



STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION



BRUCE KING
GOVERNOR

ANITA LOCKWOOD
CABINET SECRETARY

June 26, 1992

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

Texaco Exploration & Production, Inc.
P.O. Box 730
Hobbs, New Mexico 88241-0730

Attention: M.C. Duncan

*RE: Injection Pressure Increase
Central Vacuum Unit
Well No. 101
Lea County, New Mexico*

Dear Sir:

Reference is made to your request dated May 15, 1992, to increase the surface injection pressure on the Central Vacuum Unit Well No. 101. This request is based on a step rate test conducted on the well on April 6, 1992. The results of the test have been reviewed by my staff and we feel an increase in injection pressure on the 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

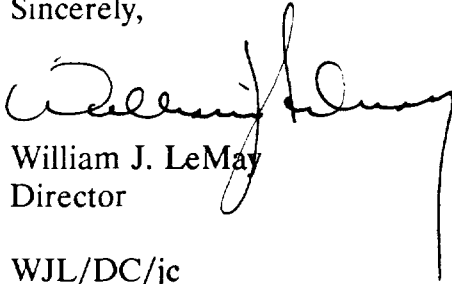
CVU Well No. 101
Unit G, Section 6, T-18 South,
R-35 East, NMPM
Lea County, New Mexico

2200 PSIG

Texaco Exploration & Production, Inc.
June 26, 1992
Page 2

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 dark ink, appearing to read 'William J. LeMay', with a long, sweeping horizontal stroke extending to the right.

William J. LeMay
Director

WJL/DC/jc

cc: Oil Conservation Division - Hobbs
File: Case No. 6008 ✓
David Catanach
Rick Brown

STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION



BRUCE KING
GOVERNOR

March 4, 1992



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

Texaco Exploration & Production, Inc.
P.O. Box 730
Hobbs, New Mexico 88240

Attention: M.C. Duncan

*RE: Injection Pressure Increase
Central Vacuum Unit
Pressure Maintenance Project
Lea County, New Mexico*

Dear Mr. Duncan:

Reference is made to your request dated February 25, 1992, to increase the surface injection pressure on the Central Vacuum Unit Well No. 16. This request is based on a step rate test conducted on the well on February 17, 1992. The results of the test have been reviewed by my staff and we feel an increase in injection pressure on the 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

CVU Well No. 16
Unit G, Section 30, T-17S, R-35E, NMPM

1620 PSIG

Lea County, New Mexico

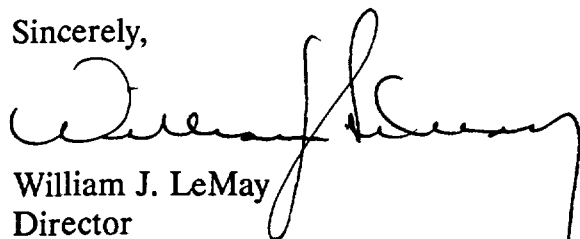
Texaco Exploration & Production Inc.

March 4, 1992

Page 2

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 dark ink, appearing to read 'William J. LeMay', is written over the printed name and title. The signature is fluid and cursive, with a long horizontal stroke extending to the right.

William J. LeMay
Director

WJL/DC/jc

cc: Oil Conservation Division - Hobbs
File: Case No. 6008
D. Catanach
R. Brown

NO WAITING PERIOD

COMPANY: Texaco Exploration & Production Inc.
ADDRESS: P.O. Box 730
CITY, STATE, ZIP: Hobbs New Mexico 88240
ATTENTION: M.C. Duncan

Re: Injection Pressure Increase
Central Vacuum Unit
Placid Mountain Project
Lea County, New Mexico

Dear Sir:

Reference is made to your request dated February 25, 1992, to increase the surface injection pressure on the Central Vacuum Unit Well No. 16. This request is based on a step rate test conducted on the well on February 17, 1992. The results of the test have been reviewed by my staff and we feel an increase in injection pressure on the well is justified at this time.

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

<u>Well & Location</u>	<u>Maximum Injection Surface Pressure</u>
<u>Civil Well No. 16</u>	<u>16.26 MPa</u>
<u>Unit G, Section 30, T-18N, R-35E, W-04E</u>	
<u>Lea 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: R. Brown
T. GALLEGOS
D. CATANACH
FILE- Case No. 6008
OCD- Hobbs



Texaco USA

OIL CONSERVATION DIVISION
RECEIVED

'92 FEB 28 PM 9 27

February 25, 1992

New Mexico Oil Conservation Division
P.O. Box 2088
Santa Fe N.M. 87504

Attn: Mr. David Catanach
Engineer, New Mexico Oil Conservation Division

Re: PRESSURE INCREASE ON INJECTION WELL
Central Vacuum Unit #16
Unit Letter G, Section 30
T-17-S, R-35-E
Lea County, New Mexico

Dear David:

Texaco Exploration and Production Inc. requests an increase on the maximum allowable pressure on the above well from 1150 psig to 1630 psig. A step rate injection test was ran on the well. Results of the test are attached.

If you have any questions concerning this request, please contact me at 397-0418 or 393-7191. The engineer assigned to this well is Darlene de Aragao. Her number is 397-0424. Thank you for your assistance in this matter.

Yours very truly,

M.C. Duncan
Engineer's Assistant

/mcd
Chrono
Attachments
cc: Jerry Sexton/NMOCD/Hobbs

- △ RECORDED WELLHEAD PRESSURE
- CORRECTED WELLHEAD PRESSURE BASED ON 2 3/8" TUBING
- BOTTOM HOLE PRESSURE @ 4475 FEET

WELLHEAD PRESSURE PSIG

2000
1900
1800
1700
1600
1500
1400
1300
1200
1100
1000
900

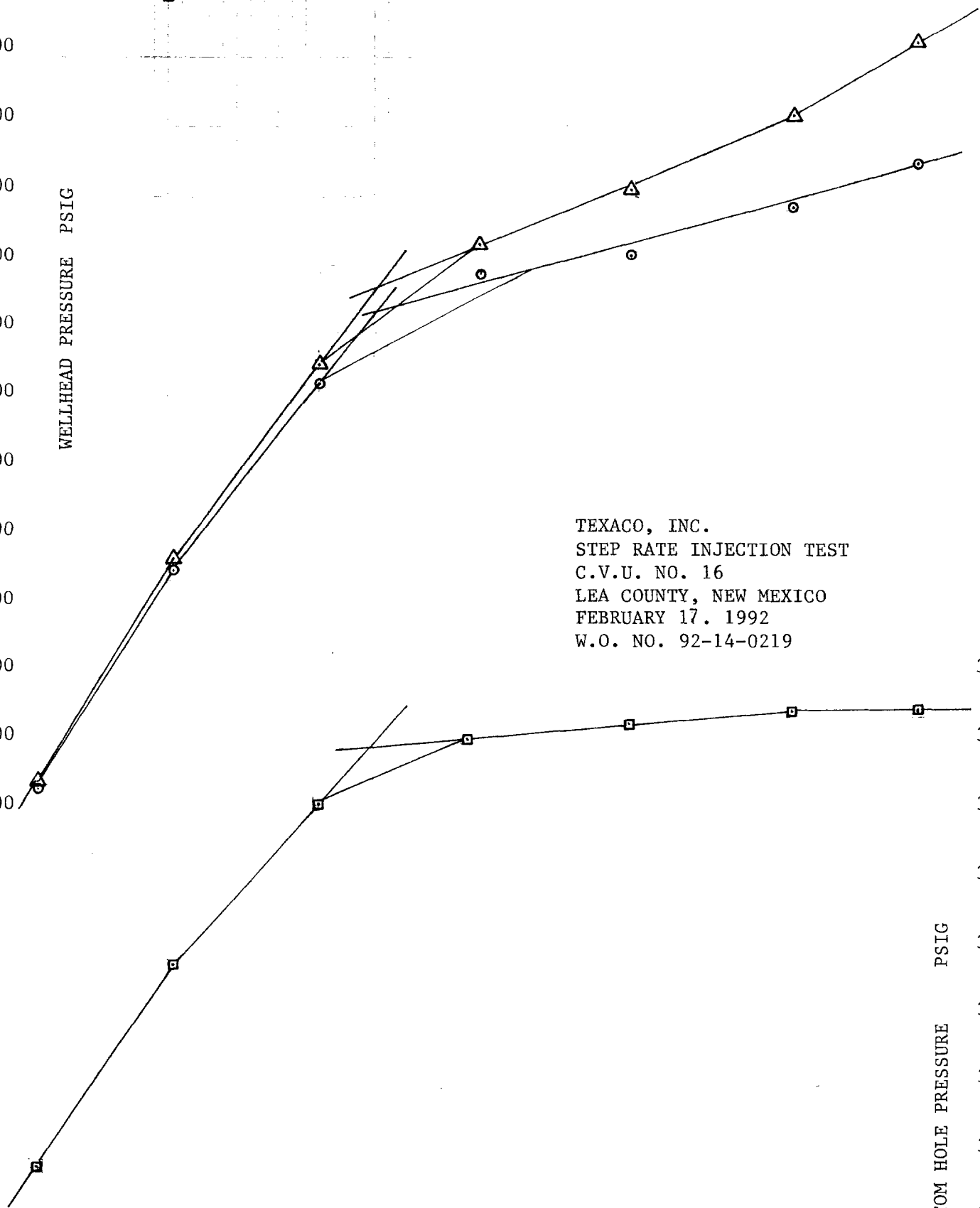
TEXACO, INC.
STEP RATE INJECTION TEST
C.V.U. NO. 16
LEA COUNTY, NEW MEXICO
FEBRUARY 17, 1992
W.O. NO. 92-14-0219

