

WFX 8/3/98
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2000 POST OAK BOULEVARD / SUITE 100 / HOUSTON, TEXAS 77056-4400

CORPORATION

[713] 296-6000

July 14, 1998

State of New Mexico
Energy, Minerals & Natural Resources Department
Oil Conservation Division
2040 South Pacheco
Santa Fe, New Mexico 87505

7/17/98

Re: **Expansion of Waterflood Project**
Northeast Drinkard Unit
North Eunice Blinebry-Tubb-Drinkard Oil & Gas Pool
Well Nos. 117, 222, 313, 319, 320, & 507

Gentlemen:

Apache Corporation hereby requests administrative approval for expansion of the subject waterflood project. Division Order No. R-8541, granted 11-9-87, and prior expansion by application dated June 26, 1995 (both in the name of Shell Western E&P Inc.), authorized the existing Northeast Drinkard Unit Waterflood Project within the subject pool.

The following information is submitted in support of this request:

- 1) Form C-108, with miscellaneous data attached;
- 2) A map reflecting the location of each of the proposed injection wells. Each map identifies wells and leases located within a two mile radius of each of the proposed injectors and reflects a one-half mile radius around the proposed injectors, this latter area being described as the well's Area of Review;
- 3) An Injection Well Data Sheet for each of the proposed injectors;
- 4) Tabulation of Data on wells located within the Area of Review;
- 5) List of Offset Operators and Surface Owners. These entities have been notified by certified mail; and
- 6) An Affidavit of Publication and "legal notice" newspaper clipping.

Should you need additional information or have any questions regarding this application, please feel free to contact the undersigned at 713-296-7152.

Sincerely,

Apache Corporation

Deborah K. Hoyt

Deborah K. Hoyt
Engineering Technician

dkh

cc: Mr. Chris Williams
Oil Conservation Division
State of New Mexico
P.O. Box 1980
Hobbs, NM 88241

State of New Mexico
Office of Land Commissioner
P.O. Box 1148
Santa Fe, NM 87504

Offset Operators (see attached list)

Surface Owners (see attached list)

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL
RESOURCES DEPARTMENT

Oil Conservation Div.
2040 Pacheco St.
Santa Fe, NM 87505

Form C-108
Revised 7-1-81

APPLICATION FOR AUTHORIZATION TO INJECT

- I. PURPOSE: Secondary Recovery Pressure Maintenance Disposal Storage
Application qualifies for administrative approval? Yes No

II. OPERATOR: Apache Corporation
ADDRESS: 2000 Post Oak Blvd. Ste. 100, Houston, TX 77056
CONTACT PARTY: Deborah K. Hoyt PHONE: 713-296-7152

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 No
If yes, give the Division order number authorizing the project R-8541

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.

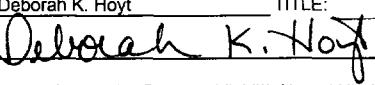
* X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted.)

* 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: Deborah K. Hoyt TITLE: Engineering Technician
SIGNATURE:  DATE: 7/10/98

* 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.
Hearing Sept. 24, 1987, Case No. 9232, Order No. 8541 & supplemental application dated 6/26/95.

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate District Office

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, P.O. 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 days from the date this application was mailed to them.

**ATTACHMENT FOR FORM C-108
NORTHEAST DRINKARD UNIT
MISCELLANEOUS DATA**

III. WELL DATA

B.(5) next higher oil zone -- Paddock @ +/- 5200'
next lower oil zone -- Abo @ +/- 6750'

VII. PROPOSED OPERATION

- | | | |
|----|--|--------------------|
| 1. | Average Injection Rate | 1350 BWPD |
| | Maximum Injection Rate | 2000 BWPD |
| 2. | Closed Injection System | |
| 3. | Average Injection Pressure | 1000 psi |
| | Maximum Injection Pressure | 1200 psi (approx.) |
| | (will not exceed 0.2 psi/ft. to top perforation) | |
| 4. | Source Water -- San Andres -- analysis attached | |

IX. STIMULATION PROGRAM

Acid treatment schedule will be determined following evaluation of
GR/CNL/CCL (to be run prior to perforating the unitized interval)

INJECTION WELL DATA SHEET

OPERATOR	Apache Corporation	LEASE	Northeast Drinkard Unit (Formerly State #7)			
WELL NO.	117	921 FNL & 1650 FWL	Sec. 2, T21S, R37E			
		FOOTAGE	LOCATION	SECTION	TOWNSHIP	RANGE

Well Construction Data

Surface Casing

Size 13-3/8 " Cemented with 245 sx.

TOC Surface feet determined by Circ.

Hole Size 17-1/2"

Intermediate Casing

Size 8-5/8 " Cemented with 2100 sx.

TOC Surface feet determined by Circ.

Hole Size 11"

Long String

Size 5-1/2" " Cemented with 200 sx.

TOC 4930 feet determined by Temp. Survey

Hole Size **7-7/8"**

Total Depth _____ 6945'

Injection Interval 575 ft 50 ft 5945 ft

Injection Interval

5750' feet to 5946 feet

(perforated or open-hole; indicate which)

