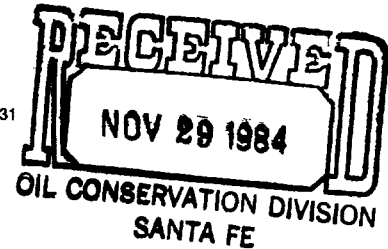


# Braden-Deem, Inc.

SUITE 1250, 125 NORTH MARKET • WICHITA, KANSAS 67202 • (316) 265-1731

*Oil and Gas Production  
Lease Operations and Engineering  
Cable-tool Rigs*



November 27, 1984

State of New Mexico  
Energy and Minerals Department  
Oil Conservation Division  
P.O. Box 2088  
Santa Fe, New Mexico 87501

*Case 8423*

Re: State DB # 6 Well  
SW SW Sec 25-7S-33E  
Chavero Field  
Roosevelt County, New Mexico

Attention: Mr. Gilbert Quintana:

We evidently had a misunderstanding as to the Application to be heard on the above referenced well. Docket No. 45-84 shows case No. 8423 as Application by Braden-Deem, Inc. for salt water disposal in perforated interval 4352 to 4382. This Application (salt water disposal into perfs. 4352-4382) was withdrawn by telephone call and was superseded by Application to Inject for Secondary Recovery into perforations 4189 to 4382. As per telephone conversation with our attorney Perry Pearce, please cancel case No. 8423 set for hearing on November 28th and reset Application for Secondary Recovery to be heard on December 19th, 1984.

I am resubmitting a copy of the Application along with additional supplementary data.

In our letter of October 1, 1984 we had requested approval to inject a maximum of 300 barrels per day of produced San Andres water at a maximum pressure not to exceed 1500 psi. Mr. Pearce has advised that if we wish to exceed a pressure gradient of 0.2 psi per foot we must show that we will not fracture formation. We withdraw our request for 1500 psi maximum injection pressure and request a maximum injection pressure not to exceed 837.8 psi (4189' x 0.2).

I have checked with Larry Nowak in the State Engineers District Office in Roswell, New Mexico and he advises that there is no potable water in the area below a depth of 150 feet. He also stated that there is only limited potable water in the red beds or Ogalla from a depth of

150 feet to surface. There are two known water wells in the area as shown on the enclosed plat. We will obtain water samples and have analyzed.

We will treat the San Andres perforations in the interval 4189-4382 with 3000 gallons of 15 percent HCl acid.

I have examined available geologic and engineering data and find no evidence of open faulting or other hydrologic connection between the injection zone and any underground source of drinking water.

Copies of this Application have been forwarded by certified mail to:

Getty Oil Company  
Box 3000  
Tulsa, Oklahoma 74102

Wiser Oil Company  
905 Oil and Gas Building  
Wichita Falls, Texas 76301

Stringer Oil & Gas  
Box 3037  
San Angelo, Texas 76902

Marathon Oil Company  
P.O. Box 2409  
Hobbs, New Mexico 88240

State of New Mexico  
Energy and Minerals Department  
Oil Conservation Division  
P.O. Box 1980  
Hobbs, New Mexico 88240

Commissioner of Public Lands  
P.O. Box 1148  
Santa Fe, New Mexico 87504



Roy C. Deem

DCD: tyt

Encl.

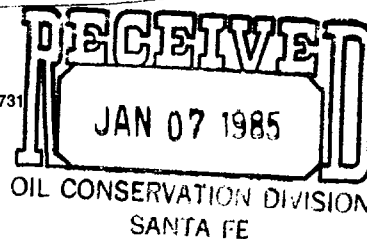
CC: Mr. W. Perry Pearce  
Montgomery & Andrews  
Attorneys and Counselors at Law  
P.O. Box 2307  
Santa Fe, New Mexico 87504-2307

FILE CASE No. 8423

**Braden-Deem, Inc.**

SUITE 1250, 125 NORTH MARKET • WICHITA, KANSAS 67202 • (316) 265-1731


*Oil and Gas Production  
Lease Operations and Engineering  
Cable-tool Rigs*



January 2, 1985

State of New Mexico  
Energy and Minerals Department  
Oil Conservation Division  
P.O. Box 2088  
Santa Fe, New Mexico 87501

Re: State DB # 6 Well  
SW SW Sec 25-7S-33E  
Chaveroo Field  
Roosevelt County, New Mexico

  
December 19, 1984

Attention: Mr. Gilbert Quintana

Enclosed are two copies of Water Analysis Report on the only water well within one mile of our State DB # 6 proposed water injection well. It is my understanding that this report is the only remaining requirement for approval of Application heard in Case No. 8423.

