Winchester South Project Table 1

The following table provides a summary of important assessment and reporting criteria used at Winchester South for the reporting of exploration results and coal 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	• A combination of open hole (predominantly for structural definition) and cored (for coal quality (CQ), geotechnical, and gas sampling) have been used.
Drilling techniques	• A total of 1,250 drill holes (133,542m) support the Resource estimate. Cored drilling represents 26% of the total metres and open hole drilling 74%. The drill holes are up to 819m in length and average 104m. The drill holes were all nominally recorded as vertical. Boreholes that deviated by more than 5% were to be re-drilled by contractor. • Coring has predominantly been done using a HQ3-sized (63mm) bit and open hole drilling to an equivalent hole diameter size. In addition 27 large diameter (LD) holes, assumed to be 200mm (8") in diameter, have been drilled.
Drill sample recovery	• Standardised Rio Tinto Coal Australia logging systems are utilised for all drilling logging and sampling. • Core recovery is recorded by the geologist while logging the drill hole. If core recovery for a coal ply is less than 95%, then that section of the hole is redrilled to ensure a representative sample is taken. • Ply samples are checked for representativeness using a theoretical mass that is determined using analysed relative density, sample thickness and core diameter prior to composite definition. • Open hole chip recovery is assessed qualitatively by the rig geologist.
Logging	• Core is geologically and geotechnically logged and open hole chip samples are taken every 1m and logged for lithology changes. Logging for lithology, grainsize, weathering and hardness is conducted using standard dictionary definitions. Colour and any additional qualitative comments are also recorded.. • All core is photographed on both a core table (0.5m increment) and a 5m tray basis. Chips are photographed as laid out by 1m intervals. • All holes are logged using a comprehensive suite of downhole geophysics tools (calliper, gamma, density, neutron, and sonic), with acoustic scanner (for geotechnical assessment) also run on cored holes.
Sub-sampling techniques and sample preparation	• Core sampling is completed at the drill site and based on set of standard criteria (determined by lithology and structure). Samples are bagged at the drill site and then transported to an external accredited laboratory for analysis as a complete hole batch • All samples are weighed, air-dried and then re-weighed before being crushed to a 19mm top size. A rotary splitter is used to divide the sample into portions (¼ for raw coal) and (¾ for wash and clean coal). • CQ analysis is by a three-stage method involving raw analysis on all plies followed by washability and product testing on composite samples as defined by the geologist. • All sample treatment and analysis is conducted according to procedures which adhere to Australian (or International equivalent) standards in a National Association of Testing Authorities certified laboratory.
Quality of assay data and laboratory tests	• A Non-formalised quality assurance/quality control (QA/QC) involving duplicate sample is completed. In addition, Rio Tinto Coal Australia checks laboratory round robin and basic reproducibility tests provided by the primary lab. All results are assessed via cross-plots and statistics for precision and accuracy.
Verification of sampling and assaying	• All CQ sampling and analysis is overseen and checked by other Rio Tinto personnel. • Data transfer from site is covered by an agreed protocol. This system documents primary data, data entry procedures, data verification, and data storage (physical and electronic) into a geological database.

Location of data points	• The topographic surface is derived from Lidar data processed to a vertical accuracy of 0.1m within the mineral development lease (MDL) border by AAM in 2011. The digital topographic model was created in Minescape with an 8m ×8m cell size triangulation at 0.5m decimation. • All surveyed co-ordinates are within Map Grid of Australia 1994 MGA Zone 55. • Drill hole collars were surveyed post drilling by licensed surveyors using differential global positioning system with an accuracy of ±10mm. • Downhole surveying has been undertaken using downhole verticality and calliper tools.
Data spacing and distribution	• Drill hole spacing for open holes is on an equilateral triangle grid of ~500m. For cored holes spacing is on a ~1000m or less equilateral triangle grid for undrilled areas, otherwise infill drilling/redrilling of the first BP program was used. • All core samples are composited within defined seam boundaries.
Orientation of data in relation to geological structure	• The Rangal Coal Measures lying within the MDL are part of the Winchester South syncline. The seams have relatively consistent layering with steeping dips on the limbs. The orientation of drilling is therefore suitable for these stratified deposits.
Sample security	• Core samples taken at the drill site were transported daily to the Winchester South drill camp for storage and placed into a freezer. Once the hole has been completed, the samples are transported to the laboratory via a dedicated courier service.
Audits or reviews	• No external audits have been performed. • Internal Rio Tinto Coal Australia peer and technical reviews have been completed, and are ongoing.

