

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: 2/26/96

\* 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.

## 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.

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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

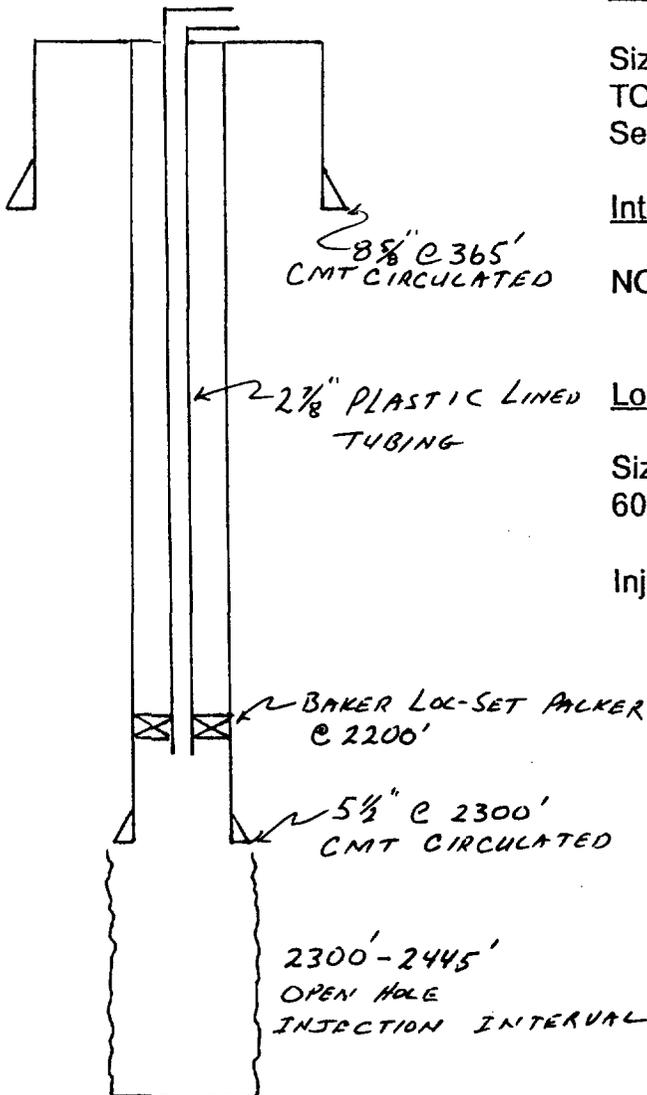
RAY WESTALL OPERATOR

FERGUSON WELL NO. 1

915' FNL & 380' FWL SECTION 30, TOWNSHIP-22-SOUTH, RANGE-28-EAST

Schematic

Tabular data



### Surface Casing

Size 8 5/8" Cemented with 250 sxs  
TOC Circulated Hole size 12 1/4"  
Set at 365'

### Intermediate Casing

NONE

### Long string (Proposed)

Size 5 1/2" Cement with Approximately  
600 SXS TOC Circulated. Total depth 2300'

Injection Interval 2300-2445 open hole

Tubing size 2 7/8" lined with plastic set in a BAKER LOC-SET packer at 2200'

### Other Data

1. Name of the injection formation: DELAWARE
2. Name of Pool: HERRADURA BEND DELAWARE
3. Original purpose of well: OIL & GAS PRODUCTION
4. Well has not been perforated in any other zone
5. There is no additional pools above or below in this area.

## **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 with schematic of plugged wells.

There are no wells within the area of review.

## ATTACHMENT VII

### PROPOSED OPERATION

1. Plans are to inject 150-200 bbls of produced water per day per well.
2. The injection system is be a closed system.
3. The proposed injection pressure is 300 psig. Maximum pressure will be 500 psig.
4. Injection fluid will be reinjected produced water.
5. A sample of produced water is attached.

