

APPLICATION FOR AUTHORIZATION TO INJECT

- I. Purpose: ☐ Secondary Recovery ☐ Pressure Maintenance ☒ Disposal ☐ Storage
Application qualifies for administrative approval? ☒ yes ☐ no
- II. Operator: RAY WESTALL
Address: P.O. BOX 4 LOCO HILLS, NM 88255
Contact party: RANDALL HARRIS Phone: 505 677-2370
- III. Well data: Complete the data required on the reverse side of this form for each well proposed 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 _____.
- 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 source 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: RANDALL HARRIS Title: GEOLOGIST
Signature: [Signature] Date: 10/5/01
- * If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be duplicated and resubmitted. Please show the date and circumstance of the earlier submittal. FILED FOR SWD-650

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, New Mexico 87501 within 15 days.

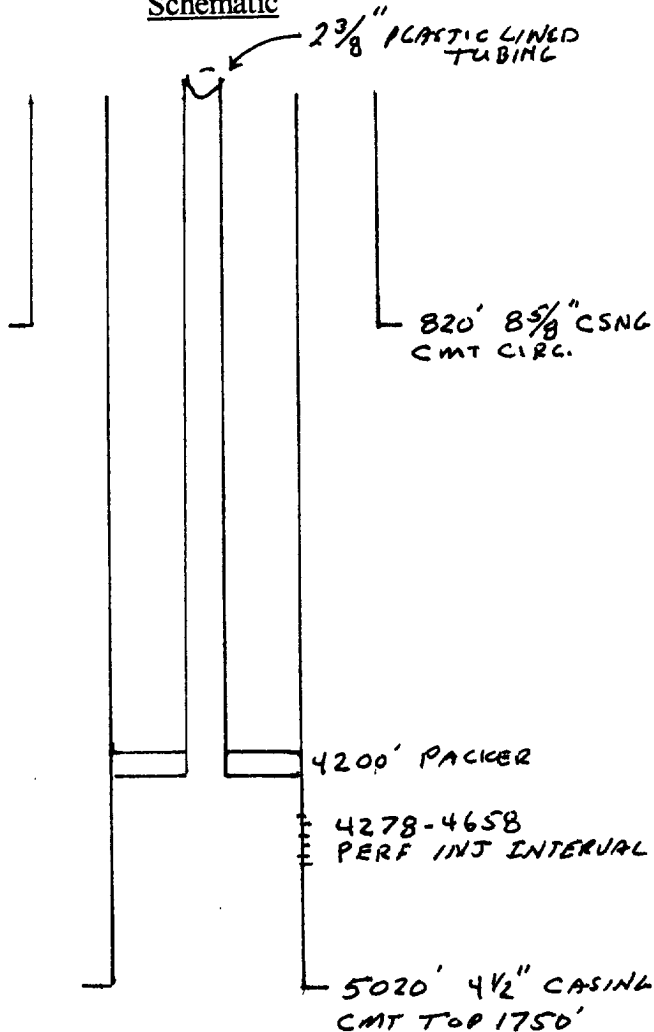
NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.

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.

INJECTION WELL DATA SHEET

RAY WESTALL
CASA STATE WELL NO. 4
2310' FNL & 2310 FEL SECTION 28 T17S-R34E

Schematic



Tubular Data

Surface Casing

Size 8 5/8 24# Cemented with 350 sxs
TOC Circ.
Hole size 12 1/4
Setting Depth 820

Long String

Size 4 1/2" 9.5# Cemented with 1400 sxs
TOC 1750 feet determined by calc.
Hole size 8 5/8"
Total depth 5020