BOTTOM HOLE PRESSURE PSIG

3700
3600
3500
3400
3300
3200
3100
3000
2900

B W P D

300 600 900 1200 1500 1800 2100 2400



JOHN WEST ENGINEERING CO.
Step Rate Injection Test

Well Name C.V.U. # 16
 CO. Name Texaco, Inc.
Lea County, New Mexico

Date 2-17-92
 W.O. No. 92-14-0219
 Page 1 of 2

Remarks	Time	Tbg. Press.	Rate BPD	Total	BHP	Tbg. Press.	Rate GPM	HEAD LOSS
				4481 Maximum Depth Reached				
				Set @ 4475 Feet				
	1:45	708.9		0	2748			
	1:50	840.3	316.8	1.1	2900			
	1:55	892	316.8	2.2	2937			
1	2:00	941.2	316.8	3.3	2980	936.6	9.24	4.604
			316.8					
	2:05	1133.4	604.80	5.4	3134			
	2:10	1213.1	604.80	7.5	3216			
2	2:15	1271.2	633.60	9.7	3279	1255.5	17.92	15.677
			614.40					
	2:20	1476.2	950.40	13.0	3426			
	2:25	1525.6	921.60	16.2	3479			
3	2:30	1554.7	921.60	19.4	3514	1520.9	27.16	33.835
			931.20					
	2:35	1716.8	1267.20	23.8	3595			
	2:40	1716.8	1238.40	28.1	3603			
4	2:45	1727.0	1267.20	32.5	3607	1688.0	36.68	58.992
			1257.60					
	2:50	1848.5	1555.2	37.9	3643			
	2:55	1829.5	1641.60	43.6	3638			
5	3:00	1811.7	1641.60	49.3	3630	1718.2	47.04	93.468
			1612.80					
	3:05	1931.8	1958.40	56.1	3658			
	3:10	1930.5	1958.4	62.9	3655			
6	3:15	1917.8	1987.2	69.8	3648	1782.7	57.40	135.078
			1968.0					
	3:20	2029.2	2275.2	77.7	3672			
	3:25	2021.7	2217.6	85.4	3658			
7	3:30	2020.3	2246.4	93.2	3651	1847.8	65.52	172.540
			2246.4					
Fall-off	3:31	1429.2			3488			
	3:32	1405.2			3462			
	3:33	1388.7			3445			
	3:34	1374.8			3432			
	3:35	1364.6			3420			

Step Rate Injection Test

Well Name C.V.U. # 16.CO. Name Texaco, Inc.

Lea County, New Mexico

Date 2-17-92

W.O. No. 92-14-0219

Page 2 of 2

[illegible]

STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION



BRUCE KING
GOVERNOR



March 4, 1992

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

Texaco Exploration & Production Inc.
P.O. Box 730
Hobbs, New Mexico 88240

Attention: M.C. Duncan

*RE: Injection Pressure Increase
Central Vacuum Unit
Pressure Maintenance Project
Lea County, New Mexico*

Dear Mr. Duncan:

Reference is made to your request dated February 4, 1991, to increase the surface injection pressure on 3 wells within the Central Vacuum Unit Pressure Maintenance Project. This request is based on step rate tests conducted on these wells January 28-30, 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.

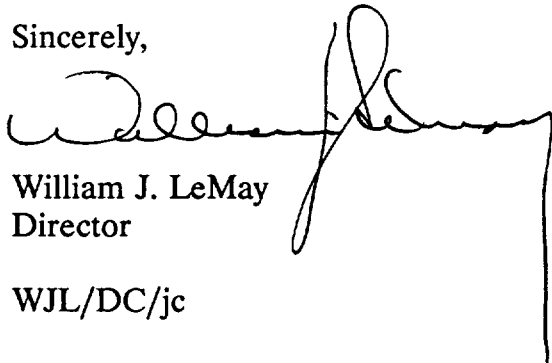
You are therefore authorized to increase the surface injection pressure on the following wells.

<u>WELL AND LOCATION</u>	<u>MAXIMUM INJECTION SURFACE PRESSURE</u>
CVU Well No. 13 Unit H, Section 25, T-17S, R-34E, NMPM	1590 PSIG
CVU Well No. 113 Unit L, Section 6, T-18S, R-35E, NMPM	1290 PSIG
CVU Well No. 135 Unit L, Section 6, T-18S, R-35E, NMPM	1120 PSIG
All in Lea County, New Mexico	

Texaco Exploration & Production, Inc.
March 4, 1992
Page 2

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 and a vertical line dropping down from the end.

William J. LeMay
Director

WJL/DC/jc

cc: Oil Conservation Division - Hobbs
File: Case No. 6008 ✓
D. Catanach
R. Brown

NO WAITING PERIOD

COMPANY: Texas Exploration & Production Inc.
ADDRESS: P.O. Box 730
CITY, STATE, ZIP: Albino, New Mexico 88210
ATTENTION: M.C. Duncan

Re: Injection Pressure Increase

Central Union Unit
Water Maintenance Project
Albino County, New Mexico

Dear Sir:

Reference is made to your request dated February 4, 1992, to increase the surface injection pressure on 3 wells located in the Central Union Unit Water Maintenance Project. This request is based on step rate tests conducted on these wells January 28-30, 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 & Location</u>	<u>Maximum Injection Surface Pressure</u>
<u>Well No. 13</u> <u>Unit A, Section 25, T-17S, R-34E, 1000000</u>	<u>1590 PSIG</u>
<u>Well No. 113</u> <u>Unit A, Section 6, T-18S, R-35E, 1000000</u>	<u>1290 PSIG</u>
<u>Well No. 135</u> <u>Unit A, Section 6, T-18S, R-35E, 1000000</u>	<u>1120 PSIG</u>
<u>Wells in Albino 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-~~GALLEGO~~ D. CATANACH FILE-Central Union OCD-Allen
R. Brown



Texaco Inc.

RECEIVED
AT
DIVISION
FEB 12 1992

February 4, 1992

New Mexico Oil Conservation Division
P.O. Box 2088
Santa Fe N.M. 87504

Attn: Mr. David Catanach
Engineer, New Mexico Oil Conservation Division

Re: PRESSURE INCREASE ON INJECTION WELL
Central Vacuum Unit #13
Unit H, Section 25
T-17-S, R-34-E
Lea County, New Mexico

Dear David:

Texaco Exploration and Production Inc. requests an increase on the maximum allowable pressure on the above well from 894 psig to 1820 psig. A step rate injection test was ran on the well. Results of the test are attached.

