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# SOUTHWESTERN OKLAHOMA STATE UNIVERSITY



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CHAIR, OKLAHOMA CORPORATION  
COMMISSION



## **The Changing Dynamics of Oklahoma Energy and the Oklahoma Corporation Commission**

*Oklahoma's leadership in energy production and regulation is key to the State's future. Innovation, creativity, and collaboration are essential for Oklahoma to maintain its leadership position and keep pace with changes occurring in the energy sector.*

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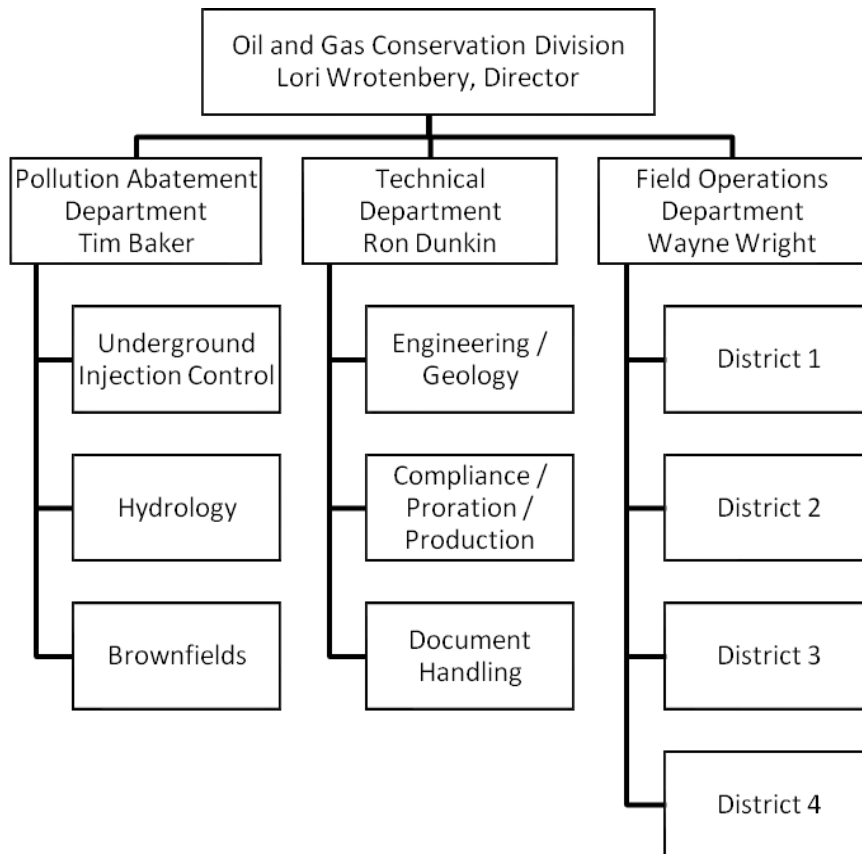
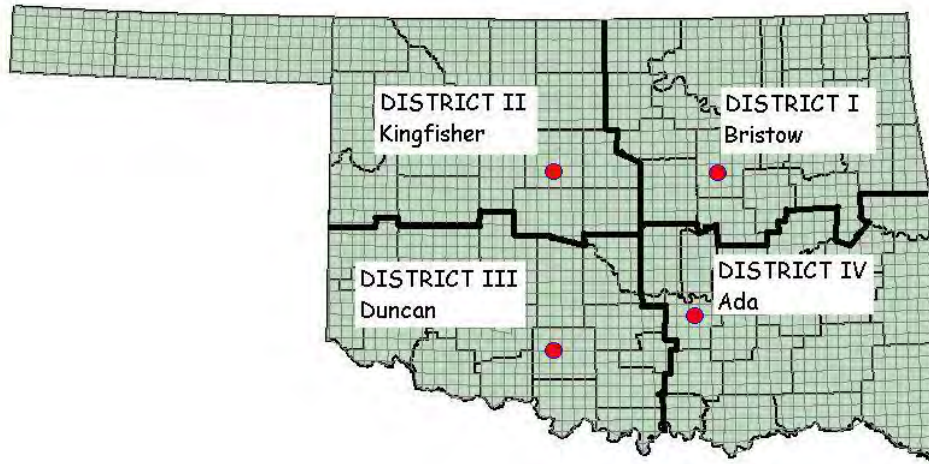


- **Established by the Oklahoma Constitution at statehood (1907)**
- **Three Commissioners, elected statewide, head the agency**
- **About 450 Employees, two main offices, four field offices**
- **The Oklahoma Corporation Commission (OCC) has regulatory powers over:**
  - **Oil and Gas**
  - **Public Utilities**
  - **Transportation**
  - **Petroleum storage tanks**

