushed and screened products were sold to these customers in previous years. |
| ***Economic*** | The LOM financial model has demonstrated that Main pit will generate significant NPV. The NPV is most sensitive to iron ore price and foreign exchange rate variation, but has the benefit of a high Fe grade of 65.2%, and average strip ratio of 2.7:1 Waste:Ore. |
| ***Social*** | The Koolan Island mine has operated continuously under Mount Gibson management since 2007. Mount Gibson enjoys a good relationship with the Traditional Owners and local community. |
| ***Other*** | Major risks identified are:<br>Seawall. Independent experts were engaged throughout the design process to review the seawall design to mitigate the risk of seawall failure and flooding of Main Pit.<br>Footwall. Extensive geotechnical studies have been carried out, with established factors of safety of the footwall and a ground support plan established.<br>Water ingress from high rainfall events and cyclones is a short term risk. Strategies are in place to control this risk, including implementation of a high capacity pumping system.<br>Iron ore price variation and foreign exchange rates. |
| ***Classification*** | In-pit Measured and Indicated Mineral Resources have been converted to Proved and Probable Ore Reserves.<br>Ore Reserves do not include Inferred Mineral Resources.<br>Mr Brett Morey is satisfied that the stated Probable Ore Reserves accurately reflect the outcome of mine planning and the input of economic parameters into optimisation studies. |
| ***Audits or reviews*** | The project parameters and outcomes have been internally reviewed and approved by MGX executive management. Periodic updates are completed when new information and understanding is required to be reflected in the Ore Reserve. |

| Criteria | Commentary |
| --- | --- |
| ***Discussion of relative accuracy/ confidence*** | All parameters are well defined from the existing mining operation.<br><br>Monthly, quarterly and annual reconciliations are conducted, assessed and reported. Historical reconciliation data indicates that the factors used to convert from Mineral Resource to Ore Reserve are robust. |

# APPENDIX 2 – Koolan Island, Acacia East Deposit

## Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections)

| Criteria | Commentary |
|---|---|
| ***Sampling techniques*** | All of the data used for resource estimation is based on the logging and sampling of RC and diamond core drilling.<br>Percussion samples were composited over 2m intervals.<br>Diamond samples were taken at 1m intervals.<br>Reverse Circulation samples were taken over 1m intervals. Historical sampling (pre 1993) is of lower quality and where any ambiguity exists, samples and assays are excluded from the database for estimation. |
| ***Drilling techniques*** | 31 historic BHP drill holes from 1961 to 1986 were percussion drilled. BHP drilled 1 diamond hole in 1959. The BHP data make up 14% of the total database. 50 reverse circulation drillholes were completed by Aztec in 2004 & 2005, and 136 reverse circulation holes completed by MGX from 2007 to 2012. |
| ***Drill sample recovery*** | Geologists or drillers recorded sample recovery during drilling. No issues were detected.<br>Standard drilling techniques were adequate for sample recovery.<br>No relationship between sample recovery and grade has been demonstrated. No bias to material size has been demonstrated. |
| ***Logging*** | All drill holes have been geologically logged appropriately to the mineralisation style to support Mineral Resource estimation.<br>Some diamond core has been photographed.<br>The total length of drill holes is 21,544.78m with approximately 98% of the drill holes logged. |
| ***Sub-sampling techniques and sample preparation*** | Samples are received and prepared at the SGS run Koolan Island lab as 2 to 5 kg RC chip samples. They are dried for 12 hours at 105°C, crushed to <2mm and split and reduced using riffle splitters or rotary sampling devices to 300 grams. The 300 gram sample is pulverised to 75µm, from which an aliquot is taken for XRF and LOI analysis.<br>Sample preparation from historical drilling prior to 1993 by BHP is not clearly understood, however this makes up 14% of the drill database, and less than 8% of sample and assay data used for the remaining Mineral Resource. |
| ***Quality of assay data and laboratory tests*** | Most BHP holes were shallow and the areas have since been mined out. No QAQC information is available for these holes. Comparison between BHP holes and Aztec holes in 2005 showed there is good agreement between both datasets for Fe, and QAQC data supports the accuracy of the Aztec data across the assay suite. While the BHP $SiO_2$ and $Al_2O_3$ data differs, there is no good reason to doubt its quality given that the company was able to operate and successfully meet sales contracts.<br>Aztec Resources Ltd holes had field duplicates, lab duplicates and site made standards as QA checks. Results were of acceptable quality.<br>MGX uses certified reference material as a standard, along with field and laboratory duplicates. MGX QAQC procedures and results are of acceptable quality. |
| ***Verification of sampling and assaying*** | No external verification was completed.<br>Historical BHP data was twinned by Aztec RC holes and found to be acceptable<br>Drill hole data found to be spurious was excluded from the database<br>Adjustments to data were made where required after data validation processes. |
| ***Location of data points*** | Survey control of hole locations has been established through the mine survey department, while detailed down hole surveys of accessible holes have been conducted by contractors Surtron. |
| | Koolan Island Mine Grid (KIMG) which is aligned consistent with average strike trends of the mineralisation at most of the known deposits and the Main deposit in particular. The marked variants from this are the Eastern and |

| Criteria | Commentary |
|---|---|
| | Mullet limbs. All directional references in this report are according to the KIMG, which is rotated +30.18° relative to the Map Grid of Australia (MGA94_51). |
| | Topographic and survey control has been undertaken by either the mine-based survey team, or contract survey companies.<br><br>The data spacing is approximately 25m along the strike of the mineralisation. |
| ***Data spacing and distribution*** | The data spacing and distribution is more than adequate to establish the degree of geological and grade continuity appropriate for the Mineral Resource estimation and classifications applied.<br><br>Percussion samples were composited over 2m intervals. |
| ***Orientation of data in relation to geological structure*** | The orientation of the mineralisation is well defined and drill holes were oriented to intersect mineralisation at an appropriate angle. |
| ***Sample security*** | Sample security was not considered a significant risk to the project. No specific measures have been taken by MGX to ensure sample security. |
| ***Audits or reviews*** | A formal audit of BHP drilling and survey data was carried out by Snowden Mining consultants in 2004. The historical BHP and Aztec data is generally of moderate quality as inferred by nearby MGX drill holes confirming broadly the extent and tenor of Fe mineralisation. Most historical data is in mined out areas and has little influence on remaining Mineral Resources. An audit of the Koolan mineral laboratory was conducted in May 2014 by an external group with no material concerns or problems identified. |

## Section 2 Reporting of Exploration Results

(Criteria listed in Section 1, and where relevant, in Sections 3 and 4, also apply to this section)

| Criteria | Commentary |
|---|---|
| ***Mineral tenement and land tenure status*** | Acacia East Mineral Resource is located on Mining Lease M04/416-I held by Koolan Iron Ore Pty Ltd, a 100% owned subsidiary of Mount Gibson Iron Ltd. The mining tenement is granted under the Western Australian Mining Act, 1978. Koolan Iron Ore Pty Ltd has a native title and heritage agreement with the Dambimangari Native title group. |
| ***Exploration done by other parties*** | Exploration has been conducted in the area of the Acacia East resource since 1959, with active exploration by BHP from 1959 to 1993, Aztec Resources from 2004 to 2006 and MGX from 2006 to 2012. |
| ***Geology*** | The mineralised zone is an enriched haematitic sandstone horizon within the Yampi Sandstone member unconformably overlying the Elgee Siltstone. It is between 8 and 20 metres thick, and dips 45 to 60° to the south. |
| ***Drill hole Information*** | As outlined in Drilling techniques of Section 1, there are 237 drillholes at the Acacia East resource dating back to 1959, forming the basis for the Mineral Resource estimate outlined in Section 3. Material drill results for Acacia East have previously been announced to the market as required under the reporting requirements of the ASX Listing Rules. All material exploration results relevant to the Acacia area have been considered in establishing the Mineral Resource discussed in Section 3. Going forward any new exploration results that result in a material change to existing Mineral Resource in Section 3 will be updated under the normal transitioning to JORC 2012. |
| ***Data aggregation methods*** | Not Applicable - No exploration results or drillhole intercepts are discussed in this ASX announcement. |
| ***Relationship between mineralisation widths and*** | Not Applicable - No exploration results or drillhole intercepts are discussed in this ASX announcement. |

| Criteria | Commentary |
|---|---|
| ***intercept lengths*** | |
| ***Diagrams*** | No exploration results or drillhole intercepts are discussed in this ASX announcement. Cross Sections, long sections and photos of the geology, mineralisation and mineral resource have been released in previous ASX reports. |
| ***Balanced reporting*** | Not Applicable - No exploration results or drillhole intercepts are discussed in this ASX announcement. |
| ***Other substantive exploration data*** | Not Applicable - No exploration results or drillhole intercepts are discussed in this ASX announcement. |
| ***Further work*** | Not Applicable - No exploration results or drillhole intercepts are discussed in this ASX announcement. |

## Section 3 Estimation and Reporting of Mineral Resources

(Criteria listed in Section 1, and where relevant in Sections 2 and 4, also apply to this section)

| Criteria | Commentary |
|---|---|
| ***Database integrity*** | Data extracted from the database for Mineral Resource estimation purposes is run through general checks to ensure data is valid. The database is maintained by MGX with automated extraction processes in place.<br><br>Checks on data include sensible ranges of values for attributes, drill hole collars matching topography and with expected limits, overlapping sample intervals, depths, azimuths, dips and co-ordinates for consistency. Any inconsistent information is either modified or excluded from use in the estimation.<br><br>Further checks are completed during the importing of the data into the mine planning software prior to modelling and estimation. |
| ***Site visits*** | Elizabeth Haren, the Competent Person for the Acacia East Mineral Resource, has made several visits to Acacia East at Koolan Island. |
| ***Geological interpretation*** | There is an extremely high degree of confidence with the mineralisation interpretation. The mineralisation and geology is very consistent and has been proven by historical and current mining on Koolan Island.<br><br>Interpretation used in the Mineral Resource estimate uses the drill holes exclusively.<br><br>There are limited alternative interpretations possible for the mineralisation which would have a minimal impact on the Mineral Resource.<br><br>The mineralisation is generally between two geological units.<br><br>The continuity of grade and geology is very good. |
| ***Dimensions*** | The Acacia East mineralisation is approximately 1,500m in length and is modelled to approximately 300 m in depth. |
| ***Estimation and modelling techniques*** | Ordinary Kriging of a suite of Iron Ore elements (Fe, $SiO_2$, $Al_2O_3$, LOI, P, S, CaO, MnO, MgO, $Na_2O$, TiO) was completed using CAE Studio software. Minor domains of limited extent and information were estimated using Inverse Distance.<br><br>Waste material was estimated where enough quality data was present however the majority of waste material is assigned default grades.<br><br>While the mineralisation tends to be planar in most cases, care was taken to ensure orientation changes were honoured by the sample search and estimation orientation regimes. Estimation parameter selection was guided by the results of mining reconciliation. |

| Criteria | Commentary |
|---|---|
| | No assumptions were made regarding recovery of by-products.<br>A full suite of Iron Ore elements were estimated.<br>Block sizes used are 12.5 mE, 8 mN and 6 mRL. The bulk of the drilling data is on 50mE spaced sections or closer.<br>No local estimation or SMU correction has been undertaken.<br>Correlations between elements were considered and while co-kriging was not implemented, using similar estimation parameters for correlated elements allows some reproduction of correlations.<br>All estimation was completed within mineralisation units using "hard" boundaries.<br>In general, most element distributions did not have extreme outliers therefore minimal top-cutting was used. Where top-cutting occurred this was done prior to sample compositing.<br>Validation was completed by checking the global averages of composites versus model from each domain, by creating trend plots of composites versus model from each domain and by visual validation of grade trends in the model to ensure they honoured the input data. |
| ***Moisture*** | All tonnages have been estimated as dry tonnages. |
| ***Cut-off parameters*** | The 50%Fe cut-off is determined by the combined grade-tonnage characteristics as the minimum iron grade and/or maximum contaminant grades which will allow production to maintain contract-specified qualities for Lump and Fines products as currently occurring at Koolan Island. |
| ***Mining factors or assumptions*** | The mining factors are assumed to correlate directly to the current operation at Koolan Island. |
| ***Metallurgical factors or assumptions*** | The metallurgical factors are assumed to correlate directly to current operation at Koolan Island. |
| ***Environmental factors or assumptions*** | Environmental factors are already considered as part of the current mining operations at Koolan Island. |
| ***Bulk density*** | Surtron down hole survey data has been used to measure densities on all deposits at Koolan Island.<br>In all cases the Surtron data confirms the positive relationship between Fe and density.<br>Regression formulas have been used to assign densities with respect to Fe estimates. |
| ***Classification*** | The basis for the classification of the Mineral Resource has included:<br>a. Quality and reliability of raw data;<br>b. Confidence in the geological interpretation;<br>c. Number, spacing and orientation of intercepts in each mineralised zone;<br>d. Confidence concerning the known limits of mining;<br>e. Knowledge of grade and density continuities gained from observations and;<br>f. Geostatistical analyses. |
| | This information was used to guide digitising of strings around defined classification areas in either long section or plan, depending on the orientation of the mineralisation. The strings were then used to flag the classification to the model. |

| Criteria | Commentary |
|---|---|
| ***Audits or reviews*** | The Mineral Resource estimates are reviewed internally within MGX on a three levelled assessment structure. Periodic updates are completed when new information and understanding is required to be reflected in the Mineral Resource. |
| ***Discussion of relative accuracy/ confidence*** | The Koolan Island Mineral Resource models are provided as a basis for long term planning and mine design, and are not necessarily sufficient for shorter term planning and scheduling. The block model grade estimates were validated against the drillhole composites to ensure that the model reflects the input data.<br>Monthly, quarterly and annual reconciliations are conducted, assessed and reported. |

