

# Appin Colliery

## MG703 Outburst Presentation

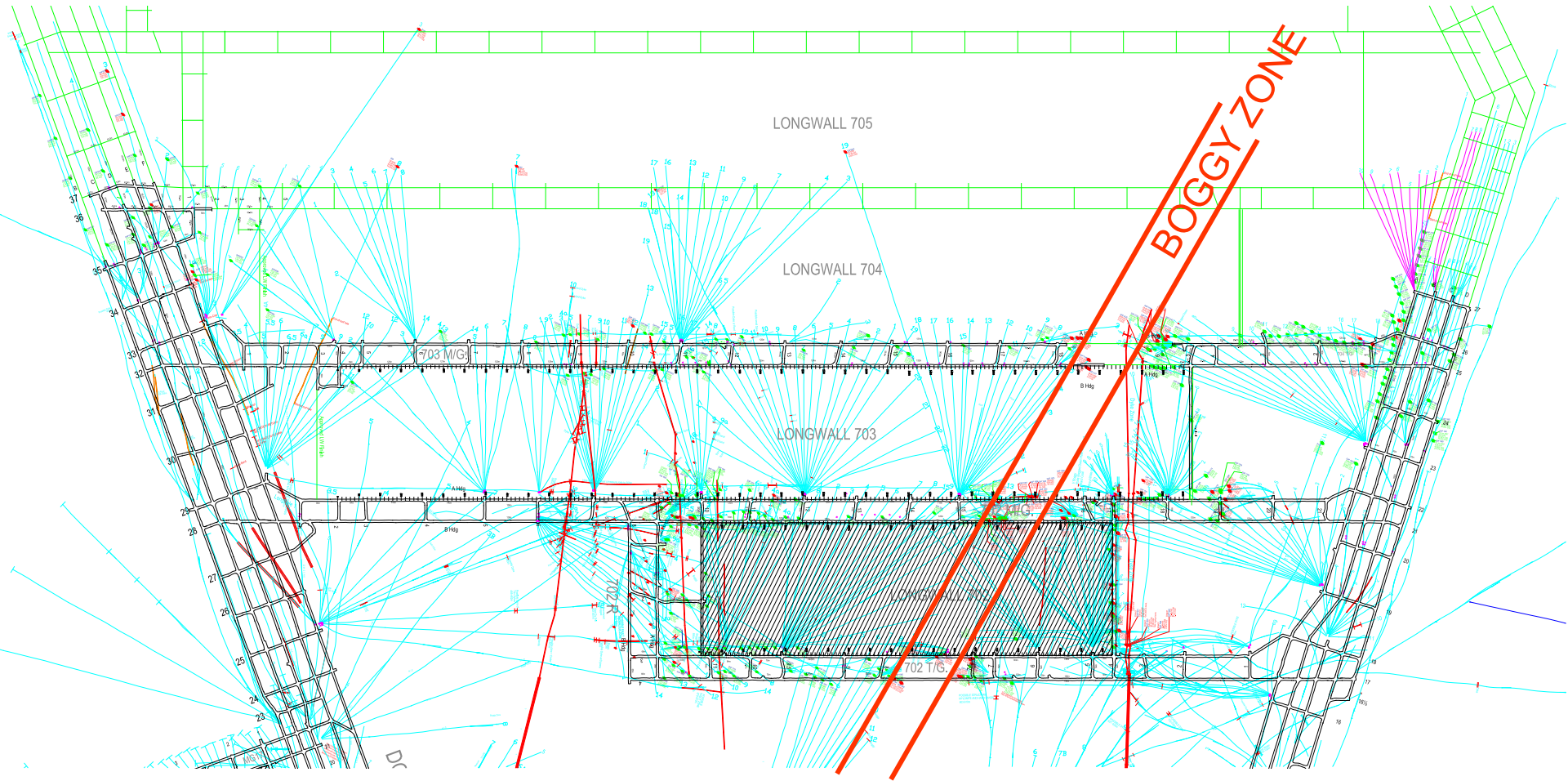
Brad Elvy

Gas and Outburst Seminar  
25<sup>th</sup> June 2009

**This presentation summarises the outburst event in MG703 panel. The data and information presented is an approximate account of that event.**

