

BEFORE THE
Oil Conservation Commission
SANTA FE, NEW MEXICO
August 7, 1956

IN THE MATTER OF:

CASE NO. 1117 (Examiner Hearings)

TRANSCRIPT OF PROCEEDINGS

DEARNLEY-MEIER AND ASSOCIATES
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ALBUQUERQUE, NEW MEXICO

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
August 7, 1956

IN THE MATTER OF:

Application of Richardson and Bass, a
partnership, for approval of its pro-
posed Little Eddy Unit Agreement located
in Eddy and Lea Counties, New Mexico, in
accordance with Rule 507 of the New Mex-
ico Oil Conservation Commission Statewide
Rules and Regulations. Applicant, in the
above-styled cause, seeks an order grant-
ing approval of its proposed Little Eddy
Unit Agreement embracing 54,044 acres,
more or less, of federal, state and fee
lands situated in Township 21 and 22
South, Range 31 East; Townships 19, 20,
21 and 22 South, Range 32 East; Town-
ships 19 and 20 South, Range 33 East,
all in Lea and Eddy Counties, New Mexico.

Case No. 1117

BEFORE:

Warren W. Mankin, Examiner

TRANSCRIPT OF HEARING

MR. MANKIN: The next case is Case 1117.

(Mr. Jack Cooley, Attorney for the Oil Conservation Commis-
sion, read the title of the within case.)

MR. HINKLE: Clarence H. Hinkle, appearing in Case 1117 on be-
half of Richardson and Bass. We have one witness, Mr. Perry R.
Bass.

(The witness, Perry R. Bass, was sworn by Mr. Mankin.)

PERRY R. BASS

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

DIRECT EXAMINATION

By MR. HINKLE:

Q. State your name, please?

A. Perry R. Bass

Q Where do you live, Mr. Bass?

A Forth Worth, Texas.

Q Are you one of the partners of Richardson and Bass?

A Yes, I am.

Q Are you familiar with the application which has been filed for approval of the Little Eddy Unit Agreement?

A Yes, sir.

Q Are you a graduate geologist, Mr. Bass?

A Yes, I am.

Q From what school?

A Yale University.

Q What year did you graduate?

A 1937.

Q Have you previously testified before the Commission?

A Yes, I have, sir.

Q Are his qualifications acceptable?

MR. MANKIN: They are.

Q. Now in connection with the application for approval of the Little Eddy Unit Agreement, how many acres does the proposed unit cover?

A The proposed unit covers approximately 54,000 acres.

Q And in what townships and ranges is it located?

A I will read from the application here: The acreage is in Township 19 South. Range 32 E, 19 South 33 East, 20 South 32 East, 20 South 33 East, 21 South 31 East, 21 South 32 East, 22 South 31 East, and 22 South 32 East.

Q Now of the proposed area, how many acres are federal lands and what percentage of the entire area?

A The federal land consists of 44,037.49 acres being a percentage of 41.48 percent. The state land consists of 8,966.14 acres being 16.59 percent. Patented land of 1,040.45 acres being 1.93 percent of the total unit.

Q Have Richardson and Bass heretofore made application to the U.S.G.S. for a survey of this area as an area suitable and proper for use?

A Yes, they have.

Q And did the U.S.G.S. act on that application?

A Yes, it acted favorably on that application.

Q And when was it designated as such area by the U.S.G.S.?

A I don't have the exact date but I believe in the information furnished to the State, we have copies of the letter of designation from the U.S.G.S.

Q Is that the letter which you referred to?

A Yes, the letter to which I refer -- I notice on the letter that there is a date of June 8, 1956.

Q Will you have that identified by the reporter, please, as Exhibit "A".

(Applicant's Exhibit "A" marked for identification.)

Q Referring to Exhibit "A", does that describe the same area contained in the application before the Oil Conservation Commission?

A Yes, it does?

Q In connection with the application to the U.S.G.S., did you submit for their consideration a geological report?

A Yes, I did.

