STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION
POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501

FORM C-108
Revised 7-1-81

APPLICATION FOR AUTHORIZATION TO INJECT

I. Purpose: ☐ Secondary Recovery ☐ Pressure Maintenance ☒ Disposal ☐ Storage
Application qualifies for administrative approval? ☒ yes ☐ no

II. Operator: Kelly H. Baxter

Address: P. O. Box 11193, Midland, TX. 79702

Contact party: Kelly H. Baxter Phone: 915/682/6191

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: Kelly H. Baxter Title Owner

Signature: _____ Date: _____

* 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. N/A

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate Division district office.

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.

KELLY H. BAXTER
P.O. BOX 11193
MIDLAND, TEXAS 79702

OFFICE TELEPHONE
915/682-6191

April 27, 1989

Kelly H. Baxter
Caudill State No. 2

FORM C-108 Supplement

III. Well Data:
See attached injection well data sheet

IV. New Project

V. Map is attached

VI. There are four wells within the area of review that penetrate the Strawn (Penn) Zone: Sinclair Oil & Gas State 735 No. 1, Sinclair Oil & Gas State 735 No. 2 Humble Oil & Refining Co. New Mexico St. AJ No. 2, Gulf Oil Corp. Lea "GJ" State No. 1. The plugging reports with schematics on these wells are attached.

VII. Data on proposed operations:
(1) Average rate of injection 1500 BWPD.
Maximum rate of injection 3000 BWPD.
Estimated total volume to be injected 6×10^6 BW.

(2) Closed

(3) Average injection pressure 1,000 psi.
Maximum injection pressure 2,060 psi.

(4) Reinjected produced water from the Devonian Zone in the Caudill State No. 1.

(5) Injection will be into the Wolfcamp, Penn, Strawn Zones in the Caudill State No. 2. Water analysis from the No. 1 & No. 2 are attached.

VIII. Geological Data:

Injection Zone: Perforations between 10,300 & 11,665' in the Wolfcamp, Penn, and Strawn Zones consisting of lime, dolomite, chert, and shale.

The underground source of drinking water in this area is Ogallala. Its base is estimated at approximately 300'. The Santa Rosa is a fresh water aquifer with its base at approximately 1300'.

IX. The planned completion is to inject thru perforations between 10,300' and 11,665'. Acid stimulation may be done if it is needed to improve injectivity.

X. A dual spaced neutron log is on file at the NMOCD, Hobbs District Office.

XI. Attached are water analysis from three fresh water wells within one mile of the Caudill State No. 2.

XII. Available geological and engineering data have been examined and no evidence of open faults or any other hydrologic connections between the disposal zone and any underground fresh water aquifers have been found.

XIII. The offset operator listed below has been furnished a copy of this application by certified mail.

The surface owner listed below has been furnished a copy of this application by certified mail.

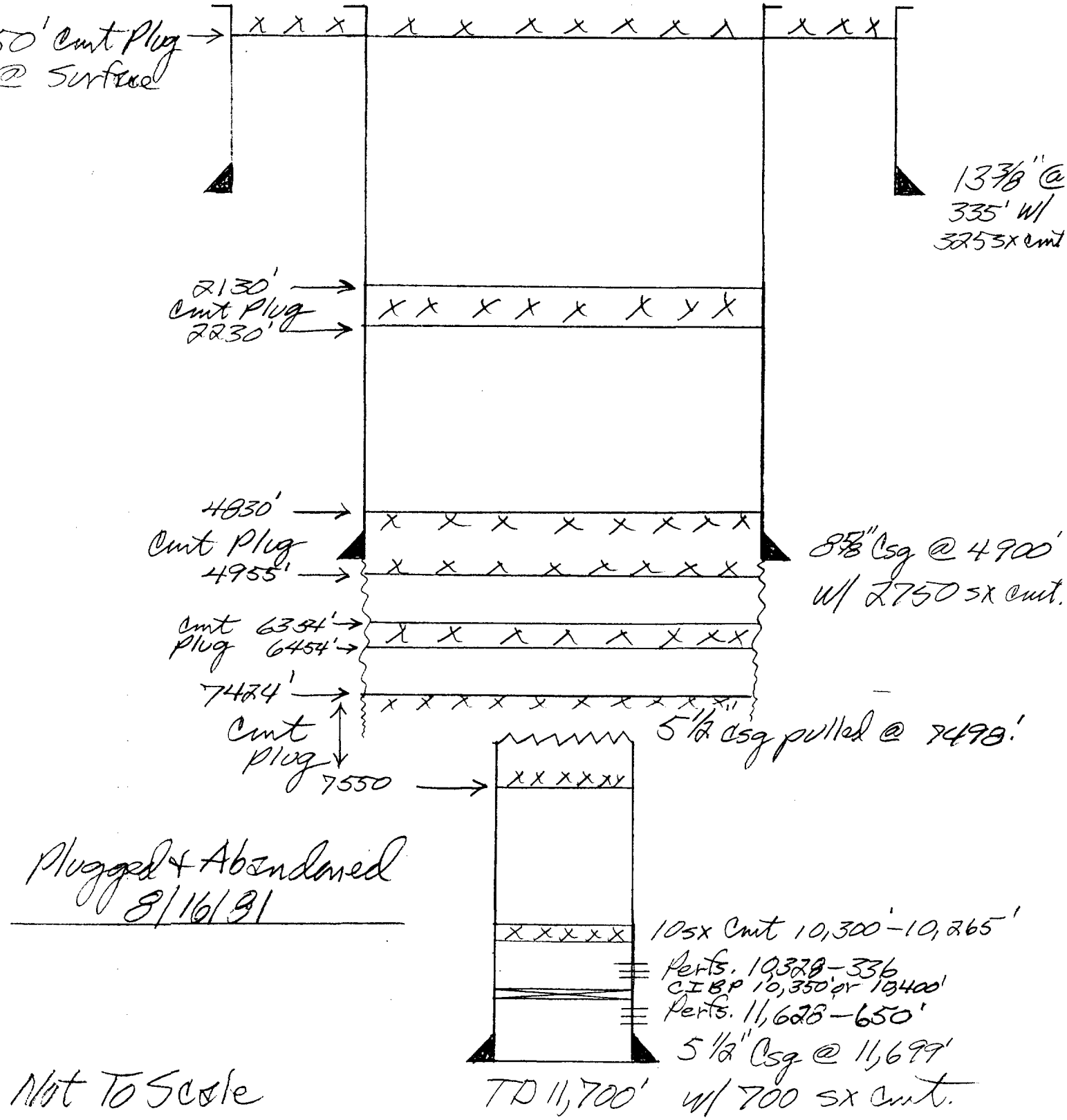
Offset Operator

Elk Oil Company
P.O. Box 310
Roswell, NM 88210

Surface Landowner

Frankie Caudill
P.O. Box 23
Lovington, New Mexico 88260
505-396-2283

Gulf Oil Corp.
Lea "GJ" State No. 1
Down Permo Penn Field
1980' FNL & 660' FEL, Sec. 26, T-16-S, R-36-E
Lea Co., N.M.



