

BEFORE THE NEW MEXICO OIL CONSERVATION DIVISION

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**APPLICATION OF ENDURANCE
RESOURCES, LLC OF A SALT WATER
DISPOSAL WELL,
EDDY COUNTY, NEW MEXICO.**

Case No. 14783

APPLICATION FOR SALT WATER DISPOSAL

Endurance Resources, LLC, by and through its undersigned attorney, applies for an order approving a salt water disposal well, and in support thereof, states:

1. Applicant seeks an order proposing to convert to water disposal its Base Ball Park #1, located 1980' FSL 660' FEL, Unit I, Section 24, Township 22 South, Range 26 East, N.M.P.M., Eddy County, New Mexico.

2. Applicant proposes to set a packer at 4030 feet below the surface of the earth and then inject into the following zone below the packer:

Delaware--4,052 feet to 4,690 feet (perforated).

3. A form C-108 for the well is attached hereto as Exhibit A.

4. The granting of this application will prevent waste and protect correlative rights.

WHEREFORE, Applicant requests that, after notice and hearing, the Division enter its order approving this application.

Respectfully submitted,

PADILLA LAW FIRM, P.A.

A handwritten signature in black ink, appearing to read "Ernest L. Padilla". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

ERNEST L. PADILLA,
Attorney for Endurance Resources, LLC
PO Box 2523
Santa Fe, New Mexico 87504
505-988-7577

EXHIBIT A

APPLICATION FOR AUTHORIZATION TO INJECT

Case 14783

- I. PURPOSE: Secondary Recovery Pressure Maintenance ☒ Disposal Storage
Application qualifies for administrative approval? Yes ☒ No
- II. OPERATOR: ENDURANCE RESOURCES LLC
ADDRESS: P.O. BOX 1466 ARTESIA, NM 88211-1466
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: [Signature] DATE: 10/12/2011
E-MAIL ADDRESS: rharrisnm@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: _____

WEI I NAME & NUMBER: BASE BALL PARK #1 30-015-24974

I UNIT LETTER

SECTION	TOWNSHIP	RANGE
24	22S	26E

WELL CONSTRUCTION DATA
Surface Casing



Hole Size: 10" Casing Size: 8 5/8

Cemented with: 250 or ft³

Top of Cement: SURFACE Method Determined: CIRCULATED
Intermediate Casing

Hole Size: _____ Casing Size: _____
 Cemented with: _____ or _____
 Top of Cement: _____ Method Determined: _____

Hole Size:	7 7/8"	Casing Size:	5 1/2"
Cemented with:	800	or	
sq. ft.			

Top of Cement: SURFACE Method Determined: CIRCULATED

Total Depth: 4950

Injection Interval

4052 feet to 4690 PERF

(Perforated or Open Hole; indicate which)

INJECTION WELL DATA SHEET

Tubing Size: 2 7/8" Lining Material: PLASTIC
 Type of Packer: BAKER AD1 PLASTIC COATED
 Packer Setting Depth: 4030
 Other Type of Tubing/Casing Seal (if applicable): _____

Additional Data

1. Is this a new well drilled for injection? Yes X No _____
 If no, for what purpose was the well originally drilled? OIL

2. Name of the Injection Formation: DELAWARE
 3. Name of Field or Pool (if applicable): SOUTH CARLEMAN 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. 3152-60
PROPOSE TO CEMENT SQUEEZE WITH 50 SXS CLASS C"
 5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area: WOLF CAMP 7000, MORENO 11,000

