STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
State Land Office Building
Santa Fe, New Mexico
25 October 1978

EXAMINER HEARING

IN THE MATTER OF:

Application of Phillips Petroleum Company for statutory unitization, Lea County, New Mexico

and

Application of Phillips Petroleum Corporation for a pressure maintenance project, Lea County, New Mexico

CASE 6366 and CASE 6367

BEFORE: Daniel S. Nutter

TRANSCRIPT OF HEARING

A P P E A R A N C E S

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MR. NUTTER: The hearing will come to order, please. We'll call now Case Number 6366.

MS. TESCHENDORF: Case 6366. Application of Phillips Petroleum Company for statutory unitization, Lea County, New Mexico.

MR. KELLAHIN: If the Examiner please, I'd move that Case 6366 be consolidated with Case 6367 for purposes of this hearing.

MR. NUTTER: We will now call Case Number 6367.

MS. TESCHENDORF: Case 6367. Application of Phillips Petroleum Corporation for pressure maintenance project, Lea County, New Mexico.

Is it corporation or company, Jason?

MR. KELLAHIN: It's company. I don't know how that corporation got in there.

MR. NUTTER: That one is wrong.

Cases 6366 and 6367 will be consolidated for purposes of hearing.

MR. KELLAHIN: If the Examiner please, Jason Kellahin, Kellahin and Fox, Santa Fe, appearing for the applicant. We'll have three witnesses for the combined case. I'd like to have them sworn at this time.

(Witnesses sworn.)

MR. NUTTER: We'll call for other appearances

in these cases.

Please proceed, Mr. Kellahin.

JIMM CHRISMAN

being called as a witness and having been duly sworn upon his oath, testified as follows, to-wit:

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q. Would you state your name, please?

A. My name is Jimm Chrisman.

Q. And by whom are you employed and in what position, Mr. Chrisman?

A. I'm employed by Phillips Petroleum Company as Director of Reservoir Engineering and Unitization in its southeastern region office in Houston, Texas.

Q. And you are located in Houston, Texas?

A. Yes, sir, I am.

Q. Have you ever testified before the Oil Conservation Division or one of its Examiners?

A. No, sir, I have not.

Q. For the benefit of the Examiner, would you briefly outline your education and your experience?

A. Yes, sir. I was graduated from the University of Kansas in 1949. I went to work for Phillips Petroleum

Company, was in its production department training program for a period of a year; I was assigned in Odessa, Texas, in general engineering for approximately one year; and then by one of those decrees that occur every once in awhile in an oil company, I found overnight that I had been made a reservoir engineer. It was up to me to learn reservoir engineering and handle the job from that point on.

I spent a total of five years at Odessa and then was transferred to Bartlesville, Oklahoma as a reservoir engineer in the Reservoir Engineering and Unitization Section in Bartlesville.

I was in various assignments in Bartlesville for a total of fourteen years. I transferred to Houston in Houston's southern -- or in Phillips' southern region in 1968 in my present job capacity.

I've continued in that capacity having had west Texas and New Mexico added to my jurisdiction about a year ago.

MR. KELLAHIN: Are the witness' qualifications acceptable?

MR. NUTTER: I'd better say so since I worked for him back in 1952.

He's qualified.

Q. (Mr. Kellahin continuing.) Mr. Chrisman, are you familiar with the application of Phillips Petroleum

Company in Case 6366?

A. Yes, sir, I am.

Q. What does the applicant propose in this case?

A. We propose the formation of a unit composing some 7025.3 acres, more or less, for the purpose of conducting a unitized operation in the Grayburg-San Andres formation, and conducting a pressure maintenance operation.

Q. Will that unit be known as the East Vacuum Grayburg-San Andres Unit?

A. Yes, sir, it will.

Q. Does Phillips seek to be designated as the operator of the unit?

A. Yes, sir.

Q. Now, referring to what has been marked as the Applicant's Exhibit Number One, would you identify that exhibit, please?

A. Yes, sir, I will. Exhibit Number One is the Unit Agreement for the proposed East Vacuum Grayburg-San Andres Unit. It was modeled after the Central Vacuum Grayburg-San Andres unit agreement.

It anticipates statutory unitization. It does apply to the 7025 acres -- 23 acres, more or less, that are shown on Exhibit A to the Agreement, and described by tract in Exhibit B to the Agreement.

All of the lands that will be in this unit

are State lands. The Unit Agreement provides for the unitized operation of the Grayburg-San Andres formation as defined in the Agreement with the implementation of a program of pressure maintenance to increase oil recovery. It does designate Phillips operator. It outlines the basis for participation of the various parties. It contains the usual provisions contained in such agreements. They're modified only to apply only to the specific conditions of this proposed unit area.

As all agreements that I've ever put out does, it contains a typographical error. I want to call that to your attention now.

In Article XVIII, page seven, there is a misspelled word. It's the sixth from the last word prior to lettered paragraph A. It should be "equals". It's now spelled E-A, I believe, U-A-L-S.

MR. NUTTER: Which equals such volume.

A. Which equals, correct.

Q. What formation is -- you're unitizing the Grayburg-San Andres formation, but it is identified in the unit as --

A. Yes, sir, it is defined.

Q. -- what depth and specific well?

A. Yes, sir, it's defined as to depth and to the specific well. It's defined at several places in our

exhibits that we'll present today.

Q. Do you have anything else to add to the Commission on this?

A. Nothing on the Unit Agreement.

Q. Now, turning to Exhibit Number Two, would you discuss that exhibit?

A. Yes, sir. Exhibit Number Two is the Unit Operating Agreement. Again this was modeled after the Central Vacuum Grayburg-San Andres Unit Operating Agreement.

In confirms the Unit Agreement. It outlines supervision to be exercised by the non-operators. It defines the rights, authorities and duties of all parties. It defines how investments will be adjusted and how future costs will be shared.

It provides for the remainder of the understanding necessary as between working interest owners upon operator assuming operations and changing the mode of operation.

It includes as exhibits a schedule showing each working interest owner's participation, both by tract and by total, which is Exhibit C, and an accounting procedure, Exhibit D, insurance provisions, Exhibit E, and equal employment, and so forth, provisions, Exhibit F.

I will later offer an exhibit and recommend its inclusion by the Division of Conservation as Exhibit G.

This has to do with operator's business ethics.

That's all I have unless there are questions on it.

Q. Mr. Chrisman, you passed over one item on Exhibit One, I believe.

In our application, amended application, you stated that the portion of the reservoir involved in this application has been defined by development, and it stated that there was a well in each quarter quarter section. There are a couple of those that have not been drilled, is that not correct?

