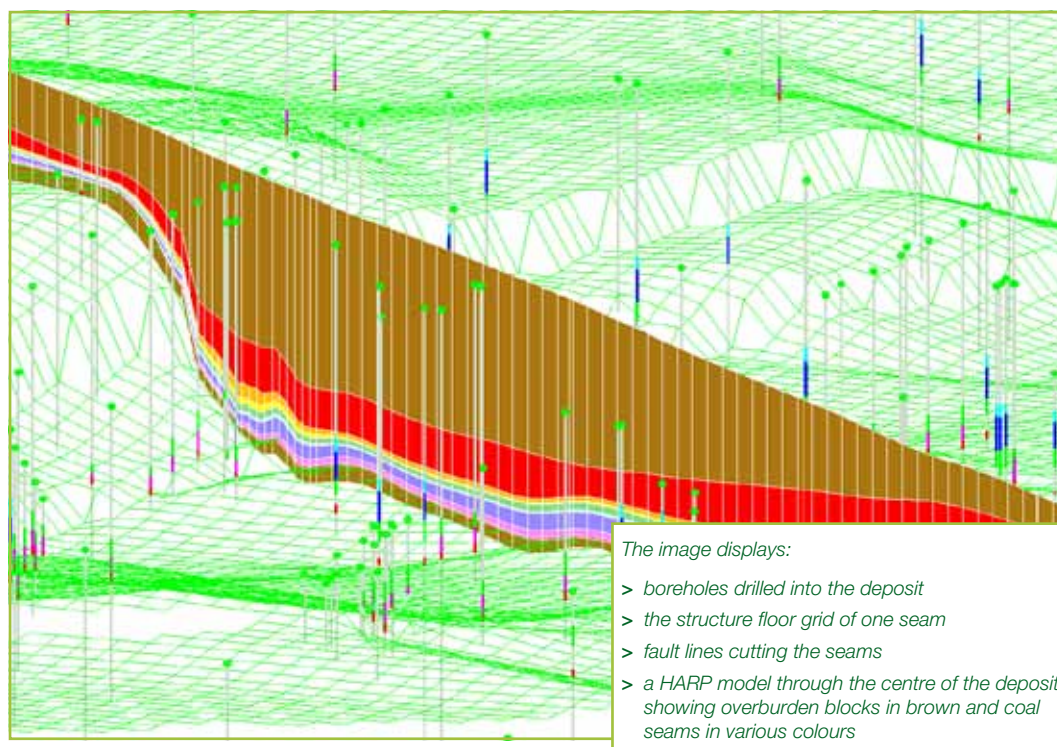


Vulcan models coal for Vale Mozambique

Vale has been operating in Mozambique since 2004, after winning a tender to exploit Moatize - one of the largest carbon deposits in the world.



BLOCK MODELLING FUNCTIONALITY ALLOWED VALE TO LINK MINE PLANNING ASPECTS TO THE GEOLOGICAL INFORMATION IN ONE MINE PLANNING MODEL.

The Moatize operation, outside the city of Tete in northwest Mozambique, will produce thermal and metallurgical coal. Operations are due to start in late 2011. Initial production capacity is planned to reach 11 million metric tonnes per year over the first few years – 8.5 million metallurgical and 2.5 million thermal.

Vale Mozambique started using Maptek Vulcan in 2008 to meet part of their initial operational needs. The first modules were acquired for stratigraphic modelling and mine planning. This was later expanded to include Vulcan Chronos scheduling and optimisation.

The company also took delivery of a Maptek I-Site™ 8800 long range laser scanning system in December 2010, for end of month survey and open pit volumetric management. Coal geology mapping is streamlined using the I-Site 8800's integrated high resolution 3D digital panoramic camera.

Vulcan's HARP block model functionality has provided mine planners with accurate quality and volume information. This would not have been possible using traditional grid based models because of inaccuracies modelling the dipping coal seams (between 6°-15°).

Block modelling functionality allowed Vale to link mine planning aspects to the geological information in one mine planning model. The dipping seams will be mined in horizontal benches. Using a block model will aid in grade control procedures of product and waste handling.

As part of the infrastructure upgrade Vale is constructing a new railway to the port town of Nacala. This will allow annual production to be pushed up to 15 mta by 2015. The railway is approximately 800 km long and will take 4 years to complete.

Thanks to
Moatize Mine, Vale Mozambique