

CASE 3933: Application of TEXACO  
FOR A WATERFLOOD PROJECT, LEA  
COUNTY, NEW MEXICO.

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Case Number

3933

Application

Transcripts

Small Exhibits

ETC.

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

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BEFORE THE  
NEW MEXICO OIL CONSERVATION COMMISSION  
Santa Fe, New Mexico  
November 12, 1968

IN THE MATTER OF:

Application of Texaco, Inc., for a  
waterflood project, Lea County,  
New Mexico

Case No. 3933

BEFORE: D. S. NUTTER

TRANSCRIPT OF HEARING

MR. NUTTER: Call Case 3933.

MR. HATCH: Application of Texaco, Inc., for a waterflood project, Lea County, New Mexico.

MR. KELLY: Booker Kelly of Gilbert, White, Koch and Kelly. I have one witness and ask that he be sworn.

(Witness sworn.)

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

\* \* \* \* \*

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

DIRECT EXAMINATION

BY MR. KELLY:

Q Would you state your name, position and employer, please?

A My name is Dale McCarter, with Texaco, Incorporated, Hobbs District, Hobbs, New Mexico. I am Assistant District Engineer in charge of the Reservoir Section.

Q Now, refer to what has been marked as Exhibit No. 1, the plat of the area. Would you explain briefly what Texaco seeks by this application?

A Texaco seeks permission to institute a pilot waterflood project by injection of water into its C. H. Lockhart Federal NCT Well No. 8 located in Unit P of Section 18, Township 22

South, Range 38 East. Also further seek a procedure whereby this pilot may be expanded without showing response and that the project be governed by Rule 701 through 703.

Q Would you locate the proposed injection well?

A On Exhibit 1, there's a red arrow pointed to the well, it's in Unit P of Section 19.

Q And who are the offset operators?

A The offset operators are American Petrofina, Gulf, Humble, Mabe Royalties, Mark Production and Penrose Production Company.

Q They have all been notified of this application?

A They were notified by a copy of our hearing request, yes, sir.

Q What is the current status of the injection well?

A The well is presently a single completion in the Drinkard formation. It is averaging about three barrels of oil per day and about a half a barrel of water per day.

Q Now, Texaco has a lease that covers the east half of Section 18, the east half of Section 18 and the north half of the northwest quarter, is that right?

A That is correct. That is known as our C. H. Lockhart Tract 1, Federal Lease.

Q Do you have an exhibit that shows the performance

curves and production history on the subject well and lease?

A Yes, this is marked Exhibit No. 2. This shows the production parameters for the lease on the Drinkard zone including a gas-oil ratio, oil production, number of wells and the water production. The current oil production on the lease is approximately 4.3 barrels of oil per day per well, or around 850 to 900 barrels of oil per month. The current lease gas-oil ratio is approximately 6,000 to 1. There are seven producing wells, water production for the lease is about four barrels of water per day.

Q Do you have any wells that anywhere approach their allowable?

A No, sir. I think the maximum is about 10 barrels of oil per day.

Q In your opinion, are the Drinkard wells on this lease in the advanced stage of depletion?

A Definitely yes, sir.

Q How many Drinkard wells do you have on the lease?

A There are seven Drinkard wells on the lease.

Q What is the drive mechanism of this reservoir?

A The drive mechanism is solution gas.

Q Now, what will the source of your water be that you will be injecting?

A The source of water will be that water produced in conjunction with oil and/or gas production from our C. H. Lockhard Federal NCT 1 Lease, our Dolly Ballinger lease, our W. L. Nix Lease, our A. H. Blineberry, NCT 1 Federal Lease, from the South Paddock Pool, from the Blineberry oil and gas pools, from the Tubb Oil and Gas Pools and from the Drinkard Pool.

Q Are all those leases shown on Exhibit 1?

A Yes, sir, there is a portion of the A. H. Blineberry NCT 1 Lease which is not shown, which is, that would be in, well, this is one of those townships that hits the State line so that the numbers are a little bit awry. It's immediately southeast of the Section 20, it's a 320 acre lease being the west half of the section.

Q Do you know whether this is State, Federal or fee land?

A All these leases are Federal Lands.

Q What will be the amount of water you will be injecting initially in this well?

A Initially the current water production is approximately 110 barrels of water per day.

Q Do you think that will go up?

A Yes, I do.

Q How about your pressure?

A At this pressure, we are estimating the maximum of 300 pounds. This is just an educated estimate of what it would take to inject this water.

Q Now, referring to what has been marked Exhibit No. 3, the diagrammatic sketch, would you explain the proposed installation to the Examiner?

A Exhibit No. 3 shows the surface casing, 13 and 3/8ths inch set at 398 feet, the cement circulated to the surface; the 8 and 5/8ths inch intermediate string set at 2901 feet and cement circulated to the surface. The production string 5 and 1/2 set at 7200 feet, and the top of the cement is at 3130 feet. The proposed installation is to install a string of 2 and 3/8ths-inch internally plastic-coated tubing set at approximately 5750 feet on a packer, the casing tubing annulus to be loaded with inhibited water. The perforated interval is indicated immediately below the packer setting depth.

