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RED HILL IRON Limited

ABN: 44 114 553 392

Level 2, 9 Havelock Street, West Perth WA 6005
PO Box 1160, West Perth WA 6872
Telephone: (61 8) 9481 8627
Facsimile: (61 8) 9481 8445

E-mail: redhillinfo@redhilliron.com.au
Website: www.redhilliron.com.au

24 November 2016

Company Announcements Office
ASX Limited
Level 4, 20 Bridge Street
SYDNEY NSW 2000

**Red Hill Iron Ore Joint Venture - Mineral Resources Update**

API Management Pty Ltd (API), the Manager of the Red Hill Iron Ore Joint Venture (RHIOJV), has delivered to Red Hill Iron Limited (RHI) and the other members of the RHIOJV updated Mineral Resource estimates dated 22 November 2016. A copy of the API covering letter and the report produced by Golder Associates Pty Ltd are attached.

The updated Mineral Resource estimates include maiden estimates for the Trixie West and Cardo Bore West Channel Iron Deposits (CID) and an updated estimate for the Red Hill Creek CID. The overall increase of 3 million tonnes in Mineral Resource estimates takes the total Mineral Resources from 813Mt (*RHI ASX announcement 26 June 2015*) to 816Mt.

RHI owns a 40% interest in the RHIOJV, which is maintained on a carry basis by API at no direct cost to RHI until the commencement of commercial production.

Upon commencement of commercial production, RHI may either elect to participate in the continuing RHIOJV mining operation at the 19% level or elect to convert its joint venture interest to a 2% FOB Royalty on all RHIOJV iron ore production. In the event of RHI electing to convert to the 2% Royalty, all funds advanced on RHI's behalf during the carry phase will be written off and the company's interest in the RHIOJV (which will be restricted to the FOB Royalty) will be debt free.

Neil Tomkinson

Chairman

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API MANAGEMENT PTY LIMITED

**API Management Pty Limited**
ABN 66 112 677 595

Level 1
1 Preston Street
Como WA 6152

Telephone: (61) 8 9423 0222
Facsimile: (61) 8 9423 0233
mail@apijv.com.au
www.apijv.com.au

22 November 2016

Red Hill Iron Limited
Level 2
9 Havelock Street
WEST PERTH WA 6005

Aquila Steel Pty Ltd
Level 14
225 St Georges Terrace
PERTH WA 6000

AMCI Australia Pty Ltd
Level 37 Riverside Centre
123 Eagle Street
BRISBANE QLD 4000

Attention: Neil Tomkinson / Miles Zhou / Brian Clifford

Dear Sirs,

**Re: Updated Mineral Resource Estimates for RHIOJV to include maiden estimates for Trixie West, Cardo Bore West and an updated estimate for Red Hill Creek West that incorporates infill RC drilling completed in 2015**

API Management Pty Ltd (APIM) and Golder Associates Pty Ltd (Golder) have updated the RHIOJV Mineral Resource estimate to include the maiden Mineral Resource estimates for the Trixie West and Cardo Bore West Channel Iron Deposits (CID) and an update to the Red Hill Creek West (CID) Mineral Resource estimate that incorporates infill RC drilling that was completed in 2015. The division of each deposit based on Joint Venture (JV) ownership is summarised in the Table below.

| Full Deposit Name | Sub-Reference Name (JV Split) | JV |
|---|---|---|
| Cardo Bore | Cardo Bore | MSIOJV |
| | Cardo Bore West | RHIOJV |
| Red Hill Creek | Red Hill Creek West | RHIOJV and APIM Mt Elvire Project |
| | Red Hill Creek (including Red Hill Creek Extension) | APIJV |
| Trixie | Trixie | APIJV |
| | Trixie West | RHIOJV |

The Mineral Resource estimates are presented in the attached report received from Golder dated 22 November 2016. A Competent Person Statement is contained within the report covering work completed by Golder.

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In the instance the Mineral Resource Statement is to be issued for public release the following Competent Person Statement should be attached when referring to the resources detailed in this report. Prior to public release of the Mineral Resource Statement consent must be obtained from the Competent Persons. Consents will be provided following review by the Competent Persons of the proposed release document.

*Competent Person Statement*

*The Competent Person responsible for the geological interpretation and the drill hole data used for the resource estimation is Mr Michael Wall who is a full-time employee of API Management Pty Ltd, and Member of the Australasian Institute of Mining and Metallurgy. Michael Wall has sufficient relevant experience to the style of mineralisation and type of deposit under consideration and to the activity for which he is undertaking to qualify as a Competent Person as defined in the JORC Code (2012 Edition).*

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

## Mineral Resource Estimates

APIM has reviewed the Mineral Resource estimates for each deposit and is satisfied the estimates have been completed to industry standard. All Mineral Resource estimates are reported at a 52% Fe block cut-off.

The updated global RHIOJV Mineral Resource estimate of 816 Mt at 56.5% Fe represents an increase of 3 Mt from the previously released 2015 Mineral Resource for the RHIOJV (813Mt). The previous estimates also used a 52% Fe block cut-off. Please note rounding of values has resulted in variation between tables.

The increase is attributed to;

- discovery and reporting of the maiden resource estimate for the Trixie West deposit (2.7 Mt);
- discovery and reporting of the maiden resource estimate for Cardo Bore West (0.1 Mt).

Table 1 summarises the three new estimates for Red Hill Creek West, Trixie West and Cardo Bore West.

Mineral Resource estimates from Cardo Bore East, Cardo Bore North, Catho Well North, Cochrane, Jewel, Kens Bore, Trinity Bore and Upper Cane were not updated as part of this work.

The full RHIOJV Mineral Resource Statement is presented in Attachment A. Refer to Figure 1 for deposit locations.

**Table 1. Summary of Mineral Resource estimates for the three identified Channel Iron Deposits within the RHIOJV (52% Fe cut-off).**

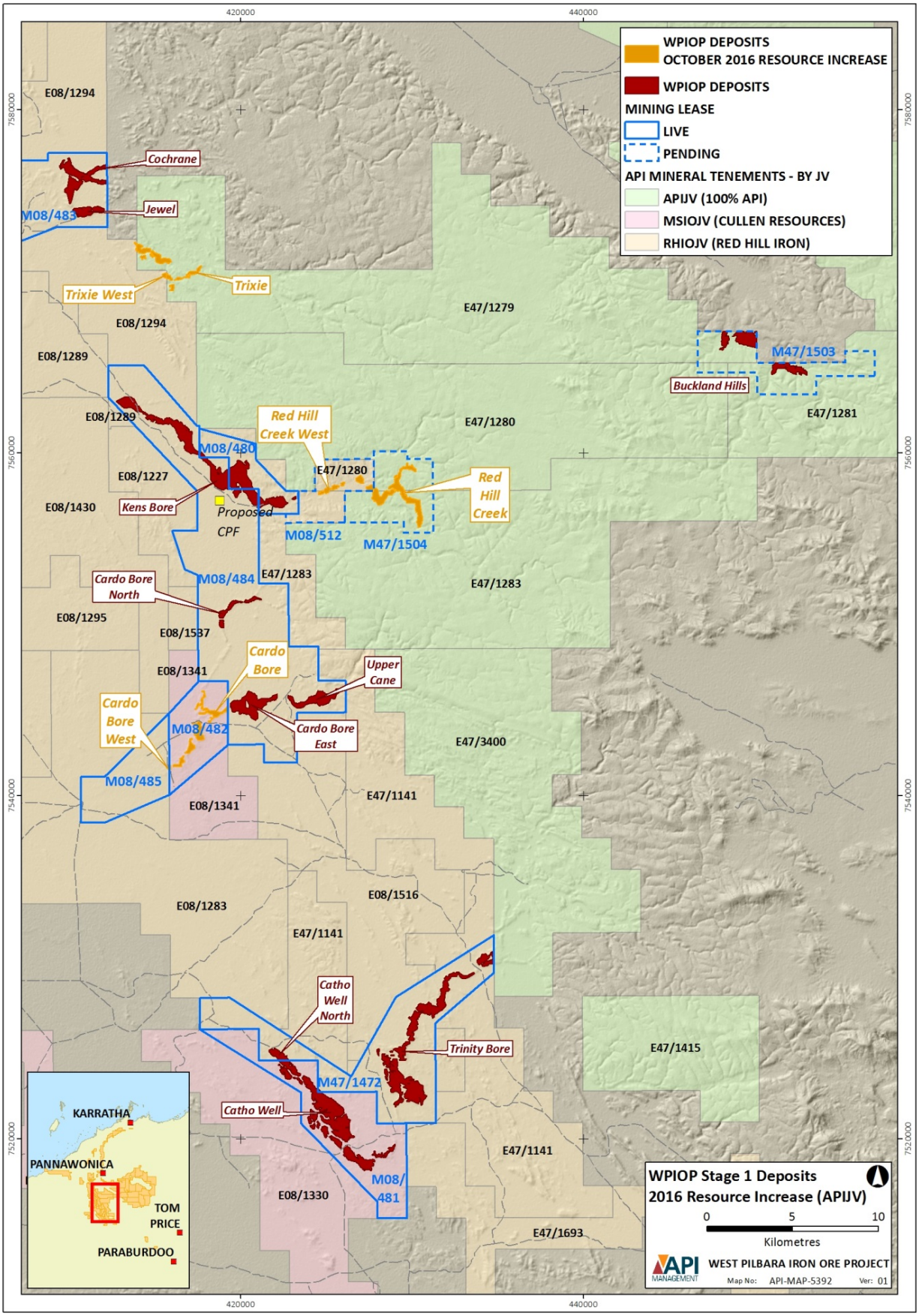
| Deposit | Joint Venture | Tonnage Mt | Fe % | $SiO_2$ % | $Al_2O_3$ % | Mn % | LOI % | MgO % | P % | S % |
|---|---|---|---|---|---|---|---|---|---|---|
| **Cardo Bore West** | RHIOJV | 0.1 | 52.34 | 7.91 | 7.15 | 0.08 | 9.21 | 0.17 | 0.054 | 0.009 |
| **Trixie West** | RHIOJV/ APIM Elvire | 2.7 | 55.30 | 7.56 | 3.75 | 0.02 | 9.13 | 0.05 | 0.069 | 0.026 |
| **Red Hill Creek West** | RHIOJV/ APIM Elvire | 27.8 | 56.98 | 5.62 | 3.30 | 0.02 | 8.89 | 0.07 | 0.116 | 0.010 |
| **TOTAL** | | **30.6** | **56.82** | **5.80** | **3.35** | **0.02** | **8.91** | **0.07** | **0.112** | **0.011** |

The Mineral Resource estimate update for the three deposits (Cardo Bore West, Red Hill Creek West and Trixie West) totals 31 Mt at 56.8% Fe.

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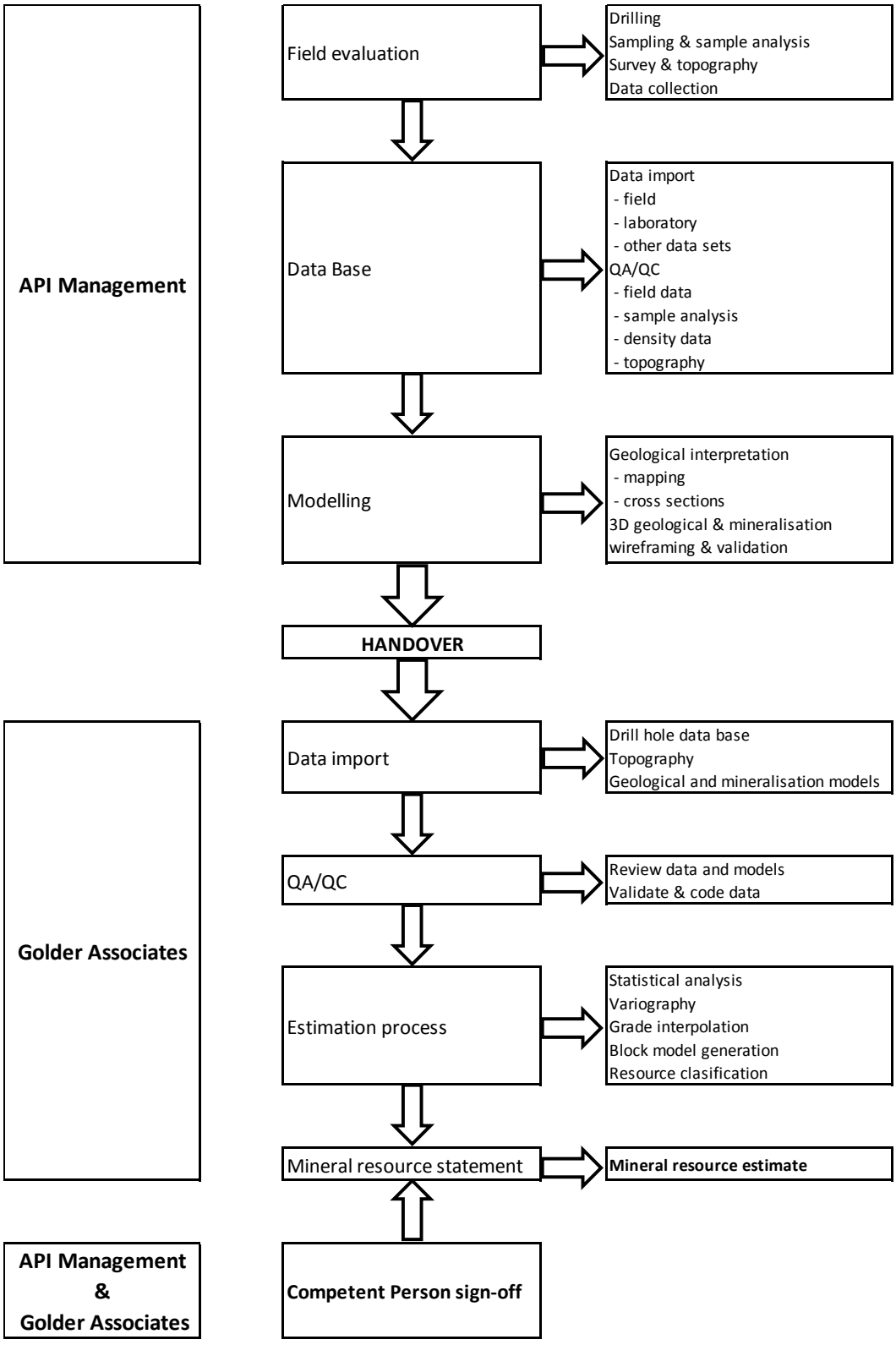
**Figure 1. West Pilbara Iron Ore Project – Stage 1 – CID deposit location plan.**



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## Estimation Process

The following flow sheet summarises key activities by APIM and Golder, all forming part of the resource estimation process.



