



Coastal Oil & Gas Corporation

RECEIVED
OIL CONSERVATION DIVISION
NOV 12 1990
'90 NOV 19 AM 9 21 *the Energy People*

November 12, 1990

State of New Mexico
Energy and Minerals Department
Oil Conservation Division
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

Attention: David Catanach

Re: Flying "M" (SA) Unit
Notification for pending
C-108 Application,
Lea Co., New Mexico

Dear Mr. Catanach:

Please find enclosed proof of notification for the pending Form C-108, Application for Authorization to Inject, on the Flying "M" (SA) Unit, Tract 13, Well #6.

Per our conversation, a copy of the application was sent to the Commissioner of Public Lands and notice was published in the Hobbs Daily News-Sun.

Sincerely,

Clarence T. Miller
Petroleum Engineer

CTM/lb

AFFIDAVIT OF PUBLICATION

State of New Mexico,
County of Lea.

I, DON TEER

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

NOVEMBER 2, 19 90
and ending with the issue dated

NOVEMBER 2, 19 90



Business Manager.

Sworn and subscribed to before

me this 7th day of

November, 19 90


Notary Public.

My Commission expires _____

JULY 24, 19 91
(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

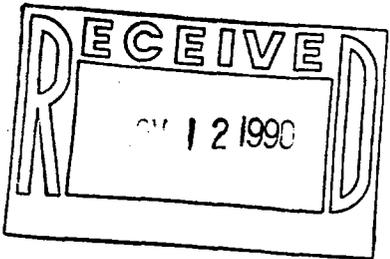
November 2, 1990

Coastal Oil and Gas Corporation intends to convert to water injection the Coastal operated Flying "M" Unit Tract 13 Well No. 6, located 660' FNL and 660' FEL of Section 20, T9S-R33E, Unit letter "A", Lea County, New Mexico. Injection will be to provide pressure maintenance in the San Andres formation from 4407' to 4466' at a maximum rate and pressure of 700 BWPD and 2100 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, N.M. 87501
If you have any questions concerning this application, please contact the following:
Coastal Oil
and Gas
Corporation
211 North Robinson
One Leadership
Square—Suite 1700
Oklahoma City, OK.
73102

Attention:
Mr. Clarence T. Miller
(405) 239-7031



P



CONSERVATION DIVISION
RECEIVED ENERGY

STATE OF NEW MEXICO
AND MINERALS DEPARTMENT

'90 OCT 10 AM 9 39

OIL CONSERVATION DIVISION
HOBBS DISTRICT OFFICE

10-4-90

GARREY CARRUTHERS
GOVERNOR

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 _____
- WFX _____
- PMX _____

Gentlemen:

I have examined the application for the:

Coastal Oil & Gas Corp. Flying M SA Unit TR 13 #6 A 20-9-33

Operator	Lease & Well No.	Unit	S-T-R
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and my recommendations are as follows:

OK

Yours very truly,

Jerry Sexton
Supervisor, District 1

/ed



Coastal Oil & Gas Corporation

The Energy People

RECEIVED DIVISION
OCT 8 AM 8 57

September 28, 1990

State of New Mexico
Energy and Minerals Department
Oil Conservation Division
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

R-3033

Gentlemen:

Please find enclosed a copy of Form C-108, Application for Authorization to Inject, regarding the proposed conversion of the Coastal Oil and Gas Corporation operated Flying "M" (SA) Unit Tract 13 Well #6. This well is located in Section 20, T9S, R33E, and is part of the Flying "M" (SA) Unit Pressure Maintenance Project.

All wells within a one-half mile radius of the proposed conversion are within the unit boundaries, and thus are operated by Coastal Oil and Gas Corporation. The surface is owned by the State and this application to OCD will serve as notice.

Coastal Oil and Gas Corporation requests administrative approval of this application per requirements set forth in Order No. R-3229 which provided for expansion of the pilot pressure maintenance project in the Flying "M" (SA) Unit.

If additional information is needed, please advise.

Sincerely,

Clarence T. Miller
Petroleum Engineer

Enclosures
CTM/lb

APPLICATION FOR AUTHORIZATION TO INJECT

- I. Purpose: Secondary Recovery Pressure Maintenance Disposal Storage
Application qualifies for administrative approval? yes no
- II. Operator: Coastal Oil and Gas Corporation
Address: 211 N. Robinson, Ste 1700, OKC, OK. 73102
Contact party: Clarence T. Miller 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 R-3229 3033.
- 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: Clarence T. Miller Title Petroleum Engineer

Signature: *Clarence T. Miller* Date: September 28, 1990

- * 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 footlane 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.

