



Westall Oil & Gas, Inc.

DRC

**Independent Oil Producer**

Post Office Box 4  
Loco Hills, New Mexico 88255  
PH. 505-677-2370 • FAX 505-677-2361

January 31, 2003

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

Attn: Mr. David Catanach

Re Form C-108  
Nugget State No.1  
Unit A, Section 36, T-19S, R31E  
Eddy County, New Mexico

872

FEB - 3 2003

Dear Mr. Catanach:

Enclosed is a re-submitted application for water disposal in the captioned well, with the issues of your letter dated January 7, 2003 being addressed.

- (1) The shortened Injection interval is not productive in any well within the West Lusk-Delaware Pool.
- (2) The injection interval has been shortened to 4470-6503' leaving the interval 6919-7082' blanked off with a CIBP.
- (3) Cement data for all wells has been provided.

If you require any additional information, please contact me at (505) 677-2370 or [rharrisnm@netscape.net](mailto:rharrisnm@netscape.net).

Sincerely,

Randall Harris  
Geologist



# NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

**Bill Richardson**

Governor

**Joanna Prukop**

Cabinet Secretary

**Lori Wrotenbery**

Director

**Oil Conservation Division**

January 7, 2003

Ray Westall  
P.O. Box 4  
Loco Hills, New Mexico 88255

Attention: Mr. Randall Harris

Re: Form C-108 Application  
Nugget State No. 1  
Unit D, Section 36, T-19S, R-31E,  
Eddy County, New Mexico

Dear Mr. Harris:

I am in the process of reviewing your application to convert the above-described Nugget State Well No. 1 to a disposal well in the Delaware formation. Please be advised that additional information will be necessary in order to process the application. Please address the following issues and submit the necessary data, at which time your application will be processed.

- (1) the subject well is directly offset to the east by the West Lusk-Delaware Oil Pool. Is the injection interval in the Nugget State Well No. 1 productive within the West Lusk-Delaware Pool? Please address how correlative rights will be protected by allowing injection into the Delaware formation in this area;
- (2) the proposed injection interval is approximately 2,612 feet in length. The Division does not normally approve injection intervals this large. It is likely that you will be asked to reduce the injection interval to a more reasonable interval, and one that will not expose such a large portion of the production casing to corrosion through injection. Likely, the interval from approximately 5,636' to 7,082' feet will be considered for approval;
- (3) please provide production casing cement top data for the Yates Drilling Federal "30" Well No. 1 located in Section 30, Township 19 South, Range 32 East.

Your application will be processed upon receipt of the requested data.

**APPLICATION FOR AUTHORIZATION TO INJECT**

- I. PURPOSE: Secondary Recovery Pressure Maintenance X Disposal Storage  
Application qualifies for administrative approval? X Yes No
- II. OPERATOR: RAY WESTALL  
ADDRESS: P.O. Box 4 Lyco 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 X 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: 1/31/03
- \* 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: \_\_\_\_\_

