

Rationalisation in the Pilbara

Rio Tinto and BHP Billiton have signed binding agreements on a Pilbara iron ore production joint venture

The new BHP Billiton and Rio Tinto deal will see mines combining, should see some interesting combination of autonomous mining technology from two of the leading proponents (*IM*, January 2010, pp46-57), will see greater efficiency in iron ore processing and blending, and will reduce infrastructure costs. There will be some big mines. Rio already has Yandicoogina operating at over 50 Mt/y now, and at BHP-Billiton's big Mt Whaleback mine, the ore is exceptionally high grade, containing up to 68% Fe. The two companies have been investigating ways to combine their Pilbara operations for more than a decade and have now found a solution that works for both companies.

Rio Tinto Iron Ore, the largest of the two major producers in the Pilbara beat its own forecast for iron ore output in the fourth quarter of 2009, reflecting surging demand from Chinese steel-makers and putting producers in a strong position for price talks this year. Its output surged a massive 54% to 56 Mt (45 Mt on an attributable basis) in the December quarter, mostly driven by China, leading analysts to suggest that miners like Rio Tinto and BHP Billiton could achieve hefty price rises in 2010. However, they will face a great deal of opposition from China for price rises. Rio's Pilbara system consistently operated above its nameplate capacity in order to supply continuing strong growth in demand.

"The market consensus is calling for a price

increase in excess of 30%," commodities analyst Lachlan Shaw, of Commsec Securities, said after Rio's production report in January. Shaw added, however, that new mines opening this year could take some of the steam out of the market.

Rio's iron ore output for all of 2009 exceeded 217 Mt, just above its raised forecast for 210-215 Mt for the year. The Pilbara mines' achievements reflected the successful implementation and optimisation of new infrastructure, control systems and recent mine expansions. The Operations Centre continued to enhance performance as it neared the final stages of construction and ramp-up. Work progressed on or ahead of schedule on the Mesa A and Brockman 4 mines to secure the capacity of the Pilbara mines at around 220 Mt/y. Both mines are expected to commence production in the first half of 2010.

On June 5 last year, Rio Tinto and BHP Billiton signed an agreement of core principles to establish a production joint venture covering the entirety of both companies' Western Australian iron ore assets. Exactly six months later, on December 5, the companies signed binding agreements on the proposed JV that cover all aspects of how the joint venture will operate and be governed. The companies have filed submissions with the European Commission and the Australian Competition and Consumer Commission and other relevant jurisdictions in relation to the proposed production joint venture. The companies anticipate completion of

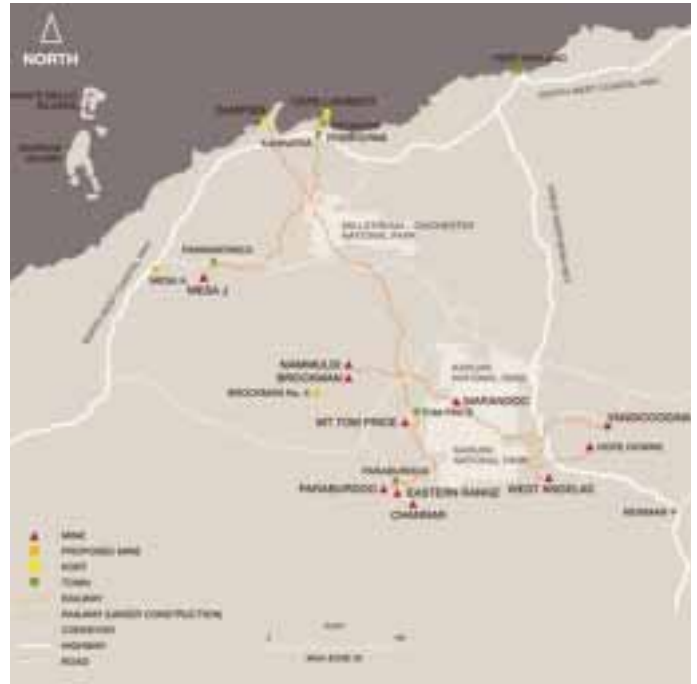
The Brockman crushing plant. Photographer: Ron Wilson, Drill and Blast Co-ordinator, Rio Tinto Iron Ore

the JV in the second half of calendar year 2010. The production joint venture encompasses all current and future Western Australian iron ore assets and liabilities and will be owned 50:50 by Rio Tinto and BHP Billiton. It will deliver substantial synergies resulting from combining the companies' Western Australian iron ore operations, with the aim of producing more iron ore at lower cost. However, there is not to be any joint venture marketing activity. The production joint venture will deliver all its iron ore output to Rio Tinto and BHP Billiton to sell independently through their own marketing groups.

The two believe the net present value of these unique production and development synergies will be in excess of \$10 billion (100% basis).

These synergies are anticipated to come from:

- Combining adjacent mines into single operations
- Reducing costs through shorter rail hauls and more efficient allocations of port capacity
- Blending opportunities, which will maximise product recovery and provide further operating efficiencies
- Optimising future growth opportunities through the development of consolidated, larger and more capital efficient expansion projects
- Combining the management, procurement and general overhead activities into a single entity.



