BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
January 25, 1961

EXAMINER HEARING

IN THE MATTER OF:

Application of Continental Oil Company for permission to shut-in one well and transfer its allowable to other wells. Applicant, in the above-styled cause, seeks permission to shut-in its Wilder Well No. 20, located 1980 feet from the South and East lines of Section 26, Township 26 South, Range 32 East, El Mar-Delaware Pool, Lea County, New Mexico, and transfer its allowable to the following offset wells in said Section 26: Wilder Lease Well Nos. 17, 18, 22 and 25.) Case 2168

BEFORE:

Elvin A. Utz, Examiner

TRANSCRIPT OF HEARING

MR. UTZ: 2168.

MR. PAYNE: 2168, application of Continental Oil Company for permission to shut-in one well and transfer its allowable to other wells.

MR. KELLAHIN: Jason Kellahin, Kellahin & Fox, Santa Fe, representing the applicant. We have the same witness that testified in the preceding case. May the record show he has been sworn?

MR. UTZ: Yes, sir.

LEO CICHOWICZ

called as a witness, having been previously duly sworn, testified as follows:

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q Would you state your name, please?

A Leo S. Cichowicz.

Q Are you the same Mr. Cichowicz that testified in the preceding case, No. 2159?

A Yes, sir.

Q Mr. Cichowicz, are you familiar with the application in Case 2168?

A Yes, sir.

Q Would you please state, briefly, what is proposed in this application?

A This is Continental Oil Company's application for permission to transfer the allowable from Well No. 20 to Wells Nos. 17, 18, 22 and 25 on the W. W. Wilder Lease, El Mar Delaware Pool, Lea County, New Mexico.

Q What is the purpose of this application to transfer allowables?

A Continental Oil Company proposes to conduct the interference tests in this pool to determine the degree of communication between wells and, at the same time, to evaluate the reservoir for secondary recovery prospects at the earliest possible date.

Q Do you have a location and ownership map showing the Wilder Lease?

A Exhibit No. 1 is a location and ownership map showing the

W. W. Wilder Lease and the surrounding area, the location of the wells and the ownership thereof. As outlined in red, the lease consists of Section 26, W/2, and the W/2 of the E/2, E/2 of the SE/4 SE/4 of the NE/4 of Section 25, Township 26 South, Range 32 East. Well No. 20, from which allowable is proposed to be transferred, is designated by a green triangle. Wells Nos. 17, 18, 22 and 25, to which the allowable is proposed to be transferred, are shown circled in red.

Q Do you have a log on the No. 20 well?

A Exhibit No. 2 is a copy of the acoustic type log run on Well No. 20. By notations on the Exhibit, the top of the Delaware line, the top of the Delaware sand and the intervals perforated are shown.

Q Do you have a core analysis on the well?

A Exhibit No. 3 is a copy of the core analysis run on the Well No. 20.

Q Is there any information shown on that exhibit which you would like to comment about?

A No, only that the subsequent, or the next exhibits, will show the average porosity and permeabilities of not only Well No. 20 but of all the offsets to which we have requested transfer of allowables.

Q That is a cross-section, Exhibit No. 4?

A Exhibit 4 is a cross-section drawn from the south to north through Wells 18, 20 and 25. Under each well are shown the com-

pletion data, the average porosity and average permeabilities. As shown on the exhibit, the zones completed are continuous and can be correlated between wells.

Exhibit No. 5 is a cross-section drawn from west to east through Wells 22, 20 and 17. Below each well is shown the completion data, average porosity and average permeability. This shows the pay intervals are continuous and can be correlated between wells.

Q You stated that that also showed permeability and porosity information?

A Yes, sir.

Q Would you comment on that, please?

A Noted on the cross-section is, the porosities are very similar from well to well, and have the average permeabilities, which range from approximately 18 to 24 millidarcies.

Q Do you have a tabulation of recent well tests on the wells involved?

A Exhibit 6 is a tabulation of recent well tests on Wells 17, 18, 20, 22 and 25. These data show that the Well No. 20 is presently capable of producing top allowable for the El Mar Delaware Pool. It also shows that 17, 18, 22 and 25 are capable of producing top allowable for the pool and, in addition, one-fourth of the allowable normally assigned to Well No. 20.

Q You say they can produce one-fourth of the allowable normally assigned to Well No. 20. Is it your proposal that each of the wells be assigned one-fourth of it?

A We feel that the distribution of the allowable of Well No. 20 should be done equitably to the four offset wells.

Q Have you run any bottomhole pressure surveys on the wells involved?

A Exhibit 7 is a copy of the bottomhole survey run January 4th and 5th, 1961. On Page 2 of this exhibit the bottomhole pressures for Wells No. 17, 18, 20, 22 and 25 are circled in red. This exhibit shows that the bottomhole pressures for the five wells involved are reasonably similar. I believe this also shows there will be no undue migration in either direction because of large differences in pressures. You see, the pressure varies only 40 pounds in any one well.

Q What is the nature of the El Mar Delaware Pool?

A The El Mar Delaware Pool produces from a blanket-type, fine-grained sand reservoir. It is believed that the reservoir is a good prospect for secondary recovery upon recovery of the primary reserves. It is believed that all engineering data that may be required to evaluate this prospect should be obtained at the earliest possible date. In order to assist the evaluation of the pool, Continental proposes to conduct interference tests in the pool to determine the degree of communication between wells. In selecting the location for the test, this interference test, the following factors were taken into consideration: (1) The well spacing between the shut-in well and the direct offset should be uniform. (2) The proposed test area should not directly offset

other operators. (3) The shut-in well and the wells to which allowable is transferred should all be located on the same lease. (4) Sufficient pay should be perforated to be representative of the entire pay interval. (5) The well selected should have a history of small water production. (6) The area selected should have reasonably uniform bottomhole pressure.