  
Doy C. Deem

DCD:tyt

Encl.

CC: Mr. W. Perry Pearce



# TRETOLITE DIVISION

369 Marshall Avenue / Saint Louis, Missouri 63119  
(314) WD 1-3500/TWX 910-760-1660/Telex 44-2417

## WATER ANALYSIS REPORT

COMPANY Braden Deem ADDRESS Tatum, NM DATE 12/7/84

SOURCE Windmill near Wiser Oil Co. DATE SAMPLED 12/4/84 ANALYSIS NO. 79

Analysis

Mg/L

\*Meq/L

1. pH 7.0

2. H<sub>2</sub>S (Qualitative) neg.

3. Specific Gravity 1.000

4. Dissolved Solids 1,421

5. Suspended Solids           

6. Phenolphthalein Alkalinity (CaCO<sub>3</sub>)           

7. Methyl Orange Alkalinity (CaCO<sub>3</sub>) 190

8. Bicarbonate (HCO<sub>3</sub>) 232 ÷ 61 3.8 HCO<sub>3</sub>

9. Chlorides (Cl) 340 ÷ 35.5 9.6 Cl

10. Sulfates (SO<sub>4</sub>) 375 ÷ 48 7.8 SO<sub>4</sub>

11. Calcium (Ca) 24 ÷ 20 1.2 Ca

12. Magnesium (Mg) 12 ÷ 12.2 .9 Mg

13. Total Hardness (CaCO<sub>3</sub>) 110

14. Total Iron (Fe) 1.25

15. Barium (Qualitative)

16. Strontium

\*Milli equivalents per liter

### PROBABLE MINERAL COMPOSITION

	Compound	Equiv. Wt.	X	Meq/L	=	Mg/L
1.2	Ca (HCO <sub>3</sub> ) <sub>2</sub>	81.04		1.2		97
.9	Ca SO <sub>4</sub>	68.07				
19.1	Ca Cl <sub>2</sub>	55.50				
	Mg (HCO <sub>3</sub> ) <sub>2</sub>	73.17		.9		65.8
	Mg SO <sub>4</sub>	60.19				
	Mg Cl <sub>2</sub>	47.62				
	Na HCO <sub>3</sub>	84.00		1.7		142.8
	Na <sub>2</sub> SO <sub>4</sub>	71.03		7.8		554
	Na Cl	58.46		9.6		561

Saturation Values Distilled Water 20°C

Ca CO<sub>3</sub> 13 Mg/L

Ca SO<sub>4</sub> • 2H<sub>2</sub>O 2,090 Mg/L

Mg CO<sub>3</sub> 103 Mg/L

REMARKS ca: Mr. Deem - 200 E. 1st Street - Wichita, Kansas 67202

G. Blackwell, G. Knorr, M. Flatt

Respectfully submitted  
TRETOLITE COMPANY

Betty Knorr

STABILITY INDEX CALCULATIONS

(Stiff-Davis Method)

CaCO<sub>3</sub> Scaling Tendency

Water Analysis No. 79

pH 7.0

TOTAL IONIC STRENGTH 0.03

SI at (80)°F = +0.10

SI at (120)°F = +0.60

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

Remarks:

SCALING TENDENCY CALCULATIONS  
(Skillman-McDonald-Stiff Method)

