Hope Downs 2 - Table 1

The following table provides a summary of important assessment and reporting criteria used at the Hope Downs 2 for the reporting of Mineral Resources in accordance with the Table 1 checklist in The Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves (The JORC Code, 2012 Edition). Criteria in each section apply to all preceding and succeeding sections.

SECTION 1 SAMPLING TECHNIQUES AND DATA

Criteria	Commentary
Sampling techniques	• Samples for geological logging, assay, geotechnical, metallurgical and density test work are collected via drilling. • 2014-2015, drilling programmes were conducted on regularly spaced grids across the deposit. All intervals are sampled. • Reverse circulation drilling utilises a static or rotary cone splitter beneath a cyclone return system to obtain a primary and secondary sample, with particular attention on samples collected being of comparable weights. The splitter produces two 8% samples ('A' and 'B') and one 84% reject sample. Primary 'A' sample was collected at 2 m intervals through 8% blades from the outer cone of splitter. • Diamond core drilling uses triple-tube techniques and samples were taken at 1 meter intervals. • Density samples are collected from via diamond core drilling of PQ-3 core. • Dry bulk density is derived from accepted gamma-density data collected at 10 cm intervals from down-hole geophysical sondes. Density measured from accepted gamma-density is corrected for moisture from diamond drill core twinned with reverse circulation drilling. • Mineralisation is determined by a combination of geological logging and assay results
Drilling techniques	• Drilling is predominantly reverse circulation with a lesser proportion of percussion and diamond drill core (Refer to Section 2, Drill hole Information, for a detailed breakdown of drilling by method and year). • The majority of drilling is angled to better approximate true thickness. • Diamond core drilling was PQ core size (PQ-3 = 83.0 mm core diameter) using triple tube techniques. • Reverse circulation drilling utilises 140 mm diameter face sampling bit with sample shroud, attached to pneumatic piston hammer used to penetrate ground and deliver sample up 6 m drill rod inner tubes (4 m starter rod) through to the cyclone and cone splitter with the aid of rig and auxiliary booster compressed air. • Majority of the 2014-2015 holes were drilled wet from surface, using water injection to mitigate risks associated with fibrous mineral intersection in Marra Mamba Formation
Drill sample recovery	• No direct recovery measurements of reserve circulation samples are performed. Sample weights are recorded at laboratory as sample received and at the rig is qualitatively estimated for loss per drilling interval. • Diamond core recovery is maximised via the use of triple-tube sampling and additive drilling muds. • Diamond core recovery is recorded using rock quality designation (RQD) measurements with all cavities and core loss recorded in the Rio Tinto Iron Ore acQuire™ database. • Sample recovery in some friable mineralisation may be reduced; however it is unlikely to have a material impact on the reported assays for these intervals. • Thorough analysis of duplicate sample performance does not indicate any chemical bias as a result of inequalities in samples weights.
Logging	• All drill holes are geologically logged utilising standard Rio Tinto Iron Ore Material Type Classification Scheme (RTIO MTCS) logging codes and entered into the acQuire™ database package on field Toughbook laptops. • Internal training and validation of logging includes RTIO MTCS identification and calibration workshops, peer reviews and validation of logging verses assay results. • Geological logging is performed on 2 m intervals for all reverse circulation drilling, and either 1 m or 2 m intervals for diamond holes, depending on the level of detail required. • All diamond drill core is photographed digitally and files stored on Rio Tinto network servers. • Magnetic Susceptibility readings taken using a Kappameter for each interval. • Since 2001, all drill holes have been geophysically logged using downhole tools for gamma trace, calliper, gamma density, resistivity, and magnetic susceptibility. • Open-hole acoustic and optical televiewer image data have been collected in specific

Criteria	Commentary
	reverse circulation and diamond drill core holes throughout the deposit for structural analyses. • For 1980's and 1990's drill campaigns, geological data was recorded on paper logs. Materials were resolved predominantly to 5%, with 1% resolutions also used (rarely) for trace constituents.

