

# Spectral Reservoir Platform

Spectral Reservoir Flow Analysis (SPEC-RFA\*)



**Oilfield Services**

"Stop Guessing - Listen to your Reservoir"

## Gas Injection Efficiency

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

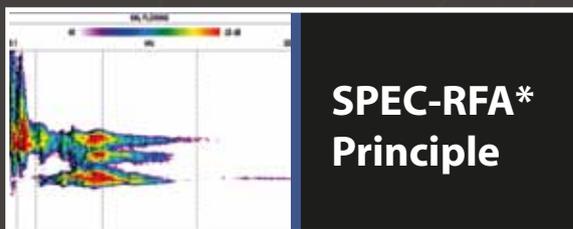
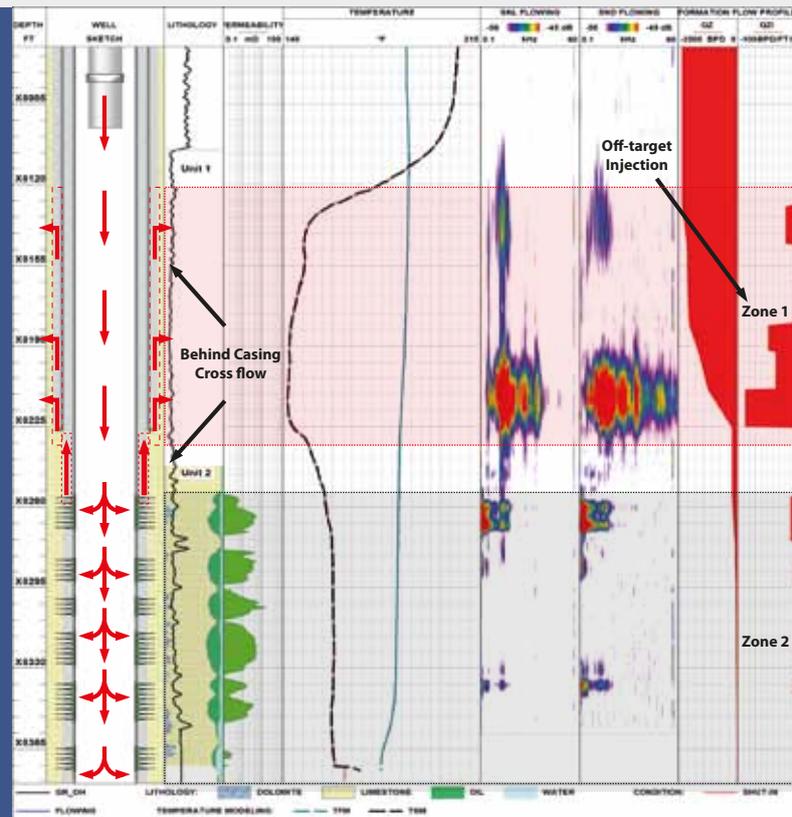
Gas injection is an established EOR method used in the industry. Evaluating its efficiency is crucial for the life of the reservoir.

**Problem:** Our Client observed presence of unwanted Gas in neighboring wells despite production pressure being below bubble point.

**Diagnosis:** TGT was consulted and requested to survey Spectral Reservoir Flow Analysis (SEPC-RFA\*) in the Gas injectors near to profile and quantify injection in Zone 2.

**Findings:** SPEC-RFA\* showed a cooling anomaly associated with a high frequency noise above the perforated areas (Zone 1) suggesting cross flows and channeling behind casing. Cross flow was quantified resulting in a 95% volume misplaced into Zone 1 which was communicated with near by wells.

**Actions:** Client worked over the well eliminating cross flow and gas in nearby wells. Injection efficiency in Zone 2 improved from 5% to 100%.



### SPEC-RFA\* Principle

SPEC-RFA\* 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

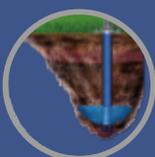


### SPEC-RFA\* Applications

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

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

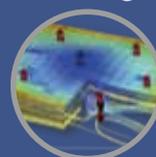
#### Reservoir Characterization



#### Well Integrity



#### Cross Well Diagnostics



Email: [info@tgtoil.com](mailto:info@tgtoil.com)

[www.tgtoil.com](http://www.tgtoil.com)



**HEAD QUARTERS**

HQ, U.A.E  
Technology Center  
Russia



**MIDDLE EAST**

Iraq  
K.S.A  
Kuwait  
Oman  
Qatar  
U.A.E



**ASIA**

Indonesia  
Kazakhstan  
Malaysia  
Pakistan  
Turkmenistan



**EUROPE**

Russia  
U.K (North Sea)



**NORTH AMERICA**

Canada  
U.S.A



**AFRICA**

Nigeria



# 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.