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## Geological Interpretation

Three dimensional geological interpretations have been completed for all deposits. Revised geological interpretations are based on increased drill density and extension drilling at the Red Hill Creek deposit and improved mineralisation surface mapping.

The key stratigraphic units identified and modelled for the CID include:

- Canga (Dhc)
- Hardcap CID (Zpw)
- Hematitic Hard Zone CID (Zph)
- Goethitic Zone CID (Zpg)
- Clay Zone (Zpc)
- Mixed Zone CID (Zpm)
- Lithic Zone CID (Zpl)
- Basal Clay Zone (Zpb)
- Basal Conglomerate or Gravel (JK / Zpk)
- Basement (Bsm)

Solid 3D geological models for each of the stratigraphic units listed above were created based on drill hole and mapping data. The geological model was used to constrain the mineralisation and assign material density. Figure 4 shows an example of the construction of the Upper Cane geological model. Not all stratigraphic units are present at each deposit.

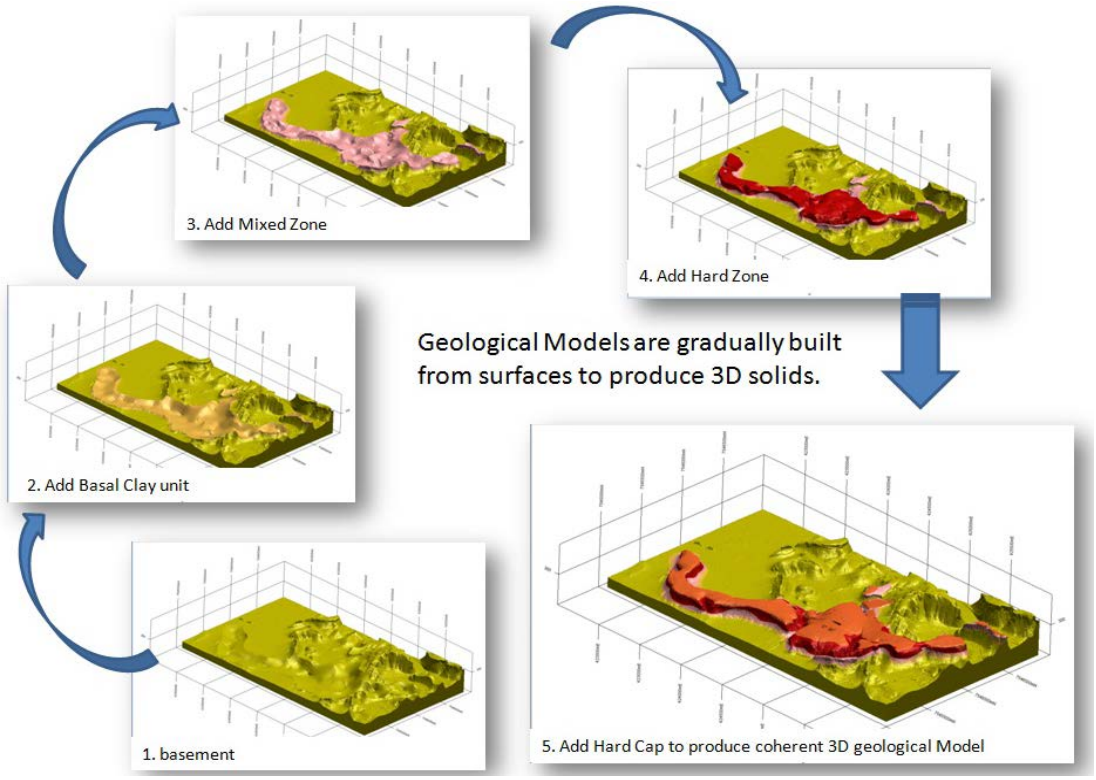



**Figure 3 – The Geological Modelling Process**

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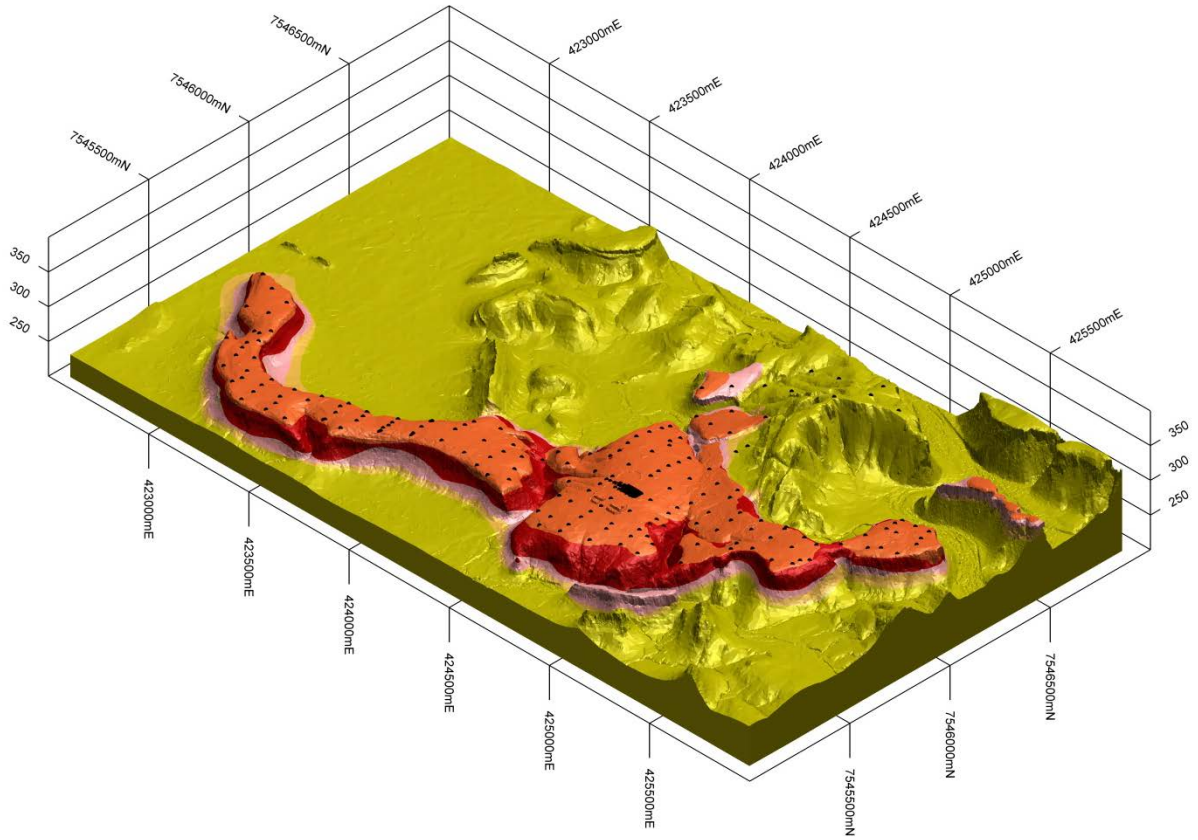



**Figure 4 – Geological / Stratigraphic Model (Using Upper Cane as an Example)**

## Mineralisation Interpretation

Mineralised outlines were created using a combination of lithological and grade data. Hard boundaries were defined based on the following guidelines:

- 52% Fe applied as a lower cut-off;
- A minimum intercept width of 2m across two sections;
- A maximum consecutive waste intercept of 2m across two sections.

It should be noted that the criteria set out above acted as a guideline only, cut-offs were relaxed in situations where geological continuity would be maintained. Mineralisation was domained by stratigraphic unit.

Internal dilution has been kept to a minimum provided continuity of the mineralised envelopes could be maintained.

Mineralised envelopes were constrained by topography and the CID stratigraphy – geological model (Figure 5).

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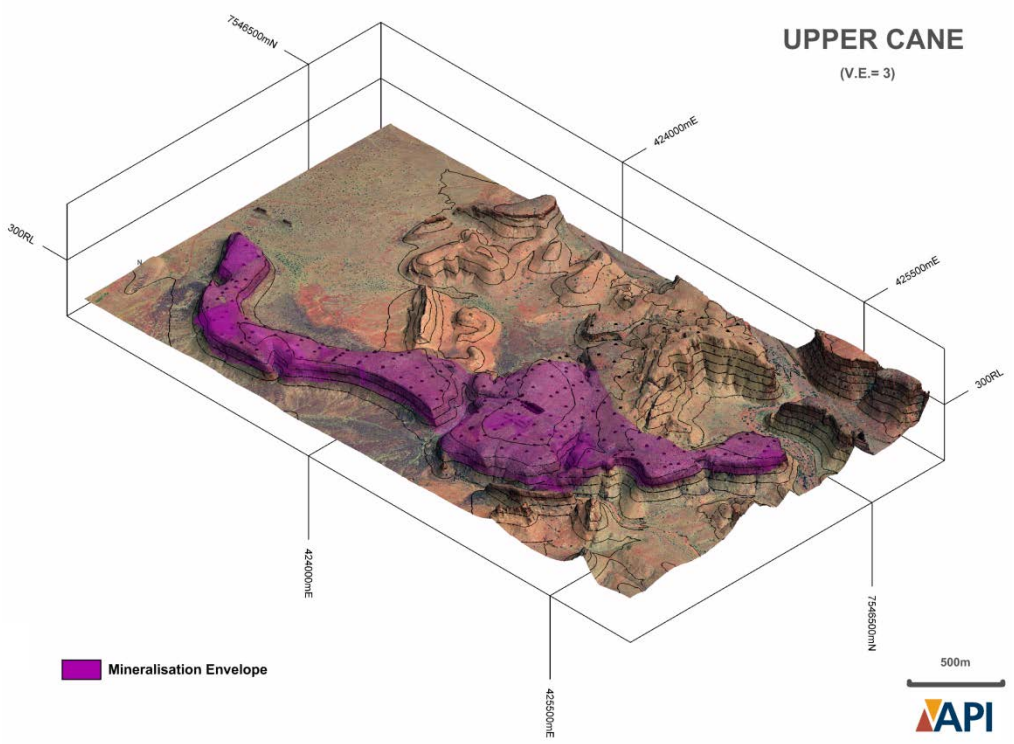



**Figure 5 – Modelled Mineralisation Envelope (Using Upper Cane as an Example)**

Golder undertook statistical and geostatistical analysis on drilling data that was constrained to the modelled mineralisation envelope and mineralised stratigraphic units.

For statistical data analysis, drilling data was composited to 2 m downhole lengths. Analysis was based on eight assay variables: Fe, $SiO_2$, $Al_2O_3$, P, S, Mn, MgO and LOI (LOI 1000$^oC$).

Directional grade variography was completed for all domains in all the deposits, to provide parameters for the Ordinary Kriging method used for resource estimation.

## Block Model

Block models were constructed using a parent block size of 25m x 25m x 2m and a sub-block cell size of 5m x 5m x 2m. The mineralised envelope was used to constrain the block model.

## Density

No diamond core density testwork is available from the Trixie or Cardo Bore deposits and densities have been assumed based on rock type from nearby WPIOP Stage 1 Deposits. A description on this density information is provided below.

API has assigned dry densities to the mineralised stratigraphic units based on 1,335 density determinations completed on diamond drill core and winze stockpile samples collected between May 2008 and May 2015.

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The accuracy and representativeness of dry densities determined by API were checked with 225 waxed sample pair densities determined Ammtec (Laboratory) and ALS Laboratories. 17% of all densities were validated in this manner. Based on the validation, a correction factor of -3.5% was applied to API's field densities for the RHIOJV deposits. Correction factors account for voids/porosity and any retained moisture at time of field measurement.

Densities have been assigned to mineralised stratigraphic units based on a global average of the density data set.

## Classification

The Mineral Resource estimates were classified by Golder in accordance with the JORC Code (2012 Edition).

The classification approach was both quantitative and qualitative. Quantitatively, the classification is based on estimation performance. Qualitatively, the approach used adjustments based on geological confidence taking into consideration the drill hole spacing, confidence in the geological interpretation / continuity and representativeness of the available assay data.

Measured, Indicated and Inferred categories have been defined.

## Cut-Off Grades

The Mineral Resource estimates are reported using a 52% Fe block cut-off grade.

## Reporting

The Mineral Resource estimates have been compiled in accordance with the guidelines defined in the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC, 2012 Edition).

## Resource Estimates

### West Pilbara Iron Ore Project – Stage 1 (RHIOJV)

Mineral Resource estimates for the CIDs within the RHIOJV total 816 Mt at 56.5% Fe (Table 2).

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**Table 2. WPIOP - Stage 1 Mineral Resource estimates summarised by Joint Venture (52% Fe cut-off).**

| Joint Venture | Class (JORC 2012) | Mt | Fe % | $SiO_2$ % | $Al_2O_3$ % | Mn % | LOI % | MgO % | P % | S % |
|---|---|---|---|---|---|---|---|---|---|---|
| **WPIOP - Stage 1 RHIOJV** | Measured | 263.5 | 57.17 | 5.71 | 3.67 | 0.03 | 8.24 | 0.08 | 0.081 | 0.015 |
| | Indicated | 448.7 | 56.32 | 6.31 | 3.85 | 0.03 | 8.64 | 0.11 | 0.07 | 0.017 |
| | Inferred | 103.7 | 55.19 | 6.82 | 4.21 | 0.03 | 9.37 | 0.11 | 0.064 | 0.019 |
| | **TOTAL** | **815.9** | **56.45** | **6.18** | **3.84** | **0.03** | **8.61** | **0.1** | **0.073** | **0.017** |

## Resource Classification

The tighter drill spacing completed at the Trixie West and infill drilling of the Red Hill Creek West Deposit has resulted in an increase of the Mineral Resource classified within the Measured category (JORC, 2012). Table 3 summarises the change in resource classification following the completion of infill and extensional drilling.

**Table 3. Comparison of 2015 - 2016 RHIOJV Mineral Resource estimates**

| | Previous Estimate June 2015 52% Fe cut-off | | Current Estimate October 2016 52% Fe cut-off | |
|---|---|---|---|---|
| Measured | 247 | 30% | 263.5 | 32% |
| Indicated | 460 | 57% | 448.7 | 55% |
| Inferred | 107 | 13% | 103.7 | 13% |
| **TOTAL** | **813** | **100%** | **815.9** | **100%** |

The total combined Measured / Indicated resources defined within the RHIOJV stands at 712.2 Mt, representing an increase of 5.2 Mt to the comparable 2015 position.