Sub-sampling techniques and sample preparation	Sub-sampling techniques:
	• 2014-2015:
	  ○ Reverse circulation drilling was sampled at 2 m intervals. Sub sampling was carried out using a rotary cone splitter beneath a cyclone return system, producing approximate splits of:
	  ▪ 'A' Split – Analytical sample – 8%
	  ▪ 'B' Split – Retention sample – 8%
	  ▪ Bulk Reject – 84%.
	
	Sampling preparation:
	• 2014–2015:
	  ○ 'A' split sample dried at 105° C.
	  ○ Sample crushed to -3 mm using Boyd Crusher and split using a linear and rotary sample divider to capture 1 – 2.5 kg samples.
	  ○ Robotic and Manual LM5 used to pulverise total sample (1 – 2.5 kg) to 90% of weight passing 150 micrometers (µm) sieve.
	  ○ A 100 gram sub sample collected for analysis.
	  ○ Diamond drill core samples are crushed to -6 mm particle size (whole core sample) and follow reverse circulation sample preparation if they are to be assayed.
	• 1989-1996:
	  ○ Drilling was conducted by Hancock Prospecting Pty Ltd, and details of sample preparation are not available.

Quality of assay data and laboratory tests	Assay methods:
	• All assaying of samples used in Mineral Resource estimates have been performed by independent, National Association of Testing Authorities (NATA) certified laboratories.
	• Fe, SiO_2, Al_2O_3, TiO_2, Mn, CaO, P, S, MgO, K_2O, Zn, Pb, Cu, Ba, V, Cr, Cl, As, Ni, Co, Sn, Sr, Zr, Na are assayed using industry standard lithium tetraborate and lithium metaborate fusion and X-Ray Fluorescence (XRF) analytical technique.
	• Loss on Ignition (LOI) is determined using industry standard Thermo-Gravimetric Analyser (TGA) and was measured at three steps of temperatures: 140° - 425° C, 425° - 650° C, 650° - 1000° C.
	• Samples were dispatched to Perth for preparation and analytical testing:
	  ○ 2014-2015
	  ▪ Samples were submitted to Genalysis Laboratory Services Pty Ltd in Perth for sample preparation and analytical testing
	
	Quality assurance measures include:
	• Insertion of coarse reference standard by Rio Tinto Iron Ore geologists at a rate of one in every 30 samples in mineralised zones and one in every 60 samples in waste zones with a minimum of one standard per drill hole. Reference material is prepared and certified by Rio Tinto Iron Ore following ISO 3082:2009 (Iron Ores – Sampling and sample preparation procedures) and ISO 9516-1:2003 (Iron Ores – Determination of various elements by X-ray fluorescence spectrometry – Part 1: Comprehensive procedure).
	• Coarse reference standards contain a trace of strontium carbonate that is added at the time of preparation for ease of identification.
	• Field duplicates were collected by sacrificing a 'B' split retention sample directly from the rig splitter. Duplicate insertion occurred at a frequency of one in 20. Trace zinc is included in the duplicate sample for later identification.
	• At a frequency of one in 20, -3 mm splits and pulps were collected as laboratory splits and repeats respectively. These sub-samples were analysed at the same time as the original sample to identify grouping, segregation and delimitation errors.
	• Internal laboratory quality assurance and quality control measures involve the use of internal laboratory standards using certified reference material in the form of pulps, blanks and duplicates were inserted in each batch.
	• Random re-submission of pulps at an external laboratory is performed following analysis.
	• Chemical Analysis Testing (CAT) and Analytical Precision Testing (APT) samples were collected one per batch and submitted to third party (Geostats) as part of Rio Tinto Iron Ore

