

Case No.

1610

Application, Transcript,
Small Exhibits, Etc.

Bobby -
Send copy of this
docket with coal
marked w/ red pencil
to the Chairman of
the Texas Railroad Commission,
Austin Texas
Hem

Copyright, 1911, by the
Texas Railroad Commission,
Austin, Texas.
Reproduction for sale or
distribution without
permission is prohibited.
James Pool, Lan County.

Rock Island Oil & Refining Co., Inc.



221 WEST DOUGLAS
WICHITA 2, KANSAS

December 1, 1959

New Mexico Oil Conservation Commission
Santa Fe, New Mexico

Re: Wills Flood
35-26-37
Lea County, New Mexico
Case No. 1610, Order No. R-1352

Gentlemen:

Following is a report on operations under the above order.
As of today:

Wills A-1 - Cleaning out at 3290'.
A-2 - Producing
A-3 - Producing
A-4 - Producing
A-5 - Producing
A-6 - Injecting 60 b/d at 400#.
A-7 - Injecting 70 b/d at 400#.
A-8 - Injecting 129 b/d at 140#.
A-9 - Injecting 74 b/d at 400#.
R-1 - Testing production, makes only water.

Yours truly,

ROCK ISLAND OIL & REFINING CO., INC.

C. C. Chapin

/smc



Rock Island Oil & Refining Co., Inc.

AM 8-8874 • 321 WEST DOUGLAS
WICHITA 2, KANSAS

March 17, 1961

New Mexico Oil Conservation Commission
Santa Fe
New Mexico

Re: Wills Flood
35-26-37
Lea County, New Mexico
Case No. 1610, Order No. R-1352

Gentlemen:

Following is the February report on operations under the
above order:

PRODUCTION

| <u>Well</u> | <u>BO/D</u> | <u>BW/D</u> |
|-------------|-----------------|-------------|
| Wills A-1 | 1 | 0 |
| A-2 | 5 | 0 |
| A-3 | 27 | 0 |
| A-4 | 10 | 0 |
| A-5 | 30 | 112 |
| Wills B-1 | 6 bf/d - 2% oil | |

INJECTION

| <u>Well</u> | <u>BW/D</u> | <u>Pressure</u> |
|-------------|-------------|-----------------|
| Wills A-6 | 106 | 680# |
| A-7 | 66 | 680# |
| A-8 | 200 | 425# |
| A-9 | 139 | 680# |
| A-10 | 96 | 680# |
| A-11 | 90 | 680# |
| A-12 | 57 | 680# |

Yours truly,

ROCK ISLAND OIL & REFINING CO., INC.

H. G. Rippeteau
H. G. Rippeteau

/pam

File



Rock Island Oil & Refining Co., Inc.

AM 5-8674 • 321 WEST DOUGLAS
WICHITA 2, KANSAS

January 25, 1961

New Mexico Oil Conservation Commission
Santa Fe
New Mexico

Re: Wills Flood
35-26-37
Lea County, New Mexico
Case No. 1610, Order No. R-1352

Gentlemen:

Following is the December report on operations under
the above order.

| | | |
|-----------|------------------|------------------------------|
| Wills A-1 | - Producing | |
| A-2 | - Producing | |
| A-3 | - Producing | |
| A-4 | - Producing | |
| A-5 | - Producing | |
| A-6 | - Injecting | 130 b/d at 400# acidized |
| A-7 | - Injecting | 100 b/d at 680# acidized |
| A-8 | - Injecting | 202 b/d at 340# |
| A-9 | - Injecting | 165 b/d at 680# |
| A-10 | - Injecting | 110 b/d at 630# |
| A-11 | - Injecting | 120 b/d at 690# acidized |
| A-12 | - Injection well | - acidized - passing on inj. |
| B-1 | - Producing | about 5 b/d - 2% oil |

Yours truly,

ROCK ISLAND OIL & REFINING CO., INC.

H. G. Rappetean
H. G. Rappetean

/pan



File

Rock Island Oil & Refining Co., Inc.

AM 5-5674 • 321 WEST DOUGLAS
WICHITA 2, KANSAS

February 17, 1961

New Mexico Oil Conservation Commission
Santa Fe
New Mexico

Re: Wills Flood
35-26-37
Lea County, New Mexico
Case No. 1610, Order No. R-1352

Gentlemen:

Following is the January report on operations under the
above order:

| <u>Producing</u> | | <u>Injection</u> | | |
|------------------|------------------------------------|------------------|-------------|-----------------|
| <u>Well</u> | <u>BO/D</u> | <u>Well</u> | <u>BW/D</u> | <u>Pressure</u> |
| Wills A-1 | 8 | Wills A-6 | 140 | 680# |
| A-2 | 15 | A-7 | 62 | 680# |
| A-3 | 22 | A-8 | 198 | 370# |
| A-4 | 17 | A-9 | 125 | 680# |
| A-5 | 17 | A-10 | 106 | 680# |
| Wills B-1 | Producing about 5 BE/d - 2% oil | A-11 | 99 | 680# |
| | | A-12 | 55 | 680# |

Yours truly,

ROCK ISLAND OIL & REFINING CO., INC.

H. G. Rappelleau
H. G. Rappelleau

/pau



Rock Island Oil & Refining Co., Inc.

AM 5-5674 • 321 WEST DOUGLAS
WICHITA 2, KANSAS

November 11, 1960

New Mexico Oil Conservation Commission
Santa Fe, New Mexico

Re: Wills Flood
35-26-37
Lea County, New Mexico
Case No. 1610, Order No. R-1352

Gentlemen:

Following is the October report on operations under
the above order.

Wills A-1 - Producing
A-2 - Producing
A-3 - Producing
A-4 - Producing
A-5 - Producing
A-6 - Injecting 141 b/d at 670#
A-7 - Injecting 78 b/d at 700#
A-8 - Injecting 220 b/d at 290#
A-9 - Injecting 203 b/d at 660#
A-10- Injecting 170 b/d at 680#
A-11- Injecting b/d at 690#
B-1 - Producing about 7 bf/d - 3% oil

Yours truly,

ROCK ISLAND OIL & REFINING CO., INC.

H. G. Rippeteau
H. G. Rippeteau

/smc



Rock Island Oil & Refining Co., Inc.

AM 5-5674 • 321 WEST DOUGLAS
WICHITA 2, KANSAS

April 4, 1960

New Mexico Oil Conservation Commission
Santa Fe, New Mexico

Re: Wills Flood
35-26-37
Lea County, New Mexico
Case No. 1610, Order No. R-1352

Gentlemen:

Following is a report on operations under the above order.

Wills A-1 - Producing
A-2 - Producing
A-3 - Producing
A-4 - Producing
A-5 - Producing
A-6 - Injecting 67 b/d at 700#.
A-7 - Injecting 118 b/d at 700#.
A-8 - Injecting 185 b/d at 340#.
A-9 - Injecting 190 b/d at 700#.
A-10 - Waiting to perforate and laying injection lines.
A-11 - Waiting to perforate and laying injection lines.
B-1 - Clean cut, put on pump, makes only water.

Yours truly,

ROCK ISLAND OIL & REFINING CO., INC.

H. G. Rippeteau
H. G. Rippeteau

/smc

MAIL OFFICE 000



X

1960 SEP 14 PM 1:24

Rock Island Oil & Refining Co., Inc.

AM 5-5674 • 321 WEST DOUGLAS
WICHITA 2, KANSAS

September 14, 1960

New Mexico Oil Conservation Commission
Santa Fe, New Mexico

Re: Wills Flood
35-26-37
Lea County, New Mexico
Case No. 1610, Order No. R-1352

Gentlemen:

Following is the August report on operations under the
above order.

Wills A-1 - Producing
A-2 - Producing
A-3 - Producing
A-4 - Producing
A-5 - Producing
A-6 - Injecting 170 b/d at 640#.
A-7 - Injecting 128 b/d at 600#.
A-8 - Injecting 193 b/d at 280#.
A-9 - Injecting 182 b/d at 600#.
A-10- Injecting 171 b/d at 640#.
A-11- Injecting 115 b/d at 700#.
B-1 - Producing about 7 bf/d - 2% oil.

Yours truly,

ROCK ISLAND OIL & REFINING CO., INC.

H. G. Rippeteau
H. G. Rippeteau

/smc



Rock Island Oil & Refining Co., Inc.

AM 5-5674 • 321 WEST DOUGLAS
WICHITA 2, KANSAS

June 2, 1960

File

New Mexico Oil Conservation Commission
Santa Fe, New Mexico

Re: Wills Flood
35-26-37
Lea County, New Mexico
Case No. 1610, Order No. R-1352

Gentlemen:

Following is the May report on operations under the
above order.

Wills A-1 - Producing
A-2 - Producing
A-3 - Producing
A-4 - Producing
A-5 - Producing
A-6 - Injecting 62 b/d at 700#.
A-7 - Injecting 111 b/d at 700#.
A-8 - Injecting 215 b/d at 290#.
A-9 - Injecting 186 b/d at 700#.
A-10 - Injecting 189 b/d at 640#.
A-11 - Injecting 78 b/d at 700#.
B-1 - Producing about 9 bf/d - 1% oil.

Yours truly,

ROCK ISLAND OIL & REFINING CO., INC.

H. G. Rippeteau
H. G. Rippeteau

/smc

MAIL OFFICE DOCS



File

1960 AUG 17 AM 8:22

Rock Island Oil & Refining Co., Inc.

AM 5-5674 • 321 WEST DOUGLAS
WICHITA 2, KANSAS

August 15, 1960

New Mexico Oil Conservation Commission
Santa Fe, New Mexico

Re: Wills Flood
35-26-37
Lea County, New Mexico
Case No. 1610, Order No. R-1352

Gentlemen:

Following is the July report on operations under the
above order.

Wills A-1 - Producing
A-2 - Producing
A-3 - Producing
A-4 - Producing
A-5 - Producing
A-6 - Injecting 183 b/d at 700#.
A-7 - Injecting 71 b/d at 700#.
A-8 - Injecting 199 b/d at 300#.
A-9 - Injecting 153 b/d at 700#.
A-10 - Injecting 185 b/d at 680#.
A-11 - Injecting 43 b/d at 700#.
B-1 - Producing about 7 bf/d - 2% oil.

Yours truly,

ROCK ISLAND OIL & REFINING CO., INC.

H. G. Rippeteau
H. G. Rippeteau

/smc



Rock Island Oil & Refining Co., Inc.

AM 5-5674 • 321 WEST DOUGLAS
WICHITA 2, KANSAS

July 8, 1960

*File Co.
1610*

New Mexico Oil Conservation Commission
Santa Fe, New Mexico

Re: Wills Flood
35-26-37
Lea County, New Mexico
Case No. 1610, Order No. R-1352

Gentlemen:

Following is the June report on operations under the
above order.

Wills A-1 - Producing
A-2 - Producing
A-3 - Producing
A-4 - Producing
A-5 - Producing
A-6 - Injecting 187 b/d at 700#.
A-7 - Injecting 70 b/d at 700#.
A-8 - Injecting 179 b/d at 280#.
A-9 - Injecting 161 b/d at 700#.
A-10 - Injecting 194 b/d at 680#.
A-11 - Injecting 51 b/d at 700#.
B-1 - Producing about 7 bf/d - 2% oil.

Yours truly,

ROCK ISLAND OIL & REFINING CO., INC.

H. G. Rippeteau
H. G. Rippeteau

/smc

Rock Island Oil & Refining Co., Inc.

321 WEST DOUGLAS
WICHITA 2, KANSAS

February 4, 1960

1610

New Mexico Oil Conservation Commission
Santa Fe, New Mexico

Re: Wills Flood
35-26-37
Lea County, New Mexico
Case No. 1610, Order No. R-1352

Gentlemen:

Following is a report on operations under the above order.
As of February 1:

Wills A-1 - Producing
A-2 - Producing
A-3 - Producing
A-4 - Producing
A-5 - Producing
A-6 - Injecting 129 b/d at 700#.
A-7 - Injecting 76 b/d at 700#.
A-8 - Injecting 169 b/d at 320#.
A-9 - Injecting 151 b/d at 700#.
R-1 - Testing production. Makes only a scum of oil.

Yours truly,

ROCK ISLAND OIL & REFINING CO., INC.

C. C. Chapin
C. C. Chapin

/smc

Rock Island Oil & Refining Co., Inc.

RECEIVED OCT 5 1959

221 WEST DOUGLAS
WICHITA 2, KANSAS

October 2, 1959

New Mexico Oil Conservation Commission
Santa Fe, New Mexico

Re: Wills Flood
35-26-37
Lea County, New Mexico
Case No. 1610, Order No. R-1352

Gentlemen:

Following is a report on operations under the above order.
As of today:

Wills A-1 - Cleaning out at 3165'.
A-2 - Building pads for pumping unit.
A-3 - Producing.
A-4 - Building pumping unit pads.
A-5 - Producing.
A-6 - Ready to perforate.
A-7 - Ready to perforate.
A-8 - Ready to perforate.
A-9 - Casing run.
B-1 - Testing production.
Power Distribution System is 90% completed.
Water Plant is being built.
Water Supply Well has pump installed and ready to operate.

Yours truly,

ROCK ISLAND OIL & REFINING CO., INC.

C. C. Chapin
C. C. Chapin

/smc

Rock Island Oil & Refining Co., Inc.

1959 SEP 2

PM 1:06

REFINERS OF

PETROLEUM

321 WEST DOUGLAS
WICHITA 2, KANSAS

September 1, 1959

New Mexico Oil Conservation Commission
Santa Fe, New Mexico

Re: Wills Flood
35-26-37
Lea County, New Mexico
Case No. 1610, Order No. R-1352

Gentlemen:

Following is a report on operations under the above order:

- (1) Water Supply well is waiting for installation of pump.
- (2) Well A-2 is cleaning out with cable tools at 3248'.
- (3) Well A-3 is ready to put on production.
- (4) Well A-4 is cleaning out at 3288'.
- (5) Well A-5 has been on production about 3 weeks.
- (6) Well A-6 is an injection well. It has casing set and ready to perforate for injection.
- (7) Well A-7 (Injection Well) is drilling at 354'.
- (8) Well B-1 cleaning out job is completed and ready to put on production.
- (9) Electric Power Distribution System is about 30% completed.

Yours truly,

ROCK ISLAND OIL & REFINING CO., INC.

C. C. Chapin

C. C. Chapin

/smc

APPLICATION FOR WATER FLOODING
OF PRODUCING FORMATION

Case 1610

To: New Mexico Oil Conservation Commission
Santa Fe, New Mexico

February 10, 1959

Application for an Order to include: (1) Authority of Install and Operate a Flood, (2) Granting Full Capacity Flood Allowable and (3) Exception to Spacing Rules for Proposed Injection Wells Nos. 6, 7, 9, 10 and 11, which locations are unorthodox, is herein submitted in triplicate as follows:

1. Name of Flood: Wills
Name of Field: Rhodes
Name of Lease Owner: Wood River Oil & Refining Co., Inc.
321 West Douglas, Wichita, Kansas

2. Description of Leases:

| <u>U.S. SERIAL NO.</u> | <u>LEGAL DESCRIPTION</u> | <u>DATE OF LEASE</u> | <u>ACRES</u> |
|------------------------|---|----------------------|--------------|
| LC 050107 (b) | Lot 1, Sec. 34 | 12-19-38 | 32.74 |
| LC 050107 (a) | NE/4 NE/4, Sec. 34; Lots 2, 3, 4; N/2 NW/4; NW/4 NE/4 Sec. 35 All in T-26S, R-37E Lea County, New Mexico | 12-1-58 | 257.81 |

3. Production map attached as Exhibit "A" shows wells and leases in the area to be flooded. All well location measurements and location units are shown on Exhibit "B".

4. It is desired to flood the lower Yates (Penn Bennett) formation through perforations which range in depths from 3235' to 3310'.

Injection is desired to be made into well No's. 6, 7, 8, 9, 10 and 11 as shown on Exhibit "A".

5. Subsea Tops of producing formation are shown by (-) data on Exhibit "A".

6. Casing program for injection wells will be:

| <u>SIZE</u> | <u>TOTAL LENGTH</u> | <u>SEAT DEPTH</u> | <u>GRADE</u> | <u>CEMENTED OR MUDDED</u> | <u>FOOTAGE BEHIND CEMENT</u> | <u>NUMBER SACKS CEMENT USED</u> |
|-------------|---------------------|-------------------|--------------|---------------------------|-------------------------------|---------------------------------|
| 8 5/8 | 600' | 600' | New | Cemented | 600' | 325 |
| 5 1/2 | 3370' | 3370' | New | Cemented | 600' and mudded to surface | 125 |

7. Liquid desired to be used for flooding is fresh water produced from a depth of about 550'. Estimated water requirements are 1200 b/d minimum to 2000 b/d maximum. Injection water is to be introduced at the well head under 400 pounds minimum pressure to 1600 pounds maximum pressure.

