SWD-516
PPEV0020900516

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

BRUCE KING
GOVERNOR

ANITA LOCKWOOD
CABINET SECRETARY

December 17, 1993

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

Pogo Producing Company
P.O. Box 10340
Midland, TX 79702-7340

Attention: Mr. Barrett L. Smith

RE:Injection Pressure Increase, Cal-Mon Well No. 5 SWD; Eddy County, New Mexico

Dear Mr. Smith:

Reference is made to your request dated October 21, 1993 to increase the surface injection pressure on the above referenced well. This request is based on a step rate test conducted on this well on October 12, 1993. 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
Cal-Mon Well No. 5 SWD 1980' FNL - 1980' FEL Unit G, Section 35, Township 23 South, Range 31 East	998 PSIG
This well located in Eddy 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/amg

cc: Oil Conservation Division - Artesia
File: SWD-516
PSI-X ~~4th~~ Quarter md

NO PERIOD

CC **POGO PRODUCING COMPANY**

AI **P.O. Box 10340**

CI , ZIP: **Midland, Texas 79702-7340**

ATTENTION: **Mr. Barrett L. Smith**

RE: Injection Pressure Increase
Cal-Mon Well No.5 SWD
Sec.35-T23S-R31E
Eddy County, New Mexico

Dear Sir:

Reference is made to your request dated **October 21, 1993,** to increase the surface injection pressure on **the above referenced well.** This request is based on a step rate test conducted on this well **October 12, 1993.** The results of the tests 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 wells:

Well & Location	Maximum Injection Surface Pressure
Cal-Mon Well No.5 SWD 1980' FNL & 1980' FEL Unit Letter "G", Section 35-T23S-R31E Eddy County, New Mexico	**998** psig

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/

xc: FILE - **SWD-516; 4th Quarter PSI-X** OCD - **Artesia**

POGO PRODUCING COMPANY

TELECOPIER COVER LETTER

Please deliver the following page(s) to:

NAME: ~~May Molzant~~ David E.

FROM: Barbara Smith

Total number of pages (including cover letter) 5

DATE: 12/8/93

IF YOU DO NOT RECEIVE ALL THE PAGES, PLEASE CALL _____:
AT (915)682-6822

JOHNSON ENGINEERING COMPANY

Hobbs, New Mexico

STEP RATE INJECTION TEST

RECEIVED

OCT 18 1993

MIDLAND

CLIENT: POGO PRODUCING CO.

DATE: OCTOBER 12, 1993

WELL NAME: CALMON NO. 5 SWD
EDDY COUNTY, NEW MEXICO

WO#: 93-14-1970

MID-PERFS.: 4981-5148

PACKER DEPTH: 4845

BHP GAUGE D.: 5040

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)
	10:05	26.3				26.3		2610
	10:10	419.0	1.2	345.6	3.784	415.2	10.08	3012
	10:15	470.9	2.4	345.6	3.784	467.1	10.08	3066
1	10:20	501.3	3.7	374.4	4.388	496.9	10.92	3088
				355.2				
	10:25	550.7	5.7	576.0	9.736	541.0	16.80	3119
	10:30	564.7	7.7	576.0	9.736	555.0	16.80	3133
2	10:35	558.4	9.7	576.0	9.736	548.7	16.80	3142
				576.0				
	10:40	611.5	13.0	950.4	24.588	586.9	27.72	3159
	10:45	609.1	16.4	979.2	25.984	583.1	28.56	3167
3	10:50	631.9	19.8	979.2	25.984	605.9	28.56	3175
				969.6				
	10:55	724.2	24.9	1468.8	55.014	669.2	42.84	3205
	11:00	725.5	30.0	1468.8	55.014	670.5	42.84	3213
4	11:05	735.7	35.2	1497.6	57.026	678.7	43.68	3219
				1478.4				
	11:10	845.5	42.0	1958.4	93.672	751.8	57.12	3244
	11:15	846.8	48.8	1958.4	93.672	753.1	57.12	3258
5	11:20	865.8	55.7	1987.2	96.236	769.6	57.96	3267
				1968.0				
	11:50	946.8	28.8	2448.0	141.544	805.3	71.40	3305
	11:55	957.0	37.3	2448.0	141.544	815.5	71.40	3312
6	12:00	959.5	45.8	2448.0	141.544	818.0	71.40	3317
				2448.0				
	12:05	1061.9	56.1	2966.4	201.937	860.0	86.52	3328
	12:10	1059.4	66.3	2937.6	198.325	861.1	85.68	3335
7	12:15	1051.8	76.5	2937.6	198.325	853.5	85.68	3341
				2947.2				

POGO PRODUCING COMPANY

October 21, 1993

New Mexico Oil Conservation Division
P. O. Box 1980
Hobbs, New Mexico 88241

Re: Cal-Mon No. 5 SWD
Step-Rate Test

Gentlemen:

Pogo Producing Company respectfully requests an increase in the maximum allowable surface injection pressure from the current 897 PSI to 1081 PSI.

This is based on a step-rate test performed on October 12, 1993 by John West Engineering. A copy of the test results are attached.

If you have any questions, please contact me at (915) 682-6822.

