

Brockman Iron Ore – Iron Ore Recovery



PROJECT SUMMARY

Rio Tinto contracted Global Civil and Mining (GCM) to mine iron ore at its Brockman Mine.

A high water table and ore zone/pit geometry meant that conventional mining techniques had failed to mine the last approximately 660,000 tonnes of iron ore at the mine. At a sale price of around \$100/t (at the time) this was a significant lost potential.

The first challenge was to dewater the pit and maintain a dry working surface. GCM mobilised a Wirtgen 2500 Surface Miner (2500SM). It cut a series of moats around the perimeter of the work areas to capture all of the surface water runoff. The 2500SM trimmed the working area's surface and created effective surface drainage to the moats where pumps had been installed to continually pump the water.

The 2500SM then set about mining the ore. Drill and blast was not necessary and the 2500SM was able to cut a steep wall on one side of the pit in order to recover the maximum amount of ore.

The overall result was a great success with all of the remaining ore economically and safely recovered resulting in a significant benefit to the client.

Case Study
GCM08-02

Year
2008

Client
Rio Tinto

Site/Location
Brockman

Region
Pilbara WA

Scope
Dewater and mine Iron Ore

Volume
193,700 bcm @ Lens C

Daily Production
1309 bcm/shift

Rock Type
Brockman Iron Ore

Rock Hardness
< 50MPa

GET Consumption
32 picks per day

Completion Time
148 shifts

Safety
Zero LTIs

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