Queensland's World-class Coals

Mine Production and Developments

November 2007

Queensland **the Smart State**

Queensland Government
Department of **Mines and Energy**

Photography
The Department of Mines and Energy wish to thank those who have assisted with the provision of images for this publication.

Cover image supplied by Central Queensland Ports Corporation
The recently completed Berth #4 at RG Tanna Coal Terminal, Gladstone receives its first vessel, the 90 000 DWT 'Shin Sanyo Maru' on 23 August 2007 to load thermal coal destined for Japan.

In September 2006 the Queensland Government created the **Department of Mines and Energy** by merging sections of the Department of Natural Resources, Mines and Water with the Department of Energy. The former department is now the Department of Natural Resources and Water.

At the time of publication machinery of goverment changes involving both departments had not been finalised, particularly those associated with the changeover of email and web addresses.

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List of abbreviations

bcm: bank cubic metres

DME: Department of Mines and Energy

EPC: Exploration Permit for Coal

FOB: free-on-board

km: kilometres

MDL: Mineral Development Licence

MDLa: Application for Mineral Development Licence

ML: Mining Lease

MLa: Application for Mining Lease

MWe: Megawatts (electrical)

Mt: million tonnes

Mt/a: million tonnes per annum

PCI: pulverised coal injection

pf: pulverised fuel

t: tonne

Note: The Department of Mines and Energy compiled the statistics in this publication from information provided by coal mining operators. The 2006–07 figures are preliminary and could be revised, subject to the receipt of new data.

Queensland's world-class coals – summary

Queensland has a rich endowment of high-quality coals, with almost 33 billion tonnes (raw coal in-situ) identified by drilling.

The State has identified resources of coking coal, amounting to about 11 billion tonnes, of which about 4 billion tonnes is suitable for open-cut mining.

Located in central Queensland, the Bowen Basin contains much of the State's coal resources including virtually all of Queensland's prime coking coal reserves.

World-class coal mines and infrastructure, including some electrified rail links from the coalfields, allow the efficient production and transport of coal to six coal-export terminals.

At these terminals, ships up to 230 000 dead weight tonnes (DWT) load export coal for distribution around the world.

According to Department of Mines and Energy preliminary figures, Queensland exported 153.36 million tonnes (Mt) of coal in 2006–07. The total sales value was A$16.3 billion free-on-board (FOB).

Exports comprised 110.53 Mt of metallurgical coal (coking coal used in iron and steel making and coal used for pulverised coal injection [PCI] into blast furnaces) and 42.83 Mt of thermal coal. See summary statistics in Table 1.

The Queensland coal industry continues to expand, with coal exports expected to exceed 200 Mt in 2011. To help meet this demand, the Queensland Government is working with the coal industry and private enterprise to expand the capacity of rail, port and other supporting infrastructure.

Queensland is working to protect its enviable global reputation as a reliable supplier of high-quality coals to the world market.

Table 1: Queensland coal – summary statistics

Saleable production	**2005–06**	**2006–07**
Open-cut	147.2 Mt	155.73 Mt
Underground	24.7 Mt	27.55 Mt
Total	**171.9 Mt**	**183.28 Mt**

Exports	**2005–06**	**2006–07**
Metallurgical	100.04 Mt	110.53 Mt
Thermal	42.82 Mt	42.83 Mt
Total	**142.86 Mt**	**153.36 Mt**

Value of exports (A$ billion FOB)*	**2005–06**	**2006–07**
Metallurgical	A$14.996	A$13.598
Thermal	A$2.884	A$2.708
Total	**A$17.880**	**A$16.306**

Domestic consumption	**2005–06**	**2006–07**
Queensland	26.85 Mt	26.64Mt
Interstate (tonnes)	0.088 Mt	0.229 Mt
Total	**26.94 Mt**	**26.87 Mt**

Employment (at 30 June)	**2006**	**2007**
Open-cut	15 148	14 473
Underground	3 539	3 770
Total	**18 687**	**18 243**

Number of operating mines	**2005-06**	**2006–07**
Open-cut	33	39
Underground	15	15
Total	**48**	**54**

* see Coal prices section on page 12

Management of saleable coal stockpile – Coppabella Mine
Photo: Macarthur Coal Limited and Peter Budd Photography

Historical overview

Commercial coal production commenced in Queensland in 1843, when a small underground hand-mining operation the 'Pioneer' mine was established by John Williams at Redbank on the Ipswich Coalfield, about 20 km south-west of Brisbane in south-east Queensland (Whitmore, 1981).

This predated the separation of the colony of Queensland from the colony of New South Wales which occurred in 1859. Coal mining was administered under the provisions of the Crown Lands Acts and the Mineral Lands Acts of New South Wales until February 1887 (Cohen and Wiltshire, editors, 1995).

Numerous small underground mines were subsequently developed throughout Queensland to supply the domestic market to fuel steamships, steam powered locomotives for the railways, small boilers for industry, conversion to town gas and to supply the State's coal fired power stations.

Coal mines in the Ipswich and West Moreton districts, which are located relatively close to the major population centre, the greater Brisbane area, were the largest coal producers.

In 1947, the Queensland Government responded to an identified coal shortage in the State by commissioning Powell Duffryn Technical Services Pty Ltd of the United Kingdom to undertake a comprehensive survey of the Queensland coal industry with a view to its future development.

The Government acted on certain recommendations of this report relating to prospecting and evaluation of the coal resources of the State and the Queensland Department of Mines, through the Geological Survey of Queensland, undertook extensive coal exploration drilling operations from 1949 to 1991.

This work significantly added to the geological knowledge and potential utilisation of the coal resources within the State and aided the progressive development of the Queensland coal export industry.

The Queensland coal industry commenced a period of major growth in 1959 with the establishment of new export mines in the south-east Bowen Basin at Moura and Kianga in central Queensland.

These mines were operated by Thiess Brothers Pty Ltd to supply coking coal to Japan. Both underground and open-cut operations were established and their total production was a mere 220 000 tonnes in 1961.

Operations at Moura were restructured in 1962 with the entry of the Peabody Coal Company of USA and Mitsui and Co., Ltd of Japan into the Thiess Peabody Mitsui joint venture.

By 1965 coal exports exceeded one million tonnes per annum. Coking coal was shipped mainly to the Japanese steel mills through the company's coal export terminal at Gladstone in central Queensland. By 1965–66 Queensland's coal exports had increased to 1.74 Mt.

New coal mines were needed to meet the rapidly increasing international demand, particularly for metallurgical coal, with Japan being the leading customer.

Large resources of high quality coking coal were discovered in the central and northern sectors of the Bowen Basin by Utah Development Company of USA (UDC) in the mid 1960s.

Deposits were identified at Blackwater, and to the north

Early open-cut mining by Thiess Brothers Pty Ltd near Moura, 1960
Photo: Des Morton, Yeppoon

where a belt of prime coking coal was discovered in the region extending from German Creek to North Goonyella, along a strike length of more than 140 km.

Following a significant exploration program that was conducted jointly with the Queensland Department of Mines, UDC commenced production at the first of its open-cut coal mines at Blackwater in 1967. This mine exported hard coking coal from seams in the Rangal Coal Measures to Japan via the Port of Gladstone.

In the period from 1971 to 1979, UDC and its partners, including Mitsubishi Development Pty Ltd (as the Central Queensland Coal Associates), progressively developed new open-cut mines in the northern areas at Goonyella, Peak Downs, Saraji and Norwich Park.

These mines were established to produce hard coking coal from the Moranbah Coal Measures for export to the international market, and are still operating today.

The early UDC projects involved the construction of extensive infrastructure including new townships at Blackwater, Moranbah and Dysart, new roads and rail links to the coast and a new coal export terminal at Hay Point. Long-term sales contracts to markets in both Asia and Europe underpinned the economic feasibility of these mines.

These initial developments laid the foundations of the coal export industry in Queensland as known today by establishing key regional infrastructure that allowed further staged expansions and access by new players.

By 1975–76, coal exports had increased to 16.4 million tonnes per annum (Mt/a) and ten years later Queensland's coal exports had grown to 50.8 Mt/a with global demand for coal continuing to increase.

The Queensland Government, through the Geological Survey of Queensland, played a vital role in the development of the coal resources of the Bowen Basin by establishing Restricted Area (RA) 55 and systematically assessing and releasing coal resources for development. Mines established from this process include German Creek, Oaky Creek, Curragh, Ensham, North Goonyella, Moranbah North and Burton.

The availability of land in Queensland for coal exploration was restructured during 1993 and 1994 by the repeal of RA 55 and the competitive release of several known coal deposits.

The Queensland Government also ensured that the necessary rail capacity and port infrastructure were progressively developed to meet demand.

Major government-owned coal export terminals were developed at Hay Point (Dalrymple Bay Coal Terminal), Gladstone (RG Tanna Coal Export Terminal) and Abbot Point. These ports continue today to ensure the efficient throughput of coal and the movement of large ships up to cape-size of a maximum of 230 000 DWT.

The coal haulage rail system is also being continually upgraded according to demand and trains with payloads of up to almost 10 000 tonnes deliver the export coal to the ports. In the September quarter of 2007 there were 52 operating coal mines in Queensland, mainly located in the Bowen Basin with the remainder in the Callide, Clarence-Moreton, Surat and Tarong Basins.

Queensland's coal exports set a new record of 153.36 Mt in 2006–07 and are expected to surpass 200 Mt/a by 2011 with a further 30 Mt/a required for the domestic market.

Early open-cut mining by Thiess Brothers Pty Ltd near Moura, 1960
Photo: Des Morcue, Yeppoon

Queensland's productive coal basins

Australia is the world's largest coal exporter, with Queensland contributing the major share of these exports. Most of this export coal is produced from mines in the Permian Bowen Basin of central Queensland (Figure 1).

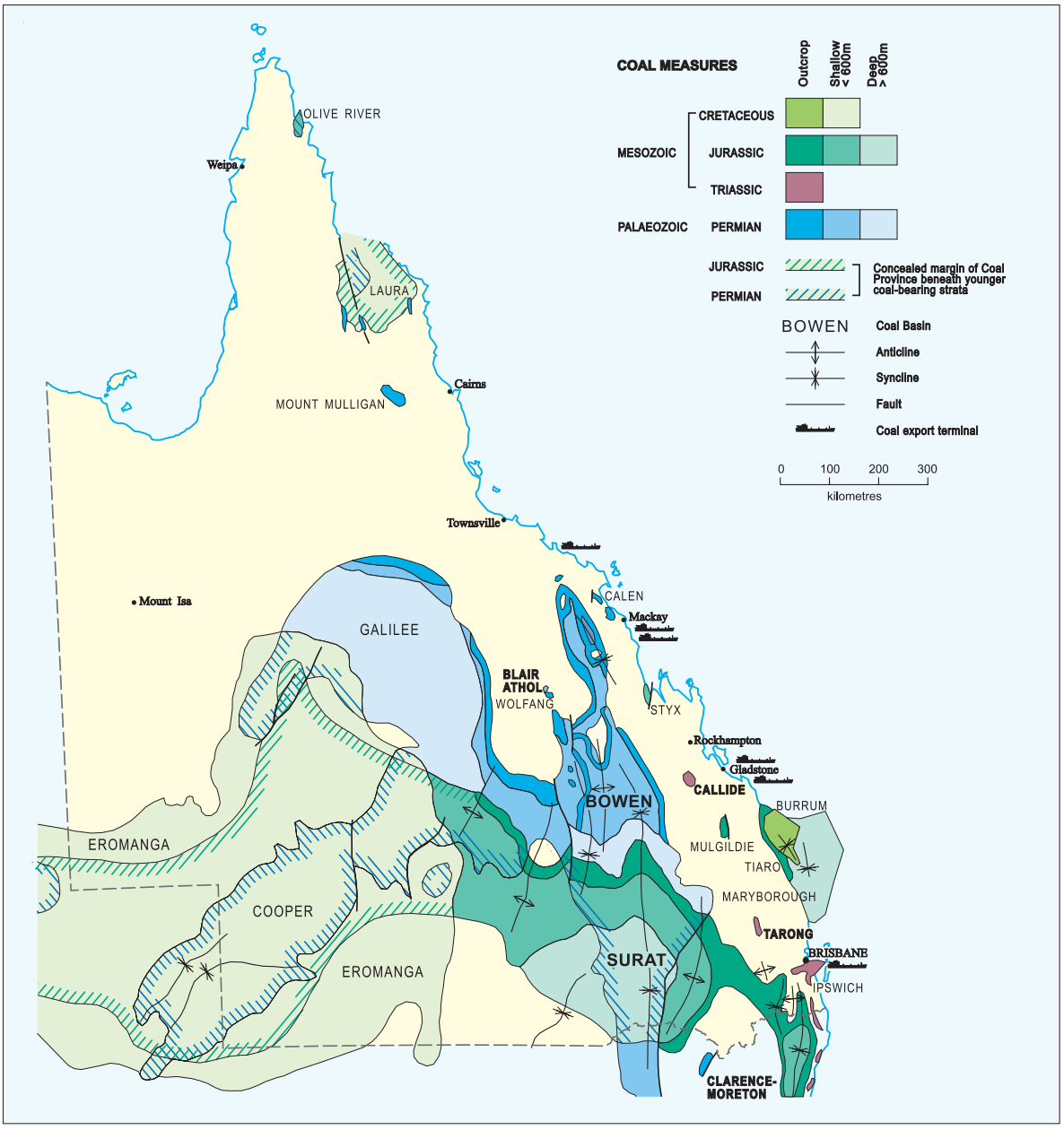
Coals of Late Triassic age are mined in the State's south-east in the Callide and Tarong Basins and coal mining ceased in the Ipswich Basin in July 2003 after 160 years of mining. The Callide and Tarong Basins are now important sources of thermal coal for domestic power generation.

Coals from the Callide and Tarong Basins are not suitable for metallurgical coke making.

Middle Jurassic coals are widespread in the Clarence-Moreton and Surat Basins of southern Queensland. The most economically important of these, are the high volatile thermal coals that occur in the Walloon Coal Measures and its equivalents.

These coals are largely used for domestic power generation and in small industrial boilers. In 2006–07 3.9 Mt were exported through the Port of Brisbane.

Figure 1: Queensland sedimentary basins



Queensland's coal resources

Queensland has 33 billion tonnes of black coal resources, raw coal in-situ. These resources include 11 billion tonnes of coking coal, of which approximately 4.1 billion tonnes are suitable for open-cut mining (Mutton, 2003).

Bowen Basin

The Bowen Basin contains much of the known Permian coal resources in Queensland, including virtually all of the known mineable prime coking coal.

Coal accumulation in the Bowen Basin occurred in a wide variety of depositional environments and the coal measures reflect this diversity, with variation in seam thickness, lateral continuity and coal quality (Staines and Koppe, 1979: and Mengel, Balfe and Coffey, 1990).

Triassic rocks that overlie the Permian coal measures do not contain significant coal.

Coal-bearing strata occur within several geological formations in the Bowen Basin. Deposits of economic importance are restricted to four groups, ranging from Early Permian (Group I) to Late Permian (Group IV) in age.

The stratigraphic relationships of these coal bearing strata are shown in Figure 2 on page 6.

Coal seams in the Bowen Basin exhibit considerable variation in rank and quality. A broad pattern of increasing coal rank within individual formations from west to east is apparent, and reflects the effects of depth of burial. Later localised igneous intrusions have also influenced coal rank, particularly in the north-east.

In the eastern part of the basin, the coal rank ranges from low volatile bituminous to anthracitic and deposits are generally more structurally complex . Coals in the central and north-western part of the basin trend toward medium to high volatile bituminous rank and include the best coking coals. Structural deformation in these deposits is less pronounced.

In the central-west and south-west, coal rank falls below the coking range and the most significant deposits are of high volatile bituminous thermal coals.

Queensland's prime hard coking coals are mainly mined from the Moranbah Coal Measures and the German Creek Formation. A range of metallurgical coals, including PCI coals, are mined from the Rangal Coal Measures and Baralaba Coal Measures.

The Bowen Basin contains coals that span the entire rank range, from sub-bituminous to anthracite.

This means that a wide variety of coal types are present in Queensland and current production includes coals sold into all sectors of the international market. These include:

- high-grade metallurgical coking coal for the iron and steel industry
- blending coals for coke making for the iron and steel industry
- PCI coals for the iron and steel industry
- high and lower volatile thermal coals for power generation
- high to low volatile thermal coals for the industrial market (cement manufacture, pulp and paper manufacturing, and the chemical industry).

The premium low and medium volatile hard coking coals from the Bowen Basin are widely acknowledged as among the best coking coals in the world, producing strong cokes with low reactivity. High volatile, high fluidity coking coals and a range of other coking coals suitable for blending are also produced from the Bowen Basin.

The sulphur content of Queensland export thermal coal is generally less than 0.8% on an air-dried basis. Investigations of the trace element content of Queensland thermal coals by the Commonwealth Scientific and Industrial Research Organisation (CSIRO) indicate significantly lower levels of mercury and selenium and other harmful trace elements compared with many other internationally traded coals (Dale, 2005).

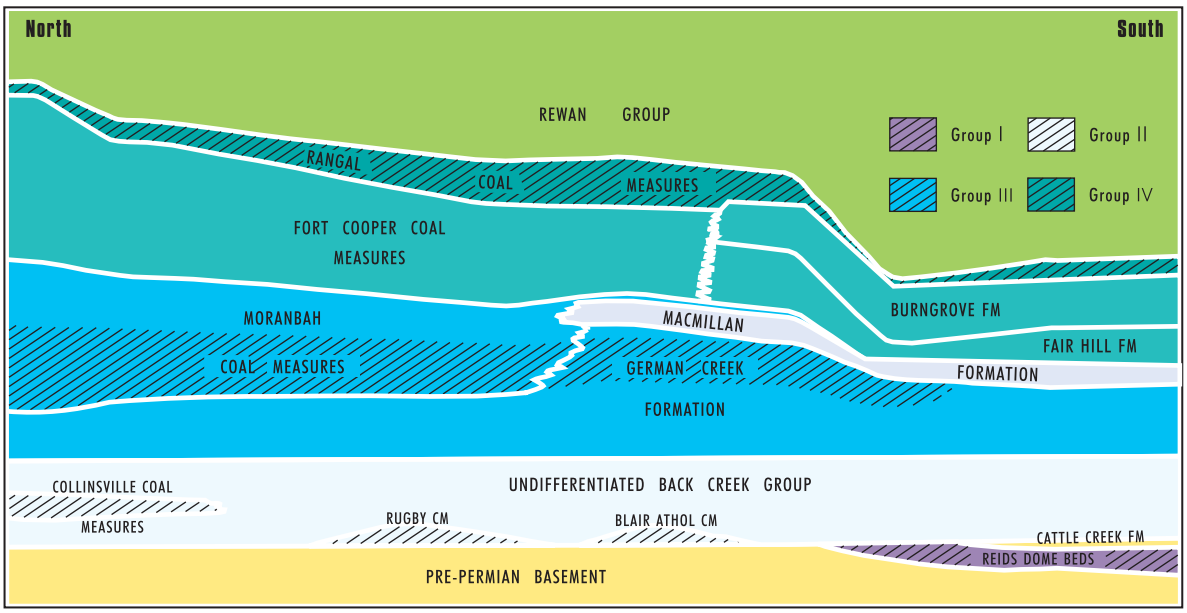
Preferential use of Queensland's hard coking coals, generally at the expense of some soft coking coals, has occurred in recent years.