Q You said you were going to have inhibited fluid in the annulus?

A Yes, and a pressure gauge.

Q Is there any fresh water in this area?

A Yes, the Ogallala is fresh water bearing. It is covered by both strings, the surface and the intermediate,

which was circulated, the cement was circulated.

Q Are there any producing zones above your perforations?

A Yes, the Paddock and the Blinebry and the Tubb zones produce above the Drinkard zone in this area.

Q In your opinion, will this installation protect any fresh water zones or any other oil producing zones from migration of your injected fluid?

A Yes, I believe it will.

Q Now, going back to Exhibit No. 1, the plat, the perforations that you will be injecting this water through in your well No. 8, are they similar or the same as the Drinkard zone in any of the other wells that adjoin?

A Yes, they are all identical.

Q Do you have an estimate of secondary recovery potential if this flood is successful?

A I would estimate that a maximum of 75% of primary would be recovered due to the type of pay we are dealing with which is nothing but a bunch of stringers located within the Drinkard zone. I would, just based upon the primary performance, this is probably around 65,000 barrels of oil. If it is successful, we will expand it to pilot.

Q Do you feel that injecting water into this well would have any adverse affect on any of the adjoining wells?

A At the present time, no, I do not think it would. There's always a possibility of water, premature water break-through, especially because of the stratified nature of the reservoir.

Q Would you say as a probability that any effect of an adjoining wells would be beneficial rather than harmful?

A I would say yes.

Q In your opinion, would the granting of this application prevent waste by allowing you to recover oil that would otherwise be left in place?

A Yes, and also serve as a salt water disposal source for our water that is produced in this area of the field.

Q Were Exhibits 1 through 4 prepared by you or under your supervision?

A We haven't admitted Exhibit 4 which is just a log of the well.

Q Exhibit 4 is the log?

A Log of the well.

Q Do you have anything to say on that?

A No.

Q Does that show the perforations?

A No, they were indicated on Exhibit 3, which is the diagrammatic sketch. All of these exhibits were prepared

either by me or under my supervision.

MR. KELLY: I would move Texaco's Exhibits 1 through 4 be admitted into evidence at this time.

MR. NUTTER: Texaco's Exhibits 1 through 4 will be admitted in evidence.

(Whereupon, Applicant's Exhibits  
1 through 4 admitted in evidence.)

MR. KELLY: That's all I have on direct.

CROSS EXAMINATION

BY MR. NUTTER:

Q I notice from your plat that the Lockhart No. 3 immediately to the west has been abandoned in the Drinkard?

A Yes.

Q Do you have any plans for the present for reactivating that well in the Drinkard?

A At the present time, no. If you remember correctly, this is the well that we recently received approval to commingle the Blinbry and Paddock zone. The Drinkard, as pointed out at that hearing was lost to us because of junk in the hole. If response is received, we will probably make a further attempt to try to recomplete that well in the Drinkard zone.

Q It would depend on whether you have response in the other wells around this injection well?

A Yes, the same is true of the Blinebry No. 9, the immediate south location which has been plugged back to the Blinebry zone from the Drinkard.

Q Since we only have --

A We have three wells which will be in the porject area, that would be Wells No. 4, 9 and 8.

Q Are any secondary recovery operations being carried on in the Drinkard?

A In the Drinkard Pool, I think it's about five and a half to six miles to the northwest of this map, Gulf has a Central Drinkard Unit which has a pilot which if I'm not mistaken, is a double-five spot, which I believe has been injected since last August or September and which has not shown any response to date.

Q Now, you have four perforated intervals that are spread over approximately 300 gross feet there --

A Yes, sir.

Q -- do you plan to try to selectively inject into any of those --

A No, sir.

Q -- or inject in all of them --

A Inject in all of them. We will probably run an injectivity profile on all of the wells within 6 months, this

is normal procedure, and Texaco policy on injection wells.

Q To see where the water is going?

A To see where the water is going. There is one zone of high permeability or relatively high permeability because there's not any high permeability in this formation of the field. I believe this is called the Andrews Zone of the Drinkard, the lowermost zone of the Drinkard which is productive in the southeast portion of the field. We suspect that this is where the water will go.

MR. NUTTER: Any other questions of Mr. McCarter?

He may be excused.

(Witness excused)

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

MR. KELLY: Nothing further.

MR. NUTTER: Does anyone have anything further they wish to cover in Case 3933? We will take the case under advisement.

I N D E X

WITNESS		PAGE
<u>DALE McCARTER</u>		
Direct Examination by Mr. Kelly		2
Cross Examination by Mr. Nutter		9
EXHIBITS	MARKED	OFFERED AND ADMITTED
Applicant's 1 through 4	2	9

STATE OF NEW MEXICO     )  
                                   ) ss  
 COUNTY OF BERNALILLO    )

I, ADA DEARNLEY, Court Reporter, in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Proceedings before the New Mexico Oil Conservation Commission was reported by me, and that the same is a true and correct record to the best of my knowledge, skill and ability.

WITNESS my hand this 25th day of November, 1968.

