

## Yandicoogina Oxbow & Billiard South Table 1

The following table provides a summary of important assessment and reporting criteria used at the Yandicoogina Oxbow & Billiard South deposit for the reporting of exploration results, Mineral Resources and Ore Reserves 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.

A summary of the Ore Reserve estimate for Yandicoogina is provided at the end of this document

### SECTION 1 SAMPLING TECHNIQUES AND DATA

Criteria	Commentary
Sampling techniques	<ul style="list-style-type: none"> <li>Samples for geological logging, assay, geotechnical, metallurgical and density test work are collected via drilling at Yandicoogina Oxbow &amp; Billiard South deposit.</li> <li>Drilling for collection of samples for assay is conducted on a 100 m × 50 m regularly spaced grid (100 m along channel × 50 m across channel). Samples are collected at 1 m intervals.</li> <li>All reverse circulation drilling utilises a static and rotary cone splitter beneath a cyclone return system for sample collection. The rotary cone splitter used in most recent holes produces two 8% samples ('A' and 'B') and one 84% reject sample.</li> <li>All diamond core drilling uses triple-tube sampling; HQ-3 (61.1 mm core diameter) and PQ-3 (83.0 mm core diameter).</li> <li>Grade, geotechnical and density samples are collected via diamond core drilling of HQ-3 core.</li> <li>Metallurgical, density and grade twin samples are collected via diamond core drilling of PQ-3 core.</li> <li>Diamond core is crushed to -6 mm and split at site prior to submitting to laboratory for further sample reduction.</li> <li>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.</li> </ul>
Drilling techniques	<ul style="list-style-type: none"> <li>Drilling is conducted predominantly by diamond core and reverse circulation (Refer to Section 2, Drill hole Information, for a detailed breakdown of drilling by method and year).</li> <li>1970's drilling was open hole percussion.</li> <li>1993 - 2008 drilling was by diamond core drilling methods.</li> <li>Between 2009 - 2015 drilling is by a combination of diamond core and reverse circulation drilling methods.</li> <li>Pre-collars were drilled to the top of the weathered channel iron deposit (CID), or to refusal in the alluvial blanket, using a tri-cone roller bit or a dual rotary (DR) drill. Pre-collars were then reamed where necessary, sleeved with a PVC collar and the remainder of the hole drilled using HQ-3 wire-line drilling techniques with 1.5 m steel triple tubes for coring within 3 m barrels.</li> <li>A majority of drill holes are oriented vertically. A small number of angled holes were drilled where appropriate, such as on channel margins and for geotechnical purposes.</li> </ul>
Drill sample recovery	<ul style="list-style-type: none"> <li>No direct recovery measurements are performed on reverse circulation samples. Sample weights are recorded from laboratory splits and the recovery at the rig is visually estimated for loss per drilling interval.</li> <li>Diamond core recovery is maximised via the use of triple-tube sampling and additive drill muds.</li> <li>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.</li> <li>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.</li> <li>Diamond core recovery was measured during each of the drill programs post 2002. Total core recovery for Oxbow (excluding cavities) was 98.5% for mineralised strands. Total core recovery for Billiard South (excluding cavities) was 98.6% for mineralised strands.</li> </ul>
Logging	<ul style="list-style-type: none"> <li>All the drill holes are geologically logged utilising standard Rio Tinto Iron Ore Material Type Classification Scheme logging codes.</li> </ul>

