

OIL CONSERVATION DIVISION

APPLICATION FOR AUTHORIZATION TO INJECT

- I. Purpose: PRESSURE MAINTENANCE
Application qualifies for administrative approval? YES
- II. Operator: Plains Petroleum Operating Company
Address: 415 West Wall, Suite 1000, Midland, TX 79701
Contact Party: James R. Sutherland, Southern District Manager Phone: 915/683-4434
- III. Well Data: Well data sheets, schematic attached for each well.
- IV. Yes, this is an expansion of an existing project. Order R-10474
- V. 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. Attach data on the proposed operations, including:
1. Proposed average and maximum daily rate and volumes of fluids to be injected
A. Average & maximum daily rate - 400, 800 BWPD
 2. Whether or not system is open or closed
A. ☒ Closed
 3. Proposed average and maximum injection pressures
A. 1500, 1800 psig
 4. Sources and appropriate analysis of injection fluid and compatibility with the receiving formation if other than re-injected produced water; and
A. Produced & Santa Rosa water - cores from previously drilled by PPOC McKee sands had throughput analysis indicating injected fluids are compatible with the McKee sand.
 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, etc.
A. Water injection purpose is for pressure maintenance of the McKee sand reservoir and improved recovery of oil from this reservoir.
- 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

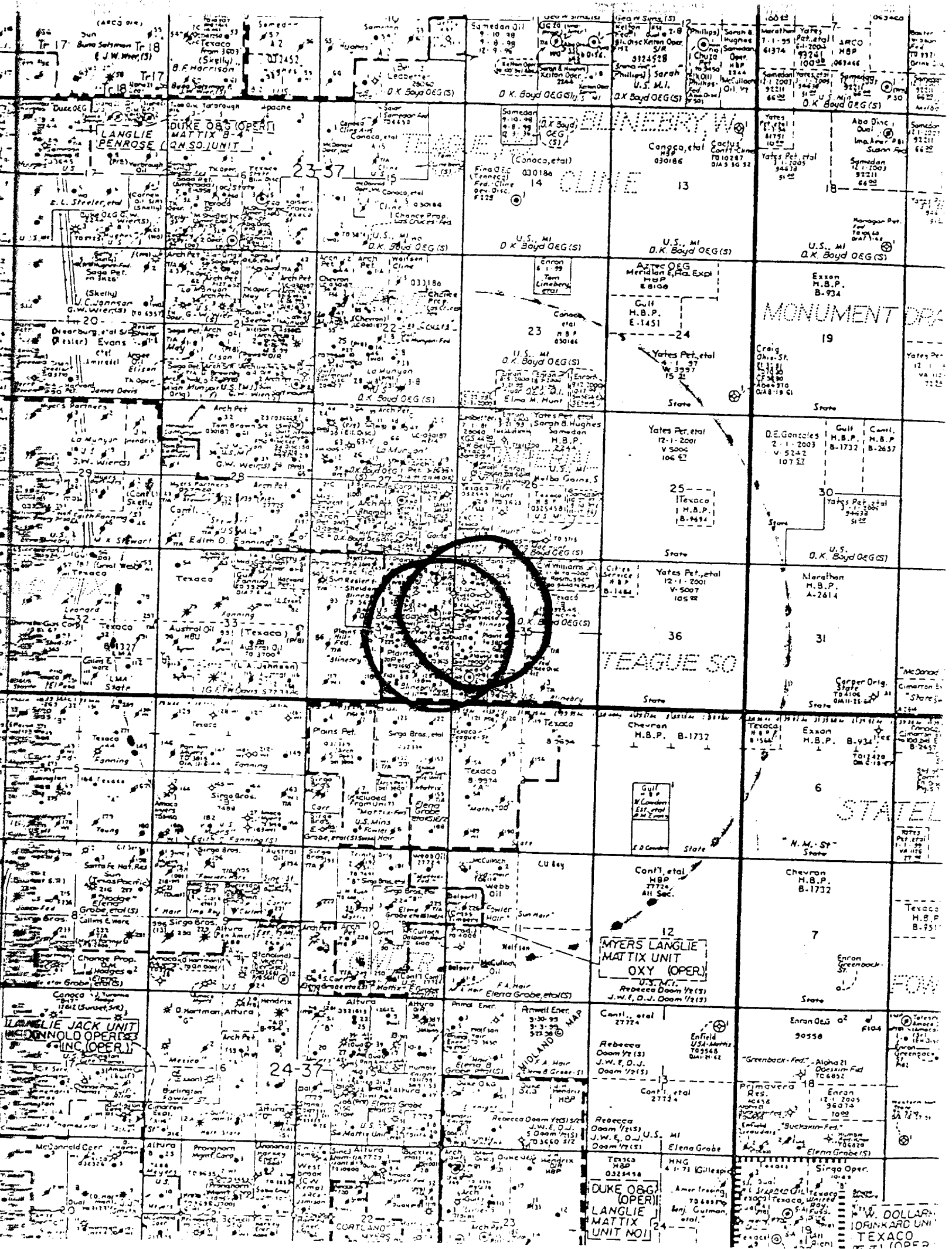
I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