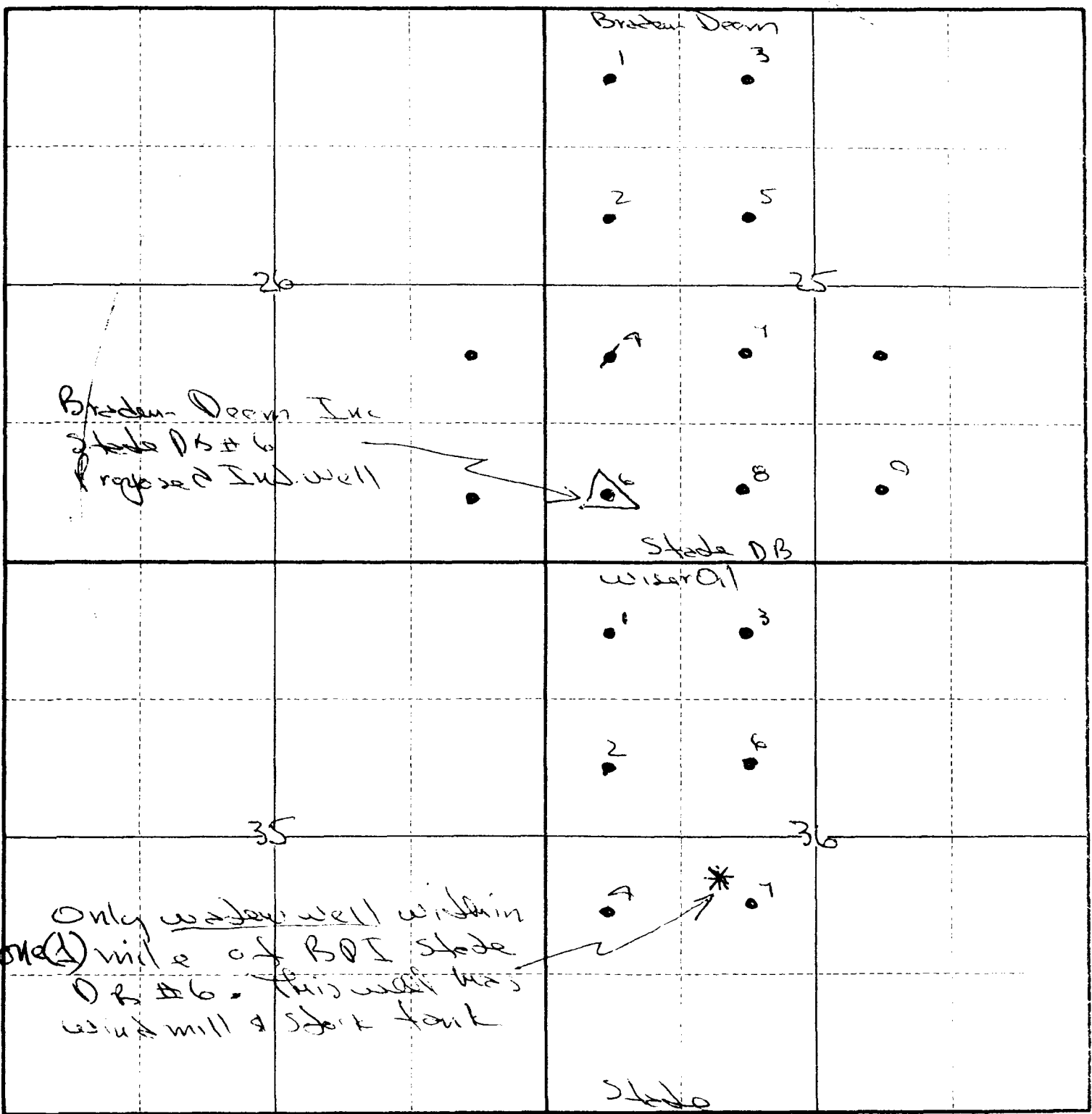
Calcium sulfate

X = 0.0092

S = 951 mg/l @ 70°F

S = 1,025 mg/l @ 110°F

Township 1S Range 33E County Lawrence State K. Mo.





# TRETOLITE DIVISION

369 Marshall Avenue / Saint Louis, Missouri 63118  
(314) WO 1-3500/TWX 910-760-1660/Telex 44-2417

## WATER ANALYSIS REPORT

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REMARKS cd: Mr. Deem - 200 E. 1st Street - Wichita, Kansas 67202

G. Blackwell, G. Knorr, M. Flatt

Respectfully submitted  
TRETOLITE COMPANY

Betty Knorr

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(Stiff-Davis Method)

CaCO<sub>3</sub> Scaling Tendency

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pH 7.0

TOTAL IONIC STRENGTH 0.03

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

Remarks: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## SCALING TENDENCY CALCULATIONS (Skillman-McDonald-Stiff Method)