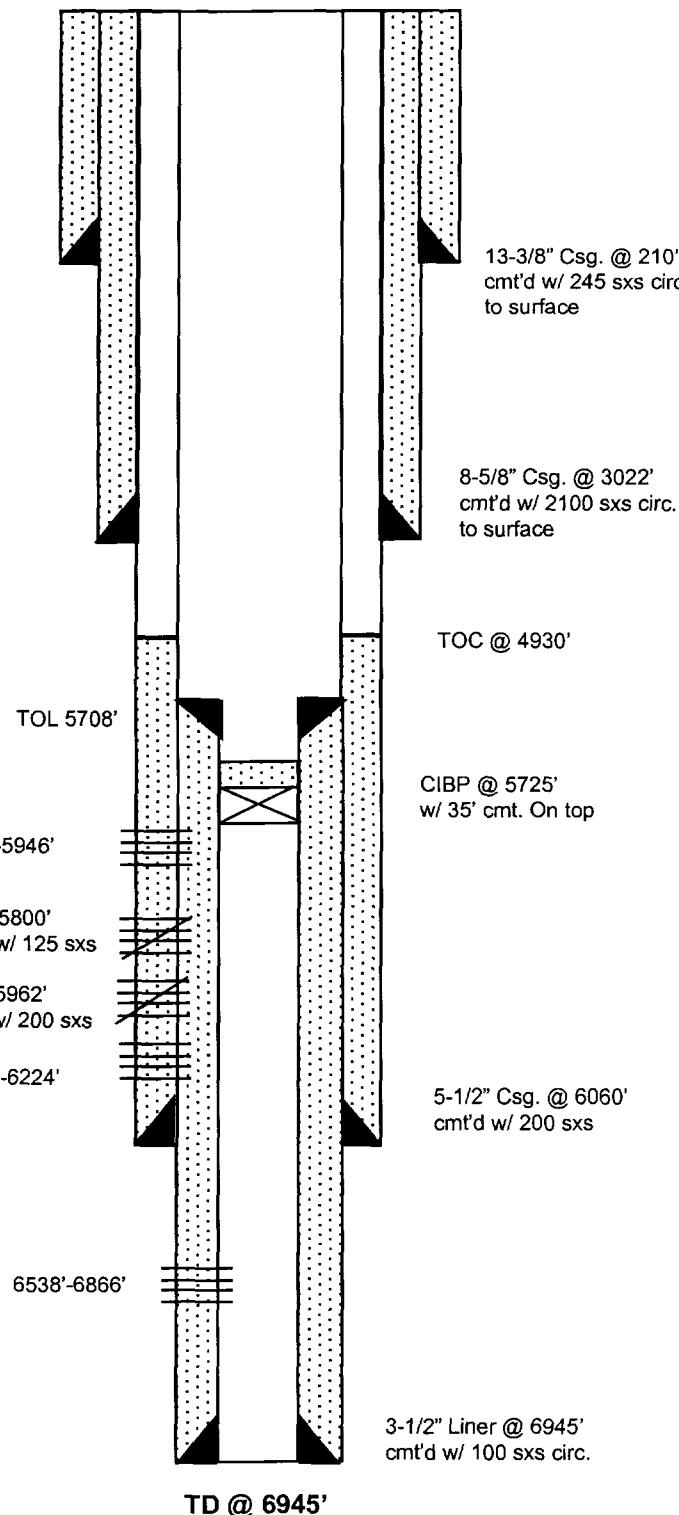
Tubing Size _____ line with _____ set in a _____
(type of internal coating)
packer at _____ feet

Other type of tubing / casing seal if applicable _____

Other Data

- | | |
|----|---|
| 1. | Is this a new well drilled for injection? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| | If no, for what purpose was the well originally drilled? <u>As a Blinebry Oil Producer</u> |
| 2. | Name of the Injection formation <u>Blinebry/Tubb/Drinkard</u> |
| 3. | Name of Field or Pool (if applicable) <u>N. Eunice B/T/D Oil & Gas Pool</u> |
| 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. <u>5790'-5800' sqz'd w/ 125 sxs, 5822'-5962' sqz'd w/ 200 sxs, 6010'-6224', 6538'-6866', CIBP @ 5725' w/ 35' cmt on top</u> |
| 5. | Give the names and depths of any over or underlying oil or gas zones (pools) in this area. |

Well: NEDU #117
Field: NE DRINKARD
Location: 921' FNL & 1650' FWL
Sec. 2, T21S, R37E
API #: 30-025-06345



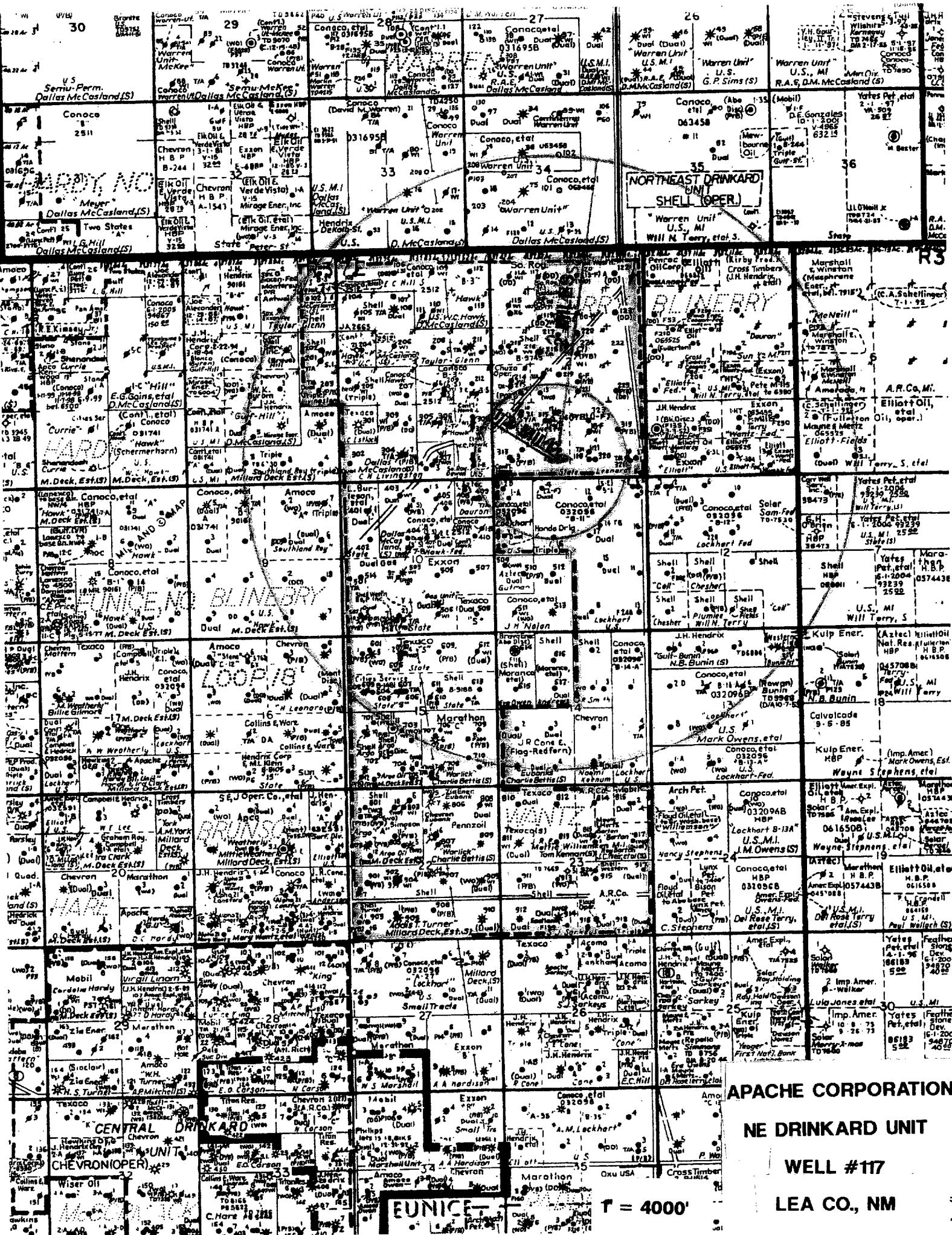
APACHE CORPORATION

NE DRINKARD UNIT

WELL #117

LEA CO., NM

T = 4000'



INJECTION WELL DATA SHEET

OPERATOR	Apache Corporation	LEASE	Northeast Drinkard Unit (Formerly State Sec. 2 #4)			
WELL NO.	313	710 FSL & 610 FWL	Sec. 2, T21S, R37E			
		FOOTAGE	LOCATION	SECTION	TOWNSHIP	RANGE

Well Construction Data

Surface Casing

Size 13-3/8 " Cemented with 250 sx.

