



NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

April 30, 1998

The Wiser Oil Company
P.O. Box 2568
Hobbs, New Mexico 88241-2568

Attn: G.M. Jones

CF 10094

R-9325

WFX 677

PDEV0020606770

WFX 696

PDEV0020600696

RE: Injection Pressure Increase, Maljamar Grayburg Unit, Lea County, New Mexico

Reference is made to your request dated November 12, 1997 to increase the surface injection pressure on 5 wells in the above referenced waterflood project. This request is based on step rate tests conducted between November 3 and 7, 1997. 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:

<i>Well and Location</i>	<i>Maximum Surface Injection Pressure</i>
Maljamar Grayburg Unit Well No.4 Unit Letter 'G', Section 3, Township 17 South, Range 32 East	2500 PSIG
Maljamar Grayburg Unit Well No.8 Unit Letter 'K', Section 3, Township 17 South, Range 32 East	1875 PSIG
Maljamar Grayburg Unit Well No.15 Unit Letter 'E', Section 4, Township 17 South, Range 32 East	1957 PSIG
Maljamar Grayburg Unit Well No.152 Unit Letter 'F', Section 4, Township 17 South, Range 32 East	2395 PSIG
Maljamar Grayburg Unit Well No.154 Unit Letter 'I', Section 4, Township 17 South, Range 32 East	2574 PSIG
Located in Lea County, New Mexico.	

Injection Pressure Increase
The Wiser Oil Company
April 22, 1998
Page 2

The Division Director may rescind these injection pressure increases 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 cursive script, reading "Lori Wrotenberg".

Lori Wrotenberg
Director

LW/BES/lv

cc: Oil Conservation Division - Hobbs
Files: Case No.10094; WFXs-677, 696; PSI-X 4th QTR-98 ✓



THE WISER OIL COMPANY

P.O. BOX 2568 • HOBBS, NM 88241
(Phone) 505-392-9797
(FAX) 505-392-8971



November 10, 1997

Mr. Ben Stone
NMOCD
2040 South Pacheco Street
Santa Fe, NM 87505

Dear Ben:

Enclosed, please find step rate injection tests for the Maljamar Grayburg Unit Well Nos. 4, 8, 15, 152, and 154 as per Mr. LeMay's request of October 31, 1997. A copy of said request is attached for you quick reference.

Again, thank you for all your help, and let me know if you need anything else.

Sincerely,

Stacey M. Crawford
Stacey M. Crawford

Cc: Bonnie(Hobbs OCD).

Enclosures: as stated.

2508
1875
1957
2395

2574

4 G 3.17.32
8 K 3.17.32
15 E 4.17.32
152 F 4.17.32
154 I 4.17.32

wfy 677
696



NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

October 31, 1997

The Wiser Oil Company
P.O. Drawer 2568
Hobbs, New Mexico 88241-2568

Attn: Ms. Stacey Crawford

**RE: Injection Pressure Increase,
Maljamar Grayburg Unit Waterflood Project,
Eddy County, New Mexico**

Dear Ms. Crawford:

Reference is made to your request dated July 16, 1997, and additional data submitted on October 8, 1997, to increase the surface injection pressure on a field-wide group of wells in the above referenced waterflood project. This request is based on 9 step rate tests conducted between May 14 and September 30, 1997. The results of the tests have been reviewed by my staff. Injection pressure increases on two wells which were tested, the MGBU Nos.8 and 15 and adjacent wells to be affected, well numbers 4, 152 and 154, are hereby denied due to questionable test results. At this time, we feel an increase in injection pressure on the remaining 7 wells with recent tests, 7 adjacent wells affected by these tests, and 4 wells to be affected by previous test data should be approved.

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

<i>Recently Tested Well Name and Number</i>	<i>Adjacent Well Name and Number</i>	<i>Section 4 ULSTR</i>	<i>Authorized Pressure</i>
MGBU Well No.20		J-4-17S-32E	2130 PSIG
	MGBU Well No.17	G-4-17S-32E	2290 PSIG
	MGBU Well No.27	O-4-17S-32E	2290 PSIG
MGBU Well No.28		P-4-17S-32E	2430 PSIG
	MGBU Well No.10	M-5-17S-32E	2290 PSIG
	MGBU Well No.19	I-4-17S-32E	2290 PSIG
MGBU Well No.18		H-4-17S-32E	2430 PSIG
MGBU Well No.21		K-4-17S-32E	2250 PSIG
MGBU Well No.153		N-4-17S-32E	2205 PSIG

Note: The mean injection pressure of all Section 4 step rate tested wells (2290 psig) was used to apply to all adjacent Section 4 (Well No.10 in Section 5) wells.

