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E.1 Introduction

This appendix presents additional information on the Project resources to address comments made by the Department of Mines and Energy (DME) in their submission on the Environmental Impact Statement (EIS) for the Daunia Coal Mine Project. Specifically the DME requested further information on:

- detailed estimates of coal resources in the project area on a seam by seam basis;
- limitations that apply to the resource estimates;
- the reasons why parts of the coal deposit will not be mined and justify any sterilisation of the resource;
- whether or not, as the mine advances there are plans to progressively extract coal from exposed end walls of the pits prior to spoil backfilling operations; and
- typical stratigraphical sections and geological cross sections for the Project area.

E.2 Daunia Resource Estimate

E.2.1 Summary

BHP Billiton Group companies are required to follow Procedure 14: Exploration Results - Mineral Resource and Ore Reserve Estimation and Reporting Procedure. This procedure mandates a June 30 cut-off for reporting and compliance with the JORC Code, Coal guidelines, US Securities Exchange Commission (SEC) Industry Guide 7 and the requirements of the US Sarbanes Oxley Act. Resource estimates were prepared for Daunia in accordance with the Australian Guidelines for Estimating and Reporting of Inventory Coal, Coal Resources and Coal Reserves (March 2003), and the BMA Geological Services – Procedures Manual for Estimation reporting of Potential mineralisation and Coal Resources.

E.2.2 Personnel Involved

The Project geological modelling and resource estimation was carried out by Mal Blaik, a principal of JB Mining Services Pty Ltd. Mal Blaik's qualifications include an Honours degree in Applied Science (Geology) from UQ and he is a Member of the AusIMM. He has 28 years experience in coal geology and mining operations and 21 years experience in coal resource estimation.

The Project resource estimates were compiled under the supervision of Competent Person Doug Dunn, a full-time employee of BMA and a Member of the AusIMM.

E.2.3 Daunia Resource Estimate

Total coal resources for Daunia as at 30 September 2008 are estimated to be 171 million tonnes (Mt) (48.0 Mt Measured, 98.0 Mt Indicated and 25.0 Mt Inferred). Refer to Table E-1 below for details.

Table E-1 Summary of Daunia In situ resources as at 30th September 2008

Lease	Measured	Indicated	Inferred	Total
	millions	millions	millions	millions
ML1781	47.7	96.5	22.4	166.6
ML70115	0.3	1.5	2.7	4.4
Total	48	98	25	171

The Property Reserves option of the Vulcan Grid Reserves Utility (RSVUTE) was used to calculate resources. This option allows polygons divided by JORC status and depth to be intersected with polygons

divided by tenement, pit and mining method, with the resulting sub-polygons used to interrogate the structural and quality grid models. The resultant output was loaded into Excel for preliminary formatting and application of the Preston Sanders equation. The detailed resource tables were then loaded into an Access database to composite the block by block data into the required reporting categories.

E.2.4 Daunia Model

Maptek's Vulcan software was used for modelling. Modelling is carried out using a series of Modelling scripts (csh's). The scripts are run in T shell.

Structure Modelling Process

Structure model is generated using a triangulation algorithm. Models have been created at a 20m and 10m cell size. The structural modelling procedure is as follows:

- 1) Create mapfiles from the modelling databases (structure, quality and wash mapfiles) excluding unreliable holes.
- 2) The fixdhd interpolator is run to interpolate daughter seams from parent seams and intercepts in holes where the seam does not exist due to a variety of reasons. This is mainly due to subcrop or the hole not drilled sufficiently deep. The interpolator also estimates the seam roof or floor for the holes listed to be nullified (seams intercepts that have either an unreliable roof or floor due to faulting, LOX thinning etc).
- 3) First phase modelling uses the fixdhd files to build "sedimentary" models from which thicknesses of seams and midburdens are calculated. Note that all seams modelled are the daughter seams in this stage.
- 4) Second phase modelling uses fault strings and 2D seismic data to derive faulted models. In Daunia two reference faulted seams (L13 floor and V1 roof and or daughters) are used to stack the Leichhardt plies and the Vermont plies.
- 5) Third phase modelling combines the daughters into parents based on limit strings. Seam limits are based a 0.3m parting thickness criteria. Outside a limit string the seam thickness is set to zero. Daughter seams are always wedged onto parents.
- 6) The fourth phase clips the models to base of weathering.

Models for each of these stages are stored in folders as per the BMA standard and for auditing purposes.

Quality Modelling Process

The Coal Quality model was generated using the Inverse distance algorithm, power = 1, the nearest six points and nine smoothing runs. The models were initially created with a 100*100m grid cell size and then saved back at the standard 20*20m grid size.

Independent Audit of Model

The Daunia model (Sept 2008) has been independently audited by Xenith Consulting Pty Ltd. The outcome of the audit identified no issues with the resource model and recommended its use for the resource estimation.

E.2.5 Geology Database

GBis™ is the current database management system used at BMA. This database holds all survey, drilling, geophysical logs, and analytical data. For the latest model all data was sourced directly from GBis™ and was downloaded in a format that is compatible for a direct import into Vulcan.

E.2.6 Coal Analyses

Coal analysis of seams in the Daunia Deposit has varied considerably in style and objectives through time resulting in a variety of coal-types and no single, universal, analysis method. There have been several phases of drilling and analysis undertaken over the last 40 years.

In 2006/7 BMA focused on a new sampling and analysis program designed to investigate the potential of extracting multiple products – coking coal and PCI. The analyses were managed by the BMA Barney Point laboratory and carried out by ACIRL, Maitland.

The results indicated that the L12 ply is generally unsuitable for a coking product due to poor caking characteristics, and would yield a PCI only product. A coking product is possible from the –16mm component of the L3 ply, the coarse coal going to PCI. The un-sized L4 and V1 plies can produce a coking product.