8. A copy of this Application has been sent to:

| <u>NAME</u> | <u>ADDRESS</u> | <u>HOW SENT</u> |
|---------------------------|--------------------------|-----------------|
| Bureau of Land Management | Santa Fe, N. M. | Registered Mail |
| John A. Anderson, USGS | Box 6721, Roswell, N. M. | Registered Mail |
| Harry Dupont, USGS | Box 1838, Hobbs, N. M. | Registered Mail |
| The Texas Co. | Midland, Texas | Registered Mail |
| The Texas Co. | Hobbs, N. M. | Registered Mail |

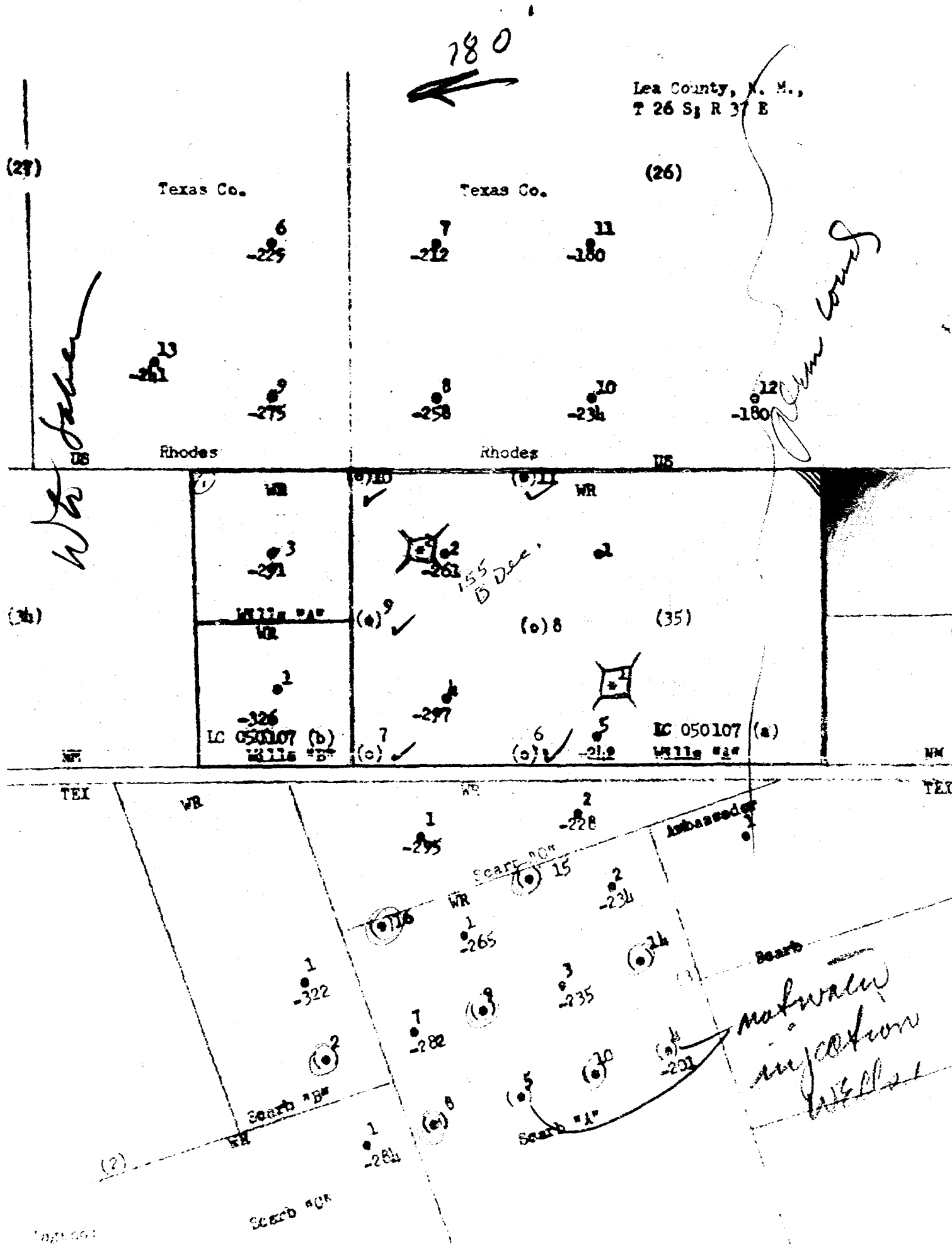
Respectfully submitted,

WOOD RIVER OIL & REFINING CO., INC.

BY C. C. Chapin
C. C. Chapin

EXHIBIT "A"

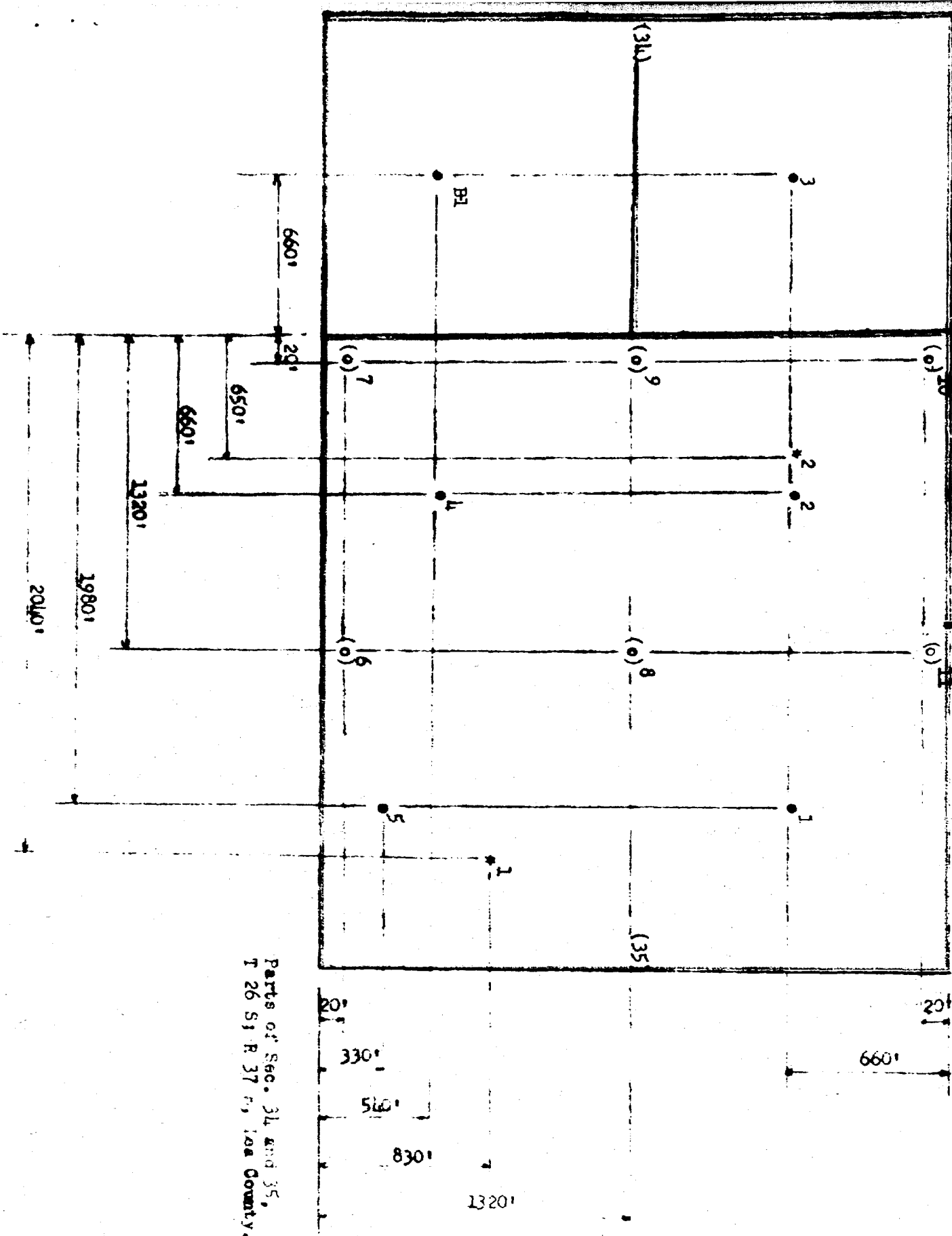
PLAT SHOWING PARTS OF
RHODES FIELD IN LEA COUNTY, NEW MEXICO AND
NORTH SCARBOROUGH FIELD IN WINKLER COUNTY, TEXAS



Winkler County, Texas
Blk. C-22 FSL Survey

Winkler County, Texas
Blk. C-22 FSL Survey

EXHIBIT "B"



Parts of Sec. 34 and 35,
T 26 S, R 37 E, 100 County.

| LOCATION OF WELLS | | | |
|-------------------|--------------------------------|--------------------------------|-------|
| Well No. | Footage from - Line of Sec. 35 | Footage from W Line of Sec. 35 | Notes |
| 1 | 660 FNL | 1980 | C |
| 2 | 660 FNL | 660 | D |
| 3 | 540 FSL | 660 | E |
| 4 | 330 FSL | 1980 | F |
| 5 | 20 FSL | 1320 | F |
| 6 | 20 FSL | 20 | F |
| 7 | 20 FSL | 20 | F |
| 8 | 1320 FSL | 1320 | C |
| 9 | 1320 FSL | 20 | D |
| 10 | 20 FNL | 20 | D |
| 11 | 20 FNL | 1320 | C |
| 12 | 660 FNL | 660 | A |
| 13 | 540 FSL | 660 | A |
| 14 | 330 FSL | 1980 | F |
| 15 | 20 FSL | 1320 | F |
| 16 | 20 FSL | 20 | F |
| 17 | 20 FSL | 20 | F |
| 18 | 1320 FSL | 1320 | C |
| 19 | 1320 FSL | 20 | D |
| 20 | 20 FNL | 20 | D |
| 21 | 20 FNL | 1320 | C |
| 22 | 660 FNL | 660 | A |
| 23 | 540 FSL | 660 | A |
| 24 | 330 FSL | 1980 | F |
| 25 | 20 FSL | 1320 | F |
| 26 | 20 FSL | 20 | F |
| 27 | 20 FSL | 20 | F |
| 28 | 1320 FSL | 1320 | C |
| 29 | 1320 FSL | 20 | D |
| 30 | 20 FNL | 20 | D |
| 31 | 20 FNL | 1320 | C |
| 32 | 660 FNL | 660 | A |
| 33 | 540 FSL | 660 | A |
| 34 | 330 FSL | 1980 | F |
| 35 | 20 FSL | 1320 | F |
| 36 | 20 FSL | 20 | F |
| 37 | 20 FSL | 20 | F |
| 38 | 1320 FSL | 1320 | C |
| 39 | 1320 FSL | 20 | D |
| 40 | 20 FNL | 20 | D |
| 41 | 20 FNL | 1320 | C |
| 42 | 660 FNL | 660 | A |
| 43 | 540 FSL | 660 | A |
| 44 | 330 FSL | 1980 | F |
| 45 | 20 FSL | 1320 | F |
| 46 | 20 FSL | 20 | F |
| 47 | 20 FSL | 20 | F |
| 48 | 1320 FSL | 1320 | C |
| 49 | 1320 FSL | 20 | D |
| 50 | 20 FNL | 20 | D |
| 51 | 20 FNL | 1320 | C |
| 52 | 660 FNL | 660 | A |
| 53 | 540 FSL | 660 | A |
| 54 | 330 FSL | 1980 | F |
| 55 | 20 FSL | 1320 | F |
| 56 | 20 FSL | 20 | F |
| 57 | 20 FSL | 20 | F |
| 58 | 1320 FSL | 1320 | C |
| 59 | 1320 FSL | 20 | D |
| 60 | 20 FNL | 20 | D |
| 61 | 20 FNL | 1320 | C |
| 62 | 660 FNL | 660 | A |
| 63 | 540 FSL | 660 | A |
| 64 | 330 FSL | 1980 | F |
| 65 | 20 FSL | 1320 | F |
| 66 | 20 FSL | 20 | F |
| 67 | 20 FSL | 20 | F |
| 68 | 1320 FSL | 1320 | C |
| 69 | 1320 FSL | 20 | D |
| 70 | 20 FNL | 20 | D |
| 71 | 20 FNL | 1320 | C |
| 72 | 660 FNL | 660 | A |
| 73 | 540 FSL | 660 | A |
| 74 | 330 FSL | 1980 | F |
| 75 | 20 FSL | 1320 | F |
| 76 | 20 FSL | 20 | F |
| 77 | 20 FSL | 20 | F |
| 78 | 1320 FSL | 1320 | C |
| 79 | 1320 FSL | 20 | D |
| 80 | 20 FNL | 20 | D |
| 81 | 20 FNL | 1320 | C |
| 82 | 660 FNL | 660 | A |
| 83 | 540 FSL | 660 | A |
| 84 | 330 FSL | 1980 | F |
| 85 | 20 FSL | 1320 | F |
| 86 | 20 FSL | 20 | F |
| 87 | 20 FSL | 20 | F |
| 88 | 1320 FSL | 1320 | C |
| 89 | 1320 FSL | 20 | D |
| 90 | 20 FNL | 20 | D |
| 91 | 20 FNL | 1320 | C |
| 92 | 660 FNL | 660 | A |
| 93 | 540 FSL | 660 | A |
| 94 | 330 FSL | 1980 | F |
| 95 | 20 FSL | 1320 | F |
| 96 | 20 FSL | 20 | F |
| 97 | 20 FSL | 20 | F |
| 98 | 1320 FSL | 1320 | C |
| 99 | 1320 FSL | 20 | D |
| 100 | 20 FNL | 20 | D |

Legend: Productive wells
Proposed Injection wells (o)
Water Supply wells *

Rock Island Oil & Refining Co., Inc.

321 WEST DOUGLAS
WICHITA 2, KANSAS

November 5, 1959

New Mexico Oil Conservation Commission
Santa Fe, New Mexico

Re: Wills Flood
35-26-37
Lea County, New Mexico
Case No. 1610, Order No. R-1352

Gentlemen:

Following is a report on operations under the above order.
As of today:

Wills A-1 - Cleaning out at 3190'.
A-2 - Producing
A-3 - Producing
A-4 - Producing
A-5 - Producing
A-6 - Waiting on injection water.
A-7 - Waiting on injection water.
A-8 - Waiting on injection water.
A-9 - Waiting on injection water.
B-1 - Testing production, makes only water.
We intend to put this flood into operation November 6.

Yours truly,

ROCK ISLAND OIL & REFINING CO., INC.

C. C. Chapin
C. C. Chapin

/smc



Wood River Oil & Refining Co., Inc.
Petroleum Products

321 WEST DOUGLAS WICHITA, KANSAS

February 10, 1959

PRODUCTION DEPARTMENT
C. C. CHAPIN, MANAGER

New Mexico Oil Conservation Commission
Santa Fe
New Mexico

Re: Wills Flood

Gentlemen:

Enclosed, in triplicate, is our Application pertaining
to the above flood.

We trust you will place this on your list for the
March Hearing.

Yours truly,

WOOD RIVER OIL & REFINING CO., INC.

C. C. Chapin
C. C. Chapin

Enclosures

cc: Bureau of Land Management, Santa Fe, New Mexico
United States Geological Survey, Roswell, New Mexico
United States Geological Survey, Hobbs, New Mexico
The Texas Co., Midland, Texas
The Texas Co., Hobbs, New Mexico
Thomas F. McKenna, Santa Fe, New Mexico
Hiram Keith, Kermit, Texas

Case 1616

*notified WR if will be on
March 11, 1959*

*ticket mailed
2-25-59
BTP*

| DOMESTIC SERVICE | |
|---|--|
| Check the class of service desired; otherwise this message will be sent as a fast telegram. | |
| TELEGRAM | |
| DAY LETTER | |
| NIGHT LETTER | |

\$
\$
E

WESTERN UNION TELEGRAM

1906 (4-55)

W. P. MARSHALL, PRESIDENT

| INTERNATIONAL SERVICE | |
|--|--|
| Check the class of service desired; otherwise the message will be sent at the full rate. | |
| FULL RATE | |
| LETTER TELEGRAM | |
| SHORE-SHIP | |

| NO. WDS.-CL. OF SVC. | PD. OR COLL. | CASH NO. | CHARGE TO THE ACCOUNT OF | TIME FILED |
|----------------------|--------------|----------|--------------------------|------------|
| | COLLECT | | | 10:00 a.m. |

Send the following message, subject to the terms on back hereof, which are hereby agreed to

FEBRUARY 13, 1959

C. C. CHAPIN
WOOD RIVER OIL & REFINING CO.
321 WEST DOUGLAS
WICHITA, KANSAS

YOUR APPLICATION PERTAINING TO WILLS FLOOD SCHEDULED
FOR MARCH 11TH EXAMINER HEARING.

A. L. PORTER, JR.
OIL CONSERVATION COMMISSION

Case 1610

ALL MESSAGES TAKEN BY THIS COMPANY ARE SUBJECT TO THE FOLLOWING TERMS:

To avoid mistakes or delays in the sending of a message, the sender should order it repeated. If it is telegraphed back to the sender, it is subject to the same terms. The unreported message rate is shown in the table below. If it is not reported, the sender is liable for the full rate. The rate is at the discretion of the company and is subject to change without notice.

1. The Telegraph Company shall not be liable for mistakes or delays in the transmission or delivery, or for non-delivery, of any message received. If it is not reported, the unreported message rate is shown in the table below. If it is not reported, the sender is liable for the full rate. The rate is at the discretion of the company and is subject to change without notice.

