

18 AUGUST 2016

TABLE 1 – CHECKLIST OF ASSESSMENT AND REPORTING CRITERIA (THE JORC CODE, 2012 EDITION)

The following table provides a summary of important assessment and reporting criteria used for the Werris Creek Mine in accordance with the Table 1 Checklist of Assessment and Reporting Criteria, in The Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves (The JORC Code) 2012 Edition. Criteria in preceding sections apply, where applicable, to the succeeding sections.

Section 1 – Sampling Techniques and Data

Criteria	Explanation
<i>Sampling Techniques</i>	<p>Coal intervals have been determined by sinking vertical drill holes and creating systematic geological descriptions of the strata encountered by visual determination. Data from mining operations in the area were also used. Drill hole types were:</p> <ul style="list-style-type: none"> Non-cored where field geological logs are initially created by describing chip samples recovered at 1 m intervals. Coal seam intercept depths are initially estimated to within about 0.5 m. Coal seam roof and floor depths are adjusted to match downhole geophysical logs with horizon boundaries reported to 0.10 m, and non-coal bands within seams to about 0.05 m. Cored where strata is geologically logged in the field to within 0.01 m, and field logging checked against downhole geophysical logs where available. <p>Coal seams intersected by non-cored drill holes were not sampled for quality analysis. Coal seams intersected by cored drill holes were visually logged in detail by seam brightness profiling. Sample intervals within a seam were determined after examination of the geological and geophysical logs, and the sampling scheme adopted for surrounding drill holes. All coal and in-seam stone bands were sampled. The standard downhole geophysical logging suite is Calliper, Natural Gamma and Density. These logs are not used to estimate coal quality parameters for resource calculations, and are only used for the identification of coal seam roof/floor levels, the identification of stone bands within the seams or to confirm the presence of igneous intrusions in non-cored holes. All full seam intersections are considered potential working sections. Resources were determined on full seam sections. Core recovery was maximised by:</p> <ul style="list-style-type: none"> Using triple tube core barrels Using minimum HQ core diameter <p>Employing experienced coal drilling contractors</p>
<i>Drilling techniques</i>	<p>All holes are drilled vertical. Drill core was not oriented. 4C core (100 mm diameter). HQ Triple Tube (HQ TT) core (61 mm diameter). Percussion and rotary open-hole methods using air circulation.</p>
<i>Drill sample recovery</i>	<p>Chip samples were not used to assess coal quality. Recent drill core is logged in accordance with Whitehaven Coal procedure. Coal intervals are logged in detail by describing its coal brightness profile. Volumetric recoveries determined by the analysing laboratory are primarily used to assess core recoveries. Volumetric recoveries are recalculated following adjustments using downhole geophysical logs made to sample length for broken core intervals. Where volumetric core recoveries are not available (e.g. historical data), linear core recoveries are used. Core losses are recorded as a logged interval within WHC geological logs. They are estimated following adjustment against downhole geophysical logs. HQ TT wireline coring is used to maximise sample recovery. Coal quality full seam points of observation used in this report are those where:</p> <ul style="list-style-type: none"> Volumetric recoveries were 80% or more In the absence of volumetric recovery values, a linear recovery of 90% or more. <p>There is no known relationship between coal quality and sample recovery.</p>
<i>Logging</i>	<p>Core and chip samples were logged by geologists experienced in coal resource investigation and evaluation using standardised codes and WHC procedures. The standard and level of detail is considered appropriate for mineral resource estimation. Drill core has been cleaned of surface contaminants before logging by washing with clean water and a soft brush. Borehole cores are stored in core trays in a secure facility until sampled. All holes were wireline logged if possible (i.e. not blocked). The minimum suite of logs is gamma, density,</p>