Changes by deposit are;

- Trixie West – identified and drilled target deposit resulting in maiden resource of 2.7 Mt (all of which is in the Measured / Indicated categories).
- Red Hill Creek West – the updated Mineral Estimate includes infill RC drilling resulting in the upgrade of approximately 4Mt of Inferred material into the Measured / Indicated categories with minimal changes to overall tonnes and grade.

Yours sincerely,



Michael Wall
**Manager Exploration**
API Management Pty Limited

**Attachment A – RHIOJV Mineral Resource Estimates**

**Attachment B – Drill Hole Location Plans and Geological Sections (Cardo Bore West, Red Hill Creek West and Trixie West)**

**Attachment C – Golder Associates Mineral Resource Statement for WPIOP Stage 1 Channel Iron Deposits; Cardo Bore West, Cardo Bore East, Cardo Bore North, Cochrane, Jewel, Trinity Bore, Trixie West, Upper Cane, Kens Bore, Catho Well, and Red Hill Creek West**

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## Attachment A – RHIOJV Mineral Resource Estimates (52% Fe Block Cut-Off Grade)

| Deposit | Classification (JORC, 2012) | Tonnage Mt | Fe % | $SiO_2$ % | $Al_2O_3$ % | Mn % | LOI % | MgO % | P % | S % |
|---|---|---|---|---|---|---|---|---|---|---|
| Cardo Bore West RHIOJV | Measured | - | - | - | - | - | - | - | - | - |
| | Indicated | - | - | - | - | - | - | - | - | - |
| | Inferred | 0.1 | 52.34 | 7.91 | 7.15 | 0.08 | 9.21 | 0.17 | 0.054 | 0.009 |
| | **Total** | **0.1** | **52.34** | **7.91** | **7.15** | **0.08** | **9.21** | **0.17** | **0.054** | **0.009** |
| Cardo Bore East RHIOJV | Measured | - | - | - | - | - | - | - | - | - |
| | Indicated | 45.1 | 57.92 | 5.34 | 3.99 | 0.06 | 7.04 | 0.12 | 0.072 | 0.016 |
| | Inferred | 14.2 | 56.28 | 6.27 | 4.13 | 0.03 | 8.31 | 0.10 | 0.064 | 0.024 |
| | **Total** | **59.3** | **57.53** | **5.56** | **4.03** | **0.05** | **7.35** | **0.12** | **0.070** | **0.018** |
| Cardo Bore North RHIOJV | Measured | - | - | - | - | - | - | - | - | - |
| | Indicated | 6.0 | 56.16 | 6.42 | 4.27 | 0.03 | 8.34 | 0.05 | 0.070 | 0.022 |
| | Inferred | 4.8 | 54.69 | 6.72 | 4.82 | 0.02 | 9.55 | 0.05 | 0.068 | 0.026 |
| | **Total** | **10.8** | **55.51** | **6.55** | **4.52** | **0.02** | **8.87** | **0.05** | **0.069** | **0.024** |
| Cochrane RHIOJV | Measured | - | - | - | - | - | - | - | - | - |
| | Indicated | 52.4 | 56.30 | 6.22 | 4.3 | 0.02 | 8.23 | 0.12 | 0.077 | 0.020 |
| | Inferred | 3.7 | 55.96 | 6.44 | 4.09 | 0.02 | 8.65 | 0.13 | 0.051 | 0.017 |
| | **Total** | **56.1** | **56.28** | **6.23** | **4.29** | **0.02** | **8.26** | **0.12** | **0.075** | **0.020** |
| Jewel RHIOJV | Measured | - | - | - | - | - | - | - | - | - |
| | Indicated | 26.3 | 55.89 | 6.41 | 4.03 | 0.02 | 9.11 | 0.06 | 0.060 | 0.020 |
| | Inferred | 10.6 | 56.32 | 6.20 | 3.92 | 0.02 | 8.86 | 0.06 | 0.070 | 0.020 |
| | **Total** | **36.9** | **56.01** | **6.35** | **4.00** | **0.02** | **9.04** | **0.06** | **0.060** | **0.020** |
| Trinity Bore RHIOJV | Measured | - | - | - | - | - | - | - | - | - |
| | Indicated | 109.1 | 54.67 | 7.44 | 4.01 | 0.03 | 9.74 | 0.11 | 0.057 | 0.022 |
| | Inferred | 28.5 | 54.38 | 7.16 | 4.44 | 0.02 | 9.98 | 0.10 | 0.060 | 0.024 |
| | **Total** | **137.6** | **54.61** | **7.38** | **4.10** | **0.03** | **9.79** | **0.11** | **0.058** | **0.022** |
| Upper Cane RHIOJV | Measured | 57.7 | 58.58 | 5.15 | 3.04 | 0.02 | 7.47 | 0.05 | 0.077 | 0.021 |
| | Indicated | 26.0 | 56.81 | 6.79 | 3.55 | 0.04 | 7.76 | 0.07 | 0.094 | 0.018 |
| | Inferred | 3.7 | 54.44 | 8.84 | 4.06 | 0.07 | 8.32 | 0.09 | 0.115 | 0.013 |
| | **Total** | **87.4** | **57.88** | **5.80** | **3.23** | **0.03** | **7.59** | **0.05** | **0.084** | **0.020** |
| Catho Well North RHIOJV | Measured | - | - | - | - | - | - | - | - | - |
| | Indicated | 11.5 | 54.66 | 7.48 | 2.98 | 0.11 | 10.38 | 0.24 | 0.039 | 0.016 |
| | Inferred | 2.8 | 53.91 | 7.86 | 3.26 | 0.17 | 10.64 | 0.25 | 0.037 | 0.012 |
| | **Total** | **14.3** | **54.51** | **7.56** | **3.03** | **0.13** | **10.43** | **0.24** | **0.038** | **0.015** |
| Kens Bore RHIOJV | Measured | 178.1 | 56.75 | 5.9 | 3.93 | 0.03 | 8.39 | 0.09 | 0.078 | 0.014 |
| | Indicated | 169.6 | 57.08 | 5.7 | 3.63 | 0.02 | 8.44 | 0.10 | 0.074 | 0.013 |
| | Inferred | 35.2 | 55.25 | 6.69 | 4.15 | 0.03 | 9.52 | 0.12 | 0.064 | 0.012 |
| | **Total** | **382.9** | **56.76** | **5.88** | **3.82** | **0.02** | **8.52** | **0.10** | **0.075** | **0.014** |

| Deposit | Classification (JORC, 2012) | Tonnage Mt | Fe % | $SiO_2$ % | $Al_2O_3$ % | Mn % | LOI % | MgO % | P % | S % |
|---|---|---|---|---|---|---|---|---|---|---|
| Red Hill Creek West RHIOJV | Measured | 25.5 | 57.06 | 5.54 | 3.29 | 0.02 | 8.87 | 0.07 | 0.116 | 0.009 |
| | Indicated | 2.2 | 56.24 | 6.42 | 3.39 | 0.02 | 9.05 | 0.06 | 0.115 | 0.011 |
| | Inferred | 0.1 | 53.74 | 9.03 | 3.60 | 0.02 | 9.51 | 0.11 | 0.156 | 0.005 |
| | **Total** | **27.8** | **56.98** | **5.62** | **3.30** | **0.02** | **8.89** | **0.07** | **0.116** | **0.010** |
| Trixie West RHIOJV | Measured | 2.2 | 55.23 | 7.63 | 3.66 | 0.02 | 9.25 | 0.05 | 0.068 | 0.027 |
| | Indicated | 0.5 | 55.63 | 7.24 | 4.16 | 0.02 | 8.62 | 0.06 | 0.073 | 0.019 |
| | Inferred | - | - | - | - | - | - | - | - | - |
| | **Total** | **2.7** | **55.30** | **7.56** | **3.75** | **0.02** | **9.13** | **0.05** | **0.069** | **0.026** |
| **RHIOJV TOTAL** | Measured | 263.5 | 57.17 | 5.71 | 3.67 | 0.03 | 8.24 | 0.08 | 0.081 | 0.015 |
| | Indicated | 448.7 | 56.32 | 6.31 | 3.85 | 0.03 | 8.64 | 0.11 | 0.070 | 0.017 |
| | Inferred | 103.7 | 55.19 | 6.82 | 4.21 | 0.03 | 9.37 | 0.11 | 0.064 | 0.019 |
| | **Total** | **815.9** | **56.45** | **6.18** | **3.84** | **0.03** | **8.61** | **0.10** | **0.073** | **0.017** |

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**Attachment B – Drill Hole Location Plans and Geological Sections (Cardo Bore West, Red Hill Creek West and Trixie West)**

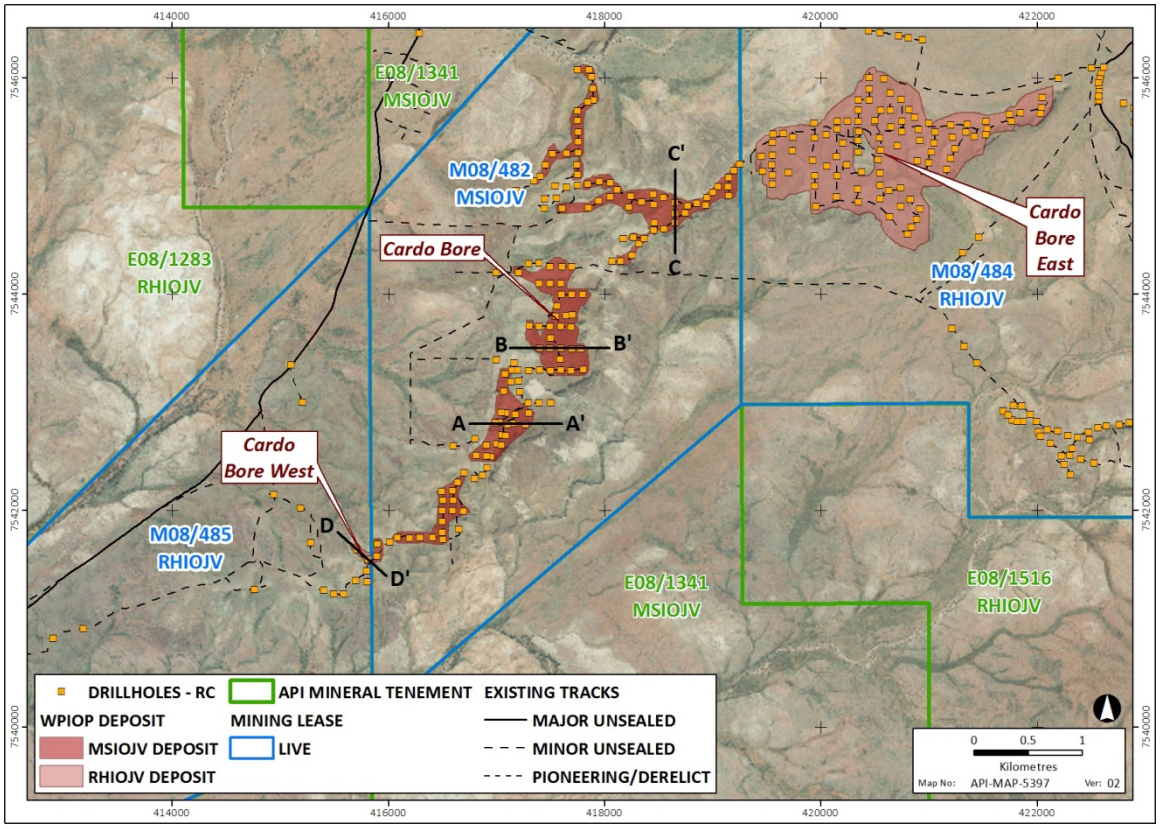



**Figure 1 - Mineralisation envelopes and drill hole locations for Cardo Bore (MSIOJV) and Cardo Bore West (RHIOJV) Deposits. The Cardo Bore East (RHIOJV) deposit was not updated in the current resource estimate.**

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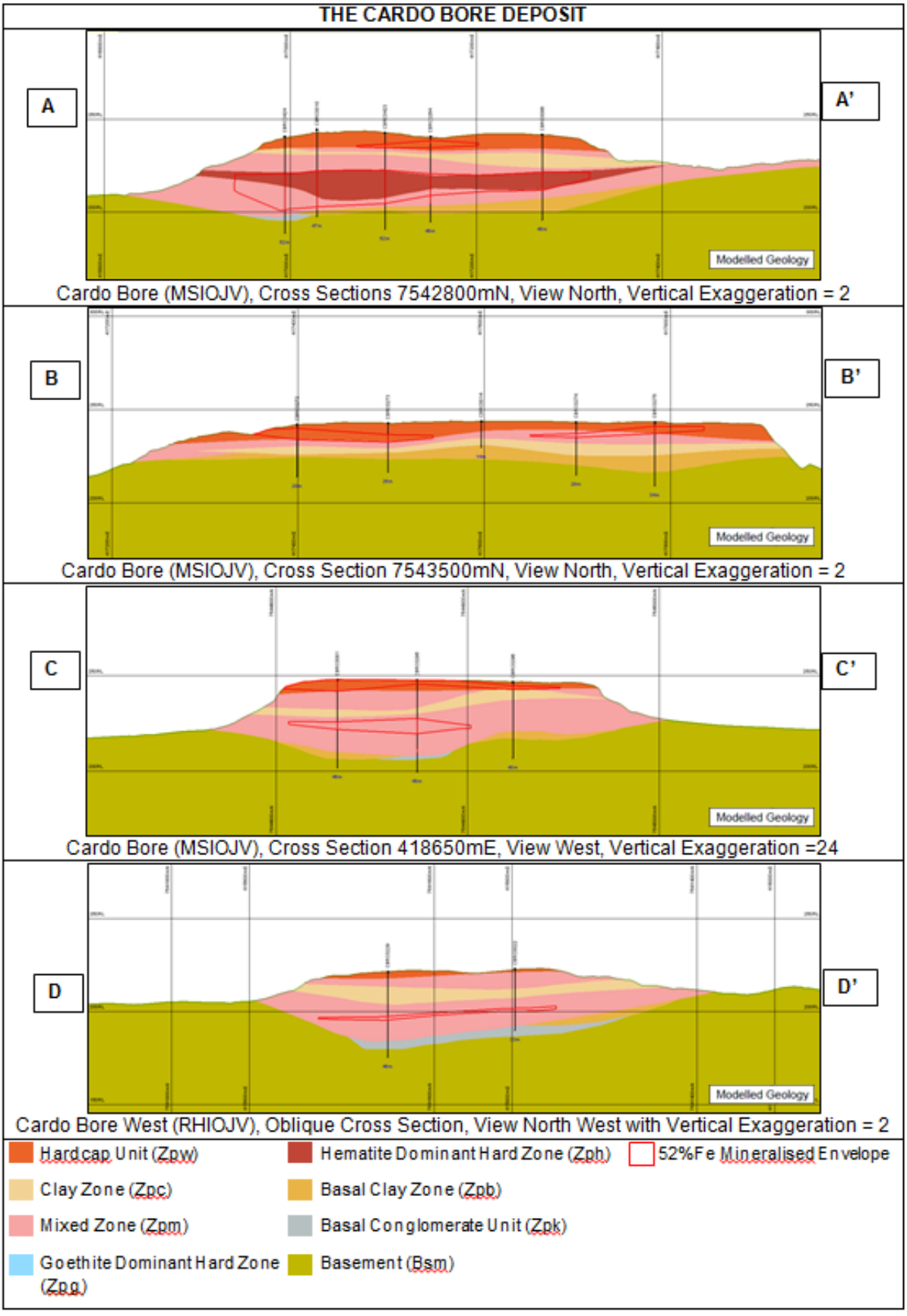



