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STATE OF NEW MEXICO
DEPARTMENT OF ENERGY, MINERALS AND NATURAL RESOURCES
OIL CONSERVATION DIVISION

APPLICATION OF TEXLAND PETROLEUM, L.P. FOR APPROVAL OF A WATERFLOOD UNIT AGREEMENT, AUTHORIZATION TO INJECT INTO THE BUBBA 4 STATE COM #001 WELL, AND TO QUALIFY FOR THE RECOVERED OIL TAX RATE, LEA COUNTY, NEW MEXICO.

CASE NO. _____

APPLICATION

Texland Petroleum, L.P. ("Texland") (OGRID No. 186838) through its undersigned attorneys, hereby files this application with the Oil Conservation Division for an order approving its proposed waterflood Unit Agreement for purposes of implementing its Bubba Strawn waterflood project (the "Project") within the Strawn formation. Texland also seeks authority to convert its **Bubba 4 State Com #001** (API 30-025-37420) well to injection to support the Project and to convert future wells within the Unit Area to injection administratively. In addition, Texland seeks approval to qualify as an enhanced oil recovery project for the recovered oil tax rate pursuant to the New Mexico Enhanced Oil Recovery Act, NMSA 1978, Sections 7-29A-1 through 7-29A-5, and Division regulations 19.15.6 NMAC. In support, Texland states as follows:

1. The proposed Unit Area / Project area, depicted in the plat attached as **Exhibit A**, consists of the Strawn formation, Shipp; Strawn Pool (Pool Code 55695), underlying approximately 240.00 acres, more or less, of the following State Trust lands situated in Lea County, New Mexico:

TOWNSHIP 17 SOUTH, RANGE 37 EAST, N.M.P.M.

Section 4: S/2 NW/4, SW/4

2. Texland is the designated operator under the Unit Agreement. The Unit Agreement has been approved by a sufficient percentage of the interest owners within the proposed Unit Area to provide effective control of unit operations.

3. The Unitized Interval is the stratigraphic equivalent of one hundred feet above the top of the Strawn formation and continuing to one hundred feet below the base of the Strawn formation, encountered at a true vertical depth of 10,945 feet down to 11,132 feet, as measured in Texland's **Walter 4 No. 1 well** (API #30-025-35919), located 2,260 feet from the south line and 718 feet from the west line of Section 4, Township 17 South, Range 37 East, N.M.P.M., Lea County, New Mexico.

4. Texland has met with the State Land Office and has received preliminary approval of the waterflood Unit Agreement.

5. The Unit Area is located entirely within the Shipp; Strawn Pool (Pool Code 55695).

6. Texland seeks authority to convert its **Bubba 4 State Com #001 Well** (API 30-025-37420) to injection to support the Project and to convert future wells within the Unit Area / Project area to injection administratively without the necessity of further hearings pursuant to 19.15.26.8.F.5 NMAC. A copy of Texland's Form C-108 is attached hereto as **Exhibit B**.

7. The Bubba 4 State Com #001 Well is located 731 feet from the south line and 1,043 feet from the west line of Section 4, Township 17 South, Range 37 East, Lea County, New Mexico. The injection of produced water will occur in the Strawn formation within the unitized interval at a depth of approximately 10,928 feet to 11,040 feet deep. The maximum proposed daily injection rate will be 2,000 barrels per day with an average daily injection rate of 750 barrels per day. The average surface injection pressure will be 1,450 psig, and the maximum surface injection pressure will be 1,950 psig.

8. Notice of this application has been provided to the owner of the surface of the lands on which the proposed injection well is to be located and to each affected party within one-half mile of the Unit Area / Project area boundary, as required by Division rules.

9. Applicant further requests that the Project be qualified for the recovered oil tax rate pursuant to the New Mexico Enhanced Oil Recovery Act, NMSA 1978, Sections 7-29A-1 through 7-29A-5, and Division regulations 19.15.6 NMAC. Applicant will present production data including graphs, charts and other supporting data showing the production history and production forecasts from the Unit Area / Project area at hearing.

10. Project data includes the following:

a.	Number of initial producing wells:	2
b.	Number of initial injection wells:	1
c.	Number of injection wells at full development:	2
d.	Capital cost of initial additional facilities:	$600,000
e.	Estimated total injection project cost:	$1,600,000
f.	Estimated value of incremental production:	$9,116,000
g.	Estimated injection commencement date:	January 2020
h.	Type of injected fluid:	Produced water
i.	Anticipated injection volumes:	750 BWPD (average) 2,000 BWPD (maximum) 20 Million Barrels (total)

11. The Unit Area / Project area has been so depleted that it is prudent to apply waterflood techniques to maximize the ultimate recovery of oil.

12. The Unit Agreement, and the unitized operation and management of the Unit Area, are in the best interests of conservation, the prevention of waste, and the protection of correlative rights.

WHEREFORE, Texland requests that this Application be set for hearing before an Examiner of the Oil Conservation Division on November 14, 2019, and that after notice and hearing as required by law, the Division enter its order granting this Application.

Respectfully submitted,

HOLLAND & HART LLP

By: _____

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ATTORNEYS FOR TEXLAND PETROLEUM, L.P.

VERIFICATION

STATE OF Texas)
) ss
COUNTY OF Tarrant)

I, Clayton Scott, hereby verify and attest that I am an engineer employed by Texland Petroleum, L.P. and am authorized to make this verification on its behalf. I have read the foregoing application and know the contents thereof and that the same is true and correct to the best of my knowledge, information, and belief.

Clayton Scott

SUBSCRIBED AND SWORN TO before me this 15 day of OCTOBER, 2019, by Clayton Scott.

Notary Public

My commission expires:

7-14-22

Leah D. Gurley
MY COMMISSION EXPIRES
July 14, 2022
NOTARY ID: 3897180

CASE _____: Application of Texland Petroleum, L.P. for Approval of a Waterflood Unit Agreement, Authorization to Inject into the Bubba 4 State Com #001 Well, and to Qualify for the Recovered Oil Tax Rate, Lea County, New Mexico. Applicant in the above-styled cause seeks an order approving its waterflood unit agreement and authorizing a waterflood project in the Strawn formation, Shipp; Strawn Pool (Pool Code 55695), underlying approximately 240.00 acres, more or less, of the following State Trust lands situated in Lea County, New Mexico:

TOWNSHIP 17 SOUTH, RANGE 37 EAST, N.M.P.M.

Section 4: S/2 NW/4, SW/4

The Unitized Interval is the stratigraphic equivalent of one hundred feet above the top of the Strawn formation and continuing to one hundred feet below the base of the Strawn formation, covering a true vertical depth of 10,945 feet down to 11,132 feet, as encountered in Texland's **Walter 4 No. 1 well** (API #30-025-35919), located 2,260 feet from the south line and 718 feet from the west line of Section 4, Township 17 South, Range 37 East, N.M.P.M., Lea County, New Mexico. Texland also seeks authority to convert its **Bubba 4 State Com #001 Well** (API 30-025-37420) to injection to support the waterflood Project and to convert future wells within the Unit Area / Project area to injection administratively without the necessity of further hearings pursuant to 19.15.26.8.F.5 NMAC. The Bubba 4 State Com #001 Well is located 731 feet from the south line and 1,043 feet from the west line of Section 4, Township 17 South, Range 37 East, Lea County, New Mexico. The proposed injection of produced water will occur within the unitized interval at a depth of approximately 10,928 feet to 11,040 feet deep. The average daily injection rate will be approximately 750 barrels per day with a maximum daily injection rate of 2,000 barrels per day. The average surface injection pressure will be 1,450 psig with a maximum surface injection pressure of 1,950 psig. The subject acreage is located approximately 8 miles northwest of Hobbs, New Mexico.

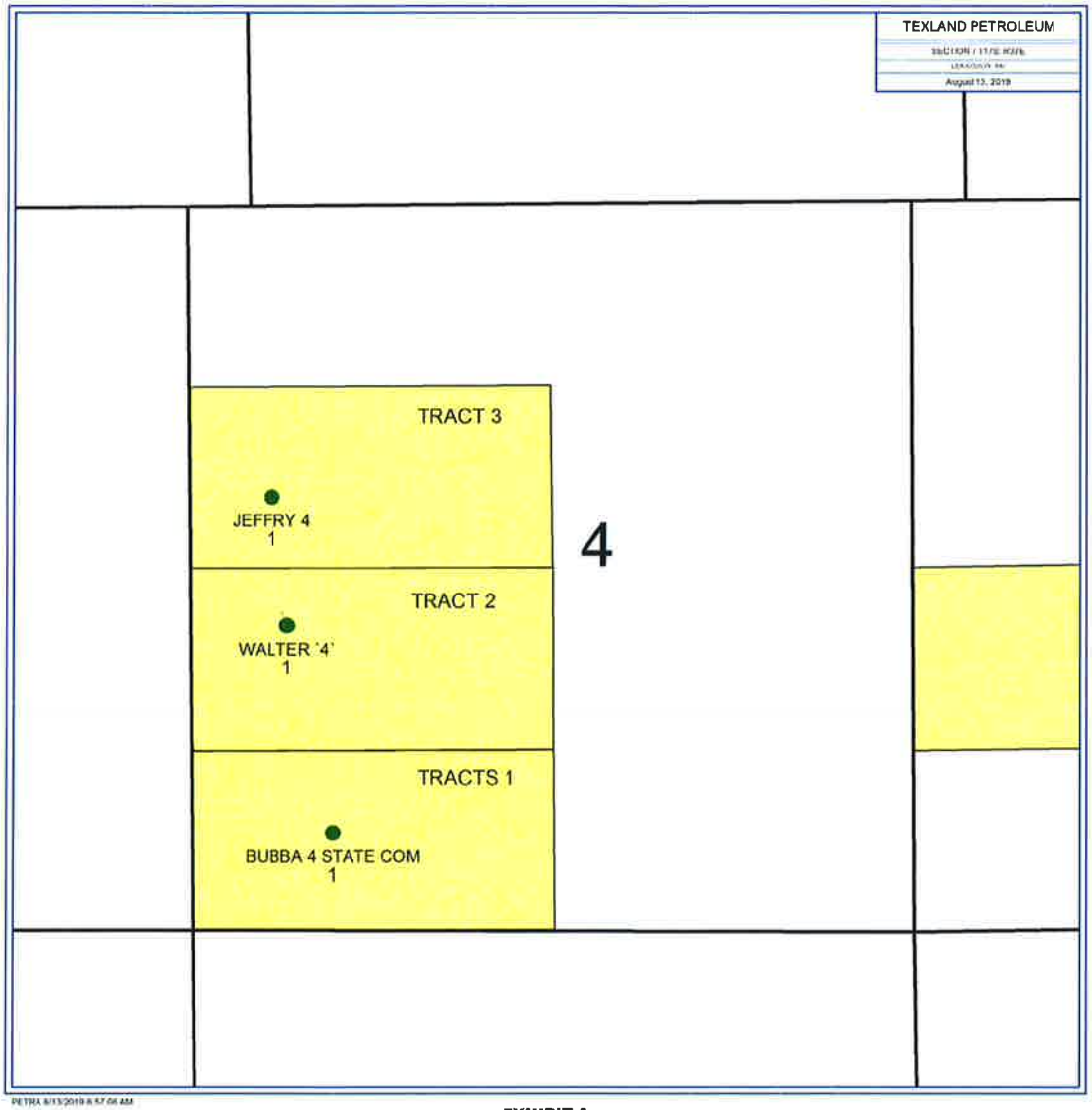

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EXHIBIT A

APPLICATION FOR AUTHORIZATION TO INJECT

BUBBA 4 STATE COM #001
Form C-108

Texland Petroleum-Hobbs, LLC

EXHIBIT B

Table of Contents

A. Form C-108

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL
RESOURCES DEPARTMENT

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

FORM C-108
Revised June 10, 2003

APPLICATION FOR AUTHORIZATION TO INJECT

I. PURPOSE: ___✓___Secondary Recovery _____Pressure Maintenance _____Disposal _____Storage
Application qualifies for administrative approval? _____Yes _____✓___No

II. OPERATOR: TEXLAND PETROLEUM-HOBBS, LLC

ADDRESS: 777 MAIN STREET SUITE 3200, FORT WORTH, TX 76102

CONTACT PARTY: VICKIE SMITH PHONE: 575-433-8395

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 geologic data on the injection zone including appropriate lithologic detail, geologic name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such sources known to be immediately underlying the injection interval.

IX. Describe the proposed stimulation program, if any.

*X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted).

*XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.

XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources 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: _____ TITLE: _____

SIGNATURE: _____ DATE: _____

E-MAIL ADDRESS: _____

* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be resubmitted. Please show the date and circumstances of the earlier submittal: _____

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate 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 the 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, 1220 South St. Francis Dr., Santa Fe, New Mexico 87505, 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

OPERATOR: TEXLAND PETROLEUM-HOBBS, LLC

WELL NAME & NUMBER: BUBBA 4 STATE COM #001

WELL LOCATION:	731' FSL & 1043' FWL	M	4	17S	37E
	FOOTAGE LOCATION	UNIT LETTER	SECTION	TOWNSHIP	RANGE

WELLBORE SCHEMATIC

WELL CONSTRUCTION DATA

Surface Casing

Hole Size: 17-1/2" Casing Size: 13-3/8" 48# H-40

Cemented with: 402 sx. ***or*** _____ ft³

Top of Cement: SURFACE Method Determined: Circulation

Intermediate Casing

Hole Size: 11" Casing Size: 8-5/8 32# J-55

Cemented with: 960 sx. ***or*** _____ ft³

Top of Cement: 265' Method Determined: Temp survey

Production Casing

Hole Size: 7-7/8" Casing Size: 5-1/2" 17# L80 LTC

Cemented with: 1005 sx. ***or*** _____ ft³

Top of Cement: 2590' Method Determined: CBL

Total Depth: 11,195'

Injection Interval

10,928' feet to 11,040' (PERFORATED)

(Perforated or Open Hole; indicate which)

INJECTION WELL DATA SHEET

Tubing Size: 2-3/8" 4.7# L-80 Lining Material: TK-70 IPC

Type of Packer: ARROWSET 1X (EPC/IPC)

Packer Setting Depth: 10,828'

Other Type of Tubing/Casing Seal (if applicable): _____

Additional Data

1. Is this a new well drilled for injection? _____Yes X No

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

2. Name of the Injection Formation: Strawn

3. Name of Field or Pool (if applicable): SHIPP, STRAWN

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail, i.e. sacks of cement or plug(s) used. No

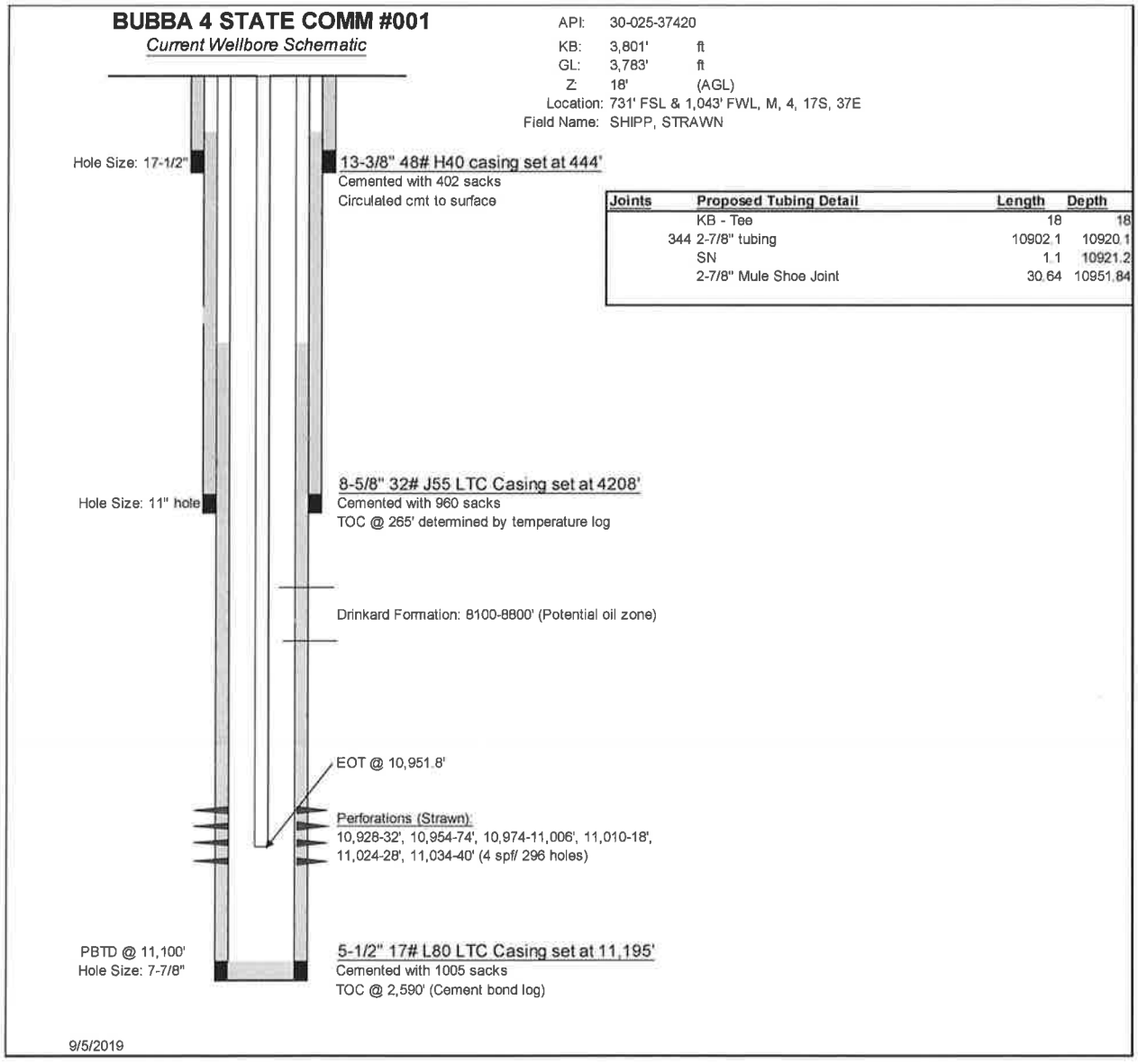
5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area:

   Drinkard (8100-8800')

B. Section III

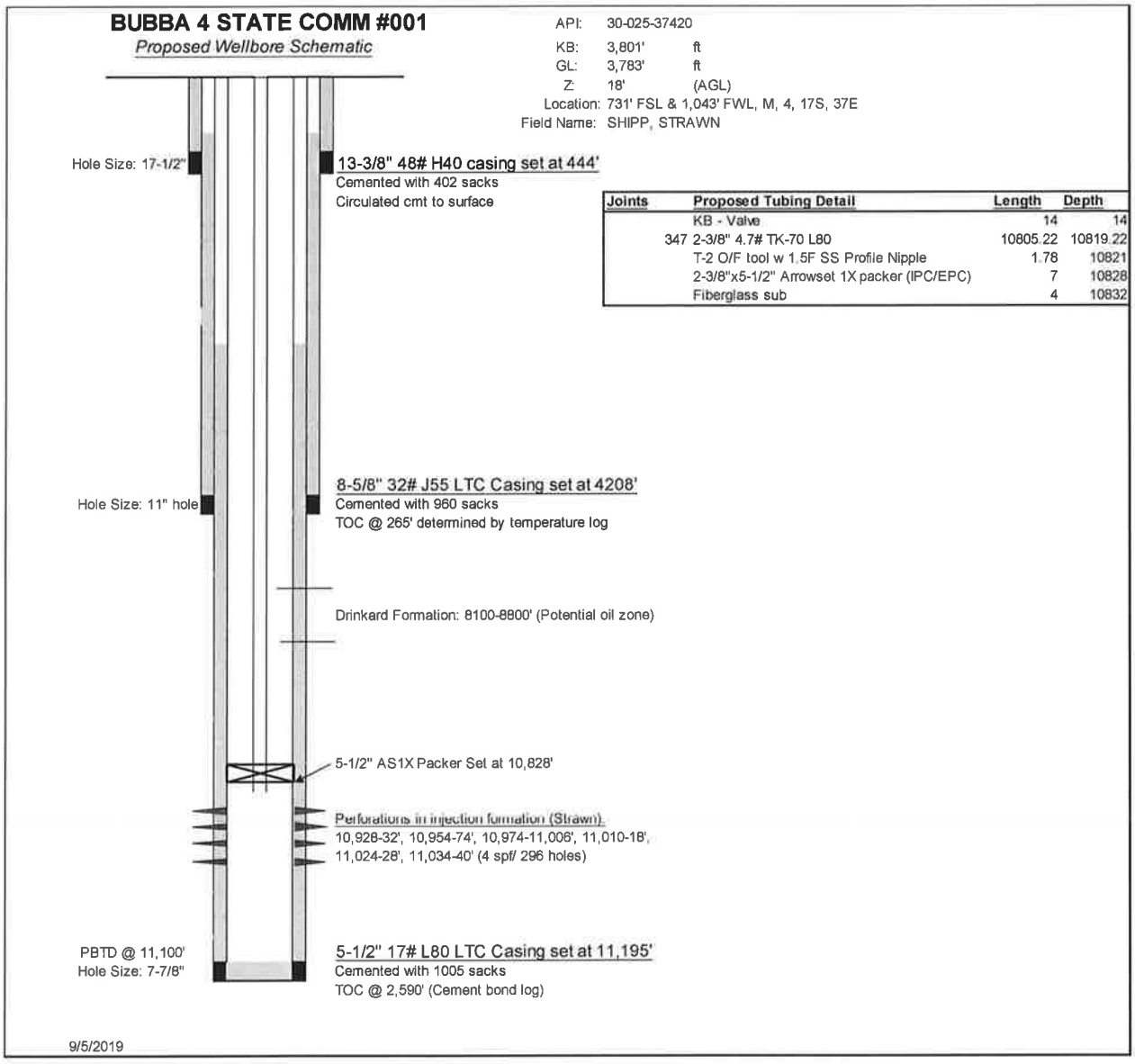
i. Bubba 4 State Com #001 Current Wellbore Schematic

