



Coastal Oil & Gas Corporation
a subsidiary of The Coastal Corporation

211 North Robinson
One Leadership Square,
Suite 1700
Oklahoma City, Oklahoma 73102

405/239-7031

June 23, 1989

State of New Mexico
Energy and Minerals Department
P.O. Box 2088
Santa Fe, New Mexico 88210

RECEIVED

JUN 26 1989

OIL CONSERVATION DIV.
SANTA FE

Gentlemen:

Enclosed please find the original and one copy of Form C-108, Application for Authorization to Inject, regarding the proposed conversion of the Coastal Oil and Gas Corporation operated Marr No. 1. This well is located in the Sawyer San Andres, West Field, Section 33, T9S-R37E, Unit Letter P.

Copies of this application have been sent to Santa Fe Energy Operating Partners L.P., and Bison Petroleum Corporation as well as the surface owners Agnes E. Kelso, Calvin H. Lewis and Raymond M. Lewis by registered mail on June 14, 1989.

I discussed this application to re-inject produced water with Mr. Jerry Sexton in your Hobbs office. Mr. Sexton said that due to the low volume of water that is to be re-injected Coastal should make application to inject as a disposal well. The only water that is to be injected is produced San Andres water from offset wells, and it will be returned to the San Andres.

Administrative approval of this disposal application is requested.

If you have any question or require further information, please advise.

Sincerely,

Kevin R. Black
Petroleum Engineer

Attachments

KRB/lb

AFFIDAVIT OF PUBLICATION

State of New Mexico,
County of Lea.

I, George W. Moore

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

June 14, 19 89
and ending with the issue dated

June 14, 19 89

George W. Moore
Publisher.

Sworn and subscribed to before

me this 2/30 day of

June, 19 89

Robert Morris
Notary Public.

My Commission expires _____

September 30, 19 89
(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.

3d **LEGAL NOTICE**
June 14, 1989
Coastal Oil & Gas Corporation intends to convert to Salt Water Disposal the Coastal operated Marr #1, Section 33, T-9-S, R-37-E, Unit Letter P, Lea County, New Mexico. Disposal will be into the San Andres formation from 4985' to 5020' at a maximum rate and pressure of 350 BWPD and 950 psi.
Interested parties must file objections or requests for hearings within 15 days to the following:
Oil Conservation Division
P.O. Box 2088
Santa Fe, NM 87501
If you have any questions concerning this application please contact the following:
Coastal Oil & Gas Corporation
Mr. Kevin R. Black
211 N. Robinson
One Leadership Square, Suite 1700
Oklahoma City, OK 73102
(405) 239-7031

APPLICATION FOR AUTHORIZATION TO INJECT

- I. Purpose: Secondary Recovery Pressure Maintenance Disposal Storage
Application qualifies for administrative approval? yes no
- II. Operator: Coastal Oil & Gas Corporation
Address: 211 N. Robinson, One Leadership Sq., Ste. 1700, Oklahoma City, OK 73102
Contact party: Kevin R. Black Phone: 405-239-7031
- 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: Kevin R. Black Title Petroleum Engineer

Signature:  Date: 6-14-89

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.

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.

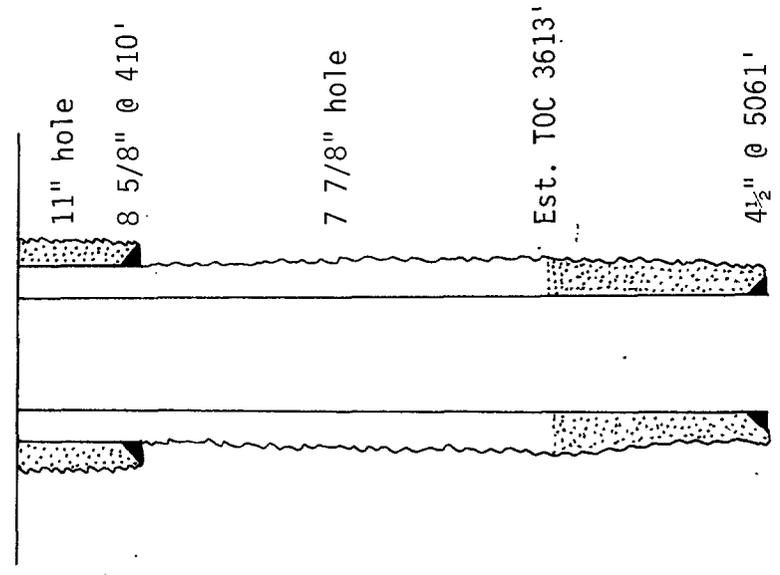
Coastal Oil & Gas Corporation
OPERATOR

Marr
LEASE

1 660' FS&EL
WELL NO. FOOTAGE LOCATION

33 SECTION 9-S TOWNSHIP 37-E RANGE

Schematic



Tabular Data

Surface Casing
 Size 8 5/8" " Cemented with 350 sx.
 TOC Surface feet determined by Visual
 Hole size 11" _____

Intermediate Casing
 Size " " Cemented with _____ sx.
 TOC _____ feet determined by _____
 Hole size _____

Long string
 Size 4 1/2" " Cemented with 250 sx.
 TOC 3613' feet determined by Calculation
 Hole size 7 7/8" _____
 Total depth 5061' _____

Injection interval
 5038 feet to 5050 feet &
 4985 feet to 5020 feet
 (perforated or open-hole, indicate which)

Tubing size 2 3/8" 4.7#/ft lined with Salta PVC (material) set in a

Baker AD-1 packer at 4935 feet
(brand and model)

(or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation San Andres

2. Name of Field or Pool (if applicable) Sawyer San Andres, West

3. Is this a new well drilled for injection? Yes No
If no, for what purpose was the well originally drilled? Oil 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) No

5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.

All wells in the area are San Andres producers or injectors.

Marr No. 1

VII. Proposed Operation.

1. We anticipate the average injection rate and pressure to be 250 BWPD at 750 psi. Anticipated maximum rate and pressure would be 350 BWPD at 950 psi.
2. This is a closed system.
3. The fluid to be injected is produced San Andres water from offset wells in the same field. Injection will be back into the San Andres formation.