Criteria	Explanation
	and calliper. All core was photographed (digitally, since 2006). Total aggregate length of cored holes in the geological model is 6 470 m, in 51 drillholes. Total aggregate length of non-cored holes in the geological model is 22 863 m, in 294 drillholes.
<i>Sub-sampling techniques and preparation</i>	Chip samples were not used to assess coal quality. Full cores were used for coal quality testing (all core taken). Laboratory sample preparation, sub-sampling and quality control procedures were ensured by using NATA accredited commercial labs employing recognised QA procedures and following Australian Standards for coal testing. No large diameter testing results are included in the coal quality database.
<i>Quality of assay data and laboratory tests</i>	Sample preparation, sub-sampling and quality control procedures ensured by using commercial labs employing recognised QA procedures and following Australian Standards for coal testing. Samples were split and reserves retained where sufficient mass remained after testing. Coal quality was not estimated from geophysical measurements. Standards, blanks, duplicates, external laboratory checks have not been used by WHC. Acceptable levels of accuracy and precision are maintained by using commercial labs that are regularly benchmarked by external auditors against ISO 17025. These labs employ regular internal and external blind proficiency programs to provide a demonstration that results are controlled (may not have occurred for historic testing).
<i>Verification of sampling and assaying</i>	Coal intersections used in the geological model were verified by geophysical measurements obtained by wireline logging, carried out by an independent contractor, and more recently by digital photographs. Coal intersection depths and seam correlations have been validated by independent reviewers/auditors and/or alternative company personnel (Database Geologist). Twinned holes are not used. Data acquisition and verification protocols are in place. Drillhole collar, lithology and basic raw coal quality data is stored in a LogCheck database and exported to a Ventyx Minescape GDB database for modelling. Other coal quality data may be imported directly into the GDB database. Source field records, lab reports, core photographs, survey data etc. are stored in electronic form on the Whitehaven Coal network, and hard copy in borehole folders at the company's Gunnedah office. The moisture basis of coal quality data may have been adjusted. Values stored in the GDB database are on an air dried basis.
<i>Location of data points</i>	Borehole collars were surveyed by a Registered Surveyor, using either triangulation or Real Time Kinematic differential GPS methods. Three boreholes, either without unweathered seam intersections or already mined through, have co-ordinates derived from handheld GPS. Surveyor's Reports are not available for some boreholes, however every effort was made to verify borehole locations from old reports etc. The grid system used is the Map Grid of Australia (MGA) Zone 56 based on the Geocentric Datum of Australia 1994 (GDA94) values. Older survey data may have been converted from ISG. Topographic control is provided by a LiDAR survey dated 31 March 2016 and the March 2016 end of month mine survey.
<i>Data spacing and distribution</i>	Many boreholes intersect only part of the sequence having been spudded stratigraphically below one or more seams, or were not drilled deep enough to intersect lower seams. Borehole spacing therefore needs to be considered on a seam-by-seam basis, but in general varies from <20 m for LOX line holes on coal G to ~300 m in the northern part of the basin. The average borehole spacing over the majority of the remainder of the basin is <100 m. Cored holes (coal quality data points) are spaced at <500 m. The data spacing and distribution is considered by the Competent Person to be sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied. Where coal intersections have been sampled in multiple sections per seam, compositing of samples, on a length x RD basis, has been applied.
<i>Orientation of data in relation to geological structure</i>	All boreholes have been drilled vertically. Seam dip within the deposit vary from approximately 35° around the margins of the basin to relatively flat lying in the centre. The orientation of data in relation to geological structure is not believed to have introduced sampling bias due to the geological modelling methods.
<i>Sample security</i>	Drill core stored in a secure facility until sampled. Sampling completed in accordance with WHC coal quality sampling procedure. All samples delivered to NATA registered laboratories. Laboratory results are reviewed and validated against sampled intervals to check sample integrity. Historical procedures were verified by Competent Person where available.
<i>Audits or reviews</i>	WHC standards and procedures for logging and sampling were reviewed and updated in July 2015. The borehole database was audited in 2013 by Mr John Rogis. Boreholes drilled since the last resource report were audited by the Competent Person, in June 2015, and

Criteria	Explanation
	adjustments made in the database where necessary. The geological model used in this report was validated by the Competent Person, using reports, tables, contour plans and cross-sections.

