

Hunter Valley Operations Table 1

The following table provides a summary of important assessment and reporting criteria used at Hunter Valley Operations (HVO) 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.

SECTION 1 SAMPLING TECHNIQUES AND DATA

Criteria	Commentary
Sampling techniques	<ul style="list-style-type: none"> A combination of open hole (predominantly for structural definition) and cored (for coal quality (CQ), geotechnical and gas sampling) have been used.
Drilling techniques	<ul style="list-style-type: none"> A total of 9,557 drill holes (585,019m) support the Resource estimate. Cored drilling represents 34% of the total metres and open hole drilling 66%. The drill holes are up to 616m in length and average 67m. The drill holes were all nominally recorded as vertical - boreholes which deviated by more than 5% from vertical of the total drill holes length the drill hole were redrilled. Coring has predominantly been done using a HQ3-sized (63mm) bit and open hole drilling to an equivalent hole diameter size. In addition a limited number of large diameter (LD) holes have been drilled: 103 holes at 101mm (4") and six holes at 200mm (8") diameter sizes.
Drill sample recovery	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Core is geologically and geotechnically logged and open hole chip samples are taken every 1m and logged for lithology changes. Logging for lithology, grain size, weathering and hardness is conducted using standard dictionary definitions. Colour and any additional qualitative comments are also recorded. All core is photographed on the core table (0.5m increment) and in 4m (HQ) or 5m (N/PQ) trays. Chip samples are photographed in 1m intervals. All holes are logged using a comprehensive suite of downhole geophysics tools (calliper, gamma, density, neutron, sonic) with acoustic scanner (for geotechnical assessment) also run on cored holes.
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> 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 an 11.2mm top size. A rotary splitter is used to divide the sample into portions available for further CQ analysis. 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	<ul style="list-style-type: none"> Non-formalised quality assurance/quality control (QAQC) involving duplicate samples is completed and, in addition, Rio Tinto Coal Australia checks laboratory round robin and basic reproducibility tests provided by the primary laboratory. All results are assessed via cross-plots and statistics for precision and accuracy.

Verification of sampling and assaying	<ul style="list-style-type: none"> All CQ sampling and analysis is overseen and checked by Rio Tinto personnel. Data transfer from site is covered by an agreed protocol. This system documents primary data, data entry procedures, data verification, data storage (physical and electronic) into a geological database.
Location of data points	<ul style="list-style-type: none"> The topographic surface is derived from a combination of Lands and Property Management Authority 10m contours which originated from the early 1980s, and recent (September 2008) 2m contours derived from an airborne LiDAR survey. Drill hole collars and mine survey data were also used. The digital terrain model was created with a 50m x 50m cell size triangulation at 0.2m decimation. All surveyed coordinates are within Map Grid of Australia 1994 MGA (MGA94) Zone 56 projection using datum GDA94. Drill hole collars were surveyed post drilling by licensed surveyors using differential global positioning system with an accuracy of $\pm 10\text{mm}$. Downhole surveying has been undertaken using downhole verticality and calliper tools since 2007, including attempted resurvey of earlier drill holes. Overall 84% of the diamond drilling metres have been surveyed downhole over the entire drill hole length but only 40% of the total open hole drilling metres have been downhole surveyed.
Data spacing and distribution	<ul style="list-style-type: none"> Drill hole spacing for core holes is on an equilateral triangle grid of 500m or less. For open holes spacing is on a 250m or less equilateral triangle grid. All core samples are composited within defined seam boundaries.
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> The coal measures show a relatively consistent layering and are not subject to steep dips. The orientation of drilling is therefore suitable for flat lying stratified deposits.
Sample security	<ul style="list-style-type: none"> Core/chip samples are taken at the drill site and then transported daily to the locked HVO core shed for storage. Once the hole has been completed the samples are transported to the laboratory via a dedicated courier service.
Audits or reviews	<ul style="list-style-type: none"> HVO has had one audit completed in the past five years. The audit was conducted in September 2011 by the Quantitative Group Pty Ltd (report: <i>Rio Tinto Corporate Assurance Resources and Reserves Internal Audit Report. Hunter Valley Operations. 2.1</i>). The review concluded that the fundamental data collection techniques are appropriate.

SECTION 2 REPORTING OF EXPLORATION RESULTS

Criteria	Commentary
Mineral tenement and land tenure status	<ul style="list-style-type: none"> Tenements are 100% owned by Coal and Allied Industries Limited, which is in turn a 100% owned subsidiary of Rio Tinto Coal Australia. HVO contains numerous leases and licences (see Figure 1, note that this is schematic only): <ul style="list-style-type: none"> 2 x authorisations covering 533ha 3 x consolidated coal leases covering 1782.5ha 5 x coal leases covering 247ha 1 x coal mining lease covering 2162ha 6 x exploration leases covering 5849ha 14 x mining leases covering 6924.47ha 5 x mining lease applications covering 251.96ha 1 x assessment lease application covering 430ha All leases containing Resources are in good standing.