(Applicant's Exhibit "B" marked for identification.)

Q Now referring to the instrument which has been identified as Exhibit "B", will you state to the Commission what this is?

A This is the geological report as a part of the application for designation of the unitized area of the Little Eddy Seismograph Structures located in Eddy and Lea Counties, New Mexico.

Q Was this report prepared by you and under your direction?

A Yes, it was.

Q Is this the same report that was filed with the U.S.G.S for designation of the area?

A Yes, it is the same report.

Q Will you explain briefly to the Commission what the report shows?

A This report shows, first, the acreage involved in the application. Then it discusses the seismograph work which was done by Richardson and Bass and also includes a map showing the results of that seismic survey. There is also another map designated as Map No. 2 showing the ownership of the land involved and what percentage is state, federal, and fee. You will also find in this report a columnar section showing the expected sediments and their depths

below the surface of the ground that should be encountered in this area and you will also find two cross sections which are thought to be the type of cross sections of the sediments of the Little Eddy Unit Area.

Q What are the probable productive zones that might be encountered in this area as shown by this report?

A There are a number of probable productive zones that might be encountered in this area, being zones that start with the Delaware formation, the underlying Bone Springs Formation also shows a productive zone.

Q And about what depth is that expected?

A The top of the Bone Springs should be at about 7,500 feet, the Wolf Camp formation, underlying it, would be encountered at approximately 10,500 feet as within the various zones which might be productive. Underlying the Wolf Camp formation is the Pennsylvanian series, in which it is possible to encounter a productive formation in a number of different places. Underlying it is the Mississippian line which in one well in the New Mexico part of the Delaware basin a rather good gas showing was encountered which means if it is favorably located on structure, it too could produce. The primary objective of the wells to be drilled in this unitized area is the Devonian or what is sometimes called in New Mexico the Siluro-Devonian formation, which is expected to be the primary and most prolific reservoir.

Q Approximately at what depth do you expect to encounter that formation?

A That formation is expected to be encountered at approximately

14,500 feet.

Q Now does the plat which is submitted with the report, attached to the report, showing your interpretation of the seismographic work which has been performed, show any anomaly of the geological structure involved?

A Yes, the seismographic work shows a very large anticline, complicated by some rather large faults making a large complex geological structure.

Q Does the proposed unit area cover all or substantially all of the geophysical features reflected by your seismic report?

A Yes, it does.

Q And in your opinion if this area is unitized, would it give effective control of the whole structure or anomaly?

A Yes, it will.

Q Is there anything else that you would like to state to the Commission with respect to this report?

A Nothing which occurs to me at the present moment.

MR. HINKLE: We would like to offer in evidence applicant's Exhibit "2".

(The Exhibit offered is marked "Exhibit B.")

We would also in that connection like to make the request that after this report has been considered by the Commission and this application acted upon, that we given permission to withdraw the report as we would like to keep it confidential.

MR. CAMPBELL: You mean you are offering it in evidence but you are not offering it?

MR. HINKLE: We are offering it until such time as the

Commission has an opportunity to study it and act on the application, and then we would like to have it taken out as a public record. I think we have already set a precedent for this in connection with the Big Eddy Unit Agreement approved in 1952.

MR. MANKIN: You mentioned, Mr. Hinkle, that this was Exhibit "2". I believe you indicated that it was "Exhibit B".

MR. HINKLE: I believe it was Exhibit "B". Will you make that correction, please?

MR. MANKIN: Is there an objection to the withdrawal of Exhibit "B", after such time as the Commission has had time to consider the report and return it to the applicants so that it may be held confidential?

(No. objection was made.)

MR. COOLEY: Mr. Hinkle, is it your opinion that such evidence could be considered by the Commission and would be the basis for their decision on the matter when it would not be subject to review?

MR. HINKLE: You might wait for the time allowed for filing an application for rehearing which would be twenty (20) days.

MR. COOLEY: Is it your suggestion that we should do that, in order that the record would be complete until such time as anyone would decide to appeal?

