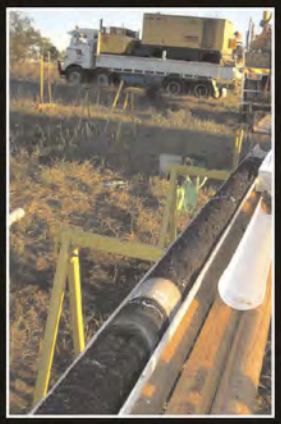
Cockatoo
Coal Limited

Woori Coal Project
MDL187

PROJECT DESCRIPTION

OCTOBER 2008



Minserve

PROPOSED WOORI COAL MINE

PROJECT DESCRIPTION

Prepared for

SURAT COAL PTY LTD

OCTOBER 2008

Prepared by
EH&S Systems Pty Ltd

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1. INTRODUCTION

1.1. WOORI COAL MINE (WOORI) PROJECT SUMMARY

The Woori Coal Mine project (formerly known as the Guluguba Coal Project) is owned by Surat Coal Pty Limited (SCPL) which is a wholly owned subsidiary of Cockatoo Coal Limited (CCL). The Woori project is situated immediately west of the small township of Guluguba and is located about 300km northwest of Brisbane and 15km south of Wandoan as indicated in Figure 1.1. The coal resources for this project lie within Mineral Development Licence Number 187 (MDL187) shown on Figure 1.2 and will be mined by opencut methods using various combinations of excavator, shovel and truck fleets and associated mining equipment.

Coal will be mined at an initial rate of 3Mtpa run-of-mine (ROM) increasing to approximately 6Mtpa ROM within one year of start up of operations and will supply thermal coal to export markets including Korea.

ROM coal will be crushed, sized and washed to yield a high-energy thermal coal to be transported by rail and exported through the Port of Gladstone.

It is proposed that a Mining Lease (ML) will support coal mining operations for approximately 15 years, with subsequent mining coming from MLs over exploration tenements owned by SCPL southeast of the initial mining area.

Other regional resources owned by SCPL may be transported to the proposed Woori mine for washing and rail load out.

SCPL is seeking to gain statutory approvals, primarily an ML over MDL187 together with the relevant environmental authority (EA) to allow opencut operations to commence in 2011.

The approval process for the project will require an Environmental Impact Study (EIS) pursuant to Chapter 3 of the Environmental Protection Act 1995 (EP Act).

The purpose of this document is to support an application for approval under Section 70 and Section 71 of the EP Act to prepare a voluntary EIS for the project.

1.2. THE PROPONENT

The proponent for the Project is SCPL which is a wholly owned subsidiary of CCL.

CCL is an Australian Public Company which is focussed on coal exploration within its extensive exploration tenements and the development of mines within areas under exploration where economic and resources are found and proven.

While exploration at the Woori project is complete, exploration activities at adjacent Surat Basin deposits are planned to extend the coal resources under CCL-related tenements.

CCL proposes to bring into operation major mines not only in the Surat Basin but also in delineated deposits within the southeastern flank of the Bowen Basin.

Since the float of CCL in 2005 extensive exploration at the Woori project and Dingo/Wonbindi projects has been undertaken. In 2008 CCL acquired additional and adjacent areas in the Surat Basin.

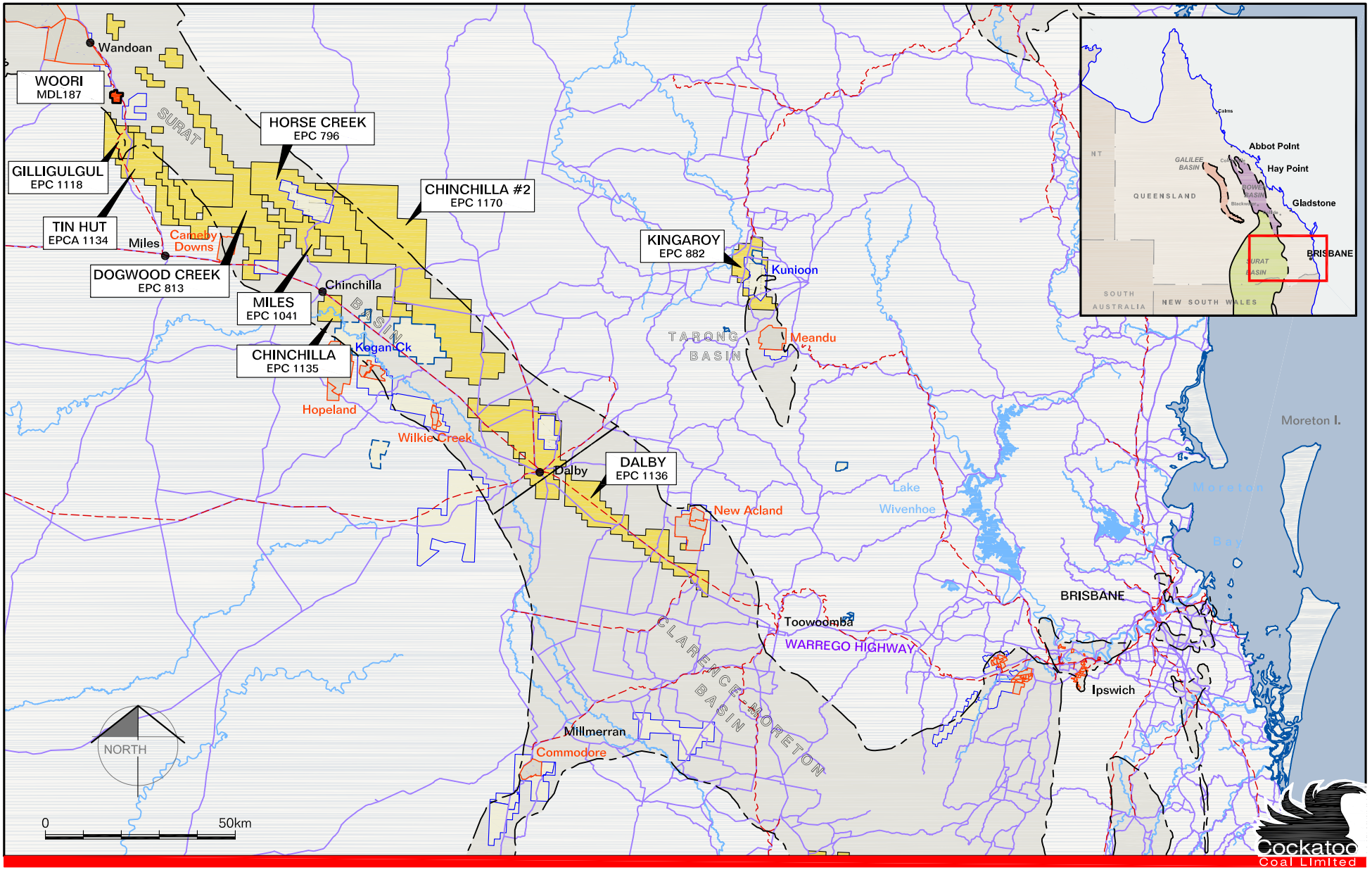
CCL Surat Basin projects comprise:

- The Woori project (MDL187)
- The Surat project (EPCs 813, 796, 1041, 1135, 1136, 1170 and EPCAs 1134 and 1278)
- The Kingaroy project (EPC882)
- The Condamine project (EPCs 963 and EPC1130)
- The Injune project (EPC1017 and EPC1018)
- A 20% interest in an Underground Coal Gasification (UCG) project with Cougar Energy Limited (Cougar) over EPC1118.

Through the strategic acquisition of EPC796 and EPC813 in early 2008 as indicated on Figure 1.3 by the wholly owned subsidiary SE QLD Coal Pty Ltd, CCL will further progress an integrated exploration strategy over contiguous and closely located exploration tenements. The tenements cover land along the Surat Basin from near Oakey in the southeast to near Wandoan and the Woori project on MDL187 in the northwest.

These tenements are closely located to CCL's existing exploration tenements in the Surat Basin, most particularly, the Surat Project comprising EPC1041 Miles, EPC1135 Chinchilla and EPC1136 Dalby which were acquired in July 2007.

EPC796 (Horse Creek) and EPC813 (Dogwood Creek) cover an area of approximately 816km^2 located in the Surat Basin and significantly increases the footprint. These new areas together with the existing portfolio of Surat tenements are considered highly prospective for potential development of opencut export thermal coal operations of significant capacity.



Regional Features

- Roads; Major
- Rivers; Creeks
- Railway
- Coal Basin Boundaries

Mining Tenements

- Cockatoo Coal EPC/EPCA
- MDLs
- MLs

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Surat Basin Showing Cockatoo Coal Projects

FIGURE 1.1

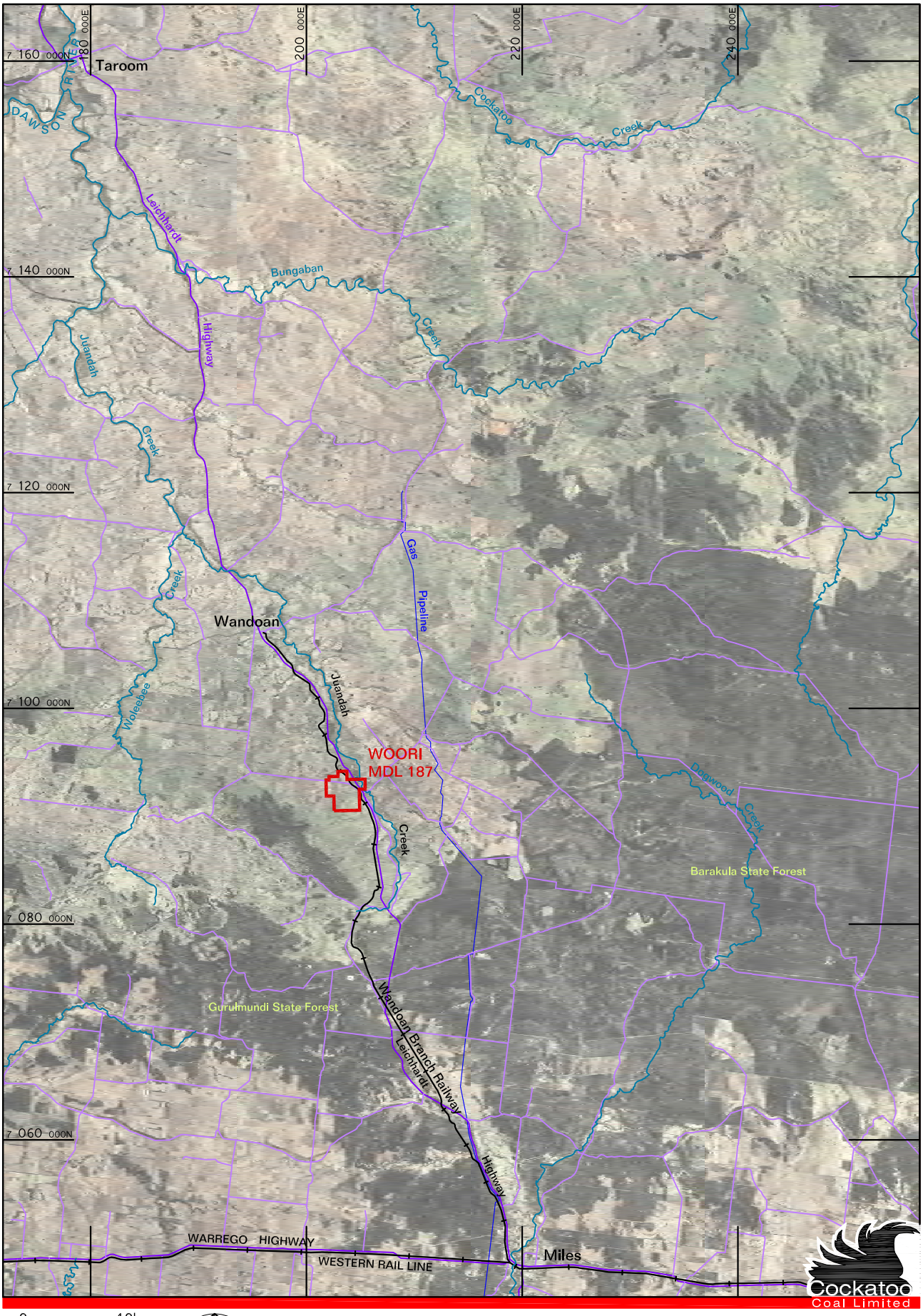
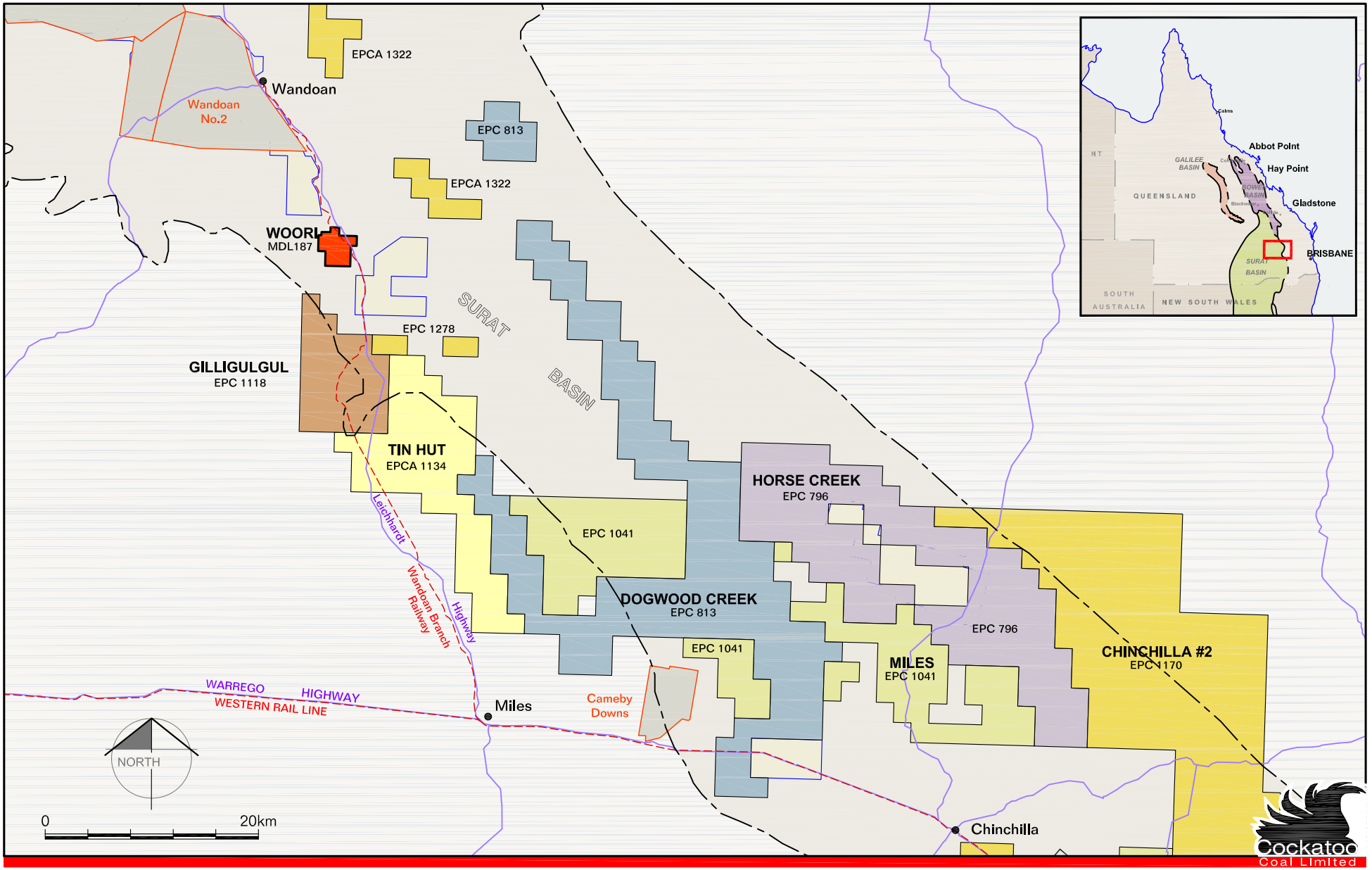


FIGURE 1.2

MDL187 Locality Plan



Regional Features

- Roads; Major
- Rivers; Creeks
- Railway
- Coal Basin Boundaries

Mining Tenements

- MDLs
- MLs

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Cockatoo Coal Tenements Relative to Woori

FIGURE 1.3

Major shareholders within CCL include:

- Korea Electric Power Company (KEPCO) through Kepco Australia Pty Ltd – a Korean national power company
- Korea East-West Power Company Ltd (KEWPO) – a Korean power company
- POSCO Australia Pty Ltd (POSCO) – a Korean steel maker
- Kores Australia Pty Ltd (Kores)– a Korean national resources development company
- Oxbow Inc based in the USA through the recent purchase of SSM Coal BV
- SK Corporation of Korea through SK Australia Pty Limited – a Korean trading house.

