BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
May 26, 1965

EXAMINER HEARING

IN THE MATTER OF:

APPLICATION OF SOCONY MOBIL OIL COMPANY, INC., FOR A UNIT AGREEMENT, LEA COUNTY, NEW MEXICO. Case No. 3255

APPLICATION OF SOCONY MOBIL OIL COMPANY, INC., FOR A WATERFLOOD PROJECT, LEA COUNTY, NEW MEXICO. Case No. 3256

BEFORE:

DANIEL S. NUTTER

TRANSCRIPT OF HEARING

MR. NUTTER: Case Number 3255.

MR. DURRETT: Application of Socony Mobil Oil Company, Inc., for a unit agreement, Lea County, New Mexico.

MR. NUTTER: We will also call Case Number 3256.

MR. DURRETT: Application of Socony Mobil Oil Company, Inc. for a waterflood project, Lea County, New Mexico.

MR. SPERLING: J. E. Sperling, of Modrall, Seymour, Sperling, Roehl & Harris, representing the applicant. We have two witnesses. I assume that the record shows that for purposes of testimony, Cases Number 3255 and 3256 have been consolidated?

MR. NUTTER: The cases are consolidated.

* * *

P A U L E. I R W I N, the witness, having been duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. SPERLING:

Q Will you state your name, please.

A Paul E. Irwin.

Q Where do you live?

A Midland, Texas.

Q By whom are you employed, and in what capacity?

A I'm employed by Mobile Oil Company as joint inter-staff assistant.

Q Have you testified on any previous occasion before the Oil Conservation Commission?

A I have not.

Q In order that your qualifications may be a matter of record, would you please give us a brief resume of your educational background and experience background.

A I graduated from Texas A&M in 1950 with a BS degree in petroleum engineering and a BS in geological engineering. I have been employed by Mobile Oil Company since August of 1950 in various capacities as a petroleum engineer; in the past two years working in the joint interest department of the Midland division of Mobile Oil Company.

Q In connection with the performance of your duties in your present assignment does the organization of unit areas for secondary recovery fall within your jurisdiction?

A Yes, sir.

Q In that capacity, I assume you are familiar with the unit agreement for development and operation of the E-K Queen Unit which is the subject of the application in Case Number 3255, presently being considered at this hearing?

A Yes, sir.

Q Would you please refer to Exhibit 1 in Case Number 3255 and identify that for us as the unit agreement to be applicable to the area which will be described by you.

A This exhibit is the unit agreement for development and operation of the E-K Queen Unit in Lea County, New Mexico. The unit area to be included in the E-K Queen Unit is as follows: Township 18 South, Range 33 East. All of Section 13; all of Section 14; the northeast quarter of the northwest quarter and the north half of the southeast quarter of Section 23; the northeast quarter of the northwest quarter and the southeast quarter of the north half of the southwest quarter, and the southeast quarter of the southwest quarter of Section 24. In Township 18 South, Range 34 East, the northwest quarter of the northwest quarter; the south half of the northwest quarter, the southwest quarter and west half of the southeast quarter. Of Section 18; the northwest quarter and the north half of the southwest quarter, and the southwest quarter of the southwest quarter of Section 19, all in Lea County, New Mexico.

Q Comprising approximately how many acres?

A Approximately 3,895 acres.

Q Is there contained as part of the unit agreement an exhibit to the unit agreement which defines in plat form the unit area which was just described by you?

A Yes, sit, it is Exhibit A to the unit agreement.

Q What formation does the unit agreement purport to unitize?

A The Queen Formation.

Q Would you explain to us in general terms the provisions of the unit agreement and in what respects it may vary from the usual form of Federal type unit agreement.

A The agreement is the Federal type. It has been slightly modified to include the State lands.

Q Do you have, as part of the unit agreement, a recapitulation of the percentage of ownership by land ownership, Federal, State and fee?

A Yes, sir, in Exhibit B are listed the various tracts included in the unit area, in the nature of the ownership of the land.