Figure 1: Bubba 4 State Com #001 Current Wellbore Schematic



ii. Bubba 4 State Com #001 Proposed Wellbore Schematic

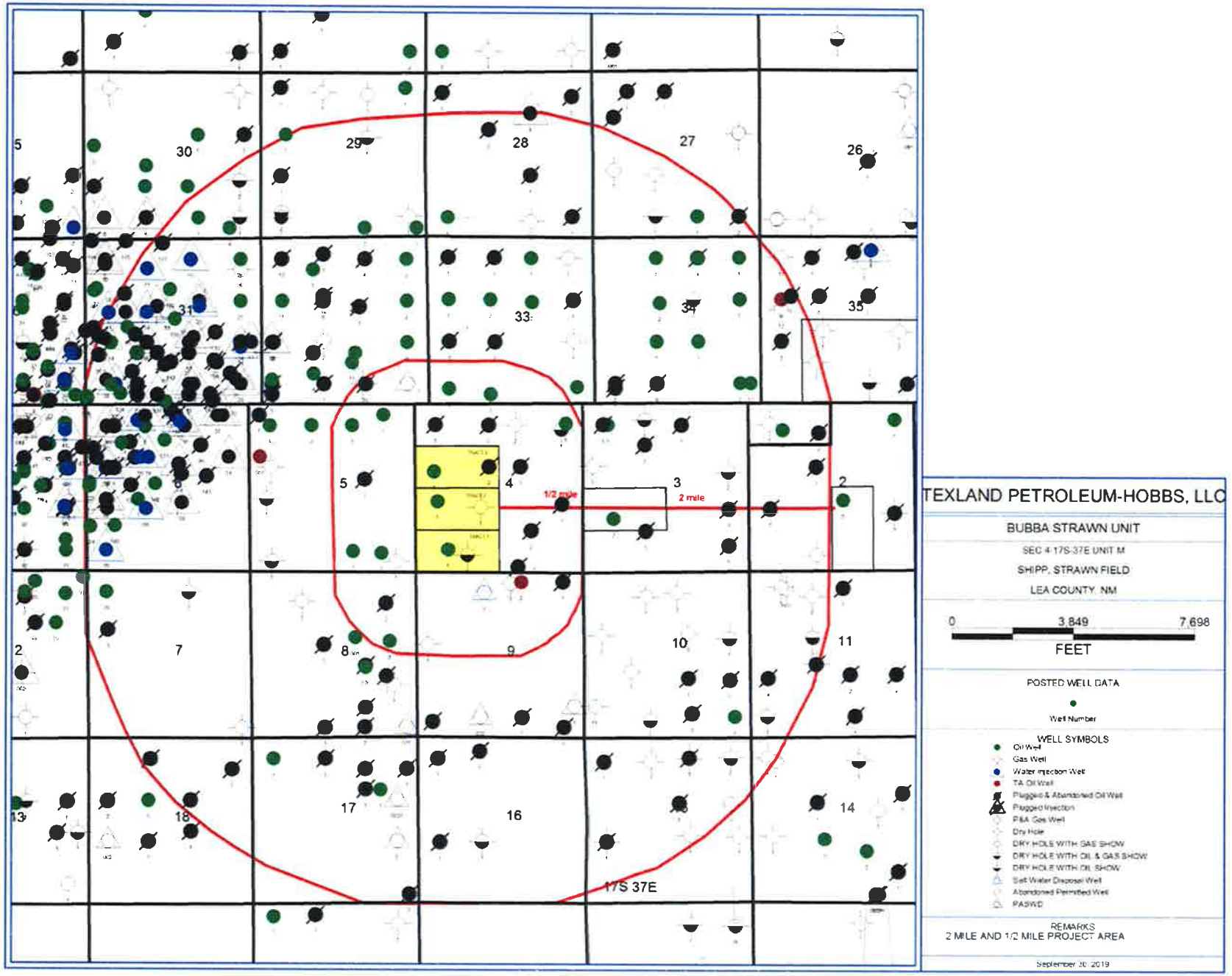
Figure 2Proposed wellbore schematic



C. Section V

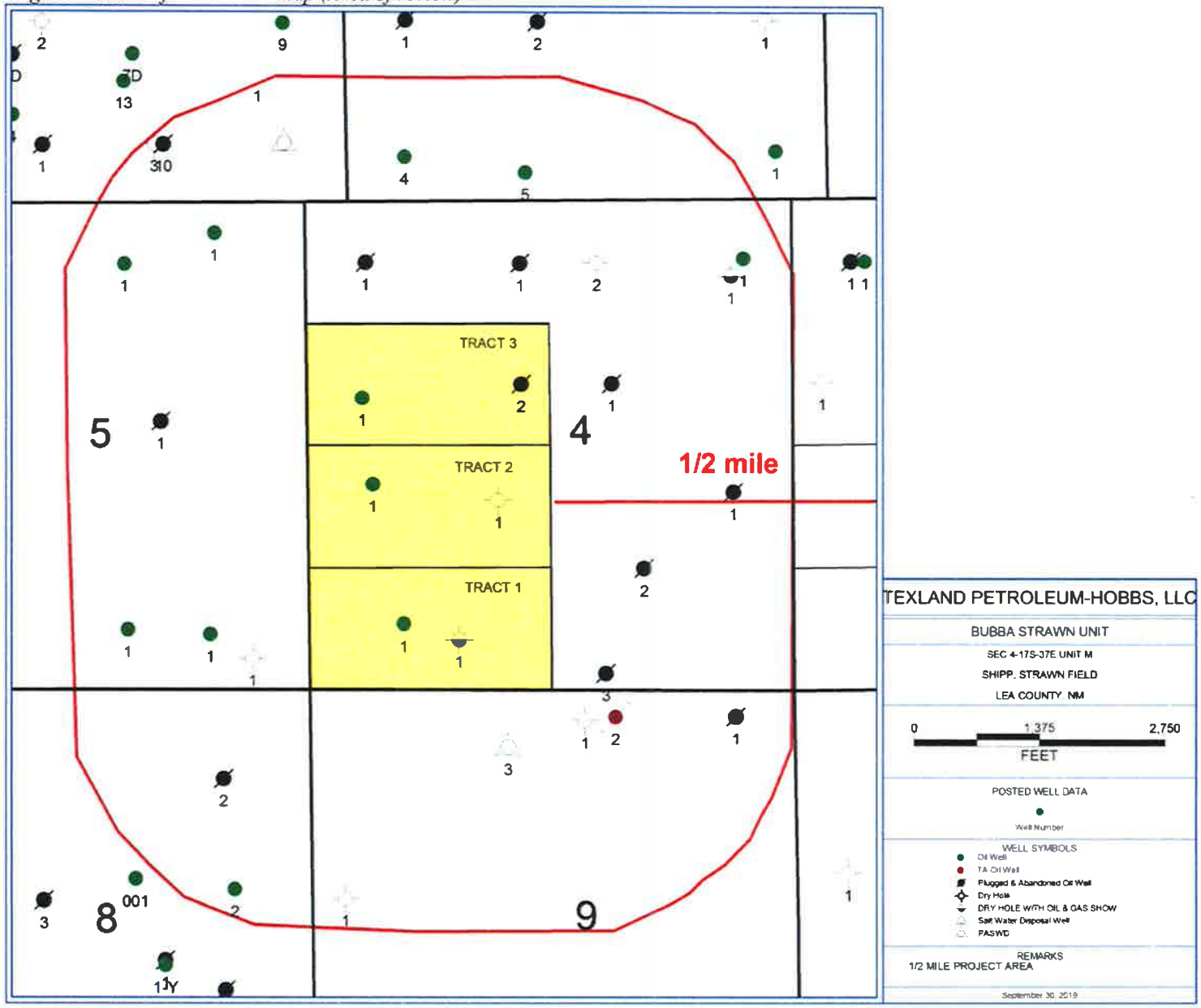
i. Bubba Strawn Unit 2 mile radius map

Figure 3: Bubba Strawn Unit 2 mile radius map



ii. Bubba Strawn Unit 1/2 mile radius map (Area of review)

Figure 4 One-half mile radius map (Area of review)



D. Section VI.

i. Tabulation of Data in Area of Review

API #	Well Name	Operator	TD	Well Status	Well Type	Construction	Spud Date	Section	Township	Range	Record of Completion
30-025-35919	Walter 4 #001	Texland Petroleum-Hobbs, LLC	11,350	Active	Oil	Vertical	9/8/2002	4	17S	37E	Strawn
30-025-36117	Jeffry 4 #001	Texland Petroleum-Hobbs, LLC	11,350	Active	Oil	Vertical	2/10/2003	4	17S	37E	Strawn
30-025-36629	Roueche 5 #001	Armstrong Energy Corp	11,050	Active	Oil	Vertical	4/9/2004	5	17S	37E	Strawn
30-025-28453	Blackmar #1	Read & Stevens Inc	11,200	P&A	Gas	Vertical	1/2/1984	5	17S	37E	Paddock, San Andres
30-025-27394	Consolidated State #002	Barbara Fasken	11,110	P&A	Oil	Vertical	4/3/1981	8	17S	37E	Strawn
30-025-28806	Jons 4 State #1	Tipperrary Oil and Gas Corporation	11,336	P&A	Oil	Vertical	9/22/1984	4	17S	37E	Dry Hole
30-025-29711	Consolidated State #003	Cobalt Operating, LLC	12,700	Active	SWD	Vertical	7/15/1986	9	17S	37E	Strawn,Devonian
30-025-29440	New Mexico Ex State #002	Dakota Resources Inc (I)	11,300	TA	Oil	Vertical	12/22/1986	9	17S	37E	Strawn
30-025-29829	Viersen #003	Pennzoil Exploration and Production Company	11,240	P&A	Oil	Vertical	1/1/1987	4	17S	37E	Strawn
30-025-29445	Viersen #002	Gruy Petroleum Management Co.	11,281	P&A	Oil	Vertical	10/23/1985	4	17S	37E	Strawn
30-025-29640	Lea YL State #001	Chevron USA INC	11,250	P&A	Oil	Vertical	3/4/1986	4	17S	37E	Strawn
30-025-31033	Midway 5 #001	Cobalt Operating, LLC	11,075	Active	Oil	Vertical	10/14/1990	5	17S	37E	Strawn, Paddock
30-025-26323	Warren #001	Cobalt Operating, LLC	13,100	Active	Oil	Vertical	7/10/1979	8	17S	37E	Devonian, Strawn
30-025-26953	Warren #002	Cobalt Operating, LLC	11,875	Active	Oil	Vertical	8/16/1980	8	17S	37E	Devonian, Strawn
30-025-27183	Consolidated State #1	David Fasken	11,073	P&A	Oil	Vertical	1/10/1981	9	17S	37E	Dry Hole

30-025-29367	New Mexico Ex State #001	Exxon Corp	11,412	P&A	Oil	Vertical	12/22/1985	9	17S	37E	Wolfcamp, Abo
30-025-29294	Viersen #001	Pennzoil Exploration and Production Company	11,389	P&A	Oil	Vertical	7/1/1985	4	17S	37E	Strawn
30-025-29485	BE Shipp Estate #001	Pennzoil Company	11,311	P&A	Oil	Vertical	11/5/1985	4	17S	37E	Strawn
30-025-29532	Tipperary 4 State Comm #002	Tipperary Oil & Gas Corporation	11,300	P&A	Oil	Vertical	12/7/1985	4	17S	37E	Strawn
30-025-35625	Buchanan 5 #001	Chevron USA INC	11,325	P&A	Oil	Vertical	7/17/2001	5	17S	37E	Strawn
30-025-05400	H L Batton #001	Sundown Energy LP	11,124	Active	Oil	Vertical	11/1/1951	5	17S	37E	Paddock
30-025-05396	State U #1	Tide Water Associated Oil Company	11,628	P&A	Oil	Vertical	4/17/1951	4	17S	37E	Pacddock
30-025-29407	Tiperrary 4 State #001	Tipperary Oil & Gas Corporation	11,350	P&A	Oil	Vertical	10/1/1985	4	17S	37E	Strawn
30-025-29582	B.E. Shipp Estate #2	Pennzoil Company	11,381	P&A	Oil	Vertical	2/18/1986	4	17S	37E	Strawn
30-025-30282	Hightower "A" #1	K P Kauffman Company Inc	11,400	Active	Oil	Vertical	3/10/1988	4	17S	37E	Strawn,Drinkard
30-025-29923	Hager #001	V-F Petroleum Inc	11,450	Active	Oil	Vertical	5/21/1987	33	16S	37E	Strawn
30-025-30124	Meyers #005	Mulloy Operating Inc	11,294	Active	Oil	Vertical	11/15/1987	33	16S	37E	Strawn, Paddock
30-025-29678	Meyers #004	Mulloy Operating Inc	11,300	Active	Oil	Vertical	5/20/1986	33	16S	37E	Paddock
30-025-05387	State P #001	Hawkins Oil & Gas Inc	12,572	P&A	SWD	Vertical	10/19/1950	32	16S	37E	Abo
30-025-30088	State P #013	Sundown Energy LP	11,240	Active	Oil	Vertical	5/12/1988	32	16S	37E	Grayburg, San Andres