A. That is correct. As a matter of fact, there are a total of four quarter quarter sections that have not been drilled. Two of these are offset four ways. I don't know why they weren't drilled. Phillips was the lessee on one of them. The other two tracts were offset three ways. They're all clearly productive, or were originally.

Q. So you do consider the reservoir clearly defined --

A. Yes, sir.

Q. -- for the purpose of this hearing?

A. Sure do.

Q. Okay, thank you. Now, going on to Exhibit Number Three, would you identify that exhibit?

A. Yes, sir. Exhibit Number Three consists of

a letter from Mr. Ray Graham advising that the Unit Agreement is acceptable to the State of New Mexico, and a subsequent letter from me to Mr. Graham transmitting copies of pages which contained minor changes.

The State of New Mexico owns 100 percent of the basic 1/8th royalty from this proposed unit.

Q. Now referring to Exhibit Number Four, will you identify that exhibit?

A. Exhibit Number Four is a listing of all overriding royalty owners, along with the amount of their ownership by tract. The only overriding royalty owners who do not also own working interests are the Frederick H. Burglan Estate and Mr. Harold E. Jones. I have Mr. Jones' ratification.

The State of New Mexico will own in excess of 97 percent of all royalties. This is basic royalty plus overriding during the initial phase of operations and nearly 96 percent during the final phase. As a result, the State's approval along constitutes more than enough to meet statutory requirement for royalty owner approval.

Q. But the other royalty owners have been given an opportunity to --

A. Yes, sir, they have.

Q. Now, referring to Exhibit Number Five, would you identify that, please?

A. Exhibit Number Five is a copy of Part B of Exhibit C to the Unit Agreement -- excuse me, Unit Operating Agreement, upon which the interest of each owner whose ratification has been received is circled.

As of today fourteen working interest owners have ratified the Unit Agreement. The initial phase interest of these fourteen owners is 44.23410 percent. The final phase participation is 42.95627 percent.

We expect to have in excess of 75 percent working interest ownership approved in sufficient time to make the unit effective on December the 1st, 1978, presuming favorable action by the Division of Conservation.

Q. Now referring to what has been marked as Exhibit Number Six, would you identify that Exhibit, please, sir?

A. Exhibit Number Six is a copy of the Engineering/Geological Report, dated November, 1977, which was prepared by representatives of the major operators. This report was accepted by the working interest owners committee in its December 15, 1977 meeting as fulfilling the charges given the Engineering/Geological Committee, with no disapprovals.

The report estimates that oil recovery can be increased by approximately 40.8 million barrels if the program of pressure maintenance is instituted. It includes

a tabulation of parameters which were used to negotiate participation and it describes how and from what sources these parameters were obtained.

In the case of two operators the current production parameter was modified slightly by the working interest owners in one of its meetings. The minutes of that meeting are included in another exhibit.

This exhibit also includes production and cost forcasts which have since been updated and will later be presented to you in the pressure maintenance portion of this hearing.

The exhibit defines the unitized interval, the unit area. It shows the production history. It shows structure cross sections, Isopach map, and so forth.

MR. NUTTER: Mr. Chrisman, before you go further, you've mentioned that the parameters for participation were included herein in Exhibit Number Six.

A. Yes, sir.

MR. NUTTER: And how they were arrived at. Now, the actual participation formula is described in Exhibit Number One.

A. Yes, sir.

MR. NUTTER: Would you go through that?

A. Yes, sir.

MR. NUTTER: And explain just how the tracts

will participate --

A. Yes, sir.

MR. NUTTER: -- under the various phases?

A. Sure will; be glad to.

The Unit Agreement, or Exhibit Number One, specifies that the tract participations will be initially 50 percent of each tract's share of total adjusted oil production from the unit area for the period July 1, 1976 through December 31st, 1976, and 50 percent of each tract's share of total future primary oil production from the unit area until 12,343,300 barrels of oil have been produced from the unit area subsequent to December 31st, 1976.

MR. NUTTER: Okay, now what was that 12,343,000 based on?

A. That was the --

MR. NUTTER: Remaining primary?

A. Yes, sir, the Geological and Engineering Committee's estimate of remaining primary.

MR. NUTTER: Okay, so initial participation is 50 percent production during that six month period and 50 percent of the remaining primary?

A. That's correct.

MR. NUTTER: Each tract's share of remaining primary.

A. Yes, sir.

MR. NUTTER: Okay.

A. The final participation will be based 74 percent of each tract's share of total secondary oil estimated for all tracts in the unit area, 25 percent of each tract's share of total hydrocarbon volume in the unit area, and 1 percent of each tract's share of total ultimate primary oil estimated for all tracts in the unit area.

The source of these parameters also was the Geological/Engineering Report.

MR. NUTTER: Okay. And that is the participating formula that has been agreed to by 42 percent, or whatever that figure was?

A. It actually has been agreed to by more than 43 percent, but the rest of the folks haven't furnished their ratifications yet.

MR. NUTTER: Yeah. Go ahead.

Q. (Mr. Kellahin continuing.) Returning --

A. That's all I have on Exhibit Six, I might say.

Q. Turning to Exhibit Number Seven, would you discuss what is shown there?

A. Exhibit Number Seven is compilation of pertinent correspondence. I guess in effect it just bears our heart to you. Anything that we thought you might want to look at or need to look at in connection with drawing this

unitization order is included in Exhibit Number Seven.

You'll find a call of certain working interest owners meetings, minutes of the seven working interest owners meetings between December 15, 1977, and July 1st, 1978, during which participation was negotiated, and the agreements were semi-finalized.

You'll find letters of solicitation to the working interest owners and overriding royalty interest owners.

You'll find letters from the purchasers advising their markets will handle the additional production.

We believe the minutes in particular will demonstrate that there has been a good faith effort to form this proposed unit on a voluntary basis. In all instances, all known working interest owners were invited to the meetings. The participation formula chosen was the 29th proposal offered. It's probably the only formula that could ever have been adopted. I consider it fair and reasonable and believe that the resulting tract participations reflect the relative value each will contribute to the unit.

MR. NUTTER: And when was formula 19th -- or 29th finally agreed to?

A. That was on May the 23rd, 1978.

Q. Referring to your Exhibit Number Eight, would you explain that exhibit, please?

A. Exhibit Number Eight is a compilation of correspondence with Mr. Millard Deck, who advised that he and his partners are not interested in joining the unit but would be interested in selling their interest.