E.2.7 Classification of Resources

The classification of coal resources into Measured, Indicated or Inferred used the following criteria, as recommended in the Coal Guidelines:

- measured coal resources have been estimated using points of observation up to 500 metres apart and extrapolated no more than 250 metres;
- indicated coal resources have been estimated using points of observation up to 1000 metres apart and extrapolated no more than 500 metres; and
- inferred coal resources have been estimated using points of observation up to 4000 metres apart. On the outer limits of the inferred resources, extrapolation was restricted to the last borehole data point or 500 metres from the last point of observation, but no more than 2000 metres.

This is likely to be the last time that the Coal Guidelines are used to estimate resources at Daunia, as geostatistical methods will be employed in the future using the “estimation variance method” (Basic Linear Statistics, Margaret Armstrong, p128-132).

The Daunia coal resources have also been classified into the following depth categories:

- less than 60 metres;
- 60 to 120 metres;
- 120 to 180 metres; and
- greater than 180 metres.

See Table E-2 for the lease-by-seam-by-depth, tonnage estimates for the Daunia Resource. Average qualities by seam are listed in Table E-3.

Table E-2 Daunia - Total Resources by Depth (Mt)

Lease	Seam	Status	<60m	60 - 120m	120 - 180m	>180m	Total
1781	L12	Measured	7.36	6.07			13.43
1781	L12	Indicated	11.84	15.51			27.35
1781	L12	Inferred	0.12	0.02	0.01		0.15
1781	L3	Measured	7.36	7			14.36
1781	L3	Indicated	14.24	19.43			33.67
1781	L3	Inferred	0.18	0.02	0.01		0.21
1781	L4	Measured	1.6	1.34			2.94
1781	L4	Indicated	0.63	0.71			1.34
1781	L4	Inferred	0.07	0.01	0.27		0.35
1781	V1	Measured	7.7	3.36	5.9		16.96
1781	V1	Indicated	9.44	8.97	0.11		18.52
1781	V1	Inferred	0.36	2.52	1.56		4.44
1781	V13	Indicated	5.5	7.94	2.17		15.61
1781	V13	Inferred	0.11	1.83	1.98		3.92
1781	V23	Inferred	5.43	7.2	0.68		13.31
ML1781 Total			71.9	82	12.7	0	167
70115	L12	Indicated	0.18	0.37			0.55
70115	L12	Inferred	0.24	0.11	0.14		0.49
70115	L3	Indicated	0.12	0.29			0.41
70115	L3	Inferred	0.14	0.08	0.13		0.35
70115	L4	Indicated	0.01	0.08			0.09
70115	L4	Inferred	0.01	0.01	0.04		0.06
70115	V1	Measured	0.05	0.21			0.26
70115	V1	Indicated	0.29	0.01	0.1		0.4
70115	V1	Inferred	0.29	0.01	0.1		0.4
70115	V23	Inferred	0.66	0.39	0.28	0.03	1.36
ML70115 Total			1.9	1.6	0.8	0	4
Grand Total			74	84	13	0.03	171

Table E-3 Daunia – Tonnage Weight Average Qualities by Seam (Measured & Indicated status)

Seam	L12 PCI	L3 PCI	L3 COKE	L4	V1	V13	V23
Average Thick	2.36	2.86	2.86	0.54	2.04	2.59	0.6
Insitu RD	1.45	1.4	1.4	1.42	1.39	1.45	1.64
Raw IM	1.6	1.7	1.7	1.4	1.6	1.6	1.8
Raw Ash adb	15.6	11.4	11.4	16.9	12	18.5	38.3
MHC	2.2	2	2	1.8	1.9	2.4	2.3
Raw TS adb	0.37	0.42	0.42	0.55	0.48	0.44	0.26
Plant Sim Yield	81.9	20.9	68.1	72.3	84.7		-
Plant Sim Ash adb	9.5	9.1	7.7	6.4	7.3	-	-
CCC Ash adb	8.7	9.6	6.6	6.7	6.5	10.6	-
CCC Phosphorus adb	0.055	0.073	0.053	0.003	0.026	0.063	-
CCC Total Sulphur adb	0.28	0.37	0.33	0.5	0.43	0.42	-
CCC Volatiles adb	20	19.9	21	22.6	21.2	19.8	-
CCC Volatiles Daf	22.3	22.5	22.9	24.5	23		
PCI Basicity Index	0.13	0.12	0.11	0.1	0.23	-	-
Modified Basicity Index	-	-	0.96	0.85	1.97	-	-
Coking Log Fluidity	-	-	0.52	1.19	0.58	-	-
PCI SE	7,532	7,454					
PCI Init defm (reducing)	1,514	1,508				-	-
Alkalis in Ash	0.35	0.4	0.48	1.13	0.92	-	-
CCC Total Vit	30.6	28.4	49.3	75.6	59.2	-	-
Mean Max Vit Reflectance	1.26	1.27	1.27	1.26	1.3	1.3	1.34

The Competent Person (Doug Dunn) for Daunia consents to the release of the above estimates in the form and content that they appear.