**THE WESTERN COMPANY OF NORTH AMERICA**  
**WATER ANALYSIS**

ARTESIA, NM LAB	ANALYSIS #: AR010133
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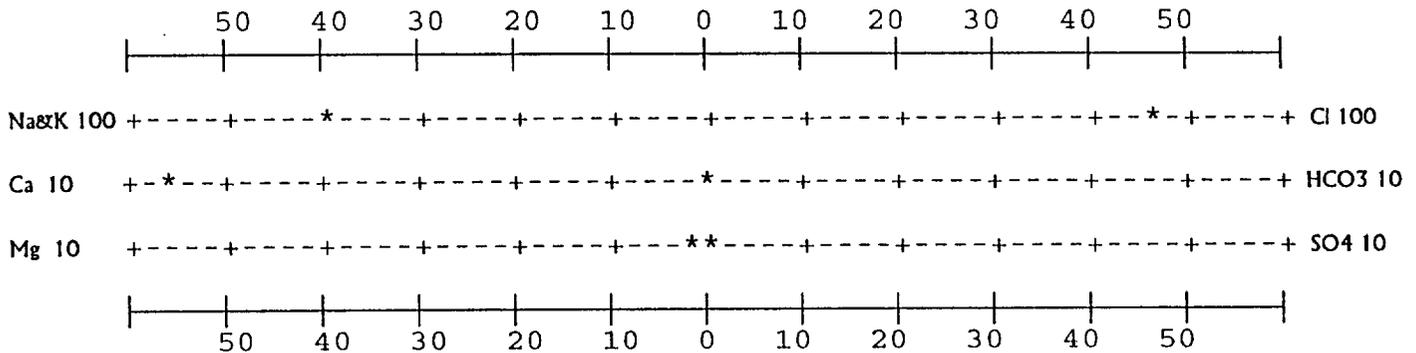
GENERAL INFORMATION	
OPERATOR: RAY WESTALL	DEPTH:
WELL: RIVER BEND #1	DATE SAMPLED: 8-2-95
FIELD:	DATE RECEIVED: 8-2-95
FORMATION:	SUBMITTED BY: RAY WESTALL
COUNTY: EDDY	WORKED BY: DAJANI
STATE: NM	PHONE #: (505) 746-3140

SAMPLE DESCRIPTION: CLEAR WITH FILM OF OIL ON TOP
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PHYSICAL AND CHEMICAL DETERMINATIONS	
SPECIFIC GRAVITY: 1.120 @ 82 °F	PH: 6.5
RESISTIVITY (CALC. ): .015 OHMS @ 75 °F	
IRON (FE++) : 38 PPM	SULFATE: 357 PPM
CALCIUM: 11071 PPM	TOTAL HARDNESS: 28571 PPM
MAGNESIUM: 217 PPM	BICARBONATE: 294 PPM
CHLORIDE: 160678 PPM	SODIUM CHLORIDE (CALC) 264315 PPM
SODIUM+POTASS: 123165 PPM	TOT. DISSOLVED SOLIDS: 313066 PPM
H2S :NONE DETECTED	KCL :450 MG/L

REMARKS:
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STIFF TYPE PLOT (IN MEQ/L)



ANALYST \_\_\_\_\_  
DAJANI

### **ATTACHMENT VIII**

The proposed injection zone is the top of the Bell Canyon sand of the Delaware Formation. This sand is composed of fine-grained quartz sand with varying amounts of shales. It is 90 feet thick, at a depth of 2345-2435'. 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 X**

Logging and test data on subject well.

NO. OF COPIES RECEIVED	
DISTRIBUTION	
SANTA FE	
FILE	
U.S.G.S.	
LAND OFFICE	
OPERATOR	

NEW MEXICO OIL CONSERVATION COMMISSION

Form No. 1  
Supersedes OIL  
C-101 and C-1  
Effective 12-1-65

Indicate the Type of Lease  
State  Fee  **XX**  
State Oil & Gas Lease No.

SUNDRY NOTICES AND REPORTS ON WELLS

(DO NOT USE THIS FORM OR PROPOSALS TO DRILL OR TO OPERATE ON WELLS BACK TO A DIFFERENT RESERVOIR, OR APPLICATION FOR PERMITS, FORM C-101 FOR SUCH PROPOSALS.)

