



Coastal Oil & Gas Corporation

a subsidiary of The Coastal Corporation

Briercroft Savings Building
200 North Loraine
P.O. Box 235
Midland, Texas 79702 - 0235

915/682 - 7925

June 22, 1984

State of New Mexico
Energy and Minerals Department
Oil Conservation Division
P. O. Box 2088
Santa Fe, New Mexico 88240

RE: OCD Case 8210
~~Coastal Oil & Gas Corporation~~
Application for Authorization
to Inject

Gentlemen:

Enclosed you will find copies of Form C-108, Application for Authorization to Inject, with all requested information attached thereto, requesting permission to dispose of produced water into two wells in Lea County, New Mexico. The two subject wells are Coastal's State "22" Well No. 1 located in Section 22 and State "27" Well No. 1 located in Section 27, both of which are in T-14-S, R-32-E, Lea County, New Mexico. We understand this matter is currently scheduled for hearing before the Oil Conservation Division on July 11, 1984 under the above docket number.

By copy of this letter, Application, and all attachments, the surface owners and all leasehold operators within one-half mile of each of the subject wells have been notified of this filing. It is understood that the surface owners or offset operators may object to this application and may appear at the scheduled hearing.

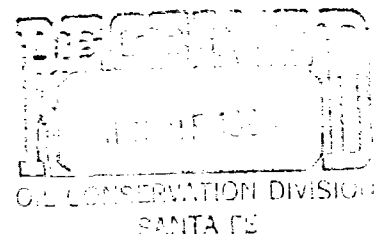
Yours very truly,

H. E. Clarke
District Production Manager

HEC/lkw

enclosures

cc: Distribution list attached



COASTAL OIL & GAS CORPORATION
C-108 MAILING LIST
JUNE 22, 1984

Yates Petroleum
207 S. 4th
Artesia, New Mexico 88210
Attn: Mr. Dave Boneau

Gulf Oil Exploration and Production Company
P. O. Box 1150
Midland, Texas 79702

Amoco Production Company, USA
P. O. Box 68
Hobbs, New Mexico 88240

Mr. Billy Frank Good
P. O. Box 333
Caprock, New Mexico 88213

State of New Mexico
Energy and Minerals Department
Oil Conservation Division
P. O. Box 2088
Santa Fe, New Mexico 87501

State of New Mexico
Energy and Minerals Department
Oil Conservation Division
P. O. Box 1980
Hobbs, New Mexico 88240

State Land Office
State of New Mexico
State Land Office Building
Santa Fe, New Mexico 87501

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: P. O. Box 235, Midland, Texas 79702
Contact party: David G. Campbell Phone: 915-682-7925
- 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: David G. Campbell Title Sr. Petroleum Engineer
Signature: David G. Campbell Date: June 22, 1984
- * 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- complete logs were filed upon completion of subject wells.

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.

Data for Form C-108 Dated June 22, 1984
Coastal Oil & Gas Corporation

VII. Data on proposed operation:

1. We propose to inject at an average rate of 1000 BWPD into the two proposed wells with a maximum total rate of 2200 BWPD. The maximum total volume to be injected into the two proposed disposal wells is anticipated to be 8,000,000 barrels of produced water.
2. This will be a closed system.
3. We anticipate an average injection pressure of 750 psig with a maximum of 1500 psig anticipated.
4. Attached is a water analysis of the Penn zone produced water which will be the only source of injected fluid.
5. Attached is a water analysis of the San Andres produced water from State "27" Well No. 1, the proposed disposal zone that is non-productive of oil or gas in this area.

VIII. Geological data:

The proposed disposal zone is the San Andres formation, a locally anhydritic and limey dolostone of Guadalupian (Middle Permian) age. In the Tulk Field Area the San Andres formation is approximately 1800' thick between the depths (more or less) of 4100' and 5900' below the surface. The Ogalalla formation with a maximum depth of approximately 300 feet below the surface is the only source of drinking water in this area.

IX. Proposed stimulation program:

We propose to isolate the proposed injection zone in State "22" Well No. 1 by perforating squeeze holes below the proposed zone and circulating cement behind the 5½" casing across the proposed zone. A cement bond log will be run and the proposed perforations shot. We propose to treat these perforations with 4000 gal. 15% HCl. A schematic of this well set up for injection has been attached. The proposed injection zone in State "27" Well No. 1 has previously had cement circulated across this interval. Additional perforations will be added and treated with 4000 gal. 15% HCl. A schematic of this well set up for injection has been attached.

X. Logs

A copy of the Sidewall Neutron Log across the proposed injection interval for each well has been attached. The proposed injection intervals for each well has been shown on these logs.

XI. Fresh water analysis

A copy of a fresh water analysis secured from a windmill located in the SW $\frac{1}{4}$ SW $\frac{1}{4}$ Sec. 35, T-14-S, R-32-E has been attached. This is the only fresh water supply well known in this area.

XII. Affirmation

Coastal Oil & Gas Corporation has examined the available geological and engineering data for this area and has found no evidence of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water.

XIII. Proof of Notice

A copy of this application complete with all attachments has been furnished by certified mail, return receipt requested, to the surface owner of the land on which each proposed disposal well is located and to each leasehold operator within one-half mile of each proposed disposal well. These copies were mailed to each party shown on the attached mailing list on June 22, 1984.