2. In any event the Telegraph Company shall not be liable for damages for mistakes or delays in the transmission or delivery, or for the non-delivery, of any message, whether caused by the negligence of its servants or otherwise, beyond the actual loss, not exceeding in any event the sum of five thousand dollars, at which amount the sender of each message represents that the message is valued, unless a greater value is stated in writing by the sender at the time the message is received for transmission. If the sender has reported the message rate, it is paid or agreed to be paid and an additional charge equal to one-tenth of one per cent of the amount by which such valuation shall exceed five thousand dollars.

3. The Telegraph Company is hereby made the agent of the sender, without liability, to forward this message over the lines of any other company when necessary to reach its destination.

4. The applicable tariff charges on a message destined to any point in the continental United States listed in the Telegraph Company's Directory of Stations cover its delivery within the established city or community limits of the destination point. Beyond such limits and to points not listed in the Telegraph Company's Directory of Stations, the Telegraph Company does not undertake to make delivery but will endeavor to arrange for delivery by any available means as the agent of the sender, with the understanding that the sender authorizes the collection of any additional charge from the addressee and agrees to pay such additional charge if it is not collected from the addressee.

5. No responsibility attaches to the Telegraph Company concerning messages until the same are accepted at one of its transmitting offices; and if a message is sent to such office by one of the Telegraph Company's messengers, he acts for that purpose as the agent of the sender, except that when the Telegraph Company sends a messenger to pick up a message, the messenger in that instance acts as the agent of the Telegraph Company in accepting the message, the Telegraph Company assuming responsibility from the time of such acceptance.

6. The Telegraph Company will not be liable for damages or statutory penalties when the claim is not presented in writing to the Telegraph Company, (a) within ninety days after the message is filed with the Telegraph Company for transmission in the case of a message between points within the United States (except in the case of an intrastate message in Texas) or between a point in the United States on the one hand and a point in Alaska, Canada, Mexico, or St. Pierre-Miquelon Islands on the other hand, or between a point in the United States and a ship at sea or in the air, (b) within 95 days after the cause of action, if any, shall have accrued in the case of an interstate message in Texas, and (c) within 180 days after the message is filed with the Telegraph Company for transmission in the case of a message between a point in the United States and a foreign or overseas point other than the points specified above in this paragraph; provided, however, that this condition shall not apply to claims for damages or overcharges within the purview of Section 415 of the Communications Act of 1934, as amended.

7. It is agreed that in any action by the Telegraph Company to recover the tolls for any message or messages the prompt and correct transmission and delivery thereof shall be presumed, subject to rebuttal by competent evidence.

8. Special terms governing the transmission of messages according to their classes, as enumerated below, shall apply to messages in each of such respective classes in addition to all the foregoing terms.

9. No employee of the Telegraph Company is authorized to vary the foregoing.

4-24

CLASSES OF SERVICE

DOMESTIC SERVICES

TELEGRAM

The fastest domestic service.

DAY LETTER (DL)

A deferred same-day service, at low rates.

NIGHT LETTER (NL)

Economical overnight service. Accepted up to 2 A. M. for delivery the following morning, at rates lower than the Telegram or Day Letter rates.

INTERNATIONAL SERVICES

FULL RATE (FR)

The fastest overseas service. May be written in code, cipher, or in any language expressed in Roman letters.

LETTER TELEGRAM (LT)

For overnight plain language messages, at half-rate. Minimum charge for 22 words applies.

SHIP RADIOGRAM

For messages to and from ships at sea.

CLASS OF SERVICE

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

WESTERN UNION

TELEGRAM

W. P. MARSHALL, PRESIDENT

SYMBOLS

DL = Day Letter

NL = Night Letter

LT = International Letter Telegram

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

LA048 KB029

[K WZA142 PD AR=FAX WICHITA KANS 13 904AMC=

NEW MEXICO OIL CONSERVATION COMMISSION=

SANTA FE NEX=

WOULD YOU KINDLY WIRE US COLLECT IF OUR APPLICATION
DATED FEBRUARY 10 PERTAINING TO WILLS FLOOD IN
SECTIONS 34 AND 35-26-37 LEA COUNTY HAS BEEN RECEIVED
AND IF WILL BE SCHEDULED FOR NEXT COMMISSION HEARING
THANKS=

WOOD RIVER OIL & REFINING CO INC C C CHAPIN==

10 34 35-26-37=

THE COMPANY WILL APPRECIATE SUGGESTIONS FROM ITS PATRONS CONCERNING ITS SERVICE

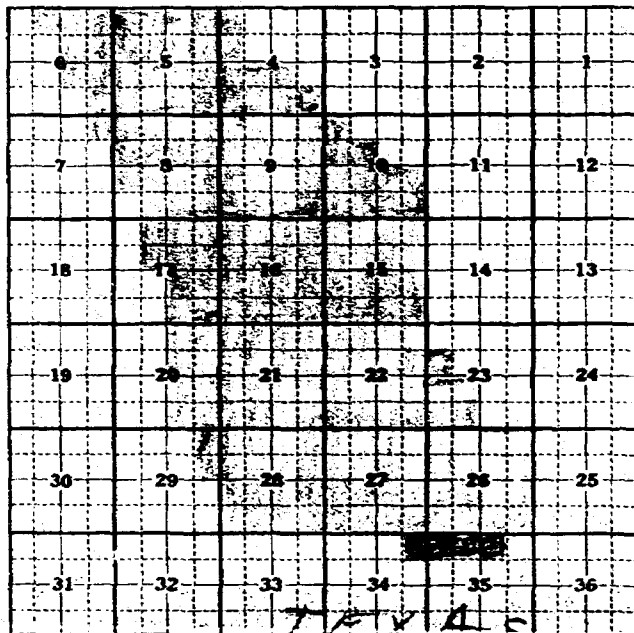
FEDERAL ABSTRACT CO.

Name

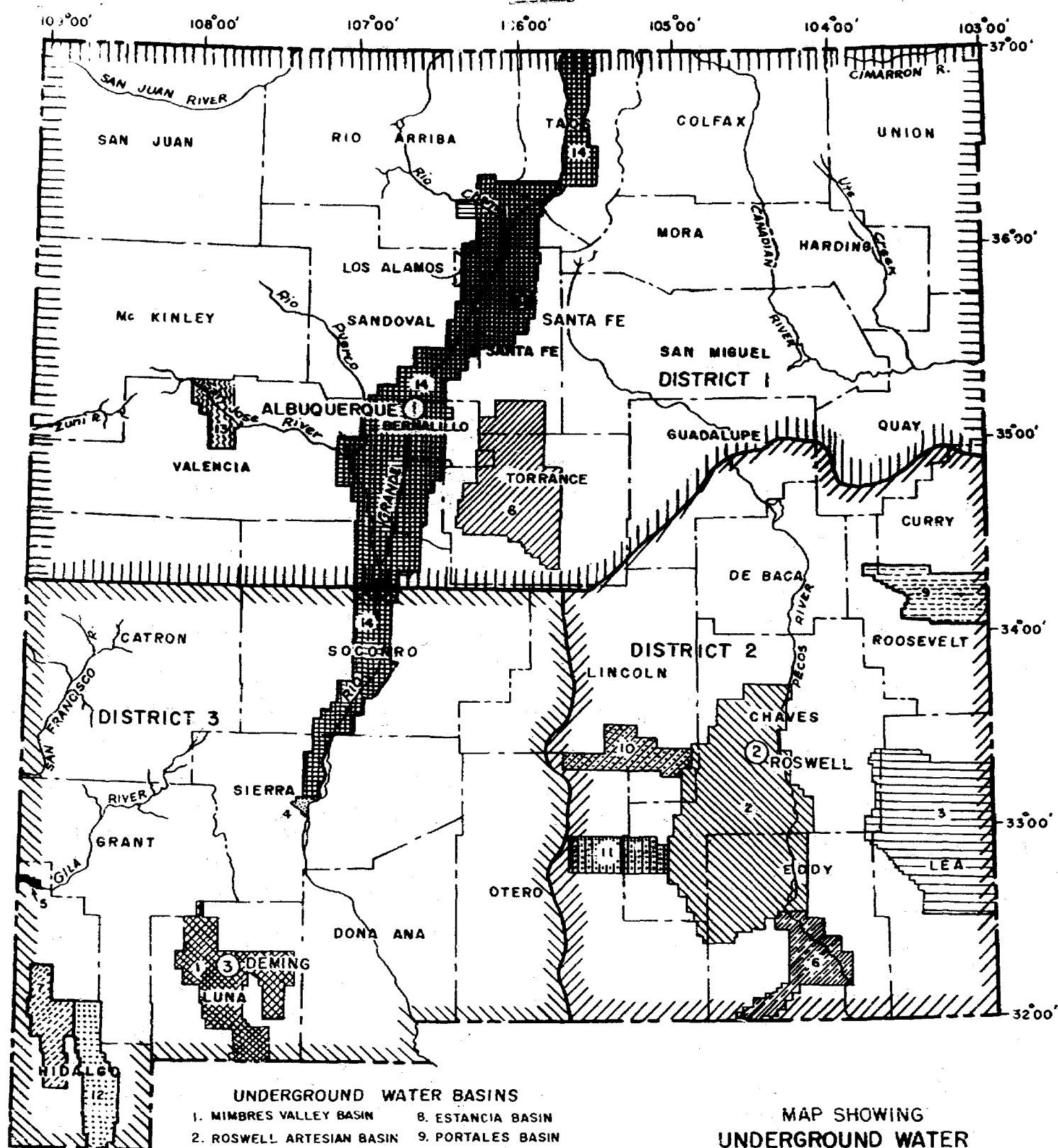
Address

Ph.

Remarks:



T R State
or County



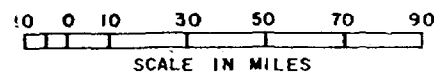
UNDERGROUND WATER BASINS

- | | |
|---------------------------|-------------------------|
| 1. MIMBRES VALLEY BASIN | 8. ESTANCIA BASIN |
| 2. ROSWELL ARTESIAN BASIN | 9. PORTALES BASIN |
| 3. LEA COUNTY BASIN | 10. HONDO BASIN |
| 4. HOT SPRINGS BASIN | 11. PENASCO BASIN |
| 5. VIRDEN VALLEY BASIN | 12. PLAYAS VALLEY BASIN |
| 6. CARLSBAD BASIN | 13. BLUEWATER BASIN |
| 7. ANIMAS VALLEY BASIN | 14. RIO GRANDE BASIN |

MAIN OFFICE
SANTA FE
DISTRICT OFFICES

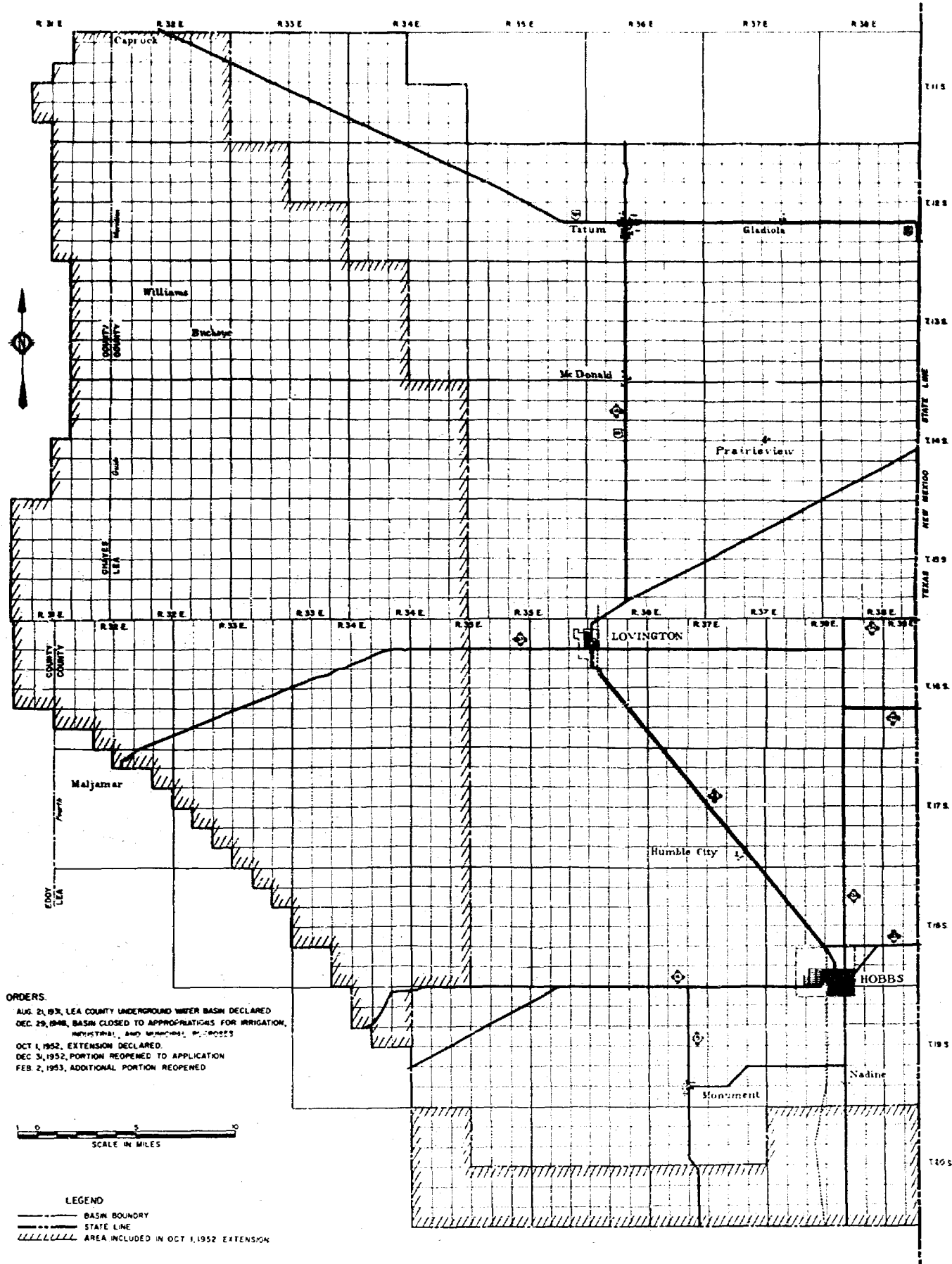
- ① ALBUQUERQUE
② ROSWELL
③ DEMING

MAP SHOWING UNDERGROUND WATER DISTRICTS OF THE STATE ENGINEER OFFICE



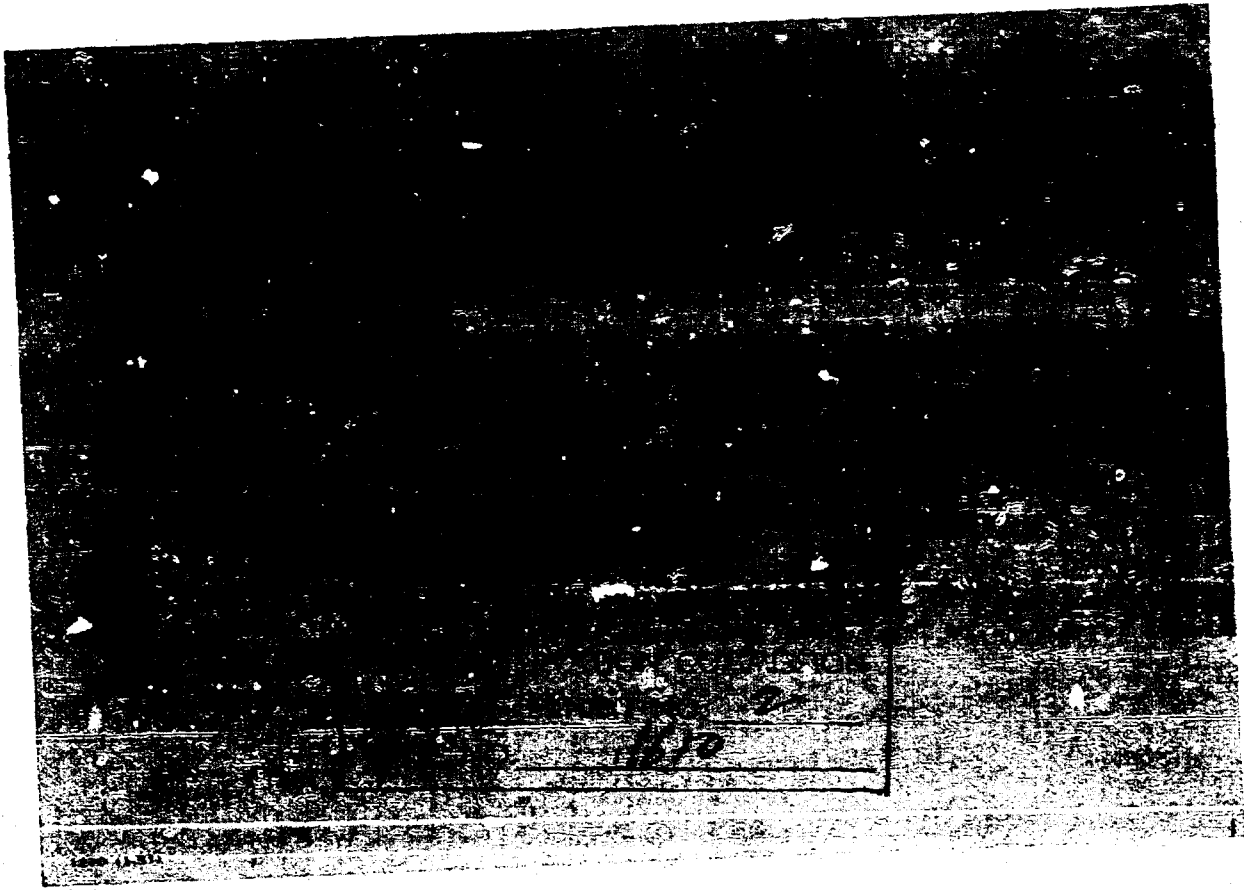
COMPILED BY: F. E. IRBY
DRAWN BY: J. J. FOX

0121
JUN 1941
J. J. FOX



MAP
 SHOWING DECLARED AREA
 LEA COUNTY UNDERGROUND WATER BASIN

STATE ENGINEER OFFICE



OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

Date 3/11/59

CASE NO. 1610

HEARING DATE 9 am 3/11/59
DSN @ SF

My recommendations for an order in the above numbered case(s) are as follows:

Enter an order approving the Wells
Water Flood Project, ^{in the Rhodes Pool} in Sections 34
and 35, Township 26 South, Range
37 East, Lea County & authorize the oil
requested injection wells.
This proposed flood is for acreage
which affects an existing water
flood project in Texas.
Also authorize the 5 ^{on} ^{ex} unorthodox locations marked
Applicant requested capacity allowances. There
as such should not be authorized at this
time. Instead, an administrative procedure
should be set up for the water flood
which will authorize the granting of allowances
in % of normal unit allowance when the need
for such allowances rises.
There is no need for administrative procedure
to expand the flood as the ^{Staff Member} applicant is
putting his entire acreage under flood
initially.

