

LAKE LINDSAY MINE

CASE STUDY

The Opportunity

Lake Lindsay Coal Mine is an open cut coal mine located approximately 25 km to the south-east of the town of Middlemount, and its development began in late 2006.

When peak mining activities are reached in 2009, it is expected to produce up to 6 Mtpa of medium to high volatile bituminous black coal suitable for both export and domestic markets. The average annual output is expected to be 4 Mtpa, with a life up to 30 years. Coal will be hauled by an overland conveyor 25km north-west to the existing German Creek mine for processing through the existing coal handling and preparation plant and transported off-site for export via the existing German Creek rail loop. Using the overland conveyor structure instead of trucks to haul the coal reduces diesel particulate emissions and water consumption for dust suppression.

Key features and needs of the project included:

- initial development of the Lake Lindsay deposit, followed by ongoing mining operations
- construction of flood control levees alongside Oakey Creek to prevent ingress of floodwaters to pit operations
- a haulage route to the existing German Creek operations
- topsoil stockpiles
- water supply infrastructure
- run-of-mine (ROM) coal stockpiles
- overburden dumps

- basic support facilities, such as offices, cribsheds, electrical reticulation, access roads, and ablutions
- implementation of a water management strategy including sedimentation dams
- management infrastructure that minimises any impacts on receiving water courses; and rehabilitation of all mining disturbance as soon as practicable after mining

With the numerous civil infrastructure works that were being planned, including a 16.5 km haul road, several surface water run-off storage dams, a major mine pit de-watering dam and one of the biggest draglines to operate in the world, Thiess Sedgman Joint Venture were contracted to lead the project. They contacted ICN Queensland to assist in identifying local capability to meet their needs both technically and commercially.

ICN assisted the project by nominating numerous Australian suppliers with the appropriate capability and capacity to meet the construction requirements of Lake Lindsay Coal Mine. A total of \$11.7 million worth of contracts were won by Australian manufacturers as a direct result of the nominations made by ICN Queensland. Of those contracts, \$3.1 million worth of work was awarded to Queensland manufacturers.

The Results

ICN Queensland assisted Thiess Sedgman on an ongoing basis from March 2006 through to November 2007. ICN Queensland recommendations led to a number of Queensland companies successfully supplying to the project.

Minco Tech Australia has specialised in the design and supply of cyclones to the mineral processing industry since 1978. The Queensland branch won the contract to supply \$350,000 worth of classifying cyclones to the Lake Lindsay Coal Mine. Classifying cyclones are used extensively in the mineral processing industry to remove or classify particles in particle laden fluid flows. The devices rely on the centrifugal forces that develop under the swirling flow inside the body to effect the separation and can classify on density or particle size. Peter Barnett, National Sales Manager for Minco-Tech says “It was a great project to be involved in from a business perspective, because we were able to secure more work on other Thiess Sedgman projects after delivering for Lake Lindsay. We spent approximately four months on assembling the classifying cyclones, with the majority of the fabrication work taking place in Brisbane and the balance of the assembly being done in NSW. It’s always beneficial being on ICN’s nomination list for projects and as preferred suppliers for this particular product, and they assisted in strengthening the relationship between Minco and Thiess Sedgman overall.”



Classifying Cyclone

Coarse coal centrifuges, wear resist slurry lines and vibrating feeders were supplied by the Queensland branch of Ludowici Australia, with combined contracts adding up to a total of \$1.9 million.

Coarse centrifuges are coal drying machines that use the principle of centrifugal force to separate water from coal (and similar material),

and wear resist slurry lines are used to prevent the corrosion of pipes. Vibrating feeders were supplied to transfer large size materials and granular materials from a hopper to a receiving device uniformly, periodically and continuously in the production flow, and to feed materials into a crusher continuously. Brett Cason, the General Manager of Ludowici Queensland says “after the successful outcome of this project, our relationship with Thiess Sedgman has strengthened, and the prospect of securing future contracts with Thiess looks bright.”



Coarse Coal Centrifuge

Gay Constructions won the contract to supply a belt tension structure for the project. These products are used for tensioning conveyor belts, in order to improve the efficiency and use of the belt. The tension tower that was provided by Gay Constructions was larger than normal take up structure, and project took two to three months to complete with an approximate value of \$700,000 to the company. Carl Vogt, management consultant for Gay Constructions says “ICN Qld is an absolute ‘must have’ for the Australian manufacturing industry, not only do they help us to become a part of the supply chains for major projects, but they also help the procurement teams of these projects with their component needs, a double service for a win/win outcome.”

Prime Pump Company manufactured and supplied emergency water supply pumping systems for the project worth \$390,000. An emergency fire pump system is designed to provide water for fighting fires and works by starting automatically once the pressure in a pipeline has dropped below a predetermined level.

The pump set starts automatically and provides sufficient water flow and pressure to drive fire hoses and hydrant and the set consisted of an electric driven pump and a diesel engine driven pump. Mark Tisdell, Owner/Director of Prime Pump Co says “ICN does a great job when it comes to industry awareness, it’s great to know there is a company out there waving the flag for Australian suppliers to be apart of major projects.”

Lake Lindsay is expected to deliver significant economic benefits to Middlemount, the Broadsound and Peak Downs shires and the central Queensland region. In part, it will enhance the economic wellbeing of the local area and the broader region by creating additional employment (up to 150 new full-time jobs are expected) and economic and related business activity. There are also additional financial benefits for Queensland through rail freight and royalty revenues.

It is evident from the support, advice and expertise that ICN provided to the Thiess Sedgman’s procurement team, right through to the multiple contracts awarded to Australian companies, the integral role ICN Queensland plays in the continuing success of the local manufacturing industry.

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