### 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.

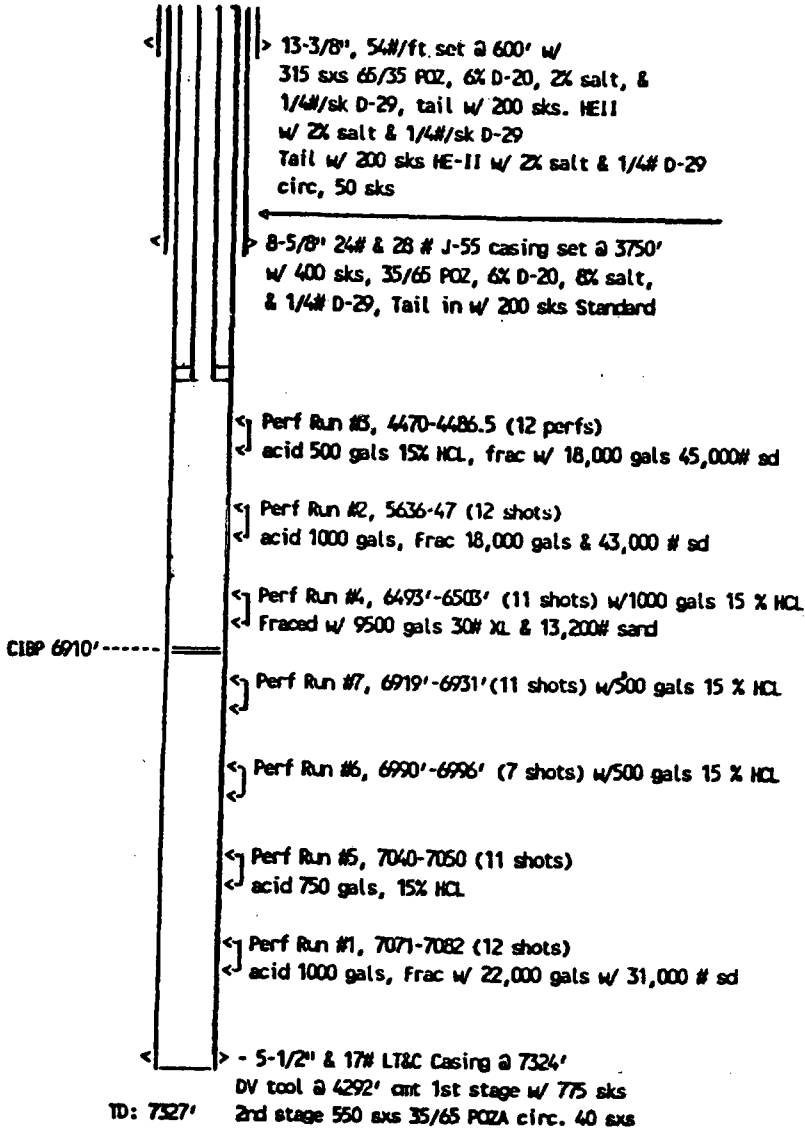
**NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.**

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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  
NUGGET STATE #1  
660' FNL & 660' FEL SEC 36 T19S-R31E



## Tubular Data

### Surface Casing

Size 13 3/8" 54.5# Set @ 600' Cemented  
with 500 sxs Circulated  
Hole size 17 1/2"

### Intermediate Casing

Size 8 5/8" 24# set @ 3750' Cemented with  
800 sxs Circulated Hole size 12 1/4"

### Long String

Size 5 1/2 17 & 15.5# set @ 7327' Cemented  
with 1295 sxs Circulated Hole size 7 7/8"