Coke makers have modified coking coal blends to improve coke quality to meet the specifications needed for coke feed into large, high productivity blast furnaces, particularly those using pulverised coal injection.

Hard coking coals from Queensland have high Coke Strength after Reaction (CSR) values and this is a prime factor, along with low sulphur and phosphorus content, that has influenced the continued strong demand for these coals.

Semi-anthracites, low volatile thermal and weaker coking coals from central Queensland are also very competitive in the PCI market. Some have even become the benchmark coals for this technology. Queensland also provides specialty coals for use in the COREX® iron-making process.

Figure 2: Generalised stratigraphy of the Bowen Basin



Coal Group	Age	Description	Coal bearing sequence	Mines
IV	Late Permian	This is the most diverse group in terms of coal quality and also the most widely distributed within the basin. Although the rank and quality of Group IV coals vary greatly, they are characterised by their comparatively lower vitrinite content in the raw coal and generally low levels of sulphur. They are of major economic importance as a source of both metallurgical and thermal coals and have been intensively mined since the 1960s.	Rangal Coal Measures (Baralaba Coal Measures and Bandanna Formation are equivalents)	Baralaba, Blackwater, Burton, Broadlea North, Carborough Downs, Cook, Coppabella, Curragh and Curragh North, Dawson, Ensham, Foxleigh, Hail Creek, Isaac Plains, Jellinbah East, Lake Lindsay German Creek East and Oak Park, Millennium, Moorvale, Poitrel, Newlands and Eastern Creek, Rolleston, South Walker Creek, Suttor Creek, Yarrabee.
III	Late Permian	Group III coals include major deposits of high grade coking coal,which are mined by both open-cut and underground methods, in a number of operations extending from Sonoma, near Collinsville in the north, to Kestrel which is near the southern extent of the deposits near Emerald.	Moranbah Coal Measures German Creek Formation	Goonyella Riverside, North Goonyella – Eaglefield, Moranbah North, Norwich Park, Peak Downs, Saraji, Sonoma, Wollombi. German Creek – Aquila and Bundoora and Grasstree, Gregory – Crinum, Kestrel, Oaky Creek.
II	Early Permian	Group II coals measures include several unconnected deposits around the northern and western margin of the Bowen Basin: the Collinsville Coal Measures, the coal measures at Rugby, and a group of deposits near Clermont including those of the Blair Athol and Wolfang Basins.	Blair Athol Coal Measures and equivalents Collinsville Coal Measures	Blair Athol Clermont Collinsville
I	Early Permian	Group 1 is represented by the Reids Dome beds, a unit of highly variable thickness and lithology. Distribution is restricted to the south-western part of the Bowen Basin, west and to the north and south of Lake Maraboon. In the southern Denison Trough coal seams in the Reids Dome beds can to reach up to 30 metres thick, but at considerable depth (~1200 metres).	Reids Dome beds	Minerva

Surat Basin and Clarence-Moreton Basin

The Surat Basin in southern Queensland contains more than 4 billion tonnes of proven thermal coal resources in the Walloon Coal Measures and equivalents.

These resources are amenable to open-cut mining but are largely undeveloped. Walloon coals are high volatile, reactive, and clean-burning. They are being used in domestic coal-fired power stations and exported for power generation and industrial use.

These coals are also well suited for gasification and also for conversion to liquid fuels by direct hydrogenation–liquefaction processes. Coals from the Surat Basin are not suitable for metallurgical coke making.

The principal coal-bearing sequence in the Clarence-Moreton, Mulgildie and Surat Basins is the Walloon Subgroup and its equivalents. These sediments of Middle Jurassic age contain numerous lenticular coal deposits in geological formations that are named as follows:

- **Clarence-Moreton Basin** Walloon Coal Measures
- **Mulgildie Basin** Mulgildie Coal Measures
- **Surat Basin** Juandah Coal Measures, Taroom Coal Measures

The seams occur in thick banded intervals where individual coal plies and bands are separated by lenticular beds of carbonaceous shale, mudstone, siltstone and sandstone of varying thickness.

A structural feature, the Kumbarilla Ridge, which trends in an arc approximately north-south near Dalby, defines the boundary between the Clarence-Moreton Basin and Surat Basin.

On the eastern side of the Kumbarilla Ridge the Walloon coals lie within the Walloon Coal Measures of the Moreton Basin and to the west, the Walloon coals are contained in the Juandah (upper) and Taroom (lower) Coal Measures of the Surat Basin.

Relatively small mineable deposits in the Clarence-Moreton Basin occur in the Amberley-Rosewood and Mount Mort districts, west and south-west of Ipswich, with much larger deposits found in the Darling Downs region, near Millmerran, Oakey-Acland and west to Dalby.

The major known deposits of the Surat Basin are located near Macalister and Chinchilla and near Wandoan and Taroom.

The Mulgildie Basin is a fault-controlled elongate depression, trending generally in a north-south direction. The basin extends southwards from the township of Monto and lies about 250 km north of Dalby.

A review of the coal geology and coal resources of the Clarence-Moreton Basin was published by the Department of Minerals and Energy (Matheson, D'Arcy and Sorby, 1993) and includes historical information on early developments.

Goscombe and Coxhead (1995) provided a very useful summary of the geology of the Clarence-Moreton, Surat, Eromanga, Nambour and Mulgildie Basins, including information about the coal resources, their quality and utilisation potential for coals from various deposits in the Walloon Coal Measures and equivalents.

Galilee Basin

The Galilee Basin, which is located to the west of the Bowen Basin in central Queensland, contains large resources of a range of thermal coals of Permian age that generally decrease in grade along strike from south to north.

The remote location, and corresponding lack of supporting infrastructure, combined with lower coal quality have precluded large-scale coal mining to date.

However there is now renewed interest in coal exploration of the eastern margin of the basin, with a view to development of thermal coal mines and also in-situ underground coal gasification projects.

Queensland coal production and sales

Overview

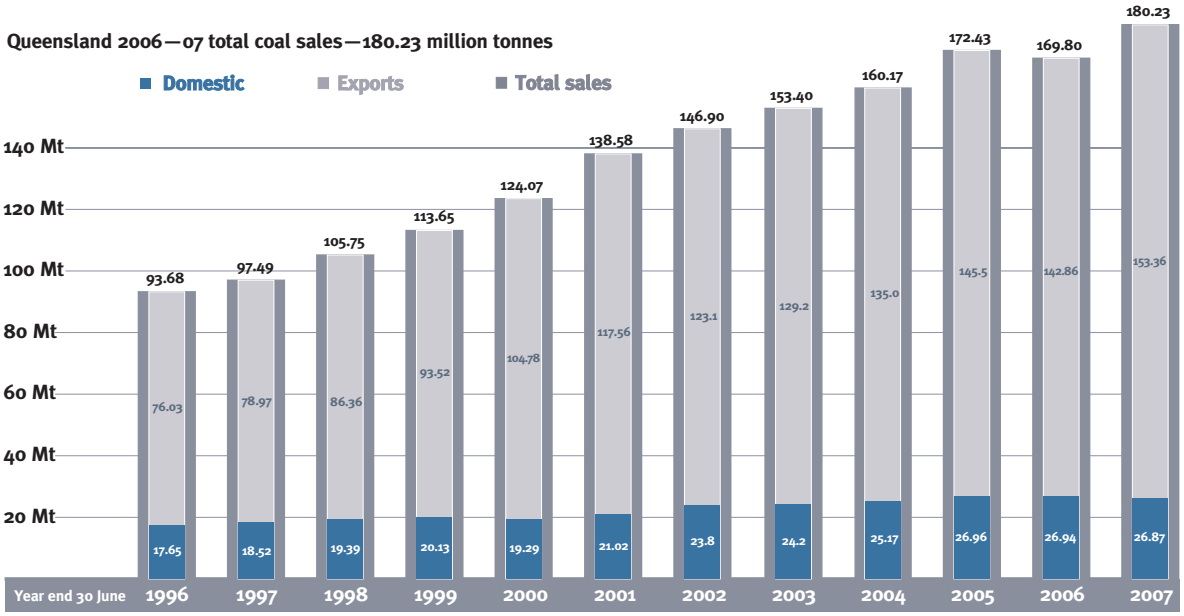
In 2006–07, the Queensland coal industry, which is dominated by large open-cut mines in the Bowen Basin in central Queensland, expanded coal production and exports to new record levels despite lower financial returns from export sales compared to the previous year.

Coal remains Queensland's most important export commodity, and continues to provide great benefit to the State through strong financial returns, increasing employment opportunities and regional development.

The Department of Mines and Energy compiled the statistics in this publication from information provided by coal mining operators. The 2006–07 figures are preliminary and could be revised, subject to the receipt of new data.

The locations of operating coal mines and many of the known coal deposits in Queensland, in relation to rail and port infrastructure, are shown in the maps, Figures 7, 8 and 9 on pages 16, 17 and 18.

Figure 3: Queensland coal sales to export and domestic markets 1995–96 to 2006–07



In-pit drilling operations – Minerva Mine
Photo: D. Coffey, DME

Coal sales

During 2006–07 total coal sales increased by 10.43 Mt or 6.1% from the previous year's sales of 169.80 Mt, to a total of 180.23 Mt. Coal exports increased by 10.50 Mt (7.3%) from the 2005–06 export total of 142.86 Mt to 153.36 Mt.

Domestic coal sales within Queensland amounted to 26.65 Mt, of which 23.90 Mt (89.7%) was used by the electricity industry. These coals generally comprised lower-grade thermal coals.

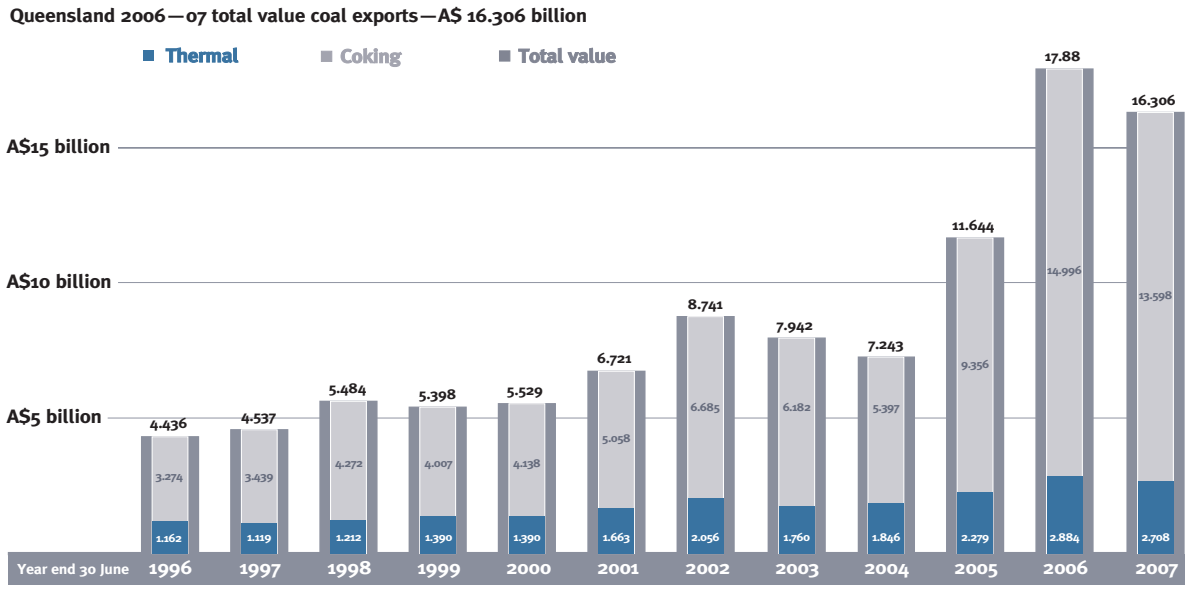
In addition, 228 723 tonnes of coal were sold interstate bringing total domestic sales for the year to 26.87 Mt, a decrease of 0.07 Mt compared with sales in 2005–06.

Annual Queensland coal sales to export and domestic markets for recent fiscal years ending 30 June 2007 are shown in Figure 3.

In 2006–07, the value of coal exports was A$16.306 billion (FOB) compared with the sales value of A$17.88 billion (FOB) for exports in 2005–06 although the tonnage had increased by 10.50 Mt (see **Coal prices** section on page 12).

The value of Queensland coal exports (FOB) for recent fiscal years ending 30 June 2007 is shown in Figure 4 below.

Figure 4: Value of Queensland coal exports 1995-96 to 2006-07



Loading product coal for haulage to rail load-out – Minerva Mine
Photo: D. Coffey, DME

Coal export markets

In 2006–07 shipments of Queensland coal were made to 33 countries throughout the world.

Japan continued to rate as the largest importer of Queensland coals. It imported 57.72 Mt, comprising 38.56 Mt of metallurgical coal and 19.16 Mt of thermal coal. This represented 37.6% of the State's coal exports in 2006–07.

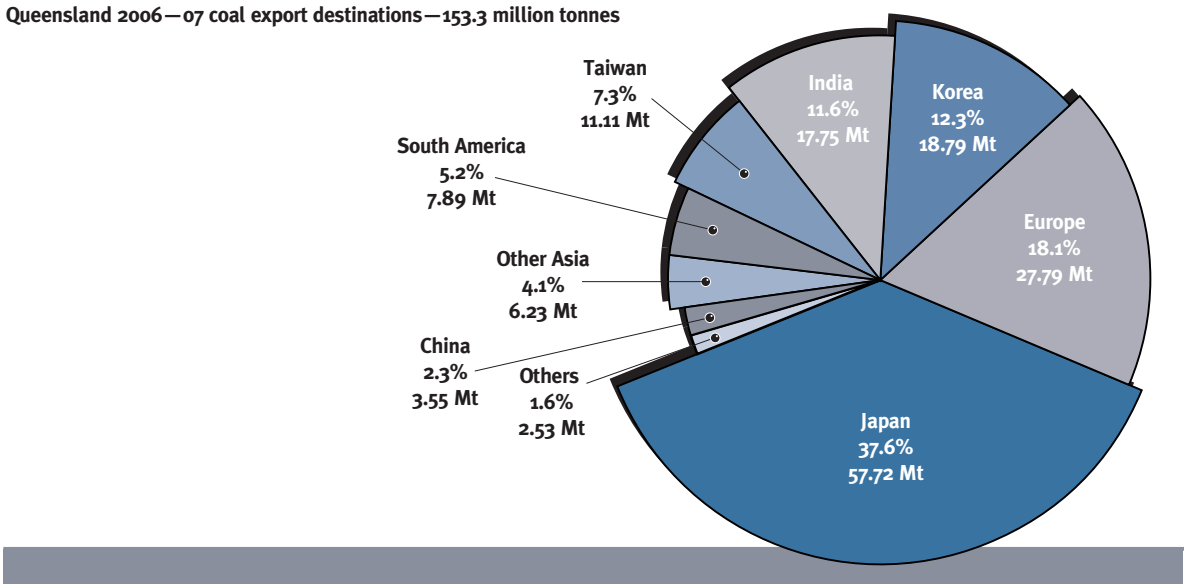
Korea was the second largest importer of Queensland coal with 18.79 Mt or 12.3%, comprising 10.85 Mt of metallurgical coal and 7.94 Mt of thermal coal.

India followed with 17.75 Mt or 11.6%, comprising 17.38 Mt of metallurgical coal and 0.37 Mt of thermal coal.

European countries were also major consumers of Queensland coals during 2006–07. Collectively, they imported 27.79 Mt, representing 18.1% of the State's coal exports for the year, and were comprised 24.91 Mt of metallurgical coal and 2.88 Mt of thermal coal.

The international distribution of Queensland's coal exports for 2006–07 is shown in Figure 5. These statistics refer to the countries at which the ships were unloaded, and do not account for further transportation from the point of discharge.

Figure 5: Queensland coal export destinations 2006-07



Product coal stockpile and rail load-out – Minerva Mine
Photo: D. Coffey, DME

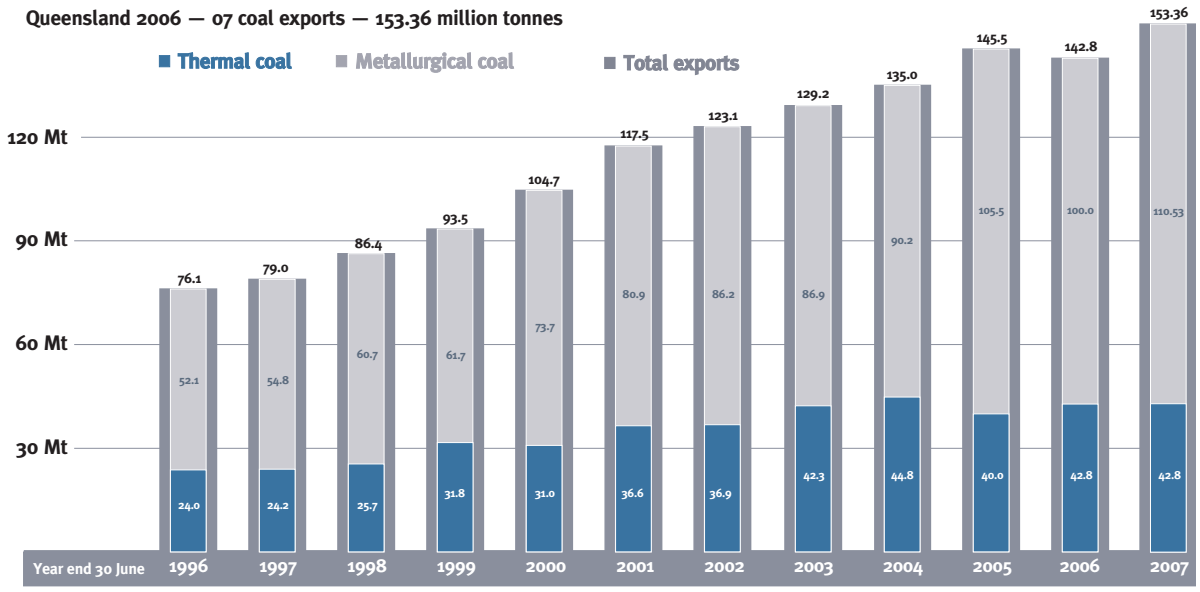
Coal exports by type

On a coal-type basis, metallurgical coal exports increased from 100.04 Mt in 2005–06 to 110.53 Mt in 2006–07.

