



Mining Under Massive Sandstone Channel Zones Using Hydrofrac Techniques to Prevent Periodic Weighting and Windblast

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NSW Minerals Industry
OHS Conference
18 - 21 June 2006
Peppers, Blue Mountains



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Effect of Massive Sandstone Roof Fall

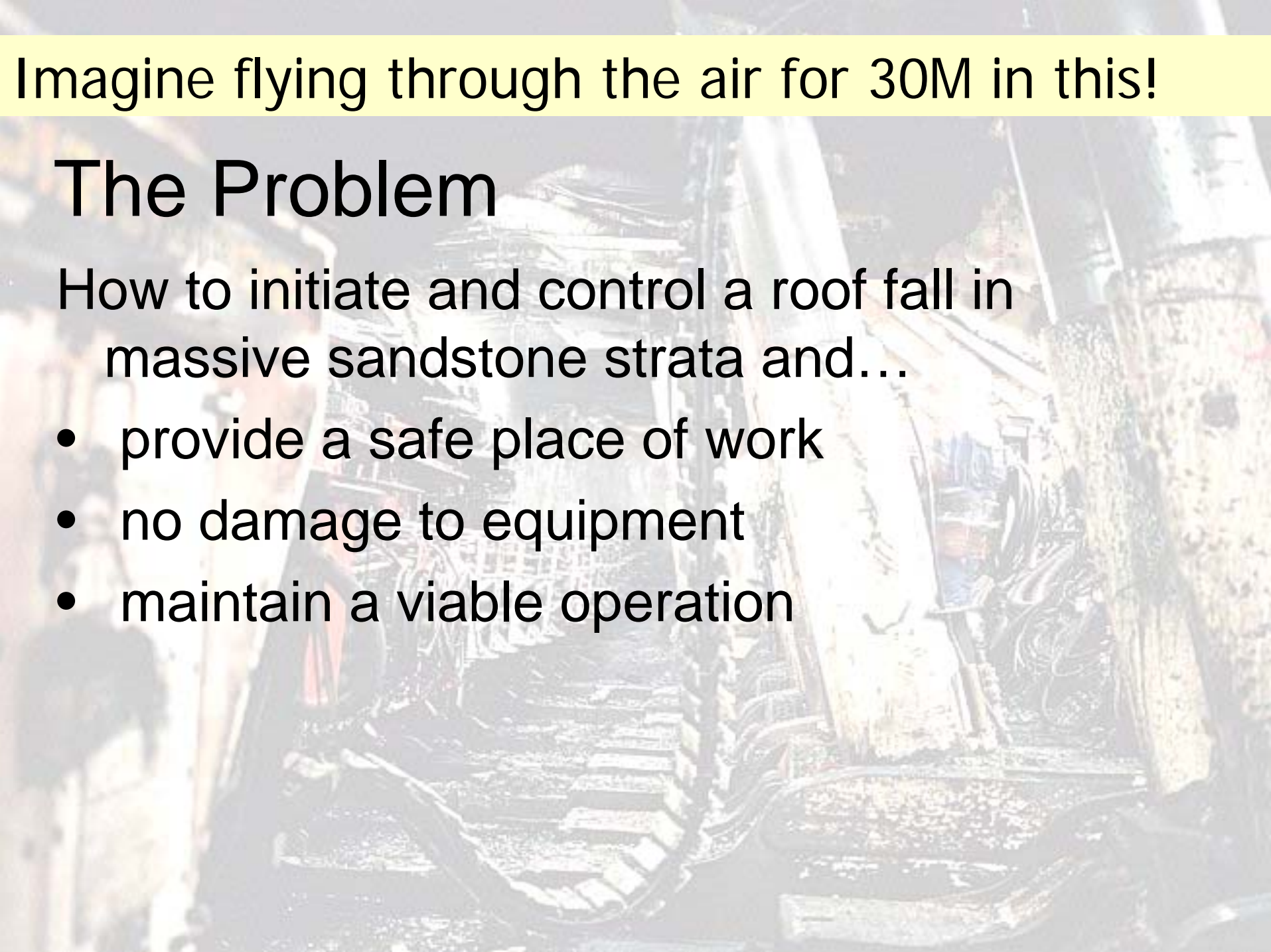


Imagine flying through the air for 30M in this!

