

Lessons Learned Communication

Incident: Trackhoe boom severed overhead power lines

Type of Incident: HIPO

Business Unit: NA NGL BU

Country: USA

Location of Incident: Anadarko Asset, Ochiltree gathering system, Lipscomb County, Texas

Date of Incident: March 5, 2007

Brief Account of Incident:

Trackhoe hit overhead powerline, while driving on right-of-way from one job to the next.

Potential outcome: Fatality

What went wrong (Critical Factors):

(See report for full root cause analysis.)

CF-1. Trackhoe boom was put in vertical position while driving on the right-of-way.

CF-2. Trackhoe operator drove into power lines.

What went well:

1. Planning for the job began well in advance of the project.
2. Had signage onsite to warn of the overhead power line hazard.
3. Recognition of the power lines was pointed out several times during the course of the day.
4. DIGTESS was notified as per procedures, lines were spotted as per procedures, work permits were obtained as per procedures.
5. Spotters were used during digging and pipe stringing operations.
6. Prompt reporting of the incident occurred.
7. Power was restored swiftly.
8. Safety Stand Down occurred the next morning before resumption of the project.
9. Interviewees involved in the incident were very open and forthright.
10. Vacuum lift device was used to unload trucks and string pipe thus reducing the risk of personal injury.
11. Selection process for hiring contract company was well setup. Contractor was given a 20 job trial to prove their capabilities before contract was awarded.

Lessons Learnt :

- Need to ensure that all identified hazards are adequately mitigated.
- Assessing hazards of routine activities should not be overlooked.

Corrective Actions :

CF-1. Anadarko should consider the use of task specific JSEA's for moving heavy equipment in addition to the full job JSEA.

CF-2. In this incident, the mitigation was not sufficient for the overhead power line hazard identified. The following recommendations address this issue:

1. Anadarko should use additional warning means, i.e. flashing beacons, caution tape, spotter with sole responsibility to assist vehicles passing under power lines as signage alone was not adequate enough to prevent this incident.
2. Anadarko should investigate means to verify onsite, the minimum required and actual clearance distance between top of equipment and power lines.





HIPO: trackhoe contact with overhead power line (March 5, 2007)

Investigation Team Member Names:

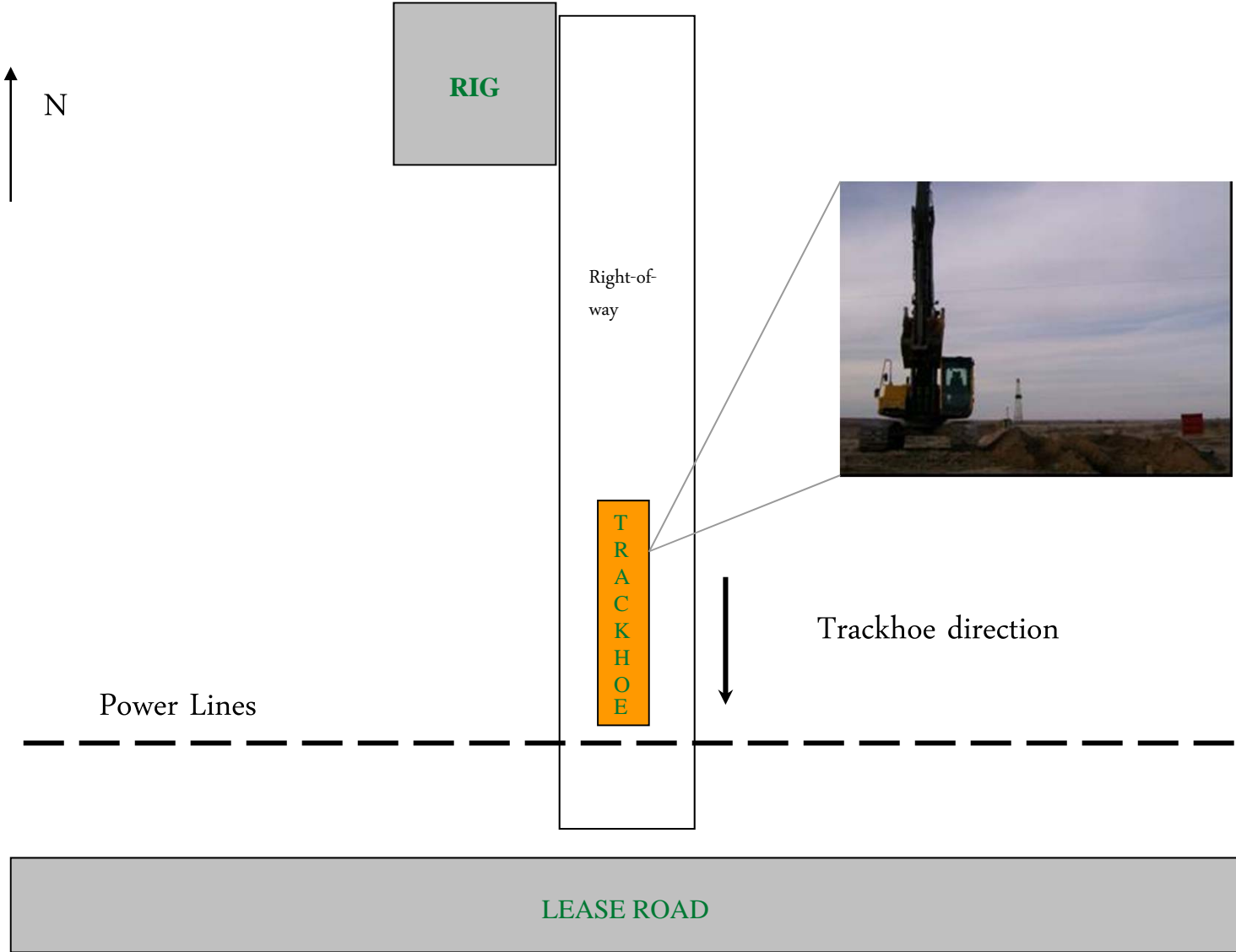
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Brief Description

- Construction crew was constructing new pipeline to tie in well.
- After finalising digging pipeline crossing, trackhoe operator lifted his boom into vertical position and proceeded to the next job location along the right-of-way.
- Operator had boom in up position to have better field of view while driving.
- Operator was focused on spotting trackhoe at new location and did not notice overhead power lines.
- Trackhoe hit and broke two overhead power lines.
- Operator got out of vehicle and incident command was notified.
- No one got hurt.

Site Plot Plan



Photographs





Critical Factor

The investigation team identified 2 critical factors:

CF-1. Trackhoe boom was put in vertical position while driving on the right-of-way.

CF-2. Trackhoe operator drove into power lines.



Recommendations

Critical Factor 1: Trackhoe boom was put in vertical position while driving on the right-of-way:

Anadarko should consider the use of task specific JSEA's for moving heavy equipment in addition to the full job JSEA.

Critical Factor 2: Trackhoe operator drove into power lines:

In this incident, the mitigation was not sufficient for the overhead power line hazard identified. The following recommendations address this issue:

- Anadarko should use additional warning means, i.e. flashing beacons, caution tape, spotter with sole responsibility to assist vehicles passing under power lines as signage alone was not adequate enough to prevent this incident.
- Anadarko should investigate means to verify on site, the minimum required and actual clearance distance between top of equipment and power lines.