

The Companies Officer Australian Securities Exchange Ltd Level 40, Central Park 152-158 St Georges Terrace Perth WA 6000

23 August 2019

Dear Madam or Sir

Fortescue Mineral Resources Update: Development Properties

Fortescue Metals Group (ASX: FMG, Fortescue) presents the attached Mineral Resources statement for its Greater Western Hub Development Properties at 30 June 2019.

The report updates the Inferred Mineral Resource estimates in accordance with the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves, December 2012 (the JORC Code) as required by the Australian Securities Exchange. The annual summary will be included in Fortescue's 2019 Annual Report which should be read in conjunction with the enclosed statement.

Summary Mineral Resources Development Properties – Hematite

	June 2	019	June 20	18
	In-situ tonnes (mt)	Fe%	In-situ tonnes (mt)	Fe%
Greater Chichester Hub	433	56.4	433	56.4
Greater Solomon Hub	2,580	56.8	2,658	56.8
Greater Western Hub	2,047	57.2	1,642	57.1
Nyidinghu	2,463	57.4	2,463	57.4
Pilbara Other	384	57.1	-	-
Total Development Mineral Resources	7,907	57.1	7,198	57.1

The Greater Western Hub Inferred Mineral Resource has increased to 2,047 million tonnes (mt). This 405mt increase includes updates to the Flying Fish, Cobra and Elevation deposits. The Pilbara Other Inferred Mineral Resource includes 384mt with the addition of the Fig Tree and Wonmunna deposits. The additional tonnes include high grade bedded iron deposits (BID) in the Brockman and Marra Mamba Iron Formations, along with channel iron deposits (CID). The Queens Extension deposit previously included in the Greater Solomon Hub has been transferred to operating properties.

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www.fmgl.com.au @FortescueNews Chief Executive Officer, Elizabeth Gaines said, "It is pleasing to see this significant growth in Mineral Resources at our development properties. With the increase in Inferred Mineral resources at the Western Hub and Other Pilbara areas, our total Development Mineral Resources is now approaching eight billion tonnes."

Yours sincerely FORTESCUE METALS GROUP

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Mineral Resources Update Development Properties

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GREATER WESTERN HUB LOCATION AND GEOLOGY

Updated Mineral Resource estimates have been produced for deposits within Fortescue's Greater Western Hub to add 405 million tonnes (mt). These were done with the intention of updating both the existing estimation footprint and the stratigraphic interpretation. The Mineral Resource estimates are in accordance with the 2012 edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves' (JORC Code, 2012 Edition). The Mineral Resources are classified as Inferred.

Deposits in the Greater Western Hub are located approximately 100-140km north-west of Tom Price and are 100-150km west of Fortescue's Solomon operations in the Pilbara region of Western Australia, Figure 1. Updated estimates have been completed for the Flying Fish, Cobra and Elevation deposits. These deposits are located within 20-30km of Eliwana, Figure 2.

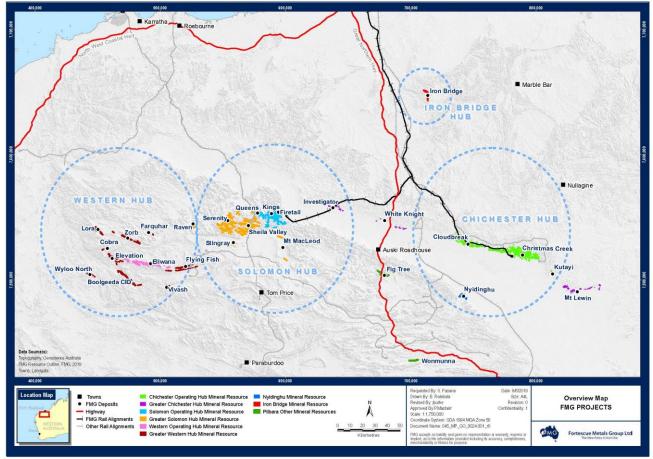


Figure 1: Fortescue Mineral Resource and operations overview.

The Flying Fish deposit is situated on the southern limb of the Jeerinah anticline in the western Hamersley Province. The deposits lay proximal to mineralised outcrop of Marra Mamba and Brockman Iron Formations. Tertiary sediments overly the carbonate shale, barren sequences of the Mt McRae Shale, Mt Sylvia and Wittenoom Formations that separate the two Iron Formations. Mineralisation predominantly occurs as bedded iron deposits (BID) with some detrital iron deposits (DID). Mineralisation is distributed variably within an area of approximately 25km along strike and 3.5km across strike. Mineralisation occurs at surface and extends to depths of 300m below surface. Further drilling over the project areas has resulted in an increase of the Inferred Mineral Resource by 169mt.

The Cobra and Elevation deposits are found along the western margin of the Hamersley Basin. These deposits contain BID mineralisation hosted by the Marra Mamba and Brockman Iron Formations, with some DID. Elevation also contains channel iron deposit (CID) mineralisation.

Cobra contains BID mineralisation hosted by the Dales Gorge and Whaleback Shale members of the Brockman Iron Formation and minor DID mineralisation. Mineralisation covers an area approximately 5km along strike east to west, 1km across strike, and occurs from surface to depths of 150m. Further drilling over the project areas has resulted in an increase of the Inferred Mineral Resource by 14mt.

Elevation contains CID mineralisation, and BID mineralisation hosted by the Dales Gorge and Whaleback Shale members of the Brockman Iron Formation and the Newman and Nammuldi members of the Marra Mamba Iron Formation. The CID occurs as a series of mesas rising to 70m above the valley floor, mineralisation occurs at surface and to depths of 60 m. The BID mineralisation occurs in a series of pods ranging from 200m to 2km along strike east to west and 200m to 600m across strike and occur from surface to depths of up to 100m. Further drilling over the project areas has resulted in an increase of the Inferred Mineral Resource by 221mt.

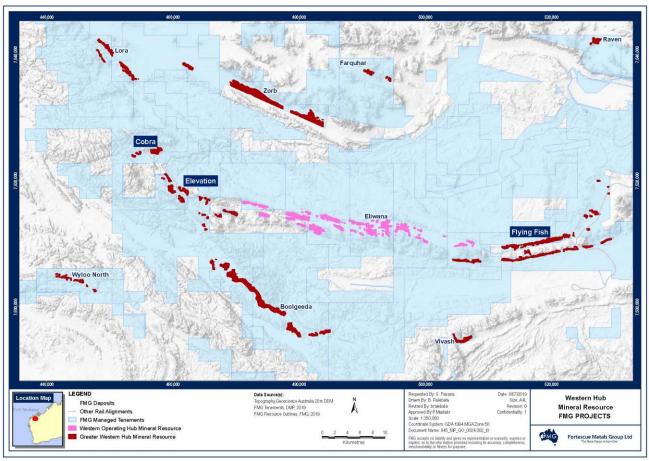


Figure 2: Location of Greater Western Hub Mineral Resources.

FIG TREE LOCATION AND GEOLOGY

A Mineral Resource estimate has been produced for Fig Tree to add 193mt. The Mineral Resource estimate is reported in compliance with the 2012 edition of the JORC Code. The Mineral Resource is classified as Inferred.

Fig Tree is located approximately 75km southwest of Fortescue's Cloudbreak operations in the Pilbara region of Western Australia, Figure 1.

Mineralisation within the Fig Tree deposit is hosted by buried CID. The CID is in a valley bounded by hills of Brockman Iron Formation. The channel covers an area of 13km in length and the average width of mineralisation across the valley is 500 metres. The mineralisation extends to depths of up to 70 metres.

WONMUNNA LOCATION AND GEOLOGY

A Mineral Resource estimate has been produced for Wonmunna to add 191mt. The Mineral Resource estimate is reported in compliance with the 2012 edition of the JORC Code. The Mineral Resource is classified as Inferred.

Wonmunna is located approximately 75km northwest of Newman and 100km southwest of Fortescue's Cloudbreak operations in the Pilbara region of Western Australia, Figure 1.

Mineralisation occurs as BID with some DID. Mineralisation is predominantly hosted by the Mount Newman Member of the Marra Mamba Iron Formation. Minor BID mineralisation is also hosted by the West Angela Member of the Wittenoom Formation and the MacLeod and Nammuldi Members of the Marra Mamba Iron Formation. Mineralisation covers an area approximately 6km along strike and 300m across strike. The mineralisation extends to depths of up to 130m with an average thickness of 25m.

DATA AND MINERAL RESOURCE

Drill samples are from Reverse Circulation (RC) drilling rigs with cone splitters. In the Greater Western Hub projects, RC drill holes have been drilled on a nominal 200m x 100m and 400m x 100m spaced grid, with a few 100m × 100m and 100m × 50m spaced drill holes. At Fig Tree and Wonmunna, RC drill holes have been drilled on a nominal 400m x 100m spaced grid.

All data is captured electronically and must pass extensive quality assurance and quality control (QAQC) procedures. QAQC is an ongoing analysis and includes validation of drill hole collar coordinates, field standards, laboratory standards, field duplicates, twin holes as well as 'round robin' checks between laboratories. No major issues were identified with precision, accuracy or bias. The estimations incorporate all the validated RC holes drilled in the area by Fortescue that have collar and assay information loaded into the acQuire database. Geological logging, geochemistry and geophysical data were used to identify the stratigraphic units which were then modelled in 3D.

Grades estimated in the models were Fe, SiO₂, Al₂O₃, P, Mn, MgO, CaO, TiO₂, Na₂O, S, K₂O, and LOI total. However, only Fe, SiO₂, Al₂O₃, P and LOI total are quoted here as the other elements are not considered significant. Variography and detailed statistics using Snowden Supervisor software was used to determine the estimation parameters for the grade modelling. Ordinary Kriging and inverse distance cubed were used as modelling techniques to estimate grades. Estimation was done using Maptek Vulcan software.

Density has been determined from down-hole geophysical measurements throughout the deposits. For the Brockman and Marra Mamba BID deposits in the Greater Western Hub, these density values have been compared with down-hole geophysical measurements and bulk density measurements on diamond core drilled at the nearby and analogous Eliwana deposit. Fig Tree CID has been compared with measurements at the analogous Kings and Queens deposits. Wonmunna has been compared with Marra Mamba at the Chichester and Western Hubs. Average rounded densities by geological unit and mineralisation have been applied globally to the models.

The cut-offs used to report these Mineral Resources vary slightly across the deposits to deliver similar grades to Fortescue's current production specifications. BID and red ochre detritals at Flying Fish are reported at greater than or equal to 50% Fe and DID is reported at greater than or equal to 52% Fe. All material at Cobra is reported at greater than or equal to 50% Fe and CID is reported at greater than or equal to 53% Fe. BID at Elevation is reported at greater than or equal to 50% Fe and CID is reported at greater than or equal to 53% Fe. CID at Fig Tree is reported at greater than or equal to 54% Fe. BID at Wonmunna is reported at greater than or equal to 50% Fe and DID is reported at greater than or equal to 54% Fe.



The estimates have been classified as Inferred Mineral Resources and reported in accordance with the JORC Code, 2012 Edition. The classification is derived from consideration of the confidence in geological and mineralisation continuity, sample spacing, sample statistics, estimation parameters, interpretational uncertainties, mapping and the potential for economic extraction. The Mineral Resource summary for these updated and new deposits is shown in Table 1 and Table 2.

