**Case History**

**RCX Sentinel Service Quickly Delivered High Quality Samples**

Reduced fluid sampling time, rig cost, and contamination compared to standard probe

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**Benefits**
- Single phase formation fluid samples with < 1% contamination
- Significant rig time savings
- Reduced operational risk

**Background and challenges**
- Southern Louisiana, USA
- 8–23 md permeability
- Uncertain reservoir fluid
- Limited operational time window

**Baker Hughes solution and results**
- RCX Sentinel service with the Reservoir Characterization Explorer™, IFX, Livewire, and DRM services
- Obtained samples in under an hour with < 1% contamination
- Recovered six single-phase samples
- Achieved all objectives at high operational efficiency

A large independent operator faced a difficult decision on a southern Louisiana exploration well. Petrophysical logs showed an ambiguous, potentially hydrocarbon bearing, low resistivity reservoir interval. To resolve this uncertainty, the operator chose the Baker Hughes RCX™ Sentinel focused sampling service to recover high-quality formation fluid samples during a short operational window.

Baker Hughes prepared for this operation by extensively modeling the expected behavior of near wellbore fluids. These models showed that the RCX Sentinel service could capture representative formation hydrocarbon samples with nominal oil based mud filtrate contamination within an hour.

Using the Deployment Risk Management (DRM) process, Baker Hughes developed a strategy for reliably accessing the wellbore. The plan included using tool string flywheels and a mechanical releasable cable head to minimize risk. The LiveWire™ data service allowed the client to further improve operational efficiencies by providing real-time monitoring.

Baker Hughes conducted the wireline operation flawlessly during a narrow 12-hour window, capturing five concentric and one standard probe samples. The In-situ Fluids eXplorer™ (IFX™) service collected data simultaneously from both flow lines of the RCX Sentinel service tool. Real-time analysis indicated...
that the samples were only minimally contaminated. Laboratory analysis verified this conclusion by showing residual filtrate contamination at less than 1% in four of the five samples with only one sample at 1.3%.

The results of the RCX Sentinel service tool operation confirmed the presence of high quality hydrocarbons and allowed the client to make a fast decision regarding the well completion. Due to the results of this well, the client plans on using the RCX Sentinel service to improve planning of subsequent wells.