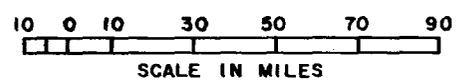


- UNDERGROUND WATER BASINS**
- | | |
|---------------------------|-------------------------|
| 1. MIMBRES VALLEY BASIN | 8. ESTANCIA BASIN |
| 2. ROSWELL ARTESIAN BASIN | 9. PORTALES BASIN |
| 3. LEA COUNTY BASIN | 10. HONDO BASIN |
| 4. HOT SPRINGS BASIN | 11. PENASCO BASIN |
| 5. VIRDEN VALLEY BASIN | 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

0171
 1210
 EXAMINER NUTTER
 COMMISSION

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

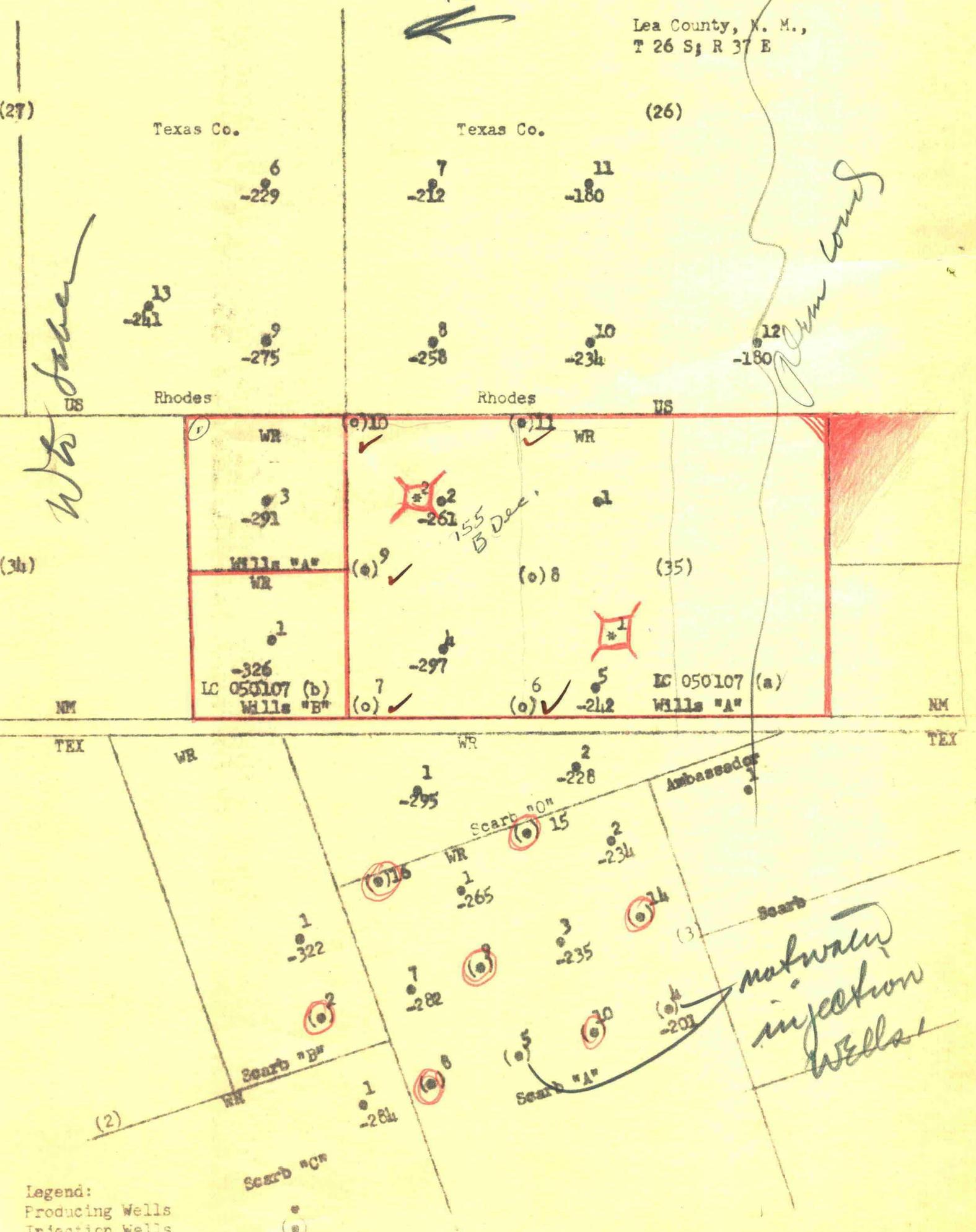
"APPLICANT"

EXHIBIT "A"