1. <input type="checkbox"/> OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <b>Dry Hole</b>	2. Unit Agreement Name
3. Name of Operator <b>Orla Petco, Inc.</b>	4. Name of Lessee <b>Ferguson</b>
5. Address of Operator <b>P.O. Box 1383, Midland, Texas 79702</b>	6. Well No. <b>1</b>
7. Location of Well UNIT LETTER <b>D</b> <b>915</b> FEET FROM THE <b>North</b> LINE AND <b>380</b> FEET FROM THE <b>West</b> LINE, SECTION <b>30</b> TOWNSHIP <b>22S</b> RANGE <b>3E</b> COUNTY	8. Well Name <b>Undesignated (Delaware)</b>
9. Elevation (Show whether DF, RI, GR, etc.) <b>3075' Ground Level</b>	10. Locality <b>Eddy</b>

10. Check Appropriate Box To Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK   
TEMPORARILY ABANDON   
PULL OR ALTER CASING   
OTHER

PLUG AND ABANDON   
CHANGE PLANS   
OTHER

SUBSEQUENT REPORT OF:

REMEDIAL WORK   
COMPLETION DRILLING OPER.   
CASING TEST AND CEMENT JOB   
OTHER

ALTERING CASING   
PLUG AND ABANDONMENT  **XX**

17. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

7/9/80 - Spudded @ 12:00 Noon.  
7/13/80 - Ran 8 5/8" surface casing to 365' cemented w/250 sx Class C, 2% CaCl.  
8/2/80 - Plugged well with the following plugs:

Plug #1 - 100' plug from 2435' - 2345'  
#2 - 100' " " 2080' - 1980'  
#3 - 100' " " 1280' - 1180'  
#4 - 100' " " 415' - 315'  
15 sx on surface.

18. I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNED *James Earl Pritchard* TITLE Vice-President DATE August 6, 1980

APPROVED BY *Mike Stupp* TITLE Oil and Gas Conservation Director DATE JAN 8 1982

CONDITIONS OF APPROVAL, IF ANY:

NO. OF COPIES RECEIVED \_\_\_\_\_  
 DISTRIBUTION \_\_\_\_\_  
 SANTA FE FILE \_\_\_\_\_  
 U.S.G.S. \_\_\_\_\_  
 LAND OFFICE \_\_\_\_\_  
 OPERATOR \_\_\_\_\_

**RECEIVED**  
 WELL COMPLETION OR RECOMPLETION REPORT AND LOG  
 SEP 08 1980

Date: 0-195  
 Revised: 10-8

CONSERVATION COMMISSION  
 RECOMPLETION REPORT AND LOG

1. Indicate Type of Well  
 State:  Federal  State

OIL CONSERVATION DIVISION  
 SANTA FE

10. TYPE OF WELL:  OIL WELL  GAS WELL  DRY  OTHER \_\_\_\_\_  
 b. TYPE OF COMPLETION:  NEW WELL  WORK OVER  DEEPEN  PLUG BACK  DIFF. REGRV.  OTHER **Plug & Abandon**

7. Unit Acre-foot Range \_\_\_\_\_  
 8. Form of Lease Form \_\_\_\_\_

2. Name of Operator: **Orla Peeco, Inc.**

9. Well No.: **1**

3. Address of Operator: **P.O. Box 1383, Midland, Texas 79702**

10. Field and Pool, or well test: **Undesignated (Delaware)**

4. Location of Well: **915' FNL & 380' FWL of Section 30, T-22S, R-28E**

UNIT LETTER: **D** LOCATED: **915** FEET FROM THE **North** LINE AND **380'** FEET FROM \_\_\_\_\_

11. Field and Pool, or well test: **Eddy**

THE **West** LINE OF SEC. **30** TWP. **22S** RGE. **28E**

15. Date Spudded: **7/9/80** 16. Date T.D. Reached: **8/1/80** 17. Date Ready to Prod.: **8/1/80** 18. Elevations (DF, RKB, RL, GR, etc.): **3075' Ground Level** 19. Elev. Casinghead: **3076'**

20. Total Depth: **2445' (Logger)** 21. Plug back T.D.: **2445'** 22. If Multiple Compl., How Many: **-----** 23. Intervals Drilled By: **-----** Rotary Tools: **-----** Cable Tools: **XXXXXXX**

24. Producing Interval(s), of this completion -- Top, Bottom, Range: **Dry Hole** 25. Was Directional Survey Made: **NO**