### Injection interval

4470' to 6503' feet Perforated

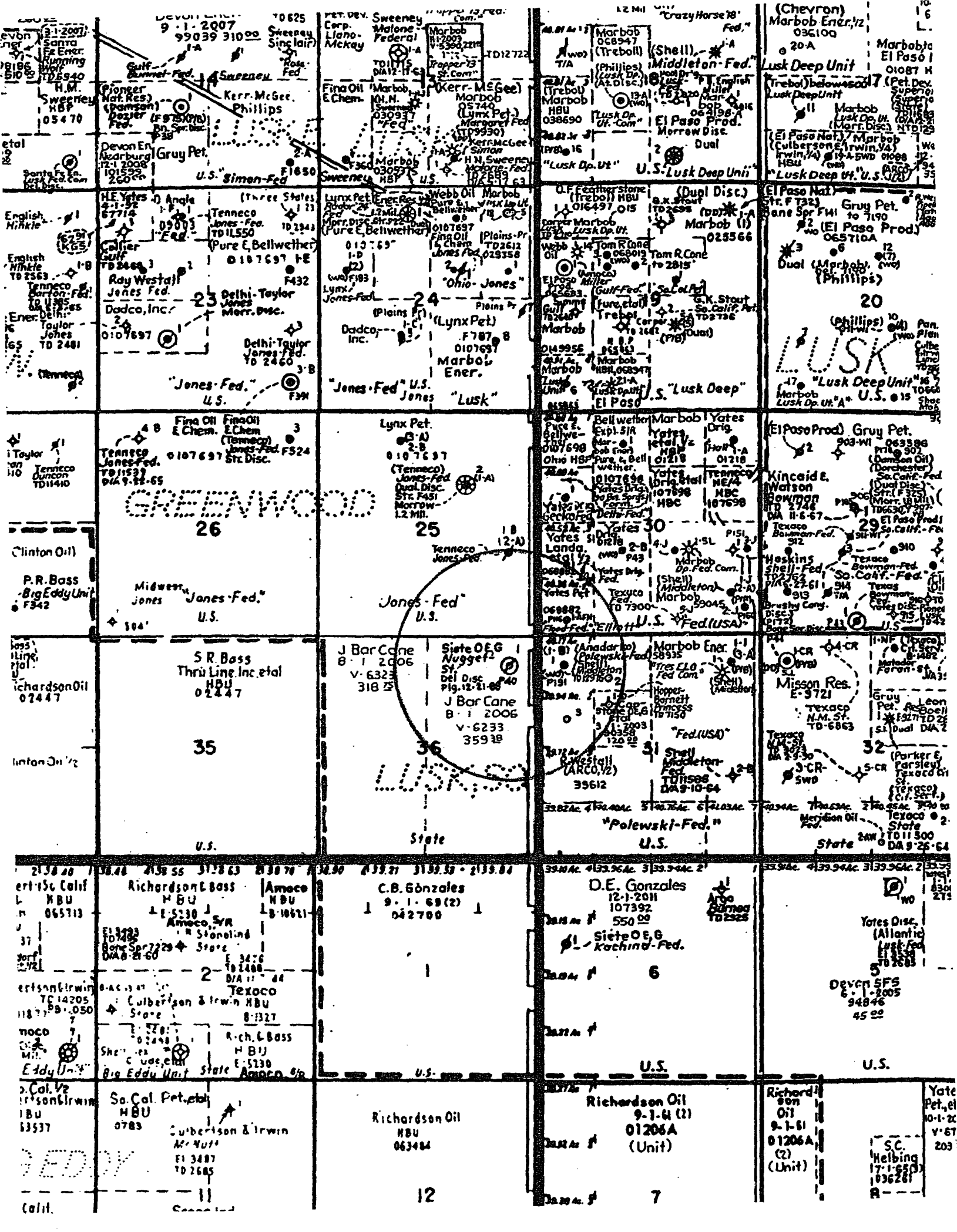
Tubing size 2 7/8" lined with Plastic set in a Baker Loc-set packer at 4400 feet.

