

Case Number

4303

Application
Transcripts.

Small Exhibits

ETC.

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SPECIALIZING IN: DEPOSITIONS, HEARINGS, STATEMENTS, EXPERT TESTIMONY, DAILY COPY, CONVENTIONS

1120 SIMMS BLDG. • P. O. BOX 1092 • PHONE 243-4491 • ALBUQUERQUE, NEW MEXICO

BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
February 4, 1970

EXAMINER HEARING

IN THE MATTER OF:

Application of El Paso Natural
Gas Company for a waterflood
project, Lea County, New
Mexico.

Case No. 4303

BEFORE: Daniel S. Nutter, Examiner

TRANSCRIPT OF HEARING

MR. NUTTER: The Hearing will come to order. Next Case 4303.

MR. HATCH: Application of El Paso Natural Gas Company for a waterflood project, Lea County, New Mexico.

MR. MEYER: If it please the Commission, I would like to call as a witness for El Paso Natural Gas Company Mr. A. J. Dudenhoeffer.

(Witness Sworn.)

A. J. DUDENHOEFFER

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

DIRECT EXAMINATION

BY MR. MEYER:

Q Will you please state your name?

A A. J. Dudenhoeffer.

MR. NUTTER: Will you spell that, please?

THE WITNESS: D-u-d-e-n-h-o-e-f-f-e-r.

MR. NUTTER: A. J.?

THE WITNESS: A. J.

MR. NUTTER: Thank you.

Q (By Mr. Meyer) Now, where do you reside, Mr. Dudenhoeffer?

A In Midland, Texas.

Q And by whom are you employed?

A El Paso Natural Gas Company.

Q How long have you been so employed?

A I have been employed by El Paso for sixteen years.

Q And what is your present job title?

A Division production engineer in the Permian Basin for El Paso Natural Gas Company.

Q Have you ever testified before this Commission on any prior occasion?

A I have not.

MR. MEYER: If it please the Commission, I would like to qualify this witness.

MR. NUTTER: The witness is qualified to testify.

MR. MEYER: Thank you.

Q (By Mr. Meyer) Mr. Dudenhoeffer, we have an application from El Paso Natural Gas Company for approval to institute a waterflood project in the Moberly area of the Rhodes-Yates pool.

I hand you El Paso's Exhibit Number One which has been marked for identification by the Clerk

and request that you explain to the Commission what is shown on the plat with respect to Moberly Well "C" No. Six, "C" No. Ten, "C" No. Nine; as to their location and their affect on this application.

A Exhibit Number One is a plat showing the Moberly lease outlined in the heavy black line compromising Section 21 and Section 20 of Township 26 South, Range 37 East. The plat also reflects other wells within a two mile radius of this particular area. These wells have been color coded to reflect the pools from which they are producing from.

That color code is marked on the index on the plat. It is proposed that El Paso inject water into "C" Six well located in Unit "K" of Section 21; the "C" No. Nine well located in Unit "M" of 21; and the "C" Ten well located in Unit "I" of Section 20 of Township 26 South, Range 37 East.

It also proposes that the "C" No. One in Unit "F," "C" Five in Unit "G," "C" Seven in Unit "L, and the "C" Eleven -- no, "C" Eight in Unit "N" of Section 21 will be utilized as recovery wells.

Also, it would "B" Seven located in Unit "H" and "C" No. Eleven of Unit "P" in Section 20 will

be utilized as recovery wells.

Now, there is a dry hole abandoned location shown in Unit "J". We intend to redrill this hole from top to bottom and complete it as a producer in this area.

Down in Unit "O" there is an abandoned gas well. It is proposed at some future date as we get response from this flood that we may re-enter that well and convert it to an injection well for water.

Also in Unit "E" of Section 21 is a Jal Matt Yates gas well. It is proposed at probably some future date that this well will be re-entered, deepened to lower Yates-Seven Rivers level, a liner ran and cemented and selectively perforated and water injected into this well also.

Q Are there other water floods in this area, Mr. Dudenhoeffer?

A Yes. More recent application by Texaco incorporated in Section 22 and Section 27, is a recent application by Texaco in November, I think, of 1969.

Q Are you acquainted with the results of that application?

A Yes. That was approved. I don't know for

sure what the order was approving it, the application, but I did notice it was approved.

Q By that question, I mean, Mr. Dudenhoeffer, was the waterflood a successful waterflood as far as you know?

A They have a flood in existence in Unit 20 -- in Section 26, where they have or had two wells utilizing injection water and that has been a very successful flood to my knowledge.

Q What is the water rate to be injected into the injection well in the El Paso location?

A We want to inject five hundred barrels per day per well for a total of fifteen hundred barrels a day.

Q And what would be the approximate pressure of that water?

A We anticipate that the injection pressure would be approxiamtely five to eight hundred pounds PSI.

Q And where would the source of that water arrive? Where would you get the water?

A Our water will be piped in from the Jal

Number One Plant located approximately four miles to the northwest, and it is located in Section Four of Township 26 South, Range 36 East. It will be plant waste water.

Q Would you like to comment on the quality of that water?

A Yes, sir. That is a -- has a total hardness of approximately eleven hundred sixty and the total dissolved solids of twenty-nine hundred part per million.

Q Now, Mr. Dudenhoeffer, I hand you El Paso Exhibit Number Two, being a structural map. Would you care to comment on it for the Commission?

A Yes.

MR. NUTTER: Mr. Dudenhoeffer, what was the location of that plant again, Section Four of Township what?

THE WITNESS: Township 26 South, Range 36 East.

MR. NUTTER: Range 36 East?

THE WITNESS: Yes, sir.

MR. NUTTER: Thank you.

A (Continuing) The Exhibit Number Two is a structural contour map on the top of the Yates

formation through the Rhodes- Yates oil pool.
This is primarily to show the anticlinal structure
which is trending northwest to southeast with
limits of production towards the west of the Moberly
lease.

