



NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT

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

May 21, 1998

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

Attn: G. Mike Jones

CF 4338

R-3952

WFX 723

PDEV0020600723

WFX 696

PDEV0020600696

***RE: Injection Pressure Increase,
Lea 'D' Unit, Lea County, New Mexico***

Reference is made to your request dated January 26, 1998 to increase the surface injection pressure on 7 wells in the above referenced waterflood project. This request is based on step rate tests conducted between January 15 and 19, 1998. The results of the tests have been reviewed by my staff and we feel an increase in injection pressure on these wells, and one additional well, 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>
Lea 'D' Unit Well No.1 - Unit Letter 'B'	1681 PSIG
Lea 'D' Unit Well No.2 - Unit Letter 'A'	1681 PSIG
Lea 'D' Unit Well No.3 - Unit Letter 'H'	2233 PSIG
Lea 'D' Unit Well No.4 - Unit Letter 'G'	1681 PSIG
Lea 'D' Unit Well No.5 - Unit Letter 'I'	1594 PSIG
Lea 'D' Unit Well No.6 - Unit Letter 'J'	1594 PSIG
Lea 'D' Unit Well No.7 - Unit Letter 'F'	1681 PSIG
Lea 'D' Unit Well No.8 - Unit Letter 'E'	1594 PSIG
Located in Lea County, New Mexico.	

Injection Pressure Increase

The Wiser Oil Company

May 21, 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,


Lori Wrotenbery
Director

LW/BES/kv

cc: Oil Conservation Division - Hobbs
Files: Case No.4338; WFX-723, 696; PSI-X 4th QTR-98

PSI-X N/R



THE WISER OIL COMPANY

P.O. BOX 2568 • HOBBS, NM 88241

(Phone) 505-392-9797

(FAX) 505-392-8971



January 26, 1998

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

Re: Wisner Petition to step-rate test every third WIW to gain pressure relief

Dear Ben:

Please have your staff review the attached step-rate tests run on our Lea D injection wells. As the NMOCD has allowed in the past, please grant pressure increases for all our Lea D water injection wells based on the following:

Lea D # 3 for itself and Lea D # 1 and Lea D # 2 — 2233
Lea D # 4 for itself and Lea D # 5 1681
Lea D # 6 for itself and Lea D # 7 1594

Thank you for your timely attention these step-rate tests.

Sincerely,

G. Mike Jones
Production Superintendent

GMJ:mlg

file

WFX 723

CS 4333

26-173-31E

8'E'