Оге Туре	In-situ Tonnes (mt)	Iron Fe %	Silica SiO ₂ %	Alumina Al ₂ O ₃ %	Phos P %	Loss on Ignition LOI %
Flying Fish						
Detritals	72	57.8	6.02	4.21	0.061	6.1
Brockman BID	134	57.6	6.64	2.97	0.130	7.2
Marra Mamba BID	168	60.4	4.01	1.97	0.059	6.7
TOTAL	374	58.9	5.34	2.76	0.085	6.7
Cobra						
Detritals	10	55.9	6.61	3.95	0.108	8.2
Brockman BID	157	58.9	5.70	2.46	0.155	7.0
TOTAL	166	58.7	5.75	2.55	0.152	7.1
Elevation						
CID	64	55.0	5.64	3.33	0.042	11.2
Brockman BID	149	59.1	5.51	2.45	0.129	6.9
Marra Mamba BID	41	58.1	4.72	2.79	0.066	8.8
TOTAL	254	57.9	5.41	2.73	0.097	8.3

Table 1: Greater Western Hub updated Mineral Resource summary.

Tonnage information has been rounded and as a result the figures may not add up to the totals quoted

Table 2: Pilbara Other updated Mineral Resource summary.

Ore Type	In-situ Tonnes (mt)	Iron Fe %	Silica SiO₂ %	Alumina Al ₂ O ₃ %	Phos P %	Loss on Ignition LOI %
Fig Tree						
CID	193	55.7	7.23	1.86	0.077	10.9
TOTAL	193	55.7	7.23	1.86	0.077	10.9
Wonmunna						
Detritals	32	56.1	6.72	5.97	0.059	6.4
Marra Mamba BID	159	59.1	4.59	2.74	0.060	7.4
TOTAL	191	58.6	4.95	3.28	0.060	7.3

Tonnage information has been rounded and as a result the figures may not add up to the totals quoted

The Mineral Resource inventory compared with the previous reporting period for these deposits is shown in Table 3 and Table 4. In accordance with the requirements of the JORC Code, 2012 Edition for reporting Mineral Resources, Table 1 Checklist of Assessment and Reporting Criteria for each estimate is provided in the attachment.

			Jun	e 2019					Jun	e 2018		
						Loss on						Loss on
	In-situ Tonnes	Iron Fe	Silica SiO ₂	Alumina Al ₂ O ₃	Phos P	Ignition LOI	In-situ Tonnes	Iron Fe	Silica SiO ₂	Alumina Al ₂ O ₃	Phos P	Ignition LOI
Project	(mt)	%	%	%	%	%	(mt)	%	%	%	%	%
Western Hub												
Flying Fish	374	58.9	5.34	2.76	0.085	6.7	205	60.2	3.98	2.38	0.059	6.7
Vivash	96	58.7	6.21	3.03	0.104	6.2	96	58.7	6.21	3.03	0.104	6.2
Cobra	166	58.7	5.75	2.55	0.152	7.1	152	58.6	5.90	2.54	0.149	7.1
Lora	189	58.5	5.56	3.13	0.151	6.9	189	58.5	5.56	3.13	0.151	6.9
Zorb	337	54.6	6.57	3.14	0.040	11.2	337	54.6	6.57	3.14	0.040	11.2
Farquhar	41	58.2	5.56	2.98	0.123	7.6	41	58.2	5.56	2.98	0.123	7.6
Elevation	254	57.9	5.41	2.73	0.097	8.3	33	59.4	4.75	2.68	0.129	7.0
Boolgeeda	490	55.4	5.92	2.84	0.043	11.4	490	55.4	5.92	2.84	0.043	11.4
Wyloo North	101	60.4	5.38	2.60	0.107	5.0	101	60.4	5.38	2.60	0.107	5.0
TOTAL	2,047	57.2	5.79	2.86	0.083	8.7	1,642	57.1	5.72	2.85	0.078	9.0

Table 3: Greater Western Hub total Mineral Resource inventory.

Tonnage information has been rounded and as a result the figures may not add up to the totals quoted

Table 4: Pilbara Other total Mineral Resource inventory.

			Jun	e 2019					Jun	e 2018		
Project	In-situ Tonnes (mt)	lron Fe %	Silica SiO ₂ %	Alumina Al ₂ O ₃ %	Phos P %	Loss on Ignition LOI %	In-situ Tonnes (mt)	lron Fe %	Silica SiO ₂ %	Alumina Al ₂ O ₃ %	Phos P %	Loss on Ignition LOI %
Pilbara Other												
Fig Tree	193	55.7	7.23	1.86	0.077	10.9	-	-	-	-	-	-
Wonmunna	191	58.6	4.95	3.28	0.060	7.3	-	-	-	-	-	-
TOTAL	384	57.1	6.10	2.57	0.069	9.1	-	-	-	-	-	-

Tonnage information has been rounded and as a result the figures may not add up to the totals quoted

COMPETENT PERSON'S STATEMENT

The information in this report that relates to Exploration Targets, Exploration Results and Mineral Resources is based on information compiled by Mr Stuart Robinson who is a Fellow of The Australasian Institute of Mining and Metallurgy, and Mr Nicholas Nitschke and Ms Erin Retz who are Members of The Australasian Institute of Mining and Metallurgy. Mr Stuart Robinson, Mr Nicholas Nitschke and Ms Erin Retz are full time employees of Fortescue Metals Group Ltd. Mr Robinson, Mr Nitschke and Ms Retz have sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity which they are undertaking to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Robinson, Mr Nitschke and Ms Retz consent to the inclusion in this report of the matters based on this information in the form and context in which it appears.



FLYING FISH JORC TABLE 1

Criteria	Commentary
	A total of 1,023 reverse circulation drill holes and 37,601 1m composite samples were used in the model. Samples sent for element and analytical work were selected based on potential ore-grade material with a reasonable envelope both above and below this interval. Most holes where possible undergo down hole geophysical logging.
Sampling techniques	Analytical standards were used to assist in checking laboratory results. Field duplicates were used to assist with determining sampling quality at the rig. Geophysical probes were calibrated on a regular basis using static methods and specific calibration holes. Drill hole locations were determined by survey contractors.
	All samples were taken on 1m intervals from reverse circulation drill holes. A sample weighing approximately 1 to 3 kilograms was collected for each metre which was transported to a commercial laboratory and then pulverised for XRF analysis.
Drilling techniques	Reverse circulation (RC) drill holes of approximately 140mm diameter were completed using a standard face sampling hammer. Most drill holes are vertical with only one being drilling at an angle.
Drill sample	The quality of each sample sent to the laboratory was recorded by the logging geologist at the time of drilling and categorised as either poor, moderate or good. 91% of samples were recorded as good, 5% were recorded as moderate and 4% were recorded as poor.
recovery	No major issues with the sample collection system were identified during drilling. Minimal loss of fines was achieved through the use of an automated sample collection and splitting system. There is assumed to be no expected relationship between sample recovery and grade.
Logging	Geological logging was completed by geologists experienced in iron ore mineralisation. The standard of logging is suitable to support an estimate of Mineral Resources. Stratigraphy, mineralogy, chip size, chip shape, chip recovery, hardness, colour, moisture and
	sample quality were recorded for all drill holes. Chip trays from RC holes were collected on an intermittent basis.
	All RC drill holes were geologically logged. Drilling samples are collected in labelled bags, which are stored onsite or sent for analysis. These
	samples are collected using a cone splitter installed directly beneath the cyclone. Wet samples are collected using the same technique as dry samples, with thorough cleaning of sampling system between samples. Wet samples are allowed to dry before being processed.
Sub-sampling	The sample collected from the cone splitter represents approximately 6 to 7% of the total sample interval. Cone splitters are the preferred splitting system used by Fortescue as they generally give the most representative sample in both dry and wet conditions.
techniques and sample	At the laboratory, samples were weighed, dried and pulverised to either 90% passing through 106 microns (Ultra Trace and SGS) or 85% passing through 75 microns (Genalysis).
preparation	Coarse field standards (approximately 1 in 100 samples) and laboratory standards (1 per laboratory job) were used as a quality control measure at different sub-sampling stages.
	Rig duplicate samples are taken at an average of 3 rig duplicate samples per approximately 100 samples sent to the laboratory. An analysis of these duplicate samples indicates that they are of good quality and repeatable.
	No formal analysis of the appropriateness of sample size compared to grain size has been completed but the sampling regime is considered to be industry best practice.
	All samples were sent to Ultra Trace, SGS or Genalysis laboratories for analysis. All laboratories have National Association of Testing Authorities, Australia (NATA) accreditation. The standard elements tested were Fe, SiO ₂ , Al ₂ O ₃ , P, MnO/Mn, MgO, CaO, TiO ₂ , Na ₂ O, S and K ₂ O by X Ray Fluorescence (XRF) and a three-point LOI thermo gravimetric analysis at 371, 650 and 1000 degrees Celsius. This is considered a total analysis.
Quality of assay data and	No geophysical tools were used to determine any element concentrations used in the estimate.
laboratory tests	Field duplicates were collected at a rate of approximately 3 in 100 samples. Standards are submitted at approximately 1 in every 100 samples. Analysis of duplicates did not indicate any major issues. Analysis of laboratory standard results indicates high confidence in XRF analysis at
	each laboratory. Analysis of field standards have indicated issues with laboratory sample preparation and standard certification in the past. Field standard results have been closely monitored and such issues have now been mitigated.
	Significant intersections have been visually verified by Fortescue's Exploration Managers.
Verification of sampling and	Twin RC holes have been completed in the project area. Results of the analysis shows mostly good correlation between the original RC drill hole and the twin drill hole.
assaying	Sample data is stored using a customised acQuire database, which includes a series of automated electronic validation checks. Fortescue data entry procedures are documented and readily

available. Only trained personnel perform further manual validation in order to confirm results
reflect field collected information and geology. Samples returning below detection limits were given the result of half the detection limit. Missing data was set to -99 and those samples were excluded from statistical analysis and estimation.
Drill hole collar locations have been surveyed using a Differential Global Positioning System by Down Under Surveys, with an accuracy of better than 3cm for Easting and Northing and 5cm in elevation. Down hole surveys have been completed on 63 of the drill holes. Collar survey data is validated against planned coordinates and the topographic surface.
Grid coordinates given for each point are Map Grid of Australia (GDA94) and heights are in the Australian Height Datum. The project area lies inside UTM zone 50.
The topography was created from 2 metre contours produced from LIDAR data. Vertical and horizontal accuracy of this data is+/-0.15 metres.
The grade estimate used RC drill holes which occur on a grid spacing of 200m × 100m and 200m × 50m for assays and geology.
This level of drill spacing is sufficient to establish the degree of geological and grade continuity required for an Inferred Mineral Resource.
No sample compositing was conducted for this estimation.
Drill holes have been predominantly drilled as vertical holes in drill lines sub-perpendicular to the
local bearing of the ore body. The mineralisation is sub-horizontal and these vertical holes are
sufficient to imply geological and grade continuity.
No material relationship is apparent between sampling bias and geological orientation.
To ensure sample security consignment notes (sample submission information) have been used and direct delivery to site laboratories has been carried out.
All sampling has been carried using Fortescue standard procedures.
Fortescue has had a sampling audit conducted previously on an analogous project. For this project no material risks relating to the sampling and assaying of the data have been identified. Similar rigs and splitter systems were utilised in this deposit.

