

Assessment of in-place oil shale resources in the Eocene Green River Formation, Greater Green River Basin, Wyoming, Colorado, and Utah

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The U.S. Geological Survey (USGS) recently (2011) completed an assessment of in-place oil shale resources, regardless of grade, in the Eocene Green River Formation of the Greater Green River Basin in southwestern Wyoming, northwestern Colorado, and northeastern Utah. No attempt was made to estimate the amount of oil that is economically recoverable, in part because there has not yet been an economically viable method developed to recover the oil from Green River Formation oil shale. The three units of the Green River Formation assessed are (in ascending order) the Tipton Shale Member, the Wilkins Peak Member, and the LaCledde Bed of the Laney Member. Total in-place resources are estimated at 1.44 trillion barrels of oil divided among the three assessed units as follows: (1) Tipton Shale Member, 363 billion barrels of oil (BBO); (2) Wilkins Peak Member, 705 BBO; and (3) LaCledde Bed of the Laney Member, 377 BBO. This result compares with in-place resource estimates of 1.53 trillion barrels for the Piceance Basin of Colorado and 1.32 trillion barrels for the Uinta Basin of Utah and Colorado. The assessed area of the Greater Green River Basin, about 5,500 mi², is about 1.4 times larger than the assessed area of the Uinta Basin (3,834 mi²) and more than four times larger than the assessed area of the Piceance Basin (1,335 mi²). Thus, the oil shale deposits of the Greater Green River Basin are of the lowest grade overall of the three basins that contain Green River Formation oil shale.