BEFORE THE
OIL CONSERVATION COMMISSION
Hobbs, New Mexico
April 25, 1956

IN THE MATTER OF:

CASE NO. 1064

TRANSCRIPT OF PROCEEDINGS

BEFORE THE
OIL CONSERVATION COMMISSION
Hobbs, New Mexico
April 25, 1956

* *

Application of Humble Oil and Refining Company for an order approving a dual completion to produce gas from the upper Queen formation of the Eumont Gas Pool and to produce oil from the lower Queen formation of the Eumont Gas Pool in compliance with Rule 112 (a) of the New Mexico Oil Conservation Commission Statewide Rules and Regulations and further applicant requests an order granting an exception to Rule 5 (a) of the Special Rules and Regulations for the Eumont Gas Pool as set forth in Order R-520 in the establishment of a 160 acre non-standard gas proration unit in Section 11, Township 19 South, Range 36 East, Lea County, New Mexico.

CASE NO. 1064

Applicant, in the above-styled cause, seeks an order granting them permission to dually complete their New Mexico State "AO" Well No. 1 as a gas well from the upper Queen formation in the Eumont Gas Pool and as an oil well from the lower Queen formation of the Eumont Gas Pool, said well being located 660 feet from the South line and 1980 feet from the West line of Section 11, Township 19 South, Range 36 East, Lea County, New Mexico, and for the establishment of a 160 acre non-standard gas proration unit in the Eumont Gas Pool comprising the SW/4 Section 11, Township 19 South, Range 36 East, Lea County, New Mexico.

* *

BEFORE:

WARREN W. MANKIN, Examiner

TRANSCRIPT OF HEARING

EXAMINER MANKIN: This is the last case on the docket for today, Case 1064, the application of Humble Oil & Refining Company for an order approving a dual completion to produce gas in the upper Queen formation, Eumont Gas Pool, to produce oil from the lower Queen formation of the Eumont Gas Pool and for the assignment of a 160 acre proration unit.

CLARENCE HINKLE: Examiner, I'm Clarence Hinkle, appearing on behalf of the Humble Oil & Refining Company, in Case No. 1064. We have one witness, Mr. Bob Dewey.

ROBERT S. DEWEY

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

DIRECT EXAMINATION

By Mr. Hinkle:

Q. State your name, please.

A. Robert S. Dewey.

Q. Where do you live, Mr. Dewey?

A. Midland, Texas.

Q. By whom are you employed?

A. Humble Oil & Refining Company.

Q. In what capacity?

A. Division Petroleum Engineer.

Q. Have you previously testified before the Conservation Commission?

A. I have.

Q. As an expert?

A. Yes.

Q. Qualifications acceptable?

MR. MANKIN: They are acceptable.

Q. Mr. Dewey, are you familiar with the application of the Humble Oil & Refining Company in Case No. 1064?

A. I am.

Q. State to the Commission the purpose of that application.

A. Humble Oil & Refining Company made an application in this case to make a dual completion on their State "AO" No. 1 Well in order to produce oil from the lower Queen formation and with the thought in mind that either the upper Queen or Seven Rivers formations that the gas bearing in this area that it would be possible to complete a gas well in the upper Queen or lower Seven Rivers formation and obtain a gas allowable covering the 160 acres in the SW/4 of Section 11, Township 19 South, Range 36 East. This is a drilling well currently -- well the drilling has been completed but the well has not been completed.

Q. What is the present status of the completion?

A. At this time the lower part of the well has been opened up to four jet shots per foot from 4250 to 4286 feet. A 5½ inch casing had been set previously at 4308 feet and the formation had been sand fraced with 10,000 gallons of refined oil and 10,000 pounds of sand to the above mentioned perforated interval. Apparently the well is swabbing to recover the frac oil and some water that was used in drilling the well.

Q. At the present time, then you don't know what the results -- probable results of the well are?

A. It is customary in our completion work, we start at the bottom of the well and test the lower part of the well first to see how productive it is and in the event that it's water why, we can shut that off and come up higher in the hole and test the perforations and open up some new perforations

and test those and progress upwards until they have exhausted the formations that we think may be commercially productive.

