

BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

IN THE MATTER OF:

CASE 1744

TRANSCRIPT OF HEARING

AUGUST 19, 1959

BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

IN THE MATTER OF:

CASE 1744 Application of Cities Service Oil Company for :
approval of a unit agreement. Applicant, in :
the above-styled cause, seeks an order approv- :
ing its Drickey Queen Sand Unit embracing 5242 :
acres, more or less, of Federal, State and fee :
lands in Townships 13 and 14 South, Range 31 :
East, Caprock-Queen Pool, Lea and Chaves Coun- :
ties, New Mexico. :

BEFORE:

Daniel S. Nutter, Examiner.

T R A N S C R I P T O F P R O C E E D I N G S

MR. NUTTER: Take next Case 1744.

MR. PAYNE: Case 1744. Application of Cities Service
Oil Company for approval of a unit agreement.

MR. KELLAHIN: Jason Kellahin of Kellahin & Fox, Santa
Fe, New Mexico, representing the applicant. We will have two wit-
nesses, Mr. Funk and Mr. Douglass.

(Witnesses sworn)

MR. KELLAHIN: If the Commission please, in this case
the applicant is seeking approval of the New Mexico Oil Conserva-
tion Commission for a unitization of a portion of the Caprock-
Queen Pool. Approval of the Oil Conservation Commission is, as

the Commission well knows, established by law, and we will present two witnesses to discuss the unit agreement with you.

I would like to call as the first witness Mr. E. E. Funk.

E. E. FUNK,

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

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q Would you state your name and position, please?

A E. E. Funk, chief secondary recovery engineer, Cities Service Oil Company, Bartlesville, Oklahoma.

Q Mr. Funk, have you testified before this Commission before as an engineer and had your qualifications accepted?

A Yes, sir, I have.

MR. KELLAHIN: Are the witness' qualifications acceptable?

MR. NUTTER: Yes, sir. Please proceed.

Q Are you familiar with the application that is before the Commission in this case?

A Yes, sir.

Q Are you familiar with the proposed unitized project?

A Yes, I am.

Q Would you please hand out at this time the Exhibits to be used in this case?

A I have these things grouped here, and they are going

4
over there for them to use, and one here which I presume will be the record set.

Q Have the Exhibits been marked on those, Mr. Funk?

A No, they haven't.

MR. NUTTER: As we go, I will mark them here, Mr. Kellahin.

(Thereupon, Applicant's Exhibit No. 1 was marked for identification.)

Q Referring, then, to what will be marked as Exhibit No. 1, would you please discuss that Exhibit?

A This is a map of a large portion of the Caprock-Queen Field, which is in both Lea and Chaves Counties, New Mexico. This is presented to show the position of the proposed Drickey Unit in reference to other operations within the Caprock Field. To the north part of this map you see outlined in red a portion of what is a unitized operation operated by the Graridge Corporation where they have water flooding operations in effect now. To the west of that, outlined in blue, is a similar unit operated by Ambassador Oil Corporation. To the south of that, outlined in orange, is what really should be two units. The first one mile of that area immediately south of Ambassador and Graridge Units is called the North Central Caprock Unit operated by Great Western. That Unit also is in effect for water flood. The remainder of the area outlined in yellow is the proposed rock unit also to be operated by Great Western. That Unit is still in the

organizing stage. Adjoining that on the south, outlined in yellow, is the Drickey Queen Sand Unit proposed, which is the subject of our hearing. Adjoining that, to the south, shows a portion of a Unit being formed by the operator headed up by Union Oil Company. You'll also notice to the southwest of the Drickey Unit and the northwest of this proposed Union Oil Company's Unit an area that isn't included. That area was left out because at this time there is too little information to establish that the field is completely defined, and we weren't able to come up with the data needed for participation. Now, while that area apparently has no one's efforts going at the present time, in one of our meetings a representative of Phillips Petroleum, who has been an operator in that area, stated that when the time came that the area was fully defined -- the productive limits were fully defined, that they would take the lead in forming a unit, if it was necessary to get water flooding going. It is entirely possible that that area will be subsequently added to either the Drickey Unit or the unit operated by, or to be operated by Union.

Q Now, Mr. Funk, do you know whether these other units you have discussed have been approved by this Commission, with the exception of the proposed Union Oil Company Unit?

A Well, I don't know definitely, but I think the procedure requires them to be approved, so they must have been.

Q Does the map indicate to you that it is the intention of the operators to continue the organization of these water flood

projects on a unitized basis?

