

P. CASE 5751: PHILLIPS PET. CO. FOR
A SPECIAL ALLOWABLE, LEA COUNTY, 7
NEW MEXICO

CASE NO.

5751

APPLICATION,
TRANSCRIPTS,
SMALL EXHIBITS,
ETC.

BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
September 1, 1976

EXAMINER HEARING

IN THE MATTER OF:

Application of Cities Service Oil
Company for an unorthodox location,
Lea County, New Mexico.

CASE
5750

Application of Phillips Petroleum
Company for a special allowable,
Lea County, New Mexico.

CASE
5751

BEFORE: Daniel S. Nutter, Examiner

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the New Mexico Oil Conservation Commission:	William F. Carr, Esq. Legal Counsel for the Commission Stat. Land Office Building Santa Fe, New Mexico
For Cities Service Oil Co.:	Jason W. Kellahin, Esq. KELLAHIN & FOX Attorneys at Law 500 Don Gaspar Santa Fe, New Mexico
For Phillips Petroleum Co.:	Donald G. Stevens, Esq. Attorney at Law 214 Old Santa Fe Trail Santa Fe, New Mexico

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1 MR. NUTTER: We will call Case Number 5750.

2 MR. CARR: Case 5750, application of Cities Service
3 Oil Company for an unorthodox location, Lea County, New Mexico.

4 MR. KELLAHIN: If the Examiner please, Jason Kellahin,
5 Kellahin and Fox appearing for the Applicant and we will have
6 one witness to be sworn.

7 MR. STEVENS: Mr. Examiner, I'm Don Stevens, attorney
8 in Santa Fe, New Mexico representing Phillips Petroleum and
9 we will have one witness.

10 MR. KELLAHIN: If the Examiner please, I would
11 suggest that this case be consolidated with 5751.

12 MR. NUTTER: We will call now Case Number 5751.

13 MR. STEVENS: Mr. Examiner, I'm Don Stevens, an
14 attorney in Santa Fe representing Phillips Petroleum in this
15 case. We previously requested consolidation and we still want
16 it if you do but it isn't necessary for our case.

17 MR. NUTTER: Would it shorten the hearing if we
18 consolidate the cases?

19 MR. STEVENS: Possibly slightly but not much.

20 MR. NUTTER: Well, that sounds good. Cases 5750 and
21 5751 will be consolidated for the purpose of the hearing and
22 we will call 5751.

23 MR. CARR: Case 5751, application of Phillips
24 Petroleum Company for a special allowable, Lea County,
25 New Mexico.

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1 Will the witnesses in the consolidated case please
2 stand?

3 (THEREUPON, the witnesses were duly sworn.)
4

5 DONALD BARRETT

6 called as a witness, having been first duly sworn, was
7 examined and testified as follows:

8
9 DIRECT EXAMINATION

10 BY MR. KELLAHIN:

11 Q Would you state your name, please?

12 A My name is Donald Barrett.

13 Q How do you spell that, Mr. Barrett?

14 A B-a-r-r-e-t-t.

15 Q By whom are you employed and in what position?

16 A I'm employed by Cities Service Oil Company as a
17 reservoir engineer.

18 Q And where are you located?

19 A Midland, Texas.

20 Q Have you ever testified before the Oil Conservation
21 Commission?

22 A No, sir, I have not.

23 Q For the benefit of the Examiner would you briefly
24 outline your education and your experience as a petroleum
25 engineer?

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1 A I received a Bachelor of Science degree from the
2 University of Missouri at Rolla in geology. I have a Bachelor
3 of Science degree in petroleum engineering from the University
4 of Tulsa. I'm a registered professional engineer in Texas. I
5 have worked three years total as a production engineer II for
6 Sun Oil Company in Michigan and one year for Cities Service in
7 Midland and for the past two-and-a-half years I have been a
8 reservoir engineer for Cities Service in Midland.

9 Q And in connection with your work, is the area involved
10 in this application under your jurisdiction?

11 A Yes, it is.

12 MR. KELLAHIN: Are the witness's qualifications
13 acceptable?

14 MR. NUTTER: Yes, they are.

15 Q (Mr. Kellahin continuing.) Mr. Barrett, what is
16 proposed by the applicant in Case 5750?

17 A We propose to drill an unorthodox location located
18 very close to the center of the southeast quarter of
19 Section 30, Township 17 South, Range 33 East in Lea County,
20 New Mexico.

21 Q Now, is this in a unit?

22 A Yes, it is. It is located in Tract One of our
23 Southeast Maljamar Grayburg-San Andres Unit.

24 Q Is that a waterflood project?

25 A Yes, it is.

1 Q And is the unorthodox location related to your
2 waterflood project?

3 A Yes, it is.

4 Q Now, referring to what has been marked as Exhibit
5 Number One would you discuss the information shown on this
6 exhibit?

7 A The exhibit is a plat of the entire unit area outlined
8 by the dark dashed line. The proposed location is marked near
9 the center of Tract One. What we are proposing to do is drill
10 this location to prevent oil from the particular tract from
11 being swept across the lease line, to prevent waste and also
12 to increase the recovery from the total area.

13 Q How are your injection wells shown?

14 A The injection wells are shown with a circle around
15 them. They are well No's. 1, 2 and 3 in that particular tract.

16 Q And you do not own the offsetting acreage, that one
17 quarter section?

18 A No, sir, we do not.

19 Q Is that Phillips'?

20 A Yes, it is.

21 Q Now, referring to what has been marked as Exhibit
22 Number Two would you identify that exhibit?

23 A Exhibit Number Two is a structure contour map con-
24 structed on the top of the Premier sand which is the primary
25 producing interval in this particular area.

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1 Q Does that indicate that the sand is quite level in
2 this area?

3 A Right, there is very little relief in the portion of
4 the area that we are looking at.

5 Q Now, referring to what has been marked as Exhibit
6 Number Three, would you identify and discuss that exhibit?

7 A Exhibit Number Three is a bubble map that shows the
8 relative position of the waterflood front and the drainage
9 radius of the U. S. Minerals No. 4 Well. The circles are
10 proportional to the amount of water having been injected and
11 the amount of oil having been produced by the Phillips well.

12 What we are attempting to show here is to give
13 some idea of how much remaining reserves there are left to
14 be recovered in this particular area of the field.

15 The dark crosshatch in each of the circles represents
16 what we feel would be oil that would have been recovered had
17 there been no wells at all that has already been swept by
18 injection. We feel that had the well been drilled right in
19 the exact center without any other producing wells there, we
20 probably would have been able to drain approximately forty
21 acres of the reservoir. As it is we have swept approximately --

22 Q Are you referring now to your exhibit?

23 A I will refer to the next exhibit which is a volu-
24 metric calculation that goes along with this particular plat.

25 Q That is Exhibit Number Four?

1 A Right. This indicates that we have already swept
2 approximately thirteen acres of the forty acres that would have
3 been available to us through the injection wells.

4 MR. NUTTER: Which forty acres are you talking
5 about, your basic forty acres?

6 A The basic forty acres would be if the well were
7 located in the exact center of that quarter section. It would
8 include the total area from wells 101, 102, 103 and U. S.
9 Minerals No. 4.

10 MR. NUTTER: In other words, you are talking about
11 if a well had been drilled at the point that is just west of
12 your proposed location?

