

Use of Contractors for Mining Operations

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ABSTRACT

Contract mining is an integral part of the underground and surface hard rock mining industry in all states of Australia. Contract mining is now makes a major contribution to the opencut coal industry in Queensland and New South Wales with Thiess alone producing over 16 million tonnes per annum with safety performances that most coal companies would be proud of. Contract mining is now attracting interest in the underground coal sector.

INTRODUCTION

The use of contractors has been common in the underground coal industry for quite some time but not for coal production. Contractors have carried specialist jobs such as drift and shaft work, fault driveages, excavations and specialised strata control. Contractors have also been used for “dirty” jobs that the mine regarded as unpleasant or dangerous, such as recovering from falls or cleaning out sumps.

Contractors came with a reputation for flaunting safety and for being under-equipped so the mine had to lend roof bolters, pumps, hand tools, etc, that rarely got returned.

The need for mining companies to focus on their core business and the introduction of industrial reforms has increased the scope and use of contractors. Longwall moves, conveyor installations and maintenance are now the domain of the contractor. Competition amongst contracting companies is fierce and they must perform to clients’ expectations to secure further work.

Attitudes to mine safety have changed – corporately, mine operators are required to treat contract employees as their own and pre-tender assessments of contractor safety performance and safety management procedures is common. Contracting companies take safety every bit as seriously as the mine companies.

A number of underground coal mining contracts are now in place in Queensland and New South Wales and there is no reason to suggest that the success achieved in surface operations will not be repeated below ground.

WHY CONTRACT MINING?

There is a lot more to being a coal mining company than simply mining coal. Commodity prices, selling volumes, the effect of exchange rates, share price and capital constraints are constant topics of discussion in coal industry circles. Aboriginal land claims and community and environmental issues relating to mining are regularly in the media.

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These are just samples of the issues facing mining companies that may serve to distract the coal company from mining coal.

The demands on the mine management are far greater than in the past. Safety, statutory processes, planning approvals, servicing customer and marketing requirements, industrial reforms and corporate bureaucracy all reduce the time that mine management have to focus on production and cost.

Other activities such as transport, exploration, long term planning and acquisitions also continue.

In Queensland town administration is another significant component of a mining companies activities.

It is tempting to ask, *What is the core business of a coal company?*'

Many mining companies have attempted to counter these increased mine site activities by making structural changes such as introducing the role of General Mine Manager or by introducing team building and employee participation programmes.

These moves have proven largely unsuccessful because the focus, generally, still remains on so many areas we get lost in standardisation and processes and loose sight of results.

The use of the mining contractor enables the mining company to be successful in fewer areas whilst the contractor focuses on mining efficiently.

The use of a mining contractor can also serve to equip or re-equip mines with restricted capital budgets. Many hard rock mining companies are lease owners with the contractor supplying the mining plant to develop then operate the mine. Thiess replaced Collinsville's mining plant when it commenced mining operations on behalf of MIM.

Companies such as Thiess who are civil, construction and mining contractors have the ability to design and construct the mine infrastructure as well as mine the coal.

TYPES OF MINING CONTRACT

Contract mining operations range from parts of mines such as Allied Contractors development at Oak Creek No 1, through stand alone mining operations within a lease such as Alliance Colliery or Newlands Open Cut, to total mine operations such as Mount Owen, Collinsville, Burton and South Walker Creek.

Thiess contracts are generally "fixed price" whereby the mine owner buys the coal from the contractor at a guaranteed price per tonne or price per metre. Contracts may be of fixed duration or life-of-mine. Life-of-mine contracts have agreed performance criteria that must be achieved for contract continuance.

By contracting to a fixed price for the mining operation the mine owner has now removed one of the largest variables in the profit equation. Mine operating costs now become the responsibility of the contractor who must maintain productivity and cost control to make a profit.

THE SUCCESS OF A CONTRACT MINING OPERATION

Relationship

To be successful the client and the contractor must understand each other's business and trust each other. Both parties exist to make profit and if either party fails the contract will fail.

Understand the resource and risks

Thiess will fully evaluate the information provided by the client to prepare a detailed and accurate mining proposal. The

evaluation will included:

- Mining plans
- Equipment selection
- Personnel requirements
- Skills requirements
- Management Organisation
- Assessment of risks

People

People are a key to any successful project. Thiess' people management practices include:

- Selection
- Training
- Procedures
- Supervision
- Remuneration
- Teamwork & Involvement
- Communication

Projects are run as accountable businesses with small management teams. This maintains a clear focus on the outcomes of their business. Communication is direct and employees are aware that if the project outcomes are not achieved the client will not extend the contract. Employees are expected to provide input into improving project safety and performance through "tool box talks" and face-to-face communication. Management is expected to consider employee suggestions in their decision making but are accountable for their actions (or inactions).

Plant

Thiess have refined their plant management procedures with over 60 years of earthmoving plant ownership and operation.

Key factors in the Thiess plant system include:

- Equipment selection;
- Life-of-plant costing for ownership and maintenance;
- Project accountability for utilisation;
- Project accountability for operating and maintenance cost; and
- Replacement when due.

Equipment is purchased for an application and is in effect, hired to a project. The rate charged to the project is established by projecting operating and maintenance costs for the life of the equipment and including the cost of ownership (finance and depreciation). The project is therefore accountable for the true cost of operating the plant and it is in the project's best interests to maximise plant utilisation and reduce surplus plant. Open cut mines are typically achieving plant utilisation of 22 operating hours per day.

The Thiess plant system appears ideally suited to underground coal mining however the industry generally does not have available lifecycle plant histories and has had a mentality of operating "grandfather's axe".

Safety

Before each project commences a Safety Management Plan is prepared for the project. The plan follows quality management principles and is based upon proven standard policies and procedures.

The plan is specific to each project and provides input into training program, supervisory procedures and site audits. Because the plan is in place prior to project commencement and induction training emphasises employee involvement in safety, safe work is regarded as the way that business is conducted.

When environmental responsibility is required under a contract a similar Environmental Management Plan is prepared for the project.

Cost control

The potential profit of a project is obviously divided by the mine owner and the contractor. The contractor takes on the mining risks within the contract price. To achieve a satisfactory profit margin the contractor must manage the risks just as any other miner must do. Badly managed risks may negate profit. Similarly costs must clearly be understood, tracked and controlled.

Supervisors are clearly accountable for their expenditure and all means of reducing project costs are explored.

The contract miner will subcontract work if it can be carried out more cost effectively by others. Thiess for example subcontracted some of the initial development of the Alliance Project to Allied. Product coal haulage at Burton is carried out by Brambles.

Continuous improvement is sought in all areas of performance to improve the profitability of a project. Without it the contractor will not retain contracts or win new business.

CONCLUSIONS

The coal industry in Australia is undergoing major reform. Contract coal mining is a major consideration in the development of new mines and the revitalisation of old mines. Contracting companies are enabling mine owners to intensify their focus on fewer business functions whilst the contractor focuses on mining. This recipe is proving effective in open cut coal mines. It will also do so underground.