EXPRO

Expro Excellence

CO₂ and cost savings delivered through optimized pig velocity control with Expro's Velonix™

Well Flow Management | Pipeline Integrity

Objectives and background

- A long-standing client required support for an integrity In-Line Inspection (ILI) pig run on a 30-inch, 60-mile natural gas pipeline with no existing flow
- The objective was to deploy a smart pig at a controlled velocity while ensuring effective pipeline separation in the event of liquid or solid sweep-through

Expro Excellence

- The client initially requested Expro to provide flare support at a flow rate of 100 MMSCFD to move the smart pig at a velocity of 3 mph under 700 psig in their 30" pipeline, along with separation support
- Expro proposed a more efficient approach by regulating the pipeline pressure down to approximately 475 psig. This allowed the pig to maintain the required velocity while significantly reducing natural gas waste
- Expro introduced a newly developed system, Velonix™, to precisely monitor and computer-control pipeline velocity. This ensured smooth and highly accurate pig movement, greatly reducing the risk of speed excursions and the need to re-run the ILI smart tool

Value to the client

- Approximately $187,000 USD saved through reduced natural gas waste by regulating pipeline pressure
- 152.16 million lbs of CO_2-e emissions avoided by flaring gas instead of cold venting
- 6.77 million lbs of CO_2 emissions reduced through optimized pressure control
- Estimated $1.1 million USD in potential savings by avoiding ILI re-runs, thanks to precise velocity control with Velonix™
- Improved visibility of pipeline flow parameters during pigging operations
- Higher resolution ILI data enabled by consistent and stable flow velocity
- Faster, more informed decisions during pig runs through real-time data streaming and Data to Desk integration
- Automated flow control delivers rapid and accurate adjustments, outperforming traditional manual methods

> " I'm very impressed by the overall solution, particularly the speed control system and the live data. It's an excellent solution to pigging low, variable, or no flow pipelines."
>
> Client

Lower carbon footprint

Cost saving