



MR. NUTTER: We will take Case 3310.

MR. DURRETT: Application of Cima Capitan, Inc.,  
Ryder-Scott Management Company, Stallworth Oil and Gas Company,  
and Newmont Oil Company for a waterflood project, Eddy County,  
New Mexico.

MR. KELLAHIN: If the Examiner please, Jason Kellahin,  
Kellahin and Fox, representing the Applicants. I will now get  
to refer to the letter from Newmont Oil Company, who has  
withdrawn from participation in this application; and at this  
time I would like to move that Western Oil Fields, Inc. be  
joined as an Applicant in this case, Western Oil Fields. I  
will represent them, and one of their engineers is in the  
hearing room.

MR. NUTTER: You are trading Newmont for Western?

MR. KELLAHIN: That is correct.

MR. NUTTER: I would also like to state that the  
Santa Fe New Mexican goofed in advertising the case, and we  
have re-advertised the case for hearing on October 6th.  
However, we did include Newmont but we didn't include Western  
Oil Fields, but we'll join them anyway. We will proceed to  
hear the case, but it will be reopened again on October 6th  
for further appearances.

MR. KELLAHIN: We will have two witnesses I would  
like to have sworn at this time.

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(Witnesses sworn.)

WILLIAM E. FICKERT

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

DIRECT EXAMINATION .

BY MR. KELLAHIN:

Q Would you state your name, please?

A William E. Fickert.

Q By whom are you employed, Mr. Fickert?

A Ryder-Scott Company, Petroleum Engineer.

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

A Yes, sir, I have.

Q Your qualifications have been made a matter of record?

A Yes.

MR. KELLAHIN: Are the witness' qualifications acceptable?

MR. NUTTER: Yes, sir, they are.

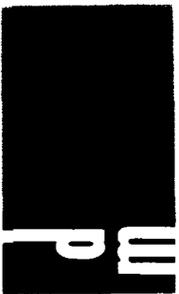
Q (By Mr. Kellahin) Are you familiar with the application in Case No. 3310?

A Yes, sir.

Q What's proposed in this application?

A I would like to refer to our list of exhibits.

MR. KELLAHIN: Let's get them marked here.



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A The first exhibit is a County map on a one to four thousand scale.

(Whereupon, Applicant's Exhibits Nos. 1 through 8 marked for identification.)

Q Now referring to what has been marked as Exhibit No. 1, would you identify that exhibit?

A This is a County map of the immediate area on a one to four thousand scale. The area shaded in yellow represents the acreage owned by Stallworth and Ryder-Scott Management Company, and to which I will testify. In the area shaded in red is the area to be testified to by Mr. Porter.

Q Is this area being unitized in any fashion?

A The area shaded in yellow is not. It will be a cooperative waterflood.

Q I mean as between the area shaded in yellow and the area shaded in red.

A No, it's a cooperative waterflood project.

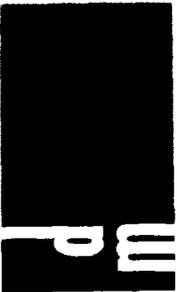
Q Do you have line agreements?

A We are working them out right now.

Q Would you continue with the discussion of the exhibit, or have you completed that?

A That's it.

Q Referring to what has been marked as Exhibit No. 2, will you identify that exhibit?



A This shows the development and the proposed development of the Stallworth and Ryder-Scott Management Company leases. On the Stallworth lease, we propose to drill a well ten feet out of the corner of the southeast 160-acre tract for injection purposes. We ask a permit for drilling a producer in the five feet from the northwest corner of the Southwest Quarter of the Southwest Quarter of Section 30 -- Section 25, excuse me, on the Stallworth lease, to be used as a producer. Shown there on the map is Number 6.

On the Ryder-Scott Management Company leases we propose to drill four injection wells as shown, 5, 6, 7, and 8. We propose to convert Number 3 in Section 30, and we propose to drill Number 9 approximately in the middle of that northwest 160 acres as a producer.

Q Now you show on the Stallworth acreage a Well No. 6 in the center. Would that be drilled as a producer, too?

A Yes.

Q Are each of the wells designated by circles and in the corner of the Quarter Sections proposed to be injection wells?

A Yes, sir.

Q Have they been drilled?

A No, sir.

Q These would all be new wells?

A These would all be new wells.

Q What's the situation as to Well No. 3 in the Ryder-Scott acreage?

A This well was drilled in the Spring of this year, I believe it was in March or April, and it will be converted to an injection.

Q What is the casing on that well?

A The casing is four and a half J-55 set through the -- we'll get to that in a later exhibit.