HVO Tenements	Projection: MGA Z56	Date: 03/02/14	Project: HVO
Location: Hunter Valley Operations	Contour Interval: N/A	Plan By: SC	Layout: A3
Council: Singleton, Muswellbrook	Source: N/A	Version: 10	Our Ref: P_UH_Tenement
Summary_101117.wor			

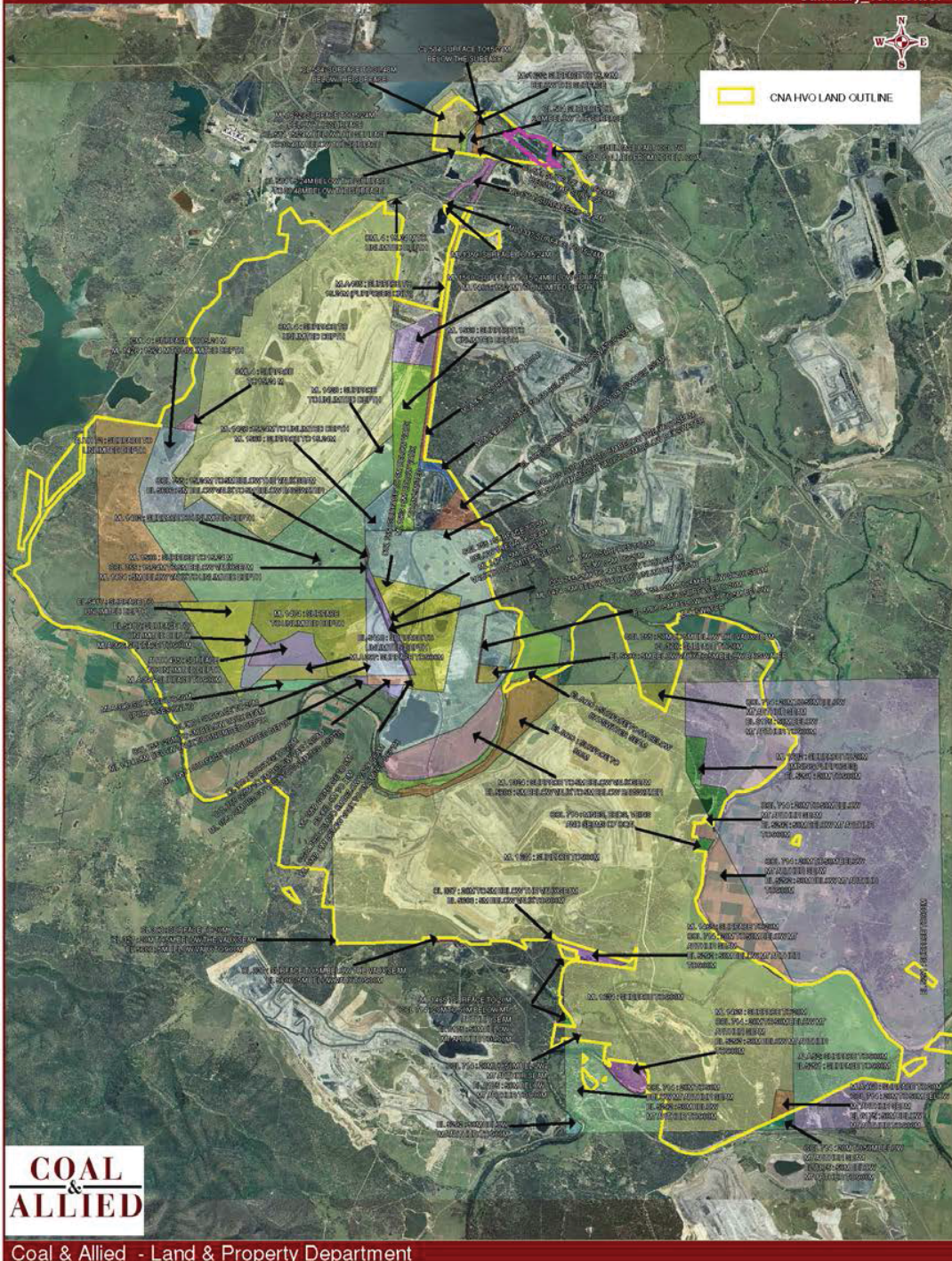


Figure 1 HVO mining and exploration titles

Exploration done by other parties	<ul style="list-style-type: none">HVO is an amalgamation of several previously independent mines: Howick, Hunter Valley, and Lemington. Each mine was developed at different times resulting in variable exploration summarised as follows:<ul style="list-style-type: none">Howick open-cut (west pit) – exploration initiated in the 1940s and 1950s undertaken by the Joint Coal Board and the Bureau of Mineral Resources. Drilling to 200m–300m spacing for cored holes and 50m–150m spacing for open holes.Hunter Valley No.1 & 2 mines – exploration initiated in the 1960s and early 1970s by the New South Wales (NSW) Department of Mines. Drilling to 212m spacing for cored holes and 100m spacing for open holes.Lemington South open-cut and underground mines – exploration initiated in the 1970s by the Joint Coal Board. Drilling to 200m– 800m spacing for cored holes.																																																																																																																																																																																																																					
Geology	<ul style="list-style-type: none">HVO is located in the Hunter Coalfield in the northern part of the Sydney Basin which contains numerous important coal producing intervals in the Permian stratigraphy. The Late Permian Wittingham Coal Measures are further sub-divided into the Vane sub-group (West and Mitchell Pits to the north of HVO) and the Jerrys Plains sub-group (Carrington, Cheshunt and Riverview Pits to the central and south parts of HVO). These sub-groups host the main coal deposits mined at HVO. The main rock types of these sub-groups are sandstone, siltstone and conglomerate, which occur with subordinate coal and tuffaceous claystone.																																																																																																																																																																																																																					
Drill hole information	<ul style="list-style-type: none">Drilling data summary since consolidation of the mines into one operation (as HVO): <table><tr><th></th><th>Area/year</th><th>2002</th><th>2003</th><th>2004</th><th>2005</th><th>2006</th><th>2007</th><th>2008</th><th>2009</th><th>2010</th><th>2011</th><th>2012</th><th>2013</th><th>2014</th><th>2015</th></tr><tr><td rowspan="6">Open