Our wells are shown in blue are the recovery
wells and the red wells are the injection wells.

Q (By Mr. Mayer) Mr. Dudenhoeffer, I
hand you El Paso Exhibit Number Three being a cross
section and diagrammatic sketch of the typical injection
well. Will you please comment on this exhibit?

A Exhibit Number Three is a diagrammatic
sketch of the Moberly "C" Nine water injection well.

It may be seen that we have eight and
five inch casings set at thirteen hundred and thirty-
five feet cemented with two hundred sacks of cement
and the cement was circulated to the surface.

We have a seven inch production string
set at three thousand fifty feet cemented with two
hundred sacks with the calculated top of the cement
at sixteen hundred feet.

We have an open hole interval at three
thousand and fifty feet with a total depth of thirty-
three hundred and ten feet; this being in the lower

Yates and Seven Rivers formation.

We want to set a four and a half inch slotted liner from three thousand and thirty feet to thirty-three hundred and ten feet. We will then run two and three-eighths internal plastic coated tubing set on a packer at three thousand feet inside the seven inch casing with the back side of the casing tubing annulus loaded with inhibited water. Injected water then will be pumped down the inside of the two and three-eighths tube.

Q Is it your opinion that injection of water into this formation, that it is conducive to such injection for waterflooding purposes as to permeability and porosity?

A Yes.

Q I hand you El Paso Exhibit Number Four, being an electrical log of the well. Would you please comment on this exhibit?

A Exhibit Number Four is an electrical log of the Moberly "C" Number Nine.

We have marked on there where the top of the Yates interval to be two thousand nine hundred fifty feet and to show the seven inch casing set at three thousand

and fifty feet. At the top of the Seven Rivers is thirty-two hundred and twenty feet, and the total depth is thirty-three hundred and ten feet.

Q Will you please refer to El Paso Exhibit Number Five and comment on this exhibit, please.

A Exhibit Number Five is the two other proposed water injection wells on the Moberly lease. "C" Number Six located in Unit "K" of Section 21, Township 26, Range 37 East.

We have production casing set at --- seven inch, set at three thousand sixty-eight feet, cemented with two hundred sacks and the calculated top of the cement one thousand six hundred and thirty feet. Total depth is three thousand two hundred ninety-eight feet and it's on an open hole interval and the Yates is from three thousand and sixty-eight to thirty-two ninety-eight.

The "C" Number Ten located in Unit "I" of Section 20, Township 26 South, Range 37 East, has eight and a quarter inch surface casing set at twelve hundred feet; production casing is seven inch set at three thousand one hundred fifty feet. It was cemented with two hundred sacks; calculated top of the cement is one

thousand eight hundred sixty-four feet; total depth of the hole is three thousand three hundred and two feet. It is open hole then from three thousand one hundred and fifty feet to thirty-three hundred and two feet.

We plan to equip these wells mechanically the same as shown in the diagrammatic sketch in Exhibit Four.

MR. NUTTER: So both of these wells will have the slotted liner in them also?

THE WITNESS: Yes, sir.

Q (By Mr. Meyer) Then in general you can say that these wells are consistent in characteristics with that introduced in Exhibit Three?

A Yes, sir.

Q I hand you El Paso Exhibit Number Six, being a performance curve of gas well ratios and some projections. Would you please comment on Exhibit Number Six?

A Exhibit Number Six is a production performance curve of the El Paso-Moberly lease. The lines -- or the green line represents a yearly average gas oil ratio. The red line represents the yearly oil production

and it may be pointed that in 1969 the yearly oil production was twelve thousand eight hundred and sixty-three barrels or an average of four barrels per day per producing well.

Q Is all of the acreage on which this application affected Federal acreage?

A Yes, sir; this is Federal acreage.

Q I offer you El Paso Exhibit Number Seven and request that you comment on this.

A Exhibit Seven is a letter addressed to El Paso Natural Gas Company from the United States Department of Interior; and in essence it says it approves of the waterflood project that we proposed subject to Commission -- the New Mexico Oil Conservation Commission approval.

Q Now, as I understand El Paso's application, they are also requesting administrative approval now of a procedure whereby the project can be expanded in the future to include additional lands and injection wells in the area. And they may be developed or later be required to complete an efficient injection pattern.

Will you please explain the necessity for

this at this time?

A Yes, sir. It is -- in referring to Exhibit One we do not plan to expand this thing outside the heavy black lines as outlined on Exhibit One.

What we think may happen is, we will want to go into the abandoned well in Unit "O" re-enter that hole and convert it to a water injection well if we get favorable response from the other well.

Also the possibility of re-entering the "C" Number Three located in Unit "E" which is not a Jal Matt Yates gas well and converting it to an injection well -- water injection well.

Q Were all of the exhibits offered by El Paso Numbered One through Six prepared by you or under your supervision?

A Yes, they were.

Q Of course, Exhibit Number Seven being a letter from the United States Department of the Interior.

A Yes.

MR. MEYER: I would like to move at this time if it please the Commission, the admission of El Paso's Exhibits One through Seven.

MR. NUTTER: El Paso's Exhibits One through Seven will be admitted.

(Whereupon, El Paso's Exhibits One, Two, Three, Four, Five, Six and Seven were admitted in evidence.)

MR. MEYER: Is there anything else that you wish to add, Mr. Dudenhoeffer, in support of this application at this time?

THE WITNESS: No, sir; I do not.

MR. MEYER: I refer the witness to the Commission.

MR. NUTTER: Mr. Dudenhoeffer, looking at your Exhibit Number Six, this production decline curve, the production from this lease declined until 1959 and '60 and then it increased. What was the reason for that increase since that time?

THE WITNESS: In 1960 we went through several of the wells and cleaned out the open hole units and installed pumping units. And this was a gradual program; it wasn't done all at once -- one or two wells per year; and this reflects the increase obtained by it.