# APPENDIX 3 – Koolan Island, Mangrove Deposit

## Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections)

| Criteria | Commentary |
|---|---|
| ***Sampling techniques*** | All of the data used for the Mineral Resource estimation is based on the logging and sampling of RC and diamond core drilling.<br><br>Percussion samples were composited over 2m intervals.<br>Diamond samples were taken at 1m intervals.<br>Reverse Circulation samples were taken over 1m intervals. Historical sampling is of lower quality and where any ambiguity exists is excluded from the database for estimation. |
| ***Drilling techniques*** | 9 percussion drilled holes and 44 reverse circulation holes were used for estimation. |
| ***Drill sample recovery*** | Geologist or driller records show sample recovery during drilling. No issues were detected.<br><br>Standard drilling techniques were adequate for sample recovery.<br><br>No relationship between sample recovery and grade has been demonstrated. No bias to material size has been demonstrated. |
| ***Logging*** | All drill holes have been geologically logged appropriately to the mineralisation style to support Mineral Resource estimation with logging subsequently confirmed through mining. |
| ***Sub-sampling techniques and sample preparation*** | Samples are received and prepared at the SGS run Koolan Island lab as 2 to 5 kg RC chip samples. They are dried for 12 hours at 105°C, crushed to <2mm and split and reduced using riffle splitters or rotary sampling devices to 300 grams. The 300 gram sample is pulverised to 75µm, from which an aliquot is taken for XRF and LOI analysis. |
| ***Quality of assay data and laboratory tests*** | The nature, quality and appropriateness of the sample preparation techniques employed by MGX are to industry standard.<br><br>Most BHP holes were shallow and the areas have since been mined out. No QAQC information is available for these holes. Comparison between BHP holes and Aztec holes in 2005 showed there is good agreement between both datasets for Fe, and QA/QC data supports the accuracy of the Aztec data across the assay suite. While the BHP $SiO_2$ and $Al_2O_3$ data differs, there is no good reason to doubt its quality given that the company was able to operate and successfully meet sales contracts.<br><br>Aztec Resources Ltd holes had field duplicates, lab duplicates and site made standards as QA checks. Results were of acceptable quality.<br><br>MGX uses certified reference material as a standard, along with field and laboratory duplicates. MGX QAQC procedures and results are of acceptable quality. |
| ***Verification of sampling and assaying*** | No external verification was completed.<br><br>Historical BHP data was twinned by Aztec RC holes and found to be acceptable<br><br>Drill hole data found to be spurious was excluded from the database<br><br>Adjustments to data were made where required after data validation processes. |
| ***Location of data points*** | Survey control of hole locations have been established through the mine survey department, while detailed down hole surveys of accessible holes have been conducted by contractors Surtron.<br><br>Koolan Island Mine Grid (KIMG) is aligned consistent with average strike trends of the mineralisation at most of the known deposits and the Main deposit in particular. The marked variants from this are the Eastern and Mullet limbs. All directional references in the Mineral Resources reports are according to the KIMG, which is rotated +30.18° relative to the Map Grid of Australia (MGA94_51).<br><br>Topographic and survey control has been undertaken by either the mine-based survey team, or contract survey companies and is considered high quality. |

| Criteria | Commentary |
|---|---|
| ***Data spacing and distribution*** | The data spacing is approximately 50m along the strike of the mineralisation.<br><br>The data spacing and distribution is more than adequate to establish the degree of geological and grade continuity appropriate for the Mineral Resource estimation and classifications applied.<br><br>Percussion samples were composited over 2m intervals. |
| ***Orientation of data in relation to geological structure*** | The orientation of the mineralisation is well defined and drill holes were oriented to intersect mineralisation at an appropriate angle. |
| ***Sample security*** | Sample security was not considered a significant risk to the project. No specific measures have been taken by MGX to ensure sample security. |
| ***Audits or reviews*** | A formal audit of BHP drilling and survey data was carried out by Snowden Mining consultants in 2004. The historical BHP and Aztec data is generally of moderate quality as inferred by nearby MGX drill holes confirming broadly the extent and tenor of Fe mineralisation. Most historical data is in mined out areas and has little influence on remaining Mineral Resources. An audit of the Koolan mineral laboratory was conducted in May 2014 by an external group with no material concerns or problems identified. |

## Section 2 Reporting of Exploration Results

(Criteria listed in section 1, and where relevant, in sections 3 and 4, also apply to this section)

| Criteria | Commentary |
|---|---|
| ***Mineral tenement and land tenure status*** | The Mangrove Mineral Resource is located on Mining Lease M04/417-I held by Koolan Iron Ore Pty Ltd, a 100% owned subsidiary of Mount Gibson Iron Ltd. The mining tenement is granted under the Western Australian Mining Act, 1978. Koolan Iron Ore Pty Ltd has a native title and heritage agreement with the Dambimangari Native title group. |
| ***Exploration done by other parties*** | Exploration has been conducted in the area of the Mangrove resource since 1955, with active exploration by BHP from 1957 to 1993, Aztec Resource from 2004 to 2006 and MGX from 2006 to 2012. |
| ***Geology*** | The mineralised zone is an enriched haematitic sandstone horizon within the Yampi Sandstone Member unconformably overlying the Elgee Siltstone. It is between 12 and 30 metres thick. The mineralised unit is overturned and dips from 80° to the south in the west, twisting to right way up and 80° to the North in the east. |
| ***Drill hole Information*** | As outlined in Drilling techniques of Section 1, there are 9 percussion drill holes and 44 reverse circulation drill holes at Mangrove, which form the basis for the Mineral Resource estimate outlined in Section 3. Material drill results for Mangrove have previously been announced to the market as required under the reporting requirements of the ASX Listing Rules. All material exploration results relevant to the Mangrove area have been considered in establishing the Mineral Resource discussed in section 3. Going forward any new exploration results that result in a material change to existing Mineral Resource in section 3 will be updated under the normal transitioning to JORC 2012. |
| ***Data aggregation methods*** | Not Applicable - No exploration results or drillhole intercepts are discussed in this ASX announcement. |
| ***Relationship between mineralisation widths and intercept lengths*** | Not Applicable - No exploration results or drillhole intercepts are discussed in this ASX announcement. |

| Criteria | Commentary |
|---|---|
| ***Diagrams*** | No exploration results or drillhole intercepts are discussed in this ASX announcement. Cross Sections, long sections and photos of the geology, mineralisation and mineral resource have been released in previous ASX reports. |
| ***Balanced reporting*** | Not Applicable - No exploration results or drillhole intercepts are discussed in this ASX announcement. |
| ***Other substantive exploration data*** | Not Applicable - No exploration results or drillhole intercepts are discussed in this ASX announcement. |
| ***Further work*** | Not Applicable - No exploration results or drillhole intercepts are discussed in this ASX announcement. |

## Section 3 Estimation and Reporting of Mineral Resources

(Criteria listed in Section 1, and where relevant in Sections 2 and 4, also apply to this section)

| Criteria | Commentary |
|---|---|
| ***Database integrity*** | Data extracted from the database for Mineral Resource estimation purposes is run through general checks to ensure data is valid. The database is maintained by Mount Gibson with automated extraction processes in place.<br><br>Checks on data include sensible ranges of values for attributes, drillhole collars matching topography and with expected limits, overlapping sample intervals, depths, azimuths, dips and co-ordinates for consistency. Any inconsistent information is either modified or excluded from use in estimation. |
| ***Site visits*** | Elizabeth Haren, the Competent Person for Mineral Resources, has made several visits to Koolan Island. |
| ***Geological interpretation*** | There is an extremely high degree of confidence with the mineralisation interpretation. The mineralisation and geology is very consistent and has been proven by historical and current mining on Koolan Island.<br><br>Interpretation uses the drill holes exclusively.<br><br>There are limited alternative interpretations possible for the mineralisation which would have a minimal impact on the Mineral Resource.<br><br>The mineralisation is generally between two geological units.<br><br>The continuity of grade and geology is very good. |
| ***Dimensions*** | The Mangrove mineralisation is approximately 1,000m in length and is modelled to approximately 250 m in depth. |
| ***Estimation and modelling techniques*** | Ordinary Kriging of a suite of Iron Ore elements (Fe, $SiO_2$, $Al_2O_3$, LOI, P, S, CaO, MnO, MgO, $Na_2O$, TiO) was completed using CAE Studio software. Minor domains of limited extent and information were estimated using Inverse Distance.<br><br>Waste material was estimated where enough quality data was present however the majority of waste material is assigned default grades.<br><br>While the mineralisation tends to be planar in most cases, care was taken to ensure orientation changes were honoured by the sample search and estimation orientation regimes.Estimation parameter selection was guided by the results of mining reconciliation.<br><br>No assumptions were made regarding recovery of by-products.<br><br>A full suite of Iron Ore elements were estimated.<br><br>Block sizes used are 12.5 mE, 8 mN and 6 mRL. The bulk of the drilling data is on 50mE spaced sections or closer. |

| Criteria | Commentary |
|---|---|
| | No local estimation or SMU correction has been undertaken.<br>Correlations between elements were considered and while co-kriging was not implemented, using similar estimation parameters for correlated elements allows some reproduction of correlations.<br>All estimation was completed within mineralisation units using "hard" boundaries.<br>In general, most element distributions did not have extreme outliers therefore minimal top-cutting was used. Where top-cutting occurred this was done prior to sample compositing.<br>Validation was completed by checking the global averages of composites versus model from each domain, by creating trend plots of composites versus model from each domain and by visual validation of grade trends in the model to ensure they honoured the input data. |
| ***Moisture*** | All tonnages have been estimated as dry tonnages. |
| ***Cut-off parameters*** | The 50%Fe cut-off is determined by the combined grade-tonnage characteristics as the minimum iron grade and/or maximum contaminant grades which will allow production to maintain contract-specified qualities for Lump and Fines products as currently occurring at Koolan Island. |
| ***Mining factors or assumptions*** | The mining factors are assumed to correlate directly to current operations at Koolan Island. |
| ***Metallurgical factors or assumptions*** | The metallurgical factors are assumed to correlate directly to current operations at Koolan Island. |
| ***Environmental factors or assumptions*** | Environmental factors are already considered as part of the current mining operations at Koolan Island. |
| ***Bulk density*** | Surtron down hole survey data has been used to measure densities on all deposits at Koolan Island.<br>In all cases the Surtron data confirms the positive relationship between Fe and density.<br>Regression formulas have been used to assign densities with respect to Fe estimates. |
| ***Classification*** | The basis for the classification of the Mineral Resource has included:<br>a. Quality and reliability of raw data;<br>b. Confidence in the geological interpretation;<br>c. Number, spacing and orientation of intercepts in each mineralised zone;<br>d. Confidence concerning the known limits of mining;<br>e. Knowledge of grade and density continuities gained from observations and;<br>f. Geostatistical analyses.<br>This information was used to guide digitising of strings around defined classification areas in either long section or plan, depending on the orientation of the mineralisation. The strings were then used to flag the classification to the model. |
| ***Audits or reviews*** | The Mineral Resource estimates are reviewed internally within MGX on a three levelled assessment structure.<br>Periodic updates are completed when new information and understanding is required to be reflected in the Mineral Resource. |

| Criteria | Commentary |
|---|---|
| ***Discussion of relative accuracy/ confidence*** | The block model grade estimates were validated against the drill hole composites to ensure that the model reflects the input data. The Koolan Island Mineral Resource models are provided as a basis for long term planning and mine design, and are not necessarily sufficient for shorter term planning and scheduling. |