Q Yes. Now are the well locations of each of your injection wells proposed to be ten feet out of the corner?

A Yes, sir.

Q With the exception of Number 3?

A Number 3.

Q Which you will convert to injection?

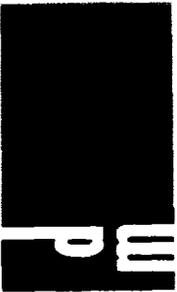
A Yes.

Q What is its location?

A 330 from the northeast corner of that quarter section.

Q Now referring to what has been marked as Exhibit No. 3, would you identify that exhibit and discuss it, please?

A This Exhibit 3 is a typical log section from the -- retraced from the Federal Lowe No. 1. It's a gamma ray sonic log and the zones of interest are indicated. We are proposing to waterflood the upper Premier zone, the lower Premier zone,



and the Lovington zone.

Q Is this zone fairly uniform throughout the area involved in this application?

A Yes, sir.

Q Have you examined the logs in other wells and found that the zones you've referred to are present in each of them?

A Yes, sir.

Q Referring to what has been marked as Exhibit No. 4, would you identify and discuss that exhibit, please?

A This is our diagram of proposed well completions for injection wells. We will have to make one correction on here after talking to Mr. Irby. We will cement back to above the Red Sand zone on the four and a half inch casing, instead of the Metex as shown on the diagram. We propose to use fresh water as our injection medium and we propose to inject down the casing; and with the experience that Newmont has had on their waterflood, we will more than likely have to set tubing on a packer to separate injection into the upper Premier and into the two lower zones. We will in all cases only inject fresh water down the casing. Any produced water which is to be handled separately will be injected down tubing when this time arrives.

Q Will each of these zones take the water to the same degree, in your opinion?

A No, sir. The upper Premier permeability is possibly fifteen to twenty times that of permeability in the lower Premier and the Lovington.

Q Do you have any approximate figures on the porosities and permeabilities of the formation?

A In our Well No. 4 which was recently completed, Lowe Federal No. 4, the permeability of the upper Premier has a streak of 1,000 millidarcies, whereas the permeability in the lower zones was approximately 50 millidarcies.

Q Does that indicate that you may have to selectively inject them?

A Yes, sir, it does.

Q How would that be done?

A We would set a two-inch tubing on a packer between the upper Premier and the lower Premier, and inject down the casing for the upper Premier; and the lower Premier and the Lovington would be flooded through the tubing.

Q In the event it is necessary to selectively inject, is there any other way this could be done than utilizing the the casing tubing annulus?

A I don't quite understand.

Q Could you selectively inject in any other fashion than utilizing the annulus?

A I don't believe so.

Q In other words, this type of completion is essential to your program, is that correct?

A Yes, sir.

Q But you do not propose to use tubing unless it is necessary, is this correct?

A No, but we're fairly certain it is going to be necessary.

Q Referring to what has been marked as Exhibit No. 5, would you identify that exhibit and discuss it?

A This is a tabulation of production history from the Stallworth A. N. Etz Lease from 1942 to 1959. The four wells produced 206,574 barrels, and then it shows the yearly production through 1964 and then monthly production for 1965 through August. The cumulative production to the end of August was 229,803 barrels. The four wells are now producing near two barrels a day per well.

Q Is this field in an advanced stage of depletion, in your opinion?

A Yes, sir.

Q And this would be a secondary recovery project you propose now?

A Yes, sir.

Q Would it come under the provisions of Rule 701?

A Yes.

Q Referring to what has been marked as Exhibit 6, would you identify and discuss that exhibit?

A Exhibit 6 is a tabulation of production history for the Lowe Federal Lease from 1942 to 1949. There were eleven producing wells which were plugged and abandoned sometime in 1949. In 1964, two wells were drilled on the Lowe Federal Lease, and in 1965 two additional wells have been drilled. The monthly production for 1965 is shown. The cumulative production for all of the oil produced from this lease amounts to 311,271 barrels. The daily production per well is approximately twenty barrels of oil per day. This producing rate is, we believe, due to some response from the Newmont flood to the east.

Q In other words, your present production in this particular area in your opinion is not primary production, is that right?

A Well, it's been stimulated by the neighboring waterflood.

Q In your opinion, then, is this area also at a substantial stage of depletion on primary recovery?

A Yes, sir, as attributed to, or exhibited by the eleven wells which were plugged and abandoned.

Q Now referring to what has been marked as Exhibit No. 7, will you identify that exhibit, please?

A This is a water analysis from the now Double Eagle Water Company, which was at that time Caprock Water Company, showing the analysis of their water.

Q And Exhibit No. 8, what is it?

