



Oil & Gas in Arkansas: a State of Energy

Millions of dollars of
Oil & Natural Gas
are produced in
Arkansas
each and every day.

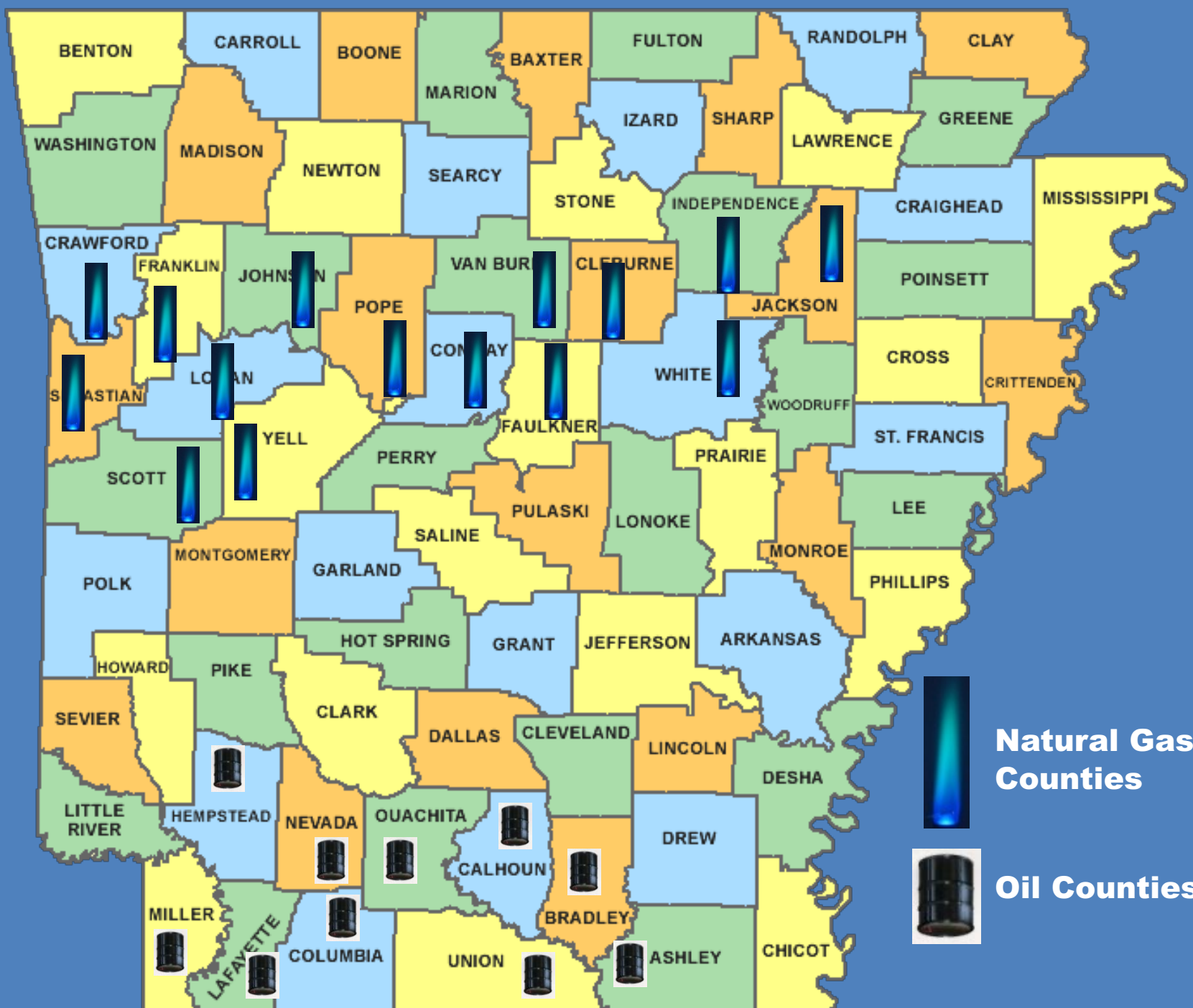


So Arkansas really is
an Energy State!





- **1889** - Natural gas first produced in Arkansas
 - **1921** - Oil discovered in Union County
- **Today** - Arkansas ranks as the 10th leading natural gas producing state & 20th among oil producing states
- **25 Arkansas Counties** - oil or natural gas production



Early History of Oil in Arkansas

- First Arkansas Oil Well – Hunter No. 1 in Ouachita County, but first commercial well was in El Dorado Field in 1921.
- El Dorado grew from a city of 4,000 to 25,000 quickly with 22 trains a day running in and out of the city.
- First well in El Dorado – the Busey No. 1 produced 15,000,000 to 35,000,000 cubic feet of natural gas and from 3,000-10,000 barrels of oil and water per day.
- 1922 – Smackover Oil Field discovered and starts producing on July 1, 1922 and within 6 months, 1,000 wells were drilled.
- By 1925, the Smackover field, covering more than 25,000 acres, had become the largest oil producing site in the world.
- The Smackover field had produced 606,627,681 barrels of oil by 2016.
- The Magnolia field, discovered in 1938, produced 173,099,821 barrels by 2016.
- There are still an estimated 51 million barrels of oil still to be drilled in Arkansas.

