



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

BRUCE KING
GOVERNOR

2040 S. PACHECO
SANTA FE, NEW MEXICO 87505
(505) 827-7131

December 1, 1994

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

CF 10573
R-9848
WFX-644
PDEV0020600644

Attn: Ms. Darlene de Aragao

**RE: Injection Pressure Increase Rhodes Yates Unit Waterflood
Project Lea County, New Mexico**

Dear Ms. de Aragao:

Reference is made to your request dated November 1, 1994 to increase the surface injection pressure on 5 wells. This request is based on step rate tests conducted on these wells between October 5 and 24, 1994. 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.

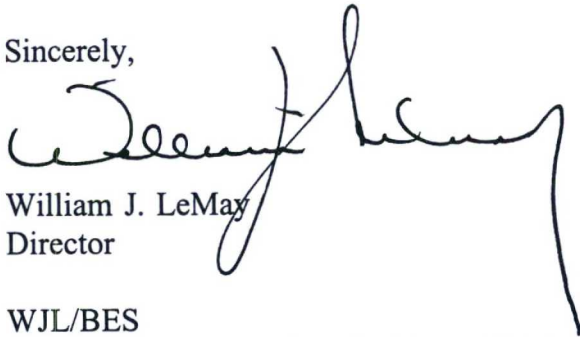
You are therefore authorized to increase the surface injection pressure on the following wells:

Well and Location	Maximum Injection Surface Pressure
Rhodes Yates Unit Well No.4 Unit A, Section 28, Township 26 South, Range 37 East	917 PSIG
Rhodes Yates Unit Well No.6 Unit C, Section 27, Township 26 South, Range 37 East	686 PSIG
Rhodes Yates Unit Well No.8 Unit E, Section 27, Township 26 South, Range 37 East	705 PSIG
Rhodes Yates Unit Well No.11 Unit K, Section 27, Township 26 South, Range 37 East	742 PSIG
Rhodes Yates Unit Well No.13 Unit M, Section 27, Township 26 South, Range 37 East	1310 PSIG
All wells located in Lea County, New Mexico.	

Injection Pressure Increase
Texaco Exploration & Production, Inc.
December 1, 1994
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', written over the typed name and title.

William J. LeMay
Director

WJL/BES

cc: Oil Conservation Division - Hobbs
File: Case No.10573; WFX-644



Texaco E & P

PO Box 2088
Santa Fe NM 87504-0208
360 437 7191

NEW MEXICO OIL CONSERVATION DIVISION
RECEIVED

NOV 03 A 11 08 52

November 1, 1994

New Mexico Oil Conservation Division
PO Box 2088
Santa Fe NM 87504

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

Re: PRESSURE INCREASE ON INJECTION WELLS
Rhodes Yates Unit
T-26-S, R-37-E
Lea County, New Mexico

Dear David:

Texaco Exploration and Production Inc. requests an increase in the maximum allowable pressure on five wells on the Rhodes Yates Unit. A step rate injection test was run on each well. Results of the test are attached. The attached table shows the present maximum allowable pressures along with the requested allowable pressures. We are also requesting that our maximum allowable surface pressures include friction which is also included in the table.

If you have any questions concerning this request, please contact me at 397-0424. Thank you for your assistance in this matter.

Yours very truly,

Darlene de Aragao

Darlene de Aragao
Production Engineer

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

WELL NAME	PRESENT MAXIMUM ALLOWABLE SURFACE PRESSURE	BHFP	STFP	FRICTION *	REQUESTED MAXIMUM ALLOWABLE SURFACE PRESSURE
Rhodes Yates Unit #4	730	2420	967	16	917 980
Rhodes Yates Unit #6	600	2180	736	15	684 750
Rhodes Yates Unit #8	650	2220	755	16	705 770
Rhodes Yates Unit #11	600	2260	792	16	742 808
Rhodes Yates Unit #13	1100	2840	1360	15	1310 1375

BHFP=BOTTOM HOLE FRAC PRESSURE

STFP=SURFACE TREATING FRAC
PRESSURE

FLUID GRADIENT=.4546

DBG=DEPTH OF BOTTOM HOLE GAGE

STFP=BHFP-(.4546xDBG)

*FRICTION PRESSURE CALCULATED
@ 500 BWPD

RYU #8 - ST "5a" No. 2 16' 27-26-37
#13
MAY 9, 94
COMMIT TO INT.