The Project is not dependent on export market conditions because two of the major shareholders are Korea's power generators KEPCO and KEWPO.

KEPCO and KEWPO have the first right of refusal to purchase the greater of 2Mt or that percentage of CCL's thermal coal production equal to the percentage ownership of CCL by KEPCO and KEWPO per annum produced from any of CCL's coal mining operations.

The purchase of any coal by KEWPO from CCL will be at the then market price for the relevant type of coal and otherwise on terms and conditions reasonably required by KEWPO having regard to terms and conditions applicable in the Australian coal market at the time of sale.

KEPCO is the Korean government power transmission and distribution utility and currently generates approximately 90% of all of Korea's power. KEPCO's current total installed power generation capacity is approximately 60,000MW.

KEPCO has five wholly owned thermal power generating subsidiary companies and one wholly owned hydro and nuclear power generating subsidiary company. KEWPO is one of these wholly owned thermal power-generating companies with current installed power generation capacity of approximately 9,500MW. KEWPO currently consumes in excess of 11.5Mt of bituminous and sub-bituminous coal per annum and this is forecast to rise to over 18.5Mt by 2016.

Kores, a Korean Government company, has played a pivotal role as a comprehensive supporting organisation of the Australian resources industry.

CCL has granted POSCO the first right of refusal to purchase a maximum of 1Mtpa of metallurgical low volatile Pulverised Coal Injection (PCI) coal or other coal type satisfactory to POSCO produced from any of CCL's coal mining operations provided that CCL produces more than 1Mt of coal per annum.

POSCO is a wholly owned subsidiary of the Korean based Pohang Iron and Steel Corporation which is one of the largest steel manufacturing and trading companies in the world with a market capitalisation of approximately US$58.0 billion and crude steel production of in excess of 30Mtpa.

POSCO has established itself as a global leader in steel making technologies and is committed to securing the stable supply of raw materials, including coal, for its steel production activities.

Oxbow Inc is a US based international coal and carbon trader. It recently took over European based coal and coke trader SSM Coal BV who was the original investor in CCL. Oxbow Inc trades coal in all markets of the world.

SK Corporation is the largest energy company in Korea with major business areas being petroleum refining, petrochemical and coal.

2. APPROVAL PROCESS

2.1. INFORMATION TO SUPPORT VOLUNTARY EIS APPLICATION

The following information is provided in accordance with the requirements specified in Part 4 of the Environmental Protection Agency (EPA) Application Form seeking approval to prepare a voluntary EIS as well as the EPA Guideline "The EIS Process for Non-Standard Mining Projects".

2.1.1. DESCRIPTION OF THE PROJECT INCLUDING TOTAL AREA PROPOSED TO BE DISTURBED AND PROPOSED ANCILLARY ACTIVITIES

Proposed Operations

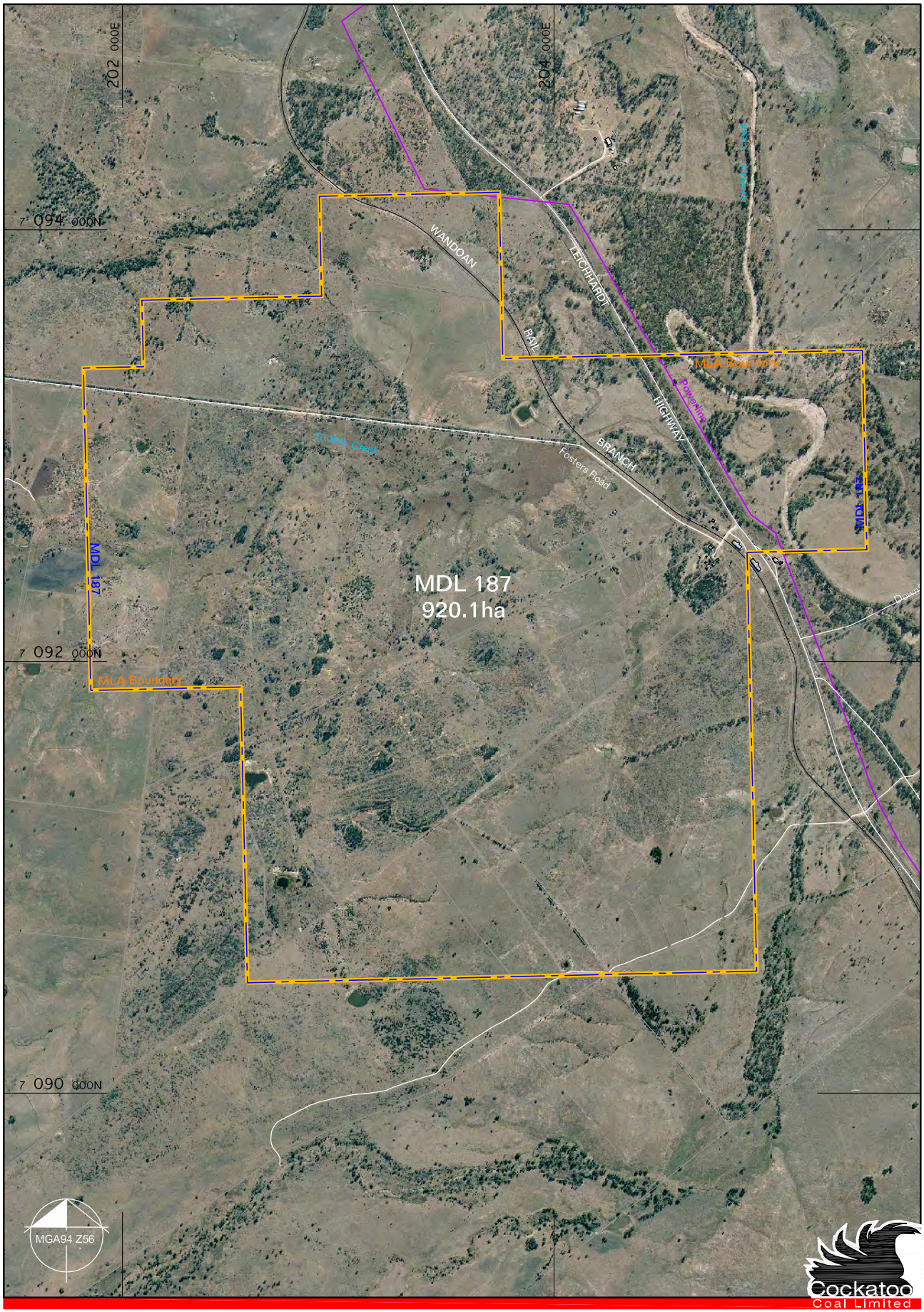
The initial mining project will take place on a ML within MDL187 over a 15 year period and will follow a two-stage development process.

Stage 1 is the development of the 3Mtpa ROM Woori mine, coal handling preparation plant (CHPP) and train loading facility with first coal railing in 2012.

With selective mining, product yield of 70% is expected with 2.1Mtpa to be railed.

Stage 2 is the expansion of production to 5Mtpa to 6Mtpa ROM coal with the addition of the second washery module, an increased mining fleet and associated transport infrastructure to bring coal from the expanded operations to the Woori mine. Completion of Stage 2 expansion is planned for 2013. Total coal to be railed is 4Mtpa.

The proposed mining lease will cover the total land area as is currently covered by MDL187 as indicated in Figure 2.1. The total area within MDL187 is approximately 920ha. The total area proposed to be disturbed by mining activities is approximately 750ha.



Cockatoo Coal Limited

0 500m

Legend

MDL 187

Proposed MLA

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Site Plan
(Orthophoto 2006)

FIGURE
2.1

Mining Method

With relatively shallow coal seams opencut mining is economical.

The size and shape of the deposit lends itself to excavator and truck operations. The excavator and trucks will remove the overburden from above the top coal seam while coal recovery and removal of interburden is planned to be removed by shovel and truck. Consideration is being given to the use of surface miners to remove the interburden and coal to reduce dilution and loss and produce a shipping quality coal that will reduce the need for washing.

The Stage 2 development of the operation will be based on a long strike length operation and additional reserves at Woori. Detailed mine planning will finalise the mining sequences and the tonnages to be mined initially and subsequent project mining areas.

Processing

Assessment of the coal resources to date has indicated that the raw coal ash is in the range 20% to 30% and the ROM coal will need to be washed to produce an export quality 14% ash thermal coal product. Washery processes considered include standard dense media cyclone processes.

Product Transport

It is proposed to transport the product coal on rail to the Port of Gladstone. A new rail line linking Wandoan to the Moura - Gladstone heavy rail line is to be built. The Project would load product coal onto rail at Woori which will require a 19km rail upgrade to Wandoan.

Note: In July 2007, the Queensland Government awarded an unconditional Exclusive Mandate to the Surat Basin Rail Joint Venture (Australian Transport and Energy Corridors Ltd, Queensland Rail, Industry Funds Management, Anglo Coal and Xstrata Coal Queensland) to investigate the development of a rail link through the Surat Coal Basin linking Toowoomba and Gladstone.

This exclusive mandate allows the Surat Basin Rail Joint Venture (SBRJV) to undertake the preliminary studies necessary to progress the Surat Basin Rail - a 210km proposed rail corridor linking Wandoan and Banana, and thence allowing trains on to the existing line to Gladstone port.

The SBRJV has appointed engineering consultants and during the December 2007 quarter a preferred route between Wandoan and Banana was identified which will form the basis of further studies and an EIS.

CCL continues discussions with SBRJV regarding future access for the Project to the rail corridor.

Coal railed to Port of Gladstone is intended to be loaded at the new Wiggins Island Coal Terminal planned to be commissioned from 2012.

Mine Infrastructure Requirements

- Water Supply

A number of water supply options are undergoing evaluation as part of the feasibility study and will be reported in the EIS.

- Power Supply

The area is presently supplied with power by way of 33kV line from Chinchilla. To enable operation of a CHPP and excavator and mining fleet at least an additional 132kV feeder will be required from Miles. Also, considering other developments further to the north at Wandoan significant transmission upgrades and/or augmentation will be required to enable operations to proceed.

- Mine Infrastructure

Mine infrastructure will consist of:

- Site access to main road
- Light vehicle access roads
- Heavy vehicle haulroads
- Communications infrastructure i.e. towers, cabling
- Offices and administration facilities
- Ablutions and crib room facilities
- Water Management System (WMS)
- Wastewater treatment facilities
- Fuel and oil storage facilities
- High voltage transmission lines/poles and reticulation
- Maintenance workshop, offices and associated amenities
- CHPP
- Coal stockpiling and blending facility
- Fines recovery system
- Train loading installation
- Rail unloading facility.

Offsite Infrastructure Requirements

- Accommodation

An option for accommodation being investigated is the establishment of a relocateable village for contractors and single units on the eastern side of the proposed mining lease. Other options include facilities closer to

local communities at either Miles or Wandoan. Since accommodation facilities may be outside the mining lease separate approval including development approval under the Integrated Planning Act 1997 may be required.

- Airstrip

Consideration will be given to upgrading the existing airstrip to provide the option for fly-in fly-out employment arrangements. This is part of the feasibility study and will be included in the EIS.

- Roads

Access will be from the Leichhardt Highway. Local roads will also need to be considered in the mine plan and may require relocation.

Water Management

Mine operations have the potential to impact on downstream water quality as well as the groundwater resource. The WMS will consist of structures that will allow the transport of water around the site and onsite storage of the maximum amount of water for internal use.

The key water management goals for the project will be to collect as much water as possible onsite while minimising downstream impacts from the proposed mining operations.

A hydrological study as part of the EIS will consider overall water balance and the need to consider temporary and permanent diversion of watercourses.

The key elements of the WMS to be included in the EIS requiring the system to maximise collection and minimise planned discharge are:

- Runoff from undisturbed areas to pass around mining areas and to continue in defined drainage corridors
- Runoff from disturbed catchments to be directed through sediment basins and collected for use onsite
- Runoff from Mine Industrial Area to be directed through sediment basins, a suitable treatment plant and then collected for use onsite
- Water from the CHPP will be recycled in a closed loop
- Mine water from runoff and groundwater inflow (if any) will be managed in dedicated storage facilities and used onsite.

Mine Waste

Coal washery rejects will be generated. Water availability and plant water consumption are major considerations in the selection of tailings disposal system. At this stage it is proposed to use band press filters instead of tailings dams and co-disposal so as to recover water from fines and to reduce water loss to evaporation.

The method of disposal for coarse reject and tailings will be reviewed as part of the water resource study.

Non-Mine Waste

General and construction waste will be generated by the Project. Waste disposal according to prevailing Council regulations will be undertaken.

A water treatment facility is to be established and designed to handle sewage and washdown water. The facility will meet local and other statutory requirements.

2.1.2. DESCRIPTION OF THE OPERATIONAL LAND/WATERS

Land Use

The mine area is predominantly used for low intensity grazing. Most of the land has been cleared for agricultural purposes. Grain growing and beef production are the major land uses in the local area. The land is predominantly privately owned as indicated in Figure 2.2.

Acquisition of land for mining operations and infrastructure will take place. All landowners likely to be affected have been identified and valuations in advance of purchase negotiations will be commissioned. Sellers of land will have the option to lease back the property for grazing in areas where there is no requirement for mining.

Soils and Land Capability

A soil and land capability study is to be undertaken as part of the EIS.

In the local area soils appear to include clays overlying sandstone with some sandstone outcrops. There are some small alluvial flats in proximity to small creeks and watercourses.

Topography

The terrain is gently undulating with an elevation in the range 240m to 300m above AHD.