CCC - Clean Coal Composite

Sim - Simulated

All qualities are on an air dried basis unless otherwise noted

Note V13 quality based on 21 (F1.60) analyses

The model constraints were as follows:

- **areas with inadequate structural definition data**

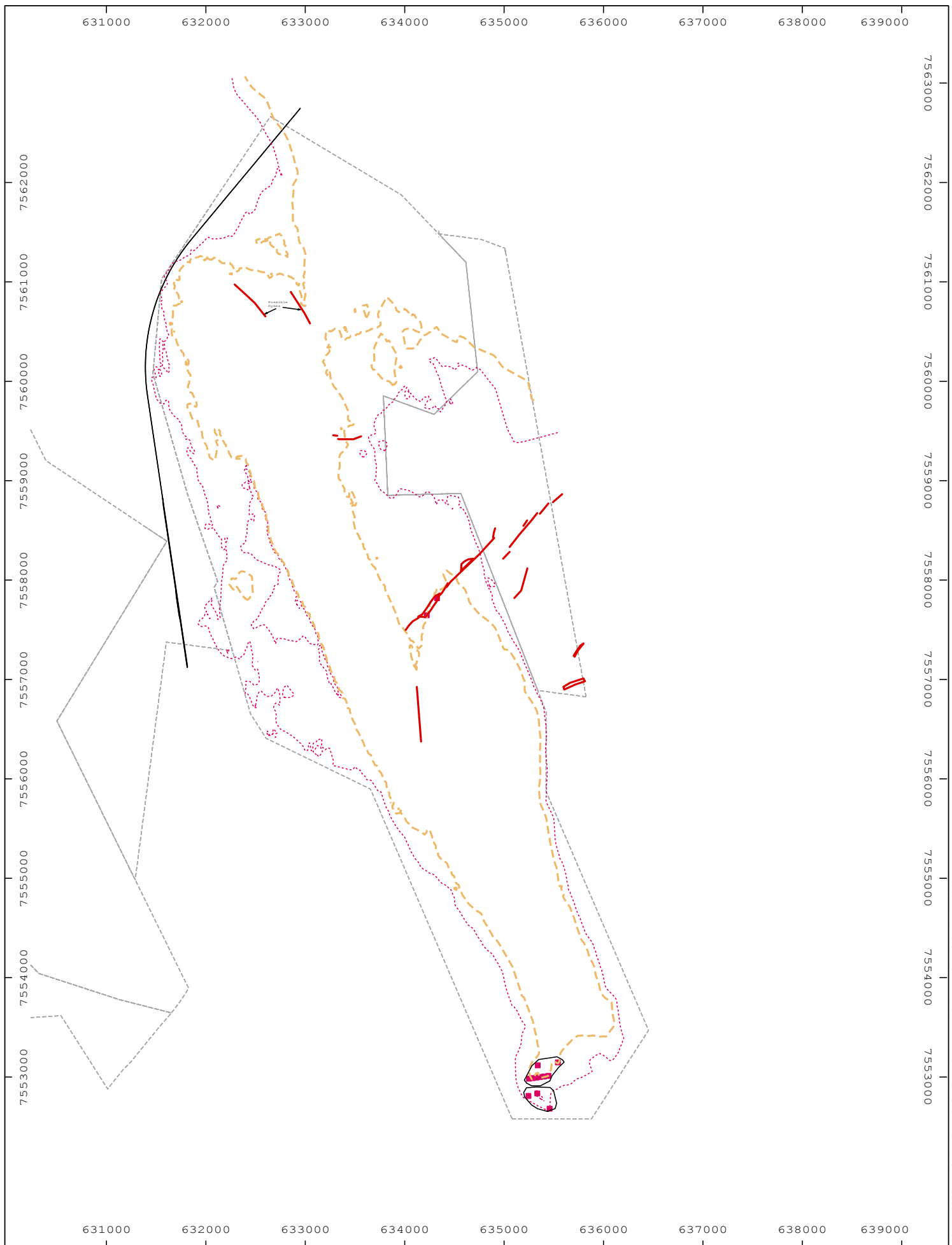
In the north east there are areas that the status has been de-rated due to inadequate structural definition data (From Measured to Indicated). Structural definition data is principally in the form of drill hole data with seismic survey data providing support;

- **open cut economic limits**

Indicative open-cut economic limits provided by Xenith Consulting Pty Ltd indicate that all of the Daunia deposit is viable to open-cut mining with the exception of a small area of deep coal. For the resource estimate completed in September 2008 it is assumed that all potential resources are amenable to open cut mining; and

- **excluded areas around intrusions**

A 10m (approx) exclusion zone was applied around dykes indicated by Magnetic surveys and exploration drilling. Delineated sill areas are also excluded (see Figure E-1 for approximate intrusion locations).

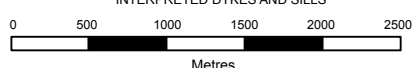


LEGEND

- Norwich Park Branch Railway
- Lease Boundaries
- Magnetic Dykes and Sills
- V1 LOX line
- L13 LOX line
- Intrusion in Drillhole



FIGURE E 1
DAUNIA COAL MINE
INTERPRETED DYKES AND SILLS



Projection: Australian Map Grid - Zone 55 (AGD84)



E.3 Indicative Product Specification

The indicative product specification for Daunia PCI and Coking Coal is outlined in Table E-4

Table E-4 Indicative Daunia Product Specification

	Units	PCI	Coking
Ash	mass % ad	9.3	7.2
Volatile Matter	mass % ad	20.0	21.0
Total Sulphur	mass % ad	0.37	0.46
Phosphorus	mass % ad	0.054	0.035
Specific Energy	Kcal/kg ad	7,600	7,750
Fixed Carbon	mass % daf	65.5	63

ad=air dried basis; daf=dry ash free

E.4 Resource Calculations for ML1781 Daunia, ML70115 Daunia East and ML1781

E.4.1 Coal to the West (ML70116 Red Mountain)

Resources have been calculated for ML1781 Daunia and ML70115 Daunia East. The results for both mining leases are detailed in Table E-2 and Table E-3.

Two small areas of Vermont coal present on ML70116 Red Mountain Mining Lease (RMML) due to the LOX line crossing over in to the lease (Figure E-2).