13 A Yes, sir, that is correct.

14 MR. NUTTER: And the square would represent --

15 A Would represent a total forty-acre plat.

16 MR. NUTTER: Like this, this square is the forty
17 acres you are talking about?

18 A Yes, sir, that is correct.

19 MR. NUTTER: Okay.

20 A And the crosshatch again represents the area of
21 that particular forty acres we feel has already been swept
22 by injection.

23 MR. NUTTER: Okay.

24 A By drilling the well we feel that we will in effect,
25 have half of a five-spot available to us for secondary

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1 recovery purposes and as represented by the dashed lines
2 running through the middle on a diagonal between Wells 101 and
3 103. With this particular setup we feel that the remaining
4 primary and secondary oil left to be recovered by the well in
5 the proposed location is approximately a hundred thousand
6 barrels.

7 Q In your opinion is oil being swept off the unit at
8 the present time?

9 A Yes, sir, I believe that it is.

10 Q Is there any other information on Exhibit Number
11 Four that you want to discuss?

12 A No, sir.

13 Q Referring to what has been marked as Exhibit Numbers
14 Five and Six, would you discuss those exhibits?

15 A Exhibit Number Five is a production curve prepared
16 from the New Mexico production reports on Phillips Petroleum
17 U. S. Minerals No. 4 Well showing the oil produced and the
18 water produced on a barrels per month basis and the producing
19 GOR.

20 Exhibit Number Six is a production performance
21 curve from the Southeast Maljamar Grayburg-San Andres Unit
22 showing the oil produced, the water produced in barrels
23 per day and the producing GOR.

24 Q Now, can you relate the information shown on the
25 two exhibits?

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1 A The one major point that I would like to point out
2 between these two particular exhibits is the declining GOR
3 on both curves with the exception of about a year if you shift
4 the curve on the U. S. Minerals No. 4 approximately one year
5 ahead, these two curves will just almost overlay identically
6 which indicates to me that the Phillips well is receiving
7 pressure maintenance and waterflood oil as a result of inject-
8 ion into the Tract One wells.

9 Q Now, in your opinion is approval of this application
10 by Cities Service necessary to protect the interest owners in
11 the waterflood project?

12 A Yes, sir, it is very definitely.

13 Q And is that going to impair the correlative rights
14 of any other operator?

15 A No, sir, it will not, we have previously agreed.

16 Q Does Cities Service have any objection to Phillips'
17 application for a capacity allowable?

18 A No, sir, we do not.

19 Q Were Exhibits One through Six prepared by you or
20 under your supervision?

21 A Yes, sir, they were.

22 MR. KELLAHIN: At this time I would like to offer
23 into evidence Exhibits One through Six, inclusive.

24 MR. NUTTER: Cities Exhibits One through Six will
25 be admitted into evidence.

(THEREUPON, Cities Service Exhibits One through Six were admitted into evidence.)

MR. NUTTER: Are there any questions of this witness?

MR. STEVENS: None.

CROSS EXAMINATION

BY MR. NUTTER:

Q Mr. Barrett, you mentioned shifting the curves one year to the right, actually there is a difference of four years in the starting point of these two curves. Now, if we look at the Maljamar GSA unit curve we see that injection started in 9-67?

A Yes, sir.

Q Then we have a period of two years and three months production curve there prior to the time of the commencement of injection and then oil production on the unit did go up rather rapidly in the next twelve to fourteen months, I believe?

A Yes, sir.

Q And it peaked out there in late '68, the first peak. We don't have a similar production history for the Phillips well. Was it drilled only in February or March of 1969?

A Yes, sir, I believe that is the proper timing on it. This was all of the information that I had available to me.

Q So we don't have any comparable production history for

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1 it because it wasn't even in existence then?

2 A That is correct.

3 Q Now, when do you think it received a response to
4 your water injection program, from the time it was first
5 drilled or did this response occur later?

6 A I would say within a year after or possibly two as
7 the GOR began to decline you would expect a well under primary
8 production to exhibit just the opposite in that the GOR
9 should increase without any other outside effects.

10 Q Do you know when your 101, 102 and 103 were put on
11 injection?

12 A No, sir, I do not at the present time. They were
13 early in the project, though.

14 Q Did you put all of the wells on at the same time,
15 do you know?

16 A Within a very short period of time. I would say
17 within six months.

18 Q So there wasn't any pilot period or anything?

19 A No, sir, there was no pilot.

20 Q And the net effect then for the -- if it has been
21 due to response from your waterflood project, the net effect
22 has been that the Phillips well has experienced no decline,
23 it has produced at a uniform rate for six or seven years?

24 A Yes, sir, that is correct.

25 Q With a declining GOR. Now, you say that you have no

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1 objection to the application of Phillips in Case Number 5751,
 2 that is for capacity allowable for their Minerals No. 4 Well,
 3 is that correct?

4 A That is correct.

5 Q But that's premised on the assumption that your
 6 unorthodox location would be approved?

7 A Yes, sir.

8 MR. NUTTER: Are there any further questions of
 9 Mr. Barrett?

10 MR. KELLAHIN: That is a correct assumption, Mr.
 11 Nutter.

12 MR. NUTTER: He may be excused.

13 (THEREUPON, the witness was excused.)

14 MR. NUTTER: Do you have anything further at this
 15 point?

16 MR. KELLAHIN: That's all I have right now.

17
 18 W. J. MUELLER

19 called as a witness, having been first duly sworn, was
 20 examined and testified as follows:

21
 22 DIRECT EXAMINATION

23 BY MR. STEVENS:

24 Q Would you state your name, residence, occupation
 25 and by whom you are employed?

1 A My name is W. J. Mueller, spelled M-u-e-l-l-e-r.
2 I'm a reservoir engineering advisor for Phillips Petroleum
3 Company, Odessa, Texas.

4 Q Have you previously testified before this Commission
5 and had your qualifications accepted by it?

6 A Yes, sir.

7 MR. STEVENS: Are the witness' qualifications
8 acceptable, Mr. Examiner?

9 MR. NUTTER: They are.

10 Q (Mr. Stevens continuing.) Would you briefly first
11 outline what Phillips seeks here and I'll ask you for your
12 comments on the Cities Service application and how they relate
13 to each other?

14 A Well, briefly, Phillips wears two hats in this, both
15 cases here. We are a twenty-seven point percent working
16 interest owner in the Southeast Maljamar Unit and the proposed
17 unorthodox location requested by Cities Service as operator
18 in the Southeast Maljamar Unit is on a tract that Phillips
19 put into the unit.

20 Phillips after the formation of the unit drilled
21 the Minerals 4 about two point three years after the unit was
22 formed and we do request a capacity allowable for our
23 Minerals 4 to compete with the unorthodox location requested
24 by Cities Service as operator of the Southeast Maljamar Unit.

25 Q All right, perhaps it would be best for you to

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1 comment, if you will, on Phillips' viewpoints on the
2 Cities Service application for this unorthodox location?

3 A Okay, our Exhibit Number One in the Cities Service
4 Case 5750 is Phillips' conditional waiver. They would like
5 the exhibit put into the record for that case wherein Phillips
6 as an offset operator and one hundred percent working interest
7 owner of the U. S. Minerals No. 4 located in Unit O of
8 Section 30, 17 South, 33 East in the Maljamar Grayburg-
9 San Andres Field, Lea County, New Mexico, conditionally waives
10 objection to the proposed unorthodox location for the Cities
11 Service-operated Southeast Maljamar Grayburg-San Andres Unit
12 Tract One Well No. 4 at thirteen hundred and fifty-five feet
13 from the south line and eleven hundred and thirty-five feet
14 from the east line of Section 30.