4 } WFX
6 } 644
11 }
8 - CASE 4136
13 10573

see 21, 27, 28
265 37E

WEST-TEST, INC.
A SUBSIDIARY OF JOHN WEST ENGINEERING COMPANY
Hobbs, New Mexico

STEP RATE INJECTION TEST

CLIENT: TEXACO EXPLORATION AND PRODUCTION

DATE: OCTOBER 12, 1994

WELL NAME: RHODES YATES UNIT NO. 4
LEA COUNTY, NEW MEXICO

WO#: 94-14-1705

PERFS = 3080-3247

PACKER DEPTH = 3030

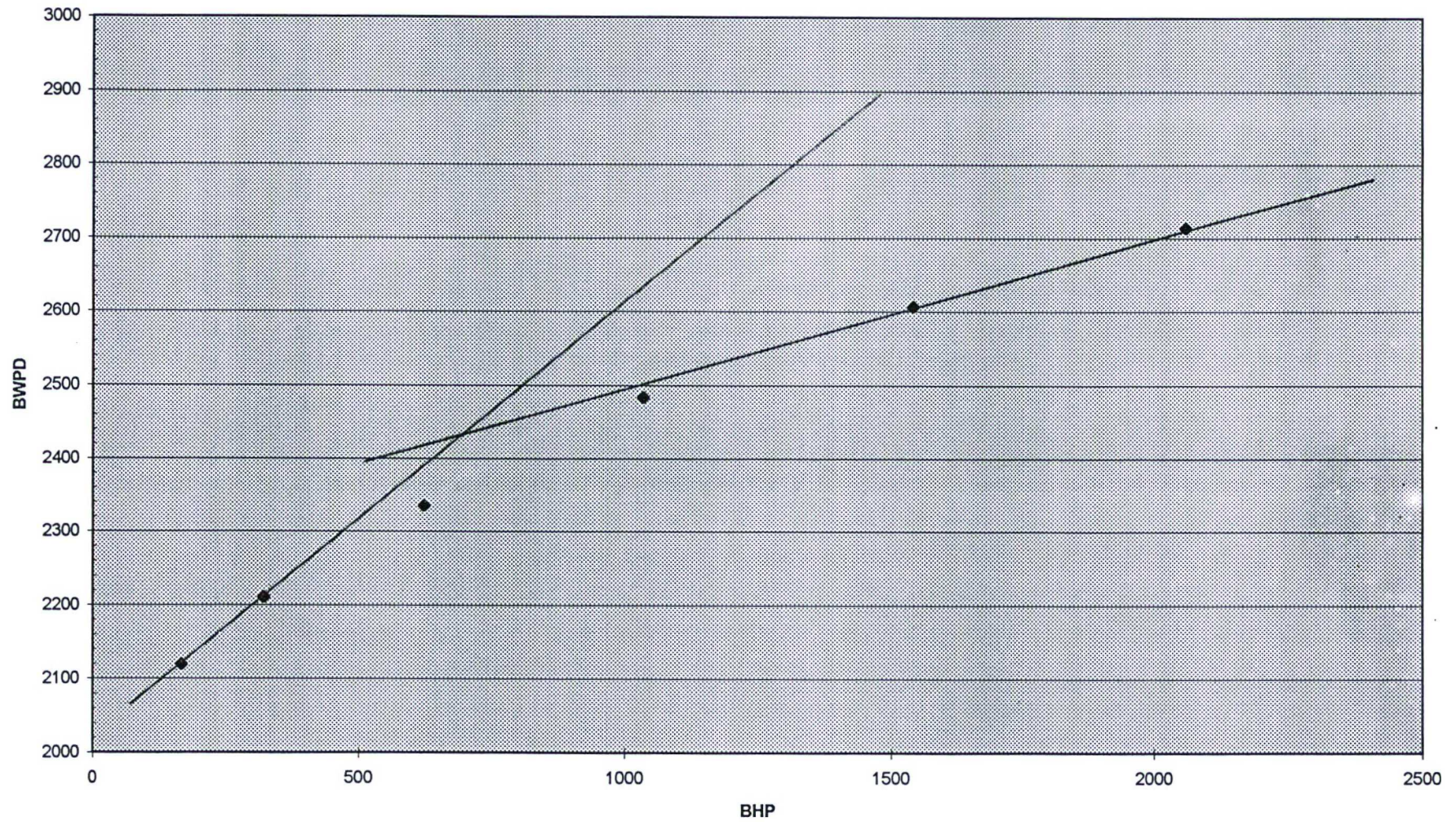
BHP GAUGE DEPTH = 3196

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)
1	9:30	510.0				510.0		2030.8
	9:35	551.0	0.6	172.8	1.071	549.9	5.04	2074.1
	9:40	556.1	1.2	172.8	1.071	555.0	5.04	2081.9
	9:45	559.9	1.8	172.8	1.071	558.8	5.04	2088.1
	9:50	563.6	2.4	172.8		563.6		2092.8
	9:55	567.4	2.9	144.0	0.765	566.6	4.20	2097.5
	10:00	571.1	3.5	172.8	1.071	570.0	5.04	2102.1
	10:05	576.2	4.1	172.8	1.071	575.1	5.04	2106.8
	10:10	582.4	4.7	172.8	1.071	581.3	5.04	2109.9
	10:15	588.7	5.2	144.0	0.765	587.9	4.20	2111.4
	10:20	596.2	5.8	172.8	1.071	595.1	5.04	2116.1
	10:25	598.7	6.4	172.8	1.071	597.6	5.04	2117.6
	10:30	601.2	7.0	172.8	1.071	600.1	5.04	2119.2
				168.0				
	10:35	633.7	8.1	316.8	3.288	630.4	9.24	2154.9
	10:40	639.9	9.2	316.8	3.288	636.6	9.24	2164.1
	10:45	646.2	10.3	316.8	3.288	642.9	9.24	2171.8
	10:50	648.7	11.4	316.8	3.288	645.4	9.24	2176.5
	10:55	653.7	12.5	316.8	3.288	650.4	9.24	2182.7
	11:00	655.0	13.6	316.8	3.288	651.7	9.24	2185.8
	11:05	657.5	14.7	316.8	3.288	654.2	9.24	2190.5
	11:10	655.0	15.8	316.8	3.288	651.7	9.24	2195.1
	11:15	650.1	16.9	316.8	3.288	646.8	9.24	2198.2
	11:20	650.1	18.1	345.6	3.862	646.2	10.08	2202.9
	11:25	652.7	19.2	316.8	3.288	649.4	9.24	2206.0
2	11:30	661.5	20.4	345.6	3.862	657.6	10.08	2210.7
				321.6				

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)
3	11:35	718.9	22.5	604.8	10.875	708.0	17.64	2258.8
	11:40	732.7	24.7	633.6	11.852	720.8	18.48	2272.8
	11:45	741.6	26.9	633.6	11.852	729.7	18.48	2283.7
	11:50	750.4	29.0	604.8	10.875	739.5	17.64	2291.4
	11:55	754.3	31.2	633.6	11.852	742.4	18.48	2297.6
	12:00	754.4	33.4	633.6	11.852	742.5	18.48	2303.9
	12:05	759.5	35.6	633.6	11.852	747.6	18.48	2309.9
	12:10	764.5	37.7	604.8	10.875	753.6	17.64	2316.3
	12:15	769.6	39.8	604.8	10.875	758.7	17.64	2321.0
	12:20	773.3	42.0	633.6	11.852	761.4	18.48	2325.6
	12:25	778.3	44.1	604.8	10.875	767.4	17.64	2330.3
	12:30	782.1	46.3	633.6	11.852	770.2	18.48	2334.7
				621.6				
	12:35	858.1	49.8	1008.0	27.980	830.1	29.40	2392.2
	12:40	884.2	53.4	1036.8	29.477	854.7	30.24	2407.7
	12:45	917.8	56.9	1008.0	27.980	889.8	29.40	2418.6
	12:50	950.2	60.5	1036.8	29.477	920.7	30.24	2431.0
	12:55	972.6	64.0	1008.0	27.980	944.6	29.40	2440.3
	1:00	985.1	67.7	1065.6	31.010	954.1	31.08	2449.7
	1:05	991.3	71.3	1036.8	29.477	961.8	30.24	2457.4
4	1:10	995.1	74.9	1036.8	29.477	965.6	30.24	2462.1
	1:15	990.1	78.4	1008.0	27.980	962.1	29.40	2466.7
	1:20	973.9	82.0	1036.8	29.477	944.4	30.24	2471.4
	1:25	957.7	85.7	1065.6	31.010	926.7	31.08	2479.2
	1:30	946.5	89.4	1065.6	31.010	915.5	31.08	2483.8
				1034.4				
	1:35	1032.4	5.1	1468.8	56.148	976.3	42.84	2524.2
	1:40	1042.4	10.4	1526.4	60.289	982.1	44.52	2536.6
	1:45	1052.4	15.8	1555.2	62.410	990.0	45.36	2550.6
	1:50	1066.1	21.2	1555.2	62.410	1003.7	45.36	2558.4
5	1:55	1051.1	26.6	1555.2	62.410	988.7	45.36	2566.2
	2:00	1087.3	32.1	1584.0	64.565	1022.7	46.20	2573.9
	2:05	1102.3	37.5	1555.2	62.410	1039.9	45.36	2581.7
	2:10	1104.8	42.9	1555.2	62.410	1042.4	45.36	2586.3
	2:15	1124.8	48.2	1526.4	60.289	1064.5	44.52	2592.6
	2:20	1131.0	53.5	1526.4	60.289	1070.7	44.52	2597.2
	2:25	1143.5	58.9	1555.2	62.410	1081.1	45.36	2601.9
	2:30	1144.7	64.2	1526.4	60.289	1084.4	44.52	2606.6
				1540.8				

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)
6 FALLOFF	2:35	1230.8	71.3	2044.8	103.551	1127.2	59.64	2639.2
	2:40	1237.1	78.4	2044.8	103.551	1133.5	59.64	2648.5
	2:45	1254.6	85.6	2073.6	106.266	1148.3	60.48	2659.4
	2:50	1258.3	92.6	2016.0	100.869	1157.4	58.80	2665.6
	2:55	1263.3	99.7	2044.8	103.551	1159.7	59.64	2671.8
	3:00	1257.1	106.9	2073.6	106.266	1150.8	60.48	2678.0
	3:05	1242.1	114.0	2044.8	103.551	1138.5	59.64	2684.2
	3:10	1235.8	121.2	2073.6	106.266	1129.5	60.48	2692.0
	3:15	1239.6	128.4	2073.6	106.266	1133.3	60.48	2698.2
	3:20	1243.3	135.6	2073.6	106.266	1137.0	60.48	2704.4
	3:25	1244.6	142.7	2044.8	103.551	1141.0	59.64	2709.1
	3:29	1247.0	148.6	2124.0	111.093	1135.9	61.95	2713.7
				2060.0				
	3:30	1094.8				1094.8		2668.4
	3:31	1076.1				1076.1		2652.9
	3:32	1064.9				1064.9		2640.5
	3:33	1056.1				1056.1		2631.2
	3:34	1047.4				1047.4		2621.8
	3:35	1039.9				1039.9		2614.1
	3:40	1008.7				1008.7		2581.7
	3:45	982.6				982.6		2555.3

RHODES YATES UNIT #4



WEST-TEST, INC.