- Area One is covered by an Endangered Regional Ecosystem (see Section 8.7.1.1 of the Project EIS for discussion and Figure 8.2 for location). Due to the presence of this vegetation there is no intention to mine in this area and the coal will remain in situ with no disturbance; and
- Area Two is located in the central west of the deposit (see Figure E-2 where the coal extent is limited by the presence of the Vermont Lox line.

Due to a lack of data in Area Two additional work programs will need to be completed to verify the exact extent of coal, quality and tonnage present. This will include LOX, coal quality and geotech drilling. This will determine the full extent of the coal, its quality and the proximity of the coal in relation to the rail line. This work will need to be completed prior to commencing any mining activities in this area. Currently it is not expected that BMA will mine adjacent to this area for approximately 10 years. Investigating this area has not been included in the short term exploration work program, and it's not likely that this data will be obtained in the next 4-5 years to determine the validity of the coal in this area.

Resources have been calculated for ML70116 RMML, however they have not been reported in our current resource statement. Tonnages for both Area 1 and 2 total approximately 220,000 tonnes. Basic qualities are displayed in Table E-5 for the two areas.

Table E-5 Tonnage and Average Qualities by Seam (Measured & Indicated status only) for coal crossing over into ML70116 Red Mountain

Seam	ML70116 Area 1	ML70116 Area 2
Tonnage of coal	20,086	201,664
Average Thick	1.94	1.79
Insitu RD	1.38	1.42

The Competent Person (Doug Dunn) for Daunia consents to the release of the above estimates in the form and content that they appear.

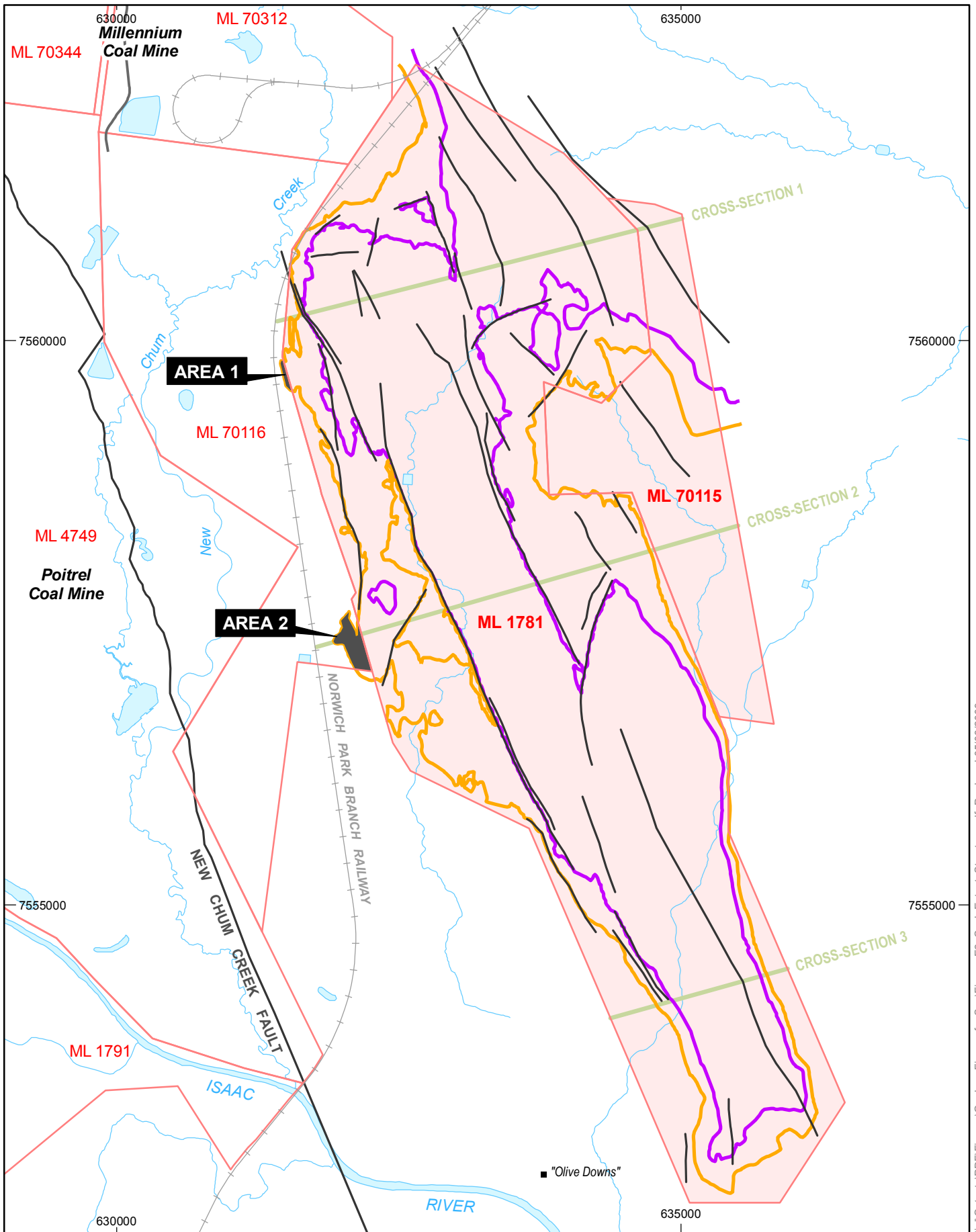
E.4.2 Coal to the North (on ML1781)

A small triangle of coal estimated at approximately 116,000 Tonnes of Leichhardt and Vermont coal is overlain by infrastructure within ML1781 (see Figure E-2, view the top portion of the lease and note the location of the rail). This infrastructure is the Norwich Park Branch Railway Line and the Poitrel / Millennium rail loop. Both of these have truncated the Rangal Coal Measures in the northern most tip of the Daunia deposit. This coal has effectively been sterilised by infrastructure.