Name: James R. Sutherland

Title: District Manager

Signature: James R. Sutherland

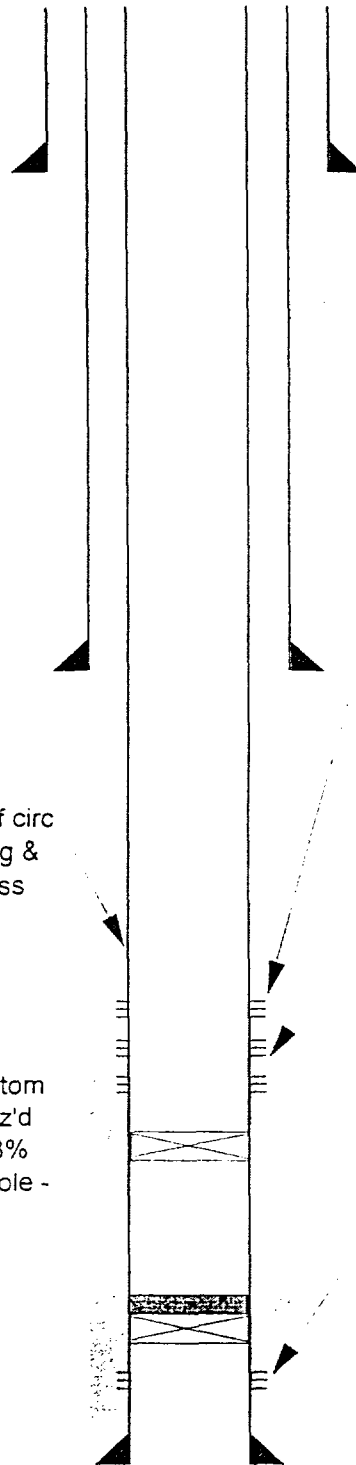
Date: February 6, 1998



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'
 Cmt'd w/300 sx, circ to surf

Perf Blineberry 1 HPF @ 5269' - 5310' (14 holes)
 Acid'd w/500 gals 15% NEFE acid & re-frac'd
 all Blinebry perms 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'
 Cmt'd w/1600 sx, circ to surf

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 -
PBD @ 5799' (6/15/89)

CIBP @ 9120' w/35' Cmt

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'-9332' (504 holes), potential
 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)

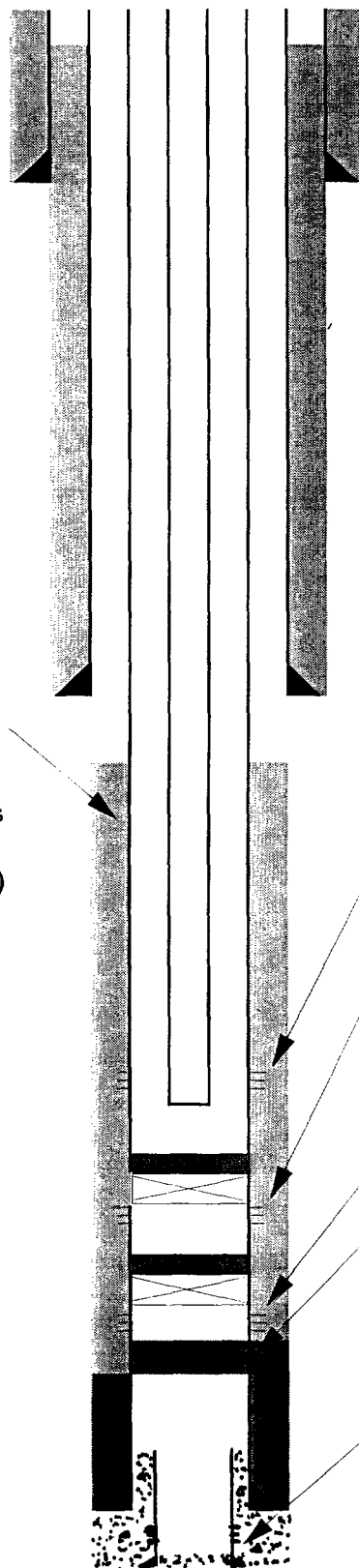
7" 23# & 26# J55 & N80 Csg @ 9348'
 Cmt'd w/400 sx

