

George L. Buckles Company

OIL PRODUCTION
CONSULTANTS - OPERATORS

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June 26, 1963

New Mexico Oil Conservation Commission
State Land Office Building
Santa Fe, New Mexico

Gentlemen:

It is respectfully requested that a hearing be scheduled for application for permit to conduct secondary recovery operations by water injection on our Knight lease in the Langlie-Mattix Field, in Lea County, New Mexico. The lease consists of the E/2 of the SE/4 of Section 21, and the W/2 of the SW/4 of Section 22, T-24-S, R-37-E, and contains 160 acres more or less.

Enclosed is a plat showing the present status of the lease, the surrounding area and the location of the proposed injection wells. There are, at the present time, four pumping producing wells located in the center of regular 40-acre proration units.

It is our plan to drill nine injection wells and enclose the four presently producing wells in four 40-acre 5-spot patterns. Due to the present lack of information concerning core data, possible thief zones and well damage in the producing wells, it is felt that the increase in ultimate recovery would justify drilling all injection wells. In this manner, the injected water can be confined to the oil producing zones and flood efficiency should be greatly improved. Eight of the injection wells will be drilled as close to the property lines as possible but on our Knight lease. One well will be drilled at each corner of the lease, one on each side of the lease, and the ninth well in the center of the lease.

Present plans are to drill the first well in the center of the lease with cable tools. This will be a test well to evaluate the waterflood possibilities. We will be able to test all formations as they are encountered. Casing point to protect all fresh water zones can be accurately determined. Quality and quantity of injection water can also be determined. All potential gas and oil bearing zones can be tested to eliminate exposing thief zones in the injection wells.

Surface casing will be set to a depth sufficient to protect all fresh water zones (approximately 700 feet). This exact depth will be determined while drilling our center well. The long string of casing will either be set just above the top of the oil producing zone or set through if there is any indication of thief zones below the top of the oil pay zone. The approximate depth of the casing setting will be 3,400 feet. Cementing and testing will be in accordance with Commission regulations.

DOCKET MAILED

Date 7/12/63

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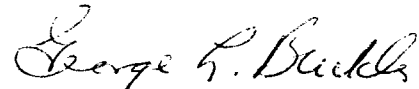
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Water injection will be into the Queen sand at depths from 3,450 feet to 3,550 feet. Present plans are to use Rustler salt water for injection purposes, if it can be found in sufficient quantities. The Rustler is expected to be encountered from 1,100 feet to 1,200 feet. Injection rates are anticipated to be 300 barrels per day per well at the start of injection. Injection rates, after waterflood oil is being produced, will be dictated somewhat by allowables.

All offset operators, including the Amerada Woolworth Unit offsetting the Knight lease to the south, have been advised of our intentions.

Please let us know if additional information is required before the hearing is scheduled.

Yours very truly,

A handwritten signature in cursive script, reading "George L. Buckles".

George L. Buckles

GLB/b

Enclosure - Plat