15 Q Can I interrupt and ask you, how close is that to
16 Phillips' lease line on this well and what would be a normal
17 spacing?

18 A This unorthodox location is one hundred and eighty-
19 eight feet from the outer contiguous acreage, boundary of the
20 two tracts being the Southeast Maljamar Unit in our U. S.
21 Minerals 4 lease or proration unit.

22 Q What would be the maximum ordinary allowable under
23 state-wide rules?

24 A I think under the infield drilling order that
25 Cities Service has in the Southeast Maljamar Unit they can

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1 drill within three hundred and thirty feet of the outer
2 boundary of their unit.

3 Q Okay.

4 A The two conditions of Phillips for waiver of objection
5 by Phillips Petroleum Company to Cities Service application
6 are, one, that the New Mexico Oil Conservation Commission
7 approve a special capacity allowable for Phillips-operated
8 U. S. Minerals Well No. 4, this being Case 5751 with the
9 Commission today, in order to permit Phillips a competitive
10 withdrawal rate from the reservoir. This capacity allowable
11 for the U. S. Minerals Well No. 4 to become effective upon the
12 completion date of the Southeast Maljamar Grayburg-San Andres
13 Unit Tract One Well No. 4 which will by virtue of being in an
14 active waterflood project also enjoy a capacity allowable.

15 Our second condition of approval is that we think
16 for the protection of correlative rights and the maximum
17 recovery in this area that waterflood operations should be
18 continued and this minimum operation should at least be
19 voidage replacement for the unorthodox well, the 1-4 and so
20 our condition number two is that the total combined monthly
21 water injected volumes into the Southeast Maljamar Grayburg-
22 San Andres Unit, Tract Numbers One, Two and Three, be maintained
23 at or above two hundred percent of the total monthly fluid
24 volume withdrawal from the proposed unorthodox 1-4. This
25 condition will insure a more balanced injection to withdrawal

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1 ratio for maximum reservoir recovery and protection of
2 correlative rights.

3 We feel that approximately fifty percent of the
4 water injected into the three injection wells could be
5 attributed to volume replacement of the unorthodox location.

6 Q Referring to what has been marked as Exhibit
7 Number Two would you point out the wells you are talking
8 about, you have given the descriptions of them.

9 A On Exhibit Number Two, shown by a red arrow, is
10 the proposed unorthodox location of Cities Service, Tract One,
11 Well No. 4. Shown by a yellow arrow is the current producing
12 well, the Phillips U. S. Minerals No. 4 located in Unit O of
13 Section 30.

14 Also shown on Exhibit Number Two are Tracts One,
15 Four and Five colored in yellow. These are the four tracts
16 that Phillips contributed to the Southeast Maljamar Unit.
17 This was some four hundred acres Phillips put into the unit
18 or approximately thirty-seven percent of the total acreage
19 in the unit was contributed by Phillips. For this we received
20 a Phase One participation of twenty-one point three percent
21 which was based on remaining primary and current production
22 at that time. We have a Phase Two Participation of twenty-
23 four point seven, four percent which is in effect now.

24 Only Phase Two participation formula by the
25 operators gave credit for undeveloped acreage. This forty

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1 acres was not put into the unit because under the participation
2 formula it would only have received zero point one seven eight
3 percent interest.

4 MR. NUTTER: Because it wasn't developed at the
5 time?

6 A Right. Yet in the approximately seven-and-a-half
7 years that U. S. Minerals No. 4 has been produced, it has
8 produced a volume of oil equal to twenty-three percent as
9 much as the Southeast Maljamar Unit has produced in this same
10 time.

11 Q A summation then might be that you do not oppose
12 this unorthodox location so long as the amount of water re-
13 injected would be two hundred percent of the amount taken out
14 by the Cities Service?

15 A Yeah, approximately a replacement of voidage by
16 the Cities Service well.

17 Q The two hundred percent is based upon what?

18 A On the fact that you draw bubble maps like Cities
19 Service did and an attributable half of the injection goes
20 north and half south or half east and half west, so the
21 attributable injection into those three injection wells in
22 any combination they want, approximately only about half of it
23 could be attributed to the acreage bounded by the outer
24 boundary of the three injection wells.

25 Q Have you further comments on Cities Service's

1 application?

2 A Yes, Phillips -- we don't believe we are really
3 scabbing here or taking unfair advantage of anybody, we have
4 paid a major share of the waterflood development costs in this
5 area through our participation in the Southeast Maljamar Unit.
6 We have not been restrictive to any waterflood development
7 in the area. Conoco proposed completion of the Pearl B No. 3
8 to water injection in 1973, our west offset, we did not
9 oppose that, we have not put any restrictive covenants on
10 the Cities Service operated unit and we feel that the operations
11 of the 4 have not in any way impeded waterflood development.
12 In fact, we feel that our operations have probably added
13 reserves development in this area so I doubt seriously that
14 Cities Service would be drilling the proposed unorthodox
15 location that they propose here had our Minerals 4 been a
16 dry hole. We did prove up additional acreage for the unit.

17 MR. STEVENS: Mr. Examiner, I'll ask, we plan
18 next to go into Case Number 5751 and we will submit informa-
19 tion and exhibits for that. Would you like to cross examine
20 the witness now in relation to the Cities Service case or wait
21 until the end?

22 MR. NUTTER: Mr. Kellahin, did you have any
23 questions that you wished to ask this witness at this time?

24 MR. KELLAHIN: No, we don't have any questions.

25 MR. NUTTER: I might just ask a couple of questions

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1 here at this point, Mr. Mueller.

2

3

CROSS EXAMINATION

4 BY MR. NUTTER:

5 Q As you are aware, the Commission has had some
6 difficulty with certain waterflood projects in southeast
7 New Mexico and has on occasion had to limit injection rates
8 to some percentage of the reservoir voidage. What would the
9 effect be if the Commission should have to set some kind of
10 a maximum injection rate here on your conditional waiver?
11 I'm not suggesting that they will but I'm just saying if they
12 would.

13 A I'm saying that if it is imposed on Cities Service
14 that they just get out and meet the requirement and we would
15 waive our objection to that continuing with the maximum
16 capacity allowable on the 1-4 if the restriction is placed by
17 the Commission on their injection.

18 Q Now, when you are talking about two hundred percent
19 of total monthly fluid withdrawal, you say oil and water but
20 you would include an equivalent reservoir volume of gas
21 in there too, wouldn't you?

22 A I believe that Cities Service's tract and our well
23 are currently at solution ratio, about three hundred cubic
24 feet, there is no free gas.

25 Q So gas if it were calculated in there would be

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1 a very minor thing?

2 A Yes. Actually it is included in the formation
3 volume factor.

4 Q At this time?

5 A Yes. I think they are at about three hundred GOR
6 and so are we, which is actually solution ratio.

7 MR. NUTTER: Okay, Mr. Stevens, we will go to
8 Case 5751.

9
10 W. J. MUELLER

11 called as a witness, having been previously sworn, was
12 examined and testified as follows:

13
14 DIRECT EXAMINATION

15 BY MR. STEVENS:

16 Q For the record are you the same party who
17 testified in Case 5750, Mr. Bill Mueller?

18 A Yes, sir.

19 Q Briefly, what does Phillips seek in this application?

20 A In the application today Phillips seeks a capacity
21 allowable for its U. S. Minerals Well No. 4 located in Unit O
22 of Section 30, Township 17 South, Range 33 East, Maljamar
23 Grayburg-San Andres Pool, Lea County, New Mexico. It is
24 directly offset to the northeast and west by water injection
25 and to the south by oil-water contact.

