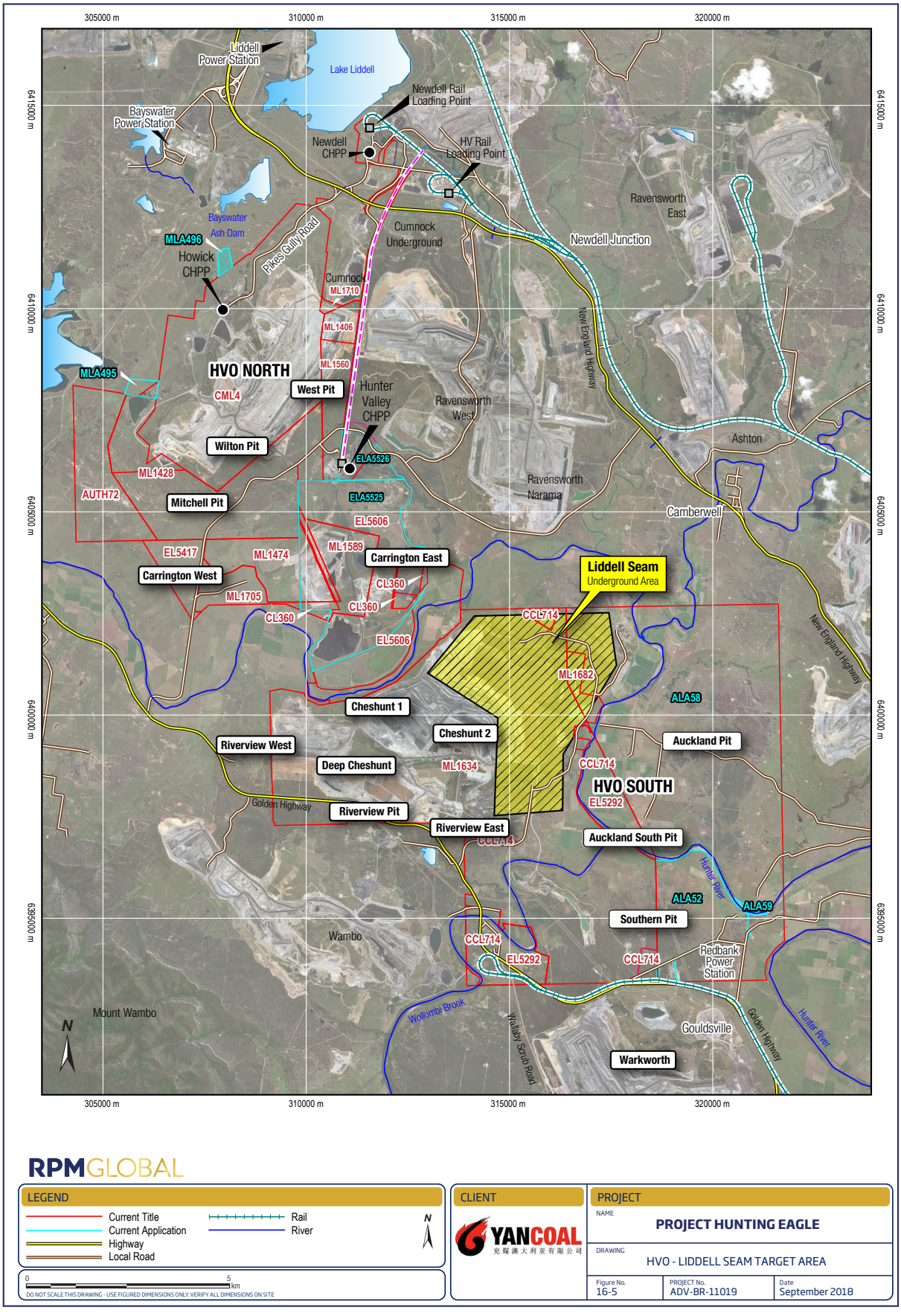
305000 m
310000 m
315000 m
320000 m
6415000 m
6410000 m
6405000 m
6400000 m
6395000 m
Liddell Power Station
Lake Liddell
Newdell Rail Loading Point
Bayswater Power Station
Newdell CHPP
HV Rail Loading Point
Ravensworth East
Bayswater Ash Dam
MLA496
Howick CHPP
Pikes Gully Road
Cumnock Underground
Newdell Junction
Cumnock
ML1710
ML1406
ML1560
New England Highway
MLA495
HVO NORTH
CML4
West Pit
Hunter Valley CHPP
Ravensworth West
Wilton Pit
ELA5526
Ashton
ML1428
AUTH72
Mitchell Pit
ELA5525
Ravensworth Narama
Camberwell
EL5606
EL5417
ML1474
ML1589
Carrington East
Carrington West
Liddell Seam
Underground Area
CL360
ML1705
CL360
CL360
CCL714
EL5606
ML1682
ALA58
Cheshunt 1
Cheshunt 2
Auckland Pit
Riverview West
Deep Cheshunt
ML1634
CCL714
HVO SOUTH
EL5292
Golden Highway
Riverview Pit
Riverview East
CCL714
Auckland South Pit
Hunter River
ALA52
ALA59
Southern Pit
Wambo
CCL714
EL5292
CCL714
Redbank Power Station
Mount Wambo
Wollombi Brook
Wallaby Scrub Road
Gouldsville
Golden Highway
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LEGEND
Current Title
Current Application
Highway
Local Road
Rail
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YANCOAL
兖煤澳大利亚有限公司
PROJECT
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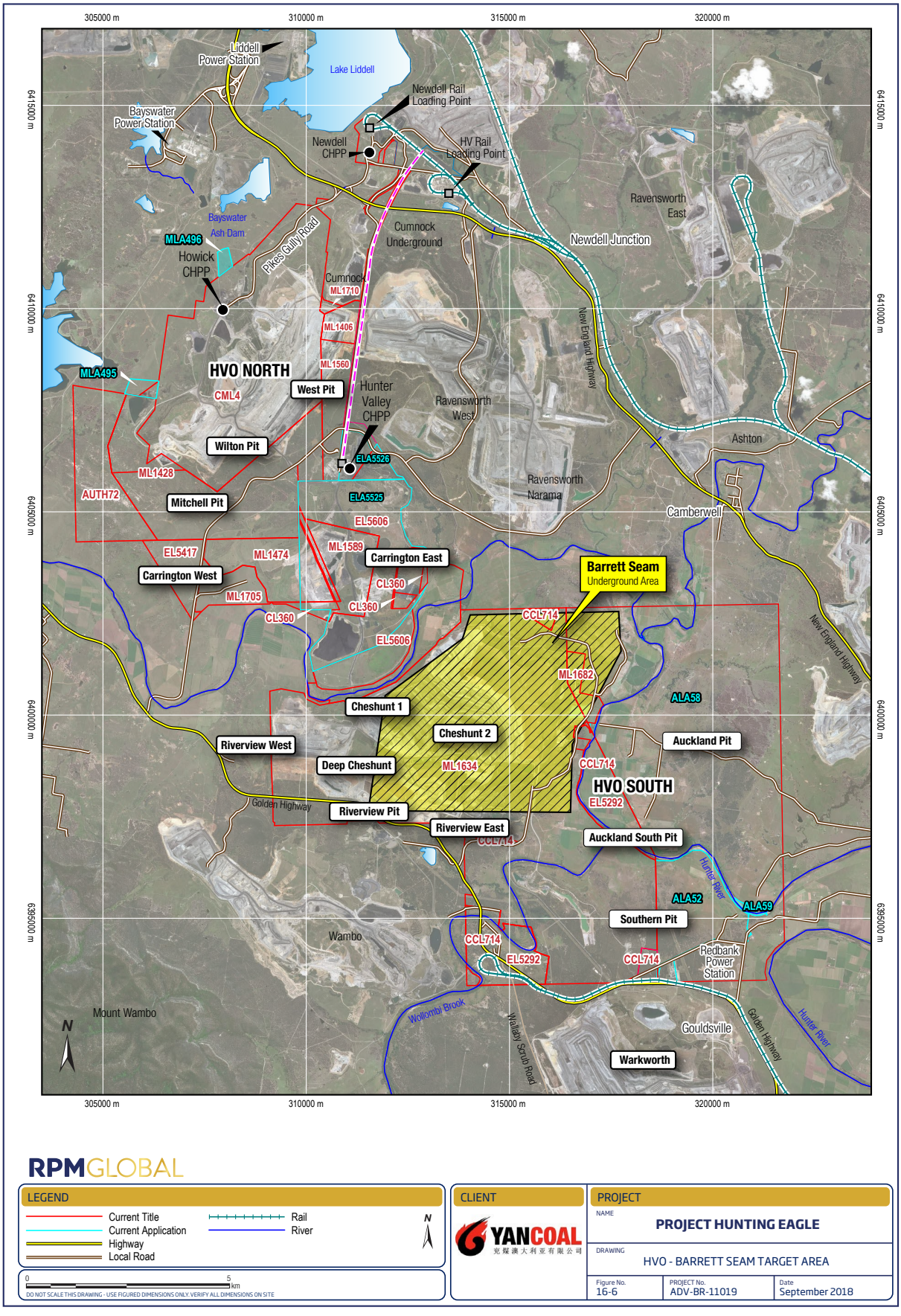
HVO - LIDDELL SEAM TARGET AREA
Figure No.
16-5
PROJECT No.
ADV-BR-11019
Date
September 2018



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CLIENT

YANCOAL 兖煤澳大利亚有限公司

PROJECT

NAME

PROJECT HUNTING EAGLE

DRAWING

HVO - BARRETT SEAM TARGET AREA

Figure No.	PROJECT No.	Date
16-6	ADV-BR-11019	September 2018

16.2 Production Estimate

RPM has reviewed the Resource areas and quantities available for underground mining operations in order to consider the possible production range for individual operations and the number of operations that could operate concurrently at the site as required for the Scoping level of study. Operational considerations that contribute to a conceptual underground development strategy include:

- The conversion of in situ tonnages to potential ROM production.
- Interaction between underground and open cut operations.
- Interaction between separate underground production units operating in close proximity (either within the same seam or overlying seams).
- Productivity range relative to the seam characteristics (depth, thickness, continuity, geotechnical considerations, etc)
- Economics of the Resource, i.e. how much capital does the scale of the Resource naturally support.

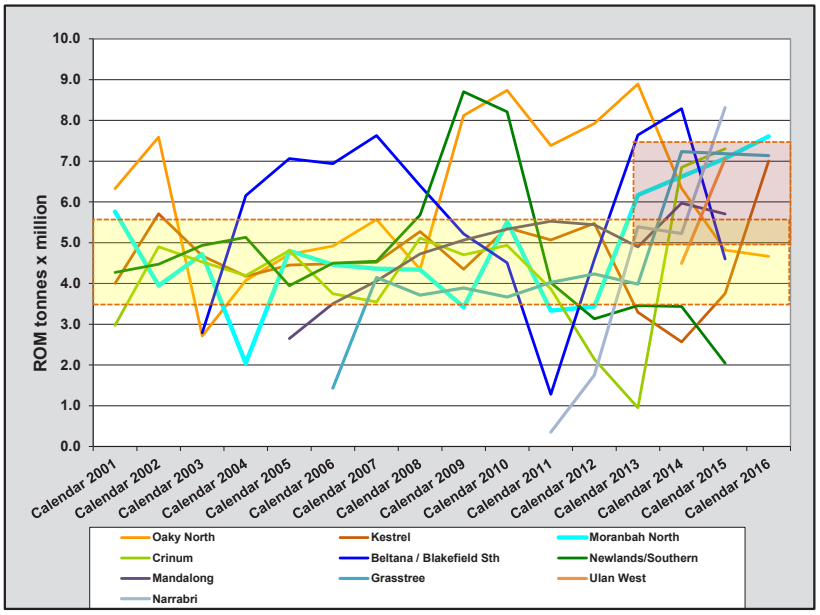
All scenarios have applied either longwall or the Longwall Top Coal Caving method. As discussed within the individual seam commentary below, RPM considers that the seam characteristics are generally favourable for longwall mining as is being utilised at Ashton and Austar by the Company.

Figure 16-7 shows the performance of the top Australian longwall operations over the last fifteen years based upon publically available production information collated by RPM. This illustrates the long-term trend of the top performers remaining within a fairly tight range of 3.5Mt to 5.5Mt in a year with a single outstanding performer recording between 7Mt and 9Mt. Historically, it would be expected that the outstanding performer would typically hold its position for four or five years before returning to the pack and another high performer takes is place. This trend is generally attributed to the commencement of new operations that are mining in the shallowest and most favourable conditions with new equipment and latest technology. As the mine progresses, conditions become more challenging and equipment downtime increases.

In terms of mine planning it has therefore been assumed by industry that an operation should be designed to produce up to 10Mtpa with the operation potentially achieving up to this figure for a limited period. Long-term (life of mine) rates however, should be pegged at much lower levels. Until recently, the long-term rate assumed for this purpose was up to 5.5Mtpa.

The graph does however show that the industry has broken out of this trend over the last three or four years and the majority of the top performers are now appearing to consistently produce in the range of 5.0Mtpa to 7.5Mtpa. RPM considers that this is due to widespread adoption of automation technology that is able to maintain more consistent operating conditions on the face and reduced delays as a result of operator error.

Figure 16.7 Historic production for top 10 producers



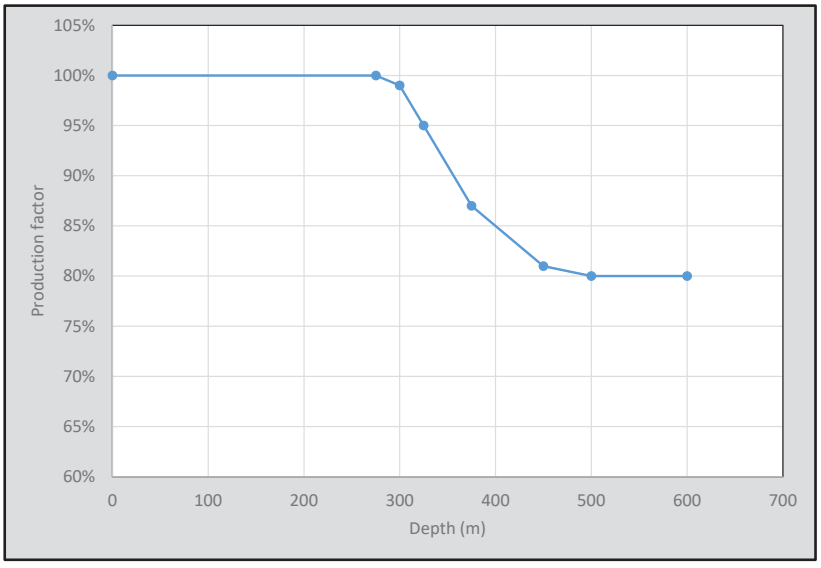
The scenarios proposed by previous studies all require the application of twin longwall systems (two units operating in the same general vicinity) or dual (two units operating in otherwise disconnected workings however at the same site) longwall mines.

In Australia there is currently limited operational experience of operating these systems with the majority of underground mines working a single longwall. The original Gordonstone Mine, renamed Kestrel Mine, was initially setup to operate two longwalls and more recently the Oaky North Mine was expanded to operate with two longwalls.

In RPM's experience running multiple longwall units at full production presents significant operational challenges and it is often difficult to maintain adequate development inventory in advance of the longwall. Ventilation and gas management systems as well as general underground logistics support are also often made far more difficult, however having said that with careful planning these challenges can be overcome to form a successful operation.

Longwall production has been found historically to be highly dependent on depth of cover with horizontal and vertical stress generally increasing with depth and creating a more challenging operating environment. Through industry experience, RPM has developed a guideline for estimating productivity relative to depth. This is illustrated in Figure 16-8 whereby there is little or no production derating up to a depth of 300 m, after which production is expected to decline to a minimum factor of 80% from around 450 m. This means that a longwall that is deemed capable of producing at 7Mtpa at 250m depth would be expected to produce around 5.6Mtpa in the same seam however at 500m deep.

Figure 16.8 Production factor relative to depth



Production can also be dependent on seam thickness although the relationship has historically been far less defined than the depth relationship. In theory thicker seams yield more coal per meter cut than their thinner counterparts and so overall productivity is expected to be higher. Higher longwall faces are however harder to manage and are more vulnerable to deterioration in high stress environments. Historically in Australia, thicker seam operations have often exhibited large swings in production whilst more moderate thickness operations (3m to 4 m) have been able to achieve more a consistent operating environment and more reliable production rates.

RPM is of the opinion that recent successes with the introduction of automation will enable operators to maintain greater control over the longwall face and as such thicker-seam operations will be better placed to achieve their potential. Importantly there is a similar seam thickness range in the Mount Arthur and Vaux seams at MTW and Arties, Liddell and Barrett at HVO and as such similar productivities may be expected. The Bayswater Seam at MTW is much thicker (up to 8.4 m) and would be expected to produce at higher rates.

Issues related to placement of tailings and spoil in the open cut voids directly above underground mines further complicates underground extraction in most areas at MTW and HVO. Overlying liquid tailings can present a significant hazard to underground mining as a result of the risk of inrush. Unconsolidated spoil can significantly impact stress regimes (and consequently productivity and roof support requirements) and access to the underground workings via surface boreholes. The significance of these issues should not be underestimated and technical solutions will have to be found before underground mining can commence. These will be addressed in future studies.

RPM has assumed that a minimum fresh interburden thickness of 80m is required below any surface spoil. In areas where this cannot be maintained, the higher coal seam is assumed to remain unmined, however operations may continue in deeper seams.

Seam-wise production and productivity

MTW Mount Arthur Seam

The Mount Arthur Seam provides a potential underground mining target within the MTO lease area only. Open cut operation will be concluded in the area within the next 6 months and will not directly impact

underground mining. The old pits are however planned to be backfilled with a combination of waste and tailings which may impact the geotechnical loading of the in situ strata. The burden between the base of the open pit, mined to the Woodlands Hill Seam and potential underground operation is estimated to be around 100m and as such should be sufficient however this would need to be confirmed through geotechnical review.

The backfilling of the open pit areas conflicts with the underground option to obtain a low-cost access point from an existing highwall. Detailed design would be required to define the optimal access point and any compromise required with open cut waste storage.

The average thickness of the seam is 3.2m which makes it well suited to high production mechanised mining. An 80 cm claystone band sits directly above the Mount Arthur Seam with the Warkworth Seam lying directly above the claystone. The claystone is deemed too thick to extract as part of the mining sequence thereby providing access to the Warkworth Seam. The competence of the claystone with overlying coal has not been assessed as part of this review however RPM considers there may be a risk with this material in the immediate roof. It is estimated that there is approximately 86Mt of Mount Arthur Seam Resource within the MTO lease.

The potential ROM quantity of 44.5Mt was scheduled for this seam in the 2015 model. In consideration of the shallow depth and moderate seam thickness RPM expects the production range for this target would average 5.5Mtpa with annual output ranging from 4.5Mt to 6.5Mt.

MTW Vaux Seam

As shown on Figure 16-2 the Vaux Seam target is divided across two distinct areas, Vaux North and Vaux South. Vaux South lies 20m to 30m below the Mount Arthur underground target and would have to be scheduled to commence following completion of the Mount Arthur operations.

The depth of cover averages 190m and the seam thickness averages 2.5m thus making is an appropriate target for underground mechanised mining. The Vaux North depth of cover under the Warkworth Pit extends to 320m which may result in a drop off in productivity however not to a significant level.

It is estimated that there is 42Mt of Resource in Vaux South which equates to 27Mt ROM when allowing for 80% resource recovery and 80% mining recovery. Productivity would be expected to be similar to the Mount Arthur Seam, averaging 5.5Mtpa, with a range from 4.5Mt to 6.5Mt.

For Vaux North it is estimated that there is approximately 25Mt of Resource and with the same recovery factors applied, this equates to 16Mt ROM. It is expected that there will be a slight reduction in productivity to 5.2Mtpa resulting from the increased depth.

MTW Bayswater Seam

The average thickness of the Bayswater Seam in MTW is 7.05m with thickness increasing to over 8m in some areas. Previous studies have recommended the application of the longwall top coal caving (LTCC) method. Elevated stress levels are required with this method to assist in fracturing the coal as part of the caving process. RPM does not consider that LTCC will be a viable choice in this case due to the relatively low depth of cover and the expected reduction in horizontal stress with the extraction of the overlying Vaux Seam.

RPM has therefore based production assumptions on a thick-seam longwall operation with a maximum extraction height of 6.0 m. The total Resource estimate is 338Mt and allowing for a Resource recovery of 80% and a reduced mining recovery of 68% to allow for up to 6m extraction, this results in a mineable quantity of 184Mt ROM.

As shown in Figure 16-9 average productivity is expected to range from 6.5Mtpa to 7.5Mtpa based on depth. For any one year the potential output could be expected to range from 5.5Mt to 8.5Mt.

Access would be expected from the eastern side of the Resource as an extension of the Vaux Seam workings.

HVO Arties Seam

The depth below open cut final voids appears to be sufficient to protect the underground from connection to the surface.

The Arties Seam thickness ranges in thickness from 1.5m to 2.3 m. Resources with seam thickness less than 2.0m are generally considered to be thin and will require more specialised equipment in order to effectively mine. The lack of height provides ergonomic challenges for operators and generally result in reduced productivity.

The Resource is estimated to be 35Mt which translates to 22Mt when applying a Resource recovery of 80% and mining recovery of 80%.

RPM has assumed that given the limited seam thickness, average productivity would not be expected to significantly exceed 4Mtpa. RPM considers that whilst this may remain a potential underground target there is currently a high level of uncertainty and a low probability of a favourable economic outcome. This target has therefore not been considered any further.

HVO Liddell Seam

The Liddell Seam lies 60m to 70m below the Arties Seam and as such can be considered over a similar area to the Arties Seam.

The Liddell Seam thickness ranges in thickness from 1.2m to 2.6m which places it in a similar marginal category as the Arties Seam.

There is limited exploration upon which to base a Resource estimate or mine plan. Based on seam thickness it is assumed that the in situ and ROM tonnages for the Liddell Seam will be similar to the Arties Seam.

RPM has assumed that given the limited seam thickness, average productivity would not be expected to significantly exceed 4Mtpa. RPM considers that whilst this may remain a potential underground target there is currently a high level of uncertainty and a low probability of a favourable economic outcome. This target has therefore not been considered any further.

HVO Barrett Seam

The Barrett Seam lies between 17m and 32m below the Liddell Seam however is predominantly greater than 20 m. Should the Liddell Seam be mined, detailed geotechnical analysis would be required to confirm sufficient coverage lies between the two seams to allow mining to proceed in the Barrett. The Barrett Seam thickness ranges between 1.9m and 2.9m which provides a more attractive target for underground mechanised mining than either the Arties or the Liddell.

As the Barrett target area falls beneath the Cheshunt Pit then open cut mining would need to be largely complete in this pit before underground operation could proceed. It is estimated that there is up to 82Mt of in situ Resource within the Barrett Seam area which converts to 52Mt based on 80% Resource recovery and 80% mining recovery.

With an average seam thickness of 2.5m the Barrett Seam lies at the low end of the moderate thickness mining however does not necessarily fall into the thin seam mining category. An average production rate of 4.8Mtpa has been estimated for working in this seam.

Summary

Table 16.8 shows the in situ and ROM estimates for each of the underground targets as discussed in the previous sections. It should be noted that not all ROM tonnage has been included in the table for the

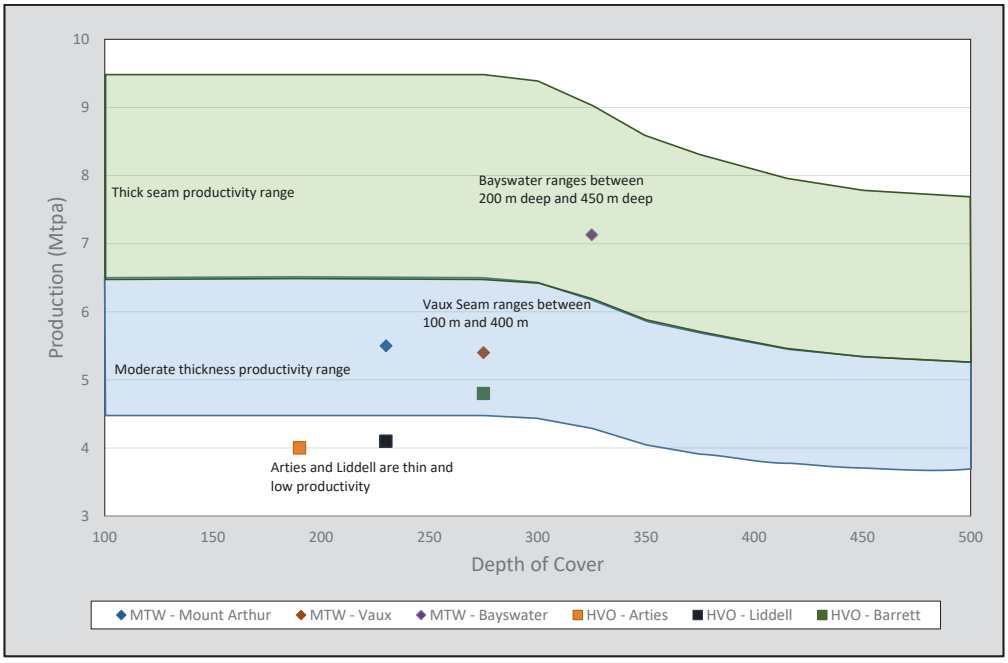
Arties or Liddell seams due to the high levels of uncertainty and high probability of a negative or very marginal economic outcome.

Table 16.8 Underground tonnage summary

Site / Seam	In situ (Mt)	ROM (Mt)
MTW		
Mount Arthur	86	45
Vaux	67	40
Bayswater	338	185
Total MTW	**491**	**270**
HVO		
Arties	35	
Liddell		
Barrett	82	50
Total HVO	**117**	**50**
TOTAL MTW / HVO Complex	**608**	**320**

Figure 16-9 shows the high-level productivity estimation for each seam based on depth and seam thickness characteristics.

Figure 16.9 Average productivity by seam



16.3 Production Schedule

A full underground schedule has not been completed at this level of study, however comment can be made on when operations may commence, the potential production and life of each operational sector, the number of contiguous longwall operations and potential annual output from the complex.

Figure 16-6 provides a high-level estimate of each seam based on the productivities and projected ROM tonnage. The Bayswater Seam is estimated to take up to 26 years to complete whilst the other seams combined are estimated to take 27 years to mine. With the Bayswater Seam using one height of longwall equipment and the other targets all requiring smaller equipment this lends itself to a two longwall arrangement with one longwall in the Bayswater Seam and the second longwall working simultaneously through the other mining targets.

The powered roof supports are the major high-cost capital item with long life and so scheduling to ensure optimal utilisation over the total life of the complex is a key schedule consideration. Roof support life is measured in cycles where one cycle is completed every time the longwall moves a single web forward. Longwalls typically advance between 0.8m and 1.0m every cycle depending on the equipment set up which is a consideration of the seam characteristics. Based on support life of 70,000 cycles RPM has estimated that a single set of supports would be sufficient to mine the thick seam Resources at MTW in the Bayswater Seam. One set of moderate height supports would be required for the Mount Arthur and Vaux Seam operations at MTW and one additional set would be required to mine the Barrett Seam at HVO.

Table 16.9 Life of mine and roof supports

Target	ROM (Mt)	Rate (Mtpa)	Life (years)	Thickness (m)	Cycles (#)	LW Life (%)
MTW – Mt Arthur	44	5.5	8	3.20	28,971	41%
MTW – Vaux	50	5.4	8	2.54	35,269	50%
MTW – Bayswater	184	7.1	26	6.00	63,889	91%
HVO - Barrett	52	4.8	11	2.40	45,573	65%
Total	**323**					

Figure 16-10 provides a conceptual schedule for the underground operations across MTW and HVO. The sequencing and timing has been organised to achieve continuous operation whilst minimising interaction between the underground operations and the open cuts. At this time no consideration has been given to the impact on total output of the complex or processing capacity.

Figure 16.10 Conceptual underground production schedule

16.4 Operating and Capital Costs

Capital Costs

RPM has provided indicative capital costs based upon typical industry costs observed in recent years. The general logic behind the estimate is as follows:

- MTW - Mount Arthur is a new operation and must bear the initial capital cost of all new equipment and infrastructure.
- MTW - Vaux South is an incremental extension of the MTW - Mount Arthur operations and other than the installation of new underground services and infrastructure, should be able to utilise much of the equipment already in operation.
- MTW - Vaux north is a satellite operation and as such will require the installation of all new fixed infrastructure however will be able to utilise the production and mobile equipment from existing operations.
- MTW - Bayswater represents an expansion to the underground operations, it is operating in a much thicker seam and so little of the existing equipment is transferrable. Other than the limited additional depth for access, this will be similar to establishing a completely new operation.
- HVO - Barrett is another satellite operation and has been costed in a similar manner to Vaux North. By this point however, it is estimated that the original powered roof supports will have completed their life and a new set will need to be purchased.

Table 16.10 provides a summary of the timing and breakdown of the estimate of initial capital costs. As estimates have been based upon database figures, individual line items should be considered with a level of accuracy of +/- 50%. Contingency has been applied at 15%.

Table 16.10 Initial capital estimate

	Owners Cost	Mt Arthur	Vaux South	Vaux North	Bayswater	Barrett	Total
Key Dates							
Mine access		Y-2	Y6	Y11	Y10	Y14	
Longwall		Y1	Y9	Y14	Y13	Y17	
Initial Capital							
Set up	100						100
Mine access		87	15	128	30	102	362
MIA		25				25	50
Ventilation		40		40	20	40	140
Development		75			75		150
Longwall eqt		163			190	163	516
Coal clearance		30	15	30	15	30	120
Diesel eqt		22	11		22	11	66
UG Infrastructure		55	28	55	28	55	220
Closure	100						100
Neat estimate	**200**	**497**	**69**	**253**	**380**	**426**	**1,824**
Contingency	30	75	10	38	57	64	274
Total	**230**	**572**	**79**	**291**	**436**	**490**	**2,098**

Sustaining capital is required to cover the replacement of operational equipment, other than the powered roof supports which are costed individually. Historical records show that sustaining capital for underground operations typically ranges between $4/t ROM and $8/t ROM depending on the age and complexity of the operation. RPM has applied high level sustaining capital rates in ***Table 16.11*** to provide

a life of mine sustaining capital estimate. It is assumed that this is distributed over the life of mine in proportion to total ROM output.

Table 16.11 Sustaining capital estimate

	Mt Arthur	Vaux South	Vaux North	Bayswater	Barrett	Total
ROM (Mt)	45	25	15	185	50	320
Rate ($/t ROM)	3	5	5	5	5	
Total ($M)	**135**	**125**	**75**	**925**	**250**	**1,510**

Operating Costs

Operating cost ranges for the underground have been developed from RPM's industry knowledge in line with the level of accuracy of the CAPEX. Underground costs are typically categorised into development, longwall, outbye and engineering to provide a "Pit Top Cost". Additional costs for technical services and general and admin have also been applied to provide a total underground operating costs. Costs are included to a ROM pad at the Pit Top, however surface transport costs to CHPP's, Coal processing, rail freight and Corporate overhead are not included. These are assumed to be in line with the current open cut OPEX which are detailed in Appendix G (LOM average of $13.8/ROM t HVO and $10.7/ROM t MTW). Examples of a breakdown of these costs for three scenarios are provided on Table 16.12. The three scenarios are as follows:

- Scenario 1 – 2.0m seam at 250m depth of cover with a production rate of 4.5Mtpa. This is similar to the HVO Barrett underground target.
- Scenario 2 – 2.5m seam at 150m depth of cover with a production rate of 5.5Mtpa. This would be similar to the MTW Mount Arthur operation.
- Scenario 3 – 6.0m seam at 350m depth of cover with a production rate of 8.0Mtpa. This would be similar to Bayswater.

Table 16.12 UG OPEX Cost scenarios

	Cost Scenario 1 ($/t ROM)	Cost Scenario 2 ($/t ROM)	Cost Scenario 3 ($/t ROM)
Development	13.1	9.1	3.9
Longwall	8.9	6.8	8.9
Outbye	6.7	5.6	5.2
Engineering	4.2	3.4	3.3
Pit Top Cost	33.5	24.9	21.3
Technical Services	1.1	1.0	0.8
General & Admin	1.7	1.5	1.2
Total Underground	**36.3***	**27.3***	**23.3***

**Excludes CHPP and Offsite costs which total LOM average of $13.8/ROM t HVO and $10.7/ROM t MTW*

Table 16.12 illustrates the wide variability in costs in respect to different operating conditions and mining approach. This creates a high level of uncertainty with regard to high-level estimates of underground operations and little reliance may be attached to any unit rates before more detailed analysis is undertaken.

Figure 16-11 shows the operating cost output range over depth, thickness and production. Indicative positions of each of the underground targets have been provided on the chart to illustrate the relative attractiveness of each deposit.

Figure 16.11 Site Operating cost ranges

16.5 Development Sequence Overview

Development of underground mines generally encompasses a number of steps which vary in both length and costs, these include:

- Exploration and Mining Studies.
- External Approvals and
- Construction and Operations.

The UG Project has advanced the initial exploration and study phase as outlined above. These works have highlighted the economic potential in the UG Project.

Exploration and studies

The progression of exploration through the various stages of study, to construction and ultimately operation are dictated by three primary factors:

1. External approvals – this includes federal and state approvals and encompasses environmental and mining approvals.

2. Internal approvals – these approvals predominantly relate to the release of funds and provision of corporate support for progression to the next phase of study or development.

3. Time to complete a phase of study or construction.

Internal approvals

Internal approval processes and the manner in which they are implemented are specific to individual organisations and their objectives. These approvals can in some cases have a greater impact on the project development timeline than external approvals.

Study phase

An exploration and study program required to prove up a greenfield coal deposit normally follows three distinct study phases. The actual length of each study phase is not fixed and will depend upon the size and complexity of the resource, specific community or environmental issues and the quality of the supporting data and analysis at the start of the study phase. In addition to this, the depth of investigation and analysis required by the client may vary significantly from one organisation to another and this will be reflected in the time that a company is prepared to invest in a particular phase.

RPM understands that The Company will begin Pre-feasibility studies in 2018.

Exploration

Staged exploration work is undertaken prior to and throughout the early stages of each of the above study phases. This exploration work is progressively focused on the higher-value areas within the deposit and is tailored to meet the objectives of the study phases. The deposit's JORC classification status therefore progresses from exploration results through to Measured Resources throughout the study phases.

At the Concept Study phase, much of the data available for the deposit would be Inferred with some broad portions brought up to higher classification status. During the Pre-feasibility stage, the key areas of the deposit sufficient in size on which to base a reasonable-sized mine are typically elevated to an Indicated status. At the completion of a final Feasibility Study, it is typical to have the area which is planned to be mined during the first five to ten years of mine life, explored sufficiently to be classed as Measured Resources, with the remainder of the proposed mine's resources remaining at an Indicated Resource level. As the mine is developed, ongoing exploration required for the completion of detailed mine planning will progressively elevate the life of mine resources from an Indicated to Measured status.

RPM understands that The Company will begin Pre-feasibility exploration in 2018.

The duration of each stage of exploration is largely dependent upon the size, depth and geological complexity of the resource. Access and weather conditions can also impact on the actual time to complete each stage. **Figure 16-12** shows the Company's indicative timeline for the project.

Figure 16.12 - Staged Exploration and Study Time Line

Summary

RPM concludes that for a greenfield site with no approvals, it is likely to take around five years to complete exploration, mining and associated studies and relevant environmental studies and approvals. Following this there is likely to be a full year prior to the commencement of construction, during which internal approvals and funding is obtained, engineering design and tendering / procurement commence. Surface construction and underground access plus development can be expected to continue for around 3 years before the longwall can commence operation.

RPM highlights that the HVO/MTW operations are currently active mines, as such the ramp up timeline may be reduced significantly given the current site and regional infrastructure in place. As outlined below there is a number of options to develop the underground operations in conjunction with the open pit operations. These options will be analysed and optimised as part of the ongoing pre-feasibility study being completed by the Company.

16.6 Development Options

RPM understands that there is no set development option or sequence for the UG Projects, however RPM notes that there are various options which are being considered in current studies which are flexible in timing of commences and can optimise the interaction between the current operations and underground while realising value however not to the detriment to the current open cut LOM.

RPM notes there are two key limitations of the underground production, these include the interactions between the open cut and underground operations along with the ability to process additional material planned to be produced from the underground mines. RPM is aware the Company has significant experience with operating open cut and underground operations, including within the same project such as at Moolarben. As such this is not considered a limiting factor, however will require detailed planning an ongoing optimising to ensure no impact between the two operations such as the waste and tailings material in pit dumping strategy as outlined above. RPM considers the key consideration to the development of the underground operation is the ability to process additional run of mine coal. Of importance, as outlined in Section 11 the HVO and MTW operations have a total of four CHPP's with a total capacity of 42mtpa while planned ROM production is 20.6Mtpa at HVO and 17Mtpa at MTW. As such there is some capacity for increased throughput at the current plants however the likely production rate is well in addition to this level (5 to 8mpta). RPM notes there are three main scenarios for production plant:

- Scenario1 - Delay Underground operations beyond the open pit mine life at MTW. RPM does not consider this an attractive viable option with production currently planned to cease at MTW in 2040. As such no value would be realised in this scenario in the short term, nor would this allow offset of the current take or pay commitments.
- Scenario 2 – Maximise throughput case. Construct an additional CHPP to process all underground production. While this would add additional CAPEX to the start-up costs this scenario but would realise value in the short term, in addition to allow a dedicated CHPP without interaction with the open cut operations or the seams which will be mined. RPM is aware there are potential locations for a CHPP.
- Scenario 3 – Capped throughput case. Limit production to the excess capacity at the current CHPP. This would limit start-up CAPEX and simplify the underground production plan (one Longwall vs two), however would reduce the realised value in the short term. While decreasing the production complexity this would increase the complexity in the CHPP due to variable seam throughputs. RPM notes that the CHPP's currently process up to four seams as such this would not be considered a limiting factor.
- Scenario 4 – A combination of scenario 2 and 3. This scenario would allow significant flexibility in the underground operations while maximising the current CHPP capacity. As with Scenario three this would increase the interaction with the open cut operation however this is not considered a determining factor in optimsation decisions

RPM considers all four scenario to be achievable and realistic and highlight the commercial path to production of the operation, however given the current level of study no detail options analysis has been completed nor it is warranted at this stage. In determining the optimal development scenario a number of studies, both on a technical and commercial front, need to be considered, these are planned to occur over the next 12 to 18 months.

16.7 Risk Overview

Some of the key risks that will be addressed as part of the ongoing studies into the potential for underground operations at MTW and HVO include:

- **Mining Approvals** - No current mining approvals are in place for commencement of UG operations. These are expected to take a period of time, however systematic approach is in place in NSW.
- **Geotechnical Conditions** - Assessment of geotechnical conditions and the resultant productivity and cost impacts arising from mining multiple seams. This will include defining effective subsidence management as well as gas and spontaneous combustion management strategies particularly in areas of reduced interburden.
- **Interaction with Open Cut** - No studies have been undertaken to determine and plan for impact on current operations and CHPP. This would include current tailings and waste storage plans and impact on underground operations.
- **Geological Information** - Delineation of any limiting geological structures (faults, dykes, sills, etc.) in seams not currently mined by open cut methods.

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17. Mine Risks and Opportunity Assessment

17.1 Opportunity

RPM considers there are several opportunities within the Assets. These include:

- **HVO/MTW Underground** –As further outlined in ***Section 16*** this would include multiple areas and could be undertaken in conjunction with the current open pit operations. If undertaken this would increase ROM production by up to 5 to 7Mtpa and have the added advantage of augmenting take or pay commitments of the groups operation.
- **HVO Boundary Coal Pillar**- The current Coal Reserves and LOM plans excludes significant coal within the boundary pillar of the tenement holding due to the inability of mining across the tenement boundary on the neighbouring tenement (***Figure 9-3***). A study from a third party indicates that an additional coal tonnage of between 100 and 120Mt could be exploited with extensions of the West, Carrington East, Riverview East and West and Cheshunt Deep pits. Integrated mine planning to a PFS level of detail is required to confirm this coal is technically feasible and economically viable. Following completion of this work then boundary coal may be considered for inclusion in Company mine plans and inclusion in Coal Reserves.
- **Blending** – The current LOM plan presented in this Report and the supporting cashflow analysis, assumes no blending occurs either within the operations or between the operations. The products generated by the operations are generally high value coal types and blending based on product qualities can realise additional value rathe then selling single products from the operations. In addition as the Company further incorporates HVO/MTW into its operations this blending strategy could be used to further optimise mining operations in both short and medium term planning through careful and meticulous mine plans focusing on:
  - Maximise the exploitation of the in situ resources by potentially increasing pit limits using improved revenue streams and
  - Incorporate the ability to reach quickly to market condition by changing the short term mine plan to target seams with specific coal qualities.
- **Moolarben Expansion** –The expansion involves optimisations to approved Stage 1 and Stage 2 operations at the Moolarben mine which will increase open cut ROM coal production to 16Mtpa and a Moolarben Complex ROM production capacity of 24Mtpa. The Approvals Modification also involves a minor extension to the OC2 pit limit, minor extensions and reductions of the OC3 pit limits, rehabilitation, water management and relocated/additional surface infrastructure.

17.2 Risk

Mining is a relatively high risk business when compared to other industrial and commercial operations. Each mine has unique characteristics and responses during mining and processing, which can never be wholly predicted. RPM's review of the Mines indicates mine risk profiles typical of large scale mines at similar levels of resource, mine planning and development in Australia. Until further studies provide greater certainty, RPM notes that it has identified risks and opportunities with the Assets as outlined in ***Table 17-2***.

RPM has attempted to classify risks associated with the Mine based on Guidance Note 7 issued by The Stock Exchange of Hong Kong Limited. Risks are ranked as **High**, **Medium** or **Low** and are determined by assessing the perceived consequence of a risk and its likelihood of occurring using the following definitions:

Consequence of risk:

- **Major**: the factor poses an immediate danger of a failure, which if uncorrected, will have a material effect (>15% to 20%) on the Mine cash flow and performance and could potentially lead to Mine failure;

- **Moderate**: the factor, if uncorrected, could have a significant effect (10% to 15% or 20%) on the Mine cash flow and performance unless mitigated by some corrective action and
- **Minor**: the factor, if uncorrected, will have little or no effect (<10%) on Mine cash flow and performance.
- Likelihood of risk occurring within a 7 year timeframe:
- **Likely**: will probably occur;
- **Possible**: may occur and
- **Unlikely**: unlikely to occur.

The consequence of a risk and its likelihood of occurring are then combined into an overall risk assessment as shown in ***Table 17-1*** to determine the overall risk rank.

Table 17.1 Risk Assessment Ranking

Likelihood	Consequence		
	Minor	Moderate	Major
Likely	Medium	High	High
Possible	Low	Medium	High
Unlikely	Low	Low	Medium

RPM notes that in most instances it is likely that through enacting controls identified through detailed review of the Mine's operation, existing documentation and additional technical studies, many of the normally encountered Mine risks may be mitigated.

Table 17.2 Risk Assessment

Risk Ranking	Risk Description and Suggested Further Review	Potential Mitigant	Area of Impact
M	**Community Relations** Communities have voiced grievances against some mine operations, in particular regarding noise and dust emissions, leading to equipment downtime and subsequent investment in noise attenuation equipment for equipment.	Continue proactively engaging with affected communities and implementing noise mitigation strategy to remain in compliance with applicable regulatory standards and minimize equipment downtime. Assess and regularly review the noise impacts of planned mine development in increasing proximity to Bulga and continuously estimate related equipment downtime	OPEX, MTW, Stratford and Moolarben Asset Economics
H	**Coal Bursts - Austar** Several Coal Bursts have occurred within the Austar mine which has resulted in loss of production and forced shutdowns and 2 fatalities in 2014. RPM is aware the company has introduced a number of measures to manage the issue.	Ongoing monitoring of rib and face stress levels during development, implementation of additional face shielding on the longwall, management systems developed and implemented.	Safety and Production
H	**Austar Restart** RPM is aware that the Austar permit for the operation of the longwall has recently been suspended following a coal bursts in 2018 and now has approval for limited longwall activities under controlled conditions. Limited operations at Austar recommenced on 14 August 2018 subject to certain conditions which the mine can comply with however full scale operations are as yet to recommence.	Continue discussions with the regulators.	Full-scale Recommencement timeframe and reserves.

L	**Plant Maintenance - all** Several of the CHPP's are ageing and this is reflected in the requirement for more detailed and systematic planning systems. This presents a risk for increased OPEX and unavailability. RPM is aware that maintenance costs are included in the costs presented in this report	The Company has implementing several system to ensure continued operation and utilisations. Ensure management overview of maintenance.	OPEX
L	**Commodity Price Fluctuation** The market for Coal has been variable over recent years, RPM highlights that while the recent lower commodity prices the operations are still profitable, as such the risk to the profit sensitivity	Long term contracts.	Assets Economics
L	**Data Quality - all** Limited original data or sampling and assay protocols or data is available for the drill hole information. However a significant review program has been undertaken.		Resource estimate
L	**Coal Quality – Middlemount/Stratford Duralie** Drilling suggests potential issues with coking properties in northern area. No estimate completed for SEOC at Ashton. Coal Qualities based on reconciliation with Avon North Pit	Complete Further grade control drilling and modelling	Plant Yield and Costs
L	**Structural Model – Middlemount** Potential for additional structure such as faults to be encountered during mining	Review structural interpretations at the site. Review geotechnical impacts and operational implications.	Resource estimate/ OPEX
L	**Wallaby Scrub Road Permit - MTW** The Closure of wallaby scrub road agreement with the local council is nearing completion. RPM is aware discussions are well advanced and likely to be completed in the near future.	Confirm closure permit	MTW operations
L	**Relative Density - MTW** Some bias may have occurred within for deposits Of particular note is the regressions noted in Section .6	Complete a reconciliation of the BD completed against the mined areas to determine the variation on a local scale.	Local Variation of Resource estimate
L	**Water Management - Yarrabee and Moolarben** Ongoing permits and approval to ensure supply for CHPP and dust suppression. RPM is aware of managements procedure in place which current manage this risk.	Ongoing approvals procedures and management and monitoring	Ongoing production
L	**Potential Acid Forming Tails and Waste- Stratford** Waste and tails storage of PAF material is ongoing in voids etc. Current management plans in place	Ongoing monitoring and planning both short and long term	Ongoing production
L	**Heavy Metals Contaminations- All**		

	Fate of heavy metals in tailings and potential groundwater and soil contamination have not been assessed. Historical or future contamination could lead to regulatory shut-down, community opposition and clean-up costs	Conduct leaching test and soil and groundwater environmental site assessment at relevant locations in and around tailings facilities	Compliance, Assets Economics (closure and/or clean-up costs)
M	**South East Open Cut Approvals** The mining permit is pending an agreement with a single land holder for access in the SEOC area.	Ongoing Negotiation with landholder	Production commencement date.
M	**Groundwater Impacts - Ashton** Potential compliance risks with extracting the lower seam longwall panels around the Bowmans Creek alluvials in the Ashton underground mine, specifically how much water is drained from the alluvials, how well the workforce is able to maintain economic productivity levels with higher groundwater make into the underground workings and any potential discharge issues associated with the higher water make.	Conduct ongoing groundwater modelling, validated by results from environmental testing.	Local Variation of Reserve estimate

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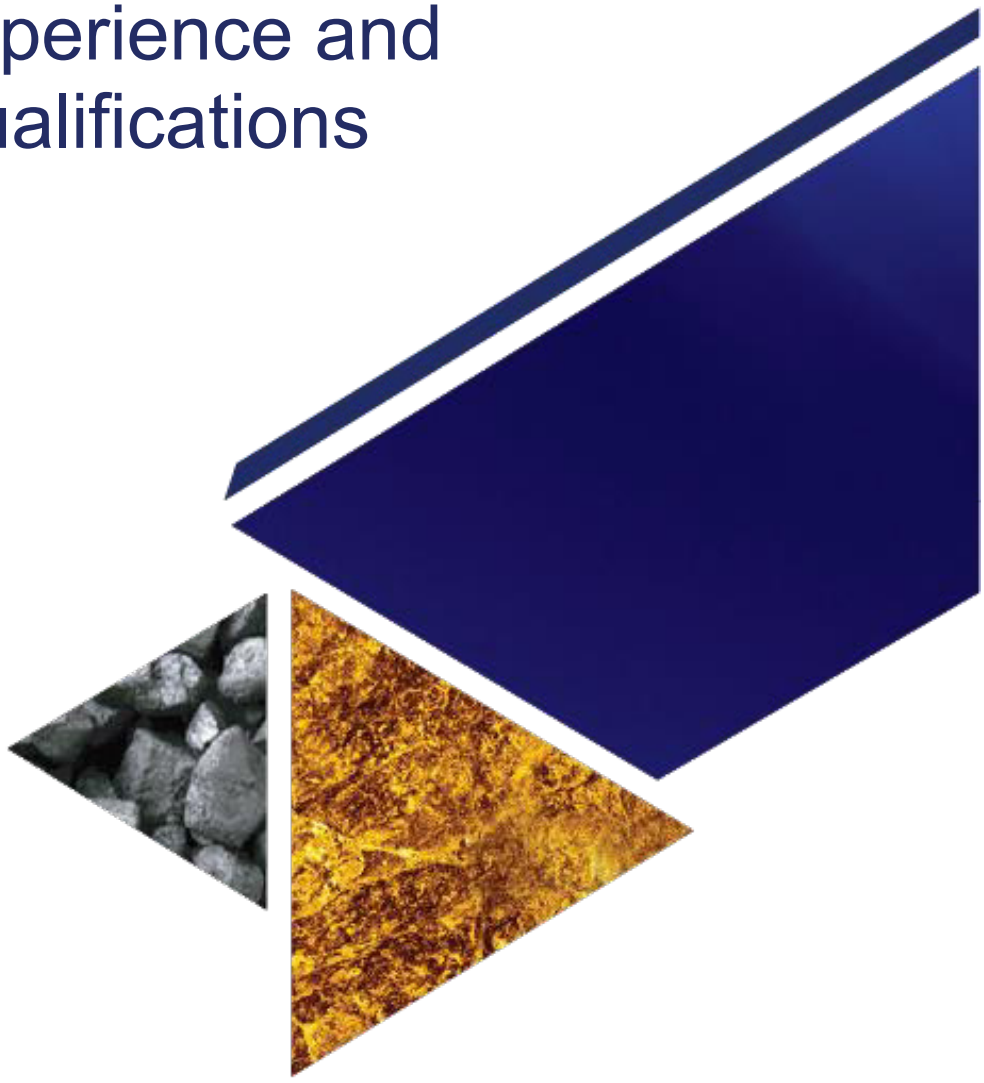
Appendix A. Experience and Qualifications



David McMillan - Master of Engineering - Royal School of Mines - Imperial College, University of London - Executive Consultant RPM (Brisbane)

David's career spans twenty-three years, with over seventeen years of operational experience. He has extensive practical underground and open-cut coal experience working in operational, managerial and technical roles. David's operational experience extends over three continents and covers potash and coal mining. David has been with RPM for six years and currently holds the title of Executive Consultant. During this time he has lead teams in the delivery of major pre-feasibility and feasibility studies for underground coal operations in New South Wales and Queensland. He has also completed numerous technical reviews and mine optimisation studies.

David is a Competent Person for the estimation of Reserves in underground coal operations and is a Registered Professional Engineer of Queensland (RPEQ).

Greg Eisenmenger - Executive Consultant - Bachelor of Engineering (Civil) (Hons)

Greg has more than 35 years of international coal mining industry experience, with a strong technical and general management background. Greg's specific general management capabilities are drawn from involvement in the management of large mining contracts in open cut coal, management of in-house technical and engineering programs, management of the annual budgeting process for individual mine sites and the business unit level and project development involving project definition, tendering, evaluation, award and construction supervision.

Greg is an Executive Consultant with RPM in the mining advisory space, managing coal mining project feasibility studies and undertaking independent technical reviews of mining assets being targeted by potential investors and completing valuations of coal projects.

Brendan Stats - Senior Resource Geologist, Bachelor of Science (Hons) Geology. MAusIMM, MAIG

Brendan is a Geologist with over ten years of experience in the mining industry. Brendan has a strong background in exploration, mine geology, coal quality and open cut geotechnical engineering. Brendan has significant experience working for Rio Tinto in Australia on large open cut coal operations in Queensland and New South Wales. More recently Brendan has worked as a consultant providing services in geology, mine geology, exploration and civil projects. This work involved projects in Australia, Indonesia, South Africa, China, Mozambique and Mongolia. Brendan has worked on mining projects from exploration, project evaluation to operating assets, as well as conducting resource estimate and reporting for listed companies.

With substantial experience in coal, Brendan meets the requirements for Qualified Person for NI 43-101 reporting and Competent Person for JORC reporting for most Coal Resources.

Jeremy Clark – Manager, Hong Kong, Bsc. with Honours in Applied Geology, Grad Cert Geostatistics, MAIG, MAusimm

Jeremy has over 15 years of experience working in the mining industry. During this time he has been responsible for the planning, implementation and supervision of various exploration programs, open pit and underground production duties, detailed structural and geological mapping and logging and has a wide range of experience in resource estimation techniques. Jeremy's wide range of experience within various mining operations in Australia and recent experience working in South and North America gives him an excellent practical and theoretical basis for resource estimation of various metalliferous deposits including Iron Coal and extensive experience in reporting resource under the recommendations of the JORC and NI-43-101 reporting codes.

With relevant experience in a wide range of commodity and deposit types, Jeremy meets the requirements for Qualified Person for 43-101 reporting and Competent Person ("CP") for JORC reporting for most metalliferous Coal Resources. Jeremy is a member of the Australian Institute of Geoscientists

Philippe Baudry – General Manager – China and Mongolia, Bsc. Coal Exploration and Mining Geology, Assoc Dip Geo science, Grad Cert Geostatistics, MAIG
Philippe is a geologist with over 20 years of experience in the mining industry. With a strong background in mine geology where he worked in both open cut and underground precious metal mines in Western Australia, Philippe gained a post graduate qualification in Geostatistics leading to a specialization in resource estimation and project evaluation. Over the last 11 years Phil has worked as a consultant focused on the Asian and Russian regions and after 3 years living and working in Russia developing 2 porphyry copper projects he moved to Beijing where for the past 9 years he has built up and managed RPM's business in north Asia including offices in China, Hong Kong, Mongolia and Russia before taking over responsibility for RPM's global advisory division which includes over 100 employees in 20 offices.

During his time in Asia, Philippe has worked closely with leading financial institutions across Asia and Europe on transactions ranging from Commercial Loan, Due Diligences to IPO's and has gained detailed understanding of the requirements of both investors and banks in regards to commercial loans, public technical report requirements and listing processes on various financial exchanges. Philippe has an in depth knowledge of the Soviet and other Asian resource/reserve reporting systems and has gained significant experience in both reviewing projects based on these systems and in converting projects from this region to international standards of reporting such as JORC and NI 43-101.

Philippe is a Member of AIG and is a Competent Person and Qualified person (JORC and NI 43-101) for both base and precious metals Mineral Resources.

Doug Sillar – Senior Engineer – Bachelor of Engineering (Mining) (Hons), Grad Dip App Finn, MAusIMM
Doug's work history spans over 16 years in the mining industry. During this time he has developed significant experience in the mining engineering field including expertise in a wide range of areas such as life of mine planning, optimisation of mining operations, mining options studies and design and scheduling. Doug's engineering career has seen him manage a number of mine planning studies ranging from high level conceptual studies through to full feasibility studies.

Throughout his career Doug has developed an ability to analyse the technical and economic issues of mine planning. He has strong project financial evaluation skills and the ability to develop project financial models including capital and operating costs, discounted cash flows and project valuations. Doug has achieved a Graduate Diploma of Applied Finance from Kaplan which compliments his strong technical skillset.

Company's Relevant Experience

RPM (RPM) is the market leader in the innovation of advisory and technology solutions that optimize the economic value of mining Assets and operations. RPM has serviced the industry with a full suite of advisory services for over 50 years and is the largest publicly traded independent group of mining technical experts in the world.

RPM has completed over 14,000 studies across all major commodities and mining methods, having worked in over 118 countries globally.

RPM has operations in all of the world's key mining locations enabling them to provide experts who understand the local language, culture and terrain. RPM's global team of technical specialists are located in 18 offices around the world. Through their global network, RPM can provide you access to the right specialist technical skills for your Assets.

RPM's advisory division operates as independent technical consultants providing services across the entire mining life cycle including exploration and Assets feasibility, resource and reserve evaluation, mining engineering and mine valuation services to both the mining and financial services industries.

RPM's trusted advisors typically complete assignments across all commodities in the disciplines of:

- Geology;
- Mining Engineering;
- Coals Processing;

- Coal Handling and Preparation;
- Infrastructure and Transportation;
- Environmental Management;
- Contracts Management;
- Mine Management;
- Finance and Assets Funding;
- Commercial Negotiations.

RPM was founded in Australia and as a result, has a solid understanding of and is committed to compliance with the codes which regulate Australian corporations and consultants.

Over the past 45 years, RPM has grown into an international business which has continued to provide Client and those that rely on its work the confidence that can be associated by the use of the relevant global industry codes some of which include:

- The Australasian Institute of Mining and Metallurgy Code of Ethics;
- The Australasian Code for Reporting of Exploration Results, Coal Resources and Coal Reserves;
- The Australian Institute of Geoscientists Code of Ethics and Practices;
- Society for Mining, Metallurgy and Exploration Code of Ethics; and
- The National Instrument 43-101 Standards of Disclosure for Coal Assets.

RPM has conducted numerous independent mining technical due diligence studies and reporting for IPO's and capital raisings under the requirements of all key mining equity markets over the past six years, with involvement in capital raisings worth more than US$44 billion. Some of this and other work is summarised in ***Table A1***.

RPM leverages the power of its specialist knowledge to also provide cutting edge mining software that is sought after globally for mine scheduling, equipment simulation and financial analysis. RPM software is relied on by mining professionals to understand how to structure their long and short term operations efficiently using auditable best practice methodologies and solutions.

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Table A1 - Mining Related IPO and Capital Raising Due Diligence Experience

2017 China Molybdenum Company., Ltd; Competent Persons Report of Mineral Resources and Ore Reserves under JORC and Independent Technical Review for inclusion in a HKEx Prospectus to support the a indirect Major Transaction for the acquisition of the Tenke Copper and Cobalt Mine, DRC.

2016 China Molybdenum Company., Ltd; Competent Persons Report of Mineral Resources and Ore Reserves under JORC and Independent Technical Review for inclusion in a HKEx Prospectus to support the a Major Transaction for the acquisition of the Tenke Copper and Cobalt Mine, DRC.

2016 China Molybdenum Company., Ltd; Competent Persons Report of Mineral Resources and Ore Reserves under JORC and Independent Technical Review for inclusion in a HKEx Prospectus to support the a Major Transaction for the acquisition of the Phosphate and Niobium Mine Brazil

2016 CGN Mining Company Limited; Competent Persons Report of Mineral Resources and Ore Reserves under JORC and Independent Technical Review for inclusion in a HKEx Prospectus to support the a Major Transaction for the acquisition of a 19.9% equity stake in Fission Uranium Corps Pattersons Lake Uranium Project, Canada.

2015 BHP Limited Demerger into South 32; independent technical review and compilation of a Competent Persons Report as defined by the European Securities and Markets Authority's Recommendations on consistent implementation of Commission Regulations ("EC") No 809/2004 implementing the Prospective Directive (the "ESMA Recommendations"). The ITR was completed on the assets of Illawara Coal Holdings located in the New South Wales state of Australia.

2014. MMG., Ltd; Competent Persons Report of Mineral Resources and Ore Reserves under JORC and Independent Technical Review for inclusion in a HKSE Prospectus to support the acquisition of the Las Bambas Copper Mine, Peru.

2014 Hidili International Development Company., Ltd; Competent Persons Report of Mineral Resources and Ore Reserves under JORC and Independent Technical Review for inclusion in a HKSE Prospectus to support the divestment of Multiple Coal Mines, Yunnan Province, China.

2013 China Molybdenum Company., Ltd; Competent Persons Report of Mineral Resources and Ore Reserves under JORC and Independent Technical Review for inclusion in a HKSE Prospectus to support the acquisition of the Northparkes Copper and Au Mine, Central West NSW, Australia.

2012 China Au Resources International., Ltd; Tibet Jiama Copper-Polymetallic Phase II NI 43-101 HKEx Pre-Feasibility Study. China

2012 China Precious Metal Resources Holdings Co., Ltd Competent Persons Report of Mineral Resources and Ore Reserves under JORC and Independent Technical Review for inclusion in a HKSE Prospectus to support the acquisition of an Au Operation Yunnan Province, China.

2012 Kinetic Mines and Energy., Ltd; Competent Persons Report of Mineral Resources and Ore Reserves under JORC and Independent Technical Review for inclusion in a HKSE Prospectus to support the IPO of an underground coal asset in Inner Mongolia Province, China.

2012 China Daye Non-Ferrous Metals Mining., Ltd; Competent Persons Report of Mineral Resources and Ore Reserves under JORC and Independent Technical Review for inclusion in a HKSE Prospectus to support the acquisition of 4 operating underground copper, lead, zinc assets in Hubei Province, China.

2012 Huili Resources Group ., Ltd; Competent Persons Report of Mineral Resources and Ore Reserves under JORC and Independent Technical Review for inclusion in a HKSE Prospectus to support the IPO of multiple underground nickel, lead, zinc, copper and au mining assets in Xinjiang and Hami Province, China.

2011 China Polymetallic Limited Mining., Ltd; Competent Persons Report of Mineral Resources and Ore Reserves under JORC and Independent Technical Review for inclusion in a HKSE Prospectus to support the IPO of a lead zinc silver polymetallic underground mining assets in Yunnan Province, China.

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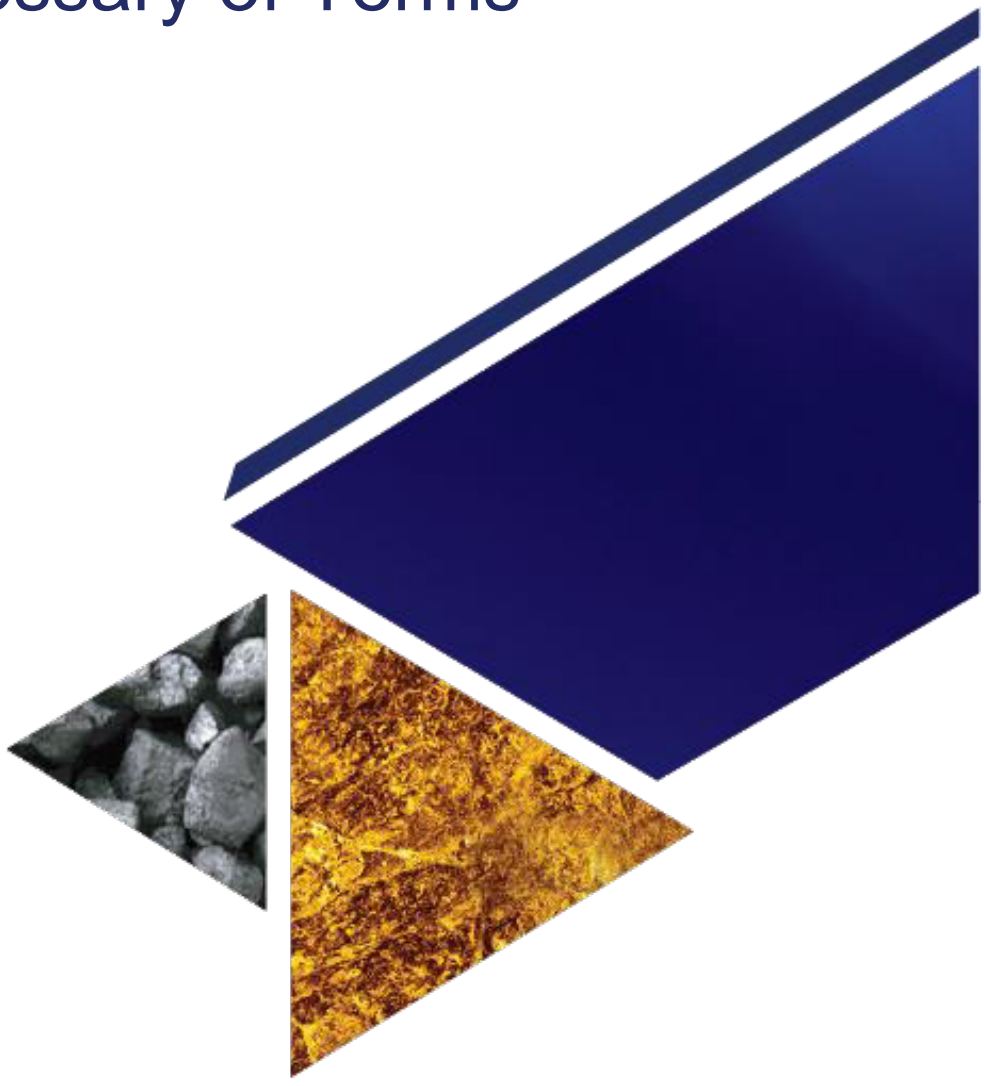
Appendix B. Glossary of Terms



Abbreviation	Unit or Term
A	Ampere
ad	air dry
adb	air dry basis
AFC	Armoured Face Conveyor
AHD	Australian Height Datum
AIG	Australian Institute of Geoscientists
AOP	Annual Operations Plan
ar	as received
arb	as received basis
ARD	Apparent Relative Density
ARTC	Australia Rail Track Corporation
AUD	Australian Dollar
AUSIMM	Australasian Institute of Mining and Metallurgy
bcm	bank cubic metre
BESR	Break Even Strip Ratio
BoW	Base of Weathering
C	Celsius (temperature)
Ca	Calcium
CAPEX	Capital expenses
CHPP	Coal Handling Processing Plant
Client	Yancoal Australia Ltd
Company	Yancoal Australia Ltd
CPR	Competent Persons Report
CQCN	Central Queensland Coal Network
CSN	Crucible Swell Number
DD	Diamond Drillholes
ddpm	dial divisions per minute
DES	Department of Environment and Science (Qld)
DMC	Dense Medium Cyclone
DNRME	Department of Natural Resources, Mining and Energy (Qld)
DPE	Department of Planning and Environment (NSW)
DPI	Department of Primary Industry
DTM	Digital Terrain Model
EA	Environmental Authority (Qld)
EHS	Environmental, Health and Safety
EIS	Environmental Impact Statement
EMP	Environmental Management Plan
EMS	Environmental Management System
EP	Equator Principles
EPA	Environmental Protection Authority (NSW)
EPBC	Environment Protection and Biodiversity Conservation (EPBC Act 1999)
EPC	Exploration Permit for Coal
EPCM	Engineering, Procurement, Construction Management
EPL	Environment Protection Licence
ESAP	Environmental and Social Action Plan
FoS	Factor of safety
FS	Feasibility Study
g	Grams
g/cc	Grams per cubic centimetre (density measurement)
gar	gross as received
GDB	Geological Database
GPS	Global Positioning System
HGI	Hardgrove Grindability
HKEx	Hong Kong Stock Exchange
HVCC	Hunter Valley Coal Chain
HVO	Hunter Valley Operations
HVON	HVO North
HVOS	HVO South
H:V	Horizontal:Vertical ratio

hp	Horsepower
H2SO4	Sulphuric acid
Hz	hertz
JORC	Joint Coal Reserves Committee
JORC Code	Refers to the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves 2012 edition, which is used to determine resources and reserves and is published by JORC on behalf of the Australasian Institute of Mining and Metallurgy, the Australian Institute of Geoscientists and the Minerals Council of Australia
kcal	thousands of calories
km	kilometre
sq.km	square kilometres
Kt	thousands of tonnes
ktpa	thousands of tonnes per year
kV	kilovolt
kW	kilowatt
kWh	kilowatt hour
l	liter
l/s	liters per second
LAS	Log ASCII Standard
lb	pound
lbs	pounds
LD	Large Diameter
LOM	Life of Mine
LPMA	Lands and Property Management Authority
LTCC	Longwall Top Coal Caving
m	metre
cu.m	cubic metre
masl	meters above sea level
M	Million
MBcm	Million Bank cubic metres
M&I	Measured and Indicated (with respect to Resources)
ML	Mining Lease
MOP	Mine Operations Plan
Mt	Million tonnes
Mtpa	Million tonnes per annum
MTW	Mount Thorley/Warkworth
MW	megawatt
MWh	megawatt-hour
nar	net as received
NPV	Net present value
NSW	New South Wales
OC	Open Cut
OK	Ordinary Kriging
OPEX	Operational expenses
P	Phosphorus
PCI	Pulverised Coal Injection
PG	Professional Geologist
PoO	Point of Observation
PPE	Personal Protective Equipment
ppm	parts per million
QA/QC	quality-assurance/quality-control
QLD	Queensland
RC	Reverse Circulation Drill Holes
RCE	Rehabilitation Cost Estimate
RD	Relative Density
Rec	Recovery
ROI	Return on investment (percentage, after tax)
ROM	Run of Mine
RPM	RPM Global
Rv max	Vitrinite Reflectance

S	Sulphur
SD	Standard deviation
SGBB	Sydney-Gunnedah-Bowen Basin
SO_2	Sulphur Dioxide
SR	Strip Ratio (expressed either as t:t or bcm:t)
SSCC	Semi Soft Coking Coal
t	Metric tonne
tph	Metric tonnes per hour
tpd	Metric tonnes per day
t/m^3	Tonnes per cubic metre (density measurement)
TSF	Tailings Storage Facility
UCS	Uniaxial Compressive Strength
UG	Underground
USD	United States Dollars
Wi	Work index (grinding characteristic of rock)
WWTP	waste water treatment plant
XRF	X-ray fluorescence
YAL	Yancoal Australia Ltd
2D	2 Dimensional
3D	3 Dimensional

Note: Where the terms Competent Person, Inferred Resources and Measured and Indicated Resources are used in this report, they have the same meaning as in the JORC Code.

A 'Coal Resource' is a concentration or occurrence of solid material of economic interest in or on the Earth's crust in such form, grade (or quality) and quantity that there are reasonable prospects for eventual economic extraction. The location, quantity, grade (or quality), continuity and other geological characteristics of a Coal Resource are known, estimated or interpreted from specific geological evidence and knowledge, including sampling. Coal Resources are sub-divided, in order of increasing geological confidence, into Inferred, Indicated and Measured categories.

An 'Ore Reserve' is the economically mineable part of a Measured and/or Indicated Coal Resource. It includes diluting materials and allowances for losses, which may occur when the material is mined or extracted and is defined by studies at Pre-Feasibility or Feasibility level as appropriate that include application of Modifying Factors. Such studies demonstrate that, at the time of reporting, extraction could reasonably be justified.

A 'Measured Coal Resource' is that part of a Coal Resource for which tonnage, densities, shape, physical characteristics, grade and mineral content can be estimated with a high level of confidence. It is based on detailed and reliable exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes. The locations are spaced closely enough to confirm geological and grade continuity.

Mineralisation may be classified as a Measured Coal Resource when the nature, quality, amount and distribution of data are such as to leave no reasonable doubt, in the opinion of the Competent Person determining the Coal Resource, that the tonnage and grade of the mineralisation can be estimated to within close limits and that any variation from the estimate would be unlikely to significantly affect potential economic viability.

An 'Indicated Coal Resource' is that part of a Coal Resource for which tonnage, densities, shape, physical characteristics, grade and mineral content can be estimated with a reasonable level of confidence. It is based on exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes. The locations are too widely or inappropriately spaced to confirm geological and/or grade continuity but are spaced closely enough for continuity to be assumed.

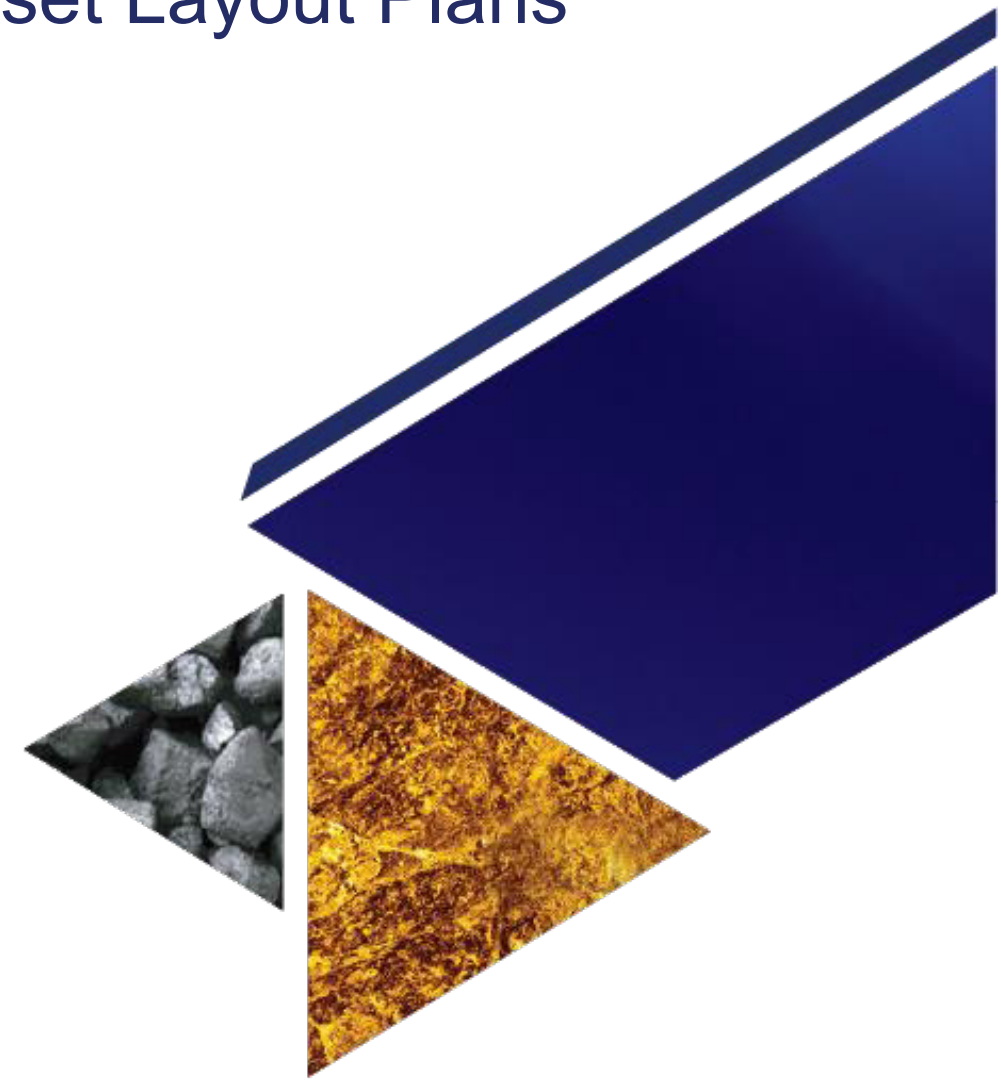
An Indicated Coal Resource has a lower level of confidence than that applying to a Measured Coal Resource, however has a higher level of confidence than that applying to an Inferred Coal Resource. Mineralisation may be classified as an Indicated Coal Resource when the nature, quality, amount and distribution of data are such as to allow confident interpretation of the geological framework and to

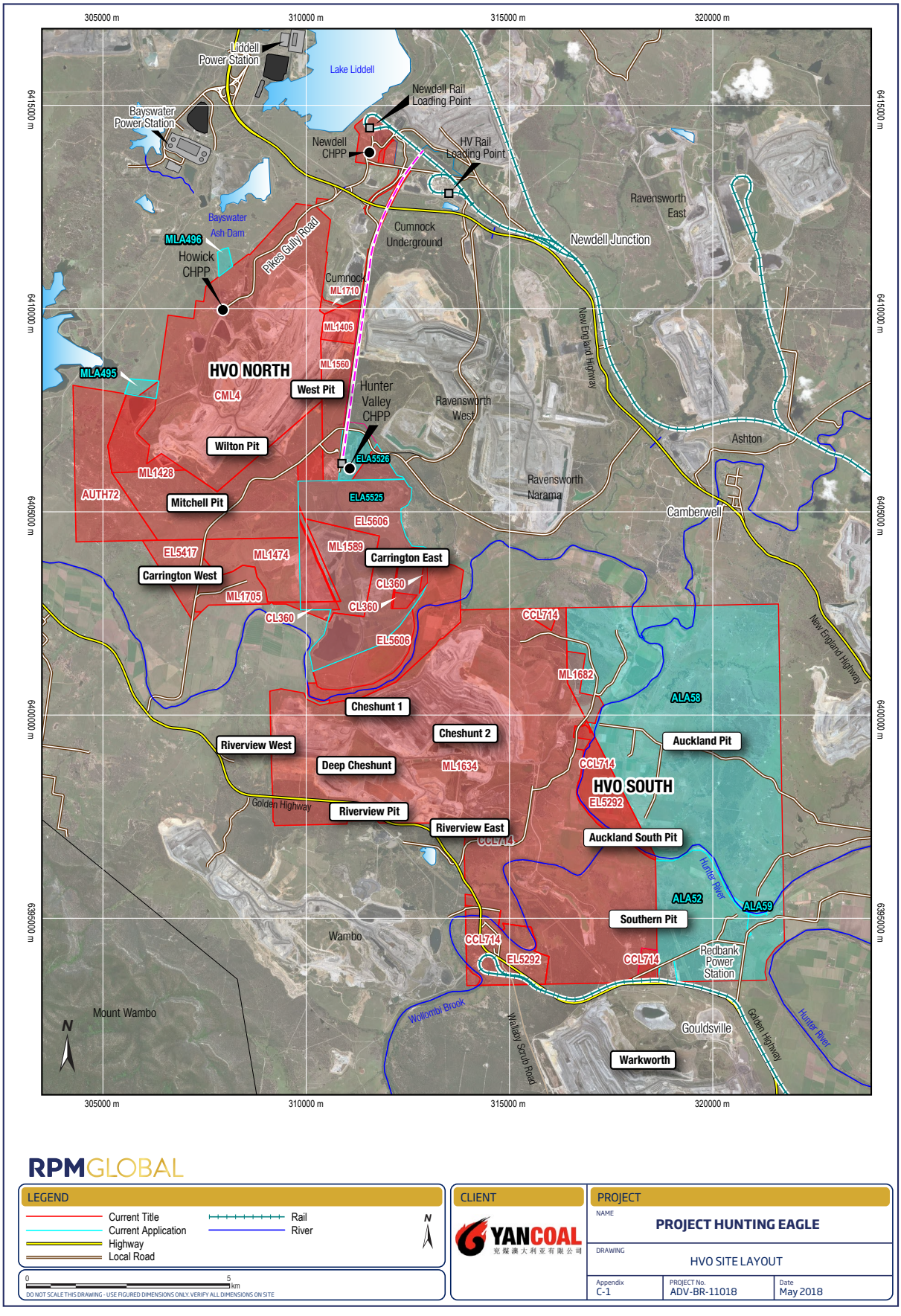
assume continuity of mineralisation. Confidence in the estimate is sufficient to allow the application of technical and economic parameters and to enable an evaluation of economic viability.

An 'Inferred Coal Resource' is that part of a Coal Resource for which tonnage, grade and mineral content can be estimated with a low level of confidence. It is inferred from geological evidence and assumed but not verified geological and/or grade continuity. It is based on information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes which may be limited or of uncertain quality and reliability.

An Inferred Coal Resource has a lower level of confidence than that applying to an Indicated Coal Resource. The Inferred category is intended to cover situations where a mineral concentration or occurrence has been identified and limited measurements and sampling completed, however where the data are insufficient to allow the geological and/or grade continuity to be confidently interpreted. Commonly, it would be reasonable to expect that the majority of Inferred Coal Resources would upgrade to Indicated Coal Resources with continued exploration. However, due to the uncertainty of Inferred Coal Resources, it should not be assumed that such upgrading will always occur. Confidence in the estimate of Inferred Coal Resources is usually not sufficient to allow the results of the application of technical and economic parameters to be used for detailed planning. For this reason, there is no direct link from an Inferred Resource to any category of Ore Reserves.

