COMPETENT PERSON REPORT

COAL RESOURCES - SUMMARY

Maxwell Project

New South Wales, Australia

EL5460

Prepared for:

Malabar Resources Limited

Prepared by:

McElroy Bryan Geological Services Pty Ltd

As at 30 September 2018

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1 COAL RESOURCE DECLARATION

PROJECT / MINE NAME	Maxwell, NSW, Australia
Malabar Resources Ltd Interest (%)	100
MINING / EXPLORATION TITLE (s)	EL5460

PROJECT / MINE STATUS & DESCRIPTION OF MINING METHOD & COAL TYPE

The Maxwell Underground Project is located within EL5460, an area south of the Mt Arthur and the Drayton open cut mine areas. The target coal seams are in the Jerry's Plains Subgroup of the Wittingham Coal Measures, and include the Whynot Seam, Woodlands Hill Seam, Arrowfield Seam, Bowfield Seam and Warkworth Seam. Upper seams in the sequence, including the Whybrow, Redbank Creek, Whynot and Blakefield Seams were explored for open-cut potential firstly by Mt Arthur South Coal in the period 1978 to 1982 and then by Saddlers Creek Coal Pty Ltd (Shell Coal) from 1998 to 2011 in EL 5460. Malabar Resources Ltd (Malabar) acquired Drayton Coal Pty Ltd including the Maxwell Project area in February 2018. Since acquiring EL5460 Malabar has been reviewing the potential for underground mining in the Edderton Block, located in the central and eastern parts of the EL. This review identified eight coal seams that are amenable to underground mining all of which have working sections in the range of 2 m to 4 m thick and are under depths of cover ranging from 50 m to 450 m. Malabar has developed five preferred underground mine plans of potential working sections in the Whynot, Woodlands Hill, Arrowfield, Bowfield and Warkworth seams. Selected seams can produce export semi soft coking or thermal products after beneficiation, similar to other operations in the Hunter Valley area that are mining these coal seams.

COAL RESOURCE ESTIMATION DETAILS (geological model details, limits applied to resources, density & moisture details)

Maxwell project lies west of the Muswellbrook Anticline in the Hunter Coalfield of New South Wales covering an area of approximately 50 km^2.
Coal seams in the project area of Late Permian age are contained within the Jerry's Plain Subgroup of the Wittingham Coal Measures and include seams from Whybrow down to Warkworth. Deposit geology can be divided into three structural domains/blocks: Plashett, Edderton and Denman, controlled by two main regional features; the Muswellbrook Anticline and the Calool Syncline.
In October 2017, MBGS was engaged by Malabar to undertake a geological review of the Maxwell project. This review was carried out by Dr. John Bryan and included an assessment of working sections from each seam in all the drill holes to ensure that the selected intervals were the most appropriate for an underground mining operation, considering the coal quality (raw ash), and the nature of the roof and floor of the selected working section. The structural interpretation was also reviewed and the location, extent and throw of known faults was incorporated into a computer geological model that was developed using Minex software and the 3D faulted module.
Coal resource classification reflects the level of confidence based on available drill hole data for each seam and supported by the geophysical surveys. Extensive exploration has been carried out over the Maxwell project area with over 1,000 holes drilled including > 300 core holes with coal quality analysis, approximately 20 km^2 of 3D seismic surveys, 18 km of 2D seismic survey and magnetic and radiometric surveys were flown over the entire lease area.
Most of the reported coal resources are classified as Measured Resources within the Edderton block due to the amount of exploration in the area providing appropriate levels of understanding and confidence on the seam structure, continuity and coal quality with approximately 900 holes and the 3D seismic survey covering 75% of the area. Drill hole spacing varies with depth, at the Whybrow Seam level it is about 250 m, while at the level of the Whynot and the Woodlands Hill seams the drill hole spacing is about 500 m. Coal resources were estimated using in situ density adjusted to 6% moisture basis and limited to working sections with a minimum thickness of 1.5 m.

COMPETENT PERSON

Name:	*Karol Patino*	Membership of AusIMM/AIG:	*M. AusIMM* *Membership No 304503*
Title / Employer:	*Senior Geologist, McElroy Bryan Geological Services Pty Ltd*	Telephone:	*(+61) 2 8440 7800*
Qualifications:	*B. Geology, University of Colombia (2004), MSc Hydrogeology, University of Technology Sydney (2006)*	Email:	Karol.patino@mbgs.com.au
Brief Description of Relevant Experience:	*Karol Patino has worked continuously in the coal industry for over 10 years with more than 5 years' experience in the estimation of coal resources. This expertise has been acquired through working as a geologist at different stages of exploration, building computer geological models and estimating coal resources for coal deposits in Australia and overseas.*	Signed:	 *30 September 2018*

The information in this report that relates to Coal Resources, is based on information compiled under the supervision of, and reviewed by, the Competent Person, Karol Patino, who is a full-time employee of McElroy Bryan Geological Services, is a Member of the Australasian Institute of Mining and Metallurgy and who has no conflict of interest with Malabar Resources Ltd.
The Coal Resource report for Maxwell has been prepared in accordance with the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves 2012 Edition" (The JORC Code).

Karol Patino has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'.

COAL RESOURCES MAXWELL PROJECT											
Coal Resources Within Mine Plan Area 30 September 2018											
Mining Method	**Depth Interval (m)**	**Measured (A)**			**Indicated (B)**			**(A+B)**	**Inferred**		
		Tonnes (Mt)	Quality		Tonnes (Mt)	Quality		Tonnes (Mt)	Tonnes (Mt)	Quality	
			CV (MJ/kg)	Ash (%)		CV (MJ/kg)	Ash (%)			CV (MJ/kg)	Ash (%)
Underground	0 – 100	9.6			-			9.6	-		
Underground	100 – 200	22.7			0.2			22.9	1		
Underground	200 – 300	65.3			2.5			67.8	2		
Underground	300 – 500	152.9			17.0			169.9	-		
Total		250.5	27.5	14.1	19.7	28.4	11.4	270.2	3	27.3	14.2

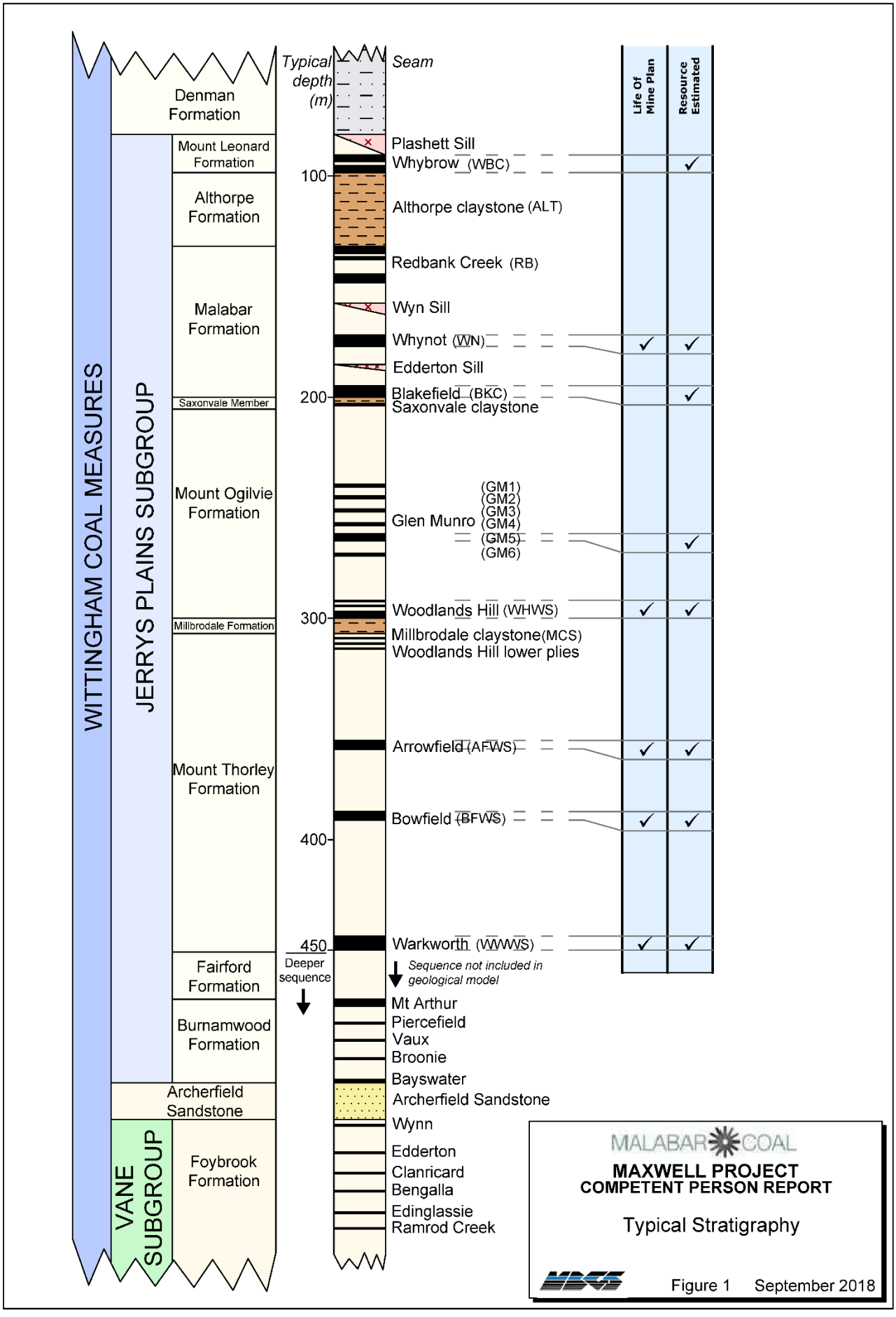
Coal Resources Outside Mine Plan Area 30 September 2018											
Mining Method	**Depth Interval (m)**	**Measured (A)**			**Indicated (B)**			**(A+B)**	**Inferred**		
		Tonnes (Mt)	Quality		Tonnes (Mt)	Quality		Tonnes (Mt)	Tonnes (Mt)	Quality	
			CV (MJ/kg)	Ash (%)		CV (MJ/kg)	Ash (%)			CV (MJ/kg)	Ash (%)
Underground	0 – 100	56.9			22.6			79.5	7		
Underground	100 – 200	43.0			90.8			133.8	52		
Underground	200 – 300	39.5			48.6			88.1	33		
Underground	300 – 500	39.4			56.9			96.3	9		
Total		178.8	26.6	16.3	218.9	24.7	15.0	397.7	101	27.1	14.6

Total Coal Resources (Inclusive of Resources modified to produce Reserves) 30 September 2018											
Mining Method	**Depth Interval (m)**	**Measured (A)**			**Indicated (B)**			**(A+B)**	**Inferred**		
		Tonnes (Mt)	Quality		Tonnes (Mt)	Quality		Tonnes (Mt)	Tonnes (Mt)	Quality	
			CV (MJ/kg)	Ash (%)		CV (MJ/kg)	Ash (%)			CV (MJ/kg)	Ash (%)
Underground	0 – 100	66.5			22.6			89.1	7		
Underground	100 – 200	65.7			91.0			156.7	53		
Underground	200 – 300	104.8			51.1			155.9	35		
Underground	300 – 500	192.3			73.9			266.2	9		
Total		429.3	27.1	15.0	238.6	26.8	15.8	667.9	104	27.1	14.6

Total Resources (Rounded)	**430**	**27**	**15**	**240**	**27**	**16**	**670**	**100**	**27**	**15**

Notes:

1. *For further information, refer to Appendix A, JORC Code 2012 Edition Table 1.*
2. *Resources reported at in situ moisture basis and coal quality at air dried basis*


WITTINGHAM COAL MEASURES
JERRYS PLAINS SUBGROUP
VANE SUBGROUP
Denman Formation
Mount Leonard Formation
Althorpe Formation
Malabar Formation
Saxonvale Member
Mount Ogilvie Formation
Millbrodale Formation
Mount Thorley Formation
Fairford Formation
Burnamwood Formation
Archerfield Sandstone
Foybrook Formation
Typical depth (m)
100
200
300
400
450
Deeper sequence
Seam
Plashett Sill
Whybrow (WBC)
Althorpe claystone (ALT)
Redbank Creek (RB)
Wyn Sill
Whynot (WN)
Edderton Sill
Blakefield (BKC)
Saxonvale claystone
Glen Munro (GM1) (GM2) (GM3) (GM4) (GM5) (GM6)
Woodlands Hill (WHWS)
Millbrodale claystone(MCS)
Woodlands Hill lower plies
Arrowfield (AFWS)
Bowfield (BFWS)
Warkworth (WWWS)
Sequence not included in geological model
Mt Arthur
Piercefield
Vaux
Broonie
Bayswater
Archerfield Sandstone
Wynn
Edderton
Clanricard
Bengalla
Edinglassie
Ramrod Creek
Life Of Mine Plan
Resource Estimated
MALABAR COAL
MAXWELL PROJECT
COMPETENT PERSON REPORT
Typical Stratigraphy
Figure 1 September 2018

