

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993

***See Instruction on Reverse Side**

GPII ENERGY, INC.

#5 Littlefield "BO" Fed
1610' FNL, 1650' FEL
Sec. 34, T26S, R29E
Eddy County, NM

Application for Authorization to Inject

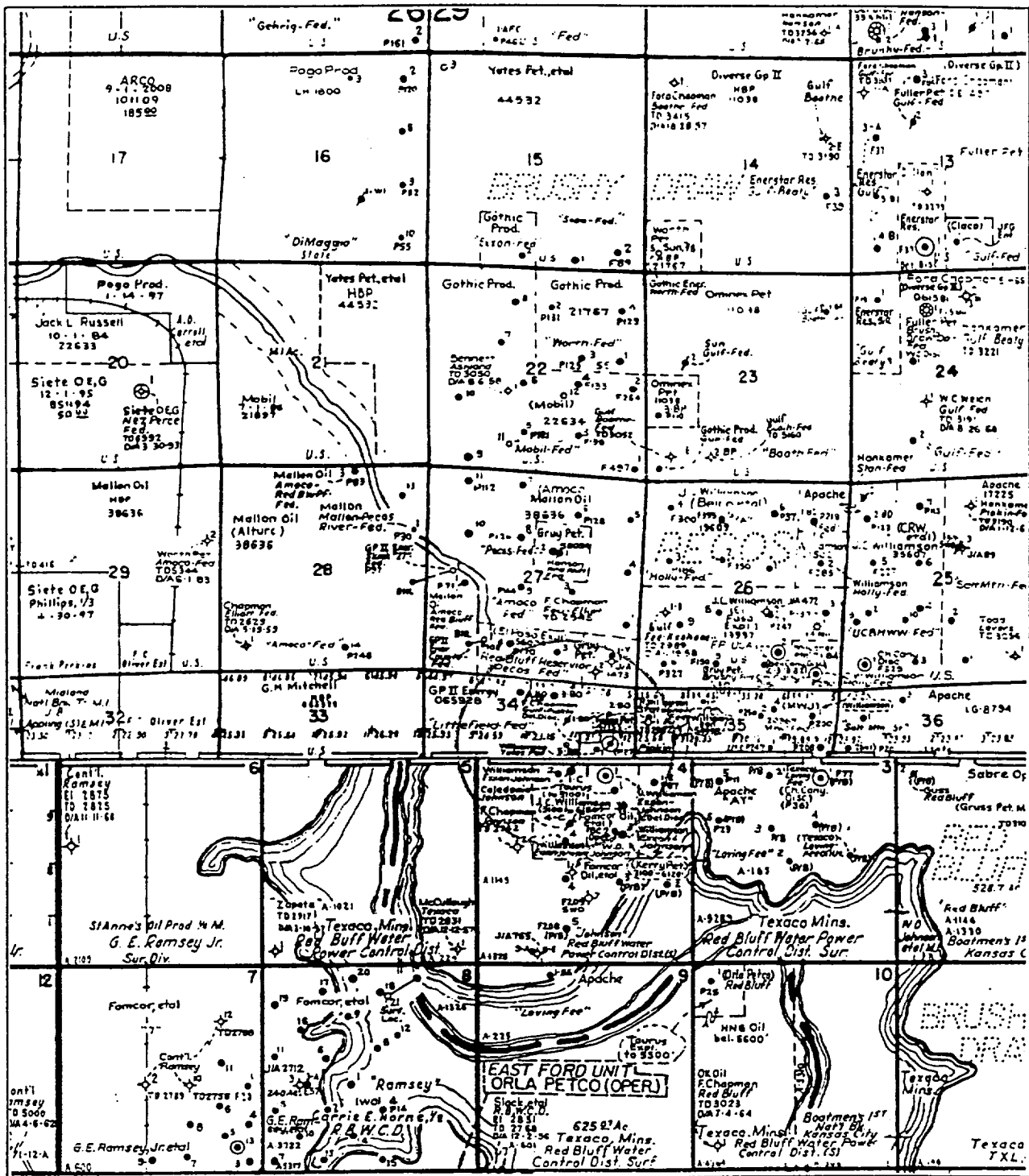
- VI. Attached is a tabulation of all wells of public record that fall within the ½ mile radius of the proposed SWD well, the Littlefield BO Federal # 5. This investigation has shown that these wells have good cement seals around their casing shoes and will prevent upward migration of the disposed water into any potable water zone.
- VII. The proposed average daily injection rate for the subject well is 500 BWPD; the maximum daily injection rate would be 700 BWPD. This will be a closed system with an average pressure of 50 psi and a maximum pressure of 750 psi. Only produced Delaware water will be injected in the proposed well, so incompatibility will not be a problem.
- VIII. The planned injection zone is the Williamson sand. The top of the formation in this well is at 4890 (-2002' subsea) and is approximately 100' thick with porosity ranges from 12% to 24%. The zone is selectively perforated from 4898 to 4970. Attached is an analysis of the water from 2 producing wells and 1 disposal well. Only produced water will be injected so compatibility should not be a problem. The area potable waters are surface waters in the nearby Pecos River and shallow aquifers within the quaternary alluvium fill. These sources are protected by casing design the appropriate surface vessels and lines.
- IX. The well will be stimulated with 500 gallons of 15% NEFE HCL and ball sealers.
- X. Log and test data is on file with the Division.
- XI. All potable water is protected down to 300'. To the best of the operator's knowledge, there are no fresh water wells within a mile of the proposed injector. The Pecos River is within a 1/2 mile of the injector but is protected downhole by the appropriate casing design and on the surface by proper lines and vessels as required by federal and state authorities. There are no known sources of potable water underlying the injection interval.
- XII. GP II Energy, Inc. has examined the available geologic and engineering data and can find no evidence of open faults or any to the hydrologic connection between the disposal zone and any underground source of drinking water.
- XIII. The required "Proof of Notice" is attached.