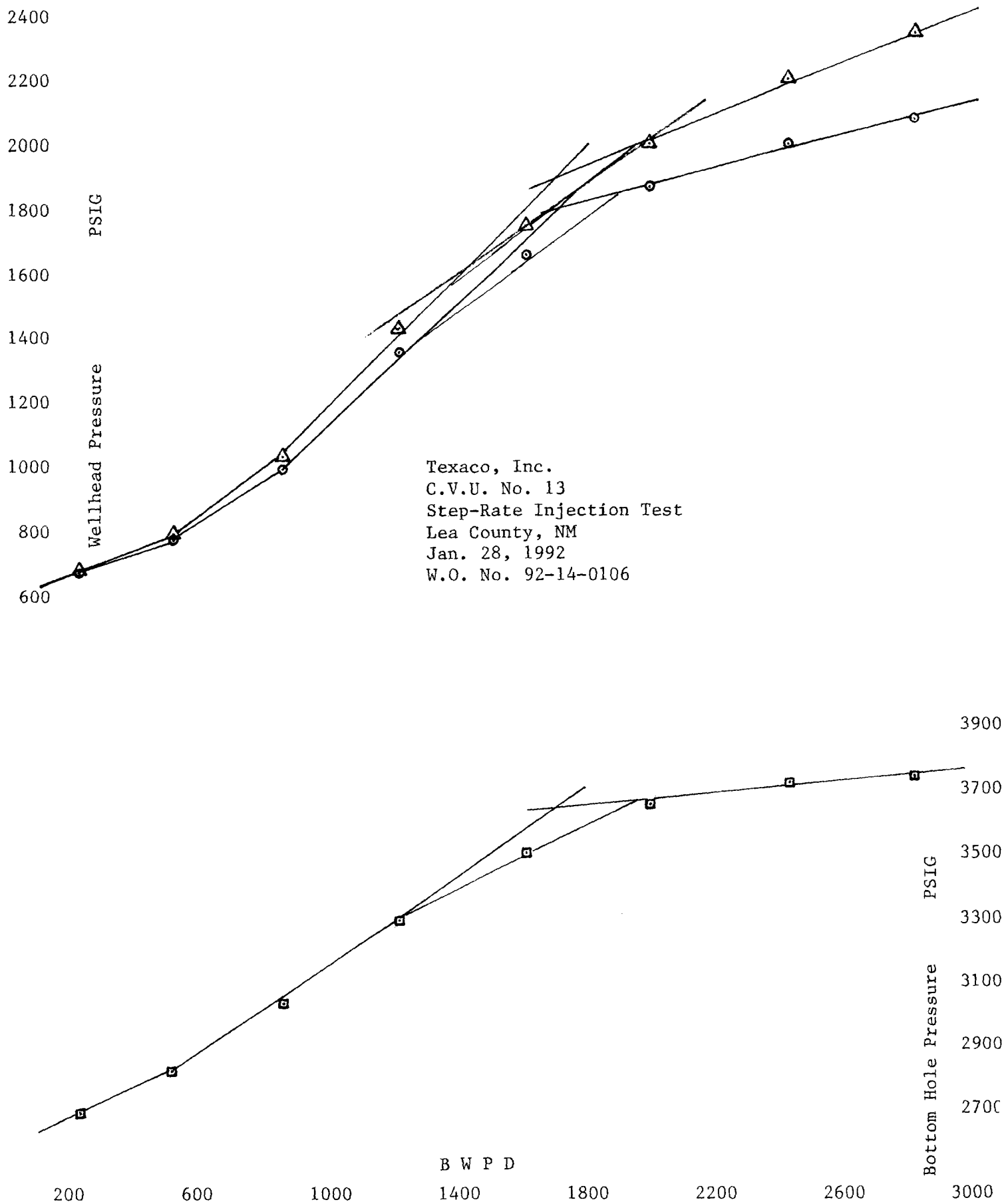
If you have any questions concerning this request, please contact me at 397-0418 or 393-7191. The engineer assigned to this well is Darlene de Aragao. Her number is 397-0424. Thank you for your assistance in this matter.

Yours very truly,

M.C. Duncan
Engineer's Assistant

/mcd
Chrono
Attachments
cc: Jerry Sexton/NMOCD/Hobbs

- △ Recorded Wellhead Pressure
- Corrected Wellhead Pressure Based on 2 3/8" Tubing
- Bottom Hole Pressure @ 4,400 Feet



JOHN WEST ENGINEERING CO.
Step Rate Injection Test

Well Name C.V.U. No. 13
CO. Name Texaco
Lea Co. NM

Date Jan. 28, 1992
W.O. No. 92-14-0106
Page 1 of 2

Remarks	Time	Tbg. Press.	Rate BPD	Total	BHP	Tbg. Press.	Rate GPM	HEAD LOSS
				Mid Perfs 4578 MFR 4416		Tubing 4371		
				Set @ 4400				
	9:05	653.50		0	2622			
	9:10	697.80	259.2	.9	2671			
	9:15	697.80	230.4	1.7	2689			
1	9:20	704.10	259.2	2.6	2703	701.2	7.28	2.912
			249.6					
	9:25	806.50	547.20	4.5	2801			
	9:30	815.30	547.20	6.4	2833			
2	9:35	815.40	547.20	8.3	2844	802.9	15.96	12.442
			547.20					
	9:40	983.50	864.00	11.3	2985			
	9:45	998.70	892.80	14.4	3034			
3	9:50	1050.60	892.80	17.5	3059	1020.4	25.76	30.165
			883.2					
	9:55	1325.4	1238.40	21.8	3225			
	10:00	1400.10	1267.20	26.2	3284			
4	10:05	1448.2	1238.40	30.5	3320	1391.0	36.40	57.187
			1248.00					
	10:10	1692.50	1670.40	36.30	3464			
	10:15	1731.80	1641.60	42.00	3502			
5	10:20	1777.30	1612.80	47.60	3536	1682.3	47.88	94.960
			1641.60					
	10:25	1996.30	2044.80	54.70	3635			
	10:30	2015.40	2016.00	61.70	3657			
6	10:35	2032.00	2044.80	68.80	3673	1890.7	59.36	141.326
			2035.20					
	10:40	2224.50	2448.00	77.30	3737			
	10:45	2237.10	2476.80	85.90	3743			
7	10:50	2237.20	2476.80	94.50	3742	2035.4	71.96	201.779
			2467.20					
	10:55	2400.60	2851.20	104.40	3782			
	11:00	2395.60	2888.00	114.40	3773			
8	11:05	2378.0	2851.20	124.30	3763	2112.7	83.44	265.338
			2860.80					

Step Rate Infection Test

Well Name C.V.U. No. 13

CO. Name Texaco
Lea County, NM

Date Jan. 28, 1992

W.O. No. 92-14-0106

Page 2 of 2

[illegible]



Texaco USA

PO Box 111
Hobbs NM 88401
505 393 7111

February 4, 1992

New Mexico Oil Conservation Division
P.O. Box 2088
Santa Fe N.M. 87504

Attn: Mr. David Catanach
Engineer, New Mexico Oil Conservation Division

Re: PRESSURE INCREASE ON INJECTION WELL
Central Vacuum Unit #113
Unit L, Section 6
T-18-S, R-35-E
Lea County, New Mexico

Dear David:

Texaco Exploration and Production Inc. requests an increase on the maximum allowable pressure on the above well from 1000 psig to 1310 psig. A step rate injection test was ran on the well. Results of the test are attached.