Criteria	Commentary
	quality assurance and quality control (RTIO QA/QC) procedures to attained analytical precision and accuracy. • Analysis of the performance of certified standard and field duplicates has indicated an acceptable level of accuracy and precision with no significant bias.
Verification of sampling and assaying	• No twinned holes of reverse circulation and diamond drill core were used. • Field data was logged directly onto field Toughbook laptops using pre-formatted and validated logging templates, with details uploaded to the acQuire™ database on a daily basis. • Assay data was returned electronically from the laboratory and uploaded into the acQuire™ database. • 2012-2015 assay data were only accepted in the acQuire™ database once the quality control process undertaken utilising Batch Analysis tool. • Written procedures outline the processes of geological logging and data importing, quality assurance and quality control validation and assay importing. A robust, restricted-access database is in place to ensure that any requests to modify existing data go through appropriate channels and approvals, and that changes are tracked by date, time, and user.
Location of data points	• Most historical drill hole collar locations were resurveyed by Rio Tinto Iron Ore in 2008. • From 2010 onwards, all drill hole collar locations at the Hope Downs 2 deposit have been surveyed to Geocentric Datum of Australia 1994 (GDA94) and Map Grid of Australia 1994 (MGA94) Zone 50 grid by qualified surveyors using Differential Global Positioning System (DGPS) survey equipment, accurate to 10 cm in both horizontal and vertical directions. • Collar location data is validated by checking actual versus planned coordinate discrepancies. Once validated, the survey data is uploaded into the the acQuire™ database. • Drill hole collar reduced level (RL) data is compared to detailed topographic maps and shows that the collar survey data is accurate. • All holes interpreted and used in the resource model have surveyed coordinates. Holes with suspect collar coordinates were excluded from the data set. • Down-hole surveys were conducted on nearly every hole, with the exception of collapsed or otherwise hazardous holes, and any significant, unexpected deviations were investigated and validated. Holes greater than 100 metres in depth are generally surveyed with an in-rod gyroscopic tool to accurately measure downhole deviation. • The topographic surface is based on 2 m contour data.
Data spacing and distribution	• Drilling was mainly 100 m × 50 m and in-filled to 50 m × 50 m in some areas. Wider spaced drilling of 200 m ×100 m was used for the eastern portion of the deposit. • Angled holes were used to intersect dipping stratigraphy at right angles. • The drill spacing is deemed appropriate for sufficient deposit knowledge by the Competent Person for the Mineral Resource classification applied. • The mineralised domains for the Hope Downs 2 deposit have demonstrated sufficient continuity in both geology and grade to support the definition of Mineral Resources, and the classifications applied under the 2012 JORC Code guidelines.
Orientation of data in relation to geological structure	• Drill lines are oriented on a rotated north/south grid, perpendicular to the deposit strike. • Drilling is predominantly angled (70°-85°) to intersect bedding at right angles and to allow for Televiewer data. • The general stratigraphy of the deposit is a gently dipping (varying between 5 to 30 degrees) synclinal structure with minor folds and a large fault through the centre of the deposit.
Sample security	• The sample chain of custody is managed by Rio Tinto Ltd. • Analytical samples ('A' splits) are collected by field assistants, placed onto steel sample racks and delivered to Perth by recognised freight service and then to the assay laboratory by a Perth-based courier service. Whilst in storage the samples are kept in a locked yard. • Retention samples ('B' splits) are collected and stored in drums at on-site facilities. • 150 gram of excess pulps from primary samples is retained indefinitely at laboratories and external storage facilities at CTI Logistics Ltd in Perth, Western Australia.
Audits or reviews	• No external audits have been performed specifically on sampling techniques or data. • Inter-lab checks were performed in 2014 and 2015. A collection of coarse retentions from randomly distributed drill holes across Hope Downs deposits were sent by Genalysis Laboratory Services Pty Ltd to Australian Laboratory Services Pty Ltd and Bureau Veritas Minerals Pty Ltd (formerly Ultra Trace Laboratories). Results of the re-analysed coarse retentions were sent by electronic distribution to Rio Tinto Iron Ore geologists for analysis. No conflicted results were identified.

Criteria	Commentary
	• Internal Rio Tinto Iron Ore peer review processes and internal Rio Tinto technical reviews have been completed. These reviews concluded that the fundamental data collection techniques are appropriate.