COASTAL OIL & GAS CORPORATION
C-108 MAILING LIST
JUNE 22, 1984

Yates Petroleum
207 S. 4th
Artesia, New Mexico 88210
Attn: Mr. Dave Boneau

Gulf Oil Exploration and Production Company
P. O. Box 1150
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State Land Office
State of New Mexico
State Land Office Building
Santa Fe, New Mexico 87501

INJECTION WELL DATA SHEET

SIDE 1

Coastal Oil & Gas Corporation State "22" TFAST

1980' ESL & 660' FEL. SECTION 22 SECTION 14-S TOWNSHIP 32-E RANGE

Lea County

Schematic

Tabular Data

Surface casing set @ 392'
Size 13 3/8 " Cemented with 450 sx.
100 surface feet determined by cement circulated
Hole size 17 1/2"

Intermediate casing set @ 4015'
Size 8 5/8" " Cemented with 300 sx.
100 surface feet determined by cement circulated
Hole size 11"

Long string
Size 5 1/2 " Cemented with 200 sx.
100 8260 feet determined by calculation
Hole size 7 7/8"

Total depth 10,000'

Injection interval proposed perforations
5100 feet to 5367 feet
(perforated or open hole, indicate which)

SEE ATTACHED WELLBORE DIAGRAMS

PROPOSED tubing size 2 3/8" lined with Salta PVC (material) set in a
5 1/2" Baker "AD-1" packer at 5060 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) _____

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

If no, for what purpose was the well originally drilled? drilled as producer in Penn formation
in Tulk (Penn) Field _____

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) Penn perforations

9791-9799', 9811-9819', 9942-9954'. Prosped plugs shown on attached well bore schematic labelled

"Well Status-Proposed".

5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in
this area. Penn zone - average top @ 9700'. No other zones productive.

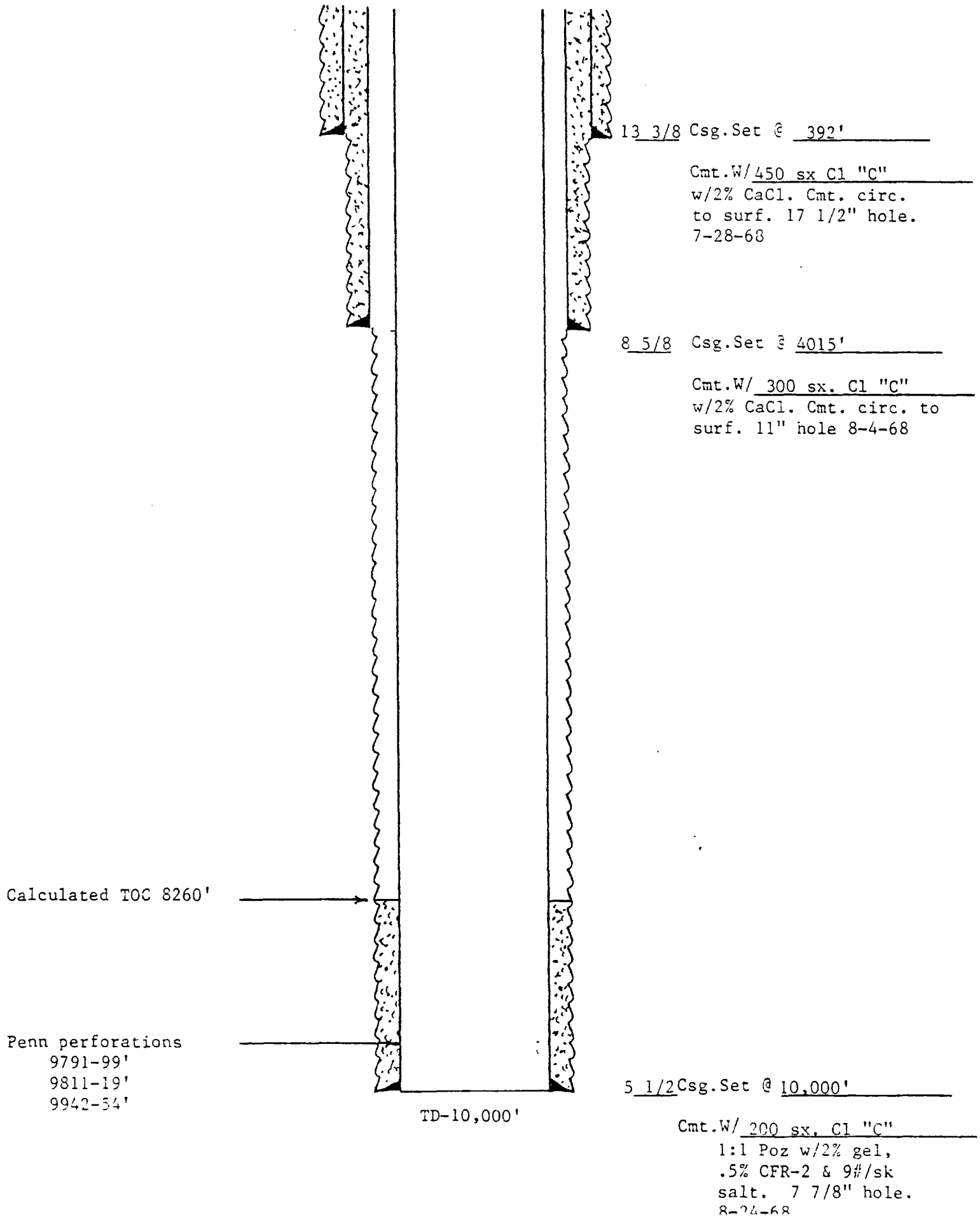
Well Status **CURRENT** Date 6-21-84

Lease State "22" Well No. 1 Operator Coastal Oil & Gas Corp.