ii. P&A Wellbore Schematics within Area of Review

Figure 5: Blackmar #1 Wellbore Schematic

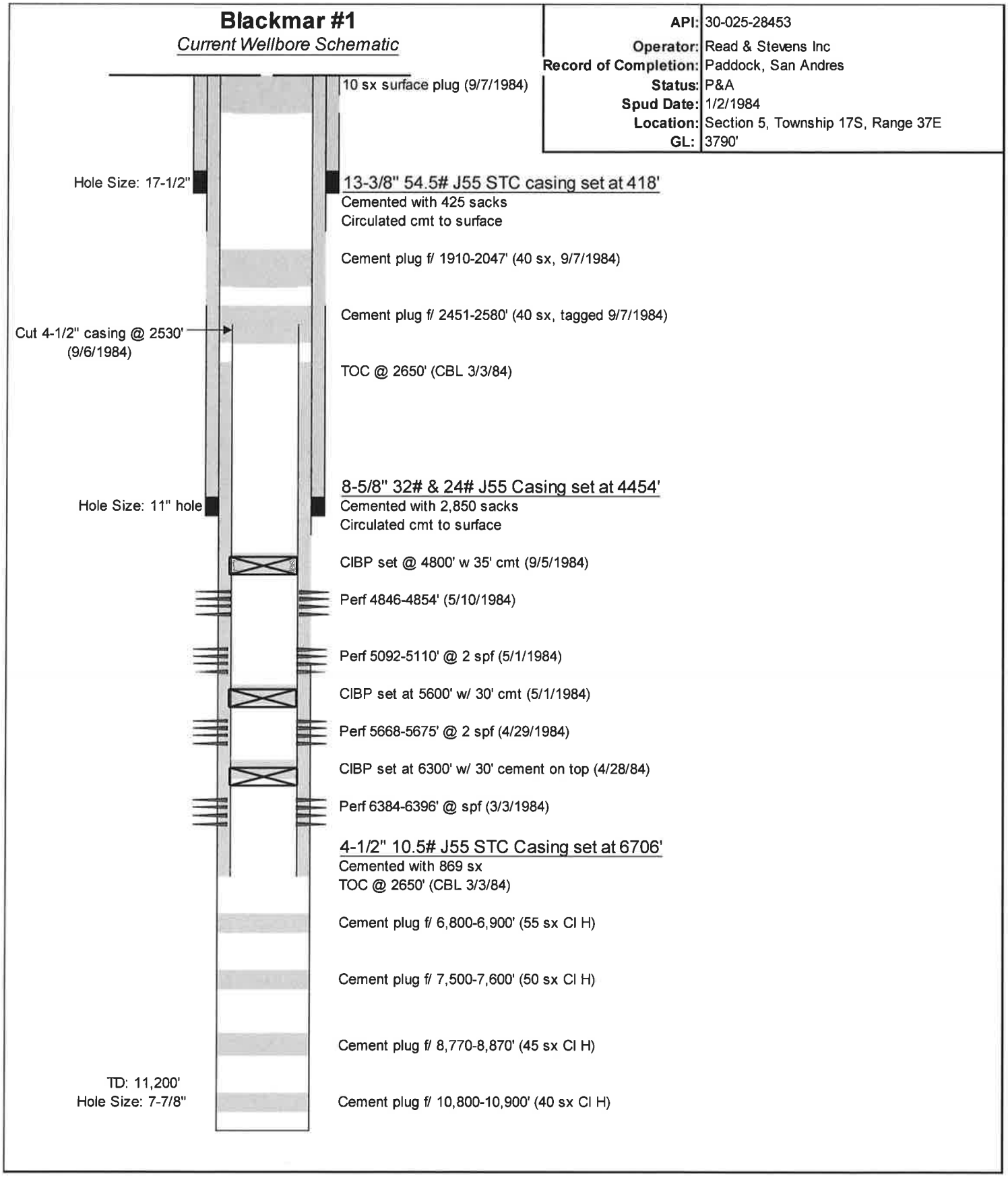


Figure 6: Consolidated State #2 Wellbore Schematic

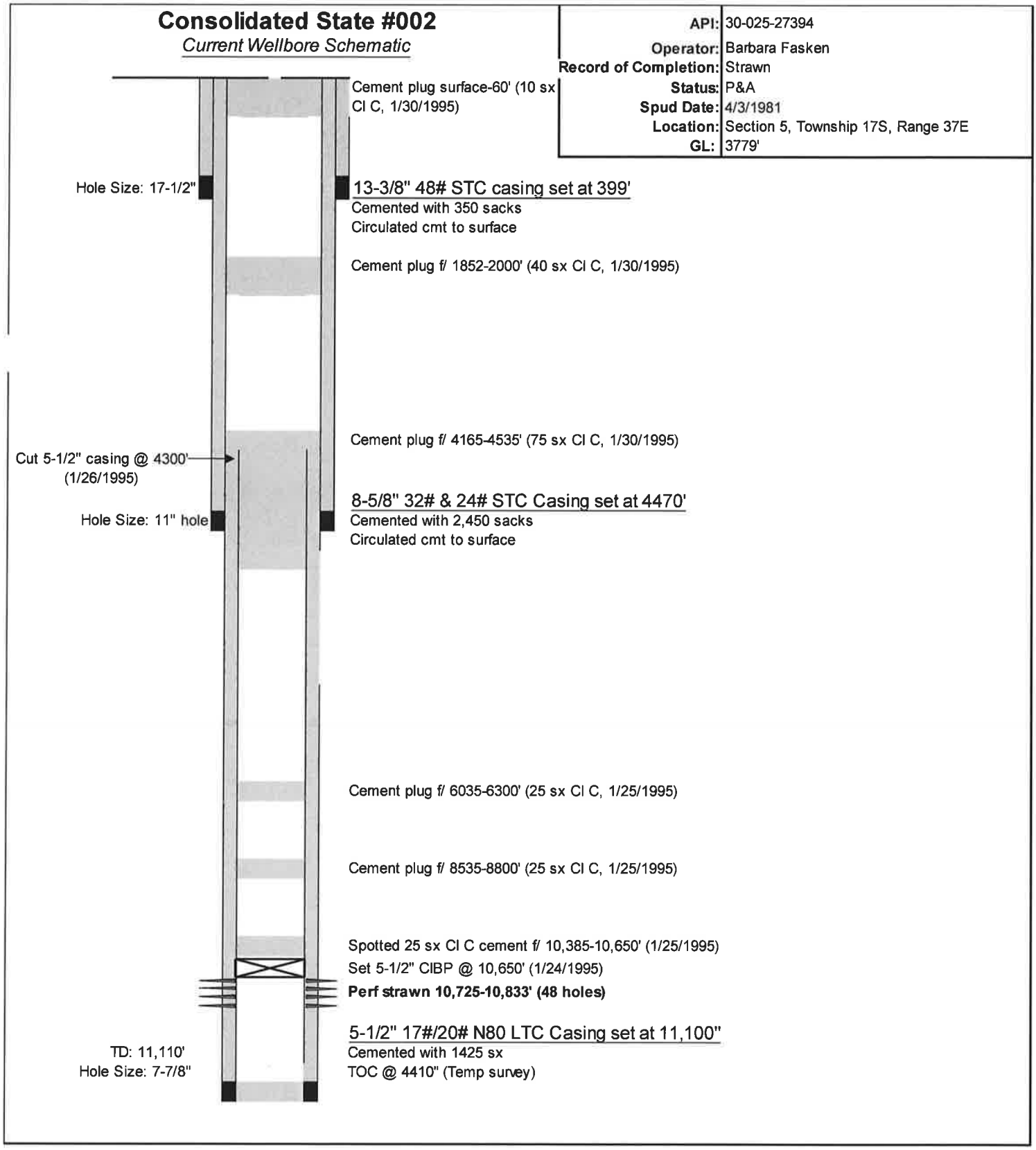


Figure 7: Jons 4 State #1 Wellbore Schematic

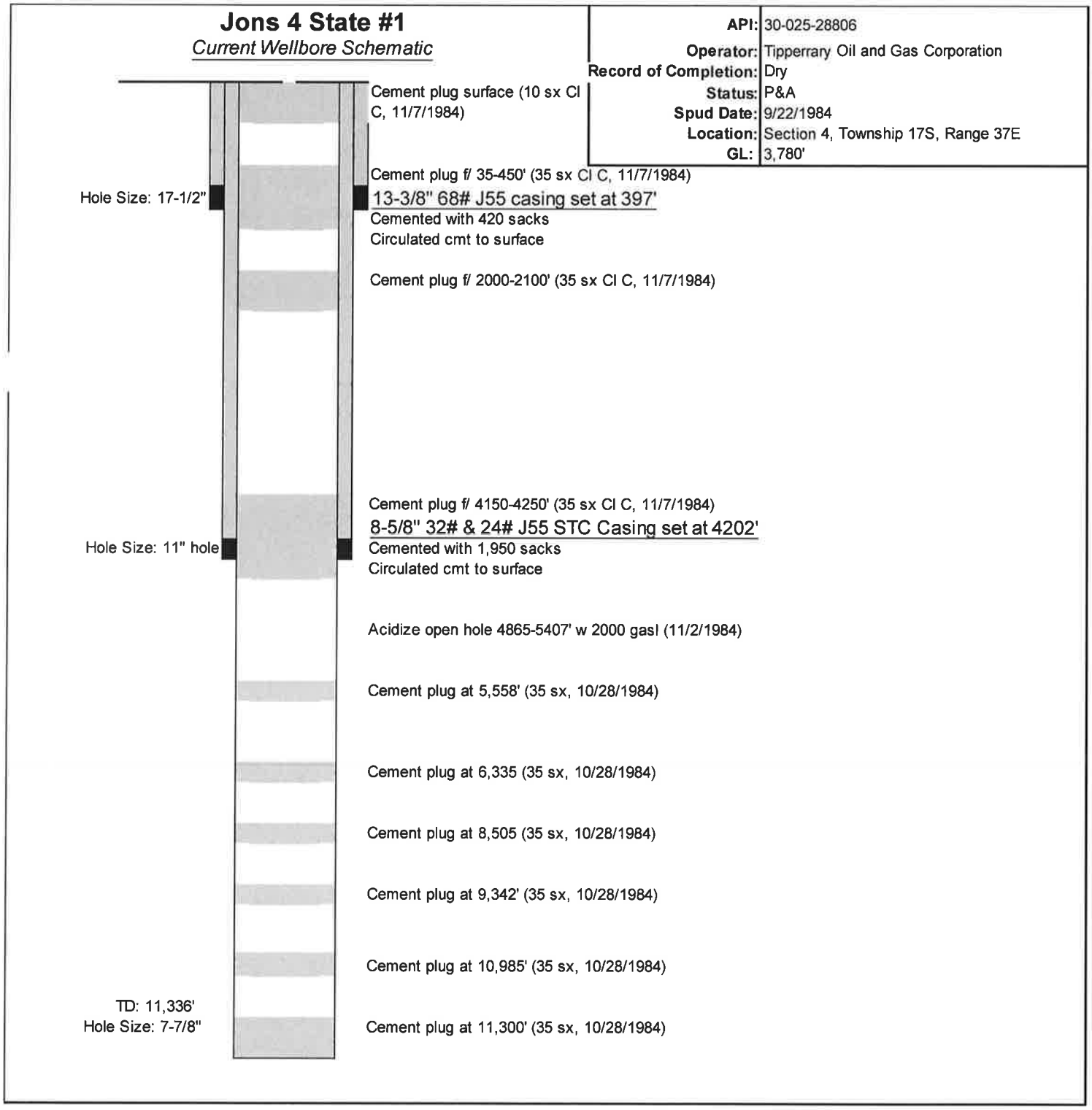


Figure 8: Viersen #3 Wellbore Schematic

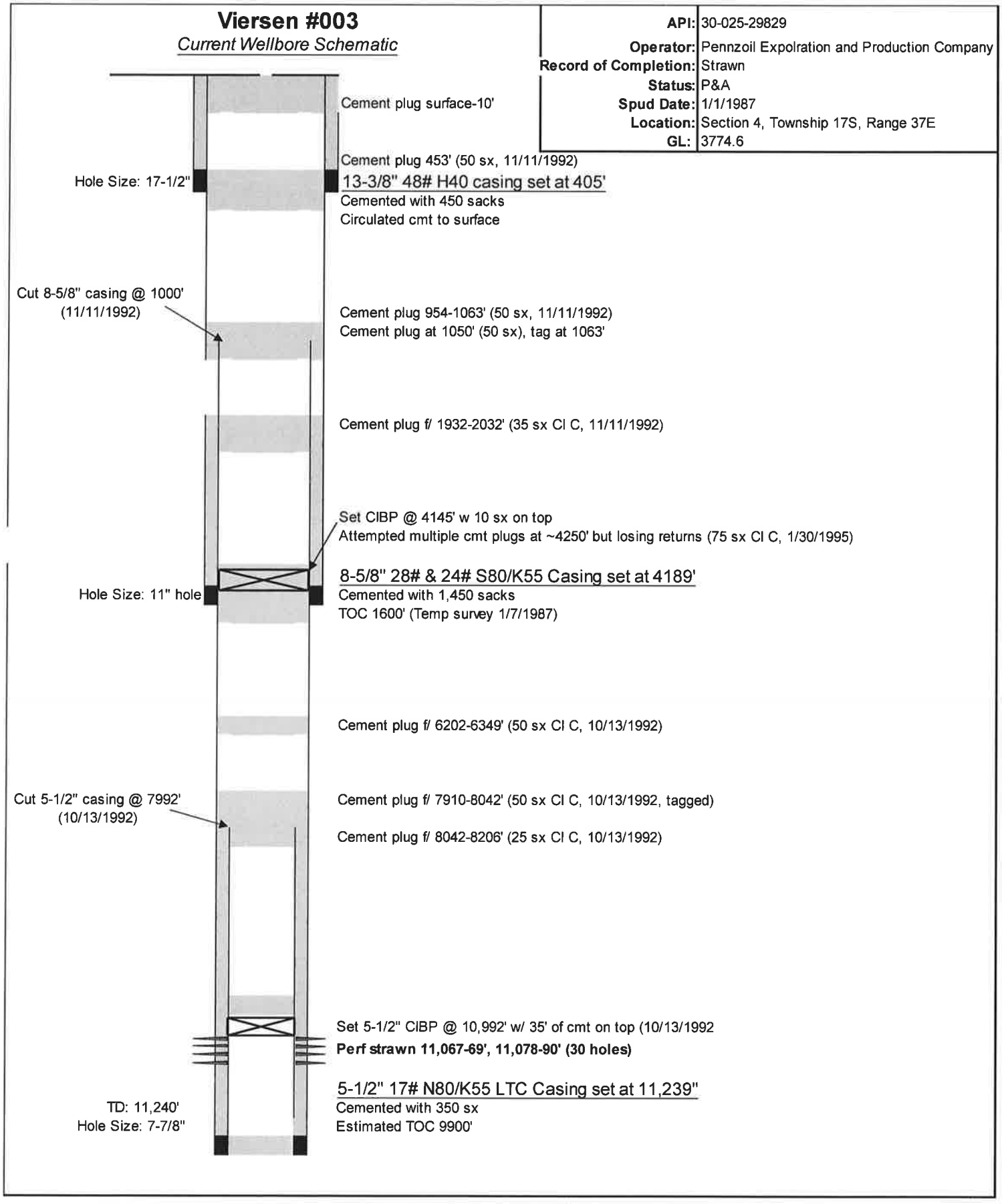


Figure 9: Viersen #2 Wellbore Schematic

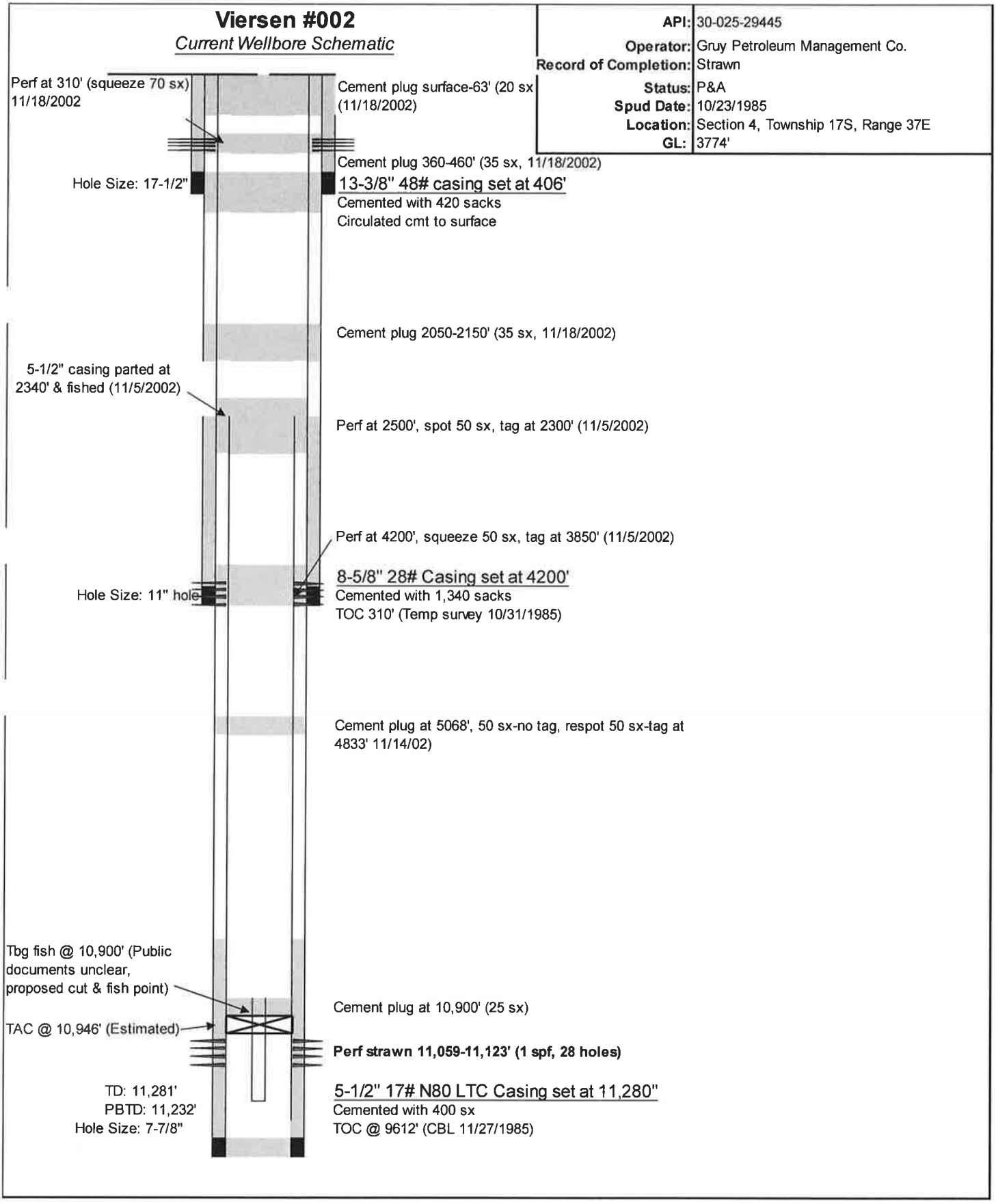


Figure 10: Lea YL State #1 Wellbore Schematic (Note possible data missing from public record)