INJECTION WELL DATA SHEET

SIDE 1

Coastal Oil and Gas Corporation
 OPERATOR

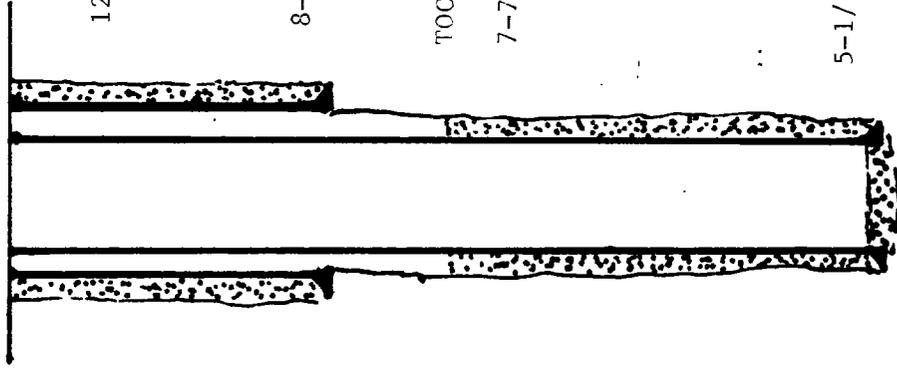
Flying "M" (SA) Unit
 LEASE

Tract 13 #6 660' FNL & 660' FEL
 WELL NO. FOOTAGE LOCATION

20 SECTION

9-S TOWNSHIP 33-E RANGE

Schematic



Tabular Data

Surface Casing

Size 8-5/8", 24#, J-55 " Cemented with 1050 sx.
 TOC Surface feet determined by Visual
 Hole size 12-1/4" to 1783'

Intermediate Casing

Size None " Cemented with sx.
 TOC feet determined by

Hole size

Long string

Size 5-1/2", 15.5#, K-55" Cemented with 745 sx.

TOC 1851' feet determined by Cement Bond Log

Hole size 7-7/8"

Total depth 4480'

Injection interval

5-1/2" CSA 4480'

4407' feet to 4466' feet
 (perforated or open-hole, indicate which)

INJECTION WELL DATA SHEET -- SIDE 2

Tubing size 2-3/8" lined with Plastic set in a

Baker Model AD-1 (material) 4350' packer at _____ feet

(brand and model)
(or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation San Andres (Slaughter zone)

2. Name of Field or Pool (if applicable) Flying "M" (SA)

3. Is this a new well drilled for injection? Yes No

If no, for what purpose was the well originally drilled? Well was originally drilled
in November, 1985 as an oil producer.

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

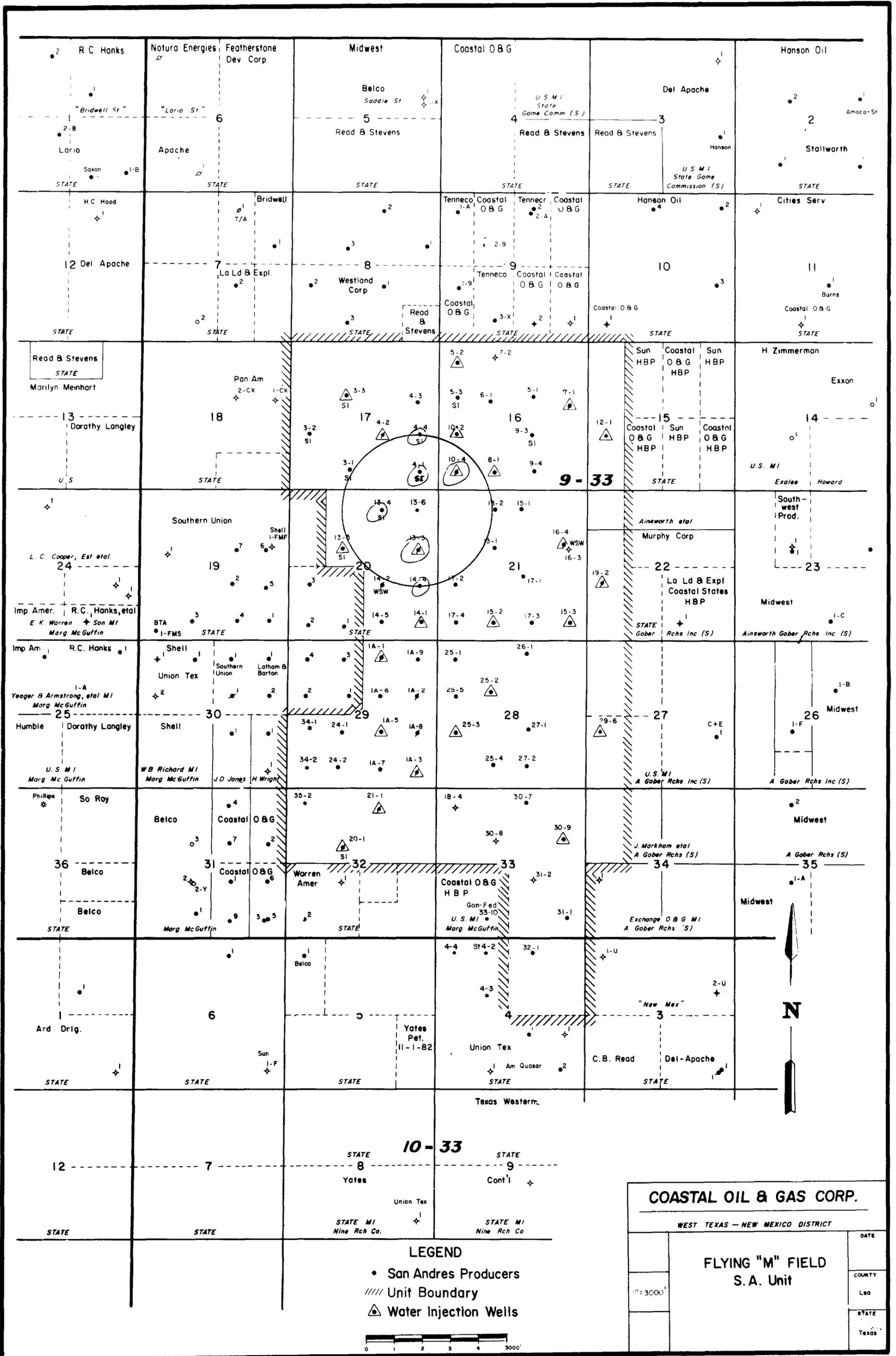
5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in
this area. No overlying oil or gas zones in this area. The ABO formation at a depth of