A SUBSIDIARY OF JOHN WEST ENGINEERING COMPANY

Hobbs, New Mexico

STEP RATE INJECTION TEST

CLIENT: TEXACO EXPLORATION AND PRODUCTION

DATE: OCTOBER 5, 1994

WELL NAME: RHODES YATES UNIT NO. 6
LEA COUNTY, NEW MEXICO

WO#: 94-14-1697

OPEN HOLE = 3110-3280

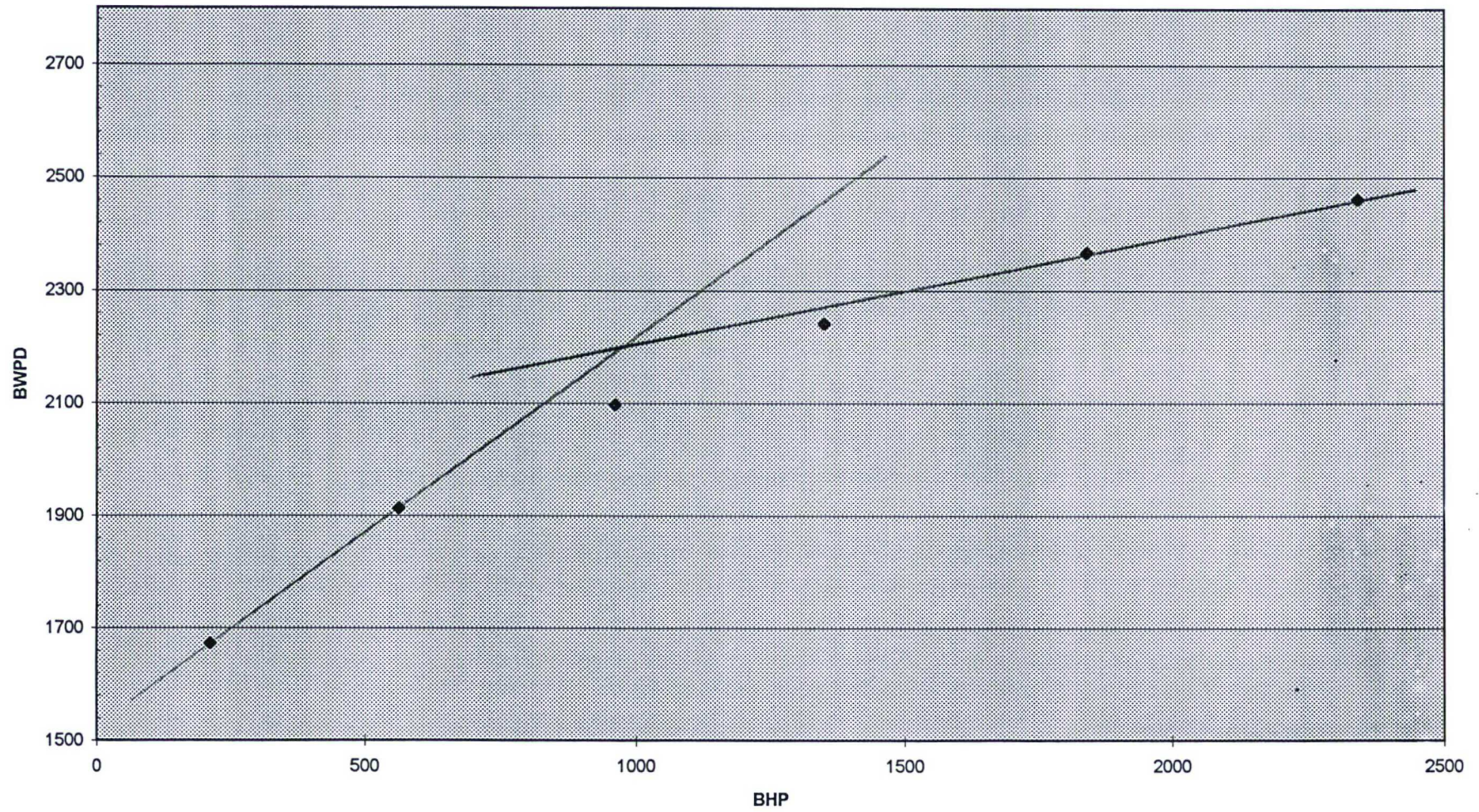
PACKER DEPTH = 2976

BHP GAUGE DEPTH = 3175

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)
1	9:40	41.9				41.9		1457.9
	9:45	148.8	0.8	230.4	1.595	147.2	6.72	1563.6
	9:50	187.4	1.5	201.6	1.246	186.2	5.88	1603.7
	9:55	211.0	2.2	201.6	1.246	209.8	5.88	1629.1
	10:00	229.7	3.0	230.4	1.595	228.1	6.72	1647.9
	10:05	243.4	3.7	201.6	1.246	242.2	5.88	1661.8
	10:10	254.7	4.4	201.6	1.246	253.5	5.88	1673.2
			0.0	211.2				
	10:15	371.9	1.9	547.2	7.902	364.0	15.96	1785.7
	10:20	409.2	3.9	576.0	8.688	400.5	16.80	1825.1
2	10:25	420.4	5.8	547.2	7.902	412.5	15.96	1850.5
	10:30	436.6	7.7	547.2	7.902	428.7	15.96	1875.1
	10:35	457.9	9.7	576.0	8.688	449.2	16.80	1897.4
	10:40	467.9	11.7	576.0	8.688	459.2	16.80	1913.0
				561.6				
	10:45	568.5	15.2	1008.0	24.466	544.0	29.40	1991.1
	10:50	603.8	18.4	921.6	20.728	583.1	26.88	2023.9
	10:55	628.7	21.7	950.4	21.942	606.8	27.72	2047.7
	11:00	642.4	25.1	979.2	23.188	619.2	28.56	2068.3
	11:05	663.6	28.4	950.4	21.942	641.7	27.72	2084.0
3	11:10	672.3	31.7	950.4	21.942	650.4	27.72	2098.0
				960.0				
	11:15	752.1	36.4	1353.6	42.210	709.9	39.48	2152.8
	11:20	774.5	41.1	1353.6	42.210	732.3	39.48	2176.6
	11:25	793.2	45.8	1353.6	42.210	751.0	39.48	2195.5
	11:30	818.1	50.5	1353.6	42.210	775.9	39.48	2212.6
	11:35	831.8	55.1	1324.8	40.563	791.2	38.64	2225.7
	11:40	846.8	59.8	1353.6	42.210	804.6	39.48	2241.2
				1348.8				

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)
5	11:45	945.2	66.3	1872.0	76.899	868.3	54.60	2291.7
	11:50	972.6	72.8	1872.0	76.899	895.7	54.60	2312.8
	11:55	1007.5	79.0	1785.6	70.462	937.0	52.08	2329.9
	12:00	1031.2	85.4	1843.2	74.725	956.5	53.76	2343.6
	12:05	1047.4	91.7	1814.4	72.579	974.8	52.92	2355.7
	12:10	1053.6	98.1	1843.2	74.725	978.9	53.76	2367.1
				1838.4				
	12:15	1118.6	106.2	2332.8	115.539	1003.1	68.04	2406.6
	12:20	1131.0	114.3	2332.8	115.539	1015.5	68.04	2421.6
	12:25	1134.8	122.5	2361.6	118.192	1016.6	68.88	2435.1
6	12:30	1141.0	130.6	2332.8	115.539	1025.5	68.04	2445.5
	12:35	1147.3	138.7	2332.8	115.539	1031.8	68.04	2454.3
	12:40	1158.5	146.9	2361.6	118.192	1040.3	68.88	2461.4
				2342.4				
FALLOFF	12:41	977.6				977.6		2414.1
	12:42	955.2				955.2		2397.8
	12:43	941.5				941.5		2383.9
	12:44	929.0				929.0		2372.4
	12:45	919.1				919.1		2361.8
	12:50	874.2				874.2		2316.9
	12:55	836.9				836.9		2281.0

RHODES YATES UNIT #6



WEST-TEST, INC.

A SUBSIDIARY OF JOHN WEST ENGINEERING COMPANY

Hobbs, New Mexico

STEP RATE INJECTION TEST

CLIENT: TEXACO EXPLORATION AND PRODUCTION

DATE: OCTOBER 7, 1994

WELL NAME: RHODES YATES UNIT NO. 8
LEA COUNTY, NEW MEXICO

WO#: 94-14-1706

PERFS = 3126-3320

PACKER DEPTH = 3081

BHP GAUGE DEPTH = 3223

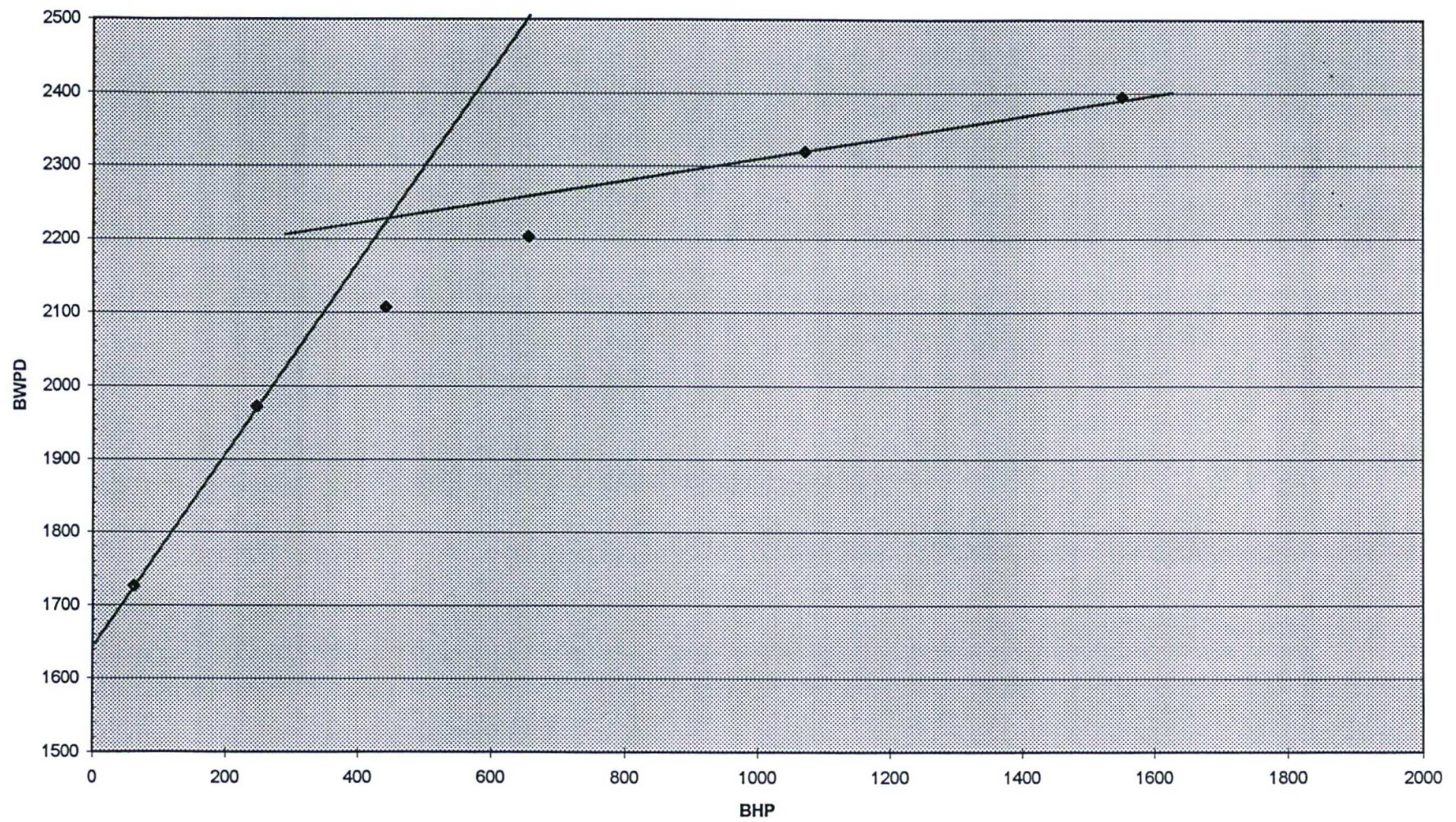
STEP NO. & REMARKS	TIME	(1) SURFACE TUBING PRESS. (psig)	(2) CUMMULATIVE VOL. INJECTED (bbls)	(3) INJECTION RATE (bbls/day)	(4) FRICTION HEAD LOSS (psi)	(5) CORRECTED TUBING PRESS. (psi) (1)-(4)	(6) INJECTION RATE (gpm) (3)/34.2857	(7) MEASURED BHP (psi)
1	8:25	35.1				35.1		1442.5
	8:30	66.1	0.1	37.4	0.056	66.0	1.09	1498.3
	8:35	134.5	0.3	40.3	0.064	134.4	1.18	1579.6
	8:40	186.6	0.4	40.3	0.064	186.5	1.18	1633.0
	8:45	218.9	0.5	37.4	0.056	218.8	1.09	1667.4
	8:50	241.4	0.7	40.3	0.064	241.3	1.18	1691.2
	8:55	265.1	0.8	46.1	0.082	265.0	1.34	1714.2
	9:00	273.8	1.2	97.9	0.332	273.5	2.86	1723.2
	9:05	270.1	1.5	92.2	0.297	269.8	2.69	1720.8
	9:10	266.3	2.0	144.0	0.679	265.6	4.20	1719.1
	9:15	266.3	2.1	34.6	0.048	266.3	1.01	1719.1
	9:20	270.1	2.2	34.6	0.048	270.1	1.01	1723.2
	9:25	271.3	2.6	100.8	0.351	270.9	2.94	1726.5
			0.0	62.16				
	9:30	415.9	0.9	259.2	2.013	413.9	7.56	1868.2
	9:35	434.6	1.8	259.2	2.013	432.6	7.56	1886.6
	9:40	458.3	2.6	230.4	1.619	456.7	6.72	1901.4
	9:45	458.3	3.5	259.2	2.013	456.3	7.56	1912.1
	9:50	496.9	4.4	259.2	2.013	494.9	7.56	1934.3
	9:55	504.4	5.3	259.2	2.013	502.4	7.56	1941.8
	10:00	495.7	6.1	230.4	1.619	494.1	6.72	1950.0
	10:05	509.3	7.0	259.2	2.013	507.3	7.56	1954.1
	10:10	523.1	7.8	230.4	1.619	521.5	6.72	1958.2
	10:15	534.2	8.7	259.2	2.013	532.2	7.56	1963.2
	10:20	531.7	9.5	230.4	1.619	530.1	6.72	1967.4
	10:25	542.9	10.3	230.4	1.619	541.3	6.72	1972.4
2				247.2				