Section 2 – Reporting of Exploration Results

Criteria	Explanation
<i>Mineral tenement and land tenure status</i>	The original Development Consent for the Werris Creek Open Cut mine was granted on 18 February 2005. This consent, as modified, was replaced by Project Approval PA10_0059 on 25 Oct 2011. Mining Lease ML1563 was granted in 2005 for 21 years. Mining Leases ML1671 & 1672 were granted in 2012 for 21 years. The current Mining Operations Plan expires on 30 November 2022. There are no historical sites, wilderness or national parks within the project area, and no native title claims. All property overlying the resource is owned by Whitehaven Coal.
<i>Exploration done by other parties</i>	Limited exploration by the operators of Werris Creek Colliery and regional work by officers of the then Department of Mineral Resources is acknowledged and properly referenced in reports. Stratigraphy is as proposed in Dawson, Coxhead & McMinn, 2006.
<i>Geology</i>	Stratiform bituminous coal deposit of Cisuralian (early Permian) age that unconformably overlies basement. Multiple coal seams are preserved in a closed synclinal structure with dips up to 35° near subcrop. Deposit intersected by multiple faults with throws up to 7 m. Igneous intrusions and multiple dykes are known to affect the deposit.
<i>Drill hole information</i>	Information from 319 drill holes has been used in the evaluation of coal resources in the project area, with information from 69 holes excluded as they are variously: <ul style="list-style-type: none"> • Inaccurate/unverified location; • No geophysical log; • Abandoned/redrilled holes; • Monitoring bores. Notwithstanding the inclusion of these data, the Competent Person does not believe that exclusion would detract from the coal resources.
<i>Data aggregation methods</i>	Coal intersections may have been sub-sampled as either ply or sub-ply samples, and compositing of samples, on a length x Relative Density basis, may have been applied. Where quoted coal quality is for the full seam. Grade cut-offs have not been applied to exploration results in the database. Generally, carbonaceous material in excess of 40–50% ash is recognised in the field and sampled separately or not sampled. Where available, analyses in excess of the resource cut-off of 35% may be included in the modelled data.
<i>Relationship between mineralisation widths and intercept depths</i>	All drillholes were (nominally) vertical. The dip of the strata in the project area is up to 35°. Coal thicknesses quoted are for downhole intercept lengths, which may have been exaggerated slightly by seam dips. Coal resource modelling and estimation takes this effect into account.
<i>Diagrams</i>	Drillhole Location Plan is appended.
<i>Balanced reporting</i>	There is no preferential reporting of results.
<i>Other substantive exploration data</i>	Geotechnical, groundwater, ground magnetic and geochemical studies have been completed.
<i>Further Work</i>	There is an ongoing annual drilling program for each mining strip, carried out ahead of the pre-strip operation. Additional cored holes will be required to increase confidence in grade continuity for areas in the north and at depth. Additional LOX line and structure definition drilling will be required in some areas.