*Ada Dearnley*  
 Ada Dearnley  
 I do hereby certify that the foregoing is  
 a complete record of the proceedings in  
 the Principal hearing of Case No. 3933  
 heard by me on 11/22, 1968.  
*[Signature]*  
 \_\_\_\_\_, Examiner  
 New Mexico Oil Conservation Commission

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. 3933  
Order No. R-3565

APPLICATION OF TEXACO INC.  
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 November 12, 1968, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 19th day of November, 1968, 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, Texaco Inc., seeks permission to institute a waterflood project in the Drinkard Pool by the injection of water into the Drinkard formation through its C. H. Lockhart Federal NCT-1 Well No. 8, located in Unit P of Section 18, Township 22 South, Range 38 East, NMPM, Lea County, New Mexico.

(3) That the applicant further seeks an administrative procedure whereby 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; 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.

-2-

CASE No. 3933  
Order No. R-3565

(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, Texaco Inc., is hereby authorized to institute a waterflood project in the Drinkard Pool by the injection of water into the Drinkard formation through its C. H. Lockhart Federal NCT-1 Well No. 8, located in Unit P of Section 18, Township 22 South, Range 38 East, NMPM, Lea County, New Mexico.

(2) That the subject waterflood project is hereby designated the Texaco Drinkard Lockhart 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 Texaco Drinkard Lockhart 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.

(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.

-3-

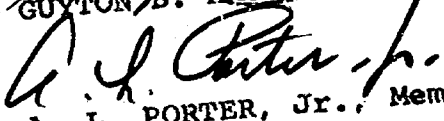
CASE No. 3933  
Order No. R-3565

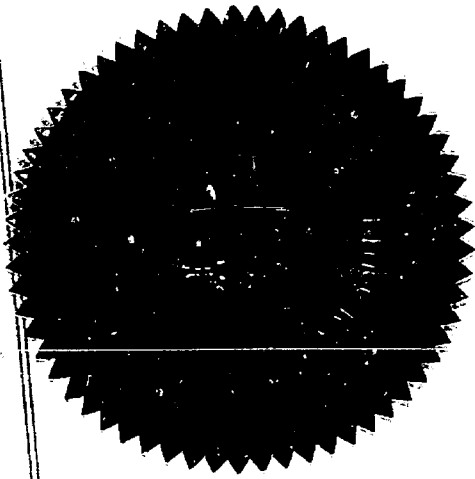
DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION

  
DAVID F. CARGO, Chairman

  
GUYTON B. NAYS, Member

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



esr/

OIL CONSERVATION COMMISSION

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

November 19, 1968

C  
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P  
Y  
Mr. Booker Kelly  
White, Gilbert, Koch & Kelly  
Attorneys at Law  
Post Office Box 787  
Santa Fe, New Mexico

Dear Sir:

Enclosed herewith is Commission Order No. R-3565, entered in Case No. 3933, approving the Texaco Drinkard Lockhart Waterflood Project.

Injection is to be through the one authorized water injection well, which shall be equipped with a string of plastic-coated tubing set in a packer at approximately 6750 feet. The casing-tubing annulus shall be loaded with an inhibited fluid and equipped with a pressure gauge to facilitate detection of leakage in the casing, tubing or packer.

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 223 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.

OIL CONSERVATION COMMISSION

P. O. BOX 2088

-2-

SANTA FE, NEW MEXICO 87501

Mr. Booker Kelly  
White, Gilbert, Koch & Kelly  
Attorneys at Law  
Post Office Box 797  
Santa Fe, New Mexico

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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

ALP/DSN/ir  
Enclosure

cc: Oil Conservation Commission  
Hobbs, New Mexico

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

ROUGH DRAFT FOR WATERFLOOD LETTERS

Mr. Booker Kelly  
White, Gilbert, Koch & Kelly  
Attorneys at Law  
Post Office Box 787  
Santa Fe, New Mexico  
Dear Sir:

Enclosed herewith Commission Order No. R-3565, entered in Case No. 3933, approving the Texas Drunkard Rockport Waterflood Project.

*Injection is to be through the one authorized water injection well, which shall be equipped with a string of plastic-coated tubing set in a pocket at approximately 6750 feet. The casing-tubing annulus shall be loaded with an inhibited fluid and equipped with a pressure gauge to facilitate detection of leakage in the casing, tubing or pocket*

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

DOCKET: EXAMINER HEARING - TUESDAY - NOVEMBER 12, 1968

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 3927: Application of Gulf Oil Corporation for an unorthodox oil well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to drill a producing oil well at an unorthodox location 5 feet from the North line and 1,315 feet from the West line of Section 33, Township 19 South, Range 35 East, as an infill well in the West Pearl Queen Unit Waterflood Project, Pearl-Queen Pool, Lea County, New Mexico.

CASE 3928: Application of Jake L. Hamon for the creation of a new oil pool and for special pool rules, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new Devonian oil pool for its State "K-33" Well No. 1 located 1980 feet from the South and West lines of Section 30, Township 16 South, Range 36 East, Lea County, New Mexico, and for the promulgation of special rules therefor including a provision for 80-acre proration units.

