

**SANTA FE**  
EXPLORATION COMPANY

OIL CONSERVATION DIVISION  
RECEIVED

MAY 13 1992

(505) 623-2733  
P. O. Box 1136  
ROSWELL, NEW MEXICO 88202

May 13, 1992

Oil Conservation Division  
P. O. Box 2088  
Santa Fe, New Mexico 87501

Re: State 32 #1  
Sec. 32, T-23-S, R-38-E  
Stateline Ellenburger Field  
Lea County, New Mexico

Gentlemen:

Please find enclosed and submitted for your approval one original and one copy of Santa Fe Exploration Company's Application for Authorization to Inject (Form C-108) which covers the referenced well. Also included are the necessary attachments per the application instructions.

At this time Santa Fe Exploration Company also requests a 30-day temporary permit to dispose of produced water into this well. This will allow us to test the ability of the formation to take water. We have certified, per the application, our belief that this will in no way endanger any surrounding production or any known underground sources of drinking water. We further request this permit to be effective immediately.

Thank you for your consideration and assistance in this matter.

Sincerely,

**SANTA FE EXPLORATION COMPANY**

Richard C. Gilliland  
Petroleum Engineer

/rcg

cc: Mr. Jerry Sexton  
Oil Conservation Division  
P. O. Box 1980  
Hobbs, New Mexico 88240

APPLICATION FOR AUTHORIZATION TO INJECT

- I. Purpose: ☐ Secondary Recovery ☐ Pressure Maintenance ☒ Disposal ☐ Storage  
Application qualifies for administrative approval? ☐ yes ☐ no
- II. Operator: Santa Fe Exploration Company  
Address: P. O. Box 1136, Roswell, New Mexico 88202-1136  
Contact party: Richard C. Gilliland Phone: (505) 623-2733
- 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: Richard C. Gilliland Title Petroleum Engineer  
Signature: Richard C. Gilliland Date: May 1, 1992
- \* 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. X. All logs were submitted by Chevron following  
D&C operations.

## 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.

**ATTACHMENT III: FORM C-108.III - WELL DATA**

A.1. Lease Name: State 32  
Well Number: 1  
Legal Location: Unit N, 660' FSL & 1980' FWL  
Section 32, T-23-S, R-38-E  
Lea County, New Mexico

2. (See attached Schematic)

Surface: 11 3/4" casing set at 490' with 300 sacks of Class "C" cement (circ.). Hole size is 15".

Intermediate: 8 5/8" casing set at 3413' with 1800 sacks of Class "C" cement (circ.). Hole size is 11".

Production: 5 1/2" casing set at 12,234' with 450 sacks of Class "C" cement. Hole size is 7 7/8". Top of cement is approximately 10,380' as determined by CBL.

3. & 4. Tubing and Packer Detail:

Qty.	Description	M.D.(feet)
-	KB Elevation Correction	13.00
1	2 7/8" EUE X 2 3/8" EUE swedge with 2 3/8" coupling	0.74
1	2 3/8" EUE X 2 3/8" PH-6 Hydrill sub	0.44
380 jts	2 3/8", 5.95#/ft, N-80 PH-6 Hydrill tbg	11,928.04
1	2 3/8" PH-6 Hydrill box X 2 3/8" EUE pin sub	0.68
1	2 3/8" EUE X 4.5" O.D. tbg. seal divider with Baker 1.562" "F" profile left hand release, nickel and stainless plated	1.63
1	Elder 45A4 Sure-Loc packer, nickel plate Packer set with 17,000 # compression	3.65
Setting Depth:		<u>11,948.18'</u>

B.1. Formation: Stateline Ellenburger

2. Interval: Perforated 12,064'-12,170'

3. Original Use: Well was originally drilled by Chevron (spud date 9/17/65) as Ellenburger producer.

4. Other Perforations: None

5. Next Higher Oil/Gas Zone: Abo producer (depth 8,124-8,160') operated by Lanexco, Inc. in Unit D, Section 4, T-24-S, R-38-E being the Crawford State No. 3.