Section 3 – Estimation and Reporting of Mineral Resources

Criteria	Explanation
<i>Database integrity</i>	Borehole collar locations and RL's were checked against surveyors' reports, field records (handheld GPS) and the Digital Terrain Model. Lithological logs and coal intersection depths were reconciled with geophysical wireline logs. Coal quality data were cross-checked against lab reports and sample depths were correlated with the lithological database. Data acquisition, validation and entry of into the database is completed as per WHC Procedures (refer to Section 1 above). All survey, lithological and raw coal quality data are compiled in a LogCheck CoalLog database.
<i>Site visits</i>	The Competent Person has made frequent visits to the site, and has regular consultations with the Mine Geologist and other technical staff. The most recent visit was on the 10 th of May 2016.
<i>Geological interpretation</i>	The geological interpretation is based on reports from the mine, surface mapping of outcrop, ground magnetic surveys and borehole data. The drillhole database is extensive and the geological structure is well understood for exposure in current mine operations making an alternative interpretation is highly unlikely. The main factor affecting coal seam continuity is the interplay of seam dip, depth of weathering and surface topography which determines seam subcrop. The structure of the deposit, a closed syncline of relatively shallow depth, obviates the need to truncate the resource estimate along strike or at depth. Faulting and intrusions are present, and may be widespread than currently known. These structures are main factors affecting the geometry and grade continuity of the coal seams. Most seams show consistent continuity of grade. Seam specific influences include the consistent, predictable development of a stone band within a seam to form a seam split, some regional trends of deterioration and also locally developed stone lenses which are mainly responsible for the bullseyes in the ash contours.
<i>Dimensions</i>	The maximum length of the resource is ~2.9 km, maximum width is ~1.1 km, and maximum depth approximately 200 m.
<i>Estimation and modelling techniques</i>	The geological model was developed by the Competent Person, using Ventyx Minescape software. A full description of the modelling process and parameters is included in the main body of the Report. The current estimate is an update to the previous Report dated August 2015. There is a history of resource reports for Werris Creek dating back to 2005. There are no known deleterious elements of economic significance. There is no assumption of selective mining. Full coal thickness roof to floor is modelled for all seams. The deposit is sufficiently characterised by drilling to allow the chosen modelling parameters to operate freely without interpreted geological controls such as dummy boreholes or extrapolated survey data. The resource model is cut by either the base of weathering grid or the mined surface. A maximum raw ash content of 35% (ad) has been imposed as a resource cut-off. There is a high degree of repeatability in the resource estimates prepared each year since 2005. Acquisition, validation and entry of data is per WHC Procedures (refer to Section 1 above). The geological model is validated by generating and inspecting reports, tables, cross sections, contour plans and comparisons with posted drillhole values.
<i>Moisture</i>	The basis of the tonnage estimate is in situ moisture (Mis). Mis was estimated for each seam using the "Meyers" model based on non-linear multivariable analysis (Meyers et al 2003). An average value of 12% Mis is used for the Resource estimate.
<i>Cut-off parameters</i>	The cut-offs selected allow for maximisation of the reserve potential of the deposit. It must be emphasised that during the reserve estimation and production scheduling process more rigorous, practical cut-offs will be imposed. A 50 m barrier around the abandoned Werris Creek Colliery underground workings in Coals D & E. Within this polygon, it is assumed that 60% of in situ coal remains in pillars, barriers and top coal based on the dimensions of exposed headings and an estimate of the extraction ratio based on the Record Tracing. A minimum coal thickness cut-off of 0.3 m. Maximum raw ash content of 35% (ad). Seam subcrop against the weathering surface. The open cut void at 31 March 2016.
<i>Mining factors or assumptions</i>	It is planned that the resource will be mined by open cut methods, in a similar configuration and using similar equipment to the current operation.
<i>Metallurgical factors or assumptions</i>	Only raw coal variables are modelled. There is no coal preparation plant on site, only stockpiling and crushing facilities. It is planned that the coal will continue to be mined cleanly and blended to saleable specifications, as has been the case to date.
<i>Environmental factors or</i>	The entire deposit is covered by an Environmental Assessment. Required Project Approval

Criteria	Explanation
<i>assumptions</i>	and Mining Operations Plan (refer to Section 2 above), and the necessary environmental licences are in place (refer to the Whitehaven Coal website whitehavennews.com.au for details).
<i>Bulk density</i>	Air dried relative density (Standard RD) was gridded, using SRD values determined for each core sample and composited on a seam-by-seam basis. For each seam average SRD was adjusted to an in situ basis (RDis) by applying the “Preston-Sanders” (Preston & Sanders, 1993) equation, using a global value for in situ moisture (Mis) derived using the “Meyers” method.
<i>Classification</i>	Resource classification confidence categories have been determined through an assessment of geological features, seam structure, mining activities, and Point of Observation (PoO) spacing. The minimum criteria for coal quality PoO are: Minimum analysis RD and ash, Geophysical log, and Linear core recovery >90% or Volumetric core recovery >80%. The minimum criteria for coal structural PoO are: Validated seam floor and thickness and Geophysical log. The result reflects the Competent Person’s view of the deposit.
<i>Audits or reviews</i>	This resource estimate update is based on the geological model used for the 2015 resource estimate. No changes were made to the geological model, or estimation and reporting criteria, with the exception of accounting for depletion of the resource by production in the twelve months since the previous report.
<i>Discussion of relative accuracy/confidence</i>	An informed but qualitative judgement of the accuracy of the global resource estimate, and for individual seams, is that it is generally within +/-10% confidence limits. The following exceptions are noted: <ul style="list-style-type: none"> For the Black Seam (BL) +/- 20% error is estimated due to the irregular weathering and oxidation profile. Variations in coal quality in this seam may not be fully reflected in the existing core samples. For Coals D & E (Indicated category only) +/-20% error is estimated due to the uncertainty introduced by past underground mining. For Coal G +/-20% error is possible due to potential thinning and subcrop onto basement highs. Reconciliation exercises are carried out by Whitehaven personnel and were available to the Competent Person.