SECTION 2 REPORTING OF EXPLORATION RESULTS

Criteria	Commentary

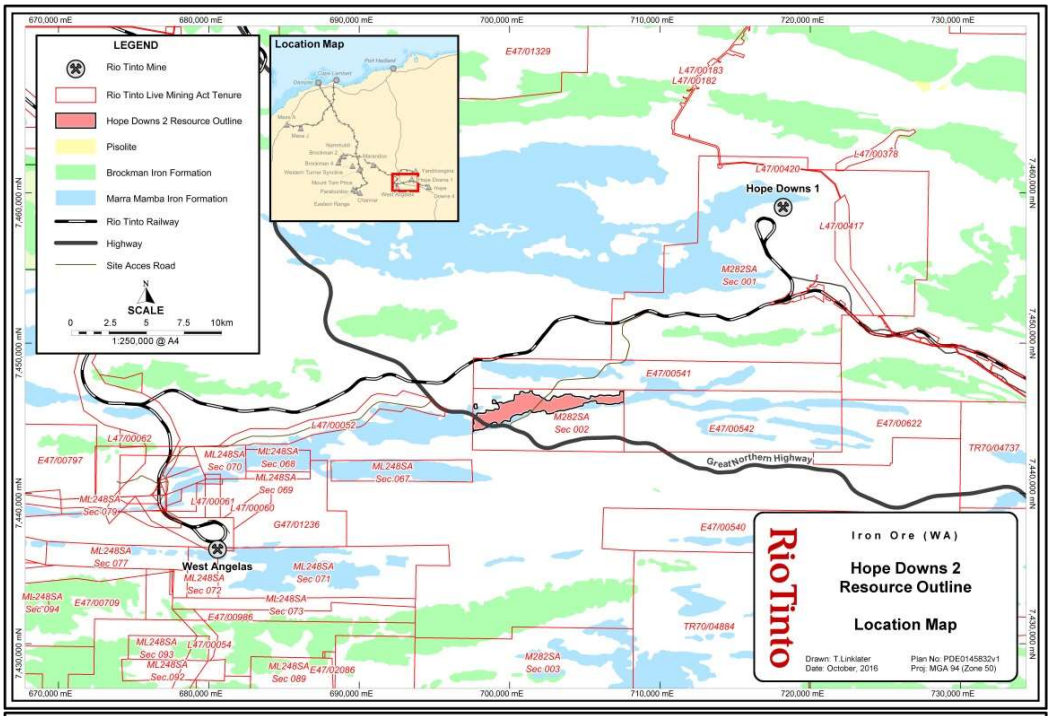
Mineral tenement and land tenure status	• The deposit is located on Mining Lease AM70/00282, granted 31/03/2006. ML282SA is held by the Hope Downs Joint Venture, under the Hope Downs Joint Venture Agreement. The participants in the Hope Downs Joint Venture are as follows:
	  ○ Hope Downs Iron Ore Pty Ltd 50%; and
	  ○ Hamersley WA Pty Ltd 50%.

