CASE STUDY

Enhancing PCP Performance

Challenges

Australia based coal-bed methane producer using Progressive Cavity Pumps (PCP's) and suffering from:

1. low efficiencies producing at high gas to liquid ratio (GLR's)
2. well not being produced at its full production potential (i.e. inadequate drawdown)

Objectives

- identify the root issue(s)
- increase PCP efficiency and production rate

Identifying Root Issue(s)

High GLR's in combination with horizontal drainage laterals feeding a vertical wellbore form excessive and unstable sluggy-flow conditions. These conditions cause PCP's to underperform with low efficiencies as large volumes of gas unstably enters the PCP.

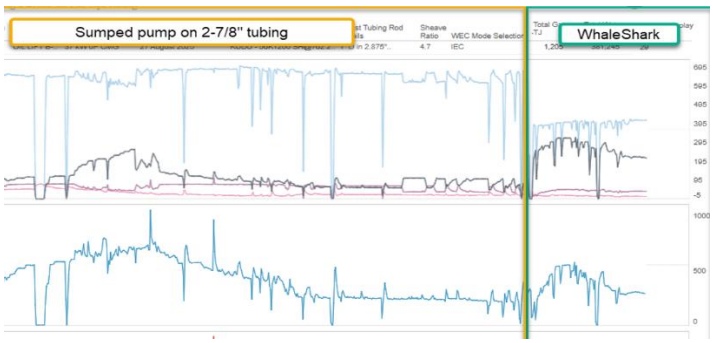
Integrated Artificial Lift System Solution

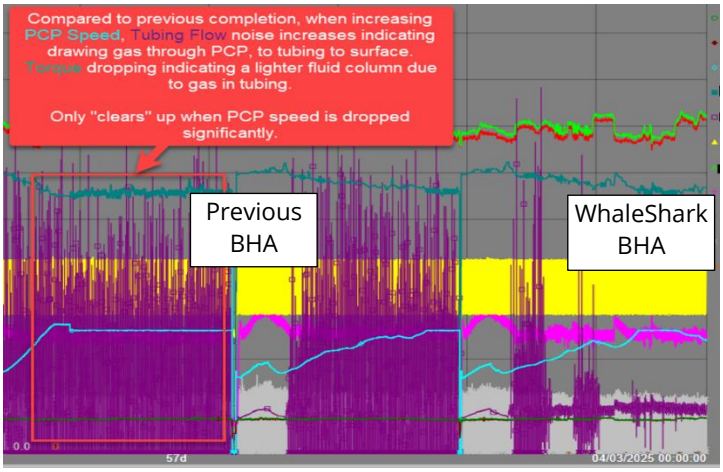
The Q2 ALS-Oilify-GPOT partnership designed an advanced bottomhole assembly (BHA) to control slugging issues, thereby permitting the gas separator to fully maximize and stabilize the efficiency of the PCP.

Key features:

Results

Achieved water and gas rates (+20%) much higher than previous, with high and stable PCP efficiency (from unstable 30% to stable 65%).





WhaleShark™ Gas Separator

the industry's highest performing downhole gas separator

an eccentrically positioned pump intake tube and large-mouth upward facing collector intake, maximize collection of liquid falling back into the separator – exceptional slug flow tolerance and gas separation efficiency at inclinations up to 90°

www.q2als.com/products/q2-whaleshark/

Extended Dip Tube™ BHA

an engineered system BHA placed the gas separator below the entry point of the drainage laterals (i.e., below the perforations)

controls excessive slugging, stabilizes pumping parameters and maximizes production drawdown (i.e., well produces at full production potential with reliability)

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