to reduce drilling time and costs
to improve rig safety
to detect and evaluate reservoirs

Celebrating 30 years of technological leadership and independence

Across 35 countries of operation, GEOLOG’s unique focus is on surface logging. GEOLOG’s leadership in advanced technologies for drilling optimization and formation evaluation is the result of 30 years of field experience and continued active research and development in co-operation with clients.

GEOLOG’s advanced surface logging services and technology coupled with highly qualified and experienced personnel, permits clients to improve drilling efficiency and reduce unproductive time, saving costs and improving safety.

GEOLOG is a world leader in gas detection while drilling, thanks to its advanced gas extraction systems and its unique gas analysis system (DualFID™). Through hydrocarbon analysis from Methane to Toluene, drilling parameters measurement (hydraulics, mechanical and engineering) and the ability to manage third party data as LWD and wireline, GEOLOG provides its clients with timely information, at the rig site and anywhere thanks to its RealTime data transmission system WellManager.

GEOLOG also runs a number of complementary services which range from Cutting Volume Monitoring for drilling operations optimization and borehole stability monitoring to formation fracture detection or the geochimical analysis and interpretation of drilling cuttings, which can save budgets and, in certain cases, entire wells.

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 Houston is home to the world’s largest oilfield conference, the OTC. However, even by its own standard, the 2013 edition was a mammoth one. With over 100,000 delegates, this was the second largest event in its history, and the largest in 30 years.

Houston is to the oil and gas industry:

ABB was awarded for their vessels powered by an energy-optimized direct-current system grid.

FMC received two awards for their subsea production performance monitoring system and for a subsea multiphase boosting pump system.

Baker Hughes introduced a new LWD fluid analysis sampling tool.

Welltec in turn showed their awarded new e-line conveyed well cutter. Bayou Wasco was acknowledged for their Subsea Flow Assurance Insulation System.

Fig. 1 - The usual swarm of delegates at the 2013 OTC

More than 2,700 exhibited at the show, 40% of which were from overseas, which made the OTC even more of a global event than it normally is. In particular, a significant presence of Chinese manufacturers required an extension to the conference show floor! Although the show is typically dominated by drilling and production equipment, with large heavy metal tools in display in every corner, the conference was as usual very lively, with almost 300 technical papers being presented, characterized by a high technical standard.

The focus of the 2013 OTC was on innovation, particularly in the field of deepwater technology and automation. For this reason, 15 new technologies were acknowledged with Spotlight Awards.

Fig. 2 - BH’s new LWD fluid sampler.

Statoil introduced an innovative remote-controlled hot tapping solution, consisting of a robot capable of welding a 1-piece on to the production pipe.

Along the same lines, Superior Services presented a completion rig that uses remote-operated or pre-programmed robotics to control various completion components.
including a snubbing unit and a drilling system. Automation was rewarded also through ShawCor Mobile Robotic Cutback System, a new machining technology for insulated pipe and West Drilling collected an award for their automated Continuous Motion Drilling Rig. Since deepwater is the technology frontier, some awards went to solutions dedicated to it: Realwell introduced a dual drill string that enables riserless drilling in 3000 m water depth. GE oil and gas lively R&D was also awarded for two innovations, one regarding a transmission and data monitoring system for ROV operations and for a new blind shear ram designed for deepwater well control. Also relevant to the future of deepwater drilling is SBM offshore solution for a suspended drilling riser, an apparatus that enables to drill multiple subsea wells consecutively. Finally, Finnish company Wärtsilä received an award for their gas recovery system which enables self-sustaining power generation for offshore operation, preventing waste of a valuable source of energy. It would be impossible to report in this limited space the wide variety of relevant technical papers, still a few must be mentioned regarding annular pressure prediction while performing well control with an MPD system (OTC24189). A series of papers regarding pore pressure prediction attracted a captive audience. Shell’s K.H. Hansen presented a case history (OTC24221) from Australia where the pore pressure predictions were based on resistivity and sonic data, corrected for historical information such as kicks and other drilling events. Alan Huffman and colleagues from Repsol have presented two separate papers: both were from AlJaz Rizvi and others, about the prediction of subsalt pore pressures (OTC24157 and 24159). Based on the analysis of shear and compressional velocities obtained from innovative acoustic methods, the method enabled to tailor pressure calculations to the Gulf of Mexico environment, and to identify a newly calculated normal compaction trend for shales which takes rock physics into account. The result of Hess’ work is really a “user dependent” method, and it has now been tested on almost a hundred wells, with an average pore pressure error lower than 0.5 psi. Buoyant Towers must also be mentioned since an entire session was dedicated to this new type of drilling and production units, designed for challenging fields. At the OTC Italy was represented by Giambattista De Ghetto who participated in the panel discussion about future offshore operations and their financial aspects. Amongst the exhibits, Saipem, Drilmecc were flying the Italian flag. Finally, one of the technical papers presented was prepared by the Kuwait national oil company KOC together with Italy’s Geolog International. The paper (OTC24002) described the utilization of field-based geochemical rock analysis to support smart multilateral well placement and completion.

![Fig. 3 - Compartimentalized reservoir](image3.png)

![Fig. 4 - Wärtsilä’s gas-powered generator](image4.png)

![Fig. 5 - A typical well pressure profile (from the Shell paper).](image5.png)

![Fig. 6 - Geochemical rock data associated to seismic profile.](image6.png)