



Case 3069

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1964 MAY 5 AM 8:15

1964 MAY 4 AM 8:22

MAIN OFFICE OCC

CONTINENTAL OIL COMPANY

P. O. Box 9312
Durango, Colorado
March 10, 1964

New Mexico Oil Conservation Commission (3)
P. O. Box 871
Santa Fe, New Mexico

Attention: Mr. A. L. Porter, Secretary-Director

Gentlemen:

Continental Oil Company herewith makes application for a hearing to obtain authority for pressure maintenance of the Pennsylvanian "CD" oil pool, Rattlesnake Field, San Juan County, New Mexico. The reservoir pressure will be maintained by injection of water. The water sources will be produced water from the Pennsylvanian "CD" zone and the DeChelly formation.

The feasibility of injecting water to maintain the reservoir pressure has been studied in detail and an engineering report recommending pressure maintenance has been approved by Continental Oil Company. The Pennsylvanian "CD" reservoir producing mechanism is a result of fluid expansion followed by solution gas and limited water drive. Performance has shown the reservoir to have finite boundaries. As a result, withdrawals have caused a steady decline in reservoir pressure. It will be in the best interest of conservation to arrest the pressure decline and conserve the reservoir energy.

It is proposed to convert Wells No. 140 and 146 to water injection. The injection rate will be about 3,000 barrels of water per day. The attached plat shows the location of the proposed injection wells. Well No. 140 is presently producing from the Pennsylvanian "CD" zone at a rate of 10 barrels of oil per day and 10 barrels of water per day. Well No. 146 is presently producing from the Pennsylvanian "B" gas zone with a retrievable bridge plug isolating the Pennsylvanian "CD" zone. This well will be dually completed for Pennsylvanian "CD" zone water injection down tubing and Pennsylvanian "B" zone gas production through the tubing-casing annulus. Attached is a log and diagrammatic sketch of the proposed injection wells.

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Wells No. 100 and 145 will be converted to supply water from the DeChelly formation to supplement the 250 barrels per day of produced Pennsylvanian water. Well No. 100 is completed in the DeChelly formation as a water well and was previously used as a water supply well for the Dakota Waterflood in 1957 through 1960. Well No. 145 is presently a salt water disposal well in the Organ Rock formation. A total of 99,826 barrels of Pennsylvanian water has been injected into this well to February 1, 1964. This well will be converted from water disposal to water supply. Additional water supply will be obtained by perforating the DeChelly formation in this well.

Water compatibility is not expected to be a problem. Both the Pennsylvanian and DeChelly waters are salty. The Pennsylvanian produced water will be checked for compatibility with the DeChelly water.

We respectfully request an early hearing to present further testimony and secure approval for the pressure maintenance program as outlined herein.

Very truly yours,



H. D. Haley
District Manager
Durango District
Production Department

ZJV/cb

Attachments

cc: Mr. E. A. Austin, Continental Oil Company, Denver, Colorado ✓
State Engineer's Office, P. O. Box 1079, Santa Fe, New Mexico
U. S. Bureau of Mines, P. O. Box 10085, Amarillo, Texas
U. S. Geological Survey, P. O. Box 959, Farmington, New Mexico
U. S. Geological Survey, P. O. Box 1857, Roswell, New Mexico
Navajo Tribal Council