D	C	B	A
		①	②
E	F	G	H
⑧	⑦	④	③ 2233
		I	
		⑥	⑤



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

STEP RATE INJECTION TEST

CLIENT: THE WISER OIL COMPANY

DATE: JANUARY 15, 1998

WELL NAME: LEA "D" NO. 3
EDDY COUNTY, NEW MEXICO

WO#: 98-14-0066

PERFS - 3497-4000

PACKER DEPTH = 3443

BHP GAUGE DEPTH = 3748

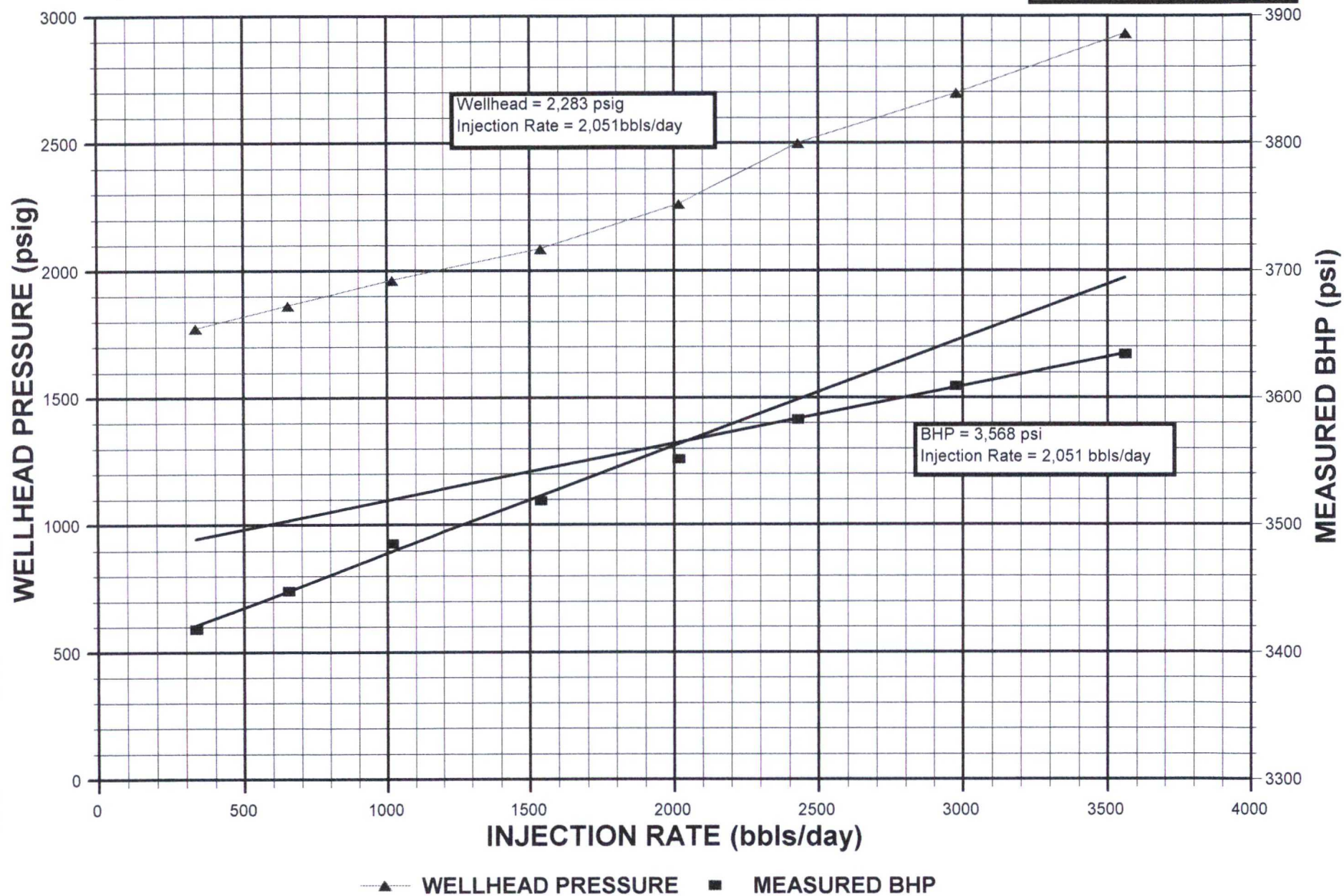
STEP NO. & REMARKS	TIME	(1) SURFACE TUBING PRESS. (psig)	(2) CUMMULATIVE VOL. INJECTED (bbls)	(3) INJECTION RATE (bbls/day)	(4) FRICTION HEAD LOSS (psi)	(5) CORRECTED TUBING PRESS. (psi) (1)-(4)	(6) INJECTION RATE (gpm) (3)/34.2857	(7) MEASURED BHP (psi)
1	10:20	1723.9				1723.9		3394.5
	10:25	1754.3	1.1	316.8	3.856	1750.4	9.24	3406.4
	10:30	1757.9	2.3	345.6	4.529	1753.4	10.08	3412.2
	10:35	1775.5	3.5	345.6	4.529	1771.0	10.08	3418.5
				336.0				
2	10:40	1810.8	5.8	662.4	15.091	1795.7	19.32	3431.5
	10:45	1855.1	8.1	662.4	15.091	1840.0	19.32	3440.9
	10:50	1865.1	10.3	633.6	13.900	1851.2	18.48	3448.6
3				652.8				
	10:55	1949.8	13.9	1036.8	34.568	1915.2	30.24	3464.7
	11:00	1951.0	17.4	1008.0	32.813	1918.2	29.40	3476.6
	11:05	1964.8	20.9	1008.0	32.813	1932.0	29.40	3485.8
4				1017.6				
	11:10	2076.6	26.5	1612.8	78.283	1998.3	47.04	3501.4
	11:15	2091.7	31.5	1440.0	63.477	2028.2	42.00	3510.9
	11:20	2087.9	36.9	1555.2	73.190	2014.7	45.36	3519.3
5				1536.0				
	11:25	2238.0	43.8	1987.2	115.184	2122.8	57.96	3533.7
	11:30	2255.8	50.8	2016.0	118.291	2137.5	58.80	3544.0
	11:35	2262.2	57.9	2044.8	121.436	2140.8	59.64	3551.9
6				2016.0				
	11:40	2446.7	65.7	2246.4	144.509	2302.2	65.52	3565.1
	11:45	2498.8	74.8	2620.8	192.197	2306.6	76.44	3575.5
	11:50	2501.4	83.2	2419.2	165.744	2335.7	70.56	3583.2
7				2428.8				
	11:55	2698.6	93.4	2937.6	237.373	2461.2	85.68	3596.0
	12:00	2703.7	103.8	2995.2	246.055	2457.6	87.36	3602.4
	12:05	2697.3	114.2	2995.2	246.055	2451.2	87.36	3609.6
				2976.0				