SECTION 2 REPORTING OF EXPLORATION RESULTS

Criteria	**Commentary**
Mineral tenement and land tenure status	• Winchester South is 100% owned by Queensland Coal Pty Ltd, which is owned by Rio Tinto Coal Australia (75%) and Westfield Limited (25%), and is managed by Rio Tinto Coal Australia. • Winchester South is defined by the boundaries of MDL 183 covering 10,952ha. The lease is in good standing.

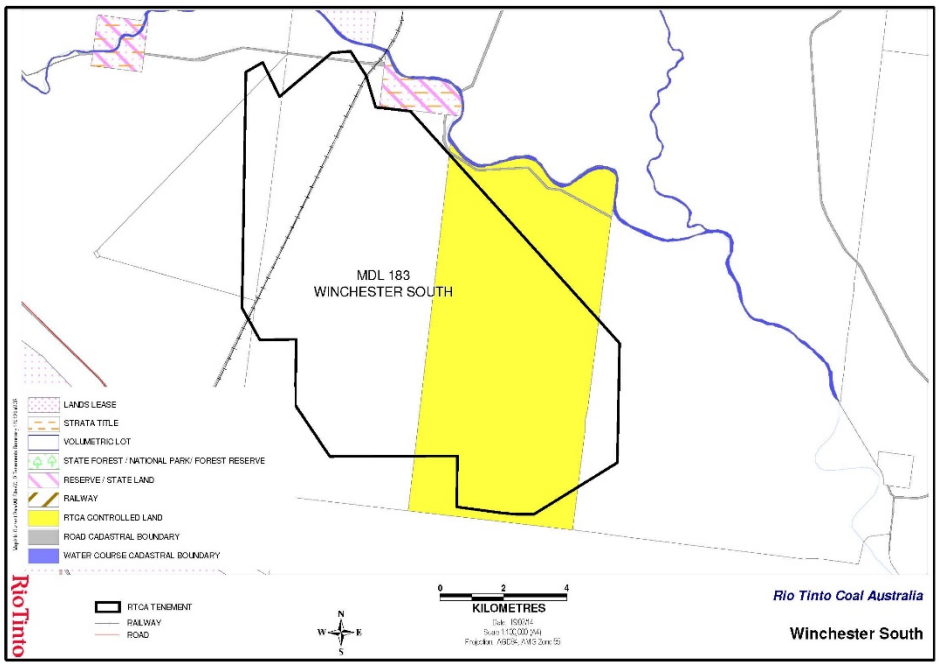


Figure 1 Winchester South tenement boundary

<table>
<tr><td>Exploration done by other parties</td><td>• Only one other exploration programme has been carried out on the tenement by other parties. This was by BP Coal who carried out exploration in 1981. The focus of their exploration programme was to understand the structure, geology, and CQ for a feasibility study on a low volatile thermal product. Drilling was done to ~250m spacing for cored holes and ~500m spacing for cored holes.</td></tr>
<tr><td>Geology</td><td>• Winchester South is located in Queensland near Moranbah in the northern part of the Bowen Basin which contains numerous important coal producing intervals in the Permian stratigraphy. The sequences of economic interest include the Late Permian Rangal Coal Measures and the Moranbah Coal Measures. The main rock types of these sub-groups are sandstone, siltstone with minor stratigraphic layers of conglomerate, and tuffaceous bands.</td></tr>
<tr><td>Drill hole information</td><td>• The table below provides a summary of drill hole data summary for all drilling that has been completed to-date.
<table>
<tr><th></th><th>1981-1982</th><th>2005</th><th>2010–2011</th><th>2013</th><th>2014</th></tr>
<tr><td>Open holes</td><td>825</td><td>11</td><td>107</td><td>0</td><td>1</td></tr>
<tr><td>Cored holes</td><td>204</td><td>12</td><td>73</td><td>6</td><td>11</td></tr>
</table>
• Since the previous resources upgrade in 2009 there have been an additional 200 drillholes added due to new drilling or database updates</td></tr>
<tr><td>Data aggregation methods</td><td>• Ply samples are combined to create composites (for washability and product coal analyses) representing mineable seam working sections.</td></tr>
<tr><td>Relationship between mineralisation widths and intercept lengths</td><td>• Based on drilling techniques and stratigraphy, the coal seam intercepts therefore approximate the true coal thickness.</td></tr>
</table>

