

USGS Assessments of Undiscovered, Technically Recoverable Oil and Natural Gas Resources in the Gulf of Mexico Coastal Plain and State Waters, USA

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The U.S. Geological Survey (USGS), following a geology-based assessment methodology, is in the process of updating estimates of the technically recoverable undiscovered oil and gas resources that are expected to be found in Jurassic-to-Tertiary-aged sediments underlying the U.S. Gulf of Mexico Coastal Plain and State waters. Previous recent USGS assessments in the region include: 1) a 1995 assessment of the entire U.S. Gulf Coastal area (USGS Digital Data Series DDS-30); and assessments of the 2) Upper Jurassic-Lower Cretaceous Cotton Valley Group (2006, USGS Digital Data Series DDS-69-E); 3) the Upper Cretaceous Navarro and Taylor Groups (2006, USGS DDS-69-H); and 4) the Upper Cretaceous Tuscaloosa and Woodbine Formations (USGS Fact Sheet 2006-3146). In 2007, the USGS completed an assessment of undiscovered oil and gas resources in Tertiary strata of the U.S. Gulf Coastal area (USGS Fact Sheet 2007-3066). For purposes of this and subsequent assessments, an Upper Jurassic-Cretaceous-Tertiary total petroleum system (TPS) was defined for the Gulf of Mexico Basin by the USGS Gulf Coast assessment team. For the 2007 assessment, 33 conventional and four continuous (coalbed gas) assessment units (AU) were defined. Of these AUs, 31 conventional and 3 continuous were estimated to contain a mean of 113.7 trillion cubic feet of undiscovered natural gas, a mean of 690 million barrels of undiscovered oil, and a mean of 3.7 billion barrels of undiscovered natural gas liquids in the assessed AUs. Detailed geologic reports supporting this assessment are in preparation.

For the next phase of assessments in the Gulf Coastal Plain, the USGS assessment team will focus on Upper Jurassic, and Lower and Upper Cretaceous strata that have not been assessed since the 1995 assessment of the entire U.S. Gulf Coastal area. This second phase of Gulf Coast assessments (similar to phase one) will involve characterization of geologic features using the TPS approach, including hydrocarbon source rocks, reservoir rocks, traps, and seals. Exploration and production data from commercial and state databases will also be examined. Assessment results are expected to be released in late 2010, with detailed geologic reports released at a later date.