CURRENT CONDITIONS

ENDURANCE RESOURCES

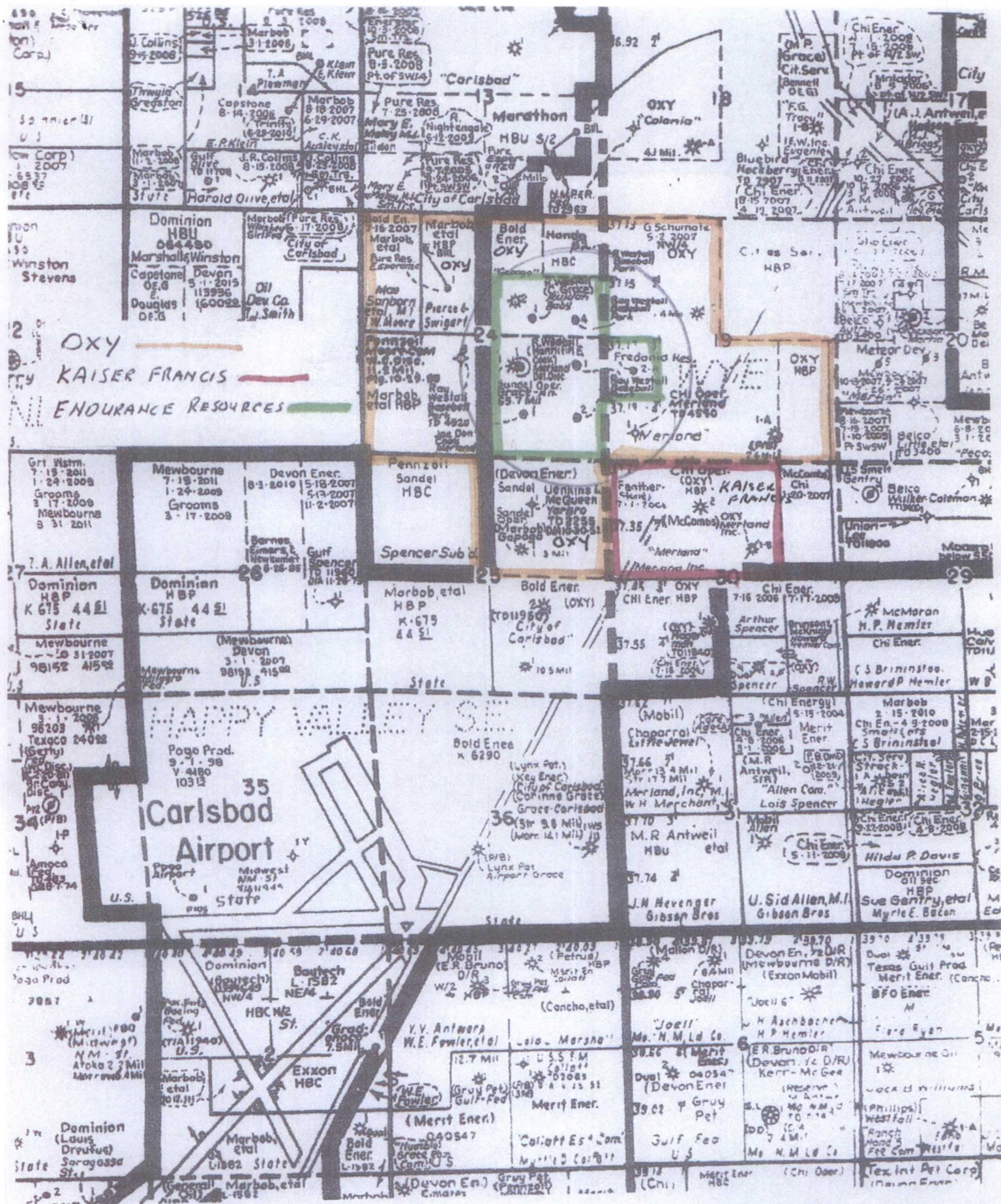
BASE BALL PARK #1

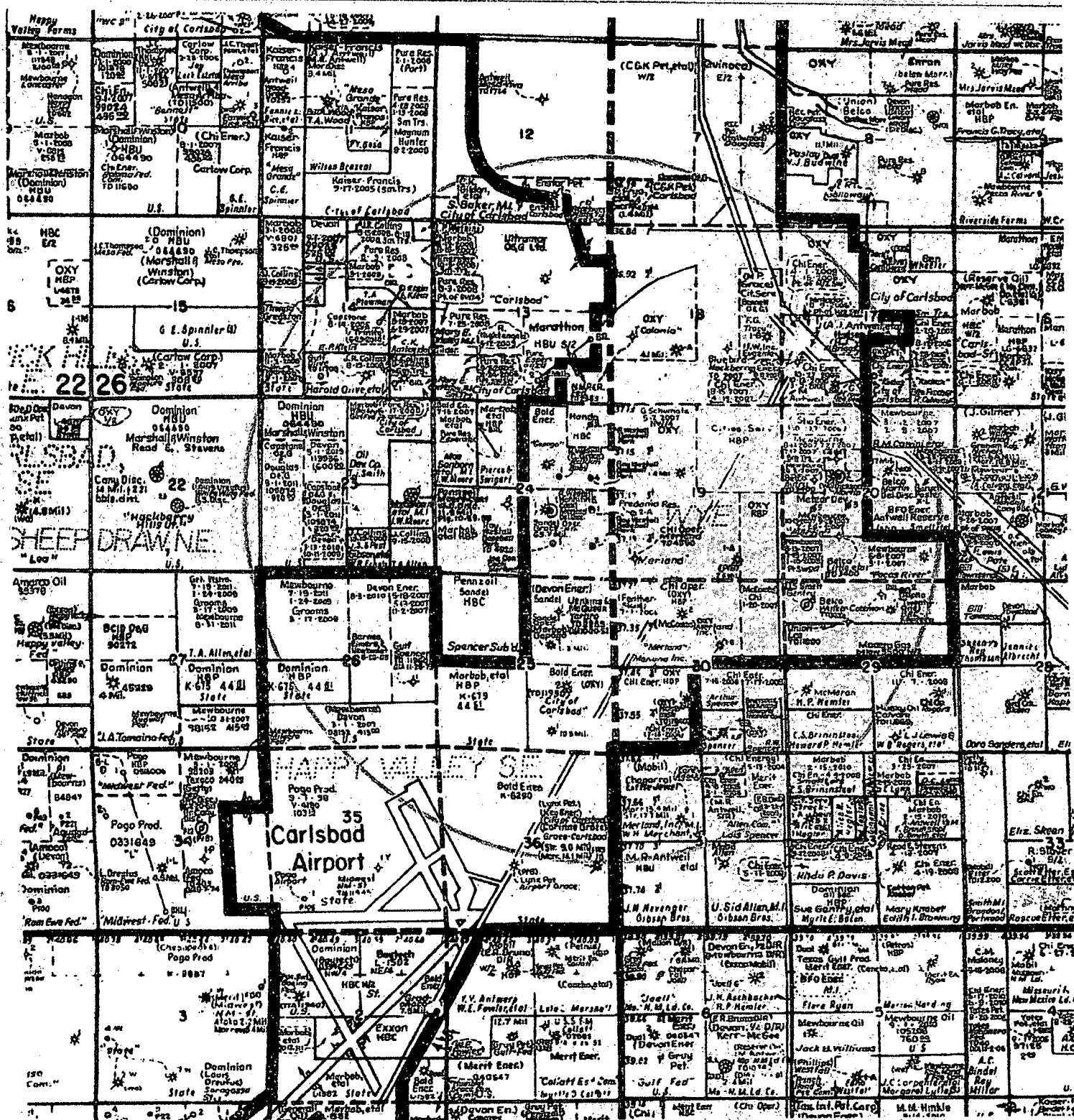
30-015-24 974



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.

2

WELL NAME	API	LOCATION	SPUD DATE	SUR.CASING	INT.CASING	PROD. CASING	COMPLETION
OXY							
Gopogo #2	30-015-20464	G-24-T22S-R26E	6/1/1971	13 3/8" @ 319' 300 sxs Circ.	9 5/8" @ 5328' 1900 sxs Circ	7" @ 11,810' 860 sxs	11,382-11,482 S. Carlsbad Morrow
Oxy							
Grace Atlantic #1	30-015-20798	J-24-T22S-R26E	1/28/1973	13 3/8" @ 356' 375 sxs Circ.	9 5/8" @ 5402' 1650 sxs Circ	7" @ 11,768' 500 sxs	11,424-11,444 S. Carlsbad Morrow
Endurance	30-015-21568	G-24-T22S-R26E	6/18/1975	9 5/8" @ 351' 150 sxs Circ.		5 1/2" @ 4518' 325 sxs T/2400' Temp	4446-4469 S. Carlsbad Delaware
Kuklah Baby #1							
Endurance	30-015-21036	J-24-T22S-R26E	1/24/1974	8 5/8" @ 375' 250 sxs Circ.		5 1/2" @ 4518' 450 sxs T/1700' Calc.	4454-4464 S. Carlsbad Delaware