Location 1980 ft. from S Line & 660 ft from E Line, Sec, 22, Blk _____

Survey T-14-S, R-32-E County Lea State New Mexico

Elevation 4312' KB Remarks Spud 7-28-68; Comp. 9-9-68; Converted to injection
in Penn 1-6-69



Coastal Oil and Gas Corporation State "27" 1980' FNL & 660' FEL 14-S 32-E
 OPERATOR ITASI SECTION TOWNSHIP RANGE
 1
 WELL NO. FOOTAGE LOCATION
 Lea County

Schematic

SEE ATTACHED WELLBORE DIAGRAMS

Tabular Data

Surface Casing - Set @ 400'
 Size 13 3/8" Cemented with 400' ss.
 IBC surface feet determined by cement circulated
 Hole size 17 1/2"
Intermediate Casing - Set @ 4045'
 Size 8 5/8" Cemented with 300' ss.
 IBC 3050 feet determined by calculation
 Hole size 11"
Long string - Set @ 9950'
 Size 5 1/2" Cemented with 200' ss.
 IBC 8000 feet determined by calculation
 Hole size 7 7/8"
 Total depth 9965'

Injection interval - proposed perforations
 5100 feet to 5285 feet
 (perforated or open-hole, indicate which)

INJECTION WELL DATA SHEET -- SDOI 2

Tubing size 2 3/8" Lined with Salta PVC set in a _____
(material)

5 1/2" Baker "AD-1" packer at 5060 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) _____

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

If no, for what purpose was the well originally drilled? drilled as producer in Penn formation
in Tulok (Penn) Field

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) Penn perforations -

9720-9728', 9758-9769', 9790-9798'. Plugged back with CIBP @ 9680' w/40' cmt. on top, cement plugs
7475-7575', 6780-6870'. Perfs @ 5325. Cmt. ret. @ 5290'. Sqz. w/200 sx. TOC @ 4200' by temperature survey

5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in
this area. Penn zone - average top 9700'. No other zones productive.

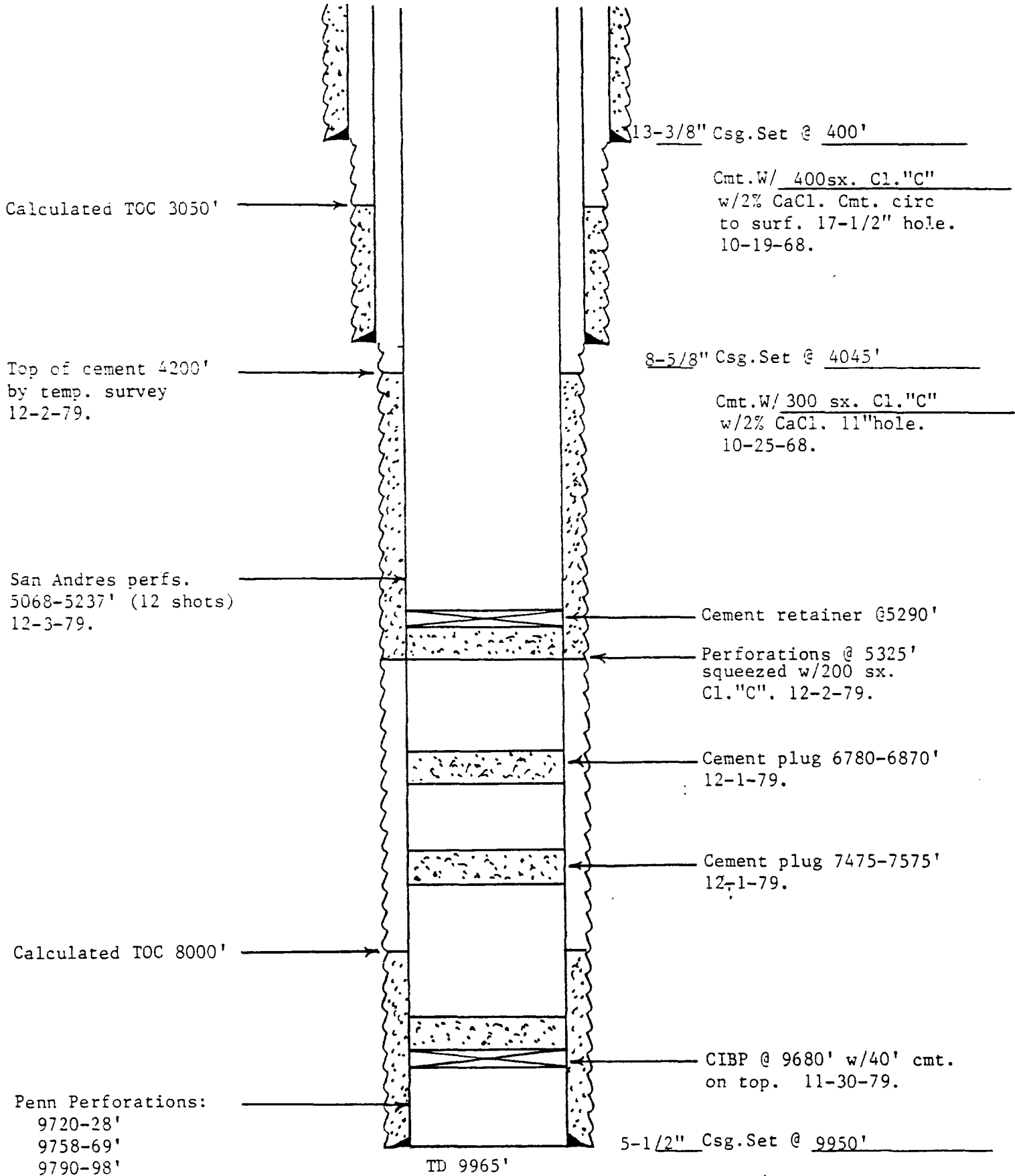
Well Status **CURRENT** Date 6-21-84

Lease State "27" Well No. 1 Operator Coastal Oil & Gas Corp.

Location 1980 ft. from N Line & 660 ft from E Line, Sec, 27, Blk

Survey T-14-S, R-32-E County Lea State New Mexico

Elevation 4309' KB Remarks Spud 10-19-68; Comp. 1-15-69;



13-3/8" Csg. Set @ 400'

Cmt. W/ 400sx. Cl. "C"
w/2% CaCl. Cmt. circ
to surf. 17-1/2" hole.
10-19-68.

Calculated TOC 3050'

8-5/8" Csg. Set @ 4045'

Cmt. W/ 300 sx. Cl. "C"
w/2% CaCl. 11" hole.
10-25-68.