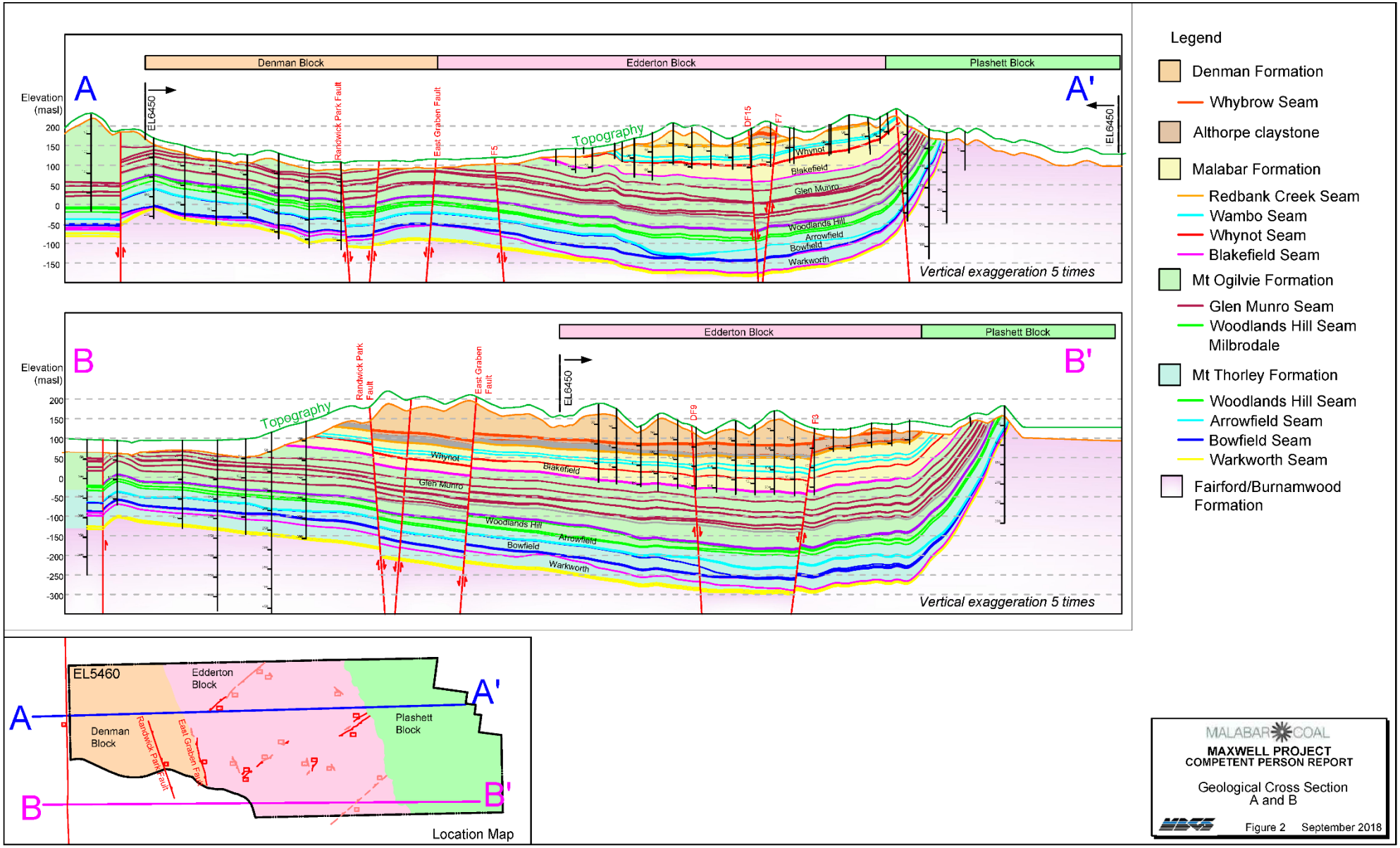

Denman Block
Edderton Block
Plashett Block
A
A'
Elevation (masl)
EL6450
Randwick Park Fault
East Graben Fault
F5
DF15
F7
Topography
Whynot
Blakefield
Glen Munro
Woodlands Hill
Arrowfield
Bowfield
Warkworth
Vertical exaggeration 5 times
B
B'
DF9
F3
Legend
Denman Formation
Whybrow Seam
Althorpe claystone
Malabar Formation
Redbank Creek Seam
Wambo Seam
Whynot Seam
Blakefield Seam
Mt Ogilvie Formation
Glen Munro Seam
Woodlands Hill Seam
Milbrodale
Mt Thorley Formation
Woodlands Hill Seam
Arrowfield Seam
Bowfield Seam
Warkworth Seam
Fairford/Burnamwood Formation
EL5460
Location Map
MALABAR COAL
MAXWELL PROJECT
COMPETENT PERSON REPORT
Geological Cross Section
A and B
Figure 2 September 2018

Table 1. Typical raw coal quality, Maxwell Project

Quality parameter	Typical raw coal quality per seam (air dried basis)							
	Whybrow	Whynot	Blakefield	Glen Munro 5	Woodlands Hill	Arrowfield	Bowfield	Warkworth
Raw ash %	26.0	6.7	16.0	27.0	17.4	8.3	11.5	20.5
Inherent moisture %	4.2	4.1	5.0	4.0	3.3	3.2	2.9	2.4
Total sulphur %	0.50	0.45	0.5	0.45	0.44	0.31	0.33	0.37
Chlorine %	-	0.01	-	-	0.02	0.02	0.02	0.01
Calorific value (Mj/Kg)	24.0	30.1	27.5	23.0	26.8	30.3	29.2	26.1

Table 2. Typical product coal quality, Maxwell Project

Quality parameter	Typical quality product per seam from clean coal composites (ad)									
	Whybrow	Whynot	Blakefield	Glen Munro 5	Woodlands Hill		Arrowfield	Bowfield	Warkworth	
	Thermal	Thermal	Coking	Thermal	Coking	Thermal	Coking	Coking	Coking	Thermal
Yield %	82	93	83	68	77	88	95	92	65	89
Ash %	8.8	5.8	5.9	12.0	8.7	10.7	5.3	6.7	9.1	10.2
Moisture %	3.3	3.6	3.6	3.6	2.9	3.1	3.1	2.9	2.7	2.5
Volatile matter %	34	31.6	32.1	34.4	33.9	33.4	33.8	33.5	32.9	32.8
Total sulphur %	0.42	0.41	0.50	0.43	0.40	0.41	0.31	0.34	0.40	0.38
HGI	51	52	-	-	52	52	57	-	-	51
CSN	3.0	1.0	5.0	3.0	6.0	-	6.5	7.0	7.0	-
Phosphorous %	0.04	-	-	-	0.03	-	0.037	0.037	0.045	-
Vitrinite %	-	-	-	-	75	-	67	72	67	-
Maximum reflectance (Ro Max)	0.68	0.81	0.73	-	0.74	-	0.76	0.77	0.78	-
Calorific value (MJ/Kg)	28.2	30.5	31.0	28.8	30.1	29.3	31.2	30.9	-	30.0
Calorific value (Kcal/Kg)	6725	7250	7402	6877	7180	6740	7450	7385	-	6940