8600' is oil productive in the area.

Flying "M" Unit Tract 13 #6

- VII Proposed Operation.
1. We anticipate the average injection rate and pressure to be 350 BWPD at 1800 psi. Anticipated maximum rate and pressure would be 700 BWPD at 2100 psi.
 2. This is a closed system.
 3. The fluid to be injected is predominantly water produced in the unit. If additional injection volume is needed, fresh water is utilized from a well approximately 5 miles south of the Flying "M" (SA) Unit. This system has been in use for over 20 years.
- VIII. The recommended injection zone in the subject well occurs in the San Andres dolomite formation from 4401' to 4466'. This zone is approximately 250' below the top of the San Andres formation which was encountered at 4154'.
- The lithologic description of the injection zone in the Flying "M" Field consist of a dense to porous dolomite with occasional vertical fracturing. The porosity is vugular to intercrystalline. The interval from 4440' to 4466' has been the main producing interval in the Flying "M" Field since it was discovered. Geologically, it is known as the Slaughter producing zone of the San Andres.
- The geologic name and depth to underground source of drinking water is the Ogallala formation which occurs from 0'-400' in this area.
- IX. A small volume matrix acid stimulation may be performed on the well. This stimulation will consist of 1500-3000 gallons of 15% HCl.
- X. The Coastal Oil and Gas Flying "M" (SA) Unit Tract 13 #6 was logged on December 1, 1985. I assume logs were sent to the State at that time.
- XI. There are no fresh water wells within one mile of this proposed injection well.
- XIII. My interpretation of Division Order No. R-3229 pertaining to the Flying "M" (SA) Pressure Maintenance Project is that the proof of publication for administrative approval is not required for a conversion within the unit. If this is not the case, please advise.

All wells within one-half mile of the proposed conversion are within the Flying "M" Unit, operated by Coastal Oil and Gas Corporation.