Q. These perforations that have already been made are in the vertical limits of the Eumont Gas Pool, are they not?

A. That's right, they are in the vertical limits.

Q. Now, Mr. Dewey, refer to Humble's Exhibit No. 1, does that show the location of the well that you have been testifying to?

A. This Exhibit shows that Humble Oil & Refining Company --- this Exhibit No. 1 of Humble Oil & Refining Company shows that well no. 1, New Mexico State "AO" lease is located 660 feet from the South and 1980 feet from the West lines of Section 11, Township 19 South, Range 36 East, Lea County, New Mexico, and the Exhibit itself is a reproduced portion of a commercial map showing the lease ownerships around the Humble State "AO" lease. The Humble State "AO" lease is colored yellow and also it shows the location of various gas wells in the adjoining sections. On the plat the location of the gas unit that Phillips has --- shows the location of the Phillips Monument Well to which they have attributed 160 acres as a gas proration unit. This well is located in Section 12, Township 19 South, Range 36 East. In the S/2 of the same section the gas proration schedule indicates that J. M. Kelly's, Phillips State No. 1 Well has a gas allowable of 400 acres. I couldn't reconcile the 400 acres but just the S/2 of the --- I didn't know just where the other acreage came in but then to the South, in Section 13-19-36E, in the case of J. M. Kelly, the State No. 1 Well has 160-acre gas proration unit. In the same section, Skelly has 3 gas proration units of 160 acres each attributed to the Lone State Well No. 2, No. 4 and No. 5. Now coming to the Section to the West which is section 14-19-36, Penrose, Bern "A" No. 1 Well has attributed to it a gas proration unit of 160 acres. Now this Exhibit indicates in the N/2 of Section 14-19-36 on the Gulf Lease, that their No. 1 Lea State is a gas well. I was unable to

find on the gas proration schedule where it was currently productive. It May be that that well was taken off the schedule and possibly has become an oil well. That is a list of all the wells and the gas proration units in which I know anything about in the Case of Section 11.

Q. All these wells you have testified to as gas wells, are they all producing from the vertical limits of the Eumont Field.

A. Yes, sir, they are all on the Eumont Gas Proration Schedule.

Q. To the best of your knowledge and belief does Exhibit No. 1 show any ownership of the leases in this immediate area?

A. In the reproduction of my commercial map, that was purchased less than a week ago, was supposed to be up to date relative to wells and leases in this immediate area.

Q. Was this prepared by you or under your direction?

A. It was.

Q. Now, Mr. Dewey, refer to Exhibit No. 2, Humble's Exhibit No. 2, and explain to the Commission what it is and what it shows.

A. Humble's Exhibit No. 2, an electric log, on which the tops of the Resler, Yates and Seven Rivers and Queen formations have been identified. Also shown is the top of the Penrose member of the Queen formation. As we were unable to make an adequate cross-section of this area, showing the gas wells so that the only Exhibit that we have is this log, there being no gas wells to the west or north or directly northeast of the Humble lease, we didn't think a cross-section of the gas wells would be particularly informative.

Q. Now, Mr. Dewey, refer to Humble's Exhibit No. 3 and explain to the Commission what this is and what it shows.

A. Well, before I do that, Mr. Hinkle, I'd like to make a statement relative to our interpretation of structure characteristics in the Eumont Gas Pool and the ideas that we found that quite often that gas may be found in the upper formations such as the Queen would be in this well, where those upper formations we encountered at about 100 sub-sea depth and the anticipation