Plugged + Abandoned
8/16/91

Not To Scale

11/25/91 565

NO. OF COPIES RECEIVED		
DISTRIBUTION		
SANTA FE		
FILE		
U.S.G.S.		
LAND OFFICE		
OPERATOR		

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

Form C-10
Revised 1

5a. Indicate Type of Lease
State [X] Fee

5. State Oil & Gas Lease No.
B-487

SUNDRY NOTICES AND REPORTS ON WELLS

(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT —" (FORM C-101) FOR SUCH PROPOSALS.)

7. Unit Agreement Name

OIL WELL [X] GAS WELL [ ] OTHER-

8. Farm or Lease Name
Lea "GJ" State

Name of Operator
Gulf Oil Corporation

9. Well No.
1

Address of Operator
P. O. Box 670, Hobbs, NM 88240

10. Field and Pool, or Wildcat
Dean Permo-Penn

Location of Well
UNIT LETTER H, 1980 FEET FROM THE North LINE AND 660 FEET FROM
East LINE, SECTION 26 TOWNSHIP 15S RANGE 36E NMPM.

15. Elevation (Show whether DF, RT, GR, etc.)
3877' GL

12. County
Lea

Check Appropriate Box To Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

- PERFORM REMEDIAL WORK [ ]
- TEMPORARILY ABANDON [ ]
- PULL OR ALTER CASING [ ]
- PLUG AND ABANDON [ ]
- CHANGE PLANS [ ]
- OTHER [ ]

SUBSEQUENT REPORT OF:

- REMEDIAL WORK [ ]
- COMMENCE DRILLING OPNS. [ ]
- CASING TEST AND CEMENT JOB [ ]
- ALTERING CASING
- PLUG AND ABANDONMENT
- OTHER P&A

Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

Set CIBP at 248', knocked out CIBP to 10,400'; spot 10 sacks cement 10,300'-10,265'. WOC. Test casing 500#., circulate with abandonment mud. Cut 5½" casing at 7498' & POH. Set cement plug 7550'-7450' to cover cut in 5½" casing. Tag TOC at 7424'. Set cement plug 6454'-6354'. Set cement plug 4955'-4855', tag TOC at 4908'. Set 50 sack cement plug, tag TOC 4830'. Spot 100' cement plug 2230'-2130'. Spot 50' surface plug. Set marker, disconnect water tanks, cut anchors, clean location. P&A 8-16-81.

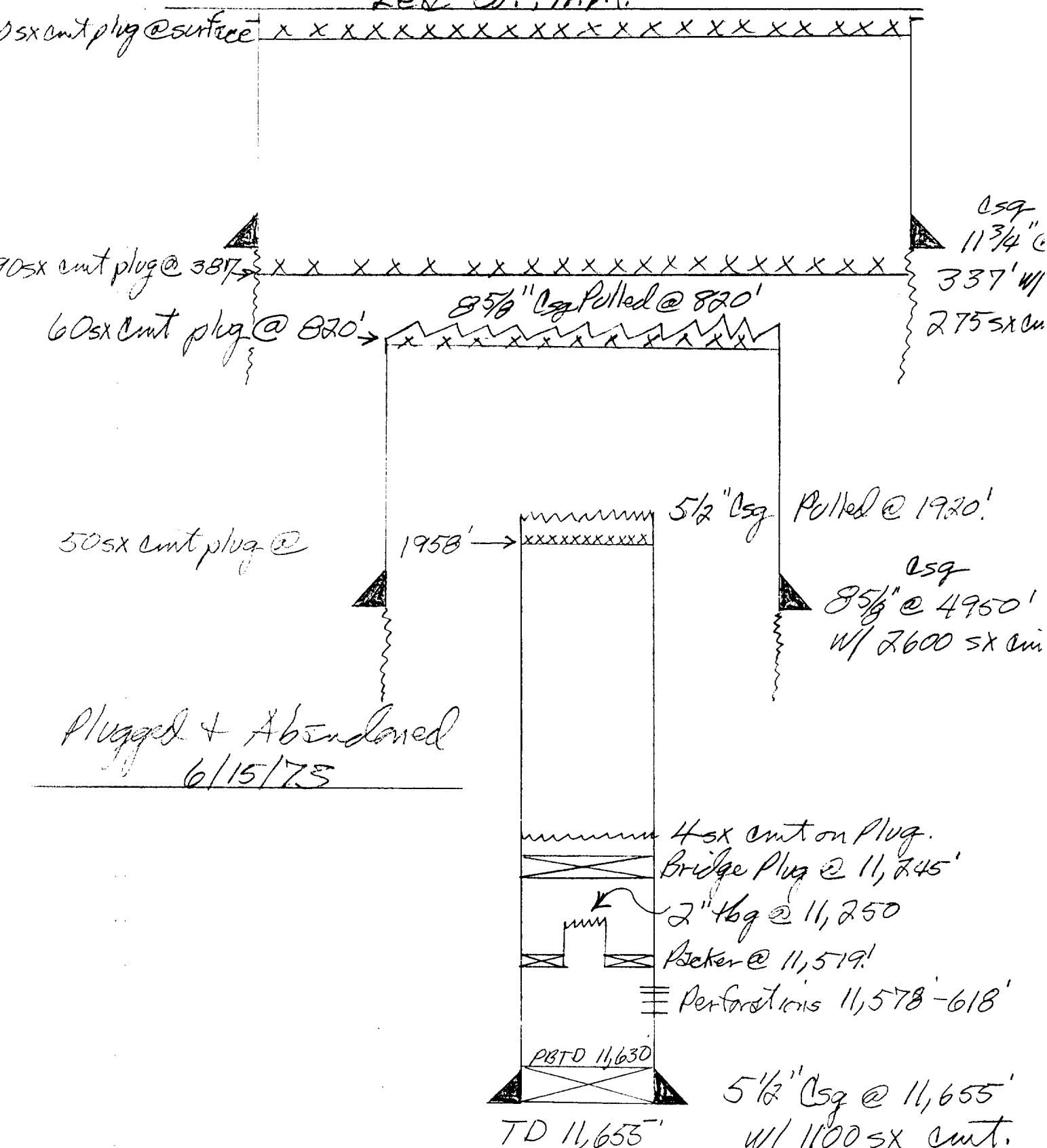
I hereby certify that the information above is true and complete to the best of my knowledge and belief.

R L Pitts

TITLE Area Engineer DATE 8-27-81

OIL & GAS INSPECTOR AUG 28 1981

Exxon Corporation
New Mexico A J State No. 2
Dean Permo Penn Field
1980' FSL & 1980' FEL, Sec 26, T-15-S, R-36-E
Lea Co., N.M.



Not To Scale.

4/25/89 565

OPIES RECEIVED		
STRIBUTION		
SANTA FE		
FILE		
U.S.G.S.		
LAND OFFICE		
OPERATOR		

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-103
Supersedes Old C-102 and C-103
Effective 1-1-65

5a. Indicate Type of Lease
State [X] Fee [ ]

5. State Oil & Gas Lease No.
E-529

SUNDRY NOTICES AND REPORTS ON WELLS

(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT —" (FORM C-101) FOR SUCH PROPOSALS.)