2 R.C. Honks
"Bridwell St"
Lario
Saxon
1-B
STATE

Natura Energies
"Lario St"
Apache
STATE

Featherstone Dev Corp.
Bridwell
T/A
STATE

Midwest
Belco
Saddle St
5
Read & Stevens
STATE

Coastal O & G
U.S.M.I. State Game Comm (S)
4
Read & Stevens
STATE

Del Apache
Del Apache
Hanson
U.S.M.I. State Game Commission (S)
3
STATE

Hanson Oil
Amoco-St
2
Stallworth
STATE

12 Del Apache
H.C. Hood
STATE

7 La Ld & Expl.
STATE

8 Westland Corp.
STATE

9 Tenneco
Coastal O & G
STATE

10 Hanson Oil
STATE

11 Cities Serv
Burns
Coastal O & G
STATE

13 Read & Stevens
Marilyn Meinhart
STATE

18 Pan Am
2-CX
1-CX
STATE

17
STATE

16
STATE

9-33
STATE

15 Sun HBP
Coastal O & G HBP
STATE

14 H. Zimmerman
Exxon
U.S.M.I. Exales Howard
STATE

24 L.C. Cooper, Est et al.
STATE

19 Southern Union
Shell 1-FMF
STATE

20
STATE

21
STATE

22 Ainsworth et al
Murphy Corp
STATE

23 South-west Prod.
STATE

25 Imp Amer. R.C. Honks, et al
E.K. Warren Son MI
Marg McGuffin
STATE

30 Shell
Union Tex
Southern Union
Latham & Barton
STATE

29
STATE

28
STATE

27 Ainsworth et al
Murphy Corp
STATE

26 Midwest
STATE

36 Phillips
So Roy
STATE

31 Belco
Coastal O & G
Marg McGuffin
STATE

32 Warren Amer
STATE

33
STATE

34 J. Markham et al
A Gobar Rchs (S)
STATE

35 Midwest
A Gobar Rchs (S)
STATE

6 Ard Drig.
STATE

6
STATE

5 Belco
STATE

4 Yates Pet. 11-1-82
Union Tex
Am Quasar
STATE

3 "New Mex"
C.B. Read
Del-Apache
STATE

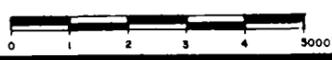
10-33
STATE

8 Yates
Union Tex
STATE MI Nine Rch Co.
STATE

9 Cont'l
STATE MI Nine Rch Co.

LEGEND

- San Andres Producers
- //// Unit Boundary
- ▲ Water Injection Wells



COASTAL OIL & GAS CORP.	
WEST TEXAS - NEW MEXICO DISTRICT	
FLYING "M" FIELD S.A. Unit	DATE
"= 3000'	COUNTY
	Leo
	STATE
	Texas

Date September 27, 1990

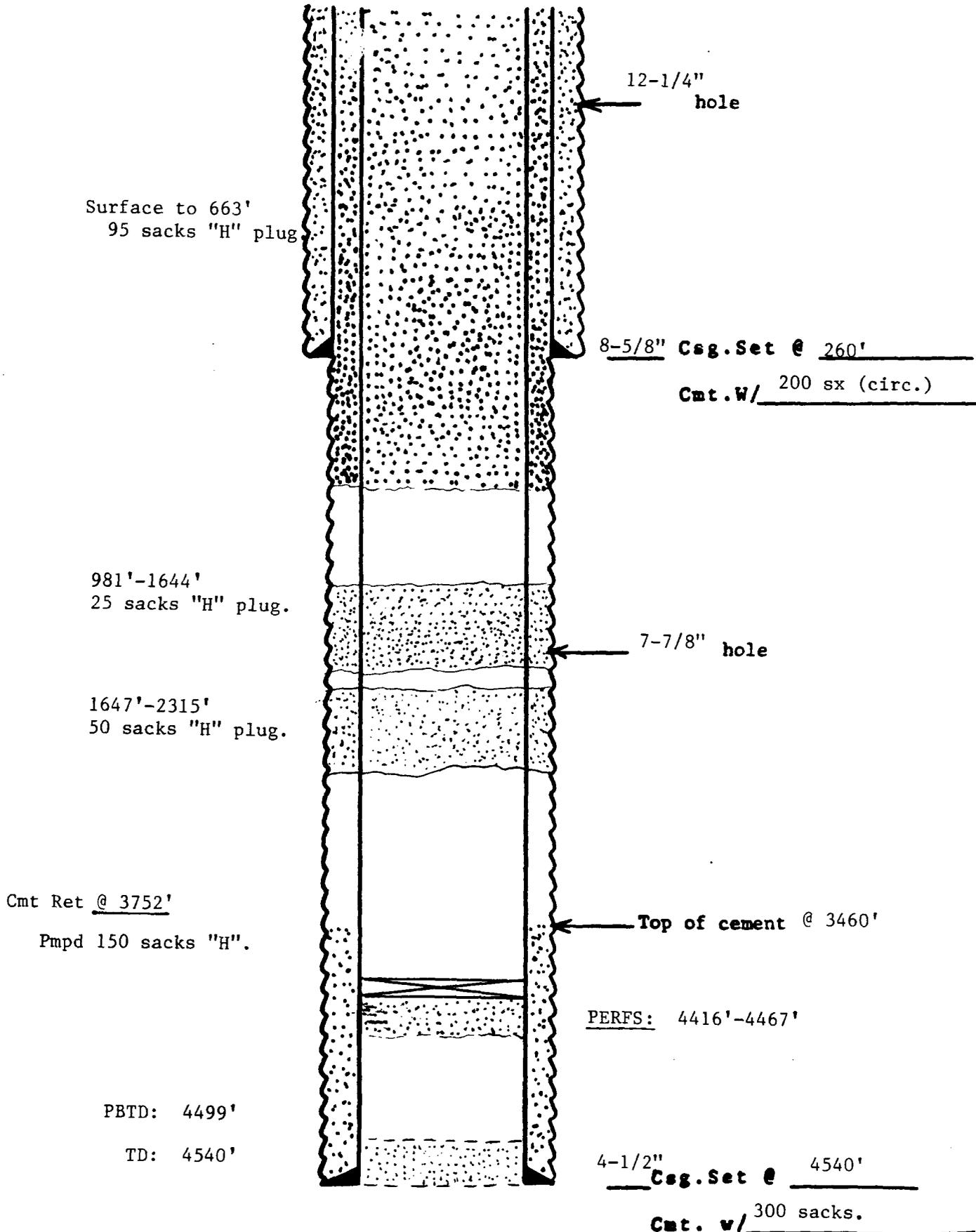
Lease Flying "M" (SA) Unit Tract 13 Well No. 3 Operator Coastal Oil & Gas Corp.