Appendix C.
Asset Layout Plans





RPMGLOBAL

LEGEND

Current Title
Current Application
Highway
Local Road
Rail
River
N

0 5 km

DO NOT SCALE THIS DRAWING - USE FIGURED DIMENSIONS ONLY. VERIFY ALL DIMENSIONS ON SITE

CLIENT

YANCOAL 兖煤澳大利亚有限公司

PROJECT

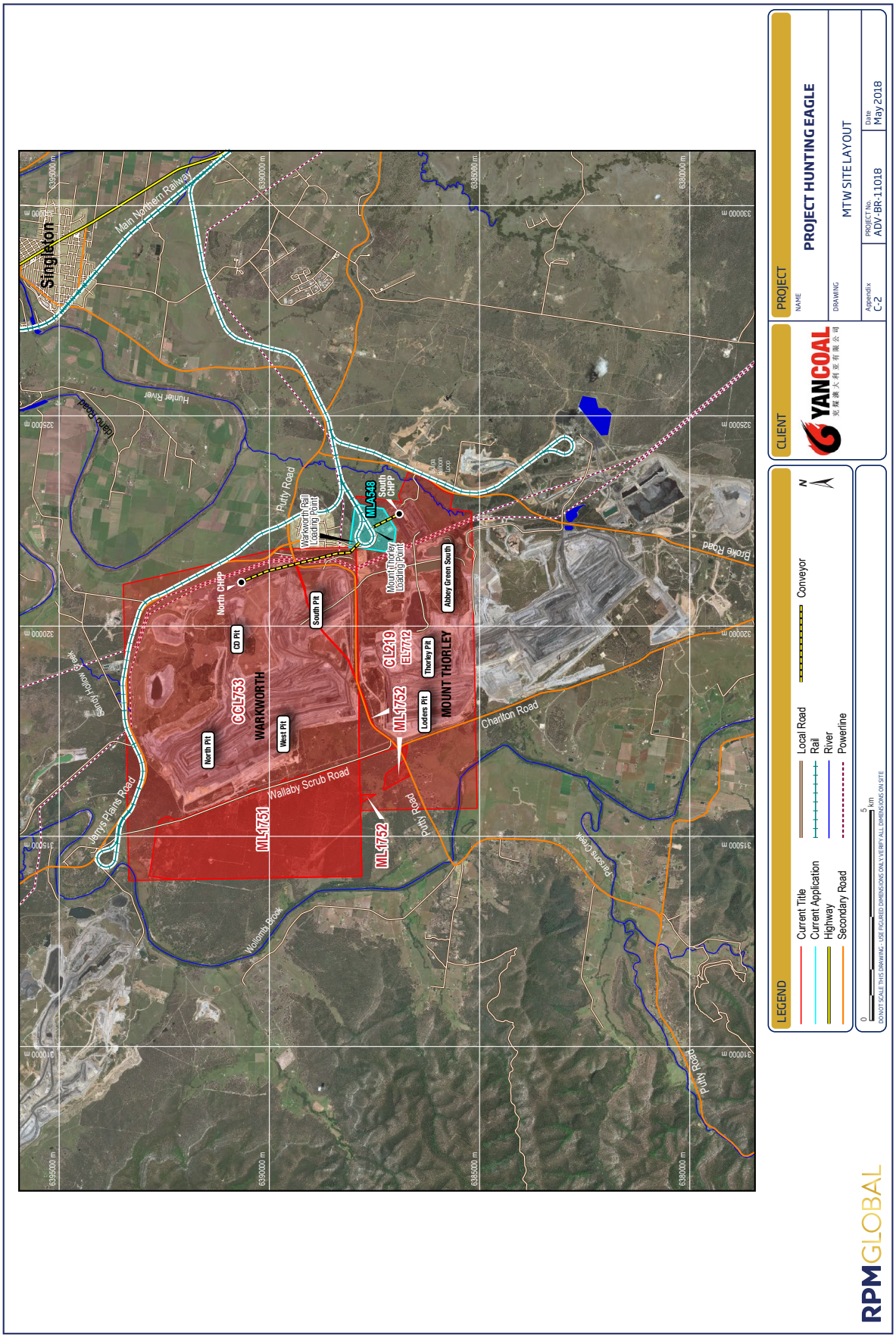
NAME

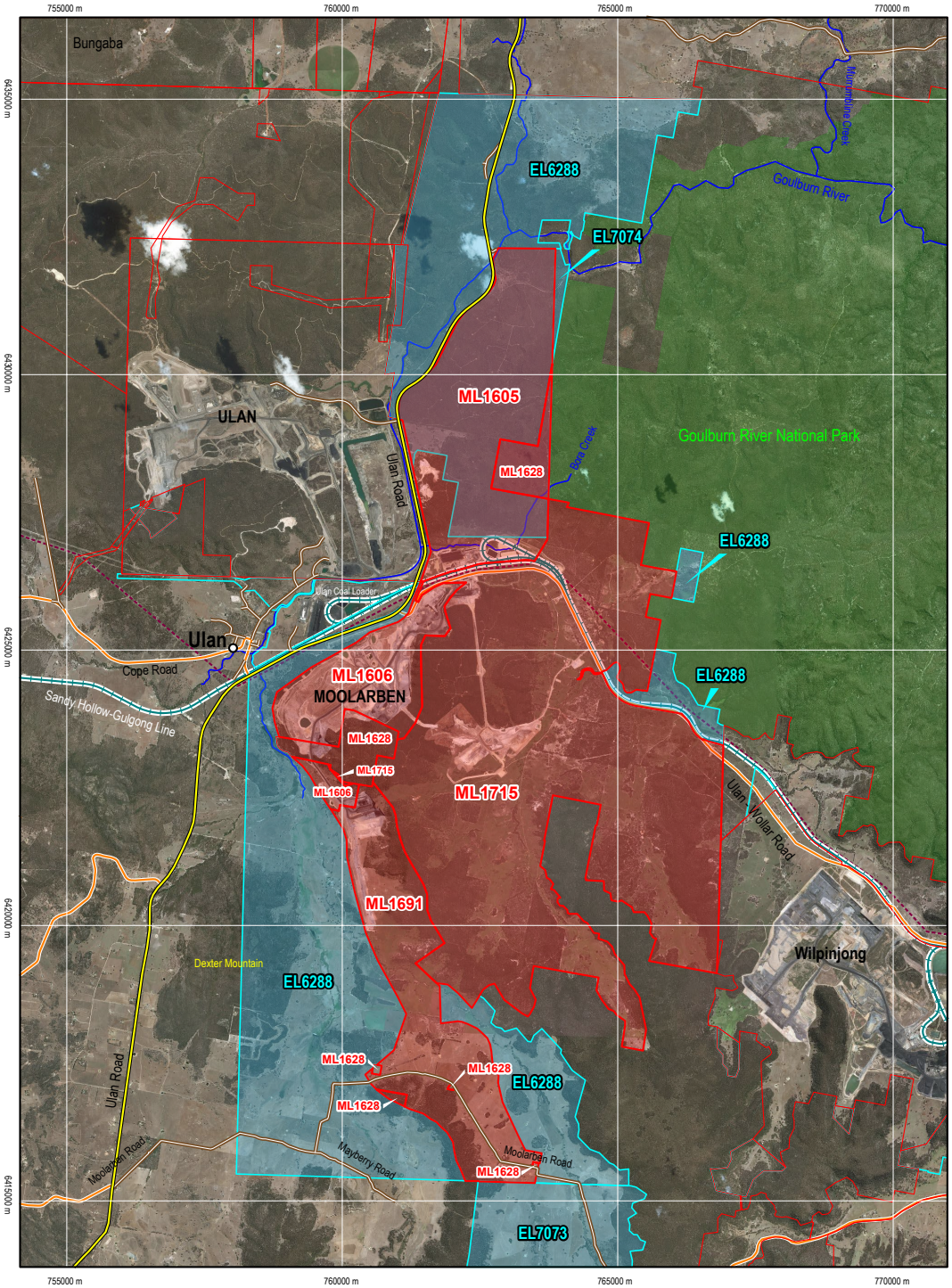
PROJECT HUNTING EAGLE

DRAWING

HVO SITE LAYOUT

Appendix	PROJECT No.	Date
C-1	ADV-BR-11018	May 2018


Singleton
Main Northern Railway
Hunter River
Lemon Road
Putty Road
Wambo Rail Loading Point
MLA548
South CHPP
North CHPP
Mount Thorley Rail Loading Point
Abbey Green South
Broke Road
North Pit
CD Pit
South Pit
West Pit
CCL753
WARKWORTH
CL219
EL7712
Thorley Pit
Loders Pit
ML1752
MOUNT THORLEY
Charlton Road
Wallaby Scrub Road
ML1751
ML1732
James Plains Road
Sandy Hollow Gully
Wollombi Brook
Putty Road
Yancoal Creek
LEGEND
Current Title
Current Application
Highway
Secondary Road
Local Road
Rail
River
Powerline
Conveyor
N
0
5
km
DO NOT SCALE THIS DRAWING - USE FIGURED DIMENSIONS ONLY. VERIFY ALL DIMENSIONS ON SITE
CLIENT
YANCOAL
PROJECT
NAME
PROJECT HUNTING EAGLE
DRAWING
MTW SITE LAYOUT
Appendix
C-2
PROJECT No.
ADV-BR-11018
Date
May 2018
RPMGLOBAL



RPMGLOBAL

LEGEND

ML Boundary
EL Boundary
Main Road
Secondary Road
Local Road
Rail
River
Powerline
N

0 5 km

DO NOT SCALE THIS DRAWING - USE FIGURED DIMENSIONS ONLY. VERIFY ALL DIMENSIONS ON SITE

CLIENT

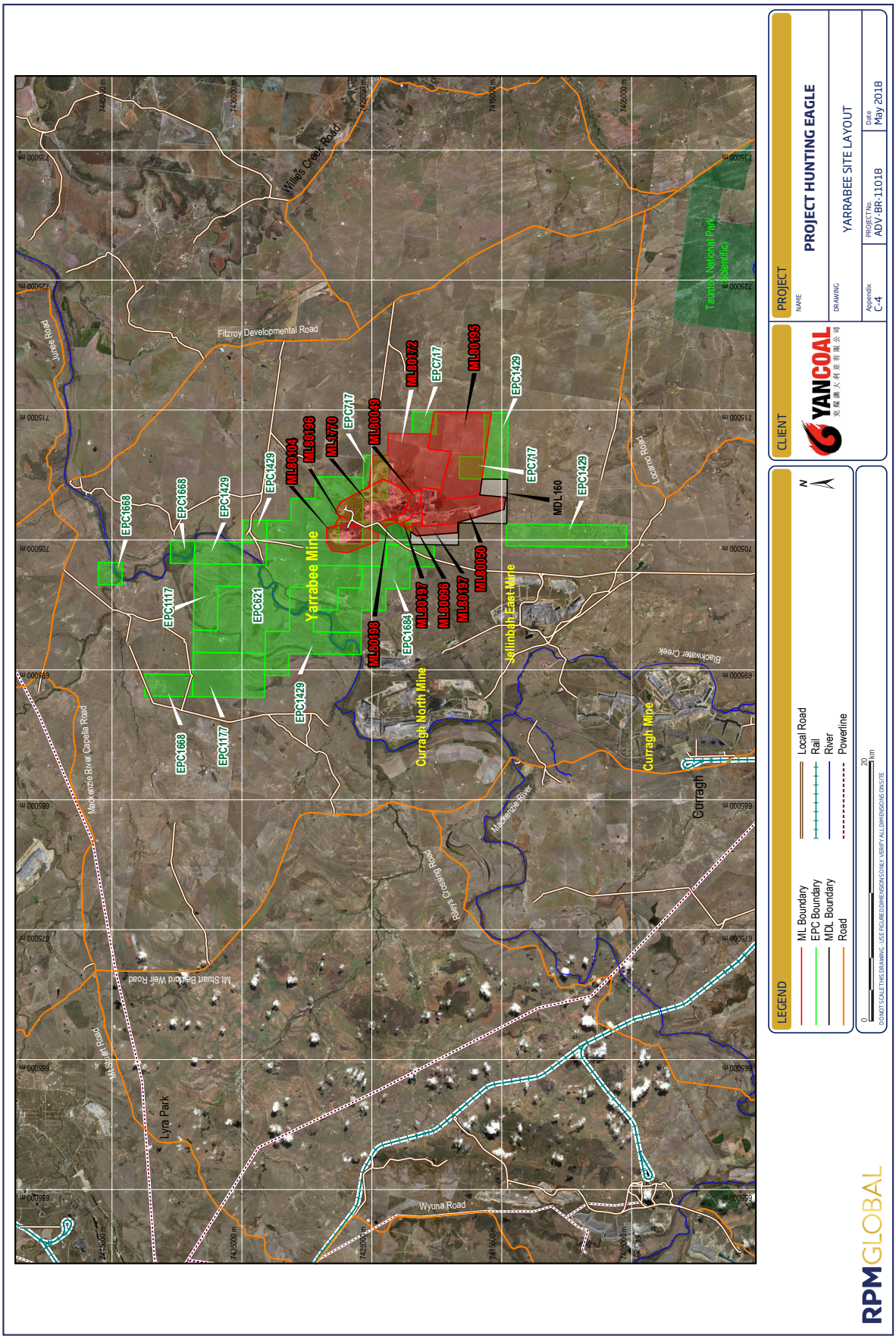
YANCOAL 兖煤澳大利亚有限公司

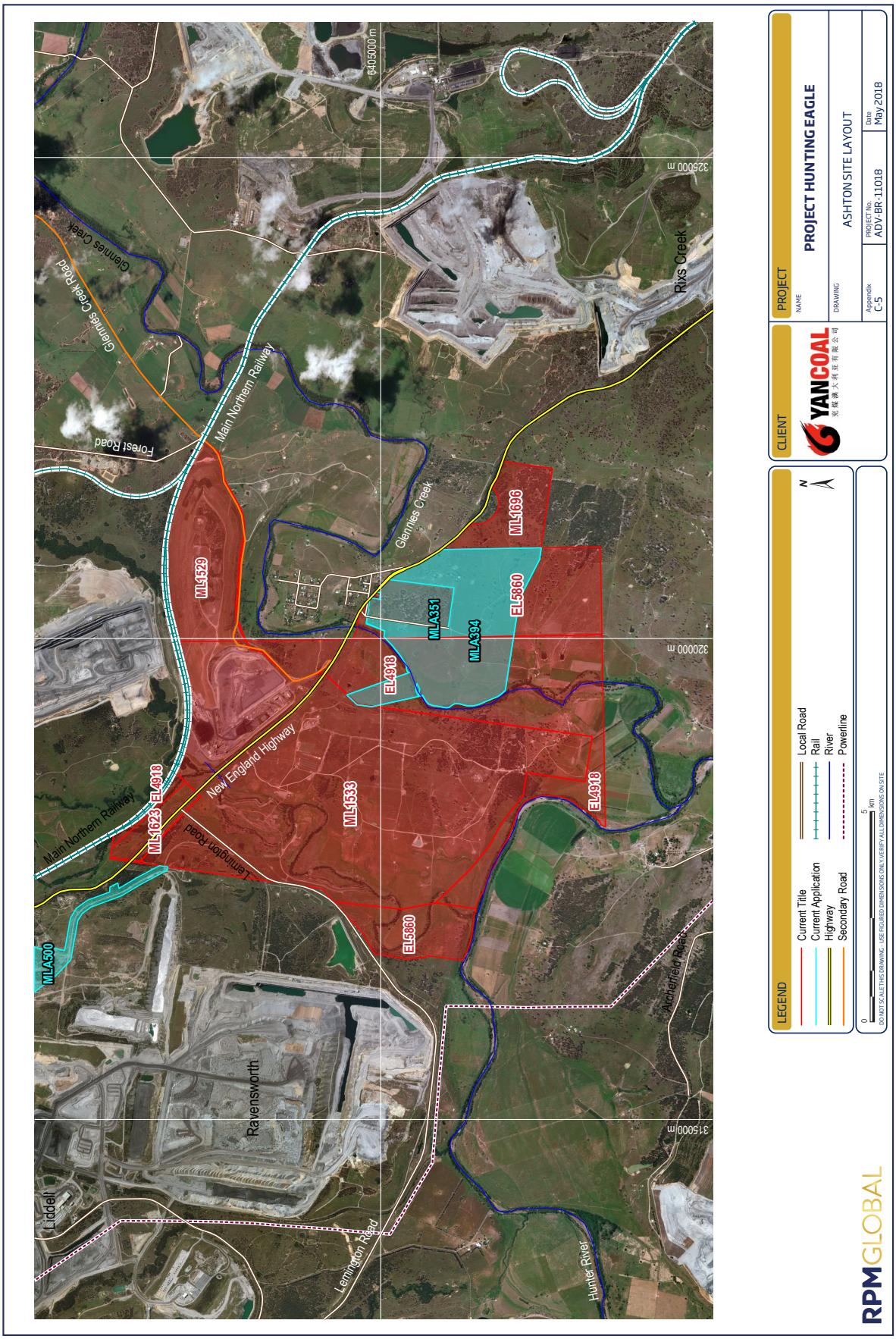
PROJECT

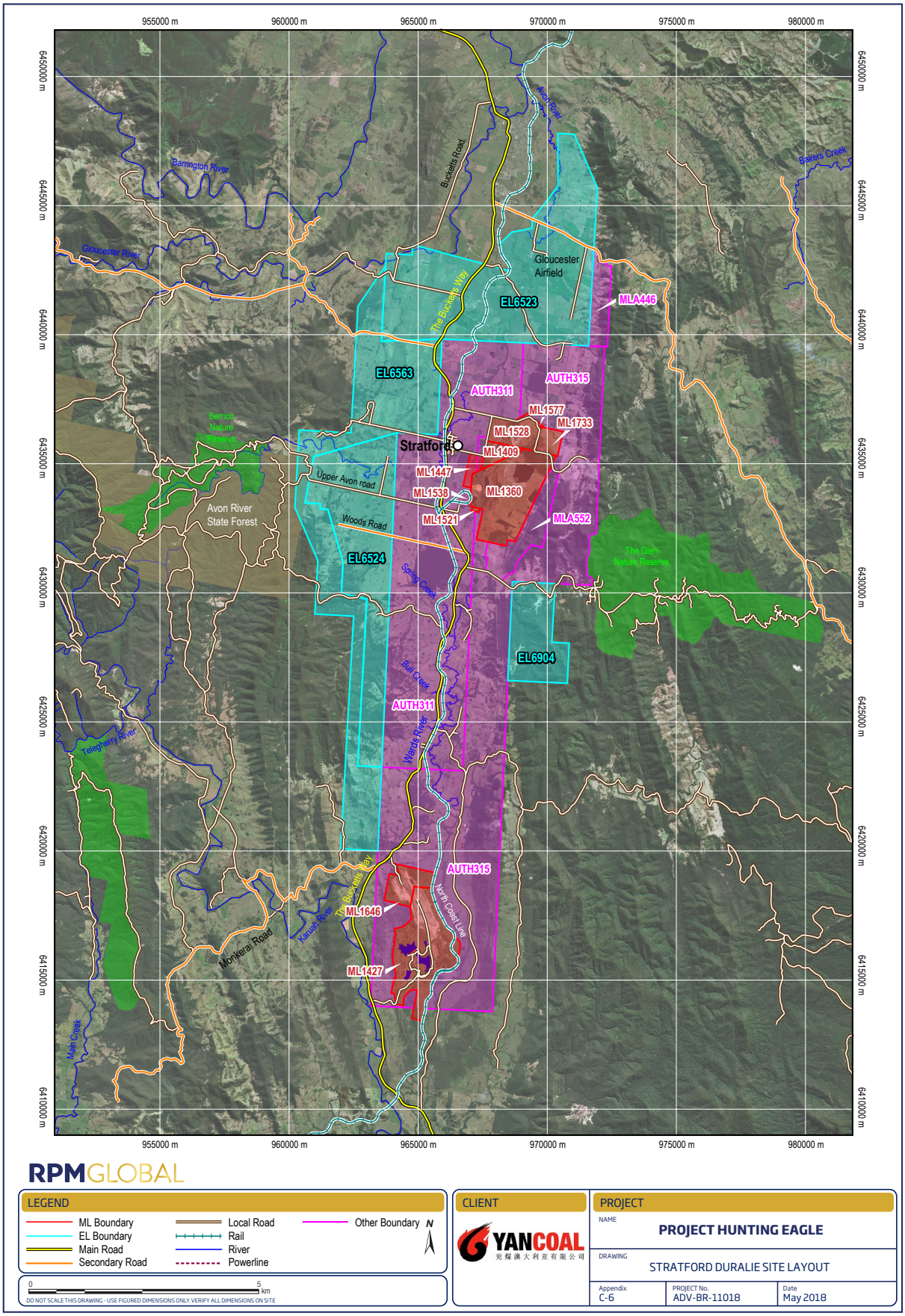
NAME: PROJECT HUNTING EAGLE

DRAWING: MOOLARBEN SITE LAYOUT

Appendix	PROJECT No.	Date
C-3	ADV-BR-11018	May 2018


Willies Creek Road
Fitzroy Developmental Road
Taunton National Park (Scientific)
Jumbe Road
Lyra Park
Mt Stuart Bedford Weir Road
Mt Stuart Road
Wyuna Road
Mackenzie River Capella Road
Phillips Crossing Road
Mackenzie River
Curragh
Curragh North Mine
Curragh Mine
Jellinbah East Mine
Blackwater Creek
Yarrabee Mine
EPC1668
EPC1429
EPC1117
EPC621
EPC1177
EPC1684
EPC717
ML80198
ML80197
ML80036
ML80050
ML80049
ML80104
ML80136
ML5770
ML80172
ML80195
MDL160
LEGEND
ML Boundary
EPC Boundary
MDL Boundary
Road
Local Road
Rail
River
Powerline
DO NOT SCALE THIS DRAWING - USE FIGURED DIMENSIONS ONLY. VERIFY ALL DIMENSIONS ON SITE
CLIENT
YANCOAL
PROJECT
NAME
PROJECT HUNTING EAGLE
DRAWING
YARRABEE SITE LAYOUT
Appendix C-4
PROJECT No. ADV-BR-11018
Date May 2018
RPMGLOBAL


6405000 m
325000 m
320000 m
315000 m
Glennies Creek
Rixs Creek
Forest Road
Main Northern Railway
ML1529
ML1533
ML1623
ML1696
MLA351
MLA394
MLA500
EL4918
EL5660
EL6330
New England Highway
Lemington Road
Archerfield Road
Ravensworth
Liddell
Hunter River
LEGEND
Current Title
Current Application
Highway
Secondary Road
Local Road
Rail
River
Powerline
N
0
5
km
DO NOT SCALE THIS DRAWING - USE FIGURED DIMENSIONS ONLY. VERIFY ALL DIMENSIONS ON SITE
RPMGLOBAL
CLIENT
YANCOAL
PROJECT
NAME
PROJECT HUNTING EAGLE
DRAWING
ASHTON SITE LAYOUT
Appendix
C-5
PROJECT No.
ADV-BR-11018
Date
May2018



RPMGLOBAL

LEGEND		
ML Boundary	Local Road	Other Boundary
EL Boundary	Rail	N
Main Road	River	
Secondary Road	Powerline	

0 5 km

DO NOT SCALE THIS DRAWING - USE FIGURED DIMENSIONS ONLY. VERIFY ALL DIMENSIONS ON SITE

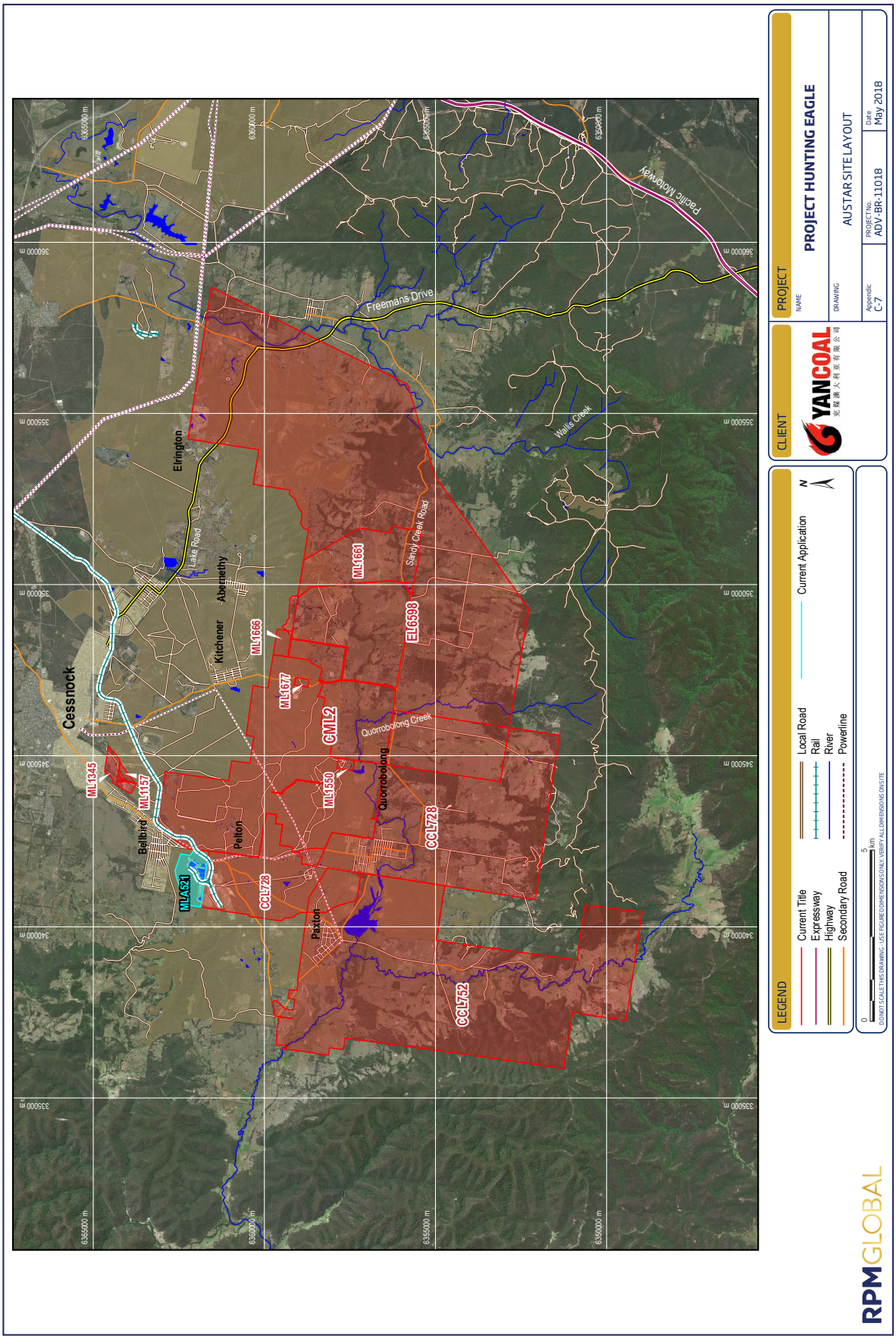
CLIENT: YANCOAL 兖煤澳大利亚有限公司

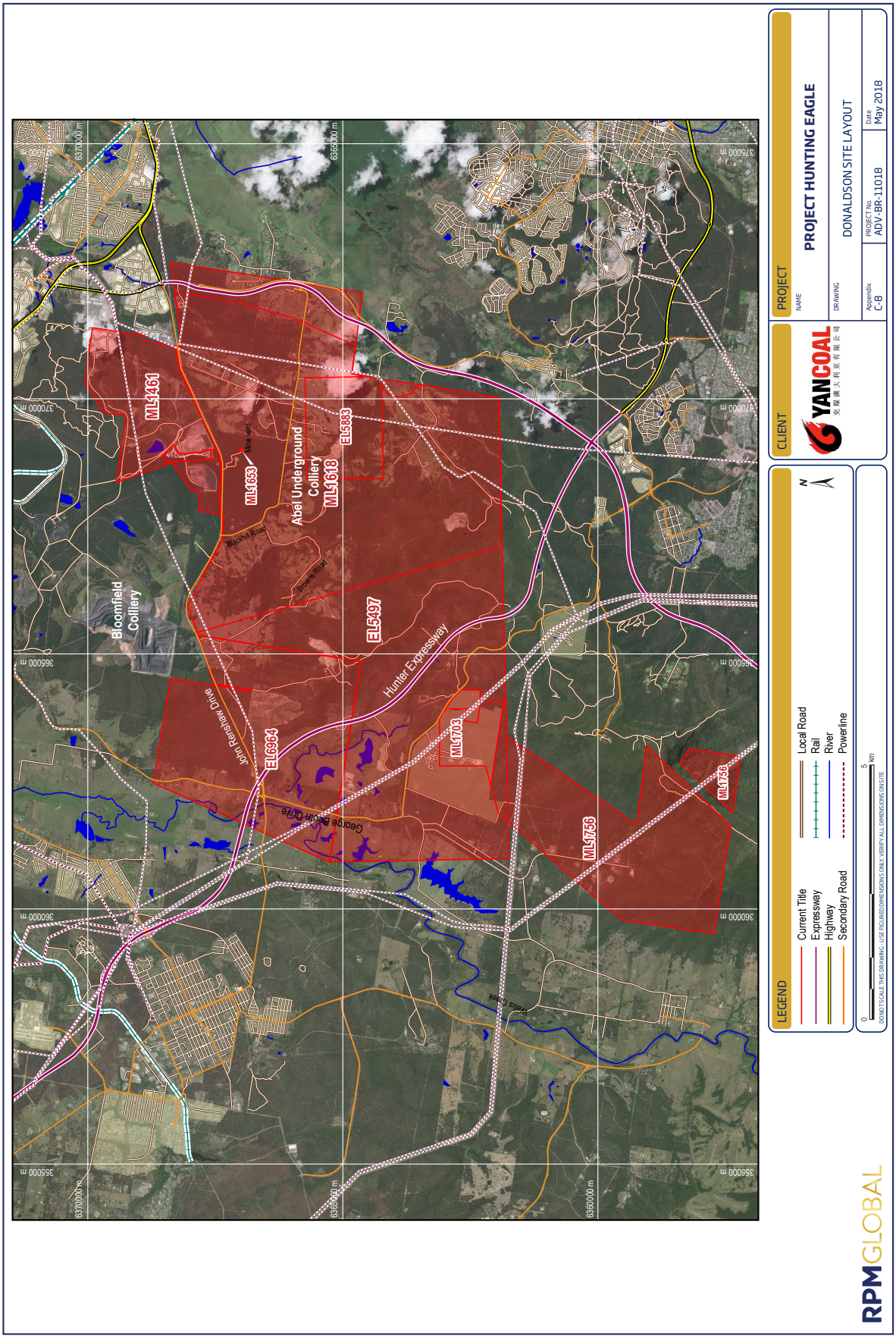
PROJECT

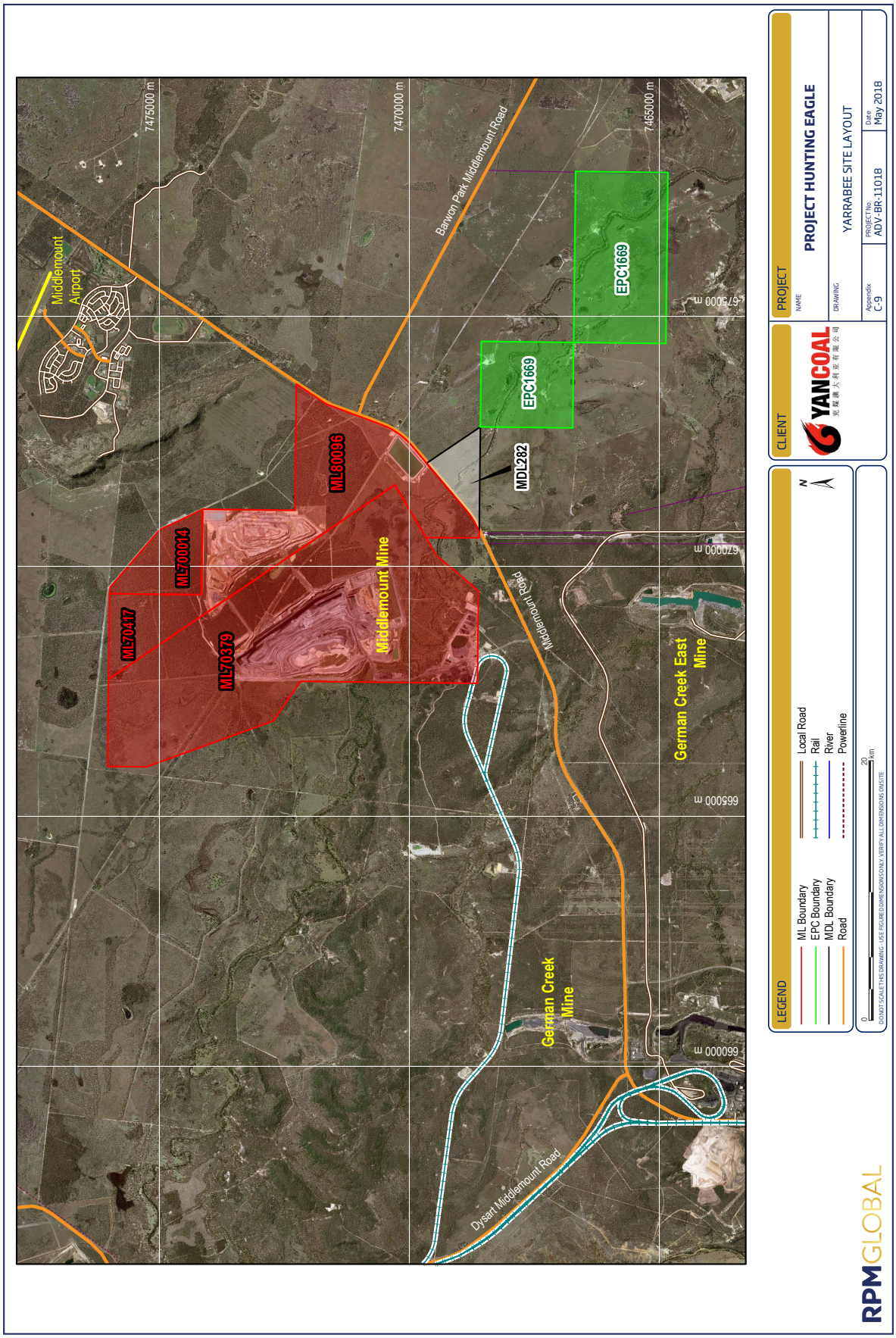
NAME: PROJECT HUNTING EAGLE

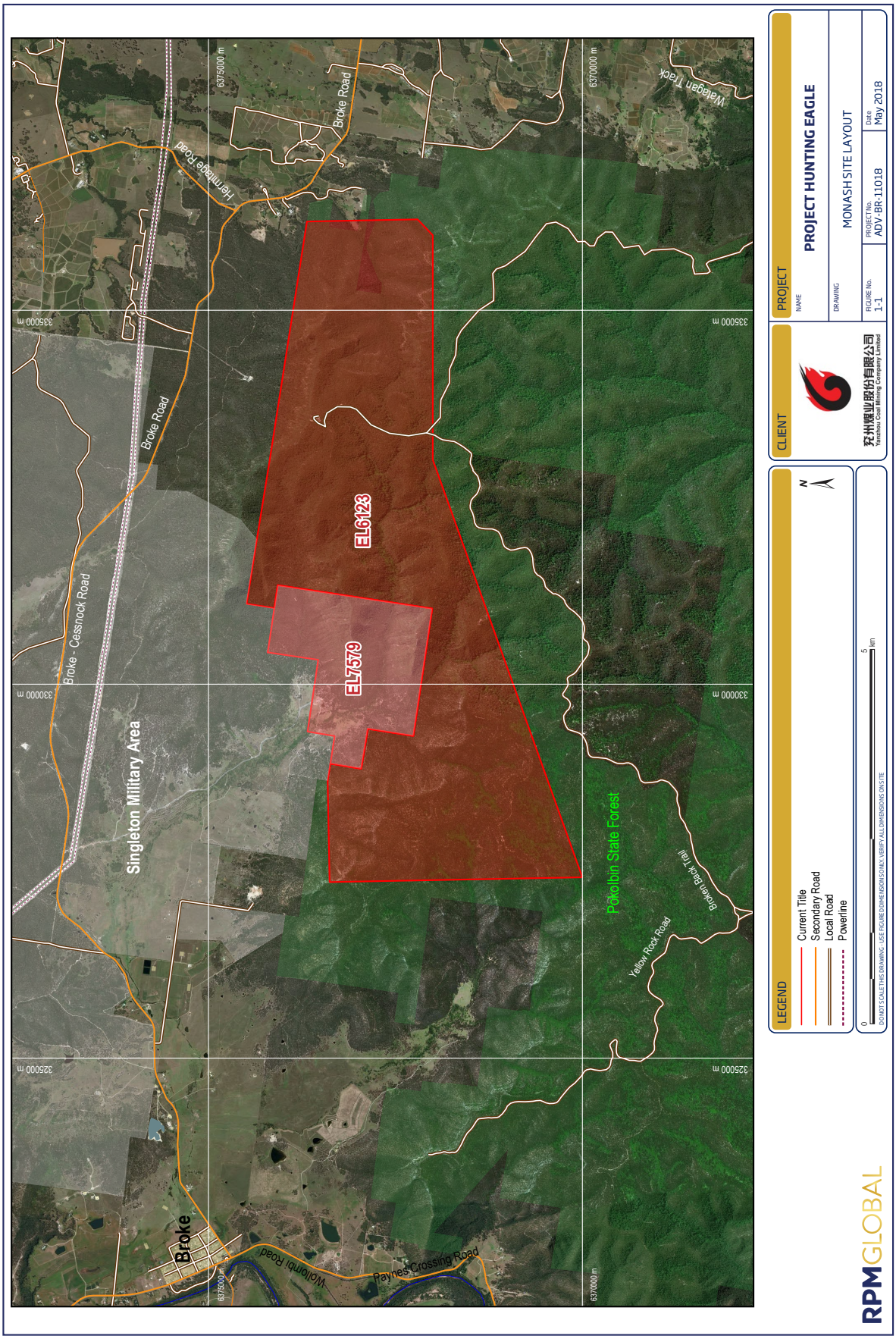
DRAWING: STRATFORD DURALIE SITE LAYOUT

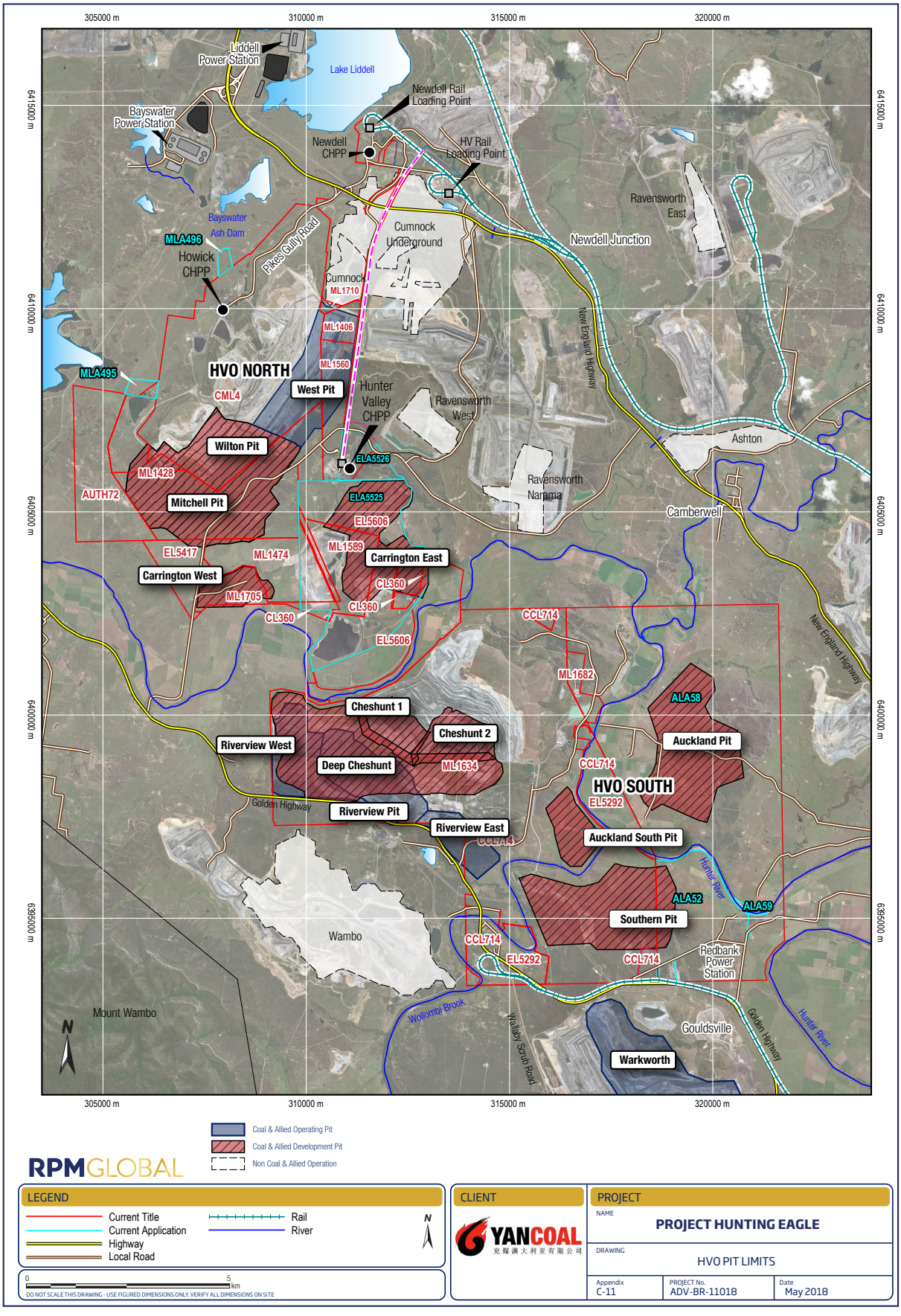
Appendix	PROJECT No.	Date
C-6	ADV-BR-11018	May 2018

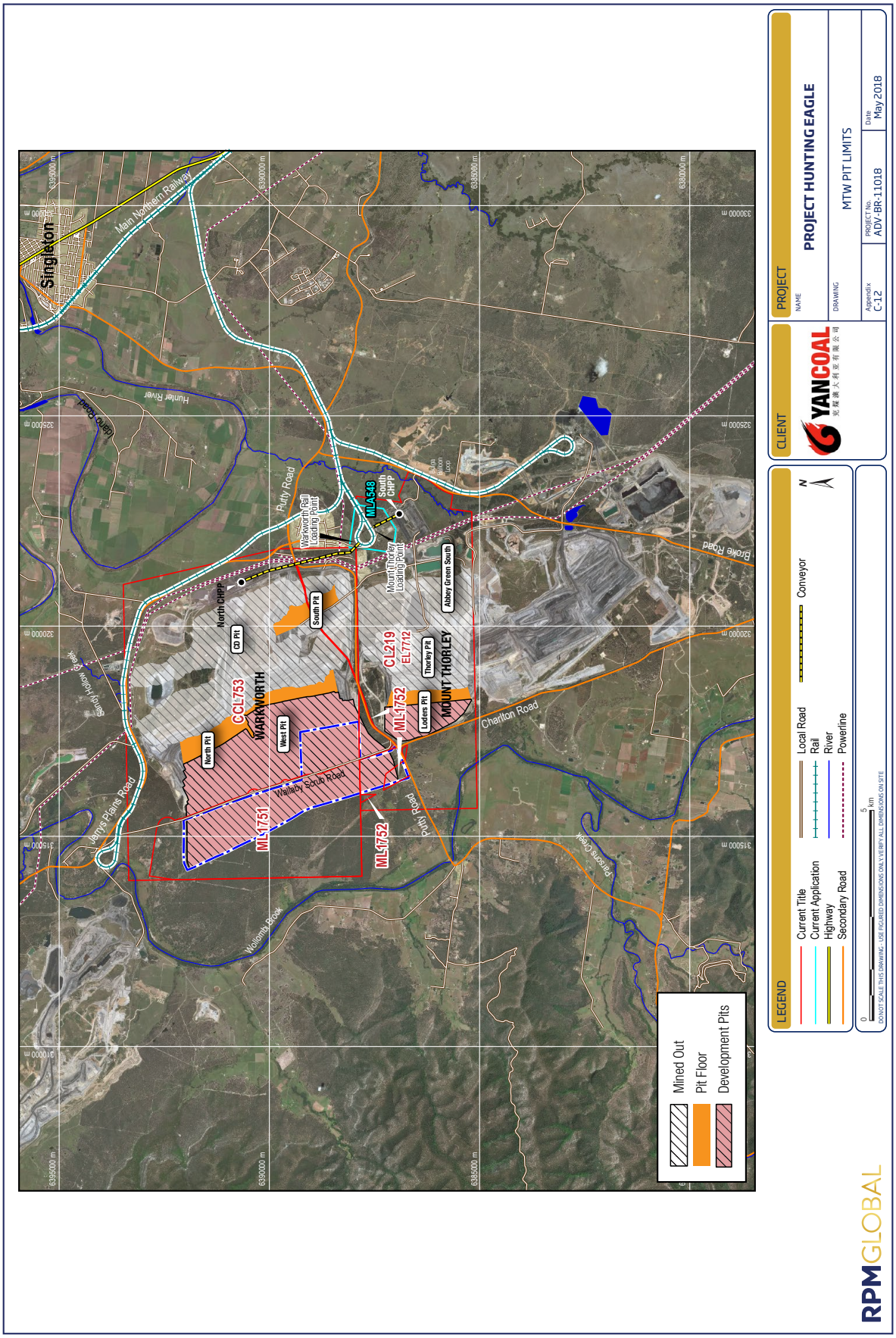

Cessnock
Kitchener
Abermethy
Elrington
Lake Road
Freemans Drive
Pacific Motorway
Wallis Creek
Sandy Creek Road
Quorrobolong Creek
Quorrobolong
Pelton
Bellbird
ML1345
ML1157
MLA521
CCL728
CCL762
CML2
ML1350
ML1677
ML1666
ML1661
EL6398
LEGEND
Current Title
Expressway
Highway
Secondary Road
Local Road
Rail
River
Powerline
Current Application
N
0
5
km
DO NOT SCALE THIS DRAWING - USE FIGURED DIMENSIONS ONLY. VERIFY ALL DIMENSIONS ON SITE
RPMGLOBAL
CLIENT
YANCOAL
PROJECT
NAME
PROJECT HUNTING EAGLE
DRAWING
AUSTAR SITE LAYOUT
Appendix
C-7
PROJECT No.
ADV-BR-11018
Date
May 2018

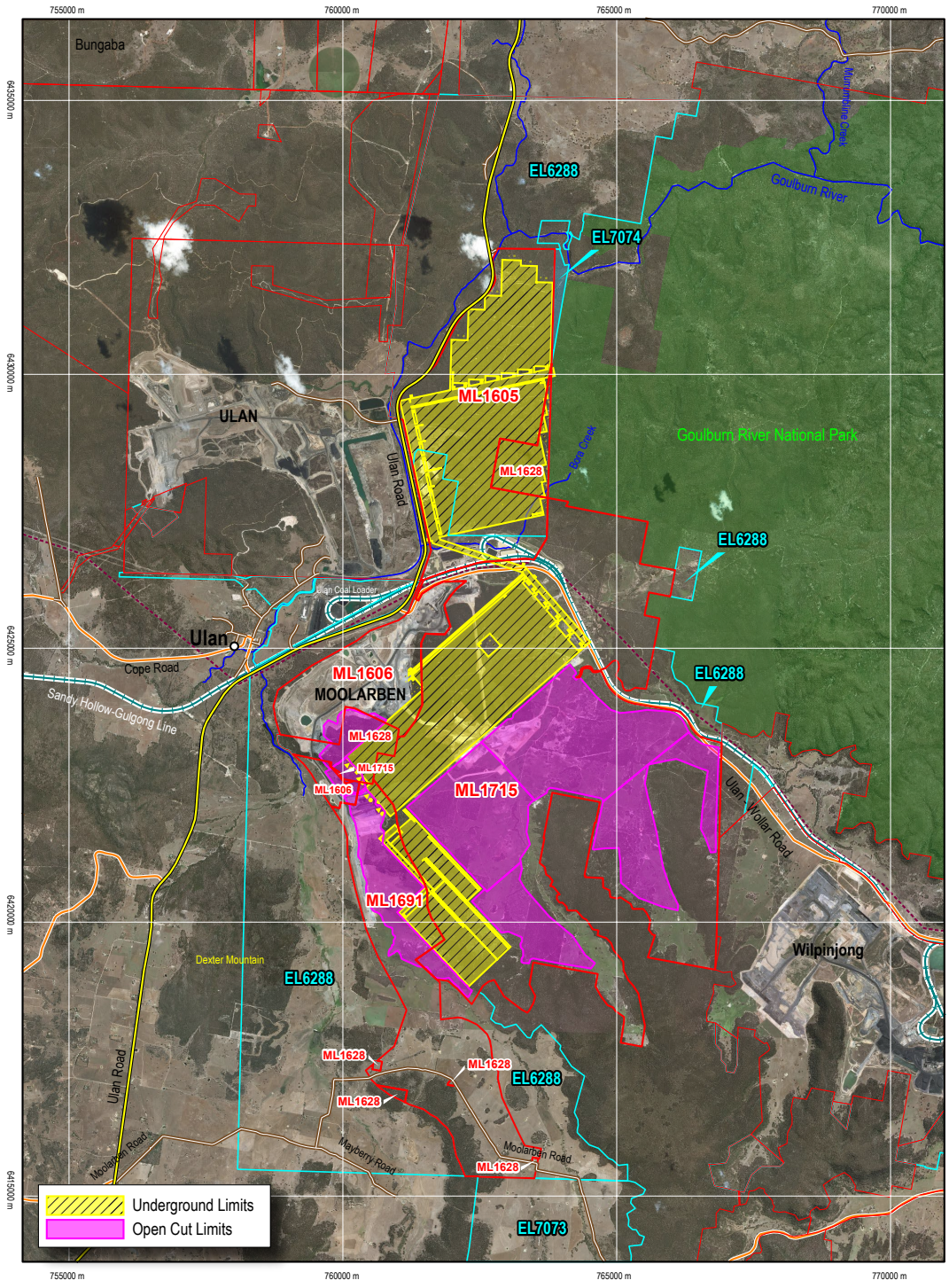

ML1461
ML1633
Mine vent
Abel Underground Colliery
ML1618
EL6333
Bloomfield Colliery
Bucktha Road
Browns Road
EL5497
Hunter Expressway
John Renshaw Drive
EL6964
ML1703
George Booth Drive
ML1756
ML1756
Fishers Creek
LEGEND
Current Title
Expressway
Highway
Secondary Road
Local Road
Rail
River
Powerline
N
0
5
km
DO NOT SCALE THIS DRAWING - USE FIGURED DIMENSIONS ONLY. VERIFY ALL DIMENSIONS ON SITE
CLIENT
YANCOAL
PROJECT
NAME
PROJECT HUNTING EAGLE
DRAWING
DONALDSON SITE LAYOUT
Appendix
C-8
PROJECT No.
ADV-BR-11018
Date
May 2018
RPMGLOBAL


7475000 m
7470000 m
7465000 m
670000 m
665000 m
660000 m
Middlemount Airport
Banyan Park Middlemount Road
EPC1669
EPC1669
MDL282
ML80096
ML70014
ML70417
ML70379
Middlemount Mine
Middlemount Road
German Creek East Mine
German Creek Mine
Dysart Middlemount Road
LEGEND
ML Boundary
EPC Boundary
MDL Boundary
Road
Local Road
Rail
River
Powerline
N
0
20
km
DO NOT SCALE THIS DRAWING - USE FIGURED DIMENSIONS ONLY. VERIFY ALL DIMENSIONS ON SITE
CLIENT
YANCOAL
PROJECT
NAME
PROJECT HUNTING EAGLE
DRAWING
YARRABEE SITE LAYOUT
Appendix
C-9
PROJECT No.
ADV-BR-11018
Date
May 2018
RPMGLOBAL


EL6123
EL7579
Broke
Broke Road
Broke - Cessnock Road
Singleton Military Area
Pokolbin State Forest
Yellow Rock Road
Bicentennial Trail
Wollombi Road
Paynes Crossing Road
Wattagan Track
Fernmeade Road
6375000 m
6370000 m
325000 m
330000 m
335000 m
LEGEND
Current Title
Secondary Road
Local Road
Powerline
DO NOT SCALE THIS DRAWING - USE FIGURED DIMENSIONS ONLY. VERIFY ALL DIMENSIONS ON SITE
CLIENT
兖州煤业股份有限公司
Yanzhou Coal Mining Company Limited
PROJECT
NAME
PROJECT HUNTING EAGLE
DRAWING
MONASH SITE LAYOUT
FIGURE No.
1-1
PROJECT No.
ADV-BR-11018
Date
May 2018
RPMGLOBAL


305000 m
310000 m
315000 m
320000 m
6415000 m
6410000 m
6405000 m
6400000 m
6395000 m
Liddell Power Station
Lake Liddell
Bayswater Power Station
Newdell Rail Loading Point
Newdell CHPP
HV Rail Loading Point
Ravensworth East
Bayswater Ash Dam
MLA496
Howick CHPP
Pikes Gully Road
Cumnock Underground
Cumnock
ML1710
Newdell Junction
ML1406
ML1560
New England Highway
MLA495
HVO NORTH
CML4
West Pit
Hunter Valley CHPP
Ravensworth West
Ashton
Wilton Pit
ELA5526
ML1428
AUTH72
Mitchell Pit
Ravensworth Narama
ELA5525
EL5606
Camberwell
EL5417
ML1474
ML1589
Carrington East
Carrington West
CL360
ML1705
CCL714
EL5606
ML1682
ALA58
Cheshunt 1
Cheshunt 2
Auckland Pit
Riverview West
Deep Cheshunt
ML1634
CCL714
HVO SOUTH
EL5292
Golden Highway
Riverview Pit
Riverview East
Auckland South Pit
Hunter River
ALA52
ALA59
Southern Pit
Wambo
CCL714
EL5292
CCL714
Redbank Power Station
Mount Wambo
Wollombi Brook
Wallaby Scrub Road
Gouldsville
Golden Highway
Hunter River
Warkworth
N
Coal & Allied Operating Pit
Coal & Allied Development Pit
Non Coal & Allied Operation
RPMGLOBAL
LEGEND
Current Title
Current Application
Highway
Local Road
Rail
River
0
5
km
DO NOT SCALE THIS DRAWING - USE FIGURED DIMENSIONS ONLY. VERIFY ALL DIMENSIONS ON SITE
CLIENT
YANCOAL
兖煤澳大利亚有限公司
PROJECT
NAME
PROJECT HUNTING EAGLE
DRAWING
HVO PIT LIMITS
Appendix
C-11
PROJECT No.
ADV-BR-11018
Date
May 2018


Singleton
Main Northern Railway
Hunter River
Putty Road
Broke Road
Charlton Road
Wallaby Scrub Road
James Plains Road
Wollombi Brook
Yancoal Road
Bowmans Creek
Warkworth Rail Loading Point
Mount Thorley Rail Loading Point
MLA548
South CHPP
North CHPP
CD Pit
North Pit
West Pit
South Pit
Loders Pit
Thorley Pit
Abbey Green South
CCL753
WARKWORTH
ML1751
ML1752
CL219
EL7712
MOUNT THORLEY
Mined Out
Pit Floor
Development Pits
LEGEND
Current Title
Current Application
Highway
Secondary Road
Local Road
Rail
River
Powerline
Conveyor
N
0
5
km
DO NOT SCALE THIS DRAWING - USE FIGURED DIMENSIONS ONLY. VERIFY ALL DIMENSIONS ON SITE
CLIENT
YANCOAL
PROJECT
NAME
PROJECT HUNTING EAGLE
DRAWING
MTW PIT LIMITS
Appendix
C-12
PROJECT No.
ADV-BR-11018
Date
May 2018
RPMGLOBAL



RPMGLOBAL

LEGEND

ML Boundary
EL Boundary
Main Road
Secondary Road
Local Road
Rail
River
Powerline
N

0 5 km

DO NOT SCALE THIS DRAWING - USE FIGURED DIMENSIONS ONLY. VERIFY ALL DIMENSIONS ON SITE

CLIENT

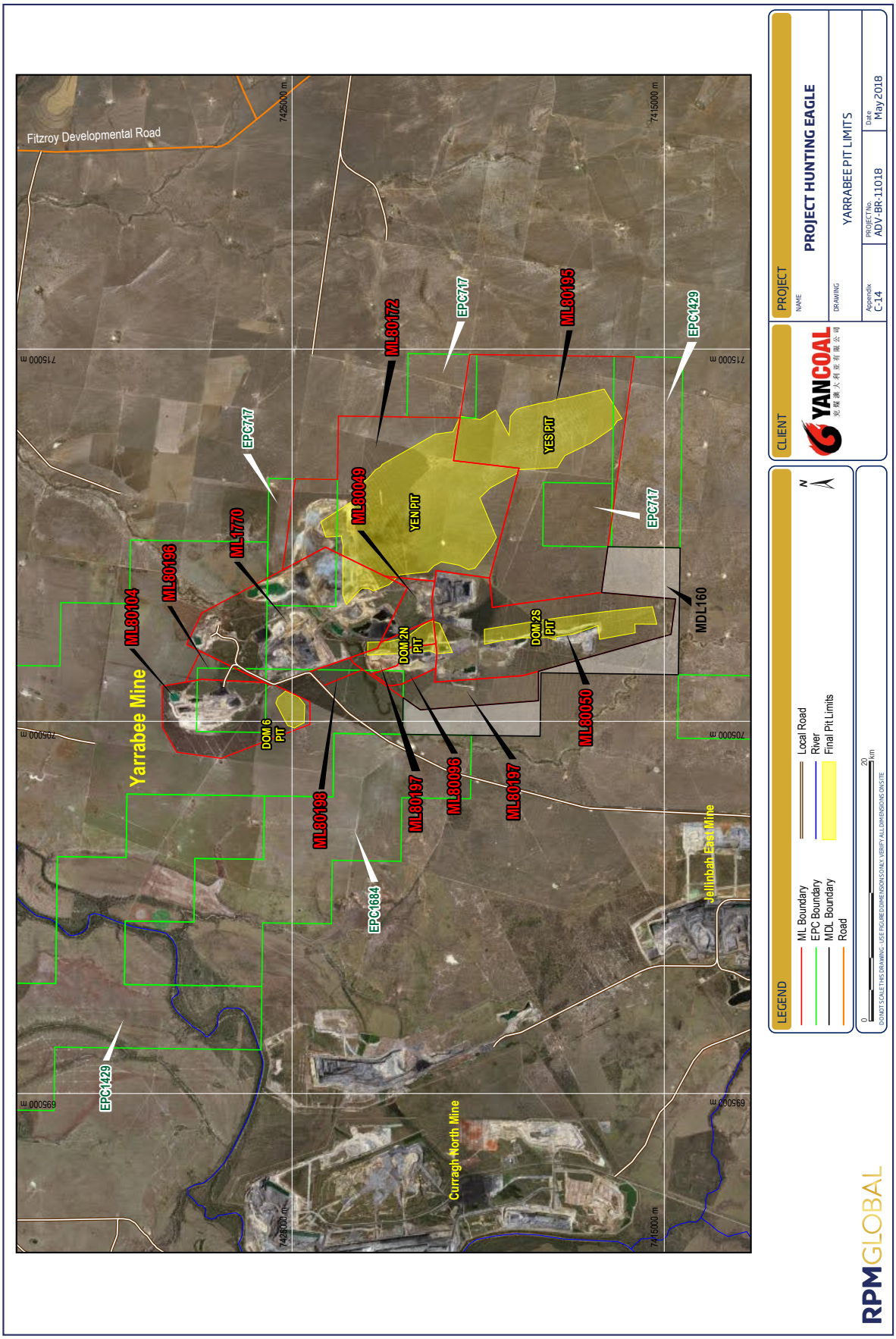
YANCOAL 兖煤澳大利亚有限公司

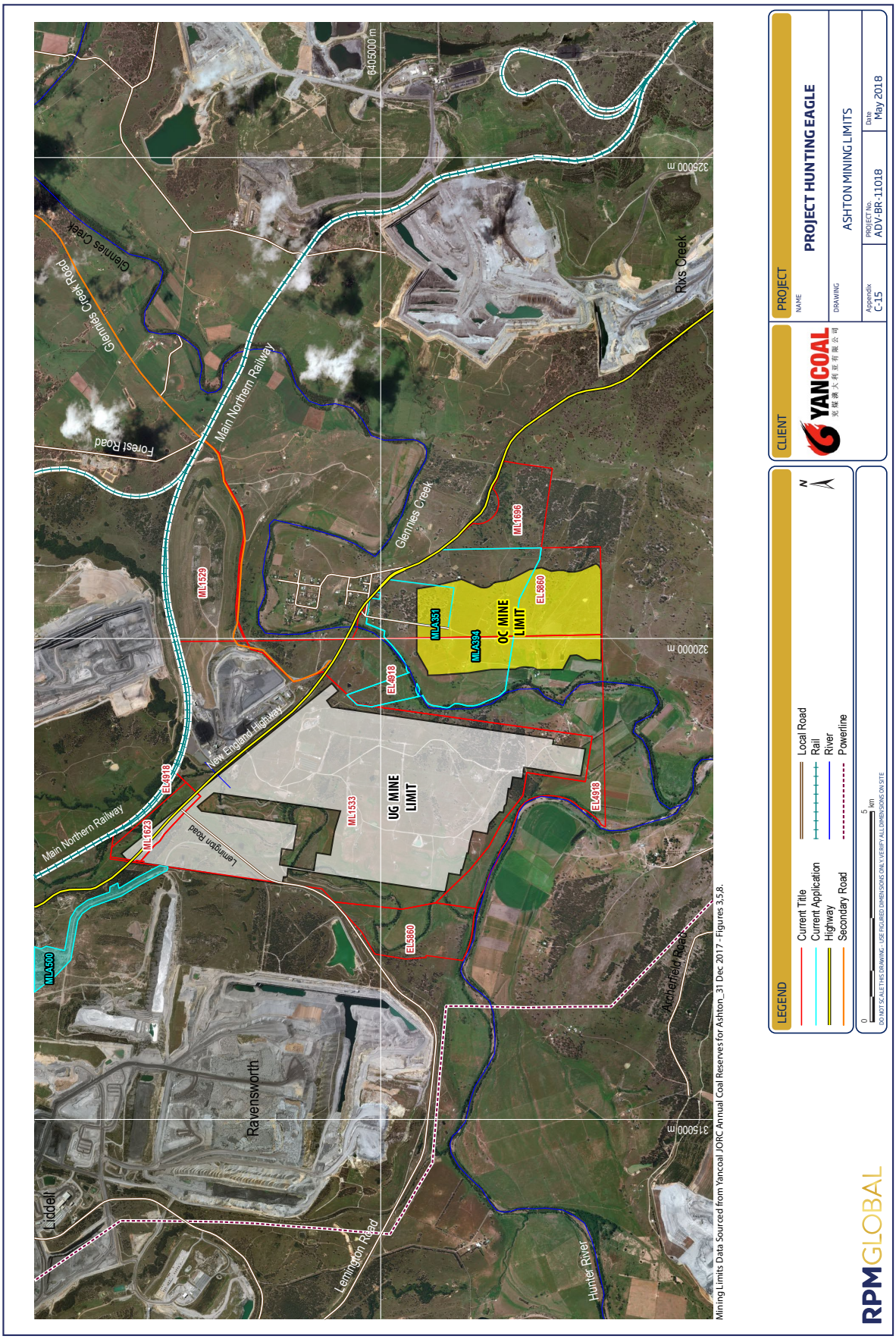
PROJECT

NAME: PROJECT HUNTING EAGLE

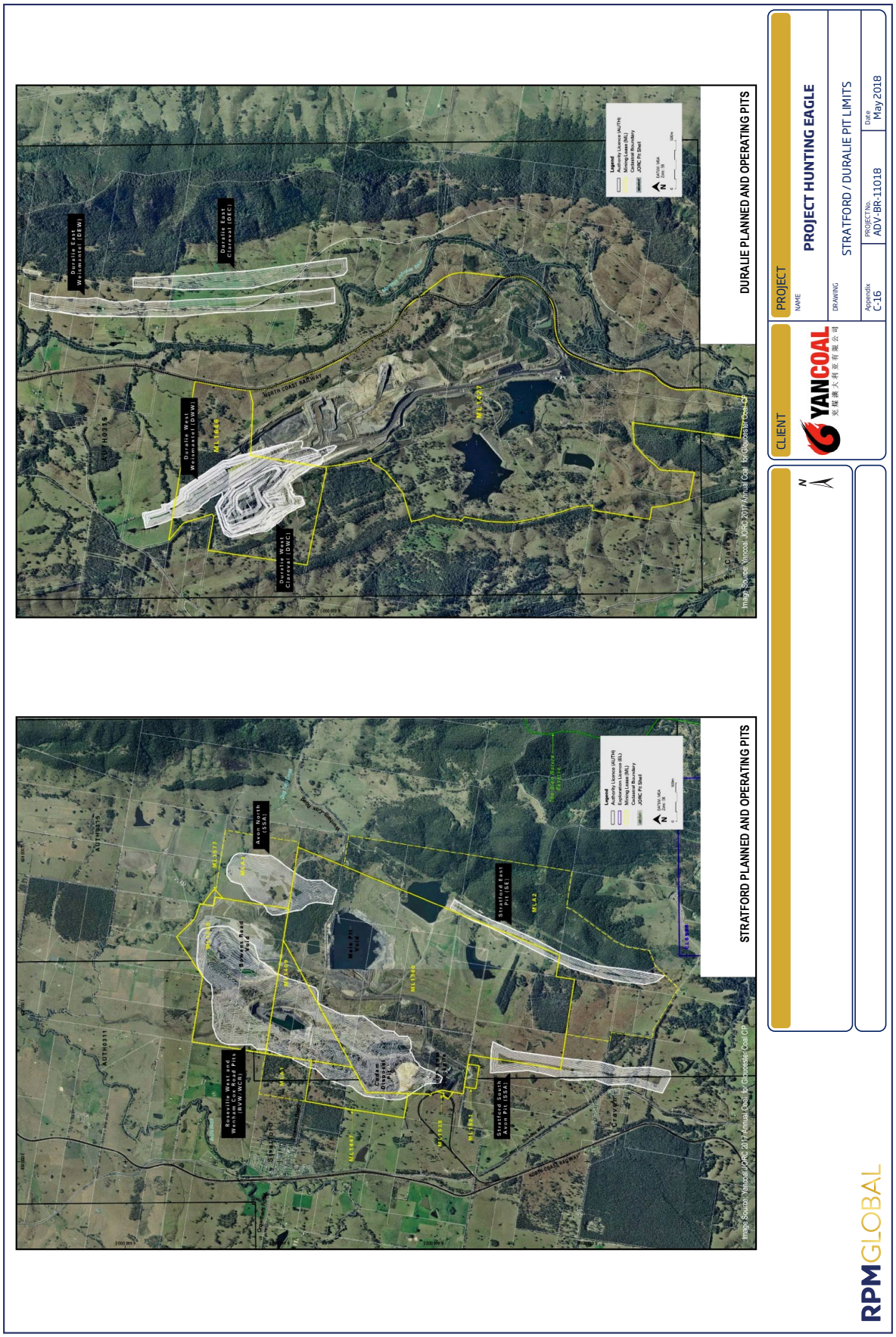
DRAWING: MOOLARBEN MINING LIMITS

Appendix	PROJECT No.	Date
C-13	ADV-BR-11018	May 2018


Fitzroy Developmental Road
Yarrabee Mine
Curragh North Mine
Jellinbah East Mine
ML80104
ML80196
ML1770
ML80049
ML80172
ML80195
EPC717
EPC1429
EPC1684
YEN PIT
YES PIT
DOM 6 PIT
DOM 2N PIT
DOM 2S PIT
MDL160
ML80198
ML80197
ML80096
ML80197
ML80050
LEGEND
ML Boundary
EPC Boundary
MDL Boundary
Road
Local Road
River
Final Pit Limits
N
DO NOT SCALE THIS DRAWING - USE FIGURED DIMENSIONS ONLY. VERIFY ALL DIMENSIONS ON SITE
km
CLIENT
YANCOAL
PROJECT
NAME
PROJECT HUNTING EAGLE
DRAWING
YARRABEE PIT LIMITS
Appendix
C-14
PROJECT No.
ADV-BR-11018
Date
May 2018
RPMGLOBAL



Mining Limits Data Sourced from Yancoal JORC Annual Coal Reserves for Ashton_31 Dec 2017 - Figures 3,5,8.


DURALIE PLANNED AND OPERATING PITS
Duralie East Pit (DE)
Duralie East Clareval (DEC)
Duralie West Clareval (DWC)
Duralie West Pit (DW)
North Coast Railway
Image Source: Yancoal, QRC 2017 Annual Coal for Gloucester Coal CP
STRATFORD PLANNED AND OPERATING PITS
Avon North (SSA)
Stratford East Pit (SE)
Stratford South Pit (SSA)
Roseville West and Wenham Cox Road Pits (RW/WC)
Image Source: Yancoal, QRC 2017 Annual Coal for Gloucester Coal CP
CLIENT
YANCOAL
PROJECT
NAME
PROJECT HUNTING EAGLE
DRAWING
STRATFORD / DURALIE PIT LIMITS
Appendix C-16
PROJECT No. ADV-BR-11018
Date May-2018
RPMGLOBAL

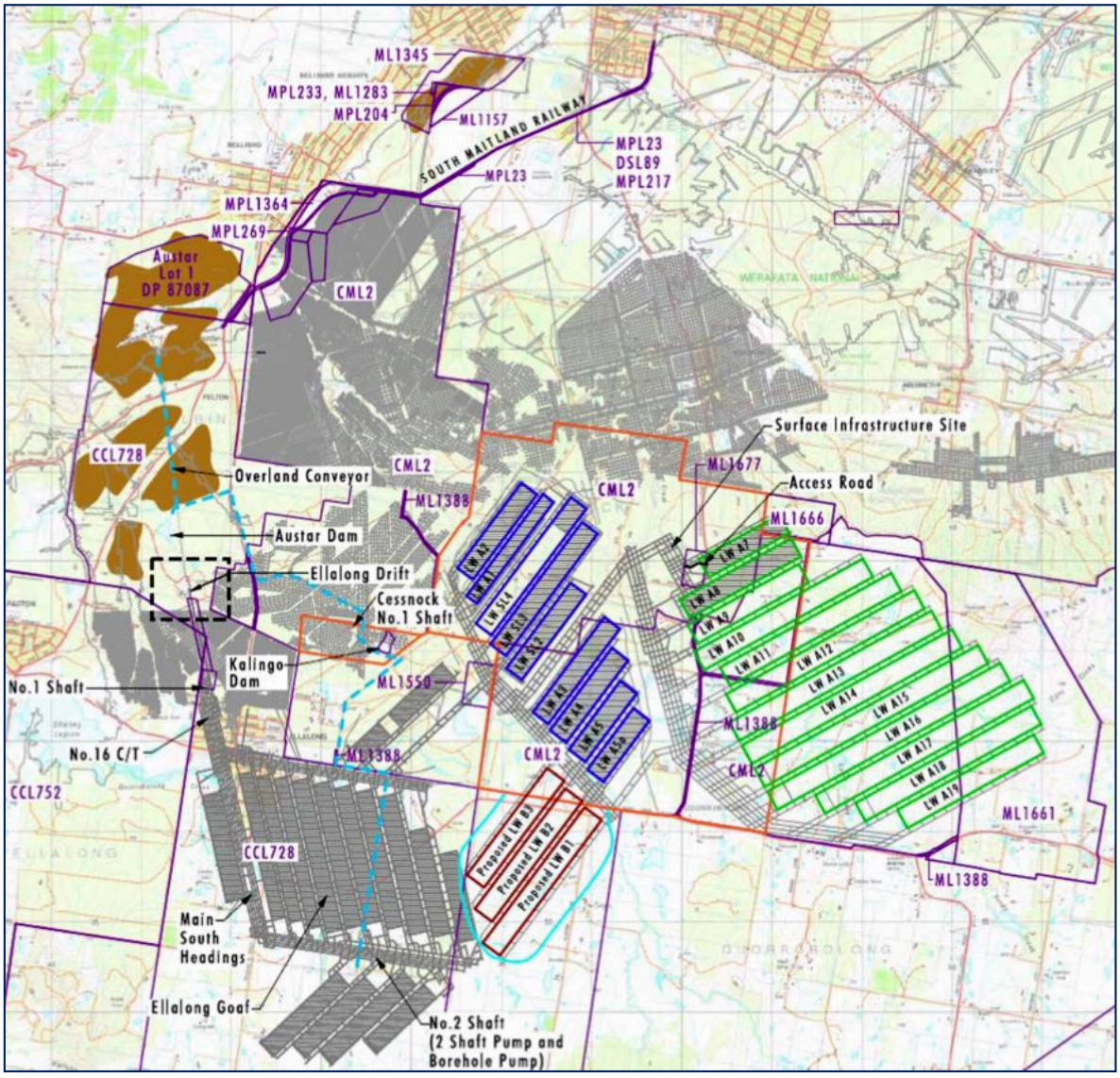


Image Sourced from Yancoal JORC 2017 Annual Coal Reserve for Austar_31 Dec 2017 - Final_Figure 1A

RPMGLOBAL

CLIENT

YANCOAL 兖煤澳大利亚有限公司

PROJECT

NAME

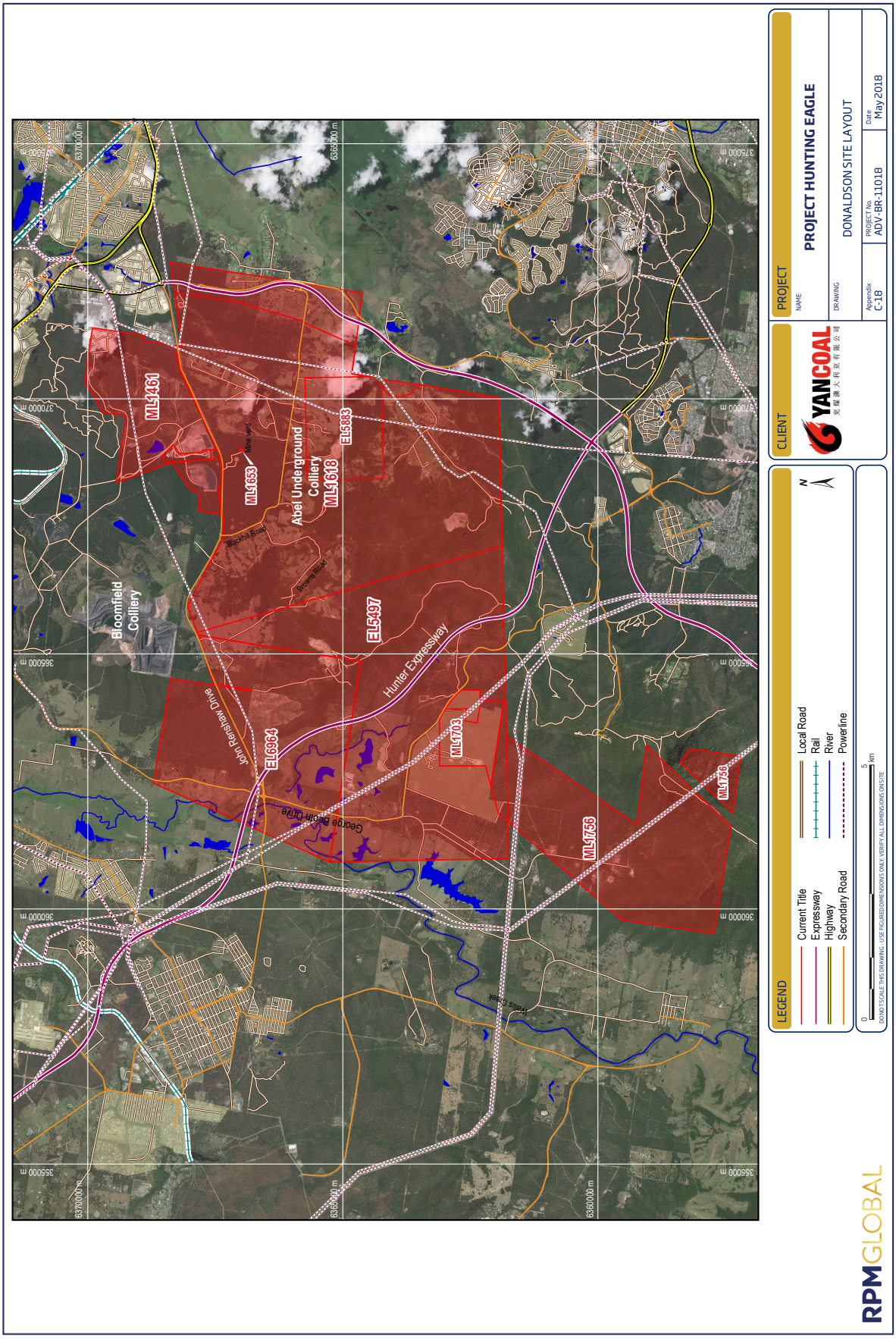
PROJECT HUNTING EAGLE

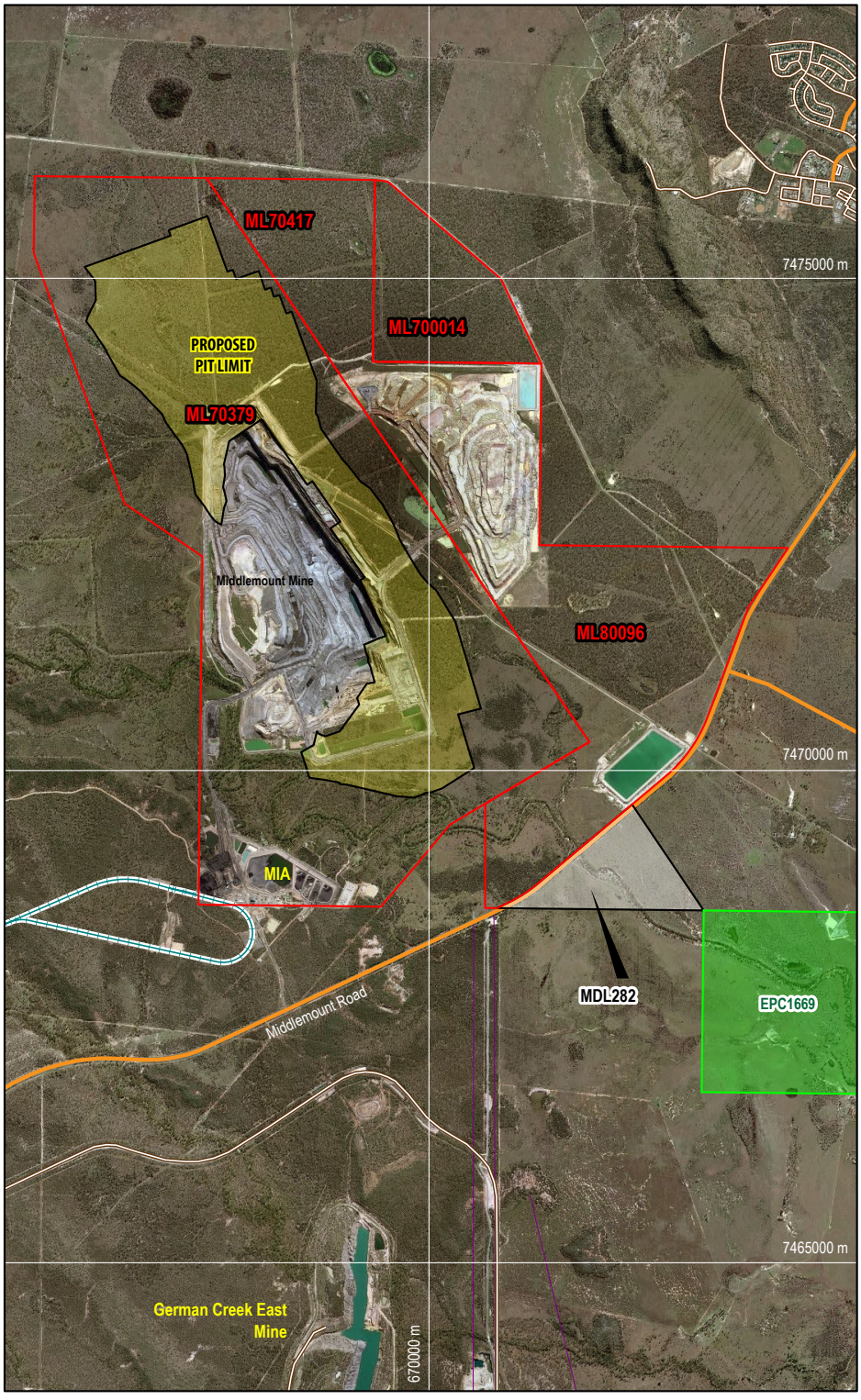
DRAWING

AUSTAR MINING LIMITS

Appendix	PROJECT No.	Date
C-17	ADV-BR-11018	May 2018

DO NOT SCALE THIS DRAWING - USE FIGURED DIMENSIONS ONLY. VERIFY ALL DIMENSIONS ON SITE


ML1461
ML1633
Mine vent
Abel Underground Colliery
ML1618
EL6333
Bloomfield Colliery
Bucchia Road
Brown's Road
EL5497
Hunter Expressway
John Renshaw Drive
EL6364
ML1703
ML1756
George Booth Drive
Fishers Creek
LEGEND
Current Title
Expressway
Highway
Secondary Road
Local Road
Rail
River
Powerline
N
0
5
km
DO NOT SCALE THIS DRAWING - USE FIGURED DIMENSIONS ONLY. VERIFY ALL DIMENSIONS ON SITE
CLIENT
YANCOAL
PROJECT
NAME
PROJECT HUNTING EAGLE
DRAWING
DONALDSON SITE LAYOUT
Appendix
C-18
PROJECT No.
ADV-BR-11018
Date
May 2018
RPMGLOBAL



RPMGLOBAL

LEGEND

ML Boundary
EPC Boundary
MDL Boundary
Road
Local Road
Rail
River
Powerline
N
0 5 km
DO NOT SCALE THIS DRAWING - USE FIGURED DIMENSIONS ONLY. VERIFY ALL DIMENSIONS ON SITE

CLIENT

YANCOAL 兖煤澳大利亚有限公司

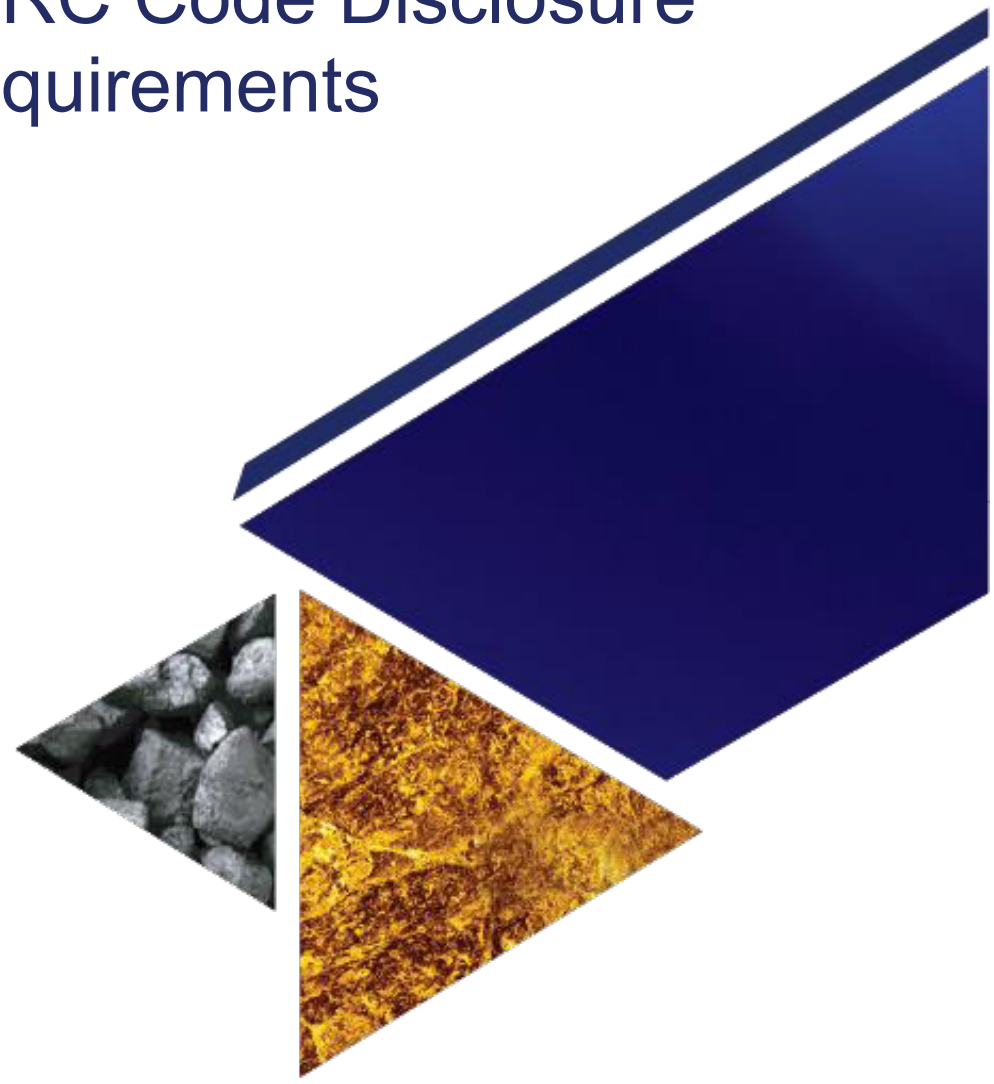
PROJECT

NAME
PROJECT HUNTING EAGLE

DRAWING
MIDDLEMOUNT MINING LIMITS

Appendix	PROJECT No.	Date
C-19	ADV-BR-11018	May 2018

Appendix D. JORC Code Disclosure Requirements



RPMGLOBAL

HVO / MTW

JORC Code Disclosure Requirements

RPMGLOBAL

JORC Code, 2012 Edition – Table 1 report template

The completed Table 1, Sections 1, 2 & 3 are in response to the current ADV-BR-11019_Hunting Eagle_CPR Report completed in part by Competent Person Mr Peter Ellis on behalf of RPM.

Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary	
		HVO	MTW
Sampling techniques	▪ *Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.* ▪ *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* ▪ *Aspects of the determination of mineralisation that are Material to the Public Report.* ▪ *In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.*	▪ A total of 9,557 boreholes (585,019 m) support the Resource estimate at HVO. Cored drilling represents 34% of the total metres and open hole drilling 66%. ▪ The boreholes are up to 616 m in depth and average 67 m. The boreholes were all nominally recorded as vertical. During RTCA ownership boreholes which deviated by more than 5% from vertical of the total boreholes length the borehole were redrilled. ▪ In addition a limited number of large diameter (LD) holes have been drilled: 103 holes at 100 mm (4") and six holes at 200 mm (8") diameter sizes. ▪ Each drill rig is managed and supervised by a qualified geologist who is normally a contract geologist, who works according to a set of site guidelines for data acquisition. ▪ Site geologists manage all of the site based exploration. ▪ Governance and overview is provided by the Yancoal corporate Resource Knowledge Department.	▪ A combination of open hole and cored holes for coal quality (CQ), geotechnical and gas sampling have been used at MTW ▪ A total of 2,628 boreholes (274,585 m) support the Resource estimate Cored drilling represents 45% of the total metres and open hole drilling 55%. ▪ The boreholes are up to 725 m in depth and average 92 m. The boreholes were all nominally recorded as vertical. During RTCA ownership boreholes that deviated by more than 5% were re-drilled by contractor. Coring has predominantly been done using a HQ3-sized (63 mm) and open hole drilling to an equivalent hole diameter size. ▪ In addition a number of large diameter (LD) holes have been drilled: seven holes at 150 mm (6") and 49 holes at 200 mm (8") diameter sizes for evaluation of detailed coal processing and preparation options.
Drilling techniques	▪ *Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether*	▪ Industry standard drilling techniques are used. ▪ All drilling has been completed using vertical holes. No core orientation has been performed.	

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Criteria	JORC Code explanation	Commentary	
		HVO	MTW
	core is oriented and if so, by what method, etc).		
Drill sample recovery	▪ *Method of recording and assessing core and chip sample recoveries and results assessed.* ▪ *Measures taken to maximise sample recovery and ensure representative nature of the samples.* ▪ *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	▪ Core recovery is recorded by the rig geologist while logging the borehole. Actual recovered core lengths are measured by the rig geologist with a tape measure, and compared with the as drilled cored interval. Core loss is recorded in the geological logs, coal quality sample intervals and in the run by run drilling record field sheets. ▪ 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. ▪ As received and air dried sample masses are typically recorded and reported during analysis and provide a check for sample recovery where core diameter, sample intervals and density is known. This also provides a useful check where sample mix ups are suspected. ▪ Open hole chip samples are taken every 1 m of drill advance. Open hole chip recovery is assessed qualitatively by the rig geologist.	
Logging	▪ *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* ▪ *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* ▪ *The total length and percentage of the relevant intersections logged.*	▪ Standardised logging systems were followed by the previous owner for all drilling logging and sampling. All data is currently logged directly into Geobank via tablet computers. ▪ Core is geologically and geotechnically logged and open hole chip samples are taken every 1 m and logged for lithology changes. ▪ All holes have been lithologically logged by qualified geologists. Cored coal sections have been brightness logged. The logging of the chip and core samples is detailed and includes a record of the recovery of the total length and the cored length, rock type, stratigraphic unit and numerous adjectives to describe the sample in terms of colour, grainsize, bedding etc. all of which is sufficient to describe the various lithologies and coal samples to support the Coal Resource estimation from a geological, geotechnical and coal quality consideration. ▪ All bore core recovered during RTCA ownership is photographed on both the core table (0.5 m increment) and in a core tray on a nominal 5 m tray basis. ▪ Chip samples are photographed as laid out in 1 m intervals. ▪ All holes are logged using a comprehensive suite of industry standard downhole geophysics tools (caliper, gamma, density, neutron, deviation, and sonic), with the addition of acoustic scanner that is used for geotechnical assessment in cored holes.	
Sub-sampling techniques and sample preparation	▪ *If core, whether cut or sawn and whether quarter, half or all core taken.* ▪ *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* ▪ *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* ▪ *Quality control procedures adopted for all sub-sampling*	▪ Core sampling is completed at the drill site and follows standardised sampling documentation. Samples are bagged and tagged with a unique sample number at the drill site, and stored in a secure core storage area until being transported to the laboratory for analysis at the completion of each borehole.	

Criteria	JORC Code explanation	Commentary HVO / MTW
	stages to maximise representivity of samples. ▪ *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.* ▪ *Whether sample sizes are appropriate to the grain size of the material being sampled.*	▪ Prior to May 2013 all core samples were analysed by the Australian Laboratory Services Steel River, Newcastle laboratory. Since that time coal testing has been performed by Bureau Veritas. ▪ The laboratories which completed the core sample testing are accredited by National Association of Testing Authorities certified laboratory (NATA). ▪ Coal testing is performed in accordance with the various Australian and or International Standards. ▪ The entire core samples only were dispatched to the laboratory for analysis. There is no splitting or halving of core. Only full core sample analyses were used to create the coal quality models. ▪ Laboratory sample preparation and subsampling has been performed at the coal testing laboratory following instructions made by RTCA. ▪ All samples are weighed, air dried and then re-weighed before being crushed to an 11.2 mm top size. A rotary splitter is used to divide the sample into portions for coal quality analysis. ▪ Coal quality analysis follows a three stage method involving raw analysis on all plies followed by stage 2 washability and stage 3 product testing on composite samples that are defined by the RTCA geologist in the laboratory instructions. ▪ All instructions issued to the laboratory follow a standard format that forms the basis for reporting the results of laboratory testing.

Quality of assay data and laboratory tests	▪ *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.*
	▪ *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.*
	▪ *Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.*
		▪ Non-formalised quality assurance/quality control (QAQC) involving duplicate samples has been completed.
		▪ Routine checks have been completed including laboratory round robin and basic reproducibility tests provided by the coal testing laboratory.
		▪ All laboratory test results are assessed by site geologists by a number of techniques for precision and accuracy that includes but is not limited to:
		– Ensuring that all test work has been completed according to the issued testing instructions;
		  ▪ Sample intervals are correctly reported;
		  ▪ Sample intervals match the seam pick intervals;
		  ▪ Sum of proximate and ultimate analysis equals 100%; and
		  ▪ Sum of ash analysis is in the range 98 to 102%.
		– Crossplots of energy and ash, density and ash, energy and volatile matter, and basic statistics to identify outlier values.

Criteria	JORC Code explanation	Commentary	
		HVO	MTW
		▪ Responsibility for quality control and quality assurance for analyses is primarily the responsibility of the NATA approved laboratories which complete the testing according to the various Australian Standards. Tested samples had sufficient reserve sample to allow for check analyses to be completed when site determined from their QC procedures that the reported coal quality results were anomalous or inconsistent with the geological expectation. ▪ Data checks and check analyses are requested where YAL identifies outliers results in the reported analytical test results that cannot be explained by geological processes.	
Verification of sampling and assaying	▪ *The verification of significant intersections by either independent or alternative company personnel.* ▪ *The use of twinned holes.* ▪ *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* ▪ *Discuss any adjustment to assay data.*	▪ All CQ sampling and analysis is managed and checked by YAL personnel. ▪ Data transfer from MTW and HVO was covered by protocols. The system documents primary assaying data, data entry procedures, data verification, and data storage (physical and electronic) into the ABB GDB relational geological database. ▪ Coal quality data is loaded to the GDB database and is validated against load limits. Once loaded the data is not altered, with the exception of converting data to different basis, such as converting air dried relative density data to an in situ basis using the Preston Sanders equation. The original as reported laboratory data is still retained in the database, and the data calculated data is contained in additional calculated columns in the database. ▪ All data is contained in the GDB database, even that data which has been identified to be incorrect. The incorrect data is excluded from Resource model development by use of borehole templates or data flags.	
Location of data points	▪ *Accuracy and quality of surveys used to locate drillholes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* ▪ *Specification of the grid system used.* ▪ *Quality and adequacy of topographic control.*	▪ The topographic surface for HVO is derived from a combination of Lands and Property Management Authority 10 m contours which originated from the early 1980s, and ▪ More recent (September 2008) 2 m contours derived from an airborne LiDAR survey. Borehole collars and mine survey data were also used. The digital terrain model was created with a 50 m × 50 m cell size triangulation at 0.2 m decimation. ▪ All surveyed coordinates are within Map Grid of Australia 1994 MGA (MGA94) Zone 56 projection using datum GDA94. ▪ Borehole collars were surveyed post drilling by licensed surveyors using differential global positioning systems with an accuracy of ±10 mm.	▪ The topographic surface is derived from a combination of 2 m and 5 m contour data digitised from topographic maps and 10m digitised data from the Bulga 1st edition topographic map covering the mined areas. Borehole collars and mine survey data were also used. The digital terrain model was created with a 20 m × 20 m cell size triangulation at 0.2 m decimation. ▪ All surveyed coordinates are within Map Grid of Australia 1994 MGA Zone 56. ▪ Borehole collars were surveyed post drilling by licensed surveyors using differential global positioning systems with an accuracy of ± 10mm. ▪ Downhole surveying has been undertaken using downhole verticality and caliper tools

Criteria	JORC Code explanation	Commentary	
		HVO	MTW
		▪ Downhole surveying has been undertaken using downhole verticality and caliper tools since 2007, including attempted resurvey of earlier boreholes. Overall 84% of the diamond drilling metres have been surveyed downhole over the entire borehole length but only 40% of the total open hole drilling metres have been downhole surveyed.	since 2007, including attempted resurvey of earlier boreholes. Overall 84% of the diamond drilling metres have been surveyed downhole over the entire borehole length for MTW, but only 40% of the total open hole drilling metres have been downhole surveyed.
Data spacing and distribution	▪ *Data spacing for reporting of Exploration Results.* ▪ *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* ▪ *Whether sample compositing has been applied.*	▪ Borehole spacing for core holes is on an equilateral triangle grid of 500 m or less. For open holes spacing is on a 250 m or less equilateral triangle grid. ▪ All core samples are composited within defined seam boundaries.	▪ Borehole spacing for core holes is on an equilateral triangle grid of 250 m or less. For open holes spacing is on a 125 m or less equilateral triangle grid. ▪ All core samples are composited within defined seam boundaries.
Orientation of data in relation to geological structure	▪ *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* ▪ *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	▪ The coal measures show a relatively consistent layering and dip at 3° to 7°. ▪ The orientation of drilling is suitable for flat lying stratified deposits.	
Sample security	▪ *The measures taken to ensure sample security.*	▪ Core/chip samples were taken at the drill site by the qualified geologists and then transported daily to the locked MTW or HVO core shed for storage. The MTW core shed stores coal samples in a refrigerated unit. Once each borehole has been completed the samples are transported to the laboratory via a dedicated courier service. ▪ In light of the bulk commodity nature of coal, no higher level security measures are deemed necessary since it is very unlikely to be subject to material impact from sample tampering theft or loss.	
Audits or reviews	▪ *The results of any audits or reviews of sampling techniques and data.*	▪ MTW has had one audit completed in the past eight years. The audit was conducted in March 2010 by the Xstract Group (report: Resources and Reserves Internal Audit Report Executive Summary Mt Thorley Warkworth). The review concluded that the fundamental data collection techniques are appropriate.	

Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary: HVO	Commentary: MTW
Mineral tenement and land tenure status	▪ *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* ▪ *The security of the tenure held at the time of reporting along with any known impediments to obtaining a license to operate in the area.*	▪ HVO was acquired by Yancoal Australia Ltd in a sale process that was completed on 1 September 2017. HVO is owned 51% by Yancoal Australia Ltd and 49% by Glencore, and will be operated by a JV management committee. ▪ HVO contains numerous leases and licenses (see Figure 1, note that this is schematic only): – one authorisations covering 454 ha; – two consolidated coal leases covering 1,743 ha; – five coal leases covering 247 ha; – one coal mining lease covering 2,162 ha; – six exploration leases covering 5,8783 ha; – 24 mining leases covering 7,380 ha; – five mining lease applications covering 56 ha; and – one assessment lease application covering 430 ha. ▪ All leases containing Resources are in good standing.	▪ MTW is an amalgamation of two previously independent mines – Mt Thorley Operations and Warkworth Mining Limited. Each mine was developed at approximately the same time and combined by Coal & Allied Limited (CNA) in 2004. ▪ Yancoal Australia Ltd acquired MTW after a sale process that was completed on 1 September 2017. ▪ MTW is operated by Yancoal on behalf of the joint venture (JV) participants. There are two JV partnerships – one for each of the formerly separate operations. Participants in the JVs are outlined below. ▪ Mount Thorley Operations (MTO) – Yancoal Australia Ltd (share: 80%); and – Posco Australia Pty Ltd (share: 20%). ▪ Warkworth Mining Limited (WML): – CNA Resources (a subsidiary of CNA) (share: 28.75%); – CNA Warkworth Australasia Pty Ltd (a subsidiary of CNA) (share: 26.82%); – Mitsubishi Development Pty Ltd (share: 28.9%); – Mitsubishi Materials (Australia) Pty Ltd (share: 6.000%); and – Nippon Steel (Australia) Pty Ltd (share: 9.53%). ▪ MTW contains numerous leases and licences including: – one consolidated coal lease covering 4,192 ha; – one coal lease covering 1,992 ha;

Criteria	JORC Code explanation	Commentary	
		HVO	MTW
			– one exploration licence covering 1,988 ha; – three mining leases covering 29 ha; and – two mining lease applications covering 1,370 ha
Exploration done by other parties	▪ *Acknowledgment and appraisal of exploration by other parties.*	▪ 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: ▪ Howick open-cut (west pit) – exploration initiated in the 1940's and 1950's by the Joint Coal Board and the Bureau of Mineral Resources. Drilling at 200 m – 300 m spacing for cored holes and 50 m – 150 m spacing for open holes. ▪ Hunter Valley No.1 & 2 mines – exploration initiated in the 1960's and early 1970's by the New South Wales (NSW) Department of Mines. Drilling to 212 m spacing for cored holes and 100 m spacing for open holes. ▪ Lemington South open cut and underground mines – exploration initiated in the 1970's by the Joint Coal Board. Drilling to 200 m - 800 m spacing for cored holes.	▪ 1949 - 1950: Newly formed Joint Coal Board commence drilling shallow percussion boreholes (McMenamins and JCB Warkworth series). ▪ 1960s: Clutha Bargo explored the Whybrow Seam for coking coal potential. ▪ Early 1970's: Armco conducted diamond drilling in the Bulga area. ▪ 1970 - 1975: Department of Mines conducts fully cored hole drilling program (DM Warkworth and DM Doyles Creek series). ▪ 1976: Warkworth Consortium is formed (later established as WML) and awarded mining bid for Warkworth area. Commenced exploration program with 12 rigs drilling fully cored, HQ-size holes and large diameter (LD) core drilling in selected seams. ▪ 1976: Drilling program started at Mt Thorley site – similar to Warkworth drilling program. Main concentration of drilling was in the shallower, eastern parts of the lease. ▪ 1980s and 1990s: Main focus at Warkworth was open-hole drilling. Mt Thorley increased open holing with production, and a concerted effort at core drilling during the 1990's. ▪ 2002 - 2005: Little drilling was undertaken.

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<table>
<tr><th rowspan="2">Criteria</th><th rowspan="2">JORC Code explanation</th><th colspan="2">Commentary</th></tr>
<tr><th>HVO</th><th>MTW</th></tr>
<tr><td></td><td></td><td></td><td>▪ 2006 - 2014: Pre-production and further exploration drilling was undertaken. Focus was on: improving borehole data density, testing in situ gas content, provide data for underground Resources, testing the geology of Abbey Green, and extending pre-production drilling 3 years ahead of mining (MTO and WML).
▪ Drilling data acquired on both sites (Warkworth and MTO) has been combined into a single geological database.</td></tr>
<tr><td>Geology</td><td>▪ Deposit type, geological setting and style of mineralisation.</td><td colspan="2">▪ MTW and HVO are located in the Permian age Hunter Coalfield in the northern part of the Sydney Basin.
▪ MTW exploits the coal seams contained within the Jerrys Plains Subgroup, (Whybrow to Bayswater seams).
▪ HVO exploits the coal seams of the Jerrys Plains and underlying Vane Subgroup which contains the Lemington to Hebden seams.
▪ The main rock types at MTW and HVO include sandstone, siltstone, sandstone and conglomerate, which occur with subordinate coal and tuffaceous claystone.</td></tr>
<tr><td>Drillhole Information</td><td>▪ A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drillholes:
– easting and northing of the drillhole collar
– elevation or RL (Reduced Level – elevation above sea level in metres) of the drillhole collar
– dip and azimuth of the hole
– down hole length and interception depth
– hole length.
▪ If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</td><td colspan="2">▪ All borehole data is stored within the ABB GDB database for both the Warkworth and MTO leases. A summary of borehole numbers completed by year since 2004 since consolidation of the Warkworth and MTO data is shown below:
<table>
<tr><th></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>Open holes</td><td>35</td><td>11</td><td>71</td><td>75</td><td>23</td><td>62</td><td>103</td><td>39</td><td>45</td><td>6</td><td>28</td><td>5</td></tr>
<tr><td>Cored holes</td><td>7</td><td>1</td><td>6</td><td>19</td><td>18</td><td>17</td><td>24</td><td>47</td><td>44</td><td>31</td><td>13</td><td>3</td></tr>
</table>
▪ All borehole data is stored within the ABB GDB database for the HVO leases. A summary of borehole numbers completed by year since 2002 and consolidation of the Lemington, Howick and Hunter Valley mines into one operation (as HVO) is shown below:</td></tr>
</table>

Criteria	JORC Code explanation	Commentary

	Area/year	HVO 2002	2003	2004	2005	2006	2007	MTW 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				

Criteria	JORC Code explanation	Commentary
Data aggregation methods	▪ *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.* ▪ *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.* ▪ *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	▪ Ply samples are combined to create composites (for washability and product coal analyses) that represent the mineable seam working sections. ▪ Individual ply samples have been weighted by thickness and density (mass weighting) to represent the mineable seam working sections. Laboratory determined air dried ARD has been used for the density weighting. Where no ARD data is available and ash data is available then an air dried ash to ARD regression has been used to assign individual sample ARDs prior to weighting. ▪ There are no metal equivalents used to report the Coal Resources. This is not a standard reporting practice for Coal Resources.
Relationship between mineralisation widths and intercept lengths	▪ *These relationships are particularly important in the reporting of Exploration Results.* ▪ *If the geometry of the mineralisation with respect to the drillhole angle is known, its nature should be reported.* ▪ *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').*	▪ The strata at MTW in general dip shallowly to the west at 4° to 6°. Boreholes are drilled vertically. ▪ The strata at HVO in general dip shallowly into the centrally located Bayswater syncline, which plunges to the south. ▪ Based on drilling techniques and seam dip, the coal seam intercepts therefore approximate the true coal thickness.

Criteria	JORC Code explanation	Commentary	
		HVO	MTW
Diagrams	▪ *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drillhole collar locations and appropriate sectional views.*	▪ All relevant figures depicting information considered material to the Coal Resources reported are contained within the JORC report associated with this Table 1.	
Balanced reporting	▪ *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	▪ Not applicable. There are no exploration results for the MTW and HVO areas.	
Other substantive exploration data	▪ *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	▪ Resistivity surveys, ground and airborne magnetic and 2D seismic surveys have been completed to identify faults, dykes, and alluvial limits in the HVO and MTW areas.	
Further work	▪ *The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).* ▪ *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	▪ Both pre-production drilling and strategic brownfields drilling is required down dip of the current MTO, WML and HVO highwalls. The drilling includes associated coal quality, geotechnical, gas and environmental testing and environmental monitoring. ▪ Brownfields exploration is required to support the MTW underground concept study which covers the areas of the present open cut pits and extending to the western extents of the MTW licence areas. ▪ Greenfields exploration at HVO includes investigations in the Auckland and Southern areas. In addition exploration and evaluation are being made to assess the underground potential of HVO and the adjoining areas of MTW.	

Section 3 Estimation and Reporting of Mineral Resources

(Criteria listed in Section 1, and where relevant in Section 2, also apply to this section.)

Criteria	JORC Code explanation	Commentary	
		HVO	MTW
Database integrity	▪ *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral*	▪ All borehole data has been migrated to Geobank which is located on a server in Sydney and is backed up daily.	

<table>
<tr><th rowspan="2">Criteria</th><th rowspan="2">JORC Code explanation</th><th colspan="2">Commentary</th></tr>
<tr><th>HVO</th><th>MTW</th></tr>
<tr><td></td><td>Resource estimation purposes.
▪ Data validation procedures used.</td><td colspan="2">▪ The ABB GDB database contains all hole surveys, drilling details, lithological data, and coal quality results and is the primary source for all such information. There is only one copy of the database and any data additions, changes to or edits of the data are made directly into the database.
▪ Where possible, all original geological field logs (scanned or hard copy), down-hole geophysics (LAS) files and hard copy logs, hole collar survey files, digital laboratory data and reports and other similar source data are maintained on the project server or library and referenced within the database to provide an audit trail to this original source data.
▪ Data is validated at the drill site and also prior to loading into the database by the responsible geologist.
▪ There are a number of underlying "business rules" built into the database that help ensure consistency and integrity of data including, but not limited to:
– relational link between geological, down hole geophysical and coal quality data;
– exclusion of overlapping geological intervals;
– restriction of data entry to the interval of the defined hole depth;
– use only of defined rock type and stratigraphic codes; and
– basic coal quality integrity checks such ensuring data is within normal range limits, that proximate analyses add to 100 percent etc.
▪ Other checks performed either periodically or before export of data for model development include:
– missing or unlogged geological intervals highlighted;
– stratigraphic picks are out of correct stratigraphic sequence;
– missing stratigraphic codes; and
– missing, anomalous, non-zero thickness, multiple or inappropriate (e.g. within overlying stratigraphy rather than host stratigraphy).
▪ The database contains automated validation processes which are activated during data loading and prevent un-validated data from being loaded to the GDB database.
▪ Field geologist seam and stratigraphic picks and correlations are independently checked and rechecked by senior geological staff. After modelling anomalous seam and interburden structure and thicknesses are reviewed to determine if they have a geological explanation, or are errors which are iteratively corrected or removed from the database.
▪ It is highly unlikely that there is significant volume of corrupt data in the database, given the validation procedures that have been described above. Some errors may still pass through to the geological and coal quality models. Coal is a bulk commodity of relative even</td></tr>
</table>

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Criteria	JORC Code explanation	Commentary HVO	Commentary MTW
		consistency which combined with the large number of boreholes on which the Resource is based, such errors are unlikely to have a material impact on the Resource estimate.	
Site visits	▪ *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* ▪ *If no site visits have been undertaken indicate why this is the case.*	▪ The RPM Resources Competent Person has visited MTW in January 2015, and both MTW and HVO in February 2017. In addition the RPM Resources Competent Person was employed by the previous owner (RTCA) from 2006 to 2013 as a Principal geologist and was responsible for governance over the operating RTCA mines.	
Geological interpretation	▪ *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.* ▪ *Nature of the data used and of any assumptions made.* ▪ *The effect, if any, of alternative interpretations on Mineral Resource estimation.* ▪ *The use of geology in guiding and controlling Mineral Resource estimation.* ▪ *The factors affecting continuity both of grade and geology.*	▪ Detailed coal ply logging is completed by geological logging of open and fully cored holes supported by geophysical log data. ▪ Coal seam and ply correlation are relatively simple where drill spacing is adequate and are sufficient to establish the variability of interburden thicknesses. ▪ The geology of the MTW Resource is well known because it has been in production since the early 1980s. The coal plies predominantly have a tabular layer-cake disposition, however, interburden thicknesses are characterised by common rapid lateral thickness changes due to channel splays propagating from alluvial fan structures located to the north of the MTW area. The major channel structures appear to have a north – south orientation (parallel to strike), and are sinuous in nature. ▪ The geology of the HVO Resource is well known because it has been in production since 1969 at Howick, 1971 at Lemington and 1979 at Hunter Valley No. 1. ▪ The coal plies predominantly have a tabular layer-cake disposition, however, interburden thicknesses are characterised by common rapid lateral thickness changes due to channel splays propagating from alluvial fan structures located to the north of the HVO area. The major channel structures appear to have an east – west orientation (perpendicular to strike), and do not appear to have the sinuosity that is seen at MTW. ▪ Infill drilling and mining exposure and mapping has supported and refined the MTW and HVO models. The current geological interpretations are considered to be robust.	
Dimensions	▪ *The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.*	▪ The MTW Resource area trends 8 km northwest to southeast and is 8.5 km in width. The deposit extends to a depth of 460 m below the topographic surface.	
Estimation and modelling techniques	▪ *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.*	▪ Coal Resources were estimated by the Competent Person using ABB Mincom software from a geological model developed by the previous owners. The geological model was updated in 2015 and is called HVO_1508_LOM.	▪ Coal Resources were estimated by the Competent Person using ABB Mincom software from a geological model developed by the previous owners. The geological model was updated in 2012 and is called MTW_1208_LOM.

Criteria	JORC Code explanation	Commentary — HVO	Commentary — MTW
	▪ *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.* ▪ *The assumptions made regarding recovery of by-products.* ▪ *Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).* ▪ *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.* ▪ *Any assumptions behind modelling of selective mining units.* ▪ *Any assumptions about correlation between variables.* ▪ *Description of how the geological interpretation was used to control the resource estimates.* ▪ *Discussion of basis for using or not using grade cutting or capping.* ▪ *The process of validation, the checking process used, the comparison of model data to drillhole data, and use of reconciliation data if available.*		
Moisture	▪ *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	▪ All tonnages are estimated on an in situ moisture basis, following the practice of estimating in situ moisture as air dried moisture content plus 4%. This offset was derived by RTCA by comparing the difference between the average total moisture content of shipments of coal that have by-passed the coal plant, and the average air dried moisture content of that coal. ▪ The Competent Person considers that this approach is reasonable.	
Cut-off parameters	▪ *The basis of the adopted cut-off grade(s) or quality parameters applied.*	▪ Resources polygons are limited to the limit of oxidation, and tenement boundaries. ▪ Mined out surfaces are used as the upper surface. ▪ At MTW the Bayswater seam is the lowest seam for which Resources have been estimated. Tenure at MTO does not extend to the seams stratigraphically lower than the Bayswater. ▪ At HVO the Barrett seam is the lowest seam for which Resources have been estimated. ▪ No cut-off coal quality parameters or thickness limits have been applied to coal plies for Resource estimation because coal plies are aggregated during the Reserve estimation	

Criteria	JORC Code explanation	Commentary: HVO / MTW
		process. It is during the Reserve estimation process that coal plies are assigned to Resource or waste based on the mining aggregation rules used.
Mining factors or assumptions	▪ *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.*	▪ Open cut mining methods are currently used at both mining sites using both draglines and truck and shovel / excavator mining equipment. ▪ Potential underground mining areas have been identified at both sites.
Metallurgical factors or assumptions	▪ *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.*	▪ MTW has two coal handling and preparation plants: North CHPP and South CHPP. Both plants are operational. North CHPP is capable of single product washing and South CHPP is capable of two-product washing. ▪ HVO has three CHPPs, Hunter Valley, West and Newdell. The Hunter Valley CHPP is located at Hunter Valley and the West CHPP handles ROM coal from the West pit. ▪ The processes used are standard for the coal industry and so are well tested technologies. All bore core samples are wash/cut-point tested and so the representativeness of test work undertaken is implicit in the Resource classification status. ▪ In-seam partings where they are included in the coal seam are included in the bore core samples tested. ▪ Coal Reserve estimation is based on existing product specifications. ▪ 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.
Environmental factors or assumptions	▪ *Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these*	▪ MTW has a number of current mining and exploration titles. ▪ All the various mining leases across MTW 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. ▪ An appeal of the project approval for Reserves west of Wallaby Scrub Road was upheld (disapproved) by the NSW Land and Environment Court in April 2013. A 350 m modification within this area was subsequently secured in January 2014 and Rio Tinto Coal Australia

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Criteria	JORC Code explanation	Commentary	
		HVO	MTW
	potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.	management worked through a process that resulted in further approvals being granted in November 2015. In September 2018, Wallaby Scrub Road was closed and ownership transferred to MTW. ▪ Coarse rejects are dumped within the mines 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 3 m of inert waste rock material. ▪ Overburden waste rock has low acid forming potential.	
Bulk density	▪ *Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.* ▪ *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.* ▪ *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	▪ 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) = 1.0003 x ARD 1.0645, and ARD = 1.0045 x RD 0.9316. ▪ The in situ relative density (i.e. the density of materials at an in situ moisture basis) was calculated using the Preston Sanders equation: – RD2 = [RD1*(100-M1)] / [100+RD1*(M2-M1)-M2] – Where RD1 is true RD (ad), M1 is air dried moisture and M2 is the in situ moisture. (M1 +4) ▪ A regression of laboratory ARD measurements against raw ash was used for the in situ density when density values had not been determined in the laboratory, such as when coal plies were aggregated on a working section basis.	
Classification	▪ *The basis for the classification of the Mineral Resources into varying confidence categories.* ▪ *Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).* ▪ *Whether the result appropriately reflects the Competent Person's view of the deposit.*	▪ The classification of the Coal Resources into varying confidence categories is based on a standardised process of utilising points of observation (PoO) according to their reliability. The PoOs are used to categorise quantity and quality continuity (or both) or support continuity. ▪ A quantity PoO has the following attributes: – open hole; – seam interval geophysically logged; and – reliable collar survey. ▪ A quality PoO has the following attributes: – cored hole in which 100% of the seam interval has been cored; – linear core recovery greater than 95%; – reliable collar survey; and – raw coal ash (can be used as a proxy for relative density).	

Criteria	JORC Code explanation	Commentary	
		HVO	MTW
		▪ Support data for PoOs includes: – in-pit mapping data for faults and dykes; and – seam floor or roof survey data. ▪ The radii of influence for PoOs were determined by consideration of the following for each coal ply: – variability of seam thickness; – variability of interburden thickness; – seam splitting and coalescing patterns; are they sedimentary or due to seam correlation inconsistency between stages of exploration; – structural variability; – variability of coal quality; – understanding of relationship between raw coal quality and washed product coal quality; – relationship between overburden thickness variation and coal quality variability; – examining aerial distribution of data points, histograms and statistics of the ash content of seam groups; – review of as mined seam roof or floor survey data in conjunction with modelled roof and floor contours, and borehole intersections to assess reliability of input data and model output to assess; – the variability of the geology between boreholes; and – the reliability of borehole data. ▪ There are many coal plies at MTW and HVO, and in general seam groups (equivalent to the seam names) were used as the Resource entities. Where variability of plies within a seam group were identified and a single Resource entity for the seam group was not justified multiple Resource entities were categorised. The MTW Resource contains 15 seam groups, but Resources have been categorised for 28 seam entities. ▪ Previous Resource classifications of the MTW Resource have been based on the 15 primary seam groups, and at HVO the 17 primary seam groups. Detailed review of each of the MTW and HVO plies has shown that in general the lower plies of some seam groups have greater variability, or have less extensive or consistent lateral development than the upper plies of the seam group. As a consequence some seam groups have multiple coal plies categorised. ▪ Radii of influence were plotted around PoOs to produce maps of quantity and quality. ▪ Areas of low, medium, and high confidence are produced from these plots for structure (quantity) and coal quality for each Resource entity. The quantity and quality areas of	

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<table>
<tr><th rowspan="2">Criteria</th><th rowspan="2">JORC Code explanation</th><th colspan="2">Commentary</th></tr>
<tr><th>HVO</th><th>MTW</th></tr>
<tr><td></td><td></td><td colspan="2">confidence are intersected to produce areas of Measured, Indicated and Inferred to categorise the Resource tonnage estimates.
▪ In summary quantity radii range:
– 100 m - 250 m for high confidence;
– 200 m - 500 m for medium confidence; and
– 400 m - 1,000 m for low confidence.
▪ In summary quality radii range:
– 200 m - 400 m for high confidence;
– 400 m - 1,000 m for medium confidence; and
– 800 m - 1,200 m for low confidence.
▪ The ranges reflect the variability within and between the fifteen seam groups modelled at MTW.
▪ The Competent Person is satisfied that the stated Coal Resource classification reflects the geological controls interpreted and the estimation constraints of the deposits.</td></tr>
<tr><td>Audits or reviews</td><td>▪ The results of any audits or reviews of Mineral Resource estimates.</td><td colspan="2">▪ MTW has had one external audit which was conducted in March 2010 by the Xstract Group as part of RTCA's internal compliance requirements.
▪ The outcome of this audit was an overall satisfactory rating with a number of recommendations made and acted upon by Rio Tinto Coal Australia.
▪ In September 2011 an audit into the modelling and Resource estimation process at HVO was completed (report: Rio Tinto Corporate Assurance Resources and Reserves Internal Audit Report. Hunter Valley Operations. 2.1).
▪ The outcome of this audit was overall a satisfactory rating with a number of recommendations made and acted upon by Rio Tinto Coal Australia.</td></tr>
<tr><td>Discussion of relative accuracy/ confidence</td><td>▪ Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.
▪ The statement should specify whether it relates to global or local estimates, and, if local, state the relevant</td><td colspan="2">▪ Reconciliation at MTW is performed on an annual rather than a spatial basis. The following is noted from the MTW 2015 Annual Reconciliation:
<table>
<tr><td></td><td colspan="2">Unprocessed Coal</td><td></td><td></td><td></td><td>Product</td><td>Product</td></tr>
<tr><td></td><td colspan="2">ROM</td><td>Yield (%)</td><td>Waste</td><td>Strip Ratio</td><td>Coal</td><td>Strip Ratio</td></tr>
<tr><td></td><td>Mass(t)</td><td>Ash(%)</td><td></td><td>M m^3</td><td>bcm/t</td><td>Mass(t)</td><td>bcm/t</td></tr>
<tr><td>AOP</td><td>17,485</td><td>38.3</td><td>54.5</td><td>94,936</td><td>5.43</td><td>9,529</td><td>9.96</td></tr>
<tr><td>To Plant</td><td>16,576</td><td>24.3</td><td>66.9</td><td>99,333</td><td>5.99</td><td>11,089</td><td>8.96</td></tr>
<tr><td>Plant/AOP</td><td>95%</td><td>63%</td><td>123%</td><td>105%</td><td>110%</td><td>116%</td><td>90%</td></tr>
</table></td></tr>
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<table>
<tr><th rowspan="2">Criteria</th><th rowspan="2">JORC Code explanation</th><th colspan="2">Commentary</th></tr>
<tr><th>HVO</th><th>MTW</th></tr>
<tr><td></td><td>tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.
▪ These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</td><td colspan="2">▪ The Annual Operating Plan ("AOP") underestimates:
– waste volume;
– yield;
– strip ratio; and
– product coal tonnes.
▪ The AOP overestimates:
– ROM tonnes; and
– ROM ash.
▪ In summary, the in situ structural and coal quality models, and the assumptions used to convert from in situ to ROM models show material difference between estimated and actual performance.
▪ The assessment of variability on a ply or seam basis at both HVO and MTW has not been performed geostatistically. The variability of seam and interburden thickness, seam structure and raw and product ash between adjacent boreholes was assessed by the RPM Competent Person to determine the PoO spacing used for the Resource categorisation and estimation at both HVO and MTW.
▪ Variability between adjacent boreholes was categorised by the following ranges, which represent high, moderate and low confidence spacing respectively:
– plus or minus 10%;
– plus or minus 10 to 20%; and
– plus or minus 20 to 40%.
▪ Reconciliation at HVO is performed on an annual rather than a spatial and temporal basis after each mining unit is completed. The following is noted from the MTW 2015 Annual Reconciliation:
<table>
<tr><th rowspan="3"></th><th colspan="2">Unprocessed Coal</th><th colspan="3"></th><th>Product</th><th>Product</th></tr>
<tr><th colspan="2">ROM</th><th>Yield (%)</th><th>Waste</th><th>Strip Ratio</th><th>Coal</th><th>Strip</th></tr>
<tr><th>Mass(t)</th><th>Ash(%)</th><th></th><th>M m^3</th><th>bcm/t</th><th>Mass(t)</th><th>bcm/t</th></tr>
<tr><td>AOP</td><td>18,849</td><td>37.5</td><td>66.5</td><td>101,808</td><td>5.4</td><td>12,535</td><td>8.12</td></tr>
<tr><td>To Plant</td><td>16,709</td><td>26.8</td><td>77.3</td><td>101,072</td><td>6.05</td><td>12,916</td><td>7.83</td></tr>
<tr><td>Plant/AOP</td><td>89%</td><td>71%</td><td>116%</td><td>99%</td><td>112%</td><td>103%</td><td>96%</td></tr>
</table>
▪ The results of the HVO annual reconciliation are similar to the findings of the MTW reconciliation, and the same comments made for MTW can apply to HVO.</td></tr>
</table>

Criteria	JORC Code explanation	Commentary	
		HVO	MTW
		▪ Resource estimates in this stratiform conformable deposit are directly dependent on three factors: the size (aerial extent) of the coal seam Resource polygons, the coal seam thickness and the coal density. The coal seam Resource polygons are limited by the modelled coal seam subcrops, mapped and interpreted faults and by the borehole distribution. The Resource polygons are not significantly extrapolated past the "last" borehole which is considered to be a conservative approach.	

Section 4 Estimation and Reporting of Ore Reserves

The completed Table 1, Sections 4 is in response to the current ADV-BR-11019_Hunting Eagle_CPR Report completed in part by Competent Person, Mr Doug Sillar on behalf of RPM.

(Criteria listed in Section 1, and where relevant in Sections 2 and 3, also apply to this section.)

Criteria	JORC Code explanation	Commentary	
		HVO	MTW
Mineral Resource estimate for conversion to Ore Reserves	▪ *Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.* ▪ *Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.*	▪ The Coal Resource estimate used as the basis for this Coal Reserves Statement is described as part of this statement. The Resource estimate has been prepared by Mr. Peter Ellis. The Competent Person, Mr. Ellis, 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. ▪ The same geological model has been used for the estimation of Resources and Reserves.	
Site visits	▪ *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* ▪ *If no site visits have been undertaken indicate why this is the case.*	▪ A site visit to the MTW and HVO Mines was undertaken by a representative of RPM in January 2017. The Reserves Competent Person was unable to attend but interviewed the RPM representative who completed the site visit. The outcome of the site visit was a better understand of the location, environmental, social, groundwater and existing infrastructure considerations, and in particular the way the two sites managed to meet their license to operate obligations.	
Study status	▪ *The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.* ▪ *The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is*	▪ MTW is an operating mine. The Reserves are located within an extension of the existing active mining pits. ▪ HVO is an operating mine consisting of a number of operating pits which will be expanded down dip and new future pits for expansion.	

Criteria	JORC Code explanation	Commentary HVO / MTW
	technically achievable and economically viable, and that material Modifying Factors have been considered.	▪ Reserves are based on the results of a life of mine plan prepared by Yancoal at MTW and Yancoal/RPM at HVO. Both LOM plans have been reviewed by RPM. The Modifying Factors are based on Yancoal's experience in operating similar mines and are considered reasonable by RPM. As such, the level of confidence in the data and assumptions exceed those of a Prefeasibility Study.
Cut-off parameters	▪ *The basis of the cut-off grade(s) or quality parameters applied.*	▪ A 55% (ad) ROM ash cut off has been applied to the MTW model. ▪ At HVO a 55% (ad) ROM ash cut off is applied in the West, Wilton, Mitchell, Carrington West and Riverview pits. The cut off was not applied at Cheshunt, Southern, Auckland and Auckland South pits. RPM has reviewed and the impact is not material.
Mining factors or assumptions	▪ *The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design).* ▪ *The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc.* ▪ *The assumptions made regarding geotechnical parameters (eg pit slopes, stope sizes, etc), grade control and pre-production drilling.* ▪ *The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).* ▪ *The mining dilution factors used.* ▪ *The mining recovery factors used.* ▪ *Any minimum mining widths used.* ▪ *The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.* ▪ *The infrastructure requirements of the selected mining methods.*	▪ A combination of Margin Ranking, Break Even Strip Ratio Analysis, pit design and LOM planning have been used as the basis of converting Coal Resources to Coal Reserves. ▪ The mining method at both Assets utilises draglines and truck and shovel for waste removal. Coal is mined by FEL / Excavator and hauled to ROM locations by rear dump trucks. This method is proven at the mine and considered appropriate for future planning based upon geology and strip ratio. Draglines will be phased out of operation when there are no longer suitable working areas. ▪ Pit designs use criteria based on operational knowledge as well as input and advice from external geotechnical consultants. All pit designs are based on those previously prepared by RTCA for the 2015 Reserves Statement. ▪ RTCA completed a pit optimisation in 2015. Yancoal then undertook a Marking Rank process in XPAC to confirm the economic limits of a number of pits at the Assets. The results of the margin rank indicate that the pits reviewed are economic and that there is potentially economic coal below the RTCA designed pit floors. RPM completed a break even strip ratio analysis as a basis for confirming the pit limits at HVO (Carrington Pits, Riverview East and Wilton/Mitchel/West pit extensions). ▪ The mining factors used were: – minimum coal working section mining thickness of 0.4 m; – minimum parting mining thickness of 0.3 m; – overall average coal losses of 10%; – dilution of 4%; – dilution ash assumed to be 80%; and – in situ moisture standardised to 6.5%. ROM moisture is assumed to be 6.5%. ▪ Inferred Coal has been included in the LOM Plan. ▪ All necessary infrastructure is in place and operational at both MTW and HVO.

Criteria	JORC Code explanation	Commentary (HVO / MTW)
Metallurgical factors or assumptions	▪ *The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.* ▪ *Whether the metallurgical process is well-tested technology or novel in nature.* ▪ *The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.* ▪ *Any assumptions or allowances made for deleterious elements.* ▪ *The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the ore body as a whole.* ▪ *For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?*	▪ HVO has three Coal Handling and Preparation Plants (CHPP); Hunter Valley CHPP, West Pit CHPP and the Newdell CHPP. Newdell is only used for coal handling purposes. The metallurgical process is appropriate for the mine. ▪ MTW has two Coal Handling and Preparation Plants; North CHPP and South CHPP. The South CHPP has two product washing. The metallurgical process is appropriate for the MTW mine. ▪ Discrepancies identified between historical yield performance data and mine plan estimates at HVO, with the actual yield higher than predicted. HVO do not record the ROM feed Ash % making analysis of the actual yield results difficult. ▪ Yancoal commissioned a coal quality expert to review production data and determine an estimate of current yield at Assets. Sufficient historical data available to produce a regression relationship between ROM Ash % and the product yield using MTW data. As the HVO pits are mining from the same coal measures it is reasonable to apply the MTW yield regression to the HVO model. ▪ Product logic based on the following: – Total product tonnes estimated from ROM tonnes and yield are derived from the ash / yield regression). – Semi soft coking coal tonnes are estimated from ROM tonnes and the F1.6 yield data in the model. – Total thermal product tonnes is the difference between the total product tonnes and the SSCC tonnes. – Thermal products further split into Low Ash, Mid Ash and High Ash products based on the annual LOM splits in the LOM plan. ▪ No bypass products assumed in the LOM plan though some minor quantities actually produced on site. ▪ No allowance has been made for deleterious elements.
Environmental	▪ *The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.*	▪ Environmental approval required for the Cheshunt Deep pit within the next five years. Yancoal advised that this is sufficient time to achieve this approval. All other primary approvals are in place for HVO for the short to medium term. ▪ Environmental Approval is required for the Southern and Auckland pits at HVO. ▪ Coarse rejects are placed within the mine overburden emplacements. Washery fines material is stored within specific tailings dams. When tailings dams are full they are dried and require 3 m of inert capping material. ▪ Overburden material has low acid forming potential.

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Criteria	JORC Code explanation	Commentary	
		HVO	MTW
Infrastructure	▪ *The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.*	▪ All necessary infrastructure is in place and operational for the current operations at Assets.	
Costs	▪ *The derivation of, or assumptions made, regarding projected capital costs in the study.* ▪ *The methodology used to estimate operating costs.* ▪ *Allowances made for the content of deleterious elements.* ▪ *The source of exchange rates used in the study.* ▪ *Derivation of transportation charges.* ▪ *The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.* ▪ *The allowances made for royalties payable, both Government and private.*	▪ All major infrastructure is in place. Capital forecasts have been included which represent the growth and sustaining requirements for the completion of the LOM plan. ▪ All operating costs are based on LOM planning estimates from Yancoal and have been reviewed by RPM. ▪ Current long-term exchange rate assumptions were provided by Yancoal. ▪ Transport charges based on actual contracted prices taking into account existing Take or Pay arrangements. ▪ NSW state government royalties are included in the estimate. ▪ RPM reviewed all costs and they are considered reasonable.	
Revenue factors	▪ *The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc.* ▪ *The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.*	▪ Long term product coal pricing assumptions have been provided by Yancoal Marketing and is based on independent third party research and reporting. ▪ The revenue factors are considered reasonable for the purposes of estimating Reserves.	
Market assessment	▪ *The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.* ▪ *A customer and competitor analysis along with the identification of likely market windows for the product.* ▪ *Price and volume forecasts and the basis for these forecasts.* ▪ *For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.*	▪ A Marketing Study has not been reviewed however markets are well established for the mine's coal products. The projects typically produce up to four main products: – Three Thermal at approx. 12 - 15.5% ash (ad); and – SSCC at approx. 8 - 9% ash (ad). ▪ Based upon these products and specifications, RPM anticipates no foreseeable issues in demand for these products.	
Economic	▪ *The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc.* ▪ *NPV ranges and sensitivity to variations in the significant*	▪ The inputs to the economic analysis are 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 have been used in assessing NPV.	

Criteria	JORC Code explanation	Commentary	
		HVO	MTW
	assumptions and inputs.	▪ The NPV results for the Project 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. ▪ Sensitivity analysis has been completed on the Project over a range of variable. The Project is most sensitive to changes in exchange rate, revenue and operating costs.	
Social	▪ *The status of agreements with key stakeholders and matters leading to social licence to operate.*	▪ MTW has received development consents which authorise mining at Mt Thorley and Warkworth to 2036. Yancoal will need to continue to work with the local community to earn its social licence. ▪ Native Title has not been extinguished for some areas (including crown land, water ways and access roads) and Native Title may still exist. The majority of the Assets holdings are however not subject to native title and future material risk associated with currently approved projects is not anticipated as a result of the Native Title. It is noted no native title issues occur in the current LOM.	
Other	▪ *To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:* ▪ *Any identified material naturally occurring risks.* ▪ *The status of material legal agreements and marketing arrangements.* ▪ *The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.*	▪ 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 operation's viability. ▪ At HVO the LOM plan includes pits that are outside the current approvals limits. The pits are forecast for mining from 2021 which RPM believe is an acceptable amount of time to achieve approval. Updating of approvals is an ongoing process and it is reasonably expected that any modifications to existing agreements or additional agreements that may be required can be obtained in a timely manner.	
Classification	▪ *The basis for the classification of the Ore Reserves into varying confidence categories.* ▪ *Whether the result appropriately reflects the Competent Person's view of the deposit.* ▪ *The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).*	▪ Classification of Coal Reserves has been derived by considering the Measured and Indicated Resources and the level of mine planning. – At HVO the West, Wilton, Mitchell, Carrington West, Riverview and Cheshunt pits. Measured Coal Resources are classified as Proved Coal Reserves and Indicated Resources classified as Probable Coal Reserves, as the pits are either operating or the level of mine planning is considered adequate to support this level of certainty in the Reserves estimate. – The Carrington East, Auckland South, Southern and Auckland pits at HVO are classified as Probable for <u>both</u> Measured and Indicated Resources, as the pit is not currently	

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Criteria	JORC Code explanation	Commentary — HVO / MTW
		operating, the level of mine planning is regarded as preliminary and approvals are not in place. – At MTW, Measured Coal Resources are classified as Proved Coal Reserves and Indicated Resources classified as Probable Coal Reserves, as the pits are operating and the level of mine planning is considered adequate to support this level of certainty in the Reserves estimate. ▪ The Inferred Coal Resources have been excluded from the Reserve estimates. ▪ The result reflects the Competent Persons view of the deposit.
Audits or reviews	▪ *The results of any audits or reviews of Ore Reserve estimates.*	▪ Internal peer review of the Reserves Report has been completed.
Discussion of relative accuracy/ confidence	▪ *Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate.* ▪ *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* ▪ *Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage.* ▪ *It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	▪ The current active pits at HVO are supported by approximately 80% of Measured Coal Resources. ▪ The shells at MTW is supported by approximately 35% Measured Coal Resources. ▪ The basis of the estimate are actual operating costs and LOM planning. ▪ CHPP's and infrastructure are in place and operating at both MTW and HVO. ▪ Analysis of the coal quality has been undertaken by independent laboratories working under international standards of method and accuracy. Coal products from both MTW and HVO is produced from blended washed 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. ▪ Geotechnical studies have been completed for existing pits. Expansion pits will need geotechnical study prior to development.

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JORC Code Disclosure Requirements

Moolarben

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JORC Code, 2012 Edition – Table 1 report template

The completed Table 1, Sections 1, 2 & 3 are in response to the current ADV-BR-11019_Hunting Eagle_CPR Report completed in part by Competent Person Mr Brendan Stats on behalf of RPM.

Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	▪ *Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.* ▪ *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* ▪ *Aspects of the determination of mineralisation that are Material to the Public Report.* ▪ *In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.*	▪ The Moolarben Coal Complex ("MCC") area includes exploration drillholes identified as MC (MCD, MCR, MCL, MCX), MCOL, WD, WMLB, R and C series. Most WMLB, MC and MCOL holes were logged with downhole geophysical logs (density, caliper, gamma). R and C series were drilled by another mining operation (Ulan Coal Mines Ltd) and geophysical logs were not transferred when MCC was acquired. ▪ The majority of holes (MCD, MCOL, WMLB, WD and C series) are partially cored HQ size. The pre-collar sections from surface to 10 m - 20 m above the Ulan seam have been sampled at 1 m intervals which are logged by the field geologist and representative samples of each metre are sampled and stored. All core was logged by the field geologist and depth corrections using geophysical logs were undertaken. Each coal ply is sampled separately for analysis. ▪ MC and MCOL series coal core was sampled in plastic bags with sample tags inserted in the bags and the information also labelled on the bags with permanent markers. Coal core is not split when sampled and the entire cylindrical section of core per ply is bagged for later analysis by NATA approved coal quality laboratory. ▪ Rotary holes to define limit of oxidation (LOX) were drilled along the interpreted subcrops. These holes were lithologically logged every meter and coal samples were taken every 0.5 m.
Drilling techniques	▪ *Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	▪ The MCC area includes more than 1,000 drillholes: – 517 core holes, most of these holes were pre-collared to within 20 m of the target Ulan seam and then diamond cored using triple tube (HQTT) to below the seam. Several holes have been fully cored to gather geological information on the full stratigraphic package and at least five large diameter holes (6") for full washability analysis. – 285 rotary holes. – 223 rotary air blast for limit of oxidation definition. ▪ All holes were drilled vertically which is considered the most appropriate given the flat lying nature of the deposit.

Criteria	JORC Code explanation	Commentary
Drill sample recovery	▪ *Method of recording and assessing core and chip sample recoveries and results assessed.* ▪ *Measures taken to maximise sample recovery and ensure representative nature of the samples.* ▪ *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	▪ Chip sample recoveries are not relevant as these samples are only used to define limit of oxidation not to assign quality parameters to the coal seam. Core recoveries are calculated using geophysical logs and measured core lengths recorded in the lithology logs. ▪ Core recovery for the coal seams is generally very good (>95%). Core loss is infrequent in this deposit. Samples with core loss greater than 5% were excluded from the geological model and Resource estimation. No bias related to sample recovery has been identified and is considered very unlikely. The Ulan seam is a thick, consistent seam with thin partings (~0.03 m) dividing the plies, the only thick parting (CMK) is modelled separately and not included in the Resource estimate
Logging	▪ *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* ▪ *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* ▪ *The total length and percentage of the relevant intersections logged.*	▪ All holes have detailed lithological logging through the whole length of the hole (100%), which have been used for seam correlation supported by geophysical logs where available. ▪ Core holes include geotechnical logging, point loading tests and selected samples are sent to geotechnical labs to support mining studies. Most recent MC, MCOL and WMLB series holes (except redrills, some pilot holes and piezometer holes) have been geophysically logged to total depth and core has been photographed. ▪ The amount, type and detail of information collected from logging of the drillholes is considered appropriate to support the Resource Estimate.
Sub-sampling techniques and sample preparation	▪ *If core, whether cut or sawn and whether quarter, half or all core taken.* ▪ *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* ▪ *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* ▪ *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* ▪ *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.* ▪ *Whether sample sizes are appropriate to the grain size of the material being sampled.*	▪ The entire cored section of each coal ply is placed in the sample bag. No splitting, subsampling or sawing takes place outside the laboratory. Coal quality analysis undertaken by NATA approved laboratories which comply with Australian Standards for coal sample preparation. ▪ Bureau Veritas and SGS Australia (for the latest samples) analysed the core samples from the MC, MCOL and some WMLB series holes. CCI Australia analysed earlier samples from WMLB holes. All laboratories followed similar treatment procedures. Coal samples undergo proximate analysis, relative density, total sulphur and specific energy; and selected plies (DTP and DWS) were tested for hardgrove grindability (HGI). The remaining sample undergoes float/sink testing and each density fraction is analysed for ash. Clean coal analysis has been undertaken for each ply at 1.50 g/cc or 1.60 g/cc density, including Proximate Analysis, sulphur, calorific value, HGI, phosphorous and ash analysis. ▪ Based on ply thickness and HQ core size the amount of sample available for testing is reasonable for the tests completed.
Quality of assay data and laboratory tests	▪ *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* ▪ *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation,*	▪ All coal core for the Ulan seam is sampled on a ply by ply basis. The sampling procedure has changed since last Resource report of 2014. Previously drill logs were corrected to downhole geophysical logs after sampling. Current procedure includes reconciliation of geophysical logs with actual core prior to the sampling process to ensure core loss is accurately reflected in the samples and ply sampling is consistent. Laboratory analysis of samples is conducted by NATA approved companies in accordance with Australian Standards.

Criteria	JORC Code explanation	Commentary
	etc. ▪ *Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.*	▪ Groundsearch Australia Pty Ltd geophysically logged most of the holes. Groundsearch follows their calibration protocols for all the tools before using them on site. ▪ All coal quality results were checked and verified by Bureau Veritas before final reports were issued. Data was verified for obvious errors prior to loading into the geological model.
Verification of sampling and assaying	▪ *The verification of significant intersections by either independent or alternative company personnel.* ▪ *The use of twinned holes.* ▪ *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* ▪ *Discuss any adjustment to assay data.*	▪ No anomalous intersections have been identified. The Ulan seam has a consistent nature. ▪ Twinned holes are not a standard in the coal industry. A non-core prior to a core hole has been used in the past to ensure consistency with coal ply sampling as samples were taken before geophysical corrections. This practice ceased due a change in procedure (now sampling is carried out after reconciliation with geophysical logs). Where there are two closely spaced core holes it likely the later hole was drilled for core recovery purposes, only drilled for data verification if there was any uncertainty with the existing data. ▪ All quality data is checked by modeller for anomalous results and are investigated upon identification. Laboratories keep a reserve sample in case re-analysis is required as part of the standards. ▪ Laboratory raw coal and washability data is kept in digital format on site. Digital data is provided in MS Excel spreadsheets which is then loaded into Geobank. All data is also loaded into Minex and identified anomalies are subsequently reviewed by modeller and site geologist. ▪ Coal density is adjusted to in situ moisture, no other adjustments to quality data takes place.
Location of data points	▪ *Accuracy and quality of surveys used to locate drillholes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* ▪ *Specification of the grid system used.* ▪ *Quality and adequacy of topographic control.*	▪ Drillhole collars and mined surfaces have been surveyed by registered surveyors using GPS equipment. ▪ The current grid system is GDA94 in Zone 55. ▪ A LiDAR topography survey was acquired in 2010 to an accuracy of +/- 0.1 m which is considered very accurate for the Resource estimation process and mined out areas are surveyed by registered site surveyors.
Data spacing and distribution	▪ *Data spacing for reporting of Exploration Results.* ▪ *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* ▪ *Whether sample compositing has been applied.*	▪ Drillhole spacing varies from <250 m to >1 km towards the edges of the lease. Drillhole data intersecting the Ulan seam exist outside the MCC tenements and two coal mines mining the Ulan seam (Ulan and Wilpinjong) are located adjacent to MCC. ▪ Resources were mostly extended to lease boundaries as drillholes and existing mine operations intersected and target the Ulan seam within and outside the MCC tenement boundaries. ▪ Samples may be composited in order to represent seams or plies as is standard.
Orientation of data in relation	▪ *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.*	▪ Strata generally maintain a north-westerly strike and dip approximately 1° - 3° northeast. No structures have been identified at MCC.

Criteria	JORC Code explanation	Commentary
to geological structure	▪ *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	▪ No sampling bias has taken place. All drillholes were drilled vertically. Sampling from vertical drillholes is perpendicular to the coal seams.
Sample security	▪ *The measures taken to ensure sample security.*	▪ All samples are sealed and marked appropriately with a tag inside and outside the plastic bag. Information is recorded on a third tag which is kept on site and on drillhole sampling schedule forms. Copies of the sampling schedule are despatched with the samples. Coal samples are sent by secured courier to the laboratory.
Audits or reviews	▪ *The results of any audits or reviews of sampling techniques and data.*	▪ Sampling techniques were reviewed by Mr. R. Dyson (Operations Manager – MBGS) in September 2015 and minor recommendations were reviewed by site. Coal quality data was reviewed by Bob Leach (Coal quality expert - BLPL).

Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	▪ *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* ▪ *The security of the tenure held at the time of reporting along with any known impediments to obtaining a license to operate in the area.*	▪ MCC holds tenements covering an approximate area of 105 km^2 containing five mining leases (65 km^2) and three exploration leases (65 km^2) partially overlapping two mining leases (25 km^2). ▪ A mining purpose lease (MPL0315) held by Ulan Coal Mines Ltd (UCML) overlaps a small portion (approx. 0.3 km^2) of EL6288 in the northwest of the tenement. This MPL does not affect Coal Resources for MCC as it only provides surface rights for UCML to a depth of 15 m; Coal Resources in this area exist at depths greater than 50 m. ▪ Exploration leases cover mainly the northern and southern areas of MCC: EL6288, EL7073, EL7074 and Mining leases cover the central area and extent to the north under EL6288; where current mine plans exist: ML1605, ML1606, ML1628, ML1691 and ML1715. There are no known impediments for the majority of the area, except for a small sensitive area called The Drip, considered a local natural attraction located near the northeast boundary of EL6288. ▪ MCC is owned by Yancoal Australia Pty Ltd (81%), Kores Australia Moolarben Coal Pty Ltd (9%) and Sojitz Moolarben Resources Pty Ltd (10%).
Exploration done by other parties	▪ *Acknowledgment and appraisal of exploration by other parties.*	▪ Exploration in the area commenced in 1950 but historical mining at UCML (immediately west of MCC) has occurred since 1920's. A summary of key exploration periods completed by other parties is provided below: – The New South Wales Mines Department carried out initial exploration in 1950 with 6 core holes.

Criteria	JORC Code explanation	Commentary
		– In 1977 the Joint Coal Board drilled 21 core holes. – In the late 1970's the Energy Recycling Corporation drilled 33 core holes inside MCC leases and 41 core holes in the surrounding areas. – White Industries in early 1980's drilled 25 core holes. – In late 1980's Ulan Coal Mine drilled 38 holes (core and non-core). – Between 1999 - 2003 the Department of Mineral Resources drilled 47 holes (core and non-core) to define potential open cut areas. ▪ All drilling includes detailed lithological logging, the majority of holes include downhole geophysical logs and most core holes were analysed for quality parameters. Exploration in the area is to a good standard and appropriate for Resource estimation.
Geology	▪ *Deposit type, geological setting and style of mineralisation.*	▪ The MCC coal deposit is located on the western margin of the Sydney Basin's Western Coalfield. Sedimentary strata of Permian, Triassic and Jurassic age overlie Carboniferous granite and folded metamorphic basement and dip towards the northeast at 1° - 3°. The Permian strata contains the coal-bearing sequence (the Illawarra Coal Measures) and the underlying barren Shoalhaven Group, which in turn unconformably overlie the Lachlan Fold Belt basement rocks. Igneous activity occurred in the area during the Tertiary, manifesting as extrusive basalt flows, intrusive dykes, sills and plugs and explosive diatremes. The Illawarra Coal Measures contain the Ulan seam which is the main coal seam of economic significance in this part of the basin. MCC is currently a thermal open cut and underground coal operation.
Drillhole Information	▪ *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drillholes:* – *easting and northing of the drillhole collar* – *elevation or RL (Reduced Level – elevation above sea level in metres) of the drillhole collar* – *dip and azimuth of the hole* – *down hole length and interception depth* – *hole length.* ▪ *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*	▪ More than 1,000 holes have been drilled at MCC. Individual drillhole results are not tabulated and presented in this report as it is not considered material to understand the deposit. All drillhole data that pertains to MCC and surrounding area has been loaded and used to construct the geological computer model which was used to estimate Coal Resources. The drillhole locations are shown in Resource figures accompanying this report. Coal Resource tables also presented in this report present summary information on each ply of the Ulan seam including: – average thickness; – average in situ density; – average raw ash; – average sulphur; – average calorific value; and – depth range.
Data aggregation methods	▪ *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.*	▪ All laboratory data is loaded into the computer model and no data is excluded. No cut-offs have been applied to the loaded data or to the computer model.

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Criteria	JORC Code explanation	Commentary
	▪ *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.* ▪ *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	▪ The Ulan seam is sampled on a ply by ply basis. Weighted averages were used to show Coal Resources as working sections. Where compositing of coal quality samples is necessary, the coal quality variables are weighted by density and thickness.
Relationship between mineralisation widths and intercept lengths	▪ *These relationships are particularly important in the reporting of Exploration Results.* ▪ *If the geometry of the mineralisation with respect to the drillhole angle is known, its nature should be reported.* ▪ *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').*	▪ The Ulan seam extends across the MCC leases and through the Western Coalfields. Seam dip is close to horizontal. Verticality (Groundsearch hole deviation log) has been acquired in most recent holes and it has shown minimal deviation (<5% from vertically drilled holes). Due to the shallow dip of the seams and vertical nature of drilling, the seam thickness is considered to very close to the true thickness.
Diagrams	▪ *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drillhole collar locations and appropriate sectional views.*	▪ All relevant figures depicting information considered material to the Coal Resources reported are contained within the JORC report associated with this Table 1.
Balanced reporting	▪ *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	▪ All drillhole results are checked prior to loading into the computer model. Laboratory coal quality results have been used as reported. The Moolarben Coal Resource table presents summarised average coal quality parameters and thickness of reported intervals. This coal deposit is consistent and presenting averaged data is considered representative of the deposit.
Other substantive exploration data	▪ *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	▪ An airborne magnetic survey was carried out over the planned underground longwalls (UG1 and UG2) to identify magnetic features. This survey identified a number of potential igneous bodies which may affect underground mining. Drilling targeted two main features and confirmed two diatremes. RIM borehole to borehole survey has been undertaken to define the size and shape of the diatremes at seam level but one of these features requires further investigation; long hole drilling across the first longwall panel was carried out. ▪ Several piezometers to monitor groundwater levels have been installed across the deposit at different stratigraphic horizons. ▪ Core holes include geotechnical testing and logging.
Further work	▪ *The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).* ▪ *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations*	▪ Recommended work includes infill drilling to increase Resource classification to measured status within the mine plan area (OC3 pit). ▪ Resource figures in this report show an area within a proposed open cut pit shell with Inferred status that require further exploration.

Criteria	JORC Code explanation	Commentary
	and future drilling areas, provided this information is not commercially sensitive.	

Section 3 Estimation and Reporting of Mineral Resources

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

Criteria	JORC Code explanation	Commentary	
		Open Cut	Underground
Database integrity	▪ *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.* ▪ *Data validation procedures used.*	▪ Drillhole data is entered into Geobank and then depth corrected to downhole geophysical logs. Once the data is corrected it is flagged as completed and then requires special permissions to edit. Digital drill data is loaded into Minex for modelling and reporting. Seam thickness and ply correlations for each seam are checked in the Minex model via cross sectional analysis and contour plots. ▪ Prior to modelling, statistical reports are generated to check anomalies have not been introduced to the dataset. Any anomaly is reviewed against original logs and reports.	
Site visits	▪ *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* ▪ *If no site visits have been undertaken indicate why this is the case.*	▪ The Competent Person has experience with several coal Assets in the Western coalfields. A site visit to MCC was carried out in April 2018, during which the open cut and underground operations where viewed as well as technical discussions with relevant personnel on site. The Competent Person also reviewed and discussed the geological data and geological model with the Geologist who built the geological model.	
Geological interpretation	▪ *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.* ▪ *Nature of the data used and of any assumptions made.* ▪ *The effect, if any, of alternative interpretations on Mineral Resource estimation.* ▪ *The use of geology in guiding and controlling Mineral Resource estimation.* ▪ *The factors affecting continuity both of grade and geology.*	▪ Strata at MCC dips gently to the northeast at approximately 1° - 3°, as does the remaining Permian and Triassic sequence. This has been confirmed from drillhole data and adjacent mine operations (Ulan Coal Mines and Wilpinjong). ▪ No major structures within the mine plans have been identified; but two faults are interpreted from regional mapping and drillhole data in the north of the deposit. Small scale unidentified faults may exist but these will have little effect on the Resource estimate. The major risk to mining is unidentified igneous bodies disrupting the coal seam, however the effect on the Resource estimate will be minor compared with the total area of the deposit, as seen in adjacent operations. ▪ The Ulan seam and Triassic/Permian stratigraphy are highly consistent across the leases and beyond, the deposit geology is well understood. There is a high degree of confidence in the geological interpretation. ▪ Coal Resources reflect this confidence level with most of the MCC area considered a Measured Resource.	
Dimensions	▪ *The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan*	▪ MCC leases cover a length of approximately 20 km (north-south) and up to 8 km wide (east-west). The Ulan seam is present over most of the area covered by the leases with exception	

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Criteria	JORC Code explanation	Commentary	
		Open Cut	Underground
	width, and depth below surface to the upper and lower limits of the Mineral Resource.	towards the west boundary where the seam subcrops at the edge of the basin. Drillhole data outside the lease and in adjacent mine operations (north-west and east) proved continuity of the seam extending beyond the lease area. Overburden thickness ranges from surface to <400 m from southwest to northeast; but >90% of the deposit has a the depth of cover < 200 m. Coal Resources are not limited to any depth cut-off as the seam is thick enough (approx. 11 m) to be mined by either open cut or underground methods.	
Estimation and modelling techniques	▪ *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.* ▪ *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.* ▪ *The assumptions made regarding recovery of by-products.* ▪ *Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).* ▪ *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.* ▪ *Any assumptions behind modelling of selective mining units.* ▪ *Any assumptions about correlation between variables.* ▪ *Description of how the geological interpretation was used to control the resource estimates.* ▪ *Discussion of basis for using or not using grade cutting or capping.* ▪ *The process of validation, the checking process used, the comparison of model data to drillhole data, and use of reconciliation data if available.*	▪ The MCC geological computer model was built using Minex software (version 6.5.2). The model was generated using Minex proprietary growth algorithms. Drillhole data was used to control the model and there is enough data within and outside the lease to avoid extrapolation for Resource estimation. Resource estimation was done in Minex using vertical sided polygons, seam thickness and in situ density. ▪ In situ density grids were produced at an estimated in situ moisture of 6%. ▪ Structural and quality grids were generated using 20 m mesh size mesh size. ▪ No assumptions are made regarding by-products. ▪ Resource classification and estimates are limited and based entirely on drillhole data and supported by existing data outside MCC. Resources were mostly extended to lease boundaries as drillholes and existing mine operations intersected and target the Ulan seam within and outside the MCC boundaries. Inferred and Indicated Resources on the western edge of OC3 and to the west of EL7073 were not extended beyond the last drillhole due to the lack of data to locate the seam subcrop and define seam continuity and character, which can rapidly change due to proximity to the edge of the basin. ▪ No coal quality cut-offs were used however the A2 ply is excluded from the Resource Estimate on account of quality. A2 plies have previously been mined and reported as a Resources, however currently the operation removes it as waste. The remaining Ulan seam plies are mined in the open cut pits and the quality of the plies means that applying a typical quality cut-off would have no material impact on the Resource Estimate. ▪ The process used by the previous Competent Person to develop the 2017 geological model used to estimate Resources was to load all drillhole data into a Minex database after validation of seam depth intervals and correlation has been undertaken with geophysical logs. Seam and sample statistics reports, cross sections and plots with drillhole annotations for each seam through the deposit are output from Minex and reviewed. At the end of 2015 the entire database was reviewed and seams above the Ulan seam were correlated. RPM reviewed the drillhole database and a selection of the drillhole records in order to understand and validate the drillhole data. ▪ Reconciliation with previous estimates and mine production was completed and the results support the confidence in the Resource. Resource estimates are completed using mined out surveyed topography as at 30 June 2018. Comparison with recent exploration supports the	

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Criteria	JORC Code explanation	Commentary	
		Open Cut	Underground
		conclusion that any future exploration will have minimal impact on the current Resource estimate due to the consistent nature of the Ulan seam. Also the bulk of the Resource is contained within the Measured and Indicated classifications with large amount of control from close spaced drillhole data and unlikely to change with new data.	
Moisture	▪ *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	▪ Coal Resources were reported at in situ moisture of 6%. This was based on knowledge of the coal in the area and current operations. Other coal quality parameters were reported at air dried basis (adb).	
Cut-off parameters	▪ *The basis of the adopted cut-off grade(s) or quality parameters applied.*	▪ The small Resources associated with the Moorlaben and Glen Davies seam is only included in the Resource Estimate where the seams are coalesced and have a thickness of around 3.0m. ▪ No coal quality or thickness cut-off parameters were applied to the Ulan seam (apart from excluding the A2 ply) on the basis that the seam is thick and quality uniform and applying reasonable cut-offs for thickness or quality would have no material impact on the Resource Estimate.	
Mining factors or assumptions	▪ *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.*	▪ MCC contains an active open cut operation mining the Ulan Seam in working sections and has commenced underground longwall operations on the lower section of the Ulan seam. ▪ MCC mine plan considers open cut potential mostly where depth of cover is less than 100 m. Coal Resources for the uppermost ply of the Ulan seam (A1) is only reported at less than 100 m depth because it is considered that this ply only have economic potential if mined by open cut methods. The rest of the Ulan seam can be mined by either open cut or underground methods as it is currently mined at MCC and adjacent operations. It is noted that currently only a portion of the Ulan seam (DWS) is mined using the longwall, however the rest of the seam could be mined by incorporating Top Coal Caving. ▪ Other seams above the Ulan seam are present within the deposit but only Moolarben and Glen Davis seams are considered a Resource in some areas of the open cut pit OC4 where these two seams coalesced to a thickness of approximately 3 m. This report considers these two seams as an Inferred Resource at this stage due to lack of quality data to better define economic mining potential.	
Metallurgical factors or assumptions	▪ *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical*	▪ No metallurgical assumptions are made. MCC currently extracts the full Ulan seam and beneficiates to produce an export thermal product to market specifications.	

Criteria	JORC Code explanation	Commentary
		Open Cut / Underground
	assumptions made.	
Environmental factors or assumptions	▪ *Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.*	▪ Yancoal Australia maintains the MCC area complying with all mining and environmental conditions pertaining to the relevant leases. ▪ There are not known impediments for mining at MCC.
Bulk density	▪ *Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.* ▪ *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.* ▪ *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	▪ Relative density (RD) has been determined in most analysed samples on an air dry basis using Australian Standards. RD is then adjusted to in situ moisture basis using the Preston & Sanders equation at an estimated in situ moisture of 6%.
Classification	▪ *The basis for the classification of the Mineral Resources into varying confidence categories.* ▪ *Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).* ▪ *Whether the result appropriately reflects the Competent Person's view of the deposit.*	▪ The combination of all existing data within and outside MCC including regional drillhole data as well as surrounding mines (Ulan and Wilpinjong) confirms the presence of a very consistent Ulan seam across the area. – Measured Resources – supported by drillholes approximately 500 m apart but up to 900 m apart (south and north areas). The consistent nature and predictability of the Ulan seam and utilizing public information and knowledge of neighbouring operations provides confidence in Measured status Resources. – Indicated Resource – mainly towards the edge of the lease where there is supporting data outside the MCC tenements. Classification supported by drillholes up to 1.2 km. – Inferred Resources – supported by drillholes up to 2 km apart. Inferred Resources exist on the edges of the lease, classified using data outside the MCC tenements to extend Resources to the lease boundaries.

Criteria	JORC Code explanation	Commentary	
		Open Cut	Underground
		▪ Inferred Resources on the western side of proposed open cut pit OC3, and to the west of EL7073 were not extended beyond drillholes to the western lease boundary due to lack of data defining the Ulan seam subcrop as it onlaps the Gulgong granite. ▪ Resource estimates exclude the A1 Ply on areas with depth of cover >100 m due to unlikely mining potential by underground methods. ▪ A2 plies are no longer reported as a Resource because the open cut operation is removing them as waste.	
Audits or reviews	▪ *The results of any audits or reviews of Mineral Resource estimates.*	▪ An updated geological model for 2017 Coal Resource estimation was generated in March 2017 - 48 new holes were added. The reconciliation with the geological model used for the previous Resource estimate showed a minor change (<1%) in Coal Resources due to model update. ▪ No external audits or reviews have been completed.	
Discussion of relative accuracy/ confidence	▪ *Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.* ▪ *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* ▪ *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	▪ Resources have been classified as either Measured, Indicated or Inferred depending mainly on the density of drillhole data and supported by existing mine operations. ▪ Prior to drilling, seam and horizon depth intervals predictions are generated from the geological model and after drilling the predictions are compared with the actual drilling results. The reliability of the predictions/differences support the level of confidence for each category determined by the Competent Person. ▪ Coal Resources were estimated for areas defined by drillhole data, an area of approximately 90 km^2. As single data points in a tabular coal environment such as this will have little or no effect on the total Coal Resource, the estimate is considered to be a global estimate.	

Section 4 Estimation and Reporting of Ore Reserves

The completed Table 1, Sections 4 is in response to the current ADV-BR-11019_Hunting Eagle_CPR Report completed in part by Competent Persons, Mr Doug Sillar (Open Cut) and Mr Graeme Rigg (Underground) on behalf of RPM.

(Criteria listed in section 1, and where relevant in sections 2 and 3, also apply to this section.)

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Criteria	JORC Code explanation	Commentary	
		Open Cut	Underground
Mineral Resource estimate for conversion to Ore Reserves	▪ *Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.* ▪ *Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.*	▪ The Coal Resource estimate used as the basis for this Coal Reserves Statement is described as part of this statement. The Resource estimate has been prepared by Mr. Brendan Stats. The Competent Person, Mr. Stats, 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. ▪ The same geological model has been used for the estimation of Resources and Reserves.	
Site visits	▪ *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* ▪ *If no site visits have been undertaken indicate why this is the case.*	▪ A site visit to the Moolarben Mine was undertaken by representatives of RPM in April 2018. The Reserves Competent Persons were unable to attend but interviewed the representative following the visit. The outcome of this visit was observation of the Asset area to better understand location, environmental, social, groundwater and existing infrastructure consideration.	
Study status	▪ *The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.* ▪ *The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.*	▪ Moolarben is an operating mine. LOM studies undertaken during the project planning and design stages have now been complemented by actual operating experience and ongoing exploration and assessment. ▪ Yancoal completed a Life of Mine Plan in 2017. ▪ The level of detail in the LOM plan is sufficient to meet requirements of JORC.	
		▪ Moolarben is an operating mine consisting of a number of operating Open Cut pits (OC1, OC2 and OC4) and a planned pit (OC3).	▪ Moolarben is an operating mine consisting of an operating Underground mine (UG1) and planned undergrounds (UG2 and UG4).
Cut-off parameters	▪ *The basis of the cut-off grade(s) or quality parameters applied.*	▪ A thickness cut-off of 0.3 m and ash cut-off of 50% is applied to the A1 and ELW plies which are the top and bottom plies of the Ulan seam. ▪ The A2 plies are excluded from Resources and hence Reserves in all OC pits due to high ash content of the coal.	▪ There are no coal quality cut-off parameters used to eliminate the conversion of Coal Resources to Coal Reserves. LOM planning has been used to determine whether Coal Resources will convert to Coal Reserves.
Mining factors or assumptions	▪ *The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design).* ▪ *The choice, nature and appropriateness of the selected*	▪ A combination of break-even strip ratio, pit design and LOM planning have been used as the basis of converting Coal Resources to Coal Reserves. RPM estimated a break even strip ratio and compared against each of the pit shells to confirm pit limits.	▪ LOM planning has been used as the basis of converting Coal Resources to Coal Reserves. ▪ The selected mining method is that in use in the operating mine, i.e. conventional

Criteria	JORC Code explanation	Commentary	
		Open Cut	Underground
	mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc. ▪ *The assumptions made regarding geotechnical parameters (eg pit slopes, stope sizes, etc), grade control and pre-production drilling.* ▪ *The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).* ▪ *The mining dilution factors used.* ▪ *The mining recovery factors used.* ▪ *Any minimum mining widths used.* ▪ *The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.* ▪ *The infrastructure requirements of the selected mining methods.*	▪ The OC mining method at Moolarben open cut is conventional truck and excavator with some dozer assist on waste. The operating method is well proven and suitable for the nature of the deposit. ▪ Pit slopes are based on practical and geotechnical criteria which include 12 – 15 m berm every 45 m vertical. Pit walls are typically pre-split with the exception of paleo channel areas at OC2 where an additional berm is required 50 m above the coal. ▪ The mining factors are based on reconciliations of production between 2013 and 2017. Assumptions used were: – Minimum coal mining thickness of 0.3 m; – Overall mining loss of 1%; – Loss and Dilution: ▪ coal roof loss of 0.055 m; ▪ coal floor loss of 0.055 m; ▪ coal roof dilution of 0.055 m; ▪ coal floor dilution of 0.055 m; and – The quality of diluting material is relative density of 2.4 t/m^3, and ash of 76% (ad). ▪ In situ moisture assumed to be 11 - 14%. ROM moisture is assumed to be 9.5%. Washed moisture is assumed to be 11.5%. ▪ A1 recovery of 55% and additional ash 13%. ▪ ELW recovery of 90%. ▪ WS1L recovery, total moisture of: – OC1 = 98% and 6.1%; – OC2 = 98% and 6.5%; – OC3 = 93% and 6.5%; and	longwall extraction with continuous miner development. ▪ Geotechnical studies were used to support the mine layout parameters. ▪ The mining factors used were: – Development roadways 5.4 m wide by 3.4 m high – Longwall operating height 3.0 m - 3.4 m – Longwall panel width 250 m - 300 m – It is assumed that a combined average of 100 mm of in situ working section will be lost from the roof and floor of the mineable coal sections during development and longwall extraction; – It is assumed that an average of 50 mm of higher ash material will be mined with both the roof and the floor of the coal seam during development and longwall operations, thereby diluting the in situ coal quality. – The quality defaults assigned to the UG1 roof were assumed to be relative density of 1.64 t/m^3, ash of 44%; – The quality defaults assigned to the UG1 floor were assumed to be relative density of 1.51 t/m^3, ash of 30%; – The quality defaults assigned to the UG4 roof were assumed to be relative density of 1.47 t/m^3, ash of 24%; – The quality defaults assigned to the UG4 floor were assumed to be relative density of 1.56 t/m^3, ash of 34%; – The quality defaults assigned to the UG2 roof were assumed to be relative density of 1.62 t/m^3, ash of 42%;

Criteria	JORC Code explanation	Commentary	
		Open Cut	Underground
		– OC4 = 97% and 6.1%. ▪ WS2L recovery and total moisture of: – OC1 = 98% and 7.5%; – OC2 = 98% and 8.3%; – OC3 = 95% and 8.3%; and – OC4 = 98% and 7.5%. ▪ WS1L dilution of -0.9%. ▪ WS2L dilution of 1.4%. ▪ Inferred Resources are not included in the estimate of Coal Reserves. Inferred Resources are included in the Life of Mine Plan however RPM anticipate that exclusion of this coal would not impact on the outcomes of the study.	– The quality defaults assigned to the UG2 floor were assumed to be relative density of 1.54 t/m³, ash of 31%; – Relative density data in the geological model is based on assumed in-situ moisture of 6%, while all qualities are based on air-dried moisture gridded values; – Preston & Sanders has been used in the estimation of in situ moisture; and – RPM has assumed that ROM moisture will be 8%, and product moisture will be 9%. ▪ Inferred Resources does not exist within the UG LOM plan footprints.
		▪ All necessary infrastructure is in place and operational for the current planned operations. Additional haul roads will be required as the open cut mine advances.	
Metallurgical factors or assumptions	▪ *The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.* ▪ *Whether the metallurgical process is well-tested technology or novel in nature.* ▪ *The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.* ▪ *Any assumptions or allowances made for deleterious elements.* ▪ *The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the ore body as a whole.* ▪ *For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?*	▪ All open cut coal at Moolarben is washed at a dedicated CHPP using dense medium cyclones, spirals and froth flotation. ▪ The coal processing plant has been in operation for six years and uses standard industry technology. ▪ Product coal quantities and quality is estimated based the results of slim core test work which is included in the quality model. The following factors are applied to modelled yield and product ash to allow for plant efficiencies: – 93% yield factor; and – 1.4% ash addition. ▪ Washed product moisture is based on shipping data collected at the port of Newcastle. For the washed open cut products the assumed moisture is:	▪ All underground coal at Moolarben bypasses the CHPP and is sold as an unwashed product. ▪ Underground ROM coal transferred to the surface is delivered to a 100,000 t ROM coal stockpile located to the north of the boxcut. Coal from the stockpile is transferred to the UG product stockpile via secondary and tertiary sizers at a nominal 50 mm top size.