TOC Surface feet determined by Circ.

Hole Size 17-1/4"

Intermediate Casing

Size 8-5/8 " Cemented with 1950 sx.

TOC Surface feet determined by Temp. Survey

Hole Size 11"

Long String

Size 5-1/2" " Cemented with 500 sx.

TOC 2375' feet determined by Temp. Survey

Hole Size 6-7/8"

Total Depth 6718'

Injection Interval

5778' feet to 6489' feet

(perforated or open-hole; indicate which)

Tubing Size _____ line 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? As an open hole Drinkard producer

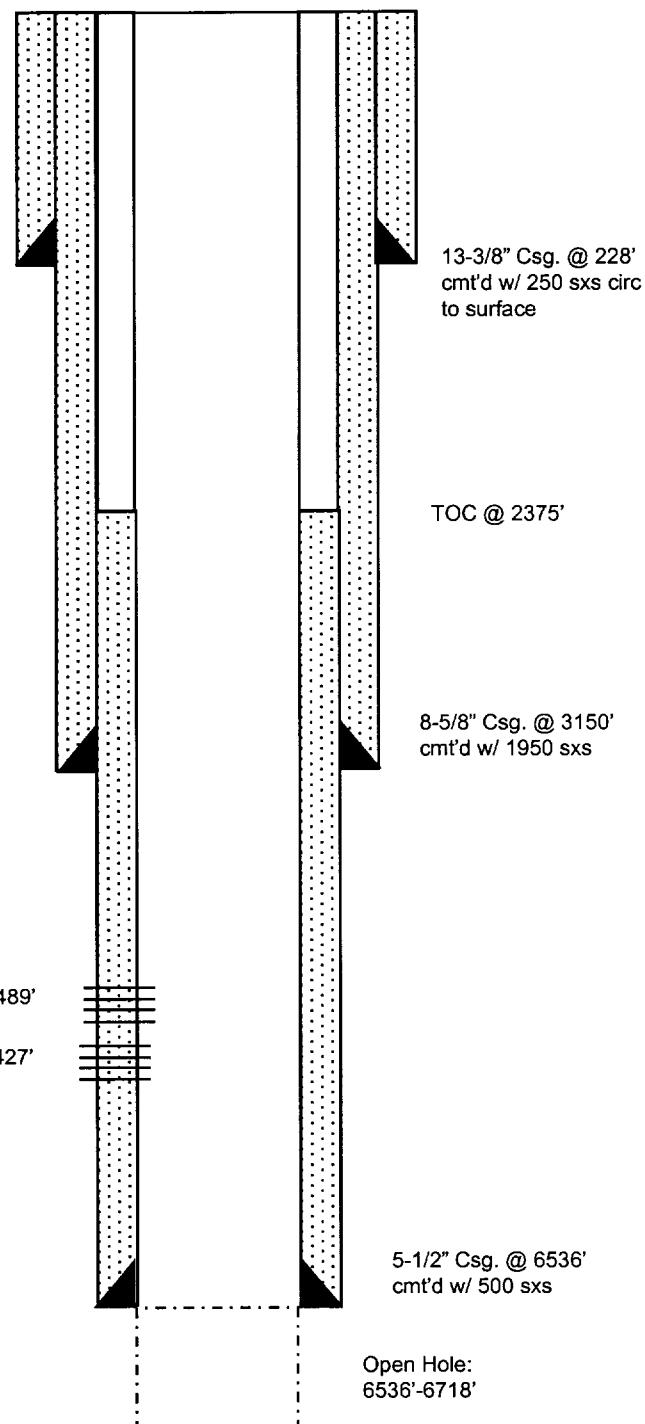
2. Name of the Injection formation Blinebry/Tubb/Drinkard

3. Name of Field or Pool (if applicable) N. Eunice B/T/D Oil & Gas Pool

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. OH 6536'-6718', 6112'-6427'

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

Well: NEDU #313
Field: NE DRINKARD
Location: 710' FSL & 610' FWL
Sec. 2, T21S, R37E
API #: 30-025-06370



INJECTION WELL DATA SHEET

OPERATOR Apache Corporation LEASE Northeast Drinkard Unit (Formerly Harry Leonard (NCT-F) #12)
 WELL NO. 222 3534 FNL & 990 FEL Sec. 2, T21S, R37E
FOOTAGE LOCATION SECTION TOWNSHIP RANGE

Well Construction Data

Surface Casing

Size 13-3/8 " Cemented with 450 sx.

TOC Surface feet determined by Circ.

Hole Size 17-1/2"

Intermediate Casing

Size 8-5/8 " Cemented with 2000 sx.

TOC 170' feet determined by Temp. Survey

Hole Size 11"

Long String

Size 5-1/2" " Cemented with 475 sx.

TOC 2480' feet determined by Temp. Survey

Hole Size 6-3/4"

Total Depth 5975'

Injection Interval

5781' feet to 5820' feet

(perforated or open-hole; indicate which)

