

STATE OF NEW MEXICO  
ENERGY, MINERALS AND NATURAL  
RESOURCES DEPARTMENT

Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, New Mexico 87505

BEFORE THE OIL CONSERVATION DIVISION  
Santa Fe, New Mexico  
Case No. 14567 Exhibit No. 1  
Submitted by:  
ENDURANCE RESOURCES, LLC  
Hearing Date: November 18, 2010

APPLICATION FOR AUTHORIZATION TO INJECT

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

I. OPERATOR: ENDURANCE RESOURCES, LLC

ADDRESS: P.O. Box 1466 ARTESIA, NM 88231

CONTACT PARTY: RANDALL HARRIS

PHONE: 575-308-0722

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 geologic data on the injection zone including appropriate lithologic detail, geologic 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.

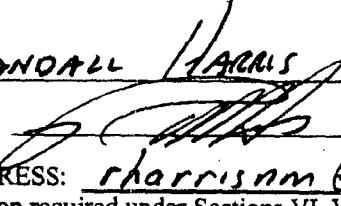
XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.

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: 

DATE: 3/31/10

E-MAIL ADDRESS: r.harrison@yahoo.com

\* 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 circumstances of the earlier submittal: THIS WAS APPROVED R-7877

PREVIOUS OPERATOR LOST THE AUTHORITY TO INJECT

## II. 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 the 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:

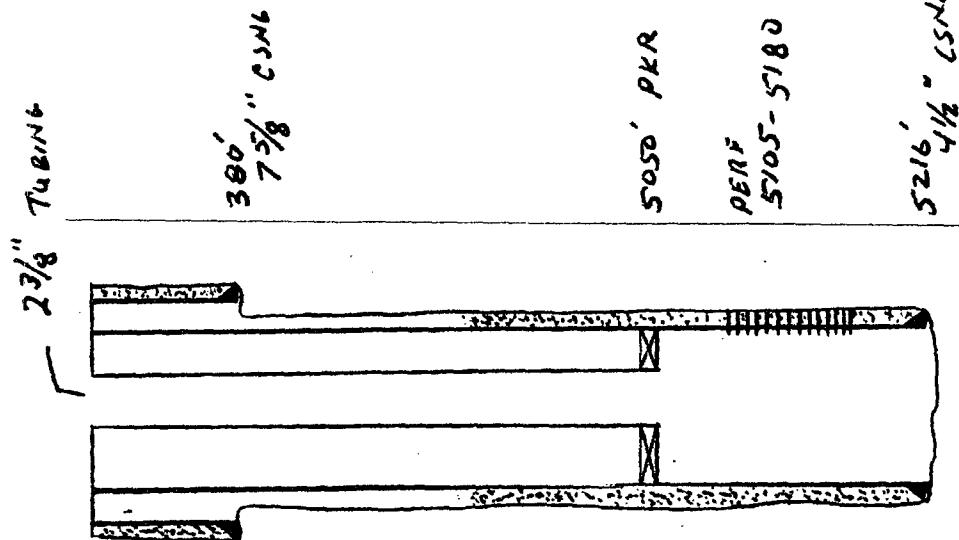
- (1) The name, address, phone number, and contact party for the applicant;
- (2) The intended purpose of the injection well; with the exact location of single wells or the Section, Township, and Range location of multiple wells;
- (3) The formation name and depth with expected maximum injection rates and pressures; and,
- (4) A notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, 1220 South St. Francis Dr., Santa Fe, New Mexico 87505, within 15 days.

