

## CHALLENGE

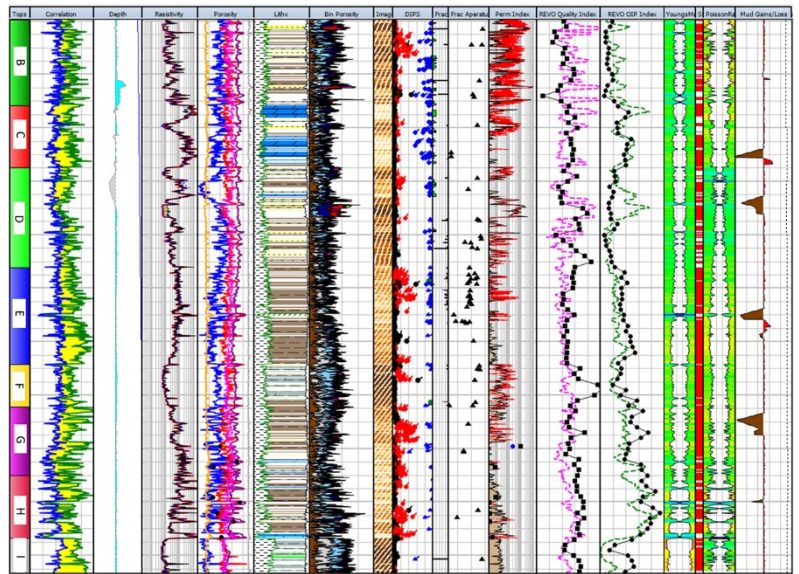
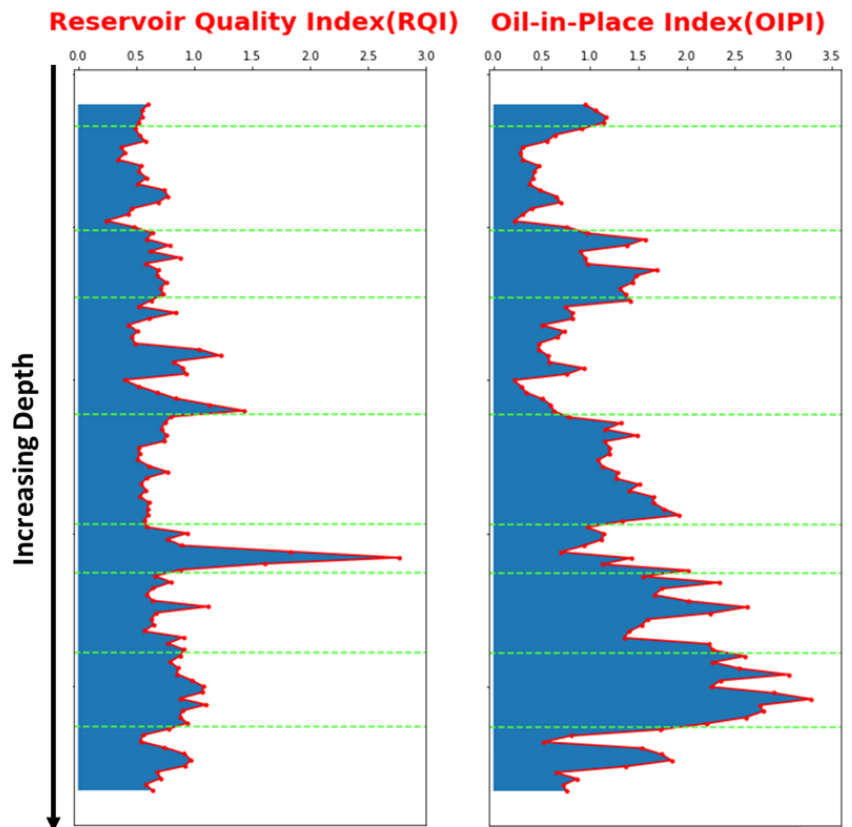
- Operator needed an effective, cost-efficient and fast reservoir characterization method to determine horizontal landing zone.

## PROCESS

- Well cuttings from pilot well were obtained and sent the lab while drilling
- Geochemical fingerprint of hydrocarbon from cuttings were collected and data mined for reservoir characterization indices

## RESULTS

- Delivered a group of reservoir characterization indices including reservoir quality index, oil-in-place index and in-situ water saturation index that helped the operator quickly (within days) fine-tuned the landing zone while drilling
- Reservoir Characterization Indices (RCI) in agreement with other petrophysical data (NMR, and other logging data) and served as an independent validation for the landing zone selection



(Upper) Reservoir Quality Index (RQI) and Oil-in-Place-Index (OIPI) as part of a group of RCIs generated from the cutting samples; (Lower) RQI and OIPI (linked black dots) plotted in comparison to log-derived permeability and log-calculated oil volume (green dashed line), along with other petrophysical analyses.