Criteria	Commentary
Mineral tenement and land tenure status	FMG Pilbara Pty Ltd is a wholly owned subsidiary of Fortescue Metals Group Ltd and owns 100% of all mineral rights in the tenements which cover the project area E47/1302, E47/1533, E47/1373 and M47/1509. These are live, granted tenements. Mining Lease applications 47/1526 and 47/1525 were applied for over the area by FMG Pilbara Pty Ltd and are pending grant. The tenements are within the Puutu Kunti Kurrama and Pinikura (PKKP) native title determination (WCD2015/003) and the Eastern Guruma native title determination (WCD2007/001). Fortescue has current Land Access Agreements with the PKKP native title holders and Eastern Guruma.
	The tenure is currently in good standing and no impediments to obtaining a licence to operate in the area are known to exist.
Exploration done by other parties	Rio Tinto has performed exploration for iron within the project area. No historical data has been used by Fortescue.
Geology	Mineralisation within the Flying Fish deposit is a hosted by DID and BID. BID mineralisation is found within the Yandicoogina Shale, Joffre, Whaleback Shale and Dales Gorge Members of the Brockman Iron Formation and the Mount Newman Member of the Marra Mamba Iron Formation.
Drill hole Information	Collar details of the RC drill holes used in the estimate are not being reported here.
Data aggregation methods	No exploration results are being reported. For methods used in the estimation of Flying Fish please refer to: Section 3 Estimation and Reporting of Mineral Resources.
Relationship between mineralisation widths and intercept lengths	No exploration results are being reported. Please refer to: Orientation of data in relation to geological structure in Section 1 Sampling Techniques and Data for the geometry of mineralisation with respect to drill hole angle.

Diagrams	
Balanced	No exploration results are being reported and this is not pertinent to the reporting of Mineral
reporting	Resources.
Other substantive exploration data	The density work carried out at Flying Fish is discussed in: Section 3 Estimation and Reporting of Mineral Resources. Geological surface mapping of the Flying Fish project has been carried out by Fortescue
	geologists. Dip and strike measurements, stratigraphy and mineralisation have been recorded into a database.
	Down hole geophysics has been carried out on RC drill holes including natural gamma, magnetic
	susceptibility and gamma gamma density.
	The estimated groundwater level has been recorded on most RC drill holes.
Further Work	Further infill drilling and metallurgical test work is planned for Flying Fish. Extensions to known mineralisation may occur in the area.

Criteria	Commentary
	Sample data is stored using a customised acQuire database, which includes a series of automated electronic validation checks. AcQuire is a secure and an industry standard strength database.
Database	Only trained personnel perform further manual validation on the data in order to confirm results
integrity	reflect field collected information and geology. In order to ensure integrity of the database, any changes to the database only occur after a review of the suggested changes are authorised, and
	these changes can only be performed by an authorised person. Prior to modelling, further validation was performed on the dataset being used.
	The Competent Person and Competent Persons team conducts regular site visits, approximately
Site visits	every two to three months when drilling operations are in progress to inspect the model area, RC drill hole logging and sampling practices. Discussions are held regularly with site geologists.
	Logging and geological interpretation was completed by geologists experienced in iron ore mineralisation. Geology over the majority of the deposit is relatively straight forward. There is some
	risk of misinterpretation in areas of wider spaced drilling with limited assay data, however, this is
	not considered to be material.
	Geological interpretation is based on geological logging, down hole geophysics and geochemistry of RC drill samples.
Geological	The stratigraphy of Flying Fish is reasonably well known, and it is envisaged that any alternative
interpretation	geological interpretation, with or without further drilling, would not have a material impact on the Mineral Resource estimate. Extrapolation of mineralisation has been restricted to approximately
	half of the nominal drill spacing.
	All samples are flagged with their host geological zone, only samples with the same geological
	zone as the block to be estimated can be used in grade estimation.
	It is not expected that further drilling will change the grade and geological continuity. The
	geological continuity is generally good compared with analogous areas.

Dimensions	Mineralisation is distributed variably within an area of approximately 25km along strike and 3.5km across strike. Mineralisation occurs at surface and extends of depth of up to 300m below surface.
	Ordinary Kriging was used to estimate all mineralised units and inverse distance cubed for all waste domains. Estimation was done using Maptek Vulcan software. Mineralisation was extrapolated approximately half the distance of drill spacing away from the drilling. The deposit was domained by stratigraphy, structure, local strike/orientation and mineralised/un-mineralised zones.
	No assumptions regarding the recovery of by-products have been made.
	The iron ore suite of Fe, SiO ₂ , Al ₂ O ₃ , P, Mn, MgO, CaO, TiO ₂ , Na ₂ O, S, K ₂ O, LOI Total, LOI 371, LOI 650 and LOI 1000 has been estimated.
	Estimation into parent cells of 100mE × 50mN × 1mRL and 100mE × 25mN × 1mRL was used. Size and orientation of parent blocks reflected half the nominal drill spacing and orientation of mineralisation. Sub blocking down to 6.25mE × 6.25mN × 0.5mRL was used along domain boundaries to better define the domain interface.
	Up to three estimation passes were used for each element, gradually increasing search ellipse distances with each pass. Search distances along strike and across strike varied between each domain. These were primarily defined by sample spacing within each domain and determined by neighbourhood iterative tests.
	No assumptions behind the modelling of selective mining units have been made.
Estimation and modelling	Correlation between some elements has been noted during statistical analysis. Similar variogram parameters were achieved for mineralised domains that had elements with a noted correlation.
techniques	The definition of mineralised zones within each stratigraphic unit was accomplished using an indicator approach. The probability of any zone being mineralised was estimated using appropriate geochemical indicator thresholds for Fe, SiO ₂ and Al ₂ O ₃ for the individual stratigraphic units. These thresholds were based on data population statistics and visual validation. A domain code was assigned to each sample, defined by the stratigraphic unit and mineralisation.
	Some element grades were top cut during estimation based on coefficient of variation values higher than 1.2.
	Visual validation of the block model coding of the domains was completed prior to estimation. Once estimated, the grade of all elements was also visually validated. Visual validation of both the domains and grade were completed in Vulcan by comparing section and plan slices of the block model against the drill holes. Statistics for the mean grade of the mineralised blocks within each stratigraphic unit were compared to the mean grade of the mineralised samples within each stratigraphic unit. Overall, the mean values between the model and samples are within an
	acceptable range. Trend analysis graphs have been created for each of the mineralised domains. These have been generated in Northing, Easting and RL, for all elements. The trend analysis graphs show the modelled grade vs. the raw data grade at a slice in space. The trend analysis charts show that overall, the model grade is consistent with the raw data and shows no bias. Areas with many samples correlate much better with the model grade than do areas with few samples.
Moisture	Tonnages are estimated on a dry basis.
Cut-off parameters	BID and red ochre detritals are reported as a cut-off of greater than or equal to 50% Fe and DID is reported as a cut-off of greater than or equal to 52% Fe. These cut-offs have been used for analogous Fortescue estimates and represents a similar cut-off to current product specifications.
Mining factors or assumptions	It is assumed that mining will be carried out with medium to large scale mining equipment, bench heights will vary depending on mining studies. These methods will be similar to analogous Fortescue deposits where conventional: truck & shovel/excavator; drill & blast and; grade control methods are used. The impact of dilution will be assessed as part of the mining studies.
Metallurgical factors or assumptions	It is assumed that similar metallurgical techniques to analogous Fortescue operations will be utilised. The expectation is that material will be dry processed by screens and crushers, with potential for some wet processing. Final processing methods will be defined by further mining studies.
Environmental factors or assumptions	Fortescue has an extensive environmental and heritage approvals process. Waste is considered to be inert and formed waste dumps will conform to WA standards. Waste will be formed as dumps or into mining voids. In the case of acid and fibre mitigation, Fortescue has industry standard procedures. Where beneficiation may take place, reject is considered to be inert and there are no foreseen problems with tailings disposal. No significant concentrations of environmentally deleterious elements have been identified.
Bulk density	Density has been calculated from down-hole geophysical measurements throughout the deposit. Average rounded densities by geological unit and mineralisation have been compared with densities collected from diamond core drilled within the project, and analogous deposits, then applied globally to the model. Whilst on site down-hole geophysical tools are calibrated fortnightly in a designated test diamond drill hole.
	Down-hole geophysical probes measure the insitu bulk density which accounts for void spaces. These measurements are not corrected for moisture but are validated against known dry bulk

	densities from diamond core drilled in analogous Fortescue projects. Down-hole geophysical measurements are grouped by geological and mineralisation domains.
	The densities used are similar to known densities for current and historical mines, of similar geology and mineralisation, across the Pilbara.
Classification	The Mineral Resource has been classified as Inferred. This considers drill spacing and data integrity, geological complexity, grade estimation quality, interpreted risk and mineralisation continuity.
	The Mineral Resource classification reflects the views of the competent persons.
Audits or reviews	Internal reviews have been completed during all stages of the estimate. External audits of the estimation process have been completed for analogous deposits with no significant flaws identified. Similar processes have been used for this estimate.
	Grade and geological continuity are sufficient for an Inferred Mineral Resource.
Discussion of	Greater confidence in applied density values will be achieved through further physical density and down-hole geophysical measurements.
relative accuracy/ confidence	The global estimate is sufficient to imply the grade and geological continuity in the area of the Inferred Mineral Resource.
	No production data is available at this stage.



COBRA JORC TABLE 1

Criteria	Commentary
Sampling techniques	A total of 174 reverse circulation drill holes and 14,535 1m composite samples were used in the model. Samples sent for element and analytical work were selected based on potential ore-grade material with a reasonable envelope both above and below this interval. Most holes where possible undergo down hole geophysical logging.
	Analytical standards were used to assist in checking laboratory results. Field duplicates were used to assist with determining sampling quality at the rig. Geophysical probes were calibrated on a regular basis using static methods and specific calibration holes. Drill hole locations were determined by survey contractors.
	All samples were taken on 1m intervals from reverse circulation drill holes. A sample weighing approximately 1 to 3 kilograms was collected for each metre which was transported to a commercial laboratory and then pulverised for XRF analysis.
Drilling techniques	Reverse circulation (RC) drill holes of approximately 140mm diameter were completed using a standard face sampling hammer. All drill holes are vertical.
Drill sample	The quality of each sample sent to the laboratory was recorded by the logging geologist at the time of drilling and categorised as either poor, moderate or good. 93% of samples were recorded as good, 4% were recorded as moderate and 3% were recorded as poor.
recovery	No major issues with the sample collection system were identified during drilling. Minimal loss of fines was achieved through the use of an automated sample collection and splitting system.
	There is assumed to be no expected relationship between sample recovery and grade.Geological logging was completed by geologists experienced in iron ore mineralisation. The standard of logging is suitable to support an estimate of Mineral Resources.
Logging	Stratigraphy, mineralogy, chip size, chip shape, chip recovery, hardness, colour, moisture and sample quality were recorded for all drill holes. Chip trays from RC holes were collected on an intermittent basis.
	All RC drill holes were geologically logged. Drilling samples are collected in labelled bags, which are stored onsite or sent for analysis. These
	samples are collected using a cone splitter installed directly beneath the cyclone. Wet samples are collected using the same technique as dry samples, with thorough cleaning of sampling system between samples. Wet samples are allowed to dry before being processed.
Sub-sampling	The sample collected from the cone splitter represents approximately 6 to 7% of the total sample interval. Cone splitters are the preferred splitting system used by Fortescue as they generally give the most representative sample in both dry and wet conditions.
techniques and sample	At the laboratory, samples were weighed, dried and pulverised to either 90% passing through 106 microns (Ultra Trace and SGS) or 85% passing through 75 microns (Genalysis).
preparation	Coarse field standards (approximately 1 in 100 samples) and laboratory standards (1 per laboratory job) were used as a quality control measure at different sub-sampling stages.
	Rig duplicate samples are taken at an average of 3 rig duplicate samples per approximately 100 samples sent to the laboratory. An analysis of these duplicate samples indicates that they are of good quality and repeatable.
	No formal analysis of the appropriateness of sample size compared to grain size has been completed but the sampling regime is considered to be industry best practice.
	All samples were sent to Ultra Trace, SGS or Genalysis laboratories for analysis. All laboratories have National Association of Testing Authorities, Australia (NATA) accreditation. The standard elements tested were Fe, SiO ₂ , Al ₂ O ₃ , P, MnO/Mn, MgO, CaO, TiO ₂ , Na ₂ O, S and K ₂ O by X Ray Fluorescence (XRF) and a three-point LOI thermo gravimetric analysis at 371, 650 and 1000 degrees Celsius. This is considered a total analysis.
Quality of assay data and	No geophysical tools were used to determine any element concentrations used in the estimate.
laboratory tests	Field duplicates were collected at a rate of approximately 3 in 100 samples. Standards are submitted at approximately 1 in every 100 samples. Analysis of duplicates did not indicate any major issues. Analysis of laboratory standard results indicates high confidence in XRF analysis at each laboratory. Analysis of field standards have indicated issues with laboratory sample preparation and standard certification in the past. Field standard results have been closely
	monitored and such issues have now been mitigated.Significant intersections have been visually verified by Fortescue's Exploration Managers.
Verification of	No twin holes have been completed at this stage of the project.
sampling and assaying	Sample data is stored using a customised acQuire database, which includes a series of automated electronic validation checks. Fortescue data entry procedures are documented and readily available. Only trained personnel perform further manual validation in order to confirm results reflect field collected information and geology.