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

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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

OPERATOR: Endurance Resources, LLCWELL NAME & NUMBER: MARSHALL #2WELL LOCATION: 1980' ESE 19/10' ENEFOOTAGE LOCATION  
UNIT LETTERKSECTIONTOWNSHIPRANGE30-025-0835933 EWELLBORE SCHEMATICWELL CONSTRUCTION DATASurface Casing

Hole Size:  $2\frac{3}{8}$ "      Casing Size:  $7\frac{1}{8}$ "

Cemented with: 200      sx. or ft<sup>3</sup>

Top of Cement: Surface      Method Determined: Circ

Intermediate Casing

Hole Size: \_\_\_\_\_      Casing Size: \_\_\_\_\_

Cemented with: \_\_\_\_\_      sx. or ft<sup>3</sup>

Top of Cement: \_\_\_\_\_      Method Determined: \_\_\_\_\_

Production Casing

Hole Size:  $6\frac{3}{4}$ "      Casing Size:  $4\frac{1}{2}$ "

Cemented with: 150      sx. or ft<sup>3</sup>

Top of Cement: 4408      Method Determined: Tens

Total Depth: 5216

Injection Interval

feet to 5180

(Perforated ~~at~~ every ~~foot~~; indicate which)

INJECTION WELL DATA SHEETTubing Size: 2 3/8 Lining Material: PLASTICType of Packer: MODEL RPacker Setting Depth: 5050

Other Type of Tubing/Casing Seal (if applicable): \_\_\_\_\_

Additional Data

1. Is this a new well drilled for injection? \_\_\_\_\_ Yes  No  
If no, for what purpose was the well originally drilled? OIL
2. Name of the Injection Formation: DELAWARE (RAMSEY SAND)
3. Name of Field or Pool (if applicable): CORAL - DELAWARE
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 name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area: No overlying oil or gas zones  
No immediate underlying oil or gas zones

## **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.





**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
Endurance Marshall #5	F-Sec 19 T23S-R33E	4/15/1975	8 5/8" @ 527' 260 sxs Circ.	5 1/2" @ 5180' 300 sxs TOC 2500'	5090-5126 Cruz Delaware Oil	
Endurance Marshall #7	C-Sec 19 T23S-R33E	12/26/1975	8 5/8" @ 1287' 700 sxs Circ.	5 1/2" @ 5235' 300 sxs TOC 3200'	5104-5123 Cruz Delaware Oil	
Endurance Marshall #8	L-Sec 19 T23S-R33E	9/17/1977	8 5/8" @ 1223' 545 sxs Circ	5 1/2" @ 5247' 1200 sxs Circ	5078-5108 Cruz Delaware Oil	
Endurance Marshall #1	M-Sec 18 T23S-R33E	9/5/1981	8 5/8" @ 372' 200 sxs	4 1/2" @ 5252' 150 sxs TOC 4500'	5095-5099 Cruz Delaware Oil	
<b>P&amp;A Wells Schematics Attached</b>						
H.L. Johnston Fields Fed #1	I-Sec 24 T23S-R32E		4/15/1963			
Continental Marshall #4	L-Sec 19 T23S-R33E		12/26/1961			
Conoco Brinninstool Unit #3	O-Sec 19 T23S-R33E		3/31/1979			
Continental Marshall #3	N-Sec 19 T23S-R33E		11/30/1961			

