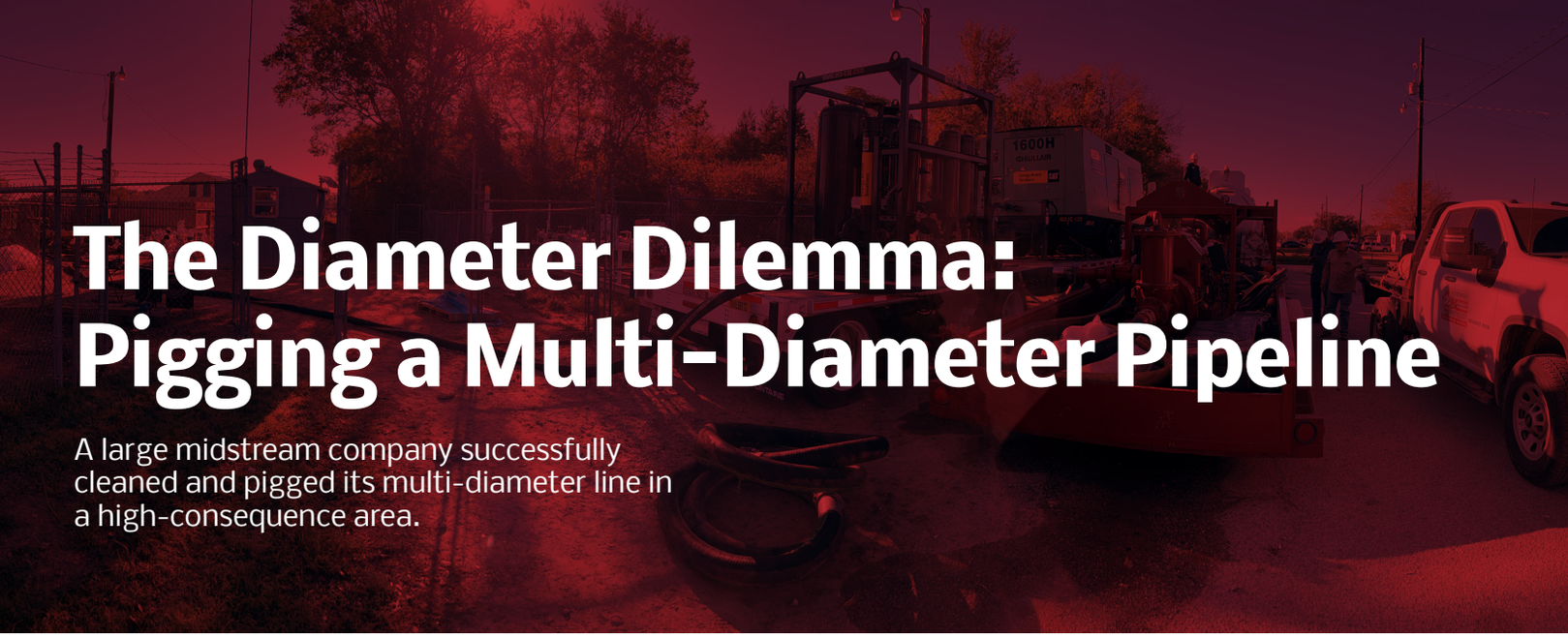


The Diameter Dilemma: Pigging a Multi-Diameter Pipeline

A large midstream company successfully cleaned and pigged its multi-diameter line in a high-consequence area.

Multi-Diameter Line Challenges

When lines are modified and added to existing assets, the diameter may differ between lines. Many multi-diameter lines can be classified as unpiggable, making cleaning and inspecting these lines a challenge.

A large midstream company's line had undergone a revision around 10 years prior, with a 6-inch diameter installed line. The new addition was placed between two 4-inch diameter lines. This project was also located in a high-consequence area, underneath an intersection of two major highways.

Customized Pigging Strategies

PL Testing was hired for full-suite cleaning and testing services. To successfully pig the total length, the pig required cross sectional area change of over 50%. Having expertise in lines with similar reductions, PL Testing developed a plan. Custom pigs were manufactured, including a brush and gauge pig. A mitigation plan was in place to recover pigs in event of getting stuck. Even with the right equipment, the risk of a pig getting stuck remains, so all pigs were tracked with ELF transmitters.

During the geometry tool run, the pig identified debris which caused tool stoppage. A recovery pig was sent and the pigs were successfully retrieved.

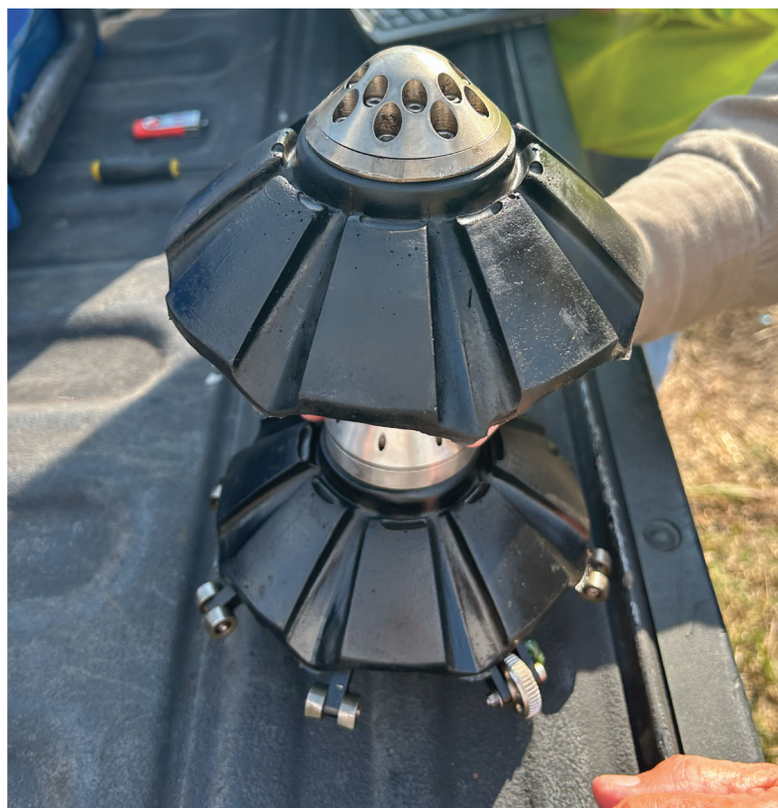
The identified debris area was excavated, severed, and pigged again to ensure the debris was removed. After confirmation of cleanliness, the pipeline was re-welded. Finally, the pipeline segment was dehydrated to -40°F dewpoint and returned to service.

Planning Leads to Success

Through proactive planning and monitoring, the multi-diameter line was able to be successfully cleaned, pigged, and tested while maintaining safe practices.

The benefits of this project were:

- Inertial mapping and geometry date collection of the pipeline
- Successful recertification of a pipeline in a high-consequence area
- Cleaning and servicing of the entire line



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