<table>
<tr><th rowspan="2">Criteria</th><th rowspan="2">JORC Code explanation</th><th colspan="2">Commentary</th></tr>
<tr><th>Open Cut</th><th>Underground</th></tr>
<tr><td rowspan="2"></td><td rowspan="2"></td><td>– 9.5% for WS1L and A1; and
– 11% for WS2 and ELW.
▪ The six years of operational plant data supersedes bulk scale test work.</td><td></td></tr>
<tr><td colspan="2">▪ No allowance has been made for deleterious elements.</td></tr>
<tr><td rowspan="2">Environmental</td><td rowspan="2">▪ The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.</td><td colspan="2">▪ An Environmental Impact Statement has been prepared and the necessary environmental approvals obtained.</td></tr>
<tr><td>▪ All necessary approvals are in place for OC1, OC2, OC3 and OC4.
▪ Waste rock characterisation results and operational experience indicates that the waste rock is non-acid forming and does not require special placement requirements or procedures in the dumps.
▪ Coal reject produced from the coal washing process is buried in the pit with the open cut waste rock.</td><td>▪ Panel layout is impacted by the location of "The Drip" on the Goulburn River. The mine is further bounded by Ulan Road, Goulburn River National Park and the old Goulburn River Valley paleochannel. In particular the significance of "The Drip" has resulted in a 500 m standoff being required from the Goulburn River so that there are no subsidence impacts.
▪ Additionally, several archaeological sites are located above the workings. The approved design accounts for their locations, including the use of a mini-wall to negotiate a cliff line.</td></tr>
<tr><td>Infrastructure</td><td>▪ The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.</td><td colspan="2">▪ All the necessary infrastructure is in place and operational for the current operation and it is suitable for the current and future production projections.
▪ Additional haul road development may be required as the open cut mines progress</td></tr>
<tr><td>Costs</td><td>▪ The derivation of, or assumptions made, regarding projected capital costs in the study.
▪ The methodology used to estimate operating costs.
▪ Allowances made for the content of deleterious elements.
▪ The source of exchange rates used in the study.
▪ Derivation of transportation charges.
▪ The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.
▪ The allowances made for royalties payable, both Government and private.</td><td colspan="2">▪ All major infrastructure is in place. Capital forecasts have been included which represent the growth and sustaining requirements for the completion of the LOM plan.
▪ All operating costs are based on LOM planning estimates from Yancoal and have been reviewed by RPM.
▪ Current long-term exchange rate assumptions were provided by Yancoal.
▪ Transport charges based on actual contracted prices taking into account existing Take or Pay arrangements.
▪ State government royalties are included in the estimate.
▪ RPM reviewed all costs and they are considered reasonable.</td></tr>
</table>

Criteria	JORC Code explanation	Commentary	
		Open Cut	Underground
Revenue factors	▪ *The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc.* ▪ *The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.*	▪ Long term product coal pricing assumptions have been provided by Yancoal Marketing and is based on independent third party research and reporting. ▪ The revenue factors are considered reasonable for the purposes of estimating Reserves.	
Market assessment	▪ *The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.* ▪ *A customer and competitor analysis along with the identification of likely market windows for the product.* ▪ *Price and volume forecasts and the basis for these forecasts.* ▪ *For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.*	▪ A Marketing Study has not been reviewed however markets are well established for the mine's coal products. The projects typically produce a range of thermal coal products including: – Low Ash Thermal 18% ash (ad), and – High Ash Thermal 27% ash (ad). ▪ The Underground operation produces a bypass Low Ash Thermal product. ▪ Based upon these products and specifications, RPM anticipates no foreseeable issues in demand for these products	
Economic	▪ *The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc.* ▪ *NPV ranges and sensitivity to variations in the significant assumptions and inputs.*	▪ The inputs to the economic analysis are 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 have been used in assessing NPV. ▪ The NPV results for the Project 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. ▪ Sensitivity analysis has been completed on the Project over a range of variable. The Project is most sensitive to changes in exchange rate, revenue and operating costs.	
Social	▪ *The status of agreements with key stakeholders and matters leading to social licence to operate.*	▪ Native Title has not been extinguished for some areas (including crown land and water ways) and Native Title may still exist. The majority of the Assets holdings are however not subject to native title and future material risk associated with currently approved projects is not anticipated as a result of Native Title. Moolarben has recently purchased land and now owns all land in the current proposed mining areas.	
Other	▪ *To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:* ▪ *Any identified material naturally occurring risks.* ▪ *The status of material legal agreements and marketing arrangements.*	▪ 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 operation's viability.	

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Criteria	JORC Code explanation	Commentary	
		Open Cut	Underground
	▪ *The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.*		
Classification	▪ *The basis for the classification of the Ore Reserves into varying confidence categories.* ▪ *Whether the result appropriately reflects the Competent Person's view of the deposit.* ▪ *The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).*	▪ Classification of Coal Reserves has been derived by considering the Measured and Indicated Resources and the level of mine planning. – For OC1, OC2 and OC4 pits, Measured Coal Resources are classified as Proved Coal Reserves and Indicated Resources classified as Probable Coal Reserves, as the pits are currently operating and the level of mine planning is considered adequate to support this level of certainty in the Reserves estimate. – At the southern end of OC3, all Coal Reserves are classified as Probable for both Measured and Indicated Resources, primarily due to limited sub-crop drilling. – For UG1 and UG4, Measured Coal Resources are classified as Proved Coal Reserves and Indicated Resources classified as Probable Coal Reserves, as the level of mine planning is considered adequate to support this level of certainty in the Reserves estimate. One small area in UG1 has Probable Coal Reserves derived from Measured Resources, due to potential igneous intrusion. This amounts to 0.4 Mt. – UG2 Coal Reserves are classified as Probable as there is only Indicated Resources in this area. ▪ The Inferred Coal Resources have been excluded from the Reserve estimates. ▪ The result reflects the Competent Persons' view of the deposit.	
Audits or reviews	▪ *The results of any audits or reviews of Ore Reserve estimates.*	▪ Internal peer review of the Reserves Report has been completed.	
Discussion of relative accuracy/ confidence	▪ *Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate.* ▪ *The statement should specify whether it relates to global*	▪ The pit shells are supported by a large proportion of Measured Coal Resources. ▪ The basis of the estimate are actual operating costs and LOM planning. ▪ CHPP and infrastructure are in place and operating. ▪ Analysis of the coal quality has been undertaken by independent laboratories working under international standards of method and accuracy. Open cut product coal is produced washed coal. ▪ 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. Moolarben has an	

Criteria	JORC Code explanation	Commentary – Open Cut / Underground
	or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used. ▪ *Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage.* ▪ *It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	ongoing reconciliation process aimed at testing the appropriateness of the assumed Modifying Factors for the mine. ▪ Geotechnical studies have been completed for the site.

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JORC Code Disclosure Requirements

Ashton

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JORC Code, 2012 Edition – Table 1 report template

The completed Table 1, Sections 1, 2 & 3 are in response to the current ADV-BR-11019_Hunting Eagle_CPR Report completed in part by Competent Person Mr Brendan Stats on behalf of RPM.

Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	▪ *Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.* ▪ *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* ▪ *Aspects of the determination of mineralisation that are Material to the Public Report.* ▪ *In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.*	▪ Industry standard HQ triple tube core holes (61 mm diameter) have been drilled from the surface, while intra-mine exploration interseam holes (IS series) coring from below the Pikes Gully seam and Upper Liddell seam mining horizons were completed using industry standard NMLC triple tube barrels (51.8 mm diameter) both employing wireline methods to recover whole cores of coal. ▪ Historically, in pre-Ashton Coal series drillholes, sampling strategies varied according to the series of holes drilled with core sampled into plies and working sections based on a systematic sampling strategy linked to the correlation of the individual seams named at that time. Recently, (from 2012 onwards) the core was sampled into coal and non-coal and instructions issued to the laboratory. In the recent holes drilled by Ashton Coal, White Mining Limited (WML) and White Mining Limited Core (WMLC) series the coal quality sampling was conducted in the field and the intervals selectively sampled. ▪ Open hole drilling acquired chips sampled in 1 m intervals. ▪ A standard suite of downhole geophysical logs were acquired in all holes used in the model (including; caliper, natural gamma and density), with some holes also logged with resistivity, sonic, neutron, borehole televiewer and verticality). ▪ Geophysical logs were acquired to supplement the geological description of the cores and to ensure that the core recoveries were satisfactory (>/= 95%) and to assist with correlation of the various seams present. All surface core holes and open holes used in the model have been geophysically logged. Historically, (prior to 2007) geophysical logs were acquired either by Wootmac or Rutherford. Since 2008, most drillholes have been geophysically logged by Groundsearch Australia. Regular calibration of geophysical logging tools is standard practice for logging companies. ▪ All intra-mine (IS series) core holes were not geophysically logged however core recovery is recorded in logging and core photos taken.
Drilling techniques	▪ *Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	▪ Both wireline coring (HQTT – 61 mm diameter and NMLC – 51.8 mm diameter) and non-core slim hole drilling have been conducted across the deposit. Historically, WML primarily used rotary air blast with percussion hammer bits to drill the non-core holes and the pre-

Criteria	JORC Code explanation	Commentary
		collars sections of core holes, with some mud rotary drilling near areas containing shallow alluvial cover. ▪ All surface and intra-mine IS series exploration holes have been drilled and cored vertically with no HQTT or NMLC core oriented. However, deviation data has been acquired by geophysical logging but is only available for surface exploration holes. Maximum horizontal deviation in the Yancoal Australia Limited (Yancoal) series holes was up to 8.6 m over 250 m depth (in YancoalO-009). On this basis it was decided that the drill dataset did not require correction for verticality and all holes have been modelled vertically. ▪ The tenement area includes 297 holes of which 12 were drilled by Yancoal Australia Limited (Yancoal) (10 non-core holes and 2 core holes). Of the 285 historical drillholes drilled prior to Yancoal ownership, 142 were cored for coal quality, geotechnical studies and gas and 143 were non-core structure holes.
Drill sample recovery	▪ *Method of recording and assessing core and chip sample recoveries and results assessed.* ▪ *Measures taken to maximise sample recovery and ensure representative nature of the samples.* ▪ *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	▪ The documentation and reporting does not describe the methods of recording and assessing core recoveries, nor does it describe the measures taken to ensure sample representivity. Best practice in the coal industry requires that the coal core is matched to the geophysical logs and depth corrected prior to sampling ensuring that there are no depth misalignments and to establish core losses prior to sampling to determine if the core recovery is satisfactory (preferably >95% recovery) to sample and conduct coal quality testing. ▪ In selecting drillholes suitable for use in developing the 2014 geological model, Geos Mining conducted a review of the historical core data on a seam by seam basis, and some seam quality data was excluded where the sample did not meet minimum acceptable core recovery criteria of 80% volumetric or 95% linear recovery where sample mass information data was not available. ▪ For the IS series holes (no geophysics) spot checks of core photos to determine whether the mass recovery determined by the lab are acceptable were conducted by Geos Mining. Geos Mining commented that the mass recovery may have generally overstated the core loss sample intervals, and that these values become unacceptable in cases where the laboratory reported values of less than 80% volumetric recovery. Recommended compare the seam graphic section with surrounding geophysical logged holes to assess likely recovery of core relative to the stone partings to determine whether the core is valid. ▪ It is not expected that there is a sample bias due to preferential loss/gain of material. Coal seams range from bright banded to dull so preferential loss of bright coal could occur although drilling methods would try to minimise losses in these zones.
Logging	▪ *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* ▪ *Whether logging is qualitative or quantitative in nature.*	▪ All drill cuttings and core from the WML historical drillholes were qualitatively lithologically described on hand written geological record sheets and then later encoded into the computer using Prolog software initially by WML's geologists, then later by Earthdata personnel. The computer files were uploaded into computer geological databases for modelling. Yancoal have adopted a similar methodology.

Criteria	JORC Code explanation	Commentary
	Core (or costean, channel, etc) photography. ▪ *The total length and percentage of the relevant intersections logged.*	▪ Logging of chip and core samples is detailed and includes a record of the recovery of the total length and the drilled core length, lithology type, lithology descriptions to describe the sample in terms of colour, grainsize, bedding and bedding spacing, bedding dip, mechanical state, weathering, bedding relationship, structure, dip of structures, mineral forms and there associations, primary bedding forms, sedimentary contacts, defects and spacing, all of which is entirely sufficient to describe the various lithologies and coal samples to support the Coal Resource estimation from a geological, geotechnical and coal quality consideration. All Yancoal core was photographed. Geos Mining determined that 40 historical WML and WMLC core holes contain core photos and 30 do not. All of the WMLC300-series holes contain core photography. The lack of core photos for the earlier WMLC holes is not considered to have a material impact upon the Resource estimation. ▪ Assessment of the geological and geotechnical logs indicate they have been logged to a level of detail to support appropriate Coal Resource estimation and mining studies.
Sub-sampling techniques and sample preparation	▪ *If core, whether cut or sawn and whether quarter, half or all core taken.* ▪ *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* ▪ *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* ▪ *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* ▪ *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.* ▪ *Whether sample sizes are appropriate to the grain size of the material being sampled.*	▪ The entire core thickness was used in sampling (sawing, quarter or half sampling of core is not a standard sampling technique in coal exploration). ▪ No non-core samples were used in the database/model/Resource estimate. ▪ The core sampling protocol followed by WML was to sample the "cleanest" coal intervals based on visual examination and sample stone partings separately using a 0.30 m minimum parting thickness limit. Roof and floor sub-samples were also taken. The nature, quality and appropriateness of these core sampling procedures was not documented but are expected to have been to an industry standard sampling the entire core section/ply/sub ply into plastic bags with some form of identification. No sample preparation takes place outside the laboratory. ▪ No coal core duplicates are taken as the analysis methods for coal require the whole cylindrical seam section for analysis. Sub-sampling of the sampled core is part of the treatment procedure at the laboratory where a portion of the sample is reserved for the purpose of sample analysis checks and or additional testing. The laboratories (SGS Australia, Carbon Consulting International Pty Ltd and currently Bureau Veritas) follow Australian Standards methods and are all NATA accredited. ▪ The core size of 61 mm for surface holes and 51.8 mm for intra-mine (IS series) provide sufficient sample to conduct the typical proposed testing program. Significantly the coal industry standard for core diameters suitable for the analysis of coal core has increased to typically 83 mm (PQTT) and 4" core (100 mm) where possible which tends to improve the recovery of the coal and the quality of the core recovered. Limitations exist for the underground drilling operations and the core size although not typically ideal is satisfactory where good core recoveries are achieved.

Criteria	JORC Code explanation	Commentary
Quality of assay data and laboratory tests	▪ *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* ▪ *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.* ▪ *Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.*	▪ The types of testing undertaken historically including pre-Ashton holes, WML holes and Yancoal holes are industry standard tests used internationally as part of the analysis and assessment of hard black coal and conform to the Australian Standards. Historically, coal analytical testing varied from one explorer to the next although the fundamental tests conducted were the same. All core testing has been on the full core section whether it has been subdivided into plies and crushed and then subsampled. The sub samples are representative of the total section of the core interval. ▪ Inconsistencies in sampling procedures were identified, particularly in the sampling strategy extended over coal and stone parting intervals for laboratory testing. In addition Stage 2 Float/Sink testing was only conducted on plies containing <60% raw ash, with no raw or clean coal composite analyses undertaken at all on the >60% ash plies which might be part of the working sections. In such cases, default values of 0% yield mass and 90% ash for stone parting material have been applied in yield/ash models to account for the stone partings which were not analysed. This historic method of analysis is no longer appropriate for modelling of coal working sections. ▪ The laboratory testing for earlier WML cores was conducted by Carbon Consulting International Pty Ltd (now Bureau Veritas), while in more recent years, testing has been undertaken consistently by SGS Australia. All these laboratories are NATA accredited laboratory. ▪ The 2012 and 2013 analytical testing procedures for the analysis of coal plies at Ashton comprised two stages. – Stage 1 involved analyses of raw coal plies (<60% ash) crushed to -11.2 mm and analysed for proximate analysis (inherent moisture, ash content, volatile matter and fixed carbon), total sulphur ("TS"), calorific value ("CV"), and relative density ("RD") and apparent relative density ("ARD"). Selected composite samples were tested for trace elements. Stone plies (>60% raw ash ad) were analysed for inherent moisture ("IM"), raw ash, TS and RD. – Stage 2 (float/sink analysis of coal plies <60% raw ash ad) at float densities of FL1.30 to FL1.80 at 0.10 increments. Each fraction was crushed to -4 mm, riffle split to give -0.212 mm 'prep' and 4 mm 'reserve' portions. Each float-sink increment was tested for air-dried mass and ash content. Coking properties were not tested on individual float fractions. ▪ Additional clean coal composite testing was carried out in selected holes on specific working section intervals determined by Ashton geologists who provided the testing instructions to the laboratory. Coking coal composites have been tested sporadically at CF1.50, CF1.60 and CF1.70. The clean coal composites were tested for proximate, TS and CV, ash analysis ("AA"), ash fusion temperatures ("AFT") reducing conditions, Gieseler Plastometer analysis and dilatometry characteristics. ▪ The quality control procedures are inherent with NATA approved laboratories which undertake the testing to Australian Standard testing procedures and are subjected to regular

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Criteria	JORC Code explanation	Commentary
		round robin testing to ensure consistency of method and results. The testing program procedures have sufficient reserve sampling in-built in the program to allow for checks of the analytical testing to be undertaken as required if the result is anomalous. External testing will be undertaken when required.
Verification of sampling and assaying	▪ *The verification of significant intersections by either independent or alternative company personnel.* ▪ *The use of twinned holes.* ▪ *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* ▪ *Discuss any adjustment to assay data.*	▪ No verification of the sampling has been conducted by the Competent Person as there was no opportunity to observe the sampling of the coal intervals. An audit comparing the coal quality database with original hard copy lab reports has not been conducted. ▪ No twinned holes have been drilled. ▪ Geos Mining geological model data was compiled into custom-designed tables within a Microsoft SQL Server 2008 database, hosted on dedicated hardware in Geos Mining's Sydney office. Following input of the newly acquired data, data validation was undertaken to exclude redundant and unreliable data from the Resource estimation, including holes without downhole geophysical data and core sample intervals that could not be reconciled with correlated seams/plies (i.e. misaligned with seam picks). ▪ Moisture holding capacity ("MHC") results for holes YAC-010 and YAC-011 were reviewed by Geos Mining and provisionally considered that an in situ moisture of 6.5% was reasonable. ▪ An in situ moisture of 6.5% has been assumed and used to determine to estimate In situ Density using the Preston and Sanders method. The Competent Person considers a 6.5% in situ moisture basis to be reasonable and appropriate based on the Moisture Holding Capacity data available and regional experience.
Location of data points	▪ *Accuracy and quality of surveys used to locate drillholes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* ▪ *Specification of the grid system used.* ▪ *Quality and adequacy of topographic control.*	▪ All surveyed drillhole collar data provided by Ashton Coal was supplied in GDA 1994 co-ordinates, MGA Zone 56. ▪ Collar data for some historical holes were excluded from the data due to lack of confidence in their collar locations. ▪ The current topography DTM surface was supplied to Ashton Coal in September 2013 based on an aerial survey flown in January 2013. It appears satisfactory for the Resource modelling and estimation. ▪ The current underground surveyed face positions of the Upper Liddell (ULD) and Upper Lower Liddell (ULLD) seams at 30th September 2017 and the LOM plans were used to excise mined coal from the geological Resource model. The LOM plans have been used to determine the Coal Resources within and outside the current LOM. ▪ A check of collar heights against the Geos topography model grid derived from the DTM (TOPO_50 – 50 m mesh) showed several anomalies up to +/-30 m between collars and the surface topography. These large anomalies were identified as being the result of spoil emplacement above original topography, with the drillhole collar located on the original surface R.L. A check of a regional original topography grid, which included the Ashton

Criteria	JORC Code explanation	Commentary
		deposit, against collar showed differences of up to 4 m in the areas with spoil dumps, this is reasonable as the original topography was most likely based on historic 1:25,000 Lands Department topographic maps. Elsewhere differences between collars and the DTM were modest generally <+/-1.5 m from visual examination of DTM contours and drillhole plotted collar height.
Data spacing and distribution	▪ *Data spacing for reporting of Exploration Results.* ▪ *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* ▪ *Whether sample compositing has been applied.*	▪ Drillhole spacing is closest in the North East Open Cut area and the northern and central parts of the proposed South East Open Cut ("SEOC"), typically from 100 m to 200 m. In the underground area, hole spacing is less dense, typically 300 m to 500 m, increasing locally to approximately 600 m to 800 m apart. Drillholes are typically more widely spaced in the western/north-western portions of ML1533, ML1623 and the western portions of EL4918 and EL5860. ▪ This drillhole spacing and distribution is sufficient to confirm the geological continuity to determine the Resource categories. ▪ Only vertical sample compositing within a single hole has been undertaken to represent a "working section". No samples have been composited together from several holes over several sites to form a single composite sample of the deposit and analysed.
Orientation of data in relation to geological structure	▪ *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* ▪ *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	▪ All structure and stratigraphic drilling and coring has been undertaken using vertical holes. This is satisfactory given the general structure and stratiform nature of the Ashton deposit seams. The coal seams exhibit complex geological structure in localised areas near the asymmetric north-northwest trending Camberwell Anticline axis, which traverses the north-eastern portion of the area. The anticline dips at 9° to 18° on the eastern limb (in ML1529) and 6° to 9° on the western limb. The dip of the strata on the Camberwell Anticline is not uniform with the rock units gradually steepen up to 9° to the northeast around the nose of the anticline. To the southwest, the rock units flatten to approximately 4° towards the Bayswater Syncline. This drilling method will not bias the sampling as it is coring a complete section of the seam across the bedding creating a cylindrical cross section representative of the coal intervals in the drillhole. ▪ Borehole deviation was judged to be immaterial and verticality surveys were not incorporated into the model.
Sample security	▪ *The measures taken to ensure sample security.*	▪ Measures to ensure sample security were not documented and reported historically. It was not possible to validate sample security. ▪ The sample number, seam and ply number, depth interval and lithology type, were recorded in the digital sampling sheets. No documentation was available summarizing the "chain of custody" of the sample and the security systems established to ensure coal seam sample anonymity at the laboratory.
Audits or reviews	▪ *The results of any audits or reviews of sampling techniques and data.*	▪ No external reviews or audits have been completed.

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Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	▪ *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* ▪ *The security of the tenure held at the time of reporting along with any known impediments to obtaining a license to operate in the area.*	▪ The Ashton Project comprises two exploration licenses (EL4918 and EL5860) and three mining leases (ML1529, ML1533 and ML1623) whose outermost boundary totals 1,510 ha. (Note; some of the tenements overlap one another). The mining operation is located approximately 14 km northwest of the township of Singleton in the Hunter Valley, New South Wales. All tenements were granted under the Mining Act, 1992, and are wholly owned by White Mining (NSW) Pty Ltd, a wholly owned subsidiary of Yancoal Australia Ltd. ▪ EL4918 was due to expire on 17/12/15 and EL5860 was due to expire on the 21/5/15 and renewals have been sought for both areas. ML1529 is due to expire on 11/11/2021, ML1533 (expires on 25/2/24), and ML1623 (expiring on the 30/10/29), are all held by Yancoal. ▪ There are a number of 'environment and community' issues that may jeopardise Ashton Coal's ability to extract coal within the current mining tenements. Some such issues include nearby rivers and waterways and their associated alluvium, licensing restrictions, nearby residents, land access and ownership. Following a protracted legal dispute some privately held land remains in the SEOC proposal which has delayed the commencement of mining and restricted access for surface exploration including LOX drilling. ▪ Native title does not currently prevent access to Resources that are currently being extracted however there are potential native title issues relating to Crown Land within the SEOC project area.
Exploration done by other parties	▪ *Acknowledgment and appraisal of exploration by other parties.*	▪ Exploration commenced at Ashton 1969, when the Joint Coal Board, acting for Durham Holdings Limited, an affiliate of Renison Goldfields, carried out drilling over a portion of the current project area as well as adjoining areas. Durham Holding at that time acquired the coal mining royalty rights, through the purchase of private coal titles, to open cut mining operations about to commence in Ravensworth No.2, adjoining to the west of Ashton, for thermal fuel supply to the nearby Liddell Power Station. ▪ Prior exploration was conducted by Durham Holdings/Joint Coal Board, Southland and Maitland Main Collieries, Department of Mineral Resources, White Mining Limited and Ashton Coal Operations Pty Ltd.
Geology	▪ *Deposit type, geological setting and style of mineralisation.*	▪ The Ashton Mine area is located in the Hunter Coalfield in the Sydney Basin and contain the basal seams of the Burnamwood Formation in the Jerrys Plains Subgroup and all seams of the Foybrook Formation in the underlying Vane Subgroup. These subgroups exist within the Late Permian Wittingham Coal Measures. The Wittingham Coal Measures seams subcrop in sequential order from west to east on the western limb of the Camberwell Anticline. Due to progressive erosion towards the east, only the basal 70m have been preserved at the eastern boundary of EL5860. Marine sediments of the Saltwater Creek Formation, which underlie the Foybrook Formation, subcrop in the eastern extremity of EL5860 and are

Criteria	JORC Code explanation	Commentary
		exposed further east. The full sequence of the Foybrook Formation, generally about 250m thick, is present in the western half of the area, with the most economically significant seams (Lemington, Pikes Gully, Upper Liddell, Upper Lower Liddell, and Lower Barrett) occurring in the formation's lower 180m. The Jerrys Plains Subgroup and Archerfield Sandstone cover the westernmost portion of the area. ▪ Quaternary alluvium associated with the Hunter River, Bowmans Creek and Glennies Creek cover various parts of the area. ▪ The dominant structural feature is the north-northwest trending asymmetric Camberwell Anticline, whose axis traverses the north-eastern portion of the area. The eastern limb of the anticline (which is situated in ML1529) dips at 9° to 18° towards the axis of the south-southwest trending Glennies Creek Syncline, while the gently dipping western limb dips at 6° to 9° towards the axis of the curvilinear, generally north-south trending Bayswater Syncline which is situated to the immediate west of the area. ▪ Upper Liddell seam mining has been affected by northeast to southwest conglomerate/sandstone channels which occur in the ULD seam roof. Roof rolls are associated with the channels (due to compaction) and areas of associated top ply erosion are also exposed in gateroad development and longwall extraction. High frequency RIM surveys are routinely carried out to map the expected location of these channels across each longwall panel to assist with horizon control in these localities. Local thinning of the ULD seam from nominally 2.0 m - 2.1 m to approximately 1.75 m is generally expected. Conglomerate channels as predicted from gateroad geological mapping and RIM surveys impacted ULD seam in panels LW-103 to LW-105 and at the inbye end of LW106A towards the proposed installation roadway from midway between CT27 and CT28 of the maingate heading. Inbye CT 31 the immediate roof was predominantly mudstone. ▪ Faults identified in the underground workings predominantly striking north-south, with a subordinate set trending east-west and northeast-southwest did not have a significant impact during Pikes Gully extraction. Faults at Pikes Gully level are believed to have been generally <1 m vertical normal displacement, although some reverse thrusts were present. However, two larger north-south faults with throws ranging from 1.0 m - 2.5 m were identified in the southern portion of LW103 and the southern portion of the gateroad between LW105 and LW106A. These faults dislocate the PG Seam and the ULD Seam where developed and extracted to date and are expected to affect the underlying ULLD and Lower Barrett (LB) seams. The two faults are roughly parallel and are inferred to extend over a distance of several hundred metres, both southwards outside the ML1533 boundary, and dissipating northwards into fault and/or flexure zones. Faults were mapped in the original proposed installation roadway for LW105, dipping at 75° with throws of 1.3 m and 0.9 m. Additionally a number of close-spaced faults along the adjoining maingate and tailgate driveages, interpreted as two fault zones with one diminishing outbye and the other diminishing inbye, necessitated the shortening of LW105, resulting in sterilisation of some Resources at the outbye end of the panel. The decision to sterilise Resources was to avoid slow longwall production, potential for equipment damage mining through the fault zone and potential

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Criteria	JORC Code explanation	Commentary
		dangerous mining conditions found when mining through a similar fault zone in LW103 Detailed mapping shows a mapped dyke swarm occurred at the tailgate end of the installation roadway for LW103. This fault zone occurred towards the centre of LW3 when Pikes Gully seam mining occurred but more difficult mining conditions occurred when these faults were mined at ULD level below the Pikes Gully goaf from LW3. These faults will persist at depth and one set (mapped in ULD MG105) will impact the proposed longwall extraction plan for Upper Lower Liddell (MG205). Mapped fault zones will also impact on the current underlying Barrett development heading layout (MG302, MG304A and MG305). ▪ A north-south trending igneous (teschenite) dyke affects the ULD seam in the eastern portion of ML1533. The same dyke system had previously been intersected in the overlying Pikes Gully Seam workings in LW1 and required pre-mining by road header and also shot-firing on the longwall face slowing production. RIM (Radio Imaging Method) survey and in-seam longhole and IS series drillhole data has mapped the dyke to enable mine planning to develop a strategy for the ULD Seam to pre-mine as much as possible of this dyke and its cinder zone. Where mined the dyke ranged in thickness from 0.7 m to 5 m (up to 8 m including the cinder zone) and was "generally very strong" (UCS ranging from 45 MPa to 214 MPa, testing by Strata Testing Services, Newcastle). The cindered coal cannot be beneficiated and is treated as waste material when mined.
Drillhole Information	▪ *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drillholes:* – *easting and northing of the drillhole collar* – *elevation or RL (Reduced Level – elevation above sea level in metres) of the drillhole collar* – *dip and azimuth of the hole* – *down hole length and interception depth* – *hole length.* ▪ *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*	▪ The inclusion of the collar co-ordinates and elevation, drillhole total depth, hole direction, hole inclination and the seam intervals is not material to this report. ▪ A total of 301 drillholes have been used in the geological model. Within the tenement boundary 153 open holes, 144 partly or full cored (of which 70 are inter-seam IS series holes) and 9 (historical explorers and government holes) are located. A total of 13 surface holes were drilled by Yancoal (11 non-core holes and 2 core holes). Of the 288 historical drillholes drilled prior to Yancoal ownership, 142 were cored for coal quality, geotechnical studies and gas and 145 were non-core structure holes. Of the 228 holes drilled from the surface 187 (82%) have geophysical logs. Recent interseam drilling from ULD to ULLD in MG106A has facilitated more confident reclassification of Resources inside the life of mine plan. ▪ Both the gas drainage holes and most of the piezometer holes were not used in the model. The piezometers weren't used because most are too shallow (i.e. <15 m total depth). ▪ The exclusion of this data set will not detract from the understanding of the deposit as the Resource figures present the location and types of drillholes in each of the areas to support the justification of the Resource category areas defined by the Competent Person. It is understood that there may be some holes drilled by White Industries and Durham Holdings that are not included in the model drillhole database for unknown reasons.
Data aggregation methods	▪ *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades*	▪ Average qualities have been weighted on mass and in situ density on volume.

Criteria	JORC Code explanation	Commentary
	are usually Material and should be stated. ▪ *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.* ▪ *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	▪ Working section qualities (for underground "working section" seams) have been composited across various ply components and partings between the plies to give the average as reported. ▪ No coal quality cut-offs have been applied in the geological model. ▪ There are no metal equivalents used to report the Coal Resources. This is not a standard reporting requirement for coal.
Relationship between mineralisation widths and intercept lengths	▪ *These relationships are particularly important in the reporting of Exploration Results.* ▪ *If the geometry of the mineralisation with respect to the drillhole angle is known, its nature should be reported.* ▪ *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').*	▪ All coal thicknesses are 'down-hole' intersected thickness and represent an apparent thickness. Because there are very few verticality logs it is not possible to generate a true thickness model of the area. However, the grid modelling uses the apparent thickness to generate vertical thicknesses from these apparent thicknesses and models between the generated roof and floor surfaces to compute a volume which honours the seam. ▪ No depth adjustment is undertaken for any holes in the Ashton drillhole database.
Diagrams	▪ *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drillhole collar locations and appropriate sectional views.*	▪ All relevant figures depicting information considered material to the Coal Resources reported are contained within the JORC report associated with this Table 1.
Balanced reporting	▪ *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	▪ All results have been included in the data used to estimate Coal Resources reported here. Average values for raw ash and CV have been reported for Resources shown here, and whilst some outlying values do exist the averages are considered representative of the Coal Resources.
Other substantive exploration data	▪ *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	▪ A RIM survey conducted April 2013, focused on mapping dyke intrusions in LW-102, roof conglomerate intrusions on the outbye-end of both LW-102 and LW-101 and the area between the underground Pikes Gully Mains and the surface with the objective of determining sterilised coal. High frequency RIM surveys are now done routinely in advance of mining to identify areas of conglomerate roof in the ULD where channel development and associated erosion of the upper coal plies as well as seam thinning from differential compaction may occur. ▪ Gas desorption testing was conducted on four ULLD seam samples taken from ISLL19A, ISLL20A, ISLL22 and an unknown inter-seam hole in MG102 Panel and one ULD seam sample from surface hole YancoalG-008 to assess the potential hazard which could affect Resources. Standardised results (at 15% ash and 1.5% moisture bases) indicated moderately gassy conditions exist, with the gas composition for all samples ranging 98%-99% CH_4 with the remainder CO_2.

Criteria	JORC Code explanation	Commentary
		▪ A report on spontaneous combustion propensity was undertaken in 2007 to assess the potential hazard.
Further work	▪ *The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).* ▪ *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	▪ The main objectives for proposed future exploration are summarised below: – Proposed exploration will include one large diameter holes for sized washability. – Several IS series interseam holes from the ULD-ULLD to refine seam thickness and known splitting for the structural model will be conducted ahead of mining to increase confidence for mine planning. – One or more surface holes to test the ULD-ULLD interseam thickness to locate the LW201 installation roadway as the interseam thins inbye. – Approximately ten holes to enable some seams with poor recovery to be elevated to Measured Resources and equivalent Reserves status.

Section 3 Estimation and Reporting of Mineral Resources

(Criteria listed in section 1, and where relevant in Section 2, also apply to this section.)

Criteria	JORC Code explanation	Commentary	
		Open Cut	Underground
Database integrity	▪ *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.* ▪ *Data validation procedures used.*	▪ Previous consultants have conducted extensive validation exercises prior to undertaking previous Resource estimations in 2012, 2013 and 2014. ▪ Geos Mining consolidated the data supplied by Ashton with the Palaris Minex Resource estimation model 2013 database exports. Data was compiled into custom-designed tables within a Microsoft SQL Server 2008 database and served as the primary data source. Lithological logs, wireline geophysical logs, coal quality results (checked against NATA laboratory reports where available) and coal intersection depths were reconciled by Geos Mining before modelling and Resource estimation in 2014. ▪ In 2017, MBGS directly used the collar survey and the coal quality databases provided by Geos Mining and incorporated updated geological and geophysical data provided by Ashton Mine. ▪ RPM completed a selective audit of drillhole data. Issues were identified with respect to sample intervals compared with seam intervals and where relevant were updated.	
Site visits	▪ *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* ▪ *If no site visits have been undertaken indicate why this is the case.*	▪ No site visit has been completed by the Resource Competent Person, however discussion have been held with the Reserves Competent Person who visited the site in 2018. The Competent Person is familiar with the geological setting of the Ashton Project from experience in nearby operations.	

Criteria	JORC Code explanation	Commentary	
		Open Cut	Underground
Geological interpretation	▪ *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.* ▪ *Nature of the data used and of any assumptions made.* ▪ *The effect, if any, of alternative interpretations on Mineral Resource estimation.* ▪ *The use of geology in guiding and controlling Mineral Resource estimation.* ▪ *The factors affecting continuity both of grade and geology.*	▪ Geology of the Ashton deposit is understood with a good level of confidence and it is believed that coal volume estimations are sound. Current drillhole spacing and coal quality data is sufficient to indicate seam continuity and consistency and imply grade continuity in some places whilst verifying it in others. ▪ Although exploration has identified several small-scale faults (up to 2.5 m throws), faults have not been modelled in the current assessment as they are considered to have no material impact upon Resources. The sterilisation of part of LW105A due to difficult mining conditions caused by two fault zones will require a review of expected impacts of these faults on ULLD and underlying Barrett seam Resources and Reserves. ▪ Seam subcrops are structurally controlled by the Camberwell Anticline and strike generally north-south throughout the project area to limit the extent of the Resources. ▪ The maximum dip of around 9° occurs near the axis of the Camberwell Anticline at the north-eastern extremity of EL4918, where a monoclinal structure is interpreted to exist. ▪ Correlation of consistent characteristic geophysical seam signatures help support seam interval continuity and grade where identified in conjunction with coal analytical results (where conducted) for both open cut or underground Resource criteria, in order to establish and/or constrain potential 'working sections'. ▪ The geological interpretation is based on the integration of all drillhole and coal quality data and comparing with previous interpretations.	
Dimensions	▪ *The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.*	▪ The outermost boundary of the Ashton Coal Project tenements totals 1,510 ha. (Note: some of the tenements overlap one another). This represents an area of approximately 4 km from east to west, by 5 km from north to south.	
		▪ Open Cut Resources extend from below the base of weathering (nominally 14 m below surface) to a maximum depth of approximately 200 m.	▪ Underground Resources extend from the base of weathering (nominally 14 m below surface) to a maximum depth of less than 350 m.
Estimation and modelling techniques	▪ *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.* ▪ *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such*	▪ The estimate of Resources is based on geological models built with the existing geological databases. ▪ The Ashton geological model was constructed by MBGS based on drillhole data to produce grids at a 50 m mesh size. The MBGS model used ECS Growth Technique algorithm for interpolation of data. ▪ Open Cut Resources for the SEOC area were generated from a Minescape Geological model developed by RPM based on an updated version of the MBGS drillhole database. ▪ The topography grid was produced from the same topographic DTM surface derived from an aerial survey flown in January 2013.	

Criteria	JORC Code explanation	Commentary – Open Cut	Commentary – Underground
	data. ▪ *The assumptions made regarding recovery of by-products.* ▪ *Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).* ▪ *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.* ▪ *Any assumptions behind modelling of selective mining units.* ▪ *Any assumptions about correlation between variables.* ▪ *Description of how the geological interpretation was used to control the resource estimates.* ▪ *Discussion of basis for using or not using grade cutting or capping.* ▪ *The process of validation, the checking process used, the comparison of model data to drillhole data, and use of reconciliation data if available.*	▪ There are no by-products from the processing and beneficiation of the coal to produce a thermal coal product. ▪ Only TS has been modelled as part of this statement. No estimation of other deleterious elements was undertaken as part of this statement. ▪ Selective mining 'working sections' were modelled. The seams were all modelled individually to minimise the risk of including stone partings in the thickness of the coal and overestimating the Coal Resources. ▪ No assumptions have been made about correlations between variables for this estimate. ▪ Where available, laboratory density measurements were used to derive Preston & Sanders in situ densities corrected to a nominal in situ moisture of 6.5%. ▪ The geological seam structure model is acceptable, although the faults have not been modelled. ▪ Resource category polygons for each seam ply and working section were defined. ▪ Resources were estimated using seam thickness, ash, in situ density, TS and CV from the geological models and limited by the seam subcrops, Resource and tenement limits and Resource category boundary polygons. ▪ A total of 301 drillholes were used in the modelling, of which 90 had coal quality data. ▪ Resources were limited to a maximum of 50% raw ash (ad). ▪ A comparison with previous estimates year shows only small differences and that any variations could be justified based on changes in criteria of the categories or where additional geological information has updated.	
Moisture	▪ *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	▪ Tonnes are estimated on an in situ moisture basis. ▪ Moisture holding capacity data from four 2013 boreholes (YAC-010, YAC-011, WMLC336 and WMLC337) has been used to estimate in situ moisture, using the equation devised by ACARP 10041C (2003) which confirmed the 6.5% in situ moisture as appropriate. ▪ The estimated 6.5% in situ moisture to adjust the in situ coal density using the Preston & Sanders formulae to undertake the Resource estimation. Air dried moisture averages on a seam group basis range from 2.7% to 3.8% for Open Cut Resources and 2.3% to 3.1% for Underground Resources.	
Cut-off parameters	▪ *The basis of the adopted cut-off grade(s) or quality parameters applied.*	▪ Ply Resources, no minimum coal thickness was used. It is noted that in particular the Lemington plies are numerous and thin and although theoretically able to be mined, the ability to recover the Lemington plies will	▪ For Underground Resources, the Ashton mine site supplied drillhole by drillhole working section seam picks in order to identify the combination of plies which could be considered as recoverable. There

<table>
<tr><th rowspan="2">Criteria</th><th rowspan="2">JORC Code explanation</th><th colspan="2">Commentary</th></tr>
<tr><th>Open Cut</th><th>Underground</th></tr>
<tr><td></td><td></td><td>need to be considered in more detail in order to determine Reserves. The amount of Resources and Strip Ratio is not overly sensitive to thin (<300 mm) plies.
▪ A maximum 50% raw ash content (ad) for coal plies and potential open cut working sections was generally applied.</td><td>are some issues identified with the working sections nominated, which may result in the modelled working sections being thin and underquoting Resources. Nominating working sections can be an iterative process. A minimum thickness of 1.8 m for remaining underground Resources in the Pikes Gully Seam and minimum 1.5 m for underground Resources in all other seams was used.</td></tr>
<tr><td>Mining factors or assumptions</td><td>▪ Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.</td><td>▪ Open Cut Resources are estimated to a nominal depth of 200 m. The strip ratio for the Open Cut Resources is well within the range of currently mined strip ratio's (<10:1) in the Hunter Valley. Open cut Resources have been excluded from within the Hunter River and Glennies Creek and associated alluvials, as it is considered very unlikely that open cut mining in the alluvials associated with either river will ever be allowed due to environmental regulations.</td><td>▪ Underground Resources are estimated to a nominal depth of 350 m. Portions of the coal will require washing to meet the target product market specification and considerable finesse will be required to mine the deposit and reduce the amount of stone that reports to the wash plant. Some significant areas identified as underground Resources are residual coal areas outside of historical or future mine plans. These areas may be recoverable by implementing different underground mining methods such as bord and pillar or may also have potential for open cut extraction.</td></tr>
<tr><td>Metallurgical factors or assumptions</td><td>▪ The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.</td><td colspan="2">▪ Raw coal is beneficiated in the CHPP, which comprises three circuits. The coarse fraction, (50 mm to +2 mm) is processed by a single HC dense medium cyclone ("DMC") circuit, the fine fraction, (-2 mm to +120 μm) is processed by spirals and an ultrafine fraction (-120 μm) is mechanically agitated flotation circuit was recently added to improve coking recovery. The plant has no bypass capability.
▪ The main seams in the LOM plan which are planned to, or are being extracted by either open cut or underground methods include PG, ULD, ULLD and LB. All have coking potential, which commands higher prices than thermal coal and justifies the recent upgrade of the CHPP to improve recovery of the ultrafine coking fraction.
▪ It is assumed that remaining seams with mining potential but which possess little or no coking properties, could potentially be blended or beneficiated with seams which possess coking properties, in order to render them a more commercial proposition for extraction. As a result, no maximum raw ash content (adb) has been applied to stone bands situated above or below recognised coal plies.</td></tr>
</table>

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Criteria	JORC Code explanation	Commentary	
		Open Cut	Underground
Environmental factors or assumptions	▪ *Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.*	▪ Coarse and fine rejects are currently trucked to Northeast Open Cut void, while ultrafine material is pumped to a tailings dam. There are no known environmental issues with mine site CHPP co-disposal.	
		▪ Open Cut Resources are excluded from the currently mapped alluvials associated with the Hunter River and Glennies Creek. Underground Resources are not excluded, however it should be noted that any underground plans to mine beneath the alluvials would likely be impacted by conditions to prevent any impacts to the waterways.	▪ For the purposes of estimating Resources, it has been assumed that the Conservation Area located in the south of ML1533 (which will be an impediment to the proposed West Pit mining of the Lemington seams above the underground workings in ML1533) will be offset by another area to allow future open cut mining.
Bulk density	▪ *Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.* ▪ *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.* ▪ *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	▪ Relative density which measures the coal density without the void space and ash measurements have been conducted systematically on many coal and stone core samples. The moisture holding capacity has also been tested on selected samples across the Ashton deposit which has enabled an assessment by Geos Mining using ACARP 10041C to determine the in situ moisture. An estimate of 6.5% for the coal was determined. In situ densities were adjusted using the Preston & Sanders formulae. ▪ In situ density grids were generated from adjusted density values derived using in situ moisture of 6.5%.	
Classification	▪ *The basis for the classification of the Mineral Resources into varying confidence categories.* ▪ *Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).* ▪ *Whether the result appropriately reflects the Competent Person's view of the deposit.*	▪ Coal Resources have been classified into Measured, Indicated and Inferred Resources categories based on spacing of data and confidence in seam continuity and consistency, grade and predictability. Where drillhole data (both surface and IS series interseam holes) is closely spaced and supported by proximal underground workings and surrounding coal mine information adjacent to Ashton and confidence in coal seam continuity, grade and predictability is sufficient to allow these Resources to be classified as Measured and Indicated Resources. Where data spacing has increased, confidence in coal seam continuity and predictability decreases and Coal Resources in these areas are classified as Inferred Resources. Inferred Resources have been estimated to 350 m depth of cover. ▪ This method of Resource assessment is appropriate to represent the geological seam complexity and variation within the Ashton deposit.	
Audits or reviews	▪ *The results of any audits or reviews of Mineral Resource estimates.*	▪ No external audits or reviews have been completed.	
Discussion of relative	▪ *Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate*	▪ The confidence in the Resources is reflected in the classifications. Based on the geological setting and type and amount of geological data, the Resources are reasonably defined.	

Criteria	JORC Code explanation	Commentary	
		Open Cut	Underground
accuracy/ confidence	*using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.* ▪ *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* ▪ *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	However the factors that affect the accuracy of the Resource estimate include the modelled limit of the subcrop, the coal thickness and the density. ▪ Coal Resources for Ashton were estimated within polygons containing multiple drillholes, as such all estimates are considered global estimates.	

Section 4 Estimation and Reporting of Ore Reserves

The completed Table 1, Sections 4 is in response to the current ADV-BR-11019_Hunting Eagle_CPR Report completed in part by Competent Persons, Mr Doug Sillar (OC) and Mr Graeme Rigg (UG) on behalf of RPM.

(Criteria listed in section 1, and where relevant in Sections 2 and 3, also apply to this section.)

Criteria	JORC Code explanation	Commentary	
		Open Cut	Underground
Mineral Resource estimate for conversion to Ore Reserves	▪ *Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.* ▪ *Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.*	▪ The Coal Resource estimate used as the basis for this Coal Reserves Statement is described as part of this statement. The Resource estimate has been prepared by Mr. Brendan Stats. The Competent Person, Mr. Stats, 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. ▪ The same geological model has been used for the estimation of Resources and Reserves.	
Site visits	▪ *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.*	▪ A site visit to the Ashton underground was undertaken by the UG Reserves Competent Person in April 2018.	

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Criteria	JORC Code explanation	Commentary	
		Open Cut	Underground
	▪ *If no site visits have been undertaken indicate why this is the case.*	▪ The proposed open cut is a Greenfields operation and hence any requirements in site visits was managed by the UG Competent Person. ▪ The outcome of this site visit was observation of site and mining conditions and discussion with site operating personnel regarding the operation and the determination of project parameters used in the Ashton underground planning process.	
Study status	▪ *The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.* ▪ *The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.*	▪ A PFS level LOM report was prepared by a third party consultant in 2013. This report and previous JORC Reserve Estimates were the basis of the mine planning required for the proposed open cut operation.	▪ Ashton is an operating underground mine. LOM studies undertaken during the project planning and design stages have now been complemented by actual operating experience and ongoing exploration and assessment.
Cut-off parameters	▪ *The basis of the cut-off grade(s) or quality parameters applied.*	▪ There are no coal quality cut-off parameters used to eliminate the conversion of Coal Resources to Coal Reserves. LOM planning has been used to determine whether Coal Resources will convert to Coal Reserves.	
Mining factors or assumptions	▪ *The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design).* ▪ *The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc.* ▪ *The assumptions made regarding geotechnical parameters (eg pit slopes, stope sizes, etc), grade control and pre-production drilling.* ▪ *The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).* ▪ *The mining dilution factors used.* ▪ *The mining recovery factors used.* ▪ *Any minimum mining widths used.* ▪ *The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.* ▪ *The infrastructure requirements of the selected mining methods.*	▪ LOM planning has been used as the basis of converting Coal Resources to Coal Reserves. ▪ A haulback mining method with an initial boxcut is the selected mining method to optimise inpit dumping capability. ▪ The mining factors used were: – Minimum coal working section mining thickness of 0.3 m; – Minimum parting mining thickness of 0.3 m; – Roof coal losses of 0.075 m; – Roof dilution of 0.075 m; – Dilution RD assumed to be 2.2 g/cc; – Dilution ash assumed to be 80%; and – In situ moisture standardised to 6.5%. ROM moisture is assumed to be 8%. ▪ Preston & Sanders has been used in the estimation of in situ RD.	▪ LOM planning has been used as the basis of converting Coal Resources to Coal Reserves. ▪ The selected mining method is that in use in the operating mine, i.e. conventional longwall extraction with continuous miner development. ▪ Geotechnical studies were used as the basis for having offset longwall panels in the multi-seam environment. The offset layout strategy is consistent with contemporary practice for extracting from multiple seams. ▪ The mining factors used were: – Development roadways 5.4 m wide by 2.7 m high; – Longwall operating height 2.3 m - 2.8 m; – Longwall panel width 205 m; – It is assumed that no coal is lost from the roof or floor of the mineable coal

Criteria	JORC Code explanation	Commentary	
		Open Cut	Underground
		▪ Pit limits were based on physical limits including seam crops, creeks, leases and roads. Application of these limits resulted in the proposed South East Open Cut (SEOC) pit. ▪ Inferred coal has been included in the LOM Plan.	sections during development or longwall extraction; – It is assumed that a combined minimum of 100 mm of higher ash material will be mined with the roof and the floor of the coal seam during development and longwall operations, thereby diluting the in situ coal quality; – The quality defaults assigned to the waste rock were assumed to be relative density of 2.34 t/m^3, ash of 85%, and specific energy of 0 kcal/kg; – Relative density data in the geological model is based on assumed in-situ moisture of 6.5%, while all qualities are based on air-dried moisture gridded values; – Preston & Sanders has been used in the estimation of in situ RD; and – RPM has assumed that ROM moisture will be 8.65%, and product moisture will be 8.5%. ▪ Inferred coal does not exist within the LOM Plan footprint. ▪ All necessary infrastructure is in place and operational.
Metallurgical factors or assumptions	▪ *The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.* ▪ *Whether the metallurgical process is well-tested technology or novel in nature.* ▪ *The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.* ▪ *Any assumptions or allowances made for deleterious elements.* ▪ *The existence of any bulk sample or pilot scale test work*	▪ The metallurgical process for washing the target seams is already in place and being used. The configuration of the CHPP includes dense media cyclone ("DMC"), Spirals, and Flotation processes. The current CHPP module was designed to process 600 tph of underground ROM coal but can operate at up to 800 tph if stone and moisture levels within the ROM coal are not excessive. ▪ The process generates a SSCC product from a low cut point that will produce a 9.5% ash product. The metallurgical process is appropriate for the Ashton mine. ▪ Yancoal commissioned a coal quality expert to review production data and determine an estimate of current yield at Ashton. ▪ No bypass products assumed in the LOM plan.	

Criteria	JORC Code explanation	Commentary: Open Cut	Commentary: Underground
	and the degree to which such samples are considered representative of the ore body as a whole. ▪ *For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?*	▪ No allowance has been made for deleterious elements.	
Environmental	▪ *The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.*	▪ An Environmental Impact Statement has been prepared and the necessary environmental approvals obtained. ▪ Coarse rejects are placed within the open cut void. Washery fines material is pumped to an adjacent property owned by AGL, under an existing agreement.	
		▪ The SEOC pit is awaiting consent based on reaching a land access agreement or purchase of a property at the site. Once an agreement is reached, the conditions of the approval will be met. ▪ Waste material will be placed both inpit and expit.	▪ Current impacts to alluvial groundwater Resources are within the approved predictions and impacts. The previous extraction of LW6b in the Pikes Gully Seam resulted in higher peak inflows than what was estimated in the groundwater modelling. The groundwater model was revised in 2016 and the new model indicated that there are potential compliance risks with extracting the lower seam longwall panels around the Bowmans Creek alluvials. Assessment is ongoing and, in the interim, the longwall panel extraction sequence has been modified such that the first 5 longwall panels in the Upper Lower Liddell Seam will be extracted prior to the final 3 longwall panels in the Upper Liddell Seam being extracted. This permits further time to assess the potential groundwater issue but there remains the risk that some or all of the lower seam longwall panels around the Bowmans Creek alluvials will not be extracted. At worst, this could reduce Reserves by 10 Mt, and Marketable Reserves by 5 Mt.
Infrastructure	▪ *The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.*	▪ All necessary infrastructure for underground operations is in place and operational for the current operations at the Asset. ▪ Additional infrastructure will be required with the commencement with the SEOC such as haul roads and potentially bridges across Glennies Creek.	

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Criteria	JORC Code explanation	Commentary: Open Cut / Underground
Costs	▪ *The derivation of, or assumptions made, regarding projected capital costs in the study.* ▪ *The methodology used to estimate operating costs.* ▪ *Allowances made for the content of deleterious elements.* ▪ *The source of exchange rates used in the study.* ▪ *Derivation of transportation charges.* ▪ *The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.* ▪ *The allowances made for royalties payable, both Government and private.*	▪ All major infrastructure is in place. Capital forecasts have been included which represent the growth and sustaining requirements for the completion of the LOM plan. ▪ All operating costs are based on LOM planning estimates from Yancoal and have been reviewed by RPM. ▪ Current long-term exchange rate assumptions were provided by Yancoal. ▪ Transport charges based on actual contracted prices taking into account existing Take or Pay arrangements. ▪ NSW state government royalties are included in the estimate. ▪ RPM reviewed all costs and they are considered reasonable.
Revenue factors	▪ *The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc.* ▪ *The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.*	▪ Long term product coal pricing assumptions have been provided by Yancoal Marketing and is based on independent third party research and reporting. ▪ The revenue factors are considered reasonable for the purposes of estimating Reserves.
Market assessment	▪ *The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.* ▪ *A customer and competitor analysis along with the identification of likely market windows for the product.* ▪ *Price and volume forecasts and the basis for these forecasts.* ▪ *For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.*	▪ A Marketing Study has not been reviewed however markets are well established for the mine's coal products. The Project typically produces one product: – SSCC at approx. 9.5% ash (ad). ▪ Based upon this product, RPM anticipates no foreseeable issues in demand for this product.
Economic	▪ *The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc.* ▪ *NPV ranges and sensitivity to variations in the significant assumptions and inputs.*	▪ The inputs to the economic analysis are 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 have been used in assessing NPV. ▪ The NPV results for the Project 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. ▪ Sensitivity analysis has been completed on the Project over a range of variable. The Project is most sensitive to changes in exchange rate, revenue and operating costs.

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Criteria	JORC Code explanation	Commentary	
		Open Cut	Underground
Social	▪ *The status of agreements with key stakeholders and matters leading to social licence to operate.*	▪ All key stakeholder agreements are in place, providing social license to operate underground operations. ▪ The SEOC pit is awaiting consent based on reaching a land access agreement or purchase of a property at the site. Once an agreement is reached, the conditions of the approval will be met. ▪ Native Title has not been extinguished for some areas (including crown land and water ways) and Native Title may still exist within the footprint of the South East Open Cut.	
Other	▪ *To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:* ▪ *Any identified material naturally occurring risks.* ▪ *The status of material legal agreements and marketing arrangements.* ▪ *The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.*	▪ Extraction of the SEOC is contingent on reaching an agreement with a landowner. ▪ As mining proceeds it is reasonably expected any modifications to existing agreements or additional agreements that may be required can be obtained as required.	
Classification	▪ *The basis for the classification of the Ore Reserves into varying confidence categories.* ▪ *Whether the result appropriately reflects the Competent Person's view of the deposit.* ▪ *The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).*	▪ There are no Measured Resources at SEOC, hence all Reserves are classified as Probable. ▪ The Inferred Coal Resources have been excluded from the Reserve estimates.	▪ Coal Reserves that are supported by Measured Resources are generally classified as Proved Reserves and Coal Reserves supported by Indicated Resources are classified as Probable Reserves ▪ Approximately 10 Mt of Probable Reserves have been derived from Measured Resources. ▪ The Inferred Coal Resources have been excluded from the Reserve estimates. ▪ The result reflects the Competent Persons view of the deposit.
Audits or reviews	▪ *The results of any audits or reviews of Ore Reserve estimates.*	▪ Internal peer review of the Reserves Report has been completed.	

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<tr><th rowspan="2">Criteria</th><th rowspan="2">JORC Code explanation</th><th colspan="2">Commentary</th></tr>
<tr><th>Open Cut</th><th>Underground</th></tr>
<tr><td rowspan="2">Discussion of relative accuracy/ confidence</td><td rowspan="2">▪ Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate.
▪ The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.
▪ Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage.
▪ It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</td><td colspan="2">▪ The basis of the estimate are actual operating costs and LOM planning.
▪ CHPP and infrastructure are in place and operating.
▪ Analysis of the coal quality has been undertaken by independent laboratories working under international standards of method and accuracy.
▪ 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.
▪ Geotechnical studies have been completed for existing underground operations. Expansion open cut pits will need more detailed geotechnical study prior to development.
▪ Additional studies are currently being undertaken to increase confidence levels in operating in the Lower Barrett Seam.</td></tr>
<tr><td>▪ There are no Measured Resources within the SEOC footprint.
▪ Actual production data is not available as the SEOC is not operational.</td><td>▪ The mine footprint is supported by approximately 60% of Measured Coal Resources.
▪ The major risk in not achieving the estimated Reserve extraction comes from the potential compliance risks with extracting the lower seam longwall panels around the Bowmans Creek alluvials, specifically how much water is drained from the alluvials, how well the workforce is able to maintain economic productivity levels with higher groundwater make into the underground workings, and any potential discharge issues associated with the higher water make.</td></tr>
</table>

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JORC Code Disclosure Requirements

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JORC Code, 2012 Edition – Table 1 report template

The completed Table 1, Sections 1, 2 & 3 are in response to the current ADV-BR-11019_Hunting Eagle_CPR Report completed in part by Competent Person Mr Michael Johnson on behalf of RPM.

Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	▪ *Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.* ▪ *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* ▪ *Aspects of the determination of mineralisation that are Material to the Public Report.* ▪ *In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.*	▪ The Yarrabee Mine has been in operation since 1982, initially producing a raw coal product until the coal handling and preparation plant (CHPP) was commissioned in June 2009. ▪ The Yarrabee Mine area contains some 10,388 boreholes which forms the knowledge basis of the coal deposit. ▪ Open hole drilling was used for structure control. ▪ Core drilling was used for coal quality and gas desorption sampling. ▪ Core drilling is typically by 100 mm diameter tungsten carbide drill bits and triple tube barrels which are standard industry practice. ▪ Core hole locations are selected based on the ability to fully represent the coal Resource at the particular location in the deposit taking the structural complexity into consideration. ▪ Core was sampled based on the Yarrabee Coal Company core logging procedure, which is based on industry standards. ▪ Open holes are sampled at 1 m intervals. ▪ Cored holes are typically sampled at 0.2 m intervals so that the quality of the seam can be characterised for raw coal ash and phosphorus. ▪ Samples were selected based on the coal brightness, lithology and geophysics from pilot holes, and provided with a unique sample number before being placed into double plastic bags and sealed. ▪ It is important that core samples are taken according to the lithology and brightness profiles of the core as the overarching control, which is followed by the 20 cm increment requirement. ▪ Raw coal ash and phosphorus characterisation is important because these parameters are used to determine the coal mining sections for bypass and washed coal products. ▪ The entire seam was sampled in each occasion. ▪ Roof and floor strata were also sampled and tested. ▪ Since 2008, all field geological data logging was entered directly into Geobank.

Criteria	JORC Code explanation	Commentary
		▪ All geological data is loaded to Geobank.
Drilling techniques	▪ *Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	▪ Industry standard drilling techniques are used, with conventional rotary table drill rigs using air and water circulation. ▪ All drilling has been completed using vertical drill orientation. No core orientation has been performed. ▪ Blade/Hammer/PCD bits were used to drill open (chip) holes. ▪ Partially cored 4C (100 mm) core holes were drilled to obtain coal quality information. It is estimated by Yarrabee that 90% of core holes are 4C. ▪ Due to the extreme geological complexity at Yarrabee, 4C (100 mm) core barrels were used to maximise core recovery. Minimum core recovery for core holes used in the model was 90%. It is observed that the brightest, lowest ash, friable/brittle coal is more susceptible to core loss, especially in faulted areas. Core loss usually occurs between core runs, and thus the maximum 4C core barrel length of 4.5 m was used to minimise the number of core runs. ▪ Contractually, a redrill is required if less than 95% core recovery is obtained. Recovery less than 95% is occasionally accepted if the drilling environment is difficult, or the loss is deemed acceptable via comparing against geophysics density, and the position of the loss in the seam. ▪ The Pollux seam coring procedure is to stop the first core run in the middle of the Bypass Upper ply, 1 m into the Pollux seam. The second core run obtains the remainder of the seam. If any loss occurs between core runs, it is entirely confined within the Bypass Upper ply. The Bypass Upper ply has the most consistent quality and is almost always <9% ash, <0.60% sulphur, and <0.06% phosphorous. ▪ However, due to steep seam dips and the regional horizontal stress magnitude and direction boreholes deviate significantly at greater than 60 m depth.
Drill sample recovery	▪ *Method of recording and assessing core and chip sample recoveries and results assessed.* ▪ *Measures taken to maximise sample recovery and ensure representative nature of the samples.* ▪ *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	▪ The Yarrabee Coal Company coring instruction procedure, which is based on Industry standard methods of obtaining core samples is used by the rig geologists. ▪ Core recovery is recorded by the rig geologist at the time logging the bore hole, based on measurements taken of the cored interval and the core recovered and visual inspection of the core. Actual recovered core lengths are measured with a tape measure and any core loss is recorded in geological logs, coal quality sample intervals and in the run by run drilling record field sheets. ▪ Core loss is confirmed by the rig geologist after comparing the recovered core to the geophysical logs to determine which parts if any of the seam are missing due to core loss. ▪ Core loss is recorded and excluded from samples in accordance with the Yarrabee Core Logging procedure. It is estimated that 90% of the core holes in the database are compliant with the procedure.

Criteria	JORC Code explanation	Commentary
		▪ Historic boreholes do not comply with the Yarrabee core logging procedure. ▪ The database contains 1,316 parent seams with sample data. 92 seams (7%) have <90% recovery and have been excluded from the model. 73 seams (5%) have between 90% and 95% core recovery and have been used in the model. 1,151 seams (87%) have >95% recovery. ▪ 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, provided that the cored hole is not located in an area of high structural complexity, in which case lower core recovery is accepted. ▪ Open hole chip recovery is assessed qualitatively by the rig geologist.
Logging	▪ *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* ▪ *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* ▪ *The total length and percentage of the relevant intersections logged.*	▪ Standardised Yancoal logging systems and protocols are utilised for all drilling logging and sampling. ▪ Core is geologically logged and open hole chip samples are taken every 1 m and logged for lithology changes. ▪ All holes have been lithologically logged, with cored coal sections brightness logged. The logging of the chip and core samples is detailed and includes a record of the recovery of the total length and the cored length, rock type, stratigraphic unit and numerous adjectives to describe the sample in terms of colour, grainsize, bedding etc. all of which is sufficient to describe the various lithologies and coal samples to support the Coal Resource estimation from a geological and coal quality consideration. ▪ In general, geotechnical assessment is not performed based on bore core data because the structural deformation at Yarrabee can be classified between complex and severe for some of the mining areas. ▪ Geotechnical boreholes have been drilled vertically, and as a result do not intersect a significant number of defect structures, because joints and the like typically have subvertical orientation. ▪ Geotechnical drilling has been completed in the Yarrabee East South (YES) and Wilpeena areas. ▪ All bore core is photographed on both the core table (0.5 m increment). ▪ Chip samples are photographed as they are sampled and laid out in 1 m intervals. ▪ An estimated 90% of the Resource uses holes with digital geophysical logs. Some older holes only have paper copy geophysics. The holes without geophysics appear to have been corrected to geophysics, and reliability has been verified from newer drilling, and mining. Holes confirmed to be unreliable have been flagged in the Geobank database to avoid accidental use during modelling. In some areas these holes have been redrilled.

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Criteria	JORC Code explanation	Commentary
		▪ The geophysical tools used were: short and long spaced density, natural gamma, calliper, and verticality. A sonic sonde is run on cored holes. ▪ Drillhole vertically data was used (when available) to orientate and locate the boreholes and the coal seams for inclusion in the structural model. An estimated 90% of the Resource was modelled using verticality data.
Sub-sampling techniques and sample preparation	▪ *If core, whether cut or sawn and whether quarter, half or all core taken.* ▪ *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* ▪ *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* ▪ *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* ▪ *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.* ▪ *Whether sample sizes are appropriate to the grain size of the material being sampled.*	▪ Core sampling is completed at the drill site and is based on a set of standard criteria (determined by lithology and structure) that follows the Yarrabee sampling procedure. ▪ All samples were photographed, double bagged, and provided with a unique sample identifier prior to sending to the laboratory. ▪ Whole samples were used for quality analysis. ▪ All samples within the seam extents were analysed. ▪ Carbonaceous material, and all stone bands were sampled to ensure that full coverage of each seam was obtained. ▪ Seam extents were corrected to geophysics prior to coal quality analysis, and then corrected to quality after the analysis was completed (if necessary). ▪ Samples were weighed as received, dried and reweighed. Raw analysis samples were crushed to -4 mm and split into portions using a rotary splitter prior to coal quality analysis. ▪ Washability analysis was conducted in Resource areas containing no wash plant production data. The analysis was conducted in accordance with the Yarrabee Coal Company washability procedure.
Quality of assay data and laboratory tests	▪ *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* ▪ *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.* ▪ *Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.*	▪ Only core samples are used to obtain coal quality information. ▪ Only third party NATA certified labs were used for sample analysis. Labs conduct round robin validation checks to ensure a high standard of reporting is maintained. ▪ All samples were analysed for raw coal quality. ▪ Sample instructions were issued by Yarrabee Coal Company personnel. ▪ Yarrabee currently uses the SGS laboratory at Gladstone.
Verification of sampling and assaying	▪ *The verification of significant intersections by either independent or alternative company personnel.* ▪ *The use of twinned holes.* ▪ *Documentation of primary data, data entry procedures,*	▪ Sample results were validated in-house by Yancoal employees. ▪ No twinned core holes have been drilled. ▪ All coal quality data is stored in the Geobank Yarrabee database.

Criteria	JORC Code explanation	Commentary
	data verification, data storage (physical and electronic) protocols. ▪ *Discuss any adjustment to assay data.*	▪ The coal quality laboratories provide the results of coal quality testing to Yarrabee in a template which is directly uploaded into Geobank which eliminates transcription and key in errors arising from data transfer. ▪ Yarrabee has used a wide range of laboratory service providers over the years, and report no bias in the results of coal testing, with the exception of phosphorus in the DOM 2 South area. Yancoal believes that the pre-2007 phosphorus values reported for wet chemistry analytical methods for the DOM 2 South area were lower than the later values reported by XRF determinations. ▪ It is noted that the DOM 2 South area is mined out, and therefore will not impact future coal quality predictions. ▪ Validation is conducted before and after the data is loaded into the Geobank Yarrabee database. ▪ Geobank is used to check the data being loaded to the database according to a set of coal quality data load limits. Any data outside of these limits is flagged and is evaluated by the Yarrabee geologists to determine if the flagged data has been caused by error or due to geological variation. ▪ In the case of a geological variation the data is loaded to Geobank. ▪ In the case of error, the samples are reanalysed by the laboratory. ▪ Validation also occurs on each seam graphically by comparison with the geophysical log data. Ash for example is compared against the geophysical signature. ▪ Relative density is adjusted for Preston & Sanders, using the assumed bed (in situ) moisture of 5.5%, which is consistent for the rank of the coal present at Yarrabee.
Location of data points	▪ *Accuracy and quality of surveys used to locate drillholes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* ▪ *Specification of the grid system used.* ▪ *Quality and adequacy of topographic control.*	▪ The initial borehole coordinates are obtained using handheld Garmin GPS by the site geologist using Aus Geoid 84 Zone 55. ▪ Final borehole collar survey is completed by the Yarrabee Coal Company personnel trained in surveying, using the Yarrabee Mine base station calibrated to AMG84_55. ▪ Geological models are developed from topographic data from AAM Hatch airborne LiDAR, using control points to correct to the local grid. LiDAR data is acquired annually and is therefore up to date. ▪ The topographic surface at Yarrabee is essentially flat lying. The topographic surface for the YES area has been developed from the borehole collars. ▪ Geobank validates the final borehole collar survey by flagging the hole if the final and estimated coordinates are more than 20 m different. This event has only occurred once at Yarrabee since 2007, and is therefore not material.

Criteria	JORC Code explanation	Commentary
		▪ Older boreholes have removed from the model if the collar does not match the topography, or the seams don't match the seam model. ▪ In general this is the data acquired by Thiess Brothers and CSR Limited. It appears that both entities controlled separate tenements, and used the same borehole numbers as each other. When the tenements were combined some boreholes were not unique which caused collar location issues that were resolved by Yancoal.
Data spacing and distribution	▪ *Data spacing for reporting of Exploration Results.* ▪ *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* ▪ *Whether sample compositing has been applied.*	▪ The geological levels of structural complexity at Yarrabee range between moderate and severe. Relatively close-spaced hole spacing was required to correlate the Resource to an acceptable level of confidence in complex and severe areas. ▪ Exploration drilling is initially performed on parallel drill lines that are located at the following distances: – 1,000 m; – 500 m; and – 250 m. ▪ The spacing of exploration drill lines is reduced as certainty of inclusion of Resources into the LOM increases. ▪ In general the spacing of open holes for pre-production drilling reduces to 125 m. ▪ Borehole spacing is not the overarching criteria for determining the spacing of exploration. Geological certainty is the prime requirement at the completion of exploration. In other words the greater the geological complexity, the closer the final borehole spacing. ▪ As a general rule of thumb, if bypass coal is required to be produced the borehole spacing is generally less than 150 m.
Orientation of data in relation to geological structure	▪ *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* ▪ *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	▪ Drillholes were oriented and drilled vertically. ▪ In areas of steep bedding dip, drillholes often have a high percentage of deviation. ▪ Verticality data was acquired during geophysical logging and has been used for unambiguous location of the coal seams for 90% of boreholes used for development of geological models. ▪ Core orientation has not been measured. Core holes have been oriented and drilled vertically. ▪ The use of downhole deviation for deviated boreholes is sufficient for unambiguous location of the coal seams and follows standard industry practices.
Sample security	▪ *The measures taken to ensure sample security.*	▪ Core samples are bagged by the geologist and dispatched through the Yarrabee Mine Stores for dispatch. Samples are transported to the laboratory by dedicated courier service. ▪ Sample instructions are provided to the laboratory.

Criteria	JORC Code explanation	Commentary
		▪ No samples have gone missing to date. ▪ In light of the bulk commodity nature of coal, no higher level security measures are deemed necessary since it is very unlikely to be subject to material impact from sample tampering theft or loss.
Audits or reviews	▪ *The results of any audits or reviews of sampling techniques and data.*	▪ No external audits have been performed.

Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	▪ *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* ▪ *The security of the tenure held at the time of reporting along with any known impediments to obtaining a license to operate in the area.*	▪ All Resources lie within mining leases held by YCC. There are no joint ventures, partnerships, overriding royalties, native title interests, historical sites or wilderness or national park and environmental settings over these mining leases. ▪ The mining lease status is listed in Table C1, and shown in the table below:
Exploration done by other parties	▪ *Acknowledgment and appraisal of exploration by other parties.*	▪ Approximately 40% of the exploration was completed by antecedents to Felix Resources who became the owner of Yarrabee in 2007. ▪ Approximately 60% of the holes have been drilled since 2007 when Felix Resources acquired Yarrabee.

Type	Number	Grant Date	Expiry Date	Hectare/sub-block	% Yarrabee Owned
ML	1770	9/03/1978	31/03/2022	1,292 ha	100%
ML	80049	24/06/1999	30/06/2019	133 ha	100%
ML	80050	1/10/1998	31/10/2018	1,223 ha	100%
ML	80096	20/06/2002	30/06/2020	100 ha	100%
ML	80104	4/09/2003	30/09/2023	648 ha	100%
ML	80172	4/10/2012	31/10/2042	1,987 ha	100%
ML	80195	1/04/2014	30/04/2044	2,356 ha	100%
ML	80196	1/04/2014	30/04/2044	80 ha	100%
ML	80197	7/05/2014	31/05/2044	413 ha	100%
ML	80198	1/04/2014	30/04/2044	50 ha	100%
MDL	160	1/04/1996	31/03/2022	742 ha	100%
EPC	621	29/10/1996	28/10/2019	28 ha	64%
EPC	717	28/08/2000	27/08/2022	4 ha	100%
EPC	1429	15/06/2010	14/06/2020	22 ha	64%
EPC	1684	12/03/2010	11/03/2022	8 ha	100%

Criteria	JORC Code explanation	Commentary
		▪ The previous Competent Person (Mr. Stuart Whyte) who has been employed at Yarrabee since 2007 has full knowledge of this post 2007 exploration, and has provided the current Competent Person with his personal insights. ▪ All known historical drilling has been incorporated into the Yarrabee geological database. The term 'historical drilling' used by Yarrabee, refers to all boreholes completed prior to 2007. ▪ No drilling is conducted on YCC mining leases by other parties.
Geology	▪ *Deposit type, geological setting and style of mineralisation.*	▪ The Yarrabee deposit is located within the Rangal Coal Measures of the Blackwater Group, and is located on the eastern edge of the Bowen Basin, adjacent to the Dawson tectonic Zone. ▪ The Yarrebee deposit is located between the Yarrabee fault on the east and the Jellinbah fault on the west, both faults being thrusts and up-thrown to the east. ▪ The Yarrabee Resource is located on an asymmetric syncline that plunges to the SSE. The western limb of the syncline is characterised by steep dips and significant crustal shortening due to over thrusting of strata. ▪ Secondary anticline and syncline structures are superimposed on the overarching syncline structure, with anticlines being subject to crustal shortening which is observed by thrust structures being located in close proximity to the axial structures of the anticlines. ▪ The Resource area is currently evaluated for open cut extraction only, because its structural complexity is currently perceived to preclude underground extraction. ▪ The deposit dimensions are approximately 15 km in length north-south, by 10 km in width west-east. ▪ Yarrabee product coal is a well-established, low volatile PCI coal brand.
Drillhole Information	▪ *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drillholes:* – *easting and northing of the drillhole collar* – *elevation or RL (Reduced Level – elevation above sea level in metres) of the drillhole collar* – *dip and azimuth of the hole* – *down hole length and interception depth* – *hole length.* ▪ *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the*	▪ All borehole data is stored within the Yarrabee Geobank database. ▪ The database contains greater than 10,388 boreholes, of which 1,118 are cored holes of various diameters. ▪ A total of 4,575 boreholes are located in the mined out areas at Yarrabee. ▪ Mr. Stuart Whyte opines that approximately 90% of the cored holes in the database meet the requirements of the Yancoal core logging procedures. ▪ The majority of boreholes in the Resource area at Yarrabee is modern data that was acquired post-2007. ▪ DOM 6 and DOM 2S contain a high percentage of historic data, but it appears to match the post 2007 data closely and has been retained.

Criteria	JORC Code explanation	Commentary
	report, the Competent Person should clearly explain why this is the case.	▪ The YES area contains approximately 200 historic boreholes that also match the post-2007 data closely.
Data aggregation methods	▪ *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.* ▪ *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.* ▪ *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	▪ Ply samples are combined after raw coal analysis to create composites (for washability and product coal analyses) that represent the mineable seam working sections. ▪ Individual samples have been weighted by thickness and density (mass weighting). Laboratory determined air dried ARD has been used for the density weighting. Where no ARD data is available and ash data is available then an air dried ash to ARD regression has been used to assign individual sample ARDs prior to weighting. ▪ There are no metal equivalents used to report the Coal Resources. This is not a standard reporting practice for Coal Resources.
Relationship between mineralisation widths and intercept lengths	▪ *These relationships are particularly important in the reporting of Exploration Results.* ▪ *If the geometry of the mineralisation with respect to the drillhole angle is known, its nature should be reported.* ▪ *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').*	▪ All boreholes at Yarrabee are planned as vertical. However due to the bed dips the holes tend to deviate 'up-dip' so that with sufficient depth the hole is perpendicular to the seam. ▪ Down-hole deviation data is used to model the bore holes which provides a higher degree of certainty to the location of the coal seams in the boreholes.
Diagrams	▪ *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drillhole collar locations and appropriate sectional views.*	▪ All relevant figures depicting information considered material to the Coal Resources reported are contained within the JORC report associated with this Table 1.
Balanced reporting	▪ *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	▪ Yancoal Australia has not specifically released exploration results for the Yarrabee coal Resource.
Other substantive exploration data	▪ *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	▪ Blast holes are used for short term exploration within the pits. The blast holes are used for the Resource model if they are geophysically logged and collars are surveyed. ▪ A magnetic survey was performed by Yarrabee in the third quarter of 2014, primarily in the Wilpeena area, and not the Yarrabee mine area. ▪ The intent of the magnetic survey was to locate faults, (in particular faults where coal seams were likely to be up-thrown) from the signatures generated by magnetic fluids on the fault planes. The results of the work were inconclusive, and did not achieve a positive outcome.
Further work	▪ *The nature and scale of planned further work (eg tests*	▪ Sufficient work has been completed to establish seam continuity in the planned LOM area.

Criteria	JORC Code explanation	Commentary
	for lateral extensions or depth extensions or large-scale step-out drilling). ▪ *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	▪ Pre-production drilling is completed to maintain a three years gap in advance of mine production. ▪ Pre-production work has not been performed since 2014 when this work had been completed to cater for doubling of production to 6 Mtpa during the last boom period. Production was never increased, and as a consequence pre-production drilling is well in advance of mining requirements, and is currently being consumed.

Section 3 Estimation and Reporting of Mineral Resources

(Criteria listed in Section 1, and where relevant in Section 2, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Database integrity	▪ *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.* ▪ *Data validation procedures used.*	▪ Since 2008, data has been stored in Geobank software. Geobank is the master database, all required modifications are made in Geobank prior to being uploaded via ODBC to Minex for modelling. ▪ The Geobank database contains the following data types: – collar survey; – lithology; – geophysics; and – coal quality data. ▪ Core and chip sample photographs are stored separately on a server. ▪ Exploration data is entered into Geobank in the field using tablet computers. Geobank contains validation and other business rules to ensure only acceptable codes are entered. ▪ Coal quality data is loaded directly into Geobank from laboratory excel spreadsheets based on the template containing the requests for analysis. ▪ Some of the business rules contained in Geobank for validation of data include: – planned borehole coordinates are within 20m of the actual as drilled collar coordinates; – the borehole total depth matches the lithology depth and the drilled depth; – the lithology data uses the correct codes; – there are no negative thicknesses; and – plies are constrained by the parent seam roof and floor constraints. ▪ Coal quality data is validated within Geobank, according to a set of upper and lower data limits for each parameter. Other rules include: – proximate data must add to 100%;

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Criteria	JORC Code explanation	Commentary
		– acceptable ranges; and – the sum of density fractions must sum to the raw mass. ▪ There is a three step process for data validation. ▪ The original data recorded by the geologist and the original files supplied by the laboratory are retained as a raw file and backed up. Subsequent upgrades to geological data in Geobank are made in the copies of the original data. ▪ The lithology data is corrected to geophysics and flagged as corrected in Geobank. ▪ The data is reviewed by a Senior geologist and flagged as finalised. ▪ The data uploaded into the database proper upon sign off by the Senior geologist. ▪ The boreholes are checked by the Resource geologist during the modelling process.
Site visits	▪ *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* ▪ *If no site visits have been undertaken indicate why this is the case.*	▪ Mr. Michael Johnson (Competent Person) visited the Yarrabee Mine in May 2018 to investigate the geology of the area, and to assess the mining methodology, coal preparation characteristics and infrastructure of the operation. ▪ Mr. Johnson completed an initial written report and with site photographs. ▪ Having visited the site, the Competent Person is familiar with the Yarrabee Resource and the in the Rangal Coal Measures after working at Newlands Southern Underground and, Newlands Northern, and Greater "NCA" Project (Newlands, Collinsville and Abbot Point) at an operational basis and various stages of Order of Magnitude, Preliminary Feasibility and Feasibility Study. ▪ The Competent person has spent time in discussion with Mr. Stuart Whyte who is the Yancoal Competent Person for the Yarrabee Resource for additional understanding of the Resource, and with several employees at the mine in the Geology Department.
Geological interpretation	▪ *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.* ▪ *Nature of the data used and of any assumptions made.* ▪ *The effect, if any, of alternative interpretations on Mineral Resource estimation.* ▪ *The use of geology in guiding and controlling Mineral Resource estimation.* ▪ *The factors affecting continuity both of grade and geology.*	▪ Detailed coal ply logging is completed by geological logging of open and fully cored holes supported by geophysical log data. ▪ Coal seam and ply correlation are relatively simple where drill spacing is adequate and are sufficient to establish the structural thickening of seams, and structural dislocation due to faulting. ▪ The adequate borehole spacing at Yarrabee ranges from 20 m to 125 m depending on the structural complexity of any given Resource area. ▪ The coal seams of the Rangal Coal Measures at Yarrabee, namely in descending stratigraphic order: – Cancer; – Aries; – Castor Upper;

Criteria	JORC Code explanation	Commentary
		– Castor Lower; – Pollux; – Orion; and – Pisces. ▪ All coal seams have unique geophysical signatures that enables seam correlations to be made consistently and confidently. ▪ The Pisces seam is underlain by the Yarrabee Tuff which is a Basin wide marker interval and can be used to provide stratigraphic assurance to the seam picks. ▪ Other markers used to assist with seam identification at Yarrabee include; – the carbonaceous rider band that is present above the Aries seam; – typical seam thickness and geophysical signatures of the seams; – interburden thickness characteristics; – gamma response of the seam intervals; – the medial stone band that is present in the Pollux seam, (which is the same as the medial stone band in the Elphinstone seam / Leichardt seam in the northern parts of the Bowen Basin); – the high ash Pollux floor plies; and – the high phosphorus Pollux floor plies.
Dimensions	▪ *The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.*	▪ Several large thrust faults exceeding 100 m vertical displacement cause discontinuity to the extent of the Yarrabee deposit. As a result, five disconnected domains are modelled separately. The combined Resource area is approximately 13 km long and 8 km wide and approximately 200 m maximum depth. Although depth of Resources is generally derived by economics.
Estimation and modelling techniques	▪ *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.* ▪ *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.* ▪ *The assumptions made regarding recovery of by-products.* ▪ *Estimation of deleterious elements or other non-grade*	▪ Modelling was undertaken using Geovia's Minex software (version 6.3). ▪ Four models were created for each of the disconnected Resource domains. ▪ The four model areas each have different structural complexities, although the structural complexity is greatest on the western limb of the syncline and in the northern nodal part of the syncline. ▪ Structure models were created at 10 m mesh size, and coal quality modelling created with a 50 m mesh size. The mesh sizes were selected to achieve the most representative models. ▪ Faults are modelled as vertical faults. This process is considered acceptable due to the fact that high coal losses occur during mining process in the vicinity of faults, and any repeat seams have relatively low coal recovery. Seam overlap on large faults has been modelled where the repeated seam is correlatable between multiple holes.

