Background: Oil and natural gas resources occur throughout much of western, south-central, and eastern Kentucky. Early explorers and settlers found many natural oil and gas seeps, as evidenced by place names such as Burning Springs, Salt Fork, and Oil Valley. In 1818, in McCreary County, Martin Beatty contracted with Huling and Zimmerman to drill a well for brine. It produced oil that was captured in wooden barrels and shipped by barge on the Cumberland River to markets in surrounding states and Europe. The deepest well in the State, the Exxon No. 1 Duncan in Webster County, was drilled to a depth of 15,200 feet in 1977. From 2006 to date, 8 of the 10 most active companies in Kentucky permitted wells in eastern Kentucky and 9 of the ten permitted more than 100 wells each.

Leading Producing Zones: Cambrian to Pennsylvanian rocks produce oil or gas in more than 1,500 pools in Kentucky. Oil is produced from Mississippian limestones and sandstones in eastern and western Kentucky and Ordovician limestones and dolomites in south-central Kentucky. Most natural gas is produced from the Devonian black shale of eastern Kentucky.

Future: There is an estimated 3.4 billion barrels of heavy oil in western Kentucky tar sands. An enhanced oil recovery project is assessing options for producing this resource. Research projects to test deep CO₂ storage potential and CO₂ enhanced oil recovery are under way. Up to 1.2 billion barrels of oil may remain in Kentucky’s oil fields. Pending availability of CO₂, an additional 60 to 200 million barrels of oil could be recovered from Kentucky’s known fields. Exploration and development of shale gas is expanding to western Kentucky.