The Problem

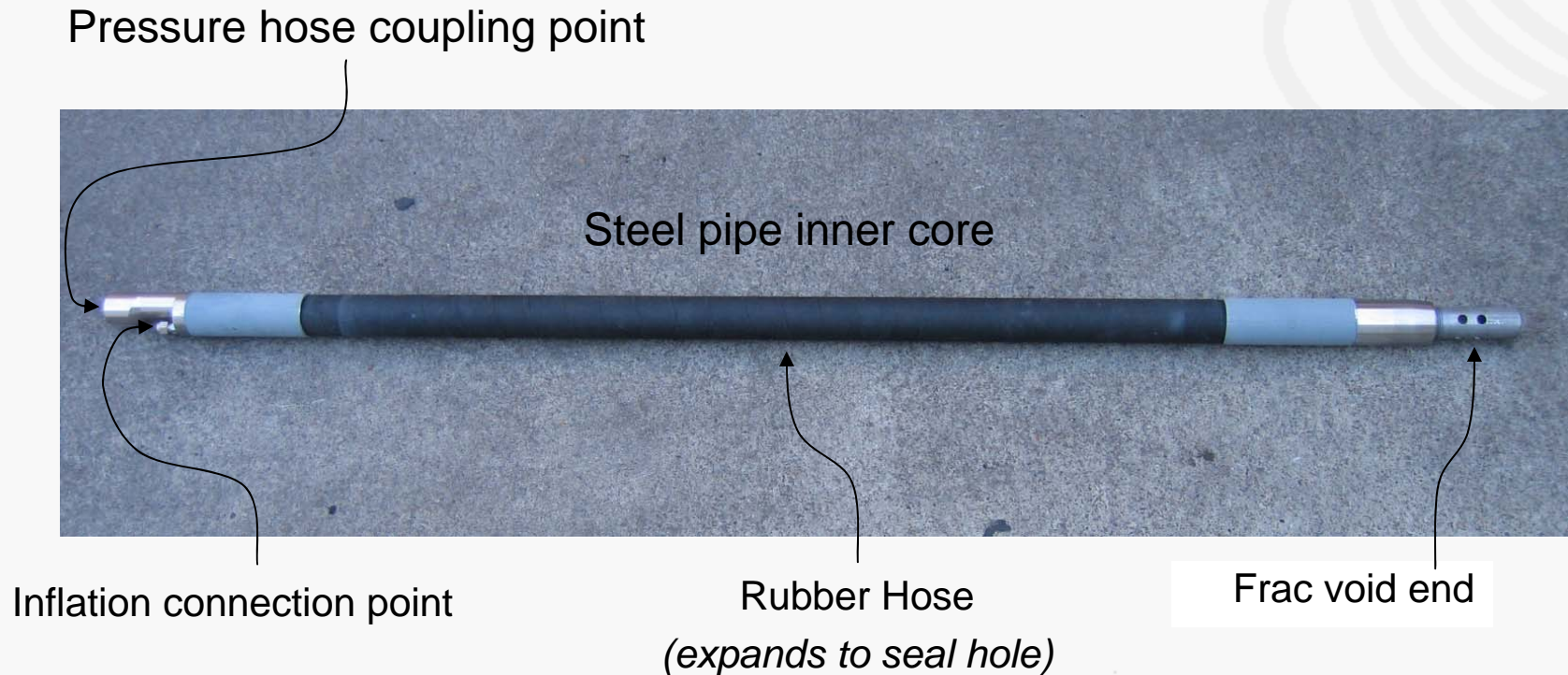
How to initiate and control a roof fall in massive sandstone strata and...

