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Oil & Natural Gas

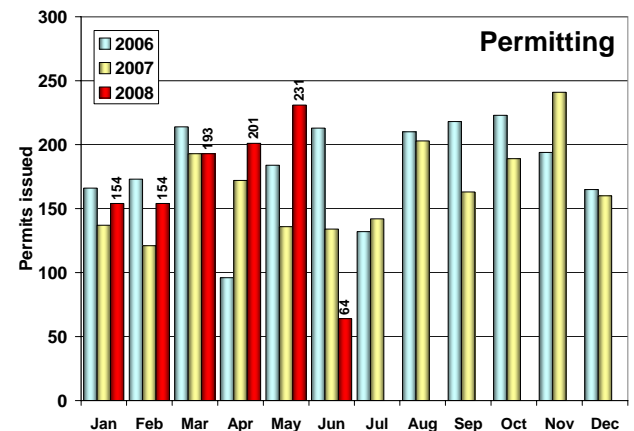
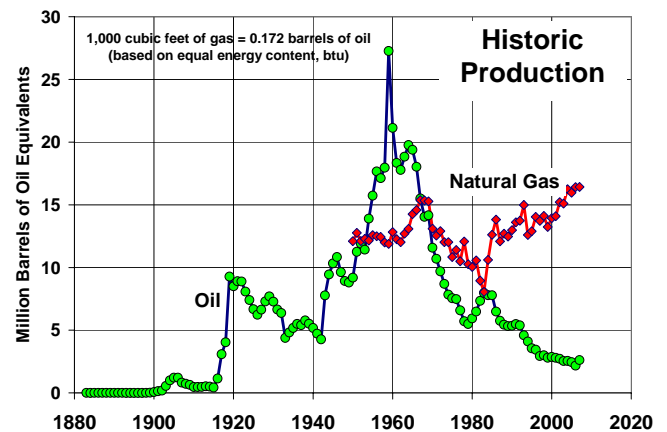
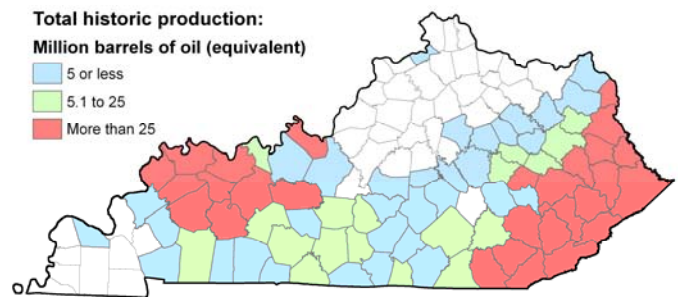
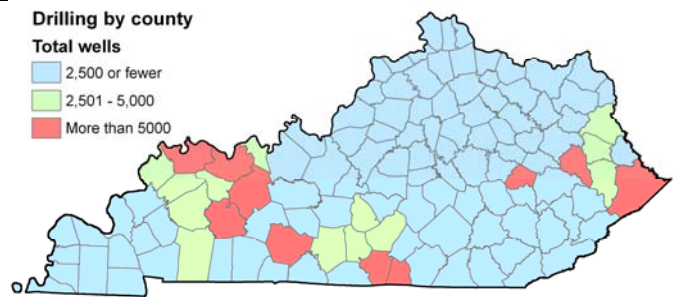
June 2008

Fact Sheet No. 7

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 that was captured in wooden barrels and shipped by barge on Cumberland River. 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 permitted wells in eastern Kentucky and 9 of the ten permitted more than 100 wells each.

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

Future: Kentucky has an estimated 3.4 billion barrels of tar sand and heavy oil. A pilot project to inject steam into these rocks for enhanced oil recovery has a scheduled June 2008 startup. Research projects to test deep CO₂ storage potential and CO₂ enhanced oil recovery are underway. 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.



Oil and Natural Gas Production in Kentucky 2007		
	Oil	Natural Gas
Producing wells	17,624	16,529
Counties	59	36
Top counties (2006 data*)	Henderson (316 Mbo ¹) Union (283 Mbo) Lee (187 Mbo) Muhlenberg (109 Mbo) Webster (101 Mbo)	Pike (32 bcf ³) Knott (12 bcf) Floyd (11 bcf) Perry (7 bcf) Martin (5 bcf)
2007 Total	2.6 MMbo ²	95.3 bcf
Total value (tax paid)	\$166 million (\$7.5 million)	\$678 million (\$31 million)
Top counties (all years)	Henderson (111 MMbo) Lee (87 MMbo) Union (85 MMbo) Davies (58 MMbo) Ohio (50 MMbo)	Pike (611 bcf) Floyd (241 bcf) Knott (216 bcf) Martin (137 bcf) Perry (129 bcf)
Statewide total	780 MMbo	5.66 trillion cubic feet

*2007 data are confidential
¹Mbo – thousand barrels of oil

²MMbo – million barrels of oil
³bcf – billion cubic feet

Search for oil and gas well data: kgsweb.uky.edu/DataSearching/OilGas/OGSearch.asp
 Interactive oil and gas well map: kgsmap.uky.edu/website/KGSGeology/viewer.asp (Petroleum Geology Map layout)
 Kentucky virtual field trips: www.uky.edu/KGS/geoky/fieldtrip/index.htm

Oil and Gas Wells in Kentucky



Kentucky Geological Survey
www.uky.edu/kgs

- Legend**
- Major faults
- Oil and gas wells**
- Well type**
- Oil
 - Gas
 - Enhanced recovery
 - Miscellaneous