Thermal coal exports for the same period marginally increased from 42.82 Mt in 2005–06 to 42.83 Mt.

Queensland's annual exports of metallurgical and thermal coals for recent years to 30 June 2007 are shown in Figure 6.

Figure 6: Queensland annual exports of metallurgical and thermal coals 1995-96 to 2006-07



Construction in progress at Berth #4 in February 2007 – RG Tanna, Gladstone
Photo: Central Queensland Ports Corporation

Coal production

Raw coal mined in Queensland in 2006–07 amounted to 234.5 Mt, and 183.3 Mt of saleable coal was produced.

Approximately 155.7 Mt or 85% of the State's 2006–07 saleable coal production was mined by open-cut methods. Underground mines produced 27.6 Mt of saleable coal.

Overall productivity figures for 2006–07 decreased by 2.7% to 42.20 tonnes per employee shift (based on tonnes of saleable coal) compared with 43.37 tonnes per employee shift in 2005–06. A significant number of employees were however involved in development and pre-production works, particularly at the nine new mines.

As at 30 June 2007, the Queensland coal industry directly employed a workforce (including contractors) of 18 243. This represented an decrease of 444 employees compared with that (18 687) at 30 June 2006.

During 2006–07, a total of 54 mines (39 open-cut and 15 underground) contributed to the State's coal production. All of the underground mines operating at the end of 2006–07 were located in the Bowen Basin. Most of these underground mines produce mainly coking coal products for export.

Coal production and distribution statistics for each mine are shown in the tables 5, 6 and 7 on pages 36, 37 and 38.

While the Bowen Basin is by far the most important source of coal in Queensland, the Surat Basin, with its large resources of potentially open-cut thermal coal, continues to attract interest, both locally and internationally.

The Callide, Clarence-Moreton and Tarong Basins are important sources of thermal coal for domestic power generation.

Queensland's large coal resources will support the State's electricity generation needs for the foreseeable future, while the use of gas is expected to continue to increase in line with the Government's energy policy.

Coal prices

In 2006–07, the average price, overall, that Queensland producers received for all export coal was approximately A$103 per tonne (/t) (FOB) compared with A$125/t (FOB) in 2005–06.

Metallurgical coal realised an average price of about A$119/t (FOB), A$150/t in 2005–06, while the average price obtained for export thermal coal was about A$61/t (FOB), A$67/t 2005–06.

Contract benchmark prices (FOB) for export coal, Australia–Japan (Japanese fiscal year 2007), were reported as follows (AME Mineral Economics, 2007):

- Hard coking coal — US$85.00/t — US$96.00/t (dependent on quality)
- Semi-hard coking coal — US$71.50/t
- Soft-soft coking coal — US$63.90/t
- Low-volatile PCI coal — US$67.50/t
- Thermal coal — US$55.65/t

Note: International seaborne coal is generally traded with prices quoted in US dollars.

Coal preparation plant and stockpiles – Carborough Downs Mine
Photo: R. Smith, DME

New Queensland coal mines in production in 2006

Carborough Downs and Broadlea North

CVRD Australia Pty Ltd and its joint venture partners are developing a new underground mine at Carborough Downs, about 20 km east-north-east of Moranbah, and a small open-cut mine at Broadlea North, about 12 km north-north-west of Carborough Downs.

The project was originally developed by AMCI Holdings Australia Pty Ltd. Subsequently, Nippon Steel, JFE Group, POSCO and Tata Steel have each acquired a 5% equity share in the Carborough Downs project.

In April 2007, Companhia Vale do Rio Doce (CVRD) announced that it had acquired 100% of AMCI Holdings Australia Pty Ltd (AMCI HA) for approximately US$665 million. The company name was then changed to CVRD Australia Pty Ltd.

It owns and operates coal mines and exploration tenements in Australia through participation in various joint ventures including the Carborough Downs, Isaac Plains and Broadlea North mines in Queensland and the Integra Coal operations in New South Wales.

Both the Carborough Downs and Broadlea North coal deposits occur within the Rangal Coal Measures from which the mines produce a range of coking, PCI and thermal coal products for the export market.

Underground coal mining at Carborough Downs commenced with continuous miners, and the first coal was extracted in September 2006.

Longwall mining equipment could be introduced in the future, subject to the company's assessment of the suitability of mining conditions.

In 2006–07 the mine produced about 207 000 tonnes of saleable coal.

Coal production is supplemented by open-cut operations on the nearby Broadlea North deposit, from which coal is trucked to the central washery at Carborough Downs.

The first export shipment from Broadlea North open-cut mine occurred in late September 2006. It comprised about 60 000 tonnes of unwashed coal that was shipped to customers in Asia.

In 2006–07 the mine produced about 334 000 tonnes of saleable coal.

Grasstree Colliery

Grasstree Colliery at the German Creek mine complex, near the township of Middlemount in central Queensland, is a new underground longwall mine that started full production towards the end of September 2006 when commissioning of the longwall mining equipment was completed.

The mine is expected to produce more than 3 Mt/a of saleable prime coking coal for export.

Anglo Coal (Grasstree Management) Pty Ltd operates the mine on behalf of the Joint Venture Partners, Anglo Coal Australia Pty Ltd (70%) and Mitsui German Creek Investment Pty Ltd (30%).

Isaac Plains

AMCI Coal Holdings Australia Pty Ltd, now renamed CVRD Australia Pty Ltd, a wholly-owned subsidiary of CVRD of Brazil, has developed a new mine centred on the Isaac Plains coal deposit located 7 km east-north-east of Moranbah and adjacent to the Goonyella to Hay Point railway (Mining Lease 7034 held by AMCI IP Pty Ltd).

The mine is owned under joint venture arrangements with Perth-based Aquila Coal Pty Ltd with each company controlling a 50% interest.

In December 2005, the joint-venture partners committed to develop an open-cut coal mine capable of producing up to 2 Mt/a of run-of-mine coal. Roche (JR) Pty Ltd was awarded the contract to build the coal-handling and preparation plant.

Mine construction started in June 2006, with first coal exposed in early July. The first coal export shipment was made in November 2006.

In 2006–07 the mine produced about 488 000 tonnes of saleable coal.

Production of saleable coal is expected to ramp up quickly, from an initial rate of about 850 000 t/a to 1.6 Mt/a, and later rise to about 2.8 Mt/a with the development of a second mine, Isaac Plains South, located about 15 km from the Isaac Plains mine. The company has applied for Mining Lease (ML) 70361 which covers this area.

Isaac Plains mine produces a range of metallurgical and thermal/PCI coal products for export through Dalrymple Bay Coal Terminal, a rail distance of about 190 km from the mine.

Kogan Creek Power project

In May 2004, the Queensland Government through its 100% owned corporation CS Energy Ltd, committed to construct the A$1.2 billion Kogan Creek Power project, south-east of Chinchilla in southern Queensland.

The project comprises an integrated mine-mouth base-load power station with a single air-cooled 750 megawatt electrical (MWe) super-critical, coal-fired unit, to be fuelled by unwashed coal from a new open-cut mine on the adjacent Kogan Creek deposits (also held by CS Energy Ltd).

The power station has been built by the consortium of Siemens/Hitachi and Golding Contractors Pty Ltd is the mine developer and operator. This base-load power plant is expected to consume about 2.8 Mt/a of coal of about 25% ash content that is delivered from the mine by a 4 km overland belt conveyor.

The air cooling system minimises the use of water by the power plant and is expected to be only 10% of that used by an equivalent water cooled plant.

Electricity will be sold into both the Queensland and national grid systems, with power delivered into New South Wales via the Interstate Interconnector at the Braemar Creek substation.

Commissioning of the various components of the power station and mine commenced in the first half of 2007 with full commercial power generation expected to start in December 2007.

Employment peaked at more than 1000 construction jobs, and when operational, the power plant will have about 70 permanent employees. The associated coal mine is expected to employ a further 45 persons.

Lake Lindsay

On 20 October 2005, Anglo American PLC announced that approval had been granted to proceed with the A$674 million Lake Lindsay metallurgical coal project, located about 25 km south of Middlemount.

Owned by Anglo Coal Australia Pty Ltd (70%) and Mitsui Coal Holdings Pty Ltd (30%), this project is based on a new mining area (ML 70336) about 22 km south-east of the industrial area at the German Creek mining complex. The deposit lies within the Rangal Coal Measures and the company has indicated that it contains about 76 Mt of saleable coal.

Production from Lake Lindsay will increase annual saleable coal production from the German Creek mining complex from 6 Mt/a to about 10 Mt/a. The additional annual production is expected to comprise 1.9 Mt of coking coal, 1.8 Mt of PCI coal and about 0.3 Mt of thermal coal.

Construction started in the September quarter of 2006 and overburden removal started in late July 2006, with the first coal mined in late October 2006. The mine is expected to deliver about 2 Mt of product coal in calendar year 2007.

A new 8750 Bucyrus Erie dragline with a 96m^3 bucket is under construction and is expected to be operational in late 2008, when the mine's saleable production is expected to ramp up to 4 Mt/a. The project also includes construction of an overland conveyor to deliver run-of-mine coal from Lake Lindsay and the nearby Oak Park operations to a new coal handling and preparation plant at German Creek.

Millennium

The new Millennium open-cut coal mine which is 84.6% owned by Excel Coal Limited, is located east of the township of Moranbah and adjacent to the Poitrel mine being developed by BHP Mitsui Coal Pty Ltd (BMC).

Control of Millennium Coal Pty Ltd passed to Peabody Energy Corporation through its takeover of Millennium's major owner, Excel Coal Pty Ltd, effective from 11 October 2006.

The Millennium mine started coal production in mid-2006 and the first commercial shipment of unwashed coal for export was railed to the Dalrymple Bay Coal Terminal in mid July 2006. Coal washing commenced in late October 2006.

Coal mining operations – Kogan Creek Mine
Photo: CS Energy Ltd

The mine is expected to produce about 1.5 Mt/a of saleable metallurgical coals (coking and PCI coals) from the Rangal Coal Measures for export. The company has indicated its intention to ramp production up to 3 Mt/a in the future.

Millennium Coal Pty Ltd and BHP Mitsui Coal Pty Ltd (BMC) have agreed, through the Red Mountain Joint Venture, to share mine infrastructure for both the Millennium and Poitrel mines.

The joint venture arrangements include an assets transfer, with BMC taking a 50% stake in mine infrastructure (including the coal handling and coal preparation plant and the rail load-out facilities, which have a planned total capacity of 6 Mt/a) in exchange for Millennium acquiring certain BMC coal tenements, including those covering the nearby Morambah, Mavis Downs and Wotonga deposits.

Newlands — Northern Underground and Wollombi

The Northern Underground mine at Newlands, that has been under development by the Newlands Collinsville Abbot Point (NCA) Joint Venture, started longwall mining operations in the Rangal Coal Measures in February 2006. The new mine replaced the Southern Underground mine, which ceased longwall mining in September 2005.

A new 2200 tonnes per hour dense media coal preparation plant, which includes spirals and froth flotation circuits, has also been built at Newlands Mine and was commissioned in the latter part of 2006.

This new high-capacity plant will enhance metallurgical coal production from the existing operations and also from the Wollombi area within the Suttor Creek mining lease, where open-cut mining operations started in May 2006.

The company has reported that the Wollombi area at Suttor Creek contains resources of about 25 Mt of coking coal in seams of the Moranbah Coal Measures. Xstrata Coal Queensland Pty Ltd operates the NCA-owned mines and port facility at Abbot Point on behalf of the joint venture partners.

Poitrel

The Poitrel open-cut mine, which is owned by BHP Mitsui Coal Pty Ltd, is located about 35 km south-east of the township of Moranbah in central Queensland. The mine commenced coal production in October 2006 and the first washed coal was produced by the mine's preparation plant in November 2006.

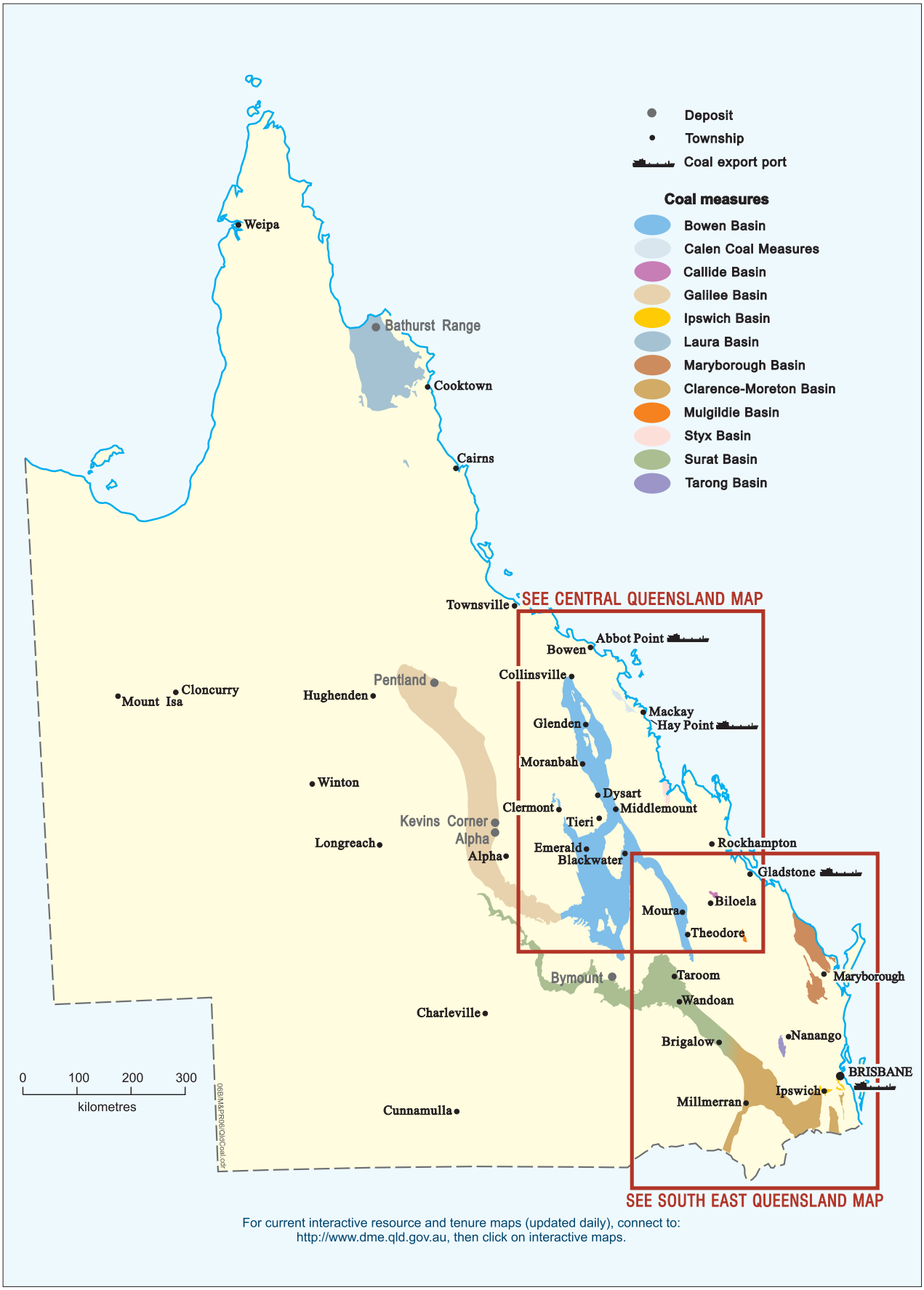
Poitrel mine produced more than 1.5 Mt of saleable coal in its first year of operation and production is planned to be ramped up to about 3 Mt/a over a three year period.

Saleable products include a range of coking, PCI and thermal coals for export markets. BHP Billiton Mitsubishi Alliance (BMA) operates the mine on the owner's behalf. Coal processing and coal handling facilities, including the rail load-out, are shared with the adjoining Millennium mine.

Leighton Contractors won a five-year contract valued at about A$330 million to develop the mine and plans to use new mining equipment including eleven 240 tonne capacity Caterpillar 793 trucks and two O&K RH340 excavators.

Overburden removal – Lake Lindsay Mine
Photo: D. Coffey, DME

Figure 7: Queensland coal – location map



For current interactive resource and tenure maps (updated daily), connect to:
http://www.dme.qld.gov.au, then click on interactive maps.

