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Application, Transcript,
Smill Exhibits, Etc.

# BEFORE THE OIL CONSERVATION COMMISSION OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING CALLED BY THE OIL CONSERVATION CONMISSION OF NEW MEXICO FOR THE PURPOSE OF CONSIDERING:

> CASE No. 1704 Order No. R-1128-B

APPLICATION OF CITIES SERVICE OIL COMPANY FOR AN AMENDMENT OF ORDER NOS. R-1126 AND R-1128-A TO PRO-VIDE FOR CAPACITY ALLOWABLES FOR EIGHT WELLS IN THE PROJECT AREA OF ITS WATER PLOOD PROJECT IN THE CAPROCK-QUEEN POOL. LEA AND CHAVES COUNTIES, NEW MEXICO, AND TO PRO-VIDE FOR A CAPACITY ALLOWABLE FOR ONE WELL OFFSETTING SAID PROJECT AREA, AND TO ESTABLISH AN ADMIN-ISTRATIVE PROCEDURE WHEREBY THE PROJECT AREA MAY BE EXPANDED AND ADDITIONAL WELLS CONVERTED TO WATER INJECTION WITHOUT NOTICE AND HEARING

# ORDER OF THE COMMISSION

## BY THE COMUSSION:

This cause came on for hearing at 8;00 o'clock a.m. on June 24, 1959, at Santa Fe, New Mexico, before Elvis A. Utz, Examiner duly appointed by the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Gommission," in accordance with Rule 1214 of the Commission Rules and Regulations.

NOW, on this \_\_\_\_\_day of July, 1959, the Commission, a quorum being present, having considered the application, the evidence adduced, and the recommendations of the Examiner, Elvis A. Uts, and being fully advised in the premises.

## FINDS:

- (1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.
- (2) That the applicant, Cities Service Oil Company, was authorised by Order Nos. R-1128 and R-1128-A to institute a water flood project in the Caprock-Queen Pool, Lea and Chaves Counties, New Mexico, on its Government \*\*B\*\* Lease comprising Section 3 and the N/2 of Section 10, Township 14 South, Range 31 East, NATM, Chaves County, New Mexico.

-2-Case No. 1704 Order No. R-1128-B

(3) That the applicant seeks an amendment of said Order Nos. R-1128 and R-1128-A to provide for capacity allowables for the following-described nine wells, eight of which are on the Government "B" Lease and thus within the project area, the other of which is located on applicant's State "AN" Lease offsetting the water flood project area:

Gevernment B Well No. 2, SW/4 NE/4 of Section 10 Gevernment B Well No. 3, NE/4 NE/4 of Section 10 Government B Well No. 11, NE/4 NW/4 of Section 10 Gevernment B Well No. 8, SW/4 SE/4 of Section 3 Government B Well No. 9, NE/4 SE/4 of Section 3 Government B Well No. 12, SW/4 NE/4 of Section 3 Government B Well No. 15, NE/4 SW/4 of Section 3 Government B Well No. 15, NE/4 SW/4 of Section 3 State AN Well No. 1, SW/4 SW/4 of Section 2

all in Township 14 South, Range 31 East, Caprock-Queen Pool, Chaves County, New Mexico.

- (4) That the applicant further seeks an amendment of said Order Nes. R-1128 and R-1128-A to establish an administrative procedure whereby the project area may be expanded and whereby additional wells may be converted to water injection without notice and hearing.
- (5) That the evidence indicates that said water flood project has caused an increase in the producing capacity of the eight above-described wells located on applicant's Government "B" Lease to the extent that they are now or soon will be individually capable of producing in excess of the top unit allowable for the Caprock-Queen Pool and/or that they are now or soon will be collectively capable of producing in excess of the project allowable authorised by Order No. R-1128-A.
- (6) That the evidence further indicates that the water flood project has caused an increase in the producing capacity of said State MANW Well No. 1, which offsets the water flood project area, to the extent that it is now capable of producing in excess of top unit allowable for the Caprock-Queen Peol.
- (7) That there is a possibility that waste will occur if production from the above-described wells is restricted.
  - (8) That the subject application should be approved.

# IT IS THEREFORE ORDERED:

(1) That the following-described wells in and offsetting the applicant's Water Flood Project in the Caprock-Queen Pool, Lea and Chaves Counties, New Mexico, be and the same are hereby granted allowables equal to their capacity to produce:

-3-Case No. 1704 Order No. R-1128-B

Government B Well No. 2, SW/4 NE/4 of Section 10 Government B Well No. 3, NE/4 NE/4 of Section 10 Government B Well No. 11, NE/4 NW/4 of Section 10 Government B Well No. 8, SW/4 SE/4 of Section 3 Government B Well No. 9, NE/4 SE/4 of Section 3 Government B Well No. 12, SW/4 NE/4 of Section 3 Government B Well No. 15, NE/4 SW/4 of Section 3 Government B Well No. 19, SW/4 SW/4 of Section 3 State AN Well No. 1, SW/4 SW/4 of Section 2

all in Township 14 South, Range 31 East, Chaves County, New Mexico.

(2) That an administrative procedure be and the same is hereby established whereby the project area of said Water Flood Project may be expanded without notice and hearing.

PROVIDED HOWEVER, That notice of the application for expansion shall be submitted to all operators offsetting the proposed expansion. If no objection is received from any such offset operator within fifteen (15) days, the Secretary-Director may grant approval of the proposed expansion for good cause shown. The Secretary-Director may grant immediate approval of the proposed expansion upon receipt of waivers of objection from all operators offsetting the proposed expansion.

(3) That an administrative procedure be and the same is hereby established to provide that additional wells in said Project may be converted to water injection without notice and hearing.

PROVIDED HOWEVER, That no well located in said Water Flood Project shall be eligible for administrative approval for conversion to water injection unless it is established to the satisfaction of the Secretary-Director that the proposed water injection well has experienced a substantial response to the water flood project or is directly effect by a producing well which has experienced such response; and that it is located on a water injection pattern which will result in a thorough and efficient sweep of oil by said water flood.

PROVIDED FURTHER, That to obtain administrative approval for the conversion of any well to water injection, applicant shall submit to the Commission in triplicate a request for such administrative approval, setting forth therein all the facts pertinent to the need for converting additional wells to water injection, and attaching thereto Commission Form C-116, showing production tests of the affected well or wells both before and after stimulation by water fleed. Applicant shall also attach plats of the water fleed project area and immediate surrounding area, indicating thereon the owner of each lease and the location of all water injection wells and producing wells, and shall submit evidence that a copy of the application to convert additional wells to water injection has been sent to each operator offsetting the proposed injection well.

