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BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
November 5, 1969

EXAMINER HEARING

IN THE MATTER OF:

Application of J. J. Travis for a unit
agreement, Eddy County, New Mexico.

)
)
)
) Case No. 4247
)

Application of J. J. Travis for a water-
flood project, Eddy County, New Mexico.

)
) Case No. 4248
)

BEFORE: Elvis A. Utz, Examiner.

TRANSCRIPT OF HEARING



MR. UTZ: Case 4247.

MR. HATCH: Application of J. J. Travis for a unit agreement, Eddy County, New Mexico.

MR. HINKLE: I would like for you to also call the next case because we want -- I may want to make a motion that these be consolidated for the purpose of taking testimony.

MR. UTZ: You make the motion now and I will consolidate them.

MR. HINKLE: I would like to move that Cases 4247 and 4248 be consolidated for the purpose of taking testimony.

MR. UTZ: We will, at this time, call 4247 and 4248. They will be consolidated for the purpose of testimony; separate orders will be written.

MR. HINKLE: Clarence Hinkle, Hinkle, Bondurant and Christy, Roswell, appearing on behalf of Mr. J. J. Travis. We have two witnesses which I would like to have sworn.

(Witnesses sworn.)

(Whereupon, Applicant's Exhibits 1 through 6 were marked for identification.)

J. J. TRAVIS

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 your residence.

A J. J. Travis and I live at Midland, Texas.

Q You are the Applicant in both Cases, 4247 and 4248?

A Yes, sir.

Q Are you an independent oil operator?

A Yes, sir, I am.

Q Have you ever testified before the Oil Conservation Commission?

A No, sir.

Q Are you a graduate geologist?

A Yes, sir. I graduated from the University of Oklahoma in 1933 in geology.

Q Have you practiced your profession since graduation?

A Yes. I was employed by Amerada Petroleum Corporation and Barnstill Oil Company. I have been self-employed since 1950.

Q How long have you been operating as an independent operator?

A About twenty years.

Q And you are interested in the Shugart Queen Area?

A Yes, sir.

Q What is the purpose of your application in connection with 4247?

A For approval of our unit and for approval of our proposed waterflood.

MR. UTZ: Do you have some exhibits?

MR. HINKLE: We had better have these exhibits marked.

THE WITNESS: This is Exhibit No. 1.

Q (By Mr. Hinkle) I believe you stated that the application in 4247 is for approval of the North Shugart Queen Unit Agreement?

A Yes.

Q Are you going to be or propose to be the unit operator of this unit?

A Yes, sir.

Q Have you prepared or has there been prepared under your direction certain exhibits for introduction

into this case?

A Yes, sir.

Q Now, refer to Exhibit No. 1 and explain what it is and what it shows.

A Exhibit No. 1 shows the boundaries of our proposed unit and also the proposed injection wells and all the other wells that have been drilled in an approximate two-mile radius from the unit area.

Q Now, this also shows all the wells within the unit area as well as outside the unit area within a radius of two miles?

A Yes, sir.

Q What is the red line?

A It's the location of our cross section which, I believe, is Exhibit 3.

Q Will be Exhibit No. 3?

A Yes.

Q What are the characteristics of lands within the proposed unit area?

A They are all federal lands.

Q Has this area been heretofore designated by the United States Geological Surveys areas that are proper for unitization?

A Yes, sir.

Q Have you filed with the application copies of the proposed unit agreement?

A Yes, sir.

Q Is the unit form which you have filed substantially the same form as forms of unit agreements heretofore approved by the Commission and by the United States Geological Surveys where only federal lands are involved?

A I believe that's correct, sir.

Q What do you propose to unitize under this agreement, what formation?

A The Queen Sand; 200 feet below the top of the Queen Sand will be the entire interval.

Q What is the primary objective of this unit agreement?

A Well, now, in what respect, sir?

Q Is it for a waterflood project or for exploration?

A For waterflood. Our leases on our production have about reached the economic limit.

Q I believe you stated that Exhibit No. 1 shows all of the proposed injection wells?

A Yes, sir.

Q Now, refer to Exhibit No. 3 and explain what that is and what it shows.

A Exhibit No. 3 is a south-north cross section and it shows the principal producing zone of the Queen colored gray on the cross section.

Now, the gray sand member of the Queen is a rather isolated sand lense which disappears to the east and to the south and to the west and partly to the north and I believe that will -- is evident from this cross section.

