

30.015.10394

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL
RESOURCES DEPARTMENT

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

RECEIVED

FORM C-108
Revised June 10, 2003

DEC 28 2004

APPLICATION FOR AUTHORIZATION TO INJECT WATER

- I. PURPOSE: Secondary Recovery Pressure Maintenance ☒ Disposal Storage
Application qualifies for administrative approval? ☒ Yes No
- II. OPERATOR: Lynx Petroleum Consultants, Inc.
ADDRESS: P.O. Box 1708, Hobbs, NM 88241
CONTACT PARTY: Larry R. Scott PHONE: (505) 392-6950
- 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: Larry R. Scott TITLE: President
SIGNATURE: Larry R. Scott DATE: 12/03/04
E-MAIL ADDRESS: lrscott@leaco.net
- * 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: _____

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate District Office

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 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.

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: Lynx Petroleum Consultants, Inc.WELL NAME & NUMBER: Jones Federal "B" No. 3WELL LOCATION: 660' FSL & 660' FEL P 23 19S 31E
FOOTAGE LOCATION UNIT LETTER SECTION TOWNSHIP RANGEWELLBORE SCHEMATIC

SEE ATTACHED

WELL CONSTRUCTION DATASurface CasingHole Size: 17 1/2" Casing Size: 13 3/8"Cemented with: 650 sx. or ft³Top of Cement: Surface Method Determined: VisualIntermediate CasingHole Size: 11" Casing Size: 8 5/8"Cemented with: 1600 sx. or ft³Top of Cement: 350' Method Determined: TSProduction CasingHole Size: 7 7/8" Casing Size: 4 1/2"Cemented with: 220 sx. or ft³Top of Cement: 10,025' Method Determined: TSTotal Depth: 11,560'Injection Interval2370 feet to 2720 (Perforated or Open Hole; indicate which)

INJECTION WELL DATA SHEETTubing Size: 2 3/8" Lining Material: PlasticType of Packer: Nickel-plated Arrow (or equivalent) tensionPacker Setting Depth: 2300'

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? Lusk Strawn Oil

2. Name of the Injection Formation: Yates-Seven Rivers

3. Name of Field or Pool (if applicable): Lusk

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. _____

See attached schematic

5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area: Yates 2375' Delaware Sands 5400'

Bone Springs 7090'Strawn 11,300'Morrow 11,900'

LYNX PETROLEUM CONSULTANTS, INC.
APPLICATION FOR AUTHORIZATION TO INJECT
Jones Federal 'B' No. 3
Supporting Documentation

III. Well Data: Schematic Attached

VI. Wells in Area of Review

1. Well Name: Jones Federal 'E' No. 1
Type: Oil (Plugged and Abandoned)
Casing & Cement: 13-3/8" @ 653' cemented w/650 sxs. Circulated
8-5/8" @ 3925' cemented w/400 sxs. TOC @ 2160' by
Temp Svy.
4-1/2" @ 11,600' cemented w/380 sxs. Estimated TOC @
9400'
Date Drilled: November 14, 1964
Location: 1980' FNL & 660' FEL Section 23, T-19S, R-31E, Eddy Cty, NM
Total Depth: 11,600'
Perforations: 11,530-540'
Schematic: Attached
2. Well Name: Jones Federal 3-23
Type: Dry hole (Plugged and Abandoned)
Casing & Cement: 8-5/8" @ 745' cemented w/50 sxs. Estimated TOC @
578'
Date Drilled: July 30, 1963
Location: 1980' FSL & 660' FEL Section 23, T-19S, R-31E, Eddy Cty, NM
Perforations: None
Schematic: Attached
3. Well Name: Jones Federal No. 3
Type: Oil (Plugged and Abandoned)
Casing & Cement: 13-3/8" @ 701' cemented w/650 sxs. Circulated
8-5/8" @ 3991' cemented w/500 sxs. TOC @ 2145' by
Temp Svy.
4-1/2" @ 11,570' cemented w/550 sxs. TOC @ 9320' by
Temp Svy.
Date Drilled: June 18, 1965
Location: 660' FNL & 660' FEL Section 26, T-19S, R-31E, Eddy Cty, NM
Perforations: 11,440-450'
Schematic: Attached

