

STATE OF NEW MEXICO  
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT  
OIL CONSERVATION DIVISION



BRUCE KING  
GOVERNOR



POST OFFICE BOX 2088  
STATE LAND OFFICE BUILDING  
SANTA FE, NEW MEXICO 87504  
(505) 827-5800

ADMINISTRATIVE ORDER NO. SWD-472

APPLICATION OF TEXACO EXPLORATION & PRODUCTION, INC.

**RECEIVED**

APR 1 4 1992

ADMINISTRATIVE ORDER  
OF THE OIL CONSERVATION DIVISION

OIL CON. DIV

DIST. 3

Under the provisions of Rule 701(B), Texaco Exploration & Production, Inc. made application to the New Mexico Oil Conservation Division on March 23, 1992, for permission to complete for salt water disposal its H.J. Loe Federal B No. 2 located in Unit G of Section 23, Township 29 North, Range 12 West, NMPM, San Juan County, New Mexico.

THE DIVISION DIRECTOR FINDS THAT:

- (1) The application has been duly filed under the provisions of Rule 701(B) of the Division Rules and Regulations.
- (2) Satisfactory information has been provided that all offset operators and surface owners have been duly notified; and
- (3) The applicant has presented satisfactory evidence that all requirements prescribed in Rule 701 will be met.
- (4) No objections have been received within the waiting period prescribed by said rule.

IT IS THEREFORE ORDERED THAT:

- (1) The applicant herein, Texaco Exploration & Production, Inc. is hereby authorized to complete its H.J. Loe Federal B No. 2 located in Unit G of Section 23, Township 29 North, Range 12 West, NMPM, San Juan County, New Mexico, in such a manner as to permit the injection of salt water for disposal purposes into the Mesa Verde formation at approximately 3250 feet to approximately 4200 feet through 2 3/8 inch plastic lined tubing set in a packer located at approximately 3150 feet.

**IT IS FURTHER ORDERED THAT:**

The operator shall take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface.

Prior to commencing injection operations into the well, the casing shall be pressure tested to 1000 psi from the surface to the packer setting depth to assure the integrity of said casing.

The casing-tubing annulus shall be loaded with an inert fluid and equipped with a pressure gauge at the surface or left open to the atmosphere to facilitate detection of leakage in the casing, tubing or packer.

The injection well or system shall be equipped with a pressure limiting device which will limit the wellhead pressure on the injection well to no more than 650 psi.

The Director of the Division may authorize an increase in injection pressure upon a proper showing by the operator of said well that such higher pressure will not result in migration of the injected fluid from the Mesa Verde formation. Such proper showing shall consist of a valid step-rate test run in accordance with and acceptable to this office.

The operator shall notify the supervisor of the Aztec district office of the Division of the date and time of the installation of disposal equipment and of the mechanical integrity test, so that the same may be inspected and witnessed.

The operator shall immediately notify the supervisor of the Aztec district office of the Division of the failure of the tubing, casing or packer in said well and shall take such steps as may be timely and necessary to correct such failure or leakage.



STATE OF NEW MEXICO  
ENERGY AND MINERALS DEPARTMENT  
OIL CONSERVATION DIVISION  
AZTEC DISTRICT OFFICE

10001 HIGHWAY 66 ROAD  
AZTEC, NEW MEXICO 87410  
(505) 334-0170

GARREY CARRUTHERS  
GOVERNOR

ATTN: DAVID CATANACH

Date: 4-6-92

Oil Conservation Division  
P.O. Box 2088  
Santa Fe, NM 87504-2088

Re: Proposed MC \_\_\_\_\_  
Proposed DHC \_\_\_\_\_  
Proposed NSL \_\_\_\_\_  
Proposed SWD X \_\_\_\_\_  
Proposed WFX \_\_\_\_\_  
Proposed PMX \_\_\_\_\_

Gentlemen:

I have examined the application dated 3-30-92  
for the TEXACO EXP INC. H.J. LOE FEDERAL #2  
Operator Lease & Well No.

G-23-29N-12W and my recommendations are as follows:  
Unit, S-T-R

TO  
TEST CASING INSIDE PLUG @ 4500' over  
the PARTED CASING TO ENSURE THAT  
PLUG WILL NOT ALLOW COMMUNICATION  
W/ DAKOTA. TEST @ 1500 PSE MAX  
OR MAXIMUM POSSIBLE INJECTION PRESS.  
RUN CBL PRIOR TO CASING INSIDE  
Yours truly, PLUG TEST

Eugene Burch

APPLICATION FOR AUTHORIZATION TO INJECT

- I. Purpose: ☐ Secondary Recovery ☐ Pressure Maintenance ☒ Disposal ☐ Storage  
Application qualifies for administrative approval? ☐ yes ☐ no
- II. Operator: Texaco E & P Inc.  
Address: 3300 N. Butler Farmington, NM 87401  
Contact party: Ted A. Tipton Phone: 505-325-4397
- 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: Ted A. Tipton

Title Area Manager

Signature: \_\_\_\_\_

Date: 2-2-82

WELL DATA

LEASE NAME: H. J. Loe Federal B No. 2  
LOCATION: T 29 N, R 12 W, Section 23  
1850' FNL & 2310' FEL  
Unit Letter G  
San Juan County, New Mexico

CASING DATA:	Surface	Production
Size	13.375"	5.5"
Set At	289'	6408'
Weight	48 #	14 & 15.5 #
Hole Size	17.25"	7.875"
Cement	300 sx	1 <sup>st</sup> 400 sx
		2 <sup>nd</sup> 150 sx
TOC	Surf (circ)	1 <sup>st</sup> 4900' (calc)
		2 <sup>nd</sup> 1350' (calc)

TUBING DATA:

Size	2 3/8"
Set At	3220'
Weight	4 #
Grade	J-55

PACKER DATA:

Name	Guiberson
Model	Uni-6
Set At	3220'

Formation/Field, Pool: Mesa Verde/Undesignated

Injection Interval: 3250'-3400', 4000'-4200'

Perforations 4 JSPF, .5 EHD

Original Purpose of Well: Well was originally drilled and completed in the Dakota formation on June 24, 1960.

