



Borehole Pump Installation

Customer: Rio Tinto – Kestrel Coal Mine

Location: 40 km NE of Emerald, QLD

Case Study ID: CS-68

Date: February 2013

Overview

Dowdens Pumping and Water Treatment successfully designed, supplied, installed and commissioned a borehole pumping system to be used for dewatering Rio Tinto's Kestrel Coal Mine goaf (the cavity behind the longwall).

The Problem

Supply and install a borehole pumping system to deliver water to be transferred to a nearby storage dam where it would be reused at the Coal Handling Preparation Plant.

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Our Solution

Rio Tinto's project supply requirements included a bore pump, a rising column, a bore head, steel discharge pipework, HDPE poly pipe to enable transfer to the storage dam, and all necessary associated valves, levels and flow monitoring equipment.

All design, fabrication, assembly and commissioning was undertaken in-house by Dowdens Pumping and Water Treatment. The system consisted of a Pleuger 5 stage borehole submersible pump complete with a 500kW 3000v motor and an operating duty of 100L/sec @ 345m TDH to fulfill the required flow rate.

Key Features

- 200NB (Nominal Bore) flanged rising column – all fabricated in house at Dowdens Pumping and Water Treatment's Mackay workshop
- Submersible pressure transducer used for level monitoring
- 200NB surface discharge pipework with isolation and air release valves – all fabricated in house at Dowdens Pumping and Water Treatment's Mackay workshop
- 280mm HDPE discharge poly pipework from borehead to the storage dam

Brands used in this project



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