Further, the following 3 adjacent wells located in Section 10 are hereby approved for injection pressure increases based on recent step rate tests on 2 wells:

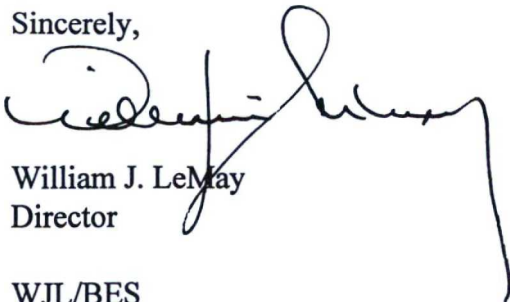
<i>Recently Tested Well Name and Number</i>	<i>Adjacent Well Name and Number</i>	<i>Section 10 ULSTR</i>	<i>Authorized Pressure</i>
MGBU Well No.51		C-10-17S-32E	2110 PSIG
	MGBU Well No.151	B-10-17S-32E	2110 PSIG
MGBU Well No.53		E-10-17S-32E	1900 PSIG
	MGBU Well No.155	F-10-17S-32E	1900 PSIG
	MGBU Well No.59	K-10-17S-32E	1900 PSIG

Additionally, the following 4 adjacent wells located in Section 3 are hereby approved for injection pressure increases based on previous step rate test results obtained on 2 wells:

<i>Previously Tested Well Name and Number</i>	<i>Adjacent Well Name and Number</i>	<i>Section 3 ULSTR</i>	<i>Authorized Pressure</i>
MGBU Well No.6		I-3-17S-32E	1594 PSIG
	MGBU Well No.5	H-13-17S-32E	1594 PSIG
	MGBU Well No.13	P-3-17S-32E	1594 PSIG
MGBU Well No.150		J-3-17S-32E	1713 PSIG
	MGBU Well No.11	N-3-17S-32E	1713 PSIG
	MGBU Well No.12	O-3-17S-32E	1713 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

cc: Oil Conservation Division - Artesia
File: Case File No3507; WFXs-650 and 677; PSI-X 2ndQTR 98

WEST-TEST, INC.