Criteria	JORC Code explanation	Commentary
	variables of economic significance (eg sulphur for acid mine drainage characterisation). ▪ *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.* ▪ *Any assumptions behind modelling of selective mining units.* ▪ *Any assumptions about correlation between variables.* ▪ *Description of how the geological interpretation was used to control the resource estimates.* ▪ *Discussion of basis for using or not using grade cutting or capping.* ▪ *The process of validation, the checking process used, the comparison of model data to drillhole data, and use of reconciliation data if available.*	▪ Trend strings were used to control the model in complex areas of tight folding, vertical seam dip, and fault displacement. ▪ Limits to data have been applied to coal quality and seam thickness grids. This limits the model thickness and coal quality attribute ranges to the maximum and minimum values within the data set. ▪ Fault thickened cored hole seam thicknesses have not been trimmed to the average seam thickness to ensure that the entire seam quality result can be composited and used in the model. Fault thickened cored hole seam are excluded from generating structure and thickness grids. Stuart Whyte estimates that less than 5% of cored hole seam intersections are fault affected. ▪ The pilot open hole at the site of the excluded cored hole is used to control seam thickness for the repeated seam section and the non-repeated seam section in the structural model. ▪ The names and details of the four models are shown in below.
Moisture	▪ *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	▪ There are no total moisture determinations for Yarrabee in situ coal. Air dried density has been adjusted to an in situ basis using the Preston & Sanders equation using an assumed in situ moisture of 5.5%, which is commensurate with the coal rank. The selection of a total moisture estimate of 4% to 6% will not make a material difference to the Resource tonnage estimate. Therefore the Competent Person considers that further discussion about changes of the total moisture assumption of 5.5% is not relevant. The biggest levers for Resource variability are structural.
Cut-off parameters	▪ *The basis of the adopted cut-off grade(s) or quality parameters applied.*	▪ Minimum seam thicknesses are determined by the structural complexity of each Resource domain, and in conjunction with practical mining limitations, as well as consultation with mine planning engineers. In areas of low structural complexity, seam thickness limit are as thin as 30 cm for the Castor Upper seam in the Yarrabee east area, but nominally a 0.5 m minimum thickness is used for the other seams. No seam thickness limit is applied where seams adjoin (coalesce) with other seams. ▪ 45% raw ash is used as an upper limit for raw coal quality, but it is extremely rare for raw ash to reach this limit. ▪ Resource cut off limits also include the 20:1 vertical in situ stripping ratio to the lowest mineable coal seam.

Mine Area	JORC Structural Resource Model Name	Date of Release	JORC Quality Model Name
Yarrabee East (YEN Pit)	EAST_PLY_CUT_DEC15	23/12/2015	EAST_PLY_QUAL_FEB17.grd
Yarrabee East (YES Pit)	EAST_CUT_DEC15	18/12/2015	QUALITY_FEB17.grd
Domain 2 (Nth)	EAST_CUT_DEC15	18/12/2015	QUALITY_FEB17.grd
Domain 2 (Sth)	Dom2Sth_Cut_2017	23/03/2017	QUALITY_FEB17.grd

Criteria	JORC Code explanation	Commentary
		▪ The lowest mineable coal seam in all areas is the Pollux seam, except for the YES area which mines to the Pisces seam.
Mining factors or assumptions	▪ *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.*	▪ Open cut mining methods using truck and shovel / excavator are considered to be the suitable method of operation. ▪ Underground extraction methods have not been considered at this stage of evaluation due to the structural complexity of the Resource area, and the large open cut Resource that is currently available.
Metallurgical factors or assumptions	▪ *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.*	▪ Yarrabee has a 10 year history of wash plant performance data available with which to calibrate product yield and ash based on bore core predictions. ▪ The Yarrabee CHPP consists of industry standard separation equipment such as: – dense media cyclones; – spirals; and – froth flotation. ▪ Washability testing is performed on 100 mm diameter core to simulate the feed to the separating equipment of the CHPP. Washability testing of bore core at Yarrabee has only been a feature of exploration since 2011, and after the CHPP was constructed. Testing follows the Washability Borecore Procedure '1' Dated 1 July 2012 which includes; ▪ Coal samples are sized to three fractions: – -50 mm + 1 mm; – -1 mm + 0.125 mm; and – -0.125 mm. ▪ Float sink testing is performed on the plus 1 mm and minus 1 mm by 0.125 mm size fractions at the following separation densities: – F1.30; – F1.35; – F1.40; – F1.45; – F1.50; – F1.55; – F1.60;

Criteria	JORC Code explanation	Commentary
		– F1.65; – F1.70; – F1.80; and – F1.90. ▪ Sequential tree froth flotation is performed on the minus 0.125 mm fraction. ▪ Clean coal composites are prepared and tested for the F1.55 and S1.55 fractions which are tested for the following: – proximate analysis; – relative density; – total sulphur; – specific energy; – phosphorus; and – Hardgrove Grindability Index. ▪ The following trace elements are also determined: – arsenic; – boron; – antimony; – selenium; – cadmium; – lead; – cobalt; – chromium; – copper; – molybdenum; – nickel; – tin; – zinc; – fluorine; – mercury; and – manganese. ▪ Washability and product coal testing follows accepted industry practice for metallurgical coal. ▪ Yarrabee Mine currently produces both thermal and PCI coal products.

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Criteria	JORC Code explanation	Commentary
		▪ Thermal coal can be sold as a bypass product. ▪ PCI coal requires to be beneficiated in the CHPP. ▪ Comparison of predicted and actual yield on an annualised basis at Yarrabee can be misleading because the mine is operated to maximise revenue. ▪ The choice of producing thermal or PCI products is a trade-off between revenue and decreased yield. PCI coal requires to be beneficiated which decreases the overall yield of the mine, but PCI coal generally achieves a higher price than thermal coal. ▪ The choice to produce PCI coal in preference to thermal coal is made when the price differential between PCI and thermal products exceeds the loss in product tonnage of thermal coal by beneficiating the bypass thermal coal to PCI product.
Environmental factors or assumptions	▪ *Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.*	▪ Current operations are conducted under an approved Environmental Authority ("EA"). All Resources are within mining leases. No issues are expected that would impact the Resource estimate.
Bulk density	▪ *Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.* ▪ *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.* ▪ *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	▪ The Yarrabee Mine has been in operation since 1982. The density of the coal and its distribution within the seams is well known. ▪ The in situ density is estimated using laboratory air dried relative density and adjusted to in situ density using the Preston & Sanders method using the assumed in situ moisture of 5.5%. ▪ The Reserving process uses reconciled production numbers to assign coal recovery parameters.
Classification	▪ *The basis for the classification of the Mineral Resources into varying confidence categories.* ▪ *Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity*	▪ The classification of the Coal Resources into varying confidence categories is based on a standardised process of utilising points of observation (PoO) according to their reliability. The PoOs are used to categorise quantity and quality continuity (or both) or support continuity.

Criteria	JORC Code explanation	Commentary
	and distribution of the data). ▪ *Whether the result appropriately reflects the Competent Person's view of the deposit.*	▪ Resource classification is based on the Competent Person's confidence of the seam continuity and coal quality variability within drillholes. ▪ Seam continuity is the key parameter in structurally complex deposits, which drives the drillhole spacing as well as the Resource classification made by the Competent Person. ▪ The overarching requirement for the Competent Person is that seam continuity can be demonstrated. ▪ A Quantity PoO has the following attributes: – open or cored hole; – seam interval geophysically logged, or Where geophysical data is missing for a seam(s), it is up to the Competent Person's discretion to determine if the seam level and thickness is consistent with nearest neighbour boreholes; – downhole survey data; and – reliable collar survey. ▪ A Quality PoO has the following attributes: – cored hole; – linear core recovery greater than 95%; – reliable collar survey; – cored hole in which 100% of the seam interval has been cored; – seam interval geophysically logged; – if no geophysics log data is available it is up to the Competent Person's discretion to determine if the seam level and thickness is consistent with nearest neighbour boreholes; – raw coal ash (can be used as a proxy for relative density and yield); and – phosphorus and fluorine are no longer required in the PoO definition because these restrictions have been relaxed in the markets that Yarrabee coal is sold in. ▪ Support Data for PoOs can include: – in pit mapping data for faults and dykes; and – seam floor or roof survey data. ▪ The radii of influence for PoOs were determined by consideration of the following for each coal ply: – seam continuity; – variability of seam thickness; – variability of interburden thickness; – structural variability;

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<table>
<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
<tr><td></td><td></td><td>
– variability of coal quality; and
– review of the variability of the geology between boreholes and the reliability of borehole data.
▪ The nominal PoO spacing and radii of influence are shown in table below:
<table>
<tr><td rowspan="2">Measured Resource</td><td>Structure drill hole grid spacing</td><td>200m</td><td>Distance Radius</td><td>150m</td></tr>
<tr><td>Coal quality drill hole grid spacing</td><td>400m</td><td>Distance Radius</td><td>250m</td></tr>
<tr><td rowspan="2">Indicated Resource</td><td>Structure drill hole grid spacing</td><td>400m</td><td>Distance Radius</td><td>250m</td></tr>
<tr><td>Coal quality drill hole grid spacing</td><td>800m</td><td>Distance Radius</td><td>500m</td></tr>
<tr><td rowspan="2">Inferred Resource</td><td>Structure drill hole grid spacing</td><td>800m</td><td>Distance Radius</td><td>500m</td></tr>
<tr><td>Coal quality drill hole grid spacing</td><td>1,000m</td><td>Distance Radius</td><td>1,000m</td></tr>
</table>
▪ The Competent Person is satisfied that the stated Coal Resource classification reflects the geological controls interpreted and the estimation constraints of the deposits.
</td></tr>
<tr><td>Audits or reviews</td><td>▪ The results of any audits or reviews of Mineral Resource estimates.</td><td>▪ No external audits have been conducted.</td></tr>
<tr><td>Discussion of relative accuracy/ confidence</td><td>▪ Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.
▪ The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.
▪ These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</td><td>▪ The Yancoal Competent Person has been conducting the Resource modelling at Yarrabee Coal Mine since 2007.
▪ Due to the highly variable nature of the deposit due to faulting, this Competent Person considers that geostatistics is not an appropriate tool to assess deposit variability.
▪ The Yarrabee area has been modelled as a series of domains based on the Competent Person's opinion of the structural complexity within the Yarrabee mine area.
▪ The complexity of the Yarrabee Resource can change significantly over short distances the concept of borehole spacing for PoOs is used as a guide only.
▪ Annual reconciliations show ± 3% variance between planned mine recovery and model tonnage for the past 5 years. The target accuracy of Measured Resources is considered as ±10 % over annual periods.
▪ To maintain consistency when converting Resources to reserves, the same modelling methodology has been used since 2007.</td></tr>
</table>

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Section 4 Estimation and Reporting of Ore Reserves

The completed Table 1, Sections 4 is in response to the current ADV-BR-11019_Hunting Eagle_CPR Report completed in part by Competent Person, Mr Doug Sillar on behalf of RPM.

(Criteria listed in Section 1, and where relevant in Sections 2 and 3, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral Resource estimate for conversion to Ore Reserves	▪ *Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.* ▪ *Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.*	▪ The Coal Resource estimate used as the basis for this Coal Reserves Statement is described as part of this statement. The Resource estimate has been prepared by Mr. Michael Johnson. The Competent Person, Mr. Johnson, 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 and a member of the Australian Institute for Geoscientists. ▪ The Resources Statement was compiled in accordance with The JORC Code 2012 Edition. ▪ The Coal Resources reported are inclusive of the Coal Reserves. ▪ The same geological model has been used for the estimation of Resources and Reserves.
Site visits	▪ *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* ▪ *If no site visits have been undertaken indicate why this is the case.*	▪ A site visit to the Yarrabee Mine was undertaken by representatives of RPM in April 2018. The Reserves Competent Person was unable to attend but interviewed the representative following the visit. The outcome of this visit was observation of the Project area to better understand location, environmental, social, geological setting, groundwater and existing infrastructure consideration.
Study status	▪ *The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.* ▪ *The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.*	▪ Yarrabee is an operating mine consisting of operating pits including DOM 2 north and YEN and planned pits YES, DOM2 South and DOM 6. ▪ Yancoal completed a Life of Mine Plan in 2017. Yancoal have undertaken ROM coal reconciliation studies and the results of this have been reflected in the LOM plan Modifying Factors. ▪ The level of detail in the LOM plan is sufficient to meet requirements of JORC. The costs and modifying factors are based on site performance and reconciliations.
Cut-off parameters	▪ *The basis of the cut-off grade(s) or quality parameters applied.*	▪ A minimum mining thickness of 0.5 m is applied to all seams at Yarrabee with the exception of the Castor Upper which is recovered to 0.3 m in flat lying areas of the deposit. ▪ A raw ash cut-off of 45% is applied to Resources. No further ash cut-off is applied to Reserves.
Mining factors or assumptions	▪ *The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design).*	▪ A combination of Pit Optimisation, pit design and LOM planning have been used as the basis of converting Coal Resources to Coal Reserves. RPM estimated a break even strip ratio and compared against each of the Company pit shells to confirm pit limits.

Criteria	JORC Code explanation	Commentary
	▪ *The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc.* ▪ *The assumptions made regarding geotechnical parameters (eg pit slopes, stope sizes, etc), grade control and pre-production drilling.* ▪ *The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).* ▪ *The mining dilution factors used.* ▪ *The mining recovery factors used.* ▪ *Any minimum mining widths used.* ▪ *The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.* ▪ *The infrastructure requirements of the selected mining methods.*	▪ The mining method at Yarrabee open cut is conventional truck and excavator mining. The operating method is well proven and suitable for the complex nature of the deposit. ▪ Pit slope designs are based on an overall slope angle of 40 degrees. This is as per current practice in operations at the site. ▪ The following mining factors are based on reconciliations of production at the Yarrabee mine: – Minimum coal mining thickness of 0.5 m and 0.3 for Castor Upper seam. – ROM recovery is based on reconciliation data which indicates a recovery of 100% applies to all seams except the Aries seam whose coal recovery is set at 87% as this seam is through seam blasted and suffers higher losses as a result. – Preston & Sanders formula applied to adjust the coal RD to an in situ moisture basis of 5.5%. – Dilution for seams that are washed is based on seam dip and ranges from 3% to 9%. Structurally complex areas of the pit have a dilution multiplier which increases the assumed dilution. The dilution is assumed to have a density of 2.0 t/m3 and ash of 85%. – Dilution for bypass coal is also based on seam dip and ranges from 3% to 9%. Dilution multipliers are included in structurally complex areas. The dilution is assumed to be made up of higher ash "wash coal" and therefore has a density of 1.6 t/m3 and ash of 30%. – In situ, ROM and Product moisture assumed to be 5.5%. ▪ Inferred Resources are not included in the estimate of Coal Reserves. Inferred Resources are included in the Life of Mine. ▪ All necessary infrastructure is in place and operational. Existing haul roads will need to be extended as the mine advances.
Metallurgical factors or assumptions	▪ *The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.* ▪ *Whether the metallurgical process is well-tested technology or novel in nature.* ▪ *The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.* ▪ *Any assumptions or allowances made for deleterious elements.* ▪ *The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the ore body as a whole.*	▪ Product coal at Yarrabee is produced from run of mine bypass product coal and washed product coal. ▪ Yarrabee operates a coal handling and preparation plant based on industry standard dense media cyclones, spirals and froth floatation. This plant is operated on a campaign basis with feed stockpiles built to a target ash from usually one or two consistent seams. Washing is then batched for each ROM wash coal stockpile. ▪ Where ROM coal meets marketable product specifications it is crushed and sent to the train loadout. This is referred to as bypass coal. ▪ Blending of coal from these two processes produce's PCI and thermal coal products. ▪ Because of the campaign washing, wash plant yield is correlated with ROM ash on a seam basis. This correlation allows prediction of actual CHPP yields for each seam and ply from each pit. This method has been used for the estimation of Marketable Reserves.

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Criteria	JORC Code explanation	Commentary
	▪ *For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?*	▪ For all new seams not currently mined at Yarrabee, laboratory washability data is used to determine product yield and specifications. ▪ Washed product moisture is based on shipping data collected at the port. ▪ The operational plant data supersedes bulk scale test work. ▪ The Yarrabee deposit contains areas / seams with high fluorine and phosphorous content. This coal is currently sold as a thermal coal product.
Environmental	▪ *The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.*	▪ All necessary approvals are in place for all mining areas at Yarrabee. ▪ Rejects will be managed on site as per current approvals. ▪ Water management will be managed on site as per current approvals. ▪ Waste residues will be stored in appropriate facilities and disposed of, or treated, in accordance with environmental approvals. ▪ Waste water will be stored in appropriate facilities and disposed of, or treated for recycling, in accordance with environmental approvals.
Infrastructure	▪ *The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.*	▪ All the necessary infrastructure is in place and operational for the current operation and is it suitable for the current and future production projections. ▪ Some existing haul roads will be extended as the mine advances ▪ Water supply through rainwater, potable water delivery and pit dewatering is planned.
Costs	▪ *The derivation of, or assumptions made, regarding projected capital costs in the study.* ▪ *The methodology used to estimate operating costs.* ▪ *Allowances made for the content of deleterious elements.* ▪ *The source of exchange rates used in the study.* ▪ *Derivation of transportation charges.* ▪ *The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.* ▪ *The allowances made for royalties payable, both Government and private.*	▪ All major infrastructure is in place. Capital forecasts have been included which represent the growth and sustaining requirements for the completion of the LOM plan. ▪ All operating costs are based on LOM planning estimates from Yancoal and have been reviewed by RPM. ▪ Current long-term exchange rate assumptions were provided by Yancoal. ▪ Transport charges based on actual contracted prices taking into account existing Take or Pay arrangements. ▪ QLD state government royalties are included in the estimate. ▪ RPM reviewed all costs and they are considered reasonable.
Revenue factors	▪ *The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc.* ▪ *The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and*	▪ Long term product coal pricing assumptions have been provided by Yancoal Marketing and is based on independent third party research and reporting. ▪ The revenue factors are considered reasonable for the purposes of estimating Reserves.

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Criteria	JORC Code explanation	Commentary
	co-products.	
Market assessment	▪ *The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.* ▪ *A customer and competitor analysis along with the identification of likely market windows for the product.* ▪ *Price and volume forecasts and the basis for these forecasts.* ▪ *For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.*	▪ A Marketing Study has not been reviewed however markets are well established for the mine's coal products. The projects typically produce up to three main products: – Low Volatile PCI Coal with; Ash 9.5%, Sulphur 0.65%, Phosphorus 0.1%, referred in this report as "YP1". – Low Volatile PCI Coal with; Ash 12.0%, Sulphur 0.85%, Phosphorus 0.08% - >0.1%, referred in this report as "YP4". – Low Volatile Anthracite Coal with; Ash >20.0%, Sulphur 0.85%, Phosphorus >0.08%, known as "YP5". ▪ Based upon these products and specifications, RPM anticipates no foreseeable issues in demand for these products.
Economic	▪ *The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc.* ▪ *NPV ranges and sensitivity to variations in the significant assumptions and inputs.*	▪ The inputs to the economic analysis are 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 have been used in assessing NPV. ▪ The NPV results for the Project 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. ▪ Sensitivity analysis has been completed on the Project over a range of variable. The Project is most sensitive to changes in exchange rate, revenue and operating costs.
Social	▪ *The status of agreements with key stakeholders and matters leading to social licence to operate.*	▪ The relationship with adjacent landowners is sound and the Project has the necessary key stakeholder agreements in place. ▪ There are no known issues in relation to cultural heritage or native title that would be considered material risks to the project based on the information available at the time of the assessment. ▪ Yarrabee owns all land in the current proposed mining areas.
Other	▪ *To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:* ▪ *Any identified material naturally occurring risks.* ▪ *The status of material legal agreements and marketing arrangements.* ▪ *The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect*	▪ The topographical area of Yarrabee is flat lying and subject to flooding in cyclonic conditions. Appropriate flood mitigation is in place or planned to cover a 1 in 1000 year event. Levees and drains are existing to protect active pit areas. ▪ 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 operation's viability.

Criteria	JORC Code explanation	Commentary
	that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.	
Classification	▪ *The basis for the classification of the Ore Reserves into varying confidence categories.* ▪ *Whether the result appropriately reflects the Competent Person's view of the deposit.* ▪ *The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).*	▪ Classification of Coal Reserves has been derived by considering the Measured and Indicated Resources and the level of mine planning. – For all pits with Reserves at Yarrabee, Measured Coal Resources are classified as Proved Coal Reserves and Indicated Resources classified as Probable Coal Reserves, as the pits are currently operating and the level of mine planning is considered adequate to support this level of certainty in the Reserves estimate. ▪ The Inferred Coal Resources have been excluded from the Reserve estimates. ▪ The result reflects the Competent Person's view of the deposit.
Audits or reviews	▪ *The results of any audits or reviews of Ore Reserve estimates.*	▪ Internal peer review of the Reserves Report has been completed.
Discussion of relative accuracy/ confidence	▪ *Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate.* ▪ *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* ▪ *Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage.* ▪ *It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	▪ The basis of the estimate are actual operating costs and LOM planning. ▪ CHPP and infrastructure are in place and operating. ▪ Analysis of the coal quality has been undertaken by independent laboratories working under international standards of method and accuracy. Coal products from both MTW and HVO is produced from blended washed 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. ▪ Geotechnical studies have been completed by a consultant and reviewed biannually for all active pits. ▪ Yarrabee has an ongoing reconciliation process aimed at testing the appropriateness of the assumed Modifying Factors for the mine. ▪ The Reserves have been adjusted through application of the Modifying Factors to reflect the slope and faulting inherent in the deposit. The deposit is drilled in detail and additional short term drilling is done ahead of mining as the pits advance. ▪ Minor additional faulting can be expected during mining. This may locally increase the dilution however it will not adversely affect the Reserves as the faulted material is typically recovered with the additional dilution to maximize product coal recovery. ▪ There is some minor risk of flooding though site infrastructure is in place or is being constructed to protect against this.

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JORC Code Disclosure Requirements

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JORC Code, 2012 Edition – Table 1 report template

The completed Table 1, Sections 1, 2 & 3 are in response to the current ADV-BR-11019_Hunting Eagle_CPR Report completed in part by Competent Person Mr Brendan Stats on behalf of RPM.

Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	▪ *Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.* ▪ *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* ▪ *Aspects of the determination of mineralisation that are Material to the Public Report.* ▪ *In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.*	▪ As a standard procedure all holes were geophysically logged with downhole geophysical tools. Holes not successfully logged with downhole geophysics generally had poor hole wall stability. Poor ground conditions can occur in this highly structured syncline/basin with steeply dipping coal seams. Holes without geophysical logs could not be used in the model as the data could not be validated. ▪ Holes have at least density/gamma/caliper logs run, a number of holes have sonic, verticality and/or acoustic scanner. The quality of some logs was poor, often related to the age or the company used. Weatherford, Ground Search and Coal Seam Wireline Services provided logging services. Presentation of the data varied between these logging companies and was at times poor. This made it difficult to consistently pick thin plies. During recent drilling at Duralie in 2015 - 2016, Weatherford undertook geophysical logging of approximately 20 drillholes (logging suite included density/gamma/caliper, vertically, sonic, neutron, dipmeter, acoustic scanner). ▪ Duralie – Coal core of seams at Duralie are generally sampled on a ply basis but some core was sampled on a sub ply or rarely combined ply basis. Sampling was undertaken on a correlatable ply basis to ensure that equivalent parts of seams were sampled across the deposit. For the Weismantel seam coal plies (W1-W4) were generally sampled on a ply basis (rare holes on a sub-ply basis) and stone partings (P1-P3) sampled separately or with the adjacent coal ply when very thin. The W2 ply was often sampled on a sub-ply basis due to the thickness of the ply. On the eastern limb, the Clareval seam was split and sampling was undertaken on a ply basis (2007 holes 1-5 m samples) or sub-ply basis using lithological boundaries (2009 - 2010 holes, 0.1 m - <2 m thick samples). On the western limb correlating plies in the thick coalesced Clareval seam was difficult, even with geophysical logs due to the uniform nature of the seam, so sampling was done on a sub-seam basis (2 m - 5 m thick samples). Stone partings or interbedded stone/coal sections were sampled separately where deemed thick (approximately >0.5 m). Finalisation of plies was undertaken at a later stage using geophysical logs and sometimes quality results (sulphur). ▪ Stratford and Grant & Chainey

Criteria	JORC Code explanation	Commentary
		– Coal core of seams at Stratford and Grant & Chainey are generally sampled on a ply basis but some core was sampled on a sub-ply or combined basis. Sampling was undertaken on a correlatable ply basis to ensure that equivalent parts of seams were sampled across the deposit. For older holes core was often sampled on a combined ply basis; not all of this data is now useful. If plies were sampled on a combined ply basis, the stone parting in between would be included in the sample. The Clareval Main seam at Stratford West was sampled on a sub-ply basis due to the thickness of this ply. ▪ Co-disposal – In the Co-disposal area bulk samples, in pit samples and slimes only samples have been taken. This is not 'in situ' material, but emplaced rejects. The co-disposal material is variable (consisting of varying quantities 'slimes' and 'coarse' material throughout the area, although now, largely slimes material remains).
Drilling techniques	▪ *Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	▪ Duralie – Non-core structural and core drilling initially targeted the Weismantel seam with subsequent exploration targeting the more recently identified Cheerup and Clareval seams. Partially cored HMLC holes for Weismantel seam were drilled during a 1995 drilling program. Large diameter drillholes (8" core) were drilled in 2002 to obtain a bulk sample from the Weismantel seam. Approximately 20 LOX holes were drilled to define the seam sub-crop prior to mining. From 2005 onwards HQ and PQ partially cored holes were drilled to Weismantel, Cheerup and Clareval seams. – Exploration holes were drilled vertically. In the early-mid 2010's several holes were drilled inclined to provide pit/geotechnical wall information ahead of mining. In 2017, 12 blast holes were geophysically logged to assist with structural interpretation in the Clareval Bowl pit. ▪ Stratford and Grant & Chainey – Non-core structural drillholes have been drilled to depths generally ranging from 50 m - 250 m. Shallow limit of oxidation drilling (LOX) was completed to define pit low walls on now completed pit areas. Core hole drilling encompassed a number of diameter sizes: pre 2001 were 100 mm and 150 mm partially cored HMLC holes, post 2001 were HQ and PQ core size. Larger core sizes achieved better core recovery. In recent years (post 2009) core drilling has focused on PQ core size. – Holes were largely drilled vertically. The exception to this is drilling in 2014 - 2015 in the northeast of Stratford where exploration drilling in steeply dipping areas was inclined, targeting multiple intersections of seams. ▪ Co-disposal – No drillholes relate to the Co-disposal area – waste emplacement area.

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Criteria	JORC Code explanation	Commentary
Drill sample recovery	▪ *Method of recording and assessing core and chip sample recoveries and results assessed.* ▪ *Measures taken to maximise sample recovery and ensure representative nature of the samples.* ▪ *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	▪ Duralie, Stratford and Grant & Chainey – Core recovery was recorded by the field geologist at the drill rig (drilled length and core recovered), and drill depths were subsequently corrected using down-hole geophysical logs to accurately determine core loss. Varying core diameters have been used (largely HQ, PQ, and 100 mm). Pre 2001 holes appear to have better core recoveries due to >100 mm core diameters used. Post 2001 - HQ holes often suffered poor recovery. PQ holes were used post 2009 and generally achieved 90-95% core recoveries. – Coal seams in the Gloucester Basin have been subject to considerable tectonic compression which can result in poor ground conditions when drilling. Some holes with high core loss were sampled. Only those holes with coal core recovery of greater than 80% were used in reporting and gridding qualities. 80% recovery was used to maximise the data due to the large number of plies in the deposit. Core loss intervals were inserted into the quality database to ensure correct selection of data in Minex software for reporting, gridding and tonnage estimation/reporting. – The effect of core loss at Stratford Duralie is that analyses may underestimate the better qualities of the coal due to loss of the brighter parts of the sample (e.g. core loses could result in higher ash, higher density, lower CSN). ▪ Co-disposal – No drillholes relate to the Co-disposal area – waste emplacement area.
Logging	▪ *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* ▪ *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* ▪ *The total length and percentage of the relevant intersections logged.*	▪ Duralie, Stratford and Grant & Chainey – Core holes were lithologically logged, coal core brightness logged and some post 2001 holes were also logged geotechnically. Generally logging was undertaken in sufficient detail (measurement and description); however there were a number of holes drilled during approximately 2009 - 2010, of which some were very basically/poorly logged. These holes heavily relied on geophysical logs to confirm thickness and depths. – Core and non-core holes were depth corrected and correlated using downhole geophysical logs and are considered reliable points of observation. – Generally logging is qualitative (core logging to centimetric accuracy and non-core logging chip samples to metre accuracy). All core sections of drillholes were lithological logged. Most if not all non-core sections were also lithologically logged. Core photography is generally available for cored sections (largely for new holes not always available for pre 2001 holes). There are a number of holes drilled during approximately 2009 - 2010 some of which were very basically/poorly logged where coal core sections appear to have been logged on a broad lithological basis rather than detailed coal core logging. ▪ Co-disposal – No drillholes relate to the Co-disposal area – waste emplacement area.

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Criteria	JORC Code explanation	Commentary
Sub-sampling techniques and sample preparation	▪ *If core, whether cut or sawn and whether quarter, half or all core taken.* ▪ *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* ▪ *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* ▪ *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* ▪ *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.* ▪ *Whether sample sizes are appropriate to the grain size of the material being sampled.*	▪ Duralie, Stratford and Grant & Chainey – No splitting or sawing of coal core took place (quarter or half sampling core is not standard in sampling of coal). – Non-core coal samples were analysed from a small number of early chip holes intersecting the Clareval seam to gain an initial understanding of basic coal quality parameters before a core rig was available to obtain standard core samples. No non-core samples were used in the database/model/Resource estimate. – For holes prior to 2001, specific sampling techniques are unknown but were sampled generally to plies, however some were on a sub-ply or combined ply basis. For post 2001 holes core of coal seams were generally sampled on a correlatable ply basis but with some combined ply samples taken on thin plies and sub-plies on very thick plies (e.g. W2, CLM). A small number of core holes were correlated at the time of sampling and some holes were re-correlated post sampling. The entire cored section of each sample was placed in the sample bag with identification tags for subsequent quality analysis. Some samples include stone partings and this would affect raw quality results. Parting plies of the Weismantel seam (P1, P2 and P3) were sampled and analysed. – No sample preparation took place outside the laboratory. Coal quality testing was undertaken at laboratories which comply with Australian Standards for sample preparation (including ACIRL laboratory at Maitland). – HQ, PQ and 100 mm core sizes are appropriate for raw coal quality testing and float/sink testing. Large diameter holes drilled prior to mining commencing at Duralie were suitable for the drop shatter/float/sink testing undertaken. The ply thickness of samples at Duralie provided adequate sample mass for testing. At Stratford and Grant & Chainey there can be thin coal intersections, and there is a potential that detailed float/sink analyses was undertaken in 2009 - 2010 holes on samples that were too thin. ▪ Co-disposal – Unsure how sampling was undertaken in the Co-disposal area. Bulk samples would provide an appropriate sample size for the material being sampled.
Quality of assay data and laboratory tests	▪ *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* ▪ *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.* ▪ *Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie*	▪ Varying analyses were undertaken for the drillhole series at Stratford Duralie. The tests undertaken are suitable for coking and thermal coals. ▪ Analyses were undertaken at accredited laboratories (including ACIRL Maitland and SGS laboratories). NATA accredited labs use standards, blanks, duplicates, external round robin checks and other routine checking procedures to ensure they meet the required accuracy for each test. ▪ Duralie – For the Weismantel seam drillholes prior to 2002, raw coal and float/sink data was compiled and validated by Quality Coal Consulting (QCC) for 15 of the 18 core holes.

Criteria	JORC Code explanation	Commentary
	lack of bias) and precision have been established.	Raw coal quality data for this seam comprised raw ash, density, moisture and total sulphur (ad moisture basis). Washed data was also available from these HMLC cored holes, including float/sink data and clean coal composite analyses. Large diameter drillholes, WC202-WC205 (drilled in 2002) provided a bulk sample of the Weismantel seam for detailed laboratory analysis (raw and washed). In 2005 to 2007 HQ and PQ core holes were drilled (approximately 20 drillholes from WC206C to WC225C), providing raw coal quality (including proximate, relative density and total sulphur) and float/sink data. – For the Clareval seam, preliminary exploration of non-core holes (chip samples) were analysed for relative density, proximate analyses, total sulphur and float/sink testing (at 1.35 and 1.60 density fractions). Once core data was available for this seam this data was no longer referenced. – Cheerup/Clareval seam holes pre 2009 were analysed for raw coal quality including relative density, proximate analyses and total sulphur (stone parting samples were analysed for relative density, raw ash and total sulphur only). Float/sink testing was undertaken on the samples for several density fractions between 1.30-1.60 for ash, sulphur and CSN. Further testing on composited samples was done and included proximate analyses, CSN, Giesler plastometer, sulphur, specific energy, Hardgrove index and phosphorus. Vitrinite reflectance and maceral analysis were undertaken on a few holes. PQ core holes drilled post 2009 were analysed for raw coal quality (ARD, relative density, proximate, total sulphur, CSN, specific energy, chlorine, forms of sulphur and ash analyses). Float/sink testing was undertaken on each of the samples at several density fractions (1.30-2.00) for moisture, ash, total sulphur and CSN. ▪ Stratford – There are some old core holes (including 100 mm SC core holes) with data on ARD, proximate, total sulphur, specific energy and clean coal analyses. 2007 to 2009 HQ core holes have raw analyses for relative density, proximate analyses and total sulphur. There is also float/sink data at two fraction sizes (1.35 and 1.60) for CSN, proximate analyses, HGI, total sulphur, specific energy, initial softening, fluidity, solidification, phosphorus, vitrinite reflectance and maceral analysis. 2009 to 2010 HQ and PQ core holes have raw analyses for relative density, proximate analyses and total sulphur. There is also float/sink data on several density fractions for moisture, ash and total sulphur (CSN also for F1.35 fraction). – Bulk ROM samples from seams mined in BRN and Roseville pits are available (testing includes proximate, total sulphur and float/sink for ash and sulphur). ▪ Grant & Chainey – 1980s core holes provided data on relative density, proximate analyses, total sulphur, CSN and specific energy. Also float/sink data at several density fractions providing information on moisture, ash and volatile matter. Ash analyses, HGI, ash fusion temperatures, maceral analyses and reflectance data were also available.

Criteria	JORC Code explanation	Commentary
		– Post 2005 HQ and PQ core holes (SS series holes and GC series holes up to GC029C) provided data on relative density, proximate analyses and total sulphur. Float/sink data was reported on up to several density fractions providing information on CSN, ash, sulphur, some proximate and some energy. Composite samples provided data on yield, proximate analysis, CSN, Giesler plastometer and phosphorus. Some maceral and reflectance data was also available. – Post 2010 (GC121C onwards) apparent relative density was analysed in addition to relative density, proximate analyses and total sulphur. Drop shatter wet tumble was undertaken on these PQ holes followed by washability at five density fractions, providing CSN, ash and sulphur information ▪ Co-disposal area – Analysis includes proximate analysis, total sulphur, specific energy, ultimates, chlorine, phosphorous, CSN, forms of sulphur, Geisler plastometer and ash analyses. Maceral and vitrinite reflectance data were also available. These analyses are appropriate for material to be included into coking and thermal blends.
Verification of sampling and assaying	▪ *The verification of significant intersections by either independent or alternative company personnel.* ▪ *The use of twinned holes.* ▪ *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* ▪ *Discuss any adjustment to assay data.*	▪ Duralie, Stratford and Grant & Chainey – Significant intersections and/or anomalous geological or coal quality values are checked as part of the data compilation process (e.g. thick or thin intersections checked to geophysical logs/logged core sections, high or low quality values checked to original reports). – Twinned holes are not standard in the coal industry. Where there are two closely spaced core holes it is likely the latter hole was drilled for core recovery purposes not for verification of results. – Raw coal quality data were compiled from original laboratory reports into a single spread sheet. Relevant data was standardised to a constant moisture basis of 2.5% (Stratford West, Avon North, Grant & Chainey) or 1.5% (Duralie and Stratford East). An ash versus density regression was developed (using RD at an estimated 6% in situ moisture) to enable generation of in situ density from raw ash data. An ash versus energy regression was also developed to generate energy data from all samples with raw ash data. – For Stratford and Grant & Chainey it was difficult to obtain original reports for pre-2001 holes and only a few are used in the data set. Sampling strategies pre-2001 often combined plies and inclusion of this data was difficult. For Weismantel seam core holes prior to 2001, raw coal and float/sink data was compiled and validated by Quality Coal Consulting (QCC). ▪ Co-disposal area – There is coal quality data for the co-disposal material available in laboratory reports. No adjustments have been made to the quality results of the co-disposal material.

Criteria	JORC Code explanation	Commentary
Location of data points	▪ *Accuracy and quality of surveys used to locate drillholes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* ▪ *Specification of the grid system used.* ▪ *Quality and adequacy of topographic control.*	▪ The original data was in the ISG coordinate system (Zone 56/1) and was converted to GDA94 (Zone 56) in early 2004. Since then models were created in GDA94. ▪ Duralie – Good topographic control from digital terrain models (DTM), obtained pre 2000 and 2006. Drillhole collars were surveyed and are generally within 1 m of the DTMs (of approximately 900 holes approximately 100 holes are 1 m - 2 m from the DTM, 20 are 2 m - 5 m from the DTM and drillholes 1017R and 1165R are 23 m and 35 m respectively from the DTM). These two holes are located towards the centre of the syncline where Inferred Resources are estimated; the collar has not been altered as resurvey should be undertaken. Approximately 20 holes were drilled in 2015 - 2016 and 12 blast holes in 2017 in the mined Clareval Bowl area. These holes will show a discrepancy to the original topography and are acceptable. – Mine seam pick up data (up to April 2014) and pit survey (up to September 2017) is supplied by site surveyors and is of a good standard. ▪ Stratford and Grant & Chainey – Although mining has occurred at Stratford, the 'original' topographic surface supplied by Stratford Duralie was used as the topographic surface for the models at Stratford and Grant & Chainey. This surface provides good original topographic control (in a small area is not quite the original surface). For Resource and Reserve studies the current mined surface would be required. In Stratford West the mined surface for all pits (Roseville and Roseville Extension/West pits, Bowens Road West, Stratford Main pit and BRN pit) to the end of June 2014 was provided by mine site surveyors and is considered good quality data. This pit data was blended with the base of weathering grid and the resultant surface was used to limit seam Resources at Stratford. No mining has occurred at Avon North, Stratford East or Grant & Chainey. For Stratford East the original topographic surface was merged with the 2014 DTM where the original topographic surface did not extend far enough east (a 2014 DTM was available for the whole area, but was largely not used at this stage due to some data discrepancies). Original topographic surface was a combination of DTMs produced from aerial photography flown pre-2001, 2004, 2006 and 2014 (the majority of the area is covered by the 2006 DTM). – Drillhole collars were surveyed and generally agree with the DTM. Drillhole survey data are generally within <1 m - 2 m of the original DTM. In some cases collar RL's differed by 2 m - 5 m and in rare cases 20 m from the DTM (two holes were adjusted to comply with the DTM as this better fitted the surrounding structure). There are discrepancies between old drillhole collars and the original surface in the Co-disposal area where reject material was emplaced and in the north of Grant & Chainey due to mine rehabilitation. There are also discrepancies where holes were drilled in partly mined out areas (including some 8000 series drillholes drilled in BRN pit). These differences are acceptable.

Criteria	JORC Code explanation	Commentary
		▪ Co-disposal area – Original topographic DTM is of good quality. – End of June 2012 surface was created from end June 2012 aerial photography with historical pits and voids to end September 2012 cut in (the end September survey of pits did not cover Cells 1-3). I.e. the upper surface for the Co-disposal area is dated end June 2012.
Data spacing and distribution	▪ *Data spacing for reporting of Exploration Results.* ▪ *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* ▪ *Whether sample compositing has been applied.*	▪ Duralie, Stratford and Grant & Chainey – No JORC exploration results presented in this report. – Due to the orientation of the structure (north-south trending syncline), drillholes are located on generally east-west drill lines (often 200 m - 400 m apart). Drillhole spacing at Stratford Duralie is probably closer than most coal deposits elsewhere in Australia due to the complex geology. Due to the steep dip of strata, apparent seam thickness, faulting, folding, seam splitting and ply variability in places, holes along each drill line can be spaced quite closely (often in the range of 20 m - 300 m). The distance between data points are further apart for Inferred Resources but not excessively. Resource polygon shapes tend to be narrow and elongate (north-south) reflecting these issues. Coal quality data for a particular seam is usually available on a linear spacing (generally along strike where the seam is reasonably shallow). – The drillhole spacing provided adequate confidence for the Resource category in ply correlation, structural interpretation between holes and sufficient quality (sometimes supported by mined data or geophysical log trends). – Core holes may not provide data on all plies in an intersected/sampled seam, due to poor core recovery or lateral and/or vertical variability in a seam. Drillhole spacing for core data on particular plies can be sparse, but the overall seam information provides confidence in coal quality continuity (more relevant for Stratford and Grant & Chainey). – Any sample compositing was only undertaken on depth corrected and correlated data, in Minex software on a length by density weighting. ▪ Co-disposal area – No drillhole data relates to this material – waste emplacement area. Sampling has been undertaken on an as needs basis.
Orientation of data in relation to geological structure	▪ *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* ▪ *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	▪ Duralie, Stratford and Grant & Chainey – Most holes are drilled vertically (except several inclined holes in the Clareval Bowl pit drilled for pit wall information and holes drilled in Stratford North in 2014 - 2015 in areas where the seams potentially dip very steeply and little was known of the structure/geology). – Although the large majority of holes were drilled vertically they tend to 'walk' up dip in moderately to steeply dipping strata, especially with increased depth. Where digital borehole deviation geophysical logs have been available (generally for more recent

Criteria	JORC Code explanation	Commentary
		holes), drillhole vertically data has been loaded and incorporated into the model to better control seam floor. The combination of vertically drilled deviated and non-deviated holes has caused some 'kinking' in the structural model, however it has been observed to be more accurate to incorporate as much deviation data as possible. – The closely spaced holes over much of the area are adequate to interpret the main (and at times minor) structural features of east-west trending normal faults and north-south trending reverse faults and folds (although even with closely spaced holes the Clareval Bowl pit structural interpretation is difficult due to the complexity of the structure). Fault angles are moderate to steep (although may become shallower through the seam in the Clareval Bowl pit). – The orientation of drilling has not introduced a structural bias due to the closely spaced drillholes and understanding of the regional geology. ▪ Co-disposal area – N/A – waste emplacement area.
Sample security	▪ *The measures taken to ensure sample security.*	▪ Duralie, Stratford and Grant & Chainey – Security measures of samples prior to 1999 are unknown, however are expected to reasonably follow standard industry practices. – Core trays are generally taken to the core shed as soon as possible (usually at the end of the day) after measurement and lithological logging of the core at the drill rig. The core shed is a secure location at the mine site. Core is sampled (after geophysical logging/correction/ correlation/core photography), bagged and tagged. Usually a site geologist transports the samples to the laboratory. – There have been occasions when the time frame between coring and sampling was over a few months and the core was not refrigerated. The coal seams at Duralie, Grant & Chainey and Stratford appear to hold fluidity very well and may not be adversely affected by a lag in time between coring and sampling of a few months. ▪ Co-disposal area – Security measures for the Co-disposal area samples are not known.
Audits or reviews	▪ *The results of any audits or reviews of sampling techniques and data.*	▪ Duralie – Validation of seam data for the Weismantel seam was undertaken in 1996/97. A comprehensive review of seam correlation, ply nomenclature and compiled raw coal quality data was carried in early 2012 for the Weismantel-Clareval seams. Structural reviews and updates were undertaken in 2001, 2003, 2014 and 2016 by the previous Competent Person (MBGS). ▪ Stratford – Detailed reviews of seam correlation, seam depths and checks made of coal quality sample depth information: Bowen Road North - 2002, Avon North - 2003, Roseville West – 2004, 2008, 2011, Stratford East - 2012, Wenham Cox Road – 2011, Stratford

Criteria	JORC Code explanation	Commentary
		North/Avon North – 2015 - 2016 (seam correlation and seam depths only) by the previous Competent Person (MBGS). ▪ Grant & Chainey – A detailed review of the data and seam re-correlation was undertaken by MBGS in 2012. Only validated data was included in the database/model. This work resulted in a more consistent and structurally robust model later in 2012.

Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	▪ *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* ▪ *The security of the tenure held at the time of reporting along with any known impediments to obtaining a license to operate in the area.*	▪ All leases are controlled/owned by Yancoal (100%). ▪ A311, A315 and EL6904 – lease renewal has been lodged or in the process of being lodged. ▪ Duralie Mine – ML1427 – granted 6-Apr-1998 expiry date 5-Apr-2019 (CIM Duralie Pty Ltd, 762.5Ha) – ML1646 – granted 4-Jan-2011 expiry date 4-Jan-2032 (CIM Duralie Pty Ltd, renewed 4-Jan-2011, 180.3Ha) – AUTH315 – granted 27-Dec-1982 expiry date 28-Nov-2017 (Gloucester Coal Ltd, renewed 28-Nov-2012, 7430Ha) ▪ Stratford Mine – ML1360 - granted 21-Dec-1994 expires 21 Dec 2036 (CIM Stratford Pty Ltd, renewed 16-Sep-2015, 754.7 Ha) – ML1409 - granted 07-Jan-1997 expires 06-Jan-2018 (CIM Stratford Pty Ltd, renewed 07-Jan-1997, 87.32 Ha) – ML1447 - granted 01-Apr-1999 expires 31-Mar-2020 (CIM Stratford Pty Ltd, renewed 01-Apr-1999, 52.21 Ha) – ML1521 - granted 24-Sep-2002 expires 23-Sep-2023 (Gloucester Coal Ltd, renewed 24-Sep-2002, 4.5 Ha). – ML1528 - granted 20-Jan-2003 expires 19-Jan-2024 (CIM Stratford Pty Ltd, renewed 20-Jan-2003, 205.9 Ha) – ML1538 - granted 25-Jun-2003 expires 24-Jun-2024 (CIM Stratford Pty Ltd, renewed 25-Jun-2003, 1.031 Ha) – ML1577 - granted 01-Mar-2006 expires 28-Feb-2027 (Gloucester Coal Ltd, renewed 01-Mar-2006, 2.244 Ha)

Criteria	JORC Code explanation	Commentary
		– ML1733 - granted 08-Apr-2016 expires 08-Apr-2037 (CIM Stratford Pty Ltd, 84.5 Ha) – A311 - granted 17-Sep-1982 expires 28 Nov 2017 (Gloucester Coal Ltd, renewed 14-Oct-2013, 5120 Ha) – A315 - granted 27-Dec-1982 expires 28- Nov-2017 (Gloucester Coal Ltd, renewed 28-Nov-2012, 7430 Ha) – A315 – proposed MLA1 and proposed MLA2 areas – proposed MLA's part of the Stratford Extension Project, application currently not submitted, however MLA2 is expected to be submitted mid-November 2017. ▪ Grant & Chainey – ML1360 granted 21-Dec-1994 expires 21-Dec-2036 (CIM Stratford Pty Ltd, renewed 16-Sep-2015, 754.7 Ha) – Auth311 granted 17-Sep-1982 expires 28 Nov 2017 (Gloucester Coal Ltd, renewed 14-Oct-2013, 5120 Ha) – Auth315 granted 27-Dec-1982 expires 28- Nov-2017 (Gloucester Coal Ltd, renewed 28-Nov-2012, 7430 Ha) – EL6904 - granted 09-Oct-2007 expires 09-Oct-2017 (Gloucester Coal Ltd, renewed 16-Sep-2015, 880.2 Ha) is part of Grant & Chainey, but currently has minimal exploration and no Resources.
Exploration done by other parties	▪ *Acknowledgment and appraisal of exploration by other parties.*	▪ Stratford Duralie (Duralie, Stratford and Grant & Chainey) has been owned by several parties: – Noranda (1970s): Initial exploration drilling in the Gloucester Basin was completed by Noranda. – BMI Mining/Noranda (1977-1981): Undertook extensive exploration drilling programs in the Gloucester Basin concentrating on drilling Stratford (Stratford Main Pit area) and Duralie. – BMI Mining/ESSO 1981-1993): Commenced exploration drilling in Stratford North (including BRN). Completed a number of east-west and north-south 2-D seismic lines in 1982/83. – During the 1980s extensive surface mapping was undertaken by Malcom Lenox. – Excon: Unsure if any exploration was undertaken. – AGIP: Undertook no exploration. – Excel Mining (1993-1995): Drilled coal quality holes. Float/sink data in the Stratford Main Deposit was later considered unreliable. – CIM Resources (1995-2003): Mining commenced and the wash plant was upgraded. Exploration drilling was completed on target areas (such as BRN proposed pit area), but was minimal due to tight economic conditions.

Criteria	JORC Code explanation	Commentary
		– Pacific Power (1990s): Drilled nine deep stratigraphic holes to obtain data for their gas leases. – Gloucester Coal Ltd (2003-2015): Exploration drilling increased during the time of Gloucester Coal Ltd, targeting future areas in Stratford (Roseville West, Wenham Cox Road, Stratford South, Avon North/Stratford North, Clareval seam) Duralie (Weismantel seam coal quality and Clareval seam) and Grant & Chainey. 2D seismic data from the 1980s was reprocessed over Duralie - further defining the structure of the area and leading to the discovery of the Clareval seam. During 2009-2010, intense exploration drilling was undertaken with the quality of data sometimes compromised for quantity of drilling. 2D seismic undertaken in EL6904 in 2011. – AGL: completed 2D and 3D seismic surveys and airborne surveys (magnetic and radiometric) thought the Gloucester Basin. 2D survey undertaken in 2009 and 2012 and 3D survey over Stratford in 2010. Several deep stratigraphic drillholes were also undertaken by AGL throughout the basin. ▪ Gloucester Coal Ltd/CIM Stratford Pty Ltd/CIM Duralie Pty Ltd is currently owned by Yancoal Australia.
Geology	▪ *Deposit type, geological setting and style of mineralisation.*	▪ The Resource areas are located in the Permian aged, Gloucester Basin in NSW. ▪ Duralie – The deposit is contained within southern extent of the basin, where that portion of the syncline plunges to the north. There are two main seams at Duralie: Weismantel and Clareval and two minor seams: Duralie and Cheerup. The interburden between the Weismantel and Clareval seams is approximately 200 m, with the Clareval seam located near the base of the basin stratigraphy. – The plies of the Weismantel seam are reasonably consistent throughout the Duralie area. The Clareval seam is split on the eastern limb of the syncline (with splitting and thinning increasing northwards) whereas on the western limb of the syncline the Clareval seam is largely coalesced. – The deposit is characterised by steeply dipping seams on the limbs of the syncline (dips generally 40° - 70°). At the mined out nose of the syncline dips were shallower, generally 10° - 20°. For the deeper parts of the syncline in the Weismantel seam dips are shallower towards the axis of the syncline (<10° - 30°), however there is mid zone between the very steep limbs and the shallower axis area where the seam dips <30° - 40°. – Thrust faulting has been interpreted through the Duralie area. Thrust faults occur in the Weismantel seam in a north-south direction on each of the limbs of the syncline (towards seam sub-crop). In the Clareval seam, in an area at 6,428,500 N (the Clareval Bowl area) the seam is folded and faulted producing the Holmes Syncline and Cheerup Anticline. This area is intersected by several north south trending reverse faults which

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Criteria	JORC Code explanation	Commentary
		have repeated the seam thickness by up to four times. Potential east-west and strike parallel faults have been indicated by seismic reinterpretation (late 2004). ▪ Stratford – This deposit is located on the eastern limb of the Gloucester Basin. The Stratford deposit contains approximately 20 coal seams which are divided into numerous plies (defined by stone partings and seam splitting). The coal seams in the Stratford Resource estimate are the Marker 7-Bowens Road seams (Stratford West), Glen View-Avon-Triple (Avon North), Cheerup-Clareval (Stratford East). Seams in the Resource estimate dip to the west between 15° - 70° with steep dips generally towards the eastern limits of the area. Seam splitting and changes in seam thickness and interburden are common. – Steeply dipping north-south trending reverse faults are found throughout the area, including several in Avon North, and a reverse faulted area under the Co-disposal area. East-west normal faults are present, including a growth fault located at the northern boundary of BRN pit (in the pit area the Bowens Road seam was approximately 10 m, north of this fault the seam is only 2 m - 3 m thick) and large normal fault with an offset in the order of 60 m at the northern limit of the completed Stratford Main pit). The mined out Stratford Main pit is located within a synclinal structure. ▪ Grant & Chainey – This deposit is largely located on the eastern limb of the basin/regional syncline. A small part of the area is located at the closure area of the seams at the centre of the syncline. There are approximately 15 coal seams in the area, of which Resources have been estimated for the Marker 3 to Parkers Road seams. Seam splitting and coalescing occurs through Grant & Chainey, especially in the Bowens Road seam. – Several east-west normal faults have been identified, ranging in offset from approximately 40 m - 150 m and are expected to be steeply dipping to vertical. In the north of Grant & Chainey reverse faults have been identified. Throughout the area several further thrust faults were identified but could not be laterally traced. Reverse faults are interpreted have vertical offsets in the order of 10 m - 50 m. Further reverse faulting is expected in Grant & Chainey. ▪ Co-disposal area – Reject material was emplaced into a topographic low area with bounding walls progressively built up as plant reject was emplaced. Capping waste material was originally emplaced over the reject material; none of the capping remains over the co-disposal material due to mining of the area. ▪ Igneous intrusions are rare in the Gloucester Basin.
Drillhole Information	▪ *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material*	▪ Duralie area is covered by approximately 900 drillholes. Approximately 20 holes and 12 blast holes were drilled in late 2015 - 2017 to obtain further information on Resource

Criteria	JORC Code explanation	Commentary
	drillholes: – *easting and northing of the drillhole collar* – *elevation or RL (Reduced Level – elevation above sea level in metres) of the drillhole collar* – *dip and azimuth of the hole* – *down hole length and interception depth* – *hole length.* ▪ *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*	definition and geotechnical data in the Clareval Bowl pit. There are approximately 1,800 drillholes at Stratford and approximately 500 drillholes at Grant & Chainey. ▪ Drillholes intersecting each reported seam provide coal quality data (on at least one ply of the seam). Almost all holes in the Resources areas were drilled vertically. ▪ Detailed drillhole information has not been provided tabulated as exclusion of this data does not detract from the understanding of the Resource. Several hundred drillholes are located in now mined out areas. The mined areas support the geological understanding of the area and the interpretation/model of the deposit. ▪ The following item have been reported: – typical seam thickness – in situ density and other qualities (partly based on default values) – depth range ▪ Co-disposal area – N/A – no drillholes relate to this material – waste emplacement area.
Data aggregation methods	▪ *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.* ▪ *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.* ▪ *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	▪ Duralie, Stratford and Grant & Chainey – No exploration results are presented in this report. – Coal seams have been generally sampled on a correlatable ply by ply basis (using downhole geophysical logs to determine ply boundaries). Available laboratory data is loaded into the Minex database and no data is excluded (except for sampling/recovery problems or verification issues). No quality limits were applied to the modelling or Resource estimation process. Sample compositing (when compositing sub-ply data into ply data) was done on a weighted length/density basis using Minex software. Compositing of Resource estimate qualities was done on a weighted area/thickness/density basis, default coal quality data were incorporated where gridded laboratory data was not available. – No metal equivalents are reported. ▪ Co-disposal area – N/A – a default density value was applied to the co-disposal material.
Relationship between mineralisation widths and intercept lengths	▪ *These relationships are particularly important in the reporting of Exploration Results.* ▪ *If the geometry of the mineralisation with respect to the drillhole angle is known, its nature should be reported.* ▪ *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').*	▪ No JORC exploration results are presented in this report. ▪ Holes used in the model/estimate were largely drilled vertically. ▪ Coal seams at Duralie are located within the north plunging, southern extent of the Gloucester Syncline. Seams dip steeply on the limbs of the syncline (generally 40° - 70°) and less steeply towards the axis of the syncline (<10° - 30°). Coal seams at Stratford and Grant & Chainey are on the eastern limb of the Gloucester Syncline, except in the south at the synclinal closure for the seams at Grant & Chainey. Seams dip moderately-steeply (15°

Criteria	JORC Code explanation	Commentary
		- 70°) to the west. The deposit geometry of the Resource area is reasonably well understood. ▪ Coal thicknesses intersected will not be true thickness but an apparent vertical thickness. Thickness of the seams is most affected towards the limbs of the syncline where seam dip is steepest. Also due to reverse faulted structure, intersected seam thickness can be significantly greater than true thickness, largely where reverse faulting has not been modelled (this is expected to be in localised areas). ▪ Co-disposal area – N/A – no drillholes relate to this material – waste emplacement area. Thickness of the 'deposit' is controlled by the survey upper and lower surfaces.
Diagrams	▪ *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drillhole collar locations and appropriate sectional views.*	▪ All relevant figures depicting information considered material to the Coal Resources reported are contained within the report associated with this Table 1.
Balanced reporting	▪ *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	▪ All validated data are loaded into the dataset and modelled. ▪ Typical thickness and quality parameters are reported. Whilst outlying values may exist, the averages are considered representative of the Coal Resources reported.
Other substantive exploration data	▪ *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	▪ Regionally – 2D seismic data acquired throughout the area in the 1980s is available. This data would have been used to assist defining initial targets. Several seismic lines crossing Duralie were reprocessed and reinterpreted by International Geophysical Consultants in the early 2000s. Reprocessed and reinterpreted seismic data was used to provide information on deposit geometry in the centre of the syncline where drillhole data is rare/absent. The results of this work at Duralie led to the discovery of the Clareval seam. Reprocessing data further to the north in Grant & Chainey was not successful and not pursued further at that time. – AGL have completed 2D seismic surveys and airborne geophysical (aeromagnetic and radiometric) surveys over the Gloucester Coal area and a 3D seismic survey over the Stratford area. Late 2015 this data was obtained by Stratford Duralie and recent works have commenced to review this data. Several deep regional holes drilled by AGL have not been included in the geological model at this stage as the data was not made available at the time of the most recent model update. – Regional aeromagnetic data sourced from Geoscience Australia is available (1,600 m line spacing). Geological interpretation map largely developed from field mapping and air photo interpretation produced in 1980s by Malcolm Lenox is available.

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Criteria	JORC Code explanation	Commentary
		▪ Duralie – Seam pick-up data, provided by mine site surveyors, was available from Duralie open cut pit for the Weismantel seam. In the highly structured Clareval Bowl area an interpretation provided by then site geologist incorporated seam pick up data, drillhole data and in pit observations to provide a contour/structural interpretation of the pit area. This interpretation updated in 2016 due to further drilling with a more detailed structural interpretation controlling the faulting and seam thickness in the pit. This drilling also obtained geotechnical information for mine planning. In 2017, the structural interpretation was updated with the addition of 12 geophysically logged blast holes. – Geochemical data is available for the PAF/NAF material above/below the seams. ▪ Stratford – Mining operations have been completed in Stratford Main, Roseville, Roseville Extension and BRN pits and are currently on hold in Roseville West. These pits have mined the Bindaboo, Deards, Cloverdale, Roseville, Marker 3, Marker 8, Marker 1, Bowens Road, Avon and Triple seams. Survey pick-up data has been available in the past and at times included in the model. Recent models have not included the pick-up data due to issues with identifying correct plies in the Roseville pit. – Data from nine deep Pacific Power stratigraphic holes – PP series (up to several hundred metres deep) were available and incorporated in to the geological model. ▪ Grant & Chainey – Drillholes intersecting the Weismantel and Clareval seams have been drilled in Grant & Chainey in the eastern limits of the area. This data is not currently sufficient to allow Resource estimation for these seams in this area. ▪ Co-disposal area – Mining of Cells 1-3 has successfully been incorporated in the blending process of the wash plant feed for several years. – Aerial photography was flown the Stratford area, including the Co-disposal area, end June 2012, June 2014 and June 2015. Since March 2016 a flyover of just the Co-disposal area (by CalCo Surveyors), has been undertaken on a semi-regular basis. This has been utilised to provide more accurate mined tonnages. – Inpit mapping of coarse and slimes material by site superintendent/senior site geologist – Todd Hutchings was undertaken (October 2012)
Further work	▪ *The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).* ▪ *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not*	▪ Regional – Geophysical interpretation of the recently acquired basin wide data from AGL. ▪ Duralie – Continued PAF/NAF, geotechnical monitoring and mine definition drilling as required.

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	commercially sensitive.	– For potential underground Resources drilling is required to evaluate the Weismantel seam in the deeper central portion of the Gloucester Syncline. Much of these Resources are currently classified as Inferred. ▪ Stratford – Potential works include update of the coal quality database/model over Stratford. Also further exploration to improve definition of Resource/Reserve (Avon North and Stratford East), including additional coal quality data, further definition of structure. ▪ Grant & Chainey – Further work planned includes reviewing the geophysical data recently obtained. Other works could include defining the Weismantel and Clareval seams through the Grant & Chainey area, on the eastern limb of the syncline ▪ Co-disposal area – Ongoing survey. Wash plant coal quality analysis as required.

Section 3 Estimation and Reporting of Mineral Resources

(Criteria listed in Section 1, and where relevant in Section 2, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Database integrity	▪ *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.* ▪ *Data validation procedures used.*	▪ Duralie, Stratford and Grant & Chainey – Drillhole data is corrected and correlated using downhole geophysical logs. Before a model is run the new data is checked or an entire seam correlation/data review is undertaken. Some unreviewed ply correlation data was loaded into the Minex borehole database in to Stratford in areas which are not within Resource areas. – Data validation processes in Minex software were used to validate the data, including: checking load errors, stratigraphic order errors, reporting for negative thickness and interburdens. Ply data statistics were reported and reviewed. Cross sections were reviewed. ▪ Co-disposal area – The information for the Co-disposal area is based on survey data, mapping and plant trial results. The survey data was loaded into a Minex database and compared against other DTM data in the database.
Site visits	▪ *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* ▪ *If no site visits have been undertaken indicate why this is the case.*	▪ A site visit was undertaken by a representative of RPM in April 2018. The Resources Competent Person was unable to attend but interviewed the RPM representative who completed the site visit. The outcome of the site visit was to better understand of the location, geological data, environment and site procedures.

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Criteria	JORC Code explanation	Commentary
Geological interpretation	▪ *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.* ▪ *Nature of the data used and of any assumptions made.* ▪ *The effect, if any, of alternative interpretations on Mineral Resource estimation.* ▪ *The use of geology in guiding and controlling Mineral Resource estimation.* ▪ *The factors affecting continuity both of grade and geology.*	▪ Due to closely spaced drillholes on east-west trending drill lines which are generally 100 m - 300 m apart there is reasonable confidence in the geological interpretation in the Resource areas, including seam correlation, seam dip and main faulted structures. ▪ Duralie – Uncertainties in the geological model are associated with the north-south trending reverse faults. Drillhole density is not adequate to trace reverse faults in the model further north of approximately 6,426,750N for the Weismantel seam. There are numerous reverse faults and folds in the Clareval Bowl area, of which five faults have been modelled as steeply inclined faults, but further faults exist. The thickness of the Clareval and Weismantel seam is reasonably consistent – large variations to seam thickness over short distances would be due to reverse faulting. – In the deeper central portion of the syncline there is limited drillhole data. Reprocessed seismic data was used to control the shape of the syncline in the model. This data is reasonable for the purpose/classification but could be in the order of 25 m (or more) out towards the deeper parts of the syncline and could affect interpreted seam dip. East-west faulting indicated by seismic data is not well understood. – There is limited coal quality data for some of the minor plies; however the tonnages associated with these are not likely to be significant. – Alterations to the geological interpretation are unlikely to alter the Resource estimate. ▪ Stratford and Grant & Chainey – For some seams the coal plies can vary in thickness over short distances. The interpretation between drillholes could vary from the in situ. – Uncertainties in the geological models are associated with the north-south trending reverse faults in the highly structured area in Stratford West (near the Co-disposal area) and in the north of Grant & Chainey. Normal and reverse faults have been intersected in all areas and those identified are reasonably understood. Other faults may exist but they are unlikely to be major features. Avon North Resources are now based on the Stratford 2015 model and due to the new data and updated structural interpretation, confidence in the structural interpretation in this area has increased. – The sill in the Avon seam in Grant & Chainey is intersected by a number of holes and is thought to be reasonably understood, however there could be irregularities between holes. – There is limited coal quality data for a number of plies and some areas. Default values were sometimes heavily relied upon for the Resource estimate. – The Coal Resource is variable at Stratford and Grant & Chainey due to changes in seam thickness, seam splitting, faults (reverse, normal and growth) and changes in seam dip. With the amount of drillhole data in the area and the information from mined areas it is not likely there is an alternative structural interpretation in the Resource

Criteria	JORC Code explanation	Commentary
		areas; the exception to this is in Grant & Chainey if new coal quality data showed very poor results. ▪ Co-disposal area – There is confidence in the interpretation of the volume/area. This material was emplaced onto a known surface (original topography) and accurate survey of the upper mined surface is undertaken at intervals. Mapping of the Resource was undertaken by the site superintendent/senior site geologist in 2012. The uncertainty of the interpretation lies in the consistency of the quality and amounts of coarse versus slimes material. The model makes no distinction between coarse co-disposal and slime material. Both these materials can be used in the plant feed, but in different ways.
Dimensions	▪ *The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.*	▪ Duralie – The area is approximately 6 km long by 3 km at its widest and 750 m wide at the southern end of the syncline where the nose of the fold is present. Resources were estimated below base of weathering or to the mined surface/tonnes (end September 2017). The Weismantel seam Resources were estimated to depths of 500 m below the surface. Resources for the Cheerup and Clareval seams are generally < 200 m except for the Clareval Bowl area, where Resources are <300 m. ▪ Stratford – The area is approximately 4 km wide by 6 km long. A thin south-eastern strip (Clareval seam) extends a further 2 km into the Grant & Chainey area but is historically part of Stratford. Resources are limited to below the base of weathering or the mined surface as at 30 June 2014 (from June 2014 to December 2017 mining at Stratford largely occurred in the Co-disposal area, where Resources were updated by depletion of mined tonnes). Resources at depth are limited to 150 m or 200 m below the original topography surface (largely controlled by drillhole data). ▪ Grant & Chainey – The area covers a north-south strike length of approximately 11 km with an east-west width of approximately 1 km, from the southern limit of Stratford to the Avon seam crop at the nose of the syncline. The upper limit of Resources is the base of weathering surface (no mining has occurred at Grant & Chainey) and the lower limit is a maximum depth of 200 m depth below topography (largely controlled by drillhole data). – There is much variability across the Resources due to changes in seam thickness, seam splitting, faults and changes in seam dip. ▪ Co-disposal area – Covers an area of approximately 500 m wide 800 m long. The Resource is limited at depth by the original topographic surface (approximately <20 m below the current surface).

Criteria	JORC Code explanation	Commentary
Estimation and modelling techniques	▪ *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.* ▪ *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.* ▪ *The assumptions made regarding recovery of by-products.* ▪ *Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).* ▪ *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.* ▪ *Any assumptions behind modelling of selective mining units.* ▪ *Any assumptions about correlation between variables.* ▪ *Description of how the geological interpretation was used to control the Resource estimates.* ▪ *Discussion of basis for using or not using grade cutting or capping.* ▪ *The process of validation, the checking process used, the comparison of model data to drillhole data, and use of reconciliation data if available.*	▪ Duralie – The geological model for Duralie (DUR_0614) was produced in 2014, using Minex software (Version 6.3). The computer model was created using drillhole intersections, seismic information reprocessed in 2004 and pit pick up data for the Weismantel seam (to April 2014). Largely reverse faults were not specifically modelled but reasonably closely spaced drillhole data allowed control of gridding. This model was used for most of the Duralie Resource area. In 2016 an updated model was produced over the LOM area to incorporate new drilling and update the structural interpretation. This model (DURmicro16) was used for this Resource and Reserve estimation. – Resources were estimated in Minex software using thickness grids and in situ density grids (or default density values where gridded data was not available) from the uncut model (DUR_0614 or DURmicro16). Coal seams were limited to below base of weathering grid combined with the end of September 2017 mined surface within vertical sided polygons. To update Resources to December 2017, forecast tonnes from October 2017 to December 2017 were subtracted from the Resource estimate. – Clareval seam Resources were limited to a maximum depth of 300 m (<300 m west limb and <200 m east limb, largely controlled by drillhole data). Weismantel seam Resources were limited to 500 m depth of cover. Resources are not extrapolated beyond drillhole data. – Seam thickness grids were gridded on a 5 m (DURmicro16) or 10 m mesh (DUR_0614) using Minex growth techniques. Raw quality grids were gridded on a 50 m mesh using inverse distance squared gridding methods. – No minimum seam thickness was applied to the Weismantel seam as this seam is generally a 10 m - 12 m thick seam across the deposit. A minimum seam thickness was applied to the Cheerup and Clareval seam of 0.1 m (this would only exclude minimal tonnes). No quality limits were applied to the Resource as current mine practices wash all coal from Duralie and blend if required at the Stratford CHPP. ▪ Stratford – The computer models for Stratford West (WCR0811), Avon North (STRAT0315) and Stratford East (SE0512) were generated using Minex software. The computer models were created using drillhole intersections, fault interpretations (although a number of faults were not modelled due to minor offset or limited interpreted extent) and trend lines to control the synclinal structure. Not all faults in Resource areas were specifically modelled but the drillhole data allowed to control the seam elevations (there could be some discrepancies between drillholes and grids but the overall tonnage is reasonable). Faults in WCR0811 model were modelled as vertical faults. STRAT0315 (Avon North) reverse fault were modelled using 3D faulting software and modelled as steeply inclined reverse faults or vertical normal faults. For Stratford East, no faulting was incorporated into the model, however faults are expected (probably minor in extent and offset and/or insufficient data to interpret laterally).

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		– Resources were estimated in Minex software using thickness grids and in situ density grids (or default density values where gridded data was not available) from the current models (WCR0811, STRAT0315 and SE0512). Coal seams were limited to below base of weathering grid combined with the end of June 2014 mined surface, within vertical sided polygons. Essentially no mining has occurred in Roseville West and Bowens Road North pits since July 2014. – Resources were limited to a maximum depth of 150 m (Stratford West) or 200 m (Avon North, Stratford East) (largely controlled by drillhole data). Resources were not extrapolated beyond drillhole data. – Seam thickness grids were gridded on mesh sizes of 10 (WCR0811) or 15 m (STRAT0315 and SE0512), depending on average drillhole spacing or structure, using Minex growth techniques. Raw coal quality grids were modelled on 50 (SE0512) or 100 m (WCR0811) mesh sizes, extrapolated 250 m from drillhole data. No raw coal quality grids have been developed for the STRAT0315 model at this time (default values are used for the Avon North Resource estimate). – No minimum seam thickness was applied to the estimate to allow maximisation of the Reserve estimate (due to the numerous plies in the deposit/splitting and coalescing, applying a minimum ply thickness in previous works limited Reserve studies from accessing all potential coal). No quality limits were applied to the Resource as current mining practices mine coal thick enough for the equipment being used and the coal is washed and potentially blended. ▪ Grant & Chainey – The Minex computer model generated in August 2012 (GC_0812), incorporating all current drillhole data in the Resource areas, was used for Resource estimation. No mining has occurred in the area (in the northern limit of the area there is a portion covered by mine rehabilitation) and the original topography surface was used. The base of weathering was developed from visual base of weathering in drillholes. – The model was produced using drillhole seam intersections, the current fault interpretation and trends lines to assist modelling the syncline structure. Not all faults were specifically modelled but the drillhole data allowed to control the seam elevations. Any faults modelled were modelled as vertical faults. Confidence is highest in the Bowens Road and Avon seams due to the number of drillhole intersections. Structural grids were gridded on a 20 m mesh and quality on a 100 m mesh. – Resources were estimated in Minex software using thickness grids from the uncut model (GC_0812) limited to below base of weathering and in situ density grids or default density values where gridded data was not available. Resources were estimated within vertical sided polygons, to a maximum depth of 200 m below topography. Resources are not extrapolated beyond drillhole data. – No minimum seam thickness was applied to the estimate to allow for maximisation of the Reserve estimate. No quality limits were applied to the Resource as current mining

Criteria	JORC Code explanation	Commentary
		practices mine coal thick enough for the equipment being used and all coal is wash and, if required, blended. ▪ Co-disposal area – The computer model for the Co-disposal area is not a traditional geological model, due to the nature of the material. The model was generated in Minex software (version 6.1) in late 2012. The model consists of upper and lower triangulated surfaces of the reject emplacement area. The basal triangulation surface covering Cells 1-3 was produced from the original topography surface (onto which the material was deposited). The upper triangulation surface was produced from a DTM based on the end of June 2012 aerial photography. – The Resource estimate was undertaken by estimating the volume between the triangulated end of June 2012 surface and original topography surface within vertical sided polygons defining the boundaries of Cells 1-3. A deduction of 10% was applied to the northern area of – Cell 2 to account for waste material included in this area. A default density value of 1.10 g/cc was applied to the volume estimate to produce a tonnage. Originally the cells were capped with waste material and previous estimates accounted for waste capping in surveyed surfaces. No capping material remains covering the cells. – The 2012 and 2009 Resource estimates were reconciled to mined tonnes and other changes and provided confidence in the estimate and parameters used (largely the default density value). See below AUDITS AND REVIEWS. For 2014 - 2017, the Resource estimate was updated by depletion of mined tonnes.
Moisture	▪ *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	▪ Duralie, Stratford and Grant & Chainey – Coal tonnages were estimated at an in situ moisture basis (estimated to be at 6% moisture). Reported qualities are at a constant moisture basis (standardised estimate of air dried moisture) of: ○ 1.5% for Duralie and Stratford East (Weismantel-Clareval seams). ○ 2.5% for Stratford West, Avon North, and Grant & Chainey (Marker 7-Parkers Road seams). ▪ Co-disposal area – The co-disposal material was emplaced. The Resources were estimated using a default density for wash plant reject material. The moisture basis would equivalent to in situ.
Cut-off parameters	▪ *The basis of the adopted cut-off grade(s) or quality parameters applied.*	▪ All areas – No coal quality limitations were applied to any of the Resource areas. Current mining practices take most coal sections thick enough for the equipment being used and the coal is washed and, if required, blended mined coals to produce a variety of products (including coking/ thermal, low/moderate/high sulphur products).

Criteria	JORC Code explanation	Commentary
		▪ Duralie – No minimum seam thickness was applied to the model. For Resource estimation a minimum seam thickness is not relevant for the Weismantel seam, as at Duralie this seam has a thickness in the order of 10 m - 12 m. For the Cheerup and Clareval seams a minimum seam thickness of 0.1 m was applied to the Resource estimate. This would only exclude a small tonnage of coal. This limit may be removed in future Resource statements to bring in line with other Stratford Duralie sites (Stratford and Grant & Chainey). ▪ Stratford and Grant & Chainey – No minimum seam thickness was applied to the model or Resource estimate. Previous Resource estimates used a minimum seam thickness of 0.1 m (the thin limitation was based on thin seam mining which had been used in Roseville West Pit). No minimum seam thickness was used in this current Resource estimate. This was to allow Reserve studies to maximise the Resource, which can have closely spaced, thin bands of coal or thin bands of coal near thick intersections of coal. The removal of this minimum thickness limitation was requested by the 2017 Reserves Competent Person. Removing this limitation increased the Resource estimate by <2%, which is not considered material. ▪ Co-disposal area – No cut off-parameters were applied to the Resource estimate; however a deduction was applied to Cell 2 to account for waste material in this area.
Mining factors or assumptions	▪ *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.*	▪ Duralie – Currently open cut mining methods are used at Duralie in the Weismantel, Cheerup and Clareval seams. Current mining depths are 115 m below original topography in the Weismantel seam pit and 150 m in the Clareval Bowl area. It is expected this method will continue for 'shallow' Coal Resources. The actual limit of open cut mining is a Reserve issue, depending on coal price and geotechnical issues. For Resources in the deeper parts of Weismantel seam, it is assumed mining will be by underground mining methods, including bord and pillar, hydraulic mining, etc. taking into account the relative steep dip of the seam. – Clareval seam Resources at Duralie are limited to depths of 200 m - 300 m below original topographic surface (largely controlled by drillhole data). With strip ratios in the order of 8:1, to depths of 200 m, it is possible that in the future (<50 years) these Resources will be viable. – The Weismantel seam is mined in two passes (approximately top 3 m - high sulphur pass, lower part of the seam (several metres) - low sulphur pass). Stone parting plies are included in the Resource estimate of this seam as the generally thin parting plies are mined as part of the ROM coal. The Clareval seam is also mined in two passes (top 3 m - 4 m - high sulphur pass (difficult to determine for in the Clareval Bowl pit),

Criteria	JORC Code explanation	Commentary
		lower part of the seam - low sulphur pass). Dilution in mining the Clareval seam in the Bowl area is expected due to the highly structured nature of the seam. ▪ Stratford – Mining at Stratford has been by open cut mining methods. It is assumed remaining coal Resources at Stratford will be extracted by open cut methods. Resources at Stratford are limited to depths of 150 m (Stratford West) or 200 m (Avon North and Stratford East) below original topographic surface (largely controlled by drillhole data). Mining depths reached in the Stratford Main pit and Bowens Road pit were 125 m and 120 m from topography respectively. Approximate strip ratios in the order of 6:1-10:1 indicate it may be possible that Resources to depths of 200 m may be economic in the future (<50 years). – In Roseville Extension and Roseville West pits, thin seam mining was used to extract the coal plies (coal bands down to 0.15 m thick were mined). Small mining equipment was used to achieve this. In BRN Pit the Marker plies were mined at thicknesses down to 0.2-0.3 m. Due to the nature and coking quality of the coal a lot of care was taken in recovering the coal. – Resources are estimated for in situ coal seams that occur beneath the co-disposal material. It is assumed the co-disposal material will be completely extracted before mining the underlying seams. The geological model for Stratford West used the base of weathering below the original topographic surface in this area for Resource estimation. – Coal Resources have been limited by the mined surface as at the end of June 2014. In areas around some of the completed pits (e.g. Roseville Pit, Bowens Road West Pit) Resources have been estimated below/adjacent to the pits. No buffer zone was applied to allow mining studies to determine Reserve limitations and future mining opportunities. – Mine infrastructure, such as the Stratford East Dam over some of Stratford East, was not used to limit Resources to allow mining studies to determine viability. The exception to this was coal under the main Stratford mine infrastructure (the wash plant, stock piles, ROM pad, and coal handling facilities). This exclusion zone has removed approximately 1.5 Mt of potential Indicated and 0.8 Mt of potential Inferred Resources from the Marker 3 - Bowens Road seams. ▪ Grant & Chainey – The same coal seams and similar geology occur at Grant & Chainey as Stratford Mine and it is assumed Coal Resources at Grant & Chainey will be extracted by open cut mining methods, as at Stratford Mine. Resources at Grant & Chainey are limited to depths of 200 m below original topographic surface (largely controlled by drillhole data). Approximate strip ratios in the order of 10:1 indicate it that Resources to depths of 200 m may be viable in the future (<50 years).

Criteria	JORC Code explanation	Commentary
		▪ Co-disposal area – The material in the Co-disposal area has been mined by open cut methods and incorporated into the plant feed at Stratford CHPP for more than 15 years. Due to the depths of the material (<20 m from surface) it is expected this mining method will continue with the remaining Resource.
Metallurgical factors or assumptions	▪ *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.*	▪ Duralie – Coal at Duralie is currently mined in separate passes so that washing can produce a combination of washed moderate and high sulphur thermal and coking products. The Weismantel and Clareval seams have similar quality properties – high sulphur section at top of seam (approximately a third to a quarter of the seam) with generally moderate sulphur in the lower section of the seam. This coal can be blended with low sulphur co-disposal material from Stratford mine site. ▪ Stratford and Grant & Chainey – A combination of washed low/moderate sulphur coking and thermal products have been produced from Stratford Mine coal seams, and they can be blended with Duralie coal seams to reduce sulphur on Duralie coal. Many of the seams occurring at Grant & Chainey have been mined at Stratford (including Marker 3 - Bowens Road seams and Avon - Triple seams). – Raw and float/sink coal quality results from drillhole data indicate both coking and thermal coal products can be derived from the Coal Resources. It is assumed that all coal mined at Stratford and Grant & Chainey will be washed at the Stratford CHPP and if required blended to produce a variety of products. – The Marker 7 - Marker 1 and Avon - Parkers Road seams are expected to (and those mined in the past have) produce low/moderate sulphur coking products with a secondary low/moderate sulphur thermal product. The Bowens Road seam is largely a thermal coal but the lower plies have produced a coking product in the past. Data for the Cheerup and Clareval seams at Stratford indicate they will yield coking and thermal coals with moderate sulphur (some rare high sulphur). ▪ Co-disposal area – In the computer model no distinction was made between Coarse CODAM and slime material. These products are incorporated differently to the plant feed – slimes can be drip fed into all blends and coarse material blended with thermal coal.
Environmental factors or assumptions	▪ *Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts,*	▪ Mammy Johnsons River is a significant waterway. A 60 m buffer zone from this river was used to limit Resources to depths of 100 m (2.2 Mt of potential Indicated Resources were excluded from the Resource estimate). At depths greater than 100 m no buffer zone was used to allow mining studies to determine limitations and possible underground mining methods, including bord and pillar extraction.

