

MINE SAFETY INVESTIGATION UNIT

INFORMATION RELEASE

Fatality

Incident date	11 June 2014
Event	Worker dies in underground sump
Location	CSA Mine, Cobar NSW

At a glance

A mine worker was attempting to clear a drainage borehole in an underground sump at the mine. While walking in the water his legs became trapped in the borehole and he was submerged. The pressure of the water draining from the sump prevented him from escaping. Rescuers were unable to revive the mine worker.



Location of drainage borehole

Underground sump – water level at the time of the incident on side wall - Photograph by Investigation Unit

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Prepared by:

MSIU

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The mine

CSA mine is a large underground metalliferous mine about 12 kilometres northwest of Cobar in Central Western NSW.

The mine is owned by Glencore Xstrata and operated by Cobar Management Pty Ltd. It employs more than 350 people and has an annual production of about 1.1 million tonnes of copper ore.¹

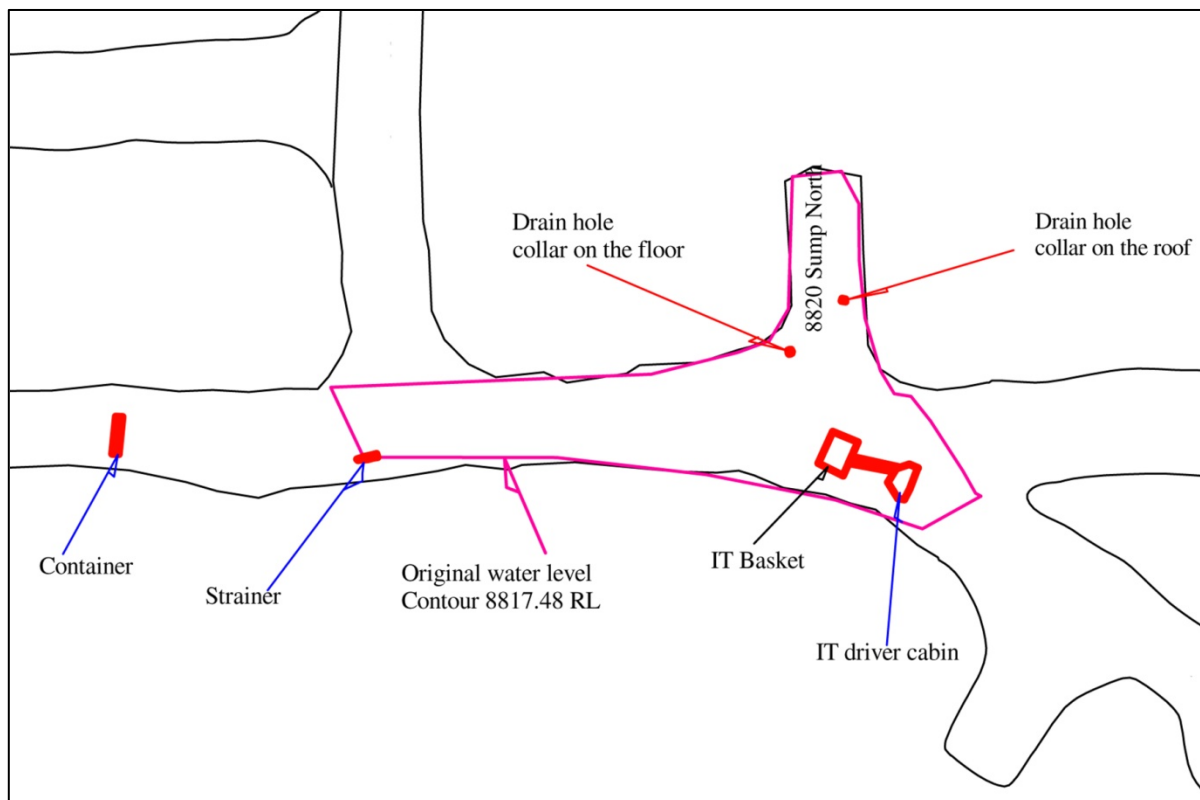
It is a deep, underground mine accessed via shaft and decline. Ore is removed by way of shaft and vehicular haulage.

