# OIL CONSERVATION DIVISION

# APPLICATION FOR AUTHORIZATION TO INJECT

I.	Purpose: Application qua	PRESSURE MAINTENA lifies for administrative app				
п.	Operator: Address: Contact Party:	Address: 415 West Wall, Suite 1000, Midland, TX 79701				
m.	Well Data:	Well data sheets, schema	tic attached for each	well.		
IV.	Yes, this is an expansion of an existing project. Order R-10474					
٧.	1" = 4000' Map enclosed identifying all wells & leases within two miles of proposed injection well with a one-half mile radius circle drawn around each proposed injection well.					
VI.	Spreadsheet/tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone attached.					
VII	<ol> <li>Attach data on the proposed operations, including:</li> <li>Proposed average and maximum daily rate and volumes of fluids to be injected         <ul> <li>A. Average &amp; maximum daily rate - 400, 800 BWPD</li> </ul> </li> <li>Whether or not system is open or closed         <ul> <li>A. f Closed</li> </ul> </li> <li>Proposed average and maximum injection pressures         <ul> <li>A. 1500, 1800 psig</li> </ul> </li> <li>Sources and appropriate analysis of injection fluid and compatibility with the receiving formation if other than re-injected produced water; and         <ul> <li>A. Produced &amp; Santa Rosa water - cores from previously drilled by PPOC McKee sands had throughput analysis indicating injected fluids are compatible with the McKee sand.</li> </ul> </li> <li>If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, etc.         <ul> <li>A. Water injection purpose is for pressure maintenance of the McKee sand reservoir and improved recovery of oil from this reservoir.</li> </ul> </li> </ol>					
VIII.	Geological data on the injection zone, etc. previously submitted in Case No. 11785.					
IX.	Proposed stimulation program - none.					
X.	Well logs have been filed with the Division as each well was completed.					
XI.	Chemical analysis of fresh water attached (E. C. Hill "B" #7 WSW, Dickey Analytical Laboratory, Inc.).					
XII.	Not applicable					
XIII.	Proof of Notice - Newspaper "Legal Notice" mailed to Hobbs Daily News-Sun 1-29-98 for publication in next available issue. (Published February 4, 1998) Application with all attachments mailed to offset operators and surface owner 2-6-98 via certified mail (list attached).					
XIV.	Certification	Certification				
•	I hereby certify that the information submitted with this application is true and correct to the best knowledge and belief.					
		s R. Sutherland	Title:	District Manager		
	Signature: Jan	neal. Autherla	Date:	February 6, 1998		

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## E. C. HILL "B" FEDERAL NO. 6

(formerly #5M - renamed 6/28/89) 1980' FNL & 810' FWL

Sec. 35, Unit Letter E, T23S, R37E Lea County, New Mexico

AFE No.:

Unique No.: 20850

GL Elev 3254' KB Elev 3268'

> 13-3/8" 48# Csg Set @ 320' Cmtd w/300 sx, circ to surf

Perf Blineberry 1 HPF @ 5269' - 5310' (14 holes) Acidzd w/500 gals 15% NEFE acid & re-frac'd all Blinebry perfs w/50,000 gals 35# borated gel w/150,000# 16/30 mesh sand, ramped from 2-8 ppg @ AIR 50 BPM @ 1800 psi. (8/25/92)

9-5/8" 32# & 36# H40 & 40# J55 @ 2906' Cmtd w/1600 sx, circ to surf

Recompleted Blineberry - Perf'd 1 HPF @ 5316' - 5781' (45 holes). Treated w/6000 gals 15 %NEFE HCl acid w/60 ball sealers, frac'd well down 3-1/2" frac tbg w/pkr set @ 5122' w/ 42,000 gals Terra Frac (BJ) T-4 w/108,500# 20/40 sd divided into 2 equal stages 20 ball sealers between stages; used total of 18,700 gals CO2, AIR 28 BPM @ 4000 psi. (6/21/89)

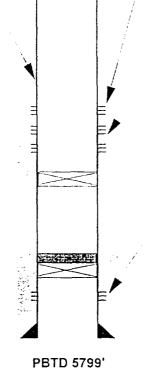
Perf McKee 9158'-78', 9194'-9220', 9228'-52', 9262'-82', 9296'-**\$**332' (504 holes), potentialed natural - no treatment based on 14 hr test to flow ARO 164 BOPD (1/21/54)
Treated McKee Perfs w/250 gals Dowell
Mud Acid + 6000 gals Dowell's JelX 500 down 2-3/8" tbg @ 2-3 BPM @ 6000 psig. (1/30/54)

7" 23# & 26# J55 & N80 Csg @ 9348' Cmtd w/400 sx

Csg Lk - 4976' - 5006', cmt retainer set @ 4946' & cmt sqzd (4 attempts) using a total of 450 sx. No evidence of circ between 7" & 9-5/8" csg while pumping & cmtg. Drld out cmt retainer & cmt, press tested sqz & csg to 1650 psi for 30 min, held ok. (2/29/64)

Perf 4 sqz holes @ 5820' - 22' for bottom blk sqz, set cmt retainer @ 5799'. Sqz'd to 1100 psi w/50 sx Class C cmt w/0.3% CFR3 & 3#/sk salt. POOR - reverse hole -PBTD @ 5799' (6/15/89)

CIBP @ 9120' w/35' Cmt



TD 9351'

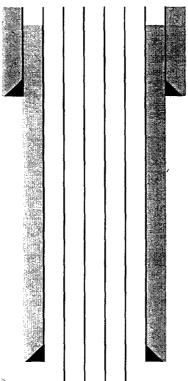
#### E. C. HILL "D" FEDERAL NO. 1

(formerly #1M - renamed 6/15/82) 2131' FNL & 660' FEL Sec. 34, Unit Letter H, T23S, R37E Lea County, New Mexico

