

State of New Mexico
ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT
Santa Fe, New Mexico 87505
Oil Conservation Division



August 7, 1995

WFX-672
PDEV0020600672

Yates Petroleum Corporation
105 South 4th Street
Artesia, New Mexico 88210

Attn: Mr. Pinson McWhorter

**RE: Injection Pressure Increase Sanmal Queen Unit
Waterflood Project Lea County, New Mexico**

Dear Mr. McWhorter:

Reference is made to your request dated July 10, 1995 to increase the surface injection pressure on one well in the above referenced waterflood project. This request is based on a step rate test conducted on this well on July 5, 1995. The results of the test have been reviewed by my staff and we feel an increase in injection pressure on this well is justified at this time.

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

Well and Location	Maximum Injection Surface Pressure
Sanmal Queen Unit Well No.2, Unit Letter "L"	1750 PSIG
Located in Section 1 of Township 17 South, Range 33 East, Lea County, New Mexico.	

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,

William J. LeMay
Director

WJL/BES

VILLAGRA BUILDING - 408 Galisteo
Forestry and Resources Conservation Division
P.O. Box 1948 87504-1948
827-5830
Park and Recreation Division
P.O. Box 1147 87504-1147
827-7465

2040 South Pacheco
Office of the Secretary
827-5950
Administrative Services
827-5925
Energy Conservation & Management
827-5900
Mining and Minerals
827-5970
Oil Conservation
827-7131

Injection Pressure Increase
Yates Petroleum Corporation
August 7, 1995
Page 2

cc: Oil Conservation Division - Hobbs
File: WFX-672; PSI-X 3rd QTR 95

1st

MARTIN YATES, III
1912 - 1985
FRANK W. YATES
1936 - 1986



105 SOUTH FOURTH STREET
ARTESIA, NEW MEXICO 88210
TELEPHONE (505) 748-1471

OIL CONSERVATION DIVISION
RECEIVED

'95 JU 12 AM 8 52

PSIX N/R

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TREASURER

July 10, 1995

David Catanach
Oil Conservation Division
New Mexico Department of Energy,
Minerals and Natural Resources
2040 South Pacheco Street
Santa Fe, New Mexico 87505

Dear Mr. Catanach:

I have enclosed a copy of the step rate injection test conducted on the Sanmal Queen Unit #2 in Lea County, New Mexico (see attached).

This well was to be converted to injection status as per OCD Administrative Order No. WFX-672. During the process of converting this well we conducted a step rate injection test and found the formation parting pressure to be 1820 psig (corrected wellhead pressure). This is our latest data and we are requesting an increase in the surface operating pressure limitation to reflect the results of the test. We request a limiting pressure of 1750 psig.

Please note that in June, 1995 we had requested an approval to increase the limiting pressure to 950 psi but that was before the step rate test.

Thank you for your consideration in this matter.

Sincerely,

Pinson McWhorter
Reservoir Engineering Supervisor

PMW/cvg

Attachment

WEST-TEST, INC.

A SUBSIDIARY OF JOHN WEST ENGINEERING COMPANY

Hobbs, New Mexico

STEP RATE INJECTION TEST

CLIENT: YATES PETROLEUM CORPORATION

DATE: JULY 5, 1995

WELL NAME: SANDMAN QUEEN UNIT NO. 2
LEA COUNTY, NEW MEXICO

WO#: 95-14-1050

PERFS = 3752-3764

PACKER DEPTH = 3724

BHP GAUGE DEPTH = 3758

SURFACE READINGS ONLY

STEP NO. & REMARKS	TIME	(1) SURFACE TUBING PRESS. (psig)	(2) CUMMULATIVE VOL INJECTED (bbls)	(3) INJECTION RATE (bbls/day)	(4) FRICTION HEAD LOSS (psi)	(5) CORRECTED TUBING PRESS. (psi) (1)-(4)	(6) INJECTION RATE (gpm) (3)/34.2857	(7) MEASURED BHP (psi)
	9:55	20.1				20.1		
	10:00	403.2	1.4	403.2	6.040	397.2	11.76	
	10:05	583.9	2.6	345.6	4.541	579.4	10.08	
1	10:10	694.8	3.8	345.6	4.541	690.3	10.08	
				364.8				
	10:15	975.0	5.7	547.2	10.626	964.4	15.96	
	10:20	1124.7	7.6	547.2	10.626	1114.1	15.96	
2	10:25	1247.1	9.5	547.2	10.626	1236.5	15.96	
				547.2				
	10:30	1415.6	12.1	748.8	18.984	1396.6	21.84	
	10:35	1495.6	14.6	720.0	17.655	1477.9	21.00	
3	10:40	1554.2	17.2	748.8	18.984	1535.2	21.84	
				739.2				
	10:45	1679.1	20.5	950.4	29.507	1649.6	27.72	
	10:50	1707.8	23.8	950.4	29.507	1678.3	27.72	
4	10:55	1734.0	27.1	950.4	29.507	1704.5	27.72	
				950.4				
	11:00	1773.9	31.1	1152.0	42.120	1731.8	33.60	
	11:05	1798.9	35.1	1152.0	42.120	1756.8	33.60	
5	11:10	1853.8	39.2	1180.8	44.089	1809.7	34.44	
				1161.6				
	11:15	1908.7	44.2	1440.0	63.646	1845.1	42.00	
	11:20	1936.1	49.5	1526.4	70.891	1865.2	44.52	
6	11:25	1944.8	54.8	1526.4	70.891	1873.9	44.52	
				1497.6				
	11:30	2001.0	61.4	1900.8	106.374	1894.6	55.44	
	11:35	2014.7	67.9	1872.0	103.411	1911.3	54.60	
7	11:40	2026.0	74.5	1900.8	106.374	1919.6	55.44	
				1891.2				

STEP NO. & REMARKS	TIME	(1) SURFACE TUBING PRESS. (psig)	(2) CUMMULATIVE VOL. INJECTED (bbls)	(3) INJECTION RATE (bbls/day)	(4) FRICTION HEAD LOSS (psi)	(5) CORRECTED TUBING PRESS. (psi) (1)-(4)	(6) INJECTION RATE (gpm) (3)/34.2857	(7) MEASURED BHP (psi)
8 FALLOFF	11:45	2067.2	82.5	2304.0	151.843	1915.4	67.20	
	11:50	2062.2	90.5	2304.0	151.843	1910.4	67.20	
	11:55	2087.2	98.6	2332.8	155.373	1931.8	68.04	
				2313.6				
	11:56	1882.4				1882.4		
	11:57	1798.8				1798.8		
	11:58	1708.9				1708.9		
	11:59	1614.1				1614.1		
	12:00	1516.7				1516.7		
	12:05	1037.6				1037.6		
12:10	652.0				652.0			