The incident site

The incident site was at the 8820 level, about 1400 metres underground. The incident site was designated as a sump for collecting ground water from the mine. Water can enter the 8820 Nth sump through a borehole from the sump directly above (8850 Nth) and from the main access decline and roadways.

Water can be pumped from the 8820 Nth sump, or drained by a borehole to the lower 8790 Nth level. At the time of the incident, the borehole was blocked, the cause of which is being investigated. It would appear that the borehole did not have any guarding or cover to prevent a person from being sucked into it. It is unclear what signs were present to indicate the position, or warn of, the open borehole.

There was a large volume of water covering the sump area and adjacent roadways. The borehole was not visible because of the expanse of deep water.



Incident site plan – Excerpt of plan supplied by the mine operator

¹ www.csamine.com.au, About CSA Mine.

The borehole

The borehole linking the 8820 Nth sump (incident scene) with the 8790 Nth sump below was about 180 mm in diameter and about 30 m deep.

The borehole was drilled in competent rock and was unlined.

The lower (discharge) end of the borehole at 8790 Nth was accessible and workers checked it before the incident. It is reported that there was no water flowing from the borehole indicating that the borehole was blocked.



Borehole in the bottom of the incident sump - *Photograph by Investigation Unit*

The borehole had been fitted with a strainer at some stage. A search of the area found a strainer nearby, but it is not known whether the strainer was fitted in the borehole or, if so, how it came to be separated from the borehole.

During inspection of the strainer, investigators observed an inflatable bag in the solid tube section of the strainer. Investigators will determine if this blockage contributed to the incident.



Strainer found in the vicinity - *Photograph by Investigation Unit*

The incident

The incident occurred about 11 pm on 11 June 2014.

Two workers were attempting to clear a reported blockage that was preventing the 8820 Nth sump from draining through the borehole to the 8790 Nth level below. The sump contained a considerable volume of water. The depth of water at the time of the incident is indicated by the markings on the side wall around the sump. It is evident from water markings on the backs (mine wall) that the sump was overflowing into the adjacent access roadways.

The workers were using an Integrated Tool Carrier (IT) with a work platform attached. It was driven into the sump to the approximate location of the borehole. Working from the basket, one of the workers attempted to clear the blockage using a scaling bar with a piece of rope attached. During the task the scaling bar was lost in the water.

One of the workers entered the water to try to find the scaling bar.

The worker disappeared below the water and the other worker activated the mine's emergency procedures. Other workers responded and began search and rescue efforts.

The worker was found below the surface of the water with his legs trapped in the borehole, being held by the pressure of the water. A number of rescuers recovered the worker, who was transported by ambulance to Cobar District Hospital. Efforts to resuscitate the worker were unsuccessful.

The investigation

The region's NSW Mine Safety inspector and NSW Police attended the incident scene on the night. Investigators from the Mine Safety Investigation Unit arrived the next day. Investigators are working to identify the cause and circumstances of the incident.

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

Safety observations

There have been several drowning-related incidents at Australian mines. There have also been numerous near misses. Control measures will vary depending on the particular circumstances and type of mine operation.

Mine operators, supervisors and workers should make themselves aware of the risks associated with tasks involving water-filled drainage sumps and water bodies. Appropriate steps should be taken to consider such risks and eliminate or minimise them.

Mine operators should ensure that open holes and boreholes are appropriately guarded and hard barriers are in place to prevent similar incidents from occurring. All open holes should be appropriately signposted. Workers should be prohibited from entering water filled sumps and water bodies without using certified water craft and appropriate flotation protective equipment.

For work in and around water-filled sumps and other water bodies around mines, some guidance can also be obtained by examining the health and safety requirements for confined spaces and drawing the appropriate analogies (refer : Work Health and Safety Regulation (NSW) ss 62 – 77).

Issued by
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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

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