Location 663.3 ft. from East Line & 1978.7 ft. from North Line, Sec. 20, Blk. _____

Survey T-9-S, R-33-E County Lea State New Mexico

Elevation _____ Remarks Completed as San Andres oil producer 6-15-64. Converted to water injection in November, 1967. Well P & A'd 8-24-77.

20 sacks "H" in cellar.



All intervals not cemented filled with 10.2# mud.

Date September 27, 1990

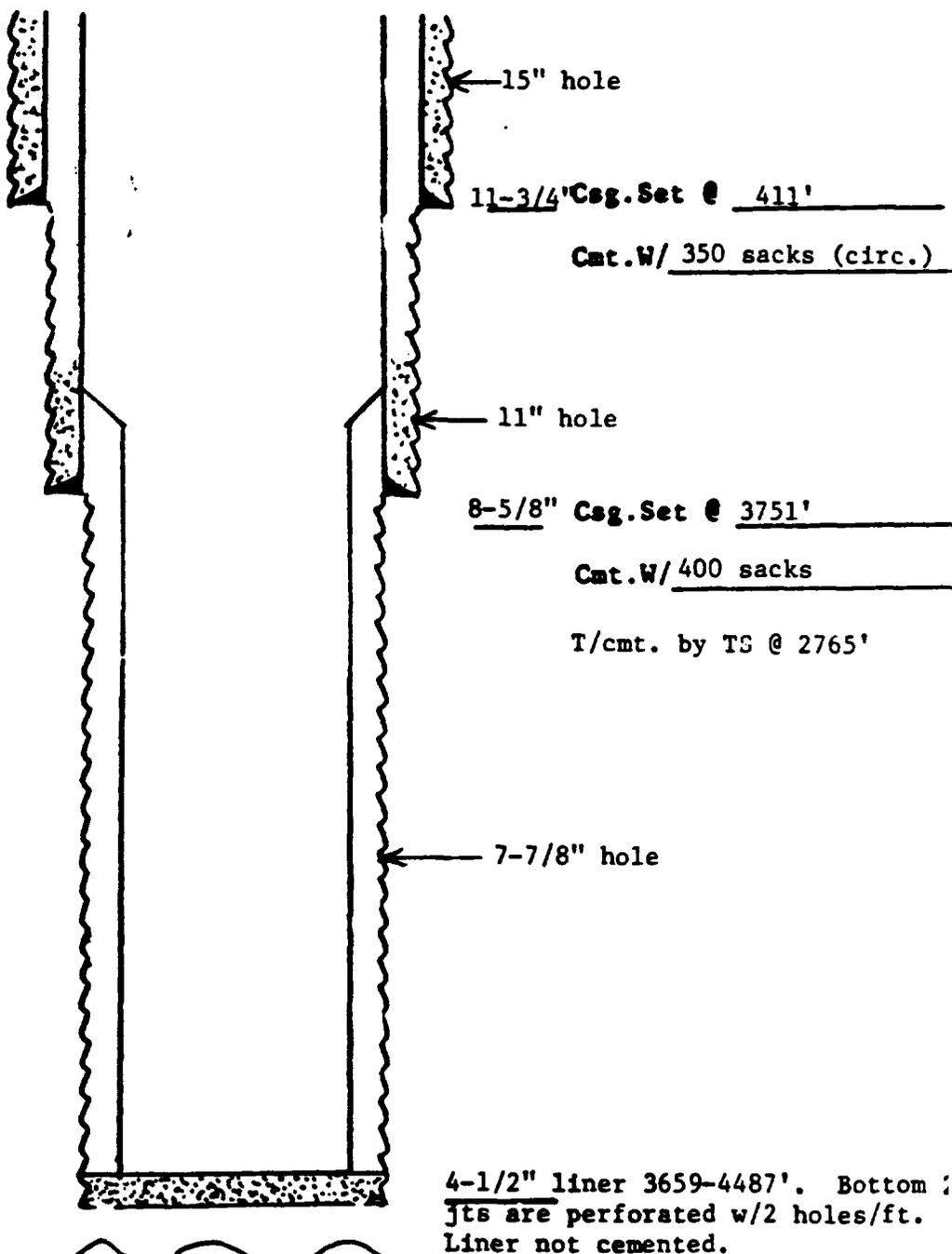
Lease Flying "M" (SA) Unit Tract 4 Well No. 4 Operator Coastal Oil & Gas Corp.

