

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
June 26, 1963

EXAMINER HEARING

IN THE MATTER OF:)

Application of Tom Brown Drilling Company)
for a unit agreement, Eddy County, New)
Mexico. Applicant, in the above-styled)
cause, seeks approval of the Runyan Ranch)
Unit Area comprising 10,890.12 acres of)
State and Federal lands in Township 19)
South, Range 21 East, Eddy County, New)
Mexico.)

Case 2834

BEFORE: Daniel S. Nutter, Examiner.

TRANSCRIPT OF HEARING

MR. NUTTER: We will take next Case 2834.

MR. DURRETT: Application of Tom Brown Drilling Company
for a unit agreement, Eddy County, New Mexico.

MR. KELLAHIN: Jason Kellahin, Kellahin & Fox, Santa
Fe, representing the applicant. I'll have two witnesses I
would like to have sworn, please.

(Witnesses sworn.)

MR. KELLAHIN: Call Mr. Morrell as the first witness.

(Whereupon, Applicant's Exhi-
bits 1 through 5 were marked
for identification.)

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FOSTER MORRELL

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

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q Would you state your name, please?

A My name is Foster Morrell.

Q What business are you engaged in?

A Petroleum consultant.

Q Have you testified before the Oil Conservation Commission as a petroleum consultant in previous cases?

A I have.

Q And made your qualifications a matter of record?

A They are.

MR. KELLAHIN: Are the witness's qualifications acceptable?

MR. NUTTER: Yes, sir.

Q Are you familiar with the application of Tom Brown Drilling Company in Case 2834 before the Commission?

A I am.

Q Did you have anything to do with the formation of the unit agreement involved in this application?

A I prepared it.



Q Then I take it you are familiar with the unit, is that correct?

A That's correct.

Q Referring to what has been marked as Exhibit No. 1, would you identify that exhibit and discuss its contents?

A Exhibit No. 1 is the unit agreement for the development and operation of the Runyan Ranch Unit Area. The form of agreement is the form prescribed by the Department of Interior with additional provisions as required for state lands, and references to the Oil Conservation Commission of New Mexico.

Q Is this substantially in the form that has heretofore been approved by this Commission?

A It is.

Q Referring to what has been marked as Exhibit A attached to the Exhibit No. 1, does that outline the area involved in the application before the Commission at this time?

A It does.

Q Does it identify the ownership of the lands?

A It does.

Q Are all the lands federal, state or fee?

A The total unit area of the proposed Runyan Ranch is 10,890.12 acres, of which 9,607.20 acres, or 88.22% are federal land, and 1,282.92 acres, or 11.78% are State of New Mexico land.



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Q Are there any fee lands in the unit?

A There are no fee lands.

Q Referring to Exhibit B attached to Exhibit No. 1, would you state what is shown on that exhibit?

A Exhibit B is a schedule of ownership of leases with description of land, serial number, acres, record owner, overriding royalty owners, and working interest owners.

Q The exhibit does not reflect that Tom Brown has an interest in the unit at the present time, does it?

A As presently held, Tom Brown does not have any interest in the leases, but by a footnote on page 4 of said Exhibit B, it is stated that "Upon completion of the initial test well, Tom Brown Drilling Company, Inc., acquires one-half interest under all tracts presently held by Marathon Oil Company in accordance with letter agreement with that company."

Q Is Tom Brown Drilling Company designated as the unit operator?

A Tom Brown Drilling Company is designated as the unit operator.

Q And it is in that position that he makes application in this case?

A That is correct.

Q Does the unit call for any development?



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A The unit calls for the commencement of a well within six months of the effective date to be drilled to test the formations of Pennsylvanian age, or to a depth not in excess of 8100 feet.

Q Is there a subsequent development required by the unit agreement?

A Upon discovery, the subsequent development will be under a plan of development, in the absence of discovery wells, must be commenced after six months of the completion of the preceding well.

Q Referring to what has been marked as Exhibit No. 2, would you identify that exhibit and discuss the information shown on it?