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)
3	10:30	615.2	11.9	460.8	5.837	609.4	13.44	2035.7
	10:35	615.1	13.4	432.0	5.180	609.9	12.60	2044.0
	10:40	625.1	14.9	432.0	5.180	619.9	12.60	2050.7
	10:45	632.5	16.4	432.0	5.180	627.3	12.60	2057.4
	10:50	644.9	17.9	432.0	5.180	639.7	12.60	2063.3
	10:55	642.4	19.5	460.8	5.837	636.6	13.44	2069.2
	11:00	644.9	20.8	374.4	3.975	640.9	10.92	2074.1
	11:05	649.9	22.3	432.0	5.180	644.7	12.60	2086.7
	11:10	657.4	23.9	460.8	5.837	651.6	13.44	2094.2
	11:15	656.1	25.5	460.8	5.837	650.3	13.44	2099.2
	11:20	668.6	27.1	460.8	5.837	662.8	13.44	2103.4
	11:25	664.9	28.7	460.8	5.837	659.1	13.44	2107.6
				441.6				
	11:30	727.1	31.1	691.2	12.358	714.7	20.16	2157.6
	11:35	737.1	33.3	633.6	10.520	726.6	18.48	2165.1
	11:40	739.6	35.7	691.2	12.358	727.2	20.16	2171.0
	11:45	748.3	37.9	633.6	10.520	737.8	18.48	2176.8
	11:50	745.8	40.2	662.4	11.422	734.4	19.32	2181.8
	11:55	743.3	42.5	662.4	11.422	731.9	19.32	2186.0
	12:00	754.6	44.8	662.4	11.422	743.2	19.32	2190.2
4	12:05	753.3	47.0	633.6	10.520	742.8	18.48	2193.6
	12:10	762.1	49.3	662.4	11.422	750.7	19.32	2197.0
	12:15	760.8	51.6	663.4	11.454	749.3	19.35	2199.6
	12:20	772.0	53.8	633.6	10.520	761.5	18.48	2202.1
	12:25	784.5	56.0	633.6	10.520	774.0	18.48	2203.7
				655.2				
	12:30	922.8	59.8	1094.4	28.917	893.9	31.92	2273.2
	12:35	936.5	63.5	1065.6	27.525	909.0	31.08	2283.0
	12:40	945.3	67.2	1065.6	27.525	917.8	31.08	2288.0
	12:45	951.5	70.9	1065.6	27.525	924.0	31.08	2292.1
5	12:50	964.0	74.6	1065.6	27.525	936.5	31.08	2297.9
	12:55	966.6	78.3	1065.6	27.525	939.1	31.08	2302.9
	1:00	953.1	82.0	1065.6	27.525	925.6	31.08	2305.4
	1:05	949.4	85.7	1065.6	27.525	921.9	31.08	2309.4
	1:10	945.7	89.4	1065.6	27.525	918.2	31.08	2313.4
	1:15	943.2	93.2	1094.4	28.917	914.3	31.92	2315.0
	1:20	944.4	96.9	1065.6	27.525	916.9	31.08	2317.4
	1:25	940.6	100.6	1065.6	27.525	913.1	31.08	2319.8
				1070.4				

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)
6 FALLOFF	1:30	1060.3	106.1	1584.0	57.309	1003.0	46.20	2365.5
	1:35	1071.5	111.5	1555.2	55.396	1016.1	45.36	2372.0
	1:40	1069.0	116.9	1555.2	55.396	1013.6	45.36	2375.2
	1:45	1069.0	122.3	1555.2	55.396	1013.6	45.36	2379.1
	1:50	1073.9	127.7	1555.2	55.396	1018.5	45.36	2381.3
	1:55	1071.3	133.1	1555.2	55.396	1015.9	45.36	2384.3
	2:00	1087.5	138.4	1526.4	53.513	1034.0	44.52	2386.5
	2:05	1106.2	143.8	1555.2	55.396	1050.8	45.36	2388.0
	2:10	1120.0	149.2	1555.2	55.396	1064.6	45.36	2389.5
	2:15	1121.2	154.5	1526.4	53.513	1067.7	44.52	2390.9
	2:20	1127.4	159.8	1526.4	53.513	1073.9	44.52	2393.2
	2:25	1123.7	165.2	1555.2	55.396	1068.3	45.36	2394.8
				1550.4				
	2:26	894.2				894.2		2305.0
	2:27	868.0				868.0		2279.7
	2:28	851.8				851.8		2254.4
	2:29	834.4				834.4		2246.2
	2:30	820.6				820.6		2233.1
	2:35	773.3				773.3		2184.1
	2:40	738.4				738.4		2150.6

2220
755

RHODES YATES UNIT #8



WEST-TEST, INC.

