



# UBD – LIVE WELL DRILLING AND COMPLETION

## Challenging Drilling Environment

### Maximize well performance

#### BACKGROUND

During managed pressure drilling (MPD) with a conventional drilling rig into a gas bearing formation severe losses were encountered. Surface pressures up to 180 Bar were recorded.

The well was temporarily killed by pumping 250 mT of LCM material and a viscous seal pill and the drilling rig was demobilized. In total 5300 m<sup>3</sup> of mud was lost. A HWO/Snubbing operation was required to complete the well.

#### OBJECTIVE

The objective was to;

- Mill and retrieve bridge plug.
- Drill further into the gas bearing formation.
- Install 4½” liner.
- Install production completion.

Underbalanced well condition had to be expected during all activities.

#### EXECUTION

- HWO/Snubbing unit was required in order to deal with pressurized well conditions.
- 21m high BOP stack was assembled to lubricate BHA's in and out of the well.
- Well deepening was conducted utilizing a MWD assembly with a 5 7/8” PDC bit powered by a 4 ¾” GT Motor. The HWO unit rotary table provided additional rotating performance.
- 4½” Liner needed to be deployed under pressure.



#### RESULTS

- Successfully retrieved bridge plug.
- Sufficient depth was reached to ensure a good producing well. Drilling conditions were harsh as the continuous lost circulation had a negative impact on the total drilling performance.
- 4½” Liner was snubbed in the well under pressure and was successfully installed.
- Successfully installed production completion under dead well conditions.
- Zero incidents and accidents.
- Entire operation was completed in 58 Days.
- Operation was conducted to full customer satisfaction.