

OIL CONSERVATION DIVISION
RECEIVED

APPLICATION FOR AUTHORIZATION TO INJECT

'92 NOV 19 AM 8 34

- I. PURPOSE: Secondary Recovery Pressure Maintenance X Disposal Storage
Application qualifies for administrative approval? X Yes No
- II. OPERATOR: TEXAS OPERATORS INC.
ADDRESS: P.O. Box 58 MIDLAND, TX 79702
CONTACT PARTY: JOE D. RAMEY PHONE: 271-1150
- III. WELL DATA: Complete the data required on the reverse side of this form for each well processed for injection. Additional sheets may be attached if necessary.
- IV. Is this an expansion of an existing project: Yes X No
If yes, give the Division order number authorizing the project _____
- V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.
- VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.
- VII. Attach data on the proposed operation, including:
1. Proposed average and maximum daily rate and volume of fluids to be injected;
 2. Whether the system is open or closed;
 3. Proposed average and maximum injection pressure;
 4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and
 5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).
- *VIII. Attach appropriate geological data on the injection zone including appropriate lithologic detail, geological name, thickness and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such sources known to be immediately underlying the injection interval.
- IX. Describe the proposed stimulation program, if any.
- * X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted.)
- * XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.
- XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water.
- XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.
- XIV. Certification: I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.
- NAME: JOE D. RAMEY TITLE: CONSULTANT
SIGNATURE: Joe D. Ramey DATE: 11/17/92
- * If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be resubmitted. Please show the date and circumstance of the earlier submittal. _____

III. WELL DATA

A. The following well data must be submitted for each injection well covered by this application. The data must be both in tabular and schematic form and shall include:

- (1) Lease name; Well No.; Location by Section, Township, and Range; and footage location within the section.
- (2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.
- (3) A description of the tubing to be used including its size, lining material, and setting depth.
- (4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

Division District Offices have supplies of Well Data Sheets which may be used or which may be used as models for this purpose. Applicants for several identical wells may submit a "typical data sheet" rather than submitting the data for each well.

B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.

- (1) The name of the injection formation and, if applicable, the field or pool name.
- (2) The injection interval and whether it is perforated or open-hole.
- (3) State if the well was drilled for injection or, if not, the original purpose of the well.
- (4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.
- (5) Give the depth to and name of the next higher and next lower oil or gas zone in the area of the well, if any.

XIV. PROOF OF NOTICE

All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.

Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

- (1) The name, address, phone number, and contact party for the applicant;
- (2) The intended purpose of the injection well; with the exact location of single wells or the section township, and range location of multiple wells;
- (3) The formation name and depth with expected maximum injection rates and pressures; and
- (4) A notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, PO Box 2088, Santa Fe, NM 87504-2088 within 15 days.

NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.

NOTICE: Surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 day: from the date this application was mailed to them.

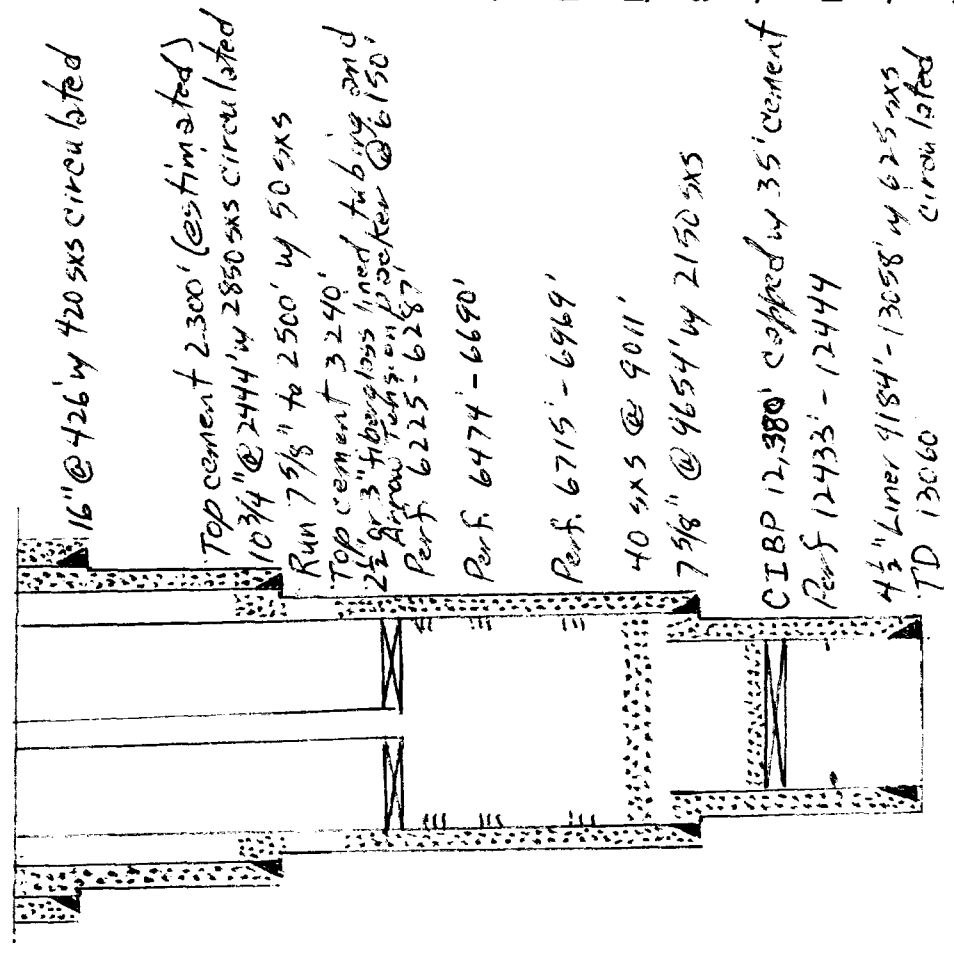
INJECTION WELL DATA SHEET

OPERATOR TEXAS OPERATORS INC. LEASE SWD

WELL NO. 1 FOOTAGE LOCATION 1980' N & 660' W SECTION 32 TOWNSHIP 23S RANGE 28E

Schematic

Well Construction Data



Surface Casing

Size 16 " Cemented with 420 sx.

TOC Surface feet determined by circulated

Hole Size 20"

Intermediate Casing

Size 10 3/4 " Cemented with 2850 sx.

TOC Surface feet determined by circulated

Hole Size 14 3/5"

Long String

Size 7 5/8 " Cemented with 2150 sx.