- provide a safe place of work
- no damage to equipment
- maintain a viable operation



The Solution

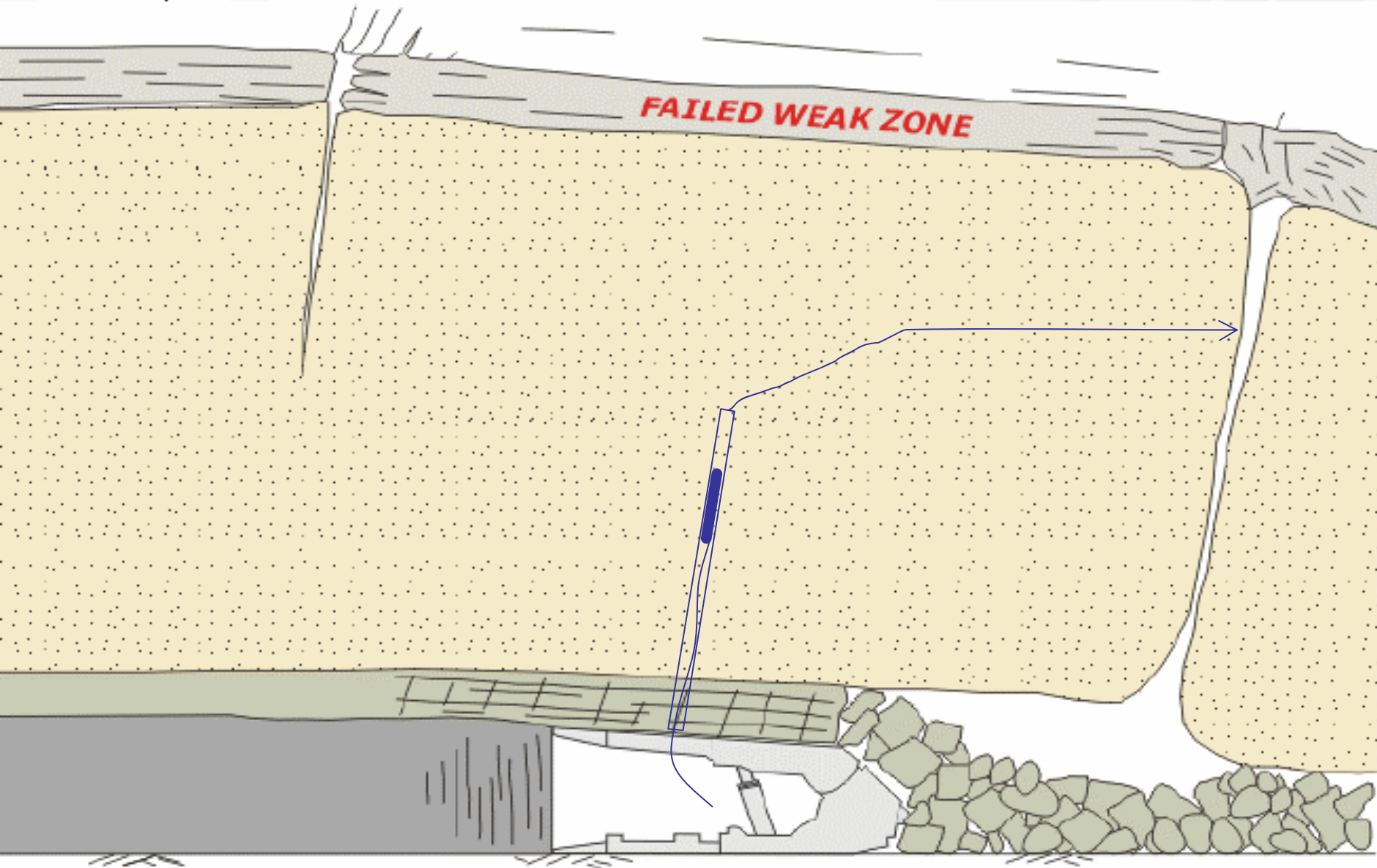
A Hydraulic Packer



Hydraulic Packer Purpose Designed and built by AGE
Developments P/L for West Wallsend



The Solution





Significance

We are still here!

