

37. How much oil and gas have been produced in Oklahoma?

Since 1891, Oklahoma has produced about 14 billion barrels of oil and 83 trillion cubic feet of natural gas (Fig. 10).

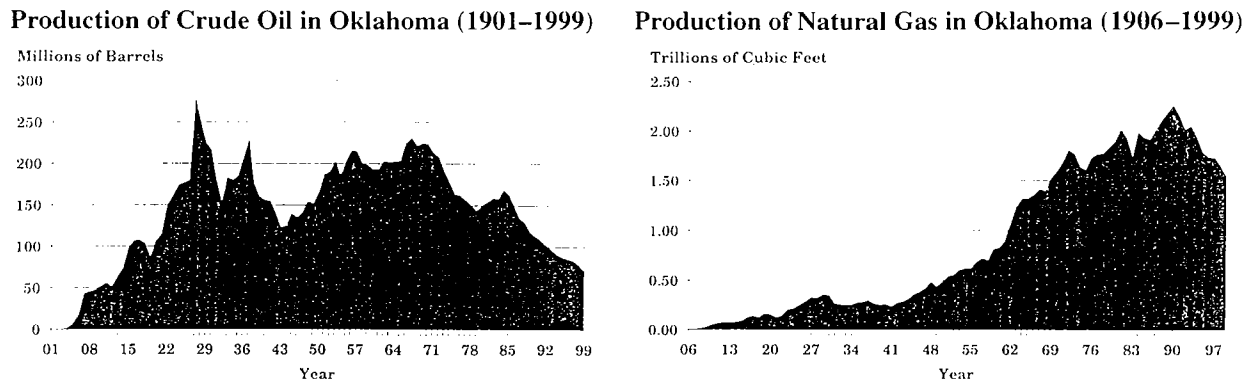


Figure 10 (question 37). Graphs showing production of oil and gas in Oklahoma throughout the 1900s. (Graphs by Charles J. Mankin, Oklahoma Geological Survey.)

38. If oil companies spent more on exploration, couldn't Oklahoma supply all the oil needed in the U.S.?

No. U.S. demand far exceeds Oklahoma's supply.

This year, U.S. demand for petroleum is about 20 million barrels per day. Oklahoma's reserves (see question 36) total about 1,356 million barrels. Thus, if we could magically produce all our petroleum reserves today, we could supply the U.S. for about two months.

Most of the petroleum, particularly crude oil, in Oklahoma that can be easily produced has been produced. Most of the remaining undiscovered reservoirs will be relatively small and their development unprofitable for large multinational companies that have high overhead exploration and production costs. Small companies that have expertise and experience in local petroleum geology, however, may be able to successfully develop some of Oklahoma's undiscovered or partly drained oil fields, even without large exploration budgets.

Most future increases in Oklahoma's petroleum reserves will not come from the discovery of new fields; rather, increased production will result from applying new methods for recovering oil (and gas, to a lesser extent) that has been "left behind" in known reservoirs.

39. Why is seismic exploration rare in northeastern Oklahoma?

Seismic exploration is expensive; and the reservoirs in northeastern Oklahoma are shallow and production potential small.

No petroleum is being produced in Cherokee, Delaware, and Adair Counties, and very little in Craig, Mayes, and Ottawa Counties (from Oklahoma Corporation Commission report titled "1999 Report on Oil and Natural Gas Activity within the State of Oklahoma," by Larry Claxton). The primary reason for this is that any potential petroleum reservoirs in northeastern Oklahoma are near the surface and any oil or gas that once may have been present probably has leaked out. Therefore, the likelihood of discovering any oil or gas in this part of the State is very low.

Numerous small oil and gas fields are present west and southwest of these counties; most of the reservoirs in these fields are shallow and have been producing for many years. New wells typically are drilled near existing wells and are designed to more efficiently produce from an already partly drained reservoir. The best northeastern Oklahoma wells typically begin producing at a few tens of barrels per day and quickly decline to one to five barrels per day. Such low volumes do not justify expensive seismic exploration.