TOC 3240 feet determined by Temperature Survey

Hole Size 9 1/2"

Total Depth 13060 (see attached sheet)

Injection Interval

6225 feet to 6969 feet
(perforated ~~or not~~ here, indicate which)

INJECTION WELL DATA SHEET

Tubing Size 2 1/2" or larger lined with Fiberglass set in a
 (type of internal coating)
Arrow Tension packer at 6150' feet

Other type of tubing / casing seal if applicable _____

Other Data

1. Is this a new well drilled for injection? Yes X No

If no, for what purpose was the well originally drilled? Oil & Gas Test

2. Name of the injection formation BOVE SPRINGS

3. Name of Field or Pool (if applicable) LOUVING AREA

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail, i.e., sacks of cement or plug(s) used. 12,433 - 12,444'

CIP @ 12380' capped with 35' cement. 40 sk cement plug b/c 9011'

5. Give the names and depths of any over or underlying oil or gas zones (pools) in this area.

Delaware -

Atots -

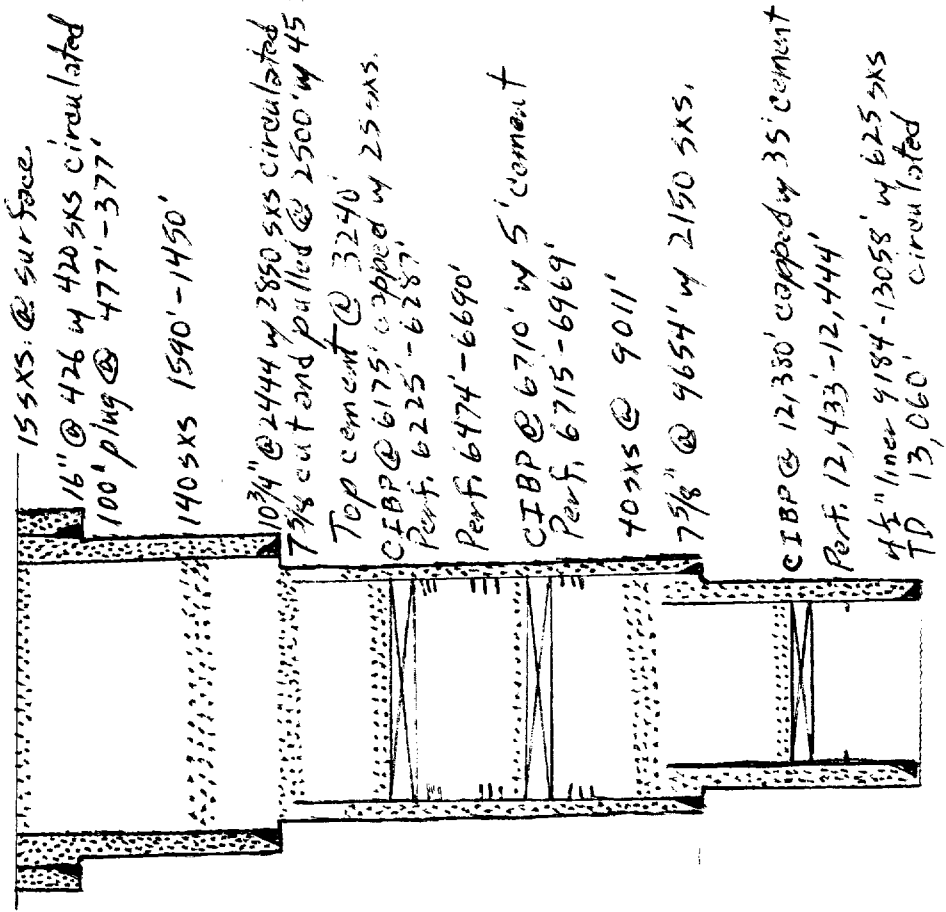
Arrow -

INJECTION WELL DATA SHEET

OPERATOR TEXAS OPERATORS INC. LEASE SWD

WELL NO. 1 FOOTAGE LOCATION 1980'N + 660'W SECTION 32 TOWNSHIP 23S RANGE 28E

Schematic PRESENT CONDITION



Well Construction Data

Surface Casing LINER 9184' to 13058'

Size 4 1/2 " Cemented with 625 sx.

TOC 9184 feet determined by circulated out top of liner

Hole Size 6 1/2 "

Intermediate Casing

Size 6 1/2 " Cemented with 625 sx.

TOC 9184 feet determined by circulated out top of liner

Hole Size 6 1/2 "

Long String

Size 6 1/2 " Cemented with 625 sx.

TOC 9184 feet determined by circulated out top of liner

Hole Size 6 1/2 "

Total Depth 13,060'

Injection Interval

13,060' feet to 13,060' feet
(perforated or open-hole; indicate which)

INJECTION WELL DATA SHEET

Tubing Size _____ lined with _____ (type of internal coating) _____ set in a
 _____ packer at _____ feet

Other type of tubing / casing seal if applicable _____

Other Data

1. Is this a new well drilled for injection? ____ Yes ____ No

If no, for what purpose was the well originally drilled? _____

2. Name of the injection formation _____

3. Name of Field or Pool (if applicable) _____

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and
 give plugging detail, i.e., sacks of cement or plug(s) used. _____