There are a number of constraints that affect access to the coal to the north on ML1781. These include;

- steeply dipping coal (10-15 deg);
- numerous faults (at least 3 faults with throws of 10 - 20m in this area);
- limited quality information – additional drilling needs to be undertaken;
- limited geotechnical information around structures in this area;
- proximity to the lease boundary;
- location of Daunia’s northern access road (runs parallel to the existing rail line, this road also allows access for rail maintenance); and
- cost and disruption to the rail line precludes moving the rail and trying to recover the 116,000 tonnes of coal.

Due to geological and physical constraints there is no intent to move either the Norwich Park Branch Railway Line or the Poitrel/Millennium rail loop to recover the coal in this area.



LEGEND

- Mining Lease
- Daunia Project Area
- Coal area outside Daunia Project ML
- Fault
- Leichhardt Seam LOX line
- Vermont Seam LOX line



FIGURE E 2

DAUNIA COAL MINE

COAL EXTENT AND STRUCTURE



Kilometres

Projection: Australian Map Grid - Zone 55 (AGD84)



BHP Billiton Mitsubishi Alliance

E.4.3 Summary

No spoil will be placed to prevent the future mining of either Leichhardt and/or Vermont coal seams until the planned further investigations are undertaken.

E.5 Resource Calculations for the Central Area of the Deposit

Estimates for each seam are included in Table E-2, and average qualities are seen in Table E-3.

There is no intention for coal to remain un-mined if it has any economic value. Exploration drilling programs at Daunia continue and will allow a re-evaluation of Daunia resources on a yearly basis. Spoil dump location, mine planning schedules and economics are reviewed on an annual basis to ensure that there is no sterilisation of potential coal resources.

E.6 Rangal Coal Measures

E.6.1 Rangal Coal Measures

The seams targeted for mining at Daunia include the Leichhardt (L13), the Lower Leichhardt (L4) and the Upper Vermont 1 (V1) seams. It has been identified that these seams have PCI and Coking coal properties.

Historically the Upper Vermont 23 (V23) and the Lower Vermont (VL) Seams have not been identified as seams of interest due to poor coal quality results and high inherent ash.

Quality of the V23

- high inherent ash (32-60% ash %db);
- average yield of 11.8% (can be up to 25% in small areas);
- variable thickness (0.2m – 2m); and
- high fluidity coal; cannot be sold to a thermal market.

Quality of the VL

- high inherent ash (47% ash %db);
- average yield of 13%; and
- variable thickness (0.1m – 1m, with an average of 0.3m).

There has been limited drilling targeting these seams as they have been identified as poor quality. Drilling is in progress to confirm that the V23 and VL seams are not viable for mining. Results of the analysis of these seams are expected by October 2009. However it is also recognised that in many regions of the deposit both of the lower seams (V23 and VL) can have a considerable thickness of interburden (approximately 35m) between the floor of the V1 seam and the roof of the V23 (See Figure E-3 for cross-sections of Daunia). The low yield and recovery from both seams make it unlikely that they will be targets of mining at Daunia.

However out of pit spoil dumps will not be placed in any locations that may sterilise economic coal seams, nor will they be placed over any seams that are being investigated to rule out economic potential.

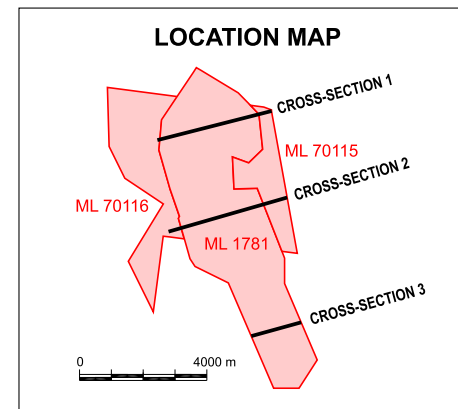
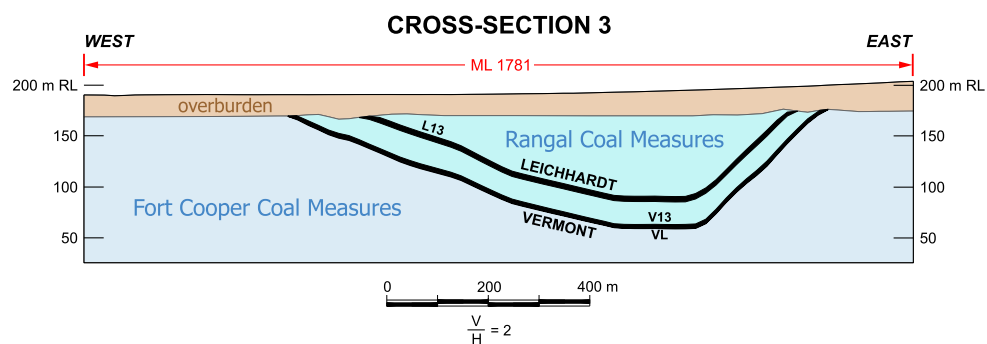
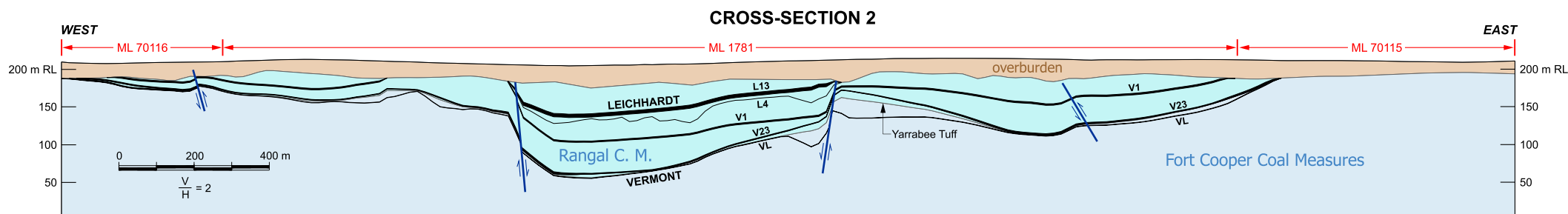
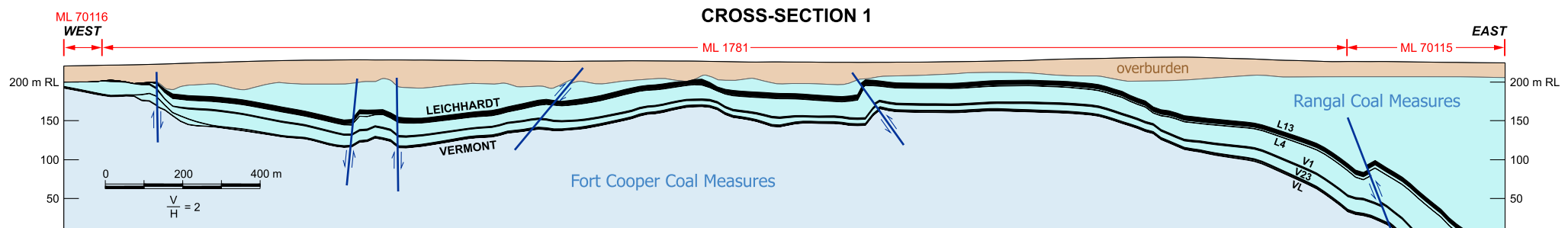