Merland #1							
Endurance	30-015-25355	L-19-T22S-R27E	9/16/1985	8 5/8" @ 597' 500 sxs Circ.		5 1/2" @ 5453' 900 sxs Circ	2769-2781 S. Carlsbad Delaware
Merland #2							
Endurance	30-015-25217	P-24-T22S-R26E	4/2/1985	8 5/8" @ 400' 250 sxs Circ.		5 1/2" @ 4600' 1850 sxs Circ.	4230-4256 S. Carlsbad Delaware
Base Ball Park #2							
Endurance							
Base Ball Park #4	30-015-25584	H-24-T22S-R26E	4/25/1986	8 5/8" @ 434' 250 sxs Circ.		5 1/2" @ 4600' 650 sxs T/ 485' BL	3150-3165 S. Carlsbad Delaware

COMPLETION

PROD. CASING

INT. CASING

SUR. CASING

SPUD DATE

LOCATION

API

WELL NAME

5 1/2" @ 4518
500 sxs T/1420 Bond

Plugged Wells

8 5/8" @ 399'
400 sxs Circ.

Endurance

Merland SWD

8/13/1979

O-24-T22S-R26E

30-015-22980

8 5/8" @ 570'
360 sxs Circ.

2/5/1990

M-19-22S-27E

30-015-26266

CHI

Merland #1

5 1/2" @ 4520'

925 sxs T/400' Temp

8 5/8" @ 425'
250 sxs Circ.

4/14/1986

K-24-T22S-R26E

30-015-25578

Ray Westall

Base Ball Park #3

5 1/2" @ 5069'