PBD 5799'
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.
tested ok, Abandoned Devonian Perfs

TOC @ 5900' (TS)

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

CIBP @ 6900' w/35' cmt
(1st CIBP slipped down hole to ?)
(8/19/89)

CIBP @ 7150'

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

9-5/8" 36# & 40# @ 2919'
Cmtd w/1400 sx, circ to within 70' of surf

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

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

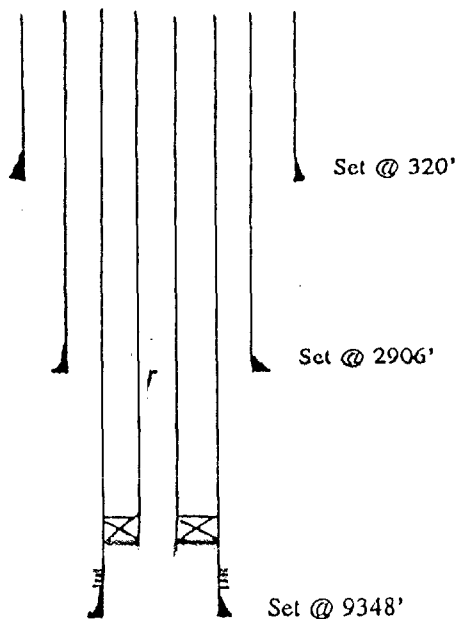
PBTD '
TD 9290'

INJECTION WELL DATA SHEET

Plains Petroleum Operating Company
OPERATORE. C. Hill "B" Federal
LEASE#6 (formerly #5M) 1980' FNL & 810' FWL, Unit Letter E, 35 23S 37E
Well No. Footage Location Section Township Range

Lea County, Mexico

Schematic



Tubular Data

Surface Casing

Size 13-3/8" Cemented with 300 sx
TOC Surface feet determined by observation
Hole size 17-1/2"

Intermediate Casing

Size 9-5/8" Cemented with 1600 sx
TOC Surface feet determined by observation
Hole size 12-1/4"

Long String

Size 7" Cemented with 400 sx
TOC *originally 6350' feet determined by temperature survey
(1-13-54) *See 4 below
Hole size 8-3/4"
Total Depth 9351'

Injection Interval

9158 feet to 9332 feet
(perforated or open-hole, indicate which)Tubing Size 2-3/8" lined with Riceline Duoline 10 IPC set in a
2-3/8" x 7" Nickel coated Arrowset 1 packer at 9070 feet
(brand and model)

(or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation Simpson McKee sand
2. Name of the Field or Pool (if applicable) Teague (Simpson)
3. Is this a new well drilled for injection: Yes X No
If no, for what purpose was the well originally drilled: Originally drilled & completed as a producing 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. Yes Perforated from 5820' to 5822' and cement block squeezed through cement retainer set at 5799' after having set CIBP (above McKee perforations) at 9120' with 35' cement on top of CIBP. Perforated Blinbry interval 5269' to 5781' treated produced oil and gas well until this zone was depleted. Squeeze casing leak from 4976'-5006' with 450 sx cement through a cement retainer after initially setting an RBP above the Blinbry perforations.
5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area. Above - Blinbry-Paddock at 5000'-5400', Below (depleted) Ellenburger at 9575'

Dickey

Analytical Laboratory, Inc.

Post-It™ brand fax transmittal memo 7671		# of pages > 2
To: K. K. NIEBERDING	From: RITA Dickey	
Co: PLAINS PETROLEUM	Co: DICKY ANAL. LAB	
Dept.	Phone # 687-2240	
Fax # 683-8046	Fax # 683-6820	

P.O. Box 2163
Midland, Texas 79702
915-687-2240

Plains Petroleum Operating Company
Fresh Water Station
Teague Field
Lea County, NM

Date of Analysis: September 28, 1992
Date of Sample: September 24, 1992
Sample Source: Header
Reference Number: DL-13489
E.C. HILL 'B' No. 7 WSW
SEC. 36-T235-R37E
LEA CO., NM

A P I W A T E R A N A L Y S I S

DISSOLVED SOLIDS

CATIONS

	mg/l	me/l
Sodium, Na	272	12
Calcium, Ca	92	5
Magnesium, Mg	73	6

ANIONS

	mg/l	me/l
Chloride, Cl	383	11
Sulfate, SO4	340	7
Carbonate, CO3	0	0
Bicarbonate, HCO3	268	4

Total Dissolved Solids 1434

Specific Gravity 1.000

pH 7.8

Hardness as CaCO3, mg/l 531

Resistivity, ohm-meters @ 75°F 4.6

Sulfate as H2S none detected

R.S. Dickey
Dickey Analytical Laboratory, Inc.