1. OIL WELL [X] GAS WELL [ ] OTHER-

7. Unit Agreement Name

2. Name of Operator
EXXON CORPORATION

8. Farm or Lease Name
NEW MEXICO AJ STATE

3. Address of Operator
P.O. Box 1600 MIDLAND, TEXAS 79701

9. Well No.
2

4. Location of Well
UNIT LETTER J, 1980 FEET FROM THE SOUTH LINE AND 1980 FEET FROM THE EAST LINE, SECTION 26 TOWNSHIP 15-S RANGE 36-E NMPM.

10. Field and Pool, or Wildcat
DEAN PERMO PENN

15. Elevation (Show whether DF, RT, GR, etc.)
3871 DF

12. County
LEA

16. Check Appropriate Box To Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK [ ]	PLUG AND ABANDON [ ]	REMEDIAL WORK [ ]	ALTERING CASING [ ]
TEMPORARILY ABANDON [ ]		COMMENCE DRILLING OPNS. [ ]	PLUG AND ABANDONMENT [X]
PULL OR ALTER CASING [ ]	CHANGE PLANS [ ]	CASING TEST AND CEMENT JOB [ ]	
OTHER [ ]		OTHER [ ]	

17. Describe Proposed or Completed Operations *(Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work)* SEE RULE 1103.

MIRU BAKER WELL SERVICE 6-13-73, CLEANED OUT CELLAR, UNABLE TO UNLATCH TBG FROM PKR AT 11519, CUT 2" TBG AT 11250', PULLED 364 JTS 2" TBG; SET BP ON WIRELINE AT 11245' W/4 SX CEMENT ON TOP; LOAD HOLE WITH MUD; WELDED NIPPLE ON 5½" CSG. CUT 5½" CSG AT 1920'; PULLED OUT OF HOLE; RAN 2" TBG; SPOTTED 50 SX PLUG AT 1958'; PULLED TBG OUT OF HOLE; WELDED ONTO 8 5/8" CSG. CUT 8 5/8" CSG. AT 820'; PULLED OUT OF HOLE; RAN TBG; SPOTTED 60 SX CMT PLUG AT 820'; SPOTTED 90 SX PLUG AT 387'; PULLED TBG; SPOTTED 10 SX PLUG @ SURFACE; INSTALLED DRY HOLE MARKER, AND CLEAND UP LOCATION. FRW 6-15-73

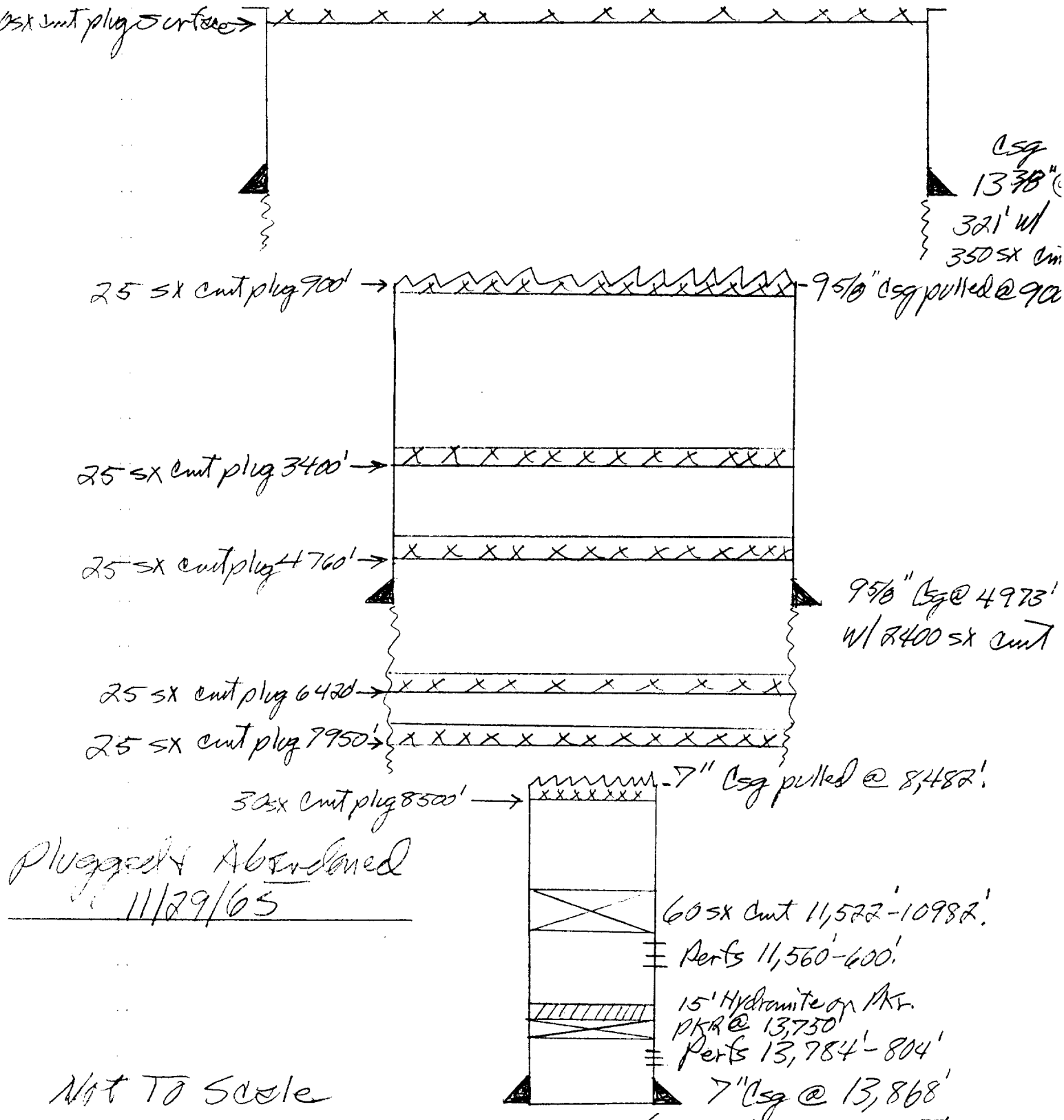
18. I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNED [signature] TITLE UNIT HEAD DATE 6-28-73

APPROVED BY Nathan E. Clegg TITLE [illegible] DATE [illegible]

CONDITIONS OF APPROVAL, IF ANY:

Sinclair Oil & Gas Company
State 735 No. 1
Dean Permo Penn Field
1980' FNL & 1980' FEL, Sec. 26, T-15-S, R-36-E
Lea Co., N.M.



Plugged & Abandoned
11/29/65

Not To Scale

NO. OF COPIES RECEIVED		
DISTRIBUTION		
SANTA FE		
FILE		
U.S.G.S.		
LAND OFFICE		
OPERATOR		

NEW MEXICO OIL CONSERVATION COMMISSION

DEC 3 11 43 AM '65

Form C-103
Supersedes Old C-102 and C-103
Effective 1-1-65

5a. Indicate Type of Lease: State [X] Fee [ ]

5. State Oil & Gas Lease No. 735

SUNDRY NOTICES AND REPORTS ON WELLS

(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT —" (FORM C-101) FOR SUCH PROPOSALS.)

