



/ Expro Excellence Wireless Well Solutions

2.25" CaTS™ gauges provide long-term wireless reservoir monitoring for onshore gas storage optimisation in South West France



Objectives/background

- An operator required continual monitoring of gas storage wells
- The wells did not have any form of permanent gauge systems installed and whilst memory gauges were considered, these only provide data historically thus real-time reservoir optimisation would not be possible
- A retrofitable wireless gauge system that delivers continuous, long-term, real-time reservoir monitoring was considered very attractive in allowing these reservoirs to be managed effectively

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- 10 x 2.25" Expro CaTS™ wireless gauges were retrofitted into a number of wells on slickline and hung off in standard nipple profiles
- Reservoir pressures and temperatures are now measured using a precision, high resolution, quartz pressure sensor and the data then transmitted to the surface wirelessly using the steel of the well completion as a conduit for the CaTS signal to pass along
- At the surface, the CaTS receiver collects, decodes and stores the data to local memory
- Surface receivers are powered by batteries and are charged by solar power, ensuring data will not be lost with continuous power supplies, and also removed the need for a mains power supply at the well site
- The gauges were installed in 2007, and the system is still providing reliable data through scheduled battery change outs

- Multiple gauges have been installed at different depths in the same well, demonstrating the addressable function of the gauges
- Various wells have been connected to a single topside receiver, demonstrating the addressable function of the receivers
- The gauges have been recovered and deployed using conventional slickline methods, allowing the client to monitor the reservoir and zones of importance across an extended time period
- The use of the same CaTS gauges in multiple wells demonstrates the durability of the equipment

Value to client

- Compliance with local regulations stating the pressure in all gas storage facilities must be monitored
- Cost savings compared to frequent memory gauge survey runs
- More than nine years of pressure and temperature monitoring across multiple zones in nine gas storage wells
- Flexibility to retrieve and deploy the gauges according to the monitoring need for reservoir optimisation
- Simple interface with the surface receivers allow the client to download the data when required
- Uninterrupted power supply at receivers mean routine maintenance to mains power can be completed without affected the gauge data



Contact

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