MR. NUTTER: Over the last several years

you have had a steady increase, and this has been a work-over program you conducted on the wells?

THE WITNESS: Yes, sir.

MR. NUTTER: Even at that the present rate of production, you say this twelve thousand barrels per year calculates out to an average of four barrels per well per day?

THE WITNESS: Yes. That's correct.

MR. NUTTER: Now, with respect to Exhibit Number One, Mr. Dudenhoeffer, your Moberly "C" lease comprises that portion of the area within the black line in Section 21 and, I presume, just that portion of Section 20 being the east half of the southeast quarter of Section 20. Is that correct?

THE WITNESS: That's the east half of the southeast quarter; yes, sir.

MR. NUTTER: And then the Moberly "B" lease comprises that southeast of the northeast of Section 20?

THE WITNESS: Yes, sir. I might elaborate on that a little bit.

There was a different royalty owner interest between the "B" and "C" lease. But as of January 1, 1970,

we have secured the approval of the royalty interest concern and it is now the same within the entire tract involved.

MR. NUTTER: So all of your ownership throughout the entire area outlined in the heavy black line is identical throughout?

THE WITNESS: Yes, sir.

MR. NUTTER: And there won't be any problem in transferring allowables around within this project area?

THE WITNESS: No, sir. That's the reason we did that.

MR. MEYER: I would like to ask one more question of Mr. Dudenhoeffer.

Is it your opinion that this will not adversely affect correlative rights or involve any waste?

THE WITNESS: No, sir. It will not affect correlative rights or involve waste.

MR. NUTTER: Now, with respect to Exhibit Five, Mr. Dudenhoeffer, on well Number "C" Six, you state the surface casing is unknown. What is unknown, whether there is or just where it's set?

THE WITNESS: It's unknown as to where it's set. There is surface casing in there, and I would just anticipate since the other wells that we have in this area have surface casing set at twelve hundred feet that it should be somewhere around twelve hundred feet.

The reason why this is unknown is we purchased this property from Troop Flarity in 1956 and if the records -- at the time the wells were drilled in 1940 to '44 were incomplete and we just don't have any records, that information.

MR. NUTTER: But in any event, that well as well as the other injection wells will be equipped with plastic coated tubing set in a packer and injection would be down that tubing?

THE WITNESS: Yes, sir.

MR. NUTTER: Any further questions of this witness? He may be excused.

Do you have anything further, Mr. Meyer?

MR. MEYER: No, sir. That concludes the testimony of El Paso Case.

MR. NUTTER: Does anyone have anything they wish to offer in Case 4303?

We will take the case under advisement
and call Case 2925.

I N D E X

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STATE OF NEW MEXICO)
)
 COUNTY OF BERNALILLO) ss

I, CA FENLEY, Court Reporter in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached transcript of Hearing before the New Mexico Oil Conservation Commission was reported by me; and that the same is a true and correct record of the said proceedings to the best of my knowledge, skill and ability.



CA FENLEY - COURT REPORTER

I do hereby certify that the foregoing
 transcript is a true and correct record of the
 hearing held at Case No. **7303**
 on the **24** day of **July**, 19**70**

 New Mexico Oil Conservation Commission

OIL CONSERVATION COMMISSION

P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

February 10, 1970

Mr. Robert A. Meyer
Office of General Counsel
El Paso Natural Gas Company
Post Office Box 1492
El Paso, Texas 79999

Dear Sir:

Enclosed herewith is Commission Order No. R-3919, entered in Case No. 4303, approving the El Paso Moberly Rhodes Waterflood Project.

Injection is to be through the three authorized water injection wells, each of which shall be equipped with plastic-lined tubing set in a packer located within 100 feet of the casing shoe. The casing-tubing annulus shall be loaded with a corrosion-inhibited fluid and equipped with a pressure gauge at the surface.

As to allowable, our calculations indicate that when all of the authorized injection wells have been placed on active injection, the maximum allowable which this project will be eligible to receive under the provisions of Rule 701-E-3 is 378 barrels per day when the Southeast New Mexico normal unit allowable is 42 barrels per day or less. Upon conversion of the wells in Units E and O of Section 21 to water injection and the completion of a producing well in Unit J of Section 21, this maximum will be increased to 504 barrels per day.

Please report any error in this calculated maximum allowable immediately, both to the Santa Fe office of the Commission and the appropriate district proration office.

In order that the allowable assigned to the project may be kept current, and in order that the operator may fully benefit from the allowable provisions of Rule 701, it behooves him to promptly notify both of the aforementioned Commission offices by letter of any change

OIL CONSERVATION COMMISSION

P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

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Mr. Robert A. Meyer
El Paso Natural Gas Company
Post Office Box 1492
El Paso, Texas

February 10, 1970

C in the status of wells in the project area, i.e., when active injection commences, when additional injection or producing wells are drilled, when additional wells are acquired through purchase or unitization, when wells have received a response to water injection, etc.

O Your cooperation in keeping the Commission so informed as to the status of the project and the wells therein will be appreciated.

Very truly yours,

A. L. PORTER, Jr.
Secretary-Director

P ALP/DSH/ir

Enclosure

Y cc: Oil Conservation Commission
Hobbs, New Mexico

Mr. D. E. Gray
State Engineer Office
Santa Fe, New Mexico

**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. 4303
Order No. R-3919**

**APPLICATION OF EL PASO NATURAL GAS COMPANY
FOR A WATERFLOOD PROJECT, LEA COUNTY, NEW
MEXICO.**

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on February 4, 1970, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 9th day of February, 1970, 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, El Paso Natural Gas Company, seeks permission to institute a waterflood project in the Rhodes (Yates-Seven Rivers) Pool by the injection of water into the Yates-Seven Rivers formation through its Moberly "C" Wells Nos. 6, 9, and 10, located, respectively, in Units K and M of Section 21 and Unit I of Section 20, Township 26 South, Range 37 East, NMPM, Lea County, New Mexico.