Dakota Perforations & PBTD: 6170'-6278' , Abandoned using 1 CIBP @ 6150', 120 sx cement (4557'-3626'), 1 CIBP @ 3204', 50 sx cement plug (3190'-3122'), 60 sx cement plug (1850'-2368')

Pictured Cliffs Perforations: 1703'-1715', 1722'-1730' (open)  
Will squeeze using 35 sx cement and pressure test to 1000 psi.

Productive Intervals: (recompletion)

Fruitland Coal	511'-1698'
Pictured Cliffs	1698'-1855'
Dakota	6170'-6310'



## H. J. LOE FEDERAL B No. 2 CURRENT COMPLETION

### WELL:

H. J. Loe Fed. #2

### LOCATION:

SW/4 NE/4

Sec. 23 T29N R12W

### COMPL DATE:

5/24/60

KB - 5869

GL - 5868

### FORMATION TOPS:

San Jose - Surface

Ojo Alamo - 440'

Kirtland - 540'

Fruitland - 1280'

Pictured Cliffs - 1698'

Cliff House - 3238'

### PICTURED CLIFFS PERFS:

1702-1715

1722-1730

CIBP @ 3204'

FISH (48" TBG, PKR)

CIBP @ 6150'

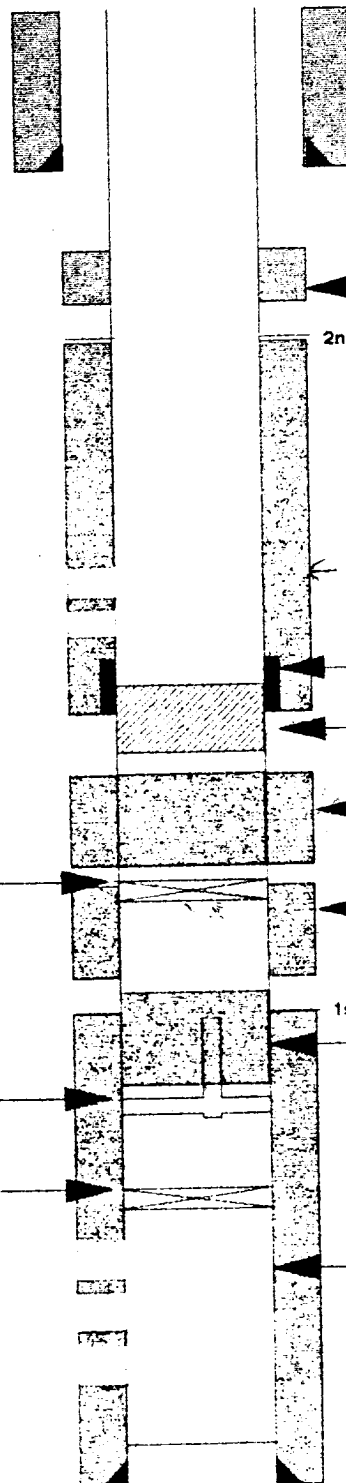
### DAKOTA PERFS: (ABANDONED)

6170-6179

6244-6278

6300-6310

PBTD - 3122  
TD - 6412



13.375" 48# K55 csg  
Set @ 289' in 17.25" hole  
w/ 300 sx. cmt.  
TOC = 0 (circ)

SQZ HOLES @ 560'

2nd TOC = 1090'  
(Calc. w/ 25% excess)

*CSG LEAK 1473-80 2 1/2" 75 SXS, 10-2-90*

DV Tool @ 1886'

Proposed 60 sx. Chacra  
Plug 1890-2368

Plugged back w/ 60 sx.  
through sqz. hole @ 3190

Squeezed csg. leak  
3578-4034 w/ 400 sx.

1st TOC = 4896' (Calc. w/ 75% exc.)  
Plugged back w/ 120 sx.  
@ 4500' (parted csg.) ?

5.5", 14 & 15.5# K55 Csg.  
Set @ 6408' in 7.875" hole  
1st Stage w/ 400 sx. TOC @ 4896'.  
(Calc. w/ 75% excess)

DV Tool @ 1886'.  
2nd Stage w/ 150 sx. TOC @ 1090'.  
(Calc. w/ 25% excess)



# H J LOE B FED. No. 2 PROPOSED INJECTION SCHEMATIC

## WELL:

H. J. Loe B Fed. #2

## LOCATION:

SW/4 NE/4  
Sec. 23 T29N R12W

## COMPL. DATE:

5/24/60

KB - 5669

GL - 5658

## EST. FORMATION TOPS:

San Jose - Surface  
Djo Alamo - 410  
Fruitland - 511  
Kirtland - 540  
Pictured Cliffs - 1599  
Cliff House - 3238

## PICTURED CLIFFS PERFS:

(SQZ w/ 40 SX CMT)