**Offset Wells to the
Littlefield BO #5**

Well	Location	Surface Casing	Inter. Casing	Prod. Casing	TD	Completions	P & A
Pecos Fed. #1 Spud 4/84	27-T26S-R29E Unit P 660' FSL & 660' FEL	13 3/8" @ 605' 600 sx TOC @ 7" @ 652'		4 1/2" @ 2904' 150 sx TOC @ 1849' Calc.	1473		J & A P & A Schematic Attached
Federal Elliot #2 Spud 12/61	27-T26S-R29E Unit P 330' FSL & 990' FEL	13 3/8" @ 391' 450 sx TOC @ Circ.	9 5/8" @ 2854' 1025 sx TOC @ 2000'	4 1/2" @ 5970' 760 sx TOC @ 626' Calc.	2945	Open Hole	
Pecos Fed. #1-Y Spud 5/84	27-T26S-R29E Unit P 690' FSL & 660' FEL	13 3/8" @ 396' TOC @ Circ.	8 5/8" @ 5500' TOC @ 2000'	4 1/2" @ 5500' 3850 sx TOC @ Circ.	6000	4945-5006	
Pecos Fed. #3 Spud 11/85	760' FSL & 1980' FEL Unit O 34-T26S-R29E	TOC @ Circ. 10 3/4" @ 600'	TOC @ Circ. 7" @ 562'	5 1/2" @ 2899' 100 sx TOC @ 2552' Calc.	5505	4863-4979	
Gulf Fed. #1 Spud 6/61	605' FEL & 330' FSL Unit A 34-T26S-R29E	TOC @ 8 5/8" @ 303' 175 sx		4 1/2" @ 2970' 70 sx TOC @ 2478' Calc.	2905	Open Hole	
Littlefield BO #1 Spud 6/61	948' FNL & 1659' FEL Unit B 34-T26S-R29E	TOC @ Circ. 9 5/8" @ 350' 485 sx	7" @ 2880' 200 sx TOC @ 2423' Calc.	4 1/2" @ 5900' 356 sx TOC @ 3397' Calc.	2970	2914-16	
Littlefield BO #2 Spud 5/84	724' FNL & 660' FEL Unit A 34-T26S-R29E	TOC @ Circ. 9 5/8" @ 354' 300 sx		4 1/2" @ 5200' 615 sx TOC @ 875' Calc.	5900	4950-98	
Littlefield BO #3 Spud 12/86	400' FNL & 1980' FEL Unit B 34-T26S-R29E	TOC @ Circ. 9 5/8" @ 372' 200 sx		4 1/2" @ 5216' 650 sx TOC @ 646' Calc.	5200	4817-4955	
Littlefield BO #4 Spud 1/87	400' FNL & 2310' FWL Unit C 34-T26S-R29E	TOC @ Circ. 8 5/8" @ 384' 250 sx		4 1/2" @ 5035' 1200 sx TOC @ Circ.	5216	4861-4922	
Littlefield BO #5 Spud 10/90	1610' FNL & 1650' FWL Unit G 27-T26S-R29E	TOC @ Circ. 13 3/8" @ 383' 395 sx	8 5/8" @ 3100' 800 sx TOC @ 1205' Calc.	5 1/2" @ 6325' 1250 sx TOC @ 1998' Calc.	5035	4898-4970	
Yates Fed. #1 Spud 10/83	330' FSL & 990' FEL Unit H 27-T26S-R29E	TOC @ Circ. 13 3/8" @ 383' 395 sx			6350	3652-6148	

