Drill rig rollover

Significant incident report no. 81 | 26 August 2016 | Version 1

What happened?

A diesel hydraulic powered drill rig, commonly used for production or presplit drilling at mines and quarries, was being operated on a quarry bench when it rolled onto its roof (photo below), trapping the driller in the drill rig cabin.

How did it happen?

The drill rig rolled when the centre of gravity shifted to the right and inclination angle exceeded the maximum angle of between 10 and 18 degrees. This occurred due to the rig tramming on uneven ground with the mast up, boom fully extended, rock drill at the top of the mast, and the boom being off centre toward the right track.

Comments

A Mines Inspectorate investigation identified the following contributing factors:

- Procedures developed at the site for management of contractors and working on benches were not followed.
- Controls identified in the site risk assessment relating to drilling activities were not implemented.
- There was no process on site for bench preparation prior to drilling, including selection criteria for the appropriate drill rig to be used under unfavourable bench conditions.
- The site senior executive lacked experience, training and competency in managing quarrying activities in accordance with the site Safety and Health Management System (SHMS).
- The Operator of the quarry failed to monitor the implementation and effectiveness of the site SHMS.

Recommendations

1. Mines and quarries review their SHMS to ensure:

1. All hazards associated with drilling and blasting activities on site have been identified, assessed and controls are effectively and consistently implemented. This should include bench preparation, drill rig selection, and working on bench procedures.

2. Workers, including contractors, are adequately supervised.

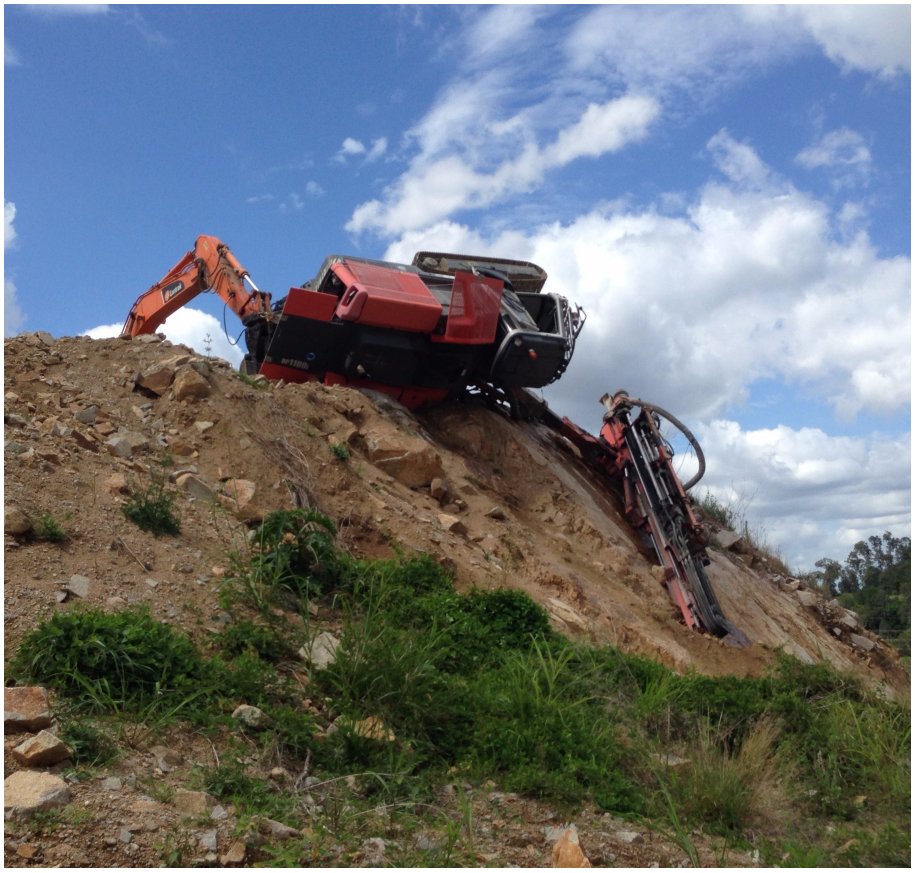
3. Processes are in place for the selection, engagement and management of contractors.

4. Workers and visitors to the site receive appropriate inductions.

5. Mines and quarries develop and implement a program to audit and review the effectiveness of the SHMS on a regular basis.

6. Mines and quarries review their processes for the selection, training and competency assessment of site senior executives to ensure their experience and training enables them to meet their obligations under the site SHMS and the Mining and Quarrying Safety and Health Act and Regulation.

7. The Mining Safety and Health Advisory Committee review the competency requirements for SSEs and supervisors, particularly at sites where drilling and blasting or other high-risk activities are required.



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Issued by the Queensland Department of Natural Resources and Mines

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