AFE No.:

Unique No.: 20846

GL Elev 3263' KB Elev 3275'



13-3/8" 48# Csg Set @ 331' Cmtd w/300 sx, circ to surf

Csg Lk - 5222' - 5282', cmt retainer set @ 5155' & sqzd w/150 sx drld out cmt retainer & cmt, csg press. Lested ok, Abandoned Devonian Perfs

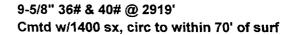
TOC @ 5900' (TS)

**2-3/8" Tbg w/TA @ 6760' (4/**20/90)

**GBP @ 6900' w/35' cmt**(1st CIBP slipped down hole to ?)
(5/19/89)

CIBP @ 7150'

**5"** Liner 9026-9289' Cmt'd in 8-3/4" OH w/35 sx (9/4/53)



Perf'd ABO 6638' - 6714' (56 holes). Acidized w/6000 gals 15% HCI NEFE (8/19/89)

Perf'd Abo 1 HPF @ 6958' - 7076' (47 holes)
Set cmt retainer @ 6895' & sqzd perfs w/150 sx
to 2000 psi, DO cmt retainer & re-perf'd Abo
6958' - 7014' acidzd w/6000 gals 15% HCI NEFE

Perf'd Devonian 7184' - 7256' 2 HPF (38 holes) Acidized thru tbg w/5000 gals 20% HCI (5/27/82)

Fish @ 8716' (Approx. 131' - 4 jts + tbg & pkr)
Cmt retainer @ 8700', cmt w/50 sx, approx.
PBTD @ 8425' pumped 150 sx cmt out through retainer & down past fish. (4/26/82)

Perf McKee 9114'-9264' (total 102' w/408 holes) (9/8/53)

7" 23# & 29# & 32# Csg @ 9100' (190' off bottom @ top of McKee) Cmtd w/650 sx

PBTD ' TD 9290'

#### INJECTION WELL DATA SHEET

	ng Company	E. C. Hill				
OPERATOR			LEA	ASE		
#6 (formerly #5M) 1980	' FNL & 810' FWL, Unit	Letter E.	35	238	37E	
Well No.	Footage Location		Section		Range	
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Lea County, Mexico				· · · · · · · · · · · · · · · · · · ·		
•						
<u>Schematic</u>				Tubular	Data	•
11111	1 1 1	Surface Casin	ng `			
		Size13	-3/8"		Cemented with	1 <u>300</u> sx
		TOC Surfa	ice	_ feet determ	uned by <u>obser</u>	yation
		Hole size	17-1/2"			
4	Set @ 320'					
		Intermediate	Casing			
		Size9-	5/8*		Cemented with	1600 sx
		TOCSurf	nce	_ feet deter	mined by <u>obse</u>	ryation
	Set @ 2906'	Hole size	12-1/4"	<del></del>		
	381 @ 2900					
		Lone String				
		Size				h 400 sx
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		(1-13-54)		* *** = **		
Ę	<b>E</b>	Hole size				
	Set @ 9348'	Total Depth	9351,			
		<b>.</b>	•			
		Injection Inte	ervai			
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Tubing Size 2-3/8"		lined wit	hRic	eline Duolin	e 10 IPC	set in a
2-3/8" x 7" Nickel cont	ed Arrowset 1	packer at				feet
(brand and mode				-		
(or describe any other ca	sing-tubing seal).					
Other Data						
1. Name of the injection	n formation <u>Simpson M</u>	cKee sand				
2. Name of the Field or	Pool (if applicable) <u>Te</u>	ague (Simpson	1)			
3. Is this a new well dri	illed for injection:		Yes		X_ N	lo
If no, for what purpo	se was the well originally	drilled: Origi	nally dri	illed & comp	leted as a produ	icing well
*4. Has the well ever be	en perforated in any other:	zone(s)? List a	ll such pe	erforated inte	ervals and give p	olugging detail (sacks
	(s) used. Yes Perforated I					
	g set CIBP (above McKee					
Blinebry interval 5269' to	o 5781' treated produced of	oil and gas wel	ll until th	nis zone was	depleted, Sque	eze casing leak from

4976'-5006' with 450 sx coment through a cement retainer after initially setting an RBP above the Blinebry perforations.

5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area. Above - Blinebry-

Paddock at 5000'-5400', Below (depleted) Ellenburger at 9575'

Dickey

Analytical Laboratory, Inc.

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683-8046	1083-4830

P.O. Box 2163 Midhed. Texas 79702 915 - 687-2240

Flains Petroleum Operating Company Fresh Water Station
Teague Field
Lea County, NN

Date of Analysis: September 28, 1992 Date of Sample: September 24, 1992 Sample Source: Header

Reference Number: DL-13483 E.C. HILL 'B' No.7 WSW

3EL. 36-T235-R37E LEA LO.,NM

## API WATER ANALYSIS

DISSOLVED SOLIDS CATIONS Sodium, Na Calcium, Ca Magnesium, Mg	mg/l 272 92 73	me/1 12 . 5 6
ANIONS Chloride, C1 Sulfate, SO4 Carbonate, CO3 Bicarbonate, HCO3	389 340 0 268	. 7 0 4
Total Dissolved Solids	1434	•
Specific Gravity pH Hardness as CaCO3, mg/l Resistivity, chm-meters @ 75'F Sulfate as H2S	1.000 7.8 531 4.6 none detected	

R.S. Dickey
Dickey Analytical Laboratory, Inc.

by and research column and are not secretary because of the record of implicit The sets contained saving AETM and API approved procedures are subject to the accurate procedure of the record of appearancy insenses or amount products. Any presention of our reports in seese or in part to provide recording to the provider of the provide

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