Top of cement 4200'
by temp. survey
12-2-79.

San Andres perms.
5068-5237' (12 shots)
12-3-79.

Cement retainer @ 5290'

Perforations @ 5325'
squeezed w/200 sx.
Cl. "C". 12-2-79.

Cement plug 6780-6870'
12-1-79.

Cement plug 7475-7575'
12-1-79.

Calculated IOC 8000'

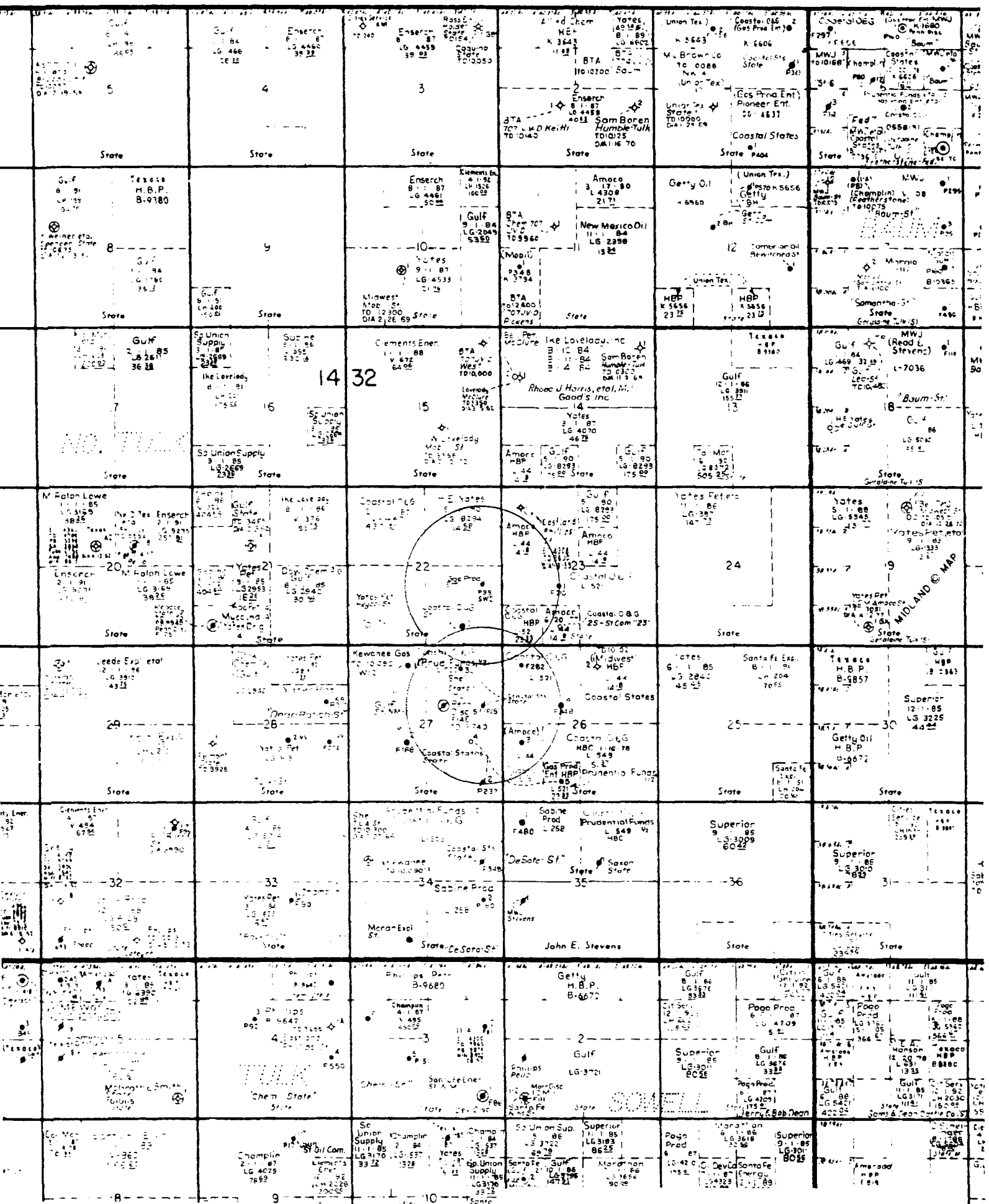
CIBP @ 9680' w/40' cmt.
on top. 11-30-79.

Penn Perforations:
9720-28'
9758-69'
9790-98'

5-1/2" Csg. Set @ 9950'

TD 9965'

Cmt. W/ 200 sx. Cl. "C"
1:1 Poz w/4% gel, .5%
CFR-2 & 9#/sk. salt.



COASTAL OIL & GAS CORPORATION

AREA OF REVIEW - ONE-HALF MILE RADIUS
AROUND PROPOSED SAN ANDRES DISPOSAL WELLS

STATE "22" WELL #1, SECTION 22
STATE "27" WELL #1, SECTION 27

T-14-S, R-32-E, LEA COUNTY, NEW MEXICO

CONTINUATION OF TABULATION OF WELL REVIEW FOR STATE "27" WELL NO. 1

OPERATOR: Coastal Oil & Gas Corporation
 WELL: State "27" Well No. 2
 STATUS: Shut-in disposal well *
 LOCATION: 660' FSL & 660" FEL, Sec. 27, T-14-S, R-32-E
 SPUD: 1-1-69 Completed 2-11-69 TD - 10,010
 CONSTRUCTION: 17½" hole 13 3/8 csg. set @ 382' Cmt. w/400 sx.
 Cmt. circ. to surface
 11" hole 8 5/8 csg. set @ 4050' Cmt. w/300 sx.
 Calculated TOC - 2270'
 7 7/8" hole 5½" csg. set. @ 10,009' Cmt. w/200 sx.
 Calculated TOC - 8370'

