

## ■ ALPHA GAS ANALYTIC SERVICES

TO ARRANGE FOR TESTING OF A WELL  
Call 866.881.2242

### Alpha Gas Production Testing and Consulting

■ We employ a series of diagnostics (molecular and isotopic compositions, production data) on production gas samples to assess the robustness and dynamics of catalytic gas generation. This information serves as input to a model that represents Alpha Gas generation as an industrial catalytic process (See Alpha Gas as an Industrial Catalytic Process) and directs changes in production parameters accordingly.

■ Applications:

**Initiation of well production:**

analyze gas samples hourly to assess early Alpha Gas generation and its potential over time.

**Shut-ins:**

analyze gas samples before and after shut-ins. The approach to thermodynamic equilibrium on shut-in and the fall from equilibrium under gas flow are powerful assessments of Alpha Gas generation (Fig. 2).

**Monitoring gas compositions over time:**

gas compositions can change during periods of instability thus signaling declines in production rates. Gas samples are analyzed during periods of change (e.g. pressure) for evidence of reaction instability.

**Price:** customized quote depending on project; typically starts at \$5,000 per well.

### Standard Analysis

■ Measures the level of catalytic activity in source rocks and coals (< 5 grams of cuttings or core chips) (United States Patent 7153688, Petroleum Habitats LLC). An Activity Log ( $\mu\text{g}$  gas/g vs. depth) can also be constructed based on multiple sample analyses from a single well.

■ Report: The relative and absolute yields of  $\text{C}_1$  through  $\text{C}_6$  Alpha hydrocarbons generated under standard conditions. Assessment of a sample's capacity to generate Alpha Gas relative to other samples in our database.

**Price:** \$300 per sample

### Advanced Analysis

■ An in-depth analysis of catalytic properties employing gas generation over time and molecular probe experiments. Recommended for samples showing extraordinary levels of activity on Standard Analysis.

■ Report: In addition to data from the Standard Analysis, the report includes characterizations of Alpha Gas feed store and dynamics, as well as interpretation of implications for production.

**Price:** \$500 per sample

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## Petroleum Habitats

Petroleum Habitats is a geochemical research and development firm focused on developing technologies to detect, predict and optimize Alpha Gas in unconventional gas plays.