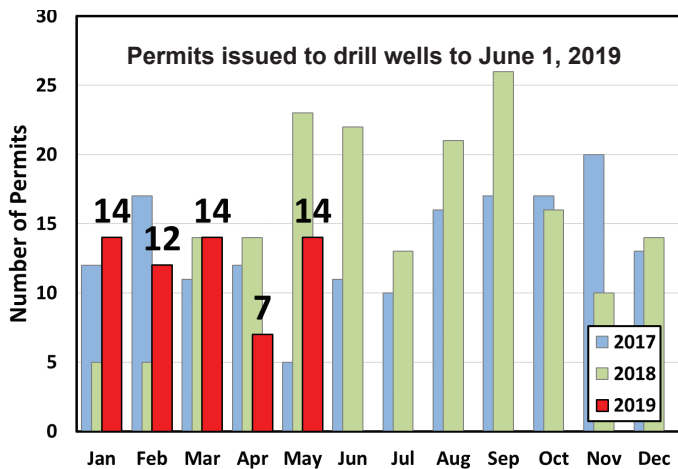
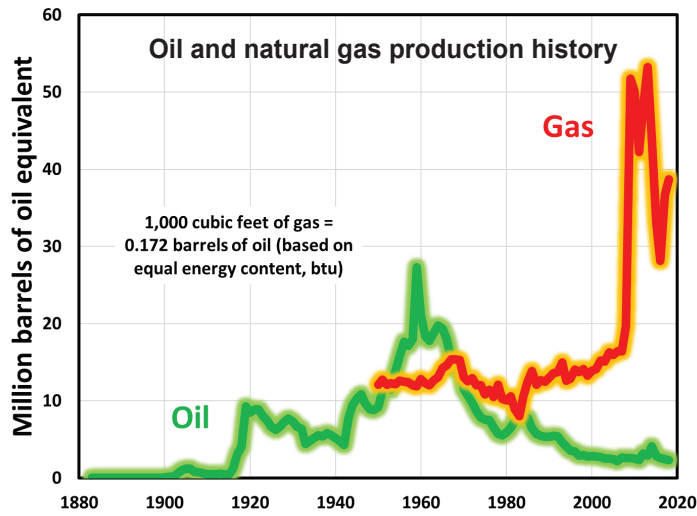


Oil and Natural Gas in Kentucky



Oil and Natural Gas Production in Kentucky 2018*		
	Oil	Natural Gas
Producing Wells (estimated number based on production reports)	14,953	16,237
Producing Counties	61	31
Top Counties (2017 data; 2018 confidential)	Lawrence (367.9 Mbo ³)	Floyd (119.7 bcf ²)
	Henderson (216.4 Mbo)	Pike (29.3 bcf)
	Union (215.5 Mbo)	Knott (13.4 bcf)
	Lee (189.8 Mbo)	Clay (11.0 bcf)
	Webster (130.7 Mbo)	Letcher (10.4 bcf)
2018 Total	2.29 MMbo ³	224.2 bcf
2018 Total Value	\$136 million	\$230.6 million
(tax paid)	(\$6.1 million)	(\$10.4 million)
Top Counties (all years)	Henderson (114 MMbo)	Floyd (1,632 bcf)
	Lee (90 MMbo)	Pike (992 bcf)
	Union (88 MMbo)	Knott (368 bcf)
	Daviess (57 MMbo)	Letcher (257 bcf)
	Ohio (51 MMbo)	Perry (243 bcf)
Statewide Total	810 MMbo	8.5 trillion cubic feet

*2019 data not available. ²bcf = billion cubic feet
¹Mbo = thousand barrels of oil ³MMbo = million barrels of oil

BACKGROUND

Oil and natural gas occur across Kentucky. Early explorers and settlers found natural oil and gas seeps to be common. The first oil boom occurred after the Civil War in south-central Kentucky.

First commercial well:

The Beatty well was drilled in McCreary County in 1818 for brine. The well produced oil that was sold as far away as Europe. The National Park Service plugged the well in 2011

Deepest well:

Chesapeake Appalachia Northup No. 1 LAW in Lawrence County, 15,950 feet (2015)

Leading Producing Zones:

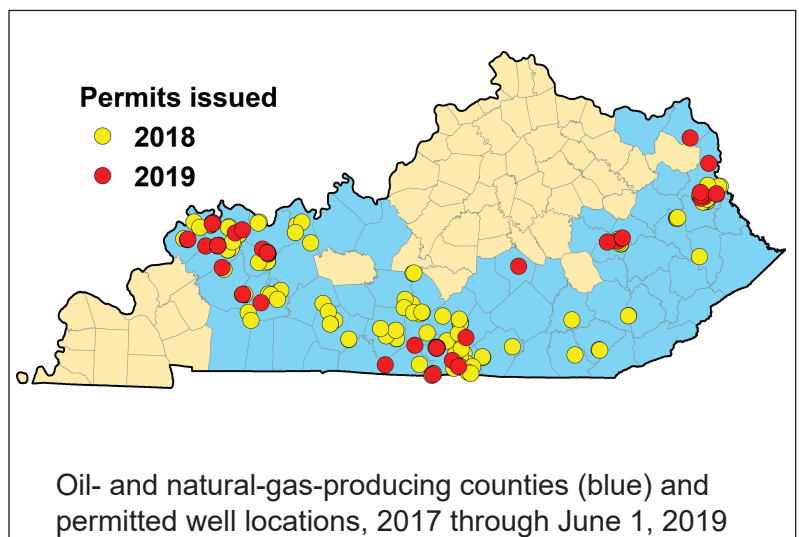
Cambrian—Pennsylvanian rocks produce oil or gas in more than 1,500 pools in Kentucky. Oil is produced from Carboniferous limestone and sandstone in eastern and western Kentucky and Ordovician limestone and dolomite in south-central Kentucky. Most natural gas is produced from the Devonian Ohio Shale of eastern Kentucky.