### **Legal Framework and Institutional Setting** **Basis of Authority and Powers**

- **The Authority and Powers of the Oklahoma Corporation Commission derive from the 1907 Oklahoma Constitution (Article IX, Sections 1-48)**
- **OCC powers are strong and apply to many significant areas and industries with high economic impact, but Federal preemptions and mandates have reduced the scope of some Commission activities (e.g. railroads, pipelines)**
- **Article IX, Section 18**
  - **The Commission shall have the power and authority and be charged with the duty of supervising, regulating and controlling all transportation and transmission companies doing business in this State, in all matters relating to the performance of their public duties and their charges therefore, and of correcting abuses and preventing unjust discrimination and extortion by such companies**
- **Article IX, Section 19**
  - **OCC has powers and authority of a court of record, to administer oaths, to compel the attendance of witnesses, and the production of papers, to punish for contempt any person guilty of disrespectful or disorderly conduct**
- **Article IX, Section 20**
  - **Appeals go directly to Supreme Court**

# OCC Oil and Gas Division Organization and District Offices



## The Oklahoma Experience:

March 26, 1930 - Wild Mary Sudik well blow out  
20,000 barrels oil & 200 million cubic feet gas daily  
Oklahoma City subsequently imposed safety and spacing  
regulations



### BRIEF FACTS CONCERNING HISTORY AND DEVELOPMENT OF OKLAHOMA OIL AND GAS

- **1897** – In 1897, William Johnstone, George B. Keeler, and Michael Cudahy drilled the first commercial oil well, Nellie Johnstone No. 1, in what is now Johnstone Park in downtown Bartlesville. They drilled the well to a depth of 1,300 feet. The well blew in on March 25, 1897, and was completed on April 15, 1897. The well was the discovery well for the Bartlesville-Dewey Field, and ushered in the oil era for Oklahoma.

# OKLAHOMA OIL AND GAS INDUSTRY

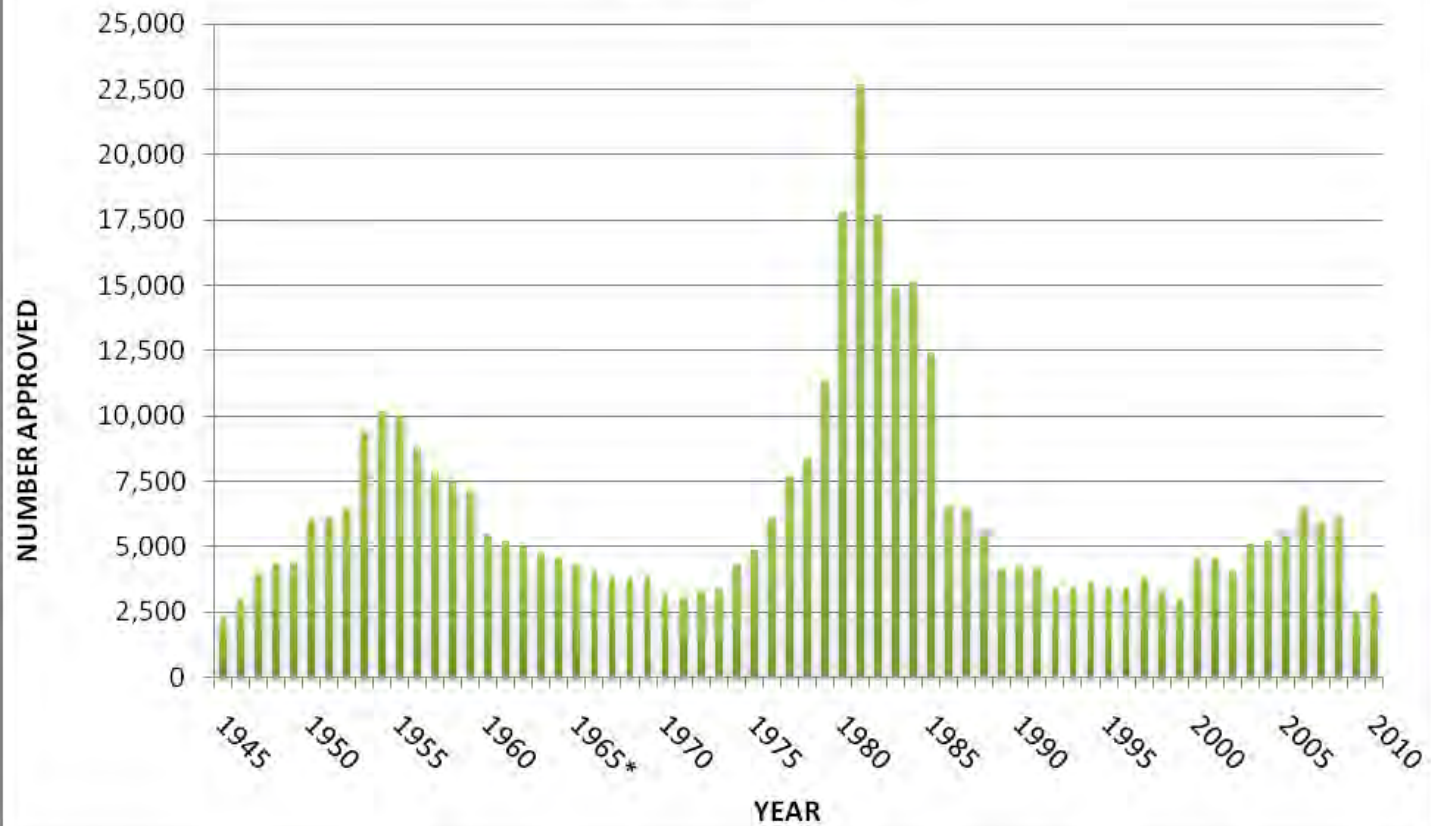
## Active wells:

<b>65,000</b>	<b>Natural gas</b>
<b>115,000</b>	<b>Oil</b>
<b><u>10,500</u></b>	<b>Injection/disposal</b>
<b>190,500</b>	<b>Total active wells*</b>

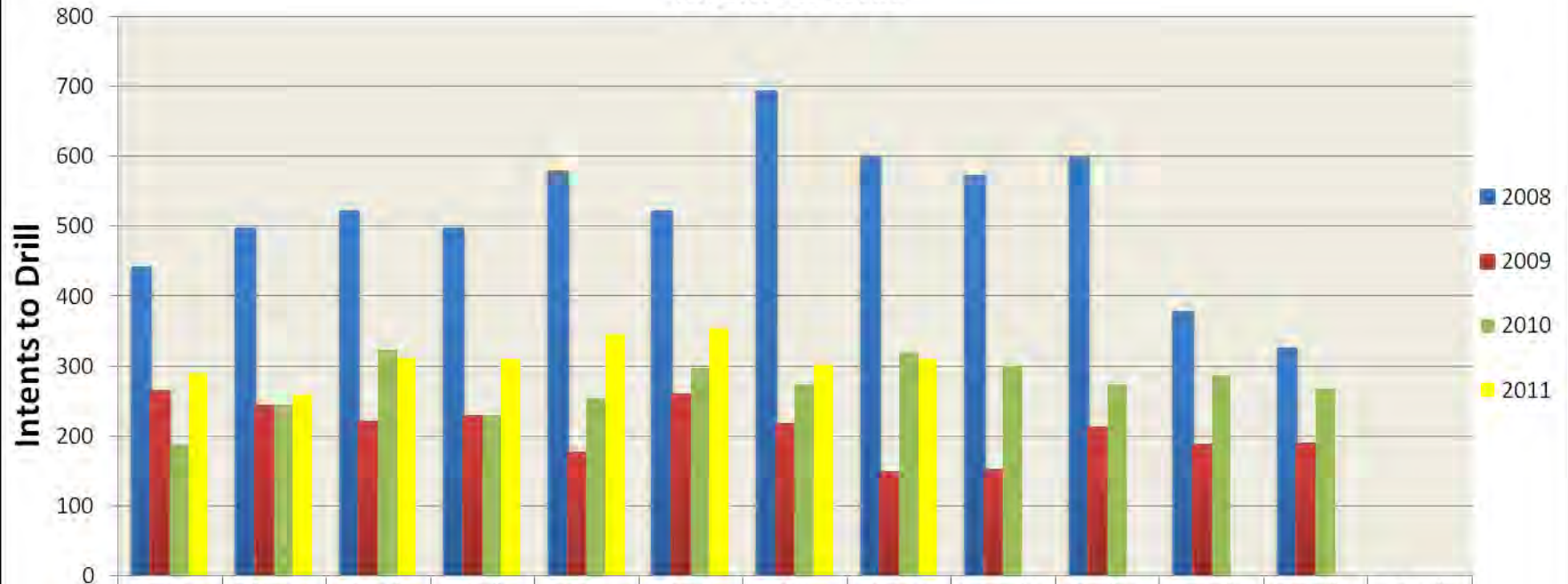
- **~310,000 plugged and abandoned wells.**
- **~500,000 wells drilled in Oklahoma history.**
- **100,000+ hydraulically fractured oil and gas wells.**
- **2,800 active operators of oil and gas wells.**
- **~40,000 miles of pipelines under commission jurisdiction.**
- **(Source: Oklahoma Corporation Commission)**

**\*As of June 2011. The Oklahoma Corporation Commission is currently performing a well inventory project. The figure given above is an estimate of the total number of drilled, not plugged wells provided on a preliminary basis.**