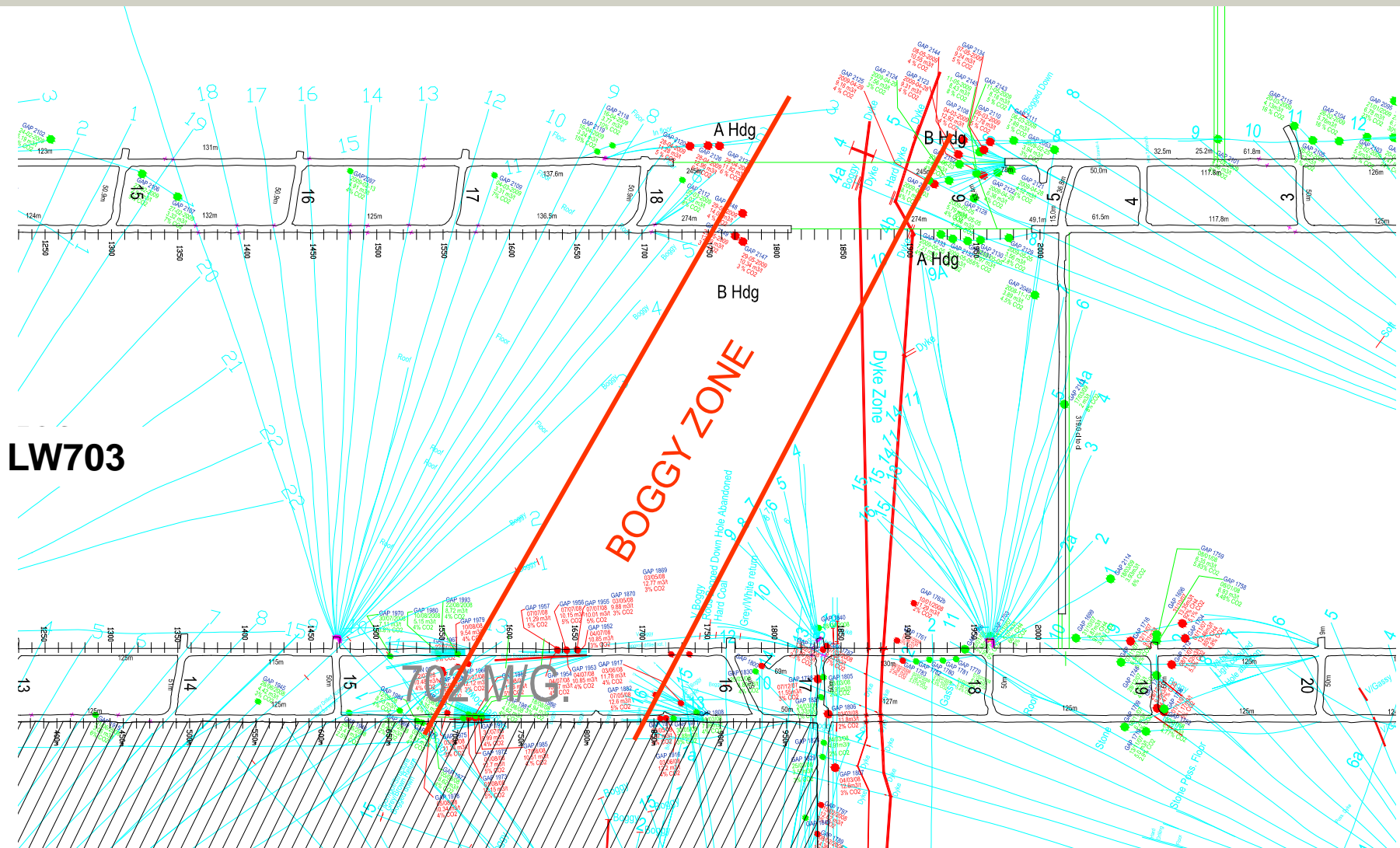
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# Appin Area 7 - Background