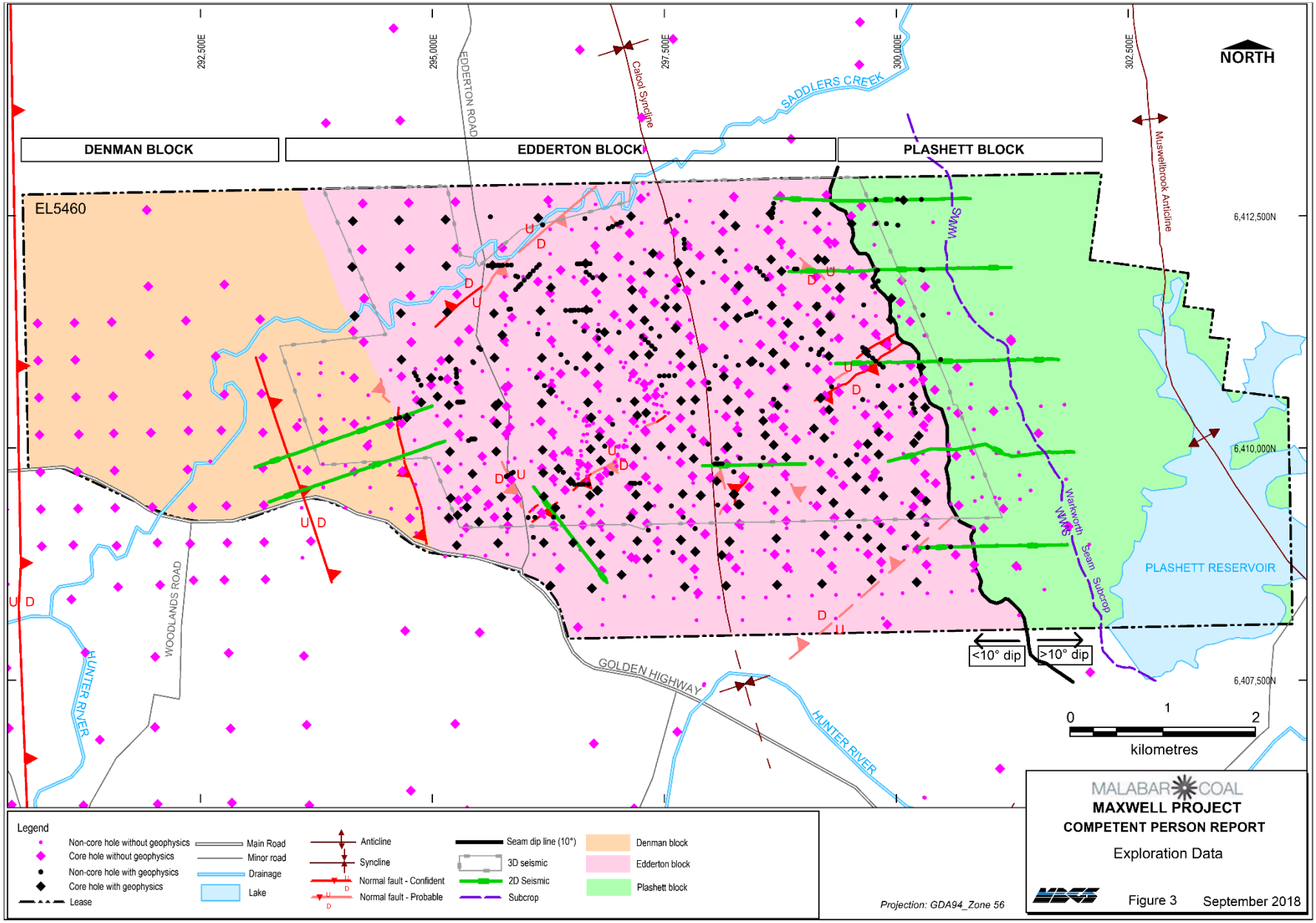
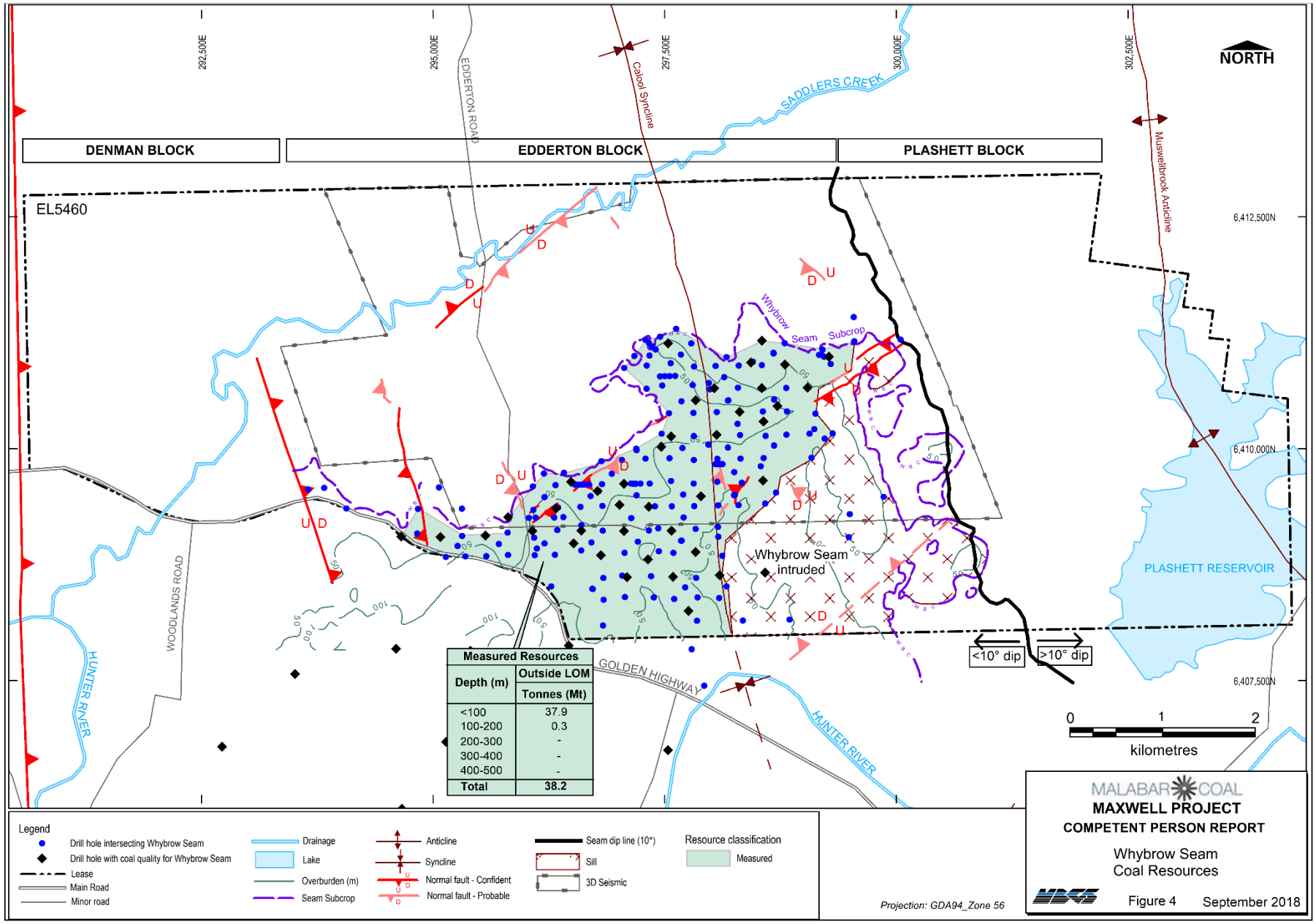
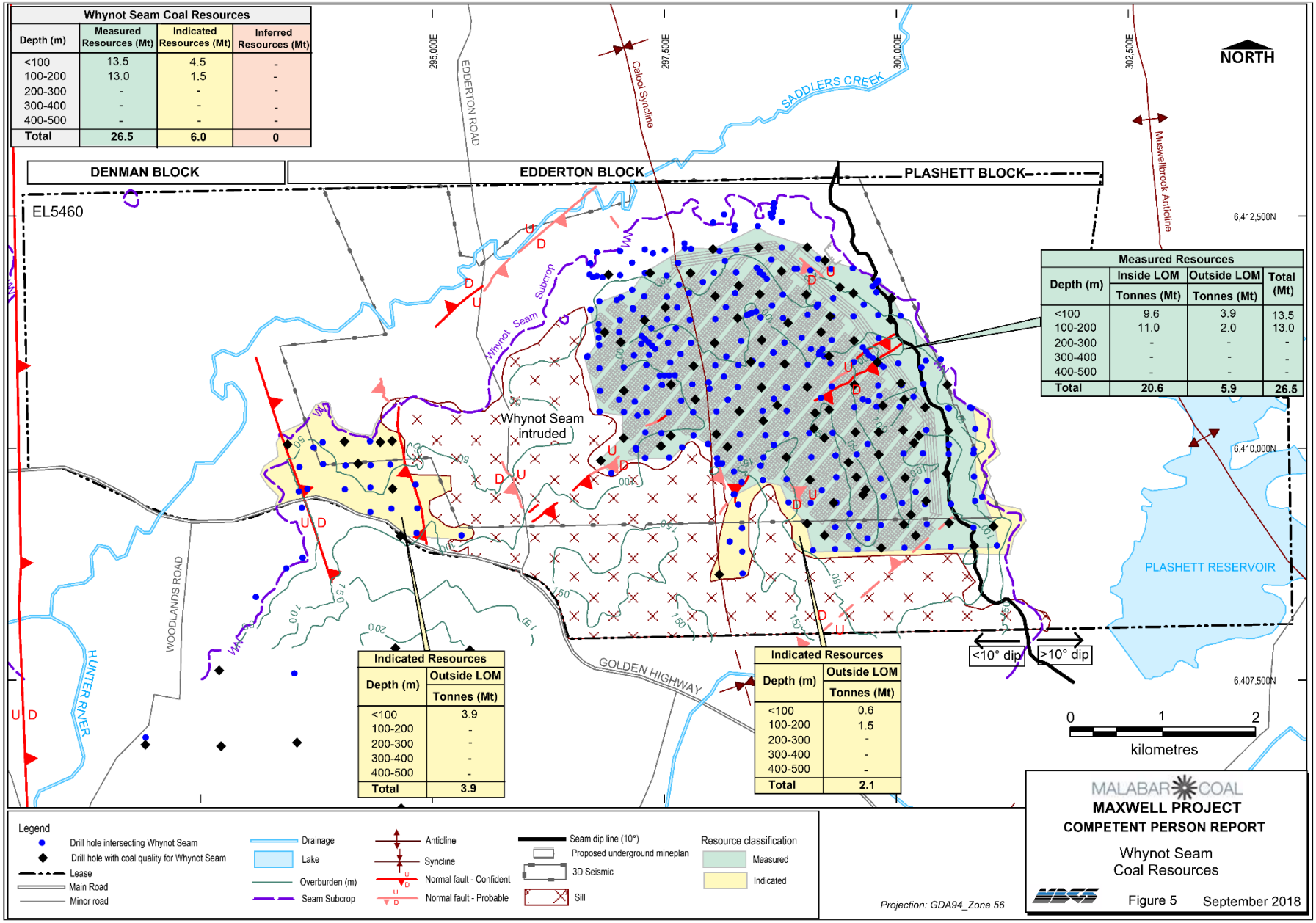

DENMAN BLOCK
EDDERTON BLOCK
PLASHETT BLOCK
EL5460
NORTH
292,500E
295,000E
297,500E
300,000E
302,500E
6,412,500N
6,410,000N
6,407,500N
EDDERTON ROAD
Calool Syncline
SADDLERS CREEK
Muswellbrook Anticline
SWWS
Warkworth SWWS Seam Subcrop
PLASHETT RESERVOIR
WOODLANDS ROAD
HUNTER RIVER
GOLDEN HIGHWAY
<10° dip
>10° dip
0
1
2
kilometres
Legend
Non-core hole without geophysics
Core hole without geophysics
Non-core hole with geophysics
Core hole with geophysics
Lease
Main Road
Minor road
Drainage
Lake
Anticline
Syncline
Normal fault - Confident
Normal fault - Probable
Seam dip line (10°)
3D seismic
2D Seismic
Subcrop
Denman block
Edderton block
Plashett block
Projection: GDA94_Zone 56
MALABAR COAL
MAXWELL PROJECT
COMPETENT PERSON REPORT
Exploration Data
Figure 3
September 2018

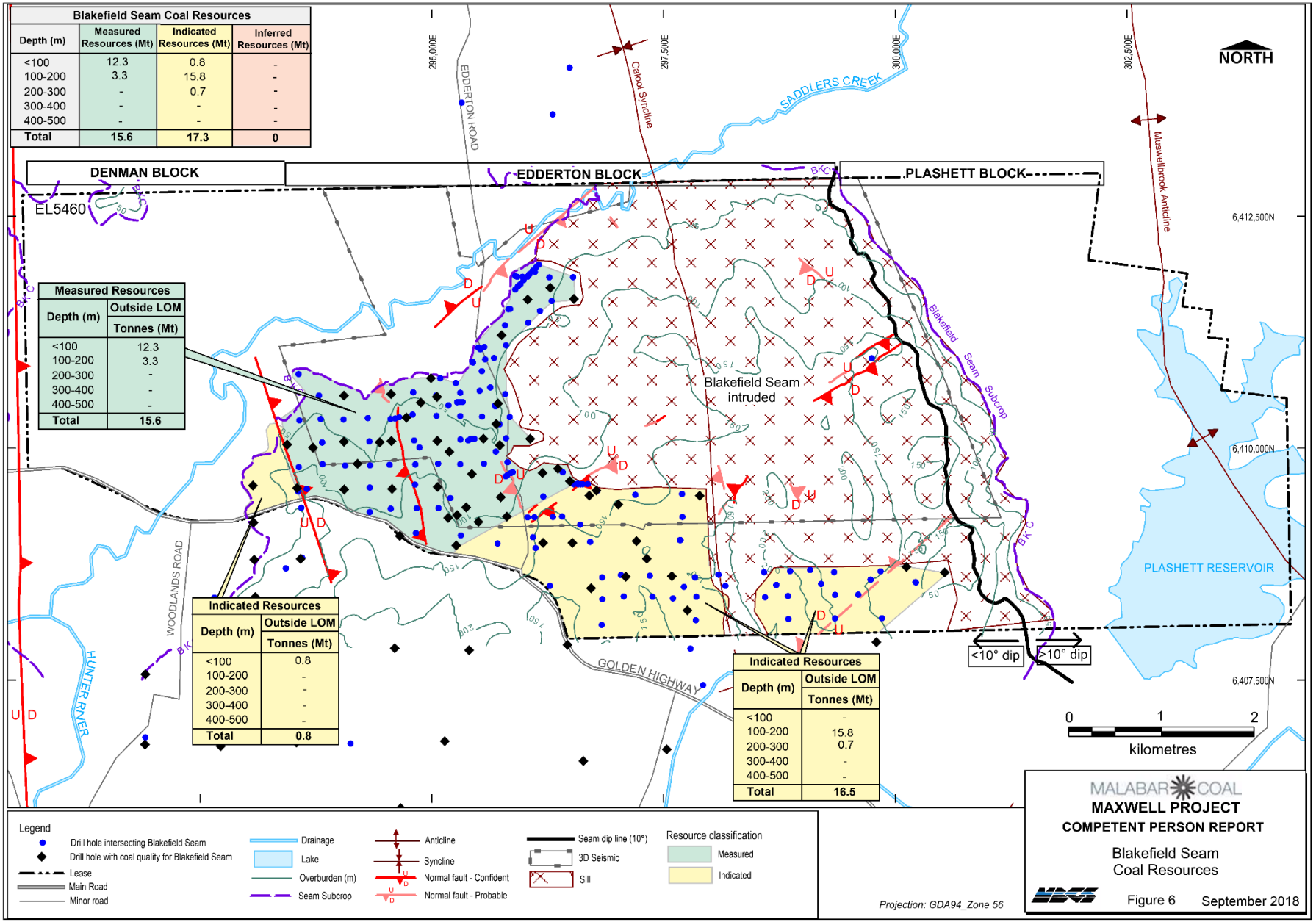
Table 3. Coal Resources, Maxwell Project