You'll note that I promised Mr. Deck Phillips would make them a good faith offer.

I know of no other owner who prefers to stay out of the unit.

Texaco will have a very minor interest and I have agreed with their representative to attempt to trade them some of our Central Vacuum Unit interest for their East Vacuum Unit interest. They did participate in some of our meetings.

Q. Now, I believe we could discuss Exhibits Eight, Nine, and Ten together. Would you refer to those exhibits?

A. Excuse me, that would be Nine, Ten, and Eleven.

Q. I'm sorry, Nine, Ten, and Eleven.

A. Yes, sir. Exhibits Nine, Ten, and Eleven are the results of voting on three ballots that were sent out to the working interest owners in addition to the voting that resulted from the minutes of the working interest owners themselves.

MR. NUTTER: Mr. Chrisman, excuse me, again.

Oh, here we go. I was looking for my Exhibit Eight. It was the correspondence with Deck.

And then Exhibit Nine is this tabulation.

MR. KELLAHIN: Nine, Ten, and Eleven.

A. Nine, Ten, and Eleven are these tabulations showing the voting.

MR. NUTTER: Okay, got them. Go ahead.

A. These ballots covered features of the agreements that -- well, two of which are closely related to the formula approved itself.

Number Nine is on the proposed basis for sharing expenses and investments.

Number Ten is on the method that would be employed in reimbursing unit operator for its technical employees employed on the unit area.

And Number Eleven covers some revised verbiage in the Unit Agreement that resulted to take care of a modified stripper regulation by the Department of Energy.

Q. Now, referring to what has been marked as Exhibit Number Twelve, would you identify that exhibit and discuss it?

A. Exhibit Number Twelve is a schedule showing the pressure maintenance operation will account for a profit. The increased income shown does not include that which will be enjoyed by the basic royalty and the increased

profit shown is before Federal Income Tax.

Current oil prices have not been escalated in this schedule.

Not shown but certainly of importance to the State of New Mexico is estimated increased basic royalty income of approximately $56.1 million. And estimated increased state taxes of all types of $23.1 million.

Q. Now does the total expense figure include the costs of your pressure maintenance program?

A. Yes, sir, it does.

Q. And that will be discussed further by another witness.

A. Yes, sir, it will.

Q. So based on Exhibit Number Twelve, if these applications are approved, it will result in the recovery of additional oil and gas above what would be recovered by present operations?

A. Yes, sir, and that will account for a profit.

Q. And will account for a profit over and above the additional cost.

A. That's correct.

MR. NUTTER: Mr. Chrisman, I'll interrupt you one more time. On that Exhibit Twelve, you said it did not include so much money for additional royalties and so much money increased taxes. Would you repeat the numbers,

please?

A. Yes, sir, be glad to.

The additional royalties are estimated at $56.1 million.

MR. NUTTER: Okay.

A. And the increased taxes, this is as of -- for all types, $23.1 million.

MR. NUTTER: Go ahead.

Q. But it is based on present oil prices?

A. Present oil prices, yes, sir.

Q. Now, referring to Exhibit Number Thirteen, would you identify that exhibit?

A. Exhibit Number Thirteen is a proposed addendum to the agreements. Phillips recommends that the Division of Conservation in its unitization order make this Exhibit G to the Unit Operating Agreement.

One of the working interest owners has advised it will not ratify the agreement unless Phillips agrees to the provisions contained in this proposed Exhibit G. We, of course, have no objection because we plan to conduct our affairs in this manner anyway, but we feel the obligation to bind ourselves to these provisions for whatever benefit they are to all working interest owners rather than just one.

At this late date the simplest vehicle for

doing this is having it done through the unitization order. We cannot conceive of it being objectionable to any of the parties because we're the only one it places any requirements on.

MR. NUTTER: This is just an agreement that you're going to be good guys.

A. That we're going to be honest.

MR. RAMEY: What Division of Conservation is this you're talking about?

A. Pardon?

MR. RAMEY: Did you mention a Division of Conservation?

A. Division of Conservation, yes, sir.

MR. NUTTER: Meaning us.

A. You.

(There followed a discussion off the record.)

A. I think these thirteen exhibits contain all the material necessary to confirm the allegations made in our application for the unitization order.

Q. Were Exhibits One through Thirteen prepared by you or under your supervision?

A. They certainly were.

MR. KELLAHIN: At this time we'd offer in evidence Exhibits One through Thirteen, inclusive.

MR. NUTTER: Exhibits One through Thirteen will be admitted in evidence.

MR. KELLAHIN: That's all the questions that we have.

MR. NUTTER: I think I've asked all my questions as we went along.

Does anyone have any questions of Mr. Chrisman? He may be excused.

MR. KELLAHIN: I'd like to call our next witness, Mr. Ralph Roper.

RALPH ROPER

being called as a witness and having been duly sworn upon his oath, testified as follows, to-wit:

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q. Will you state your name, please?

A. Ralph Roper.

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

A. I'm employed by Phillips Petroleum as a Senior Reservoir Engineer.

Q. And where are you located?

A. Odessa, Texas.

Q. And have you ever testified before the Oil Conservation Division or one of its Examiners?

A. No, sir.

Q. For the benefit of the Examiner would you please outline your education and experience as an engineer?

A. I graduated from Texas Tech in 1961 as a petroleum engineer, a Bachelor graduate. After three years in the Army I joined Phillips in 1954 in their Alton, Texas, operations; went through the training program at that location; was assigned there approximately a year later in general engineering work and toward more of the reservoir end toward the end of that stay.

In 1969 was transferred to Smackover, Arkansas as a reservoir engineer and was in Arkansas until January 1st of this year; was transferred to Odessa in my present assignment.

Q. Now, in your present assignment have you had anything to do with the proposed pressure maintenance project in the Grayburg-San Andres Field?

A. Yes, sir.

MR. KELLAHIN: Are the witness' qualifications acceptable?

MR. NUTTER: Yes, they are.

Q. (Mr. Kellahin continuing.) Are you familiar with what Phillips is proposing in Case Number 6367 for a

pressure maintenance project for its East Vacuum Grayburg-San Andres Unit?

A. Yes.

Q. What does Phillips propose to do in this application?

A. To conduct the unit operations by pressure maintenance with the injection of water, the drilling of injection wells and producing wells at orthodox and unorthodox locations.

