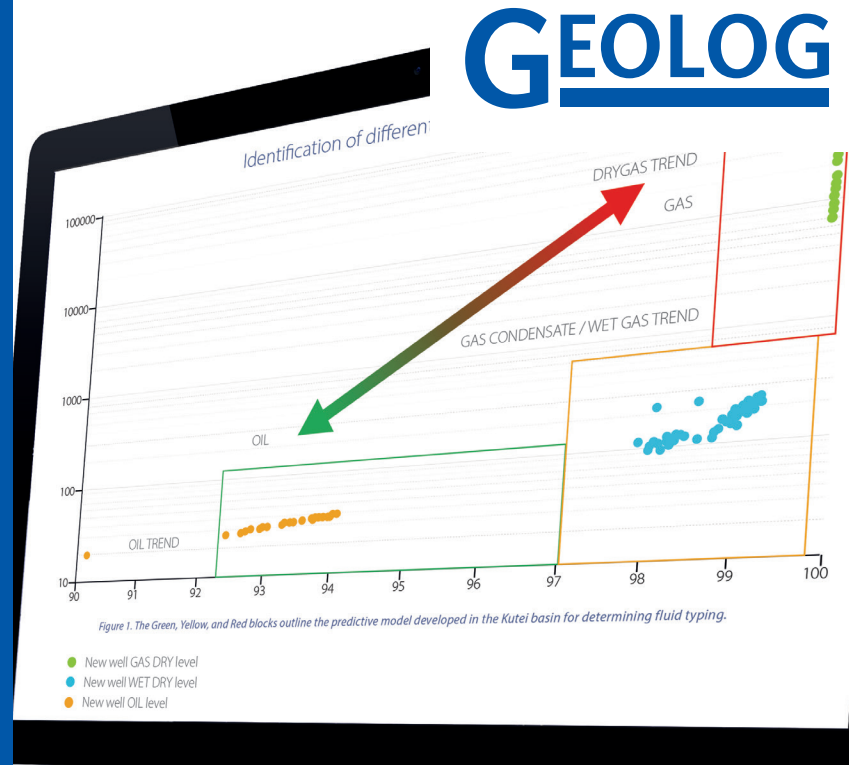




G5 is the most accurate hydrocarbon detection solution in the market with advanced extraction methods to provide near real-time, accurate, quantifiable reservoir information. Coupling quality controlled gas extraction with an extremely precise hydrocarbon chromatograph, **G5** enables GEOLOG to deliver optimum analysis of the C1-C5 gas spectrum.



Benefits

- Cost-Effective and reliable formation evaluation solution
- Ability to compensate for recycled gas
- Gas While Drilling Interpretation "GWD" can be confidently used
- Identification of Gas/Oil and Oil/Water contacts in real-time
- Supported by a standard mudlogging crew
- Dual column technology enables complete C1 C2 separation for maximum data quality

Applications

G5 solution is designed with customer specific challenges in mind, delivering unmatched results in the industry, acquiring quality, low-risk data in challenging environments and optimising formation evaluation costs.

G5 solution supports exploration and appraisal wells by maximising the quality of gas data. In development projects provides useful well correlation models of gas trends.

The system has a track record in all environments, including ultra deep-water, arctic, desert and tropical operations to evaluate clastic, carbonate and unconventional reservoirs.

Challenges and Solutions

In challenging HPHT wells, quality LWD or wireline logs, maybe unobtainable due to heavy weight drilling fluids and temperatures exceeding tool specifications.

