



Completion Solutions

Successful Auto Gas-Lift Using Intelligent Completion Boosted Oil Production

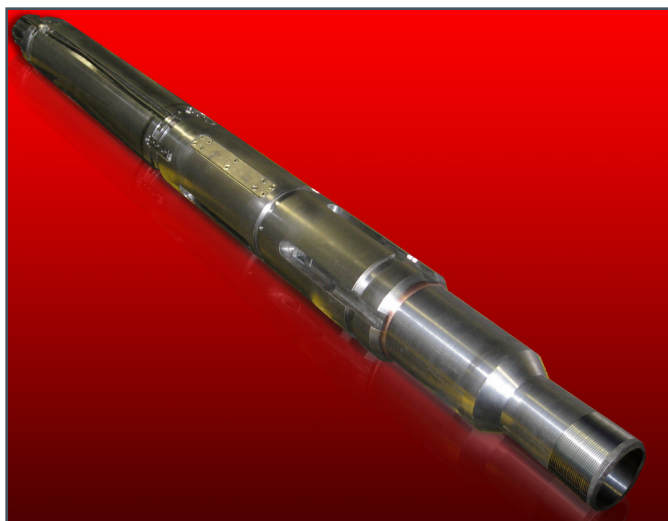
Location: Oman, Middle East

Overview

A major customer operating in a mature field in Oman had a few wells that were shut-in due to insufficient reservoir pressure to sustain natural flow. This was adversely impacting field production and eroding project value. Conventional gas lift implementation was uneconomical, moreover, associated lead times were in excess of two years. The reservoir management team was challenged with maximizing crude recovery before an underlying gas cap blow down occurred.

Halliburton proposed an artificial lift technique called Auto Gas-Lift technique that utilized the in-situ gas energy from a non-associated gas reservoir or associated gas from a gas cap in a controlled manner, to produce the principal oil reservoir.

The intake of the gas into the tubing was controlled by an HVC interval control valve (ICV), which is remotely operated from surface with a customized gas flow trim. A single ROC™ monitoring system was installed to monitor changes in tubing pressure.



HAL30842

The Auto Gas-Lift artificial lifting technique using Halliburton Intelligent Completions' ICVs, successfully boosted production for this field. Riding on the success of the first well, all wells in the field were screened for this artificial lift technique. Based on certain criteria, four additional wells were also identified for Auto Gas-Lift implementation. As a result, the customer saw a significant reduction in Capex, Opex and wellsite footprint by helping to eliminate the conventional gas lift surface infrastructure. **Reference SPE 148474**

CHALLENGES	SOLUTIONS	RESULTS
Depleting reservoir pressure	Auto Gas-Lift technique to utilize the underlying gas cap and lift the crude oil	Based on successful first well, four additional wells were identified
Conventional gas lift method was uneconomical	Intelligent Completion's HVC-ICV to control the tubing intake	Helped eliminate conventional gas lift system
Maximize crude recovery	ROC™ monitoring system	Significant reduction in opex, capex and well site footprint