**Figure 2 – Cardo Bore Geological Cross Sections**

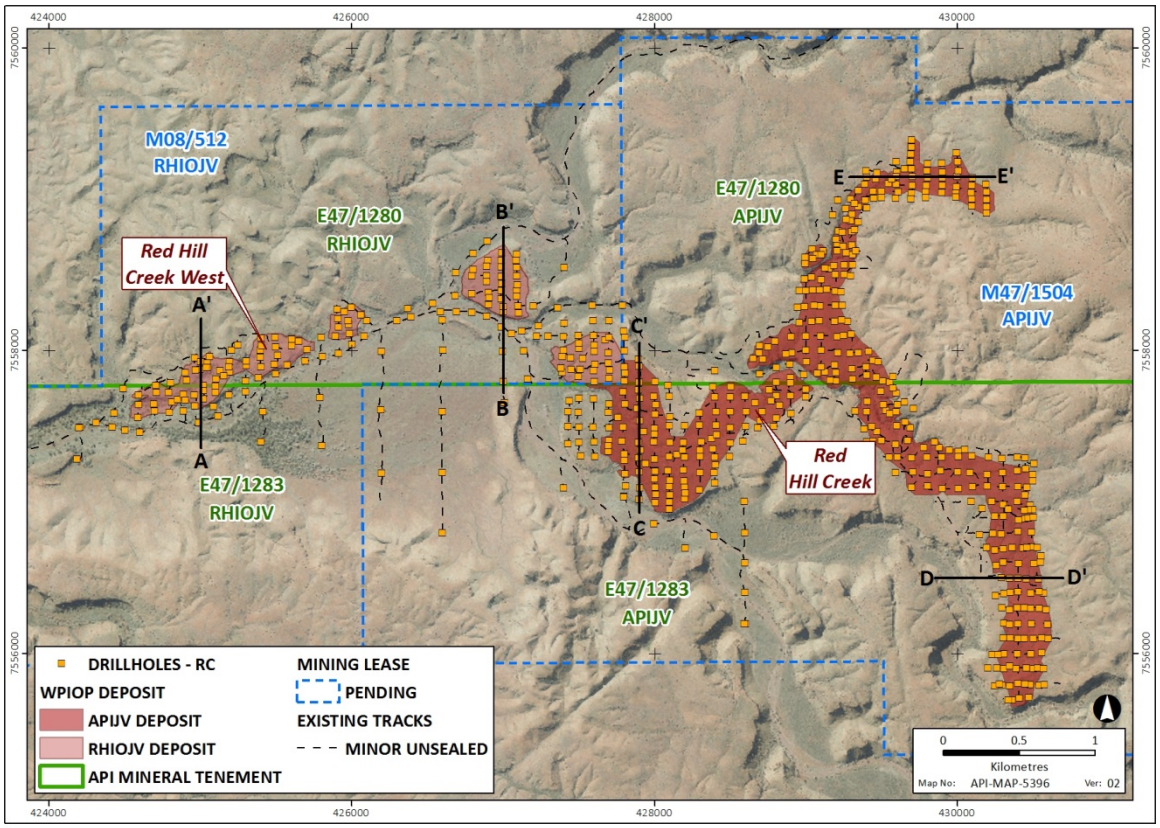



**Figure 3 - Mineralisation envelopes and drill hole locations for Red Hill Creek (APIJV) and Red Hill Creek West (RHIOJV) Deposits**

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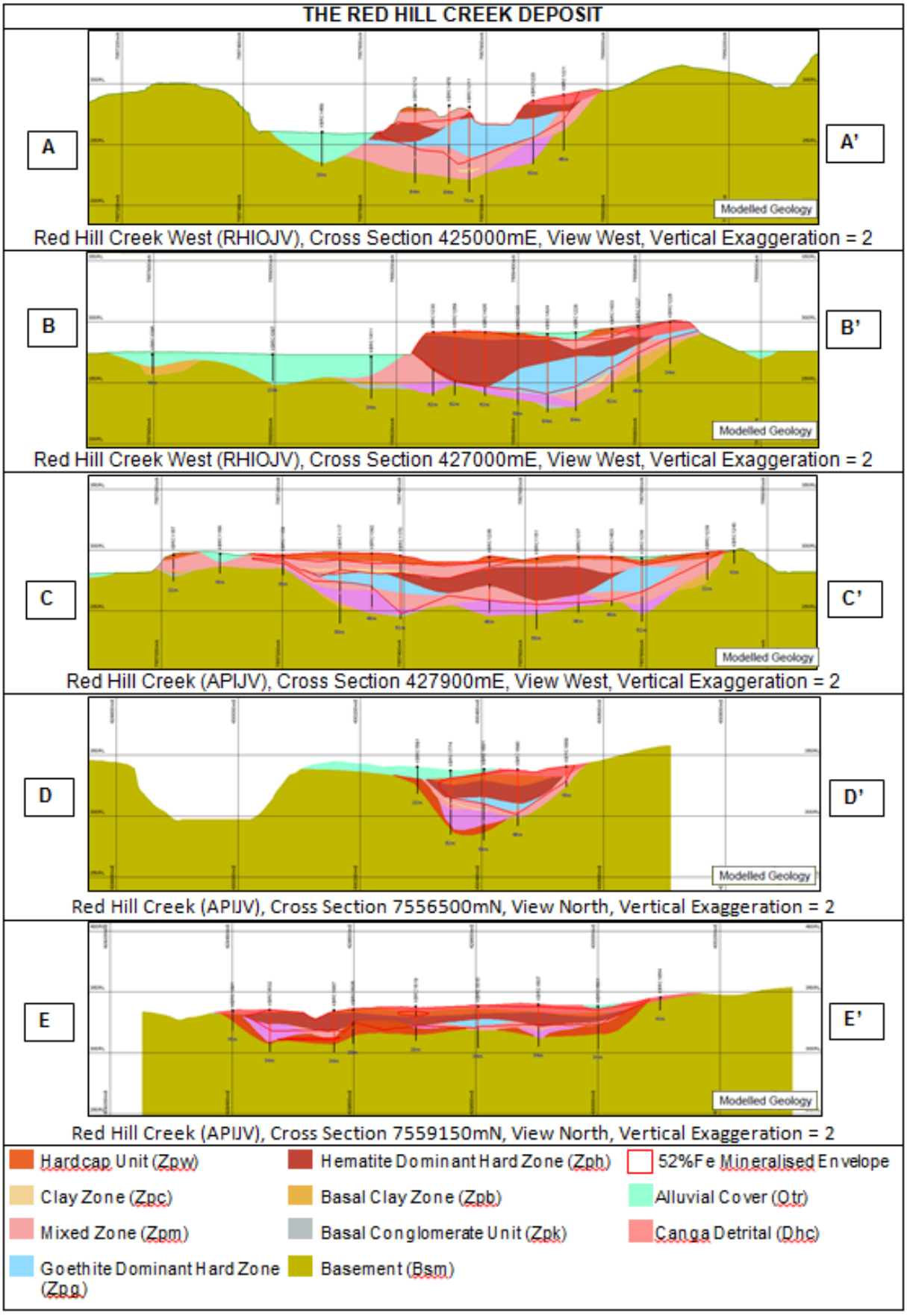



**Figure 4 – Red Hill Creek Geological Cross Sections**

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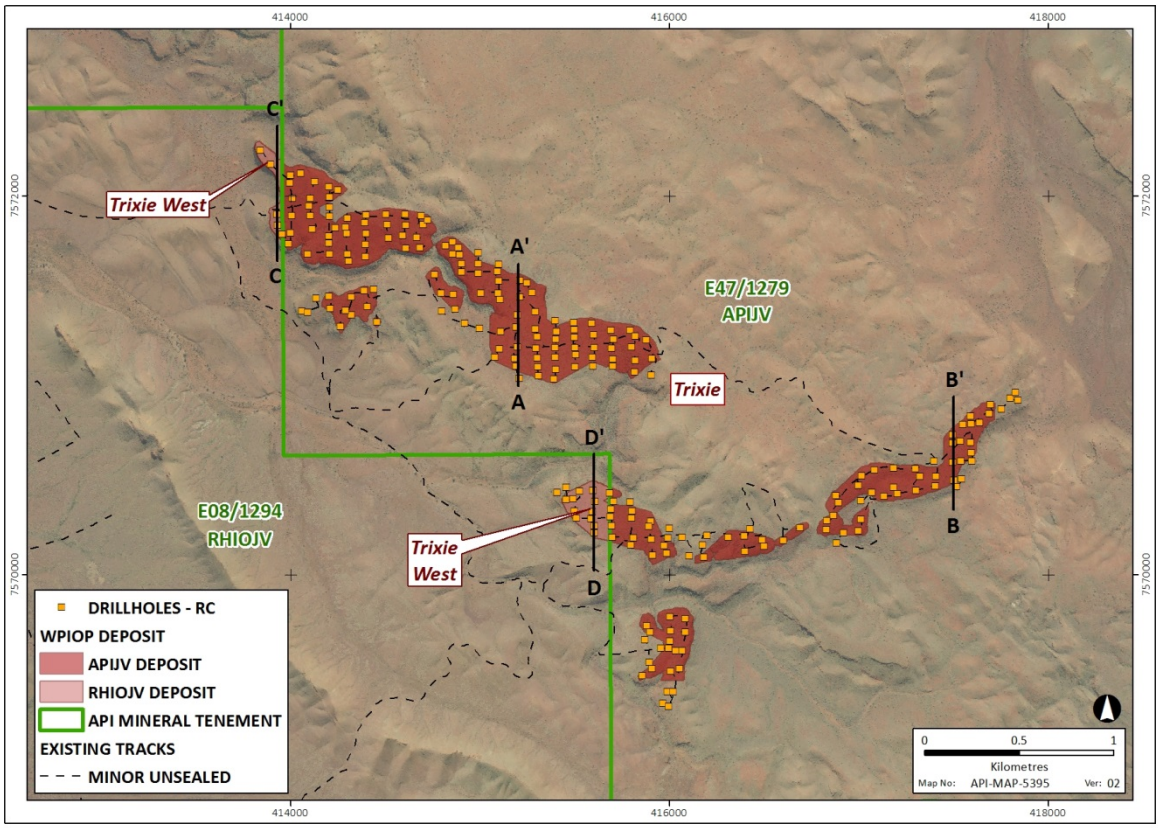



**Figure 5 - Mineralisation envelopes and drill hole locations for Trixie (APIJV) and Trixie West (RHIOJV) Deposits**

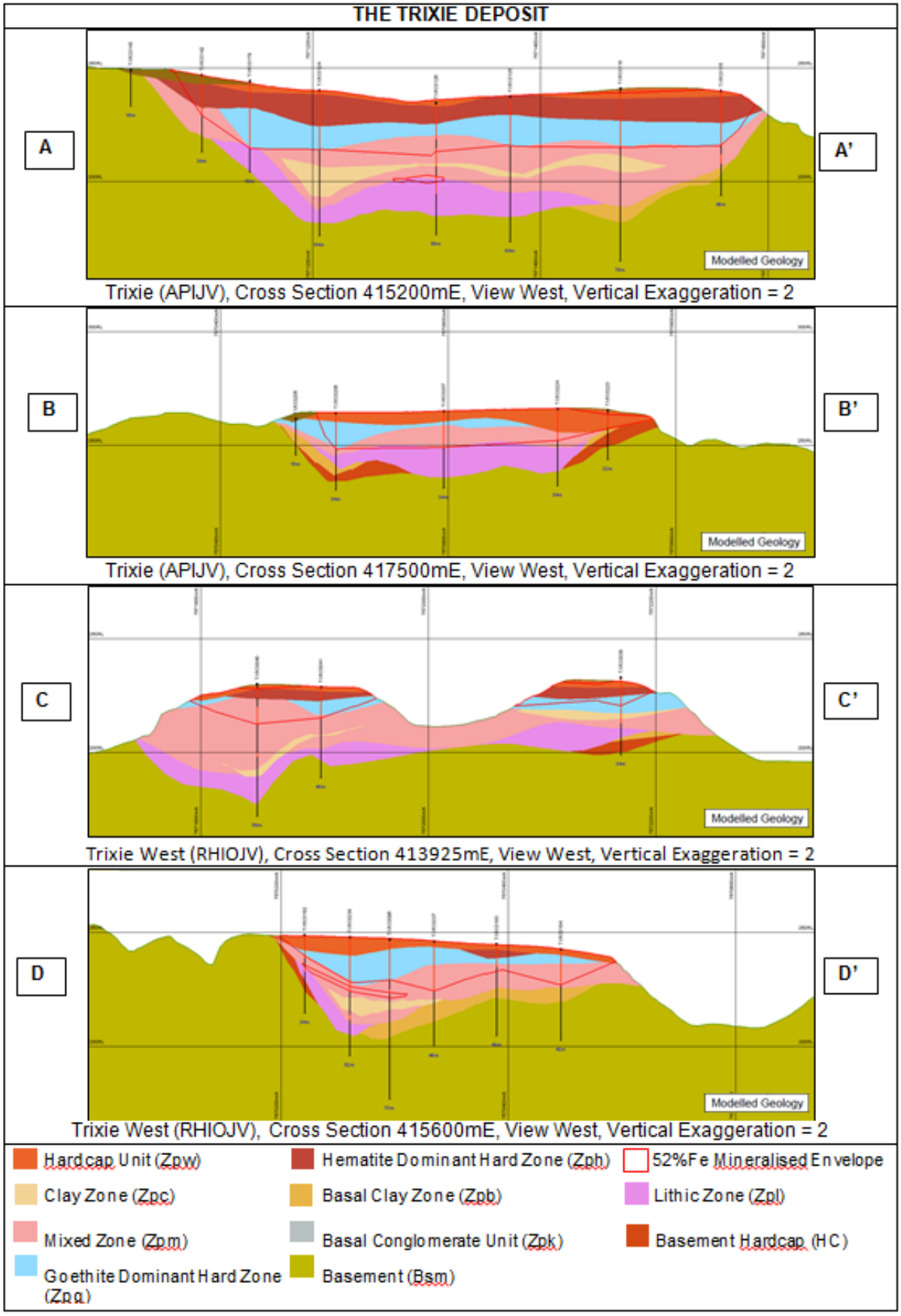



**Figure 6 – Trixie Geological Cross Sections**

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22 November 2016 Project No. 1648592-001-L-Rev2

Mr Michael Wall
API Management Pty Ltd
Level 1, 1 Preston Street
COMO WA 6152

**MINERAL RESOURCE STATEMENT FOR CHANNEL IRON DEPOSITS IN THE RED HILL IRON ORE JOINT VENTURE (RHIOJV): CARDO BORE WEST, TRIXIE WEST, RED HILL CREEK WEST AND UPDATED RHIOJV WPIOP STAGE 1 MINERAL RESOURCE ESTIMATE**

Dear Michael

Golder Associates Pty Ltd (Golder) completed Mineral Resource estimates for three deposits on behalf of APIM Management Pty Ltd (APIM). The Mineral Resource estimate updates were completed for Cardo Bore (CB), Trixie (TX) and Red Hill Creek (RHC) deposits. This letter reflects the portion of the Mineral Resources attributed to the RHIOJV.