VIII. The recommended injection zone in the subject well occurs in the San Andres dolomite from 4985' to 5020'. This zone is some 737' below the top of the San Andres formation.

The lithologic description of the injection zone in the Sawyer San Andres, West Field is a tan, gray porous dolomitic zone that grades and wedges out updip into non-porous anhydrite, limestone, salt and redbeds. These lithofacies represent depositional environments ranging from subtidal (lagoonal) to supratidal (sabha) sequences. The field is a westward trending extension of the Levelland-Slaughter (San Andres) Fields which also produce oil and gas from the porous, dolomitic Slaughter zone within the San Andres.

The Ogallala is the underground source of drinking water in this area and ranges in depth from 0 to 350'.

- IX. A low volume matrix acid stimulation will be performed on the well. This stimulation will consist of 2000 to 3000 gallons of 15% HCL.
- X. This well was drilled in 1969 and operated by Coastal States Gas Producing Company. I assume logs were submitted to the State at that time.
- XI. Attached is a chemical analysis from one of the three fresh water wells within one mile of the proposed injection well. The other two fresh water wells are no longer operational.
- XII. I have examined all available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and the Ogallala fresh drinking water zone.

Signed: 

Kevin R. Black
Petroleum Engineer
Coastal Oil & Gas Corporation
June 12, 1989



JUN 7 1989

PETRO-CHEM SERVICES CORP.

P. O. BOX 10160

MIDLAND, TEXAS 79702

(915) 682-5025

JUN 9

API WATER ANALYSIS REPORT FORM

Company COASTAL OIL & GAS CORP.		Sample No.		Date Sampled 05/31/89	
Field SAWYER		Legal Description		County or Parish State	
Lease or Unit		Well FRESH #1	Depth	Formation	Water, B/D
Type of Water (Produced, Supply, etc.)			Sampling Point		Sampled By

DISSOLVED SOLIDS

CATIONS

	mg/l	me/l
Sodium, Na (calc.)	1088.3	47.3
Calcium, Ca	200.5	10.0
Magnesium, Mg	145.8	11.9
Barium, Ba		

ANIONS

Chloride, Cl	2002.2	56.4
Sulfate, SO ₄	475.0	9.89
Carbonate, CO ₃		
Bicarbonate, HCO ₃	183.0	3.0

Total Dissolved Solids (calc.)

4094.8

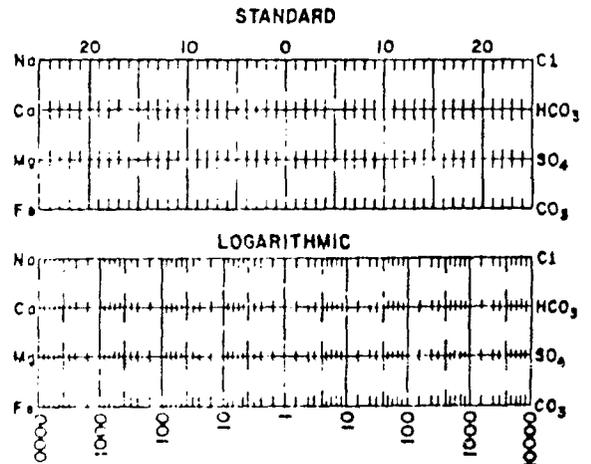
Iron, Fe (total)

Sulfide, as H₂S

OTHER PROPERTIES

pH	7.15
Specific Gravity, 60/60 F.	1.000
Resistivity (ohm-meters) 77° F.	7.0
Total Hardness, CaCO ₃	
Total Alkalinity, CaCO ₃	
Supersaturation, CaCO ₃	

WATER PATTERNS — me/l



REMARKS & RECOMMENDATIONS:

SLIGHT CORROSION

NO SCALE

● **SENDER:** Complete Items 1 and 2 when additional services are desired, and complete Items 3 and 4. Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

1. Show to whom delivered, date, and addressee's address. Restricted Delivery
 ↑(Extra charge)↑ ↑(Extra charge)↑

3. Article Addressed to: Bison Petroleum Corporation 5809 S. Western, Ste 200 Amarillo, TX 79110	4. Article Number P 713 992 259
	Type of Service: <input checked="" type="checkbox"/> Registered <input type="checkbox"/> Insured <input type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail
Always obtain signature of addressee or agent and DATE DELIVERED.	
5. Signature - Addressee X <i>Linda Osborn</i>	8. Addressee's Address (ONLY if requested and fee paid)
6. Signature - Agent X	
7. Date of Delivery 6/16/89	

PS Form 3811, Mar. 1987 * U.S.G.P.O. 1987-178-268 **DOMESTIC RETURN RECEIPT**

● **SENDER:** Complete Items 1 and 2 when additional services are desired, and complete Items 3 and 4. Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

1. Show to whom delivered, date, and addressee's address. Restricted Delivery
 ↑(Extra charge)↑ ↑(Extra charge)↑

3. Article Addressed to: Santa Fe Energy Op. Partners, LP 500 W. Illinois Midland, TX 79701	4. Article Number P713 992 258
	Type of Service: <input checked="" type="checkbox"/> Registered <input type="checkbox"/> Insured <input type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail
Always obtain signature of addressee or agent and DATE DELIVERED.	
5. Signature - Addressee X	8. Addressee's Address (ONLY if requested and fee paid) <i>Same</i>
6. Signature - Agent X <i>W. T. Hane</i>	
7. Date of Delivery 6-16-89	

PS Form 3811, Mar. 1987 * U.S.G.P.O. 1987-178-268 **DOMESTIC RETURN RECEIPT**

● **SENDER:** Complete Items 1 and 2 when additional services are desired, and complete Items 3 and 4. Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

