The Occurrence of Low-Resistivity Oil, Gas, and Carbon Dioxide Mesozoic Reservoirs in the MAFLA Region of the U.S. Onshore Gulf Coast

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Abstract

The Mesozoic rocks of the MAFLA (Mississippi, Alabama, and Florida "Panhandle") region have produced large volumes of oil, gas, and carbon dioxide from numerous traps, most believed to have been sourced by the prolific (Oxfordian) Lower Smackover Brown Dense Lime. Whereas most clastic and carbonate reservoirs in the MAFLA Region typically exhibit high formation resistivity throughout the producing interval, a surprising number of Mesozoic reservoirs exhibit a much more subtle low-resistivity producing profile. This suggests much remaining low-resistivity pay ("LRP") reservoirs left to be discovered in the area. This presentation illustrates many examples of LRP reservoirs discovered in the Mesozoic strata of the MAFLA region and documents the known or theorized cause of the low resistivity associated with those productive reservoirs.