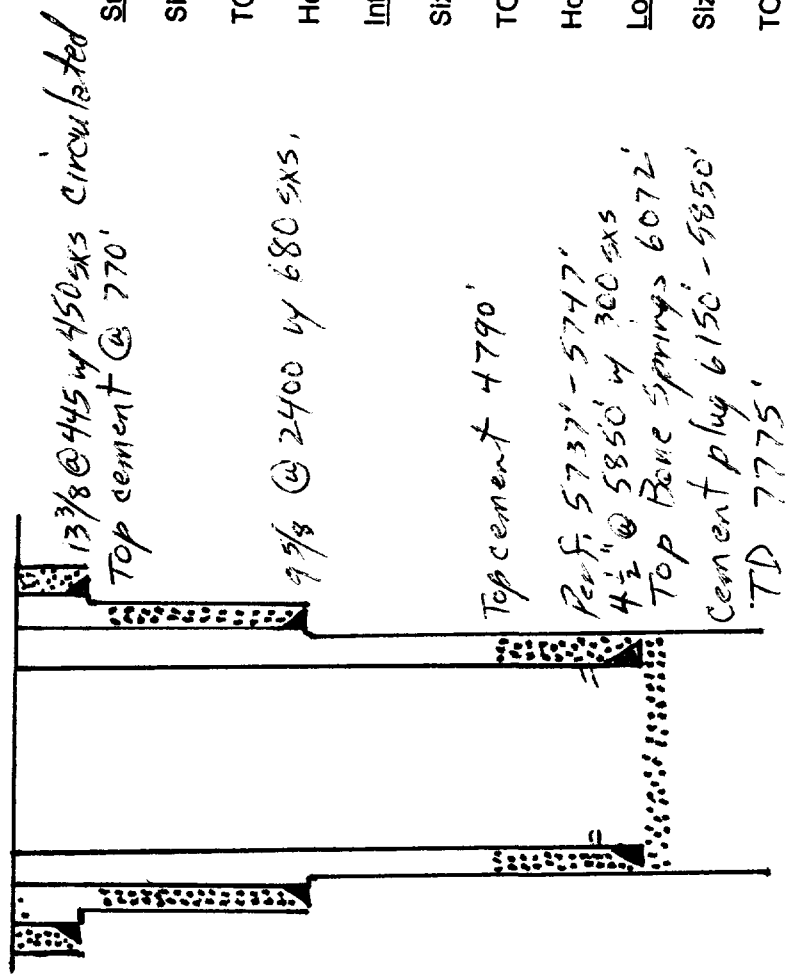
5. Give the names and depths of any over or underlying oil or gas zones (pools) in this area.

INJECTION WELL DATA SHEET

OPERATOR Cimarron Energy LEASE Watts Federal

WELL NO. 1 FOOTAGE LOCATION 990 North 660 East SECTION 31 TOWNSHIP 23S RANGE 28E

Schematic



Well Construction Data

Surface Casing

Size 13 3/8 " Cemented with 450 sx.

TOC Surface feet determined by Circulated

Hole Size 17 1/2 "

Intermediate Casing

Size 9 5/8 " Cemented with 680 sx.

TOC 770 feet determined by Calculated

Hole Size 12 1/4 "

Long String

Size 4 1/2 " Cemented with 300 sx.

TOC 4790 feet determined by Calculated

Hole Size 8 1/2 "

Total Depth 7775'

Injection Interval

_____ feet to _____ feet
(perforated or open-hole; indicate which)

Delaware Formation Oil Producer

INJECTION WELL DATA SHEET

Tubing Size _____ lined with _____ set in a _____
(type of internal coating)
_____ packer at _____ feet

Other type of tubing / casing seal if applicable _____

Other Data

1. Is this a new well drilled for injection? ____ Yes ____ No

If no, for what purpose was the well originally drilled? _____

2. Name of the injection formation _____

3. Name of Field or Pool (if applicable) _____

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail, i.e., sacks of cement or plug(s) used. _____

5. Give the names and depths of any over or underlying oil or gas zones (pools) in this area.

TEJAS OPERATORS INC. SEEKS APPROVAL TO RE-ENTER THE PLUGGED AND ABANDONED AMOCO JB COM #1 LOCATED 1980 FEET NORTH AND 660 FEET WEST OF SECTION 32, TOWNSHIP 23S, RANGE 28E EDDY COUNTY, NEW MEXICO. THE SUBJECT WELL IS LOCATED ONE MILE WEST AND TWO MILES SOUTH OF LOVING, NEW MEXICO. TEJAS WILL CONVERT THE SUBJECT WELL INTO A COMMERCIAL SALT WATER DISPOSAL WELL AND WILL INJECT A MAXIMUM OF 3000 BARRELS OF PRODUCED WATER FROM WELLS PRODUCING IN THE DELAWARE, BONE SPRINGS, ATOKA AND MORROW IN THE AREA, INTO THE BONE SPRINGS FORMATION THROUGH SELECTED PERFORATIONS 6225' - 6969'. INITIAL INJECTION RATES ARE ANTICIPATED TO AVERAGE 1500 BARRELS PER DAY AT AN AVERAGE INJECTION PRESSURE OF 500 PSI WITH A MAXIMUM REQUESTED INJECTION PRESSURE OF 1295 PSI. THE SYSTEM WILL BE OPEN AND ANALYSIS OF THE INJECTION FLUID AND ANALYSIS OF THE FLUID IN THE INJECTION ZONE FROM NEARBY WELLS IS ATTACHED. COMPATIBILITY TESTS WILL BE CONDUCTED WHEN ACTUAL SAMPLES ARE COLLECTED.

THE SUBJECT WELL WAS DRILLED IN 1980 AS AN OIL AND GAS TEST AND WAS PLUGGED AND ABANDONED AFTER TESTING THE MORROW AND BONE SPRINGS. THE MORROW TESTED WATER WITH A SHOW OF GAS AND THE BONE SPRINGS WATER WITH A TRACE OF OIL AND GAS. SCHEMATICS OF THE WELL AS IT PRESENTLY EXISTS AND HOW IT WILL BE EQUIPPED AS A DISPOSAL WELL ARE ATTACHED. INJECTION WILL BE THROUGH 2 1/2 INCH OR LARGER, FIBERGLASS LINED TUBING SET IN AN ARROW TENSION PACKER TO BE SET AT APPROXIMATELY 6150 FEET. THE TUBING-CASING ANNULUS WILL BE FILLED WITH AN INERT PACKER FLUID.

THE BONE SPRINGS IN THE WELL IS TOPPED AT 6080 FEET AND IS AROUND 3300 FEET THICK. IT IS COMPOSED PRIMARILY OF SHALE AND SANDSTONE WITH SOME INTERMINGLING OF LIMESTONE. THE PERFORATED INTERVALS WERE FRACTURED DURING TESTING SO NO FURTHER TREATMENT IS ANTICIPATED.

THERE ARE NO FRESH WATER WELLS WITHIN ONE MILE OF THE INJECTION WELL SO NO FRESH WATER ANALYSIS IS INCLUDED. THE BASE OF ANY FRESH WATER WILL BE AT AROUND 350 FEET WHICH IS IN THE RUSTLER ANHYDRITE. FRESH WATER IN THE AREA IS USED PRIMARILY FOR LIVESTOCK WATERING. THE AVAILABLE GEOLOGIC AND ENGINEERING DATA HAS BEEN EXAMINED AND THERE IS NO EVIDENCE OF OPEN FAULTS OR ANY OTHER HYDROLOGIC CONNECTION BETWEEN THE DISPOSAL ZONE AND ANY UNDERGROUND SOURCE OF DRINKING WATER.