1703-1716

1722-1730

## MESA VERDE INJECTION INTERVAL

3250-3400

4000-4200

FISH

1 1/2 JTS TBG. PKR

CIBP @ 6150

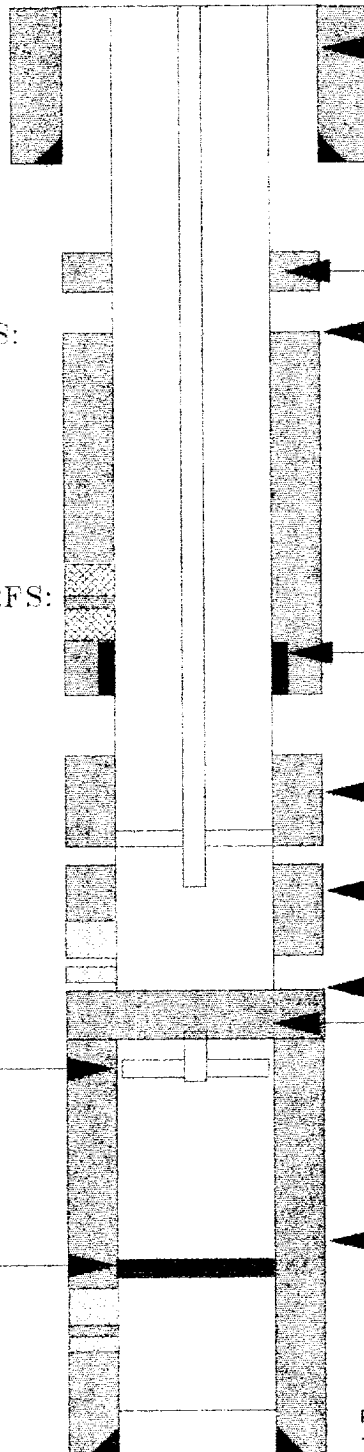
## DAKOTA PERFS:

(ABANDONED)

6170-6179

6244-6278

6300-6310



13.375" 48# K55 csg  
Set @ 289' in 17.25" hole  
w/ 300 sx. cmt.  
TOC = 0 (circ)

SQZ CSG LEAK @ 1473-1480  
W/ 75 SX CMT

2nd TOC = 1090  
(Calc. w/ 25% Excess)

DV Tool @ 1686'  
w/ 150 sx. cmt.

Plugged back w/ 50 sx.  
through sqz. hole @ 3190

Squeezed csg. leak  
3578-4034 w/ 400 sx.

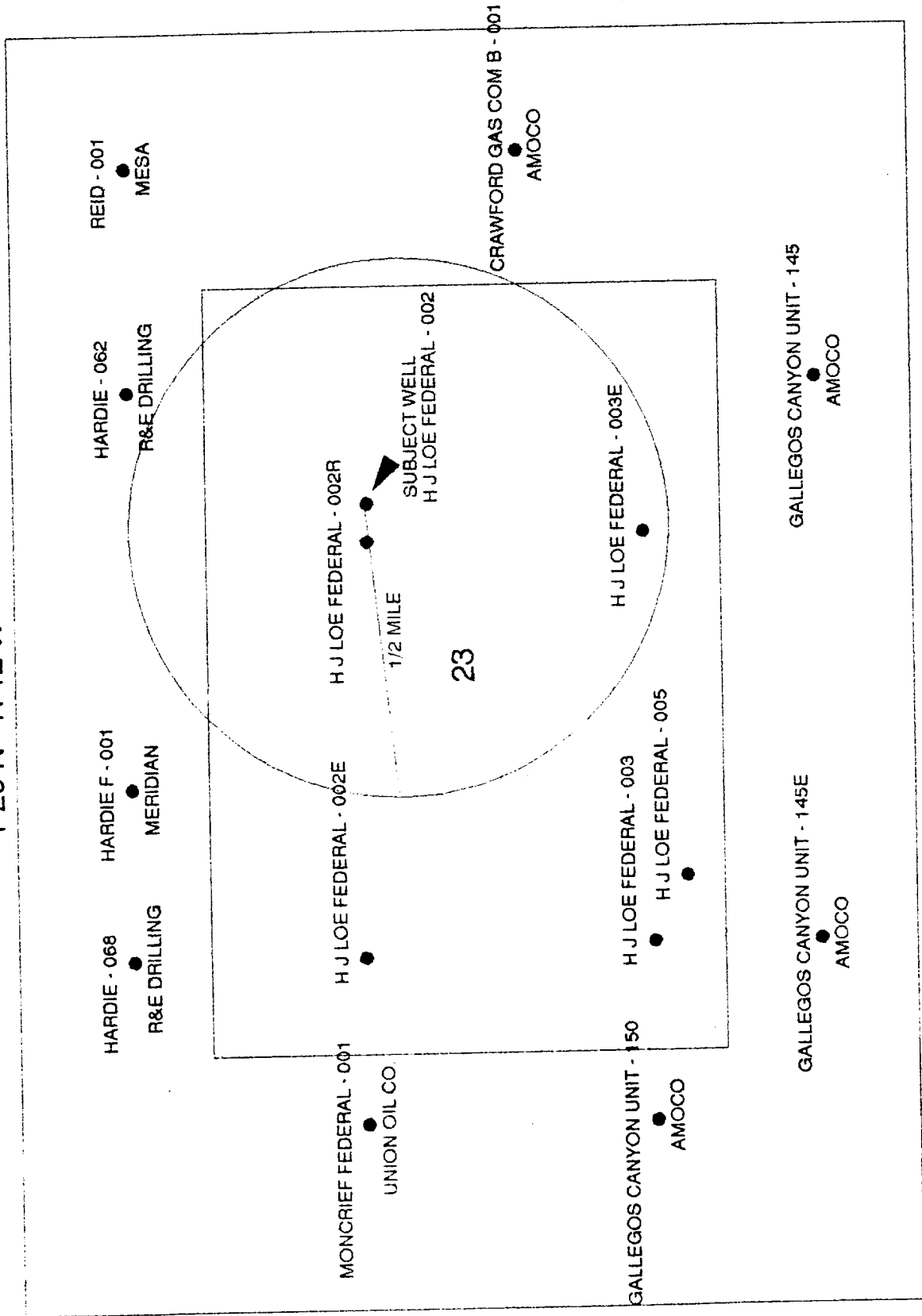
1st TOC = 4896  
(Calc. w/ 75% Excess)

Plugged back w/ 120 sx.  
@ 4500' (parted csg.)