A SUBSIDIARY OF JOHN WEST ENGINEERING COMPANY

Hobbs, New Mexico

STEP RATE INJECTION TEST

CLIENT: THE WISER OIL COMPANY

DATE: NOVEMBER 4, 1997

WELL NAME: MALJAMAR GRAYBURG UNIT NO. 154
LEA COUNTY, NEW MEXICO

WO#: 97-14-1828

PERFS = 3823-3990

PACKER DEPTH = 3747

BHP GAUGE DEPTH = 3907

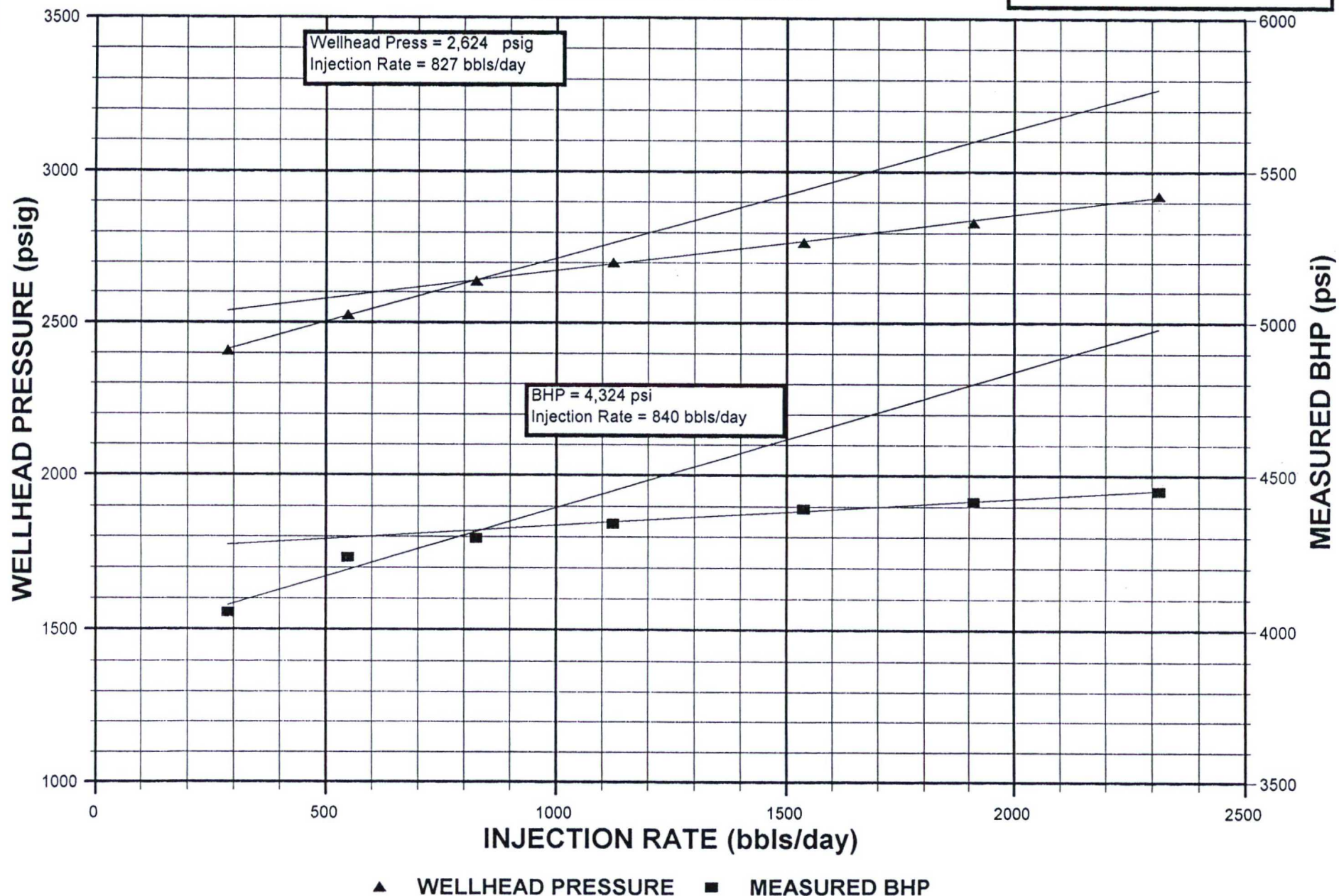
STEP NO. & REMARKS	TIME	(1) SURFACE TUBING PRESS. (psig)	(2) CUMMULATIVE VOL. INJECTED (bbls)	(3) INJECTION RATE (bbls/day)	(4) FRICTION HEAD LOSS (psi)	(5) CORRECTED TUBING PRESS. (psi) (1)-(4)	(6) INJECTION RATE (gpm) (3)/34.2857	(7) MEASURED BHP (psi)
	9:55	16.2				16.2		1779.0
	10:00	2357.1	1.0	288.0	3.369	2353.7	8.40	4027.6
	10:05	2292.1	2.0	288.0	3.369	2288.7	8.40	4103.4
1	10:10	2411.7	3.0	288.0	3.369	2408.3	8.40	4057.4
				288.0				
	10:15	2486.7	5.2	633.6	14.489	2472.2	18.48	4213.3
	10:20	2519.7	6.8	460.8	8.039	2511.7	13.44	4229.4
2	10:25	2527.3	8.7	547.2	11.047	2516.3	15.96	4233.5
				547.2				
	10:30	2621.4	11.5	806.4	22.636	2598.8	23.52	4289.8
	10:35	2609.9	14.4	835.2	24.155	2585.7	24.36	4290.8
3	10:40	2639.2	17.3	835.2	24.155	2615.0	24.36	4298.5
				825.6				
	10:45	2692.6	21.2	1123.2	41.786	2650.8	32.76	4350.9
	10:50	2693.8	25.1	1123.2	41.786	2652.0	32.76	4352.1
4	10:55	2702.7	29.0	1123.2	41.786	2660.9	32.76	4344.4
				1123.2				
	11:00	2776.5	34.3	1526.4	73.701	2702.8	44.52	4390.5
	11:05	2765.1	39.7	1555.2	76.294	2688.8	45.36	4390.6
5	11:10	2768.9	45.0	1526.4	73.701	2695.2	44.52	4393.8
				1536.0				
	11:15	2824.8	51.6	1900.8	110.591	2714.2	55.44	4406.0
	11:20	2831.2	58.3	1929.6	113.711	2717.5	56.28	4414.2
6	11:25	2836.3	64.9	1900.8	110.591	2725.7	55.44	4418.1
				1910.4				
	11:30	2921.6	72.9	2304.0	157.863	2763.7	67.20	4449.9
	11:35	2922.9	81.0	2332.8	161.533	2761.4	68.04	4453.1
7	11:40	2925.5	89.0	2304.0	157.863	2767.6	67.20	4452.9
				2313.6				

		(1)	(2)	(3)	(4)	(5)	(6)	(7)
STEP NO. & REMARKS	TIME	SURFACE TUBING PRESS. (psig)	CUMMULATIVE VOL. INJECTED (bbls)	INJECTION RATE (bbls/day)	FRICTION HEAD LOSS (psi)	CORRECTED TUBING PRESS. (psi) (1) - (4)	INJECTION RATE (gpm) (3)/34.2857	MEASURED BHP (psi)
FALLOFF	11:41	2452.2				2452.2		4144.9
	11:42	2345.4				2345.4		4038.6
	11:43	2274.1				2274.1		3966.1
	11:44	2220.7				2220.7		3911.4
	11:45	2174.9				2174.9		3865.5
	11:50	1968.9				1968.9		3658.0
	11:55	1772.3				1772.3		3460.7

