

## COAL, CBM & SHALE GAS

- Coal Technical Reviews & Audits
- Coal Geological Modelling, Exploration Targeting
- Coal Ore Body Modelling & Resource Estimation
- Coal Seam Gas Resource Evaluation
- Shale Gas Resource Evaluation
- Mine & Transport Logistics Planning



*Coal seam, Western Canada*

## CAPABILITY

Mining Associates is a specialist minerals and energy consultancy based in Brisbane, Australia.

Mining Associates has the capability for resource evaluations and mine planning services for coal and the related coal seam gas and shale bed gas with the addition of 3 experts in these areas: Graham Muggeridge, David Graham and Bruce Wright.

Graham has some 25 years experience with RTZ/CRA including a management role in the exploration and development of Kaltim Prima Coal in Indonesia. David has been at the forefront of CBM and shale gas exploration and evaluation in western Canada. Bruce has over 30 years experience in surface and underground mining in Queensland, New South Wales and New Zealand. He has managed mining operations in QLD and NSW and has been a General Manager of Oakleigh Coal Mines and Company Director of Sumitomo Coal Mining Brisbane.

COAL	CBM/SHALE GAS	MANAGEMENT
<p><b>Graham Muggeridge</b> <b>Principal Geologist</b></p> <ul style="list-style-type: none"> <li>■ Management of coal exploration programmes in Queensland and NSW (RTZ).</li> </ul> <p><b>Project Manager</b></p> <ul style="list-style-type: none"> <li>■ Planning and implementation of discovery exploration programme of Kaltim Prima Coal (CRA/BP Coal).</li> </ul> <p><b>Geologist</b></p> <ul style="list-style-type: none"> <li>■ Coal &amp; oil shale exploration, WA (CRA).</li> </ul>	<p><b>David Graham</b> <b>Project Management</b></p> <ul style="list-style-type: none"> <li>■ Mannville CBM play assessment, Alberta (250+ tcf OGIP CBM)</li> <li>■ Mannville equivalent CBM Play assessment S.E. and N.E. British Columbia (1st CBM production in B.C.).</li> </ul> <p><b>Technical Evaluations</b></p> <ul style="list-style-type: none"> <li>■ Shale gas evaluation of the Triassic Montney and Doig Formations, N.E. British Columbia</li> <li>■ Shale oil evaluation of the Devonian Bakken Formation, S.E. Saskatchewan, U.S.</li> </ul>	<p><b>Bruce Wright</b> <b>Project Director</b></p> <ul style="list-style-type: none"> <li>■ Preliminary design costing for Ellensfield UG Coal Mine Surface Infrastructure for Vale.</li> <li>■ Preliminary design of UG longwall conveyor trunk belt, stockpile and overland conveyor belt feed for CVRD Carborough Downs Underground Colliery QLD.</li> <li>■ Technical Evaluation of metallurgical coal assets in Central Queensland for JFE Shoji Trade Australia.</li> <li>■ Transport Logistics Study Rio Doce Australia (RDA) Belvedere Coal Movements.</li> <li>■ Concept Study - Overburden Aerial Conveyor Removal System – Macarthur Coal Central QLD.</li> </ul>