

Case Study:

Slickline DTS cable (FibreDip) used on intervention wells to monitor gas lift valve efficiency or treatment

TAQA's slickline DGS system used to monitor temperature in 5 gas lift wells

Well Data

Location: Qatar

Well Type: Gas Lift Well

Installation Date: 10- 14 August 2010



The Challenge

To find a cost-effective monitoring solution that will identify a faulty Gas Lift (GL) valve in a lineup of several GL mandrels in succession. This means the operator does not waste valuable time changing fully operational valves in an elimination process attempting to find the culprit.

TAQA Solution

TAQA offers a Slickline DTS 'FibreDip' monitoring solution. Distributed Temperature Sensing (DTS) is existing fibre optic technology normally placed on a completion across the reservoir tied back and monitored in the rig control room. TAQA has taken this technology and adapted it to suit well intervention activities such as GL or reservoir treatment monitoring. This FibreDip monitoring system comes in the form of 1/8" stainless steel cable that houses the fibre optic strands. It can be deployed with standard Slickline units and pressure control equipment as shown in (Fig 1) and hooked up at surface to a portable data interpretation and collection unit. This means the system is fully independent and portable for use on multiple wells. Fig 2 shows an example of the 3rd GLM (slugging) or intermittently opening and closing, which indicated improper operation and inefficiency.

Project Results

- Client can identify immediately which gas lift valve is faulty and target this for replacement with one trip in the hole.
- Significant time saved for the Well Services team

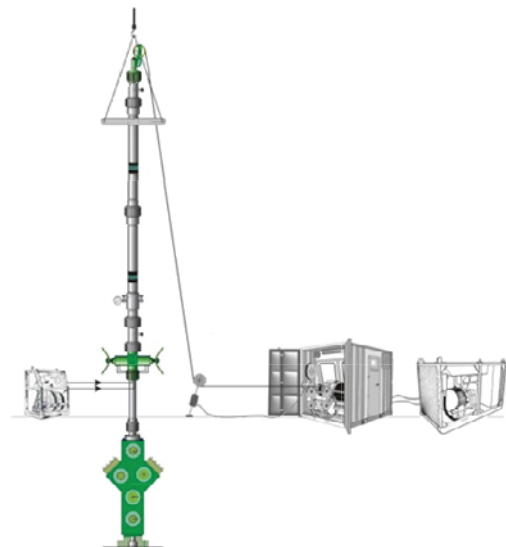


Fig 1 Utilises Standard wire line equipment

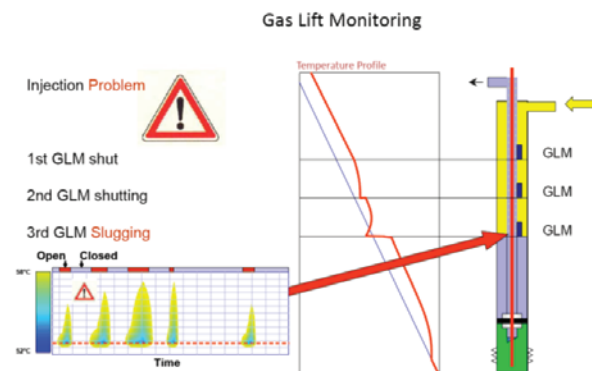


Fig 2 Data graph while monitoring the well