A Very definitely so. I think it shows that within a matter of another two years the entire Caprock Field will be organized into unit groups entirely, and all for water flooding.

Q In your opinion, is that a necessary step in an effective water flood project?

A It certainly is.

(Thereupon, Applicant's Exhibit No. 2 was marked for identification.)

Q Referring to Exhibit No. 2, would you discuss that Exhibit, please?

A This map is not quite so bulky. This is a map of the proposed Drickey Queen Sand Unit. The hashed lines show the outline of the Unit area as covered by the unit agreement. The shaded area covers tracts which have not qualified and will not be included in the Unit if it goes into effect in the very near future.

Q For what reason are they not included?

A Well, I have a number of items, of Exhibits that we can introduce here in regard to each one. I might say that their reasons are --

Q Well, just summarize. Have they signed the unit agreement?

A No, they have not signed the unit agreement, that's true. That's the reason they are not included right now.

Q Is there any possibility that these tracts, which are not included, may come into the agreement?

A The unit agreement permits them to come in later. If any of them should be signed up between now and the time the Unit goes into effect, why we would, of course, seek the necessary approval of this Commission and the State Land Commission and the Federal Government for their inclusion at the time the Unit goes into effect. Now, furthermore, if any of the tracts qualify by reason of the parties having signed within the first six months, they may be included on the same basis as is outlined in the unit agreement, of course, again, subject to approval by the three agencies which I just mentioned. After six months from the effective date, they still may be included on a negotiated basis, which in turn, has to have the approval of the governmental agencies involved.

Q Now, in your position, you have worked with representatives of the working interest owners, have you not?

A Yes, sir, I have.

Q Have you become acquainted with the reasons of certain working interest owners for refusing to execute the working interest agreement?

A Yes, sir.

Q Would you review briefly the situations involved and explain the probable future relationship between the non-qualifying tracts and the qualifying tracts in the Unit?

6

A Well, I will, in the course of doing so, present certain items of information here which can be considered Exhibits. First of all, Tracts Nos. 4 and 5 are involved. They are operations of John Trigg. John Trigg has, by these two Tracts, the adjacent area that is not being committed to the Unit. In place of participating in the Unit, Mr. Trigg felt that he had a sufficiently large block to operate on his own, and he just desired to remain as his own operator. Now, I'll agree that that Tract, or his two Tracts, are large enough for that sort of arrangement.

Q You do agree with that?

A Yes, sir.

Q Now, have you worked out any cooperative agreement with Mr. Trigg in regard to the water flood project?

A Yes, sir, we have a line well agreement executed by Cities Service Oil Company and John Trigg which I'll present here as the next Exhibit.

Q That will be Exhibit No. 3?

A Yes. This agreement is in two parts. Part 1 calls for conversion of certain line wells to input by Trigg and by Cities Service regardless of whether this Drickey Unit goes into effect or not. That is because Trigg's Tract No. 5 -- that's the Unit tract number, and the Cities Service Tract No. 6 have a common boundary of one and a half miles. Part No. 2 calls for ad-

ditional line input wells to be converted on the part of John Trigg and the Cities Service operated Drickey Unit if the Drickey Unit is in effect. Now, this line agreement specifies dates for wells to be converted to input. That is an anticipated rate of development which, of course, is subject to the superseding control of the New Mexico Oil Conservation Commission, the State Land Commission, and the Federal Government.

Q Now, does the input pattern called for in the Trigg line agreement conform to the prevailing pattern in the Unit?

A Yes, what I call an eighty-acre five spot plan, was first used by the Graridge project in the extreme north end of the field, and it has been followed by all the water floods that have been started in the Caprock Field. The Trigg line agreement is in complete conformity with the ultimate extension of that established pattern.

Q Why do you find it necessary to have two parts to the Trigg line agreement?

A Both Cities Service and Trigg have already obtained water flood permits on their adjoining leases, that is, the Tracts No. 5 and 6, by the unit agreement. A pilot water flood has been in effect on the Cities Service lease for about fourteen months. It needs to be backed up by additional input wells right away. This agreement permits such backup even though there might be a delay in getting the unit into effect.

Q Now, would you please continue with your discussion as

to the other non-qualifying tracts involved in the unit?

A Gulf Oil Corporation executed the unit agreement insofar as it concerned all of their tracts except tract No. 44. They felt that this tract would receive a little better participation if it would be included in Great Western's proposed rock unit rather than in the Drickey Unit. Since they had the say so on the matter, we had to allow them to go ahead in that fashion. We did ask them to execute a line agreement on input wells which would assure us that the Drickey Unit would be adequately protected. We drew up a line agreement and submitted it to them, which I have a copy of here. Now, this line agreement --

Q That will be Exhibit No. 4?