A SUBSIDIARY OF JOHN WEST ENGINEERING COMPANY

Hobbs, New Mexico

STEP RATE INJECTION TEST

CLIENT: TEXACO EXPLORATION AND PRODUCTION

DATE: OCTOBER 6, 1994

WELL NAME: RHODES YATES UNIT NO. 11
LEA COUNTY, NEW MEXICO

WO#: 94-14-1699

OPEN HOLE = 3130-3327

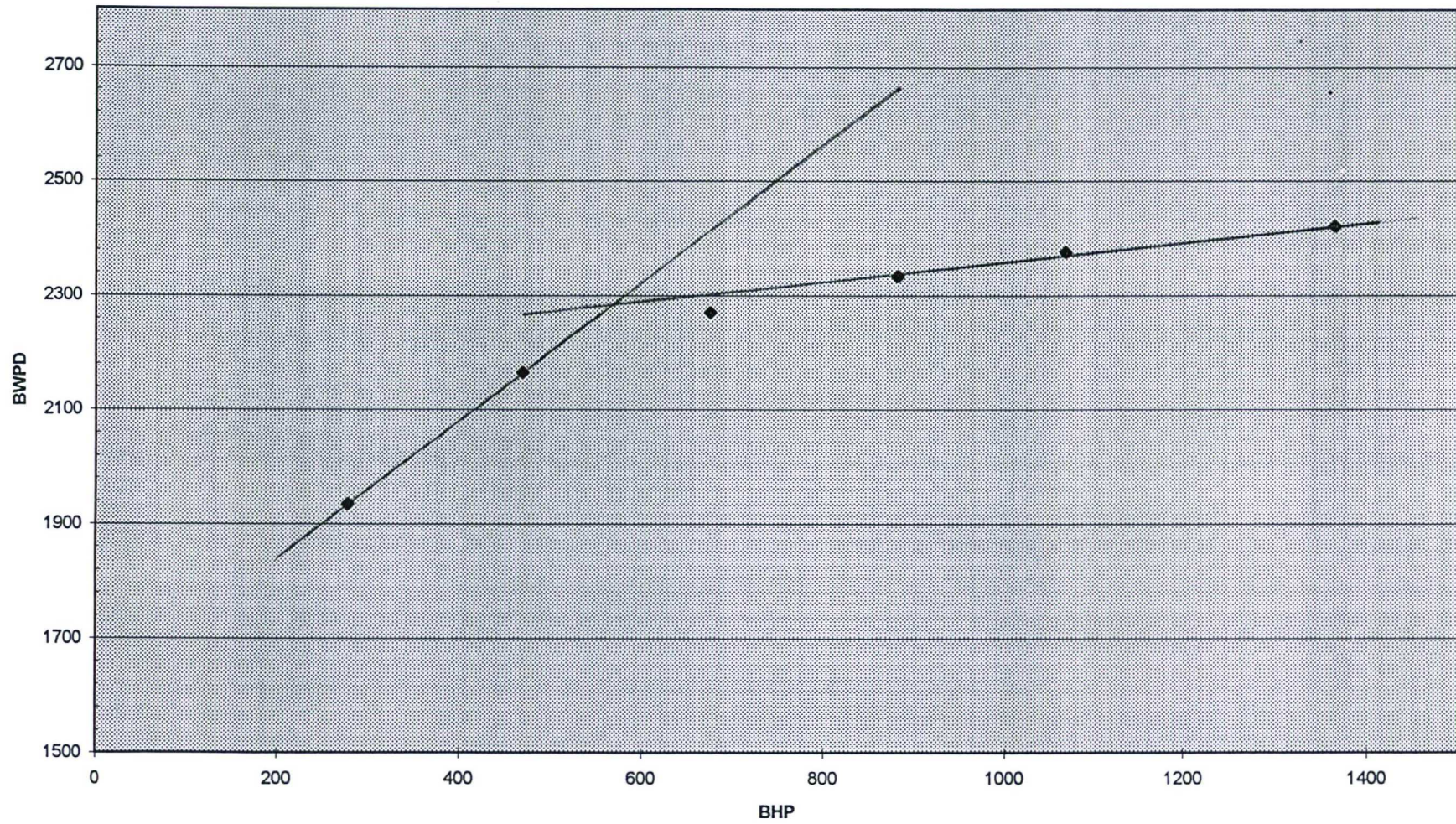
PACKER DEPTH = 3014

BHP GAUGE DEPTH = 3228

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)/34.2657	(7) MEASURED BHP (psi)
1	9:15	25.3				25.3		1444.1
	9:20	270.2	1.2	345.2	3.426	266.8	10.07	1702.4
	9:25	361.2	2.2	288.0	2.450	358.7	8.40	1788.3
	9:30	401.1	3.0	230.4	1.622	399.5	6.72	1836.6
	9:35	462.2	4.0	288.0	2.450	459.7	8.40	1893.1
	9:40	490.9	4.9	259.2	2.016	488.9	7.56	1917.7
	9:45	504.7	5.8	259.2	2.016	502.7	7.56	1934.1
				278.4				
	9:50	628.1	7.5	489.5	6.537	621.6	14.28	2059.7
	9:55	659.5	9.1	460.8	5.846	653.7	13.44	2103.1
2	10:00	693.3	10.8	489.6	6.540	686.8	14.28	2126.0
	10:05	699.7	12.4	460.8	5.846	693.9	13.44	2142.5
	10:10	696.0	14.0	460.8	5.846	690.2	13.44	2154.9
	10:15	714.7	15.6	460.8	5.846	708.9	13.44	2164.9
				470.4				
	10:20	775.8	18.0	691.2	12.377	763.4	20.16	2226.2
	10:25	802.0	20.3	662.4	11.440	790.6	19.32	2242.0
	10:30	808.2	22.7	691.2	12.377	795.8	20.16	2251.2
	10:35	808.2	25.0	662.4	11.440	796.8	19.32	2257.9
	10:40	818.2	27.3	662.4	11.440	806.8	19.32	2263.8
3	10:45	812.0	29.7	691.2	12.377	799.6	20.16	2269.7
				676.8				
	10:50	870.5	32.7	864.0	18.702	851.8	25.20	2306.6
	10:55	873.0	35.8	892.8	19.872	853.1	26.04	2315.8
	11:00	876.8	38.9	892.8	19.872	856.9	26.04	2320.8
	11:05	884.2	41.9	864.0	18.702	865.5	25.20	2325.8
	11:10	893.0	45.0	892.8	19.872	873.1	26.04	2330.1
	11:15	886.7	48.1	892.8	19.872	866.8	26.04	2333.5
				883.2				

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)
5	11:20	917.9	51.8	1065.6	27.567	890.3	31.08	2357.3
	11:25	925.3	55.5	1065.6	27.567	897.7	31.08	2362.2
	11:30	926.6	59.2	1065.6	27.567	899.0	31.08	2366.4
	11:35	934.1	62.9	1065.6	27.567	906.5	31.08	2370.5
	11:40	936.5	66.6	1065.6	27.567	908.9	31.08	2373.0
	11:45	939.0	70.4	1094.4	28.962	910.0	31.92	2376.2
				1070.4				
	11:50	978.9	75.1	1353.6	42.914	936.0	39.48	2401.5
	11:55	986.3	79.9	1382.4	44.619	941.7	40.32	2407.2
	12:00	990.1	84.7	1382.4	44.619	945.5	40.32	2409.6
6	12:05	1000.0	89.4	1353.6	42.914	957.1	39.48	2413.6
	12:10	1024.9	94.2	1382.4	44.619	980.3	40.32	2417.5
	12:15	1038.7	98.9	1353.6	42.914	995.8	39.48	2421.4
				1368.0				
	FALLOFF 12:16	931.6				931.6		2369.9
	12:17	912.9				912.9		2344.6
	12:18	893.0				893.0		2325.0
	12:19	876.8				876.8		2307.8
	12:20	861.8				861.8		2293.1
	12:25	800.8				800.8		2232.6
	12:30	752.3				752.3		2181.9

