

January 8, 1997
NARRATIVE FOR
PERKINS COUNTY, SOUTH DAKOTA
OIL & GAS DEVELOPMENT POTENTIAL MAP

INTRODUCTION

Perkins County lies west of the Missouri River in the northwestern part of South Dakota. The topography in this county is primarily rolling hills (Searight, 1934). Geologically, Perkins County is on the southeastern flank of the Williston Basin. There are no producing oil and gas wells in this county.

OCCURRENCE POTENTIAL

All of Perkins County is classified high oil & gas occurrence potential. The entire county is in the southern portion of the Williston Basin. Regional geologic mapping (Mallory, 1972, p. 56) indicates the county contains more than 5000 feet of sedimentary rocks. The type log for the county, taken from the Shell 1 Veal well (T. 17 N., R. 15 E., Sec. 7), encountered 8288 feet of sedimentary rock before drilling into Precambrian basement rock. This is the same package of rocks which contain source beds and producing reservoirs in other parts of the Williston Basin.

Despite the lack of production, this county has been the target for numerous oil and gas wildcat wells. Oil shows have been encountered in the Permo- Pennsylvanian Minnelusa, Mississippian Madison, and Ordovician Red River Formations. Some slight gas shows were encountered in the Cretaceous Muddy Sandstone.

DISCUSSION OF DEVELOPMENT POTENTIAL RATINGS

All of Perkins County is classified moderate development potential because of the numerous wells that have encountered oil and gas shows throughout the county. Wildcatting and limited development may occur in this county in the next 15 years. This will involve anywhere from one to three additional wildcat wells being drilled per township. Should a major discovery be found in any of these townships, that particular township will experience additional drilling activity.

REFERENCES CITED

Mallory, W.W. (ed.), 1972, Geologic atlas of Rocky Mountain Region: Rocky Mountain Association of Geologists, p. 56.

Searight, W.V., 1934, The geology of central Perkins County, South Dakota: South Dakota State Geological Survey Report of Investigations No. 21, 52 p.