



Geophysics
International

PETRO-SONDE RESPONSE TO THE STRAWN REEF

Petro-Sonde Survey - Oil and Gas Division

LOCATION. Midland County, West Texas; U.S.A.

OBJECTIVE OF THE PETRO-SONDE SURVEY. To determine the Petro-Sonde's ability to delineate the top of the Strawn Reef and the porosity within it.

GEOLOGY. Lower Pennsylvanian carbonate reef with erratic porosity development. Reef is overlain by shale.

INFORMATION AVAILABLE. General knowledge of stratigraphic column.

CONCLUSIONS AND COMMENTS. The Petro-Sonde accurately determined the depth to the top of the Strawn reef and to the porosity zones. Figure 1 is a comparison of a dual induction log and a Petro-Sonde relative resistivity log. Note the discrepancy in the thickness of the upper porosity zone between the two logs. Hydrocarbons amplify the resistivity contrast within a porosity zone. The Petro-Sonde only identified 16' of the 32' porosity zone because this is where the majority of the hydrocarbons are located. In effect, the Petro-Sonde identified the net pay, as opposed to the net porosity thickness.

COMPARISON OF DUAL INDUCTION LOG AND PETRO-SONDE RELATIVE RESISTIVITY LOG.

C.S. - CONTINUT SIGNAL INDICATES THE POTENTIAL PRESINCE, AND THE DEPTH AND THICKNESS OF OIL, GAS, AND WATER RESOURCES

L.S. - LITHOLOGICAL SIGNAL DETIRM'NES DEPTH AND TH'CKNESS OF FORMATIONS

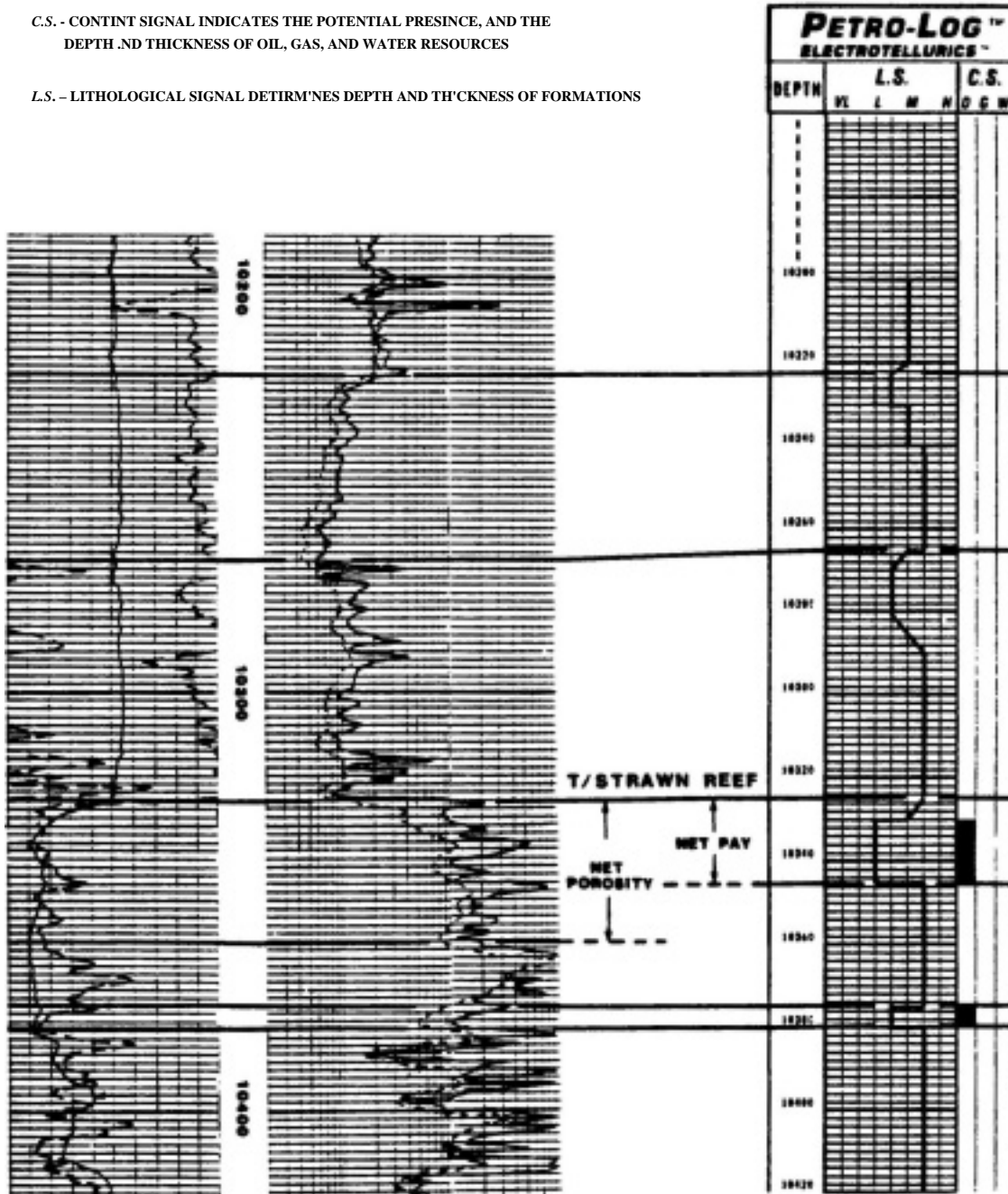


FIGURE 1