



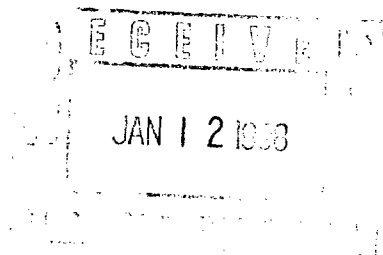
SWD 2/3/98  
691

P.O. BOX 8206  
WICHITA FALLS,  
TEXAS 76307-8206  
TELEPHONE (940) 716-5100  
PRODUCTION FAX (940) 716-5110  
WELL LOG FAX (940) 716-5180  
LAND FAX (940) 716-5210  
ACCOUNTING FAX (940) 716-5150  
EXPLORATION FAX (940) 716-5170

January 9, 1998

Oil Conservation Division  
PO Box 2088  
Santa Fe, New Mexico 87501

Re: State #1 SWD  
Section 16, T9S-R37E  
Lea County, New Mexico



Gentlemen:

Enclosed is Cobra Oil & Gas Corporation's Application For Authorization to Inject for the above captioned well. The State #1 SWD well was drilled by IP Petroleum in 1992 as a Devonian test and plugged as a dry hole in April 1992. Both the surface and intermediate casing strings remain intact. Upon approval, Cobra intends to drill out the three cement plugs in the 8 $\frac{5}{8}$ " intermediate casing and one cement plug in the open hole. This well will be utilized for the purpose of disposing of produced Devonian water from Cobra's State 16 #1Y well. Due to the high costs of trucking produced water to a disposal facility, this disposal well is critical to prolonging the producing life of the State 16 #1Y by significantly reducing the operating costs associated with trucking the produced water.

Thank you for your consideration of this application. Should you require additional information, please advise.

Sincerely Yours,

A handwritten signature in black ink that reads "Rory Edwards". The signature is written in a cursive, flowing style.

Rory Edwards  
Production Supervisor

RRE:sg  
Enclosures  
LTR395



P.O. BOX 8206  
WICHITA FALLS,  
TEXAS 76307-8206  
TELEPHONE (940) 716-5100  
PRODUCTION FAX (940) 716-5110  
WELL LOG FAX (940) 716-5180  
LAND FAX (940) 716-5210  
ACCOUNTING FAX (940) 716-5150  
EXPLORATION FAX (940) 716-5170

---

January 9, 1998

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

Re: State #1 SWD  
Section 16, T9S-R37E  
Lea County, New Mexico

Gentlemen:

On January 9, 1998, Cobra Oil & Gas Corporation mailed to Mr. M.J. Harvey Jr., offset leasehold operator and Mr. David Bilbery, surface owner, copies of the Application For Authorization to Inject for the above captioned proposed disposal well. Cobra Oil & Gas Corporation has under lease the North Half of Section 21, and all of Section 16, T9S-R37E. Mr. M.J. Harvey Jr., has under lease the Southwest Quarter of Section 15, T9S-R37E. The Northwest Quarter of Section 15, T9S-R37E is not currently under lease. No other acreage falls within the one-half radius of the area of review for the proposed disposal well.

Should you require additional information, please advise.

Sincerely Yours,

A handwritten signature in black ink that reads "Rory Edwards". The signature is written in a cursive, flowing style.

Rory Edwards  
Production Supervisor

RRE:sg  
Enclosures  
LTR393

P 359 178 665

US Postal Service  
**Receipt for Certified Mail**

No Insurance Coverage Provided.

Do not use for International Mail (See reverse)

PS Form 3800, April 1995

Sent to		DAVID BILBREY
Street & Number		HC 60 BOX 55
Post Office, State, & ZIP Code		CROSS ROADS NM 88114
Postage	\$	.78
Certified Fee		1.10
Special Delivery Fee		1.35
Restricted Delivery Fee		
Return Receipt Showing to Whom & Date Delivered		
Return Receipt Showing to Whom, Date, & Addressee's Address		
TOTAL Postage & Fees	\$	3.23
Postmark or Date		

1-9-98

P 359 178 664

US Postal Service  
**Receipt for Certified Mail**

No Insurance Coverage Provided.