A Yes. This line agreement was not signed. Now, they replied that they were in sympathy with the program and the time for the input wells, and felt that they could not commit, or could not actually sign such an agreement since they would be committing the as yet unformed rock unit where they hoped to have this tract included. They did give us a letter to that effect, of which I have a copy, which we can present as an Exhibit. I believe that will be Exhibit No. 5.

Q Now, how about Texas Pacific Coal & Oil Company?

A Well, Texas Pacific acted in a fashion similar to Gulf. They executed the agreement for several tracts, but withheld Tract No. 37, which is also on the north immediately adjacent to the proposed Rock Unit. Now, this line well agreement which we

presented as a suggested agreement, and was not signed, was to be signed by Gulf and Texas Pacific both. They also declined to cinch an agreement for similar reasons. They did give us a letter which we have duplicated here and can present here as an Exhibit, or will present as an Exhibit, in which they also state their willingness to cooperate and their sympathy with the overall program, but their unwillingness to commit to a firm line well agreement at this time.

Q Now, how about the tracts held in the name of Ambassador?

A Well, Ambassador acquired Tracts No. 26 and No. 28 in June of 1959. As such, they didn't attend the several operators' meetings that we held in 1958 at which time the Drickey Unit participation was developed. The action of Gulf and Texas Pacific in regard to their Tracts 44 and 37 effectively isolates Tract No. 26 from the rest of the proposed Drickey Unit, and makes it necessary that Ambassador seek inclusion of Tract No. 26 in the Rock Unit. In regard to Tract No. 28, Ambassador feels that they are entitled to a greater percent in the Drickey Unit than was allowed by the participation formula.

Now, I agree with Ambassador's contention that the performance of Tract 28 since July of 1958 makes it appear that this tract should have a little higher unit participation. July 23, '58 was the date of the information from which we established the participation formula. Now, since we obviously could not

change the interpretative data that we need in the participation formula just to satisfy Ambassador, and particularly since many other operators interest holders had already signed the unit agreement, Ambassador decided to stay out at this time. But they will seek inclusion of Tract No. 28 in the Drickey agreement, or in the Drickey unit, on a negotiated basis, which means that they must await the passage of six months after the effective date. They have written us a letter to that effect, which we can present as Exhibit No. 8. I might say that Tract No. 28 is a one well tract, and by the pattern for water injection over the Caprock Field, it is a necessity that it come into the unit to be water flooded and to permit water flood in the immediate vicinity.

Q Will that be effected immediately by the operation of the unit?

A No, I would guess that it would be at least a year, perhaps a little longer before that tract will cause any problem to the unit.

Q Then, their decision to wait six months and negotiate their participation with the unit will not interfere with the operation of the unit at this time, is that correct?

A That is correct.

Q What is the situation as to the O'Neill Tract No. 46?

A Oh, you've got me a little bit out of order here. Tract 46 is much the same situation as Ambassador. They feel that they did not get the participation that they were entitled

to, but they would like to seek inclusion six months after the unit goes into effect, or after six months from the date the unit goes into effect, and that will be on a negotiated basis.

Q Do you have a letter from them to that effect?

A Yes, we do. I can present that as the next Exhibit.

Let's see, --

MR. NUTTER: That will be No. 8, I believe.

A Yes.

Q What is the situation as to Tracts Nos. 35 and 39, as to participation?

A Those two tracts are one well tracts very close to the Ambassador Tract No. 28. In this case, these two cases, we received letters from the operators, which we can present as the next two Exhibits.

Q Exhibits 9 and 10?

A Yes.

MR. NUTTER: Would the letter, Shelton Warren be Exhibit 9?

A Yes. And Exhibit 10 would be for Tract 39.

Q That's a letter from Wheley Company?

A W-h-e-l-e-y Company, yes. These two operators declined to join the unit and have not indicated any desire to negotiate later on, but we hope that we can -- well, let me take that back -- they have indicated some desire to negotiate later on. We hope that we can work that out, but really we don't have

any basis for that hope other than just the fact that they need to be in a unit in order to permit water flood in that area.

MR. NUTTER: Those particular tracts don't happen to be on the pattern for injection wells, do they?