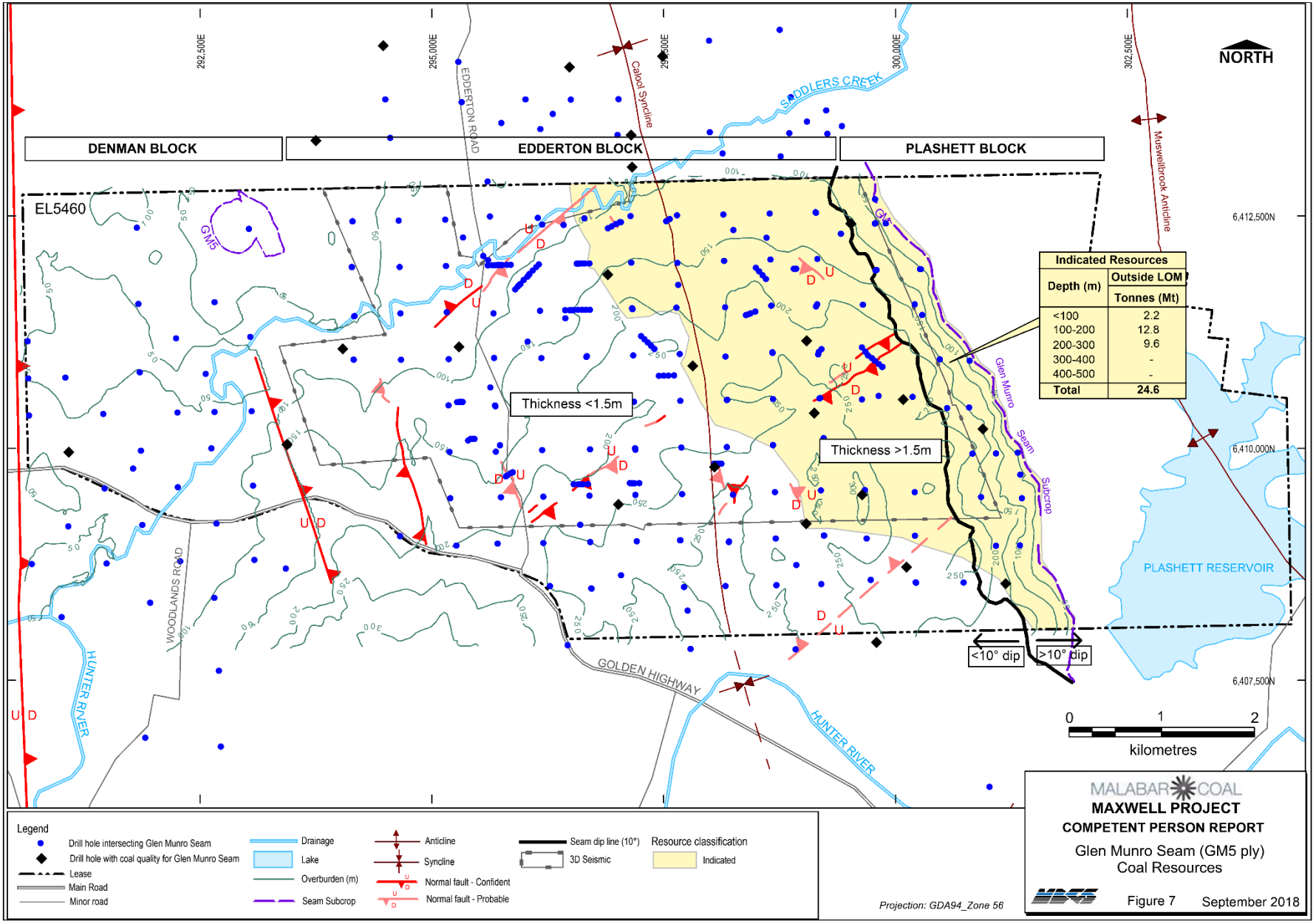
Coal Resource Classification	Seam / working section	Coal area (km^2)	Typical Seam thickness (m)	Density [1] (g/cc)	Typical raw coal quality (air dried) [2]					Coal Resources [4] (Mt)						
					Moisture (%)	Raw ash (%)	Energy (Mj/kg)	Sulphur (%)	Volatile matter (%)	Depth interval [3] (m)					Total	**Total[5] (Rounded)**
										<100	100-200	200-300	300-400	400-500		
Measured	Whybrow	7.2	3.6	1.48	4.7	21.5	24.5	0.6	31.2	37.9	0.3	-	-	-	38.2	**430**
	Whynot	10.0	1.9	1.36	3.3	10.3	28.9	0.4	30.0	13.5	13.0	-	-	-	26.5	
	Blakefield	4.6	2.4	1.42	4.7	16.9	26.6	0.5	31.6	12.3	3.3	-	-	-	15.6	
	Glen Munro 5	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
	Woodlands Hill	22.7	2.6	1.42	3.4	18.3	25.7	0.5	31.9	2.8	24.8	39.2	16.4	-	83.2	
	Arrowfield	17.4	2.8	1.33	3.2	8.6	29.5	0.3	33.4	-	13.8	14.7	34.4	1.0	63.9	
	Bowfield	18.0	2.8	1.35	2.9	10.5	28.7	0.3	33.5	-	8.9	11.2	39.2	9.0	68.3	
	Warkworth	24.7	3.9	1.41	2.7	17.2	26.5	0.4	30.8	-	1.6	39.7	53.2	39.1	133.6	
	Subtotal									**66.5**	**65.7**	**104.8**	**143.2**	**49.1**	**429.3**	
Indicated	Whybrow	-	-	-	-	-	-	-	-	-	-	-	-	-	0	**240**
	Whynot	2.2	2.0	1.36	3.6	11.2	28.5	0.5	33.6	4.5	1.5	-	-	-	6.0	
	Blakefield	5.1	2.3	1.46	4.8	19.7	25.7	0.4	31.2	0.8	15.8	0.7	-	-	17.3	
	Glen Munro 5	9.8	1.7	1.46	3.5	24.8	23.2	-	-	2.2	12.8	9.6	-	-	24.6	
	Woodlands Hill	8.1	3.2	1.44	3.3	21.2	24.8	0.5	31.8	6.4	12.3	14.9	4.0	-	37.6	
	Arrowfield	12.9	2.9	1.35	3.3	9.3	29.2	0.3	33.2	2.2	15.6	6.9	23.3	0.2	48.2	
	Bowfield	11.7	3.1	1.36	3.1	11.0	28.5	0.4	32.9	2.2	17.4	7.3	19.3	2.0	48.2	
	Warkworth	11.2	3.7	1.41	2.5	17.1	26.3	0.4	31.0	4.3	15.6	11.7	10.1	15.0	56.7	
	Subtotal									**22.6**	**91**	**51.1**	**56.7**	**17.2**	**238.6**	
Inferred	Whybrow	-	-	-	-	-	-	-	-	-	-	-	-	-	0	**100**
	Whynot	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
	Blakefield	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
	Glen Munro 5	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
	Woodlands Hill	7.7	1.7	1.43	3.8	21.1	24.6	0.4	30.8	7	9	2	-	-	18	
	Arrowfield	8.6	2.2	1.35	3.7	10.3	28.8	0.3	32.2	-	18	7	-	-	25	
	Bowfield	8.9	2.6	1.37	3.5	11.9	28.2	0.3	31.9	-	17	13	1	-	31	
	Warkworth	6.2	3.5	1.42	2.8	16.9	26.2	0.4	28.2	-	9	13	8	-	30	
	Subtotal									**7**	**53**	**35**	**9**	**0**	**104**	
TOTAL										**96.1**	**209.7**	**190.9**	**208.9**	**66.3**	**771.9**	**770**

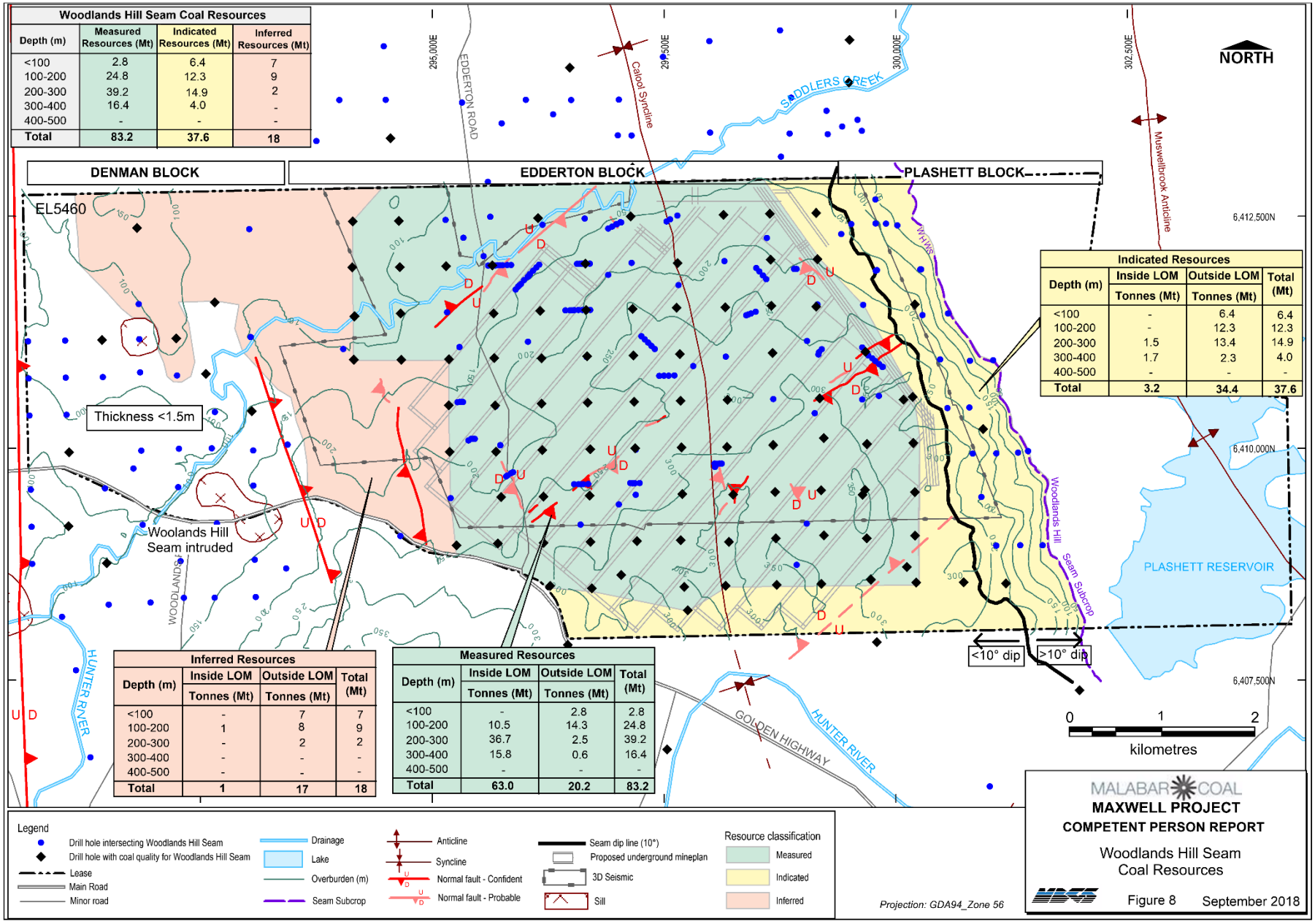
1) *Density adjusted to 6% in situ moisture basis*
2) *Raw coal quality parameters reported at air dried basis*
3) *Depth interval from digital terrain model (DTM) flown in 2007*
4) *Coal resources reported within EL5460 and limited to drill hole intersections*
5) *Resource totals rounded to appropriate levels of accuracy in accordance with The JORC Code*
6)

