

SUBDIVISION AND REGIONAL STRATIGRAPHY OF THE PRE-PUNTA GORDA ROCKS (LOWERMOST CRETACEOUS-JURASSIC?) IN SOUTH FLORIDA

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ABSTRACT

In recent years several wells have been drilled in the South Florida Basin through carbonate and evaporite sequences to depths as much as 5,300 ft below the Punta Gorda Anhydrite. The deepest well penetrated igneous basement rocks to a total depth of 18,670 ft. Correlation of anhydrite beds below the Punta Gorda has revealed several thick anhydrite units (200 to 400 ft) with regional persistence.

The pre-Punta Gorda section is subdivided into four easily identifiable units listed in order of increasing age — Lehigh Acres (lowermost Comanchean), Pumpkin Bay (upper Coahuilan), Bone Island (lower Coahuilan), and Wood River (Jurassic?) Formations, all newly named in this report. In addition, the Lehigh Acres is divided into the West Felda Shale (base), Twelve Mile, and Able Members which are also named and defined in this report. Geochemical evidence indicates that the Lehigh Acres unit and the upper part of the Pumpkin Bay unit contain the most likely source beds for petroleum.

Only two production tests have been carried out in the basin in strata below the oil-productive Sunniland Limestone. One was through casing in a Wood River dolomite zone. It reportedly produced water and some gas. The other was a drill stem test in an upper Pumpkin Bay dolomite zone which produced only water. In the Gulf Florida State Lease 826Y (Permit No. 275), a moderately porous, 350-ft-thick Pumpkin Bay dolomite zone was observed. As this well is west of the axis of the basin, better reservoir conditions presumably exist on the West Florida shelf than onshore.

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