# APPENDIX 4 – Extension Hill Deposit

## Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections)

| Criteria | Commentary |
|---|---|
| ***Sampling techniques*** | Drill holes used in the Mineral Resource estimate included 588 reverse circulation holes (RC), 17 diamond holes (DD) and 37 RC holes with diamond tails (RCD) for a total of 15,094m within the mineralisation wireframes. Rotary air blast (RAB), air core (AC) and water bore (WB) drilling were also carried out, but were not used in the estimate. Holes were generally angled towards grid west or east to optimally intersect the sub-vertical mineralised zones. There were a total of 899 drill holes in the supplied Extension Hill database.<br><br>Drill hole collar locations and down-hole surveys were carried out by company and contract surveyors.<br><br>During the 2008/09 program, RC samples were collected through a cyclone mounted directly above a riffle splitter on a 1/8 split at 1m intervals. During the 2013/14 program, RC samples were collected at 1m intervals through a static cone splitter attached to the RC drill rig. Two samples were taken for each metre at the time of drilling, and each sample identified with a sample ID and with suffix "A" or "B", each sample weighing between 2-4kg.<br><br>Diamond drill core was predominately half core sampled, with some full core sampled for chemistry and metallurgical properties.<br><br>RC samples were analysed using XRF. Laboratory accuracy and precision were assessed by the submission of Certified Reference Materials and duplicate samples. |
| ***Drilling techniques*** | For the 2008/09 program, RC drilling used a 140mm face sampling percussion hammer. For the 2013/14 program, RC drilling used a face sampling hammer with 108 mm bit size. Diamond drilling was carried out with HQ and PQ sized equipment with triple tube. |
| ***Drill sample recovery*** | Recoveries from historical drilling are unknown. Recoveries from MGX drilling were recorded in the database with no significant issues noted.<br><br>RC samples were visually checked for recovery, moisture and contamination. Diamond core recovery was recorded in the drill logs. No drill hole intersected the water table and all samples returned were dry.<br><br>No relationship between sample recovery and grade has been demonstrated. No bias to material size has been demonstrated. |
| ***Logging*** | All diamond drill holes were logged for recovery, RQD, geology and structure. RC drilling was logged for various geological attributes.<br><br>Logging of diamond core and RC samples recorded lithology, texture, alteration and mineralisation. All RC samples were logged in the field with spoil piles and sieved chips assessed.<br><br>All drill holes were logged in full. |
| ***Sub-sampling techniques and sample preparation*** | Core was cut in half using a core saw. All samples were collected from the same side of the core. Whole core for sampled for metallurgical purposes.<br><br>During the 2008/09 program, RC samples were collected through a cyclone mounted directly above a riffle splitter on a 1/8 split at 1m intervals. During the 2013/14 program, RC samples were collected at 1m intervals through a static cone splitter attached to the RC drill rig. All samples were dry.<br><br>Sampling of diamond core and RC chips used industry standard techniques. Each sample is reduced by riffle splitting to approximately a 400g sub-sample. They are then re-bagged and the residue returned to the original bag. The sub-samples are put in the preparation oven to dry for 4 hours in temperatures of 100°C to 110°C. Sub-samples are then pulverized until 90% passing 106µm fraction (75µm during the 2008/09 program).<br><br>Field QC procedures for MGX drilling involved the use of certified reference materials (1 in 20) and duplicates (1 in 25). |

| Criteria | Commentary |
|---|---|
| | Field duplicates were taken on 1m samples for RC using the rig mounted splitter. Results were acceptable.<br><br>Sample sizes are considered appropriate to correctly represent the low nugget iron mineralisation based on: the style of mineralisation, the thickness and consistency of the intersections, the sampling methodology and assay value ranges for Fe. |
| ***Quality of assay data and laboratory tests*** | Assays for typical iron ore suite of elements by XRF and LOI conducted by n (2006) and Spectrolab Geraldton (2009). Spectrolab Geraldton is NATA accredited for the XRF analysis of Iron Ore and Loss on Ignition determination according to ISO17025. An oxide balance was carried out on each sample; any sample falling outside the range 98% to 102% was repeated, firstly as a repeat bead, then the pulp, and then the residue if required.<br><br>No geophysical tools were used to determine any element concentrations used in this resource estimate. Down-hole density data was used in the estimate, obtained from the surveys completed by Surtron Technologies in 2009 and ABIM Solutions in 2008 and 2013/14.<br><br>For the 2008/09 program, 273 CRM's were submitted at a rate of one per hole. 13 CRM's which failed due to the pulp not being ground finely enough once this was identified the pulp CRM's were pulped again and the results consistently fell within 3 standard deviations. The laboratory tested 616 internal standards and all were assayed in the recommended limits.<br>For the 2013/14 program, MGX followed its established QAQC procedures with the use of Certified Reference Materials as standards, along with field and laboratory duplicates. CRM's were inserted in pulp and coarse form at a rate of one in 20 samples. Field duplicates were inserted at a rate of one in 25 samples.<br><br>Results show good accuracy and precision and indicate that that the sample and assay data are representative, homogenous and repeatable, and suitable for use in the resource estimate. |
| ***Verification of sampling and assaying*** | RPM has independently verified significant intersections of mineralisation by inspecting drill chips from the 2013 drilling within the Extension Hill pit. Validation and cross checking of laboratory performance has included submission of repeat and split samples to Bureau Veritas laboratories in Perth.<br><br>No twin holes were drilled.<br><br>Assay results were provided by the lab to MGX in electronic (sif, csv and pdf) format, and then validated and entered into the MGX database situated at the Perth office. Assay, sample ID and logging data are matched and validated using filters in the MGX database. The data is further visually validated by Mount Gibson geologists and database staff. The MGX drilling database is a commercially available software package which is used throughout the mining industry.<br><br>Assay values that were below detection limit were adjusted to equal half of the detection limit value. |
| ***Location of data points*** | All MGX and Asia Iron collar positions have been surveyed using a Trimble RTK GPS system with expected accuracy of +/- 0.02m horizontal and +/- 0.03m vertical, relative to each other and to the onsite survey control.<br><br>Surveys were picked up on the Extension Hill Mine local grid, which is MGA94z50 plus 32.5°.<br><br>Topographic surface uses Lidar data. |
| ***Data spacing and distribution*** | The nominal drill hole spacing is 25m by 25m.<br><br>The mineralised domains have demonstrated sufficient continuity in both geological and grade continuity to support the definition of Mineral Resource, and the classifications applied under the 2012 JORC Code.<br><br>Samples have been composited to 1m lengths using best fit techniques. |
| ***Orientation of data in relation to geological structure*** | Drill holes are angled to grid west and east, as the deposit is sub-vertical. This represents the most optimal way to intersect the sub-vertical units.<br><br>No orientation based sampling bias has been identified in the data. |

| Criteria | Commentary |
|---|---|
| ***Sample security*** | All samples taken from Extension Hill were kept within MGX's premises and transported to the onsite lab at Extension Hill.<br><br>Sample security was not considered a significant risk to the project. No specific measures were taken by MGX to ensure sample security beyond the normal chain of custody for sample submission. |
| ***Audits or reviews*** | RPM reviewed RC sampling techniques during the November 2013 site visit. RPM concludes that sampling techniques are conducted to industry standards. An audit of the Extension Hill mineral laboratory was conducted in May 2014 by an external group. Concerns or problems identified have been rectified, with no material concerns or problems identified. |

## Section 2 Reporting of Exploration Results

(Criteria listed in Section 1, and where relevant, in Sections 3 and 4, also apply to this section)

| Criteria | Commentary |
|---|---|
| ***Mineral tenement and land tenure status*** | The Extension Hill deposit is located on Mining Lease M59/399-I held by Extension Hill Pty Ltd which is an independent third party unrelated to Mount Gibson Iron Limited. Mount Gibson Mining, a wholly-owned subsidiary of Mount Gibson Iron Limited, has the right to explore and develop DSO iron (defined as hematite, goethite and Limonite) on the Mining Leases through contractual rights and agreement with Extension Hill Pty Ltd. The tenements are in good standing with active mining occurring at Extension Hill. |
| ***Exploration done by other parties*** | The area has historically been explored for iron. Between 1962 and 1966 Kokan Mining Company Ltd and Kakiuchi & Company Ltd drilled a number of diamond holes into Extension Hill. Work was suspended in 1966 and recommenced in 1969 with the Griffin Coal Mining Company joining as a joint venture member.<br><br>Work including diamond and percussion drilling continued until 1977 when the joint venture was dissolved and the project abandoned. In 1995 Asia Iron Pty Ltd acquired the leases.<br><br>Asia Iron Pty Ltd conducted drill programs over Extension Hill in 1995-1997, 2002 and 2005. With subsequent programs in 2012.<br><br>In 2008 to 2009 MGX Mining conducted a resource drill out of Extension Hill which included 492 RC holes. |
| ***Geology*** | The geology of Extension Hill can be defined as a jaspilitic iron formation mineralised to hematite and goethite.<br><br>The rocks have been exposed to intensive weathering with the depth of complete oxidation in the iron formation 90-100m below the surface.<br><br>Laterised detrital goethite-dominated hematitic material on the flanks related to paleo-topography which has been re-worked and enriched by paleo-weathering and weathering process.<br><br>The main iron mineralisation is hematite dominated related to paleo weathering enrichment of the primary magnetite mineralisation. The hematite is sub vertical to vertically dipping striking north-south. |
| ***Drill hole Information*** | Drill hole locations and the resource wireframes are summarised in the report "Mineral Resource Estimate Extension Hill Iron Ore Deposit, Western Australia (April 2014)".<br><br>In the opinion of MGX material drill results have been adequately reported previously to the market as required under the reporting requirements of the ASX Listing Rules. |
| ***Data aggregation methods*** | Exploration results are not being reported.<br><br>Not applicable as a Mineral Resource is being reported.<br><br>Metal equivalent values are not being reported. |
| ***Relationship between mineralisation widths and intercept lengths*** | Drill holes are angled to grid west and east, as the deposit is sub-vertical. This represents the most optimal way to intersect the sub-vertical units. |

| Criteria | Commentary |
|---|---|
| ***Diagrams*** | Relevant diagrams have been included within the Mineral Resource report (Mineral Resource Estimate Extension Hill Iron Ore Deposit, Western Australia – April 2014) main body of text. |
| ***Balanced reporting*** | Drill holes were located and picked up by mine site surveyors using Trimble RTK GPS system with expected accuracy of +/- 0.02m horizontal and +/- 0.03m vertical on Extension Hill Mine local grid, which is MGA94z50 plus 32.5°.<br><br>Exploration results are not being reported. |
| ***Other substantive exploration data*** | Resource infill drilling has progressed over several programs as the size and extent of the mineralisation became clear. |
| ***Further work*** | No further work is currently planned for the Extension Hill deposit. |