Injection interval

4278 feet to 4658 feet perforated

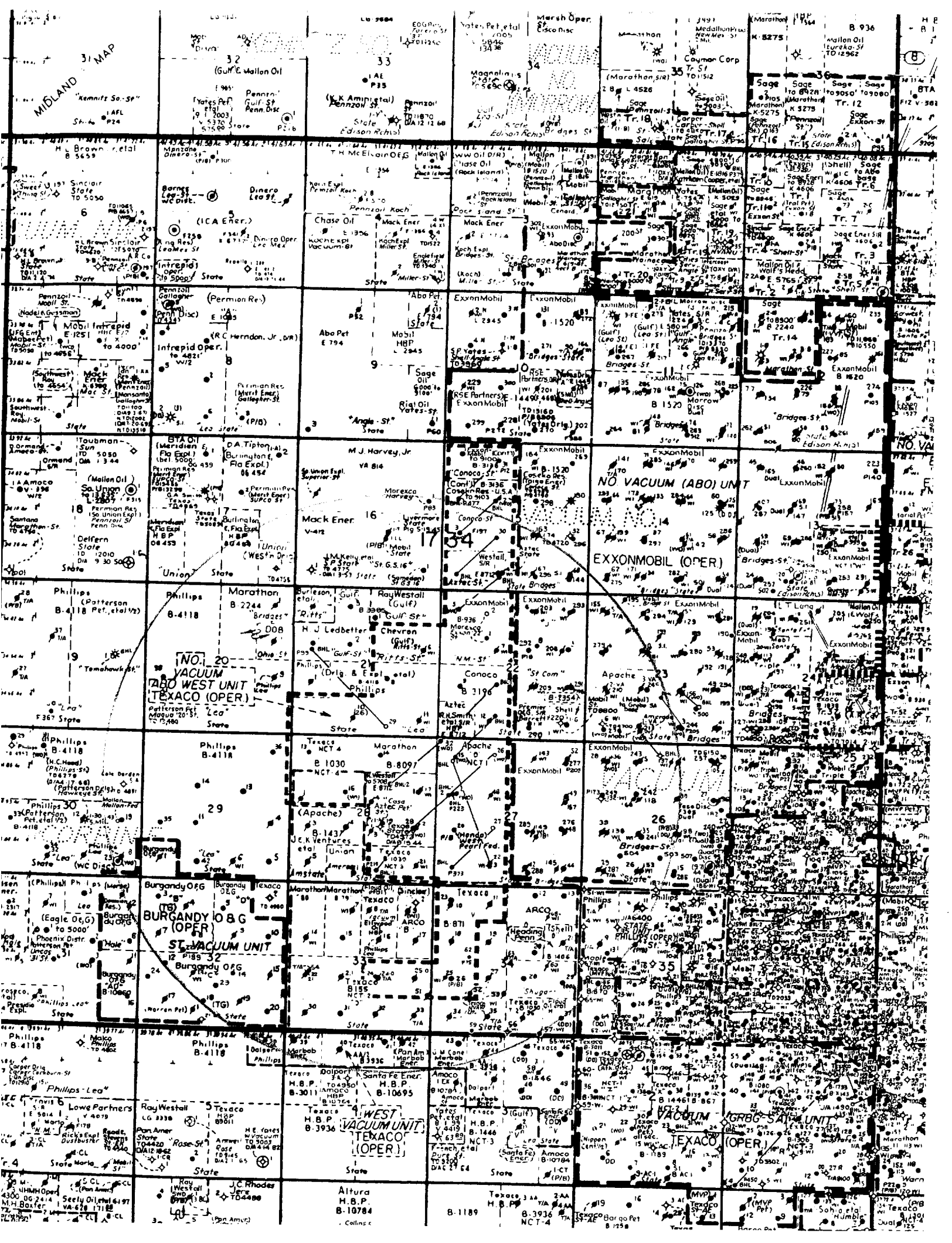
Tubing size 2 3/8" lined with Plastic set in a Baker Loc-set packer at 4200 feet.

Other Data

1. Name of the injection formation. Grayburg SanAndres
2. Name of field or pool. Vacuum Grayburg-SanAndres
3. Is this a new well drilled for injection? No
If no, for what purpose was the well originally drilled? Oil production
4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug (s) used. No other intervals
5. Give the depth to and name of any overlying or underlying oil or gas zones in this area.
Vacuum Abo 8500'

ATTACHMENT V

Maps that identifies all wells of public record within two miles of each proposed injection well, and the area of review one-half mile radius around each proposed injection well.



