

# AUSROCKS PTY LTD

CONSULTING MINING ENGINEERS

ABN 64 056 939 014

## AUSROCKS NEWSLETTER No 6 March 2011

### Introduction:

**From Alan Robertson, Ausrocks Director.**

2011 is well underway and it is a very busy year so far for Ausrocks. Just after the Christmas break we had the Brisbane floods and despite our employees being cut off and the Ausrocks office being about 3m above the floodwaters, we managed to keep our consultancy group operating. Ausrocks was proud to help out in Toowong and Oxley where we used a trailer mounted gerni and 2,000L water tank and Mitsubishi Triton supplied by Professional Grass Seeding (Des Kilpatrick) to clean up the mud at a number of flooded houses and home units.

The exciting news for this quarter is that our Mining Engineer, Carl Morandy got married on 19 February to Emily (The Cake Lady) in Auckland. It was a fantastic turnout at the local racecourse and a great time was had by all. Below are a couple of photos from the fantastic day.



Wedding Guests and Carl and Emily



Bride and Groom at an Auckland Landmark

Ausrocks continues to keep abreast of innovation and technology changes in mining, quarrying and tunnelling. One of the ways we do this is to sponsor our employees at technical meetings and conferences held by the Institute of Quarrying and the Australasian Tunnelling Society. Ausrocks are proud to support Stephen Vaughan as our mentored final year Mining Engineering student at the School of Mechanical and Mining Engineering at the University of Queensland. Stephen has recently been nominated as the Young Professional Representative for the National Group Committee of the Australasian Tunnelling Society.

### Value Adding in Sandstone Quarries

About 10 years ago, a number of quarry operators in the Helidon area of South-East Queensland looked at value adding of sandstone from the large stockpiles of offcuts and waste accumulated from sandstone extraction from the area over the past century. Initially the target was to achieve “break even” - to remove the material from site to allow rehabilitation to commence in worked out areas. A number of options existed:

- Remove the material off site as land fill – most likely at a net cost to the quarry operator.
- Process the material eg crush and screen to produce aggregates and fill for the construction industry.
- Further processing cut stone offcuts for the landscaping industry.

Typical equipment used includes mobile crushers, screens, trommels, rock splitters, trimmers and other specialised tools. The overall result has been a “win-win” - the production of high “added value” products such as sandstone pebbles with a major environmental offset –today’s waste is tomorrow’s resource. The photo below shows a mobile trommel set-up. (Photo Courtesy of Powerscreen Crushing and Screening).



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## “Clever Innovation in the Mining Industry”

### CSIRO Non-Entry Underground Mining:

In this Newsletter, I thought it would be interesting to introduce the CSIRO Mining Team that it is looking at Transforming the Future Mine. I first met the team leader Jock Cunningham in the late 1970's at Mount Isa when he was on the team that developed the remote controlled loader in the difficult underground mining environment. Early units were line of sight, but technology developments led to fully remote loaders and eventually autonomous loader and truck systems. The team's philosophy is:

*“Now that much of Australia's easily recoverable surface and near-surface ore has been located and mined, future mines will become increasingly deeper. This will result in a more complex mining environment due to high in-situ rock stress and elevated temperatures.*

*Current mining operations can expose people to risk by locating them near mining machinery and freshly excavated ground. In fact, safety statistics suggest that the vast majority of injuries occur within 50 metres of an active mining face.*

*The CSIRO team will help remove people from hazardous conditions by developing transformational, non-entry methods and novel mining equipment with a focus on mine development and construction to significantly improve the time and cost required to access ore in an economic, safe and environmentally sound way. These technologies will reduce mining costs, bring ore onstream sooner and increase Australia's inventory of economically mineable ore”.*

Contacts for the **Minerals Down Under National Research Flagship** are:

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Autonomous Loader Control Room  
(Photo Courtesy Atlas Copco)

### SIGNS WE HAVE NOTICED:

Thanks for the reader contributions still being sent in. If you too have an interesting sign, Email a photo to: [alan.robertson@ausrocks.com.au](mailto:alan.robertson@ausrocks.com.au)



*Perhaps a little more demarcation is required than just this sign!!!*

For any help in mining, quarrying and tunnelling, contact:

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