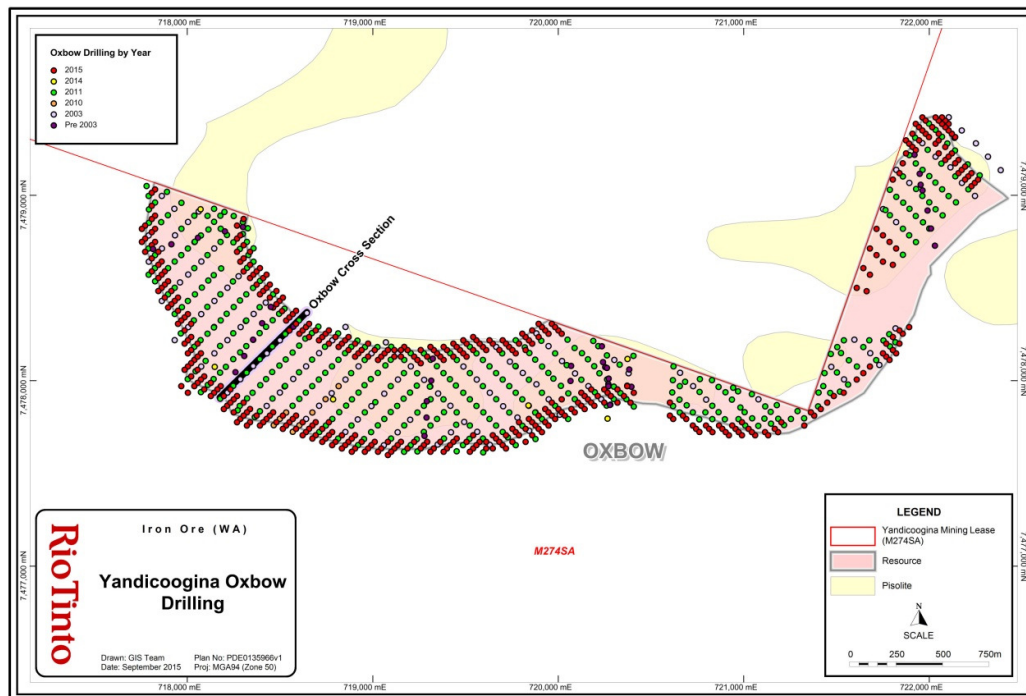
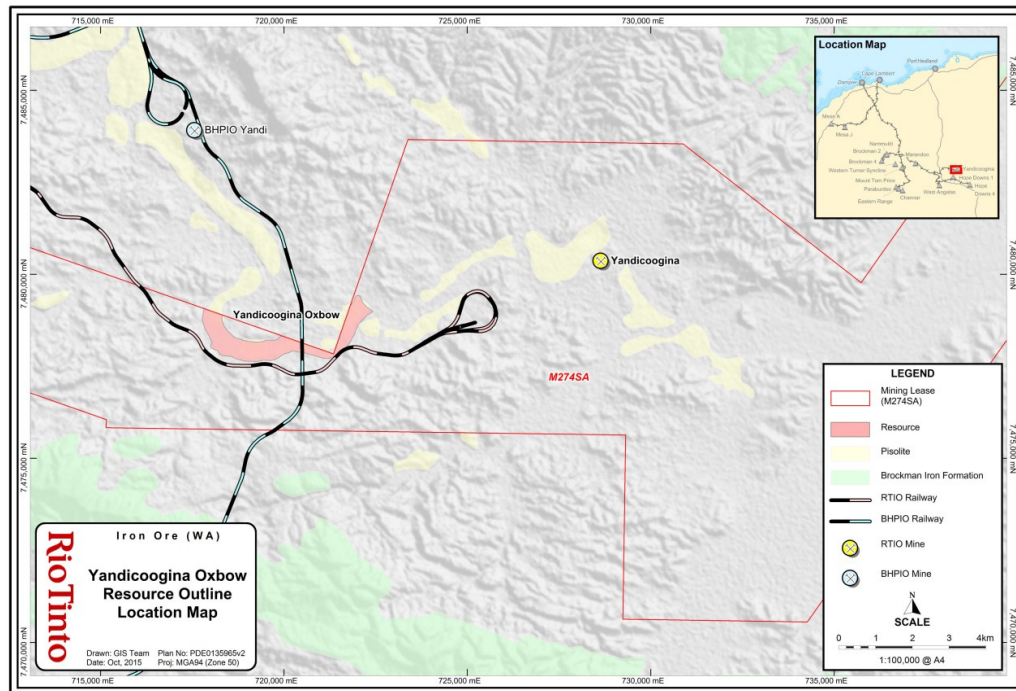
	<ul style="list-style-type: none"> <li>Geological logging is performed on 1 m intervals after examination of drill core or drill cuttings.</li> <li>In 2014 and 2015 bulk logging was conducted on reverse circulation drill holes at Billiard South, where the majority material type is recorded.</li> <li>All drill holes are logged using downhole geophysical tools for gamma trace, calliper, gamma density, resistivity, and magnetic susceptibility since 2002 at Oxbow and since 2004 at Billiard South.</li> </ul>
Sub-sampling techniques and sample preparation	<p>Sub-sampling technique:</p> <ul style="list-style-type: none"> <li>Diamond core drilling: <ul style="list-style-type: none"> <li>Samples are collected at 1 m intervals. Following logging, photography, and oven drying, samples are passed through a jaw crusher resulting in a top size of 1 - 2 cm. The sample is then passed through a rotary splitting device at a minimum rate of 20 revolutions per sample to produce the following splits: <ul style="list-style-type: none"> <li>'A' Split - Analytical sample – 40%</li> <li>'B' Split - Retention sample – 20%</li> <li>Waste or composited to nominal 10 m intervals for metallurgical test work – 40%</li> </ul> </li> </ul> </li> <li>Reverse circulation drilling: <ul style="list-style-type: none"> <li>Samples are collected at a 1m interval and sub sampled using a rotary cone splitter, rotating at a nominal 20-30 RPM, beneath a cyclone return system and produces approximate splits of: <ul style="list-style-type: none"> <li>'A' Split - Analytical sample – 8%</li> <li>'B' Split - Retention sample – 8%</li> <li>Bulk reject – 84%</li> </ul> </li> </ul> </li> </ul> <p>Sample preparation:</p> <ul style="list-style-type: none"> <li>The 'A' Splits are then submitted to laboratory to undertake the following sample preparation process: <ul style="list-style-type: none"> <li>Dry at 105° C</li> <li>Crushed to -3 mm using Boyd crusher and splitting through linear splitting device to capture 1 – 2.5 kg samples.</li> <li>Robotic LM5 used to pulverise total sample (1 – 2.5 kg) to 90% passing 150 micron sieve.</li> <li>A 100 gram sub sample collected for analysis.</li> </ul> </li> </ul>
Quality of assay data and laboratory tests	<p>Assay methods:</p> <ul style="list-style-type: none"> <li>An X-Ray Fluorescence (XRF) analysis conducted to determine : <ul style="list-style-type: none"> <li>Fe, SiO<sub>2</sub>, Al<sub>2</sub>O<sub>3</sub>, TiO<sub>2</sub>, Mn, CaO, P, S, MgO, K<sub>2</sub>O, Zn, Pb, Cu, Ba, V, Cr, Cl, As, Ni, Co, Sn, Sr, Zr, Na</li> </ul> </li> <li>Loss on Ignition (LOI) was determined using industry standard Thermo-Gravimetric Analyser (TGA) <ul style="list-style-type: none"> <li>Pre 2004: <ul style="list-style-type: none"> <li>LOI was measured at 371° C, 538° C, and 900° C.</li> </ul> </li> <li>2004 - 2011: <ul style="list-style-type: none"> <li>LOI was measured at three steps of temperatures: 140° - 425° C, 425° - 650° C, 650° - 1000° C.</li> </ul> </li> </ul> </li> <li>2002 – Samples were sent to the Rio Tinto internal Dampier Laboratory.</li> <li>2004 – 2005 – Samples were sent to the Rio Tinto internal Yandi Laboratory.</li> <li>2003 and 2005 - 2015 – Samples were sent to Ultra Trace Laboratories in Perth for sample preparation and analytical testing.</li> </ul> <p>Quality assurance measures include:</p> <ul style="list-style-type: none"> <li>Insertion of coarse reference standard by Rio Tinto 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).</li> <li>Coarse reference standards contain a trace of strontium carbonate that is added at the time of preparation for ease of identification.</li> <li>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.</li> <li>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</li> </ul>