-4-Case No. 1704 Order No. R-1128-B

The Secretary-Director of the Commission may, if in his opinion there is need for the conversion of additional wells to water injection, authorise said conversion without notice and hearing, provided no offset operator objects to said conversion within fifteen (15) days. The Secretary-Director way grant immediate approval of the conversion to water injection upon receipt of waivers of objection from all operators offsetting the proposed water injection well.

- (4) That the project allowable provision of Order No. R-1128-A be and the same is hereby superseded.
- (5) That this order shall become effective at 7:00 o'clock a.m., Hountain Standard Time, July 7, 1959.
- (6) That the Commission hereby retains jurisdiction in this cause to amend all or any part of this order and further to enter any additional order or orders deemed necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO OIL CONSERVATION CONMISSION

JOHN BURROUGHS, Chairman

MENTAL E. MORGAN, Member

A. L. PORTER, Jr., Mexiber & Secretary

BEFORE THE
OIL CONSERVATION COMMISSION
EXAMINER HEARING
Santa Fe, New Mexico
June 24, 1959

IN THE MATTER OF: Case 1704

TRANSCRIPT OF HEARING

DEARNLEY - MEIER & ASSOCIATES INCORPORATED GENERAL LAW REPORTERS ALBUQUERQUE, NEW MEXICO 3-6691 5-9546

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BEFORE THE OIL CONSERVATION COMMISSION EXAMINER HEARING Santa Fe, New Mexico June 24, 1959

IN THE MATTER OF:

Application of Cities Service Oil Company for capacity allowables for nine wells in a water flood project and for establishment of administrative procedure for expansion of said pro- : Case 1704 ject. Applicant, in the above-styled cause, seeks an order authorizing capacity allowable for nine wells in the project area of its water flood project in the Caprock-Queen Pool, Chaves County, New Mexico. Said capacity allowable would be in exception to Order R-1128-A. Applicant further seeks establishment of an administrative procedure to expand said water flood project.

**BEFORE:** 

Elvis A. Utz, Examiner

# TRANSCRIPT OF HEARING

MR. UTZ: The next case will be 1704.

MR. PAYNE: Case 1704: Application of Cities Service Oil Company for capacity allowables for nine wells in a water flood project and for establishment of administrative procedure for expansion of said project.

MR. KELLAHIN: If the Commission please, Jason Kellahin of Kellahin and Fox, Santa Fe, New Mexico, representing the Applicant. We have one witness.

(Witness sworn.)

MR. UTZ: Are there other appearances to be made in



this case?

(Applicant's Exhibits 1 through 4 marked for identification.)

# E. F. MOTTER

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

# DIRECT EXAMINATION

# BY MR. KELLAHIN:

- Would you state your name, please?
- E. F. Motter.
- By whom are you employed and what position, please?
- Cities Service Oil Company, Division Engineer, West Texas - New Mexico.
  - Where are you stationed?
  - Hobbs, New Mexico.
- Have you testified before this Commission in the past and had your qualifications as an expert engineer accepted by the Commission?
- Yes, sir, numerous times, and on this specific case several times.
- MR. KELLAHIN: Are the witness's qualifications acceptable?

MR. UTZ: Yes, sir.

(By Mr. Kellahin) Mr. Motter, are you familiar with the application that is now before the Commission?



ALBUQUERQUE, NEW MEXICO

A Yes, sir.

Q Would you state briefly what is proposed in this application?

A We have asked for capacity production for nine wells offsetting four wells, pilot injection wells authorized under Order R-1128, and have also requested administrative approval without notice or hearing for additions or deletions to the pilot area for both injection wells and capacity production for producing wells affected by the injection wells.

Q Is the area involved in this application in your division?

A Yes, it is.

Q Referring to what has been marked as Exhibit No. 1, would you state what that shows, please?

Queen Pool. The Government "B" is in the very center section where our pilot water flood is located. The four wells circled in red indicate the current injection wells; those wells with the green circles around them represent a diagrammatic or graphic representation of the wells' current ability to produce. The diamond with the circle is in reference to the June unit allowable which as I say is circled at the bottom of the sheet. I would like to point out now for the staff's benefit, and the Commission, that those circles do not represent areas of influence; they're merely a graphic representation of the wells' current ability to



produce. We could have done the same thing by a bar graph or some other means. We chose this method.

What is the scale on which the area has been delineated Q on the exhibit?

Well, the diamond of those circles is half-inch equals a hundred barrels.

Are the wells circled in green the wells for which capacity allowables are sought in this application?

Yes, sir, those are the nine wells which we have asked for capacity, and I'll list those: The Government B-2, Southwest Quarter Northeast Quarter, Section 10; Government B-3, Northeast Quarter Northeast Quarter, Section 10; Government B-11, Northeast Quarter Northwest Quarter, Section 10; Government B-8, Southwest Quarter Southeast Quarter, Section 3; Government B-9, Northeast Quarter Southeast Quarter, Section 3; Government B-12, Southwest Quarter Northeast Quarter, Section 3; Government B-15, Northeast Quarter Southwest Quarter, Section 3; Government B-19, Southwest Quarter Southwest Quarter, Section 3. Those are all in Township 14 South, Range 31 East, Chaves County, and we have had one additional on the State AN Well No. 1, Southwest Quarter Southwest Quarter, Section 2, Township 14 South, Range 31 East, Chaves County.

Under the original Order R-1128-A setting out an authorization for allowable for this project, it was stated that on no wells except those located on the Government "B" Lease could we



transfer any allowable. We have asked that the amendment be changed to include the State AN Well No. 1.

I might add that even though one or two of the wells are not up to current top 40-acre unit allowable, they have all shown some response and we have some tabulated data, which is another exhibit, that will bear that out.

Now referring to what has been marked as Exhibit No. 2, would you discuss that for the benefit of the Examiner?

Yes, this is a production history of the Government "B" Lease, on which there are twenty-four wells. Right now there are eight wells influenced by the water flood project and six which are still on primary. We have the production curve for that entire lease, and we have also plotted our water injection since the start of injection in the latter part of June, 1958. As you will notice, the production decline was down to where all the wells on the Lease were producing somewhere in the neighborhood of eight to ten barrels of oil per day when we started injecting water. Since that time we have had a rather rapid and most excellent response, we think, to water flooding.