Q It is because of that situation that you based your productive limits of this area?

A That's right.

Q Or the limits of the proposed unit area?

A That's right.

Q Does this show a continuity throughout the proposed unit area of the producing wells within the unit area?

A Yes, sir. The Queen can be correlated very accurately over this entire unit area.

Q The portion you have shown in red is that approximately 200 feet?

A No, sir. The 200 feet interval is from here down to here. This is only about 100 feet here in the top of the upper Queen.

Q Will all that interval be subject to waterflood the whole 200?

A Yes, sir; but, the gray sand, of course, is the principal member.

Q Principal member?

A Yes.

Q Do you have any further comment with respect to this exhibit?

A No, sir.

Q Now, refer to Exhibit No. 4 and explain what that is and what it shows.

A Exhibit No. 4 is an isovol map.

Q What is an isovol map?

A An isovol map is a map that was prepared by a combination of net acre feet and porosity and it shows the productive limits of the proposed flood.

Q Based upon this map you decided upon the proposed limits of the unit agreement: is that right?

A Yes, sir.

Q Or unit area?

A Yes, sir.

Q And has this area, the boundaries of it, been approved by the USGS?

A Yes, sir.

Q Has USGS also attentively approved the proposed injection wells?

A I believe that's correct, sir.

Q Does the unit agreement contain an allocation formula?

A Yes, sir. It's essentially based on net acre and porosity.

Q Has that formula been approved by the USGS?

A Yes, sir.

Q And the USGS has also approved the form of unit agreement?

A Yes, sir.

Q Do you have any further comments with respect to this exhibit?

A I believe not; no, sir.

Q In your opinion will the approval of this unit agreement as a conversion measure be in the interest of conservation and prevention of waste?

A Yes; I think so. Our wells, as I mentioned, are down to their economic limit at the present time.

Q And will tend to promote the greatest recovery of unitized substances?

A Yes, sir.

Q And will also tend to protect correlative rights?

A Yes, sir.

MR. HINKLE: I believe that's all of this witness.

MR. UTZ: Will the next witness have any information on what the wells are now producing?

MR. HINKLE: Yes.

MR. UTZ: Any questions of the witness?

CROSS EXAMINATION

BY MR. UTZ:

Q Now, in reference to this 200 feet, I believe you said from here to here. Did you mean here at the base of the Seven Rivers?

A Yes, sir, from -- actually the top of the Queen 200 feet below.

Q Two hundred feet down into the Queen Formation?

A Yes.

Q That's the unitized section?

A Yes, sir.

MR. UTZ: Other questions? He may be excused.

(Witness excused.)

LOUIS BURLESON

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

DIRECT EXAMINATION

BY MR. HINKLE:

Q State your name, your residence and your official position.

A My name, Louis Burleson. I am a petroleum consultant in Midland, Texas, and have been hired to come up here and testify for Mr. Travis's waterflood.

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

A Yes, I have.

Q And your qualifications as a geologist are a matter of record with the Commission?

A Yes, it is.

Q Have you made a study of this proposed unit area?

A Yes, I have.

Q What does that study consist of?

A In studying all the net pay thicknesses and help in preparing the isovol maps and the study in applying the injection well patterns that we will use for this

waterflood.

The current production in this field per well is .95 or less than one barrel per day for the 11 producers in this Queen Sand Lense.

Q So, they are at a depleted stage of production?

A Yes, they are. We have -- on the -- we have studied the economics of waterflooding and using our core analysis and have come up with a figure of 1,712,185 barrels of oil in place and --

Q Originally in place?

A -- in place in this sand lense. Using a 14 percent recovery factor for primary, this will give a primary figure of 239,706 barrels of oil.

Q And what do you anticipate might be the recovery through secondary operation?

A Based on the pot tests on two cores and a sweep efficiency of 78 percent, we come up with a recovery of secondary and primary of 36 percent of the oil in place, which would give us a total primary and secondary recovery of 616,387 barrels of oil which would mean that our secondary reserve would amount to 476,204 barrels of oil.

Q I believe the Exhibit No. 1 shows a proposed injection well, does it not?

A Yes, sir, and we have a peripheral flood which will start in the Travis Keohane No. 3 which is located in unit -- which is located in unit "N" of Section 21 and in the Travis Littlefield Well which is -- which will be located in Section "P" of Section 20.