Well	Location	Surface Casing	Inter. Casing	Prod. Casing	TD	Completions	P & A
Pipkin A #1 Spud 2/62	35-T26S-R29E Unit D 842' FNL & 330' FWL	8 5/8" @ 619' 190 sx TOC @		4 1/2" @ 2700' 50 sx TOC @ 2348' Calc.	2982		P & A Schematic Attached
Stataline Fed. #1 Spud 6/83	35-T26S-R29E Unit D 740' FNL & 330' FWL	13 3/8" @ 455' 450 sx TOC @ Circ.	8 5/8" @ 2901' 650 sx TOC @ 1361' Calc.	5 1/2" @ 6756' 1800 sx TOC @ 525' Calc.	6750	4935-5892	
Stataline Fed. #2 Spud 12/87	35-T26S-R29E Unit D 610' FNL & 990' FWL	12 3/4" @ 188' 65 sx TOC @ 121' Calc.	8 5/8" @ 2750' 1975 sx TOC @ Circ.	5 1/2" @ 5092' 750 sx TOC @ 2495 Calc.	5093	4910-74	
Exxon Johnson #3 Spud 9/85	Sec. 4, Blk 57, T1S, T&P 1980' FNL & 1787' FEL	13 3/8" @ 507' 500 sx TOC @ Circ.	8 5/8" @ 2735' 250 sx TOC @ 2142' Calc.	5 1/2" @ 6220' 550 sx TOC @	6220	4938-5000	
Exxon Johnson #2 Spud 9/83	Sec. 4, Blk 57, T1S, T&P 467' FNL & 1980' FEL	12 3/4" @ 565' 650 sx TOC @ Circ.	8 5/8" @ 2710' 150 sx TOC @ 2354' Calc.	4 1/2" @ 6160' 1300 sx TOC @ Circ.	6160	4098-6051	
W D Johnson #1 Spud 1/61	Sec. 4, Blk 57, T1S, T&P 660' FNL & 2008' FEL	10 3/4" @ 651' 150 sx TOC @ 451' Calc.		4 1/2" @ 2883' 150 sx TOC @ 1828' Calc.	2904	Open Hole	
W D Johnson #2 Spud 5/61	Sec. 4, Blk 57, T1S, T&P 1980' FNL & 1980' FEL	8 5/8" @ 384' 250 sx TOC @ Circ.		5 1/2" @ 2922' 75 sx TOC @ 2622' Calc.	2940	Open Hole	
Johnson #4-C Spud 3/79	Sec. 4, Blk 57, T1S, T&P 1650' FNL & 2310' FWL	10 3/4" @ 347' 50 sx TOC @ 297' Calc.		4 1/2" @ 2938' 50 sx TOC @ 2586' Calc.	2955	Open Hole	
W D Johnson #E-1 Spud 4/85	Sec. 4, Blk 57, T1S, T&P 660' FNL & 950' FEL	8 5/8" @ 624' 400 sx TOC @ Circ.		4 1/2" @ 6216' 1420 sx TOC @ Circ.	6220	4921-5880	
Johnson #C-1 Spud 7/65	Sec. 4, Blk 57, T1S, T&P 330' FNL & 2310' FEL	8 5/8" @ 585' 150 sx TOC @ 229' Calc.		4 1/2" @ 2938' 100 sx TOC @ 2235' Calc.	2938	2931-36	
Exxon Johnson #4 Spud 11/85	Sec. 4, Blk 57, T1S, T&P 1980' FNL & 2173' FEL	13 3/8" @ 700' 700 sx TOC @ Circ.	8 5/8" @ 2740' 250 sx TOC @ 2147' Calc.	5 1/2" @ 4723' 1150 sx TOC @ 742' Calc.	6220	5327-5818	