In May of this year, or actually in April, we could see that our oil production was going to far exceed that allowed by Order R-1128-A which in effect allowed a normal unit allowable for 18 40-acre units, so we reduced our water injection from approximately 1700 barrels a day to a thousand.

In the month of June we are putting in about a thousand



barrels a day and in May it shows up slightly over a thousand. That's because we made that reduction in two stages. We feel that the efficiency of this flood is considerably better than others we have had experience with, and we thought that a reduction of water would probably cut the oil production somewhat in a few days, but it apparently is not going to do that; and from some other data we have here, it will show now our wells have ability to produce up over 90 barrels a day from this Lease, which by adding the 18 normal unit allowable, which is 648 barrels plus approximately 85 that the other six wells on the Lease will make, is slightly over 700 barrels allowable, and yet we have ability to produce about 950.

As I understand your testimony, this Lease then is up to approximately the maximum limits of the allowable authorized by the Commission?

Yes, sir. Last month we were shut in the last four days of the month so as not to exceed the State allowable.

Mr. Motter, do you recommend to your company that the water injection rates be cut and that wells be shut in in order not to exceed an allowable?

I do not recommend a further reduction of water injection in this field because we are slightly over a half-barrel of water per acre foot of injection, which we feel that is an absolute minimum that should be injected in a reservoir of this Therefore we don't feel a reduction should be made.



may damage the reservoir permanently, and we would lose some oil we would continue to get with higher injection rates.

- Q Is it practical to shut the wells in in order to curtail production?
  - A No, we do not feel it is a practical matter.
- Q Would such action in your opinion result in loss of oil in the reservoir?
- A Yes, it could. We could have water by-passing some of the oil in the reservoir and premature water breakthrough by having to shut the wells in as we did last month.
  - Q Would it result in migration of the oil off a lease?
- A It may not result in migration of oil off the lease, but we would probably not recover it.
- Q As I understand your testimony, these wells were marginal prior to the time injection was started?
- A Yes, I said a while ago, according to the curve, the lowest production there was slightly over 2300 barrels a day, which will be about nine barrels, I guess. By the way, for the Commission's benefit, I see they didn't put a scale, but that is a thousand barrels up there and the bottom figure, No. 1 is 100 barrels per day.
- Q Does this reflect that this is a successful secondary recovery program?
- A This is a very excellent response, we think, to a secondary measure.



# VG SERVICE, Inc.

Q Have you prepared a tabulation on the rates of water injection as Exhibit No. 3?

A Yes, sir, we have. Exhibit 3 indicates the amount of water we have injected in each of the four wells since the start of the project. Actually we don't show just a very few days in the month of June, 1958; but through July, from July through May of 1959, we show the actual daily average water injection for those four wells, and this bears out our cut in the month of May and currently we're averaging about 250 barrels per well per day water injection.

Q Have you any production figures reflecting the production from this lease?

A Yes, sir. Exhibit No. 4 is a tabulation of all the wells for which we have asked capacity production. We have given the tests and the average production, these are all barrels of oil per day since the start of injection of water through the latest information we have; and you'll notice that in June, 1959, we have tested all the wells, but of course we do not have the production average for that month. I would like to point out that by adding those figures in June, 1959, for eight wells on the Government "B" Lease, they have the ability to produce right now 805 barrels a day, and the other six wells run about 85 barrels so that is approximately 895 that we can produce on the Government "B" Lease. State AN was tested for 42 barrels and of course that is some eight barrels over the July normal unit allowable.



Currently, the allowable for June for the Government "B" Lease is 748 barrels, but by multiplying 18 times 36 normal unit allowable, 648 barrels to be produced in the water flood area.

In the event this application is approved and you are granted capacity allowables for the nine wells, what would you anticipate your peak production to be?

We have discussed this at length, and we feel that these wells will probably peak with the present equipment and everything at about 1100 barrels a day. That's without the addition of any further injection wells, I should add.

On a lease basis, how would that average out on the normal unit allowable, Mr. Motter?

Well, let's take 24 times 36, well, for the Government "B" Lease we would have 864 barrels if we had a top unit allowable for all the 40-acre developed tracts on the Lease, since there are four injection wells.

Is the pipeline willing to take the excess production in the event this application is approved?

Yes, sir, I talked with the pipeline people last week and they can handle this oil.

> Who is the company? Q

Texas-New Mexico Pipeline Company.

They have expressed willingness to take increased Q production?

Yes.



# DEARNLEY-MEIER REPORTING SERVICE,

Mr. Motter, you are familiar with the Caprock-Queen Pool, are you not?

Yes, sir, I have followed it to some extent since the water flooding has been going on.

Have other applications similar to this been approved by this Commission?

Α Yes, there are two or three units up there that have authorized capacity production.

In your opinion are capacity allowables essential to the proper operation of your secondary recovery program?

Yes, I think the wells that are responding should be allowed to produce at capacity.

In the event they are not allowed to produce at capacity, what will be the effect?

As I stated before, there could be a by-passing of oil and this oil could be left in the reservoir and never recovered.

Q Your application asks for an administrative procedure for the approval of injection wells and the granting of capacity allowables to wells affected by the water flood project. Do you have any comments on that?

The Commission has granted previous administrative approval for injection wells, and we feel that the capacity producttion more or less falls in line with the injection wells and we would like to see that any wells that may be affected by the addition of administrative-approved injection wells also, when



they become affected, that they be allowed to produce at capacity by administrative approval of the Commission.

Q Have you any specific recommendations as to the procedure to be followed, or would you prefer to leave that to the Commission?

A Well, we would prefer to leave it to the Commission. We would, of course, notify them by letter, and if they would so require, all offset operators, that certain wells are now producing above the normal unit allowable, and therefore we would request that it be allowed to produce at capacity.

Are you aware of the fact that the emergency orders have been entered by the Commission granting capacity allowables?

A Yes, I think it has happened in all cases, that when a well responds above the normal unit allowable, they have been granted emergency orders for production at capacity, with a hearing set up for the following two or three weeks, at which time hearing is held and then usually the order is granted.

Q Has that procedure been followed in other states, or do you know?

- A Not that I know of.
- Q You don't know about Texas?

A No. There are one or two water flood projects I'm familiar with, they can be granted after a unit area is outlined and the injection wells are outlined.

Q Were Exhibits 1 through 4 prepared by you or under



your direction and supervision?

