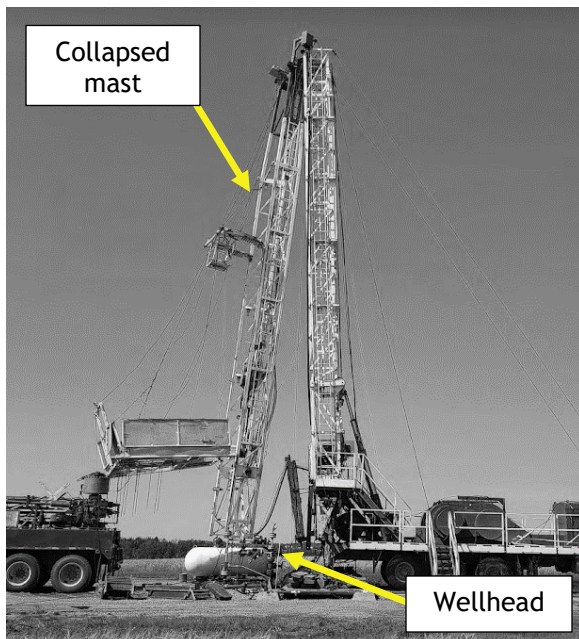


## Raising Ram Failure on Telescopic Rig

### Description:

During the setup of a telescopic service rig, the raising ram buckled. This caused the top section of the mast, which was almost fully extended, to drop out of the bottom section and fall. Damage to the rig was extensive. While no injuries occurred in this serious incident, it could have easily resulted in serious injury or loss of life.



View of collapsed mast near wellhead

### What Went Wrong:

- A worker removed a rope that was caught in the spring-loaded stabilizers and inadvertently moved the stabilizers (human error) just before the mast raising. The stabilizers ensure lateral movement of the ram is kept to a minimum.
- If the raising ram is not held in position by the stabilizers, its lifting capacity is reduced by up to 75% and, therefore, does not have the power to hold the mast section.

- NOTE: Something that went right was that during the mast raising, the workers remained out of the exclusion zone under and in front of the derrick.

### Life Saving Rule | Safe Mechanical Lifting

This alert relates to the following excerpts from the rule:



- I confirm that the equipment and load have been inspected and are fit for purpose
- I establish and obey barriers and exclusion zones



[Watch the video.](#)

### Actions Taken/Recommendations:

- Ensure telescopic rigs are equipped with a mechanism to raise the mast that has capacity to fail safely if a human error or mistake is made.
- Review the safety-critical procedure with the entire crew before raising the mast.
- Clean, inspect and lubricate the raising ram stabilizers. **Stabilizers must be 100% perpendicular.** If they are not, stop work and notify your supervisor immediately.
- Ensure a supervisor is present and observing safety-critical tasks.

## Energy Safety Canada Resources:

- [Life Saving Rules](#)
- [Building Capacity to Manage Pressure Program and Online Course](#) (free)
- [Process Safety Management Awareness Course](#)
- [A Barrier Focused Approach: How to Get Started with Process Safety, Volume 2](#)

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.