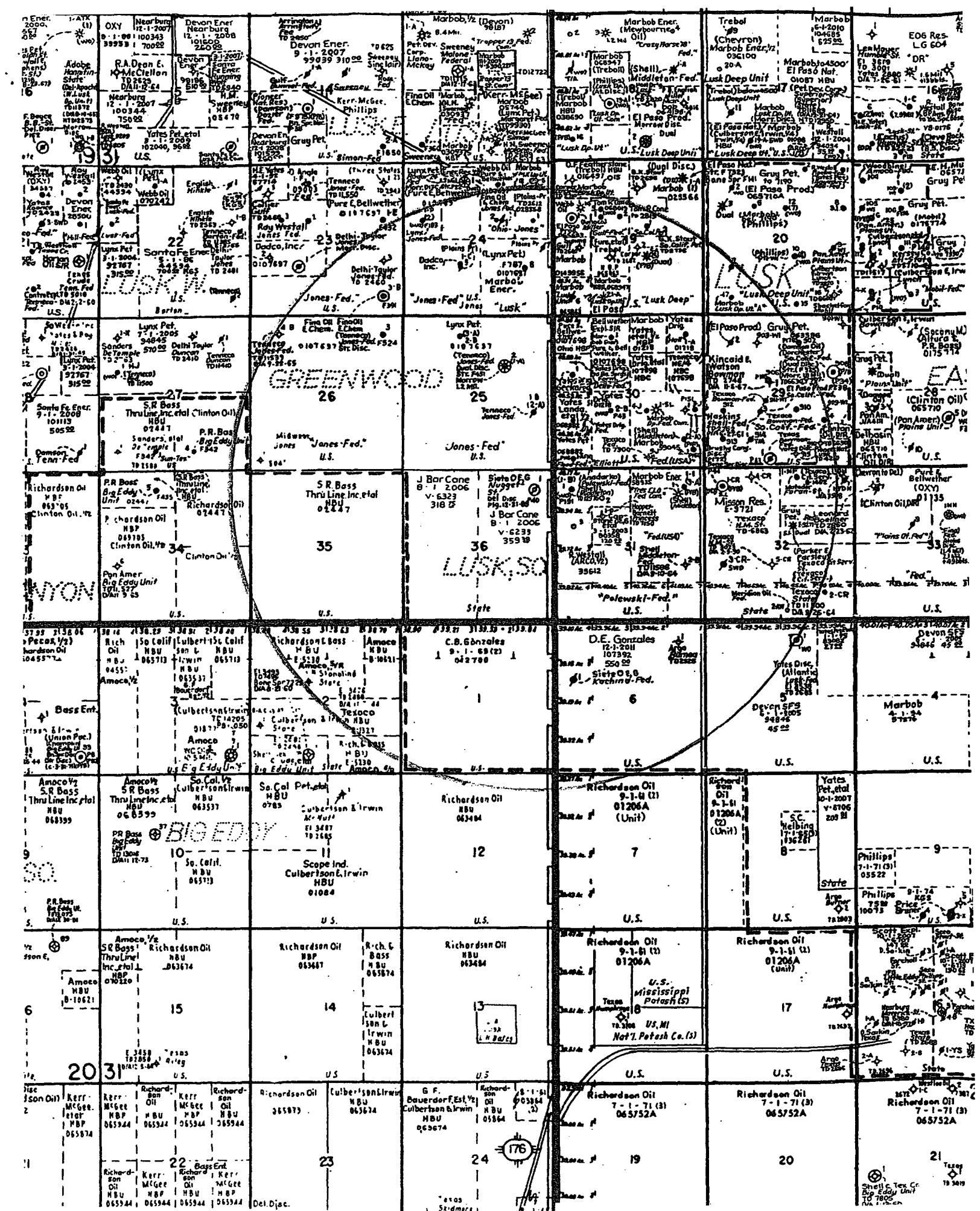
## Other Data

1. Name of the injection formation. DELAWARE
2. Name of field or pool. WEST LUSK DELAWARE
3. Is this a new well drilled for injection? No  
If no, for what purpose was the well originally drilled? Oil & Gas production
4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug (s) used. CIBP at 6910'
5. Give the depth to and name of any overlying or underlying oil or gas zones in this area.  
NONE

## **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
Yates Flood AFN Fed #1	SWSW Sec 30 T19S-R32E	7/16/90	13 3/8" @ 707 650 sxs Circ.	8 5/8" @ 4073 2070 sxs Circ	5 1/2" @7270 890 sxs T/2450 calc	7009-7025 W. Lusk Delaware Oil
Yates Drilling Federal 30 #1	NWSW Sec 30 T19S-R32E	11/17/90	13 3/8" @ 851 851 sxs Circ.	8 5/8" @ 4222 2075 sxs Circ.	5 1/2" @ 7292 650 sxs T/3503 calc	6956-7118 W. Lusk Delaware Oil
Ray Westall Polewski Federal #1	NWNW Sec 31 T19S-R32E	4/4/63 Re entered Feb-88	13 3/8 @ 845 350 sxs Circ.	8 5/8" @ 3075 3350 sxs T/2100	5 1/2" @ 7162 1550 sxs Circ	7024-7056 W. Lusk Delaware Oil
Ray Westall Polewski Federal #2	NENW T19S-R32E	9/11/02	13 3/8" @ 844 650 sxs Circ.	8 5/8" @ 3992 2250 sxs Circ	5 1/2" @ 7302 1150 sxs Circ	7159-7202 W. Lusk Delaware TESTING

