

APPLICATION FOR JUL - 6 1998 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 NEW MEXICO 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: 7/2/98

* 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.

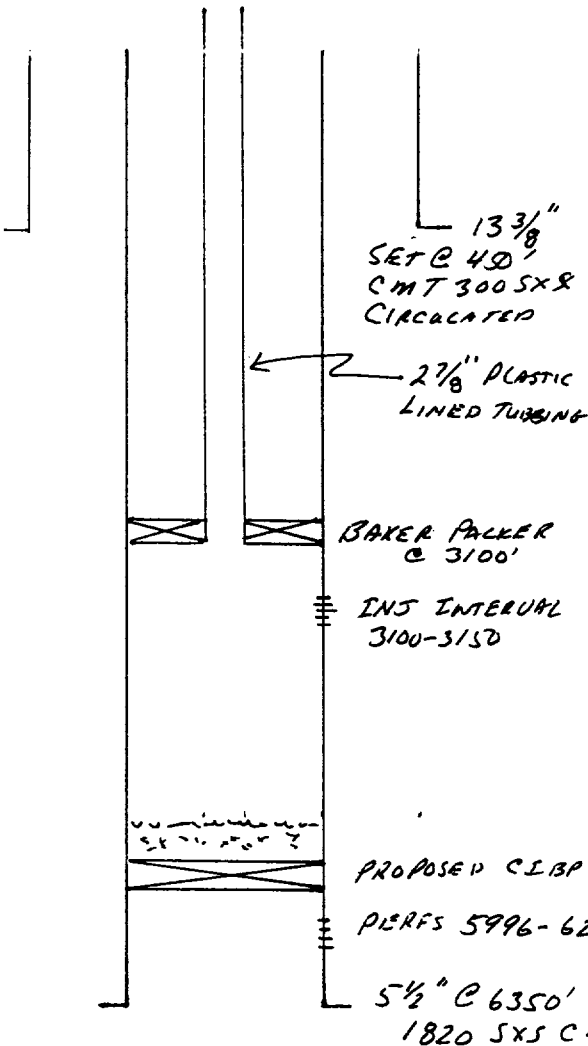
NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.

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 SANTA FE FEDERAL NO. 8
760' FNL & 460' FEL SECTION 35, TOWNSHIP 22 SOUTH, RANGE 28

SCHEMATIC



TABULAR DATA

Surface Casing

Size 13 3/8" Cemented with 300 sxs
TOC Circulated Hole size 12 1/4"
Set at 450'

Long String

Size 5 1/2" Cemented with 1820 sxs
TOC Circulated
Total Depth 6350'