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1 Q Referring to the log marked Exhibit Number One,
2 would you explain it, please?

3 A Exhibit Number One is the borehole compensated
4 acoustic log run by Dresser-Atlas on our U. S. Minerals Well
5 No. 4.

6 This log shows on the two-inch section, we have
7 Yates, Queen, Grayburg and San Andres marked. The four areas
8 in red colored at the bottom of the two-inch section that are
9 about forty-two, fifty to forty-three, fifty, are the four
10 lower Grayburg sands we are producing from. These four
11 sands are detailed on the five inch -- excuse me, this is
12 reduced scale so I guess it is about two-and-a-half inch. It
13 shows our actual perforations on the large-scale section of
14 the log with the well being perforated from forty-two, fifty
15 to sixty; forty-two, eighty-four to ninety-six; forty-three,
16 twelve to twenty-four and forty-three, forty to fifty.

17 The log analysis indicates that we have some forty-
18 six feet of net pay in these four sands and that they had
19 an average porosity of ten point two percent and a weighted
20 average water saturation of forty-six percent, that the
21 forty-acre original oil in place calculations for the proration
22 unit of our U. S. Minerals No. 4 is approximately seven hundred
23 and fifty thousand barrels of oil. We anticipate that
24 through the offset injection we would recover at least fifty
25 percent of this or approximately three hundred and seventy-five

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1 thousand barrels of oil should be the estimated current
2 ultimate recovery for the U. S. Minerals No. 4. We've only
3 produced a cumulative of one hundred and seventy-one thousand
4 barrels of oil and, therefore, have a remaining recovery in
5 excess of two hundred thousand barrels of oil which we feel
6 deserves careful protection.

7 We do not feel that this reserve definitely
8 indicates that we have not produced any oil from outside of
9 our own forty-acre reserve limit and I can't say if oil has
10 moved into the forty acre unit or not.

11 Q Would this amount of pay tend to be greater or
12 lesser than the other wells in the field, in your opinion?

13 A This is one of the best wells in the field and I
14 would say particularly this area would be maybe number one or
15 number two.

16 Q Would this be the reason why this well has
17 produced twenty-three percent as much as the Southeast
18 Maljamar itself as previously testified?

19 A Yes, sir.

20 Q In other words, could a summation be made that
21 as a better well that explains the better porosity and that
22 explains the amount of oil it has produced and will produce?

23 A The Southeast Maljamar Tract One which was the old
24 total U. S. Minerals lease one, two and three, was one of
25 the best tracts put in the Southeast Maljamar Unit.

1 Q Referring then to what has been marked as Exhibit
2 Two would you explain it, please?

3 A Exhibit Two is the average annual oil, water and
4 gas production for our U. S. Minerals No. 4 since completion
5 in 1969 through the first half of 1976. In the seven-and-a-
6 half years this well has been completed it has accumulated
7 a hundred and seventy-one thousand, two hundred and two
8 barrels of oil. The well's reserves have been pressured by
9 offsetting injection as is evidenced by the decrease in gas
10 production here.

11 Q Would you point out what the various colors mean
12 on your graph there?

13 A Yes, the color code is indicated on the right-hand
14 side of the graph, the red-shaded curve being barrels of oil
15 per day, the blue-shaded curve being barrels of water per
16 day and the green-shaded curve being MCF of gas per day.

17 Our current producing gas-oil ratio is approximately
18 three hundred to one. Initially we started out at about
19 fifteen hundred to one.

20 The well has not sustained any decline, in fact,
21 it has experienced an increase over the seven-and-a-half years
22 of its production and when Cities Service first approached
23 us earlier this year to drill this unorthodox location we
24 stated that if we thought our waiver would be conditioned
25 upon a capacity allowable for this well, so in May of this year

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Phone (505) 982-9212

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1 we inserted a two-inch tubing pump in this well and tested
2 it on May 6th through May 11th at rates of one hundred and
3 forty-one barrels of oil to a high of a hundred and ninety-one
4 barrels of oil per day and water rates from a hundred and
5 fifty barrels of water per day to two hundred and fifteen
6 barrels of water per day. The six day average test was a
7 hundred and sixty barrels of oil per day and a hundred and
8 eighty barrels of water per day. I think this is approximately
9 the initial rate we could anticipate if the well is given a
10 capacity allowable, approximately twice the normal allowable
11 of eighty barrels of oil per day.

12 Q Referring then to what has been marked as Exhibit
13 Number Three would you explain it, please?

14 A Exhibit Number Three is the June 1976 daily average
15 production in barrels of oil per day, barrels of water per
16 day and MCF per day for the wells in two-and-a-half sections
17 flat area. As noted on this plat the U. S. Minerals No. 4
18 with an average June production of eighty-three barrels of
19 oil per day, seventy-seven barrels of water per day is the
20 highest oil producer on the plat. The only well approaching
21 it is the Cities Service Tract Seven, Well No. 6 located over
22 in the southeast quarter of the southeast quarter of Section
23 29 and it produced sixty barrels of oil per day and a hundred
24 and thirty-one barrels of water per day.

25 Q Your red is oil, blue is water and green is gas in

1 MCF?

2 A Correct. The blue figures under the injection
3 wells are the daily average injections for the month of
4 June, 1976.

5 As noted here on the daily average June injection
6 on Tract One of Cities Service, had the condition which we
7 requested be imposed at that time it would have permitted
8 Cities Service to produce the Tract 1-4 in excess of two
9 hundred and fifty barrels of fluid a day. I think there is
10 about five hundred barrels injection there, four, eighty or
11 four, eighty-five.

12 The normal injection rate has been approximately
13 six hundred barrels a day, I think, on the average waterflood.

14 Q And then from that could you say that if Cities
15 were to drill this well they would not exchange their
16 practices as presently constituted?

17 A That's right. I mean, the major capacity they have
18 now in the 7-5 is about a hundred and ninety barrels of fluid
19 a day.

20 I will state, though, I believe the records will
21 show and I do not have them with me, I'm sorry, but at the
22 time we drilled the U. S. Minerals No. 4, only wells 1 and
23 3 were on injection. I believe Well No. 2 was a producer in
24 Tract One of Cities Service Unit and it was only subsequently
25 placed on injection after the U. S. Minerals 4 was drilled.

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1 Q Referring to what has been marked as Exhibit Number
2 Four, would you explain that, please?

3 A Exhibit Number Four is the cumulative barrels of
4 oil produced, colored in red, under each of the current
5 producing wells in this area and colored in blue is the
6 cumulative water injected under each of the injection wells
7 in the area. I note that the cumulative production of Phillips
8 Well No. 4 here was based on a 1-1-76 figure or it's the end
9 of the annual report for '75 since those are handy figures.
10 I indicate that our estimate of approximately three hundred and
11 fifty to four hundred thousand barrels of ultimate recovery
12 from the Minerals 4's own forty acre development isn't too far
13 out of line when you look at the Conoco operated MC-8 Unit Well
14 No. 199. The direct northwest offset has accumulated some
15 three hundred and twenty-seven thousand barrels of oil and the
16 northwest offset to that was another two hundred and twenty-
17 two thousand barrels of oil.