Q Do these wells meet the tests you have outlined?

A The wells selected for this test meet the above requirements.

Q Under what procedure do you propose to conduct your interference tests?

A The procedure under which the test is to be run is proposed as follows: During the field-wide bottomhole pressure survey to be conducted January 4th and 5th, 1961, the bottomhole pressure on all flowing wells will be measured by sub-surface bomb.

Q That has been done?

A Yes. sir.

Q That is reflected by one of the exhibits here?

A Yes, sir. The bottomhole pressure on pumping wells will be calculated with the aid of the fluid level determined by an acoustical well sounder and the shut-in surface pressures. Upon completion of the survey, the pressure bomb will be re-run in Well No. 20 and left for a period of several days in an attempt to detect the initial decrease in pressure due to production from surrounding wells. The well will remain shut-in until the test is

completed. A bottomhole pressure bomb will be run into the well at least monthly to measure the pressure performance in the reservoir. The well will remain shut-in no longer than the interval of time between field-wide bottomhole pressure surveys. The next bottomhole pressure survey is scheduled to take place in July, 1961.

Q In other words, you would anticipate that the test you are contemplating, and the transfer of the allowables, would only extend to July of 1961?

A Yes, sir. We would like to point out that the proposed test should provide considerable information in regard to the degree of pressure communication in the reservoir. The tests will be conducted without waste, in that no well will be produced at excessive rates. In view of the inside location the test will be conducted without any impairment of correlative rights.

In view of these facts, it is respectfully requested that permission be granted to transfer the allowable from Well No. 20 and distribute it equally between Wells Nos. 17, 18, 22 and 25, and that adjustment of allowables be continued during the period of field-wide bottomhole pressure surveys, not to exceed a six-month period. It is also requested that the interference test may be discontinued and the allowable returned to normal before the end of six months duration by proper notification in the event we obtain the information we are striving to obtain.

Q As I understand your testimony the annual bottomhole survey was made in the early part of January; is that correct?

A Yes, sir.

Q Has your proposed test well been shut-in since that date?

A Yes, it has, and we would like to further add that if the Commission approves that, that they see fit to make the transfer of allowable retroactive to the time this well was shut in.

Q Which was what date?

A I believe it was the first week in January, about January 4th, thereabouts, retroactive to January 1st so that the entire allowable may be transferred. I believe the wells were shut in as of January 1st.

Q Have you examined Exhibits Nos. 1 through 7, inclusive?

A Yes, I have.

Q In your opinion are they correct and accurate?

A Yes, sir.

MR. KELLAHIN: At this time I would like to offer in evidence Exhibits 1 through 7 inclusive.

MR. UTZ: Without objection Exhibits 1 through 7 may be entered into the record.

MR. KELLAHIN: That is all the questions I have, Mr. Utz.

MR. UTZ: Any questions of the witness?

BY MR. PAYNE:

Q This isn't a water-drive reservoir, is it?

A We haven't had a chance to build up sufficient bottomhole pressure on which to definitely establish whether this is a water-drive. I personally believe that the reservoir is under gas solution

drive. However, that is my own personal observation.

Q That is why you feel it is a good prospect for secondary recovery?

A Yes, sir.

Q In your opinion, then, it probably wouldn't be rate-sensitive?

A That's right.

Q Do you think there is any possibility that during the six-month period that you are conducting that test that the shut-in well might decline where, had it produced, it could not have produced top allowable?

A You mean, to actually destroy some of the producing or, in effect, damage the well so that it would not provide those reserves which it would have produced had not the well been shut in; is that your question?

Q I assume you want to transfer top unit allowable, divided four ways?

A Yes, sir.

Q Do you have any reason to believe that if this well stayed on production, during the six-month period it would no longer be capable of producing top unit allowable?

A No, I believe the well would be capable of producing top allowable in either event.

Q There has been no indication in this pool that these wells would decline rapidly?

A No. Productivity has not been declining. There has been some evidence of that offered on the recent tests. You will notice the choke size in most instances is close to 10 64, which is very small, and the production ranges from 45 to 97 barrels through this small size choke. That is some indication, at least for six months we shouldn't have the condition arise that you are questioning.

MR. UTZ: Other questions: Witness may be excused. Any statements in this case? Case will be taken under advisement.

STATE OF NEW MEXICO)
) ss
COUNTY OF BERNALILLO)

I, JUNE PAIGE, Court Reporter, do hereby certify that the foregoing and attached transcript of proceedings before the New Mexico Oil Conservation Commission at Santa Fe, New Mexico, is a true and correct record to the best of my knowledge, skill and ability.

IN WITNESS WHEREOF I have affixed my hand and notarial seal this 6th day of February, 1959.

June Paige

Notary Public - Court Reporter

I N D E X

E X H I B I T S

NUMBER	EXHIBIT	IDENTIFIED	OFFERED	ADMITTED
Ex.#1	Location Map	3	8	8
Ex.#2	Acoustic Log	3	8	8
Ex.#3	Core Analysis	3	8	8
Ex.#4	Cross-Section, S-N	3	8	8
Ex.#5	Cross-Section, W-E	4	8	8
Ex.#6	Tabulation	4	8	8
Ex.#7	Bottomhole Survey	5	8	8

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 2168, heard by me on Jan. 25, 1961.

New Mexico Oil Conservation Commission, Examiner