San Juan
Examiner

WOOD RIVER OIL & REFINING CO., INC.

521 WEST DOUGLAS

WICHITA 2, KANSAS

Case 1610

RECEIVED
BUREAU OF LAND MANAGEMENT

1959 FEB 16 AM 10:28

SANTA FE, NEW MEXICO

February 10, 1959

New Mexico Oil Conservation Commission
Santa Fe
New Mexico

Re: Wills Flood

Gentlemen:

Enclosed, in triplicate, is our Application pertaining to the above flood

We trust you will place this on your list for the March Hearing

Yours truly,

WOOD RIVER OIL & REFINING CO., INC.

C. C. Chapin
C. C. Chapin

Enclosures

cc: Bureau of Land Management, Santa Fe, New Mexico
United States Geological Survey, Roswell, New Mexico
United States Geological Survey, Hobbs, New Mexico
The Texas Co., Midland, Texas
The Texas Co., Hobbs, New Mexico
Thomas F. McKenna, Santa Fe, New Mexico
Hiram Keith, Kermit, Texas

**APPLICATION FOR WATER FLOODING
OF PRODUCING FORMATION**

Case 1610

To: New Mexico Oil Conservation Commission
Santa Fe, New Mexico

February 10, 1959

Application for an Order to include: (1) Authority of Install and Operate a Flood, (2) Granting Full Capacity Flood Allowable and (3) Exception to Spacing Rules for Proposed Injection Wells Nos. 6, 7, 9, 10 and 11, which locations are unorthodox, is herein submitted in triplicate as follows:

1. Name of Flood: Wills
Name of Field: Rhodes
Name of Lease Owner: Wood River Oil & Refining Co., Inc.
321 West Douglas, Wichita, Kansas

2. Description of Leases:

| <u>U.S. SERIAL NO.</u> | <u>LEGAL DESCRIPTION</u> | <u>DATE OF LEASE</u> | <u>ACRES</u> |
|------------------------|---|----------------------|--------------|
| LC 050107 (b) | Lot 1, Sec. 3h | 12-19-38 | 32.7h |
| LC 050107 (a) | NE/4 NE/4, Sec. 3h; Lots 2, 3, 4; N/2 NW/4; NW/4 NE/4 Sec. 35 All in T-26S, R-37E Lea County, New Mexico | 12-1-58 | 257.81 |

3. Production map attached as Exhibit "A" shows wells and leases in the area to be flooded. All well location measurements and location units are shown on Exhibit "B".

4. It is desired to flood the lower Yates (Penn Bennett) formation through perforations which range in depths from 3235' to 3310'.

Injection is desired to be made into well No's. 6, 7, 8, 9, 10 and 11 as shown on Exhibit "A".

5. Subsea Tops of producing formation are shown by (-) data on Exhibit "A".

6. Casing program for injection wells will be:

| <u>SIZE</u> | <u>TOTAL LENGTH</u> | <u>SEAT DEPTH</u> | <u>GRADE</u> | <u>CEMENTED OR MUDDED</u> | <u>FOOTAGE BEHIND CEMENT</u> | <u>NUMBER SACKS CEMENT USED</u> |
|-------------|---------------------|-------------------|--------------|---------------------------|-------------------------------|---------------------------------|
| 8 5/8 | 600' | 600' | New | Cemented | 600' | 325 |
| 5 1/2 | 3370' | 3370' | New | Cemented | 600' and mudded to surface | 125 |

7. Liquid desired to be used for flooding is fresh water produced from a depth of about 550'. Estimated water requirements are 1200 b/d minimum to 2000 b/d maximum. Injection water is to be introduced at the well head under 400 pounds minimum pressure to 1600 pounds maximum pressure.

8. A copy of this Application has been sent to:

| <u>NAME</u> | <u>ADDRESS</u> | <u>HOW SENT</u> |
|---------------------------|--------------------------|-----------------|
| Bureau of Land Management | Santa Fe, N. M. | Registered Mail |
| John A. Anderson, USGS | Box 6721, Roswell, N. M. | Registered Mail |
| Harry Dupont, USGS | Box 1838, Hobbs, N. M. | Registered Mail |
| The Texas Co. | Midland, Texas | Registered Mail |
| The Texas Co. | Hobbs, N. M. | Registered Mail |

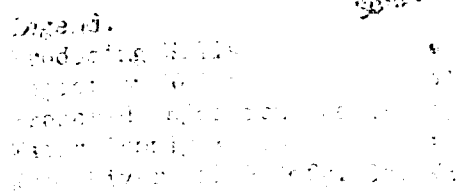
Respectfully submitted,

WOOD RIVER OIL & REFINING CO., INC.

BY C. C. Chapin
C. C. Chapin

"APPLICANT"

PLAT SHOWING PARTS OF
RHODES FIELD IN LEA COUNTY, NEW MEXICO AND
NORTH SCARBOROUGH FIELD IN WINKLER COUNTY, TEXAS



Winkler County, Texas
Blk. C-22 PSL Survey

[illegible]

Parts of Soc. 34 and 35,
T 25 S, R 27 E, and County.

| LOCATION OF WELL | | PRODUCTION | | DATE | |
|------------------|---------|------------|------|-------|------|
| WELL | NO. | PROD. | DATE | PROD. | DATE |
| 1 | 640 PNL | 1050 | 1050 | 1050 | 1050 |
| 2 | 640 PNL | 640 | 640 | 640 | 640 |
| 3 | 510 PNL | 640 | 640 | 640 | 640 |
| 4 | 270 PNL | 1980 | 1980 | 1980 | 1980 |
| 5 | 20 PNL | 1280 | 1280 | 1280 | 1280 |
| 6 | 20 PNL | 20 | 20 | 20 | 20 |
| 7 | 20 PNL | 20 | 20 | 20 | 20 |
| 8 | 20 PNL | 20 | 20 | 20 | 20 |
| 9 | 20 PNL | 20 | 20 | 20 | 20 |
| 10 | 20 PNL | 20 | 20 | 20 | 20 |
| 11 | 20 PNL | 20 | 20 | 20 | 20 |
| 12 | 20 PNL | 20 | 20 | 20 | 20 |
| 13 | 20 PNL | 20 | 20 | 20 | 20 |
| 14 | 20 PNL | 20 | 20 | 20 | 20 |
| 15 | 20 PNL | 20 | 20 | 20 | 20 |
| 16 | 20 PNL | 20 | 20 | 20 | 20 |
| 17 | 20 PNL | 20 | 20 | 20 | 20 |
| 18 | 20 PNL | 20 | 20 | 20 | 20 |
| 19 | 20 PNL | 20 | 20 | 20 | 20 |
| 20 | 20 PNL | 20 | 20 | 20 | 20 |
| 21 | 20 PNL | 20 | 20 | 20 | 20 |
| 22 | 20 PNL | 20 | 20 | 20 | 20 |
| 23 | 20 PNL | 20 | 20 | 20 | 20 |
| 24 | 20 PNL | 20 | 20 | 20 | 20 |
| 25 | 20 PNL | 20 | 20 | 20 | 20 |
| 26 | 20 PNL | 20 | 20 | 20 | 20 |
| 27 | 20 PNL | 20 | 20 | 20 | 20 |
| 28 | 20 PNL | 20 | 20 | 20 | 20 |
| 29 | 20 PNL | 20 | 20 | 20 | 20 |
| 30 | 20 PNL | 20 | 20 | 20 | 20 |
| 31 | 20 PNL | 20 | 20 | 20 | 20 |
| 32 | 20 PNL | 20 | 20 | 20 | 20 |
| 33 | 20 PNL | 20 | 20 | 20 | 20 |
| 34 | 20 PNL | 20 | 20 | 20 | 20 |
| 35 | 20 PNL | 20 | 20 | 20 | 20 |
| 36 | 20 PNL | 20 | 20 | 20 | 20 |
| 37 | 20 PNL | 20 | 20 | 20 | 20 |
| 38 | 20 PNL | 20 | 20 | 20 | 20 |
| 39 | 20 PNL | 20 | 20 | 20 | 20 |
| 40 | 20 PNL | 20 | 20 | 20 | 20 |
| 41 | 20 PNL | 20 | 20 | 20 | 20 |
| 42 | 20 PNL | 20 | 20 | 20 | 20 |
| 43 | 20 PNL | 20 | 20 | 20 | 20 |
| 44 | 20 PNL | 20 | 20 | 20 | 20 |
| 45 | 20 PNL | 20 | 20 | 20 | 20 |
| 46 | 20 PNL | 20 | 20 | 20 | 20 |
| 47 | 20 PNL | 20 | 20 | 20 | 20 |
| 48 | 20 PNL | 20 | 20 | 20 | 20 |
| 49 | 20 PNL | 20 | 20 | 20 | 20 |
| 50 | 20 PNL | 20 | 20 | 20 | 20 |
| 51 | 20 PNL | 20 | 20 | 20 | 20 |
| 52 | 20 PNL | 20 | 20 | 20 | 20 |
| 53 | 20 PNL | 20 | 20 | 20 | 20 |
| 54 | 20 PNL | 20 | 20 | 20 | 20 |
| 55 | 20 PNL | 20 | 20 | 20 | 20 |
| 56 | 20 PNL | 20 | 20 | 20 | 20 |
| 57 | 20 PNL | 20 | 20 | 20 | 20 |
| 58 | 20 PNL | 20 | 20 | 20 | 20 |
| 59 | 20 PNL | 20 | 20 | 20 | 20 |
| 60 | 20 PNL | 20 | 20 | 20 | 20 |
| 61 | 20 PNL | 20 | 20 | 20 | 20 |
| 62 | 20 PNL | 20 | 20 | 20 | 20 |
| 63 | 20 PNL | 20 | 20 | 20 | 20 |
| 64 | 20 PNL | 20 | 20 | 20 | 20 |
| 65 | 20 PNL | 20 | 20 | 20 | 20 |
| 66 | 20 PNL | 20 | 20 | 20 | 20 |
| 67 | 20 PNL | 20 | 20 | 20 | 20 |
| 68 | 20 PNL | 20 | 20 | 20 | 20 |
| 69 | 20 PNL | 20 | 20 | 20 | 20 |
| 70 | 20 PNL | 20 | 20 | 20 | 20 |



Wood River Oil & Refining Co., Inc.
Petroleum Products

321 WEST DOUGLAS WICHITA, KANSAS

PRODUCTION DEPARTMENT
C. C. CHAPIN, MANAGER

May 8, 1959

can file

New Mexico Oil Conservation Commission
Santa Fe, New Mexico

Re: Case No. 1610
~~Order No. R-1352~~

Gentlemen:

One of the conditions of the above order is that we give you monthly reports of progress on the flood to be constructed.

We expect to start drilling a water supply well around May 12.

We will keep you further informed at least once a month. In the meantime, if you wish any further information we will be glad to furnish it.

Yours truly,

WOOD RIVER OIL & REFINING CO., INC.

C. C. Chapin

C. C. Chapin

/smc

cc: New Mexico Oil Conservation Commission
Hobbs, New Mexico

APPLICATION FOR AMENDMENT TO
NEW MEXICO CONSERVATION COMMISSION
CASE NO. 1610, ORDER NO. R-1352

July 3, 1959

To: New Mexico Conservation Commission
Santa Fe, New Mexico

Order 1352-A

Application for an order to: Amend order to change locations of
injection wells Nos. 8 and 9:

1. Name of Flood: Wells
Name of Field: Rhodus
Name of Lease Owner: Wood River Oil & Refining Co., Inc.
321 West Douglas, Wichita, Kansas

2. Description of Leases:

| <u>U. S. SERIAL NO.</u> | <u>LEGAL DESCRIPTION</u> | <u>DATE OF LEASE</u> | <u>ACRES</u> |
|-------------------------|---|----------------------|--------------|
| LC 050107 (b) | Lot 1, Sec. 34 | 12-19-38 | 32.74 |
| LC 050107 (a) | NE/4 NE/4, Sec. 34; Lots 2, 3, 4; N/2 NW/4; NW/4 NE/4 Sec. 35 All in T-26S, R-37E Lea County, New Mexico | 12-1-58 | 257.81 |

3. Production map attached as Exhibit "A" shows wells and leases in the area to be flooded. All well location measurements and location units are shown on Exhibit "B", (Amended).

Sec. 35, Twp. 36S, Rge. 37E, shown on Exhibit "B", is an irregular tract. The distance from the north to the south line is only 2390'. Our original application showed spacing for a regular 2640' half section.

In order to equally flood the producing wells it is necessary to move injection wells Nos. 8 and 9 approximately 180' south or 1135' from the south line instead of 1315' from the south line as shown on the original application.

4. A copy of this application has been sent to:

| <u>NAME</u> | <u>ADDRESS</u> | <u>HOW SENT</u> |
|-------------------------------|-------------------------|-----------------|
| Bureau of Land Management | Santa Fe, N. M. | Registered Mail |
| John A. Anderson, U. S. G. S. | Box 6721, Roswell N. M. | Registered Mail |
| A. P. Kleeman, U. S. G. S. | Box 1838, Hobbs, N. M. | Registered Mail |
| The Texas Co. | Midland, Texas | Registered Mail |

Respectfully submitted,

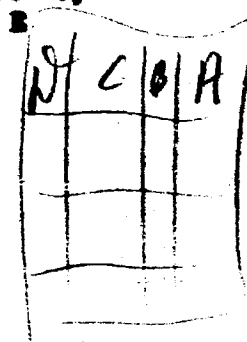
WOOD RIVER OIL & REFINING CO., INC.