5.5", 14 & 15.5# K55 Csg.  
Set @ 6408' in 7.875" hole  
w/ 1st 400 sx. cmt.  
2nd 150 sx. cmt

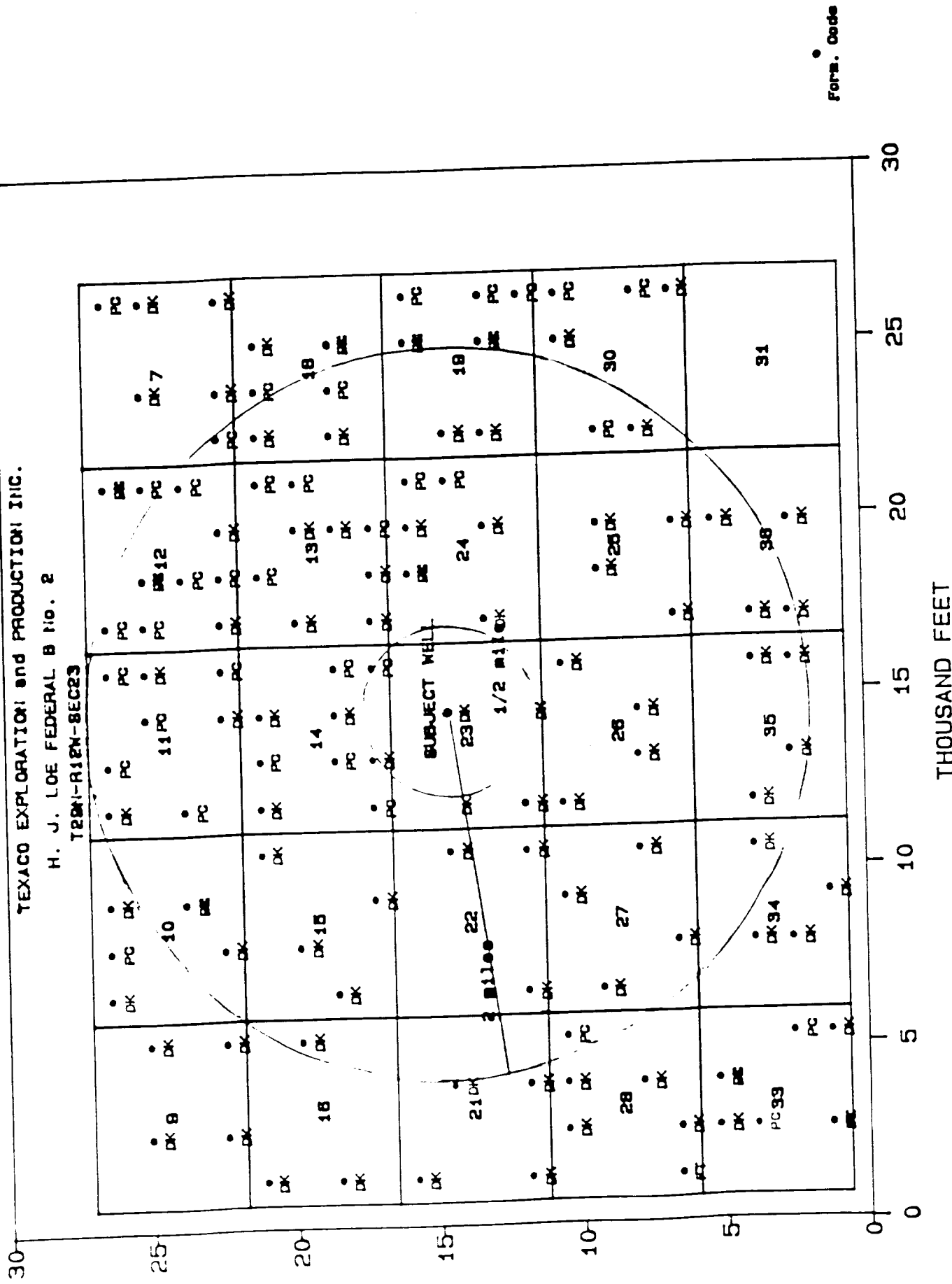
PBTD - 4300  
TD - 6412

# H.J. LOE B FEDERAL LEASE & OFFSETS T 29 N - R 12 W









# OFFSET WELLS WITH AREA OF REVIEW

WELL NAME: H. J. LOE FEDERAL B No. 2E

LOCATION: 1700' FNL & 1050' FWL  
UNIT LETTER "E"  
SEC 23 T29N-R12W

SPUD DATE: OCTOBER 18, 1980  
COMPL DATE: DECEMBER 31, 1980

CASING:	SIZE	WEIGHT	SET @	HOLE SIZE	CEMENT	TOC
	8 5/8"	24	501'	12 1/4"	450 SX (CIRC)	SURF
	4 1/2"	10.5	6340'	7 7/8"	1350 SX (1ST)	SURF
			DV @ 3170'		1200 SX (2ND)	3170

(cement volumes calculated using 33% excess annular volume)

TD: 6340'  
PBTD: 6312'

COMPLETION:

FORMATION: DAKOTA  
INTERVAL: 6188'-6290' w/ 1 JSPF  
STIMULATION: 2000 GAL ACID  
125,000 # 20/40 SAND  
94,000 GAL FRAC FLUID

