

Solution Mining Research Institute Fall 2018 Technical Conference
Belfast, Northern Ireland, 23-26 September 2018

WORKOVERS & MIT'S AT THE LOOP LLC OIL STORAGE FACILITY CLOVELLY SALT DOME, LOUISIANA

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Abstract

Louisiana Offshore Oil Port (LOOP LLC) is an underground storage facility (crude oil) located at the Clovelly salt dome in Southeast Louisiana in inland waters. LOOP LLC's caverns are constructed for high volume transfers of crude oil and are configured with five wellbores in a single cavern. During a recent Mechanical Integrity test of one cavern, one of the five wellbores exhibited an apparent nitrogen leak above the minimum detectable leak limit. Evaluations and remediation efforts were performed to determine the location of and remedy the apparent leak, including mercaptan injection for surface leak detection, installing a cemented casing liner, and positioning liquid Seal-Tite at potential leak points, including casing and casing shoe area. While the apparent nitrogen leak was minimized as a result of these efforts, there was still an apparent leak above the calculated minimum detectable leak rate, and an alternative method for mechanical integrity test was proposed, submitted, approved by the Regulatory Agency, and successfully performed on the well.

This paper will present an overview of the logistics, workover procedures, inspection methods, remediation techniques and MIT methods employed.

Key words: Caverns for Liquid Storage, Casing Brushing, Casing Inspection Logging, Workovers, Cavern Testing, Mechanical Integrity, USA, Louisiana, Clovelly.

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