Location 1980 ft. from South Line & 660 ft from East Line, Sec. 17, Blk _____

Survey T-9-S, R-33-E County Lea State New Mexico

Elevation 4380' GR Remarks Original TD 9285' - P&A 7-10-65. Re-entered by

Coastal Oil & Gas Corp. in March, 1967. Completed as San Andres oil producer.



*TOP 872
3744
BY Paul*

P&A 1965 as follows:
 75 sacks at 9285'
 150 sacks at 5160'
 100 sacks at 5022'
 (WOC and tagged top of plug at 4750')
 75 sacks at 4600'
 50 sacks at 3790'
 10 sacks at surface

Re-entered 1967. Cleaned out to 4490'.
 Ran 27 jts. 4-1/2" liner, bull plugged on bottom,
 bottom 2 jts. perforated 2 holes/ft. Liner not

TD 9285'

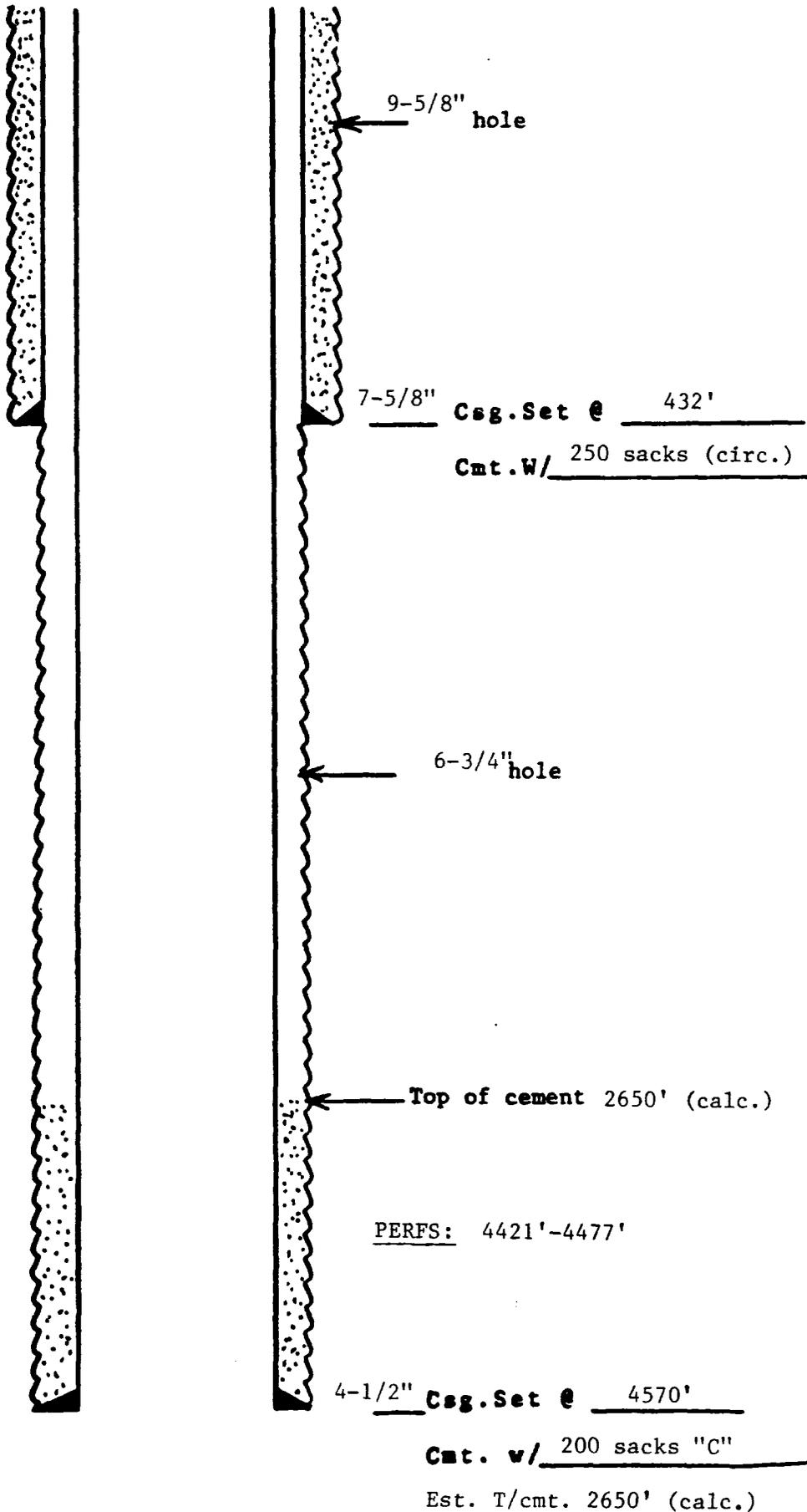
Date September 27, 1990

Lease Flying "M" (SA) Unit Tract 4 Well No. 1 Operator Coastal Oil & Gas Corp.

