

Slant rig mast failure POTENTIALLY SERIOUS INCIDENT

Description:

Crew lowering a slant rig mast heard a “pop”. Mast was leaning towards the side of the carrier.

Lessons Learned:

Regular Level I and II inspections as per the CAODC recommended practice did not include inspection the welded areas under the mast brackets

Cause:

A third-party inspection revealed two weld failures at the brackets that pin the mast to the A-frame.

Contributing Factors:

Previous engineering quality control, assurance and repair added to the difficulty for inspection.

Workers required a higher level of inspection experience to recognize cracking in the welds.



Off-driller side bracket cracking.



Driller side bracket. Close-up view of cracked mast.

Corrective Actions:

Company had been following the CAODC Canadian Well Servicing Industry; *Recommended Practice 3.0: Inspection and Certification of Masts (SR)*, including the hours of service inspection intervals. More frequent Level III inspections may have brought attention to cracks in the mast by the A-frame.

The company focused on the following actions:

- Engineers certified in Level III and higher inspections will train field supervisors, rig managers and drillers for awareness of overall component inspections.
- Rig managers and drillers will continue to perform Level II inspections of entire mast structures, paying special attention to the carrier, ears, mast derrick pins and A-frame.

Resources:

- [CAODC Recommended Practice 3.0 Service Rig Mast](#)
- [CAODC Level III Inspection Checklist](#)

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