Yes, they were.

MR. KELLAHIN: At this time we would like to offer in evidence Exhibits 1 through 4.

MR. UTZ: Without objection they will be received.

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

MR. UTZ: Mr. Payne.

MR. PAYNE: For the benefit of the record and the Examiner, I would point out when we initially received the application it did not contain a request for administrative approval for capacity allowables. It was not advertised as such and it is not within the scope of this hearing to consider that matter at all.

MR. KELLAHIN: Do I understand this was not advertised for capacity allowable?

MR. PAYNE: Not for administrative procedure for capacity allowables.

MR. KELLAHIN: The application certainly contains that.

MR. PAYNE: Yes, the application came in after we had advertised that.

I had some correspondence along this line, not correspondence but telephone calls, and talked to the members of the Commission staff in Hobbs, and they relayed the information on through to Santa Fe; and then, as Mr. Payne states, in order



to get the docket out they asked us to submit a telegram of our request, and I have the telegram I would be glad to read for the record, that we submitted; and he is certainly right.

This is the telegram: "New Mexico Oil Conservation Commission, Santa Fe, New Mexico, Attention Mr. A. L. Porter, Jr.; Cities Service Oil Company respectfully request-a-hearing June 24, 1959, to consider capacity production for wells offsetting the pilot water flood in the Caprock-Queen Pool, Chaves County, New Mexico. Letter of request will follow." Signed, D. D. Boddy.

The letter was sent the same day, and if I may read the third paragraph of the letter of application: "It is further requested that authorization by administrative approval without notice or hearing be granted for additions to or deletions from the pilot area for both injection wells and capacity production for producing wells which exceed the normal unit allowable by results of the waterflood."

I don't know what member in Santa Fe called Mr. Montgomery in Hobbs, but he related the information to me that it was not advertised as such, but it was my understanding it would be considered.

MR. PAYNE: It can't be considered because it is not within the scope of the advertisement. You can come in at any time in the future for this.

MR. KELLAHIN: Does the advertising in your opinion cover the administrative approval for additional injection wells?



MR. PAYNE: Yes, and also additional producing wells for expansion of the project area.

MR. KELLAHIN: But not for capacity allowables for any producing wells.

MR. PAYNE: That's right.

MR. UTZ: For administrative approval.

MR. KELLAHIN: Yes. That's all the questions I have.

MR. UTZ: Are there other questions of the witness?

Mr. Nutter.

# CROSS\_EXAMINATION

# BY MR. NUTTER:

Q Mr. Motter, just to correct something in your testimony, I believe you stated that the production of the area prior
to the time the area received the response from the water flood was
some 2300 barrels a day. You mean 230?

A 230, that is correct. It is approximately nine barrels per well per day on the Government Lease. I might point out that at that time we had two wells that were top allowable, Well No. 22 and the inside producer to our four injection wells, which substantially increased that average.

Q Now you also stated that you had discussed this increase in allowable with the Texas-New Mexico Pipeline Company and they stated they would be willing to run it. Now what about the purchaser that buys the run?

A Well, our company is one of the purchasers that purchase through Texas-New Mexico.



# DEARNLEY-MEIER REPORTING SERVICE, Inc.

Q Is Cities Service willing to provide a market for the additional capacity allowable?

A I assume they would. I can't answer that. I don't think this increase is going to hurt the market much, something over 200 barrels a day over what we were authorized.

- Q This is one of quite a few increases, though.
- A That's right.
- Q However, the pipeline said they would be willing to run the oil?

A Yes, sir. They are having some difficulties right now running the oil. They're working only days and we have some trouble getting our oil out but we are building an L.A.C.T. unit which was approved back in February, and it will be installed pending the outcome of this order.

Q What are your plans for conversion of wells in the near future, Mr. Motter?

A We will not, as far as I'm concerned, will not convert any wells until our unit is formed. We are making pretty good progress on that. Mr. Funk of our secondary department, is here if you would like to go into that, but I can probably give you this information that we have. We hope to have that unit in operation by August the 1st or no later than September 1st, 1959. There will be no expansion until after that.

Q Do you think that there is any danger to the effectiveness of this water flood by waiting until August or September to



convert additional wells to water injection?

Α Yes, I think we should be backing up in some of these wells right now.

You don't contemplate backing them up until after Q approval of the unit?

No.

Mr. Motter, you stated that in the last thirty to sixty days you had reduced your rate from 1700 to approximately a thousand barrels a day?

Yes, sir. Actually, if you ever have had any experience running some of these pumps, they are a little bit hard to control. I think you will notice that in the month of April we actually injected 1875 barrels a day. We have strived to stay right at about 1700 in the four wells, but we have reduced it now to about 250 barrels per well per day.

Now, Mr. Motter, I note on your water injection curve there that from the months of November and December of 1958 to January of 1959, there was a decrease in the amount of water injected?

Yes, sir.

I also note from the months of January to February there was a levelling off in the amount of oil that was produced; that is, the increase in oil production decreased for that period of time?

> I can explain that by -- in the month of February, or Α



I should say in the month of March we speeded up some of our pumping units, which we probably could have gotten the oil out in February should we have done that at that time, the month before.

- Q. You don't feel that this --
- A No, I don't feel --
- Q -- that this flattening out of the production increase was due to the increase in water production during the preceding three months?

A No, sir, I don't. If you will back up there a couple more months you'll see that in September or October of 1958 we had some pump trouble and we averaged only 1400 barrels a day injection, but it doesn't show up on the production curve.

Q From February to March you had a decrease in water but you had a levelling out of production during March to April, which would correlate to the same reaction you had back in January to February?

A = Yes.

Q What I'm driving at, Mr. Motter, do you think that despite the fact that you have had a decrease in water injection from April to May that you will have a decrease in oil production maybe in June or July?

A Yes; however, we have been, we have reduced this over two months, Mr. Nutter. It doesn't show here because we don't have all the data for June, but we do have these well tests which indicate that we still can produce 850 barrels a day from



# DEARNLEY-MEIER REPORTING SERVICE,

the eight wells on the Government "B" Lease, and we have put approximately a thousand barrels a day in the ground for two months and actually we have most of our voidage should be filled up by now, and this has a very good efficiency, this flood has, so the efficiency it has, I think we should have gotten a response or more of a response to this reduction than what it shows. These two may almost approach each other, I mean the water injection and the oil production.