Holes</td><td>Carrington</td><td>43</td><td>20</td><td>31</td><td></td><td></td><td></td><td></td><td></td><td></td><td>11</td><td>102</td><td></td><td></td><td></td></tr><tr><td>Cheshunt</td><td>23</td><td>7</td><td>2</td><td>6</td><td>16</td><td>43</td><td></td><td>3</td><td>19</td><td>51</td><td></td><td>2</td><td>15</td><td></td></tr><tr><td>West</td><td>37</td><td></td><td></td><td>25</td><td></td><td>9</td><td>134</td><td>38</td><td></td><td></td><td>6</td><td>5</td><td>4</td><td></td></tr><tr><td>Mitchell</td><td>13</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>43</td><td></td><td></td><td></td></tr><tr><td>Riverview</td><td>84</td><td></td><td></td><td>8</td><td></td><td>29</td><td></td><td>26</td><td>14</td><td>47</td><td></td><td>24</td><td>33</td><td></td></tr><tr><td>Southern</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>12</td><td>25</td><td></td><td></td><td></td></tr><tr><td rowspan="7">Cored Holes</td><td>Carrington</td><td></td><td>1</td><td>7</td><td></td><td></td><td></td><td>17</td><td>4</td><td></td><td>5</td><td>40</td><td></td><td></td><td></td></tr><tr><td>Cheshunt</td><td>10</td><td>1</td><td></td><td>5</td><td>5</td><td>8</td><td></td><td>4</td><td>8</td><td>8</td><td>4</td><td></td><td>2</td><td></td></tr><tr><td>West</td><td>4</td><td>7</td><td></td><td>8</td><td></td><td>3</td><td>7</td><td>4</td><td>4</td><td>3</td><td>9</td><td></td><td>2</td><td></td></tr><tr><td>Mitchell</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>5</td><td>1</td><td></td><td></td><td></td></tr><tr><td>Riverview</td><td></td><td></td><td></td><td>1</td><td>1</td><td></td><td></td><td>1</td><td>15</td><td>8</td><td>2</td><td></td><td></td><td></td></tr><tr><td>Auckland</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>18</td><td></td><td></td><td>6</td></tr><tr><td>Southern</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>15</td><td></td><td></td><td></td><td></td></tr></table> <ul style="list-style-type: none">Since the previous resources upgrade in 2014 there have been an additional 2,153 drillholes added due to 6 new holes drilled but mostly to a major legacy database update		Area/year	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Open Holes	Carrington	43	20	31							11	102				Cheshunt	23	7	2	6	16	43		3	19	51		2	15		West	37			25		9	134	38			6	5	4		Mitchell	13										43				Riverview	84			8		29		26	14	47		24	33		Southern										12	25				Cored Holes	Carrington		1	7				17	4		5	40				Cheshunt	10	1		5	5	8		4	8	8	4		2		West	4	7		8		3	7	4	4	3	9		2		Mitchell										5	1				Riverview				1	1			1	15	8	2				Auckland											18			6	Southern										15				
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Data aggregation methods	<ul style="list-style-type: none">Ply samples are combined to create composites (for washability and product coal analyses) representing mineable seam working sections.																																																																																																																																																																																																																					
Relationship between mineralisation widths and intercept lengths	<ul style="list-style-type: none">Based on drilling techniques and stratigraphy, the coal seam intercepts approximate the true coal thickness.																																																																																																																																																																																																																					