BY C. G. Chapin
C. G. Chapin

"APPLICANT"

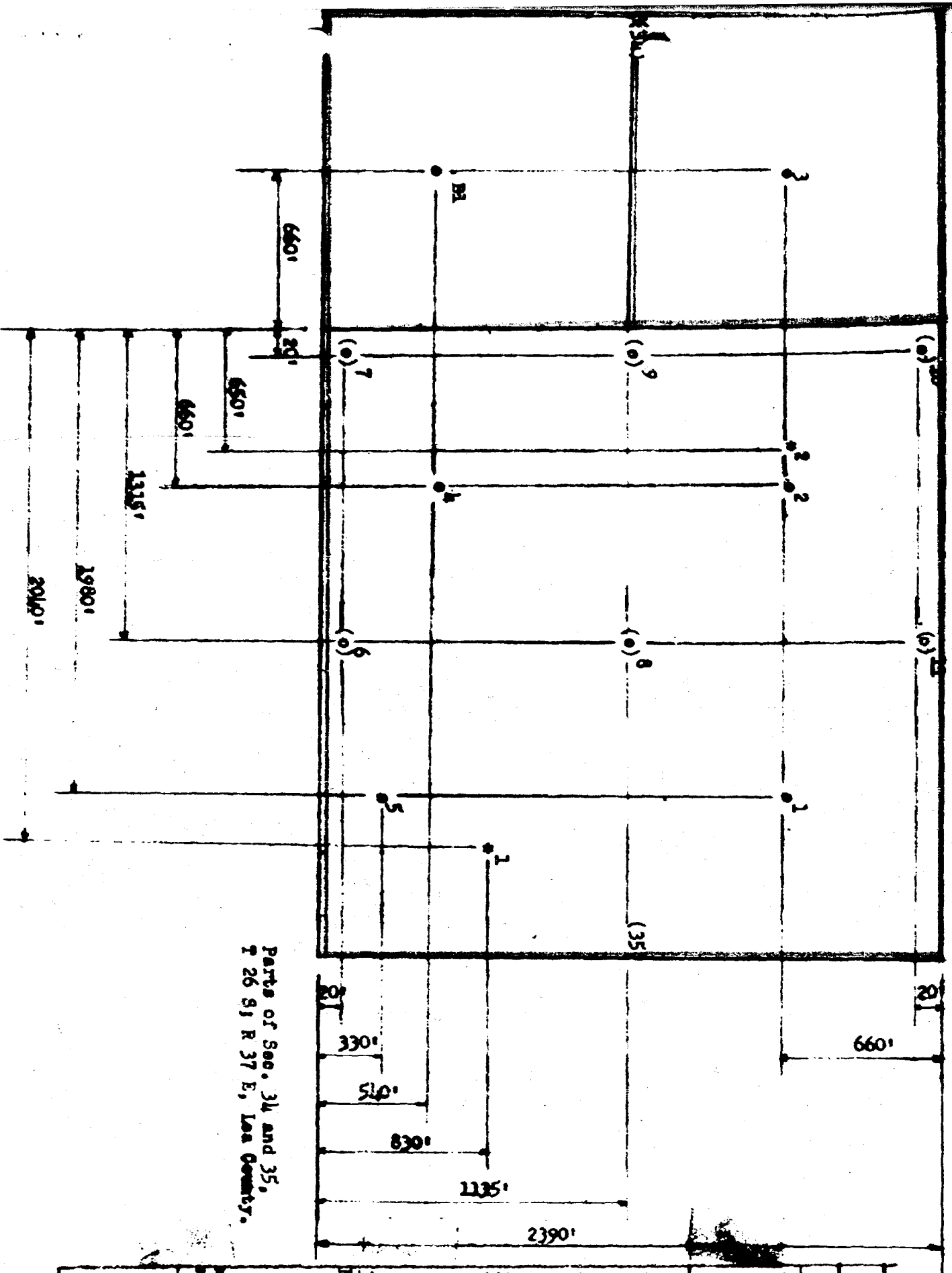
112

2



Winkler County, Texas
 Bk. C-2 P5L Survey

EXHIBIT "B" (AMENDED)



Parts of Sec. 34 and 35,
T 26 S, R 37 E, Lea County.

| LOCATION OF WELLS | | | |
|-------------------|----------------------------------|--------------------------------|-------------|
| Well No. | Footage from - - Line of Sec. 35 | Footage from W Line of Sec. 35 | Subdivision |
| 1 | 660 FNL | 1980 | C |
| 2 | 660 FNL | 660 | D |
| 3 | 510 FSL | 660 | E |
| 4 | 330 FSL | 1980 | F |
| 5 | 20 FSL | 1315 | G |
| 6 | 20 FSL | 20 | H |
| 7 | 20 FSL | 20 | I |
| 8 | 1135 FSL | 1315 | J |
| 9 | 1135 FSL | 20 | K |
| 10 | 20 FNL | 20 | L |
| 11 | 20 FNL | 2315 | M |
| 12 | 20 FNL | 2315 | N |
| 13 | Footage from - - Line of Sec. 34 | Footage from E Line of Sec. 34 | A |
| 14 | 660 FNL | 660 | B |
| 15 | 510 FSL | 660 | C |
| 16 | Footage from - - Line of Sec. 35 | Footage from W Line of Sec. 35 | D |
| 17 | 660 FNL | 2040 | E |
| 18 | 660 FNL | 650 | F |

Legend: Producing Wells (o)
Proposed Injection Wells (o)
Water Supply Wells *

MAIN OFFICE OCC



1030 JUL 5 PM 3:19

Wood River Oil & Refining Co., Inc.
Petroleum Products

321 WEST DOUGLAS WICHITA, KANSAS

PRODUCTION DEPARTMENT
C. C. CHAPIN, MANAGER

July 3, 1959

New Mexico Oil Conservation Commission
Santa Fe, New Mexico

Re: Wills Flood
Your Order R-1352; Case 1610

Gentlemen:

Enclosed, in triplicate, is our application for an amendment to your Order No. R-1352.

Our Santa Fe attorney, Mr. McKenna, has already called on you to explain our problem and he requested that we file this amended application.

We are surveying locations and building roads to these wells and, no doubt, we will have your decision by the time we are ready to start drilling wells 8 and 9.

Thanks for your consideration in this matter.

Yours truly,

WOOD RIVER OIL & REFINING CO., INC.

C. C. Chapin

/smc
Enclosures

cc: Bureau of Land Management, Santa Fe, N. M.
United States Geological Survey, Roswell, N. M.
United States Geological Survey, Hobbs, N. M.
The Texas Co., Midland, Texas

Handwritten notes:
7-18-59
Mr. McKenna
Mr. [unclear]

DOCKET: EXAMINER HEARING JULY 28, 1959

Oil Conservation Commission - 9 a.m., Mabry Hall, State Capitol, Santa Fe, New Mexico

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

Continued Case

CASE 1720: (Continued) Application of Skelly Oil Company for an oil-oil dual completion. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its W. P. Saunders Well No. 1, located in the SW/4 SE/4 of Section 11, Township 26 North, Range 11 West, San Juan County, New Mexico, in such a manner as to produce oil from the Gallegos-Gallup Oil Pool and to produce oil from an undesignated Dakota pool through parallel strings of tubing.

NEW CASES

CASE 1725: Application of Amerada Petroleum Corporation for an oil-oil dual completion and for permission to commingle the production from two separate pools. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its State "Q" Well No. 1, located in the NW/4 SE/4 of Section 16, Township 20 South, Range 37 East, Lea County, New Mexico, in such a manner as to permit the production of oil from the Eunice-Monument Pool and the production of oil from an undesignated Tubb pool, through parallel strings of tubing. Applicant further seeks permission to commingle the production from said pools produced from the said State "Q" Well No. 1.

CASE 1726: Application of Amerada Petroleum Corporation for an oil-oil dual completion. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its Ka Da Pa Well No. 1, located in the SW/4 SW/4 of Section 4, Township 25 North, Range 12 West, San Juan County, New Mexico, in such a manner as to permit the production of oil from the Bisti-Lower Gallup Oil Pool and the production of oil from an interval designated by the applicant as the Lower Mancos sand through parallel strings of tubing.

CASE 1727: Application of Skelly Oil Company for an oil-gas dual completion. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its Jicarilla "B" Well No. 20, located in the NW/4 NW/4 of Section 31, Township 25 North, Range 5 West, Rio Arriba County, New Mexico, in such a manner as to permit production of oil from the Otero-Gallup Oil Pool and the production of gas from an undesignated Dakota pool through parallel strings of tubing.

CASE 1728: Application of Hanson, Waters and Williamson, for an order authorizing a pilot water flood project, for capacity allowable for twelve wells in said project area, and for establishment of an administrative procedure for expansion of said project, conversion of wells to water injection, and for granting capacity allowables. Applicant, in the above-styled cause, seeks an order authorizing it to institute a pilot water flood project in the Coyote-Queen Pool in Chaves County, New Mexico. Applicant proposes to inject water into the Queen formation through six wells located in Sections 15 and 16, Township 11 South, Range 27 East. Applicant also seeks capacity allowables for twelve wells in said project. Applicant further seeks the establishment of a procedure whereby the project area may be expanded, wells may be converted to water injection, and capacity allowables granted without notice and hearing.

1728

Docket No. 26-59

-2-

CASE 1729: Application of El Paso Natural Gas Products Company for permission to produce more than 16 wells in a common tank battery. Applicant, in the above-styled cause, seeks an order authorizing the production of more than 16 wells in the Horseshoe-Gallup Oil Pool into a common tank battery. Said wells are located on applicant's Horseshoe Ute Lease comprising portions of Sections 27, 28, 33 and 34, Township 31 North, Range 16 West, San Juan County, New Mexico.

CASE 1610: Application of Wood River Oil & Refining Company, Inc., for an amendment of Order No. R-1352. Applicant, in the above-styled cause, seeks an amendment of Order No. R-1352, to provide that the unorthodox well locations for well Nos. 8 and 9 of the Wills Water Flood Project, Rhodes Pool, Lea County, New Mexico, be 1135 feet from the South line and 1315 feet from the West line of Section 35, and 1135 feet from the South line and 20 feet from the West line of Section 35 respectively, both in Township 26 South, Range 37 East.

ig/

NEW MEXICO OIL CONSERVATION COMMISSION
WELL LOCATION AND ACREAGE DEDICATION PLAT

FORM C-128
Revised 5/1/57

SEE INSTRUCTIONS FOR COMPLETING THIS FORM ON THE REVERSE SIDE

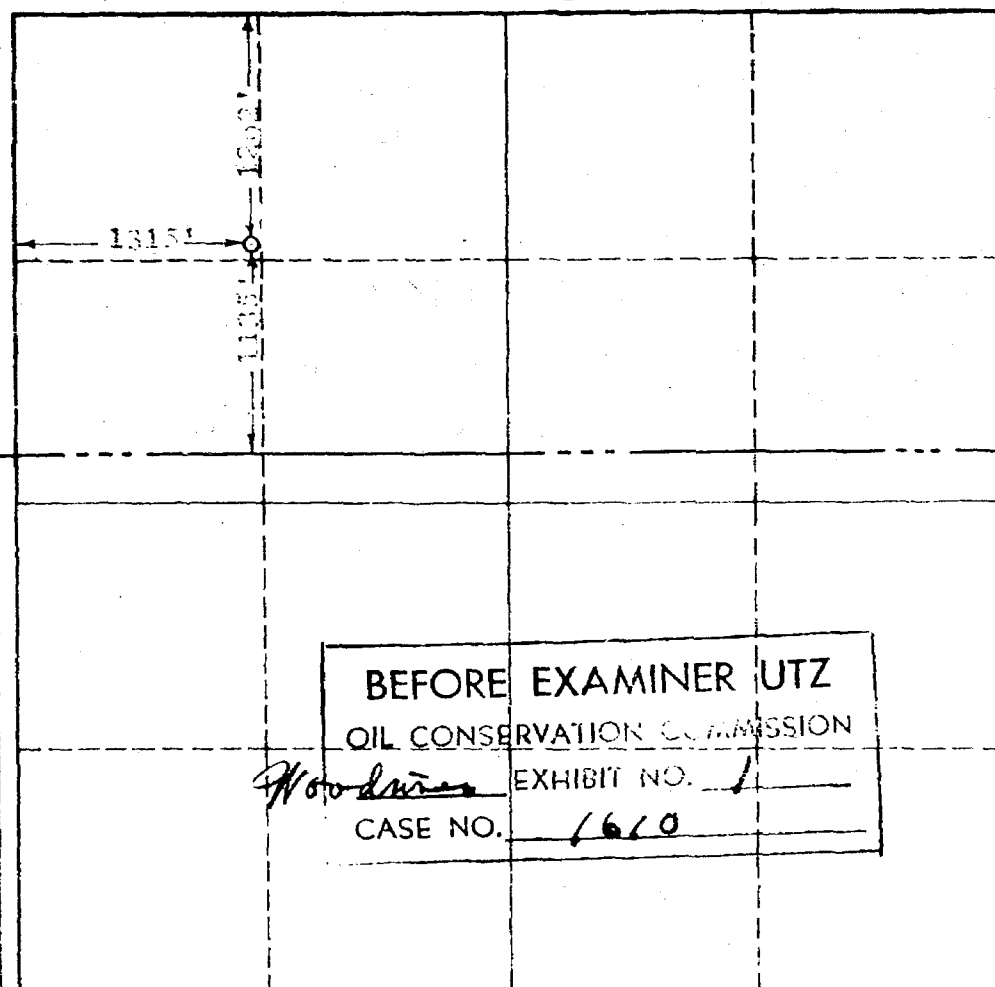
SECTION A

| | | | | |
|--|---------------------|------------------|-----------------------------|---------------|
| Operator Woodriver Oil & Gas Co. | | Lease 1115-1 | | Well No. 3 |
| Unit Letter D | Section 35 | Township 23 S | Range 37 E | County Lea |
| Actual Footage Location of Well: 1135 feet from the South line and 1315 feet from the East line | | | | |
| Ground Level Elev. 2987.40 | Producing Formation | Pool | Dedicated Acreage: Acres | |

1. Is the Operator the only owner in the dedicated acreage outlined on the plat below? YES _____ NO _____. ("Owner" means the person who has the right to drill into and to produce from any pool and to appropriate the production either for himself or for himself and another. (65-3-29 (e) NMSA 1935 Comp.)
2. If the answer to question one is "no," have the interests of all the owners been consolidated by communitization agreement or otherwise? YES _____ NO _____. If answer is "yes," Type of Consolidation _____
3. If the answer to question two is "no," list all the owners and their respective interests below:

| | |
|-------|------------------|
| Owner | Land Description |
| | |
| | |

SECTION B



CERTIFICATION

I hereby certify that the information in SECTION A above is true and complete to the best of my knowledge and belief.

| |
|----------|
| Name |
| Position |
| Company |
| Date |

I hereby certify that the well location shown on the plat in SECTION B was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

| |
|---|
| Date Surveyed July 3, 1957 |
| Registered Professional Engineer and/or Land Surveyor JOHN W. WEST |
| Certificate No. N.M. - P.E. & L.S. NO. 678 |

0 330 660 990 1320 1650 1980 2310 2640 2000 1500 1000 500 0

REC'D JUL 6 1959

NEW MEXICO OIL CONSERVATION COMMISSION
WELL LOCATION AND ACREAGE DEDICATION PLAT

FORM C-128
Revised 5-1-57

SEE INSTRUCTIONS FOR COMPLETING THIS FORM ON THE REVERSE SIDE

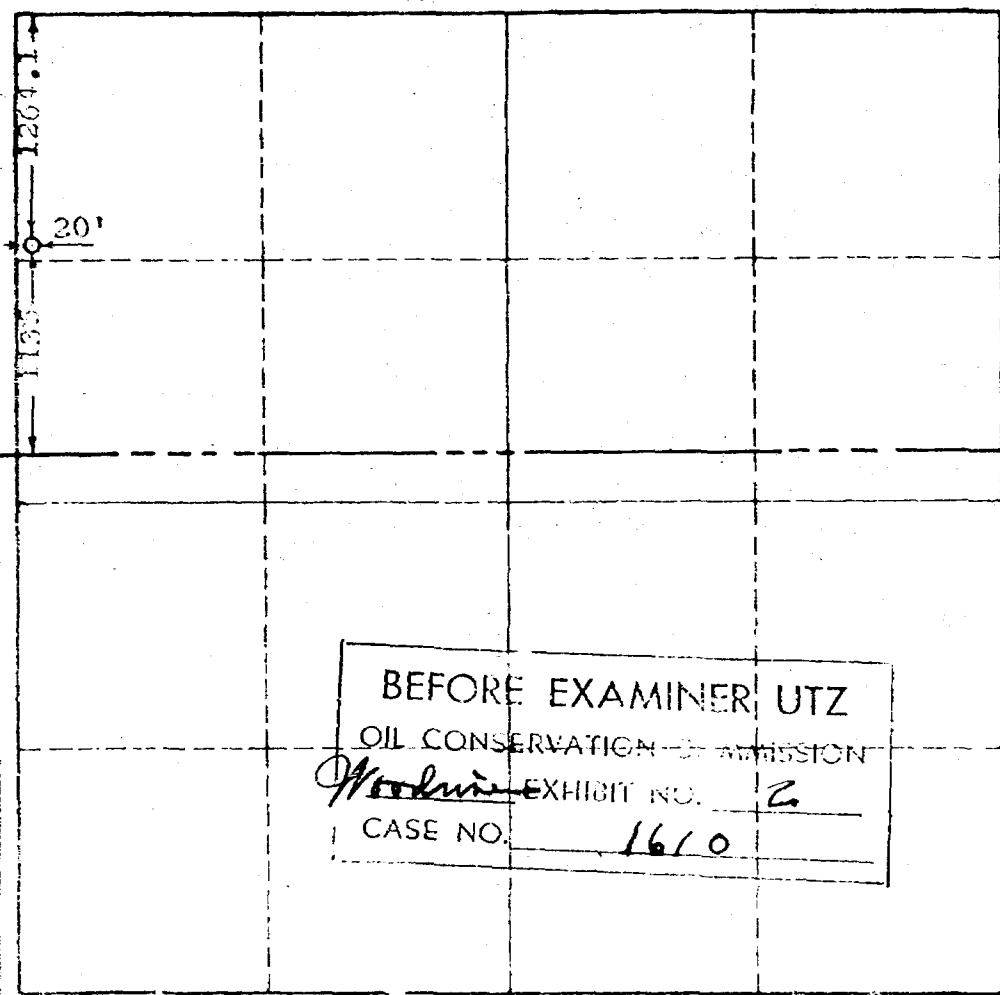
SECTION A

| | | | | |
|--|---------------------|-----------------------|---------------|-----------------------------|
| Operator Woodriver Oil & Refining Co. | | Lease 1115 Federal | | Well No. 9 |
| Unit Letter A | Section 35 | Township 20 S | Range 37 E | County Lea |
| Actual Footage Location of Well: 1135 feet from the South line and 20 feet from the West line | | | | |
| Ground Level Elev. 2979.28 | Producing Formation | | Pool | Dedicated Acreage: Acres |

1. Is the Operator the only owner in the dedicated acreage outlined on the plat below? YES _____ NO _____. ("Owner" means the person who has the right to drill into and to produce from any pool and to appropriate the production either for himself or for himself and another. (65-3-29 (e) NMSA 1935 Comp.)
2. If the answer to question one is "no," have the interests of all the owners been consolidated by communitization agreement or otherwise? YES _____ NO _____. If answer is "yes," Type of Consolidation _____
3. If the answer to question two is "no," list all the owners and their respective interests below:

| Owner | Land Description |
|-------|------------------|
| | |
| | |

SECTION B



BEFORE EXAMINER: UTZ
OIL CONSERVATION COMMISSION
Woodriver EXHIBIT NO. 2
CASE NO. 1610

CERTIFICATION

I hereby certify that the information in SECTION A above is true and complete to the best of my knowledge and belief.

| |
|----------|
| Name |
| Position |
| Company |
| Date |

I hereby certify that the well location shown on the plat in SECTION B was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

| |
|--|
| Date Surveyed July 2, 1959 |
| Registered Professional Engineer and/or Land Surveyor, JOHN W. WEST |
| <i>John W. West</i> |
| Certificate No. N.M. - P.E. & L.S. NO. 676 |

MAIN OFFICE CCC



1959 JUL 8 AM 8:18

Wood River Oil & Refining Co., Inc.
Petroleum Products

321 WEST DOUGLAS WICHITA, KANSAS

PRODUCTION DEPARTMENT
C. C. CHAPIN, MANAGER

July 6, 1959

New Mexico Oil Conservation Commission
Santa Fe, New Mexico

Re: Wills Flood
35-26-37
Lea County, New Mexico
Case No. 1610, Order No. R-1352

Gentlemen:

Following is report on operations under the above order:

- (1) Water Supply Well is drilling at 440'.
- (2) Well A-5 is cleaning out cavings at 3258'.
- (3) Locations for injection wells have been staked.
Bids are being taken to build roads.