WELL NAME: H. J. LOE FEDERAL B No. 2R

LOCATION: 1650' FNL & 2210' FEL  
UNIT LETTER "G"  
SEC 23 T29N-R12W

SPUD DATE: OCTOBER 28, 1976  
COMPL DATE: DECEMBER 31, 1976

CASING:	SIZE	WEIGHT	SET @	HOLE SIZE	CEMENT	TOC
	8 5/8"	24	298'	11"	150 SX (CIRC)	SURF
	5 1/2"	15.5	6358'	7 7/8"	625 SX (1ST)	2307'
			DV @ 3166'		0 SX (2ND)	

(cement volumes calculated using 50% excess annular volume)

TD: 6358'  
PBTD: 6320'

COMPLETION:

FORMATION: DAKOTA  
INTERVAL: 6174'-6312'  
STIMULATION: 130,000 # 20/40 SAND  
121,500 GAL FRAC FLUID  
350 scf CO<sub>2</sub>

# OFFSET WELLS WITH AREA OF REVIEW

WELL NAME: H. J. LOE FEDERAL B No. 1

LOCATION: 990' FNL & 990' FEL  
UNIT LETTER "A"  
SEC 23 T29N-R12W

SPUD DATE: DECEMBER 9, 1959  
COMPL DATE: DECEMBER 13, 1959

CASING:	SIZE	WEIGHT	SET @	HOLE SIZE	CEMENT	TOC
	8 5/8"	24	207'	11"	250 SX (CIRC)	SURF
	4 1/2"	9.5	1775'	6 3/4"	200 SX	430'

(cement volumes calculated using 33% excess annular volume)

TD: 1775'  
PBTD: 1761'

## COMPLETION:

FORMATION: PICTURED CLIFFS  
INTERVAL: 1730'-1748'  
STIMULATION: N/A

## ABANDONMENT CONDITIONS

10 SX CMT PLUG-SURFACE  
25 SX CMT PLUG-PICTURED CLIFFS  
(SEE WELLBORE DIAGRAM)



DATE: 2/10/92

## H. J. LOE FEDERAL B No. 2E CURRENT COMPLETION

**WELL:**

H. J. Loe Fed B No. 2E

**LOCATION:**

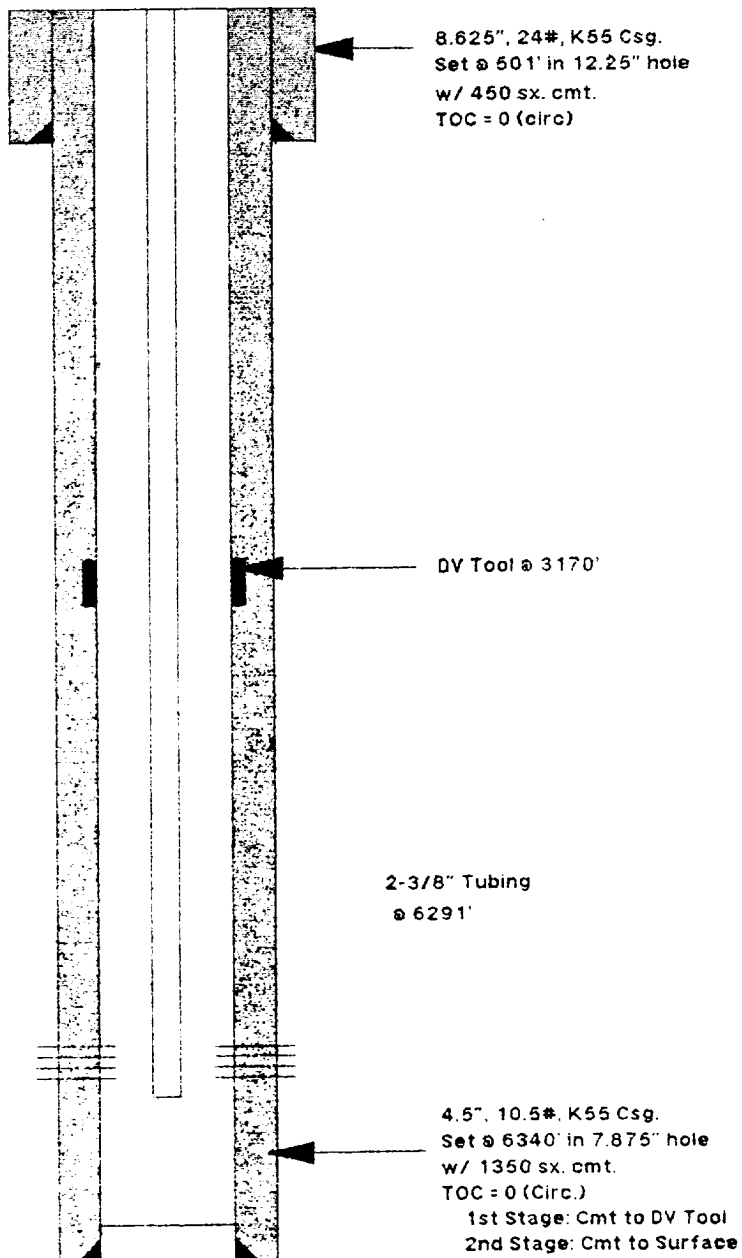
Unit E, 1700' FNL & 1050' FWL  
Sec. 23, T29N, R12W  
San Juan County