Q. And do you ask for an administrative procedure for further injection wells at orthodox and unorthodox locations?

A. Yes.

Q. With this application?

A. Yes, sir.

Q. Now, referring to your Exhibit Number Fourteen, would you identify that exhibit?

A. Exhibit Number Fourteen is what we refer to as our development plan. This was prepared for presentation at this hearing as well as presentation to the working interest owners at a meeting on October 12th of this year, and in addition to the development plan as outlined, we also attached a ballot soliciting approval of monies for the initial development from the working interest owners, and there are references in this plan to this ballot. I

could briefly, if I may, go through some of the pertinent sections of the plan.

Q. If you would, please.

A. The basic philosophy in this plan was to maximize production, maximize injection, and to develop a flexibility within the program that as conditions developed during the operation there was the ability to change the plan to fit the conditions.

The section I'd like to deal with most would be the drilling program section of this. And the drilling will be in a three phase order.

Attachment Number Two in that section is a map of the unit area with ten wells shown in red on the map. These constitute our initial development drilling program. These wells are in the better productive area of the field and will be used for reservoir evaluation; will be placed on production as allowable limits permit; and in the subsequent development program can be converted to water injection service.

Q. Now in connection with your drilling program what formation are you going to inject?

A. We'll be injecting into the San Andres portion of the Grayburg-San Andres reservoir.

Q. So your injection wells to be drilled will be drilled to the San Andres and not penetrate the Gray-

burg, is this correct?

A. They will penetrate -- the Grayburg is above the San Andres.

Q. I understand they will not be open in the Grayburg.

A. Right, will not be open in the Grayburg, yes, sir.

Q. All right.

A. The Attachment Three in that section is the second phase of our drilling program and it will be done scheduled for the 1979 drilling. The proposed producing wells are coded in red. The injection wells in blue. And the wells are drilled in vertical rows at approximate center of the quarter quarter sections within the unit area. Alternate producers and injectors.

The red area outlined in here on this map is the area in which large casing, 7-inch casing will be installed in the producing wells and 5-1/2 casing in the injection wells.

The next map shows the 1980 drilling program, the third phase of it, and this will complete the infill drilling at the vertical rows which were not drilled in the prior drilling. And this will complete the infill drilling in the -- essentially, in the unit area.

The flexibility that was mentioned earlier is

apparent as we get into the 1980 drilling, that the location of producers and injectors can be modified to fit the appropriate water injection pattern to be developed at that time.

Subsequent conversion of the newly drilled producing wells will complete a pattern of water injection development across the unit area. The specific pattern is not included in this at this time. It will be a pattern but it may vary across the field because of the type of reservoir characteristics are quite different from the south central portion of the unit up to the north. So the specific pattern may not be the same across the field. Or the unit, excuse me.

Q. Does that complete your drilling program?

A. That is essentially the well drilling portion of it, yes, sir.

Q. Now, do you have a diagrammatic sketch of the type well --

A. Yes, sir, the -- excuse me.

Q. Go ahead.

A. The next six attachments in the drilling section show schematic completion diagrams of several possible completions. In our design of casing we mentioned earlier to maximize the production and the other concern that we have in this area is the control and the isolation

and the protection of the wellbores from a possible salt water flow interval that does exist in the field.

Attachment Number Five shows the 7-inch producing wells if no salt water flow is encountered.

Attachment Number Six is how we propose to handle and isolate any salt water flows that may occur in the drilling of the well.

The main point in these -- or one of the points is that all the casing strings will be cemented to the surface and that there will be monitors on the surface for observation of surface pressures.

Q. Now those are producing wells you're talking about?

A. Yes, sir, these are the producing wells.

Q. Yes, sir.

MR. NUTTER: And as you drill the well, you will drill out from under the surface casing with a large enough hole that you could run this intermediate casing if necessary?

A. Yes, sir.

MR. NUTTER: And if it's not necessary you just go on down and run 7-inch.

A. Right.

And as we get across the field and isolate or identify where we may or may not have salt water flow

problems we would reduce the surface casing size as applicable at this specific point;after we've drilled several wells we should hopefully be able to identify where those problems exist.

MR. NUTTER: Is that Attachment Seven where you have 8-5/8ths surface pipe?

A. Yes, sir, and this would be a 5-1/2 inch casing producing well, yes, sir.

Attachment Number Eight is a water injection well. Again it's designed -- this would be the completion if no salt water flow was encountered. Again all strings are cemented to the surface. The annulus is protected with corrosion inhibited inert fluid. The tubing will be set on a packer approximately 50 feet above the injection interval and the tubing will be internally protected for corrosion. There will be pressure control devices on the tubing for the injection control. Again surface pressure gauges on the annulus and the monitors on the other casing strings.

Attachment Number Nine is the injection well if the 9-5/8ths intermediate casing is required.

I might -- there's one point that will be brought out later in the proposed field rules. When we say all the strings will be cemented to the surface we're also stipulating that -- or tied back into our prior

cemented casing strings.

And Attachment Number Ten is a 4-1/2 injection well.

Q. Now will you utilize existing wells for injection purposes?

A. At the present time we're not -- it's possible they will be used but our primary injectors will be the newly drilled producing wells and injection wells.

Q. And if you do utilize existing wells, you will adequately pressure test them before using them?

A. Yes, sir.

Q. Now, in the event you find some existing wells have problems, have you made provision for replugging or handling that situation?

A. We have this in some subsequent exhibits. Would you like to get them now or --

Q. No.

A. Okay. Yes, we do.

Q. Now what's your source of water supply for this program?

A. This will be the Ogallala formation at approximately 200 feet.

Q. And do you have a permit from the State Engineer for wells for that purpose?

A. Yes, sir, we have within the unit area and

near the unit area, we do have State permits for the water permits.

Q. And have you drilled some of those wells?

A. Yes, sir.

Q. And in your opinion will this water supply be adequate for the purposes of your pressure maintenance program?

A. Yes, sir.

Q. Will you use make-up water? Or will you recircle -- recycle the water?

A. Yes, sir, we will inject produced water as well as fresh water.

Q. And you have available to you in addition to that, any other source of water supply if you need it?

A. Yes, sir, there is a salt water disposal system in the field and the water belongs to the operators within the unit in different formations and that water will be available and Mobil Oil Corporation, a working interest owner in this unit has two sources of water, fresh water supply, in the vicinity that they've offered to make available for the unit's use at a price. There is additional water, yes.

Q. It is available?

A. Yes, sir.

Q. Now, do you anticipate that your produced

water or the water from a salt water disposal system would require treatment prior to injection?