MR. HINKLE: That would be all right, we would just like to not have it a public record after it has served the Commission.

MR. MANKIN: If there is no objection Exhibit "E" will be returned to the applicant after the Commission has properly considered it in formulating their opinion, at least twenty (2) days after the issuance of the order.

Q Now, Mr. Bass, there was filed with this application, I believe, three copies of the proposed Unit Agreement. Do you know whether or not that form has been approved by the U.S.G.S.?

A Yes, it has, sir.

Q Is that form substantially the same form as the forms heretofore used and approved by the Commissioner of Public Lands and the New Mexico Oil Conservation Commission and the United States Geological Survey in similar cases?

A Yes, it is.

Q Who is designated as the operator in the proposed unit agreement?

A Richardson and Bass.

Q Does the unit agreement provide for the drilling of any wells?

A Yes, it does. It provides for the drilling of two test wells.

Q To what depth?

A To 14,500 feet or to water in the Devonian formation.

Q Can you give the Commission the location of these two proposed wells?

A I can give them the location of one well offhand, the other I can't from memory. But one well is being drilled at the present time in the SE of the SW of Section Seven (7), Township 20 South, Range 33 East.

Q And at what depth approximately is that well being drilled at the present time?

A That well at the present time is around 6,500 feet in depth.

Q Does the unit agreement provide for a situation of this kind where the well is already commenced and regarded as one of the location wells under the agreement?

A Yes, it does.

Q And can you tell the approximate location of the other well?

A The SE of the SE, Section 25, 20 South, 32 East.

Q And both wells will be drilled to a depth sufficient to test the Devonian formation?

A Yes, sir, that is correct.

Q Now in the event the unit agreement is approved by the Commission and the Commissioner of Public Lands and the U.S.G.S., and becomes effective, and in the event oil or gas in the same quantities is discovered on the same area, can you state whether or not this would be in the interest of the conservation of oil and gas?

A In my opinion it would.

Q And would it promote the greatest ultimate recovery of unitized substances from the area?

A Yes, I believe it would.

MR. HINKLE: I believe that is all.

MR. MANKIN: You have nothing further, Mr. Hinkle?

MR. HINKLE: That's all -- Oh yes, there is one other thing I would like to mention here. I spoke to Mr. Bass about it, in connection with the drilling of the well which is being drilled at the present time and the projected well to the Devonian, have you taken into consideration a casing program that would meet all the requirements of any existing orders or regulations of the New Mexico Oil Conservation Commission with regard to the protection of potash

formation?

A Yes, the casing program is designed to adequately protect the potash formation under the rules of the state.

Q Do you have copies of the proposed casing program?

A Yes, I have it before me.

Q Will it be the same for both wells?

A Yes, it will.

Q Can you state what that program consists of?

A Yes, in the first well I can give the exact depth of the first two strings of casing and the approximate depth of the remainder which will be set. The 20 inch casing was set at 1193 feet with 3200 sacks; the 13 3/8 was set at 2734 with 2300 sacks; the 9 5/8 will be set at approximately 8000 feet with approximately 3300 sacks; and the 5 1/2 is expected to be set at the total depth in the event of a commercial showing with probably around 500 sacks.

Q In your opinion would that casing program effectively protect the potash beds?

A Yes, it is designed to adequately protect the potash beds both to the depth at which the various strings are cemented and of the amount used.

MR. HINKLE: That's all.

CROSS EXAMINATION

By MR. MANKIN:

Q Mr. Bass, the well which you have related in Section 7 as now being drilled at about 6500 feet, is that well not known as being operated by the Texas Company as their Muse Federal No. 1?

A Yes, it is listed as the Texas Company Muse Federal No. 1.

Q Is that particular location indicated as 660 feet from the

South line and 1926 feet from the West line of Section 7, Township 20 South, Range 33 East in Lea County, New Mexico?