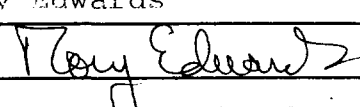
Do not use for International Mail (See reverse)

PS Form 3800, April 1995

Sent to		M J HARVEY JR
Street & Number		PO BOX 12705
Post Office, State, & ZIP Code		DALLAS TX 75225
Postage	\$	.78
Certified Fee		1.10
Special Delivery Fee		1.35
Restricted Delivery Fee		
Return Receipt Showing to Whom & Date Delivered		
Return Receipt Showing to Whom, Date, & Addressee's Address		
TOTAL Postage & Fees	\$	3.23
Postmark or Date		

1-9-98

**APPLICATION FOR AUTHORIZATION TO INJECT**

- I. PURPOSE: Secondary Recovery Pressure Maintenance X Disposal Storage  
Application qualifies for administrative approval? X Yes No
- II. OPERATOR: Cobra Oil & Gas Corporation  
ADDRESS: P.O. Box 8206 Wichita Falls, Texas 76307-8206  
CONTACT PARTY: Rory Edwards PHONE: (940) 716-5100
- III. WELL DATA: Complete the data required on the reverse side of this form for each well processed 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 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 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 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: Rory Edwards TITLE: Production Supervisor  
SIGNATURE:  DATE: 1/9/98
- \* 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 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, PO Box 2088, Santa Fe, NM 87504-2088 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.

# Application for Authorization to Inject

Cobra Oil & Gas Corporation  
State #1 SWD  
1650' FSL & 2150' FEL  
Unit J, Section 16, T9S-R37E  
Lea County, New Mexico

- VI. Attached is a tabulation of all wells of public record that fall within the  $\frac{1}{2}$  mile radius of the proposal salt water disposal well, the State #1 SWD. There is one producing well along with two plugged and abandoned wells within the radius of investigation. The wells each have a good cement seal around their casing shoe to prevent any upward migration of the disposal water into any potable water zone. The State #1 well was drilled as a Devonian test by IP Petroleum Company, Inc. and plugged as a dry hole in April 1992.
- VII. The proposed average daily injection rate for the subject well is 500 BWPD with a maximum daily rate of 5000 BWPD. This will be a closed system with an average pressure of 500 - 1000 psi and a maximum pressure of 2111 psi. Produced Devonian water will be injected in the proposed well. Attached is a letter from Martin Water Laboratories, Inc. indicating there is no incompatibility concerns in injection of Devonian water into the San Andres interval.
- VIII. The disposal zone consists of the San Andres Formation, a 1,450 thick dolomite section, the Glorietta, a 1,382 foot thick dolomite section, the Tubb a 131 foot thick shaly dolomitic sandstone and the Clearfork, a 643 foot thick shaly dolomite. A cement plug from 5,510' - 5,610' will be drilled out and the open hole interval from 4,223' - 7,694' will be utilized as the disposal interval. The main source of drinking water in this area is the Cretaceous Formation, the base of which is approximately 180'. There are of no known sources of drinking water underlying the injection interval.
- 1X. The well will be stimulated with 1000 - 2000 gallons of 20% NEFE HCL if required after a pumpin test.

- X. Log is on file with the Division.
- XI. Attached is an analysis of the water from the Bilbrey water well approximately  $\frac{1}{4}$  mile to the northwest.
- XII. Cobra Oil & Gas Corporation has examined the available geologic and engineering data and can find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water.
- XIII. The required "Proof of Notice" is attached.