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	12:10	2956.9	126.5	3542.4	335.618	2621.3	103.32	3622.0
	12:15	2959.5	139.0	3600.0	345.783	2613.7	105.00	3629.1
	12:20	2932.7	151.3	3542.4 3561.6	335.618	2597.1	103.32	3634.4
	12:21	1982.5				1982.5		3619.6
	12:22	1969.8				1969.8		3613.1
	12:23	1964.7				1964.7		3608.1
	12:24	1959.7				1959.7		3603.0
	12:25	1955.8				1955.8		3598.8
	12:30	1938.1				1938.1		3581.0
	12:35	1925.4				1925.4		3567.2

STEP RATE INJECTION TEST

THE WISER OIL COMPANY

Well Name:
Lea "D" No. 3
Eddy 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: JANUARY 19, 1998

WELL NAME: LEA "D" NO. 6
EDDY COUNTY, NEW MEXICO

WO#: 98-14-0068

PERFS = 3472-3813

PACKER DEPTH = 3463

BHP GAUGE DEPTH = 3642

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	1154.9				1154.9		2770.1
	9:35	1186.6	1.4	403.2	5.853	1180.7	11.76	2786.6
	9:40	1195.4	2.9	432.0	6.650	1188.7	12.60	2795.6
	9:45	1190.4	4.4	432.0	6.650	1183.7	12.60	2802.5
2				422.4				
	9:50	1248.7	7.5	892.8	25.473	1223.2	26.04	2824.4
	9:55	1279.1	10.5	864.0	23.974	1255.1	25.20	2836.9
	10:00	1312.0	13.6	892.8	25.473	1286.5	26.04	2849.1
3				883.2				
	10:05	1371.6	17.9	1238.4	46.664	1324.9	36.12	2871.3
	10:10	1367.8	22.3	1267.2	48.691	1319.1	36.96	2888.7
	10:15	1380.4	26.7	1267.2	48.691	1331.7	36.96	2904.0
4				1257.6				
	10:20	1419.7	32.6	1699.2	83.779	1335.9	49.56	2922.6
	10:25	1433.6	38.2	1612.8	76.069	1357.5	47.04	2937.1
	10:30	1447.6	43.9	1641.6	78.601	1369.0	47.88	2950.7
5				1651.2				
	10:35	1475.4	51.0	2044.8	118.002	1357.4	59.64	2971.2
	10:40	1489.3	57.9	1987.2	111.926	1377.4	57.96	2987.0
	10:45	1498.1	64.8	1987.2	111.926	1386.2	57.96	3001.8
6				2006.4				
	10:50	1574.1	73.6	2534.4	175.531	1398.6	73.92	3025.5
	10:55	1579.1	82.4	2534.4	175.531	1403.6	73.92	3041.2
	11:00	1605.6	91.2	2534.4	175.531	1430.1	73.92	3054.4
7				2534.4				
	11:05	1719.6	101.6	2995.2	239.096	1480.5	87.36	3079.1
	11:10	1732.2	112.0	2995.2	239.096	1493.1	87.36	3098.9
	11:15	1741.0	122.5	3024.0	243.367	1497.6	88.20	3114.0
				3004.8				

