

# POSSIBLE GROUND WATER INFLUENCE ON THE HABITAT OF OIL IN THE GULF COAST

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## ABSTRACT

Within the geologic setting of the Gulf Coast the regionally seaward movement of ground water has a significant effect on some phases of oil and gas movement and concentration. Evidence is cited which indicates that the beginning of hydrocarbon formation comes fairly soon after deposition of the sediments.

The effects of ground water on oil or gas accumulation may be separated into two broad categories: (1) those in shallow, relatively unconsolidated sediments with a high water content, and (2) those at greater depths where shales are at least moderately compacted and where fluid movement is mainly through sands, silts or permeable carbonates. Evidence in the first case must come mainly from studies of modern sediments and from ground water hydrology and geochemistry. In the second case, the evidence rests upon data from all phases of subsurface geology and from the history as well as the distribution of hydrocarbon reservoirs, both structural and stratigraphic.

An increased understanding of both of these categories of ground water effects upon oil or gas concentration should result in a concomitant increase in exploration efficiency and success.