## INTENTS TO DRILL (1945 - 2010)

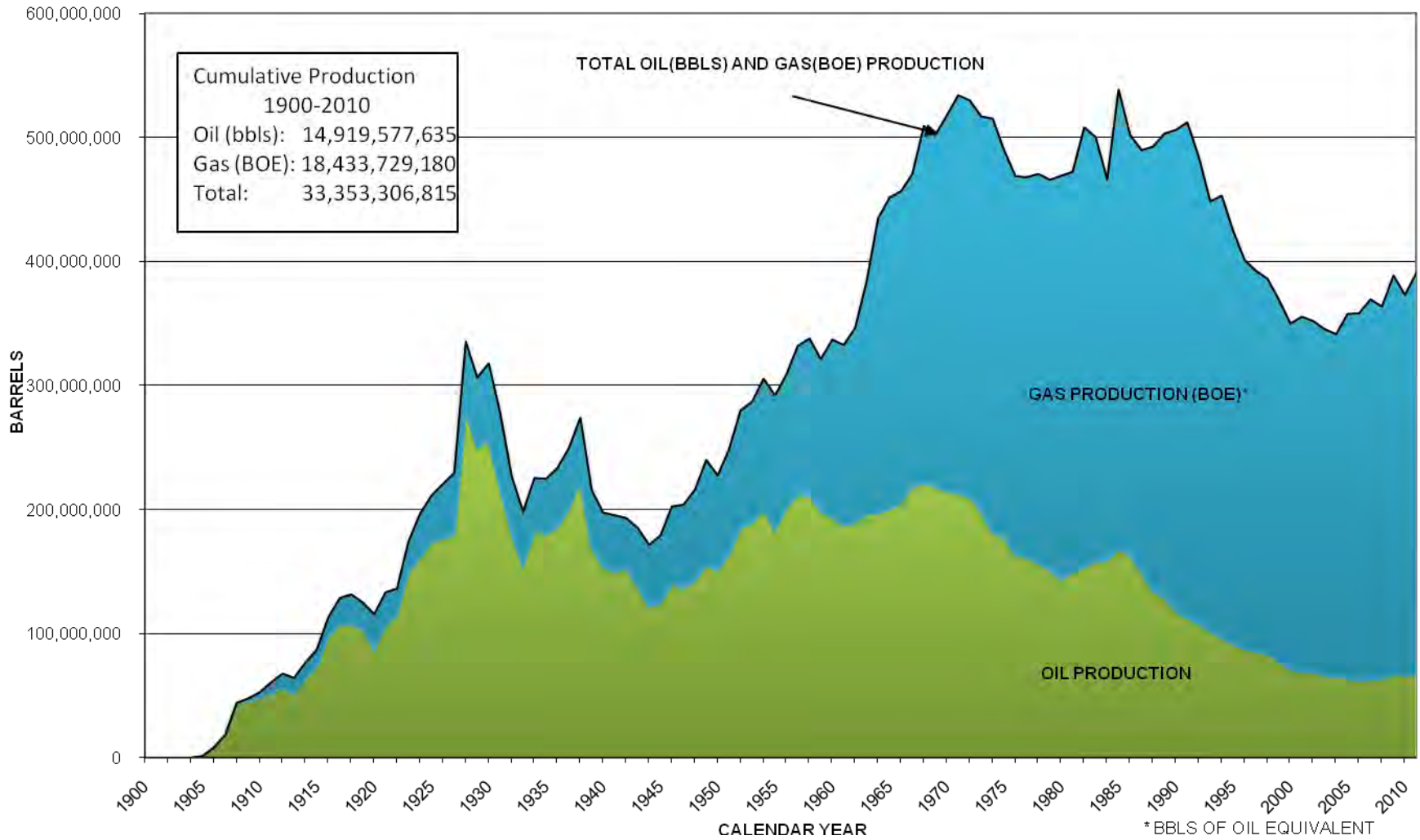


### 2008 - 2011 Comparison: Intentions to Drill

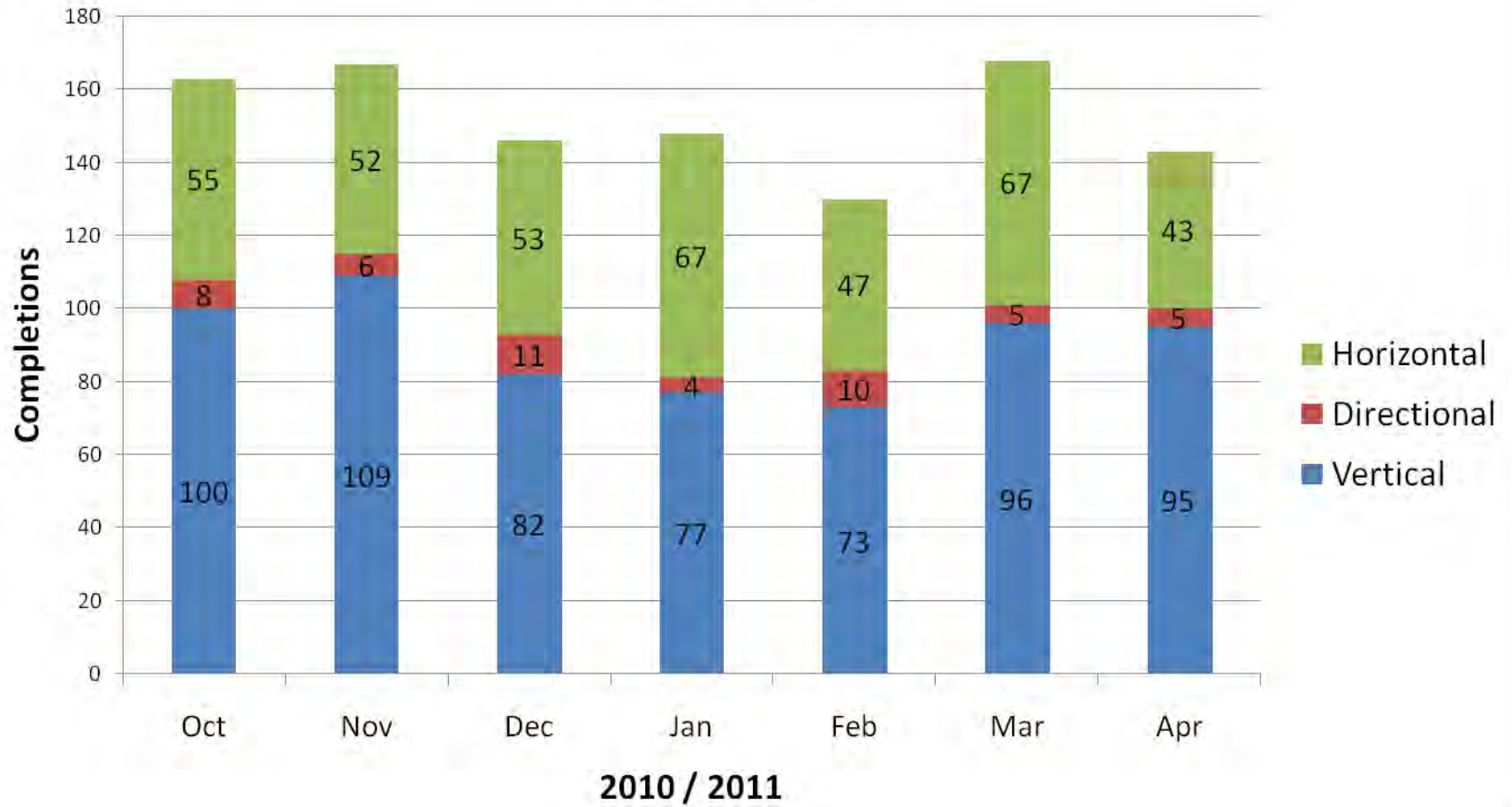


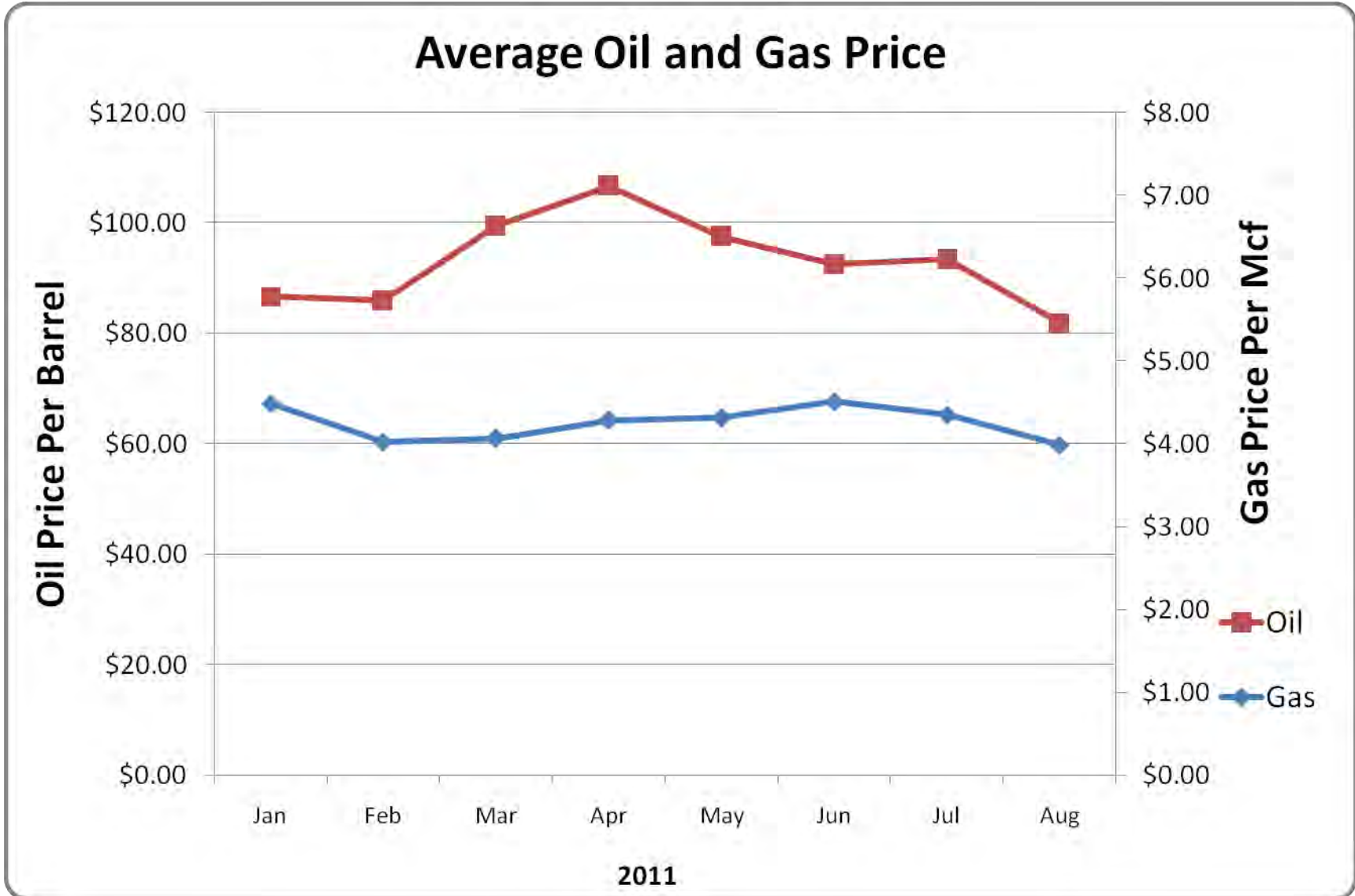
	January	February	March	April	May	June	July	August	September	October	November	December	Total
■ 2008	442	496	521	496	579	521	693	598	572	599	378	325	6,220
■ 2009	265	244	220	228	176	260	217	148	152	213	188	189	2,500
■ 2010	187	245	324	230	255	298	275	320	301	274	288	268	3,265
■ 2011	290	259	312	311	346	354	302	310					2,484

# OKLAHOMA OIL AND GAS PRODUCTION (1900-2010)



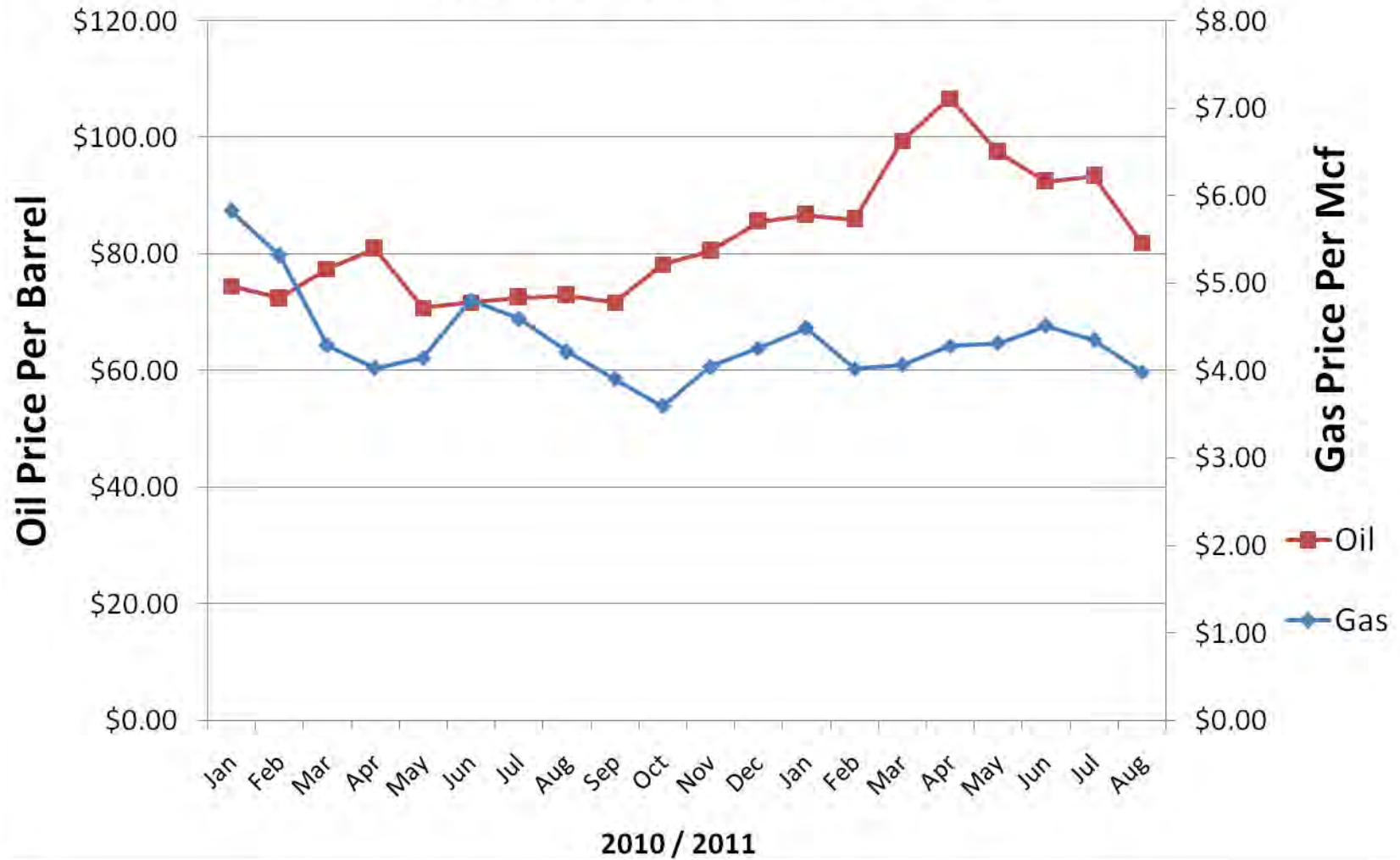
# Completions



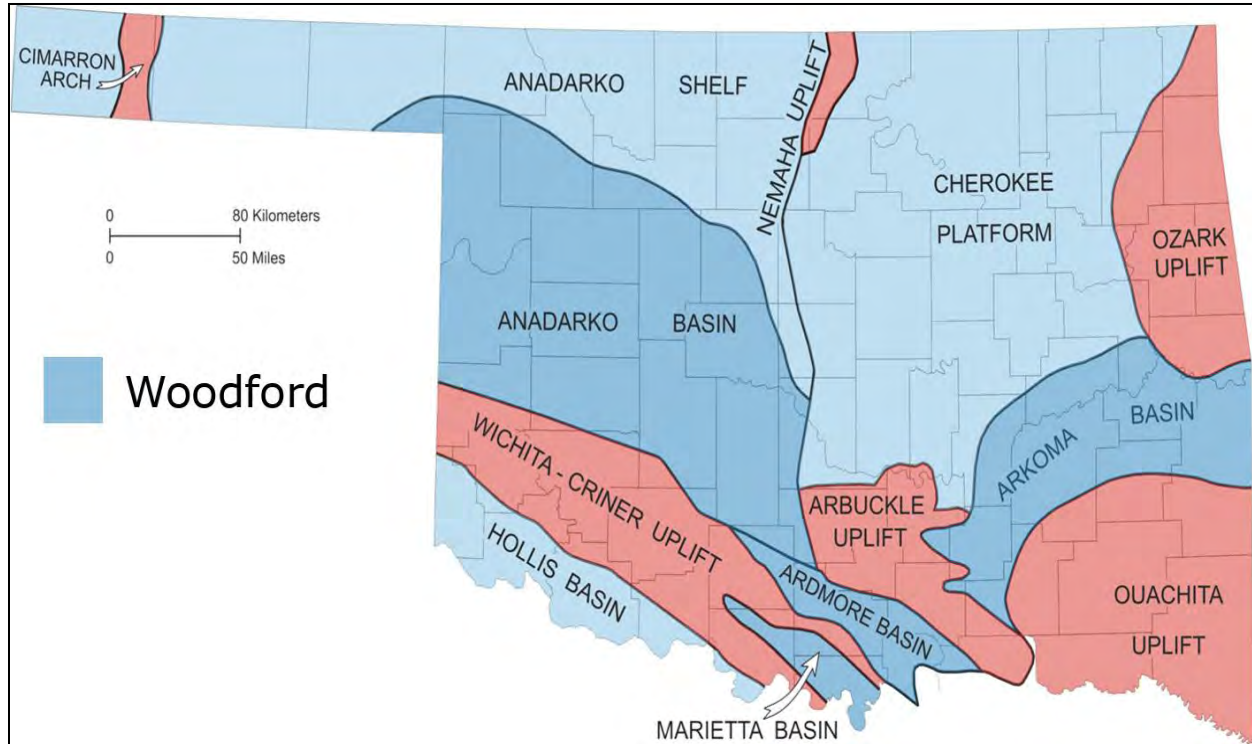


**Source:** **Oil** - Average bulletin price of Oklahoma Sweet posted by Conoco Phillips, Sunoco, Valero, and Plains All American Pipeline.  
**Gas** - Henry Hub Natural Gas Spot