In other words, you would expect it to get to the point, because of the efficiency of this flood, where the response to a change in the water injection rate would be immediately detected in the oil production rate?

Yes. Oil on a flood of this type, I should think that perhaps two weeks or something like that, we should know the effects of it.

Q How are the pumps sized, are they sized that any available oil in the oil bore would be shown?

No, on all wells, on some of the wells we have run bigger tubing and we still have the same unit on there we have always had. On the other wells we had the original equipment that was there when we --

Is the producing capacity of some of the wells affected by the pump?

> Α Yes, it is.

Do you anticipate changing the pump equipment?



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Α No, we don't anticipate changing until we get our unit formed.

Q Do you think there's any danger to the reservoir in producing these wells at less than the capacity of the well to produce?

There may be. We should have had our unit formed a little sooner. We realize now that we have been delayed somewhat.

You stated that one-half barrel per acre foot was the expected absolute minimum at which you should inject water?

Α We wouldn't want to go any lower. Right now we are running six-tenths of a barrel, we estimate.

Speaking of this limited area right here with the nine producing wells and the four injection wells, what do you anticipate would be the levelled out rate of production from those nine producing wells if you were injecting into the four producing wells at the rate of one-half barrel per acre foot per day?

Well, deducting the approximately 90 barrels for the other six wells, I would say it would approximately be a thousand barrels a day. I stated previously, I believe, that the Government "B" Lease with the wells affected by the water flood and then the six other wells, we estimate it will probably level off about 1100 barrels per day at this current rate of injection.

Is the current rate of injection a thousand barrels a day?



A Yes.

Q So you feel that as time goes on and we have the production figures for June and July, this oil production curve will be up more--

- A Yes, sir, I believe it will.
- Q -- than it is at the present time?

A Certainly do. Of course, we can foresee some water breaking through to the No. 8 Well, the producing capacity will remain the same but the oil producing capacity will drop.

MR. NUTTER: I believe that's all. Thank you.

MR. UTZ: Any other questions of the witness?

MR. KELLAHIN: I would like to ask a couple more if I may, please.

MR. UTZ: Mr. Kellahin.

# REDIRECT EXAMINATION

# BY MR. KELLAHIN:

Q How does your rate of injection compare with other projects in the pool?

Mell, I believe that now we're somewhat lower. There may be wells in the other portions of the pool that are actually injecting less water, say a barrel per acre foot, but it's probably due to a physical matter, maybe a water block or on account of high pressure, they aren't able to get the water in. We have never tried to put more than, well, about 1800 barrels a day in these four wells; in fact, two wells are still on a vacuum, and



No. 14 Well has about 400 pounds of pressure on it, so we could put a lot more water in there than we are right now.

Q Well, now, in summary, the injection rates of Cities Service are generally lower than the other operators?

A Yes, I would say. We would strive for perhaps somewhere between three-quarters and one barrel of injection per acre foot.

MR. KELLAHIN: That's all I have.

# RECROSS EXAMINATION

# BY MR. UTZ:

 $\sqrt{\mathbf{Q}}$ Mr. Motter, is any portion of the State AN Lease included in R-1128 at this time or does that just include the Government "B" Lease?

I believe that just includes the Government "B". However, in Order R-1128-A it was specifically set out that all offsets and diagonal offsets to the four injection wells should receive top unit allowable. That would include the State AN No. 1 and 2 and Penrose Alstone No. 2. In that particular order they were definitely specified. That's the reason we asked for amendment, so it could produce also at capacity.

- Well, then, you are requesting an amendment to the order, inasmuch as the area of the water flood is concerned?
  - Yes, that is correct.
- What did you say the present producing capacity of the nine wells was at this time?



Well, the nine wells that we have asked for the capacity on it is 847 barrels a day, results of tests this month, the eight wells that we have asked for capacity on the Government are 805 barrels per day.

The total capacity of the State AN and Government "B" Lease is what?

Let me state it this way. For the Government "B" Lease, 805 barrels from the eight wells which we have asked for capacity production; and approximately 90 barrels from the other six wells is 895 barrels per day. State AN, that particular well tested 42, the No. 2 is producing approximately 22 barrels a day, No. 3 is about 5, and No. 4 is about 4 barrels, so production from that lease would be about 73 barrels per day.

- Your present capacity is 968 barrels?
- Yes, I believe that's about right.
- Of which 121 barrels comes from wells not affected by the water flood?

Well, I'll accept that figure. I haven't sat down and figured it out. That's probably right. That's correct, 121 will be from nine wells. Maybe I should explain, Mr. Utz, that I have referred numerous times to six wells on the Government "B" lease not being affected. We have some other wells that are affected that we have not asked for capacity production on. Those specific six wells would be those four across or five plus No. 7 down in the Southwest of the Northwest of Section 10. The diagonals



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have also shown some response, maybe two or three barrels per day, something like that, so I am not, -- of course, they're included in the allowable situation granted by R-1128-A, so that is the reason we were leaving those six wells out.

- Q Well, the total non-marginal allowable for the State AN and Government "B" Leases will be a thousand and eight barrels a day, twenty-four wells on the "B" Lease?
  - Yes, and four on the other.
  - Yes.
  - That would be correct.
- Now your total capacity of both leases now is 968 barrels?
  - That's right.
- So you could stay within that allowable very nicely at the present time, couldn't you?
- If we had a probable unit allowable for those two leases.
  - By revising the order to include the AN Lease?
  - Yes.
- These wells are not affected by the water flood, would it/hard them to shut them in?
- No, I don't believe, they're still on primary, we could shut some of those wells in.
- You could shut some of them in and still produce more from the affected wells, couldn't you?



A Yes, we probably could do that, operate in a sense under a unit allowable.

MR. UTZ: Any other questions of the witness?

MR. PAYNE: Yes, sir.

MR. UTZ: Mr. Payne.

# BY MR. PAYNE:

Q Mr. Motter, are you familiar with the testimony of Gerald McGrew of your company at the June 9th regular hearing, wherein he recommended that allowables in Southeast New Mexico be reduced from 36 to 33?

A Yes, sir. I didn't hear his testimony but I understand that was the recommendation.

Q Do you think that might indicate that water flood oil is taking an undue portion of the total market demand for oil from New Mexico?

A Well, it may be so, but I don't believe this small amount is going to have much effect, and personally I feel that this entire field is one big reservoir and should be treated as such. If wells in one portion are allowed to produce at capacity I feel the others should, too.