1. OIL WELL [X] GAS WELL [ ] OTHER- Dry

7. Unit Agreement Name

2. Name of Operator: Sinclair Oil & Gas Company

8. Farm or Lease Name: Sun State Lea 735

3. Address of Operator: P. O. Box 1920, Hobbs, New Mexico

9. Well No. 1

4. Location of Well: UNIT LETTER G, 1980 FEET FROM THE North LINE AND 1980 FEET FROM THE East LINE, SECTION 26 TOWNSHIP 15S RANGE 36E NMPM.

10. Field and Pool, or Wildcat: Dean Permo-Penn

15. Elevation (*Show whether DF, RT, GR, etc.*): 3864' GR

12. County: Lea

6. Check Appropriate Box To Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK [ ]	PLUG AND ABANDON [ ]	REMEDIAL WORK [ ]	ALTERING CASING [ ]
TEMPORARILY ABANDON [ ]		COMMENCE DRILLING OPNS. [ ]	PLUG AND ABANDONMENT [X]
PULL OR ALTER CASING [ ]	CHANGE PLANS [ ]	CASING TEST AND CEMENT JOB [ ]	
OTHER [ ]		OTHER [ ]	

7. Describe Proposed or Completed Operations (*Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work*) SEE RULE 1103.

11-10-65 to 11-12-65 Rigged up pulling unit, pulled 11,522' of 2-3/8"OD tubing and Baker Model M Anchor catcher. Ran 11,522' of 2-3/8"Od tubing and filled hole w/heavy mud.

11-13-65 to 11-20-65 Mixed 60 sacks cement and plugged off perforations 11,560-11,600'. Bottom of plug at 11,522', top of plug at 10,982'. Displaced cement w/gel mud. Pull tubing out of hole and shot off 7"OD casing @ 8,482'.

11-21-65 Ran tubing to 8,500', mixed 30 sacks cement, displaced w/gel mud on top of 7"OD casi stub at 8,500'.Pulled tubing up to 7590', mixed 25 sacks cement, displaced w/gel mud at 7,590'.

11-22-65 to 11-25-65 Pulled tubing up to 6420', mixed 25 sacks cement, displaced w/gel mud at 6,420'.

11-26-65 to 11-29-65 Mixed 25 sacks cement, displaced w/gel mud at 4,760'. Shot off 9-5/8"OD casing at 900' and pulled 900'. Ran tubing to 3400', mixed 25 sacks cement, displaced w/gel mud at 3400'. Pulled tubing up to 900', mixed 25 sacks cement, displaced w/gel mud at 900' top of 9-5/8"OD csg stub. Mixed 10 sacks cement, capped top of 13-3/8"OD casing and installed regulation dry hole marker, cleaned and levelled location.

13-3/8"OD csg set @ 321', 9-5/8"OD csg set @ 4973', 7"OD Csg set @ 13,868'.

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

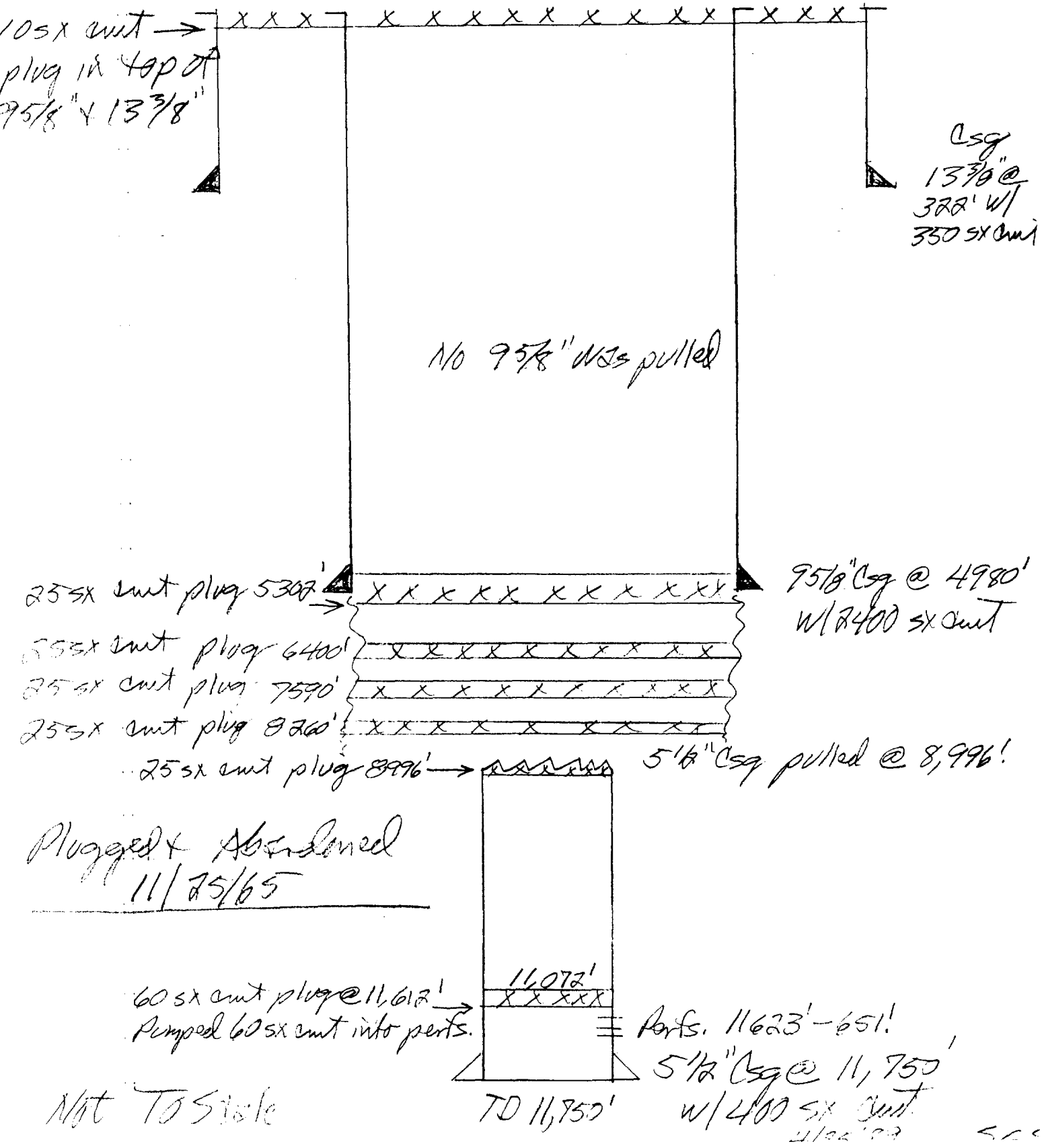
SIGNED [signature] TITLE Superintendent DATE 12-2-65

APPROVED BY [signature] TITLE [ ] DATE [ ]

CONDITIONS OF APPROVAL, IF ANY:

Orig&cc: OCC Hobbs, cc: State Land Office, cc: Regional Office, cc: file

Sinclair Oil & Gas Company
State 755 No. 2
Dean Permo Penn Field
660'FSL & 1980'FEL, Sec 23, T-15-S, R-36-E
Lea Co., N.M.