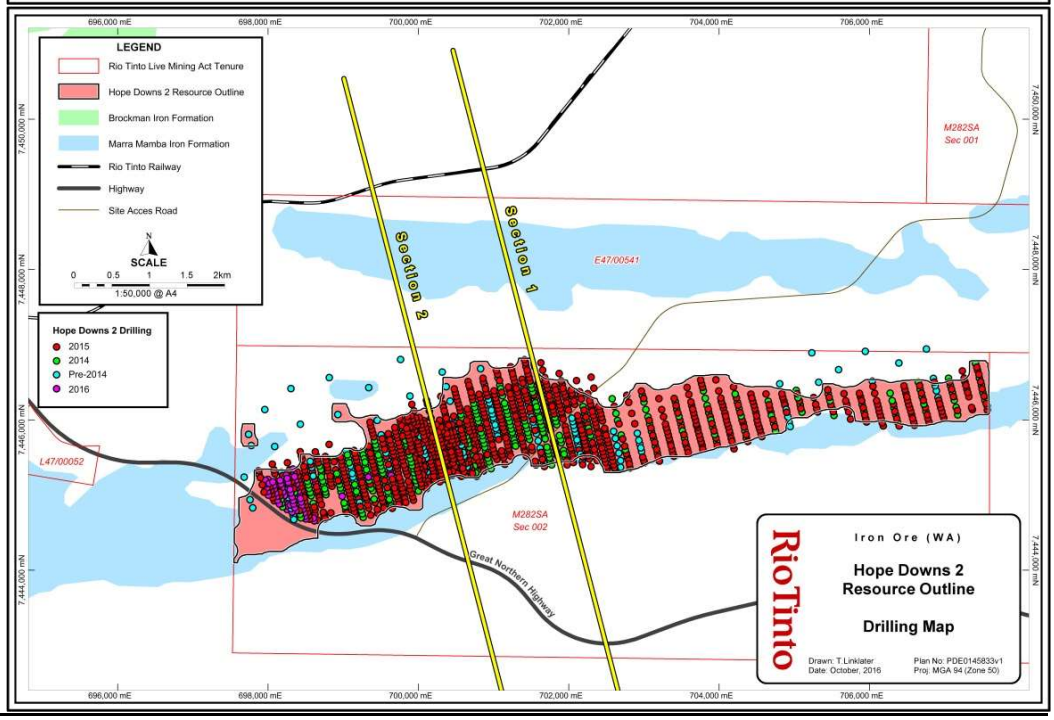
Exploration done by other parties	• Exploration was completed by Hancock Prospecting Pty Ltd across various programs between 1989-1996.
Geology	• The deposit contains both detrital and bedded-hosted iron mineralisation. • Bedded mineralisation is hosted within the Mount Newman Member of the Marra Mamba Iron Formation. It is located within a complex geological setting that is thrust faulted, folded and overlaid with detritals. • Detrital mineralisation predominantly comprises Marra Mamba derived Red Ochre Detritals (ROD).
Drill hole Information	• Summary of drilling data used for the Hope Downs 2 Mineral Resource estimate:

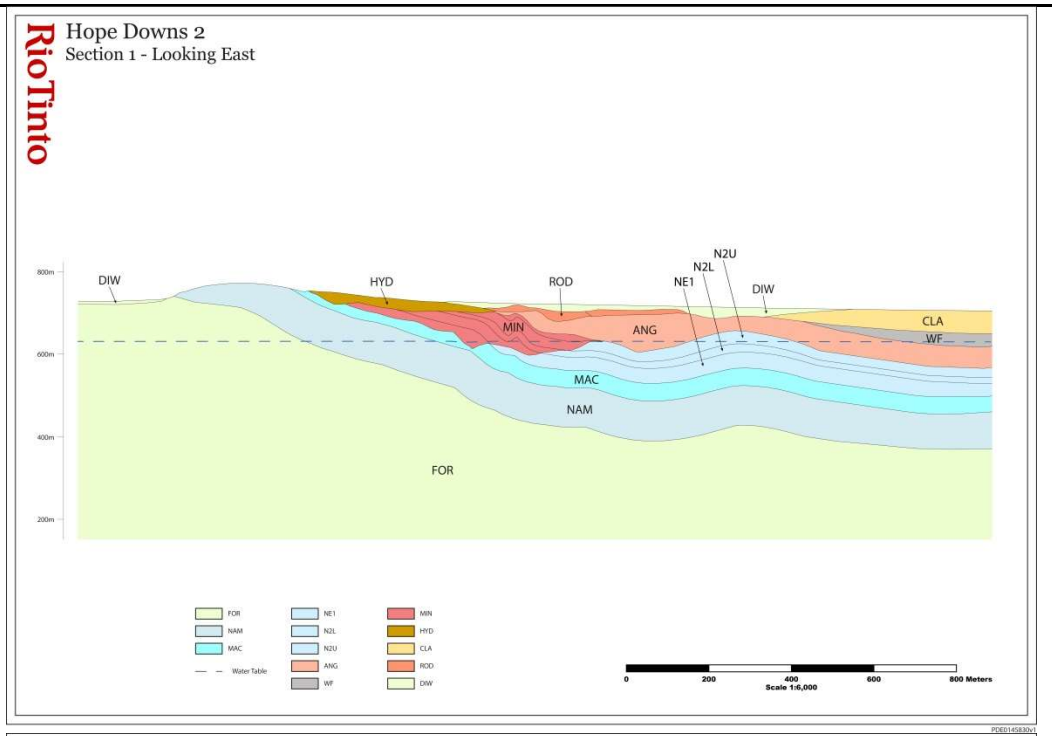
Year	Diamond Holes		Reverse Circulation	
	# Holes	Metres	# Holes	Metres
1989	-	-	9	492
1990	-	-	7	312
1991	-	-	3	234
1992	-	-	80	6,140
1993	-	-	6	530
1996	-	-	28	2,210
2014	-	-	279	21,040
2015	14	916.3	927	71,026
Total	**14**	**916.3**	**1,339**	**101,984**