CB (of which Cardo Bore West is in the RHIOJV) reflects an area of the Cardo Bore deposits not previously modelled. TX is a maiden resource estimate. RHC is an update of the 2015 resource estimate to reflect additional infill drilling and a new area, RHC Extension, drilled in late 2015. Mineral Resource estimates from Cardo Bore East, Cardo Bore North, Catho Well, Cochrane, Jewel, Kens Bore, Trinity Bore and Upper Cane were not updated (from August 2015); however, a new global RHIOJV Mineral Resource Statement has been calculated and included in this letter.

The Mineral Resource estimates are based on a 52% Fe cut-off mineralisation envelope and stratigraphic domains interpreted, modelled and provided by APIM. The Mineral Resources are classified in accordance with “the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code, 2012 Edition)”. Classification of resources was completed by Golder, based principally on geological confidence, data density and estimation performance. The *in situ* Mineral Resources are constrained to the mineralisation domain boundaries.

The Mineral Resources were prepared under the supervision of Mr Richard Gaze, of Golder Associates Pty Ltd (Golder). Mr Richard Gaze is a member of the Australasian Institute of Mining and Metallurgy and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the JORC Code.

## GEOLOGY

In the West Pilbara Iron Ore Project (WPIOP) area, the principal type of iron ore occurs as secondary channel iron deposits (CIDs), also known as Robe Pisolite. The CIDs occur as partly dismembered, topographically inverted palaeochannel deposits preserved along major palaeodrainage lines.

A plan view map of the deposit locations is provided in Figure 1. The interpreted mineralisation envelopes, geology, drill hole collar locations and where relevant, tenement boundaries for each deposit are shown in Figure 2 to Figure 4.


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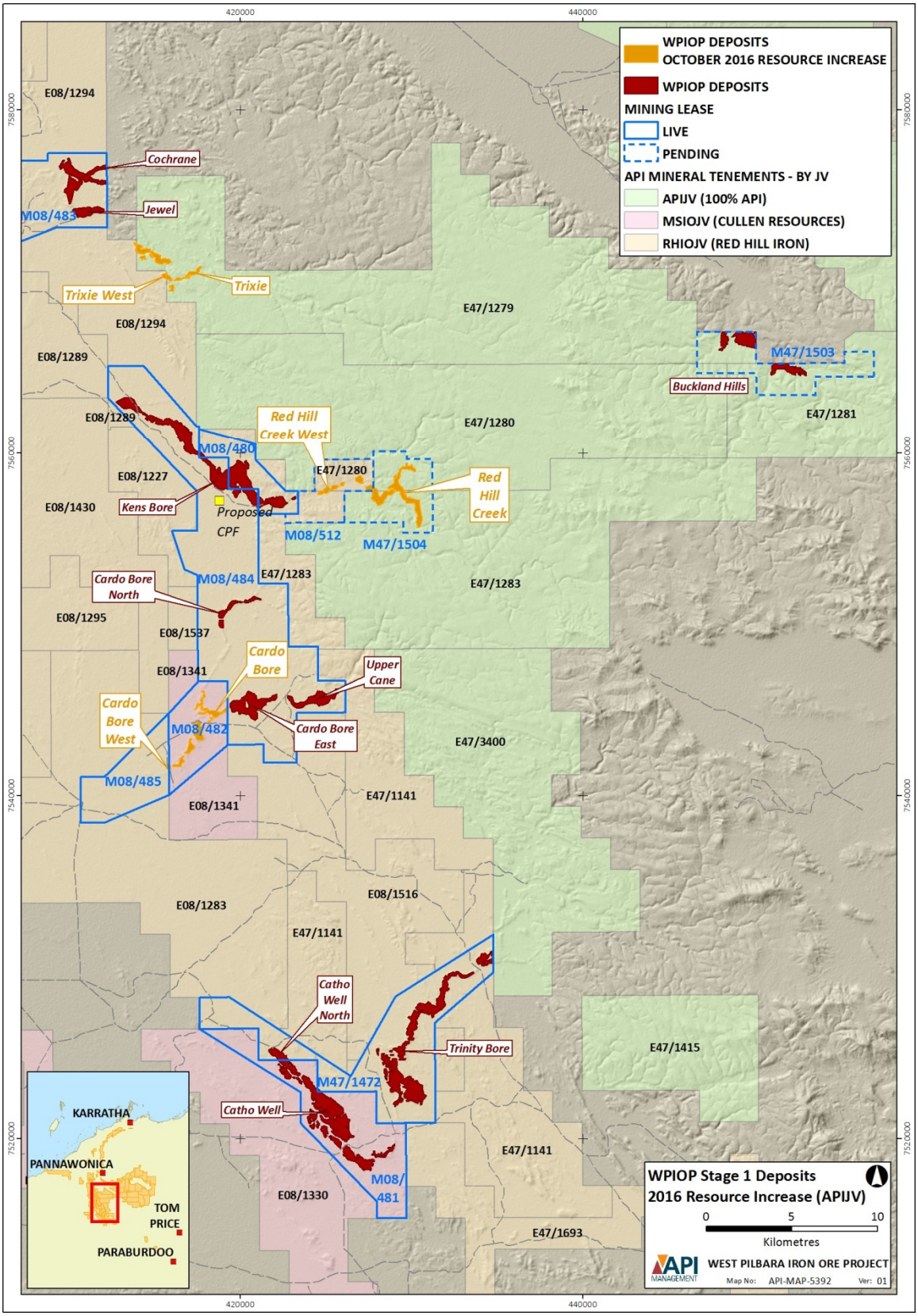



*Figure 1: Plan of WPIOP Stage 1 deposit locations displaying CID mineral resources and tenement boundaries (after APIM)*

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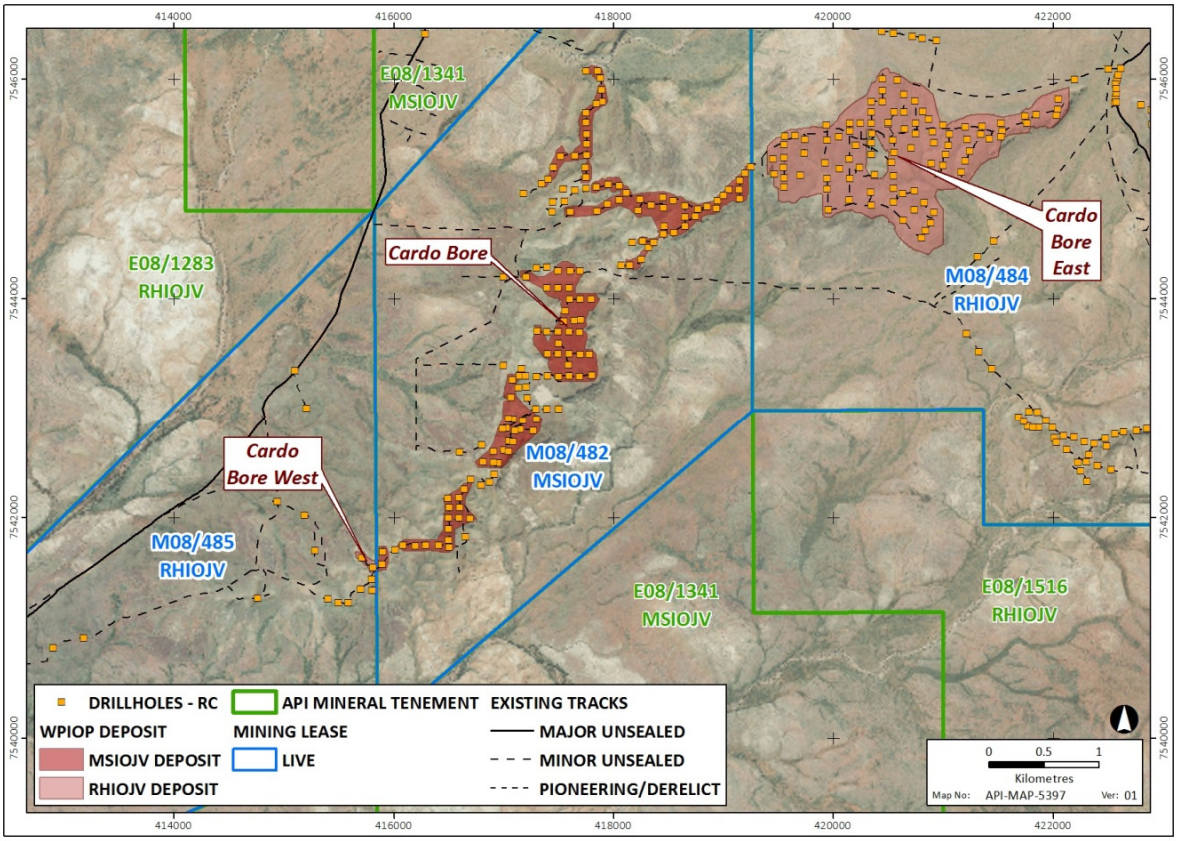



*Figure 2: Mineralisation envelopes and drill hole locations for CB (MSIOJV) and CBW (RHIOJV) deposits with tenement boundaries. Note that the CBE deposit was not updated in the current resource estimate*

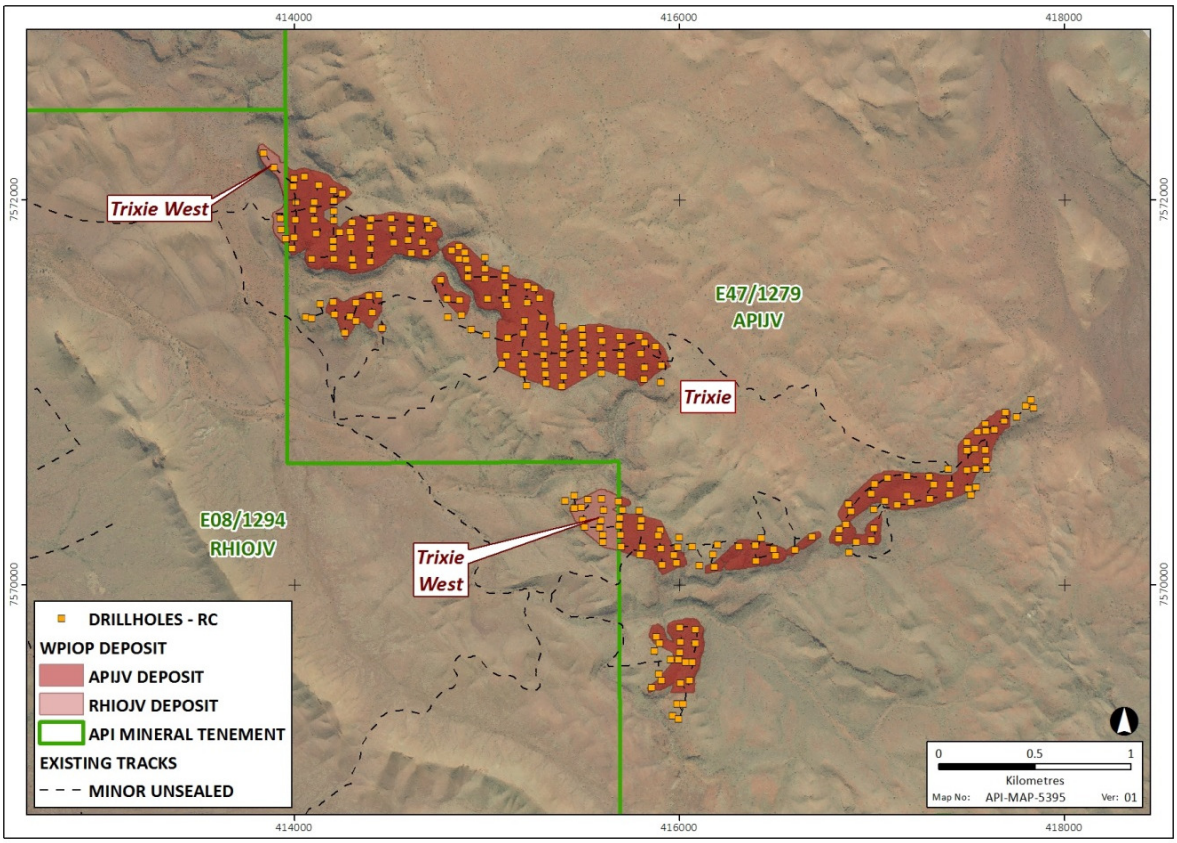



*Figure 3: Mineralisation envelopes and drill hole locations for TX (APIJV) and TX West (RHIOJV) deposits with tenement boundaries*