Figure 8: Central Queensland coal

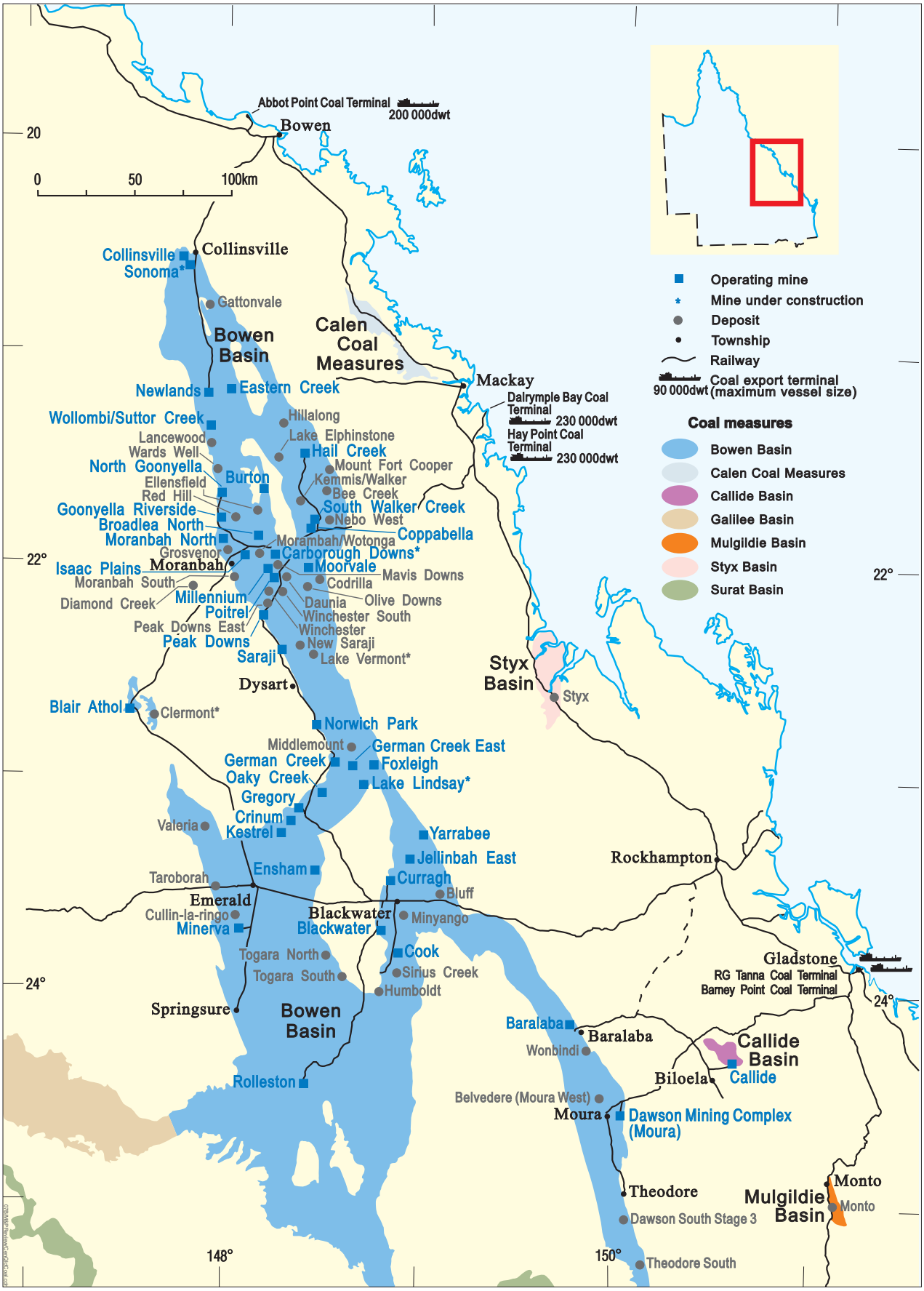
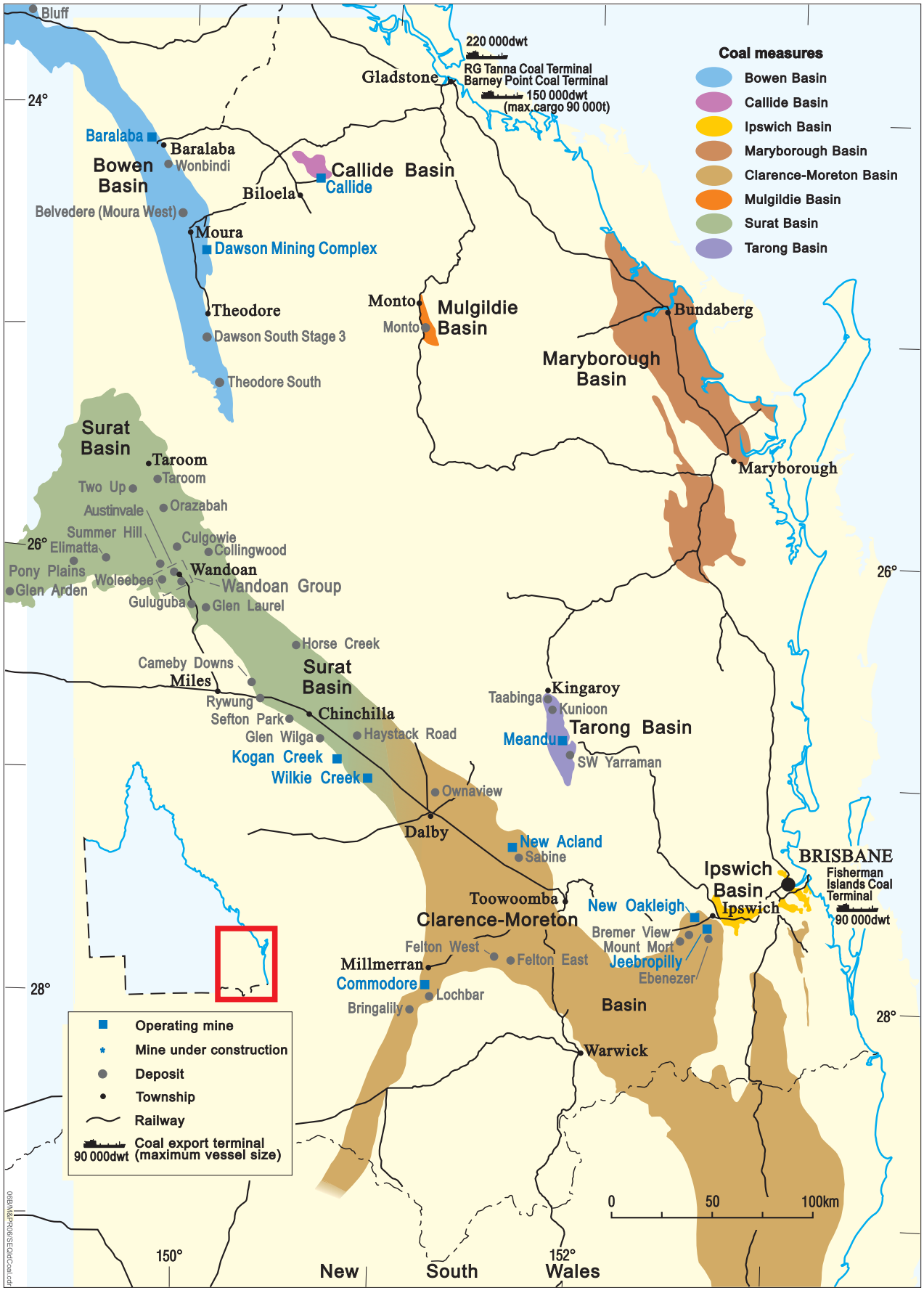


Figure 9: South-east Queensland coal



Queensland coal mine expansions

Dawson mine redevelopment project

In December 2004, the Moura Joint Venture partners – Anglo Coal Australia Pty Ltd (51%) and Mitsui Coal Holdings Pty Ltd (49%) announced plans for a total redevelopment of the existing Moura mine, 140 km south-west of Gladstone.

The Dawson Expansion Project includes establishing two new mining operations to the north and south of the existing mine. Collectively, this group of operations is to be called Dawson.

The separate mining areas are named:

- Dawson North – a new, previously unmined area, north of the existing open-cut mine area
- Dawson Central – the area of the existing open-cut operations
- Dawson South – an area south of the former Moura Mine, containing the Theodore North coal deposits.

Each mining area is linked by an overland conveyor system to a new central coal-preparation plant and coal handling facilities, costing an estimated A$346 million and designed by the Thiess Segman Joint Venture. The facilities include a new wash plant with dense medium cyclones, spirals and froth flotation circuits, and coal handling by six stacker/reclaimer machines for raw coal and product coal stockpiles. New mining equipment acquired as part of the project includes 32 new CAT 977B trucks, four new O&K 340 excavators and two new P&H 4100 electric shovels.

When fully operational, the combined new operations will produce about 12.7 Mt/a of coking and thermal coal.

The mine produced about 7.0 Mt of saleable coal in 2006–07, with coking coal representating about two-thirds of production.

Ensham Central project

Ensham Resources Pty Limited is expanding the Ensham mine which is located about 40 km north-east of Emerald. The company plans to increase coal production from its present level of 8.5 Mt/a to 13 Mt/a in the near future.

The project involves expanding open-cut mining operations, construction of a new coal wash plant, upgrading mine infrastructure and establishing a new underground mine from a section of the final highwall that could further increase coal production.

Although not part of the project, a new 7000 tonne Bucyrus 8750-63 dragline has been built on site and was commissioned in March 2007. This machine is expected to remove up to about 28 million bank cubic metres (bcm) of overburden per year and will enhance the mine's overall productivity.

In 2006–07, Ensham mine produced a total of 7.5 Mt of saleable coal, comprised largely of high-energy, low-ash thermal coal and a small tonnage of semi-soft coking coal. The coal is mainly exported to Asian countries, including Japan, Korea, India and China.

Dragline operations at Curragh Mine – central Queensland
Photo: Curragh Queensland Mining Pty Ltd

Goonyella Riverside mine expansion

The Goonyella Riverside mine, located about 30 km north of Moranbah township, comprises a number of open-cut mining operations and the Broadmeadow 'punch' longwall underground mine, along a strike length of more than 20 km.

The mine, operated by BHP Billiton Mitsubishi Alliance (BMA), produces prime coking coal from seams within the Moranbah Coal Measures in the Bowen Basin.

The Goonyella mine started production in 1971 and the adjacent Riverside mine began in 1983. Operations of these mines were merged in 1989 to establish the Goonyella Riverside mine. Mining at Riverside ceased in April 2005 and ownership of the mine assets was later transferred from BHP Mitsui Coal Pty Ltd to BMA.

Broadmeadow underground mine started longwall mining at Goonyella in August 2005, replacing the production lost with the closure of Riverside.

BMA is proposing to increase coal production from the mine to more than 16 Mt/a and is considering options that could increase production to between 20 Mt/a and 24 Mt/a.

Terms of reference for an Environmental Impact Statement for the project were issued in January 2006. The project options include:

- expanding capacity of the existing Broadmeadow underground mine in the Goonyella Middle Seam
- establishing a new underground mine in the Goonyella Lower Seam.
- expanding coal-processing facilities, including upgrades to the existing coal-processing plants and/or the construction of a third coal handling and processing plant.

BHP Billiton is currently developing new coking coal mines in central Kalimantan, Indonesia. Overall coking coal production from all of its operations will be balanced in accordance with the company's existing contracts and developing market opportunities.

Hail Creek mine expansion

The Hail Creek mine, located 35 km north-west of Nebo and operated by Rio Tinto Coal Australia Pty Limited, was officially opened on 5 November 2003, having been developed at a cost of about A$460 million by the Hail Creek Joint Venture.

The Hail Creek Joint Venture comprises Rio Tinto Coal Australia Pty Limited (82%), Nippon Steel Australia Pty Ltd (8%), Marubeni Coal Pty Ltd (6.67%) and Sumisho Coal Development Pty Ltd (3.33%).

Mining involves using conventional dragline and truck-and-shovel mining techniques to produce hard coking coal for the export market from seams within the Rangal Coal Measures.

In July 2004, Rio Tinto committed to its expanding production at the mine from its initial design capacity of 5.5 Mt/a (saleable) to 8 Mt/a. The project was completed in late 2006 when the new P&H 9020 dragline became fully operational and the coal preparation plant upgrade was completed.

New Acland mine expansion

The New Acland open-cut mine, owned by New Hope Corporation, is about 16 km north-west of Oakey township.

The mine is a multi-thin-seam operation, producing high-volatile thermal coal for both domestic and export markets. Coal is won from the lower seams of the Walloon Coal Measures of the Clarence-Moreton Basin.

In 2006–07, the mine produced about 2.90 Mt of saleable coal, of which about 2.47 Mt was exported.

The production capacity of New Acland mine was increased to about 4 Mt/a saleable coal by April 2007. Site works included building an additional module in the wash plant, provision of additional site infrastructure and acquisition of new mining equipment.

A new mining lease, ML 50216 covering 1175 hectares, adjoining the original Mining Lease's (ML 50170) southern and western boundaries, was granted from 7 December 2006 for a term of 20 years.

In 2006–07, New Hope Corporation also produced about 0.9 Mt of high-volatile thermal coal from its Jeebropilly and New Oakleigh mines in the Amberley–Rosewood district, west of Ipswich.

The Jeebropilly mine, which produced about 0.4 Mt/a of saleable coal, ceased mining operations in January 2007. The New Oakleigh mine is expected to close in 2009. The lost production will be offset by expansion of the New Acland mine.

In June 2006, New Hope Corporation entered into an agreement that provided Tarong Energy Corporation with an option, under certain conditions, to supply 5.7 Mt/a of coal for the Tarong Power Station for up to 25 years.

However, the option has lapsed as Tarong Energy announced early in September 2007 that it would acquire and source its future coal requirements from the Kunioon deposits which are located about 12 km north-west of the Tarong power plant.

Peak Downs mine expansion

Peak Downs mine, which commenced coal production in April 1972, is operated by BMA and is located about 30 km south of the township of Moranbah.

The mine is a large open-cut operation that produces hard coking coal from seams within the Moranbah Coal Measures for export to the world market.

In 2006–07 the mine exported about 8.84 Mt.

BMA is considering options to expand the mine by extending open-cut mining operations to extract prime coking coal from the far northern part of the main Mining Lease 1775.

Wilkie Creek mine expansion

Wilkie Creek mine, which is located about 14 km south-west of the town of Macalister in southern Queensland, commenced production in 1995. The mine was purchased by Peabody Energy Corporation of USA in 2002.

In 2006–07, Wilkie Creek mine exported 1.89 Mt of high-volatile thermal coal, mainly to Japan and Korea.

During 2006 the production capacity of saleable coal was increased to 2.3 Mt/a. The coal is trucked about 14 km to a stockpile area and rail load-out on the main line.

Trains of 1940 tonnes payload capacity haul the coal via the Moreton rail system about 250 km to the Queensland Bulk Handling Pty Ltd coal export terminal at Fisherman Islands, Port of Brisbane.

Mine closures

German Creek — Central and Southern collieries

Central Colliery, owned by Anglo Coal Australia Pty Ltd, ceased operations on 31 December 2005 and was placed on care and maintenance.

Southern Colliery, which was built in 1988, ceased longwall operations in June 2006. Surplus mining equipment was transferred for use at the company's operations elsewhere.

Coal mining operations – New Acland Mine
Photo: R. Smith, DME

Queensland advanced coal projects

The advanced coal projects listed below are at various stages of assessment. Most are proceeding through the statutory approvals process, while others are progressing to and beyond prefeasibility studies.

Cameby Downs

Syntech Resources Pty Ltd controls the Cameby Downs coal deposits (under Exploration Permit for Coal – EPC 732) that lie adjacent to and to the north of the Western Rail Line, about 15 km east of Miles in the Surat Basin.

In June 2007, Syntech Resources Pty Ltd applied for a Mining Lease (ML) 50233 covering approximately 2722 hectares.

The company has estimated that the deposits contain more than 250 Mt of resources of high volatile thermal coal within seams of the Juandah Coal Measures (equivalents of the upper seams of the Walloon Coal Measures) and is planning to develop a new open-cut mine.

Production is estimated to commence in late 2008 at approximately 1.0 Mt/a with the product coal railed approximately 380 km to the Port of Brisbane for export to markets mainly in Asia.

Through an affiliate company, Syntech Resources Pty Ltd has also, in June 2007, acquired a 100% interest in the Chinchilla coal deposits that lie within EPC 562, EPC 873, Mineral Development Licence (MDL) 246 and MDL 247.

When the Southern Missing Link Railway project from Wandoan to Banana and the Wiggins Island Coal Export Terminal project at Gladstone are completed, Syntech Resources Pty Ltd intends to investigate the potential for exporting larger tonnages through the Port of Gladstone from its combined resource base.

Clermont

In early January 2007, Rio Tinto PLC committed to the immediate development of the Clermont open-cut thermal coal project, about 10 km north of the township of Clermont.

The new mine, which has an estimated capital cost of A$950 million, is being developed by Rio Tinto Coal Australia Pty Limited on behalf of the Clermont Coal Joint Venture, comprising Rio Tinto Coal Australia Pty Limited (50.1%); Mitsubishi Development Pty Limited (31.4%); J-Power, formerly the Electric Power Development Company of Japan, (15%); and JCD Australia Pty Ltd (3.5%).

When it reaches full production in 2013, the mine will have a nominal production capacity of 12.2 Mt/a of saleable coal. The run-of-mine coal will be transported about 13 km along an overland conveyor to new coal handling and preparation facilities to be built near the existing Blair Athol mine rail load-out facility.

The Clermont coal deposit is contained within the early Permian Wolfang Basin, which is located on the Bowen Basin's western margin.

Most of the coal resource occurs within the Wolfang Seam, which is about 40 m thick. Parts of the Peak Downs Highway and the Gregory Highway are planned to be relocated to allow the project to proceed.

Coal exploration drilling – Bowen Basin, central Queensland
Photo: R. Smith, DME

A relatively small proportion (up to 20%) of the run-of-mine coal will require washing. The coal quality is similar to that produced from the Blair Athol mine and ready market acceptance of the product is expected.

The target coal seams range from about 80 m to 250 m depth and the overburden includes significant basalt cover. Coal production is planned to ramp up to replace production from the nearby Blair Athol mine, commensurate with the depletion of its reserves, which are expected to be mined out by 2013.

Export shipments from the Clermont mine are planned to commence during the second quarter of 2010. With proven coal reserves of approximately 190 Mt, Clermont open-cut mine will operate for about 17 years and will create up to about 400 jobs during its construction phase and 380 jobs during its operation.

Grosvenor

In July 2007, Anglo Coal (Grosvenor) Pty Ltd applied for ML 70378 covering an area of approximately 9515 hectares to the north and east of the township of Moranbah.

Anglo Coal are conducting a feasibility study into the development of a new underground mine using longwall mining techniques. The mine is expected to produce prime, medium volatile coking coal from the Goonyella Middle Seam of the Moranbah Coal Measures.

Coal production is planned to ramp up to about 6.5 Mt/a (run-of-mine) that will be washed at the nearby Moranbah North coal preparation plant to produce about 4.5 Mt/a of product coal which will be railed to the Dalrymple Bay Coal Terminal for export.