MR. PAYNE: Thank you, that's all.

 $$\operatorname{MR.}$$  UTZ: Any other questions? If not the witness may be excused.

(Witness excused.)

MR. UTZ: Any statements to be made in this case?



if I may.

MR.KELLAHIN: I would like to make a brief statement,

MR. UTZ: Mr. Kellahin.

MR. KELLAHIN: I think the testimony and evidence has shown the necessity for capacity allowables for these wells, in order to prevent loss of oil in the reservoir which could not be recovered; and in connection with the application, I think the last statement made by Mr. Motter in regard to this being one common source of supply is quite significant, in that the Commission has in the past granted a number of applications for capacity allowables, Graridge Corporation, the Ambassador Oil Corporation, in water floods, are both involved in those. I would refer the Commission specifically to Orders R-1073, R-1073-A, R-1053-A, and R-1053-C. The Examiner has heard another such application this morning. There is no question but what these are all from one common source of supply and should be treated on the same basis throughout.

In connection with the application for administrative approval for expansion of the project and approval of additional injection wells, and I'm sorry to say we cannot argue the point for capacity allowables on the other wells; certainly the Commission's experience in this water flood operation has indicated the need for administrative procedure in regard to these matters. The Commission has had numerous cases involving the water floods in this specific pool, and I think it would relieve the Commission



3-6691

of a serious burden if administrative procedures were established, insofar as possible, within the call of this docket, for further activities in this area.

MR. UIZ: Are there any other statements? If not, the case will be taken under advisement. The hearing will be adjourned until 1:00 o'clock.

### \*\*\*\*

# CERTIFICATE

STATE OF NEW MEXICO COUNTY OF BERNALILLO

I, ADA DEARNLEY, Notary Public in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Hearing was reported by me in Stenotype, and that the same was reduced to typewritten transcript under my personal supervision and contains a true and correct record of said proceedings, to the best of my knowledge, skill, and ability.

DATED this 2nd day of July, 1959, in the City of Albuquerque, County of Bernalillo, State of New Mexico.

NOTARY PUBLIC

My Commission Expires:

I do hereby certify that the foregoing is a complete record of the proceedings in the Exeminer hearing of Case No. 17.0 % heard by me on.

New Mexico Oil Conservation Commi

STATE OF NEW MEXICO )
COUNTY OF BERNALILLO )

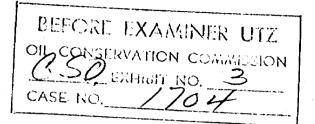
I, Motary Public in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoin; and attached Transcript of Proceedings before the New Mexico Oil Conservation Commission was reported by me in Stenotype and reduced to typewritten transcript by me, and that the same is a true and correct record to the best of my knowledge, skill and ability.

of Legy , 1959, in the City of Albuquerque, County of Bernalillo, State of New Mexico.

Motary Public

liy Commission Expires:

June 19, 1963.



# CITIES SERVICE OIL COMPANY

# DRICKEY QUEEN WATERFLOOD GOVERNMENT B LEASE

Month	Well #5	DAILY AVERA	IGE INJECTION Well #10	Well #14
July, 1958	405	0	0	
August	407	380	423	0
September	421	400	400	406
October	352	371	344	385
November	435	475	493	331
December	477	428	462	458 415
January, 1959	487	433	468	200
February	462	477	472	399 466
Harch	437	432	424	
April	476	498	476	398 447
Hay	285	241	266	265

EXHIBIT \_\_\_\_

DRICKEY QUEEN Note: All fig

	July, 1958 Prod	Aug.,	1958 Prod	Sept,	1958 Prod	Oct.,	1958 Prod	Nov.,	1958 Prod	Der
Lse. & Well No.	Test Avg.	Test	Avg.	<u>Test</u>		<u>Test</u>		<u>Tes t</u>	Avg.	Te
Government B-2	11.5	16	15.5	20.5	13	20	17	20	17	21
Government 8-3	7	7	6.8	7.5	5	7	6	48	41	56
Government 8-8	35	33	32.7	36	37	39	39	60	47	71
Government 8-9	20	22	22.2	15	15	10	10	48	38	68
Government B-11	11.7	12	11.8	12	10	10	9	13	13	12
Government 8-12	8.5	8	8.5	11	9	7	6	18	14	10
Government B-15	5	5	5	5	5	8	7	5	Ļ	15
Government B-19	11.7	12	11.7	12	10	12	13	11	10	12
State AN-1	8.1	10	10.0		7.4		10.6		10.7	

DEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
EXHIBIT NO. 4
CASE NO. 1704

EXHIBIT\_

E OIL COMPANY
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د	1958 Prod	Jan.,	1959 Prod	Feb.	1959 Prod	Mar.	1959 Prod	Apr.	1959	May,		June,	
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	55	82	80	91	84	87	82	82	65	150	131	160	
	61	90	84	154	113	197	161	269	209	238	213	251	
	58	85	80	100	88	97	82	97	90	93	83	95	
	12	22	19	20	21	22	21	23	24	23	17	24	
	8	12	11	15	12	23	23	36	38	40	41	46	
	12	19	18	46	40	87	73	93	87	92	83	139	
	12	17	15	20	21	<b>20</b>	21	20	21	20	14	48	
100 CO	11.5		8.5	28	27.0		13.1		14.8	31	30.9	42	•

# OIL CONSERVATION COMMISSION SANTA FE, NEW MEXICO

	Date	7-1-5-9
CASE NO. 1704	HEARING DATE	6-24-59
My recommendations for an order as follows:	er in the above numb	ered case(s) are
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# DOCKET: EXAMINER HEARING JUNE 24, 1959

OIL CONSERVATION COMMISSION - 1120 CERRILLOS ROAD, HIGHWAY DEPARTMENT AUDITORIUM, 8 a.m., SANTA FE, NEW MEXICO

The following cases will be heard before Elvis A. Utz, Examiner, or A. L. Porter, Jr., Secretary-Director.

## CONTINUED CASE

CASE 1666: Application of Sunray Mid-Continent Oil Company for approval of a unit agreement. Applicant, in the above-styled cause, seeks an order approving its Central Bisti-Lower Gallup Sand Unit embracing approximately 7389 acres of federal, state, and allotted Indian lands in the Bisti-Lower Gallup Oil Pool, San Juan County, New Mexico.