VII. Proposed Operation

1. Average Daily Rate: 500 Barrels
Maximum Daily Rate: 1000 Barrels
Average Daily Volume: 500 Barrels
Maximum Daily Volume: 1000 Barrels
2. System will be closed

3. Average Injection Pressure: 500 psig
Maximum Injection Pressure: 800 psig
 4. Sources of injected water will be leases in the immediate vicinity including:
 - A. Jones 'D' Federal No. 1 (E-24-19S-31E) Bone Springs
 - B. Radar 24 Federal No. 1 (C-24-19S-31E) Delaware/Bone Springs
 - C. Hawkeye Federal 7 Nos. 1&2 (P-7-19S-32E) Bone SpringsA water sample from the Hawkeye Federal 7 No. 1 is attached.
 5. Proposed disposal zone is productive of oil and gas within one mile (Lusk Yates-Seven Rivers pool).
- VIII.** The proposed injection zone is the Yates-Seven Rivers formation which consists of interbedded layers of sandstone and dolomite. Injection will be through perforations (scattered) from 2370' to 2720'. An upper portion of the interval (2370'-2412') was perforated, fracture stimulated, and tested non-commercial for oil production at 1 BO plus 105 BWPD.
- IX.** Stimulation will consist of 2000 gallons of 15%-HCL-NE-FE acid.
- X.** Logs are previously on file.
- XI.** The only fresh water well listed in the State Engineer's database for Sections 23, 24, 25, and 26 is located in the NE/4 NE/4 of Section 25, T-19S, R-31E. No water sample is available. The well depth is 250'.
- XII.** I have examined the 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.
- XIV.** Application has been mailed via certified mail to the Bureau of Land Management (surface owner) and a copy of the return receipt is attached. Lynx Petroleum Consultants, Inc. is the only leasehold operator within one-half mile of the well location so notification to offset operators is not required. Proof of publication in the Carlsbad CURRENT-ARGUS is attached.

Elevation: 3531' DF

17-1/2" Hole

602' - 13 3/8", H-40, 48# Casing
Cemented w/650 sxs. Circulated to Surf.

11" Hole

Perfs: 2370'-2720' Overall
2-3/8" Plastic lined tubing w/packer set @ 2300'

3949' - 8 5/8", J-55, 32# Casing.
Cemented w/1600 sxs. TOC @ 350'
by Temp Survey

Cement Plug: 100 sxs. 3906'-4000' (Tagged)

7-7/8" Hole

Cement Plug: 45 sxs. 6885'-7050' (Tagged)
4-1/2" Casing Cut & Pulled from 7000'

TOC @ 10025' by Temp Survey

C.I.B.P. @ 10550' w/35' Cement on Top

C.I.B.P. @ 11400' w/50' Cement on Top

Perfs 11421-29', 11438-42', 11446-56', 11465-67'

PBTD @ 11492'

11560' - 4 1/2", J-55 & N-80,
11.6# Casing
Cemented w/220 sxs

T.D. @ 11560'

Dadco, Inc.

Jones Federal B No. 3

660' FSL & 660' FEL

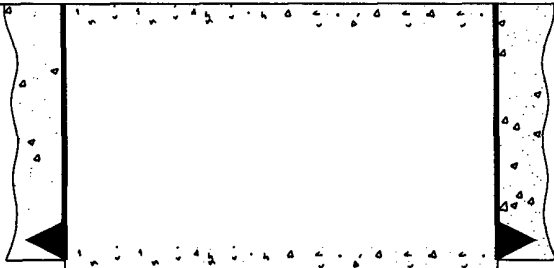
Sec. 23, T-19S, R-31E

ATTACHMENT III Eddy County, N.M.

