

DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.
PHONE 325-1182SANTA FE, N. M.
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PHONE 243-6691

A My name is Foster Morrell.

Q What business are you engaged in?

A Petroleum consulting.

Q In connection with your business as a petroleum consultant, have you ever testified before the Oil Conservation Commission?

A I have.

Q As a petroleum consultant, have you had anything to do with the application of Tom Brown Drilling Company and the unit agreement involved therein in Case No. 2766?

A I have.

Q What did you have to do with that?

A I have prepared an initial application, land maps, and schedule of lands.

(Whereupon, Applicant's Exhibits Nos. A through D marked for identification.)

Q Mr. Morrell, referring to what has been marked as Exhibit A, will you identify that exhibit and state what is shown on that?

A Exhibit A is a land map or plat of the Siecrest Draw Unit Area. As originally prepared, it embraced a total of 7,577.66 acres. Following conferences with the Commissioner of Public Lands and his representatives, it has been agreed that the unit area of the Siecrest Draw shall be reduced to embrace a total of only 3,760.00 acres.



Q That land is included in the lands which were in the original application, is it not?

A That is correct.

Q And would be covered by the advertising in this case?

A That is correct.

Q But you are now asking for somewhat less or approximately one-half of the area originally applied for?

A That is correct.

Q Is that the area that is outlined in green?

A It is the area outlined in green, and for the record I will describe it as embracing all of Section 21 and 22; in Section 27, the West Half of the Northeast Quarter and the Southeast Quarter; all of Sections 28, 33, and 34, in Township 19 South, Range 23 East, NMPM, Eddy County, New Mexico.

Q I believe on Section 27 I didn't follow your description there. You are deleting from that the East Half of the Northeast Quarter?

A We are deleting the East Half of the Northeast Quarter of Section 27.

Q And the rest of the Section would be included?

A That is correct.

Q Is there any Federal or fee land included in this area?

A This is 100 percent lands of the State of New Mexico.

Q Do you have a schedule showing the ownership of the mineral interests under these lands?



A That is correct, and that is contained in what has been termed Exhibit B.

Q In connection with Exhibit B, does that depict all of the interest on a percentage basis or just acreage basis?

A On an acreage basis.

Q Do you have the figures on a percentage basis?

A I have the figures. As to working interest ownership within the Sieqrest Draw Unit, Marathon would have 2,200 acres or 58.511 percent. Kewanee Oil Company owns 640 acres or 17.021 percent of the unit. Carper Drilling Company, Inc. has 560 acres or 14.893 percent. Texaco, Inc. has 240 acres or 6.383 percent. Southern Minerals Corporation owns one-half interest in 80 acres or a net 40, representing 1.064 percent. Jake L. Hammon has a one-half interest in 80 acres, representing a net of 40 acres, or 1.064 percent. And R. K. Williams holds 40 acres, also 1.064 percent.

Q The owners you have listed there, have they all agreed to enter into this unit agreement?

A They have all agreed or indicated they will join or participate in the drilling, or farm out their acreage so that they will be committed.

Q In other words, you anticipate 100 percent participation in the unit?

A At this time we are anticipating that.

Q Referring to what has been marked as Exhibit No. C, will



you identify that exhibit and state what is shown in it?

A Exhibit C is the suggested basic form for use in forming unit agreements embracing State lands or State and fee lands, as distributed by the Office of the Commissioner of Public Lands.

Q That is a form which has been approved by the Commissioner of Public Lands for use in a unit of this type?

A That is correct.

Q Will there be any changes made in the form of the unit agreement?

A The additions or changes to be made in the form of the unit agreement are limited to the insertion under Section -- well first we will put insertion in Section 3 of Tom Brown Drilling Company, Inc., as unit operator. In Section 8, which is headed "Drilling to Discovery Well", insert the word "Pennsylvanian" as the formation to be tested at a maximum drilling depth of 8,600 feet. In Section 17, which is headed "Effective Date and Term", we are going to amend the standard form which provides "that the unit agreement shall become effective upon approval by the Commissioner and shall terminate in two years after such date unless extended by the Commissioner or valuable discovery." We are changing the unit term by deleting the words "two years after such date" and inserting in lieu thereof "on February 16, 1964."

Q What is the reason for that?

A The purpose of that is that the majority of the lands



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within the Siegrest Draw Unit area will expire by their own terms, most of the leases will expire by their own terms on February 16, 1964. By the change in Section 17 limiting the term of the unit to February 16, 1964, we are not then asking for an extension of the unit beyond the term of the earliest expiration date of any State lease within the unit area.

Q The unit agreement commits the operator to drill a test well?

A That is correct.

Q That is the well you have described as to formation and depth. When is it to be drilled?

A It's required by the terms of the unit agreement under Section 8 to be commenced within 60 days after the effective date of the agreement.

Q In listing the ownership in this unit, you do not show Tom Brown Drilling Company, Inc. as owning any interest?

A They do not own any interest as of this time. By the drilling of the obligation well, they will earn one-half interest in the acreage of Marathon Oil Company.

Q And they will be the unit operator?

A They will be the unit operator.

Q Were Exhibits A, B, C, and D prepared by you or under your supervision?

A A and B were prepared; of course, C --

Q Is the standard form of unit?



A -- standard form of agreement by the Commissioner of Public Lands.

Q Has this proposed unit been approved by the Commissioner of Public Lands as to area and content?

A As to area and form of the agreement, the unit agreement as now requested, embracing a total of only 3,760 acres has been approved by the Commissioner of Public Lands as of March 6, 1963.

Q Is that shown by Exhibit D?

A That is correct.

MR. KELLAHIN: At this time I would like to offer in evidence Exhibits A, B, C, and D.

