Plunger Lift Challenges & Solutions in a Deviated or Horizontal Well

Running a plunger lift system in deviated or horizontal wells can be very different than running a plunger lift system in a vertical well. Even at low inclinations (10-20°), the deviation can affect plunger performance. Very commonly, an operator will set the X – Nipple or tubing above the curve to avoid the deviation, but in doing so, more backpressure is exerted on the formation, therefore hurting well performance.

Other common issues with horizontal or deviated applications:

- The plunger becomes worn unevenly, decreasing run life.
- Inefficient plunger seal due to the plunger lying on the side of the tubing.
- Slow plunger rise times due to an inefficient seal.

“...I like the Viper because it came to surface several minutes faster than a conventional barstock plunger after turning the well on. This is because the tangential jets center the plunger in the tubing while in a non-vertical portion of the tubing, therefore increasing displacement efficiency.”
- DJ Basin Operator

Solution:

Well Master is the only plunger lift company that engineers and manufactures patented plunger lift technology specifically for horizontal and deviated wells.

Well Master patented plungers with jetted technology are designed to use the gas flow to lift the plunger off the downhill side of the tubing, allowing the plunger to rotate and create a dynamic turbulent seal. This highly efficient seal captures the lifting energy to optimize gas and liquid production, as well as extending plunger life through more evenly distributed wear.

The Venturi™ Viper, the Original Viper™, and the Xcel Jetted Pad™ Plungers feature tangential jets to induce spin on rise, centering the tools in deviated tubing. These tools allow a lower tubing setting depth, which maximizes well performance.

Contact Well Master today to find out how we can help optimize your oil and gas well production.

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