18 Q From that information could you infer that the high
19 productivity of the 4 is at least in part due to a high produc-
20 tivity area as opposed to the waterflood injection offsetting?

21 A Yes, there is a very good sand development right in
22 the diagonal across the middle of the southwest-southwest section
23 of the lease here, tract or section, but just a narrow band where
24 the sand is well developed, Lower Grayburg sands.

25 Q And this would negate a contention which might be made

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1 that the high productivity was due to the waterflood, is
2 that correct?

3 A Well, I think we've got good sand development, plus
4 they have pressured us up. This also down there in Tract Nine,
5 Well No. 5, you see they have an accumulative recovery of
6 a hundred and fifty-five thousand barrels being greater
7 than the cumes in the area offsetting it.

8 Q And it also would be an edge well?

9 A Yes, it will be an edge well.

10 We do not believe that the capacity allowable would
11 be detrimental to any waterflood project in this area, nor
12 would it hurt any proposed completions in this area. It
13 should not result in the loss of reserves to the projects
14 if Cities Service is granted the unorthodox location they
15 propose in Tract One, Well No. 4.

16 Offset water injection has definitely pressured up
17 the reserves under our forty-acre tract, however, the estimated
18 remaining reserves of this well of two hundred thousand
19 barrels of oil from just its own forty-acres would have a
20 remaining life of seven to ten years under the current state-
21 wide allowable of eighty barrels of oil per day and this
22 project life could or this producing life of No. 4 could
23 possibly even exceed the project life of the offset waterflood
24 development such that it would result in possibly a subsequent
25 loss of reserves in Minerals 4 if the fluid under its forty-

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1 acre tract migrates back into abandoned acreage. So although
2 they have pressured us up now, it may come back to them if
3 their project is not continued for as long as Minerals 4 is
4 produced.

5 Q Inasmuch as this unorthodox location of Cities would
6 have a capacity allowable you seek merely what they would get
7 also?

8 A Yes, just at a different producing rate.

9 Q This also, would it not, prevent, if you are able to
10 produce it, prevent migration of oil off your tract due to
11 the Cities Service's flood elsewhere, is that affirmative?

12 A I don't believe they have a flood elsewhere but I
13 do not anticipate oil migration off our tract since we are
14 blanked in by water injection on all sides and dry holes to
15 the south.

16 Q Were Exhibits One through Four and Exhibits One and
17 Two in Case 5750 prepared by you or under your direction?

18 A Yes, sir.

19 Q And in your opinion would the granting of your
20 application tend to protect correlative rights and prevent
21 waste?

22 A Yes, sir.

23 MR. STEVENS: We move at this time the introduction
24 of Exhibits One through Four in Case 5751 and One and Two in
25 Case 5750.

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1 MR. NUTTER: Phillips' Exhibits One and Two in Case
2 5750 and Exhibits One through Four in Case 5751 will be
3 admitted.

4 (THEREUPON, Phillips' Exhibits One and Two
5 (Case 5750) and Exhibits One through Four
6 (Case 5751) were admitted into evidence.)

7 MR. STEVENS: We have no further questions.

8 MR. NUTTER: Are there any questions of the witness,
9 Mr. Kellahin?

10 MR. KELLAHIN: Mr. Nutter, I don't believe we
11 covered the testimony, what effective date do you propose for
12 your capacity allowable?

13 THE WITNESS: The completion date of the Cities
14 Service unorthodox location in Tract One, Well No. 4.

15 MR. KELLAHIN: Thank you.

16 MR. NUTTER: I believe that is one of the conditions
17 of the waiver.

18 Was that all you had, Mr. Kellahin?

19 MR. KELLAHIN: That's all I had.

20 MR. NUTTER: If there is nothing further of the
21 witness he may be excused.

22 (THEREUPON, the witness was excused.)

23 MR. NUTTER: Did you have anything further,
24 Mr. Stevens?

25 MR. STEVENS: Nothing, sir.

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1 MR. NUTTER: Does anyone have anything they wish to
2 offer in Cases 5750 or 5751?


3 We will take the cases under advisement and take
4 a fifteen minute recess.

5 (THEREUPON, the hearing was in recess.)
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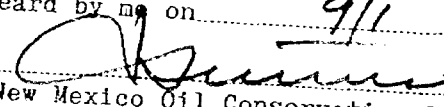
REPORTER'S CERTIFICATE

I, SIDNEY F. MORRISH, a Certified Shorthand Reporter,
do hereby certify that the foregoing and attached Transcript
of Hearing before the New Mexico Oil Conservation Commission
was reported by me, and the same is a true and correct record
of the said proceedings to the best of my knowledge, skill and
ability.


Sidney F. Morrish, C.S.R.

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I do hereby certify that the foregoing is
a complete record of the proceedings in
the Examiner hearing of Case No. 5750-51
heard by me on 9/1 19 76.
, Examiner
New Mexico Oil Conservation Commission



OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO
P. O. BOX 2088 - SANTA FE
87501

DIRECTOR
JOE D. RAMEY

LAND COMMISSIONER
PHIL R. LUCERO
September 17, 1976



STATE GEOLOGIST
EMERY C. ARNOLD

Mr. Donald G. Stevens
Attorney at Law
Post Office Box 1797
Santa Fe, New Mexico

Re: CASE NO. 5751
ORDER NO. R-5282

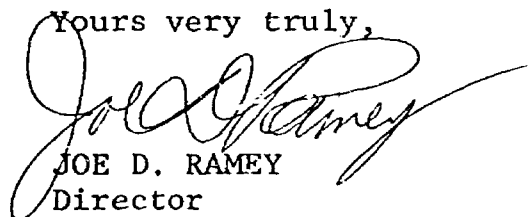
Applicant:

Phillips Petroleum Company

Dear Sir:

Enclosed herewith are two copies of the above-referenced Commission order recently entered in the subject case.

Yours very truly,


JOE D. RAMEY
Director

JDR/fd

Copy of order also sent to:

Hobbs OCC X
Artesia OCC X
Aztec OCC

Other Jason Kellahin

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

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

CASE NO. 5751
Order No. R-5282

APPLICATION OF PHILLIPS PETROLEUM
COMPANY FOR A SPECIAL ALLOWABLE,
LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on September 1, 1976, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 16th day of September, 1976, the Commission, a quorum being present, having considered the testimony, the record and the recommendations of the Examiner, 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, Phillips Petroleum Company, is the owner and operator of the U. S. Minerals Well No. 4 located in Unit O of Section 30, Township 17 South, Range 33 East, NMPM, Maljamar Grayburg-San Andres Pool, Lea County, New Mexico.

(3) That said well is offset to the North and East by water injection wells in an active waterflood project in said Maljamar Grayburg-San Andres Pool.

(4) That said well has received a response to the injection of water into the Grayburg formation in the offsetting waterflood project.

(5) That if applicant's said U. S. Minerals Well No. 4 is not permitted to produce at capacity, oil may be swept from under said U. S. Minerals Lease across lease lines onto other producing leases or onto undrilled acreage to the South.

(6) That to prevent waste and protect correlative rights, the SW/4 SE/4 of Section 30, Township 17 South, Range 33 East, NMPM, should be designated a Waterflood Buffer Zone in the Maljamar Grayburg-San Andres Pool, Lea County, New Mexico, and applicant's U. S. Minerals Well No. 4 located on said 40-acre tract should be permitted to produce at capacity.

