

PRODUCTION

ForeSite[®] SENSE CAPILLARY SERVICES

Real-time reservoir and production data via capillary-conveyed technology



Weatherford

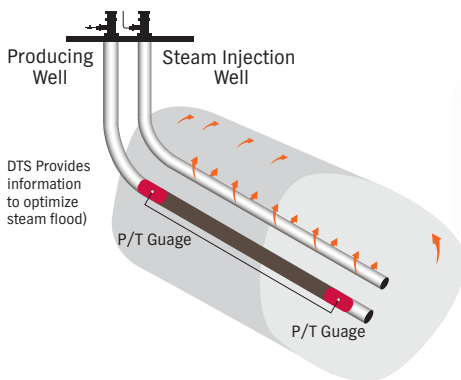
CONTINUOUS INTELLIGENCE IN CHANGING RESERVOIR ENVIRONMENTS

ForeSite® Sense capillary services empowers you with real-time, reliable data to extend the decline curve in both onshore and offshore fields.

As reservoir conditions change, one thing remains the same. You have a constant need for cost-effective, data-driven insights to inform your decisions about recoverable resources. This need is particularly relevant in challenging environments, such as extreme temperature and pressure reservoirs, highly deviated wellbores, unconventional applications, and multistage completions.

As part of the Weatherford ecosystem, ForeSite Sense capillary services simultaneously delivers data about your reservoir and your capillary-injection treatments. Applying low cost, reliable fiber-optic sensors to our industry-leading solutions provides real-time data for fast, easy, and effective field decisions—and at 30 percent lower costs than traditional production logging tools (PLT).

Using our thru-tubing, capillary-conveyed, fiber-optic monitoring system, we provide all-in-one optical pressure and temperature sensing (PT), distributed temperature sensing (DTS), and distributed acoustic sensing (DAS) data collection so that you can monitor stimulation and injection. Our field-proven fiber-optic measurements provide clear and concise imaging along the total length of the well, so you can make informed decisions about the future of your assets.



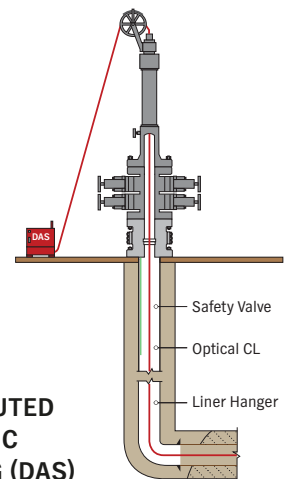
DISTRIBUTED TEMPERATURE SENSING (DTS)

The integrated central interrogation and processing unit, provides real-time data that helps identify flow anomalies, such as tubing or casing leaks, thief zones, and flow obstructions. Take advantage of advanced imaging, reservoir modeling, and process optimization.



PRESSURE AND TEMPERATURE (PT) MONITORING

Measure reservoir pressure in real-time and manage initial drawdown. Our PT monitoring methods let you discern fluctuations in downhole conditions to assess production performance, determine reservoir characteristics, and optimize production rates.



DISTRIBUTED ACOUSTIC SENSING (DAS)

Produce real-time compressional and shear-wave measurements along the optical fiber. Also monitor injections so that treatments reach intended zones. Fiber-optic sensors also process vibrations and translate them into usable datasets.

Comprehensive Fiber-Optic Monitoring

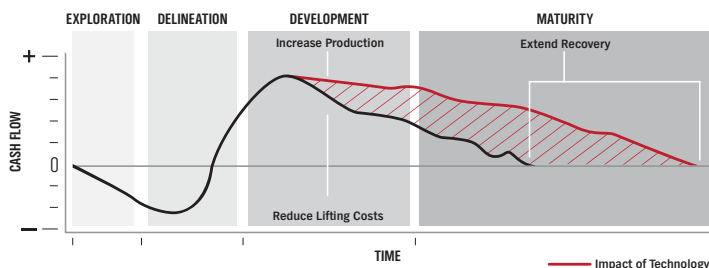
ForeSite Sense capillary services uses fiber optics that combine three proven methods of reservoir monitoring. With DTS, DAS, and PT data in one through-tubing, capillary-conveyed package, you can increase production, lower costs, and make informed decisions.

Remediate Cased-Hole Issues

- Collar leaks
- Refracturing
- Water shutoff
- Zonal isolation
- Thief-zone elimination
- Lateral and sidetrack isolation
- Eroded, corroded, split, parted, worn, or buckled casing

Drive Rig-Free Performance in Every Well

- Rigless installation
- Real-time data monitoring
- Well integrity maintenance
- Conveyed thru tubing, no electronic components at depth
- Service in all well types
 - onshore and offshore



ForeSite Sense capillary services helps you increase production and extend recovery while dramatically reducing your lift costs.

30% cheaper than traditional PLT

REDUCE COSTS

Compared to traditional methods using industry-standard PLT, our comprehensive tools and service packages cost 30 percent less and deliver more insights about your reservoir than any other service today.



Minimize exposure of personnel

INCREASE RELIABILITY

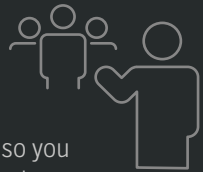
Our rigless system can be deployed in live wells, and our easy-to-deploy solutions help to maintain well integrity, maximize recovery, and minimize personnel exposure to health, safety, and environmental (HSE) risks.



Share information with colleagues in other locations

ENABLE COLLABORATION

Using our data visualization software, we deliver real-time insights to a localized dashboard, so you can adjust operations on the fly or share information with colleagues in other locations.



Up to a 60% deviation

IMPROVE DETECTION

Our monitoring tools have a 1/4-in. (6.35-mm) outside diameter and can be placed anywhere slickline can go—up to a 60 percent deviation. They can also detect decreases in pressure, temperature, and flow in real time so that you can remediate plans and manage production.



Reduce lift costs with precise fluid placement

MONITOR INJECTIONS

Our capillary-injection monitoring enables you to maximize production and reduce lifting costs by overseeing precise and safe fluid placement at the production intake or elsewhere in the reservoir.





CONSTANT ASSURANCE IN CHANGING RESERVOIR ENVIRONMENTS

As your reservoir matures and your budget changes, the constant need for cost-effective lift and reservoir monitoring solutions remains. ForeSite Sense capillary services integrates technologies that simultaneously deliver real-time reservoir and capillary-injection data.

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