

Pipeline Decommissioning

LiquiGel® pigs and de-oiling chemistry provide economic solution

A GoM operator backlogged various production pipelines for decommissioning. Pipeline product varied from single phase to three phase usage with lengths ranging from 1,800' to 25,000'. All segments were permitted or abandonment in place, which required a minimum seawater flush volume equal to double the pipeline internal volume. Of importance, each segment needed to follow BSEE regulatory pipeline decommissioning standards.

PLAN OF EXECUTION

- Interconnect multiple pipeline segments using subsea tie-in points and topside platform tie-in points; work stations included both offshore motor vessels and operator platforms.
- Displace a 250' column of AquaGel® Plus into each pipeline segment for clean product separation.
- Follow with a 500' column of DynoWash® cleaning solvent into each pipeline segment.
- Calculate designed flushing volumes using filtered seawater.
- Receive and filter all fluids in front of and including the AquaGel® Plus and DynoWash® de-oil displacement.
- Discharge all filtered fluids overboard per BSEE regulations.
- Return the pipeline back over to the operator for separation and burial operations.

TECHNICAL ACHIEVEMENTS & BENEFITS

- Utilized the same tie-in points and equipment for both the AquaGel® Plus displacement and the seawater flushing operations.
- No additional on-site equipment or pig launchers/receivers were needed for chemical components.
- Mitigated operator's concerns of pipeline structural integrity with LiquiGel® pig system.
- LiquiGel® pig system transversed multi-diameter pipeline segments, thus enabling multiple pipeline segments to be bundled for flushing operations. This reduced project costs by shortening the original project schedule and utilizing fewer offshore motor vessels.
- De-oiling cleaning system encapsulated the solids and allowed trailing pig system to suspend and carry out of pipeline system.

LOCATION

Gulf of Mexico

SPECIFICATIONS

Pipeline 2 - 8 inch: multiple lengths

CHALLENGE

Create an economic solution to properly decommission each pipeline segment per Federal regulatory standards with minimal disruption to normal production operations.

SOLUTION

1. **Provide pipeline flushing and fluid filtering technical expertise. Use a water-based AquaGel Plus® pig system combined with a displacement of DynoWash® de-oiling solvent to carry out solids near the pipe wall.**
2. **Create a multi-phase execution approach that would bundle pipeline assets together for lower costs and shorter schedules.**