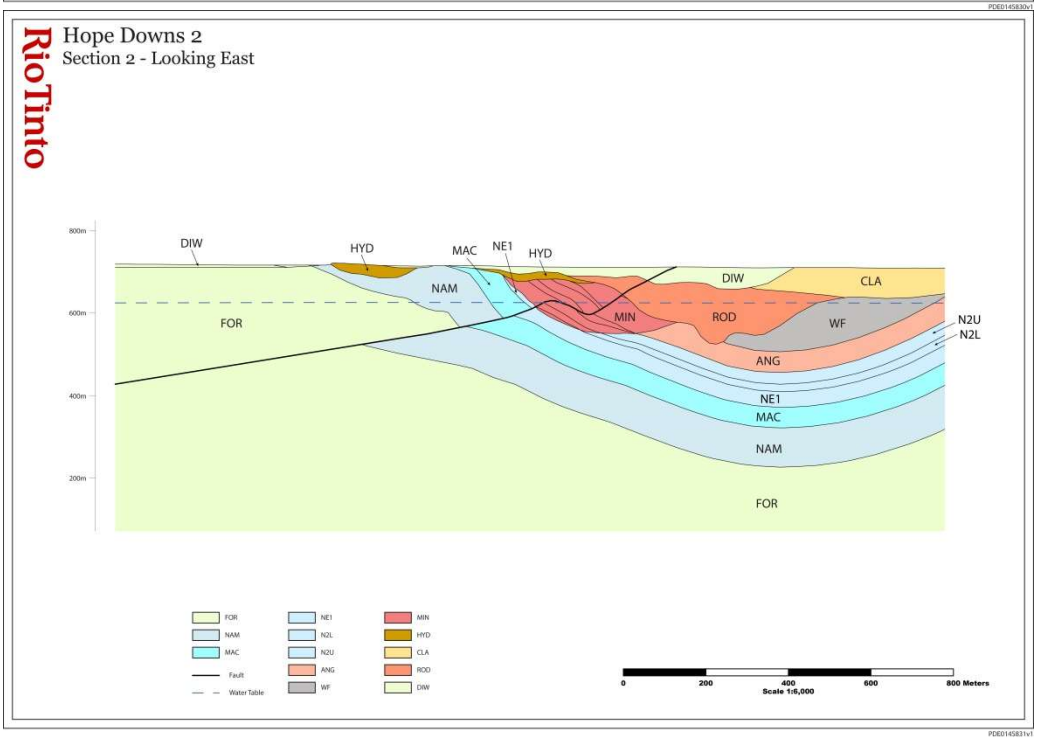
	• A total of 1,353 drill holes were included in the geological model for interpretation and estimation. • Three reverse circulation holes in 2015 were pre collar diamond holes (96 m). • Four drill holes were excluded from the data set due to no assay data or unreliable survey co-ordinates.
Data aggregation methods	• All assay, geology, and density data have been composited to 2 m for Mineral Resource modelling and estimation. • No grade truncations are performed.
Relationship between mineralisation widths and intercept lengths	• Geometry of the mineralisation with respect to the drill hole angle is well-defined in most areas of the deposit. Strata are generally dipping/sometimes folded and perceived true width is held consistent during geological interpretations.