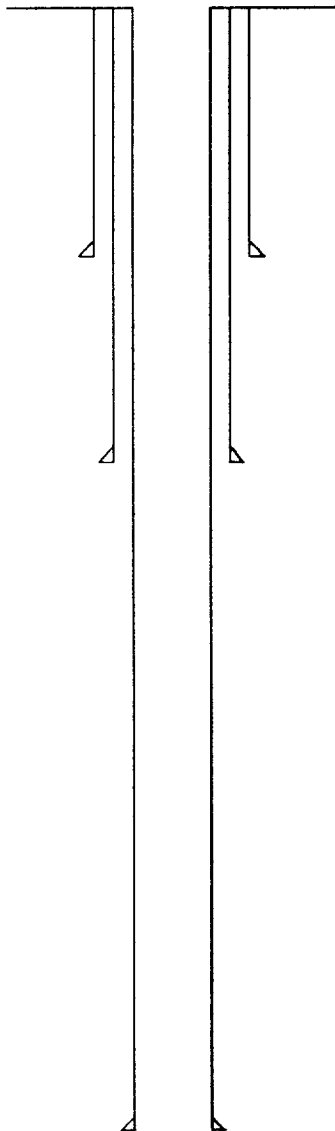
Next Lower Oil/Gas Zone: None in area

OPERATOR: SANTA FE EXPLORATION CO.

LEASE & WELL NO.: STATE 32 #1

LOCATION: UNIT N. 660' FSL & 1980' FWL, SEC. 32, T-23-S, R-38-E, LEA COUNTY

WELLBORE SCHEMATIC



Well Type:

Spud Date: 9/17/65

Interval: 12,064-170

Shot: 1 ISPF

Acid: 1500 GAL MCA

Hole Size.....	15 "
Casing Size...	11 3/4 "
Depth Set.....	490 '
Cement.....	300 SX.
TOC.....	CIRC. '

Hole Size.....	11 "
Casing Size...	8 5/8 "
Depth Set.....	3413 '
Cement.....	1800 SX.
TOC.....	CIRC. '

Hole Size.....	7 7/8 "
Casing Size...	5 1/2 "
Depth Set.....	12,234 '
Cement.....	450 SX.
TOC.....	10,380 ' (BY CBL)

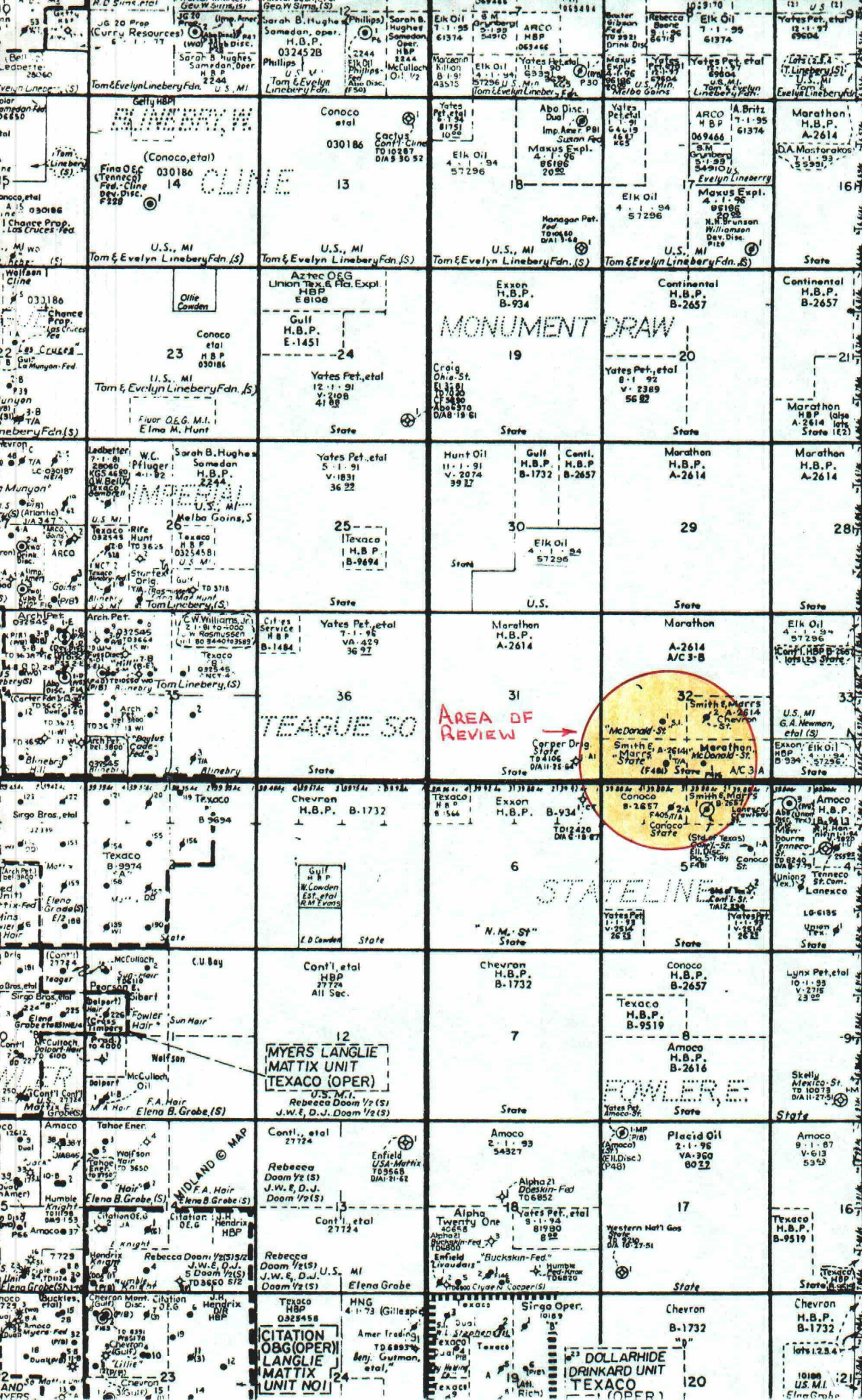
TD: 12,235 '