Section 4 – Estimation and Reporting of Ore Reserves

Criteria	Explanation
<i>Mineral Resource estimate for conversion to Ore Reserves</i>	The Mineral Resource estimate used as the basis for this Coal Reserves Statement is described in the document “Coal Resource Report for the Werris Creek Coal Project, ML1563; ML1672, NSW, Australia” prepared by Mr. Ben Thompson, Whitehaven Coal Limited, August 2016. The Competent Person, Mr. Thompson, has sufficient expertise that is relevant to the style of mineralisation and type of deposit and activity to qualify as a Competent Person as specified under the JORC Code and is a member of the Australian Institute of Mining and Metallurgy. The Resources Statement was compiled in accordance with The JORC Code 2012 Edition. The Coal Resources reported are inclusive of the Coal Reserves.
<i>Site visits</i>	A site visit to the Werris Creek Mine was undertaken by the Reserves Competent Person (“CP”) in 2015. The outcome of this visit was observation of the Project area to better understand location, environmental, social, groundwater and existing infrastructure consideration. The CP visited the nearby WHC-owned Mines and the existing Gunnedah CHPP and train loading facility. A site visit was not undertaken in 2016 as part of the preparation of this Report as the CP believed there had been no material change in site conditions since the 2015 site visit.
<i>Study status</i>	Werris Creek is an operating mine and the Modifying Factors have been informed by operational experience. As such, the level of confidence in the data and assumptions exceed those of a Prefeasibility Study. WHC last completed a Life of Mine Plan for the mine in 2013. WHC has undertaken considerable work in ROM coal reconciliation, the results of which have been reflected in the LOM Plan Modifying Factors.
<i>Cut-off parameters</i>	A 35% (ad) ROM ash cut-off has been applied to the Reserve. No additional cut-off has been applied based on ROM ash.

Criteria	Explanation
<i>Mining factors or assumptions</i>	<p>Margin Ranking, pit design and LOM planning have been used as the basis of converting Coal Resources to Coal Reserves.</p> <p>The mining method is a conventional truck and excavator mining method with primarily in-pit dumping of waste. This method is proven at the mine and considered appropriate for future planning based upon geology and strip ratio.</p> <p>The Werris Creek deposit is a synclinal basin structure. The basal coal seam forms the base of the pit up to the base of weathering layer. WHC has received geotechnical advice regarding the stable slope design criteria within the weathered zone.</p> <p>WHC completed a margin rank on the deposit as part of the 2013 LOM planning process. The results indicated that the entire basin is economic to the G Seam Floor. The Reserves CP confirmed this result through break even strip ratio analysis with updated cost and revenue inputs.</p> <p>The mining factors used were:</p> <ul style="list-style-type: none"> - Minimum coal mining thickness of 0.5 m; - Minimum parting mining thickness of 0.3 m; - Overall geological loss of 9% and mining loss of 3%; - For coal >1m in thickness: <ul style="list-style-type: none"> • Mineable coal section roof loss of 0.15 m; • Mineable coal section floor loss of 0.1 m; • Mineable coal section roof dilution of 0.02 m; • Mineable coal section floor dilution of 0.03 m; - For coal ≤1m in thickness: <ul style="list-style-type: none"> • Mineable coal section roof loss of 0.03 m; • Mineable coal section floor loss of 0.03 m; • Mineable coal section roof dilution of 0.02 m; • Mineable coal section floor dilution of 0.02 m; - The quality of diluting material is relative density of 2.4 t/bcm, and ash of 74% (ad); and - In situ moisture assumed to be 12%. ROM moisture is assumed to be 12%. <p>All necessary infrastructure is in place and operational.</p>
<i>Metallurgical factors or assumptions</i>	<p>Werris Creek is currently operating and produces ROM coal Products</p> <p>Coal Handling Plant is currently operating and utilises well tested technology</p> <p>The deleterious elements Fe and CaO are present in higher concentration in certain seams at Werris Creek but it is expected that these can be blended down in final products. As such, no allowance has been made for deleterious elements in the Reserves estimate.</p> <p>Last dot point is not applicable for coal</p>
<i>Environmental</i>	<p>Werris Creek has the necessary environmental approvals in place for the current operations.</p> <p>Waste rock characterisation results and operational experience indicate that the waste does not require special placement requirements or procedures in the dumps.</p>
<i>Infrastructure</i>	All necessary infrastructure is in place and operational.
<i>Costs</i>	<p>All major infrastructure is in place at Werris Creek. The primary ongoing capital requirements are for equipment replacement and this is included in the economic model.</p> <p>All operating costs were based the 2015 Actuals and 2016 Werris Creek 3 year budget estimates provided by WHC and include allowances for royalties, commissions, mining costs, ship loading and administration</p> <p>Current long-term exchange rate assumptions were provided by WHC.</p> <p>Transport charges are based on actual contracted prices.</p> <p>Revenue assumptions and product coal benchmark specifications were provided by WHC for the 3 year forecast and the long term estimate was sourced by RPM from the April 2016 Consensus forecast.</p> <p>RPM reviewed all costs and they are considered reasonable.</p>
<i>Revenue factors</i>	<p>The long term thermal coal price is based on the April 2016 Consensus Forecast. The long term PCI prices are as per the WHC Long Term estimates. These assumptions are considered reasonable for the purposes of estimating Reserves.</p>
<i>Market assessment</i>	<p>A detailed Market Study has not been carried out specifically for Werris Creek however markets are well established for the mine's product coal blends. WHC blend product coal from its mines in the Gunnedah region to meet product specifications prior to shipment through the Port of Newcastle. This allows WHC a lot of flexibility in preparing shipments.</p> <p>WHC typically produce three main products:</p>