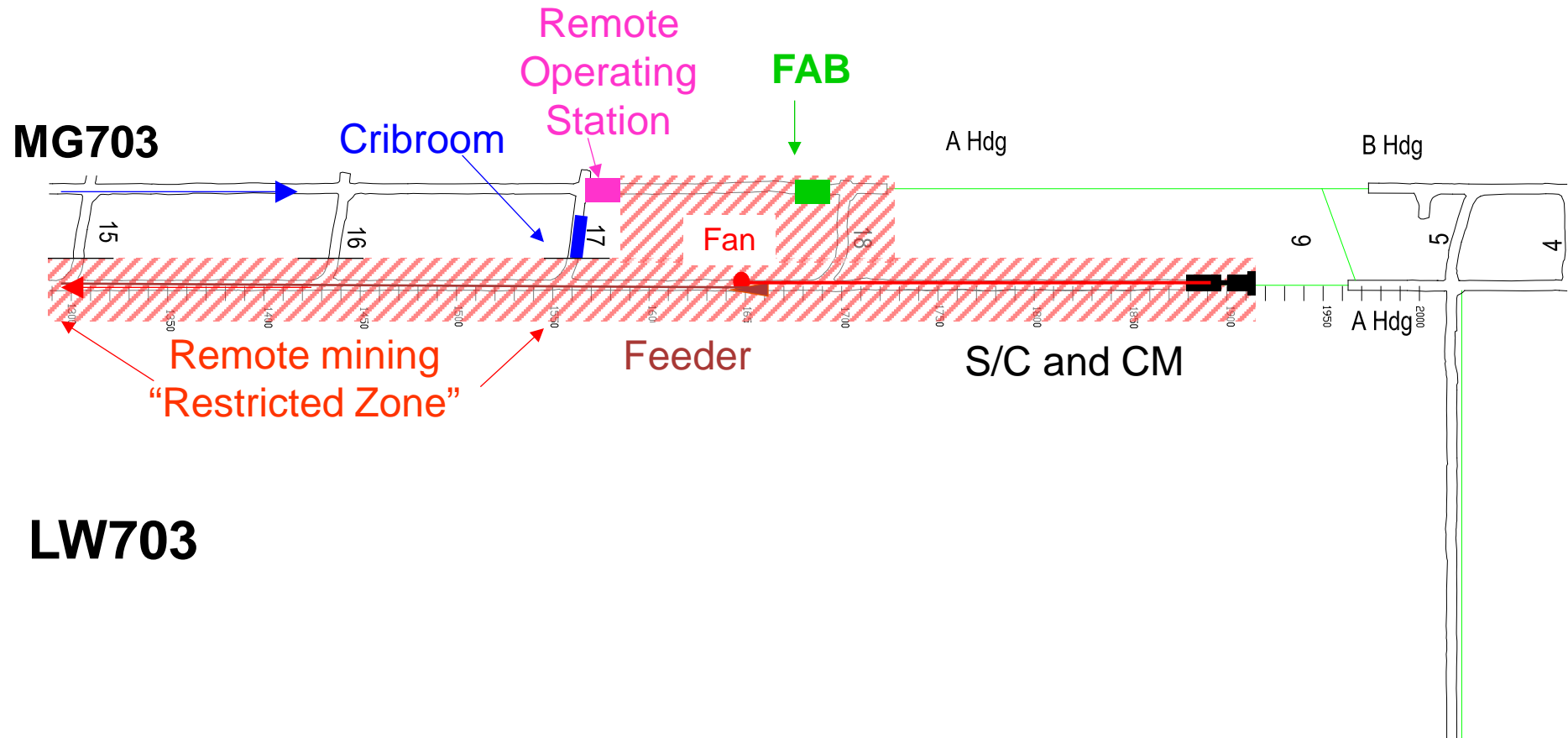


Numerous Thrust Faults

# Appin – LW703 Geology



# MG703 Panel Setup – remote mining



# Summary of the Event

- **N/S Crew started cutting out for 3<sup>rd</sup> strap for the evening – approx 3:20am and 74m l/b C/T**
- **As soon as drum started to cut the face large pressure bump noises (normal)**
- **Minor gas release pause in cutting**
- **Resume cutting more banging and gas release**
- **Stopped cutting left conveyor running.**
- **Rumblings for 30 to 45 seconds then big bang.**
- **All face power and fan tripped automatically.**
- **No personnel were directly exposed to the energy release.**