A They both happen to be on the pattern for producing wells. It is fortunate, though, that Tracts 35 and 39 are a sufficient distance from the pilot water flood to allow us at least a year before it will be necessary to reach some solution as to this problem.

Q Now, we have another tract, Tract No. 43, I believe, which is --

A Yes, that tract is a little bit different. We have another Exhibit concerning that, which we have duplicated, and I'm sorry it is not too readable, that was just received. Morris Atwell wants this tract included, but he had to postpone action because of a pending agreement between Atwell and the owner of a large overriding royalty on this tract, as well as a number of other properties which Atwell operates. He expects to get that negotiation worked out within this six months so that he can then sign the agreement and come into the unit.

Now, I believe that covers all except two 40-acre tracts which are described as the NE of the NE and the SE of the SE in Section 11, Township 14 South, Range 31 East. These tracts were erroneously included in Tract No. 11. It was the general agreed on plan in our negotiations at operators and engineering committee

meetings to include around the perimeter of this unit what we call a buffer area, which would include all adjacent available 40-acre tracts; that was the reason these were put in. But these 40-acre tracts must exist under common ownership as part of producing leases. Since we belatedly found out that these two 40 acres that I've just described were not held by the working interest owners in Tract 11, we have interpreted our unit agreement as authorizing their exclusion.

Q Do you have a stipulation with the owner of Tract 11 on that?

A Yes, we have a tentative stipulation. I have one copy of it in front of me. It has not been signed, so I will not introduce it as an Exhibit. We had anticipated on their verbal statement that we would have the signed copies available so they could be introduced. This stipulation is their acceptance of the fact that those two 40-acre pieces of land were erroneously included as under their ownership.

Q What is the basis of participation in the Drickey Unit?

A The participation is in two parts. The first part is remaining primary, and the second part is secondary participation. The remaining primary was arrived at after several meetings in a general engineering committee meeting that was held on November 18, 1958. This committee used performance data which at that time was available only to July 1st, '58. We used this performance data as a basis for estimating the ultimate primary

recovery for each tract in the proposed unit. From each tract accumulated production to July 1st, 1958, we subtracted -- I mean -- I'll state that again -- we subtracted each tract accumulated production as of July 1st, 1958 to yield a remaining primary figure for each tract. Now, then, this remaining primary figure in reference to the summarization of all the tracts remaining primary constitute the percent participation in remaining primary production. The secondary participation formula was also worked out by these similar engineering committee meetings, and we decided on four factors. Now, these four factors do not have equal weight. One factor is the estimated ultimate primary recovery which I just described, and that is given forty percent weight. The second factor is accumulated production to July 1st, 1958. That also was given forty percent weight. The number of acres in each tract is given ten percent weight, and the number of wells is given ten percent weight. We have an Exhibit which I don't know the number that it will have.

Q That will be No. 12.

MR. NUTTER: Is this the tabulation labeled "Revised Exhibit B?"

A That is correct.

MR. NUTTER: I will mark that as Exhibit No. 12.

A All right. This Exhibit is a scheduled participation for the tracts which now qualify for inclusion in the unit, and this will be the division by the tracts on the effective date.

Q Mr. Funk, do you feel that this is a fair and equitable division of the production in the unit?

A Yes, sir.

Q What is your plan of water flood development for the Drickey Unit?

A We have another Exhibit on that, which is a map.

MR. NUTTER: That will be Exhibit No. 13.

A Exhibit 13 is a map that shows by the encircled dots the wells which will ultimately become water input wells. We have shaded in there the area that includes the Cities Service pilot flood where four wells are now injecting water plus eleven proposed injection wells which are proposed for conversion as the initial unit development program. I might also say that two of these wells, Wells No. 17 and 21 on the Cities Service Government "B" Lease or Tract No. 6 are in the line well agreement with John Trigg. By this agreement, they are to be converted by the 1st of September, subject to approval by this Commission. In cooperation with that, John Trigg has two wells, Nos. 7 and 35, I believe it is -- no, it is 5 -- No. 7 and No. 5, which will also be converted at the same time.

Q What rate do you expect to expand this unitized water flood program?

A We hope to encourage production rates in the unit by adding input wells at a rate slow enough to maintain the project's production within the state's per well unit allowable times the

number of wells participating in the Drickey Unit. That means that if we assume a state per well allowable of 33 barrels per day times the 111 wells that are in the area now qualifying, we would come up with 3663 barrels per day. We do not expect to exceed that as a peak rate. Now, by controlling our development rate, that is, the rate at which we add input wells, we expect to produce this unit area at or near that peak rate for about four years. In controlling our development rate, we will spread that development out over a period of about five years.

