

Colombia

Installation of Hercules™ Horizontal Pumping System (HPS) Triples Water Injection Capacity

Comprehensive collaboration delivers efficient, scalable system with minimal capital expense in half the time of alternative solution

CHALLENGE

A prominent operator in Colombia recognized a rapidly increasing need to increment their water injection capabilities by as much as 300% to meet production demands.

SOLUTION

- Pump: ST2500 12-stage pump
- Thrust chamber: L4001, 50,000 lb capacity
- Motor: 2500 hp at 4160 V
- Variable speed drive (VSD): 2500 hp at 4160 V

RESULT

- Installed in half the time of the alternatives
- Tripled the customer's water injection capacity at a higher efficiency point
- Significantly increased oil production capability
- Flexibility to respond to market dynamics and future growth opportunities
- Saved time and money without need for additional facility construction
- Estimated \$150,000+ USD annual power savings

Overview

A Colombian operator faced the critical challenge of rapidly addressing their increasing need for water injection to meet their production target demands.

Challenge

The customer's current water injection infrastructure was based on an HPS system with a nominal capacity to inject 35,000 BWPD. Their initial replacement strategy of increasing capacity presented operational challenges and bottlenecks due to the number of units that would be required. Recognizing the urgency of the situation, the customer decided to seek out a partner who could rapidly address their immediate challenges with a single-unit solution that could inject 80,000 BWPD and would also address long-term growth objectives.

Solution

Summit ESP® - A Halliburton Service engaged in a comprehensive collaboration with the customer to understand their specific requirements, challenges, and goals. Halliburton proposed a tailored solution that would expand and modernize their current injection system with a single wide range, high efficiency, high flow Hercules HPS.

With a nominal capacity of 80,000 BWPD up to 100,000 BWPD, Hercules HPS tripled the production of their current single-unit systems and would be able to handle varying reservoir conditions. It negated the expense of buying multiple replacement units and was designed to seamlessly integrate with the customer's existing facilities, minimizing downtime during the implementation phase. Designed with a best efficiency point of 88% versus 77-79% for alternative systems, the customer would also benefit from significant power savings.

CASE STUDY

Result

With the expanded water injection capabilities in place, the customer significantly enhanced their capacity to increase oil production. The scalability of the new system allowed them to adapt to changing project requirements and market dynamics seamlessly. The collaboration between the customer and Halliburton not only addressed the immediate challenges but proved Halliburton's prowess with larger, more complex water injection horizontal pump system solutions. As a result, the customer has placed orders for two more identical units.



Hercules™ HPS system

single
Hercules
solution reduces
power costs by
\$150,000yr

Previous
injection capacity

35,000
BWPD

Hercules
injection capacity

80,000 -
100,000
BWPD

Sales of Halliburton products and services will be in accord solely with the terms and conditions contained in the contract between Halliburton and the customer that is applicable to the sale.

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