1. Show to whom delivered, date, and addressee's address. Restricted Delivery
 ↑(Extra charge)↑ ↑(Extra charge)↑

3. Article Addressed to: Agnes E. Kelso/Calvin H. Lewis Raymond M. Lewis P.O. Box 123 Bledsoe, TX 79314	4. Article Number P713 992 257
	Type of Service: <input checked="" type="checkbox"/> Registered <input type="checkbox"/> Insured <input type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail
Always obtain signature of addressee or agent and DATE DELIVERED.	
5. Signature - Addressee X	8. Addressee's Address (ONLY if requested and fee paid)
6. Signature - Agent X <i>Jane Lewis</i>	
7. Date of Delivery 6-17-89	

PS Form 3811, Mar. 1987 * U.S.G.P.O. 1987-178-268 **DOMESTIC RETURN RECEIPT**

Date May 25, 1989

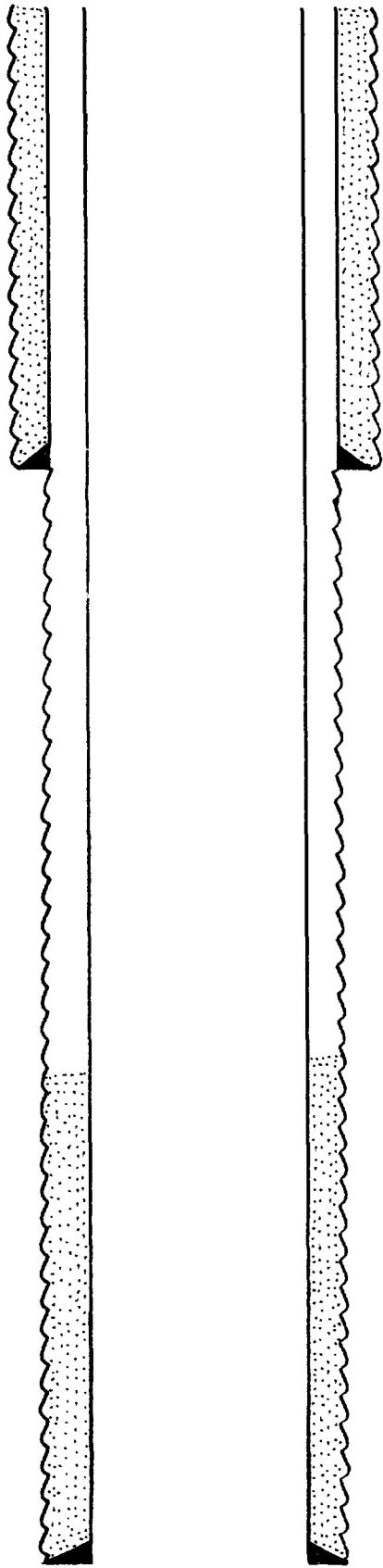
Lease Susco 3 State Well No. 1 Operator Bison Petroleum Corp.

Location 660 ft. from North Line & 460 ft. from West Line, Sec. 3, ~~XXX~~.

Survey T-10-S, R-37-E County Lea State New Mexico

Elevation 3967.2 GR Remarks Spud Date: 11-24-81

STATUS
Active Oil Producer



12 $\frac{1}{2}$ " Hole

8 5/8" Csg. Set @ 450'

Cmt. w/ 250 sacks (circ)

7 7/8" Hole

Est. TOC @ 4500' (calculated)

Perfs: 4969-75', 4977-83'
4995-99', 5002-06'

5 1/2" Csg. Set @ 5100'

Cmt. w/ 200 sacks

Date May 25, 1989

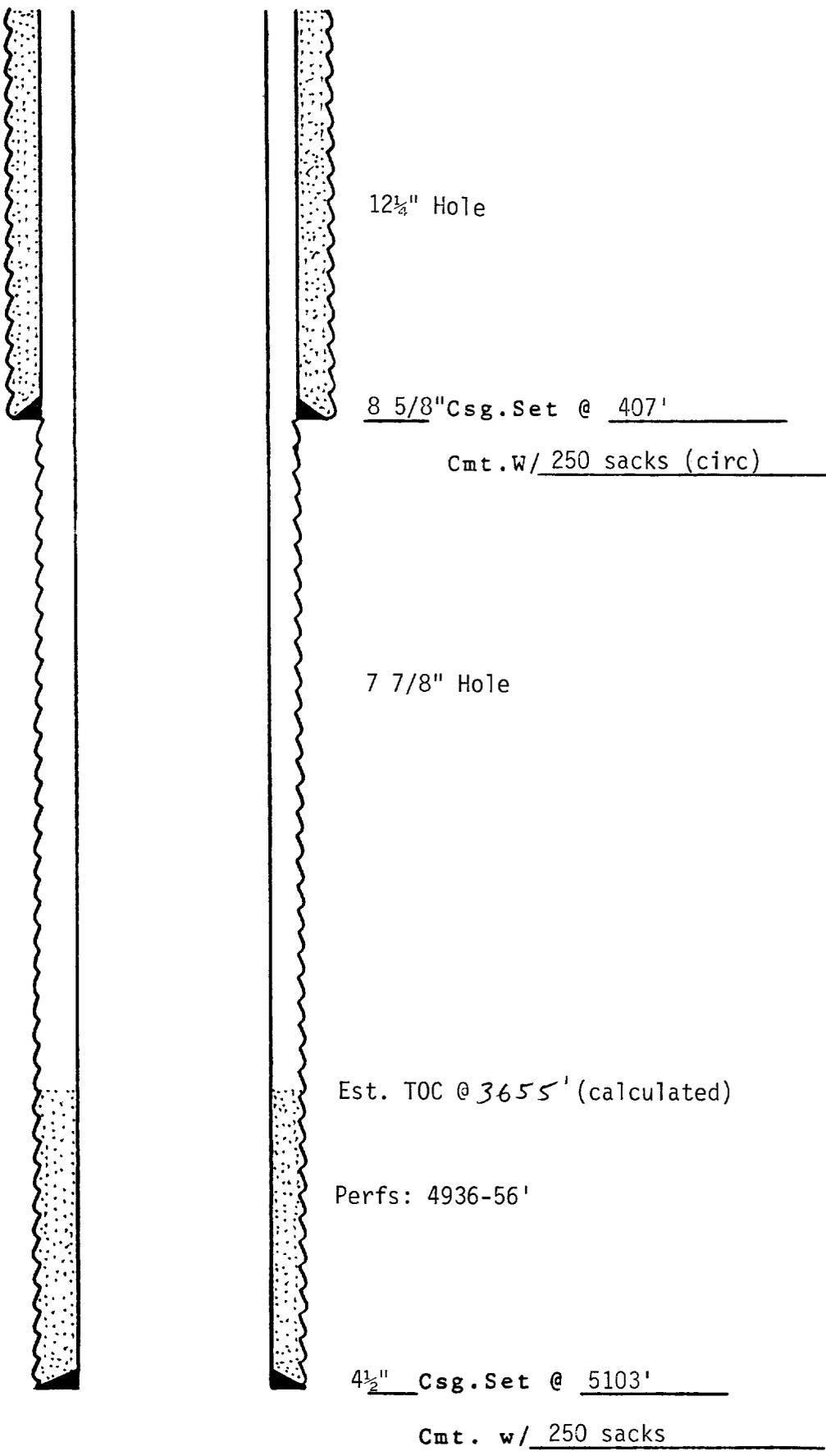
Lease SFPRR Well No. 1 Operator Santa Fe Energy Operating Partners, L.P.