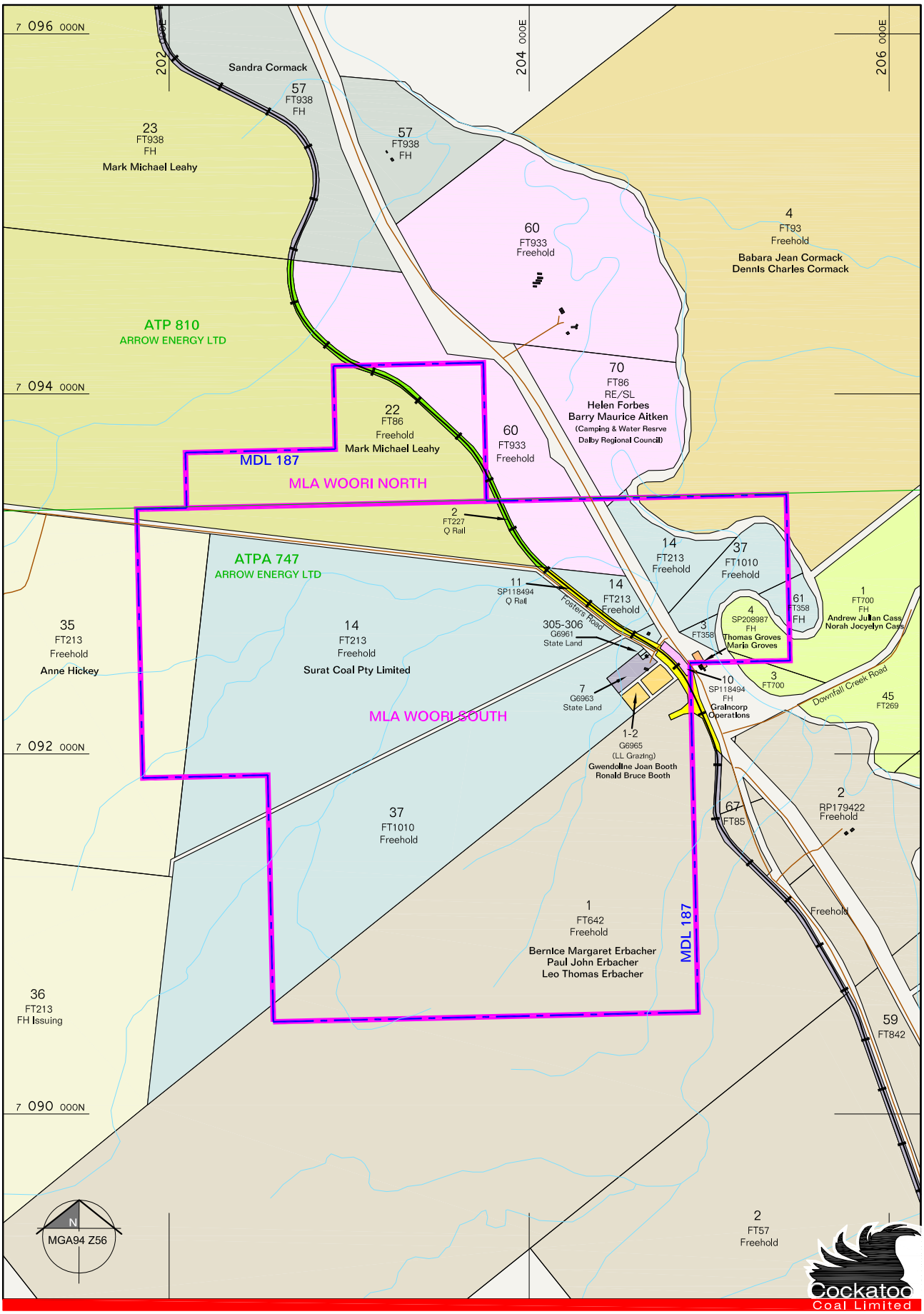


FIGURE 2.2

Landholders Plan

Geology

MDL187 is located in the northern portion of the Surat Basin. Four major Jurassic sedimentary stratigraphic units are present including the overlying Gubberamunda Sandstone and the basal Hutton Sandstone.

The Injune Creek Group which lies above the Hutton Sandstone consists of the Westborne Formation, the Springbok Sandstone, the Walloon Sub-Group and the Eurombah Formation.

The Walloon Sub-Group contains two coal-bearing formations, the lower Taroom Coal Measures and upper Juandah Coal Measures. These two coal measures are widely recognised as containing the most attractive opencut steaming coal resources of the Surat Basin.

Surface Water

Ephemeral creeks and watercourses are major hydrological features of the mine area. Since there is limited information on surface water parameters a hydrological study as part of the EIS is required.

Groundwater

Coal seam exploration has provided some data on the groundwater within the coal seams within MDL187. This data will be included in the hydrological study being undertaken as part of the EIS.

Existing Vegetation

During the initial survey conducted on 26 August to 27 August 2008 nothing was observed that would indicate an Environment Protection and Biodiversity Conservation (EPBC) referral is necessary. Current Regional Ecosystem mapping shows remnant communities of brigalow present adjacent to the school and at the northern end of the site as indicated in Figure 2.3. Neither of these communities is remnant brigalow as defined by either the national or state legislation. The definitions are:

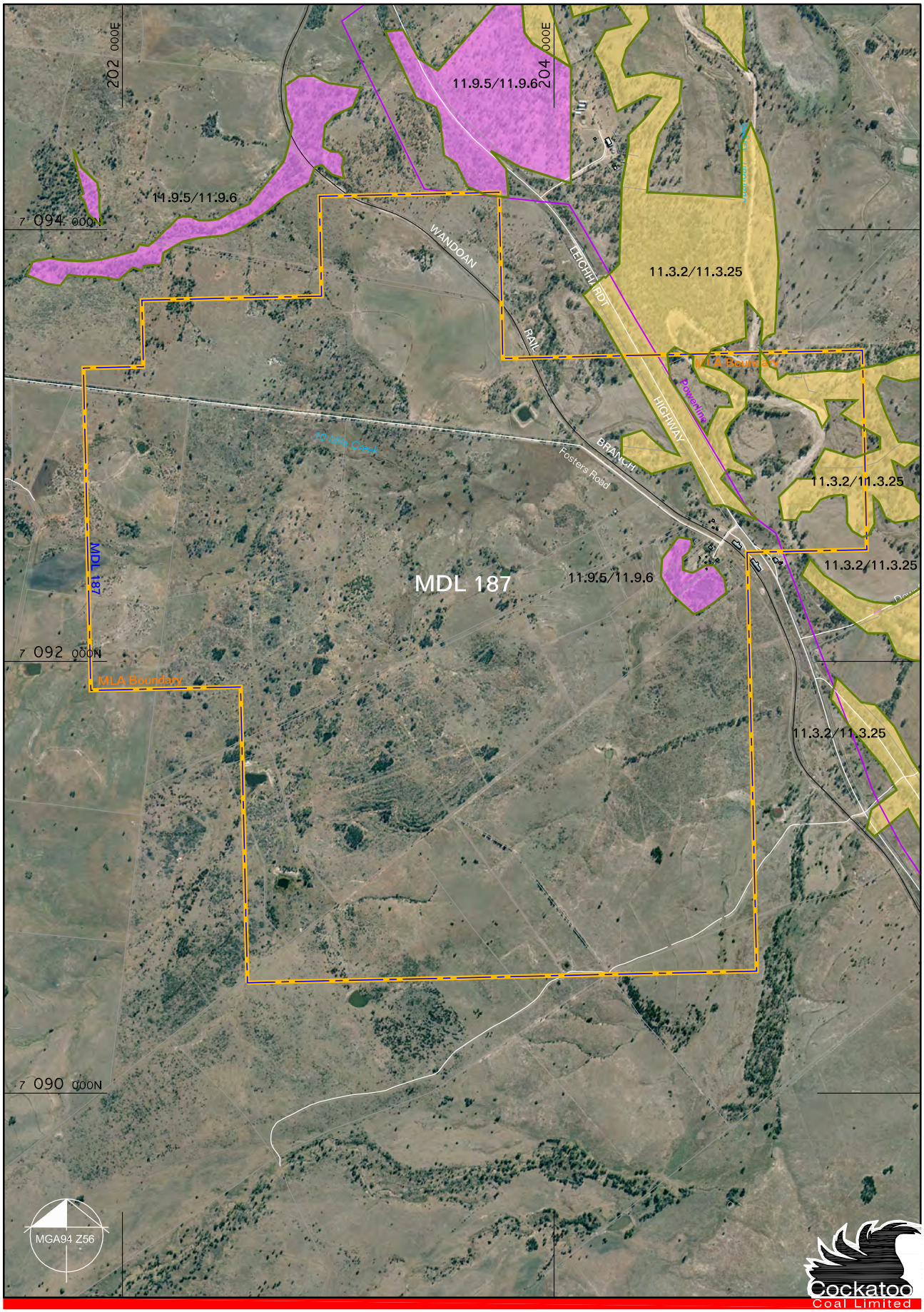
- From EPBC Protected Matters Report - Brigalow *(Acacia harpophylla* dominant and co-dominant) - a Threatened Ecological Community classified as Endangered under the EPBC Act 1999
- From Regional Ecosystem (RE) mapping (QLD EPA 2005 with current amendments) - mosaics (combinations) of two different Endangered (under the Vegetation Management Act 1999) Regional Ecosystems. Their short descriptions from the Regional Ecosystem Description Database are in brackets: remnant brigalow-belah (RE 11.9.5 *Acacia harpophylla* and/or *Casuarina cristata* open forest on fine-grained sedimentary rocks) and remnant yarran (RE 11.9.6 *Acacia melvillei* ± *A.harpophylla* open forest on fine-grained sedimentary rocks). Yarran is another wattle (like brigalow, with smaller "leaves").

The mapped remnant adjacent to the school is highly disturbed and consists of a range of species including eucalypts which are not characteristic of RE 11.9.5 or RE 11.9.6. Height and cover are also inconsistent. Some brief measurements were recorded but a more formal assessment would be needed to support an RE map modification.

The mapped remnants at the northern end of the site are not characteristic of RE 11.9.5 or RE 11.9.6. The eastern most one is remnant dominated by poplar box *(Eucalyptus populnea)* and is consistent with RE 11.3.2. This RE is classified as Of Concern under the Vegetation Management Act but is not a Threatened Ecological Community under the EPBC Act. The western most one is non-remnant within the site due to its highly disturbed low and open structure and its original RE type is unclear. A more formal assessment of these two mapped remnants would be needed to support an RE map modification.

There were a number of small patches of belah *(Casuarina cristata* - falls into RE 11.9.5) distributed across the site. These patches were generally not large enough to be mapped at the minimum scale determined from Queensland Herbarium methodology (on which the RE mapping is based) and were in poor condition due to exposure beneath the canopy from abrupt cleared edges. It is possible that a couple of the patches could be considered large enough to be mapped but their condition would also have to be good. This is considered unlikely but worth checking when subsequently visiting for detailed sampling of other areas. Although formally recognised as non-remnant, they should be conserved wherever possible. They should be mapped at the property scale so that the cumulative area of small patches removed can be calculated in order to offer an offset area of similarly unmapped belah elsewhere or offset with a similar area of revegetation/rehabilitation of this community.

A couple of very small unmappable patches of yarran (from RE 11.9.6) were also observed in flower (but not confirmed) a few hundred metres northwest from the school.



Cockatoo Coal Limited

0 500m

Legend

MDL 187

Proposed MLA

ERE Area (EPA Redata 2003)

Endangered. Dominant

Of Concern. Dominant

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FIGURE 2.3

Current Vegetation Map

A large amount of brigalow regrowth is present on site, mainly in the southwest corner. Height estimates of this regrowth in various locations found that none of this regrowth could be regarded as sufficiently advanced in height to be classified as remnant. A few remnant mature trees remain onsite as an indicator that the original brigalow communities were much taller.

A small creek lined with medium to large blue gum *(Eucalyptus tereticornis)* was observed extending for a distance of several hundred metres in the central north of the site (approximately E202800 N7093000). An offset strategy similar to the belah communities should be developed.

An *ad hoc* search for Rare and Threatened species during the survey did not find any listed species. The five species listed under the EPBC Protected Matters Report (5km radius search) consisted of one tree and four shrub/groundlayer species. The tree (ooline - *Cadellia pentastylis)* would have been conspicuous. The other species, although more cryptic, were unlikely to be present due to the dominance of buffel grass *(Cenchrus ciliaris).* An additional three species, Rare or Threatened at the state level (Nature Conservation Act 1992) were listed from a Wildlife Online search (collections or sightings recorded by Queensland EPA) within a 20km radius of the site. None of these species were observed and they are unlikely to occur onsite due to the heavy clay soils present.

No serious weed infestations were observed onsite.

A long line of poplar box in the southeast of the site is too narrow to be considered remnant and is not mapped as such.

The remnant RE communities in the northeast corner of the site, on the eastern side of the highway, are correctly mapped. They consist of poplar box floodplains (11.3.2) and riparian forest dominated by blue gum (11.3.25). Much of this area is a reserve.

Fauna

Terrestrial, avian and aquatic fauna are expected to be typical of the central Surat Basin. While a detailed fauna survey is yet to be undertaken it is considered unlikely for there to be threatened fauna. Habitat useful to a wide range of faunal species is not evident. Desk surveys and field studies will be required.

2.1.3. DOCUMENTARY EVIDENCE THAT THE APPLICANT MAY ENTER THE LAND TO WHICH THE PROJECT RELATES TO CARRY OUT THE NECESSARY STUDIES FOR THE EIS

All EIS studies necessary for the mining development will be undertaken on MDL187.

CCL through its wholly owned subsidiary SCPL holds MDL187 and exploration tenements for coal over adjacent areas as indicated in Figure 1.1.

All permits to enter the major landholdings on MDL187 are held by SCPL and exploration activities have been undertaken on the properties over recent years.

One property has been purchased by SCPL and discussions with adjacent landholders on compensation and purchase are continuing.

2.1.4. TENEMENT DETAILS FOR THE MINING PROJECT

SCPL plans to apply for a ML for the proposed mining project over MDL187 during the last quarter of 2008. CCL has undertaken extensive exploration at Woori and its Dingo/Wonbindi projects and in 2008 acquired the additional and adjacent areas in the Surat Basin.

As indicated in Section 1.2 the Company's Surat Basin projects comprise:

- Woori project (MDL187)
- The Surat project (EPCs 813, 796, 1041, 1135, 1136, 1170 and EPCAs 1134 and 1278)
- The Kingaroy project (EPC882)
- The Condamine project (EPC963 and EPC1130)
- The Injune project (EPC1017 and EPC1018)
- A 20% interest in an UCG project with Cougar over EPC1118.

2.1.5. NAME AND ADDRESS OF EACH PERSON THE PROPONENT PROPOSES AS AN AFFECTED PERSON FOR THE PROJECT

Refer to Section 6.1.

2.1.6. NAME AND ADDRESS OF EACH PERSON THE PROPONENT PROPOSES AS AN INTERESTED PERSON IN THE PROJECT

Refer to Section 6.2.

2.1.7. STATEMENT OF HOW THE PROPONENT PROPOSES TO CONSULT WITH THE AFFECTED AND INTERESTED PERSONS

SCPL has a presence in Miles with its resident geological and exploration administration team in the exploration office. Extensive consultation has been

undertaken with all landowners directly affected by drilling and compensation agreements are in place with all affected landowners.

During the EIS process a wider community consultation will take place to ensure that all relevant stakeholders are aware of the project and have the opportunity to comment on issues of relevance to them.

A community and stakeholder consultation plan will be enacted during the EIS process to provide information and to enable the community to directly contact the Woori project team and raise issues and concerns that the community may have.

The methodology for the consultation strategy for the proposed project will be designed to inform and incorporate the views of the following groups in the community:

- Referral bodies
- Other government agencies
- Elected representatives
- Landholders
- Special interest and community groups.

The proposed consultation strategy may involve the following activities:

- Referral Bodies

Site visits, where appropriate, will be held for the referral bodies and will include presentations and discussions on all issues relevant to the proposal followed by field inspections.

- Other Government and Semi-Government Bodies

The proposal will be discussed with these groups to impart a general awareness of the proposal and comments and feedback will be incorporated into the project design wherever practical.

- Representative Bodies

Individual meetings will be held with the State Government representative of the electorate. Other State and Federal representatives will be consulted as necessary.

- Landholders and Neighbours

The landholders and near neighbours are aware of the project proposal and further discussions will be conducted individually with the landholders during the development of the project. Landholders concerns will be taken into account in the design and construction of the project.

- Local Community Groups

Representatives of community groups with a specific interest e.g. the local Landcare Group will be consulted to obtain comments which will be incorporated into the design wherever practical.

- Aboriginal Representative Bodies

Discussions will be held with local Aboriginal people concerning the project. Discussions will focus on the impacts of the project on cultural heritage materials and values.

2.1.8. ENVIRONMENTALLY RELEVANT ACTIVITIES

At this early stage of the project, is it anticipated that there will be two Environmentally Relevant Activities ERAs). They are:

1. ERA15(b) Sewage treatment works having a peak design capacity to treat sewage of 100 or more equivalent persons but less than 1,500 equivalent persons
2. ERA75(b)(i) Waste disposal – operating a facility for disposing of regulated waste (other than limited regulated waste) whether alone or in combination with any waste, if the facility is designed to receive waste at the rate of less than 50,000t a year.

2.1.9. PROPOSED SOURCE OF WATER FOR THE PROJECT INCLUDING APPROXIMATE VOLUMES

It is estimated that at 6Mtpa ROM production rate the water requirement will be 1,500Mlpa.

The demand is predominantly water required for coal preparation and for haulroad dust suppression.