Maps of the Rio Tinto (right) and BHP-Billiton Pilbara iron ore operations

The comment of Tom Albanese, Chief Executive of Rio Tinto, was: "Signing binding agreements brings us one step closer to unlocking the full production potential of our Pilbara iron ore assets and achieving substantial benefits for all our stakeholders. Completing the joint venture is a priority for Rio Tinto in 2010 and I look forward to realising this vision and capturing the synergies for our shareholders." And for BHP Billiton, CEO Marius Kloppers, said, "We are very pleased to now have formal and binding agreements in place to develop this important joint venture. With the history of both companies' attempts to join together these two world-class iron ore operations in WA at various times, this deal has effectively been more than a decade in the making. It is an important milestone towards delivering substantial additional benefits to both sets of shareholders, and to the shareholders of our respective joint venture partners in the Pilbara."

BHP Billiton Iron Ore's RGP5 is its next step in its phased growth path. It will increase installed capacity across its Western Australia operations by 50 Mt to 205 Mt/y during calendar year 2011. There are seven extensive high-grade iron ore mining operations in the Pilbara, with a number of these located near the town of Newman. There is Mt Whaleback mine, established in 1968, and adjacent smaller deposits, Orebodies 29, 30 and 35. Smaller satellite mines – Jimblebar and Orebodies 18, 23 and 25 – are located outside the town of Newman. The Yandi and Area C mines are located about 100 km northwest of Newman. The Yarie mine is 200 km east of Port Hedland. BHP Billiton Iron Ore says it "has reserves for at least another 30 years and additional resources for future development."

The massive Mt Whaleback mine, established in 1968, is the biggest single-pit open-pit iron ore mine in the

The Yandicoogina JSE ROM pad - a Komatsu 830E haul truck and a WD900 wheel dozer in full view.

Photographer: Matthew Yeo, Mobile Equipment Fitter, Rio Tinto Iron Ore

world, in physical size, being more than 5 km long and nearly 1.5 km wide.

Last November, BHP Billiton celebrated the official opening of the 'Newman Mining Hub.' This will be the centre of the operations' mining, crushing and screening activities in the Eastern Pilbara. It is the key component of the company's Rapid Growth Project 4 (RGP4), which will increase installed capacity across BHP

BHP-Billiton iron ore production for the years ended June 30, 2008 and 2009

Operation	2008	2009
Mt Newman Joint Venture (85%)	26,437	30,329
Goldsworthy Joint Venture (85%)	1,416	941
Area C Joint Venture (85%)	35,513	27,130
Yandi Joint Venture (85%)	37,818	40,277
Jimblebar (85%)	4,913	5,119

Billiton's Western Australia Iron Ore operations to 155 Mt/y. The additional capacity associated with RGP4 will be ramped up during 2010.

The introduction of the Newman Hub will mean that Mt Whaleback will be equipped to mine, crush and screen ore at site rather than those processes taking place in Port Hedland before the product is shipped from there.

BHP Billiton's partners in the Western Australia Iron Ore operations are Itochu Minerals & Energy of Australia, Mitsui-Itochu Iron and Mitsui Iron Ore Corp.

Rio Tinto's wholly owned Hamersley Iron is one of the world's largest iron ore producers. From its mines in the iron rich Pilbara it is a major supplier to the Pacific Rim and European steel industries. Hamersley wholly owns five mines - Mount Tom Price, Paraburdoo, Marandoo, Brockman and Yandicoogina - and



also operates the 60% owned Channar mine and the 54% owned Eastern Range mine on behalf of joint venture partners. Hamersley has a system capacity of 90 Mt/y, with iron ore transported from the mines to the port of Dampier on the northwest coast of Australia, on a 630 km dedicated railway. High-technology locomotives with advanced on board computers enable one-man operation of some of the longest and heaviest trains in the world.

Overall, Rio Tinto's iron ore operations in the Pilbara have expanded to an annual capacity of 220 Mt, with advanced plans to further expand. With a total network of 11 mines, three shipping terminals and the largest privately

Project	Value*	Target completion
Mesa A project (20 Mt)	\$901 million	Early 2010
Brockman 4 project (22 Mt)	\$1520 million	2010
Cape Lambert Port upgrade*	\$952 million	Complete
Hope Downs project - stage 2 (to 30 Mt)	\$364 million	Q1 2009
New Dampier power station	\$538 million	2010
Additional rolling stock/infrastructure	\$113 million	Progressive

*expanding throughput to 80 Mt

owned heavy freight rail network in Australia, the Pilbara operations make up a major part of Rio's iron ore activities globally.

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Since 2003, Rio's iron ore growth strategy in the Pilbara has seen some \$8 billion committed to port, rail, power and mine assets, resulting in a network that has expanded to an annual capacity of 220 Mt, with advanced plans to expand further (including those in the table above).

The BHP Billiton/Rio Tinto joint venture will operate as a cost centre and deliver iron ore, in equal volumes, to ships designated to sell independently through their own marketing groups. In order to equalise the contribution value of the two companies, BHP Billiton is paying Rio Tinto \$5.8 billion for equity type interests to take its interest in the joint venture from 45 to 50%. Senior management will be determined jointly on the basis of the 'best person for the job' with broadly equal participation from Rio Tinto and BHP Billiton. The initial Chairman of the non-executive owners' council will be Sam Walsh, currently Rio Tinto Chief Executive Iron Ore, and the initial CEO of the production joint venture will be BHP Billiton Iron Ore President, Ian Ashby. Future CEOs will be appointed by mutual consent.

Technology and research and development activity will also be shared. The agreement excludes Hismelt, any secondary processing facilities, and operations and future business development outside Western Australia. The Hismelt pig iron plant in Western Australia remains on a care and maintenance program to April 2010, due to depressed global pig iron prices. **IM**



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