MR. NUTTER: You mean you'll be adding new wells for a five-year period?

A For a long time.

Q Now, I'm aware of the fact, Mr. Funk, that the information was presented at a previous hearing, but could you state briefly your sources of water and your expected water input rates?

A Cities Service has permission to appropriate water from a five-section area southeast of the Drickey Unit. We have two water supply wells down there operating at this time. We expect the Drickey Unit to use these facilities. We started water input into the pilot area at a rate of about 400 barrels per well per day. This is a rate that was used by Granridge and Ambassador on the start of their floods to the north. The production response to this rate exceeded our expectations, and we reduced our input rate to about 250 barrels per well per day in an effort to stay

within the allowable that we had and still operated the stimulated wells at capacity. Now, this is about as slow a rate of input as we dared risk, and even at this rate it became necessary to seek allowable relief which we did in June, and now have an order to that effect.

Q Do you still think it is safe to hold the input rate to about 250 barrels per day per well?

A Yes. Based on the performance that we have seen so far, I believe it is safe to hold the input rate at about 250 barrels per well per day for the present, that is, until we have some experience that shows undesirable results. Now, we have not experienced water breakthrough. It may be after water breaks through to the producing wells that we -- it will look different and we will want to use a different rate of input.

Q Now, in your opinion, as an engineer, Mr. Funk, is the proposed unit an efficient, economical means of operating this unit?

A Well, the proposed unit --

Q Does the unit agreement provide for an efficient and economical means of operating the unit?

A Yes, sir, I think it is the best method that could be used in this situation.

Q Bearing in mind the tracts which you have discussed as being excluded, in your opinion, does the unit agreement and the operations under it protect correlative rights?

A Yes, sir.

Q And is in the interest of conservation and the prevention of waste?

A Very much so.

Q Were Exhibits 1 through 13 prepared by you or under your direction and supervision?

A Yes, they were.

MR. KELLAHIN: At this time we would like to offer in evidence Exhibits 1 through 13.

MR. NUTTER: Cities Service Exhibits 1 through 13 will be admitted.

(Thereupon, Cities Service Exhibits 1 through 13 were received in evidence.)

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

CROSS EXAMINATION

BY MR. NUTTER:

Q Mr. Funk, did I understand you correctly to say that Gulf didn't sign the agreement that you have submitted to them because they felt that this C. A. Browning lease of theirs would be more properly be in the Rock Unit to the north?

A They felt that their participation basis was not quite all they were entitled to, and also in negotiations with the operators in the proposed Rock Unit they feel that they are getting a better break.

Q Do they intend to put tract No. 44 in the Rock Unit?

A Yes.

QUESTIONS BY MR. PAYNE:

Q Mr. Funk, can you have acreage in two different units?

A Well, it will have to be in one unit or the other, it can't be in both. Right now it does not qualify. I presume you are referring to the Gulf tract?

Q That's right.

A It does not qualify for inclusion in the Drickey Unit.

Q However, it is included, but not participating?

A It is included in the outline of Drickey Unit area.

Q Could you also include it in the outline of Rock Unit?

MR. KELLAHIN: If the Commission please, I think the question poses a legal question as to whether acreage which is shown on the plat is in the unit or not when they have not yet signed the unit agreement and have indicated their intention not to sign the unit agreement.

Q (By Mr. Payne) Let me ask you this, Mr. Funk. What is the purpose of clearing acreage on the edge of a proposed unit which does not participate? The unit agreement itself provides for expansion, does it not?

A Yes, it does. Now, I might ask you a question to get a little clarification, what you mean by your question. To the east and to the west of the unit area, as outlined, oh, I believe it was our second Exhibit, we do not have production, with

a few exceptions; mainly the productive limits of the field. We have included this buffer area on those two sides.

Q Well, let's take the Trigg acreage now. He doesn't intend to participate, is that right? He intends to run his own water flood?

A That is correct.

Q What is the purpose of including his acreage within the outline of the unit?

A Well, in the course of obtaining the approval of a unit by the various owners, you have to make assumptions. There are, oh, I think forty or fifty working interest owners in this area. At the time we outlined the unit area, Mr. Trigg was undecided as to whether he wanted to come in or not. Since it was all Federal acreage, that is, they were Federal leases, the U.S. G. S. people encouraged us to include it in the unit area even though they knew that he was not at that time willing to commit. Their idea was, well, in case he does, why the mechanics is here to allow it to come in.