Criteria	JORC Code explanation	Commentary
	particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.	▪ In general, environmental and infrastructure features such as waterways, roads, power lines, etc., have not been used to limit Resources at Gloucester Coal to allow mining studies at the time to determine the limits for Reserves and potential mining opportunities. At Duralie, a creek diversion was completed to extract the Weismantel seam and in the future this same process may be undertaken at Stratford or Grant & Chainey. Wenham Cox Road was diverted around BRN pit and in the Weismantel Pit at Duralie, the 132 kV power lines were raised to allow continuation of mining underneath. ▪ The Main Northern Railway line runs through the centre of the Duralie area. Through most of the area the railway would cross potential underground Resources of the Weismantel seam. In the southern most area of Duralie, the railway line crosses potential open cut Resources in the Weismantel seam (for a distance of approximately 400 m). While it is not likely that this line would be diverted, the railway line was not used as a limit to Resources, to allow mining studies to determine buffer zones. At Grant & Chainey, a small Resource area in the south occurs under the Main Northern Railway Line (approximately 600 m along the railway). If a 50 m buffer zone around the railway was used to limit Resources it would reduce Resources by approximately 0.6 Mt of Indicated and 0.1 Mt of Inferred (not considered material for this Resource estimate). ▪ Roads such as the Buckets Way, Duralie, Johnsons Creek, Terreel, Bowens and Wenham Cox roads were not used to limit Resources. While it may not be likely that the Buckets Way would be diverted, a limit was not used to allow mining studies to determine limiting parameters. The only Resources estimated under the Buckets Way are a small area of Inferred Weismantel Resources (approximately 400 m along the Buckets Way) in the north of the Duralie area and a small area containing 0.5 Mt of Inferred Marker 1 and Bowens Road Resources at Grant & Chainey. ▪ Creeks including Avondale Creek and Dog Trap Creek (Stratford) and Wards River (Grant & Chainey) were not used as limits to Resources. Nor the mine dams at Duralie or Stratford. ▪ At Duralie, a 132 kV transmission line trends north-south in the eastern edge of the Resource and then cuts across the area to the west and a 35 kV transmission line cuts a small area of Inferred Weismantel Resources at the north of Duralie. At Stratford, a 132 kV transmission line runs north-south partly through Stratford East Resources. ▪ Stratford Resources for the upper seams, (i.e. along the western limit), are located over 1 km from the centre of Stratford hamlet. A small area of Resources occurs under the Craven township. This is now a very small hamlet, where Gloucester Coal owns most of the properties. ▪ Biodiversity areas occur in the south and in a small area in the west of Duralie. The Biodiversity area in the south covers part of the potential sub-crop of the Clareval seam. There is no drillhole data in this southern area and so Resources have not been estimated. Proposed biodiversity areas have been determined as part of the Stratford Extension

Criteria	JORC Code explanation	Commentary
		Project (SEP). These areas extend over Resources in the northern part of Grant & Chainey and a small area of Stratford East.
Bulk density	▪ *Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.* ▪ *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.* ▪ *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	▪ Duralie, Stratford and Grant & Chainey – A mixture of Relative density and Apparent Relative density data was available from laboratory analyses. Only Relative density data was used in the database/gridding/Resource estimate. Relative density data was converted to an in situ moisture basis (estimated at 6% moisture) to account for loss of void spaces during testing. An ash versus density regression was determined to enable estimation of in situ density for all plies with raw ash data. – Where sufficient data was available in situ density grids were generated. Default in situ density values were determined for each ply from the available data to use where gridded data was not available. Default density values range from 1.35-1.60 g/cc. For stone parting plies of the Weismantel seam default density values used (when gridded data was not available) ranged from 1.80-2.1 g/cc. ▪ Co-disposal area – A default density of 1.10 g/cc was used as a reasonable density estimate for emplaced wash plan reject material.
Classification	▪ *The basis for the classification of the Mineral Resources into varying confidence categories.* ▪ *Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).* ▪ *Whether the result appropriately reflects the Competent Person's view of the deposit.*	▪ Core and non-core drillholes with downhole geophysical logs were considered points of observation for confidence in the deposit in conjunction with information from mined areas and supporting information from seismic data. ▪ The classification of Coal Resources in this report used the classification of Measured, Indicated and Inferred used in the previous Resource Estimate. The Resources classification from the previous Resource estimate was reviewed by reviewing the drillhole data, geological models, reconciliation data and detailed discussions with relevant site personnel and the previous 2017 Resources Competent Person. The conclusion of the review is that the previous Resource classification was appropriate. ▪ The classification in the previous Resource Estimate was based on the previous Competent Persons confidence in the estimate. The previous Competent Person has been heavily involved in the data checking and ply correlation process, structural interpretation, and construction of the geological models and compilation of the coal quality data for over 15 years at Stratford Duralie. Also involved in exploration data collection/supervision and in-pit work. The estimate classification is based on the confidence to identify coal plies between holes, understanding the changes/variability of the coal seams, the interpreted structure and how the computer model manages to 'model' the structure. In some structurally complex areas the model has not defined the faulted structure specifically (such as the Clareval Bowl or structurally complex area in Stratford West or Rombo/Parkers Road seams in the north of Grant & Chainey, where drillhole seam intersections were allowed to control seam elevation/thickness); however the drillhole spacing was sufficient to show coal seam continuity and reasonable confidence in tonnages to support the classification category. An

Criteria	JORC Code explanation	Commentary
		example of this is the Clareval Bowl area at Duralie. This is an extremely complex small synclinal structured area with numerous reverse faults and folds. In the early years of mining none of the faults had been modelled specifically; allowing the closely spaced drillholes to control the geology. Mining found on a day to day basis there were differences between the model and the actual structure encountered, but overall mined tonnes reconciled with modelled tonnes. From discussions with the Duralie site geologist at the time, the model underestimated the tonnage slightly as a result of repetition of coal seams because of thrust faulting. This area is covered by approximately 100 m spaced drill lines with holes averaging 50 m along these lines (supported by coal quality data). The confidence in this estimate is Measured. ▪ Often the availability of coal quality data on a ply basis is variable per seam due to core recovery or the ply not existing in the hole (minor upper and lower plies have rare quality data due to fewer drillhole intersections due to variability of these plies). In the absence of drillhole coal quality data, a history of nearby mining or geophysical log trends were used to support the classification. Sometimes the estimate of particular plies depended on default quality values. This was more common for Inferred Resources, but also used for Measured and Indicated Resources. Core holes often do not provide data on all plies in an intersected/sampled seam, due to either core recovery or variability in a seam. ▪ Duralie – **Measured Resources** – typical drilling density involved 100 m spaced east-west drill lines (range from 50 m - 150 m) with drillholes along these drill lines averaging 50 m spacing. Some fault delineation drilling down to 15 m spacing may be present. Cored holes are spaced approximately 200 m - 500 m apart. – **Indicated Resources** – 200 m - 500 m spaced east-west drill lines, with drillholes along the drill lines up to 300 m. Core holes are located generally 400 m - 1,000 m apart. – **Inferred Resources** – for Weismantel seam drillhole data is generally located at the edges of Inferred areas, rare data within these areas (up to 1,500 m apart). Core holes are rare in Inferred Resource areas however are generally adjacent/nearby to areas with core data. ▪ Stratford – **Measured Resources**: there is a small Measured Resource at Stratford in the Bowens Road seam (this is a consistent seam, which was mined extensively immediately north of the measured area). Holes are located on approximately 100 m spaced drill lines with holes along these lines 75 m - 100 m apart and with coal quality data available from holes or previous mining within 500 m. – **Indicated Resources**: holes were located on 200-300 m spaced east-west drill lines with holes along the lines 20 m - 200 m apart. For Avon North the holes were spaced on 100 m drill lines but were classified Indicated due to seam complexity and quality

Criteria	JORC Code explanation	Commentary
		data limitations. Core holes were 150 m to approximately 1,000 m apart or near mined areas of those seams. – **Inferred Resources**: drillholes up to 800 m apart with rare coal quality data. Some areas had far more closely spaced holes but quality data rare/absent. ▪ Grant & Chainey – **Measured Resources**: Drillholes are located on 100 m - 150 m spaced east west drill lines. Holes along drill lines are spaced 20-150 m. Core holes are located up to 400 m apart along strike due to the steeply dipping nature of seams. – **Indicated Resources**: Drillholes are located generally on 200 m spaced east west drill lines. Holes along these drill lines are 40 m - 150 m apart. Core holes are located generally 400 m - 800 m apart, but can be up to 1.5 km apart (often along strike due to the steeply dipping seams). At the nose of the seam sub-crops in the south, there is no coal quality data, however the spacing and grid of drillholes, coal quality data available in nearby areas on certain seams (including Bowens Road and Avon seams) and consistency of coal seam character determined from downhole geophysical logs, has enabled these Resources to be classified as Indicated Resources. – **Inferred Resources**: For some minor seams, drillholes are located as close as 200 m spaced east-west drill lines, however there may be little up-dip/down-dip data on the seam or inconsistency of the plies. For major seams, holes are spaced on drill lines up to 2 km apart. Core data is 500 m apart to rare on some minor seams, and sparse to rare for major seams (including Bowens Road and Avon seams). ▪ Co-disposal area – These Resources were classified as Indicated Resources due to the good quality of survey and mapping data, continuous emplacement of wash plant reject material into these cells from 1995 - 1999, a history and continued use of this material as feed to the Stratford Mine wash plant and coal quality results indicating usable products.
Audits or reviews	▪ *The results of any audits or reviews of Mineral Resource estimates.*	▪ No external review or audit of this Resource estimate.
Discussion of relative accuracy/ confidence	▪ *Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.* ▪ *The statement should specify whether it relates to global*	▪ Duralie, Stratford and Grant & Chainey – Due to the steep dip of strata, apparent seam thickness, faulting, folding, seam splitting and ply variability in places, holes are usually quite closely (often 50 m - 300 m apart). Quality data for a particular seam is usually available on a linear spacing (often along strike, where the seam is shallower). Drillhole spacing at Stratford Duralie is probably closer than most coal deposits elsewhere in Australia, due to the complex geology. – Although the structure can be variable the closely spaced drillholes and the confidence in the seam correlation and interpreted geology provide confidence in the tonnage estimates. Due to the structural complexity of this deposit, the experience of the previous Competent Person in relation to understanding the data, geology, exploration and mining at Gloucester Coal is a critical factor in the assessment of Resource

Criteria	JORC Code explanation	Commentary
	or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used. ▪ *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	confidence categorisation. The previous 2017 Competent Person was able to communicate that understanding the Competent Person for this Report and that understanding was consistent with the review completed. – The estimates are considered to be a global estimate. Coal Resources were estimated for areas populated with numerous drillholes, all data were used and a single data point would have little or no effect on the total Resource estimate. – All tonnages would be relevant to a technical and economic evaluation, however there could be coal with thin ply thickness which, in places, is relatively isolated in the stratigraphy pile with no economic value but included in the Resource estimate to allow for maximisation of the Reserve estimate (i.e. allow thin plies near other plies in the stratigraphic pile to be included). Working sections were not developed due to the number of plies/complex spitting/number of possible working section combinations and Reserve determination should be allowed to use coal price and the equipment selected to determine minimum ply thickness and interburden limits. In total coal <0.1 m at Stratford and Grant & Chainey is approximately 2% of the Resource estimate. – For the Duralie 2016 estimate, Resources reconciled reasonably well to 2015 Resource estimate, where the main difference in the estimate were mined tonnes, updates in the computer model and taking into account mining losses and dilution. For 2017 Resources where updated by depletion of mined tonnes, taking into account mining losses and dilution. – For Stratford, Coal Resources in 2014 were reconciled to previous Resource estimates, taking into account coal mined during that period. 2015 - 2017 no mining occurred at Stratford West, Avon North or Stratford East to compare production tonnes to the estimate. There has been no mining at Grant & Chainey. ▪ Co-disposal area – The Competent Person has reasonable confidence in the estimate of the Indicated Resource. The surveyed surfaced on which the tonnage is based is accurate and the material has a proven record of being incorporated into the plant feed. For 2014 - 2017 Resources were updated by depletion of mined tonnes, however for previous estimates the mined surface was reconciled with mined tonnes and compared well. – The estimate is considered a global estimate as the surfaces used in the estimate cover the entire area.

Section 4 Estimation and Reporting of Ore Reserves

The completed Table 1, Sections 4 is in response to the current ADV-BR-11019_Hunting Eagle_CPR Report completed in part by Competent Person, Mr Doug Sillar on behalf of RPM.

(Criteria listed in Section 1, and where relevant in Sections 2 and 3, also apply to this section.)

Criteria	JORC Code explanation	Commentary		
		Stratford	Grant and Chainey	Duralie
Mineral Resource estimate for conversion to Ore Reserves	▪ *Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.* ▪ *Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.*	▪ The Coal Resource estimate used as the basis for this Coal Reserves Statement is described as part of this statement. The Resource estimate has been prepared by Mr. Brendan Stats. The Competent Person, Mr. Stats, 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. ▪ The same geological model has been used for the estimation of Resources and Reserves.		
Site visits	▪ *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* ▪ *If no site visits have been undertaken indicate why this is the case.*	▪ A site visit was undertaken by representatives of RPM in April 2018. The Reserves Competent Person was unable to attend but interviewed the representative following the visit. The outcome of this visit was observation of the Asset area to better understand location, environmental, social, groundwater and existing infrastructure consideration. ▪ The site visit included a tour of both the Stratford and Duralie existing pits and proposed areas for development. ▪ The site visit also included discussion with Stratford Duralie personnel and handover and discussion of key mine planning information used for this report.		
Study status	▪ *The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.* ▪ *The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.*	▪ Coal is currently produced from the Duralie Mine with operations in the Stratford Mine about to recommence. Information such as loss and dilution, operating costs, revenue, coal yield and coal product qualities and offsite costs are all based on actual information. The mining data from site is at a level of detail equal to or greater than that required of a PFS. ▪ A report titled 'Gloucester Coal Basin Mine Planning Study" completed by RPM in 2014 is to a PFS level of details and generally represents planned operations. ▪ For areas where proposed pits are included in the Reserves, a life of mine plan has been completed using site actual data as a guide. The mine plan is considered by the Competent Person to be technically achievable and economically viable using the actual site inputs.		
Cut-off parameters	▪ *The basis of the cut-off grade(s) or quality parameters applied.*	▪ Gemcom Minex Pit Optimiser software was used to estimate the open cut economic pit limits in 2017 by the previous Competent Person. Cost inputs were based on existing Duralie operations. Yancoal provided input into cost, revenue and exchange rate assumptions. RPM have confirmed these pits shells are representative of the economic coal based on a break-even strip ratio analysis. The break-even strip ratio is variable by pit and typically ranges from 9-10 bcm:t.		
Mining factors or assumptions	▪ *The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or*	▪ The selected mining method is a conventional truck and excavator mining method based on the targeted mine production and strip ratio of the deposit, with expit and inpit dumping of waste. This method is considered appropriate based upon geology and strip ratio and is the mining method currently used at the operational Stratford Duralie pits.		

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Criteria	JORC Code explanation	Commentary		
		Stratford	Grant and Chainey	Duralie
	detailed design). ▪ *The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc.* ▪ *The assumptions made regarding geotechnical parameters (eg pit slopes, stope sizes, etc), grade control and pre-production drilling.* ▪ *The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).* ▪ *The mining dilution factors used.* ▪ *The mining recovery factors used.* ▪ *Any minimum mining widths used.* ▪ *The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.* ▪ *The infrastructure requirements of the selected mining methods.*	▪ The mine plans have been based on seven geological models prepared in Gemcom Minex format: WCR_0811, CODAM_0912, SE_0512, StratfordStrat_0315model, GC_0812, DuralieMicromodel0716 and DU_0714. ▪ The mining factors used were: – Minimum parting mining thickness of 0.3 m; and – Global loss of 5%. ▪ RVW coal plies are deemed non-viable when two of the following conditions are met: – The incremental stripping ratio is greater than 10:1; – The coal thickness is less than 0.5 m; and – The underburden thickness is greater than 5 m. ▪ RPM consider these reasonable for the style of deposit and mining methods and equipment proposed. ▪ The dilutant material had a relative density of 2.1 t/cum and an ash of 80%. ▪ Pit Optimisation, pit design and LOM planning have been completed as the basis for converting Coal Resources to Coal Reserves. Geovia Minex Pit Optimiser software was used to estimate economic pit limits, and modified through practical pit design for all pits except RVW which was based on the optimiser result directly. ▪ Inferred Coal Resources are included in the pit optimisation and LOM production schedule, but are not converted to Coal Reserves. ▪ Pit slopes for existing pits were based on surveyed actual slopes and previous geotechnical advice supplied by Yancoal. For proposed pits, slopes between 40° and 45° were used for unweathered waste. ▪ Relative density data in the geological model is based on in situ moisture of 6%. Washed product coal has a moisture of 8%.		
		▪ 200 m offset on SE northern endwall from Stratford East Dam. ▪ Minimal additional infrastructure required. New waste and coal haul roads.	▪ 100 m offset from Wards River and Bucketts Way. ▪ Access though excavation face and dump face ▪ New coal haul road from pit to Stratford ROM stockpile required.	▪ 300 m offset from Bucketts Way. ▪ Access though excavation face and dump face ▪ ROM coal will be crushed at the Duralie crusher and then transported to the coal processing plant.

Criteria	JORC Code explanation	Commentary		
		Stratford	Grant and Chainey	Duralie
		▪ The coal will be transported to the Port of Newcastle using the existing train load-out facility and rail network.		
Metallurgical factors or assumptions	▪ *The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.* ▪ *Whether the metallurgical process is well-tested technology or novel in nature.* ▪ *The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.* ▪ *Any assumptions or allowances made for deleterious elements.* ▪ *The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the ore body as a whole.* ▪ *For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?*	▪ All coal is washed through the Stratford CHPP which is a dense medium type coal preparation plant producing a number of coal products. The metallurgical process to generate marketable coal has been operated successfully on the site for a range of seam types over a period of 17 years. The dense medium coal processing techniques and equipment employed at the Stratford CHPP (SCPP) are widely and successfully used across the coal industry. ROM coal will be crushed at the Stratford ROM crusher and then transported to the coal processing plant. ▪ A new Powerscreen is proposed to be used for specific seams such as Deards and Cloverdale to remove thin partings allowing bulk mining of the seams. Expected yield and mining cost improvements have not been modelled at this stage until actual data can be produced from processing trials. ▪ The site is currently operated with saleable products being produced after processing at the Stratford CHPP. ▪ For all mining areas Measured Coal Resources were downgraded to Probable Reserves due to the limited availability of laboratory washability test results from drillhole data. Significant historical washability data has been recorded for the range of seams processed at the SCPP and was the basis for metallurgical assumptions used in the mine planning process. As additional washability data is made available from the exploration drilling process and the coal quality variation across modelled areas is better understood, there will be increasing confidence associated with the application of the metallurgical factors.		
Environmental	▪ *The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.*	▪ Yancoal developed non-acid forming/potential acid forming (NAF/PAF) geological models for the Duralie and Stratford areas allowing selective waste placement within dumps where acid generating wastes are fully encapsulated by inert materials. Scheduling activities onsite are now focused on locating these waste materials as part of day to day planning operations. ▪ Duralie Operations are approved through till the end of 2021 (Application Number 08_0203). ▪ Additional approvals will be required for the full development of the Stratford South Avon pit and the expansion of the Avon North and Roseville West pits as they are larger than current SEP approvals. Approvals should be achieved within the scheduled development timeframe. ▪ Duralie East pit requires approval. ▪ Rejects will be managed on site as per current approvals. ▪ Water management will be managed on site as per current approvals. ▪ Waste water will be stored in appropriate facilities and disposed of or treated for recycling in accordance with current environmental approvals.		

Criteria	JORC Code explanation	Commentary		
		Stratford	Grant and Chainey	Duralie
Infrastructure	▪ *The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.*	▪ RPM have not undertaken an infrastructure assessment as part of the 2017 Coal Reserves Estimate however it is recognised that minimal additional infrastructure will be required for development of the various open cut mining sites. ▪ An operational CHPP is already available within the Stratford Mining Complex and would process coal from all proposed operations. ▪ Small scale surface facilities would be required for mining activities in the Duralie East area. ▪ Additional mining and coal haulage roads will need to be established for proposed pits that would enable transport of coal to the Stratford CHPP. ▪ Some power lines need to be elevated for the development of Stratford East. Gloucester has completed preliminary discussion with power line owner Transgrid and this process has successfully been applied historically at Duralie. ▪ Stratford Duralie own the majority of the land for the proposed mining and infrastructure areas to be developed in the currently stated Reserves. Some small additional land purchases are required however, Yancoal believe these purchases are achievable and are not a constraint on the proposed mine plans. ▪ Water supply through rainwater harvesting and pit dewatering is planned. The primary water requirement at the site is for dust suppression. ▪ The forecast work force are primarily Yancoal employees and the cost modelling reflects an owner/operating mining operation.		
Costs	▪ *The derivation of, or assumptions made, regarding projected capital costs in the study.* ▪ *The methodology used to estimate operating costs.* ▪ *Allowances made for the content of deleterious elements.* ▪ *The source of exchange rates used in the study.* ▪ *Derivation of transportation charges.* ▪ *The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.* ▪ *The allowances made for royalties payable, both Government and private.*	▪ All major infrastructure is in place. Capital forecasts have been included which represent the growth and sustaining requirements for the completion of the LOM plan. ▪ All operating costs are based on LOM planning estimates from Yancoal and have been reviewed by RPM. ▪ Current long-term exchange rate assumptions were provided by Yancoal. ▪ Transport charges based on actual contracted prices taking into account existing Take or Pay arrangements. ▪ NSW state government royalties are included in the estimate. ▪ RPM reviewed all costs and they are considered reasonable.		
Revenue factors	▪ *The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc.* ▪ *The derivation of assumptions made of metal or*	▪ Long term product coal pricing assumptions have been provided by Yancoal Marketing and is based on independent third party research and reporting. ▪ The revenue factors are considered reasonable for the purposes of estimating Reserves.		

Criteria	JORC Code explanation	Commentary		
		Stratford	Grant and Chainey	Duralie
	commodity price(s), for the principal metals, minerals and co-products.			
Market assessment	▪ *The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.* ▪ *A customer and competitor analysis along with the identification of likely market windows for the product.* ▪ *Price and volume forecasts and the basis for these forecasts.* ▪ *For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.*	▪ A Marketing Study has not been reviewed however markets are well established for the mine's coal products. The projects typically produce up to two main products: – Thermal at approx. 22 - 24% ash (ad); and – SHCC at approx. 9.9 – 10.5% ash (ad). ▪ Based upon these products and specifications, RPM anticipates no foreseeable issues in demand for these products.		
Economic	▪ *The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc.* ▪ *NPV ranges and sensitivity to variations in the significant assumptions and inputs.*	▪ The inputs to the economic analysis are 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 have been used in assessing NPV. ▪ The NPV results for the Project 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. ▪ Sensitivity analysis has been completed on the Project over a range of variable. The Project is most sensitive to changes in exchange rate, revenue and operating costs.		
Social	▪ *The status of agreements with key stakeholders and matters leading to social licence to operate.*	▪ The SEP was approved on the 29th May 2015 by the NSW Planning Assessment Commission with operating consent until 31st December 2025. ▪ The Coal Reserves quoted in this document differ from the extent and sequencing in the SEP and a revision of Stratford consent conditions will be required. This is not considered as a critical issue by the Competent Person based on historical precedent of approvals.		
Other	▪ *To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:* ▪ *Any identified material naturally occurring risks.* ▪ *The status of material legal agreements and marketing arrangements.* ▪ *The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received*	▪ 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 operation's viability. ▪ The coal that is currently approved is mined first in the LOM schedule (Duralie West pits and SEP). ▪ Updating of approvals is a continual process and it is reasonably expected that any modifications to existing agreements or additional agreements that may be required can be obtained in a time periods modelled.		

Criteria	JORC Code explanation	Commentary – Stratford / Grant and Chainey / Duralie
	within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.	
Classification	▪ *The basis for the classification of the Ore Reserves into varying confidence categories.* ▪ *Whether the result appropriately reflects the Competent Person's view of the deposit.* ▪ *The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).*	▪ Coal Reserves are primarily supported by Indicated Resources with only minimal Measured Resources estimated in the deposit. These have been classified as Probable Reserves due to the Measure Resources lying outside currently approved operations and an absence of modelled yield data. The Inferred Coal Resources have been excluded from the Reserve estimates.
Audits or reviews	▪ *The results of any audits or reviews of Ore Reserve estimates.*	▪ Internal peer review of the Reserves Report has been completed.
Discussion of relative accuracy/ confidence	▪ *Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate.* ▪ *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* ▪ *Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage.* ▪ *It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	▪ The pit shell is based only on Probable Coal Reserves. ▪ The basis of the estimate are actual operating costs and LOM planning. ▪ CHPP and infrastructure are in place and operating. ▪ Analysis of the coal quality has been undertaken by independent laboratories working under international standards of method and accuracy. ▪ 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. ▪ Geotechnical studies have been completed for existing pits. ▪ Modifying factors that could potentially impact the Coal Reserve estimate include: – Forecast pricing and exchange rate; – Geotechnical uncertainty with the deeper Stratford pits; – Limited raw quality data for Avon North; and – Yield assumptions.

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ORC Code, 2012 Edition – Table 1 report template

The completed Table 1, Sections 1, 2 & 3 are in response to the current ADV-BR-11019_Hunting Eagle_CPR Report completed in part by Competent Person Mr Brendan Stats on behalf of RPM.

Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	▪ *Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.* ▪ *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* ▪ *Aspects of the determination of mineralisation that are Material to the Public Report.* ▪ *In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.*	▪ Coal samples were taken from cored drillhole intersections. Core sample size is generally HQTT (61 mm). HQTT coring is a coal industry standard technique to maximise core recovery and ensure sample representivity. ▪ Almost all exploration holes that intersected the Greta seam were geophysically logged and have hard copy down hole geophysics available in drill log folders on site at Austar. The typical geophysical logging suite comprises density, caliper, gamma, neutron, sonic, verticality. Very old (1970's) core holes in the north of EL6598 do not have down hole geophysics. ▪ The Greta seam has been sampled on a ply by ply basis using density geophysical log responses to determine sample intervals. Due to differing eras of drilling plus gradational changes within the Greta seam from west to east, the correlation of individual plies may not be consistent across the leases. ▪ Since LTCC extraction recovers the full Greta seam, Austar has merged all previous borehole ply correlations into one standard system comprising three basal plies each 1 m thick each, and up to eight consecutive 0.5 m thick plies to the seam roof, which gives them the capability to assess standard longwall operations and longwall top coal caving (LTCC) options. The current longwall operations do not use LTCC due to the high total sulphur content of the upper plies of the Greta seam, but LTCC is proposed for the Stage 3 area..
Drilling techniques	▪ *Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	▪ The depth to the Greta seam, ranges between 500 and 760 metres in the Stage 3 area. Almost all holes were cored (HQTT core) to recover core samples from the Greta seam plus roof and floor strata. Some non-core holes were drilled for structural investigation of faults that were interpreted from 2D seismic data. Some holes were fully cored (HQTT) from surface to acquire geological and geotechnical information for the full stratigraphic sequence.
Drill sample recovery	▪ *Method of recording and assessing core and chip sample recoveries and results assessed.* ▪ *Measures taken to maximise sample recovery and ensure representative nature of the samples.*	▪ Core recovery for the Greta seam in most holes has been greater than 95%. Core recovery is measured at the drill rig by comparison of drill run length to the core recovered length. This calculation is audited and confirmed by down-hole geophysics (density log) by the geologist. In boreholes where core recovery has been less than 90%, the hole has been

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Criteria	JORC Code explanation	Commentary
	▪ *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	redrilled. HQTT is the standard method of core drilling which follows standard industry practices and maximises coal seam recovery with minimal disturbance. ▪ No bias in coal quality due to recovery has been identified and due to the high core recovery, any bias is considered unlikely or immaterial.
Logging	▪ *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* ▪ *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* ▪ *The total length and percentage of the relevant intersections logged.*	▪ Lithological logs are available for almost all drillholes. Some early NER non-core structure holes did not have logs but down hole geophysical logs are available. Logging of Maitland Group overburden strata may be of lesser detail as it is mostly non-core drilled. Core logging of roof/floor strata as well as the Greta seam has been detailed. Geotechnical logs are available from 1999. Core photography from pre 1999 holes are not available however since that time core photography has been standard procedure.
Sub-sampling techniques and sample preparation	▪ *If core, whether cut or sawn and whether quarter, half or all core taken.* ▪ *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* ▪ *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* ▪ *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* ▪ *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.* ▪ *Whether sample sizes are appropriate to the grain size of the material being sampled.*	▪ Coal core of the Greta seam is divided into plies using down hole geophysics and then sampled. The entire cored section of each ply is placed in sample bags. No splitting or sawing of coal core takes place. No sample preparation takes places outside the laboratory. Coal quality analytical laboratories used to analyse Greta seam coal comply with Australian Standards for sample preparation. ▪ Sample sizes are considered appropriate for the material being sampled.
Quality of assay data and laboratory tests	▪ *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* ▪ *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.* ▪ *Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.*	▪ Laboratories used to analyse Greta seam cores have complied with Australian Standards for coal quality testing and are certified by the National Association of Testing Authorities Australia ("NATA"). ▪ Wireline logging companies that ran down-hole geophysical tools for past and present exploration have, as standard operating procedures a calibration process which takes place on a regular (monthly) basis. ▪ Surface seismic survey data acquired in the past at Austar is of high quality and has proved reliable in identifying faults in advance of mining and defining seam continuity between drillholes. The extensive network of seismic coverage has significantly improved confidence in the overall structural interpretation and continuity of the Greta seam. Seismic survey data was all reprocessed by geophysicist J Saunders, who specialises in seismic interpretation. The favourable nature of overburden strata above the Greta seam allows for capture of very

Criteria	JORC Code explanation	Commentary
		high quality seismic data. More recently, geophysicist G Fallon has also reprocessed seismic data.
Verification of sampling and assaying	▪ *The verification of significant intersections by either independent or alternative company personnel.* ▪ *The use of twinned holes.* ▪ *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* ▪ *Discuss any adjustment to assay data.*	▪ Laboratories used to analyse the Greta seam cores have complied with Australian Standards for coal quality testing and are NATA certified. Repeat sampling on a regular basis to validate results is standard procedure for proximate analysis testing.
Location of data points	▪ *Accuracy and quality of surveys used to locate drillholes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* ▪ *Specification of the grid system used.* ▪ *Quality and adequacy of topographic control.*	▪ Drillhole collars over the last 17 years were surveyed by registered surveyors using GPS total station equipment. Previously drill hole surveys were carried out by registered surveyors using theodolite survey instruments. Topography data is from the Department of Lands (supplied 2007). Drill hole collar and topographic data is considered to be suitable for underground evaluation purposes.
Data spacing and distribution	▪ *Data spacing for reporting of Exploration Results.* ▪ *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* ▪ *Whether sample compositing has been applied.*	▪ In the northern portion of CML2, core hole spacing ranges from approximately 250 m - 600 m while in the southern portion of CML2 core hole spacing ranges from 600 m to 1,200 m. In CCL728 core hole spacing is approximately 1,000 m. In EL6598 core hole spacing ranges from 1.0 km - 3.6 km. In addition to drillhole data, an extensive array of seismic survey lines (>100 km) over CML2 and CCL728 provides support for seam continuity. ▪ The amount, type and spatial distribution of data is sufficient to establish the degree of geological and grade continuity appropriate for the Coal Resource classification applied in this estimate. ▪ Coal quality results for individual samples have been composited against the seam or working sections intervals, so that the quality values represent the corresponding seam/working section.
Orientation of data in relation to geological structure	▪ *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* ▪ *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	▪ Orientation of core samples is not relevant to this style of coal deposit. All drillholes were vertical and the coal seam has almost horizontal (4° dip to the southeast. All core samples are from vertical drillholes which are oriented almost orthogonally (85°) to the target Greta seam. No sampling bias has taken place. ▪ Borehole verticality surveys have been incorporated into the modelled boreholes where available.
Sample security	▪ *The measures taken to ensure sample security.*	▪ Coal core sample bags are sent to the coal testing laboratory via courier. In the past they have also been delivered to the laboratory by the field geologist or picked up from site by laboratory personnel. This is considered appropriate for coal core samples.

Criteria	JORC Code explanation	Commentary
Audits or reviews	▪ *The results of any audits or reviews of sampling techniques and data.*	▪ The drillhole information was reviewed as part of the process of developing the geological and coal quality models used for this Resources estimate. No external audits or reviews are known to have been completed.

Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	▪ *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* ▪ *The security of the tenure held at the time of reporting along with any known impediments to obtaining a license to operate in the area.*	▪ Austar holds title to CCL728, CML2, ML1661, ML1666 and EL6598. The first four titles allow Austar to mine the Greta seam at depth whilst EL6598, which overlies portions of CCL728, CML2 and all of ML1661 and ML1666 provides access to the surface to conduct exploration. – CCL752 was granted 23/05/90 and expires30/12/23 – CCL728 was granted 10/10/89 and expires30/12/23 – CML2 was granted 24/03/93 and expires 06/07/25 – ML1661 was granted 22/11/11 and expires 22/11/32 – ML1666 was granted 25/01/12 and expires 25/01/33 – EL6598 was granted and expires on 13/07/21 ▪ At the time of reporting, there are no identified issues pertaining to the security of tenure.
Exploration done by other parties	▪ *Acknowledgment and appraisal of exploration by other parties.*	▪ Numerous phases of exploration drilling and seismic surveys have taken place since the late 1970's within CCL728 and CML2. Since Yancoal's acquisition of the Southland leases in 2005, exploration drilling has focussed on the central and eastern portions of CML2 in advance of current and proposed mining. The granting of EL6598 has also allowed Austar to explore the Greta seam further to the east. ▪ In the western and southern part of CCL728, boreholes named NED1to NED32 were drilled in the late 1970's and early 1980's to define Coal Resources for Ellalong Colliery, which is now mined out. ▪ During 1986 - 1991 Southland completed the following exploration: – core holes SKD1 to SKD19, in the Stage 3 area; – 44 km of reflection seismic survey - 1986 (Mini- SOSIE); – 30.5 km and 3.6 km of reflection and refraction seismic surveys; – 1991 (mini-SOSIE); and – Ground magnetic survey (30.5 km) along 1the 991 seismic survey lines.

Criteria	JORC Code explanation	Commentary
		▪ During 1994 - 1996, 22 line km of high resolution 2D seismic was carried out over the central portion of CML2. In addition a series of non-core holes named NER1001 toNER1010 were drilled to validate structures identified from the interpretation of the seismic data. ▪ In 1999 a series of shallow non-core holes named SBR1013 to SBR1048 were drilled on tailings/reject areas at Pelton wash plant to assess potential Coal Resources for power station stock feed. ▪ During 2000 - 2003, high resolution 2D seismic (2.9 km) was completed over the SL2-3 longwall panels. All seismic data was gathered and reprocessed by IGEC (seismic consultant J Saunders) using current software to maximise resolution of this data, particularly with respect to fault delineation in the Greta seam. Core holes named SBD1052 to SBD1065 were completed in the central area of CML2.
Geology	▪ *Deposit type, geological setting and style of mineralisation.*	▪ The Lochinvar Anticline is a major north to north-easterly striking regional feature which has a significant impact on the Greta seam dip and strike. ▪ The Austar leases are located on the eastern flank of the south plunging Lochinvar Anticline with gentle seam dip of approximately 4° and strike rotating between east to northeast. ▪ The orientation of fault structures is northerly in the western part of the Austar tenure, rotating progressively to a north-westerly strike in the eastern part of the leases. ▪ Subsidiary fold axes are oriented in a northerly direction in the west and rotate to a north north-westerly direction in the east. ▪ It is common for fault pairs to form graben structures throughout the area of tenure. ▪ Three north north-westerly striking dykes have been identified which are from west to east referred to as; • Ellalong Dyke, which is located in the central part of the Ellalong longwall panels, • The central Dyke which separates the Belbird and the Stage 3 area, and • The Kitchener Dyke which is located in the eastern part of the Stage 3 area. ▪ The Greta seam is located within the Greta Coal Measures in the South Maitland Coalfield, on the western side of the Newcastle Coalfield. ▪ In the area of the current Life of Mine (LOM) plan, the Greta seam thickness ranges from 5.5 m - 6.5 m. for the majority of the Bellbird and Stage 3 areas. The Greta Seam splits into an upper and lower ply in the southeast of the Stage 3 area. ▪ On the eastern side of the Greta seam split line, thickness is approximately 4 m. Raw ash for the full seam is generally less than 11% although east of the split line, ash increases to 18%. Sulphur content is high and ranges from 1.5% to in excess of 3%. ▪ The depth of cover for the current mine plan ranges from 500 m - 760 m.

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Criteria	JORC Code explanation	Commentary
		▪ Seam gas content is very low for a seam of this depth.
Drillhole Information	▪ *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drillholes:* – *easting and northing of the drillhole collar* – *elevation or RL (Reduced Level – elevation above sea level in metres) of the drillhole collar* – *dip and azimuth of the hole* – *down hole length and interception depth* – *hole length.* ▪ *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*	▪ From 2006 to 2011, Austar completed ongoing annual exploration programs in the central and eastern portions of CML2 and in EL6598 where mining is planned in the Stage 3 area... The exploration drilling includes; a) core holes named AQD1072 to AQD1111, b) two regional core holes (AQD1108-1109A) have been drilled in the central part of EL6598 to gain knowledge on the Greta seam in a regional context. c) IAustar completed six partially cored holes named AQD1112 to AQD1117 in the northern portion of CML2 to gain geological information for mine planning,between July 2011 to June 2012, and d) one partially cored hole (AQD1119) on the northern boundary of EL6598, near old underground mine workings at Ellington. e) Boreholes named AQD1120 to AQD1125 have been drilled in recent years in the Stage 3 area for coal quality and structural purposes. f) Boreholes named AQD1126 to AQD1132 were drilled in 2017 however this drillhole data has not been used in the current geological model. This drillhole data will be loaded into the late 2017 geological model used for mine planning purposes in early 2018. ▪ Individual drillhole results are not tabulated and presented in this report however all drillhole data that pertains to the Greta seam has been used in the geological and coal quality models to estimate Greta seam Coal Resources. The Coal Resources table presented in this report includes summary information on the Greta seam such as: • average thickness; • in situ density; • raw ash; • total sulphur; and • average depth. ▪ All surface drillholes were spudded and oriented to be drilled vertically.Down-hole deviation data showing the borehole trajectory to total depth for those holes has been incorporated in the geological computer model.
Data aggregation methods	▪ *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.* ▪ *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade*	▪ Past Greta seam drill cores have been sampled on a ply by ply basis using down hole geophysics to determine ply boundaries. Because of the longwall top coal caving method used, Austar has subsequently composited raw coal ply results into three one metre intervals up from the base of the seam. Above the third one metre interval raw coal results have been composited into half metre intervals to the top of the seam. Compositing of samples was weighted by length and density, from the base of the seam.

Criteria	JORC Code explanation	Commentary
	results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail. ▪ *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	▪ In recent time, Greta seam cores have been analysed in this sampling pattern (i.e. basal 3 x 1 m samples, followed by 0.5 m sampling interval to top of coal).
Relationship between mineralisation widths and intercept lengths	▪ *These relationships are particularly important in the reporting of Exploration Results.* ▪ *If the geometry of the mineralisation with respect to the drillhole angle is known, its nature should be reported.* ▪ *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').*	▪ Drillholes are vertical and the Greta seam is almost horizontal (4° dip) so drillhole intersections of Greta seam have been assumed to be true thickness.
Diagrams	▪ *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drillhole collar locations and appropriate sectional views.*	▪ All relevant figures depicting information considered material to the Coal Resources reported are contained within the JORC report associated with this Table 1.
Balanced reporting	▪ *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	▪ All drillhole data is checked and validated prior to loading into the computer model. Outputs from the geological model (eg seam roof, seam floor, overburden thickness, ash and sulphur) are then checked to ensure trends are real. Laboratory coal quality results have been used as reported.
Other substantive exploration data	▪ *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	▪ In 1994 - 1996, 22 line km of high resolution 2D seismic was carried out over the central portion of CML2. In addition a series of non-core holes (numbered NER1001 to NER1010) were drilled to validate structures identified from the interpretation of the seismic data. ▪ During 2000 - 2003 high resolution 2D seismic (2.9 km) was completed over SL2-3 longwall panels. ▪ All seismic data was gathered and reprocessed by IGEC (seismic consultant J Saunders) using current software to improve the resolution of this data, particularly with respect to fault delineation of the Greta seam. ▪ There has been a long history of exploration and mining in the Austar area, and in particular to the north of the Austar area. Data has been acquired from surface drillhole intersections, previous underground workings (Ellalong, Kalingo, Aberdare Central and Kitchener) and from numerous seismic reflection/refraction surveys. ▪ The geology and disposition of the Greta seam is well understood from the numerous underground operations that have operated in the vicinity of the Austar area. Seam continuity, thickness and quality is well established.

Criteria	JORC Code explanation	Commentary
		▪ Surface seismic survey data acquired has proved to be reliable for identifying faults in advance of mining and defining seam continuity between drillholes. The extensive network of seismic coverage has significantly improved confidence in the overall structural interpretation and continuity of the Greta seam in the Austar area. ▪ A ground magnetometer survey was completed over the Central Dyke to define its location at the surface. Two additional ground magnetometer surveys were completed further to the east in the Stage 3 mine expansion area has interpreted another south-east trending dyke at surface, similar to the Central Dyke. This dyke has been called the Kitchener Dyke and appears to bifurcate into two separate dykes. This geological feature has been projected down to the Greta seam.
Further work	▪ *The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).* ▪ *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	▪ Future exploration is required to better understand the structure, intrusions, and geotechnical characteristics of the Austar area. ▪

Section 3 Estimation and Reporting of Mineral Resources

(Criteria listed in Section 1, and where relevant in Section 2, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Database integrity	▪ *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.* ▪ *Data validation procedures used.*	▪ Digital geological data for Austar resides in a Minex borehole database. This includes drillhole survey data, seam picks, raw coal quality data, and verticality data for more recent holes. Data in the database includes drillholes up to borehole AQD1123 Recent holes drilled in 2017 will be loaded into the next geological model.
Site visits	▪ *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* ▪ *If no site visits have been undertaken indicate why this is the case.*	▪ RPM personnel and representatives performed a site visit in April 2018. Graeme Rigg visited Austar and went underground. ▪ RPM is familiar with the Austar operation having provided technical services for the mining operation when the mine was called Southland. Thiess was the Contractor at the mine, and RPM provided the technical advice to the owners. ▪ .
Geological interpretation	▪ *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.* ▪ *Nature of the data used and of any assumptions made.*	▪ The Greta seam outcrops on the eastern flank of the south plunging Lochinvar Anticline resulting in gentle seam dip to the south or southeast. Zones of normal faulting have been interpreted based on mapping from old workings to the north, and interpretation from seismic

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Criteria	JORC Code explanation	Commentary
	▪ *The effect, if any, of alternative interpretations on Mineral Resource estimation.* ▪ *The use of geology in guiding and controlling Mineral Resource estimation.* ▪ *The factors affecting continuity both of grade and geology.*	surveys. In most cases faults have been interpreted where mining has intersected the fault and has stopped. ▪ The Central Dyke was interpreted from a ground magnetic survey and subsequently intersected in the Southland mine workings. The Kitchener intrusive extends south from old workings at Kitchener into the Stage 3 area. Drillhole data and two recent ground magnetic surveys indicate a south southeast trending dyke/or dykes extending through the Stage 3 mine expansion area. This dyke has been called the Kitchener Dyke. ▪ The broad deposit geometry for the Greta seam is well understood. Coal quality such as raw ash and total sulphur are also well understood. The combination of old workings, drillhole data and the extensive array of seismic data have enabled most Resources to be classified as either Measured or Indicated.
Dimensions	▪ *The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.*	▪ Historical mining proves the Greta seam has a strike length of over 22 km (east-west) and extends down dip (north-south) from subcrop to depths in excess of 700 m, for a distance of over 9 km. The Greta seam has been mined within leases to the north of Austar for over 100 years. The variability is well defined and understood from the extensive production and exploration data.
Estimation and modelling techniques	▪ *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.* ▪ *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.* ▪ *The assumptions made regarding recovery of by-products.* ▪ *Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).* ▪ *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.* ▪ *Any assumptions behind modelling of selective mining units.* ▪ *Any assumptions about correlation between variables.* ▪ *Description of how the geological interpretation was*	▪ The resource estimation was completed using in situ density and ply thickness grids in Minex software (version 6.1), using vertical sided polygon areas. No raw ash or total sulphur laboratory data was excluded. No coal quality limits were applied as Austar wash the ROM coal to produce a low ash, high sulphur product. Coal Resources estimated for 2017 are reconciled against the 2016 Resource estimate. ▪ The latest geological model for Austar was updated in September 2015 (Austar_1015). Exploration data from four new boreholes was loaded at that time. In addition, the fault model was updated based on the current interpretation received from site. The geological model contains the Greta seam and was produced using drillhole intersections, some underground data and structural interpretation from seismic information. The Greta seam is usually a coalesced package for most of the Austar resource area, however the seam splits into the Upper Greta (UG) and Lower Greta (LG) in the eastern part of the Stage 3 area. ▪ The Greta seam was split into an upper and lower section for the entire Austar resource area using the Minex seam splitting interpolation. A working Greta seam section grid developed (WGR) for Resource estimation was created from the upper and lower seam splits according to the logic shown below, (Which states when the separation between the upper and lower ply is less than 0.2m thick the working section is a combined upper and lower ply, and when the separation between the upper and lower ply is greater than 0.2m the working section is the upper ply): – WGR = UG and LG where LG interburden is <0.2 m, or; – WGR = UG only where LG interburden is >0.2 m

Criteria	JORC Code explanation	Commentary
	used to control the resource estimates. ▪ *Discussion of basis for using or not using grade cutting or capping.* ▪ *The process of validation, the checking process used, the comparison of model data to drillhole data, and use of reconciliation data if available.*	▪ Coal quality grids were produced for this working section at an in situ moisture basis, which is estimated to be 5%. ▪ Drillhole vertically data was loaded where available. Structural and coal quality grids were created using growth techniques (inverse distance squared was tested for quality grids however growth techniques appeared to grid the data better). Seam thickness and quality grids were gridded on a 50 m mesh. ▪ This 2017 Coal Resource estimate compares favourably with the 2016 Resource estimate. Tonnages from Resource polygons that remained unchanged (same area) were checked to compare the accuracy of this model against the previous model.
Moisture	▪ *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	▪ In situ moisture of the Greta seam is considered similar to in situ moisture content of other coal seams within the Permian Wittingham Coal Measures. Average inherent moisture (ad) of sampled data from slim core samples was 1.6%. Total moisture (ar) from six belt samples collected in 2011 averaged 6%. In situ moisture of Greta seam coal was assumed to be slightly lower than belt sample results and for this Resource estimation process was estimated at 5%.
Cut-off parameters	▪ *The basis of the adopted cut-off grade(s) or quality parameters applied.*	▪ No cut off parameters were used for ash, total sulphur or seam thickness. Austar utilise the Pelton Prep Plant to wash ROM coal for product coal at market specifications. Typical product specifications are: ash 6.5% and sulphur is 1.5% ▪ The thickness and quality of the Resource is understood to be consistent and applying typical cut off parameters for thickness or quality would not materially impact on the Resource.
Mining factors or assumptions	▪ *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.*	▪ Austar is currently an underground coal mine using longwall with top coal caving method. The Resource estimate is based upon underground mining methods including longwall, top coal caving but also potentially bord and pillar of areas not suitable for longwall mining. ▪ The following list details limits and assumptions used to define Resource areas. – limit of mining as at 30 September 2017; – ROM tonnes forecast from October to December 2017 were 556,109 t; and – Resources were divided into three separate areas: ▪ Northwest of the Central Dyke – Kalingo area; ▪ East of the Central Dyke - Stage 3 mine expansion area; and ▪ Southeast of Ellalong Main Headings – Bellbird South area. ▪ Resource exclusion zones comprised: – 50 m distance from old workings; – 5 m either side of the Central (dyke is assumed to be 10 m wide);

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Criteria	JORC Code explanation	Commentary
		– 5 m either side of Kitchener Dyke which has been interpreted as two separate dykes trending southeast through Stage 3 mine expansion area. Dykes are each assumed to be 10 m wide; – tonnage and quality variables are reported to an in situ moisture content of 5%; and – Resources have been estimated to depths up to 800 m.
Metallurgical factors or assumptions	▪ *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.*	▪ No raw ash or total sulphur cut-offs were applied to the computer model as Austar wash ROM coal to produce a low ash, high sulphur coal product. Current market specifications are 6.5% product ash and 1.5% product sulphur (adb). Product coal extracted from the Greta seam has been successfully marketed as a blending metallurgical coal as well as thermal coal for the past 33 years. ▪ Based on the coal quality data, the product is not expected to be materially different to the historic product.
Environmental factors or assumptions	▪ *Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.*	▪ Austar is an operating mine that complies with all environmental conditions that relate to extraction of the Greta seam.
Bulk density	▪ *Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.* ▪ *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.* ▪ *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	▪ Relative density (RD) and apparent relative density (ARD) values have been reported on coal core samples in past and present drilling programs. Differing eras of exploration reported either RD or ARD on each ply sample. ▪ For this Resource estimate, coal quality data was separated into those reporting RD or ARD as per information from original coal quality reports. RD and raw ash data were then converted to an in situ moisture basis of 5% (using the Preston and Sanders change of base equation) and a regression was developed to allow estimation of in situ density (ID) for all data, from raw ash values. This included coal quality data which reported ARD only.
Classification	▪ *The basis for the classification of the Mineral Resources into varying confidence categories.*	▪ Coal Resources were estimated within lease areas, CCL728, CML2, ML1666, ML1661 and that part of EL6598 not covered by the previous two leases. The Greta seam Resource

Criteria	JORC Code explanation	Commentary
	▪ *Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).* ▪ *Whether the result appropriately reflects the Competent Person's view of the deposit.*	estimate is for the full seam, and east of the split line the upper part of the Greta seam (Upper Greta). Resources have not been estimated for the Lower Greta seam that splits from the base of the full Greta seam and deteriorates towards the east. Once Resource polygons were defined, the status of Coal Resources within each polygon was classified either as a: – **Measured Resources** - where geological data points based on detailed and reliable exploration, sampling and testing information support a reasonable level of confidence in Greta seam thickness, continuity, coal quality and structure of the Greta seam. Supporting geological information in the form of reprocessed seismic data was also used to interpret continuity of Greta seam along seismic lines. – **Indicated Resources** - where geological data points contributed to a reasonable level of confidence in seam thickness and continuity and some coal quality. Supporting geological information in the form of reprocessed seismic data was also used to interpret continuity of Greta seam along seismic lines. – **Inferred Resources** - where there was a paucity of coal quality data within the area and drillhole spacing was only
Audits or reviews	▪ *The results of any audits or reviews of Mineral Resource estimates.*	▪ No external peer reviews have been completed. ▪
Discussion of relative accuracy/ confidence	▪ *Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.* ▪ *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* ▪ *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	▪ Coal Resources have been classified into Measured, Indicated or Inferred Resources depending on the density of points of observation (drillhole and seismic survey data) which provide varying levels of confidence in the Resource estimate. Extensive past underground mining to the west, north and east of current leases provides additional supporting information further up-dip. A geostatistical study on Greta seam parameters such as raw ash, thickness and density has not been completed and is not considered warranted. ROM ash and sulphur have been close to predicted values from the geological model.

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Section 4 Estimation and Reporting of Ore Reserves

The completed Table 1, Sections 4 is in response to the current ADV-BR-11019_Hunting Eagle_CPR Report completed in part by Competent Person, Mr Graeme Rigg on behalf of RPM.

(Criteria listed in Section 1, and where relevant in Sections 2 and 3, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral Resource estimate for conversion to Ore Reserves	▪ *Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.* ▪ *Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.*	▪ The Coal Resource estimate used as the basis for this Coal Reserves Statement is described as part of this statement. The Resource estimate has been prepared by Mr. Brendan Stats. The Competent Person, Mr. Stats, 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. ▪ The same geological model has been used for the estimation of Resources and Reserves.
Site visits	▪ *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* ▪ *If no site visits have been undertaken indicate why this is the case.*	▪ A site visit to the Austar underground was undertaken by the Reserves Competent Person in April 2018. The outcome of these site visits was observation of site and mining conditions and discussion with site operating personnel regarding the operation and the determination of project parameters used in the Austar underground planning process.
Study status	▪ *The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.* ▪ *The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.*	▪ Austar is an operating mine. LOM studies undertaken during the project planning and design stages have been complemented by actual operating experience and ongoing exploration and assessment.
Cut-off parameters	▪ *The basis of the cut-off grade(s) or quality parameters applied.*	▪ There are no coal quality cut-off parameters used to eliminate the conversion of Coal Resources to Coal Reserves.
Mining factors or assumptions	▪ *The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design).* ▪ *The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc.* ▪ *The assumptions made regarding geotechnical*	▪ LOM planning has been used as the basis of converting Coal Resources to Coal Reserves. ▪ The selected mining method is that in use in the operating mine, i.e. longwall top coal caving ("LTCC") extraction with continuous miner development. ▪ From a geotechnical perspective, the most significant issues relate to coal bursts, rib control and periodic weighting. Of these, the coal burst issue is easily the most significant and ongoing studies are being carried out in order to increase confidence and levels of safety regarding operating in an environment prone to coal bursts.

Criteria	JORC Code explanation	Commentary
	parameters (eg pit slopes, stope sizes, etc), grade control and pre-production drilling. ▪ *The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).* ▪ *The mining dilution factors used.* ▪ *The mining recovery factors used.* ▪ *Any minimum mining widths used.* ▪ *The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.* ▪ *The infrastructure requirements of the selected mining methods.*	▪ The depth of cover for the future workings ranges from 450 m - 700 m. These depths are high by Australian standards. ▪ The mining factors used were: – development roadways 5.0 m wide by 3.2 m high; – longwall cutting height 3.2 m; – longwall caving height ≤ 3.9 m; – longwall panel width 226 m; – no coal is lost from the roof or floor of the mineable coal sections during development; – an average of 25% of the coal from the caving section coal will be lost during longwall extraction; – the development roadways incorporate coal tops and bottoms and therefore no out-of-seam dilution has been included for development operations; – 30 mm of higher ash material will be mined with the floor of the coal seam during longwall operations, and that any longwall caving tonnes will be supplemented with an additional 8% (by mass of the caving tonnes) of roof dilution; – the waste rock quality defaults were a relative density of 2.38 t/m3 for floor dilution and 2.40 t/m3 for roof dilution and ash an of 90%; – relative density data in the geological model is based on assumed in situ moisture of 5.0%, while all qualities are based on air dried moisture gridded values; – Preston Sanders has been used in the estimation of in situ moisture; and – ROM moisture will be 6.0%, and product moisture will be 6.0%. ▪ Inferred coal has been excluded from the LOM Plan. ▪ All necessary infrastructure is in place and operational.
Metallurgical factors or assumptions	▪ *The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.* ▪ *Whether the metallurgical process is well-tested technology or novel in nature.* ▪ *The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.* ▪ *Any assumptions or allowances made for deleterious elements.* ▪ *The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered*	▪ The metallurgical process for washing the target seams is already in place and being used. The configuration of the CHPP includes Dense Media Cyclone ("DMC") and Spirals. The current CHPP module operates at a nominal capacity of 750 tph. ▪ CHPP yield estimates are based on gridded values for the cut section as well as the various plies in the caved section. A composite yield is calculated and then a practical yield adjustment factor is applied to reflect the differences between laboratory yields and the CHPP yield. ▪ Actual yield in 2017 was 91%, against a budget forecast of 90%. Yields are expected to reduce once LTCC operations recommence in the Stage 3 area. ▪ The process generates a semi hard coking coal product from a cut point that will generally produce a less than 9% ash product. Minor areas will produce a higher ash product, which is

Criteria	JORC Code explanation	Commentary
	representative of the ore body as a whole. ▪ *For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?*	expected to be sold as a thermal product. The metallurgical process is appropriate for Austar Mine. ▪ No bypass products assumed in the LOM plan. ▪ No allowance has been made for deleterious elements.
Environmental	▪ *The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.*	▪ An Environmental Impact Statement has been prepared and the necessary environmental approvals obtained. ▪ Coarse rejects are placed within the Pelton open cut void. Washery fines material is pumped to an adjacent property owned by AGL, under an existing agreement.
Infrastructure	▪ *The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.*	▪ All necessary infrastructure is in place and operational for the current operations at the Asset.
Costs	▪ *The derivation of, or assumptions made, regarding projected capital costs in the study.* ▪ *The methodology used to estimate operating costs.* ▪ *Allowances made for the content of deleterious elements.* ▪ *The source of exchange rates used in the study.* ▪ *Derivation of transportation charges.* ▪ *The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.* ▪ *The allowances made for royalties payable, both Government and private.*	▪ All major infrastructure is in place. Capital forecasts have been included which represent the growth and sustaining requirements for the completion of the LOM plan. ▪ All operating costs are based on LOM planning estimates from Yancoal and have been reviewed by RPM. ▪ Current long-term exchange rate assumptions were provided by Yancoal. ▪ Transport charges based on actual contracted prices taking into account existing Take or Pay arrangements. ▪ NSW state government royalties are included in the estimate. ▪ RPM reviewed all costs and they are considered reasonable.
Revenue factors	▪ *The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc.* ▪ *The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.*	▪ Long term product coal pricing assumptions have been provided by Yancoal Marketing and is based on independent third party research and reporting. ▪ The revenue factors are considered reasonable for the purposes of estimating Reserves.
Market assessment	▪ *The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.* ▪ *A customer and competitor analysis along with the*	▪ A Marketing Study has not been reviewed however markets are well established for the mine's coal product. The Project typically produces one main product: – SHCC at approx. 6.7% ash (ad).

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Criteria	JORC Code explanation	Commentary
	identification of likely market windows for the product. ▪ *Price and volume forecasts and the basis for these forecasts.* ▪ *For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.*	▪ Based upon these products and specifications, RPM anticipates no foreseeable issues in demand for these products.
Economic	▪ *The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc.* ▪ *NPV ranges and sensitivity to variations in the significant assumptions and inputs.*	▪ The inputs to the economic analysis are 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 have been used in assessing NPV. ▪ The NPV results for the Project 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. ▪ Sensitivity analysis has been completed on the Project over a range of variable. The Project is most sensitive to changes in exchange rate, revenue and operating costs.
Social	▪ *The status of agreements with key stakeholders and matters leading to social licence to operate.*	▪ There are no native title claims over the area.
Other	▪ *To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:* ▪ *Any identified material naturally occurring risks.* ▪ *The status of material legal agreements and marketing arrangements.* ▪ *The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.*	▪ 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 operation's viability.
Classification	▪ *The basis for the classification of the Ore Reserves into varying confidence categories.* ▪ *Whether the result appropriately reflects the Competent Person's view of the deposit.* ▪ *The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).*	▪ Classification of Coal Reserves has been derived by considering the Measured and Indicated Resources and the level of mine planning. – Measured Resources have been classified as Proved or Probable Reserves, Indicated Resources have been classified as Probable Reserves. – Approximately 10 Mt of Probable Reserves have been derived from Measured Resources.

Criteria	JORC Code explanation	Commentary
		▪ The Inferred Coal Resources have been excluded from the Reserve estimates. ▪ The result reflects the Competent Person's view of the deposit.
Audits or reviews	▪ *The results of any audits or reviews of Ore Reserve estimates.*	▪ Internal peer review of the Reserves Report has been completed.
Discussion of relative accuracy/ confidence	▪ *Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate.* ▪ *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* ▪ *Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage.* ▪ *It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	▪ The mine footprint is supported by approximately 30% of Measured Coal Resources. ▪ The basis of the estimate are actual operating costs and LOM planning. ▪ CHPP and infrastructure are in place and operating. ▪ Analysis of the coal quality has been undertaken by independent laboratories working under international standards of method and accuracy. Coal products from both MTW and HVO is produced from blended washed 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. ▪ Geotechnical studies have been completed for the mine. ▪ The major risk in not achieving the estimated Reserve extraction comes from the coal burst issue, specifically how much the issue intensifies with increasing depth of cover, how well the workforce is able to undertake the necessary testing and still maintain economic productivity levels, and willingness of government regulators to continue to allow the operations to continue if coal burst incidents continue to occur.

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JORC Code Disclosure Requirements

Donaldson

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JORC Code, 2012 Edition – Table 1 report template

The completed Table 1, Sections 1, 2 & 3 are in response to the current ADV-BR-11019_Hunting Eagle_CPR Report completed in part by Competent Person Mr Brendan Stats on behalf of RPM.

Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	▪ *Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.* ▪ *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* ▪ *Aspects of the determination of mineralisation that are Material to the Public Report.* ▪ *In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.*	▪ Sampling techniques utilised at Donaldson includes sampling of drill cores for coal quality and gas composition analysis, channel samples for coal quality analysis and geophysical sampling using downhole wireline tools. ▪ Where downhole wireline geophysical data has been obtained it generally includes natural gamma, caliper and dual density. On occasions other tools have been acquired, including resistivity and sonic. ▪ Coal quality sampling is extremely detailed in many drillholes, which has generally allowed ply composites to be derived within the geological model. This process provides coal quality results that are representative of the horizons estimated for Resources. Samples are rejected by the modelling software when the sample is not representative of the ply because there is significant difference in thickness. ▪ Wireline logging tools are calibrated by the geophysical logging contractors in accordance with their company standards. ▪ Laboratories currently being used to provide coal quality analysis are NATA accredited and work to Australian and International Standards.
Drilling techniques	▪ *Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	▪ 17 different phases of exploration have occurred at the Donaldson Asset since the early 1950s. Hence, a variety of drilling techniques have been utilised. All drillholes are vertical and are fully cored, partially cored or non-cored open holes. The majority of the holes are either non-core or partially cored HQ3 diameter holes.
Drill sample recovery	▪ *Method of recording and assessing core and chip sample recoveries and results assessed.* ▪ *Measures taken to maximise sample recovery and ensure representative nature of the samples.* ▪ *Whether a relationship exists between sample recovery*	▪ Contractual arrangements requiring greater than 95% recovery on a seam basis have been in place for drillholes that have recently been drilled. The recovery is recorded in the geological database for a large portion of holes and it is generally at an acceptable level (>80%). Where the recovery is recorded and it is less than 80% then the sample is rejected from the geological modelling process. Where sample recovery has not been recorded it

Criteria	JORC Code explanation	Commentary
	and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	has been accepted as adequate. No relationship between sample recovery and a quality bias has been identified.
Logging	▪ *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* ▪ *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* ▪ *The total length and percentage of the relevant intersections logged.*	▪ Lithological and geotechnical logging has been undertaken on core and chip samples for the majority of drillholes. For a small collection of older drillholes these data have been lost and these holes are not used in the geological model. In most cases the logging is of a detailed enough nature to provide an accurate reflection of the geology. In most cases lithological logging encompasses the full length of the drillhole.
Sub-sampling techniques and sample preparation	▪ *If core, whether cut or sawn and whether quarter, half or all core taken.* ▪ *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* ▪ *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* ▪ *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* ▪ *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.* ▪ *Whether sample sizes are appropriate to the grain size of the material being sampled.*	▪ Samples taken at Donaldson are generally only sub-sampled by the laboratory as a part of their coal quality analysis procedures. Sub-sampling by the lab involves either riffle or rotary splitting in order to receive a representative sub-sample to undertake each step of the analysis procedure. ▪ Historically coal quality samples taken from drillholes have not undergone any pre-treatment, rather they have been crushed to pass 11.2 mm and then analysis preformed. It is understood that coal quality samples received through channel sampling are subject to a pre-treatment process that involves drop shatter, sizing, wet tumbling and hand knapping. ▪ The more modern coal quality analysis has involved analysing ply samples on an individual basis and then re-combining into working/seam sections on an RD x length basis.
Quality of assay data and laboratory tests	▪ *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* ▪ *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.* ▪ *Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.*	▪ A portion of historical coal quality results exists; however, they were undertaken at reputable laboratories including R.W. Miller Laboratories, CSIRO Coal Section or ACIRL. These results have been checked and are considered valid. ▪ More recently laboratories including ACTEST and ALS have been utilised to undertake coal quality analysis. These laboratories are NATA accredited and report results to Australian and International Standards.

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Criteria	JORC Code explanation	Commentary
Verification of sampling and assaying	▪ *The verification of significant intersections by either independent or alternative company personnel.* ▪ *The use of twinned holes.* ▪ *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* ▪ *Discuss any adjustment to assay data.*	▪ Generally a significant number of coal quality data points exists for each seam allowing anomalous values to be spotted easily. ▪ Values for each variable were checked prior to loading into the geological database and any anomalous values were verified. ▪
Location of data points	▪ *Accuracy and quality of surveys used to locate drillholes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* ▪ *Specification of the grid system used.* ▪ *Quality and adequacy of topographic control.*	▪ Drillholes recently completed have been surveyed by a registered surveyor using an RTK GPS system with a base station control. These collars have been captured and stored in the Map Grid of Australia (MGA) 1994 Zone 56 system. ▪ Locations of historical holes are recorded in either the old Integrated Survey Grid (ISG) or in Chains from referenced cadastral locations. ▪ Historical drillhole surveys have been converted to the MGA 94 Zone 56 system; however, the accuracy of the conversion is not known by the Competent Person. ▪ A topographic surface was created in the geological model built in July 2015 using LiDAR data acquired by Donaldson Coal in 2014/2015. The quality and adequacy of the topographic surface is considered good.
Data spacing and distribution	▪ *Data spacing for reporting of Exploration Results.* ▪ *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* ▪ *Whether sample compositing has been applied.*	▪ Drillhole spacing varies across the Donaldson deposit with closely spaced (<200 m) holes distributed across the mined open cut area and down into the current Abel Underground Mine area. South of the Abel Underground Mine area, the spacing between drillholes increases to approximately 1,200 m. A significant database of mapped geological features exists. These features have been mapped in the workings of the now closed Stockrington No.2 and Tasman Mines as well as Abel Underground Mine.
Orientation of data in relation to geological structure	▪ *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* ▪ *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	▪ All drillholes at the Donaldson Project have been drilled vertical and are generally perpendicular to the coal seams. More recent drillholes have had downhole verticality recorded and show little deviation of the drillholes through the strata. ▪ Faults and dykes tend to trend in two strike directions at Donaldson, southeast to northwest and a perpendicular set striking southwest to northeast. Drilling at Donaldson is somewhat sporadic and doesn't conform to a regular grid pattern. However, there is good drillhole coverage of the deposit, which allows for the delineation of major geological structures.
Sample security	▪ *The measures taken to ensure sample security.*	▪ Any sample security measures applied to historical samples is unknown by the Competent Person. Holes recently drilled (those holes completed in 2014) were double bagged with sample tickets included between the bags. A copy of the sample ticket was retained on site at Donaldson Coal.
Audits or reviews	▪ *The results of any audits or reviews of sampling techniques and data.*	▪ The Competent Person does not know of any audits or reviews of the sampling techniques.

Criteria	JORC Code explanation	Commentary
		▪ In 2015 MBGS undertook a large review of the seam and ply correlation as well as a comparison of the coal quality data against the original lab results. This extensive exercise resulted in a completely new geological model, which removed numerous small and several large errors.

Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	▪ *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* ▪ *The security of the tenure held at the time of reporting along with any known impediments to obtaining a license to operate in the area.*	▪ Donaldson Coal and its subsidiary Newcastle Coal hold title to four exploration licences (EL) and four mining leases (ML). Donaldson Coal also have one mining lease application (MLA) lodged. The tenure held by Donaldson Coal is as follows: – EL5537; – EL5497; – EL5498; – EL6964; – MLA416; – ML1461; – ML1555; – ML1618; – ML1653; and – ML1703.
Exploration done by other parties	▪ *Acknowledgment and appraisal of exploration by other parties.*	▪ In total 17 phases of exploration have been undertaken on the Donaldson deposit. A number of the early exploration phases overlap each other in their timing but were undertaken by different parties in small areas that are now incorporated in Donaldson Coal. ▪ Companies that have undertaken exploration of the Donaldson deposit include Bureau of Mineral Resources, Joint Coal Board, R.W. Miller, Electricity Commission of NSW, J&A Brown, Seaham Collieries, Gollin Wallsend Coal Company, Donaldson Projects Pty Ltd, Callaghans Collieries, Bloomfield Collieries, Excel Coal and Yancoal.
Geology	▪ *Deposit type, geological setting and style of mineralisation.*	▪ Strata from the Late Permian Newcastle Coal Measures and Tomago Coal Measures are present within the Donaldson Coal deposit. These coal bearing formations are overlain by Triassic strata that are devoid of any significant coal occurrences. In total, seven coal seams have been identified in the Newcastle Coal Measures and ten have been identified within the underlying Tomago Coal Measures. Of the 17 coal seams, 13 have been included in the geological model and six have been included in this Resource estimate.

Criteria	JORC Code explanation	Commentary
		▪ Numerous faults and intrusions have been identified at Donaldson using mapping from workings, drillhole intersections and geophysical data. Faults that have been identified are generally minor with only a single significant (approx. 8 m) reverse fault noted. Intrusions at Donaldson tend to be in the form of dykes that intrude the coal seams to varying degrees. Intrusion of coal seams tends to occur in the south of the deposit. ▪ Seam splitting and coalescing is common at Donaldson and is considered extreme in many cases. Coal seams of the Tomago Coal Measures tend to be coalesced through the area covered by the Abel Mine and split rapidly to the west and east of this area. As the seams split, the individual plies thin to a point where their correlation is difficult. Coal seams within the Newcastle Coal Measures are affected by a moderate complexity of splitting and coalescing. One significant feature exists in the West Borehole seam, which has been previously named the 'Want Zone'. This is a zone where the interburden between the plies thickens and the coal plies thin. This feature appears to be caused by an overbank splay affecting the depositional environment.
Drillhole Information	▪ *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drillholes:* – *easting and northing of the drillhole collar* – *elevation or RL (Reduced Level – elevation above sea level in metres) of the drillhole collar* – *dip and azimuth of the hole* – *down hole length and interception depth* – *hole length.* ▪ *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*	▪ A total of 833 drillholes were supplied and used to estimate the Resources reported here. Of these, 40 drillholes had either incomplete or missing collar data which meant they could not be used in the model. The remaining drillholes were loaded into a Vulcan Isis database along with lithology, seam/ply picks and coal quality information. Drillholes used in the evaluation and estimation of the Coal Resources reported in the document are shown on the accompanying figures. Provision of further information would not change the materiality of the Coal Resource reported.
Data aggregation methods	▪ *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.* ▪ *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.* ▪ *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	▪ Where numerous samples fall within a ply horizon they are composited in Vulcan using relative density and sample length in order to generate coal quality values on a ply basis.

Criteria	JORC Code explanation	Commentary
Relationship between mineralisation widths and intercept lengths	▪ *These relationships are particularly important in the reporting of Exploration Results.* ▪ *If the geometry of the mineralisation with respect to the drillhole angle is known, its nature should be reported.* ▪ *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').*	▪ All drillholes at Donaldson Coal are drilled vertically. Some minor deviation of the drillholes has occurred and the seams dip at approximately 5° to the southeast; however, bias is not expected to be introduced by these minor variations.
Diagrams	▪ *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drillhole collar locations and appropriate sectional views.*	▪ All relevant figures depicting information considered material to the Coal Resources reported are contained within the JORC report associated with this Table 1.
Balanced reporting	▪ *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	▪ Where values appeared anomalous and their accuracy could not be validated they were not included in the data used to generate the geological model. This only occurred on a small set of data. All other values have been included in the construction of the database, development of the model and estimation of the Coal Resources. Weighted average coal quality values have been reported in the Resource tables to summarise a complex set of data and these values are considered representative of the Donaldson deposit.
Other substantive exploration data	▪ *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	▪ The Stockrington No.2 Colliery extensively mined the West Borehole seam within the Donaldson Coal tenure. Mapping of geological features, such as faults and dykes, provides a widespread dataset that covers large portions of the Donaldson deposit.
Further work	▪ *The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).* ▪ *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	▪ No further exploration is planned at this time.

Section 3 Estimation and Reporting of Mineral Resources

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

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Criteria	JORC Code explanation	Commentary
Database integrity	▪ *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.* ▪ *Data validation procedures used.*	▪ In 2015 MBGS undertook an extensive re-correlation exercise, which resulted in an entirely new geological model being developed. This exercise included: – checking the correction of every hole with geophysics; – picking ply and seam boundaries for hole with geophysics or graphic logs; and – validating coal quality against original lab reports. ▪ This exercise removed many errors from the Donaldson Coal dataset. ▪ Validation of the data was undertaken after loading into the Vulcan Isis database using Vulcan's validation tools. Grids were also visually inspected for anomalies using isopach contouring. Statistics were also run on all grids to identify any significant anomalous values. ▪ RPM reviewed the geological model database using logic, statistical and regression analysis. RPM reviewed the geological model to assess if the modelling method was appropriate and that the resultant model honoured the drillhole data. ▪ RPM considers the geological data suitable for the estimate of Coal Resources.
Site visits	▪ *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* ▪ *If no site visits have been undertaken indicate why this is the case.*	▪ The Donaldson site is currently on care and maintenance. ▪ The Resources Competent Person was unable to visit the site but interviewed the previous Competent Person who has visited the site on numerous occasions and who was responsible for developing the geological model. From a Resources perspective, the geological understanding is based on the drillhole data and the geological model which was reviewed.
Geological interpretation	▪ *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.* ▪ *Nature of the data used and of any assumptions made.* ▪ *The effect, if any, of alternative interpretations on Mineral Resource estimation.* ▪ *The use of geology in guiding and controlling Mineral Resource estimation.* ▪ *The factors affecting continuity both of grade and geology.*	▪ A reasonably extensive dataset exists for Donaldson in the form of both drillholes and operational mapping. These data provide a reasonable level of confidence for most of the Donaldson deposit. Seam splitting is a prominent feature of the Donaldson geology and it has a significant impact on the continuity and quality of potential mining sections. This has been taken into consideration during the classification and estimation of the Coal Resources for Donaldson Coal.
Dimensions	▪ *The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.*	▪ The Donaldson coal deposit is approximately 12 km wide by 15 km long. Within those dimensions, target coal seams can change character considerably and may not be a Resource over the entire area due to splitting and seam deterioration. Coal seams subcrop in the northern portion of Donaldson leases and extend to depths in excess of 300 m towards the south.
Estimation and modelling techniques	▪ *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining,*	▪ Early in 2015 MBGS undertook a complete review of the Donaldson deposit correlation. This process resulted in the development of an entirely new database. Using this database, which houses lithology and coal quality data, MBGS developed an updated geological model. The

Criteria	JORC Code explanation	Commentary
	interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used. ▪ *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.* ▪ *The assumptions made regarding recovery of by-products.* ▪ *Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).* ▪ *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.* ▪ *Any assumptions behind modelling of selective mining units.* ▪ *Any assumptions about correlation between variables.* ▪ *Description of how the geological interpretation was used to control the resource estimates.* ▪ *Discussion of basis for using or not using grade cutting or capping.* ▪ *The process of validation, the checking process used, the comparison of model data to drillhole data, and use of reconciliation data if available.*	geological model was generated in July 2015 using standard grid modelling practices in Maptek's Vulcan software (version 9). Design data consisting of points and lines were applied to control the up-dip and down-dip geometry of the coal seams away from the drillhole extents. These controls are outside of the Donaldson Coal tenure and are used to prevent the software from flattening seams back to horizontal where no actual data exists. ▪ Structure map files were generated using FixDHD for each of the 107 plies included in the geological model. Grid surfaces for structure roof, structure floor, thickness and interburden were created at a 25 m mesh size. ▪ Raw coal quality grids for seven variables were generated from a FixDHD database. Using a FixDHD database allowed the samples for parent plies to be used by splitting the parent ply into its children. Raw coal quality grids at a mesh size of 25 m were generated for ash, moisture, fixed carbon, volatile matter, total sulphur, specific energy and in situ density. All coal quality variables, with the exception of in situ density, were modelled at a standardised air dried moisture of 2.5%. In situ density was modelled at an in situ moisture of 4%. In situ density was derived by applying regression equations to raw ash values. Coal Technologist, Bob Leach developed two regression equations for the Donaldson data, one for samples with raw ash values less than 50% (air dried basis) and another for samples with raw ash values greater than 50% (air dried basis). ▪ RPM reviewed the geological model to confirm estimations output by the software are valid. ▪ Resources were estimated within vertical sided polygons, which provided a 'cookie cutter' limit to each area classified. In situ density grids were used to convert volume into tonnes within the Vulcan software.
Moisture	▪ *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	▪ Coal quality has been standardised to a 2.5% moisture basis in prior to loading into the Vulcan database and all quality variables were modelled at this basis with the exception of in situ density. In situ density was calculated at 4% in situ moisture basis. These moisture values are typical for these coals in this region.
Cut-off parameters	▪ *The basis of the adopted cut-off grade(s) or quality parameters applied.*	▪ Minimum seam thickness was 1.2 m and maximum parting thickness was 0.3 m. Raw ash cut-off was 50% for most seams except the Lower Donaldson seam. In this instance a 55% ash cut-off was used.
Mining factors or assumptions	▪ *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the*	▪ Resources were estimated within the confines of the seam's subcrop and within the tenements holdings. No surface constraints were applied to the Resource estimate, and no minimum interburden thicknesses were considered for vertically overlapping underground Resources, on the premise that geotechnical and financial (Reserves) considerations would define the most economic option.

Criteria	JORC Code explanation	Commentary
	assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.	▪ Cinder zones around dykes are thin (<0.5 m) and have not been excluded from Resources. Fault throws within existing mine workings do not have a material impact on Resources. Faults with throws greater than seam height exist in the northeast (8 m thrust fault) and in the northwest, where seam limits are bound by a north-south normal fault. ▪ Two seams, the Sandgate and Ashtonfield were included in the previous Resource estimate. These seams were excluded from this Resources estimate due to the conclusion by this Competent Person that they did not meet the 'Reasonable Prospects' test as they are unlikely to be developed, principally due to the thickness of each seam.
Metallurgical factors or assumptions	▪ *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.*	▪ High ash cut-off of 50% (is) raw ash was applied to the Coal Resource. Abel Mine previously produced thermal and semi-soft coking coals. Coals that are quoted in the Resource estimate have been mined and processed in previous mine operations in the area.
Environmental factors or assumptions	▪ *Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.*	▪ Donaldson Coal maintains title over two mining leases and five exploration licences, which have environmental conditions that Donaldson Coal uphold.
Bulk density	▪ *Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.* ▪ *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.* ▪ *Discuss assumptions for bulk density estimates used in*	▪ In situ density was calculated for all samples using two regression equations developed by coal quality specialist Bob Leach. Bob Leach provided one regression equation for samples under 50% ash (adb) and another for samples over 50% ash (adb). In situ density was calculated at an in situ moisture of 4%.

Criteria	JORC Code explanation	Commentary
	the evaluation process of the different materials.	
Classification	▪ *The basis for the classification of the Mineral Resources into varying confidence categories.* ▪ *Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).* ▪ *Whether the result appropriately reflects the Competent Person's view of the deposit.*	▪ Status of Coal Resources were classified either as: – **Measured Resources** - where geological data points based on detailed and reliable drillhole data, sampling and testing information support a reasonable level of confidence in seam thickness, continuity and coal quality of the seam. Adjacent past workings (if present) provide additional supporting information confirming seam presence and continuity. Distance between drillholes can be up to 700 m depending on the consistency of seam character. – **Indicated Resources** - where geological data points contribute to a reasonable level of confidence in seam thickness and continuity and coal quality. Distance between drillholes can be up to 1,300 m depending on the consistency of seam character. – **Inferred Resources** - where there is a paucity of coal quality data and drillhole spacing is only sufficient to delineate seam thickness to a low level of confidence. Distance between drillholes is generally greater than 1,500 m.
Audits or reviews	▪ *The results of any audits or reviews of Mineral Resource estimates.*	▪ No external audits or reviews have been undertaken with regards to the Coal Resource estimate.
Discussion of relative accuracy/ confidence	▪ *Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.* ▪ *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* ▪ *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	▪ Coal Resources for Donaldson Coal have been classified into confidence categories (Measured, Indicated & Inferred) based on the Competent Person's assessment of the data and understanding of the geology. These confidence categories, and the appropriate rounding that has been applied, reflect the accuracy and confidence of the Resource estimate. ▪ Coal Resources have been reported within polygons that contain multiple drillhole intersections. The estimate is therefore considered a global estimate.

Section 4 Estimation and Reporting of Ore Reserves

The completed Table 1, Sections 4 is in response to the current ADV-BR-11019_Hunting Eagle_CPR Report completed in part by Competent Person, Mr Graeme Rigg on behalf of RPM.

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(Criteria listed in Section 1, and where relevant in Sections 2 and 3, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral Resource estimate for conversion to Ore Reserves	▪ *Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.* ▪ *Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.*	▪ The Coal Resource estimate used as the basis for this Coal Reserves Statement is described as part of this statement. The Resource estimate has been prepared by Mr. Brendan Stats. The Competent Person, Mr. Stats, 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.
Site visits	▪ *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* ▪ *If no site visits have been undertaken indicate why this is the case.*	▪ Multiple site visits to the Abel underground have been undertaken by the Reserves Competent Person. The outcome of these site visits was observation of site and mining conditions and discussion with site operating personnel regarding the operation and the determination of project parameters used in the Donaldson underground planning process.
Study status	▪ *The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.* ▪ *The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.*	▪ Abel Mine is currently on care and maintenance, following cessation of the bord and pillar operations over a number of years of low coal prices. LOM studies have been complemented by ongoing exploration and assessment.
Cut-off parameters	▪ *The basis of the cut-off grade(s) or quality parameters applied.*	▪ There are no coal quality cut-off parameters used to eliminate the conversion of Coal Resources to Coal Reserves. LOM planning has been used to determine whether Coal Resources will convert to Coal Reserves.
Mining factors or assumptions	▪ *The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design).* ▪ *The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc.* ▪ *The assumptions made regarding geotechnical parameters (eg pit slopes, stope sizes, etc), grade control and pre-production drilling.* ▪ *The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).* ▪ *The mining dilution factors used.*	▪ LOM planning has been used as the basis of converting Coal Resources to Coal Reserves. ▪ The selected mining method is conventional longwall extraction with continuous miner development. ▪ Geotechnical studies have been carried out to determine roadway and longwall behaviour. ▪ Groundwater studies have been carried out to estimate groundwater impacts and inflows. ▪ Gas studies have been carried out to determine seam gas content and composition, and likely gas management requirements. ▪ The mining factors used were: – Development roadways 5.4 m wide by 2.7 m high – Longwall operating height 2.4 m - 3.2 m – Longwall panel width 250 m - 300 m

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Criteria	JORC Code explanation	Commentary
	▪ *The mining recovery factors used.* ▪ *Any minimum mining widths used.* ▪ *The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.* ▪ *The infrastructure requirements of the selected mining methods.*	– It is assumed that no coal is lost from the roof or floor of the mineable coal sections during development or longwall extraction; – Seam splitting and seam thickness variation across the target area results in stone forming part of the working section (mid-seam or at the seam roof) during development and longwall operations, thereby diluting the in situ coal quality. – The quality defaults assigned to the waste rock were assumed to be relative density of 2.2 t/m^3, ash of 80%, and specific energy of 0 kcal/kg; – Relative density data in the geological model is based on assumed in-situ moisture of 2.5%, while all qualities are based on air-dried moisture gridded values. – Preston & Sanders has been used in the estimation of in situ moisture. – RPM has assumed that ROM moisture will be 6%, and product moisture will be 11%. ▪ Inferred Coal Resources do exist within the LOM Plan footprint but have been excluded from Reserve estimates. ▪ The majority of necessary infrastructure is in place.
Metallurgical factors or assumptions	▪ *The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.* ▪ *Whether the metallurgical process is well-tested technology or novel in nature.* ▪ *The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.* ▪ *Any assumptions or allowances made for deleterious elements.* ▪ *The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the ore body as a whole.* ▪ *For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?*	▪ The metallurgical process for washing the target seams is already in place, having been used for washing the coal from the Abel bord and pillar operations. The configuration of the CHPP includes Dense Media Cyclone ("DMC"), Spirals/Reflux separator, and Flotation processes. The current CHPP capacity is approximately 5.1 Mtpa, but this could be increased to approximately 6.8 Mtpa by implementing a 24/7 operation. ▪ The process generates a medium ash thermal product. The metallurgical process is appropriate for the Donaldson/Abel mine. ▪ Yancoal commissioned a coal quality expert to review production data and determine an estimate of current yield at Donaldson/Abel. ▪ No bypass products assumed in the LOM plan. ▪ No allowance has been made for deleterious elements. ▪ Last dot point is not applicable for coal.
Environmental	▪ *The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.*	▪ An Environmental Impact Statement has been prepared and environmental approvals obtained for longwall mining. It is anticipated that some modifications to the approval will be required following additional exploration licence areas being added to the existing areas, further assessment and further modification of the proposed mine layout. ▪ Coarse rejects and washery fines are placed within the Bloomfield open cut void.

