

**SUMMARY**

A significant accumulation of hydrocarbons was found in Yolla-1. Total net pay in this well is 58 m.

The average porosity of the top zone (1805-1846 m) is 26% and the average water saturation is 51%. A hydrocarbon water contact is interpreted at 1846 m.

The average porosity of the bottom zone (2718-2995 m) is 19% and the average water saturation is 30%. A hydrocarbon water contact is not interpreted.

The results of the analysis along with the pertinent input log data are shown in Table 2.

**DISCUSSION**

Yolla-1 wireline logs were analysed for porosity, water saturation and fluid content. Well logs available for interpretation were from Suite #3 and include the following:

Induction Spherically/Focused Micro Spherically Focused/  
Gamma Ray/Sonic  
Litho Density/Compensated Neutron/Gamma Ray  
High Resolution Dipmeter  
Repeat Formation Tester

The quality of the data was basically good except for borehole effects in washed-out areas of the well. Where the reservoir quality rock is in gauge the log data is valid.

There were problems with the Sonic, Dipmeter and Repeat Formation Tester. All problems associated with these tools were corrected either before the job was completed or during subsequent post-processing.

Log information obtained from the ISF-BHC-MSFL-GR-SP-CAL log heading applicable to the log analysis is:

Depth logger	3351 m
Resistivity of the filtrate	.838 ohm meters at 16 Deg. C.
Bottom hole temperature	121 Deg. C.

**TECHNIQUE**

The dual water method of analyzing shaly formations was used in processing these data. The basic Archie water saturation equation was modified to take into account the varying amounts of shale. The water saturation equation used in the interpretation is:

$$S_w = (R_{mix}/(R_t * \Phi^{**M}))^{**0.5}$$

$$R_{mix} = R_{wb} * R_{wf} / (V_{sh}(R_{wf} - R_{wb}) + R_{wb})$$

$S_w$  = water saturation

$R_{mix}$  = resistivity of the formation water (a function of free and bound water resistivities)