

ABSTRACT

This project was conducted in Petrotrin's Antilles Oropouche Field located in the southern basin of Trinidad in an attempt to identify and evaluate remaining untested resistive intervals for the Antilles Oropouche (AO) wells. The study served to provide (1) generally low risk, economic intervals for recompletion by Petrotrin and (2) for use as a counter proposal for analysing the technical work plan for bid proposals should a decision be made to externally lease.

Identification of the untested intervals was done using strip logs and a Geolprd Report generated from Petrotrin's WIS database. A total of ninety-four (94) wells were reviewed resulting in the identification of forty-two (42) untested intervals in thirty-two (32) wells. Remaining recoverable reserves, R_{rem} were determined through the development of NOS and Bubble map sections previously not developed for these smaller uphole sands. Water saturation (S_w) values per NOS section were determined from log analysis of the Induction Electric Logs (IEL) and Compensated Formation Density (CFD) Logs. Due to the lack of core data and CFD logs for untested intervals for porosity determination, a CFD Plot was developed using six (6) of the available CFD logs.

An economic evaluation was done using an excel spreadsheet programme developed by the company for three different oil prices, 15, 20 and 25 USD per

barrel. The economic spreadsheet was also used to arrive at predicted values of initial production per interval based on annual decline rates.

Untested intervals were rated based on; calculated remaining recoverable reserves, payout time and P/I ratio and an overall rating incorporating well status, well potential, location and access road condition. A total of eight (8) categories were used for the overall rating system.

Four (4) of the prospective intervals with calculated remaining recoverable reserves in excess of 20,000 barrels of oil with payout time of 0.5 years and under. Another four (4) of the intervals determined as being depleted by surrounding wells.

There is a high percentage of small net oil sand intervals from the untested intervals identified, a total of twenty-three (23) intervals that are less than or equal to 15 ft from the forty two (42) identified.