

BEFORE THE  
NEW MEXICO OIL CONSERVATION COMMISSION  
Santa Fe, New Mexico  
EXAMINER HEARING

May 24, 1967

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IN THE MATTER OF: )

Application of Sunray DX Oil )  
Company for a waterflood project, )  
Eddy County, New Mexico. )  
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Case No. 3580

BEFORE: Elvis A. Utz, Examiner.

TRANSCRIPT OF HEARING

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SPECIALIZING IN: DEPOSITIONS, HEARINGS, STATEMENTS, EXPERT TESTIMONY, DAILY COPY, CONVENTIONS

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MR. UTZ: Case 3580.

MR. HATCH: Application of Sunray DX Oil Company for a waterflood project, Eddy County, New Mexico.

(Whereupon, Applicant's Exhibits 1 through 3 were marked for identification.)

MR. KELLY: Booker Kelly of White, Gilbert, Koch and Kelly on behalf of the Applicant. I have one witness and ask that he be sworn.

(Witness sworn.)

JOHN HASTINGS

called as a witness, having been first duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. KELLY:

Q Would you state your name, position and employ, please?

A John Hastings, District Engineer with Sunray DX in Roswell, New Mexico.

Q Have your qualifications as an expert engineer been made a matter of record before this Commission?

A Yes, they have.

Q Would you state briefly what Sunray seeks by this application?

A Sunray DX Oil Company is asking authority to

initiate a waterflood project on our Foster Eddy lease. This will be done by the conversion of one well, our No. 4 well to water injection service.

Q Now, referring to what has been marked Exhibit No. 1, would you locate the well and show the project area?

A Yes. Exhibit 1 is a plat of the area. The well in question is our Foster Eddy No. 4 which is located 660 from the North and 1980 from the West of Section 17, Township 17 South, Range 31 East.

Q And what wells will be, other wells will be in this project area?

A Only the No. 4 well will be converted to injection. We would expect to have some benefit in our No. 3 and our No. 5 wells.

Q Is this project in conjunction with an existing waterflood project?

A Yes, it is. We have executed a line well agreement with Sinclair whereby they will furnish us pressured water for our injection well.

Q And what is the name of the project immediately north of this one?

A This is the Sinclair Keil West waterflood project.

Q Are the pressures and procedure of operation the same as the Sinclair Keil West project?

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A That is correct, and as will be noted from the plat, this will correspond to an existing five-spot pattern on the Keil West project.

MR. KELLY: I ask that the Examiner take administrative notice of Order R-2268, which is the initial order that created the Sinclair Keil West project.

Q (By Mr. Kelly) Referring to what has been marked Exhibit No. 2, would you just briefly run through that and give the Examiner the waterflood data?

A Yes, Exhibit 2 is a tabulation of waterflood data for the proposed project. Our Foster Eddy No. 4 well was completed in 1944, present status of the well is temporarily abandoned. This well developed a tubing leak some months ago and due to the low producing nature of the well it was felt at that time that it could not be economically repaired. The well is producing in the Grayburg Jackson field. This particular well is opened in the Grayburg San Andres interval. It is producing from the open hole section of 2960 to 3505.

We would propose to convert the well to injection and inject water into this same interval. We would anticipate a volume of approximately 300 barrels per day at an injection pressure of 2,000 pounds, with possibility of possibly 2400 pounds at some later date.

The wells on this lease are presently producing

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an average of four barrels of oil per day per well and one barrel of water per day per well. Cumulative production from the lease has been 234,000 barrels. We would expect approximately 90,000 barrels benefit secondary oil as a result of this conversion.

Q Do you feel that the producing wells are now in the advanced stage of completion?

A Yes, sir, this is correct.

Q The primary source is just about exhausted?

A That is correct.

Q What is the source of your water for your injection well?

A This is fresh water which we are purchasing from Sinclair.

Q And how much water will you need?

A We are estimating 300 barrels per day.

Q Will that be a pretty constant rate?

A Yes, we expect it to be.

Q You don't anticipate that you will have any problems supplying that water?

A No, we do not.

Q Now, referring to Exhibit No. 3, which is your diagrammatic sketch of your injection well, would you briefly go through that?

A Yes. Exhibit 3 is a diagrammatic sketch of the proposed injection installation. It will be noted from the sketch 10-inch casing was set at 41 feet, cement circulated to the surface. Surface casing, 8-5/8ths surface casing was set at 532 feet and here again, cement was circulated to the surface. 7-inch casing was set at 2908 and cemented with 100 sacks of cement. We have a calculated cement top of 1856 feet. The well was then drilled in with cable tools and the open hold section 2908 to 3505 is now open for production.

We propose to install 2-3/8ths-inch injection tubing and install a packer at approximately 2850 feet. We will also load the tubing casing annulus with an inhibited fluid and install the pressure gauge on this annulus, and in this manner, if a leak in the tubing were to occur, it could be quickly found and repaired.

Q Do you feel that this installation you have shown on Exhibit 3 will insure that that water will not leak out in any other zone?

A That is correct.

Q Now, have you received approval from the State Engineer's office and the United States Geological Survey on this application?

A Yes, we have received approval from both.

Q This is federal land?

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A That is correct.

Q As far as the correlative rights in this situation, referring back to Exhibit No. 1, what do you think your flow pattern will be?

A Well, we feel that correlative rights will be protected in so, so much that Sinclair, by putting water in their No. 4 well directly to the north of our property will push some oil toward our No. 5 well. We, by putting water in our No. 4, will push some oil north to the Sinclair property.

Q So this will balance your correlative rights?

A That's right.

Q In your opinion, would the granting of this application prevent waste by promoting production of oil that otherwise would be left in place and protect correlative rights?

A Yes, we do.

Q Were Exhibits 1 through 3 prepared by you or under your supervision?

A Yes, they were.

MR. KELLY: That's all we have on direct.

MR. UTZ: Do you want to introduce these at this time?

MR. KELLY: Yes.

MR. UTZ: Exhibits 1 through 3 will be entered into the record in this case.

(Whereupon, Applicant's Exhibits 1 through 3 were offered and admitted in evidence.)

MR. UTZ: Any questions of the witness?

CROSS EXAMINATION

BY MR. UTZ:

Q What type of water do you intend to inject, fresh water?

A Yes.

Q So you don't have any corrosion problem?

A There should be a minimum of corrosion.

Q You don't propose to plastic-coat the tubing?

A No, only place this inhibited fluid in the annulus.

MR. UTZ: Any questions? The witness may be excused.

(Witness excused.)

MR. UTZ: Any statements? The case will be taken under advisement.

MR. HATCH: Excuse me. I have a letter from Sinclair Oil and Gas dated May 19, 1967 supporting the application.

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Witness my Hand and Seal this 28th day of June, 1967.

My Commission Expires:

I hereby certify that the foregoing is a complete report of the testimony of the Examiner bearing on the case of the S.S. "O" heard by me on June 28, 1947.

[Signature], Examiner  
New Mexico Oil Conservation Commission