BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
January 3, 1963

EXAMINER HEARING

IN THE MATTER OF:

Application of Standard Oil Company of Texas for allowable transfer, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks authority to conduct pressure interference tests on its Jicarilla 4-26 lease, Section 26, Township 28 North, Range 1 West, Boulder-Mancos Pool, Rio Arriba County, New Mexico. Applicant proposes to shut-in Well No. 4 and produce its allowable equally from Wells Nos. 2 and 3. CASE 2725

BEFORE: Daniel S. Nutter, Examiner

TRANSCRIPT OF PROCEEDINGS

MR. NUTTER: Call Case 2725.

MR. DURRETT: Application of Standard Oil Company of Texas for allowable transfer, Rio Arriba County, New Mexico.

MR. KELLAHIN: Jason Kellahin, Kellahin and Fox, Santa Fe, appearing for the Applicant. We have one witness I would like to have sworn.

(Witness sworn.)

EDWARD O. HOLLOWAY

called as a witness, having been first duly sworn on oath, testified as follows:

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q Will you state your name, please?

A Edward O. Holloway.

Q By whom are you employed and in what position?

A I am employed by Standard Oil Company of Texas in the Houston office, as a petroleum engineer.

Q Have you ever testified before the New Mexico Oil Conservation Commission?

A No, sir, I have not.

Q For the benefit of the Examiner, will you outline your experience as a petroleum engineer?

A I received a Bachelor of Science Degree in Petroleum Engineering from the University of Texas in 1945, and have been employed by Standard Oil Company of Texas since that time in various capacities of drilling engineer, production engineer; and have been employed in the Houston office in the Proration Section for the past 15 months, approximately.

MR. KELLAHIN: Are the witness' qualifications acceptable?

MR. NUTTER: Yes, they are.

Q (By Mr. Kellahin) Are you familiar with the application of Standard Oil Company of Texas in Case 2725?

A Yes, I am.

Q Would you state briefly what is proposed by Standard in this case?

A Briefly, Standard is asking permission to transfer the allowable from the Jicarilla 4-26 Well No. 4 for a period of 90

days, in the Boulder-Mancos Field. We propose the transfer of allowable in equal portions to Wells No. 2 and 3 on the same lease, Jicarilla 4-26 Lease.

(Whereupon, Applicant's Exhibit No. 1 marked for identification.)

Q Referring to what has been marked Exhibit No. 1, will you identify that exhibit and discuss the information shown on it?

A Exhibit No. 1 is a contour map contoured on top of the Gallup formation, showing the Standard Oil Company of Texas Jicarilla 4-26 Lease and the offset leases. It will be noted that there are six wells on the Standard Oil Company of Texas Jicarilla 4-26 Lease. Well No. 1 is shown as a standing well. It has not been potentialed at this time. We are still making attempts to complete it as an oil well. Wells No. 2, 3, and 4, and 6, are oil wells. 2, 3, and 4 are top allowable wells. Well No. 6 is not a top allowable well. Well No. 4 is a shut-in gas well, and is, I believe, the only gas well in the Boulder-Mancos Pool at this time.

Q Are you familiar with the history of the development in this pool?

A Yes, I am.

Q Would you outline it briefly?

A The Boulder-Mancos Pool was discovered in January of 1961. It has been developed to this present time with 18 wells on the December 1 proration schedule, four of these operated by Standard Oil Company of Texas; other wells being operated by

Foutz and Bursum, Mobil, Skelly, and P.M. Drilling Company.

The producing formation here is the Lower Mancos and the Upper Gallup, and the Standard completion procedure has been to set production casing somewhere above the top of the Gallup formation and to drill in with air, leaving approximately five or six hundred feet of open hole completion, setting 4-inch slotted liners and then placing the well on production.

This is sandy shale, fractured shale formation, and the recoverable oil is retained in the open fracture system rather than in the matrix itself, and we found that it's necessary for the well bore either to be in communication with the fracture system or through some sort of remedial work, fracture treatments, and so forth, to produce communication with the fracture system in order to get top allowable wells in this field.

In our attempts to determine the oil in place and various reservoir characteristics, we have tried various logs, the conventional logs tell very little quantitatively. We feel we can pick the tops of formations. Your standard porosity logs give no information. Core analysis is of no real value as far as determining porosity and permeability, because we don't know what these fractures look like through the reservoir; and so therefore, the only real method of determining or obtaining reservoir information in this pool is through material balance calculations, which require substantially more production history than we have at this time to be significant, or interference tests.

We're proposing at this time to run interference tests using the Wells 2, 3, and 4, in an attempt to obtain some significant reservoir information that will be helpful to us in further developing the pool.

Q Will your Well No. 5, the gas well, be involved in these tests, too?