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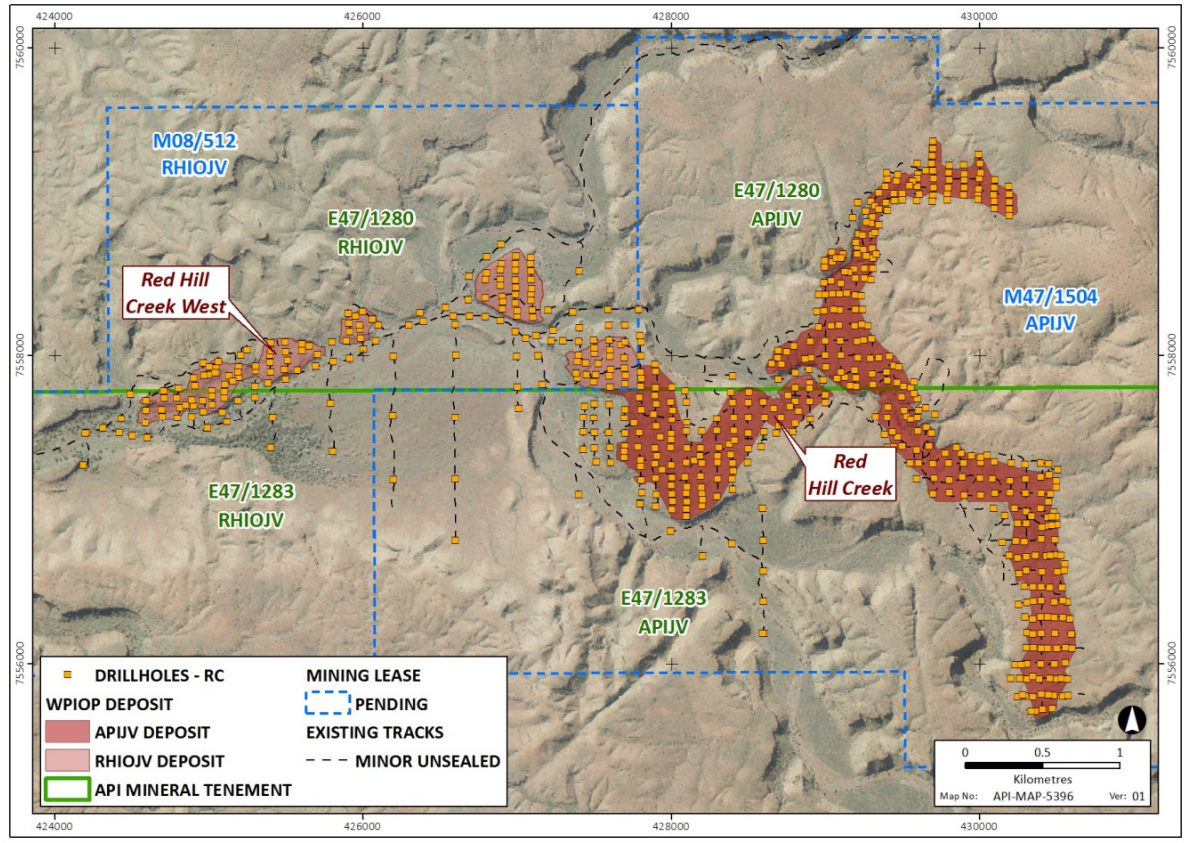



*Figure 4: Mineralisation envelopes and drill hole locations for RHC West (RHIOJV) and RHC (APIJV) deposits with tenement boundaries*

## ASSUMPTIONS AND METHODOLOGY

The Mineral Resources are based on a number of factors and assumptions:

- Stratigraphy and mineralisation domains were interpreted and modelled by APIM and reviewed by Golder. APIM geologists completed the sectional string interpretation and generated the stratigraphy and mineralisation wireframes based on the sectional strings. Golder reviewed the wireframes prior to the resource estimation.
- A nominal 52% Fe mineralisation cut-off grade was used to define mineralised domains. "Sub-grade" material (below 52% Fe) was also incorporated in certain areas to maintain continuity. Both stratigraphy and mineralisation domains were used to flag the sample data for statistical analysis and to constrain the grade estimation. A summary of the geological domains which typically apply to each of the deposits is provided in Table 1.
- The most recent topographical surface provided by APIM was used to define the surface topography. Mineralisation domains were extended to the edge of the mesa defined by the topographic surface where considered appropriate.
- The Mineral Resource estimates are based on all available information provided to Golder as of 17 August 2016.
- Golder has previously completed a review of the QAQC data provided by APIM. No significant issues with the QAQC aspects of sampling and assaying were found. Golder were supplied with field duplicate and reference standard data reflecting the additional drilling for CB, TX and RHC. Golder has undertaken a high-level review of the QAQC data provided and has observed that similar standards of QAQC controls apply.
- The survey control for collar positions was considered by Golder to be adequate for the purposes of resource estimation and accepted with no further modifications.

**Table 1: Geological domains for all deposits**

| Variable | Code | Description |
|---|---|---|
| MINSTR (stratigraphy) | 10 | Zpw – Hardcap Zone |
| | 20 | Zph – Hematite Rich Hard Zone |
| | 30 | Zpm – Mixed Zone |
| | 40 | Zpb – Basal Clay Zone |
| | 50 | Zpc – Clay Zone |
| | 60 | JK/Zpk – Basal Conglomerate or Gravel Zone |
| | 70 | Bsm – Basement Lithology |
| | 80 | Otr – Transported Overburden |
| | 90 | Zpg – Goethite Rich Hard Zone |
| | 100 | Dhc – Canga Detrital Unit |
| | 110 | Dsi – Silica Detrital Unit |
| | 120 | Zpl – Lithic Zone |
| | 130 | Dsh – Silica Detrital (haematitic) unit |
| | 140 | HC –Basement Hardcap Zone |
| DOMAIN (Fe mineralisation) | 1 | Mineralised (>52% Fe) |
| | 0 | Non-Mineralised |

- For each deposit, statistical and geostatistical analysis was carried out on drilling data composited to 2 m downhole and constrained to the mineralisation and stratigraphy domains.
- *In situ* bulk density values were assigned to each model based on stratigraphy and mineralisation type. The bulk density values are summarised in Table 2. Density values for the WPIOP Stage 1 Deposits were provided by APIM and are based on 1335 wet and dry (non-waxed) density determinations from 1054 PQ diamond drill core samples and 281 winze stockpile samples collected between May 2008 and February 2015.
- Using parameters derived from modelled variograms, the interpolation method of Ordinary Kriging (OK) was used to estimate Fe, $SiO_2$, $Al_2O_3$, Mn, LOI (1000ºc), MgO, P, S, CaO, $K_2O$ and $TiO_2$.
- The Mineral Resource is reported using *in situ* tonnes and estimated grades at the 52% Fe cu-off grade, with no dilution/ore loss factors applied or any specific selectivity assumptions other than that implied by the block model parent cell size.

**Table 2: *In Situ* bulk density values used for the WPIOP Stage 1 deposits**

| DOMAIN | MINSTR | Density Assignment |
|---|---|---|
| 1 (>52% Fe) | 10 (Zpw) | 2.85 |
| | 20 (Zph) | 2.85 |
| | 30 (Zpm) | 2.65 |
| | 90 (Zpg) | 2.75 |
| | 100 (Dhc) | 2.85 |
| 0 (Waste) | 10 (Zpw) | 2.80 |
| | 20 (Zph) | 2.60 |
| | 30 (Zpm) | 2.60 |
| | 40 (Zpb) | 2.60 |
| | 50 (Zpc) | 2.60 |
| | 60 (Zpk) | 2.60 |
| | 70 (Bsm) | 2.60 |
| | 80 (Otr) | 2.60 |

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| DOMAIN | MINSTR | Density Assignment |
|---|---|---|
| | 90 (Zpg) | 2.60 |
| | 100 (Dhc) | 2.60 |
| | 110 (Dsi) | 2.60 |
| | 120 (Zpl) | 2.60 |
| | 130 (Dsh) | 2.60 |
| | 140 (HC) | 2.60 |

## MINERAL RESOURCE STATEMENT

Mineral Resource estimates were classified in accordance with guidelines provided in the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code, 2012 Edition). The classification was based principally on geological confidence, drill hole spacing and grade continuity from available drilling data. Table 3 provides a summary of the Mineral resources at the 52% Fe cut-off grade applied for CB, TX RHC for the RHIOJV. Table 4 provides a summary of the Mineral Resources at the 52% Fe cut-off grade for the RHIOJV deposits.

**Table 3: *In Situ* mineral resources for RHIOJV at a 52% Fe cut-off grade (CB, TX, and RHC)**

| Deposit | Joint Venture | Class | Mt | Fe | $SiO_2$ | $Al_2O_3$ | Mn | LOI1000 | MgO | P | S |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Cardo Bore West | RHIOJV | Measured | - | - | - | - | - | - | - | - | - |
| | | Indicated | - | - | - | - | - | - | - | - | - |
| | | Inferred | 0.1 | 52.34 | 7.91 | 7.15 | 0.08 | 9.21 | 0.17 | 0.054 | 0.009 |
| | | ***Total*** | ***0.1*** | ***52.34*** | ***7.91*** | ***7.15*** | ***0.08*** | ***9.21*** | ***0.17*** | ***0.054*** | ***0.009*** |
| Trixie West | RHIOJV | Measured | 2.2 | 55.23 | 7.63 | 3.66 | 0.02 | 9.25 | 0.05 | 0.068 | 0.027 |
| | | Indicated | 0.5 | 55.63 | 7.24 | 4.16 | 0.02 | 8.62 | 0.06 | 0.073 | 0.019 |
| | | Inferred | - | - | - | - | - | - | - | - | - |
| | | ***Total*** | ***2.7*** | ***55.30*** | ***7.56*** | ***3.75*** | ***0.02*** | ***9.13*** | ***0.05*** | ***0.069*** | ***0.026*** |
| Red Hill Creek West | RHIOJV | Measured | 25.5 | 57.06 | 5.54 | 3.29 | 0.02 | 8.87 | 0.07 | 0.116 | 0.009 |
| | | Indicated | 2.2 | 56.24 | 6.42 | 3.39 | 0.02 | 9.05 | 0.06 | 0.115 | 0.011 |
| | | Inferred | 0.1 | 53.74 | 9.03 | 3.60 | 0.02 | 9.51 | 0.11 | 0.156 | 0.005 |
| | | ***Total*** | ***27.8*** | ***56.98*** | ***5.62*** | ***3.30*** | ***0.02*** | ***8.89*** | ***0.07*** | ***0.116*** | ***0.010*** |
| ***All*** | ***Combined*** | ***Measured*** | 27.7 | 56.91 | 5.71 | 3.32 | 0.02 | 8.90 | 0.07 | 0.112 | 0.011 |
| | | ***Indicated*** | 2.7 | 56.12 | 6.57 | 3.53 | 0.02 | 8.97 | 0.06 | 0.107 | 0.012 |
| | | ***Inferred*** | 0.2 | 53.23 | 8.62 | 4.90 | 0.04 | 9.40 | 0.14 | 0.119 | 0.006 |
| | | ***Total*** | ***30.6*** | ***56.82*** | ***5.80*** | ***3.35*** | ***0.02*** | ***8.91*** | ***0.07*** | ***0.112*** | ***0.011*** |

**Table 4: *In Situ m*ineral resources for RHIOJV at a 52% Fe cut-off grade (RHIOJV)**

| Deposit | Joint Venture | Class | Mt | Fe | $SiO_2$ | $Al_2O_3$ | Mn | LOI1000 | MgO | P | S |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Cardo Bore West | RHIOJV | Measured | - | - | - | - | - | - | - | - | - |
| | | Indicated | - | - | - | - | - | - | - | - | - |
| | | Inferred | 0.1 | 52.34 | 7.91 | 7.15 | 0.08 | 9.21 | 0.17 | 0.054 | 0.009 |
| | | ***Total*** | ***0.1*** | ***52.34*** | ***7.91*** | ***7.15*** | ***0.08*** | ***9.21*** | ***0.17*** | ***0.054*** | ***0.009*** |
| Cardo Bore East | RHIOJV | Measured | - | - | - | - | - | - | - | - | - |
| | | Indicated | 45.1 | 57.92 | 5.34 | 3.99 | 0.06 | 7.04 | 0.12 | 0.072 | 0.016 |
| | | Inferred | 14.2 | 56.28 | 6.27 | 4.13 | 0.03 | 8.31 | 0.10 | 0.064 | 0.024 |
| | | ***Total*** | ***59.3*** | ***57.53*** | ***5.56*** | ***4.03*** | ***0.05*** | ***7.35*** | ***0.12*** | ***0.070*** | ***0.018*** |

