



## **DRILL ROD HANDLING – SERIOUS ACCIDENT**

### **INCIDENT**

During a reverse circulation exploration drill program a driller's offsider received serious spinal injuries when a 270kg drill rod, some 6 metres in length fell on him.

The drill crew were in the process of removing a string of drill rods from a vertical hole. While the section of drill string protruding from the ground was held in a hydraulic clamp, the drill rod being removed was suspended from the tapered thread on the saversub which is attached to the drill head. However, the tapered thread was extremely worn and, in addition, it had been partially unscrewed in preparation for removal.

As the driller's offsider was attempting to place the winching attachments (clam shell and hook) onto the rod, the thread suddenly parted and the rod fell down onto the drill table. The six metre rod balanced in the vertical position for a few seconds then fell forward, striking the operator on the head as he attempted to get clear.

There were obstacles on either side of the rig which restricted his escape path to the same direction as that taken by the falling rod. The conditions under foot were rocky which further impeded his efforts to escape.

### **COMMENTS**

The hazard presented by a falling drill rod is far more significant when drilling vertical holes as the rod may then be able to fall forward towards personnel working around the rig. If a drill rod fell while drilling an angled hole, it would tend to fall in towards the mast.

It would appear that most exploration drilling rigs do not have any means designed to retain the drill rod in the mast while drilling vertical holes.

### **PREVENTATIVE ACTION**

- A discard criterion should be established to determine at what point the saversub's tapered thread is no longer fit for use. Drillers should then be trained in the application of this information so that they may monitor the condition of the saversub and replace it when necessary.
- Each drilling company should assess the hazards of vertical drilling in relation to the design of their drilling rigs. A safe working procedure should then be developed to ensure the drilling crew is not exposed to the hazard of falling drill rods.
- The drilling industry should develop a mechanised rod handling system as an alternative to manual handling. Accidents involving manual drill rod handling are frequent and will tend to continue unless such an alternative is pursued.

J M Torlach  
STATE MINING ENGINEER  
31 December 1997