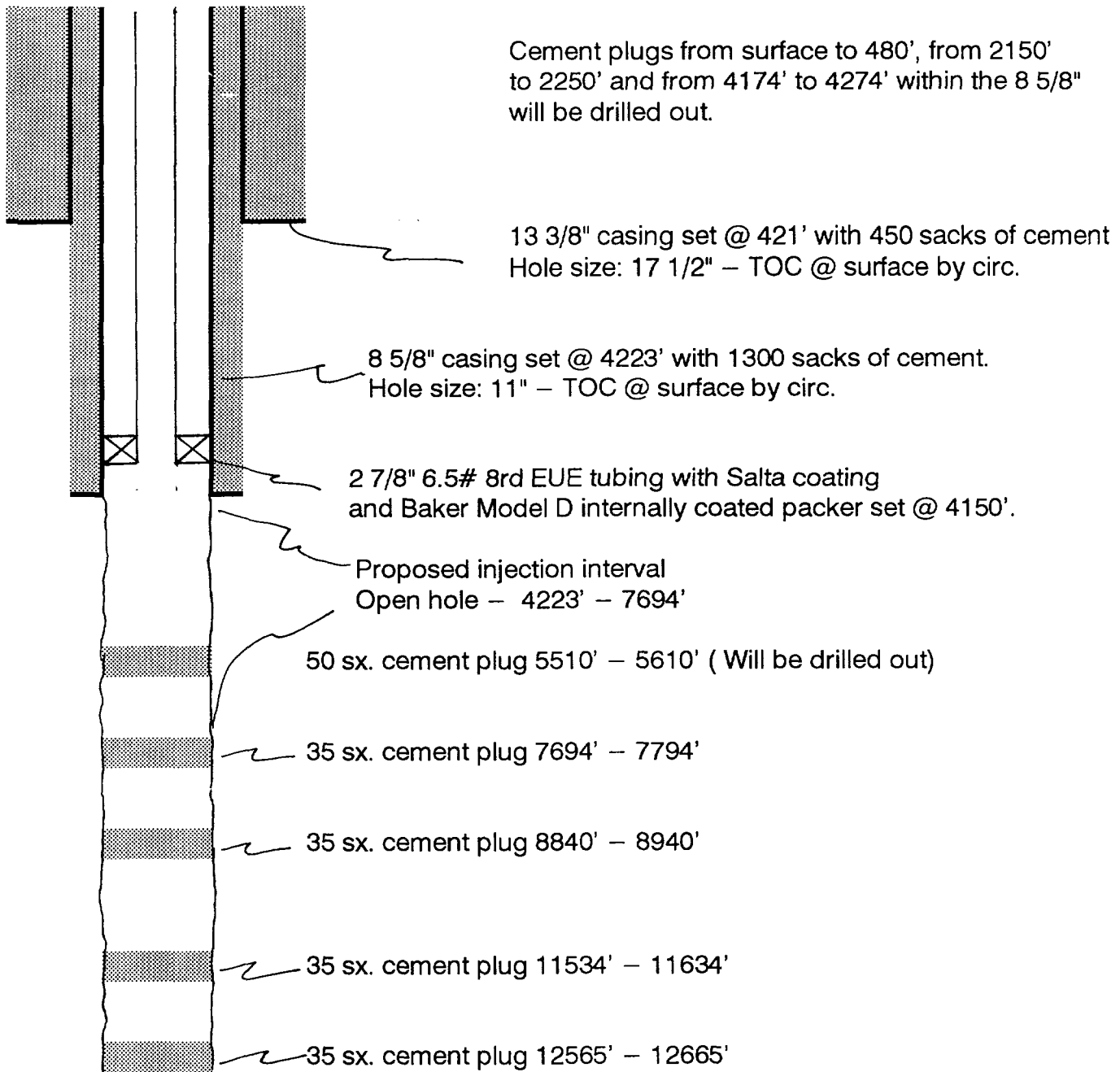
[illegible]