## Section 3 Estimation and Reporting of Mineral Resources

(Criteria listed in Section 1, and where relevant in Sections 2 and 4, also apply to this section)

| Criteria | Commentary |
|---|---|
| ***Database integrity*** | Data extracted from the database for Mineral Resource estimation purposes is run through general checks to ensure data is valid. The database is maintained by MGX with automated extraction processes in place.<br><br>Checks on data include sensible ranges of values for attributes, drill hole collars matching topography and with expected limits, overlapping sample intervals, depths, azimuths, dips and co-ordinates for consistency. Any inconsistent information is either modified or excluded from use in estimation. |
| ***Site visits*** | Elizabeth Haren, the Competent Person for Mineral Resources, has made several visits to Extension Hill. |
| ***Geological interpretation*** | The confidence in the geological interpretation is considered to be good and is based on previous current mining and visual confirmation in outcrop and within the open pit.<br><br>Geochemistry and geological logging has been used to assist identification of lithology and mineralisation |
| | The deposit consists of sub-vertical to steeply dipping supergene-enriched BIF units. Mineralisation is mostly confined to the BIF units and the detrital material on the flanks of the deposit. Infill drilling has supported and refined the model and the current interpretation is considered robust<br><br>Outcropping of mineralisation and host rocks within the open pit confirm the geometry of the mineralisation.<br><br>Infill drilling and mining has confirmed geological and grade continuity. |
| ***Dimensions*** | The Extension Hill Mineral Resource area extends over an N-S strike length of 1,190m (from 19,850mN – 21,030mN), has a maximum width of 400m (9,720mE – 10,120mE) and includes the 115m vertical interval from 445mRL to -330mRL |
| ***Estimation and modelling techniques*** | Ordinary Kriging of a suite of Iron Ore elements (Fe, SiO2, Al2O3, LOI, P, S, CaO, MnO, MgO, Na2O, TiO) was completed using CAE Studio software. Minor domains of limited extent and information were estimated using Inverse Distance.<br><br>Waste material was estimated where enough quality data was present however the majority of waste material is assigned default grades.<br><br>While the mineralisation tends to be planar in most cases, care was taken to ensure orientation changes were honoured by the sample search and estimation orientation regimes.Estimation parameter selection was guided by the results of mining reconciliation. |

| Criteria | Commentary |
|---|---|
| ***Estimation and modelling techniques*** | No assumptions were made regarding recovery of by-products.<br><br>A full suite of Iron Ore elements were estimated. There is no potentially acid forming material within the Mineral Resource model.<br><br>Block sizes used are 25mE, 10mN and 2.5m RL. The bulk of the drilling data was on nominal 30m spaced sections.<br><br>No local estimation or SMU correction has been undertaken.<br><br>Correlations between elements were considered and while co-kriging was not implemented, using similar estimation parameters for correlated elements allows some reproduction of correlations.<br><br>All estimation was completed within mineralisation units using “hard” boundaries.<br><br>In general, most element distributions did not have extreme outliers therefore minimal top-cutting was used. Where top-cutting occurred this was done prior to sample compositing.<br><br>Validation was completed by checking the global averages of composites versus model from each domain, by creating trend plots of composites versus model from each domain and by visual validation of grade trends in the model to ensure they honoured the input data.<br><br>Using parameters derived from modelled variograms, Ordinary Kriging (OK) was used to estimate average block grades in three passes using Surpac software. Linear grade estimation was deemed suitable for the Extension Hill Mineral Resource due to the geological control on mineralisation. Maximum extrapolation of wireframes from drilling was 15m across strike. This was half drill hole spacing in this region of the deposit. Maximum extrapolation was generally half drill hole spacing.<br><br>No recovery of by-products is anticipated.<br><br>A total of 12 elements were estimated for the mineralisation domains (Fe, SiO2, Al2O3, P, S, LOI, Mn, TiO2, CaO, MgO, K2O and Na2O) and a total of 6 elements for BIF and magnetite waste domains (Fe, SiO2, Al2O3, P, S, LOI). In addition, Magnasat was estimated into the HEM, MAG and BIF lithology types.<br><br>The parent block dimensions used were 12m NS by 8m EW by 2.5m vertical with sub-cells of 3.0m by 2.0m by 0.625m. The parent NS block size was selected on the basis of 50% of the average drill hole spacing of the deposit, while dimensions in other directions were selected to provide sufficient resolution to the block model in the across-strike and down-dip direction.<br><br>An orientated ‘ellipsoid’ search was used to select data and adjusted to account for the variations in lode orientations, however all other parameters were taken from the variography derived from wireframe lodes 1, 2, 8 and 13. Three passes were used for each domain. First pass had a range of, with a minimum of 8 to 20 samples. For the second pass, the range was extended to 60, with a minimum of 4 to 20 samples. For the final pass, the range was extended to 120m, with a minimum of 2 to 10 samples. A maximum of 30 samples was used for all 3 passes, with a maximum of 8 samples per hole.<br><br>No local estimation or SMU correction has been undertaken.<br><br>Correlations between elements were considered and while co-kriging was not implemented, using similar estimation parameters for correlated elements allows some reproduction of correlations. The strong negative correlation between Fe and SiO2 was preserved in the block model.<br><br>The deposit mineralisation was constrained by wireframes constructed using a 50% Fe cut-off grade. The wireframes were applied as hard boundaries in the estimate.<br><br>In general, most element distributions did not have extreme outliers therefore no top-cutting was used.<br><br>Validation was completed by checking the global averages of composites versus model from each domain, by creating trend plots of composites versus model from each domain and by visual validation of grade trends in the model to ensure they honoured the input data. |
| ***Moisture*** | Tonnages and grades were estimated on a dry in situ basis. No moisture values were reviewed. |

| Criteria | Commentary |
|---|---|
| ***Cut-off parameters*** | The 50%Fe cut-off is determined by the combined grade-tonnage characteristics as the minimum iron grade and/or maximum contaminant grades which will allow production to maintain contract-specified qualities for Lump and Fines products as currently occurring at Extension Hill. |
| ***Mining factors or assumptions*** | The mining factors are assumed to correlate directly to current operation at Extension Hill. |
| ***Metallurgical factors or assumptions*** | The metallurgical factors are assumed to correlate directly to current operation at Extension Hill. |
| ***Environmental factors or assumptions*** | Environmental factors are already considered as part of the current mining operations at Extension Hill. |
| ***Bulk density*** | Surtron Technologies was employed to take down-hole survey readings of drill holes in 2009, whilst ABIM Solutions was employed to take down-hole survey readings of drill holes from 2008 and 2013 to 2014. Down-hole density and calliper measurements were recorded at 10cm intervals. Bulk density was assigned based on average down-hole densities for each individual wireframe lode.<br>Down-hole density measurements account for voids and moisture.<br>After trend analysis of the down-hole density data, 3 lodes had average densities applied based on elevation constraints. |
| ***Classification*** | The basis for the classification of the Mineral Resource has included:<br>a. Quality and reliability of raw data;<br>b. Confidence in the geological interpretation;<br>c. Number, spacing and orientation of intercepts in each mineralised zone;<br>d. Confidence concerning the known limits of mining;<br>e. Knowledge of grade and density continuities gained from observations; and f. Geostatistical analyses.<br>This information was used to guide digitising of strings around defined classification areas in either long section or plan, depending on the orientation of the mineralisation. The strings were then used to flag the classification to the model.<br>The input data is comprehensive in its coverage of the mineralisation and does not favour or misrepresent in-situ mineralisation. The definition of mineralised zones is based on high level geological understanding producing a robust model of mineralised domains. This model has been confirmed by infill drilling which supported the interpretation. Validation of the block model shows good correlation of the input data to the estimated grades.<br>The Mineral Resource estimate appropriately reflects the view of the Competent Person. |
| ***Audits or reviews*** | Internal audits have been completed by RPM which verified the technical inputs, methodology, parameters and results of the estimate.<br>The Mineral Resource estimates are reviewed internally within MGX on a three levelled assessment structure.<br>Periodic updates are completed when new information and understanding is required to be reflected in the Mineral Resource. |
| ***Discussion of relative accuracy/ confidence*** | The Extension Hill Mineral Resource model is provided as a basis for long term planning and mine design, and is not necessarily sufficient for shorter term planning and scheduling. The block model grade estimates were validated against the drill hole composites to ensure that the model reflects the input data.<br>The Mineral Resource statement relates to global estimates of tonnes and grade. |

# APPENDIX 5 – Iron Hill Deposit

## Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections)

| Criteria | Commentary |
|---|---|
| ***Sampling techniques*** | All drilling data used for the geological interpretation and estimation of the Iron Hill mineral resource was based on information from drilling campaigns designed and conducted by four companies since 1962. Drilling programs were paid for by Kokan Mining Company ("KMC") between 1963 to 1966, by Pacific Consolidated ("PC") between 1969 and 1970, by Asia Iron Pty Ltd ("AI") between 1997 and 2004 and recently by Mount Gibson Iron ("MGX") between 2013 and 2014.<br><br>The integrity of the data used for estimation was thoroughly verified using reports and field information. Twin holes of historic drill holes were drilled in 2013 and 2014 to check validity of the historical downhole assay data.<br><br>Sample assay data from two adits built in 1964 and 1966 by Kokan Mining Company were also used.<br><br>Sampling techniques followed operating company standards and procedures. Quality assurance and quality control of the samples and assays acquired during the years of exploration pre 1997 were limited or remains unknown due to the limited access to historical documents and the lack of reporting on the existing documents.<br><br>With the RAB drilling conducted by Kokan Mining Company between 1963 and 1966 samples were acquired in 10 feet (3.05m) lengths. It is suggested that this possibly reflects the length of the drill rods used by the drill rig, and this would also to reduce cross contamination between samples, with RAB often stigmatised by the potential contamination of material from the edge of the drill hole.<br><br>KMC also conducted a diamond drilling program between 1964 and 1966, where samples were acquired by splitting (by impact) the drill core in half. One split was then submitted for analysis and remaining split left for future reference.<br><br>Two adits were also built by KMC, respectively in 1964 and 1966. Channel samples were taken from the left wall of both adits and submitted for analysis.<br><br>No sampling techniques information could be retrieved from the Pacific Consolidated drilling conducted for Iron Hill Prospect between 1969 and 1970. This included the percussion and diamond drilling.<br><br>Asia Iron Pty Ltd conducted some reverse circulation drilling between 1997 and 2004 when 34 drill holes were completed. All drill holes were sampled at single and composite intervals of 2m to 6m depending on the lithology. From the single metre samples a sub-sample split was obtained by passing the bulk cuttings through a 3-way riffle splitter and collecting the minor portion in a calico bag. The bulk residue was retained on site and the second split placed temporarily on top.<br><br>Mount Gibson Iron have conducted three phases of drilling, including reverse circulation and diamond drilling programs. The reverse circulation drilling programs were conducted in 2013 and 2014, comprising 125 drill holes in total. All samples during both drilling programs were acquired at one metre intervals through a static cone splitter attached to the RC drill rig. Two samples were taken for each metre at the time of drilling, and each sample identified with a sample ID with a suffix "A" or "B". All "A" samples acquired were assayed.<br><br>No samples have been taken from the 2014 diamond drilling program conducted by MGX, however the core has been geologically and geotechnically logged. The potential "Metallurgical samples" have been identified. |
| ***Drilling techniques*** | The drilling techniques used during the mineral exploration history of Iron Hill Prospect are listed below:<br><br>85 Percussion drill holes ("PER") (excluded from the resource estimate)<br><br>39 Rotary air blast drill holes ("RAB")<br><br>159 Reverse circulation drill holes ("RC")<br><br>15 Diamond drilling ("DD") drill holes.<br><br>Kokan Mining Company between 1963 and 1966 conducted RAB and diamond drilling programs. This consisted of 39 RAB drill holes, with the prefix "ID", which were drilled for a total of 1,256.77m. Operators belonging to Mesers, Perron & Sons Pty conducted the drilling however no information about the drilling equipment used and sampling acquisition method could be found within the existing report.<br><br>KMC also conducted a diamond drilling program, where five drill holes were drilled for 698.20m. The drilling was performed by Diamond Drillers Pty Ltd. No information about drill bit size and type of sampling could be found.<br><br>Pacific Consolidated conducted between 1969 and 1970, 85 percussion (prefix "PD") and 6 diamond drill holes (prefix "DDH-") throughout the Iron Hill Project. A Gardner Denver 133 with a 900cfm compressor from Timor Enterprise Drilling was used to conduct the percussion drilling program. A total of 3,970.36m of percussion drilling |