Q Does it have the percentage of interest, so far as the land ownership division is concerned?

A Federal lands comprise approximately 80% of the participation within the unit area. There are six Federal tracts; there are five State tracts which comprise approximately 19% of the unit participation; and there is one forty-acre tract which has a little over 1% participation.

Q I think it is set forth in Exhibit B; but in order that there won't be any misunderstanding, you might review those.

A The six Federal tracts comprise 1,975.36 acres or 68.2% of the unit area. The five State tracts comprise 880 acres or 30.4% of the unit area. Fee land, as stated, was

40 acres or 1.4% of the unit area.

Q You have referred to the participation factor and percentages ascribed to the basic royalty interest owners. What is the basis for participation, as between the respective tracts?

A The participation is a single-phase formula based on ultimate primary from each tract within the unit area.

Q Do I understand that the formula will be tract production over the total primary production, with the resulting factor being percentage of participation assigned to the respective tracts?

A Yes, sir.

Q You have stated generally that the unitized formation is the Queen. Is the vertical limit of the unitized formation described in the unit agreement?

A Yes, it is.

Q Would you state what it is.

A Yes, sir. The unitized Queen sand is defined in paragraph 2.7 of the unit agreement on page 2, and is defined as "the heretofore established underground reservoirs that exist in the interval from the top of the Queen sand or Artesia Red sand member, as is picked at 4,252 feet on gamma ray neutron log, on Carper Drilling Company Number 9 Carper-Sivley log in the northeast of the southeast quarter of Section 24,

Township 18 South, Range 33 East, 300 feet downward, and including the Penrose sand, all included in the Queen Formation of the Guadalupe series, a part of the Permian system, insofar as the same lies within the unit area."

Q It is proposed by the unit agreement that your company, Socony Mobil Oil Company, will be the operator in this unit area?

A Yes, it is.

Q Has the unit agreement as reflected in Exhibit 1 to Case Number 3255 been submitted to the respective governmental agencies?

A Yes, sir, it has.

Q And what has been their reaction?

A The reaction was that some modifications were required. These modifications have been adopted as written, and incorporated in the agreement as it is now presented.

Q In other words, I understand that the unit agreement as revised following initial submission has received preliminary approval from the US Geological Survey and the Office of the Commissioner of Public Lands of the State of New Mexico?

A Yes, sir.

Q Would you review for us now the percentage of sign-up to the unit agreement, insofar as the respective working

interest owners are concerned.

A Approximately 88% of the working interest participation has signed the agreement. Texaco and Marathon are two working interest owners who have not yet signed; they have indicated that they will. The only other working interests are located in the fee land, and they have indicate that they will also sign in the near future.

Q I take it that the unit agreement in its present form, as presented by exhibit here, has been submitted to all interested parties within the unit area, and you have indicated that you have either signed or expect to sign all interested parties within the unit area, within the reasonably near future?

A That is correct.

Q Is there any other comment you care to make, Mr. Irwin, concerning the unit agreement?

A No, sir. I might state that this royalty signup--I did not include that as of the present time. We have approximately 57% of the royalty interest signed. The State and Federal royalty interests amount to about 30% participation. Again, we have had no indication from anyone that the agreement will not be signed, on the part of the royalty owners.

Q The purpose of the unit agreement, as stated in it, is to institute a secondary recovery program within the unit area for the purpose of greater recovery of oil-in-place under-

lying the unit area?

A Yes, sir.

MR. SPERLING: I think that's all the questions I have at this time.

MR. NUTTER: Are there any questions of Mr. Irwin? --Mr. Irwin, I was looking at Exhibit A. On this unit agreement, evidently Texaco owns 5 and 11?

A Yes.

Q And Marathon has Tract 9?

A Yes.

Q What has Texaco's attitude been toward the unit?

A It's a matter of time. We submitted this on April 19th by letter.

Q They are not opposed?

A Oh no.

Q What about Tract 9 of Marathon's?