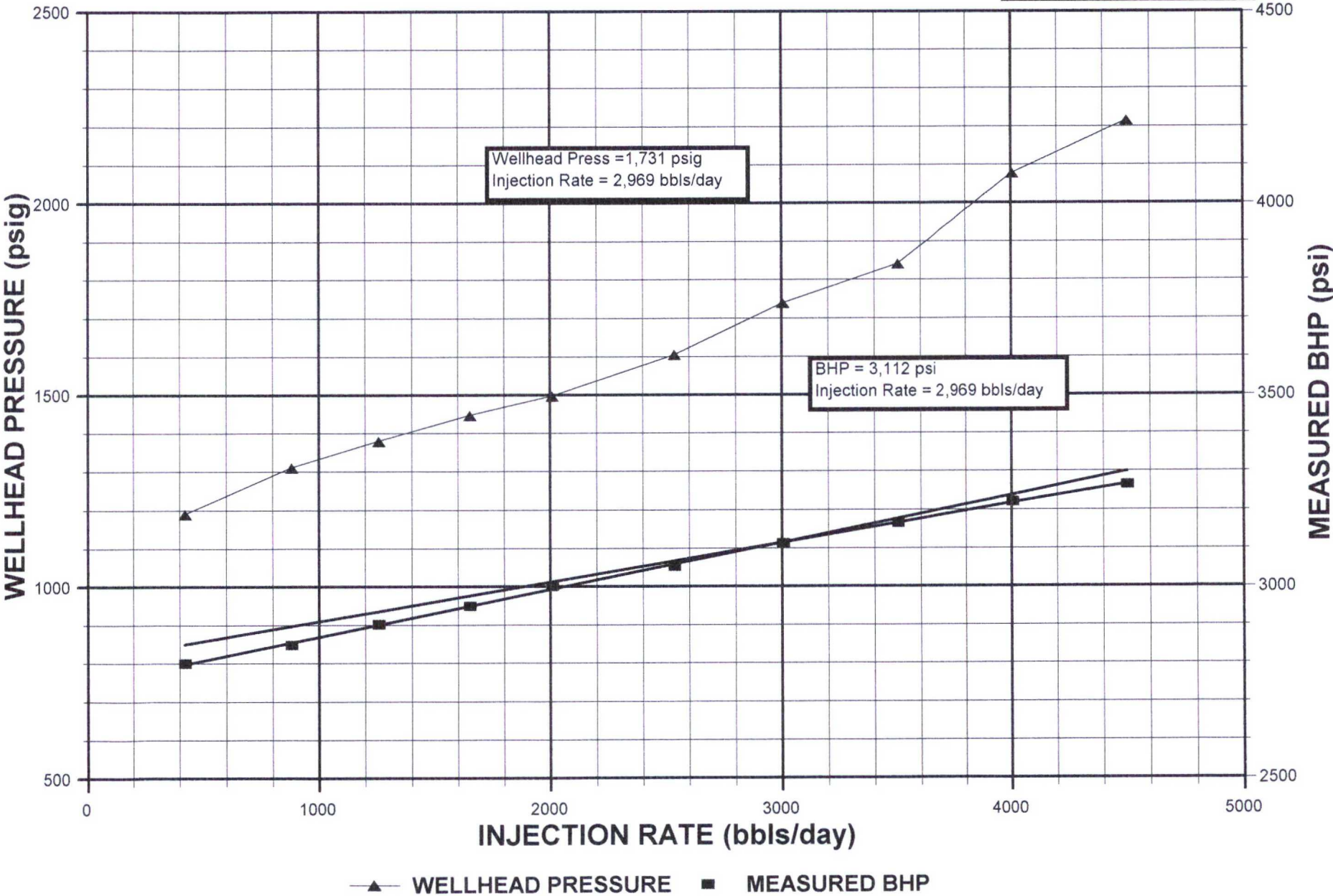
STEP NO. & REMARKS	TIME	(1)	(2)	(3)	(4)	(5)	(6)	(7)
		SURFACE TUBING PRESS. (psig)	CUMMULATIVE VOL. INJECTED (bbls)	INJECTION RATE (bbls/day)	FRICTION HEAD LOSS (psi)	CORRECTED TUBING PRESS. (psi) (1) - (4)	INJECTION RATE (gpm) (3)/34.2857	MEASURED BHP (psi)
8	11:20	1855.1	134.7	3513.6	321.238	1533.9	102.48	3136.3
	11:25	1862.6	147.0	3542.4	326.126	1536.5	103.32	3151.5
	11:30	1843.6	159.0	3456.0	311.563	1532.0	100.80	3165.8
9				3504.0				
	11:35	2004.5	172.9	4003.2	408.920	1595.6	116.76	3180.1
	11:40	2031.1	186.8	4003.2	408.920	1622.2	116.76	3203.2
10	11:45	2079.4	200.7	4003.2	408.920	1670.5	116.76	3221.3
				4003.2				
	11:50	2205.4	216.6	4579.2	524.379	1681.0	133.56	3241.0
FALLOFF	11:55	2215.5	231.9	4406.4	488.360	1727.1	128.52	3253.3
	12:00	2216.8	247.6	4521.6	512.242	1704.6	131.88	3265.5
				4502.4				
	12:01	1646.9				1646.9		3241.9
	12:02	1652.0				1652.0		3237.0
	12:03	1648.1				1648.1		3234.5
	12:04	1646.9				1646.9		3231.2
	12:05	1644.3				1644.3		3229.5
	12:10	1638.0				1638.0		3221.7
	12:15	1631.6				1631.6		3216.1