CASE 3929: Application of Leonard Latch for three waterflood projects, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute three waterflood projects by the injection of water into the Yates formation through five wells on his Saunders A, B, and Travis leases located in Sections 12 and 13 of Township 17 South, Range 27 East, Empire (Yates-Seven Rivers) Pool, Eddy County, New Mexico.

CASE 3930: Application of Pan American Petroleum Corporation for a dual completion and water injection, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dually complete its Meyers "B" Federal Well No. 4 located in Unit E of Section 21, Township 24 South, Range 37 East, Lea County, New Mexico, in such a manner as to permit the production of gas from the perforated interval 2950 feet to 3090 feet, Jalmat Gas Pool, and the injection of water for secondary recovery purposes into the Seven Rivers-Queen formations, Langlie-Mattix Pool, in the open-hole interval from 3295 feet to 3650 feet through parallel strings of tubing.

CASE 3931: Application of Pan American Petroleum Corporation for salt water disposal, Roosevelt County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the San Andres formation in the interval from 4239 feet to 4389 feet in its Farrell Federal Well No. 10 located in Unit F of Section 28, Township 7 South, Range 33 East, and in

November 12, 1968  
Examiner Hearing

-2-

Docket No. 33-68

(Case 3931 continued)

the interval from 4402 to 4422 feet in its State "DF" Well No. 1 located in Unit I of Section 25, Township 7 South, Range 33 East, Chaveroo-San Andres Pool, Roosevelt County, New Mexico.

CASE 3932:

Application of Pan American Petroleum Corporation for down-hole commingling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to commingle production from the Justis-Blinbry and Justis-Fusselman Pools in the wellbore of its State "AJ" Well No. 6 located in Unit M of Section 30, Township 25 South, Range 38 East, Lea County, New Mexico, with the provision that no more than one single allowable will be produced from said well.

CASE 3933:

Application of Texaco, Inc., for a waterflood project, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a pilot waterflood project by the injection of water into the Drinkard formation through its C. H. Lockhart Federal NCT Well No. 3 located in Unit P of Section 18, Township 22 South, Range 38 East, Drinkard Pool, Lea County, New Mexico. Applicant further seeks a procedure whereby said project may be expanded administratively without a showing of a well response.

CASE 3934:

Application of Texaco Inc., for a waterflood project, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project by the injection of water into the Drinkard formation through the Drinkard string of its multiple completed (tubingless) V. M. Henderson Well No. 8 located in Unit E of Section 30, Township 21 South, Range 37 East, Drinkard Pool, Lea County, New Mexico.

CASE 3935:

Application of Sinclair Oil Corporation for a waterflood project, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a pilot waterflood project by injection of water into the Yates and Seven Rivers formations through its B Davis Well No. 1 located 330 feet from the South and West lines of Section 34, Township 23 South, Range 36 East, Jalmat Pool, Lea County, New Mexico.

November 12, 1968  
Examiner Hearing

-3-

Docket No. 33-68

- CASE 3936: Application of Tenneco Oil Company for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Yates and Seven Rivers formations in the perforated interval from approximately 2920 feet to 3134 feet in its E. J. Wells Well No. 2 located in Unit G of Section 12, Township 25 South, Range 36 East, Jalmat Pool, Lea County, New Mexico.
- CASE 3937: Application of Anadarko Production Company for an amendment to Order No. R-2977, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks the amendment of Order No. R-2977, as corrected by Order No. R-2977-A, which authorized a cooperative waterflood project in the Square Lake Pool, Eddy County, New Mexico, to delete the water injection well previously authorized to be drilled 2630 feet from the South line and 2650 feet from the East line of Section 31, Township 16 South, Range 31 East, and to authorize for water injection its Grier Federal Well No. 6 located 1980 feet from the South and East lines of said Section 31.
- CASE 3938: Application of Aztec Oil & Gas Company for compulsory pooling and a non-standard proration unit, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Pictured Cliffs formation underlying Lots 6, 7, NE/4 SW/4, and SE/4 SW/4 of Section 6, Township 29 North, Range 10 West, Aztec-Pictured Cliffs Gas Pool, San Juan County, New Mexico. Said non-standard unit to be dedicated to a well to be drilled 1830 feet from the South line and 1530 feet from the West line of said Section 6. Also to be considered will be the costs of drilling said well, a charge for the risk involved, a provision for the allocation of actual operating costs, and the establishment of charges for supervision of said well.
- CASE 3939: Application of Aztec Oil & Gas Company for four unorthodox gas well locations, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks approval of unorthodox Blanco-Mesaverde Gas Pool locations for four wells located as follows:

SAN JUAN COUNTY, NEW MEXICO

Township 30 North, Range 11 West

Hampton Well No. 4 - 1,140 feet from the West line  
and 970 feet from the North line  
of Section 13

November 12, 1968

Examiner Hearing

-4-

Docket No. 33-68

(Case 3939 continued)

Township 31 North, Range 12 West

Richardson Well No. 7 - 1,584 feet from the East line  
and 1,621 feet from the South line  
of Section 15

East Well No. 10      1,770 feet from the North line  
and 790 feet from the West line of  
Section 26

East Well No. 8      790 feet from the South and East  
lines of Section 26.