20.01 Ac 12
 (wo)
 20.17 Ac 3
 (Trebol)
 Marbob
 HBW
 038690
 20.22 Ac 3
 16
 "Lusk Dp."
 O.F. Feat.
 (Trebol)
 0164
 Corner Mar
 Lusk
 Webb
 Oil
 El Paso
 Prod.
 055683
 Gull
 782640
 Marbob
 0149956
 25.1 Ac
 Marbob
 Lusk
 Unit 6
 015863
 Pure E.
 Bellwe-
 her
 0107698
 Ohio HBW
 21.00 Ac
 Yates & Co.
 Geckard
 21.52 Ac
 Yates & Co.
 Land.
 et al
 068882
 21.00 Ac
 Yates Pet
 068882
 PINE ASH
 Flood Fed.
 21.1 Ac
 (I. B.) (And
 (Polo)

ATTACHMENT V

Elevation: 3545' DF



653' - 13 3/8", H-40, 54.5# Casing
Cemented w/650 sxs. Circulated to Surf.

Cement Plugs: 10 sxs. @ surface
603'-703'
1028'-1128'
3835'-3935'

8-5/8" Casing cut & pulled from 1078'



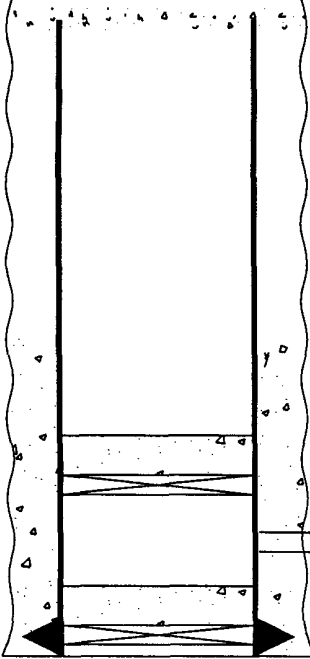
3925' - 8 5/8", J-55, 24# Casing.
Cemented w/400 sxs.
TOC @ 2160' by Temp Svy.

Cement Plug: 5290'-5390'



Cement Plug: 6970'-7070'
Cement Plug: 7254'-7354'
4-1/2" cut & pulled from 7304'

Estimated TOC @ 9400'



C.I.B.P. @ 11240' w/35' Cement on Top

Perfs 11530'-11540'

PBTD @ 11563'

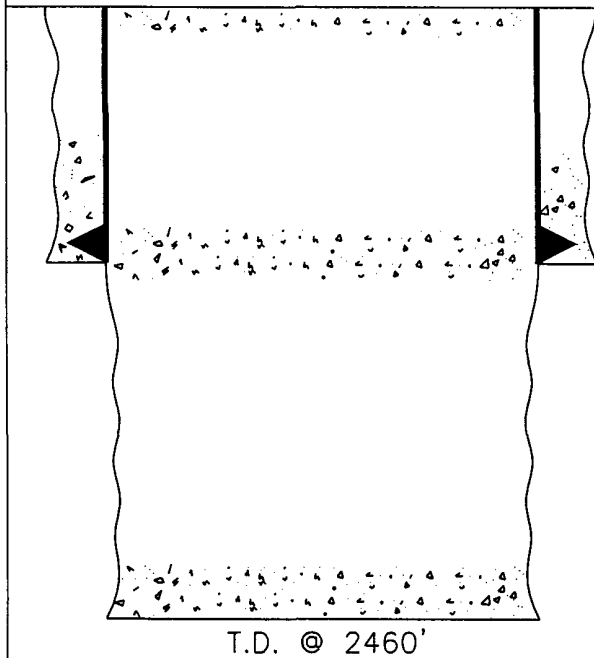
11600' - 4 1/2", J-55 & N-80
11.6#/ft.

Cemented w/380 sxs

T.D. @ 11600'

ATTACHMENT VI.1

Tenneco Oil Co.
Jones Federal 'E' No 1
1980' FNL & 660' FEL
Sec. 23, T-19S, R-31E
Eddy County, N.M.