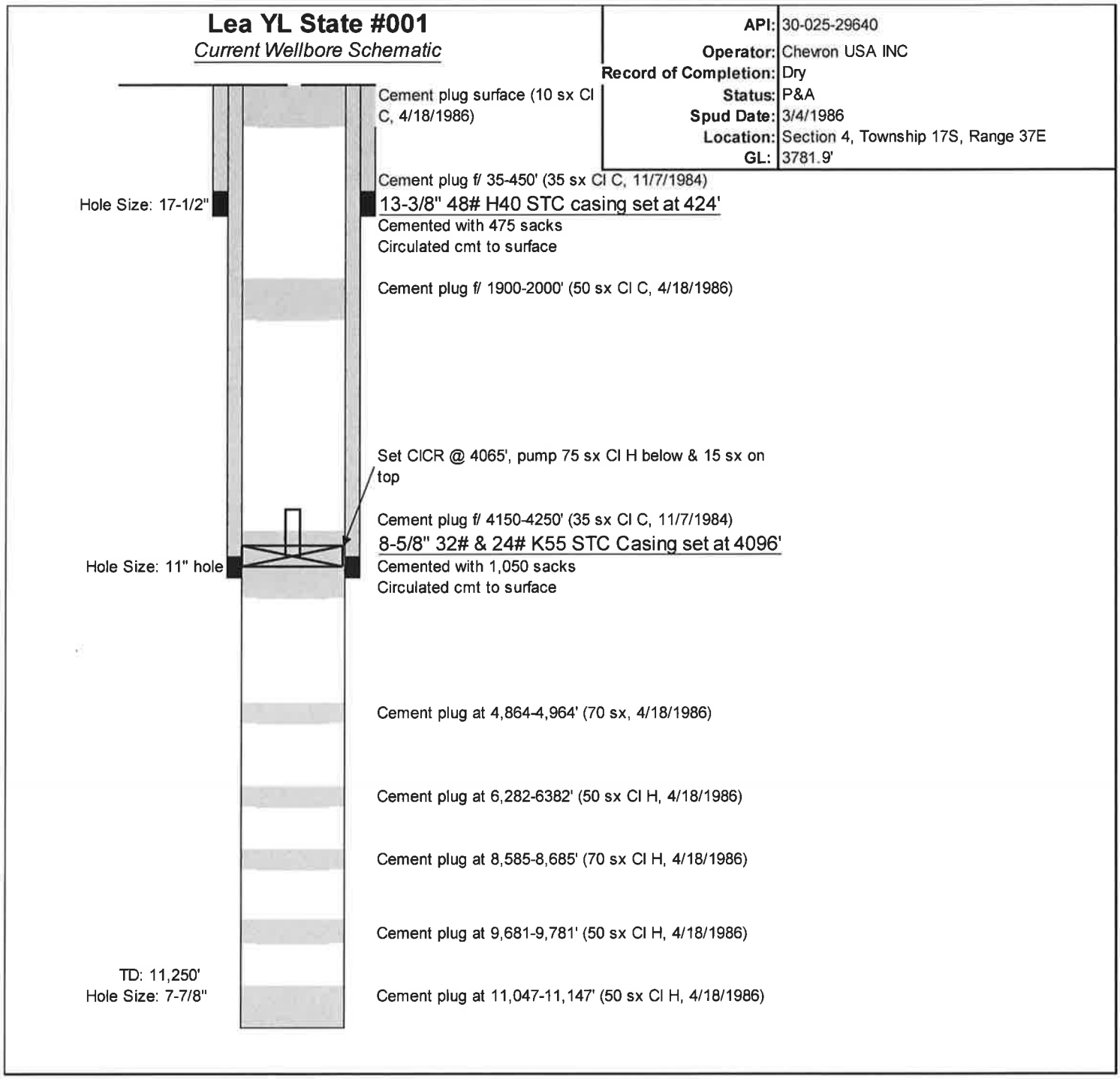


Figure 11: Consolidated State #1 Wellbore Schematic

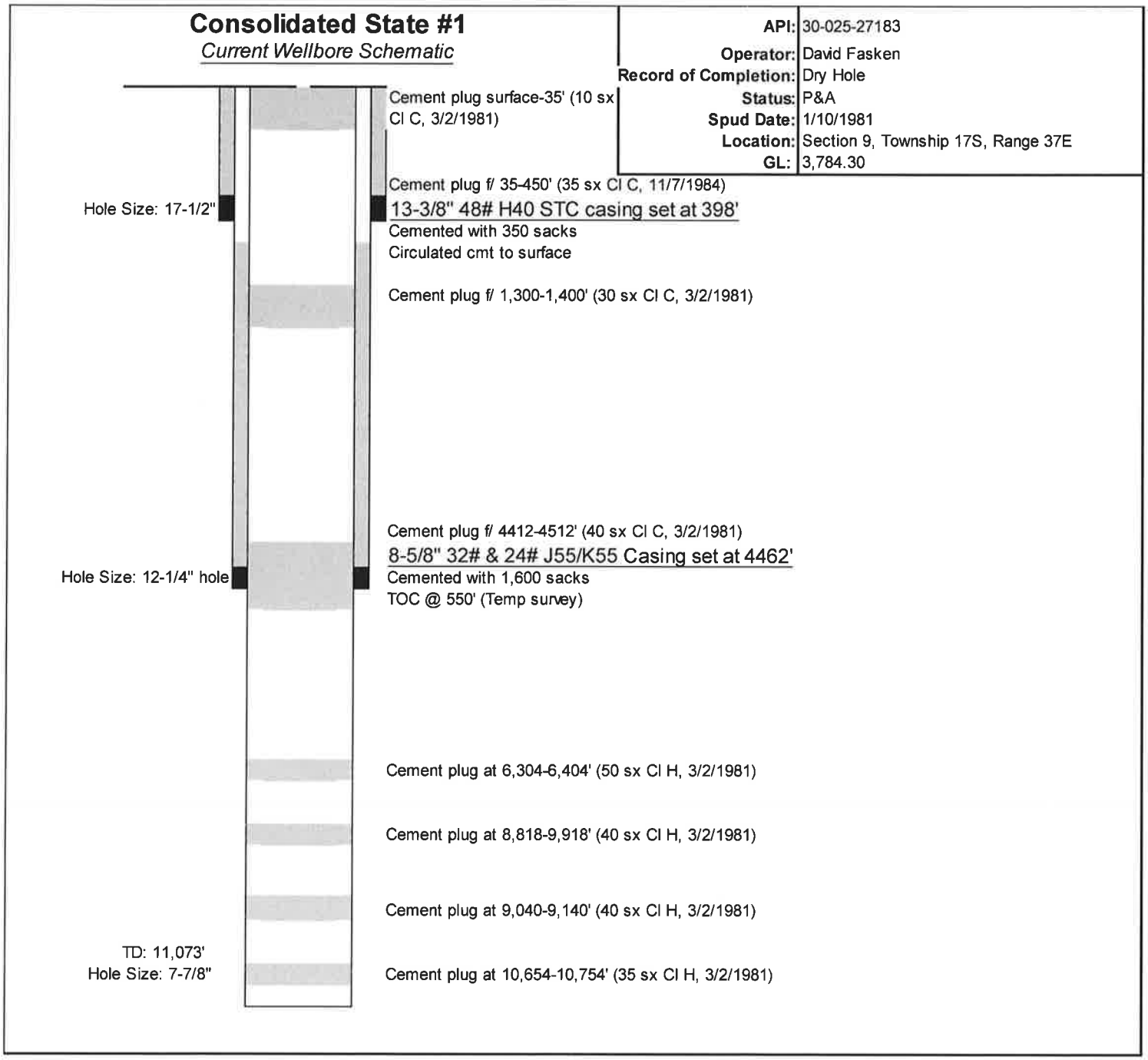


Figure 12: New Mexico EX State #1 Wellbore Schematic

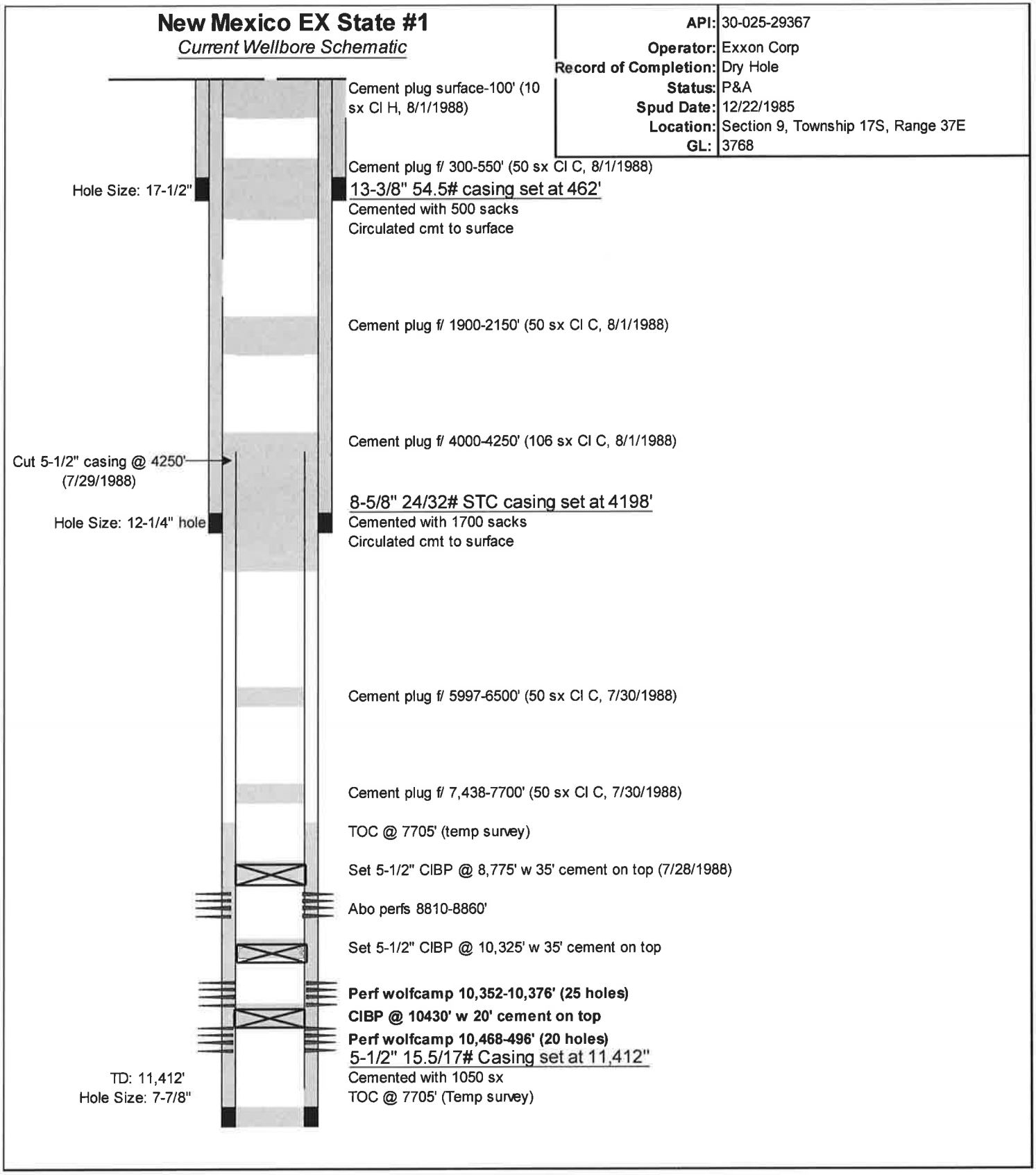


Figure 13: Viersen #1 Wellbore Schematic

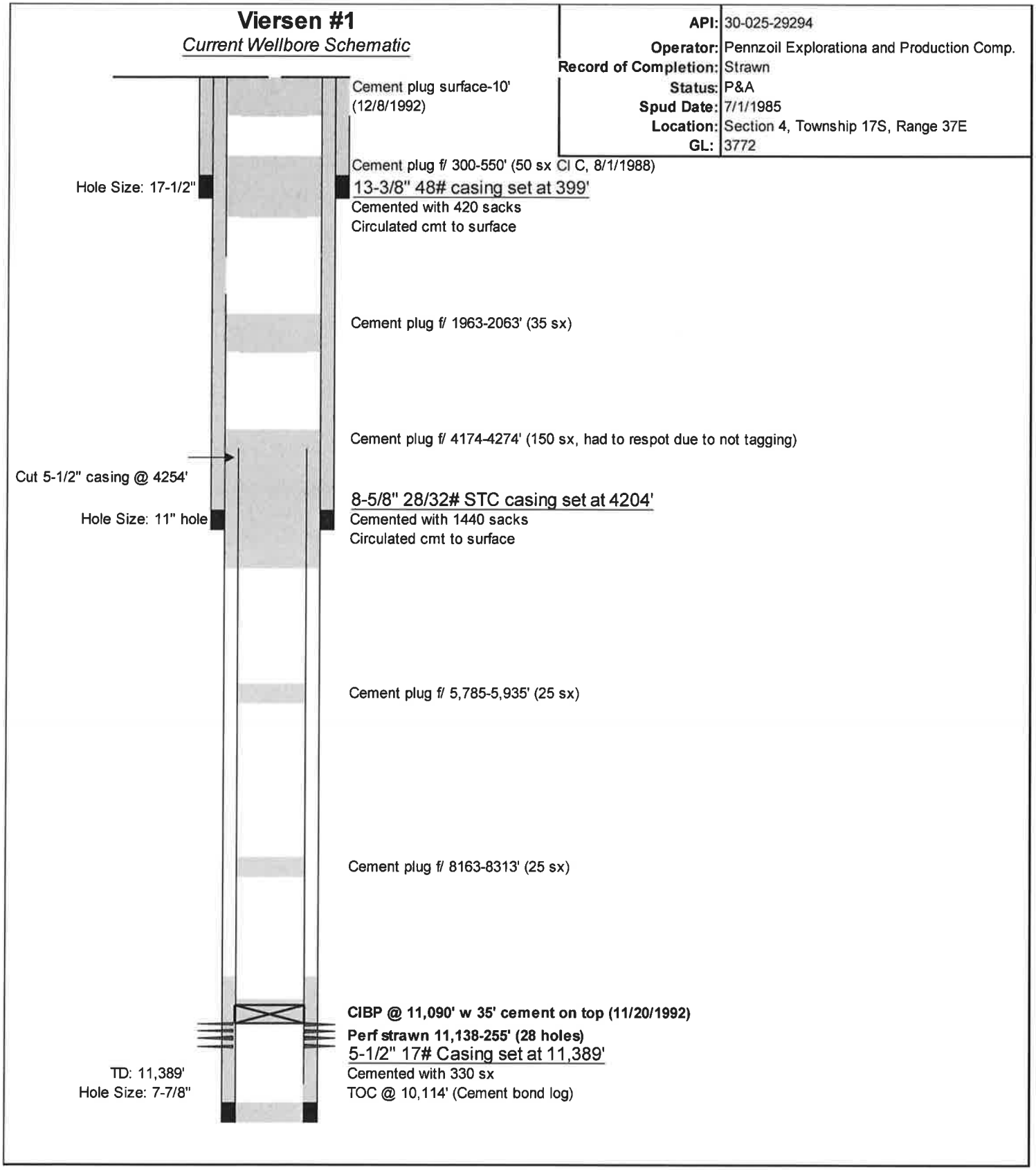


Figure 14: B.E. Shipp Estate #1

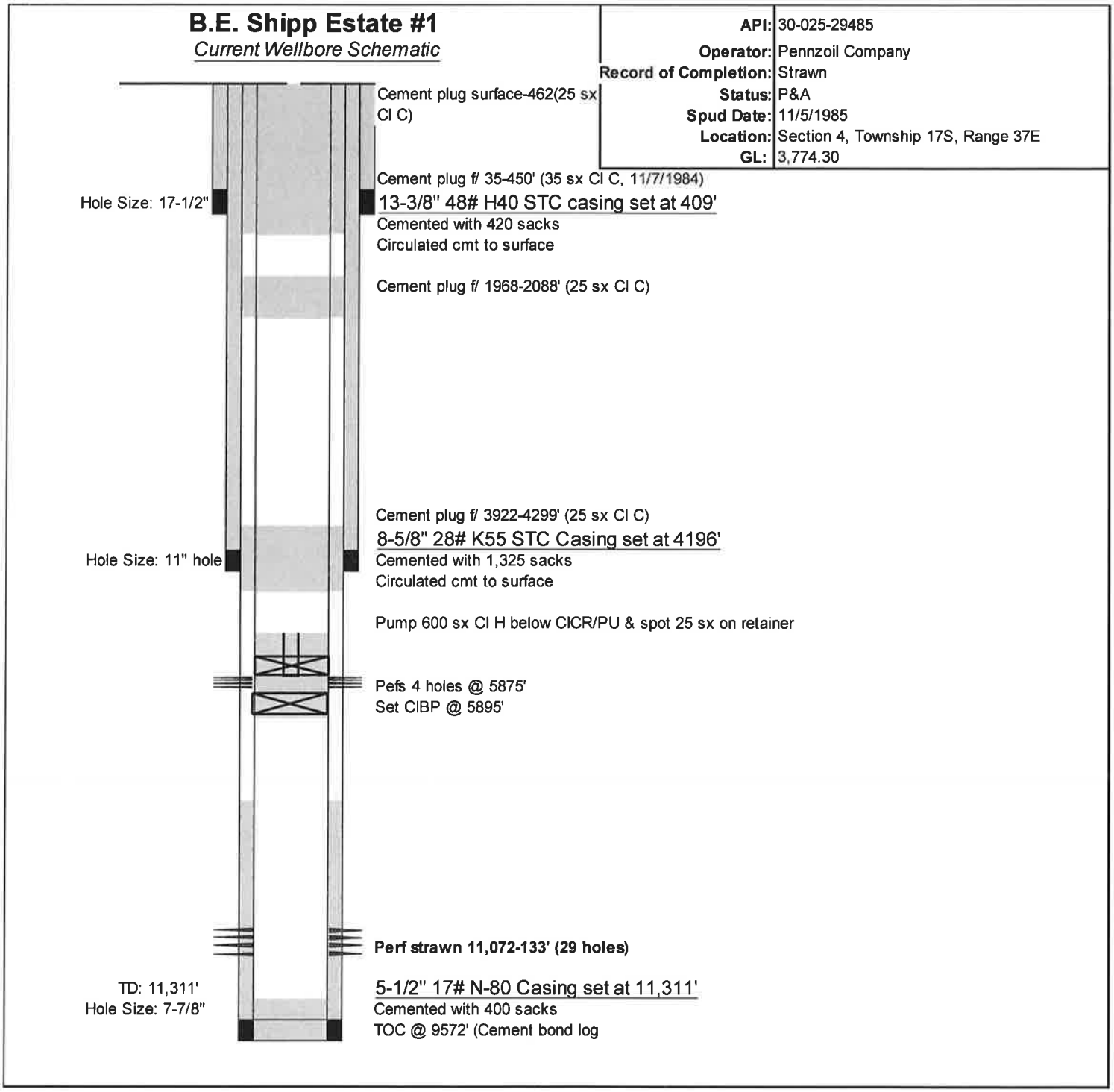


Figure 15: Tipperary 4 State Comm #002 Wellbore Schematic

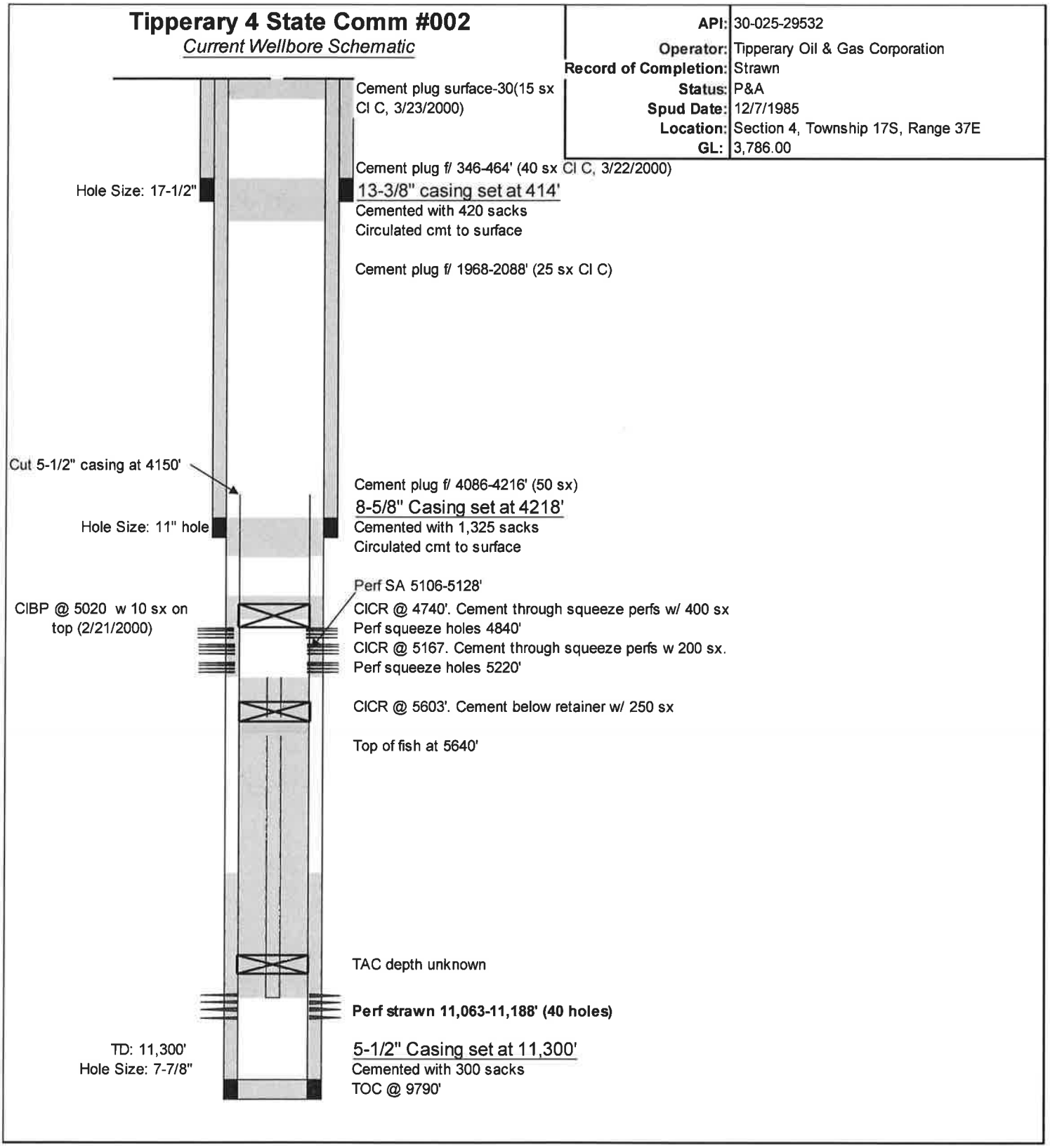


Figure 16: Buchanan 5 #1 Wellbore Schematic

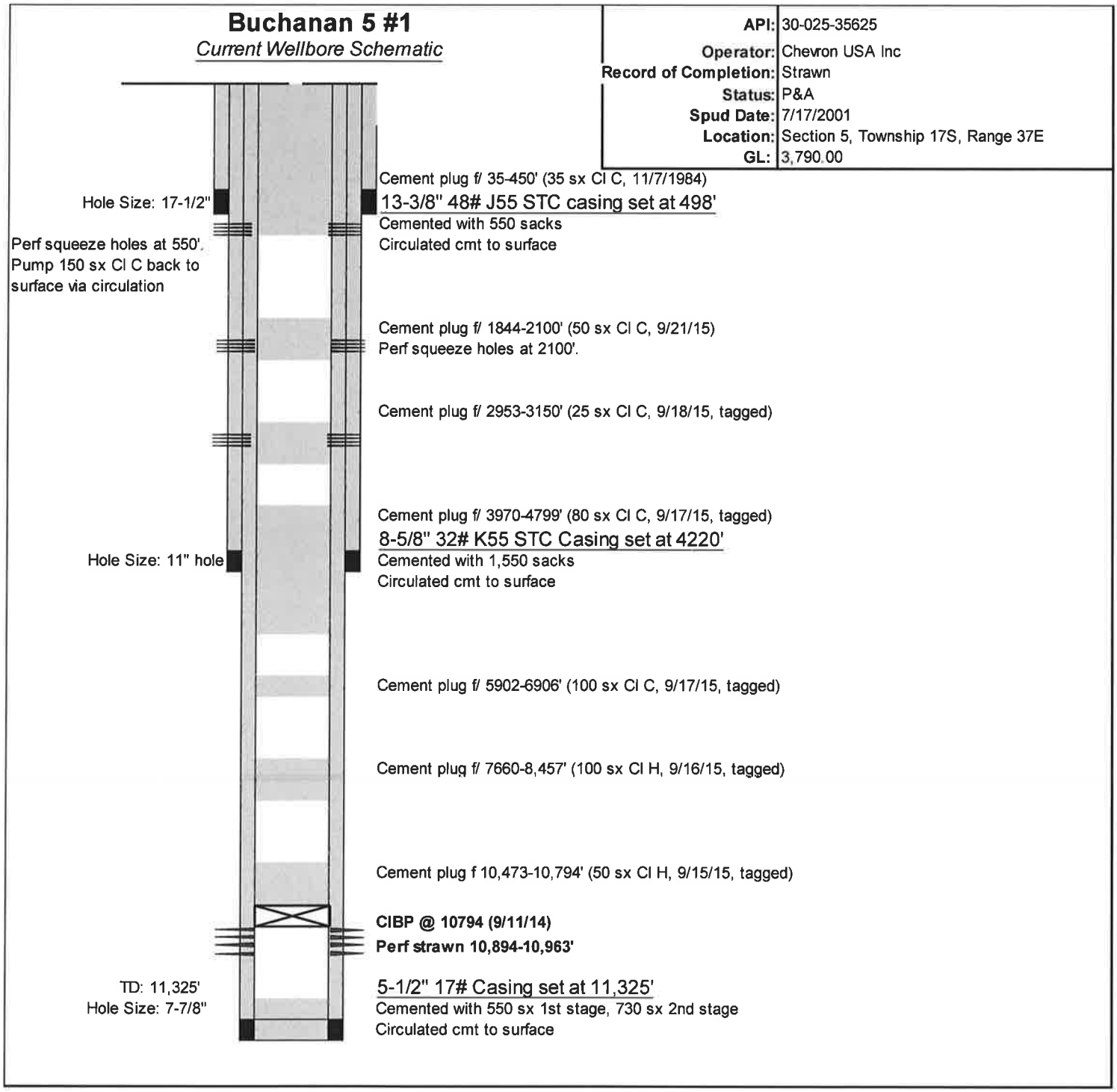


Figure 17: State U #1 Wellbore Schematic

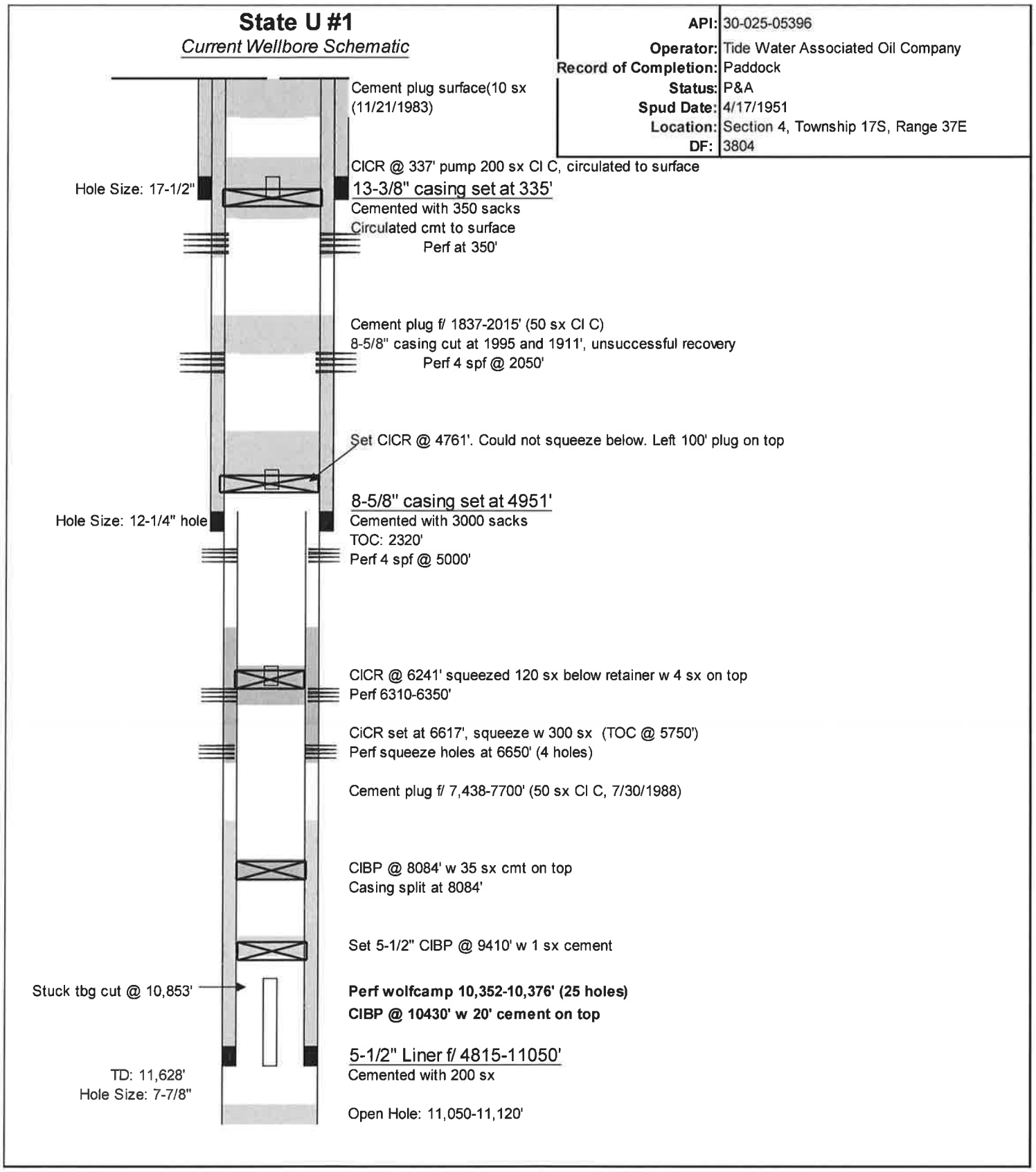