Great Artesian Basin Borefield

One water supply option being considered is the establishment of a borefield to tap groundwater in the well-known Precipice Sandstone Aquifer of the Great Artesian Basin. Test drilling and modelling/simulation of the reservoir and its impact on the aquifer and current users is required as a part of the groundwater licence application for such a proposed borefield.

Dawson River

An alternative to groundwater under consideration is by pipeline from the proposed Nathan Dam on the Dawson River.

The Nathan Dam, if built, would be accessed by the construction and operation of a 110km long pipeline to Woori. Routes for the pipeline include the Surat Basin Rail corridor.

Construction of the Nathan Dam is dependent on Commonwealth and State Approval. A feasibility study

is currently underway by SunWater into the Nathan Dam financed by the Queensland Government.

An alternative source is the raised Glebe Weir which is upstream of the proposed Nathan Dam.

Impact assessment for the Nathan Dam construction or Glebe Weir raising could be undertaken by SunWater in a parallel process to the Woori project.

Coal Seam Gas Water

Water extracted by coal seam gas (CSG) operations could be available to the Project.

Water quality in some instances is considered not suitable for use without treatment or dilution.

CSG projects and the associated petroleum tenure are indicated on Figure 2.4.

Discussions with CSG companies on quantity of water, quality and availability are underway and will be part of the considerations for the overall water supply and utilisation model.

Overland Flow

Capturing overland flow is an option subject to approvals but requires hydrological modelling with necessary reservoirs to consider overall capability in dry times.

The WMS will include at least some capture of overland flows as well as runoff from disturbed areas within the mine.

Groundwater

While exploration drilling has provided some data on groundwater the possible magnitude of flows into the opencuts is considered at this stage to be low. A groundwater study is part of the EIS.

2.1.10. PROPOSED POST MINING LAND USE INCLUDING ANY NON-BENEFICIAL LAND USE THAT WILL REMAIN

The mining operation will involve removal of overburden to expose coal results in the formation of elevated landforms since the volume of overburden increases after blasting and removal.

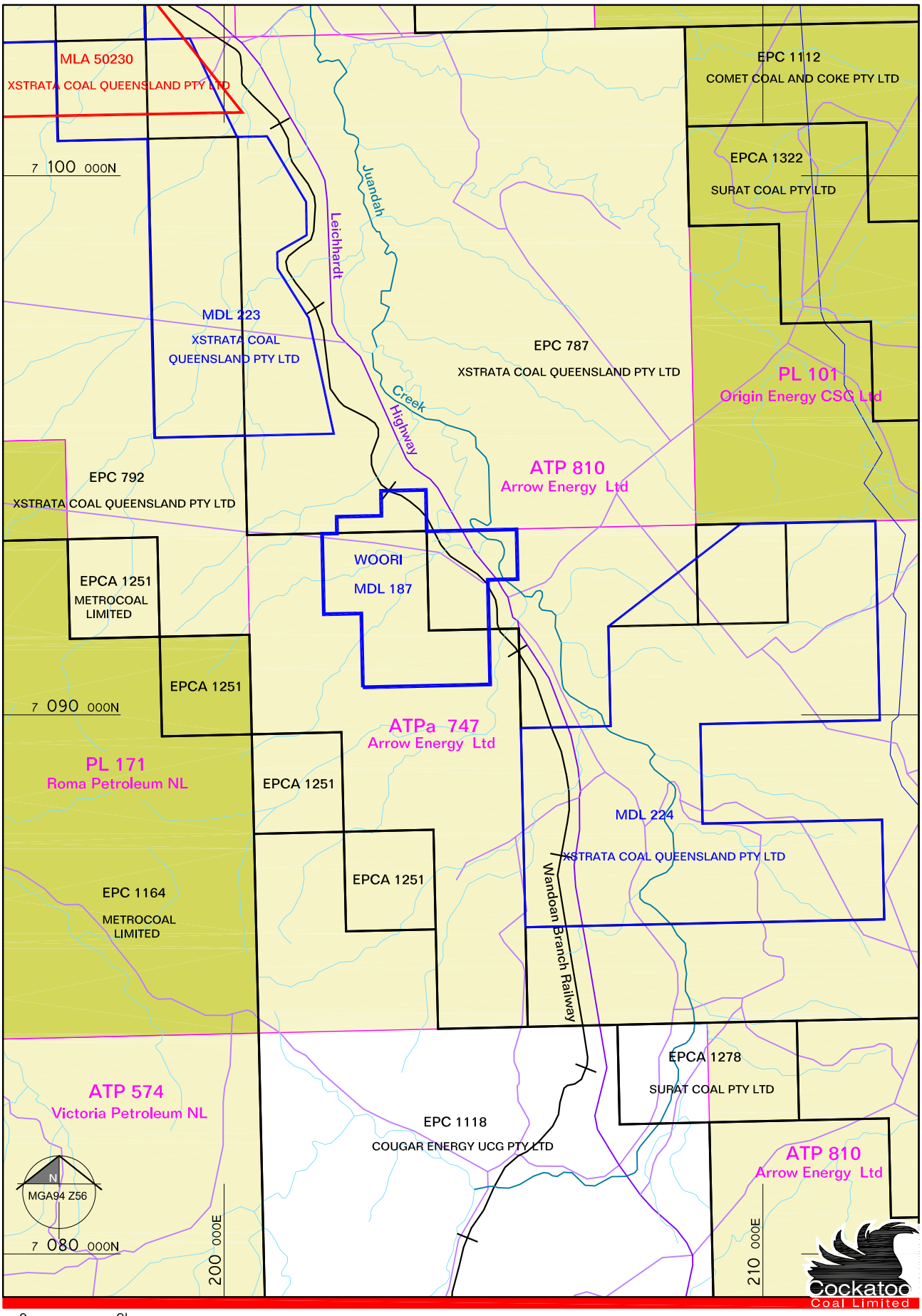
These spoilpiles will be progressively rehabilitated with placement of topsoil as soon as possible to maintain viable seeds and microorganisms in the soil.

The formation of long-term stable and productive land with land capability and land use options approximating the pre-mining condition will be part of the Environmental Management Plan (EMP) to be included in the EIS.

Proposed monitoring of rehabilitated areas will be outlined in the EIS and EMP.

With progressive rehabilitation the total area of land disturbed by mining at any one time will be minimised.

Post mining landscape planning is part of the EIS with water retention structures and land capability statements included in the rehabilitation and decommissioning planning.



Petroleum and Coal Mining Tenure

FIGURE 2.4

3. GEOLOGY

3.1. EXPLORATION

A total of 14 holes had been drilled in the area prior to acquisition by CCL.

A three phase drilling program has been completed with a fourth phase in progress.

Phase 1 - Completion of 1,600m of drilling in a 19 hole program.

Phase 1 program was carried out on two traverse lines at 250m intervals to provide a structural and stratigraphic framework on which to base a more comprehensive program designed to provide a structural and stratigraphic framework for a Phase 2 drilling program.

Phase 2 – commenced in October 2006 and completion of 13,680m of drilling in a 115 hole Phase 2 resource delineation drilling program.

This second phase of drilling was over the entire area with non-cored holes drilled on a 250m grid pattern. The object of this program was to establish the number, thickness and structure of seams over the area and to carry out a preliminary resource assessment.

The second phase of drilling, comprising 115 holes totalling 13,679.5m to depths of up to 120m was completed during the year. Geophysical logs were run in all but nine of the holes and these logs have provided an excellent basis for establishing control on the depth, thickness of each seam and to assist in seam correlation. The logs also provide a subjective indication of coal quality. The holes not logged were for reasons of inaccessibility due to rain, blockages in the hole or because of the presence of gas. Available drilling results are reported in full and are published on CCL's website.

Phase 3 - Drilling of 30 part-cored holes at Woori to provide coal quality data.

The third phase of drilling was commenced in mid May 2007 designed to provide coal quality data from part cored holes at 500m centres to enable the reported Indicated Resources to be upgraded to a Measured Resource status.

A total of 30 holes were drilled adjacent to already completed open holes that had been geophysically logged. Within each borehole selected, coring over the main coal seam intervals was undertaken.

A program of 32 shallow (+20m) depth of weathering of the coal seams (oxidation or line of oxidation [LOX] line holes) was also undertaken.

Cores were obtained of each of the five recognised seams in the Juandah Coal Measures. Logging of the core has shown that each seam may contain a number of non-coal bands of varying thickness, which divide the coal into a number of plies. These individual plies can be recognised over a broad area of the deposit and sampling of the cores was carried out on the basis of these plies.

The location of drillholes is indicated on Figure 3.1.

Further Exploration at Woori

Following the completion of the 30 hole part-core and shallow oxidation drilling program in September 2007, consultants Mincom Pty Ltd have been tasked with the geological and resource modelling of the Woori deposit.

A new geological model of the Woori deposit is now being generated which will include all the coal quality data now available. This model will be the basis for a feasibility study. For this purpose the modelling will be carried out on a ply-by-ply basis, rather than whole of seam basis, to allow for the running of selective mining options. Consequently, a more detailed breakdown of the coal seam stratigraphy is required to be defined.

3.2. REGIONAL GEOLOGY

The Surat Basin includes the Middle Jurassic strata of the Walloon Sub-Group including Taroom Coal Measures with Juandah Coal Measures.

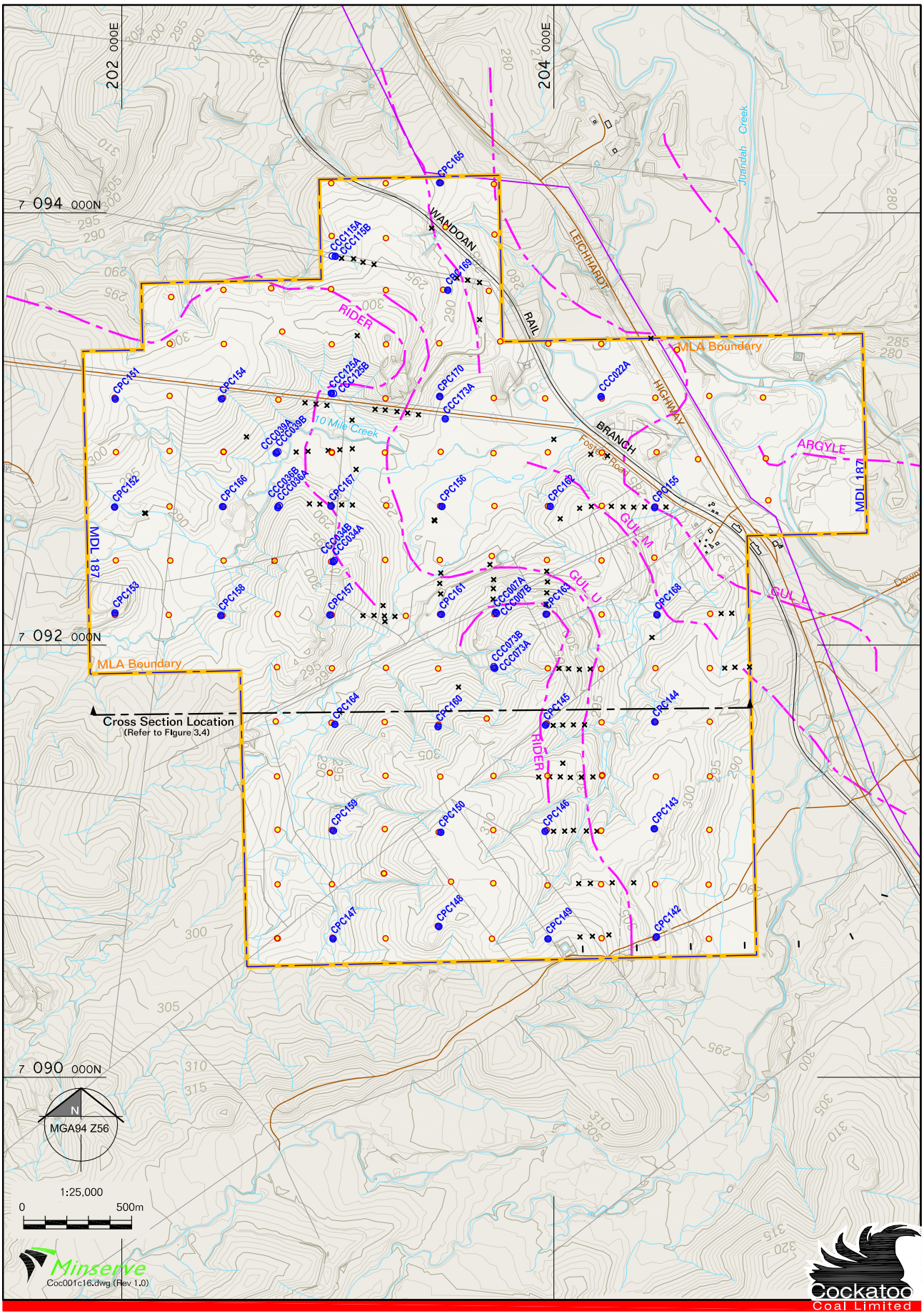
A simplified stratigraphic column for the Walloon Coal Measures is indicated in Figure 3.2.

The Juandah Coal Measures are the upper most formation of the Walloon Sub-Group and varies between 50m and 200m in thickness and consists of sandstones, mudstones, siltstones and coal.

The coal seams of the Juandah Coal Measures are in the form of lenticular pods, which is a characteristic of the coal measures.

Strata are unconformably overlain by poorly consolidated Tertiary sediments consisting mainly of ferruginous sandstones and light coloured clays.

Tertiary sediments vary in thickness between 5m and 15m and become thinner to the north and east.



Legend

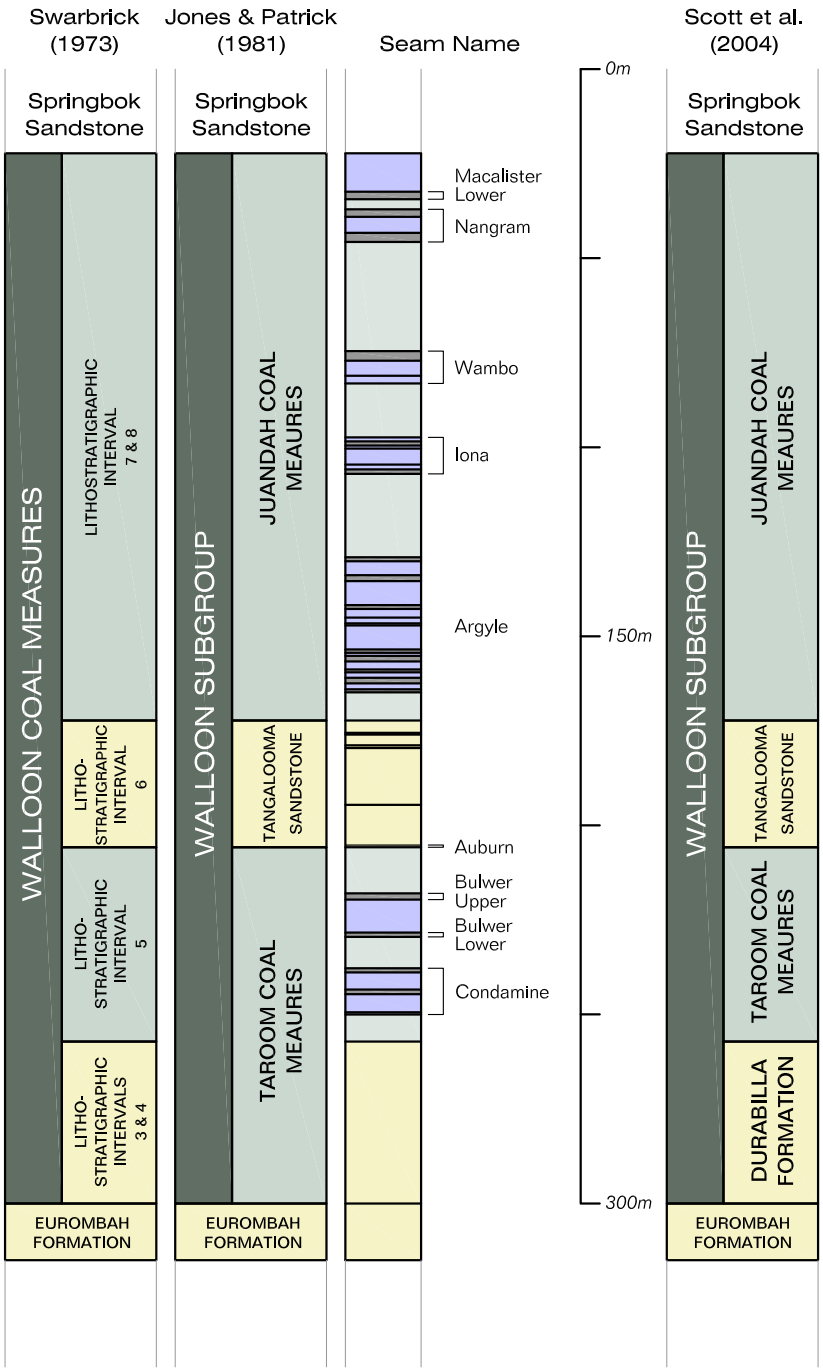
- MDL 187
- MLA
- 315 Topography
- Rivers; Creeks
- Railway
- Major Roads
- Secondary Roads

Drill Holes

- Partially Cored Holes
- Open Holes
- LOX Holes
- Seam Subcrops

FIGURE 3.1

Drill Hole Location Plan



After Scott, S.G., Anderson, B., Crosdale, P.J., Dingwall, J.A., Leblang, G., 2004
Eastern Australasian Basins Symposium II. Petroleum Exploration Society of Australia, special publication, pp. 345-355

Cockatoo Coal Limited

0 50m

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Simplified Stratigraphic Column for the Walloon Subgroup

FIGURE 3.2

3.3. DEPOSIT GEOLOGY

MDL187 is located in the northern portion of the Surat Basin. Four major Jurassic sedimentary stratigraphic units are present including the overlying Gubberamunda Sandstone and the basal Hutton Sandstone; the Injune Creek Group which lies above the Hutton Sandstone consists of the Westborne Formation, the Springbok Sandstone, the Walloon Sub-Group, and the Eurombah Formation.