A That is correct, sir. I might explain that the Texas Company is drilling that well as an agent of the unit operator.

Q You mentioned that this particular well now being drilled would adequately protect the potash beds, is it not true that a large area of the proposed unit is covered by a shallower potash lease or potash beds approximately 1800 feet in depth?

A Yes, that is true, it is in the potash area.

Q And which has been further delineated by the Commission's order R-111-A?

A Yes, sir.

Q Will all wells within the unitized area be drilled according to Order R-111-A?

A Yes, they will.

Q Have all the potash lessees of record within a mile of the proposed wells, if there are any, been notified of the proposed wells?

A Yes, they have been notified and it is my understanding that they have signed a letter saying they do not object to the drilling of this well with the casing program as set forth.

Q Returning again to your geological report, you indicated a North-South cross section showing an anticline section, is that correct?

A That is correct.

Q What does it look like from the East-West, are there closures within the unit?

A Yes, there are a number of closures within the unit due to the faults which trend in more than one direction as shown on the seismographic map in further detail. There is a closure both in the North and South and the East and West making it a large anticline structure broken up by faulting.

Q Then the 54,000 and some acres requested in this unit, you feel, is the nearest acreage determination of the structures which you have mapped?

A Yes, sir, I do.

Q Is the unitized area substantially to include all the formations down to and including the Devonian?

A Yes it is with the exception of two,-- in a couple of sections where there are some tired shallow wells that are still producing, that the U.S.G.S. wanted made clear that they would not be in any way expected to be considered as wells sufficient to hold this large amount of acreage by their production.

Q So that there is already some shallow wells within the unitized area?

A Yes there is, I believe, three or four shallow wells of some age that are producing a small amount of oil.

Q Your development program indicated that there would be two well located, within Section 7 and one in Section 25, are there any other plans for development prior to the exploration of the unit which is nominally given?

A That is the primary plan at the present time. Further
of course
development of the unit area/is subject to the outcome of these two rather deep and expensive wells. Due to the subsurface and

geological information developed, due to the drilling of these wells, I would expect further development at a subsequent time.

Q Both of the proposed wells are essentially in the North half of the unit, is there any plan for development in the South half of the unit?

A Not at the immediate time, nothing firm has been developed up to now, although there has been some conversation among the various operators.

(Mr. Mankin indicated that he had finished his examination.)

MR. HINKLE: I would like to ask one or two more questions?

REDIRECT EXAMINATION

By MR. HINKLE:

Q Mr. Bass, approximately what is the cost of one of these wells at 14,500 feet?

A The cost of wells to that depth can vary considerably depending upon the trouble encountered due to loss of circulation and due to the well trying to blow out through having encountered high pressure gas. We have successfully drilled wells in the Delaware Basin to that depth for as little as half million dollars; we have drilled another well, a most expensive well in the Delaware Basin, to that depth and it cost considerably above a million dollars.

Q At the time you made application to the U.S.G.S. for designation of this area, did you talk with them about the proposition of this further development of this area, other than the two wells projected under this unit?

A Yes, there was considerable discussion concerning further development at a later time.

Q Do you know whether or not Section 2-E of the unit agreement

was inserted partially on that account?

A Yes, it was.

Q I had you a copy of the proposed unit agreement and ask you to refer to Section 2-E and state to the Commission what that is and what it shows, what it provides for.

A It provides that at the end of seven years after the effective date of the first initial participating area is established under this agreement, that lands shall be automatically eliminated that are not in a participating area unless at that time diligent drilling operations are in progress on unitized land not then entitled to participation. In the event such drilling operations are in progress, all land shall remain in the unit for as long a time as drilling operations are continued without a cessation of more than 180 days elapsing between the completion of one well and the commencement of operation for the next such well.

Q That provision is designed to take care of a situation where if you get production, unless you do step out and develop it and try to define the limits of the area, the unit agreement would not continue in effect as to an extremely large area that was not productive, is that correct?

A That is correct. It puts the burden on the working owner of the unit to adequately determine the productive part of the unit within the specified time limit.