**COBRA OIL & GAS CORPORATION**  
**OFFSET WELLS TO THE STATE #1 SWD**  
**WITHIN A ONE-HALF MILE RADIUS**

WELL	LOCATION	SURFACE CASING	INTER. CASING	PROD. CASING	TD	STATUS
Ike Lovelady, Inc. Santa Fe, State #1 Spud 2/6/81	Section 16, T9S-R37E Unit N 660' FLS & 1,980' FWL	8 5/8" @ 433' Cement w/250 sacks TOC @ surface by circ.		4 1/2" @ 5,250' Cement w/1360 sacks TOC @ surface by circ.	5,250'	Perf 5,023' - 30 - Set CIBP @ 5,010' Perf 4,917' - 4,979' P & A 11/11/81 Schematic Attached
Cobra Oil & Gas Corp. State 16 #1Y Spud 7/24/97	Section 16, T9S-R37E Unit P 330' FSL & 940' FEL	13 3/8" @ 399' Cement w/390 sacks TOC @ surface by circ.	8 5/8" @ 4,301' Cement w/1650 sacks TOC @ surface by circ.	5 1/2" @ 12,551' Cement/675 sacks TOC @ 9,830' by CBL	12,585'	Open hole 12,551' - 12,585' Schematic Attached
Sam Boren Martin "A" State #1 Spud 2/12/69	Section 16, T9S-R37E Unit O 990' FSL & 1,650' FEL	11 3/4" @ 418' Cement w/400 sacks TOC @ surface by circ.	8 5/8" @ 4,242' Cement w/450 sacks TOC @ +/- 2,900' by calc.	Not Run	12,371'	Hole junked & abandoned w/DP lost in hole P & A 4/19/69 Schematic Attached
I.P. Petroleum, Inc. State #1 Spud 2/12/92	Section 16, T9S-R37E Unit J 1650' FSL & 2,150' FEL	13 3/8" @ 421' Cement w/450 sacks TOC @ surface by circ.	8 5/8" @ 4,223' Cement w/1300 sacks TOC @ surface by circ.	Not Run	12,665'	Drilled as Devonian test - Dry hole P & A 4/92 Schematic Attached

COBRA OIL & GAS CORPORATION  
 STATE #1 SWD  
 UNIT J, 1,650' FSL & 2,150' FEL  
 SECTION 16, T9S-R37E  
 LEA COUNTY, NEW MEXICO



Total depth - 12665'. Well plugged and abandoned 4/1992.  
 Hole size: 7 7/8", no production casing was run.

WELL ORIGINALLY DRILLED BY IP PETROLEUM COMPANY, INC. AS THE  
 STATE #1 IN 3/1992. REENTRY TO CONVERT WELL TO SALT WATER DISPOSAL

## INJECTION WELL DATA SHEET

Tubing size – 2 7/8" 6.5# 8rd EUE lined with Salta lining set in a Baker Model D packer at 4150'.  
Other type of tubing/casing seal if applicable \_\_\_\_\_

### Other Data:

1. Is this a new well drilled for injection? \_\_\_\_\_ Yes    X No

If no, for what purpose was the well originally drilled?    Oil Production – Dry Hole

2. Name of injection formation San Andres.

3. Name of field or Pool (if applicable)    W. Sawyer (San Andres)

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.

