Glitne P&A
DW Operations Summary
16.10.2014
Glitne General Information

- Small oil field north of Sleipner
- Production start August 2001
- Last production day 24 February 2013
- P&A campaign 6 oil producers,
  - A-1 to A6
    - Watercut 90%+
  - 1 combined water gas injector.
    - B-1 H
Overall Concept

- **Initial P&A (Well status, Conceptual planning)**: May 2013
- **Temp P&A (LWI #1)**: Aug 2013
- **Monitoring Period (IMR)**: Nov 2013
- **Temp P&A (LWI #2)**: June 2014
- **Permanent P&A (MODU)**: Summer 2015
- **Mechanical removal (Rigless)**

**Locations and Equipment**

- **Petrojarl 1 Glitne Field**
- **LWI Island Wellserver**
- **Rig Songa Trym**
Objective and Scope with LWI operation

- Temporary secure the wells on the Glitne Field prior to final P&A w/rig

Campaign # 1:
Bullhead and secure wells with deep and shallow set plugs in main bore.

Campaign # 2:
Secure annulus with annulus tubing hanger plug – remove X-mas tree.

Results

- Key facts:
  Planned time (budget): 155 days
  Days used: 82 days
Objective and Scope with Rig operation

- Permanent secure the wells on the Glitne Field

Campaign:
Pull completion and permanent plug the wells

Results

- Key facts:
  Planned time (budget): 228 days
  Days used: 130 days
Design Basis

• Flowing intervals:
  - Utsira, Gas injected in B1H, all wells needs to account for it, otherwise water.
  - Grid Fm : Waterfilled
  - Heimdal Fm: Oil
    • 870 Kg/m3, Bobble point 110 bar.

• Pressure now in reservoir 200 bar, expected to increase to 218 bar (original pressure)
Excellent results is achieved, so let us look at why

- Leadership: From a «helicopter view» perspective, a long chain of decisions have been successful. It involves leadership that:
  - Prepare the ground for safe and efficient operations
    - Team is aligned and prepared before execution – OPS (%) 97,5
  - Uses every possibility to cut cost as long as it is operational robust
    - I e. No drift run, use alternative vessels, drillwater instead of spacer
  - Smarter planning
    - Must balance: good enough versus perfection
      - Use of formation as barrier
      - 2 independents jobs or log?

- A rig team with a performance spirit and documented track record to deliver
- Summer operations- WOW (%): 5,3
- A 7 well campaign in one batch
There’s never been a better time for good ideas