Yours truly,

WOOD RIVER OIL & REFINING CO., INC.

C. C. Chapin
C. C. Chapin

/smc

cc: New Mexico Oil Conservation Commission
Hobbs, New Mexico

*Copy
Mailed
7-18-59
to
Mr. McKinnon*

APPLICATION FOR AMENDMENT TO
NEW MEXICO CONSERVATION COMMISSION
CASE NO. 1610, ORDER NO. E-1352

July 3, 1959

To: New Mexico Conservation Commission
Santa Fe, New Mexico

Application for an order to: Amend order to change locations of
injection wells Nos. 8 and 9:

1. Name of Flood: Wells
Name of Field: Roubidoux
Name of Lease Owner: West River Oil & Refining Co., Inc.
321 West Douglas, Wichita, Kansas

2. Description of Leases:

| <u>U. S. SERIAL NO.</u> | <u>LEGAL DESCRIPTION</u> | <u>DATE OF LEASE</u> | <u>ACRES</u> |
|-------------------------|---|----------------------|--------------|
| LC 050107 (b) | Lot 1, Sec. 34 | 12-19-38 | 32.74 |
| LC 050107 (a) | NE/4 NE/4, Sec. 34; Lots 2, 3, 4; E/2 NW/4; NW/4 NE/4 Sec. 35 All in T-26S, R-37E Lea County, New Mexico | 12-1-58 | 257.81 |

3. Production map attached as Exhibit "A" shows wells and leases in the area to be flooded. All well location measurements and location units are shown on Exhibit "B", (Amended).

Sec. 35, Twp. 36S, Rge. 37E, shown on Exhibit "B", is an irregular tract. The distance from the north to the south line is only 2390'. Our original application showed spacing for a regular 2640' half section.

In order to equally flood the producing wells it is necessary to move injection wells Nos. 8 and 9 approximately 180' south or 1135' from the south line instead of 1315' from the south line as shown on the original application.

4. A copy of this application has been sent to:

| <u>NAME</u> | <u>ADDRESS</u> | <u>HOW SENT</u> |
|-------------------------------|-------------------------|-----------------|
| Bureau of Land Management | Santa Fe, N. M. | Registered Mail |
| John A. Anderson, U. S. G. S. | Box 6721, Roswell N. M. | Registered Mail |
| A. P. Kleeman, U. S. G. S. | Box 1838, Hobbs, N. M. | Registered Mail |
| The Texas Co. | Midland, Texas | Registered Mail |

Respectfully submitted,

WOOD RIVER OIL & REFINING CO., INC.

BY

C. C. Chapin
C. C. Chapin

"APPLICANT"

179

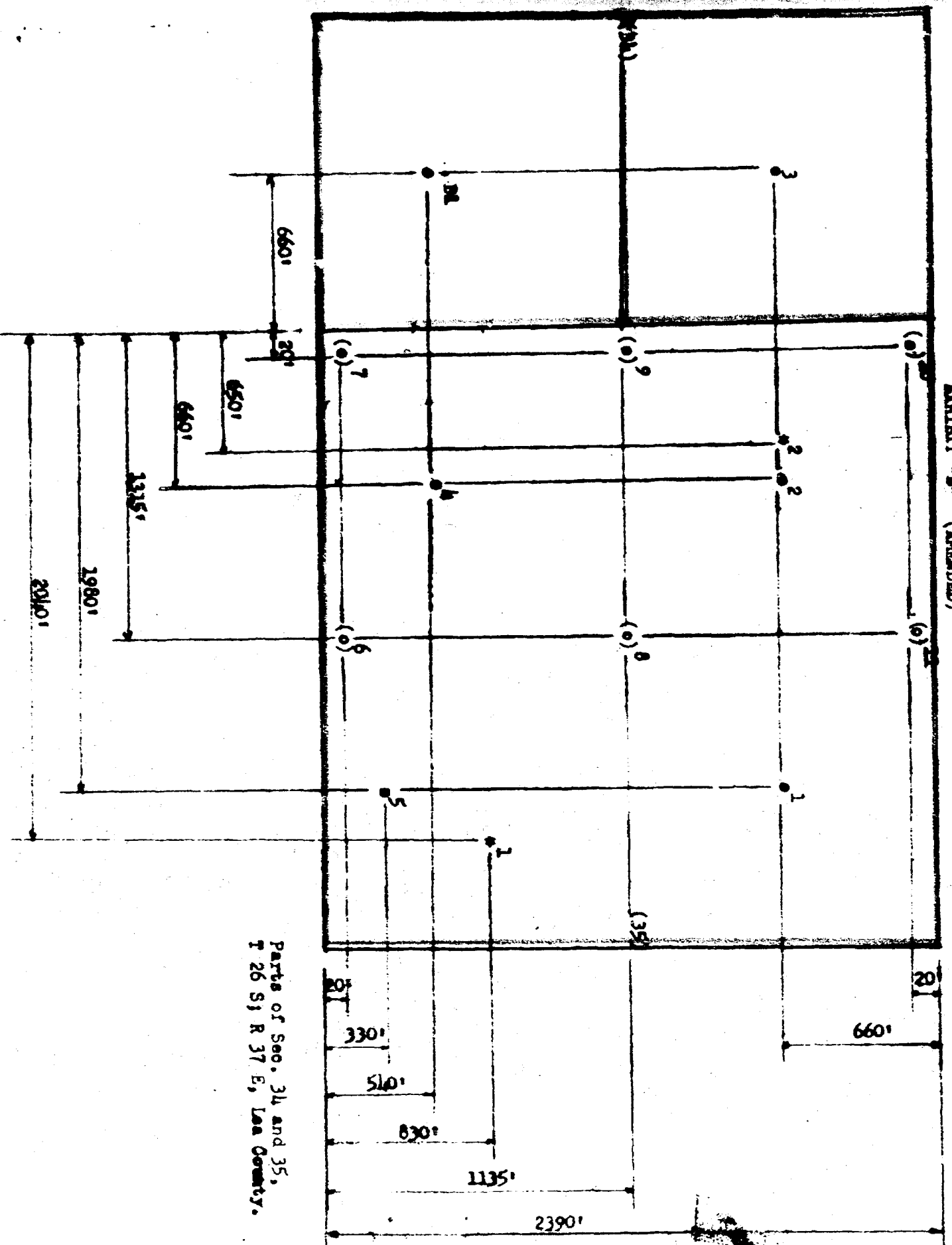
1



Producing Wells •
Injection Wells (•)
Proposed Injection Wells (o)
Water Supply Wells *
Wood River Oil & Refg. Co. WR

Wilder County, Tenn.
Mar. 1-22 1911

EXHIBIT "B" (AMENDED)



Parts of Sec. 34 and 35,
T 26 S, R 37 E, Lea County.

| LOCATION OF WELLS | | | |
|-------------------|----------------------------------|--------------------------------|---------------|
| Well No. | Footage from - - Line of Sec. 35 | Footage from W Line of Sec. 35 | Subdi- vision |
| 1 | 660 FNL | 1980 | C |
| 2 | 660 FNL | 660 | D |
| 3 | 510 FSL | 660 | E |
| 4 | 330 FSL | 1980 | F |
| 5 | 20 FSL | 1315 | G |
| 6 | 20 FSL | 20 | H |
| 7 | 20 FSL | 1315 | I |
| 8 | 1135 FSL | 20 | J |
| 9 | 1135 FSL | 20 | K |
| 10 | 20 FNL | 20 | L |
| 11 | 20 FNL | 1315 | M |
| 12 | Footage from - - Line of Sec. 34 | Footage from E Line of Sec. 34 | |
| 13 | 660 FNL | 660 | A |
| 14 | 510 FSL | 660 | H |
| 15 | Footage from - - Line of Sec. 35 | Footage from W Line of Sec. 35 | |
| 16 | 830 FNL | 2040 | F |
| 17 | 660 FNL | 650 | D |

Legend: Producing Wells (o)
Proposed Injection Wells (o)
Water Supply Wells *

OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

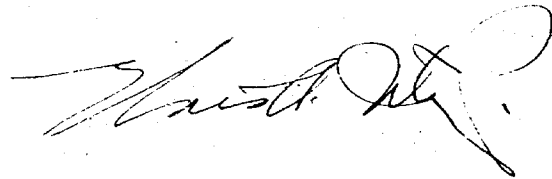
Date 7-29-59

CASE NO. 1610

HEARING DATE 7-28-59

My recommendations for an order in the above numbered case(s) are as follows:

1. Grant Woodrines request to amend R-1352 for 2 injection wells locations.
2. (a) Woodrines - Willsa Fed # 8, ~~1135~~ 1135 ft./S line 1315/W line of sec. 35-26S-37E, NMPM
(b) Woodrines - Willsa Fed # 9, 1135/S and 20/W line of sec. 35-26S-37E NMPM.
3. Order R-1352 should have used the operator name & lease name for wells which are listed.



Staff Member



DEC 1 1960
Rock Island Oil & Refining Co., Inc.

AM 5-5674 • 321 WEST DOUGLAS
WICHITA 2, KANSAS

December 22, 1960

New Mexico Oil Conservation Commission
Santa Fe, New Mexico

Re: Wills Flood
35-26-37
Lea County, New Mexico
Case No. 1610, Order No. R-1352

Gentlemen:

Following is the November report on operations under the above order.

Wills A-1 - Producing
A-2 - Producing
A-3 - Producing
A-4 - Producing
A-5 - Producing
A-6 - Injecting 103 b/d at 680#
A-7 - Injecting 47 b/d at 690#
A-8 - Injecting 217 b/d at 280#
A-9 - Injecting 189 b/d at 680#
A-10- Injecting 151 b/d at 680#
A-11- Injecting 90 b/d at 690#
A-12- Injection well - drilling at 2986'
B-1 - Producing about 6 bf/d - 3% oil

Yours truly,

ROCK ISLAND OIL & REFINING CO., INC.

H. G. Rippeteau
H. G. Rippeteau

/pan

**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. 1610
Order No. R-1352**

**APPLICATION OF WOOD RIVER OIL &
REFINING COMPANY, INC., FOR AN
ORDER AUTHORIZING A WATER FLOOD
PROJECT IN THE RHODES POOL, LEA
COUNTY, NEW MEXICO, FOR THE
ESTABLISHMENT OF AN ADMINISTRATIVE
PROCEDURE FOR GRANTING CAPACITY
ALLOWABLES TO WELLS IN SAID PROJECT,
AND FOR APPROVAL OF UNORTHODOX
LOCATIONS FOR THE INJECTION WELLS
WITHIN THE PROJECT.**

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on March 11, 1959, at Santa Fe, New Mexico, before Daniel S. Nutter, Examiner duly appointed by the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission," in accordance with Rule 1214 of the Commission Rules and Regulations.

NOW, on this 18th day of March, 1959, the Commission, a quorum being present, having considered the application, the evidence adduced, and the recommendations of the Examiner, Daniel S. Nutter, 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 proposes to institute the "Wills Water Flood Project" in the Rhodes Pool, Lea County, New Mexico, on two federal leases in Sections 34 and 35, Township 26 South, Range 37 East, NMPM, Lea County, New Mexico.

(3) That the proposed water flood project is an expansion of a presently existing water flood project in the State of Texas.

(4) That the applicant proposes to inject water into the lower Yates formation in said Rhodes Pool through the following-described wells, which are to be drilled on unorthodox locations:

Well No. 6, to be located 20 feet from the South line and 1315 feet from the West line of Section 35.

Well No. 7, to be located 20 feet from the South line and 20 feet from the West line of Section 35.

Well No. 8, to be located 1315 feet from the South line and 1315 feet from the West line of Section 35.

Well No. 9, to be located 1315 feet from the South line and 20 feet from the West line of Section 35.

Well No. 10, to be located 20 feet from the North line and 20 feet from the West line of Section 35.

Well No. 11, to be located 20 feet from the North line and 1315 feet from the West line of Section 35,

all in Township 26 South, Range 37 East, NMPM, Lea County, New Mexico.

(5) That the proposed unorthodox locations for the above-described wells should be approved.

(6) That an administrative procedure should be established whereby approval may be granted for capacity allowables to wells in the project when, in the opinion of the Secretary-Director, good cause is shown for doing so.

IT IS THEREFORE ORDERED:

(1) That Wood River Oil & Refining Company, Inc., be and the same is hereby authorized to institute the Wills Water Flood Project in the Rhodes Pool, Lea County, New Mexico, by the injection of water into the lower Yates formation through the following-described wells:

Well No. 6, to be located 20 feet from the South line and 1315 feet from the West line of Section 35.

Well No. 7, to be located 20 feet from the South line and 20 feet from the West line of Section 35.

Well No. 8, to be located 1315 feet from the South line and 1315 feet from the West line of Section 35.

Well No. 9, to be located 1315 feet from the South line and 20 feet from the West line of Section 35.

-3-

Case No. 1610
Order No. R-1352

Well No. 10, to be located 20 feet from the North line and 20 feet from the West line of Section 35.

Well No. 11, to be located 20 feet from the North line and 1315 feet from the West line of Section 35,

all in Township 26 South, Range 37 East, NMPM, Lea County, New Mexico.

(2) That unorthodox locations be and the same are hereby approved for the above-described wells.

(3) That a procedure be and the same is hereby established whereby approval of capacity allowables for wells in said project may be granted by the Secretary-Director administratively (without notice and hearing) when the applicant furnishes good reason therefor.

(4) That monthly progress reports on the water flood project herein authorized shall be submitted to the Commission in accordance with Rule 704 and Rule 1119 of the Commission Rules and Regulations.

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

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

John Burroughs

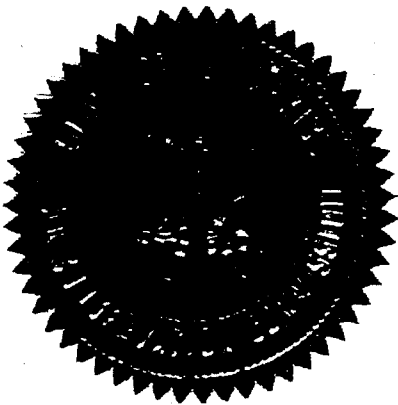
JOHN BURROUGHS, Chairman

Murray E. Morgan

MURRAY E. MORGAN, Member

A. L. Porter, Jr.

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



ir/

OIL CONSERVATION COMMISSION
P. O. BOX 871
SANTA FE, NEW MEXICO

March 19, 1959

Mr. Thomas F. McKenna
302 East Palace
Santa Fe, New Mexico

Dear Mr. McKenna:

On behalf of your client, Wood River Oil & Refining Company, we enclose two copies of Order R-1352 issued March 18, 1959, by the Oil Conservation Commission in Case 1610, which was heard on March 11th before an examiner.

Very truly yours,

A. L. Porter, Jr.
Secretary - Director

bp
Encls.

C
O
P
Y

OIL CONSERVATION COMMISSION

P. O. BOX 871

SANTA FE, NEW MEXICO

August 6, 1959

Mr. Thomas F. McKenna
303 East Palace
Santa Fe, New Mexico

Dear Mr. McKenna:

On behalf of your client, Wood River Oil & Refining
Company, we enclose two copies of Order No. R-1352-A
issued on August 6, 1959, by the Oil Conservation
Commission in Case No. 1610.

Very truly yours,

A. L. PORTER, Jr.
Secretary-Director

ir/

Enclosures

*Copy sent
to Hobbs & Co. Inc.
and Mr. Chapin*



WOOD RIVER OIL & REFINING CO., INC. *files*
Petroleum Products

321 WEST DOUGLAS WICHITA, KANSAS

PRODUCTION DEPARTMENT
C. C. CHAPIN, MANAGER

August 3, 1959

New Mexico Oil Conservation Commission
Santa Fe, New Mexico

Re: Wills Flood
35-26-37
Lea County, New Mexico
Case No. 1610, Order No. R-1352

Gentlemen:

Following is report on operations under the above order:

- (1) Water Supply Well has been completed for approximately 1120 b/d.
- (2) Well A-5 has been cleaned out and is being put on production.
- (3) Roads have been built to all injection wells. Site has been graded for the plant.
- (4) Well A-3 is cleaning out at 3262'.
- (5) Well B-1 is cleaning out at 3345'.
- (6) Expect to move in rotary tools on injection well A-6 within a week.

