University of Wollongong
Research Online

Coal Operators' Conference

Faculty of Engineering and Information Sciences

2004

Strategic Planning for the Future

B. Allan
BHP Billiton - Illawarra Coal

Publication Details

This conference paper was originally published as Allan, B, Strategic Planning for the Future, in Aziz, N (ed), Coal 2004: Coal Operators' Conference, University of Wollongong & the Australasian Institute of Mining and Metallurgy, 2004, 9-13.

Research Online is the open access institutional repository for the University of Wollongong. For further information contact the UOW Library: research-pubs@uow.edu.au

KEYNOTE ADDRESS

STRATEGIC PLANNING FOR THE FUTURE

Bruce Allan [1]

INTRODUCTION

Planning and development for both new and existing coal mines is a major process that has increased in complexity from one involving a small number of stakeholders that were primarily focused on the broad issues of:

- Resource
- Technical process
- Market
- Business result

to one today which is quite complex, involving many internal studies, corporate checks and balances, expert consultant studies and many stakeholders both small and large, government and non-government.

The aim of this AUSIMM 2004 Conference and Workshop is to bring together expert speakers who will seek to highlight and share some of their experiences of issues and aspects which impact on coal mine planning and development – both now and into the future.

In any business project or venture, and coal mining is no different, it is important to clearly understand all issues that will impact on a project and its viability and have in place appropriate strategies to manage and ensure the successful outcome of all goals that are set.

In using the word strategy in this paper it is used in the sense of pertaining to skilful management of any kind, involving structured plans or schemes that achieve a successful end result. Strategy used in a military sense, has down through the ages denoted rigour and discipline to an action, coupled to accurate evaluation and understanding of the risks associated with the outcome.

Mine planning is no different it depends upon accurate evaluation and risk understanding and quality management. Planning must display foresight and vision of a changing world, through leadership and direction. To support the importance for strategic planning, I share with you the case study of Illawarra Coal and the Company's quest to create World-Class Mines.

ILLAWARRA COAL CASE STUDY

BACKGROUND

In 1995, BHP Collieries, operating as part of the BHP Steel Group, owned and operated four (4) coalmines in the Illawarra, namely:

- Appin Colliery – 1960
- Cordeaux Colliery – 1976
- Tower Colliery – 1977
- Elouera Colliery – formed in 1990

[1] BHP Billiton – Illawarra Coal

Total raw coal production 7.6 Million tonnes/annum (mtpa) , 5.6 mtpa mined from the Bulli seam and 2.0 mtpa mined from the Wongawilli seam.

Coal washing and processing was at two locations, Appin – SADA coal preparation plant (2 mtpa) with all the remaining coal from the Bulli Seam and the Wongawilli seam, (5.6 mtpa) at a conglomeration of coal washing plants located within the Port Kembla Steelworks – BHP.

Transport of coal from the mines to the coal preparation plants and then to either the steelworks blended beds or to export, consisted of three modes of transport involving road haulage, conveyor systems and rail transport on both private and public networks.

Waste disposal of coal washery refuse was on mine property adjacent to the Elouera Colliery at Wongawilli.

The operations were costly and constrained in production capacity. Mine planning was limited in thinking, with little planning for the future, targeting mainly for the budget year. The mines were focused at continually removing costs from the business to stay competitive with limited new capital being invested back into the business for improvement. Illawarra Coal operations in 1995 were not world-class.

THE STRATEGY

In 1996 when West Cliff Colliery (owned and operated by Kembla Coal & Coke – KCC) became available for sale, it was considered the mine had some synergies to the adjacent BHP Appin Colliery, but these synergies were not clear.

The potential acquisition of West Cliff Colliery provided BHP with the opportunity to re-evaluate the current operating and planning strategies for the Illawarra Collieries Group.

In mid-1996, BHP Collieries moved under the management of the BHP Minerals Group, this group having a totally different operating and planning philosophy to that of the BHP Steel Group.

In July 1996, a small strategic planning group was formed within Illawarra Coal, made up of senior management, some with existing BHP backgrounds and some from outside BHP.

A vision of the future was developed by this strategic planning group, which would lead to the creation of value with future world-class mines for Illawarra Coal.

Key element of this vision centred on the following:

Objectives
- Safety
- Productivity
- Financials

New Levers

Strategic
Themes

This new vision would require a step change across the business:

From	**To**
- Safety improvements	- Safe pro active operations
- 1995 business configuration	- Forward thinking; re configuration
- Old culture	- Culture striving to change
- Domestic market focus	- Domestic & Export orientation
- 4 Mines	- 3 World-class Mines
- LW's @ 2.00 mtpa	- LW's @ 3.00-5.00 mtpa
- 5000 t/e/yr	- 20,000 t/e/yr
Accessible reserves	- Target quality reserves
Washeries at Port Kembla	- Washeries as a part of mine site operations
Complex logistics	- Direct deliveries
Road-based haulage	- Conveyor/road/rail

In assessing the potential of KCC's, West Cliff Colliery, the strategic group developed the view that West Cliff Colliery and it's associated infrastructure could significantly enhance the value of Illawarra Coal through the ability to provide:

- Lower cost, rapid entry to BHP existing quality reserves
- An infrastructure hub in the Appin area
- A significant logistic advantage leading to lower costs
- 6.5 mtpa coal washery facility that could be further enhanced
- 2.5 mtpa coal stock pile area at site
- 15-year coal washery refuse emplacement area at mine site
- Additional coking coal reserves for BHP Billiton and
- Low community impact – a remote site

Following a detailed merger and acquisition evaluation study by the strategy team, covering such areas as:

- Business strategy
- Risk (Business and Safety)
- Market analysis
- Mineral resources and geology
- Mining
- Coal processing and logistics
- Infrastructure and
- Health, safety, environment and community

West Cliff was purchased by BHP in April 1997 and incorporated into Illawarra Coal.