MDL187 covers an area of approximately 920ha and contains a full sequence of the coal bearing Walloon Sub-Group. The Juandah Coal Measures, the uppermost formation within the sub-group, sub-crops over the area.

Five principal coal seams were recognised from the drilling (Table 3.1) and the stratigraphy established from this exploration has been maintained in the subsequent modelling work. The seams maintain a regional gentle dip to west and there is no evidence of any major structural dislocations. Coal quality within plies is consistent across the deposit as indicated generally in Figure 3.3. Structural modelling also demonstrates consistent characteristics within seams across the deposit as indicated in Figure 3.4.

Table 3.1
Coal Seams Present Within the MDL187 Woori Deposit

Seam	Code
Guluguba Upper Rider	GULR
Guluguba Upper	GULU
Guluguba Middle	GULM
Guluguba Lower	GULL
Argyle	ARG

3.4. COAL QUALITY

The coal is bituminous in rank, low ash and high volatile. A program of analysis for quality of the individual samples from selected coal sections in the cored holes obtained during the exploration is nearing completion.

Analyses of the coal included Moisture (%), Ash (%), Volatile Matter (%), Fixed Carbon (%), Specific Energy (SE MJ/kg), Total Sulphur (TS %) and Relative Density. Immediate roof and floor samples of each of the coal plies were analysed for Moisture Ash and Relative Density. A total of 907 individual sample analyses have been carried out to date.

The analytical data will be reviewed in detail when finalised to assess which coal and shale plies will be composited for float/sink and other quality tests.

A preliminary review of the analytical data indicates that, as is typical of coal deposits in the Walloon Coal Measures, there is considerable variability in coal quality both between plies and within plies. Further analyses and detailed modelling of the deposit is required before typical product specifications can be determined.

Borehole CPC163 (Figure 3.2) intersected all five recognised seams and by way of example the quality profiles of each of the seams are shown in the attached figures. In this hole the GULR Seam comprises two main plies with ash contents of 23.7% (1.54m thick) and 27.6% (0.35m) respectively. The GULU Seam has an ash content of 17.4% over 4.06m. The GULM Seam comprises two plies with ash contents of 8.8% (0.36m) and 33.2% (0.87m). Seven individual plies are recognised in the GULL Seam range in thickness between 4.17m and 0.16m. The thickest interval has an ash content of 10% whilst the other plies have ash values of between 8.5% and 35.7%. The Argyle Seam in CPC163 contains two recognisable plies with ash contents of 8.7% (0.95m) and 8.2% (0.42m).

SE varies with the ash content and ranges from 17.07MJ/kg up to 27.01MJ/kg. TS is most commonly $<$0.35%.

The weighted average quality values for the entire hole for a total coal intersection of 14.8m are 17.76% Ash, an SE of 22.4MJ/kg and a TS of 0.32%. By way of comparison CPC166 which intersected all seams except for the Argyle Seam contained total coal of 13.27m are 22.5% Ash, 20.27MJ/kg and a TS of 0.3%.

While further analyses and detailed modelling of the deposit is required before typical product specifications can be determined, the expectation is that a typical analysis would be:

- Ash (a.d.): 14.0%
- Equilibrium Moisture (a.d.): 8.0%
- Volatile Matter (a.d.): 40%
- Sulphur (a.d.): 0.4%
- Nitrogen (d.a.f.): 1.0%
- Calorific Value (a.d.): 6,000Kcal/kg
- HGI: 38.

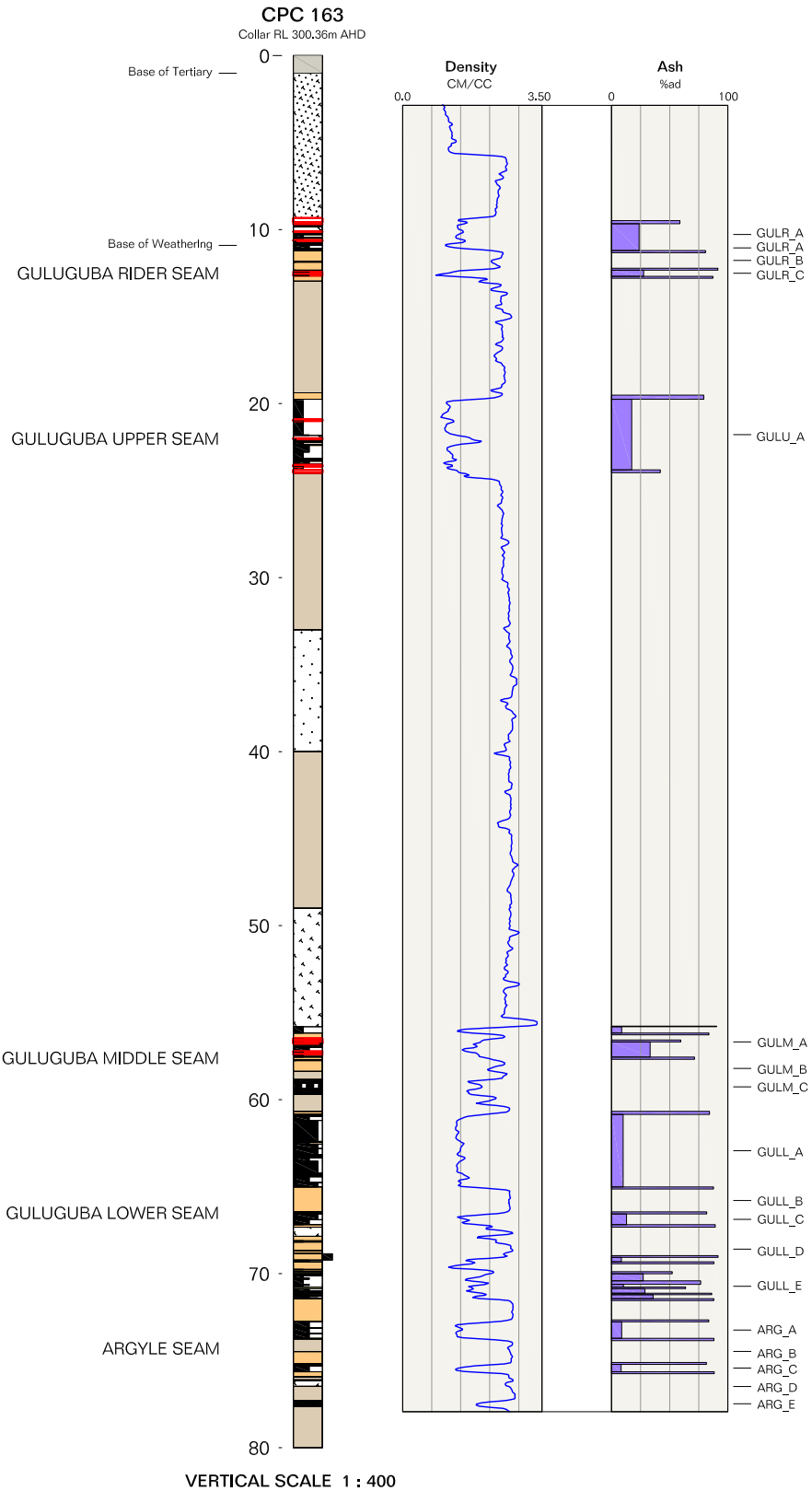

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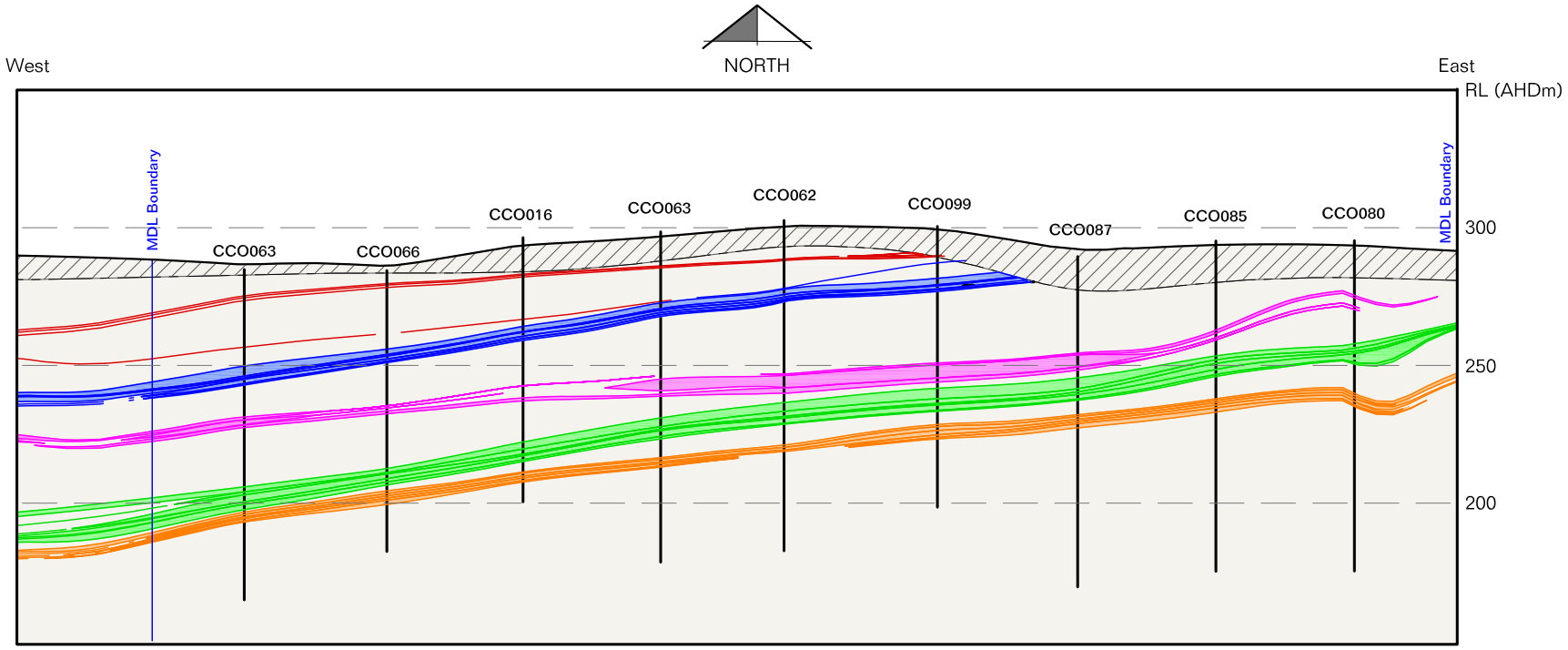
FIGURE
CPC163 Downhole Summary 3.3



Vertical Scale 1:2500

0 50m

Horizontal Scale 1:12,500

0 250m

Legend

- Weathering
- Guluguba Rider Seam
- Guluguba Upper Seam
- Guluguba Middle Seam
- Guluguba Lower Seam
- Argyle Seam

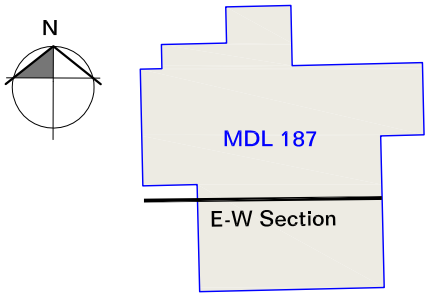


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FIGURE 3.4

Typical E-W Cross Section of Deposit

3.5. GEOLOGICAL MODEL

The production of the model and report involved a multi-staged process, which included but is not limited to the following steps:

- Correlation of seams and plies. This had not been undertaken previously for the dataset
- Developing a sensible naming convention for modelling
- Load and validate the data using Mincom MineScape software
- Generate and interrogate model (both structural and quality models)
- Generate plans and resource figures from validated model
- Generate report outlining process.

A total of 140 chip holes were used to create the structural geological model out of a total of 186 boreholes that exist within the database. Open holes were drilled to gather information on the stratigraphy of the area. There were 29 cored holes drilled, twinning the chip holes from which coal samples could be taken for coal quality analysis. The coal quality model was built on the 29 core holes.

The methodology of the structural model has been to define the non-coal partings as subseams and include them in the schema. Seams were divided into five subseams (A-E). The A, C, E and G subseams are dominantly coal and the B, D and F subseams are dominantly stone. For the quality model these intervals were assigned to the cored boreholes (CPC series).

Additional open holes, positioned to infill areas with limited geological information (sites of open holes not geophysically logged) are currently being drilled.

Further to this, core drilling for coal quality purposes is being undertaken in the northeastern area of MDL187, where the proposed re-alignment of the railway easement will provide additional coal resources as indicated in Figure 3.1.

This area, while currently covered by open hole drilling, has been previously excluded from any resource calculations. The current coal quality drilling will enable the structural and coal quality model to be expanded, thereby adding to the existing JORC-compliant measured resource.

Washability Analysis

Following on from the generation of the overburden ratio plan as part of the modelling process, a large diameter core drill program is underway to provide samples for washability analysis as well as proximate analytical data to further enhance the coal quality model. Detailed sampling, in consultation with geophysical logs, is being conducted, with samples to be dispatched to Bureau Veritas (formerly CCI Newcastle) in the coming weeks.

The coal quality results are presented in Table 3.2, Table 3.3 and Table 3.4.

3.6. LINE OF OXIDATION DRILLING

In order to maximise the coal resource at Woori, high resolution LOX drilling is being undertaken. Holes will be positioned on the existing 250m open hole grid. The holes will be geophysically logged and surveyed, thereby enabling the results to feed directly into the structural and coal quality models.

The LOX line is indicated in Figure 3.1.