Location 660 ft. from South Line & 1980 ft. from West Line, Sec. 33, Blk. _____

~~Survey~~ T-9-S, R-37-E County Lea State New Mexico

Elevation 3968' KB Remarks Spud Date: 3-9-70

STATUS
Active Oil Producer



Date May 25, 1989

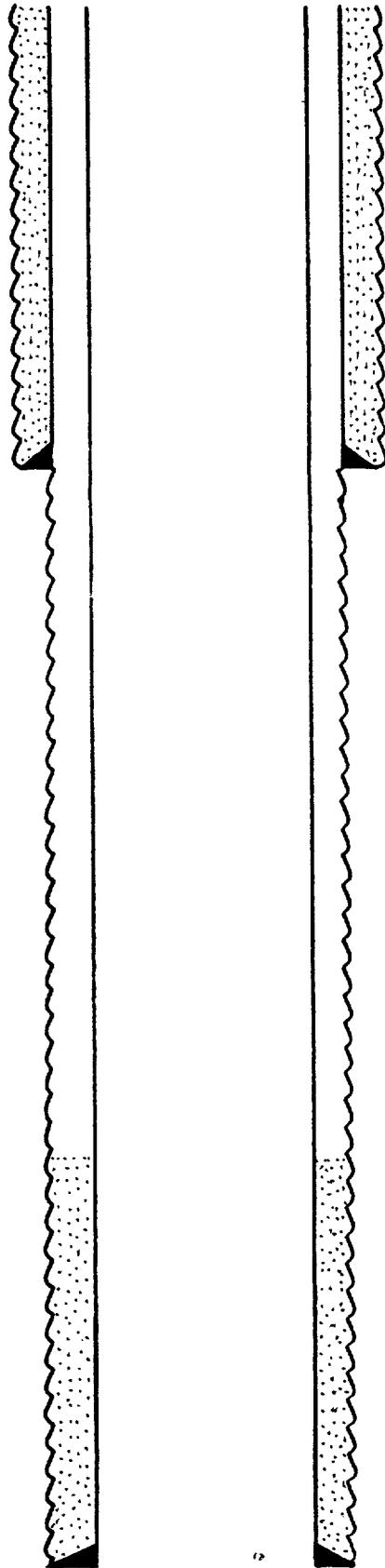
Lease Rich Unit Well No. 1 Operator Santa Fe Energy Operating Partners, L.P.

Location 1980 ft. from South Line & 560 ft. from West Line, Sec. 34, T9S, R37E

Survey T-9-S, R-37-E County Lea State New Mexico

Elevation 3996' KB Remarks Spud Date: 5-19-70

STATUS
Active Oil Producer



12 $\frac{1}{4}$ " Hole

8 5/8" Csg. Set @ 414'

Cmt. w/ 300 sacks

7 7/8" Hole

Est. TOC @ 3602' (calculated)

Perfs: 4986-94'
4998-5014'

4 $\frac{1}{2}$ " Csg. Set @ 5050'

Cmt. w/ 250 sacks

Date May 25, 1989

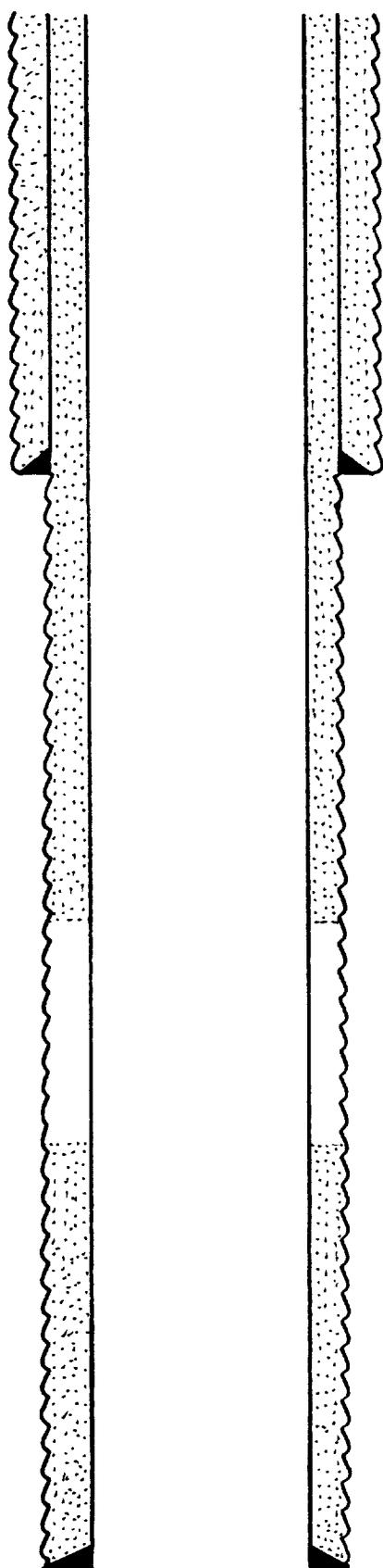
Lease SFPRR Well No. 23 Operator Santa Fe Energy Operating Partners, L.P.