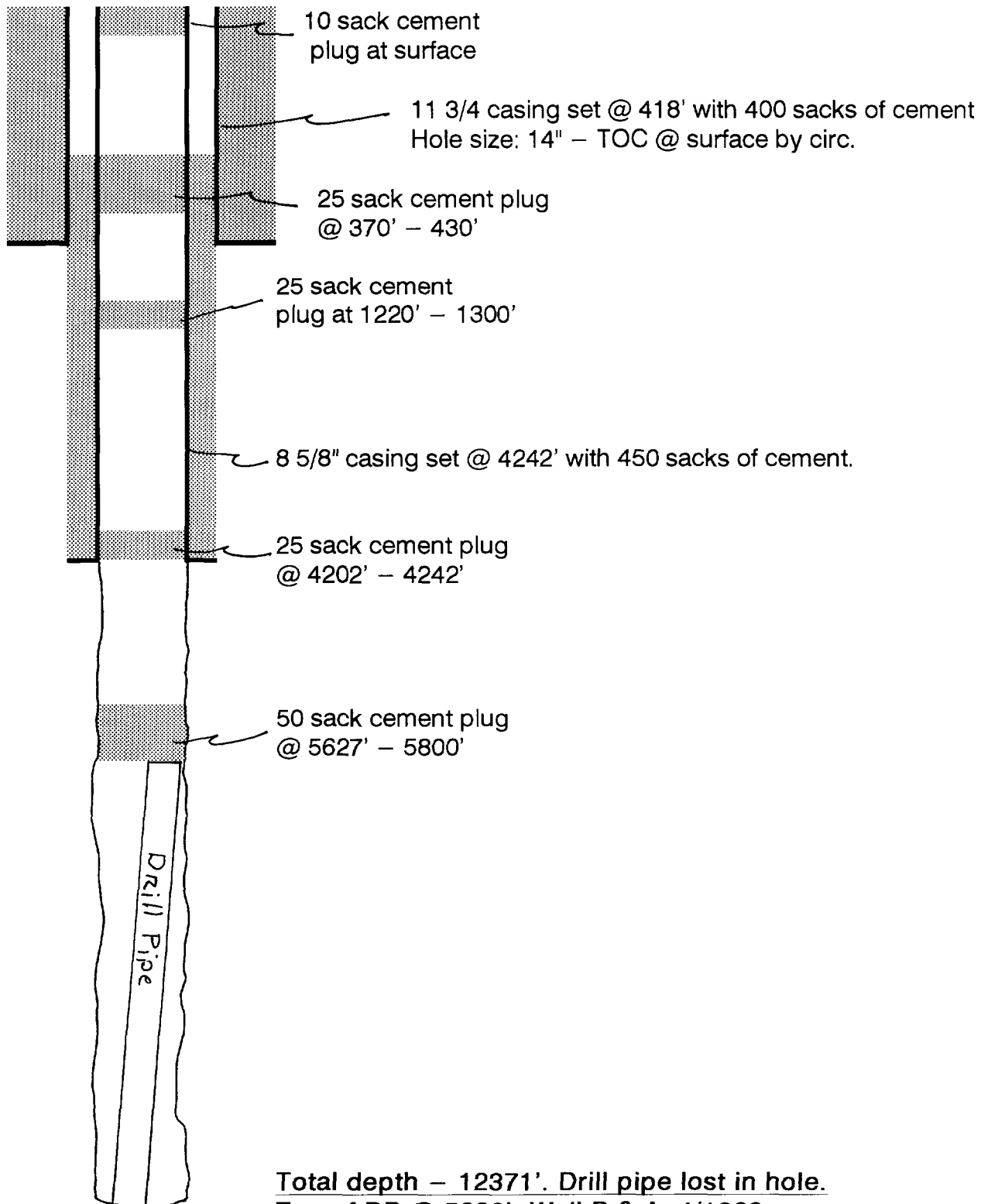
None

5. Give the names and depths of any over or underlying oil or gas zones (pools) in this area.

Devonian    +/- 12500'