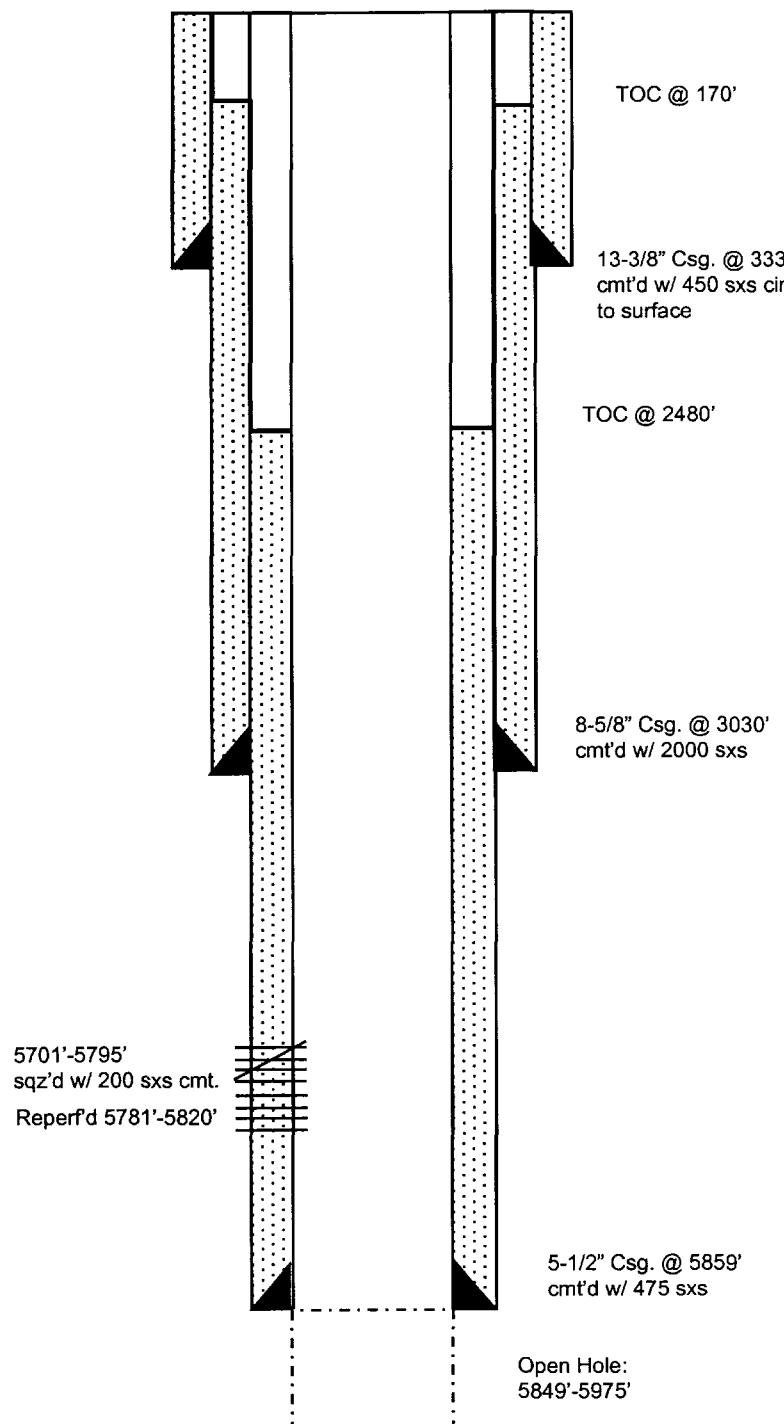
Tubing Size _____ line with _____ set in a
 (type of internal coating)
 packer at _____ feet

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? As an open hole Drinkard producer
2. Name of the Injection formation Blinebry/Tubb/Drinkard
3. Name of Field or Pool (if applicable) N. Eunice B/T/D Oil & Gas Pool
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. OH 5849'-5975', 5701'-5795'
 sqz'd w/ 200 sxs cmt.
5. Give the names and depths of any over or underlying oil or gas zones (pools) in this area.

Well: NEDU #222
Field: NE DRINKARD
Location: 3534' FNL & 990' FEL
Sec. 2, T21S, R37E
API #: 30-025-06356



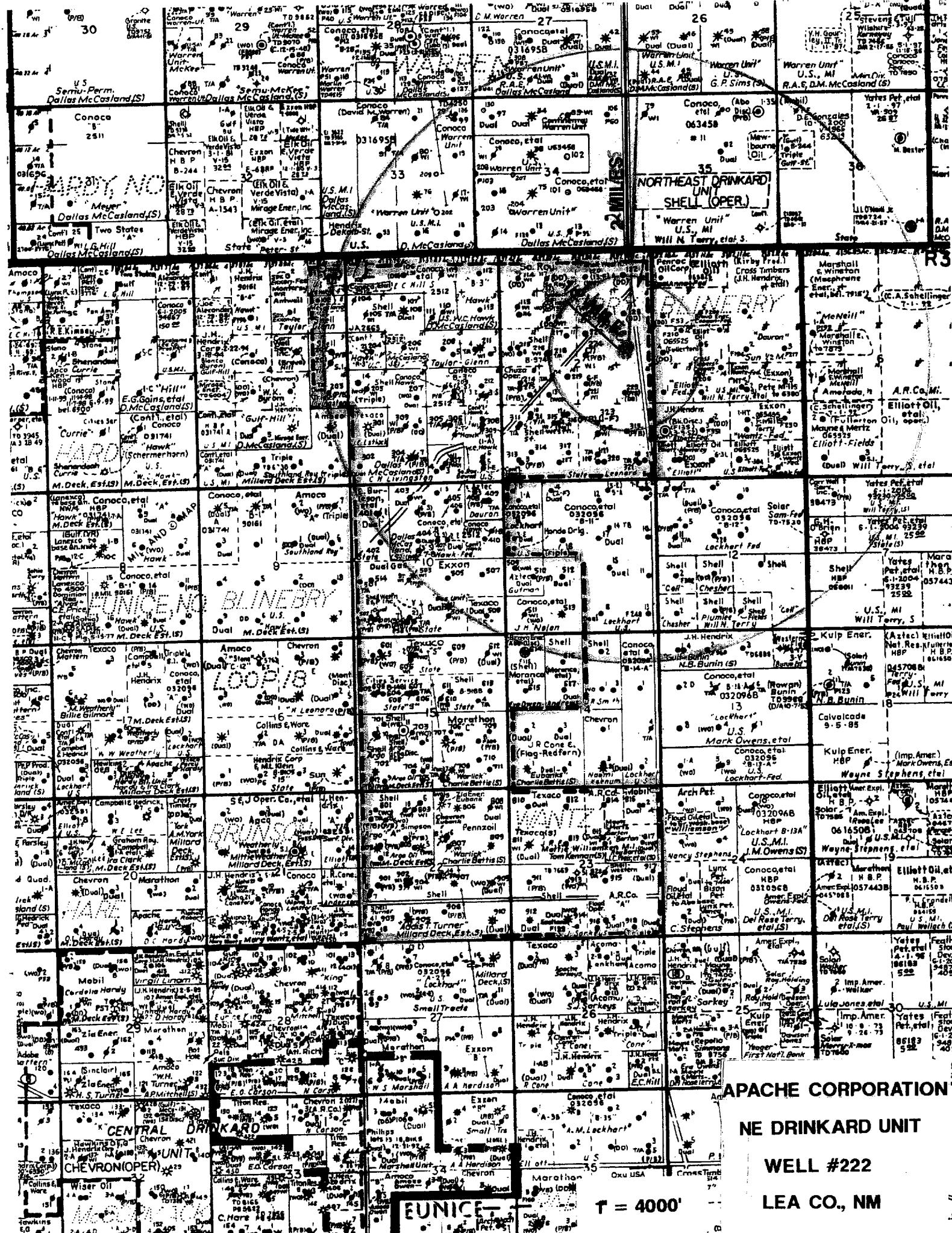
APACHE CORPORATION

NE DRINKARD UNIT

WELL #222

LEA CO., NM

T = 4000'



INJECTION WELL DATA SHEET

OPERATOR Apache Corporation LEASE Northeast Drinkard Unit (Formerly Harry Leonard "A" #31)
 WELL NO. 319 650 FSL & 990 FEL Sec. 2, T21S, R37E
FOOTAGE LOCATION SECTION TOWNSHIP RANGE

Well Construction Data

Surface Casing

Size 13-3/8" Cemented with 350 sx.