REMARKS: PREVIOUSLY OPERATED BY CHEVRON AND SMITH & MARRS, INC.

**ATTACHMENT V: FORM C-108.V - AREA MAP**

Attached is a lease map showing all wells and leases within a two mile radius of our proposed disposal well in Lea County, New Mexico. Also shown is a one-half mile radius circle denoting the area of review.





**ATTACHMENT VI: FORM C-108.VI - AREA WELLS**

Attached are schematics on all wells of public record within our area of review which penetrate the proposed disposal zone. This information was retrieved from the files of the Oil Conservation Division - Hobbs, New Mexico District office.

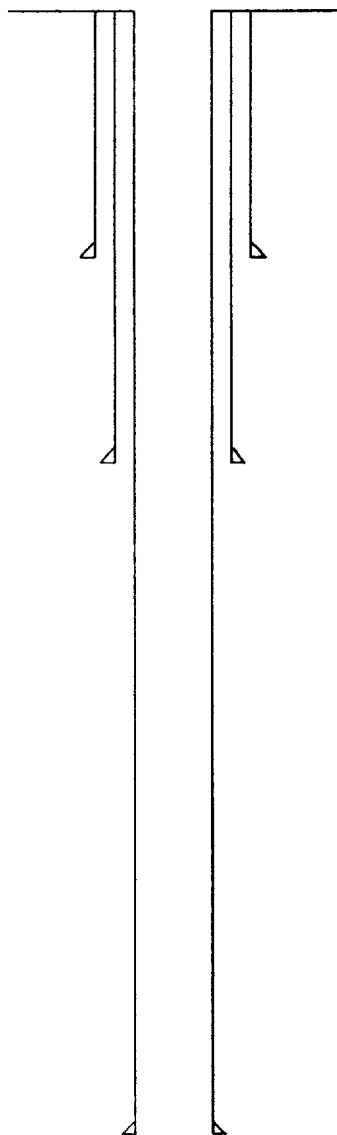


OPERATOR: SANTA FE EXPLORATION CO.

LEASE & WELL NO.: STATE 32 #2

LOCATION: UNIT J, 1980' FSL \* 1980' FEL, SEC. 32, T-23-S, R-38-E, LEA COUNTY

WELLBORE SCHEMATIC



Well Type: SWD (SE)  
Spud Date: 11/17/65  
Interval: 12,152-195'  
Shot: 1 JSPF  
Acid: 4000 GAL.

Hole Size..... 15 "  
Casing Size... 11 3/4 "  
Depth Set..... 481 '  
Cement..... 360 SX.  
TOC..... CIRC.

Hole Size..... 11 "  
Casing Size... 8 5/8 "  
Depth Set..... 3440 '  
Cement..... 750 SX.  
TOC..... CIRC.