Injection Interval 3100-3150' Perforated

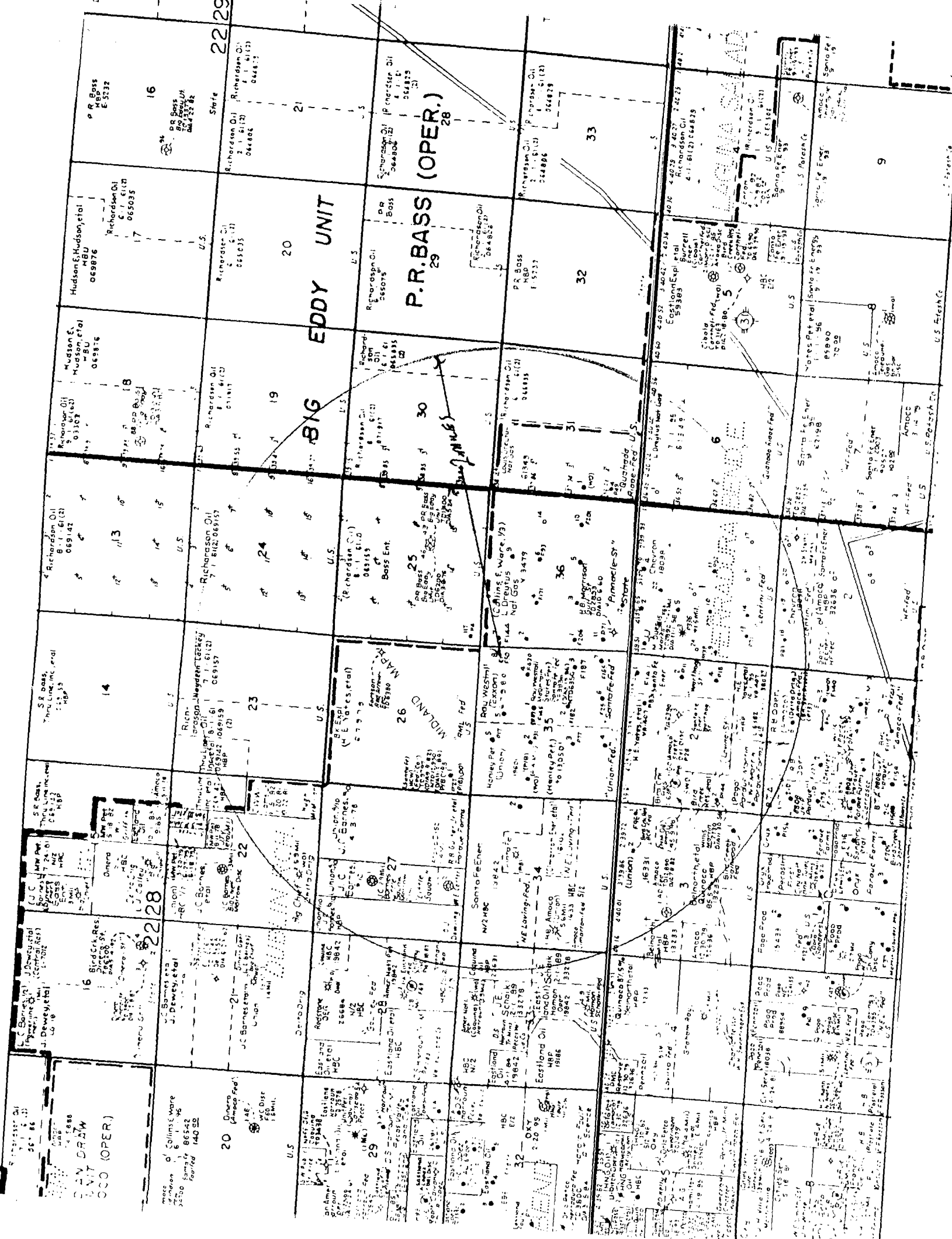
Tubing size 2 7/8" lined with plastic set in a BAKER LOC-SET packer at 3000'.

Other Data

1. Name of the injection formation: DELAWARE
2. Name of Pool: HERRADURA BEND EAST DELAWARE
3. Original purpose of well: OIL & GAS PRODUCTION
4. Well is currently perforated 5996-6250'. Propose to set CIBP @ 5959' and cap with 50' cement.
5. There is no overlying or underling oil or gas pool on this lease.

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.
There are no plugged wells within the area of review.

Well name	Location	Spud date	Sur. Casing	Int. Casing	Prod. Casing	Completion
Louis Dreyfus Big Eddy #117	SWSW Sec 25 T22S-R28E	01/04/93	11 3/4" @ 450 370 sxs Circ.	8 5/8" @ 2760 975 sxs Circ.	5 1/2" @ 6480 760sxs T/2450	2950-2972 Herradura Bend E. S.W.D.
Hanley Pet Union Federal #2	SESW Sec 35 T22S-R28E	04/05/93	8 5/8" @ 457 320 sxs Circ.		4 1/2" @ 8493 2245 sxs Circ	6118-6150 Herradura Bend E. OIL
Hanley Pet Union Federal #5	NENW Sec 35 T22S-R28E	05/31/93	8 5/8" @ 461 320 sxs Circ.		4 1/2" @ 6569' 1385 sxs Circ	6122-6156 Herradura Bend E. Oil
Ray Westall Santa Fe Federal #1	SWNE Sec 35 T22S-R28E	03/11/86	8 5/8" @ 432 260 sxs Circ.		5 1/2" @ 6349 1815 sxs Circ	3634-6203 Herradura Bend E. Oil
Ray Westall Santa Fe Federal #3	NESE Sec 35 T22S-R28E	06/14/92	8 5/8" @ 450 300 sxs Circ.		5 1/2" @ 6360 2010 sxs Circ	4382-6206 Herradura Bend E. Oil
Ray Westall Santa Fe Federal #4	SENE Sec 35 T22S-R28E	07/09/92	8 5/8" @ 450 300 sxs Circ.		5 1/2" @ 6370 1740 sxs Circ	5840-6233 Herradura Bend E. Oil
Ray Westall Santa Fe Federal #5	NWNE Sec 35 T22S-R28E	08/11/92	8 5/8" @ 450 300 sxs Circ.		5 1/2" @ 6370 1870 sxs Circ	3660-6218 Herradura Bend E. Oil