**P & A Wells**

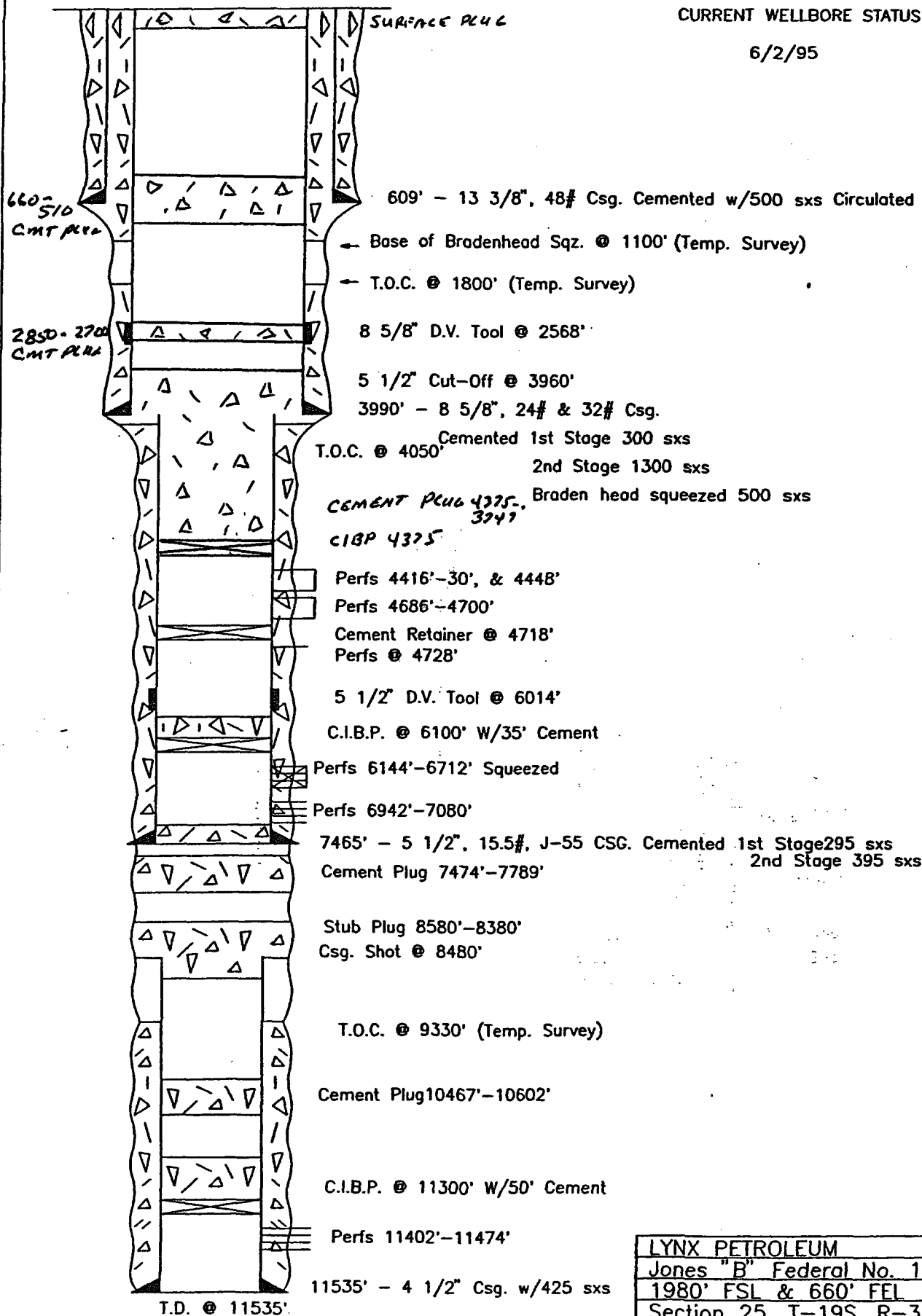
**SCHEMATICS ATTACHED**

Hopper-Barnett Princess Fed #1	SENW Sec 31 T19S-R32E	12/30/89
Lynx Jones B Federal #1	NESE Sec 25 T19S-R31E	1/22/64

K.B. + 7'