FIGURE E 3
DAUNIA COAL MINE
 TYPICAL CROSS SECTIONS



E.7 Geology

The seams that are being targeted within the Daunia Mining Lease are:

- the Leichhardt Seam – L13 (DL1);
- the Lower Leichhardt Seam – L4 (DL0); and
- the Upper Vermont Seam V13 (DV4) including the upper split of V13, the Upper Vermont 2 Seam V1 (DV2).

Typical seam Nomenclature can be reviewed in Figure E-4 and is discussed below. The stratigraphy of the Daunia deposit varies little between North and South Daunia. A typical stratigraphic section (Figure E-5) shows the overburden and interburden to be interbedded siltstone and sandstone interspersed with coal seams. The only major difference is the presence of carbonaceous shale on the roof of the L13, L4 and V1 seams in Northern Daunia.

L13 (DL1) typically comprises 5m to 6m of clean, dull to dull-banded coal, which brightens marginally in the basal at 1m to 1.5m. A persistent, 2cm to 4cm thick, grey-brown, claystone marker, which is present 2.3m to 3.3m below the roof of the seam in most holes. This divides the seam into the Leichhardt Tops (L12) and Bottoms (L3). This marker is regionally recognised, and is referred to as a Tonstein Band.

In the north, the V1 (DV2) comprises 1.8m to 2.5m of low ash, interbanded coal. The interburden between L4 (DL0) and V1 (DV2) ranges from 10m to 35m.

The Upper Vermont Seam V23 (DV1) is composed of 1.5 – 1.7m of high inherent ash coal; and the Lower Vermont Seam VL (DV0) is composed of 0.3 – 1.9m of interbanded carbonaceous mudstones, tuffaceous claystones and inferior coal. The Yarrabee Tuff Bed, a basin-wide stratigraphic marker, which, at Daunia, comprises 0.5m to 1m of brown tuffaceous claystone lies at the base of the V23 and separates it from the VL (DV0) seam.

In the southern third of the deposit the V1 (DV2) and the V23 (DV1) coalesce into one seam.

Regional features dominate the structure of Daunia. These include the New Chum Creek fault to the west with an offset of 150m, and a series of synclines and anticlines running at a sub-parallel orientation through the lease and along the eastern margin (See Figure E-6 for surface geological map).

Figure E-2 shows the extent of coal and the trace of major faults in ML1781, ML70115 and ML70116. As the Daunia deposit lies on a syncline structure the majority of the coal seams sub-crop within the lease boundary. The exception is in the north eastern margin of the deposit where the coal steeply dips 12-15 degrees to the north east and is intersected by several large scale faults.

The cross-sections shown in Figure E-3 show a detailed view of the extent and magnitude of the structure present at Daunia within the Rangal Coal Measures (RCM), over the three lease boundaries. There are numerous structures within the lease. Thrust faulting is dominant with offsets in the order of 5-30m. Normal faulting does occur and tends to have the larger offsets up to 50m.