MR. NUTTER: Well, you've got mechanics for the expansion of the unit, haven't you, or does this unit agreement not provide that?

A There is provision for expansion to include the tracts which don't qualify at the time the unit goes into effect, and also there is a clause, I think, for expansion outside the unit area originally outlined. Now, as to the details of this unit

agreement, Mr. Douglass is to follow me here on the witness stand, and perhaps he can answer those questions a little better.

Q (By Mr. Payne) Let me ask you this, Mr. Funk, and if you don't feel qualified to answer it, Mr. Kellahin can answer it. If we include, for example, the Gulf acreage to the north in this unit and in the unit outline, wouldn't that preclude the Commission from subsequently including this acreage in the Rock Unit operated by Great Western?

A I believe that's a legal question.

MR. PAYNE: All I want is an answer, I don't particularly care who from.

MR. KELLAHIN: Just a moment. If the Commission please, in the application, the Gulf acreage was not included in the application, and neither was the Trigg acreage included in the application. Although the Exhibit indicates it was in there and it was included in the original unit agreement, it has not been signed and it was not included in the application of approval.

QUESTIONS BY MR. NUTTER:

Q In the order that this Commission enters, if it does enter one approving the unit agreement and the unit area, would you define the acreage that Cities Service is requesting as being included in the unit area?

MR. KELLAHIN: Included in the application.

Q The acreage in the application?

A Yes, sir.

Q Is the Ambassador Tract No. 26 included in the application?

MR. KELLAHIN: No, it is not.

Q Is the Texas Pacific Coal & Oil Tract No. 37 included in the application?

MR. KELLAHIN: No, sir. The S/2 of Section 35 is included in the application.

MR. PAYNE: We should go by your application rather than your Exhibit?

MR. KELLAHIN: Yes, sir.

Q (By Mr. Nutter) Mr. Funk, you've covered this material pretty thoroughly. I don't think I have any further questions to ask you on this. However, I might -- so I think we will take a noon recess and recall Mr. Funk at one-thirty to the stand.

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

MR. NUTTER: The hearing will come to order, please. Does anyone have any questions of Mr. Funk?

QUESTIONS BY MR. NUTTER:

Q Mr. Funk, are you acquainted with the order that authorized Cities Service to initiate a pilot water flood project in this area?

A Yes, sir.

Q Does that order provide for expansion of the water flood and addition of extra wells for injection?

A I don't remember the exact working, but it provides

for expansion on administrative approval, and it refers to it as a project rather than a specific lease.

Q It does provide, doesn't it, that if a well is -- has received response from the water flood or is offsetting a well that has received a response from the water flood, then that well can be converted to injection?

A That is correct.

Q Now, what I was wondering about, you mentioned that these two wells, your No. 21 and 17, were to be put on water injection by September the 1st, subject to approval of the Oil Conservation Commission. I was wondering if those two wells are offsetting wells which have received a response from the water flood?

A I might quote here from a letter to the Commission asking for administrative approval on those two wells, and --

Q You already have filed for administrative approval?

A We have filed for them.

Q Have you received that approval yet?

A I don't think so.

MR. KELLAHIN: I think it was just filed, but all the information is contained in the application, as I understand.

Q Now, I was wondering also, if you put these two wells on water injection and Trigg hasn't put his two wells, being his No. 7 and 5, on water injection, that's liable to create inequities, isn't it?

A It certainly will.

Q Do you know if Mr. Trigg has filed for conversion of his Nos. 7 and 5?

A No, I don't know specifically. I might see if any of the others know. I know he has on order.

MR. PAYNE: You have a line agreement with Mr. Trigg anyway, don't you?

A We have a line agreement that says September 1st.

Q (By Mr. Nutter) In any event, even if it weren't September the 1st, when the wells were converted, you would not put your wells on water injection until such time as he were ready to put his on also?

A That is correct. We would work together. Coming back to your earlier question, this application for administrative approval states that both No. 17 and 21 have received stimulation from the pilot water flood.

Q How many wells are you currently using as injection wells?

A Four.

Q That's your No. 10, 14, 6 and 5?

A I'll have to refer to the map here, just a moment. That's correct; 10, 14, 6 and 5.

Q Now, in effect, when we were discussing this before the recess, the N/2 of Section 34 and the N/2 of Section 35 are both outside of the unit area, is that correct?

A As stated in our application, that's true.