(3) That the applicant further seeks an administrative procedure whereby said project could be expanded to include additional injection wells in the area of the said project as may be necessary in order to complete an efficient injection pattern; that said administrative procedure should provide for administrative approval for conversion to water injection in

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CASE No. 4303

Order No. R-3919

exception to the well response requirements of Rule 701 E-5 of the Commission Rules and Regulations.

(4) That the wells in the project area are in an advanced state of depletion and should properly be classified as "stripper" wells.

(5) That the proposed waterflood project should result in the recovery of otherwise unrecoverable oil, thereby preventing waste.

(6) That the subject application should be approved and the project should be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations; provided however, that the showing of well response as required by Rule 701 E-5 shall not be necessary before obtaining administrative approval for the conversion of additional wells to water injection.

IT IS THEREFORE ORDERED:

(1) That the applicant, El Paso Natural Gas Company, is hereby authorized to institute a waterflood project in the Rhodes (Yates-Seven Rivers) Pool by the injection of water into the Yates-Seven Rivers formation through the following-described wells in Township 26 South, Range 37 East, NMPN, Lea County, New Mexico:

Moberly "C" Well No. 6, located in Unit K
of Section 21;

Moberly "C" Well No. 9, located in Unit M
of Section 21; and

Moberly "C" Well No. 10, located in Unit I
of Section 20.

(2) That the subject waterflood project is hereby designated the El Paso Moberly Rhodes Waterflood Project and shall be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations;

PROVIDED HOWEVER, that the Secretary-Director of the Commission may approve expansion of the El Paso Moberly Rhodes Waterflood

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CASE No. 4303
Order No. R-3919

Project to include such additional injection wells in the area of said project as may be necessary to complete an efficient water injection pattern; that the showing of well response as required by Rule 701 E-5 shall not be necessary before obtaining administrative approval for the conversion of additional wells to water injection.

(3) That monthly progress reports of the waterflood project herein authorized shall be submitted to the Commission in accordance with Rules 704 and 1120 of the Commission Rules and Regulations.

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

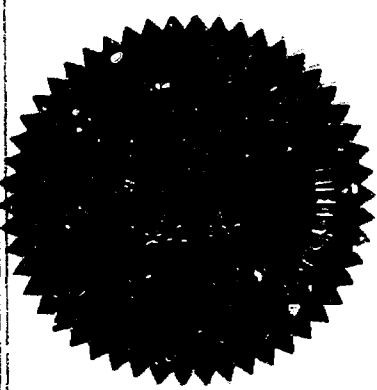
DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION


DAVID F. CARGO, Chairman


ALEX J. ARMIÑO, Member


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



esr/

DOCKET: EXAMINER HEARING - WEDNESDAY - FEBRUARY 4, 1970

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. Nutter, Examiner, or
Elvis A. Utz, Alternate Examiner:

CASE 4302: Application of El Paso Natural Gas Company for suspension and amendment of certain provisions of Rules 14(A), 15(A), and 15(B), of the General Rules and Regulations for the prorated gas pools of Northwestern New Mexico. Applicant, in the above-styled cause, seeks suspension for a period of one year from February 1, 1970, of those provisions of Rules 14(A), 15(A), and 15(B) of the General Rules and Regulations for the prorated gas pools of Northwestern New Mexico promulgated by Order No. R-1670, as amended, that provide for the cancellation of unproduced allowable and the shutting-in of over-produced wells.

CASE 4303: Application of El Paso Natural Gas Company for a waterflood project, Lea County, New Mexico. Applicant, in the above-described cause, seeks authority to institute a waterflood project in the Rhodes (Yates-Seven Rivers) Pool by the injection of water into the Yates-Seven Rivers formation through its Moberly "C" Wells Nos. 6, 9, and 10, located respectively, in Units K and M of Section 21 and Unit I of Section 20, Township 26 South, Range 37 East, Lea County, New Mexico. Applicant further seeks a procedure whereby said project may be expanded administratively without a showing of well response.

CASE 2925: (Reopened)

In the matter of Case 2925 being reopened pursuant to the provisions of Order No. R-2598, which order established 640-acre spacing units for the South Hope-Strawn Gas Pool, now designated the South Hope-Pennsylvanian Gas Pool, Eddy County, New Mexico, for a period of one year after first pipeline connection in the pool. All interested persons may appear and show cause why said pool should not be developed on 160-acre spacing units.

CASE 4263: (Continued from the December 17, 1969 Examiner Hearing)

Application of Wynn & Brooks for an unorthodox gas well location, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Federal "E" Well No. 3, to be located 590 feet from the South line and 1590 feet from the West line of Section 13, Township 27 North, Range 8 West, Blanco-Mesaverde and Basin-Dakota Pools, San Juan County, New Mexico.

CASE 4264: (Continued from the December 17, 1969 Examiner Hearing)

Application of Wynn & Brooks for an unorthodox gas well location, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Federal "J" Well No. 1, to be located 2390 feet from the South line and 2410 feet from the East line of Section 11, Township 27 North, Range 8 West, Blanco-Mesaverde and Basin-Dakota Pools, San Juan County, New Mexico.

CASE 4297: (Continued from the January 21, 1970 Examiner Hearing)

Application of Anadarko Production Company for lease commingling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to commingle Langlie-Mattix production from the Langlie-Mattix Penrose Sand Unit Tracts 2, 16 and 28, comprising, respectively, the W/2 NW/4 of Section 23, the SW/4 SW/4 of Section 23, and the S/2 NW/4 and SW/4 of Section 28, Township 22 South, Range 37 East, Lea County, New Mexico, with Langlie-Mattix production from other tracts in said unit, allocating the production to each of said Tracts 2, 16 and 28 on the basis of monthly well tests.