A Mr. Kellahin, if you please, there are a couple of comments I would add to Exhibit 1 on the unit agreement. All formations are unitized to all depths, and also pursuant to instructions from the Director of the United States Geological Survey we have presented the form of unit agreement to the Commissioner of Public Lands, and at the request of Mrs. Marion M. Rhea, we have on page 24 made a change with respect to subsequent joinders which provides that as to state land such subsequent joinder by a lessee of record must be approved by the Land Commissioner.



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Q Does that complete your discussion of Exhibit No. 1 then?

A Yes.

MR. NUTTER: This change has been made in this exhibit?

A That has been incorporated in the copies which you have.

Q (By Mr. Kellahin) Now, referring to what has been marked as Exhibit No. 2, would you discuss that exhibit, please?

A Exhibit No. 2 is a tabulation showing the ownership of working interests in the Runyan Ranch Unit.

Q Have all of the owners of working interest joined the unit?

A No joinders have been received to date, but we have received indications that at least 95% of the acreage within the unit will be committed.

Q What is the situation as to overriding royalties?

A The four overriding royalties under the unit agreement other than those who also hold record title have already executed ratification and consents.

Q Would you refer to Exhibit No. 3, please, and discuss that exhibit?

A Exhibit No. 3 is my letter in behalf of Tom Brown Drilling Company applying to the Director of the United States



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Geological Survey for the designation of certain lands as the whole unit to be known as the Runyan Ranch Unit and for the drilling of a test well to the Pennsylvanian formation, or not in excess of 8100 feet.

Q That letter makes reference to a geological report, has that report been made available to the Oil Conservation Commission?

A That report has been filed with the Oil Conservation Commission.

Q That was filed prior to this hearing, is that correct?

A That is correct.

Q Referring to Exhibit No. 4, would you identify that exhibit and discuss it?

A That is the letter dated March 26 from the Acting Director of the Geological Survey approving the designation of the Runyan Ranch Unit as requested, the drilling obligation and providing that we are to contact the Commissioner prior to soliciting joinders.

Q Have you contacted the Commissioner of Public Lands as directed by that letter?

A We have.

Q Would you refer to Exhibit No. 5? Please identify that exhibit.



A A letter dated May 10, 1963, we submitted to the Commissioner of Public Lands the form of unit agreement as approved by the Director, including the customary language required by the State of New Mexico.

Q Have you received approval of the Commissioner of Public Lands as yet?

A We have received no formal approval from the Commissioner as yet except for the request that I mentioned before that on the change in subsequent joinder as to state lands.

Q Mr. Morrell, Exhibit No. 1 is the unit agreement prepared by you?

A That is correct.

Q And the other Exhibits 2, 3, 4 and 5 were either prepared by you or constitute correspondence from your files in connection with this matter, is that correct?

A That is correct.

MR. KELLAHIN: At this time we offer in evidence Exhibits 1 through 5 inclusive.

MR. NUTTER: Tom Brown's Exhibits 1 through 5 are admitted in evidence.

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

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



witness.

MR. NUTTER: Any questions of Mr. Morrell?

CROSS EXAMINATION

BY MR. NUTTER:

Q Referring to your Exhibit No. 2, it shows 100% of the working interest owners in the unit, did you state that to date none have actually executed?

A That is correct.

Q But you have firm tentative commitments from 95%?

A That is correct.

Q And Tom Brown will earn 50% of Marathon's acreage, so he would have 41% of the unit on completion of the test well?

A That is correct.

Q Now, the Director, in his letter of March 26 to you, suggested certain changes in the form of the unit agreement, have those changes been incorporated?

A Those have been incorporated in the form which is before you.

MR. NUTTER: Any further questions of Mr. Morrell? He may be excused.

(Witness excused.)

MR. KELLAHIN: I would like to call Mr. McMichael as our next witness.



(Whereupon, Applicant's Exhibit No. 6 was marked for identification.)

BILL McMICHAEL

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

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q Would you state your name, please?

