

August 9, 1956

Mr. A. L. Porter, Secretary and Director
Oil Conservation Commission
Box 871
Santa Fe, New Mexico

Dear Sir:

This is to request administrative approval for a well dually completed in the Blanco-Mesa Verde Pool and the Antee-Pictured Cliffs Pool. The El Paso Natural Gas Ludwick #9 is located 820 feet from the west line and 1090 feet from the south line, Section 20, Township 20 North, Range 10 West, N.M.P.M., San Juan County, New Mexico.

This well has been completed in the Point Lockout member of the Mesa Verde formation and the Pictured Cliffs sandstone. Completion has been accomplished in the following manner:

1. 10 3/4 inch casing set at 172 feet with 225 sacks of cement.
2. 7 5/8 inch casing set at 4000 feet using multi-stage cement procedure--150 sacks at the base of the casing and 150 sacks across the Pictured Cliffs formation.
3. 8 1/2 inch liner set at total depth 5107 feet to 4337 feet with 150 sacks of cement.
4. Before perforating either pay zone, both the casing and liner were tested under pressure for leaks and none were found.
5. Point Lockout formation was perforated and sand-water fraced at three intervals through the 8 1/2 inch liner.
6. Pictured Cliffs formation was perforated and sand-water fraced through the 7 5/8 inch casing.
7. Both formations were thoroughly cleaned after treatment, and completion was accomplished by setting a Baker Model "D" production packer below the Pictured Cliffs perforations in the 7 5/8 inch casing. 2 inch tubing was then run through the production packer to a point opposite the Mesa Verde perforations. Thus, the Mesa Verde will be produced through the 2 inch tubing, and the Pictured Cliffs formation will be produced through the tubing-casing annulus.



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This is a report of a field study conducted at the University of California, Davis, California, during the summer of 1963. The study was conducted by the author and a number of other students. The purpose of the study was to determine the effect of various factors on the growth and yield of a certain crop. The factors studied were: (1) the amount of water, (2) the amount of fertilizer, (3) the amount of sunlight, and (4) the amount of soil. The results of the study are as follows:

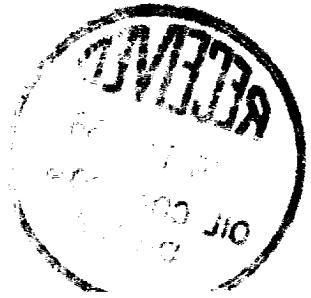
The first factor studied was the amount of water. It was found that the amount of water had a significant effect on the growth and yield of the crop. The more water the crop received, the greater the growth and yield. This was true for all of the other factors studied as well.

The second factor studied was the amount of fertilizer. It was found that the amount of fertilizer had a significant effect on the growth and yield of the crop. The more fertilizer the crop received, the greater the growth and yield. This was true for all of the other factors studied as well.

The third factor studied was the amount of sunlight. It was found that the amount of sunlight had a significant effect on the growth and yield of the crop. The more sunlight the crop received, the greater the growth and yield. This was true for all of the other factors studied as well.

The fourth factor studied was the amount of soil. It was found that the amount of soil had a significant effect on the growth and yield of the crop. The more soil the crop received, the greater the growth and yield. This was true for all of the other factors studied as well.

In conclusion, it was found that all four factors studied had a significant effect on the growth and yield of the crop. The amount of water, fertilizer, sunlight, and soil all had a positive effect on the growth and yield of the crop. The more of each factor the crop received, the greater the growth and yield. This was true for all of the other factors studied as well.



EL PASO NATURAL GAS COMPANY

EL PASO, TEXAS

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8. A Garrett Sidedoor Flow Nipple was installed on the 2 inch tubing above the production packer. This flow nipple will enable Bottom Hole pressures to be taken if they are required at a future date.
9. Initial potential tests have been run and commercial production has been found at both zones. Also a packer leakage test has been run and witnessed by the Artes Oil Conservation Commission office. This test shows no communication in the well bore between the two producing formations.

Administrative approval is asked for this dual completion to allow production from both known producing formations without the high initial cost of drilling two wells.

The offset operator of this dual completion has been notified, and I am enclosing a telegram from him waiving any objection to it. Also enclosed are:

- (a) Two copies of the Schematic Diagram of the mechanical installations.
- (b) Two copies of the plats showing the location of this well and the offset operators.
- (c) Two copies of an affidavit from the packer setting company stating that the packer used was set at the depth shown.
- (d) Two copies of the packer leakage tests as observed by a member of the Oil Conservation Commission.
- (e) Two copies of the initial potential tests showing commercial production from the zones.

It is intended to dedicate the E/2 of Section 29 to the Mesa Verde formation and the SW/4 of Section 29 to the Pictured Cliffs production.

Any further information required will be furnished upon your request. Thank you for your consideration of this matter.

Yours very truly

EJC:cc
Encls.

E. J. Cool
Senior Petroleum Engineer

cc: Mr. E. L. Hamblin
Mr. Phil T. McGrath
Mr. Emory Arnold ✓

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