Development of the mine is not yet committed however the company has indicated the following target dates:

- Project approval April 2009
- Construction commenced July 2009
- Drifts and shafts complete July 2010
- Underground development October 2011
- Single longwall to commence 2012

Kunioon

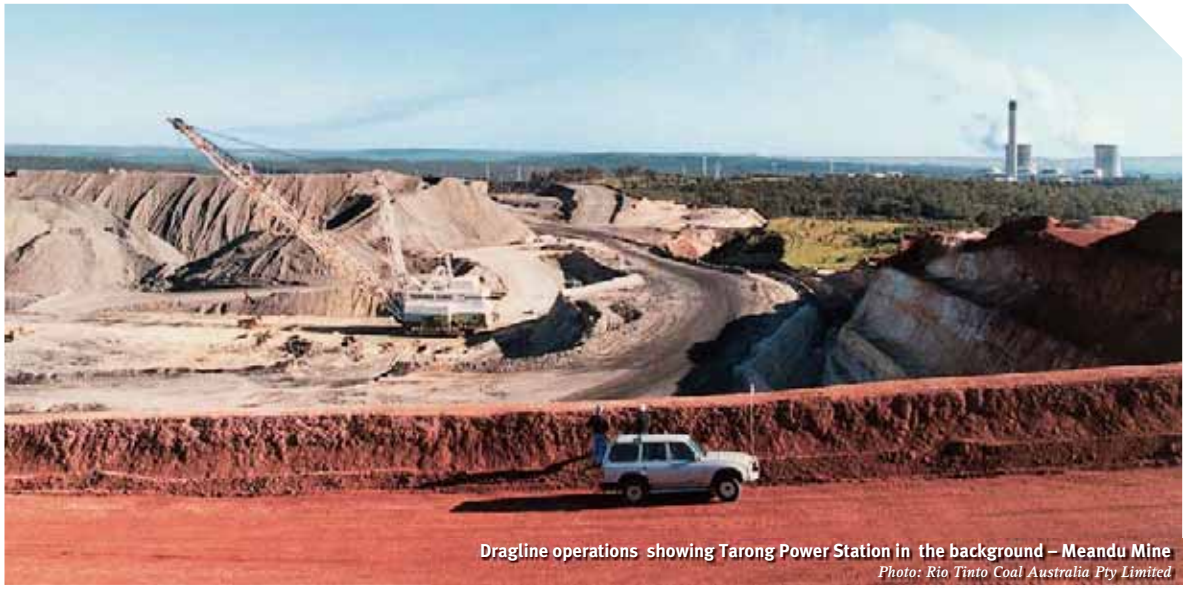
Tarong Energy Corporation owns and operates the 1400 MWe Tarong Power Station near Nanango, about 180 km west of Brisbane, and owns a 50% share of the adjacent 445 MWe Tarong North power station.

The coal supply contract under which coal is procured from the adjacent Meandu mine expires in December 2010 (in 2006–07 the mine supplied 6.19 Mt).

The company announced on 10 September 2007 that it will acquire ownership of the existing mine and the nearby coal resources from Rio Tinto Coal Australia Pty Limited and that it would develop a new mine based on the Kunioon deposits, about 15 km north of the Tarong Power Station.

Tarong Energy Corporation plans to invest in the order of $500 million in the project and will construct the new mine and associated 16 km coal conveyor to deliver product coal to the power plant.

The project will create up to 750 jobs during the construction phase and more than 500 direct and flow-on jobs throughout Queensland. The new mine will be operated by a contractor and employees of the Meandu mine will be offered positions with the mining contractor.



Dragline operations showing Tarong Power Station in the background – Meandu Mine
Photo: Rio Tinto Coal Australia Pty Limited

Lenton

New Hope Corporation has applied for ML 70337 covering the Lenton coal deposit which is about 50 km north-north-east of the township of Moranbah in the Bowen Basin. The deposit lies in an area adjacent to the north-western boundary of the Burton mine.

Exploration adjacent to the known deposit is targeting both open-cut and underground resources in the Rangal Coal Measures.

Products are likely to include a range of coking, thermal and PCI coals subject to coal preparation options that are yet to be determined.

Monto

Macarthur Coal Limited, through its wholly-owned subsidiaries Monto Coal 2 Pty Ltd and Monto Coal Pty Ltd, and other joint-venture partners planned to develop a small open-cut mine south of Monto, with an initial capacity of up to 1 Mt/a high-volatile thermal coal. Mining Lease 80101 was granted on 21 April 2005.

Monto Coal 2 Pty Ltd holds a 51% interest in the Monto Coal Joint Venture and Monto Coal Pty Ltd is the operator for the joint venture.

The company has reported that the inferred coal resources within its mining and exploration tenements at Monto (ML 80101, EPC 613 and EPC 683) exceed 500 Mt and include 55 Mt classed as 'measured resources' and 66 Mt classed as 'indicated resources'.

As reported by Macarthur Coal Limited in its Preliminary Final Report for the year ended 30 June 2007, further progress was made with the Monto coal project when in June 2007, the company entered into an agreement to issue an option (with an option fee of $2 million) to a non-related third party to buy all the shares of Monto Coal Pty Ltd and Monto Coal 2 Pty Ltd, two wholly owned subsidiaries of Macarthur Coal Limited, for a total purchase price of approximately $41.95 million, subject to the satisfaction of several conditions precedent.

The option period began on 1 July 2007 and ended on 15 October 2007 however the sale would be subject to pre-emptive rights held by the existing minority partners in the joint venture.

In early October 2007 a media report indicated that further legal action had been initiated by the minority partners in relation to this project.

Rail haulage of export coal – central Queensland
Photo: QR National

Olive Downs

The Olive Downs project, controlled by Macarthur Coal Limited, is located about 15 km south of the company's Moorvale mine in the Bowen Basin.

The company is planning to develop a new open-cut mine to produce up to 1 Mt/a of run-of-mine coal from seams within the Rangal Coal Measures that will yield both coking and low volatile PCI fractions for the export market. The raw coal will be trucked to Moorvale mine for processing and rail load-out.

Applications for ML 70354, Olive Downs 'A', covering 1175 hectares, and for ML 70355, covering the proposed haul road, have been lodged with the Department of Mines and Energy.

Macarthur Coal Limited, through Moorvale Coal Pty Ltd, also controls additional coal resources within the Rangal Coal Measures in the nearby area. These resources lie adjacent to, and to the south of the Olive Downs mining lease area and within EPC 649.

Sonoma

QCoal Pty Ltd and partners Cleveland Cliffs Inc. (CLF) of USA, China Steel Corporation of Taiwan and JFE Steel of Japan and Watami (Qld) Pty Ltd are developing a new open-cut mine, the Sonoma coal project, about 6 km south of Collinsville.

Ownership of the Sonoma Coal Project is expected to be:

- QCoal Pty Ltd 40.5%
- Cleveland-Cliffs Inc. (USA) 45%
- China Steel Corp. (Taiwan) 5%
- JFE Shoji Trade (Japan) 5%
- Watami (Qld) Pty Ltd 4.5%

In December 2006, China Steel Corporation announced plans to buy a 5% stake in the Sonoma coal mine for A$16 million and CLF, the largest producer of iron ore pellets in North America, announced in April 2007 that it had acquired a 45% interest in the project for approximately A$140 million. JFE Shoji Trade Corporation also acquired a 5 % stake in the project, announced by the company in February 2007. In May 2007, CLF reported that the deposit contains coal resources of 109 Mt within seams of the Moranbah Coal Measures.

QCoal Pty Ltd lodged applications for MLs 10325, 10326 and 10327 for the project in November 2005. ML 10325, Belmore West, was granted for a term of 30 years from 12 April 2007. MLs 10326–Sonoma West and 10327–Sonoma East were granted on 13 September 2007.

Mining by truck-and-shovel methods is proposed, and the run-of-mine coal will be transported to an on-site coal-preparation plant for beneficiation and rail load-out.

The mine is planned to initially produce about 2 Mt/a of saleable coal for export, consisting mainly of coking coal with smaller quantities of thermal and PCI coal.

Export coal will be railed 105 km to the Abbot Point Coal Terminal near Bowen. Saleable production will be rapidly expanded to peak at about 4 Mt/a subject to the availability of markets.

The Sonoma project has generated about 200 construction jobs and will initially create about 110 permanent jobs for mine operations which are expected to start in late 2007. The first coal export shipment is likely to occur early in 2008.

Coal preparation plant under construction – Sonoma Mine
Photo: QCoal Pty Ltd

Vermont

The Lake Vermont Coal Project Joint Venture has committed to develop a new open-cut mine on the Vermont coal deposit to produce about 3.5 Mt/a to 4 Mt/a of coking and PCI coals for the export market.

The Joint Venture partners include: QCMM (Lake Vermont) Holdings Pty Ltd (70%), Marubeni Coal Pty Ltd (10%), Catherine Hill Resources Pty Ltd (10%) and Coronar (Australia) Pty Ltd (10%).

The deposit lies within the Rangal Coal Measures about 18 km north-east of Dysart and east of the Saraji Mine. The project has been at an advanced stage for some time as the required mining lease (ML 70331) was granted to Bowen Basin Coal Pty Ltd, a 100% owned subsidiary of Queensland Coal Mine Management Pty Ltd, on 27 October 2005 for a term of 30 years.

The Lake Vermont Coal Project Joint Venture announced on 10 October 2007 that it would develop the new mine to be built and operated under contract by Thiess Pty Ltd with construction commencing early in November 2007 with a workforce peaking at about 350.

Saleable coal production is planned to commence by the first quarter of 2009 and initially, will be railed to the Port of Gladstone for export to customers world-wide. The mine is expected to have approximately 280 permanent employees.

The joint venture is considering possible options to reserve rail and port capacities that would also allow the coal to be exported through the coal export terminals at Abbot Point and Hay Point.

Wandoan

Xstrata Coal Queensland Pty Ltd and its joint venture partners control large resources of high volatile thermal coal in the region around Wandoan in the Surat Basin of southern Queensland.

The company is investigating the feasibility of developing a new open-cut coal mine with a production capacity of about 15 Mt/a of saleable coal. In May 2007 the joint venture lodged applications for MLs 50229, 50330 and 50331 covering a total area of 32 107 hectares. The mine would have an expected life of more than 30 years.

The project requires a new 207 km rail connection (Southern Missing Link) from Wandoan to Banana to link to the Port of Gladstone, a total rail distance of about 385 km, where the planned Wiggins Island high-capacity coal terminal would load the coal for export to markets, mainly in Asia.

In July 2007 the Queensland Government confirmed an exclusive mandate for a consortium to build the Surat Basin Railway with the project conforming to the Government's 'Public Private Partnership Value for Money' criteria.

The consortium comprises the Australian Transport and Energy Corridor; Dawson Valley Railway Pty Ltd; Industry Funds Management; Queensland Rail (QR) and mining companies Xstrata Coal and Anglo Coal.

Key milestones which the consortium must meet under the mandate include:

- the awarding of preliminary engineering and environmental consultancies by the end of July 2007

Trial pit at the Austinvale deposit showing 6 metre thick coal seam – Wandoan, 1989
Photo: R. Smith, DME

- Contracts have been let and work is proceeding
- finalisation of a preferred route by November 2007
- submission to the Coordinator-General by December 2008 of an environmental impact statement prepared under the *State Development and Public Works Organisation Act 1971*
- completion of a business case, including a financial model by September 2009
- agreement with the State on the principles for a development agreement
- achievement of financial close by June 2010.

The Queensland Government also confirmed that QR will retain ownership of the rail infrastructure from Wandoan to Toowoomba and from Banana to Gladstone and that the State will retain ownership of the new rail corridor between Wandoan and Banana.

Coals from the Surat Basin have been proven to be excellent fuels for combustion in coal-fired industrial boilers from small plant used by general industry to large pulverised fuel (pf) boilers used for utility power generation. These coals are also well suited for use in Integrated Gasification Combined Cycle power generation systems and also the production of liquid hydrocarbons and chemicals.

Within the decades 1970 to 1990 several bulk samples of coal from the Austinvale deposit at Wandoan were used by the New Energy and Industrial Technology Development Organization (NEDO) of Japan in the development of its NEDOL direct coal liquefaction process.

Coals from the Surat Basin and its geological equivalents are steadily winning greater acceptance in export markets as users become more aware of the advantages of its superior combustion performance, favourable ash properties and low environmental impact.

The Wandoan Project is being progressed by Xstrata Coal Queensland Pty Ltd on behalf of the Wandoan Joint Venture (WJV) which comprises Xstrata Coal Queensland Pty Ltd (75%), ICRA RPW Pty Limited (12.5%) and Sumisho Coal Australia Pty Ltd (12.5%).

A final decision regarding commitment to develop the project is not expected before 2009.

Stockpiled coal for 1989 bulk sample, Austinvale deposit – Wandoan
Photo: R. Smith, DME

Other Queensland coal exploration and development projects under assessment

Other selected coal projects considered to be of interest at the present time are listed in Table 2. This list is not complete in relation to all coal exploration and potential development projects currently underway in Queensland.

Table 2: Queensland selected coal exploration and development projects

Project name	Tenure and location	Stratigraphy	Operator or beneficial owner
Alpha and **Kevins Corner** (Galilee Basin)	MDLa 285, EPC 570 about 50 km north west of Alpha MDL 333 about 65 km north west of Alpha	Bandanna Formation equivalents and Colinlea Sandstone	Hancock Prospecting Pty Ltd
Alpha North and **South Alpha** (Galilee Basin)	EPC 1039 and EPC 1053 about 80 km north north-west of Alpha EPC 1040 about 27 km north-west of Alpha	Bandanna Formation equivalents and Colinlea Sandstone	Waratah Coal Inc.
Bluff (Bowen Basin)	EPC 729 about 7 km north west of Bluff	Rangal Coal Measures	C I Wallin
Broughton (Bowen Basin)	EPC 818 near Hail Creek mine	Rangal Coal Measures	Broughton Coal Pty Ltd (Eastern Corporation)
Daunia (Bowen Basin)	ML 1781, ML 70115 about 27 km east-south-east of Moranbah	Rangal Coal Measures	BHP Billiton Mitsubishi Alliance
Diamond Creek (Bowen Basin)	EPC 709 about 25 km south-west of Moranbah	Not formally named (Early Permian strata)	Diamond Creek Coal Pty Ltd
Elimatta (Surat Basin)	MDLa 373 35 km west of Wandoan township	Walloon Coal Measures (upper)	Taroom Coal NL (Northern Energy Corporation Ltd)
Ellensfield (Bowen Basin)	EPC 722, EPC 1036 about 30 km north-north-east of Moranbah	Rangal Coal Measures	CVRD Australia Pty Ltd
Glen Wilga and **Haystack Road** (Surat Basin)	MDLa 382 about 15 km south east of Chinchilla MDLa 383 about 30 km east south east of Chinchilla	Walloon Coal Measures (upper) Walloon Coal Measures (upper)	Tarong Energy Corporation Limited
Horse Creek (Surat Basin)	MDL 173 23 km north of Chinchilla	Walloon Coal Measures (lower)	Peabody (Wilkie Creek) Pty Ltd
Moranbah South (Bowen Basin)	MDL 273, MDLa 377 and MDLa 277 adjacent to Moranbah	Moranbah Coal Measures	Anglo Coal Australia Pty Ltd Exxaro Australia Pty Ltd
Middlemount (Bowen Basin)	MLa 70379, MDL 282 about 8 km south-west of Middlemount	Rangal Coal Measures	Ribfield Pty Ltd (Custom Mining Pty Ltd)
Moorvale West (Bowen Basin)	EPC 680 about 30 km east of Moranbah	Rangal Coal Measures	Macarthur Coal Limited
Nebo West (Bowen Basin)	MDL 235 about 20 km southwest of Nebo	Moranbah Coal Measures	BHP Mitsui Coal Pty Ltd
Peak Downs East (Bowen Basin)	EPC 795 about 30 km south-east of Moranbah	Moranbah Coal Measures	CVRD Australia Pty Ltd and Aquila Coal Pty Ltd
Pentland (Galilee Basin)	MDL 356, near the Flinders Highway, about 110 km south-west of Charters Towers	Betts Creek beds	Xstrata Coal Queensland Pty Ltd
Saraji East (Bowen Basin)	EPC 837 about 18 km north of Dysart	Moranbah Coal Measures	New Hope Corporation
Sirius Creek (Bowen Basin)	EPC 890 about 43 km south of Blackwater	Rangal Coal Measures	HLM Australia Pty Ltd
Taroom (Surat Basin)	MDL 158, MDL 275 about 8 km south-south-east of Taroom	Walloon Coal Measures (lower)	Anglo Coal Australia Pty Ltd
Theodore South (Bowen Basin)	MDL 216 about 20 km south of Theodore	Baralaba Coal Measures	Anglo Coal Australia Pty Ltd
Togara North (Bowen Basin)	MLa 70149, MDL 316, MDLa 317, EPC 550 about 32 km south of Comet	Rangal Coal Measures	Enex Togara Pty Limited (Xstrata Coal Queensland Pty Ltd)
Togara South (Bowen Basin)	MDL 340 about 53 km south of Comet	Rangal Coal Measures	Coal Mines Australia Limited (BMA)
Valeria (Bowen Basin)	MDL 219 about 20 km south-west of Capella	Reids Dome beds	Rio Tinto Coal Australia Pty Limited
Wards Well/ Lancewood (Bowen Basin)	ML 1790, ML 4752 about 50 km north of Moranbah	Moranbah Coal Measures	BHP Mitsui Coal Pty Ltd (BMA)
West Rolleston (Bowen Basin)	EPC 786 about 45 km south of Springsure	Bandanna Coal Measures	West Rolleston Coal Pty Ltd (Macarthur Coal Limited)
Winchester South (Bowen Basin)	MDL 183 about 33 km south east of Moranbah	Rangal Coal Measures	Queensland Coal Pty Limited
Wonbindi (Bowen Basin)	MDL 352 about 11 km south-south-east of Baralaba	Baralaba Coal Measures	Cockatoo Coal Limited
Yamala (Bowen Basin)	EPC 927 about 14 km west of Comet	Rangal Coal Measures	Taroom Coal Pty Limited (Northern Energy Corporation Ltd)

ML = Mining Lease • MDL = Mineral Development Licence • EPC = Exploration Permit for Coal • a = Application

Queensland coal exploration activity

In line with the upward trend in coal exploration expenditure over the past five years, exploration and mining companies are continuing to explore for coal in Queensland, particularly in the coal-rich Bowen Basin.