PERFORATIONS: 9789-98', 9870-80', 9904-10', 9920-24'
 TREATMENTS: 9870-80' w/500 gal 28%, 1500 gal 15%, 2000 gal 3% acid
 9904-10' w/500 gal 28%, 1500 gal 15%, 2000 gal 3% acid
 9920-24' w/500 gal 28%, 1500 gal 15%, 2000 gal 3% acid
 TUBING: 2 3/8" @ 9835' Packer @ 9835'
 POTENTIAL: 237 BO, 343 BW, 196 MCF - Pumping
 * Well shut-in w/CIBP set @ 9680' w/25 sx. cmt. on top
 Tested csg. to 500 psi for 30 minutes OK 3/28/84

OPERATOR: Coastal Oil & Gas Corporation
 WELL: State "27" Well No. 3
 STATUS: Producing Oil Well
 LOCATION: 990' FNL & 1300 FEL, Sec. 27, T-14-S, R-32-E
 SPUD: 4-11-84 Completed 5-26-84 TD - 10,000'
 CONSTRUCTION: 17½" hole 13 3/8" csg. set @ 400' Cmt. w/400 sx.
 Cmt. circ. to surface
 12½" hole 8 5/8" csg. set @ 4100' Cmt. w/2400 sx.
 Cmt. circ. to surface
 7 7/8" hole 5½" csg. set @ 10,000' Cmt. 2/495 sx.
 TOC - 7920' by cmt. bond log

PERFORATIONS: 9786-90', 9797-9810', 9826-29', 9835-60'
 TREATMENTS: 9786-9810' w/4000 gal. 15% NE-FE acid
 9826-60' w/6000 gal. 15% NE-FE acid
 TUBING: 2 3/8" @ 9735' Packer @ 9735'
 POTENTIAL: 383 BO, 179 BW, 310 MCFG

OPERATOR: Shell Oil Company
 WELL: State "TU" Well No. 1
 STATUS: P&A*
 LOCATION: 1980' FNL & 1980' FEL, Sec. 27, T-14-S, R-32-E
 SPUD: 2-18-65 Completed 5-13-65 TD - 13,740'
 CONSTRUCTION: 17" hole 13 3/8" csg. set @ 401' Cmt. w/400 sx.
 Cmt. circ. to surface
 12½" hole 9 5/8" csg. set @ 4100' Cmt. w/500 sx.
 Calculated TOC - 1990'
 8 3/4" hole 5½" csg. set @ 10,230' Cmt. w/400 sx.
 Calculated TOC - 8140'

PERFORATIONS: 9856-80'
 TREATMENTS: 9856-80' w/1000 gal. 15% MCA
 TUBING: 2 3/8" @ 9775' Packer @ 9775'
 POTENTIAL: 148 BO, 54 BW, - Flowing
 * Abandonment: cement plugs spotted 13,100-13,400'
 12,500-12,600', 10,000-10,400'
 25 sx. @ 6835', 25 sx. @ 5466'
 5½" csg. shot @ 5200' and pulled
 50 sx. @ 5200', 25 sx. @ 4087'
 15 sx. @ surface

*P & A
 Check file*

Well Status P & A Date 6-21-84

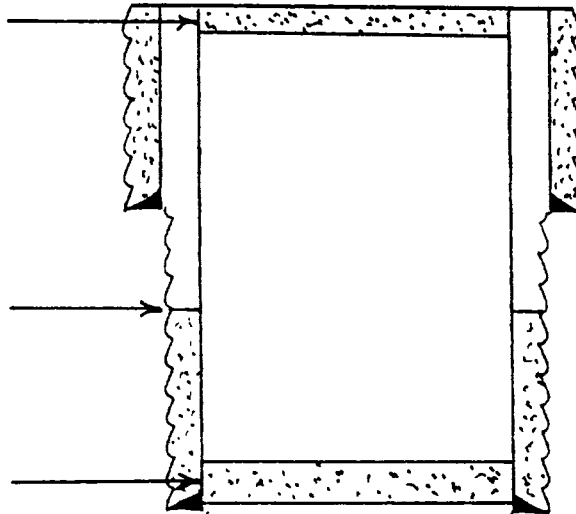
Lease State "TU" Well No. 1 Operator Shell Oil Co.

Location 1980 ft. from N Line & 1980 ft from E Line, Sec, 27, Blk _____

Survey T-14-S, R-32-E County Lea State New Mexico

Elevation -- Remarks Well P & A 2-1-66

15 sx. cmt. @ surface



13 3/8 Csg. Set @ 401'

Cmt. W/ 400 sx.
Cmt. circ. to surface
17" hole

Calculated TOC - 1990'

25 sx. cmt. @ 4087'

9 5/8 Csg. Set @ 4100'

Cmt. W/ 500 sx.
12 1/2" hole

5 1/2" csg. shot @ 5200'
csg. pulled

50 sx. cmt. @ 5200'

25 sx. cmt. @ 5466'

25 sx. cmt. @ 6835'

Calculated TOC - 8140'

Penn perforations
9856-80'

Cmt. plug 10,000-10,400'

5 1/2" Csg. set @ 10,230'
Cmt. w/400 sx.
8 3/4" hole

Cmt. plug 12,500-12,600'

Cmt. plug 13,100-13,400'

TD 13,740'