Criteria	JORC Code explanation	Commentary
Infrastructure	▪ *The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.*	▪ The majority of necessary infrastructure is in place for the current operations at the Asset.
Costs	▪ *The derivation of, or assumptions made, regarding projected capital costs in the study.* ▪ *The methodology used to estimate operating costs.* ▪ *Allowances made for the content of deleterious elements.* ▪ *The source of exchange rates used in the study.* ▪ *Derivation of transportation charges.* ▪ *The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.* ▪ *The allowances made for royalties payable, both Government and private.*	▪ Abel mine is currently on care and maintenance. Subsequent capital expenditure will be limited primarily to items associated with the change from bord and pillar operations to longwall operations. ▪ All operating costs are based on LOM planning estimates from Yancoal and have been reviewed by RPM. ▪ Current long-term exchange rate assumptions were provided by Yancoal. ▪ Transport charges based on actual contracted prices taking into account existing Take or Pay arrangements. ▪ NSW state government royalties are included in the estimate. ▪ RPM reviewed all costs and adjusted them where necessary.
Revenue factors	▪ *The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc.* ▪ *The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.*	▪ Long term product coal pricing assumptions have been provided by Yancoal Marketing and is based on independent third party research and reporting. ▪ The revenue factors are considered reasonable for the purposes of estimating Reserves.
Market assessment	▪ *The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.* ▪ *A customer and competitor analysis along with the identification of likely market windows for the product.* ▪ *Price and volume forecasts and the basis for these forecasts.* ▪ *For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.*	▪ A Marketing Study has not been reviewed however markets are well established for the mine's coal products. The projects typically produce up to four main products: – Thermal at approx. 14.5 - 33% ash (ad); and – SSCC at approx. 9.5% ash (ad). ▪ Product Coal specifications were based on assessment by A&B Mylec. ▪ Based upon the product and specifications, RPM anticipates no foreseeable issues in demand for the product.
Economic	▪ *The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc.* ▪ *NPV ranges and sensitivity to variations in the significant assumptions and inputs.*	▪ The inputs to the economic analysis are 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 have been used in assessing NPV.

Criteria	JORC Code explanation	Commentary
		▪ The NPV results for the Project 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. ▪ Sensitivity analysis has been completed on the Project over a range of variable. The Project is most sensitive to changes in exchange rate, revenue and operating costs. ▪ GCL currently pays significant rail and port Take or Pay penalties for Abel Mine. Once the mine becomes operational again (assuming favourable economic conditions) it will be necessary for the rail and port contracts to mesh better with the actual mine output, otherwise Take or Pay penalties could impact significantly on project value.
Social	▪ *The status of agreements with key stakeholders and matters leading to social licence to operate.*	▪ Further exploration is planned for areas outside the existing tenements. The additional exploration and subsequent assessment may require modification of existing approvals, or the establishment of additional agreements.
Other	▪ *To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:* ▪ *Any identified material naturally occurring risks.* ▪ *The status of material legal agreements and marketing arrangements.* ▪ *The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.*	▪ 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 operation's viability. ▪ As mining proceeds it is reasonably expected any modifications to existing agreements or additional agreements that may be required can be obtained as required.
Classification	▪ *The basis for the classification of the Ore Reserves into varying confidence categories.* ▪ *Whether the result appropriately reflects the Competent Person's view of the deposit.* ▪ *The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).*	▪ Classification of Coal Reserves has been derived by considering the Measured and Indicated Resources and the level of mine planning. – Both Measured and Indicated Resources have been classified as Probable Reserves. – Approximately 1 Mt of Probable Reserves have been derived from Measured Resources. ▪ The Inferred Coal Resources have been excluded from the Reserve estimates. ▪ The result reflects the Competent Persons view of the deposit.
Audits or reviews	▪ *The results of any audits or reviews of Ore Reserve estimates.*	▪ Internal peer review of the Reserves Report has been completed.

Criteria	JORC Code explanation	Commentary
Discussion of relative accuracy/ confidence	▪ *Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate.* ▪ *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* ▪ *Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage.* ▪ *It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	▪ The mine footprint is supported by approximately 2% of Measured Coal Resources, with the bulk of the rest of the footprint supported by Indicated Coal Resources. ▪ The basis of the estimate are estimated operating costs and comparison with typical industry mining costs. ▪ CHPP and surface infrastructure is in place. ▪ Analysis of the coal quality has been undertaken by independent laboratories working under international standards of method and accuracy. ▪ 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. ▪ Geotechnical studies have been completed for the mine. ▪ Additional exploration is proposed in areas outside of the current tenements, as well as within the proposed mine footprint. ▪ The major risk in not achieving the estimated Reserve extraction comes from the low project NPV and the exposure of the project's economic viability to future variations in coal prices.

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JORC Code Disclosure Requirements

Middlemount

RPMGLOBAL

JORC Code, 2012 Edition – Table 1 report template

The completed Table 1, Sections 1, 2 & 3 are in response to the current ADV-BR-11019_Hunting Eagle_CPR Report completed in part by Competent Person Mr Michael Johnson on behalf of RPM.

Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	▪ *Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.* ▪ *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* ▪ *Aspects of the determination of mineralisation that are Material to the Public Report.* ▪ *In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.*	▪ The Middlemount Mine has been in operation since November 2011. ▪ The Middlemount Mine area contains some 1,073 boreholes which forms the knowledge basis of the coal deposit; 732 of which were used in the 2018 geological model. ▪ Open hole drilling was used for structure control. ▪ Open holes are sampled at 1 m intervals. ▪ Core drilling was used for the collection of coal quality information. ▪ Core drilling is typically by both HQ (nominal 60 mm diameter) and 100 mm diameter tungsten carbide drill bits and triple tube barrels which are standard industry practice. ▪ Core hole locations are selected based on the ability to fully represent the Coal Resource at the particular location in the deposit taking the structural complexity into consideration. ▪ Cored holes are typically sampled at 10 cm and a maximum of 1 m intervals so that the quality of the seam can be characterised for raw coal ash. ▪ All non-coal bands greater than 5 cm thick are sampled and tested separately. ▪ Samples were selected based on the coal brightness in an attempt to maximise coking potential (typically associated with brighter coals) and provided with a unique sample number before being placed into double plastic bags and sealed. ▪ Raw coal ash and CSN are used to determine the coal mining sections for washed coal products. ▪ The entire seam was sampled in each occasion. ▪ Roof and floor strata were also sampled and tested. Dilution samples are 20 cm to 30 cm in length.
Drilling techniques	▪ *Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	▪ Industry standard drilling techniques are used, with conventional rotary table drill rigs using air and water circulation. ▪ All drilling has been completed using vertical drill orientation. No core orientation has been performed.

Criteria	JORC Code explanation	Commentary
		▪ Blade/Hammer/PCD bits were used to drill open (chip) holes. ▪ Partially cored 4-inch (100 mm) core holes were drilled to obtain coal quality information. It is estimated that 40% of core holes are 4-inch; the remainder are HQ (nominally 60 mm diameter). ▪ Where geological complexity increased, 4-inch core barrels were used to maximise core recovery. Minimum core recovery for core holes used in the model was 90%. It is observed that the brightest, lowest ash, friable/brittle coal is more susceptible to core loss, especially in faulted areas. Core loss usually occurs between core runs, and thus the maximum 4C core barrel length of 4.5 m was used to minimise the number of core runs. ▪ Contractually, a redrill is required if less than 95% core recovery is obtained. Recovery less than 95% is occasionally accepted if the drilling environment is difficult, or the loss is deemed acceptable via comparing against geophysics density, and the position of the loss in the seam.
Drill sample recovery	▪ *Method of recording and assessing core and chip sample recoveries and results assessed.* ▪ *Measures taken to maximise sample recovery and ensure representative nature of the samples.* ▪ *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	▪ Coring instructions followed by field geologists at Middlemount are based on the industry-standard CoalLog Manual for Geology & Geotechnical Data Collection. ▪ Core recovery is recorded by the rig geologist at the time logging the bore hole, based on measurements taken of the cored interval and the core recovered and visual inspection of the core. Actual recovered core lengths are measured with a tape measure and any core loss is recorded in geological logs, coal quality sample intervals and in the run by run drilling record field sheets. ▪ Core loss is confirmed by the rig geologist after comparing the recovered core to the geophysical logs to determine which parts if any of the seam are missing due to core loss. ▪ Core loss is recorded and excluded from samples in accordance with the CoalLog Manual for Geology & Geotechnical Data Collection. ▪ Historic boreholes do not comply with CoalLog Manual for Geology & Geotechnical Data Collection. ▪ The database contains 3,312 coal quality samples, of which 2,266 are of coal. 95% of these samples have valid proximate analysis. ▪ 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, provided that the cored hole is not located in an area of high structural complexity, in which case lower core recovery is accepted, but may not be used in the Resource model. ▪ Open hole chip recovery is assessed qualitatively by the rig geologist.
Logging	▪ *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies*	▪ Standardised Peabody logging systems and protocols are utilised for all drilling, logging and sampling.

Criteria	JORC Code explanation	Commentary
	and metallurgical studies. ▪ *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* ▪ *The total length and percentage of the relevant intersections logged.*	▪ Core is geologically logged and open hole chip samples are taken every 1 m and logged for lithology changes. ▪ All holes have been lithologically logged, with cored coal sections brightness logged. The logging of the chip and core samples is detailed and includes a record of the recovery of the total length and the cored length, rock type, stratigraphic unit and numerous adjectives to describe the sample in terms of colour, grainsize, bedding etc. all of which is sufficient to describe the various lithologies and coal samples to support the Coal Resource estimation from a geological and coal quality consideration. ▪ Geotechnical drilling is completed by Middlemount, particularly around faulted areas, and where the Girrah seams are up thrown and appear at the top of the open cut highwall. ▪ Geotechnical boreholes have been drilled vertically. ▪ Bore core is photographed on both the core table (0.5 m increment). ▪ An estimated 75% of the Resource uses holes with digital geophysical logs. Some older holes only have paper copy geophysics. The holes without geophysics appear to have been corrected to geophysics, and reliability has been verified from newer drilling, and mining. Holes confirmed to be unreliable have been flagged in the Isis database to avoid accidental use during modelling. In some areas these holes have been redrilled. ▪ The standard geophysical tools used were: density, gamma and caliper. Selected historic holes have verticality, sonic, resistivity, temperature and spontaneous potential sondes run in the holes. ▪ Drill hole vertically data was used (when available) to orientate and locate the boreholes and the coal seams for inclusion in the structural model. An estimated 10% of the Resource was modelled using verticality data.
Sub-sampling techniques and sample preparation	▪ *If core, whether cut or sawn and whether quarter, half or all core taken.* ▪ *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* ▪ *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* ▪ *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* ▪ *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.* ▪ *Whether sample sizes are appropriate to the grain size of the material being sampled.*	▪ Core sampling is completed at the drill site and is based on a set of standard criteria (determined by lithology and structure) that follows the Middlemount sampling procedure. ▪ All samples were photographed, double bagged, and provided with a unique sample identifier prior to sending to the laboratory. ▪ Whole samples were used for quality analysis. ▪ All samples within the seam extents were analysed. ▪ Carbonaceous material, and all stone bands were sampled to ensure that full coverage of each seam was obtained. ▪ Sample depths have been reported as the geophysically corrected depths. ▪ Samples were air dried and weighed prior to analysis. Raw analysis samples were crushed to -12.5 mm and split into portions using a rotary splitter prior to coal quality analysis.

Criteria	JORC Code explanation	Commentary
		▪ Washability analysis was conducted across the Resource area. The analysis was conducted in accordance with the Middlemount washability procedure.
Quality of assay data and laboratory tests	▪ *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* ▪ *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.* ▪ *Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.*	▪ Only core samples are used to obtain coal quality information. ▪ Only third party NATA certified labs were used for sample analysis. Labs conduct round robin validation checks to ensure a high standard of reporting is maintained. ▪ All samples were analysed for raw coal quality. ▪ Sample instructions were issued by Middlemount Coal personnel. ▪ Middlemount Coal currently uses the ALS Global Coal Quality laboratory at Richlands, QLD, following appropriate Australian Standards for coal testing.
Verification of sampling and assaying	▪ *The verification of significant intersections by either independent or alternative company personnel.* ▪ *The use of twinned holes.* ▪ *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* ▪ *Discuss any adjustment to assay data.*	▪ At the laboratory, all samples are registered into both Coal8 & LabSys – ALS's own sample tracking software systems (approved by NATA). This registration is confirmed by Asset Manager against the original client instructions, and each sample and its subsequent children are affixed with a designated sticker containing all the sample details and a scannable barcode. ▪ Samples are analysed according to client procedures. As samples are analysed the barcode is used to log each result to that sample. ▪ Results are quarantined and repeated if they do not meet the requirements of the appropriate Australian or ISO Standards. Controls are run with each batch of samples to ensure the testing apparatus is operating properly. Asset Managers and Laboratory Managers/Supervisors approve these results. ▪ Laboratory Asset Managers collate and validate the data, looking for abnormalities in the results. The primary means of validation include looking for known trends in the data, by creating cross plots of the results on a seam by seam basis. Typical industry practices include the comparison of the following (for example): – Ash vs. Relative Density, – Volatile Matter vs. Ash, – Specific Energy vs. Volatile Matter, and – Ash vs. Total Sulphur ▪ Sample results are also validated in-house by Middlemount Coal employees. ▪ Twinned core holes have only been drilled where initial sample recovery was not acceptable for analysis. ▪ All coal quality data is stored in Peabody's internal data managements system.

Criteria	JORC Code explanation	Commentary
		▪ The coal quality laboratories provide the results of coal quality testing to Middlemount in a template which is directly uploaded into Peabody's internal data management system. CSV files are exported from this system for modelling, which eliminates transcription and key in errors arising from data transfer. ▪ Validation is conducted before and after the data is loaded into Peabody's internal data management system. ▪ Relative density is adjusted for Preston Sanders, using the assumed bed (in situ) moisture of 5%, which is consistent for the rank of the coal present at Middlemount.
Location of data points	▪ *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* ▪ *Specification of the grid system used.* ▪ *Quality and adequacy of topographic control.*	▪ The initial borehole coordinates are obtained using handheld GPS by the site geologist using Aus Geoid heights and GDA94 Zone 55 datum and projection system. ▪ Final borehole collar survey is completed by the Middlemount Coal personnel trained in surveying, using the Middlemount Mine base station calibrated to GDA94_55. ▪ Geological models are developed from topographic data from Middlemount Coal supplied Digital Terrain Model (DTM) data for the Middlemount area, as at the end of June 2018. ▪ The topographic surface at Middlemount is essentially flat lying. ▪ In the case that older boreholes were not surveyed in line with CoalLog Manual for Geology & Geotechnical Data Collection, the holes have been reviewed and where elevations were questions, adjusted to DTM levels. Else, these locations have been redrilled.
Data spacing and distribution	▪ *Data spacing for reporting of Exploration Results.* ▪ *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* ▪ *Whether sample compositing has been applied.*	▪ There is a low to moderate level of geological structural complexity at Middlemount, therefore, relatively wide-spaced hole distribution has been employed to correlate the Resource to an acceptable level of confidence (i.e. approximately 200 m). ▪ Where the seam is cropping, line of oxidation (LOX) drilling has been completed, with 100m-long parallel lines drilled with approximately 50 m between lines and 25 m between holes. The LOX line drilling extends for approximately 4 km of strike length within the mining area. ▪ The spacing of exploration drill holes is reduced as certainty of inclusion of Resources into the LOM increases. ▪ Borehole spacing is not the overarching criteria for determining the spacing of exploration. Geological certainty is the prime requirement at the completion of exploration. In other words the greater the geological complexity, the closer the final borehole spacing.
Orientation of data in relation to geological structure	▪ *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* ▪ *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	▪ Drill holes were oriented and drilled vertically. ▪ In areas of steep bedding dip, drill holes often have a high percentage of deviation. ▪ LOX holes have been drilled perpendicular to the strike of the coal seam being investigated. ▪ Verticality data was acquired during geophysical logging for holes drilled in 2017 only (10% of modelled holes).

Criteria	JORC Code explanation	Commentary
		▪ Core orientation has not been measured.
Sample security	▪ *The measures taken to ensure sample security.*	▪ Core samples are bagged by the geologist and dispatched to the laboratory by dedicated courier service. ▪ Sample instructions are provided to the laboratory. ▪ In light of the bulk commodity nature of coal, no higher level security measures are deemed necessary since it is very unlikely to be subject to material impact from sample tampering theft or loss.
Audits or reviews	▪ *The results of any audits or reviews of sampling techniques and data.*	▪ The coal quality laboratory is audited by external auditors as a requirement under the NATA accreditation. ▪ All updates to the geological data or model have been documented following internal checklists and reporting documentation. ▪ Peer review of the 2018 JB Mining model has been completed by Carol Rolley, confirming consistency between JORC Table 1 and the model report. ▪ Resource estimation checks have been completed by Spencer Summers of Peabody Energy. ▪ Resource estimation checks have also been completed internally by RPM Geologists.

Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	▪ *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* ▪ *The security of the tenure held at the time of reporting along with any known impediments to obtaining a license to operate in the area.*	▪ All Resources lie within Mining Leases held by Middlemount Coal Pty Ltd, which is a joint venture between Peabody Energy Australia Pty Ltd (50.003%) and Yancoal Australia Ltd (49.997%). There are no overriding royalties, native title interests, historical sites or wilderness or national park and environmental settings over these Mining Leases. ▪ Middlemount Coal has title to ML70379, ML70417, MDL282 and infrastructure mining leases ML700014 and MLA700027. ▪ The Resources have been reported for ML70379, ML70417 and MDL282 only. ▪ The tenure licence for ML70379 will expire on 30 September 2031. The primary activity undertaken on this lease is mining. ▪ The tenure licence for ML70417 will expire on 30 September 2031. The primary activity undertaken on this lease is mining.

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Criteria	JORC Code explanation	Commentary
		▪ The tenure licence for MDL282 will expire on 30 April 2020. The primary activity undertaken on this lease is exploration. ▪ The tenure licence for ML700014 will expire on 30 September 2031. The primary use for lease is infrastructure location.
Exploration done by other parties	▪ *Acknowledgment and appraisal of exploration by other parties.*	▪ 40/732 model holes (0.05%) were drilled in the 1970-80's by Anglo American. ▪ 93/732 model holes (12.7%) were drilled in the 1980's by Capricorn Coal (CapCoal) Pty Ltd. ▪ 39/732 model holes (0.05%) were drilled in 2006-07 by Custom Mining. ▪ 550/732 model holes (75.1%) were drilled from by 2008-2017 were drilled by Middlemount Coal, including three water bores. ▪ 10/732 model holes (0.01%) were drilled by other companies during the exploration history of the tenure. ▪ All known historical drilling has been incorporated into the Middlemount Isis database. The term 'historical drilling' used by Middlemount Coal, refers to all boreholes completed prior to 2008. ▪ No drilling is conducted on Middlemount Coal's mining leases by other parties.
Geology	▪ *Deposit type, geological setting and style of mineralisation.*	▪ The Middlemount deposit is located in the central region of the Bowen Basin and targets the Permian Rangal Coal Measures of the Blackwater Group. ▪ The major regional structure is the north-northwest oriented Jellinbah fault, a thrust fault with over 300 m throw. The Jellinbah faults bisects Middlemount's ML70379. ▪ To the west of the Jellinbah fault, small-scale (<10 m) faults have been detected in mining and exploration. ▪ The cropping coal of the Middlemount deposit is located to the west of the Jellinbah fault, which also bounds the eastern extent of the Resource area. ▪ The coal seams strike north-northwest also, and dip at an average of 5-8° to the east. ▪ The deposit dimensions are approximately 7 km in length north-northwest, by 2 km in width west-east. ▪ The seam structure is complicated by seam splitting and localised thickening of seams around faulted zones.
Drill hole Information	▪ *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:* – *easting and northing of the drill hole collar* – *elevation or RL (Reduced Level – elevation above sea level*	▪ All borehole data is stored within the Middlemount Isis database. ▪ The Isis database associated with the 2018 Vulcan model contains 1,076 boreholes, of which 481 are cored holes of various diameters.

Criteria	JORC Code explanation	Commentary
	in metres) of the drill hole collar – *dip and azimuth of the hole* – *down hole length and interception depth* – *hole length.* ▪ *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*	▪ A total of 344 boreholes are not used in the geological model, as they are either located outside the current model area; they occur to the east of the Jellinbah fault; they did not intersect coal measure strata; the hole was redrilled; or the data was considered unreliable. ▪ The majority of boreholes in the Resource area at Middlemount are modern data that was acquired post-2008.
Data aggregation methods	▪ *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.* ▪ *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.* ▪ *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	▪ Samples collected by the field geologist may be combined prior to raw coal analysis, based on the seam naming from review of the geophysical logs. ▪ Samples may be combined after raw coal analysis to create composites (for washability and product coal analyses) that represent the mineable seam working sections. ▪ Individual sample parameters have been weighted by thickness and density (mass weighting), except for relative density (RD), which is composited based on thickness only. ▪ There are no metal equivalents used to report the Coal Resources. This is not a standard reporting practice for Coal Resources.
Relationship between mineralisation widths and intercept lengths	▪ *These relationships are particularly important in the reporting of Exploration Results.* ▪ *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* ▪ *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').*	▪ All boreholes at Middlemount are planned as vertical. However due to the bed dips the holes tend to deviate 'up-dip' so that with sufficient depth the hole is perpendicular to the seam. ▪ Downhole deviation data has been collected on holes drilled in 2017 to provide a higher degree of certainty to the location of the coal seams in the boreholes.
Diagrams	▪ *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	▪ All relevant figures depicting information considered material to the Coal Resources reported are contained within the JORC report associated with this Table 1.
Balanced reporting	▪ *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	▪ All valid exploration data for the Middlemount project has been collated and reported accordingly. ▪ Some exploration holes have not been included in the geological model, as they are either located outside the current model area; they occur to the east of the Jellinbah fault; they did not intersect coal measure strata; the hole was redrilled; or the data was considered unreliable, or misrepresentative (of coal quality results). However, sufficient coverage of

Criteria	JORC Code explanation	Commentary
		boreholes has allowed JORC Resources to be reported for the Middlemount deposit, owing to the collection of valid borehole data.
Other substantive exploration data	▪ *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	▪ Three 2D seismic lines totalling 7.5 km in coverage were completed in 2008 to assist in identifying the location of the Jellinbah fault. ▪ An additional six 2D seismic lines totalling 2.93 km in coverage were completed in 2017. ▪ In-pit survey data of coal roof and floor of the Middlemount Lower and Pisces Upper seams have been incorporated into the geological model for Middlemount ▪ Toe & crest locations for faults have been incorporated into the geological model for Middlemount.
Further work	▪ *The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).* ▪ *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	▪ Sufficient work has been completed to establish seam continuity in the planned LOM area. ▪ Pre-production drilling is completed to maintain a two year gap in advance of mine production. ▪ Additional drilling will be required to test the weathering affects for proposed open cut Resource to the north of the current open cut mine. This may assist increase Resources for future reporting. ▪ Additional exploration require to more accurately define the position and geometry of the Jellinbah fault. This will also assist with defining the pinch-out of the Middlemount seam which is currently occurring against the fault. ▪ Additional core drilling to reduce the spacing between core holes will assist increase confidence in the Resource ▪ Further fault delineation drilling or 2D seismic surveys for structural interpretation.

Section 3 Estimation and Reporting of Mineral Resources

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Database integrity	▪ *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.* ▪ *Data validation procedures used.*	▪ Geological data for Middlemount is stored in Peabody's internal data managements system "Task Manager". ▪ Task Manager stores the following data types: – Collar survey; – Lithology; – Geophysics; and

Criteria	JORC Code explanation	Commentary
		– Coal quality data. ▪ Core and chip sample photographs are stored separately on a server. ▪ Exploration data is data entered into Task Manager which contains validation and other business rules to ensure only acceptable codes are entered. ▪ Coal quality data is loaded directly into Task Manager from laboratory excel spreadsheets based on the template containing the requests for analysis. ▪ Coal quality data is validated accordant to rules which include: – proximate data must add to 100%; – acceptable ranges; and – the sum of density fractions must sum to the raw mass. ▪ The original data recorded by the geologist and supplied by the laboratory is retained as a raw file and backed up. Subsequent upgrades to geological data in Vulcan/Isis are made in the copies of the original data. ▪ The lithology data is corrected to geophysics. ▪ The data is reviewed by a Senior Geologist. ▪ The data uploaded into the Isis database prior to geological modelling. ▪ The boreholes are checked by the Resource Geologist during the modelling process.
Site visits	▪ *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* ▪ *If no site visits have been undertaken indicate why this is the case.*	▪ A site visit was undertaken by the Competent Person in April 2018. The outcome of the site visit was to better understand of the location, geological data, environment and site procedures. ▪ The Competent Person is familiar with the style of the Middlemount Resource. ▪ RPM has spent time in discussion with Mr. Stuart Whyte who is the Yancoal Competent Person; and Mr. Greg Jones who is the Competent Person for Peabody for additional understanding of the Resource.
Geological interpretation	▪ *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.* ▪ *Nature of the data used and of any assumptions made.* ▪ *The effect, if any, of alternative interpretations on Mineral Resource estimation.* ▪ *The use of geology in guiding and controlling Mineral Resource estimation.* ▪ *The factors affecting continuity both of grade and geology.*	▪ Detailed coal ply logging is completed by geological logging of open and fully cored holes supported by geophysical log data. ▪ Coal seam and ply correlation are relatively simple where drill spacing is adequate and are sufficient to establish the structural thickening of seams, and structural dislocation due to faulting. ▪ The coal seams of the Rangal Coal Measures at Middlemount, namely in descending stratigraphic order: – Middlemount seam; – Tralee seam; and

Criteria	JORC Code explanation	Commentary
		– Pisces seam. ▪ All coal seams have unique geophysical signatures that enables seam correlations to be made consistently and confidently. ▪ The Pisces seam is underlain by the Yarrabee Tuff which is a basin wide marker interval and can be used to provide stratigraphic assurance to the seam picks. ▪ Other markers used to assist with seam identification at Middlemount include: – typical seam thickness and geophysical signatures of the seams; – interburden thickness characteristics; and – gamma response of the seam intervals.
Dimensions	▪ *The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.*	▪ The Middlemount deposit is approximately 7 km in strike length (north-northwest), and 2 km wide (east-west). ▪ Coal Resources commences at the subcrop line in the west of the deposit, and extends towards the Jellinbah fault, which bounds the east of the deposit. Resource estimations are limited to 50 m west of the Jellinbah fault. ▪ Resource estimates are exclusive of mined coal at Middlemount. ▪ Only coal less than 37% (ad) raw ash has been considered for Resource estimations, based on the limits used by Middlemount CHPP operators. ▪ Open cut Coal Resources commence below the base of weathering, which averages 40-45 m across the deposit. ▪ The minimum mining thickness for fresh coal is 0.30 m. ▪ Potential open cut Coal Resources have been estimated to a depth of 280 m, and all coal down to the floor of the Pisces Upper seam to within a 50 m buffer from the underground mining area. ▪ To the east of the open cut, highwall mining is planned in the Pisces Upper seam until the 50 m buffer from the Jellinbah fault. This zone is 50-150 m wide, and is controlled by the location of the Jellinbah fault. This section of coal has not been included in the Resource estimate. ▪ South of the current Middlemount Coal open cut mine, a proposed underground area is limited to the Middlemount seam (coalesced plies of MLT and MLB) and the Pisces Upper seam (coalesced plies of PUT, PUM and PUB). ▪ There are no thickness or depth restrictions on the underground Resource estimates (a minimum thickness of 0.5 m was applied to the individual plies for the purpose of generating coal resource model to report resources); tenure is the only limiting factor from which a 50 m offset has been applied to the mining lease boundary on the southern extents of the

Criteria	JORC Code explanation	Commentary
		Underground Area, and a 50 m barrier pillar between the Open Cut area and Underground Area. ▪ It is estimated that the coal thickness increases to over 5 m in the underground area. ▪ No fault-repeated coal has been included in the Resource estimation.
Estimation and modelling techniques	▪ *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.* ▪ *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.* ▪ *The assumptions made regarding recovery of by-products.* ▪ *Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).* ▪ *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.* ▪ *Any assumptions behind modelling of selective mining units.* ▪ *Any assumptions about correlation between variables.* ▪ *Description of how the geological interpretation was used to control the resource estimates.* ▪ *Discussion of basis for using or not using grade cutting or capping.* ▪ *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.*	▪ Modelling was undertaken using Maptek Ptd Ltd geological modelling software, Vulcan, version 10.1.4. ▪ One all-encompassing model (mar18) was created for the Middlemount Coal Resource. ▪ Structure models were created at 20x20 m mesh size, and coal quality modelling created with a 100x100 m mesh size. The mesh sizes were selected to achieve the most representative models. ▪ Faults are modelled with dip (25-30°). The location where the fault plane intersects the roof and floor of each seam has been estimated. In the case of the Jellinbah Fault, a 50 m buffer to the west of this point has been applied as the fault line. ▪ Stratigraphic mapfiles were used to interpolate horizons in every hole to control the development of the structure and thickness grids. ▪ Seams were split into their plies and modelled as contiguous elements. ▪ Where holes were not drilled deep enough to intersect seams lower in the sequence (e.g. in LOX holes), the interpolation of the seams into these holes was ignored and only true intersections were recognised so that the structural integrity of the model was kept intact. ▪ Spot heights from interpretation of 2D seismic lines supplied by Middlemount Coal were used for the floor of the Middlemount Lower seam and Pisces Upper seam to control the structural model. ▪ Selected data points were used from in-pit floor survey of the Middlemount Lower seam and Pisces Upper seam to control the structural model also. ▪ Toe and crest survey for faults encountered in mining were applied to the structural model. ▪ A base of weathering grid was developed from drillhole intersections, and all final structure grids used for Resource estimations were clipped to the base of weathering to ensure oxidised coal was excluded from the calculations. ▪ Structural and coal quality grids were developed using inverse distance modelling interpolation, to the power of two with no trending. This has been selected to honour the data while providing a degree of smoothing over the Resource.
Moisture	▪ *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	▪ There are no total moisture determinations for Middlemount in situ coal. Air dried density has been adjusted to an in situ basis using the Preston Sanders equation using an assumed in situ moisture of 5%, which is commensurate with the coal rank. The selection of a total moisture estimate of 4% to 6% will not make a material difference to the Resource tonnage

Criteria	JORC Code explanation	Commentary
		estimate. Therefore the Competent Person considers that further discussion about changes of the total moisture assumption of 5% is not relevant.
Cut-off parameters	▪ *The basis of the adopted cut-off grade(s) or quality parameters applied.*	▪ The minimum seam thickness for Resource estimation is 0.30 m; a limit that has been applied due to practical mining limitations, as well as consultation with mine planning engineers. However, no seam thickness limit is applied where seams adjoin (coalesce) with other seams. ▪ 37% raw ash is used as an upper limit for raw coal quality, based on discussions with CHPP personnel. ▪ No weathered coal is included in the Resource estimation. ▪ No fault-repeated coal is included in the Resource estimation. ▪ All coal within a 50 m buffer of the Jellinbah fault has been excluded from the Resource estimates. ▪ Highwall Mining Areas have been excluded from the Resource Estimate. ▪ A 50 m Offset from the lease boundary on the southern extent of the Underground Area has been applied. ▪ All coal to the east of the Jellinbah fault has been excluded from Resource estimates.
Mining factors or assumptions	▪ *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.*	▪ Open cut mining methods using a combination of conventional excavator and truck operation and blast cast and dozer mining for approximately 80% of the Resource. ▪ Underground extraction methods have been considered for the remaining 20% of the Resource. ▪ Highwall mining methods are excluded from the Resource.
Metallurgical factors or assumptions	▪ *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.*	▪ Middlemount Coal has a six year history of washplant performance data available. ▪ The Middlemount CHPP consists of industry standard separation equipment such as: – De-sliming screen; – Dense media cyclones; – Spirals; and – Froth flotation. ▪ The Middlemount CHPP is a 700 tph single stage plant with two product coal handling systems.

Criteria	JORC Code explanation	Commentary
		▪ Washability testing is performed on 100 mm diameter core to estimate the coals performance in the CHPP. ▪ Coal samples are crushed to 12.5 mm, and float sink testing is performed on the following separation densities: – F1.30; – F1.40; – F1.50; – F1.60; – F1.70; – F1.80; and – F2.00. ▪ Clean coal composites are prepared and tested for coking and PCI parameters, following accepted industry practice for metallurgical coal. ▪ Middlemount Coal currently produces both coking and PCI coal products, which requires beneficiation in the CHPP. ▪ Products are determined based on their coal quality. The MLT seams and the +16 mm fraction of the TL2 and PU seams are washed to a PCI product. The MLB seam and the -16 mm fraction from TL2 and PU seams is washed to a semi hard coking coal.
Environmental factors or assumptions	▪ *Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.*	▪ Current operations are conducted under an approved environmental authority (EA). ▪ All Resources are within mining leases. No issues are expected that would impact the Resource estimate. ▪ Re-alignment of Roper Creek is required to complete the full extraction of Coal Resources at the southern end of the pit.
Bulk density	▪ *Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.* ▪ *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences*	▪ The Middlemount Mine has been in operation since 2011. The density of the coal and its distribution within the seams has been established. ▪ Most borehole samples have true relative density analysis. ▪ The in situ density is estimated using laboratory air dried relative density and adjusted to in situ density using the Preston Sanders method using the assumed in situ moisture of 5%.

Criteria	JORC Code explanation	Commentary
	between rock and alteration zones within the deposit. ▪ *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	
Classification	▪ *The basis for the classification of the Mineral Resources into varying confidence categories.* ▪ *Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).* ▪ *Whether the result appropriately reflects the Competent Person's view of the deposit.*	▪ The classification of the Coal Resources into varying confidence categories is based on a standardised process of utilising points of observation (PoO) according to their reliability. The PoOs are used to categorise quantity and quality continuity (or both) or support continuity. ▪ Resource classification is based on the Competent Person's confidence of the seam continuity and coal quality variability within drillholes. ▪ Seam continuity is the key parameter in structurally complex deposits, which drives the drillhole spacing as well as the Resource classification made by the Competent Person. ▪ The overarching requirement for the Competent Person is that seam continuity can be demonstrated. ▪ A Quantity PoO has the following attributes: – open or cored hole; – seam interval geophysically logged, or where geophysical data is missing for a seam(s), it is up to the Competent Person's discretion to determine if the seam level and thickness is consistent with nearest neighbour boreholes; and – reliable collar survey. ▪ A Quality PoO has the following attributes: – cored hole; – linear core recovery greater than 90%; – reliable collar survey; – cored hole in which 100% of the seam interval has been cored; – seam interval geophysically logged; – if no geophysics log data is available it is up to the Competent Person's discretion to determine if the seam level and thickness is consistent with nearest neighbour boreholes; and – raw coal ash (can be used as a proxy for relative density and yield). ▪ Support Data for PoOs can include: – In-pit mapping data for faults and dykes; – Seam floor or roof survey data; and – Elevations from interpreted 2D seismic surveys. ▪ The radii of influence for PoOs were determined by consideration of the following for each coal ply:

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Criteria	JORC Code explanation	Commentary
		– seam continuity; – variability of seam thickness; – variability of interburden thickness; – structural variability; – variability of coal quality (particularly raw ash); and – review of the variability of the geology between boreholes and the reliability of borehole data. ▪ The nominal PoO spacing and radii of influence are: – **Measured**: 500 m apart with 250 m radii – **Indicated**: 1,000 m apart with 500 m radii – **Indicated**: 2,000 m apart with 1,000 m radii ▪ The Competent Person is satisfied that the stated Coal Resource classification reflects the geological controls interpreted and the estimation constraints of the deposits.
Audits or reviews	▪ *The results of any audits or reviews of Mineral Resource estimates.*	▪ Data review, modelling and Resource estimation procedures have been critically reviewed. ▪ The Coal Resource estimate has been compared with previous Resource estimations for Middlemount, and are found to be acceptable given the updates and changes that have occurred between the 2018 model and its predecessor.
Discussion of relative accuracy/ confidence	▪ *Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.* ▪ *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* ▪ *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	▪ The geological modelling for Middlemount has been conducting by JB Mining since 2007. ▪ Geostatistical analysis was completed on modelled seam thickness and raw ash across the Middlemount deposit. This analysis assisted with justification of confidence categories for Resource estimation. ▪ Middlemount budgeted coal recovery and quality specifications are achieved annually, therefore, it is inferred that the geological model honours exploration data and is reflective of the mined product. ▪ To maintain consistency when converting Resources to Reserves, the same modelling methodology has been used since 2007.

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Section 4 Estimation and Reporting of Ore Reserves

The completed Table 1, Sections 4 is in response to the current ADV-BR-11019_Hunting Eagle_CPR Report completed in part by Competent Person's, Mr Doug Sillar on behalf of RPM.

(Criteria listed in section 1, and where relevant in sections 2 and 3, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral Resource estimate for conversion to Ore Reserves	▪ *Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.* ▪ *Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.*	▪ The Coal Resource estimate used as the basis for this Coal Reserves Statement is described as part of this statement. The Resource estimate has been prepared by Mr. Michael Johnson. The Competent Person, Mr. Johnson, 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 and a member of the Australian Institute for Geoscientists. ▪ The Resources Statement was compiled in accordance with The JORC Code 2012 Edition. ▪ The Coal Resources reported are inclusive of the Coal Reserves. ▪ The same geological model has been used for the estimation of Resources and Reserves.
Site visits	▪ *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* ▪ *If no site visits have been undertaken indicate why this is the case.*	▪ A site visit to the Middlemount Mine was undertaken by representatives of RPM in April 2018. The Reserves Competent Person was unable to attend but interviewed the representative following the visit. The outcome of this visit was observation of the Asset area to better understand location, environmental, social, groundwater and existing infrastructure consideration.
Study status	▪ *The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.* ▪ *The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.*	▪ Middlemount Coal Pty Ltd is a joint venture between Peabody Energy and Yancoal. ▪ Middlemount is an operating mine consisting of a single operating pit. ▪ Middlemount completed a Life of Mine (LOM) Plan in 2017. Only open cut Resources have been considered for Reserves. ▪ The level of detail in the LOM plan is sufficient to meet requirements of JORC. The costs and modifying factors are based on site performance and reconciliations.
Cut-off parameters	▪ *The basis of the cut-off grade(s) or quality parameters applied.*	▪ A minimum mining thickness of 0.3 m is applied to all seams at Middlemount. ▪ A raw ash cut-off of 37% is applied to Resources. No further ash cut-off is applied to Reserves. ▪ Tralee seam is wasted if the seam is thin <0.8 m and high ash >15% ash.
Mining factors or assumptions	▪ *The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design).*	▪ RPM estimated a break even strip ratio and compared against the Company pit shell to confirm pit limits. ▪ The mining method at Middlemount open cut is conventional truck and shovel mining. The operating method is well proven and suitable for the deposit.

Criteria	JORC Code explanation	Commentary
	▪ *The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc.* ▪ *The assumptions made regarding geotechnical parameters (eg pit slopes, stope sizes, etc), grade control and pre-production drilling.* ▪ *The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).* ▪ *The mining dilution factors used.* ▪ *The mining recovery factors used.* ▪ *Any minimum mining widths used.* ▪ *The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.* ▪ *The infrastructure requirements of the selected mining methods.*	▪ Pit slope designs are based on the following criteria: – 35° lowwall; – 50° highwall and endwall in weathered zone, 10 m berms every 12 m vertically to give overall slope of approximately 35°; – 25 m berm at top of fresh Permian; and – 70° slopes is fresh material, 25 m berm every 50 m vertically. ▪ The following mining factors are based on reconciliations of production at the Middlemount mine: – minimum coal mining thickness of 0.3 m; – coal loss of 0.10 m at the working section roof and 0.05 m at the working section floor; – edge loss of 0.20 m applied to the Pisces Upper seam; – Tralee loss criteria: ▪ wasted if product ash >20%; ▪ wasted if thin (<0.8m) and high ash (>15% ash); and ▪ Additional loss of 15% applied when recovered; – roof and floor dilution of 0.05 m and 0.10 m respectively; – additional fault loss of 1% and fault dilution of 1%; – in situ moisture assumed to be 5%. ROM moisture is assumed to be 6%. Washed moisture is assumed to be 10.5%; and – dilution assumed to have an RD of 2.1 and ash of 80%. ▪ Inferred Resources are not included in the estimate of Coal Reserves. Minor quantities of Inferred Resources are included in the LOM Plan however RPM anticipate that exclusion of this coal would not impact on the outcomes of the study. ▪ All necessary infrastructure is in place and operational. Existing haul roads will need to be extended as the mine advances.
Metallurgical factors or assumptions	▪ *The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.* ▪ *Whether the metallurgical process is well-tested technology or novel in nature.* ▪ *The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.* ▪ *Any assumptions or allowances made for deleterious elements.*	▪ All ROM coal is washed at Middlemount to produce two product types. ▪ The Middlemount CHPP is a 700 tph single stage plant with two product coal handling systems. The CHPP uses industry standard technology and is operating at high availability. ▪ Product yields are based on wash plant simulations and supported by operating knowledge since 2010. ▪ Products are determined based on their coal quality. The MLT seams and the +16 mm fraction of the TL2 and PU seams are washed to a PCI product. The MLB seam and the -16 mm fraction from TL2 and PU seams is washed to a semi hard coking coal. ▪ The operational plant data supersedes bulk scale test work.

Criteria	JORC Code explanation	Commentary
	▪ *The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the ore body as a whole.* ▪ *For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?*	▪ No allowance has been made for deleterious elements.
Environmental	▪ *The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.*	▪ All necessary approvals are in place for the current mining areas at Middlemount. ▪ Coarse rejects is placed into open cut waste rock dumps inpit. ▪ Re-alignment of Roper Creek is required to complete the full extraction of Coal Reserves at the southern end of the pit.
Infrastructure	▪ *The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.*	▪ All the necessary infrastructure is in place and operational for the current operation and is suitable for the current and future production projections. ▪ Existing haul roads will need to be extended as the mine advances.
Costs	▪ *The derivation of, or assumptions made, regarding projected capital costs in the study.* ▪ *The methodology used to estimate operating costs.* ▪ *Allowances made for the content of deleterious elements.* ▪ *The source of exchange rates used in the study.* ▪ *Derivation of transportation charges.* ▪ *The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.* ▪ *The allowances made for royalties payable, both Government and private.*	▪ All major infrastructure is in place. Capital forecasts have been included which represent the growth and sustaining requirements for the completion of the LOM plan. ▪ All operating costs are based on LOM planning estimates provided by Yancoal and have been reviewed by RPM. ▪ Current long-term exchange rate assumptions were provided by Yancoal. ▪ Transport charges based on actual contracted prices taking into account existing Take or Pay arrangements. ▪ QLD state government royalties are included in the estimate. ▪ RPM reviewed all costs and they are considered reasonable.
Revenue factors	▪ *The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc.* ▪ *The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.*	▪ Long term product coal pricing assumptions have been provided by Yancoal Marketing and is based on independent third party research and reporting. ▪ The revenue factors are considered reasonable for the purposes of estimating Reserves.
Market assessment	▪ *The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.* ▪ *A customer and competitor analysis along with the*	▪ A Marketing Study has not been reviewed however markets are well established for the mine's coal products. The projects typically produce up to four main products: – Low Volatile PCI Coal at 10.5% ash.

Criteria	JORC Code explanation	Commentary
	identification of likely market windows for the product. ▪ *Price and volume forecasts and the basis for these forecasts.* ▪ *For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.*	– Semi Hard Coking Coal at 10.0% ash and CSN of 6. ▪ Based upon these products and specifications, RPM anticipates no foreseeable issues in demand for these products.
Economic	▪ *The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc.* ▪ *NPV ranges and sensitivity to variations in the significant assumptions and inputs.*	▪ The inputs to the economic analysis are 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 have been used in assessing NPV. ▪ The NPV results for the Project 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. ▪ Sensitivity analysis has been completed on the Project over a range of variable. The Project is most sensitive to changes in exchange rate, revenue and operating costs.
Social	▪ *The status of agreements with key stakeholders and matters leading to social licence to operate.*	▪ The relationship with adjacent landowners is sound and the project has the necessary key stakeholder agreements in place.
Other	▪ *To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:* ▪ *Any identified material naturally occurring risks.* ▪ *The status of material legal agreements and marketing arrangements.* ▪ *The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.*	▪ The topographical area of Middlemount is flat lying and subject to flooding in cyclonic conditions. Appropriate flood mitigation is in place or planned to cover a 1 in 1000 year event. Levees and drains are existing to protect active pit areas. ▪ The eastern pit limit will be mining up to and adjacent to the Jellinbah Fault which presents a risk to a portion of Reserves. ▪ 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 operation's viability.
Classification	▪ *The basis for the classification of the Ore Reserves into varying confidence categories.* ▪ *Whether the result appropriately reflects the Competent Person's view of the deposit.* ▪ *The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).*	▪ Classification of Coal Reserves has been derived by considering the Measured and Indicated Resources and the level of mine planning. – Measured Coal Resources are classified as Proved Coal Reserves and Indicated Resources classified as Probable Coal Reserves, as the pit is currently operating and the level of mine planning is considered adequate to support this level of certainty in the Reserves estimate.

Criteria	JORC Code explanation	Commentary
		▪ The Inferred Coal Resources have been excluded from the Reserve estimates. ▪ The result reflects the Competent Person's view of the deposit.
Audits or reviews	▪ *The results of any audits or reviews of Ore Reserve estimates.*	▪ Internal peer review of the Reserves Report has been completed.
Discussion of relative accuracy/ confidence	▪ *Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate.* ▪ *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* ▪ *Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage.* ▪ *It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	▪ The pit shells are supported by a high proportion of Measured Coal Resources. ▪ The basis of the estimate are actual operating costs and LOM planning. ▪ CHPP and infrastructure are in place and operating. ▪ Analysis of the coal quality has been undertaken by independent laboratories working under international standards of method and accuracy. ▪ 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. ▪ The Reserves have been adjusted through application of the modifying factors to reflect the ongoing site performance. The deposit is drilled in detail and additional short term drilling is done ahead of mining as required. ▪ There is some minor risk of flooding though site infrastructure is in place or is being constructed to protect against this. ▪ Ongoing geotechnical review will be required as the mine advances towards the Yarrabee fault on the eastern margin of the pit. ▪ A decrease in future coal prices represents the largest risk to the realisation of Reserves at Middlemount.

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JORC Code Disclosure Requirements

Monash

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JORC Code, 2012 Edition – Table 1 report template

The completed Table 1, Sections 1, 2 & 3 are in response to the current ADV-BR-11019_Hunting Eagle_CPR Report completed in part by Competent Person Mr Brendan Stats on behalf of RPM.

Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	▪ *Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.* ▪ *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* ▪ *Aspects of the determination of mineralisation that are Material to the Public Report.* ▪ *In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.*	▪ Exploration in and around EL6123 commenced in 2004 with completion of EM series core holes (EM01, EM02, EM05, EM06). EL7579 was granted to Monash Coal Pty Ltd in July 2010 and two campaigns of exploration were carried out in 2011 and 2012 (MN series core holes). ▪ All EM and MN series holes within both EL's have been geophysically logged for long and short spaced density, natural gamma and caliper. In addition, most recent MN series holes have full wave sonic logs, and acoustic televiewer data for holes MN001, MN01A and MN002. Geophysical data exists in hard copy and electronic formats in the MBGS Sydney office and within the secure onsite database. ▪ During non core drilling, drill samples were placed at 1m intervals and lithologically logged and HQ drill core was logged and sampled at the drill rig. As coal plies had not been identified prior to sampling, sampling was detailed and extensive in distinguishing coal from stone units. Coal seams intersected in both MN and EM series holes were sampled and sent to the laboratory for preparation and testing. Raw coal analysis was conducted on all ply samples from MN series holes. Ply intervals were then composited to form a thicker potential mining section and then underwent washability and clean coal analysis.
Drilling techniques	▪ *Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	▪ All MN and EM series holes were HQ sized (100mm hole diameter, 63mm core) and core was recovered using the triple tube method. EM and MN series holes drilled on top of the Triassic escarpment were non core drilled to base of Triassic with 100mm bit. In this circumstance, coring drilling would commence between 300m and 420m depending on Triassic sediment package thickness.
Drill sample recovery	▪ *Method of recording and assessing core and chip sample recoveries and results assessed.* ▪ *Measures taken to maximise sample recovery and ensure representative nature of the samples.* ▪ *Whether a relationship exists between sample recovery*	▪ HQ drill core was logged either at the drill rig or in a core shed post drilling. Where core was interpreted to be lost, a core loss unit was assigned. Core losses were then verified when correcting lithology against downhole geophysical logs. ▪ Core recovery data from field logging was not available and so laboratory volumetric recoveries for sampled intervals have been reviewed. Laboratory calculated volumetric

Criteria	JORC Code explanation	Commentary
	and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	recoveries are generally greater than 95% and range between 70% and 120%. The high degree of variablility in laboratory recovery is thought to be related to applying laboratory density to small sample intervals where the degree of error can be high. Where a seam did not have sufficient recovery for representative sampling it was redrilled. For modelling purposes the quality data from the redrilled seam was used.
Logging	▪ *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* ▪ *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* ▪ *The total length and percentage of the relevant intersections logged.*	▪ For all EM and MN series holes, non core intervals were logged on a meter by meter basis and all drill core was logged to centimetre accuracy. Evidence of geotechnical logging has not been provided, however field geotechnical testing (point load testing) was conducted and geotechnical samples from MN002 and MN003 underwent laboratory analysis at STS.
Sub-sampling techniques and sample preparation	▪ *If core, whether cut or sawn and whether quarter, half or all core taken.* ▪ *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* ▪ *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* ▪ *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* ▪ *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.* ▪ *Whether sample sizes are appropriate to the grain size of the material being sampled.*	▪ Coal and stone samples for laboratory analysis were sampled at the drill rig following lithological logging of drill core. As coal plies had not been developed, sampling was highly detailed in distinguishing coal from stone units. For each sample, the full length of core was placed into bags with sample details. No splitting or sawing of any samples takes place and there is no sample preparation outside of the laboratory. Coal quality testing was undertaken at laboratories complying with Australian Standards for sample preparation. ▪ Upon arrival at the lab, samples were crushed and subdivided into two subsamples. One subsample is analysed for proximate analysis, relative density and sulphur. The second subsample was combined with other subsamples and float sink tested for ash and sulphur at each density fraction. ▪ No non-core material was sampled
Quality of assay data and laboratory tests	▪ *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* ▪ *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.* ▪ *Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.*	▪ At a minimum, raw coal analysis results have been attained from each drill location within EL6123 and EL7579. ▪ Geophysical logging was conducted on all drill holes by Ellemby Consulting except for MN006 which was logged by Weatherford Pty Ltd. It is industry standard that all down hole geophysical logging tools are calibrated on a monthly basis before usage. ▪ Coal and stone sampling was conducted at the drill rig before geophysical logging of holes. Upon completion of a drill hole, lithology logs were corrected to downhole geophysics. Coal quality data was not always corrected to geophysics, however there was a very close correlation between sample thicknesses and logged lithology thicknesses which allowed confident correlation of quality samples. Bureau Veritas Pty Ltd Newcastle laboratory was

Criteria	JORC Code explanation	Commentary
		used for all sample preparation and testing and is certified by the National Association of Testing Authorities (NATA).
Verification of sampling and assaying	▪ *The verification of significant intersections by either independent or alternative company personnel.* ▪ *The use of twinned holes.* ▪ *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* ▪ *Discuss any adjustment to assay data.*	▪ All quality data is checked for any anomalous results and are investigated upon identification. Laboratories as part of standards always keep a reserve sample if re-analysis is required. Raw coal and washability data is provided by the laboratory in digital format, which is compiled into a coal quality database (Excel). The database is loaded into the geological model (Vulcan) and anomalies are investigated and validated against final laboratory reports, geological logs and geophysical logs prior to modelling. Any anomalies are investigated prior to further use. ▪ Raw specific energy data was only available for composite samples. This data was compiled and used to generate a regression with ash in Microsoft Excel. This equation, CV = -91505 x Ash + 7948.4 has an R^2 = 0.9909 and was used to estimate energy for all samples with less than 65% ash value.
Location of data points	▪ *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* ▪ *Specification of the grid system used.* ▪ *Quality and adequacy of topographic control.*	▪ All drill hole collars have been surveyed by registered surveyors using GPS equipment. A digital terrain model (DTM) exists over EL6123 and EL7579 accurate to 1m which is used for topographic control between data points and to validated collar RLs. The grid system used is MGA94, Zone 56.
Data spacing and distribution	▪ *Data spacing for reporting of Exploration Results.* ▪ *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* ▪ *Whether sample compositing has been applied.*	▪ Drilling within EL6123 and EL7579 would have been constrained by local topography as drill holes do not appear to follow a grid or pattern. All data points across EL6123 and EL7579 are in excess of 500m from each other. In the EL7579 all MN series holes are within 1km and in the southwest of EL6123, MN drill holes are spaced between 1km and 2km. In the east of EL6123, holes EM01 and EM02 are approximately 1.5km apart, but are in excess of 2km from the nearest MN drill hole. ▪ Within EL6123 and EL7579 coal seams and plies can confidently be correlated between data points although there is some variation in coal quality results.
Orientation of data in relation to geological structure	▪ *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* ▪ *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	▪ No oriented drilling was conducted in EL6123 and EL7579. Coal seams are near horizontal (dip approximately 50 southwest) and coal sampling was performed on almost orthogonal (>850) seam intersections. Seam thicknesses are assumed to be true thicknesses and there is no sample bias.
Sample security	▪ *The measures taken to ensure sample security.*	▪ All samples were placed in plastic bags at the drill rig with sample details written on tags included in the sample. Sample numbers were recorded on lithology field logs at time of sampling and copies of sample details were sent to the laboratory once drill data was entered.

Criteria	JORC Code explanation	Commentary
Audits or reviews	▪ *The results of any audits or reviews of sampling techniques and data.*	▪ All drillhole data is corrected to geophysical logs and final coal quality data is verified by the laboratory before importing into computer model. Section outputs and contour plots from the computer model are used to identify any anomalous data. If any anomalies exist, original field logs, geophysical logs and final lab reports are used to verify the existence of, or correct the data. RPM has reviewed the drill hole data using logic and statistical checks.

Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	▪ *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* ▪ *The security of the tenure held at the time of reporting along with any known impediments to obtaining a license to operate in the area.*	▪ Yancoal Australia Pty Ltd, through its subsidiary Monash Coal Pty Ltd holds title to EL6123 and EL7579. ▪ EL6123 was granted on 8th September 2003 and was last renewed on 23 October 2017. EL6123 expires on the 3rd September 2019. ▪ EL 7579 was granted on the 22nd July 2010 and a renewal was granted on 23rd October 2017. Expiry for EL7579 is 22 July 2019. ▪ EL6123 lies wholly within Pokolbin State Forest, which will have environmental conditions attached to any exploration. There are currently no known sites with native title or historical significance.
Exploration done by other parties	▪ *Acknowledgment and appraisal of exploration by other parties.*	▪ Ellemby Consulting supervised exploration for all holes within EL6123 and EL7579. EM series holes were drilled in 2004 and MN series holes were drilled throughout 2011 and 2012.
Geology	▪ *Deposit type, geological setting and style of mineralisation.*	▪ EL6123 and EL7579 are located in the South Maitland Coalfield of the Lower Hunter Valley close to the eastern margin of the Sydney Basin. Surrounding the Monash Project, Early Triassic Narrabeen Group sediments unconformably overly Late Permian Newcastle Coal Measures, which overly Late Permian Wittingham Coal Measures. Regional topography is dominated by steep Narrabeen Group escarpments with sediment pile thickness ranging from 30m to 400m in areas of low and high relief. ▪ Target seams for drilling within the Newcastle Coal Measures were: – Fassifern Seam (youngest) – Borehole Seam ▪ Target seams for drilling within the Wittingham Coal Measures were: – Whybrow Seam – Redbank Creek Seam

Criteria	JORC Code explanation	Commentary
		– Wambo Seam – Whynot Seam – Blakefield Seam – Glen Munro Seam – Woodlands Hill Seam – Arrowfield Seam – Bowfield Seam (oldest) ▪ Seams intersected below Bowfield Seam include Warkworth, Mount Arthur, Piercefield, Vaux, Broonies and Bayswater. Only two holes (MN07A, MN004) intersected these lowermost seams and only MN004 had down hole geophysics. Other coal seams were identified within the Newcastle and Wittingham Coal Measures, however they were considered too thin or of too poor quality to be considered a target. Measured gas content from all seams is typically <10m3/t. Regional strike is eastwest and strata dip is approximately 50 to the southwest. This regional dip is influenced by the northsouth trending Loder anticline and Belford Dome located to the north of the ELs. No other structures or igneous activity have been identified within or around Monash Project.
Drill hole Information	▪ *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:* – *easting and northing of the drill hole collar* – *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar* – *dip and azimuth of the hole* – *down hole length and interception depth* – *hole length.* ▪ *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*	▪ Within EL6123 and EL7579 all holes were drilled to target seams from the Newcastle and Wittingham Coal Measures. All coal quality holes and holes dedicated to gas testing were partially cored with open hole intervals from surface to top of Fassifern Seam, and on occasion, through poorly developed Newcastle Coal Measures to top of Borehole Seam. Cored intervals were drilled with HQTT and hole diameters were 100mm. Most holes terminated once Bowfield Seam had been intersected, however, MN004 and MN07A intersected Bayswater Seam (five seams below Bowfield) and terminated in the Archerfield Sandstone at the base of Jerrys Plains Subgroup. Redrills of MN series drill holes were due to unacceptable core loss, if the original hole was dedicated to gas testing or if holes were abandoned due to downhole conditions. In the east of EL6123, EM01 and EM02 holes were terminated shortly after a deteriorated Fassifern Seam was intersected at 330 and 365m respectively. ▪ Individual drill hole results are not tabulated and presented in this report, however all drill hole data that pertains to coal seams has been loaded and modelled in the Vulcan geological model used to estimate resources. The coal resource table presented in this report does present summary information (average thickness, raw ash, density) relating to each seam. ▪ For the purposes of modelling, drill holes have been assumed as vertical. However, deviation data is not available for holes drilled within EL6123 and EL7579.
Data aggregation methods	▪ *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.*	▪ Drill cores were sampled at the rig prior to geophysical logging and without the determination of ply boundaries. Samples were therefore highly detailed in distinguishing stone from coal. Upon loading the coal quality database into the computer model, lab samples were composited into plies nominated by MBGS during re-correlation prior to modelling. Plies

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Criteria	JORC Code explanation	Commentary
	▪ *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.* ▪ *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	would then be composited to provide average thickness and average coal quality information for a coal seam or desired potential mining section. Samples composited to make plies or seam/working sections were weighted by length and density. No limits or cut offs have been applied to any coal quality data.
Relationship between mineralisation widths and intercept lengths	▪ *These relationships are particularly important in the reporting of Exploration Results.* ▪ *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* ▪ *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').*	▪ Deviation data is not available for any drill holes within EL6123 and EL7579. However, all drill holes in the exploration area are vertical and regional dip is south-southwest at 50(near horizontal). Drill hole intersections with coal seams is very close to orthogonal and seam thicknesses are assumed to be true thickness.
Diagrams	▪ *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	▪ Site overview and Leases are presented in the report to which this Table 1 is attached.
Balanced reporting	▪ *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	▪ All available drill hole data, geophysical data and coal quality data has been loaded into the Vulcan computer model to estimate resources. No representative reporting has taken place and model outputs honour all data.
Other substantive exploration data	▪ *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	▪ Geotechnical point load and immersion testing was conducted in the field for most MN series holes. Geotechnical samples taken from drill core in holes MN002 and MN003 were sent to Strata Testing Services (NATA approved) for strength testing. ▪ Seam gas (Q1) testing was performed in the field for holes MN006 and MN007 and gas samples were sent to the laboratory for further desorption testing.
Further work	▪ *The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).* ▪ *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	▪ No further exploration drilling has been planned.

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Section 3 Estimation and Reporting of Mineral Resources

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Database integrity	▪ *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.* ▪ *Data validation procedures used.*	▪ All lithologies and thicknesses entered directly into the drill hole data base were corrected against downhole geophysics. Seam graphics displaying lithology against geophysical profile were produced following corrections where keying errors made with lithologies or thicknesses could be identified and fixed. ▪ Final laboratory data as standard was checked by Bureau Veritas before release. Final lab reports are compiled (in Excel) to produce the coal quality database for import into the computer model. ▪ MBGS performed a re-correlation of all seams in EL6123 and EL7579 where seam thicknesses and quality statistics were reviewed against 1:200 and 1:20 geophysics. A degree of tolerance was adopted when reviewing Ellemby target coal seam depth picks, however spurious seam picks were reviewed against coal quality data and lithological logs and were either verified or corrected. ▪ Upon loading drill hole and coal quality data into the computer model, contour plots and section outputs for target seams were produced and visually checked for anomalous data. ▪ RPM reviewed the geological data and geological model produced by MBGS.
Site visits	▪ *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* ▪ *If no site visits have been undertaken indicate why this is the case.*	▪ No site visit has been completed by the Competent Person. As the Project is an underground exploration site, there is little value in attending site as the Competent Person is familiar with regional geology and local conditions in the Monash area.
Geological interpretation	▪ *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.* ▪ *Nature of the data used and of any assumptions made.* ▪ *The effect, if any, of alternative interpretations on Mineral Resource estimation.* ▪ *The use of geology in guiding and controlling Mineral Resource estimation.* ▪ *The factors affecting continuity both of grade and geology.*	▪ There is a moderate level of confidence in the current geological interpretation of the Monash Project. Coal seams have been correlated between drill holes and coal plies have been determined within all seams. Seam correlations were conducted using 1:200 scale geophysical logs. Existing coal seam picks were verified and coal plies and stone partings were defined using 1:20 scale geophysical logs. Down hole deviation data was not available, however all holes were drilled vertical and it is assumed seam thicknesses represent true thickness. ▪ Drill hole spacing within EL7579 is in excess of 500m and up to 2km in the western half of EL6123. Variability in seam thickness, coal quality data and uncertainty in coal ply and stone parting correlations resulted in moderate to low confidence in the geology and resources within this deposit. ▪ There is a high degree of uncertainty in the east of EL6123. Only two holes (EM01 and EM02) have been drilled in this part of the lease, both of which terminated within 15m below Fassifern Seam (uppermost target).

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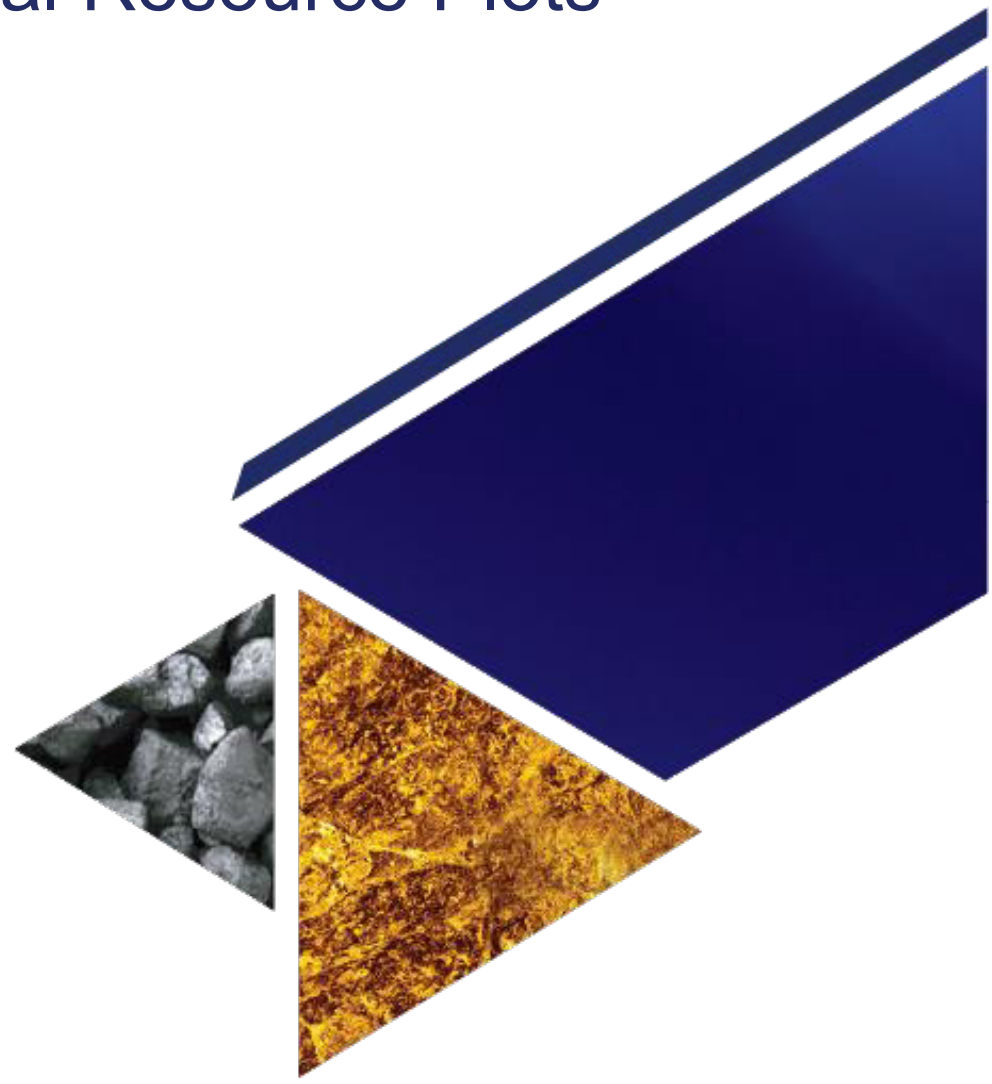
Criteria	JORC Code explanation	Commentary
Dimensions	▪ *The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.*	▪ EL7579 is almost surrounded by EL6123 and together form a block approximately 9km wide (east west) and 3km long (north south). Exploration drilling shows considerable variability in seam thickness and quality due to the splitting nature of seams. Resources have been estimated to a maximum depth of 700m.
Estimation and modelling techniques	▪ *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.* ▪ *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.* ▪ *The assumptions made regarding recovery of by-products.* ▪ *Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).* ▪ *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.* ▪ *Any assumptions behind modelling of selective mining units.* ▪ *Any assumptions about correlation between variables.* ▪ *Description of how the geological interpretation was used to control the resource estimates.* ▪ *Discussion of basis for using or not using grade cutting or capping.* ▪ *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.*	▪ The estimation was completed using a block model generated from in situ density and ply thickness grids in Vulcan, using vertical sided polygons and limited to 700m below surface. All seams have been modelled, however resources have been estimated for seven seams only. Target seam continuity, thickness and quality is variable throughout the lease and resources have been estimated on the most likely workable section. ▪ Seam thickness and quality grids were gridded on a 50m mesh basis. ▪ Coal resources were estimated using in situ density adjusted to 6% moisture. ▪ Coal quality data loaded into the Vulcan computer model has not been limited or capped. Drill hole data is validated in Vulcan prior to modelling and anomalous values are reviewed against field logs, core photos and geophysical logs. The model is validated by visual checks of geological sections through the deposit and contour plots of seam thickness, depth and coal quality data. Spurious results are investigated and if necessary, corrected.
Moisture	▪ *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	▪ Coal resources were estimated using an in situ moisture estimated at 6%. Coal quality parameters were adjusted to 6% in situ moisture using the Preston and Sanders change of base formula.

Appendix E.
Coal Resource Plots



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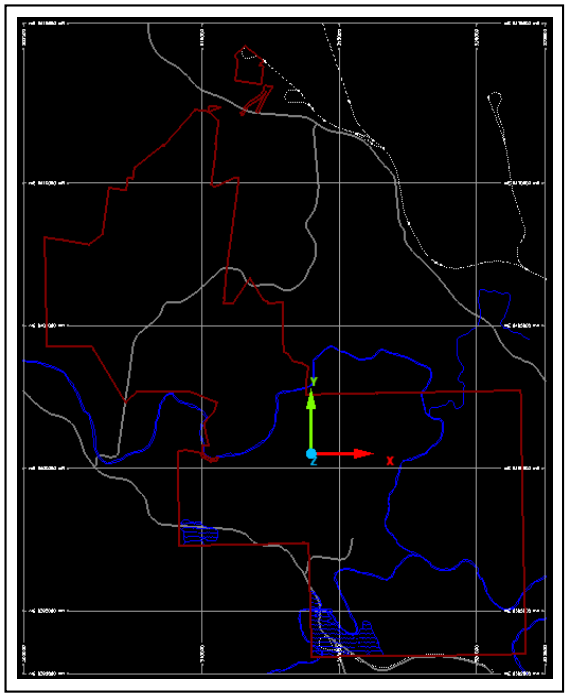
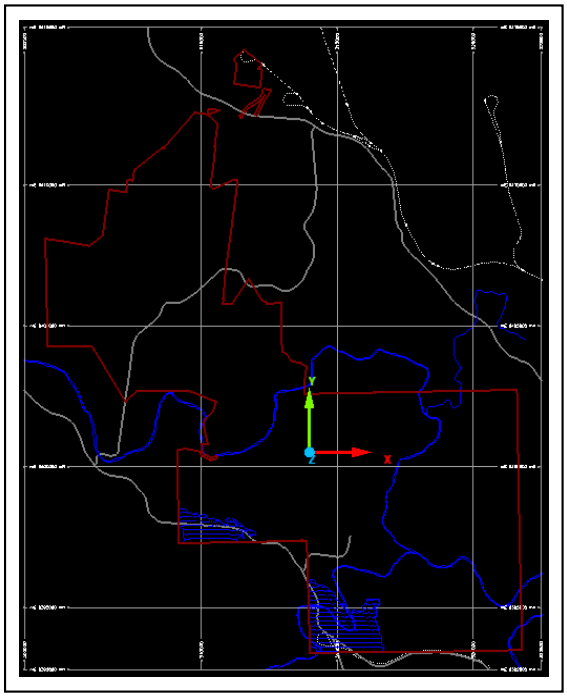
Resource Polygons

HVO

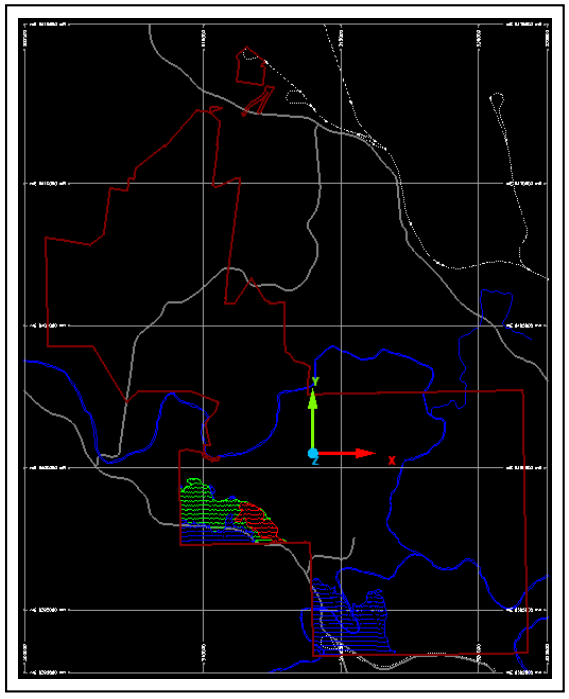
Blakefield Seam



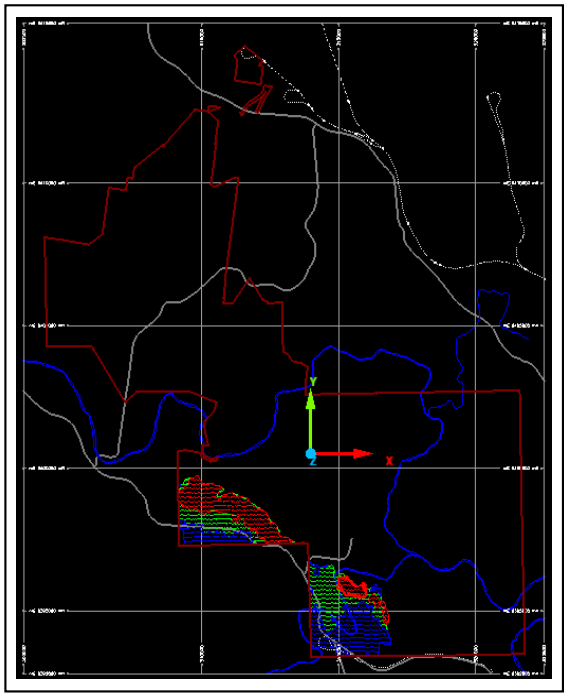
Glen Munro Seam



Woodlands Hill Seam



Arrowfield Seam



RPMGLOBAL

LEGEND

MEASURED RESOURCE
INDICATED RESOURCE
INFERRED RESOURCE

N

CLIENT

YANCOAL 克煤澳大利亚有限公司

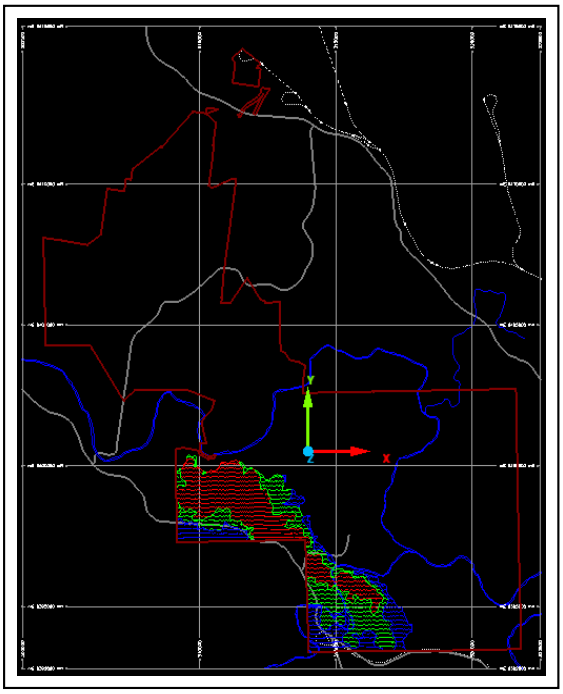
PROJECT

NAME
PROJECT HUNTING EAGLE

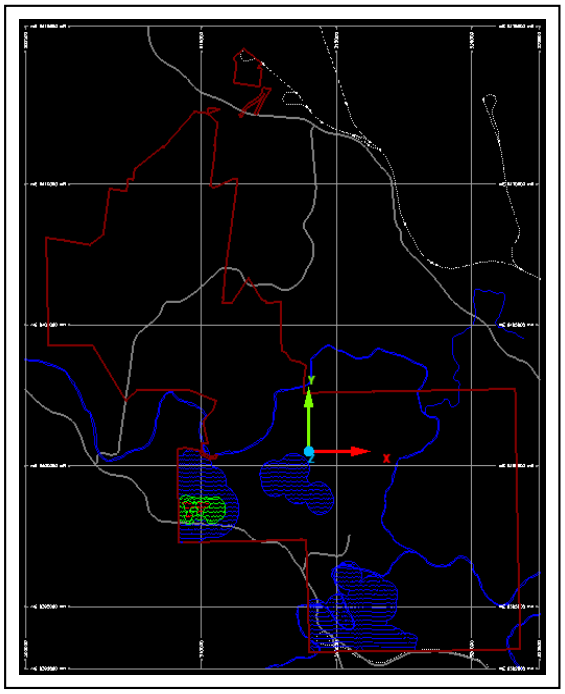
DRAWING
HVO RESOURCE BOUNDARIES

Appendix	PROJECT No.	Date
XX	ADV-BR-11018	May 2018

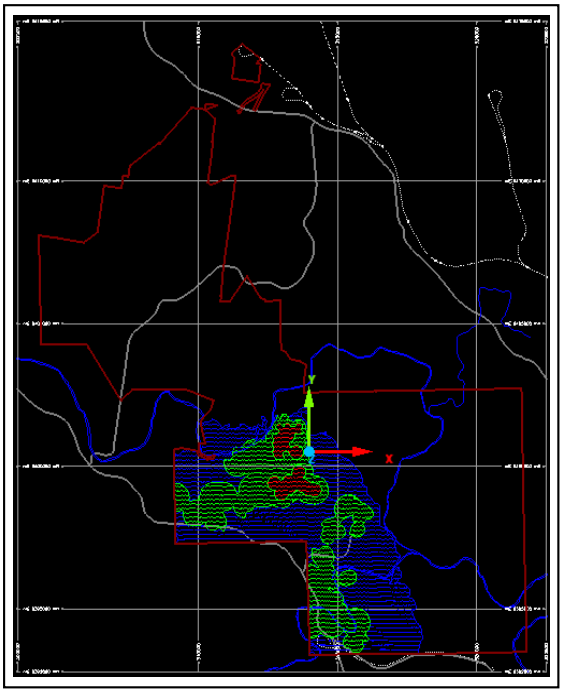
Arrowfield Seam



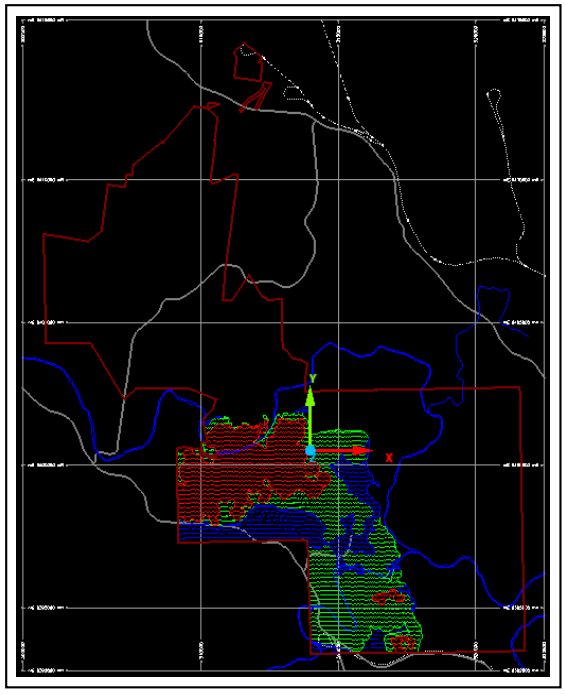
Warkworth 1 Seam



Warkworth 7 & 8 Seams



Warkworth 2,3,4,5,6,9,10 Seams



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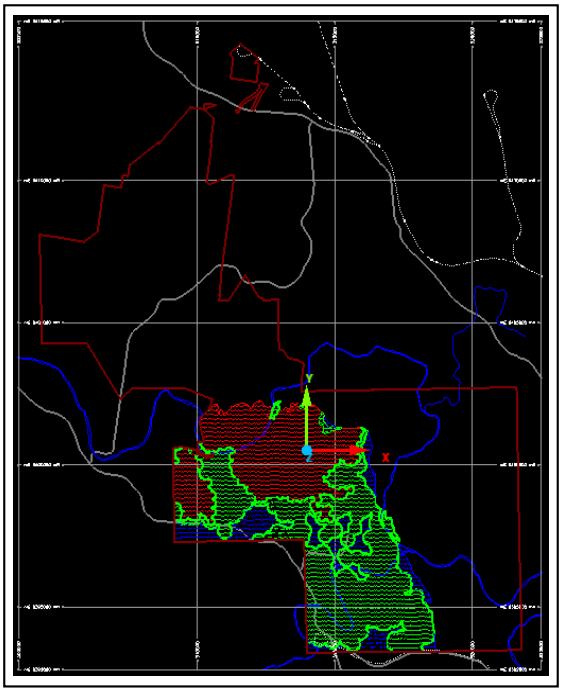
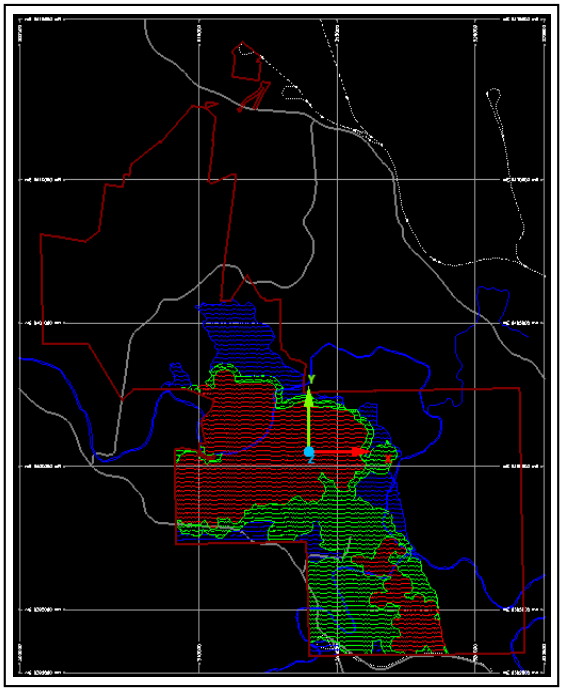
LEGEND	CLIENT	PROJECT
MEASURED RESOURCE INDICATED RESOURCE INFERRED RESOURCE N	YANCOAL 克煤澳大利亚有限公司	NAME: PROJECT HUNTING EAGLE DRAWING: HVO RESOURCE BOUNDARIES Appendix: xx PROJECT No.: ADV-BR-11018 Date: May 2018

