

AUSROCKS PTY LTD

CONSULTING MINING ENGINEERS

ABN 64 056 939 014

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Introduction

It is interesting to note that we are getting busier at the Ausrocks office. We are now looking to larger premises and are employing more people. This is a credit to the quality of work of our employees and our work ethic. During the next six months or so, Kayleigh (Environmental Planning, Second Year) will be away from Brisbane, Ausrocks, her family and the UofQ to take up a semester at Manchester University. We wish Kayleigh the best of luck and look forward to her return in February 2013.



Ausrocks Car Park on a Normal Day

It is interesting to note that our support and mentoring of University students does pay off. Rubik Ghosh did his thesis on Measure While Drilling (MWD) in 2008 under our mentoring and now Terry Dube is looking at automated drilling in 2012.

Karen Normanton, a Mining Engineer with considerable experience in surface and underground mining, has joined Ausrocks part-time while Carl is on leave. Karen is assisting in the many interesting facets of Carl's job and learning a little about the "red tape" in planning and Development Applications for quarries. We also have Peng Li, a fourth year Mining Engineering student, who is gaining some mining and quarrying experience before he graduates at the end of the year.

It is hoped that for most students, working at Ausrocks can form a valuable interface between acadameia and working in the civil, mining or quarrying industry. Adebayo, Carl and myself have a lot of experience to pass on to our younger engineers and we enjoy the training and interaction process..

From Alan Robertson, Director.
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Big Trucks, Mining and Quarrying

In this edition of the Ausrocks Newsletter, our focus is on big trucks, both for surface and underground operations. Having known the large crane capability from LCR's work on the Legacy Way Project where cranes from 15t to 100t have been used, I was not surprised when told by Greg Keane about the LCR off-highway Superhailer. The Superhailer boasts a 670kW CAT C27 diesel engine, Allison 8 speed gearbox and Kessler axles and is 8 wheel drive with twin steer configuration. The Superhailer can tow 4 trailers and a 4-trailer Superhailer rig is not much longer than current 3-trailer rigs yet it can carry up to twice the payload. Positive visible aspects are the easy step access and associated deck and rails, the location of the cooling system and the large cab with good forward visibility.



LCR SuperHailer

Having been involved with the Powertrans road train trucking concept for many years, I was pleased to see the configuration of the Powertrans-Byrnescut Murray Engineering DAT 60 which is built in Brisbane and currently being trialled at Gwalia Deeps. This side-tipping underground truck looks like a real winner with 2x 410kW engines, all wheel drive, enclosed wet disc brakes, double articulation and a speed of 16 k/h loaded up a 1:7 gradient.



For further information on the DAT 60, please contact Murray Engineering (08 95505800) or Powertrans (07 3716 6100) and Peter Koschel at the LCR Group (07 33320009) regarding the LCR Superhailer.

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“Clever Innovation in the Mining and Quarrying Industry”

Mine Automation – Surface Drilling

Terry Dube is an undergraduate Mining Engineer at Ausrocks, graduating in July 2013. As part of his fourth year programme Terry’s Research Project is on Automated Drilling. Here, in Terry’s own words is a summary of what he is doing.

“Automation in the mining industry is developing more rapidly in this decade than it did in the previous 50 years. Lots of research work is going on into automating many parts of mining systems for more productivity and efficiency. My research topic will begin by defining the different types of automation which have been split into three categories: Remote Teleoperation, Semi-Autonomous and Fully Automatic or Autonomous.. A literature review will follow that investigates the developments that have been made so far. Various automated drills will then be analysed and an in-depth analysis of the hardware and software components involved will be made. This will include the data loggers and the input software systems. Investigations will include analysing the efficiency and reliability of these automated drills. Current designs in these machines will be researched and suggestions will be made to improve on them. Apart from the technical side of automation, the project will look at the economic and safety and health impact of implementing automated drills and the advantages and disadvantages associated with their operation.



Photo Courtesy of Atlas Copco

The SmartRig ROC D65 (formerly known as the D9C) is one of the newest rigs from Atlas Copco that will be analysed in my project. It introduces an upgrade to the software that greatly improves the performance and increases the life of drilling consumables. This drill can be remote controlled and the automatic drilling system works by adjusting drilling power to suit the ground conditions. In some cases where the control system has to reduce penetration rate the total production per shift is often increased with its smart quick switch technology.”

Signs We Have Noticed



This one was sent in by one of our readers- thanks!! Our research indicates the town of Plateau is (or was?... maybe no longer existent) in Colorado and is not into population growth and this prompts the question:

Is this Stop sign Effective?

If you have seen an interesting sign please send it to: alan.robertson@ausrocks.com.au

STOP PRESS Carl has first baby (This article is not related to the photo above... Carl and Emily obviously haven’t been to Plateau!!!).

Congratulations to Mining Engineer Carl Morandy and his wife Emily on the birth of Jade Eileen on 7th July 2012. Jade weighed 3.7 kg and both Emily and Jade are well. Carl will be on parental leave until 6th August 2012. *Go Daddy Carl!!*τ

