

Case History

High-Performance Water-Based Fluids

BOREMAX® High-Performance Water-Based Fluid Helped Reduce Operational Cost & Non-Productive Time

Customer: Industrias Costa Mesa

Location: Tabasco, Mexico

OPERATOR'S CHALLENGE – To reach the Upper Pliocene formation, Industrias Costa Mesa needed to drill through the Paraje Solo formation – which consisted of sands and sedimented clay in a shallow water environment. This section was to be drilled vertical with a 26" bit and conventional bottom hole assembly up to 3,280 ft. mud depth. The 20" casing was going to be cemented to isolate the shallow waters and increase the gradient in order to drill the next section. Industrias Costa Mesa was concerned about bit balling, hole enlargement and operation time optimization.

HALLIBURTON'S SOLUTION – The Baroid team advised Industrias Costa Mesa to drill the section with a 20" bit and recommended applying the BOREMAX® high-performance water-based fluid system. The Baroid lab personnel monitored the concentrations to optimize fluid properties. As a result, successful drilling yielded a reduction of 1.71 drilling days from the estimated 6 days (including change of stage). During the drilling of the section, an ROP average of 139.03 ft./hr. helped reach a penetration rate of 3,220 ft. in 23.16 hr., which was a record in this field. Historically, this field held an average

ROP of 46 ft./hr. The new record drilling rate of 300% increase was achieved, which didn't include the saved time through bypassed wiping trips, which were corroborated by caliper logs, as the well was in gauge.

ECONOMIC VALUE CREATED – Industrias Costa Mesa reduced the rig cost by \$160,000 USD, reduced operation time and realized a reduction on cement excess volumes. Overall, the operator saved 3.5 days and \$280,000 USD.

Additionally, the Baroid team helped reduce the operator's costs programmed for the stage, and Industrias Costa Mesa realized significant savings by optimizing the resources of the technology lab without compromising the fluid quality.

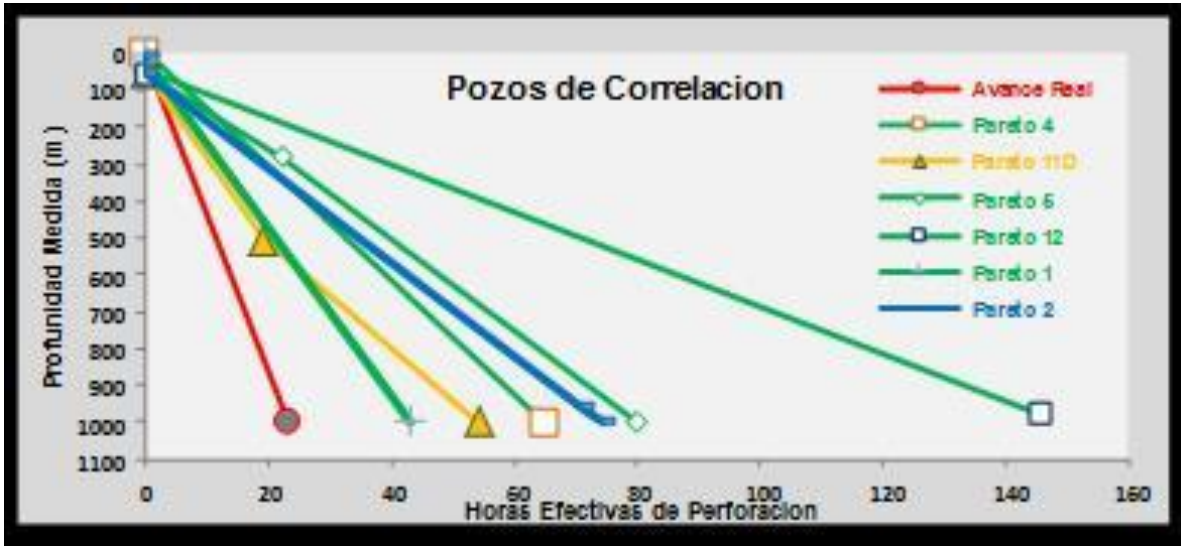


Fig. 1 26" drilling section

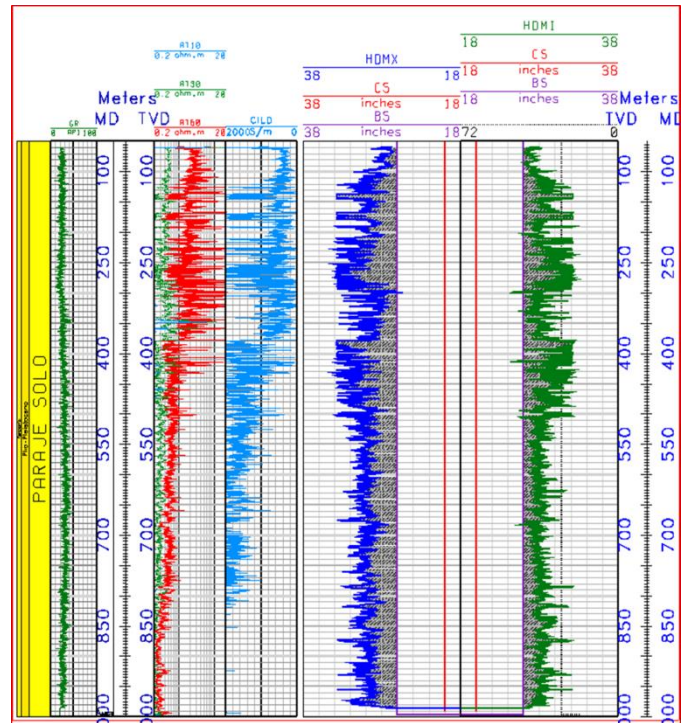
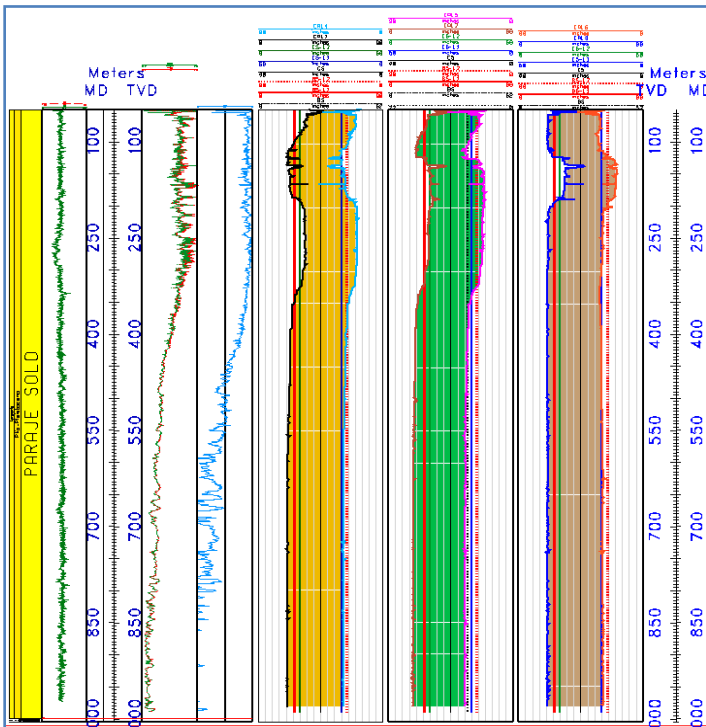


Fig. 2 26" caliber section