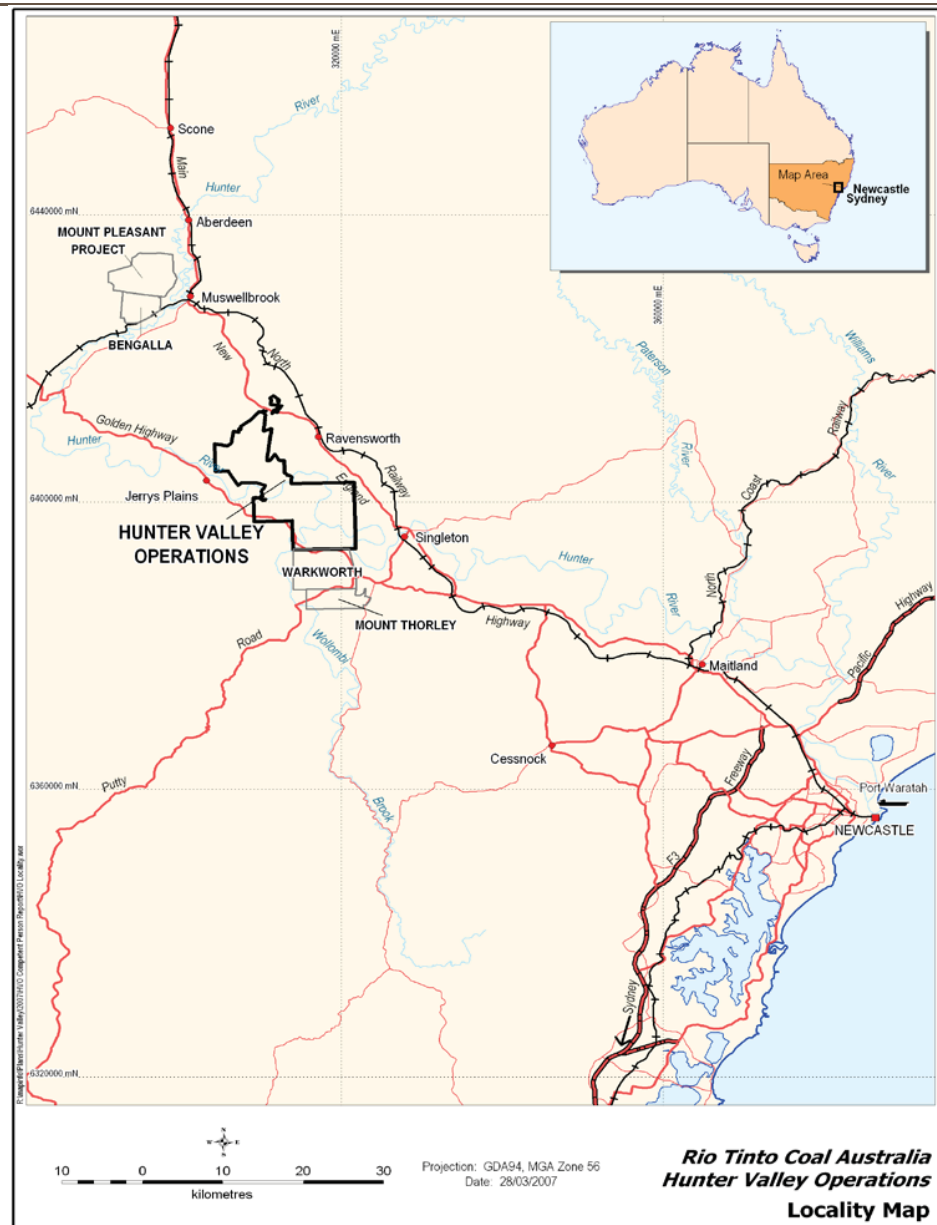
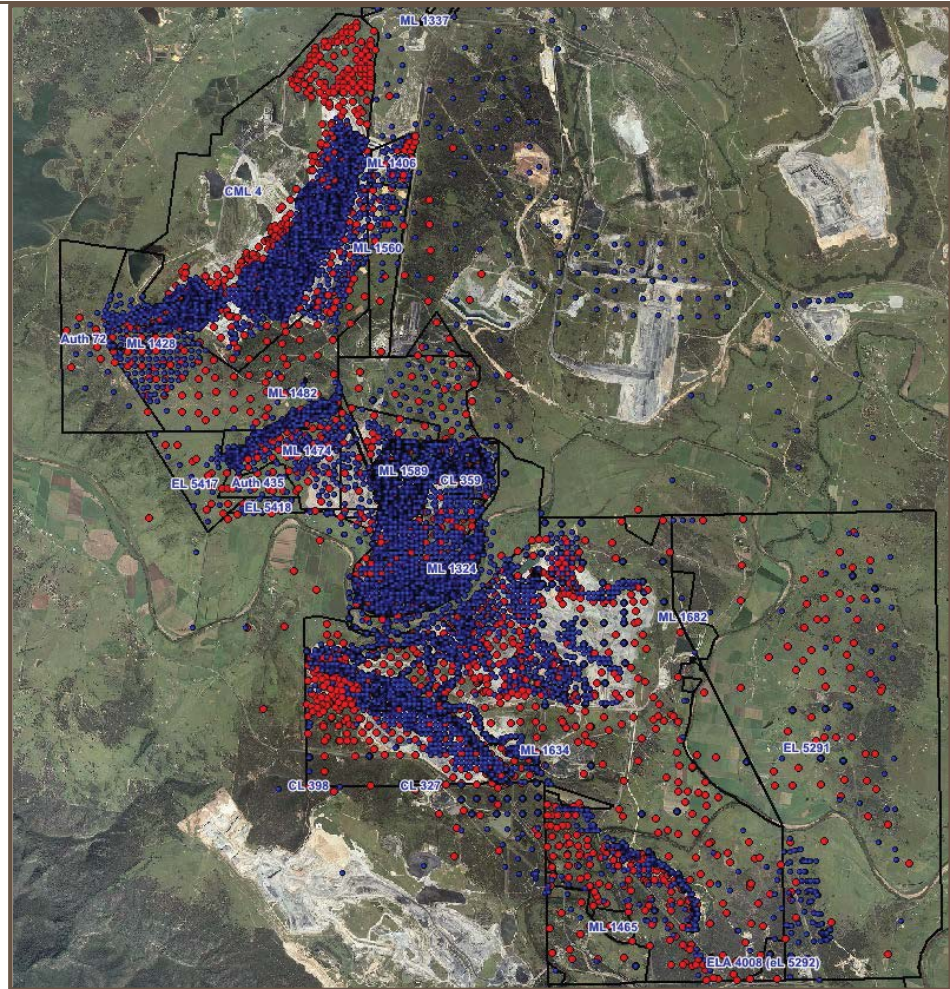