| Criteria | Commentary |
|---|---|
| | completed. No information about drill bit size and sampling method could be retrieved reviewing the historical reports. No drilling equipment information and sampling acquisition was found for the six diamond drill holes completed at Iron Hill Prospect. A total of 775.85m diamond drill core was drilled.<br><br>Asia Iron Pty Ltd conducted some RC exploration drilling programs between 1997 and 2004. All the drill holes have the prefix "IHH". A total of 34 RC drill holes were drilled during that period for 2,888m.<br><br>In 2002, Asia Iron Pty Ltd conducted an extensive drilling program at Iron Hill Prospect. 23 RC drill holes for 1,451m were drilled. Colby Drilling Pty Ltd executed the drilling using a track-mounted RC rig with a face sampling hammer and was fitted with an onboard 200psi/500cu. ft/min compressor.<br><br>In 2004, AI conducted a reverse circulation drilling program at Iron Hill Prospect for a total of 11 holes and 1,435m. The drilling was performed by Target Drilling Pty Ltd using a truck-mounted RC rig fitted with an on board 350psi/900cu. Ft/min compressor and auxiliary booster. A face sampling hammer was used to collect the samples.<br><br>Mount Gibson Iron has conducted three phases of drilling, including reverse circulation and diamond drilling programs since 2013. The reverse circulation drilling programs were conducted in 2013 and 2014, comprising 65 and 60 RC drill holes for a total of 4,966.30m. VM Drilling Pty Ltd was engaged to conduct the drilling and used a track mounted Atlas Copco ROC L8 RC drill rig fitted with an on-board carrousel with 54m of rods and a 30Bar compressor. A face sampling hammer was used to retrieve the drilling samples.<br><br>Four diamond drill holes were also completed by Mount Gibson Iron in 2014 for 326.30m. The diamond drill core will be used for metallurgical test work and have been used to acquire detailed information about the iron ore types, texture and density studies for the Iron Hill Prospect. All drill holes were drilled with a PQ bit size and in an angled orientation (-50°/290°, -60°/190° and -60/240°). West Core Drilling Pty Ltd conducted the drilling using and a track-mounted LF90D core drilling rig executed the drilling program. |
| ***Drill sample recovery*** | No information about the sample recovery could be found for the RAB drilling performed by Kokan Mining Company between 1963 and 1966. Original drill logs for the diamond drill holes, prefix "DDH-", were found and sample recovery was recorded. The sample recovery was good overall with some core loss through some mudstone sequences and no core recovery through cavernous iron ore mineralisation and caves.<br><br>Information from the percussion drilling, prefix "PD", conducted by Pacific Consolidated was retrieved from a Wamex report and indicated very poor drilling conditions; many problems were encountered such as loss of air circulation and caving ground. No sample recovery information was found for the diamond drill holes, prefix "RH-", conducted by the company.<br><br>Asia Iron Pty Ltd, for its RC drilling, prefix "IHH", conducted between 2002 and 2004, recorded the sampling recovery through its logging procedure. Very good sample recovery was recorded with some loss of sample through cavities and within the first metre of drilling.<br><br>The drill sample recovery for the drilling performed by Mount Gibson Iron, between 2013 and 2014, prefixes "IH13RC, IH14RC and IH14DD", was visually inspected by the rig geologist and digitally recorded. 88% of the sample recovery rate for the 2013 drilling was good or better, and for the 2014 90% was good or better. Minor sample loss was recognised due to cavities and rarely due to unconsolidated material in the first metre of drilling.<br><br>No relationship between sample recovery and grade was recognised. |
| ***Logging*** | During the drilling conducted by KMC only the mineralisation information was recorded for the RAB drill holes, however full geological description was completed for the diamond drill holes, for a total length of 698.20m.<br><br>Logging information from the percussion drill holes, prefix "PD", conducted by PC was not found. The original report with the information for the diamond drill holes, prefix "RH-", was found for only one drill hole within Wamex report a779.<br><br>All drill holes drilled by Asia Iron Pty Ltd and Mount Gibson Iron were geologically logged at 1m intervals using standardised codes and abbreviations for lithology, texture, weathering, hardness, colour, alteration and mineralisation. All samples were logged in the field with spoil piles and wet and dry sieved chips assessed.<br><br>The total length of drilling with contemporary geological logging is 7,854.30m, including IHH, IH13RC, IH14RC and IH14DD drill holes.<br><br>The logging is considered to be of an industry acceptable standard. |

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| ***Sub-sampling techniques and sample preparation*** | No data found detailing the sub-sampling techniques used during the historical drilling programs performed by previous explorers (pre 1997).<br><br>All drill chip samples from the drilling completed by Asia Iron Pty Ltd between 1997 and 2004 were processed by AMDEL Laboratory in Perth, WA.<br><br>For the 1997 to 2004 drilling all samples were collected at 1m intervals, with a sub-sample split obtained by passing the bulk cuttings through a 3-way riffle splitter and collecting the minor portion in a calico bag. The bulk residue was retained on site in a plastic bag, with the sample split placed temporarily on top.<br><br>Composite samples were also collected, generally of 2 to 6m intervals depending on gross lithology. The composite samples, each weighing 2-4 kg, were made up of equal portions (by volume) of cuttings from each of the individual 1m sub-samples ("from calico bags").<br><br>All RC drill chip samples from the 2013 and 2014 RC drilling programs were processed respectively at Bureau Veritas in Perth, WA and Spectrolab Laboratory based at Extension Hill Hematite Mine Site also in WA.<br><br>Sample dispatches were submitted to Bureau Veritas in 2013 on a weekly basis and to Spectrolab in 2014 on a daily basis.<br><br>At Bureau Veritas samples were received, sorted and reconciled against the sample dispatch. Samples were then dried for up to 36hrs at 105°C. Samples sizes had an estimated average of 2.5kg. All samples were then crushed to <10mm and <3mm. Samples weighing more than 2.4kg were split to 1.5-2.4kg. All samples were pulverized to 90% passing at 75µm fraction.<br><br>An aliquot of 0.66g of the samples and 7g of 12:22 Lithium Borate Flux mix and fused at 1,100°C. The glass discs are run on a PANalytical PW24xx XRF Spectrometer.<br><br>A portion of the samples were also submitted to Thermo Gravimetric Analysis where they were dried, weighed and then loaded into a series of furnaces with set temperatures for a set time period. After spending a designated time in each furnace, the sample were reweighed before entering the next furnace to determine weight loss at each individual temperature.<br><br>30g of the sample was analysed for magnetic material content at an applied magnetic field using Satmagan Magnetic Analyser.<br><br>At Spectrolab Laboratory the samples, after arrival, were sorted, weighed and sample numbers recorded. Samples were typically of 2 to 4kg, and usually submitted in batches of 80 to 200 samples.<br><br>Each sample was reduced by riffle splitting to approximately a 400g sub-sample. They were then re-bagged and the residue returned to the original bag. The sub-samples were put in the preparation oven to dry for 4 hours in temperatures of 100°C to 110°C. Sub-samples were then pulverized until 90% passing 106µm fraction.<br><br>An aliquot of 0.7g to 3g of the sub-sample was then submitted to a 3 step LOI analysis using a TGA system.<br><br>Between 30g to 90g of the sub-sample was extracted as an aliquot and submitted to a MAGNASAT magnetic susceptibility test (which does not affect or alter the material). This aliquot was then placed again in the oven to dry for another hour.<br><br>The remainder (residue) of the sub-sample was stored as a pulp in a labelled paper satchel.<br><br>0.7g of the sub-sample is submitted for fusion with 7 grams of flux to form an analysis bead and analysed using the XRF.<br><br>Sample quality control analysis is then conducted on each sample and on the batch.<br><br>Results were reported to the client in .csv (comma delimited) format. |
| ***Quality of assay data and laboratory tests*** | Mount Gibson followed its established QAQC procedures for its 2013 and 2014 exploration programmes with the use of Certified Reference Materials as standards, along with field and laboratory duplicates.<br><br>No Quality Analysis and Quality Control reports have been located for the historical drilling programs conducted at Iron Hill Prospect by Kokan Mining Company, Pacific Consolidated or Asia Iron Pty Ltd.<br><br>For the most recent drilling programs completed by Mount Gibson Iron between 2013 and 2014, the company's QAQC procedures were followed with the use of Certified Reference Materials (CRM) as standards, along with field and laboratory duplicates.<br><br>Iron ore standards (Certified Reference Materials) in pulp and coarse form were submitted at a rate of one for every 20 samples and field duplicate samples taken every 25 samples.<br><br>For both MGX RC drilling programs a total of 5,065 samples were analysed, six different standards were used, including two coarse standards and four pulp standards, totalling 225 standards assayed. The acceptable limit |

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| | used is 3 standard deviations from the expected value for the elements of the CRMs.<br><br>All drill hole samples, duplicates and standards were analysed for Fe plus 18 elements including major contaminants ($SiO_2$, $Al_2O_3$, P, S and $TiO_2$). Loss on Ignition (LOI) was also recorded in three stages, at 371, 650 and 1000°C.<br><br>Analysed standards rarely presented fails. All fails were assessed and issues resolved by resubmitting samples for re-analysis. Umpire laboratories were also used to assess the quality of the assay data, which verified the accuracy and precision of the primary lab.<br><br>201 field duplicates were taken and submitted during the drilling programs. The field duplicate samples taken presented an excellent precision, with Fe showing an $R^2$ of 0.99, $SiO_2$ an $R^2$ of 0.99 and $Al_2O_3$ an $R^2$ of 0.98.<br><br>The laboratories used for the programs also submitted laboratory duplicate checks and 82 laboratory standards which all were within acceptable limits. |
| ***Verification of sampling and assaying*** | Verification of sampling and assaying documents has not been found for the historical drilling performed at Iron Hill Prospect pre 1997.<br><br>In 2013 three twin holes were drilled with collar locations within 6 metres of the historic collars to confirm previously reported mineralisation, and to gauge the reliability of the historic sampling and assays. This program has given confidence in the historical drill hole data.<br><br>Mount Gibson Iron for the 2013 and 2014 RC drilling conducted a validation and cross checking process of lab performance, including the submission of pulps and samples residues to umpire laboratories.<br><br>Assay results were provided by the lab to MGX Iron in csv format, and then validated and entered into the MGX Iron database situated at the head office. Backups of the database are stored out of office.<br><br>Assay, sample ID and logging data were matched and validated using filters at import into the Mount Gibson Iron drill database. The data is further visually validated by Mount Gibson geologists and database staff.<br><br>The Mount Gibson drilling database is a commercially available software package which is used throughout the mining industry.<br><br>Significant intercepts were extracted from the database by Mount Gibson Iron geologists, then verified by the Mount Gibson Iron Principal Geologist, and peer reviewed by the Mount Gibson GM Geology & Reserve Growth. |
| ***Location of data points*** | No information relative to the collar survey for the Kokan Mining Company drill holes could be found however drilling completed by MGX in 2013 and 2014 supports the downhole assay values from this historical drilling, thus validates the collar location and downhole data values.<br><br>A surveyor under contract for Pacific Consolidated conducted the survey of the percussion drill collars in 1969 however failed to adjust to the original grid done by Kokan Mining Company, called “Japanese grid” in the report a779 page 5. As no confidence was shown on the report and recent attempts to validate the downhole assay data for the PD drill holes, all data from those holes were excluded from the resource estimate.<br><br>All drill holes conducted by Asia Iron Pty Ltd between 1997 and 2004 were surveyed by MHR Surveyors & Planning from Geraldton, WA after the completion of each stage of drilling.<br><br>During the 2013 and 2014 drilling programs conducted by Mount Gibson Iron a hand held GPS (Garmin GPS62cx model) was used to determine the drill hole collars with a ±3m coordinate accuracy.<br><br>A DGPS survey of the 2013 RC drill hole collars was conducted at the Iron Hill Prospect on 16 December 2013. The 2013 survey used a Trimble RTK GPS system with expected accuracy of +/- 0.02m horizontal and +/- 0.03m vertical, relative to each other and to the onsite survey control.<br><br>A Trimble DGPS was used to conduct the a final drill hole collar survey at Iron Hill on 15 December 2014 with expected accuracy of ±0.005m. The 2014 pickup validated the 2013 RC collar locations. Survey pickups were completed and reported in GDA 94, MGA zone 50.<br><br>For the 2013 RC drill program downhole surveys were conducted by ABIM Solutions for dip and dip direction, magnetic susceptibility, density and natural gamma were conducted on all drill holes >30m in depth. All holes were surveyed within 1 day of being drilled.<br><br>For the 2014 RC and diamond drill programs downhole surveys were conducted by SURTRON Technologies Pty Ltd over 50 of the 60 drill holes drilled at Iron Hill Prospect. Downhole survey included GYRO, Magnetic Susceptibility, Spectral Gamma, Density and Conductivity surveys.<br><br>Gyroscopic tool collected the downhole deviation data every 10m interval, the magnetic susceptibility data was collected in 1m intervals and the Spectral Gamma, Density and Conductivity data every 0.1m intervals. A calibration drill holes was used prior to the geophysical survey and after the completion. |