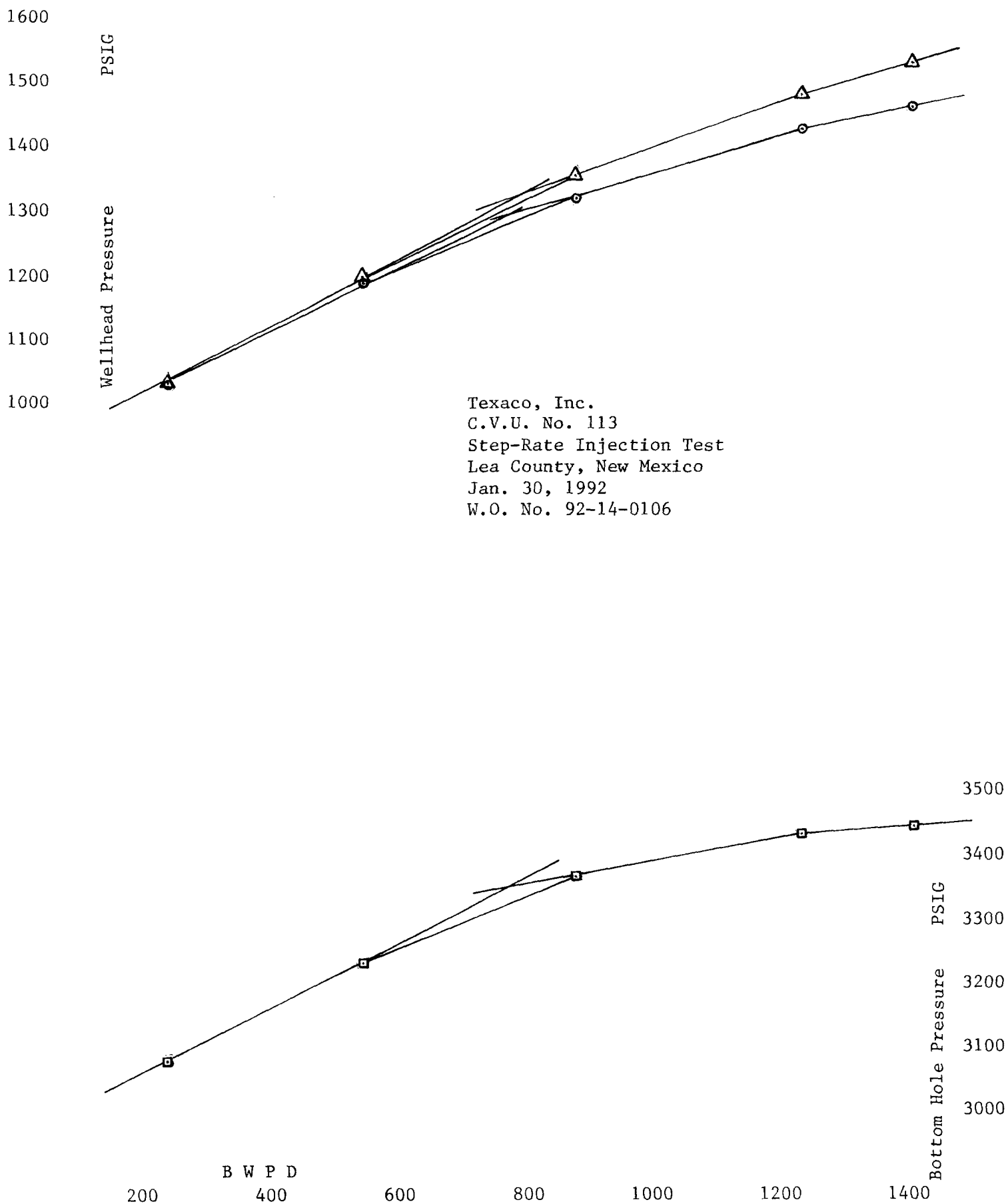
If you have any questions concerning this request, please contact me at 397-0418 or 393-7191. The engineer assigned to this well is Darlene de Aragao. Her number is 397-0424. Thank you for your assistance in this matter.

Yours very truly,

M.C. Duncan
Engineer's Assistant

/mcd
Chrono
Attachments
cc: Jerry Sexton/NMOCD/Hobbs

- △ Recorded Wellhead Pressure
- Corrected Wellhead Pressure Based on 2 3/8" Tubing
- Bottom Hole Pressure @ 4504 Feet



JOHN WEST ENGINEERING CO.
Step Rate Injection Test

Well Name C.V.U. 113
CO. Name Texaco, Inc.
Lea County, NM

Date Jan. 30, 1992
W.O. No. 92-14-0106
Page 1 of 2

Remarks	Time	Tbg. Press.	Rate BPD	Total	BHP	Tbg. Press.	Rate GPM	HEAD LOSS
				Perfs-4504 Tubing	4250			
				Set @ 4504				
	9:20	923.4		0	2961			
	9:25	989.30	259.2	.9	3029			
	9:30	1022.2	259.2	1.8	3064			
1	9:35	1045.1	230.2	2.6	3088	1042.1	7.28	2.981
			249.60					
	9:40	1140.1	576.00	4.6	3168			
	9:45	1185.7	547.20	6.5	3213			
2	9:50	1215.0	547.20	8.4	3243	1201.9	16.24	13.152
			556.80					
	9:55	1316.20	892.80	11.5	3317			
	10:00	1355.50	892.80	14.6	3355			
3	10:05	1367.00	864.00	17.6	3380	1336.1	25.76	30.878
			883.20					
	10:10	1463.3	1267.2	22.0	3424			
	10:15	1454.6	1238.4	26.3	3437			
4	10:20	1497.9	1209.6	30.5	3444	1440.2	36.12	57.708
			1238.4					
	10:25	1528.5	1353.6	35.2	3455			
	10:30	1603.3	1497.6	40.4	3458			
5	10:35	1546.5	1382.4	45.2	3458	1473.1	41.16	73.482
			1411.20					
Fall-off	10:36	1355.4			3445			
	10:37	1373.1			3431			
	10:38	1363.0			3422			
	10:39	1355.5			3413			
	10:40	1347.9			3405			
	10:41	1341.6			3399			
	10:42	1336.5			3393			
	10:43	1330.2			3386			
	10:44	1325.2			3381			
	10:45	1320.1			3376			
	10:46	1316.3			3370			
	10:47	1311.30			3367			

Step Rate Injection Test

Well Name C.V.U. 113CO. Name Texaco, Inc.

Lea County, NM

Date Jan. 30, 1992

W.O. No. 92-14-0106

Page 2 of 2

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Texaco U.S.A.

February 4, 1992

New Mexico Oil Conservation Division
P.O. Box 2088
Santa Fe N.M. 87504

Attn: Mr. David Catanach
Engineer, New Mexico Oil Conservation Division

Re: PRESSURE INCREASE ON INJECTION WELL
Central Vacuum Unit #135
Unit L, Section 6
T-18-S, R-35-E
Lea County, New Mexico

Dear David:

Texaco Exploration and Production Inc. requests an increase on the maximum allowable pressure on the above well from 1000 psig to 1120 psig. A step rate injection test was ran on the well. Results of the test are attached.

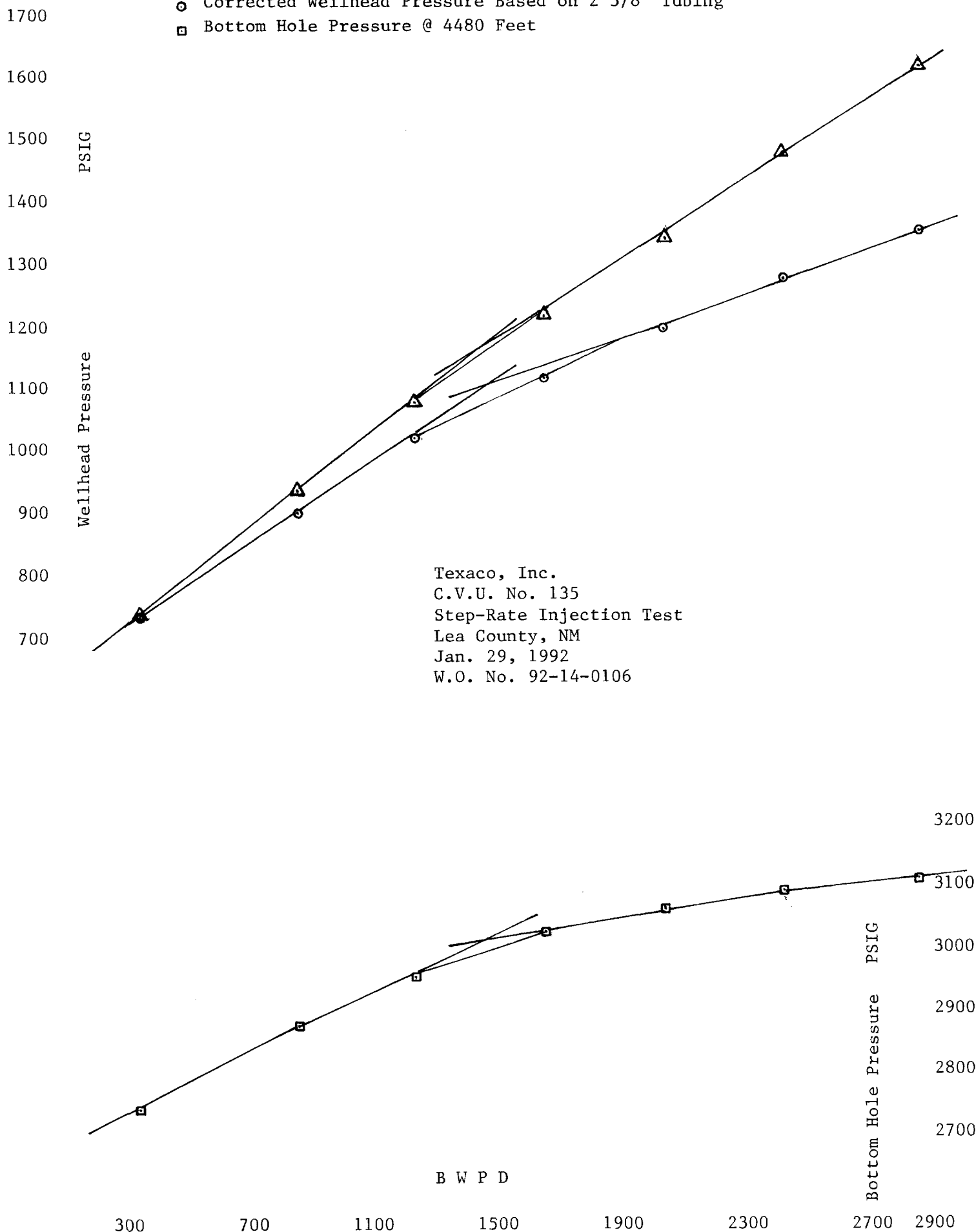
If you have any questions concerning this request, please contact me at 397-0418 or 393-7191. The engineer assigned to this well is Darlene de Aragao. Her number is 397-0424. Thank you for your assistance in this matter.