THE LAND UPON WHICH THE WELL IS LOCATED IS STATE LAND AND IS NOT PRESENTLY LEASED FOR OIL AND GAS EXPLORATION.

COPIES OF THE APPLICATION HAVE BEEN SENT BY CERTIFIED MAIL
TO THE FOLLOWING:

H. E. YATES
BOX 1933
ROSWELL, NM 88201

CIMARRON ENERGY
BOX 1525
CARLSBAD, NM 88220

ENRON
BOX 2267
MIDLAND, TX 79702

AMOCO PETROLEUM CORP.
BOX 3092
HOUSTON, TX 77253

NEW MEXICO STATE LAND OFFICE
BOX 1148
SANTA FE, NM 87504-1148

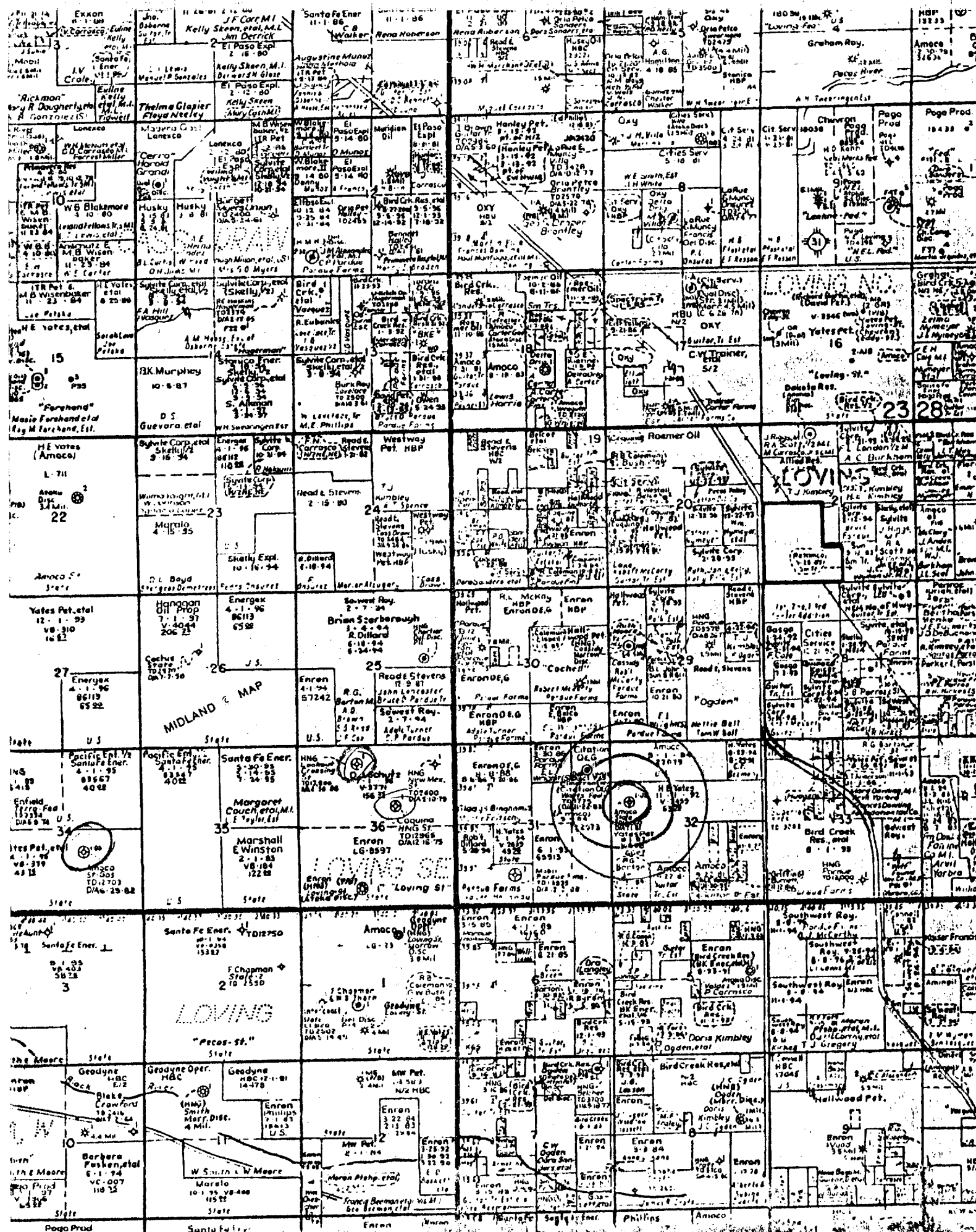


TABLE 1A.--WATER-QUALITY DATA FOR EDDY AND LEA COUNTIES, NEW MEXICO, ARRANGED BY BOTH FORMATION SOURCE AND GEOGRAPHIC LOCATION.