### NEW\_CASES

- CASE 1692: Application of Continental Oil Company for the establishment of a non-standard gas proration unit in the Tubb Gas Pool. Applicant, in the above-styled cause, seeks the establishment of a 160-acre non-standard gas proration unit in the Tubb Gas Pool consisting of lot 15, the N/2 SE/4 and the SE/4 SE/4 of Section 3, Township 21 South, Range 37 East, Lea County, New Mexico, said unit to be dedicated to applicant's Hawk B-3 Well No. 2-T, located 1650 feet from the South and East lines of said Section 3.
- CASE 1693: Application of Amerada Petroleum Corporation for three non-standard oil proration units. Applicant, in the above-styled cause, seeks an order establishing three 43.7 acre non-standard oil proration units for Mississippian production in the SE/4 of Section 11, Township 13 South, Range 38 East, Lea County, New Mexico. Applicant further seeks approval of one unorthodox oil well location.
- CASE 1694: Application of Texas Crude Oil Company for an oil-oil dual completion. Applicant, in the above-styled cause, seeks an order authorizing it to dually complete its Big Eddy Unit 1-30 Well, located in the SE/4 SE/4 of Section 30, Township 20 South, Range 31 East, Eddy County, New Mexico, in such a manner as to produce oil from an undesignated Tansil pool and to produce oil from an undesignated Delaware pool through parallel strings of tubing.
- CASE 1695: Application of Texaco, Inc. for a triple completion, for permission to commingle the production from three separate pools, and for the establishment of two non-standard gas proration units, Applicant, in the above-styled cause, seeks an order authorizing it to triple complete its A. H. Blinebry NCT-4 Well No. 1, located in the SE/4 SE/4 of Section 31, Township 22 South, Range 38 East, Lea County, New Mexico, in such a manner as to permit production from the Blinebry formation, production of gas from the Tubb Gas Pool, and production of oil from the Drinkard Pool through tubing, the annulus via cross-over, and tubing respectively. Applicant further seeks the establishment of a 160-acre non-standard gas proration unit in both the Tubb Gas Pool and Blinebry Gas Pool each consisting of the S/2 S/2 of said Section 31. Applicant further seeks permission to commingle the liquid production from the Blinebry, Tubb, and Drinkard formations underlying said acreage.

- CASE 1696: Application of Caulkins Oil Company for a triple completion. Applicant, in the above-styled cause, seeks an order authorizing it to triple complete its Breech "F" Well No. PMD-8, located in the NE/4 NE/4 of Section 34, Township 27 North, Range 5 West, Rio Arriba County, New Mexico, in such a manner as to produce gas form the South Blanco-Pictured Cliffs Pool, gas from the Mesaverde formation, and gas from the Dakota formation through parallel strings of tubing.
- CASE 1697: Application of Universal Oil Corporation for the creation of a new oil pool for Gallup production, and for an exception to Rules 104 and 107 for wells in said pool. Applicant, in the above-styled cause, seeks an order creating a new pool for Gallup production to be designated the Shiprock-Gallup Oil Pool and located in Sections 16 and 17, Township 29 North, Range 18 West, San Juan County, New Mexico. Applicant further seeks the promulgation of pool rules to permit wells in said pool to be located closer than 660 feet to the nearest producing well in exception to Rule 104, and to permit certain exceptions to the casing requirements of Rule 107 of the Commission Rules and Regulations.
- CASE 1698: Application of Shell Oil Company for an exception to Rule 502 I (a). Applicant, in the above-styled cause, seeks an order which would exempt all wells in the Carson Unit Area and all other Shell wells in Township 25 North, Ranges 11 and 12 West, Bisti-lower Gallup Oil Pool, San Juan County, New Mexico, from the daily tolerance provisions of Rule 502 I (a) of the Commission Rules and Regulations.
- CASE 1195: Application of Graridge Corporation for capacity allowables for certain wells in a water flood project. Applicant, in the above-styled cause, seeks an order authorizing capacity allowables for three wells in the project area of its water flood in the Caprock-Queen Pool in Lea and Chaves Counties, New Mexico.
- CASE 1196: Application of Graridge Corporation for an order amending Order No. R-966. Applicant, in the above-styled cause, seeks an order amending Order No. R-966 to establish administrative procedures for development of its Artesia Water Flood Projects No. 2 and 3, Artesia Pool, Eddy County, New Mexico, and for approval of unorthodox locations for 27 wells in said projects, for authority to convert six wells in said projects to water injection, and for capacity allowables for five wells in said projects.
- CASE 1185: Application of Graridge Corporation for an order amending Order No. R-952. Applicant, in the above-styled cause, seeks an order amending Order No. R-952 to establish administrative procedures for development of its Artesia Water Flood Project No. 1, Artesia Pool, Eddy County, New Mexico, and for approval of unorthodox locations for fifteen wells in said project, and for capacity allowables for five wells in said project.
- CASE 1699: Application of J. W. Brown for an order authorizing a pilot water flood project. Applicant, in the above-styled cause seeks an order authorizing it to institute a pilot water flood project in the Brown Pool, Chaves County, New Mexico, by the injection of water into the Queen formation through four wells located in the SE/4 NN/4 of Section 26, Township 10 South, Range 26 East, Chaves County, New Mexico.

- CASE 1337: Application of Gulf Oil Corporation for an order amending Order No. R-1093-A. Applicant, in the above-styled cause, seeks an order amending Order No. R-1093-A to permit the commingling of Paddock production with the commingled Blinebry, Drinkard, and Langlie-Mattix production from its Learcy McBuffington lease consisting of the S/2 of Section 13, Township 25 South, Range 37 East, Justis Field, Lea County, New Mexico.
- CASE 1700: Application of Gulf Oil Corporation for permission to commingle the production from two separate leases: Applicant, in the above-styled cause, seeks an order authorizing it to commingle the production from the East Millman Queen-Grayburg Pool from two separate non-contiguous leases in Township 19 South, Range 28 East, Eddy County, New Mexico.
- Application of Tidewater Oil Company to commingle the production from several separate oil pools from two separate leases. Applicant, in the above-styled cause, seeks an order authorizing it to commingle the intermediate grade crudes produced from its Coates "D" Lease comprising the SE/4 SW/4 of Section 24, Township 25 South, Range 37 East, Justis Field, Lea County, New Mexico, with the commingled production of all intermediate grade crudes produced from its Coates "C" Lease comprising the E/2, SE/4 NW/4, and the NE/4 SW/4 of said Section 24 and to pass such commingled production through its automatic custody transfer system.
- Application of Cities Service Oil Company for capacity allowables for nine wells in a water flood project and for establishment of administrative procedure for expansion of said project. Applicant, in the above-styled cause, seeks an order authorizing capacity allowable for nine wells in the project area of its water flood project in the Caprock-Queen Pool, Chaves County, New Mexico. Said capacity allowables would be in exception to Order R-1128-A. Applicant further seeks establishment of an administrative procedure to expand said water flood project.
- Application of Neville G. Penrose, Inc., for a capacity allowable for one well. Applicant, in the above-styled cause, seeks an order authorizing a capacity allowable for its Alston Well No. 2, located in the NW/4 NW/4 of Section 11, Township 14 South, Range 31 East, Caprock Queen Pool, Chaves County, New Mexico, due to a response from the adjoining Cities Service Oil Company water flood project. Said capacity allowable would be in exception to Order R-1128-A.