R29E



GP II Energy, Inc.
Littlefield "BO" Lease

RESULT OF WATER ANALYSES

TO: Mr. George H. Mitchell LABORATORY NO. 493173
P. O. Box 963, Kermit, TX 79705 SAMPLE RECEIVED 4-26-93
RESULTS REPORTED 4-28-93

COMPANY George H. Mitchell LEASE As listed

FIELD OR POOL _____

SECTION _____ BLOCK _____ SURVEY _____ COUNTY _____ STATE _____

SOURCE OF SAMPLE AND DATE TAKEN: _____

5-3-93

NO. 1 Disposal water - taken from Chapman salt water disposal #3.

NO. 2 Produced water - taken from Federal "B0" #3.

NO. 3 Produced water - taken from Federal "B0" #5.

NO. 4 _____

REMARKS: _____

CHEMICAL AND PHYSICAL PROPERTIES

	NO. 1	NO. 2	NO. 3	NO. 4
Specific Gravity at 60° F.	1.0890	1.2042	1.0905	
pH When Sampled				
pH When Received	5.78	5.35	5.76	
Bicarbonate as HCO ₃	49	39	156	
Supersaturation as CaCO ₃				
Undersaturation as CaCO ₃				
Total Hardness as CaCO ₃	25,000	98,000	26,000	
Calcium as Ca	7,400	34,000	8,000	
Magnesium as Mg	1,580	3,159	1,458	
Sodium and/or Potassium	37,761	76,569	40,091	
Sulfate as SO ₄	1,831	58	1,802	
Chloride as Cl	74,570	187,490	78,831	
Iron as Fe	28.6	10.1	31.0	
Barium as Ba		0		
Turbidity, Electric				
Color as Pt				
Total Solids, Calculated	123,190	301,315	130,338	
Temperature °F.				
Carbon Dioxide, Calculated				
Dissolved Oxygen				
Hydrogen Sulfide	0.0	0.0	0.0	
Resistivity, ohm-in at 77° F.	0.081	0.046	0.078	
Suspended Oil				
Filtrable Solids as mg/l				
Volume Filtered, ml				

Results Reported As Milligrams Per Liter

Additional Determinations And Remarks It is noted in comparing the above results that the water from well "B0" #5 is essentially identical to the water from Chapman salt water disposal #3. We are not familiar with the circumstances, but we note the water from well "B0" #3 is an entirely different water and obviously originates from a different source than the other two waters herein. Contact us for any additional assistance in this matter.

RECEIVED
MAR 26 89
E
ROSWELL NM

GP II Energy, Inc.

#5 Littlefield "BO" Fed.