[illegible]

ATTACHMENT VI

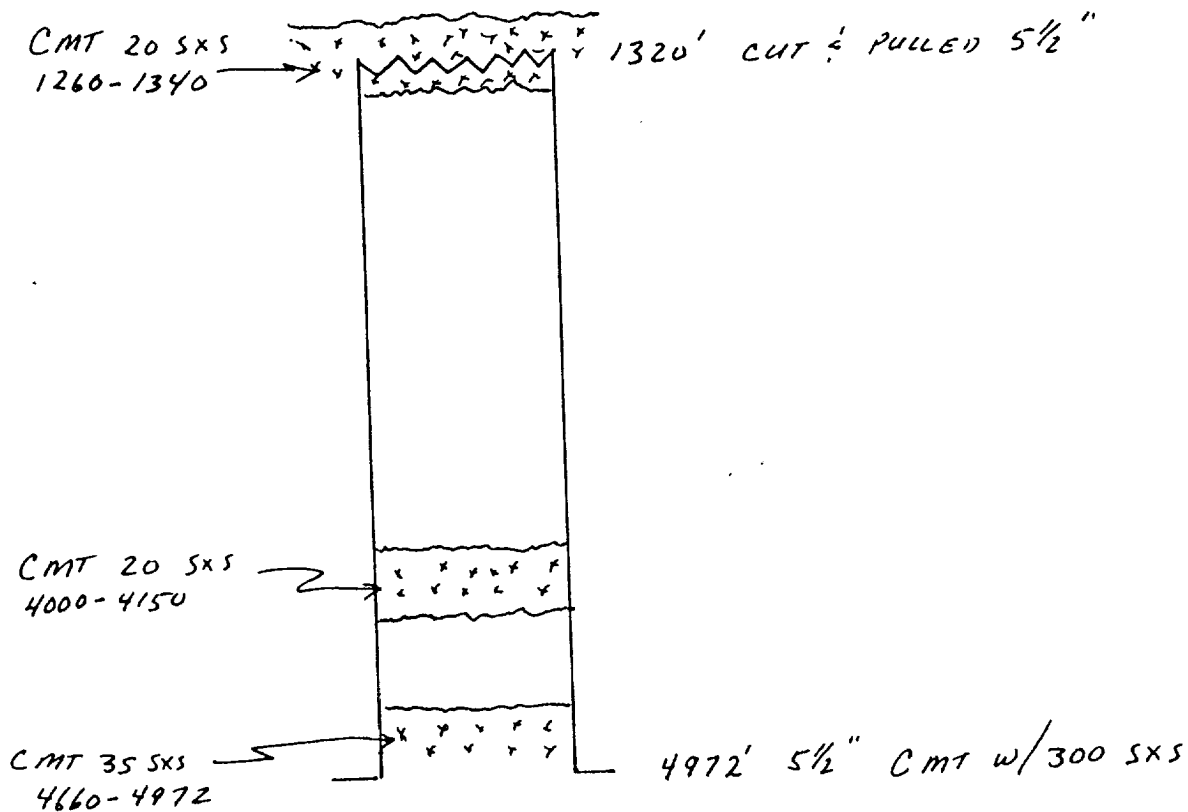
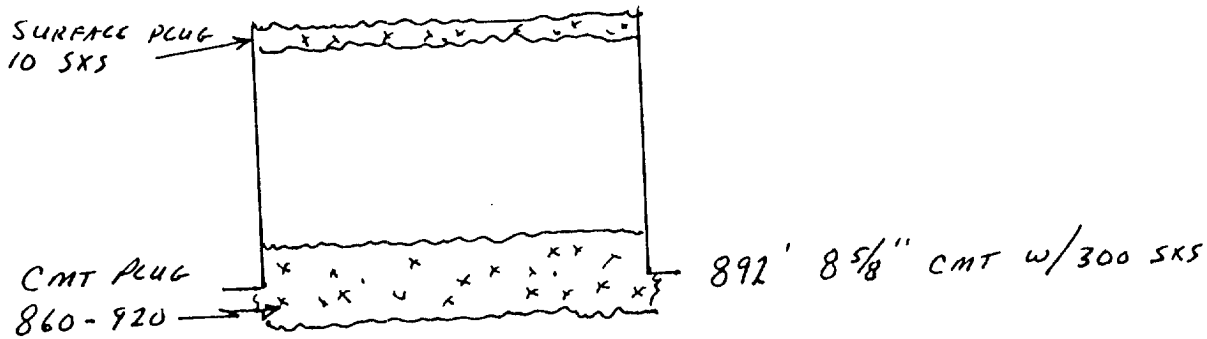
Data on all wells of public record within the area of review. Included are schematics of the plugged wells that penetrated the proposed injection zone within the area of review.