TOC Surface feet determined by Circ.

Hole Size 17-1/4"

Intermediate Casing

Size 8-5/8" Cemented with 1575 sx.

TOC 1495' feet determined by Temp. Survey

Hole Size 11"

Long String

Size 5-1/2" Cemented with 1605 sx.

TOC 2400' feet determined by Temp. Survey

Hole Size 7-7/8"

Total Depth 8300'

Injection Interval

5786' feet to 6888' feet
 (perforated or open-hole; indicate which)

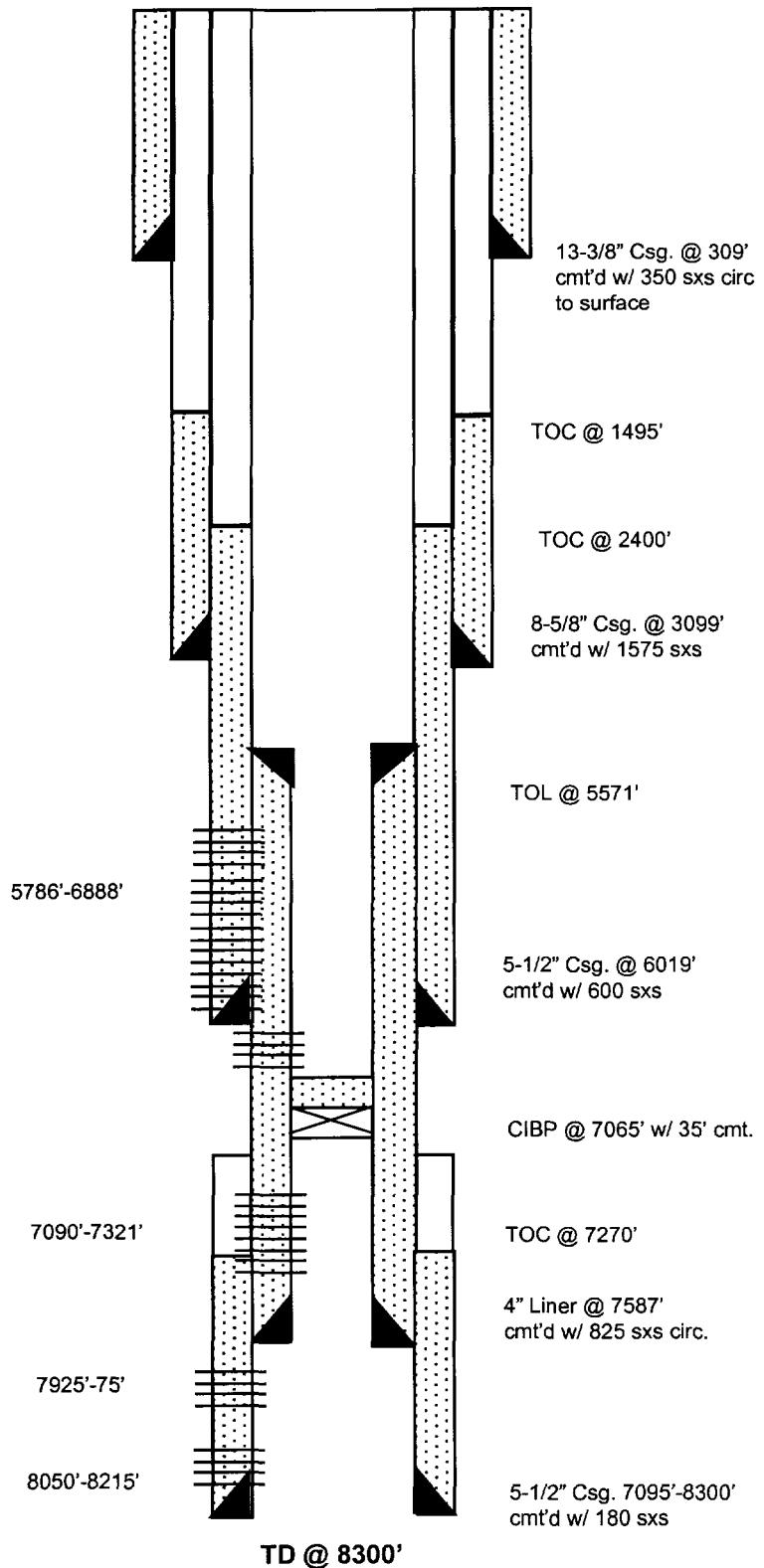
Tubing Size _____ line with _____ set in a
 _____ (type of internal coating)
 packer at _____ feet

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? As a Blinebry producer
2. Name of the Injection formation Blinebry/Tubb/Drinkard
3. Name of Field or Pool (if applicable) N. Eunice B/T/D Oil & Gas Pool
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. 5905'-5810', 5975'-5930',
 5760'-5940', 7090'-7321', 7925'-75', 8195'-8215', 8115'-8145', 8050'-75' CIBP @ 7065' w/ 35' cmt.
5. Give the names and depths of any over or underlying oil or gas zones (pools) in this area.

Well: NEDU #319
Field: NE DRINKARD
Location: 650' FSL & 990' FEL
Sec. 2, T21S, R37E
API #: 30-025-06353



