MAPTEK™ I-Site™

CASE STUDY

Millennium Coal Mine takes accurate survey data to a new level

Consultants are relied on in the mining industry to provide technology and expertise to supplement an operation's resources. In the current market, it is crucial for consulting services to deliver results that impact positively on efficiency and profitability.

THE MAPTEK I-SITE ADVANTAGE

- Extra hands when you need them
- We invest in the technology for you
- Rapid turn-around time
- Accurate survey results

The Millennium Coal Mine is located 170 km west of Mackay, near Moranbah in the Bowen Basin of Central Queensland. Downer EDI is the contract miner for Millennium, which is owned by Peabody Coal.

The open cut mine commenced operation in May 2006. Conventional truck and excavator mining methods are employed to produce 1.4 Mtpa of low to mid volatile PCI coal and low ash coking coal for customers in Japan, Korea and India.

Expansion plans

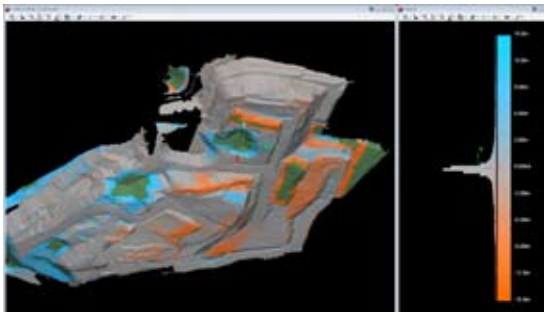
The Millennium Expansion Project is planned to increase production up to a maximum of 7 Mtpa, processing ROM (run-of-mine) coal on site at the existing preparation plant and transporting the product coal to the Dalrymple Bay Coal Terminal via the existing rail network.

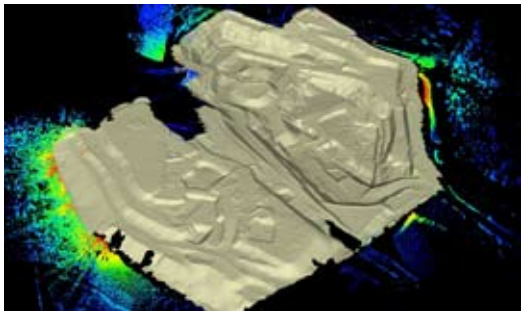
The engineering department relies on Maptek™ to carry out survey tasks for end-of-month reconciliations to feed back into short-term planning and design for the expansion. Specified quantities and qualities of coal are required for supply to the processing plant.

Accurate volumes are essential to monitor this, besides being instrumental in controlling contractor payments.

Maptek consulting services can help operations collect accurate and timely end-of-month survey data.

Millennium previously used GPS pickups for survey work around the mine. The Maptek solution is more accurate and much faster, doing the same task in one day as against one week.





TESTIMONIAL

Maptek staff were able to demonstrate the speed with which the scene can be recorded, and how easily pre- and post-blast models can be created using I-Site Studio software.

Rapid turn-around

A Maptek I-Site™ Technical Services staff member travels to the mine with the I-Site 4400LR laser scanner, and scans the entire 1400 m length of open pit and the inner pit waste dumps in just 1 day. Setup and operation of the scanner is straightforward, so no time is wasted getting down to business.

With the I-Site scanner, an entire 1400 m length of open pit and in-pit waste dumps can be scanned in 1 day.

All active faces in the 2 mined areas of the pit are scanned, and capturing all of the data in a 360-degree sweep means no extra time or money is spent to survey the in-pit waste dumps. It has proved more economical to dump waste in other areas of the pit, to be used for rehabilitation once mining has ceased. A large external dump adjacent to the pit has also been scanned as a separate exercise.

Maptek is able to quickly deliver 3D seam maps and volumes, lines and strings for top and floor of coal, and accurate mine models for the Millennium engineers to feed into their planning process.

The 4400LR has no difficulty picking up the coal, which can be a tricky material to scan due to its poor reflectivity. Robust engineering is a bonus in the heat and humidity of tropical Queensland, which is at its peak from December to February.

When blasting on site coincided with a consulting visit, Maptek staff were able to demonstrate to the engineering team, the speed with which the scene can be recorded, and how easily pre- and post-blast models can be created using I-Site Studio software.

Calculating the volume of material blasted is simply a matter of comparing the 2 models. The results are completely reliable because throw and swell factors are taken into account.

Thanks to
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Mining Engineer
Downer EDI