

# MINE SAFETY INVESTIGATION UNIT

INFORMATION RELEASE

## Double fatality

<b>Incident date</b>	15 April 2014
<b>Event</b>	Major rib burst in an underground coal mine
<b>Location</b>	Austar Coal Mine, Hunter Valley NSW

### At a glance

Two mine workers died when a major rib/sidewall burst event occurred in a longwall development gate road during mining operations. Material from the rib engulfed the two workers who died at the scene. Five other members of the mining crew escaped injury and initiated the mine emergency response system. Investigations into the incident are ongoing.



Rib on the left of the bolter miner after the workers were recovered. - Photograph by Investigation Unit

## The mine

Austar Coal Mine (Austar) is a deep underground coal mine at Paxton about 10 kilometres south west of Cessnock in the Hunter Valley, NSW.

Austar uses bolter miners and a roadheader to develop mine workings (first workings) in the 5-7 metre thick Greta seam. Longwall top coal caving, a modified longwall mining system, is used for production. The mine produced 1.85 Mt of raw coal in 2010-11.<sup>1</sup>

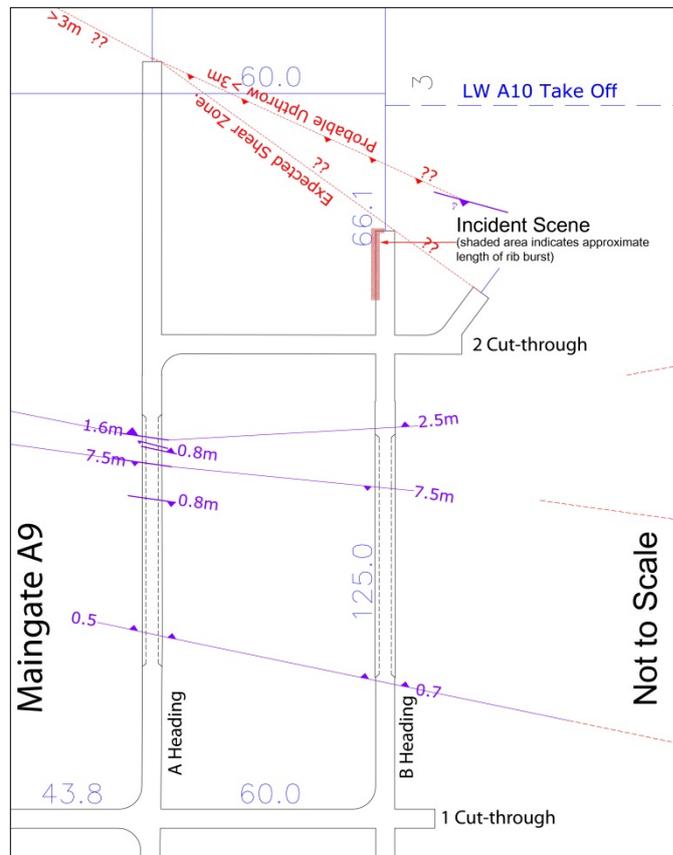
The incident occurred in a development panel that was being prepared for future longwall operations.

## The incident site

The incident occurred at 9.05 pm on 15 April 2014. The incident site was in maingate A9, B heading about 25 metres inbye from the second cut-through. It was about 10 kilometres from the mine entrance and 555 metres below the surface. At this depth the rib and roof strata of the coal seam is subject to significant stress.

This particular heading is in a geologically disturbed zone near an upthrow fault and shear zone. The workers were mining toward the upthrow fault when the incident happened.

Steel mesh and bolts supported the roof and ribs at the incident site. A combination of steel mesh and chemically anchored roof bolts and cable bolts supported the roof. A combination of steel mesh, chemically and mechanically anchored bolting systems supported the rib. The extent and nature of the bolting is yet to be confirmed.



Plan of the incident site supplied by the mine.

Illustrations added by the Investigation Unit

<sup>1</sup> NSW Trade & Investment, 2013 *Coal Industry Profile*, pages 77, 208.

## **The incident**

At the time of the incident, seven workers were operating a bolter miner and shuttle car to develop a gate road for a future longwall panel. The bolter miner had bolting rigs attached to each side for installing bolts in the roof and ribs to support the strata.

Two of the workers were on the left hand side of the bolter miner when a major burst of coal from the rib occurred. During this event a large section of the left rib that was supported with various lengths of bolts and mesh lost confinement and moved sideways into the roadway where the two men were working. Rib material engulfed both men who died at the scene.

Other workers attempted to rescue the men but the area was deemed unstable. The mine's emergency procedures were initiated.

NSW Trade & Investment inspectors and investigators, NSW Police and Coal Services Mines Rescue responded to the incident and worked with mine personnel on recovery efforts. The bodies of the two workers were recovered over the following days by Mines Rescue and mine personnel.

## **Observations**

The Mine Safety Investigation Unit is investigating the incident.

Preliminary investigations suggest that the rib burst event was not related to a gas outburst. Gas outbursts are characterised by the sudden release of seam gas and coal. Investigators have examined the mine's gas monitoring systems and at the time of writing there was no evidence of elevated gas readings before, during or after the event. Further analysis of data and geological conditions is continuing.

Given the geological features of the incident site, the investigation is examining the design of the mine, the incident site geotechnical conditions, the suitability of engineering and strata controls, the systems of mining and safe work procedures and the conditions related to the mining activities. Mining engineering and geotechnical consultants have been engaged to assist with the investigation.

The mine operator is cooperating with the investigation.

An investigation report will be prepared for the Secretary of NSW Trade & Investment and the NSW Coroner.

## **About this information release**

The Mine Safety Investigation Unit has issued this information to draw attention to the occurrence of a serious incident in the mining industry. The investigation is ongoing. Further information may be published as it becomes available.

The information contained in this publication is based on knowledge and understanding at the time of writing. However, because of advances in knowledge, users are reminded of the need to ensure that the information upon which they rely is up to date and to check the currency of the information with the appropriate officer of the Department of Trade and Investment, Regional Infrastructure and Services or the user's independent adviser.

Information about the Investigation Unit and its publications can be found at: [www.resourcesandenergy.nsw.gov.au/miners-and-explorers/safety-and-health/major-investigations](http://www.resourcesandenergy.nsw.gov.au/miners-and-explorers/safety-and-health/major-investigations)

For information about health and safety regulation on mine sites contact a mines inspector at one of our local offices [www.resourcesandenergy.nsw.gov.au/miners-and-explorers/safety-and-health/mine-safety-offices](http://www.resourcesandenergy.nsw.gov.au/miners-and-explorers/safety-and-health/mine-safety-offices)

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