

NATURAL GAS:

Clean Energy to Keep America Going Strong

Why Drill?

Drilling is necessary to find and produce the natural gas consumers need.

While advanced exploration technologies increase the likelihood of identifying geologic formations as natural gas reservoirs, natural gas is only "found" when it flows to the surface through pipe put in place once a well has been drilled.

- Geoscientists, including physicists, geologists and engineers, can estimate with sophisticated computer equipment and software which subsurface rock, sand and coal structures are likely to contain the abundant natural gas that exists throughout much of North America.
- Within those structures the most likely places for natural gas to be found can be identified before a well is drilled. This results in ever-increasing precision in selecting productive well locations, thereby reducing the number of wells that may need to be drilled, onshore or offshore.
- Drilling is still necessary, however, to actually find and produce the natural gas.

Natural gas wells do not produce forever. Over time the amount of production from a gas well becomes less and less. So, to continue supplying American families with the gas they need, industry must continually explore for gas in new areas and drill new wells.

- As time goes on, the amount of gas a well produces is reduced -- in some cases by 40% or more each year, requiring that new wells be drilled to replace that supply.

*"Drilling is the moment of truth for oil and gas producers. After all the analyses and preparation, have explorationists pinpointed the reservoir? Will it be productive? Are development wells being drilled in the right pattern for efficient extraction?" *(p34)*

Dramatic improvements in well drilling technology continue to minimize effects on the environment.

- Directional, horizontal and extended-reach drilling -- to depths up to 30,000 feet and reaching horizontally even farther -- can tap multiple gas reservoirs from a single location onshore or from a single offshore facility.
- Tiny downhole sensors located near the drillbit can transmit data while drilling to accurately target the well into desired gas zones.
- Technological advances allow the use of smaller modular drilling rigs that can be more easily transported to remote locations and disassembled and removed after a well is drilled.

"Successful drilling often means going faster and deeper, through harder rock, and in multiple directions from a single wellbore. The result? More resources are contacted with fewer wells, less drilling waste, and less surface disturbance."(p32)*

**DOE: Environmental Benefits of Advanced Oil and Gas Exploration and Production Technology, 1999. (http://www.fe.doe.gov/oil_gas/environ_rpt/index.html)*