Hole Size..... 7 7/8 "  
Casing Size... 5 1/2 "  
Depth Set..... 12,214 '  
Cement..... 475 SX.  
TOC..... (est.) 8,924 '

TD: 12,214'

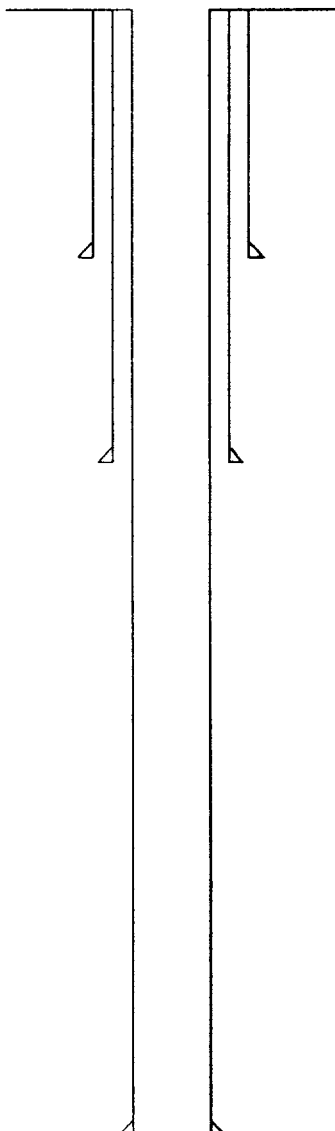
REMARKS: PREVIOUSLY OPERATED BY CHEVRON AND SMITH & MARKS

OPERATOR: MARATHON OIL COMPANY

LEASE & WELL NO.: McDONALD STATE A/C 3-B #1

LOCATION: UNIT K, 1875' FSL & 1875' FWL, SEC. 32, T-23-S, R-38-E, LEA COUNTY

WELLBORE SCHEMATIC



Well Type: PRODUCER (SI)  
Spud Date: 11/29/65  
Interval: 12,044-133  
Shot: 2 TSPF  
Acid: 2850 GAL.

Hole Size..... 17 1/2 "  
Casing Size... 13 3/8 "  
Depth Set..... 469 '  
Cement..... 500 SX.  
TOC..... CIRC.

Hole Size..... 12 1/4 "  
Casing Size... 8 5/8 "  
Depth Set..... 3258 '  
Cement..... 1350 SX.  
TOC..... CIRC.

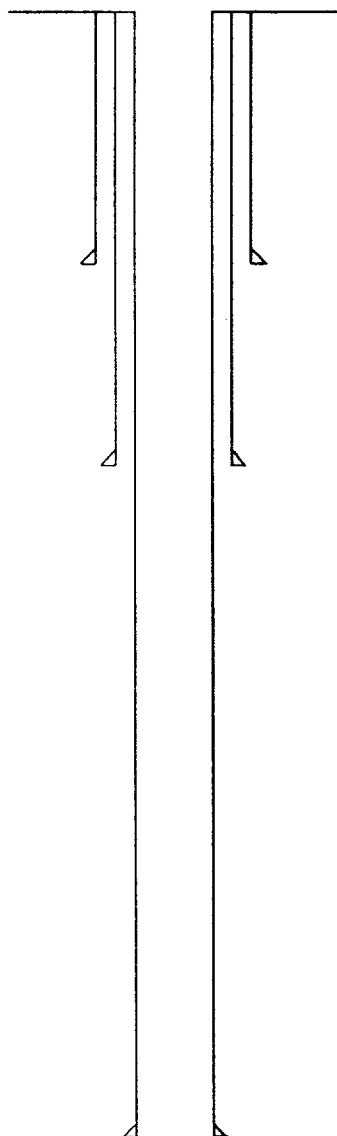
Hole Size..... 8 3/4 "  
Casing Size... 5 1/2 "  
Depth Set..... 12,248 '  
Cement..... 710 SX.  
TOC..... (est.) 8859 '

TD: 12,232 '

REMARKS:

OPERATOR: MARATHON OIL COMPANY	LEASE & WELL NO.: McDONALD STATE A/C 3A #1
LOCATION: UNIT D, 2080' FEL + 560' FSL, SEC. 32, T-23-S, R-38-E, LEA COUNTY	

### WELLBORE SCHEMATIC



Well Type: PRODUCER (SI)  
 Spud Date: 7/27/65  
 Interval: 12,122-171  
 Shot: 1 JSPF  
 Acid: 1100 GAL 15% ACID

Hole Size.....	17 1/2 "
Casing Size...	13 3/8 "
Depth Set.....	473 '
Cement.....	520 SX.
TOC.....	CIRC.