	<p>sample to identify grouping, segregation and delimitation errors.</p> <ul style="list-style-type: none"> <li>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.</li> <li>Random re-submission of pulps at an external laboratory is performed following analysis.</li> <li>Analysis of the performance of certified standard and field duplicates has indicated an acceptable level of accuracy and precision with no significant bias.</li> </ul>
Verification of sampling and assaying	<ul style="list-style-type: none"> <li>At Billiard South, approximately one in ten reverse circulation drill holes were twinned with diamond core drilling in 2014 and 2015. Comparison of reverse circulation and twinned diamond drill core assay data distributions show that the drilling methods have similar grade distributions, verifying the suitability of reverse circulation samples in the Mineral Resource estimate.</li> <li>No twinned drilling has taken place at Oxbow.</li> <li>Data was returned electronically from Ultra Trace laboratories in Perth. All data is transferred to an acQuire™ database.</li> <li>Written procedures outline the processes of geological logging and data importing, quality assurance and quality control validation and assay importing, etc. 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.</li> </ul>
Location of data points	<ul style="list-style-type: none"> <li>All drill hole collar locations at the Yandicoogina Oxbow and Billiard South deposits are surveyed using Geocentric Datum of Australia 1994 (GDA94) and Map Grid of Australia 1994 (MGA94) zone 50 using a Trimble RTK Global Positioning System survey equipment. The accuracy of this system is to within six to 10 cm.</li> <li>Oxbow - All drilling was vertical and no down-hole surveys were conducted. Down-hole samples are located on traces assumed to be vertical.</li> <li>Billiard South - Down hole survey includes the collar set-up survey, down hole magnetic surveys and gyroscopic surveys (on angled holes or &gt;~100 m) with data uploaded to the acQuire™ database.</li> </ul>
Data spacing and distribution	<ul style="list-style-type: none"> <li>Drill spacing of approximately 100 m × 50 m (100 m along the channel × 50 m across the channel).</li> <li>The drill spacing is deemed appropriate for sufficient deposit knowledge by the Competent Person for the Mineral Resource classification applied.</li> <li>The mineralised domains for the Yandicoogina Oxbow &amp; Billiard South 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.</li> </ul>
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> <li>Drill lines run perpendicular to the channel, and subsequently change through 90° as the channel meanders.</li> <li>Drilling is predominantly vertical, which is appropriate for the sub-horizontal stratigraphy of the majority of the deposit.</li> <li>A small number of angled holes were drilled where appropriate, such as on the channel margins, for geotechnical purposes.</li> </ul>
Sample security	<ul style="list-style-type: none"> <li>Analytical samples (A splits) are collected by field assistants, placed onto steel sample racks, and transported to Ultra Trace Laboratories in Perth, Western Australia for analyses. Retention samples (B Splits) are collected and stored in drums.</li> <li>Assay pulps are retained indefinitely at Laboratories and external storage facilities at CTI Logistic.</li> </ul>
Audits or reviews	<ul style="list-style-type: none"> <li>No external audits have been performed.</li> <li>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.</li> </ul>

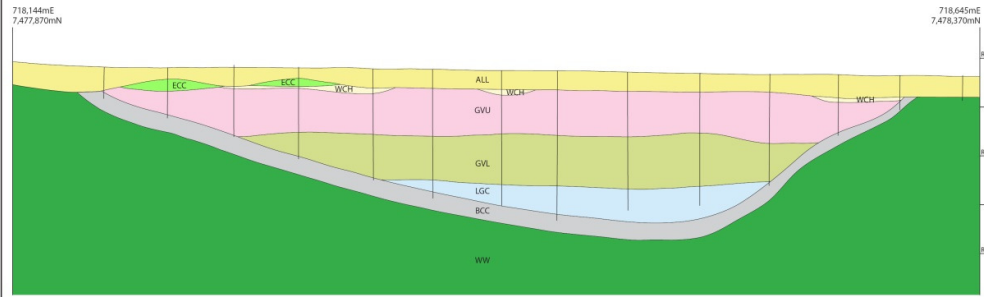
## SECTION 2 REPORTING OF EXPLORATION RESULTS

Criteria	Commentary
Mineral tenement and land tenure status	<ul style="list-style-type: none"> <li>100% owned by Hamersley Iron-Yandi Pty Limited (HIY), 100% Rio Tinto Limited, held under Mining Lease (ML) 274SA.</li> </ul>

Exploration done by other parties	<ul style="list-style-type: none"><li>• Drilling was conducted by CSR Ltd. at Yandicoogina between 1972 – 1978. The Yandicoogina deposit was acquired from CSR Ltd. by CRA in 1987.</li><li>• Mining Lease (ML) 274SA was granted to Hamersley Iron-Yandi Pty Limited (HIY) in October, 1998.</li></ul>																																																																																																								
Geology	<ul style="list-style-type: none"><li>• The deposit is a channel iron deposit incised into the Lower Proterozoic Weeli Wolli Formation.</li><li>• The bedded mineralisation is generally overlain by a variable thickness zone of Quaternary alluvium/colluvium.</li></ul>																																																																																																								
Drill hole Information	<table><tr><th rowspan="2">Year</th><th colspan="2">Oxbow</th><th colspan="2">Billiard South</th></tr><tr><th>No. of Holes</th><th>Type of Drilling</th><th>No. of Holes</th><th>Type of Drilling</th></tr><tr><td>1972</td><td>2</td><td>Percussion</td><td>-</td><td>-</td></tr><tr><td>1974</td><td>11</td><td>Percussion</td><td>-</td><td>-</td></tr><tr><td>1977</td><td>1</td><td>Percussion</td><td>17</td><td>Percussion</td></tr><tr><td>1978</td><td></td><td></td><td>12</td><td>Percussion</td></tr><tr><td>1993</td><td>19</td><td>Diamond</td><td>-</td><td>-</td></tr><tr><td>1999</td><td></td><td></td><td>4</td><td>Diamond</td></tr><tr><td>2002</td><td>6</td><td>Diamond</td><td>-</td><td>-</td></tr><tr><td>2003</td><td>108</td><td>Diamond</td><td>19</td><td>Diamond</td></tr><tr><td>2004</td><td>8</td><td>Diamond</td><td>111</td><td>Diamond</td></tr><tr><td>2005</td><td>376</td><td>Diamond</td><td>48</td><td>Diamond</td></tr><tr><td>2006</td><td>-</td><td>-</td><td>144</td><td>Diamond</td></tr><tr><td>2007</td><td>-</td><td>-</td><td>172</td><td>Diamond</td></tr><tr><td>2008</td><td>-</td><td>-</td><td>132</td><td>Diamond</td></tr><tr><td>2009</td><td>-</td><td>-</td><td>424</td><td>Diamond (398), DR (16) &amp; RC (10)</td></tr><tr><td>2010</td><td>8</td><td>Diamond</td><td>235</td><td>Diamond</td></tr><tr><td>2011</td><td>376</td><td>Diamond</td><td>-</td><td>-</td></tr><tr><td>2014</td><td>-</td><td>-</td><td>422</td><td>Diamond (45) &amp; RC (377)</td></tr><tr><td>2015</td><td>-</td><td>-</td><td>30</td><td>RC</td></tr><tr><td><b>Total</b></td><td><b>915</b></td><td><b>-</b></td><td><b>1,744</b></td><td><b>-</b></td></tr></table> <ul style="list-style-type: none"><li>• All drilling data has been used for geological interpretation.</li><li>• No data pre - 2002 has been used in the Mineral Resource estimate due to concerns regarding sample quality.</li></ul>	Year	Oxbow		Billiard South		No. of Holes	Type of Drilling	No. of Holes	Type of Drilling	1972	2	Percussion	-	-	1974	11	Percussion	-	-	1977	1	Percussion	17	Percussion	1978			12	Percussion	1993	19	Diamond	-	-	1999			4	Diamond	2002	6	Diamond	-	-	2003	108	Diamond	19	Diamond	2004	8	Diamond	111	Diamond	2005	376	Diamond	48	Diamond	2006	-	-	144	Diamond	2007	-	-	172	Diamond	2008	-	-	132	Diamond	2009	-	-	424	Diamond (398), DR (16) & RC (10)	2010	8	Diamond	235	Diamond	2011	376	Diamond	-	-	2014	-	-	422	Diamond (45) & RC (377)	2015	-	-	30	RC	<b>Total</b>	<b>915</b>	<b>-</b>	<b>1,744</b>	<b>-</b>
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Data aggregation methods	<ul style="list-style-type: none"><li>• No data aggregation. All diamond core samples collected at 1 m intervals.</li><li>• No grade truncations are performed.</li></ul>																																																																																																								
Relationship between mineralisation widths and intercept lengths	<ul style="list-style-type: none"><li>• Down-hole lengths are reported that are essentially true width due to vertical drilling and gently folded, horizontal strata.</li></ul>																																																																																																								