- The process fits into the production cycle
- Hydrofracing can be commenced at any stage
- Safety and viability have been maintained



Transferability across industry

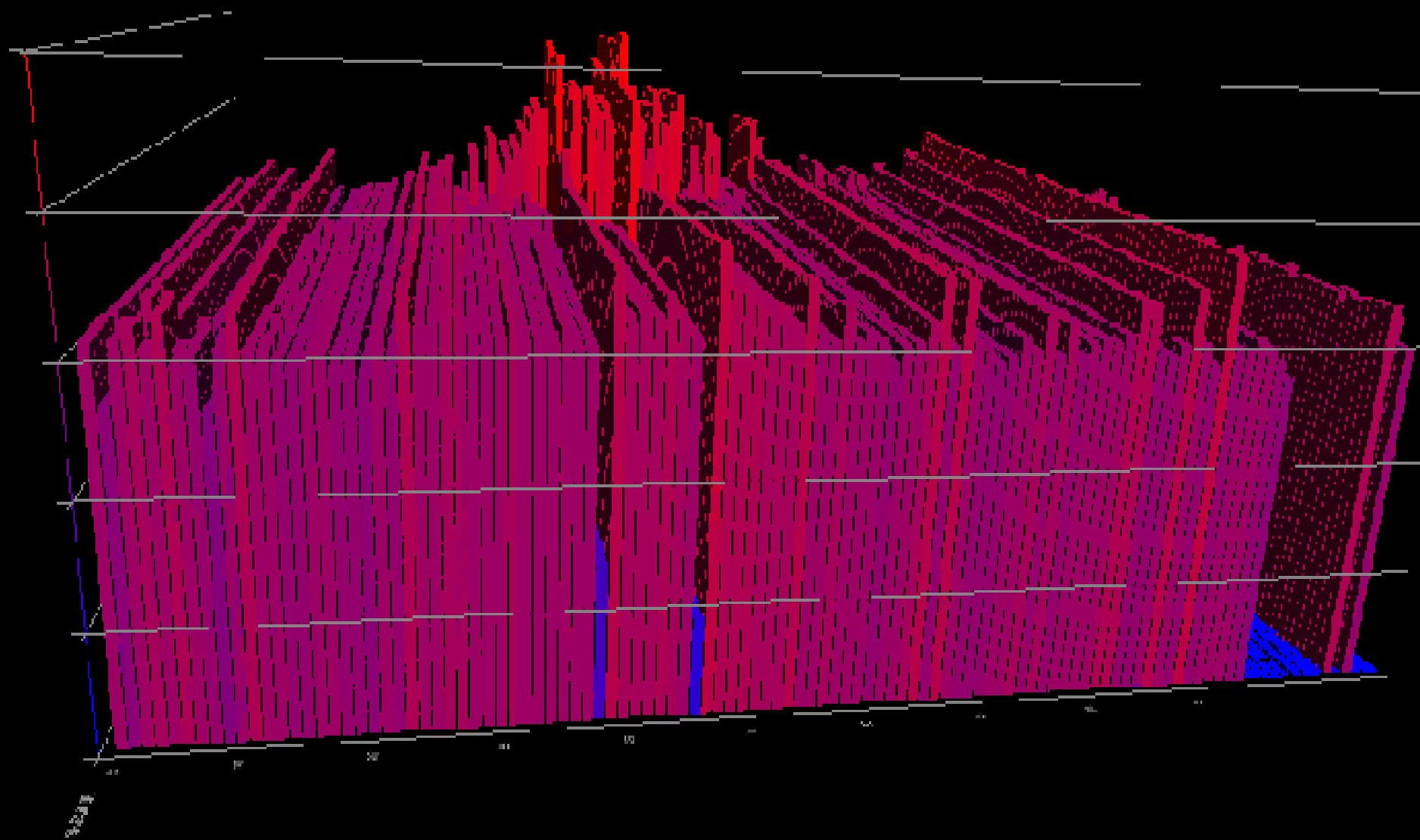
- Also used at United Colliery – Longwall change out
- Suitable in any Longwall mine with similar strata control issues