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SB NO.	LOCATION	DATE OF COLLECTION	DEPTH FROM TO	SAMP- LING METHOD	SILICA (SiO ₂) (MG/L)	IRON (FE) (MG/L)	CALCIUM (CA) (MG/L)	MAGNESIUM (MG) (MG/L)	SODIUM + POTASSIUM AS Na (MG/L)	BICAR- BONATE (MG/L)	SULFATE (SO ₄) (MG/L)	HYDROGEN SULFIDE (H ₂ S) (MG/L)	CHLORIDE (CL) (MG/L)	FLUO- RIDE (F) (MG/L)	NIT- RATE (NO ₃) (MG/L)	DENSITY OF WATER (G/ML)	DISSOLVED SOLIDS (SUM) (MG/L)	SPECIFIC CONDUCT- ANCE (UMHOS /CM AT 25C)	SPECIFIC CONDUCT- ANCE (UMHOS /CM AT 25C)
1	10 18	07-07-59	6.002 - 5.837	FG	-	-	4.800	2.700	23.000	1.700	1.600	-	51.000	-	-	1.063	85.000	-	96.0
2	10 18	07-07-59	2.932 - 2.822	DT	-	-	4.000	1.500	12.000	1.600	1.300	-	12.000	-	-	1.038	48.000	-	59.0
3	10 18	07-07-59	2.932 - 2.822	DT	-	-	1.300	2.800	6.300	1.150	1.500	-	12.000	-	-	1.022	24.000	-	30.0
4	10 18	07-07-59	2.932 - 2.822	DT	-	-	1.300	2.800	6.300	1.150	1.500	-	12.000	-	-	1.022	24.000	-	30.0
5	10 18	07-07-59	2.932 - 2.822	DT	-	-	1.300	2.800	6.300	1.150	1.500	-	12.000	-	-	1.022	24.000	-	30.0
6	10 18	07-07-59	2.932 - 2.822	DT	-	-	1.300	2.800	6.300	1.150	1.500	-	12.000	-	-	1.022	24.000	-	30.0
7	10 18	07-07-59	2.932 - 2.822	DT	-	-	1.300	2.800	6.300	1.150	1.500	-	12.000	-	-	1.022	24.000	-	30.0
8	10 18	07-07-59	2.932 - 2.822	DT	-	-	1.300	2.800	6.300	1.150	1.500	-	12.000	-	-	1.022	24.000	-	30.0
9	10 18	07-07-59	2.932 - 2.822	DT	-	-	1.300	2.800	6.300	1.150	1.500	-	12.000	-	-	1.022	24.000	-	30.0
10	10 18	07-07-59	2.932 - 2.822	DT	-	-	1.300	2.800	6.300	1.150	1.500	-	12.000	-	-	1.022	24.000	-	30.0
11	10 18	07-07-59	2.932 - 2.822	DT	-	-	1.300	2.800	6.300	1.150	1.500	-	12.000	-	-	1.022	24.000	-	30.0
12	10 18	07-07-59	2.932 - 2.822	DT	-	-	1.300	2.800	6.300	1.150	1.500	-	12.000	-	-	1.022	24.000	-	30.0
13	10 18	07-07-59	2.932 - 2.822	DT	-	-	1.300	2.800	6.300	1.150	1.500	-	12.000	-	-	1.022	24.000	-	30.0
14	10 18	07-07-59	2.932 - 2.822	DT	-	-	1.300	2.800	6.300	1.150	1.500	-	12.000	-	-	1.022	24.000	-	30.0
15	10 18	07-07-59	2.932 - 2.822	DT	-	-	1.300	2.800	6.300	1.150	1.500	-	12.000	-	-	1.022	24.000	-	30.0
16	10 18	07-07-59	2.932 - 2.822	DT	-	-	1.300	2.800	6.300	1.150	1.500	-	12.000	-	-	1.022	24.000	-	30.0
17	10 18	07-07-59	2.932 - 2.822	DT	-	-	1.300	2.800	6.300	1.150	1.500	-	12.000	-	-	1.022	24.000	-	30.0
18	10 18	07-07-59	2.932 - 2.822	DT	-	-	1.300	2.800	6.300	1.150	1.500	-	12.000	-	-	1.022	24.000	-	30.0
19	10 18	07-07-59	2.932 - 2.822	DT	-	-	1.300	2.800	6.300	1.150	1.500	-	12.000	-	-	1.022	24.000	-	30.0
20	10 18	07-07-59	2.932 - 2.822	DT	-	-	1.300	2.800	6.300	1.150	1.500	-	12.000	-	-	1.022	24.000	-	30.0
21	10 18	07-07-59	2.932 - 2.822	DT	-	-	1.300	2.800	6.300	1.150	1.500	-	12.000	-	-	1.022	24.000	-	30.0
22	10 18	07-07-59	2.932 - 2.822	DT	-	-	1.300	2.800	6.300	1.150	1.500	-	12.000	-	-	1.022	24.000	-	30.0
23	10 18	07-07-59	2.932 - 2.822	DT	-	-	1.300	2.800	6.300	1.150	1.500	-	12.000	-	-	1.022	24.000	-	30.0
24	10 18	07-07-59	2.932 - 2.822	DT	-	-	1.300	2.800	6.300	1.150	1.500	-	12.000	-	-	1.022	24.000	-	30.0
25	10 18	07-07-59	2.932 - 2.822	DT	-	-	1.300	2.800	6.300	1.150	1.500	-	12.000	-	-	1.022	24.000	-	30.0
26	10 18	07-07-59	2.932 - 2.822	DT	-	-	1.300	2.800	6.300	1.150	1.500	-	12.000	-	-	1.022	24.000	-	30.0
27	10 18	07-07-59	2.932 - 2.822	DT	-	-	1.300	2.800	6.300	1.150	1.500	-	12.000	-	-	1.022	24.000	-	30.0
28	10 18	07-07-59	2.932 - 2.822	DT	-	-	1.300	2.800	6.300	1.150	1.500	-	12.000	-	-	1.022	24.000	-	30.0
29	10 18	07-07-59	2.932 - 2.822	DT	-	-	1.300	2.800	6.300	1.150	1.500	-	12.000	-	-	1.022	24.000	-	30.0
30	10 18	07-07-59	2.932 - 2.822	DT	-	-	1.300	2.800	6.300	1.150	1.500	-	12.000	-	-	1.022	24.000	-	30.0
31	10 18	07-07-59	2.932 - 2.822	DT	-	-	1.300	2.800	6.300	1.150	1.500	-	12.000	-	-	1.022	24.000	-	30.0
32	10 18	07-07-59	2.932 - 2.822	DT	-	-	1.300	2.800	6.300	1.150	1.500	-	12.000	-	-	1.022	24.000	-	30.0
33	10 18	07-07-59	2.932 - 2.822	DT	-	-	1.300	2.800	6.300	1.150	1.500	-	12.000	-	-	1.022	24.000	-	30.0
34	10 18	07-07-59	2.932 - 2.822	DT	-	-	1.300	2.800	6.300	1.150	1.500	-	12.000	-	-	1.022	24.000	-	30.0
35	10 18	07-07-59	2.932 - 2.822	DT	-	-	1.300	2.800	6.300	1.150	1.500	-	12.000	-	-	1.022	24.000	-	30.0
36	10 18	07-07-59	2.932 - 2.822	DT	-	-	1.300	2.800	6.300	1.150	1.500	-	12.000	-	-	1.022	24.000	-	30.0
37	10 18	07-07-59	2.932 - 2.822	DT	-	-	1.300	2.800	6.300	1.150	1.500	-	12.000	-	-	1.022	24.000	-	30.0
38	10 18	07-07-59	2.932 - 2.822	DT	-	-	1.300	2.800	6.300	1.150	1.500	-	12.000	-	-	1.022	24.000	-	30.0
39	10 18	07-07-59	2.932 - 2.822	DT	-	-	1.300	2.800	6.300	1.150	1.500	-	12.000	-	-	1.022	24.000	-	30.0
40	10 18	07-07-59	2.932 - 2.822	DT	-	-	1.300	2.800	6.300	1.150	1.500	-	12.000	-	-	1.022	24.000	-	30.0
41	10 18	07-07-59	2.932 - 2.822	DT	-	-	1.300	2.800	6.300	1.150	1.500	-	12.000	-	-	1.022	24.000	-	30.0
42	10 18	07-07-59	2.932 - 2.822	DT	-	-	1.300	2.800	6.300	1.150	1.500	-	12.000	-	-	1.022	24.000	-	30.0
43	10 18	07-07-59	2.932 - 2.822	DT	-	-	1.300	2.800	6.300	1.150	1.500	-	12.000	-	-	1.022	24.000	-	30.0
44	10 18	07-07-59	2.932 - 2.822	DT	-	-	1.300	2.800	6.300	1.150	1.500	-	12.000	-	-	1.022	24.000	-	30.0
45	10 18	07-07-59	2.932 - 2.822	DT	-	-	1.300	2.800	6.300	1.150	1.500	-	12.000	-	-	1.022	24.000	-	30.0
46	10 18	07-07-59	2.932 - 2.822	DT	-	-	1.300	2.800	6.300	1.150	1.500	-	12.000	-	-	1.022	24.000	-	30.0
47	10 18	07-07-59	2.932 - 2.822	DT	-	-	1.300	2.800	6.300	1.150	1.500	-	12.000	-	-	1.022	24.000	-	30.0
48	10 18	07-07-59	2.932 - 2.822	DT	-	-	1.300	2.800	6.300	1.150	1.500	-	12.000	-	-	1.022	24.000	-	30.0
49	10 18	07-07-59	2.932 - 2.822	DT	-	-	1.300	2.800	6.300	1.150	1.500	-	12.000	-	-	1.022	24.000	-	30.0
50	10 18	07-07-59	2.932 - 2.822	DT	-	-	1.300	2.800	6.300	1.150	1.500	-	12.000	-	-	1.022	24.000	-	30.0
51	10 18	07-07-59	2.932 - 2.822	DT	-	-	1.300	2.800	6.300	1.150	1.500	-	12.000	-	-	1.022	24.000	-	30.0
52	10 18	07-07-59	2.932 - 2.822	DT	-	-	1.300	2.800	6.300	1.150	1.500	-	12.000	-	-	1.022	24.000	-	30.0
53	10 18	07-07-59	2.932 - 2.822	DT	-	-	1.300	2.800	6.300	1.150	1.500	-	12.000	-	-	1.022	24.000	-	30.0