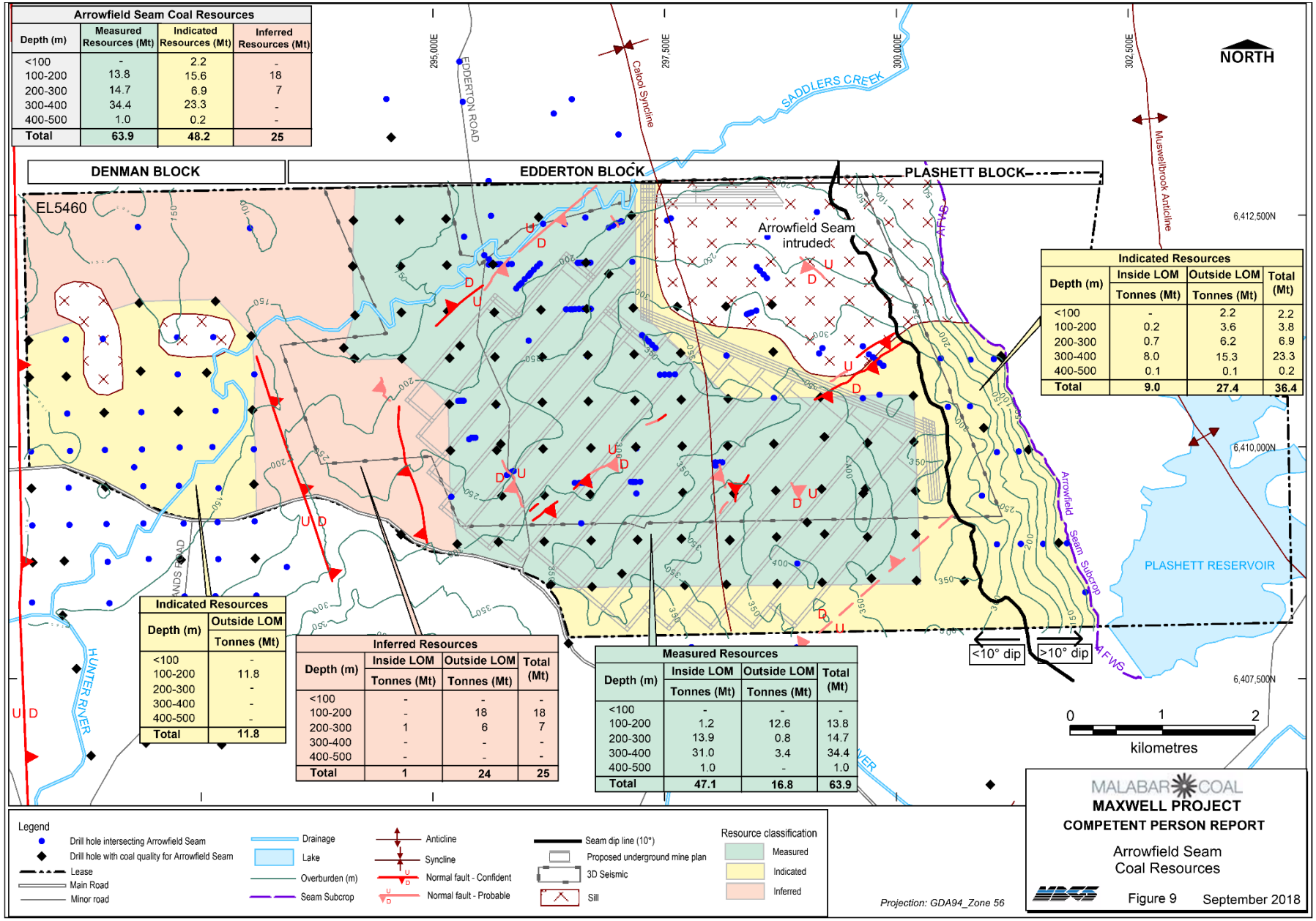

DENMAN BLOCK
EDDERTON BLOCK
PLASHETT BLOCK
EL5460
NORTH
292,500E
295,000E
297,500E
300,000E
302,500E
6,412,500N
6,410,000N
6,407,500N
EDDERTON ROAD
Calcol Syncline
SADDLERS CREEK
Muswellbrook Anticline
Whybrow Seam Subcrop
Whybrow Seam intruded
PLASHETT RESERVOIR
WOODLANDS ROAD
HUNTER RIVER
GOLDEN HIGHWAY
<10° dip
>10° dip
0 1 2
kilometres
Measured Resources
Depth (m) | Outside LOM Tonnes (Mt)
<100 37.9
100-200 0.3
200-300 -
300-400 -
400-500 -
Total 38.2
Legend
Drill hole intersecting Whybrow Seam
Drill hole with coal quality for Whybrow Seam
Lease
Main Road
Minor road
Drainage
Lake
Overburden (m)
Seam Subcrop
Anticline
Syncline
Normal fault - Confident
Normal fault - Probable
Seam dip line (10°)
Sill
3D Seismic
Resource classification
Measured
Projection: GDA94_Zone 56
MALABAR COAL
MAXWELL PROJECT
COMPETENT PERSON REPORT
Whybrow Seam
Coal Resources
Figure 4
September 2018

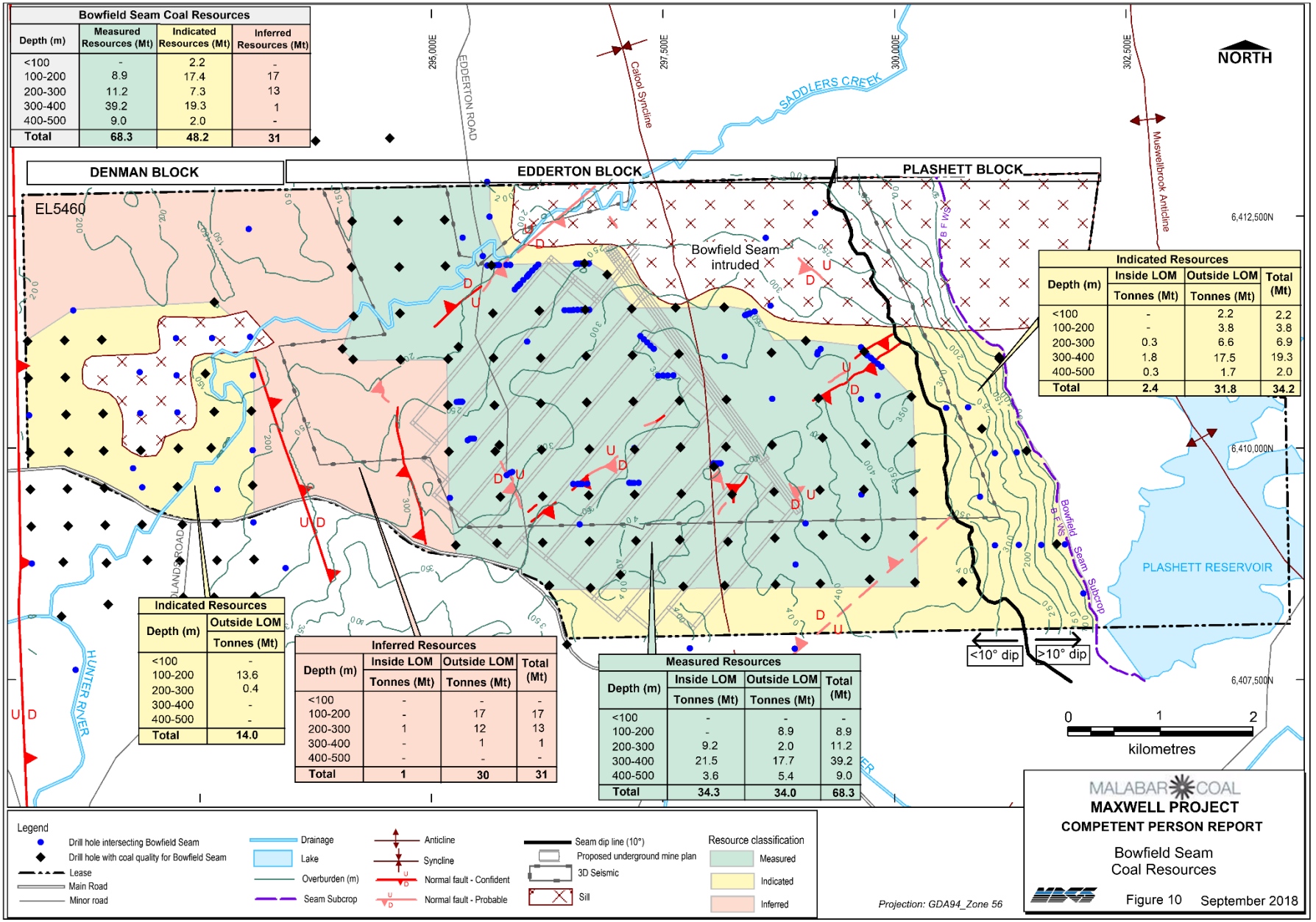

Whynot Seam Coal Resources
Depth (m) | Measured Resources (Mt) | Indicated Resources (Mt) | Inferred Resources (Mt)
<100 | 13.5 | 4.5 | -
100-200 | 13.0 | 1.5 | -
200-300 | - | - | -
300-400 | - | - | -
400-500 | - | - | -
Total | 26.5 | 6.0 | 0
DENMAN BLOCK
EDDERTON BLOCK
PLASHETT BLOCK
EL5460
NORTH
EDDERTON ROAD
Calool Syncline
SADDLERS CREEK
Muswellbrook Anticline
295,000E
297,500E
300,000E
302,500E
6,412,500N
6,410,000N
6,407,500N
Whynot Seam Subcrop
Whynot Seam intruded
Measured Resources
Depth (m) | Inside LOM Tonnes (Mt) | Outside LOM Tonnes (Mt) | Total (Mt)
<100 | 9.6 | 3.9 | 13.5
100-200 | 11.0 | 2.0 | 13.0
200-300 | - | - | -
300-400 | - | - | -
400-500 | - | - | -
Total | 20.6 | 5.9 | 26.5
Indicated Resources
Depth (m) | Outside LOM Tonnes (Mt)
<100 | 3.9
100-200 | -
200-300 | -
300-400 | -
400-500 | -
Total | 3.9
Indicated Resources
Depth (m) | Outside LOM Tonnes (Mt)
<100 | 0.6
100-200 | 1.5
200-300 | -
300-400 | -
400-500 | -
Total | 2.1
<10° dip
>10° dip
PLASHETT RESERVOIR
WOODLANDS ROAD
HUNTER RIVER
GOLDEN HIGHWAY
0 1 2
kilometres
Legend
Drill hole intersecting Whynot Seam
Drill hole with coal quality for Whynot Seam
Lease
Main Road
Minor road
Drainage
Lake
Overburden (m)
Seam Subcrop
Anticline
Syncline
Normal fault - Confident
Normal fault - Probable
Seam dip line (10°)
Proposed underground mineplan
3D Seismic
Sill
Resource classification
Measured
Indicated
Projection: GDA94_Zone 56
MALABAR COAL
MAXWELL PROJECT
COMPETENT PERSON REPORT
Whynot Seam
Coal Resources
Figure 5 September 2018

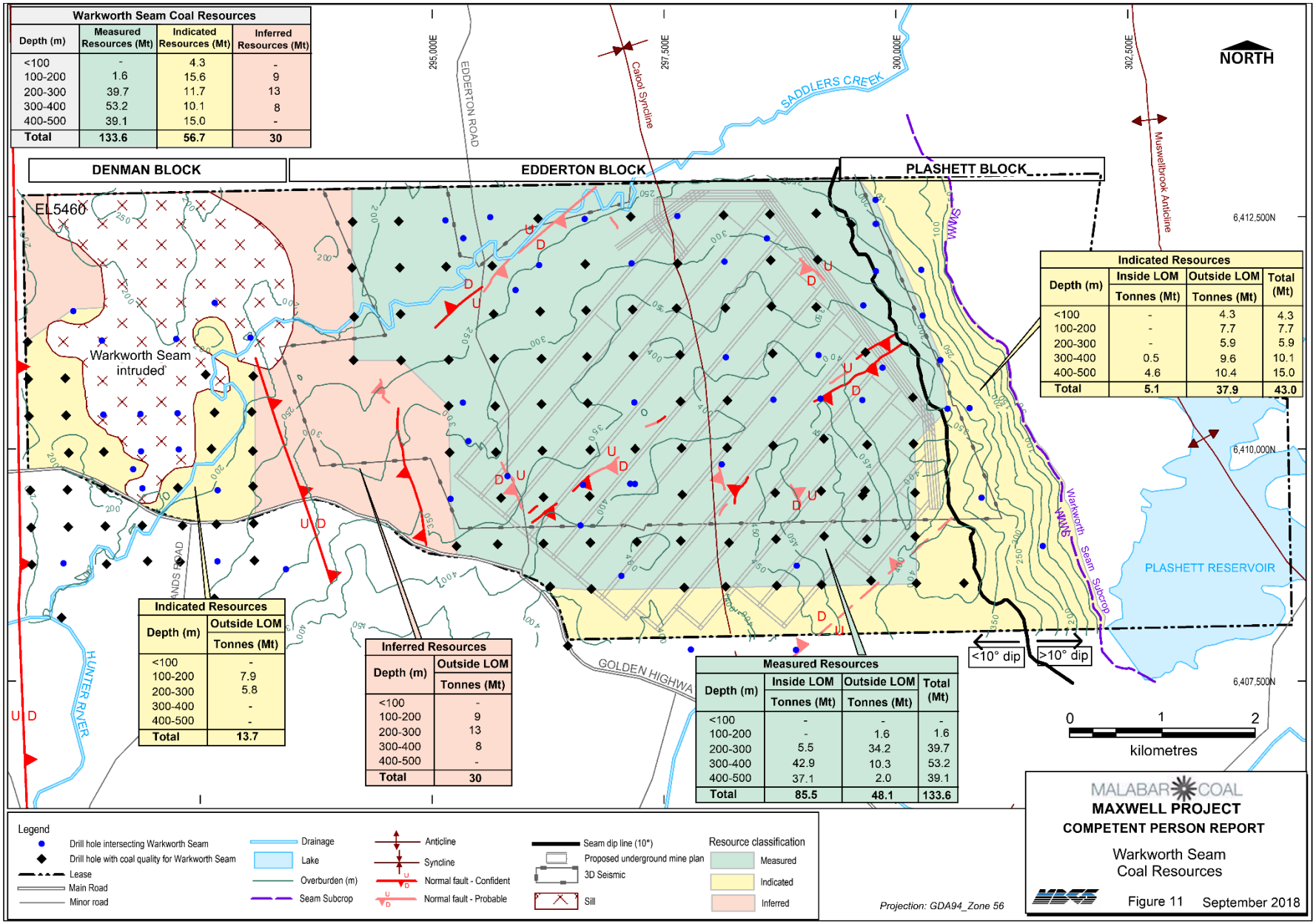

Blakefield Seam Coal Resources
Depth (m) | Measured Resources (Mt) | Indicated Resources (Mt) | Inferred Resources (Mt)
<100 | 12.3 | 0.8 | -
100-200 | 3.3 | 15.8 | -
200-300 | - | 0.7 | -
300-400 | - | - | -
400-500 | - | - | -
Total | 15.6 | 17.3 | 0
DENMAN BLOCK
EDDERTON BLOCK
PLASHETT BLOCK
EL5460
NORTH
295,000E
297,500E
300,000E
302,500E
6,412,500N
6,410,000N
6,407,500N
EDDERTON ROAD
Calool Syncline
SADDLERS CREEK
Muswellbrook Anticline
Blakefield Seam Subcrop
Blakefield Seam intruded
PLASHETT RESERVOIR
WOODLANDS ROAD
HUNTER RIVER
GOLDEN HIGHWAY
<10° dip
>10° dip
Measured Resources
Depth (m) | Outside LOM Tonnes (Mt)
<100 | 12.3
100-200 | 3.3
200-300 | -
300-400 | -
400-500 | -
Total | 15.6
Indicated Resources
Depth (m) | Outside LOM Tonnes (Mt)
<100 | 0.8
100-200 | -
200-300 | -
300-400 | -
400-500 | -
Total | 0.8
Indicated Resources
Depth (m) | Outside LOM Tonnes (Mt)
<100 | -
100-200 | 15.8
200-300 | 0.7
300-400 | -
400-500 | -
Total | 16.5
0 1 2
kilometres
Legend
Drill hole intersecting Blakefield Seam
Drill hole with coal quality for Blakefield Seam
Lease
Main Road
Minor road
Drainage
Lake
Overburden (m)
Seam Subcrop
Anticline
Syncline
Normal fault - Confident
Normal fault - Probable
Seam dip line (10°)
3D Seismic
Sill
Resource classification
Measured
Indicated
Projection: GDA94_Zone 56
MALABAR COAL
MAXWELL PROJECT
COMPETENT PERSON REPORT
Blakefield Seam
Coal Resources
Figure 6 September 2018


