# GEOLOGY OF CHATOM FIELD, WASHINGTON COUNTY, ALABAMA

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## ABSTRACT

Chatom Field, located in Washington County, Alabama, produces sour gas condensate in the Jurassic Smackover Formation. The 1971 discovery currently has four producing wells which average 1170 BCPD, 5027 MCFGPD per well. The four wells supply a 25 million cubic foot sour gas cleaning plant.

Structurally, Chatom Field is an isolated Jurassic closure located along a north-south trending Louann salt ridge. Isopachs indicate both Jurassic and Cretaceous structural growths.

The reservoir rock, the Upper Smackover Formation, consists of a finely crystalline dolomite with intercrystalline porosity and a pelmoldic dolomite with both intercrystalline and moldic porosities. Both types exist together in a single porosity zone. Porosities and permeabilities are generally higher in the pelmoldic dolomites.

Petrographic analysis indicates the Upper Smackover reservoirs were deposited as low energy, pelletal muds and moderate energy, oolitic shoals. Dolomitization occurred early in both the grainstone facies and the non-porous lime-mud facies. The original and dolomitic porosities have been enhanced by selective grain leaching. Following dolomitization and leaching, calcite and anhydrite have infilled some of the porous dolomites along the flanks of the structure.

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