Location 660 ft. from East Line & 660 ft. from South Line, Sec. 17, Blk. _____

Survey T-9-S, R-33-E County Lea State New Mexico

Elevation 4377' GR Remarks _____ Spud Date: 8-14-64. Completed as San Andres
oil producer.



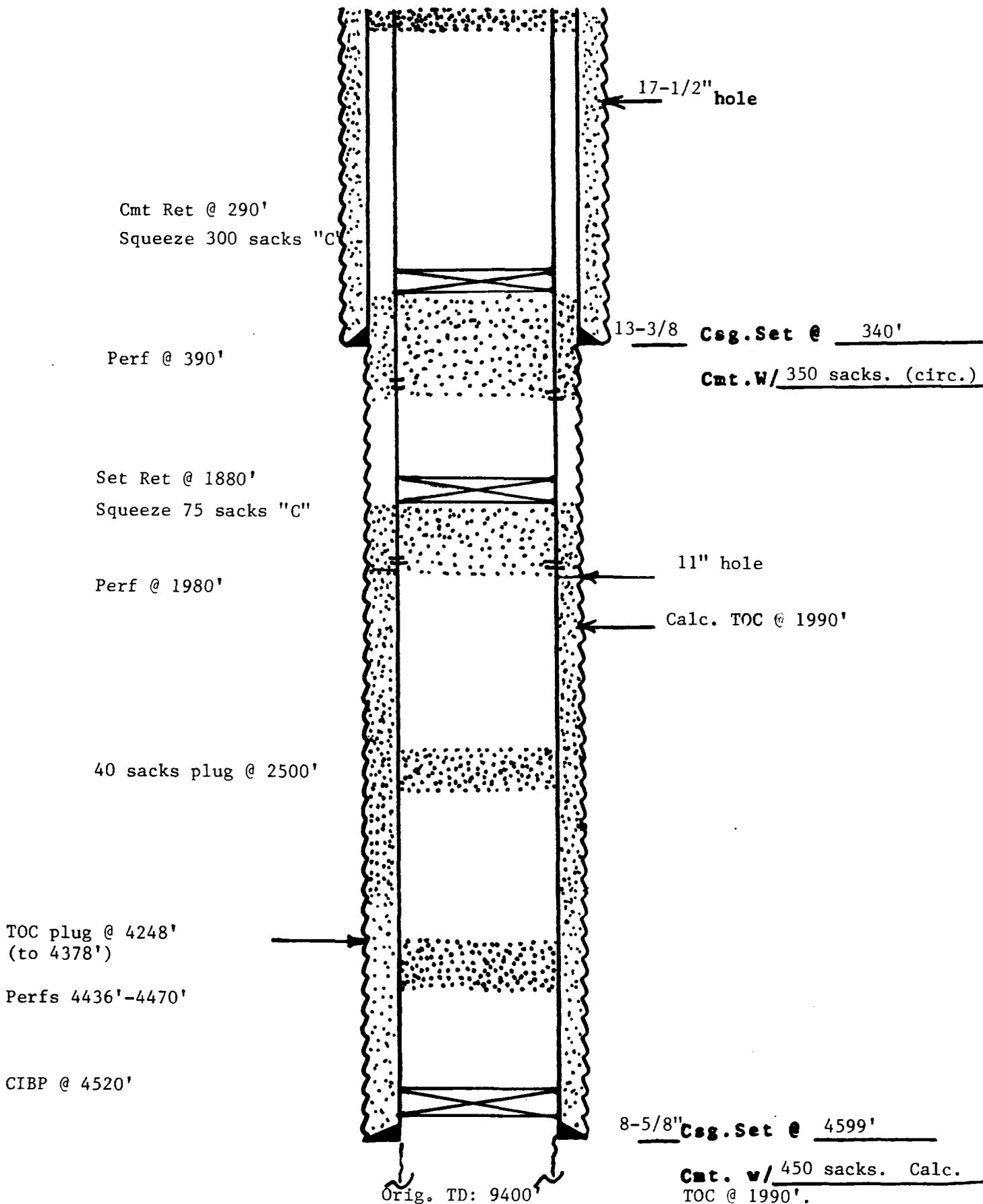
Date September 27, 1990

Lease Flying "M" (SA) Unit Tract 10 Well No. 4 Operator Coastal Oil & Gas Corp.

Location 659 ft. from South Line & 664 ft. from West Line, Sec. 16, Blk. _____

Survey T-9-S, R-33-E County Lea State New Mexico

Elevation 4384' GR Remarks Original TD at 9400'. Well was plugged back in 1965, per NMOCD specs (5-1/2" casing cut at 7861') to 4334'. Well P&A'd 1-25-85.



Date September 27, 1990

Lease Flying "M" (SA) Unit Tract 14 Well No. 4 Operator Coastal Oil & Gas Corp.