A. Not excessive treatment other than filtering -- excuse me, not filtering, but settling through the --

Q. You don't anticipate any problem with it?

A. No, sir.

Q. Now referring to Exhibit Number Fifteen, would you identify that exhibit, please?

A. Exhibit Number Fifteen is a list of wells with specific locations, well numbers that we would like to have included in the order for the drilling of ten wells as a part of the initial development of the unit, and might mention here, we have not surveyed any locations on the ground and that these locations are subject to slight changes and we're asking for approval to drill these wells at unorthodox locations within 10 feet of quarter quarter section lines. The well could possibly move from one tract number to another and require an amended well number and location.

Q. And you ask for an administrative procedure for approving those changes?

A. Yes, sir.

Q. Now are those wells to be drilled as producing wells or injection wells or both?

A. They will be drilled as producing wells and

will be placed on production as allowables permit at the time they're completed.

Q. But they could in the future be used to be converted to injection wells?

A. Yes, sir.

Q. Some of them? Now, Exhibit Number Sixteen, would you identify that, please?

A. As Mr. Chrisman mentioned earlier in his, this is the type log, and it is the log of the well that is referenced in the unit agreement and in the Engineering/ Geological Report. This is a full length log from essentially the surface to below the unitized interval, showing the formations.

Q. And that identifies the unitized area and the zone in which you are going to inject?

A. Yes, sir.

Q. Now referring to Exhibit Number Seventeen, would you identify that, please?

A. Exhibit Number Seventeen is a map of the unit area identifying both the reservoir designation, the producing formations of all the wells in the unit area, and within two miles of the unit boundary on the northeast and the south boundaries. The Texaco Central Vacuum Unit is on the west. That, I'm sure, was presented as part of their agreement.

Q. In other words, you did not cover that area because it's already before the Commission?

A. Right.

Q. And the Central Vacuum Unit area has been approved by the Commission, has it not?

A. Yes, sir.

Q. Do you have anything else to add?

A. On that exhibit also it does show the ownership and lease ownership of the -- of the area surrounding the unit, as well as into a portion of the unit.

Q. In other words, it shows all the wells offsetting the unit and the ownership.

A. Yes.

Q. Now referring to Exhibit Number Eighteen, would you identify that exhibit, please?

A. Exhibit Number Eighteen is a tabulation of all of the wells that penetrated the Grayburg-San Andres reservoir in the unit area as well as a half mile boundary around the unit area. Again, not including the Central Vacuum Unit portion of it.

Within this we have color coded some wells which we feel there are, in our review of this data, some indication of possible problems, either in the way the well was plugged to satisfy the current plugging requirements in the area due to the salt water flow or that the

estimated tops of cement may not be brought high enough to adequately protect the wellbores opposite the proposed unitized interval.

And our plans are to review these particular wells in question in more detail to the point of contacting the current operators if they are not wells to be contributed to the unit to substantiate the tops of cement and the -- also some of the plugging -- to determine that the plugging was done as we have shown.

Q. And that's shown further, then, on Exhibit Nineteen, is it not?

A. Yes, sir. Exhibit Nineteen is a schematic diagram of all the wellbore completions of plugged and abandoned wells in and within a half mile of the unit area.

And if I may, I'd like to point out about ten of these specifically that from our review appear to have some either questions or some obvious work that needs to be done either by the unit or by the operator if it's outside the unit area.

The second one, Amoco Production Company's State CV Well No. 4, the calculated top of cement and the 10-sack plug within the casing, it appears to be above where we're estimating the top of the Grayburg, and while we're not planning injection into the Grayburg, it is a portion of the reservoir and there is a possibility of pressured

injection in the San Andres getting into this Grayburg and possibly into this wellbore.

So again our question on this one is that we may need to refer to records a little bit more to confirm the plugging and the top of the cement.

The next plat, Amoco State CV Well No. 5, essentially the same question on the calculated top of the cement.

I believe it's three more down, Chevron State 634 Well No. 4, that with the plug in the tubing -- excuse me, in the open hole below the estimated top of the Grayburg, there's a possibility we could have communication within this. This is a well that appears it would need some work on it to satisfactorily plug it to preclude problems with the salt water flow to the surface.

Go a way with a few fairly good ones here, down eight or nine more pages, will be Great Western State "E" Well, Well No. 2. We neglected to put the depth of that 6-sack plug on the plat. That is at approximately 4250 feet. This is one that looks like there may be some questions of whether there's -- there's probably at least a surface plug in this well that we didn't have in the records that we researched in developing these plats. At least there's some questions on that one, if not major problems, and again, a 6-sack plug may not be adequate with

the injection below it.

Amazingly enough the next couple of questions are Phillips Petroleum Company wells.

Well No. 15, and we can get the -- possibly get the injection into the wellbore with the shot points in the casing there and not having a plug into the stub of the casing, again it could let the -- have a problem getting the injection to the surface. This is a well again we plan to re-enter and plug.

About four more down is again another Phillips Petroleum well, No. 37, and a very similar case where there was not a cement plug left in the stub of the 7-inch when it was cut off and it was also shot several times before the casing could be removed.

MR. NUTTER: Which one was that?

A. Well No. 37, Phillips Santa Fe Well No. 37.

MR. NUTTER: Okay.

A. The next one is about six or seven further down, it's Shell Oil Company's State "U" Well No. 1. Does not appear to be any cement plug at all across the open hole interval, which does include the proposed unitized interval.

Two below that is the Shell Oil Company State "C" No. 1. This well is in the unit area. Again, with the shot holes in there and a fairly small plug and the entire

unitized interval open, it doesn't appear to be too well -- sanitarily plugged for what we're doing, but this is in the unit area and we will evaluate it as well as re-entering it for plugging. We may re-enter it to put it on production.

MR. NUTTER: Where is this well on your --

A. It is in Section 24, 17, 34, Unit "I". It's in that little portion of the blue outlined unit extending into 34.

MR. NUTTER: Way over in the far west of the unit?

A. Right.

Two wells further down is the Shell Oil Company State "S" Well No. 1. Again there's a slight error in the drawing of the plat. The plug at the stub actually does -- of the 5-1/2 inch does extend both in and out of the cutoff portion of the 5-1/2, but again there is not cement across the proposed unitized interval.

And four further down is a dry hole, it's Barnett and Hansen State No. 1-B. I think this was also carried in the records as Permian Corporation. There is -- the entire unitized interval is not covered, and again we just discovered what appears to be a typographical error in our estimated top of the Grayburg in this well and I don't have where the estimated top is, but I believe it should be below that, possibly in the vicinity of 4000 feet.

MR. NUTTER: You're pretty sure 3696 is wrong?