CASE 4304: Application of Continental Oil Company for an unorthodox oil well location and amendment of Order No. R-2403, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to drill its MCA Unit Well No. 251 as a producing oil well at an unorthodox location 1100 feet from the South line and 2600 feet from the West line of Section 21, Township 17 South, Range 32 East, as an infill well in the MCA Unit Project Area, Maljamar Grayburg-San Andres Pool, Lea County, New Mexico. Applicant further seeks the amendment of Order No. R-2403 to permit the adoption of a procedure whereby additional producing wells and injection wells at unorthodox locations in said project may be approved administratively.

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Examiner Hearing
February 4, 1970

Docket No. 4-70

CASE 4301: (Continued from the January 21, 1970 Examiner Hearing)
In the matter of the hearing called by the Oil Conservation Commission on its own motion to permit Robert T. Smith and all other interested persons to appear and show cause why the following Robert T. Smith wells located in Section 32, Township 20 North, Range 9 West, McKinley County, New Mexico, should not be plugged and abandoned with a Commission-approved plugging program:

State Well No. 1 located 487 feet from the North line and 990 feet from the East line;

State "A" Well No. 1 located 400 feet from the North line and 990 feet from the East line;

State Well No. 3 located 330 feet from the North line and 330 feet from the West line;

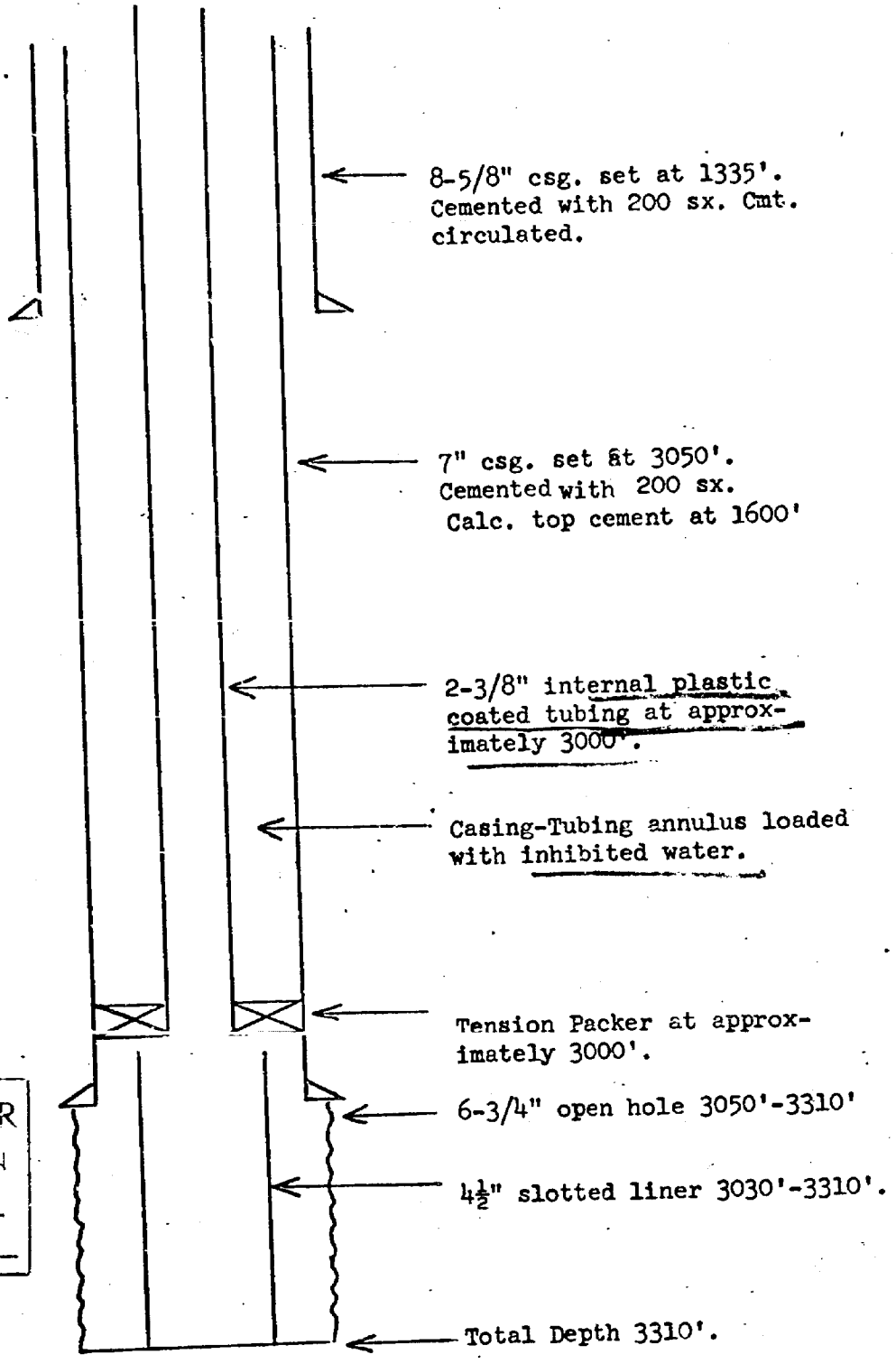
State Well No. 6 located 220 feet from the North line and 1485 feet from the East line;

State Well No. 6-Y located approximately 5 feet West of the above-described Well No. 6;

State Well No. 8 located 1155 feet from the North line and 2475 feet from the East line.

