

#### UNDERGROUND WATER BASINS

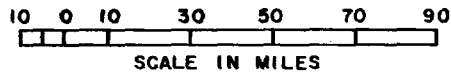
- |                           |                         |
|---------------------------|-------------------------|
| 1. MIMBRES VALLEY BASIN   | 8. ESTANCIA BASIN       |
| 2. ROSWELL ARTESIAN BASIN | 9. PORTALES BASIN       |
| 3. LEA COUNTY BASIN       | 10. HONDO BASIN         |
| 4. HOT SPRINGS BASIN      | 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

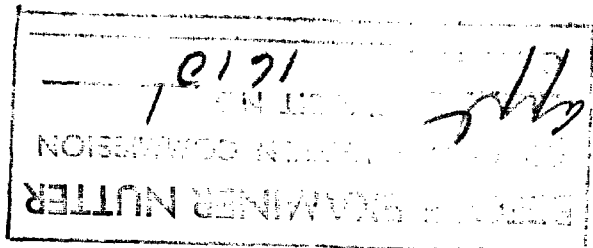
#### DISTRICT OFFICES

- |   |             |
|---|-------------|
| 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



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,

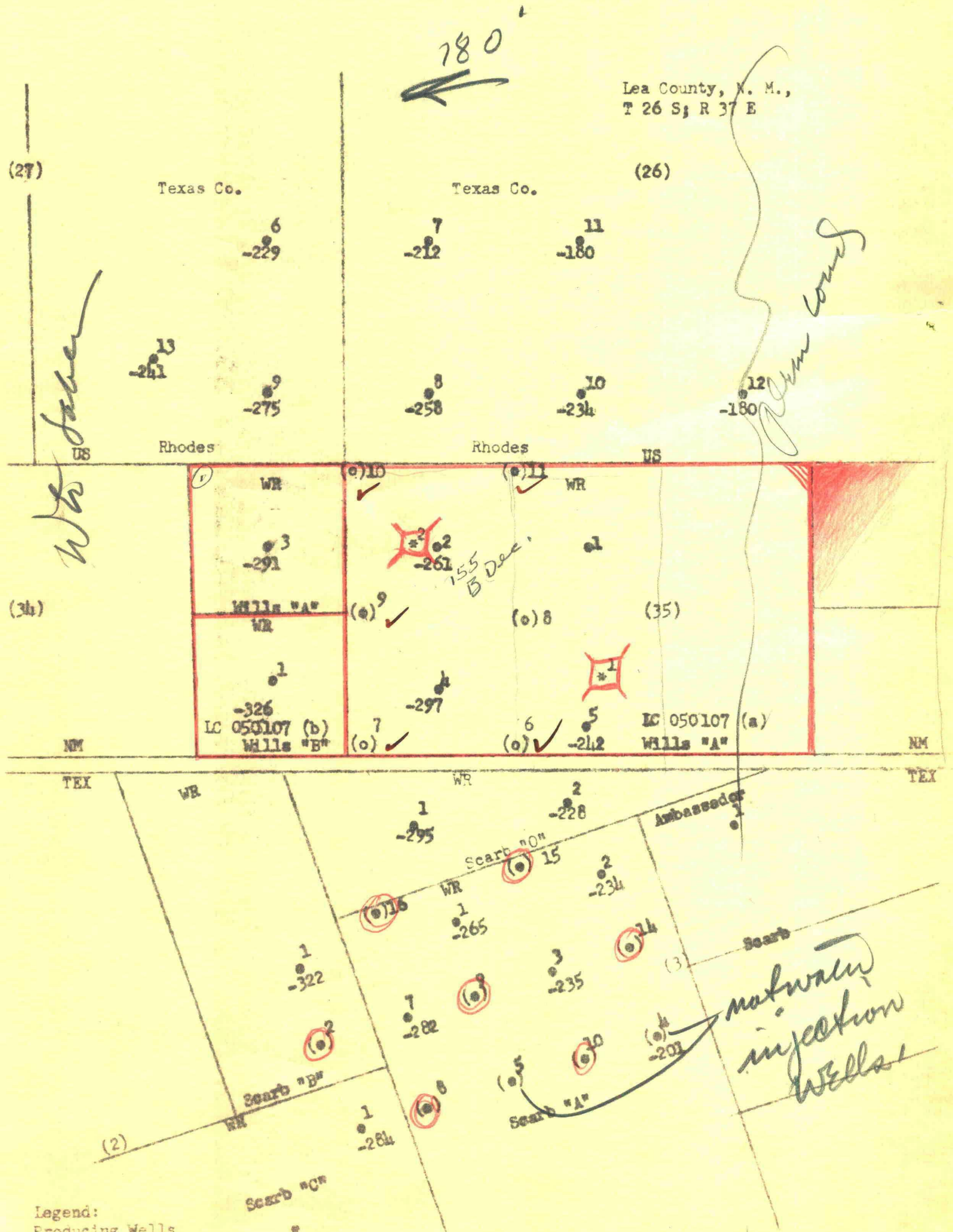
WOOD RIVER OIL & REFINING CO., INC.