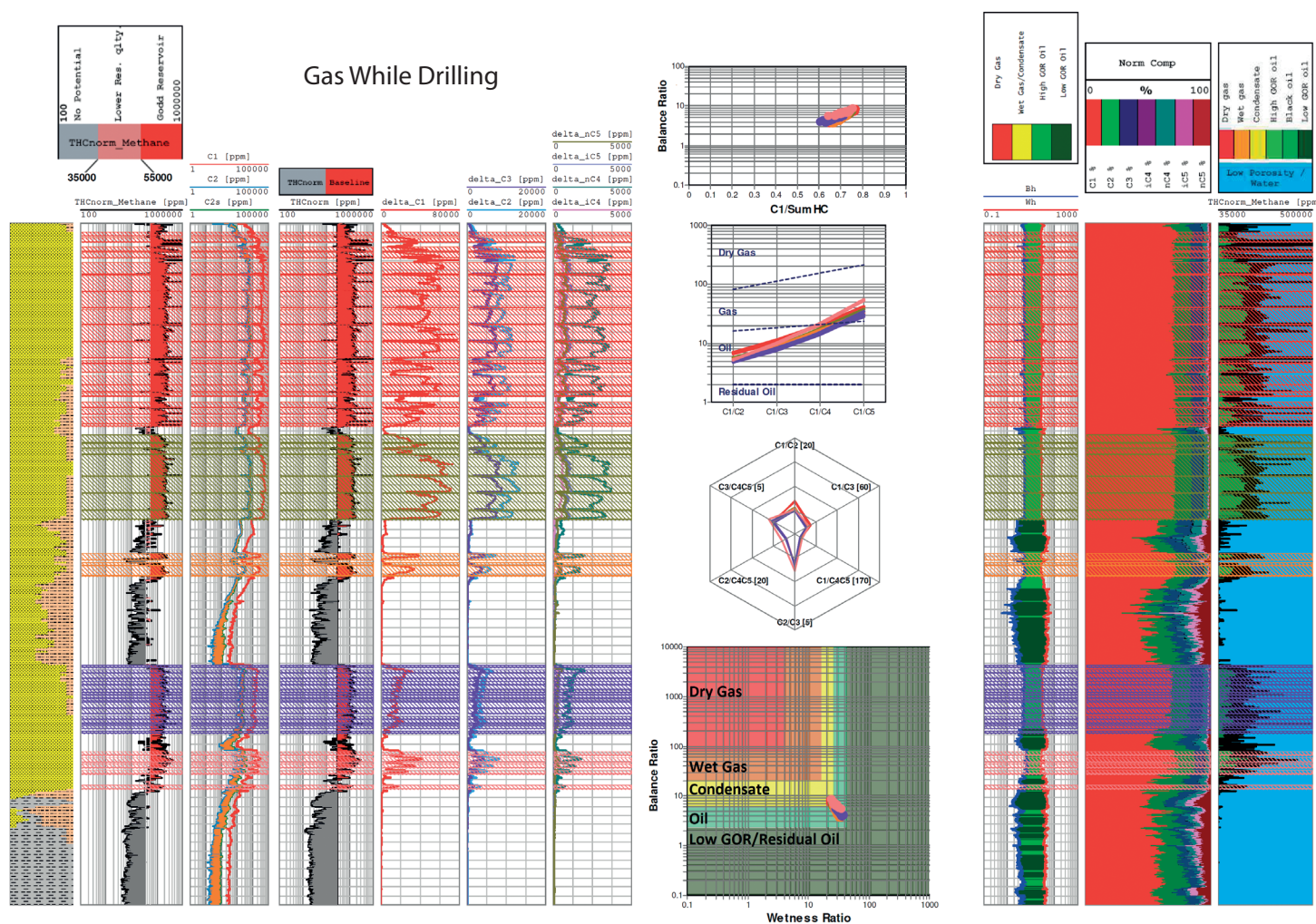
The G5 solution can obtain gas data at the surface from the "first breath" of the well, while drilling. Resulting in unaffected data by well conditions and eliminating downhole risk by utilizing an "at-surface" solution.

With reduced budgets, operators are driven to make changes in formation evaluation programs. Downhole sampling programs are time consuming and costly.

The G5 solution enables operators to optimise downhole sampling programs. The service provides clear continuous formation fluid identification reducing or eliminating downhole risk. Operators gain the ability to pick and choose only the necessary pre-test and sampling points to refine reservoir characterisation further and reduce downhole exposure. Enables completion placement to be optimized.

"We particularly appreciate the G5 performances in terms of reliability and accuracy as fast gas chain, improving our HSE confidence and the reservoir interpretation." Eni





GEOLOG G5 solution provides quantitative gas data in real time. The data acquired is fully complementary of other log types and after the field calibration, can be used to optimise other downhole tools, without compromising the well placement and fluid type characterisation.

Using the G5 with delta gas data effectively supplemented the LWD data downhole, enabling real-time navigation within the reservoir for producing zones.

Specifications

Working Principle	Double Column GC-FID*
Hydrocarbon Analysis	C1, C2, C3, iC4, nC4, iC5, nC5
Limits of Detection	1ppm–1.000.000 ppm(100%)
Analysis Time	45 seconds

*This design allows perfect separation of C1 / C2 peak during detection

GEOLOG around the World



Technical Paper
Reference



Advanced Mud Gas Evaluation in a Complex Clastic Reservoir While Drilling in the Usano Field of PNG (Geosciences Conference and Exhibition, Papua New Guinea, February 2020)