Date: 1/19/70

BEFORE EXAMINER NUTTER
 CONSERVATION COMMISSION
 EXHIBIT NO. 3
 CASE NO. 4303



EL PASO NATURAL GAS COMPANY
 MOBERLY NO. "C" 9 WELL
 660 FS & WL Section 21
 T-26-S R-37-E
 LEA COUNTY, NEW MEXICO
 RHODES POOL

DIAGRAMMATIC SKETCH OF TYPICAL INJECTION WELL

EL PASO NATURAL GAS COMPANY
 PROPOSED INJECTION WELLS
 MOBERLY LEASE
LEA COUNTY, NEW MEXICO

Surface Casing
 Production
 Cement Sacks
 Calc. top of cement
 Total Depth
 Open Hole

C-6
 Unit K, Sec. 21
T-26-S, R-37-E

Unknown
 7" @ 3068'
 200
 1630'
 3298'
 230'

C-10
 Unit I, Sec. 20
T-26-S, R-37-E

8 $\frac{1}{2}$ " @ 1200'
 7" @ 3150'
 200
 1864'
 3302'
 152'

BEFORE EXAMINER NUTTER
 U.S. DEPARTMENT OF THE INTERIOR
 BUREAU OF LAND MANAGEMENT
 EXHIBIT NO. 5
4303

AJD/kg
 1/29/70



UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
P. O. Box 1157
Hobbs, New Mexico 88240

November 26, 1969

El Paso Natural Gas Company
P. O. Box 1492
El Paso, Texas 79999

Attention: Mr. T. W. Bittick

Gentlemen:

Your letter of November 20 requests approval to institute a waterflood of the Yates and Seven Rivers formations in sec. 21, T. 26 S., R. 37 E., Lea County, New Mexico, lease Las Cruces 030181(c).

The plan you propose for waterflooding the Yates and Seven Rivers formations on lease Las Cruces 030181(c) is satisfactory to this office and is hereby approved.

Appropriate notices to convert existing wells to water injection should be submitted for approval prior to commencing the work. Duplicate copies of a monthly progress report should be submitted showing the volume of water injected and average pressures for each injection well and monthly oil and water production for the producing wells in the project area.

Approval of the project by the New Mexico Oil Conservation Commission is also required.

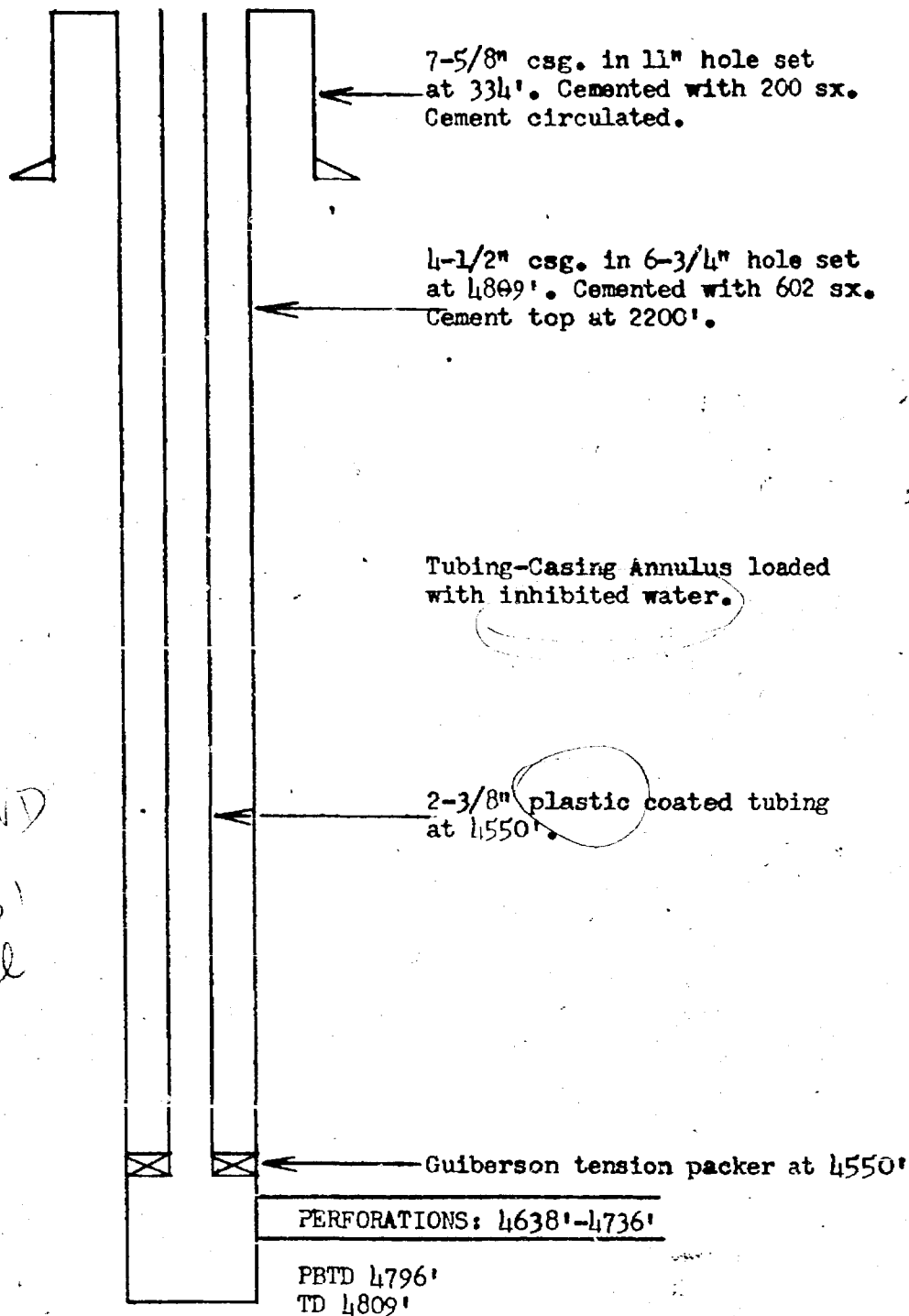
Sincerely yours,


Arthur R. Brown
District Engineer



BEFORE EXAMINER NUTTER	
OIL CONSERVATION COM.	
EXHIBIT NO.	7
CASE NO.	4303

500 BWD
400.75'
Initial



DIAGRAMMATIC SKETCH OF TYPICAL INJECTION WELL
TEXACO INC.
COTTON DRAW UNIT WELL NO. 13
PADUCA-DELAWARE POOL
LEA COUNTY, NEW MEXICO

El Paso Natural Gas Company

JAN 14 1970

El Paso, Texas 79999

January 13, 1970

Exec 11303

New Mexico Oil Conservation Commission
Post Office Box 2088
Santa Fe, New Mexico

Attention: Mr. A. L. Porter, Jr.