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| Deposit | Joint Venture | Class | Mt | Fe | $SiO_2$ | $Al_2O_3$ | Mn | LOI1000 | MgO | P | S |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Cardo Bore North | RHIOJV | Measured | - | - | - | - | - | - | - | - | - |
| | | Indicated | 6.0 | 56.16 | 6.42 | 4.27 | 0.03 | 8.34 | 0.05 | 0.070 | 0.022 |
| | | Inferred | 4.8 | 54.69 | 6.72 | 4.82 | 0.02 | 9.55 | 0.05 | 0.068 | 0.026 |
| | | ***Total*** | ***10.8*** | ***55.51*** | ***6.55*** | ***4.52*** | ***0.02*** | ***8.87*** | ***0.05*** | ***0.069*** | ***0.024*** |
| Cochrane | RHIOJV | Measured | - | - | - | - | - | - | - | - | - |
| | | Indicated | 52.4 | 56.30 | 6.22 | 4.3 | 0.02 | 8.23 | 0.12 | 0.077 | 0.020 |
| | | Inferred | 3.7 | 55.96 | 6.44 | 4.09 | 0.02 | 8.65 | 0.13 | 0.051 | 0.017 |
| | | ***Total*** | ***56.1*** | ***56.28*** | ***6.23*** | ***4.29*** | ***0.02*** | ***8.26*** | ***0.12*** | ***0.075*** | ***0.020*** |
| Jewel | RHIOJV | Measured | - | - | - | - | - | - | - | - | - |
| | | Indicated | 26.3 | 55.89 | 6.41 | 4.03 | 0.02 | 9.11 | 0.06 | 0.060 | 0.020 |
| | | Inferred | 10.6 | 56.32 | 6.20 | 3.92 | 0.02 | 8.86 | 0.06 | 0.070 | 0.020 |
| | | ***Total*** | ***36.9*** | ***56.01*** | ***6.35*** | ***4.00*** | ***0.02*** | ***9.04*** | ***0.06*** | ***0.060*** | ***0.020*** |
| Trinity Bore | RHIOJV | Measured | - | - | - | - | - | - | - | - | - |
| | | Indicated | 109.1 | 54.67 | 7.44 | 4.01 | 0.03 | 9.74 | 0.11 | 0.057 | 0.022 |
| | | Inferred | 28.5 | 54.38 | 7.16 | 4.44 | 0.02 | 9.98 | 0.10 | 0.060 | 0.024 |
| | | ***Total*** | ***137.6*** | ***54.61*** | ***7.38*** | ***4.10*** | ***0.03*** | ***9.79*** | ***0.11*** | ***0.058*** | ***0.022*** |
| Upper Cane | RHIOJV | Measured | 57.7 | 58.58 | 5.15 | 3.04 | 0.02 | 7.47 | 0.05 | 0.077 | 0.021 |
| | | Indicated | 26.0 | 56.81 | 6.79 | 3.55 | 0.04 | 7.76 | 0.07 | 0.094 | 0.018 |
| | | Inferred | 3.7 | 54.44 | 8.84 | 4.06 | 0.07 | 8.32 | 0.09 | 0.115 | 0.013 |
| | | ***Total*** | ***87.4*** | ***57.88*** | ***5.80*** | ***3.23*** | ***0.03*** | ***7.59*** | ***0.05*** | ***0.084*** | ***0.020*** |
| Catho Well North | RHIOJV | Measured | - | - | - | - | - | - | - | - | - |
| | | Indicated | 11.5 | 54.66 | 7.48 | 2.98 | 0.11 | 10.38 | 0.24 | 0.039 | 0.016 |
| | | Inferred | 2.8 | 53.91 | 7.86 | 3.26 | 0.17 | 10.64 | 0.25 | 0.037 | 0.012 |
| | | ***Total*** | ***14.3*** | ***54.51*** | ***7.56*** | ***3.03*** | ***0.13*** | ***10.43*** | ***0.24*** | ***0.038*** | ***0.015*** |
| Kens Bore | RHIOJV | Measured | 178.1 | 56.75 | 5.9 | 3.93 | 0.03 | 8.39 | 0.09 | 0.078 | 0.014 |
| | | Indicated | 169.6 | 57.08 | 5.7 | 3.63 | 0.02 | 8.44 | 0.10 | 0.074 | 0.013 |
| | | Inferred | 35.2 | 55.25 | 6.69 | 4.15 | 0.03 | 9.52 | 0.12 | 0.064 | 0.012 |
| | | ***Total*** | ***382.9*** | ***56.76*** | ***5.88*** | ***3.82*** | ***0.02*** | ***8.52*** | ***0.10*** | ***0.075*** | ***0.014*** |
| Red Hill Creek West | RHIOJV | Measured | 25.5 | 57.06 | 5.54 | 3.29 | 0.02 | 8.87 | 0.07 | 0.116 | 0.009 |
| | | Indicated | 2.2 | 56.24 | 6.42 | 3.39 | 0.02 | 9.05 | 0.06 | 0.115 | 0.011 |
| | | Inferred | 0.1 | 53.74 | 9.03 | 3.60 | 0.02 | 9.51 | 0.11 | 0.156 | 0.005 |
| | | ***Total*** | ***27.8*** | ***56.98*** | ***5.62*** | ***3.30*** | ***0.02*** | ***8.89*** | ***0.07*** | ***0.116*** | ***0.010*** |
| Trixie West | RHIOJV | Measured | 2.2 | 55.23 | 7.63 | 3.66 | 0.02 | 9.25 | 0.05 | 0.068 | 0.027 |
| | | Indicated | 0.5 | 55.63 | 7.24 | 4.16 | 0.02 | 8.62 | 0.06 | 0.073 | 0.019 |
| | | Inferred | - | - | - | - | - | - | - | - | - |
| | | ***Total*** | ***2.7*** | ***55.30*** | ***7.56*** | ***3.75*** | ***0.02*** | ***9.13*** | ***0.05*** | ***0.069*** | ***0.026*** |
| ***All*** | ***Combined*** | Measured | 263.5 | 57.17 | 5.71 | 3.67 | 0.03 | 8.24 | 0.08 | 0.081 | 0.015 |
| | | Indicated | 448.7 | 56.32 | 6.31 | 3.85 | 0.03 | 8.64 | 0.11 | 0.070 | 0.017 |
| | | Inferred | 103.7 | 55.19 | 6.82 | 4.21 | 0.03 | 9.37 | 0.11 | 0.064 | 0.019 |
| | | ***Total*** | ***815.9*** | ***56.45*** | ***6.18*** | ***3.84*** | ***0.03*** | ***8.61*** | ***0.10*** | ***0.073*** | ***0.017*** |

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## The JORC Code assessment criteria

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

**Table 5: JORC Code table 1**

| JORC Code Assessment Criteria | Comment |
|---|---|
| **Section 1 Sampling Techniques and Data** | |
| **Sampling Techniques**<br>*Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as downhole gamma sondes, or handheld XRF instruments etc.). These examples should not be taken as limiting the broad meaning of sampling.*<br>*Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.*<br>*Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.* | ■ RC drill samples for analysis were collected every 2 m down hole directly from the cyclone after passing through a three-tier riffle splitter or cone splitter mounted on the RC drilling rig. Each sample represents approximately 12% (by volume) of the drilling interval with an average weight of 4 kg for a 2 m interval.<br>■ Sample analysis was completed by SGS Laboratories in Welshpool, WA. Samples were sent direct to the laboratory, sorted, dried and pulverised using a ring mill.<br>■ All drilling was sampled in accordance with APIM sampling procedures. |
| **Drilling Techniques**<br>*Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic etc.), and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method etc.).* | ■ The majority of the downhole samples were collected from RC drilling utilising a 5¼" face sampling hammer.<br>■ HQ3 and PQ3 diamond drilling has been completed for QAQC, geotechnical and beneficiation purposes across the majority of the WPIOP Stage 1 Deposits (excluding Cardo Bore and Trixie).<br>■ All diamond drilling was completed using triple tube methods. |
| **Drill Sample Recovery**<br>*Method of recording and assessing core and chip sample recoveries and results assessed.*<br>*Measures taken to maximise sample recovery and ensure representative nature of the samples.*<br>*Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.* | ■ RC sample recoveries and quality were recorded for each sampling interval by the geologist. Samples were classified as dry, damp or wet. Sample recoveries were based on estimates of the size of drill spoil piles and were recorded as a percentage of the expected total sample volume. The majority of drilling was completed above the water table and sample recovery estimates of 100% were the norm.<br>■ The cyclone in the RC rig was cleaned in between drill holes to minimise sample contamination. Previous twinned hole studies (diamond vs RC) at APIM project areas indicate minimal sample bias using RC drilling techniques.<br>■ Diamond core recoveries were recorded for every run. |

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| JORC Code Assessment Criteria | Comment |
|---|---|
| **Logging**<br>*Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.*<br>*Whether logging is qualitative or quantitative in nature. Core (or costean, channel etc.), photography.*<br>*The total length and percentage of the relevant intersections logged.* | ■ All geological logging was conducted using APIM procedures and standardised coding. Data is entered directly into ruggedised laptops at the drill site using software that validates data as the geologist logs.<br>■ Logging data is then emailed to Perth where it undergoes further validation as it is uploaded and stored into the APIM SQL-based geological database.<br>■ All diamond core from the WPIOP Stage 1 area has been photographed. |
| **Sub-Sampling Techniques and Sample Preparation**<br>*If core, whether cut or sawn and whether quarter, half or all core taken.*<br>*If non-core, whether riffled, tube sampled, rotary split etc., and whether sampled wet or dry.*<br>*For all sample types, the nature, quality and appropriateness of the sample preparation technique.*<br>*Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.*<br>*Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.*<br>*Whether sample sizes are appropriate to the grain size of the material being sampled.* | ■ RC samples were collected in pre-labelled calico bags via a cone splitter mounted directly below the cyclone on the rig.<br>■ Wet and dry samples were collected via the same technique.<br>■ Samples were stored on-site prior to being transported to the laboratory. Wet samples were allowed to dry before being processed.<br>■ Samples were sorted, dried and weighed at the laboratory where they were then crushed and riffle split to obtain a sub-fraction for pulverisation. The pulverised sample was reduced further and combined with various reagents prior to oven fusion to create a fused disc for analysis. |
| **Quality of Assay Data and Laboratory Tests**<br>*The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.*<br>*For geophysical tools, spectrometers, handheld XRF instruments etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation etc.*<br>*Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.* | ■ Sample analysis was completed by SGS Laboratories in Welshpool, WA. Standards and duplicates were inserted into the sample sequence at the rate of 1 in 50 samples, i.e. every 25th sample was a standard or a duplicate. These samples were used to test the precision and accuracy of the sampling method and laboratory analysis. APIM conducts monthly checks of all QAQC data.<br>■ APIM has previously conducted external reviews (undertaken by Optiro and Geostats) of the geological and assay database. Audit results show an acceptable level of accuracy and precision. |
| **Verification of Sampling and Assaying**<br>*The verification of significant intersections by either independent or alternative company personnel.*<br>*The use of twinned holes.*<br>*Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.*<br>*Discuss any adjustment to assay data.* | ■ Comparison of RC and twinned diamond hole assay data distributions show that the drilling methods have similar grade distributions, verifying the suitability of RC samples in the Mineral Resource estimate.<br>■ APIM periodically conducts round robin studies on assay results to verify sample analysis. No concerns were highlighted and no adjustments to data have been made.<br>■ APIM has retained laboratory sample pulps for all samples since 2005. |

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| JORC Code Assessment Criteria | Comment |
|---|---|
| **Location of Data Points**<br><br>*Accuracy and quality of surveys used to locate drill holes (collar and downhole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.*<br>*Specification of the grid system used.*<br>*Quality and adequacy of topographic control.* | ■ All drill holes are initially surveyed by handheld GPS and later surveyed by differential GPS utilising an independent contractor.<br>■ Drill hole collar coordinates were verified in ArcGIS and/or MapInfo software utilising aerial photography as part of APIM's monthly QA/QC procedures.<br>■ Topographic coverage of all APIM deposits has been established by aerial survey (LIDAR) with a vertical accuracy of ±0.15 m.<br>■ APIM projects fall within the MGA Zone 50 or 51 (GDA 1994 based) for horizontal data and AHD for vertical data. |
| **Data Spacing and Distribution**<br><br>*Data spacing for reporting of Exploration Results.*<br>*Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.*<br>*Whether sample compositing has been applied.* | ■ Nominal drill spacing varies from 100 m × 100 m at Cardo Bore to 100 m × 50 m spacing at Trixie and Red Hill Creek.<br>■ For other Stage 1 Deposits, nominal drill hole spacing ranges from typically 100 m × 50 m × 200 m × 100 m<br>■ Cardo Bore North has been drilled at 100 m × 50 m.<br>■ Areas of Kens Bore have been drilled to 50 m × 50 m drill and 25 m × 25 m spacing.<br>■ Short scale trial grade control drilling has also been conducted at Upper Cane and Catho Well on 5 m × 5 m spacing.<br>■ Diamond hole samples were composited for metallurgical testwork however these samples were not included in the Mineral Resource estimate.<br>■ No sample compositing has been undertaken for RC samples as all samples are on uniform 2 m lengths.<br>■ Resource drilling was designed along grid lines dominantly orientated in the north-south direction (360°-180°). |
| **Orientation of Data in Relation to Geological Structure**<br><br>*Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.*<br>*If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.* | ■ All drill holes in the WPIOP Stage 1 area, apart from seven RC holes at Upper Cane, and two RC holes at Catho Well and 6 DD holes at Buckland Hills were drilled vertically. These angled holes were drilled at 60° in order to test the CID where topography restricts access to the limits of the mesa and for geotechnical testwork.<br>■ Due to the shallow depth of drill holes and the horizontal stratigraphy of the CID it was not considered a requirement to complete downhole orientation surveys. To support this assumption downhole surveys were conducted on 62 drill holes at the Kens Bore, Red Hill Creek, Cochrane, Jewel, Catho Well and Cardo Bore deposits. The average absolute deflection recorded in all drill holes was negligible.<br>■ The orientation of sampling achieves unbiased sampling of stratigraphic domains. |
| **Sample Security**<br><br>*The measures taken to ensure sample security.* | ■ APIM and SGS communicate on a regular basis and standard chain of custody paperwork is used. Samples are despatched and transported to the laboratory on a regular basis. |
| **Audits and Reviews**<br><br>*The results of any audits or reviews of sampling techniques and data.* | ■ QA/QC procedures and rigorous database validation rules ensures sampling and logging data is validated prior to being used by APIM Geologists. |

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<table>
<tr><th>JORC Code Assessment Criteria</th><th>Comment</th></tr>
<tr><td></td><td>■ APIM conducts monthly QA/QC data checks on reference standards and field duplicates.<br>■ Independent audits of APIM's sampling techniques and QA/QC assay data have been undertaken. Sampling procedures and the drill hole database is consistent with industry standards.</td></tr>
<tr><td colspan="2">Section 2 Reporting of Exploration Results</td></tr>
<tr><td>Mineral Tenement and Land Tenure Status<br><br>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.<br>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</td><td>■ The Australian Premium Iron Joint Venture (APIJV - between Aquila Steel Pty Ltd and AMCI (IO) Pty Ltd), the Red Hill Iron Ore Joint Venture (RHIOJV - between APIM and Red Hill Iron Limited) and the Mt Stuart Iron Ore Joint Venture (MSIOJV – between APIM and Cullen Exploration Pty Ltd) and the Yalleen Project (Helix Resources – royalty) collectively comprise the broader West Pilbara Iron Ore Project (WPIOP), with each joint venture managed by APIM Management Pty Ltd (APIM).<br>■ There are no known environmental or cultural heritage matters that would impact on the development of the resource areas (subject to relevant approvals).</td></tr>
<tr><td>Exploration Done by Other Parties<br><br>Acknowledgment and appraisal of exploration by other parties.</td><td>■ Exploration work completed by APIM or other parties prior to this report has been summarised in previous ASX releases or are publically available via the Department of Mines and Petroleum online systems.</td></tr>
<tr><td>Geology<br><br>Deposit type, geological setting and style of mineralisation.</td><td>■ The Mineral Resources are from Channel Iron Deposits (CID) with mineralisation present as Tertiary Robe Pisolite. CID has been formed by the alluvial and chemical deposition of iron rich sediments in palaeo-river channels after erosion and weathering of lateratised Hamersley Group sediments.<br>■ Basement varies from Members of the Wyloo Group to Hamersley Group and includes dolomites, chert, volcanoclastics, and basalt (Wyloo Group), and shales to dolomites of the Wittenoom Formation, Mount McRae Shale, and Mt Sylvia Formation (Hamersley Group).</td></tr>
<tr><td>Drill hole information</td><td>■ The Mineral Resource estimates are based on all available drilling as of 17 August 2016. A summary of number of drill holes and drilling meterage by deposit is provided below:
<table>
<tr><th rowspan="2">Prospect</th><th colspan="2">RC</th></tr>
<tr><th>No. of holes</th><th>Metres</th></tr>
<tr><td>Catho Well</td><td>1 097</td><td>29 749</td></tr>
<tr><td>Cardo Bore</td><td>330</td><td>12 021</td></tr>
<tr><td>Cardo Bore East</td><td>118</td><td>4 737</td></tr>
<tr><td>Cardo Bore North</td><td>89</td><td>4 594</td></tr>
<tr><td>Cochrane</td><td>173</td><td>8 251</td></tr>
<tr><td>Jewel</td><td>60</td><td>3 880</td></tr>
<tr><td>Ken's Bore</td><td>1 273</td><td>67 065</td></tr>
<tr><td>Red Hill Creek</td><td>651</td><td>23 372</td></tr>
<tr><td>Trinity Bore</td><td>792</td><td>25 520</td></tr>
</table></td></tr>
</table>