	Samples returning below detection limits were given the result of half the detection limit. Missing data was set to -99 and those samples were excluded from statistical analysis and estimation.
Location of data points	Drill hole collar locations have been surveyed using a Differential Global Positioning System by Down Under Surveys, with an accuracy of better than 3cm for Easting and Northing and 5cm in elevation. Down hole surveys have been completed on 37 of the drill holes. Collar survey data is validated against planned coordinates and the topographic surface. Grid coordinates given for each point are Map Grid of Australia (GDA94) and heights are in the
	Australian Height Datum. The project area lies inside UTM zone 50. The topography was created from 2 metre contours produced from LIDAR data. Vertical and horizontal accuracy of this data is+/-0.15 metres.
Data spacing and distribution	The grade estimate used RC drill holes which occur on a grid spacing of 200m × 100m with a small amount of 100m × 100m and 100m × 50m for assays and geology. This level of drill spacing is sufficient to establish the degree of geological and grade continuity required for an Inferred Mineral Resource.
Orientation of	No sample compositing was conducted for this estimation.
Orientation of data in relation to geological	Drill holes have been drilled as vertical holes in drill lines sub-perpendicular to the local bearing of the ore body. The mineralisation is sub-horizontal and these vertical holes are sufficient to imply geological and grade continuity.
structure	No material relationship is apparent between sampling bias and geological orientation.
Sample security	To ensure sample security consignment notes (sample submission information) have been used and direct delivery to site laboratories has been carried out.
Audits or reviews	All sampling has been carried using Fortescue standard procedures.
	Fortescue has had a sampling audit conducted previously on an analogous project. For this project no material risks relating to the sampling and assaying of the data have been identified. Similar rigs and splitter systems were utilised in this deposit.

Criteria	Commentary
Mineral tenement and land tenure status	FMG Pilbara Pty Ltd is a wholly owned subsidiary of Fortescue Metals Group Ltd and owns 100% of all mineral rights in the tenement which cover the project area: E47/1351. This is a live, granted tenement.
	The tenement is within the Puutu Kunti Kurrama and Pinikura (PKKP) native title determination (WCD2015/003). Fortescue has a current Land Access Agreement with the PKKP native title holders.
	The tenure is currently in good standing and no impediments to obtaining a licence to operate in the area are known to exist.
Exploration done by other parties	Rio Tinto has performed exploration for iron within the project area. No historical data has been used by Fortescue.
Geology	Mineralisation within the Cobra deposit is a hosted by DID and BID. BID mineralisation is found within the Whaleback Shale and Dales Gorge Members of the Brockman Iron Formation.
Drill hole Information	Collar details of the RC drill holes used in the estimate are not being reported here.
Data aggregation methods	No exploration results are being reported. For methods used in the estimation of Flying Fish please refer to: Section 3 Estimation and Reporting of Mineral Resources.
Relationship between mineralisation	No exploration results are being reported. Please refer to: Orientation of data in relation to geological structure in Section 1 Sampling Techniques and Data for the geometry of mineralisation with respect to drill hole angle.
widths and intercept lengths	



Diagrams	
Balanced	No exploration results are being reported and this is not pertinent to the reporting of Mineral
Conterning Other substantive exploration data	Resources. The density work carried out at Cobra is discussed in: Section 3 Estimation and Reporting of Mineral Resources. Geological surface mapping of the Cobra project has been carried out by Fortescue geologists. Dip and strike measurements, stratigraphy and mineralisation have been recorded into a database. Down hole geophysics has been carried out on RC drill holes including natural gamma, magnetic susceptibility and gamma gamma density. The estimated groundwater level has been recorded on most RC drill holes.
Further Work	Further infill drilling and metallurgical test work is planned for Cobra. Extensions to known mineralisation may occur in the area.

Criteria	Commentary
Database integrity	Sample data is stored using a customised acQuire database, which includes a series of automated electronic validation checks. AcQuire is a secure and an industry standard strength database.
	Only trained personnel perform further manual validation on the data in order to confirm results
	reflect field collected information and geology. In order to ensure integrity of the database, any changes to the database only occur after a review of the suggested changes are authorised, and
	these changes can only be performed by an authorised person. Prior to modelling, further validation was performed on the dataset being used.
	The Competent Person and Competent Persons team conducts regular site visits, approximately
Site visits	every two to three months when drilling operations are in progress to inspect the model area, RC drill hole logging and sampling practices. Discussions are held regularly with site geologists.
	Logging and geological interpretation was completed by geologists experienced in iron ore mineralisation. Geology over the majority of the deposit is relatively straight forward. There is some
	risk of misinterpretation in areas of wider spaced drilling with limited assay data, however, this is not considered to be material.
	Geological interpretation is based on geological logging, down hole geophysics and geochemistry of RC drill samples.
Geological	The stratigraphy of Cobra is reasonably well known, and it is envisaged that any alternative
interpretation	geological interpretation, with or without further drilling, would not have a material impact on the
	Mineral Resource estimate. Extrapolation of mineralisation has been restricted to approximately half of the nominal drill spacing.
	All samples are flagged with their host geological zone, only samples with the same geological
	zone as the block to be estimated can be used in grade estimation.
	It is not expected that further drilling will change the grade and geological continuity. The
	geological continuity is generally good compared with analogous areas.

Dimensions	Mineralisation occurs within two areas approximately 2km apart. In the west, the mineralised area is 2km along strike and up to 1.5km across strike. In the east, the mineralised area is 2km along strike and up to 1km across strike. Mineralisation occurs at the surface and extends to depths of up to 200 m. The true thickness of the mineralisation is up to 150 m.
	Ordinary Kriging was used to estimate all mineralised units and inverse distance cubed for all waste domains. Estimation was done using Maptek Vulcan software. Mineralisation was extrapolated approximately half the distance of drill spacing away from the drilling. The deposit was domained by stratigraphy, structure, local strike/orientation and mineralised/un-mineralised zones.
	No assumptions regarding the recovery of by-products have been made.
	The iron ore suite of Fe, SiO ₂ , Al ₂ O ₃ , P, Mn, MgO, CaO, TiO ₂ , Na ₂ O, S, K ₂ O, LOI Total, LOI 371, LOI 650 and LOI 1000 has been estimated.
	Estimation into parent cells of 100mE × 50mN × 1mRL and 50mE × 25mN × 1mRL was used. Size and orientation of parent blocks reflected half the nominal drill spacing and orientation of mineralisation. Sub blocking down to 6.25mE × 6.25mN × 0.5mRL was used along domain boundaries to better define the domain interface.
	Up to three estimation passes were used for each element, gradually increasing search ellipse distances with each pass. Search distances along strike and across strike varied between each domain. These were primarily defined by sample spacing within each domain and determined by neighbourhood iterative tests.
	No assumptions behind the modelling of selective mining units have been made.
Estimation and modelling	Correlation between some elements has been noted during statistical analysis. Similar variogram parameters were achieved for mineralised domains that had elements with a noted correlation.
techniques	The definition of mineralised zones within each stratigraphic unit was accomplished using an indicator approach. The probability of any zone being mineralised was estimated using appropriate geochemical indicator thresholds for Fe, SiO ₂ and Al ₂ O ₃ for the individual stratigraphic units. These thresholds were based on data population statistics and visual validation. A domain code was assigned to each sample, defined by the stratigraphic unit and mineralisation.
	Some element grades were top cut during estimation based on coefficient of variation values higher than 1.2.
	Visual validation of the block model coding of the domains was completed prior to estimation. Once estimated, the grade of all elements was also visually validated. Visual validation of both the domains and grade were completed in Vulcan by comparing section and plan slices of the block model against the drill holes. Statistics for the mean grade of the mineralised blocks within each stratigraphic unit were compared to the mean grade of the mineralised samples within each stratigraphic unit. Overall, the mean values between the model and samples are within an acceptable range. Trend analysis graphs have been created for each of the mineralised domains. These have been generated in Northing, Easting and RL, for all elements. The trend analysis graphs show the modelled grade vs. the raw data grade at a slice in space. The trend analysis charts show that overall, the model grade is consistent with the raw data and shows no bias. Areas with many samples correlate much better with the model grade than do areas with few samples.
Moisture	Tonnages are estimated on a dry basis.
Cut-off parameters	BID and DID are reported as a cut-off of greater than or equal to 50% Fe. This cut-off has been used for analogous Fortescue estimates and represents a similar cut-off to current product specifications.
Mining factors or assumptions	It is assumed that mining will be carried out with medium to large scale mining equipment, bench heights will vary depending on mining studies. These methods will be similar to analogous Fortescue deposits where conventional: truck & shovel/excavator; drill & blast and; grade control methods are used. The impact of dilution will be assessed as part of the mining studies.
Metallurgical factors or assumptions	It is assumed that similar metallurgical techniques to analogous Fortescue operations will be utilised. The expectation is that material will be dry processed by screens and crushers, with potential for some wet processing. Final processing methods will be defined by further mining studies.
Environmental factors or assumptions	Fortescue has an extensive environmental and heritage approvals process. Waste is considered to be inert and formed waste dumps will conform to WA standards. Waste will be formed as dumps or into mining voids. In the case of acid and fibre mitigation, Fortescue has industry standard procedures. Where beneficiation may take place, reject is considered to be inert and there are no foreseen problems with tailings disposal. No significant concentrations of environmentally deleterious elements have been identified.
Bulk density	Density has been calculated from down-hole geophysical measurements throughout the deposit. Average rounded densities by geological unit and mineralisation have been compared with densities collected from diamond core drilled within the project, and analogous deposits, then applied globally to the model. Whilst on site down-hole geophysical tools are calibrated fortnightly in a designated test diamond drill hole.