MR. NUTTER: Exhibits A, B, C, and D will be admitted into evidence.

(Whereupon, Applicant's Exhibits Nos. A, B, C, and D admitted in evidence.)

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

MR. NUTTER: Any questions of Mr. Morrell?

MR. DURRETT: Yes, sir, I have one question.

CROSS EXAMINATION

BY MR. DURRETT:

Q How many parties do you have that have signed at this time?

A In view of the fact that we were negotiating with the Commissioner as to the area, we have not actually had any



signatures because we did not know the area that would be approved until March 6th.

Q But they have all agreed that they would be willing to sign?

A That is correct.

Q Have they been informed that you intended to use the standard form approved by the Commissioner?

A Right, they have.

MR. DURRETT: That's all I have, I believe.

BY MR. NUTTER:

Q Other than the changes which you noted in the standard form of the unit agreement, it will be used in this same form?

A That is correct.

MR. NUTTER: Any further questions? The witness may be excused.

(Witness excused.)

MR. KELLAHIN: If the Examiner please, I would like to call Mr. John W. Higgins; and in connection with his testimony I would like to ask that the Commission receive the application with the exhibits attached thereto as an exhibit in this proceeding, for the reason that it contains the geological report and maps based on seismic information which will be referred to by Mr. Higgins in his testimony.

MR. NUTTER: We have a copy of this report and it will be a part of the record.



JOHN W. HIGGINS

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

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q Would you state your name, please?

A John W. Higgins.

Q By whom are you employed and in what position?

A Marathon; I am District Geologist for West Texas-New Mexico District.

Q Have you ever appeared before the New Mexico Oil Conservation Commission as an expert geologist and made your qualifications a matter of record?

A Yes, I have.

MR. KELLAHIN: Are the witness' qualifications acceptable?

MR. NUTTER: Yes, sir.

Q (By Mr. Kellahin) Are you familiar with the application of Tom Brown Drilling Company, Inc., in Case 2766?

A Yes, sir, I am.

Q In connection with this application, have you read the geological report that was attached as an exhibit to the application that was prepared by Mr. James Day?

A Yes, sir, I have.

Q Are you in agreement with the content of that report?



A Yes, sir, I am.

Q Attached to the application is a plat showing the formations involved here on interpretive data. Did you prepare that? That's the map showing the seismic information?

A Yes, sir.

Q Or was it prepared --

A It was prepared under my supervision.

Q On what basis did you prepare that exhibit, Mr. Higgins?

A That exhibit was prepared using basic data from a rather large seismic survey conducted by our company, not only covering this area but embracing a much larger area, particularly to the south and southwest, the Indian Basin Area, which is a recent discovery. The survey was made by Independent Exploration Company for Marathon Oil Company, which at that time was the Ohio Oil Company.

Q Could you summarize briefly for the Commission the type of structure that is involved here?

A Yes, sir, I can. The seismic graph indicates it is a typical anticlinal structure with approximately 200 feet of closure on the Siegrèst Unit. The trend of the structure is local for the area, in that it tends to parallel the Huapache monocline and Huapache fault, which is a major structure in the area. It is compatible with all the known geology in the area, as far as I am concerned.

Q Is all the acreage which is included in the unit as now



proposed as shown on Applicant's Exhibit No. A located on this structure?

A Yes, sir, it is.

Q In the event production is found in the area, would it be reasonable to presume that all of the unit area would be productive of oil or gas, or both?

A Yes, sir, I think it would be.

Q A well was proposed in the unit agreement to be drilled to a depth of 8,600 feet. Is that sufficient to test the Pennsylvanian formation?

A Yes, sir, that depth is adequate or more than adequate to completely penetrate and test the entire Pennsylvanian section.

MR. KELLAHIN: That's all the questions I have on direct examination.

MR. NUTTER: Any questions of Mr. Higgins?

CROSS EXAMINATION

BY MR. NUTTER:

Q Mr. Higgins, in your opinion the Pennsylvanian is the target horizon in this unit?

A Yes, that is right. That's the primary objective.

Q In your opinion, if the Pennsylvanian is productive, will it be productive of gas?

A It could be productive of either, Mr. Nutter. The Pennsylvanian, of course, includes a rather substantial amount of sedimentary rocks. In a country as rank as this, rather than



referring to any particular reservoir, I think it would be more proper to use the term Pennsylvanian. We, of course, are thinking of the gas zone which was recently discovered by Sunray-Midcontinent in this immediate area; and also other zones in the area, particularly the Upper Pennsylvanian zone which yielded oil on the Magnolia No. 1 Tres Ranchos approximately three miles northeast of the subject area. I personally believe it is a potential oil and gas area from the entire Pennsylvanian section.

Q Now the Magnolia Tres Ranchos is three miles northeast. How far away is the Sunray DX State "AH" Well?

A Approximately five miles north-northwest.

Q And the Ralph Lowe discovery in the Indian Basin?

A Approximately eleven miles southeast.

Q And all of those were Pennsylvanian gas discoveries?

A Yes, sir. Well, no, the Magnolia Tres Ranchos was completed as a dry hole. However, it had very substantial shows of oil in the Upper Pennsylvanian.

Q Is it going to adversely affect operation of this structure if a decision is made to decrease the application from the former application to the present application?

A You mean from the engineering standpoint, effective drainage of the structure?

Q And effective unit control by the unit operator of the structure?

A No, sir, I do not believe it would.



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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 Hearing 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, the 22nd day of March, 1963.

Ada Dearnley
NOTARY PUBLIC

My Commission Expires:

June 19, 1963.

I do hereby certify that the foregoing is a true and correct record of the proceedings in the hearing of Case No. 2766, heard by me on 3/7, 1963.

[Signature], Examiner
New Mexico Oil Conservation Commission.