Diagrams

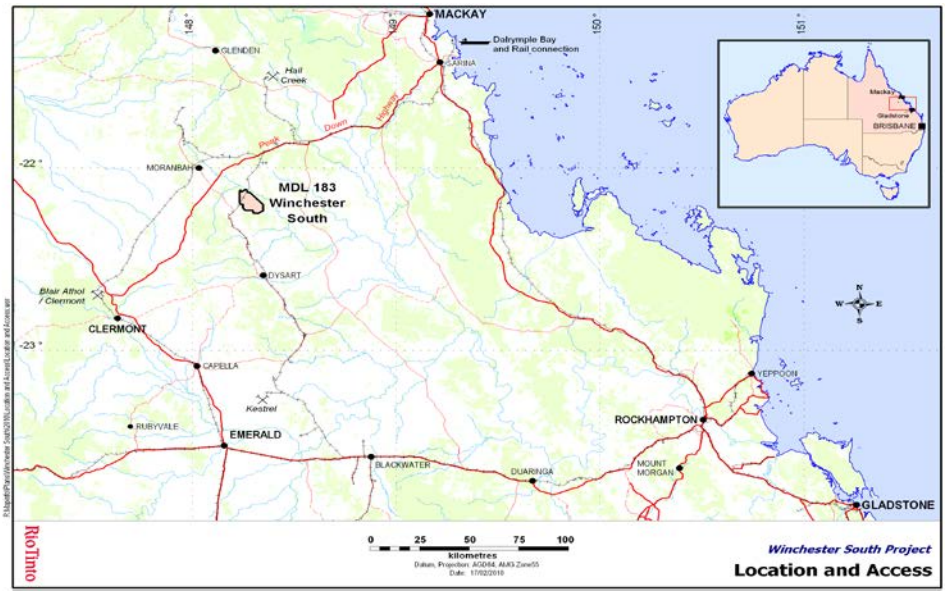


Figure 2 Winchester South location

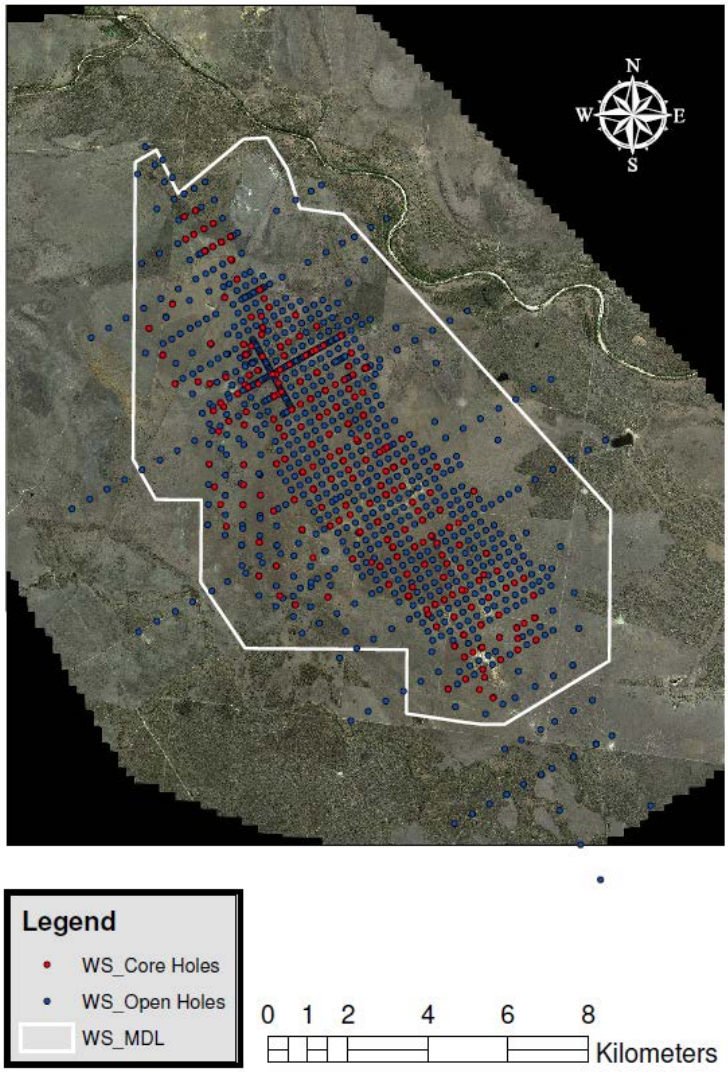


Figure 3 Drill collar locations

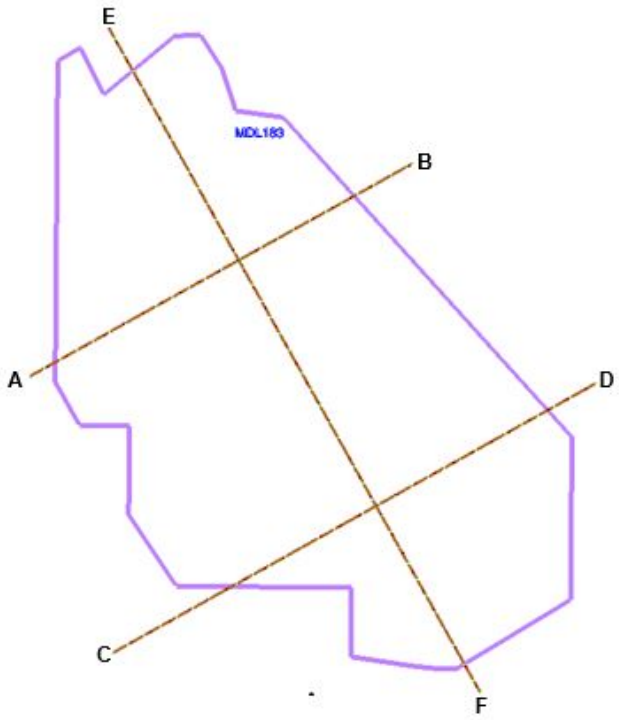
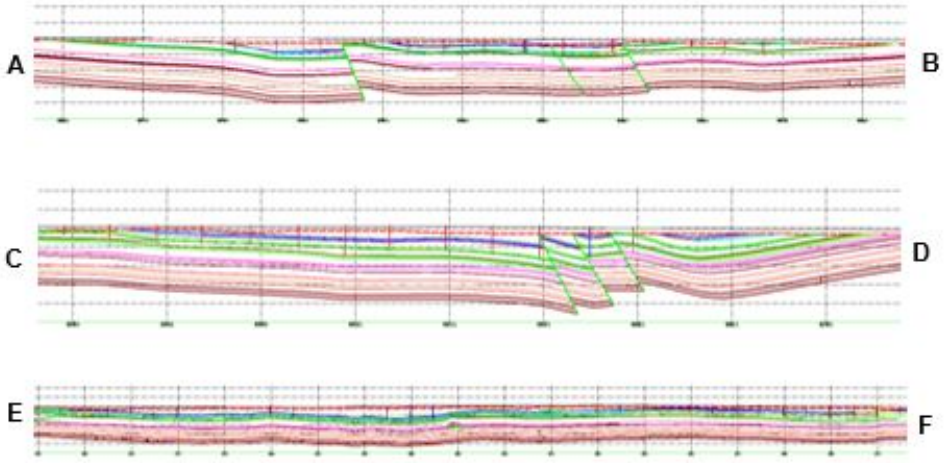


Figure 4 Winchester South cross-section map



Cross-sections A–B and C–D are southwest to northeast / cross-section E–F is northwest to southeast

Figure 5 Winchester South cross-sections

Balanced reporting	• Not applicable. Rio Tinto Coal Australia has not specifically released exploration results for these deposits.
Other substantive exploration data	• In addition to drilling, 2D seismic lines have been completed to identify faults, folds, and possible igneous intrusions.
Further work	• Drilling into the underlying Moranbah Coal Measures for potential underground Resources is ongoing.

