



## Near Miss Investigation

A medium level near miss investigation has recently been undertaken into a drilling incident. Drilling works using a cable percussion drilling rig were ongoing. The casing was being surged into the ground using a sinker bar, attached to the rig using a lifting eye. Suddenly the sinker bar separated from the swivel.

The winch cable and shackle projected upwards then swung. The nut and pin which had held the lifting eye in place were assumed to have become projectiles. These items were not recovered. At the time, the drillers were 2-3m away from the rig. There were no injuries.

The sinker bar had separated from the swivel as the thread on the lifting eye had failed. The nut and weld were unable to maintain the required integrity. The photograph at the top of this page shows the lifting eye on the sinker bar and the swivel. Further photographs are provided to the right.

The immediate cause of the near miss was that the lifting eye on the sinker bar was not fit for purpose at the time.

Underlying causes include that the drilling sub-contractor deemed that lifting eyes were not subject to the Lifting Operations and Lifting Equipment Regulations (LOLER). As a result, the lifting eye had not undergone a thorough examination. The British Drilling Association has stated that lifting eyes on sinker bars are subject to LOLER.

Further underlying causes include that the lifting eye could not be visually checked due to the surrounding nut and weld. Additional indicators, such as small movements in the nut, had not been documented in the plant examination records. The risk assessment did not consider the potential failure of lifting accessories. Furthermore, the remaining useful life of the lifting eye was not known. The consultant's assurance checks of plant records were incomplete.

The drilling sub-contractor considered that the wear on the thread of the lifting eye was due to poor handling of the swivel, causing a slight deformity in the swivel and resultant wear and tear between the lifting eye and the nut. Ultimately, the thread on the lifting eye and the weld failed.

To minimise the likelihood of recurrence, the following measures are recommended:

- Use only fit-for-purpose plant and equipment. Ensure compliance with regulatory requirements (e.g. LOLER, PUWER).
- Ensure that an effective asset management system is in place.
- Make appropriate assurance checks.
- Ensure risk assessments consider foreseeable scenarios and detail control measures.
- Ensure any lessons to be learnt are implemented immediately (e.g. make sure that lifting eyes have appropriate thorough examination).



Above: Sinker bar, swivel, shackle and winch cable

Below: Failed thread on lifting eye