CASE 3940:      Application of Shell Oil Company for an amendment to Order No. R-2808, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the amendment of Order No. R-2808 to permit the dedication of a non-standard proration unit authorized therein to its Livingston Wells Nos. 7 and 2 located in Units V and W, respectively, of Section 3, Township 21 South, Range 37 East, Tubb Gas Pool, Lea County, New Mexico. Applicant further seeks authority to produce the allowable assigned to said unit from either of the aforesaid wells in any proportion.

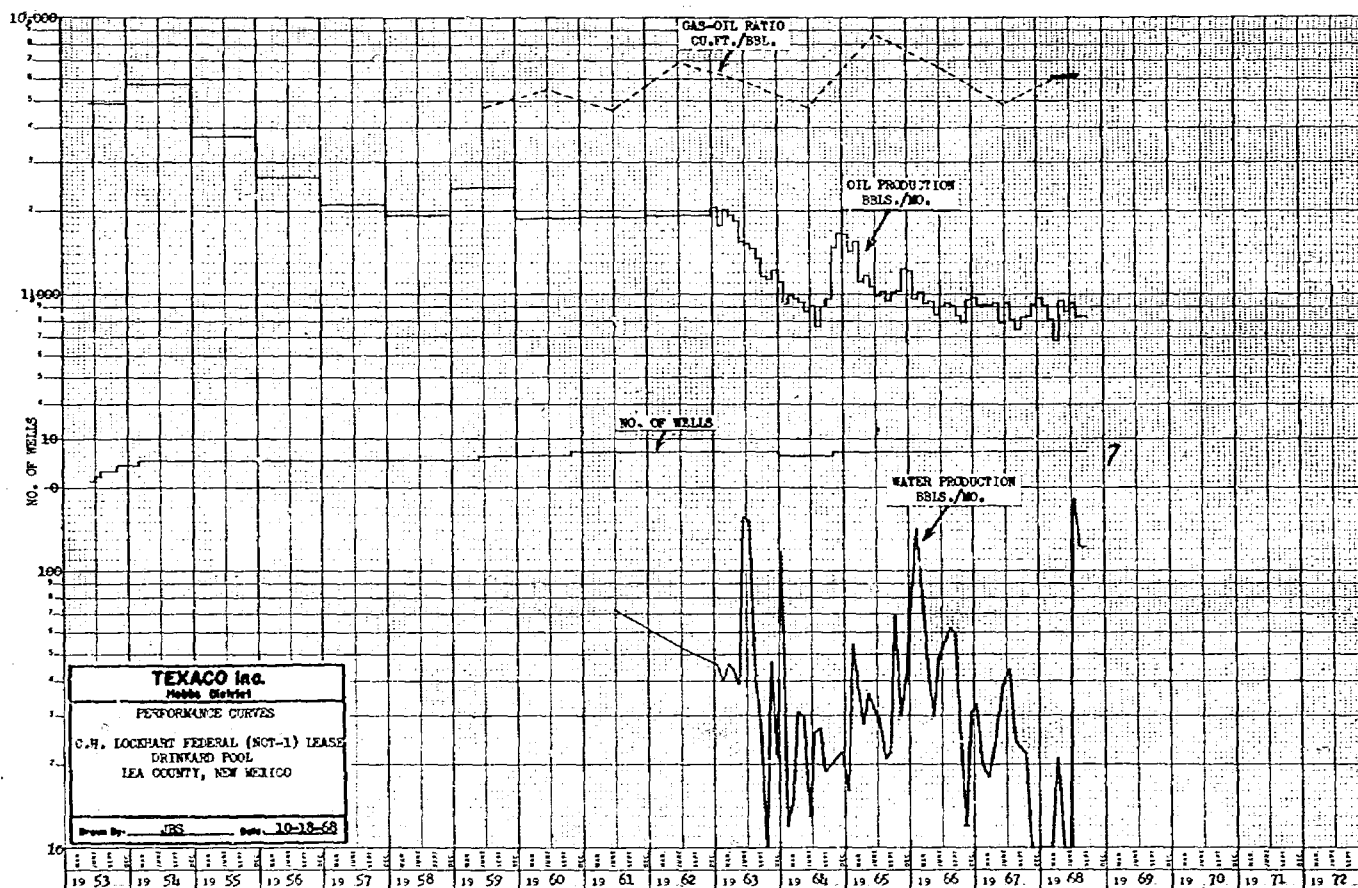
CASE 3941:      Application of Agua, Inc., for salt water disposal, Eddy County, New Mexico. Applicant, in the above-styled cause, proposes to dispose of produced salt water into the San Andres formation in the open-hole interval between the casing shoe set at 2050 feet and a cement plug at 5400 feet after cleaning out and acidizing the well between 2050 feet and 3600 feet in its Empire-Abo SWD Well No. 01, formerly the Humble Federal Empire-Abo Well No. 3, located in Unit O of Section 1, Township 18 South, Range 27 East, Empire-Abo Field, Eddy County, New Mexico.