THE WAY FORWARD

To meet the future vision for the BHP Billiton Illawarra Coal Strategy of 3-5 mtpa mining operations, longwall dimensions at operating mines would need to be increased from 200 metres to 300-metres wide, with block lengths up to and exceeding 3 kilometres, containing some 3 – 5 million tonnes of minable coal.

The age of existing mines and the suitability of infrastructure was evaluated.

Elouera Colliery is the only source of Wongawilli seam coal to Illawarra Coal and is a vital component of the Company's, coal blending and marketing strategy and a key ingredient to the Port Kembla Steel Works for coke making.

Elouera Colliery, mining the Wongawilli Seam, will reach the end of its economic life in early 2005. Plans had been in place for some period of time to prospect and develop the Wongawilli Seam through the existing Cordeaux Colliery mine workings as a replacement source of coal.

The plan to re develop Cordeaux Colliery was re-evaluated by the Strategic Group. It was considered following detailed investigation, that it would be better to develop a new mine, of world-class standards, closer to the coast, to extract the Company's Wongawilli Seam reserves. This could be achieved from existing Company owned property located on the Illawarra escarpment at the old Nebo mine site. The decision led to the Dendrobium Mine Project, which came into being to provide up to 5.00 million tonnes per annum of raw coal, from the Wongawilli seam, by late 2004.

On the completion of Bulli Seam extraction at Cordeaux Colliery and following the removal of all valuable plant and equipment from the mine, the operations were finally sealed in 2003, capping a 27-year operation.

To achieve the same criteria of 3-5 mtpa longwall operations, in the Bulli Seam, at other mines in Illawarra Coal, a similar review was undertaken by the strategy team. One of the mines, Appin, Tower or West Cliff would need to be combined to create the appropriate longwall domains for the future. As West Cliff contained the "hub" of surface infrastructure and Appin had sound surface infrastructure, was located close to West Cliff and was equipped with a 2000 tph seam to surface coal clearance system, the decision was made to close Tower Colliery operations. This occurred in December 2002 and the Tower mine workings were progressively incorporate into the mine workings of Appin Colliery thus providing additional ventilation systems to manage the high methane seam gas contents and permitting increasing mine production from larger longwall domains in the near future.

The strategy behind the Appin and West Cliff mine re - configurations and the development of the new Dendrobium Mine led to a very significant rationalisation in the movement and transport of coal from Illawarra Coal mines to the Port Kembla Coal Terminal (PKCT) and to the Port Kembla Steelworks. Road haulage of raw coal carried along the main Picton Road from Tower and Cordeaux would eventually cease, significantly reducing transport and logistics costs from that region.

The private Kemira Valley rail line would be upgraded and become a dedicated rail line for Dendrobium Coal to an upgraded Dendrobium coal washed plant located within the Port Kembla Steelworks. The road haulage of wash Bulli Seam coalfrom West Cliff, would remain the only product being transported to the Port Kembla Coal Terminal and BlueScope Steel via the Appin Road, a Federal Government dedicated export road. This strategy has permitted Illawarra Coal to engage a road haulage contractor for this dedicated coal transport route with a purpose built road haulage fleet with enhanced safety features bringing improved cost of performance for group logistics.

REVIEW OF THE STRATEGY

Through a structured strategic planning process, commenced in 1996, BHP Illawarra Coal, now a part of the BHP Billiton Group (BHPB), has significantly changed the capability, scale and configuration of Company mines in the Illawarra.

The process outlined has been the positioning aspect of planning for the future. Success in the on going operation of underground coalmines is to identify, understand and manage the risks in a systematic way.

The strategy team identified the following key future risks to the Illawarra Coal:

- External Affairs
  - Residential, Industrial developments
  - National Parks
  - Transport
  - Mine Subsidence Impacts
  - Strategic Land acquisition

- Environment & Community
  - Transport
  - Future refuse emplacement
  - Mine subsidence
  - Emissions and waste water
- Underground Mining Issues
  - Seam gas contents – removal of gas to safe acceptable levels prior to mining
  - Employee safety and exposures
  - Geological uncertainty
  - Modern fit for purpose mining equipment
- Technological Change/Markets
  - Steel industry process alternatives
  - Supply and demand fluctuations
  - International exchange rate movements
- People
  - Future technically and statutory employees
  - Leadership development of key communicators
  - Involving all levels of the workforce in the understanding and achievement of the business objectives
  - Ensuing the full-unimpeded release of our people's potential.

CONCLUSION

The future of mining by BHPB, in the Illawarra, will continue to be sustainable through the rigorous planning processes outlined. Planning tools and networks are in wide use across the BHPB organisation and are regularly tested and re-evaluated at all levels to ensure appropriate suitability.

With all the other competing interest of the region, never in the history of mining in the Illawarra has planning, for the future, been so important. For the future success of underground coal mining in the Illawarra, we must ensure that our mine management teams plan and think strategically.