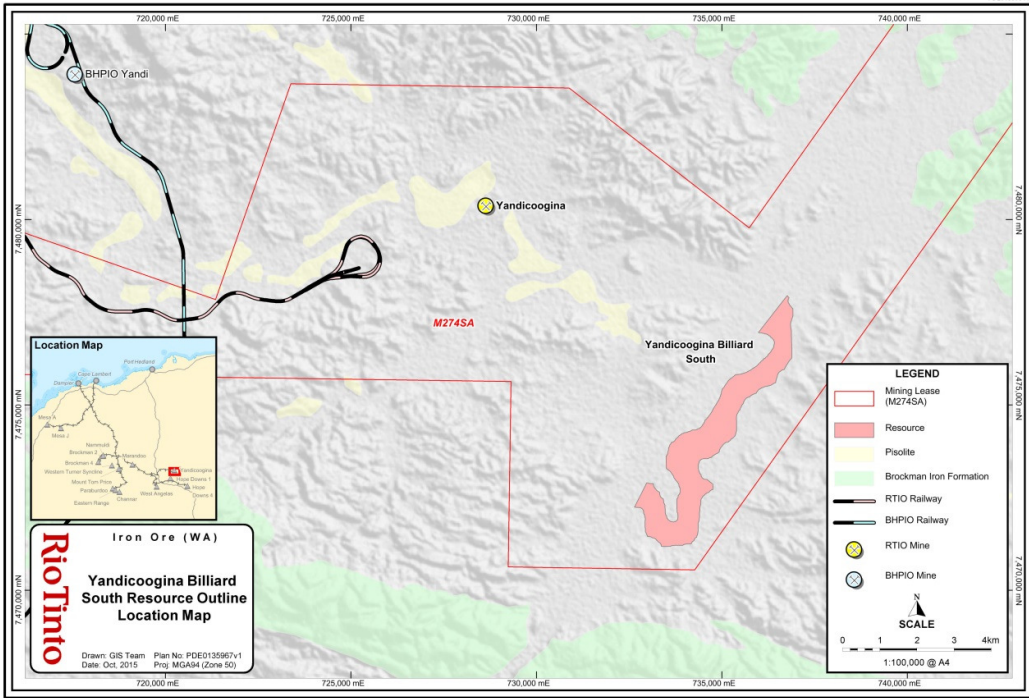


# **Yandicoogina Oxbow - Cross Section** (Looking East)



**ALL** Alluvium      **ECC** Eastern Clay Conglomerate      **GVL** Goethite Vitreous Channel - Lower      **BCC** Basal Conglomerate      **WCH** Weathered Channel      **GVC** Goethite Vitreous Channel - Upper      **LGC** Limonitic Goethite Channel      **WW** Weeli Walli Formation

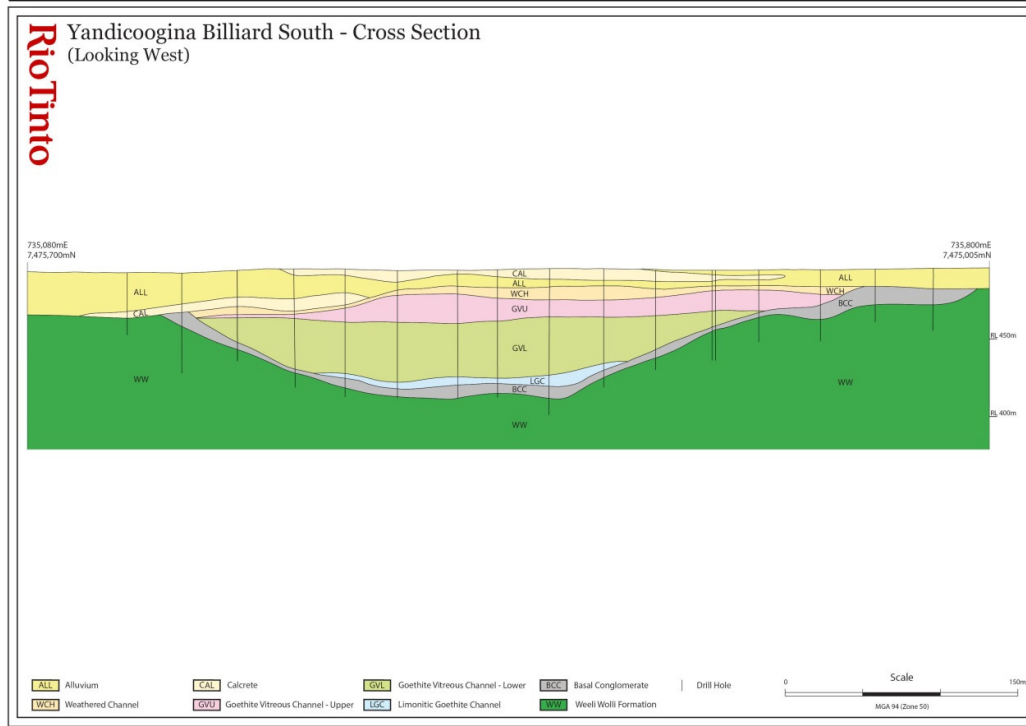
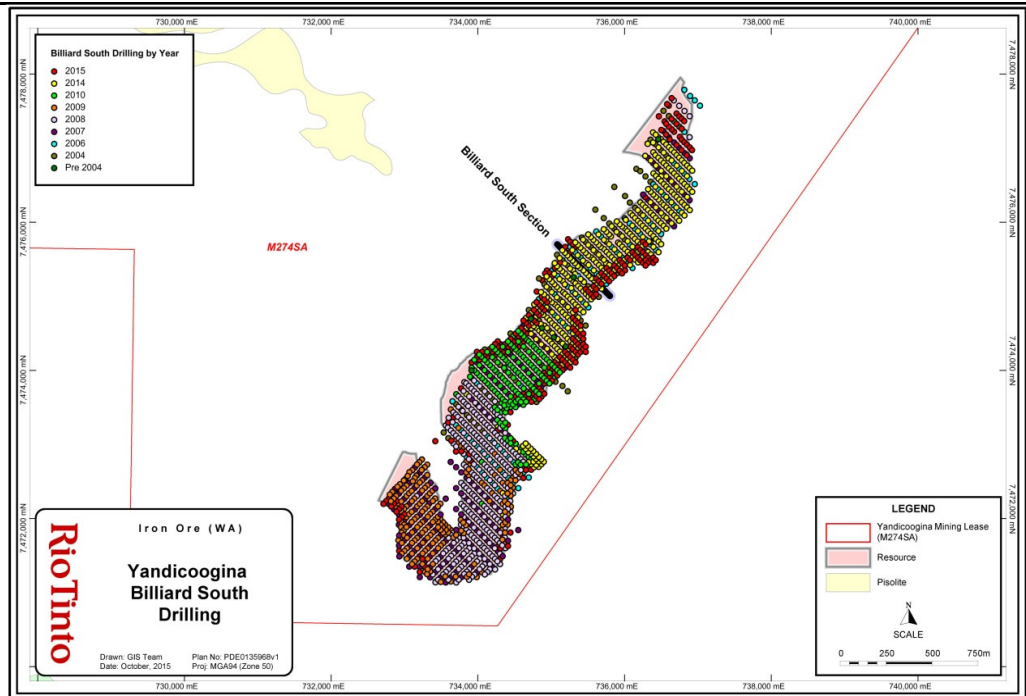
Scale  
 0 100m  
 MGA 54 (Zone 50)