In 2006–07, coal exploration expenditure on both production and exploration tenements in Queensland was A$113.7 million, compared with A$94.0 million in 2005–06 (Australian Bureau of Statistics Cat. No. 8412.0). Expenditure has continued an upwards trend since the low in 2000, as shown in Figure 10 below.

In 2006–07, the Department of Mines and Energy received 77 applications for Exploration Permits for Coal (EPCs) although five of these were subsequently abandoned, as were two previous applications.

This compares with 83 applications that were lodged in 2005–06. A total of 50 EPCs were granted during 2006–07.

At 30 June 2007, a total of 278 EPCs were current in Queensland. They covered more than 23 000 sub-blocks or about 74 000 km^2. This compares with the 21 500 sub-blocks (about 68 500 km^2) for the 238 EPCs current at 30 June 2006. Since 2001, the number of active Exploration Permits for Coal has continued to increase, as shown in Figure 11.

In 2006–07, five applications for Mineral Development Licences (MDLs) for coal were lodged, and one was granted – MDL 356 which covers the Lauderdale thermal coal deposit in the northern Galilee Basin (held by Xstrata Coal Queensland Pty Ltd).

In 2006-07, 17 applications for coal mining leases were lodged with the Department, and 10 were granted. Mining leases were granted in association with the following mines and new coal projects:

- Clermont project (infrastructure)
- Goonyella Riverside Mine (infrastructure)
- New Acland Mine
- Norwich Park Mine
- Sonoma project (infrastructure).

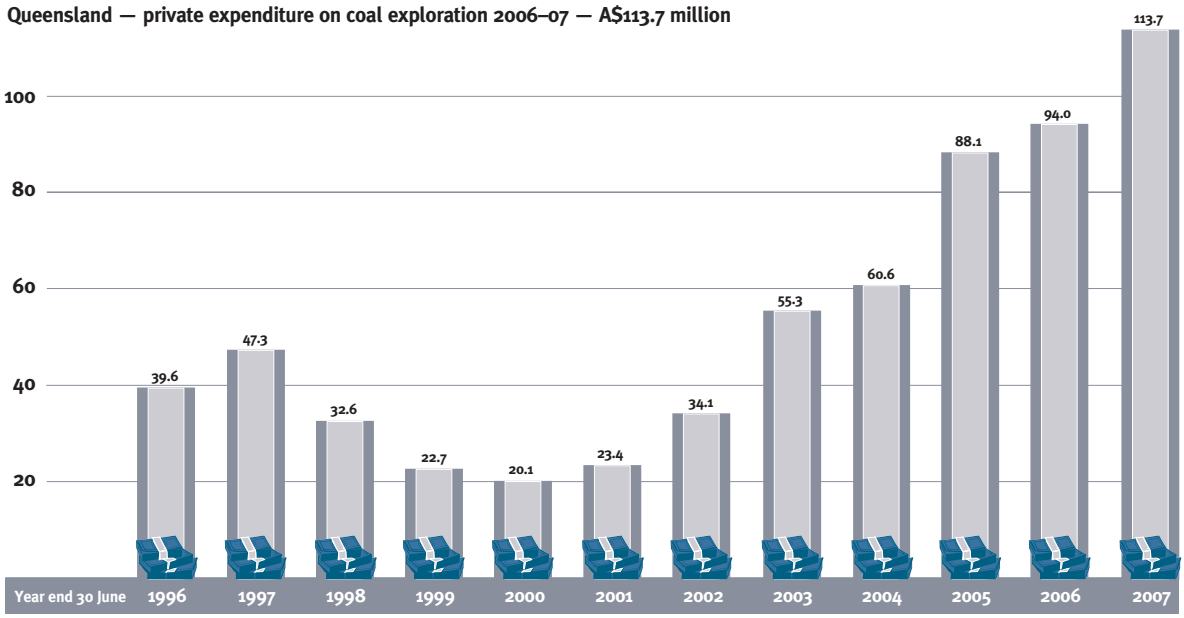
Exploration and mining companies continued to seek areas prospective for coal in the eastern part of the State, particularly in the Bowen Basin, the Surat Basin and the Clarence-Moreton Basin.

Prospective lands in other coal-bearing basins in the eastern part of the State are also largely held under tenure. These are located mainly in the Galilee, Maryborough and Styx Basins, and in the Calen Coal Measures near Mackay.

Noteable discoveries of potentially very large resources of thermal coal have been made in the Galilee Basin by Waratah Coal Inc. within EPC 1040 – South Alpha and EPCs 1039 and 1053 – North Alpha.

In 2006, a major deep-drilling program of more than 70 bore holes was undertaken to evaluate the coal resources at west Moura, now known as the Belvedere project. The area is held as EPC 783 by Belcoal Pty Ltd (50%) and BD Coal Pty Ltd (50%), companies associated with the former AMCI Holdings Australia Pty Ltd and Aquila Resources Limited.

Figure 10: Queensland annual private expenditure on coal exploration 1995-96 to 2006-07



CVRD announced in April 2007 that it had acquired 100% of AMCI Holdings Australia Pty Ltd and the company name has been changed to CVRD Australia Pty Ltd, however issues in relation to pre-emptive rights under the Agreement are being legally contested by Aqulia Resources Limited.

Coal exploration continued in the areas east (down dip) of the Peak Downs and Saraji coal mines targeting the deep resources of prime coking coal.

Discoveries have already been made within EPC 795 (Peak Downs East) held equally by Aquila Coal Pty Ltd and Bowen Central Coal Pty Ltd and within EPC 837 (Saraji East) held by New Hope Exploration Pty Ltd.

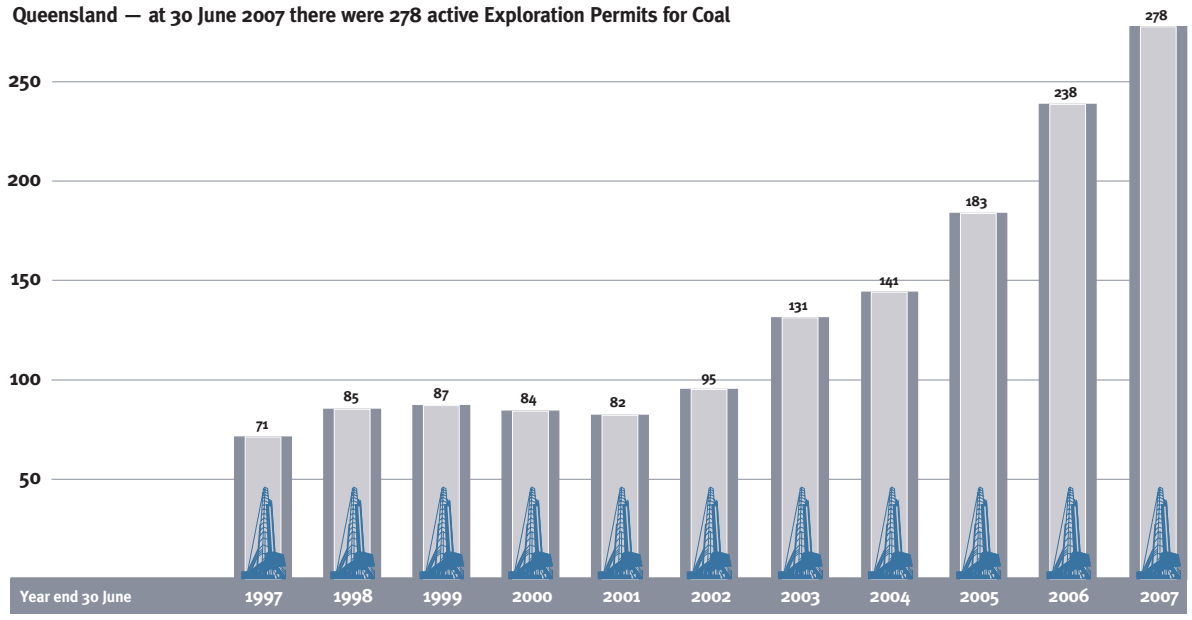
Bowen Central Coal Pty Ltd is a wholly-owned subsidiary of CVRD Australia Pty Ltd. These prospects are amongst the last unproven, major exploration targets that contain potentially mineable seams of prime coking coal within the Bowen Basin.

Work to date at Peak Downs East has confirmed that the coals from the Q, Harrow Creek Upper, Harrow Creek Lower and Dysart seams would yield hard coking coal products over a wide section of the northern part of the area.

New Hope Corporation has reported large inferred coal resources in excess of 650 Mt, in the Saraji East area and now refer to the project as New Saraji.

With the limited availability of prospective greenfields sites, new entrants seeking equity in Queensland coal are generally limited to buying interests in existing projects.

Figure 11: Queensland number of active Exploration Permits for Coal at 30 June, 1997–2007



Queensland Government activities

Smart Exploration

Smart Exploration is a A$20 million initiative of the Department of Mines and Energy to stimulate investment in exploration in Queensland over four years (2005–09).

Administered by the Geological Survey of Queensland, the program builds on earlier funding initiatives that acquired gravity and airborne geophysical data to update the Department's geological mapping. These earlier initiatives also developed systems to deliver strategic geoscience data online.

Smart Exploration targets key areas in the State that have significant mineral and energy potential, including the Bowen and Surat Basins in central and southern Queensland.

Previous initiatives have resulted in positive benefits for the coal industry, such as:

- acquiring airborne geophysical survey data over the exposed Bowen Basin
- developing and implementing the Queensland Digital Company Reports system (QDEX) for online receipt, storage, management and access to historical company exploration reports
- developing the Interactive Resource and Tenure Maps (IRTM) System to facilitate strategic decision-making and provide access to, and delivery of, tenement and geoscience information over the Internet.

Airborne coverage of the whole of the Bowen and Surat Basins has been completed. Magnetic and radiometric data were captured at 400 m line spacing and 80 m flying height. Gravity data were captured at 4 km spacing in the central part of the Surat Basin.

SRK Consulting is preparing a structural synthesis of the basins as a cooperative project funded by the Queensland Government and some major coal companies and petroleum explorers.

The objective is to provide a four dimensional regional structural/basin framework by integrating existing data and new data. Eight coal, coal-seam gas and petroleum companies have now joined as partners in this collaborative project. The Department has also started a project to remap the Bowen and Surat Basins.

Queensland's coal infrastructure expansion

The buoyant world demand for coal has resulted in increased pressure on Queensland's coal transport and export facilities and the Government and private enterprise have embarked on a major infrastructure upgrade.

In late 2006, committed investment in coal transport-infrastructure expansion programs (by State-owned rail and port corporations and the privately owned coal terminals) amounted to more than A$4 billion.

These works will increase the total coal-export capacity of the rail and port systems to 200 Mt/a by the end of 2008. Additional planned rail capacity will become available on the Goonyella rail system when the Jilalan Yard project is completed at the end of 2009. The total coal haulage capacity of the Queensland rail system, including haulage to domestic markets, is expected to increase to about 242 Mt/a by the end of 2010.

Ports

Queensland continues to develop a modern, efficient rail network that delivers large tonnages of coal to six coal export terminals. These are located at the ports of:

Ships at berth and first coal in new stockpiling area shown in background – RG Tanna, Gladstone
Photo: Central Queensland Ports Authority

- **Abbot Point** – Abbot Point Coal Terminal
- **Hay Point** – Dalrymple Bay Coal Terminal
  Hay Point Services Coal Terminal
- **Gladstone** – R G Tanna Coal Terminal
  Barney Point Coal Terminal
- **Brisbane** – QBH Bulk Terminal.

Expansion programs are underway to increase the nominal throughput capacity of Queensland's coal-export terminals to about 230 Mt/a by the end of 2008. Further expansion plans are already in place and works will be timed to meet demand (Table 3 and Figure 9).

Rail

Works in progress, including committed track-capacity expansions, will provide a total rail coal haulage capacity, including coal to domestic markets, of about 210 Mt/a by early 2008.

These works do not include construction of either the Northern Missing Link (North Goonyella mine to the Newlands rail system connecting to the Port of Abbot Point) or the Southern Missing Link (from the coal deposits near Wandoan in the Surat Basin to the Moura rail system near the township of Banana).

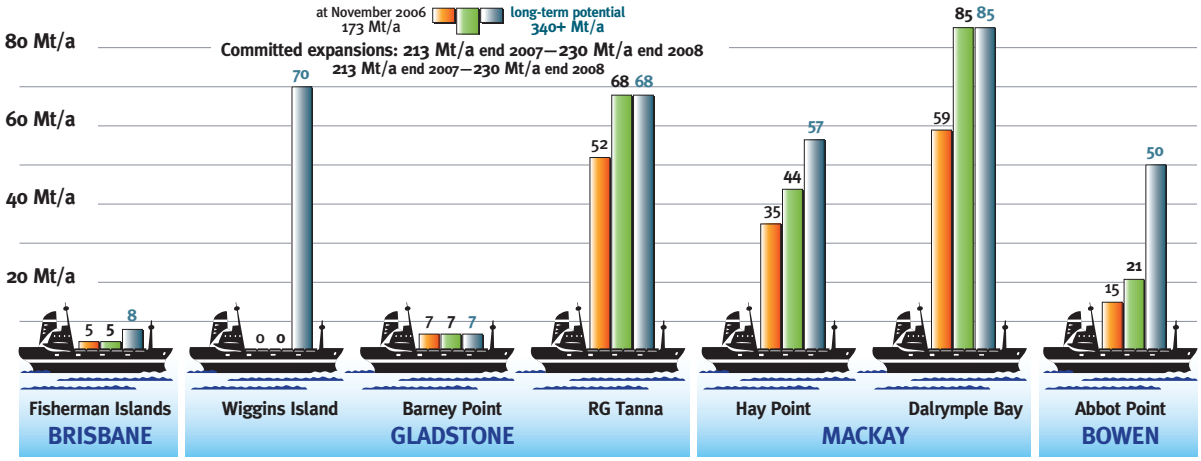
Any commitment to construct either of these will be subject to demand and commercial viability. It is unlikely that either of these new rail links will be completed by the end of 2010, although with immediate support from industry the Northern Missing Link could be constructed within this timeframe. The committed program of works will increase the total coal haulage capacity of QR in 2009–2010 to about 240 Mt/a (Table 4).

Table 3: Queensland nominal coal export port capacities and planned expansions (Mt/a)

Location	At Nov 2006	Committed expansions	Long-term potential	Port ownership or lessee	Operator
Abbot Point near Bowen	**15**	**21** end 2007	**50** later 2010	The Ports Corporation of Queensland	Abbot Point Bulkcoal Pty Ltd
Dalrymple Bay near Mackay	**59**	**68** end 2007 **85** end 2007	**85**	Babcock and Brown Infrastructure Group (Lessee)	Dalrymple bay Coal Terminal Pty Ltd
Hay Point near Mackay	**35**	**44** Q1 2007	**55–57** under study	Central Queensland Coal Associates Joint Venture	Hay Point Services Pty Ltd
RG Tanna Gladstone	**52**	**68** end 2007	**68** under study	Central Queensland Ports Authority	Central Queensland Ports Authority
Barney Point Galdstone	**7**	**7**	**7**	Central Queensland Ports Authority	Central Queensland Ports Authority
Wiggins Island Gladstone	•	•	up to **70** subject to demand	Central Queensland Ports Authority	Central Queensland Ports Authority
Fisherman Islands Brisbane	**5**	**5**	**8**	Queensland Bulk Handling	Queensland Bulk Handling Pty Ltd
TOTAL	**173**	**213** end 2007 **230** end 2008	**›340**		

Source: Queensland Transport, 2006.

Figure 12: Queensland nominal coal export port capacities and planned expansions



In accordance with recommendations of the recent O'Donnell Report, the Queensland Government announced on 10 October 2007 that it has approved that Queensland Rail invest an additional $654 million for the purchase of rolling stock and infrastructure improvements for Queensland's coal export system.

A second stage investment of $216 million for the purchase of an additional 920 wagons which could be necessary to meet demand in 2010-11 was also approved in principle.

These new acquisitions, including the existing program and the $113 million for 510 new coal wagons announced in July 2007, brings the total investment in rolling stock to be made in forward years to $2.05 billion. This new investment will allow QR to transport up to 261 million tonnes of coal per annum by 2010-11.

Further information about QR's plans for expanding rail-haulage capacity for coal is available from the following web site: www.qr.com.au/coalrail

New water supply infrastructure

With demand increasing for reliable water supplies to service the large export coal mines and communities in the Bowen Basin, the Queensland Government-owned corporation, SunWater has constructed the A$300 million Moranbah water pipeline which it owns and operates. The project was officially opened on 30 August 2007.

The 220 km pipeline (813 mm outside diameter — initial capacity nominally 17 000 megalitres/year) extends from the Gorge Weir on the Burdekin River to Moranbah. it also links to a smaller new pipeline to supply water to coal mines east of Moranbah (about 50 km). A second smaller link to the south (about 70 km) from Moranbah is also planned.

The major infrastructure for the project includes a pump station at Gorge Weir, a 600 megalitre balancing storage facility located about 35 km north of Moranbah, three booster pump stations and a new 6 megalitre terminal storage at Moranbah.

Six foundation users of the pipeline, as listed below, participated in a funding agreement with SunWater in regard to the engineering design and have also established contracts for long term water supplies that underwrite the financial viability of the pipeline:

- BMA Coal
- Macarthur Coal
- Carborough Downs Coal
- Isaac Plains Coal
- Rio Tinto Coal Australia (Hail Creek Mine)
- Excel Coal (Millennium mine) – Excel Coal is majority owned by Peabody Energy Australia Coal Pty Ltd

The increased availability of water will allow coal production to expand by up to about 60 Mt/a. The Queensland Government announced in July 2007 that a total of A$17.835 million had been allocated for 2007–08 to progress feasibility work on a number of water supply projects – A$1.976 million for the Nathan Dam Project near Taroom and A$1.5 million for the Connors River Dam Project which is located about 100 km east of Moranbah. These projects represent options for relaible water supplies for the coal mining industry in the northern Surat Basin and northern and central Bowen Basin regions respectively.