A The same situation.

Q You anticipate that ultimately 100% of the working interest will be signed?

A Yes, sir, in the very near future.

Q The USGS has approved the participation formula, as well as the Commissioner of Public Lands for the State of New Mexico?

A Yes, sir.

MR. NUTTER: Are there any further questions of Mr. Irwin? -- He may be excused.

(The witness thereupon withdrew from the stand.)

MR. SPERLING: I'd like to offer Exhibit 1 in Case Number 3255.

MR. NUTTER: Applicant's Exhibit 1 will be admitted in evidence.

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W I L L I A M T. S C H R E I B E R, the witness, having been duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. SPERLING:

Q Will you state your name and place of residence; your occupation, and by whom you are employed.

A My name is William T. Schreiber. I live in Hobbs, New Mexico and am employed by Mobil Oil Company as a senior production engineer.

Q Have you testified on previous occasions before this Commission?

A No, sir.

Q Your qualifications, then, are not a matter of record?

A No, sir.

Q For the record, would you please review your

educational and experience background.

A I was graduated from Marietta College, Marietta, Ohio, with a BS degree in petroleum engineering in 1951. I have been in Hobbs, New Mexico for almost four years, working for Mobil Oil Company as senior production engineer. I am also a registered professional engineer in the State of New Mexico.

MR. SPERLING: Are Mr. Schreiber's qualifications acceptable?

MR. NUTTER: Yes, sir, they are.

MR. SPERLING: Mr. Schreiber, in the course of the performance of your duties have you made a study of the unit area and its reservoir characteristics, within the area described in the E-K Queen Unit Agreement?

A Yes, sir.

Q Please refer to what has been marked Exhibit 1 in Case Number 3256, and explain what this exhibit is designed to portray.

A Exhibit A is a plan which shows the unit area and all other wells within a radius of two miles from the unit area. Also shown are lessees in the two-mile radius from the unit area.

Q It has been previously testified by Mr. Irwin that the formation to be unitized in connection with the operation of this unit is the Queen Formation, with vertical limits having

been described in the unit agreement as testified to by Mr. Irwin. Would you please refer to your Exhibit Number 1 and outline which of the wells are proposed as injection wells; or at least indicate on the legend, the plat itself, the wells which are to be converted to injection wells.

A Exhibit 2 is a plat of the injection wells--proposed injection wells for the unit.

Q Is that essentially the same map as--

A It's the same map, identically, except that the proposed injection wells are circled.

Q Does this plat also show all the wells which have been drilled to or completed in the Queen Formation within the unit area, and within a radius of two miles?

A Yes, sir.

Q Referring to Exhibit 2 and the wells shown as injection wells on the exhibit, does it also show wells which are to be converted at a later date, as set forth in the application?

A Yes, sir, these wells are also shown as proposed injection wells. These wells are the Number 2 Carper State, which is in the southwest quarter of the southeast quarter of Section 14, 18-33, and Well Number 7, the Sivley Federal Number 7, which is in the southwest quarter of the southeast quarter of Section 24, 18-33.

Q How many wells are included within the unit area, in total?

A There are 48 wells within the unit area.

Q When were these wells drilled, approximately?

A The first wells were drilled in 1955, and most wells were completed within the next two-year period.

Q In what stage of depletion is the reservoir underlying the unit area?

A The reservoir is in a very advanced stage of depletion. The original engineering committee made an estimate as to remaining primary reserves for participation, and these reserves have already been produced, so for all practical purposes most of the primary reserves are depleted.

Q Do you have any data on the average daily production of the wells within the unit area, as of the present time?

A Yes, sir, there are 24 producing wells--26; excuse me--producing wells presently producing, mainly from the main Queen sand in the unit area, and the average per well per day production is 3.6 barrels.

Q Now, please refer to the exhibit marked 3, which is a sketch, and explain what this exhibit is designed to indicate.