-2-

Case No. 5751
Order No. R-5282

(7) That the subject application should be approved and that monthly buffer zone project reports should be filed with the Commission on Form C-120.

IT IS THEREFORE ORDERED:

(1) That the SW/4 SE/4 of Section 30, Township 17 South, Range 33 East, NMPM, Maljamar Grayburg-San Andres Pool, Lea County, New Mexico, is hereby designated a Waterflood Buffer Zone, and the Phillips Petroleum Company U. S. Minerals Well No. 4 located thereon is authorized an allowable equal to its ability to produce.

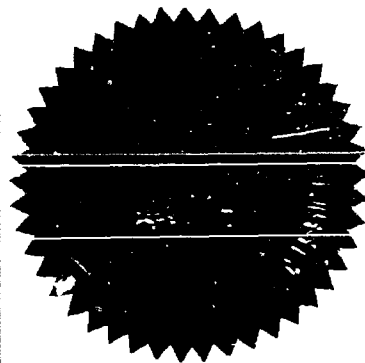
(2) That the applicant herein shall file a Buffer Zone Project report monthly with the Hobbs district office of the Commission on Commission Form C-120 setting forth thereon production data concerning the above-described well.

(3) That such Buffer Zone Project report shall be filed commencing with the month of assignment to the subject well of allowable in excess of the pool top unit allowable.

(4) That the effective date of this order shall be the date that the Cities Service Oil Company Southeast Maljamar Unit Tract 1 Well No. 4, located 1355 feet from the South line and 1135 feet from the East line of Section 30, Township 17 South, Range 33 East, NMPM, Maljamar Grayburg-San Andres Pool, Lea County, New Mexico, is assigned its initial allowable.

(5) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

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



S E A L

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

Phil R. Lucero
PHIL R. LUCERO, Chairman

Emery C. Arnold
EMERY C. ARNOLD, Member

Joe D. Ramey
JOE D. RAMEY, Member & Secretary

jr/

Dockets Nos. 25-76 and 26-76 are tentatively set for hearing on September 15 and 29, 1976. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: EXAMINER HEARING - WEDNESDAY - SEPTEMBER 1, 1976

9 A.M. - OIL CONSERVATION COMMISSION CONFERENCE ROOM,
STATE LAND OFFICE BUILDING, SANTA FE, NEW MEXICO

The following cases will be heard before Daniel S. Mutter, Examiner, or Richard L. Stamets, Alternate Examiner:

- CASE 5747: Application of Atlantic Richfield Company for a non-standard gas proration unit, unorthodox location, and simultaneous dedication, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for a previously established 185-acre non-standard Eumont gas proration unit comprising the SW/4 and SE/4 NW/4 of Section 19, Township 21 South, Range 36 East, Lea County, New Mexico, to be simultaneously dedicated to applicant's State "F" DE Wells Nos. 1 and 3, at unorthodox locations in Units E and K, respectively, of said Section 19.
- CASE 5748: Application of TERRAPET Management Corporation for an unorthodox gas well location, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of a well to be drilled at a point 990 feet from the South and West lines of Section 31, Township 14 South, Range 28 East, Buffalo Valley-Pennsylvanian Gas Pool, Chaves County, New Mexico.
- CASE 5749: Application of Southern Union Supply Company for an unorthodox gas well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Gallagher State "8" Well No. 3, proposed to be drilled at a point 660 feet from the South line and 1980 feet from the East line of Section 8, Township 17 South, Range 34 East, West Vacuum Field, Lea County, New Mexico.
- CASE 5750: Application of Cities Service Oil Company for an unorthodox location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Southeast Maljamar G-SA Unit-Tract 1 Well No. 4 to be located 1355 feet from the South line and 1135 feet from the East line of Section 30, Township 17 South, Range 33 East, Maljamar Grayburg-San Andres Pool, Lea County, New Mexico.
- CASE 5751: Application of Phillips Petroleum Company for a special allowable, Lea County, New Mexico. Applicant, in the above-styled cause, seeks a capacity allowable for its U. S. Minerals Well No. 4 located in Unit O of Section 30, Township 17 South, Range 33 East, Maljamar Grayburg-San Andres Pool, Lea County, New Mexico, said well being a direct offset to an active waterflood project.
- CASE 5752: Application of Bettis, Boyle & Stovall for a special allowable, Lea County, New Mexico. Applicant, in the above-styled cause, seeks a capacity allowable for its V. H. Justis Well No. 2 located in Unit D of Section 20, Township 25 South, Range 37 East, Jalmat Oil Pool, Lea County, New Mexico, said well being a direct offset to an active waterflood project.
- CASE 5262: (Reopened)
- In the matter of Case 5262 being reopened pursuant to the provisions of Order No. R-4822-B, which order extended the special pool rules for Southwest Media-Entrada Oil Pool, Sandoval County, New Mexico, including a provision for 160-acre spacing and proration units and a special depth bracket allowable of 750 barrels of oil per day. All interested parties may appear and show cause why said pool should not be developed on 40-acre spacing and why the special depth bracket allowable should not be rescinded.
- CASE 5737: (Continued & Readvertised)
- Application of Howard Boatright for amendment of Order No. R-5203, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks the amendment of Order No. R-5203 which authorized salt water disposal into the Delaware formation through applicant's State CS Well No. 1, located in Unit I of Section 17, Township 21 South, Range 27 East, Eddy County, New Mexico. Applicant seeks to increase the maximum injection pressure for said well from 400 psi to 800 psi, and also to amend the specified packer setting depth from 2975 feet to 2585 feet.
- CASE 5736: (Continued from August 18, 1976, Examiner Hearing)
- Application of BCO Inc. for downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks authority to commingle production from the Basin Dakota Gas Pool and Lybrook-Gallup Oil Pool and undesignated Greenhorn and Mancos production in the wellbore of its Dunn Well No. 2, located in Unit F of Section 10, Township 23 North, Range 7 West, Rio Arriba County, New Mexico.

Year End JUNE, 1976
Cum. Prod. - 80 171,202

FIELD MAIJAMAR (GRAYBURG - SAN ANDRES)
COUNTY LEA STATE N.M.

Phillips Petr. Co.

U.S. MINERALS No. 4

K&E SEMI-LOGARITHMIC 46 5373
3 CYCLES X 60 DIVISIONS MADE IN U.S.A.
KEIFFEL & ESSER CO.