These two will be the first wells which would be our injection wells. Subsequent pattern would -- shown by triangles on this map would be the Chambers and Kennedy No. 2, Gulf Well in Section 20; then up to the Travis Shugart No. 1 in Section 20; to the Travis-Kenwood No. 2 in Section 21; to the Travis-Kenwood No. 4 in Section 21; to the Travis-Kenwood No. 3 in 21 and the Travis Keohane No. 2 in 21.

Our main two producing wells will be the No. 1 Keohane and the No. 1 Kenwood in Section 21.

Q In your opinion will this pattern of injection wells be the most effective way to waterflood this area?

A Yes, sir, it will.

Q Have you prepared or has there been prepared under your direction any other exhibits?

A In Exhibit 5, we have a diagram of all of the proposed injection wells which shows the casing, the top

of the cement and the perforated interval, where our packers will be set, where our plastic-coated tubing will be set with packer; our annulus filled with treated water and on several wells, which were drilled into the Penrose Sand it shows where the bridge plug has been set or will be set on these injection wells.

Q Now, this exhibit, which is No. 5, includes a diagrammatic sketch of each of the proposed injection wells, does it not?

A Yes, sir; that is correct.

Q Now, are all of these to be similarly completed?

A Yes, sir, they are.

Q Is there any reason why you should testify as to each one of these or are they all substantially the same?

A They would all be the same unless -- everyone will -- every well is perforated in the Queen and every well has a very similar casing program on them.

Q I believe you --

MR. UTZ: Do they all show the top of the cement on the production string?

THE WITNESS: Yes, sir.

MR. UTZ: I can't see it.

THE WITNESS: No, sir. They don't show the top of the cement on the --

MR. UTZ: Do you have that information?

(Whereupon, an off-the-record discussion was held.)

Q (By Mr. Hinkle) How old are these wells?

A They were drilled approximately eight to nine years ago.

Q So, you do not have the exact information as to the cement tops?

A No, sir; but, we can get that information and supply it.

MR. UTZ: Would you do that and supply it to us, please?

THE WITNESS: All right.

Q (By Mr. Hinkle) In supplying that write a letter to the Commission, refer to this case and that this information is being supplied pursuant to request made at the Examiner's Hearing in this case.

A All right.

Q I believe you testified that the tubing would be plastic-coated?

A Yes, sir.

Q Do you propose to fill the annulus between the --

A Yes, sir. It will be filled with treated water.

Q Would you install a gauge at the top?

A Yes, sir, we will.

Q Approximately how much water do you propose to inject in these wells?

A It will depend on how many wells that we have in injection; but, we plan to start off with approximately 300 barrels per day and it may take several years to reach up to a maximum amount.

Of course, we have to know what kind of pressure we will be dealing with in our injection patterns and they should be approximately 7 to 800 pounds and -- but, they could go up we feel, if it is similar to other operators in the area, up to 1500 pounds.

Q Where do you propose to obtain the water for injection?

A The water is -- there's currently a water -- fresh water line owned by the Double Eagle Water Company that goes across this lease and this fresh water will be used to waterflood this Queen Sand Lense.

Q It will be purchased from the water company?

A Yes, sir.

Q And that is fresh water?

A Yes, sir.

Q Do you have any further comments with respect to any of these exhibits?

A No, sir, I do not.

MR. HINKLE: We would like to offer in evidence Exhibits 1 through 6.

MR. UTZ: Without objection, Exhibits 1 through 6 will be entered into the record of this case.

MR. HINKLE: That's all the direct.

CROSS EXAMINATION

BY MR. UTZ:

Q The tubing size on all these is two and three-eighths?

A Yes, sir.

Q All plastic-coated: is that correct?

A Yes, sir.

Q Now, are the locations shown on your Exhibit A with your application correct?

A Yes, sir, they are.

MR. UTZ: Other questions of the witness. He may be excused.

(Witness excused.)

MR. UTZ: Statements? We will take the case
under advisement.

(Whereupon, a recess was taken until one-thirty.)

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STATE OF NEW MEXICO)
) ss
COUNTY OF BERNALILLO)

I, Glenda Burks, Court Reporter 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.

Glenda Burks

NOTARY PUBLIC

My Commission Expires:
March 12, 1973

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 4287 heard by me on APR 5 1973.
[Signature]

Chairman
New Mexico Oil Conservation Commission