Table 3.2
Woori Coal Quality Summary

Seam	Ratio	Volume (m^3)	Area (m^2)	Mass (tonnes)	Average Thickness (m)	FC	IM	RA	RD	SE	TS	VM
GULR_A		58,252	15,342	92,455	3.80	28.34	9.91	35.16	1.59	17.59	0.36	29.75
GULU_A		48,436	15,342	68,016	3.16	35.58	9.72	18.45	1.40	23.42	0.34	37.14
GULU_C		41,737	15,342	63,245	2.72	33.30	8.97	28.89	1.52	20.88	0.27	30.15
GULM_A		34,623	30,202	53,451	1.15	31.99	9.82	33.48	1.54	20.17	0.35	32.18
GULM_C		21,724	15,342	33,672	1.42	29.59	9.96	33.49	1.55	19.09	0.35	31.22
GULL_A		64,171	30,202	88,111	2.12	36.95	9.60	14.82	1.37	24.20	0.26	39.03
GULL_C		34,989	30,202	54,905	1.16	37.64	8.79	33.53	1.57	24.55	0.33	38.94
GULL_E		46,221	30,202	71,256	1.53	33.87	9.62	31.93	1.54	22.12	0.31	35.95
ARG_A		45,858	30,202	68,917	1.52	32.89	9.12	25.39	1.50	22.30	0.33	36.39
ARG_C	Less than 2	20,133	15,342	27,995	1.31	36.45	9.07	18.03	1.39	24.14	0.32	38.52
ARG_E		18,978	15,342	25,889	1.24	35.42	8.60	16.44	1.36	24.36	0.37	39.03
Subtotal		**435,122**		**647,913**				**26.33**				
GULR_A		1,163,148	537,740	1,842,601	2.16	28.37	9.97	35.07	1.58	17.49	0.36	29.28
GULR_C		54,115	133,613	81,678	0.41	31.34	9.81	28.77	1.51	18.99	0.33	30.08
GULU_A		2,394,342	802,851	3,344,723	2.98	35.46	9.61	17.79	1.40	23.31	0.34	37.76
GULU_C		1,226,138	761,874	1,831,690	1.61	33.23	9.31	26.98	1.49	21.05	0.29	31.99
GULU_E		399,240	603,482	578,738	0.66	31.60	9.88	24.47	1.45	20.70	0.27	34.32
GULM_A		915,192	786,552	1,432,476	1.16	31.45	8.95	34.74	1.57	20.17	0.35	32.29
GULM_C		563,036	741,986	880,848	0.76	29.34	9.89	35.49	1.56	18.89	0.35	30.95
GULL_A		2,021,721	817,237	2,862,176	2.47	35.06	9.88	19.90	1.42	23.00	0.28	36.93
GULL_C		1,116,968	817,237	1,879,778	1.37	35.73	10.16	38.81	1.68	23.73	0.32	38.08
GULL_E		896,339	726,713	1,405,578	1.23	33.75	9.96	31.25	1.57	21.98	0.31	35.15
ARG_A		638,669	501,451	928,732	1.27	35.64	9.54	19.96	1.45	24.14	0.34	39.08
ARG_C	Between 2 & 3	449,016	478,518	623,268	0.94	36.42	9.28	17.36	1.39	24.15	0.33	38.57
ARG_E		209,474	277,002	286,161	0.76	35.38	8.58	16.64	1.37	24.27	0.37	38.87
Subtotal		**12,047,397**		**17,978,447**				**26.71**				
GULR_A		471,095	444,075	740,956	1.06	28.47	10.15	34.14	1.57	17.54	0.36	29.40
GULR_C		42,919	186,457	65,212	0.23	31.47	9.61	29.38	1.52	18.80	0.32	29.55
GULU_A		3,240,871	1,298,788	4,532,662	2.50	35.65	9.45	18.05	1.40	23.30	0.35	37.52
GULU_C		1,496,713	1,258,715	2,212,939	1.19	33.35	9.24	26.10	1.48	21.22	0.31	32.67
GULU_E		732,551	1,105,196	1,075,647	0.66	31.99	9.09	26.64	1.47	20.92	0.33	34.18
GULM_A		1,463,063	1,663,100	2,215,644	0.88	32.43	9.43	30.48	1.51	20.85	0.36	33.49
GULM_C		1,076,720	1,438,068	1,620,965	0.75	32.27	9.93	28.76	1.51	20.48	0.34	32.80
GULL_A		5,177,452	1,823,048	7,307,326	2.84	35.46	9.51	19.74	1.41	23.26	0.28	37.37
GULL_C		2,146,348	1,806,987	3,411,656	1.19	35.95	9.61	29.30	1.59	23.80	0.35	38.05
GULL_E		2,127,847	1,720,560	3,316,853	1.24	34.59	9.57	29.44	1.56	22.73	0.35	36.24
ARG_A		1,434,788	1,344,420	2,052,562	1.07	35.69	9.18	19.21	1.43	23.89	0.33	38.41
ARG_C	Between 3 & 4	803,965	1,180,596	1,104,640	0.68	37.46	9.03	15.60	1.37	24.96	0.35	39.63
ARG_E		448,213	783,378	611,479	0.57	37.77	7.68	14.43	1.36	25.22	0.40	40.08
Subtotal		**20,662,546**		**30,268,540**				**24.71**				
GULR_A		271,485	234,000	441,944	1.16	27.68	9.02	38.51	1.63	17.65	0.34	30.76
GULR_C		50,120	168,642	76,607	0.30	31.58	9.43	29.91	1.53	18.64	0.31	29.08
GULU_A		1,980,544	898,168	2,788,394	2.21	35.78	9.64	18.57	1.41	23.20	0.34	36.78
GULU_C		1,183,451	922,427	1,746,700	1.28	32.78	9.22	26.37	1.48	20.85	0.29	32.48
GULU_E		496,230	702,510	728,668	0.71	31.93	9.04	26.46	1.47	20.86	0.31	34.06
GULM_A		1,082,700	1,400,348	1,639,111	0.77	32.86	9.37	30.33	1.51	21.22	0.37	34.28
GULM_C		994,598	1,313,441	1,508,016	0.76	31.98	9.71	29.61	1.52	20.42	0.33	32.79
GULL_A		4,374,039	1,802,325	6,187,186	2.43	35.32	9.39	20.14	1.41	23.13	0.29	37.14
GULL_C		2,104,059	1,788,871	3,190,926	1.18	36.14	9.27	24.10	1.52	23.78	0.36	37.99
GULL_E		1,733,813	1,687,193	2,698,516	1.03	35.45	9.38	27.89	1.56	23.39	0.38	37.26
ARG_A		1,623,060	1,732,676	2,399,185	0.94	35.38	8.95	22.42	1.48	23.57	0.34	37.90
ARG_C	Between 4 & 5	1,235,844	1,498,398	1,697,779	0.82	37.57	9.03	15.96	1.37	24.91	0.32	39.43
ARG_E		564,454	1,040,115	768,631	0.54	37.62	7.94	14.29	1.36	25.23	0.39	40.05
Subtotal		**17,694,399**		**25,871,662**				**24.97**				
GULR_A		100,615	92,484	165,744	1.09	27.49	8.66	39.89	1.65	17.84	0.32	31.75
GULR_C		13,339	37,959	20,407	0.35	31.60	9.40	30.00	1.53	18.61	0.31	29.00
GULU_A		1,060,224	535,882	1,497,711	1.98	35.54	9.57	19.33	1.41	23.10	0.34	36.52
GULU_C		649,847	532,509	967,329	1.22	33.09	9.03	26.50	1.49	20.95	0.30	32.26
GULU_E		202,031	385,979	297,782	0.52	33.62	8.81	26.11	1.47	21.63	0.37	34.02
GULM_A		537,220	705,573	806,959	0.76	33.13	9.09	28.61	1.50	21.54	0.36	35.03
GULM_C		378,254	585,019	571,331	0.65	32.48	9.53	29.13	1.51	20.65	0.32	33.06
GULL_A	Between 5 & 6	1,855,152	908,647	2,639,820	2.04	35.21	9.32	20.94	1.42	22.96	0.29	36.84

Table 3.3 (continued)
Woori Coal Quality Summary

Seam	Ratio	Volume (m^3)	Area (m^2)	Mass (tonnes)	Average Thickness (m)	FC	IM	RA	RD	SE	TS	VM
GULL_C		766,790	886,956	1,112,870	0.86	36.17	9.00	22.38	1.45	23.75	0.38	38.07
GULL_E		647,897	891,132	995,408	0.73	35.77	8.99	31.30	1.54	23.40	0.40	37.40
ARG_A		884,921	884,245	1,262,110	1.00	35.45	8.87	20.53	1.43	23.71	0.32	38.24
ARG_C		550,982	794,439	750,253	0.69	37.61	8.96	14.78	1.36	24.95	0.35	39.42
ARG_E		306,632	655,323	419,163	0.47	37.28	7.86	14.73	1.37	25.07	0.41	40.06
Subtotal		**7,953,904**		**11,506,888**				**24.94**				
GULR_A		6,736	15,183	10,569	0.44	27.88	9.93	33.95	1.57	17.30	0.36	29.01
GULR_C		772	2,711	1,181	0.28	31.60	9.40	29.99	1.53	18.61	0.31	29.01
GULU_A		886,174	549,205	1,247,853	1.61	35.47	9.08	19.19	1.41	22.98	0.33	37.41
GULU_C		721,941	549,205	1,043,319	1.31	34.04	9.19	22.24	1.45	21.61	0.31	34.87
GULU_E		316,319	513,784	466,503	0.62	34.29	8.45	25.82	1.47	21.74	0.35	33.44
GULM_A		371,480	571,442	553,281	0.65	32.57	9.16	26.80	1.49	20.96	0.35	34.01
GULM_C		348,318	526,553	523,881	0.66	32.10	9.40	29.44	1.50	20.47	0.34	32.98
GULL_A		1,015,018	695,572	1,458,999	1.46	35.03	9.68	22.80	1.44	22.68	0.30	36.20
GULL_C	Between 6 & 7	511,618	695,572	722,096	0.74	36.74	9.35	18.56	1.41	24.05	0.40	38.28
GULL_E		503,169	630,139	751,778	0.80	37.25	8.56	26.97	1.49	24.09	0.44	38.50
ARG_A		672,519	583,222	958,239	1.15	35.05	8.90	21.46	1.42	23.19	0.32	37.29
ARG_C		277,054	528,323	370,734	0.52	38.98	8.71	11.73	1.34	26.03	0.36	41.15
ARG_E		214,069	484,174	296,007	0.44	36.29	7.95	16.41	1.38	24.36	0.44	39.36
Subtotal		**5,845,187**		**8,404,441**				**23.49**				
TOTAL		**64,638,555**		**94,677,890**								
GULR_A		594	5,423	934	0.11	27.92	9.90	34.25	1.57	17.31	0.36	29.01
GULR_C		1,225	2,711	1,874	0.45	31.60	9.40	30.00	1.53	18.61	0.31	29.00
GULU_A		290,893	237,274	409,395	1.23	35.73	8.86	18.91	1.41	23.11	0.33	37.38
GULU_C		292,531	250,933	419,146	1.17	34.36	9.42	21.29	1.43	21.90	0.32	35.19
GULU_E		135,828	221,651	203,158	0.61	33.83	8.10	28.52	1.50	22.02	0.36	32.39
GULM_A		162,316	279,743	251,645	0.58	31.81	9.13	33.06	1.55	20.54	0.36	33.69
GULM_C		139,188	265,553	207,603	0.52	33.03	9.40	28.01	1.49	20.80	0.34	33.07
GULL_A		397,531	347,937	583,367	1.14	34.21	9.39	25.94	1.47	21.94	0.30	34.94
GULL_C	Greater than 7	212,766	317,796	299,900	0.67	37.03	9.13	18.72	1.41	24.26	0.37	38.45
GULL_E		209,606	279,878	307,605	0.75	36.30	8.69	24.14	1.47	23.76	0.41	38.37
ARG_A		197,431	283,480	284,344	0.70	35.44	8.85	22.78	1.44	23.31	0.33	37.24
ARG_C		108,469	227,722	151,712	0.48	38.25	8.70	19.50	1.40	25.42	0.35	40.03
ARG_E		64,101	154,548	88,429	0.41	36.70	7.67	15.99	1.38	24.61	0.42	39.64
Subtotal		**2,212,478**		**3,209,112**				**24.70**				
TOTAL		**2,212,478**		**3,209,112**								
TOTAL COAL		**66,851,033**		**97,887,002**								

Table 3.4
Average Ash Values Based on Overburden Ratio Category

Ratio Category	Average Ash	Weighted Average Ash (Weighted by Mass)
Less than 2	26.33	26.78
Between 2 and 3	26.71	26.64
Between 3 and4	24.71	23.69
Between 4 and 5	24.97	23.17
Between 5 and 6	24.94	22.93
Between 6 and 7	23.49	22.20
Greater than 7	24.70	23.59

Table 3.5
Average Ash Values by Seam for Overburden Ratios Less than 7:1

Seam	Average Ash
GULR_A	36.12
GULR_C	29.61
GULU_A	18.56
GULU_C	26.18
GULU_E	25.90
GULM_A	30.74
GULM_C	30.99
GULL_A	19.72
GULL_C	27.78
GULL_E	29.80
ARG_A	21.50
ARG_C	15.58
ARG_E	15.49

4. MINING

4.1. PROJECT DESCRIPTION

The proposed Woori Coal Mine will be an opencut mine with a projected production of up to 4Mtpa of export thermal coal, from 6Mtpa of ROM coal. It is planned to commence production in 2011 with an anticipated life of mining operations of 15 years and an overall project life of 30 years, potentially extended by regional resource development.

ROM coal from the mining operation will generally be processed in a CHPP to be constructed as part of the project. Prior to the commissioning of the CHPP a ROM coal product will be sold. Depending on quality, it is possible that some ROM coal will be bypassed at the CHPP, and sold directly into suitable markets. Product coal will be railed to Gladstone for shipment to overseas customers.

The conceptual project layout is presented in Figure 4.1.

It is unlikely that seams to be mined by CCL will contain any significant quantities of coal seam gas. This position is supported by the gas producer's focus on deeper seams which will not be affected by any proposed mining and which in turn will have no impact on CCL operations.

4.2. PROJECT MILESTONES

The present development schedule for Woori is based on the following major milestones:

- Mining Lease Application submitted
- Mining Development Plan completed
- Mining Lease granted
- Site construction commenced
- Mining operations commenced
- First ROM coal crushed
- First raw product railing
- First raw product shipment
- CHPP operational
- First processed coal railed after
- First processed coal shipped after.

4.3. SUMMARY OF COAL SEAM GAS OCCURRENCE

As yet there has been no specific testing for coal seam gas, either as to quantity or quality. It therefore cannot be definitively stated the coal seam gas does or does not exist at Woori. However, there is little likelihood of gas existing in commercial quantities.

The amount of gas released depends on such parameters as porosity, permeability, fracturing and adsorption properties of the coal. Much of the methane formed is liberated into overlying strata, where it can be trapped or lost, rather than adsorbed onto the coal particles. Given the shallow depth of the coal seams and the nature of the overburden any gas has probably been largely liberated from Woori coals.

It is suggested that the methane content of Woori coal within the proposed opencut would be considerably less than $1m^3$/tonne.