A. Yes, sir. Again the plugs in the open hole in this are 10-sack plugs and we can't say that's adequate to isolate all of the wellbore.

That concludes the -- this exhibit.

Q. Now, prior to injecting the fluids into the reservoir would you check the unit wells, or take wellhead pressures?

A. Yes, sir, we plan to on all of the unit wells, certainly record the present surface pressures and any wells in the non-unitized formation, we shall attempt to get approvals to check those also, and would submit this to the State to show what our surface pressure situation was at the time of unitization.

Q. And as your injection program proceeds, would you continually monitor your producing wells?

A. Yes, sir.

Q. Were Exhibits Fourteen through Nineteen prepared by you or under your supervision?

A. Yes, sir.

MR. KELLAHIN: At this time we'd like to offer Exhibits Fourteen through Nineteen, inclusive.

MR. NUTTER: Phillips Exhibits Fourteen through Nineteen will be admitted in evidence.

Q. Do you have anything to add?

A. No, sir.

MR. KELLAHIN: That's all we have, Mr. Nutter.

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

That's all you have of this witness, you mean?

MR. KELLAHIN: All we have of this witness. We will have one more witness.

MR. NUTTER: If there are no questions, the witness may be excused.

CROSS EXAMINATION

BY MR. NUTTER:

Q. Mr. Roper, what would you define this flood as being, a 9-spot, or what?

A. It has potential of being that, depending on the conversion of producing wells to injection. In the north area a conventional 5-spot would be developed.

Q. But basically what your final program, as shown by Exhibit -- Attachment Four in Exhibit Number Fourteen, would be, you've got a well on each 40 now and you'd end up with a well on each corner of each 40, too, wouldn't you?

A. Yes, sir.

Q. And then about one well on -- one injection well on each corner of each 160.

A. Yes.

Q. Is about what it finally resolves into.

Now, on Attachment Number One in this group, I'd like for you to explain this one page right here to us. That's the allowable production decline and the expected recoveries, and such as that.

A. This is schematic diagram of our forecast showing the timing of the drilling of wells and the allowable and the production. The next witness will present the allowable recommendations on the field rules, but this is the increase in production due to new production from the newly drilled producing wells, and then what is generated from the project allowable areas, and finally in 1981 beginning of allowable increases credit due to voidage replacements.

Q. Well, would it be more proper to direct the questions to you or to the next witness as to what the current rate of production is and how much production you're going to lose while the thing is being put into operation, how much you'll gain, and what the total anticipated secondary recovery will be?

A. I think I can try to answer some of that.

Q. Okay, it's probably in here in this curve,

if you'd explain.

A. Yes, it's there;from a production standpoint a review of the curve in the forecast economic section of this same development plan shows it possibly a little more graphically, Attachment Number Two in that section.

Q. Okay.

A. Current production as of July, 1978, is 4,380 barrels.

Q. 4,380.

A. Right. Pretty much on the line of the history portion of this curve.

Q. Now, what is that, that's barrels per day or --

A. Yes, sir.

Q. How many 40-acre tracts are in this unit?

A. I believe 176.

Q. And how many active wells are on those 176 40s?

A. Some of the tracts, some of the 40-acres have more than one producing Grayburg-San Andres well on them. I believe there's 159 current producers.

Q. And those 159 40-acre tracts have a current total of 4,380 barrels per day?

A. Yes, sir.

Q. Okay. And that's the point that we show on this curve.

A. Right.

Q. Okay, now take it from there.

A. The remainder of this curve shows the bottom line is the forecast of the total continued primary, adjusted from time and current production from the 12 million barrel figure that Mr. Chrisman mentioned. The remaining primary as of the -- estimated as of the first of 1979 is approximately 9.1 million barrels.

Q. Now why would this curve take such a sharp break in the years 1983 and 84?

A. This field, this reservoir, does have some currently top allowable wells, and some flatter decline wells at fairly high rates close to the top allowable, and this was an estimated trend, assuming that the unit was not formed and significant workovers, treatments, and so forth, would maintain the top allowable wells for about this period until the normal decline would set in.

Q. And then it's marginal production?

A. Right, begins to drop off rapidly.

Q. I see. And then the other curve on that?

A. The top curve is the total production estimated with the water injection and the infill drilling. The stairstep shape is the same as reflected in the earlier schedule dealing with new production, project allowables, and subsequently voided replacement allowables.

Q. And you estimate that it will peak out in mid-1982?

A. Yes, sir, at about --

Q. At what rate?

A. About 23,000 barrels a day.

Q. And then the decline would start again?

A. Yes, sir.

Q. When would you expect that the third phase of drilling would be complete?

A. We're anticipating that will be done at the end of 1980.

Q. So there wouldn't be any additional drilling to hold that peak up after 1982, or '83?

A. No, sir. Of course if the conditions warranted, or the economics did, there could be some additional producing wells drilled, but not a significant increase over this curve, no.

Q. Okay.

MR. NUTTER: Are there any other questions of Mr. Roper?

REDIRECT EXAMINATION

BY MR. KELLAHIN:

Q. Mr. Roper, your economics differ slightly in your report than those given by Mr. Chrisman, do they not?

A. Yes, sir.

Q. Would you explain the difference?

A. Again, in the same forecast and economic section we presented an economic evaluation of the project and it utilizes the same total investment slightly in excess of $48,000,000. The difference is that the economics in this was generated for the working interest owners and it does include Federal Income Tax in the calculation.

This is the difference in the total cash flow figure from what Mr. Chrisman presented.

Q. Now do you agree with Mr. Chrisman's statement that the additional oil to be recovered from the pressure maintenance operation will result in a profit over and above the cost of the project?

A. Yes.

Q. And would result in the recovery of oil that would not otherwise be recovered?

A. Yes.

Q. Now, in your opinion is unitization necessary for the proper operation of a pressure maintenance project in this area?

A. Yes, sir.

Q. And therefore you recommend that the area be unitized?

A. Yes.

MR. KELLAHIN: That's all I have.

RECROSS EXAMINATION

BY MR. NUTTER:

Well, now, Mr. Roper, I see here you anticipate that the infill drilling program and water injection will result in the recovery of 150 million --$150.5 million above $17.5 million, based on continued primary operations.

