

2008 Oil and Gas Activity Update for South Dakota

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In 2008, total crude oil production was 1,696,842 barrels from 162 wells (24 fields, 3 counties), which surpassed the old record of 1,668,197 barrels in 1988 from 207 wells. Production declined from the 1988 high to the 1999 low of 150 wells producing 1,100,249 barrels of crude. From that point, production again began to increase, mostly due to the advent of horizontal drilling of new wells, horizontal re-entries of existing wells, and enhanced recovery techniques in the Red River Formation in Harding County.

In 2008, total natural gas production was 12.1 billion cubic feet (BCF). Most of this gas was “casing head” gas produced in association with crude oil, or “flue” gas produced in association with the air injection or “in-situ combustion” enhanced recovery process. The majority of the gas has a very low BTU content, so is unmarketable. Shallow methane gas produced in southwestern Harding County, however, has a higher BTU content, is marketable, and is piped to the Williston Basin Pipeline. In 2008, methane production was 1.1 BCF, the highest production since 1982, when the total was 1.9 BCF.

The large increase in natural gas production is primarily due to development by Spyglass Cedar Creek, LLC from New Brunfels, Texas. Analysis of seismic surveys resulted in several wells being drilled and tested. The wells showed some natural gas in the Shannon zone of the Eagle Member of the Pierre Shale at depths of 1500 to 2000 feet. Further drilling proceeded off and on through 2007 and, during this period, Spyglass also constructed a compressor and a gathering line to transport the gas from the producing wells to the Williston Basin Pipeline in extreme western Harding County. Another company, North Finn Exploration, is currently drilling gas exploration wells in southern Harding and Northern Butte counties, and currently have over twenty outstanding permits to drill.

We are also continuing to provide Internet access to oil and gas well data, as well as updated state and county maps. All of the electric well logs in our files have been scanned, are available on DVD by request, and will be available on the web site soon. Along with the South Dakota Geological Survey (SDGS), we constructed and published the Stratigraphic Correlation Chart of SD (Oil & Gas Investigation #1), which is currently available in digital and hard copy versions from the SDGS and our office. Also, with cooperation from the SDGS and professors at the SD School of Mines and Technology, we constructed well log correlations and cross sections that span the entire state. They are also available as SDGS publications and on their website at <http://www.sdgs.usd.edu/>.

With the advent of the development of new oil and gas fields in Harding County, and the large amount of high potential but essentially unexplored regions in the state, Governor Rounds and the DENR believe the time is right for expanding the orderly drilling and development of the oil and gas resources of South Dakota.

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