



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

BRUCE KING  
GOVERNOR

July 15, 1991

POST OFFICE BOX 2088  
STATE LAND OFFICE BUILDING  
SANTA FE, NEW MEXICO 87504  
(505) 827-5800

Yates Drilling Company  
105 South Fourth Street  
Artesia, New Mexico 88210

*RE: Injection Pressure Increase  
Cactus Queen Unit Waterflood Project  
Chaves County, New Mexico*

Dear Sir:

Reference is made to your request dated June 3, 1991, to increase the surface injection pressure on the two wells within the Cactus Queen Unit Waterflood Project. This request is based on step rate tests conducted on these wells on May 29, 1991. The results of the tests have been reviewed by my staff and we feel an increase in injection pressure on these wells is justified at this time.

You are therefore authorized to increase the surface injection pressure on the following well.

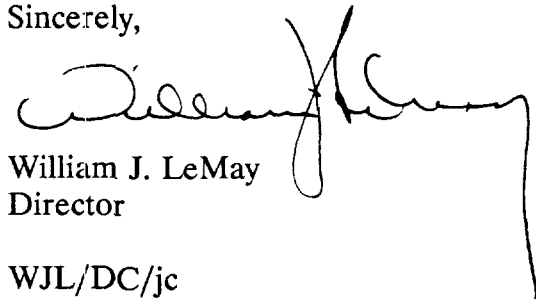
<u>WELL AND LOCATION</u>	<u>MAXIMUM INJECTION SURFACE PRESSURE</u>
Cactus Queen Unit Well No. 1 Unit K, Section 27, T-12 South, R-31 East, NMPM	980 PSIG
Cactus Queen Unit Well No. 5 Unit C, Section 34, T-12 South, R-31 East, NMPM	1100 PSIG
Both in Chaves County, New Mexico	

Yates Drilling Company  
July 15, 1991  
Page 2

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The Division Director may rescind this injection pressure increase if it becomes apparent that the injected water is not being confined to the injection zone or is endangering any fresh water aquifers.

Sincerely,

A handwritten signature in black ink, appearing to read 'William J. LeMay', with a long horizontal stroke extending to the right.

William J. LeMay  
Director

WJL/DC/jc

cc: Oil Conservation Division - Artesia  
File: Case No. R-9810 ✓  
D. Catanach  
R. Brown

NO WAITING PERIOD

COMPANY: Yates Drilling Company  
ADDRESS: 105 South Fourth Street  
CITY, STATE, ZIP: Albino, New Mexico 88210  
ATTENTION: \_\_\_\_\_

Re: Injection Pressure Increase  
Cactus Queen Unit Waterflood Project  
Chaves County, New Mexico

Dear Sir:

Reference is made to your request dated June 3, 1991, to increase the surface injection pressure on two wells within the Cactus Queen Unit Waterflood Project. This request is based on step rate tests conducted on these wells on May 29, 1991. The results of the tests have been reviewed by my staff and we feel an increase in injection pressure on these wells is justified at this time.

You are therefore authorized to increase the surface injection pressure on the following wells:

<u>Well &amp; Location</u>	<u>Maximum Injection Surface Pressure</u>
<u>Cactus Queen Unit Well No. 1</u> <u>Unit B, Section 27, T-12S, R-3E, NMPM</u>	<u>980 PSIG</u>
<u>Cactus Queen Unit Well No. 5</u> <u>Unit C, Section 34, T-12S, R-3E, NMPM</u>	<u>1100 PSIG</u>
<u>Both in Chaves County, New Mexico</u>	
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

The Division Director may rescind this injection pressure increase if it becomes apparent that the injected water is not being confined to the injection zone or is endangering any fresh water aquifers.

xc: T. GALLEGOS  
R. Brown

D. CATANACH

FILE- Case No 9810

OCD- 1666

Submit 3 Copies  
to Appropriate  
District Office

State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-103  
Revised 1-1-89

DISTRICT I  
P.O. Box 1980, Hobbs, NM 88240

DISTRICT II  
P.O. Drawer DD, Artesia, NM 88210

DISTRICT III  
1000 Rio Brazos Rd., Aztec, NM 87410

OIL CONSERVATION DIVISION

P.O. Box 2088  
Santa Fe, New Mexico 87504-2088

WELL API NO.