A Bill McMichael.

Q By whom are you employed and in what position, Mr. McMichael?

A Employed by Marathon Oil Company as Area Geologist in Roswell, New Mexico, and in charge of the southeastern part of the state.

Q The area you are in charge of includes the area involved in the Tom Brown Drilling Company application presently being heard, is that correct?

A That is correct.

Q Mr. McMichael, have you previously testified before the Oil Conservation Commission and made your qualifications as a geologist a matter of record?

A Yes, I have.

MR. KELLAHIN: Are the witness's qualifications

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acceptable?

MR. NUTTER: They are.

Q Are you familiar with the application of Tom Brown Drilling Company in Case No. 2834?

A Yes, sir, I am.

Q Have you made a study of the area involved in this application?

A I have.

Q Are you familiar with the geological report which was prepared by a Mr. James R. Day?

A Yes, sir, I have read that report, and I am in agreement with the contents.

Q Referring to what has been marked as Exhibit No. 6, would you identify that exhibit, please?

A That exhibit is a structural map based on Devonian seismograph reflections that constitute the basis for this particular unit.

Q On the basis of that exhibit and the information available to you, would you discuss the geology within the area of the proposed unit?

A This particular anomaly was mapped by Independent Exploration Company in a seismic survey several years ago run for Marathon, formerly Ohio Oil Company, and the anomaly has two



trends, one a northwest-southeast, the other opposite trend is a southwest-northeast trend. These particular conflicting pieces of evidence are actually we feel in agreement in that the northwest-southeast trend approximately parallels the trend of the Hupache monocline to the southwest. The opposing trend northeast-southwest is the actual orientation of the stratigraphic deposition, the southeastern direction being the Basin area in Pennsylvanian at a later time.

This anomaly has approximately 250 feet of closure bounded by dip slope and seismic faulting. That is about the total discussion of the structure as far as the stratigraphy is concerned, the sedimentary section is quite favorable and recent indications in this particular area have been encouraging as to the probable success.

Q In your opinion, does the proposed unit of Tom Brown Drilling Company substantially cover a single structural feature?

A Yes, it does.

Q Would a unit, as proposed here, give essential control to the development of that structural feature?

A Yes, sir.

Q In your opinion would such development of the area be in the interest of conservation and the prevention of waste?

A Yes, sir.



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Q Would it result in more efficient development of the natural resources underlying that area?

A Yes, sir, it would be much in the interest of conservation in this particular case.

Q Now, Mr. Morrell testified that the unit agreement called for the drilling of a well to sufficient depths to test the Pennsylvanian or 8100 feet. In your opinion, would a well drilled to 8100 feet be of sufficient depth to adequately test the Pennsylvanian formation?

A Yes, sir, a depth of 8100 feet would be more than adequate to test the Mississippian, completely test the Pennsylvanian into the Mississippian.

Q And into the Mississippian?

A Yes.

Q Exhibit No. 6 was not prepared by you, or was that exhibit prepared by you?

A It was not prepared by me.

Q Are you in agreement with the information that is shown on that exhibit?

A Yes, sir, I am in agreement.

MR. KELLAHIN: At this time we would like to offer in evidence Exhibit No. 6.

MR. NUTTER: Exhibit 6 will be admitted in evidence.



(Whereupon, Applicant's Exhibit No. 6 was offered and admitted in evidence.)

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

MR. NUTTER: Are there any questions of Mr. McMichael?

CROSS EXAMINATION

BY MR. NUTTER:

Q This Exhibit No. 6 is contoured on the seismic top of the Devonian. Has any structure map of the seismic Pennsylvanian been prepared?

A No, sir, the reflections from the Pennsylvanian were very, very poor quality and no attempt was made. They have this same survey in adjoining areas we have made some attempt, but it isn't too reliable.

Q You can't pick up the Pennsylvanian accurately enough?

A Not accurately here.

Q Are the faults pretty well substantiated by the seismic work?

A By the seismic records, there is an interruption in the records.