TABLE 4A.--WATER-QUALITY DATA FOR EDDY AND LEA COUNTIES, NEW MEXICO, ARRANGED BY BOTH FORMATION SOURCE AND GEOGRAPHIC LOCATION.

TABLE 4A.--WATER-QUALITY DATA FOR EDDY AND LEA COUNTIES, NEW MEXICO, ARRANGED BY BOTH FORMATION SOURCE AND GEOGRAPHIC LOCATION.

SD NO	LOC. SEC. T. R.	DATE OF COLLECTION	DEPTH FROM TO	SAMP- LING METHOD	SILICA (SiO ₂) (MG/L)	IRON (FE) (MG/L)	CALCIUM (CA) (MG/L)	MAGNESIUM (MG/L)	SODIUM + POTASSIUM AS Na (MG/L)	BICARBONATE (MG/L)	SULFATE (SO ₄) (MG/L)	HYDROGEN SULFIDE (H ₂ S) (MG/L)	CHLORIDE (CL) (MG/L)	FLUORIDE (F) (MG/L)	NITRATE (NO ₃) (MG/L)	DENSITY OF WATER (GM/ML) AT 20C	DISSOLVED SOLIDS (SUM) (MG/L)	(CA+MG)/(M+K) (M+K)	SPECIFIC CONDUCTANCE (UMHDS AT 25C)	SPE CON ANC (U AT
1	22	21	10-17-70	3,417-3,434	4530L SD	TR	9,400	2,300	48,000	572	1,400	-	35,000	-	1,400	1.106	160,000	-	314	153
2	23	21	10-17-70	3,411-3,434	4530L SD	ST	9,300	2,400	48,000	574	1,400	-	35,000	-	1,400	1.106	160,000	-	314	153
3	12	21	03-25-60	2,387-2,387	4530L SD	MD	3,100	1,400	45,000	101	1,400	-	60,000	-	1,400	1.106	160,000	-	314	153
4	15	21	03-25-60	2,480-2,480	4530L SD	TR	3,100	2,600	100,000	192	2,000	-	60,000	-	2,000	1.106	160,000	-	314	153
5	25	30	06-21-60	3,838-3,842	4530L SD	MD	9,000	1,500	45,000	40	400	-	90,000	-	400	1.106	160,000	-	314	153
6	25	30	04-03-63	3,724-3,724	4530L SD	MD	9,000	2,100	51,000	122	130	-	93,000	-	130	1.106	160,000	-	314	153
7	18	24	05-17-66	3,668-3,675	4530L SD	MD	8,300	1,000	47,000	24	350	-	90,400	-	350	1.106	160,000	-	314	153
8	18	24	05-17-66	3,668-3,675	4530L SD	MD	8,300	1,000	47,000	24	350	-	90,400	-	350	1.106	160,000	-	314	153
9	18	24	05-17-66	3,668-3,675	4530L SD	MD	8,300	1,000	47,000	24	350	-	90,400	-	350	1.106	160,000	-	314	153
10	18	24	05-17-66	3,668-3,675	4530L SD	MD	8,300	1,000	47,000	24	350	-	90,400	-	350	1.106	160,000	-	314	153
11	18	24	05-17-66	3,668-3,675	4530L SD	MD	8,300	1,000	47,000	24	350	-	90,400	-	350	1.106	160,000	-	314	153
12	20	24	03-18-59	3,450-3,450	4530L SD	TR	7,500	2,600	77,000	139	1,300	-	110,000	-	1,300	1.110	180,000	-	330	165
13	20	24	03-18-59	3,450-3,450	4530L SD	TR	7,500	2,600	77,000	139	1,300	-	110,000	-	1,300	1.110	180,000	-	330	165
14	24	24	03-10-58	4,112-4,128	4530L SD	TR	9,400	2,500	59,000	137	1,300	-	98,000	-	1,300	1.100	180,000	-	330	165
15	27	18	01-22-58	4,972-4,972	4530L SD	TR	24,000	3,100	52,000	159	340	-	130,000	-	340	1.187	280,000	-	634	178
16	28	18	01-22-58	4,972-4,972	4530L SD	TR	24,000	3,100	52,000	159	340	-	130,000	-	340	1.187	280,000	-	634	178
17	7	20	02-00-67	5,074-5,074	4530L SD	50	19,000	3,600	58,000	70	800	-	160,000	-	800	1.173	250,000	-	379	194
18	30	20	04-22-59	4,395-4,460	4530L SD	DT	2,600	710	4,000	236	2,700	-	72,000	-	2,700	1.074	120,000	-	307	130
19	30	20	04-22-59	4,395-4,460	4530L SD	DT	2,600	710	4,000	236	2,700	-	72,000	-	2,700	1.074	120,000	-	307	130
20	30	20	04-22-59	4,395-4,460	4530L SD	DT	2,600	710	4,000	236	2,700	-	72,000	-	2,700	1.074	120,000	-	307	130
21	30	20	09-21-59	6,786-6,836	4530L SD	TR	1,400	730	6,700	1,530	3,400	-	10,000	-	1,530	1.108	198,000	-	445	28
22	24	24	02-15-67	2,670-2,670	4530L SD	ST	1,400	730	6,700	1,530	3,400	-	10,000	-	1,530	1.108	198,000	-	445	28
23	24	24	02-15-67	2,670-2,670	4530L SD	ST	1,400	730	6,700	1,530	3,400	-	10,000	-	1,530	1.108	198,000	-	445	28