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| | A detailed and accurate topographic survey covers the Iron Hill Prospect area. It was flown in July 2013 in conjunction with the nearby Extension Hill Operation |
| ***Data spacing and distribution*** | When considering all drilling programs completed at Iron Hill all extents are covered, with an overall drilling spacing of approximately 25 x 25m, other than the drill holes drilled south of coordinates 6,724,930N which have a spacing of 25 x 50m or 25 x 30m on average.<br>While preliminary, it appears that 50m spacing is adequate to understand geological continuity, however further assessment is required to determine the spacing confidence with regards to grade continuity.<br>The drilling pattern is considered largely sufficient to test the extent of the hematite mineralisation throughout the prospect, however a few areas will require further drilling to replace the data from the "PD" drill holes not considered sufficient in quality to be used for a Mineral Resource estimate. Further drilling and sampling is required to verify the extension of the mineralisation to the south-east, or to define a larger Indicated or Measured Mineral Resource. |
| ***Orientation of data in relation to geological structure*** | The hematite mineralisation is based on the supergene iron enrichment of rocks the equivalent of the underlying magnetite mineralisation. The detrital mineralisation is due to the erosion and re-deposition of the material with hematite mineralisation down-slope of the elevated source.<br>The hematite mineralisation is mostly vertical to steeply east dipping tabular bodies striking north-west. The detrital mineralisation concentrates in the eastern flank of the hill and it seems to be more continuous through the central-north-east surficial portion of the prospect.<br>All MGX 2013 and 2014 drilling completed at Iron Hill project was planned to intercept the mineralised body near to perpendicular wherever possible. Most of the drilling has an azimuth of 220° or 045°.<br>No sampling bias is believed to have been introduced by the orientation of the drilling compared to the local geology or structures. Further infill drilling is planned for the prospect. |
| ***Sample security*** | No information could be retrieved about sample security for the samples submitted to the lab before the year of 1997. Sample dispatch procedures were recorded by Asia Iron Pty Ltd and Mount Gibson Iron.<br>All samples taken from the Iron Hill Prospect for the 2013 RC drill program were kept within Mount Gibson's premises before being transported by courier under consignment to Bureau Veritas in Perth. Upon receipt of the samples a sample confirmation note was sent from Bureau Veritas to Mount Gibson confirming the arrival of the samples and that all samples sent were received in good order.<br>All samples taken from the Iron Hill Prospect for the 2014 RC drill program were delivered to Spectrolab at the same day of the drilling. Round robin samples were couriered or transported by contract staff to Intertek Laboratory in Perth, WA and SGS Laboratory at Koolan Island, WA.<br>Sample security was not considered a significant risk to the project. No specific measures were taken by Mount Gibson to ensure sample security beyond the normal chain of custody for a sample submission. |
| ***Audits or reviews*** | The Mineral Resource estimates are reviewed internally within MGX on a three levelled assessment structure.<br>Periodic updates are completed when new information and understanding is required to be reflected in the Mineral Resource. |

## Section 2 Reporting of Exploration Results

(Criteria listed in Section 1, and where relevant, in Sections 3 and 4, also apply to this section)

| Criteria | Commentary |
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| ***Mineral tenement and land tenure status*** | The Iron Hill Prospect is located on the Mining Leases M59/454-I and M59/609-I held by Extension Hill Pty Ltd. Mount Gibson Iron has the right to explore and develop DSO iron ore (defined as hematite, goethite and limonite) on the Mining Leases through contractual rights and agreement with the tenement holder, Extension Hill Pty Ltd.<br>All Mining Leases at the Extension Hill South Project are in good standing. |

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| ***Exploration done by other parties*** | From 1962 to 2004, 174 drill holes for 10,610m have been conducted on the Extension Hill South Project from other parties. Then in 2013, Mount Gibson Iron started the exploration drilling with the completion of 65 RC drill holes for 1,731m at Iron Hill.<br><br>The area has historically been explored for iron for more than fifty years. Between 1962 and 1966 Kokan Mining Company Ltd and Kakiuchi & Company Ltd drilled a number of diamond holes into the Extension Hill South Prospect as well as mining two horizontal winzes through the Prospect. Work was suspended in 1966 and recommenced in 1969 with the Griffin Coal Mining Company joining as a Joint Venture member.<br><br>Work including diamond and percussion drilling continued until 1977 when the joint venture was dissolved and the project abandoned. In 1995 Asia Iron Pty Ltd acquired the mining leases and conducted numerous drill programs on the magnetite resources of the entire area. Asia Iron Pty Ltd conducted drill programs over Extension Hill South Project in 1997, 2002 and 2004.<br><br>In 2005 Mount Gibson Mining Ltd and Extension Iron Pty Ltd agreed to the Extension Hill Hematite Agreement and First Supplemental Deed.<br><br>Late in 2013, Mount Gibson Iron conducted a reverse circulation drilling program at Iron Hill Prospect aiming at understanding the potential for iron ore mineralisation and also validate some of the historical drilling information from the 60's. A total of 65 drill holes were drilled for 1,731m.<br><br>Prior to the 2013 RC drill program no exploration other than mapping and rock chip sampling had been conducted on the Extension Hill South Project since 2004. |
| ***Geology*** | The geology of the Extension Hill South project can be defined by a jaspilitic iron formation variably mineralised in places to hematite±goethite bounded by volcanics and cross cut by brittle to brittle-ductile faults and shears. The iron formation shows evidence of multiple folding events which have structurally thickened the iron formation.<br><br>These rocks have been exposed to intensive weathering with the ultramafic to mafic rocks now strongly saprolitic. The depth of complete oxidation observed in the iron formation is generally 45 to 50m vertical depth.<br><br>The geology of the Iron Hill Prospect area conforms with a north-westerly plunging tight synform. The Synform has been mapped showing a felsic volcanics centre bound by, mafic/ultramafic rocks and then BIF.<br><br>To the east of the fold axial plane there is a continuous outcrop of banded iron formation, of which more than half is iron mineralised and contains significant iron ore grades.<br><br>Further east of the enriched BIF there are a felsic volcanics, outcropping prominently on the northern side of the eastern edge of the hill. The exposure of the felsic volcanics decreases to the south, with most of it covered by detrital material.<br><br>The western limb of the synform is defined predominantly by felsic and mafic rocks, the banded iron formation is enriched, but limited to within the apex of the synform and it is discontinuous towards the northwest.<br><br>In places detrital accumulations of hematitic material is preserved on the lower slopes of the iron formation and overlying the saprolitic ultramafic to mafic rocks. The depth of the transported haematitic material between 1 to 9m in depth and can be found under up to 12m of soil material. |
| ***Drill hole Information*** | 305 drill holes have been drilled at the Iron Hill Prospect throughout its mineral exploration history. Percussion (PER), rotary air blast (RAB), reverse circulation (RC) and diamond drilling (DD) techniques have been used at the Iron Hill Prospect.<br><br>39 rotary air blast (RAB) drill holes were drilled at Iron Hill Prospect in 1963 by Kokan Mining Company, for a total of 1,256.77m. The majority of the drill holes were drilled vertically except for three drilled at -68°/032.5° and -58/032.5°.<br><br>85 percussion drill holes were completed at Iron Hill Prospect, between 1969 and 1970 by Pacific Consolidated, for a total of 3,970.36m. All drill holes were drilled vertically. Information from the 85 Pacific Consolidated percussion drill holes has not been considered during the mineral resource estimation due to unreliable collar location.<br><br>95 reverse circulation drill holes were drilled at the Iron Hill Project by Asia Iron Pty Ltd and Mount Gibson Iron. Asia Iron Pty Ltd drill holes were drilled between 1997 and 2004, for a total of 34 drill holes and 2,888m. All drill holes were drilled at -60° towards 255°.<br><br>Mount Gibson Iron conducted two RC drilling programs in 2013 and 2014 for a total of 125 RC drill holes for 4,640m. All drill holes completed at the Iron Hill Prospect during this period were drilled using a face sampling |

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| | hammer with a 133mm bit size. Drill holes were drilled in a vertical orientation, and also angled orientations (-60°/225° and -60°/045°).<br><br>20 diamond drill holes were drilled by three companies during three distinct periods. In the 60's, Kokan Mining Company completed 10 diamond drill holes for a total of 1,396.40m. In 1969 and 1970 Pacific Consolidated drilled 6 drill holes for a total of 775.85m.<br><br>In 2014, Mount Gibson Iron conducted a diamond drilling program with the completion of 4 drill holes for a total of 326.30m. All drill holes were drilled with a PQ bit size and in an angled orientation (-50°/290°, -60°/190° and -60/240°). |
| ***Data aggregation methods*** | Not Applicable - No exploration results or drillhole intercepts are discussed in this ASX announcement. |
| ***Relationship between mineralisation widths and intercept lengths*** | Not Applicable - No exploration results or drillhole intercepts are discussed in this ASX announcement. |
| ***Diagrams*** | Not Applicable - No exploration results or drillhole intercepts are discussed in this ASX announcement. |
| ***Balanced reporting*** | Not Applicable - No exploration results or drillhole intercepts are discussed in this ASX announcement. |
| ***Other substantive exploration data*** | Not Applicable - No exploration results or drillhole intercepts are discussed in this ASX announcement. |
| ***Further work*** | Further drilling is planned in the first half of calendar year 2018 to close the gaps within the ore bodies without data and also twin some of the historical drill holes from the 60's which were considered unreliable and were not included in the current resource estimation. |

## Section 3 Estimation and Reporting of Mineral Resources

(Criteria listed in Section 1, and where relevant in Sections 2 and 4, also apply to this section)

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| ***Database integrity*** | Data extracted from the database for Mineral Resource estimation purposes is run through general checks to ensure data validity. The database is maintained by MGX with automated validation and extraction processes in place.<br><br>Checks on data include sensible ranges of values for attributes, drill hole collars matching topography and within expected limits, overlapping sample intervals, depths, azimuths, dips and co-ordinates for consistency. Any inconsistent information is either modified or excluded from use in estimation.<br><br>Further checks are completed during the importing of the data into the mine planning software prior to modelling and estimation. |
| ***Site visits*** | Elizabeth Haren, the Competent Person for Mineral Resources, has made several visits to Extension Hill. |
| ***Geological interpretation*** | The iron mineralisation has been interpreted based on a mixture of Fe threshold grades and the geological and geophysical logging. Iron mineralisation occurs as hematite-goethite in the upper portions of the BIF, with magnetite occurring at depth below the base of oxidation. Detrital mineralisation is located on the eastern flank of the hematite-goethite zone.<br><br>The boundary between the hematite and magnetite is interpreted to occur over a relatively narrow zone (a few metres) and as such no transitional zone was modelled. The extents of the magnetite mineralisation have not been tested as the rights to the magnetite do not belong to MGX. |

