

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
March 20, 1957

IN THE MATTER OF:

Case No. 1224

TRANSCRIPT OF HEARING

DEARNLEY - MEIER & ASSOCIATES
INCORPORATED
GENERAL LAW REPORTERS
ALBUQUERQUE - SANTE FE
3-6691 2-2211

on behalf of Wilshire Oil Company of Texas, and I am the witness.

(Witness sworn.)

FOSTER MORRELL

having been sworn as a witness, testified as follows:

DIRECT EXAMINATION

BY: MR. COOLEY:

Q State your full name for the record, please.

A My name is Foster Morrell.

Q By whom are you employed, Mr. Morrell?

A I am a petroleum consultant from Roswell, New Mexico employed in Case 1224 by Wilshire Oil Company of Texas.

Q Have you previously qualified as an expert before this Commission?

A I have.

Q Will you proceed.

A The Wilshire Oil Company of Texas is presenting for the consideration of the Oil Conservation Commission the Seven Rivers Unit Agreement.

Copies of the Unit Agreement were heretofore filed with the Commission by letter dated February 26, 1957. With that transmittal letter there was forwarded to the Commission a copy of a letter dated December 4, 1956, from the acting director, United States Geological Survey approving the form of the Seven Rivers Unit Agreement and designating 10,995.88 acres of land as a logical unit in Township 20 South, Range 26 East, and Township 21 South, Range 25 East, NMPM, Eddy County, New Mexico. Copies of the Unit Agreement

have also been furnished to the Commissioner of Public Lands of the State of New Mexico, and by letter of March 8, 1957, the Commissioner of Public Lands addressed a letter to me advising that the revised form of Unit Agreement was approved as to form and context as of March 7, 1957.

I would like to enter into the record as Exhibit 1, a copy of the letter dated March 8, 1957 to me, from the Commissioner of Public Lands. As a result of the conferences with the Commissioner of Public Lands, several corrections were made, particularly those pertaining to lands of the State of New Mexico, and in that connection, I would like to present for the Commission's file, corrected copies of the pages changed as a result of the Commissioners request.

The Commission has been furnished heretofore three copies, and I am furnishing to the Commission now three additional copies of corrected Page 4 and 3, and additional copies of Page 5.

The purpose of those corrections are to change the provisions of Section 2 - E of the Unit Agreement, which deals with automatic elimination of acreage not entitled to be included in a participating area. "Within ten years" to read "Within seven years". Also, I would like to present three corrected copies of Page 15, which provides that under Section 17 entitled "Drainage", that the Commissioner of Public Lands may charge compensatory royalty for drainage affecting state lands.

I have also the corrected pages for Pages 16, 17, and 18. There is 16. The changes on Pages 15, 16, and 17--I've already

given Page 15--16, 17, and 18, relate to the inclusion of the right of the Commissioner to grant suspension of drilling and producing operations, and deletes the original Section 18-I, and expands Sub-section 18-H to conform with the interpretation of the rights under state leases as now held by the Commissioner of Public Lands.

The essence of those changes in Section 18 are to the effect that the state lease, partially within the unit and partially outside the unit, may be held in toto if discovery of oil and gas in paying quantities is made on the state lease within the unit area.

The Seven Hills Unit area embraces a total of 10,995.88 acres, of which 10,355.88 acres, or 94.18 per cent are Federal lands, and 640 acres, or 5.82 per cent are state lands. There are no privately owned lands within the unit area to our knowledge.

The form of the unit agreement follows essentially the standard form suggested by the Department of the Interior, as set forth under Title 30, Code of Federal Regulations, Section 226.12.

Under the Unit Agreement, the Wilshire Oil Company of Texas is designated as the unit operator, and under Section 9, titled, "Drilling to Discovery", the unit operator has six months from the effective date within which to commence an initial test well to be drilled to test the upper portion of the San Andres Formation, or to a depth not in excess of 3,000 feet. Within ninety days after the completion of the initial well, the unit operator shall drill a second test well to the upper portion of the San Andres Formation.

With respect to the basis on which the unit areas were selected,

I have for presentation to the Commission, for its records, seven figures. Does the Commission desire to change the number to its exhibit number?

MR. NUTTER: That will be appropriate, Mr. Morrell. If you prefer to list those numbers as the Exhibit numbers, then we will make this Exhibit No. 8, the one that you previously presented as Exhibit 1. That will be fine, if these are already marked.