## Average Oil and Gas Price



**Source:** **Oil** - Average bulletin price of Oklahoma Sweet posted by Conoco Phillips, Sunoco, Valero, and Plains All American Pipeline.  
**Gas** - Henry Hub Natural Gas Spot



- ❖ The Woodford Shale—located in south-central Oklahoma
- ❖ The formation—Devonian-age shale
- ❖ Covers an area of nearly 11,000 square miles
- ❖ Average thickness of 120 ft to 220 ft
- ❖ Estimated depth of production—between 6,000 ft and 11,000 feet
- ❖ The Woodford shale is in the early stages of development—recent production began in 2003 and 2004 with vertical well completions only
- ❖ Due to the success in the Barnett Shale, horizontal drilling has been more widely adopted
- ❖ Technically recoverable gas reserves—estimated to be 11.4 Tcf
- ❖ The amount of gas in place is estimated to be up to 101 Tcf\*

\**Navigant Consulting's North American Natural Gas Supply Assessment—July 4, 2008*

Sources: U.S. DEPARTMENT OF ENERGY, OFFICE OF FOSSIL ENERGY, NATIONAL ENERGY TECHNOLOGY LABORATORY, *MODERN SHALE GAS DEVELOPMENT IN THE UNITED STATES: A PRIMER*.

The primer is available at: [http://www.netl.doe.gov/technologies/oil-gas/publications/epreports/shale\\_gas\\_primer\\_2009.pdf](http://www.netl.doe.gov/technologies/oil-gas/publications/epreports/shale_gas_primer_2009.pdf)

*Geologic Provinces of Oklahoma*. Oklahoma Geological Survey, 2011. The map is available at: [http://www.ogs.ou.edu/geolmapping/Geologic\\_Provinces\\_OF5-95.pdf](http://www.ogs.ou.edu/geolmapping/Geologic_Provinces_OF5-95.pdf)

## **House Bill 1909**

### **Shale Reservoir Development Act**

HB 1909 provides two new tools for development of shale reservoirs:

- 1) **Tool 1** - **Allows drilling of horizontal wells in shale reservoirs across existing unit boundaries**, with the costs, production and proceeds allocated to each of the affected units
  
  - 2) **Tool 2** - **Creates a new type of unit for horizontal shale development** (a hybrid which incorporates portions of existing legal authority for drilling and spacing units and enhanced recovery units)
    - **The new unit hybrid would be comprised of 2 governmental sections (i.e., 1,280 acres)**, but could be expanded up to 4 governmental sections under certain circumstances.
    - **Creation of the new hybrid unit requires approval by 63% of working interest owners and 63% of the royalty owners** in the proposed unit. (Analogous to the required approval for existing enhanced recovery units.)
  
  - 3) To utilize either of these new tools, the applicant is required to **submit a proposed plan of development** for approval by the OCC **and provide notice to all affected owners**.
- Modifies Section 87.1 of Title 52 to clarify the ability to utilize irregular shaped units (e.g., 640-acre unit that is 1/2 mile wide by 2 miles long).
  
  - Modifies Section 287.1 of Title 52 to clarify that enhanced recovery units are not available for primary production (confirming a recent ruling by the OCC).

**HB 1909 passed the House on March 17, 2011, by an 87-0 vote and the Senate by a 45-0 vote on April 6, 2011. It was signed by the Governor on April 13, 2011.**

# OGE's Smart Grid

- Smart meters currently being deployed system wide through 2012
- Online consumer web portal at [www.myogepower.com](http://www.myogepower.com)
- 410,000 meters have been deployed as of October 3, 2011
- The technology has resulted in fewer truck rolls, faster connection, improved system reliability, reduced outages, and enhanced customer control
- Project cost is \$357 million
  - \$130 million covered by a grant from Department of Energy



# PSO's gridSMART

- Public Service Company of Oklahoma's pilot program in Owasso
- 13,500 smart meters installed
- Includes a comprehensive set of technologies and programs
  - Advanced Metering Infrastructure (AMI)
  - Home Area Network / Consumer Programs
  - Grid Management Technologies
- Currently, data from the pilot is being gathered and analyzed for planning of the next phase
- Pilot program has reduced truck rolls and duration and frequency of outages
- Project cost is approximately \$17.5 million
  - \$8.75 million of low cost financing through the Oklahoma Department of Commerce