STEP RATE INJECTION TEST

THE WISER OIL COMPANY

Well Name:
Maljamar Grayburg Unit No. 154
Lea County, New Mexico



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

STEP RATE INJECTION TEST

CLIENT: THE WISER OIL COMPANY

DATE: NOVEMBER 5, 1997

WELL NAME: MALJAMAR GRAYBURG UNIT NO. 152
LEA COUNTY, NEW MEXICO

WO#: 97-14-1827

PERFS = 3889-4051

PACKER DEPTH = 3812

BHP GAUGE DEPTH = 3970

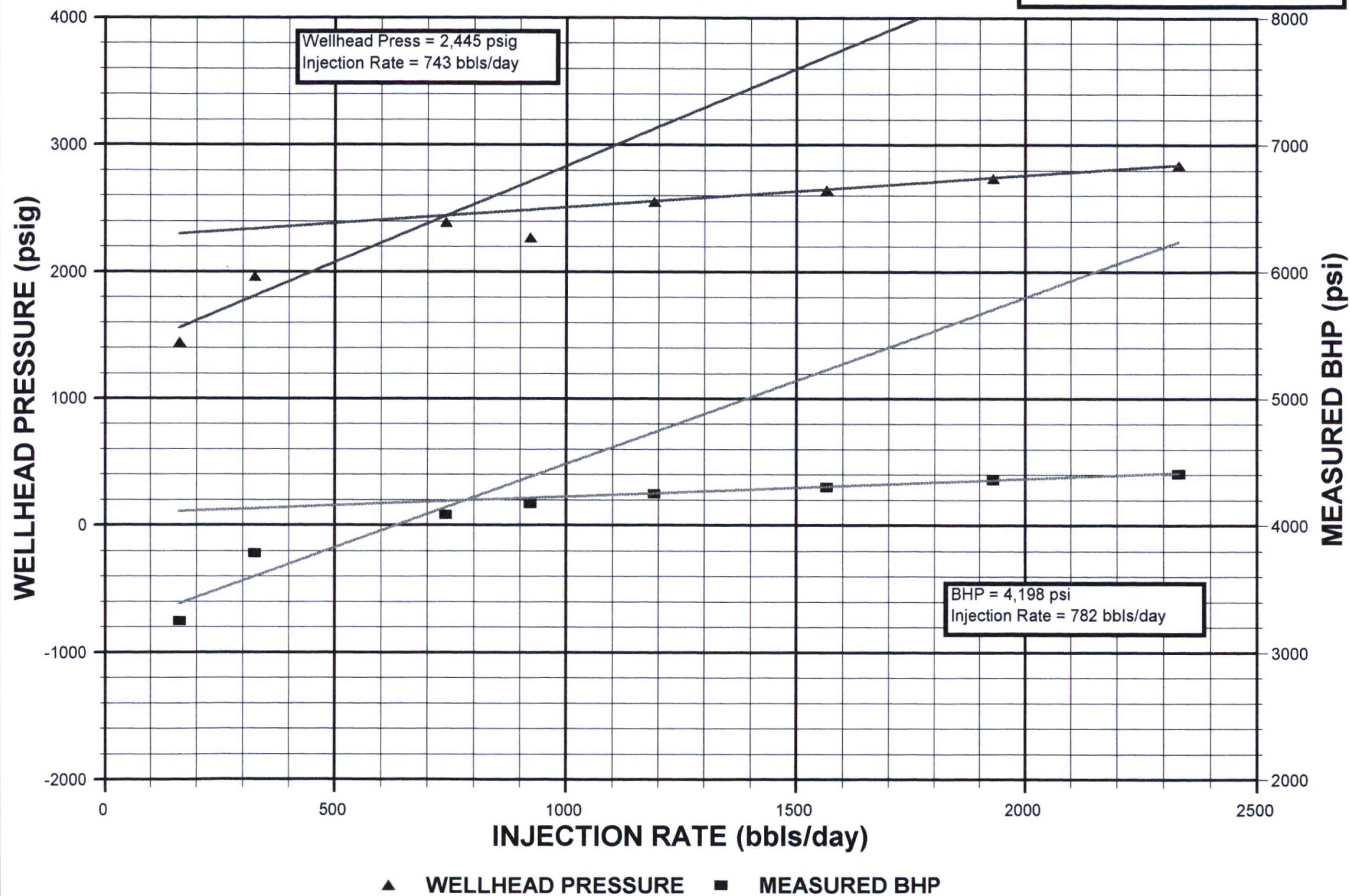
STEP NO. & REMARKS	TIME	(1) SURFACE TUBING PRESS. (psig)	(2) CUMMULATIVE VOL. INJECTED (bbls)	(3) INJECTION RATE (bbls/day)	(4) FRICTION HEAD LOSS (psi)	(5) CORRECTED TUBING PRESS. (psi) (1)-(4)	(6) INJECTION RATE (gpm) (3)/34.2857	(7) MEASURED BHP (psi)
1	10:00	695.3				695.3		2514.3
	10:05	1278.6	0.6	172.8	1.331	1277.3	5.04	3034.1
	10:10	1339.3	1.2	172.8	1.331	1338.0	5.04	3185.8
	10:15	1449.5	1.7	144.0	0.950	1448.6	4.20	3250.8
				163.2				
2	10:20	1822.2	2.8	316.8	4.084	1818.1	9.24	3621.5
	10:25	1940.0	4.0	345.6	4.797	1935.2	10.08	3696.5
	10:30	1966.6	5.1	316.8	4.084	1962.5	9.24	3786.2
3				326.4				
	10:35	2175.1	7.7	748.8	20.055	2155.0	21.84	3997.6
	10:40	2316.2	10.3	748.8	20.055	2296.1	21.84	4054.2
	10:45	2395.1	12.8	720.0	18.651	2376.4	21.00	4089.2
				739.2				
4	10:50	2730.9	16.0	921.6	29.447	2701.5	26.88	4156.2
	10:55	2605.0	19.2	921.6	29.447	2575.6	26.88	4165.7
	11:00	2275.5	22.4	921.6	29.447	2246.1	26.88	4175.8
				921.6				
5	11:05	2531.1	26.5	1180.8	46.576	2484.5	34.44	4215.3
	11:10	2490.3	30.7	1209.6	48.699	2441.6	35.28	4232.1
	11:15	2557.7	34.8	1180.8	46.576	2511.1	34.44	4252.2
				1190.4				
	11:20	2627.7	40.0	1497.6	72.297	2555.4	43.68	4282.2
6	11:25	2641.6	45.5	1584.0	80.201	2561.4	46.20	4296.0
	11:30	2651.8	51.1	1612.8	82.920	2568.9	47.04	4308.4
				1564.8				
	11:35	2715.3	57.8	1929.6	115.545	2599.8	56.28	4331.3
7	11:40	2731.9	64.5	1929.6	115.545	2616.4	56.28	4348.6
	11:45	2743.3	71.2	1929.6	115.545	2627.8	56.28	4362.6
				1929.6				

