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BEFORE THE  
NEW MEXICO OIL CONSERVATION COMMISSION  
Santa Fe, New Mexico  
July 10, 1968

EXAMINER HEARING

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IN THE MATTER OF: )  
)  
)

Application of Atlantic Richfield )  
Company for a unit agreement, )  
Eddy County, New Mexico. )  
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Case No. 3802

BEFORE: Elvis A. Utz, Examiner.

TRANSCRIPT OF HEARING

MR. UTZ: Case 3802.

MR. HATCH: Case 3802: Application of Atlantic Richfield Company for a unit agreement, Eddy County, New Mexico.

MR. HINKLE: Clarence Hinkle, Hinkle, Bondurant and Christy, Roswell, appearing on behalf of Atlantic Richfield Company. We have two witnesses which we would like to have sworn.

(Witnesses sworn.)

(Whereupon, Applicant's Exhibits 1 through 5 were marked for identification.)

MR. UTZ: Are there any other appearances? You may proceed.

MR. HINKLE: Mr. Examiner, I would like to state this before we start, this is an application for an approval of a unit agreement which is primarily for waterflood purpose. Ordinarily we would file with the unit agreement the application for approval of the waterflood project, but they had a deadline to meet as far as the approval of the unit agreement was concerned and they were not quite ready as far as the project was concerned, so this was filed in order to obtain approval and there will be filed within the next few days an application for approval of the waterflood project under

Rule 701. We would like to request that that be set down for the Examiner's Hearing on August 7th. We are going to divide the testimony between two witnesses, one of which is a land man, and the other a petroleum engineer.

A. D. GOODWIN

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

DIRECT EXAMINATION

BY MR. HINKLE:

Q State your name.

A A. D. Goodwin.

Q By whom are you employed?

A Atlantic Richfield Company.

Q In what capacity?

A As a land man.

Q How long have you been employed by Atlantic?

A Approximately five months.

Q Are you familiar with Atlantic's efforts to unitize the West Red Lake Area?

A Yes, I am.

Q Are you familiar with the application of Atlantic Richfield in this case?

A Yes.

Q What is Atlantic Richfield seeking to accomplish?

A Seeking to accomplish to put together the West Red Lake secondary recovery unit approval of this, which braces about 1237 acres of Federal and fee lands in Township 18 South, Range 27 East, Eddy County, New Mexico.

Q Refer to Atlantic Richfield's Exhibit 1 and explain what this is and what it shows.

A Exhibit 1, first, shows the outline of the proposed West Red Lake Unit area and all the wells which have been completed in the unit area and in the surrounding area. It also shows the formations from which wells in the unit and surrounding area are producing from. It shows the ownership of the oil and gas leases within the producing area and in the surrounding area and also shows the characteristic of the land being Federal, State or fee land. It will also be used as an index map to the cross section plats which will be referred to in connection with subsequent exhibits.

Q Are you familiar with the progress that has been made in having the working interest owners and royalty and overriding royalty owners execute the agreement?

A Yes, I am.

Q What percentage of the acreage has been committed?

A There are approximately, oh, there are fifteen

numbered tracts, several tracts having an "A" portion to them or being followed with an "A". There are four fee tracts, and on three of the fee tracts 100 percent of the royalty and of the overriding royalty interest owners have been signed up. One of the fee tracts that we have signed up 87 1/2 percent of the royalty and it has no overriding. On the remaining tracts, which will all be Federal tracts, we have signed up an average of about 94 percent of all the overriding royalty owners, with the lowest one tract having 76 and there are two tracts in the 80 percent, the rest being in the 90 percent.

Q As far as the working interest owners are concerned, there are 100 percent committed both Federal and fee except for that one-eighth interest you mentioned, is that right?

A That is correct, in the fee lands. All the working interest is signed up.

Q Is committed?

A Right, is committed.

Q Except that that one-eighth has not been ratified by the royalty owner on a fee lease?

A That is correct. There is one-eighth which has not been ratified by the royalty owner.

MR. HINKLE: That's all the direct testimony of this witness.

CROSS EXAMINATION

BY MR. UTZ:

Q There's only fee and Federal lands?

A That is correct.

Q How many acres of fee land do you have?

A We have 321.14 approximately.

Q How many acres of Federal?

A 915.71 approximately.

