WELL CONTROL INCIDENT LESSON SHARING

Intermitted gas release observed around tool catcher/grease injection head during E-line operations. Gas release was noted as a near miss well control event.

During a Rigless intervention, while running an E-line BHA on an oil producer well, an intermittent gas leak was observed around the tool catcher/grease injection head. It was decided by field personnel to POOH with the E-line BHA - at high speed - until BHA was secured at the surface inside the Pressure Control Equipment (PCE). Both PCE and a wireline BOP stack were rigged up on the surface. The BOP was not activated during the mitigation of the gas release.

The IOGP Wells Expert Committee/Well Control Incident Subcommittee believes that this incident description contains sufficient lessons to be shared with the industry. We further encourage the recipients of this mail to share it further within their organization.

What happened?

During a Rigless intervention, while running an E-line BHA on an oil producer well, an intermittent gas leak was observed around the tool catcher/grease injection head. There was an attempt to increase pressure in the inflow tubes with no success. It was decided by field personnel to POOH with the E-line BHA - at high speed - until BHA was secured at the surface inside the Pressure Control Equipment (PCE). Both PCE and a wireline BOP stack were rigged up on the surface. The BOP was not activated during the mitigation of the gas release. The Swab and Upper Master valve were both closed and the PCE bled off. Both valves were closed within 15 minutes after the initial gas release.

What Went Wrong?

- The leaking tool catcher was inspected during a formal investigation by tool catcher provider where it was revealed that the main O-ring had failed. In addition, it was later identified that the O-ring was from a batch that was deemed to be non-conforming for the designed application.
- It was also noted that there were inexperienced wireline personnel on location. This was noted by their reluctance to shut-in the well with the wireline BOP. In addition, having difficulties to appreciate the potential severity of the gas leak which took place at night where it was also noisy.
- The wellsite intervention program did not provide for a clear decision tree for when to POOH safely during an emergency situation.

Corrective Actions and Recommendations:

- Provide better training for the field operations staff. Office operations staff must also have more training in the area of fit-for-purpose operations programs. Specifically, programs to provide clear guidance or decision trees for actions to take in the event of an emergency during wireline operations.

- Ensure that a QAQC program is in place to ensure parts for the tool catcher, and other related equipment, are up to specifications for the planned operations.
- Tool catcher vendor to provide a spare parts package that will include two different O-ring batches for each part of their equipment.
- Reiterate with supervisors and contractors to secure the well as per their well control training. The first priority of well control - in case of loss of containment during well intervention - is to shut-in the well using primary well control methods, such as shutting in on the wireline BOP.