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)
8 FALLOFF	11:50	2827.3	79.3	2332.8	164.138	2663.2	68.04	4395.8
	11:55	2834.9	87.4	2332.8	164.138	2670.8	68.04	4399.9
	12:00	2845.1	95.5	2332.8	164.138	2681.0	68.04	4410.4
				2332.8				
	12:01	2602.1				2602.1		4348.5
	12:02	2576.6				2576.6		4315.1
	12:03	2548.7				2548.7		4285.8
	12:04	2521.9				2521.9		4259.0
	12:05	2497.8				2497.8		4234.5
	12:10	2388.4				2388.4		4121.7
	12:15	2279.0				2279.0		4009.9

STEP RATE INJECTION TEST

THE WISER OIL COMPANY

Well Name:
Maljamar Grayburg Unit No. 152
Lea County, New Mexico



WEST-TEST, INC.

A SUBSIDIARY OF JOHN WEST ENGINEERING COMPANY
Hobbs, New Mexico

STEP RATE INJECTION TEST

CLIENT: THE WISER OIL COMPANY

DATE: NOVEMBER 3, 1997

WELL NAME: MALJAMAR GRAYBURG UNIT NO. 15
LEA COUNTY, NEW MEXICO

WO#: 97-14-1826

PERFS = 3848-4060

PACKER DEPTH = 3781

BHP GAUGE DEPTH = 3954

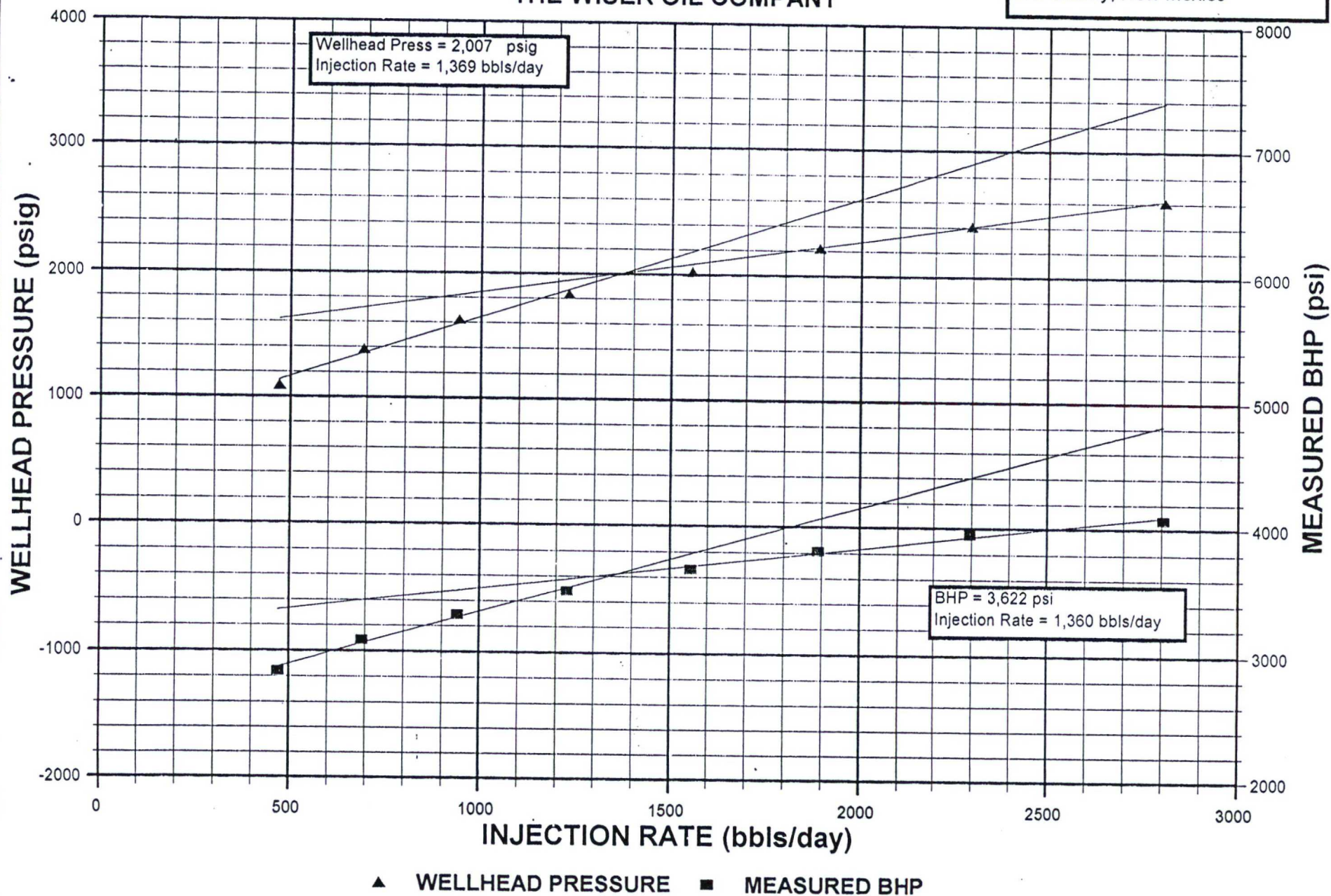
STEP NO. & REMARKS	TIME	(1) SURFACE TUBING PRESS. (psig)	(2) CUMMULATIVE VOL. INJECTED (bbls)	(3) INJECTION RATE (bbls/day)	(4) FRICTION HEAD LOSS (psi)	(5) CORRECTED TUBING PRESS. (psi) (1)-(4)	(6) INJECTION RATE (gpm) (3)/34.2857	(7) MEASURED BHP (psi)
1	10:35	677.1				677.1		2469.1
	10:40	909.3	1.6	460.8	8.135	901.2	13.44	2690.3
	10:45	1027.3	3.2	460.8	8.135	1019.2	13.44	2783.3
	10:50	1099.5	4.9	489.6	9.101	1090.4	14.28	2847.2
				470.4				
2	10:55	1249.0	7.3	691.2	17.225	1231.8	20.16	2970.6
	11:00	1320.0	9.7	691.2	17.225	1302.8	20.16	3038.2
	11:05	1388.4	12.1	691.2	17.225	1371.2	20.16	3090.1
3				691.2				