Activity:

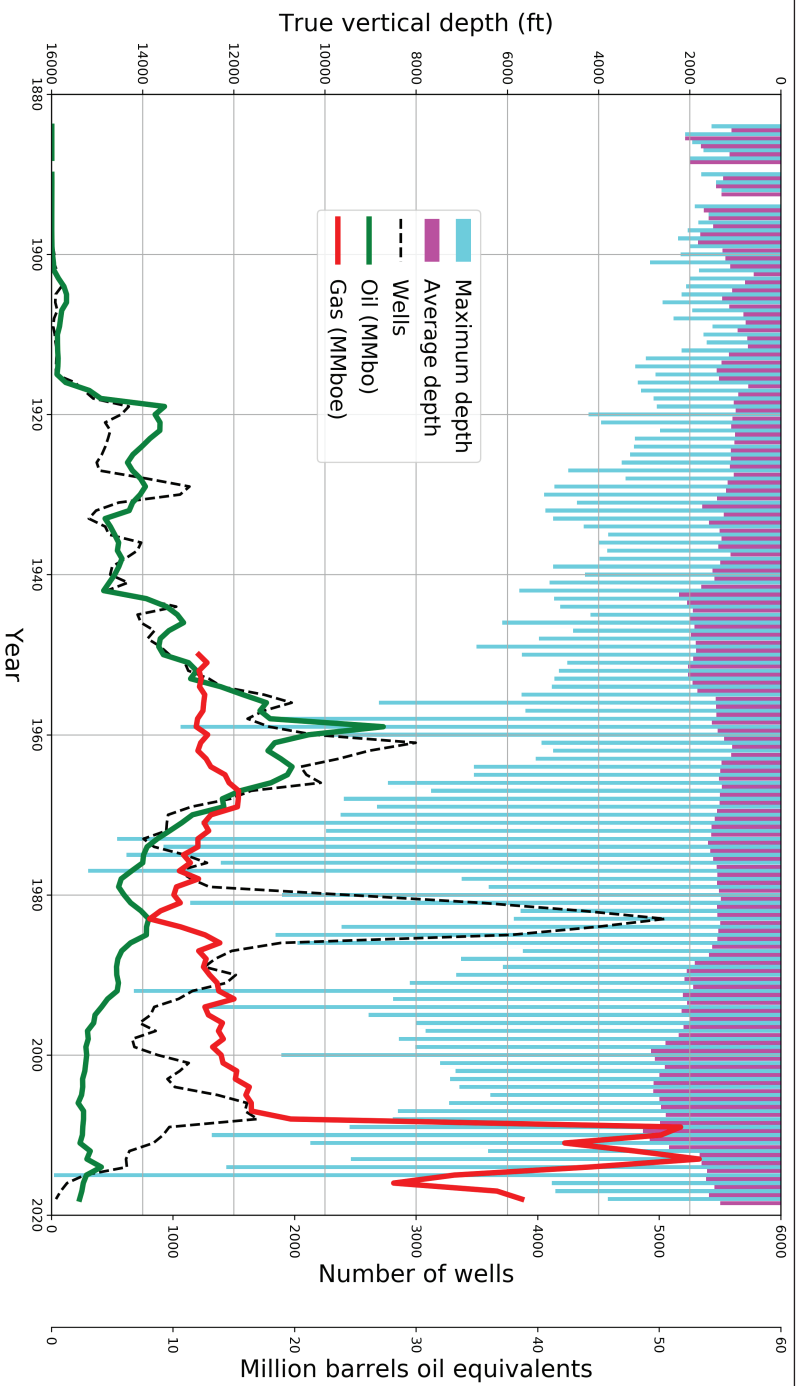
Low prices continue to have an effect on drilling across the state. In 2018, the number of permits issued increased 14 percent to 183. Diversified Southern Production acquired the majority of the Ohio Shale gas production in Kentucky from other companies in 2019.

Future:

A favorable natural gas price could revive interest in the Ohio Shale in eastern Kentucky and spur the infrastructure expansion needed for more widespread drilling in the New Albany Shale in western Kentucky.



Snapshot of Kentucky Petroleum History, 1880–2018



Kentucky's petroleum history begins with the Martin Beatty well, 1818. It wasn't until the 1880s, however, that statewide efforts were made to collect drilling records and production data. The record of Kentucky oil production data begins in 1883. Statewide gas production data were recorded beginning in 1950. In 1912, the first commercial oil well in western Kentucky was completed in Ohio County. The first major oil boom occurred as a result of drilling to supply fuel for our European allies in World War I. Discovered in 1918, the Big Sinking Field, located mostly in Lee County, eastern Kentucky, is the commonwealth's only giant oil field.

Drilling and production generally increased until 1959, when 10 million barrels of oil were produced from the Greensburg Pool, Green and Taylor Counties, west-central Kentucky. The 1960s was the heyday of waterflooding with production of more than 1 million barrels of oil per year from the Big Sinking Field, Lee County. In 1967, natural gas production exceeded oil production on a Btu basis. With increased drilling in the Ordovician Knox Group in south-central Kentucky and the Devonian Ohio Shale in eastern Kentucky, the 1980s saw an unprecedented number of wells completed. The era of horizontal drilling opened in 2007 with the Ohio Shale in eastern Kentucky (leading to record gas production) and in 2011 with oil production in the Devonian Berea Sandstone of northeastern Kentucky. The leading oil-producing county is now Lawrence County.