	Down-hole geophysical probes measure the insitu bulk density which accounts for void spaces.
	These measurements are not corrected for moisture but are validated against known dry bulk
	densities from diamond core drilled in analogous Fortescue projects. Down-hole geophysical
	measurements are grouped by geological and mineralisation domains.
	The densities used are similar to known densities for current and historical mines, of similar geology and mineralisation, across the Pilbara.
	The Mineral Resource has been classified as Inferred. This considers drill spacing and data
Classification	integrity, geological complexity, grade estimation quality, interpreted risk and mineralisation
Classification	continuity.
	The Mineral Resource classification reflects the views of the competent persons.
	Internal reviews have been completed during all stages of the estimate. External audits of the
Audits or reviews	estimation process has been completed for analogous deposits with no significant flaws identified.
	Similar processes have been used for this estimate.
	Grade and geological continuity are sufficient for an Inferred Mineral Resource.
Discussion of relative accuracy/ confidence	Greater confidence in applied density values will be achieved through further physical density and
	down-hole geophysical measurements.
	The global estimate is sufficient to imply the grade and geological continuity in the area of the
	Inferred Mineral Resource.
	No production data is available at this stage.



ELEVATION JORC TABLE 1

Criteria	Commentary
Sampling techniques	A total of 231 reverse circulation drill holes and 11,270 1m composite samples were used in the model. Samples sent for element and analytical work were selected based on potential ore-grade material with a reasonable envelope both above and below this interval. Most holes where possible undergo down hole geophysical logging.
	Analytical standards were used to assist in checking laboratory results. Field duplicates were used to assist with determining sampling quality at the rig. Geophysical probes were calibrated on a regular basis using static methods and specific calibration holes. Drill hole locations were determined by survey contractors.
	All samples were taken on 1m intervals from reverse circulation drill holes. A sample weighing approximately 1 to 3 kilograms was collected for each metre which was transported to a commercial laboratory and then pulverised for XRF analysis.
Drilling techniques	Reverse circulation (RC) drill holes of approximately 140mm diameter were completed using a standard face sampling hammer. Most drill holes are vertical with only one being drilling at an angle.
Drill sample	The quality of each sample sent to the laboratory was recorded by the logging geologist at the time of drilling and categorised as either poor, moderate or good. 93% of samples were recorded as good, 4% were recorded as moderate and 3% were recorded as poor.
recovery	No major issues with the sample collection system were identified during drilling. Minimal loss of fines was achieved through the use of an automated sample collection and splitting system. There is assumed to be no expected relationship between sample recovery and grade.
	Geological logging was completed by geologists experienced in iron ore mineralisation. The standard of logging is suitable to support an estimate of Mineral Resources.
Logging	Stratigraphy, mineralogy, chip size, chip shape, chip recovery, hardness, colour, moisture and sample quality were recorded for all drill holes. Chip trays from RC holes were collected on an intermittent basis.
Sub-sampling techniques and sample preparation	 All RC drill holes were geologically logged. Drilling samples are collected in labelled bags, which are stored onsite or sent for analysis. These samples are collected using a cone splitter installed directly beneath the cyclone. Wet samples are collected using the same technique as dry samples, with thorough cleaning of sampling system between samples. Wet samples are allowed to dry before being processed. The sample collected from the cone splitter represents approximately 6 to 7% of the total sample interval. Cone splitters are the preferred splitting system used by Fortescue as they generally give the most representative sample in both dry and wet conditions. At the laboratory, samples were weighed, dried and pulverised to either 90% passing through 106 microns (Ultra Trace and SGS) or 85% passing through 75 microns (Genalysis). Coarse field standards (approximately 1 in 100 samples) and laboratory standards (1 per laboratory job) were used as a quality control measure at different sub-sampling stages. Rig duplicate samples are taken at an average of 3 rig duplicate samples per approximately 100 samples sent to the laboratory. An analysis of these duplicate samples indicates that they are of good quality and repeatable. No formal analysis of the appropriateness of sample size compared to grain size has been completed but the sampling regime is considered to be industry best practice. All samples were sent to Ultra Trace, SGS or Genalysis laboratories for analysis. All laboratories
Quality of assay data and laboratory tests	All samples were sent to Ultra Trace, SGS or Genalysis laboratories for analysis. All laboratories have National Association of Testing Authorities, Australia (NATA) accreditation. The standard elements tested were Fe, SiO ₂ , Al ₂ O ₃ , P, MnO/Mn, MgO, CaO, TiO ₂ , Na ₂ O, S and K ₂ O by X Ray Fluorescence (XRF) and a three-point LOI thermo gravimetric analysis at 371, 650 and 1000 degrees Celsius. This is considered a total analysis. No geophysical tools were used to determine any element concentrations used in the estimate. Field duplicates were collected at a rate of approximately 3 in 100 samples. Standards are submitted at approximately 1 in every 100 samples. Analysis of duplicates did not indicate any major issues. Analysis of laboratory standard results indicates high confidence in XRF analysis at each laboratory. Analysis of field standards have indicated issues with laboratory sample preparation and standard certification in the past. Field standard results have been closely monitored and such issues have now been mitigated.
Verification of sampling and assaying	Significant intersections have been visually verified by Fortescue's Exploration Managers. No twin holes have been completed at this stage of the project. Sample data is stored using a customised acQuire database, which includes a series of automated electronic validation checks. Fortescue data entry procedures are documented and readily available. Only trained personnel perform further manual validation in order to confirm results reflect field collected information and geology.



	Samples returning below detection limits were given the result of half the detection limit. Missing data was set to -99 and those samples were excluded from statistical analysis and estimation.
Location of data points	Drill hole collar locations have been surveyed using a Differential Global Positioning System by Down Under Surveys, with an accuracy of better than 3cm for Easting and Northing and 5cm in elevation. Down hole surveys have been completed on 6 of the drill holes. Collar survey data is validated against planned coordinates and the topographic surface.
	Grid coordinates given for each point are Map Grid of Australia (GDA94) and heights are in the Australian Height Datum. The project area lies inside UTM zone 50.
	The topography was created from 2 metre contours produced from LIDAR data. Vertical and horizontal accuracy of this data is+/-0.15 metres.
Data anazian and	The grade estimate used RC drill holes which occur on a grid spacing of $400m \times 100m$ and $200m \times 100m$ with a small amount of $100m \times 100m$ for assays and geology.
Data spacing and distribution	This level of drill spacing is sufficient to establish the degree of geological and grade continuity required for an Inferred Mineral Resource.
	No sample compositing was conducted for this estimation.
Orientation of data in relation to geological	Drill holes have been predominantly drilled as vertical holes in drill lines sub-perpendicular to the local bearing of the ore body. The mineralisation is sub-horizontal and these vertical holes are sufficient to imply geological and grade continuity.
structure	No material relationship is apparent between sampling bias and geological orientation.
Sample security	To ensure sample security consignment notes (sample submission information) have been used and direct delivery to site laboratories has been carried out.
Audits or reviews	All sampling has been carried using Fortescue standard procedures.
	Fortescue has had a sampling audit conducted previously on an analogous project. For this project no material risks relating to the sampling and assaying of the data have been identified. Similar rigs and splitter systems were utilised in this deposit.

Criteria	Commentary
Mineral tenement and land tenure status	FMG Pilbara Pty Ltd is a wholly owned subsidiary of Fortescue Metals Group Ltd and owns 100% of all mineral rights in the tenements which cover the project area: P47/1664, P47/1665, P47/1666, P47/1669, P47/1670, P47/1671, E47/1194, E47/1299 and E47/1351. These are live, granted tenements. E47/1194 is subject to a royalty deed with a third party. The tenements are within the Puutu Kunti Kurrama and Pinikura (PKKP) native title determination (WCD2015/003). Fortescue has a current Land Access Agreement with the PKKP native title holders
	The tenure is currently in good standing and no impediments to obtaining a licence to operate in the area are known to exist.
Exploration done by other parties	There is no known historical data within the project area.
Geology	Mineralisation within the Elevation deposit is a hosted by CID and BID. BID mineralisation is found within the Whaleback Shale and Dales Gorge Members of the Brockman Iron Formation; and the Mount Newman and Nammuldi Members of the Marra Mamba Iron Formation.
Drill hole Information	Collar details of the RC drill holes used in the estimate are not being reported here.
Data aggregation methods	No exploration results are being reported. For methods used in the estimation of Flying Fish please refer to: Section 3 Estimation and Reporting of Mineral Resources.
Relationship between mineralisation widths and intercept lengths	No exploration results are being reported. Please refer to: Orientation of data in relation to geological structure in Section 1 Sampling Techniques and Data for the geometry of mineralisation with respect to drill hole angle.

Diagrams	Image: constrained and constrai
Balanced reporting	No exploration results are being reported and this is not pertinent to the reporting of Mineral Resources.
Other substantive exploration data	The density work carried out at Elevation is discussed in: Section 3 Estimation and Reporting of Mineral Resources. Geological surface mapping of the Elevation project has been carried out by Fortescue geologists. Dip and strike measurements, stratigraphy and mineralisation have been recorded into a database. Down hole geophysics has been carried out on RC drill holes including natural gamma, magnetic susceptibility and gamma gamma density. The estimated groundwater level has been recorded on most RC drill holes.
Further Work	Further infill drilling and metallurgical test work is planned for Elevation. Extensions to known mineralisation may occur in the area.

Criteria	Commentary
Database integrity	Sample data is stored using a customised acQuire database, which includes a series of automated electronic validation checks. AcQuire is a secure and an industry standard strength database.
	Only trained personnel perform further manual validation on the data in order to confirm results
	reflect field collected information and geology. In order to ensure integrity of the database, any changes to the database only occur after a review of the suggested changes are authorised, and
	these changes can only be performed by an authorised person. Prior to modelling, further validation was performed on the dataset being used.
	The Competent Person and Competent Persons team conducts regular site visits, approximately
Site visits	every two to three months when drilling operations are in progress to inspect the model area, RC drill hole logging and sampling practices. Discussions are held regularly with site geologists.
	Logging and geological interpretation was completed by geologists experienced in iron ore mineralisation. Geology over the majority of the deposit is relatively straight forward. There is some
	risk of misinterpretation in areas of wider spaced drilling with limited assay data, however, this is
	not considered to be material.
Geological interpretation	Geological interpretation is based on geological logging, down hole geophysics and geochemistry of RC drill samples.
	The stratigraphy of Elevation is reasonably well known, and it is envisaged that any alternative
	geological interpretation, with or without further drilling, would not have a material impact on the Mineral Resource estimate. Extrapolation of mineralisation has been restricted to approximately
	half of the nominal drill spacing.
	All samples are flagged with their host geological zone, only samples with the same geological
	zone as the block to be estimated can be used in grade estimation.
	It is not expected that further drilling will change the grade and geological continuity. The
	geological continuity is generally good compared with analogous areas.