Louis Dreyfus Pinnacle State #1	NWSW Sec 36 T22S-R28E	07/24/92	8 5/8" @ 552 320 sxs Circ.	5 1/2" @ 6450 1375 sxs Circ	6013-6226 Herradura Bend E. Oil
Louis Dreyfus Pinnacle State #2	SWNW Sec 36 T22S-R28E	08/09/92	8 5/8" @ 565 320 sxs Circ.	5 1/2" @ 6397 1425 sxs Circ	6184-6210 Herradura Bend E. Oil
Louis Dreyfus Pinnacle State #4	SENW Sec 36 T22S-R28E	09/03/92	8 5/8" @ 553 600 sxs Circ.	5 1/2" @ 6390 1475 sxs Circ	6000-6016 Herradura Bend E. Oil
Louis Dreyfus Pinnacle State #7	NWNW Sec 36 T22S-R28E	09/30/92	8 5/8" @ 549 450 sxs Circ.	5 1/2" @ 6440 1275 sxs Circ	6000-6258 Herradura Bend E. Oil
Louis Dreyfus Pinnacle State #8	NENW Sec 36 T22S-R28E	10/13/92	8 5/8" @ 527 425 sxs Circ.	5 1/2" @ 6430 1275 sxs Circ	6020-6066 Herradura Bend E.

ATTACHMENT VII

PROPOSED OPERATION

1. Plans are to inject 500-700 bbls of produced water per day per well.
2. The injection system is be a closed system.
3. The estimated injection pressure is 200 psig. Maximum pressure will be 500# psig.
4. Injection fluid will be reinjected produced water from the Santa Fe Federal Nos. 1, 2, 3, 4, 5, 6, and 7.
5. A sample of produced water is attached.

ATTACHMENT VIII

The proposed injection zones are sands of the Delaware Formation. These sands are composed of fine-grained quartz sand with varying amounts of shales. They have varying thickness from 8-130 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

Propose to set a cast iron bridge plug at 5950' and cap with 50' cement. Perforate the proposed injection interval of 3100-3150' with 1 jspf acidize with 2000 gal 7 1/2% HCL.

ATTACHMENT XI

There is no 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 Hanley Petroleum, Louis Dreyfus Natural Gas and BK Exploration. Each of these operators were provided a copy of our application by certified mail. Proof of notice is enclosed. The surface owner is the of United States of America, BLM.

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:

Hanley Petroleum Inc. 415 W. Wall suite 1500 Midland, Tx. 79701-4473	Certified Mail # P 333 336 172
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Louis Dreyfus Natural Gas 1400 Quail Springs Parkway Suite 600 Oklahoma City, Ok 73134-2600	Certified Mail # P 333 336 173
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BK Exploration Corporation 810 South Cincinnati, Suite 208 Tulsa, Ok 74119	Certified Mail # P 333 336 174
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Oil Conservation Division
811 South 1st St.
Artesia, NM 88210

Oil Conservation Division
2040 So. Pacheco St.
Santa Fe, NM 87505-5472

SURFACE OWNER

BLM
620 E. Greene St.
Carlsbad, NM 88220-6292

P 333 336 173

US Postal Service

Receipt for Certified Mail

No Insurance Coverage Provided.