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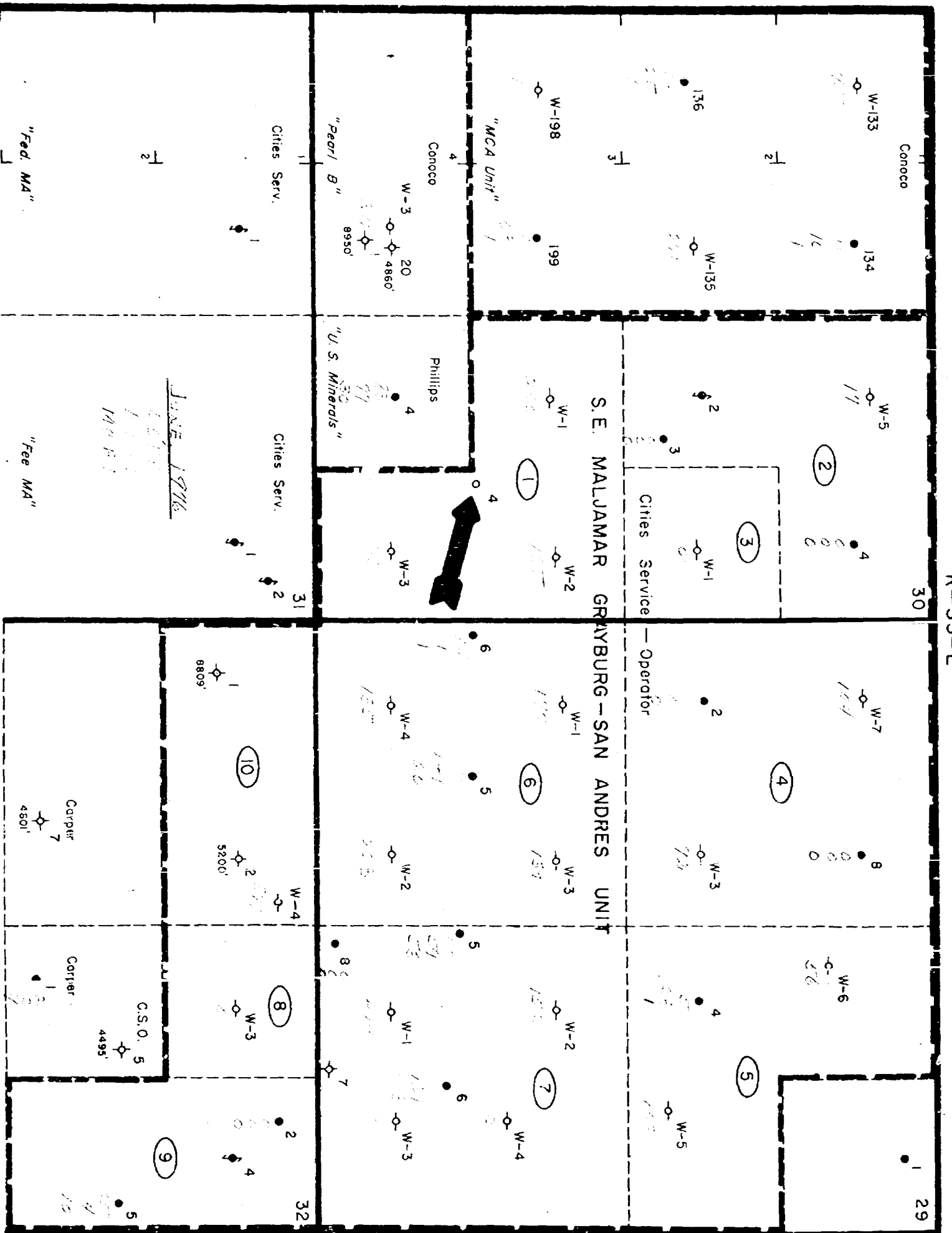
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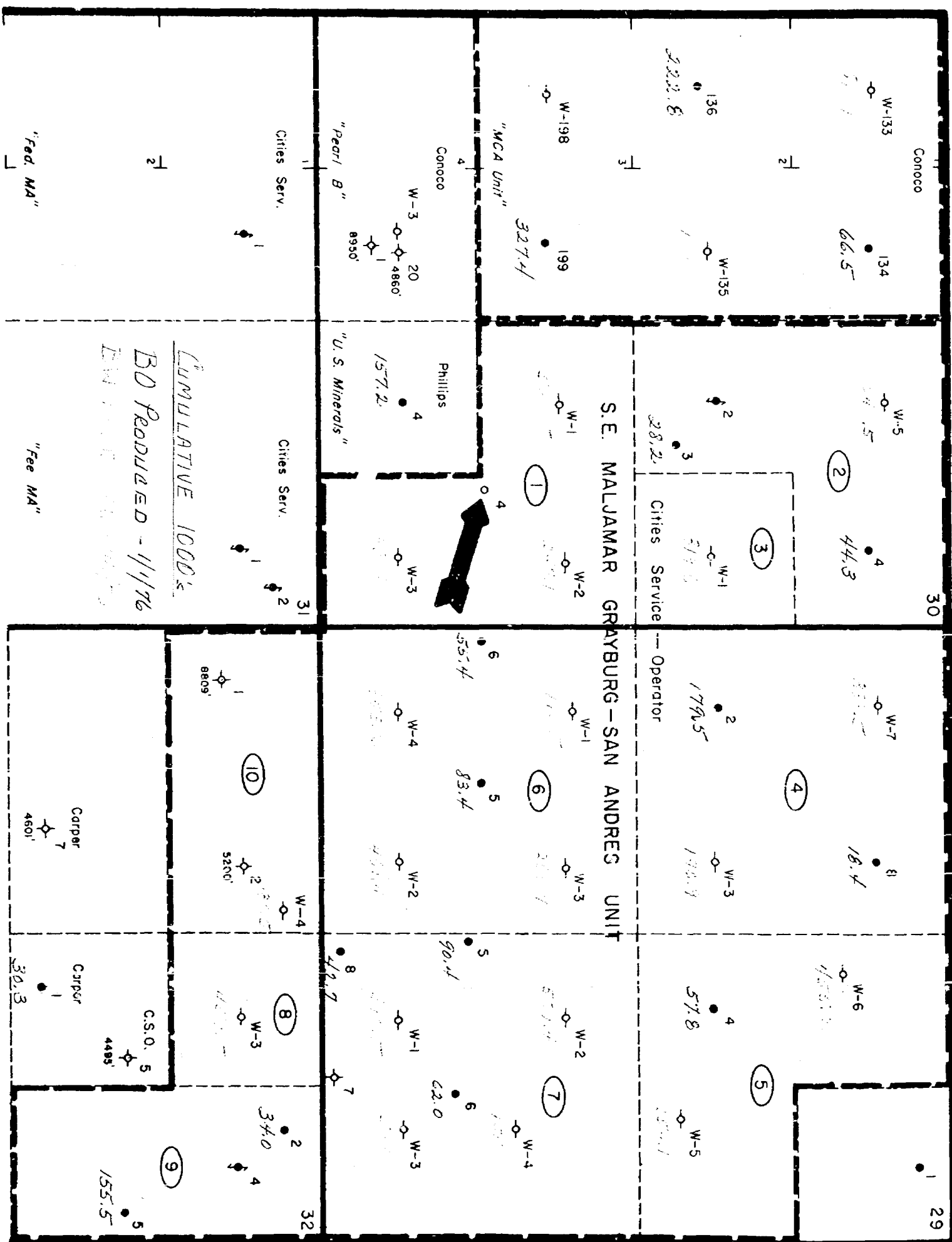
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MALJAMAR GRAYBURG-SAN ANDI
LEA CO., NEW MEXICO
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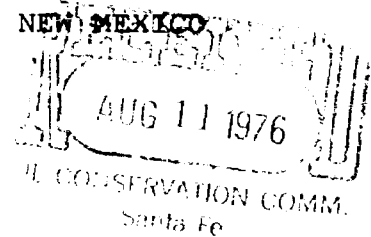
BEFORE EXAMINER NUTTER
OIL COMMISSION
EXHIBIT NO. 11
CASE NO. 1927



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BEFORE THE
OIL CONSERVATION COMMISSION OF NEW MEXICO

IN THE MATTER OF THE APPLICATION
OF PHILLIPS PETROLEUM COMPANY FOR
A CAPACITY ALLOWABLE FOR ITS
U. S. MINERALS WELL #4,
MALJAMAR GRAYBURG - SAN ANDRES
FIELD, LEA COUNTY, NEW MEXICO