800 sxs Circ

8 5/8" @ 353'
260 sxs Circ

6/16/1988

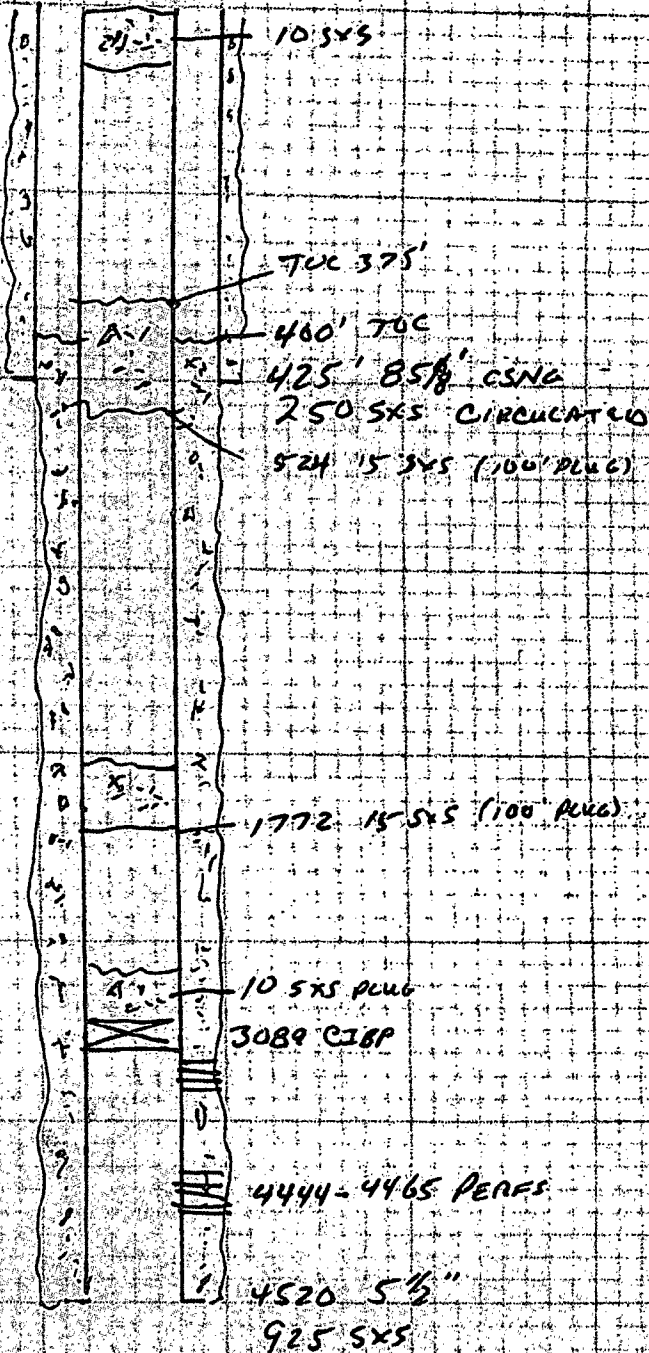
A-24-T22S-R26E

30-015-25881