**Spud Date:**

10/18/80

**COMPL. DATE:**

5/24/80





DATE: 2/11/92

## H. J. LOE FEDERAL B No. 2R CURRENT COMPLETION

### WELL:

H. J. Loe Federal B No. 2R

### LOCATION:

Unit G, 1850' FNL & 2210' FEL  
Sec. 28, T29N, R12W  
San Juan County

### SPUD DATE:

10/28/76

### COMPL. DATE:

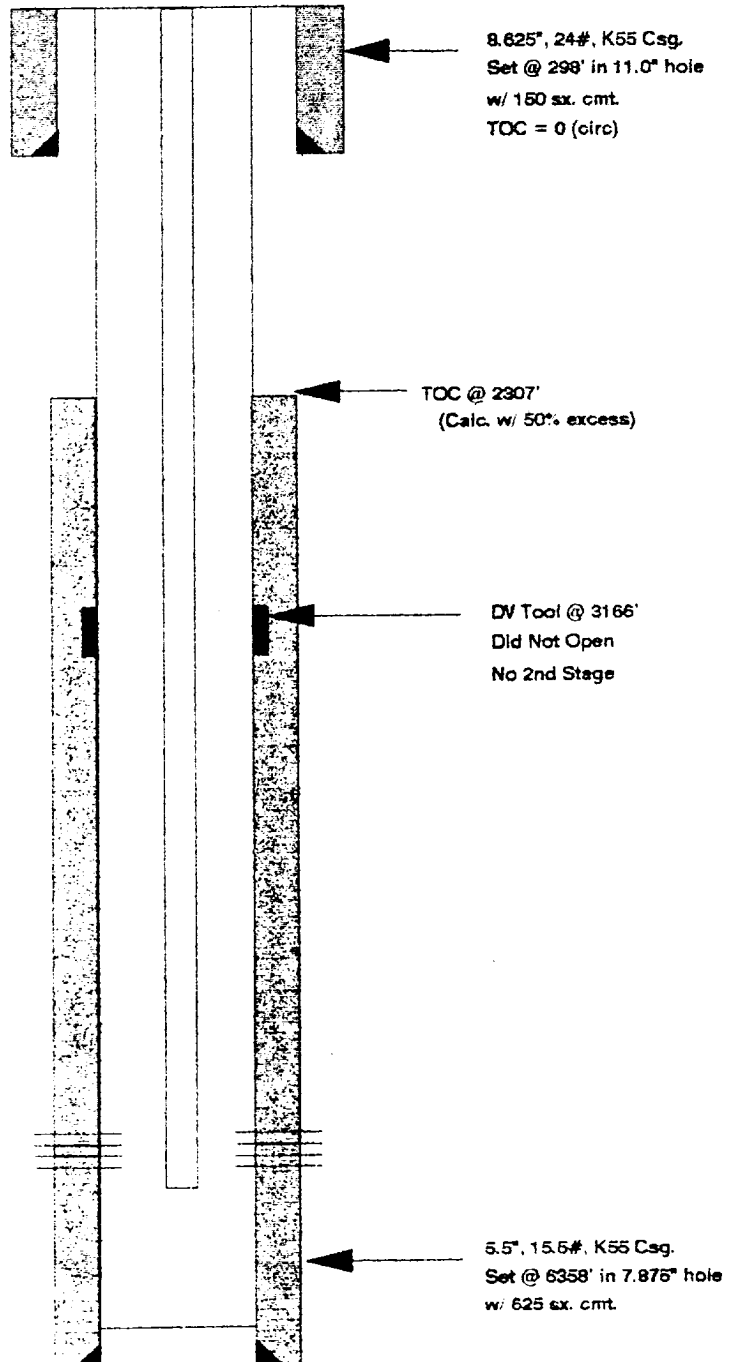
12/19/76

### FORMATION TOPS:

Fruitland 1338'  
Pictured Cliffs 1708'  
Chacra 2890'  
Mesa Verde 3240'  
Menacos 4458'  
Dakota 6173'

### DAKOTA PERFS:

PBTD - 6320'  
TD - 6358'