**Iron Ore (WA)**  
**Yandicoogina Billiard South Resource Outline Location Map**  
 Drawn: GIS Team    Plan No: PDE0135967v1  
 Date: Oct 2015    Proj: MGA54 (Zone 50)

**LEGEND**  
 Mining Lease (M274SA)  
 Resource  
 Pisotite  
 Brockman Iron Formation  
 RTIO Railway  
 BHPIO Railway  
 RTIO Mine  
 BHPIO Mine  
 SCALE  
 0 1 2 3 4km  
 1:100,000 @ A4





#### Balanced reporting

- Not applicable as Rio Tinto has not specifically released exploration results for this deposit.

#### Other substantive exploration data

- Geological surface mapping has been collected at 1:10,000 scale in 1997.
- Approximately 75% of the Mineral Resource lies below the water table at Oxbow and 98% of the Mineral Resource lies below the water table at Billard South.

#### Further work

- Further infill reverse circulation drilling is planned along channel margins.

## SECTION 3 ESTIMATION AND REPORTING OF MINERAL RESOURCES

Criteria	Commentary
Database integrity	<ul style="list-style-type: none"> <li>All drilling data is securely stored in an acQuire™ geoscientific information management system managed by a dedicated team within Rio Tinto. The system is backed up nightly on servers in Perth, Western Australia. The backup system has been tested in 2015, demonstrating that it is effective.</li> <li>The drilling database used for Mineral Resource estimation has been internally validated by Rio Tinto Iron Ore personnel by the following methods: <ul style="list-style-type: none"> <li>acQuire™ scripts for relational integrity, duplicates, total assay and missing / blank assay values</li> <li>Grade ranges in each domain</li> <li>Domain names and tags</li> <li>Null and below detection limit grade values</li> <li>Missing or overlapping intervals</li> <li>Duplicate data</li> </ul> </li> <li>Drill hole data is also validated visually by domain to the geological model.</li> </ul>
Site visits	<ul style="list-style-type: none"> <li>The Competent Person has regularly visited Yandicoogina Oxbow &amp; Billiard South between 2011 and 2015. There were no outcomes as a result of these visits.</li> </ul>
Geological interpretation	<ul style="list-style-type: none"> <li>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.</li> <li>Geological modelling was undertaken by Rio Tinto geologists. The method involves interpretation of down-hole stratigraphy using surface geological mapping, lithological logging data, down-hole gamma data, and assay data.</li> <li>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.</li> <li>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.</li> <li>The geological model is sub-divided into domains and both the composites and model blocks are coded with these domains.</li> </ul>
Dimensions	<ul style="list-style-type: none"> <li>The mineralisation is part of the Yandicoogina Channel Iron Deposit.</li> <li>The Yandicoogina Oxbow deposit extends 4.5 km along strike. The paleochannel is saucer-shaped in cross section and between 450 m and 750 m wide. The main ore zone is 40 - 50 m thick in the centre of the channel, thinning towards the margins.</li> <li>The Yandicoogina Billiard South deposit extends 7.4 km along strike. The paleochannel is saucer-shaped in cross section and between 450 m and 850 m wide. The main ore zone is 40 - 60 m thick in the centre of the channel, thinning towards the margins.</li> </ul>
Estimation and modelling techniques	<ul style="list-style-type: none"> <li>The estimation process was completed in Maptek Vulcan software.</li> <li>Mineralised domains were estimated by ordinary kriging and non-mineralised domains were estimated by inverse distance weighting to the first power.</li> <li>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.</li> <li>All domains were estimated with hard boundaries applied.</li> <li>Statistical analysis was carried out on data from all domains. High yield limits were applied to TiO<sub>2</sub> for the mineralised domains within Oxbow; and Mn within GVL and, MgO and CaO for the mineralised GVL and GVL domains within Billiard South. The limits differed for different domains and were selected based on histograms and the spatial distribution of the respective assay values.</li> <li>Grades are extrapolated to a maximum distance of approximately 750 m from data points.</li> <li>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.</li> </ul>
Moisture	<ul style="list-style-type: none"> <li>All Mineral Resource tonnages are estimated and reported on a dry basis.</li> </ul>
Cut-off parameters	<ul style="list-style-type: none"> <li>The criteria for Mineral Resources were that geology must either be mixed clay and pisolite or hard competent pisolite.</li> </ul>