Calcium sulfate

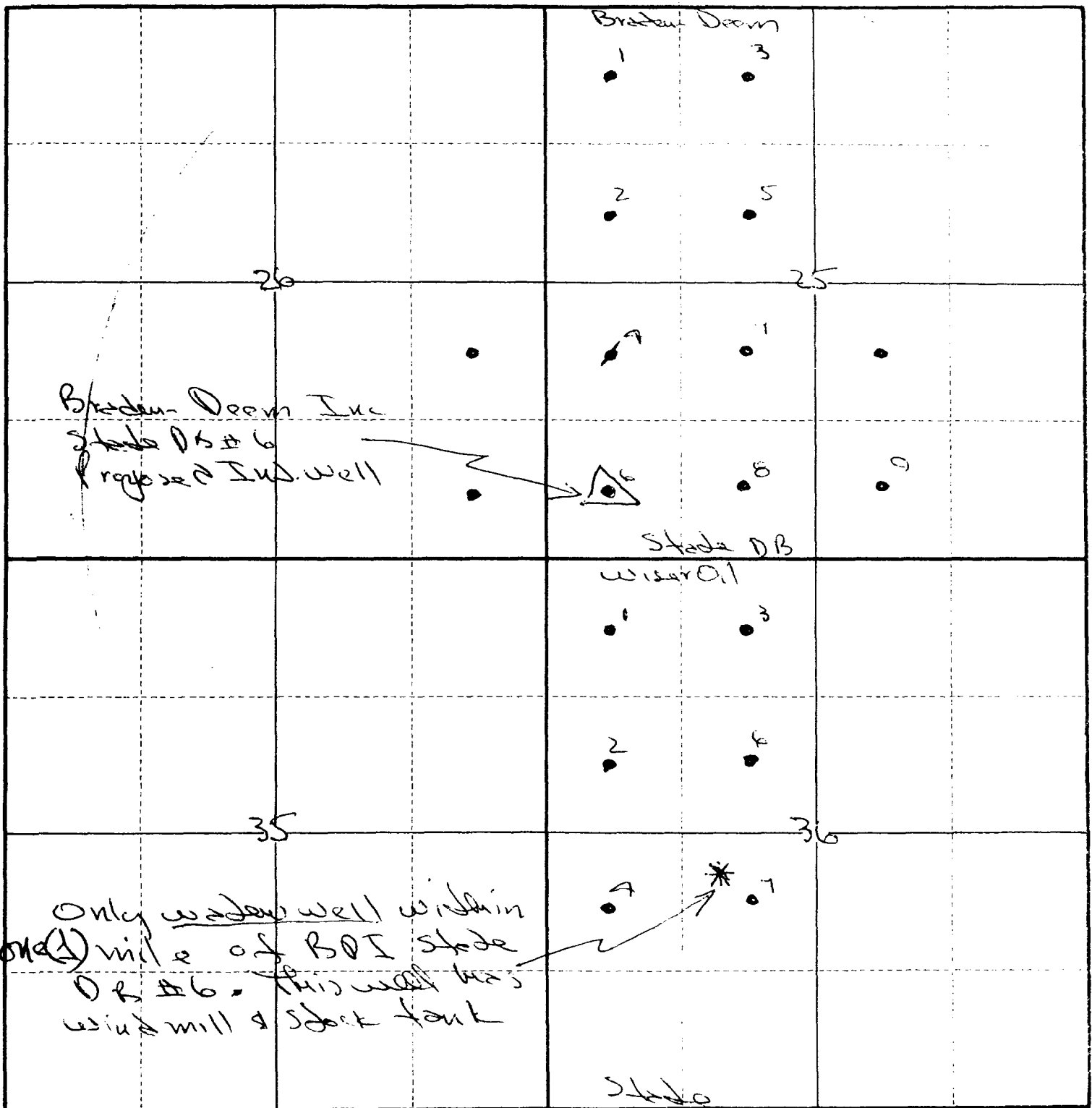
X = 0.0092

S = 951 mg/l @ 70°F

S = 1,025 mg/l @ 110°F



Township 1S Range 33E County Prescott State N. Mexico



FORM 45



STATE OF NEW MEXICO  
ENERGY AND MINERALS DEPARTMENT  
OIL CONSERVATION DIVISION

**TONEY ANAYA**  
**GOVERNOR**

February 6, 1985

POST OFFICE BOX 2088  
STATE LAND OFFICE BUILDING  
SANTA FE, NEW MEXICO 87501  
(505) 827-5800

**Mr. W. Perry Pearce**  
**Montgomery and Andrews**  
**Attorneys at Law**  
**P. O. Box 2307**  
**Santa Fe, New Mexico**

Re: CASE NO. 8423  
ORDER NO. R-7809

Applicant:

**Braden-Deem, Inc.**

Dear Sir:

Enclosed herewith are two copies of the above-referenced Division order recently entered in the subject case.

Sincerely,

*B. L. Hunt*

R. L. STAMETS  
Director

RLS / fd


Copy of order also sent to:

Hobbs OCD           x            
 Artesia OCD           x            
 Aztec OCD

Other \_\_\_\_\_

MEMO

TO: EXAMINER QUINTANA

FROM: JOE D. RAMEY 

SUBJECT: Case No. 8423

The plat labeled Exhibit # 1 in the above case, indicated the Stringer Oil & Gas Well No. 8 P 26-T7S-R33E to be plugged and abandoned. In checking this with the Hobbs office, I was informed that the well produced 59 bbls. of oil in October, 1984. It appears that the well has been put back on production and should be no hazard to injection in the area.

I will advise Mr. Deem to pressure test the casing-tubing annulus on the State DB Well No. 6 to a minimum of 200 psi for 30 minutes prior to injection. This procedure was suggested by Mr. Sexton.