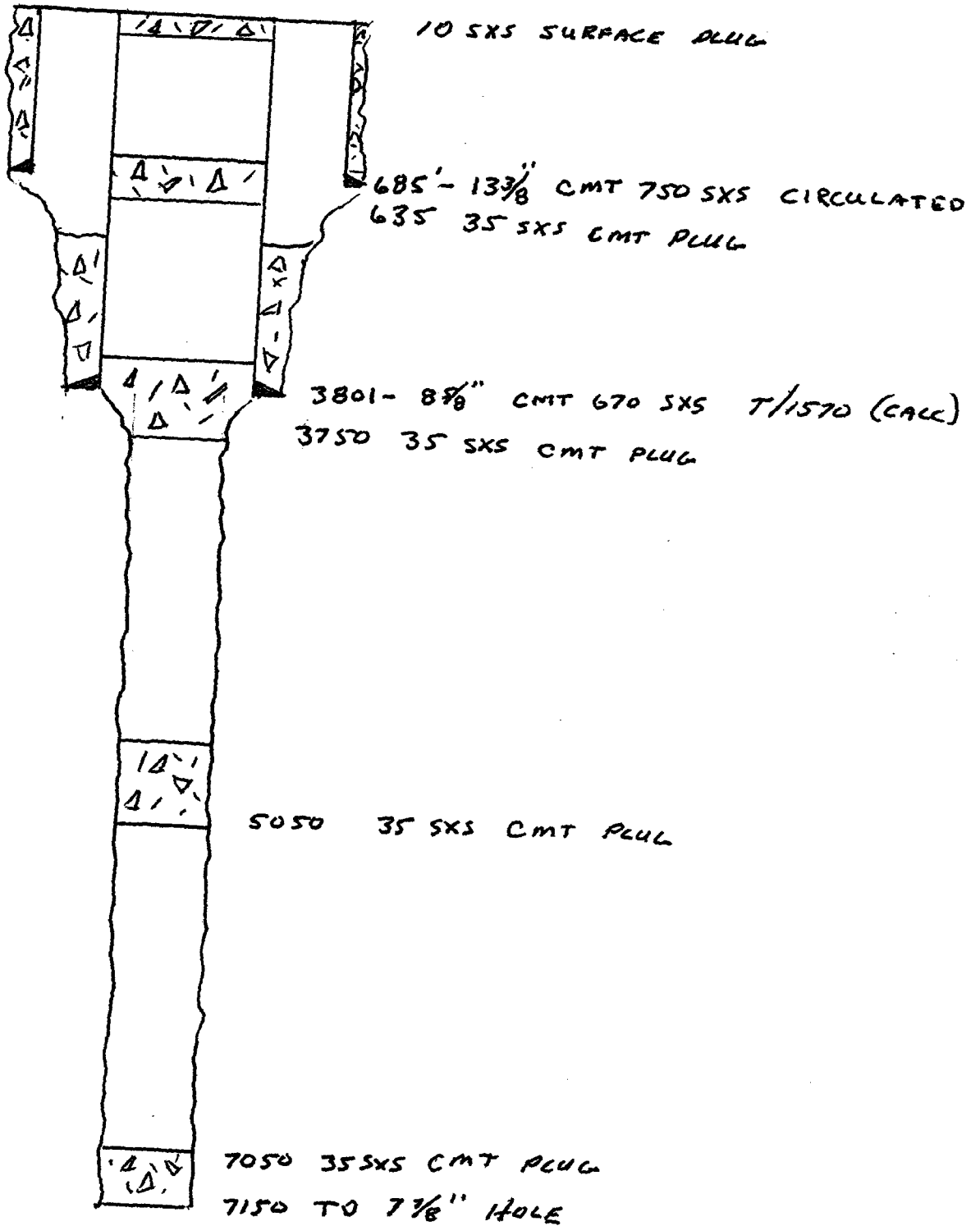
# CURRENT WELLBORE STATUS

6/2/95



LYNX PETROLEUM
Jones "B" Federal No. 1
1980' FSL & 660' FEL
Section 25, T-19S, R-31E
Eddy County, NM

1107MER-DARNETT  
PRINCESS FED 1  
1650' NWL  
SECTION 31 T19S-R32E  
LEA COUNTY, NM



## **ATTACHMENT VII**

1. Proposed average of 150 bbls per day and maximum of 300 bbls per day of injected fluids. At a rate of one bbl per minuet.
2. System will be closed.
3. Average anticipated pressure of 450 psi and a maximum of 800 psi.
4. Source of produced water is reinjected produced water from offsetting leases of the same formation.
5. Water analysis attached.