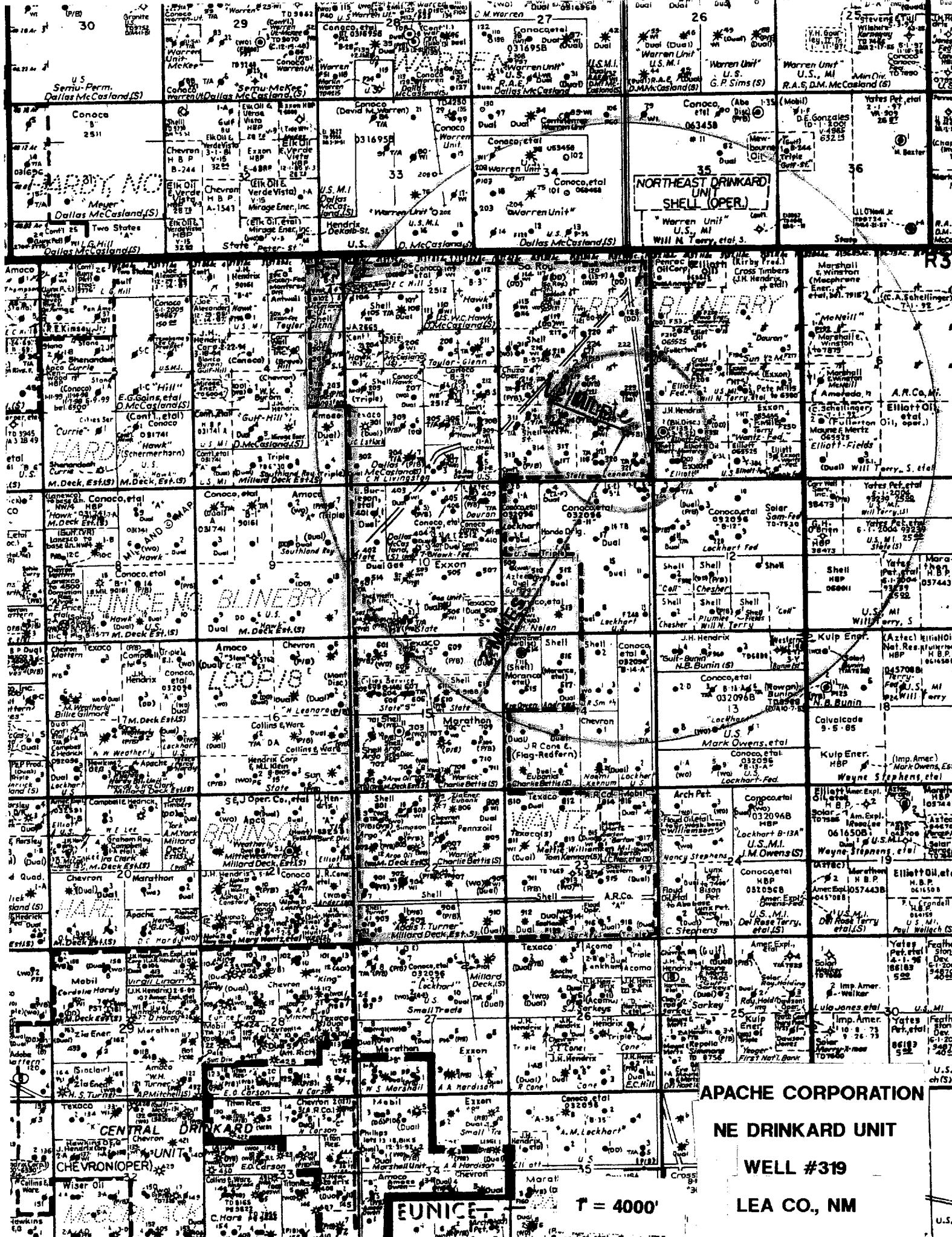
APACHE CORPORATION

NE DRINKARD UNIT

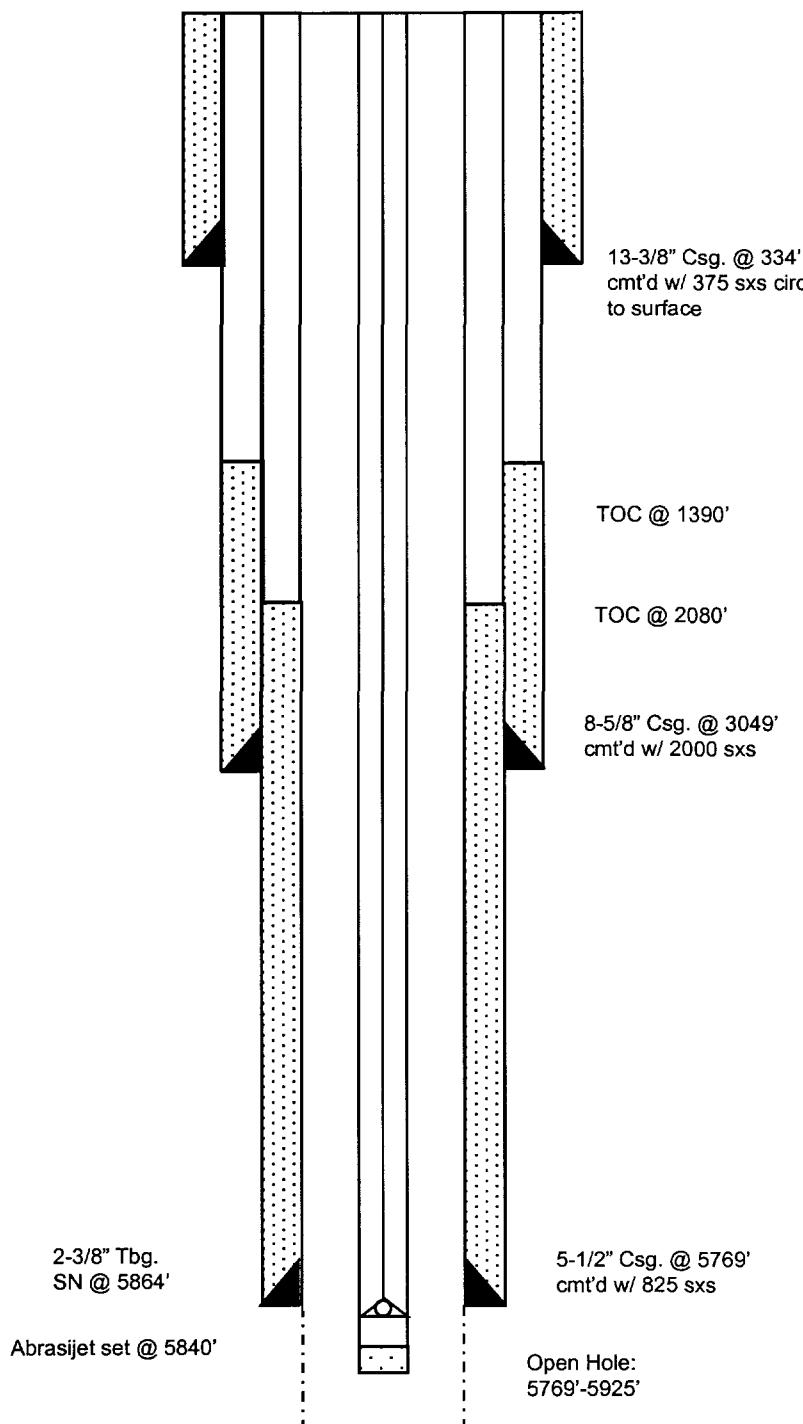
WELL #319

LEA CO., NM

T = 4000'



Well: NEDU #320
Field: NE DRINKARD
Location: 660' FSL & 1780' FEL
Sec. 2, T21S, R37E
API #: 30-025-06366



INJECTION WELL DATA SHEET

OPERATOR Apache Corporation LEASE Northeast Drinkard Unit (Formerly Harry Leonard (NCT-F) #19)
 WELL NO. 320 660 FSL & 1780 FEL Sec. 2, T21S, R37E
 FOOTAGE LOCATION SECTION TOWNSHIP RANGE

Well Construction Data

Surface Casing

Size 13-3/8 " Cemented with 375 sx.