of that fact we have asked for this dual completion anticipating that either the upper Queen or Lower Seven Rivers might be productive. And we anticipate that certain perforated intervals should be tested. I've testified relative to the intervals that are now open in the well and are being tested for production. Coming up in the hole above those, from 4192 to 4236, we feel that there is another interval that we would like to test and that concievably it will be oil, coming up higher in the section from 3910 to 3950, there is another interval that we want to perforate and test and this interval may or may not be an oil interval. It may be an oil interval with a high gas-oil ratio or conceivably could be gas, and then in the Seven Rivers formation there's an interval from 3640 to 3660 feet that could be gas bearing. You'll note that the top of the current perforated interval in the well is 4284 feet and the top of the Seven Rivers formation would be 3660 feet which would be nearly 400 feet higher in the section than the interval we're testing now. And it is conceivable that the -- to us anyway -- that the Seven-Rivers formation may be encountered in this well and to sufficiently high elevation so that it will be productive of gas. Now we don't know until we try it and what we are asking for here is permission to try it.

Q. Are these probable producing intervals that you just testified to reflected by an interpretation of the electrical logs that you referred to in Exhibit No. 2.

A. Well, it's both the core information that we obtained in coring the well and also it's an interpretation of the electric log and we made a number of drill stem tests throughout the intervals too. Now the drill stem tests information has not been particularly enlightening, but there is porosity and permeability in these various intervals that we intend to test and we feel that from the porosity and permeability that we have obtained that we have a good chance of completing a gas well in a higher elevation.

Q. Now, Mr. Dewey, is it the purpose of the Humble in making this application to be in position, if the Commission sees fit to approve the

application, to dually complete the well in the event your tests show that you have both a gas producing zone and an oil producing zone?

A. That is correct.

Q. Now in the event that occurs, how do you expect to dually complete them?

A. Well, Humble's Exhibit No. 3 is a diagrammatic sketch of the proposed conventional dual completion. There is nothing relative to this dual completion, so far as we know, that is different than all the dual completions that are currently being made in New Mexico. We feel that there may be possibly 200 to possibly almost 400 feet between. It is anticipated that the gas and oil will be separated by sufficient intervals so that a dual completion can be satisfactorily made without getting the two formations in communication.

Q. Mr. Dewey, is the structural position of this acreage such that it can reasonably be presumed in the event you got a commercial gas well there that the entire SW/4 of Section 11 would be productive of gas.

A. We think so, yes, sir, we, of course, until we get it, we don't know definitely, but we anticipate that we will.

Q. In the event you do get a commercial gas well, what acreage are you requesting be assigned to that well?

A. Requesting a 160 acres being the SW/4 of Section 11, Township 19 South, Range 36 East.

Q. Now, Mr. Dewey, referring to Humble's Exhibit No. 4, state to the Commission what that is and what it shows.

A. Humble's Exhibit No. 4 is an incomplete list of the Commission dual completion orders granting approval of dually completed wells in the Eumont Gas Pool so that the upper part of the well will produce gas and the lower part of the well will produce oil. And another distribution of the dually completed wells in the Eumont Gas Pool with request for permission to dually complete Humble's State "AO" 1 is consistent with the orders granted other operators. The May and June, 1955 hearings on the Eumont Gas Pool,

Humble concurred in the proposals made by Amerada Relative to suggested rules recommending that a gas-oil ratio of 6000 to 1 be placed on oil wells and that the production of casinghead gas be deducted in computing the allowable for any units having both oil and gas wells. The practice of gas cap withdrawals is not considered to be the best conservation practice. Humble is requesting the assignment of both oil and gas allowables to the same acreage for the State "AO" lease under the conditions currently permitted by the Commission in order to protect our competitive position in the area.

Q. Mr. Dewey, would the Humble be willing to file with the Commission a report showing the test of results in the completion of this well?

A. Yes.

MR. HINKLE: I believe that is all.

MR. MANKIN: Mr. Dewey, your Exhibit No. 3 which is a schematic diagram of proposed dual completion of well in question here indicated certain information which apparently has been changed, is that correct?

MR. DEWEY: Yes, sir. Exhibit No. 3 is a copy of the Exhibit that we submitted to the Committee with our application which was made prior to the time that we had electric log information and had cored part of the interval and is based on incomplete information.