Plugged & Abandoned
11/25/65

Not To Scale

NO. OF COPIES RECEIVED		
DISTRIBUTION		
ANTA FE		
ILE		
.S.G.S.		
AND OFFICE		
PERATOR		

HOBBS OFFICE O. C.

NEW MEXICO OIL CONSERVATION COMMISSION

DEC 3 11 42 AM '65

Form C-103
Supersedes Old C-102 and C-103
Effective 1-1-65

5a. Indicate Type of Lease
State [X] Fee [ ]

5. State Oil & Gas Lease No.
735

SUNDRY NOTICES AND REPORTS ON WELLS

(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT —" (FORM C-101) FOR SUCH PROPOSALS.)

OIL WELL [X] GAS WELL [ ] OTHER-

7. Unit Agreement Name

Name of Operator
Sinclair Oil & Gas Company

8. Farm or Lease Name
State Lse 735

Address of Operator
P. O. Box 1920, Hobbs, New Mexico

9. Well No.
2

Location of Well
UNIT LETTER O, 660 FEET FROM THE South LINE AND 1980 FEET FROM THE East LINE, SECTION 23 TOWNSHIP 15S RANGE 36E NMPM.

10. Field and Pool, or Wildcat
Dean Permo-Penn

15. Elevation *(Show whether DF, RT, GR, etc.)*
3868' Surface

12. County
Lea

Check Appropriate Box To Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
ERFORM REMEDIAL WORK [ ]	PLUG AND ABANDON [ ]	REMEDIAL WORK [ ]	ALTERING CASING [ ]
EMPORARILY ABANDON [ ]		COMMENCE DRILLING OPNS. [ ]	PLUG AND ABANDONMENT [X]
ULL OR ALTER CASING [ ]	CHANGE PLANS [ ]	CASING TEST AND CEMENT JOB [ ]	
OTHER [ ]		OTHER [ ]	

. Describe Proposed or Completed Operations *(Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work)* SEE RULE 1103.

11-22-65 Rigged up pulling unit, ran 2-3/8"OD tubing to 11,612' and filled hole w/heavy mud. Mixed 60 sacks of cement and displaced into perforations 11,623-11,651', no results, mixed 60 more sacks of cement and displaced into perfs. top of plug at 11,072', bottom plug at 11,612'. Pulled out of hole w/tubing.

11-23-65 Shot off 5-1/2"OD csg at 8,996' and pulled 8,996'.

11-24-65 Ran tubing to 8,996', mixed 25 sacks cement, displaced w/gel mud and placed plug on top of 5-1/2"OD csg stub @ 8,996'. Placed cement plug @ 8,260' w/25 sacks cement and displaced w/gel mud. Placed cement plug at 7590' w/25 sacks cement and displaced w/gel mud.

11-25-65 Placed cement plug at 6400' w/25 sacks cement and displaced w/gel mud. Placed cement plug at bottom of 9-5/8"OD casing at 5,032' w/25 sacks cement and displaced gel mud. Pulled out of hole w/2-3/8"OD tubing and placed cement plug in top of 9-5/8" and 13-3/8" casing w/10 sacks cement, installed regulation marker, cleaned and levelled location.

5-1/2"OD casing set @ 11,750'.
9-5/8"OD casing set @ 4980'.
13-3/8"OD casing set @ 3~~19~~22'.

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

ED [signature] TITLE Superintendent DATE 12-2-65

OVED BY John W. Runyan TITLE [ ] DATE [ ]

IDITIONS OF APPROVAL, IF ANY:

Orig&2cc: CCC Hobbs, cc: State Land Office, cc: Regional Office, cc: file

PERMIAN
Treating Chemicals, Inc.

P. O. BOX 815
TATUM, NM 88267
PHONE (505) 398-4111

WATER ANALYSIS REPORT

Company Kelly H. Baxter — Date Samples 4-18-89

Field — County

Lease — State

Well — Formation

Type of Water Fresh — Water, B/D

Sampling Point Windmill SE of #2 3/4 mile — Sampled By

Asudill State #2

DISSOLVED SOLIDS

CATIONS	mg/l		meq/l
Sodium, Na+(Calc)	-0-	÷ 23	-0-
Calcium, Ca++	1600	÷ 20	8
Magnesium, Mg++		÷ 12.2	
Barium, Ba++	175	÷ 68.7	3
Iron, Fe (Total			

ANIONS			
Chloride, Cl-	250	÷ 35.5	7
Sulfate, $So_4^=$	250	÷ 48	5
Carbonate, $Co_3^=$		÷ 30	
Bicarbonate, HCo_3^-	207	÷ 61	3

OTHER PROPERTIES

PH 7.68

Specific Gravity 1.000

H_2S Negative

Total Dissolved Solids 2482

Total Hardness 1000

Remarks and Recommendations

PERMIAN
Treating Chemicals, Inc.

P. O. BOX 815
TATUM, NM 88267
PHONE (505) 398-4111

WATER ANALYSIS REPORT

Company Kelly H. Baxter — Date Samples 4-18-89

Field — County

Lease — State

Well — Formation

Type of Water Fresh — Water, B/D

Sampling Point House ½ mile West of #2 Caudill State — Sampled By

DISSOLVED SOLIDS

CATIONS	mg/l		meq/l
Sodium, Na+(Calc)	-0-	÷ 23	-0-
Calcium, Ca++	2800	÷ 20	14
Magnesium, Mg++		÷ 12.2	
Barium, Ba++	150	÷ 68.7	2
Iron, Fe (Total			

ANIONS			
Chloride, Cl-	200	÷ 35.5	6
Sulfate, $So_4^=$	350	÷ 48	7
Carbonate, $Co_3^=$		÷ 30	
Bicarbonate, HCo_3^-	195	÷ 61	3

OTHER PROPERTIES

PH 7.67

Specific Gravity 1.000

H_2S Negative

Total Dissolved Solids 3695

Total Hardness 1000

Remarks and Recommendations

PERMIAN
Treating Chemicals, Inc.

P. O. BOX 815
TATUM, NM 88267
PHONE (505) 398-4111

WATER ANALYSIS REPORT

Company Kelly H. Baxter — Date Samples 4-18-89

Field — County

Lease — State

Well — Formation

Type of Water Fresh — Water, B/D

Sampling Point Windmill NE 1/2 to 3/4 mile of #2 Well Caudill Estate — Sampled By

DISSOLVED SOLIDS

CATIONS	mg/l		meq/l
Sodium, Na+(Calc)	115	÷ 23	5
Calcium, Ca++	2000	÷ 20	10
Magnesium, Mg++		÷ 12.2	
Barium, Ba++	150	÷ 68.7	2
Iron, Fe (Total			

ANIONS			
Chloride, Cl-	275	÷ 35.5	8
Sulfate, So_4=	275	÷ 48	6
Carbonate, Co_3=		÷ 30	
Bicarbonate, HCo_3-	195	÷ 61	3

OTHER PROPERTIES

PH 7.88

Specific Gravity 1.000

H_2S Negative

Total Dissolved Solids 3010

Total Hardness 1000

Remarks and Recommendations

PERMIAN
Treating Chemicals, Inc.