SECTION 3 ESTIMATION AND REPORTING OF MINERAL RESOURCES

Criteria	Commentary
Database integrity	• All drill hole data are securely stored in a database (in Brisbane) and are backed up daily. • Data are validated at the drill site and also prior to loading into the database by the responsible geologist. • The database contains automated validation processes which are activated during data loading and prevent un-validated data being loaded.
Site visits	• The Resources Competent Person visited the site in 2015.
Geological interpretation	• The deposit is well known and tabular for the Rangal Coal Measures with most major structures defined. New drill holes along with seismic has supported and refined the model. The current interpretation is thus considered to be robust.
Dimensions	• The deposit trends 17km northwest to the southeast following the Winchester South syncline and is 9km thickness in width. The deposit extends to a depth of ~200m below the topographic surface.
Estimation and modelling techniques	• The Resource model was last modelled in 2013 was undertaken using resource modelling software (version 5.4). For structural modelling a Finite Element Method (FEM) interpolator is used and for CQ an inverse distance squared interpolator is used. All surfaces and coal qualities are interpolated into grids with 50m × 50m node spacing. • The models are of the coal seams only with waste modelled by default and not assigned any grade. Resource estimates are therefore of the coal plies only. • Modelling is completed on an iterative basis with checking of cross-sections and contours of structural. Database values are posted on contours as a further check. A volume/tonnage check between the model and its predecessor are completed as a final validation.
Moisture	• All tonnages are estimated on an in situ moisture basis, which is determined to be 5%.. This assumption was based on Hail Creek mine.
Cut-off parameters	• Nominally coal is washed to produce three types of products: o 7.5% air-dried ash coking product o 10% air-dried ash coking product o 18-25% air-dried ash thermal product. • For all products, product moisture is 11%. Air-dried moisture is quoted at a 3% moisture basis. • Economic resources are defined by a “break even” ($0 margin) Lerchs-Grossman optimised shell for opencast coal – this effectively sets the maximum depth or lowermost seam considered. For underground resources the limits are based on either an order of magnitude study or standard set of rules (i.e. coal below “break even” shell, less than 600m deep and greater than 1.8m thick).
Mining factors or assumptions	• Development of this Mineral Resource estimate assumes mining using standard Rio Tinto Coal Australia equipment. The assumed mining method is overburden removal via draglines, and conventional truck and shovel open-cut coal mining.
Metallurgical factors or assumptions	• It is assumed that a combination of density separation (magnetite/water) and fines flocculation processes used by Rio Tinto Coal Australia will be applicable for the processing of Winchester South coal.
Environmental factors or assumptions	• Rio Tinto Coal Australia has an extensive environmental and heritage approval and compliance process. No issues are expected that would impact on the Mineral Resource estimate.
Bulk density	• The Winchester South 2013 Resource model uses average densities to determine coal mass as shown in the table below. **Table 1 Average density values** Seam Density

Upper Leichhardt Seam, L1	1.57
Lower Leichhardt Seam, L2	1.48
Upper Vermont Seam, VU	1.60
Lower Vermont Seam, VML	1.82

- Coal relative density is currently modelled at a 6% in situ moisture basis. Conversion to the in situ moisture basis has been carried out by applying the Preston and Sanders method using the equation:

$$\text{relative density } (\textit{in situ}) = \frac{RD_{ad} * (100 - M_{ad})}{100 + RD_{ad} * (ISM - M_{ad}) - ISM}$$

Where: Rdad = relative density, air-dried basis; Mad = moisture, air-dried basis, ISM = in situ moisture.

Classification	• The classification of the Mineral Resources into varying confidence categories is based on a standardised process of utilising points of observation (PoO) (i.e. drill holes) according to their reliability and value in estimation. The PoO are used to categorise structure and quality continuity (or both) or support continuity. • Radii of influence as determined by geostatistical analysis are then plotted around PoO maps for structure and quality. As there are many plies at Winchester South, seam groups (equivalent to the seam names) were used for categorisation. • Areas of confidence (low, medium, high) are produced from these plots (structure and CQ for each seam group). These are finally combined to produce areas of Measured, Indicated, and Inferred which are used to subdivide the Resource tonnage estimates. • In summary structural radii are 250-650m for high confidence, 500-1,200m for medium and 1,075-2,475m for low; and, for CQ 175-750m radii for high, 550-1350m for medium and 1,200-2,625m for low confidence respectively • The Competent Person is satisfied that the stated Mineral Resource classification reflects the geological controls interpreted and the estimation constraints of the deposits.
Audits or reviews	• No formal audits have been completed on the estimation and reporting of Mineral Resources at Winchester South to-date.
Discussion of relative accuracy/ confidence	• Rio Tinto Coal Australia operates multiple mines in New South Wales (NSW) and Queensland (QLD). The Mineral Resource data collection and estimation techniques used for the Winchester South deposit are consistent with those applied at other deposits which are being mined, and is indicative of a robust process. • Accuracy and confidence of Mineral Resource estimation estimate has been accepted by the Competent Person.