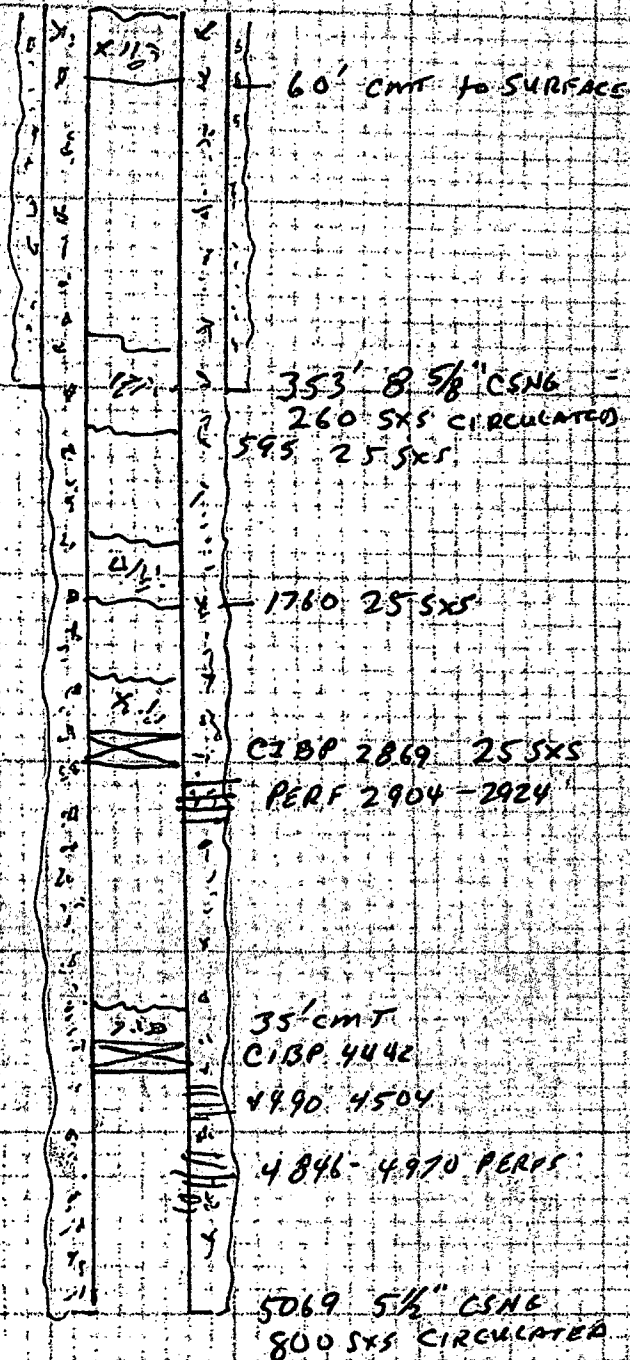
Ray Westall

Base Ball Park #5

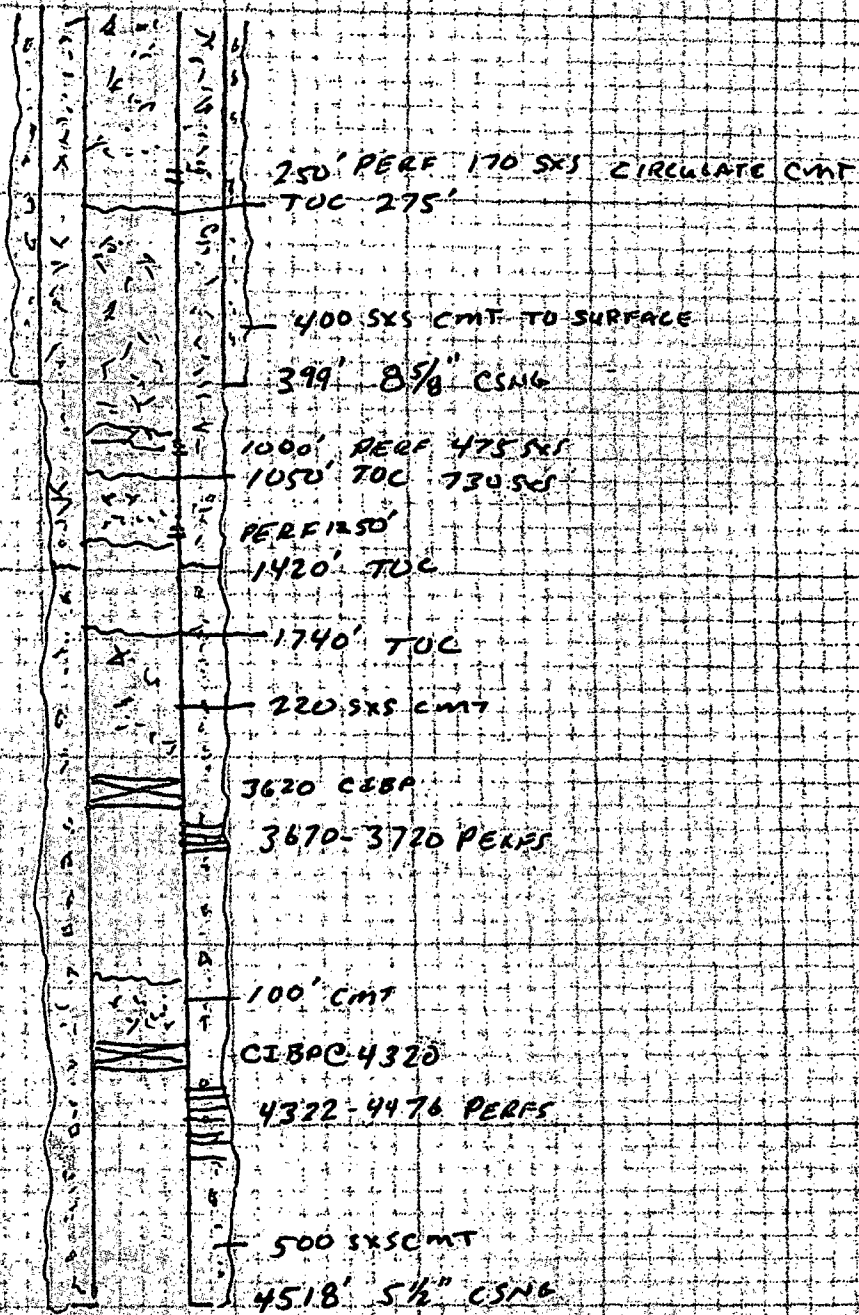
RAY WESTALL
BASE BALL PARK #3
30-015-25578