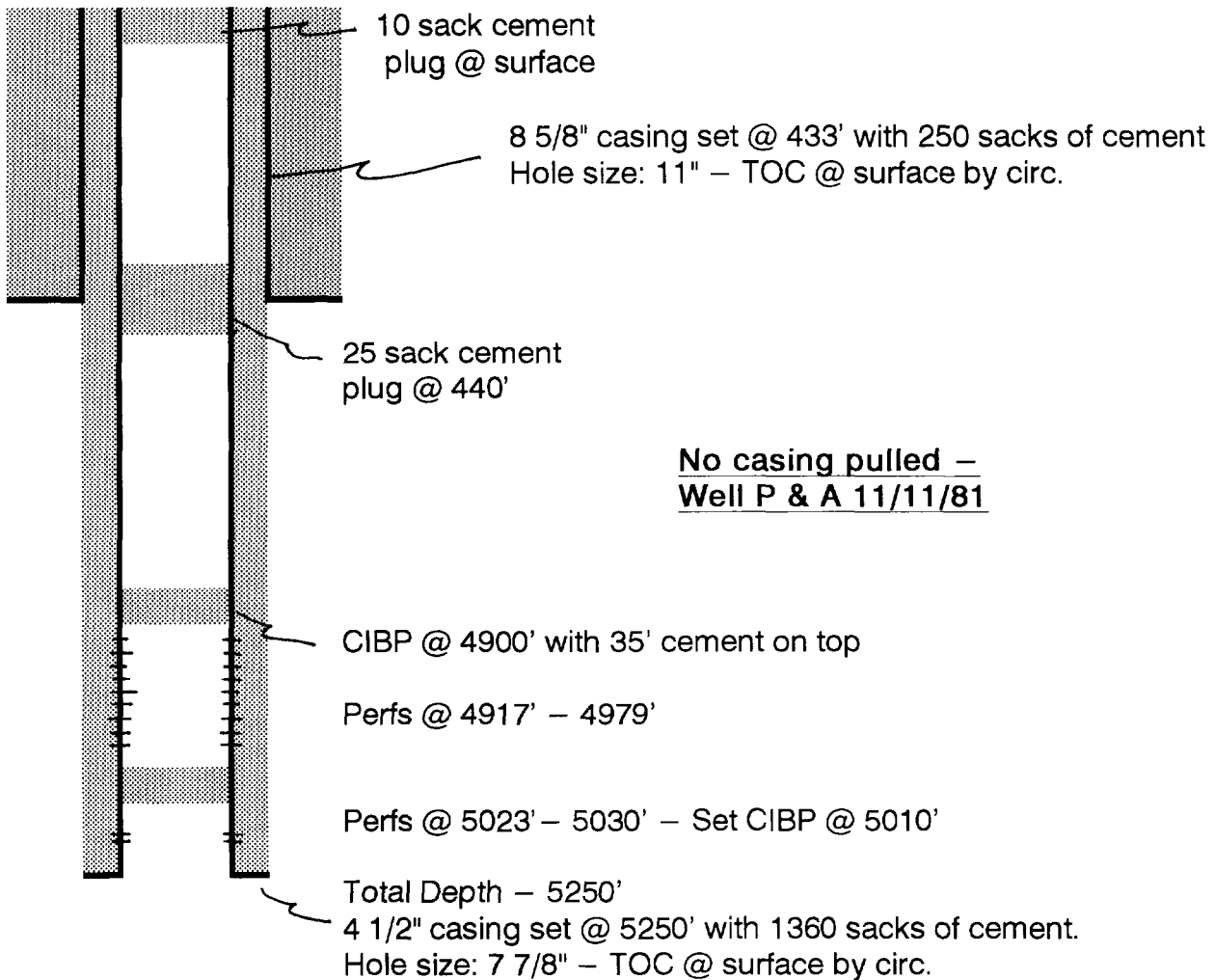
\_\_\_\_\_  
\_\_\_\_\_

SAM BOREN  
MARTIN "A" STATE #1  
UNIT O, 990' FSL & 1,650' FEL  
SECTION 16, T9S-R37E  
LEA COUNTY, NEW MEXICO

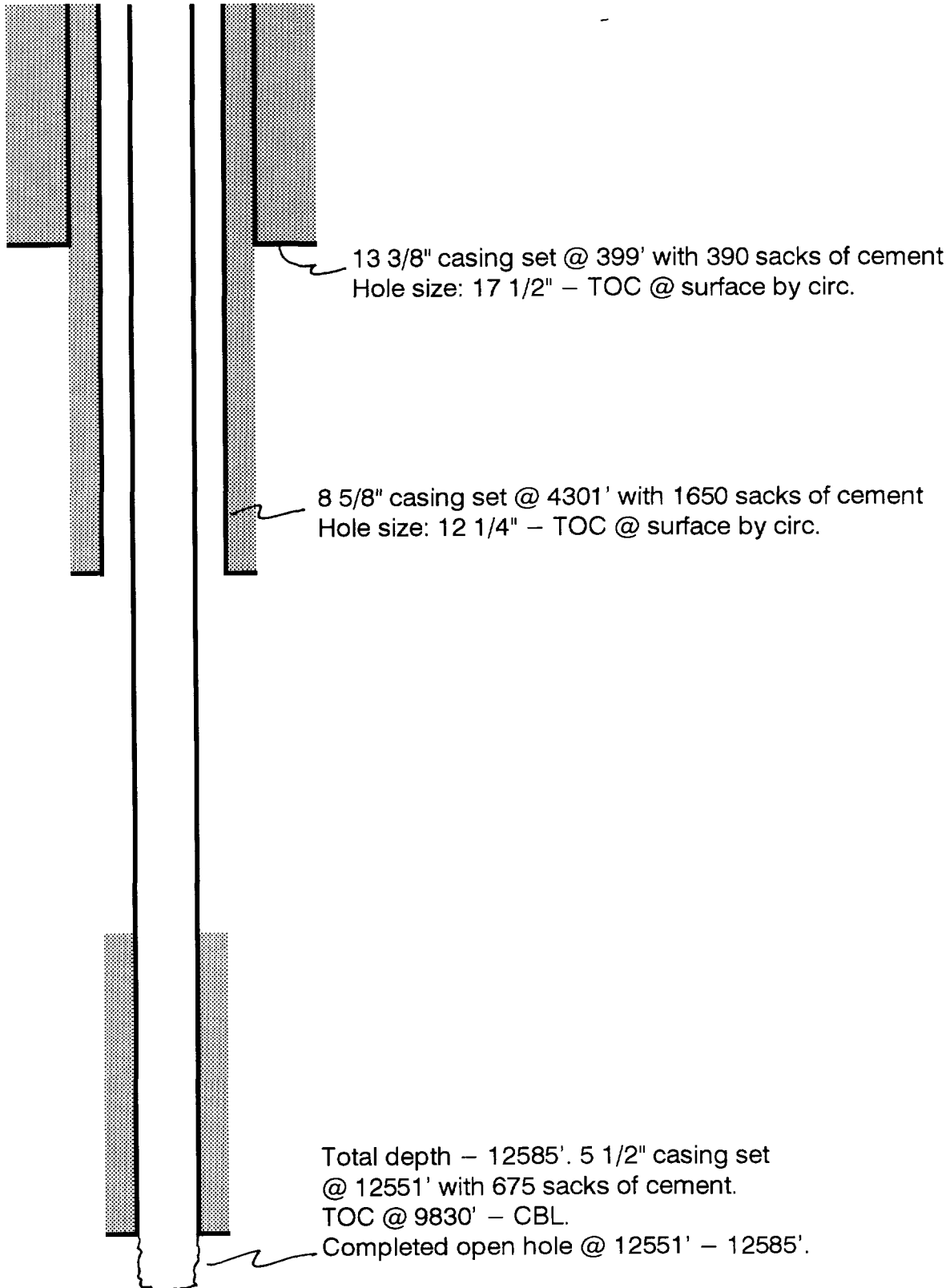




IKE LOVELADY, INC.  
SANTE FE STATE #1  
UNIT N, 660' FSL & 1,980' FWL  
SECTION 16, T9S-R37E  
LEA COUNTY, NEW MEXICO



COBRA OIL & GAS CORPORATION  
STATE 16 #1Y  
UNIT P, 330' FSL & 940' FEL  
SECTION 16, T9S-R37E  
LEA COUNTY, NEW MEXICO





# Affidavit of Publication

STATE OF NEW MEXICO           )  
  ) ss.  
COUNTY OF LEA                )

Joyce Clemens       being first duly sworn on oath deposes and says that he is Adv. Director of THE LOVINGTON DAILY LEADER, a daily newspaper of general paid circulation published in the English language at Lovington, Lea County, New Mexico; that said newspaper has been so published in such county continuously and uninterruptedly for a period in excess of Twenty-six (26) consecutive weeks next prior to the first publication of the notice hereto attached as hereinafter shown; and that said newspaper is in all things duly qualified to publish legal notices within the meaning of Chapter 167 of the 1937 Session Laws of the State of New Mexico.