Q Approximately how long does it take to drill a well in this area to a depth of 15,000 feet?

A It takes close to a year.

Q So that the seven year period is not unreasonable under the

circumstances?

A No, due to the fact the wells are so expensive and take so long to drill, it is not at all an unreasonable time.

MR. HINKLE: I believe that is all.

By MR. MANKIN:

Q Mr. Bass, the seven year period you mentioned, is that comparable to the time limit given to the Big Eddy Unit?

A Yes, as I recall the Big Eddy Unit had a somewhat similiar clause but as I remember, it was on a 10 year term rather than a 7 year term.

Q Did you say 10 year or "tenure"?

A 10, ten.

Q Ten years to determine that, I see. That's all.

CROSS EXAMINATION

By MR. W. D. GIRAND, JR. :

MR. GIRAND: Mr. W. D. Girand, Jr. of Hobbs, New Mexico:

Q Mr. Bass on the proposed wells that might be drilled in the event of discovery under your unit agreement notices will be given to the potash owners on your tracts that you will project your wells for these additional wells rather than the two required under the agreement?

A Oh yes, sir.

Q And in compliance with 111-A?

A Yes, it will be adhered to throughout.

MR. MANKIN: Mr. Girand, are you representing National Potash?

MR. GIRAND: Yes, we have some very small acreage in the unit but we are interested in that one place.

MR. MANKIN: Are there any further questions of the witness?

CROSS-EXAMINATION

By MR. NUTTER:

Q Mr. Bass, when will the second well be started?

A The second well will be started within the next few months. It will not wait until completion of the first well.

MR. MANKIN: The second well, I assume, has not been started or staked, has it?

A That's right, sir.

MR. MANKIN:: But it is just a proposed location?

A It is a proposed location at the present time but activity will pick up at the present time.

CROSS-EXAMINATION

By MR. COOLEY

Q The 14,500 maximum limit on drilling is not anticipated as being the bottom of the unitized area, is it, and you would feel free to drill more than 14,500 feet if you saw fit, wouldn't you?

A That's right. The unit has a lower horizontal depth, it goes right on down.

MR. MANKIN: Mr. Bass, the original well was projected to approximately 15,000 feet, was it not?

A Yes, sir, although only 14,500 feet was required in the unit application approved by the U.S.G.S.

MR. MANKIN: Are there any further questions of the witness in this case -- Mr. Nutter?

MR. NUTTER: No.

MR. MANKIN: Mrs. Rhea?

(Mrs. Marian Rhea of the Land Office.)

MRS. RHEA: No, no questions.

MR. MANKIN: Mr. Hinkle, I don't believe you moved that Exhibit "A" be entered in the record.

MR. HINKLE: No, I didn't, and I would like for Exhibit "A" to be entered in the record.

MR. MANKIN: Is there any objection to Exhibit "A" entered in this case, if not, it will be so entered. Is there anything further Mr. Hinkle -- the only thing I have is unit agreement, will copies be furnished of the signatures on this?

MR. HINKLE: All the signatures have not been obtained yet. We are in the process of circulation now for the necessary signatures and the order will provide, I assume, within thirty (30) days after approval by the Commissioner of Public Lands and the U.S.C.S., that an executed copy will be furnished to the Commission which we, of course, will do.

MR. MANKIN: Is there anything further, any statements to be made in this case? If not, the case will be taken under advisement.

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STATE OF NEW MEXICO)
 : SS.
COUNTY OF SANTA FE)

I, DOROTHY B. MYERS, a Court Reporter, do hereby certify the foregoing and attached transcript of proceedings before the Oil Conservation Commission for the State of New Mexico, was reported by me in shorthand and reduced to typewritten transcript by me or under my personal supervision, and that the same is a true and complete record to the best of my knowledge, skill and ability.

WITNESS my hand and seal this 5 day of

Sept, 1956.

Dorothy B. Myers
Court Reporter