P. O. BOX 815
TATUM, NM 88267
PHONE (505) 398-4111

WATER ANALYSIS REPORT

Company: Kelly H. Baxter
Date Samples: 4-22-89
Field: Denton Sec26 T15S R36E
County: Lea
Lease: Caudill State
State: NM
Well: #1
Formation: Devonian
Type of Water: Prod
Water, B/D:
Sampling Point: Well Head
Sampled By: Leroy Collins (Pumper)

DISSOLVED SOLIDS

CATIONS	mg/l		meq/l
Sodium, Na+(Calc)	11845	÷ 23	515
Calcium, Ca++	1880	÷ 20	94
Magnesium, Mg++	170	÷ 12.2	14
Barium, Ba++		÷ 68.7	
Iron, Fe (Total			

ANIONS			
Chloride, Cl-	21000	÷ 35.5	591
Sulfate, So_4=	1250	÷ 48	26
Carbonate, Co_3=		÷ 30	
Bicarbonate, HCo_3-	378	÷ 61	6

OTHER PROPERTIES

PH: 6.78
Specific Gravity: 1.025
H_2S: Negative
Total Dissolved Solids: 36523
Total Hardness: 5400

Remarks and Recommendations

STABILITY INDEX CALCULATIONS
(Stiff-Davis Method)
$CaCO_3$ Scaling Tendency

SAMPLE

Company Kelly H. Baxter — Sample Test No. _____

Address P. O. Box 11193 Midland, Texas — Sample Date 4-22-89

Sample Caudill State #1 — Submitted By David Nailon

Field Denton

S. I. = pH - pCa - pAlk - K

where S. I. = stability index
pH = pH as measured on fresh sample
pCa = negative logarithm of calcium concentration
pAlk = negative logarithm of total alkalinity
K = constant, depends upon temperature and salt content

pH = 6.7 pCa = 1.3 pAlk = 2.3

CALCULATION OF IONIC STRENGTH AND K VALUE

Na	(.11845) X (2.2×10^{-5}) =	0.2605
Ca	(.01880) X (5.0×10^{-5}) =	0.0940
Mg	(.00170) X (8.2×10^{-5}) =	0.0139
Cl	(.21000) X (1.4×10^{-5}) =	0.2940
HCO_3	(.00378) X (0.8×10^{-5}) =	0.0030
SO_4	(.01250) X (2.1×10^{-5}) =	0.0262
	TOTAL IONIC STRENGTH =	0.6916

K = 3.0 @ 100 °F.

K = 2.4 @ 140 °F.

SI at(100)° = (6.7) - (1.3) - (2.3) - (3.0) or +.1

SI at(140)° = (6.7) - (1.3) - (2.3) - (2.4) or +.7

SI = 0 or water is relatively stable at 90 °F.

Remarks: Water should parcipitate calcium carbonate scale at temperature above 90° F.

PERMIAN
Treating Chemicals, Inc.

P. O. BOX 815
TATUM, NM 88267
PHONE (505) 398-4111

WATER ANALYSIS REPORT

Company Kelly H. Baxter — Date Samples 4-22-89

Field Denton Sec26 T15S R36E — County Lea

Lease Caudill St #2 — State NM

Well #2 — Formation ~~Devonian~~ Strawn

Type of Water Prod — Water, B/D

Sampling Point Well Head — Sampled By Leroy Collins (pumper)

DISSOLVED SOLIDS

CATIONS	mg/l		meq/l
Sodium, Na+(Calc)	15525	÷ 23	675
Calcium, Ca++	5040	÷ 20	252
Magnesium, Mg++	948	÷ 12.2	78
Barium, Ba++	-0-	÷ 68.7	-0-
Iron, Fe (Total			

ANIONS			
Chloride, Cl-	35000	÷ 35.5	986
Sulfate, So_4=	575	÷ 48	12
Carbonate, Co_3=	-0-	÷ 30	-0-
Bicarbonate, HCo_3-	427	÷ 61	7

OTHER PROPERTIES

PH 6.08

Specific Gravity 1.050

H_2S Negative

Total Dissolved Solids 57515

Total Hardness 16500

Remarks and Recommendations

STABILITY INDEX CALCULATIONS
(Stiff-Davis Method)
$CaCO_3$ Scaling Tendency

SAMPLE

Company Kelly H. Baxter — Sample Test No. ____

Address P. O. Box 11193 Midland, Texas — Sample Date 4-22-89

Sample Caudill State #2 — Submitted By Nailon

Field Denton

S. I. = pH - pCa - pAlk - K

where S. I. = stability index
pH = pH as measured on fresh sample
pCa = negative logarithm of calcium concentration
pAlk = negative logarithm of total alkalinity
K = constant, depends upon temperature and salt content

pH = 6.0 pCa = .8 pAlk = 2.1

CALCULATION OF IONIC STRENGTH AND K VALUE

Na	(.15525) X (2.2×10^{-5}) =	0.3415
Ca	(.05040) X (5.0×10^{-5}) =	0.2520
Mg	(.00948) X (8.2×10^{-5}) =	0.0777
Cl	(.35000) X (1.4×10^{-5}) =	0.4900
HCO_3	(.00427) X (0.8×10^{-5}) =	0.0034
SO_4	(.00575) X (2.1×10^{-5}) =	0.0120
	TOTAL IONIC STRENGTH =	1.1766

K = 3.3 @ 100 °F.

K = 2.6 @ 140 °F.

SI at(100)° = (6.0) - (.8) - (2.1) - (3.3) or -.2

SI at(140)° = (6.0) - (.8) - (2.1) - (2.6) or +.5

SI = 0 or water is relatively stable at 120 °F.

Remarks: Water should percipitate calcium carbonate scale at temperature above 120° F.

PERMIAN
Treating Chemicals, Inc.