	11:10	1522.7	15.4	950.4	31.046	1491.7	27.72	3192.1
	11:15	1579.8	18.6	921.6	29.328	1550.5	26.88	3250.4
	11:20	1629.2	21.9	950.4	31.046	1598.2	27.72	3295.8
4				940.8				
	11:25	1731.8	26.2	1238.4	50.661	1681.1	36.12	3389.2
	11:30	1801.5	30.5	1238.4	50.661	1750.8	36.12	3446.1
	11:35	1839.5	34.7	1209.6	48.503	1791.0	35.28	3487.8
5				1228.8				
	11:40	1948.5	40.1	1555.2	77.212	1871.3	45.36	3571.6
	11:45	1995.3	45.5	1555.2	77.212	1918.1	45.36	3624.0
	11:50	2029.6	50.9	1555.2	77.212	1952.4	45.36	3663.4
6				1555.2				
	11:55	2150.5	57.5	1900.8	111.922	2038.6	55.44	3736.1
	12:00	2195.0	64.0	1872.0	108.805	2086.2	54.60	3779.7
	12:05	2225.5	70.6	1900.8	111.922	2113.6	55.44	3815.7
7				1891.2				
	12:10	2314.6	78.4	2246.4	152.452	2162.1	65.52	3881.8
	12:15	2374.3	86.5	2332.8	163.476	2210.8	68.04	3927.6
	12:20	2413.7	94.5	2304.0	159.762	2253.9	67.20	3959.2
				2294.4				

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)
8	12:25	2552.4	104.2	2793.6	228.184	2324.2	81.48	4020.7
	12:30	2589.2	113.9	2793.6	228.184	2361.0	81.48	4056.2
	12:35	2617.2	123.7	2822.4	232.555	2384.6	82.32	4081.9
				2803.2				
	12:40	2736.8	134.8	3196.8	292.823	2444.0	93.24	4122.2
	OUT OF WATER							
	12:41	2336.0				2336.0		4063.0
	12:42	2301.6				2301.6		4034.7
	12:43	2278.7				2278.7		4011.1
	12:44	2255.8				2255.8		3990.1
	12:45	2236.7				2236.7		3969.7
	12:50	2155.3				2155.3		3886.6
	12:55	2089.2				2089.2		3819.5

STEP RATE INJECTION TEST

THE WISER OIL COMPANY

Well Name:
Maljamar Grayburg Unit No. 15
Lea County, New Mexico



WEST-TEST, INC.