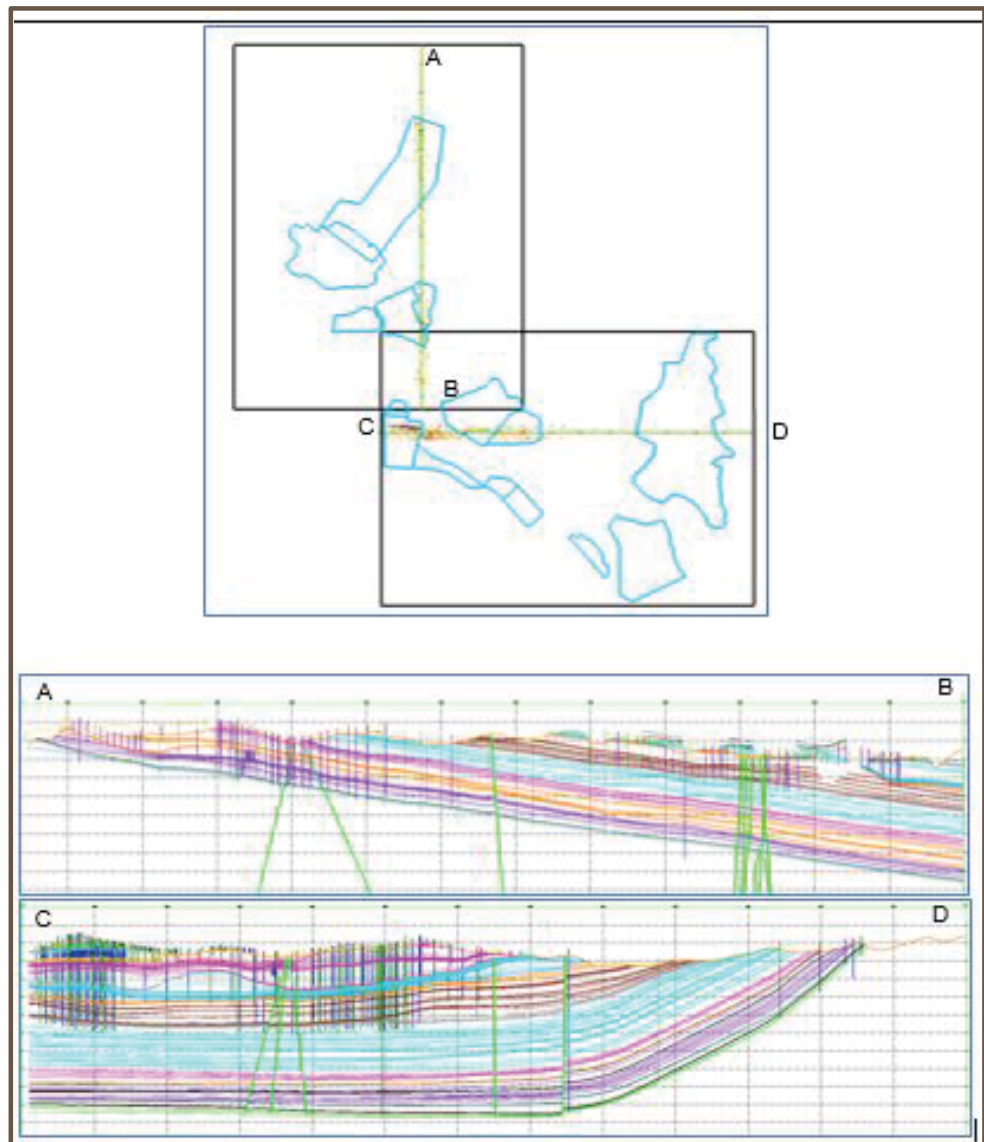