Yours very truly,

M.C. Duncan
Engineer's Assistant

/mcd
Chrono
Attachments
cc: Jerry Sexton/NMOCD/Hobbs

- △ Recorded Wellhead Pressure
- Corrected Wellhead Pressure Based on 2 3/8" Tubing
- Bottom Hole Pressure @ 4480 Feet



JOHN WEST ENGINEERING CO.
Step Rate Injection Test

Well Name C.V.U. No. 135
CO. Name Texaco, Inc.
Lea County, NM

Date 1-29-92
W.O. No. 92-14-0106
Page 1 of 2

Remarks	Time	Tbg. Press.	Rate BPD	Total	BHP	Tbg. Press.	Rate GPM	HEAD LOSS
				Mid Perfs 4518	MDR 4494	Tubing	4295	
				Set @ 4480				
	9:30	630.5		0	2643			
	9:35	716.5	374.40	1.3	2711			
	9:40	727.9	374.40	2.6	2735			
1	9:45	748.10	374.40	3.9	2753	741.8	10.92	6.278
			374.40					
	9:50	885.90	864.00	6.9	2836			
	9:55	910.00	892.80	10.0	2866			
2	10:00	945.40	864.00	13.0	2887	915.3	25.48	30.099
			873.60					
	10:05	1061.80	1238.40	17.3	2945			
	10:10	1075.7	1267.20	21.7	2959			
3	10:15	1092.20	1238.40	26.0	2970	1033.9	36.40	58.226
			1248.00					
	10:20	1203.60	1670.40	31.8	3020			
	10:25	1218.80	1641.60	37.5	3032			
4	10:30	1230.30	1670.40	43.3	3041	1131.5	48.44	98.789
			1660.80					
	10:35	1336.60	2044.80	50.4	3069			
	10:40	1349.40	2073.60	57.6	3075			
5	10:45	1358.30	2044.80	64.7	3080	1211.9	59.92	146.147
			2054.40					
	10:50	1467.10	2419.20	73.10	3098.00			
	10:55	1483.60	2419.20	81.5	3100.00			
6	11:00	1490.00	2448.00	90.0	3110.00	1290.4	70.84	199.571
			2428.80					
	11:05	1633.00	2851.20	99.9	3127			
	11:10	1634.30	2880.00	109.9	3128			
7	11:15	1634.30	2880.00	119.9	3130	1362.5	83.72	271.842
			2870.4					
Fall-off	11:16	1035.6			3061			
	11:17	1019.20			3047			
	11:18	1007.80			3037			
	11:19	1000.20			3029			

Step Rate Injection Test

Well Name C.V.U. No. 135
CO. Name Texaco, Inc.
Lea County, NM

Date 1-29-92
W.O. No. 92-14-0106
Page 2 of 2

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OIL CONSERVATION DIVISION
RECEIVED

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
HOBBS DISTRICT OFFICE

February 12, 1992

BRUCE KING
GOVERNOR

POST OFFICE BOX 1980
HOBBS, NEW MEXICO 88240
(505) 393-6161

OIL CONSERVATION DIVISION
P.O. BOX 2088
SANTA FE, NEW MEXICO 87504-2088

RE: APPLICATION FOR PRESSURE LIMIT INCREASE FOR DISPOSAL & INJECTION WELLS

Gentlemen:

I have examined the step rate test for the:

<u>Texaco Exploration & Production Inc. Central Vac Unit #113-L</u>	<u>6-18-35</u>
Operator	Lease & Well No. Unit S-T-R

and my recommendations are as follows:

DK

Very truly yours

Jerry Sexton
Supervisor, District I

/bp



OIL CONSERVATION DIVISION
RECEIVED
FEB 14 1992
ENERGY

STATE OF NEW MEXICO
AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
HOBBS DISTRICT OFFICE
February 12, 1992

BRUCE KING
GOVERNOR

POST OFFICE BOX 1980
HOBBS, NEW MEXICO 88240
(505) 393-6161

OIL CONSERVATION DIVISION
P.O. BOX 2088
SANTA FE, NEW MEXICO 87504-2088

RE: APPLICATION FOR PRESSURE LIMIT INCREASE FOR DISPOSAL & INJECTION WELLS

Gentlemen:

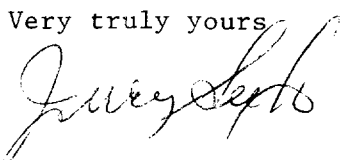
I have examined the step rate test for the:

Texaco Exploration & Production Inc. Central Vacuum Unit #135-L	6-18-35
Operator	Lease & Well No. Unit S-T-R

and my recommendations are as follows:

OK

Very truly yours,


Jerry Sexton
Supervisor, District I

/bp

STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION



BRUCE KING
GOVERNOR



November 22, 1991

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

Texaco USA
P.O. Box 730
Hobbs, New Mexico 88240

Attention: M.C. Duncan

*RE: Injection Pressure Increase
Central Vacuum Unit
Well No. 107
Lea County, New Mexico*

Dear Mr. Duncan:

Reference is made to your request dated November 13, 1991, to increase the surface injection pressure on the Central Vacuum Unit Well No. 107. This request is based on a step rate test conducted on the well on October 14, 1991. The results of the test have been reviewed by my staff and we feel an increase in injection pressure on the 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

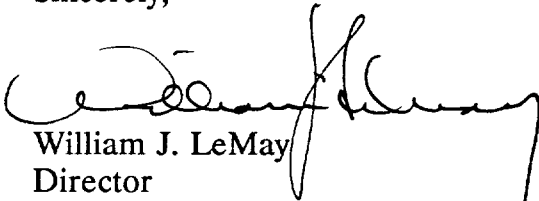
Central Vacuum Unit No. 107
Unit G, Section 6, T-18 South, R-35 East, NMPM
Lea County, New Mexico

1620 PSIG

Texaco USA
November 21, 1991
Page 2, 1991

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/DC/jc

cc: Oil Conservation Division - Hobbs
File: Case No. 6008 ✓
D. Catanach
R. Brown

NO WAITING PERIOD

COMPANY: Texas USA
ADDRESS: P.O. Box 730
CITY, STATE, ZIP: Hobbs, New Mexico 88240
ATTENTION: M.C. Duncan

Re: Injection Pressure Increase
Central Vacuum Unit
Well No- 107
Lea County, New Mexico

Dear Sir:

Reference is made to your request dated November 13, 1991, to increase the surface injection pressure on the Central Vacuum Unit Well No 107. This request is based on a step rate test conducted on the well on October 14, 1991. The results of the test have been reviewed by my staff and we feel an increase in injection pressure on the well is justified at this time.

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

<u>Well & Location</u>	<u>Maximum Injection Surface Pressure</u>
<u>Central Vacuum Unit No. 107</u>	<u>1620 PSI</u>
<u>Unit 6, Sector 6, T48 South, R-35 East, Unmon</u>	
<u>Lea 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.