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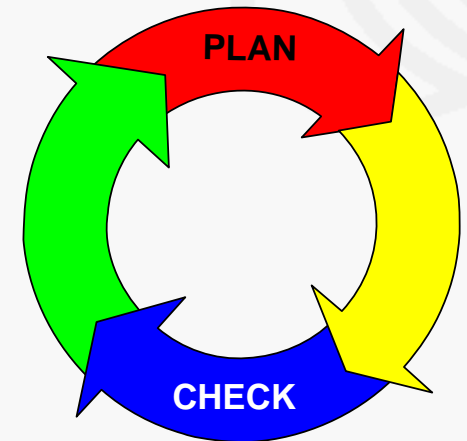


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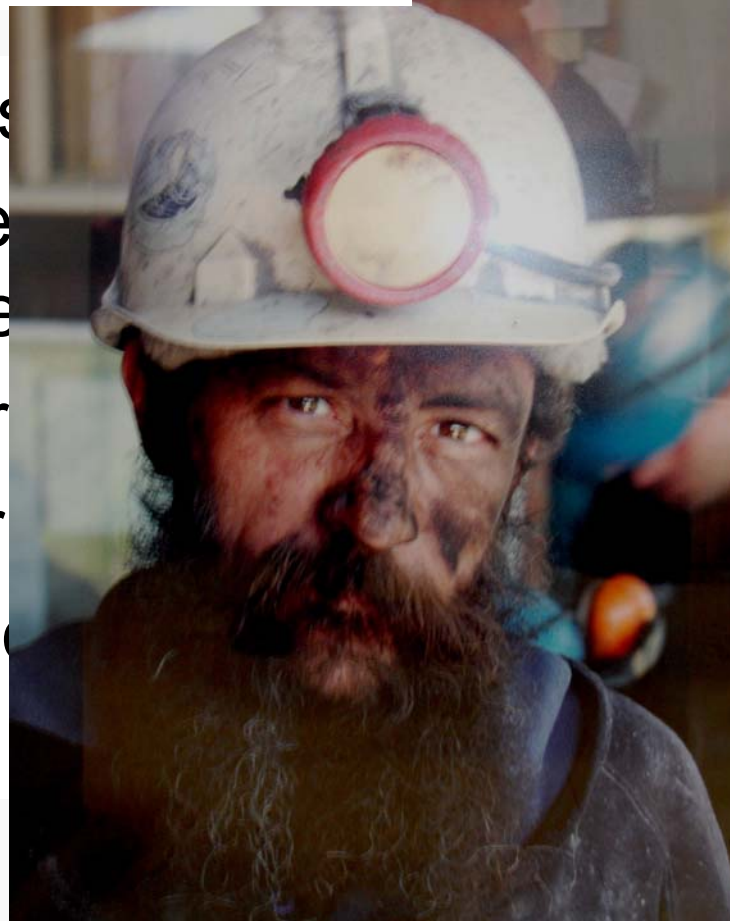
Application of risk management principles

- Windblast Management Plan
- Risk & Change Management Procedures
 - Risk assess (Hierarchy of controls)
 - Available solutions
 - Trials of the fracing equipment & process
 - Each process steps
- Developed procedures & training
- Daily review of what worked well and opportunities to improve
- Using change management to control modifications



Remember

- We achieved the goal of s
 - The workforce participate
 - The stress levels for ever
 - The Operations Manager
 - We even modified the pac
- The most important thing to come out of the mine is the miner!**



“Meet The Fraccers” ...

- Martin Drew – Development Co-ordinator
- Darryl Hogan – Longwall Engineer
- Trevor Walters – Longwall Co-ordinator
- Boyd Buschmann – Mining Eng Student
- Mark Shepherd – Project Co-ordinator
- Shaun Shepherd – SCADA Developer
- Brian McCowan – Geotechnical Consultant
- Ben Smith – Mining Engineer