Location 1798 ft. from South Line & 2062 ft. from West Line, Sec. 33, T11N

Survey T-9-S, R-37-E County Lea State New Mexico

Elevation 3967' KB Remarks Spud Date: 9-18-77

STATUS
Active Oil Producer



12 1/4" Hole

"

3 5/8" Csg. Set @ 431'

Cmt. w/ 250 sacks (circ)

7 7/8" Hole

DV Tool @ 2863'

Est. TOC @ 3543' (calculated)

Perfs: 4894-4974'

4 1/2" Csg. Set @ 4991'

Cmt. w/ 250 sacks & 1000 sacks through DV @ 2863'

Date May 25, 1989

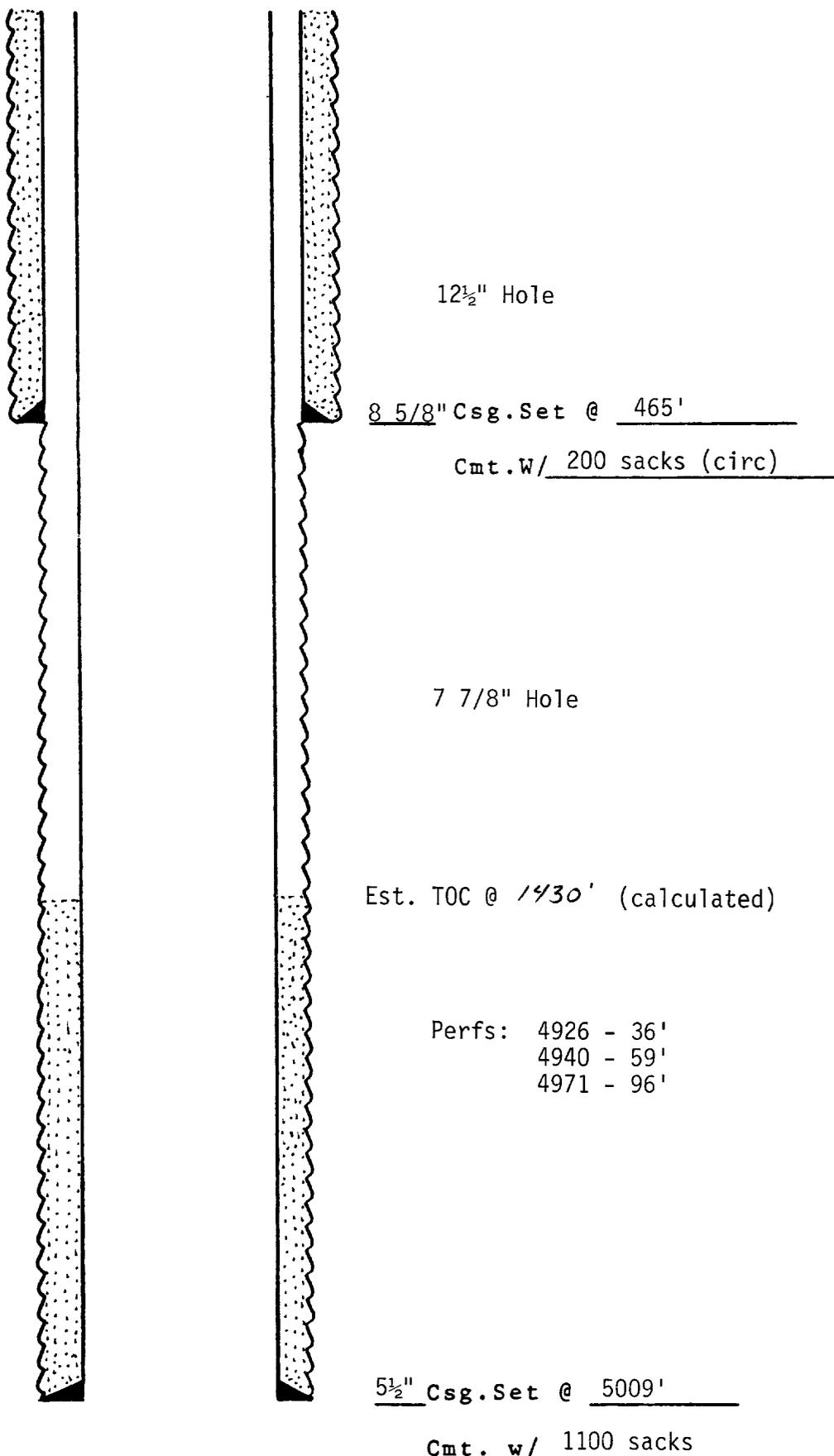
Lease Santa Fe Well No. 6 Operator Coastal Oil & Gas Corp.