Yours truly,

WOOD RIVER OIL & REFINING CO., INC.

C. C. Chapin
C. C. Chapin

/smc

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. 1610
Order No. R-1352-A

APPLICATION OF WOOD RIVER OIL
& REFINING COMPANY, INC., FOR
AN AMENDMENT OF ORDER NO. R-1352
TO PROVIDE FOR CHANGES IN TWO
UNORTHODOX WELL LOCATIONS IN THE
WILLS WATER FLOOD PROJECT, RHODES
POOL, LEA COUNTY, NEW MEXICO

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on July 28, 1959, at Santa Fe, New Mexico, before Elvis A. Utz, Examiner duly appointed by the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission," in accordance with Rule 1214 of the Commission Rules and Regulations.

NOW, on this 6th day of August, 1959, the Commission, a quorum being present, having considered the application, the evidence adduced, and the recommendations of the Examiner, Elvis A. Utz, 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, Wood River Oil & Refining Company, Inc., seeks an amendment of Order No. R-1352 to provide that the unorthodox well locations for Wood River-Wills Federal Well No. 8 and Wood River-Wills Federal Well No. 9 in the Wills Water Flood Project, Rhodes Pool, Lea County, New Mexico, be 1135 feet from the South line and 1315 feet from the West line of Section 35 and 1135 feet from the South line and 20 feet from the West line of Section 35, respectively, both in Township 26 South, Range 37 East, N&PM.

(3) That approval of the proposed amendment of Order No. R-1352 will neither cause waste nor impair correlative rights.

-2-

Case No. 1610
Order No. R-1352-A

IT IS THEREFORE ORDERED:

That as requested, Order No. R-1352 be and the same is hereby amended to provide that the unorthodox well locations for Wood River-Wills Federal Well No. 8 and Wood River-Wills Federal Well No. 9 of the Wills Water Flood Project, Rhodes Pool, Lea County, New Mexico, be 1135 feet from the South line and 1315 feet from the West line of Section 35, and 1135 feet from the South line and 20 feet from the West line of Section 35, respectively, both in Township 26 South, Range 37 East.

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

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

John Burroughs
JOHN BURROUGHS, Chairman

Murray E. Morgan
MURRAY E. MORGAN, Member

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



ven/

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
July 28, 1959

EXAMINER HEARING

IN THE MATTER OF:

C Vase 1610

DEARNLEY . MEIER & ASSOCIATES
GENERAL LAW REPORTERS
ALBUQUERQUE NEW MEXICO
Phone CHapel 3-6691

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
July 28, 1959

EXAMINER HEARING

IN THE MATTER OF:

Application of Wood River Oil & Refining Com-)
pany, Inc., for an amendment of Order No.)
R-1352. Applicant, in the above-styled)
cause, seeks an amendment of Order No. R-)
1352, to provide that the unorthodox well)
locations for well Nos. 8 and 9 of the Wills)
Water Flood Project, Rhodes Pool, Lea)
County, New Mexico, be 1135 feet from the South)
line and 1315 feet from the West line of Sec-)
tion 35, and 1135 feet from the South line)
and 20 feet from the West line of Section 35)
respectively, both in Township 26 South,)
Range 37 East.)

BEFORE:

Mr. Elvis A. Utz, Examiner

TRANSCRIPT OF HEARING

MR. UTZ: The next case will be Case 1610.

MR. PAYNE: Case 1610. "Application of Wood River Oil
& Refining Company, Inc., for an amendment of Order No. R-1352."

MR. McKENNA: Mr. Examiner, Thomas McKenna of McKenna
and Summer, Santa Fe, appearing for the applicant, Wood River
Oil & Refining Company. I have one witness, Mr. C. C. Chapin.

(Witness sworn.)

C. C. CHAPIN

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

DIRECT EXAMINATIONBY MR. McKENNA:

Q Will you state your name, please?

A C. C. Chapin.

Q C-h-a-p-i-n, is that correct?

A Yes, sir.

Q What is your address, Mr. Chapin?

A Wichita, Kansas.

Q What is your occupation?

A Manager of Production Department, Wood River Oil & Refining Company.

Q Have you testified before this Commission on previous occasions?

A Yes, sir.

Q Mr. Chapin, did you prepare the application, was the application prepared at your direction which is involved in this matter?

A Yes, sir.

Q Can you tell the Examiner the particular relief that you request and the purpose of the application?

A In our application dated February 10th we assumed our

tract of land was 2640 feet from the North line to the South line. In staking our locations recently we found out it was only 2390 feet from the North line to the South line. That brought about the necessity of changing the location of injection wells No. 8 and 9 to 180 feet south of our original application, move it 180 feet south.

Q Is the purpose of this application to request an amendment of Order No. R-1352 previously entered by the Commission in this matter, being the Wills Water Flood Project, is that correct?

A Yes, sir.

Q So it may be put out definitely, what will now, what is the south location for Well No. 8?

A We wish it to be 1135 feet from the South line, now.

Q By way of refreshing your memory, you are right, go ahead, sir, I am sorry. Give the complete location.

A We want No. 8 to be 1135 feet from the South line and 1315 feet from the West line of Section 35, Township 26 South, Range 37 East, Lea County.

Q And will you tell the Examiner the desired new location for Well No. 9?

A We seek to have injection well No. 9, 1135 feet from the South line and 20 feet from the West line of Section 35, Township 26 South, Range 37 East, Lea County.

Q And so far as is necessary, your request is for the

4
approval of such locations as an unorthodox location, is that correct?

A Yes, sir.

Q Can you tell the Examiner the quarter subdivision or legal subdivision in which these two wells as now requested will be located?

A They both will be in Subdivision D.

Q And Subdivision D would be the Northwest Quarter of the Northwest Quarter of Section 35?

A Yes, sir.

Q 26 South, 27 East? A 37 East.

Q 37 East? A Yes.

MR. McKENNA: I have two exhibits which I would like to have identified, Exhibits 1 and 2 of Wood River Oil & Refining Company.

(Whereupon the documents above referred to were marked Applicant's Exhibits Nos. 1 & 2, for identification.)

Q I hand you what has been marked as Applicant's Exhibits 1 and 2. Will you tell the Examiner what they purport to be, please?

A These are the surveyor's plats showing the location of injection wells No. 8 and 9 on our Wills Flood in Section 35, Township 26, Range 37, Lea County.

Q And is it true that those exhibits reflect the

proposed or desired locations?

A Yes, this coincides with our application, revised application, yes, sir.

Q Can you state whether or not you prepared these exhibits or whether or not they were prepared at your direction?

A They were, yes, sir.

Q Prepared at your direction, is that correct, sir?

A Yes, sir.

MR. McKENNA: Mr. Examiner, I would like to have these submitted in evidence.

(The documents previously marked Applicant's Exhibits Nos. 1 & 2 were offered in evidence by counsel for the Applicant.)

MR. UTZ: Without objection they will be received.

Q Mr. Chapin, do you see anything in connection with your application that would be violative of the principles of conservation and the prevention of waste?

A No, I do not.

Q And would it be your testimony that this application is in keeping with correlative rights?

A Oh, yes, sir.

Q And the basis of your application is to request the amendment of the previous order as to Wells 8 and 9, is that correct?

A Yes, sir.

MR. McKENNA: That's all I have, Mr. Examiner.

CROSS EXAMINATION

BY MR. UTZ:

Q Mr. Chapin, have you sent copies of Exhibits 1 and 2 to the Hobbs office for their file?

A Yes, sir.

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

BY MR. PAYNE:

Q Mr. Chapin, this does not change your original water flood project in any respect here, does it?

A No, not at all, sir. We just got these two wells too far north to make equal distribution.

Q And it was necessary for you to have another hearing since the well location was spelled out in the original order?

A Yes, sir.

MR. UTZ: Any other questions? If not, the witness may be excused.

(Witness excused.)

MR. UTZ: Is that all you have?

MR. McKENNA: Yes, sir.

MR. UTZ: Any statement to be made in this case? If not, the case will be taken under advisement and the hearing is adjourned.

STATE OF NEW MEXICO)
:
COUNTY OF BERNALILLO)

I, JOSEPH A. TRUJILLO, Court Reporter, do hereby certify that the foregoing and attached transcript of proceedings before the New Mexico Oil Conservation Commission at Santa Fe, New Mexico, is a true and correct record to the best of my knowledge, skill and ability.

IN WITNESS WHEREOF I have affixed my hand and notarial seal this th 7 - day of August, 1959.

Joseph A. Trujillo
Notary Public-Court Reporter

My Commission Expires:

Oct 5 1966

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 1610 heard by me on Aug 5 1959.

James H. [Signature] Examiner
New Mexico Oil Conservation Commission

BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

IN THE MATTER OF:

CASE NO. 1610

TRANSCRIPT OF HEARING

DEARNLEY - MEIER & ASSOCIATES
GENERAL LAW REPORTERS
ALBUQUERQUE NEW MEXICO
Phone CHapel 3-6691

March 11, 1959

NEW MEXICO OIL CONSERVATION COMMISSION

Mabry Hall

Santa Fe, NEW MEXICO

REGISTER

HEARING DATE _____ Examiner _____ March 11, 1959 TIME: 9:00 a.m.

| NAME: | REPRESENTING: | LOCATION: |
|-------------------|----------------------|----------------|
| Hiram W. Keith | Wood River. | Kermit, Texas |
| Thomas F. McKenna | " " | Santa Fe. |
| J. C. Austerler | " " | Monahans, Tex |
| C. C. Chapman | " " | Wichita Kan. |
| H. N. Rhodes | British American | Denver, Colo. |
| Burns H. Errebo | ✓ | Albuquerque |
| John Yurontea | T. P. Coal & Oil Co. | Midland, Texas |
| John Langston | Great Western Oil | MIDLAND |
| Wm. A. Davis | Hamble | Midland |
| Robert H. Vick | Antbrook | H. W. A. |
| J. D. Conrad | " | " |
| James Manning | " | Rockwell |
| Frank E. Doby | State Eng. Office | Santa Fe |
| Jim Hasty | Heavy Duty Pumps | Rockwell |
| Nancy Ray | McKenna P. Co. | Santa Fe |
| Wm. A. Davis | Antbrook | MIDLAND TEX |

BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

IN THE MATTER OF:

Application of Wood River Oil & Refining Company, Inc., for an order authorizing a pilot water flood project, for capacity allowables for wells in said project, and for approval of five unorthodox locations. Applicant, in the above-styled cause, seeks an order authorizing it to institute a pilot water flood project in the Rhodes Pool in Lea County, New Mexico. Applicant proposes to inject water into the Lower Yates formation through six wells located in Section 35, Township 26 South, Range 37 East. Applicant also seeks approval of unorthodox locations for five of its proposed injection wells. Applicant further seeks capacity allowables for wells within the project.

CASE NO.
1610

BEFORE:

Daniel S. Nutter, Examiner

TRANSCRIPT OF HEARING

MR. NUTTER: The Hearing will come to order, please.
First case on the docket this morning will be Case 1610.

MR. PAYNE: Case 1610. Application of Wood River Oil & Refining Company, Inc., for an order authorizing a pilot water flood project, for capacity allowables for wells in said project, and for approval of five unorthodox locations.

MR. McKENNA: Morning, Mr. Examiner and gentlemen.

My name is Thomas Seth McKenna, lawyer from Santa Fe, and I am representing Wood River Oil & Refining Company. I believe we only have one witness, Mr. Keith.

(Witness sworn.)

H I R A M W. K E I T H, a witness, called by and on behalf of the Applicant, being first duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY: MR. McKENNA:

Q Would you state your name, please, sir.

A My name is Hiram W. Keith.

Q And where do you live, Mr. Keith?

A I live at Kermit, Texas.

Q And by whom are you employed and in what capacity?

A I am employed by the Wood River Petroleum Company as a petroleum engineer.

Q Have you testified previously before this Commission?

A No.

Q Will you please state your education and your experience in your field for the Commission.

A My first experience in the oil business started in 1946 in Groesbeck, Texas. I was employed by Pan American Oil Company as a roustabout. I was graduated from the University of Oklahoma in 1949. Upon completion of my graduation I was

employed by the Texas Company in Illinois, and at that time in Illinois I was employed as an area engineer, water flood engineer and did water flooding engineering work and was associated with some fifteen water flood projects. After that I was transferred, and from 1949 to 1956 I worked in Illinois, Kentucky, and Indiana, and I was transferred to Oklahoma where I was associated with two more water floods in connection with the Texas Company. After that I was transferred to the division office where I was employed as a reservoir engineer for two years. After that I, in February of 1957, last year, I resigned the Texas Company and was employed by Wood River Oil Company and since that time I have worked in the North Scarborough water flood as a water flood engineer.

Q Where is this North Scarborough water flood located?

A The North Scarborough water flood is located in Winkler County, Texas, adjacent to the proposed flood that we have proposed here.

MR. McKENNA: Mr. Examiner, I move that this witness' qualifications be accepted.

MR. MUTTER: What will be your job with the proposed water flood that we have here this morning?

A As a water flood engineer. In other words, we will be expanding our water flood across the state line from Texas.

MR. MUTTER: His qualifications are acceptable.

Q (By Mr. McKenna) As you stated, you are in charge

of the identical water flood across the state line?

A That's right.

Q The North Scarborough for Wood River?

A That's right.

Q And you will be in charge of this project if approved?

A From an engineering standpoint, yes.

Q Can you tell the Examiner your particular acquaintance with the proposed water flood now before this Commission?

A Well, since I have been working with this flood for a year in the North Scarborough, naturally we kept, or observed the offset leases and looked for other possible properties to flood, and in the process of this, why I have studied the sub-surface and structural and all pertinent things that would be relative to a prospective flood, and visited the leases from time to time to see how they are coming along and if progress was being made.

Q And you are particularly acquainted with the land involved and the area involved in this proposed water flood?

A Very definitely. I am out there anywhere from three to four times a week.

Q Now, if I remember correctly, Mr. Witness, and correct me if I am wrong, there are two leases involved in this proposed water flood; Las Cruces 050107 (b) and 050107 (a), is that correct?

A That's right.

Q Do you recall what the two leases have recovered from

primary production?

A As of --

Q As of January, so to speak, 1st, 1959?

A As of January 1st, 1959, the two leases recovered, cumulative, 416,666 barrels of oil from a total of six wells, six producing wells.

Q How many active wells do you now have in this area involved?

A There are now two. I mean, one active well, the A No. 2 Well, which the December state data showed it was producing 155 barrels during the month and no water. Just the one well.

Q And this proposed project is located in Section 34 and 35 of Township 26 South, Range 37 East, Lea County, is that correct?

A Right.

Q Particularly involving Lot 1 of Section 34 in the NE/4 NE/4 of Section 34; Lots 2, 3, and 4, in the N/2 NW/4; NW/4 NE/4 of Section 35, is that correct, sir?

A That's right.

Q Is it your opinion that the reservoir is now in a late stage of primary depletion?

A Very definitely, it is.

Q And what is this reservoir, Mr. Witness?

A You mean the name of the reservoir?

Q Yes, please.

A The reservoir we are referring to is what we call the Penn Bennett. We refer to it as the Penn Bennett. Some people refer to it as the Lower Yates. It is the lower portion sand section in the Yates, or immediately above the Seven Rivers.

Q And as a result of your studies of this reservoir, have you reached any conclusion as to the necessity for secondary recovery?

A Yes, sir, I have. It is my honest opinion that if secondary recovery operations are not instigated, that we stand to lose a considerable amount of oil in the ground.

Q And is it your testimony that this secondary recovery program as proposed is necessary in the interest of conservation and prevention of waste?

A Yes.

Q What do you believe will be recovered by virtue of this secondary recovery program?

A I believe we can anticipate at least as much if not more additional oil than was recovered by primary, which was 416,656, as I previously mentioned.

Q Now, Mr. Witness, I notice that you have in your possession a copy of the application which was submitted to the Conservation Commission. Will you go ahead and explain to the Examiner in detail the proposed plan?

A We propose to drill first our two water supply wells, which we propose to use the same water source as we are using

in our North Scarborough flood, which will be the Santa Rosa formation. Now, the water sand occurs from a depth 420 to 550, and we propose to drill two water supply wells: equip those wells with turbine pumps and determine first if we have water supply, then we plan to drill six injection wells as located on the map shown here on irregular spacing. The pattern will be 40-acre five spot injection, which will be conforming to the primary pattern, other than we are going to have to drill inside for injection wells.

Now, the injection wells, we plan to drill those in this manner, by drilling through the producing formation of the Penn Bennett, which is to be some 3380 feet, forty feet below that center casing, five and a half inch casing, and cement that with 525 sacks of cement, run centralizers and float your float column on the bottom joint, go in and perforate the Penn Bennett with four shots per foot and leave the float shoe in and the float collar in. We plan on setting eight and five-eighths for surface pipe at 600 feet, which conforms to the Texas regulations, and cement that with circulated cement to the surface on our surface pipe and that will protect any fresh water sand from recharging with gas or anything else.

Q. Where did you say you would set that eight and five-eighths --

A. Six hundred feet.

Q. All right, so you know from your plans, the rings

in depth and perforations?

