

The background image shows an industrial setting at sunset. In the foreground, a worker wearing a white hard hat and a high-visibility vest is looking at a clipboard. The scene is dominated by large, vertical pipes and a valve in the lower center. In the background, a wellhead is visible against the orange and yellow sky. The overall atmosphere is warm and industrial.

# IPLOCA Workshop – 2015

## Lessons Learned

## Scope of Work

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- HDD under several roads, yards, and water reservoir. Approx. 1300 meters.
- Large diameter pipeline.
- Originally one 12 hour shift, changed to 24 hour operation shortly before incident.
- Two frac-walks per shift looking for drilling mud. Two person task with portable radio.
- Ground and reservoir frozen for weeks.
- During frac-walk, one foot breaks through ice in ½ meter deep water. Pulls foot/leg out and continues.
- No injury.

## Investigation

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- December 2014 request for procedure to string survey wire across reservoir. Not frozen.
- Temperatures drop, reservoir freezes over.
- January 2015 survey wire strung across reservoir by walking on ice. No SWP.
- January/February: Employees crossed reservoir for weeks without incident during frac-walks.
- Other contractor employee breaks through ice days before our incident. No injuries, not reported, but crew heard of incident.
- Day foreman holds tailgate meeting instructing all to not cross reservoir – Not documented.

## Investigation (Cont)

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- Employee changes from day to night shift.
- New employees on site due to second shift.
- Night shift Foreman new to project, unaware of mainline employee incident days earlier.
- Employee volunteers for frac-walk due to experience completing task during day.
- Employee reaches reservoir and continues onto ice against day foreman's instruction.
- No foot prints in snow along path on ice.
- Employee stated saw many people every day on ice. Not concerned about ice integrity.

## Corrective Actions

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- Immediate Stand down of all crews to cover incident.
- Investigation begins.
- Written Safe Work Practice (SWP) for frac-walks including crossing bodies of water, frozen or unfrozen.
  - Note: Can one see drilling mud under ice?
- Posted signs: Danger-No Ice Access Permitted.
- Orange Construction fence across ROW at sign.
- Developed process for sharing of information between foreman and crews.

## Summary

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- SWP's, developed in 2008/2009, were being used less and less. Last review of SWP documents was 2011.
- Hard copy of SWP's no longer kept in driller's office, went electronic.
- Daily JTSA/JSA form lacked sufficient space for complete task and hazard identification.
- Ice Hazard not identified(leadership\employee).
- No formal process of informing new onsite leadership of prior incidents or new "non typical" requirements/practices.