Elevation: 3546' DF

Cement plug via tubing: Surface-20'

Cement plug via tubing: 700'-800'

745' - 8-5/8" Casing

Cemented w/50 sxs. Est. TOC @ 578'

Cement plug via tubing: 2358'-2460'

T.D. @ 2460'

ATTACHMENT VI.2

Delhi-Taylor Oil Corp.
Jones Federal 3-23
1980' FSL & 660' FEL
Sec. 23, T-19S, R-31E
Eddy County, N.M.

Elevation: 3513' DF

80 sxs. Cement Plugs: 579'-676' (Tagged)

8-5/8" Casing cut & pulled from 688'

701' - 13 3/8", H-40, 48# Casing
Cemented w/650 sxs. Circulated to Surf.

250 sxs. Cement Plugs: 1029'-???? (Tagged)

3991' - 8 5/8", J-55, 32# Casing.

Cemented w/500 sxs. TOC @ 2145'
by Temp Svy.

100 sxs. Cement Plug: 3780'-4099' (Tagged)

4-1/2" Casing cut @ 4057'

40 sxs. Cement Plug: 6668'-7273' (Tagged)

Tubing cut @ 7000'

TOC @ 9320' by Temp Svy.

50 sxs. cement pumped down tbg.
Estimated TOC @ 10700'

Perfs 11440'-11450'

PBTD @ 11519'

11568' - 4 1/2", J-55 & N-80,
11.6# Casing
Cemented w/550 sxs

T.D. @ 11570'

ATTACHMENT VI.3

Fing Oil & Chemical Co.
Jones Fed. No. 3
660' FNL & 660' FEL
Sec. 26, T-19S, R-31E
Eddy County, N.M.

**CAPITAN CHEMICAL
WATER ANALYSIS REPORT**

Company :	LYNX PETROLEUM	Date Sampled : 7/18/01
Lease Name :	HAWKEYE 7	Capitan Rep. :
Well Number :	#1	Company Rep. :
Location :		

ANALYSIS

- | | | |
|---|--------|------------------------------------|
| 1. pH | 6.83 | |
| 2. Specific Gravity @ 60/60 F. | 1.131 | |
| 3. CaCO ₃ Saturation Index @ 80 F. | +0.528 | 'Calcium Carbonate Scale Possible' |
| @ 140 F. | +1.508 | 'Calcium Carbonate Scale Possible' |

Dissolved Gases

- | | | |
|---------------------|----------------|-----|
| 4. Hydrogen Sulfide | 0 | PPM |
| 5. Carbon Dioxide | 111 | PPM |
| 6. Dissolved Oxygen | Not Determined | |

Cations

- | | mg/L | / | Eq. Wt. | = | MEQ/L |
|----------------------------|----------------|---|---------|---|----------|
| 7. Calcium (Ca++) | 4,500 | / | 20.1 | = | 223.88 |
| 8. Magnesium (Mg++) | 972 | / | 12.2 | = | 79.67 |
| 9. Sodium (Na+) Calculated | 67,171 | / | 23.0 | = | 2,920.49 |
| 10. Barium (Ba++) | Not Determined | / | 68.7 | = | 0.00 |

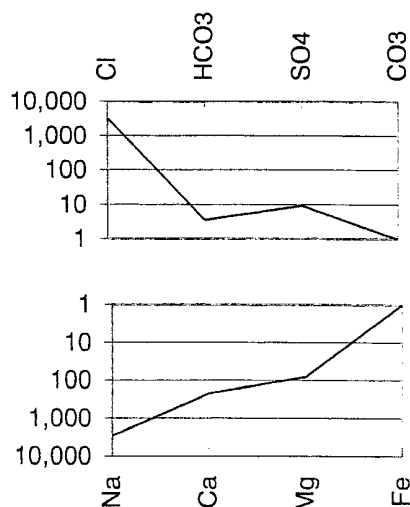
Anions

- | | | | | | |
|--------------------------------------|---------|---|------|---|----------|
| 11. Hydroxyl (OH-) | 0 | / | 17.0 | = | 0.00 |
| 12. Carbonate (CO ₃ =) | 0 | / | 30.0 | = | 0.00 |
| 13. Bicarbonate (HCO ₃ -) | 215 | / | 61.1 | = | 3.51 |
| 14. Sulfate (SO ₄ =) | 452 | / | 48.8 | = | 9.26 |
| 15. Chloride (Cl-) | 114,000 | / | 35.5 | = | 3,211.27 |

