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**IMPLEMENTATION OF THE SONICGAUGE WIRELESS MONITORING SYSTEM
FOR LONG-TERM DOWNHOLE PRESSURE AND TEMPERATURE DATA
ACQUISITION IN UNDERGROUND OIL AND GAS STORAGE WELLS AND
CAVERNS**

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ABSTRACT

The purpose of this paper is to present a real-time wireless downhole monitoring solution which is able to measure and observe long-term downhole pressure and temperature in an underground gas storage wells or caverns; enabling operators to optimize storage capacities during seasonal operations while meeting the requirements for industry and regulatory data acquisition and reporting. It will review how the SonicGauge Wireless Monitoring System can be retrofitted via to existing wells without a workover, or alternatively, externally mounted during the completion process.

Two case studies have been referenced to highlight how the acoustic telemetry system has provided a cost-effective multi-year “data-to-desktop” solution which will reduce the need for frequent slickline interventions associated with memory gauge surveys in wells where a permanent monitoring system was not previously installed.

Keywords: Caverns for Gas Storage, Caverns for Liquid Storage, Gas Storage, Instrumentation and Monitoring, Monitoring, Regulations (Regulatory Agencies, Law), Storage Cavern, Well Design, Drilling & Completion, Well Logging

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