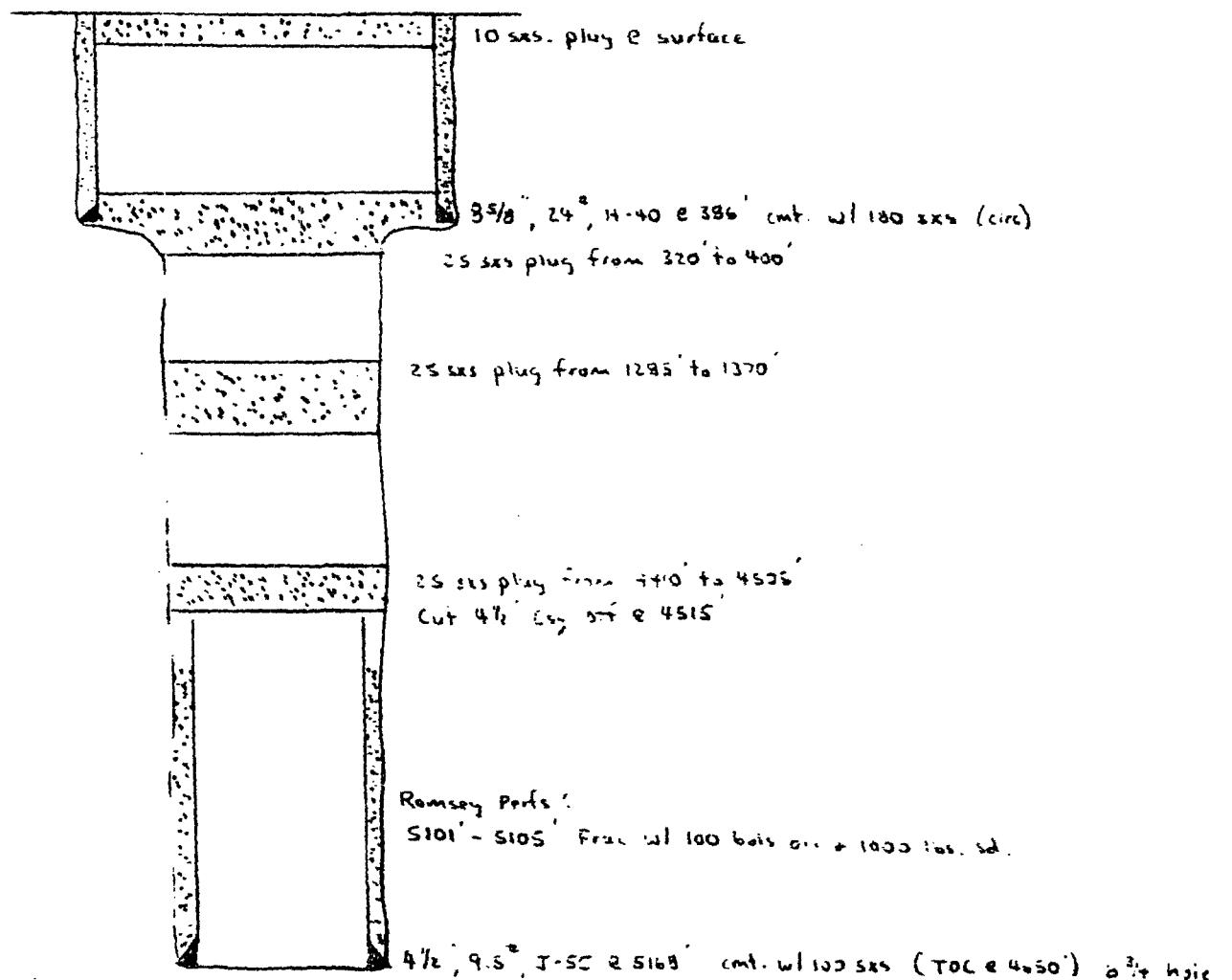
**WELL NAME :** Fields Federal No. 1

**Elev:** 3719'

**Location :** 1650 FS & 330 FEL

**XB:** \_\_\_\_\_

Sec 24, T23S, R32E



WELL NAME : Brininstool Unit No. 3

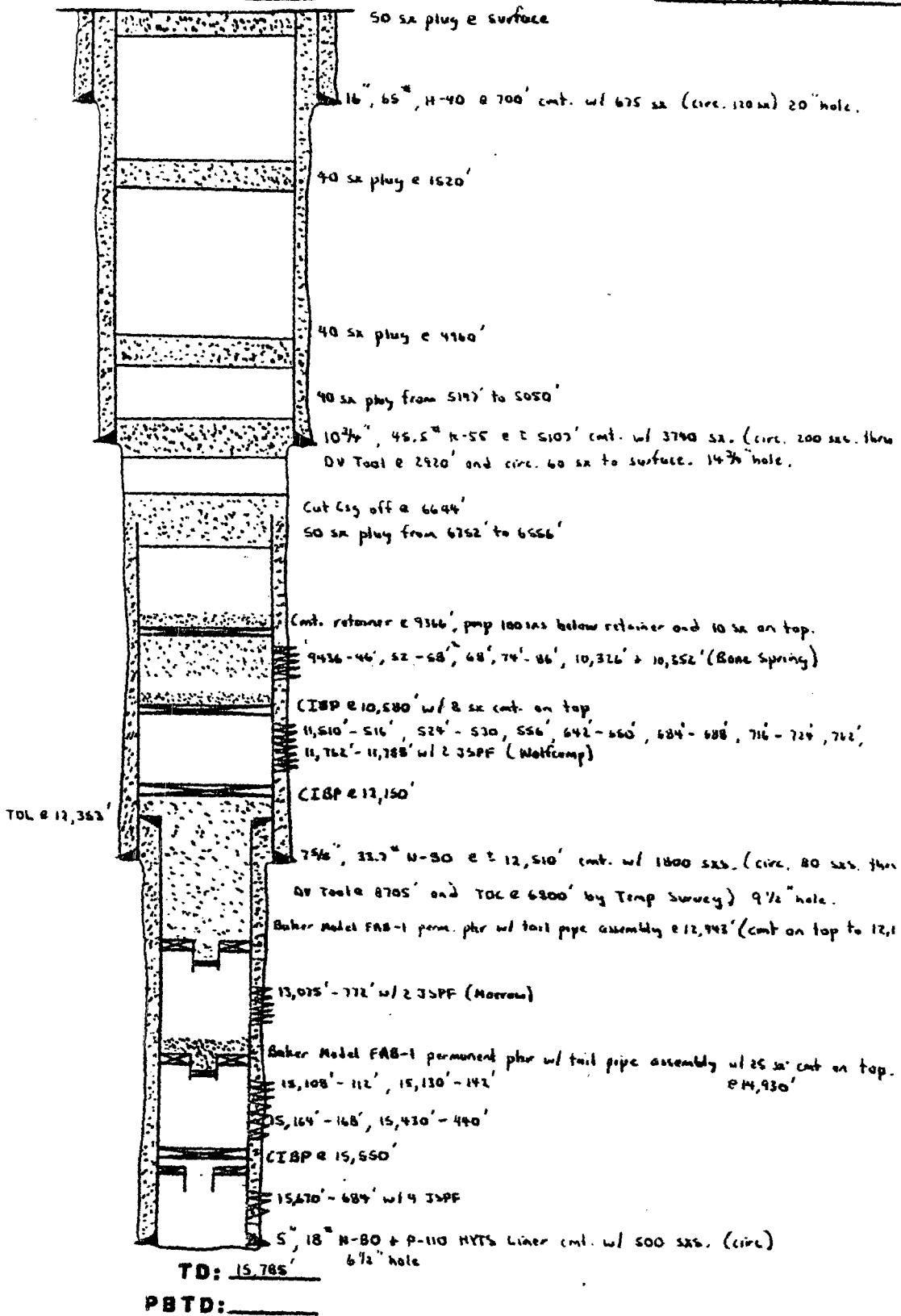
Current Status: Plugged + Abandoned

Elev. : 3692 ft

Location : 660 FSL + 1980 FEL

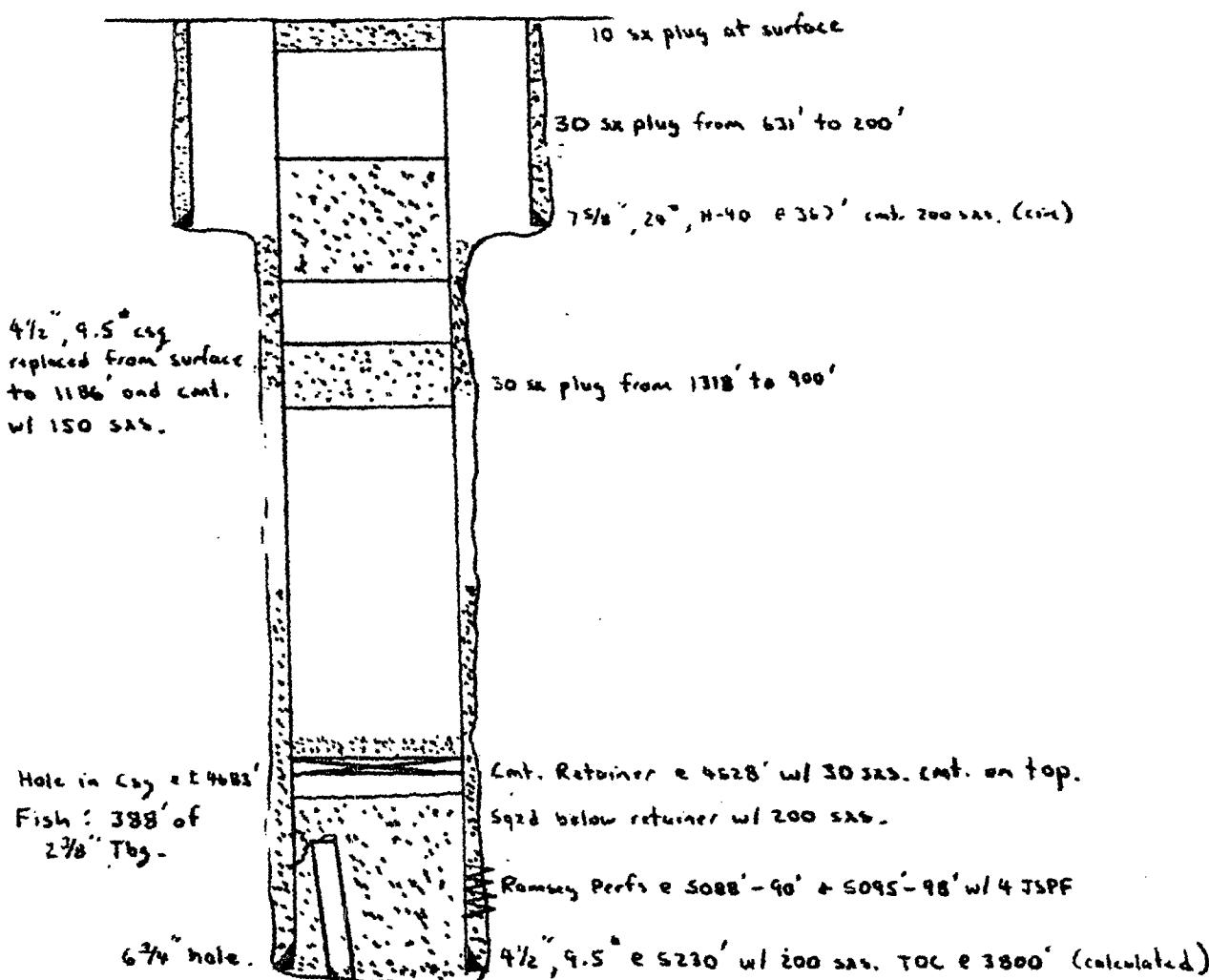
KB: 20' AGI

Sec 19, T23S, R37E