That the notice which is hereto attached, entitled  
..... Notice Of Produced Water Disposal .....  
..... Well .....

and numbered ..... ~~XXXXXX~~ .....

..... ~~Court of Lea~~  
~~County, New Mexico~~ was published in a regular and  
entire issue of THE LOVINGTON DAILY LEADER and  
not in any supplement thereof, ~~once each week on the~~  
~~same day of the week~~, for ..... one (1) day .....  
~~consecutive weeks~~ beginning with the issue of .....  
..... December 24 ..... 19 97 .....

and ending with the issue of .....  
..... December 24 ..... 19 97 .....

And that the cost of publishing said notice is the  
sum of \$ 12.31 .....

which sum has been (Paid) (Assessed) as Court Costs

*Joyce Clemens*

Subscribed and sworn to before me this ..... 24th  
day of ..... December ..... 19 97 .....

*Jean Lemmer*  
Notary Public, Lea County, New Mexico

My Commission Expires ..... Sept. 28 ..... 19 98 .....

## LEGAL NOTICE NOTICE OF PRODUCED WATER DISPOSAL WELL

Cobra Oil and Gas Corporation,  
2201 Kell Blvd., Wichita Falls,  
Texas 76308-1000, (940) 716-  
5100, contact Rory Edwards, has  
made application for a produced  
water disposal well with the New  
Mexico Oil Conservation Division.  
The well, known as the State #1  
SWD, is located 1,650' FSL and  
2,150' FEL, Section 16, T9S-  
R37E, Lea County, New Mexico.  
Disposal will be into the San  
Andres Zone, open hole, from  
4,223' to 7,694'. Maximum rate is  
anticipated to be 5,000 BWPD  
with a maximum pressure of 2,111  
psig. Interested parties must file  
objections or request for hearing  
with the New Mexico  
Conservation Division, P.O. Box  
2088, Santa Fe, New Mexico  
87504 within fifteen (15) days of  
this notice.  
Published in the Lovington Daily  
Leader December 24, 1997.



P. O. BOX 1468  
MONAHANS, TEXAS 79756  
(915) 943-3234 or 563-1040

**Martin Water Laboratories, Inc.**

WATER CONSULTANTS SINCE 1953  
BACTERIAL AND CHEMICAL ANALYSES

709 W. INDIANA  
MIDLAND, TEXAS 79701  
(915) 683-4521

December 18, 1997

Mr. Rory Edwards  
Cobra Oil & Gas Corp.  
P.O. Box 8206  
Wichita Falls, TX 76307-8206

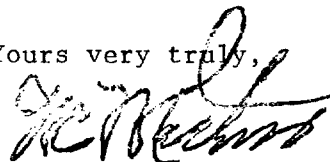
Dear Mr. Edwards:

This letter is in response to your request for a compatibility evaluation between Devonian and San Andres in the area of Section 16, T-9S & R-37E in Lea county New Mexico. We have examined our area records for representative waters from these two intervals and find the nearest Devonian to be in the Crossroads field and San Andres in the Buckshot field. The objective is to evaluate the possibility of injecting Devonian into the San Andres interval.

Based on a comparison of the above two waters, we have identified no evidence of any incompatibility between our area records of Devonian and San Andres. This is to say that based on our representative records, these waters could be combined in most any proportion and not be expected to cause any precipitation or the development of any scaling potential.

In summary of the above, the evidence available is indicating there would be no incompatibility concern in injecting Devonian water into the San Andres interval in the area represented.

Yours very truly,



Waylan C. Martin

WCM/mo