A You mean the formation? Well, the top of the Penn Bennett is usually found in an average of 3280 to 3290, and the thickness of the Penn Bennett ranges from thirteen to thirty feet, for an average of approximately twenty feet. Now, I believe that answers the question.

Q And I believe in the application you stated that you desire to flood the Lower Yates formation through perforations which range in depth from 3235 to 3310 is that correct?

A That's right.

Q Now, the water that will be used is fresh water?

A That is correct, Santa Rosa formation fresh water.

Q Now, Mr. Witness, some of the injection wells are, so to speak, unorthodox in view of the rule of this Commission, and please check me carefully, and I refer to injection wells 6, 7, 9, 10, and 11. Well No. 6 is located in Lot 3 of Section 35, Well No. 7 in Lot 4, Section 35; No. 9 in Lot 4, Section 35; No. 10 in the NW/4 NW/4 Section 35, and No. 11 in the NE NW, all in 26 South, 37 East, is that correct?

A That's correct.

Q And it is part of your application, asking approval for these unorthodox locations?

A That's right.

Q How many wells will be on the lease, to recapitulate, Mr. Witness, after you have drilled the injection wells?

A When the injection wells should be completed, we will have a total of twelve wells, six will be injection wells and six will be producing wells.

Q What is the total number of acreage involved in the flood?

A Our lease will require, as shown on the map, 290 acres.

Q Is it then your testimony, or would you view it as a, in your opinion, as a large flood program, or what?

A No. In fact, it is just a relatively, I consider it a relatively small area, inasmuch as it is just an expansion or addition to our present flooding operations.

Q In Texas?

A In Texas.

Q Mr. Witness, can you tell the Examiner the reservoir characteristics of the Penn Bennett sand?

A Yes, sir, I can. The Penn Bennett formation is located on a, it might be considered a stratigraphic trap. It is indicated on the west edge of the bisymmetrical anticline running north and south. The structure plunges approximately 180 feet to the west and on the eastern edge of the pool, the productive limits are dominated by permeability conditions, whereas on the western edge we suspect a very inactive water drive, water table would be correct. Now, the formation is, the sand characteristics, it is a very soft fragile brown silty sand, and it usually comes in two sections. The zone is separated by thin dense dolomite

section, and runs anywhere from four to six feet. Now, as far as the porosity and permeability -- Well, first, it is estimated in this 290 acres that we have requested, that 235 of those are productive. Now, the average porosity is 21.3 per cent; average horizontal permeability, 30.3 millidarcies. Estimated connate water content, 35 per cent. Gravity of oil 37 degrees API. Estimated original reservoir pressure, 1250. Bottom hole temperature, 95 degrees Fahrenheit, viscosity of oil, gas free, 5.4 centipoise. Estimated original GOR 400 to 1. Now, I would like to point out here that this reservoir data is just for the Bennett. Now, the Yates, if they consider the entire Yates, the Yates is going to have a higher GOR on account of the upper zones, the stringers up in there are gas, and these wells, a lot of them, I say a lot of them, five of the six wells were completed producing from the entire Yates section, which includes the Penn Bennett and the Upper Yates, but in our flooding program, our injection wells were primarily to flood the Penn Bennett, and we set them all in the North Scarborough field.

Q Do you know what the estimated present reservoir pressure is?

A I would estimate around a hundred pounds.

Q Mr. Witness, can you tell the Examiner how you propose to isolate the producing formation?

A Well, I believe I explained that a while ago, through the casing program by setting through and perforating only the Penn

Bennett section, or those zones which we are flooding now. In the producing wells, why we don't plan to isolate the Penn Bennett, but we are isolating our flood from the original point.

Q And this same completion method has been used in your offset North Scarborough pool, is that correct?

A Yes, sir, we found it to be very successful there.

Q Do you have any idea, or can you express any opinion as to the compatibility of the injection and produced water?

A No, that would be difficult, since the leases haven't produced water, and we had a water table, but that has been very hard to define. It is very hard to run any chemical analysis to find the compatibility of the two waters. However, I can say this, we have had flooding for four and a half years in the North Scarborough field, and some of the wells have had the break-through point and we haven't noticed any adverse effect in those wells from injection of the fresh water in the Penn Bennett section.

Q In addition, your application asks for full capacity allowables, is that correct?

A Yes.

Q Have you reached any conclusion as to the economic necessity of that?

A I believe it is necessary in this -- I am not too familiar with the rest of the state, but in this particular instance, I think it is, in that we are cutting on the state line and we have flooding operations with full capacity allowables in Texas, which

is going to be detrimental if we don't have it in New Mexico in that particular adjoining area. In other words, I think it could be correlated to some of your primary allowables where you have fields across the state line when you try to make those the same on both sides of the state line.

Q And as you state, you do have full capacity allowables in the North Scarborough field?

A We have full capacity allowables in the North Scarborough field.

Q Now, Mr. Witness, do you believe that this proposed project is necessary for the greatest ultimate recovery of oil and that it will prevent waste in keeping with the principles of conservation?

A I do, because--and I forgot to mention the reservoir characteristics of the pool--it has been produced primarily by gas drive, and which we know isn't a very efficient method of production from an overall standpoint, and I believe we can reduce the oil saturation in the reservoir by secondary recovery methods.

MR. McKENNA: I believe that's all, Mr. Examiner.

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

MR. PAYNE: Yes.

MR. HUTTER: Mr. Payne.

CROSS EXAMINATION

BY: MR. PAYNE:

Q Mr. Keith, is the Railroad Commission Order that

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approved your water flood in Texas, does it actually contain a provision that all wells in the project will be allowed to produce at capacity?

A If they are in the flood area. In other words, there are some leases that haven't been -- We don't operate or haven't been flooded. They don't have capacity allowable. When we get the flood permit then we usually set up, like the lease, for instance, the lease went from ten barrels up to two hundred barrels in one month, and we will go to the Railroad Commission and tell them that, and they will give us a full capacity allowable. In other words, it is just a matter of informing them what it is and they assign us capacity allowable on that two hundred barrels a day for the lease.

Q In other words, they have what we consider comparable to an administrative procedure for allowing capacity allowables for wells that have had a considerable response to the flood?

A That's right, but it is just a matter of -- all we do is just write a letter and then they answer back, and we inform our pipeline and so forth.

Q I was just wondering if you were aware of the fact that the New Mexico Commission has never approved a pilot water flood project in the very same order capacity allowables were approved for wells in the project.

A Well, I wouldn't consider this a pilot flood.

Q It is a pilot flood in New Mexico, isn't it?

A It is all the same pool and everything. In other words, it is just an extension of the flood. Now, the Rhodes field and the North Scarborough are very definitely the same field, and just because the state line is there, from your standpoint, I guess you would look at it as a pilot flood; from our standpoint, we don't. We have been operating it for four and a half years. We originated the pilot flood in 1956, which we have six injection wells, and now got to the point where we produce three hundred thousand barrels from the flood.

Q Would you be satisfied with an order which provides that when a well has a substantial response from the flood and you so advise us, we would administratively approve capacity allowables for such wells, providing the response was substantial?

A Would that mean that we would have to have a hearing, or would it --

Q No, administrative approval by the Secretary Director upon being satisfied that the wells had received the substantial response.

A I think that would be the same as we have in Texas, if it were handled in that method.

MR. MCKENNA: We would be satisfied.

MR. PAYNE: That's all, Mr. Examiner.

MR. MCKENNA: Mr. Examiner, I have a couple of exhibits which I would like to have marked for identification, and if there is no objection, have them admitted in evidence.

One is a map showing the under water district in New Mexico by way of showing that this is not in any declared basin. Mark that as Wood River's Exhibit No. 1.

MR. NUTTER: What is the source of this exhibit, Mr. McKenna?

MR. McKENNA: That was received yesterday from the State Engineer's Office.

MR. NUTTER: Is this an exhibit or a map that was prepared by the State Engineer's office?

MR. McKENNA: Yes, sir, it is.

MR. NUTTER: This map has been identified as Exhibit No. 1 in Case 1610.

MR. McKENNA: I would like to move it be admitted in evidence.

MR. NUTTER: Is there objection to the introduction of applicant's Exhibit No. 1 in evidence in this case? The exhibit consists of two maps, is that correct?

MR. McKENNA: Two maps, that is correct. Mr. Examiner, the offsetting lease is owned by the Texas Company, and I have here in my possession a telegram sent to Wood River Oil and Refining Company from the Texas Company stating that they have no objection to the proposed water flood project. I would like to mark this as Exhibit No. 1 for identification, and if there are no objections, I respectfully move it be admitted in evidence.

MR. NUTTER: Is there objection to the introduction

of Applicant's Exhibit No. 2 in Case 1510? If not, the exhibit will be received.

MR. McKINNA: I believe that concludes our case.

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

QUESTIONS BY MR. FISCHER:

Q Mr. Keith, did you state the primary drive, mechanical drive of this formation was solution gas drive or solution gas?

A Solution gas. You mean what kind of recovery?

Q Primary recovery mechanism.

A The primary recovery mechanism was solution gas.

Q At the present time are your leases in Texas developed to the stage where, say, your production or injection is right up against the state line? Is there any zone in between? Would there be any zone between the lease in New Mexico and the lease in Texas where wells are not presently being flooded or affected by the flood?

A No, there wouldn't be, as shown on the map, on that exhibit. It will be one continuous flood. Those wells shown south of the state line have already been drilled and have water injection in them. The 15 and 16, they are on the Scarborough "A", are fairly new injection wells, and they haven't enough cumulative to affect the wells north of there, but we expect and anticipate in two months.

Q What would be your Scarborough "C" up against the line?

A That's right.

Q And one and two, are they affected by the flood.

A That's what I say, the new injection wells have been put in recently, and they have had no time to affect one and two, that's one of the reasons we would like to begin flooding operations as soon as feasible, to maintain a balance flood and not have part of the property flooded out.

Q And in this lease in New Mexico, you will begin flooding your entire lease?

A That's right. We don't want a pilot flood because we have already proven to our own satisfaction and I believe we can prove that pretty well, that flooding of the Penn Bennett section is very successful and we see no reason for a pilot flood.

Q What I am getting at, there will be no further expansion of this?

A We don't anticipate any, and if some other operator comes along side-from the present data it doesn't indicate there will be any expansion. I will put it this way, I mean, that is all speculative.

Q Do you have the same purchaser in Texas and New Mexico for your oil?

A No, we don't.

Q Who is your purchaser in New Mexico at the present time?

A In New Mexico.

MR. McKENNA: Is the witness competent to answer that?

A I really am not, that's out of my line really.

MR. FISCHER: All right, that's all.

MR. PORTER: Is there anyone that is competent?

MR. McKENNA: He doesn't know for sure.

MR. NUTTER: Any further questions?

MR. PAYNE: Yes.

MR. NUTTER: Mr. Payne.

QUESTIONS BY MR. PAYNE:

Q Mr. Keith, you say this is not in a declared water basin, is that correct?

A That's right.

Q Could you give me the locations where you propose to drill the two water wells?

A I believe they are located on Exhibit 1, and are shown by asterisk 1 and the other by asterisk 2 by the No. 2 Well. No. 1, well, we put our injection plant in there, that is the reason we put it there, by our injection plant.

MR. McKENNA: Mr. Witness, the fresh water supply well will be located in Lot 3 of Section 35, and the No. 2 on the Northwest, Northwest Quarter of Section 35?

A That would be accurate, yes.

MR. PAYNE: That's all.

QUESTIONS BY MR. NUTTER:

Q Mr. Keith, the area that is commonly referred to as the Rhodes storage area, or gas storage, is somewhere in this general neighborhood, is it not?

A It is my understanding it stops at Section 35, that's my information, the top of Section 35, and I believe that storage is in the Upper Yates, isn't it? I am not too familiar with the storage, but as I understand it, it is in the Upper Yates, and it was, the bottom of the storage was at the top of Section 35, that line there.

Q And the gas storage as far as you know is in the Upper Yates and you will be flooding the Penn Bennett member, which is the Lower Yates?

A Now, those wells are still producing. I mean, the one well is still producing from the entire Yates section, but we are not in the gas storage project.

Q Now, the one well that you stated was still producing is the No. 2 Well?

A Yes, sir.

Q On your Mills "A" Lease.

A "A" Lease.

Q Which is the well that's got the minus 261 just below the designation of the well?

A That's right, that's the subsea top.

Q What is the status of the No. 4 and No. 5 on that lease, and the No. 1 and 3 on the other lease?

A Three is still on the "A" Lease. They are all TA or shut in. They still have the surface equipment. I say the surface equipment, the flow equipment with the exception of "B" 1 which they have removed all surface equipment.

Q Do you expect that after this flood gets in progress that all six of these well will be activated as producing wells?

A As soon as we complete our injection wells and have our water injection system and our plant set up, we plan to go in and clean up these wells. They never have been cleaned up; clean up the wells and put pumping equipment and electrify them.

Q That's all six of them?

A Yes, all six producing wells.

Q Could you give us the footage description that you propose for the unorthodox locations of the No. 6, 7, 9, 10, and 11, please?

A That would be on the next exhibit there.

Q These footages are given with the application then?

A Yes, sir.

Q Is No. 5 and unorthodox location, Mr. Keith?

A It is, according to the 40 acres. That's 330 from the South lease line.

Q It is 330?

A Yes, sir.

Q Then that would not be an unorthodox location according

to the Rules of the New Mexico Commission?

A I thought you had to go on center 40's.

Q No, 330 is acceptable.

A I didn't know.

Q I thought from the map it was closer than 330 feet.

A No, sir, it is 330.

Q Mr. Keith, you mentioned that the Penn Bennett is composed of two separate sands separated by a thin string of dolomite. What is the member that lies directly above the Penn Bennett and directly below the Penn Bennett?

A There is a thick dolomite section above and below both, which some people call the dolomite section above the fingers. It is just kind of a field name. Five-finger dolomite and immediately below would be the top of the formation.

Q Are these two members that bind the upper and lower limits of the Penn Bennett?

A Very definitely.

Q So that the water you put in the Penn Bennett will be confined to the Penn Bennett?

A Yes, sir.

Q Have you made any calculations, Mr. Keith, as to the amount of water which will be required to achieve filling or about 250-acre water flood that you are proposing here?

A Yes, sir, on a per well basis, it will require from one hundred ten thousand to one hundred forty thousand per well.

That is based on volumetric data and also on our experience in the North Scarborough field.

Q What rates of injection do you think will be necessary in order to obtain this filling satisfactorily?

A We propose to inject 300 barrels a day.

Q In each well?

A Yes, sir, per well. A total of 1800 barrels.

Q Can you indicate Mr. Keith, the wells which are currently being used as water injection wells on the acreage directly south of the proposed water flood?

A Yes, sir, they have the same circle on them that your wells up here that we propose, or they are in parenthesis.

Q Is No. 15 a water injection well?

A Yes, sir.

Q Sixteen?

A Yes, sir.

Q Fourteen, nine, two, eight, five, ten, and four?

A Five isn't, that's an error, and four isn't. In other words, it is on five-spot 20-acres, with the exception of 15 and 16, which are slightly off location.

Q Mr. Keith, in the event that you have the entire interval perforations opened in the producing wells, and this is probably a gone--that is, the Upper Yates is probably gone--that is depleted or near depletion, is there any possibility of the water flood oil that is produced from the lower Permian being

lost into these outer sections.

A No, we are going to leave them opened. As I said before, the Yates and the Penn Bennett both are very fragile sand, and we plan to set a liner in the producing wells, just hung, not cemented, to set the bottom of the liner in the, what I refer to as the five finger dolomite above the Penn Bennett to prevent caving from coming back into the formation. As long as we maintain our production and keep our production level down and our flood level down, I don't see why there should be any oil or water escaping back into the outer zones.

Q What would happen in the event one of your wells was shut in and fluid levels did rise in the well?

A In this particular area, the Upper Yates is much tighter than the Penn Bennett and it would take considerably more than hydrostatic head to inject into the Upper Yates what we would have in our well. That's all it would be, the hydrostatic head, while the well was shut down.

MR. NUTTER: Are there any further questions of Mr. Keith?

MR. PORTER: I have one.

MR. NUTTER: Mr. Porter.

QUESTIONS BY MR. PORTER.

Q This question has no bearing on the case. What is the spacing in Texas, the proration, is it 40?

A Here it is diagonally, 20's. You mean statewide?

Q No, in this particular pool.

A In this particular case it is diagonally 20.

Q Is that the spacing that the wells are drilled on at present in Texas, 20's?

A Our lease was developed on that, yes.

MR. NUTTER: 40 in New Mexico?

A Yes, sir.

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

MR. NUTTER: Any further questions of Mr. Keith?

If there are no further questions, the witness may be excused.

Do you have anything further, Mr. McKenna?

MR. McKENNA: I have not.

MR. NUTTER: Does anyone have anything they wish to offer in Case 1610? If there is nothing further, we will take the case under advisement.

STATE OF NEW MEXICO)
)
COUNTY OF BERNALILLO)

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I, Joseph A. Trujillo, Notary Public 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 in Stenotype and that the same was reduced to typewritten transcript by me and contains a true and correct record of said hearing, to the best of my knowledge, skill and ability.

DATED this 13th day of March, 1959, in the City of Albuquerque, County of Bernalillo, State of New Mexico.

Joseph A. Trujillo
NOTARY PUBLIC

My Commission Expires:

October 5, 1960

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 1610, heard by me on 3-11, 1959.

Sanford A. Duran, Examiner
New Mexico Oil Conservation Commission