Very truly yours,

POGO PRODUCING COMPANY

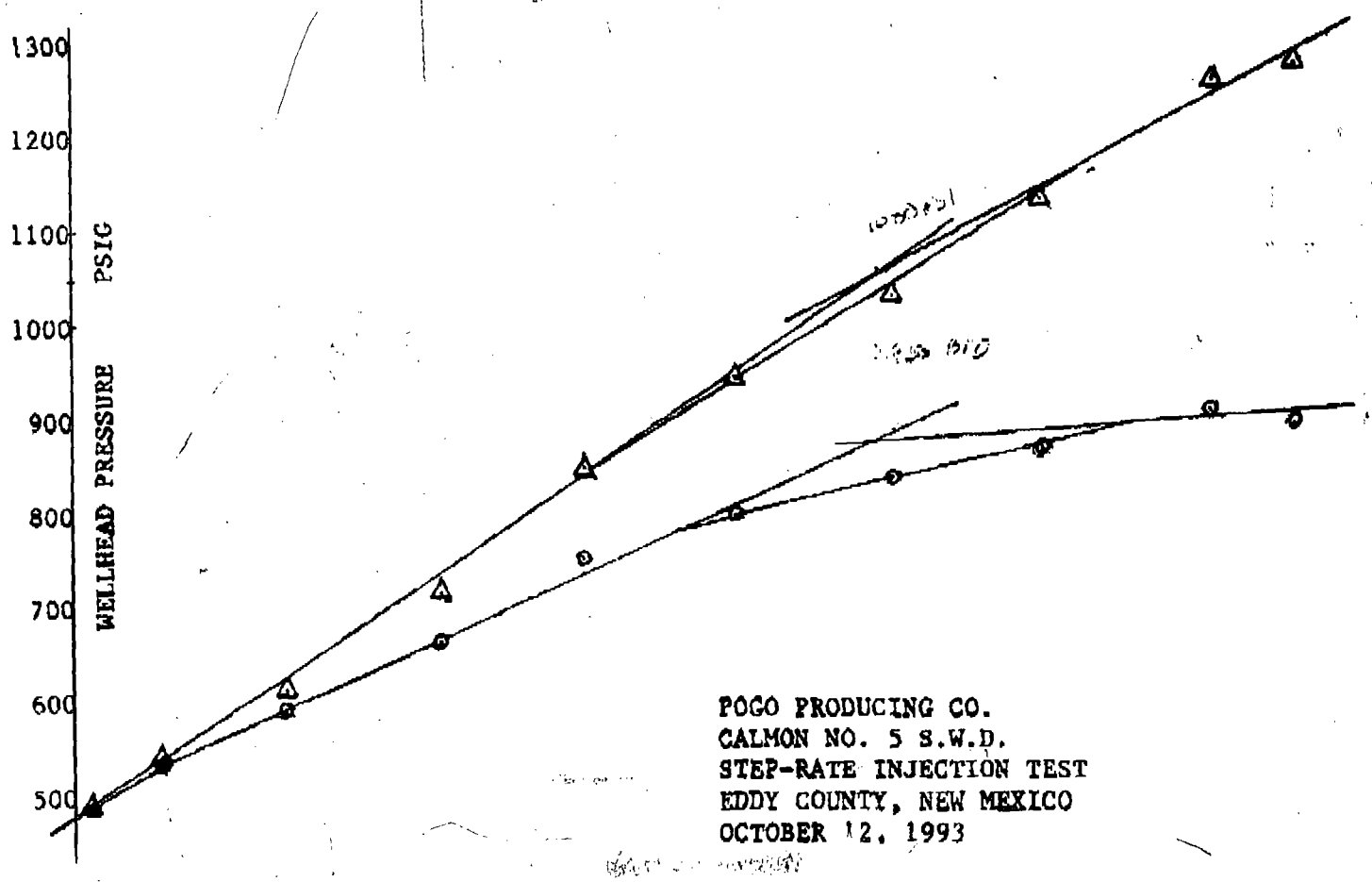
Barrett L. Smith
Senior Operations Engineer

BLS:lf\c:[illegible]

Attachment

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)
	12:20	1145.5	88.5	3456.0	267.887	877.6	100.80	3355
	12:25	1153.1	100.4	3427.2	263.772	889.3	99.96	3359
8	12:30	1154.4	112.4	3456.0	267.887	886.5	100.80	3361
				3446.4				
	12:35	1284.8	126.3	4003.2	351.596	933.2	116.76	3365
	12:40	1279.7	140.3	4032.0	356.289	923.4	117.60	3361
9	12:45	1279.8	154.2	4003.2	351.596	928.2	116.76	3356
				4012.8				
	12:50	1305.1	169.3	4348.8	409.801	895.3	126.84	3354
	12:55	1308.9	184.0	4233.6	389.945	919.0	123.48	3355
10	1:00	1296.3	198.6	4204.8	385.052	911.2	122.64	3355
				4262.4				
FALLOFF	1:01	705.1				705.1		3331
	1:02	713.9				713.9		3316
	1:03	700.1				700.1		3304
	1:04	695.0				695.0		3293
	1:05	683.7				683.7		3283
FIVE MIN	1:10	644.6				644.6		3243
FIVE MIN	1:15	615.6				615.6		3210

△ RECORDED WELLHEAD PRESSURE
○ CORRECTED WELLHEAD PRESSURE BASED ON 2-3/8" TUBING
□ BOTTOM HOLE PRESSURE @ 5040 FEET



POGO PRODUCING CO.
CALMON NO. 5 S.W.D.
STEP-RATE INJECTION TEST
EDDY COUNTY, NEW MEXICO
OCTOBER 12, 1993