P. O. BOX 815
TATUM, NM 88267
PHONE (505) 398-4111

WATER ANALYSIS REPORT

Company Kelly H. Baxter — Date Samples 4-22-89

Field Denton — County Lea

Lease Caudill St. — State NM

Well 1 and 2 — Formation Devonian / Strawn

Type of Water Comingled Pro — Water, B/D

Sampling Point Well Head — Sampled By Leroy Collins (pumper)

DISSOLVED SOLIDS

CATIONS	mg/l		meq/l
Sodium, Na+(Calc)	14720	÷ 23	640
Calcium, Ca++	3520	÷ 20	176
Magnesium, Mg++	656	÷ 12.2	54
Barium, Ba++		÷ 68.7	
Iron, Fe (Total			

ANIONS			
Chloride, Cl-	30000	÷ 35.5	845
Sulfate, So_4=	825	÷ 48	17
Carbonate, Co_3=		÷ 30	
Bicarbonate, HCo_3-	476	÷ 61	8

OTHER PROPERTIES

PH 6.42

Specific Gravity 1.035

H_2S Negative

Total Dissolved Solids 50197

Total Hardness 11500

Remarks and Recommendations

STABILITY INDEX CALCULATIONS
(Stiff-Davis Method)
$CaCO_3$ Scaling Tendency

SAMPLE

Company Kelly H. Baxter — Sample Test No. _____

Address _____ — Sample Date 4-22-89

Sample Comingled Pro — Submitted By _____

Field _____

S. I. = pH - pCa - pAlk - K

where S. I. = stability index
pH = pH as measured on fresh sample
pCa = negative logarithm of calcium concentration
pAlk = negative logarithm of total alkalinity
K = constant, depends upon temperature and salt content

pH = 6.4 pCa = 1.1 pAlk = 2.2

CALCULATION OF IONIC STRENGTH AND K VALUE

Na	(.14720) X (2.2×10^{-5}) =	0.3238
Ca	(.03520) X (5.0×10^{-5}) =	0.1760
Mg	(.00656) X (8.2×10^{-5}) =	0.0537
Cl	(.30000) X (1.4×10^{-5}) =	0.4200
HCO_3	(.00476) X (0.8×10^{-5}) =	0.0038
SO_4	(.00835) X (2.1×10^{-5}) =	0.0173

TOTAL IONIC STRENGTH = .9946

K = 3.2 @ 100 °F.

K = 2.6 @ 140 °F.

SI at(100)° = (6.4) - (1.1) - (2.2) - (3.2) or -.1

SI at(140)° = (6.4) - (1.1) - (2.2) - (2.6) or +.5

SI = 0 or water is relatively stable at 110 °F.

Remarks: Water should percipitate calcium carbonate scale at temperature above 110°F.

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

May 8, 1989
and ending with the issue dated

May 8, 1989

Publisher.

Sworn and subscribed to before me this 11 day of May, 1989

Notary Public.

My Commission expires

November 14, 1992
(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.

37 **LEGAL NOTICE**
May 8, 1989

Kelly H. Baxter proposes to convert the Caudill State No. 2 to a salt water disposal well. This well is located 660 feet FNL and 1980 feet FEL, Sec 26, T-15-S, R-36-E, Lea County, New Mexico. The purpose of the well will be to dispose of produced water from the Caudill State No. 1. This water is produced from the Devonian formation and will be disposed of into the Wolfcamp, Penn, and Strawn formation in the interval 10,300 feet to 11,665 feet. Maximum injection rate will be 3,000 BWPD and maximum pressure will be 2060 pounds per square inch. Interested parties may contact:

Kelly H. Baxter
P.O. Box 11193
Midland, Texas 79702
915/682/6191

Objections or requests for hearing with the Oil Conservation Division, P.O Box 2088, Santa Fe, New Mexico 87501 must be filed within 15 days of this notice.

RECEIVED

MAY 19 1989

OIL CONSERVATION DIV.
SANTA FE

● **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. 2. ☐ Restricted Delivery.

3. Article Addressed to: Yates Petroleum 105 South 4th St Artesia NM	4. Article Number 503 810 103 Type of Service: ☐ Registered ☐ Insured ☒ Certified ☐ COD ☐ 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	
7. Date of Delivery 5/30/89	

PS Form 3811, Feb. 1986 DOMESTIC RETURN RECEIPT

P-503 810 103

Yates Petro
105 S 4th St
Artesia NM 88210

RECEIVED
JUN -5 1989
OIL CONSERVATION DIV.
SANTA FE

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. 2. ☐ Restricted Delivery.

3. Article Addressed to:
EXXON COMPANY USA
PO BOX 1600
Midland TX 79702-1600

4. Article Number
503 810 104

Type of Service:
☐ Registered ☐ Insured
☑ Certified ☐ COD
☐ Express Mail

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature – Addressee
X

6. Signature – Agent
X

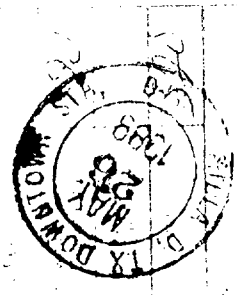
7. Date of Delivery
30 MAY 89

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

PS Form 3811, Feb. 1986 DOMESTIC RETURN RECEIPT

P-503 810 104

Exxon Co. USA
PO Box 1600
Midland TX 79702-1600



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. 2. ☐ Restricted Delivery.

3. Article Addressed to:
Hadson Pet. (USA) Inc.
921 W Sanger
Hobbs NM 88240

4. Article Number
503 810 102

Type of Service:
☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature – Addressee
X