A Exhibit 8 is an analysis of the Yucca Water Company's water. We have included both of these because we have not yet made a contract with either company, but it does show that we have water available for our injection purposes.

Q Is this fresh water, according to these two analyses?

A Yes, sir.

Q It's from the Ogalalla formation, is that right?

A Yes, sir.

Q And is that true as to both companies?

A Yes, sir.

Q And is the water available for the purposes of this injection program?

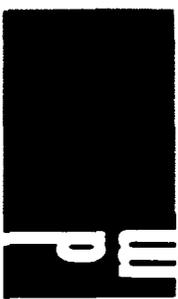
A Yes, sir, we have sufficient water.

Q What volume of water do you anticipate you will inject?

A We are anticipating we will inject in the neighborhood of 250 barrels per day per well to maybe 350 barrels per day per well.

Q How many injection wells will you have?

A Our project, we will use five -- or six injection



wells, excuse me.

Q What anticipated life do you expect this project to have?

A Somewhere from six to ten years.

Q In your opinion, will it result in the recovery of oil that would not otherwise be recovered?

A Yes, sir.

Q Would it prevent waste and will correlative rights be protected?

A Yes, sir.

Q Will the water injection be under pressure?

A Yes, sir.

Q What pressure would you anticipate?

A We anticipate that injection pressures will be in the neighborhood of 2,000 to 2200 pounds surface.

Q Will the casing be tested prior to the injection?

A Yes, sir. This will be 3,000 pound test casing we will be using.

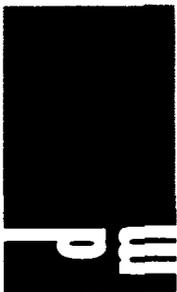
Q And it's all new casing, is that correct?

A All new casing, J-55, four and a half.

Q Were Exhibits 1 through 8 prepared by you or under your supervision?

A Yes, sir.

MR. KELLAHIN: At this time I would like to offer in



evidence Exhibits 1 through 8, inclusive.

MR. NUTTER: Applicant's Exhibits 1 through 8 will be admitted in evidence.

(Whereupon, Applicant's Exhibits Nos. 1 through 8, both inclusive, offered and admitted in evidence.)

MR. KELLAHIN: I have no further questions of the witness.

MR. NUTTER: Does anyone have any questions of Mr. Fickert?

MR. IRBY: I have one.

CROSS EXAMINATION

BY MR. IRBY:

Q Mr. Fickert, did you state in your testimony that any water which came in contact with the casing -- I don't find the size of it, four and a half inch, is that right?

A Yes, sir.

Q J-55. -- any water that comes in contact with that casing will be fresh water?

A If it's above the Premier zone it will.

Q Above the packer?

A Above the packer, yes, sir.

MR. IRBY: Thank you.

A And we will cement the four and a half inch casing above the Red Sand back to and above --

Q -- which is above the packer?

A Yes, sir.

MR. IRBY: That's all I have. Thank you.

BY MR. NUTTER:

Q Now, Mr. Fickert, the application, the advertisement of the case was for the injection of water through sixteen wells in Sections 25 and 36 of 16, 30; and Sections 31 and 32 of 16, 31. By the elimination of Newmont from the case, has this narrowed down to just this acreage that's colored yellow, and in addition the two water injection wells shown on Exhibit 2, being the Capitan No. 4 in Section 36 and the Western Oil Fields No. 15 in Section 1?

A Our Exhibit 2 indicates only the wells which will be adjacent to our property. Mr. Porter will testify to the other additional wells to be drilled to the south.

Q You are testifying only to the Ryder-Scott; this is just a portion of the flood then?

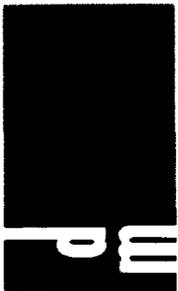
A Yes, sir.

Q I see.

A Those two wells on the Cima Capitan and the Western Oil Fields will give us the 160-acre pattern for lease line equity.

Q You are talking only about the yellow acreage?

A Yes, sir.



Q On the yellow acreage, you will have the No. 3 going from right to left across the top?

A Yes.

Q The No. 3, No. 7 and No. 8, and the 6 and the 5 and the other No. 5?

A Correct.

Q For water injection wells?

A Yes, sir.

Q And all of these are to be drilled, with the exception of the No. 3 which has been drilled?

A Yes, sir.

Q It is a 330 - 330 out of that quarter quarter section?

A Yes, approximately that.

Q Now this Exhibit No. 4, which is a diagram of proposed well completion for injection wells is for the wells that are to be drilled. Now how about the one that has been drilled?