Criteria	Explanation
	<ul style="list-style-type: none"> - Thermal at approx. 11-15% ash (ad); - PCI at approx. 6-8% ash (ad); and - SSCC at approx. 6% ash (ad); <p>Based upon these products and specifications, RPM anticipates no foreseeable issues in demand for these products.</p>
<i>Economic</i>	<p>The inputs to the economic analysis of the Werris Creek Mine are the Project derived capital and operating cost estimates outlined in the "Costs" section of Table 1. The source of the inputs is real and the confidence satisfactory. The economic modelling is in real terms and a range of discount rates between 6% and 10% have been used in assessing NPV.</p> <p>The NPV results produced from economic modelling generated positive and acceptable NPV's for all discount rates and the Project is considered economic from an NPV stand-point. The NPV at 8% discount rate has been assessed for variations of +/- 20% in the key value drivers of revenue, operating costs, exchange rate and capital costs. Positive NPV results were achieved for all sensitivity cases assessed. The project is most sensitive to changes in revenue and operating cost and least sensitive to changes capital.</p>
<i>Social</i>	WHC has key stakeholder agreements in place.
<i>Other</i>	All mining projects operate in an environment of geological uncertainty. RPM is not aware of any other potential factors, legal, marketing or otherwise, that could affect the operations viability.
<i>Classification</i>	<p>Classification of Ore Reserves has been derived by considering the Measured and Indicated Resources and the level of mine planning. Coal Reserves are classified as Proved for Measured Resources and Probable for Indicated Resources, as the mine is currently operating and the level of mine planning is considered adequate to support this level of certainty in the reserves estimate.</p> <p>There is no Inferred coal within the pit shell at Werris Creek.</p> <p>The result reflects the Competent Persons view of the deposit.</p>
<i>Audits or reviews</i>	Internal peer review and reconciliation by RPM of the Reserves estimate has been completed.
<i>Discussion of relative accuracy/ confidence</i>	<p>The pit shell is supported by approximately 84% of Measured Coal Resources.</p> <p>The basis of the cost estimate is the WHC 2015 Werris Creek operating costs and the 2016 budget forecasts.</p> <p>Coal Handling Plant and infrastructure is in place and operating</p> <p>Analysis of the coal quality has been undertaken by independent laboratories working under international standards of method and accuracy. Werris Creek produces ROM coal products. The level of accuracy will continue to be dependent on the ongoing update of the geological model and monitoring of the Modifying Factors affecting the coal estimate.</p> <p>Geotechnical studies have been completed</p> <p>Internal peer review and reconciliation by RPM of the Reserves estimate has been completed.</p> <p>Dot point 2 is not applicable for coal</p> <p>WHC have an ongoing reconciliation process aimed at testing the appropriateness of the assumed Modifying Factors for the mine</p>