Well Status **PROPOSED** Date 6-21-84

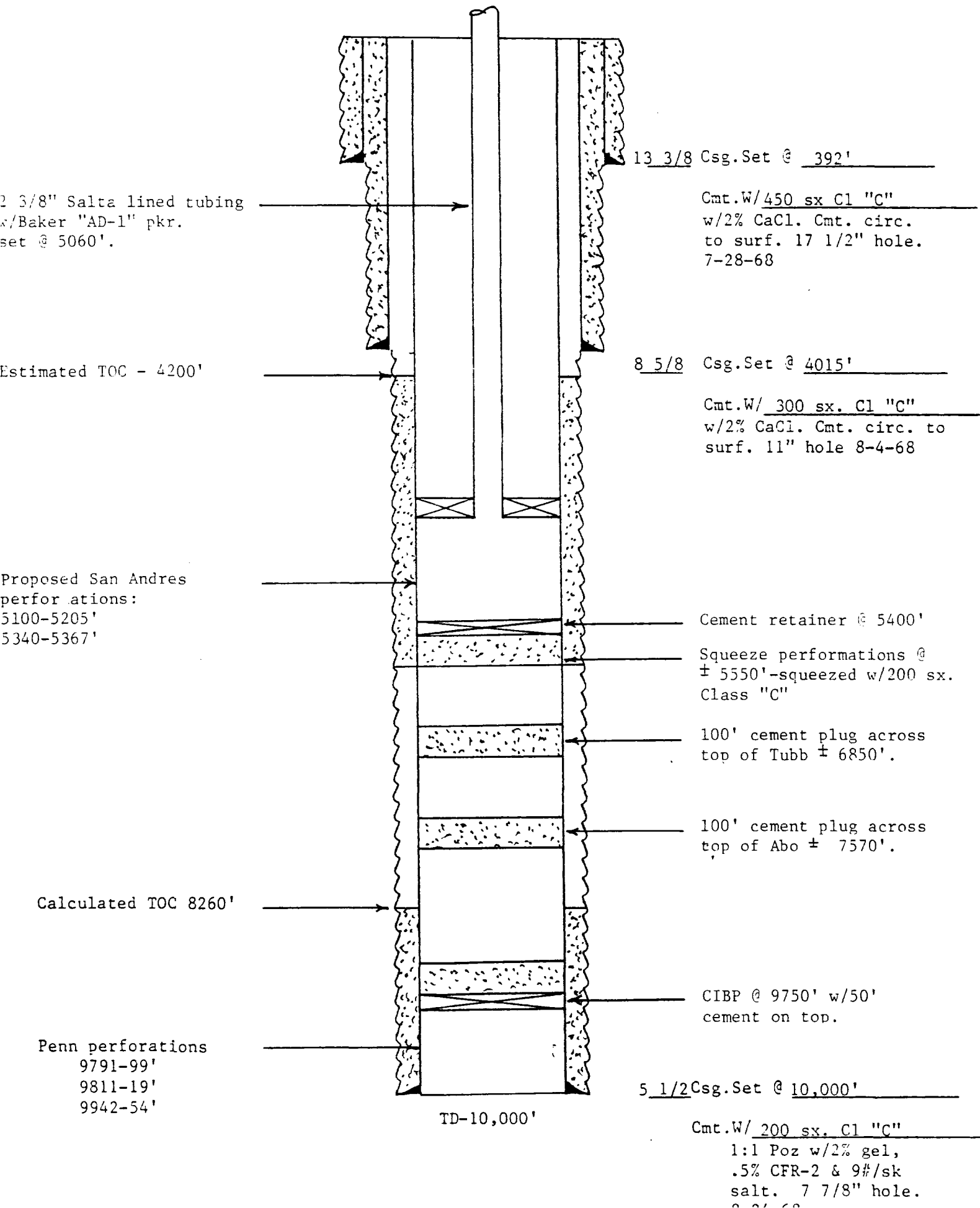
Lease State "22" Well No. 1 Operator Coastal Oil & Gas Corp.