Q In effect, then, are you amending your Exhibits to show -- I mean your testimony, as such, to be the same as amending these Exhibits to exclude that acreage from the unit area?

A We are filing with our instruments revisions of the Exhibits A and B, --

Q I see.

A -- which will outline the unit area as reduced, and that will eliminate those two half sections you referred to.

Q And also all of Section 4 which belongs to John Trigg, and Section 9 will be eliminated from the unit area?

A That's right.

MR. WUTTER: I believe that's all. Does anyone have any further questions? Mr. Funk may be excused.

(Witness excused)

MR. KELLAHIN: I would like to call as our next witness Mr. Douglass.

M. S. DOUGLASS,

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

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q Will you state your name, please?

A M. S. Douglass.

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

A Cities Service Oil Company, Bartlesville, Oklahoma. I'm supervisor of the secondary recovery unitization section of the Land Department.

Q How long have you been in that section in the Land Department, Mr. Douglass?

A Well, may I answer it this way, please? I have been in the Land Department about thirty-three years. We have only had this section possibly ten or twelve years, and I've been in it all that period of time.

Q Have you worked for Cities Service during that period of time?

A Yes, sir.

Q All of the time?

A I have, sir.

Q Prior to that, what was your education, Mr. Douglass, and experience?

A Well, it was in the field of Business, and I came from college directly to work for Cities Service in the Land Department.

Q Subsequent to that time, all of your work has been in the Land Department?

A Right, sir.

Q And in that work, are you familiar with the negotiations for unit agreements, and the drawing up of unit agreements, and obtaining signatures thereof?

A I am, sir.

Q In connection with your work, did you have anything to do with the Drickey agreement --

A Yes, sir.

Q -- and with the unit operating agreement?

A Yes. Directly with the unit agreement, indirectly with the operating agreement.

Q Now, has the unit agreement been signed by all of the working interest owners as indicated in Mr. Funk's testimony, aside from those units -- those areas which were depleted?

A They have been.

Q How about the royalty owners?

A With the exception, of course, of the Federal Government and the State of New Mexico, both of them.

Q Has the formal agreement been submitted to the United States Geological Survey, Department of Interior, and the State Land Commissioner?

A It has.

Q Has it received approval as to the form?

A Yes, sir.

Q And will an executed copy be submitted upon completion of this agreement?

A Yes, sir.

Q Are you willing to file with the Commission a copy of the unit agreement executed, if it is requested?

A Yes, sir.

MR. KELLAHIN: At this time, if the Commission please, we would like to, in lieu of filing a completely executed copy of the unit agreement, file with the Commission photostatic copies of the signature pages to be attached to the formal agreement, which has heretofore been filed with the Commission.

MR. NUTTER: This is a copy of the unit agreement that has been executed, is that correct? That will be satisfactory.

Q (By Mr. Kellahin) Is -- the Exhibit attached to the application, is that the same as the final draft of the unit agreement as executed, Mr. Douglass?

A The Exhibit as contained in this executed agreement is the original Exhibit of the proposed unit area, --

Q Yes, sir.

A -- and that was to be reduced by the filing of a revised Exhibit, both as to A and B, which would be the plat of the area and also the tracts participating.

Q Well, that information is covered, insofar as the plat is concerned, by our Exhibit 2 introduced today, is it not?

A Correct.

Q At the time you file the signature pages on the unit agreement, will you be willing to furnish them with a new agreement of the area as it will exist in the form?

A That is right.

Q If that is --

MR. NUTTER: I think we would appreciate having a new

Page 3 for the unit agreement we have because it describes all of the unit area as the unit area was originally defined.

Q Will Page 3 be changed on the final draft?

A There is no provision on the contract for amending the description on Page 3. The amending and changing is to be done on Exhibits A and B.

Q And the unit agreement so provides, does it not?

A It does, yes, sir.

MR. KELLAHIN: There will be no change, Mr. Nutter, on Page 3.

MR. NUTTER: Page 3 says, "the unit area is defined as follows:" and includes all of Section 34 and all of Section 5 in Township 31. Notwithstanding the fact that Exhibit A and Exhibit B would be revised at the end of the unit agreement, it appears that this defines the unit area.

MR. KELLAHIN: The difficulty of that, Mr. Nutter, is that if Page 3 is revised, it will necessitate approval of the U. S.G.S. and State Land Commissioner, and the change would have to be approved by the participating party, whereas there is provision for reducing or expanding the unit contained in the body of the agreement.