Figure 2: HVO location



Open holes (blue); cored holes (red)

Figure 3: Schematic drill collar locations



Cross-section A-B is north to south / cross-section C-D is west to east

Figure 4: Schematic HVO cross-sections

Balanced reporting	<ul style="list-style-type: none"> Not applicable. Rio Tinto Coal Australia has not specifically released exploration results for these deposits.
Other substantive exploration data	<ul style="list-style-type: none"> In addition to drilling, resistivity surveys, ground and airborne magnetic surveys have been completed to identify faults, dykes, and alluvial limits.
Further work	<ul style="list-style-type: none"> Drilling for both pre-production and strategic brown/green fields drilling is ongoing and analytical (CQ, geotechnical, gas) results will be ongoing. Greenfields exploration includes investigations in the Auckland and Southern areas. In addition regional scale exploration and evaluation are being made to assess the underground potential of HVO and the adjoining areas (Mount Thorley Warkworth (MTW) directly south of HVO).

SECTION 3 ESTIMATION AND REPORTING OF MINERAL RESOURCES

Criteria	Commentary
Database integrity	<ul style="list-style-type: none"> All drill hole data are securely stored in a database which is duplicated on multiple servers (HVO and Singleton) and is 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, during data loading and prevents invalid data being loaded.
Site visits	<ul style="list-style-type: none"> The Resources Competent Person visited HVO in 2015.
Geological interpretation	<ul style="list-style-type: none"> The deposit is well known and tabular with all major structures and coal seam continuity (including coal quality) and limits (i.e. LOX, sub-crop and igneous intrusions) defined. Infill drilling, mining exposure and mapping have supported and refined the model. The additional legacy data added has confirmed this and the current interpretation is thus considered to be robust.
Dimensions	<ul style="list-style-type: none"> The deposit trends 20km northwest to southeast and is 10km in width. The deposit extends to a depth of 515m below the topographic surface.
Estimation and modelling techniques	<ul style="list-style-type: none"> Modelling was completed using resource modelling software. For structural modelling a proprietary fine 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 x 50m node spacing. The model is of the coal seams only with waste modelled by default. Resource estimates are therefore of the coal seams only and restricted on a whole seam group basis only. Modelling is completed on an iterative basis by checking cross-sections and contours of structural and CQ attributes. 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. The previous resources upgrade in 2014 was based on two separate resource models (north and south of the Hunter River) – these models have been merged for this update. The underground estimates are based on a separate model which spans HVO south of the Hunter River and the Mount Thorley Warkworth deposit directly adjacent to the south. This model only considers the Vane sub-group.
Moisture	<ul style="list-style-type: none"> All tonnages are estimated on an in situ moisture basis, which is determined as air-dried moisture content plus 4%. This number is derived using the assumption that the run of mine (ROM) and in situ moisture are comparable. At HVO, the run of mine (ROM) moisture content is not well understood due to the lack of sampling equipment on the feed to the coal handling and preparation plant (CHPP). At MTW, which has such equipment, the ROM moisture is typically 4% higher than the air-dried moisture content. Since the coals mined at HVO and MTW are similar rank and largely from the same sequence, the same relationship is assumed to be valid at HVO.