RHODES YATES UNIT #11



WEST-TEST, INC.
A SUBSIDIARY OF JOHN WEST ENGINEERING COMPANY
Hobbs, New Mexico

STEP RATE INJECTION TEST

CLIENT: TEXACO EXPLORATION AND PRODUCTION

DATE: OCTOBER 24, 1994

WELL NAME: RHODES YATES UNIT NO. 13
LEA COUNTY, NEW MEXICO

WO#: 94-14-1704

PERFS = 3167-3349

PACKER DEPTH = 2984

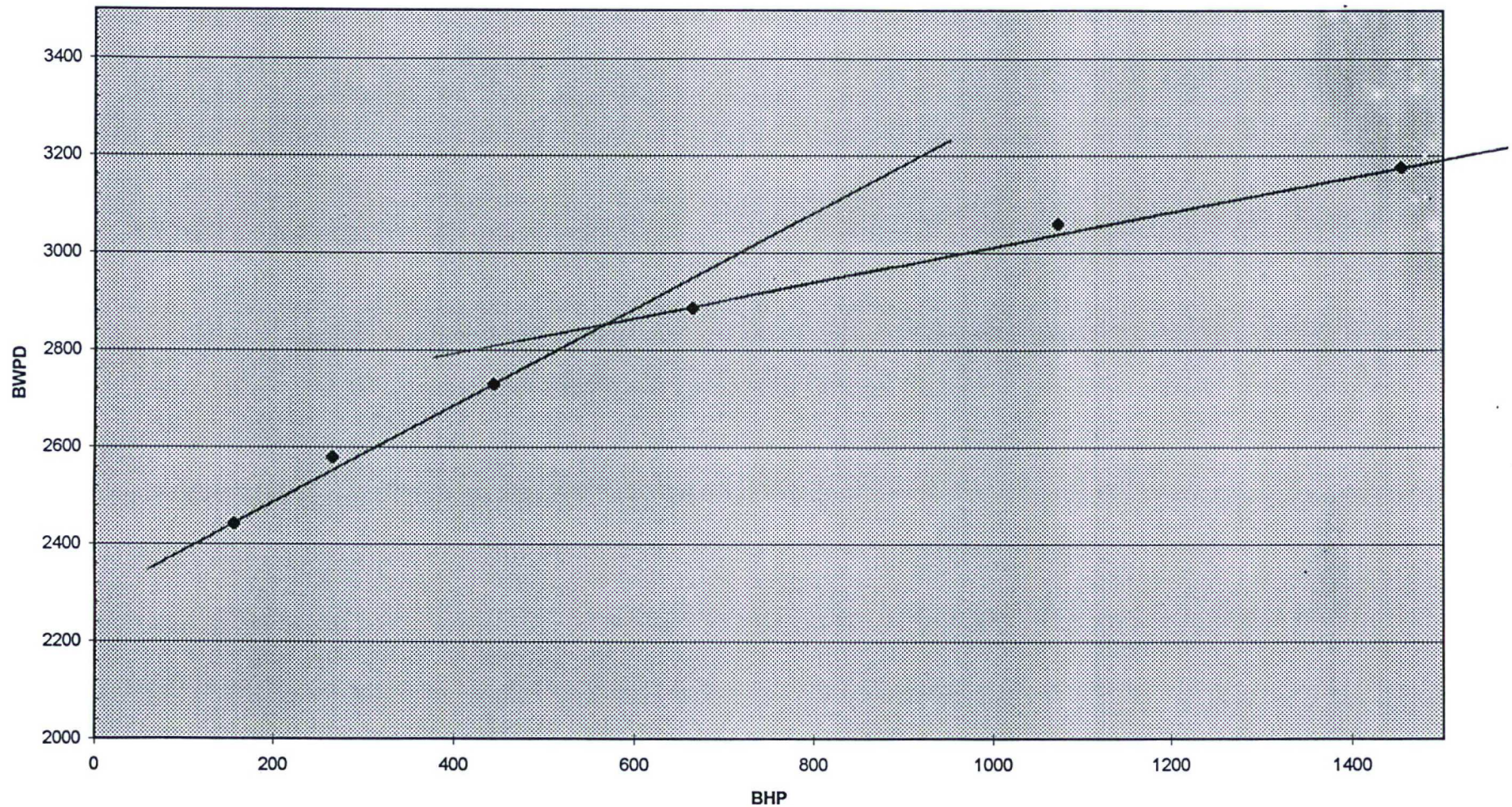
BHP GAUGE DEPTH = 3258

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)
1	9:10	480.4				480.4		2031.0
	9:15	608.7	0.6	172.8	0.961	607.7	5.04	2169.2
	9:20	659.8	1.1	144.0	0.686	659.1	4.20	2221.7
	9:25	697.2	1.6	144.0	0.686	696.5	4.20	2254.5
	9:30	737.1	2.2	172.8	0.961	736.1	5.04	2303.7
	9:35	764.6	2.8	172.8	0.961	763.6	5.04	2326.6
	9:40	778.3	3.3	144.0	0.686	777.6	4.20	2343.7
	9:45	793.3	3.8	144.0	0.686	792.6	4.20	2357.7
	9:50	807.1	4.2	115.2	0.454	806.6	3.36	2370.3
	9:55	832.0	4.8	172.8	0.961	831.0	5.04	2401.6
	10:00	844.6	5.4	172.8	0.961	843.6	5.04	2418.9
	10:05	858.3	6.0	172.8	0.961	857.3	5.04	2430.2
	10:10	870.8	6.5	144.0	0.686	870.1	4.20	2441.6
				156.0				
	10:15	888.3	7.5	288.0	2.473	885.8	8.40	2480.7
	10:20	905.8	8.4	259.2	2.035	903.8	7.56	2496.9
	10:25	920.7	9.3	259.2	2.035	918.7	7.56	2508.4
	10:30	939.4	10.2	259.2	2.035	937.4	7.56	2516.9
	10:35	950.7	11.1	259.2	2.035	948.7	7.56	2523.6
	10:40	969.4	12.0	259.2	2.035	967.4	7.56	2530.4
	10:45	975.6	12.9	259.2	2.035	973.6	7.56	2543.6
	10:50	980.6	13.8	259.2	2.035	978.6	7.56	2554.9
	10:55	976.9	14.8	288.0	2.473	974.4	8.40	2563.1
	11:00	1003.1	15.7	259.2	2.035	1001.1	7.56	2568.5
	11:05	974.5	16.6	259.2	2.035	972.5	7.56	2572.3
	11:10	1003.2	17.6	288.0	2.473	1000.7	8.40	2579.2
				266.0				
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)
3	11:15	1028.3	19.1	432.0	5.236	1023.1	12.60	2628.2
	11:20	1085.7	20.7	460.8	5.900	1079.8	13.44	2644.5
	11:25	1080.8	22.3	460.8	5.900	1074.9	13.44	2658.1
	11:30	1070.9	23.8	432.0	5.236	1065.7	12.60	2668.3
	11:35	1089.6	25.4	460.8	5.900	1083.7	13.44	2678.6
	11:40	1082.2	26.9	432.0	5.236	1077.0	12.60	2685.6
	11:45	1084.9	28.4	432.0	5.236	1079.7	12.60	2693.0
	11:50	1109.8	29.9	432.0	5.236	1104.6	12.60	2700.1
	11:55	1122.3	31.5	460.8	5.900	1116.4	13.44	2708.9
	12:00	1121.1	33.0	432.0	5.236	1115.9	12.60	2712.9
	12:05	1119.8	34.5	432.0	5.236	1114.6	12.60	2719.9
	12:10	1134.8	36.1	460.8	5.900	1128.9	13.44	2730.0
				444.0				
	12:15	1214.7	38.5	691.2	12.492	1202.2	20.16	2776.2
	12:20	1228.3	40.8	662.4	11.546	1216.8	19.32	2794.4
	12:25	1223.3	43.1	662.4	11.546	1211.8	19.32	2806.3
	12:30	1233.4	45.5	691.2	12.492	1220.9	20.16	2820.0
	12:35	1255.9	47.8	662.4	11.546	1244.4	19.32	2830.6
	12:40	1249.6	50.2	691.2	12.492	1237.1	20.16	2839.6
	12:45	1254.6	52.4	633.6	10.635	1244.0	18.48	2848.4
4	12:50	1262.1	54.7	662.4	11.546	1250.6	19.32	2857.0
	12:55	1283.4	57.0	662.4	11.546	1271.9	19.32	2863.7
	1:00	1279.6	59.2	633.6	10.635	1269.0	18.48	2871.5
	1:05	1293.3	61.5	662.4	11.546	1281.8	19.32	2879.6
	1:10	1314.6	63.8	662.4	11.546	1303.1	19.32	2885.9
				664.8				
	1:15	1426.9	67.6	1094.4	29.231	1397.7	31.92	2939.6
	1:20	1450.6	71.3	1065.6	27.824	1422.8	31.08	2963.6
	1:25	1471.9	75.0	1065.6	27.824	1444.1	31.08	2979.8
	1:30	1491.8	78.8	1094.4	29.231	1462.6	31.92	2992.8
5	1:35	1496.8	82.6	1094.4	29.231	1467.6	31.92	3004.9
	1:40	1483.1	86.4	1094.4	29.231	1453.9	31.92	3013.5
	1:45	1483.0	90.1	1065.6	27.824	1455.2	31.08	3022.2
	1:50	1500.5	93.8	1065.6	27.824	1472.7	31.08	3031.1
	1:55	1490.5	97.5	1065.6	27.824	1462.7	31.08	3038.4
	2:00	1507.9	101.2	1065.6	27.824	1480.1	31.08	3045.5
	2:05	1494.2	104.8	1036.8	26.448	1467.8	30.24	3052.8
	2:10	1511.6	108.5	1065.6	27.824	1483.8	31.08	3058.6
				1072.8				

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)
6 FALLOFF	2:15	1632.7	113.7	1440.0	48.566	1584.1	42.00	3093.8
	2:20	1637.7	118.8	1468.8	50.378	1587.3	42.84	3108.9
	2:25	1646.4	123.9	1468.8	50.378	1596.0	42.84	3118.8
	2:30	1675.1	128.8	1411.2	46.785	1628.3	41.16	3128.0
	2:35	1701.4	133.8	1440.0	48.566	1652.8	42.00	3134.2
	2:40	1699.0	138.9	1468.8	50.378	1648.6	42.84	3143.9
	2:45	1720.2	143.9	1440.0	48.566	1671.6	42.00	3149.1
	2:50	1724.0	149.0	1468.8	50.378	1673.6	42.84	3154.3
	2:55	1735.2	154.0	1440.0	48.566	1686.6	42.00	3160.0
	3:00	1720.3	159.0	1440.0	48.566	1671.7	42.00	3165.7
	3:05	1717.8	164.0	1440.0	48.566	1669.2	42.00	3170.4
	3:10	1719.1	169.1	1468.8	50.378	1668.7	42.84	3175.1
				1454.4				
	3:11	1530.6				1530.6		3136.1
	3:12	1520.6				1520.6		3125.1
	3:13	1511.8				1511.8		3115.8
	3:14							3108.0
	3:15							3101.7
	3:20	1472.9				1472.9		3074.9
	3:25	1450.4				1450.4		3051.0

RHODES YATES UNIT #13



Presently, the well is injecting 15 BWPD at 1100 psi (surface)



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

BRUCE KING
GOVERNOR

2040 S. PACHECO
SANTA FE, NEW MEXICO 87505
(505) 827-7131

December 21, 1994

Yates Drilling Company
105 South 4th Street
Artesia, New Mexico 88210

Attn: Ms. Karen J. Leishman

***RE: Injection Pressure Increase South Loco Hills Unit Waterflood
Project Eddy County, New Mexico***

Dear Ms. Leishman:

Reference is made to your request dated December 12, 1994 to increase the surface injection pressure on one well. This request is based on a step rate tests conducted on December 1, 1994. 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.

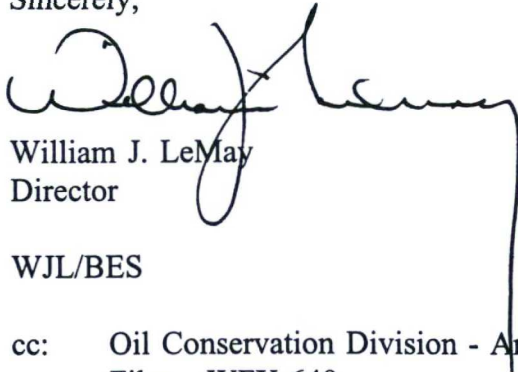
You are therefore authorized to increase the surface injection pressure on the following well:

Well and Location	Maximum Injection Surface Pressure
South Loco Hills Unit 1310' FSL & 130' FEL Unit P, Section 19, Township 18 South, Range 29 East	1125 PSIG
Located in Eddy County, New Mexico.	