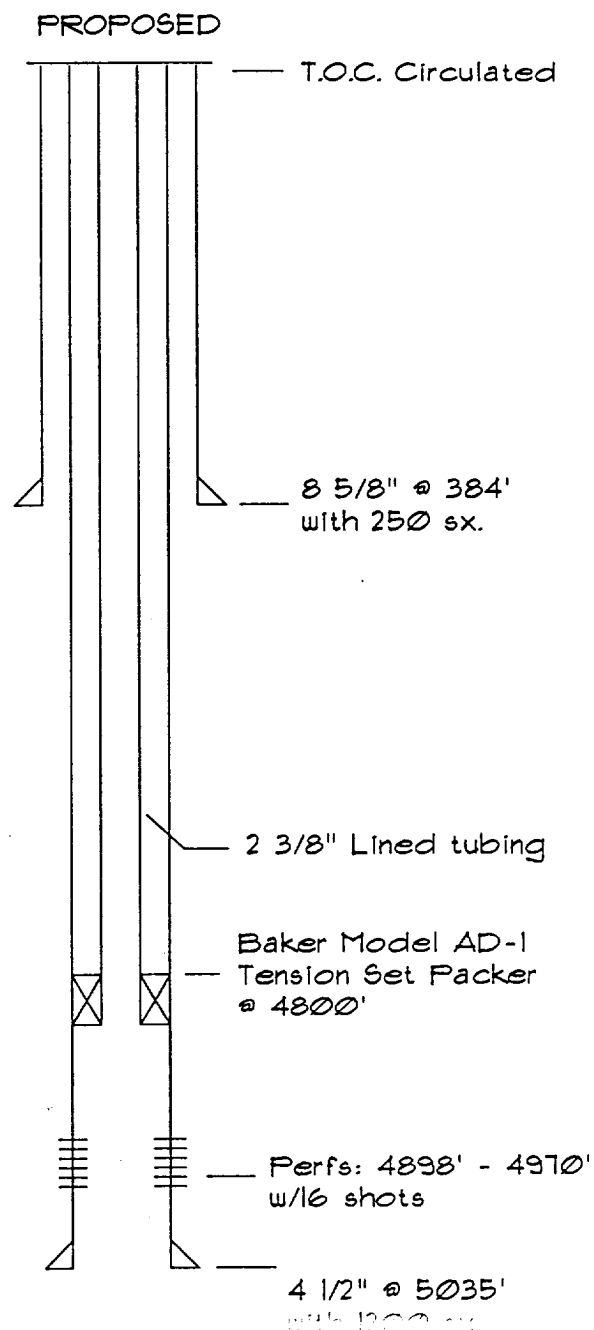
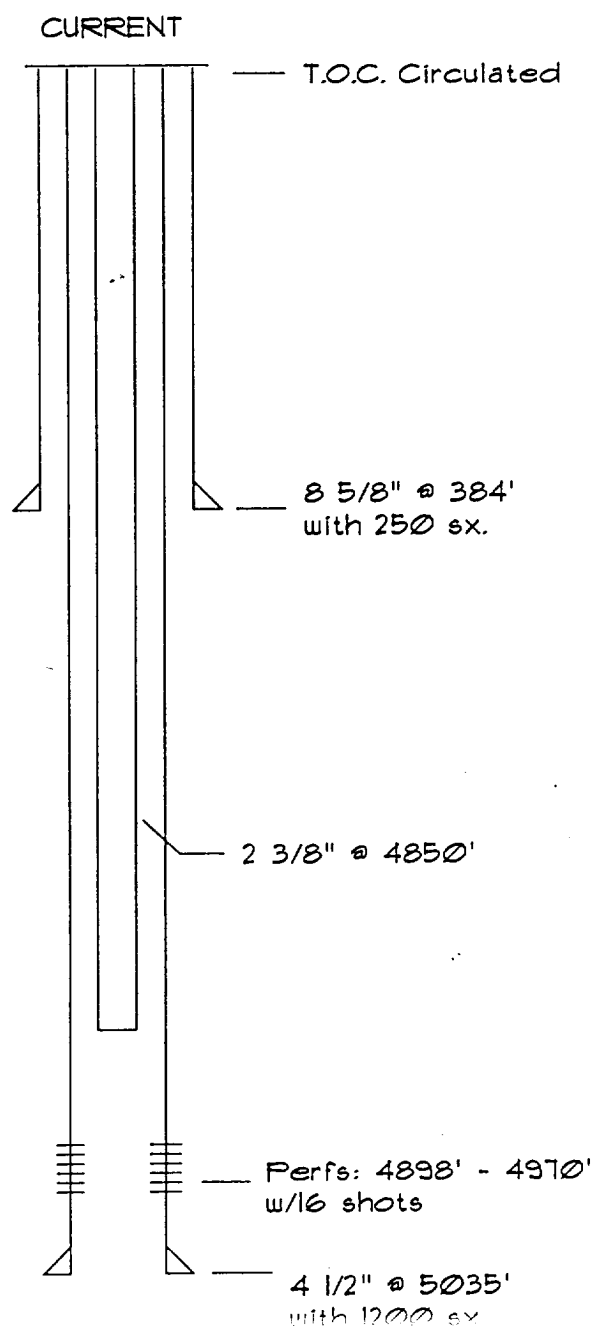
1610' FNL, 1650' FEL