WELL NAME : Marshall No. 4

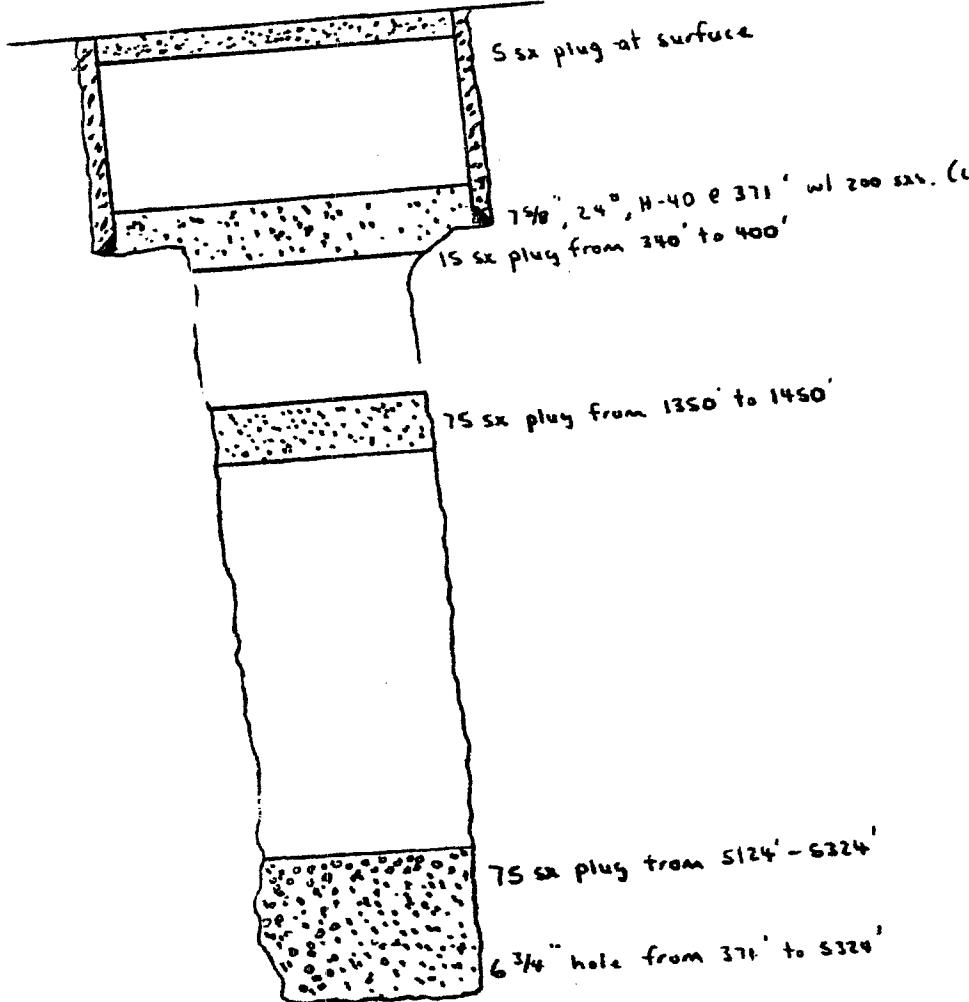
Plugged &amp; Abandoned

Elev: 3701' GLLocation : 1980 FSL + 625' FWLKB: 13' AGLSection 19, T233, R37E

WELL NAME : Marshall No. 3  
Plugged + Abandoned

Elev: 3698' GL  
KB: 12' AGL

Location : 660 ESE 1910 FWL  
Section 19, T23S, R33E



## **ATTACHMENT VII**

- 1) Plan to inject approximately 3,000 bpd of produced water from Endurance own operation on lease.
- 2) System will be closed.
- 3) Average injection pressure should be approximately 400#.
- 4) Source of water is from on lease oil production.

#### **ATTACHMENT VIII**

The proposed injection zone is sand of the Delaware formation. In this area the Delaware is approximately 3,500' thick and consists of sand and shales. In the proposed disposal well the Delaware injection interval is the first sand of the Delaware formation known as the Ramsey

There is possible drinking water overlying the injection in the surface sands at a depth of 0-400'. There is no known source underlying the injection interval.

## **ATTACHMENT IX**

Stimulate perforations with approximately 2000 gallons 15% HCL.

**ATTACHMENT XI**

There three fresh water wells within one mile location and analysis attached.