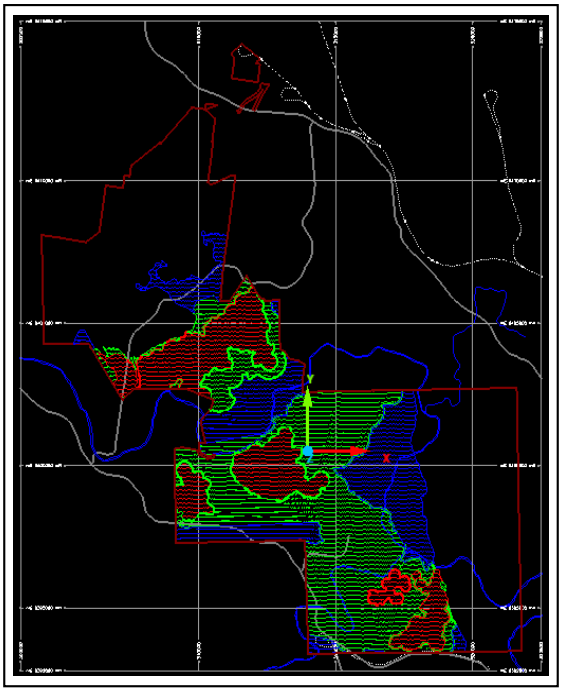
Mt Arthur Seam



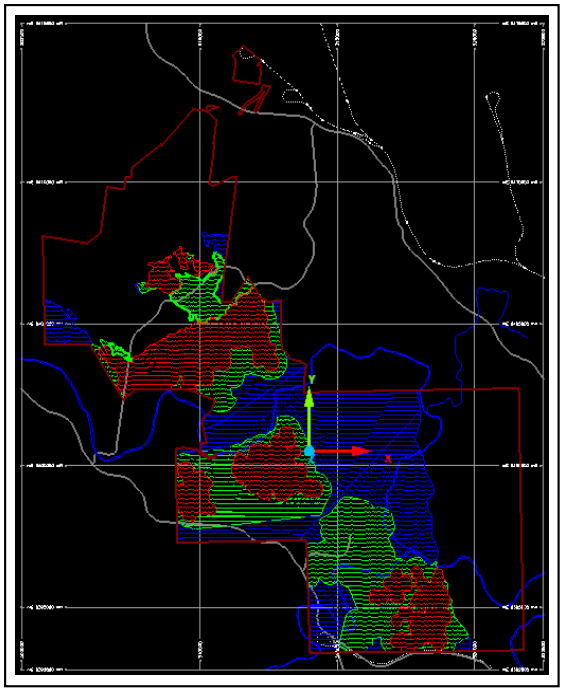
Vaux Seam



Broonie Seam



Bayswater Seam



RPMGLOBAL

LEGEND

MEASURED RESOURCE

INDICATED RESOURCE

INFERRED RESOURCE

N

CLIENT

YANCOAL 克煤澳大利亚有限公司

PROJECT

NAME

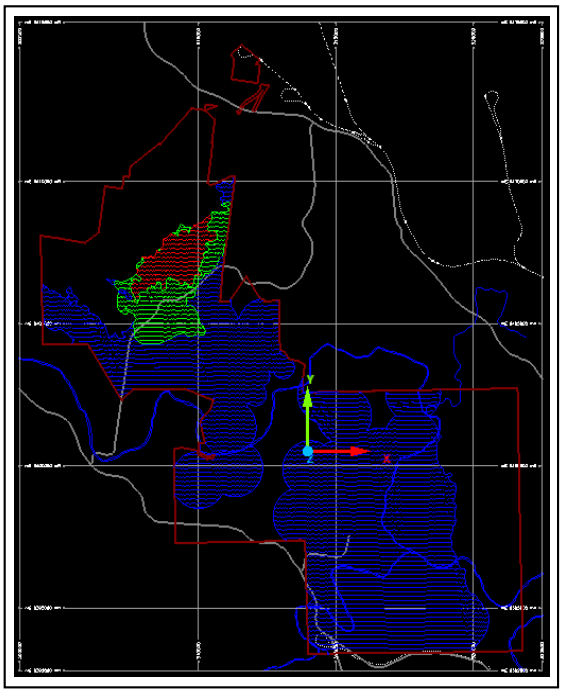
PROJECT HUNTING EAGLE

DRAWING

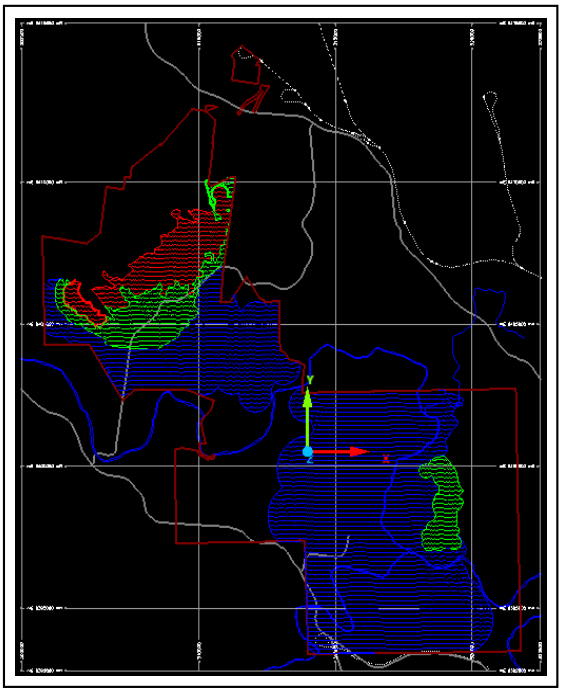
HVO RESOURCE BOUNDARIES

Appendix	PROJECT No.	Date
xx	ADV-BR-11018	May 2018

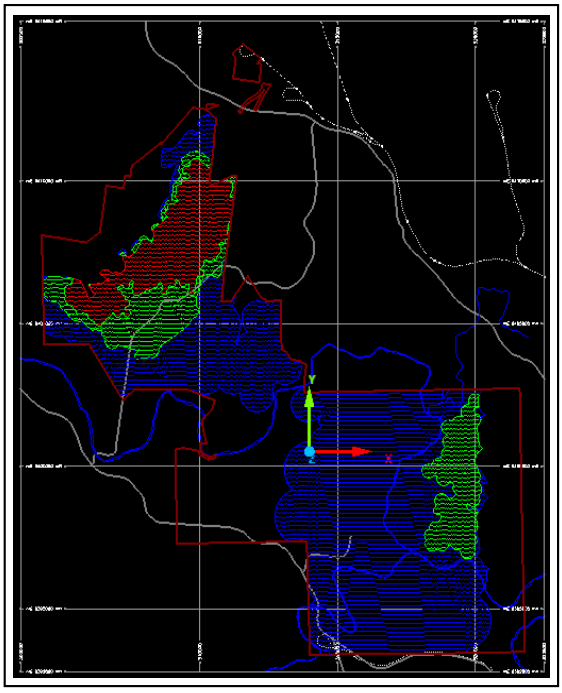
Lemington Seam



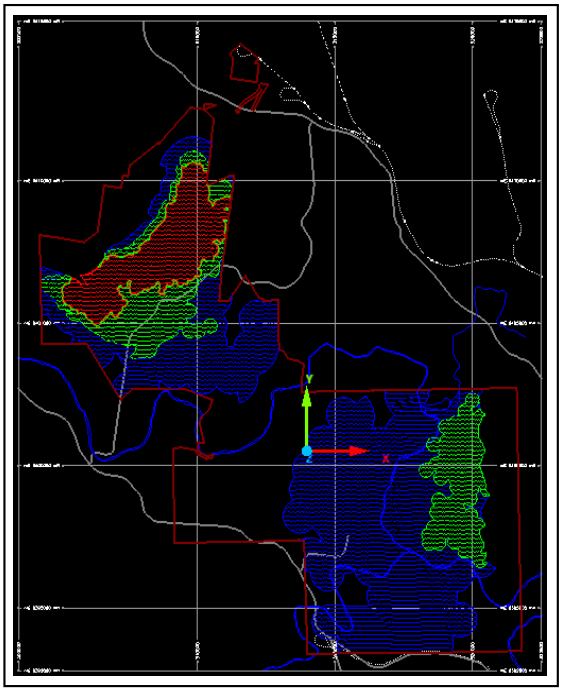
Pikes Gully Seam



Arties Seam



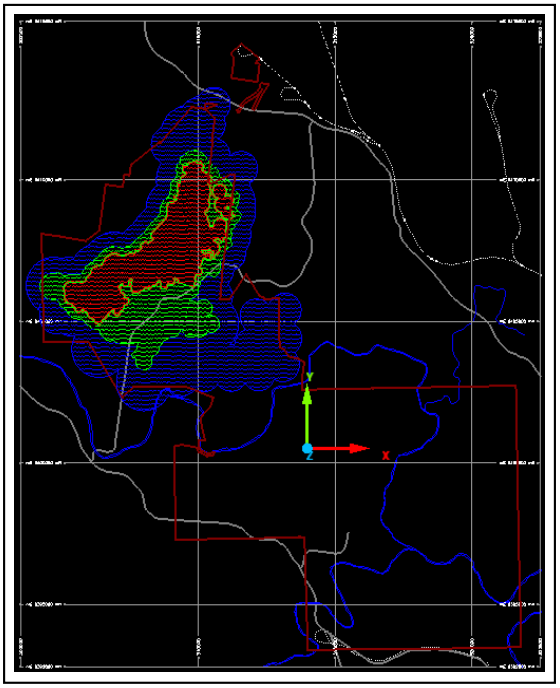
Liddell Seam



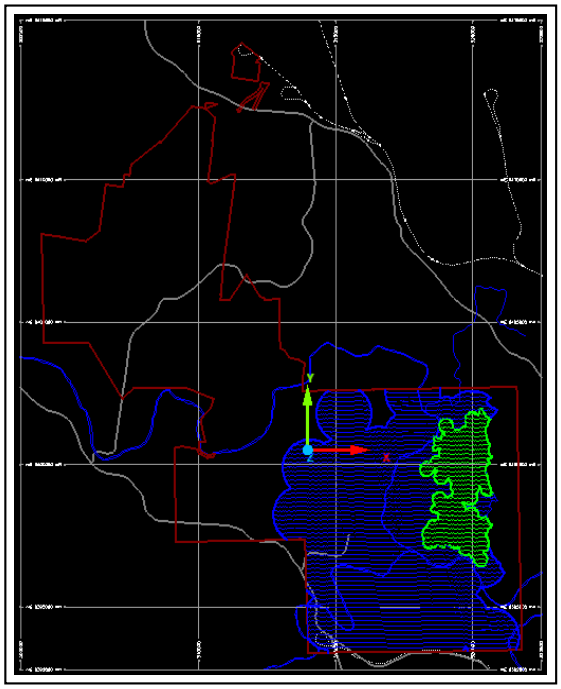
RPMGLOBAL

LEGEND	CLIENT	PROJECT
MEASURED RESOURCE INDICATED RESOURCE INFERRED RESOURCE N	YANCOAL 兖煤澳大利亚有限公司	NAME: PROJECT HUNTING EAGLE DRAWING: HVO RESOURCE BOUNDARIES Appendix: xx | PROJECT No.: ADV-BR-11018 | Date: May 2018

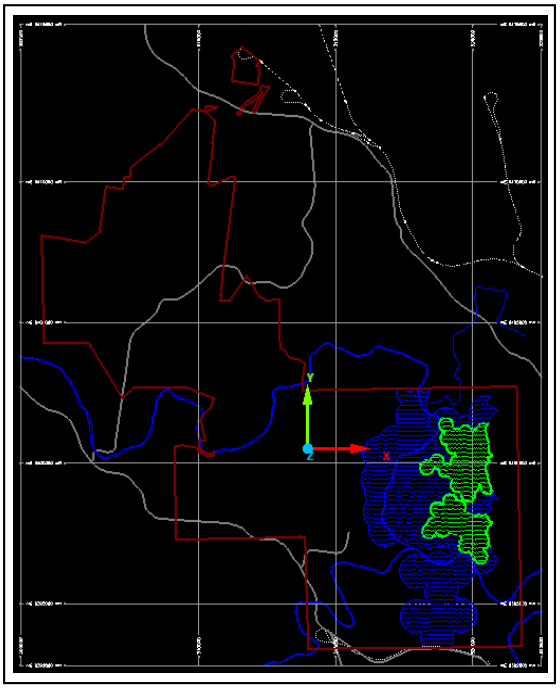
Barrett Seam



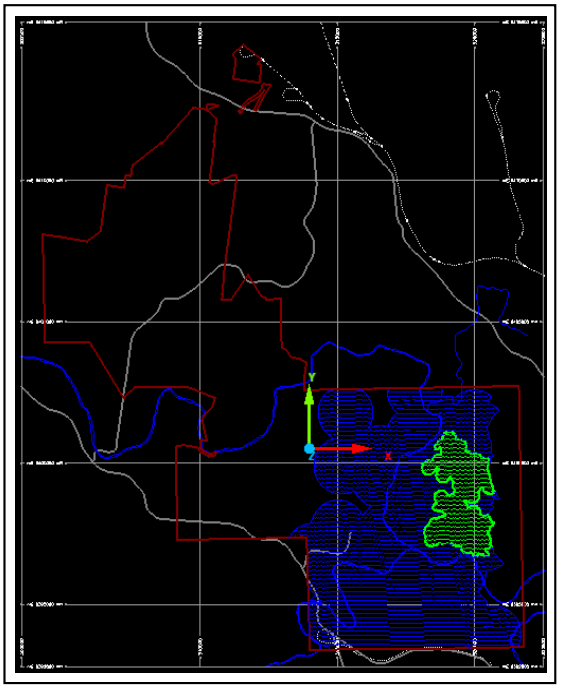
Barrett 1A Seam



Barrett 1B Seam



Barrett 2A Seam



RPMGLOBAL

LEGEND

MEASURED RESOURCE

INDICATED RESOURCE

INFERRED RESOURCE

N

CLIENT

YANCOAL 兖煤澳大利亚有限公司

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NAME

PROJECT HUNTING EAGLE

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HVO RESOURCE BOUNDARIES

Appendix	PROJECT No.	Date
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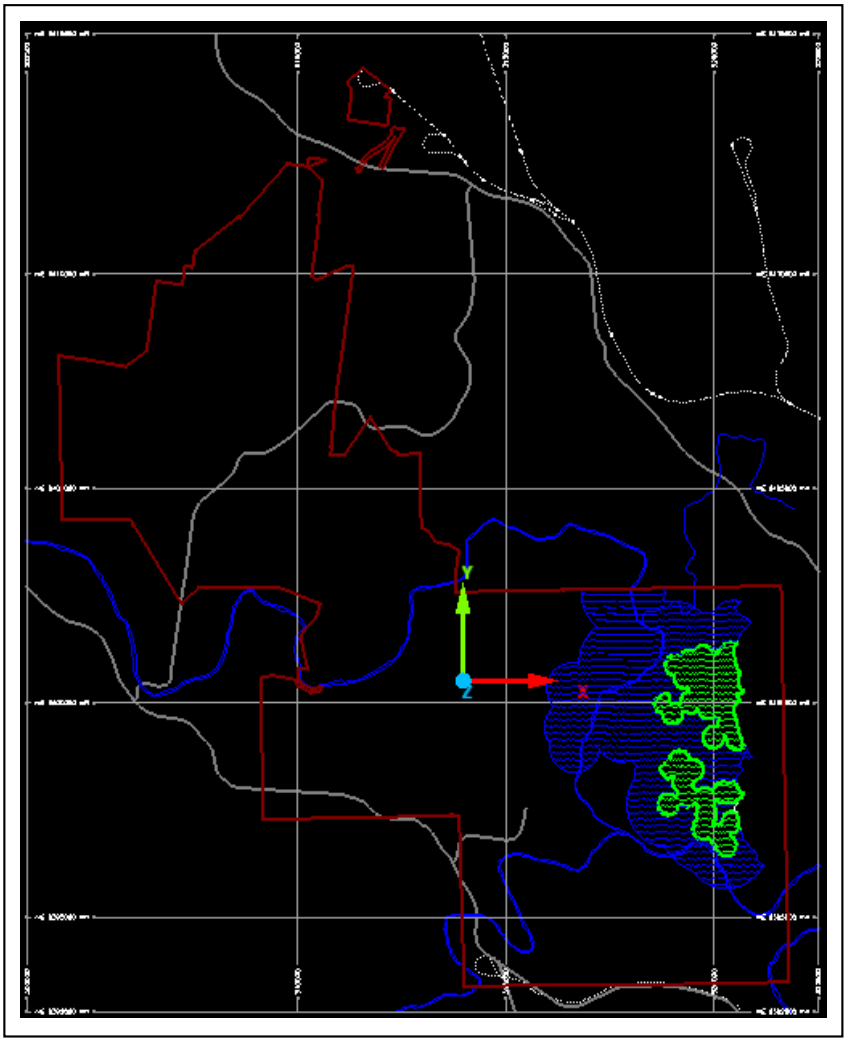
Barrett 2B Seam



RPMGLOBAL

LEGEND

MEASURED RESOURCE

INDICATED RESOURCE

INFERRED RESOURCE

N

CLIENT

YANCOAL 兖煤澳大利亚有限公司

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HVO RESOURCE BOUNDARIES

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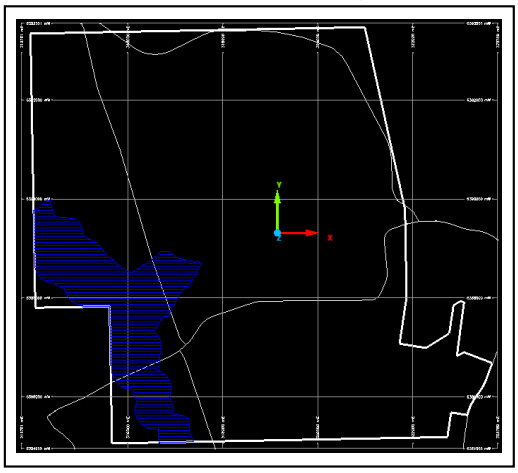
RPMGLOBAL

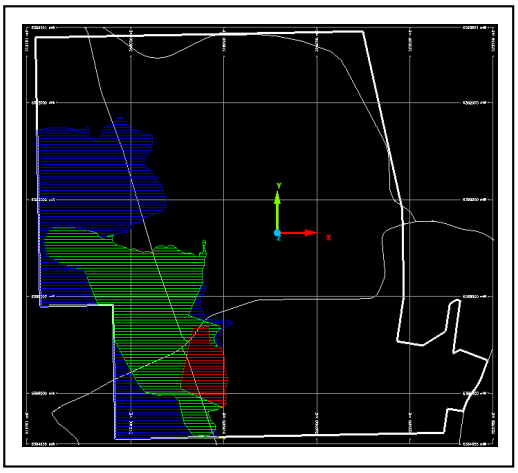
Resource Polygons

MTW

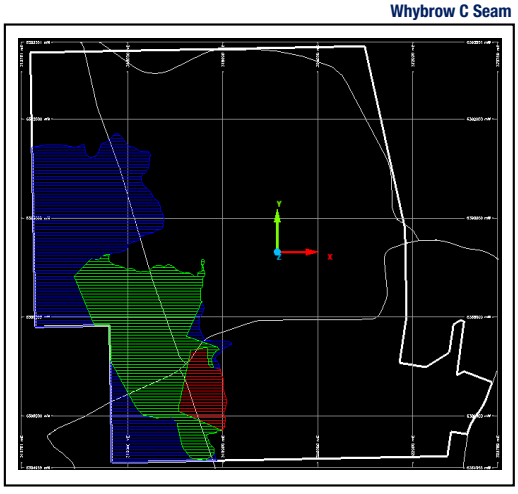
Whybrow A and B Seams



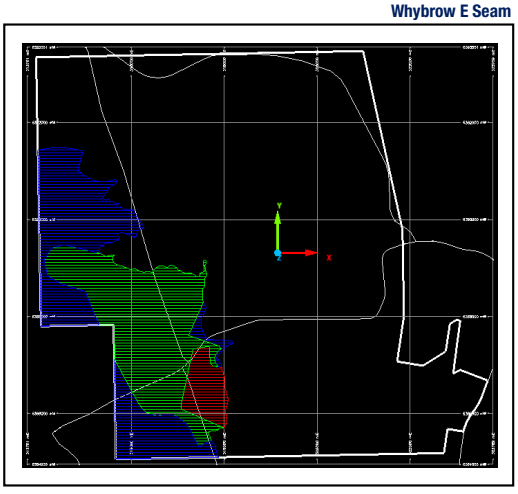
Whybrow D Seam



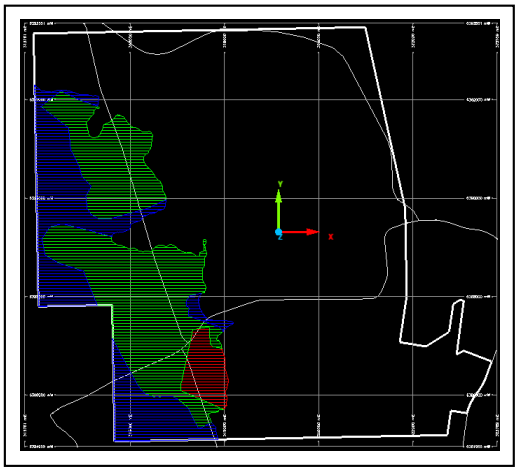
Whybrow C Seam



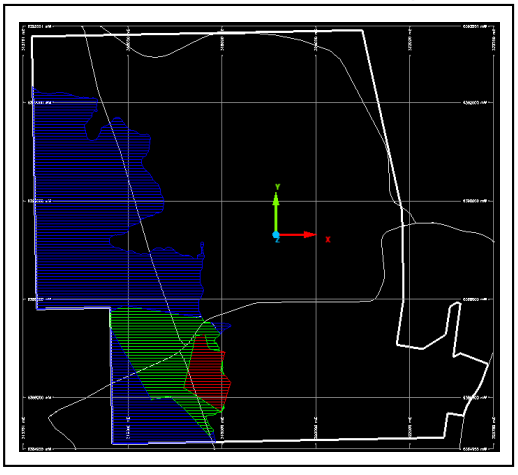
Whybrow E Seam



Whybrow F Seam



Whybrow G Seam



RPMGLOBAL

LEGEND

MEASURED RESOURCE

INDICATED RESOURCE

INFERRED RESOURCE

N

CLIENT

YANCOAL 克煤澳大利亚有限公司

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NAME

PROJECT HUNTING EAGLE

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MTW RESOURCE BOUNDARIES

Appendix	PROJECT No.	Date
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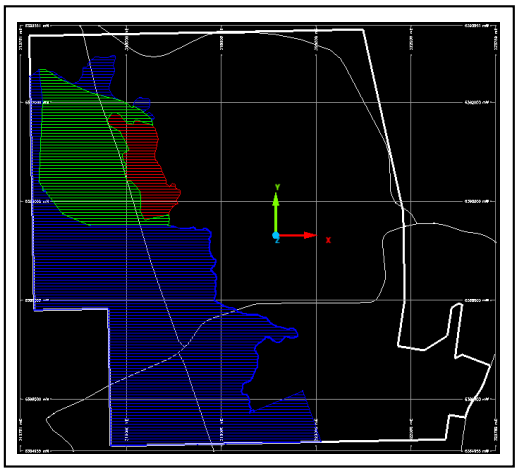
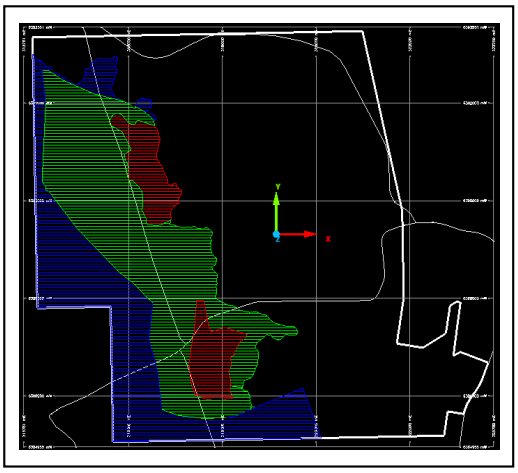
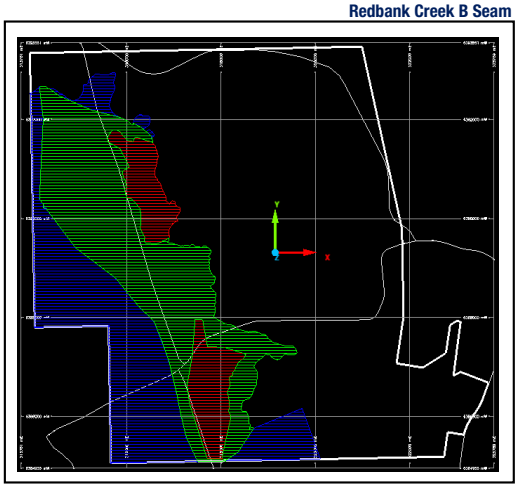
Redbank Creek A Seam



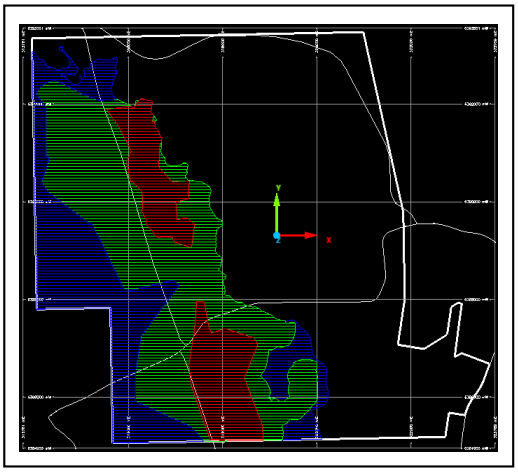
Redbank Creek C Seam



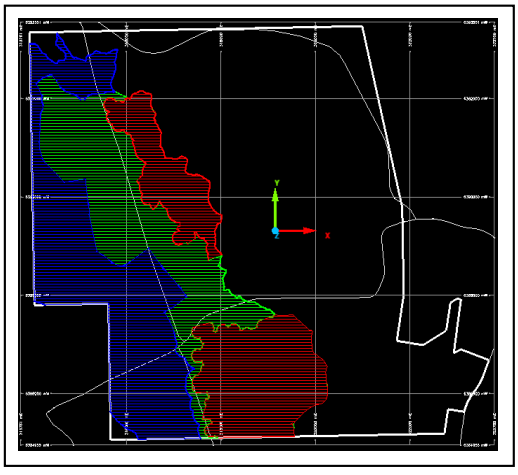
Redbank Creek B Seam



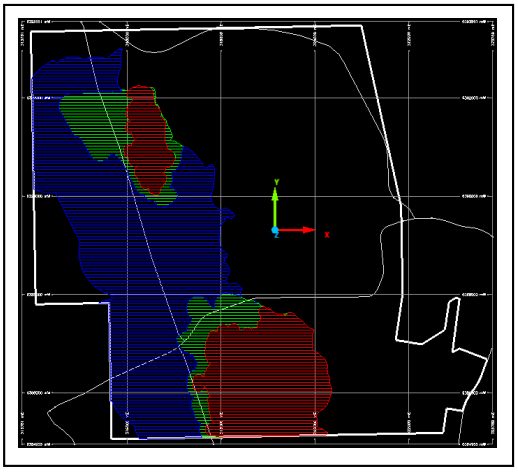
Redbank Creek DEF Seams



Wambo ABC Seams



Wambo D Seam



RPMGLOBAL

LEGEND	CLIENT	PROJECT
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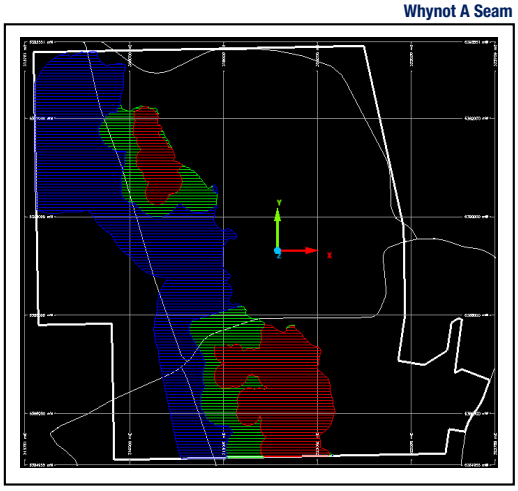
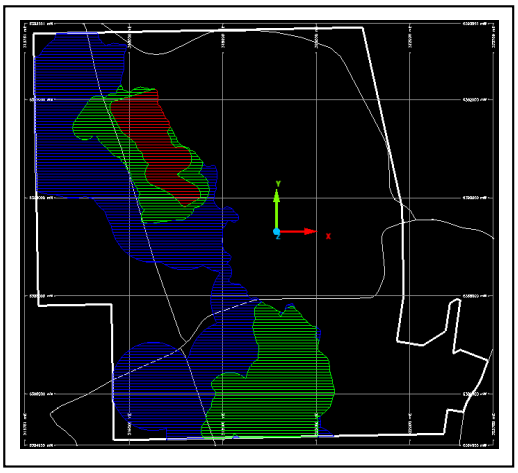
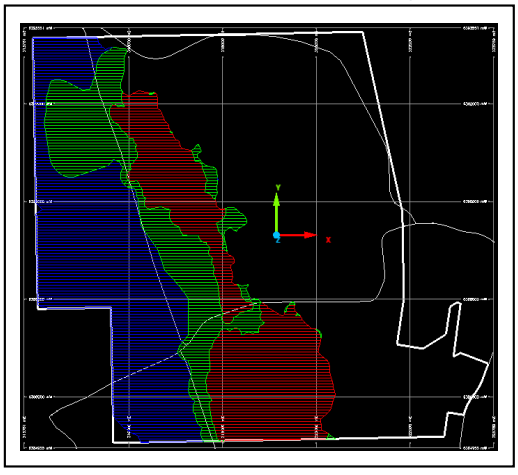
Whynot A Seam



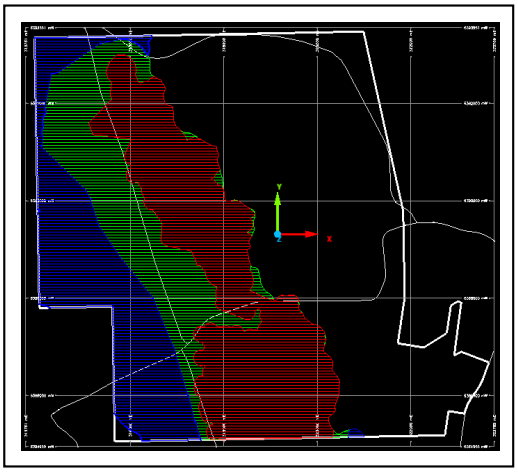
Whynot C Seam



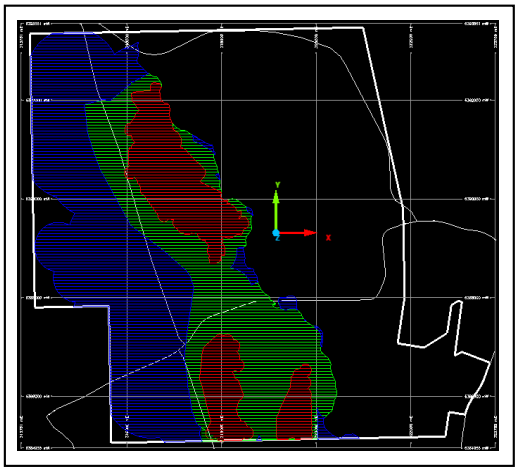
Whynot BD Seams



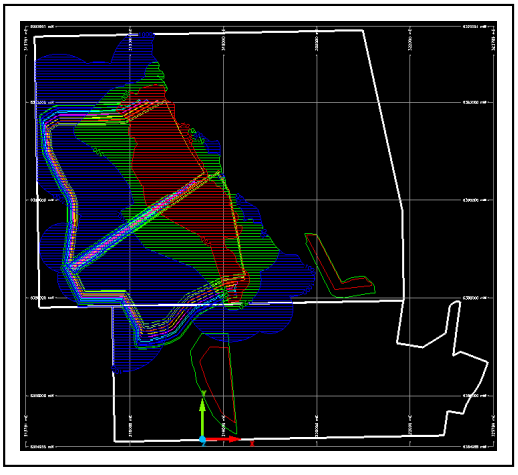
Blakefield ABCEFGH Seams



Blakefield D Seam



Blakefield J Seam



RPMGLOBAL

LEGEND

- MEASURED RESOURCE
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N

CLIENT

YANCOAL 兖煤澳大利亚有限公司

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NAME: PROJECT HUNTING EAGLE

DRAWING: MTW RESOURCE BOUNDARIES

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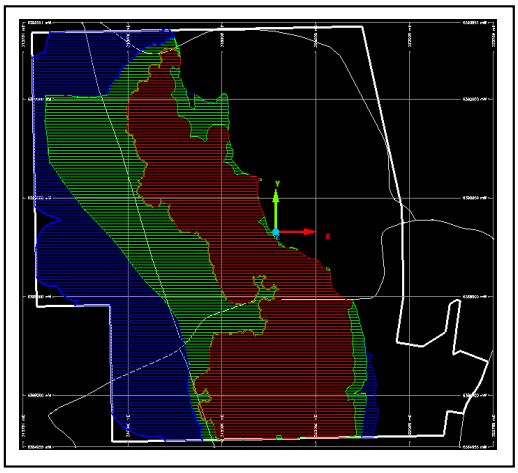
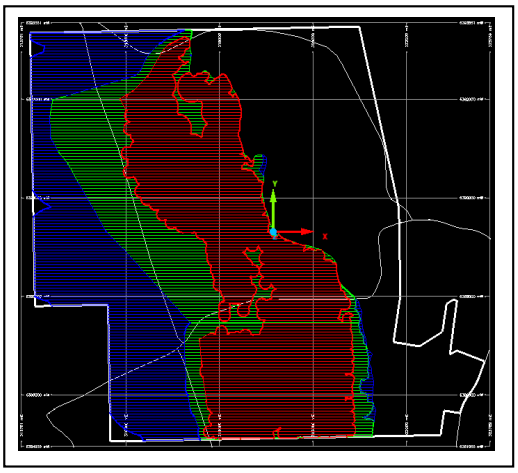
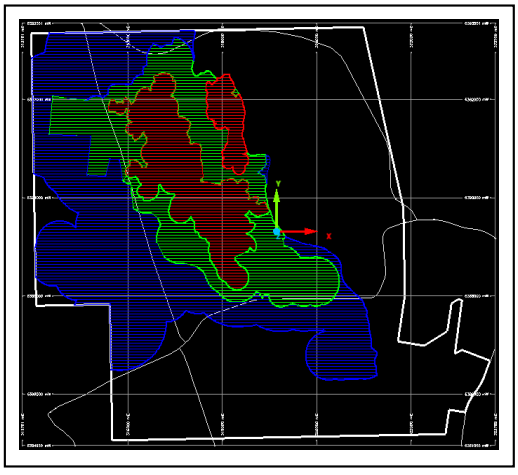
Glen Munro Seam



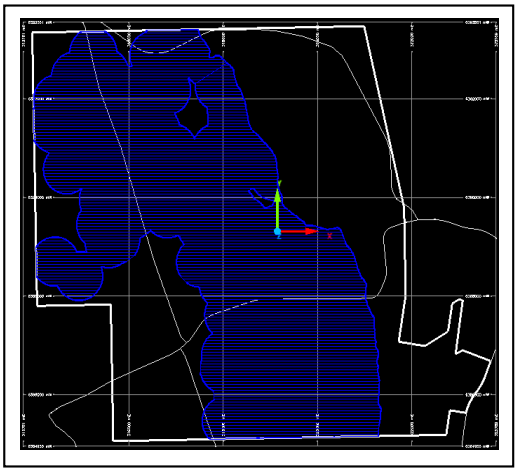
Woodlands Hill Seam



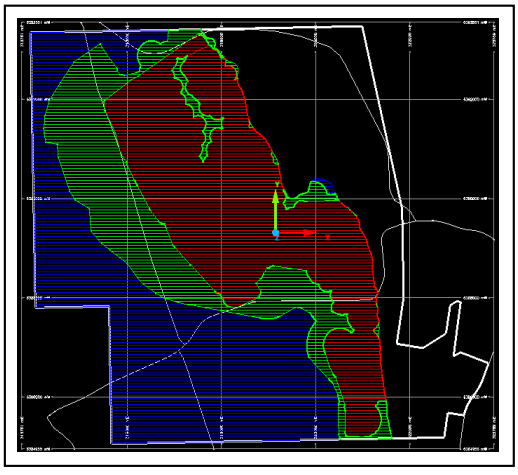
Arrowfield A Seam



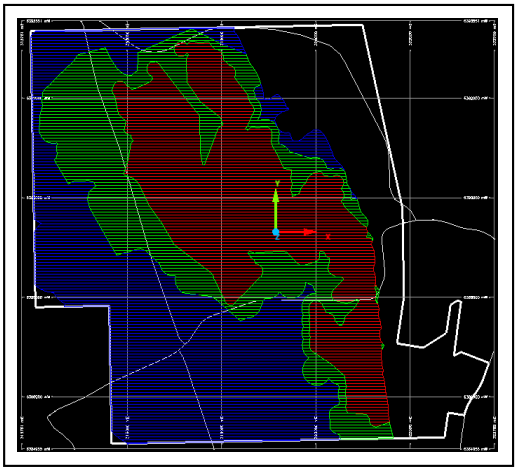
Arrowfield B Seam



Bowfield Seam



Warkworth Seam



RPMGLOBAL

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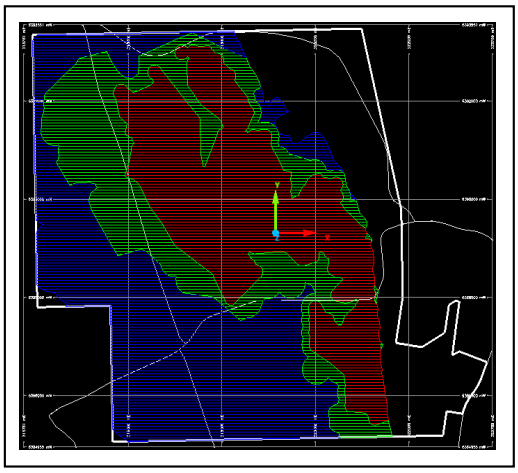
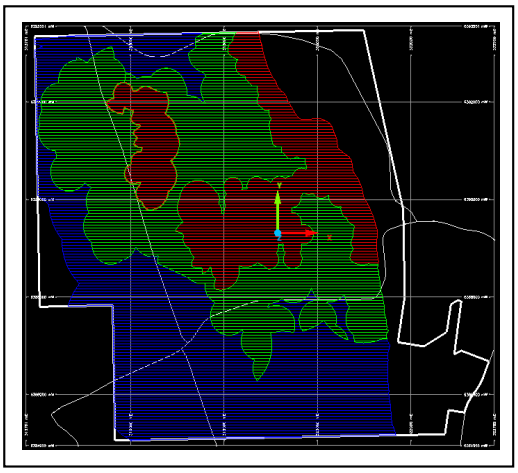
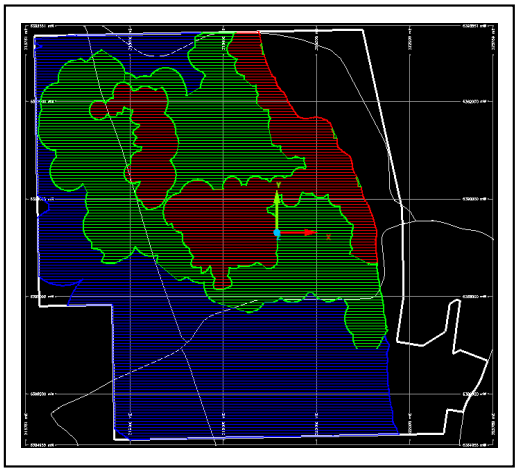
Warkworth Seam



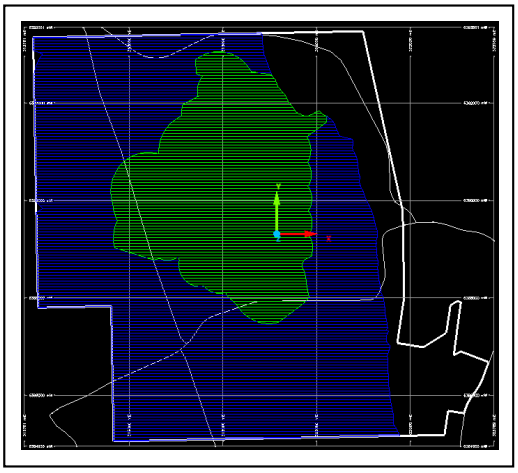
Piercefield AB Seams



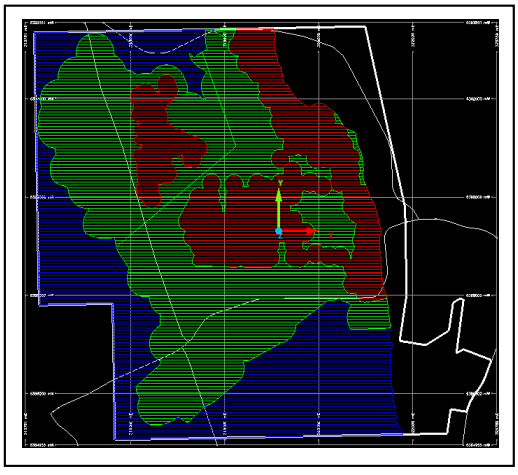
Piercefield CDE Seams



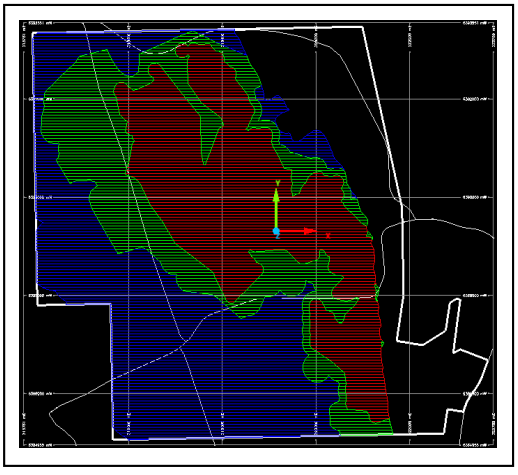
Vaux AB Seams



Vaux CDEFGH Seams



Vaux J Seam



RPMGLOBAL

LEGEND

MEASURED RESOURCE

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N

CLIENT

YANCOAL 克煤澳大利亚有限公司

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MTW RESOURCE BOUNDARIES

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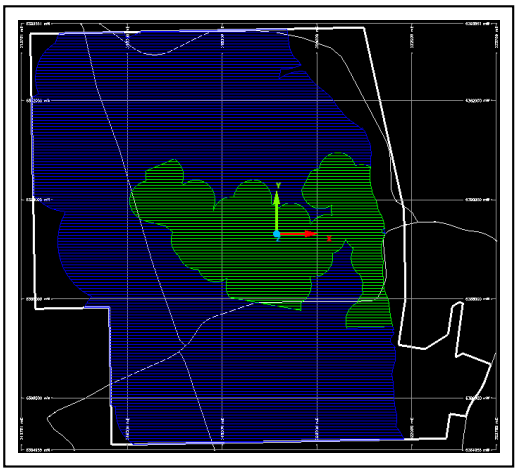
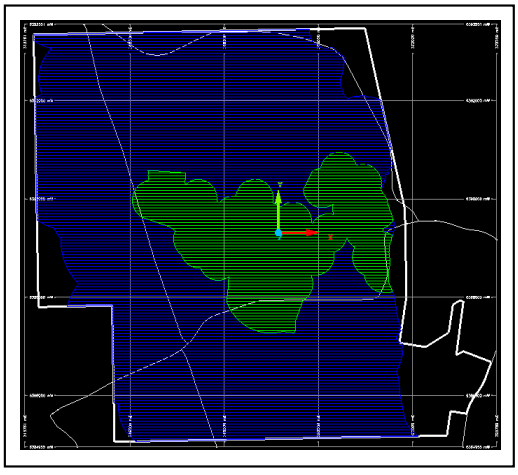
Broonie ABCDEF Seams

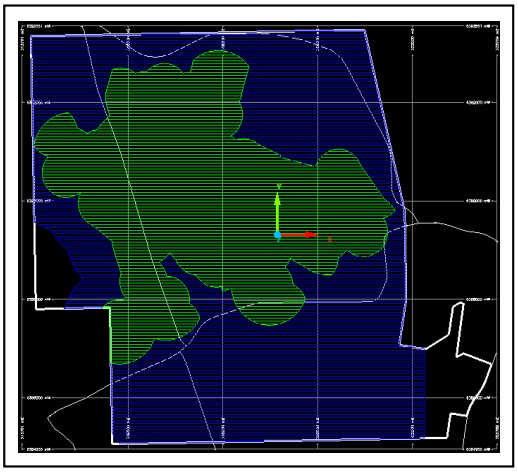
Broonie GH Seams



Broonie JQ Seam



Bayswater Seam



RPMGLOBAL

LEGEND

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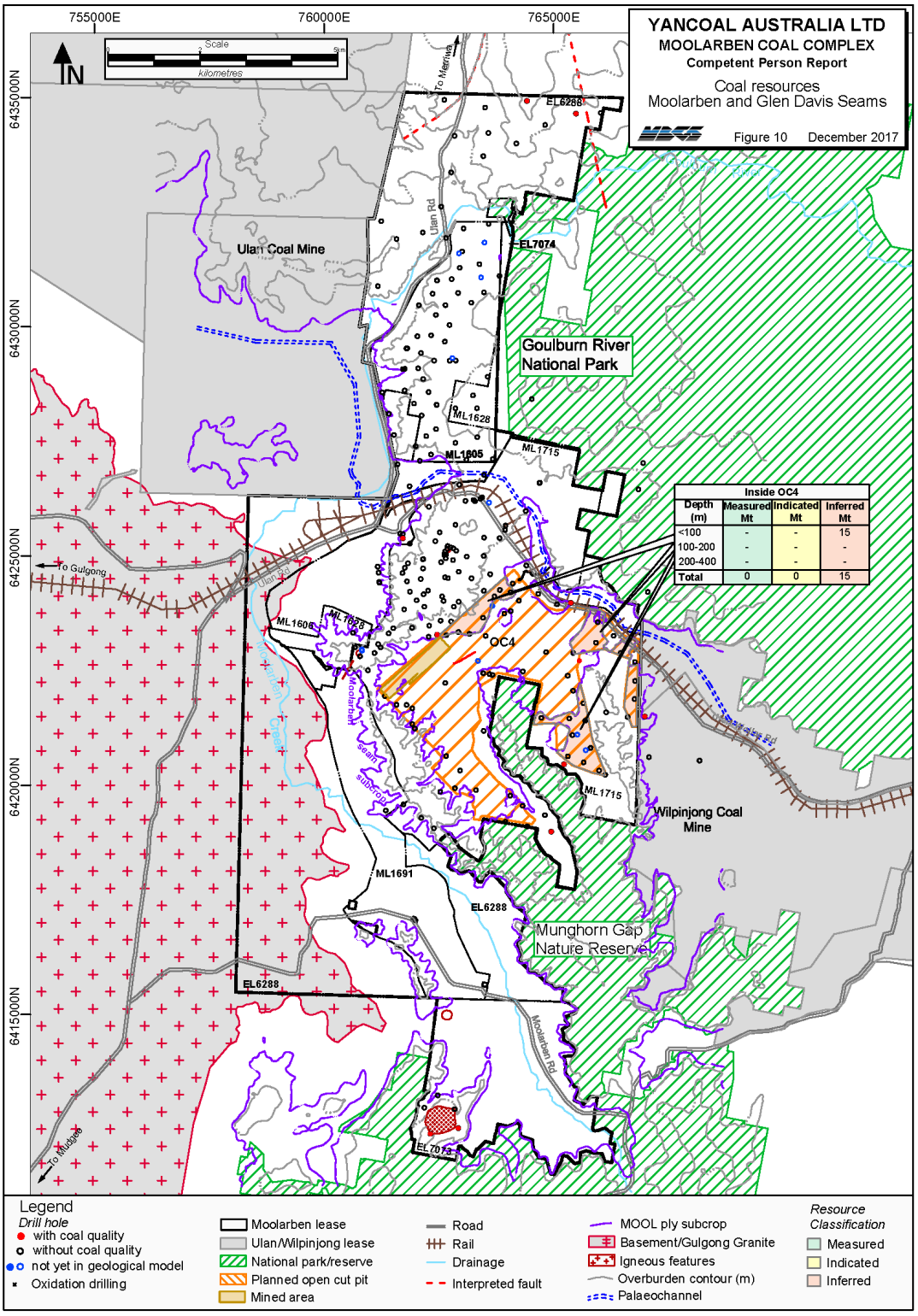
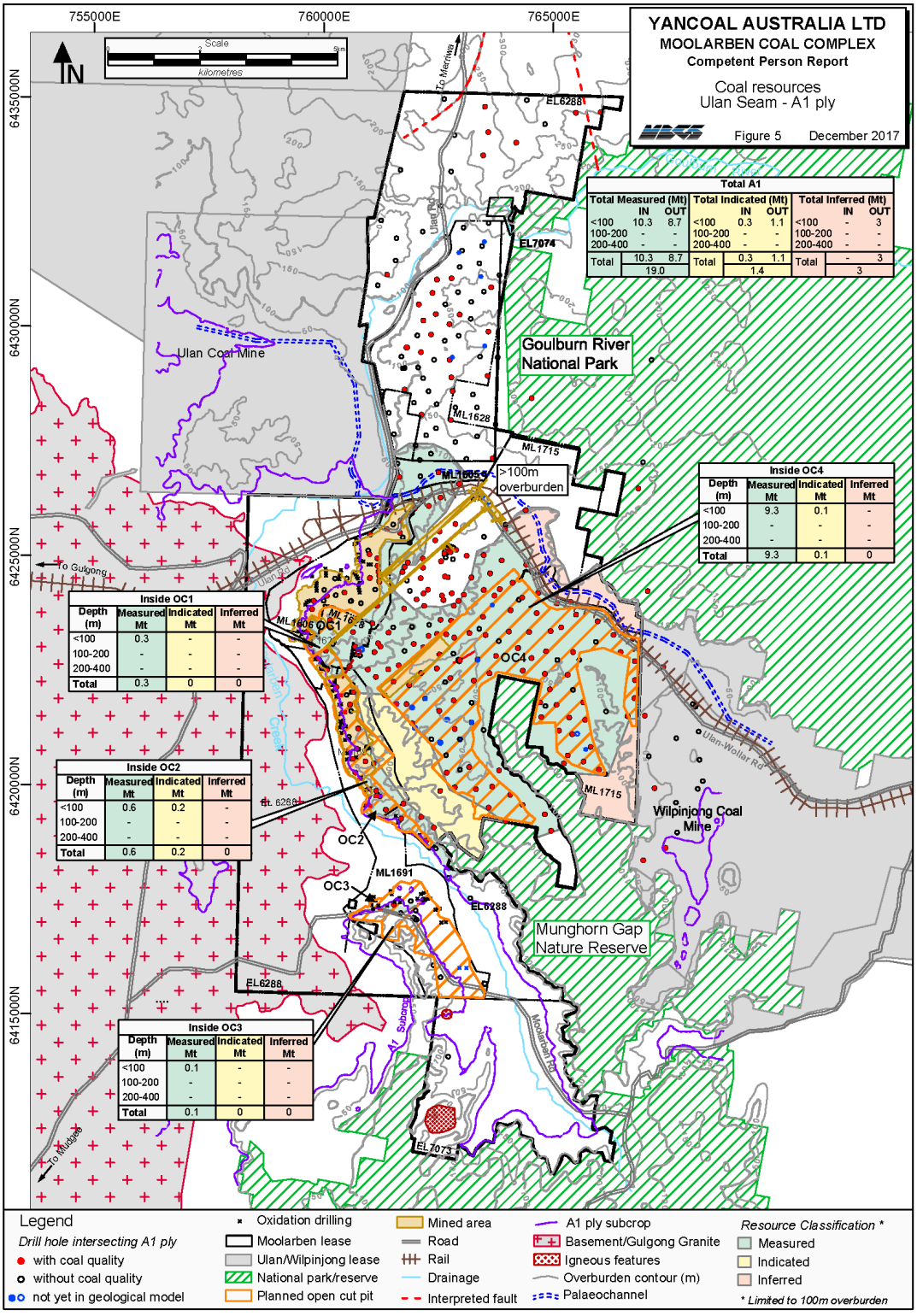
RPMGLOBAL

Resource Polygons

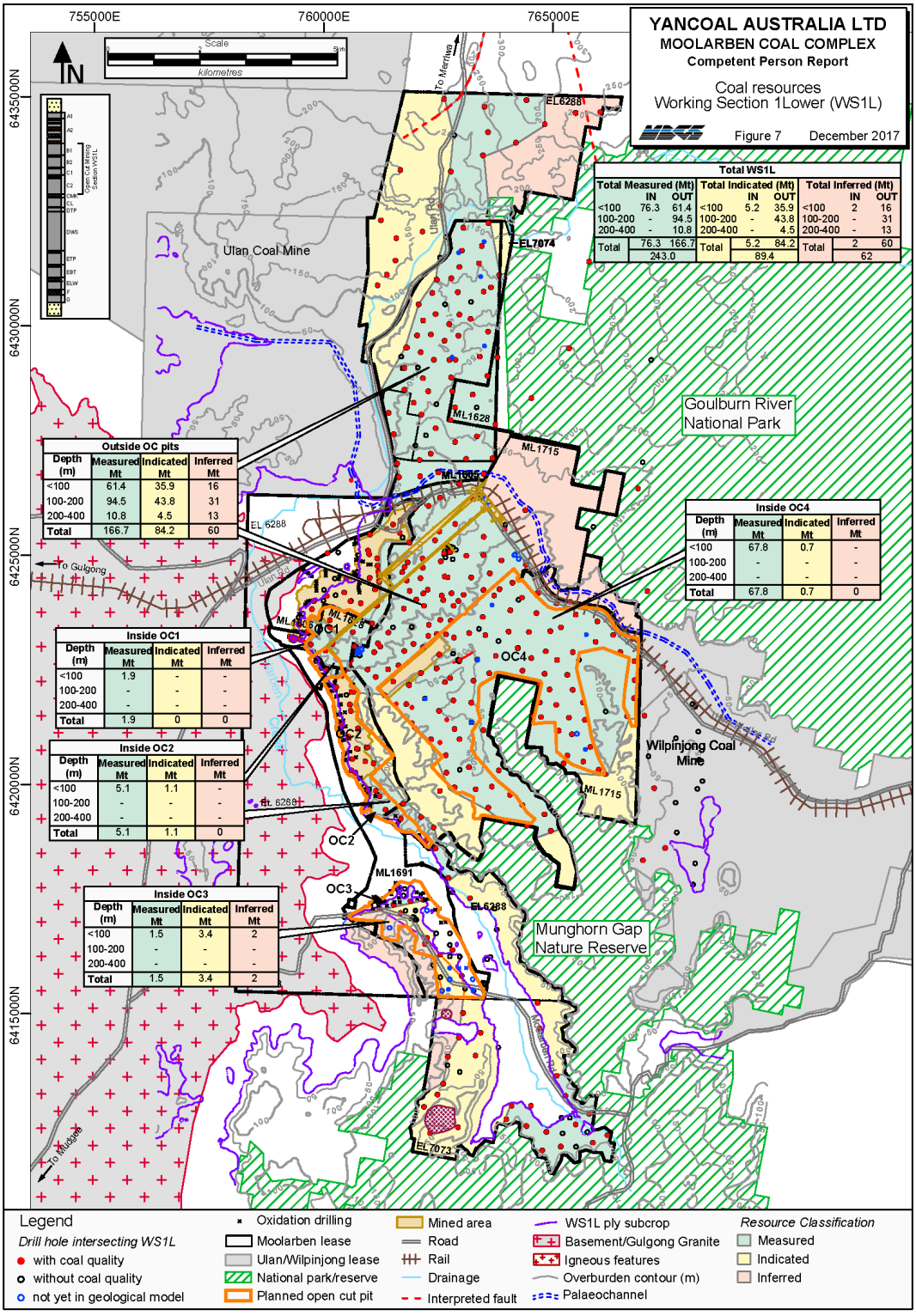
Moolarben

COMPETENT PERSON RESOURCE REPORT - MOOLARBEN COAL COMPLEX

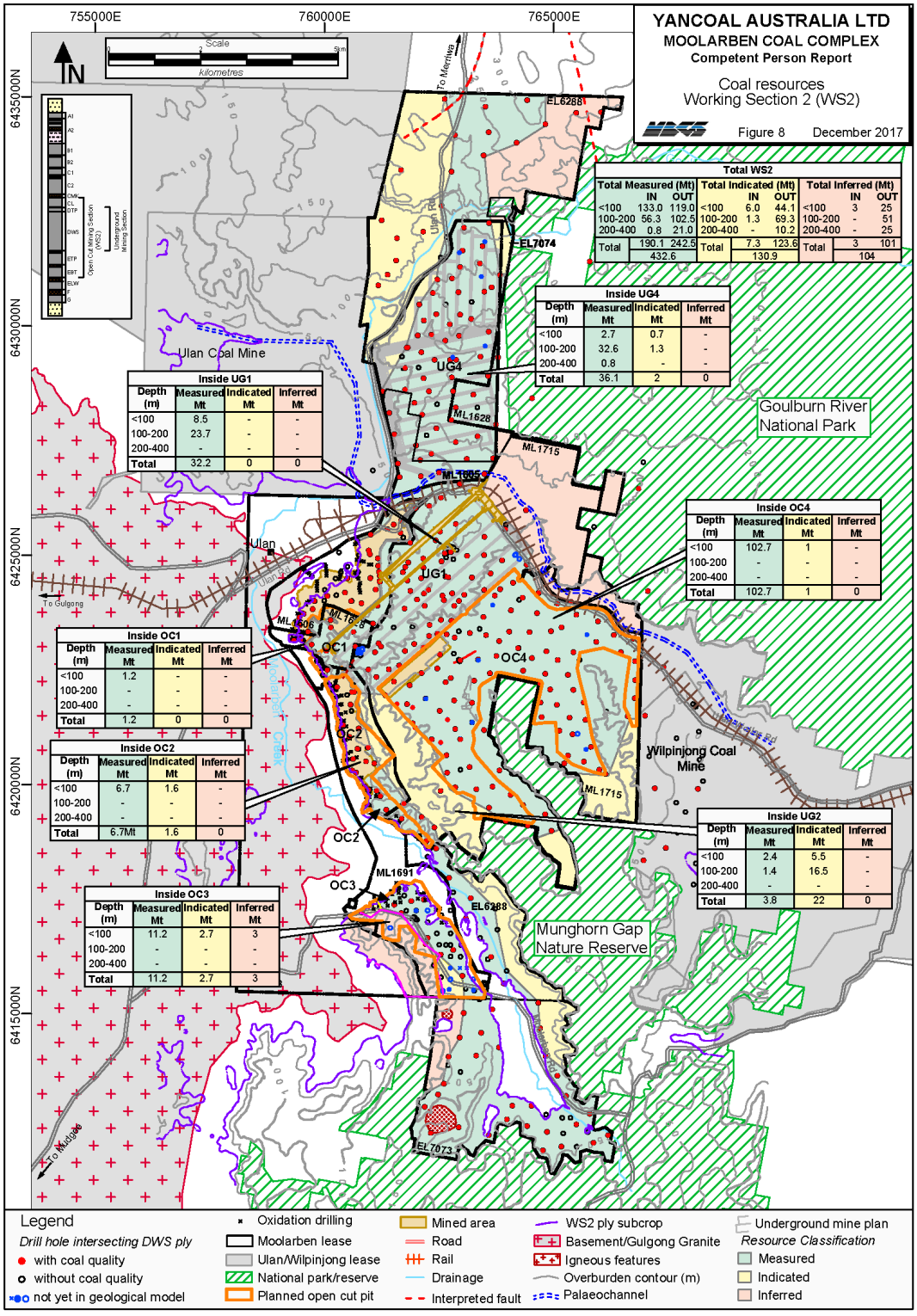


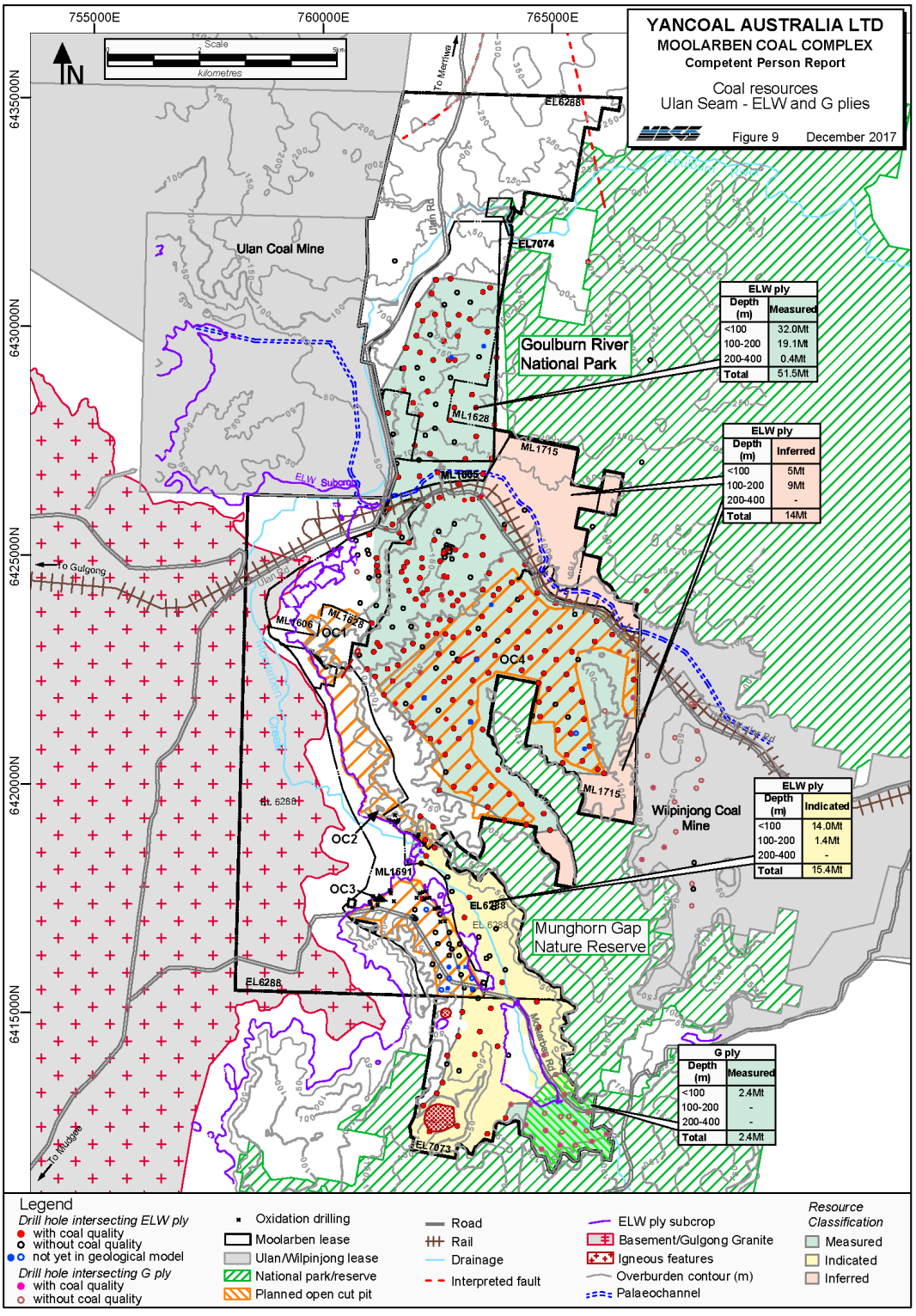

YANCOAL AUSTRALIA LTD
MOOLARBEN COAL COMPLEX
Competent Person Report
Coal resources
Ulan Seam - A1 ply
Figure 5 December 2017
755000E
760000E
765000E
6435000N
6430000N
6425000N
6420000N
6415000N
Scale
kilometres
Total A1
Total Measured (Mt) IN OUT
<100 10.3 8.7
100-200 - -
200-400 - -
Total 10.3 8.7
19.0
Total Indicated (Mt) IN OUT
<100 0.3 1.1
100-200 - -
200-400 - -
Total 0.3 1.1
1.4
Total Inferred (Mt) IN OUT
<100 - 3
100-200 - -
200-400 - -
Total - 3
3
Goulburn River National Park
Ulan Coal Mine
Wilpinjong Coal Mine
Munghorn Gap Nature Reserve
>100m overburden
OC1
OC2
OC3
OC4
EL6288
EL7074
EL7073
ML1628
ML1715
ML1691
Inside OC1
Depth (m) Measured Mt Indicated Mt Inferred Mt
<100 0.3 - -
100-200 - - -
200-400 - - -
Total 0.3 0 0
Inside OC2
Depth (m) Measured Mt Indicated Mt Inferred Mt
<100 0.6 0.2 -
100-200 - - -
200-400 - - -
Total 0.6 0.2 0
Inside OC3
Depth (m) Measured Mt Indicated Mt Inferred Mt
<100 0.1 - -
100-200 - - -
200-400 - - -
Total 0.1 0 0
Inside OC4
Depth (m) Measured Mt Indicated Mt Inferred Mt
<100 9.3 0.1 -
100-200 - - -
200-400 - - -
Total 9.3 0.1 0
To Gulgong
To Mudgee
To Merriwa
Ulan-Wollar Rd
Legend
Drill hole intersecting A1 ply
with coal quality
without coal quality
not yet in geological model
Oxidation drilling
Moolarben lease
Ulan/Wilpinjong lease
National park/reserve
Planned open cut pit
Mined area
Road
Rail
Drainage
Interpreted fault
A1 ply subcrop
Basement/Gulgong Granite
Igneous features
Overburden contour (m)
Palaeochannel
Resource Classification *
Measured
Indicated
Inferred
* Limited to 100m overburden

COMPETENT PERSON RESOURCE REPORT - MOOLARBEN COAL COMPLEX



COMPETENT PERSON RESOURCE REPORT - MOOLARBEN COAL COMPLEX

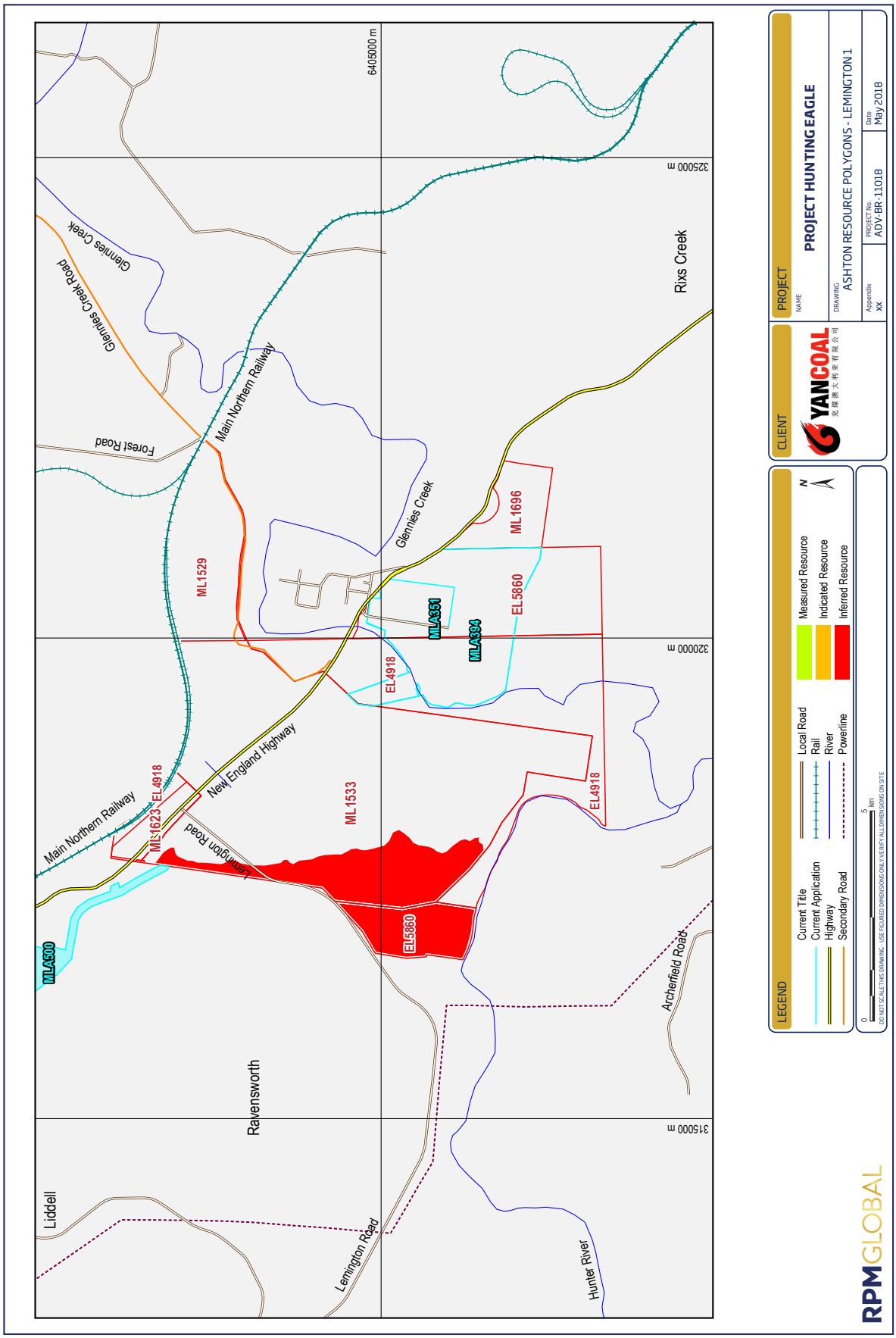


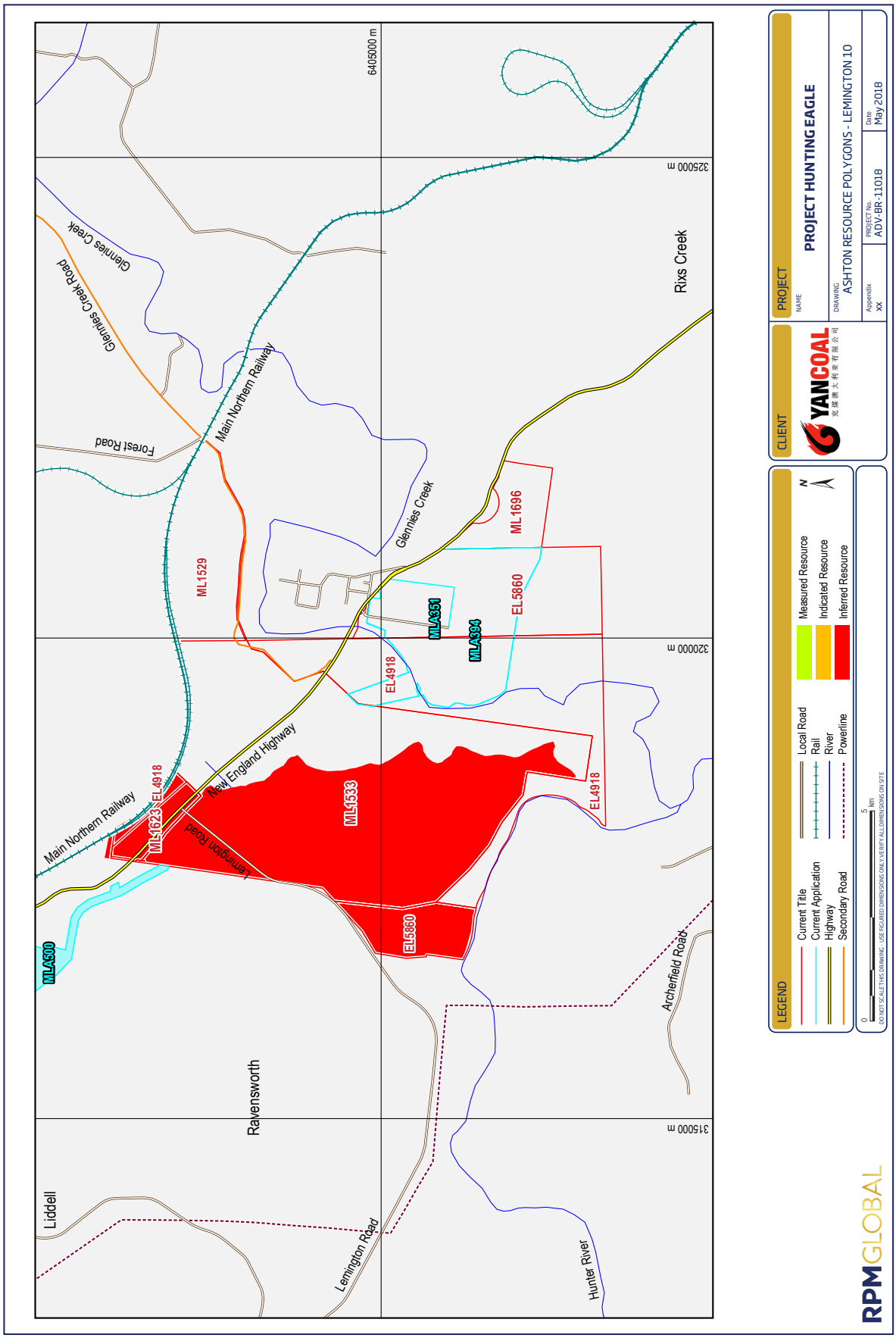

YANCOAL AUSTRALIA LTD
MOOLARBEN COAL COMPLEX
Competent Person Report
Coal resources
Ulan Seam - ELW and G plies
Figure 9 December 2017
755000E
760000E
765000E
6435000N
6430000N
6425000N
6420000N
6415000N
N
Scale
kilometres
Ulan Coal Mine
Goulburn River National Park
Wilpinjong Coal Mine
Munghorn Gap Nature Reserve
EL6288
EL7074
EL7073
ML1628
ML1715
ML1605
ML1606
OC1
OC2
OC3
OC4
ML1691
To Merriwa
To Gulgong
To Mudgee
ELW ply
Depth (m) | Measured
<100 | 32.0Mt
100-200 | 19.1Mt
200-400 | 0.4Mt
Total | 51.5Mt
ELW ply
Depth (m) | Inferred
<100 | 5Mt
100-200 | 9Mt
200-400 | -
Total | 14Mt
ELW ply
Depth (m) | Indicated
<100 | 14.0Mt
100-200 | 1.4Mt
200-400 | -
Total | 15.4Mt
G ply
Depth (m) | Measured
<100 | 2.4Mt
100-200 | -
200-400 | -
Total | 2.4Mt
Legend
Drill hole intersecting ELW ply
with coal quality
without coal quality
not yet in geological model
Drill hole intersecting G ply
with coal quality
without coal quality
Oxidation drilling
Moolarben lease
Ulan/Wilpinjong lease
National park/reserve
Planned open cut pit
Road
Rail
Drainage
Interpreted fault
ELW ply subcrop
Basement/Gulgong Granite
Igneous features
Overburden contour (m)
Palaeochannel
Resource Classification
Measured
Indicated
Inferred

RPMGLOBAL

Resource Polygons

Ashton


6405000 m
325000 m
320000 m
315000 m
Rixs Creek
Glennies Creek
Glennies Creek Road
Forest Road
Main Northern Railway
Glennies Creek
New England Highway
Main Northern Railway
Lemington Road
Ravensworth
Archerfield Road
Liddell
Lemington Road
Hunter River
ML1529
ML1696
EL5860
MLA351
MLA394
EL4918
ML1533
EL4918
EL4918
ML1623
EL5630
MLA500
LEGEND
Current Title
Current Application
Highway
Secondary Road
Local Road
Rail
River
Powerline
Measured Resource
Indicated Resource
Inferred Resource
N
0
5
km
DO NOT SCALE THIS DRAWING - USE FIGURED DIMENSIONS ONLY, VERIFY ALL DIMENSIONS ON SITE
CLIENT
YANCOAL
PROJECT
NAME
PROJECT HUNTING EAGLE
DRAWING
ASHTON RESOURCE POLYGONS - LEMINGTON 1
Appendix
xx
PROJECT No.
ADV-BR-11018
Date
May 2018
RPMGLOBAL


6405000 m
325000 m
320000 m
315000 m
Rixs Creek
Glennies Creek
Glennies Creek Road
Forest Road
Main Northern Railway
ML1529
ML1696
EL5860
MLA351
MLA394
EL4918
ML1623
ML1533
EL5630
MLA500
New England Highway
Lemington Road
Archerfield Road
Ravensworth
Liddell
Lemington Road
Hunter River
LEGEND
Current Title
Current Application
Highway
Secondary Road
Local Road
Rail
River
Powerline
Measured Resource
Indicated Resource
Inferred Resource
N
0
5
km
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DRAWING
ASHTON RESOURCE POLYGONS - LEMINGTON 10
Appendix
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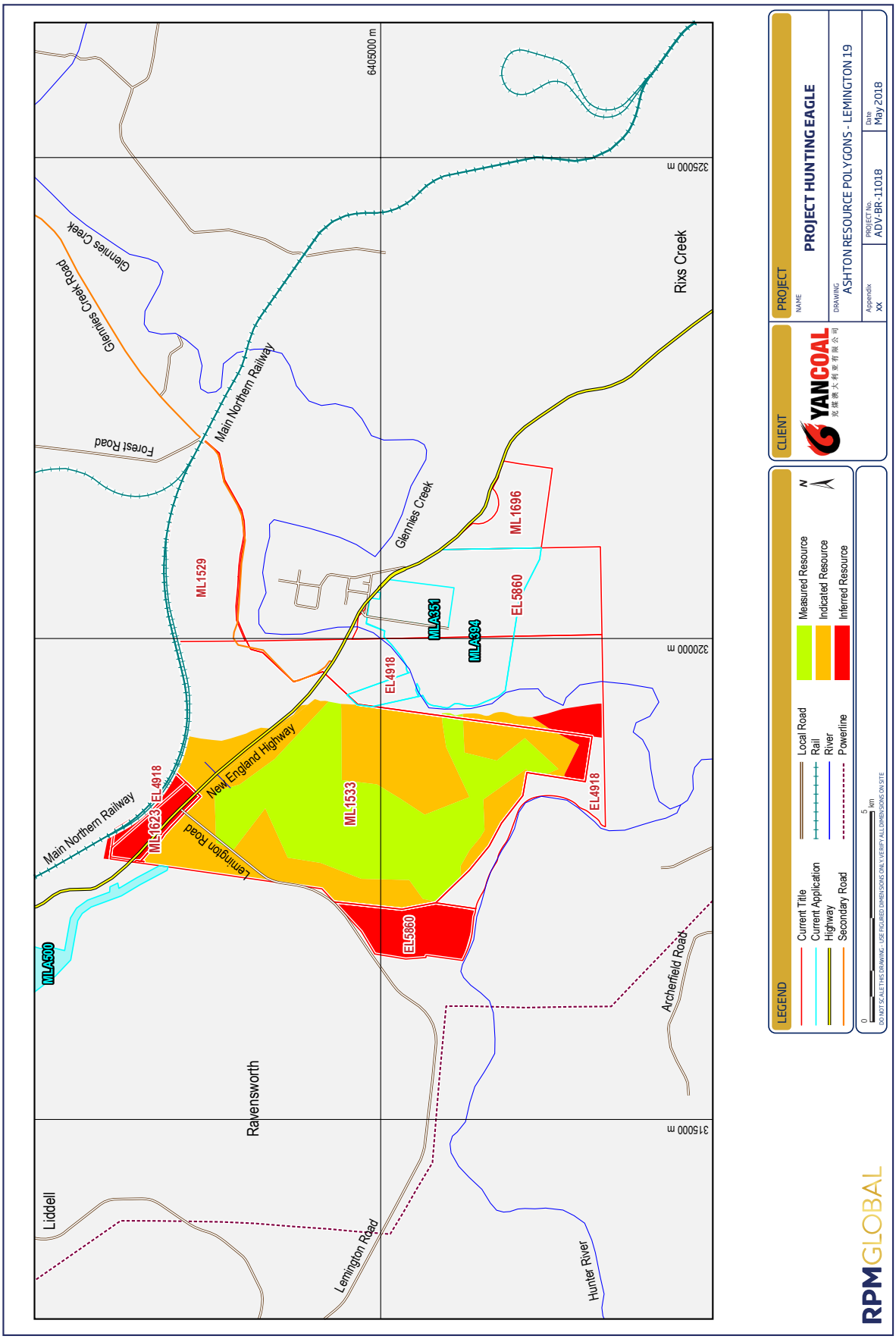
PROJECT No.
ADV-BR-11018
Date
May 2018


6405000 m
3250000 m
3200000 m
3150000 m
Rixs Creek
Glennies Creek
Glennies Creek Road
Forest Road
Main Northern Railway
Glennies Creek
ML1529
ML1696
EL5860
MLA351
MLA394
EL4918
ML1533
EL4918
New England Highway
Main Northern Railway
EL4918
ML1623
Lemington Road
EL5630
MLA500
Archerfield Road
Ravensworth
Liddell
Lemington Road
Hunter River
LEGEND
Current Title
Current Application
Highway
Secondary Road
Local Road
Rail
River
Powerline
Measured Resource
Indicated Resource
Inferred Resource
N
0
5
km
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PROJECT HUNTING EAGLE
DRAWING
ASHTON RESOURCE POLYGONS - LEMINGTON 19
Appendix
xx
PROJECT No.
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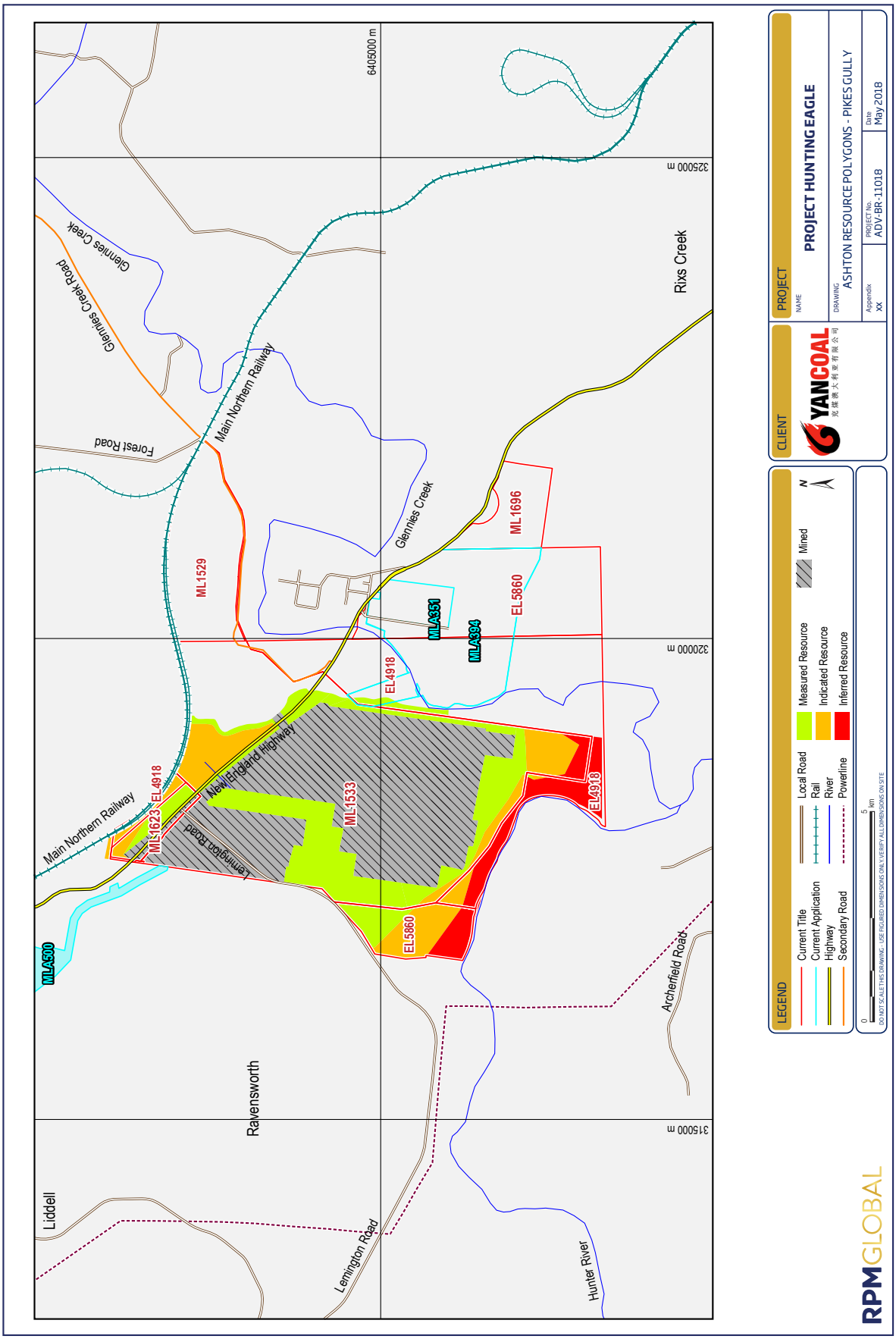
Date
May 2018
RPMGLOBAL


6405000 m
325000 m
320000 m
315000 m
Rixs Creek
Ravensworth
Liddell
Glennies Creek
Glennies Creek Road
Forest Road
Main Northern Railway
New England Highway
Lemington Road
Archerfield Road
Lemington Road
Hunter River
ML1529
ML1623
ML1533
ML1696
ML4394
ML4351
ML4500
EL4918
EL5860
LEGEND
Current Title
Current Application
Highway
Secondary Road
Local Road
Rail
River
Powerline
Measured Resource
Indicated Resource
Inferred Resource
Mined
N
0
5
km
DO NOT SCALE THIS DRAWING - USE FIGURED DIMENSIONS ONLY, VERIFY ALL DIMENSIONS ON SITE
CLIENT
YANCOAL
PROJECT
NAME
PROJECT HUNTING EAGLE
DRAWING
ASHTON RESOURCE POLYGONS - PIKES GULLY
Appendix
xx
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Date
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