R. Brown
xc: T. GALLEGOS
D. CATANACH
FILE- Case 6008
OCD- Hobbs



Texaco USA

PO 56
Hobbs
5/15/91

OIL CONSERVATION DIVISION
RI 440

1991 NOV 14 09 07

November 13, 1991

New Mexico Oil Conservation Division
P.O. Box 2088
Santa Fe N.M. 87504

Attn: Mr. David Catanach
Engineer, New Mexico Oil Conservation Division

Re: PRESSURE INCREASE ON INJECTION WELL
Central Vacuum Unit #107
Unit G, Section 6
T-18-S, R-35-#
Lea County, New Mexico

Dear David:

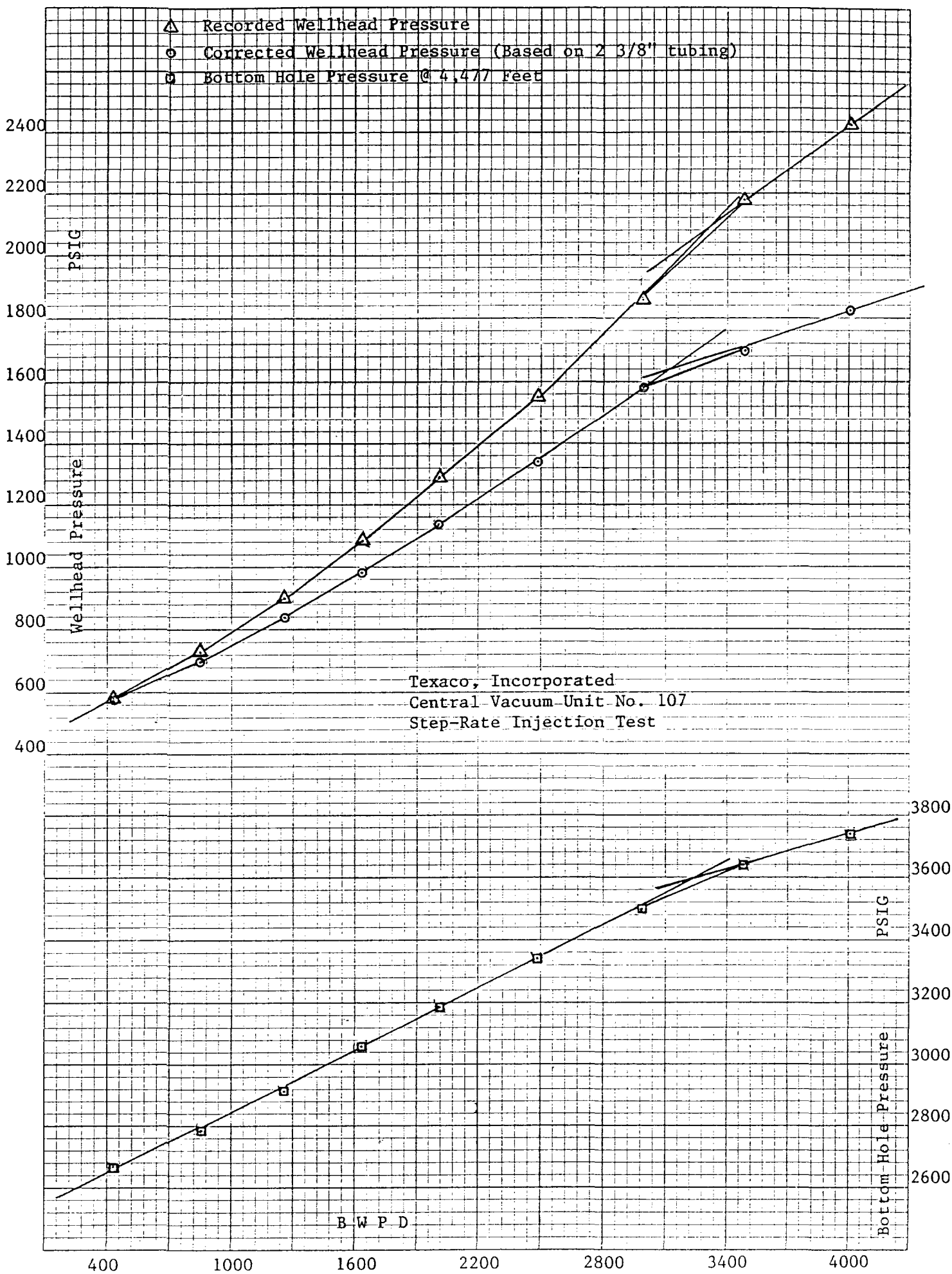
Texaco Exploration and Production Inc. requests an increase on the maximum allowable pressure on the above well from 866 psig to 1620 psig. A step rate injection test was ran on the well. Results of the test are attached.

If you have any questions concerning this request, please contact me at 397-0418 or 393-7191. The engineer assigned to this well is Darlene de Aragao. Her number is 397-0424. Thank you for your assistance in this matter.

Yours very truly,

M.C. Duncan
Engineer's Assistant

/mcd
Chrono
Attachments
cc: Jerry Sexton/NMOCD/Hobbs



JOHN WEST ENGINEERING CO.
Step Rate Injection Test

Well Name Central Vacuum Unit No. 107

Date 10-14-91

CO. Name Texaco, Incorporated

Perfs. 4244-4710

Set @ 4,477 Feet

Page 1

Remarks	Time	Tbg. Press.	Rate B PD	Total	B H P	Tbg. Press.	Rate GPM	HEAD LOSS
	9:45	491.50		0	2588			
	9:50	571.80	432.00	1.5	2635			
	9:55	591.00	432.00	3.0	2657			
1	10:00	580.40	432.00	4.5	2671	572.2	12.60	8.175
			432.00					
	10:05	681.20	864.00	7.5	2727			
	10:10	708.00	864.00	10.5	2757			
2	10:15	725.60	864.00	13.5	2782	696.1	25.20	29.470
			864.00					
	10:20	825.10	1238.40	17.8	2844			
	10:25	862.00	1238.40	22.10	2884			
3	10:30	896.30	1238.40	26.40	2917	838.9	36.12	57.362
			1238.40					
	10:35	1018.00	1641.60	32.10	2983			
	10:40	1051.00	1641.60	37.80	3022			
4	10:45	1081.40	1612.80	43.40	3056	985.8	47.60	95.578
			1631.99					
	10:50	1213.10	2016.00	50.40	3117.0			
	10:55	1258.00	2016.00	57.40	3158.00			
5	11:00	1285.90	2016.00	64.40	3192.00	1144.6	58.80	141.299
			2016.00					
	11:05	1484	2505.60	73.10	3263			
	11:10	1520	2476.80	81.70	3307			
6	11:15	1557.00	2505.60	90.40	3343	1347.2	72.80	209.766
			2496.00					
	11:20	1781.30	2937.60	100.60	3414			
	11:25	1822.50	2995.20	111.00	3460			
7	11:30	1873.60	3024.00	121.50	3499	1581.4	87.08	292.173
			2985.60					
	11:35	2106.5	3484.80	133.60	3566			
	11:40	2146.0	3484.80	145.70	3607			
8	11:45	2181.60	3484.80	157.80	3640	1702.7	101.64	388.921
			3484.80					
	11:50	2390.3	4003.20	171.70	3693.30			
	11:55	2421	4032.00	185.70	3721.00			
9	12:00	2433.50	3974.40	199.50	3742.00	1930.8	116.76	502.673
			4003.20					

Step Rate Injection Test

Well Name Central Vacuum Unit No. 107

Date 10-14-91

CO. Name Texaco Incorporated

Page 2

[illegible]

10-24-91

To: David Cutanuck

From: Evelyn

Did not know if Teresa
sent this info up to you or
not.

Oil Conservation Division
PO Box 1980, Hobbs, New Mexico 88241-1980

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

DIVISION

WELL API NO.

30-025-25820

5. Indicate Type of Lease

STATE ☒ XX

FEE ☐

6. State Oil & Gas Lease No.

B-1306

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

2. Name of Operator

Texaco Exploration and Production Inc.

8. Well No.

107

3. Address of Operator

P.O. Box 730 Hobbs, New Mexico 88240

9. Pool name or Wildcat

Vacuum Grayburg San Andres

4. Well Location

Unit Letter G : 2450 Feet From The North Line and 2632 Feet From The East Line

Section 6 Township 18S Range 35E NMPM Lea County

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

3978' GR

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 for maximum allowable
pressure increase ☒ XX

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.

Texaco Exploration and Production Inc. requests an increase in the maximum allowable pressure on the above well from 866 psig to 1620 psig. A step rate injection test was ran on the well. Results of the test are attached.