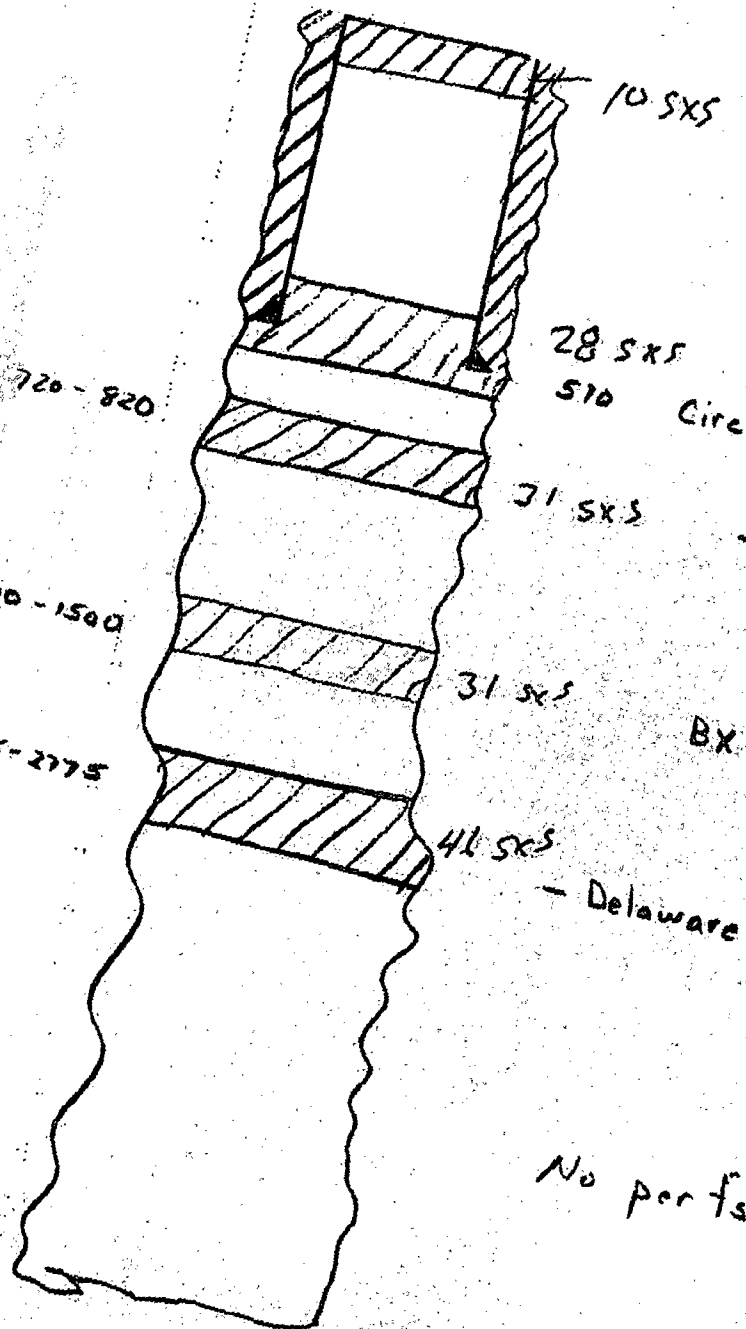


RAY WESTALL
BASE BALL PARK #5
30-015-25881



ENDURANCE RESOURCES
MERLAND SWD





Chi Oper.
 Merland #1
 19-22-27
 Darrell Moore
 given to David Harrison
 2/13/90
 887-9073

No perfs

TD in Del. 4550'

ATTACHMENT VII

Endurance Resources LLC proposed to convert this to a SWD. Cement squeeze perforations 3152-3160. Pressure test well as OCD requires.

- 1) Plan to inject approximately 250 bpd of produced water from Endurance Resources LLC own operation on lease.
- 2) System will be closed.
- 3) Average injection pressure should be approximately 500#.
- 4) Water from the offset production if from the S. Carlsbad Delaware.

ATTACHMENT VIII

The proposed injection zone is sands of the Delaware formation. In this area the Delaware is approximately 3300' thick and consists of shales and sand. In the proposed disposal well the Delaware is at 1932'.

There is possible drinking water overlying the injection in the surface sands at a depth of 0-250'. New Mexico State Engineer report attached.

ATTACHMENT IX

No stimulation proposed.

ATTACHMENT XI

There are two active water analysis attached .



New Mexico Office of the State Engineer

Wells with Well Log Information

(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest)									
(NAD83 UTM in meters)									
POD Number	Sub-basin	Use	County	Source	Q	Q	Q	Q	
C-00851	C	DOM	ED	6416	4	24	22S	26E	
C-03156	C	DOL	ED	Shallow	2	1	4	24	22S 26E

Record Count: 2

Basin/County Search:

Basin: Carlsbad

County: Eddy

UTM/NAD83 Radius Search (in meters):

Easting (X): 570858

Northing (Y): 3582581

Radius: 500

Usage Filter:

Use: All Usages

on was derived from PLSS - see Help

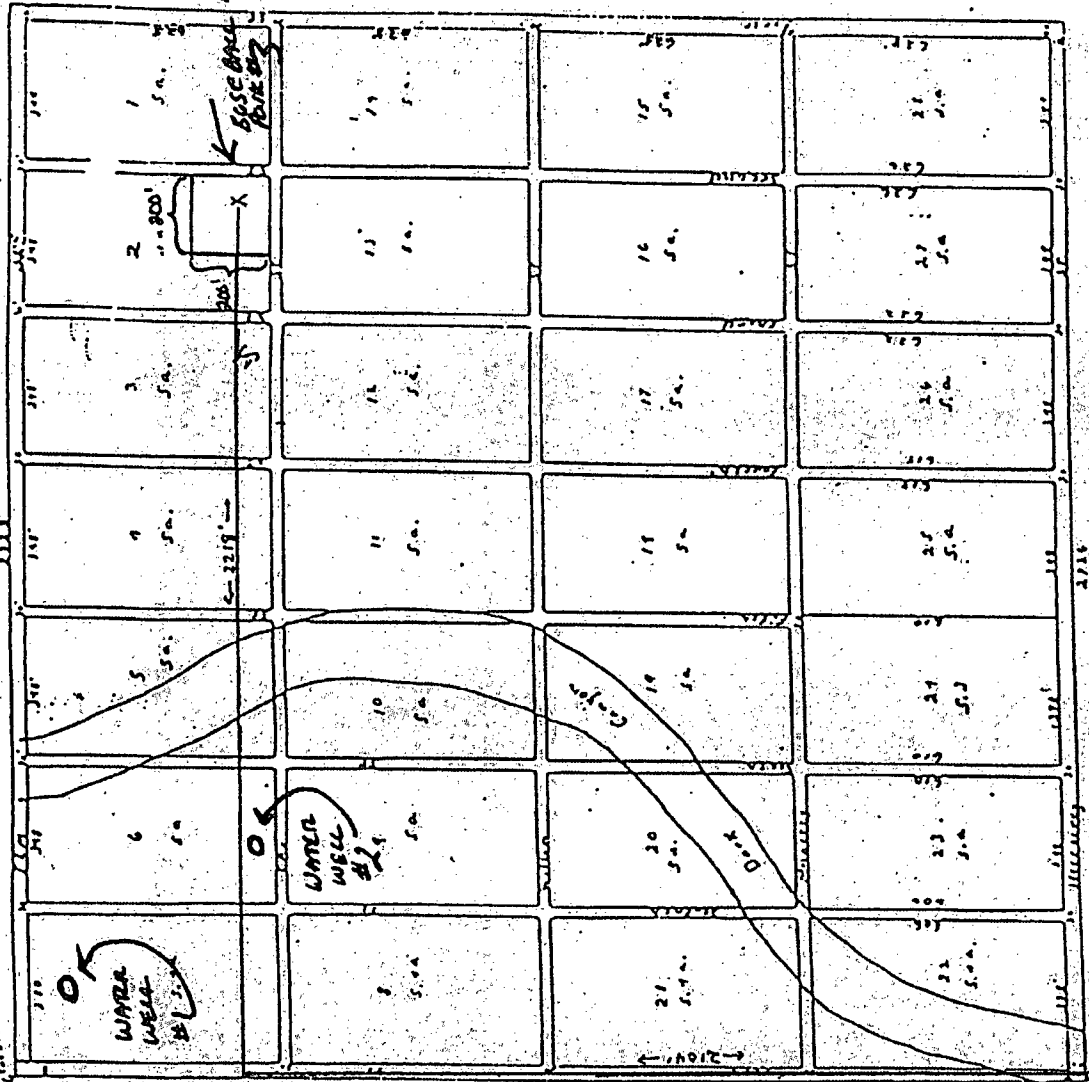
urnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, ability, or suitability for any particular purpose of the data.

