

The well was zoned for formation changes, obvious R_w changes and shale parameter changes. Within these zones, the cleanest, highest resistivity sands were analysed using optimistic parameters. Where these such sands showed no evidence of hydrocarbons, then it was inferred that all other sands of lower resistivity and similar porosities were also water saturated.

The water saturations (S_w) were calculated using the Indonesia equation as shown below. The constants a , m and n were kept as 0.81, 2.0 and 2.0 respectively:

$$S_w = (V_{sh}^{0.5}(2 - V_{sh}) / (R_{sh}/R_t)^{0.5} + (R_t/R_o)^{0.5})^{-2/n}$$

The anomalously high water salinities calculated cannot be ignored as all evidence suggests extremely high NaCl equivalent concentrations. If lower salinities (higher R_w 's) are used, the water saturations calculated are in the 200% to 300% range. The deep resistivity values are so low (0.3 to 3.0 ohm/m) that it is impossible to suggest less saline formation waters, although salinity does decrease to a more reasonable range with depth.

Despite using what appear to be very optimistic R_w values, no evidence of hydrocarbons is seen in any zone throughout the well. All potential reservoirs (some of which have excellent porosity and permeability) are interpreted to be fully water saturated as no shows were observed while drilling.