Early History of Natural Gas in Arkansas

- Natural gas first discovered in Arkansas in 1887 in Fort Smith, but first commercial was in 1902.
- Formation in Western Arkansas is the Arkoma Basin and wells are conventional – drilled straight down into sandstone formation that easily releases gas.
- 2005 – The Fayetteville Shale began to be drilled.
- Unconventional wells, those in tighter formations of shale, were drilled using a combination of horizontal drilling and hydraulic fracturing to break up this hard, dense shale so that it would release the gas.
- Between the Arkoma Basin, the Fayetteville Shale and the gas still being produced in southern Arkansas, the state produces 1 billion cubic feet of natural gas EVERY DAY.
- In 2013, production from the Fayetteville and Arkoma hit close to 1,200,000,000 MCF for the year.
- North Arkansas fields produce dry gas, while south Arkansas fields produce wet gas – gas with heavier fluid hydrocarbons.



Pump Jack or pumping unit for oil.
Top mechanism is called a
horsehead

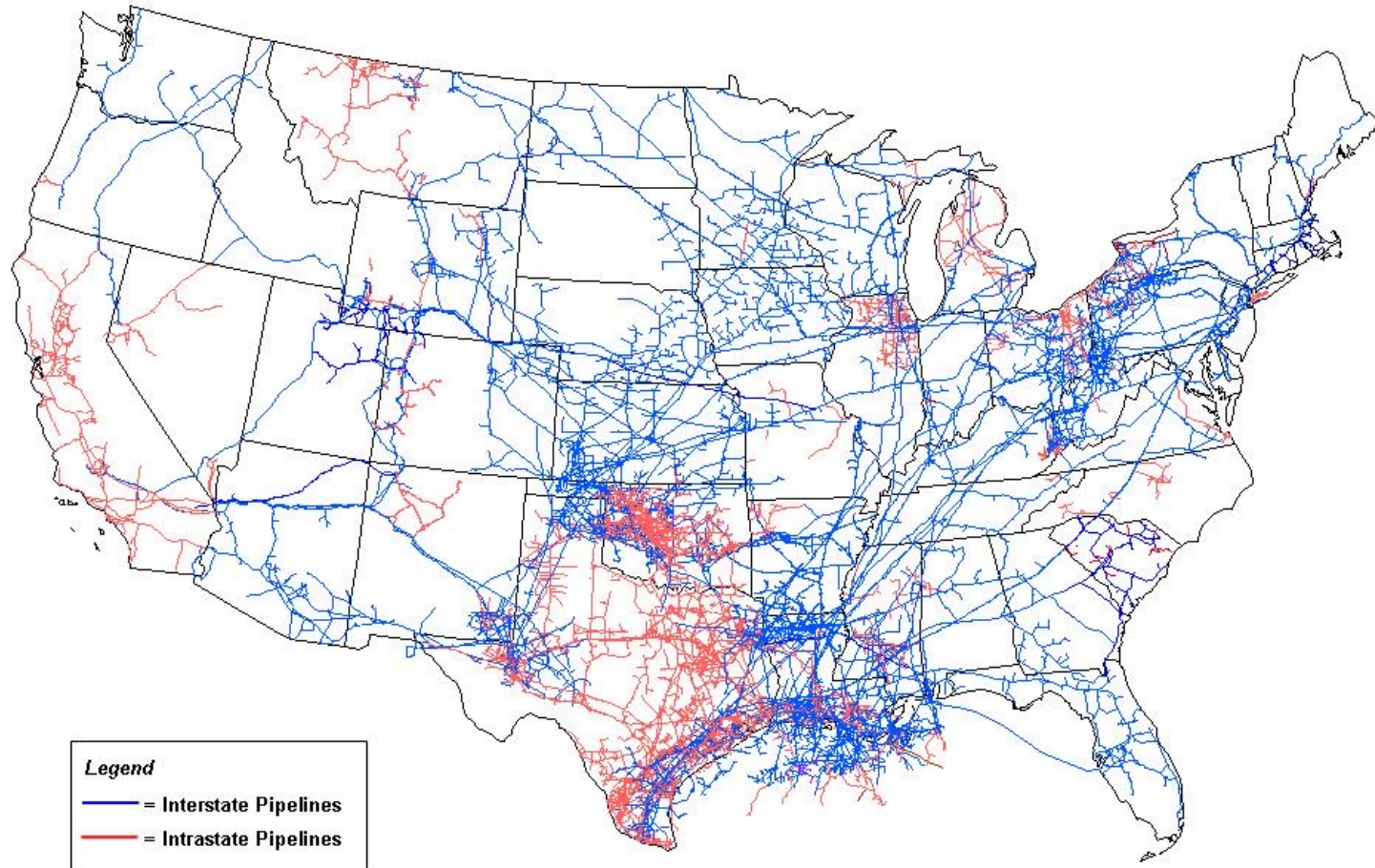
Pumping units for natural gas
are called Christmas trees



Major Oil Pipeline Map



Major Natural Gas Pipeline Map



Source: Energy Information Administration, Office of Oil & Gas, Natural Gas Division, Gas Transportation Information System

Brine Industry in Arkansas

- When oil production began in South Arkansas, the brine, or salty water that was produced with the oil was considered useless.
- By 1957, the Arkansas Geological Survey had discovered that the brine contained large amounts of Bromine, a chemical used in flame retardants, pesticides, industrial cleaning equipment and insulating foam among other things.
- Bromine is not commonly found around the earth, in fact, the largest deposits have been found in South Arkansas and Israel.
- Since 2007, all US bromine production has been in South Arkansas, making the US the second-largest producer in the world after Israel.
- There are two active bromine producers in South Arkansas, Albemarle Corporation and Chemtura, through its subsidiary, Great Lakes Solutions.
- Almost 300,000 BBLS of bromine are produced in Arkansas annually.