DENMAN BLOCK
EDDERTON BLOCK
PLASHETT BLOCK
EL5460
NORTH
292,500E
295,000E
297,500E
300,000E
302,500E
6,412,500N
6,410,000N
6,407,500N
EDDERTON ROAD
Calool Syncline
SADDLERS CREEK
Muswellbrook Anticline
GM5
Glen Munro Seam Subcrop
Thickness <1.5m
Thickness >1.5m
<10° dip
>10° dip
Indicated Resources
Depth (m) | Outside LOM Tonnes (Mt)
<100 2.2
100-200 12.8
200-300 9.6
300-400 -
400-500 -
Total 24.6
PLASHETT RESERVOIR
WOODLANDS ROAD
HUNTER RIVER
GOLDEN HIGHWAY
0 1 2
kilometres
Legend
Drill hole intersecting Glen Munro Seam
Drill hole with coal quality for Glen Munro Seam
Lease
Main Road
Minor road
Drainage
Lake
Overburden (m)
Seam Subcrop
Anticline
Syncline
Normal fault - Confident
Normal fault - Probable
Seam dip line (10°)
3D Seismic
Resource classification
Indicated
Projection: GDA94_Zone 56
MALABAR COAL
MAXWELL PROJECT
COMPETENT PERSON REPORT
Glen Munro Seam (GM5 ply)
Coal Resources
Figure 7 September 2018


Woodlands Hill Seam Coal Resources
Depth (m) | Measured Resources (Mt) | Indicated Resources (Mt) | Inferred Resources (Mt)
<100 | 2.8 | 6.4 | 7
100-200 | 24.8 | 12.3 | 9
200-300 | 39.2 | 14.9 | 2
300-400 | 16.4 | 4.0 | -
400-500 | - | - | -
Total | 83.2 | 37.6 | 18
DENMAN BLOCK
EDDERTON BLOCK
PLASHETT BLOCK
EL5460
NORTH
EDDERTON ROAD
Calool Syncline
SADDLERS CREEK
Muswellbrook Anticline
WHITES
Thickness <1.5m
Woolands Hill Seam intruded
WOODLANDS
HUNTER RIVER
GOLDEN HIGHWAY
Woodlands Hill Seam Subcrop
PLASHETT RESERVOIR
<10° dip
>10° dip
295,000E
297,500E
300,000E
302,500E
6,412,500N
6,410,000N
6,407,500N
0
1
2
kilometres
Indicated Resources
Depth (m) | Inside LOM Tonnes (Mt) | Outside LOM Tonnes (Mt) | Total (Mt)
<100 | - | 6.4 | 6.4
100-200 | - | 12.3 | 12.3
200-300 | 1.5 | 13.4 | 14.9
300-400 | 1.7 | 2.3 | 4.0
400-500 | - | - | -
Total | 3.2 | 34.4 | 37.6
Inferred Resources
Depth (m) | Inside LOM Tonnes (Mt) | Outside LOM Tonnes (Mt) | Total (Mt)
<100 | - | 7 | 7
100-200 | 1 | 8 | 9
200-300 | - | 2 | 2
300-400 | - | - | -
400-500 | - | - | -
Total | 1 | 17 | 18
Measured Resources
Depth (m) | Inside LOM Tonnes (Mt) | Outside LOM Tonnes (Mt) | Total (Mt)
<100 | - | 2.8 | 2.8
100-200 | 10.5 | 14.3 | 24.8
200-300 | 36.7 | 2.5 | 39.2
300-400 | 15.8 | 0.6 | 16.4
400-500 | - | - | -
Total | 63.0 | 20.2 | 83.2
Legend
Drill hole intersecting Woodlands Hill Seam
Drill hole with coal quality for Woodlands Hill Seam
Lease
Main Road
Minor road
Drainage
Lake
Overburden (m)
Seam Subcrop
Anticline
Syncline
Normal fault - Confident
Normal fault - Probable
Seam dip line (10°)
Proposed underground mineplan
3D Seismic
Sill
Resource classification
Measured
Indicated
Inferred
Projection: GDA94_Zone 56
MALABAR COAL
MAXWELL PROJECT
COMPETENT PERSON REPORT
Woodlands Hill Seam Coal Resources
Figure 8
September 2018


Arrowfield Seam Coal Resources
Depth (m) | Measured Resources (Mt) | Indicated Resources (Mt) | Inferred Resources (Mt)
<100 | - | 2.2 | -
100-200 | 13.8 | 15.6 | 18
200-300 | 14.7 | 6.9 | 7
300-400 | 34.4 | 23.3 | -
400-500 | 1.0 | 0.2 | -
Total | 63.9 | 48.2 | 25
DENMAN BLOCK
EDDERTON BLOCK
PLASHETT BLOCK
EL5460
NORTH
295,000E
297,500E
300,000E
302,500E
6,412,500N
6,410,000N
6,407,500N
EDDERTON ROAD
Calool Syncline
SADDLERS CREEK
Muswellbrook Anticline
Arrowfield Seam intruded
ATWS
MTFWS
Arrowfield Seam Subcrop
PLASHETT RESERVOIR
HUNTER RIVER
<10° dip
>10° dip
Indicated Resources
Depth (m) | Inside LOM Tonnes (Mt) | Outside LOM Tonnes (Mt) | Total (Mt)
<100 | - | 2.2 | 2.2
100-200 | 0.2 | 3.6 | 3.8
200-300 | 0.7 | 6.2 | 6.9
300-400 | 8.0 | 15.3 | 23.3
400-500 | 0.1 | 0.1 | 0.2
Total | 9.0 | 27.4 | 36.4
Indicated Resources
Depth (m) | Outside LOM Tonnes (Mt)
<100 | -
100-200 | 11.8
200-300 | -
300-400 | -
400-500 | -
Total | 11.8
Inferred Resources
Depth (m) | Inside LOM Tonnes (Mt) | Outside LOM Tonnes (Mt) | Total (Mt)
<100 | - | - | -
100-200 | - | 18 | 18
200-300 | 1 | 6 | 7
300-400 | - | - | -
400-500 | - | - | -
Total | 1 | 24 | 25
Measured Resources
Depth (m) | Inside LOM Tonnes (Mt) | Outside LOM Tonnes (Mt) | Total (Mt)
<100 | - | - | -
100-200 | 1.2 | 12.6 | 13.8
200-300 | 13.9 | 0.8 | 14.7
300-400 | 31.0 | 3.4 | 34.4
400-500 | 1.0 | - | 1.0
Total | 47.1 | 16.8 | 63.9
0 1 2
kilometres
Legend
Drill hole intersecting Arrowfield Seam
Drill hole with coal quality for Arrowfield Seam
Lease
Main Road
Minor road
Drainage
Lake
Overburden (m)
Seam Subcrop
Anticline
Syncline
Normal fault - Confident
Normal fault - Probable
Seam dip line (10°)
Proposed underground mine plan
3D Seismic
Sill
Resource classification
Measured
Indicated
Inferred
Projection: GDA94_Zone 56
MALABAR COAL
MAXWELL PROJECT
COMPETENT PERSON REPORT
Arrowfield Seam Coal Resources
Figure 9 September 2018


Bowfield Seam Coal Resources
Depth (m) | Measured Resources (Mt) | Indicated Resources (Mt) | Inferred Resources (Mt)
<100 | - | 2.2 | -
100-200 | 8.9 | 17.4 | 17
200-300 | 11.2 | 7.3 | 13
300-400 | 39.2 | 19.3 | 1
400-500 | 9.0 | 2.0 | -
Total | 68.3 | 48.2 | 31
DENMAN BLOCK
EDDERTON BLOCK
PLASHETT BLOCK
EL5460
NORTH
295,000E
297,500E
300,000E
302,500E
6,412,500N
6,410,000N
6,407,500N
EDDERTON ROAD
Calool Syncline
SADDLERS CREEK
Muswellbrook Anticline
Bowfield Seam intruded
B F WS
Bowfield Seam Subcrop
PLASHETT RESERVOIR
HUNTER RIVER
<10° dip
>10° dip
0
1
2
kilometres
Indicated Resources
Depth (m) | Inside LOM Tonnes (Mt) | Outside LOM Tonnes (Mt) | Total (Mt)
<100 | - | 2.2 | 2.2
100-200 | - | 3.8 | 3.8
200-300 | 0.3 | 6.6 | 6.9
300-400 | 1.8 | 17.5 | 19.3
400-500 | 0.3 | 1.7 | 2.0
Total | 2.4 | 31.8 | 34.2
Indicated Resources
Depth (m) | Outside LOM Tonnes (Mt)
<100 | -
100-200 | 13.6
200-300 | 0.4
300-400 | -
400-500 | -
Total | 14.0
Inferred Resources
Depth (m) | Inside LOM Tonnes (Mt) | Outside LOM Tonnes (Mt) | Total (Mt)
<100 | - | - | -
100-200 | - | 17 | 17
200-300 | 1 | 12 | 13
300-400 | - | 1 | 1
400-500 | - | - | -
Total | 1 | 30 | 31
Measured Resources
Depth (m) | Inside LOM Tonnes (Mt) | Outside LOM Tonnes (Mt) | Total (Mt)
<100 | - | - | -
100-200 | - | 8.9 | 8.9
200-300 | 9.2 | 2.0 | 11.2
300-400 | 21.5 | 17.7 | 39.2
400-500 | 3.6 | 5.4 | 9.0
Total | 34.3 | 34.0 | 68.3
Legend
Drill hole intersecting Bowfield Seam
Drill hole with coal quality for Bowfield Seam
Lease
Main Road
Minor road
Drainage
Lake
Overburden (m)
Seam Subcrop
Anticline
Syncline
Normal fault - Confident
Normal fault - Probable
Seam dip line (10°)
Proposed underground mine plan
3D Seismic
Sill
Resource classification
Measured
Indicated
Inferred
Projection: GDA94_Zone 56
MALABAR COAL
MAXWELL PROJECT
COMPETENT PERSON REPORT
Bowfield Seam
Coal Resources
Figure 10 September 2018