6. Signature – Agent
X Rhoades

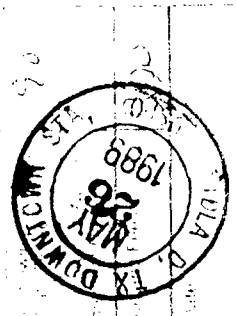
7. Date of Delivery
5-30-89

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

PS Form 3811, Feb. 1986 **DOMESTIC RETURN RECEIPT**

P-503 810 102

Hadson Pet. (USA) Inc.
921 W Sanger
Hobbs NM 88240



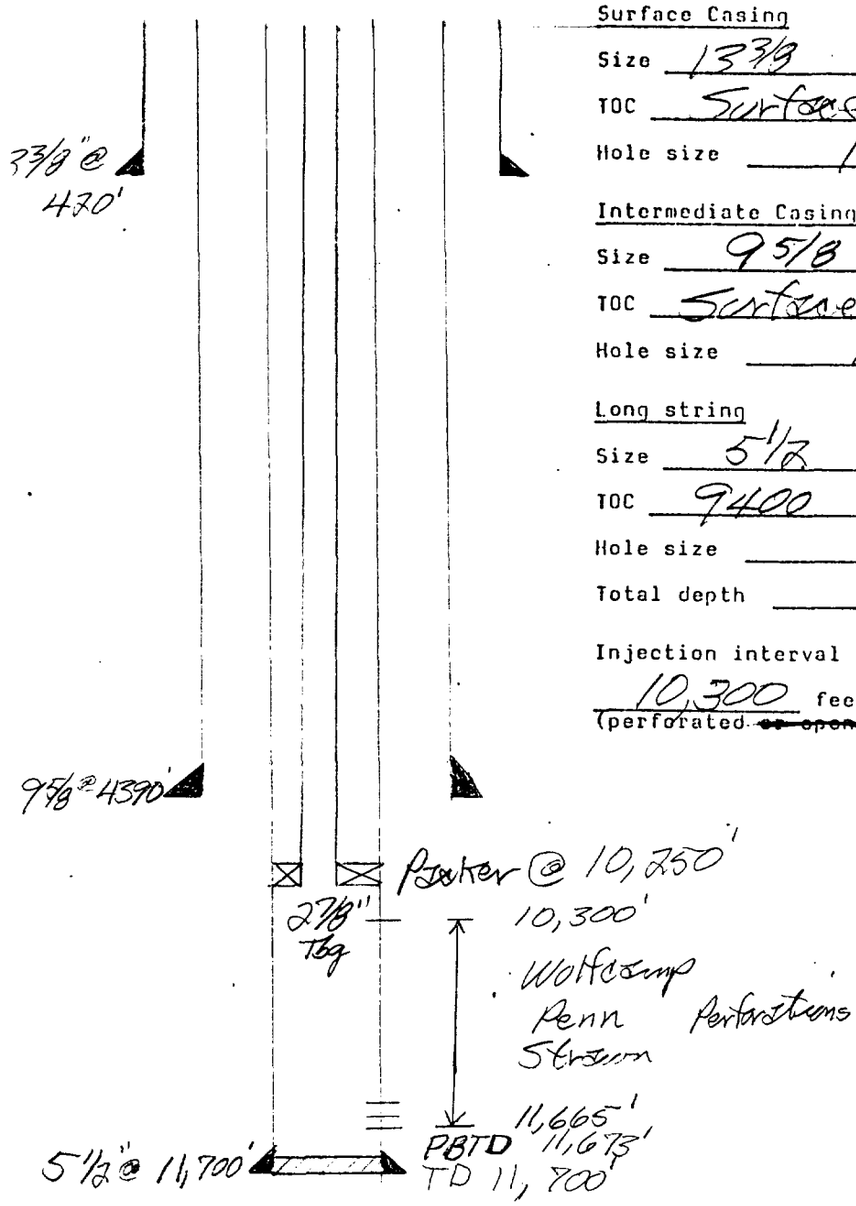
INJECTION WELL DATA SHEET

Kelly H. Baxter (OPERATOR) Cudill State (LEASE)

2 (WELL NO.) 660' FNL & 1980' FEL (FOOTAGE LOCATION) 26 (SECTION) T-15-S (TOWNSHIP) R-36-E (RANGE)

Dean (Permo Penn) Field

Schematic



Tabular Data

Surface Casing

Size 13 3/8" Cemented with 450 sx.

TOC Surface feet determined by Circulated

Hole size 17 1/2 Set@ 420'

Intermediate Casing

Size 9 5/8" Cemented with 1100 sx.

TOC Surface feet determined by Circulated

Hole size 12 1/4 Set@ 4390'

Long string

Size 5 1/2" Cemented with 625 sx.

TOC 9400 feet determined by Cmt Bond Log

Hole size 8 1/2" Set@ 11,700'

Total depth 11,700'

Injection interval

10,300 feet to 11,665 feet

(perforated ~~or open hole~~, indicate which)

Tubing size 2 7/8 lined with Plastic (material) set in a

Guiberson Uni-VI (brand and model) packer at 10,250 feet

(or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation Strawn

2. Name of Field or Pool (if applicable) Dean (Permo-Penn)

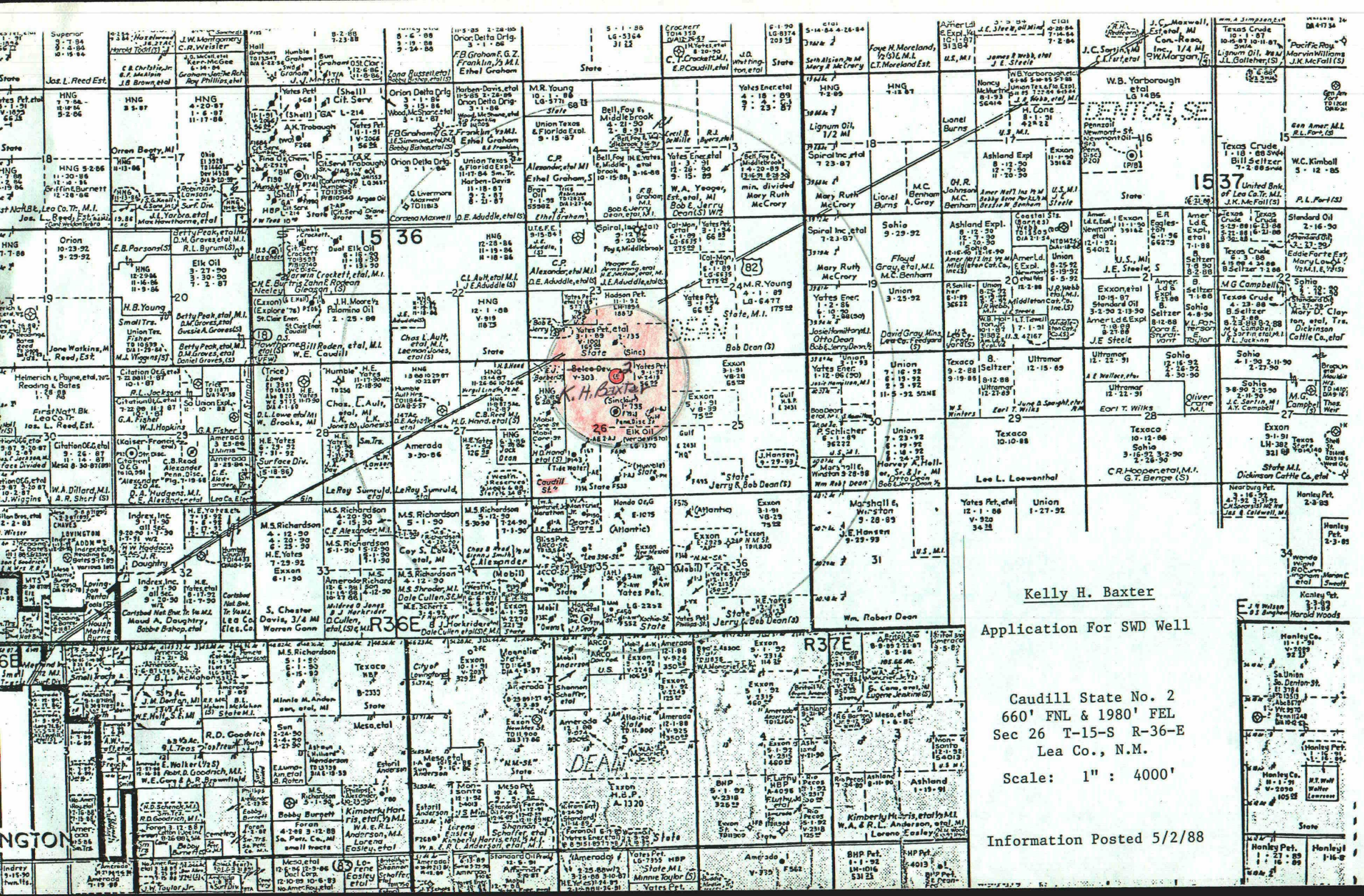
3. Is this a new well drilled for injection? ☐ Yes ☒ No

If no, for what purpose was the well originally drilled? Oil Well

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. None

4/25/89 565


Kelly H. Baxter
Application For SWD Well
Caudill State No. 2
660' FNL & 1980' FEL
Sec 26 T-15-S R-36-E
Lea Co., N.M.
Scale: 1" : 4000'
Information Posted 5/2/88
K. H. Baxter
DEAN
BENTON SE
R36E
R37E