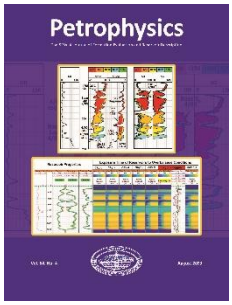

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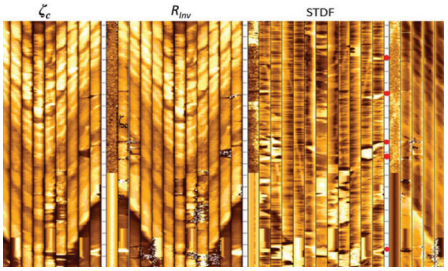
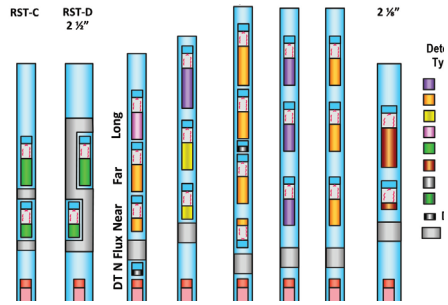


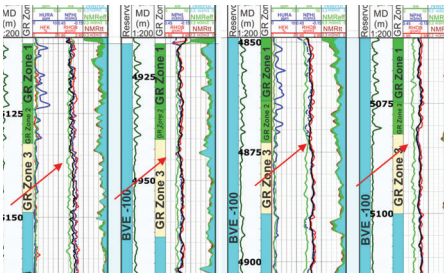
Chen et al. **PAGES 544–554**

The high-definition oil-based mud (OBM) borehole imagers measure button impedances, which are often inverted to produce images of the formation resistivity, formation permittivity, and sensor standoff. These images, each reflecting a unique aspect of the downhole media, can provide a comprehensive understanding of the reservoir's secondary porosity, i.e., fractures and vugs. Forward modeling and inversion are performed to understand and validate the inversion behavior on fractures and vugs, thus explaining many of the phenomena observed in the fields.



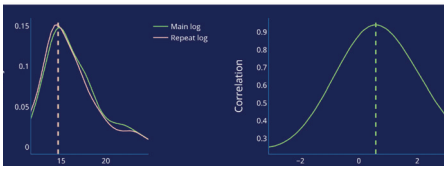
Fitz **PAGES 473–501**

This paper reviews the developments in nuclear logging tools commonly used in surveillance of reservoir fluid movement in steel-cased wellbores. It includes gamma ray and spectral gamma ray, single-detector neutron, dual-detector neutron, chlorine, pulsed-neutron capture, and pulsed-neutron spectroscopy tools. Log examples of some of the monitor logging techniques used are given, as are figures from some of the original patents for these logging tools. The key people responsible for these developments are cited, and references to the most important papers describing their work are also given.



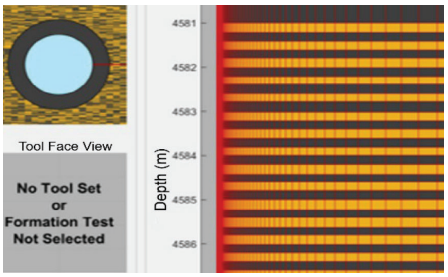
Jácomo et al. **PAGES 518–543**

The presalt carbonates reservoirs of the Barra Velha Formation (BVF) present a complex mineralogic distribution and heterogeneous physical properties, making it challenging to construct a reliable mineralogical model. Here, the authors propose a mineralogical model for the BVF using well-log curves to quantify calcite, dolomite, quartz, shale, and stevensite and observed that the model fits well with the stratigraphic interval and allows a better understanding of the mineralogical distribution in the BVF.



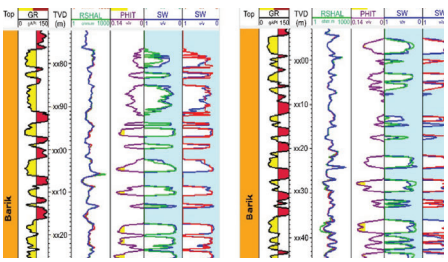
Jin et al. **PAGES 568–573**

Open-source Python libraries, such as Python Dash, DLISIO and LASIO, are utilized to facilitate the implementation of intelligent petrophysics solutions and reduce the time from development to the deployment cycle. The automated workflow improves both the effectiveness and efficiency of routine data quality control processes.



Merletti et al. 1 **PAGES 502–517**

This paper describes the implementation of a compositional fluid-flow simulator to numerically model WBM-filtrate invasion and mudcake buildup in vertical boreholes. The outputs—saturation and salintiy radial profiles—are used to simulate vendor-specific array resistivity logs via forward modeling. Actual and synthetic reservoir configurations are used to understand the reservoir properties, drilling mud characteristics and drilling conditions at which deep mud-filtrate invasion occurs across the Barik (tight-gas) reservoirs.



Merletti et al. 2 **PAGES 555–567**

This paper describes the implementation of inversion algorithms solving for uninvaded formation resistivity (R_t), addresses their limitations in deeply invaded reservoirs (L_{xo} > 1 m), and proposes an iterative approach where inversion results are constrained by core measurements and oil-based mud (OBM)-equivalent interpretation data. This iterative approach was extensively used in Barik (tight-gas) reservoirs, where water saturation (S_w) can be overestimated by up to 20 s.u. if as-acquired deep laterolog apparent resistivities are used in volumetric calculations.