A. Yes, sir.

Q. Now, can you convert that into barrels? How many additional barrels are going to be obtained there?

A. Under the total water injection project, you mean, with the infill drilling?

Q. Yes, sir.

A. Roughly 40.8 million barrels.

Q. That's additional oil that's recovered because of the injection program, unitization and injection program?

A. Yes, sir.

Q. And the value of that is $133 million?

A. Yes, sir. Again, these economics are unescalated prices, but we do escalate the investments, since this is what we're asking the working interest owners to approve of the monies for, so that does include an escalation of investment costs.

Q. And then that additional money would be the $56 million additional royalty that Mr. Chrisman was talking about and $23.1 million of additional taxes, or was that total revenues from the project?

A. These are total revenues to the project but the royalty has been -- this is working interest revenue. The royalties have been deducted from this and the taxes.

Q. That's the figures that are given on the forecast and economic --

A. Yes, sir.

Q. Okay, that's working interest only?

A. Right.

MR. NUTTER: Are there any further questions of Mr. Roper?

REDIRECT EXAMINATION

BY MR. KELLAHIN:

Q. You stated that your oil prices have not been escalated. You are using current oil prices for your forecast?

A. Yes, sir, and we are basing this on a two tier pricing system and do not have any stripper pricing in here, which was, as Mr. Chrisman pointed out earlier, the rules were changed and included after these numbers were worked up.

Q. So that would make it even more advantageous, wouldn't it?

A. Yes, sir.

MR. KELLAHIN: That's all. Thank you.

MR. NUTTER: One other question, Mr. Roper.

RECROSS EXAMINATION

BY MR. NUTTER:

Q. On Exhibit Number Fifteen you had the location of the first ten unorthodox locations that you're proposing to drill and you ask that those be included in the order authorizing the project?

A. Yes, sir.

Q. Now, are these firm locations or are these theoretical locations that you think would be adviseable from your office in Midland? Or Odessa?

A. Well, these are firm locations with the limitations of what it is on the ground, whether there's roads or power lines or tank batteries, and so forth. These are our desired locations.

Q. Well, that's -- we approved a bunch of these for one operator awhile back and he went out there and found out there were power lines, even a gasoline plant that would be sitting on one of them.

A. I guess the better phrase for these would be

the desired locations.

Q. Okay.

A. No, they have not been surveyed on the ground and of course there will be, I'm sure, a change on some if not all of them.

Q. Can you establish what the firm locations are and let us know what they are before we enter an order, so you won't have to come back and have an amended application?

A. Well, one of the little problems in here is I'm not quite sure if we've gotten everybody's approval until the unit is formed to go in and survey and stake the locations on non-Phillips leases.

MR. KELLAHIN: If the Examiner please, we -- the witness did ask for an administrative procedure for approval of those specific locations as well as future ones, too.

MR. NUTTER: I thought he asked for these to be approved now.

MR. KELLAHIN: He asked for them to be listed, I agree.

MR. NUTTER: He wants the procedure for moving them.

MR. KELLAHIN: That's correct.

MR. NUTTER: If something is in the way. Okay.

If there are no further questions of Mr. Roper, he may be excused.

BILL MUELLER

being called as a witness and having been duly sworn upon his oath, testified as follows, to-wit:

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q. Would you state your name, please?

A. W. J. Mueller.

Q. And by whom are you employed and in what position, Mr. Mueller?

A. I'm a Reservoir Engineering Supervisor in the Odessa area of Phillips Petroleum Company.

Q. And have you testified before the Oil Conservation Division and as an expert witness?

A. Yes.

MR. KELLAHIN: Are the witness' qualifications acceptable?

MR. NUTTER: Yes, they are.

Q. Mr. Mueller, referring to what has been marked as the Applicant's Exhibit Number Twenty, would you identify that exhibit?

A. Number Twenty is a section out of the Bryan

book that shows the New Mexico Commission rules relative to a Santa Fe pilot waterflood we asked for.

This is Order Number R-3150 and was approved in November of 1966, that permitted Phillips to inject water into the Grayburg-San Andres interval in its Santa Fe Well No. 14. This was a pilot test and the test has now been concluded and we ask that this order be rescinded because this is the same area that will be encompassed by the new order for the pressure maintenance unit.

Q. This could be rescinded assuming that the unitization order is approved, is this correct?

A. Yes.

Q. Now, referring to what has been marked as Exhibit Number Twenty-one, would you identify that exhibit and discuss the provisions proposed?

A. Exhibit Number Twenty-one is Phillips Petroleum Company's proposed special rules and regulations for operation and development of the East Vacuum Grayburg-San Andres Unit Pressure Maintenance Project.

I'd like to state at this time that in the Vacuum Field there are currently three waterflood units, five lease waterflood units, and two pressure maintenance water injection units.

The two pressure maintenance water injection units are the Texaco 100 percent Vacuum Unit, and that is

Number R-4442, and was approved in November of 1972; the more recent one being the Texaco Central Vacuum Unit, which is Order Number R-5530, that was approved in September of 1977.

It was from the special rules and regulations of those two pressure maintenance units that these proposed rules and regulations were combined and formulated on.

Of note is that it is in the 100 percent Texaco Unit, or R-4442, that permitted the drilling of both injection and producing wells at unorthodox locations within ten feet of the quarter quarter section line.

An additional thing to be noted in the Texaco Central Vacuum Unit in Order R-5530, was the voidage and water injection credit allowable for voidage replacement.

Q. Are you asking for the same provisions in this unit?

A. Yes, and both those provisions are provided for in these rules.

And the proposed rules, if I may rapidly go through them, is Rule Number One is to authorize the institution of a pressure maintenance project in the unit area by injection of water into wells at orthodox and unorthodox locations.

Rule Two is that the Unit Operator is authorized to drill injection wells and additional producing wells

at both orthodox and unorthodox locations anywhere within the unit area provided no unorthodox location is closer than 10 feet to a quarter quarter section line or closer than 1320 feet to the unit boundary; that the Division Director shall have authority to grant permission to drill any well within the provisions of this rule without notice and hearing.

There was a hope that as Phase Two and Phase Three drilling comes along we could just look the proposed locations to Santa Fe for approval, administrative approval for unorthodox locations.

Rule Three will be that each newly drilled injection well or producing well shall be equipped with surface casing, approximately 350 feet, or it would be 50 foot in the Red Beds, cemented to surface, and the production string run to total depth of 4900 feet and cement to surface, except in those instances where it may be necessary to run and cement an intermediate casing string into the Yates and then the production string need only be cemented back into the intermediate.

Rule Four will be that the conversion of producing wells to injection at orthodox and unorthodox locations within the unit area shall be accomplished only after approval of same by the Division Director. This will include both the newly drilled wells that we hope to put

on production initially in those proration units that are not now producing 80 barrels a day. We think we will go ahead and put those on production and bring the allowable of that proration unit up to 80, but then subsequently down the line convert it to injection when our injection station and system is ready.