24	24	24	02-15-67	2,670-2,670	4530L SD	ST	1,400	730	6,700	1,530	3,400	-	10,000	-	1,530	1.108	198,000	-	445	28
25	24	24	02-15-67	2,670-2,670	4530L SD	ST	1,400	730	6,700	1,530	3,400	-	10,000	-	1,530	1.108	198,000	-	445	28
26	24	24	02-15-67	2,670-2,670	4530L SD	ST	1,400	730	6,700	1,530	3,400	-	10,000	-	1,530	1.108	198,000	-	445	28
27	24	24	02-15-67	2,670-2,670	4530L SD	ST	1,400	730	6,700	1,530	3,400	-	10,000	-	1,530	1.108	198,000	-	445	28
28	24	24	02-15-67	2,670-2,670	4530L SD	ST	1,400	730	6,700	1,530	3,400	-	10,000	-	1,530	1.108	198,000	-	445	28
29	24	24	02-15-67	2,670-2,670	4530L SD	ST	1,400	730	6,700	1,530	3,400	-	10,000	-	1,530	1.108	198,000	-	445	28
30	24	24	02-15-67	2,670-2,670	4530L SD	ST	1,400	730	6,700	1,530	3,400	-	10,000	-	1,530	1.108	198,000	-	445	28
31	24	24	02-15-67	2,670-2,670	4530L SD	ST	1,400	730	6,700	1,530	3,400	-	10,000	-	1,530	1.108	198,000	-	445	28
32	24	24	02-15-67	2,670-2,670	4530L SD	ST	1,400	730	6,700	1,530	3,400	-	10,000	-	1,530	1.108	198,000	-	445	28
33	24	24	02-15-67	2,670-2,670	4530L SD	ST	1,400	730	6,700	1,530	3,400	-	10,000	-	1,530	1.108	198,000	-	445	28
34	24	24	02-15-67	2,670-2,670	4530L SD	ST	1,400	730	6,700	1,530	3,400	-	10,000	-	1,530	1.108	198,000	-	445	28
35	24	24	02-15-67	2,670-2,670	4530L SD	ST	1,400	730	6,700	1,530	3,400	-	10,000	-	1,530	1.108	198,000	-	445	28
36	24	24	02-15-67	2,670-2,670	4530L SD	ST	1,400	730	6,700	1,530	3,400	-	10,000	-	1,530	1.108	198,000	-	445	28
37	24	24	02-15-67	2,670-2,670	4530L SD	ST	1,400	730	6,700	1,530	3,400	-	10,000	-	1,530	1.108	198,000	-	445	28
38	24	24	02-15-67	2,670-2,670	4530L SD	ST	1,400	730	6,700	1,530	3,400	-	10,000	-	1,530	1.108	198,000	-	445	28
39	24	24	02-15-67	2,670-2,670	4530L SD	ST	1,400	730	6,700	1,530	3,400	-	10,000	-	1,530	1.108	198,000	-	445	28
40	24	24	02-15-67	2,670-2,670	4530L SD	ST	1,400	730	6,700	1,530	3,400	-	10,000	-	1,530	1.108	198,000	-	445	28
41	24	24	02-15-67	2,670-2,670	4530L SD	ST	1,400	730	6,700	1,530	3,400	-	10,000	-	1,530	1.108	198,000	-	445	28
42	24	24	02-15-67	2,670-2,670	4530L SD	ST	1,400	730	6,700	1,530	3,400	-	10,000	-	1,530	1.108	198,000	-	445	28
43	24	24	02-15-67	2,670-2,670	4530L SD	ST	1,400	730	6,700	1,530	3,400	-	10,000	-	1,530	1.108	198,000	-	445	28
44	24	24	02-15-67	2,670-2,670	4530L SD	ST	1,400	730	6,700	1,530	3,400	-	10,000	-	1,530	1.108	198,000	-	445	28
45	24	24	02-15-67	2,670-2,670	4530L SD	ST	1,400	730	6,700	1,530	3,400	-	10,000	-	1,530	1.108	198,000	-	445	28
46	24	24	02-15-67	2,670-2,670	4530L SD	ST	1,400	730	6,700	1,530	3,400	-	10,000	-	1,530	1.108	198,000	-	445	28
47	24	24	02-15-67	2,670-2,670	4530L SD	ST	1,400	730	6,700	1,530	3,400	-	10,000	-	1,530	1.108	198,000	-	445	28
48	24	24	02-15-67	2,670-2,670	4530L SD	ST	1,400	730	6,700	1,530	3,400	-	10,000	-	1,530	1.108	198,000	-	445	28
49	24	24	02-15-67	2,670-2,670	4530L SD	ST	1,400	730	6,700	1,530	3,400	-	10,000	-	1,530	1.108	198,000	-	445	28
50	24	24	02-15-67	2,670-2,670	4530L SD	ST	1,400	730	6,700	1,530	3,400	-	10,000	-	1,530	1.108	198,000	-	445	28
51	24	24	02-15-67	2,670-2,670	4530L SD	ST	1,400	730	6,700	1,530	3,400	-	10,000	-	1,530	1.108	198,000	-	445	28
52	24	24	02-15-67	2,670-2,670	4530L SD	ST	1,400	730	6,700	1,530	3,400	-	10,000	-	1,530	1.108	198,000	-	445	28
53	24	24	02-15-67	2,670-2,670	4530L SD	ST	1,400	730	6,700	1,530	3,400	-	10,000	-	1,530	1.108	198,000	-	445	28

