



Improvement / Incident Details



Generated on Monday, 17 August 2009

Incident

Ref No: PE-122

Status: Pending

Type: Property/Equipment Damage/Loss

Identification Details

Name: Knight, Justin

ID No: 120

External:

Location: Ullina

Source:

Grid Ref:

Reported: 07 Jun 2009

Job No:

Incident Date/Time/Location

Date: 07 Jun 2009 **Time:** 04:00 PM

Address: Glengower-Lawrence Road

Location: Ullina

State/Ctry: VIC

Region: Australia

Site Type: Rig 4-TLD

Incident / Improvement Details

Category: Rigs

Level: 2

Severity: Moderate

Summary: Whilst pulling out rods the winch rope was wound up too far, resulting in the clevis failing as it bent over the top of the winch under strain. The rods were released from the winch rope, traveling back down the hole.

Description: Pulling rods out of the ground involves firstly detaching the head from the rod 'string' (3m long rods joined together) and raising it up and out of the way. A 'hauling plug' is then screwed into the top of the rod string. The hauling plug is attached to the 'main winch line' (a 14mm wire rope wound onto a winch located at the top of the Rig's mast) via a 'clevis' and pin. Once the hauling plug is secured to the rod string, Offsiders are required to stand back, clear of the mast and in view of the Driller.

The Driller will open the 'foot clamps' (jaws at the bottom of the mast holding the rods in place) and engage the main winch. The rod string is pulled up until the second rod is clear of the foot clamps. Two 3m rods will fit in the mast leaving approximately 1.7m of clearance between the top of the rods and the main winch.

The Driller is required to look up as the rods travel up the mast to ensure they do not travel too high. Pulling the rods too far will result in the clevis and hauling plug being pulled over the winch. Firstly, this can potentially result in damage to the winch and/or rope and clevis. Secondly, the join in the rod string will be too high to allow the Offsiders to 'break the join and separate the rods.

The distance up the mast is judged in two ways. Firstly, the head is positioned at roughly the 6m mark up the mast. When the top of the rods reaches this point the Driller will stop the winch. Secondly, the Driller will then look at the join in the rods to ensure it is above (about 200mm) the foot clamps.

Rods are generally prevented from being winched too fast because of the 'suction' effect created as they are pulled out of the ground and the friction between the rods and the wall of the hole.

Once correctly positioned, the foot clamps are closed and the Offsiders are directed to approach to 'break' the join using tools. The rods are then lowered down, away from the mast and onto a rod rack. The hauling plug is removed and the process repeated until all the rods are removed out of the ground. The process is detailed in SOP 'TLD417 - Pulling Rods'.

The crew is made up of the Driller (with 4.5 years drilling experience) and two Offsiders (both with 15 months experience).

On this occasion, the Driller activated the winch and was looking down at the rods to find the second join in the rod string as it came out of the ground. He did not notice the join pass the rod clamps (possibly due to lubricant covering the rods). He did not at anytime look up, and can offer no explanation why he did not. The crew report looking downwards, watching the rods moving up and then, without warning, began to move back down the hole.

The rod string sank back down into the hole with the hauling plug and clevis resting approximately one meter below the surface. With no protruding parts on the rod string and the crew members standing away from the mast, the rods moved freely back down the hole, posing no risk of injury or further damage. The rig was shut down and the incident reported to the Operations Manager who subsequently arranged for a new winch cable to be installed.

The wire rope appears to have broken away from, and flush with, the top of the clevis. One of the clevis' eyes is bent inwards slightly. Based on statements from the crew and the damage to the wire rope and clevis, it appears that the assembly had wound up onto the winch. This placed excessive lateral strain on the rope at the point it enters the clevis. The rope subsequently failed. On examination, the wire rope and clevis appear to be in otherwise good condition.

The wire rope was originally fitted on 26/7/08 whilst working in Mt Isa, Queensland. The rig subsequently stopped work in September and then returned to service in May 2009, effectively having 'worked' only four months of its 12 month service life. Wire ropes are replaced every 12 months of service regardless of condition with this one scheduled to be replaced in July 2009.

Injury: **Near Miss:** **Improvement:** **Environmental:** **Manual Handling:** **Asset Damage:**

Contractor:

Employees: Blizzard, Jesse - Sullivan, Santo

Contractors:

Division: Titeline Drilling

Function: Pulling and running rods

Task: Pulling Rods with Hoist Plug and Break-Out Tool

Contract No:

Risk Assess: 10100

Audit No:

Costing:

Plan. Project:

Proj. Phase:

Project Task:

Assigned To: Gavin, Stephen (Blue)

Delegate:

Assigned Date: 07 Jun 2009

Action By Date:

Close-off Date:

Investigation Details

Cause Cat: Process/Procedural

Equip No:

Plant No:

Cause Desc: Driller did not look up to see how far the rod string had traveled up the mast.

Likelihood: Possible

Conseq: Moderate

Re-occur Rat: Significant

Exposure: Infrequently

Persons: Experienced operator

Risk No:

Report Doc:

Survey Answers:

Survey Rating:

Answering Employee: