



Straits Resources Ltd -Tritton Copper Mine

Mining for improved performance



Straits is a mining and exploration company focused on copper and gold in Australia and Asia. Straits controls and operates the Tritton Copper Mine in NSW and the Mt Muro Gold mine in Indonesia and has an exciting exploration portfolio focusing on projects in NSW and South Australia.

Tritton Copper Mine is a 1.4 million ore tonne resource producing 25,000 tonnes of Copper and is situated in Central Western NSW.

“...the real value of this project is that it shows exactly why we have low performance... no more excuses or wondering...”

Nic Earner
Straits EGM

ANALYSIS

Renoir was invited to identify opportunities to increase the output of hauled ore to the surface. Renoir’s Analysis identified opportunities to increase output by 5%, equivalent to \$5.7 M in revenue. On top of that, 4 cost avoidance initiatives were identified, to recover at least \$1.2M AUD.

PROJECT APPROACH

The project was run as a 35 consecutive, calendar week program and was composed of full time on-site Renoir presence, consisting of a Project Manager and two Consultants, supported by team of four, full time, dedicated Straits Taskforce.

The project was governed by the client via a Management Action Team and Steering Committee, who were charged with the responsibility of ensuring the project developed and delivered sustainable solutions.

THE FOCUS PROCESS®

The project conducted observations of people undertaking their roles as well as undertaking Capacity and Bottleneck analyses of the critical mining processes.

Key Results

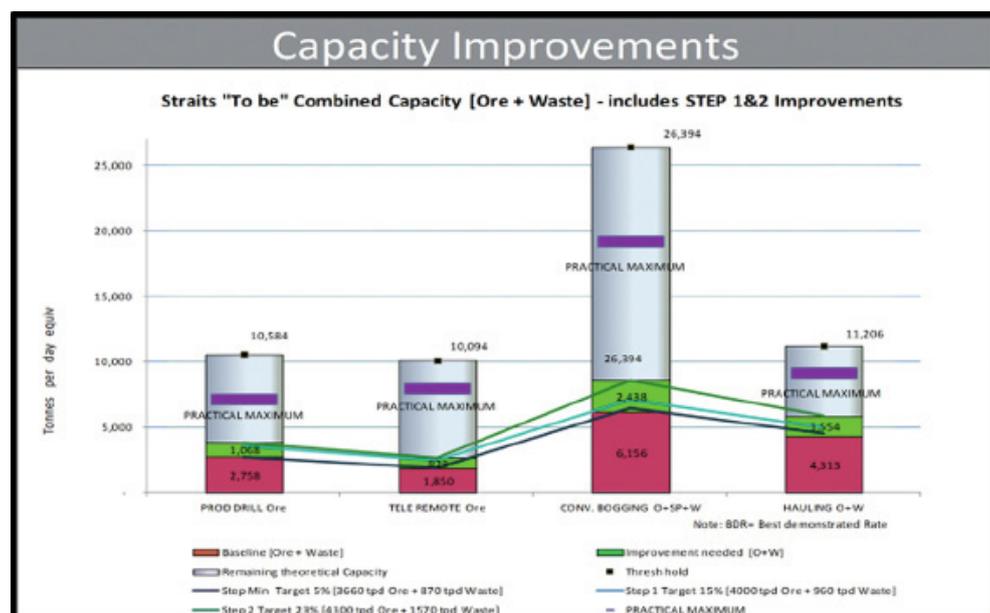
Increase in ore tonnes output of 9%

4 costs avoidance initiatives achieved in excess of \$1.2M AUD benefit

Integrated Management Control System to manage, control and eliminate variance

Integrated capacity erosion data capture and management system to drive continuous improvement

Physicals and Financial KPI trees to manage unfavourable trends and variances



The Bottleneck Analysis indicated that capacity was not optimally utilised and also detailed that the bottleneck was in the Remote Boggging function. A second bottleneck was identified in the stopecycle.

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To capture the benefits identified during the Analysis, the Project addressed:

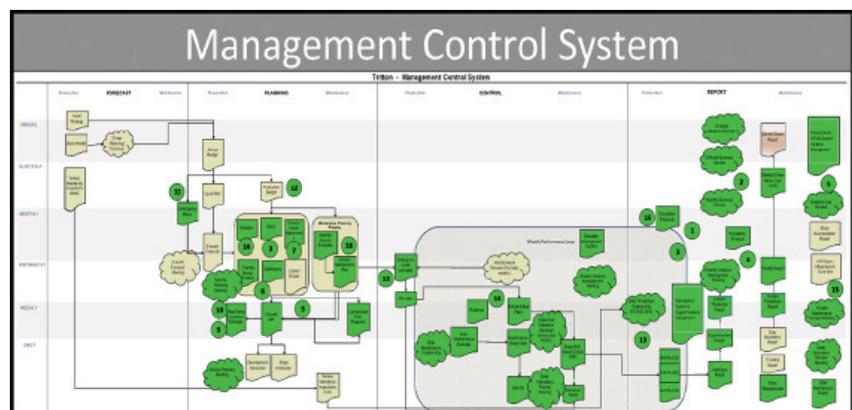
- Driving the planning process to bring multiple stopes on line to optimise the Remote Loader capacity
- Converting conventional loader capacity into Remote Loader capacity
- Reducing the stope cycle using the Stope Firing Countdown Schedule and associated process
- Installation of a Management Control System to manage On Time, In Full, On Cost and On Quality.
- Integrating data capture and management systems to convert data into empirical business information.
- Creating a Variance Management System to identify & eliminate the Root Cause of variance.
- Enhance the culture of Short Interval Control and supervision.
- Clarify Roles, Service Level Agreements, Routines and Skills requirement to ensure reliable delivery of outcomes to stakeholders.
- Enhance Production and Maintenance Planning systems and practices to link business objectives and strategies to work execution
- Enhance Warehousing systems and practices

PROJECT IMPLEMENTATION

Solutions implemented:

- Management Control and Reporting systems that drive the required behaviours
- Information Management system that centralises data and converts it into operational information
- Standardised operational rates to optimise planning and set expectations
- Management Behaviours that support the mine operations management
- Scheduling and Planning processes that optimise resources
- Variance management systems that identify and eliminate the underlying cause of deviation to plan

Solutions were developed and implemented with the extensive collaboration of the various operational stakeholders and departments and were extensively supported during the implementation phase.



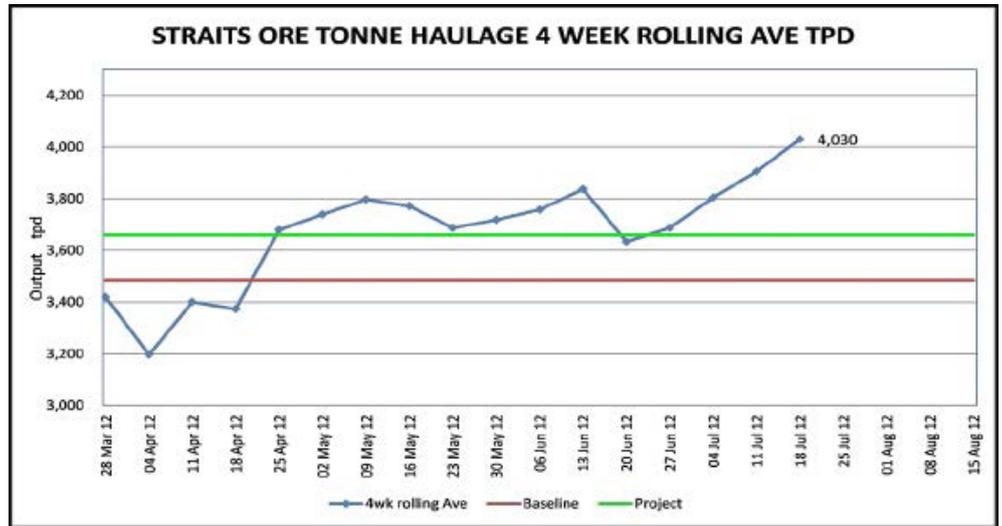
The existing Management Control System was critically assessed and many aspects and elements were upgraded. Maintenance Management Systems and Production Planning processes were also critically assessed and upgraded

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PROJECT RESULTS

- 90 day rolling average showed that output increased by 9%
- The 4 cost avoidance initiatives have generated in excess of \$1.2 million AUD benefit



Ore Tonne Haulage

Average hauled ore performance for Tritton mines measured in the Implementation phase

- Rolling 90 day average, 3,800 tpd, 9% improvement over baseline
- Rolling 4 week average 4,030 tpd, 16% improvement over baseline.

THE RENOIR GROUP

Renoir Consulting is a world leader in sustainable, implemented change. Founded in 1994, Renoir has offices located in North and South America, UK, Europe, Turkey, Middle East, Southern Africa, India, Pakistan, China, South East Asia and Australasia. With over 350 fully employed and highly trained consultants, their work across a wide range of industry sectors gives them a broader perspective of the issues facing your business, allowing them to be sensitive to your unique challenges, culture and specific business issues. This cross-pollination ensures truly effective, rapid and sustainable solutions.

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