Injection Pressure Increase
Yates Drilling Company
December 21, 1994
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/BES

cc: Oil Conservation Division - Artesia
File: WFX-640

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. 30-015-27052
5. Indicate Type of Lease STATE ☐ FEE ☐
6. State Oil & Gas Lease No.
7. Lease Name or Unit Agreement Name South Loco Hills Waterflood
8. Well No. 29
9. Pool name or Wildcat Loco Hills, QN, GRB, SA
10. Elevation (Show whether DF, RKB, RT, GR, etc.) 3532' GR

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 WIW
2. Name of Operator Yates Drilling Company
3. Address of Operator 105 South 4th St., Artesia, NM 88210
4. Well Location Unit Letter <u>P</u> : <u>1310</u> Feet From The <u>South</u> Line and <u>130</u> Feet From The <u>East</u> Line Section <u>19</u> Township <u>18S</u> Range <u>29E</u> NMPM <u>Eddy</u> County
10. Elevation (Show whether DF, RKB, RT, GR, etc.) 3532' 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 Higher 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.

Injection into subject well was approved by order WFX-640.
A step-rate test was conducted 12-1-94 on the subject well. The results of the test are attached.

We request permission to increase the wellhead injection pressure to the maximum allowable, based on the attached step-rate test results.

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

SIGNATURE John R. Rhoad TITLE Engineer DATE 12-12-94
TYPE OR PRINT NAME TELEPHONE NO.

(This space for State Use)

APPROVED BY TITLE DATE
CONDITIONS OF APPROVAL, IF ANY:

WEST-TEST, INC.

A SUBSIDIARY OF JOHN WEST ENGINEERING COMPANY
Hobbs, New Mexico

STEP RATE INJECTION TEST

CLIENT: YATES DRILLING COMPANY

DATE: DECEMBER 1, 1994

WELL NAME: LOCO HILLS SOUTH UNIT NO. 29
EDDY COUNTY, NEW MEXICO

WO#: 94-14-2057

PERFS = 2375-2383

PACKER DEPTH = 2335

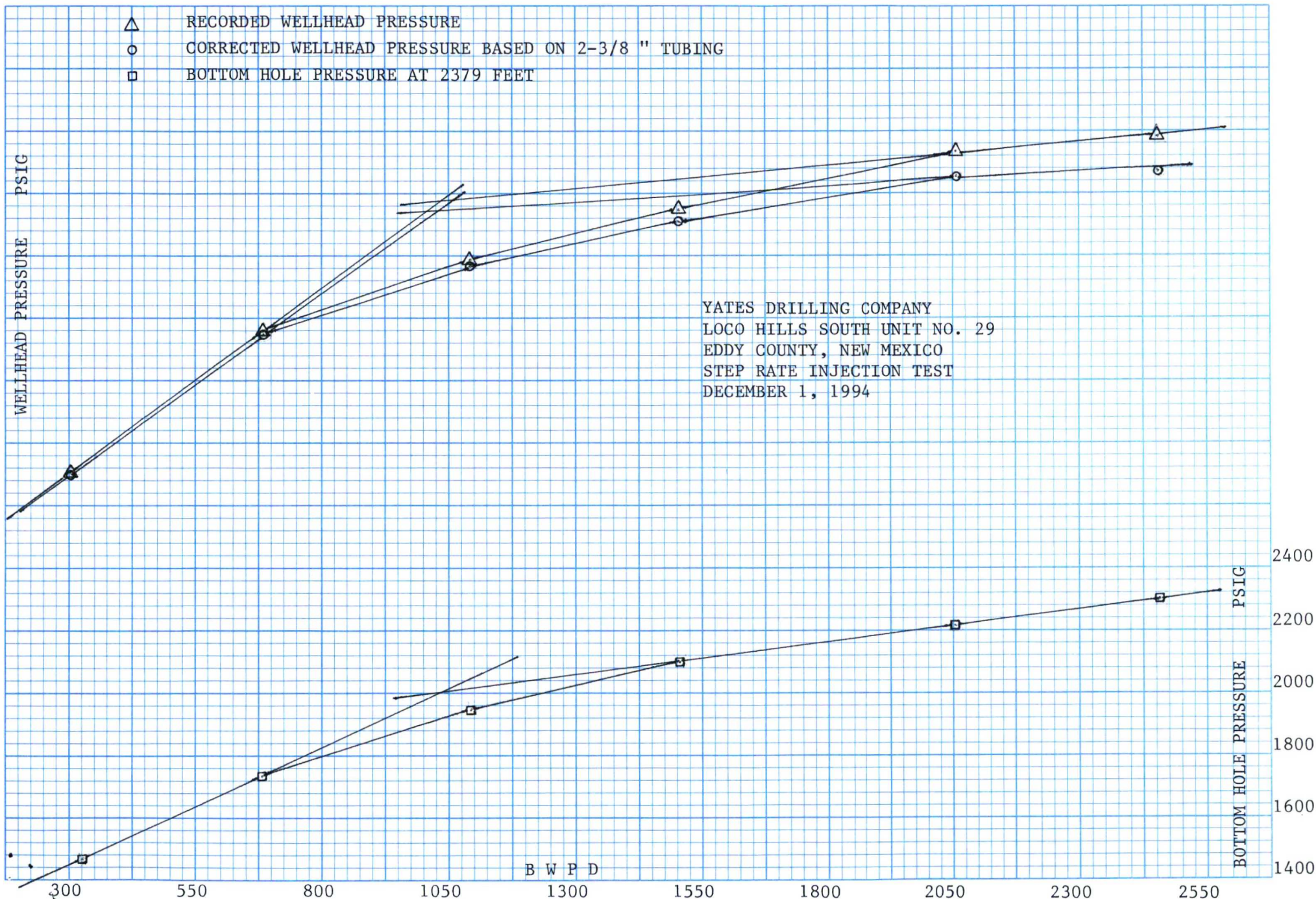
BHP GAUGE DEPTH = 2379

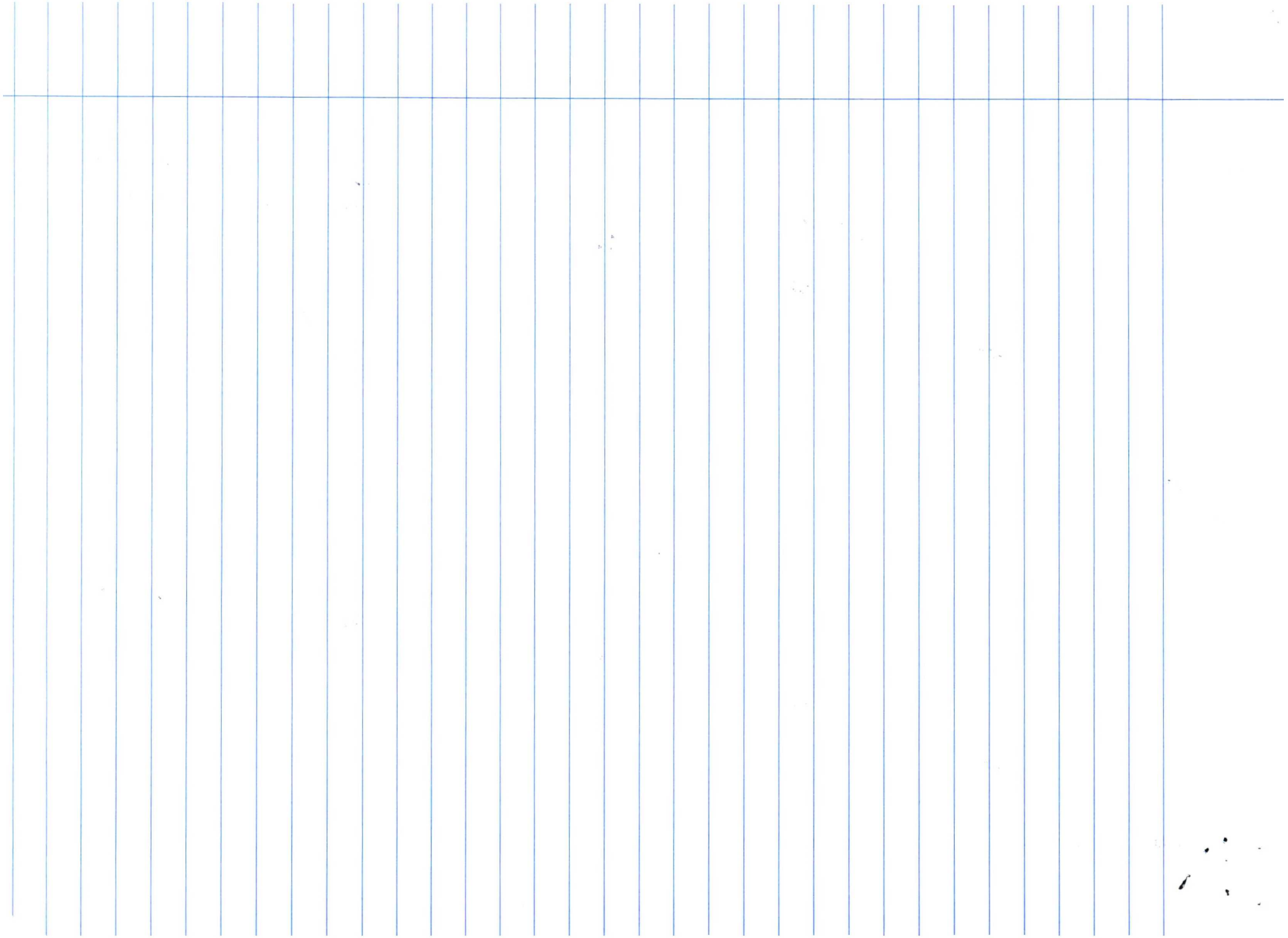
STEP NO. & REMARKS	TIME	(1) SURFACE TUBING PRESS. (psig)	(2) CUMMULATIVE VOL. INJECTED (bbls)	(3) INJECTION RATE (bbls/day)	(4) FRICTION HEAD LOSS (psi)	(5) CORRECTED TUBING PRESS. (psi) (1)-(4)	(6) INJECTION RATE (gpm) (3)/34.2857	(7) MEASURED BHP (psi)
1	9:50	263.5				263.5		1271.0
	9:55	379.5	1.2	345.6	2.875	376.6	10.08	1340.0
	10:00	316.8	2.3	316.8	2.447	314.4	9.24	1392.0
	10:05	316.8	3.4	316.8	2.447	314.4	9.24	1466.0
				326.3				
2	10:10	600.3	5.7	662.4	9.579	590.7	19.32	1545.0
	10:15	684.5	8.1	691.2	10.363	674.1	20.16	1623.0
	10:20	759.7	10.5	691.2	10.363	749.3	20.16	1731.0
3				681.5				
	10:25	841.4	14.3	1094.4	24.250	817.1	31.92	1800.0
	10:30	895.0	18.0	1065.6	23.083	871.9	31.08	1873.0
	10:35	992.1	21.9	1123.2	25.444	966.7	32.76	1946.0
				1094.4				
4	10:40	1062.4	27.1	1497.6	43.323	1019.1	43.68	2007.0
	10:45	1103.3	32.4	1526.4	44.877	1058.4	44.52	2052.0
	10:50	1153.2	37.6	1497.6	43.323	1109.9	43.68	2102.0
				1507.1				
5	10:55	1186.5	44.4	1958.4	71.163	1115.3	57.12	2135.0
	11:00	1274.7	51.7	2102.4	81.145	1193.6	61.32	2166.0
	11:05	1334.9	59.0	2102.4	81.145	1253.8	61.32	2209.0
				2054.3				
6	11:10	1361.7	67.6	2476.8	109.885	1251.8	72.24	2237.0
	11:15	1375.7	76.1	2448.0	107.533	1268.2	71.40	2277.0
	11:20	1385.9	84.6	2448.0	107.533	1278.4	71.40	2306.0
				2457.5				