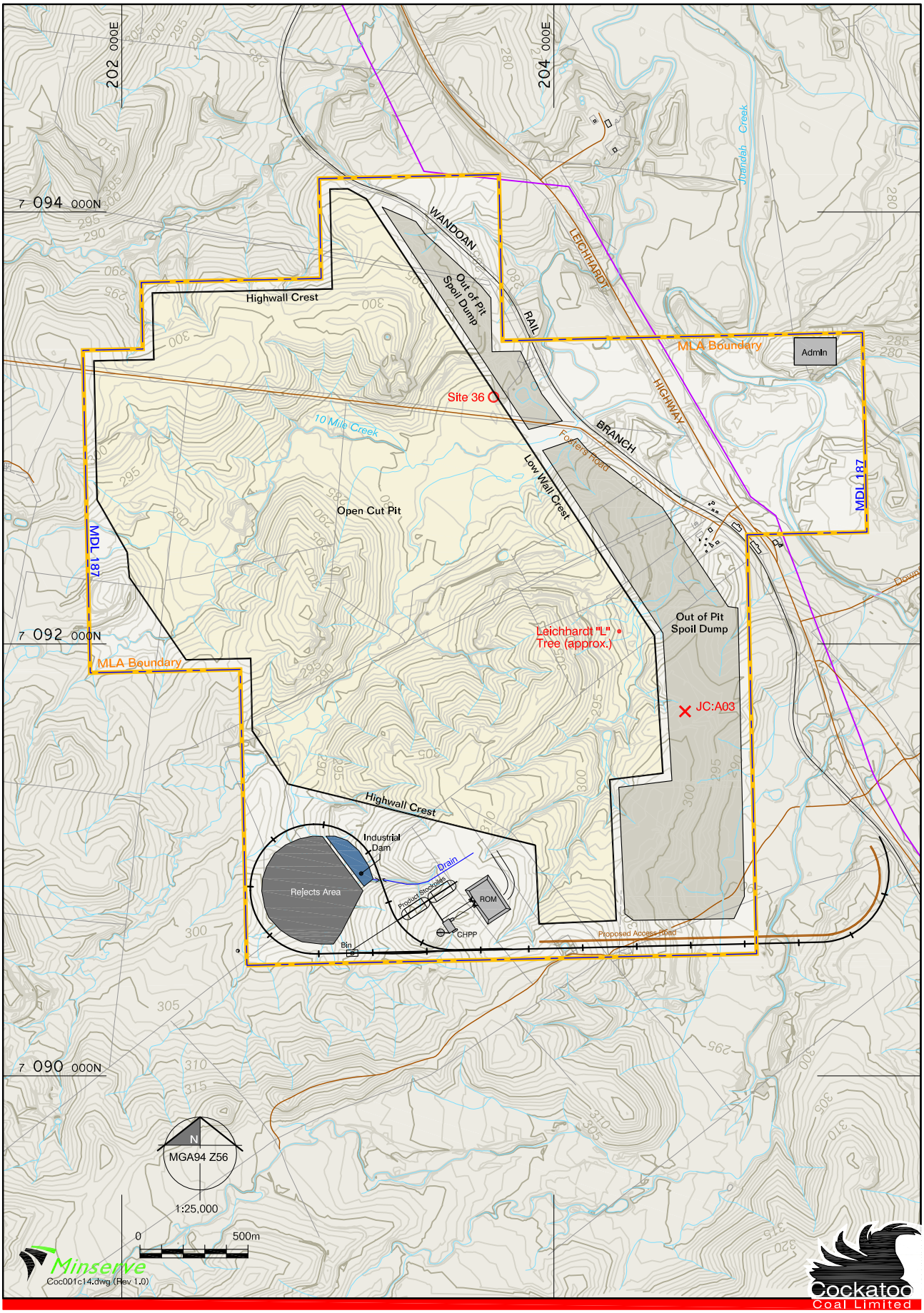
4.4. PROJECT APPROPRIATENESS

It is considered that the proposed mining plan is the most appropriate in the circumstances. The plan maximises the use of the economically viable sections of the resource while retaining the ability to access coal seam gas which may be available downdip of opencut mining. There are a number of points in favour of this view:

- Any likely commercial coal seam gas accessible
- Defined reserve able to be economically extracted by opencut methods
- Relatively low stripping ratios and a geologically simple deposit
- Coal capable of upgrading to an export quality product
- High probability of establishing long term customer relationships
- Considerable existing rail and port infrastructure
- A quality thermal coal product in an expanding international market
- Project infrastructure and out-of-pit dumps have been located in such a way as to avoid alienating coal.

Income to the state and state agencies during the operational phase of the project is estimated to be:

	$Million
Coal royalties approximately	180
Rail freight approximately	305
Taxes and other expenses approximately	40
Total	525



Legend

- MDL 187
- MLA
- 315 Topography
- Rivers; Creeks
- Railway
- Major Roads
- Secondary Roads

Recorded Cultural Heritage

- JC:A03 Burial Site
- Site 36 Scarred Tree Site

Conceptual Infrastructure Layout and Mining Lease Boundary

FIGURE 4.1

4.5. DESCRIPTION OF MINING ACTIVITIES

The main elements of the opencut operation are:

- Clearing of vegetation ahead of mining and selective stripping of available topsoil to be stockpiled for later use in the rehabilitation program
- Development of a conventional truck excavator open pit mine with the possibility of a dragline operation also being evaluated
- Contractors will probably be employed to carry out the mining operation, and the selection of mining equipment will to a degree, be dependant on the selected contractor's preference
- Mining of ROM coal from the twelve seams
- Bypassing of ROM coal of suitable quality
- Processing of ROM coal through a CHPP to be constructed for the project. The overall yield of product coal from ROM coal will be around 70% depending on the ash levels of the various products sold and on how much coal bypasses the washery
- Initial disposal of CHPP rejects and tailings in co-disposal storages (i.e. disposal of coarse and fine rejects together) away from the opencut excavation, followed by co-disposal within the mined out areas
- Reshaping of spoil dumps, replacement of topsoil and revegetation of the mined out and backfilled areas
- Development of infrastructure, including a rail spur and loop, train loading facilities, water storages, and office and workshop facilities
- Transport of product coal by rail to Gladstone for export
- Construction of water management structures.

Because of the distribution of mining strip ratios across the proposed mining lease area, there are a number of possible sequences in which the mine could be developed. These options are under review so that the project can be optimised for coal quality, mining economics, location of plant and infrastructure while minimising environmental impacts.

4.6. VEGETATION CLEARING AND TOPSOIL REMOVAL

Prior to the development of any opencut pits, spoil dumps or infrastructure, vegetation and topsoil will be removed from the footprint area and stockpiled. Where necessary, stockpiles will be ripped and seeded to encourage water infiltration and prevent erosion. Topsoil will be re-spread on surfaces to be rehabilitated as soon as possible to benefit from the viability of the topsoil seed bank.

Possible land use zones within the proposed mining lease are presented in Figure 4.2.

The site topography and identified cultural heritage sites are shown on Figure 4.3.

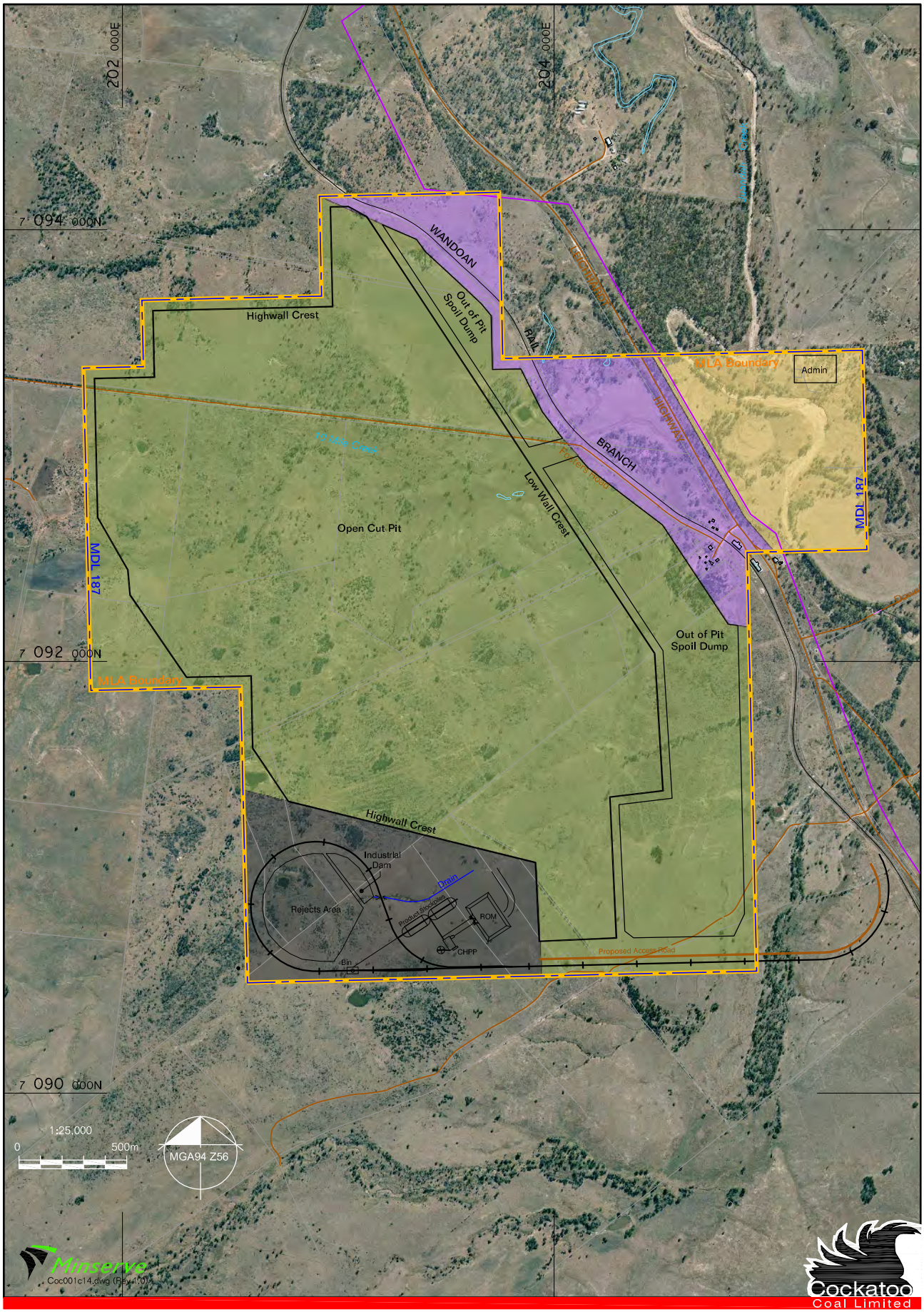
4.7. WASTE STRIPPING

The mining method proposed for Woori requires that some material is dumped out-of-pit. However, as soon as there is sufficient working room within the excavation, in-pit waste dumping will commence. Rehabilitation of the out-of-pit dumps will be undertaken as soon as they reach full planned height and before the entire dump is complete. Similarly, rehabilitation of the in-pit dumps will commence as soon as possible, and as a general rule rehabilitation will lag disturbance by about two years.

It is likely that some blasting of overburden will be required in some areas either to facilitate excavation or to optimise equipment productivity.

4.8. COAL EXTRACTION

Coal will typically be extracted using hydraulic excavators, dozers, and rear dump haul trucks. ROM coal will be hauled to the CHPP for processing, or possibly crushing and bypassing.



Legend

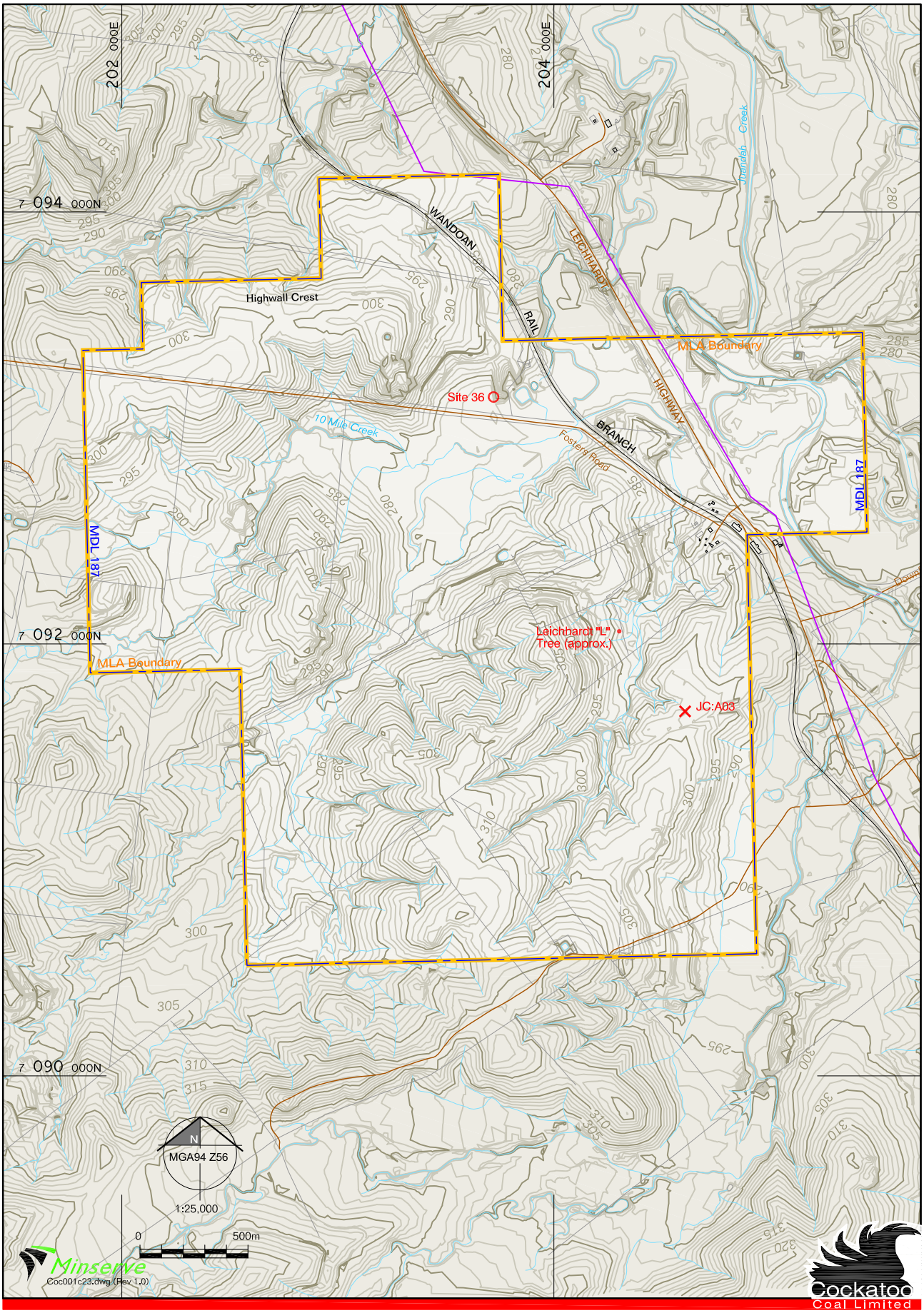
- MDL 187
- Proposed MLA
- Railway
- Major Roads
- Secondary Roads

Land Use Zones

- Infrastructure/CHPP
- Mining Pit and Dumps
- Transport Corridor
- Administration

Conceptual Land Use Zones During Mining

FIGURE 4.2



Legend

- MDL 187
- MLA
- 315 Topography
- Rivers; Creeks
- Railway
- Major Roads
- Secondary Roads

Recorded Cultural Heritage

- JC:A03 Burial Site
- Site 36 Scarred Tree Site

FIGURE 4.3

Topography Plan

5. COAL PREPARATION

5.1. INTRODUCTION

The preferred option for the CHPP and train loadout (TLO) facilities is to produce 4Mtpa by bypassing approximately half the product and washing half the product. The present estimate of plant yield suggests that 3.5Mt will be washed and 2Mt bypassed.

The preferred option for the CHPP and TLO facilities will be designed to achieve the following design objectives:

- Product coal of 4Mtpa
- Washing 3.5Mtpa to produce 2Mtpa washed thermal coal
- Bypass 2.0Mtpa of unwashed thermal coal
- To receive and process -1,500mm ROM coal to -40mm at a nominal rate of 1,000tph
- To receive and process -40mm ROM coal at the CHPP at a nominal rate of 500tph
- To transfer and stack the unwashed thermal coal product at a rate of up to 1,000tph
- To transfer and stack the washed thermal coal product at a rate of up to 400tph
- To transfer the rejects material to the emplacement area via a co-disposal pumping system
- To stack the washed and unwashed thermal coals separately on the product coal stockpiles divided into segments with reclaim valves on each section
- To reclaim the product coal from different stockpile sections for blending purposes at a controlled rate up to 5,000tph and discharge into the train loadout surge bin
- To consistently load the trains at a rate of 4,500tph
- The CHPP and TLO facility will be designed with highest levels of automation for efficient operations
- The CHPP and TLO facilities will be designed to minimise down time and optimise availability
- The CHPP and TLO facilities will be designed for ease of maintenance and access
- The CHPP and TLO facilities will be designed as robust operating units appropriate for its intended duty.

5.2. RAW COAL MATERIALS HANDLING

The uncrushed ROM coal will be transported from the Woori opencut mine areas by haul trucks to the ROM Dump Hopper. Due to the campaign nature of the operation of this facility, it may be necessary to stockpile ROM material from each seam in different heaps in this area.