A Exhibit 3 is a diagramatic sketch of each proposed injection well, which shows all casing strings, diameter and

setting depth, perforations, sacks of cement used and other pertinent information.

Q Are these schematic diagrams essentially self-explanatory, or do they need interpretation one by one?

A I believe that these are self-explanatory. However, if there are any questions I'd be glad to answer them.

Q All right; fine. Now, I refer you to Exhibit 4. Would you please explain what that shows.

A Exhibit 4 is a typical well log of the Queen formation. This is the well location which Mr. Irwin referred to in the unit agreement. The Queen sand is picked at 4,352 feet on the gamma ray neutron log of the Carper Drilling Company's Sivley Number 9 Well.

Q Referring back to Exhibit 3, I forgot to ask you to clarify one point. Submitted as a part, or as an exhibit to the original application file herein were similar schematic diagrams of completion of proposed injection wells. Are any changes reflected in Exhibit 3 from the diagrams which were submitted as an exhibit to the application itself?

A The only changes made were the addition of some more information. The information previously furnished was correct; it was just supplemented.

Q I see. And this additional information was supplied primarily as a result of a request by Mr. Irby of the State

Engineer's Office?

A Yes, sir.

Q --Who received a copy of the application as initially filed?

A Yes.

Q Does the log which is Exhibit 4 show the top of the Queen Formation?

A Yes, sir.

Q It has been indicated in the log?

A Yes, sir.

Q And the log covers the completion interval as described in the unit agreement as the unitized formation?

A Not quite. I think there's a few feet--the unit agreement says "from the top of the Queen, 300 feet," and this log does not go quite 300 feet below the top of the Queen.

Q But it does show all sections or portions of the formation which are expected to contribute, insofar as secondary recovery is concerned?

A Yes, sir.

Q Now, would you refer to Exhibit 5 and describe for us what this indicates.

A Exhibit 5 is a plat which shows the proposed water supply line to the E-K Queen unit. It is proposed to inject fresh water from the Ogalalla Formation into the Queen Form-

ation, with the water supply well to be located in Section 7, Township 18 South, Range 35 East, Lea County, New Mexico. This well has been completed and equipped. The Completion of Works form has been submitted to the State Engineer at Roswell. Produced water will be re-injected into the unit at such time as it becomes available.

Q Do I understand that a supply well was drilled, with the approval of the Office of the State Engineer?

A Yes, sir, that is correct.

Q Is this fresh water?

A Yes, sir. Ogalalla Formation fresh water.

Q Now, returning to the reservoir itself, what is the cumulative production from--that is, primary, within the unit area?

A The cumulative production from the unit area to the first of March of this year has been 1,697,631 barrels of oil. Secondary recovery is expected to yield in the neighborhood of an additional 1,700,000 barrels, or a secondary-primary ratio of one to one, approximately.

Q Would you describe the characteristics of this reservoir which are pertinent insofar as secondary recovery is concerned.

A You mean our plan of procedure?

Q Yes--what kind of reservoir it is.

A This reservoir is a stratigraphic trap type reservoir. It is a sandstone; it has an average porosity of about 13.3%. The average permeability in the unit area is thirty millidarcies. From log interpretations the water saturation was estimated to be 40%.

Q Do those characteristics ordinarily lend themselves or adapt themselves to a waterflood operation?

A Yes, sir.

Q Now, please refer to what has been marked Exhibit 5, and tell us what that is supposed to indicate.

A Exhibit 5 we have covered, I believe, which is the water supply line to the--

Q This is Exibit 6--I'm sorry.

A Exhibit 6 is a plat which, in addition to showing the unit area and the proposed injection wells, shows the tract number which has been assigned to each tract in the unit agreement. Production and injection will be reported by tract and well number.

Q Then I take it that this exhibit is simply an enlargement of the exhibit with the tract designations appearing on it, which is attached to the unit agreement itself?

A Yes, sir.

Q I notice that there are wells to the north and east of the unit area which appear to be Queen Formation wells?

A That's right.

Q And not included as part of the unit area. Is there any particular reason for that?