A Exhibit 1 is a generalized map of the area showing merely the physical location of the unit area on the surface. Exhibit 2 is a structure contour map, based on sub-surface information, contoured on the top of the Queen Formation, Queen Sand. Exhibit 3 is a sub-surface geologic map contoured from well data, with contours on top of the San Andres. Exhibit 4 is an isopach map based on the structure contour map as shown on Exhibits 2 and 3, so it is an isopach from the top of the Queen to the top of the San Andres. That is, in essence, the basis on which the unit area was determined and approved. It is a stratographic trap with a thinning from the southeastern edge of the unit, from eleven hundred to a thickness of only two hundred on the western portion of the unit.

We have a difference of nine hundred feet, which gives us an opportunity for some stratographic trap production. That is the same information that was furnished to the United States Geological Survey, in which they approved the unit area as to the geologic basis.

Figure 5 is a structure contour map based on sub-surface interpretations and well data on the top of the Abo. Although there is not any contemplation to drill to that depth at this time, that was compiled in connection with this study, and is furnished merely for your information.

Figure 6 is a west-east cross section through the proposed Seven Rivers Hill Unit Area of existing wells, based on existing wells, and the area of the proposed unit as shown in relation to the cross section.

Exhibit 8 is an additional cross section--

MR. NUTTER: Exhibit 7, I think

A Exhibit 7, excuse me, is an additional cross section containing some of the interpretations between deep wells to the northwest and to the east of the Seven Rivers Hills Unit. The unit agreement has been executed as of the date of this hearing by Wilshire Oil Company of Texas as the working interest owner, and by Paul Childers and Childers Royalty Company as the holders of lease title, covering 9,675.88 acres, representing 87.9955 per cent of the working interest.

The agreement has been circulated to others, the five other parties who are, or could be involved in the negotiations. Attempts are now being made to endeavor to have the agreement committed.

In order to permit orderly exploration and development under existing leases of potential oil zones indicated in the general area, it is necessary that the Seven Rivers Hills Unit Agreement be

approved by the Oil Conservation Commission.

It is further stated that the Seven Rivers Hills Unit Agreement will tend to promote conservation of oil and gas and better utilization of reservoir energy and to prevent waste, and that such an agreement is necessary and advisable in the public interest for the purpose of more properly conserving of natural resources, and also, that the unit agreement is, in another respect, for the best interests to the State of New Mexico.

Wilshire Oil Company of Texas agrees to file with the Oil Conservation Commission an executed -- an original or executed counterpart of the Seven Rivers Hills Unit Agreement not later than thirty days after the effective date of the unit agreement.

On the basis of the showing made, it is respectfully requested that the Oil Conservation Commission, by appropriate order, approve the unit agreement for the development and operation of Seven Rivers Hills Unit Agreement at its earliest convenience. We respectfully request that Exhibits 1 through 8 in this case, 1224, be entered into the record of this hearing.

MR. NUTTER: Is there any objection to the introduction of Exhibits 1 through 8 in Case 1224? If not, they will be so admitted. Do you have anything further?

A No.

MR. NUTTER: Does anyone have any questions of the witness?
Mr. Mankin.

CROSS EXAMINATION

BY: MR. MANKIN:

Q Do I understand that the proposed pay zone would likely be in the San Andres?

A The liklihood is problematic. There is a potential south-west extension of Yates and Queen production from the Magnolian Field, and there is also the possiblity of production in the Upper San Andres.

Q There is a possibility of at least three zones, which will be the Yates, Seven Rivers and Queen?

A That's right.

Q And --

A And San Andres.

Q --and upper San Andres?

A Yes.

Q Which would possibly be four zones?

A That's right.

Q Why was such a large area such as this formed for such shallow wells at such small costs? In other words, two wells three thousand feet cost sixty or seventy thousand dollars. Why was the unit put together just for such, when Wilshire owns nearly eighty-nine per cent of the unit?

A Any time you are placing with the stratographic trap, you naturally have to have more acreage. Then, if you do, you have the geologic down to where you can pinpoint it on the strtographic trap. The only thing you can do is to border on two sides and then take enough along the trend to warrant the expenditures. Now, the two are the obligation wells, and that doesn't mean that there may

not be other wells drilled. Those are obligation wells required, or the unit goes out.

Q Would you indicate where the obligation wells would be located?

A They are not set forth in the unit agreement. The tentative location for the first well would be the Northwest Quarter of the Southwest Quarter.

Q Just a moment, please. A Sure.

Q Okay, go ahead, please.

A Northwest Quarter of the Southwest Quarter of Section 28, Township 20 South, Range 26 East.

Q That would be the first well?

A That is correct.

Q Do you have any present plans for any additional wells, the second well?

A Plans for the second well are not to be laid until after the results of the first well are determined.

Q I notice Exhibit 2 shows a location in Section 29. Is that of any significance?