Location 560 ft. from South Line & 1980 ft. from East Line, Sec. 33, ~~Blk.~~

Survey T-9-S, R-37-E County Lea State New Mexico

Elevation 3952' GR Remarks Spud Date: 9-25-81

STATUS
Active Oil Producer



Date May 25, 1989

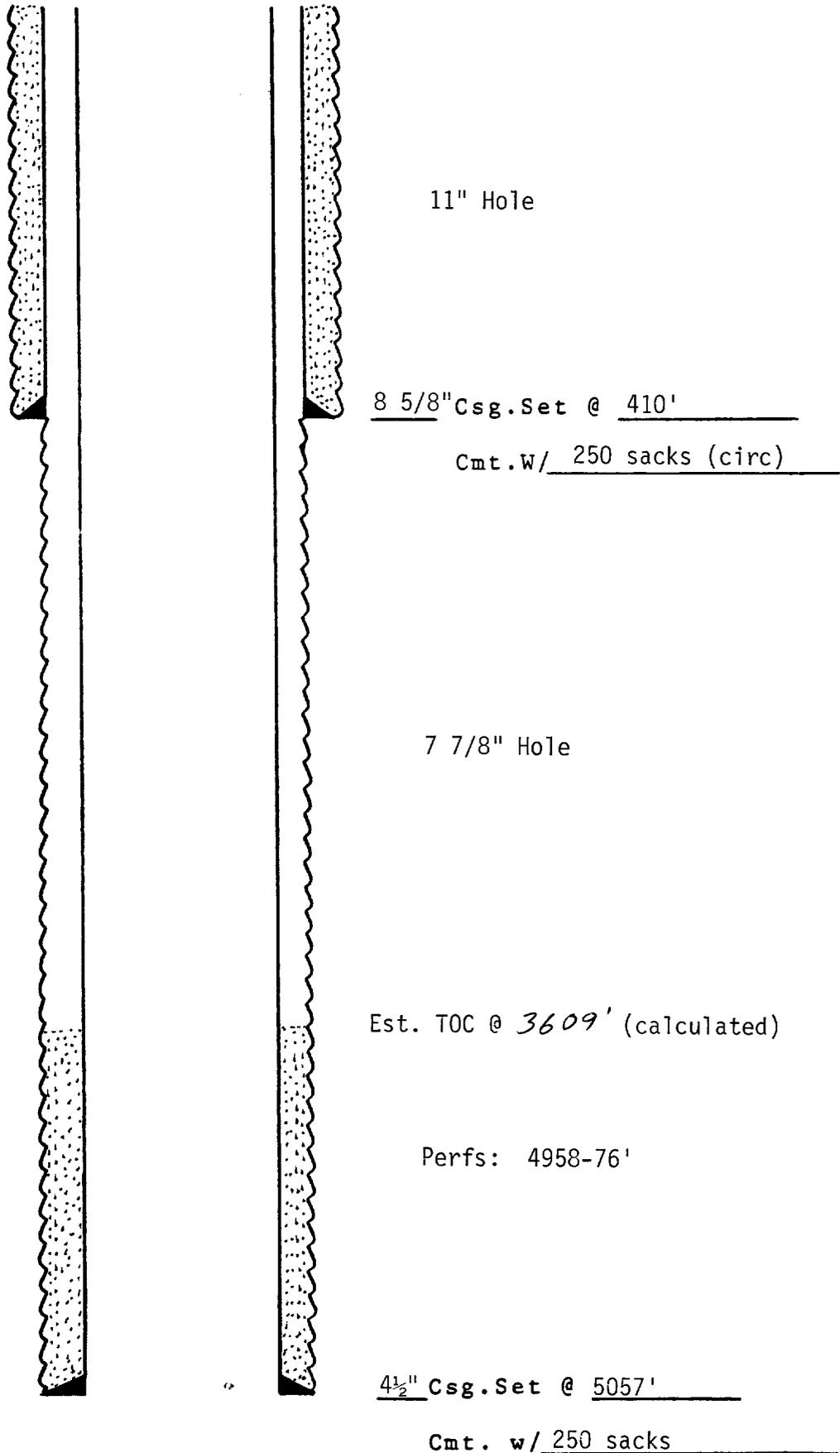
Lease Sawyer State "4" Well No. 1 Operator Coastal Oil & Gas Corp.

Location 660 ft. from North Line & 1980 ft. from East Line, Sec. 4, ~~Blk.~~

~~Survey~~ T-10-S, R-37-E County Lea State New Mexico

Elevation 3966.7' GR Remarks Spud Date: 6-2-69

STATUS
Active Oil Producer



Date May 25, 1989

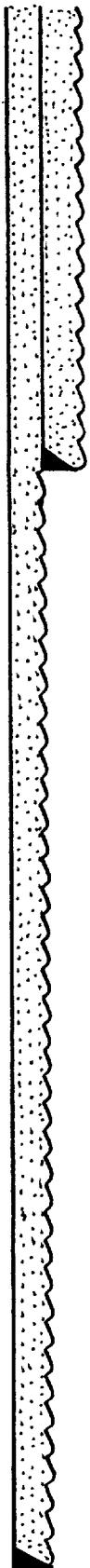
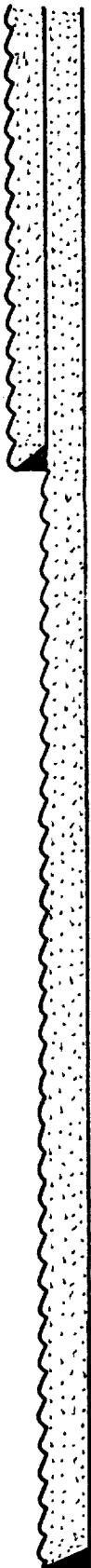
Lease Sawyer State "4" Well No. 2 Operator Coastal Oil & Gas Corp.

Location 660 ft. from North Line & 660 ft. from East Line, Sec. 4, ~~Blk.~~

~~Survey~~ T-10-S, R-37-E County Lea State New Mexico

Elevation 3983' GR Remarks Spud Date: 6-12-81

STATUS
Active Oil Producer



" 12 1/4" Hole

8 5/8" Csg. Set @ 456'
Cmt. w/ 325 sacks (circ)

7 7/8" Hole

Est. TOC @ *surface* (calculated)

Perfs: 4974 - 5010'

5 1/2" Csg. Set @ 5116'
Cmt. w/ 2050 sacks (circ)