Dimensions	Mineralisation is distributed variably within an area of approximately 13km along strike and 2-5km across strike. Mineralisation occurs as a series of pods ranging from 200m to 1500m along strike and 200m to 600m across strike. BID mineralisation occurs at surface and extends of depth of up to 100 m. CID comprises mesas rising approximately 70m above the valley floor, the mineralisation occurs at surface and is up to 60m thick.
	Ordinary Kriging was used to estimate all mineralised units and inverse distance cubed for all waste domains. Estimation was done using Maptek Vulcan software. Mineralisation was extrapolated approximately half the distance of drill spacing away from the drilling. The deposit was domained by stratigraphy, structure, local strike/orientation and mineralised/un-mineralised zones.
	No assumptions regarding the recovery of by-products have been made. The iron ore suite of Fe, SiO ₂ , Al ₂ O ₃ , P, Mn, MgO, CaO, TiO ₂ , Na ₂ O, S, K ₂ O, LOI Total, LOI 371, LOI 650 and LOI 1000 has been estimated.
	Estimation into parent cells of $50\text{mE} \times 50\text{mN} \times 1\text{mRL}$ was used. Size and orientation of parent blocks reflected half the nominal drill spacing and orientation of mineralisation. Sub blocking down to $6.25\text{mE} \times 6.25\text{mN} \times 0.5\text{mRL}$ was used along domain boundaries to better define the domain interface.
	Up to three estimation passes were used for each element, gradually increasing search ellipse distances with each pass. Search distances along strike and across strike varied between each domain. These were primarily defined by sample spacing within each domain and determined by neighbourhood iterative tests.
	No assumptions behind the modelling of selective mining units have been made.
Estimation and modelling	Correlation between some elements has been noted during statistical analysis. Similar variogram parameters were achieved for mineralised domains that had elements with a noted correlation.
techniques	The definition of mineralised zones within each stratigraphic unit was accomplished using an indicator approach. The probability of any zone being mineralised was estimated using appropriate geochemical indicator thresholds for Fe, SiO ₂ and Al ₂ O ₃ for the individual stratigraphic units. These thresholds were based on data population statistics and visual validation. A domain code was
	assigned to each sample, defined by the stratigraphic unit and mineralisation.
	Some element grades were top cut during estimation based on coefficient of variation values higher than 1.2.
	Visual validation of the block model coding of the domains was completed prior to estimation. Once estimated, the grade of all elements was also visually validated. Visual validation of both the domains and grade were completed in Vulcan by comparing section and plan slices of the block model against the drill holes. Statistics for the mean grade of the mineralised blocks within each stratigraphic unit were compared to the mean grade of the mineralised samples within each stratigraphic unit. Overall, the mean values between the model and samples are within an acceptable range. Trend analysis graphs have been created for each of the mineralised domains. These have been generated in Northing, Easting and RL, for all elements. The trend analysis graphs show the modelled grade vs. the raw data grade at a slice in space. The trend analysis charts show that overall, the model grade is consistent with the raw data and shows no bias. Areas with many samples correlate much better with the model grade than do areas with few samples.
Moisture	Tonnages are estimated on a dry basis.
Cut-off parameters	BID is reported as a cut-off of greater than or equal to 50% Fe and CID is reported as a cut-off of greater than or equal to 53% Fe. These cut-offs have been used for analogous Fortescue optimates and represents a similar cut off to current product specifications.
Mining factors or assumptions	 estimates and represents a similar cut-off to current product specifications. It is assumed that mining will be carried out with medium to large scale mining equipment, bench heights will vary depending on mining studies. These methods will be similar to analogous Fortescue deposits where conventional: truck & shovel/excavator; drill & blast and; grade control methods are used. The impact of dilution will be assessed as part of the mining studies.
Metallurgical factors or assumptions	It is assumed that similar metallurgical techniques to analogous Fortescue operations will be utilised. The expectation is that material will be dry processed by screens and crushers, with potential for some wet processing. Final processing methods will be defined by further mining studies.
Environmental factors or assumptions	Fortescue has an extensive environmental and heritage approvals process. Waste is considered to be inert and formed waste dumps will conform to WA standards. Waste will be formed as dumps or into mining voids. In the case of acid and fibre mitigation, Fortescue has industry standard procedures. Where beneficiation may take place, reject is considered to be inert and there are no foreseen problems with tailings disposal. No significant concentrations of environmentally deleterious elements have been identified.
Bulk density	Density has been calculated from down-hole geophysical measurements throughout the deposit. Average rounded densities by geological unit and mineralisation have been compared with densities collected from analogous deposits, then applied globally to the model. Whilst on site down-hole geophysical tools are calibrated fortnightly in a designated test diamond drill hole.



	Down-hole geophysical probes measure the insitu bulk density which accounts for void spaces.
	These measurements are not corrected for moisture but are validated against known dry bulk
	densities from diamond core drilled in analogous Fortescue projects. Down-hole geophysical
	measurements are grouped by geological and mineralisation domains.
	The densities used are similar to known densities for current and historical mines, of similar geology and mineralisation, across the Pilbara.
	The Mineral Resource has been classified as Inferred. This considers drill spacing and data
Classification	integrity, geological complexity, grade estimation quality, interpreted risk and mineralisation
Classification	continuity.
	The Mineral Resource classification reflects the views of the competent persons.
	Internal reviews have been completed during all stages of the estimate. External audits of the
Audits or reviews	estimation process has been completed for analogous deposits with no significant flaws identified.
	Similar processes have been used for this estimate.
	Grade and geological continuity are sufficient for an Inferred Mineral Resource.
Discussion of relative accuracy/ confidence	Greater confidence in applied density values will be achieved through further physical density and
	down-hole geophysical measurements.
	The global estimate is sufficient to imply the grade and geological continuity in the area of the
	Inferred Mineral Resource.
	No production data is available at this stage.



FIG TREE JORC TABLE 1

Criteria	Commentary
Sampling techniques	A total of 196 reverse circulation drill holes and 6,266 1m composite samples were used in the model. Samples sent for element and analytical work were selected based on potential ore-grade material with a reasonable envelope both above and below this interval. Most holes where possible undergo down hole geophysical logging.
	Analytical standards were used to assist in checking laboratory results. Field duplicates were used to assist with determining sampling quality at the rig. Geophysical probes were calibrated on a regular basis using static methods and specific calibration holes. Drill hole locations were determined by survey contractors.
	All samples were taken on 1m intervals from reverse circulation drill holes. A sample weighing approximately 1 to 3 kilograms was collected for each metre which was transported to a commercial laboratory and then pulverised for XRF analysis.
Drilling techniques	Reverse circulation (RC) drill holes of approximately 140mm diameter were completed using a standard face sampling hammer. All drill holes are vertical.
Drill sample	The quality of each sample sent to the laboratory was recorded by the logging geologist at the time of drilling and categorised as either poor, moderate or good. 90% of samples were recorded as good, 4% were recorded as moderate and 6% were recorded as poor.
recovery	No major issues with the sample collection system were identified during drilling. Minimal loss of fines was achieved through the use of an automated sample collection and splitting system.
	 There is assumed to be no expected relationship between sample recovery and grade. Geological logging was completed by geologists experienced in iron ore mineralisation. The standard of logging is suitable to support an estimate of Mineral Resources.
Logging	Stratigraphy, mineralogy, chip size, chip shape, chip recovery, hardness, colour, moisture and sample quality were recorded for all drill holes. Chip trays from RC holes were collected on an intermittent basis.
	All RC drill holes were geologically logged.
	Drilling samples are collected in labelled bags, which are stored onsite or sent for analysis. These samples are collected using a cone splitter installed directly beneath the cyclone. Wet samples are collected using the same technique as dry samples, with thorough cleaning of sampling system between samples. Wet samples are allowed to dry before being processed.
Sub-sampling	The sample collected from the cone splitter represents approximately 6 to 7% of the total sample interval. Cone splitters are the preferred splitting system used by Fortescue as they generally give the most representative sample in both dry and wet conditions.
techniques and sample	At the laboratory, samples were weighed, dried and pulverised to either 90% passing through 106 microns (SGS) or 85% passing through 75 microns (Genalysis).
preparation	Coarse field standards (approximately 1 in 100 samples) and laboratory standards (1 per laboratory job) were used as a quality control measure at different sub-sampling stages.
	Rig duplicate samples are taken at an average of 3 rig duplicate samples per approximately 100 samples sent to the laboratory. An analysis of these duplicate samples indicates that they are of good quality and repeatable.
	No formal analysis of the appropriateness of sample size compared to grain size has been completed but the sampling regime is considered to be industry best practice.
	All samples were sent to SGS or Genalysis laboratories for analysis. All laboratories have National Association of Testing Authorities, Australia (NATA) accreditation. The standard elements tested were Fe, SiO ₂ , Al ₂ O ₃ , P, MnO/Mn, MgO, CaO, TiO ₂ , Na ₂ O, S and K ₂ O by X Ray Fluorescence (XRF) and a three-point LOI thermo gravimetric analysis at 371, 650 and 1000 degrees Celsius. This is considered a total analysis.
Quality of assay data and	No geophysical tools were used to determine any element concentrations used in the estimate.
data and laboratory tests	Field duplicates were collected at a rate of approximately 3 in 100 samples. Standards are submitted at approximately 1 in every 100 samples. Analysis of duplicates did not indicate any major issues. Analysis of laboratory standard results indicates high confidence in XRF analysis at
	each laboratory. Analysis of field standards have indicated issues with laboratory sample preparation and standard certification in the past. Field standard results have been closely monitored and such issues have now been mitigated.
	Significant intersections have been visually verified by Fortescue's Exploration Managers.
Verification of	No twin holes have been completed at this stage of the project.
sampling and assaying	Sample data is stored using a customised acQuire database, which includes a series of automated electronic validation checks. Fortescue data entry procedures are documented and readily available. Only trained personnel perform further manual validation in order to confirm results reflect field collected information and geology.



	Samples returning below detection limits were given the result of half the detection limit. Missing data was set to -99 and those samples were excluded from statistical analysis and estimation.
Location of data points	Drill hole collar locations have been surveyed using a Differential Global Positioning System by Down Under Surveys, with an accuracy of better than 3cm for Easting and Northing and 5cm in elevation. Down hole surveys have not been completed on the drill holes. Collar survey data is validated against planned coordinates and the topographic surface. Grid coordinates given for each point are Map Grid of Australia (GDA94) and heights are in the
	Australian Height Datum. The project area lies inside UTM zone 50. The topography was created from 2 metre contours produced from LIDAR data. Vertical and horizontal accuracy of this data is+/-0.15 metres.
Determention and	The grade estimate used RC drill holes which occur on a grid spacing of 400m × 100m for assays and geology.
Data spacing and distribution	This level of drill spacing is sufficient to establish the degree of geological and grade continuity required for an Inferred Mineral Resource.
	No sample compositing was conducted for this estimation.
Orientation of data in relation to geological	Drill holes have been drilled as vertical holes in drill lines sub-perpendicular to the local bearing of the ore body. The mineralisation is sub-horizontal, and these vertical holes are sufficient to imply geological and grade continuity.
structure	No material relationship is apparent between sampling bias and geological orientation.
Sample security	To ensure sample security consignment notes (sample submission information) have been used and direct delivery to site laboratories has been carried out.
Audits or reviews	All sampling has been carried using Fortescue standard procedures.
	Fortescue has had a sampling audit conducted previously on an analogous project. For this project no material risks relating to the sampling and assaying of the data have been identified. Similar rigs and splitter systems were utilised in this deposit.

Criteria	Commentary
Mineral tenement and land tenure status	FMG Pilbara Pty Ltd is a wholly owned subsidiary of Fortescue Metals Group Ltd and owns 100% of all mineral rights in the tenements which cover the project area: E47/1702 and M47/1492. These are live, granted tenements.
	The tenements are within the Banjima People native title determination (WCD2014/001). Fortescue has a current Land Access Agreement with the Banjima native title holders.
	The tenure is currently in good standing and no impediments to obtaining a licence to operate in the area are known to exist.
Exploration done by other parties	There is no known historical data within the project area.
Geology	Mineralisation within the Fig Tree deposit is hosted by CID. Outcropping geology in the project area is the Brockman Iron Formation. Incised into the bedrock are large channel systems which contain the CID mineralisation.
Drill hole Information	Collar details of the RC drill holes used in the estimate are not being reported here.
Data aggregation methods	No exploration results are being reported. For methods used in the estimation of Flying Fish please refer to: Section 3 Estimation and Reporting of Mineral Resources.
Relationship between mineralisation widths and intercept lengths	No exploration results are being reported. Please refer to: Orientation of data in relation to geological structure in Section 1 Sampling Techniques and Data for the geometry of mineralisation with respect to drill hole angle.