Affidavit of Publication

No. 14132

STATE OF NEW MEXICO,

County of Eddy:

Gary D. Scott being duly sworn, says: That he is the Publisher of The Artesia Daily Press, a daily newspaper of general circulation, published in English at Artesia, said county and state, and that the hereto attached Legal Notice

was published in a regular and entire issue of the said Artesia Daily Press, a daily newspaper duly qualified for that purpose within the meaning of Chapter 167 of the 1937 Session Laws of the state of New Mexico for 1 days consecutive weeks on the same day as follows:

First Publication November 20, 1992

Second Publication _____

Third Publication _____

Fourth Publication _____

Gary D. Scott

Subscribed and sworn to before me this 20th day of November 19 92

Barbara Ann Boars

Notary Public, Eddy County, New Mexico

My Commission expires September 23, 1996

Copy of Publication
OIL CONSERVATION DIVISION
RECEIVED

'92 NOV 30 AM 9 14

LEGAL NOTICE

Travis Operations, Inc., Box 58, Midland, TX 79702, has received the planning and approval of the State of New Mexico for the proposed disposal of water from the North Salt Lake and South Salt Lake Formations, 32, Township 35 North, Range 28 East, Eddy County, New Mexico. The proposed salt water disposal well location will be into the Artesia Springs Formation at a depth of 6225 feet to 6235 feet. The proposed injection volume will be 3000 barrels per day, or more, not to exceed 1000 feet. Interested parties have the opportunity to object to the location of the proposed disposal well with the Oil Conservation Division, P.O. Box 3088, Santa Fe, NM 87504-2088 within 15 days. Published in the Artesia Daily Press, Artesia, N.M., November 20, 1992. Legal 14132

Is your RETURN ADDRESS completed on the reverse side?

SENDER:

- Complete items 1 and/or 2 for additional services.
- Complete items 3, and 4a & b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

N. Mex. State Land Office
Box 1148
Santa Fe, NM 87504-1148

4a. Article Number

P401 653 607

4b. Service Type

- ☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

7. Date of Delivery

NOV 19 1991
SANTA FE, NM 87504
USPS

5. Signature (Addressee)

M. Lucero

6. Signature (Agent)

PS Form 3811, December 1991 ☆ U.S.G.P.O. : 1992-307-530

DOMESTIC RETURN RECEIPT

Thank you for using Return Receipt Service.

Is your RETURN ADDRESS completed on the reverse side?

SENDER:

- Complete items 1 and/or 2 for additional services.
- Complete items 3, and 4a & b.
- Print your name and address on the reverse of this form so that we can return this card to you.
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I also wish to receive the following services (for an extra fee):

1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

H. E. Yates
Box 1933
Roswell, NM 88201

4a. Article Number

P401 653 611

4b. Service Type

- ☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

7. Date of Delivery

11/18/91

5. Signature (Addressee)

Donita Hepper

6. Signature (Agent)

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- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

Cimarron Energy
Box 1525
Carlsbad, NM 88220

4a. Article Number

P401 653 610

4b. Service Type

- ☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

7. Date of Delivery

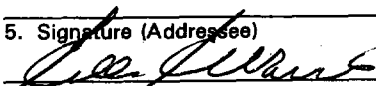
5. Signature (Addressee)

6. Signature (Agent)

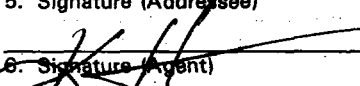
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SENDER: • Complete items 1 and/or 2 for additional services. • Complete items 3, and 4a & b. • Print your name and address on the reverse of this form so that we can return this card to you. • Attach this form to the front of the mailpiece, or on the back if space does not permit. • Write "Return Receipt Requested" on the mailpiece below the article number. • The Return Receipt will show to whom the article was delivered and the date delivered.		I also wish to receive the following services (for an extra fee): 1. <input type="checkbox"/> Addressee's Address 2. <input type="checkbox"/> Restricted Delivery Consult postmaster for fee.	
3. Article Addressed to: Enron Box 2267 Midland, TX 79702		4a. Article Number P 401 653 609	
		4b. Service Type <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input type="checkbox"/> Return Receipt for Merchandise	
		7. Date of Delivery NOV 19 1992	
5. Signature (Addressee) 		8. Addressee's Address (Only if requested and fee is paid)	
6. Signature (Agent)			
PS Form 3811, December 1991 ☆ U.S.G.P.O. : 1992-307-530 DOMESTIC RETURN RECEIPT			

PS Form 3811, December 1991 ☆ U.S.G.P.O. : 1992-307-530 **DOMESTIC RETURN RECEIPT**

SENDER: • Complete items 1 and/or 2 for additional services. • Complete items 3, and 4a & b. • Print your name and address on the reverse of this form so that we can return this card to you. • Attach this form to the front of the mailpiece, or on the back if space does not permit. • Write "Return Receipt Requested" on the mailpiece below the article number. • The Return Receipt will show to whom the article was delivered and the date delivered.		I also wish to receive the following services (for an extra fee): 1. <input type="checkbox"/> Addressee's Address 2. <input type="checkbox"/> Restricted Delivery Consult postmaster for fee.	
3. Article Addressed to: Amoco Petr. Corp Box 3092 Houston, TX 77253		4a. Article Number P 401 653 608	
		4b. Service Type <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input type="checkbox"/> Return Receipt for Merchandise	
		7. Date of Delivery NOV 19 1992	
5. Signature (Addressee) 		8. Addressee's Address (Only if requested and fee is paid)	
6. Signature (Agent)			
PS Form 3811, December 1991 ☆ U.S.G.P.O. : 1992-307-530 DOMESTIC RETURN RECEIPT			

PS Form 3811, December 1991 ☆ U.S.G.P.O. : 1992-307-530 **DOMESTIC RETURN RECEIPT**