MR. UTZ: Any other questions? The witness may be excused.

(Witness excused.)

E. M. PRINGLE

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

DIRECT EXAMINATION

BY MR. HINKLE:

Q State your name and by whom you are employed and where you reside.

A E. M. Pringle. I'm employed by Atlantic Richfield Company as Senior Operations Engineer in Roswell, New Mexico.

Q Have you previously testified before the New Mexico Oil Conservation Commission?

A Yes, sir, I have.

Q Your qualifications as a petroleum engineer are a matter of record with the Commission?

A I obtained a B. S. degree--

Q Well, I say, your qualifications are a matter of record with the Commission?

A Oh, they are, yes, sir.

Q You are familiar with the application of Atlantic Richfield in this case?

A I am.

Q And have made a study of this particular area that's involved in the unit agreement?

A I have.

Q Refer to Exhibit 2 and explain what this shows.

A Exhibit Number 2 is a structural map drawn on the top of the San Andres formation. It shows that in the subject area the San Andres formation dips towards the east, and particularly in the proposed unit area the structural relief is rather flat. It is on somewhat of a nose dipping towards the east.

Q This plat also shows the outline of the proposed unit area, does it not?

A Yes, it does, and it shows the wells within the unit area, the formation from which they are now producing or have produced, and the same information is shown for all wells

outside of the unit area within at least a two-mile radius.

Q The same as shown on Exhibit Number 1?

A That is correct.

Q Now refer to Exhibit Number 3 and explain what this shows.

A Exhibit Number 3 is a cross section, the reference of which is shown on Exhibit Number 1, it's a cross section running from south or trending south, north, through the unit area. It shows the logs of the wells used to construct the cross section, all of which are gamma ray neutron logs. It shows the Grayburg producing interval or the interval within the Grayburg formation which is found to be productive in the proposed unit area and, incidentally, this is the Premier zone, and then it shows the top of the known San Andres productive interval. It does show that these two intervals are continuous over the unit area.

Q Now refer to Exhibit Number 4 and explain what this shows.

A Exhibit Number 4 is an east-west cross section, again the location of the cross section is shown on Exhibit Number 1. It also shows that the Premier portion of the Grayburg formation exists across the proposed unit area and it shows the top of the San Andres productive interval by gamma



ray neutron logs of the designated wells.

Q These two exhibits, 3 and 4, cross sections, together show complete continuity over the whole proposed unit area, do they not?

A Yes, sir. The zone can be followed over the entire unit area.

Q Has this area been heretofore designated by the Director of the United States Geological Survey as an area suitable and proper for unitization under the provisions of the Mineral Leasing Act?

A We submit Exhibit No. 5, which is a letter from the United States Geological Survey, designating the proposed unit area as being a logical area for unitization.

Q Are you familiar with the proposed form of unit agreement, copies of which have been filed with the application in this case?

A Yes, sir, I am.

Q Is this form substantially the same form as has heretofore been approved by the Commission and by the Geological Survey where Federal and fee lands are involved?

A Yes.

Q And where it is primarily for secondary recovery purposes?

A Yes, sir.

Q Does the unit agreement cover all formations or is it limited to a particular formation?

A The formations to be covered by this particular unit are identified as the interval which has been penetrated between 1240 feet and 2240 feet, below the derrick floor of the Hondo Oil and Gas Federal "EG" No. 1 well which is located 1650 feet from the south line and 2310 feet from the west line of Section 4, Township 18 South, Range 27 East.

Incidentally, the log of this particular well is the far east log on Exhibit Number 4. The interval or point, rather, of 1240 feet is the top of the Grayburg formation, the lower limit 2240 feet is below the lowest known productive zone in the San Andres.

Q This interval that is being unitized is spelled out just as you have testified in the unit agreement?

A Yes, it is.

Q And it's the same interval as shown by the two cross sections, Exhibits 3 and 4?

A Yes, this interval is shown on these cross sections.

Q Who is to be the unit operator?

A Atlantic Richfield is designated as unit operator.

Q Does the unit agreement contain a participating

formula?

A Yes, it does. The participating formula is based on one-third surface acres, one-third current oil rate as defined in the unit agreement, and one-third estimated ultimate primary recovery for each tract committed to the unit agreement.

Q Have all of the working interest owners who have committed their acreage to the unit agreement agreed to this formula?