A P P L I C A T I O N

COMES NOW, Phillips Petroleum Company, under the provisions of Rule 701-E-3, N.M.O.C.C. Rules and Regulations, and applies to the Oil Conservation Commission of New Mexico for an order establishing a capacity allowable for its U.S. Minerals Well #4, located in Unit O (660 feet FSL and 1930 feet FEL), Section 30, Township 17 South, Range 33 East, N.M.P.M., Maljamar Grayburg - San Andres Field, Lea County, New Mexico in support hereof Applicant would show:

1. Applicant is the owner of the above described well and lease right and is currently producing oil from said well.
2. Cities Service Oil Company is requesting before this Commission the approval of an unorthodox location for its SE Maljamar Grayburg - San Andres Unit, Tract No. 1, Well #4 to be located in Unit I (1355 feet FSL and 1135 feet FEL), Section 30, Township 17 South, Range 33 East, N.M.P.M., near the boundary between Applicant's above described well and tract and the Cities Service above described well and tract.
3. Said Cities Service well would be closer to Applicant's well and boundary than is orthodox and would tend to endanger correlative rights.
4. Since the boundary between Applicant's and Cities Service' wells is in a buffer zone of a waterflood project, granting of a capacity allowable to Applicant's well will protect correlative rights.

Applicant requests that the granting of said capacity allowable

be made contingent upon the approval of Cities Service' unorthodox location application.

Applicant further requests that the Commission combine the hearing on this application with that of the above Cities Service hearing, set for September 1, 1976, for purposes of common testimony and exhibits and because Applicant's request is contingent upon approval of Cities Service' application.

WHEREFORE, Applicant respectfully requests that the Commission set this matter for hearing before the Commission's duly appointed examiner on September 1, 1976, combined with Cities Service' unorthodox location application, and that after notice and hearing as required by law the Commission enter its order granting a capacity allowable to Applicant's U. S. Minerals Well #4, contingent upon the approval of Cities Service' unorthodox location application and for further orders as may be proper in the premises.

Respectfully submitted,

PHILLIPS PETROLEUM COMPANY

By 
DONALD G. STEVENS

P.O. Box 1797
Santa Fe, New Mexico 87501

ATTORNEY FOR APPLICANT

DRAFT

dr/

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

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

CASE NO. 5751

Order No. R- 5282

APPLICATION OF PHILLIPS
PETROLEUM COMPANY FOR A SPECIAL
ALLOWABLE, LEA COUNTY, NEW MEXICO.

W
ORDER OF THE COMMISSION

W
BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on September 1,
1976, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this day of September, 1976, the Commission,
a quorum being present, having considered the testimony, the record,
and the recommendations of the Examiner, 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, Phillips Petroleum Company, is the
owner and operator of the U. S. Minerals Well No. 4 located in
Unit O of Section 30, Township 17 South, Range 33 East, NMPM,
Maljamar Grayburg-San Andres Pool, Lea County, New Mexico.

(3) That said well is offset to the North and East by water injection wells in an active waterflood project in said Maljamar Grayburg-San Andres Pool.

(4) That said well has received a response to the injection of water into the Grayburg formation in the offsetting waterflood project.

(5) That if applicant's said U. S. Minerals Well No. 4 is not permitted to produce at capacity, oil may be swept from under said U. S. Minerals Lease across lease lines onto other producing leases or onto undrilled acreage to the South.

(6) That to prevent waste and protect correlative rights, the SW/4 SE/4 of Section 30, Township 17 South, Range 33 East, NMPM, should be designated a ~~Waterflood~~ **Buffer Zone** in the Maljamar Grayburg-San Andres Pool, Lea County, New Mexico, and applicant's **U.S. Minerals** Well No. 4 located on said 40-acre tract should be permitted to produce at capacity.

(7) That the subject application should be approved and that monthly ~~buffer zone~~ **project** reports should be filed with the Commission on Form C-120.

IT IS THEREFORE ORDERED:

(1) That the SW/4 SE/4 of Section 30, Township 17 South, Range 33 East, NMPM, Maljamar Grayburg-San Andres Pool, Lea County, New Mexico, is hereby designated a Waterflood Buffer Zone, and the Phillips Petroleum Company U. S. Minerals Well No. 4 located thereon is authorized an allowable equal to its ability to produce.

(2) That the applicant herein shall file a ~~Waterflood~~ **Buffer Zone Project** report monthly with the Hobbs District Office of the Commission on Commission Form C-120 setting forth thereon production data concerning the above-described well.

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Case No. 5751

Order No. R-

(3) That such Buffer Zone Project report shall be filed commencing with the month of assignment to the subject well of allowable in excess of the pool top unit allowable.

(4) That the effective date of this order shall be the date that the Cities Service Oil Company Southeast Maljamar Unit Tract 1 Well No. 4, located 1355 feet from the South line and 1135 feet from the East line of Section 30, Township 17 South, Range 33 East, NMPM, Maljamar Grayburg-San Andres Pool, Lea County, New Mexico, is assigned its initial allowable.

(5) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

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

Case
5571

- (2) That the applicant, Phillips Petroleum Company, is the owner and operator of the U.S. Minerals Well No 4 located in Unit 0 Section 30, Township 17 South, Range 33 East, NMPM Matjamar Wrayburg ^{San Andres} Pool, Lea County, New Mexico.
- (3) That said well is offset to the North and East by water injection wells in an active waterflood project in said Matjamar Wrayburg ^{San Andres} Pool.
- (4) That said well has received a response to the injection of water into the Wrayburg Formation in the offsetting water flood project.
- (5) That if applicant's said U.S. Minerals Well No. 4 is not permitted to produce at capacity, oil may be swept from under said U.S. Minerals Lease across lease lines onto other producing leases or onto undrilled acreage to the South.
- (6) That to prevent waste and protect correlative rights, ~~applicant's~~ the SW 1/4 SE 1/4 of Section 30, Township 17 South, Range 33 East, NMPM, ~~well no.~~ should be designated a waterflood buffer zone in the Matjamar Wrayburg ^{San Andres} Pool, Lea County, New Mexico and ^{applicant's well No 4 located in said waterflood project} should be permitted to produce at capacity.
- (7) That the subject application should be approved and that monthly Buffer Zone Project reports should be filed with the Commission on Form C-120.

IT IS THEREFORE ORDERED:

- (1) That the SW $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 30, Township 17 South, Range 33 East, NMPM, Maljamar Grayburg-San Andres Pool, Lea County, New Mexico, is hereby designated a Waterflood Buffer Zone, and the Phillips Petroleum Company U.S. Minerals Well No. 4 located thereon is authorized an allowance equal to its ability to produce.
- (2) That the applicant herein shall file a Buffer Zone Project report monthly with the House District Office of the Commission ~~setting out~~ thereon on Commission Form IC-120 setting forth thereon production data concerning the above described well.
- (3) That such Buffer Zone Project report shall be filed commencing with the month of assignment of allowance in excess of the pool ~~top~~ unit allowance to the project well.
- (4) That the effective date of this order shall be the date that the Cities Service Oil Company ~~the~~ Southeast Maljamar Unit Tract 1 Well No. 4, located 1355 feet from the South line and 1135 feet from the East line of Section 30, Township 17 South, Range 33 East, NMPM, Maljamar Grayburg-San Andres Pool, Lea County, New Mexico, is assigned its initial allowance.

(5) Jurisdiction