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

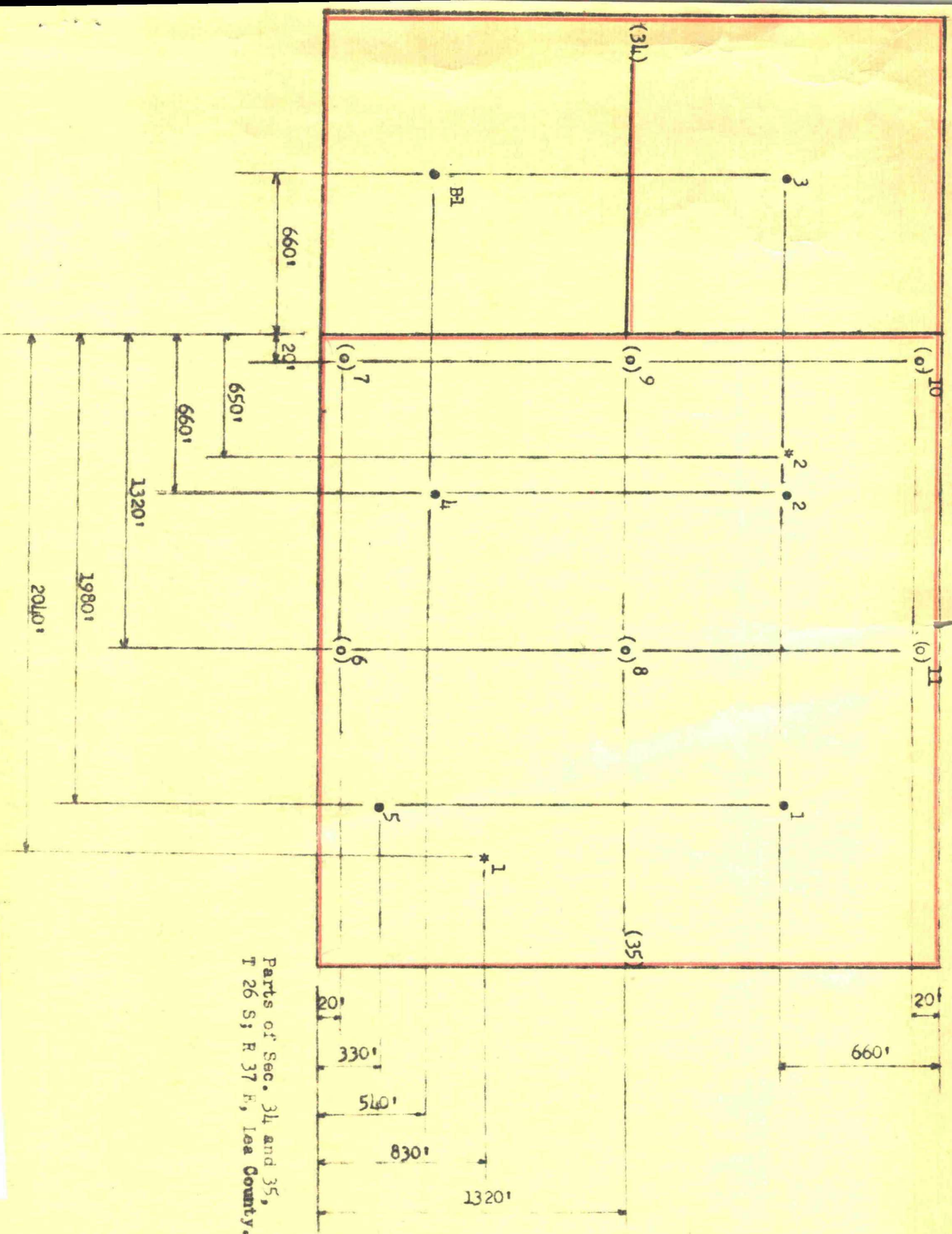


Legend:  
Producing Wells  
Injection Wells  
Proposed Injection Wells  
Water Supply Wells  
Wood River Oil & Refg. Co. WR

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 - - Line of Sec. 35	Footage from W Line of Sec. 35
1	(o)	660 FNL	1980
2	(o)	660 FNL	660
3	(o)	540 FSL	660
4	(o)	330 FSL	1980
5	(o)	20 FSL	1320
6	(o)	20 FSL	20
7	(o)	1320 FSL	1320
8	(o)	1320 FSL	20
9	(o)	20 FNL	20
10	(o)	20 FNL	1320
11	(o)	20 FNL	1320
3	(o)	660 FNL	660
B-1	(o)	540 FSL	660
1	(o)	Footage from - - Line of Sec. 35	Footage from W Line of Sec. 35
2	(o)	830 FSL	2040
	(o)	660 FNL	650

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

ILLEGIBLE

