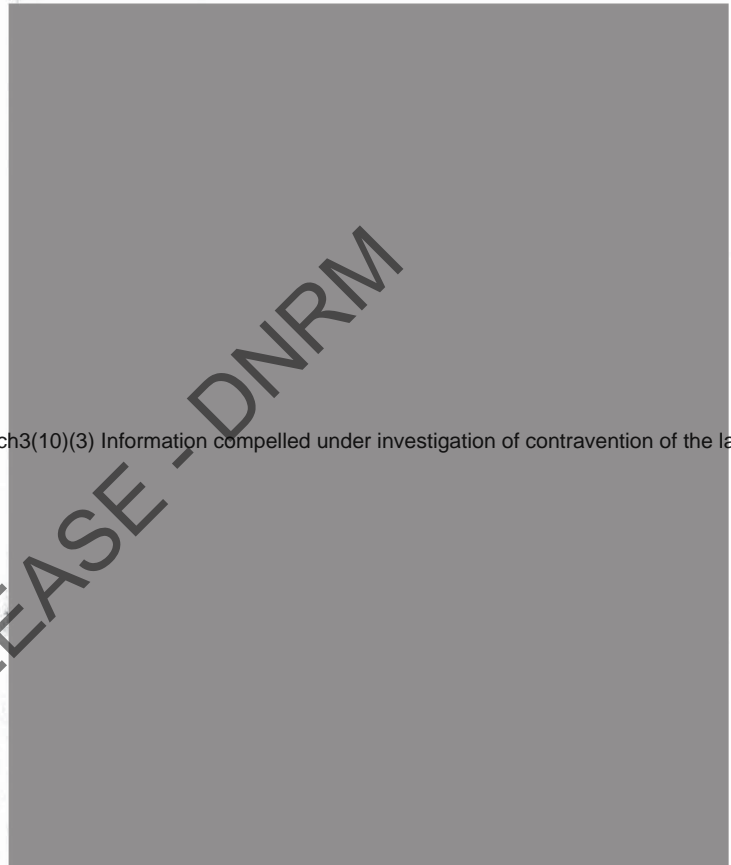


Rockfall
- DIRECTIVE

Quickly



sch3(10)(3) Information compelled under investigation of contravention of the law

Safety Abt. - 5 days
- directive -
- STMS - meetings
explosives
Bulletin end Dept -
deadline #

RTI RELEASE - DNRM

sch3(10)(3) Information compelled under investigation of contravention of the law

RTI DL RELEASE - DNRM

From: CASEY Phillip [<mailto:Phil.Casey@dnrm.qld.gov.au>]

Sent: Wednesday, 3 August 2016 6:42 AM

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Subject: Rockfall at Development Face

For your information

A rock fall occurred at a development face at Eloise Mine yesterday morning while persons were charging. An operator who was believed to be priming/charging lifters received lacerations including two to his head requiring stitches, a broken left collarbone and two broken ribs (at the back).

Eloise Mine was not on the list circulated previously as having any prior reported occurrence of such an event.

The incident is under investigation.

Please look at the effectiveness of your current controls in protecting persons carrying out these activities.

Regards,
Phil

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Miner struck by rockfall at a development face

Mines safety alert no. 330 | 12 August 2016 | Version 1

What happened?

While preparing to charge lifter holes at a face approximately 475m below the surface at a metalliferous mine, an underground operator was struck by rocks that fell from the face, (see photos 1 and 2), and sustained serious injuries including a broken collar bone, broken ribs and facial lacerations. The face was 6m high and 5.3m wide. The rocks fell from a height of approximately 5m and included a large rock weighing approximately 650kg. This rockfall had the potential to have resulted in a fatality.

How did it happen?

Rock falls occur due to inherent fractures or weaknesses in the rock, changes in rock mass conditions, stress redistribution, or as a result of drill and blast damage, some of which may not be recognised in the face and therefore may not be properly controlled or managed.

The stress regime would likely have been a time-dependent post-excavation stress re-distribution.

Comments

- A Normet charging vehicle was being used to charge the face.
- The hazard was a rock fall from unsupported ground in the face, backs or shoulder between the last effective row of bolts/surface support:
 - causing serious or fatal injuries to operators working in close proximity to the face, and
 - with potential to cause unplanned initiation of explosives from impact.
- The rock type was predominantly arenite schist with some pyrrhotite and chalcopyrite, with calcite veining and chloritic foliations.
- The development was an incline heading where the shoulder of the face arched over into the back. It was not highly fractured or faulted and the rock mass conditions appeared good. Post the rockfall two distinct failure planes could be seen; these may not have been recognisable prior to the rockfall. There were two drill holes in the location from where the rocks fell, one which could not be cleaned past approx. 0.5m during charging. This may have indicated a failure zone / crack behind the face.
- The face was not meshed or supported. Meshing the face would likely have prevented this incident. Even if the mesh would not have held such a rockfall it would have controlled and delayed the manner in which it fell.
- There was no other development or stoping in proximity to the face.

- There were rattle marks from mechanical scaling on the face, including a rattle mark on the main large rock that fell. The rock large rock measuring approximately 1.5m x 1 m and varied in thickness up to 0.4m.
- The rockfall pulled a 'J' hook off a nonel detonator and a rock landed on top of the detonator cord and a box of powergel.
- When inserting lifter tubes or cleaning and charging lifters, operators are in a bent over head down position at the face. This results in them having limited ability to retreat from the face, minimal vision of the face and backs and exposure to the maximum fall distance of rocks.

Recommendations

The investigation into this incident is still ongoing, however sites should review their risk assessments, associated procedures and standard work instructions for working in close proximity to development faces, taking into consideration:

- Use of face support to prevent rocks from falling or control the manner in which they fall.
- Visual assessment may not identify a potential for a rock fall.
- Blocked holes may indicate broken / cracked ground that has the potential to fail.
- To minimise the risk of detonating cord being impacted and inadvertently initiated by falling rock, the tie in should only be completed after all blast holes have been charged.

RTI DL RELEASE - DIRM



Authorised by Hermann Fasching - Manager Safety and Health, North Region
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Issued by the Queensland Department of Natural Resources and Mines

Placement: Place this announcement on noticeboards and ensure all relevant people in your organisation receive a copy.

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