A Yes, sir, they have.

Q And it has also been approved by the United States Geological Survey?

A Yes, sir. This is mentioned in their letter which we referred to previously.

Q The letter also approves the form of agreement, does it not?

A Yes, sir, it does.

Q Does Atlantic Richfield propose to file an application for approval of a waterflood project which would be co-extensive with the boundaries of the unit?

A Yes, sir. Atlantic Richfield will make application in the very near future, within a few days, for permission to conduct a waterflood project within the proposed unit area.

Q That would be in accordance with provisions of

Rule 701 of the Commission?

A Yes, it would.

Q In your opinion, if this unit agreement is approved, will it be in the interest of conservation and prevention of waste?

A Yes, sir, it will.

MR. HINKLE: That's all we have of this witness.

CROSS EXAMINATION

BY MR. UTZ:

Q Mr. Pringle, what determined the limits of this unit?

A Vertical or horizontal, Mr. Utz?

Q Horizontal.

A The owners of oil and gas leases surrounding the proposed unit area have been contacted on the north, as shown on Exhibit Number 1 or 2, Mr. Ingram is a principal owner. We have tentative agreement to cooperate across the north line of the proposed unit with Mr. Ingram. To the east we're out of the Red Lake pay essentially. The Red Lake pay also is limited on the south principally by water. To the west, the owners there have been contacted. The boundary of the unit runs essentially down the Pecos River trace, this was a separation because of ease of operation for not having to

cross the river, also the owners in that vicinity have not expressed any interest in joining this unit.

Q Did you say the formula was one-third estimated primary recovered for each tract?

A The formula is one-third surface acres, one-third current rate and one-third ultimate primary recovery.

MR. UTZ: Are there any other questions of the witness?

MR. HINKLE: I might amplify the surrounding ownership you have testified to.

REDIRECT EXAMINATION

BY MR. HINKLE:

Q When Mr. Ingram was contacted, was he invited to join in the unit agreement?

A I believe that he was.

Q And he preferred to stay out?

A Yes, sir.

Q And as you have stated, you propose to enter into an agreement with him which would be a cooperative agreement and whereby he would also go ahead with some sort of waterflood project?

A Right. We would enter into an agreement, the tentative plans are to enter into an agreement by which he

would place on injection a well which would balance and protect movement of oil and correlative rights across the unit boundary.

Q As far as the west boundary is concerned, were there any particular difficulties that were encountered in which Mr. Ingram envisioned in joining the unit there on account of the Pecos River?

A Yes, sir. It is a considerable distance from, say, the far west boundary of the unit over to Mr. Ingram's property if we go and cross the river. We understand there have been several vehicles lost in the river trying to cross it, and in order to conduct business, he at one time, I understand, did have to temporarily dam up the river to cross it in order to service his well.

Q That particular area is essentially a marsh area along the river, is it not?

A It is. It's a very mushy, sandy, marshy area.

Q Which would make it difficult as far as running pipelines are concerned and all that?

A Yes, sir, that is correct.

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

MR. UTZ: Are there any other questions? The witness may be excused.

(Witness excused.)

MR. UTZ: Any statements in this case? The case will be taken under advisement.

MR. HINKLE: On account of the deadline that Atlantic Richfield has, we would appreciate any effort that you would make to get out the order as quickly as possible. I would like to offer Exhibits 1 through 5.

MR. UTZ: The Applicant's Exhibits 1 through 5 will be entered into the record.

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

MR. UTZ: We will take a ten-minute break.

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STATE OF NEW MEXICO   )  
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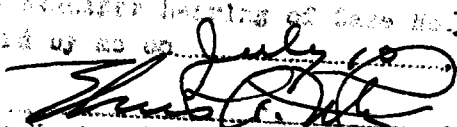
I, ADA DEARNLEY, Notary Public in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Hearing before the New Mexico Oil Conservation Commission was reported by me; and that the same is a true and correct record of the said proceedings, to the best of my knowledge, skill and ability.

Witness my Hand and Seal this 18th day of July, 1968.

  
 NOTARY PUBLIC

My Commission Expires:

June 19, 1971.

I do hereby certify that the foregoing is a true and correct report of the proceedings in the Bernalillo hearing of Case No. 3802 heard on July 10, 1968.  
  
 Notary Public  
 New Mexico Oil Conservation Commission