WALLING HEIGHTS

A Subdivision of The

with or sec. 2472

Range 261 N.M.



FOR DISSEMINATION
PURPOSES ONLY

$$\begin{array}{r} 23 \overline{) 521} \\ \underline{46} \\ 61 \\ \underline{59} \\ 22 \\ \underline{22} \\ 0 \end{array}$$



DOWELL DIVISION OF DOW CHEMICAL U.S.A.

An Operating Unit of The Dow Chemical Company

LABORATORY LOCATION

API WATER ANALYSIS REPORT FORM

DATE

LAB. NO.

Company <u>King West A11</u>		Sample No. <u>1</u>	Date Sampled <u>5.19.87</u>
Field <u>DOMESTIC WATER WELL</u>	Legal Description	County or Parish <u>Eddy</u>	State <u>N.M.</u>
Lease or Unit <u>King West A11</u>	Well	Depth <u>62</u>	Formation
Type of Water (Produced, Supply, etc.)	Sampling Point <u>WINDMILL</u>	Water, B/D	
		Sampled by <u>GG</u>	

DISSOLVED SOLIDS

CATIONS

	mg/L	me/L
Sodium, Na (calc.)	<u>0</u>	<u>0</u>
Calcium, Ca	<u>1000</u>	<u>50</u>
Magnesium, Mg	<u>2042</u>	<u>250</u>
Barium, Ba		

ANIONS

Chloride, Cl	<u>3550</u>	<u>100</u>
Sulfate, SO ₄	<u>200</u>	<u>4</u>
Carbonate, CO ₃		
Bicarbonate, HCO ₃	<u>79</u>	<u>1.3</u>

Total Dissolved Solids (calc.)

Iron, Fe (total)

Sulfide, as H₂S

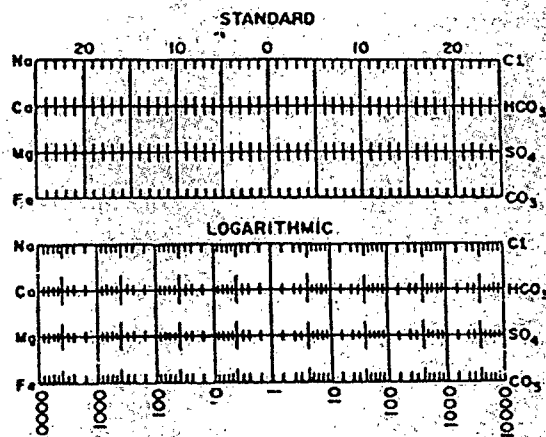
OTHER PROPERTIES

pH

Specific Gravity, 60/60 F.

Resistivity (ohm-meters) F.

WATER PATTERNS — me/L



REMARKS & RECOMMENDATIONS:

ANALYSIS BASED ON API RECOMMENDED PROCEDURE



DOWELL DIVISION OF DOW CHEMICAL U.S.A.

An Operating Unit of The Dow Chemical Company

LABORATORY LOCATION

API WATER ANALYSIS REPORT FORM

DATE

LAB NO.

Company <u>RHY. WESTALL</u>		Sample No. <u>2</u>	Date Sampled <u>5-19-87</u>
Field <u>DOMESTIC WATER WELL</u>	Legal Description	County or Parish <u>Edwards</u>	State <u>Nm</u>
Lease or Unit <u>100' DUE WEST OF BASELINE PLOT 43</u>	Well	Depth, <u>105'</u>	Formation <u>7</u>
Type of Water (Produced, Supply, etc.)	Sampling Point <u>WINDMILL</u>	Water, H/D	
		Sampled By <u>G.G.</u>	

DISSOLVED SOLIDS

CATIONS

	mg/L	me/L
Sodium, Na (calc.)	<u>0</u>	<u>0</u>
Calcium, Ca	<u>1000</u>	<u>50</u>
Magnesium, Mg	<u>1825</u>	<u>150</u>
Barium, Ba		

ANIONS

Chloride, Cl	<u>3556</u>	<u>100</u>
Sulfate, SO ₄	<u>200</u>	<u>4</u>
Carbonate, CO ₃		
Bicarbonate, HCO ₃	<u>79</u>	<u>1.3</u>

Total Dissolved Solids (calc.)