### NEW MEXICO OIL CONSERVATION COMMISSION

Docket No. 23-59-a

In addition to the cases listed on Docket No. 23-59, the following cases will also be heard June 24, 1959, before Elvis A. Utz, Examiner, or A. L. Porter, Jr., Secretary-Director:

## CASE 1701:

Application of Gulf Oil Corporation for an oil-oil dual completion. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its Learcy McBuffington Well No. 5, located in the NW/4 SE/4, Section 13, Township 25 South, Range 37 East, Lea County, New Mexico, in such a manner as to produce oil from an undesignated Paddock Pool and oil from the Justis-Ellenburger Pool through parallel strings of tubing.

# CASE 1702:

Application of Humble Oil & Refining Company for an oil-gas dual completion. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its South Four Lakes Unit Well No. 6, located in the SW/4 SE/4, Section 2, Township 12 South, Range 34 East, Lea County, New Mexico, in such a manner as to produce oil from a Four Lakes-Pennsylvanian Pool extension and gas from a Four Lakes-Devonian Gas Pool extension through parallel strings of tubing.

## CASE 1706:

Application of Sunray Mid-Continent Oil Company for an order amending Order No. R-1414. Applicant, in the above-styled cause, seeks an order amending Order No. R-1414 to include the following additional acreage: NW/4 NW/4 of Section 6, Township 25 North, Range 12 West, and the SW/4 SW/4 of Section 31, Township 26 North, Range 12 West, San Juan County, New Mexico.

Place of hearing will be Highway Department Auditorium, 1120 Cerrillos Road, Santa Fe. New Mexico.

Time of hearing will be 8:00 o'clock a.m.



1709

CITIES SERVICE OIL COMPANY

MIL EZET

BOX 97

HOBBS, NEW MEXICO

Hearing

June 4, 1959

Oil Conservation Commission State of New Mexico Box 871 Santa Fe, New Mexico

Attn: Hr. A. L. Porter, Jr.

Re: Capacity Allowable - Cities Service

Waterflood, Caprock Queen Pool, Chaves

County, New Mexico

## Gentlemen:

Cities Service Oil Company herewith makes application for authorization of capacity production from producing wells offsetting the water injection wells authorized under Order R-1128. Injection rates have been reduced from 1,700 barrels per day to 1,000 barrels per day in an attempt to maintain production within limits set out by Order R-1128-A. It has been necessary to shut-in producing wells because of overproduction at the lower injection rates. To prevent possible permanent damage to the reservoir by further reduction in injection volume, capacity production is requested for the following wells:

Government B-2, SW/4 NE/4, Section 10;
Government B-3, NE/4 NE/4, Section 10;
Government B-11, NE/4 NW/4, Section 10;
Government B-8, SW/4 SE/4, Section 3;
Government B-9, NE/4 SE/4, Section 3;
Government B-12, SW/4 NE/4, Section 3;
Government B-15, NE/4 SW/4, Section 3;
Government B-19, SW/4 SW/4, Section 3;

oh 145 R-31-E

all in Township 14 South, Range 31 East, Chaves County, New Mexico.

It is requested that Order R-1128-A, Paragraph 9, be amended so that the State AN Well No. 1, SW/4 SW/4, Section 2, T-14-S, R-31-E, Chaves County, New Mexico, may produce at capacity.

It is further requested that authorization by administrative approval without notice or hearing be granted for additions to or deletions from the pilot area for both injection wells and capacity production for producing wells

Dodated 12.5%

which exceed the normal unit ellowable by results of the waterflood.

A copy of this application has been sent to each operator on the attached list.

Very truly yours,

CITIES SERVICE OIL COMPANY

D. D. Bodle
Division Superintendent

EFM/gk Attach.

# MAILING LIST

Oll Conservation Commission (3) State of New Mexico P. O. Box 871 Santa Fe, New Mexico

Oll Conservation Commission P. O. 80x 2045 Hobbs, New Mexico

L. B. Hodges Box 671 Nickson Hotel Building Roswell, New Mexico

Late Oil Company Box 670 San Angelo, Texas

Neville G. Penrose, Inc. 1813 Fair Building Fort Worth, Texas

Mr. W. E. Pittman Box 83 Midland, Texas

Pure Oil Company P. O. Box 671 Midland, Texas

Gulf Oil Corporation
P. O. Box 669
Roswell, New Mexico
Attn: Mr. M. I. Taylor

Kerr-McGee Oil Industries, Inc. Box 1876 Abell Building Midland, Texas Ada Oll Company
P. O. Box 844
Houston I, Texas
Attn: Mr. William G. Harvey

Morris R. Antwell P. O. Box 1058 Hobbs, New Mexico

Union Oil Company of California 619 West Texas Hidland, Texas Attn: Mr. W. D. Owens

Texas Pacific Coal & Oil Co. P. O. Box 2037 Midland, Texas

Mr. John H. Trigg Box 5629 Roswell, New Mexico

White-Geror Oil Corporation 1846 E. Broadway Tucson, Arizona

R. R. Woolley Box 398 Loco Hills, New Mexico

Phillips Petroleum Company Permian Building Midland, Texas Attn: Mr. J. M. Perkins

This is a fast message unless its deferred character is indicated by the proper symbol.

# WESTERN UNICATELEGRAM TELEGRAM 1201

The filing time shown in the date line on domestic telegrams is SMA THROFFELL Colleges. Time of receipt is STANDARD TIME at point

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NEW MEXTCO OTL CONSERVATION COMM, ATTN A L PORTER JR= SANTA FE NMEX=

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