A It is completed essentially this way. In other words, it is completed with a joint of 13-3/8ths to surface. We did not lose circulation by the time we hit the salt, so we reduced hole size and drilled to TD, set four and a half inch casing and cemented, and then, using one-inch tubing we cemented from the salt on back up behind the four and a half pipe.

Q You went in with a string of one-inch on the outside

of the pipe?

A Yes, sir.

Q And what's the base of the cement there, that upper portion of it?

A It would be approximately 450.

Q On up to the surface then?

A It's a 50-sack plug.

Q Now, the sketch is for a packer to be set above the upper Premier, but you indicated in all probability --

A That was part of our change, --

Q Yes.

A -- that we will have to make after talking to Mr. Irby, that's part of our change that we will be able to, if we have to separate the injection well, move the packer down to below the upper Premier and inject fresh water.

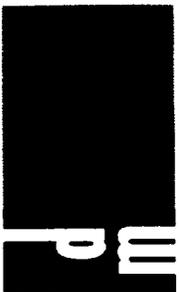
Q Through the annulus into the upper Premier?

A And fresh water or brine, as the time comes, produced water will be injected down the tubing into the lower Premier and the Lovington.

Q But in no event would produced water be injected down the casing?

A No, sir.

Q I see. Now, for allowable purposes, Mr. Fickert, I have to know which of these various forties these wells are in.



They're in the Northeast Quarter of Section 25, the Well No. 4 is there. What quarter quarter is it in?

A It's in the lower Southeast Quarter of that quarter.

Q And the No. 6 south of that would be where?

A On the Management Company lease.

Q On the Etz lease?

A On the Etz lease. The No. 5 would be in the same quarter as the No. 2.

Q It would be in the Southwest Quarter --

A Yes, sir.

Q -- of the --

A Southeast Quarter.

Q Of the Southeast Quarter?

A Yes, sir.

Q Now up here in the Northwest of Section 30, that No. 9, where is it?

A We have a problem here. This is a narrow section and it's approximately 304 feet short of being a full section, so that's why I haven't referred to distances from a section line, but the No. 9 will be drilled in a, I hope to have drilled in a quarter section that does not have a producing or an injection well on it. It would probably be in the Southeast 40 acres of that Northwest Quarter if we can --

Q How about the Little Well No. 2 there, isn't it a

producing well?

A I believe we mislocated it.

Q It's in the Southwest?

A We didn't drill it but I believe it's -- at the time we drill it up we'll make an application for the proper quarter for it to be in.

Q That No. 2 hasn't been drilled yet?

A It is drilled, and from the numbers that I have it should be in the -- it looks like it should be in the Southeast 40.

Q Yes.

A If it is, then the No. 9 would be in one or the other, either the Northwest or the Southwest 40. There's not quite 40 acres in those.

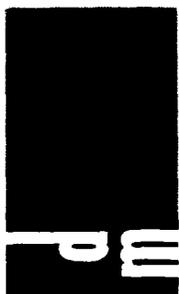
Q So you really don't know where that No. 9 is going to be yet; you'll have to measure the No. 2 first?

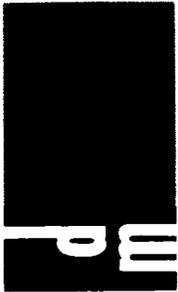
A I'll have to find out where it is.

Q Down on the Federal Lowe lease in the South Half of 30, where is that, do you know?

A I believe it is in the Northeast 40 of that Southwest Quarter. The No. 5 will be drilled in the Northwest 40, but any time that we have two wells in a 40, we'll expect to come under the rules of the allowable.

Q Do you expect to reactivate these eleven old wells that





have been plugged and abandoned?

A No, sir. As far as we know, they are properly plugged and will stay that way. We have researched the records in the United States Geological Survey and believe that they're all plugged properly.

Q So you'll only have four producing wells then, is that right?

A Yes, sir. The No. 2 by that time will probably be plugged. It's off pattern.

Q Oh, and to balance the flood over on the east side you are depending on the Newmont Federal Vickers No. 3 injection well?

A Yes, sir, we will have a line agreement with them.

Q It's slightly off pattern for your remaining wells, but it's close enough that you will rely on it?

A And it has had enough injection into it that it will balance up.

Q Mr. Fickert, when do you think that you will be able to let me know which quarter quarter section No. 2 is in, and which quarter quarter section No. 9 will be in?

A Probably tomorrow.

Q I would appreciate it because we'll need that in order to make that allowable determination for the transmittal letter.

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A All right.

MR. NUTTER: Are there any other questions of Mr. Fickert? He may be excused.

(Witness excused.)