Hole Size.....	12 1/2 "
Casing Size...	9 5/8 "
Depth Set.....	3795 '
Cement.....	1200 SX.
TOC.....	CIRC.

Hole Size.....	8 3/4 "
Casing Size...	5 1/2 "
Depth Set.....	12,186 '
Cement.....	1460 SX.
TOC.....	7,280 ' (TEMP. SURVEY)

TD: 12,187 '

REMARKS:

---



---



---



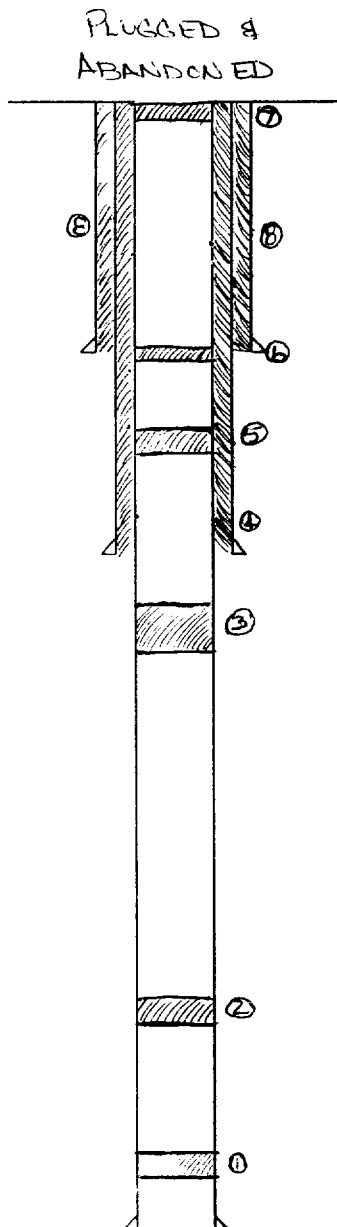
---

OPERATOR: SANTA FE EXPLORATION CO.

LEASE & WELL NO.: CONTINENTAL STATE #1

LOCATION: UNIT B, 860' ENL & 1980' FEL, SEC. 5, T-24-S, R-38-E, LEA COUNTY

# WELLBORE SCHEMATIC



Well Type: PRODUCER (P&A)  
Spud Date: 5/8/65  
Interval: 12,086-140  
Shot: 1 JSPP  
Acid: 1000 GAL. ACID

Hole Size.....	15 "
Casing Size...	11 3/4 "
Depth Set.....	409 '
Cement.....	400 SX.
TOC.....	CIRC '

Hole Size.....	11 "
Casing Size...	8 5/8 "
Depth Set.....	4,208 '
Cement.....	800 SX.
TOC.....	(est) 1000 '

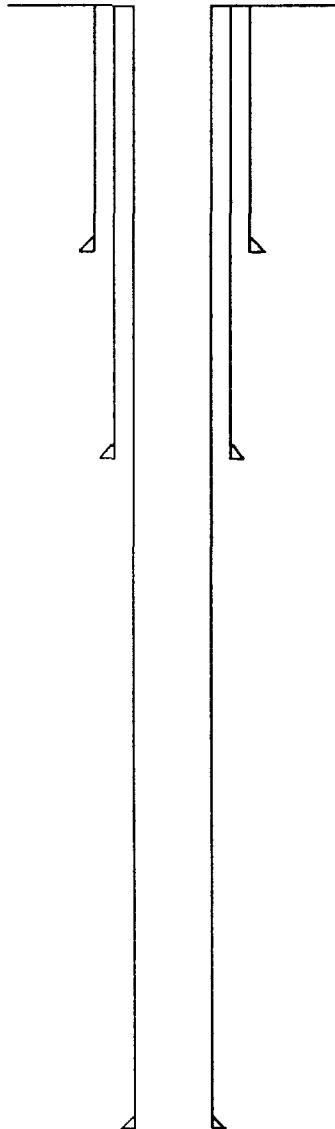
Hole Size.....	7 7/8 "
Casing Size...	5 1/2 "
Depth Set.....	12,161 '
Cement.....	800 SX.
TOC.....	(est) 6,200 '

