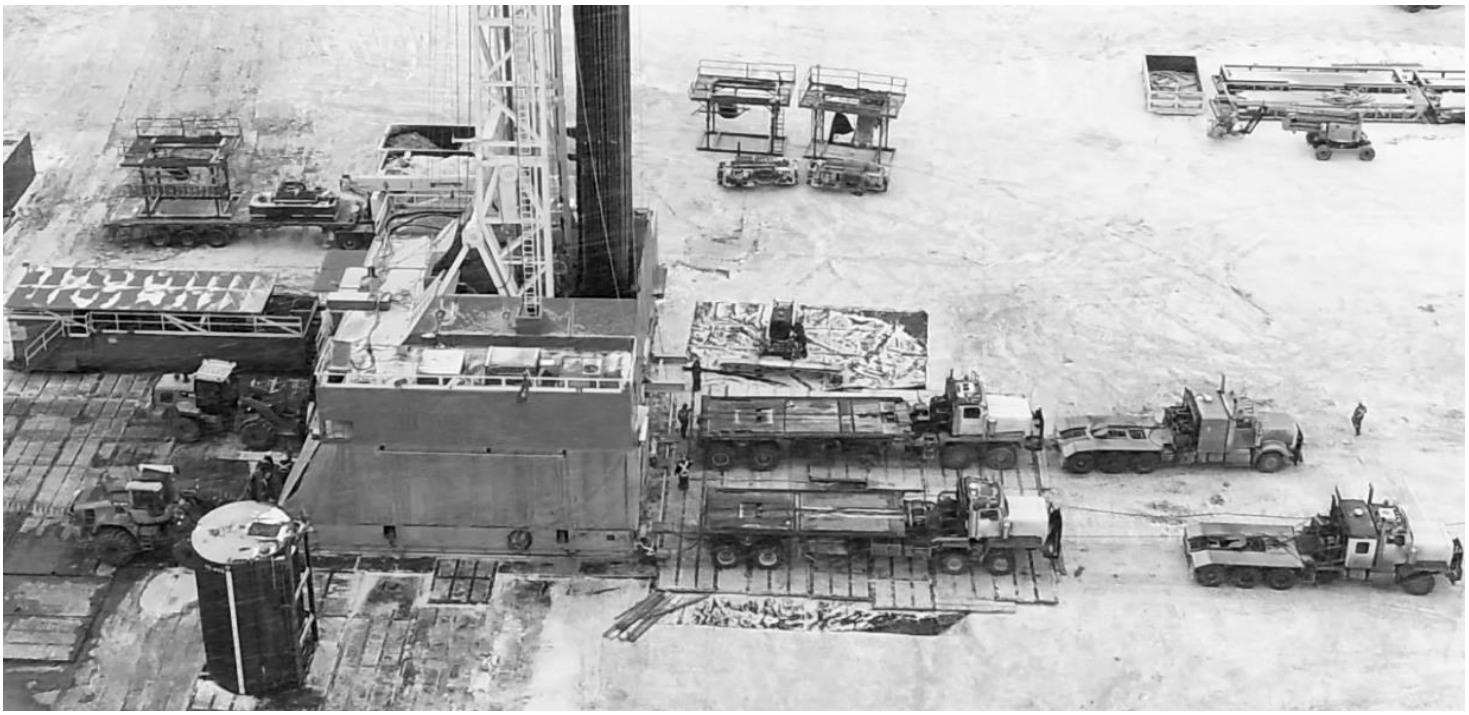
SKIDDING RIGS

ARE YOU MANAGING THE RISK?

SAFETY BULLETIN

ISSUE# 16-2018



View of several trucks and front-end loaders preparing to skid a rig with tubulars in the derrick (setback).

BACKGROUND

The practice of skidding or sliding the drilling rig over to an adjacent well location has become more common with multi-well pad construction, despite an engineered solution: hydraulic rig walking systems rated for full setback (tubulars in the derrick).

Most conventional rigs in use have not been engineered for skidding. This is especially true when the rig is skidded with setback, as this and other equipment can add substantial weight to the rig. As a result, the skidding of rigs with tubulars in the derrick is not recommended.

The friction forces on a drilling rig during a skid vary depending on site conditions. If a rig is going to be skidded, a well-thought-out plan is required to manage a variety of risks to personnel and equipment.

POTENTIAL RISKS

- The tow points and trailer roll may not be engineered to withstand the loads of a rig being skidded. This could lead to a failure, releasing energy that could injure site personnel or damage equipment.
- The winch cable and rigging may not be capable of withstanding the forces. This is particularly true when the truck is near the rig, creating a downward angle on the winch line or sling, resulting in lift and jerky rig movement.
- The racking board may not be designed to withstand dynamic loads that may be present when skidding the rig with tubulars in the derrick. This could lead to damaged rig equipment or falling tubulars and subsequent injury to site personnel and damage to adjacent equipment and wells.

ENERGY SAFETY CANADA

SKIDDING RIGS

ARE YOU MANAGING THE RISK?

SAFETY BULLETIN

ISSUE# 16-2018

SUPERVISOR RESPONSIBILITIES

- Use walking rigs, rather than skidding a rig, whenever possible and refrain from skidding rigs with setback
- Ensure that an engineer has reviewed and confirmed the rig can be safely skidded
- Have a detailed rig skidding plan that identifies the risks and how they will be managed and by whom
- Ensure adjacent operations are informed of the rig skid plan and risks to each others' activities managed
- Verify the rig substructure is level prior to moving
- Ensure that the rig and equipment is secured
- Position trucks at an optimal separation distance and angle between the back of the truck and the rig to maximize pulling forces and minimize jerky skidding
- At minimum, use a double line equipped with a sheave to conduct heavy pulls
- Identify, communicate and verify that no personnel are in the line of fire prior to and during skidding activities
- Verify that an adequate barrier is present on the back of truck cabs to prevent winch rigging from penetrating the cab if a winch or sling failure occurs
- Ensure adequate winching capacity and, if winching in parallel, ensure towing forces are matched
- Use engineered tow-bars for rigs that require slight turns and use rig jacks to conduct lateral rig moves
- Use a friction reducing technique such as skid plates to minimize drag during the skid

WORKER RESPONSIBILITIES

- Know and adhere to the rig moving plan
- Ensure you are not in the line of fire when equipment is being moved
- Identify and share hazards with other workers and supervisors on the worksite
- Exercise your right to refuse dangerous work; often, situations can be easily resolved by speaking to your supervisor

PRESENT LIKE A PRO

Before you begin:

Review this material, make sure you understand it and how the topic can be applied.

Research your own company's experience so you can provide examples that pertain to your work areas.

Anticipate questions and be prepared to answer/discuss them.

If you're not able to answer a question, let the person know you will find the information and make sure you follow up.

Consider the audience and their experience with the topic (i.e. how familiar are they with the topic or the terms being used?).

Challenge the group:

Identify the engineered load limits of rig roll bar anchors, trailer roll, winch cables, clevises and other gear.

Know the rig weight with and without tubulars in the derrick and understand the implications of friction on rig skidding.

Ask the group if anyone has concerns with the planned rig skid.

Discuss and share stories of rig skidding and associated risks on your worksite.

Challenge the group to find solutions to reduce risk during rig skidding.

ENERGY SAFETY CANADA