

It Seems Like Shale Gas Came Out of Nowhere – What Happened?

Knowledge of gas shale resources and even production techniques has been around a long time (see “*Technological Highlights*” timeline). But even as recently as a few years ago, very little of the resource was considered economical to produce. Innovative advances – especially in **horizontal drilling**, **hydraulic fracturing** and other **well stimulation technologies** – did much to make hundreds of trillions of cubic feet of shale gas technically recoverable where it once was not.

The **U.S. Department of Energy’s (DOE) Office of Fossil Energy**, along with industry partners, was heavily involved in the innovation chain, and helped to make some of these techniques, as well as protective environmental practices and data development, efficient and cost-effective.

SHALE STAT: In 1975, a DOE-industry joint venture drilled the first Appalachian Basin directional wells to tap shale gas, and shortly thereafter completed the first horizontal shale well to employ seven individual hydraulically fractured intervals. DOE integrated the basic core and geologic data from this well to prepare the first publically available estimates of technically recoverable gas for shales in West Virginia, Ohio and Kentucky.

Source: NETL, “*Shale Gas: An American Success Story*,” page 5.



DOE researchers gathering data from one of a series of cored shale wells in the Appalachian Basin in the early 1980s.