SID: 2796  
Latitude: 32.2904 Longitude: -103.612  
Section: 19 Township: 23S Range: 33E  
WBF: TRS Formation:  
Depth: 0 Elevation:  
Temperature: 0  
Date Collected: Thu Feb 7 00:00:00 MST 1985 Collector: SEO Point of Collection: DP  
Use: Stock  
Conductivity: 684  
Chlorides(mg/L): 28

SID: 1952  
Latitude: 32.2904 Longitude: -103.612  
Section: 19 Township: 23S Range: 33E  
WBF: TRS Formation:  
Depth: 0 Elevation:  
Temperature: 0  
Date Collected: Tue Aug 21 00:00:00 MDT 1990 Collector: SEO Point of Collection: DP  
Use: Stock  
Conductivity: 736  
Chlorides(mg/L): 45

SID: 2483  
Latitude: 32.2904 Longitude: -103.612  
Section: 19 Township: 23S Range: 33E  
WBF: TRS Formation:  
Depth: 0 Elevation:  
Temperature: 72  
Date Collected: Wed Dec 8 00:00:00 MST 1976 Collector: SEO Point of Collection: DP  
Use: Stock

Conductivity:  
Chlorides(mg/L):

1312  
52

SiD: 1862  
Latitude: 32.2904  
Section: 19  
WBF: TRS  
Depth: 0  
Temperature: 72  
Date Collected: Fri Oct 13 00:00:00 MDT 1995  
Use: null  
Conductivity: 860  
Chlorides(mg/L): 87

Longitude: -103.612  
Township: 23S  
Formation: SANTA ROSA  
Elevation: 3701  
Collector: SEO  
Point of Collection: DP



# New Mexico Office of the State Engineer

## Water Column/Average Depth to Water

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest) (NAD83 UTM in meters)

(in feet)

POD Number	Sub basin	Use	County	Sec	Twp	Rng	X	Y	Depth Well	Depth WaterColumn
C 00611	DOM	LE	1 1 3	17	22S	27E	573392	3584092*	180	
C 00957	PRO	LE	3 1 4	18	24S	26E	563005	3564410*	753	650
C 00963	PRO	LE	3 3 2	30	25S	25E	553411	3551895*	447	
C 00988	PRO	LE		4 01	22S	25E	561503	3586854*	55	20
C 01321	DOM	LE	2 3 29	21	21S	27E	573860	3590480*	270	60
C 01399	PRO	LE	3 3 2	15	21S	25E	558068	3593839*	200	
C 02216	STK	LE	2 2 4	21	23S	32E	625035	3573281*	585	400
C 02244	PRO	LE	3 1 2	22	24S	28E	587224	3563865*	260	
C 02270	STK	LE	1 2 27	26	26S	33E	636182	3543543*	150	125
C 02271	DOM	LE	3 2 3	21	26S	32E	624348	3544010*	300	260
C 02273	DOM	LE	1 2 21	26	26S	33E	634549	3545134*	160	120
C 02274	STK	LE	2 1 2	31	26S	32E	621742	3541730*	300	295
C 02275	COM	LE	3 3 2	19	23S	33E	630843	3573557*	650	400
C 02276	COM	LE	3 1 4	19	23S	33E	630848	3573154*	650	400
C 02277	COM	LE	2 3 4	20	23S	33E	632663	3572970*	550	400
C 02278	COM	LE	3 4 2	28	23S	33E	634484	3571989*	650	400
C 02279	COM	LE	3 4 3	28	23S	33E	633691	3571173*	650	400
C 02280	COM	LE	3 2 4	28	23S	33E	634489	3571586*	650	400
C 02281	COM	LE	3 4 4	28	23S	33E	634495	3571183*	545	400
C 02282	STK	LE	3 1 1	25	23S	33E	638098	3572436*	325	225
C 02283	STK	LE	4 2 2	26	23S	33E	637896	3572431*	325	225
C 02284	STK	LE	4 2 4	26	23S	33E	637907	3571626*	325	225
C 02285	STK	LE	4 4 4	03	26S	33E	636612	3548675*	220	180
C 02286	STK	LE	4 4 4	03	26S	33E	636612	3548675*	220	175
C 02287	STK	LE	4 4 4	03	26S	33E	636612	3548675*	220	175
C 02288	STK	LE	4 4 4	03	26S	33E	636612	3548675*	220	180
C 02289	STK	LE	4 4 4	03	26S	33E	636612	3548675*	200	160
C 02290	STK	LE	4 4 4	03	26S	33E	636612	3548675*	200	160
C 02291	STK	LE	1 1 2	06	26S	34E	640825	3550140*	220	160