Date May 25, 1989

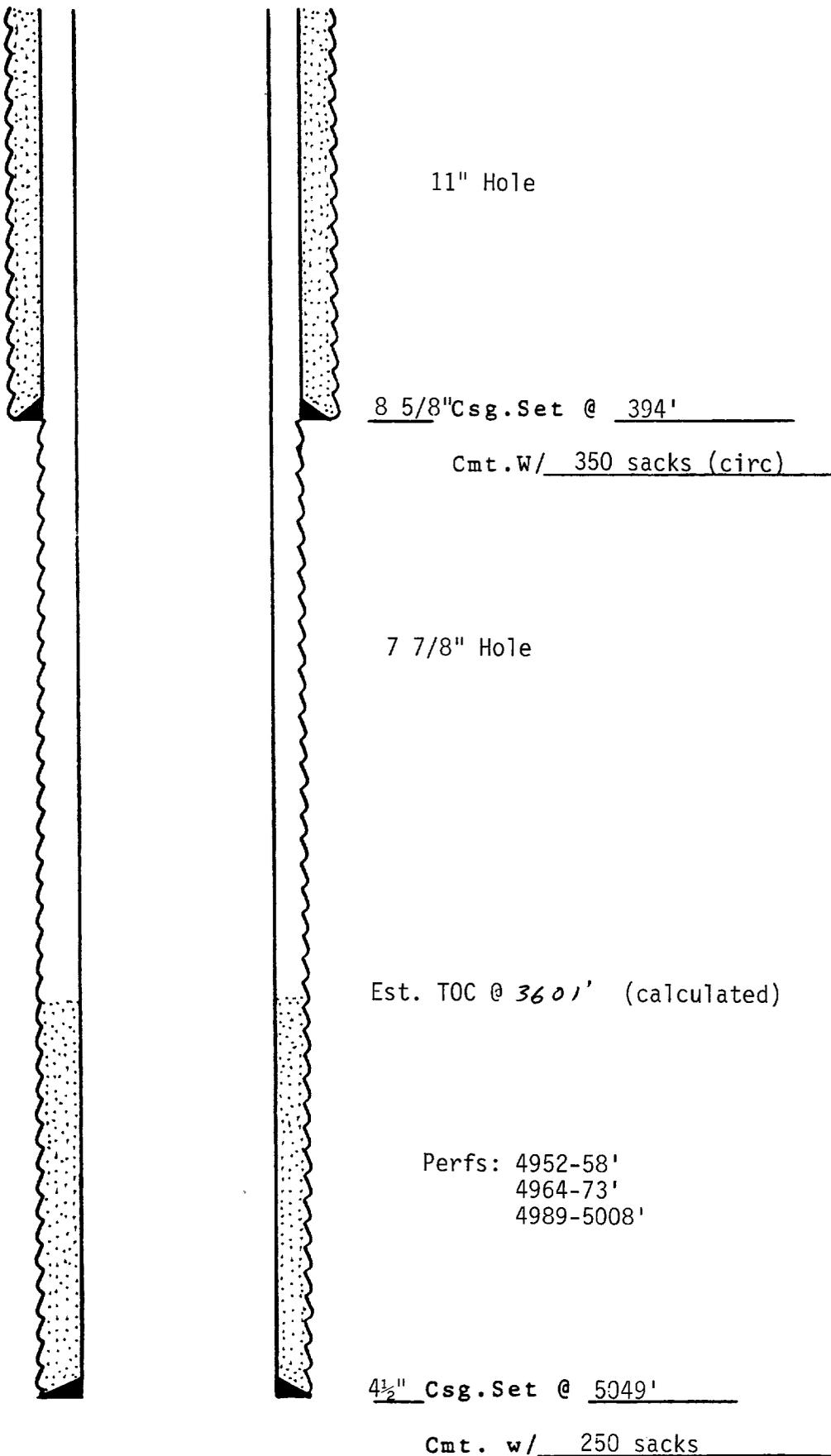
Lease Santa Fe Well No. 4 Operator Coastal Oil & Gas Corp.

Location 1980 ft. from North Line & 660 ft. from East Line, Sec. 33, ~~Rk.~~

Survey T-9-S, R-37-E County Lea State New Mexico

Elevation 3977' GR Remarks Spud Date: 12-16-69

STATUS
Active Oil Producer



Date May 25, 1989

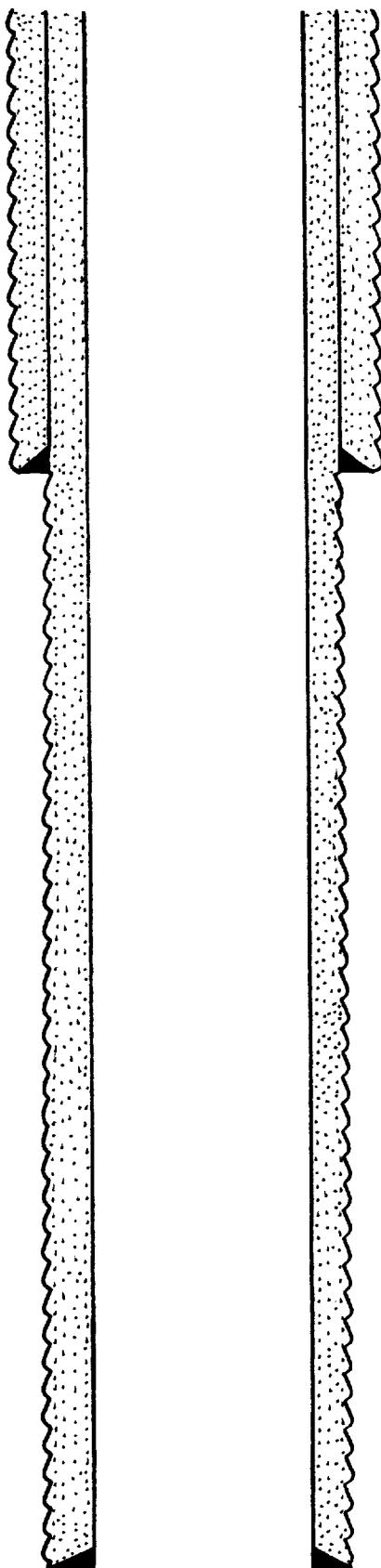
Lease Marr Well No. 4 Operator Coastal Oil & Gas Corp.