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

780
←

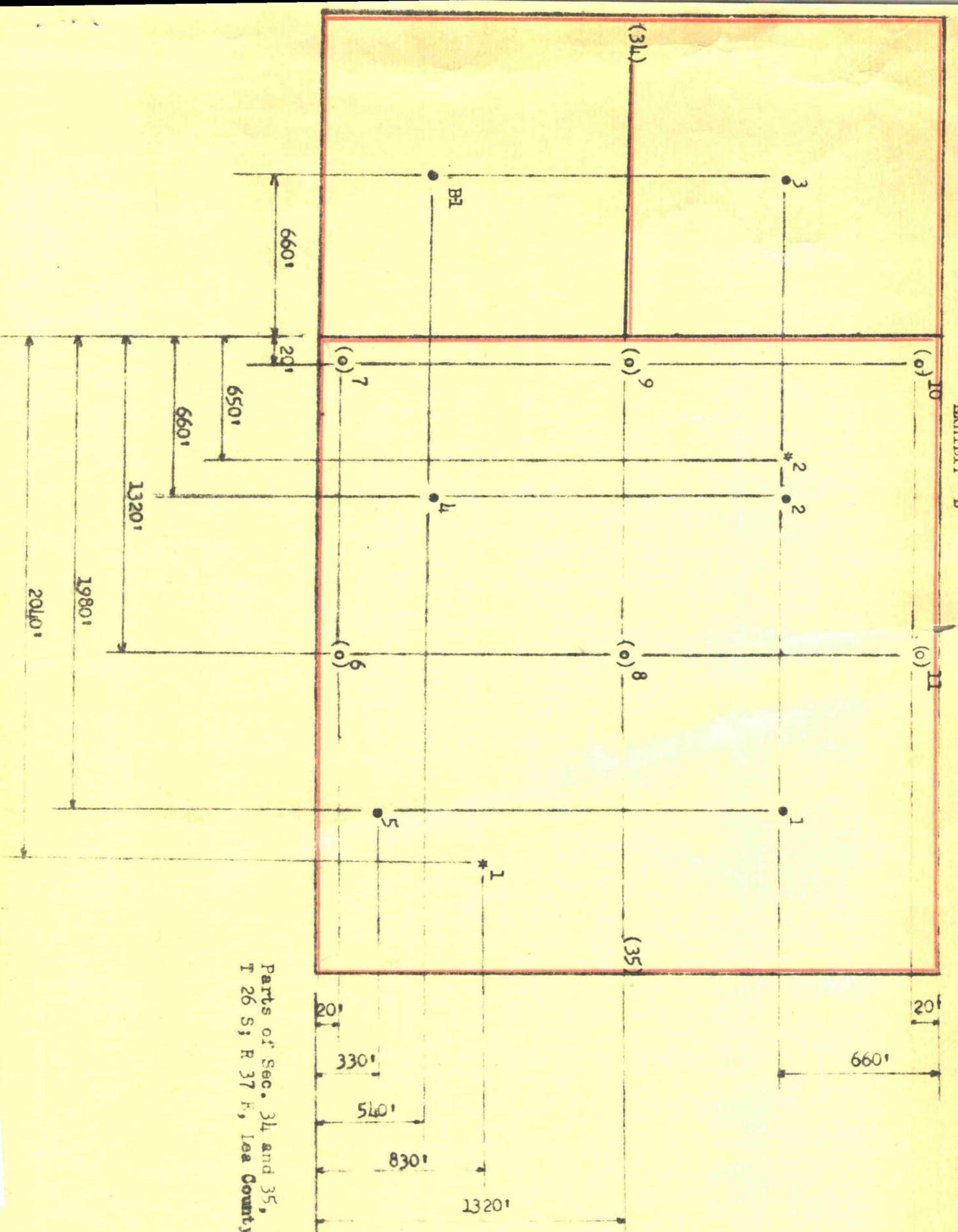
Lea County, N. M.,
T 26 S; R 37 E



- Legend:
- Producing Wells ●
 - Injection Wells (●)
 - Proposed Injection Wells (○)
 - Water Supply Wells *
 - Wood River Oil & Refg. Co. WR

