

Water-based LiquiGel® Pig Restores Flowrates in New Mexico

A mid-size upstream operator experienced progressively lower flow rates as the result of solids restrictions. Routine pigging procedures were not applicable on the produced water system, as the HDPE product pipe configuration was considered to be unpiggable with conventional methods.

This liability reduced the engineering startup flow rates drastically, which initially calculated a rate to move produced water equal to or faster than the production rate. Slower flow rates impeded production and ultimately had a negative reflection for the production asset.

PLAN OF EXECUTION

- 1. Project Pre-planning**
 - a. Asset system details, project specifications, and scope of work were communicated from individual headquarters.
 - b. Utilized flow assurance models and previous integrity pigging SOW's to achieve an approved engineering plan.
- 2. Project Preparation and Setup**
 - a. Mobilized within a 2-day notification.
 - b. Provided specialized gel pigging technicians and onsite gel pig casting.
- 3. Project Execution**
 - a. SIMOPS operations alongside client-supplied contractor.
 - b. Successfully cleaned each HDPE pipeline with a combined approach of SoliGel for fluid interfacing and AquaGel for debris removal.

TECHNICAL ACHIEVEMENTS & BENEFITS

- Successfully received all LiquiGel® products through one 4 inch receiving port.
- Increased pipeline #1 flowrate capacity by approximately 2,500 bbl/day.
- Increased pipeline #1 flowrate capacity by approximately 12,000 bbl/day.
- Projected completed with zero incidents and no environmental impact.

LOCATION

New Mexico (US)

SPECIFICATIONS

Diameter: 10 inch
Length: 7,500 feet
Pipe Schedule: DR7 HDPE

Diameter: 10 inch
Length: 15,500 feet
Pipe Schedule: DR7 HDPE

CHALLENGE

- Low pressure HDPE.
- Limited data on the actual characteristics of the said restriction.
- Multi-diameter tie-in point. Reduced diameter termination tie-in point (4").
- Lateral connections with the produced water HDPE system.
- Fast response.
- Flow assurance modeling demanded two different LiquiGel® Pig types.
 - AquaGel: ideal for solids transport.
 - SoliGel: ideal for multidiameter and pipe seal requirements.