

Abstracts of Papers

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Geologic and Engineering Aspects of Buck Draw Field, Campbell County, Wyoming

Buck Draw field was discovered in February 1983 by the drilling of the Louisiana Land and Exploration 33-18 Moore Minerals located in Section 18, Township 41 North, Range 73 West. Production of 2360 BOPD and 5.5 MMCFGPD was established from the Dakota Formation in this well. Since the discovery, eleven offset wells have been completed with a combined production capacity of more than 13,000 BOPD.

The reservoir appears to be a complex of fluvial point bar sandstones deposited along a meandering Dakota stream. Repetition of the point bar sequence can be observed in several cores retrieved from the field with a combined thickness of about sixty feet. The sands are very fine to medium grained, 90-95% quartz, with less than 5% clay. Porosity has been occluded by several stages of secondary silica precipitation.

Original reservoir pressure was approximately 8100 psi. Reservoir pressure has been lowered by production and the field is currently being studied for pressure maintenance potential. Production rates are restricted by the State of Wyoming pending the outcome of this study.