WELL NAME	LOCATION	SPUD DATE	SUR.CASING	INT.CASING	PROD. CASING	COMPLETION
Marathon State B-9097	NVNE Sec 28 T17S-R34E	11/23/71	13 3/8" @ 255 275 sxs Circ.	8 5/8" @ 3160 1100 sxs T/3450	5 1/2" @ 8975	8801-8896 N. Vacuum Abo Oil
Texaco New Mexico T State #1	SWSW Sec 28 T17S-R34E	2/28/72	8 5/8" @ 1630 850 sxs Circ.		5 1/2" @ 8900 2650 sxs T/1630	8710-8800 N. Vacuum Abo W.I.W.
Texaco New Mexico T State #2	SENW Sec 28 T17S-R34E	3/6/72	8 5/8" @ 1620 850 sxs Circ.		5 1/2" @ 8910 2600 sxs T/surface	8777-8859 N. Vacuum Abo W.I.W.
Aztec State NV #2	SENE Sec 28 T17S-R34E	11/4/93	8 5/8" @ 1620 550 sxs Circ.		5 1/2" @ 9000 1700 sxs T/2990	8744-8792 N. Vacuum Abo W.I.W.
Aztec State NV #3	NWSE Sec 28 T17S-R34E	9/18/71	8 5/8" @ 1600 800 sxs Circ.		5 1/2" @ 8929 1600 sxs T/2790	8736-8812 N. Vacuum Abo Oil
BTA Amstate #3	NESW Sec 28 T17S-R34E	5/18/61	8 5/9" @ 325 325 sxs Circ.		5 1/2" @ 4744 200 sxs T/3747	4505-4602 Vacuum GB/SA W.I.W.
BTA Amstate #2	NWSW Sec 28 T17S-R34E	4/27/61	8 5/8" @ 428 250 sxs Circ.		5 1/2" @ 4680 200 sxs T/3600	4560-4602 Vacuum GB/SA W.I.W.
BTA Amstate #1	SWSW Sec 28 T17S-R34E	3/8/61	8 5/8" @ 428 250 sxs Circ.		5 1/2" @ 4900 278 sxs T/ 3200	4537-4698 Vacuum GB/SA W.I.W.

WELL NAME	LOCATION	SPUD DATE	SUR.CASING	INT.CASING	PROD. CASING	COMPLETION
Texaco State New Mexico "T" NCT-4 #1	SWNW Sec 28 T17S-R34E	8/11/61	7 5/8" @ 401 250 sxs Circ		3 1/2" @ 4759 500 sxs T/854	4534-4732 Vacuum GB/SA
Ray Westall Casa State #1	SENE Sec 28 T17S-R34E	9/28/82	8 5/8" @ 1557 850 sxs Circ.		4 1/2" @ 5164 550 sxs T/1550	4505-4988 Vacuum GB/SA Oil
Ray Westall Casa State #2	NESE Sec 28	2/8/83	8 5/8" @ 1595 571 sxs Circ.		5 1/2" @ 5200 550 sxs T/1500	4852-4910 Vacuum GB/SA Oil
Ray Westall *Casa State #3* Casa State #3 the current W.I.W. Will be plugged and abandoned well no longer able to take water	NESW Sec 28	6/17/83	8 5/8" @ 384 450 sxs Circ		4 1/2" @ 5138 400 sxs T/225	4404-4614 Vacuum GB/SA W.I.W.
P & A Wells						
The Texas Co. 1-AF	NESE Sec 28	6/24/44				