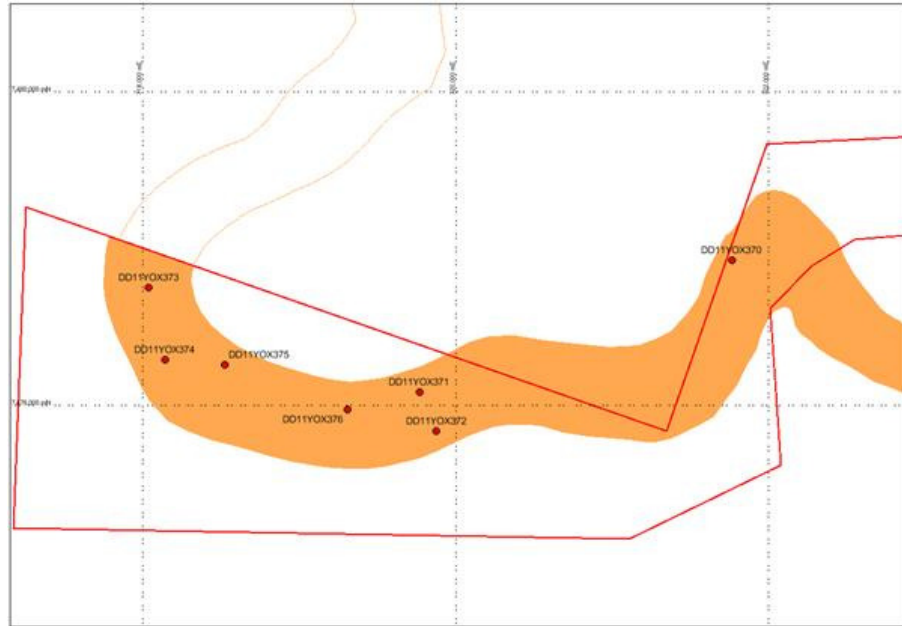


Mining factors or assumptions	<ul style="list-style-type: none"> <li>Development of this Mineral Resource assumes mining using standard Rio Tinto Iron Ore equipment and methods similar to other Rio Tinto Iron Ore operations. The assumed mining method is conventional truck and shovel open pit mining at an appropriate bench height. Mining practices will include grade control utilising blast hole data.</li> </ul>
Metallurgical factors or assumptions	<ul style="list-style-type: none"> <li>It is assumed that a mixture of dry and wet crush and screening processes used by Rio Tinto Iron Ore will be applicable for the processing of the Yandicoogina Oxbow and Billiard South deposits.</li> </ul>
Environmental factors or assumptions	<ul style="list-style-type: none"> <li>Rio Tinto Iron Ore has an extensive environmental and heritage approval process. A detailed review of these requirements has been undertaken in a recent Feasibility Study. No issues were identified that would impact on the Mineral Resource estimate.</li> </ul>
Bulk density	<ul style="list-style-type: none"> <li>Gamma-density logs are collected from reverse circulation drill holes.</li> <li>Dry core densities are generated via the following process: <ul style="list-style-type: none"> <li>The core volume is measured in the split and the mass of the core is measured and recorded.</li> <li>Wet core densities are calculated by the split and by the tray.</li> <li>The maximum length of sample for each density measurement is 1.5 m.</li> <li>Core recovery is recorded.</li> <li>The core is then dried and dry core masses are measured and recorded.</li> <li>Dry core densities are then calculated.</li> </ul> </li> <li>Density measured from accepted gamma-density logs is corrected for moisture from diamond drill core twinned with reverse circulation drilling.</li> <li>Dry bulk density was estimated using ordinary kriging in mineralised zones and inverse distance weighted to the first power in waste zones.</li> </ul>
Classification	<ul style="list-style-type: none"> <li>The model has been classified into the categories of Measured, Indicated and Inferred. The determination of the applicable resource category has considered the average data density for the respective domains, the interpreted geological continuity and the estimation statistics.</li> <li>The Competent Person is satisfied that the stated Mineral Resource classification reflects the data spacing, data quality, level of geological continuity and the estimation constraints of the deposits.</li> </ul>
Audits or reviews	<ul style="list-style-type: none"> <li>All stages of Mineral Resource estimation have undergone a documented internal peer review process, which has documented all phases of the process.</li> </ul>
Discussion of relative accuracy/confidence	<ul style="list-style-type: none"> <li>Rio Tinto Iron Ore operate multiple mines in the Pilbara region of Western Australia. The Mineral Resource data collection and estimation techniques used for Yandicoogina Oxbow and Billiard South 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.</li> <li>The accuracy and confidence of the Mineral Resource estimate is consistent with the current level of study (Feasibility).</li> </ul>