TD: 12,161 '

REMARKS: 5/89 P&A: ① 80 SX. @ 11,085-11,710 ② 35 SX 8666-9012 ③ 125 SX @ 4460-5696 ④ PERF 5 1/2 @ 4100 & SQUEEZE 8 7/8 CSS. SHOE @ 4107 W/ 50 SX. ⑤ 30 SX @ 1296-1592 ⑥ PERF 5 1/2 & 8 5/8 @ 425 PUMP 155 SX & SQUEEZE 75 SX INTO FORMATION ⑦ 30 SX @ SURFACE ⑧ SQUEEZE OFF BOTH ANNULUS W/ 130 SX.

OPERATOR: SANTA FE EXPLORATION Co.	LEASE & WELL NO.: STATE A #2
LOCATION: UNIT C, 752' FNL & 2092' FNL, SEC 5, T-24-S, R-36-E, LEA COUNTY	

### WELLBORE SCHEMATIC



Well Type: PRODUCER (T/A)  
 Spud Date: 10/5/65  
 Interval: 12,223-249  
 Shot: 2 JSIF  
 Acid: 2000 GAL. ACID

Hole Size.....	17 1/2	"
Casing Size...	13 3/8	"
Depth Set.....	425	'
Cement.....	300	SX.
TOC.....	CIRC.	'

Hole Size.....	11	"
Casing Size...	8 5/8	"
Depth Set.....	3500	'
Cement.....	550	SX.
TOC.....	CIRC.	'

Hole Size.....	9 7/8	"
Casing Size...	5 1/2	"
Depth Set.....	12,310	'
Cement.....	770	SX.
TOC.....	(est) 9782	'

TD: 12,285'

REMARKS: PREVIOUSLY OPERATED BY CONOCO.

**ATTACHMENT VII: FORM C-108.VII - PROPOSED OPERATION**

1. Our expected maximum daily injection rate is 3,000 BWIPD.
2. Our proposed system is closed.
3. Our expected maximum injection pressure is 2,000 psia.
4. Our source of injection fluid is produced water from the Stateline Ellenburger which we propose to reinject into the Ellenburger formation.
5. N/A. The Ellenburger zone which we propose to dispose into is productive of oil and gas in the area.



**ATTACHMENT VIII: FORM C-108.VIII - GEOLOGIC DATA**

The proposed injection zone is in the Ellenburger carbonate formation which is perforated in this wellbore from 12,064' - 12,170' below the surface.

The only underground drinking water source in the area is the Ogallala formation which lies from the surface to approximately 200 feet below the surface. There are no known sources of drinking water below our proposed zone of injection in the Ellenburger.

**ATTACHMENT: FORM C-108.IX - C-108.XII**

IX. No stimulation program is proposed at this time.

X. All logs have been previously filed with the Oil Conservation Division by the original operator, Chevron.

XI. There are no known fresh water wells within a one-mile radius.

XII. Santa Fe Exploration Company has examined available geologic and engineering data and finds no evidence of open faults or any other hydrologic connection between the disposal zone and any known underground source of drinking water.

**ATTACHMENT XIII: FORM C-108.XIII - PROOF OF NOTICE**

Attached is an Affidavit of Publication from the Hobbs Daily News-Sun, a daily newspaper published in Hobbs, New Mexico, submitted herein as proof of notice publication.

Also attached are copies of the return receipts from the certified notification sent to the offset operators.

The owner of the surface is the State of New Mexico and is hereby notified by submission of this application.

AFFIDAVIT OF PUBLICATION

State of New Mexico,  
County of Lea.

I, Kathi Bearden

of the Hobbs Daily News-Sun, a daily newspaper published at Hobbs, New Mexico, do solemnly swear that the clipping attached hereto was published once a week in the regular and entire issue of said paper, and not a supplement thereof for a period

of \_\_\_\_\_

One weeks.  
Beginning with the issue dated

May 4, 1995  
and ending with the issue dated

May 4, 1995

Kathi Bearden  
General Manager

Sworn and subscribed to before

me this 8 day of

May, 1992

Paula Parrish  
Notary Public.

My Commission expires \_\_\_\_\_

Aug. 5, 1995  
(Seal)

This newspaper is duly qualified to publish legal notices or advertisements within the meaning of Section 3, Chapter 167, Laws of 1937, and payment of fees for said publication has been made.