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)
FALLOFF	11:21	1220.7				1220.7		2261.0
	11:22	1205.3				1205.3		2244.0
	11:23	1189.9				1189.9		2228.0
	11:24	1178.4				1178.4		2213.0
	11:25	1168.1				1168.1		2199.0
	11:30	1127.1				1127.1		2149.0
	11:35	1102.7				1102.7		2102.0

- △ RECORDED WELLHEAD PRESSURE
- CORRECTED WELLHEAD PRESSURE BASED ON 2-3/8 " TUBING
- BOTTOM HOLE PRESSURE AT 2379 FEET

YATES DRILLING COMPANY
 LOCO HILLS SOUTH UNIT NO. 29
 EDDY COUNTY, NEW MEXICO
 STEP RATE INJECTION TEST
 DECEMBER 1, 1994





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.
30-015-27052
5. Indicate Type of Lease STATE ☐ FEE ☐
6. State Oil & Gas Lease No.

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.)	
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NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐
TEMPORARILY ABANDON ☐ CHANGE PLANS ☐
PULL OR ALTER CASING ☐
OTHER: Request for Higher Injection Pressure ☒

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐
COMMENCE DRILLING OPNS. ☐ PLUG AND ABANDONMENT ☐
CASING TEST AND CEMENT JOB ☐
OTHER: ☐

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Injection into subject well was approved by order WFX-640.

A step-rate test was conducted 12-1-94 on the subject well. The results of the test are attached.

We request permission to increase the wellhead injection pressure to the maximum allowable, based on the attached step-rate test results.

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

SIGNATURE John R. Rhoad TITLE Engineer DATE 12-12-94
TYPE OR PRINT NAME TELEPHONE NO.

(This space for State Use)

APPROVED BY _____ TITLE _____ DATE _____
CONDITIONS OF APPROVAL, IF ANY:

WEST-TEST, INC.

A SUBSIDIARY OF JOHN WEST ENGINEERING COMPANY

Hobbs, New Mexico

STEP RATE INJECTION TEST

CLIENT: YATES DRILLING COMPANY

DATE: DECEMBER 1, 1994

WELL NAME: LOCO HILLS SOUTH UNIT NO. 29
EDDY COUNTY, NEW MEXICO

WO#: 94-14-2057

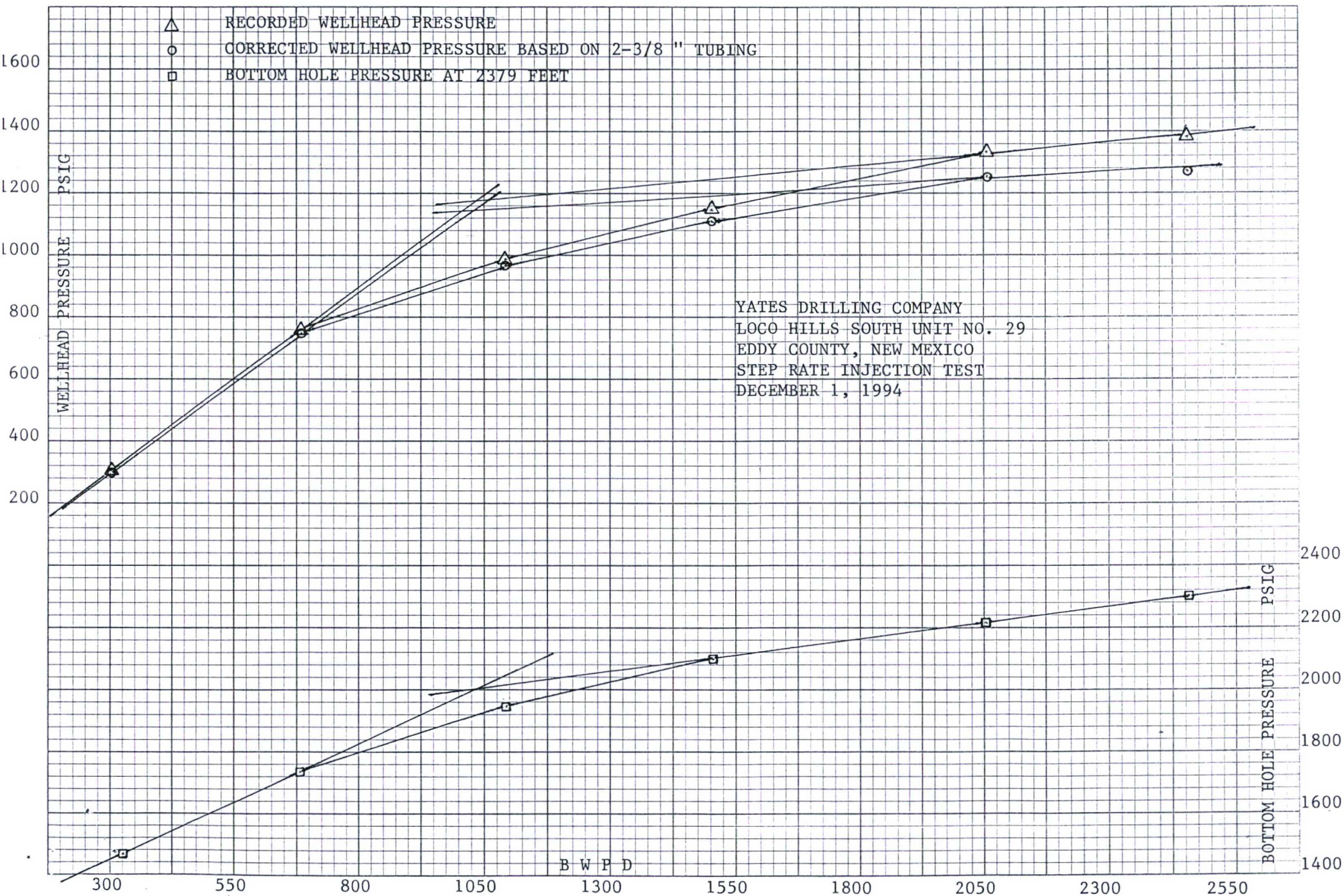
PERFS = 2375-2383

PACKER DEPTH = 2335

BHP GAUGE DEPTH = 2379

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)
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Energy, Minerals and Natural Resources Department

Form C-103
Revised 1-1-89

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OIL CONSERVATION DIVISION
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30-015-27052
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TEMPORARILY ABANDON ☐ CHANGE PLANS ☐
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SUBSEQUENT REPORT OF:

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COMMENCE DRILLING OPNS. ☐ PLUG AND ABANDONMENT ☐
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SIGNATURE John Rhoad TITLE Engineer DATE 12-12-94
TYPE OR PRINT NAME TELEPHONE NO.

(This space for State Use)

APPROVED BY TITLE DATE

CONDITIONS OF APPROVAL, IF ANY:

WEST-TEST, INC.
A SUBSIDIARY OF JOHN WEST ENGINEERING COMPANY
Hobbs, New Mexico

STEP RATE INJECTION TEST

CLIENT: YATES DRILLING COMPANY

DATE: DECEMBER 1, 1994

WELL NAME: LOCO HILLS SOUTH UNIT NO. 29
EDDY COUNTY, NEW MEXICO

WO#: 94-14-2057

PERFS = 2375-2383

PACKER DEPTH = 2335

BHP GAUGE DEPTH = 2379

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)
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