A SUBSIDIARY OF JOHN WEST ENGINEERING COMPANY

Hobbs, New Mexico

STEP RATE INJECTION TEST

CLIENT: THE WISER OIL COMPANY

DATE: NOVEMBER 6, 1997

WELL NAME: MALJAMAR GRAYBURG UNIT NO. 8
LEA COUNTY, NEW MEXICO

WO#: 97-14-1825

PERFS = 4057-4244

PACKER DEPTH = 3997

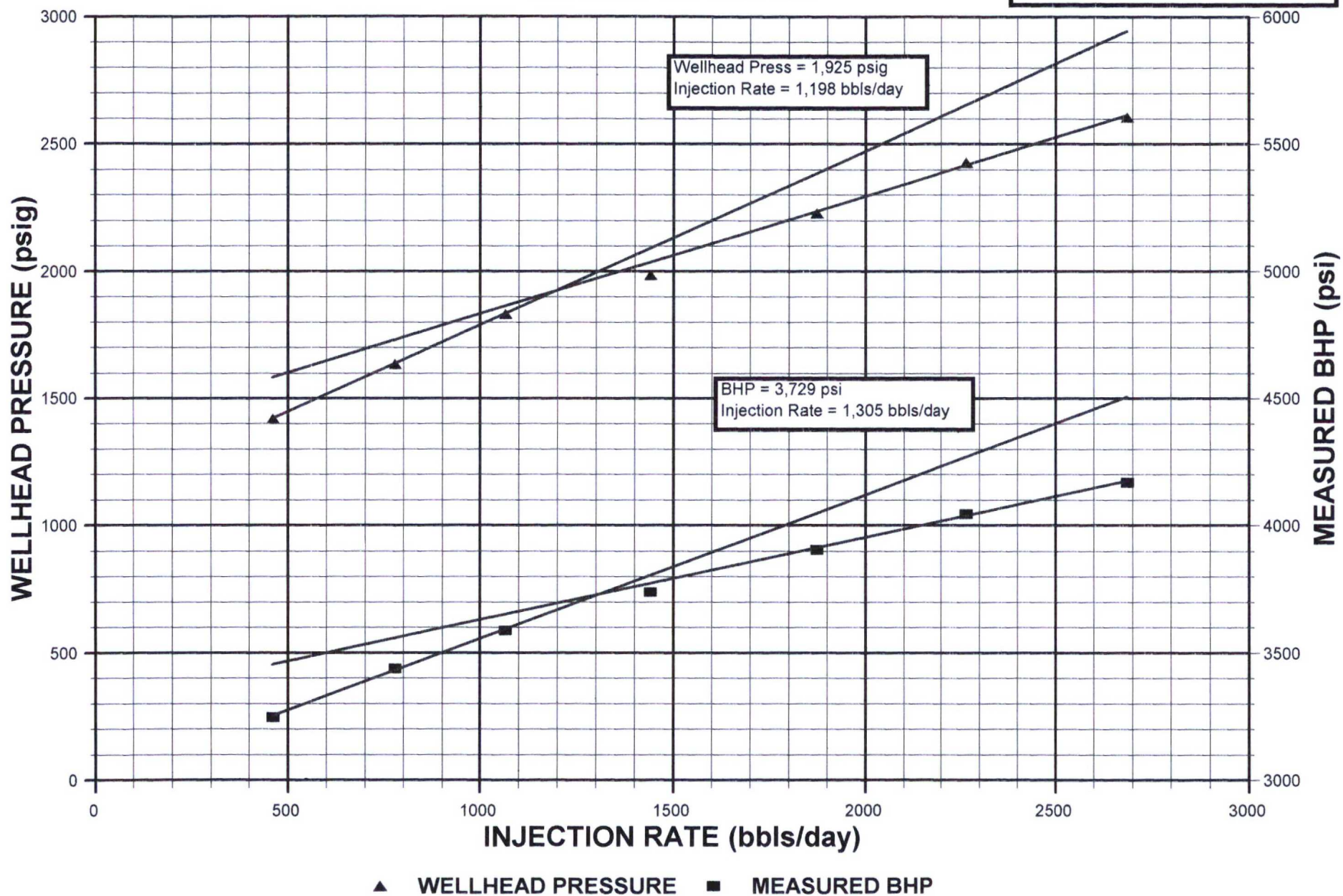
BHP GAUGE DEPTH = 4150

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	1101.2				1101.2		2972.3
	9:55	1326.9	1.6	460.8	8.539	1318.4	13.44	3162.6
	10:00	1376.4	3.2	460.8	8.539	1367.9	13.44	3216.3
	10:05	1422.1	4.8	460.8	8.539	1413.6	13.44	3249.2
2	10:10	1576.8	7.5	777.6	22.480	1554.3	22.68	3364.4
	10:15	1602.2	10.2	777.6	22.480	1579.7	22.68	3408.9
	10:20	1637.7	12.9	777.6	22.480	1615.2	22.68	3440.5
				777.6				
3	10:25	1764.5	16.6	1065.6	40.266	1724.2	31.08	3524.8
	10:30	1801.2	20.3	1065.6	40.266	1760.9	31.08	3561.5
	10:35	1835.5	24.0	1065.6	40.266	1795.2	31.08	3589.4
				1065.6				
4	10:40	1959.7	29.0	1440.0	70.285	1889.4	42.00	3676.5
	10:45	1987.6	34.0	1440.0	70.285	1917.3	42.00	3713.6
	10:50	1987.6	39.0	1440.0	70.285	1917.3	42.00	3741.1
				1440.0				
5	10:55	2160.6	45.4	1843.2	110.969	2049.6	53.76	3833.3
	11:00	2203.8	52.0	1900.8	117.470	2086.3	55.44	3874.7
	11:05	2231.8	58.5	1872.0	114.198	2117.6	54.60	3907.2
				1872.0				
6	11:10	2360.3	66.4	2275.2	163.825	2196.5	66.36	3980.9
	11:15	2389.6	74.2	2246.4	160.009	2229.6	65.52	4019.7
	11:20	2430.3	82.1	2275.2	163.825	2266.5	66.36	4048.7
				2265.6				
7	11:25	2561.3	91.3	2649.6	217.158	2344.1	77.28	4118.9
	11:30	2594.4	100.8	2736.0	230.440	2364.0	79.80	4150.1
	11:35	2609.7	110.1	2678.4	221.545	2388.2	78.12	4171.4
				2688.0				

STEP RATE INJECTION TEST

THE WISER OIL COMPANY

Well Name:
Maljamar Grayburg Unit No. 8
Lea County, New Mexico



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