DAUNIA SEAM NOMENCLATURE AND CODES

NORTH DAUNIA

SOUTH DAUNIA

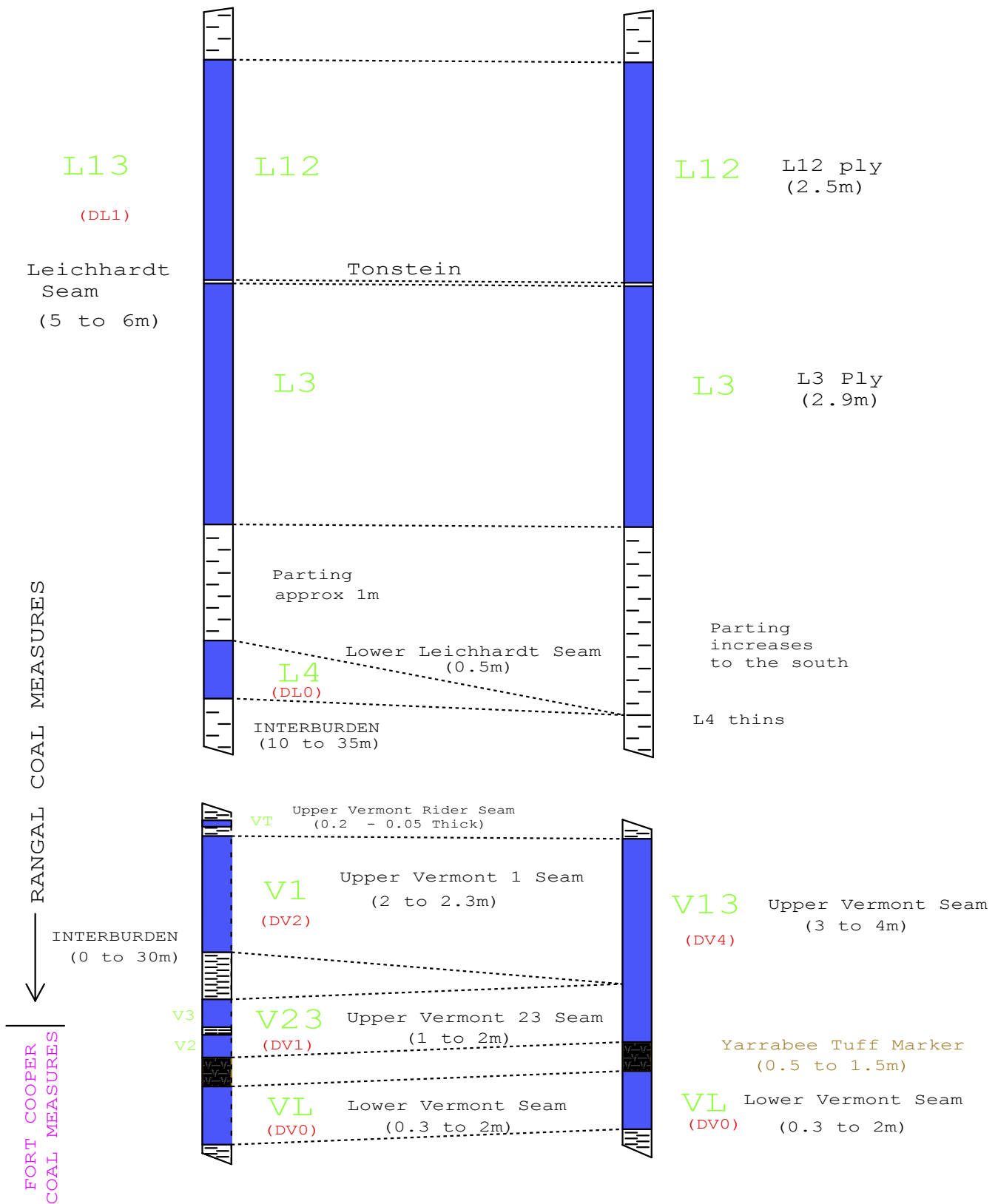
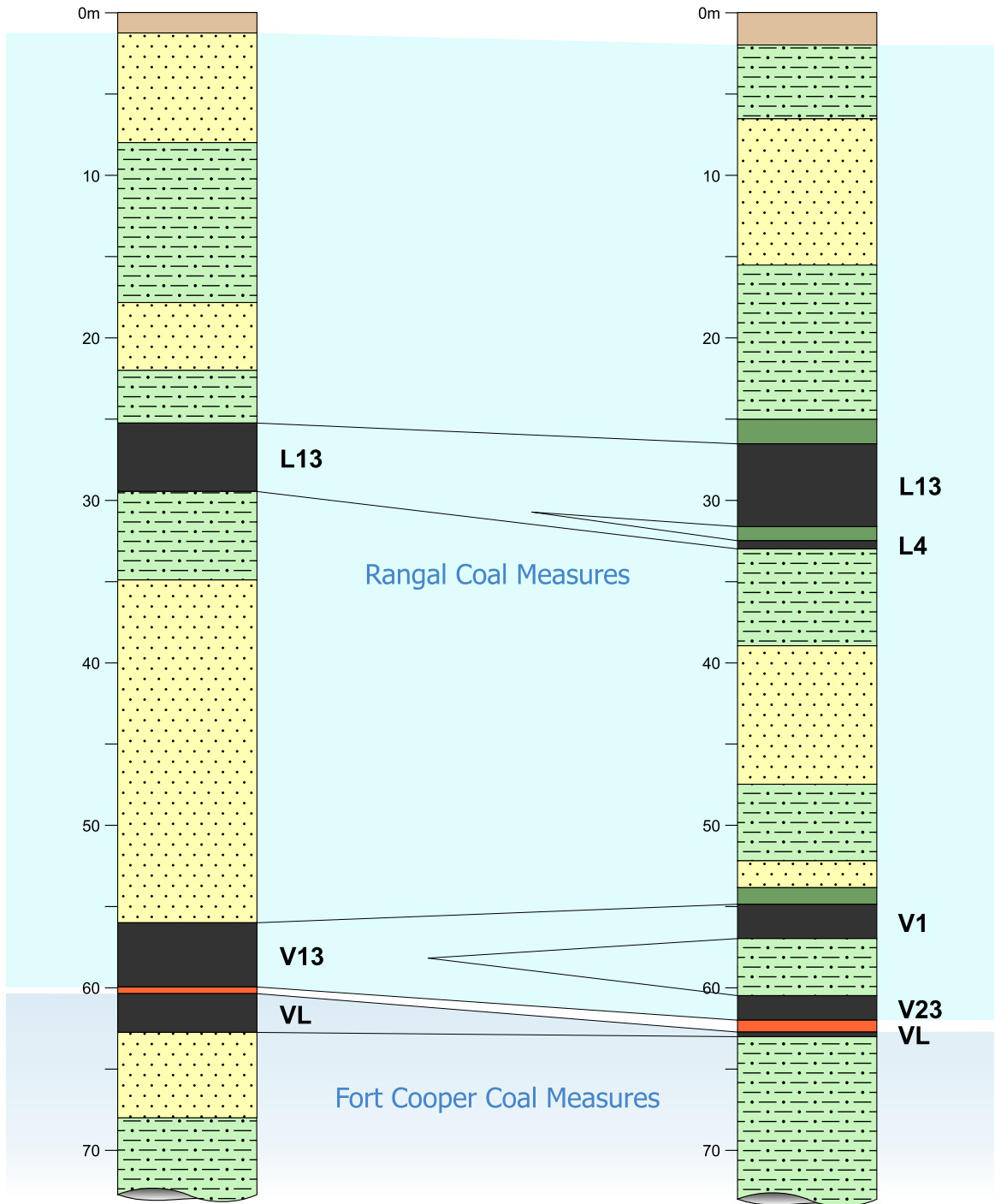