ILLEGIBLE

Winkler County, Texas
Blk. C-22 PSL Survey

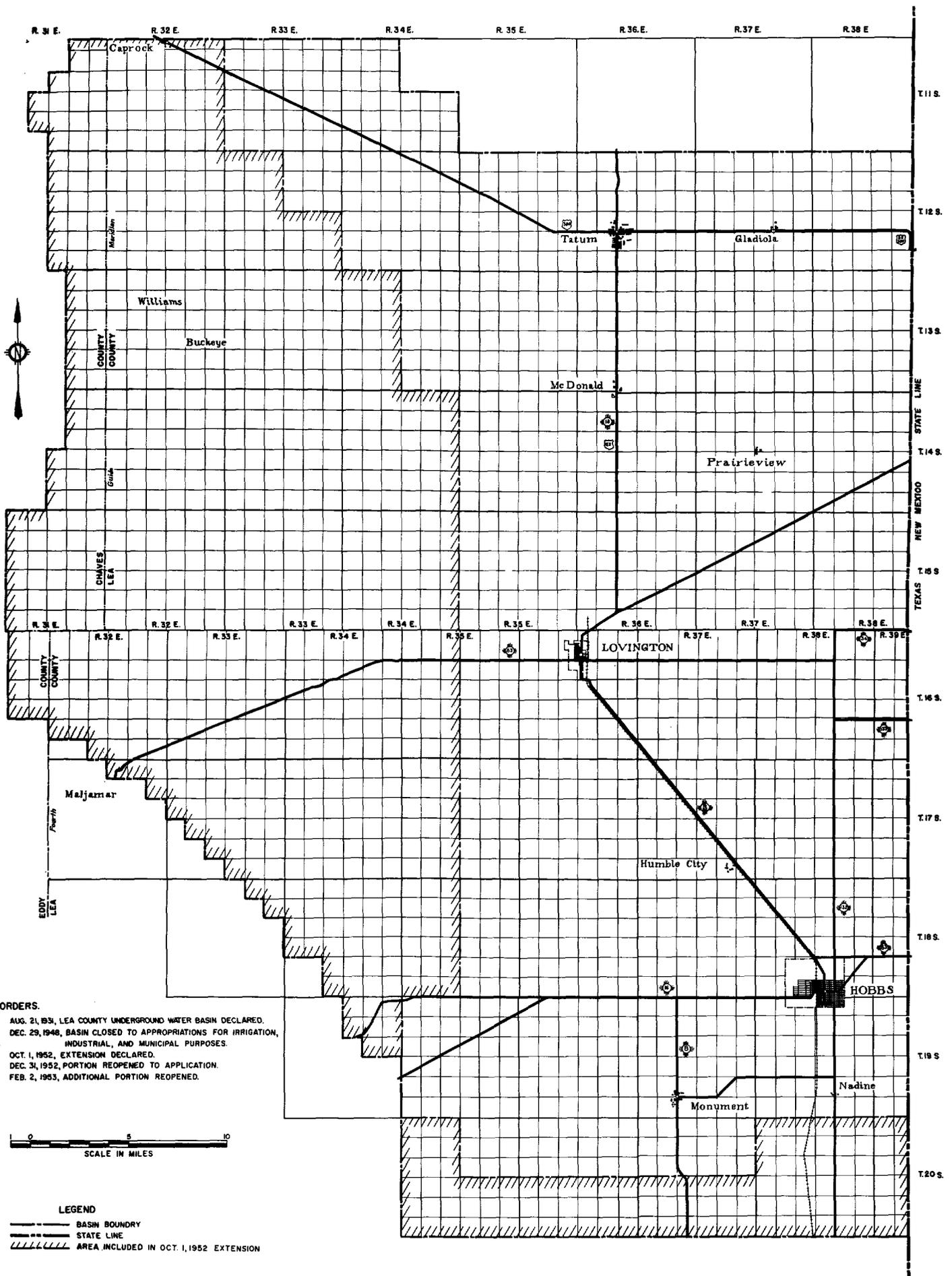


Parts of Sec. 34 and 35,
T 26 S; R 37 E, Lea County.

| LOCATION OF WELLS | | | |
|----------------------------------|----------------|--------------------------------|--------------------------------|
| Well No. | Classification | Footage from W Line of Sec. 35 | Footage from E Line of Sec. 34 |
| 1 | ● | 1980 | |
| 2 | ● | 660 | |
| 3 | ● | 660 | |
| 4 | ● | 660 | |
| 5 | ● | 1980 | |
| 6 | (o) | 1320 | |
| 7 | (o) | 20 | |
| 8 | (o) | 1320 | |
| 9 | (o) | 20 | |
| 10 | (o) | 20 | |
| 11 | (o) | 1320 | |
| Footage from - - Line of Sec. 34 | | | |
| 3 | ● | 660 FNL | |
| B-1 | ● | 540 FSL | |
| Footage from - - Line of Sec. 35 | | | |
| #1 | * | 830 FSL | 2040 |
| #2 | * | 660 FNL | 650 |

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

ILLEGIBLE



ORDERS.
 AUG. 21, 1934, LEA COUNTY UNDERGROUND WATER BASIN DECLARED.
 DEC. 29, 1948, BASIN CLOSED TO APPROPRIATIONS FOR IRRIGATION,
 INDUSTRIAL, AND MUNICIPAL PURPOSES.
 OCT. 1, 1952, EXTENSION DECLARED.
 DEC. 31, 1952, PORTION REOPENED TO APPLICATION.
 FEB. 2, 1953, ADDITIONAL PORTION REOPENED.



LEGEND
 ——— BASIN BOUNDARY
 - - - - STATE LINE
 // // // AREA INCLUDED IN OCT. 1, 1952 EXTENSION

MAP
SHOWING DECLARED AREA
LEA COUNTY UNDERGROUND WATER BASIN