DATE: 2/10/92

## H. J. LOE FEDERAL B No.1 PLUGGED & ABANDONED

### WELL:

H. J. LOE FEDERAL B No. 1

### LOCATION:

Unit A, 890' FNL & 990' FEL  
Sec. 23, T29N, R12W  
San Juan County

### SPUD DATE:

12/09/59

### COMPL. DATE:

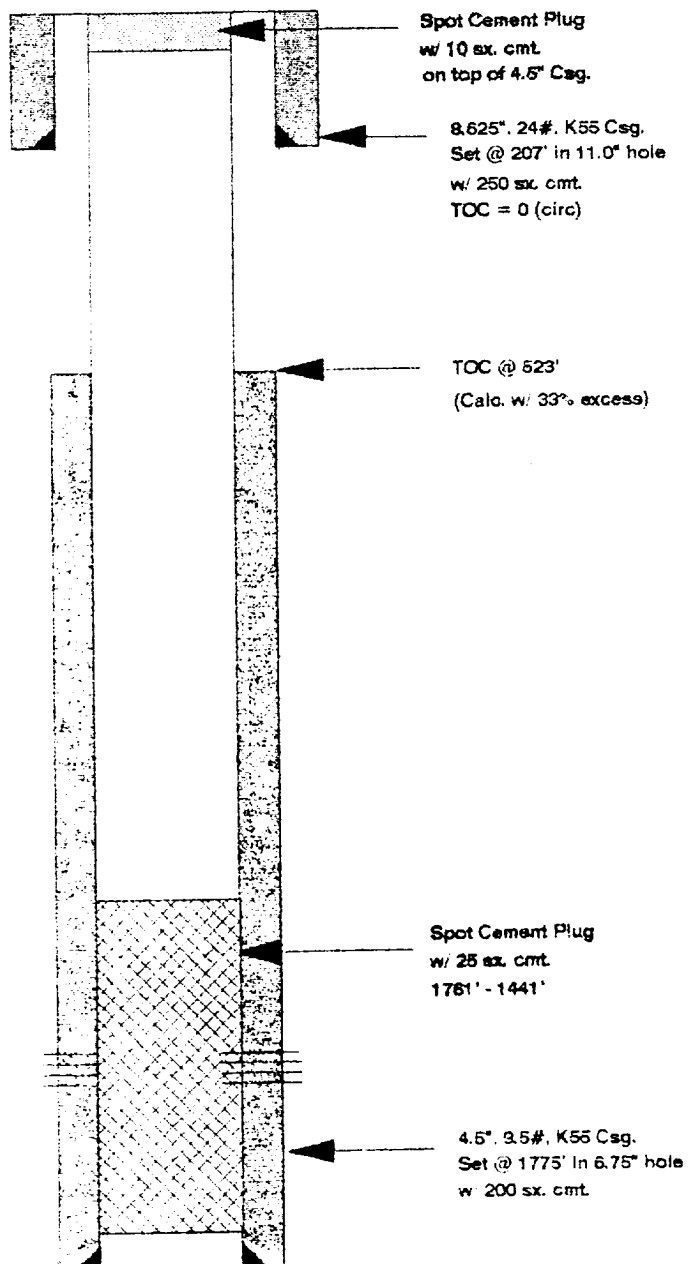
12/13/59

### PLUGGED & ABANDONED:

12/13/59

### PERFORATIONS:

PBTD - 1761'  
TD - 1775'



**VII. Attach data on the proposed operation, including:**

- 1. Proposed average and maximum daily rate and volume of fluid to be injected daily.**  
Primary source of water will come from the fruitland coal development on the Loe lease. Secondary water may be truck in from neighboring leases. Average daily injection is anticipated to be 200 BPD, with a maximum volume expected not to exceed 1000 BPD.
- 2. Whether the system is open or closed.**  
The system will be a closed injection system. The primary source of water will be from Fruitland coal wells on the Loe lease, with the capabilities of trucking in water from neighboring leases.
- 3. Proposed average and maximum injection pressure.**  
After the interval is completed a Step Rate Test will be performed to determine the formation parting pressure. The initial surface injection pressure is not expected to exceed 1800 psi.
- 4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water.**  
The primary source of injection water will be from the Fruitland coal formation. Water from other conventional formations may also be injected. Enclosed are water analysis from the Fruitland coal, obtained during drilling operations on the Loe lease, and a Mesa Verde water sample. The fluids appear to be compatible, and exhibit no traits that would pose any operational or environmental problems.
- 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.**  
Attached



<b>Company: TEXACO EXPL. AND PROD.</b>	
<b>County: SAN JUAN</b>	<b>Field: SAN JUAN</b>
<b>State: NM</b>	<b>Location: 27-5</b>
<b>Lab #: 1</b>	<b>Formation: MV</b>
<b>Date: 12/19/90</b>	<b>Depth: 0</b>

## Unichem Intl.

## Water Analysis Report

<u>Sum +</u>	<u>mg/L</u>	<u>meq/L</u>	<u>Sum -</u>	<u>mg/L</u>	<u>meq/L</u>
Potassium	0.0	0.00	Sulfate	58.3	1.21
Sodium	1,810.0	78.73	Chloride	2,400.0	67.70
Calcium	11.8	0.59	Carbonate	0.0	0.00
Magnesium	2.5	0.21	Bicarbonate	659.0	10.80
Iron	0.0	0.00	Hydroxide	0.0	0.00
Barium	10.0	0.15	-	0.0	0.00
Strontium	0.0	0.00	-	0.0	0.00
<b>CATIONS</b>	<b>1,834.3</b>	<b>79.68</b>	<b>ANIONS</b>	<b>3,117.3</b>	<b>79.71</b>

### Solids

Total Dissolved Solids @180C	4,946 mg/L
Total Solids, calculated less carbonate	4,622 mg/L
Total Solids, calculated	4,952 mg/L
Total Solids, NaCl equivalents	4,485 mg/L

### System Conditions

System Operation	Normal
Sample Temperature, °F	90 F
Sample pH, standard units	7.2 Units

### Dissolved Gases

Dissolved Oxygen	0.0 ppm
Carbon Dioxide	0.0 mg/L
Total Sulfide, (TS)	0.0 mg/L
Sulfide Ion, (S)	0 mg/L
Dissolved Hydrogen Sulfide, (TS S)	0 mg/L

### Other Properties

Specific Gravity, measured	1.0040
Specific Gravity, calculated	1.0037
Resistivity, measured	0 ohm-m <sup>3</sup>
Ionic strength	0.081

### Microbiological

Sulfate Reducing Bacteria	nd
Aerobic Bacteria	nd

### Water Analysis Pattern

<b>Company: TEXACO EXPL. AND PROD.</b>	
<b>County: SAN JUAN</b>	<b>Field: BASIN FRUITLAND</b>
<b>State: NM</b>	<b>Location: H-J-LOE FED B #5</b>
<b>Lab #: 1</b>	<b>Formation: FRUITLAND COAL</b>
<b>Date: 12/19/90</b>	<b>Depth: 0</b>

## Unichem Intl.

## Water Analysis Report

<u>Sum +</u>	<u>mg/L</u>	<u>meq/L</u>	<u>Sum -</u>	<u>mg/L</u>	<u>meq/L</u>
Potassium	0.0	0.00	Sulfate	0.0	0.00
Sodium	10,536.0	458.29	Chloride	16,330.0	460.61
Calcium	416.0	20.76	Carbonate	0.0	0.00
Magnesium	165.0	13.57	Bicarbonate	1,952.0	31.99
Iron	0.0	0.00	Hydroxide	0.0	0.00
Barium	0.0	0.00	-	0.0	0.00
Strontium	0.0	0.00	-	0.0	0.00
<b>CATIONS</b>	<b>11,117.0</b>	<b>492.62</b>	<b>ANIONS</b>	<b>18,282.0</b>	<b>492.60</b>