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

SIGNATURE M.C. Duncan TITLE Engineer's Assistant DATE 10-22-91

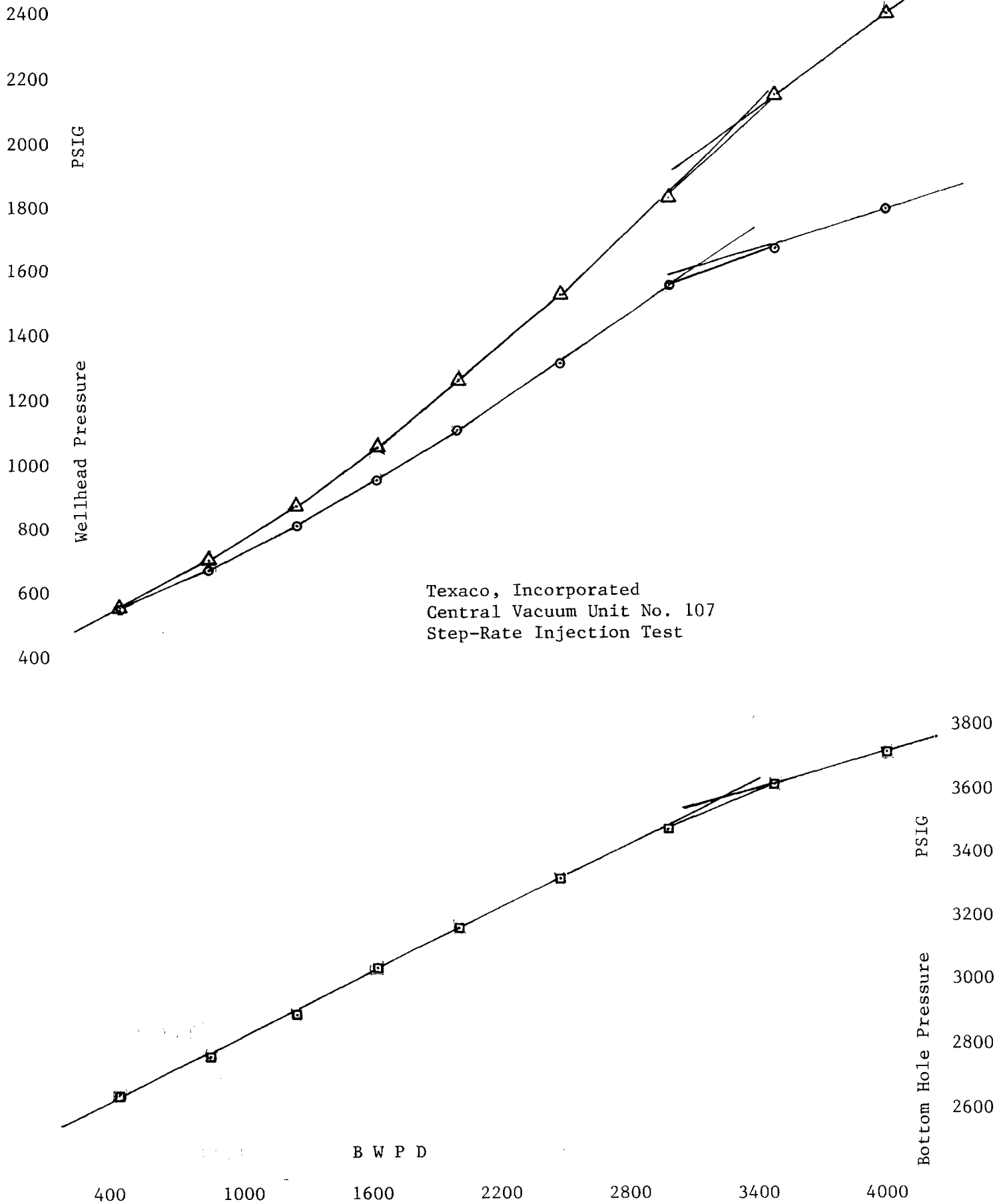
TYPE OR PRINT NAME M.C. Duncan TELEPHONE NO. 393-7191

(This space for State Use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

- △ Recorded Wellhead Pressure
- Corrected Wellhead Pressure (Based on 2 3/8" tubing)
- Bottom Hole Pressure @ 4,477 Feet



JOHN WEST ENGINEERING CO.
Step Rate Injection Test

Well Name Central Vacuum Unit No. 107

Date 10-14-91

CO. Name Texaco, Incorporated

Perfs. 4244-4710

Set @ 4,477 Feet

Page 1

Remarks	Time	Tbg. Press.	Rate B P D	Total	B H P	Tbg. Press.	Rate G P M	HEAD LOSS
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	9:50	571.80	432.00	1.5	2635			
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	10:10	708.00	864.00	10.5	2757			
2	10:15	725.60	864.00	13.5	2782	696.1	25.20	29.470
			864.00					
	10:20	825.10	1238.40	17.8	2844			
	10:25	862.00	1238.40	22.10	2884			
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			1238.40					
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4	10:45	1081.40	1612.80	43.40	3056	985.8	47.60	95.578
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	10:55	1258.00	2016.00	57.40	3158.00			
5	11:00	1285.90	2016.00	64.40	3192.00	1144.6	58.80	141.299
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	11:10	1520	2476.80	81.70	3307			
6	11:15	1557.00	2505.60	90.40	3343	1347.2	72.80	209.766
			2496.00					
	11:20	1781.30	2937.60	100.60	3414			
	11:25	1822.50	2995.20	111.00	3460			
7	11:30	1873.60	3024.00	121.50	3499	1581.4	87.08	292.173
			2985.60					
	11:35	2106.5	3484.80	133.60	3566			
	11:40	2146.0	3484.80	145.70	3607			
8	11:45	2181.60	3484.80	157.80	3640	1702.7	101.64	388.921
			3484.80					
	11:50	2390.3	4003.20	171.70	3693.30			
	11:55	2421	4032.00	185.70	3721.00			
9	12:00	2433.50	3974.40	199.50	3742.00	1930.8	116.76	502.673
			4003.20					

JOHN WEST ENGINEERING CO.
Step Rate Injection Test

Well Name Central Vacuum Unit No. 107
CO. Name Texaco Incorporated

Date 10-14-91

Page 2

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STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
HOBBS DISTRICT OFFICE
November 15, 1991

OIL CONSERVATION DIVISION
RECEIVED
'91 NOV 18 AM 10 21

BRUCE KING
GOVERNOR

POST OFFICE BOX 1980
HOBBS, NEW MEXICO 88240
(505) 393-6161

OIL CONSERVATION DIVISION
P.O. BOX 2088
SANTA FE, NEW MEXICO 87504-2088

RE: APPLICATION FOR PRESSURE LIMIT INCREASE FOR DISPOSAL & INJECTION WELLS

Gentlemen:

I have examined the step rate test for the:

Texaco Expl. & Prod Inc.	Central Vacuum Unit	#107-G	6-18-35
Operator	Lease & Well No.	Unit	S-T-R

and my recommendations are as follows:

OK

Very truly yours

Jerry Sexton
Supervisor, District I

/bp

STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

GARREY CARRUTHERS
GOVERNOR

POST OFFICE BOX 2086
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87504
(505) 827-5800

January 24, 1989

Texaco Producing, Inc.
P.O. Box 728
Hobbs, NM 88240

Attention: J. A. Schaffer

RE: Injection Pressure Increase
Central Vacuum Unit
Vacuum Grayburg/San Andres Pool
Lea County, New Mexico

Dear Mr. Schaffer:

Reference is made to your request dated January 6, 1989, to increase the surface injection pressure on seven injection wells within the Central Vacuum Unit Waterflood Project. This request is based on step rate tests conducted on these wells during December 15-22, 1988. 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 wells shown on Exhibit "A" attached to this order.

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,


for William J. LeMay
Director

cc: OCD - Hobbs
Tim Gallegos
D. Catanach
File: Case Files 6008, 6256
PMX-121

EXHIBIT "A"

<u>WELL & LOCATION</u>	<u>MAXIMUM SURFACE INJECTION PRESSURE</u>
CVU Well No. 57 Unit B, Section 36, T-17S, R-34E	1197 PSIG
CVU Well No. 71 Unit G, Section 36, T-17S, R-34E	940 PSIG
CVU Well No. 135 Unit L, Section 6, T-18S, R-35E	1000 PSIG
CVU Well No. 156 Unit K, Section 25, T-17S, R-34E	1175 PSIG
CVU Well No. 157 Unit M, Section 25, T-17S, R-34E	1425 PSIG
CVU Well No. 160 Unit E, Section 36, T-17S, R-34E	1530 PSIG
CVU Well No. 161 Unit M, Section 36, T-17S, R-34E	1429 PSIG



STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

GARREY CARRUTHERS
GOVERNOR

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

October 11, 1988

Texaco, Inc.
West Star Route Box 423
Lovington, NM 88260

Attention: A. Gernandt

RE: Amended Injection Pressure
Increase Central Vacuum Unit,
Vacuum Grayburg San Andres
Unit, Lea County, New Mexico

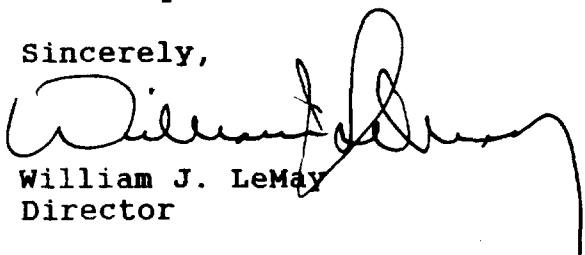
Dear Mr. Gernandt:

Reference is made to your request dated June 23, 1988, to increase the surface injection pressure on seventeen wells within the Central Vacuum Unit and Vacuum Grayburg San Andres Unit. This request is based on step rate tests conducted on these wells during May & June, 1988. 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 wells show on Exhibit "A" attached to this order.