MR. MANKIN: Then where it shows a total depth of 4100', what is the actual total depth at the present time at which you intend to complete the well?

MR.DEWEY: The actual total depth of the well is 4308' which is 200' deeper than shown on Exhibit 3.

MR. MANKIN: Your application and the Exhibit 3 which is the same exhibit shown with the original application likewise reflects that you intend to make a dual completion of the lower Queen for oil and the upper Queen for gas is that -- those conditions have now changed as you have

testified.

MR. DEWEY: There is a possibility that the upper gas well may be obtained in the upper Queen, however, it is more probable that a gas well might be obtained in the Seven Rivers which is a little higher structure.

MR. MANKIN: Is it not true that as a result of drilling this well you have found that this well is considerably lower structure than you had anticipated before.

MR. DEWEY: I think that is correct, yes sir.

MR. MANKIN: Is it not also true that Gulf on some of their completions, or attempted completions, their No. 10 and No. 11 Wells in Section 14 and their No. 6 in Section 11 are experiencing difficulties even on making a Penrose oil well at the present time, are you aware of that?

MR. DEWEY: I am not aware of that.

MR. MANKIN: Then your application which stated that you intend to make a lower Queen oil completion and an upper Queen gas completion -- that situation has changed considerably and you will not know for some time where you will be able to complete.

MR. DEWEY: That is correct.

MR. MANKIN: As oil or gas well?

MR. DEWEY: What we desire is permission to go ahead and attempt to make a dual completion provided we are able to do so. We would like to have the right to attempt to do it.

MR. MANKIN: Then you are not at this time able to put in a more complete schematic diagram of possible completion?

MR. DEWEY: I attempted to do that when I quoted these intervals where we intended to test.

MR. MANKIN: Would you give again those intervals where you feel you might be able to --- of course, I realize it is a result of testing, for the oil completion and what zone, what formation and what possible zone as you can foresee it at the moment.

MR. DEWEY: This well is completed currently to perforations from 4248 to 4284 which is the zone that has been sand fraced and which we are attempting to complete now. We anticipate that we can come up the hole and test for another oil zone 4192 to 4236.

MR. MANKIN: Those two zones that you just mentioned --

MR. DEWEY: That is in the lower Queen.

MR. MANKIN: In the Penrose and lower Queen.

MR. DEWEY: Yes, sir. Then in the upper Queen 3910 to 3950 is a zone in there that may possibly be oil bearing or may possibly be gas bearing or a high gas-oil ratio well might be obtained.

MR. MANKIN: That is the upper Queen?

MR. DEWEY: That is in the upper Queen.

MR. MANKIN: Which you had anticipated might originally be gas productive, but now you are not certain.

MR. DEWEY: Are not certain about it. Looks as though it's a question as to which it might be. Then coming up the hole still higher from 3640 to 3660 which is in the Seven Rivers, there is a possibility that gas might be obtained. Those intervals appear currently to be the most promising intervals to perforate for gas and oil in this well.

MR. MANKIN: Then as you now see it, there is a possibility of one zone in the Seven Rivers which would likely be gas productive. Another zone in the upper Queen which might be either oil or gas productive and two zones in the lower Queen that might very likely be oil productive.

MR. DEWEY: That is correct.

MR. MANKIN: What again was the lowest, I mean the second highest perforation in the lower Queen 41 something?

MR. DEWEY: 4192 to 4236.

MR. MANKIN: Have you performed any drill stem tests of the Seven Rivers that would indicate that this area of say 3640 to 3660 might be gas productive?

MR. DEWEY: We had a drill stem test from 3631 to 3672 which covers this possible gas interval in the Seven Rivers, and that is the highest gas drill stem test that was made, and we have a weak blow of gas we don't think shuts the door on the possibility of obtaining gas from the Seven Rivers.

MR. MANKIN: So even though there wasn't much of a drill stem test, you still feel that it might be productive of gas by fracturing or some type of method to stimulate the formation.

MR. DEWEY: That is right.