A That was originally the thought, but it has been changed to the one I just gave you.

Q It has been moved slightly southeast from the original location? A That's right.

Q Which would be in the Northwest, Southwest Section of 28?

A That's correct.

Q Well, could you indicate the general area where the second

well might be? Is it in the opposite end of the unit, or near the present well?

A I would say it would depend on the first well, whether it is dry or productive. That would give us quite a lead. In the early days--you will notice a dry hole on the Northwest Quarter on Section 22, which when drilled, many years ago, had free oil on the Bailey Test, which was exhausted, but with present day completion practices, particularly sand frac, we have a chance of making production in those zones, which were normally, at that time, considered non-profitable.

Q The well which you mentioned had free oil in the Northwest Quarter of Section 22, was that from the Seven Rivers?

A I can't say offhand whether it was Seven Rivers or Queen, I don't recall.

Q Do you feel that all persons in this unit area will eventually sign this unit agreement?

A I have a feeling, yes, sir.

Q In other words, you have had no turn-downs yet of any one who has not signed?

A No, sir.

Q The unit area which you proposed here is only a portion of the stratographic trap, is that correct?

A I would say so, yes.

Q And you feel that this unit area will properly evaluate the area enough to determine what should be done further outside the unit area?

A It would have that tendency.

MR. MANKIN: That's all.

BY: MR. NUTTER:

Q Mr. Morrell, is there a provision in the Unit Agreement for the expansion or contraction of the unit area?

A Yes, sir.

Q If it is determined necessary?

A That is correct.

Q What percentage of the federal lands in the unit have been committed, Mr. Morrell?

A Well, all the lands have been executed by Wilshire, except for two hundred acres of fee land, or federal. In other words, I gave you a figure of a total of 9,675.88 acres, 200 of which are state lands, the balance are federal.

Q Does Childers -- Is Childers a working interest owner, or an overriding --

A An overriding owner.

Q So the only lands that have been committed by a working interest owner are Wilshire's?

A As of this date.

Q And all of these lands are federal lands, with the exception of two hundred acres of state land?

A That is correct.

Q And no other state land has been committed to the unit in this area?

A We are presently under discussion with Phillips Petroleum, which has the remainder of the state land, 440 acres.

Q Is Tract 14 in Section 21 and partially in Section 28 of

20, 26, still under lease? *unleased?*

A No applications for leases have been filed.

Q But the present status is unleased?

A Just unleased applications filed.

Q So it would be impossible at this time, to have one hundred per cent commitment of acreage? A That is right.

Q What is the general location of these cross sections? You have submitted two cross sections as exhibits. What is the general location of them with reference to the unit area?

A I would say the unit area is about the central portion. It is marked here on the map. Here is the proposed unit, extending from here to here (indicating).

Q And whereabouts in the unit area would this line cross, Mr. Morrell?

A This crosses the well in Section 32 and in 22. I think that AA and BB are shown on those maps. I forgot to mention that.

Q I see. Exhibit 2 shows the location of the cross sections that are on Exhibit 6?

A Exhibit 6 is a cross section of AA, and Exhibit --

Q 7?

A --7 is a cross section of BB. Those lines are identified on Exhibit B.

MR. COOLEY: On Exhibit 2.

A Exhibit 2.

Q Mr. Morrell, you mentioned at the beginning of your testimony

that the United States Geological Survey had approved, or that their letter approved the unit agreement as filed with them. I think that the letter states that certain changes, as mentioned by the USGS, had been necessary. Have those changes been made in the unit agreement as submitted to the Commission?

A Those have been made as submitted to the Commission, in the letter that was referred to the Oil Conservation Commission.

Q And with the amendment sheet that has been submitted to the Commission this morning, all changes that have been made by the USGS, and Commissioner of Public Lands, have been made in the unit agreement?

A That's right, those will conform now with the copies now being circulated for signature.

MR. NUTTER: Does anyone have any questions of Mr. Morrell? If not, the witness may be excused. Does anyone have any statements they wish to make in this case? If not we will take the case under advisement.

STATE OF NEW MEXICO)
COUNTY OF BERNALILLO) ss

I, J. A. Trujillo, 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 in Stenotype and reduced to typewritten transcript by me, and that same is a true and correct record to the best of my knowledge, skill and ability.

WITNESS my Hand and Seal this 26th day of March, 1957, in the City of Albuquerque, County of Bernalillo, State of New Mexico.

J. A. Trujillo
Notary Public

My Commission Expires:

October 5, 1960

I do hereby certify that the foregoing is
a true and correct copy of the original
filed in my office on *March 20* 1957
James L. Miller
Director
New Mexico Oil Conservation Commission