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# Investigation & Recovery of the Outburst

- The Remote Mining method followed by the crew protected them from the outburst energy release.
- The Remote Mining Authority to Mine (ATM) was immediately suspended pending a full investigation and development of a recovery plan.
- The area was inspected by the Outburst Risk Review (ORR) Team and DPI & Check Inspectors.
- Outburst risk review team completed initial investigation - reviewed remote mining procedures and developed a recovery plan.
- Everyone onsite was given a start of shift presentation on the event.
- All Development crews were briefed in the recovery plan prior to restarting operations.
- The outcomes of this event have confirmed the remote mining method as the safest means to mine in above outburst threshold areas.

# Recovery Plan Summary

- **Communication briefing to MG703 development crews**
- **Meggered the S/C and CM Cables.**
- **Purged Flameproof enclosures.**
- **Carried out Electrical code inspections on both S/C and CM.**
- **Powered and removed S/C**
- **All CM movements where carried out remotely under remote mining procedures.**
- **CM pulled back and inspected for damage & repair**

- **Gas bag samples of the atmosphere at the face.**
- **Coal from S/C and head of CM placed into Gas Bomb.**
- **Collected real time history data from all gas monitoring points.**
- **Once restarted counted S/cars (calculation of tonnes)**
- **Once developed extended past site – Drilled core holes either side of the heading and took 5 and 10m cores.**
  - **(could not drill out any further – plan was 5,10,15,20,25m cores).**
- **Extensive photographs at all stages.**