Cut-off parameters	<ul style="list-style-type: none"> Nominally coal is washed to produce a semi-soft coking coal product at 9% air-dried ash or to three types of thermal products (11% air-dried ash, 13% air-dried ash and 18% air-dried ash). For all products, product moisture is at 9%. Air-dried is quoted at a 2.5% moisture basis. A minimum coal thickness of 0.25m and density of 1.8 g/m³ are applied as cut-off parameters for reporting coal. 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	<ul style="list-style-type: none"> 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. Mining practices utilise detailed extraction plans to effectively manage grade control. These extraction plans are generated from real time blast hole drill compliance monitoring, in-pit visual inspections and survey monitoring and control.
Metallurgical factors or assumptions	<ul style="list-style-type: none"> A combination of density separation (magnetite/water) and fines flocculation processes are used for the processing of HVO coal.
Environmental factors or assumptions	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Certain boreholes samples have only true relative density (RD) analysis; some have both apparent relative density (ARD) and true RD, and most have ARD. Relationships between ARD and RD were determined from the paired sets of ARD and RD analyses. The relationships used to populate the ply by ply data with missing ARDs or RDs are: $RD(ad) = 1.042 \times ARD(ad) - 0.018$. The in situ relative density (i.e. the density of materials at an in situ moisture basis) is calculated using the Preston and Sanders equation: $RD2 = [RD1 \times (100 - M1)] / [100 + RD1 \times (M2 - M1) - M2]$ Where RD1 is true RD (ad), M1 is moisture (ad) and M2 is the in situ moisture (M1 + 4).
Classification	<ul style="list-style-type: none"> The classification of the Mineral Resources into varying confidence categories is based on a standardised process of utilising points of observation (PoO). Drill holes are assessed according to their reliability and value in estimation. The PoOs are used to categorise structure and quality continuity. Radii of influence are then plotted around PoO maps for structure and quality. The radii of influence were determined by consideration of the observed variability in structure and CQ for seam groups, and by examining histograms and statistics of ash content of seam groups. As there are many plies at HVO, seam groups (equivalent to the seam names) were used for categorisation. Areas of confidence (low, medium, high) are produced from these plots (structure, CQ for each seam group) and finally these are combined to produce areas of Measured, Indicated and Inferred Resources which are used to subdivide the tonnage estimates. In summary structural radii range 175-250m for high confidence, 350-500m for medium and 1,400-2,000m for low; and, for CQ 450-500m radii for high, 900-1,000m for medium and 2,700-3,000m for low confidence respectively. The ranges reflect variability within the nineteen seam groups modelled at HVO. 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	<ul style="list-style-type: none"> In September 2011 an audit into the modelling and Resource estimation process at HVO

	<p>was completed (report: <i>Rio Tinto Corporate Assurance Resources and Reserves Internal Audit Report. Hunter Valley Operations. 2.1</i>).</p> <ul style="list-style-type: none"> The outcome of this audit was overall a satisfactory rating with a number of recommendations made and acted upon by Rio Tinto Coal Australia.
Discussion of relative accuracy/ confidence	<ul style="list-style-type: none"> Rio Tinto Coal Australia operates multiple mines in NSW and Queensland. The Mineral Resource data collection and estimation techniques used for the HVO deposit are consistent with those applied at other deposits which are being mined. Reconciliation of actual production with the Mineral Resource estimates for the existing operational deposits are generally within 3% for tonnes. This result is indicative of a robust process. Accuracy and confidence of Mineral Resource estimate has been accepted by the Competent Person.

SECTION 4 ESTIMATION AND REPORTING OF ORE RESERVES

Criteria	Commentary
Mineral Resource estimate for conversion to Ore Reserves	<ul style="list-style-type: none"> A 3D gridded Resource model of topography, structure and quality are used for in situ Resource definition. Mine design strips and blocks are applied to the in situ Resource model to generate the raw Reserves used to create a separate mine schedule database. The mine schedule database also reflects working sections or seam aggregations, mining methods and associated loss and dilution impacts. The mine schedule database is used as the basis for Ore Reserves reporting. Mineral Resources are exclusive of Ore Reserves. Declared Ore reserves are for the open pit operation only.
Site visits	<ul style="list-style-type: none"> The Reserves Competent Person visited HVO in 2015.
Study status	<ul style="list-style-type: none"> HVO is an operating mine project. The reportable Ore Reserve is based on the life of mine (LOM) plan and has determined a mine plan that is technically achievable and economically viable, and that material modifying factors have been considered.
Cut-off parameters	<ul style="list-style-type: none"> Periodic (<3yrs) pit optimisation work used to define pit shells is conducted using Rio Tinto economics prices and an estimate of unit operating costs including a \$/ROMt allowance for sustaining capex. This process was conducted in 2015 and led to the inclusion of additional pits in the LOM plan and ultimately additional reserves. For annual JORC Reserves reporting purposes, detailed mine design and schedules are constructed to generate detailed cash flow schedules. This work includes identifying the mining sequence, equipment requirements, and incremental and sustaining capital. A discounted cashflow analysis is conducted to re-assess under the latest economic assumptions the potential Reserves that remain net cashflow positive.