Gentlemen:

It is respectfully requested that a hearing be scheduled at Santa Fe, New Mexico February 4, 1970 to consider the application of El Paso Natural Gas Company for approval to institute a water flood project in the Moberly Area of the Rhodes Yates Pool in the area shown on the attached plat by the injection of water into the Yates-Seven Rivers Formations through three injection wells, the Moberly C #6, Moberly C #10 and Moberly C #9. The Moberly C #6 and the Moberly C #9 are located in Units K and M, Section 21, Township 26 South, Range 37 East, NMPM, Lea County, New Mexico. The Moberly C #10 is located in Unit I, Section 20, Township 26 South, Range 37 East, NMPM, Lea County, New Mexico.

It is proposed that water will be injected at a rate of 500 barrels of water per day per well at an initial surface injection pressure of approximately 600 psig. The source water for the flood will be obtained from residue water resulting from operations at EPNG's Jal No. 1 Plant. It is further proposed that the following:

Moberly C #1, Moberly C #5, Moberly C #7 and the Moberly C #8, all located in Section 21, Township 26 South, Range 37 East, and the Moberly C #11 and Moberly B #7, both located in Section 20, Township 26 South, Range 37 East, be utilized as oil recovery wells. We plan to redrill the Moberly C #4 in Unit J, Section 21, Township 26 South, Range 37 East, and restore that location to production.

El Paso Natural Gas Company further seeks an approval for an administrative procedure whereby the said project could be expanded to include additional lands and injection wells in the area of the said project as may be necessary in order to complete an efficient injection pattern; and that said administrative procedure should also provide for administrative approval for conversion to water injection in exception to the well response requirement of Rule 701-E-5 of the Commission Rules and Regulations.

All of the area involved is federal acreage and a copy of this letter requesting a hearing is being sent to the United States Geological Survey and to each of the offset operators as listed on Page 2.

DOCKET MARKED

Date 1-23-70

New Mexico Oil Conservation Commission
Attention: Mr. A. L. Porter
January 13, 1970
Page Two

Attached is a letter from the United States Department of Interior, Geological Survey, Hobbs, New Mexico, granting approval of the project subject to the New Mexico Oil Conservation Commission approval.

Very truly yours,

Robert A. Meyer

Robert A. Meyer
Office of General Counsel

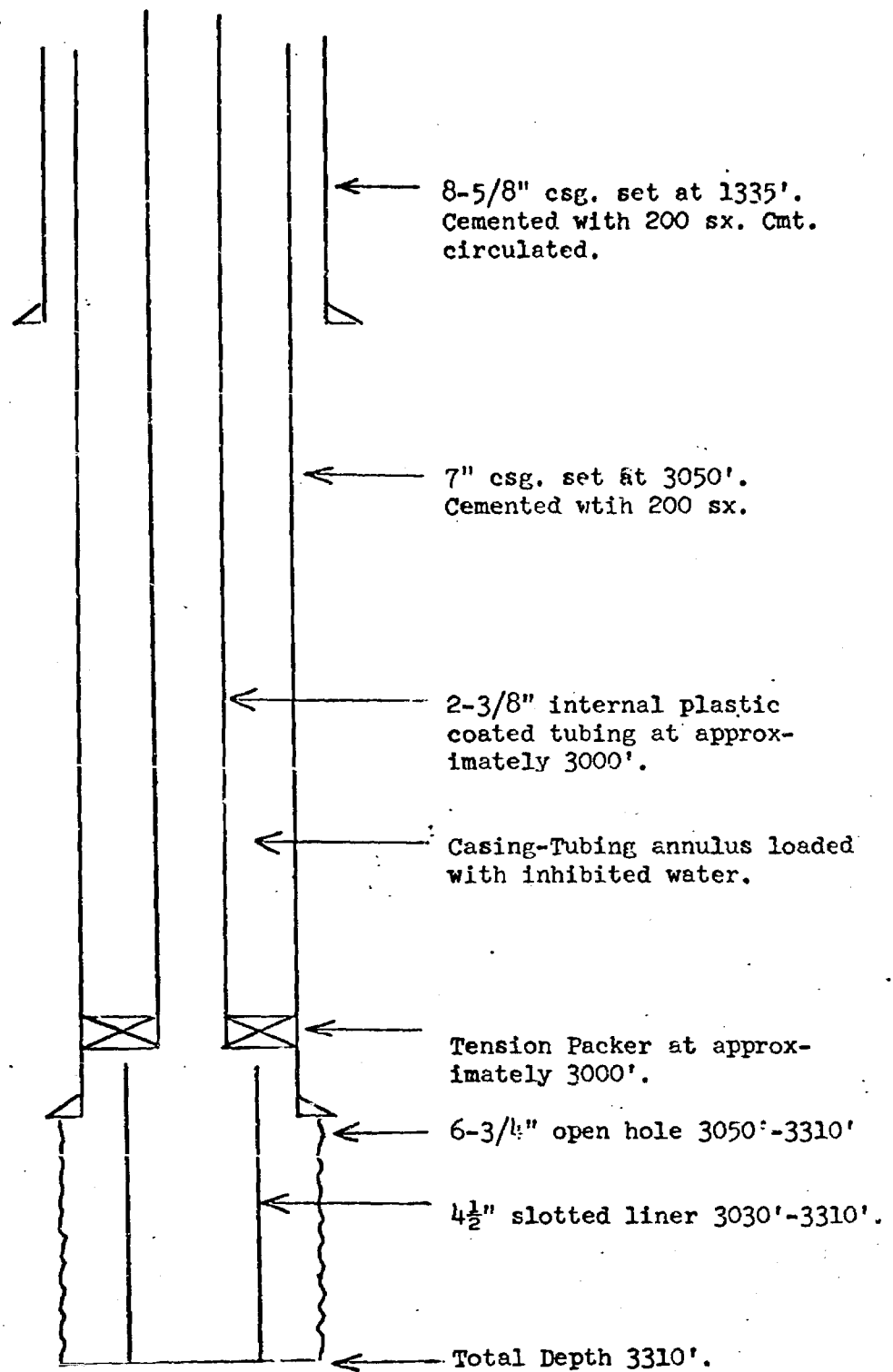
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attachment

cc: U. S. Department of Interior
Geological Survey
P. O. Box 1157
Hobbs, New Mexico 88240