CASE 3942:      Application of Cities Service Oil Company for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Yates and Seven Rivers formations in the perforated interval from approximately 3790 feet to 3834 feet in its Closson "B" Well No. 18 located in Unit M of Section 19, Township 22 South, Range 36 East, Jalmat Pool, Lea County, New Mexico.

November 12, 1968  
Examiner Hearing  
-5-

Docket No. 33-68

- CASE 3943: Application of Continental Oil Company for a dual completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dually complete its Lynn A-28 Well No. 5, located in Unit A of Section 28, Township 23 South, Range 36 East, Lea County, New Mexico, in such a manner as to produce gas from the Yates formation of the Jalmat Gas Pool through the casing-tubing annulus and to dispose of produced salt water through tubing into the Seven Rivers formation of said pool in the interval from 3340 to 3374 feet.
- CASE 3944: Application of Sun Oil Company for a pressure maintenance project, Roosevelt County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a pressure maintenance project in its James McFarland Lease by the injection of water into the San Andres formation through its James McFarland Well No. 4 located in the NW/4 SW/4 of Section 20, Township 7 South, Range 33 East, Chaveroo-San Andres Pool, Roosevelt County, New Mexico. Applicant further seeks the promulgation of special rules to govern operation of said pressure maintenance project.
- CASE 3945: Application of Mobil Oil Corporation for lease commingling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to commingle Vacuum Grayburg-San Andres production from its State "G" lease comprising the W/2 NE/4 and SE/4 NE/4 of Section 24, Township 17 South, Range 34 East, Lea County, New Mexico, with Vacuum Grayburg-San Andres production from that portion of its Bridges State lease comprising the W/2 of said Section 24, allocating the production to each lease on the basis of monthly well tests.



well inject  
110 BOPD  
initially  
max press 300 psi

BEFORE EXAMINER NUTTER  
OIL CONSERVATION COMMISSION  
EXHIBIT NO. 2  
CASE NO. 3933

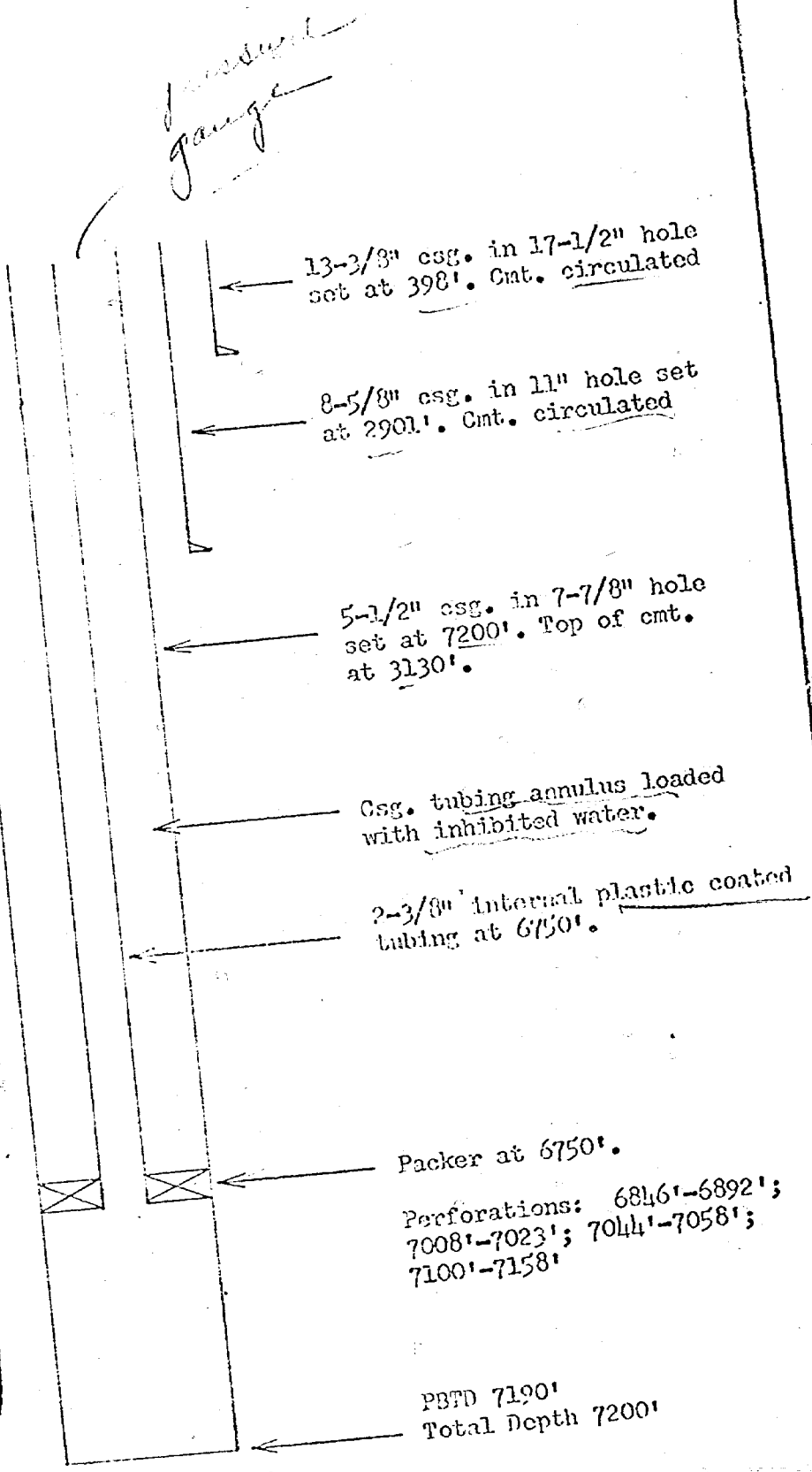
Wells from Lockhart }  
Phinley }  
Bollinger }  
Phinley  
S. Paddock  
Tuba  
Drinkard