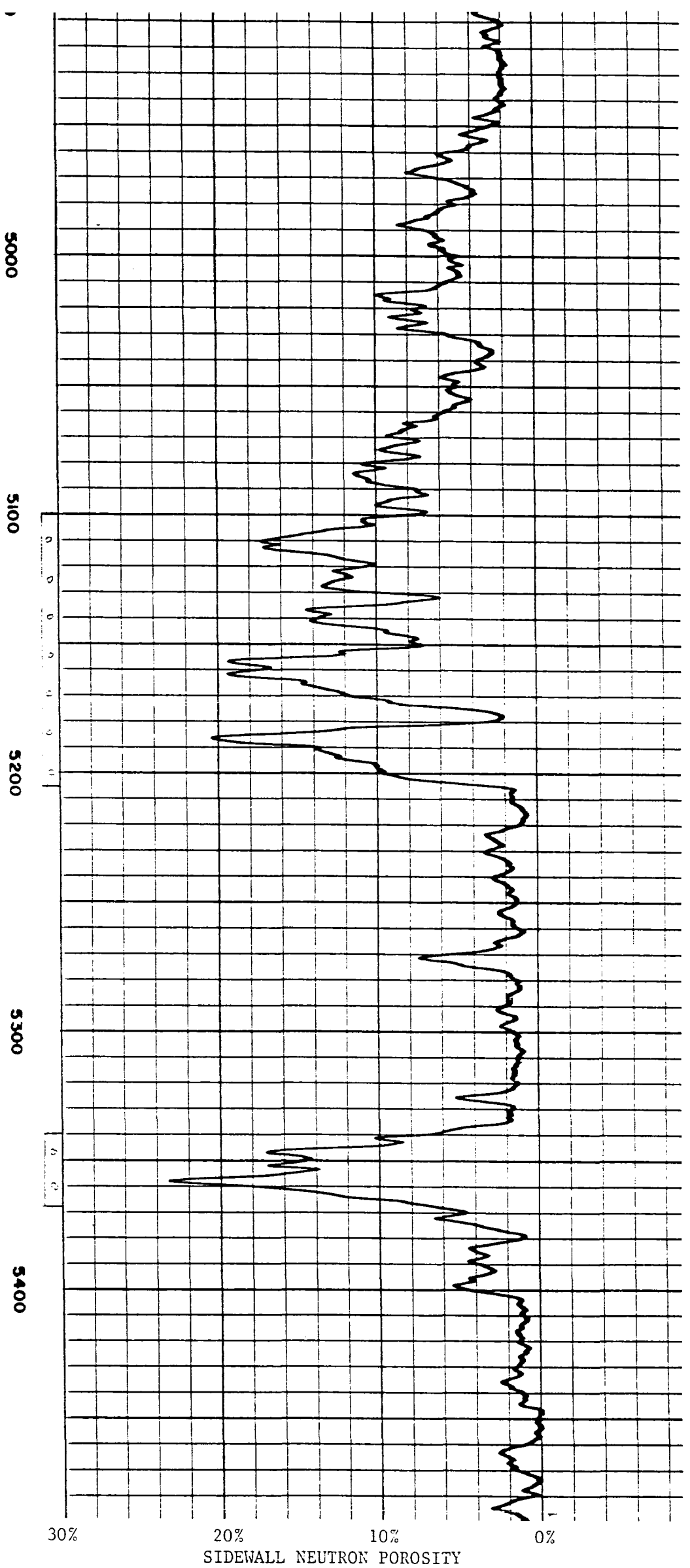
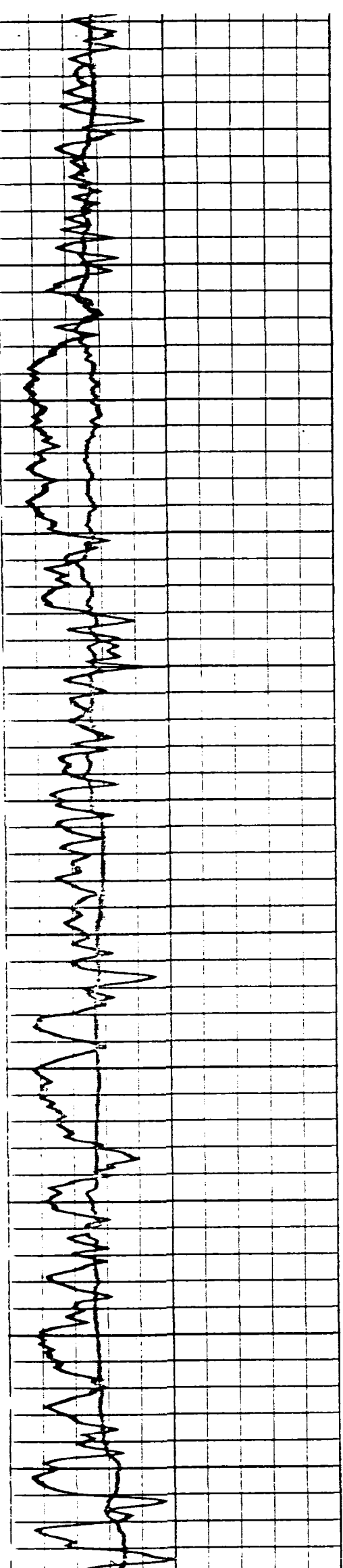
Location 1980 ft. from S Line & 660 ft from E Line, Sec, 22, Blk _____

Survey T-14-S, R-32-E County Lea State New Mexico

Elevation 4312' KB Remarks Spud 7-28-68; Comp. 9-9-68; Converted to injection

in Penn 1-6-69: Log tops: San Andres 3926'; Tubb 6854'; Abo 7568'





Coastal Oil & Gas Corporation
State "22" #1, Sec. 22, T-14-S, R-32-E
Lea County, New Mexico
Proposed Disposal Perforations