HAROLD C. PORTER

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

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q Shall we proceed? State your name, please.

A Harold C. Porter.

Q What business are you engaged in?

A I am an Engineer for Cima Capitan, Inc. in Artesia.

Q Have you ever testified before the Oil Conservation Commission and made your qualifications a matter of record?

A Yes, sir.

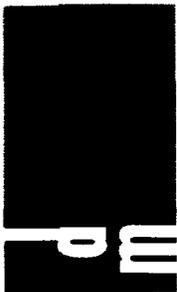
MR. KELLAHIN: Are the witness' qualifications acceptable?

MR. NUTTER: Yes, sir, they are.

(Whereupon, Applicant's Exhibits Nos. 9 through 18, both inclusive, marked for identification.)

MR. NUTTER: How long will this witness take, Mr. Kellahin?

MR. KELLAHIN: I imagine about twenty minutes.



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MR. NUTTER: We will recess for lunch. The hearing will resume at 1:15.

(Whereupon, the hearing was recessed until 1:15 o'clock P.M.)

AFTERNOON SESSION

(Whereupon, the hearing was resumed at 1:15 o'clock P.M.)

MR. NUTTER: The hearing will come to order. Would you proceed, Mr. Kellahin?

DIRECT EXAMINATION (Continued)

BY MR. KELLAHIN:

Q Would you state your name, please?

A Harold C. Porter.

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

A Cima Capitan, Inc. as a Petroleum Engineer.

Q Have you ever testified before the Commission and made your qualifications a matter of record?

A Yes.

MR. KELLAHIN: Are the witness' qualifications acceptable?

MR. NUTTER: They are.

Q (By Mr. Kellahin) Would you refer to what has been marked as Exhibit No. 9 and identify that exhibit and state what's shown on it?

A This is a plat showing the lease ownership and the location and proposed unorthodox location injection wells and producing wells.

Q Now this is in the same area that was testified to by the previous witness, is that correct?

A That is correct. You can see the wells that Mr. Fickert testified are in Sections 25 and 30, and I would like to point out the locations, proposed locations of the injection wells.

Q Just before we do that, would you state whether you are testifying in behalf of Cima Capitan Corporation and Western Oil Fields, Inc.?

A Yes, I am.

Q And Western Oil Fields is participating in this application, is this correct?

A That's correct.

Q Would you discuss the well locations of the injection wells?

A Yes, sir. The Capitan State No. 4 will be located ten feet from the North and ten feet from the East lines of Section 36, 16 South, 30 East. The Western Oil Fields Greer No. 15 will be located ten feet from the North and 2630 from the East of Section 31, 16 South, 31 East. Western Oil Fields Greer No. 16 will be located ten feet from the west and 2630

from the North of Section 31, 16 South, 31 East; and Western Oil Fields Greer No. 17 will be located ten feet from the South and 2630 from the East of that same section. The unorthodox-- let me get this other one injection well. Cima Capitan Inc. Greer No. 2 will be located 2630 from the South and 2650 from the East of Section 31, 16 South, 31 East.

The unorthodox producers, Cima Capitan State No. 5 will be located 1220 from the North and 1420 from the East of Section 36, 16 South, 30 East. Cima Capitan Greer No. 3 will be located 1330 from the South and 3950 from the East of Section 31, 16 South, 31 East. Western Oil Fields Greer No. 18 will be 1310 from the North and West of Section 31; Greer No. 19 will be 1310 from the North and East of Section 31; and Western Oil Fields Greer No. 20 will be 1330 from the South and East of Section 31.

MR. NUTTER: What well was that, the last one?

A Number 20.

MR. NUTTER: Oh, yes.

A Now these producers, Capitan No. 5, Capitan Greer No. 3, and Western Oil Fields Greer No. 20 will be drilled only if those 160 acres are unitized and become common ownership.

Q (By Mr. Kellahin) Are they common ownership at the present time?

A No, they're not. You can see that they're not on

the map.

Q Are there other wells completed in the zone which are producing at the present time?

A Yes, there are.

Q Will they continue on production during the course of this waterflood project?

A Our plans are to continue producing these wells and to take the oil out until they start cutting water pretty heavily, and then probably they will be plugged at that time and these unorthodox center locations drilled to drain that center area.

Q Does the Exhibit No. 9 also show some Newmont wells which are not presently involved in the waterflood project?

A Yes, it does. Newmont was originally an Applicant in this matter, and we have several wells here that you can see are the wells that they were going to apply for. Subsequent to the application they withdrew and said after they got certain technical legal matters straightened out they would re-apply for their wells at a separate hearing.

Q Will the withdrawal of Newmont in any way affect the operation of your waterflood project as a successful waterflood project?