Figure 18: Tiperrary 4 State #001 Wellbore Schematic

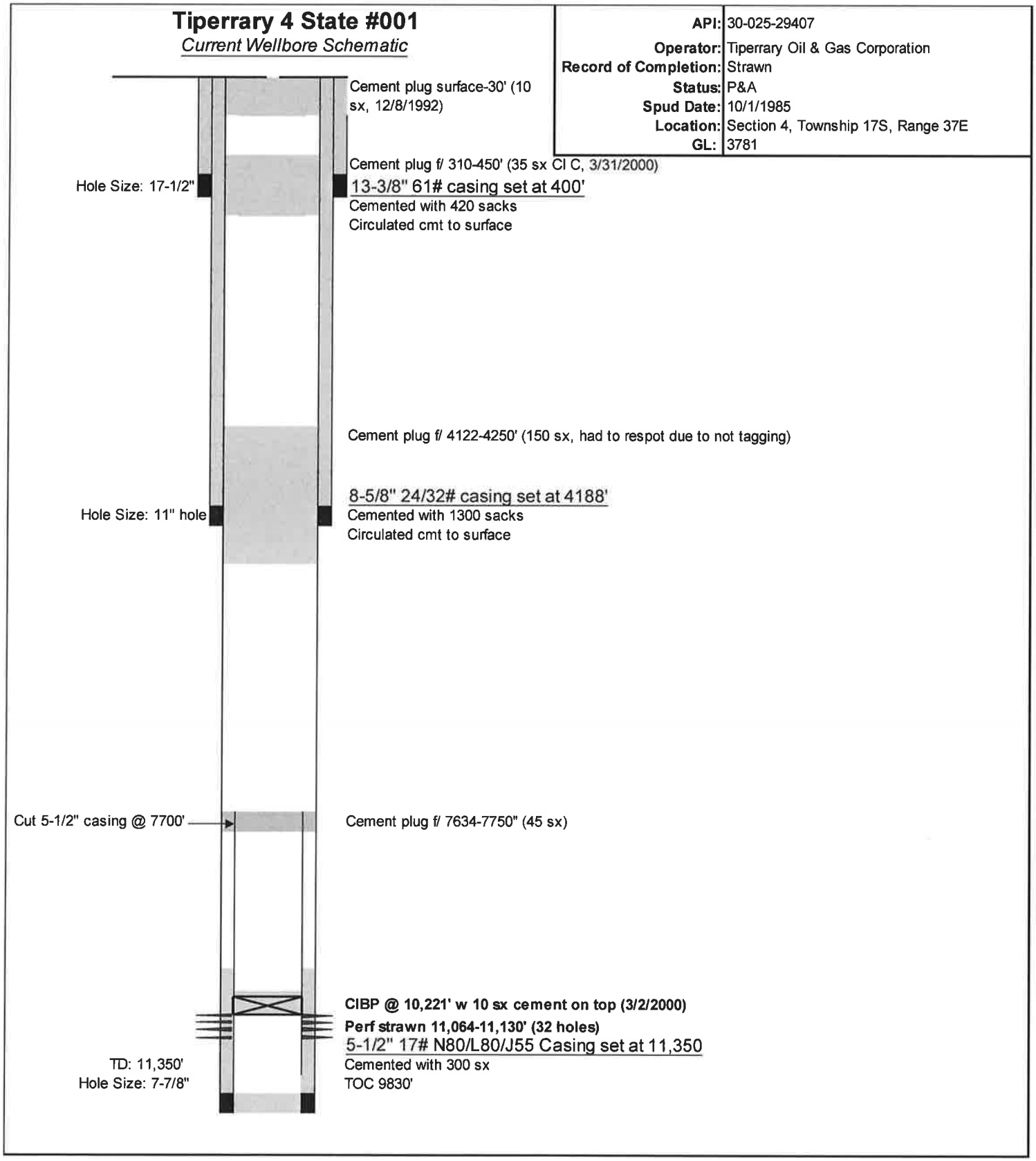


Figure 19: B.E. Shipp Estate #2 Wellbore Schematic

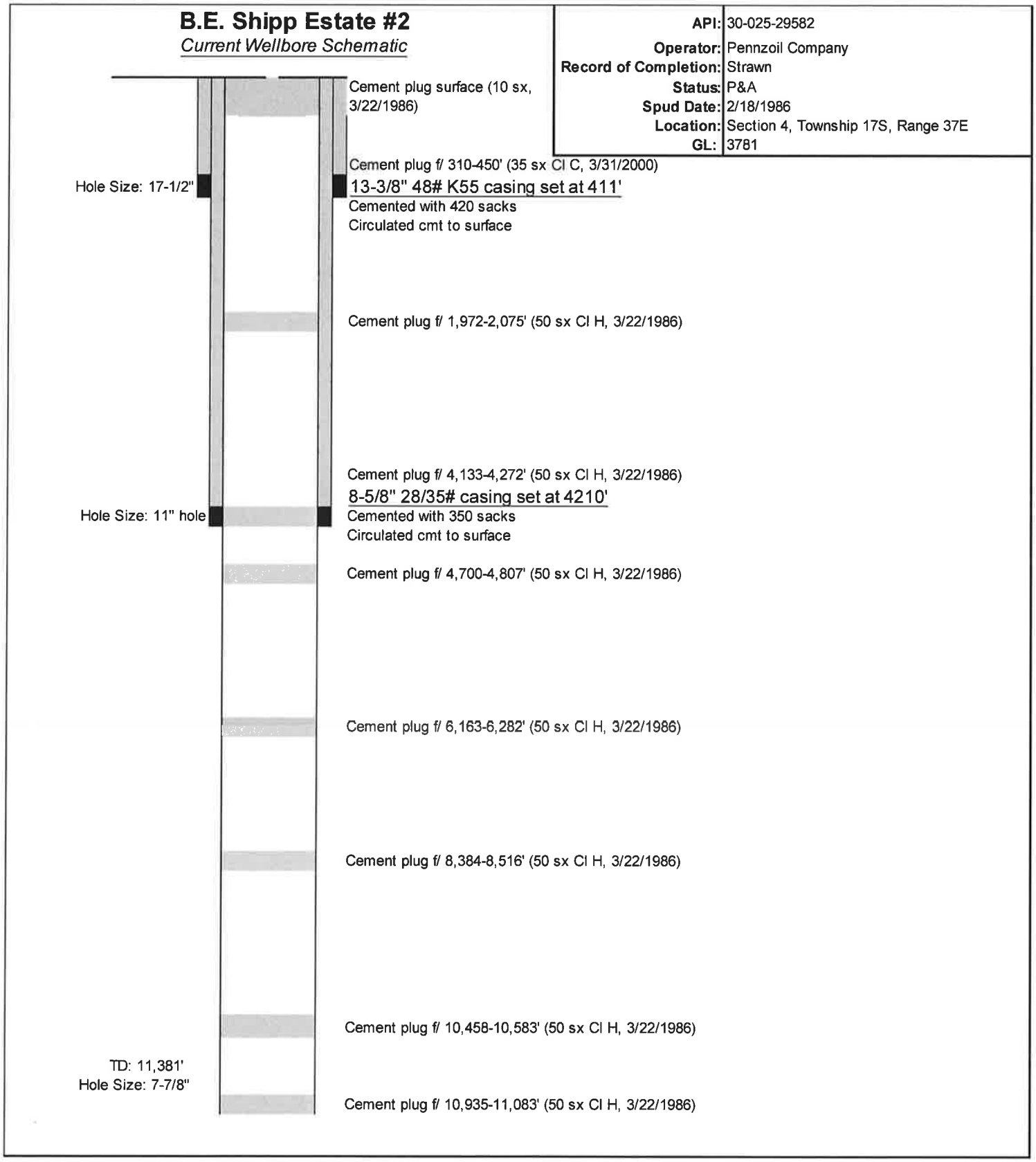
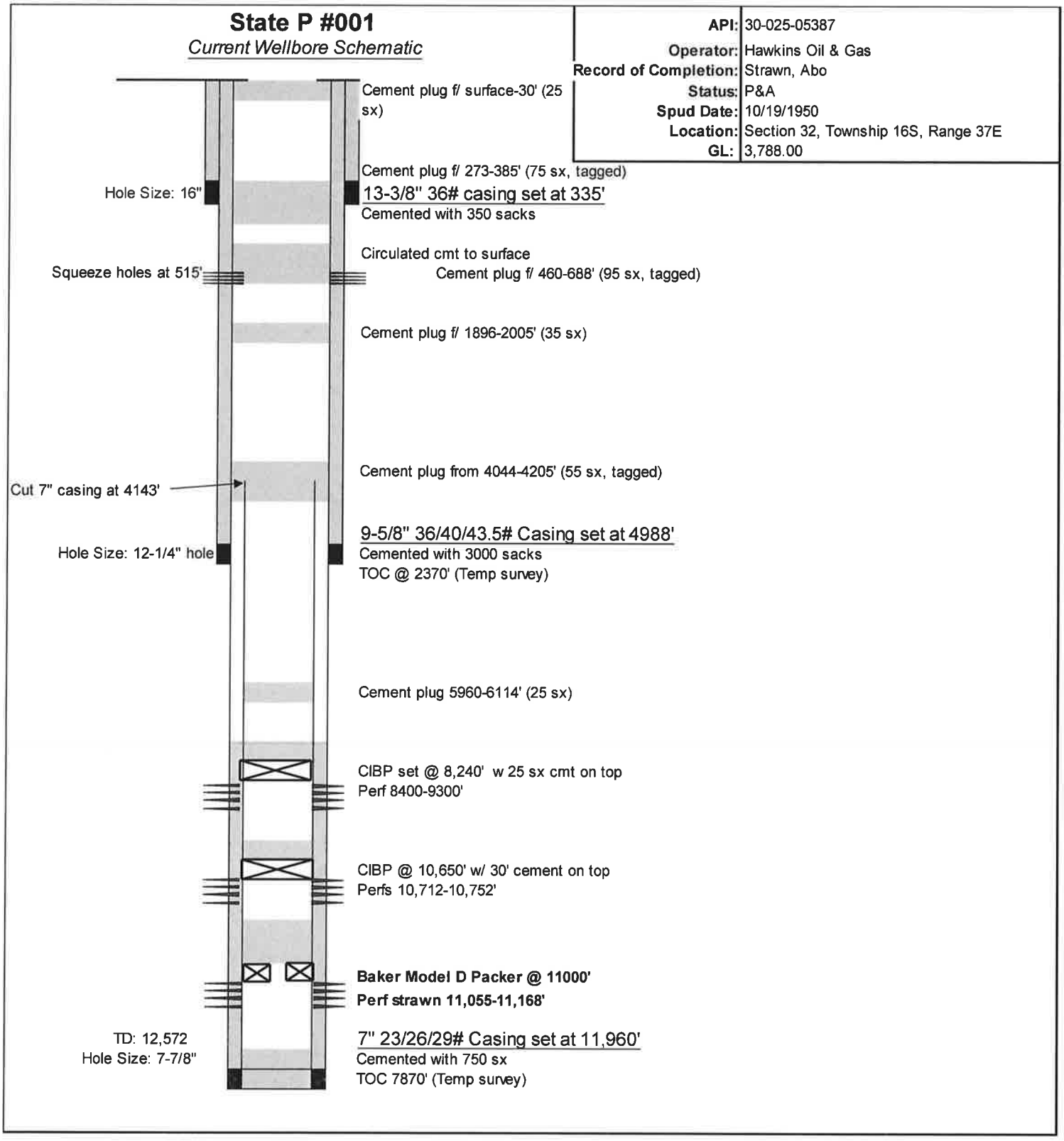


Figure 20: State P #001 Wellbore Schematic



E. Section VII: Proposed Operation

1. Proposed average and maximum daily rate and volume of fluids to be injected;
    a. Proposed average daily rate: 750 bpd
    b. Proposed Maximum daily rate: 2000 bpd
    c. Proposed maximum volume to be injected: 10 MM bbl

2. Whether the system is open or closed;
    a. The system is closed

3. Proposed average and maximum injection pressure;
    a. Average injection pressure: 1450psig
    b. Maximum injection pressure: 1950psig

4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and,
    a. Texland has leased rights to the Lee Carter #1 (API: 30-025-27927) to produce the Abo formation as a water supply source. This well is currently plugged and will be re-entered.
    b. Section VII **Figure 21** is an Abo water analysis from the OPL 3 State #2 (API: 30-025-41954) located approximately 4 miles west.
    c. Section VII **Figure 22** is a Strawn water analysis from the Simmons Estate #2 (30-025-41738) located 1 mile northwest.
    d. Section VII **Figure 23** is a compatibility analysis between the Strawn and Abo produced water.