STEP RATE INJECTION TEST
THE WISER OIL COMPANY

Well Name:
Lea "D" No. 6
Eddy County, New Mexico

Wellhead Press = 1,731 psig
Injection Rate = 2,969 bbls/day

BHP = 3,112 psi
Injection Rate = 2,969 bbls/day



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

STEP RATE INJECTION TEST

CLIENT: THE WISER OIL COMPANY

DATE: JANUARY 16, 1998

WELL NAME: LEA "D" NO. 4
EDDY COUNTY, NEW MEXICO

WO#: 98-14-0067

PERFS = 3493-3788

PACKER DEPTH = 3450

BHP GAUGE DEPTH = 3640

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	795.7				795.7		2394.4
	9:55	885.8	1.6	460.8	7.489	878.3	13.44	2494.2
	10:00	937.8	3.2	460.8	7.489	930.3	13.44	2544.5
	10:05	988.6	4.7	432.0	6.646	982.0	12.60	2582.7
2				451.2				
	10:10	1106.5	7.7	864.0	23.961	1082.5	25.20	2671.5
	10:15	1171.2	10.6	835.2	22.504	1148.7	24.36	2723.3
	10:20	1204.1	13.5	835.2	22.504	1181.6	24.36	2766.3
3				844.8				
	10:25	1316.9	17.8	1238.4	46.638	1270.3	36.12	2843.8
	10:30	1381.6	22.2	1267.2	48.664	1332.9	36.96	2890.5
	10:35	1400.6	26.5	1238.4	46.638	1354.0	36.12	2928.3
4				1248.0				
	10:40	1482.9	32.3	1670.4	81.127	1401.8	48.72	2986.7
	10:45	1508.3	38.1	1670.4	81.127	1427.2	48.72	3021.6
	10:50	1551.3	43.9	1670.4	81.127	1470.2	48.72	3050.8
5				1670.4				
	10:55	1618.5	51.1	2073.6	121.028	1497.5	60.48	3098.8
	11:00	1660.3	58.2	2044.8	117.937	1542.4	59.64	3124.9
	11:05	1680.6	65.3	2044.8	117.937	1562.7	59.64	3145.0
6				2054.4				
	11:10	1815.0	74.0	2505.6	171.764	1643.2	73.08	3194.0
	11:15	1793.4	82.8	2534.4	175.435	1618.0	73.92	3215.6
	11:20	1811.1	91.8	2592.0	182.882	1628.2	75.60	3231.3
7				2544.0				
	11:25	1908.7	102.1	2966.4	234.731	1674.0	86.52	3257.5
	11:30	1908.7	112.9	3110.4	256.246	1652.5	90.72	3269.2
	11:35	1907.5	123.3	2995.2	238.965	1668.5	87.36	3279.9
				3024.0				

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	11:40	2040.7	135.5	3513.6	321.061	1719.6	102.48	3305.2
	11:45	2045.7	147.9	3571.2	330.866	1714.8	104.16	3312.5
	11:50	2072.5	160.2	3542.4	325.947	1746.6	103.32	3318.0
	11:51	1681.8				1681.8		3268.4
	11:52	1672.9				1672.9		3255.5
	11:53	1664.0				1664.0		3246.5
	11:54	1656.4				1656.4		3238.4
	11:55	1651.3				1651.3		3232.7
	12:00	1631.0				1631.0		3212.0
	12:05	1617.0				1617.0		3198.3

STEP RATE INJECTION TEST
THE WISER OIL COMPANY

Well Name:
Lea "D" No. 4
Eddy County, New Mexico