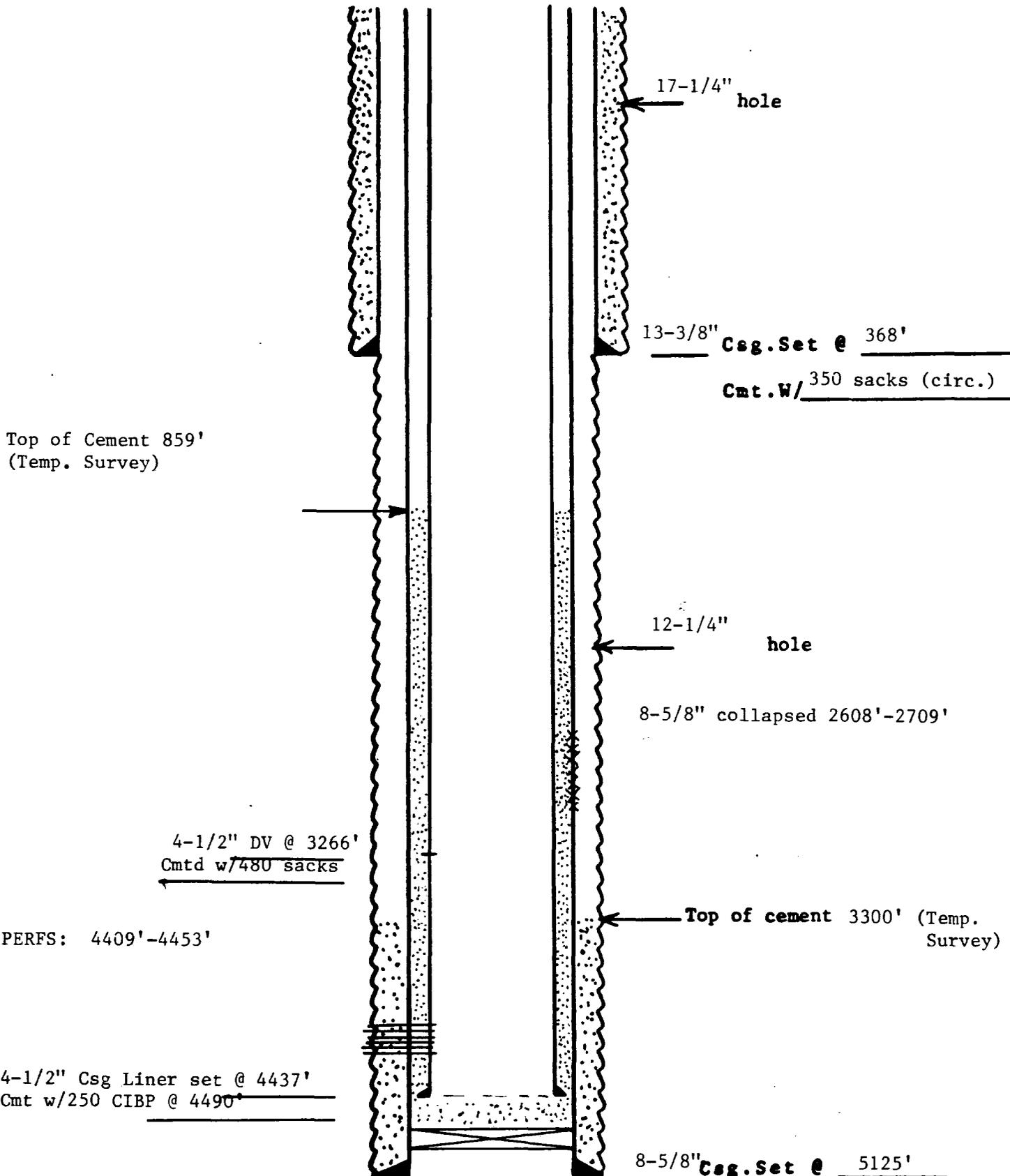
Location 6633 ft. from East Line & 1978.7 ft. from South Line, Sec. 20, Blk. _____

Survey T-9-S, R-33-E County Lea State New Mexico

Elevation _____ Remarks Spud Date: 3-30-65. Drilled as Bough "C" test to 9278'.

Bough "C" was non-commercial. Plugged back and completed as San Andres oil producer

5-28-65.



Orig. drilled to 9278'. Spotted 25 sacks
plugs at 9278'-8000', 68000' and 5175' in 776.

Date September 27, 1990

Lease Flying "M" (SA) Unit Tract 13 Well No. 4 Operator Coastal Oil & Gas Corp.

Location 1983' ft. from East Line & 660 ft. from North Line, Sec. 20, Blk.

Survey T-9-S, R-33-E County Lea State New Mexico

Elevation 4372' Remarks Spud Date: 12-12-64. Completed as San Andres
oil producer.