Raw coal will be directly dumped by truck or from the ROM stockpile either by a front-end loader or dozer to one of two ROM hoppers. Each ROM dump hopper will be fitted with a reclaim feeder, and apart from performing its intended reclaiming duty; this unit regulates the mass feedrate to the crushing facility. The reclaimer will be capable of variable speed operation and will reduce the lumps of up to 1,500mm ROM material to -350mm.

The broken ROM material from the reclaimer feeder and primary sizer will then discharge onto a conveyor to transport the material to the surge bin and secondary and tertiary sizing station. Here, the two-stage sizing will reduce the top-size of the -350mm ROM particles to -40mm.

The sized raw coal that is to be unwashed will be discharged onto a conveyor and transported to the bypass product stockpile.

The sized raw coal to be washed will be discharged either onto a conveyor and transported or into a sump, mixed with water and pumped to the CHPP.

A coal process flowsheet is presented in Figure 5.1.

5.3. COARSE COAL PROCESSING

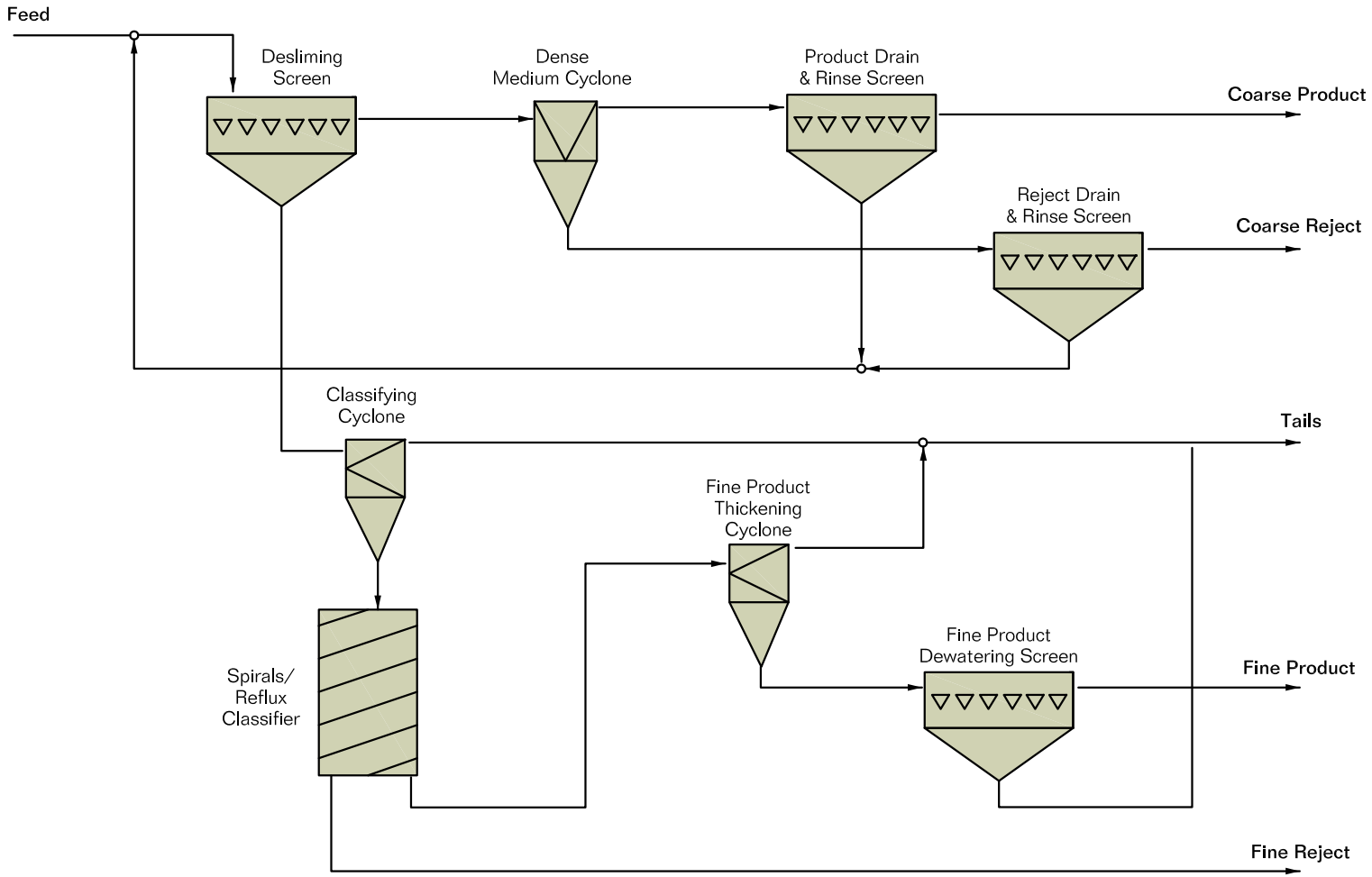
The plant processes will consist of a combination of dense medium cyclone and spirals/fluidised bed circuits for the coarse and fine sized particle streams. The fines (nominally -0.1mm) will be discarded.

Raw coal material -40mm will report directly into the desliming screen feed chute where it will be mixed with water (if from a conveyor) before being discharged onto the screen deck as a homogenous slurry.

Overhead water sprays will assist the desliming operation of this screen to ensure minimal misplacement of fines into the oversize material being discharged from the screen.

The desliming screen will separate the coal destined for dense medium circuit from the fine coal circuit feedstock. The plant descriptions below will cover each of these circuits.

Desliming screen oversize material (nominally 40mm x 1mm) will discharge via an alumina tile lined chute into the dense medium sump, which is in the form of a "wing tank". The wing tank will be fed with correct dense medium that mixes with the oversize particles before being pumped to the plant dense medium cyclone.



Cockatoo Coal Limited

The dense medium cyclone will discharge both its overflow (washed product) and underflow (rejects) streams onto product and reject drain and rinse screens. These multi-sloped screens will remove the magnetite from the product coal and rejects to be reused in the separation process. High pressure sprays, placed over the rinsing sections of the screen, will assist to minimise the direct loss of magnetite from this screen.

The washed product coal discharged from the product drain and rinse screen will be directed to a horizontal basket small coal centrifuge. This unit will discharge onto the product transfer conveyor that will transport the dewatered washed coal to the washed coal stacking conveyor.

Reject material from the drain and rinse screen will be conveyed directly by a conveyor either to a rejects bin or directly into a co-disposal sump.

The dense medium cyclone operation and its circuitry above will be supported by a recirculating correct medium sump and pump system that delivers correct density medium to the wing tank, a dilute medium system that maintains the medium quality and a raw magnetite make-up system.

Sufficient volume of medium is stored in the correct medium sump. This medium is pumped to the dense medium wing tank in excess of the dense medium pump needs.

This excess medium returns from the wing tank to the correct medium sump, via a permanent overflow. This system maintains a constant pumping head in the wing tank to ensure that the conditions that the dense medium cyclone operates under do not fluctuate excessively.

A density monitor mounted on the correct medium pump discharge pipe maintains the correct medium density to its set point by controlling dilution water addition valve located on the pump suction pipe. This ensures that minimum response time to minor density variations is achieved.

Medium drained from the product and reject streams passing through the drainage section of combined drain and rinse screen returns directly to the correct medium sump.

Dilute medium underflow from the rinsing section of the combined drain and rinse screen, as well as a controlled permanent bleed from the correct medium pump discharge, reports to the dilute medium sump before being pumped to a single drum counter-flow magnetic separator.

Magnetite concentrate from the magnetic separator is returned to the correct medium sump while the effluent is passed onto the fine coal circuit to recover any coal from the non-magnetic particles that may be entrained in this flow. During operation, due to long-term magnetite losses, the plant operator will be notified that the correct medium sump level has reached a pre-set low level and must be topped up with raw magnetite. Truck-dumped raw magnetite is drawn from an in-ground pit by an operator hosing the material into a sump at the rear of the pit. A floor sump pump then delivers the slurry to the dilute medium sump for magnetite recovery by the magnetic separator.

5.4. FINE COAL PROCESSING

The -1mm underflow material from the desliming screen will be directed to the classifying sump. From here, the slurry will be pumped to classifying cyclones that will split the fine coal at approximately 100 microns (μm). The overflow stream from this cyclone, containing -100μm material, will report to the thickener.

The underflow from the classifying cyclone, containing material of 1.0mm x 0.1mm size range, is collected and fed to either a bank of spirals or reflux classifiers.

The product will be collected and forwarded to a product sump prior to being pumped to fine coal product thickening cyclones. The overflow from these cyclones will report to the thickener. The underflow from these cyclones will report to fine coal centrifuges before being discharged onto the product coal conveyor.

The material rejected from the fines circuit will report to the rejects high frequency screen before being discharged onto the reject conveyor to be recombined with the coarse rejects. The screen underflow will report to the thickener.

5.5. PRODUCT MATERIALS HANDLING

As discussed above, the proposed plant provides washed and unwashed products.

The unwashed product will be discharged onto a conveyor and directed to a transfer station where it is discharged onto the stacking conveyor.

In a similar fashion, the washed product conveyor will run parallel to the unwashed product conveyor. The conveyed product is directed to the same transfer station where it is discharged onto a separate product stacking conveyor similar to the unwashed product.

The product coal stockpiles thus formed will be managed by dozers to increase the effective storage capacity of the product stockpiles. Reclaiming is performed by underground reclaim feeders discharging onto a single reclaim conveyor. The reclaim conveyor directly feeds the facilities rail bin at a capacity of 4,500tph.

6. AFFECTED AND INTERESTED PERSONS

6.1. AFFECTED PERSONS

The affected persons for the Woori project are the local landholders shown in Table 6.1.

Table 6.1
Affected Persons

Name	Address	Real Property Description	Tenure
Surat Coal Pty Limited	C/- Cockatoo Coal Limited Level 2 66 Hunter Street Sydney NSW 2000	Lot 14 on FT213 Lot 37 on FT1010 Lot 3 on FT358 Lot 61 on FT358	Freehold
Mr P J Erbacher Mr L T Erbacher Ms B M Erbacher	"Kalang" Guluguba Qld 4418	Lot 1 on FT642	Freehold
Ms A Hickey	"Myall Downs" Guluguba Qld 4418	Lot 35 on FT213	Freehold
Mr M M Leahy	"Broadacres" Guluguba, Qld 4418	Lot 22 on FT86	Freehold
Mr B M Aitken Ms H Forbes	Wallace Brae 33655 Leichhardt Highway Guluguba Qld 4418	Lot 60 on FT933	Freehold
Mr T Groves Ms M Groves	C/- Guluguba Store Leichhardt Highway Guluguba Qld 4418	Lot 4 on SP208987	Freehold
Graincorp Operations	16 Mann Street PO Box 136 Toowoomba QLD 4350	Lot 10 on SP118494	Freehold
Mr D C Cormack Ms B J Cormack	C/- "Goorewan" Guluguba Qld 4418	Lot 4 on FT93	Freehold
Mr A J Cass Ms N J Cass	"Glen Laurel" 45 Bruggermanns Lane Guluguba Qld 4418	Lot 1 and Lot 3 on FT700	Freehold
State Land with Lessees: Mr R B Booth Ms G J Booth	PO Box 145 Chinchilla Qld 4413	Lot 1-2 on G6965	Lease Lands
State land – Guluguba School	The State of Queensland Department of Education and the Arts PO Box 15033 City East Qld 4002	Lot 7 on G6963 Lot 305-306 GG6961	State Land
Queensland Rail C/- Facilities Asset Manager	PO Box 3357 Toowoomba Village Fair Qld 4350	Wandoan Branch Railway	State Land
Minister for Transport	The State of Queensland Department of Transport Level 6, Beville Bonner Building 73 William Street Brisbane QLD 4000	Leichhardt Highway	Road Reserve
Dalby Regional Council	The Chief Executive Officer Dalby Regional Council PO Box 551 Dalby QLD 4405	Fosters Road	Road Reserve

Other affected persons are shown in Table 6.2.

Table 6.2
Other Affected Persons

Name	
The Dalby Regional Council	The Chief Executive Officer Dalby Regional Council PO Box 551 Dalby QLD 4405
Ms D Daylight	Formerly spokesperson for the Barunggan People. Ms Daylight has provided an expression of interest in the Aboriginal Cultural Heritage associated with the Woori project
Arrow Energy Ltd	Level 13, 10 Eagle Street Brisbane QLD 4000

6.2. INTERESTED PERSONS

The interested persons for the Woori project are shown in Table 6.3.

Table 6.3
Interested Persons

Name	
Rural Action Group – Dalby	
Queensland Conservation Council	166 Ann Street Brisbane QLD 4000
Xstrata Coal	Level 38, Gateway 1 Macquarie Place Sydney NSW 2000
Guluguba State School Community	Fosters Road Guluguba QLD 4418

7. HEALTH AND SAFETY MANAGEMENT SYSTEM

7.1. OVERVIEW OF OH&S MANAGEMENT SYSTEM

SCPL's approach to managing occupational risk is based on the principal that a management system must be consistent with the objectives and detail of enabling legislation, such as the Queensland Coal Mining Occupational Health and Safety (OH&S) Act, and must meet the requirements of prescriptive legislation such as Queensland Coal Mining Regulations. The health and safety goals are stated in the SCPL OH&S Policy.

Every person must be provided with an avenue to actively participate in hazard identification and risk assessment and the development of risk mitigation practices. In a practical sense this means that all SCPL staff has input into the risk assessment and has opportunities to decide on the most practical methods of controlling the risks identified. Work permits are issued in-field for tasks that are not covered by existing procedures, weekly toolbox meetings are held with all contractors, all hazards and improvements for suggestions are recorded and reported to senior management and individuals are empowered to take responsibility for their own safety (and that of their colleges) through the SCPL personal safety prompt tool "*Take the TIME for safety*". Importantly, all information is recorded within the SCPL OH&S database and reported through to executive management at the end of each month. To date SCPL has completed 29,000 work hours without a Lost Time Injury (15 months of operation).

Good safety management practices need not be complex, the basic principles of occupational risk reduction have not changed: Companies, who can successfully *identify, evaluate* and *control* hazards, with the simplest methodologies; where all staff are involved and have ownership over the process, will achieve better safety performance.

8. PROPOSED CONSULTATION PROGRAM

The proposed consultation program is outlined in Section 2.1.7. The affected and interested persons will be included in the consultation program.

9. ABBREVIATIONS

a.d.	air dried
AHD	Australian Height Datum
CCL	Cockatoo Coal Limited
CHPP	coal handling and preparation plant
Cougar	Cougar Energy Limited
CSG	coal seam gas
d.a.f.	dry ash free
EA	environmental authority
EPBC	(Commonwealth) Environment Protection and Biodiversity Conservation
EIS	environmental impact statement
EMP	environmental management plan
EPA	Environmental Protection Authority
EP Act	Environmental Protection Act 1995
EPC	exploration permit coal
EPCA	exploration permit coal application
ERA	environmentally relevant activity
ha	Hectares
JORC	Joint Ore Resource Committee
Kcal/kg	kilocalories per kilogram
km	Kilometres
KEPCO	Korea Electric Power Company
KEWPO	Korea East-West Power Company
km^2	square kilometres
Kores	Kores Australia Pty Ltd
kV	Kilovolt
LOX	line of oxidation
m	Metres
MDL	mineral development licence
μm	Microns
MJ/kg	megajoules per kilogram
ML	mining lease (usually followed by the lease number)
Mlpa	megalitres per annum
mm	Millimetres
Mt	million tonnes
Mtpa	million tonnes per annum
OH&S	occupational health and safety
POSCO	POSCO Australia Pty Ltd
RE	regional ecosystem
ROM	run of mine
SBRJV	Surat Basin Rail Joint Venture
SCPL	Surat Coal Pty Limited
SE	specific energy
TLO	train loadout
tph	tonnes per hour
TS	total sulphur
UCG	underground coal gasification
WMS	water management system
Woori	Woori Coal Mine

Cockatoo Coal Limited

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