

CASED HOLE FORMATION EVALUATION: AN ALTERNATIVE TO OPTIMIZE DATA ACQUISITION AND REDUCE OVERALL COSTS IN MATURE FIELDS

Abstract:

In the industry current situation there is an important pressure to reduce the development costs. Although using well-to-well correlations is a common practice to decide which intervals to complete, the correlations are not always reliable, especially when the reservoirs have poor lateral continuity. Therefore, acquiring log data to evaluate the formation continues to be critical in the decision-making process, but optimization is essential to maintain the project financial viability.

To reduce costs, one of the options explored by many operators in Argentina and around the world is to move the data acquisition from open hole (OH) to cased hole (CH), performing the operations without the drilling rig. This saves the time to condition the well in addition to the logging operations, saving several rig days. Not all the OH measurements are available in CH, and the corrections required to remove the casing and cement effects add uncertainty, but the CH logs can be an effective solution to reduce costs for wells drilled “infill” in mature fields, where the formations are known and the petrophysical properties and models are well calibrated.

In this presentation we will briefly review the technologies available to evaluate the formation behind casing and present some case studies from Argentina in multilayered tight oil reservoirs in the San Jorge basin and tight gas sands in the Neuquén basin, combining advanced pulsed neutron logs and other measurements to perform a petrophysical analysis behind casing and support subsequent well completion operations.

Bio:



Pablo Saldungaray is a petrophysicist working for Schlumberger providing support for the planning, execution and interpretation of open and cased hole logs, with a focus on wireline services and petrophysical applications. He is also involved in other activities acting as a link between Schlumberger's engineering and research centers, field locations and operating companies. He is currently based in Buenos Aires, providing support to several countries in Latin America south region. Since joining Schlumberger as a Wireline engineer in 1989, he has held various positions in the field and data processing centers in Africa, Europe, Latin America and the Middle East. He has also worked and consulted for oil companies operating in Argentina, Uruguay and Chile. Today Pablo has more than 30 years of experience in the industry. He holds a degree in Electrical Engineering from the Universidad Nacional del Sur (1987), Argentina, and an executive MBA degree from Universidad Austral (1995), Argentina. Pablo is an active member of the SPWLA and SPE. He participated in several papers as author or co-author for these societies and other industry related publications.