Mining factors or assumptions	<ul style="list-style-type: none"> • The HVO mine utilises dragline, and truck and shovel for waste movement, while coal is loaded using a combination of loaders and excavators with haulage to the ROM hopper undertaken using rear dump trucks. The operations are supported by additional equipment including dozers, graders, and water carts. • All pit end walls have benched and battered designs based on the existing operation with allowances made for increasing depth of mining. The design provides for mining roadways and catch benches. • Working section or seam aggregation logic pre-determines what is defined as mineable coal by applying working section tests based on minimum coal thickness of 30cm, and a maximum raw ash of 50% on an air-dried basis. • Coal loss and dilution factors are also applied and vary by the equipment type uncovering the various coal seams (i.e. excavator/truck versus dragline). Typical roof and floor coal loss thickness ranges from 5cm–25cm. Typical roof and floor waste dilution thickness ranges from 3cm–7cm. • LOM plans for strategic planning purposes may contain Inferred Resources, provided that the LOM plan would not be compromised by non-inclusion of this coal. Inferred Resources included in LOM plans retain this designation and are not referred to as Reserves. Neither are they reported in either JORC or Securities and Exchange Commission compliant reserve statements. • The HVO LOM valuation has been tested removing the inferred and unclassified coal from the schedule to ensure they still remain compliant.
Metallurgical factors or assumptions	<ul style="list-style-type: none"> • HVO has three CHPPs: Hunter Valley CHPP, West Pit CHPP and the Newdell CHPP. • Only Hunter Valley CHPP and West Pit CHPP are operational, with Newdell CHPP used purely as a coal handling plant and no longer used to wash coal. • The processes used are standard for the coal industry and so are well tested technologies. • All samples are wash/cut-point tested and so the representativeness of test work undertaken is implicit in the Resource classification status. • In-seam dilution is included in sample testing. • Detailed reconciliation during the course of 2015 updated predicted yield. The updated yield was validated against operating performance. • Ore Reserve estimation is based on existing product specifications.
Environmental	<ul style="list-style-type: none"> • HVO has a large number of current mining and exploration titles. • All the various mining leases across HVO are defined by a 21 year consent limit. This consent limit is particular to each mining lease, and as such leases are constantly being renewed. There is a dedicated tenements manager to ensure the application for lease renewal occurs on time. All necessary Government approvals are expected to be received within the timeframes anticipated in the LOM plan. • Coarse rejects are dumped within the mine overburden dumps, while the fines coal washery rejects are stored within dedicated tailings dams. Rejects material and completed tailings dams must be covered by at least 3m of inert waste rock material. • Overburden waste rock has low acid forming potential.
Infrastructure	<ul style="list-style-type: none"> • HVO is an operating site with existing infrastructure in place to support the operation. The current LOM requires sustaining capital only to maintain the existing infrastructure.

Costs	<ul style="list-style-type: none"> Based on detailed annual operating plan (AOP) process. Beyond AOP, sustaining capex based on \$/ROMt plus equipment replacements and additions required to deliver the mine plan. First principles estimating and aligned with AOP. Budget prices for major consumables and labour. Adjustments are made for energy. Commodity prices are supplied by Rio Tinto Economics and Markets Team (RTEM), based on: expected demand, current supply, known expansions, and expected incentivised supply. Exchange rates are supplied by RTEM. Transport charges are obtained from coal chain team based on existing contracts and expected tonnages. State Government royalties, based on current NSW royalty rates. Additional Reserves were added due to an improved operational cost focus, leading to a demonstrated reduction in unit cost over 2013-2015 periods. Incorporation of legacy data into the underlying geological model improved classifications leading to additional reserves.
Revenue factors	<ul style="list-style-type: none"> 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.
Market assessment	<ul style="list-style-type: none"> The supply and demand situation for coal is affected by a wide range of factors, and coal consumption changes with economic development and circumstances. Rio Tinto Coal Australia delivers products aligned with its Mineral Resources and Ore Reserves, these products have changed over time and successfully competed with coal products supplied by other companies.
Economic	<ul style="list-style-type: none"> 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.
Social	<ul style="list-style-type: none"> A small parcel of reserves has been omitted due to the HVO South Aboriginal Cultural Heritage Restricted Access Area 2. This area was been removed from the reserve schedule valuation. Rio Tinto Coal Australia established the Upper Hunter Valley Cultural Heritage Working Group as a consultation and management process to negotiate cultural heritage issues with local Aboriginal communities. As part of releasing a ground disturbance permit on site, authority must be gained to destroy/remove sites of cultural interest. This involves archaeological mapping and removal of artefacts prior to ground disturbance. There are no sites of European cultural heritage at HVO.
Other	<ul style="list-style-type: none"> Semi-quantitative risk assessments have been undertaken throughout the LOM and Reserve phases. No material naturally occurring risks have been identified through the above mentioned risk management processes.
Classification	<ul style="list-style-type: none"> The Ore Reserves consist of 77% Proved Reserves and 23% Probable Reserves, this is an increase in proven reserves from 67% Proved in 2014. The Competent Person is satisfied that the stated Ore Reserve classification reflects the outcome of technical and economic studies.

Audits or reviews	<ul style="list-style-type: none"> HVO has had one audit completed in the past five years. The audit was conducted in September 2011 by the Quantative Group Pty Ltd (report: <i>Rio Tinto Corporate Assurance Resources and Reserves Internal Audit Report. Hunter Valley Operations. 2. 1</i>). The review concluded that the fundamental data collection techniques are appropriate and consistent with previously audited HVO models.
Discussion of relative accuracy/ confidence	<ul style="list-style-type: none"> Rio Tinto Coal Australia operates multiple mines in Queensland and New South Wales. The Ore Reserve estimation techniques utilised for HVO are consistent with those applied across the other operations. Reconciliation of actual production with the Ore Reserve estimate for the existing operations is generally within 5% for tonnage and grade. This result is indicative of a robust Ore Reserve estimation process. Accuracy and confidence of modifying factors are generally consistent with the current operation.