

Worker's Leg Amputated by Parted Sand Line

Description:

A well service crew was swabbing when the swab assembly reached the top of the well and parted the sand line. The rig manager was manually spooling the last six wraps of the sand line and became entangled in the parted line. The driller reacted, moving the throttle in the wrong direction and energized the line, which cinched on the rig manager's leg. The rig manager was launched into the raising ram of the service rig and sustained a leg amputation and other serious injuries.

What Went Wrong:

- Several sets of flags, 3-2-1, in use and visible on the second swab were no longer visible on the third swab of this horizontal well.
- Personnel did not recognize how close the swab assembly was to the surface (at the top of the lubricator) because of sun in their eyes, multitasking and other distractions.
- The throttle control configuration on this rig operates in the opposite direction of the typical driller's draw works controls. During this high stress moment, the driller activated the throttle control in the wrong direction.



Example of sand line flags installed before use



Worn flags on sand line after use

Actions Taken/Recommendations:

- Ensure flags are designed to withstand the conditions of the well they are being used for.
- Investigate the use of fail-safe measures so the swabbing assembly is not pulled up too far, even if flags become worn/not visible or an error or mistake is made (i.e., ensure there is capacity to fail safely).
- Review control configurations to ensure they are consistent.
- Review the incident and job safety analysis (JSA) with all operations personnel prior to swabbing.
- Prior to conducting swabbing operations, the rig manager must get approval from the field superintendent to ensure safeguards are in place and everyone understands their roles and responsibilities.

Energy Safety Canada Resources:

- [Life Saving Rules](#)
- [Building Capacity to Manage Pressure Program](#)
- [Fit for Duty Guideline](#)

Help industry by sharing lessons learned from an incident. [Submit your Safety Alert.](#)

SHARE AND COLLABORATE

Energy Safety Canada (ESC) works collaboratively with industry to share information aimed at helping companies of all sizes improve safe work performance.

DISCLAIMER

Use of this document or any information contained herein is at the user's sole risk. ESC makes no representations and assumes no liability. For further information on these restrictions, go to <https://www.energysafetycanada.com/Legal>

COPYRIGHT/RIGHT TO REPRODUCE

Copyright for this document is held by Energy Safety Canada, 2022. All rights reserved. Energy Safety Canada encourages the copying, reproduction and distribution of this document to promote health and safety in the workplace, if Energy Safety Canada is acknowledged. However, no part of this publication may be copied, reproduced or distributed for profit or other commercial enterprise, nor may any part be incorporated into any other publication, without written permission of Energy Safety Canada.