30-005-21037

5. Indicate Type of Lease

STATE ☒

FEE ☐

6. State Oil & Gas Lease No.

LH-1648

7. Lease Name or Unit Agreement Name

Cactus Queen Unit

8. Well No.

1

9. Pool name or Wildcat

SE Chaves On Gas Area Assoc.

SUNDRY NOTICES AND REPORTS ON WELLS

(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A  
DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT"  
(FORM C-101) FOR SUCH PROPOSALS.)

1. Type of Well:

OIL  
WELL ☐

GAS  
WELL ☐

OTHER Water Injection Well

2. Name of Operator

Yates Drilling Company

3. Address of Operator

105 S. 4th Street, Artesia, NM 88210

4. Well Location

Unit Letter K : 1650 Feet From The South Line and 2310 Feet From The West Line

Section 27

Township 12S

Range 31E

NMPM

Chaves

County

10. Elevation (Show whether DF, RKB, RT, GR, etc.)

4438' GL

11.

Check Appropriate Box to Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐

PLUG AND ABANDON ☐

TEMPORARILY ABANDON ☐

CHANGE PLANS ☐

PULL OR ALTER CASING ☐

OTHER: Request increase in Allowable Injection Pressure ☒

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐

COMMENCE DRILLING OPNS. ☐ PLUG AND ABANDONMENT ☐

CASING TEST AND CEMENT JOB ☐

OTHER: ☐

12. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

A Step-Rate Injection Test was conducted on the subject well 5-29-91. A copy of the data from this test along with Rate vs. Pressure plots are attached. Calculations indicate the (wellhead) pressure at which the formation first parts is 1082 psig. Under the terms of order R-9075 and R-9075-B, we are permitted to request administrative approval of an increase in injection pressure, if supported by a Step-Rate Injection Test. Accordingly we are requesting approval of a wellhead injection pressure of 980 psig.

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE [Signature] TITLE Engineer DATE 6-3-91