# Information recorded after the outburst

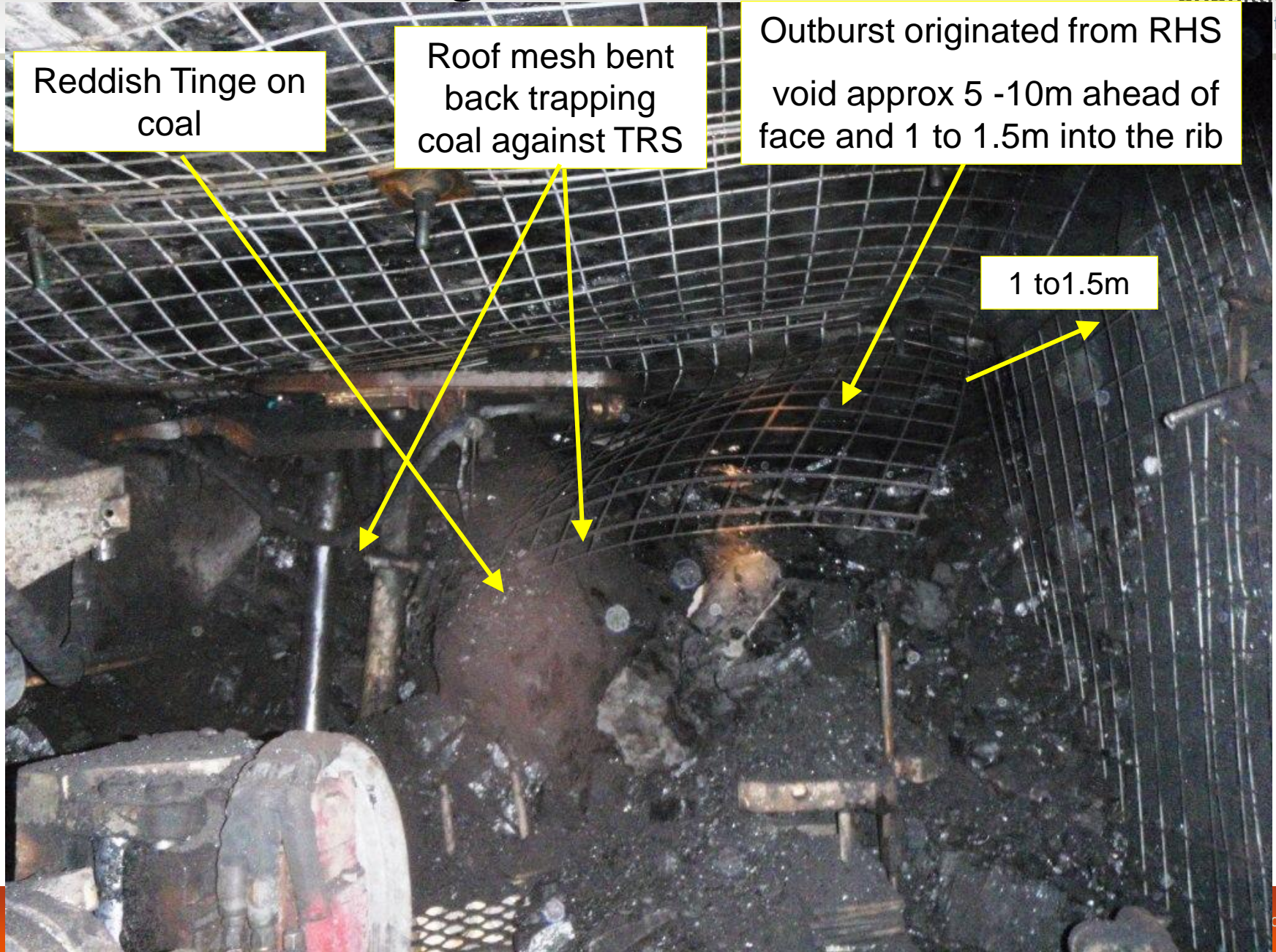
- It took 6 hours to degas the heading to gain access to the face – Centre line brattice erected prior to fan starting.
- On safe inspection of the face the ABM20, with canopy set to the roof, had been pushed back approximately 500mm.
- The maximum percentage of methane recorded in the panel return was 1.5%.
- The face position was 74m inbye B 18Line, (Approx 50m into boggy zone)
- There were no recorded increased gas levels detected in A Hdg (as recorded by the real-time monitor at 18A Hdg).

# Information recorded after the outburst

- **Total quantity of gas released estimated at 1100m<sup>3</sup>.  
(approx 97% CH<sub>4</sub> – 3% CO<sub>2</sub> - traces of Ethane)**
- **Approximate tonnes 150 to 200 tonnes.**
- **Outburst occurred on a thrust fault.**
- **Drill hole gas cores collected ranged from 10 to 14 m<sup>3</sup>/t**
- **Face coal sample (part Q<sub>2</sub> and Q<sub>3</sub>) content – 8.4m<sup>3</sup>/t**

- **Sign Present before Outburst occurred**
- Ribs hardened – vertical – no slumping
- Reddish tinge throughout coal (movement on joints)
- Slickenslides
- Noise - Bumping
- **Additional Signs following Outburst**
- Large thrust fault.
- More evidence of slickenslides.
- Large amount of Mylonite
- Some Water Drippers
- Large void in RHS Rib.
- Fine powdery coal

# RHS of ABM looking towards face void



## CM pushed back nominally 500mm – Canopy set to roof



## LHS of ABM – Mesh bent back trapping coal against TRS



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# LHS behind Mesh looking into void



# RHS ABM – Coal thrown back covering platform



# RHS of ABM – Coal back over bolting station



# RHS of Shuttle car – pushed back

minimal coal from  
outburst next to car



Pile of coal pushed in  
front of outbye end of  
wheel



# Outburst Void RHS – Once coal loaded out



# Outburst Void RHS – Once coal loaded out



# Bottom part of outburst – Shiny Slickenslides



# Thrust Fault – Approx 0.5m vertical displacement.



# Thrust Faults



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# Sandstone Floaters.



# The End

## Questions / Comments