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| | Outcrop and adit mapping of the iron mineralisation and various lithologies, across the deposit, confirms the validity of the geological interpretation based on the drilling. Alternative interpretations of the mineralisation are unlikely to significantly change the overall volume of the Fe mineralised envelopes in terms of the reported classified Mineral Resources at a 50 % Fe cut-off. |
| ***Dimensions*** | The Iron Hill hematite-goethite and detrital mineralisation is approximately 1,100 m in length and is currently modelled to approximately 50 m below the topography. Mineralisation is not closed off towards the northeast of the central area of the deposit however further infill drilling is required to define this area with confidence.<br><br>There also remains the possibility to define further detrital mineralisation on the eastern flank with further shallow drilling.<br><br>The depth extent of the hematite mineralisation is controlled by the hematite-magnetite boundary which currently has a limited number of drill holes that are deep enough to define this limit. However better definition of this boundary would be expected to increase any hematite mineralisation, not decrease as current interpretations are terminated just below end-of-hole if it is still mineralised. |
| ***Estimation and modelling techniques*** | Using parameters derived from variograms, modelled in Supervisor V8.3, ordinary kriging (OK) of a suite of 14 Iron Ore elements (Fe, SiO2, Al2O3, LOI, P, S, CaO, MnO, MgO, Na2O, TiO2, K2O, Magnasat and density) was completed using CAE Studio software. Linear estimation techniques were considered suitable for Iron Hill due to the geological control on mineralisation. Minor domains of limited extent and information were assigned default average grades as were waste domains and blocks not estimated in the three passes.<br><br>Across-strike extrapolation was limited to approximately half the sectional drill hole spacing (ranging approximately 10-20m) however surface outcrop mapping has been used to extend the known limits in some areas. If these extended areas are not supported by drill sampling they have been excluded from the reported Mineral Resource. Along strike extrapolation is limited to a maximum of half the drill hole spacing.<br><br>While the mineralisation tends to be planar in most cases, care was taken to ensure orientation changes, resulting from folding, were honoured by the sample search and estimation orientation regimes. Estimation parameter selection was guided by the results of mining reconciliation and mining experience at the nearby Extension Hill operation which displays similar geological characteristics and is considered to be an along strike, analogous mineralisation system.<br><br>No assumptions were made regarding recovery of by-products.<br><br>A full suite of Iron Ore elements (Fe, SiO2, Al2O3, LOI, P, S, CaO, MnO, MgO, Na2O, TiO2 and K2O including Magnasat and density) were estimated.<br><br>Block sizes used are 10 mE by 10 mN and 5 mRL with sub-blocks of 2.5 mE by 2.5 mN and 1.25 mRL. The parent NS block size was selected on the basis of approx. 50% of the average drill hole spacing, while other direction dimensions were selected to provide sufficient resolution to blocks across-strike and down-dip. The drilling data spacing varies from nominal 25 m x 25 m spacing at the northern end of the deposit and increases to nominally 25 m x 50 m between the southern and central hematite areas.<br><br>The search ellipse for mineralisation was defined by the general strike and dip of the domains and three distinct zones were used to allow for the folded nature of the mineralisation. Waste search ellipses were defined by variography where possible and if no variogram was able to be modelled the variogram from the same element in a geologically similar domain was applied. Interpolation was completed in three passes to estimate average block grades for each element. The first pass had a range of 25 m using a minimum of 6 samples or a maximum of 9 with a maximum of 3 samples per hole. The second pass had a range of 50 m using a minimum of 6 samples or a maximum of 9 with a maximum of 3 samples per hole. The third pass had a range of 150 m using a minimum of 3 samples or a maximum of 9 with a maximum of 3 samples per hole.<br><br>No local estimation or SMU correction has been undertaken.<br><br>Correlations between elements were considered and while co-kriging was not implemented, using similar estimation parameters for correlated elements allows some reproduction of correlations. Correlation of elements was reviewed for drill data and for estimated blocks to ensure a similar correlation was produced by the estimate.<br><br>All estimation was completed within mineralisation units using “hard” boundaries interpreted to an approximately 50% Fe cut-off.<br><br>In general, most element distributions did not have extreme outliers. Top-cutting was applied to composited samples. |

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| | Validation was completed by checking the global averages of composites versus model from each domain, by creating trend plots of composites versus model from each domain and by visual validation of grade trends in the model to ensure they honoured the input data. |
| ***Moisture*** | All tonnages have been estimated as dry tonnages. |
| ***Cut-off parameters*** | All grade interpolation was constrained within geological contacts and to mineralisation solids interpreted at an approximately 50% Fe cut-off grade. The grade chosen for interpretation provides a suitable continuity to generate sensible geological shapes for interpolation.<br>Reporting of Mineral Resources uses 54% Fe as a cut-off grade to produce material at a target shipping specification of 60% Fe (or greater). |
| ***Mining factors or assumptions*** | It is assumed that mining will be by open cut methods. Due to the proximity to Extension Hill Operations and similarity of the mineralisation to that at Extension Hill the mining factors are assumed to correlate directly to current operations at Extension Hill and costs are well understood.<br>A diluted model is generated for mining evaluation using a dilution skin of 0.5m applied in an E-W orientation to the mineralisation envelop. |
| ***Metallurgical factors or assumptions*** | It is assumed that the hematite ore will be direct shipping with minimal processing required (crushing and screening only). Current metallurgical factors are assumed to be consistent with current operations at Extension Hill Mine which is approximately 3km to the north, along-strike from Iron Hill. |
| ***Environmental factors or assumptions*** | Environmental factors and conditions are considered to be similar to those at the operating Extension Hill Mine and as such are well understood. Work has already commenced to gain mining permissions. It is assumed that any environmental concern can be addressed satisfactorily. |
| ***Bulk density*** | Density at Iron Hill was determined using down hole geophysical methods employed by ABIM Solutions, in 2013, and Surtron Technologies, in 2014. Down hole density and calliper measurements were recorded on 10cm intervals and composited after filtering to 1m composites by DOMAIN.<br>The bulk density was estimated into the model blocks using ordinary kriging based on for mineralisation domains and assigned averages for waste domains and un-estimated blocks. The average bulk density value (2.84t/m3) is reasonable for the Iron Hill mineralisation.<br>All density results have been coded for domains based on lithology and mineralisation and have been statistically reviewed with commercially available software. |
| ***Classification*** | The Mineral Resource has been classified based on the continuity of both the geology and the Fe grades, along with the drill hole spacing and data quality.<br>The Mineral Resource has been classified as a combination of Indicated and Inferred. No Measured material has been defined at this point.<br>The mineralisation was classified as an Indicated Resource where the drilling density was approximately 25 m by 25 m, the mineralisation shows reasonable geological continuity and was estimated in the first interpolation pass.<br>The remainder of the mineralisation was classified as an Inferred Resource due to limited drill coverage, structural / geological complexity and the narrow, discontinuous geometry of the mineralisation.<br>Poorly understood areas of mineralisation were not classified or were downgraded to unclassified.<br>The classification was completed by digitising strings, in plan and/or section, with the strings or resultant wireframes used to code the block model for classification.<br>The Mineral Resource estimate appropriately reflects the Competent Person's view of the deposit. |
| ***Audits or reviews*** | The Mineral Resource estimates are reviewed internally within MGX on a three levelled assessment structure.<br>Periodic updates are completed when new information and understanding is required to be reflected in the Mineral Resource. |

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| ***Discussion of relative accuracy/ confidence*** | The Mineral Resource models are provided as a basis for long term planning and mine design, and are not necessarily sufficient for shorter term planning and scheduling. The block model grade estimates were validated against the drill hole composites to ensure that the model reflects the input data.<br>The Mineral Resource statement relates to global estimates of tonnes and grades.<br>No production data is available for comparison purposes at Iron Hill at this stage of the project. |

# APPENDIX 6 – Shine Project

## Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections)

| Criteria | Commentary |
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| ***Sampling techniques*** | The bulk of the data used for Mineral Resource estimation is based on the logging and sampling of RC drilling conducted by Gindalbie Metals Ltd (Gindalbie) prior to acquisition of the Shine Project by Mount Gibson Iron (Mount Gibson) as well as the drill results from additional drilling conducted by Mount Gibson between 11 April 2014 and 9 June 2014.<br><br>The Gindalbie RC samples (wet and dry) were collected at 1 m intervals using a cone splitter. Within the hematite mineralisation, 33 % of the samples are recorded as either wet or damp.<br><br>The Gindalbie diamond core samples were half-core or quarter-core sampled using the same nominal sample interval<br><br>The additional Mount Gibson drilling totalled 6,243 samples consisting of 5,558 primary samples and 685 secondary samples which were collected and submitted to the Extension Hill laboratory for assaying. Primary samples were 1 m samples collected off a static cone splitter mounted to the RC rig and were used in the resource estimation. Secondary samples were collected as 2 – 4 m composites using the spear method of sample collection and these are not considered in the Mineral Resource estimation. Average sample weight was about 3 kg but sample weights ranged from 0.5 kg to 4 kg depending on sample recovery.<br><br>Of all the Mount Gibson samples 33 % were recorded as either wet or damp.<br><br>Quality control measures during sampling were implemented to prevent sample contamination which in turn ensures integrity of the samples and ultimately the integrity of the assays. |
| ***Drilling techniques*** | Gindalbie completed 154 RC holes using a 140 mm face sampling hammer. Gindalbie also drilled 23 diamond drill holes of HQ and PQ diameter.<br><br>In 2014 Mount Gibson completed an additional 78 RC holes using either a 138 mm or 140 mm face sampling hammer and 6 diamond holes of PQ diameter. The RC drilling was conducted by VM Drilling using a track mounted HYDCO 800 RC drill rig. The rig utilised a mounted compressor with a capacity to produce 1150cfm @ 500psi and a separate auxiliary booster with a capacity to produce 2400cfm @ 1000psi.<br><br>The total air pressure utilised to lift the sample into the cyclone affects the quality of the sample, sample recoveries and how representative the final primary sample is to the material generated from the face hammer per meter interval. The drilling was conducted by experienced drillers with a rig with sufficient air pressure to ensure excellent sample recoveries. |
| ***Drill sample recovery*** | Sample recovery information for the 2014 Mount Gibson samples from the RC drilling is based on visual judgement and is indicative. The data indicates 81 % of the samples to have been judged as attained high sample recovery, with 12 % having moderate sample recovery and 7 % having poor sample recovery. The majority of the samples with poor sample recovery were determined to come from the first 6 m of each drill hole and were generated whilst the RC drill hole was being collared.<br><br>The information from the Gindalbie RC drill hole data regarding sample recovery is indicative only and suggests the majority of samples have achieve moderate to high sample recovery.<br><br>No relationship between sample recovery and grade has been ascertained due to the subjective nature of sample recovery information. |
| ***Logging*** | Logging data from previous drilling was provided to Mount Gibson by Gindalbie Metals. Lithological units were determined by Gindalbie based on geological logging and geochemistry.<br><br>Mount Gibson conducted qualitative logging utilising LogChief to capture the logging data. LogChief is logging software with inbuilt data validation commands. In addition to LogChief internal validations, the logging data was validated visually by geologists and also post-validated against geochemistry.<br><br>Logging, geochemistry (assays) and cross section interpretations conducted during and after Mount Gibson drilling confirms the geological continuity at depth, of mapped outcrops of the hosting banded iron formation and associated outcropping iron mineralisation.<br><br>An independent consultant, Haren Consulting, sighted diamond core from the Shine Mount Gibson 2014 diamond drilling to confirm the continuity of the mineralised intercepts. |

| Criteria | Commentary |
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| | Mount Gibson logging of RC chips captured information about lithological variations, textures, alteration, mineralisation, level of oxidation and weathering, sample condition and sample recoveries. Geotechnical logging was also conducted on diamond core in addition to the above.<br><br>Downhole geophysical logging data include Gyroscopic orientation data, density, resistivity and magnetic susceptibility.<br><br>It is concluded that logging of drill hole samples was done with sufficient detail to meet the requirements of Mineral Resource estimation and Ore Reserve feasibility studies. |
| ***Sub-sampling techniques and sample preparation*** | RC drill samples (33 % of mineralised samples recorded as damp or wet from both Gindalbie and Mount Gibson drill programs) were collected using a cone splitter. Diamond core was generally half-core or quarter-core sampled.<br><br>For Gindalbie samples three analytical laboratories were used for sample preparation and subsequent XRF analysis – Amdel Ltd in Perth and Adelaide, along with Ultra Trace Pty Ltd in Perth.<br><br>Gindalbie sample preparation comprises oven drying and crushing to approximately 3 mm, followed by pulverising to 90 % passing 105 µm.<br><br>Mount Gibson in 2014 used Extension Hill (EH) Spectrolab as the primary assaying laboratory for the Shine RC samples. Upon receiving samples from Shine, the EH Spectrolab sorted and registered the samples on to the lab tracking & processing system.<br><br>Each sample was reduced by riffle splitting to approximately a 400 g sub-sample. The sub-sample was re-bagged and the residue returned to the original calico bag. The sub-samples was oven dried for 4 hours at temperatures between 100°C and 110°C before being pulverized to 90 % passing 106 µm fraction.<br><br>The splitting of the samples into sub-samples and the sample sizes were considered to be appropriate to correctly represent the mineralisation, based on the style of mineralisation (massive hematite), the thickness and consistency of intersections and the drilling methodology.<br><br>No samples from the 2014 Mount Gibson PQ diamond program have been used in the Mineral Resource estimation. |
| ***Quality of assay data and laboratory tests*** | Samples were assayed using the XRF method for a preferred iron ore suite of elements and compounds by Gindalbie and Mount Gibson. Loss on Ignition (LOI) was determined by Thermo-gravimetric analyser at 1000°C.<br><br>In-house standards and field duplicates were inserted by Gindalbie Metals into the sample batches (nominal rate of 1:50 for standards and 1:25 for field duplicates) to monitor sampling and assaying quality.<br><br>Previous analysis of the Gindalbie QAQC data for the Shine deposit did not identify any significant issues with the assay data which could be material to the resource estimate.<br><br>Mount Gibson implemented quality control (QC) measures to qualify the assay data and laboratory tests. Approximately 4 % duplicate samples were collected and inserted in the sampling stream and approximately 5 % commercially available Certified Reference Material (CRM) were incorporated in the sampling stream submitted to Spectrolab for XRF analysis.<br><br>Analysis of QC duplicates results suggests that the bulk of the sample material in the sample splitting system (static cyclone) was evenly split with geochemical variability between parent sample and duplicate sample within acceptable ranges. There were very few outliers and these are considered not material to the Mineral Resource.<br><br>Results of the CRM data demonstrates that in general, that Spectolab consistently reproduced assay results within the required limits for the particular CRM types used, indicating lab accuracy was good. On 3 occasions an assay batch failed a Fe standard. In each case the entire assay batch was re-analysed and returned Fe CRM results within the acceptable range.<br><br>Mount Gibson implemented quality assurance (QA) measures to verify the sampling and assaying process. Approximately 10 % of the total primary samples were submitted to a secondary lab with half of these being pulps and the other half coarse rejects. QA plots indicate no bias and good relative precision for the majority of analytes except for Al2O3 which showed minor variation between Spectrolab and the secondary lab. This is not considered to be material to the Mineral Resource. |
| ***Verification of sampling and assaying*** | Haren Consulting has not conducted any independent verification of the assay data from either Gindalbie or Mount Gibson.<br><br>All data from Gindalbie was collected electronically and stored in a SQL database with appropriate validation procedures.<br><br>Mount Gibson used Logchief as a data capturing software and the data was stored in Datashed (a database software). |