\*UTM location was derived from PLSS - see Help

## **ATTACHMENT XII**

I, Randall L. Harris, have examined all available geologic and engineering data 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: None. The surface owner is the United States of America, BLM.

### **PROOF OF PUBLICATION**

Proof of publication is attached.

Copies of this application have been sent to:

Oil Conservation Division

Bureau of Land Management  
620 E. Greene St.  
Carlsbad, NM 88220

## **Affidavit of Publication**

State of New Mexico,  
County of Lea.

I, KENNETH NORRIS  
GENERAL MANAGER  
of the Hobbs News-Sun, a  
newspaper published at Hobbs, New  
Mexico, do solemnly swear that the  
clipping attached hereto was  
published in the regular and entire  
issue of said newspaper, and not a  
supplement thereof for a period

of 1 issue(s).

Beginning with the issue dated  
March 21, 2010  
and ending with the issue dated  
March 21, 2010

## GENERAL MANAGER

Sworn and subscribed to before me  
this 24th day of  
March, 2010

**Notary Public**

My commission expires  
June 16, 2013

(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**  
**MARCH 21, 2010**  
Endurance Resources LLC  
P.O. Box 1465, Anselia,  
New Mexico 88211. Phone:  
(575) 308-0722. Contact  
party for Endurance  
Resources LLC: Operator is  
Randall Heitler, is seeking  
administrative approval from  
the New Mexico Oil  
Conservation Division to  
utilize a well located 1980  
FSL # 1910, FWL Section  
19, Township 23 South,  
Range 33 East, Lea County,  
New Mexico known as the  
Marshall #3, for water  
injection. Proposed  
injection is in the Delaware  
formation through perfora-  
tions at 108-5109 feet.  
Expected maximum  
injection rate of 1000 bbls/  
per day at 800 psi.  
Interested parties must file  
objection or requests for  
hearing within the Oil Conserva-  
tion Division, 1240 S.E. 51  
Francis Drive, Santa Fe, NM  
87505 within 15 days of this  
notice.

67105951 00048952  
ENDURANCE RESOURCES/TRITEX  
PO BOX 1466  
ARTESIA, NM 88211-1466

**CASE \_\_\_\_\_:** **Application of Endurance Resources, LLC for approval of a salt water disposal well, Lea County, New Mexico.** Applicant seeks approval to utilize its Marshall Well No. 2 (API No. 30-025-08359), located 1980 feet from the South line and 1910 feet from the West line of Section 19, Township 23 South, Range 33 East, NMPM, to inject up to 1000 barrels of water per day, at a maximum pressure of 600 psi, into the Delaware formation, (Ramsey Sand), Cruz-Delaware Pool, at an approximate depth of 5105 feet to 5180 feet. This well is located approximately 25 miles southwest of Eunice, New Mexico.

**NOTIFICATION LIST**

**APPLICATION OF ENDURANCE RESOURCES, LLC  
FOR SALT WATER DISPOSAL  
LEA COUNTY, NEW MEXICO**

**MARSHALL WELL NO. 2**

(API No. 30-025-08359)

**Section 19, Township 23 South, Range 33 East**

**SURFACE OWNERSHIP:**

Bureau of Land Management  
620 E. Greene Street  
Carlsbad, New Mexico 88220

**MINERAL OWNERSHIP:**

{ $\frac{1}{2}$  Mile Radius}

None