Q And you feel that you got between two and three hundred feet of closure in this structure?

A Yes.



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Q Within the unit area?

A Yes.

Q Do you believe that the unit area is adequately large to provide control by the unit operator in the event production would be obtained?

A Yes, I do.

Q Do you think the unit area encompasses any appreciable amount of acreage which is not on this structure?

A No, sir, if you are referring to the particular closure there is not, it will adequately cover the closure, there is some that has at the suggestion of the United States Geological Survey been added as favorable acreage, and we believe has geologic merit that is outside the closed contour, but not outside the productive area.

Q Would this be the acreage to the extreme south?

A Yes.

Q Where will the initial test well be drilled?

A That will be at the discretion of Tom Brown. My understanding is that it will be in the northeast part of this unit.

Q Even the section hasn't been picked as yet?

A The section has not been revealed to me.

MR. NUTTER: Any further questions of Mr. McMichael?

He may be excused.



August 19, 1963

Mr. Foster Morrell
Petroleum Consultant
Petroleum Building
Roswell, New Mexico

Re: Runyan Ranch Unit
Eddy County, New Mexico

Dear Mr. Morrell:

The Commissioner of Public Lands approved as of August 19, 1963 Runyan Ranch Unit Agreement, Eddy County, New Mexico. Our approval is subject to like approval by the United States Geological Survey and the Oil Conservation Commission.

Enclosed are six originally signed Certificates of Approval and Official Receipt No. G-18302 in the amount of Eighty-five (\$85.00) Dollars, which covers the filing fee.

It is understood that upon approval by the United States Geological Survey, you will furnish this office a fully conformed copy of this Agreement.

Very truly yours,

E. S. JOHNNY WALKER
COMMISSIONER OF PUBLIC LANDS

JY:
(Mrs.) Marian M. Rhea, Supervisor
Unit Division

ESJW/mmr/m

cc: United States Geological Survey
Roswell, New Mexico

Oil Conservation Commission
Santa Fe, New Mexico

Mr. Tom Brown
Tom Brown Drilling Company, Inc.
P. O. Box 5131
Midland, Texas

RUNYAN RANCH UNIT AREA
EDDY COUNTY, NEW MEXICO

<u>Working Interest Owner</u>	<u>Federal</u>	<u>Acreage State</u>	<u>Total</u>	<u>Percentage</u>
Marathon Oil Company	8,206.91	761.31	8,968.22	82.35189%
Pan American Pet. Corp.		481.61	481.61	4.42245%
Beard Oil Company	480.00		480.00	4.40766%
Bruce (Jacqueline) Anderson	480.00		480.00	4.40766%
Transmountain Prod. Co.	280.00		280.00	2.57114%
James D. Wheeler	80.00		80.00	0.73461%
Coe S. Mills	40.29		40.29	0.36997%
Estate of Carl W. Krouse	40.00		40.00	0.36731%
Sinclair Oil & Gas Co.		40.00	40.00	0.36731%
	<u>9,607.20</u>	<u>1,282.92</u>	<u>10,890.12</u>	<u>100.00000%</u>

BEFORE EXAMINER NUTTER
 OIL CONSERVATION COMMISSION
 EXHIBIT NO. 2
 CASE NO. 2834

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cause, seeks approval of the Runyan Ranch)
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State and Federal lands in Township 19)
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Mexico.)

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MR. KELLAHIN: Jason Kellahin, Kellahin & Fox, Santa
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(Witnesses sworn.)

MR. KELLAHIN: Call Mr. Morrell as the first witness.

(Whereupon, Applicant's Exhi-
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FOSTER MORRELL

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

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q Would you state your name, please?

A My name is Foster Morrell.

Q What business are you engaged in?

A Petroleum consultant.

Q Have you testified before the Oil Conservation Commission as a petroleum consultant in previous cases?

A I have.

Q And made your qualifications a matter of record?

A They are.

MR. KELLAHIN: Are the witness's qualifications acceptable?

MR. NUTTER: Yes, sir.