MR. MANKIN: Then your application, of course, showed one thing and which you foresaw at the time and now you find yourself in a different position because of lower structural position, is that correct?

MR. DEWEY: That is right.

MR. MANKIN: Mr. Dewey, in that certain conditions have changed since your original proposal, would you be willing to amend how you might anticipate drilling this well by an amended letter to the Commission?

MR. DEWEY: Be glad to if the Commission will give us permission to go ahead and attempt to make a dual completion. Be glad to amend our application all the way through and come back to another hearing as to ---

MR. MANKIN: No, I don't mean another hearing. I meant your amended situation that you have found yourself in now which is considerably different from the original application and as was, of course, was advertised.

MR. DEWEY: Well, that is right. We will be glad to amend that --

MR. HINKLE: To conform with existing facts that they have found in drilling the well.

MR. DEWEY: You see, those were anticipated when this was sent in before we had gotten very far along in the drilling of this well, and if you

would like to have one, we would be glad to submit it.

MR. MANKIN: An amended application which would make of a general nature what you might find yourself in in the future as you go along testing this particular area.

MR. HINKLE: Yes, and to conform to what has been produced here today.

MR. MANKIN: That is all I have.

MR. HINKLE: I might ask Mr. Dewey one other question. What difference, if any, Mr. Dewey, would it make to Humble in completing this well, financially or otherwise, to have this order entered while they're in the process of completing it or complete until after they find out what they have, and then enter an order of dual completion?

MR. DEWEY: That would be quite helpful and probably save some money if we were allowed to go ahead and complete the dual completion in the event we were able to make it, rather than to stop the well and work and the testing work and have to come back to the Commission to get permission to dually complete it and get another workover rig out there to make the dual completion.

MR. HINKLE: In other words, in your opinion, you can clear it all a good deal cheaper whether you engage in the present operation than making a temporary completion you might say and then come back later on and ---

MR. DEWEY: That's right.

MR. HINKLE: That is all.

MR. MANKIN: Is there questions of the witness in this case? Do you wish to --- did Humble enter these Exhibits?

MR. HINKLE: Oh yes, I would like to offer in evidence Exhibits 1 thru 4, inclusive.

MR. MANKIN: Is there objection to entering of Exhibits 1 thru 4 in this case? If not, they will be so entered. Is there any further witness in this case? Any questions of the witness? If not, the witness may be excused. Is there any statements to be made in this case?

L. W. FOLMAR: I am L. W. Folmar with the Texas Company. As we have stated at other times today we urge the Commission to deny applications to dually complete wells within a common source of supply if they assign allowable to zones included within what is defined by the Commission as a common source of supply. We also urge them to consider the entire problem of dual completions within common sources of supply.

MR. MANKIN: I have a telegram I would like to read received on April 23rd, 1956 addressed to New Mexico Oil Conservation Commission, Attention: A. L. Porter, Santa Fe. Stanolind Oil and Gas Company respectfully requests that Humble Oil and Refining Company's application in Case 1064 be denied. Although Stanolind is not an offset operator, we are operators in other areas of the Eumont Pool and have consistently opposed dual completions within the vertical limits of the Eumont Pool. It is our position that simultaneous dedication of acreage for the production of oil and gas from the Eumont Pay does not result in equitable withdrawals from the pool. Furthermore, the granting of such dual completions results in a violation of correlative rights of those operators who do not have such completions. It is further requested that this telegram be read into the record at the hearing in Case 1064. Stanolind Oil and Gas Company, C. L. Kelley, Roswell, New Mexico. Is there further statements to be made in this case? If not, we will take the case under advisement. Hearing is adjourned.

STATE OF NEW MEXICO)

COUNTY OF SANTA FE)

I, Nancy Chowning, do hereby certify that the foregoing and attached transcript of proceedings before the Oil Conservation Commission Examiner at Hobbs, New Mexico, is a true and correct record to the best of my knowledge, skill and ability.

Dated this 10th day of July, 1956.

Nancy Chowning