

IR27

Open Hole Log Data Acquisition in the Challenging Well Bore Conditions of Northern Iraq

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Abstract

The tectonic stresses inherent in the earth's crust in Northern Iraq create challenges in the drilling and completion of oil and gas wells drilled in this area. Geomechanical studies show that wellbore stability issues can arise when formations are penetrated by well bores. These well bore stability issues can lead to difficulties when attempting to acquire open hole wireline log data leading to increased formation evaluation risks. These risks can be classified as follows:

1. Lost rig time due to the inability of logging tools getting to bottom. (bridging)
2. Lost rig time due to delays associated with making last minute arrangements for alternative logging methods when bridging problems become too severe.
3. Lost in hole charges associated with permanently sticking logging tools due to bad hole conditions.
4. Unsound decision making throughout the life of the well, because bad hole conditions, made the acquisition of formation evaluation data impossible.

Recent advances in Formation Evaluation technology and conveyance techniques; allow for the acquisition of high quality petrophysical measurements regardless of borehole conditions or geometry.

Logging systems conveyed in the drill string, or through the drill string, have a 100% chance of getting to bottom on the first attempt. With the logging tools securely attached to the drill pipe, the risk of the logging tools getting stuck is also reduced.

The non-traditional conveyance techniques presented on this poster will illustrate several case studies from Northern Iraq which have led to operational optimization to formation evaluation in this area.