MR. NUTTER: I suppose it is a matter of record, and we all understand that only half of Section 34 or only a portion of 34 and half of Section 35 will be in this unit area, and altering Page 3 would amount to --

MR. PAYNE: Approval of the unit agreement as proposed, Mr. Nutter, will set off the acreage that is in the unit insofar as this Commission is concerned, so no amendment of Page 3 is necessary as far as we are concerned.

Q (By Mr. Kellahin) Does the unit agreement contain a provision for reducing the acreage included in the unit, Mr. Douglas?

A Yes, sir, it provides for a reduction of those tracts which do not qualify, by eliminating such tracts.

Q Does it contain any provisions for expanding the unit or including those tracts or other tracts which may be appropriate or necessary to the operation of the unit?

A Yes, sir, there is a provision for non-joinder and subsequent joinder under Article No. 31 of the agreement, and then there is an expansion provision No. 4 -- Article No. 4, which would cover acreage that is not outlined in the unit area or described in the unit area.

Q Now, you heard Mr. Funk testify as to the non-joining tracts and the reasons therefore. Are you familiar with those tracts?

A I am, sir.

Q Are you in agreement with the testimony as was presented by Mr. Funk in that regard?

A I am. I would like to add this, if I may, please. At the time this agreement was prepared, as Mr. Funk stated, there

was a question as to whether or not some of these tracts would come in. There was no question in our minds but what others would come in, which later decided to withdraw the tract. For example, Mr. Trigg, we felt he wouldn't go in. However, the U.S.G.S. and the Department of Conservation wanted his acreage in the unit area because they were of the opinion that possibly Mr. Trigg cannot find the water supply, therefore would be forced into the unit. And He'd drilled some wells, I understood, attempting to locate a water supply for water flooding his lease. And they felt that if that was not -- if he did not locate it, then he would be forced into our unit, and they asked that we put the acreage in.

Q Did you discuss that with the United States Geological Survey?

A Yes, sir, it was discussed at Roswell and also back in Washington.

Q Did you go to Washington for that purpose?

A Yes, sir, I did.

Q Are they in agreement with the present arrangement which has been made?

A Yes, sir. As far as we know -- the agreement, of course, has not been submitted to them. As far as the agreement itself is concerned, we have a letter from them in which they approved the form, and we assume they will approve it.

Q Now, in your opinion, will the correlative rights of the owners of the tracts in the unit, including the royalty owners, be

A Yes, sir.

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

MR. NUTTER: Anyone have any questions of the witness?

CROSS EXAMINATION

BY MR. PAYNE:

Q Mr. Douglass, the U. S. G. S. has not indicated to you, have they, that they would not approve this unit unless Mr. Trigg's acreage was included?

A No, I believe it's been more or less the adverse. They have indicated that with the line agreement, they would approve it with Mr. Trigg's out.

MR. PAYNE: Thank you.

QUESTIONS BY MR. NUTTER:

Q Is it your belief that the line agreement, which will surround Mr. Trigg's acreage, will provide adequate protection for both sides of the acreage -- both sides of the line?

A Not being an engineer -- but I say it is a customary form and type of line well agreement that I am familiar with in working with such units. The contents of this was briefly read to the Department of Conservation in Washington, and they seem to

indicate that they felt satisfied with that agreement, although they have not seen it.

Q Then you expect for all of the shaded tracts on Exhibit No. 2, with the exception of the Trigg acreage, the Gulf acreage, and the Ambassador, Texas Pacific acreage at the north and the Shelton and Wheley tracts to be eventually committed to the unit?

A I would say, sir, that the O'Neill tract, possibly, will not be, Tract 46, but I feel that there is a very definite possibility that the Atwell acreage, Tract 43, will come in. Also the Ambassador Tract No. 28 will also be included.

MR. NUTTER: Anyone have any further questions of Mr. Douglass? He may be excused.

(Witness excused)

MR. NUTTER: Do you have anything further, Mr. Kella-
hin?

MR. KELLAHIN: No, sir.

MR. NUTTER: Does anyone have anything further they wish to offer in Case No. 1744?

MR. KASTLER: I have a statement. Bill Kastler, representing Gulf Oil Corporation. As Cities Service has testified, Gulf Oil Corporation has signed the unit agreement for the reason that it strongly favors the policy of expediting secondary recovery of oil by water flooding. However, so far as low injection rates and restricted allowables are concerned, the recommendations

of Mr. Funk did not completely represent the views of Gulf Oil Corporation.

MR. NUTTER: Thank you. Any further statements? Take the case under advisement and take Case 1745.