A Yes, it will. Our proposed procedure is to shut-in,--as I said before, the Well No. 5 is shut-in. We have no market for the gas at this time. We'll shut-in Wells 2, 3, and 4, and take a build-up pressure in Well No. 4 until we obtain static conditions in all wells. Then at the same time we will take a tubing pressure measurement, using a dead weight tester at Well No. 5. We will then place Wells 2 and 3 on production at their transferred allowable rate of approximately 105 barrels of oil per day, and we will run bottom hole pressure bomb in Well No. 4 at various intervals to determine what effect, if any, the producing of the Wells 2 and 3 is having on the bottom hole pressure of Well No. 4. We propose to carry out this procedure for 90 days or until such time as we have received significant information.

Q Do you believe you can obtain the information required within the 90 days?

A We hope so. We feel that if we don't obtain any information in 90 days, that the test will be of little value anyway. We hope to obtain significant information in that period.

Q Assuming that the Commission will approve this application,

what effective date do you request on the order?

A We would like to have the order effective January 1st, 1963.

Q Are the wells presently shut-in?

A The wells are presently shut-in to reach stabilized conditions.

Q That commenced on January 1st, is that correct?

A That is correct.

Q Have you obtained waivers from all the operators in the Pool?

A Yes, we have waivers from all the operators in the Field.

(Whereupon, Applicant's Exhibit No. 2 marked for identification)

Q Referring to what has been marked as Exhibit No. 2, does that consist of the waivers to which you just referred?

A Yes. We have waivers executed by Skelly, Mobil Oil Company, and Foutz and Bursum, and P.M. Drilling Company, the other operators in the Field, in which they state they understand the proposal, that Standard of Texas proposes to transfer the allowable for a period of 90 days from Well No. 4 in equal portions to Wells 2 and 3, and for the purpose of conducting interference tests; and they state they have no objection to this proposal.

Q Do you have logs of the wells that are involved in this test?

A Yes, we have induction electric logs on Wells 2, 3,

and 4.

(Whereupon, Applicant's Exhibits Nos. 3, 4, and 5 marked for identification.)

A The Exhibits marked as 3, 4, and 5 are induction electric logs on Wells 2, 3, and 4 in the Jicarilla 4-26 Lease, Boulder-Mancos Pool.

Q What information is marked on those?

A Those logs are marked showing the tops of the Mancos and Gallup formations.

Q Were Exhibits 1, 3, 4, and 5 prepared by you or under your supervision?

A Yes, they were.

Q The Exhibit 2 waivers were received by your company in connection with this case?

A Yes, sir, that is correct.

MR. KELLAHIN: I would like to offer at this time Exhibits 1 through 5, inclusive.

MR. NUTTER: Standard's Exhibits 1 through 5 will be admitted in evidence.

(Whereupon, Applicant's Exhibits 1 through 5 admitted in evidence.)

MR. NUTTER: I can't find the pay on those logs.

A They should be marked.

MR. NUTTER: I mean on the curves.

A We can't either. That's what we're looking for.

MR. KELLAHIN: That's all the questions I have, Mr.

Nutter.

CROSS EXAMINATION

BY MR. NUTTER:

Q Mr. Holloway, you say that the No. 2, 3, and 4 are top allowable wells at the present time?

A Yes.

Q What is top allowable?

A Seventy barrels per day.

Q So the No. 2 and 3 would each receive half of the 70, or a maximum of 105 barrels per day for 90 days?

A Yes, sir.

MR. NUTTER: Any other questions?

A I might point out at this time that the Well No. 4 from which we propose to transfer the allowable is a low gas-oil ratio well. We have recently filed a gas-oil ratio report, and the gas-oil ratio on the well was 373 cubic feet per barrel, so that it is a top allowable, low ratio well and will receive no advantage by transferring the allowable.

Q (By Mr. Nutter) To what do you attribute the fact that the No. 5 is a gas well, the high structural position?

A We're not sure at this time. We hadn't established any contacts in the field, either gas or water contacts, until we completed this well as a gas well. It is higher structurally, which possibly explains it, but we feel that there is a possibility that the Well No. 5 is separated from the other wells in the

STATE OF NEW MEXICO)
) ss
COUNTY OF BERNALILLO)

I, ADA DEARNLEY, Notary Public in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Proceedings before the New Mexico Oil Conservation Commission was reported by me; and that the same is a true and correct record of the said proceedings to the best of my knowledge, skill and ability.

WITNESS my Hand and Seal this 21st day of January, 1963.

Ada Dearnley
NOTARY PUBLIC

My Commission Expires:

June 19, 1963.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 2725 heard by me on 1/3, 1963.

..... Examiner
New Mexico Oil Conservation Commission