## SECTION 4 ESTIMATION AND REPORTING OF ORE RESERVES

Criteria	Commentary
Mineral Resource estimate for conversion to Ore Reserves	<ul style="list-style-type: none"> <li>The Billiard South Mineral Resource estimate was generated in 2015, incorporating 1,722 drill holes for grade on a final drilling grid of 100 m x 50 m. The grade and density estimates were generated using geostatistical spatial analysis and Ordinary Kriging for the mineralised domains.</li> <li>The Oxbow Mineral Resource estimate was generated in 2012, incorporating 514 drill holes for grade on a final drilling grid of 100 m x 50 m. The grade and density estimates were generated using geostatistical spatial analysis and Ordinary Kriging for the mineralised domains.</li> <li>The most recent Mineral Resource estimates together with the latest update of pit designs were used for reporting Ore Reserves.</li> <li>The declared Ore Reserves are for the Yandicoogina Billiard South and Oxbow deposits.</li> <li>Mineral Resources are reported additional to Ore Reserves.</li> </ul>
Site visits	<ul style="list-style-type: none"> <li>The Competent Person has visited Yandicoogina in 2014.</li> </ul>
Study status	<ul style="list-style-type: none"> <li>The Oxbow Feasibility study was completed in 2015.</li> <li>The Billiard South Pre-Feasibility Study was completed in 2015 and the Feasibility Study is in progress.</li> </ul>
Cut-off parameters	<ul style="list-style-type: none"> <li>The cut-off grade for high-grade ore is less than or equal to 1.9% Al<sub>2</sub>O<sub>3</sub> and 6.5% SiO<sub>2</sub>.</li> </ul>
Mining factors or assumptions	<ul style="list-style-type: none"> <li>The Mineral Resource model was regularised to a block size of 25 m E x 25 m N x 5 m RL, which was determined to be the selective mining unit following an analysis of a range of selective mining units. Dilution and mining recovery were modelled by applying the regularisation process to the sub-block geological model.</li> <li>Metallurgical models were applied to the regularised model in order to model products tonnage, grades and plant yields.</li> <li>The pit design is extended to the limit of the channel iron deposit (CID) with due consideration of geotechnical, geometric and access constraints. The pit design was used as the basis for production scheduling and economic evaluation.</li> <li>Conventional truck and shovel mining methods, similar to the existing Yandicoogina operation and other Rio Tinto Iron Ore mines, were selected. The mine has been designed to utilise trucks to transport ore to central processing facilities.</li> <li>Geotechnical design recommendations have been supplied based on geotechnical studies informed by the assessment of seven fully cored and geotechnically logged diamond drill holes in Oxbow, and seven fully cored and geotechnically logged diamond drill holes in Billiard South, both drilled in 2014. This site specific data was supplemented by 19 fully cored and geotechnically logged diamond drill holes from across adjacent Yandicoogina deposits (Junction Central, Junction South West, Junction South East and Billiard South), in 2009, 2010 and 2014 and were also supported by rock strength and RQD information from 38 diamond resource geology holes drilled at Oxbow.</li> <li>The resultant design recommendations are to follow the Basal Clay Conglomerate (BCC) (contour mining) up to a dip of 30 degrees, and then a typical batter berm configuration with inter ramp slope angles varying between 32 and 43 degrees, depending on the local rock mass and structural geological conditions.</li> <li>During the above process, Inferred Mineral Resources were excluded from mine schedules and economic valuations utilised to validate the economic viability of the Ore Reserves.</li> <li>The Oxbow Feasibility and Billiard South Pre-Feasibility Studies considered infrastructure requirements associated with the conventional truck and shovel mining operation including crushing and conveying systems, dump &amp; stockpile locations, maintenance facilities, access routes, explosive storage, water and power.</li> </ul>
Metallurgical factors or assumptions	<p><b>Oxbow</b></p> <ul style="list-style-type: none"> <li>The Oxbow mine has been designed with a dry crush and screen processing facility similar to existing processing facilities at Yandicoogina mining operations. The alternative processing technologies are available for Oxbow; however this has been excluded from this Ore Reserve declaration.</li> <li>Metallurgical core processing followed a well-tested and proven processing methodology that has been utilised for Rio Tinto Iron Ore Yandicoogina process design purposes for decades.</li> <li>During drill campaigns in 2011, a total of 500 m of metallurgical PQ-3 diamond core was drilled. This core formed the basis for metallurgical test work, which informed the study for the design of the processing facility and metallurgical models. The map below show the</li> </ul>

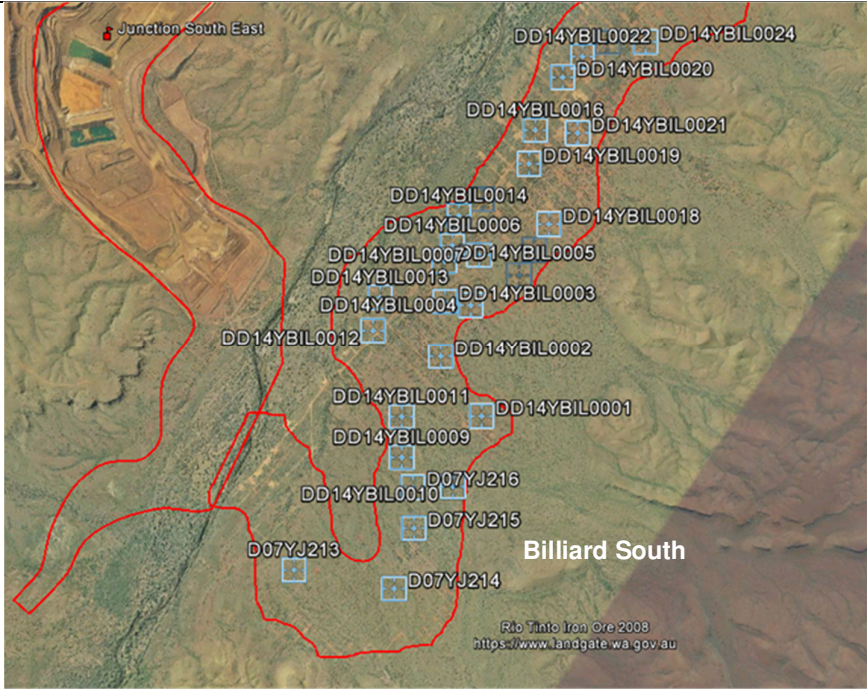
location of these drill holes.



- The diamond drill core test results were utilised to develop metallurgical models representing upper and lower ore domains and were considered representative of the ore body. The metallurgical models predict plant yield, product tonnage and grade parameters for fines product.

#### **Billiard South**

- The Billiard South mine has been designed with wet/dry crush and screen processing facility similar to processing facilities at Yandicoogina mining operations, to process below water table high aluminous ore.
- Metallurgical core processing followed a well-tested and proven processing methodology that has been utilised for Rio Tinto Iron Ore Yandicoogina process design purposes for decades.
- During drill campaigns in 2011 and 2014 a total of 1800 m of metallurgical PQ-3 diamond core was drilled. This core formed the basis for metallurgical test work, which informed the study for the design of the processing facility and metallurgical models. The map below show the location of these drill holes.