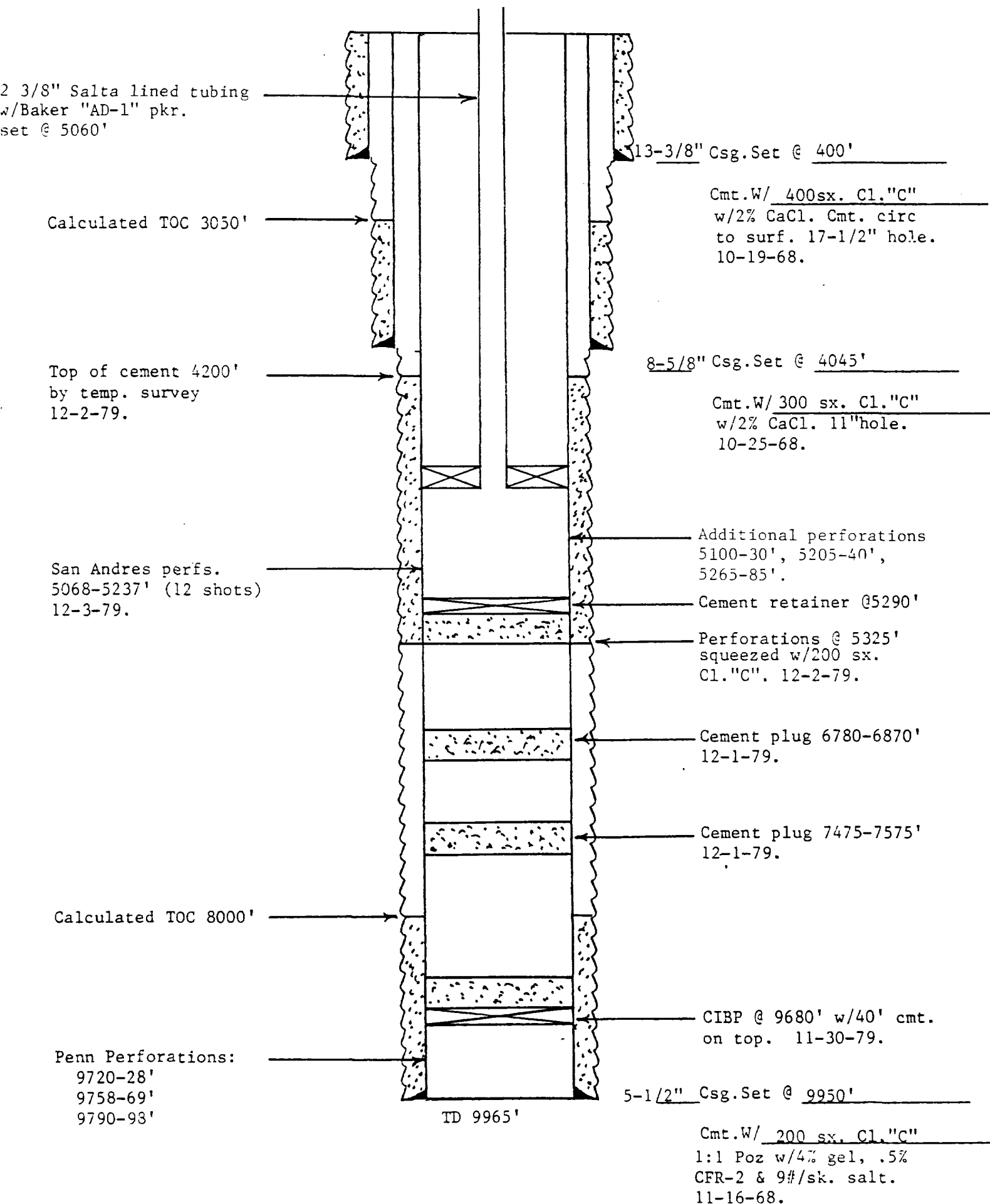
Well Status **PROPOSED** Date 6-21-84

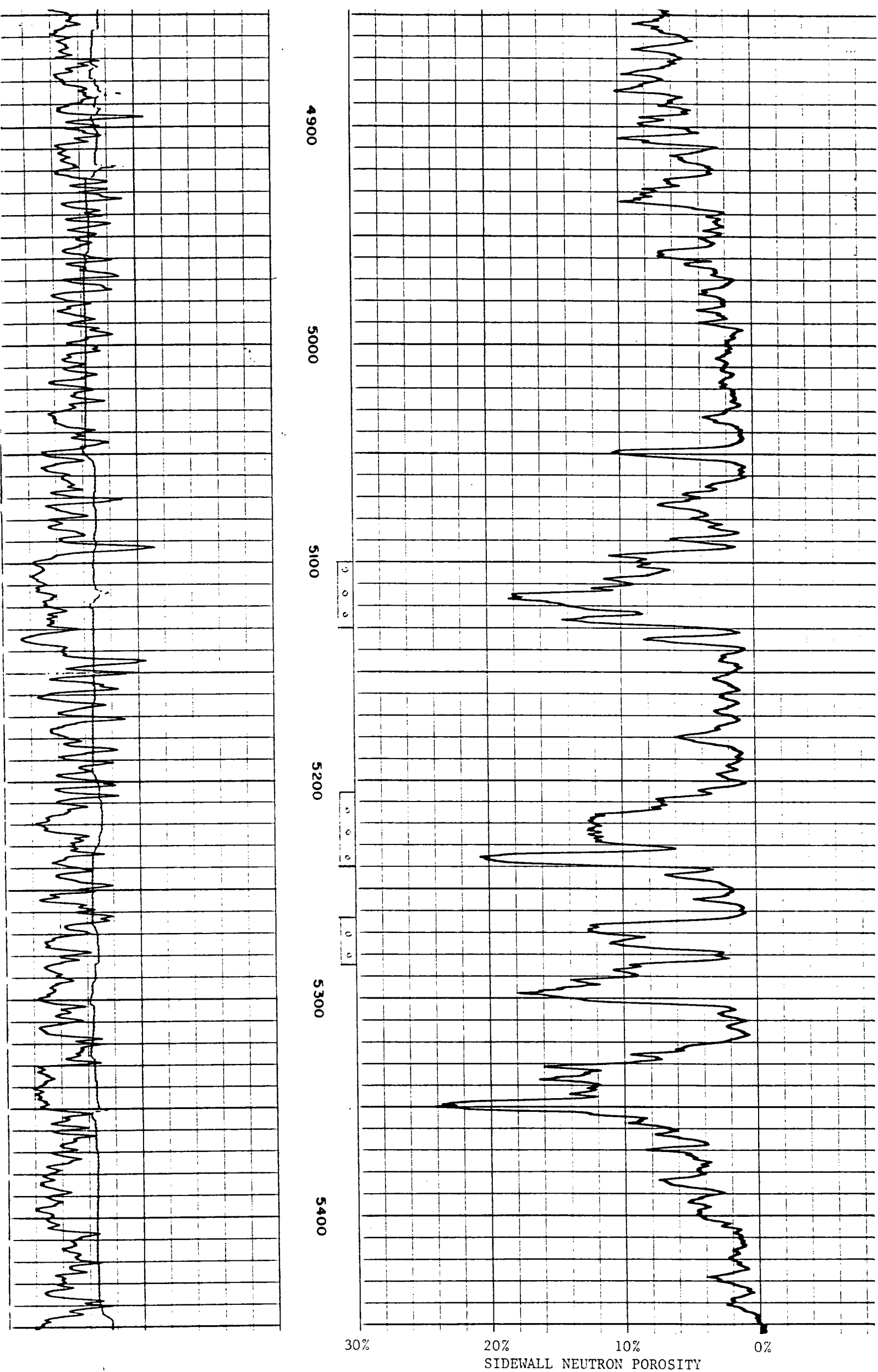
Lease State "27" Well No. 1 Operator Coastal Oil & Gas Corp.

Location 1980 ft. from N Line & 660 ft from E Line, Sec, 27, Blk

Survey T-14-S, R-32-E County Lea State New Mexico

Elevation 4309' KB Remarks Spud 10-19-68; Comp. 1-15-69;





Coastal Oil & Gas Corporation
 State "27" #1, Sec. 27, T-14-S, R-32-E
 Lea County, New Mexico
 Proposed Disposal Perforations