



MINING CONSULTANCY SERVICES Technical Capability:



- Unique combination of experience, expertise & innovation in:
- •Mine Design and Layouts
- •Mining Systems and Operations
- Productivity Optimisation
- •Process Analysis Software and Electronics
- •Training







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MINING CONSULTANCY SERVICES



- Established in 1988
- Employ over 40 personnel between offices in Australia and RSA
- Rapidly expanding company with focus on underground mining
- Project work with clients such as BHP, Anglo, Xstrata, AMCI, Peabody, Sasol, Solid Energy
- Projects in Australia, South Africa and New Zealand
- ISO Accreditation





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POP PROJECTS

Process Based Management

HAT HAS BEEN LEARN ABOUT THE PRODUCTION PRODESS? HERAGES REPORT RECOURTINGE HEREALES POP RECOURTINGE

The focus is not on tonnes and metres as this is purely a result

By influencing the primary drivers of cutting rate and time we influence the result which is production







Process Mapping Quantifying Constraints

ABM Process



Time (min)

"X" Minute cycle

Current Joy Process Map





MCS Electronic Monitoring "Measure to Manage"



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Shuttle Car Away Time (SCAT)



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Formalising and Coaching Best Practice

Sumping To Correct Depth



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Optimising Operating Time

Time to First and Last Coal



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Case Study Example -Optimising Face Time





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Involvement of the Team



When they arrive at the waiting place / crew section, they discuss the report with their team to decide where they need to focus on to improve. withing consultancy services

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70 Issues/Solutions

Initiatives

Initiatives Sorting and Sequencing



70 Issues/Solutions filtered down to Top 20 Initiatives

The Top 20 then rated to determine the overall effect to pillar time

Initiatives plotted in a constraints analysis to maintain a balanced mining cycle

Initiatives then sequenced in terms of practicality and cycle constraints



Constraint Analysis & Initiative I

Initiative Sequence

Order To Implement	Init No	BMA Initiatives				
1	3	Panel Advance Sequence Control Chart				
2	8	Panel Construction Control Chart				
3	12	BMA Time To First & Last Coal				
4	4	Shuttle Car Filling Practice				
5	2	Second Auxiliary Fan				
6	1	Second Mobile Bootend				
7	5	Dedicated Outbye Person				
8	6	Supply storage cut-through & Supply Person				
9	7	Horizon & Grade Control				
10	9	Water Management Plan				
11	11	Mining Cycle Optimisation Training Scheme				
12	15	Crew Fitter & Electrician				
13	16	Two Shuttle Car System				
14	10	Roof & Rib Bolting Pattern				
15	17	Breaker Feeder				
16	18	Digitial Drill Rigs				
17	20	Floor Brushing				
18	19	Roadway Width 5m				

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Pillar Time

Effect

Analysis





Standards and Prep Work Accountability



Floor Cleaning, Roadway Construction, Water Control, Pipe Extensions, Panel Supplies, Panel Advance Prep



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Panel Extensions

Decrease Length of Panel Extensions:

- Improve Planning and Coordination
- Adherence to the plan
- Implementation of Panel Advance Control Chart
- Water management to prevent water build-up
- Roadway conditions (build & maintain roads on advance)
- Supply & Logistics



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Process Based Training -Training is Key to Sustainability-

MCS Training Academy

Modular courses





International Organization for Standardization



Mentoring program

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World leading competency based mining process training courses to complement and sustain POP and CI Formalised assessment





Customised training tools





Case Study - Results of POP

Anglo Coal SA - Greenside





- 100,000 per month achieved within 6 months
- Cutting time increase from 160 to > 200 min/shift
- Cutting rate increase from 540 to > 700 t/hr
 - 40% improvement in 1st year (0.8 to 1,11 Mt)

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Case Study - Results of POP

Anglo Coal SA - Greenside





- 40% improvement in 1st year (0.8 to 1,11 Mtpa)
- 75% improvement in 3 years (0.8 to 1.4 Mtpa)
- New section targeting 1.2 Mtpa in first year
- Continual Improvement

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