STEP RATE INJECTION TEST

CLIENT: THE WISER OIL COMPANY

DATE: NOVEMBER 7, 1997

WELL NAME: MALJAMAR GRAYBURG UNIT NO. 4
LEA COUNTY, NEW MEXICO

WO#: 97-14-1824

PERFS = 4063-4279

PACKER DEPTH = 4025

BHP GAUGE DEPTH = 4171

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	10:05	1155.6				1155.6		3053.2
	10:10	1827.3	1.5	432.0	7.616	1819.7	12.60	3702.8
	10:15	1965.4	3.1	460.8	8.582	1956.8	13.44	3838.5
	10:20	2052.8	4.6	432.0	7.616	2045.2	12.60	3908.2
				451.6				
2	10:25	2204.1	6.8	633.6	15.468	2188.6	18.48	4039.8
	10:30	2271.4	9.0	633.6	15.468	2255.9	18.48	4095.8
	10:35	2327.2	11.2	633.6	15.468	2311.7	18.48	4138.2
3				633.6				
	10:40	2463.2	14.2	864.0	27.456	2435.7	25.20	4231.1
	10:45	2501.3	17.2	864.0	27.456	2473.8	25.20	4272.1
	10:50	2526.7	20.2	864.0	27.456	2499.2	25.20	4302.4
				864.0				
4	10:55	2600.4	23.8	1036.8	38.470	2561.9	30.24	4353.2
	11:00	2605.4	27.5	1065.6	40.470	2564.9	31.08	4377.2
	11:05	2640.9	31.1	1036.8	38.470	2602.4	30.24	4396.2
5				1046.4				
	11:10	2709.6	35.8	1353.6	63.000	2646.6	39.48	4442.2
	11:15	2718.4	40.5	1353.6	63.000	2655.4	39.48	4460.9
	11:20	2728.6	45.1	1324.8	60.543	2668.1	38.64	4472.9
				1344.0				
6	11:25	2799.8	50.7	1612.8	87.118	2712.7	47.04	4509.4
	11:30	2802.4	56.2	1584.0	84.262	2718.1	46.20	4522.3
	11:35	2813.8	61.8	1612.8	87.118	2726.7	47.04	4532.7
				1603.2				

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)
FALLOFF	11:36	2635.7				2635.7		4447.3
	11:37	2603.8				2603.8		4418.9
	11:38	2583.5				2583.5		4396.2
	11:39	2563.1				2563.1		4375.8
	11:40	2544.0				2544.0		4357.1
	11:45	2465.1				2465.1		4276.1
	11:50	2400.1				2400.1		4210.3

STEP RATE INJECTION TEST

THE WISER OIL COMPANY

Well Name:
Maljamar Grayburg Unit No. 4
Lea County, New Mexico