leave from  
4.3 BOPD / well  
leave with good  
4 BOPD  
leave BOR  
about 6000  
Soln gas drive

*Ogallala  
water  
protected  
by surface  
intermediate*

*3000'  
also  
in this  
area* { *Red  
P.  
7th*

**BEFORE EXAMINER NUTTER**  
OIL CONSERVATION COMMISSION  
*Copy* EXHIBIT NO. 3  
CASE NO. 3932



TEXACO INCORPORATED  
Schematic Diagram  
Proposed Water Injection Completion  
C.H. LOCKHART FEDERAL (NCT-1) NO. 8  
DRINKARD POOL  
IEA COUNTY, NEW MEXICO



PETROLEUM PRODUCTS

PRODUCING DEPARTMENT  
UNITED STATES  
MIDLAND DIVISION  
DARRELL SMITH  
DIVISION MANAGER

October 23, 1968

TEXACO INC.  
P. O. BOX 3109  
MIDLAND, TEXAS 79701

HEARING REQUEST  
DRINKARD OIL POOL  
LEA COUNTY, NEW MEXICO

*Case 3933*

Oil Conservation Commission  
P. O. Box 2088  
Santa Fe, New Mexico

Gentlemen:

It is respectfully requested that an examiner hearing be scheduled in Santa Fe, New Mexico on November 12, 1968 to consider the application of Texaco Inc. for an order permitting pilot water-flood operations on Texaco's C. H. Lockhart Federal NCT-1 Lease in the Drinkard Oil Pool in Lea County, New Mexico. Authority will be sought to permit the conversion of Texaco's C. H. Lockhart Federal NCT-1 Well No. 8 from production to water injection service and authority will be sought to provide for administrative approval for expansion of water injection facilities by the conversion of additional wells to water injection service without the necessity for showing response from injection operations in offsetting wells. The proposed injection well is located in Unit P, Section 18, T-22-S, R-38-E, in Lea County, New Mexico.

The injection fluid will be produced salt water from various leases in the immediate area. Injection will be through 2-3/8" OD, internally plastic coated tubing installed with a packer at a depth of approximately 6750' and into the perforated interval within the Drinkard reservoir at a depth of 6846' to 7158' at an initial rate of approximately 110 BWPD. In compliance with Statewide Rule 701, we attach hereto a map of the project area, a diagrammatic sketch of the proposed subsurface installation in the injection well, and a radioactivity log of the injection well. Attached is a list of the six offset operators involved in this application, each of whom is receiving a copy of this letter.