Texas Pacific Oil Company
1700 One Main Place
Dallas, Texas 75250

Oran C. & Frances L. Dale
P. O. Box 2227
Roswell, New Mexico 88201

Texaco, Inc.
P. O. Box 3109
Midland, Texas 79701



EL PASO NATURAL GAS COMPANY
MOBERLY NO. "C" 9 WELL
660 FS & WL Section 21
T-26-S R-37-E
LEA COUNTY, NEW MEXICO
RHODES POOL

DIAGRAMMATIC SKETCH OF TYPICAL INJECTION WELL

Chas 4303

Mr. Robert A. Meyer
Office of General Counsel
El Paso Natural Gas Company
Post Office Box 1492
El Paso, Texas 79999

Dear Sir:

Enclosed herewith is Commission Order No. R-3919, entered in Case No. 4303, approving the El Paso Natural Gas Company Waterflood Project.

Injection is to be through the three authorized water injection wells, each of which shall be equipped with plastic lined tubing set in a ~~proper~~ ~~located~~ ~~in the casing~~ ~~within 100 feet of the casing shoe~~. The casing-tubing annulus shall be loaded with corrosion-inhibited fluid and equipped with a pressure gauge as to allowable, our calculations indicate that when all of the authorized injection wells have been placed on active injection, the maximum allowable which this project will be eligible to receive under the provisions of Rule 701-E-3 is 378 barrels per day when the Southeast New Mexico normal unit allowable is 42 barrels per day or less.

Please report any error in this calculated maximum allowable immediately, both to the Santa Fe office of the Commission and the appropriate district proration office.

In order that the allowable assigned to the project may be kept current, and in order that the operator may fully benefit from the allowable provisions of Rule 701, it behooves him to promptly notify both of the aforementioned Commission offices by letter of any change in the status of wells in the project area, i.e., when active injection commences, when additional injection or producing wells are drilled, when additional wells are acquired through purchase or unitization, when wells have received a response to water injection, etc.

Your cooperation in keeping the Commission so informed as to the status of the project and the wells therein will be appreciated.

Very truly yours,

A. L. PORTER, Jr.
Secretary-Director

cc: OCC: Hobbs x
Artesia
Aztec

USGS

Mr. Frank Kirby, State Engineer Office, Santa Fe, New Mexico
Mr. D. E. Gray,

upon conversion of the wells in Units E and O of Section 21 to water injection and the completion of a producing well in Unit J of Section 21, this maximum will be increased to 504 barrels per day.

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. 4303

Order No. R- 3919

APPLICATION OF EL PASO NATURAL GAS COMPANY
FOR A WATERFLOOD PROJECT, LEA COUNTY,
NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on February 4, 1967,
at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this _____ day of February, 1967, 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, El Paso Natural Gas Company,
seeks permission to institute a waterflood project in the _____
Rhodes (Yates-
~~Unit Area~~ Seven Rivers) Pool by
the injection of water into the Yates-Seven Rivers formation
through its Moberly "C" Wells Nos. 6, 9, and 10, located
respectively, in Units K and M of Section 21 and Unit I of
Section 20, Township 26 South, Range 37 East, NMPM, Lea County,
New Mexico.

(3) That the applicant further seeks an administrative
procedure whereby said project could be expanded to include
additional ~~injection~~ injection wells in the area of the said
project as may be necessary in order to complete an efficient
injection pattern; that said administrative procedure should
provide for administrative approval for conversion to water
injection in exception to the well response requirements of
Rule 701 E-5 of the Commission Rules and Regulations.

(SEE UNDER)

waste.

(6) That the subject application should be approved and the project should be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations; provided however, that the showing of well response as required by Rule 701 E-5 shall not be necessary before obtaining administrative approval for the conversion of additional wells to water injection.

IT IS THEREFORE ORDERED:

(1) That the applicant, El Paso Natural Gas Company,
is hereby authorized to institute a waterflood project in the
Rhodes (Yates-
===== Unit Area Seven Rivers) Pool
by the injection of water into the Yates-Seven Rivers formation
through the following-described wells in Township 26
~~North~~ South, Range 37 ~~West~~ East, NMPM, Lea
County, New Mexico:

Moberly "C" Well No. 6, located in Unit K
of Section 21;

Moberly "C" Well No. 9, located in Unit M
of Section 21; and

Moberly "C" Well No. 10, located in Unit I
of Section 20.

(2) That the subject waterflood project is hereby designated
the El Paso Moberly Rhodes Waterflood Project and shall
be governed by the provisions of Rules 701, 702, and 703 of the
Commission Rules and Regulations;

PROVIDED HOWEVER, that the Secretary-Director of the Commis-
sion may approve expansion of the El Paso Moberly Rhodes
Waterflood Project to include such additional ~~lands and~~ injection
wells in the area of said project as may be necessary to complete
an efficient water injection pattern; that the showing of well
response as required by Rule 701 E-5 shall not be necessary before
obtaining administrative approval for the conversion of additional
wells to water injection.

(SEE UNDER)

entry of such further orders as the Commission may deem necessary.

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