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

cc: OCD - Hobbs File: PMX-120
D. McDonald PMX-121
D. Catanach PMX-43
Case File: 6008, PMX-74
 & 4852 PMX-111

Injection Pressure Increase
October 12, 1988
Page No. 2

EXHIBIT "A"

<u>WELL & LOCATION</u>	<u>MAXIMUM SURFACE INJECTION PRESSURE</u>
Central Vacuum Unit No. 73 2630 FNL & 142 FEL (Unit H) Section 36, T-17S, R-34E	1000 PSIG
Central Vacuum Unit No. 84 1333 FSL & 151 FEL (Unit I) Section 36, T-17S, R-34E	1144 PSIG
Central Vacuum Unit No. 93 10 FSL & 1136 FWL (Unit M) Section 31, T-17S, R-35E	1200 PSIG
Central Vacuum Unit No. 99 1408 FNL & 11211 FWL (Unit E) Section 6, T-18S, R-35E	1095 PSIG
Central Vacuum Unit No. 159 1310 FNL & 100 FWL (Unit D) Section 36, T-17S, R-34E	1215 PSIG
VGSAU Well No. 18 1330 FSL & 1330 FWL (Unit K) Section 1, T-18S, R-34E	1260 PSIG
VGSAU Well No. 30 2630 FSL & 2630 FWL (Unit K) Section 2, T-18S, R-34E	1260 PSIG
VGSAU Well No. 32 2630 FSL & 30 FWL (Unit L) Section 1, T-18S, R-34E	1220 PSIG
VGSAU Well No. 34 2630 FSL & 2630 FEL (Unit J) Section 1, T-18S, R-34E	920 PSIG
VGSAU Well No. 44 1330 FNL & 1330 FWL (Unit F) Section 2, T-18S, R-34E	1435 PSIG
VGSAU Well No. 46 1405 FNL & 1230 FEL (Unit H) Section 2, T-18S, R-34E	1415 PSIG

Injection Pressure Increase
October 12, 1988
Page No. 3

VGSAU Well No. 48 1330 FNL & 1330 FWL (Unit F) Section 1, T-18S, R-34E	895 PSIG
VGSAU Well No. 50 1330 FNL & 1330 FEL (Unit G) Section 1, T-18S, R-34E	925 PSIG
VGSAU Well No. 59 2500 FNL & 40 FWL (Unit E) Section 2, T-18S, R-34E	1110 PSIG
VGSAU Well No. 62 65 FNL & 1330 FWL (Unit C) Section 2, T-18S, R-34E	1240 PSIG
VGSAU Well No. 63 50 FNL & 2630 FEL (Unit B) Section 2, T-18S, R-34E	1330 PSIG
VGSAU Well No. 67 2630 FEL & 120 FWL (Unit L) Section 35, T-17S, R-34E	1380 PSIG

Memo

From

DAVID CATANACH
Petroleum Engineer

To

Anna.
Can you fix this
and send
back out.
Thx.
D.C.

Oil Conservation Division
PO Box 2088, Santa Fe, New Mexico 87501

To: David Catanach
From: Evelyn Downs

Injection Pressure Increase
October 12, 1988
Page No. 3

pmx-111	✓ VGSAU Well No. 48 (1330) 1330 FNL & 1130 FWL (Unit F) Section 1, T-18S, R-34E	895 PSIG
pmx-111	✓ VGSAU Well No. 50 1330 FNL & 1330 FEL (Unit G) Section 1, T-18S, R-34E	925 PSIG
pmx-74	✓ VGSAU Well No. 59 2500 FNL & 40 FWL (Unit E) Section 2, T-18S, R-34E	1110 PSIG
pmx-120	✓ VGSAU Well No. 62 65 FNL & 1330 FWL (Unit C) Section 2, T-18S, R-34E	1240 PSIG
pmx-120	✓ VGSAU Well No. 63 50 FNL & 2630 FEL (Unit B) Section 2, T-18S, R-34E	1330 PSIG
pmx-120	✓ VGSAU Well No. 67 2630 FSL & 120 FWL (Unit L) Section 35, T-17S, R-34E	1380 PSIG



STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

GARREY CARRUTHERS
GOVERNOR

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87504
(505) 827-5300

October 11, 1988

Texaco, Inc.
West Star Route Box 423
Lovington, NM 88260

Attention: A. Gernandt

RE: Injection Pressure Increase
Central Vacuum Unit, Vacuum
Grayburg San Andres Unit,
Lea County, New Mexico

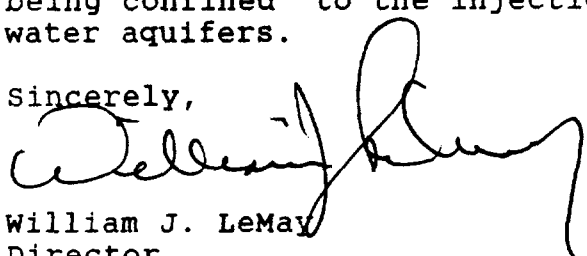
Dear Mr. Gernandt:

Reference is made to your request dated June 23, 1988, to increase the surface injection pressure on seventeen wells within the Central Vacuum Unit and Vacuum Grayburg San Andres Unit. This request is based on step rate tests conducted on these wells during May & June, 1988. 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 wells show on Exhibit "A" attached to this order.

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

cc: OCD - Hobbs	File: PMX-120
D. McDonald	PMX-121
D. Catanach	PMX-43
Case File: 6008,	PMX-74
& 4852	PMX-111

Injection Pressure Increase
October 12, 1988
Page No. 2

EXHIBIT "A"

<u>WELL & LOCATION</u>	<u>MAXIMUM SURFACE INJECTION PRESSURE</u>
Central Vacuum Unit No. 73 2630 FNL & 142 FEL (Unit H) Section 36, T-17S, R-34E	1000 PSIG
Central Vacuum Unit No. 84 1333 FSL & 151 FEL (Unit I) Section 36, T-17S, R-34E	1144 PSIG
Central Vacuum Unit No. 93 10 FSL & 1136 FWL (Unit M) Section 31, T-17S, R-35E	1200 PSIG
Central Vacuum Unit No. 99 1408 FNL & 1211 FWL (Unit E) Section 6, T-18S, R-35E	1095 PSIG
Central Vacuum Unit No. 159 1310 FNL & 100 FWL (Unit D) Section 36, T-17S, R-34E	1215 PSIG
VGSAU Well No. 18 1330 FSL & 1330 FWL (Unit K) Section 1, T-18S, R-34E	1260 PSIG
VGSAU Well No. 30 2630 FSL & 2630 FWL (Unit K) Section 2, T-18S, R-34E	1260 PSIG
VGSAU Well No. 32 2630 FSL & 30 FWL (Unit L) Section 1, T-18S, R-34E	1220 PSIG
VGSAU Well No. 34 2630 FSL & 2630 FEL (Unit J) Section 1, T-18S, R-34E	920 PSIG
VGSAU Well No. 44 1330 FNL & 1330 FWL (Unit F) Section 2, T-18S, R-34E	1435 PSIG
VGSAU Well No. 46 1405 FNL & 1230 FEL (Unit H) Section 2, T-18S, R-34E	1415 PSIG

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VGSAU Well No. 48 1330 FNL & 1130 FWL (Unit F) Section 1, T-18S, R-34E	895 PSIG
VGSAU Well No. 50 1330 FNL & 1330 FEL (Unit G) Section 1, T-18S, R-34E	925 PSIG
VGSAU Well No. 59 2500 FNL & 40 FWL (Unit E) Section 2, T-18S, R-34E	1110 PSIG
VGSAU Well No. 62 65 FNL & 1330 FWL (Unit C) Section 2, T-18S, R-34E	1240 PSIG
VGSAU Well No. 63 50 FNL & 2630 FEL (Unit B) Section 2, T-18S, R-34E	1330 PSIG
VGSAU Well No. 67 2630 FSL & 120 FWL (Unit L) Section 35, T-17S, R-34E	1380 PSIG