



OHIO DEPARTMENT OF TRANSPORTATION

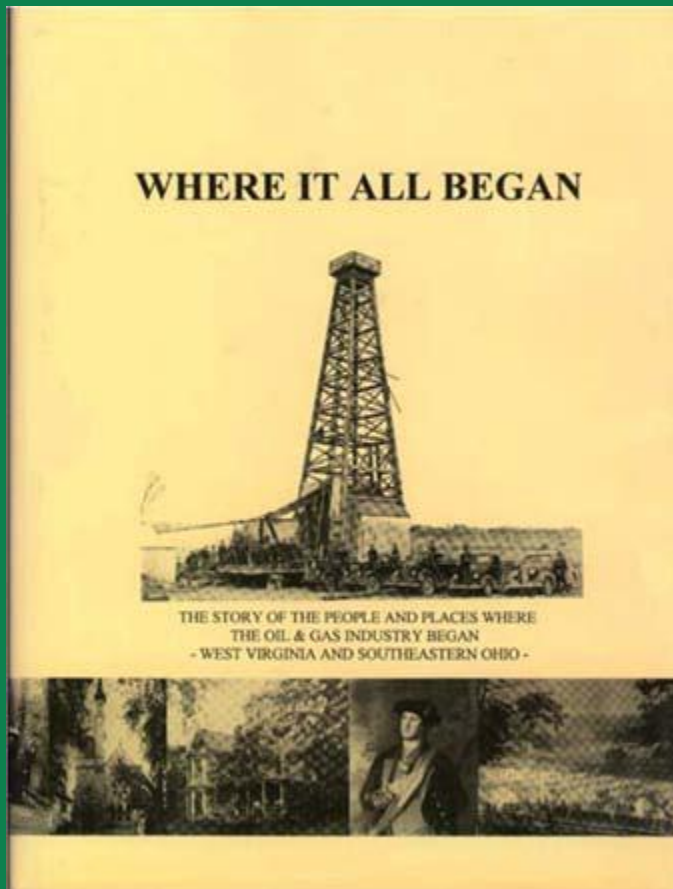
JOHN KASICH, OHIO GOVERNOR

JERRY WRAY, ODOT DIRECTOR



**The Marcellus Shale Oil and Gas Exploration
Potential Impact on Ohio's Roadway Infrastructure:
Possible Alternative Rail and Water Modes of
Transporting Material**

History Repeats Itself



“...by 1861, both Parkersburg and Marietta had become the oil capitals of their regions...”

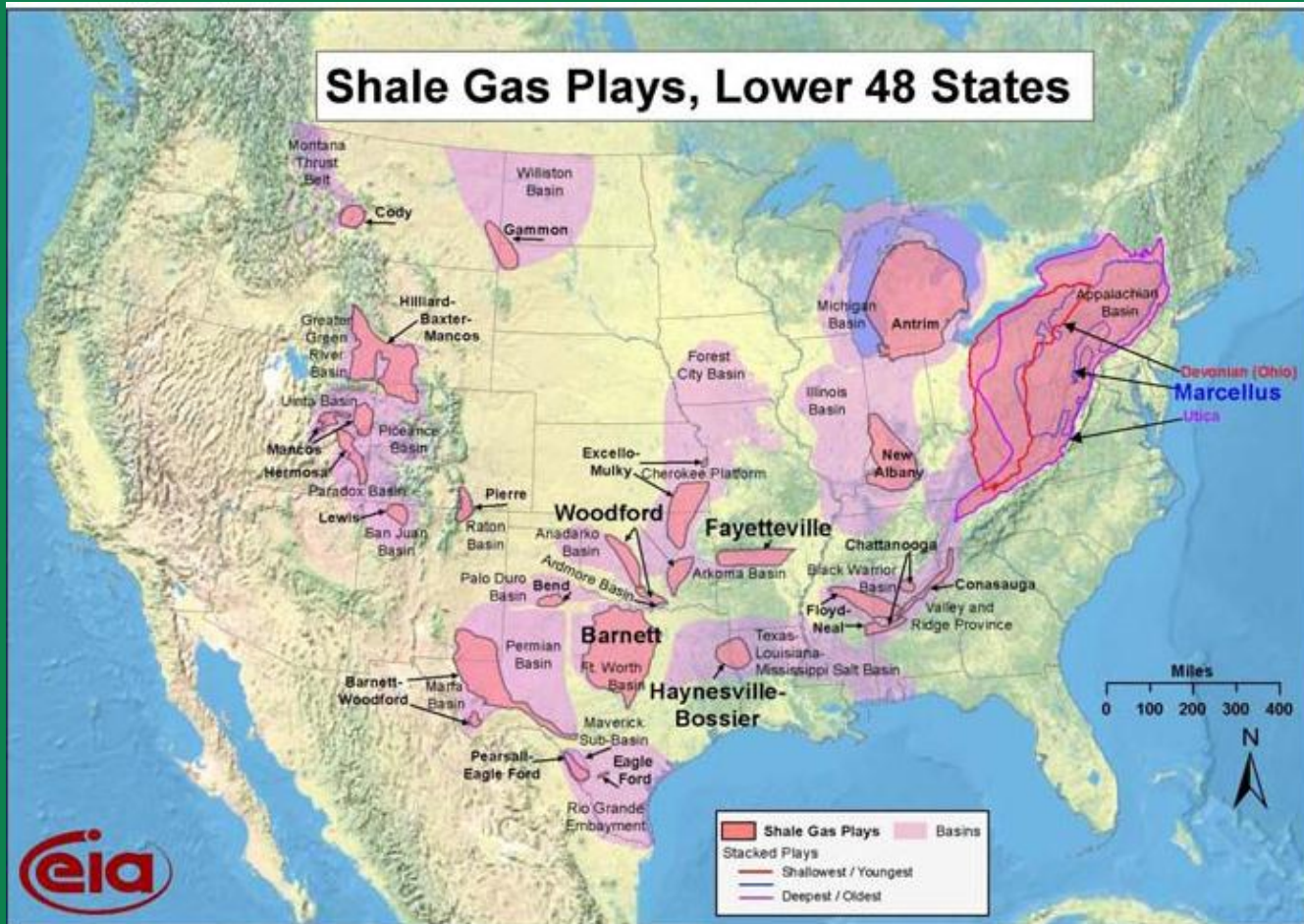


Gold Rush of Ohio

The CEO of Chesapeake Energy estimates that there will be 25,000 wells drilled in Ohio at an estimated cost of \$200 billion over the next 20 years.



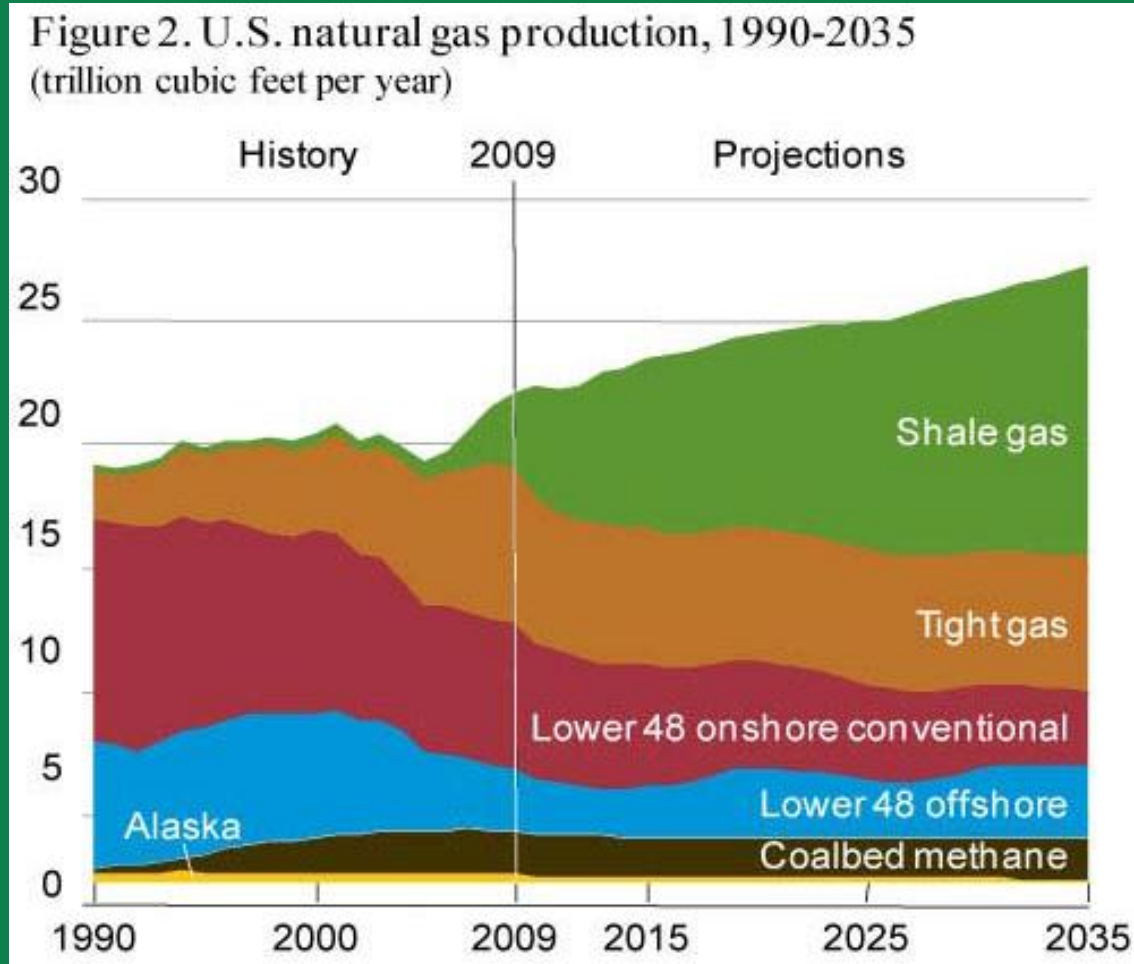
Marcellus & Utica



Source: Energy Information Administration based on data from various published studies.
Updated: March 10, 2010



US Natural Gas Production



Transportation of Industry Materials

- Drilling Equipment
- Fracking Materials
- Raw Product
- Refined Product



Materials Needed

- Water - Approximately 5.6 million gallons per well (same as used every 8 minutes in New York City every day – but the well is a one-time use)
- Sand – Approximately 3 million pounds per well
- Pipe – Approximately 320,000 pounds per well



Ohio Valley & Gas Production



Industry Example

“Left for Extinct, a Steel Plant Rises in Ohio”

By: Clare Anserry, The Wall Street Journal, August 2, 2011

V&M Star Steel Youngstown - Rail

- 400 jobs
- A new \$650 million steel plant
 - 10 stories tall
 - One million square feet
 - Will produce a half million tons of seamless steel tubes used in ‘fracking’ or drilling for natural gas in shale basins.
- US Steel Lancaster – ORDC Rail
 - \$93 Million expansion
 - 90 jobs, 523 jobs retained



Major Energy Sources and Uses In Ohio



End

