

Case 5072

Northern Minerals, Inc.

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President



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Jen

New Mexico Oil Conservation Commission
Santa Fe, New Mexico

Gentlemen:

Northern Minerals, Inc., requests permission to drill two wells to test the Hospah formation at about 735' on one 40 acre tract; to use one well already on this tract to inject water in the Hospah; and to drill a water supply well to the Massive Gallup at about 850'.

Northern Minerals, Inc., No. 6-Y SFPRR was drilled to a total depth of 748'. 4½" casing was run to 734'. The well has been tested on pump for about 10 days and is capable of producing 33 gravity oil at the rate of about one-half barrel per day along with 4½ barrels water. This well is located 2013' FNL and 2003' FEL of section 29, T16N-R6W, McKinley County. A core analysis of this well shows some 9½ feet of oil sand. There is no associated gas. The well is producing only what fluid comes into the well bore through gravity.

Northern Minerals believes that substantial quantities of oil can be produced from this formation in this area if the oil is forced into the well bore through a water flood.

It is desired to drill an additional well to the Hospah sand 330' from the West line and 330' from the South line of the West half of the Northeast one-quarter section of said section 29 and to drill a secone well 330' out of the southeast quarter of this quarter-quarter section. These wells would be completed with pumps and used as producing wells. The present well, No. 6-Y, would be converted to an injection well. This well is located approximately in the center of the said quarter-quarter section. A well would be drilled some 50 feet of the injection well for water supply. This well would be drilled to about 850 feet in the Massive Gallup and cased with 4½" casing with cement from top to bottom. This would be an open hole completion. A recent well in this area flowed water from the Gallup at the rate of about 2,000 barrels per day.

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Water would be injected into the Hospah at the rate of about 25 to 50 barrels per day to begin with and under a pressure of 400 to 500 pounds per square inch. The injection rate would be gradually increased to 100 to 150 barrels per day.

It is believed that this pilot program would establish if the Hospah sand in this area will take water and if the pressure thus applied will result in increased oil production in the two wells completed as producing wells.

There are no oil producing wells within a two mile radius of the proposed injection well.

Northern Minerals, Inc., has a farmout agreement with Tenneco Oil Company which has a lease on section 29, T16N-R6W from Santa Fe Pacific Railroad Company. Northern will earn an assignment to the $W\frac{1}{2}NE\frac{1}{4}$, $W\frac{1}{2}NW\frac{1}{4}$, $E\frac{1}{2}SE\frac{1}{4}$ and $E\frac{1}{2}SW\frac{1}{4}$ if commercial production of oil is established on any of this land. Tenneco will retain ownership to the other half of this section. Thus, Northern Minerals, Inc., and Tenneco are the only interested lease owners of the land upon which the proposed pilot water-flood would be located and any off-setting land, North, East, South and West. Tenneco has agreed to the installation of the proposed water-flood.

It is requested, therefore, that permits for the wells herein described be allowed and that the injection program as outlined be approved.

Very truly yours,

Northern Minerals, Inc.

Lloyd Davidson

By: Lloyd Davidson