A No, sir, it won't, except that they will be needed for backup, and negotiations will be continued and they will

apply for their wells later.

Q Are you at the present time attempting to negotiate a line agreement with them?

A Yes, we are.

Q Now referring to what has been marked as Exhibit No. 10, would you identify that exhibit, please?

A Number 10 is a tabulation of the production over the years from the four wells owned by Cima Capitan Inc., and Number 11, you may refer to it, too, is just the same thing on a graphic presentation.

As you can see, the production from these leases has declined. At the present time it is on the order of a barrel per well per day. It has been a primary decline and you might say that these wells have had a decline to the point that it would apply as a waterflood project rather than pressure maintenance.

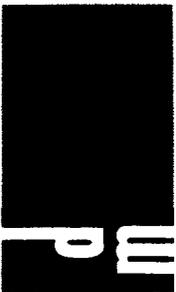
Q In other words, it is substantially depleted on primary production, is that correct?

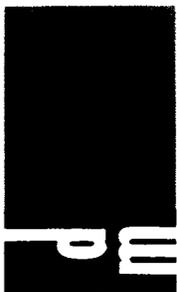
A That is correct.

Q And you are at a level of stripper production at the present time?

A That is correct.

Q And you say Exhibit 11 reflects the same information as shown on Exhibit 10, in graphic form, is that correct?





A That's right.

MR. IRBY: Which one is 11?

MR. KELLAHIN: That's the graph.

Q (By Mr. Kellahin) Now referring to what has been marked as Exhibits No. 12 and 13, would you identify those exhibits, please?

A Exhibits 12 and 13 are graphic and tabular presentations of the production history from the sixteen wells owned by Western Oil Fields. Their production has declined to the point where it's about the same on a per well basis as ours. They're making about one barrel per well per day.

Q It would be your testimony that this area is also substantially depleted on primary production?

A That is correct.

Q In referring to what has been marked as Exhibit No. 14 --

MR. IRBY: May I have the identification on which is 12 and 13, please?

A The one you have there is 12, Mr. Irby.

MR. IRBY: Which one? I have two.

A The one on your right; that's 13.

Q (By Mr. Kellahin) Now referring to what has been marked as Exhibit No. 14, that's the schematic diagram; would you identify that exhibit, please?

A This is a schematic diagram of a typical injector that we propose. The completion will be exactly the same as testified to by Mr. Fickert. We will drill large hole, set 13-inch one joint approximately 30 feet long, cemented at the surface, to drill 11-inch hole to the top of the salt which occurs at approximately 500 feet. Then if we don't lose circulation, we'll reduce hole size and drill to TD which will be approximately 3200 feet. We'll cement our 4-1/2 with sufficient cement to cover the Red Sand and perforate zones 5, 6, and 8, which are the Premier and Lovington zones. Then approximately 50 sacks of cement will be spotted at the top of the salt through one-inch tubing.

Our casing will be new J-55 4-1/2 casing which is mill tested to 3,000 pounds, and we propose to inject down the casing unless we have the problem of having to have selective injection due to the permeability variations. In any event, we will not inject other than fresh water down the casing or the annulus.

Q Your injection program then is substantially the same as that testified to by Mr. Fickert?

A That is correct.

Q Are all of your injection wells to be drilled, Mr. Porter?

A Yes, they will all be new wells.

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A Yes.

Q There are no old wells to be converted, is this correct?

A No.

Q Now referring to what has been marked as Exhibit No. 15, will you identify that exhibit?

A Exhibit 15 is a type log, it's a gamma ray neutron log of the productive sections. Zone 5 occurs about 3,040 feet, Zone 6 at about 3,080 feet, and the Lovington at 3220, thereabouts.

Q You heard Mr. Fickert's testimony as to the permeabilities of these zones. Are you in agreement with him on that testimony?

A Yes, I am. We have very little data, actually, as to permeabilities, but we've seen from offset operations by Newmont that the Zone 5 does have a relatively higher permeability than the rest of the zones.

Q Do you anticipate that you will have to selectively inject that zone?

A We think we will probably have to.

Q But you are going to attempt to inject down the casing first, is that right?

A Yes, and then we'll run a survey and see where the water is going and in what proportions, and determine if we are

getting a suitable profile.

Q Referring to what have been marked Number 16 and 17, would you identify those two exhibits, please?

A Number 16 is the presentation of Cima Capitan well data which shows the casing, the completion methods, and so forth.

Q Does that give a history of the well completion?

A Yes, it does. It shows the necessary statistics as to how the wells were completed.

Q Now are these the producing wells that will be utilized in connection with the waterflood project?