Table 4: Estimates of Queensland nominal coal rail haulage capacities and planned expansions

Rail system	Haulage Capacity Mt/a 2007 - 2008	Haulage Capacity Mt/a 2008 - 2009	Haulage Capacity Mt/a 2009 - 2010
Newlands system Northern Bowen Basin – Port of Abbot Point	20	20	20
Goonyella system Northern and central Bowen Basin – Port of Hay Point	92–105	105–118	118–131
Blackwater system Central and southern Bowen Basin – Port of Gladstone	58–60	64	64–68
Moura system Southern Bowen Basin – Port of Gladstone	12–16	16	17*
West Moreton system Surat and Clarence Moreton Basins – Port of Brisbane	6	6	6
Total	188–207	211–224	225–242

Data supplied by QR Network Access Group, January 2008

Note: The figures include a total of approximately 10 Mt/a haulage for domestic use of which approximately 9.5 Mt/a is carried on the Blackwater and Moura systems.

*** using 1 x 3700 t and 5 x 7000 t trains**

Queensland coal industry outlook

Queensland is endowed with coal resources, including high-quality coking coals, far in excess of domestic needs for the foreseeable future. Consequently, it will be able to maintain its high rate of coal exports for many years into the future. Coal sales, for both export and domestic consumption, are moving ahead to new record levels with prices for export coal expected to increase and remain strong in 2008.

With substantial new rail, port and water supply infrastructure capacity now under construction, mines ramping-up production and eight new mines opening in 2006, the Queensland coal industry has entered yet another phase of major expansion.

The supply of metallurgical coals to the world market will remain a major part of this expansion, supplemented by new thermal coal projects, particularly if infrastructure is provided to service coal mining in the Surat Basin and the southern and south-west Bowen Basin.

Continued strong demand for thermal coal could lead to the development large new coal mines in new frontiers of Queensland. Firstly, in the Surat Basin of southern Queensland and later in the region north of the township of Alpha in the Galilee Basin however the lack of infrastructure in both these areas, including access to rail and port facilities, is major impediment.

Queensland's competitively priced coking coals will continue to be in strong demand and will maintain market share because of their superior quality and proven reliability of supply.

Company mergers and acquisitions have dominated the Queensland coal mining industry over recent years. Most of Queensland's major coal resources are now controlled by large multinational corporations.

Opportunities still exist targeting smaller coal deposits and a number of junior companies such as Custom Mining Pty Ltd (Middlemount), Northern Energy Corporation (Elimatta) and QCoal Pty Ltd (Sonoma) are planning new mines with Sonoma commencing prodcution in late 2007.

Unprecedented international demand, coupled with strong coal prices, points towards continued strength and success in the future for the Queensland coal-export industry. The Queensland Government and the coal industry are working together to establish the required mining, land transport, port and civil infrastructure to meet this demand.

The Queensland Government, in conjunction with the Australian Coal Association, major coal producers and the electricity industry is also striving to meet the challenges of climate change.

With assistance from industry and research organisations including CSIRO, the Queensland Government is promoting the development of a range of clean coal technologies to significantly reduce emissions of greenhouse gases into the atmosphere. These technologies include the capture and underground storage of carbon dioxide into deep underground reservoirs.

Successful demonstration of these new technologies will ensure that coal will remain a fuel of choice with low environmental impacts in the future.

Expansion works underway at Abbot Point coal terminal in 2007 – Abbot Point, Bowen
Photo: Ports Corporation of Queensland

Hay Point Services Coal Export Terminal and Dalrymple Bay Coal Terminal prior to recent expansions – Mackay
Photo: AAMHATCH Aerial Photo

Table 5: Queensland saleable coal production by mine, 2001–02 to 2006–07 (tonnes)

Mine name	2001–02 (t)	2002–03 (t)	2003–04 (t)	2004–05 (t)	2005–06 (t)	2006–07 (t)
Open-cut						
Baralaba	•	•	•	•	24 838	311 491
Blackwater	10 290 487	13 851 903	13 088 524	12 474 261	11 704 455	13 022 607
Blair Athol	10 254 271	11 975 129	12 890 306	11 239 092	10 357 895	9 823 838
Collinsville Opencut	5 116 735	5 571 258	5 447 948	4 431 595	5 246 970	4 503 368
Broadlea North	•	•	•	•	•	334 587
Burton	4 062 280	3 721 268	4 302 062	4 130 554	4 220 145	3 597 235
Callide and Boundary Hill	10 393 328	8 991 865	9 088 851	9 432 651	9 245 155	9 884 166
Commodore	246 277	1 690 784	2 590 364	3 311 995	3 433 044	3 465 814
Coppabella	3 971 810	4 261 367	3 920 258	4 640 654	4 120 176	3 491 676
Curragh	5 995 431	6 300 983	7 040 118	7 029 359	8 944 903	8 590 211
Eaglefield	•	•	•	590 477	771 287	1 296 976
Ebenezer	1597628	767210	•	•	•	•
Ensham	5 492 110	5 654 491	6 988 909	8 462 937	8 034 255	7 503 286
Foxleigh	2 343 778	2 415 097	1 996 090	2 265 509	1 954 726	2 422 880
German Creek– German Creek East	593 000	821 864	9 81 184	1 615 870	1 976 782	1 514 351
German Creek – Lake Lindsay	•	•	•	•	•	512 932
Goonyella/Riverside	10 954 385	10 264 864	10 879 721	13 144 766	12 686 496	11 762 657
Gregory	1 847 760	2 105 841	1 551 124	1 731 426	1 898 585	1 689 741
Hail Creek	•	•	3 274 028	5 624 082	4 746 867	5 278 580
Isaac Plains	•	•	•	•	•	488 079
Jeebropilly	1 506 381	980 141	672 521	689 323	557 539	409 121
Jellinbah East	3 407 949	3 683 835	3 687 871	3 946 328	3 338 945	4 057 228
Kogan Creek	•	•	•	•	•	175 737
Meandu	5 314 864	6 138 326	6 812 706	6 657 084	6 839 838	6 227 965
Millennium	•	•	•	•	•	692 054
Minerva	•	•	•	•	946 341	1 938 592
Moorvale	•	68 384	1 514 485	2 325 922	2 730 786	1 467 203
Moura (Dawson complex)	5 198 267	5 849 351	6 710 243	6 489 674	6 000 314	7 041 515
New Acland	•	1 136 571	2 129 018	2 570 057	2 641 135	2 907 821
New Hope No. 358	141 322	160 548	19 713	•	•	•
New Oakleigh	357 715	434 303	432 729	467 524	471 567	487 439
Newlands	4 194 761	4 461 208	3 511 516	4 458 907	4 879 332	4 455 419
Norwich Park	4 204 209	4 323 903	4 630 467	5 680 702	5 359 127	5 743 419
Oaky Creek	1 423 534	2 383 191	1 882 676	1 153 208	659 099	481 418
Peak Downs	7 392 862	7 246 523	8 186 432	8 781 770	8 744 860	8 863 562
Poitrel	•	•	•	•	•	1 515 956
Rolleston	•	238 606	64 647	•	3 060 780	6 045 331
Saraji	5 009 851	4 627 082	5 710 581	6 212 168	5 120 408	6 681 428
South Blackwater	666 366	•	•	•	•	•
South Walker Creek	3 331 118	3 972 549	3 614 754	3 317 354	3 043 693	3 348 043
Wilkie Creek	1 006 415	1 042 098	1 212 471	1 560 542	1 747 736	1 973 395
Yarrabee	913 788	1 211 451	1 364 339	1 545 968	1 694 174	1 723 971
Open-cut Total	**117 228 682**	**126 351 994**	**1 36 196 656**	**145 981 759**	**147 202 253**	**155 731 092**
Underground						
Alliance (Oaky Creek)	560 413	•	•	•	•	•
Broadmeadow	•	•	•	•	1 540 489	2 572 866
Carborough Downs	•	•	•	•	•	207 354
Cook	455 803	499 007	414 437	205 970	112 906	41 555
Crinum	3 063 515	2 893 971	4 036 341	3 630 221	3 222 153	2 976 483
German Creek Aquila	•	•	•	•	•	259 195
German Creek Bundoora	•	•	•	•	•	307 005
German Creek Central	1 610 000	1 531 919	1 184 676	1 237 977	982 272	4 715
German Creek Southern	3 150 000	3 029 765	2 838 451	2 342 635	2 061 838	55 489
Grasstree	•	•	17 849	211 280	398 970	2 175 187
Kenmare	2 580 972	•	•	•	•	•
Kestrel	3 722 160	3 895 825	3 297 596	3 872 124	3 370 727	3 705 289
Moranbah North	4 086 716	3 674 073	1 388 752	3 220 464	3 222 046	3 648 241
Newlands	3 970 775	3 433 981	4 652 014	4 438 736	2 882 840	3 042 569
North Goonyella	1 362 831	2 126 141	1 438 394	1 286 010	1 286 224	1 485 797
Oaky Creek No. 1	1 474 396	2 387 708	2 641 797	2 857 519	2 697 676	3 143 508
Oaky North	5 096 690	3 777 491	1 955 327	3 380 880	2 904 408	3 927 708
Underground Total	**31 134 271**	**27 249 881**	**23 865 634**	**2 6683 816**	**24 682 549**	**27 552 961**
Open-cut Total	**117 228 682**	**126351 994**	**136 196 656**	**1 45 981 759**	**147 202 253**	**155 731 092**
Grand Total	**148 362 953**	**153 601 875**	**160 062 290**	**172 665 575**	**171 884 802**	**183 284 053**

Statistical data for 2006–07 are preliminary and may be subject to revision.

Table 6: Queensland coal exports by mine, 2001–02 to 2006–07 (tonnes)

Mine name	2001–02 (t)	2002–03 (t)	2003–04 (t)	2004–05 (t)	2005–06 (t)	2006–07 (t)
Baralaba	•	•	•	•	80 218	250 526
Blackwater	9 332 065	11 417 775	11 318 435	10 812 717	10 523 970	10 754 686
Blair Athol	10 112 298	12 158 040	12 637 548	10 706 143	10 573 732	9 704 030
Broadlea North	•	•	•	•	•	350 386
Burton	3 958 344	3 605 089	4 105 520	4 224 875	4 127 016	3 918 038
Callide	•	124 214	369 588	307 436	414 694	270 909
Carborough Downs	•	•	•	•	•	249 287
Collinsville	4 066 228	4 517 650	4 510 643	3 874 950	4 476 374	3 948 525
Cook	180 506	369 969	493 675	151 133	90 726	•
Coppabella	4 121 962	4 324 047	4 484 230	4 317 430	4 118 295	4 726 156
Curragh	3 380 639	4 009 693	4 566 542	4 416 034	6 144 214	6 459 322
Ebenezer	897 397	673 924	17 184	•	•	•
Ensham	4 863 771	5 065 321	7 032 182	7 812 315	7 804 534	7 676 959
Foxleigh	2 289 890	2 146 541	1 934 529	2 211 529	2 094 131	2 454 949
German Creek	5 593 886	5 504 605	5 423 852	5 122 070	5 648 091	5 185 980
Goonyella/Riverside	9 975 363	10 352 607	11 044 071	13 262 455	13 171 854	14 072 379
Gregory	4 776 414	4 700 206	5 226 104	5 263 896	4 830 760	4 969 941
Hail Creek	•	•	2 695 655	5 525 463	4 263 622	5 413 696
Isaac Plains	•	•	•	•	•	335 713
Jeebropilly	1 304 067	868 507	340 015	303 901	298 225	259 751
Jellinbah East	3 399 673	3 517 621	4 021 492	4 005 973	3 212 631	4 054 916
Kestrel	3 721 126	3 785 569	3 254 163	3 798 735	3 684 324	3 647 771
Millennium	•	•	•	•	•	441 547
Minerva	•	•	•	•	887 977	1 858 180
Moorvale	•	•	752 722	2 248 416	2 615 191	996 425
Moranbah North	4 378 256	4 079 659	1 582 975	3 414 668	3 738 628	3 888 128
Moura Dawson (Complex)	5 066 710	5 613 140	6 921 845	6 336 291	5 534 904	7 081 881
New Acland	•	749 365	1 194 017	1 554 514	1 652 903	1 559 325
New Hope	101 087	143 389	28 198	•	•	23 927
New Oakleigh	•	99 672	230 110	339 774	430 362	207 286
Newlands	7 812 038	8 274 253	7 584 250	8 712 912	7 093 889	7 042 243
North Goonyella	1 424 221	1 717 403	1 849 142	1 950 790	1 880 098	2 333 610
Norwich Park	4 242 408	4 248 320	4 769 742	5 557 632	5 115 950	5 081 251
Oaky Creek	9 046 869	8 641 689	5 998 637	7 702 366	6 342 835	7 183 513
Peak Downs	7 077 885	7 529 805	8 239 449	9 077 101	8 817 978	8 845 349
Poitrel	•	•	•	•	•	834 878
Rolleston	•	196 061	52 881	•	1 637 005	4 043 512
Saraji	4 859 056	4 869 905	5 875 816	6 292 209	5 303 190	6 460 951
South Blackwater	2 176 263	•	•	•	•	•
South Walker Creek	3 414 479	3 790 210	3 697 987	3 409 275	2 813 068	3 225 333
Wilkie Creek	676 283	1 026 279	1 198 520	1 507 592	1 776 399	1 885 234
Yarrabee	864 632	1 104 313	1 603 467	1 244 918	1 660 741	1 667 302
Total	**123 113 816**	**129 224 841**	**135 055 186**	**145 465 513**	**142 858 529**	**153 363 795**

Statistical data for 2006–07 are preliminary and may be subject to revision.

Table 7: Queensland coal distribution to domestic markets, 2001–02 to 2006–07 (tonnes)

Mine name	2001–02 (t)	2002–03 (t)	2003–04 (t)	2004–05 (t)	2005–06 (t)	2006–07 (t)
Blackwater	2 053 757	2 235 812	2 313 586	2 300 973	1 521 301	1 104 728
Blair Athol	91 375	93 014	82 324	94 013	85 397	101 655
Boundary Hill	•	•	•	•	•	•
Burton	•	91 030	•	•	•	•
Callide	10 549 711	8 855 335	8 459 773	9 104 569	9 016 980	9 542 498
Collinsville	819 503	708 089	684 767	670 883	566 127	591 187
Commodore	246 277	1 690 784	2 590 364	3 311 995	3 431 311	3 387 684
Cook	167 019	103 633	40 204	64 848	13 358	•
Curragh	2 608 649	2 187 613	2 339 588	2 511 014	2 557 989	2 239 555
Ebenezer	565 701	203 689	13 542	•	•	•
Ensham	305 832	557 839	278 303	547 841	227 409	56 600
German Creek	4 683	•	•	60 368	•	•
Gregory	163 310	239 785	24 027	•	28 951	•
Jeebropilly	825 616	518 037	360 228	310 673	268 466	277 085
Jellinbah East	52 874	13 147	7 414	5 413	2 890	1 185
Kogan Creek	•	•	•	•	•	106 545
Meandu	5 225 190	6 181 145	6 896 881	6 652 757	6 823 473	6 193 326
Moura Dawson (Complex)	•	8 490	•	19 900	35 633	44 153
New Acland	•	282 022	766 134	942 897	1 005 444	913 755
New Hope	26 760	50 167	15	•	•	•
New Oakleigh	•	120 800	212 512	85 656	20 572	74 758
Norwich Park	•	•	•	5 352	•	•
Rolleston	•	43 263	13 707	•	1 243 997	2 008 592
Wilkie Creek	90	•	•	•	•	•
Yarrabee	1 641	1 524	1 985	1 349	949	1 429
Total	**23 707 988**	**24 185 218**	**25 085 354**	**26 690 501**	**26 850 247**	**26 644 735**

Note: An additional 88 649 tonnes were sold interstate in 2005–06 and an additional 228 723 tonnes were sold interstate in 2006–07.

Statistical data for 2006–07 are preliminary and may be subject to revision.

Coal stacker-reclaimer – Abbot Point Coal Terminal, Bowen
Photo: Ports Corporation of Queensland

List of Queensland coal mines and operators, 2007

Anglo Coal Australia Pty Ltd

GPO Box 1410 Brisbane QLD 4001
Phone: +61 7 3834 1333; Fax: +61 7 3834 1390
Web site: www.anglocoal.com.au

Anglo Coal (Callide Management) Pty Ltd
PO Box 144 Biloela Qld 4715
Phone: +61 7 4990 1603; Fax: +61 7 4990 1687
Major owners: Anglo Coal Holdings Australia Ltd 100%
Operating mines: Callide open-cut and Boundary Hill open-cut
Coal type: Thermal

Dawson Joint Venture
Dawson Highway Moura Qld 4718
Phone: +61 7 4990 9700; Fax: +61 7 4990 9800
Major owners: Anglo Coal (Dawson) Ltd 51% and Mitsui Moura Investment Pty Ltd 49%
Operating mine: Dawson Mining Complex - Dawson North open-cut, Dawson Central open-cut, Dawson South open-cut
Coal type: Coking and thermal

Anglo Coal (Capcoal Management) Pty Ltd
Private Mail Bag Middlemount Qld 4746
Phone: +61 7 4985 0200; Fax: +61 7 4985 7962
Major owners: Anglo Coal (German Creek) Pty Ltd 56.97%, Jena Pty Ltd 13.03%,
Mitsui German Creek Investment Pty Ltd 30%
Operating mines: Grasstree Colliery underground, Bundoora underground, Lake Lindsay open-cut
Contract mine: Aquila u/ground (contractor – InCoal Pty Ltd),
Coal type: Coking and PCI

Anglo Coal (Moranbah North Management) Pty Ltd
PO Box 172 Moranbah Qld 4744
Phone: +61 7 4968 8600; Fax: +61 7 4968 8678
Major owners: Moranbah North Coal Pty Ltd 87%, Moranbah North Coal (No 2) Pty Ltd 1%, Nippon Steel Australia Pty Ltd 5%, NS Resources Australia Pty Ltd 1.25%, Mitsui Moranbah North Investment Pty Ltd 4.75%, JFE Mineral (Australia) Pty Ltd 0.5% and Shinsho Australia Pty Ltd 0.5%.
Operating mine: Moranbah North Underground
Coal type: Coking

Roper Creek Joint Venture
PMB, Middlemount QLD 4746
Phone: +61 7 4985 0200; Fax: +61 7 4985 7962
Major owners: Anglo Coal Holdings Australia Ltd 86.36% and Marubeni Coal Pty Ltd 13.64%
Operating Mine: German Creek East/Oak Park open-cut
Coal Type: Coking and PCI / thermal

BHP Billiton Mitsubishi Alliance

GPO Box 1389 Brisbane Qld 4001
Phone: +61 7 3226 0600; Fax: +61 7 3229 2575
Web site: www.bmacoal.com