Warkworth Seam Coal Resources
Depth (m) | Measured Resources (Mt) | Indicated Resources (Mt) | Inferred Resources (Mt)
<100 | - | 4.3 | -
100-200 | 1.6 | 15.6 | 9
200-300 | 39.7 | 11.7 | 13
300-400 | 53.2 | 10.1 | 8
400-500 | 39.1 | 15.0 | -
Total | 133.6 | 56.7 | 30
DENMAN BLOCK
EDDERTON BLOCK
PLASHETT BLOCK
EL5460
Warkworth Seam intruded
EDDERTON ROAD
Calool Syncline
SADDLERS CREEK
Muswellbrook Anticline
NORTH
295,000E
297,500E
300,000E
302,500E
6,412,500N
6,410,000N
6,407,500N
Indicated Resources
Depth (m) | Inside LOM Tonnes (Mt) | Outside LOM Tonnes (Mt) | Total (Mt)
<100 | - | 4.3 | 4.3
100-200 | - | 7.7 | 7.7
200-300 | - | 5.9 | 5.9
300-400 | 0.5 | 9.6 | 10.1
400-500 | 4.6 | 10.4 | 15.0
Total | 5.1 | 37.9 | 43.0
Indicated Resources
Depth (m) | Outside LOM Tonnes (Mt)
<100 | -
100-200 | 7.9
200-300 | 5.8
300-400 | -
400-500 | -
Total | 13.7
Inferred Resources
Depth (m) | Outside LOM Tonnes (Mt)
<100 | -
100-200 | 9
200-300 | 13
300-400 | 8
400-500 | -
Total | 30
Measured Resources
Depth (m) | Inside LOM Tonnes (Mt) | Outside LOM Tonnes (Mt) | Total (Mt)
<100 | - | - | -
100-200 | - | 1.6 | 1.6
200-300 | 5.5 | 34.2 | 39.7
300-400 | 42.9 | 10.3 | 53.2
400-500 | 37.1 | 2.0 | 39.1
Total | 85.5 | 48.1 | 133.6
<10° dip
>10° dip
PLASHETT RESERVOIR
Warkworth Seam Subcrop
GOLDEN HIGHWA
HUNTER RIVER
0 1 2
kilometres
Legend
Drill hole intersecting Warkworth Seam
Drill hole with coal quality for Warkworth Seam
Lease
Main Road
Minor road
Drainage
Lake
Overburden (m)
Seam Subcrop
Anticline
Syncline
Normal fault - Confident
Normal fault - Probable
Seam dip line (10°)
Proposed underground mine plan
3D Seismic
Sill
Resource classification
Measured
Indicated
Inferred
Projection: GDA94_Zone 56
MALABAR COAL
MAXWELL PROJECT
COMPETENT PERSON REPORT
Warkworth Seam Coal Resources
Figure 11 September 2018

Appendix A JORC Code, 2012 Edition Table 1

SECTION 1. SAMPLING TECHNIQUES AND DATA		
CRITERIA	**EXPLANATION**	**COMMENTS**
SAMPLING TECHNIQUES	• *Nature and quality of sampling (e.g. 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 (e.g. 'reverse circulation drilling was used to obtain 1m 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 (e.g. submarine nodules) may warrant disclosure of detailed information.*	The Maxwell project area includes approximately 1,000 holes from different vintages of exploration drilled since the 1970's up to the most recent data acquired in 2011. The different exploration campaigns have produced a wide range of data acquired with drill holes identified as D, DD, EMA, EMAS, LD, LOX, PPG, RD and RDH series. Most holes (483 holes) drilled between 1998 and 2011 (DD and RD series) were geophysically logged downhole with a basic suite (density, caliper, gamma), some included sonic, neutron, resistivity, verticality and a small number of holes (~50) also included dipmeter, acoustic scanner and temperature. Coal quality sampling took place for core holes, series D, DD, EMA, EMAS and LD series. D, EMA and EMAS were cored NQ size (45 mm), whereas DD series are partially cored HQ size (61 mm) and LD series are cored large diameter (200 mm). The pre-collar sections from surface to the core depth are logged by the field geologist and representative samples of each metre are stored for record purposes but not for quality analysis. All core was logged by the field geologist and depth corrections using geophysical logs were undertaken. Each coal ply is sampled separately for analysis. The coal core was sampled on a ply by ply basis or in <1 m interval if the plies were >1 m thick. Approximately 0.2 m of roof and floor were also sampled as well as intra stone partings. Coal core samples are boxed immediately after lithological logging at the rig, lined with plastic and stored in a refrigerator until sampling takes place after geophysical logging and depth corrections. 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 to identify weathering horizon but are not used to define coal quality parameters.

DRILLING TECHNIQUES	• *Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic etc.) and details (e.g. 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 Maxwell EL5460 area includes approximately 1,000 drill holes:
		• 517 core holes - core holes drilled prior to 1998 were mostly NQ size and after 1998 HQ size:
		  • 261 NQ core size (D, EMA, EMAS series)
		  • 228 HQ core size (DD series)
		  • 26 LD core size (11 EMAS series and 15 LD series)
		Most of these holes were diamond cored using triple tube. Several holes have been fully cored to gather geotechnical information on the full stratigraphic package and the large diameter holes (200 mm) for full washability analysis.
		• 610 rotary non-core holes (RD and RDH series).
		• 38 rotary air blast for limit of oxidation definition.
		All holes were drilled vertically.

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 coal quality 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 ranges between 90% - 95%, core loss is infrequent in this deposit. Samples with core loss greater than 5% were excluded from the geological model and resource estimation. The coal seams reported with coal resources are usually thick (~2 m), consistent with thin partings (~0.10 m) dividing the plies but composited to generate the working sections. Coal quality seam data composited was reviewed in plots and six anomalous (too low) values were identified where the core loss occurred in the stone partings, in this case a default stone value was used to reflect the quality of the seam without bias.
LOGGING	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Coal 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 quantitative lithological logging through the whole length of the hole (100%), which have been used for seam correlation supported by geophysical logs where available. Non-core chip samples are logged over meter increments while core samples are logged on centimetre detail. Core holes include core photography, detailed descriptions for coal brightness, sedimentary structures, geotechnical logging and selected samples are sent to geotechnical labs to support 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 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. Core samples prior to 2004 were prepared and analysed by Carbon Consulting International (CCI) under the superintendence of Quality Coal Consulting (QCC) and since 2004 have been analysed by SGS Australia (SGS) under the superintendence of QCC or Rod Hall. Although there have been different exploration campaigns undertaken by different companies all laboratories followed similar treatment procedures. HQ core samples are crushed to pass 11.2 mm and split to undergo Proximate analysis, relative density, total sulphur and specific energy; other portion undergoes fast coking at F1.35 and F1.50 and the remaining float/sink testing and each density fraction is analysed for ash and CSN. Clean coal analysis has been undertaken as well at different fractions. 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	• *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*	All coal core for target seams is sampled on a ply by ply basis. The sampling 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. Geophysical tools used for downhole logging are routinely calibrated in a specific calibration hole kept open for this

TESTS	*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 (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established).*	purpose on site as well as the geophysical logging company calibration protocols for all the tools before using them on site. All coal quality results were checked by QCC before final reports were issued. Data was verified for obvious errors prior to building the geological model used for resource estimation.
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 coal seams in the lease are consistent in nature except where the seam has been intruded and in these cases the intrusion is not included with the coal seam and any quality results are excluded from the model. Twinned holes are not a standard in the coal industry. A non-core or core hole prior to a large diameter hole is used to ensure the correct interval is cored and sampled but for the rest of the holes the use of geophysical logs for thickness and broad quality reconciliations is considered sufficient and appropriate. Where there are two closely spaced core holes it is 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 and quality expert (QCC) 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 Excel spreadsheets which is then loaded into Minex. All data loaded into Minex is reviewed and identified anomalies are investigated. 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 drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Coal Resource estimation.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	Drill hole collars have been surveyed by registered surveyors using GPS equipment. The deposit originally used ISG coordinates but in 2011 all drill hole data and models were converted to the MGA coordinate system (GDA94 Zone 56). The Australian Height Datum (AHD) is used for elevations. A digital terrain model (DTM) was flown in 2007 with three levels of accuracy 1 m, 2 m and 10 m contours. The 1m contour was used to generate the topographic surface which is considered accurate for the resource estimation process.
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 coal quality continuity appropriate for the Coal Resource and Coal Reserve estimation procedure(s) and classification applied.* • *Whether sample compositing has been applied.*	Drill hole spacing varies from <250 m to approximately 500 m over most the area but it reaches about 2 km in the eastern boundary of the Denman block. Drill hole data outside the Maxwell tenement intersecting the coal sequence to the lowermost seam (Warkworth Seam) is included in the geological model and a coal mine immediately north mines coal seams from this sequence (Mt Arthur North) providing supporting data to extend resources to the lease boundaries. Resource classification for each seam is largely defined by the exploration strategy undertaken over the lease area which also corresponds with the structural domains: Edderton, Plashett and Denman. Most of the reported coal resources are classified as Measured Resources within the Edderton block due to the amount of exploration in the area providing appropriate levels of understanding and confidence on the seam structure, continuity and coal quality with approximately 900 holes and the 3D seismic survey covering 75% of the area. Drill hole spacing varies with depth; within the Edderton block at the Whybrow Seam level is about 250 m, while at the level of the Whynot and the Woodlands Hill seams the drill hole spacing is about 500 m for holes with

		coal quality data. The Plashett block contains less exploration data than the Edderton block. It is mostly classified with Indicated Resources due to less certainty on the location of seam subcrops, extent of igneous intrusions and continuity of coal quality parameters. The Denman Block contains mostly historical data (1970's) with several holes terminated above the Woodlands Hill Seam increasing the drill hole spacing, so most of the coal seams in this block are classified as Inferred Resources. Ply samples are composited using density and thickness weighted average.
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 sampling bias has taken place. All holes are drilled vertical which is appropriate considering that the strata generally maintain a sub horizontal dip of <10° except for strata within the Plashett block where strata dip up to 40°. In the Plashett block verticality data has shown that the holes drilled vertical deviate perpendicular to the seam dip so no bias occurs, which is also assessed in the geological model because there are no observed anomalies in seam thicknesses between the Edderton (<10° dip) and Plashett blocks (>10° dip). Drill hole data is supported by 3D seismic surveys which provide accurate strata geometry, and this has assisted in the structural interpretation. Additionally, magnetic surveys have provided information to interpret the extent and direction of dykes and possible plugs. Drill hole data has identified sills and these areas are excluded from resource estimation.
SAMPLE/DATA SECURITY	• *The measures taken to ensure sample security*	All samples are sealed and marked appropriately. Information is recorded on drill hole sampling schedule forms. 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.*	In 2011 Anglo commissioned an external audit of the 2011 geological model and associated data. The audit did not find any serious issues that could materially affect the resource estimation. In 2017 Malabar engaged Dr John Bryan from MBGS to undertake a review of the existing drill hole data over the Maxwell Project area, with the result of this review the geological model was updated and it is used for this resource estimation. Recently QCC has been engaged by Malabar to review the coal quality data. QCC concluded that the quality coverage from drill hole data is adequate for this coal deposit.

SECTION 2. REPORTING OF EXPLORATION RESULTS		
CRITERIA	**JORC CODE 2012 EXPLANATION**	**COMMENTS**
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 licence to operate in the area.*	Maxwell project is located on Exploration Licence 5460 covering approximately 50 km^2 for which Malabar Resources holds 100% interest. There are no national parks or protected areas impeding future applications for a mining lease. Any future mining development has been restricted to underground only by the NSW Government.
EXPLORATION DONE BY OTHER PARTIES	• *Acknowledgement and appraisal of exploration by other parties.*	Exploration in the area commenced in 1940s with field reconnaissance from the Bureau of Mineral Resources. 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. • 1949 – 1976 Mines Department and Joint Coal Board carried out initial exploration including 2 diamond core holes in the EL area. • 1978 – 1979 MAS Coal Pty Ltd drilled 30 holes • 1980–1981 MAS Coal Pty Ltd drilled 96 (NQ) cored and 347 rotary (non-cored) holes, 12 large (150 mm) diameter quality and two 155 mm diameter holes for groundwater studies. • 1975–1985 Carpentaria Exploration/MIM drilled 129 NQ core and three 150 mm core holes. • 1997–2000 Shell Coal Pty Ltd (Saddlers Creek) carried out a drilling program including 68 non-core holes, 31 HQ partially core holes, 3 large diameter (200 mm) core holes and 8 HQ fully core holes for geotechnical purposes. d • 2001 - 2008 Saddlers Creek carried out an extensive exploration program including: geophysical surveys (aeromagnetic, 2D and 3D seismic), 122 non-core holes, 2 LD core holes and 162 HQ core holes with coal quality, geotechnical, hydrogeological, geochemical and coal seam gas investigations. • 2009 – 2012 Drayton South (project renamed in 2009 by Anglo American) exploration drilling included 77 HQ core holes, 58 non-core holes, 4 large diameter holes and 36 shallow non-core holes for LOX definition.
GEOLOGY	• *Deposit type, geological setting and style of mineralisation.*	Maxwell project lies west of the Muswellbrook Anticline in the Upper Hunter Coalfield of New South Wales. Coal resources reported in the project area are of Late Permian age are contained within the Jerry's Plain Subgroup of the Wittingham Coal Measures and include seams from Whybrow down to Warkworth. Strata generally dip gently to the S-SW except in the east of the area onto the western limb of the Muswellbrook Anticline where the lower seam sequence dips steeply (up to 40°) to the west near sub-crop. The uppermost seams from Whybrow to Blakefield were considered open cut targets by the former holder of the lease (Anglo American) due to the relatively shallow depth of cover - < 200 m; whereas the seams below Blakefield were considered underground targets with depth of cover reaching <500 m. Deposit geology can be divided into three structural domains/blocks: Plashett, Edderton and Denman, controlled by two main regional features; the Muswellbrook Anticline and the Calool Syncline. • The Plashett domain (eastern area of the lease): is located on the western limb of the Muswellbrook anticline where strata dip up to 30° to the west, • The Edderton domain: comprises the central area of the lease with gentle dips (<10°) and lies within the