Diagrams	
Balanced reporting	No exploration results are being reported and this is not pertinent to the reporting of Mineral Resources.
Other substantive exploration data	The density work carried out at Fig Tree is discussed in: Section 3 Estimation and Reporting of Mineral Resources. Geological surface mapping of the Fig Tree project has been carried out by Fortescue geologists. Dip and strike measurements, stratigraphy and mineralisation have been recorded into a database. Down hole geophysics has been carried out on RC drill holes including natural gamma, magnetic susceptibility and gamma gamma density. The estimated groundwater level has been recorded on most RC drill holes.
Further Work	Further infill drilling and metallurgical test work is planned for Fig Tree. Extensions to known mineralisation may occur in the area.

Criteria	Commentary
Database	Sample data is stored using a customised acQuire database, which includes a series of automated electronic validation checks. AcQuire is a secure and an industry standard strength database.
	Only trained personnel perform further manual validation on the data in order to confirm results
integrity	reflect field collected information and geology. In order to ensure integrity of the database, any changes to the database only occur after a review of the suggested changes are authorised, and
	these changes can only be performed by an authorised person. Prior to modelling, further validation was performed on the dataset being used.
	The Competent Person and Competent Persons team conducts regular site visits, approximately
Site visits	every two to three months when drilling operations are in progress to inspect the model area, RC drill hole logging and sampling practices. Discussions are held regularly with site geologists.
	Logging and geological interpretation was completed by geologists experienced in iron ore mineralisation. Geology over the majority of the deposit is relatively straight forward. There is some
	risk of misinterpretation in areas of wider spaced drilling with limited assay data, however, this is
	not considered to be material.
	Geological interpretation is based on geological logging, down hole geophysics and geochemistry of RC drill samples.
Geological	The stratigraphy of Fig Tree is reasonably well known, and it is envisaged that any alternative
interpretation	geological interpretation, with or without further drilling, would not have a material impact on the
	Mineral Resource estimate. Extrapolation of mineralisation has been restricted to approximately half of the nominal drill spacing.
	All samples are flagged with their host geological zone, only samples with the same geological
	zone as the block to be estimated can be used in grade estimation.
	It is not expected that further drilling will change the grade and geological continuity. The
	geological continuity is generally good compared with analogous areas.

Dimensions	Mineralisation at Fig Tree covers an area approximately 13km in length and 500m across the channel. Mineralisation occurs at surface and to depths of up to 70 metres. The defined mineralised units are between 5m and 45 thick with an average thickness of 30m.
	Ordinary Kriging was used to estimate all mineralised domains and inverse distance cubed for all waste domains. Estimation was done using Maptek Vulcan software. Mineralisation was extrapolated approximately half the distance of drill spacing away from the drilling. The deposit was domained by stratigraphy, structure, local strike/orientation and mineralised/un-mineralised zones.
	No assumptions regarding the recovery of by-products have been made. The iron ore suite of Fe, SiO ₂ , Al ₂ O ₃ , P, Mn, MgO, CaO, TiO ₂ , Na ₂ O, S, K ₂ O, LOI Total, LOI 371, LOI 650 and LOI 1000 has been estimated.
	Estimation into parent cells of 200mE × 50mN × 1mRL and 50mE × 200mN × 1mRL was used. Size and orientation of parent blocks reflected half the nominal drill spacing and orientation of mineralisation. Sub blocking down to 6.25mE × 6.25mN × 0.5mRL was used along domain boundaries to better define the domain interface.
	Up to three estimation passes were used for each element, gradually increasing search ellipse distances with each pass. Search distances along strike and across strike varied between each domain. These were primarily defined by sample spacing within each domain and determined by neighbourhood iterative tests.
	No assumptions behind the modelling of selective mining units have been made.
Estimation and modelling	Correlation between some elements has been noted during statistical analysis. Similar variogram parameters were achieved for mineralised domains that had elements with a noted correlation.
techniques	The definition of mineralised zones within each stratigraphic unit was accomplished using an indicator approach. The probability of any zone being mineralised was estimated using appropriate geochemical indicator thresholds for Fe, SiO ₂ and Al ₂ O ₃ for the individual stratigraphic units. These thresholds were based on data population statistics and visual validation. A domain code was
	assigned to each sample, defined by the stratigraphic unit and mineralisation.
	Some element grades were top cut during estimation based on coefficient of variation values higher than 1.2.
	Visual validation of the block model coding of the domains was completed prior to estimation. Once estimated, the grade of all elements was also visually validated. Visual validation of both the domains and grade were completed in Vulcan by comparing section and plan slices of the block model against the drill holes. Statistics for the mean grade of the mineralised blocks within each
	stratigraphic unit were compared to the mean grade of the mineralised blocks within each stratigraphic unit. Overall, the mean values between the model and samples are within an acceptable range. Trend analysis graphs have been created for each of the mineralised domains. These have been generated in Northing, Easting and RL, for all elements. The trend analysis graphs show the modelled grade vs. the raw data grade at a slice in space. The trend analysis charts show that overall, the model grade is consistent with the raw data and shows no bias. Areas
	with many samples correlate much better with the model grade than do areas with few samples.
Moisture	Tonnages are estimated on a dry basis.
Cut-off	CID is reported as a cut-off of greater than or equal to 54% Fe. This cut-off has been used for
parameters	analogous Fortescue estimates and represents a similar cut-off to current product specifications.
Mining factors or assumptions	It is assumed that mining will be carried out with medium to large scale mining equipment, bench heights will vary depending on mining studies. These methods will be similar to analogous Fortescue deposits where conventional: truck & shovel/excavator; drill & blast and; grade control methods are used. The impact of dilution will be assessed as part of the mining studies.
Metallurgical factors or assumptions	It is assumed that similar metallurgical techniques to analogous Fortescue operations will be utilised. The expectation is that material will be dry processed by screens and crushers, with potential for some wet processing. Final processing methods will be defined by further mining studies.
Environmental factors or assumptions	Fortescue has an extensive environmental and heritage approvals process. Waste is considered to be inert and formed waste dumps will conform to WA standards. Waste will be formed as dumps or into mining voids. In the case of acid and fibre mitigation, Fortescue has industry standard procedures. Where beneficiation may take place, reject is considered to be inert and there are no foreseen problems with tailings disposal. No significant concentrations of environmentally
Bulk density	deleterious elements have been identified.Density has been calculated from down-hole geophysical measurements throughout the deposit.Average rounded densities by geological unit and mineralisation have been compared withdensities collected from analogous deposits, then applied globally to the model. Whilst on sitedown-hole geophysical tools are calibrated fortnightly in a designated test diamond drill hole.
	Down-hole geophysical probes measure the insitu bulk density which accounts for void spaces. These measurements are not corrected for moisture but are validated against known dry bulk densities from diamond core drilled in analogous Fortescue projects. Down-hole geophysical measurements are grouped by geological and mineralisation domains.

	The densities used are similar to known densities for current and historical mines, of similar geology and mineralisation, across the Pilbara.
Classification	The Mineral Resource has been classified as Inferred. This considers drill spacing and data integrity, geological complexity, grade estimation quality, interpreted risk and mineralisation continuity. The Mineral Resource classification reflects the views of the competent persons.
	Internal reviews have been completed during all stages of the estimate. External audits of the
Audits or reviews	estimation process have been completed for analogous deposits with no significant flaws identified. Similar processes have been used for this estimate.
	Grade and geological continuity are sufficient for an Inferred Mineral Resource.
Discussion of relative accuracy/ confidence	Greater confidence in applied density values will be achieved through further physical density and down-hole geophysical measurements.
	The global estimate is sufficient to imply the grade and geological continuity in the area of the Inferred Mineral Resource.
	No production data is available at this stage.



WONMUNNA JORC TABLE 1

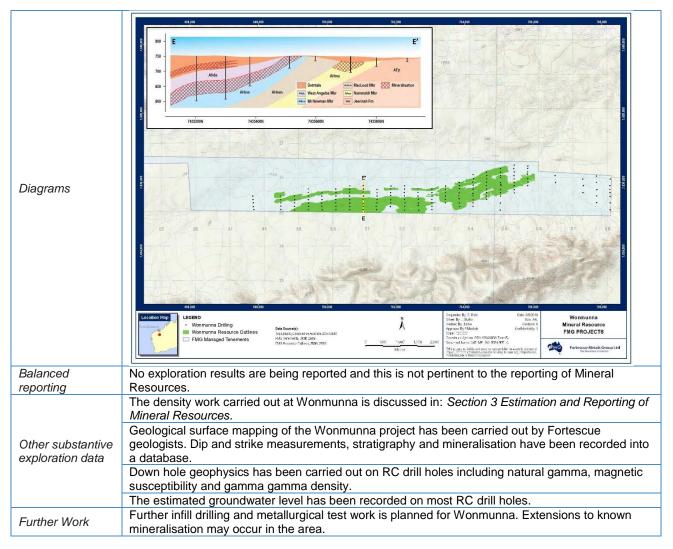
Criteria	Commentary
Sampling techniques	A total of 166 reverse circulation drill holes and 6,266 1m composite samples were used in the model. Samples sent for element and analytical work were selected based on potential ore-grade material with a reasonable envelope both above and below this interval. Most holes where possible undergo down hole geophysical logging.
	Analytical standards were used to assist in checking laboratory results. Field duplicates were used to assist with determining sampling quality at the rig. Geophysical probes were calibrated on a regular basis using static methods and specific calibration holes. Drill hole locations were determined by survey contractors.
	All samples were taken on 1m intervals from reverse circulation drill holes. A sample weighing approximately 1 to 3 kilograms was collected for each metre which was transported to a commercial laboratory and then pulverised for XRF analysis.
Drilling techniques	Reverse circulation (RC) drill holes of approximately 140mm diameter were completed using a standard face sampling hammer. The majority of drill holes are vertical, there are three angled RC drill holes.
Drill sample	The quality of each sample sent to the laboratory was recorded by the logging geologist at the time of drilling and categorised as either poor, moderate or good. 93% of samples were recorded as good, 4% were recorded as moderate and 3% were recorded as poor.
recovery	No major issues with the sample collection system were identified during drilling. Minimal loss of fines was achieved through the use of an automated sample collection and splitting system. There is assumed to be no expected relationship between sample recovery and grade.
	Geological logging was completed by geologists experienced in iron ore mineralisation. The standard of logging is suitable to support an estimate of Mineral Resources.
Logging	Stratigraphy, mineralogy, chip size, chip shape, chip recovery, hardness, colour, moisture and sample quality were recorded for all drill holes. Chip trays from RC holes were collected on an intermittent basis.
Sub-sampling techniques and sample preparation	 All RC drill holes were geologically logged. Drilling samples are collected in labelled bags, which are stored onsite or sent for analysis. These samples are collected using a cone splitter installed directly beneath the cyclone. Wet samples are collected using the same technique as dry samples, with thorough cleaning of sampling system between samples. Wet samples are allowed to dry before being processed. The sample collected from the cone splitter represents approximately 6 to 7% of the total sample interval. Cone splitters are the preferred splitting system used by Fortescue as they generally give the most representative sample in both dry and wet conditions. At the laboratory, samples were weighed, dried and pulverised to either 90% passing through 106 microns (SGS) or 85% passing through 75 microns (Genalysis). Coarse field standards (approximately 1 in 100 samples) and laboratory standards (1 per laboratory job) were used as a quality control measure at different sub-sampling stages. Rig duplicate samples are taken at an average of 3 rig duplicate samples per approximately 100 samples sent to the laboratory. An analysis of these duplicate samples indicates that they are of good quality and repeatable. No formal analysis of the appropriateness of sample size compared to grain size has been completed but the sampling regime is considered to be industry best practice. All samples were sent to SGS or Genalysis laboratories for analysis. All laboratories have National
Quality of assay data and laboratory tests	All samples were sent to SGS or Genalysis laboratories for analysis. All laboratories have National Association of Testing Authorities, Australia (NATA) accreditation. The standard elements tested were Fe, SiO ₂ , Al ₂ O ₃ , P, MnO/Mn, MgO, CaO, TiO ₂ , Na ₂ O, S and K ₂ O by X Ray Fluorescence (XRF) and a three-point LOI thermo gravimetric analysis at 371, 650 and 1000 degrees Celsius. This is considered a total analysis. No geophysical tools were used to determine any element concentrations used in the estimate. Field duplicates were collected at a rate of approximately 3 in 100 samples. Standards are submitted at approximately 1 in every 100 samples. Analysis of duplicates did not indicate any major issues. Analysis of laboratory standard results indicates high confidence in XRF analysis at each laboratory. Analysis of field standards have indicated issues with laboratory sample preparation and standard certification in the past. Field standard results have been closely monitored and such issues have now been mitigated.
Verification of sampling and assaying	Significant intersections have been visually verified by Fortescue's Exploration Managers. No twin holes have been completed at this stage of the project. Sample data is stored using a customised acQuire database, which includes a series of automated electronic validation checks. Fortescue data entry procedures are documented and readily available. Only trained personnel perform further manual validation in order to confirm results reflect field collected information and geology.