Location 660 ft. from South Line & 660 ft. from West Line, Sec. 34, ~~Blk.~~

Survey T-9-S, R-37-E County Lea State New Mexico

Elevation 3975' GR Remarks Spud Date: 5-18-81

STATUS
Active Oil Producer



12 1/4" Hole

8 5/8" Csg. Set @ 472'

Cmt. w/ 275 sacks (circ)

7 7/8" Hole

Est. TOC @ *Surface* (calculated)

Perfs: 4965 - 72'
4980 - 96'
5000 - 12'
5030 - 46'

5 1/2" Csg. Set @ 5104'

Cmt. w/ 1375 sacks (circ)

Date May 25, 1989

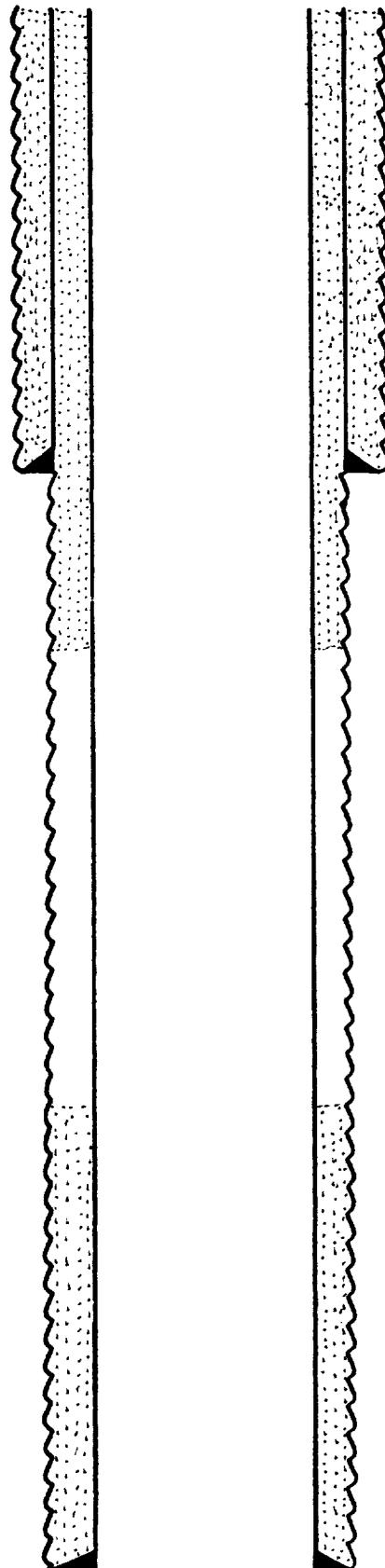
Lease Marr Well No. 3 Operator Coastal Oil & Gas Corp.

Location 1980 ft. from South Line & 660 ft. from East Line, Sec. 33, ~~Bk.~~

Survey T-9-S, R-37-E County Lea State New Mexico

Elevation 3990.2' GRRemarks Spud Date: 5-17-78

STATUS
Active Oil Producer



“
12 1/4" Hole

8 5/8" Csg. Set @ 447'

Cmt. w/ 250 sacks (circ)

DV Tool @ 2087' (700 sx.-circ)

7 7/8" Hole

Est TOC @ 3651' (calculated)

Perfs: 4977 - 83'
4991 - 99'
5018 - 36'

5 1/2" Csg. Set @ 5099'

Cmt. w/ 250 sacks

Date May 25, 1989

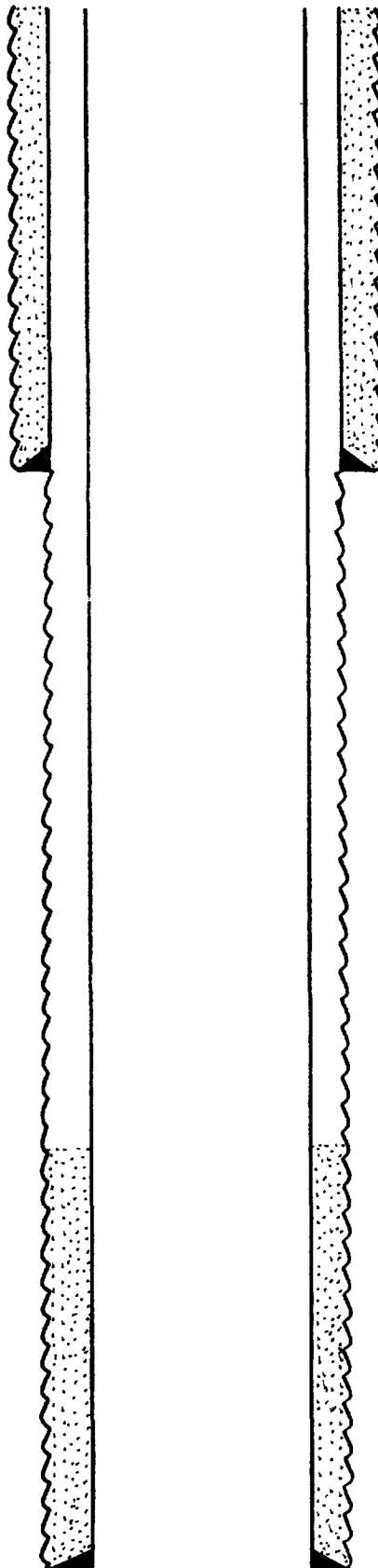
Lease Santa Fe Well No. 3 Operator Coastal Oil & Gas Corp.

Location 1805 ft. from South Line & 1980 ft. from East Line, Sec. 33, T. 9-S, R. 37-E

Survey T-9-S, R-37-E County Lea State New Mexico

Elevation 3954.2' GR Remarks Spud: 10-4-69

STATUS
Active Oil Producer



12 1/4" Hole

8 5/8" Csg. Set @ 434'

Cmt. w/ 350 sacks (circ)

7 7/8" Hole

Est. TOC @ 3557' (calculated)

Perfs: 4928 - 32'
4939 - 43'
4952 - 57'
4970 - 86'

4 1/2" Csg. Set @ 5005'

Cmt. w/ 250 sacks

Date May 25, 1989

Lease Marr Well No. 2 Operator Coastal Oil & Gas Corp.

Location 660 ft. from South Line & 1780 ft. from West Line, Sec. 34, Blk.

Survey T-9-S, R-37-E County Lea State New Mexico

Elevation 3970.8' GR Remarks Spud Date: 2-10-71

STATUS
Dry & Abandoned