TOC Surface feet determined by Circ.

Hole Size 17-1/4"

Intermediate Casing

Size 8-5/8 " Cemented with 2000 sx.

TOC 1390' feet determined by Temp. Survey

Hole Size 11"

Long String

Size 5-1/2" " Cemented with 825 sx.

TOC 2080' feet determined by Temp. Survey

Hole Size 7-7/8"

Total Depth 5925'

Injection Interval

5769 feet to 5925 feet
 (perforated or open-hole; indicate which)

Tubing Size 2-3/8" line 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? As a Blinebry Oil & Gas
OH 5769'-5925'

2. Name of the Injection formation Blinebry/Tubb/Drinkard

3. Name of Field or Pool (if applicable) N. Eunice B/T/D Oil & Gas Pool

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.
NO

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

This figure is a detailed geological map of the Northeast Drinkard Unit, Shell (Oper.) area, showing various oil fields, lease numbers, and company names. The map includes numerous labels such as Conoco, Texaco, Exxon, Mobil, and various independent operators like E.G. Sains, et al., and D.M. McCasland, et al. It also features several state boundaries and major rivers. A legend at the bottom right indicates a scale of T = 4000'. The map is heavily annotated with lease numbers, well locations, and company names.

INJECTION WELL DATA SHEET

OPERATOR	Apache Corporation	LEASE	Northeast Drinkard Unit (Formerly New Mexico St. "V" #8)		
WELL NO.	507	2100 FSL & 760 FEL	Sec. 10, T21S, R37E		
		FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE

Well Construction Data

Surface Casino

Size 11-3/4 " Cemented with 305 sx.

TOC Surface feet determined by Circ.

Hole Size 17-1/4"

Intermediate Casing

Size 7-5/8 " Cemented with 700 sx.

TOC Surface feet determined by Circ.

Hole Size 11"

Long String

Size 5-1/2" " Cemented with 1400 sx.

TOC 2950' feet determined by Temp. Survey

Hole Size 6-3/4"

Total Depth 7573'

Injection Interval

5704 feet to 6604 feet

(perforated or open-hole; indicate which)

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? As a Blinbry Oil & Gas producer

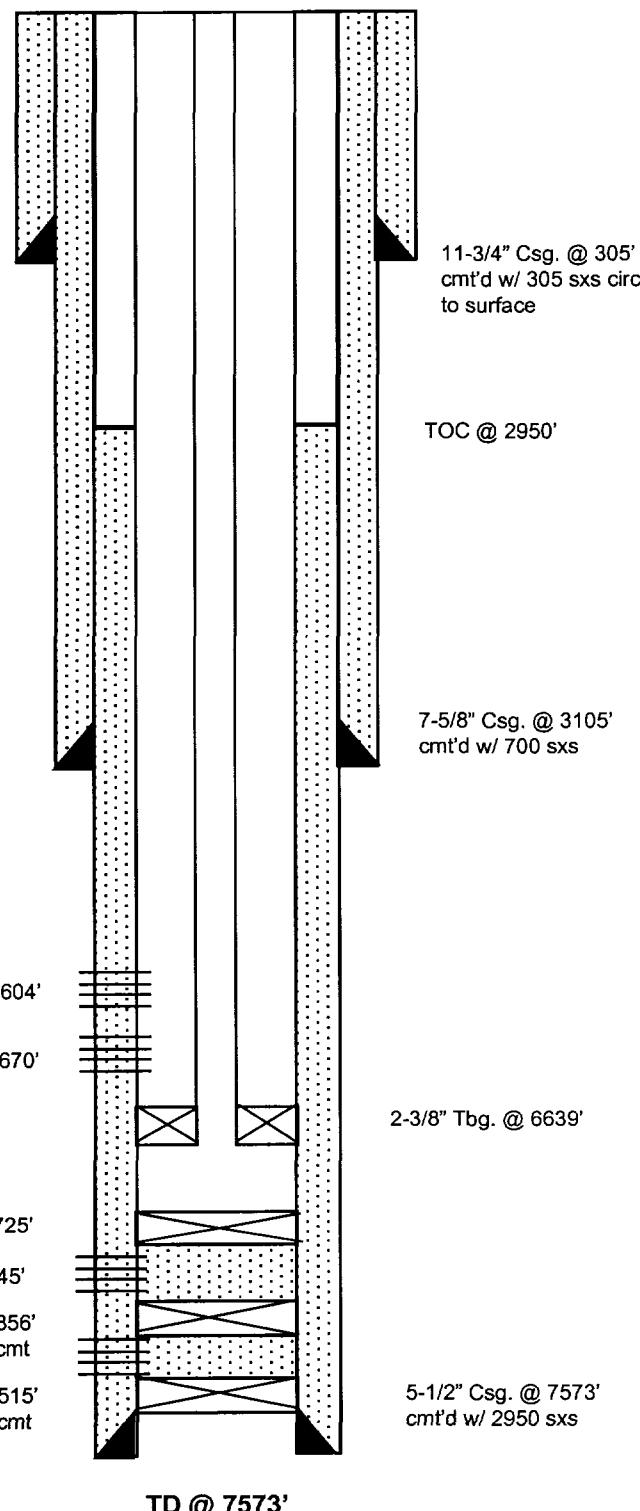
2. Name of the Injection formation Blinbry/Tubb/Drinkard

3. Name of Field or Pool (if applicable) N. Eunice B/T/D Oil & Gas Pool

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. 6832'-7545', CIBP @ 6856' TOC @ 7094', 6608'-6670', 6490'-6519', 5680'-6589', 5726'-5846'

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

Well: NEDU #507
Field: NE DRINKARD
Location: 2100' FSL & 760' FEL
Sec. 10, T21S, R37E
API #: 30-025-06470



MAP OF THE NORTHEAST DRINKARD UNIT

This map displays the Northeast Drinkard Unit, which spans across several states including Wyoming, Colorado, and Nebraska. The unit is divided into various fields and lease areas, with numerous wells and pipelines marked. Key features include:

- Fields:** Conoco, E.I., Marathon, Texaco, Amoco, and Phillips.
- Wells:** Numerous wells are plotted with their respective well numbers and types (e.g., "Dual", "T-A", "T-B", "T-C").
- Pipelines:** A complex network of pipelines connects the wells and fields.
- Geographical Labels:** The map includes labels for "HARDY NO.", "MCCASLAND", "BLINERY", "UNICE", "LOOP 78", "DRINKARD", "CENTRAL DRINKARD", "CHEVRON (OPER.)", and "APACHE CORP.".
- State Boundaries:** The state boundaries of Wyoming, Colorado, and Nebraska are clearly marked.
- Scale:** The scale of the map is indicated as 1:4000'.