		Calool Syncline. This block is limited by the change of dips in the east and the East Graben Fault in the west. • Denman domain: covers the area west of the East Graben Fault to the edge of the lease. Several faults (12) with normal component have been interpreted either from the seismic surveys or from drill hole data. The majority and larger faults trend northwest and the smaller faults trend in the opposite direction towards the northeast. The main faulting structure in the area is the northwest trending graben zone produced by the East Graben Fault downthrown up to 20 m to the west and the Randwick Park Fault downthrown up to 50 m to the east. Igneous bodies have been identified across the lease area with sills intruding some coal seams, also at least five dykes have been delineated by the magnetic surveys and some have been confirmed by trenching within the Edderton domain. Three northeast faults show evidence of igneous dykes following the fault planes. Deposits of Quaternary alluvium are found along the current drainage system. Several coal mines in the vicinity mined the same seam sequence contained in Maxwell with some seams producing either coking and/or thermal products.
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* ○ *downhole 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 are contained within the Maxwell geological model. Individual drill hole results are not tabulated and presented in this report as it is not considered material to understand the deposit. All drill hole data that pertains to Maxwell and surrounding area has been loaded and used to construct the geological computer model which was used to estimate coal resources. The drill hole locations are shown in resource figures accompanying this report. Coal Resource tables also presented in this report summarize information on each reported seam including: • average thickness • average in situ density • average moisture • average raw ash • average sulphur • average calorific value • depth range
DATA AGGREGATION METHODS	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. 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.*	All laboratory data is loaded into the computer model, individual samples with only ARD which were composited by the lab for proximate analysis are excluded as the composite samples are used instead. No cut-offs have been applied to the loaded data or to the computer model. The seams are sampled on a ply by ply basis. Weighted averages were used to model and report coal resources as working sections. Where compositing of coal quality samples is necessary, the coal quality variables are weighted by density and thickness.

	• *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	
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 (e.g. 'down hole length, true width not known).*	The coal seams extend across the Maxwell lease and through the Hunter Coalfield. Seam dip is close to horizontal. Verticality has been acquired in most recent holes and it has shown minimal deviation. Due to the shallow dip of the seams and vertical nature of drilling, the seam thickness is considered to approximate the true thickness. In the higher dip area, the holes deviate perpendicular to the dip so the seam thickness in these holes is also considered true thickness. Also, the 3D seismic surveys provide supporting data to confirm the sub horizontal geometry of the strata in most of the area and the change in dip in the eastern boundary.
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 limited to a plan view of drill hole collar locations and appropriate sectional views.*	This Report contains a selection of text figures presenting the following geological information relating to the deposit: • drill hole location plan • typical stratigraphy • cross-sections • Coal Resource diagrams per working section including drill hole locations and other supporting data for the resource classification.
BALANCED REPORTING	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high coal quality and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	All drill hole results are checked prior to loading into the computer model. Laboratory coal quality results have been used as reported. The 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.*	A high-resolution ground magnetic survey was carried out on the area east of Edderton Road, airborne magnetic and radiometric surveys were flown over the entire lease area to identify magnetic features. This survey identified several potential igneous bodies that require further exploration. Approximately 20 km^2 of 3D seismic and 18 km of 2D seismic surveys have been acquired over the lease area. Core holes also include geotechnical testing and logging.
FURTHER WORK	• *The nature and scale of planned further work (e.g. 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.*	Recommended work includes infill drilling to increase resource classification to measured status within the proposed mine plan areas. Resource figures in this report show the areas with Inferred status that require further exploration. Additional exploration will target identified structures and igneous bodies that could have a negative impact on future mining operations. These features are presented in the geology plan.

SECTION 3. ESTIMATION AND REPORTING OF COAL RESOURCES		
CRITERIA	**JORC CODE 2012 EXPLANATION**	**COMMENTS**
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 Coal Resource estimation purposes.* • *Data validation procedures used.*	Drill hole data was acquired in the field using LogCheck which includes pre-established codes and basic depth validations then data was loaded into acQuire software which also includes some validation tools. All drill hole data was then corrected to geophysical logs and the database updated before loading into Minex software. Prior to build the geological model in Minex a series of validations take place including plotting hole profiles with lithology and geophysical logs and once the model is built all floor, thickness, ash contours are plot with drill hole postings and anomalies are reviewed before finalising the model for the resource estimation. Coal quality data is validated using different regression graphs and anomalous values are reviewed with original lab 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 not visited the project area but has extensive experience in the coalfield through years of reviewing data, geological models and assisting to complete resource estimation and reporting for other deposits in the area. Also, the Competent Person worked closely in this report with Dr John Bryan who has visited the site multiple times in the past and who continues to visit when there is need to corroborate geological data.
GEOLOGICAL INTERPRETATION	• *Confidence in (or conversely, the uncertainty of) the geological interpretation of the coal deposit.* • *Nature of the data used and any assumptions made.* • *The effect, if any, of alternative interpretations on Coal Resource estimation.* • *The use of geology in guiding and controlling Mineral Resource estimation.* • *The factors affecting continuity both of grade and geology.*	The stratigraphic sequence is highly consistent across the lease and beyond into other mines of the coalfield, the deposit geology is well understood and there is a high degree of confidence in the geological interpretation. Data density and quality of the existing data is appropriate and reflect the level of confidence for the resource classification in the project area. Structures are present and have been identified in the area through the density of drilling and 3D seismic surveys which covered approximately 75% of the area containing Measured and Indicated Resources. The use of the 3D seismic and the density of drilling makes it very unlikely that a major unidentified structure could have a material impact on the coal resources. Resource classification for each seam is largely defined by the exploration strategy undertaken over the lease area which also corresponds with the identified structural domains: Edderton, Plashett and Denman. Most of the reported coal resources are classified as Measured Resources within the Edderton block due to the amount of exploration in the area providing appropriate levels of understanding and confidence on the seam structure, continuity and coal quality. The Plashett block contains less exploration data than the Edderton block. It is mostly classified with Indicated Resources due to less certainty on the location of seam subcrops due to the steeper dip of the strata, extent of igneous intrusions and continuity of coal quality parameters. The Denman Block contains mostly historical data (1970's) with most holes terminated above the Woodlands Hill Seam so most of the coal seams in this block are classified as Inferred Resources. 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.
DIMENSIONS	• *The extent and variability of the Coal Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Coal Resource.*	The Maxwell lease (EL5460) covers a length of approximately 13 km (east-west) and up to 5 km (north-south). The seams subcrop in the eastern part of the EL where they strike in a north south direction. The seams extend over approximately 10 km (east-west). Drill hole data outside the lease and in adjacent mine proved continuity of the seam extending beyond the lease area. Overburden thickness ranges from surface to about 450 m. Coal resources are not limited to any depth cut-off as the reported seams are thick enough (>1.5 m) to be mined by 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 Coal 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 (e.g. 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 correlations between variables.* • *Description of how the geological interpretation was used to control the resource estimates.* • *Discussion of basis for using or not using coal quality 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 geological computer model was built using Minex software (version 6.5.3). The model was generated using Minex proprietary growth algorithms. Drill hole 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 and 50 m mesh size respectively. Reconciliation with previous estimates was completed and reported in the reconciliation section of this report. No assumptions are made regarding by-products. Resource classification for each seam is largely defined by the exploration strategy undertaken over the lease area which also corresponds with the identified structural domains: Edderton, Plashett and Denman. Most of the reported coal resources are classified as Measured Resources within the Edderton block due to the amount of exploration in the area providing appropriate levels of understanding and confidence on the seam structure, continuity and coal quality. The Plashett block contains less exploration data than the Edderton block. It is mostly classified with Indicated Resources due to less certainty on the location of seam subcrops due to the steeper dip of the strata, extent of igneous intrusions and continuity of coal quality parameters. The Denman Block contains mostly historical data (1970's) with most holes terminated above the Woodlands Hill Seam so most of the coal seams in this block are classified as Inferred Resources Resource classification and estimates are limited and based entirely on drill hole data and supported by exiting data outside the lease. Resources were mostly extended to lease boundaries as drill holes intersected the seams within and outside the lease boundaries. Resource estimates are limited to working sections with a minimum thickness of 1.5 m because the mining potential is for underground methods, due to surface restrictions on the lease. The geological model includes all coal plies identified in the area down to and including the Warkworth Seam. Seams below Warkworth Seam have been intersected in the area but due to the sparse intersections these seams are not included in the model. Drill hole data is loaded 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 drill hole annotations for each seam through the deposit are output from Minex and reviewed.
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 moisture holding capacity tests. Other coal quality parameters were reported at air dried basis (adb).
CUT-OFF PARAMETERS	• *The basis of the adopted cut-off or quality parameters applied.*	Resource estimates are limited to working sections with a minimum thickness of 1.5 m because the mining potential is underground due to surface constraints. No coal quality cut-off parameters were applied to the model or estimate.
MINING FACTORS OR ASSUMPTIONS	• *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable,*	The deposit is planned to be mined by underground methods so resources have been reported only for coal sections with a thickness >1.5 m. The working sections include thin intra stone partings which have been composited to reflect the in situ coal quality for the sections

	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 Coal 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.	
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 Coal 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.*	The coal seams in the Maxwell Project area are high volatile bituminous coals that can be beneficiated into semi-soft coking coal or low ash thermal coal products. The report by QCC Resources entitled "Resource Review Report", dated March 2018, provides a summary of the coal quality database for the Maxwell Project and provides a summary of the washability and processing of the coal that can be accomplished in the existing CHPP located at the Maxwell infrastructure area (also owned by Malabar and located just north of Maxwell). That report provides information about the raw coal and the coal products that could be produced when the coal seams are mined in the proposed underground workings. Of significance is that the existing Maxwell CHPP is deemed to be fit for purpose for processing the coal seams for which Coal Resources have been estimated in this report. The Whynot, Arrowfield and Bowfield seams in some areas have such low raw coal ash that if out-of-seam dilution was absent or minimal it may be possible for sized ROM coal from these seams to go directly to product. An alternative to single cut-point washing is "two product washing", where a low ash, semi-soft coking (6% - 8%) primary product is extracted, followed by a higher ash (13% -15%) middlings product that would be suitable for export thermal markets. It should be noted that there are no significant seam by seam differences in quality parameters. Considering the options outlined above for various product mixes these could change with time depending on market demands and prices for each coal type, at any point in the mine life.
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.*	Malabar Resources complies with all permits and environmental conditions pertaining to the relevant lease. There are not known impediments for underground mining in the area.

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 dried 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%. There was enough RD and ash determined in the laboratory to calculate RD for samples where RD was not available.
CLASSIFICATION	• *The basis for the classification of the Coal Resources into varying confidence categories.* • *Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/coal quality 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 resource classification reflects the level of confidence based on available drill hole data for each seam and supported by the geophysical surveys. Extensive exploration has been carried out over the Maxwell project area with over 1,000 holes drilled including > 300 core holes with coal quality analysis, approximately 20 km2 of 3D seismic and 18 km of 2D seismic surveys. Additionally, a high-resolution ground magnetic survey was carried out on the area east of Edderton Road and airborne magnetic and radiometric surveys were flown over the entire lease area. • Measured Resources – generally supported by drill holes approximately 500 m apart. The consistent nature and predictability of the Wittingham Coal Measures geology and knowledge within the Edderton block provides confidence for this resource classification. • Indicated Resources – mainly occur around the known sills and towards the eastern subcrops due to a level of uncertainty on the extent of intrusions or weathering between available drill holes. Also, on the north and south lease boundaries within the Edderton block where data is sparser, but it is complemented with drill hole data and adjacent operations outside the lease to support seam continuity. This classification is supported by drill holes approximately 500 m apart, but the polygons may extend to a lesser distance due to subcrops, lease boundaries and/or sills. • Inferred Resources – supported by drill hole intersections up to 1 km apart but supported by drill hole intersections for upper seams in between which provide some confidence that the seams may have similar continuity at depth.
AUDITS OR REVIEWS	• *The results of any audits or reviews of Coal Resource estimates.*	A review of the coal resource classification has been conducted by the Resources Competent Person in conjunction with Dr John Bryan. The review found the level of confidence at each resource classification was adequate. The reconciliation with previous resource estimate by Anglo American showed the classification and resource estimates are similar.
DISCUSSION OF RELATIVE	• *Where appropriate a statement of the relative accuracy and confidence level in the Coal Resource estimate using an*	Resources have been classified as either Measured, Indicated or Inferred depending mainly on the density of drill hole data and supported by geophysical surveys.

ACCURACY/ CONFIDENCE	*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.*	Drill hole data and the geological model trends support the level of confidence for each category determined by the Competent Person. Coal resources were estimated for areas defined by drill hole data, an area of approximately 40 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.