There will be about a one-year time lag here. We anticipate the Central injection facilities to be ready for pressured injection approximately one year after unitization, and that is why during this first year these infill wells, we will go ahead and produce them up to a proration unit's 80 barrel allowable if the current producing well on that unit is not 80 barrels.

MR. NUTTER: Well, now, Mr. Mueller, to interrupt you at this point, so often on these unitized projects that go on production, we see the total production for the unit go down initially, because they take wells off production. You won't be doing that at all here. You'll cause production to go up even before you start injection, then?

A. Yes, immediately.

MR. NUTTER: Then there won't be any drop in production at all, because all the injection wells initially will be new wells?

A. Right, yes, sir.

MR. NUTTER: Okay.

A. Rule Five would be that the injection shall be accomplished through tubing installed in a packer set within 100 feet of the uppermost perforation. The injection shall be done in corrosion protected tubing; casing annulus filled with an inert fluid, similar to the diagrammatic sketch we showed in the development program.

Rule Six will be that the injection wells or system shall be equipped with a pressure control device or acceptable substitute to limit the surface injection pressure to more than 0.2 of a psi per foot of depth to the uppermost perforation.

A continuation of that rule would be that the Division Director may administratively authorize a pressure limitation in excess of the above upon showing by the Unit Operator that such higher pressure will not result in fracturing of the confining strata.

That administrative procedure was provided for in the Texaco Central Vacuum Unit pressure maintenance.

Rule Seven is that the project area of the East Vacuum Grayburg-San Andres Pressure Maintenance Project shall consist of those proration units within the boundary of the East Vacuum Grayburg-San Andres Unit upon which is located an injection well and any directly or diagonally offsetting proration unit.

Rule Eight is that all wells within the project area shall be equipped with risers or in another acceptable manner as to facilitate the periodic testing of the bradenhead for pressure or fluid production.

Rule Nine will be that those wells within the East Vacuum Unit that are not included within the project area shall be prorated in accordance with the normal rules and regulations of the Division.

Rule Ten is that the project area shall receive a project area allowable and said project area allowable shall be the sum of the basic project area allowable plus the water injection credit allowable.

Rule Eleven states that the basic project area allowable shall be equal to 80 barrels of oil per day times the number of developed 40-acre proration units in the project area.

Rule Twelve states that the water injection credit allowable shall be contingent upon full voidage -- full reservoir voidage replacement of all produced fluids and shall be based upon the following formula. This is the same formula that occurs in the Texaco Central Vacuum Unit Pressure Maintenance Project.

There is one addition here, or I should say one omission we request, and that is that no limit be placed upon the water injection credit allowable. In

other words, if we are able to completely fulfill voidage with the production we have, we ask that this not be restricted to -- once the basic project allowable or anything like that; that it be allowed to go ahead and rise to one to one-and a half times the basic allowable if full voidage is replaced with water injection.

Rule Thirteen is that the weighted average project area reservoir pressure shall be determined prior to commencement of injection of water into the reservoir and at least annually thereafter.

And Rule Fourteen is that the project area allowable may be produced from the wells within the project area in any proportion, provided however, that any proration unit situated on the boundary of the East Vacuum Unit which is not directly diagonally offset by an injection well outside said unit or on said unit boundary, shall be permitted to -- shall not be permitted to produce in excess of 80 barrels of oil per day.

Attached as an Exhibit A to these proposed rules and regulations is the water injection credit allowable formula that was used in the Texaco Central Vacuum Unit, and all nomenclature here is the same, and this is -- I attached it as an exhibit as this would be the type of calculation we would submit monthly to the Commission to determine our water injection credit allowable to be added

to our basic project area allowable for the total project area allowable.

Exhibit B is the formation volume factors and solubility and solution ratio curves that had been used throughout the Engineering/Geological studies of the Vacuum Pool, and these are identical to the same factors that were in the Texaco Central Vacuum order.

This figure is a little different as far as this one has a solution, or I should say an initial formation volume factor and initial solution ratio points shown on it,and the curve that was made an exhibit to that pressure maintenance project didn't show that breakover there.

MR. NUTTER: It stopped over here --

A. Right.

MR. NUTTER: -- the left of that.

A. Right, other than that it's the identical curve.

Q. Does that complete your testimony?

A. Yes.

Q. Was Exhibit Twenty-one prepared by you or under your supervision?

A Yes, sir.

Q And Exhibit Twenty is a copy of the Commission's order for the pilot project?

A. Right.

MR. KELLAHIN: At this time we'll offer Exhibits Twenty and Twenty-one.

MR. NUTTER: Applicant's Exhibits Twenty and Twenty-one will be admitted in evidence.

MR. KELLAHIN: That's all I have, Mr. Nutter.

CROSS EXAMINATION

BY MR. NUTTER:

Q. Mr. Mueller, under Rule Seven where the project area would comprise the proration units within the boundaries of the unit upon which are located injection well or which diagonally or directly offset proration units containing producing wells, does that mean injection wells there?

A. Let's see, the project area shall consist of those proration units upon which is an injection well and any directly or diagonally offsetting proration unit which contains a producing well. In other words, if there is no well on that 40 acres it would not be constituted as part of the project area.

Q. Okay, I'm reading it right now. I wasn't reading it right.

And then each of these wells in the project area would get a top allowable whether the well on it could make it or not.

A. That's right.

Q. Whether it's going to be transferred to another well within the project area that might be able to make it.

A. Yes, sir.

MR. NUTTER: Are there any further questions of Mr Mueller?

He may be excused.

Do you have anything further, Mr, Kellahin?

MR. KELLAHIN: That's all I have, Mr. Nutter, thank you.

MR. NUTTER: Does anyone have anything to offer in Cases Numbers 6366 and 6367?

We'll take the cases under advisement and the hearing is adjourned.

(Hearing concluded.)

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REPORTER'S CERTIFICATE

I, SALLY WALTON BOYD, a Court Reporter, DO HEREBY CERTIFY that the foregoing and attached Transcript of Hearing before the Oil Conservation Division was reported by me; that said transcript is a full, true, and correct record of the hearing, prepared by me to the best of my ability, knowledge, and skill, from my notes taken at the time of the hearing.

Sally W. Boyd CSR
Sally W. Boyd, C.S.R.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 6366-6367 heard by me on 10/25 78.
Oil Conservation Division, Examiner

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