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| JORC Code Assessment Criteria | Comment |
|---|---|
| | Trixie 247 9 624<br>Upper Cane 312 10 384<br>**Total 5 142 199 197** |
| **Data aggregation methods** | ■ No maximum or minimum grade truncations were performed. |
| **Relationship between mineralisation widths and intercept lengths** | ■ Mineralisation in each of the areas reported are flat lying and only true mineralisation widths are reported. |
| **Diagrams** | ■ A plan view map showing the deposit locations is included in the body of the report. |
| **Balance reporting** | ■ Not applicable. Exploration results have previously been reported. This Table relates to the reporting of the Mineral Resource estimates. |
| **Other substantive exploration data** | ■ Not applicable. Exploration results have previously been reported. This Table relates to the reporting of the Mineral Resource estimates. |
| **Further work** | ■ Exploration work will continue as required, and as a minimum, to maintain the Exploration Licences in good standing. Diamond drilling for geotechnical and density testwork is planned for Trixie, Red Hill Creek and Cardo Bore. |
| **Section 3 Estimation and Reporting of Mineral Resources** | |
| **Database Integrity**<br>*Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.*<br>*Data validation procedures used.* | ■ All geological data and drilling information is stored in a SQL database in the APIM Perth office and is managed by APIM with support from external consultants.<br>■ APIM uses Ocris to import data into its SQL database. Custom-built configured imports are used to further validate the data on import. Despatching of samples, receipting of assays, and QA/QC is also undertaken in Ocris.<br>■ APIM has previously engaged external consultants to review the drill hole database. The database was found to be above industry standard. |
| **Site Visits**<br>*Comment on any site visits undertaken by the Competent Person and the outcome of those visits.*<br>*If no site visits have been undertaken indicate why this is the case.* | ■ APIM Competent Persons have visited the Mineral Resource deposits.<br>■ Golder has not undertaken any site visits for the current Mineral Resource estimation. |
| **Geological Interpretation**<br>*Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.*<br>*Nature of the data used and of any assumptions made.*<br>*The effect, if any, of alternative interpretations on Mineral Resource estimation. The use of geology in guiding and controlling Mineral Resource estimation.*<br>*The factors affecting continuity both of grade and geology.* | ■ 3D geological and mineralisation modelling is undertaken by APIM using Micromine software. The method involves interpretation of downhole stratigraphy using surface geological mapping, lithological logging and downhole assay data. Working field sections are updated at the drill rig by the geologist and these comments are taken into account when creating or editing geological and mineralisation models.<br>■ Golder reviewed the mineralisation wireframes reflecting the 52% Fe cut-off grade prior to use for Mineral Resource estimation. |

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| JORC Code Assessment Criteria | Comment |
|---|---|
| **Dimensions**<br><br>*The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.* | ■ The dimensions of each block model (below) are adequate to cover the extent and variability of each of the deposits. |

| Dep. | Dir. | Min. (m) | Max. (m) | Ext. (m) |
|---|---|---|---|---|
| CB | Easting (X) | 412 700 | 419 300 | 6 600 |
| | Northing (Y) | 7 540 600 | 7 546 800 | 6 200 |
| | RL (Z) | 75 | 305 | 230 |
| CBE | Easting (X) | 419 200 | 422 400 | 3 200 |
| | Northing (Y) | 7 544 200 | 7 546 300 | 2 100 |
| | RL (Z) | 75 | 275 | 200 |
| CBN | Easting (X) | 418 500 | 421 500 | 3 000 |
| | Northing (Y) | 7 549 700 | 7 552 000 | 2 300 |
| | RL (Z) | 150 | 400 | 250 |
| CCH | Easting (X) | 409 000 | 413 000 | 4 000 |
| | Northing (Y) | 7 574 000 | 7 577 500 | 3 500 |
| | RL (Z) | 0 | 300 | 300 |
| JWL | Easting (X) | 410 100 | 412 200 | 2 100 |
| | Northing (Y) | 7 573 600 | 7 574 500 | 900 |
| | RL (Z) | 75 | 275 | 200 |
| TB | Easting (X) | 427 000 | 435 000 | 8 000 |
| | Northing (Y) | 7 521 000 | 7 531 000 | 10 000 |
| | RL (Z) | 200 | 400 | 200 |
| UC | Easting (X) | 422 500 | 426 000 | 3 500 |
| | Northing (Y) | 7 544 900 | 7 546 500 | 1 600 |
| | RL (Z) | 100 | 400 | 300 |
| CW | Easting (X) | 421 500 | 428 200 | 6 700 |
| | Northing (Y) | 7 517 800 | 7 525 400 | 7 600 |
| | RL (Z) | 124 | 300 | 176 |
| KB | Easting (X) | 412 000 | 424 000 | 12 000 |
| | Northing (Y) | 7 556 000 | 7 565 000 | 11 000 |
| | RL (Z) | 100 | 300 | 200 |
| RHC | Easting (X) | 424 000 | 430 800 | 6 800 |
| | Northing (Y) | 7 555 500 | 7 559 500 | 4 000 |
| | RL (Z) | 180 | 400 | 220 |
| TX | Easting (X) | 413 700 | 417 900 | 4 200 |
| | Northing (Y) | 7 569 200 | 7 572 400 | 3 200 |
| | RL (Z) | 150 | 300 | 150 |

| | |
|---|---|
| **Estimation and Modelling Techniques**<br><br>*The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters, and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.*<br>*The availability of check estimates, previous* | ■ The estimation technique used for the Mineral Resource estimation of all deposits is the geostatistical method of Ordinary Kriging. Parameters were derived from variograms to estimate the average grade for Fe, $SiO_2$, $Al_2O_3$, Mn, LOI (1000°C), MgO, P, S, CaO, $K_2O$ and $TiO_2$ for each block.<br>■ Block sizes were selected with respect to the nominal drilling densities to ensure acceptable local estimation quality. |

| JORC Code Assessment Criteria | Comment |
|---|---|
| *estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.*<br>*The assumptions made regarding recovery of by-products.*<br>*Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulfur for acid mine drainage characterisation).*<br>*In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.*<br>*Any assumptions behind modelling of selective mining units.*<br>*Any assumptions about correlation between variables.*<br>*Description of how the geological interpretation was used to control the resource estimates.*<br>*Discussion of basis for using or not using grade cutting or capping.*<br>*The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.* | ■ The block size selected for each deposit is 25 m (X) × 25 m (Y) × 2 m (Z). The sub-block size is 5 m (X) × 5 m (Y) × 2 m (Z).<br>■ All samples were composited to 2 m for estimation purposes (essentially uncomposited due to 2 m raw sample support)<br>■ The estimation was conducted in three passes with the search size increasing for each pass. In some domains, where the blocks were not fully estimated after three passes, blocks were assigned default grades. The default grades were based on the mean of the estimated blocks or samples grades in the same domain.<br>■ Individual variables between each stratigraphy domain were compared for similarity to decide if grouping of MINSTR during Mineral Resource estimation was appropriate.<br>■ The model was validated visually and statistically using comparisons to composite data statistics, swath plots and smoothing effect assessments. |
| **Moisture**<br>*Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.* | ■ All Mineral Resource tonnages are reported on a dry basis. |
| **Cut-off Parameters**<br>*The basis of the adopted cut-off grade(s) or quality parameters applied.* | ■ The resource model is constrained by assumptions about economic cut-off grades. The mineralisation is confined by a 52% Fe cut-off grade. The tabulated resources were reported using a cut-off grade of 52% Fe which was applied on a block by block basis. |
| **Mining Factors or Assumptions**<br>*Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.* | ■ It has been assumed that the traditional open cut mining method of drill, blast, load and haul will be used. This is consistent with current practices at similar deposits in the Pilbara. |
| **Metallurgical Factors or Assumptions**<br>*The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an* | ■ Multiple phases of metallurgical test work have been undertaken. Results indicate a saleable product can be achieved via a simple crush and screen process. Higher clay zones may require beneficiation by wet process to remove clay. |

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| JORC Code Assessment Criteria | Comment |
|---|---|
| *explanation of the basis of the metallurgical assumptions made.* | |
| **Environmental Factors or Assumptions** | |
| *Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.* | ■ All key Commonwealth and WA government on-tenement approvals for the development of the project have been obtained. More detailed studies regarding possible waste and process residue disposals options are ongoing. |
| **Bulk Density** | ■ Density determinations were completed by AMMTEC and SGS on PQ diamond core and by APIM field staff on Winze stockpiles.<br>■ In situ bulk density values were assigned to each model based on stratigraphy and mineralisation type.<br>■ Density values were provided by APIM and were based on 1335 wet and dry (non-waxed) density determinations from 1054 PQ diamond drill core samples and 281 winze stockpile samples collected between May 2008 and February 2015.<br>■ 17% of the Wet and Dry (non-waxed) samples were re-tested at the lab using the waxed method for quality control (225 pairs). The difference between the mean of the waxed and the non–waxed samples is -3.5%.<br>■ A correction factor of -3.5% has been applied to the Wet and Dry (non-waxed) measurements.<br>■ The regional average density across all the deposits managed by APIM was applied by stratigraphic units for mineralised and waste domains.<br>■ No diamond core density testwork is available from the Trixie or Cardo Bore and densities have been assumed based on rock type from nearby WPIOP Stage 1 Deposits. |
| *Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.*<br>*The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity etc.), moisture and differences between rock and alteration zones within the deposit.*<br>*Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.* | |
| **Classification** | ■ Mineral Resources were classified in accordance with the Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code, 2012 Edition).<br>■ Continuous zones meeting the following criteria were used to define the resource classes:<br><u>Measured Resource</u><br>■ Strong evidence of geological continuity<br>■ Strong evidence of grade continuity<br>■ High levels of kriging performance quality<br>■ Drill spacing of 100 m × 100 m or less<br><u>Indicated Resource</u><br>■ Evidence of geological continuity<br>■ Evidence of grade continuity<br>■ Moderate levels of kriging performance quality |
| *The basis for the classification of the Mineral Resources into varying confidence categories.*<br>*Whether appropriate account has been taken of all relevant factors, i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data.*<br>*Whether the result appropriately reflects the Competent Person(s)' view of the deposit.* | |

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| JORC Code Assessment Criteria | Comment |
|---|---|
| | ■ Drill spacing of 100 m × 100 m<br>Inferred Resource<br>■ Drill spacing wider than 100 m × 100 m<br>■ Greater geological uncertainty.<br>■ Limited grade continuity, or if mineralisation is discontinuous and occurs as thin lenses<br>■ Relatively low kriging performance quality |
| **Audits or Reviews**<br><br>*The results of any audits or reviews of Mineral Resource estimates.* | ■ Optiro consultants conducted a review of the 2010 Mineral Resource estimates, although the current resource statement is for regions of the WPIOP not previously modelled in 2010.<br>■ Only relatively minor changes to the geology and mineralisation interpretation approach have occurred since 2010, reflecting either new areas or infill drilling. However the mineralisation Fe cut-off grade used to define the 2015/2016 resources is lower than used for the 2010 estimates.<br>■ Golder conducted a number of basic and geological interpretation reviews during the compilation of the current Mineral Resource estimates. All practices and methods observed are considered to be consistent with the resource classification applied to the deposits. |
| **Discussion of Relative Accuracy/Confidence**<br><br>*Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.*<br>*The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation.*<br>*Documentation should include assumptions made and the procedures used.*<br>*These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.* | ■ Additional infill and extension drilling data has been added to the drill hole database supporting the Mineral Resource estimates since they were previously reported in 2015. Due to increase drilling density, there is a higher confidence in the Mineral Resource estimates.<br>■ The Mineral Resource estimates represents an increase over the 2015 estimates for Red Hill Creek due to the new Extension to the east of the previous Red Hill Creek resource estimate.<br>■ The increase in the total resource and improved resource confidence for Red Hill Creek is attributable to improved definition to mineralised zones and extension of the previously defined CID as a result of the completion of infill and extension RC drilling.<br>■ Both Cardo Bore and Trixie represent new areas not previously modelled, however the same resource confidence parameters were applied for consistency with other resource estimates. |

## COMPETENT PERSON'S STATEMENTS

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

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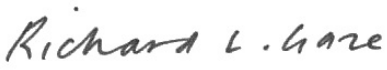
The Competent Person responsible for the geological interpretation and the drill hole data used for the resource estimation is Mr Michael Wall who is a full-time employee of APIM Management Pty Ltd, and Member of the Australasian Institute of Mining and Metallurgy. Michael Wall has sufficient relevant experience to the style of mineralisation and type of deposit under consideration and to the activity for which he is undertaking to qualify as a Competent Person as defined in the JORC Code (2012 Edition). Mr Wall consents to the inclusion in this report of the matters based on his information in the form and content in which it appears.

## IMPORTANT INFORMATION

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

Yours sincerely

**GOLDER ASSOCIATES PTY LTD**





Richard Gaze
Principal

Jorge Peres
Senior Resource Geologist

RLG/SK/hn

Attachments: A – Important Information

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**ATTACHMENT A**

**Important Information**

# IMPORTANT INFORMATION RELATING TO THIS REPORT

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

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

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

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

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

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

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