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## **“Gotcha Deep” Project: PVT Quality Fluid Samples Using New MDT Sampling Probes Lead to More Accurate Reservoir Answers in Less Time**

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### **ABSTRACT**

The Alaminos Canyon 856, “Gotcha Deep” discovery and subsequent appraisal wells, recently drilled by TOTAL E&P USA in the Gulf of Mexico in 7800 ft of water, benefited from two new fluid sampling innovations recently introduced by Schlumberger. The first is the new Quicksilver “focused sampling” probe and the second is the Extra Large Diameter (XLD) probe. This was the first time TOTAL E&P USA had used these probes during fluid sampling operations.

The intervals tested had fairly high pretest mobilities (>10 millidarcies per centipoise or md/cp), low overbalance (approximately 500 psi), and the drawdown while sampling was relatively low (less than 200 psi for most stations). These characteristics typically indicate a relatively easy sampling environment. Usually, the greatest risk here is the unconsolidated nature of the reservoir and the danger of the sand producing and plugging the fluid sampling tool. The design of the Quicksilver and XLD probes reduces this risk.

Over the course of the two penetrations at Gotcha Deep, eight different intervals were sampled. Sampling times and fluid contamination levels were significantly lower than pre-job expectations, with the Quicksilver probe providing fluid samples with less than 1% contamination, and the XLD probe providing samples with less than about 4% contamination. Obtaining more accurate fluid properties information from these low contamination samples will aid in completion design and flow assurance predictions, improve reserve estimation and help optimize facilities design. Sampling time was substantially reduced compared to times normally associated with sampling operations in this area. Obtaining higher quality fluid samples in less time resulted in reduced rig time costs, reduced risk of sticking the sampling tools and more accurate fluid properties information