Data of Wells which penetrate the proposed injection zone:

WELLS	LOCATION	TD	TYPE	DATE DRILLED	DATED COMPLETED	STATUS
Nedu 119	2F, 21S, 37E	6850'	Oil-W	1953	1990	TA
Nedu 223	2P, 21S, 37E	7542'	Oil-WO	1954	1988	Prod.
Nedu 307	3W, 21S, 37E	6674'	WINJ	1951	1988	Inactive
Nedu 513	11N, 21S, 37E	6711'	Oil-WO	1955	1990	Prod.

**NORTHEAST DRINKARD UNIT
LIST OF SURFACE OWNERS**

SURFACE OWNERS

State of New Mexico
Office of Land Commissioner
P.O. Box 1148
State Land Office Bldg.
Santa Fe, NM 87504-1148

G.P. Sims Estate
P.O. Box 1046
Eunice, NM 88331

Will N. Terry Trust
Wm. F. McNeill
Marilyn McNeill Gates
Marcia Blackburn
P.O. Box 686
Hobbs, NM 88241

**NORTHEAST DRINKARD UNIT
LIST OF OFFSET OPERATORS**

Shell Exploration & Production
Box 576
Houston, TX 77001

Chevron USA Production Company
Box 1635
1301 McKinney
Houston, TX 77251

Conoco Inc.
10 Desta Dr., Ste. 100W
Midland, TX 79705-4500

Elliott Oil Co.
Box 1355
Roswell, NM 88202

Cross Timbers Operating Company
Box 52070
Midland, TX 79710-2070

J.H. Hendrix Corporation
Box 3040
Midland, TX 79701

AFFIDAVIT OF PUBLICATION

State of New Mexico,
County of Lea.

I, KATHI BEARDEN

Publisher

of the Hobbs Daily News-Sun, a daily newspaper published at Hobbs, New Mexico, do solemnly swear that the clipping attached hereto was published once a week in the regular and entire issue of said paper, and not a supplement thereof for a period.

of 1

 weeks.

Beginning with the issue dated

July 2 1998

and ending with the issue dated

July 2 1998

Kathi Bearden
Publisher

Sworn and subscribed to before

me this 2nd day of

July 1998

Jodi Henson
Notary Public.

My Commission expires
October 18, 2000
(Seal)

This newspaper is duly qualified to publish legal notices or advertisements within the meaning of Section 3, Chapter 167, Laws of 1937, and payment of fees for said publication has been made.

LEGAL NOTICE

July 2, 1998

Notice is hereby given of the application of Apache Corporation, 2000 Post Oak, Blvd., Ste. 100, Houston, TX 77056, (713) 296-7152, to the Oil Conservation Division, New Mexico Energy, Minerals and Natural Resources Department, for approval of the following injection wells for the purpose of secondary recovery.

Pool Name: North Eunice Blinney-Tubb-Drinkard Oil & Gas

Lease/Unit Name: Northeast Drinkard Unit

All wells are located in Lea County, New Mexico

Well No. 117 - (formerly State #7)

Location: 921' FNL & 1650' FWL, Section 2, T21S, R37E Unit C

Well No. 222 - (formerly Harry Leonard "F" #12)

Location: 3534' FNL & 990' FEL, Section 2, T21S, R37E Unit I

Well No. 313 - (formerly State Sec. 2 #4)

Location: 710' FSL & 610' FWL, Section 2, T21S, R37E Unit U

Well No. 319 - (formerly Harry Leonard NCT-F #9)

Location: 1650' FSL & 990' FEL, Section 2, T21S, R37E Unit Q

Well No. 320 - (formerly Harry Leonard NCT-F #19)

Location: 660' FSL & 1780' FEL, Section 2, T21S, R37E Unit W

Well No. 507 - (formerly New Mexico "V" State #8)

Location: 2100' FSL & 760' FEL, Section 10, T21S, R37E Unit I

The injection formations are the Blinney, Tubb and Drinkard located between the intervals of 5600' MD to 6900' MD below the surface of the ground. Expected maximum injection rate is 2000 barrels per day and the expected maximum injection pressure is 1200 psi. Interested parties must file objections or requests for hearing with the Oil Conservation Division, 2040 S. Pacheco, Santa Fe, NM 87505 within fifteen days.

#16028

02102716000 02517638

Apache Corporation
2000 Post Oak Boulevard Suite 100
Houston, TX 77056-4400

CHECKLIST for ADMINISTRATIVE INJECTION APPLICATIONS

Operator: Arcute Corp. Well: NEDU-117, 222, 313, 319, 329, 507
Contact: Donna Anderson Title: Eng. Tech. Phone: 713-277-7152
DATE IN 7-17-98 RELEASE DATE 8-3-98* DATE OUT _____

Proposed Injection Application is for: WATERFLOOD Expansion Initial

Original Order: R- 8541 Secondary Recovery Pressure Maintenance

SENSITIVE AREAS

SALT WATER DISPOSAL Commercial Well

WIPP Capitan Reef

Data is complete for proposed well(s)? YRS

Additional Data Req'd

AOR Construction Details

RFCD 9-10-98

AREA of REVIEW WELLS

47 Total # of AOR

5 # of Plugged Wells

16 Tabulation Complete

16 Schematics of P & A's

46 Cement Tops Adequate

NO AOR Repair Required

INJECTION FORMATION

Injection Formation(s) 8-T-D Compatible Analysis 463

Source of Water or Injectate AREA PRODUCTION

PROOF of NOTICE

Copy of Legal Notice

Information Printed Correctly

Correct Operators

Copies of Certified Mail Receipts

Objection Received

Set to Hearing _____ Date _____

NOTES:

APPLICATION QUALIFIES FOR ADMINISTRATIVE APPROVAL? 463

COMMUNICATION WITH CONTACT PERSON:

1st Contact: Telephoned Letter _____ Date _____ Nature of Discussion _____

2nd Contact: Telephoned Letter _____ Date _____ Nature of Discussion _____

3rd Contact: Telephoned Letter _____ Date _____ Nature of Discussion _____