### Solids

Total Dissolved Solids @180C	28,118 mg/L
Total Solids, calculated less carbonate	28,423 mg/L
Total Solids, calculated	29,399 mg/L
Total Solids, NaCl equivalents	27,889 mg/L

### System Conditions

System Operation	Normal
Sample Temperature, °F	90 F
Sample pH, standard units	7.43 Units

### Dissolved Gases

Dissolved Oxygen	0.0 ppm
Carbon Dioxide	0.0 mg/L
Total Sulfide, (TS)	0.0 mg/L
Sulfide Ion, (S)	0 mg/L
Dissolved Hydrogen Sulfide, (TS-S)	0 mg/L

### Other Properties

Specific Gravity, measured	1.0200
Specific Gravity, calculated	1.0206
Resistivity, measured	0 ohm·m <sup>3</sup>
Ionic strength	0.510

### Microbiological

Sulfate Reducing Bacteria	nd
Aerobic Bacteria	nd

### Water Analysis Pattern

Approved: T.J. MOORE

12-14-91

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 one as well as any such source known to be immediately underlying the injection interval.

The proposed injection interval for the subject well are sandstones within the Mesa Verde Group. The Mesa Verde Group is Cretaceous in age. The sandstone intervals vary in thickness from 10 feet to 100 feet. These Mesa Verde intervals are composed of fine grained, angular, highly cemented sands with an average porosity of 12 percent. Typically these sandstones are interrupted by layers of shale and coal. The known fresh water zones for this area of the San Juan Basin are the Nacimiento, and the Ojo Alamo formations. The Nacimiento sandstone is at its surface outcrop. The Ojo Alamo is found at approximately 400 feet. There are no known aquifers underlying the Mesa Verde Group that would be considered as "fresh" (less than 10,000 mg/l).

**IX. Describe the proposed stimulation program, if any.**

The Mesa Verde interval will be perforated between 3250'-3400', and 4000'-4200'. This interval will be tested for injectivity and evaluated. At this time it will be determined if fracture stimulation is necessary. If the Mesa Verde is fractured the job will be performed using a linear gel system, and an estimated 250,000 pounds of propan.

- x.    Attach appropriate logging and test data on the well.  
      Electric well logs were submitted upon the initial completion of the well (Schlumberger Induction Log 6402'-287').    A CBL-VDL will be run prior to the Mesa Verde completion.

XI. Attach a chemical analysis of fresh water from two or more fresh water wells within one mile of any injection or disposal well showing location of wells and dates samples were taken.

Inquires to the State Engineer/ Water Rights Bureau on January 16, 1992 indicate no fresh water wells are located within one mile of the proposed injection well.

**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 under ground source of drinking water.**

The Mesa Verde interval is a complex formation comprised of sand, shale, and coal layers. The formation is bordered above by the Lewis Shale, and below by the Mancos Shale. These formation can be considered virtually impermeable to vertical flow under the existing overburden pressure. The known fresh water zones for this area of the San Juan Basin are the Nacimiento, and the Ojo Alamo formations. Within the area of review for the proposed injection well, the Nacimiento sandstone is at its surface outcrop. The Ojo Alamo is found at approximately 400 feet. This sandstone is 100'-200' thick. Faulting or fracturing from the Mesa Verde interval to one of the fresh water formations would be highly uncommon, and highly improbable to occur in the San Juan Basin. Offsetting well records within the "area of review" indicate adequate cement isolation between the proposed injection interval and known sources of drinking water or producing intervals. There is no other evidence indicating a hydrological connection between the Mesa Verde interval and the known sources of drinking water.

**XIII Applicants must complete the "proof of Notice"...**  
Texaco has run the following notice in the Farmington Daily Times:

**Legal**

**LEGAL NOTICE  
INTENT TO DISPOSE  
OF PRODUCED  
WATER IN THE SUB-  
SURFACE**

Texaco Exploration and Production Inc. is requesting approval to convert the H. J. Loe Federal B No. 2 to a water disposal well. The well is located in Sec 23, T29N, R12W at 1850' FNL & 3210' FEL, Unit Letter "G" of San Juan County, New Mexico. The proposed injection interval is within the Mesa Verde Group in the Cliff House and Point Lookout formations. (3250'-3400', 4000', 4200'). The average daily injection rate is anticipated to be 200 BWPD, with a maximum rate of 1000 BWPD. This surface injection pressure is estimated to be at or below 1800 psi. Any questions regarding this notice should be addressed to Ted A. Tipton, Texaco Exploration and

**Legal**

Production Inc. 3300 N. Butler, Ste 100, Farmington, NM 87401. Interested parties must file objections or request for hearing with the Oil Conservation Division, PO Box 2088, Santa Fe, NM 87501 within 15 days.

Legal No 28945 published in the Farmington Daily Times, Farmington, New Mexico on Sunday, Monday, Tuesday and Wednesday, February 9, 10, 11 and 12, 1992.

**IN THE DISTRICT  
COURT FOR  
SAN JUAN COUNTY  
STATE OF NEW  
MEXICO**

**IN THE MATTER OF  
THE ESTATE OF  
ORVILLE SCHERER,  
deceased.**

No. PB-92-7-3

**NOTICE TO  
CREDITORS**

Raymond L. Hill has been appointed Personal Representative of the Estate of Orville Scherer, deceased. All persons having claims against this estate are required to present their claims within two months after the

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