A Yes, sir. There are dry holes which separate this area from the unit area. In Section 18, 18 South, 34 East, in the northwest of the northwest the Number 2 well is a dry hole. Just east of that well, the Number 3 is a dry hole, and also in Section 17 the Number 5 well on the State EKA is a dry hole; and our interpretation is that these are two separate reservoirs.

Q Even though they are both productive from the Queen Formation, there is a barrier of some sort separating the two areas?

A Yes, sir.

Q And you have reference to a number of dry holes, as the basis for formation of that opinion?

A Yes, sir.

Q What is the anticipated life of this secondary recovery project?

A Anticipated life of this project would range from fourteen to sixteen years.

Q Is it the plan of your company to in any manner treat the water which is to be injected into this area?

A No, sir, not unless situations develop where we

will have to treat it.

Q I see. But you are satisfied that the water supply source is a fresh water source at this time?

A Yes, sir.

Q I believe the exhibit previously referred to, which shows the location of the injection wells with relation to producing wells, indicates that you are to convert, or plan to convert initially 24 wells for injection purposes. What rates of injection do you expect to employ initially?

A We plan an initial rate of approximately 385 barrels per well per day, and then we contemplate that two additional wells will be converted to injection wells at a later date; probably when we get a response in the offset producers. These are the two injection wells which I pointed out earlier, which we would not convert at first. These were two dry holes which we feel may be of benefit as of a later date to use as backup in our flood program.

Q What injection pressure do you expect to employ?

A The unit flood is planned as a high-rate pressure balanced eighty-acre five-spot waterflood rate, a planned 10,000 barrels per day at approximately 1,700 pounds per square inch. Injection equipment and distribution lines are designed to operate at 2,000 pounds per square inch. This design is approximately 300 pounds per square inch above operating

pressure. Three horizontal Triplex pumps will be driven by 125 horsepower motors. All injection lines will be two-inch and 3-inch Schedule 40 cement lines, coated, wrapped and buried. The water supply line will be asbestos cement pipe. The major portion of the line will be eight-inch. The injection water metering system will use turbine meters and central readout for the plant. Injection into the wells will be through cement line tubing below a packer. The tubing casing annulus will be loaded with corrosion inhibiting water.

Q Does Socony Mobil as the applicant in this case request any exception to the Commission's Rule 701, which relates to assignment of allowables to such projects?

A No, sir.

Q You expect to operate in accordance with those rules?

A Yes, sir, we expect to operate in accordance with those rules.

Q Now, as part of the application it is requested that the order, should the application receive favorable consideration, be made effective upon the first day of the month following final approval of the unit agreement by the Commissioner of Public Lands of the State of New Mexico. When do you anticipate that this would be received?

A I really don't know when we will get this approval.

We have AFEs made up to submit to the operators as soon as approval is given, and our work will start very shortly after we do get this approval.

Q You heard Mr. Irwin's testimony to the effect that no difficulty is anticipated in obtaining approval?

A Yes, sir.

Q And you have no reason to think otherwise?

A No, sir.

Q Were Exhibits 1 through 7 prepared by you or under your supervision?

A Yes, sir, they were.

MR. SPERLING: I offer Exhibits 1 through 7, Mr. Examiner.

MR. NUTTER: Socony Mobil Exhibits 1 through 7 are admitted in evidence.

MR. SPERLING: That's all I have at this time.

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

MR. IRBY: On your Exhibit 4, I believe it's the pipeline from the water supply well to the injection well--

A Yes, sir.

Q This is asbestos cement pipe. There will be no appreciable pressure on this pipe, will there?

A No, sir.

Q What kind of pipe is to be used in the distribution system from the injection station to the wells?

A The distribution lines are designed to operate at 2,000 pounds per square inch pressure.

Q Will this be steel pipe?

A Yes, sir.

Q Thank you. It isn't a part of the application and isn't a part of the record here, but I would like to bring out a point or two in Mr. Joe Gordon, Jr.'s letter to me dated May 24th. Do you have a copy of that?