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.)
    a. The proposed injection well is not for disposal.

Figure 21: OPL 3 State #2-Abo produced water analysis

CATALYST Oilfield Services

Catalyst Oilfield Services
11999 E Hwy 158
Gardendale, TX 79758
(432) 563-0727
Fax: (432) 224-1038

Water Analysis Report

Customer:	Texland Petroleum	Sample #:	103780
Area:	Permian Basin	Analysis ID #:	97322
Lease:	OPL		
Location:	3-2 0		
Sample Point:	Wellhead		

Sampling Date:	9/5/2019
Analysis Date:	9/12/2019
Analyst:	Catalyst
TDS (mg/l or g/m3):	43485
Density (g/cm3):	1.029
Hydrogen Sulfide:	423
Carbon Dioxide:	356
Comments:	

Anions	mg/l	meq/l
Chloride:	23744.1	669.73
Bicarbonate:	1268.0	20.78
Carbonate:		
Sulfate:	2000.0	41.64
Borate*:	71.2	0.45
Phosphate*		

*Calculated based on measured elemental boron and phosphorus.

pH at time of sampling:	6.23
pH at time of analysis:	
pH used in Calculation:	6.23
Temperature @ lab conditions (F):	75

Cations	mg/l	meq/l
Sodium:	13910.0	605.05
Magnesium:	400.3	32.93
Calcium:	1718.0	85.73
Potassium:	324.2	8.29
Strontium:	47.9	1.09
Barium:	1.2	0.02
Iron:	0.1	0.
Manganese:	0.034	0.

Conductivity (micro-mhos/cm):	64332
Resistivity (ohm meter):	.1554

Values Calculated at the Given Conditions - Amounts of Scale in lb/1000 bbl

Temp	Calcite $CaCO_3$		Gypsum $CaSO_4 2H_2O$		Anhydrite $CaSO_4$		Celestite $SrSO_4$		Barite $BaSO_4$	
°F	Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount
80	0.29	75.53	-0.18	0.00	-0.23	0.00	0.05	3.69	1.57	0.67
100	0.41	102.39	-0.21	0.00	-0.19	0.00	0.05	3.36	1.40	0.67
120	0.53	129.24	-0.23	0.00	-0.13	0.00	0.06	4.03	1.26	0.67
140	0.66	155.43	-0.24	0.00	-0.05	0.00	0.07	5.37	1.14	0.67
160	0.79	180.60	-0.24	0.00	0.05	79.56	0.10	6.71	1.04	0.67
180	0.93	204.44	-0.24	0.00	0.17	239.35	0.13	8.73	0.96	0.67
200	1.07	226.26	-0.23	0.00	0.29	385.71	0.16	10.41	0.90	0.67
220	1.22	246.40	-0.22	0.00	0.43	513.61	0.20	12.42	0.86	0.67

Figure 22: Simmons Estate #2 Strawn Water Analysis

CATALYST Oilfield Services

Catalyst Oilfield Services
11999 E Hwy 158
Gardendale, TX 79758
(432) 563-0727
Fax: (432) 224-1038

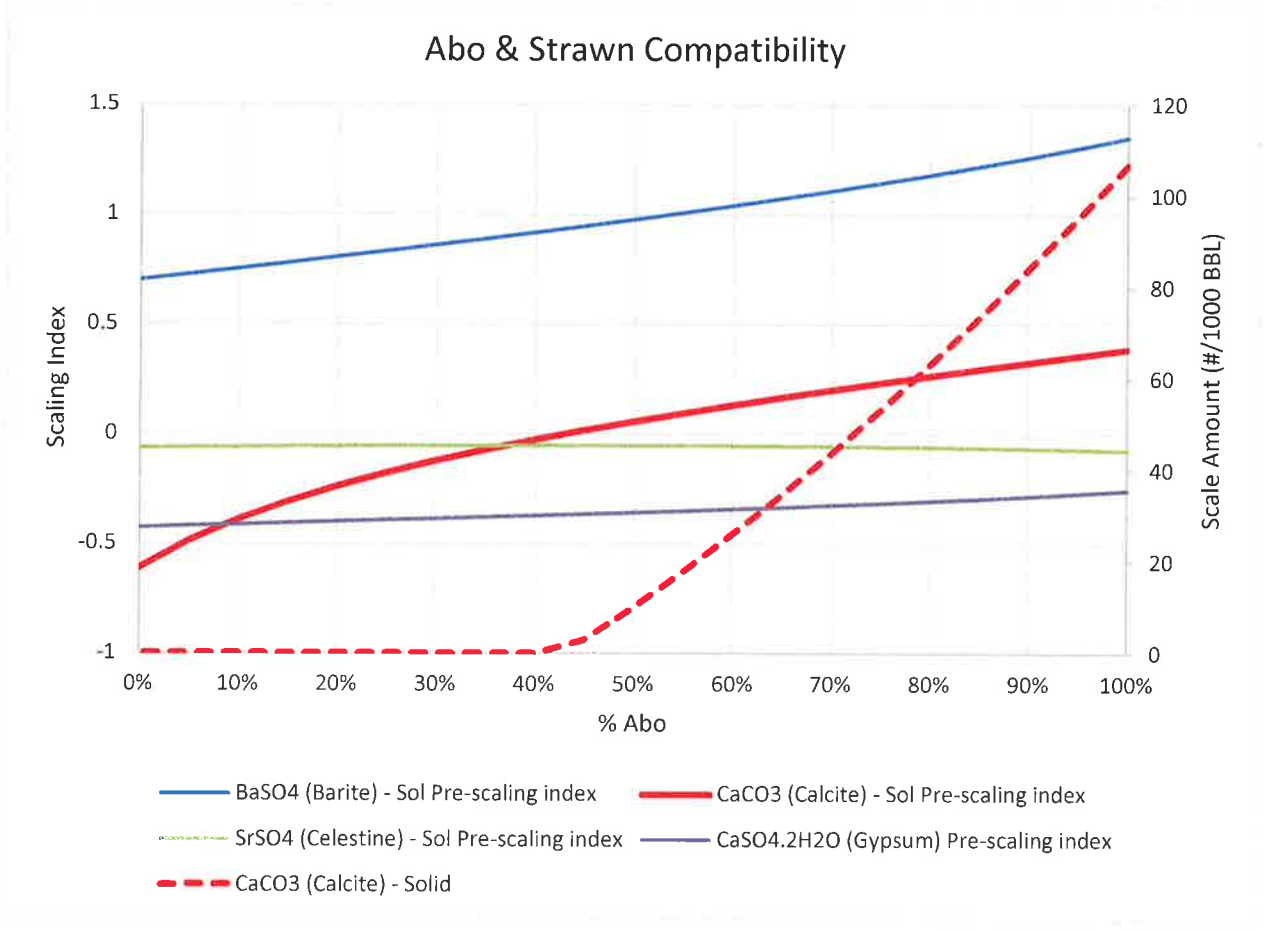
Water Analysis Report

Customer:	Texland Petroleum	Sample #:	103781
Area:	Permian Basin	Analysis ID #:	97323
Lease:	Simmons Estate		
Location:	2 0		
Sample Point:	Wellhead		

		Anions	mg/l	meq/l	Cations	mg/l	meq/l
Sampling Date:	9/5/2019	Chloride:	71789.0	2024.91	Sodium:	41440.0	1802.54
Analysis Date:	9/12/2019	Bicarbonate:	175.7	2.88	Magnesium:	980.3	80.64
Analyst:	Catalyst	Carbonate:			Calcium:	3202.0	159.78
TDS (mg/l or g/m3):	119601.2	Sulfate:	1200.0	24.98	Potassium:	401.4	10.27
Density (g/cm3):	1.083	Borate*:	273.4	1.73	Strontium:	137.6	3.14
		Phosphate*			Barium:	1.1	0.02
Hydrogen Sulfide:	17				Iron:	0.5	0.02
Carbon Dioxide:	140	*Calculated based on measured elemental boron and phosphorus.			Manganese:	0.163	0.01
Comments:		pH at time of sampling:		5.87			
		pH at time of analysis:					
		pH used in Calculation:		5.87			
		Temperature @ lab conditions (F):		75	Conductivity (micro-mhos/cm):		158543
					Resistivity (ohm meter):		.0631

	Values Calculated at the Given Conditions - Amounts of Scale in lb/1000 bbl									
Temp	Calcite $CaCO_3$		Gypsum $CaSO_4*2H_2O$		Anhydrite $CaSO_4$		Celestite $SrSO_4$		Barite $BaSO_4$	
°F	Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount
80	-0.69	0.00	-0.39	0.00	-0.41	0.00	0.00	0.00	1.01	0.62
100	-0.59	0.00	-0.45	0.00	-0.40	0.00	-0.02	0.00	0.82	0.62
120	-0.48	0.00	-0.50	0.00	-0.36	0.00	-0.03	0.00	0.65	0.62
140	-0.36	0.00	-0.53	0.00	-0.31	0.00	-0.03	0.00	0.51	0.31
160	-0.24	0.00	-0.56	0.00	-0.23	0.00	-0.02	0.00	0.38	0.31
180	-0.11	0.00	-0.58	0.00	-0.14	0.00	-0.01	0.00	0.28	0.31
200	0.02	0.94	-0.60	0.00	-0.04	0.00	0.01	1.25	0.19	0.31
220	0.16	6.55	-0.61	0.00	0.08	79.82	0.03	4.99	0.12	0.00

Figure 23: Abo & Strawn Produced Water Compatibility



F. Section VIII: Geologic Data

a. Geologic Name of Injection Zone
   i. Strawn Limestone

b. Geologic Description
   i. Injection will be into the Pennsylvanian Strawn Limestone. The proposed injection interval is from 10928' to 11040'. These units are composed of limestone with a gross thickness of about 200'. The reservoir units were deposited as complex biohermal buildups in a ramp setting. These buildups occasionally include grainstone shoals, but for the most part are organic in nature. Individual units achieved considerable accretional thickness. Porosity in the reservoir ranges from 2% to as much as 14%.

c. Fresh Water Sources
   i. Fresh water production in this area is from the Tertiary Ogallala aquifer. The productive interval is from 50' to 150'. Other possible, but currently unused water sources, are the Triassic Santa Rosa from 280' to the top of the Permian Rustler Formation at 2007'. No other fresh water sources overlie the injection interval.

G. Section IX: Proposed Stimulation

a. At this time, Texland does not have any stimulations planned. If scale deposition is encountered when converting the well to an injection well, a small acid stimulation will be pumped.

H. Section X: Logging and Test Data

a. The log and test data have already been filed with the Division.

I. Section XI: Offset Fresh Water Chemical Analysis

a. Section XI **Figure 24** is a chemical analysis from a fresh water well utilized for agriculture production location .9 miles NW.

Figure 24: Offset Ogalla (Fresh Water) Analysis

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

TEXLAND PETROLEUM P. O. BOX 3446 HOBBS NM, 88241	Project: SIMMONS W W Project Number: NONE GIVEN Project Manager: RONNIE MC CRACKEN Fax To: (432) 596-4235	Reported: 24-Sep-19 09:19

SIMMONS WW

H903204-01 (Water)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Alkalinity, Bicarbonate	254		5.00	mg/L	1	9081902	AC	18-Sep-19	310.1	
Alkalinity, Carbonate	<1.00		1.00	mg/L	1	9081902	AC	18-Sep-19	310.1	
Chloride*	396		4.00	mg/L	1	9091309	AC	18-Sep-19	4500-Cl-B	
Conductivity*	1560		1.00	uS/cm	1	9091809	AC	18-Sep-19	120.1	
pH*	7.83		0.100	pH Units	1	9091817	AC	18-Sep-19	150.1	
Sulfate*	84.4		25.0	mg/L	2.5	9091810	AC	18-Sep-19	375.4	
TDS*	1120		5.00	mg/L	1	9091611	AC	18-Sep-19	160.1	
Alkalinity, Total*	208		4.00	mg/L	1	9081902	AC	18-Sep-19	310.1	
Green Analytical Laboratories										
Total Recoverable Metals by ICP (E200.7)										
Calcium*	154		0.100	mg/L	1	B909167	AES	20-Sep-19	EPA200.7	
Magnesium*	29.9		0.100	mg/L	1	B909167	AES	20-Sep-19	EPA200.7	
Potassium*	3.08		1.00	mg/L	1	B909167	AES	20-Sep-19	EPA200.7	
Sodium*	99.4		1.00	mg/L	1	B909167	AES	20-Sep-19	EPA200.7	

J. Section XII: Affirmative Statement for Disposal Wells

a. The proposed injection well is not for disposal.

K. Proof of Notice

13689131_v1