

# ANGLO AMERICAN METALLURGICAL COAL SAFETY UPDATE

May - December 2020



# SAFETY RESPONSE

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- Anglo American is continuing to respond to the incident at Grosvenor Mine, including through investing in the acceleration of technology to improve safety in underground mining.
- Over the past six months, we have looked at every aspect of the management of risk in our underground mines, and commenced a range of work to accelerate technology solutions, particularly automation and remote operation.
- As the largest underground metallurgical coal miner in Australia, we will continue to leverage our scale to find new ways of addressing safety risks, drawing on international best practice and technology development.
- We have proactively responded to learnings from the Grosvenor incident and the Board of Inquiry and have a significant body of work underway across our underground mines.
- We will give full consideration to the Board's report and continue to ensure that relevant learnings are captured and actioned within our business, which will ensure our systems and processes extend beyond current industry best-practice.
- We have allocated \$1.5 billion for gas management over five years across our underground mines, and will harness advancements in data analytics to optimise our approach
- We are committed to working with industry to ensure Queensland's mining industry is safe, sustainable and productive and will continue to cooperate fully and transparently with the Board of Inquiry.



# REVIEWING OUR CONTROLS

The body of work to develop additional controls in our underground mines is progressing well.

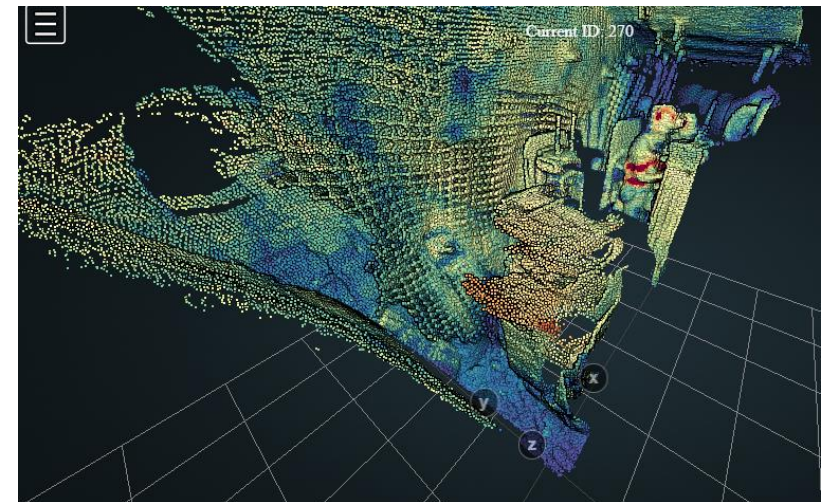
- **Pressure sensor pilot** to remove power from longwall face
  - Initial laboratory testing has been successfully completed and we are confident that the sensors could be used to immediately cut power to the longwall as an additional control for an overpressure event
  - Equipment has been risk assessed and ordered for installation and testing at Moranbah North in coming weeks
  - Pilot results will be incorporated into our plan to re-start at Grosvenor and shared with industry
- **Introducing a further layer of quality control for the supply of Intrinsically Safe equipment**
  - We are putting in place a further layer of independent testing with our suppliers of mining equipment across our underground mines to ensure quality control.



*Laboratory testing of pressure sensors*

# REVIEWING OUR CONTROLS

- Bolstering of **remote longwall operation plans**
  - On track to be capable of a fully remote operation at Moranbah North Mine by the end of the year, with the surface remote operations room completed in early December. Crews will be rotated through the surface remote operations centre, with no impacts on job numbers
  - Remote shears from surface successfully completed at Grasstree Mine in December
  - Aquila longwall will be operated remotely from commencement of production in early 2022
- World-first trial to support **automation in development process**
  - We are partnering with Australia's national science agency, CSIRO, to commence a world-first trial of technology to support automation in the roadway development phase of underground coal mining.
  - We have fitted state-of-the-art navigation and CSIRO LiDAR technology to a continuous miner, to capture 3D scans of the underground environment and detect the marker bands within the coal seam.
  - This is an early step towards automation of the roadway development process and will improve the accuracy, reliability and productivity of continuous miners, while reducing the risk of offline driveage.



*Initial scans and data from continuous miner*

# SAFE PRODUCTION THROUGH DATA ANALYSIS

- As announced in September, we are developing a Met Coal Analytics Centre (MAC) at Brisbane Corporate Office, which will be fully operational in Q1 2021
- The MAC will bring together operational, engineering and data science experts to look at major challenges and opportunities for the future of our mines
- Initial focus is on underground operations, gas and ventilation, processing and strata and geotech
- Recruitment has commenced for data scientists, technologists and subject matter experts to create a multidisciplinary team
- We have already commenced some work through mobilising a data analytics team to support our technical team in providing in depth analytical insights



# PRIORITISING SAFETY REPORTING

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Encouraging everyone to speak up on safety is critical to improving our safety performance. We have been addressing this through our safety sessions over the past year, however we are additionally progressing the following:

- **Safety in bonus structures**
  - We currently have a number of different bonus schemes in place across our sites, with different approaches to how safety metrics and safety outcomes are addressed.
  - Building on work by the global Anglo American Elimination of Fatalities taskforce, we have commenced a review of bonus schemes at each site to ensure we are incentivising safety improvement opportunities and encouraging open reporting of hazards and incidents at the team level.
  - We will consult broadly across sites in Q1 2021 to understand views on how we achieve the right balance.
- **Reporting of High Potential Incidents (HPIs)**
  - To support our alignment of Queensland statutory reporting terminology, any gas exceedances of above 2.5% in our underground mines will now be treated as Anglo American HPIs.
- **Learning from Incidents**
  - We will also improve learning opportunities from Learning from Incidents (LFI) between our operations. There will be automatic distribution of LFIs across our sites through our document control system, where relevant.
  - All Coal Mine Workers already have access to these LFIs through the Safety and Health Management System.