A Yes, sir, I do.

Q On his Item 3 regarding percentage of gell in the cement--

A Yes, sir?

Q Is this percentage expressed in weight or volume?

A That's volume.

Q In a dry state, or wet state?

A In a dry state.

Q And I'm assuming this isn't true 100% Bentonite, so I'd like to ask how much the percentage would be in the wet state?

A I just can't answer that. I don't know.

Q You don't know the expansive qualities of the Bentonite?

A No, sir.

Q Further down in this Item 3 he says in one sentence here simply "sacks of cement," and doesn't tell if gell or other additives were used. What other additives are commonly used, or have been used, in these wells?

A In these wells, none that I know of. In some wells they use a fast-setting agent, and sometimes a slow-setting agent, depending on the depth of the wells. But in these particular wells I don't believe there has been any other additive.

Q Nothing to lighten the cement, like Poslanic materials, or Gilsonite?

A No, sir, not to my knowledge. This gell would be the only thing to my knowledge that has been added.

Q Referring to Item 7 in Mr. Gordon's letter, he uses the trade name "Sealmint." I assume this is a trade name?

A Yes, sir.

Q Can you identify that for me?

A My impression of Sealmint is a type of cement which is similar to Hydromite or Cal-Seal, or a latex type of cement which is a very strong bonding cement, which normally some people like to use around the bottom of the shoe joint there, where it's going to be perforated. It's real strong, and when perforated it isn't as likely to shatter as normal cement would

be.

Q Does it have enough latex in it that a perforation by bullets would re-seal?

A No, sir.

Q Back to that same point, this fifty gallons of Sealmint used between the liner and the casing, near the bottom of the Federal T Number 1124--is this going to be sufficient to prevent a blowout from injection pressure?

A Yes, sir, we feel it is. From our calculations the Sealmint was sufficient to go all the way up behind the liner and into the casing, so this should be sufficient, yes, sir.

Q Then it would go without saying that the 250 on the other well would be sufficient?

A Yes, sir.

Q Now, Item 10, where we have these perforations in the casing from the annulus between tubing and casing, out to the earth--this isn't quite clear to me. Could you explain that a little bit better. He says that they are going to abandon this and that they won't load it.

A Yes, sir, I believe I can answer that to your satisfaction. There are six wells in the unit area which are presently completed in the Yates Formation. We purchased this property from John Trigg, and he did this work before we

got it. He dumped sand in the bottom of these six wells to seal off the Queen perforations. He then perforated in the Yates. These six wells, which are the Number 1 Carper State in Section 14--it's the well in the southeast of the southeast; and Number 4 well directly east of it, the Number 3 directly east of the Number 4, and the Number 5, which is directly east of the Number 3--those four wells in an east-west line, also the Mobil Federal T Number 2 well in Section 24 and the Mobil Federal T Number 13 well, which is in section 13--those six wells are completed in the Yates. What we propose to do is to leave these perforations open to clean out the sand that is covering their Queen Formation, and run a packer on tubing and set the packer down in the bottom of the casing, or in the liner, and inject or produce in this manner. Therefore, we won't have anything in the annulus of these wells, because the Yates perforations will still be open. We are currently getting Yates production, and we would like to go back and produce the Yates at the time this unit is dissolved. Therefore we would like to keep the Yates perforations open, and they will be separated, by a packer, from the Queen zone.

Q This Yates production will flow into the wellbore?

A Yes, sir, it does, but one well is all that's flowing to the surface--all the rest are on pump, so we won't have any danger from these wells being active at the time they

are shut in. If any of these producing wells--the Number 13 is the only one presently flowing, and if it would flow and had enough volume, then I guess we could meter the production, or put in a separate tank, but we don't anticipate being able to get oil out of the well while it's shut-in.

Q Even though it's flowing now, you don't think the static head is such that it will produce oil?