Q Are you familiar with the application of Tom Brown Drilling Company in Case 2834 before the Commission?

A I am.

Q Did you have anything to do with the formation of the unit agreement involved in this application?

A I prepared it.

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Q Then I take it you are familiar with the unit, is that correct?

A That's correct.

Q Referring to what has been marked as Exhibit No. 1, would you identify that exhibit and discuss its contents?

A Exhibit No. 1 is the unit agreement for the development and operation of the Runyan Ranch Unit Area. The form of agreement is the form prescribed by the Department of Interior with additional provisions as required for state lands, and references to the Oil Conservation Commission of New Mexico.

Q Is this substantially in the form that has heretofore been approved by this Commission?

A It is.

Q Referring to what has been marked as Exhibit A attached to the Exhibit No. 1, does that outline the area involved in the application before the Commission at this time?

A It does.

Q Does it identify the ownership of the lands?

A It does.

Q Are all the lands federal, state or fee?

A The total unit area of the proposed Runyan Ranch is 10,890.12 acres, of which 9,607.20 acres, or 88.22% are federal land, and 1,282.92 acres, or 11.78% are State of New Mexico land.



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Q Are there any fee lands in the unit?

A There are no fee lands.

Q Referring to Exhibit B attached to Exhibit No. 1, would you state what is shown on that exhibit?

A Exhibit B is a schedule of ownership of leases with description of land, serial number, acres, record owner, overriding royalty owners, and working interest owners.

Q The exhibit does not reflect that Tom Brown has an interest in the unit at the present time, does it?

A As presently held, Tom Brown does not have any interest in the leases, but by a footnote on page 4 of said Exhibit B, it is stated that "Upon completion of the initial test well, Tom Brown Drilling Company, Inc., acquires one-half interest under all tracts presently held by Marathon Oil Company in accordance with letter agreement with that company."

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Q Is there a subsequent development required by the unit agreement?

A Upon discovery, the subsequent development will be under a plan of development, in the absence of discovery wells, must be commenced after six months of the completion of the preceding well.

Q Referring to what has been marked as Exhibit No. 2, would you identify that exhibit and discuss the information shown on it?

A Mr. Kellahin, if you please, there are a couple of comments I would add to Exhibit 1 on the unit agreement. All formations are unitized to all depths, and also pursuant to instructions from the Director of the United States Geological Survey we have presented the form of unit agreement to the Commissioner of Public Lands, and at the request of Mrs. Marion M. Rhea, we have on page 24 made a change with respect to subsequent jointers which provides that as to state land such subsequent joinder by a lessee of record must be approved by the Land Commissioner.



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Q Does that complete your discussion of Exhibit No. 1 then?

A Yes.

MR. NUTTER: This change has been made in this exhibit?

A That has been incorporated in the copies which you have.

Q (By Mr. Kellahin) Now, referring to what has been marked as Exhibit No. 2, would you discuss that exhibit, please?

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Geological Survey for the designation of certain lands as the whole unit to be known as the Runyan Ranch Unit and for the drilling of a test well to the Pennsylvanian formation, or not in excess of 6100 feet.

Q That letter makes reference to a geological report, has that report been made available to the Oil Conservation Commission?

A That report has been filed with the Oil Conservation Commission.

Q That was filed prior to this hearing, is that correct?

A That is correct.

Q Referring to Exhibit No. 4, would you identify that exhibit and discuss it?

A That is the letter dated March 26 from the Acting Director of the Geological Survey approving the designation of the Runyan Ranch Unit as requested, the drilling obligation and providing that we are to contact the Commissioner prior to soliciting joinders.

Q Have you contacted the Commissioner of Public Lands as directed by that letter?

A We have.

Q Would you refer to Exhibit No. 5? Please identify that exhibit.

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A I have.

Q Are you familiar with the geological report which was prepared by a Mr. James R. Day?

A Yes, sir, I have read that report, and I am in agreement with the contents.

Q Referring to what has been marked as Exhibit No. 6, would you identify that exhibit, please?

