OmniCap™ INTEGRATED RESERVOIR AND PRODUCTION MONITORING SYSTEM

Informing crucial decision-making through real-time reservoir and capillary-injection monitoring to increase production

WELL SERVICES FOR CONVEYANCE
CONSTANT ASSURANCE IN CHANGING RESERVOIR ENVIRONMENTS

Our OmniCap™ system empowers our customers 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.

Part of the Weatherford OmniWell® family, our OmniCap™ integrated reservoir and production monitoring system 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 (PTS), 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.

**CAPPED BUDGETS UNCAPPED PERFORMANCE**
- 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

**REDUCE COSTS**
We help you to do more without increasing 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.

**INCREASE RELIABILITY**
Effective risk management is crucial to every operation. Our rigless system can be deployed in live wells, and our easy-to-deploy solutions help to maintain well integrity, maximize recovery, and minimize personal exposure to health, safety, and environmental (HSE) risks.

**ENABLE COLLABORATION**
Share data despite distance. 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.

**IMPROVE DETECTION**
We know that you can only manage what you can measure. 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.

**MONITOR INJECTIONS**
Pumping fluid to the exact zone and in the correct quantity can avert workovers and lost production. 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.

**Reduce lift costs with precise fluid placement**

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**OMNIWELL**
- **Production and Intervention Technologies**
- **Reservoir Monitoring**
- **Optical Sensing**
- **Temperature, Flow, and Environmental (TFe) Monitoring**
- **Acoustic Products**

**nLink®**
Multi-function optical monitoring cable spans the entire OmniWell optical portfolio.

**nLink**

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**CASH FLOW**
- **TIME**
- **EXPLORATION**
- **DEVELOPMENT**
- **MATURETT**
- **DECREASE LIFTING COSTS**
- **IMPACT OF TECHNOLOGY**

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**25 million+ ft (7,785+ km)**
Of optical fiber installed in wells around the world

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**LIFTING PERFORMANCE IN 44 COUNTRIES GLOBALLY**

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**REDUCE COSTS**
- Traditional PLT
- Industry-standard PLT
- Multi-function optical portfolio

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**INCREASE RELIABILITY**
- Fiber-optic monitoring
- Real-time data monitoring
- Well integrity maintenance

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**ENABLE COLLABORATION**
- Data visualization software
- Real-time insights to a localized dashboard

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**IMPROVE DETECTION**
- Fiber-optic measurements
- Real-time data monitoring
- Up to a 60% deviation

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**MONITOR INJECTIONS**
- Precise fluid placement
- Safe fluid placement at the production intake or elsewhere in the reservoir
- Reduce lift costs with precise fluid placement

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Multi-function optical monitoring cable spans the entire OmniWell optical portfolio.
ONE SOLUTION FOR MULTIWELL MONITORING
Bringing you actionable data across all applications

No matter where you operate globally, our OmniCap monitoring systems can be deployed in onshore and offshore oil- and gas-producing wells, injector wells, steam-assisted gravity drainage (SAGD) wells, conventional and unconventional reservoirs, and offshore shelf platforms. More than 130 dedicated personnel, with focused capillary, optical, and reservoir engineering expertise, enable us to bring you actionable data across all applications and well types where and when you need it.

Actionable Data Points at a Glance
- Daily production
- Casing leak detection
- Injectivity performance
- Optimized lift performance
- Water and steam breakthrough
- Chemical treatment performance
- Optimized field and reservoir management
- Static and dynamic pressures and temperatures

COMPREHENSIVE FIBER-OPTIC MONITORING
Going beyond traditional PLT to deliver comprehensive fiber-optic monitoring in diverse applications

Our OmniCap system 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

DISTRIBUTED TEMPERATURE SENSING (DTS)
Our DTS capabilities go beyond distributed-sensing architecture. We integrate our capabilities into a central interrogation and processing unit that delivers real-time data and helps you to identify flow anomalies, such as tubing or casing leaks, thief zones, and flow obstructions. Our DTS solution creates new possibilities in advanced imaging, reservoir modeling, and ultimately process optimization.

PRESSURE AND TEMPERATURE (PT) MONITORING
Our optical PT monitoring sensors not only measure real-time reservoir pressure, but also manage initial drawdown. Using our PT monitoring methods, you can discern fluctuations in downhole conditions to assess production performance, determine reservoir characteristics, and optimize production rates.

DISTRIBUTED ACOUSTIC SENSING (DAS)
Our fiber-optic DAS capabilities produce real-time compressional and shear wave measurements along the optical fiber. DAS also monitors injections so that treatments reach the intended zones. The fiber-optic sensors process vibrations and translate them into usable datasets.
COMBINE DOWNHOLE MONITORING WITH DATA VISUALIZATION

Unifying individual data input sources and processing disparate data in real time

Monitoring your reservoir is crucial, but so too is ease of use and data analysis viewability. Our proprietary WellVista® downhole data visualization software compiles information from multiple OmniCap applications and points of measurement. The software is an optional add-on to our OmniCap service packages and delivers powerful visualization and advanced analysis functionality straight to a localized dashboard.

WELL INFORMED WITH WellVista® SOFTWARE

• Create movies of data plots over time
• Access per-second data capture for every sensor
• Export screenshots to Microsoft® PowerPoint®, Word, or Excel
• Interpret downhole changes at the producing wellsite in real time
• Share pertinent information across collaboration centers or management locations
• Correlate downhole temperature, pressure, and flow readings for advanced well characterization
• Visualize production forecasts alongside data collected from permanent downhole gauges
• Customize charts using data from file formats, including 2D line charts, 2D-surface waterfall plots, and 3D surfaces

Get more with integrated data analysis

As part of our production software suite, WellVista software can integrate advanced analyses from other packages. Using our WellFlo® software, you can perform complete dynamic nodal analysis using pressure-drop, reservoir-inflow, and well-outflow calculations. You can also export WellVista data subsets into our PanSystem® well-testing analysis software for well testing, pressure transient analyses, and buildup analyses.

For a Canadian-based operator, WellVista improved overall control of surface pressures, pump variables, steam-injection rates, zonal subcools, and subsurface pressure and temperature profiles. At the 2,133-ft (650-m) section, our customer used WellVista real-time visualizations to identify local subcools ranging from 27 to 18°F (15 to 10°C) ∆T, as well as a subcool of 72°F (40°C) ∆T at 3,937 ft (1,200 m).

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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. OmniCap systems integrate technologies that simultaneously deliver real-time reservoir and capillary-injection data.

WEATHERFORD.COM/OMNICAP