

# Spectral Reservoir Platform

Spectral Reservoir Flow Pattern (SPEC-RFP\*)



**Oilfield Services**

“Stop Guessing - Listen to your Reservoir”

## Gas Storage Evaluation

TGT’s Spectral Reservoir Platform addresses several Reservoir challenges through multiple strings, in both producers and Injectors. Our range of services provides real Reservoir answers up to 5 meters away from the wellbore. Applications include: fluid breakthroughs, injection & production profile, stimulation / fracture flow evaluation and formation pressure behind multiple casings.

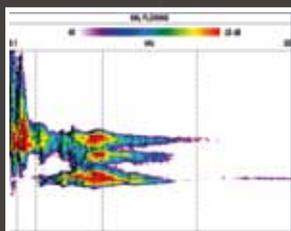
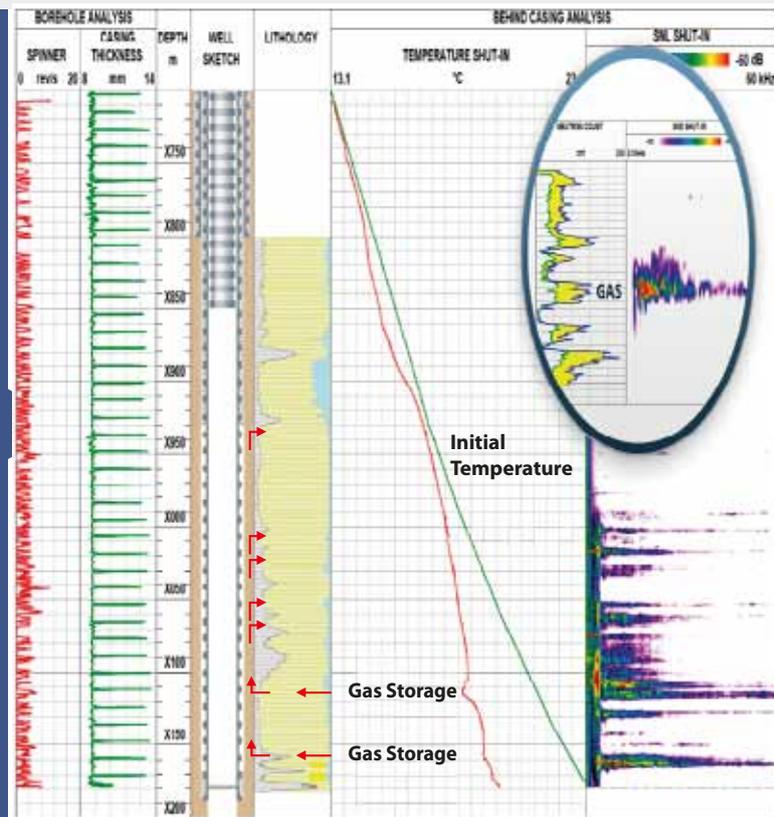
### Case Study

Gas storage applications represent a growing area of interest in the Oil & Gas industry. Accurate understanding of behind casing Production and Injection profiles is critical to ensure project performance and economics.

In this case, our client drilled a gas storage well and ran a cement evaluation survey to verify isolation. The quality of cement was patchy leading our client to suspect behind casing cross flows. TGT conducted Spectral Reservoir Flow Pattern (SPEC-RFP\*) along with other advanced services, including EmPulse 3\* for well integrity, Indigo PLT\* and PNN\* for reservoir characterization.

EmPulse3\* indicated good casing condition and PLT showed no wellbore cross flows. However, SPEC-RFP\* survey detected gas flows in the reservoirs above and below the gas storage and indicated cement channelling. Gas accumulation in those reservoirs was confirmed by Indigo PNN\* data. The Client used this information to intervene and eliminate cross flows.

Spectral Reservoir Flow Pattern (SPEC-RFP\*) utilizing TGT proprietary SNL – HD\* provided a unique answer for this Gas storage challenge, several meters behind the casing and enabled our Customer to take remedial action.



**SPEC-RFP\*  
Principle**

SPEC-RFP\* measures noise generated by fluid movement behind multiple casings deep into the formation. Passive high definition acoustic data combined with high precision temperature allow qualitative and quantitative Reservoir flow measurements via TGT proprietary modeling software.

\* Patented, patent pending or TGT’s mark



**SPEC-RFP\*  
Applications**

SEPC-RFP\* can be utilized in vertical, deviated or horizontal wells with single and dual completions. Injectors and producers can be surveyed to identify:

- ✓ Cross flow
- ✓ Active Reservoir units
- ✓ Water or gas breakthroughs
- ✓ Fluid inflows

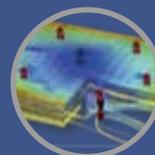
**Reservoir Characterization**



**Well Integrity**



**Cross Well Diagnostics**



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# Oilfield Services

TGT is an oilfield services provider supplying game-changing logging and reservoir modeling technologies. The company offers advanced solutions in the areas of Reservoir Characterization, Well Integrity and Cross Well Diagnostics. TGT proprietary services can be deployed through multiple strings, on any conveyance type and in any well.

Our patented software and modeling techniques coupled with a strong geoscience team, allows TGT to offer unique solutions to Customers globally.

TGT prides itself on in-house research and development (R&D) as well as first class manufacturing (MFG) capabilities. We hold several patents, copyright technologies and applications. As an organization we continue to innovate and actively contribute to the industry with regular technical publications including SPE.