26. Type Electric and Other Logs Run: **Schlumberger Formation Density Log** 27. Was Well Cased: **NO**

28. CASING RECORD (Report all strings set in well)

CASING SIZE	WEIGHT LB./FT.	DEPTH SET	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
8 5/8"	23#	365'	12 1/2"	250 sx Class C 2% CaCl	None

29. LINER RECORD

SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN

30. TUBING RECORD

SIZE	DEPTH SET	PACKER SET

31. ~~Acid treatments~~ (Interval, size and number)  
**Plugging**  
 Plug #1 - 2335' to 2435'  
 " #2 - 1980' to 2080'  
 " #3 - 1180' to 1280'  
 " #4 - 315 to 415'  
 15 sx on surface

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL	AMOUNT AND KIND MATERIAL USED

33. PRODUCTION

Date First Production: \_\_\_\_\_ Production Method (Flowing, gas lift, pumping -- size and type pump): \_\_\_\_\_ Well Status (Prod. or Shut-in): \_\_\_\_\_

Date of Test	Hours Tested	Choke Size	Prod'n. Fr. Test Perfor.	Oil -- PBL	Gas -- MCF	Water -- PBL	Gas -- Oil Ratio

Flow Tubing Press.	Casing Pressure	Calculated I.A. Hour Rate	Oil -- PBL	Gas -- MCF	Water -- PBL	Oil Gravity -- API (Corr.)

34. Disposition of Gas: (Sold, used for fuel, vented, etc.): **NONE** Test Witnessed by: \_\_\_\_\_

35. List of Attachments: **One copy of Electric Log attached**

36. I hereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief.

SIGNED: Juan B. C. [Signature] TITLE: **Vice President** DATE: **August 26, 1980**

## **ATTACHMENT XI**

There is no fresh water wells being used for domestic purposes. There are several irrigation wells to supplement the C.I.D. water when needed. At the present time there are no wells that are operational 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 Amoco and National Energy Group (VP Oil). Each of these operators were provided a copy of our application by certified mail. Proof of notice is enclosed. The surface owner is Jay & Gemma Ferguson.

### PROOF OF PUBLICATION

Proof of publication will be from the Artesia Daily Press and will be forwarded.



Copies of this application has been sent to:

Amoco Oil Inc. Certified Mail # P 333 336 240  
21 Desta Dr.  
Midland, Tx. 79701

National Energy Group (VP Oil) Certified Mail # P 333 336 239  
1400 One Energy Sq.  
4925 Greenville Ave.  
Dallas, Tx. 75206

Oil Conservation Division  
811 South First Street  
Artesia, NM. 88210

Oil Conservation Division  
P.O. Box 2088  
Santa Fe, NM 87505-2088

SURFACE OWNER:  
Jay & Gemma Wells Certified Mail # P 333 336 241  
4406 Ferguson Rd.  
Carlsbad, NM. 88220

P 333 336 241

US Postal Service

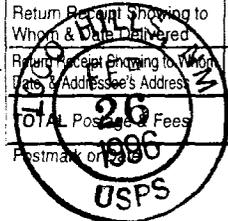
### Receipt for Certified Mail

No Insurance Coverage Provided.

Do not use for International Mail (See reverse)

Sent to <i>JAY WELLS</i>	
Street & Number <i>4406 Ferguson Rd.</i>	
Post Office, State, & ZIP Code <i>CARLSBAD, NM 88220</i>	
Postage	\$ <i>1.01</i>
Certified Fee	<i>1.10</i>
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	<i>1.10</i>
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	\$ <i>3.21</i>
Postmark or Date	<i>FEB 26 1996</i>

PS Form 3800, April 1995



P 333 336 239

US Postal Service

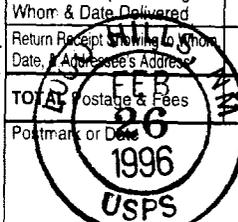
### Receipt for Certified Mail

No Insurance Coverage Provided.