A Yes, they will be used.

Q Referring to what has been marked as Exhibit No. 18, would you identify that exhibit?

MR. IRBY: No testimony on 17?

MR. KELLAHIN: I am sorry.

A Number 17 is the same well data presentation for Western Oil Fields, Inc.

Q (By Mr. Kellahin) That covers the history of those wells and their completion information?

A Yes, sir.

Q And there again, those are the wells that will be used in the waterflood project for producing?

A That's correct.

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Q Now referring to what has been marked as Exhibit No. 18, would you identify that exhibit?

A Exhibit 18 is a letter from Double Eagle Corporation to Cima Capitan, saying they have water in the area for the flood. Also Yucca Water Company has a pipeline near here which they have called on the phone and offered to sell water. This is fresh water which comes from the Ogalalla formation.

Q That would be the same analyses as the two exhibits presented by Mr. Fickert, is this right?

A Yes.

Q For the Yucca Water Company and the Double Eagle?

A That's correct.

Q What volumes of water do you anticipate that you will inject in this project?

A We think that we'll probably be able to inject 300 or 350 barrels a day at approximately 2,000 pounds of pressure.

Q Will the casing be tested to 2,000 pounds, or in excess of that?

A Yes, sir, it will be tested to at least 3,000.

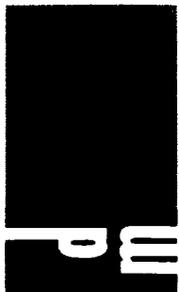
Q Now what disposition will be made of the produced water?

A The produced water will be reinjected. We have to buy the make-up water and it's fairly expensive. It's our plan to reinject the produced waters through a split system.

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The produced water will be injected, however, through tubing which will be either cement lined or plastic coated, and beneath a packer.

Q Were Exhibits 9 through 18 prepared by you or under your supervision?

A Yes, sir.

Q With the exception of Exhibit 18, which is a letter received by you?

A That is correct.

MR. KELLAHIN: At this time I offer in evidence Exhibits 9 through 18, inclusive.

MR. NUTTER: Exhibits 9 through 18 are admitted in evidence.

(Whereupon, Applicant's Exhibits Nos. 9 through 18, both inclusive, were offered and admitted in evidence.)

MR. KELLAHIN: That's all I have on direct examination from this witness. However, I do have two letters I would like to offer for the consideration of the Commission from the Newmont Oil Company and from Kennedy Oil Company, which approve the application for the waterflood project.

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

MR. IRBY: Yes.

MR. NUTTER: Mr. Irby.



CROSS EXAMINATION

BY MR. IRBY:

Q Mr. Porter, as testified by Mr. Fickert for the other participants in this matter, can you state that the only water which will contact the casing wall above the packer in your wells will be fresh water?

A Yes, sir, I can. I thought I did mention that. I will state that, yes, sir.

MR. IRBY: Thank you. That's all I have.

BY MR. NUTTER:

Q Mr. Porter, let me see if I've got the right forties for these various wells. First of all, your original application was for sixteen wells, and Newmont has withdrawn from this, and as I look at your Exhibit 9 it appears that five wells were on their property.

A Yes, sir, I believe that's what I count.

Q So we have a total of eleven wells, six of them were Ryder-Scott wells and you have five injection wells left on yours?

A Yes, sir.

Q So the hearing will be for a total of eleven injection wells?

A Yes, sir.

Q Now starting with your various injection wells, you

gave those footage descriptions, but I want to be sure I have got them right. The No. 4 appears in the extreme corner of Section 26; that is ten feet out of the corners?

A Yes, sir, I believe I have the circles drawn on the injectors in the correct 40.

Q And then the No. 15 is 2630 from the East and ten from the North; it's in the same 40 with Well No. 11, ten feet out of the corner?

A Yes.

Q Your No. 18 producer is 1310 from the North and West lines of the section?

A Yes.

Q In the same 40 as No. 1?

A That's right.

Q Your No. 19 is 1310 from the North and East lines of the section in the same quarter quarter as No. 9?

A That is correct.

Q Your No. 16 injector down here is ten from the West and 2630 from the North?

A Yes.

Q Your No. 20 is in the same 40 as the Greer 1 and would be 2630 from the South and West?

A You are referring to the Capitan No. 2?

Q Oh, yes, it's the 2, not the 20.

A Yes, it's in the same 40 with Capitan No. 1.

Q And then the last well -- oh, then you have a No. 3 down here on your Greer Lease?

A Yes.

Q And what's the distance there, it would be 1330 from the --

A 1330 from the South and 3950 from the East. The reason I measured from the East is that this is a correction section.