LEGAL NOTICE

May 4, 1992

"Santa Fe Exploration Company will convert the State 32 well no. 1 located 660' FSL and 1980' FWL of Section 32, Township 23 South, Range 38 East, Lea County, New Mexico to a salt water disposal well. Injection will be into the Stateline Ellenburger formation from 12,064' to 12,170' with expected maximum rates and pressures of 3,000 BWPD and 2,000 psia respectively. Any interested parties must file objections or requests for hearing with the Oil Conservation Division, P.O. Box 2068, Santa Fe, New Mexico 87501 within 15 days.

SANTA FE  
EXPLORATION  
COMPANY  
Richard C. Gilliland

**SENDER:**

- Complete items 1 and/or 2 for additional services.
- Complete items 3, and 4a & b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt Fee will provide you the signature of the person delivered to and the date of delivery.

I also wish to receive the following services (for an extra fee):

1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

**3. Article Addressed to:**

Exxon Company, U.S.A.  
Attn: Land Dept.  
P. O. Box 1600  
Midland, TX 79702

**4a. Article Number**

P 145 006 072

**4b. Service Type**

- |   |   |
|---|---|
| <input type="checkbox"/> Registered           | <input type="checkbox"/> Insured                        |
| <input checked="" type="checkbox"/> Certified | <input type="checkbox"/> COD                            |
| <input type="checkbox"/> Express Mail         | <input type="checkbox"/> Return Receipt for Merchandise |

**7. Date of Delivery**

MAY 11 1992

**5. Signature (Addressee)****6. Signature (Agent)****8. Addressee's Address (Only if requested and fee is paid)**

PS Form 3811, November 1990 ★ U.S. GPO: 1991-287-066

**DOMESTIC RETURN RECEIPT**

P 145 006 072

EXXON COMPANY USA  
P.O. BOX 1600  
MIDLAND, TX 79702

.75  
1.00

1.00

2.75



**SENDER:**

- Complete items 1 and/or 2 for additional services.
- Complete items 3, and 4a & b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt Fee will provide you the signature of the person delivered to and the date of delivery.

I also wish to receive the following services (for an extra fee):

1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

**3. Article Addressed to:**

Marathon Oil Company  
P. O. Box 552  
Midland, TX 79702  
  
Attn: Land Dept.

**4a. Article Number**

P 145 006 077

**4b. Service Type**

- ☐ Registered ☐ Insured  
☒ Certified ☐ COD  
☐ Express Mail ☐ Return Receipt for Merchandise

**7. Date of Delivery** 11 1992

**5. Signature (Addressee)**

**8. Addressee's Address (Only if requested and fee is paid)**

**6. Signature (Agent)**

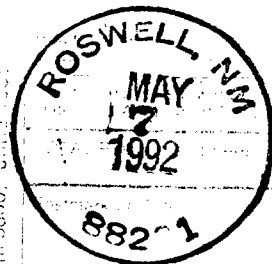
*Sammy Gutierrez*

PS Form 3811, November 1990 \*U.S. GPO: 1991-287-086

**DOMESTIC RETURN RECEIPT**

P 145 006 077

MARATHON OIL COMPANY  
PO Box 552  
MIDLAND, TX 79702  
.75  
1.00



1.00

2.75





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

BRUCE KING  
GOVERNOR

ay 18, 1992

POST OFFICE BOX 1980  
HOBBS, NEW MEXICO 88241-1980  
(505) 393-6161

OIL CONSERVATION DIVISION  
P. O. BOX 2088  
SANTA FE, NEW MEXICO 87501

RE: Proposed:

MC \_\_\_\_\_  
DHC \_\_\_\_\_  
NSL \_\_\_\_\_  
NSP \_\_\_\_\_  
SWD X SWD-478  
WFX \_\_\_\_\_  
PMX \_\_\_\_\_

Gentlemen:

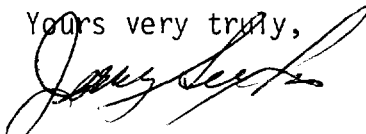
I have examined the application for the:

Santa Fe Explor. Co.	State 32 #1	Unit N	32-23-38
Operator	Lease & Well No.	Unit	S-T-R

and my recommendations are as follows:

OK

Yours very truly,

  
Jerry Sexton  
Supervisor, District 1

/ed