	Samples returning below detection limits were given the result of half the detection limit. Missing
	data was set to -99 and those samples were excluded from statistical analysis and estimation.
Location of data points	Drill hole collar locations have been surveyed using a Differential Global Positioning System by Down Under Surveys, with an accuracy of better than 3cm for Easting and Northing and 5cm in elevation. Down hole surveys have not been completed on the drill holes. Collar survey data is validated against planned coordinates and the topographic surface. Grid coordinates given for each point are Map Grid of Australia (GDA94) and heights are in the Australian Height Datum. The project area lies inside UTM zone 50.
	The topography was created from 2 metre contours produced from LIDAR data. Vertical and horizontal accuracy of this data is+/-0.15 metres.
Data spacing and	The grade estimate used RC drill holes which occur on a grid spacing of 400m × 100m for assays and geology.
distribution	This level of drill spacing is sufficient to establish the degree of geological and grade continuity required for an Inferred Mineral Resource.
	No sample compositing was conducted for this estimation.
Orientation of data in relation to geological	Drill holes have been predominantly drilled as vertical holes in drill lines sub-perpendicular to the local bearing of the ore body. The mineralisation is sub-horizontal and these vertical holes are sufficient to imply geological and grade continuity.
structure	No material relationship is apparent between sampling bias and geological orientation.
Sample security	To ensure sample security consignment notes (sample submission information) have been used and direct delivery to site laboratories has been carried out.
Audits or reviews	All sampling has been carried using Fortescue standard procedures.
	Fortescue has had a sampling audit conducted previously on an analogous project. For this project no material risks relating to the sampling and assaying of the data have been identified. Similar rigs and splitter systems were utilised in this deposit.

Criteria	Commentary
	FMG Pilbara Pty Ltd is a wholly owned subsidiary of Fortescue Metals Group Ltd and owns 100% of all mineral rights in the tenement which cover the project area: E47/1423. This is a live, granted tenement.
Mineral tenement and land tenure status	The tenement is within the Ngarlawangga People native title determination (WCD2016/007). A small portion of the tenement is within the Nyiyaparli native title determination (WCD2018/008). Fortescue has current Land Access Agreements with the Ngarlawangga People and the Nyiyaparli People native title holders.
	The tenure is currently in good standing and no impediments to obtaining a licence to operate in the area are known to exist.
Exploration done by other parties	There is no known historical data within the project area.
Geology	Mineralisation within the Wonmunna deposit is a hosted by BID and DID. Bedded mineralisation is found within the West Angela Member of the Wittenoom Formation and within the Mount Newman, MacLeod and Nammuldi Members of the Marra Mamba Iron Formation.
Drill hole Information	Collar details of the RC drill holes used in the estimate are not being reported here.
Data aggregation methods	No exploration results are being reported. For methods used in the estimation of Flying Fish please refer to: Section 3 Estimation and Reporting of Mineral Resources.
Relationship between mineralisation widths and intercept lengths	No exploration results are being reported. Please refer to: Orientation of data in relation to geological structure in Section 1 Sampling Techniques and Data for the geometry of mineralisation with respect to drill hole angle.





Criteria	Commentary
Database integrity	Sample data is stored using a customised acQuire database, which includes a series of automated electronic validation checks. AcQuire is a secure and an industry standard strength database.
	Only trained personnel perform further manual validation on the data in order to confirm results
	reflect field collected information and geology. In order to ensure integrity of the database, any changes to the database only occur after a review of the suggested changes are authorised, and
	these changes can only be performed by an authorised person. Prior to modelling, further validation was performed on the dataset being used.
Site visits	The Competent Person and Competent Persons team conducts regular site visits, approximately
	every two to three months when drilling operations are in progress to inspect the model area, RC drill hole logging and sampling practices. Discussions are held regularly with site geologists.
	Logging and geological interpretation was completed by geologists experienced in iron ore mineralisation. Geology over the majority of the deposit is relatively straight forward. There is some
Geological interpretation	risk of misinterpretation in areas of wider spaced drilling with limited assay data, however, this is
	not considered to be material.
	Geological interpretation is based on geological logging, down hole geophysics and geochemistry of RC drill samples.
	The stratigraphy of Wonmunna is reasonably well known, and it is envisaged that any alternative
	geological interpretation, with or without further drilling, would not have a material impact on the Mineral Resource estimate. Extrapolation of mineralisation has been restricted to approximately
	half of the nominal drill spacing.
	All samples are flagged with their host geological zone, only samples with the same geological
	zone as the block to be estimated can be used in grade estimation.
	It is not expected that further drilling will change the grade and geological continuity. The
	geological continuity is generally good compared with analogous areas.

Dimensions	Mineralisation at Wonmunna covers an area approximately 6km in length and 700m across strike. Mineralisation occurs at surface and to depths of up to 200 metres. The defined mineralised units are between 5m and 60m thick with an average thickness of 25m.
	Ordinary Kriging was used to estimate all mineralised domains and inverse distance cubed for all waste domains. Estimation was done using Maptek Vulcan software. Mineralisation was extrapolated approximately half the distance of drill spacing away from the drilling. The deposit was domained by stratigraphy, structure, local strike/orientation and mineralised/un-mineralised zones.
	No assumptions regarding the recovery of by-products have been made. The iron ore suite of Fe, SiO ₂ , Al ₂ O ₃ , P, Mn, MgO, CaO, TiO ₂ , Na ₂ O, S, K ₂ O, LOI Total, LOI 371, LOI 650 and LOI 1000 has been estimated.
	Estimation into parent cells of 100mE × 50mN × 1mRL was used. Size and orientation of parent blocks reflected half the nominal drill spacing and orientation of mineralisation. Sub blocking down to 6.25mE × 6.25mN × 0.5mRL was used along domain boundaries to better define the domain interface.
	Up to three estimation passes were used for each element, gradually increasing search ellipse distances with each pass. Search distances along strike and across strike varied between each domain. These were primarily defined by sample spacing within each domain and determined by neighbourhood iterative tests.
Estimation and	No assumptions behind the modelling of selective mining units have been made.
modelling	Correlation between some elements has been noted during statistical analysis. Similar variogram parameters were achieved for mineralised domains that had elements with a noted correlation.
techniques	The definition of mineralised zones within each stratigraphic unit was accomplished using an indicator approach. The probability of any zone being mineralised was estimated using appropriate geochemical indicator thresholds for Fe, SiO ₂ and Al ₂ O ₃ for the individual stratigraphic units. These thresholds were based on data population statistics and visual validation. A domain code was
	assigned to each sample, defined by the stratigraphic unit and mineralisation.
	Some element grades were top cut during estimation based on coefficient of variation values higher than 1.2.
	Visual validation of the block model coding of the domains was completed prior to estimation. Once estimated, the grade of all elements was also visually validated. Visual validation of both the domains and grade were completed in Vulcan by comparing section and plan slices of the block model against the drill holes. Statistics for the mean grade of the mineralised blocks within each stratigraphic unit were compared to the mean grade of the mineralised samples within each
	stratigraphic unit. Overall, the mean values between the model and samples are within an acceptable range. Trend analysis graphs have been created for each of the mineralised domains. These have been generated in Northing, Easting and RL, for all elements. The trend analysis graphs show the modelled grade vs. the raw data grade at a slice in space. The trend analysis
	charts show that overall, the model grade is consistent with the raw data and shows no bias. Areas with many samples correlate much better with the model grade than do areas with few samples.
Moisture	Tonnages are estimated on a dry basis.
Cut-off parameters	BID is reported as a cut-off of greater than or equal to 50% Fe and DID is reported as a cut-off of greater than or equal to 54% Fe. These cut-offs have been used for analogous Fortescue estimates and represents a similar cut-off to current product specifications.
Mining factors or assumptions	It is assumed that mining will be carried out with medium to large scale mining equipment, bench heights will vary depending on mining studies. These methods will be similar to analogous Fortescue deposits where conventional: truck & shovel/excavator; drill & blast and; grade control methods are used. The impact of dilution will be assessed as part of the mining studies.
Metallurgical factors or assumptions	It is assumed that similar metallurgical techniques to analogous Fortescue operations will be utilised. The expectation is that material will be dry processed by screens and crushers, with potential for some wet processing. Final processing methods will be defined by further mining studies.
Environmental factors or assumptions	Fortescue has an extensive environmental and heritage approvals process. Waste is considered to be inert and formed waste dumps will conform to WA standards. Waste will be formed as dumps or into mining voids. In the case of acid and fibre mitigation, Fortescue has industry standard procedures. Where beneficiation may take place, reject is considered to be inert and there are no foreseen problems with tailings disposal. No significant concentrations of environmentally
Bulk density	deleterious elements have been identified. Density has been calculated from down-hole geophysical measurements throughout the deposit. Average rounded densities by geological unit and mineralisation have been compared with densities collected from analogous deposits, then applied globally to the model. Whilst on site down-hole geophysical tools are calibrated fortnightly in a designated test diamond drill hole.
	Down-hole geophysical probes measure the insitu bulk density which accounts for void spaces. These measurements are not corrected for moisture but are validated against known dry bulk

	densities from diamond core drilled in analogous Fortescue projects. Down-hole geophysical
	measurements are grouped by geological and mineralisation domains.
	The densities used are similar to known densities for current and historical mines, of similar
	geology and mineralisation, across the Pilbara.
Classification	The Mineral Resource has been classified as Inferred. This considers drill spacing and data
	integrity, geological complexity, grade estimation quality, interpreted risk and mineralisation
	continuity.
	The Mineral Resource classification reflects the views of the competent persons.
Audits or reviews	Internal reviews have been completed during all stages of the estimate. External audits of the
	estimation process have been completed for analogous deposits with no significant flaws
	identified. Similar processes have been used for this estimate.
Discussion of relative accuracy/ confidence	Grade and geological continuity are sufficient for an Inferred Mineral Resource.
	Greater confidence in applied density values will be achieved through further physical density and
	down-hole geophysical measurements.
	The global estimate is sufficient to imply the grade and geological continuity in the area of the
	Inferred Mineral Resource.
	No production data is available at this stage.