| Criteria | Commentary |
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| | No adjustments or calibrations were made to any assay data used in the estimate, apart from resetting below detection limit values to half positive detection so as to not have negative assay values within the resource estimation.<br><br>No twinned diamond core holes have been completed to validate the RC drilling assay results by either Gindalbie or Mount Gibson. |
| ***Location of data points*** | The grid is based on the MGA 94 Zone 50 grid datum. Collar locations for both Gindalbie and Mount Gibson drill holes were surveyed routinely by surveyors using RTK DGPS with mm accuracy in X, Y and Z.<br><br>Downhole surveys were collected for the majority of drill holes using gyroscopic survey techniques for both Gindalbie and Mount Gibson. Gyroscopic surveys are not affected by the magnetism of the BIF host rock. The data was presented at 5 m or 10 m intervals. Where gyroscopic surveys could not be completed to end of hole the last gyroscopic survey azimuth taken down the hole was inferred to end of hole and dip measurements taken from drillers' magnetic tool were used to end of hole. The banded iron formation magnetism does not affect the drillers dip measurements, however the driller's azimuth measurements are not accurate and have not been used for data location purposes.<br><br>The topography wireframe was based on 2m contours. |
| ***Data spacing and distribution*** | The drilling for both Gindalbie and Mount Gibson was completed along a set of east-west trending sections. The section spacing varies between 25 m and 50 m apart, with drill holes spaced 25 m apart on section.<br><br>The section spacing achieved through drilling is sufficient to establish the degree of geological and grade continuity necessary to support the Mineral Resource classifications that were applied.<br><br>The drilling was composited downhole using 1 m intervals. |
| ***Orientation of data in relation to geological structure*** | The host Banded Iron Formation of the Shine iron mineralisation is sub-vertical and dips to the west at approximately -85o. Holes are predominately drilled at an inclination of -55° and -60° towards both west and east due to the sub-vertical nature of the hosting unit. Interpretation of the mineralised intercepts indicates that the mineralisation mimics the general sub-vertical orientation of the BIF. However, a horizontal orientation of the mineralisation is evident at the contact with an intervening flat lying dolerite dyke at depth. The location and orientation of the Shine drilling is appropriate given the strike, dip and morphology of the iron mineralisation. |
| ***Sample security*** | Haren does not believe that sample security poses a material risk to the integrity of the assay data used in the Mineral Resource estimate from the Gindalbie Metals drill results.<br><br>All samples generated at Shine from the Mount Gibson 2014 drilling were handled, packaged and dispatched by Mount Gibson personnel to Spectrolab at the Mount Gibson Extension Hill Mine. There were no sample security issues during this process. No sample losses occurred between sampling and lab analysis with all samples were accounted for through field and lab tracking systems. |
| ***Audits or reviews*** | Haren are not aware of any audits or reviews for the Shine deposits, other than the due diligence conducted by Mount Gibson during the acquisition of Shine.<br><br>Haren Consulting audited and reviewed the data capturing processes and the QAQC systems that Mount Gibson have in place and deemed them to be industry standard. |

## Section 2 Reporting of Exploration Results

(Criteria listed in Section 1, and where relevant, in Sections 3 and 4, also apply to this section)

| Criteria | Commentary |
|---|---|
| ***Mineral tenement and land tenure status*** | Gindalbie are the vendors of the project to Mount Gibson. The Shine Project area is defined by an area previously agreed between the tenement holder "Minjar Gold" and the vendors Gindalbie who have iron mineral rights over the tenure. The Shine Project Area is over parts of 3 mining leases M59/406, M59/421 and M59/731. |
| ***Exploration done by other parties*** | Exploration for Iron at the Shine Project Area has only been conducted by Gindalbie prior to the 2014 Mount Gibson RC and Diamond drill programs. |
| ***Geology*** | The Shine Hematite deposit is located within the Warriedar Fold Belt which is part of the Archaean Yalgoo-Singleton greenstone belt. The deposit is located along a north-northwest trending, sub-vertical 50 – 120 m wide |

| Criteria | Commentary |
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| | banded iron formation (BIF) of the Windanning Formation which is part of the Luke Creek Group. The BIF forms a prominent ridge which is approximately 50 m to 90 m wide in the Shine area. A sequence of mafic, ultramafic and pelitic sediments bounds the BIF to the east while a talc-rich ultramafic schist dominates west of the BIF. Where the BIF does not outcrop it is covered by latereititic or colluvial material. The iron mineralisation (goethite, hematite and magnetite) is strata bound occurring only within the BIF unit. |
| ***Drill hole Information*** | The majority of the drilling by Gindalbie has been RC drilling with some diamond holes drilled for metallurgical and geotechnical assessment. Specific drill hole information from Gindalbie is not presented here as it has been previously reported in August 2012.<br>Appendix A contains drill hole information from drilling conducted by Mount Gibson in 2014. The drill hole information consists of drill hole collars, eastings and northings, elevations, dips and azimuths, hole maximum depths and significant intercepts. |
| ***Data aggregation methods*** | Not Applicable - No exploration results or drillhole intercepts are discussed in this ASX announcement. |
| ***Relationship between mineralisation widths and intercept lengths*** | Not Applicable - No exploration results or drillhole intercepts are discussed in this ASX announcement. |
| ***Diagrams*** | No exploration results or drillhole intercepts are discussed in this ASX announcement. Cross Sections, long sections and photos of the geology, mineralisation and mineral resource have been released in previous ASX reports.. |
| ***Balanced reporting*** | Not Applicable - No exploration results or drillhole intercepts are discussed in this ASX announcement. |
| ***Other substantive exploration data*** | Not Applicable - No exploration results or drillhole intercepts are discussed in this ASX announcement. |
| ***Further work*** | No further exploration drilling will be required at Shine. The drilling conducted so far is sufficient enough to prove the lateral and depth continuity of the iron mineralisation at Shine and provides enough confidence to conduct Mineral Resource estimation prior to mining. |

## Section 3 Estimation and Reporting of Mineral Resources

(Criteria listed in Section 1, and where relevant in Sections 2 and 4, also apply to this section)

| Criteria | Commentary |
|---|---|
| ***Database integrity*** | All data collected electronically and stored in a SQL database with appropriate data validation procedures. The database was managed by Gindalbie, and has now been transferred to MGX.<br>Haren undertook a basic check of the data for potential errors as a preliminary step to compiling the resource estimate. No significant flaws were identified. |
| ***Site visits*** | No site visit has been conducted by the competent person for Mineral Resources. |
| ***Geological interpretation*** | The iron mineralisation has been interpreted based on a mixture of Fe threshold grades and the geological and geophysical logging.<br>Iron mineralisation occurs as hematite-goethite in the upper portions of the BIF, with magnetite occurring at depth below the base of oxidation which is approximately 100 m below surface.<br>The boundary between the hematite and magnetite is interpreted to occur over a relatively narrow zone (a few metres) and as such no transitional zone was modelled. |

| Criteria | Commentary |
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| | An east-west striking, shallow dipping, narrow dolerite dyke is interpreted which stopes out the mineralisation.<br><br>The northern and southern areas of the BIF and associated iron mineralisation are covered by a siliceous capping (a product of near-surface weathering processes), which thickens to the north and south (i.e. this zone is thinnest in the central parts of the deposit).<br><br>Outcrops of the iron mineralisation and various lithologies, confirms the validity of the geological interpretation based on the drilling.<br><br>Alternative interpretations of the mineralisation are unlikely to significantly change the overall volume of the Fe mineralised envelopes in terms of the reported classified resources at a 50 % Fe cut-off. |
| ***Dimensions*** | The Shine deposit is hosted within a north-south trending BIF. The mineralisation parallels the stratigraphy, trends roughly north-south and is sub-vertical, with a total strike length of about 1.7 km. The mineralisation occurs mainly in two sub-parallel zones which are up to 30 m wide in places. |
| ***Estimation and modelling techniques*** | Estimation of Fe, $SiO_2$, $Al_2O_3$, P, LOI, CaO, $K_2O$, MgO, MnO, S, $TiO_2$, Magnasat and density using ordinary block kriging for all domains with hard domain boundaries.<br><br>Block model constructed using a parent cell size of 5 mE by 10 mN by 10 mRL for mineralised material. The search ellipse orientation and radius was based on the results of the grade continuity analysis, with the same search neighbourhood parameters used for all elements to maintain the metal balance and correlations between elements. An initial search of 200 m along strike by 100 m down dip by 20 m across the plane of mineralisation was used, with a minimum of eight and maximum of 20 samples.<br><br>Hematite and magnetite mineralisation was modelled, along with the host rock domains. Where insufficient samples were available default values were assigned.<br><br>Block estimates were validated against the input composite data both globally and locally.<br><br>Snowden previously estimated the Shine resource in November 2011 and July 2012. |
| ***Moisture*** | All tonnages have been estimated as dry tonnages. |
| ***Cut-off parameters*** | The iron mineralisation within the hematite was reported above a 50 % Fe cut-off grade.<br><br>The cut-off grade was provided by Mount Gibson and is based on the assumption that the Shine deposit will be mined by open pit mining methods and that costs will be similar to existing mines operated by Mount Gibson (e.g. Extension Hill and Tallering Peak).<br><br>The iron mineralisation within the magnetite was reported above a 50 % Fe cut-off grade. |
| ***Mining factors or assumptions*** | It is assumed the deposit will be mined using open cut methods. |
| ***Metallurgical factors or assumptions*** | It is assumed that the hematite ore will be direct shipping with minimal processing required (crushing and screening only). Magnetite mineralisation will likely require beneficiation to produce a concentrate. |
| ***Environmental factors or assumptions*** | It is assumed that no environmental factors exist that could prohibit any potential mining development at the Shine deposit. |
| ***Bulk density*** | The bulk density was estimated into the model blocks using ordinary kriging based on downhole geophysical logging. |
| ***Classification*** | The Mineral Resource has been classified based on the continuity of both the geology and the Fe grades, along with the drill hole spacing and data quality.<br><br>The Mineral Resource has been classified as a combination of Measured, Indicated and Inferred.<br><br>The mineralisation was classified as a Measured Resource where the drilling density was 25 mE by 50 mE (or less) and the hematite mineralisation shows good geological continuity.<br><br>The mineralisation was classified as an Indicated Resource where the drilling density was greater than 25 mE by 50 mN but less than 25 mE by 100 mN and the hematite mineralisation shows reasonable geological continuity. |

| Criteria | Commentary |
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| | The remainder of the mineralisation was classified as an Inferred Resource due to structural complexity and the narrow, discontinuous geometry of the mineralisation.<br><br>Poorly understood areas of mineralisation were not classified. |
| ***Audits or reviews*** | No external reviews or audits have been completed. |
| ***Discussion of relative accuracy/ confidence*** | The block model grade estimates were validated against the drill hole composites to ensure that the model reflects the local input data. |