Diagrams


LEGEND
Rio Tinto Mine
Rio Tinto Live Mining Act Tenure
Hope Downs 2 Resource Outline
Pisolite
Brockman Iron Formation
Marra Mamba Iron Formation
Rio Tinto Railway
Highway
Site Acces Road
SCALE
1:250,000 @ A4
Location Map
Hope Downs 1
West Angelas
Great Northern Highway
Iron Ore (WA)
Hope Downs 2
Resource Outline
Location Map
Drawn: T.Linklater
Date: October, 2016
Plan No: PDE0145832v1
Proj: MGA 94 (Zone 50)


LEGEND
Rio Tinto Live Mining Act Tenure
Hope Downs 2 Resource Outline
Brockman Iron Formation
Marra Mamba Iron Formation
Rio Tinto Railway
Highway
Site Acces Road
SCALE
1:50,000 @ A4
Hope Downs 2 Drilling
2015
2014
Pre-2014
2016
Section 1
Section 2
Great Northern Highway
Iron Ore (WA)
Hope Downs 2
Resource Outline
Drilling Map
Drawn: T.Linklater
Date: October, 2016
Plan No: PDE0145833v1
Proj: MGA 94 (Zone 50)





Balanced reporting	• Not applicable as Rio Tinto Ltd. has not released exploration results for this deposit.
Other substantive exploration data	• Detailed geological surface mapping was collected across the Hope Downs 2 area in 2013 at 1:5,000 scale.
Further work	• Further work at Hope Downs 2 is required to better define the orebody and improve structural understanding. Additional infill grade reverse circulation drilling (50 m × 50 m) is required across most of the deposit. • Geotechnical drilling and metallurgical test work is required across the deposit.

SECTION 3 ESTIMATION AND REPORTING OF MINERAL RESOURCES

Criteria	Commentary

Database integrity	• Drilling data is securely stored in an acQuire™ geoscientific information management system managed by a dedicated team within Rio Tinto Iron Ore. The system is backed up nightly on servers located in Perth, Western Australia. The backup system was tested in May 2016, demonstrating that the system is effective.
	• The import/exporting process requires limited keyboard transcription and has multiple built in safeguards to ensure information is not overwritten or deleted. These include:
	  ○ Data is imported and exported through automated interfaces, with limited manual input;
	  ○ Inbuilt validation checks ensure errors are identified prior to import;
	  ○ Once within the acQuire™ database, editing is very limited and warning messages ensure accidental changes are not made;
	  ○ Audit trail records updates and deletions should an anomaly be identified;
	  ○ Export interface ensures the correct tables, fields and format are selected.
	• The drill hole database used for Mineral Resource estimation has been internally validated. Methods include checking:
	  ○ acQuire™ scripts for relational integrity, duplicates, total assay and missing / blank assay values;
	  ○ Grade ranges in each domain;
	  ○ Domain names and tags;
	  ○ Survey data down-hole consistency;
	  ○ Null and negative grade values;
	  ○ Missing or overlapping intervals;
	  ○ Duplicate data.
	• Drill hole data is also validated visually by domain and compared to the geological model

Site visits	• The Competent Person last visited Hope Downs 2 in 2015. There were no outcomes as a result of these visits.
Geological interpretation	• Overall the Competent Person's confidence in the geological interpretation of the area is good, based on the quantity and quality of data available, and the continuity and nature of the mineralisation. • Geological modelling was performed by Rio Tinto Iron Ore geologists. The method involves interpretation of stratigraphy using surface geological mapping, lithological logging data, down-hole gamma data, and assay data. • Cross-sectional interpretation of each stratigraphic unit is performed followed by interpretation of mineralisation boundaries. Three-dimensional wireframes of the sectional interpretations are created to produce the geological model. • Mineralisation is continuous. It is affected by stratigraphy, structure and weathering. The drill hole spacing is sufficient to capture density, grade and geology variation for Mineral Resource reporting. • The geological model is sub-divided into domains and both the composites and model blocks are coded with these domains.
Dimensions	• Hope Downs 2 strikes approximately 070 degrees with an along strike extent of approximately 10 km and a width of 1.4 km. The mineralisation extends from surface to a depth of 200 m.
Estimation and modelling techniques	• Ten grade attributes Fe, SiO_2, Al_2O_3, P, Mn, LOI, S, TiO_2, MgO, and CaO), and density were estimated for input into Mine Planning and Marketing assessments. • The grade estimation process was completed using Maptek™ Vulcan™ software. • Mineralised domains are predominantly estimated by ordinary kriging however those domains where robust semi-variograms were not able to be created employed inverse distance weighting to the second power. Non-mineralised domains are estimated by inverse distance weighting to the first power. These methods are deemed appropriate by the Competent Person for estimating the tonnes and grade of the reported Mineral Resources. • All domains were estimated with hard boundaries applied. • A block size of 25 m (X) × 25 m (Y) × 5 m (Z) was used for parent blocks. Parent blocks are sub-celled to the geological boundaries to preserve volume. • Statistical analysis was carried out on data from all domains. • A 'high yield limit' or grade dependent restriction on a sample's range of influence was used for Mn, S, and CaO for the mineralised domains. The limits differed for different domains