SCHEMATIC ATTACHED

The Texas Company
1-AF
1980' FSL & 1980' FEL
Section 28
Township 17 South, Range 34 East



ATTACHMENT VII

PROPOSED OPERATION

1. Plans are to inject 150-200 bbls of produced water per day.
2. The injection system is to be closed system.
3. The estimated injection pressure is 400 psig. Maximum pressure will be 800 psig.
4. Injection fluid will be reinjected produced water from the Casa No. 1 & 2.
5. A sample of produced water is attached.

BJ SERVICES COMPANY**WATER ANALYSIS #FW01W128**

ARTESIA LAB

GENERAL INFORMATION

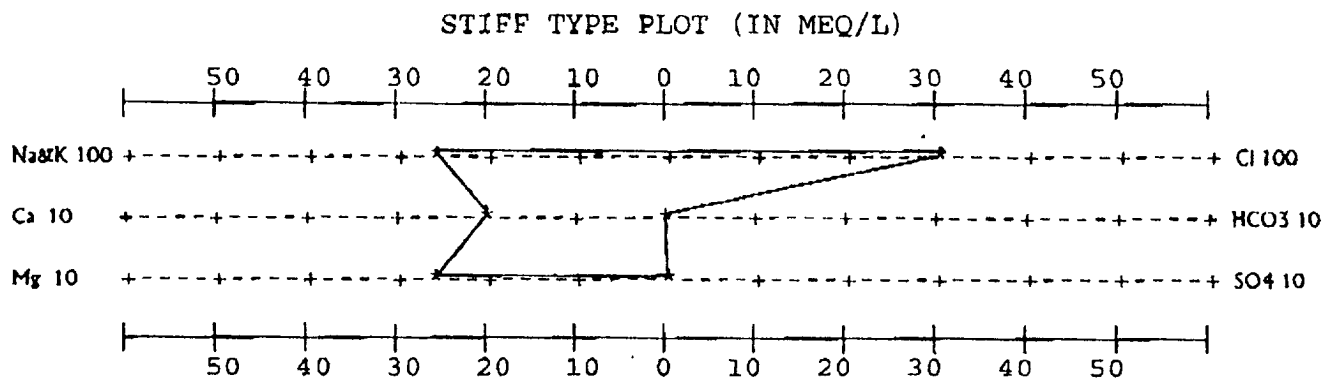
OPERATOR: RAY WESTALL OPERATING DEPTH:
WELL: CASA #3 DATE SAMPLED: 11/11/96
FIELD: DATE RECEIVED: 11/11/96
SUBMITTED BY: RANDY HARRIS COUNTY: LEA STATE: NM
WORKED BY: CRAIG BAILEY FORMATION: GRAYBURG/SAN ANDRES
PHONE NUMBER:

SAMPLE DESCRIPTION

PHYSICAL AND CHEMICAL DETERMINATIONS

SPECIFIC GRAVITY:	1.140	@ 76°F	PH:	7.09
RESISTIVITY (CALCULATED):	0.025	ohms @ 75°F		
IRON (FE++) :	2	ppm	SULFATE:	263 ppm
CALCIUM:	3,864	ppm	TOTAL HARDNESS	22,821 ppm
MAGNESIUM:	3,197	ppm	BICARBONATE:	364 ppm
CHLORIDE:	108,747	ppm	SODIUM CHLORIDE (Calc)	178,890 ppm
SODIUM+POTASS:	81,418	ppm	TOT. DISSOLVED SOLIDS:	213,613 ppm
IODINE:			POTASSIUM CHLORIDE:	

REMARKS



ANALYST

Craig Bailey
CRAIG BAILEY

ATTACHMENT VIII

The proposed injection zones are sands of the Grayburg-SanAndres Formations. These sands are composed of fine-grained quartz sand with varying amounts of shales. They have varying thickness from 8-30 feet thick. There is possible drinking water overlying the injection in the surface sands at a depth of 0-250'. There is no known source underlying the injection interval.