A That's right. It's flowing up two-inch tubing, which is easier than flowing through the annulus between the tubing and casing.

Q I don't understand the fraction calculations there.

A The well made 469 barrels in January--I believe this was January's production, which is fifteen barrels of oil per day. The gas-oil ratio is 810, and we would feel that there is enough gas volume to flow this well up through the annulus. However, if there is, that's fine as far as we're concerned, because we could then set another tank and produce the well, because this is a producing well--we just don't feel that it will flow; but we'll just have to wait and see.

MR. NUTTER: Would it be classified as an oil well?

A We would temporarily abandon it until we got through with the unit operation, if it would not flow.

Q Do you know an oil well in the State of New Mexico which is flowing through the annulus?

A I'm sure there are ... well, I don't know. No, sir, I don't.

MR. IRBY: I still don't understand why it would flow through tubing and not through the annulus.

MR. NUTTER: Annular flow is wasteful flow--it's inefficient.

MR. IRBY: What would oil in the annulus--oil and gas, do to your outside of your tubing and the inside of your casing?

A You mean as far as corrosion? Nothing, I don't believe. It would probably be just as well as a corrosion inhibiting water in there. I don't think we would have any problem from the corrosion standpoint.

MR. IRBY: I'm going to quit you now, but I want you to explain to me some day about static head flowing through one conductor and not through another. Thank you.

MR. NUTTER: You have two wells here that will be injection wells, which have Yates perforations?

A Three. The Number 4 Federal T in Section 13 in the southwest of the southwest; the Number 2 Feceral T which is a diagonal southeast to that well; and the Number 5, which is the northeast diagonal to the Number 2. Those three wells are currently Yates producers and will be proposed injection wells.

Q And all other wells will have the annulus loaded

with corrosion inhibiting fluid, but these three you couldn't?

A These three and the other three Yates producers. All other wells will have corrosion inhibiting water behind them.

Q Even the producing wells?

A No, just the injection wells.

Q The application was for 24 wells immediately, and then contemplated two additional wells on administrative approval later. Do you have any objection to all 26 wells being authorized in the original order?

A No, sir.

Q In the event it became desirable to produce the Yates while the Queen was being produced or flooded by injection well, would it be possible in this 5½-inch casing to run small diameter flush joint tubing similar to high drill, so you would have parallel strings of tubing?

A It would be possible--I would think it would be possible.

Q This is done in 5½-inch casing quite often, is it not?

A Yes, in 5½-inch casing. However, it doesn't leave too much working room, and I think we would probably rather just leave it behind the pipe.

Q What about Well Number 6 in Section 13, the north-

east quarter of the southeast quarter? It's shown as a dry hole.

A Yes, sir.

Q That would normally fit on the injection pattern. Is that well so tight it's impossible to use it as an injection well?

A Yes. We did not, to my knowledge, get any pay in this well. These other two dry holes did have some pay but it was very tight and not completed. This well is without pay.

Q So although its location would make it desirable for an injection well, because it has three offsetting producers, you have no plans for it?

A No, sir.

MR. NUTTER: Are there any further questions of Mr. Schreiber? ... He may be excused. Do you have anything further, Mr. Sperling?

MR. SPERLING: No, Mr. Examiner.

MR. NUTTER: Does anyone have anything they wish to offer in Case Number 3255 and Number 3256? ... We will take the cases under advisement.

* * *

STATE OF NEW MEXICO)
) ss
COUNTY OF BERNALILLO)

I, ELIZABETH K. HALE, Notary Public and Court Reporter, do hereby certify that the proceedings in the foregoing case were taken and transcribed by me, and that the foregoing is a true and correct transcript of proceedings to the best of my knowledge, skill and ability.

IN WITNESS WHEREOF, my hand and seal of office this 7th day of June, 1965.

Elizabeth K. Hale
Notary Public

My commission expires

May 23, 1965.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 3255-3256 heard by me on May 26, 1965.

....., Examiner
New Mexico Oil Conservation Commission