Criteria	Commentary
	and were selected based on histograms and the spatial distribution of the respective assay values. • Grades were extrapolated to a maximum distance of approximately 400 m from data points. • The block model was validated using a combination of visual, statistical, and multivariate global change of support techniques in the absence of any production data.
Moisture	• All Mineral Resource tonnages are estimated and reported on a dry basis.
Cut-off parameters	• The cut-off for high grade ore is greater than or equal to 58% Fe.
Mining factors or assumptions	• Development of this Mineral Resource assumes mining using standard Rio Tinto Iron Ore equipment and methods similar to other Rio Tinto Iron Ore operations. The assumed mining method is conventional truck and shovel, open pit mining at an appropriate bench height. Mining practices will include grade control utilising blast hole data. • It is planned to blend ore from Hope Downs 2 with ore from other Rio Tinto Iron Ore mine sites to make a saleable ore product. This plan is in line with current Rio Tinto Iron Ore practices where ore from multiple mines is combined to produce the Pilbara Blend product.
Metallurgical factors or assumptions	• It is assumed that standard crushing and screening processes used by Rio Tinto Iron Ore will be applicable for the processing of Hope Downs 2.
Environmental factors or assumptions	• Rio Tinto Iron Ore has an extensive environmental and heritage approval process. No issues have yet been identified that would impact on the Mineral Resource. • Mapping of oxidised shales, black carbonaceous shales, lignite and pyrite, and the location of the water table, is used in prediction and planning for the treatment of potential environmental impacts. This process is in accordance with Rio Tinto's Mineral Waste Management and Acid Rock Drainage (ARD) Control Environmental Standards.

Bulk density	• Dry bulk density is derived from accepted gamma-density data collected at 10 cm intervals from down-hole geophysical sondes. Accepted gamma-density data is corrected for moisture using diamond drill core specifically drilled throughout the deposit.
	• Dry core densities are generated via the following process:
	  ○ The core volume is measured in the split and the mass of the core is measured and recorded.
	  ○ Wet core densities are calculated by the split and by the tray.
	  ○ Core recovery is recorded.
	  ○ The core is then dried and dry core masses are measured and recorded.
	  ○ Dry core densities are then calculated.
	• Accepted gamma-density values were estimated using ordinary kriging in mineralised zones and inverse distance weighted to the second power in waste zones.
	• Estimated gamma-density values were corrected for moisture using diamond drill core twinned with reverse circulation drilling.

Classification	• The Mineral Resource has been classified into the categories of Measured, Indicated and Inferred. The determination of the applicable resource category has considered the relevant factors (geology, mineralisation continuity, sample spacing, data quality, and others). • Approximately 77% of the Mineral Resource lies above the water table. • The Competent Person is satisfied that the stated Mineral Resource classification reflects the relevant factors of the deposit.
Audits or reviews	• All stages of Mineral Resource estimation have undergone an internal peer review process, which has documented all phases of the process. The Mineral Resource estimate has been accepted by the Competent Person.
Discussion of relative accuracy/ confidence	• Rio Tinto Iron Ore operates multiple mines in the Pilbara region of Western Australia. The Mineral Resource data collection and estimation techniques used for the Hope Downs 2 deposit are consistent with those applied at other deposits which are being mined. Reconciliation of actual production with the Mineral Resource estimates for individual deposits is generally accurate to within ten percent for tonnes on an annual basis. This result is indicative of a robust process.