Yours very truly,

Darrell Smith

By *C. L. Whigham*

C. L. Whigham  
Midland Division  
Proration Engineer

DOCKET MAILED

Date *11-1-68*

CLW:jl

OFFSET OPERATORS  
TEXACO Inc.  
C.H. LOCKHART FEDERAL (NCT-1) LEASE  
LEA COUNTY, NEW MEXICO

American Petrofina Co. of Texas  
P.O. Box 1311  
Big Spring, Texas 79720

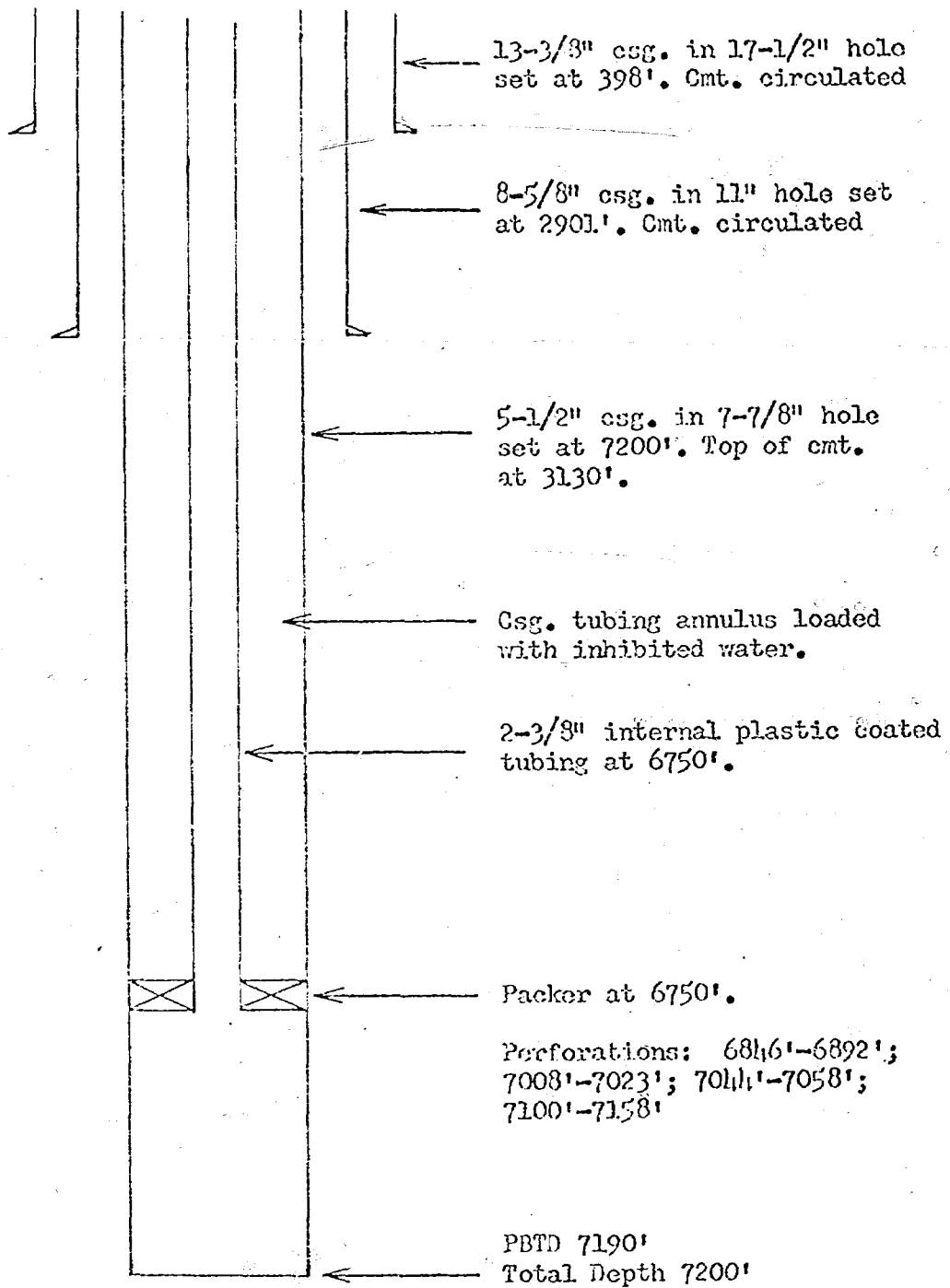
Gulf Oil Corporation  
P.O. Box 1938  
Roswell, New Mexico 88201

Humble Oil & Refining Company  
P.O. Box 1600  
Midland, Texas 79701

Mabee Royalties, Inc.  
P.O. Box 4006  
Midland, Texas 79701

Mark Production Company  
3340 Republic Bank Building  
Dallas, Texas

Penrose Production Company  
P.O. Box 988  
Eunice, New Mexico 88231



TEXACO INCORPORATED  
Schematic Diagram  
Proposed Water Injection Completion  
C.H. LOCKHART FEDERAL (NCT-1) NO. 8  
DRENNARD POOL  
LEA COUNTY, NEW MEXICO

Case 3933 jbs 10-11-68

DRAFT

GMH/esr

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. 3933

Order No. R- 3565

APPLICATION OF TEXACO INC.  
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 November 12, 1968,  
at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this \_\_\_\_\_ day of November, 1968, 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, Texaco Inc.,  
seeks permission to institute a waterflood project in the \_\_\_\_\_  
~~Unit Area~~ Drinkard Pool by  
the injection of water into the Drinkard formation  
through its C. H. Lockhart Federal NCT Well No. 8, located in Unit P of  
~~injection wells in~~ Section 18,  
Township 22 ~~North~~ South, Range 38 ~~West~~ East, NMPM,  
Lea County, New Mexico.

(3) That the applicant further seeks an administrative  
procedure whereby 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; 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.

(SEE UNDER)

is hereby authorized to institute a waterflood project in the

~~=====~~ ~~Unit Area~~ Drinkard ~~Pool~~

by the injection of water into the Drinkard formation

~~through the following described wells in Township =====~~

~~North, South, Range ===== West, East, NMPM, =====~~

~~County, New Mexico =~~

through its C. H. Lockhart Federal NCT-Well No. 8, located in Unit P of Section 18, Township 22 South, Range 38 East, NMPM, Lea County, New Mexico.

(2) That the subject waterflood project is hereby designated the Texaso Drinkard Lockhart 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 Texaso Drinkard Lockhart 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)

(4) That jurisdiction of such cases -- -- -- entry of such further orders as the Commission may deem necessary.

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

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Jen. Que. Go, 5000000,  
Polo 1000 K600. 1000  
Dampend. 1000000000  
1000000000. SW into perfect  
68/46 to 7158 in 1000  
C.H. Lockout. Fed NCT. 1000  
unit P ser, 18-225-B8E,  
Reserve for Ad. approval  
of 1000000000. 1000  
Available response  
1100