Blackwater Mine
Private Mail Bag Blackwater Qld 4717
Phone: +61 7 4980 5666; Fax: +61 7 4982 6825
Major owners: BHP Billiton Ltd 50% and Mitsubishi Development Pty Ltd 50%
Operating mine: Blackwater open-cut
Coal type: Coking and thermal

Goonyella Riverside Mine
Private Mail Bag 1 Moranbah Qld 4744
Phone: +61 7 4940 4333; Fax: +61 7 4940 4688
Broadmeadow U/ground – Phone: +61 7 4940 4813
Fax: +61 7 4940 4833
Major owners: BHP Billiton Ltd 50% and Mitsubishi Development Pty Ltd 50%
Operating mines: Goonyella open-cut and Broadmeadow underground
Coal type: Coking

Gregory Crinum Mine
PO Box 1526 Emerald Qld 4720
Major owners: BHP Billiton Ltd 50% and Mitsubishi Development Pty Ltd 50%
Phone: +61 7 4982 8100; Fax: +61 7 4982 8197
Operating mine: Gregory open-cut, Crinum underground
Coal type: Coking and thermal

Norwich Park Mine
Private Mail Bag Dysart Qld 4745
Phone: +61 7 4968 9222; Fax: +61 7 4958 2357
Major owners: BHP Billiton Ltd 50% and Mitsubishi Development Pty Ltd 50%
Operating mine: Norwich Park open-cut
Coal type: Coking and thermal

Peak Downs Mine
Private Mail Bag Moranbah Qld 4744
Phone: +61 7 4968 8233; Fax: +61 7 4968 8160
Major owners: BHP Billiton Ltd 50% and Mitsubishi Development Pty Ltd 50%
Operating mine: Peak Downs open-cut
Coal type: Coking

BHP Billiton Mitsubishi Alliance ...continued

GPO Box 1389 Brisbane Qld 4001
Phone: +61 7 3226 0600; Fax: +61 7 3229 2575
Web site: www.bmacoal.com

Saraji Mine
Private Mail Bag Dysart Qld 4745
Phone: +61 7 4968 9777; Fax: +61 7 4968 9760
Major owners: BHP Billiton Ltd 50% and Mitsubishi Development Pty Ltd 50%
Operating mine: Saraji open-cut
Coal type: Coking

BHP Mitsui Coal Pty Ltd

GPO Box 1389 Brisbane Qld 4001
Phone: +61 7 3226 0600; Fax: +61 7 3229 2575
Web site: www.bmacoal.com

Poitrel Mine
Private Mail Bag 1007 Moranbah Qld 4744
Phone: +61 7 4968 8700; Fax: +61 7 4968 8798
Major owners: BHP Billiton Ltd 80% and Mitsui & Co., Limited 20%
Operating Mine: Poitrel open-cut
Coal type: Coking, PCI and thermal

South Walker Creek Mine
Locked Bag 1014 Nebo Qld 4742
Phone: +61 7 4950 5311; Fax: +61 7 4950 5335
Major owners: BHP Billiton Ltd 80% and Mitsui & Co., Limited 20%
Operating mine: South Walker Creek open-cut
Coal type: PCI and thermal

Caledon Coal Pty Ltd

Level 2, 87 Wickham Terrace Brisbane Qld 4000
Phone: +61 7 3309 3100; Fax: +61 7 3831 0366
Web site: www.caledonresources.com

CC Pty Ltd
2613 Blackwater-Rolleston Road Blackwater Qld 4717
PO Box 119 Blackwater Qld 4717
Phone: +61 7 4986 1600; Fax: +61 7 4986 1655
Major owners: Caledon Resources PLC 100%
Operating mine: Cook underground
Coal type: Coking and thermal

CS Energy Limited

GPO Box 769 Brisbane Qld 4001
Phone: +61 7 3222 9508; Fax: +61 7 3222 9833
Web site: www.csenergy.com.au

Kogan Creek open-cut
Major owners: Aberdare Collieries Pty Ltd, a 100% owned subsidiary of CS Energy Ltd
Coal type: Thermal

Mining contractor:
Golding Contractors Pty Ltd
PO Box 338 Chinchilla Qld 4413
Phone: +61 7 4665 2177; Fax: +61 7 4665 2100

Head Office: PO Box 1625 Gladstone Qld 4680
Phone: +61 7 4976 0400; Fax: +61 7 4976 0451

CVRD Australia Pty Ltd

Lvl 22 Riverside Centre 123 Eagle Street Brisbane Qld 4000
Phone: +61 7 3220 0330; Fax: +61 7 3220 0805
Web site: www.cvrd.com.br

Broadlea North Mine
PO Box 1565 Moranbah Qld 4744
Phone: 1300 883 234; Fax: +61 7 3503 9378
Major owners: CVRD Australia Pty Ltd 100%
Operating mine: Broadlea North open-cut
Coal type: Coking, PCI

Carborough Downs Mine
PO Box 8098 Mt Pleasant Qld 4740
Phone: +61 7 4951 7800; Fax: +61 7 4951 7828
Major owners: CVRD Australia Pty Ltd 80%, JFE Group 5%, Nippon Steel 5%, POSCO 5%, and Tata Steel 5%
Operating mine: Carborough Downs underground
Coal type: Coking, PCI

Isaac Plains Mine
PO Box 8703 Mt Pleasant Qld 4740
Phone: +61 7 4940 0500; Fax: +61 7 4944 0653
Major owners: CVRD Australia Pty Ltd 50%, Aquila Coal Pty Ltd 50%
Operating mine: Isaac Plains open-cut
Coal type: Coking, PCI

Ensham Resources Pty Ltd

GPO Box 814
Brisbane Qld 4001
Phone: +61 7 3221 1201; Fax: +61 7 3221 1225
Web site: www.ensham.com.au

Ensham Resources Pty Limited
PO Box 1565 Emerald Qld 4720
Phone: +61 7 4987 3601; Fax: +61 7 4987 3622
Major owners: Idemitsu Queensland Pty Ltd 37.5%, Bligh Coal Ltd 47.5%, J-Power (Australia) Pty Ltd 10% and LG International (Australia) Pty Ltd 5%.
Operating mine: Ensham open-cut
Coal type: Thermal

Felix Resources Limited

PO Box 10470 Brisbane Adelaide Street Qld 4000
Phone: +61 7 3248 7900; Fax: +61 7 3211 7328
Email: felixresources@frl.com.au
Web site: www.felixresources.com.au

Minerva Coal Mine
PO Box 1845 Emerald Qld 4720
Phone: +61 7 4984 1999; Fax +61 7 4984 1896
Major owners: Felix Resources Limited (51%), Sojitz Corporation (45%), Korea Resources Corporation (4%)
Operating mine: Minerva open-cut
Coal type: Thermal

Yarrabee Coal Company Pty Ltd
PO Box 431 Blackwater Qld 4717
Phone: +61 7 4982 7730; Fax +61 7 4982 5703
Major owners: Felix Resources Limited (100%)
Operating mine: Yarrabee open-cut
Coal type: PCI and thermal

Foxleigh Mining Pty Ltd

GPO Box 843 Brisbane Qld 4001
Phone: +61 7 3220 0800; Fax: +61 7 3220 0449
Web site: www.foxleigh.com.au

Foxleigh Mining Pty Ltd
PO Box 21 Middlemount Qld 4746
Phone: +61 7 4985 9000; Fax: +61 7 4985 9640
Major owners: CAML Resources Pty Ltd 63%, ICRA Foxleigh Pty Ltd 20.6%, Bowen Basin Investments Pty Ltd 16.4%
Operating mine: Foxleigh open-cut
Coal type: PCI

Jellinbah Mining Pty Ltd

GPO Box 374 Brisbane Qld 4001
Phone: +61 7 3877 6700; Fax: +61 7 3221 7119
Web site: www.jellinbah.com.au

Jellinbah East Mine
PO Box 63 Bluff Qld 4702
Phone: +61 7 4986 1144; Fax: +61 7 4986 1553
Major owners: Queensland Coal Mine Management Pty Ltd (70%) which includes 40.1% through Tremell Pty Ltd, Marubeni Coal Pty Ltd 15% and Catherine Hill Resources Pty Ltd 15%
Operating mine: Jellinbah East open-cut
Coal Type: PCI, thermal and coking

Macarthur Coal (C&M Management) Pty Ltd

PO Box 7146, Riverside Centre Qld 4001
Level 18, 215 Adelaide Street, Brisbane Qld 4000
Phone +61 7 3239 7666; Fax +61 7 3229 1776
Website www.macarthurcoal.com.au

Coppabella Coal Pty Ltd
PO Box 193 Nebo Qld 4742
Phone: +61 7 4958 0006; Fax: +61 7 4958 0008
Major owners: Macarthur Coal Limited 73.3%, CITIC Australia Coppabella Pty Ltd 7%, Marubeni Corporation 7%, Sojitz Corporation 7%, Kawasho Corporation 3.7% and Nippon Steel Trading Co. Ltd 2%.
Operating mine: Coppabella open-cut
Coal type: PCI and thermal

Moorvale Coal Pty Ltd
PO Box 193 Nebo Qld 4742
Phone: +61 7 4958 0250; Fax: +61 7 4958 0230
Major owners: Macarthur Coal Limited 73.3%, CITIC Australia Coppabella Pty Ltd 7%, Marubeni Corporation 7%, Sojitz Corporation 7%, Kawasho Corporation 3.7% and Nippon Steel Trading Co. Ltd 2%.
Operating mine: Moorvale open-cut
Coal type: PCI and thermal

Millmerran Operating Company Pty Ltd

PO Box 5743 Central Plaza Brisbane Qld 4001
Phone: +61 7 3001 7177; Fax +61 7 3001 7178
Website: www.intergen.com

Commodore Mine
Major owners: Millmerran Power Partners, comprising – InterGen 26.85%, China Huaneng Group 26.85%, Marubeni Corporation 30%, GE Structured Finance 6.3%, Energy Investors Fund 5% and Tohoku Electric Power Co. 5%.
Operating mine: Commodore open-cut
Coal type: Thermal

Mining contractor: Downer EDI Mining Pty Ltd
PO Box 48 Millmerran Qld 4357
Phone: +61 7 4612 0500; Fax: +61 7 4612 0524

New Hope Corporation Limited

PO Box 47 Ipswich Qld 4305
Phone: +61 7 3810 0500; Fax: +61 7 3202 4315
Web site: www.newhopecoal.com.au

New Acland Coal Pty Ltd
Muldu Road Acland Qld 4352
Phone: +61 7 4694 8888; Fax: +61 7 4694 8889
Major owners: New Hope Corporation Limited is a publicly listed company of which the major shareholder is Washington H. Soul Pattinson and Company Limited.
Operating mine: New Acland open-cut
Coal type: Thermal

New Oakleigh Collieries Pty Ltd
Oakleigh Colliery Road, Rosewood Qld 4340
Phone: +61 7 5461 9600; Fax: +61 7 5464 2201
Major owners: New Hope Corporation Limited is a publicly listed company of which the major shareholder is Washington H. Soul Pattinson and Company Limited.
Operating mine: New Oakleigh open-cut
Coal type: Thermal

Peabody Energy Australia Coal Pty Limited

GPO Box 164 Brisbane Qld 4001
Phone: +61 7 3225 5500; Fax: +61 7 3225 5555
Web site: www.peabodyenergy.com.au

Baralaba Coal Pty Ltd
Off Woorabinda Road, Baralaba Qld 4702
Phone: +61 7 4998 1592; Fax: 073319 6589
(Queensland callers must also first dial 07)
Major owners: Peabody Energy Australia Coal Pty Limited 62.5% and Republic Coal Pty Ltd 37.5%.
Operating mine: Baralaba open-cut
Coal type: PCI and thermal

Burton Coal Pty Ltd
PO Box 108 Glenden Qld 4743
Phone: +61 7 4940 5555; Fax: +61 7 4940 5561
Major Shareholders: Peabody Energy Australia Coal Pty Limited 95% and Thiess Investments Pty Limited 5%.
Operating mine: Burton open-cut
Coal type: Coking and thermal

Millennium Coal Pty Ltd
Locked Bag 1005 Moranbah Qld 4744
Phone: +61 7 4950 7068; Fax: +61 7 3251 0849
Major owners: Peabody Energy Australia Coal Pty Limited 84%, a number of other small shareholders collectively hold the remaining 16%.
Operating mine: Millennium open-cut
Coal type: Coking and PCI

North Goonyella Coal Properties Pty Ltd
PO Box 41 Glenden Qld 4743
Phone: +61 7 4949 2888; Fax: +61 7 4949 2826
Major Shareholders: Peabody Energy Australia Coal Pty Limited 100%
Operating mines: North Goonyella underground, Eagle-field open-cut
Coal type: Coking

Peabody Wilkie Creek Pty Ltd
PO Box 260 Dalby Qld 4405
Phone: +61 7 4663 5555; Fax: +61 7 4663 5549
Major Shareholders: Peabody Surat Pty Ltd, 100%
Operating mine: Wilkie Creek open-cut
Coal type: Thermal

QCoal Pty Ltd

1095 Waterworks Road The Gap, Qld 4061
Phone: +61 7 3300 1111; Fax: +61 7 3300 4131
Web site: www.qcoal.com.au

Sonoma Mine Management Pty Ltd
1095 Waterworks Road, The Gap Qld 4061
Phone: +61 7 3300 1111; Fax: +61 7 3300 4131
Email: sonoma@ozemail.com.au
Major Shareholders: QCoal Pty Ltd 45%, Cleveland-Cliffs Inc. (USA) 45%, China Steel Corp. (Taiwan) 5%, JFE Shoji Trade (Japan) 5%
Operating mine: Sonoma open-cut (under construction)
Coal type: Coking, PCI, Thermal

Rio Tinto Coal Australia Pty Limited

GPO Box 391 Brisbane QLD 4001
Phone: +61 7 3361 4200; Fax: +61 7 3361 4370
Web site: www.riotintocoalaustralia.com.au

Blair Athol Mine Joint Venture
PO Box 177 Clermont Qld 4721
Phone: +61 7 4980 2444; Fax: +61 7 4980 2383
Major owners: Queensland Coal Pty Limited - a wholly owned subsidiary of Rio Tinto Ltd 57.2%, Leichhardt Coal Pty Ltd 31.4% (company owned by National Nominees Ltd, Australian Coal Holdings Pty Ltd and J-Power Australia Pty Ltd), J-Power Australia Pty Ltd 8% and J.C.D. Australia Pty Ltd 3.4%.
Operating mine: Blair Athol Mine open-cut
Coal type: Thermal

Hail Creek Mine
PO Box 3097 Mackay Qld 4740
Phone: +61 7 4940 5711; Fax: +61 7 4940 5058
Major owners: Queensland Coal Pty Limited - a wholly owned subsidiary of Rio Tinto Ltd 82%, Nippon Steel Australia Pty Ltd 8%, Marubeni Coal Pty Ltd 6.66% and Sumisho Coal Development Queensland Pty Ltd 3.34%.
Operating mine: Hail Creek Mine open-cut
Coal type: Coking

Kestrel Mine Joint Venture
PO Box 1969 Emerald Qld 4720
Phone: +61 7 4984 7500; Fax: +61 7 4982 8577
Major owners: Queensland Coal Pty Limited - a wholly owned subsidiary of Rio Tinto Ltd 80% and Mitsui Kestrel Coal Investment Pty Ltd 20%.
Operating mine: Kestrel Mine underground
Coal type: Coking and thermal

Tarong Mine
PO Box 36 Nanango Qld 4615
Phone: +61 7 4160 7211; Fax: +61 7 4160 7200
Major owners: Rio Tinto Coal Australia Pty Ltd 100%
Operating mine: Tarong Mine Meandu open-cut
Coal type: Thermal coal

Wesfarmers Curragh Pty Limited

GPO Box 51
Brisbane Qld 4001
Phone: +61 7 3031 7777; Fax: +61 7 3211 7908
Web site: www.wesfarmerscoal.com.au

Wesfarmers Curragh Pty Ltd
Private Mail Bag Blackwater Qld 4717
Phone: +61 7 4986 9211; Fax: +61 7 4986 9327
Major owner: Wesfarmers Limited 100%
Operating mine: Curragh open-cut
Coal type: Coking PCI and thermal

Xstrata Coal Queensland Pty Ltd

GPO Box 2587 Brisbane Qld 4001
Phone: +61 7 3115 5300; Fax: +61 7 3115 5412
Web site: www.xstrata.com

Collinsville Coal Company Pty Ltd
PO Box 60 Collinsville Qld 4804
Phone: +61 7 4785 4600; Fax: +61 7 4785 4650
Major owners: Xstrata Coal Queensland Pty Ltd 55%, Itochu Coal Resources Australia Pty Ltd 25%, ICRA NCA Pty Limited 10% and Sumisho Coal Australia Pty Ltd 10%.
Operating mine: Collinsville open-cut
Coal type: Coking and thermal

Newlands Coal Pty Ltd
PO Box 21 Glenden Qld 4743
Phone: +61 7 4940 5200; Fax: +61 7 4940 5211
Major owners: Xstrata Coal Queensland Pty Ltd 55%, Itochu Coal Resources Australia Pty Ltd 25%, ICRA NCA Pty Limited 10% and Sumisho Coal Australia Pty Ltd 10%.
Operating mines: Newlands open-cut (Suttor Creek and Wollombi) and Newlands Northern underground,
Coal type: Thermal and coking

Oaky Creek Coal Pty Ltd
PO Box 1 Tieri Qld 4709
Phone: +61 7 4984 7200; Fax: +61 7 4984 7240
Major Shareholders: Xstrata Coal Queensland Pty Ltd 55%, Sumisho Coal Australia Pty Ltd 25%, Itochu Coal Resources Australia Pty Ltd, 10% and ICRA OC Pty Limited 10%.
Operating mines: Oaky Creek open-cut, Oaky Creek No. 1 underground, and Oaky North underground
Coal type: Coking

Rolleston Coal Pty Ltd
PO Box 11 Springsure Qld 4722
Phone: +61 7 4988 9100; Fax: +61 7 4988 9150
Major Shareholders: Xstrata Coal Queensland Pty Ltd 75%, ICRA Rolleston Pty Ltd 12.5%, Sumisho Coal Australia Pty Ltd 12.5%.
Operating mine: Rolleston open-cut
Coal type: Thermal

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