TYPE OR PRINT NAME \_\_\_\_\_ TELEPHONE NO. \_\_\_\_\_

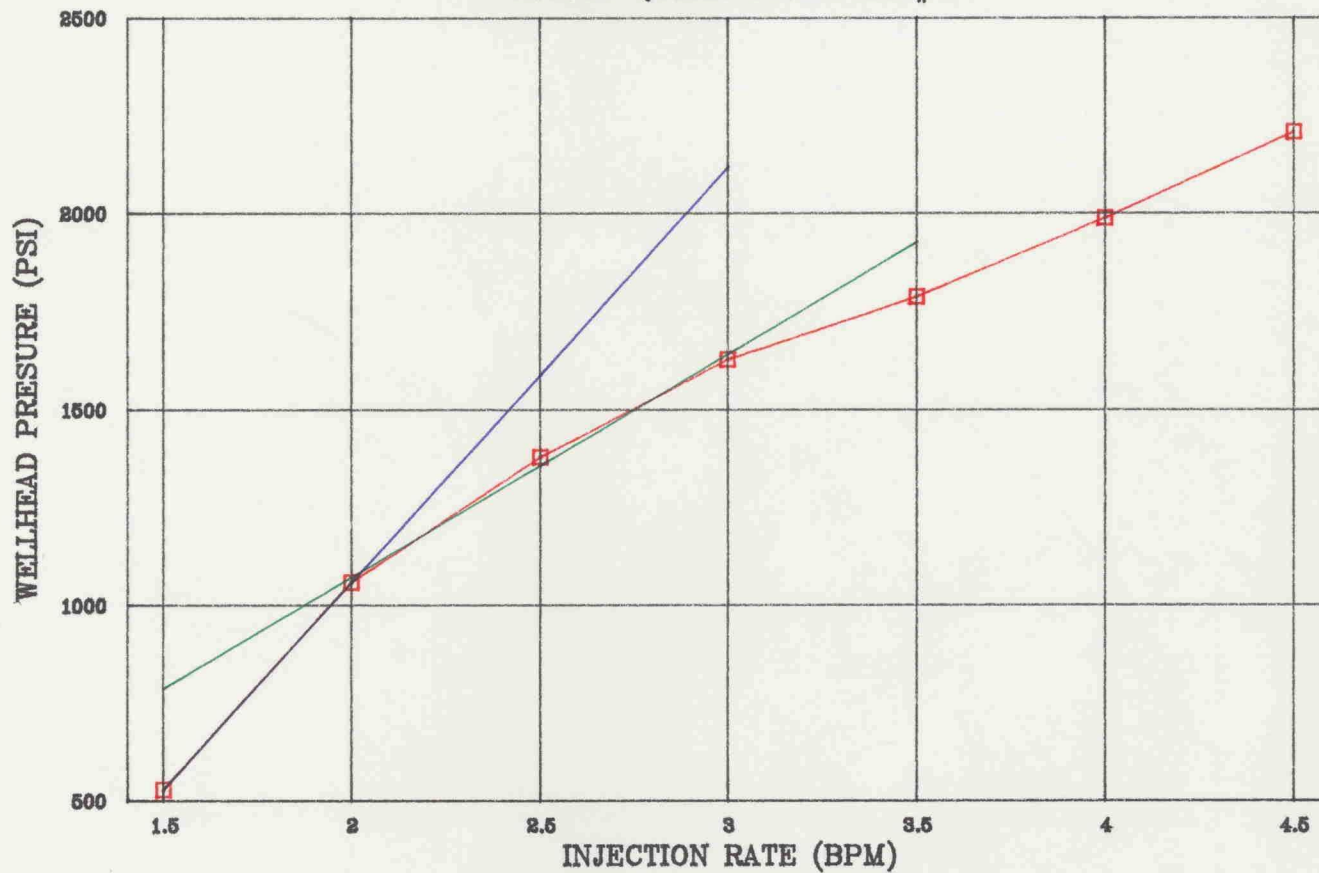
(This space for State Use)

APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_

CONDITIONS OF APPROVAL, IF ANY:

# STEP RATE INJECTION TEST

CACTUS QUEEN UNIT WELL #1

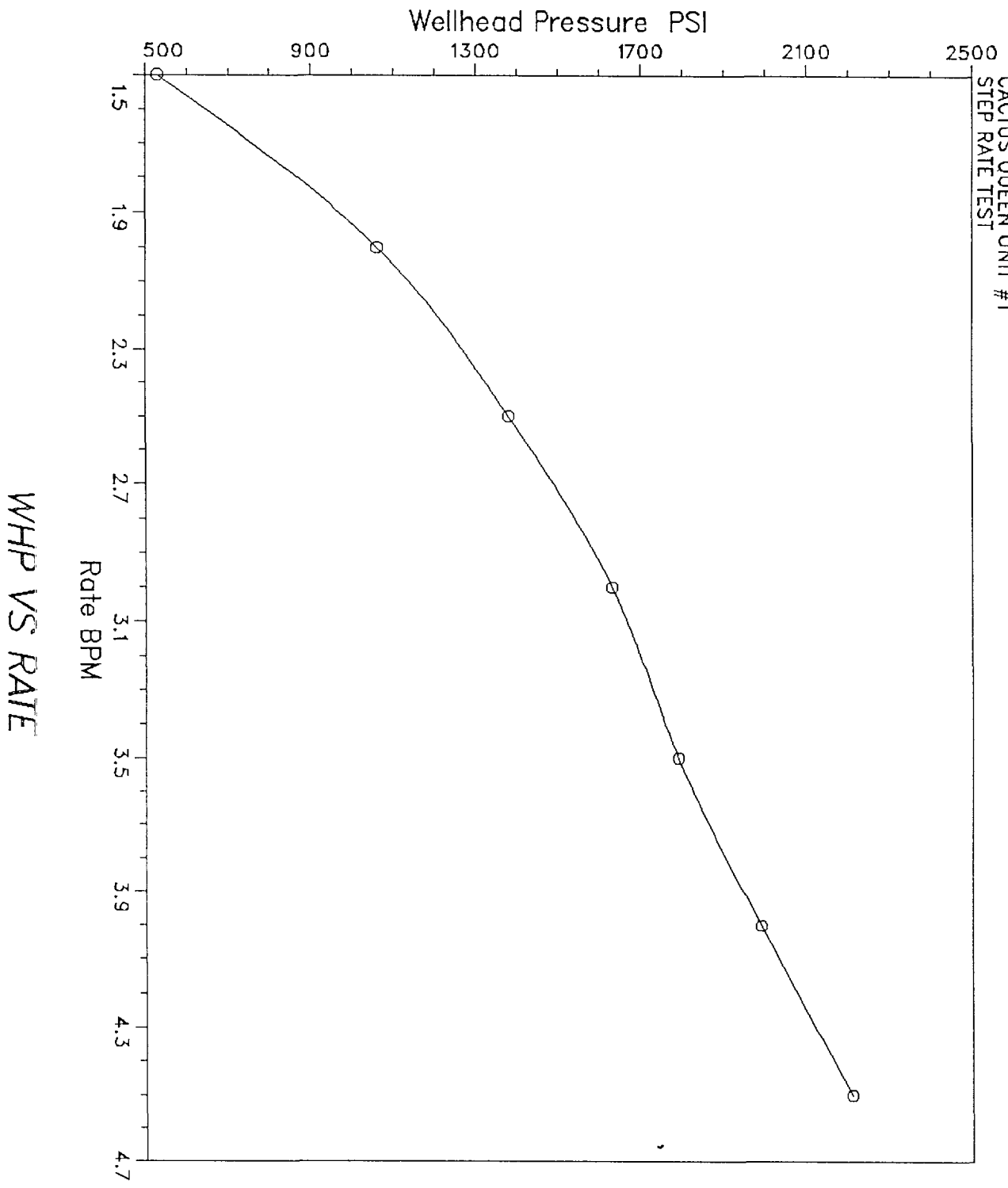


5-29-91

RECEIVED  
JUL 1 1991  
NO  
WELL HEAD

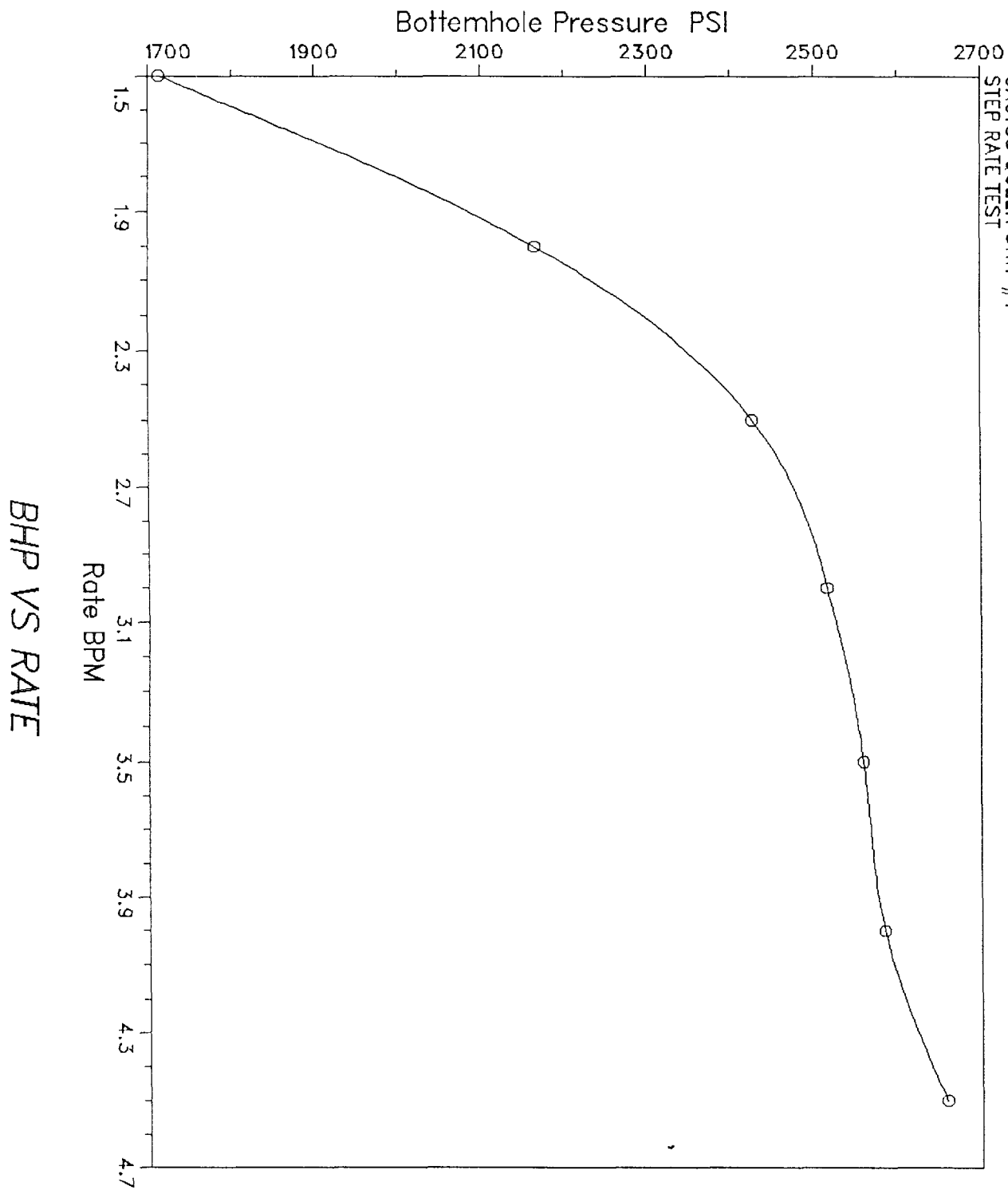
YATES DRILLING  
CACTUS QUEEN UNIT #1  
STEP RATE TEST

Halliburton Services



YATES DRILLING  
CACTUS QUEEN UNIT #1  
STEP RATE TEST

Halliburton Services





27 12 31

2998

SPEEDSET © MOORE BUSINESS FORMS, INC. - N

# HALLIBURTON SERVICES JOB LOG

WELL NO. 1 LEASE Cactus Queen Unit TICKET NO. 129 714  
 CUSTOMER VATES Drilling PAGE NO. 1  
 JOB TYPE 460 injection test DATE 5-29-91