Q Because the section is short?

A But it will be in the same 40 acres as Capitan No. 1.

Q So it's 1330 from the South and 3950 from the East?

A Yes.

Q And then the No. 17 is ten from the South and 2630 from the East?

A Yes.

Q And the No. 20 unorthodox producer would be 1310 from the South and 1330 from the East?

A I have it as 1330 from the South and East.

Q Well, it would be in the same quarter quarter with the No. 6?

A Yes, sir. I might point out that the Capitan Kelly No. 1 is a producer which is presently an unorthodox location.

Q Let me see, where is that one?

A In Section 36.

Q Oh, yes.

A That's approved ten feet out of the corner of that 40-acre tract in 19--I believe it was 1949. Anyway, it was, and the only reason we might possibly want to drill that No. 5 is that this is an open hole type completion. If we have any pipe problem, we might want to replace it with a new well.

Q Which 40 would the No. 5 be in?

A The same 40 with Kelly State No. 2.

Q So it would be 1330 from the East and 1310 from the North, probably?

A No, sir. I got that moved a little farther to stay at least 100 feet from the old well in case we want to drill. I have it located 1220 from the North and 1420 from the East.

Q 1220 and 1420. Well, now, did you state -- now you are going to go ahead and drill the 18 and the 19, but the No. 3 and the No. 20 down here won't be drilled unless it's unitized?

A 3, 5, and 20 will be unitized before it is drilled because it's too close to the lease line otherwise.

Q 3, 5, and 20?

A Yes.

Q But the 18 and 19 will be drilled, since they are in the center of your lease?

A These others will, too, as soon as we get the unitization.

Q Will any of these wells indicated as being abandoned be reactivated?

A I rather doubt it.

Q So for instance, there in the case of the Northeast Northeast of 31, we would have one well there for allowable purposes, being the No. 19?

A Yes.

Q Now in the event that the selective injection is necessary, you would equip your well in the same manner that Mr. Fickert was speaking of this morning where you would set a packer between the upper and the lower zone of the Premier?

A Yes, sir.

Q And go down the casing into the upper zone and then down the tubing into the other two zones, the Lovington and the lower Premier?

A Yes, sir, that's correct.

Q Now, Mr. Porter, has any estimate been made of the secondary recovery for this project, over-all?

A I made an estimate from reviewing the flood east of us, and I would estimate that we will recover on the order of one and a quarter times primary production. The primary production has been over a half a million barrels for Western

Oil Fields, and slightly over 200,000 barrels for Cima Capitan.

Q And that one and a quarter would probably be applicable to the Ryder property too?

A Yes, I think it would be applicable. It would be on that order, somewhere between there and two times, at least.

MR. NUTTER: Are there any other questions of Mr. Porter? He may be excused.

(Witness excused.)

MR. NUTTER: Do you have anything further, Mr. Kellahin?

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

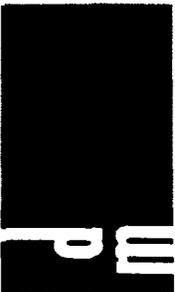
MR. NUTTER: Does anyone have anything they wish to offer in Case 3310?

MR. WHITE: With the permission of the Examiner, I would like to make a closing statement.

MR. NUTTER: Yes, sir. Would you identify yourself?

MR. WHITE: My name is Paul White, Division Engineer with Western Oil Fields, Inc., Hobbs, New Mexico. I have testified before, before the Examiner; and for the protection of correlative rights in this area I want, on behalf of Western Oil Fields, Inc., to assure the Oil Conservation Commission that we will give our full support to Ryder-Scott and Cima Capitan in their request for the approval of this project.

Both for the conservation and efficient recovery of

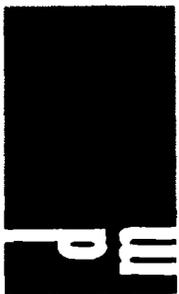




I N D E X

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MR. UTZ: Case 3310.

MR. DURRETT: Application of Cima Capitan, Inc.,  
Ryder-Scott Management Company, and Stallworth Oil and Gas  
Company for a waterflood project, Eddy County, New Mexico.

If the Examiner please, I would like to state for  
the record that there was also an error in advertising this  
case; that it was heard on September 22, 1965, continued to  
this docket for the purpose of readvertising the case. It  
has been properly advertised and we would ask the Examiner to  
incorporate the record of the September 22nd hearing and take  
the case under advisement if there is no objection.

MR. UTZ: The September 22nd record will be  
incorporated in the record today. Are there any other  
appearances or comments regarding this case? If there are  
none, the case will be taken under advisement.

\* \* \* \*

