mentation to the confines of the Sea even though no physiographic barrier is present to hinder flow to the adjacent Bay of Bengal. Thus, the sedimentation in the two areas is from two different sources producing lenses of sedimentation of geosynclinal scale side by side from different sources. The development of the entire Andaman margin is effectively controlled by these circumstances.

Off the southern Atlantic coast of the United States, the Gulf stream forms an effective boundary to the detrital terrigenous sediments of the upper shelf and the bioclastic sediments of the outer shelf and Blake Plateau. The combination of broad shelf and strong regional current also influence the form of the coast and apparently also prevents the active formation of submarine canyons.

ORIGIN, GEOMETRY AND PRODUCTION OF A SANDSTONE RESERVOIR

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Oil production from the Robinson sandstone, of Pennsylvanian age, is localized by the LaSalle anticline in an area 25 miles long and up to 10 miles wide. However, within the structurally high area, production is controlled by stratigraphic variations. Original oil in place is estimated as 750 million barrels — approximately 1160 bbls/acre-ft. Primary production was by solution gas drive; supplemental recovery methods include vacuum, gas repressuring, water flooding, and *in situ* combustion.

Detailed core and log studies have led to an interpretation of the depositional environment and an understanding of the rock and reservoir characteristics of the Robinson sandstone. This information has explained the discontinuity of productive areas and has guided supplemental recovery operations.

Sandstone occurs in isolated or coalesced lenses up to two miles long, one-half mile wide, and up to 50 feet thick; these are enclosed in siltstone and shale. Each lens is usually characterized by a sharp erosional basal contact, gradational upper contact, decreasing grain size upward, absence of marine fossils, abundance of carbonized wood fragments, and sedimentary structures that are predominantly high-angle cross stratification and trough-shaped ripple laminations. The direction of sediment transport, measured from sedimentary structures in geographically oriented cores, parallels the long dimension of a sand body. Collectively, these characteristics are interpreted as indicating a fluviatile environment of deposition.

Variation in sandstone texture and in the type and distribution of sedimentary structures controls variation in porosity, permeability (specific, directional, and relative), as well as general reservoir heterogeneity. Internally the sandstone lenses may be uniform vertically, or they may be made up of layers characterized by distinct texture and sedimentary structure. In general, porosity and permeability decrease upward as well as laterally from the center to the edges. Internal variations in texture and sedimentary structure control primary production as well as secondary recovery by water floding and *in situ* combustion.

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