Other

- | | | | | | |
|---|---------|------------|------|-------------|------|
| 16. Soluble Iron (Fe) | 0 | / | 18.2 | = | 0.00 |
| 17. Total Dissolved Solids | 187,310 | | | | |
| 18. Total Hardness As CaCO ₃ | 15,250 | | | | |
| 19. Calcium Sulfate Solubility @ 90 F. | 3,177 | | | | |
| 20. Resistivity (Measured) | 0.060 | Ohm/Meters | @ 89 | Degrees (F) | |

Logarithmic Water Pattern



PROBABLE MINERAL COMPOSITION

COMPOUND	Eq. Wt.	X	MEQ/L	=	mg/L
Ca(HCO ₃) ₂	81.04	X	3.51	=	285
CaSO ₄	68.07	X	9.26	=	630
CaCl ₂	55.50	X	211.10	=	11,716
Mg(HCO ₃) ₂	73.17	X	0.00	=	0
MgSO ₄	60.19	X	0.00	=	0
MgCl ₂	47.62	X	79.67	=	3,794
NaHCO ₃	84.00	X	0.00	=	0
NaSO ₄	71.03	X	0.00	=	0
NaCl	58.46	X	2,920.49	=	170,732

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

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

2. Article Number
(Transfer from service label)

7003 1010 0002 2612 1503

PS Form 3811, August 2001

Domestic Return Receipt

102595-02-M-154

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X Ma Able

- ☐ Agent
☐ Addressee

B. Received by (Printed Name)

UNAABLE

C. Date of Delivery

12-9

D. Is delivery address different from item 1? ☐ Yes

If YES, enter delivery address below: ☐ No

3. Service Type

- ☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee)

☐ Yes

7003 1010 0002 2612 1503

**U.S. Postal Service™
CERTIFIED MAIL™ RECEIPT
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For delivery information visit our website at www.usps.com

OFFICIAL USE

Postage	\$	83
Certified Fee		20
Return Receipt Fee (Endorsement Required)		75
Restricted Delivery Fee (Endorsement Required)		
Total Postage & Fees	\$	4.28

Postmark
Here

Sent To

BLM

Street, Apt. No.,
or PO Box No. *620 E. Greene St.*

City, State, ZIP+4 *Carlsbad NM 88220-6292*

PS Form 3800, June 2002

State of New Mexico,
County of Eddy, ss.

That she is Business Manager of the Carlsbad Current-Argus, a newspaper published daily at the City of Carlsbad, in said county of Eddy, state of New Mexico and of general paid circulation in said county; that the same is a duly qualified newspaper under the laws of the State wherein legal notices and advertisements may be published; that the printed notice attached hereto was published in the regular and entire edition of said newspaper and not in supplement thereof on the date as follows, to wit:

2004

Dawn Higgins

23 day of December, 2004

Stephanie Dobson

My commission expires 12-13-05
Notary Public

Lynx Petroleum Consultants, Inc., P.O. Box 1708, Hobbs, NM 88241, is making application to the New Mexico Oil Conservation Division to convert the Jones Federal 'B' No. 3 well located 660' FSL & 660' FEL of Section 23, Township 19S, Range 31E, Eddy County, New Mexico to a salt water disposal well. The proposed injection interval will be Yates-Seven Rivers formation from 2370' to 2720'. Maximum expected rates and pressures are 1000 BWPD and 800 psi respectively. Interested parties must file objections or request for hearing with the Oil Conservation Division, 1220 South St. Francis Drive, Santa Fe, New Mexico 87505, within 15 days. The contact party for the applicant is Larry R. Scott who may be reached by phone at 505-392-6950.