Sec. 34, T26S, R29E

Eddy County, NM

Spud Date: October 1990

TD. 5035

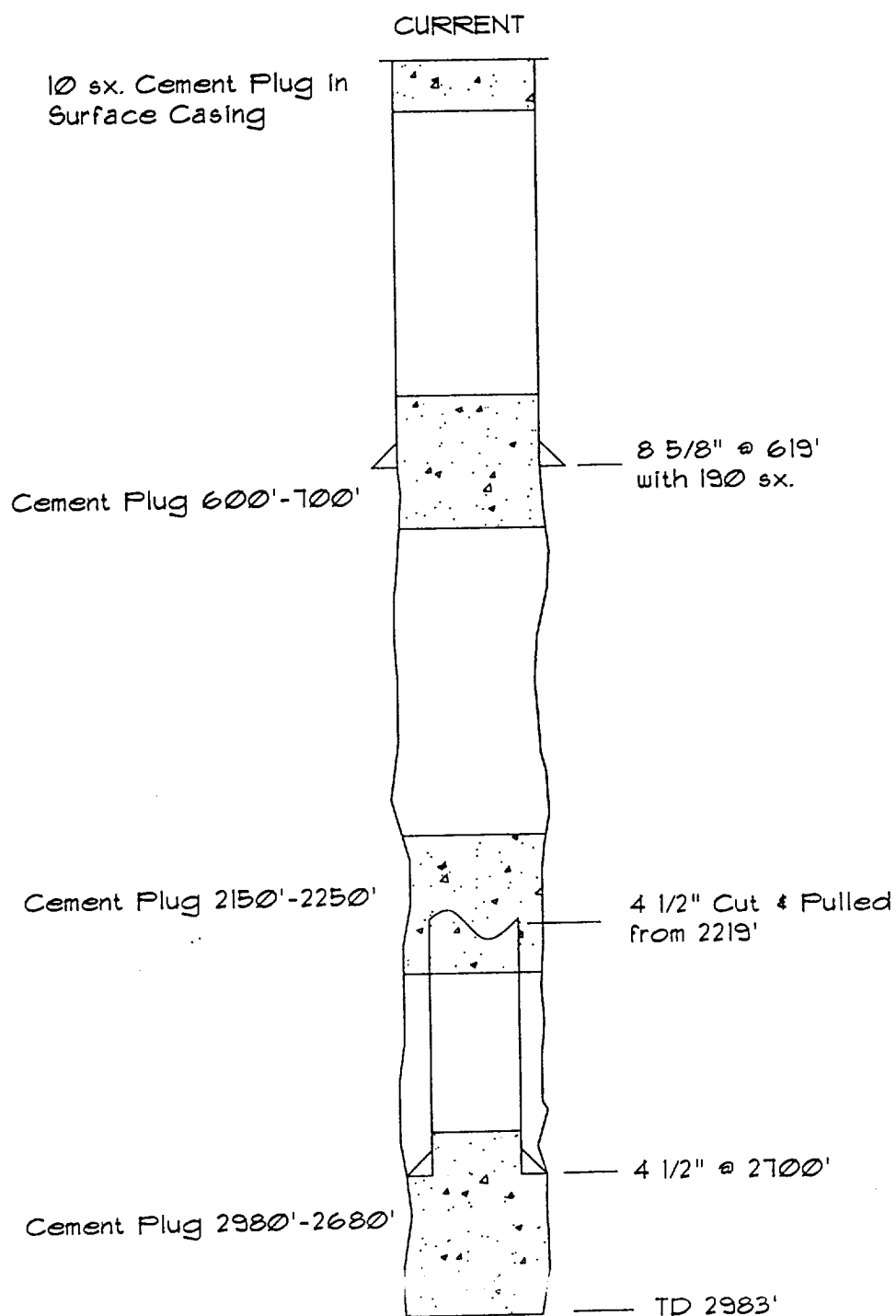


Curtis Hankamer

#1-A Pipkin
842' FNL, 330' FWL
Sec. 35, T26S, R29E
Eddy County, NM

Spud Date: February 1962
P&A Date: October 1962

TD. 2982



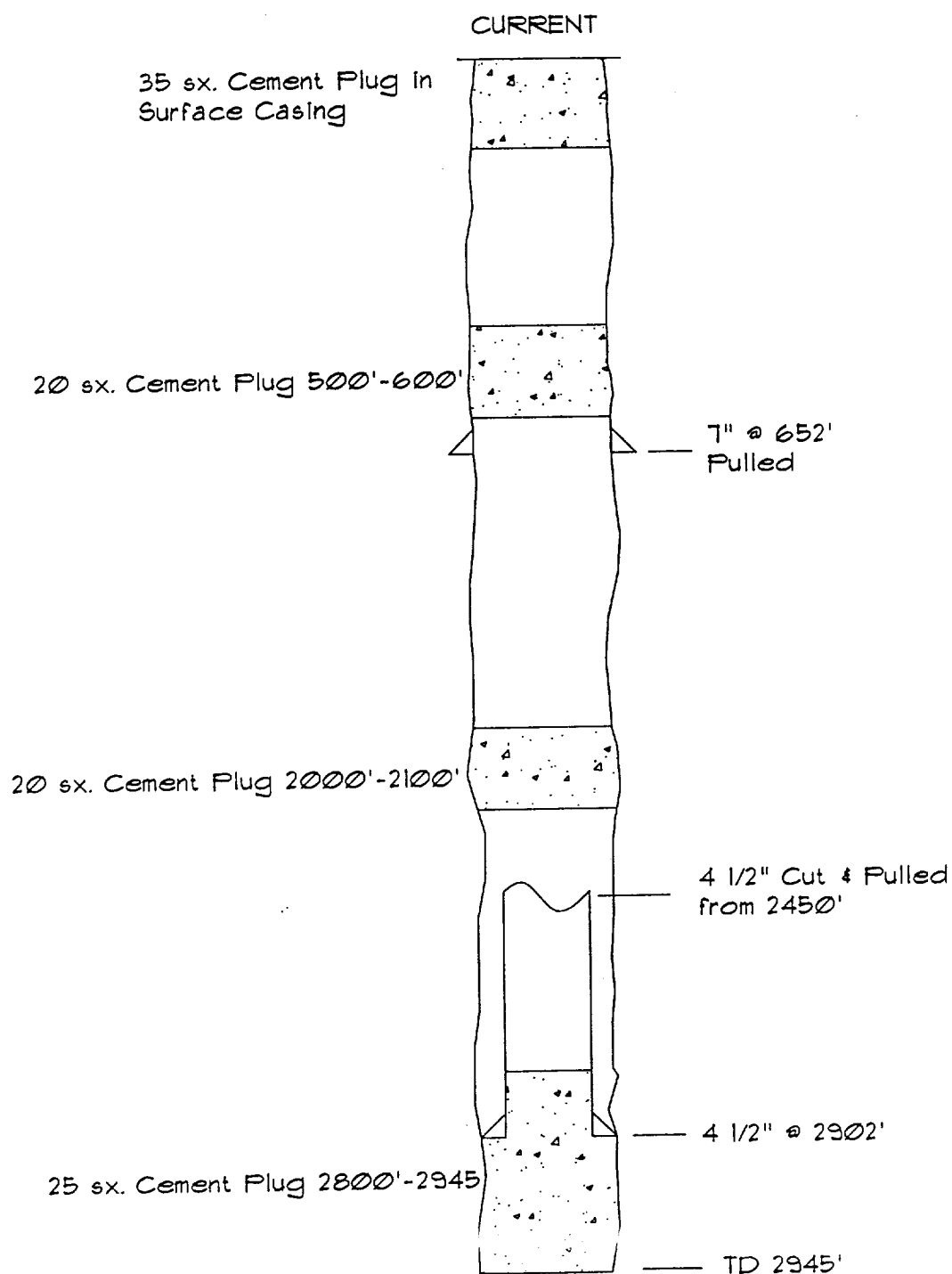
Ford Chapman

Federal Elliot #2
330' FSL, 990' FEL
Sec. 27, T26S, R29E
Eddy County, NM

Spud Date: December 1961

P&A Date: February 1962

TD. 2945



RECEIVED
MAR 26 2009
JIM
HOSWELL, NM

El Paso Exploration Co.

El Paso Federal #1
660' FSL, 660' FEL
Sec. 27, T26S, R29E
Eddy County, NM

Spud Date: April 1984

P & A Date: May 1984

TD. 1473