ATTACHMENT IX

No proposed stimulation.

ATTACHMENT XI

There is no active fresh water wells within one mile.

ATTACHMENT XII

All available geologic and engineering data have been examined and there is no evidence of open faults or any other hydrologic connection between the disposal zone and any source of drinking water.

ATTACHMENT XIV

PROOF OF NOTICE

Leasehold operators within one-half mile of the well location are: Marathon and Texaco. Each of the operators were provided a copy of our application by certified mail. Proof of notice is enclosed. The surface owner is the United States of America, BLM.

PROOF OF PUBLICATION

Proof of publication will be from the Hobbs Sun News and will be forwarded.

Proof Of Notice

Copies of this application have been sent to:

Texaco
Box 3190
Midland, TX. 79702

Marathon
Box 552
Midland, TX. 79702

Oil Conservation Division
1625 French Dr.
Hobbs, NM 88240

Oil Conservation Division
1220 S. St. Francis Drive
Santa Fe, NM 87505

7000 0600 0090 0000 4200 2324 3401

U.S. Postal Service	
CERTIFIED MAIL RECEIPT	
(Domestic Mail Only; No Insurance Coverage Provided)	
Postage	\$ 1.03
Certified Fee	2.10
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	\$ 3.13

Loco Hills, NM
OCT 05 2001
USPS

Recipient's Name (Please Print Clearly) (to be completed by mailer)
TEXACO
Street, Apt. No.; or PO Box No.
Box 3190
City, State, ZIP+4
MIDLAND, TX 79702

PS Form 3800, February 2000 See Reverse for Instru

7000 0600 0090 0000 4200 2324 3425

U.S. Postal Service	
CERTIFIED MAIL RECEIPT	
(Domestic Mail Only; No Insurance Coverage Provided)	
Postage	\$ 1.03
Certified Fee	2.10
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	\$ 3.13

Loco Hills, NM
OCT 05 2001
USPS

Recipient's Name (Please Print Clearly) (to be completed by mailer)
MARATHON
Street, Apt. No.; or PO Box No.
P.O. Box 552
City, State, ZIP+4
MIDLAND, TX 79702

PS Form 3800, February 2000 See Reverse for Instru

State of New Mexico,
County of Lea.

Publisher

of the Hobbs News-Sun, a 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

October 7 2001

and ending with the issue dated

October 7 2001

Kathi Bearden

Publisher

Sworn and subscribed to before

me this 8th day of

October 2001

Jodi Benson
Notary Public.

My Commission expires
October 18, 2004
(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
October 7, 2001

Ray Westall, Operator, P.O. Box 4, Loco Hills, New Mexico 88255, Phone: 505-677-2370, Contact party for Ray Westall, Operator, P.O. Box 4, Loco Hills, New Mexico 88255, Phone: 505-677-2370, is seeking administrative approval from the New Mexico Oil Conservation Division to utilize a well located 2010 ENL 8810 FEL Section 28, Township 19 south, Range 2 East, Lea County, New Mexico known as the Gas State 4-Hor water injection. Proposed injection in the Grayburg sandstone formations through perforations 4278-4658 feet. Expected maximum injection rate of 300 bbls per day at 800 psi. Interested parties must file objection or requests for hearing with the Oil Conservation Division, 1220 So. St. Francis Drive, Santa Fe, NM 87505 within 15 days of the notice.

#18470

01101152000 67503182
Steve Carter Inc,
P.O. Box 26
Loco Hills, NM 88255