Case Study
Delmas

Client Background

Delmas Coal situated some 20 km south of Delmas. It consists of a vertical shaft (South Shaft) and an inclined shaft which is used for machine access and recovering mined coal via a conveyor. 4 seam is mined using the traditional board and pillar method with three continuous miners.
On surface there are a number of beneficiation plant options which allow Delmas to process coal to specific client needs in terms of grading and ash content/CV. Outbound logistics are via road and a dedicated rail siding.

Key Challenges

- Delmas Coal had been run down due to consecutive years of low energy prices with very little investment in the plant and equipment.
- Maintenance had been neglected.
- With the surge in demand for coal a change in maintenance strategy was required to ensure optimal asset performance.
- Many of the maintenance systems were largely manual. This limited the management and control of the work with almost no ability to mine the maintenance data for focused improvement activities.
- The purchasing and stores systems were also largely paper driven and this resulted in frustrations for the users and long delays, which increased downtimes for the plant while waiting for spares.

> ***"With the inefficiencies in materials management and the substandard maintenance regimes that have been accepted as a norm in the mining sector, Pragma has assisted with the change of that culture. The competence and determination of the Pragma staff is making this work which is still in progress realisable."***
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> *Mpumelelo Saliwa – General Manager*

Pragma Intervention

- Performed an Asset Management maturity assessment and used the results to develop a policy, strategy and improvement plan.
- Agreed on key performance indicators and developed reports to track these.
- Implemented the ACC service and On Key identify, plan and allocate work and record detailed feedback for each job.
- Performed a "5S" intervention, disposing of huge amounts of scrap.
- Redesigned the store, purchasing and stores processes and the implementation thereof in On Key.
- Designed a solution to effectively distribute spares to the underground areas.
- An efficient process was designed and implemented to manage rotable items.
- A mining solution was developed and implemented to measure overall productivity of the underground sections to address the shortcomings of the Overall Equipment Efficiency (OEE) methodology in the mining industry.

Performance Improvement

Single point of control for all maintenance work from A to Z

- Standardised work planning and control processes across the whole operation
- Accurate and complete asset register with history of work done
- Improved maintenance tactics
- Powerful analytical capability on work history
- Accurate productivity information on the mining machinery
- Efficient stores and purchasing
- More efficient and cost effective maintenance
- Steady improvement of equipment downtime and reliability
- Improved availability due to better spares service
- Better control of and information on the mobile mining fleet
- Cash generated from the sale of scrap from 5S exercise.

Tools and Technology

- On Key
- The following key business processes were implemented:
  - Asset Care Foundations
  - Asset Management Improvement Process (AMIP)
  - Asset Register Administration
  - Maintenance Plan Development
  - Warehousing
  - Work Planning and Control
  - Equipment Performance Measurement.