FIGURE E 4
DAUNIA COAL MINE
 SEAM NOMENCLATURE
 AND CODES



SOUTH DAUNIA

NORTH DAUNIA



Lithology

	Soil, clay		Carbonaceous shale
	Sandstone		Yarrabee Tuff
	Siltstone		Coal

Seam nomenclature

L13	Leichhardt Seam
L4	Lower Leichhardt Seam
V1	Upper Vermont 1 Seam
V23	Upper Vermont 23 Seam
V13	Upper Vermont Seam
VL	Lower Vermont Seam

FIGURE E 5
DAUNIA COAL MINE
 TYPICAL STRATIGRAPHIC SECTIONS



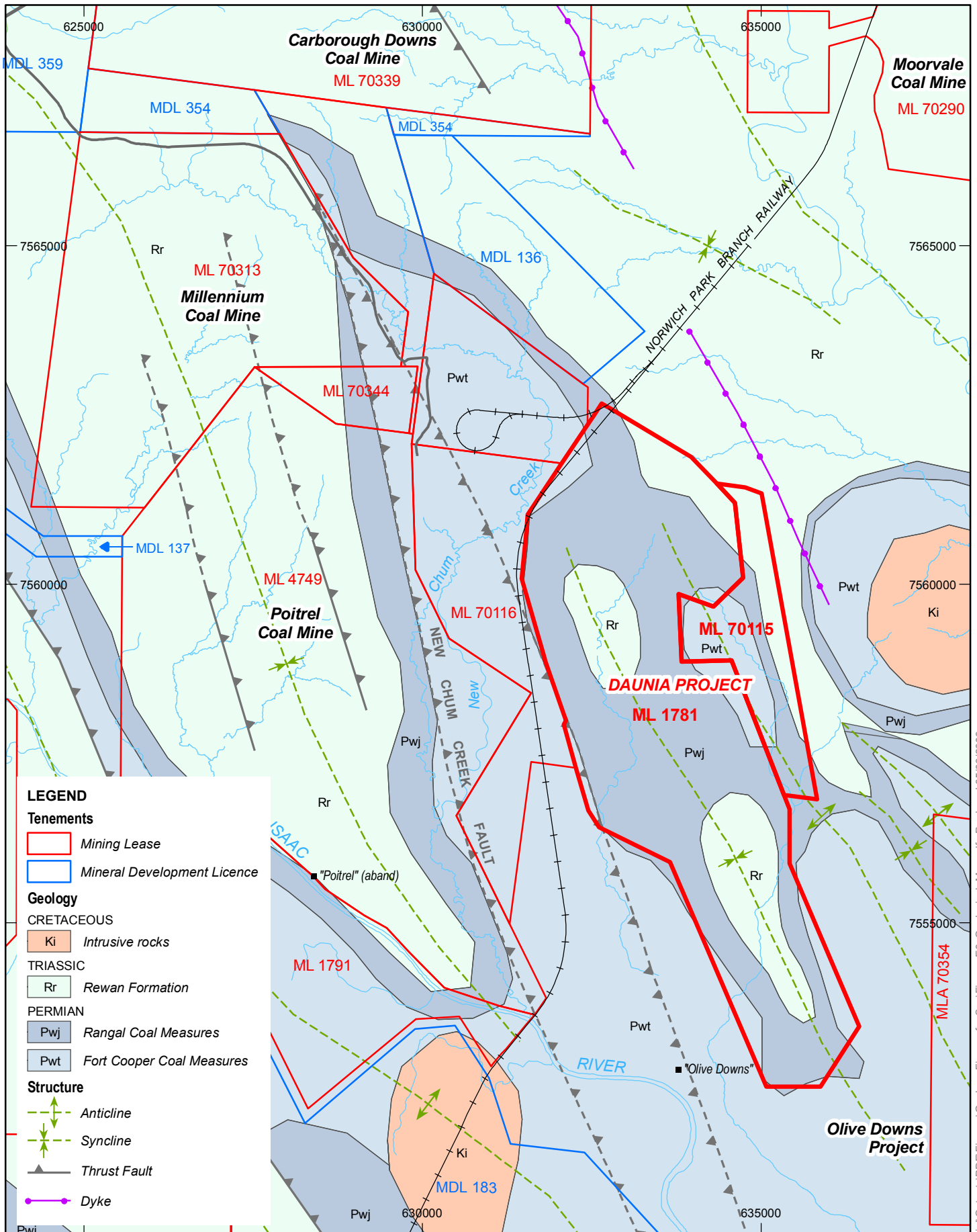
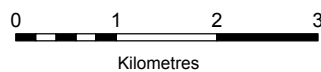


FIGURE E 6
DAUNIA COAL MINE
 GEOLOGICAL MAP



Projection: Australian Map Grid - Zone 55 (AGD84)



BHP Billiton Mitsubishi Alliance