Attn: Ray Westall  
Fax # 505-677-2361

## B J Services Water Analysis

Artesia District Laboratory  
(505)-746-3140

Date: 4-Nov-02 Test #: 1530 Hrs.  
Company: Ray Westall Well #: #2  
Lease: Polewski County: Lea  
State: NM Formation:  
Depth: 7,000 Source: Grab

pH	6.35	Temp (F):	70
Specific Gravity	1.026		

CATIONS	mg/l	me/l	ppm
Sodium (calc.)	11389	495.4	11100
Calcium	241	12.0	235
Magnesium	122	10.0	118
Barium	< 25	---	---
Potassium	< 10	---	---
Iron	97	3.5	95

ANIONS			
Chloride	18000	507.8	17544
Sulfate	244	5.1	237
Carbonate	< 1	---	---
Bicarbonate	610	10.0	595
Total Dissolved Solids(calc.)	30702		29924
Total Hardness as CaCO3	1101	22.0	1073

**COMMENTS:** Resistivity (ohm-meters-calc.) 0.215509

### SCALE ANALYSIS:

CaCO3 Factor	146766 Calcium Carbonate Scale Probability->	Remote
CaSO4 Factor	60150 Calcium Sulfate Scale Probability ->	Remote

### Stiff Plot



## **ATTACHMENT VIII**

The proposed injection zone is a fine grained sand in the Delaware Formation. It has several sands with varying thickness. 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**

**No proposed stimulation.**

## **ATTACHMENT XI**

**There is no active 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: J Bar Cane, Lynx Yates Drilling Yates Petroleum, Marbob and Capstone. Each of the operators were provided a copy of our application by certified mail. Proof of notice is enclosed. The surface owner is the State of New Mexico.

### **PROOF OF PUBLICATION**

Proof of publication will be from the Hobbs Daily Sun and will be forwarded.

# Affidavit of Publication

NO. 17889

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 October 27 2002

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

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

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

Subscribed and sworn to before me this

28th day of October 2002

Barbara Ann Boans

Notary Public, Eddy County, New Mexico

My Commission expires September 23, 2003

# 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 is Randall Harris,  
is seeking administrative  
approval from the New  
Mexico Oil Conservation  
Division to utilize a well  
located 660' FNL & 660'  
FEL Section 36, Township  
19 south, Range 31 East,  
Eddy County, New Mexico  
known as the Nugget State  
#1 for water injection.  
Proposed injection is in the  
Delaware formation through  
perforations 4470-7082 feet.  
Expected maximum injection  
rate of 300 bbls per day at  
800 psi. Interested parties  
must file objection or  
requests for hearing with the  
Oil Conservation Division,  
1220 So. St. Francis Drive,  
Santa Fe, NM 87505 within  
15 days of the notice.  
Published in the Artesia  
Daily Press, Artesia, N.M.  
October 27, 2002.  
Legal 17889.

**CERTIFIED MAIL #**

**J. Bar Cane  
P.O. Box 316  
Stanley, NM 87056-0316**

**7000 0600 0024 2324 1711**

**Yates Petroleum  
105 S. 4<sup>th</sup>  
Artesia, NM 88210**

**7000 0600 0024 2324 1728**

**Yates Drilling  
105 S/ 4<sup>th</sup>  
Artesia, NM 88210**

**7000 0600 0024 2324 1735**

**Marbob  
P.O. Box 227  
Artesia, NM 88210**

**7000 0600 0024 2324 1742**

**Capstone  
Box 10187  
Midland, Tx. 79702**

**7000 0600 024 2324 1766**

7000 0600 0024 2324 1742

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Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	\$ 3.36

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Recipient's Name (Please Print Clearly) (to be completed by mailer)  
~~3 BAR CANE~~ CAPSA  
Street, Apt. No., or PO Box No.  
Box 10187  
City, State, ZIP+4  
MIDLAND TX 79702  
PS Form 3800, February 2000 See Reverse for Instructions

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MACRAE  
Street, Apt. No., or PO Box No.  
P.O. Box 227  
City, State, ZIP+4  
ARTESIA NM 88210  
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YATES DRILLING  
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105 S 4th  
City, State, ZIP+4  
ARTESIA, NM 88210  
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STANLEY, NM 89056-0316  
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ARTESIA NM 88210  
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