FORM 1013 R-2

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
1	1331	3		1				load tubing with pressurizer
2	1340	1.5		1		60		start test
3	1345	1.5	28	1		200		5 min
4	1350	1.5	34.5	1		390		10 MIN
5	1355	1.5	42	1		530		15 MIN step up to 2 BBL/MIN
6	1400	2	50	1		790		5 MIN
7	1405	2	59	1		960		10 MIN
8	1410	2	68	1		1060		15 MIN step up to 2.5 BBL/MIN
9	1416	2.5	79	1		1240		5 MIN
10	1420	2.5	89	1		1280		10 MIN
11	1425	2.5	101	1		1380		15 MIN
12				1		1500		step up to 3 BBL/MIN
12	1430	3	113	1		1560		5 MIN
13	1435	3	127	1		1600		10 MIN
14	1440	3	142	1		1630		15 MIN
				1		1740		step up to 3.5 BBL/MIN
15	1445	3.5	156	1		1760		5 MIN
16	1450	3.5	173	1		1790		10 MIN
17	1455	3.5	185	1		1790		15 MIN
				1		1920		step up to 4 BBL/min
18	1500	4	202	1		1950		5 MIN
19	1505	4	222	1		1980		10 MIN
20	1510	4	239	1		1990		15 MIN
				1		2160		step up to 4.5 BBL/MIN
21	1515	4.5	259	1		2190		5 MIN
22	1520	4.5	279	1		2210		10 MIN
23	1525	4.5	300	1		2210		15 MIN
						1600		15 IP

STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION



BRUCE KING  
GOVERNOR

April 15, 1992



POST OFFICE BOX 2088  
STATE LAND OFFICE BUILDING  
SANTA FE, NEW MEXICO 87504  
(505) 827-5800

Yates Drilling Company  
105 South Fourth Street  
Artesia, New Mexico 88210

*RE: Injection Pressure Increase  
Doyle Fee Lease  
Waterflood Project  
Chaves County, New Mexico*

Dear Sir:

Reference is made to your request dated April 1, 1992, to increase the surface injection pressure on three wells within the Doyle Fee Lease Waterflood Project. This request is based on step rate tests conducted on these wells March 17-19, 1992. The results of the tests have been reviewed by my staff and we feel an increase in injection pressure on these wells is justified at this time.

You are therefore authorized to increase the surface injection pressure on the following wells:

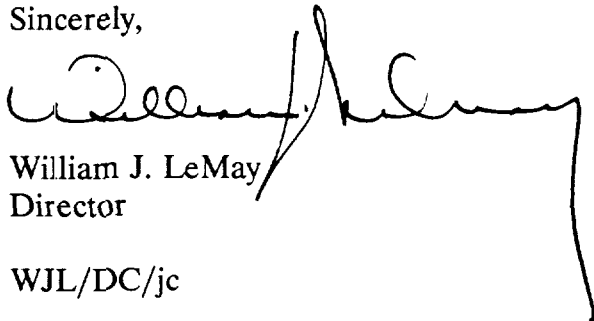
<u>WELL AND LOCATION</u>	<u>MAXIMUM INJECTION SURFACE PRESSURE</u>
Doyle No. 1 Unit A, Section 34, Township 12 South, Range 31 East, NMPM;	1480 PSIG
Doyle No. 3 Unit I, Section 27, Township 12 South, Range 31 East, NMPM;	1630 PSIG
Doyle No. 4 Unit M, Section 26, Township 12 South, Range 31 East, NMPM;	1750 PSIG
All in Chaves County, New Mexico	

Yates Drilling Company  
April 15, 1992  
Page 2

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The Division Director may rescind this injection pressure increase if it becomes apparent that the injected water is not being confined to the injection zone or is endangering any fresh water aquifers.

Sincerely,

A handwritten signature in black ink, appearing to read 'William J. LeMay', with a long horizontal flourish extending to the right.

William J. LeMay  
Director

WJL/DC/jc

cc: Oil Conservation Division - Hobbs  
File: Case No. 9810 ✓  
D. Catanach  
R. Brown

STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION



BRUCE KING  
GOVERNOR

April 16, 1992



POST OFFICE BOX 2088  
STATE LAND OFFICE BUILDING  
SANTA FE, NEW MEXICO 87504  
(505) 827-5800

Yates Drilling Company  
105 South Fourth Street  
Artesia, New Mexico 88210

*RE: Injection Pressure Increase  
Cactus Queen Unit  
Waterflood Project  
Chaves County, New Mexico*

Dear Sir:

Reference is made to your request dated April 1, 1992, to increase the surface injection pressure on three wells within the Cactus Queen Unit Waterflood Project. This request is based on step rate tests conducted on these wells March 18-20, 1992. The results of the tests have been reviewed by my staff and we feel an increase in injection pressure on these wells is justified at this time.

You are therefore authorized to increase the surface injection pressure on the following wells:

<u>WELL AND LOCATION</u>	<u>MAXIMUM INJECTION SURFACE PRESSURE</u>
Cactus Queen Unit No. 1 Unit K, Section 27, Township 12 South, 31 East, NMPM;	1610 PSIG
Cactus Queen Unit No. 4 Unit O, Section 27, Township 12 South, Range 31 East, NMPM;	1660 PSIG
Cactus Queen Unit No. 5 Unit C, Section 34, Township 12 South, Range 31 East, NMPM;	1700 PSIG


All in Chaves County, New Mexico

Yates Drilling Company  
April 16, 1992  
Page 2

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The Division Director may rescind this injection pressure increase if it becomes apparent that the injected water is not being confined to the injection zone or is endangering any fresh water aquifers.

Sincerely,

A handwritten signature in black ink, appearing to read 'William J. LeMay', with a long vertical line extending downwards from the end of the signature.

William J. LeMay  
Director

WJL/DC/jc

cc: Oil Conservation Division - Hobbs  
File: Case No. 9810 ✓  
D. Catanach  
R. Brown

CASE 9810 (Readvertised)

Application of Yates Drilling Company for Water Flood  
Projects, Chaves County, New Mexico.

Applicant, in the above-styled cause, seeks authority to  
institute a water flood project in the proposed Cactus Queen  
~~Unit~~ (Statutory) Unit Area (Division Case No 9809) ~~located~~  
underlying the SW $\frac{1}{4}$  SW $\frac{1}{4}$  of Section 26, ~~the~~ the NE $\frac{1}{4}$  SW $\frac{1}{4}$ , E $\frac{1}{2}$  SW $\frac{1}{4}$ ,  
and SE $\frac{1}{4}$  of Section 27, the N $\frac{1}{2}$  N $\frac{1}{2}$  and SE $\frac{1}{4}$  NE $\frac{1}{4}$  of Section 34, and  
the NW $\frac{1}{4}$  NW $\frac{1}{4}$  of Section 35, all in Township 12 South, Range  
31 East, by the injection of water into the Southeast Chaves  
Queen Gas Area Associated Pool through <sup>certain</sup> ~~3~~ wells ~~located~~  
within ~~the~~ <sup>said</sup> Unit Area. IN THE ALTERNATIVE, the applicant  
seeks to institute two water flood projects adjacent to one another  
in this same ~~general~~ general area; the first to be in the proposed  
Cactus Queen (Voluntary) Unit Area (Division Case No 9823)  
underlying the NE $\frac{1}{4}$  SW $\frac{1}{4}$ , E $\frac{1}{2}$  SW $\frac{1}{4}$ , and W $\frac{1}{2}$  SE $\frac{1}{4}$  of Section 27  
and the NW $\frac{1}{4}$  NE $\frac{1}{4}$  and N $\frac{1}{2}$  NW $\frac{1}{4}$  of Section 34, both in Township 12  
South, Range 31 East, by the injection of water into the  
Southeast Chaves Queen Gas Area Associated Pool through  
3 certain wells with said Unit Area; and, the second to be  
on the ~~Wade~~ "Doyle" Fire lease comprising the SW $\frac{1}{4}$  SW $\frac{1}{4}$  of  
Section 26, the E $\frac{1}{2}$  SE $\frac{1}{4}$  of Section 27, and the NE $\frac{1}{4}$  NE $\frac{1}{4}$  of  
Section 34, all in Township 12 South, Range 31 East, by the

injection of water into said Pool through 3 certain wells  
within ~~the~~ said lease. The aforementioned area is  
centered approximately 12 miles southeast by south of  
Caprock, New Mexico