Estimates of Undiscovered Oil and Gas Resources in the Permian Basin Province of West Texas and Southeast New Mexico

C. J. Schenk, R. M. Pollastro and M. J. Pawlewicz
U.S. Geological Survey
Cschenk@usgs.gov
pawlewicz@usgs.gov

The U.S. Geological Survey (USGS) recently assessed the potential for undiscovered oil and gas resources in the Permian Basin Province of West Texas and southeast New Mexico. This study assessed the potential for technically recoverable oil and gas resources in new field discoveries only; field growth (or reserve growth) of existing conventional oil and gas fields is not included in these estimates. The USGS assessed undiscovered conventional oil and gas resources and continuous (unconventional) oil and gas resources in 30 assessment units (AUs). For conventional resources, the total estimated means were 747 million barrels of oil (MMBO), 5.2 trillion cubic feet of gas (TCFG), and 236 million barrels of natural gas liquids (MMBNGL) in 26 AUs. For continuous resources, the total estimated mean is 35 TCFG, which includes a mean of about 3 TCFG in the Woodford–Barnett Continuous Gas AU of the Midland Basin, a mean of 15 TCFG in the Delaware-Pecos Basins Woodford Continuous Shale Gas AU, and a mean of 17 TCFG in the Delaware-Pecos Basins Barnett Continuous Gas Shale AU in the Delaware Basin. For continuous oil resources the estimated mean is 510 MMBO in the Spraberry Continuous Oil AU in the Midland Basin. Of the total mean of 41 TCF of undiscovered gas in the province, about 35 TCFG is estimated to be in these three continuous shale AUs. Given that few wells have tested or produced from these AUs, there is significant geologic uncertainty in these estimates of continuous gas potential.

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