

Low Resistivity Low Contrast – A Systematic Evaluation Methodology

<i>Awad El Geed</i>	<i>PDOC (Presenter)</i>
<i>Widaa Widaatalla</i>	<i>PDOC</i>
<i>Bahar Bakheet</i>	<i>PDOC</i>
<i>Ibrahim M. Hassan</i>	<i>WNOPC</i>

Well log evaluations in the hydrocarbon bearing basins in Melut, central Sudan are complicated by the presence of fresh formation water. The low salinities encountered result in relatively high resistivities rendering the differentiation of oil and water difficult.

A major petrophysical hurdle in Sudan is the presence of low resistivity reservoirs. In other words, high resistivity zones (fresh water) interpreted as oil bearing could end up producing water, while low resistivity zones (laminated sand shale / sequences) assumed to be water bearing could indeed be oil bearing and risk by-passing.

Identifying these suspect zones is not a very difficult matter especially when mud logs are deployed, however, the validity of the existing evaluation methods pose a bigger problem and this paper will address ways to tackle this issue.