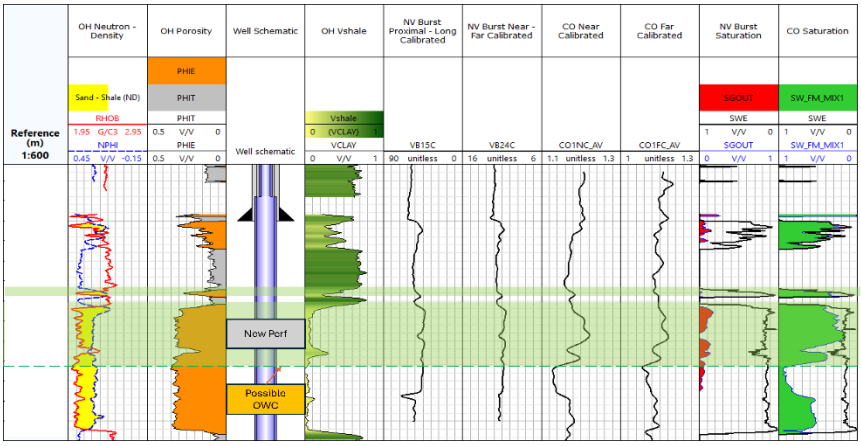
Saturation Logging Confirms Hydrocarbons, Optimizes Perforation Planning, Improves Long-Term Reservoir Management



The log shows fluid saturation identification using N-Vision and carbon/oxygen logging as deployed by Raptor 2.0 system. From the picture, the possible oil-water contact has been pinpointed, and the stronger oil response has been shaded with green.

Objectives

- Confirm the presence of oil and water across the target interval to support informed perforation planning.
- Assess the full area behind casing to uncover any remaining hydrocarbon potential.

Our Approach

- An operator needed N-Vision and carbon/oxygen (C/O) pulsed neutron logging to identify the current fluid contact and saturation in the target reservoirs.
- Weatherford experts recommended the Raptor 2.0 cased-hole evaluation system to ensure comprehensive coverage of the target reservoir, including the perforation interval.
- In collaboration with field personnel and the operator, Interpretation and Evaluation Services (IES) experts ensured successful deployment, high-quality data acquisition, and log quality control (QC).
- A Monte Carlo N-particle model was requested following the operator's given input. The model validated the response envelope and ensured coherence in the saturation interpretation.
- Using a 70% near/30% far detector ratio, the C/O logging revealed approximately 65% oil saturation in the target interval.

LOCATION
Malaysia

FORMATION
Sandstone

HOLE SIZE AND ANGLE
8-1/2 in., deviation up to 68°

CASING SIZE
Single 5-1/2 in.

PRODUCTS/SERVICES
- Raptor 2.0 cased-hole evaluation system
- Interpretation and evaluation services

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Value to Customer

- **Confirmed Hydrocarbon Presence:** The Raptor 2.0 system, combined with expert interpretation, accurately identified the oil/water contact.
- **Enhanced Perforation Planning**: The saturation analysis enabled the operator to pre-select optimal perforation intervals, improving reservoir access and production strategy.
- **Improved Reservoir Management**: The insights provided a solid foundation for long-term reservoir development and decision-making.
- **Extended well production life**: The operator added perforation from the potential zone and converted an idle well to production.