Iron, Fe (total)

Sulfide, as H₂S

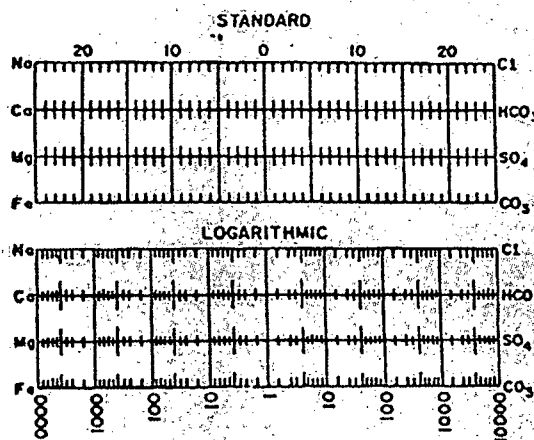
OTHER PROPERTIES

pH

Specific Gravity, 60/60 F.

Resistivity (ohm-meters) F.

WATER PATTERNS — me/L



REMARKS & RECOMMENDATIONS:

ANALYSIS BASED ON API RECOMMENDED PROCEDURE

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: OXY and Kaiser Francis. Each of the operators were provided a copy of our application by certified mail. Proof of notice is enclosed. The surface owner is Merland Inc.

PROOF OF PUBLICATION

Proof of publication is attached.

Copies of this application have been sent to:

Kaiser Francis Oil Co
P.O. box 21468
Tulsa, OK 74121-1468

OXY
P.O. box 4294
Houston, TX 77210

Surface Owner

Merland Inc.
302 N. Canal
Carlsbad, NM 88220

7008 3230 0002 1722 32176

U.S. Postal Service
CERTIFIED MAIL RECEIPT
 (Domestic Mail Only, No Insurance Coverage Provided)
 For delivery information visit our website at www.usps.com

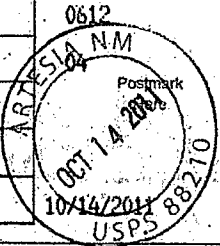
OFFICIAL USE

CARLSBAD NM 88220

Postage	\$ 1.68
Certified Fee	\$2.85
Return Receipt Fee (Endorsement Required)	\$2.30
Restricted Delivery Fee (Endorsement Required)	\$0.00
Total Postage & Fees	\$ 6.83

Sent To **MERLAND INC.**
 Street, Apt. No., or PO Box No. **302 N. CANAL**
 City, State, ZIP+4 **CARLSBAD, NM 88220**

PS Form 3800, August 2006 See Reverse for Instructions



7008 3230 0002 1722 3200

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 For delivery information visit our website at www.usps.com

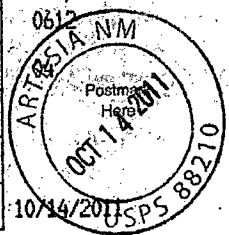
OFFICIAL USE

HOUSTON TX 77210

Postage	\$ 1.68
Certified Fee	\$2.85
Return Receipt Fee (Endorsement Required)	\$2.30
Restricted Delivery Fee (Endorsement Required)	\$0.00
Total Postage & Fees	\$ 6.83

Sent To **OXY**
 Street, Apt. No., or PO Box No. **P.O. Box 4294**
 City, State, ZIP+4 **HOUSTON, TX 77210**

PS Form 3800, August 2006 See Reverse for Instructions



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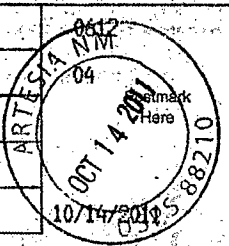
OFFICIAL USE

TULSA OK 74121

Postage	\$ 1.68
Certified Fee	\$2.85
Return Receipt Fee (Endorsement Required)	\$2.30
Restricted Delivery Fee (Endorsement Required)	\$0.00
Total Postage & Fees	\$ 6.83

Sent To **KAISER-FRANCIS OIL CO**
 Street, Apt. No., or PO Box No. **P.O. Box 21468**
 City, State, ZIP+4 **TULSA, OK 74121-1468**

PS Form 3800, August 2006 See Reverse for Instructions



NMOCD Case No. 14783

Application of Endurance Resources, LLC for approval of a salt water disposal well, Eddy County, New Mexico; Applicant seeks an order proposing to convert to water disposal its Base Ball Park No.1 well, located 1980 FSL 660 FEL, Unit I, Section 24, Township 22 South, Range 26 East, N.M.P.M., Eddy County, New Mexico. The disposal interval shall be in the Delaware Formation at a depth of 4952 feet to 4690 feet below the surface of the earth perforated. The Base Ball Park No. 1 is located approximately 2.5 miles northeast of the Carlsbad, New Mexico, Airport.

RECEIVED OCD
2011 DEC -5 P 1:24