	 <ul style="list-style-type: none"> <li>The diamond drill core test results were utilised to develop metallurgical models representing upper and lower ore domains and were considered representative of the ore body. The metallurgical models predict plant yield, product tonnage and grade parameters for fines products.</li> </ul>
Environmental	<ul style="list-style-type: none"> <li>The Oxbow (west) deposit is approved under the Western Australian <i>Environmental Protection Act 1986</i> and the Commonwealth <i>Environment Protection and Biodiversity Conservation Act 1999</i>. Approval for Oxbow (east) is being sought as a non-significant amendment to the existing environmental approvals and is underway.</li> <li>Hamersley Iron – Yandi Pty Limited referred the Yandicoogina Pocket-Billiard South project to the WA Environmental Protection Authority and has been given a level of assessment of a Public Environmental Review under section 38 of the <i>Environmental Protection Act 1986</i>. The project is currently undergoing an environmental impact assessment. The Proposal was also referred to the Commonwealth and determined to be a ‘not controlled’ action under the Commonwealth <i>Environment Protection and Biodiversity Conservation Act 1999</i>. Therefore no further federal environmental assessment is required.</li> <li>A geochemical risk assessment has been completed for the project. The assessment encompasses all material types present at the site, and tests have been conducted in accordance with industry standards. Mining operations at the project pose a low acid mine drainage risk based on current pit designs and the assessment of samples from within the pit locations.</li> </ul>
Infrastructure	<ul style="list-style-type: none"> <li>Access to the site is well established from the Great Northern Highway.</li> <li>Ore will be railed to Rio Tinto’s ports at Dampier and Cape Lambert. The port and railway networks have sufficient capacity to accommodate ore supply from the site.</li> <li>A central hub for all non-process support facilities is located close to the existing Junction Central (JC) pit for ease of access. It is located centrally to the processing plant and accommodation precinct.</li> <li>The Yandicoogina Explosive Facility is located east of the JC pit and is similar to those constructed at other Rio Tinto Iron ore projects in the Pilbara, Western Australia.</li> <li>The Yandicoogina operation is well established with central administration and workshop facilities at JC. The workforce currently operates on a Fly in Fly out (FIFO) model using the Barimunya airport located to the north.</li> <li>Process water will be sourced from groundwater abstracted through the mine dewatering process. Potable water will be sourced from the bore fields servicing the current Yandicoogina operation.</li> <li>Power supply will be derived from the existing distribution system at the Yandicoogina Operation, sourced from the Hamersley Iron power stations in Dampier and Paraburdoo.</li> <li>The existing fuel storage and handling facilities at the site will be upgraded to service the project mining operations.</li> </ul>

	<ul style="list-style-type: none"> <li>The site operation is well established with a permanent village.</li> </ul>
Costs	<ul style="list-style-type: none"> <li>The capital costs are based on relevant Engineering Studies utilising experience from the construction of existing, similar Rio Tinto Iron Ore projects in the Pilbara, Western Australia.</li> <li>Operating costs were benchmarked against similar operating Rio Tinto Iron Ore mine sites.</li> <li>Exchange rates were forecast by analysing and forecasting macro-economic trends in the Australian and World economy.</li> <li>Transportation costs were based on the existing operating experience at Rio Tinto Iron Ore mine sites in the Pilbara, Western Australia.</li> <li>Allowances have been made for royalties to the Western Australian government and other private stakeholders.</li> </ul>
Revenue factors	<ul style="list-style-type: none"> <li>Rio Tinto applies a common process to the generation of commodity price estimates across the group. This involves generation of long-term price curves based on current sales contracts, industry capacity analysis, global commodity consumption and economic growth trends. In this process, a price curve rather than a single price point is used to develop estimates of mine returns over the life of the project. The detail of this process and of the price point curves is commercially sensitive and is not disclosed.</li> </ul>
Market assessment	<ul style="list-style-type: none"> <li>The supply and demand situation for iron ore is affected by a wide range of factors, and as iron and steel consumption changes with economic development and circumstances. Rio Tinto Iron Ore delivers products aligned with its Mineral Resources and Ore Reserves; these products have changed over time and successfully competed with iron ore products supplied by other companies.</li> </ul>
Economic	<ul style="list-style-type: none"> <li>Economic inputs such as foreign exchange rates, carbon pricing, and inflation rates are also generated internally at Rio Tinto. The detail of this process is commercially sensitive and is not disclosed.</li> <li>Sensitivity testing of the Yandicoogina Ore Reserves using both Rio Tinto long-term prices and a range of published benchmark prices demonstrates a positive net present value for the project sufficient to meet Rio Tinto Limited investment criteria.</li> </ul>
Social	<ul style="list-style-type: none"> <li>The Yandicoogina deposits are located within existing tenure Mining Lease (ML) 274SA, which was granted under the <i>Iron Ore (Yandicoogina) Agreement Act 1996</i>.</li> <li>The Yandicoogina deposits and associated infrastructure are located within the Shire of East Pilbara, who has been informed of the proposal to develop the deposits.</li> </ul>
Other	<ul style="list-style-type: none"> <li>Semi-quantitative risk assessments have been undertaken throughout the Oxbow and Billiard South study phases, no critical naturally occurring risks have been identified through the above mentioned risk management processes.</li> </ul>
Classification	<ul style="list-style-type: none"> <li>The Billiard South Ore Reserves consist of 100% Proved Reserves.</li> <li>The Oxbow Ore Reserves consist of 100% Proved Reserves.</li> <li>The Competent Person is satisfied that the stated Ore Reserve classification reflects the outcome of technical and economic studies.</li> </ul>
Audits or reviews	<ul style="list-style-type: none"> <li>No external audits have been performed.</li> <li>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.</li> </ul>
Discussion of relative accuracy/ confidence	<ul style="list-style-type: none"> <li>Rio Tinto Iron Ore operates multiple mines in the Pilbara region of Western Australia. The Ore Reserve estimation techniques utilised for the Oxbow and Billiard South deposits are consistent with those applied at the existing operations. Reconciliation of actual production with the Ore Reserve estimate for individual deposits is generally within 10 percent for tonnes on an annual basis. This result is indicative of a robust Ore Reserve estimation process.</li> <li>Accuracy and confidence of modifying factors are generally consistent with the current level of studies (Billiard South Pre-Feasibility Study and Oxbow Feasibility Study). It is anticipated that the modifying factors for Billiard South will be further refined during the Feasibility Study, which is currently under way.</li> </ul>

**2015 Annual Report Ore Reserve Table, showing line items relating to Yandicoogina upgrade**

	Type (a)	Proved Ore reserves at end 2015		Probable ore reserves at end 2015		Total ore reserves 2015 compared with 2014				Interest %	Recoverable metal
		Tonnage	Grade	Tonnage	Grade	Tonnage		Grade			
						2015	2014	2015	2014		
						millions of tonnes	millions of tonnes	%Fe	%Fe	Marketable product millions of tonnes	
IRON ORE (b)						of tonnes	of tonnes	%Fe	%Fe		
Reserves at Operating Mines											
Hamersley Iron (Australia)											
- Yandicoogina (Pisolite ore HG) (c)	O/P	637	58.5	4	58.8	642	247	58.5	58.7	100.0	642

(a) Type of mine: O/P = open pit (b) Reserves of iron ore are shown as recoverable Reserves of marketable product after accounting for all mining and processing losses. Mill recoveries are therefore not shown.

(c) Hamersley Iron Yandicoogina (Pisolite ore HG) Reserves tonnes increased due to the inclusion of additional pits.