A That exhibit is a structural map based on Devonian seismograph reflections that constitute the basis for this particular unit.

Q On the basis of that exhibit and the information available to you, would you discuss the geology within the area of the proposed unit?

A This particular anomaly was mapped by Independent Exploration Company in a seismic survey several years ago run for Marathon, formerly Ohio Oil Company, and the anomaly has two

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trends, one a northwest-southeast, the other opposite trend is a southwest-northeast trend. These particular conflicting pieces of evidence are actually we feel in agreement in that the northwest-southeast trend approximately parallels the trend of the Huapache monocline to the southwest. The opposing trend northeast-southwest is the actual orientation of the stratigraphic deposition, the southeastern direction being the Basin area in Pennsylvanian at a later time.

This anomaly has approximately 250 feet of closure bounded by dip slope and seismic faulting. That is about the total discussion of the structure as far as the stratigraphy is concerned, the sedimentary section is quite favorable and recent indications in this particular area have been encouraging as to the probable success.

Q In your opinion, does the proposed unit of Tom Brown Drilling Company substantially cover a single structural feature?

A Yes, it does.

Q Would a unit, as proposed here, give essential control to the development of that structural feature?

A Yes, sir.

Q In your opinion would such development of the area be in the interest of conservation and the prevention of waste?

A Yes, sir.

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Q Would it result in more efficient development of the natural resources underlying that area?

A Yes, sir, it would be much in the interest of conservation in this particular case.

Q Now, Mr. Morrell testified that the unit agreement called for the drilling of a well to sufficient depths to test the Pennsylvanian or 8100 feet. In your opinion, would a well drilled to 8100 feet be of sufficient depth to adequately test the Pennsylvanian formation?

A Yes, sir, a depth of 8100 feet would be more than adequate to test the Mississippian, completely test the Pennsylvanian into the Mississippian.

Q And into the Mississippian?

A Yes.

Q Exhibit No. 6 was not prepared by you, or was that exhibit prepared by you?

A It was not prepared by me.

Q Are you in agreement with the information that is shown on that exhibit?

A Yes, sir, I am in agreement.

MR. KELLAHIN: At this time we would like to offer in evidence Exhibit No. 6.

MR. NUTTER: Exhibit 6 will be admitted in evidence.

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(Whereupon, Applicant's Exhibit No. 6 was offered and admitted in evidence.)

MR. KELLAHIM: That's all the questions I have of the witness.

MR. NUTTER: Are there any questions of Mr. McMichael?

CROSS EXAMINATION

BY MR. NUTTER:

Q This Exhibit No. 6 is contoured on the seismic top of the Devonian. Has any structure map of the seismic Pennsylvanian been prepared?

A No, sir, the reflections from the Pennsylvanian were very, very poor quality and no attempt was made. They have this same survey in adjoining areas we have made some attempt, but it isn't too reliable.

Q You can't pick up the Pennsylvanian accurately enough?

A Not accurately here.

Q Are the faults pretty well substantiated by the seismic work?

A By the seismic records, there is an interruption in the records.

Q And you feel that you got between two and three hundred feet of closure in this structure?

A Yes.

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Q Within the unit area?

A Yes.

Q Do you believe that the unit area is adequately large to provide control by the unit operator in the event production would be obtained?

A Yes, I do.

Q Do you think the unit area encompasses any appreciable amount of acreage which is not on this structure?

A No, sir, if you are referring to the particular closure there is not, it will adequately cover the closure, there is some that has at the suggestion of the United States Geological Survey been added as favorable acreage, and we believe has geologic merit that is outside the closed contour, but not outside the productive area.

Q Would this be the acreage to the extreme south?

A Yes.

Q Where will the initial test well be drilled?

A That will be at the discretion of Tom Brown. My understanding is that it will be in the northeast part of this unit.

Q Even the section hasn't been picked as yet?

A The section has not been revealed to me.

MR. NUTTER: Any further questions of Mr. McMichael?

He may be excused.



