



Consultant Profile

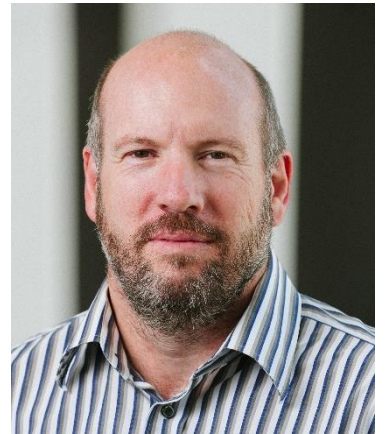
MARK BOWATER

PRINCIPAL MINING CONSULTANT

Bio

Mark has over 30 years of experience in the Australian open cut mining industry, in both coal and iron ore. He is passionate about mine planning and would like to create a legacy of leaving mine planning in a better place than he found it 30 years ago when he first started on his mine planning journey. The mining industry meets the definition of insanity in continuing to do the same thing and expecting different results – Mark is aiming to fix that issue.

Mark worked in the industry for 10 years before starting his own mining consulting company that he grew to 35 people, before selling it in 2012. Coming back to the industry in 2016 after a four year break, Mark decided he wanted to work “on the industry” rather than in the industry.



Mark has created a lot of content around mine planning and this can be found at www.markbowater.com

Qualifications

- Bachelor of Business, Human Relations, University of Southern Queensland, 1997
- Bachelor of Engineering, Civil Engineering, Queensland University of Technology, 1987

Industry Experience

2017 – CURRENT

Various Consulting Works – Principal Mining Engineer

- Study lead on major analysis work into future development strategy for very large open cut coal mine
- Audit of Technical Services Department and recommended changes
- Due Diligence study for major International coal company
- Wet weather insurance claim for a large multi-national mining company
- Orica Value Driver Workshop and Assessment
- Development of Tender Documents for Whole of Mine Contract
- Dragline insurance claim review of process
- Mining engineering assistance to Business Planning function

NOVEMBER 2012 – APRIL 2014

XSTRACT Mining Consultants – Technical Director, Mining

- Responsible for the smooth and efficient transition of Echelon Mining Services into the Xstract Group. This also involved evaluation as to how the skill set and work experiences of former Echelon personnel can be best leveraged by Xstract
- Numerous business development opportunities for evaluation and consideration

MAY 1999 – OCTOBER 2012

MB Mining Consultants/Echelon Mining – Owner & CEO



Consultant Profile

Worked on numerous projects/studies and in various on site roles for over 50 different clients at varying mine sites around Australia, including the following examples:

Major Brown Field Coal Mine Expansion Pre-Feasibility Study

- Evaluation of suitability and costs of numerous excavation systems, including Truck & Shovel, Dragline and Crusher & Conveyor systems
- Detailed analysis and evaluation of the optimum dragline horizon for cost comparison with Truck/Shovel operations
- Detailed evaluation of modelled truck cycle times in comparison to actual cycle times
- Conceptual green field pit studies

Other Works

- Evaluation of various dragline options in comparison to Truck & Shovel
- Analysis required for dragline purchase justification
- Preparation of JORC compliant reserve estimates
- Final landform studies
- Green field coal mine conceptual studies
- Various conceptual studies of major developments in operating mines, such as crossing major faults, amalgamation of adjacent pits, etc.
- Short and long term scheduling for numerous mine sites
- Various financial studies and evaluations
- Various mine site engineering and management roles
- Various drill and blast cast and related studies
- Coal reconciliation studies
- Various mobile equipment purchase justifications
- Strip width studies at various mines

JANUARY 1996 – APRIL 1999

Thiess (Burton Coal Mine) – Technical Services Manager

- Responsible for leading a multi-disciplined team providing technical services to the mining operations including the following areas, mine design and scheduling, drill and blast, geology, geotechnical, survey, environmental and production reporting
- Responsible for initial mine design and scheduling work until a team could be recruited
- Managing the Burton Coal Mine in the absence of the Project Manager

NOVEMBER 1993 – JANUARY 1996

Rio Tinto Iron and Titanium (Paraburdoo Mine)

Production Superintendent

- Responsible for a team of employees consisting of 4 Supervisors, a Production Officer and 68 Operators
- This team was responsible for the mining of iron ore and waste from the Paraburdoo Mine

Rio Tinto Iron and Titanium (Paraburdoo Mine) – Operations Scheduling Superintendent

Responsible for supervision of a team of employees consisting of 4 Grade Controllers, 4 Pit Controllers, 1 Scheduling Engineer, 1 Production Officer and 3 Surveyors. This team was responsible for provision of the following services to other output teams within Mine Production:

- Advice on quality to allow construction of product stockpiles to target grades
- Scheduling of development, drilling, blasting and mining activities over a weekly time frame
- Dispatching of trucks to maximise equipment utilisation
- Survey
- Data collection and reporting

Rio Tinto Iron and Titanium (Paraburdoo Mine) – Specialist Planning Engineer



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- Responsible for short and long term mine planning and associated projects including supervision of a Short Term Planning Engineer

MAY 1989 – NOVEMBER 1993

Rio Tinto Coal Australia (Blair Athol Coal Mine)

Senior Planning Engineer

Responsible for supervision of a team of employees accountable for provision of the following services to the Mining Department:

- Equipment Scheduling
- Drill and Blast
- Design
- Survey
- Data Collection and Reporting
- Improvement Projects

Short Term Planning Engineer

Responsible for short term scheduling of drills, dragline and coal mining equipment, as well as on site ROM and product stockpiles

Drill and Blast Engineer

Responsible for design of drill patterns, hole loading and tie up for overburden shots as well as involvement in coal blasting changes and improvements