Do not use for International Mail (See reverse)

Sent to	LOUIS DREYFUS NATURAL GAS
Street & Number	1400 QUAIL SPRINGS PARKWAY
Post Office, State, & ZIP Code	OKLAHOMA CITY, OK 73134-2800
Postage	\$ 78
Certified Fee	1.35
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Address of Addressee	
TOTAL Postage & Fees	\$ 2.13
Postmark or Date	APR 11 1995

PS Form 3800 April 1995

P 333 336 174

US Postal Service

Receipt for Certified Mail

No Insurance Coverage Provided.

Do not use for International Mail (See reverse)

Sent to	BK EXPLORATION
Street & Number	810 S. CINCINNATI ST 208
Post Office, State, & ZIP Code	TULSA, OK 74119
Postage	\$.78
Certified Fee	1.35
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Address of Addressee	
TOTAL Postage & Fees	\$ 2.13
Postmark or Date	APR 11 1995

PS Form 3800 April 1995

P 333 336 172

US Postal Service

Receipt for Certified Mail

No Insurance Coverage Provided.

Do not use for International Mail (See reverse)

Sent to	HANLEY PETROLEUM
Street & Number	45 W. WALL ST 1500
Post Office, State, & ZIP Code	MIDLAND, TX 79701-4473
Postage	\$.78
Certified Fee	1.35
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Address of Addressee	
TOTAL Postage & Fees	\$ 2.13
Postmark or Date	APR 11 1995

PS Form 3800 April 1995

Affidavit of Publication

NO. 16255

Copy of Publication:

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 county and state, and that the here to 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 consecutive weeks/days on the same
day as follows:

First Publication May 28 1998

Second Publication _____

Third Publication _____

Fourth Publication _____

Subscribed and sworn to before me this

28th day of May 1998

Danara Ann Boers
Notary Public, Eddy County, New Mexico

My Commission expires September 23, 1999

LEGAL NOTICE

Ray Westall-Operator, P.O. Box 4,
Leco 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
760' FNL & 460' FEL, Section
35, Township 22 South, Range 28
East, Eddy County, New Mexico
known as the Santa Fe Federal #8
for water disposal. Proposed
injection is in the Delaware
Formation, vertical perforations
3104-3150'. Expected maximum
injection rate of 500 BBls per day,
at 400 PSI.
Interested parties must file objec-
tions or requests for hearing with
the Oil Conservation Division,
P.O. Box 2068, Santa Fe, New
Mexico 87501, within 15 days of
this notice.
Published in the Artesia Daily
Press, Artesia, N.M. May 28,
1998.

Legal 16255

CHECKLIST for ADMINISTRATIVE INJECTION APPLICATIONS

Operator: RAY WESTALL Well: SANTA FE FLD # 8
Contact: RANDY HARRIS Title: GEOLOGIST Phone: 505-677-2370
DATE IN 7-6-98 RELEASE DATE 7-21-98 DATE OUT 9-2-98

Proposed Injection Application is for: ☐ WATERFLOOD ☐ Expansion ☐ Initial

Original Order: R- ☐ Secondary Recovery ☐ Pressure Maintenance

SENSITIVE AREAS

☒ SALT WATER DISPOSAL ☐ Commercial Well

☐ WIPP ☐ Capitan Reef

Data is complete for proposed well(s)? YES Additional Data Req'd _____

AREA of REVIEW WELLS

12 Total # of AOR

0 # of Plugged Wells

YES Tabulation Complete

YES Schematics of P & A's

YES Cement Tops Adequate

☐ AOR Repair Required

INJECTION FORMATION

Injection Formation(s) DELAWARE

Compatible Analysis YES

Source of Water or Injectate ARLS PROD.

PROOF of NOTICE

YES Copy of Legal Notice

YES Information Printed Correctly

YES Correct Operators

YES Copies of Certified Mail Receipts

NO Objection Received

☐ Set to Hearing _____ Date

NOTES:

APPLICATION QUALIFIES FOR ADMINISTRATIVE APPROVAL? YES

COMMUNICATION WITH CONTACT PERSON:

1st Contact: ☒ Telephoned

☐ Letter 9-2-98 Date

Nature of Discussion VERBAL APP.

2nd Contact: ☐ Telephoned

☐ Letter _____ Date

Nature of Discussion _____

3rd Contact: ☐ Telephoned

☐ Letter _____ Date

Nature of Discussion _____