Do not use for International Mail (See reverse)

Sent to <i>NATIONAL ENERGY GROUP</i>	
Street & Number <i>4925 GREEVILLE AVE</i>	
Post Office, State, & ZIP Code <i>DALLAS, TX 75206</i>	
Postage	\$ <i>1.01</i>
Certified Fee	<i>1.10</i>
Special Delivery Fee	
Restricted Delivery Fee	<i>1.10</i>
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	\$ <i>3.21</i>
Postmark or Date	<i>FEB 26 1996</i>

PS Form 3800, April 1995



P 333 336 240

US Postal Service

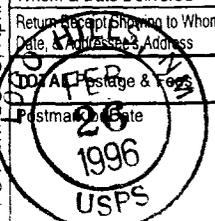
### Receipt for Certified Mail

No Insurance Coverage Provided.

Do not use for International Mail (See reverse)

Sent to <i>AMOCO OIL INC</i>	
Street & Number <i>21 DESTA Dr.</i>	
Post Office, State, & ZIP Code <i>MIDLAND, TX 79701</i>	
Postage	\$ <i>1.01</i>
Certified Fee	<i>1.10</i>
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	<i>1.10</i>
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	\$ <i>3.21</i>
Postmark or Date	<i>FEB 26 1996</i>

PS Form 3800, April 1995



# Affidavit of Publication

No. 15371

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

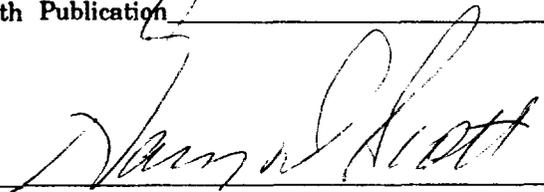
the same day as follows:

First Publication February 22, 1996

Second Publication \_\_\_\_\_

Third Publication \_\_\_\_\_

Fourth Publication \_\_\_\_\_



Subscribed and sworn to before me this 22nd day

of February 19 96

Barbara Ann Beans

Notary Public, Eddy County, New Mexico

My Commission expires September 23, 1999

# Copy of Publication

## LEGAL NOTICE

Ray Westall-Operator, P.O. Box 4, Loco Hills, New Mexico 88255. Phone (505)677-2370. Contact party for Ray Westall-Operator, Randall L. Harris, is seeking administrative approval from the New Mexico Oil Conservation Division to utilize a well located, 915' FNL & 380' FWL, Section 30, Township 22 South, Range 28 East, Eddy County, New Mexico for salt water disposal.

Proposed injection is in the Delaware Formation through open hole 2306-2445'.

Expected maximum injection rate of 200 BBLs per day, at 300 PSL.

Interested parties must file objections or requests for hearing with the Oil Conservation Division, P.O. Box 20888, Santa Fe, New Mexico 87501, within 15 days of this notice.

Published in the Artesia Daily Press, Artesia, N.M. February 22, 1996.

Legal 15371

P 333 336 240

US Postal Service  
**Receipt for Certified Mail**

No Insurance Coverage Provided.  
Do not use for International Mail (See reverse)

Sent to	AMOCO OIL INC
Street & Number	21 DESTA Dr.
Post Office, State, & ZIP Code	Milano, TX 79701
Postage	\$ 1.01
Certified Fee	1.10
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	1.10
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	\$ 3.21
Postmark or Date	FEB 26 1996 USPS

PS Form 3800, April 1995

P 333 336 241

US Postal Service  
**Receipt for Certified Mail**

No Insurance Coverage Provided.  
Do not use for International Mail (See reverse)

Sent to	JAY WELLS
Street & Number	4406 Ferguson Rd.
Post Office, State, & ZIP Code	CARLETON, NM 88220
Postage	\$ 1.01
Certified Fee	1.10
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	1.10
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	\$ 3.21
Postmark or Date	FEB 26 1996 USPS

PS Form 3800, April 1995

P 333 336 239

US Postal Service  
**Receipt for Certified Mail**

No Insurance Coverage Provided.  
Do not use for International Mail (See reverse)

Sent to	NATIONAL ENERGY GROUP
Street & Number	4925 GREENVILLE AVE
Post Office, State, & ZIP Code	DALLAS, TX 75206
Postage	\$ 1.01
Certified Fee	1.10
Special Delivery Fee	
Restricted Delivery Fee	1.10
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	\$ 3.21
Postmark or Date	FEB 26 1996 USPS

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