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 m³ 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.