

Office

Energy, Minerals and Natural Resources

May 27, 2004

District I

1625 N. French Dr., Hobbs, NM 88241

District II

1301 W. Grand Ave., Artesia, NM 88210

District III

1000 Rio Brazos Rd., Aztec, NM 88201

District IV

1220 S. St. Francis Dr., Santa Fe, NM 87505

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.

Santa Fe, NM 87505

WELL API NO.

5. Indicate Type of Lease
STATE ☐ FEE ☒

6. State Oil & Gas Lease No.

7. Lease Name or Unit Agreement Name
WTYSR Unit Wells:
443,641,912,913,921, 924,941,945

8. Well Number

9. OGRID Number 147179

10. Pool name or Wildcat
Teas (Yates-Seven Rivers), West

(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 Injection Wells

2. Name of Operator

Chesapeake Operating, Inc.

3. Address of Operator

P.O. Box 18496
Oklahoma City, OK 73154-0496

4. Well Location

Unit Letter _____ feet from the _____ line and _____ feet from the _____ line
Section 4 & 9 Township 20S Range 33E NMPM County Lea

11. Elevation (Show whether DR, RKB, RT, GR, etc.)

Pit or Below-grade Tank Application ☐ or Closure ☐

Pit type _____ Depth to Groundwater _____ Distance from nearest fresh water well _____ Distance from nearest surface water _____

Pit Liner Thickness: _____ mil Below-Grade Tank: Volume _____ hbls; Construction Material _____

12. 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 ☐ MULTIPLE COMPL ☐

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐
COMMENCE DRILLING OPNS. ☐ P AND A ☐
CASING/CEMENT JOB ☐OTHER: Injection Pressure Increase ☒OTHER: ☐

13. 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. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

Chesapeake Operating, Inc. respectfully requests to increase the injection pressure on eight wells in the West Teas (Yates-Seven Rivers) Waterflood Unit Area.

For your review, please find the attached application letter along with step rates tests performed for each well.

Copies of this application have been submitted to the Hobbs New Mexico Oil Conservation Division office.

WEST TEAS YATES SEVEN RIVERS UNIT No. 443 3002535976 I-4-20S-33E 1855 FSL & 660 FEL ✓
WEST TEAS YATES SEVEN RIVERS UNIT No. 641 3002533144 A-4-20S-33E 330 FNL & 330 FEL ✓
WEST TEAS YATES SEVEN RIVERS UNIT No. 912 3002529971 E-9-20S-33E 1980 FNL & 660 FWL ✓
WEST TEAS YATES SEVEN RIVERS UNIT No. 913 3002529972 L-9-20S-33E 1980 FSL & 660 FWL ✓
WEST TEAS YATES SEVEN RIVERS UNIT No. 921 3002531896 C-9-20S-33E 330 FNL & 2310 FWL ✓
WEST TEAS YATES SEVEN RIVERS UNIT No. 924 3002536073 F-9-20S-33E 2560 FNL & 2210 FWL ✓
WEST TEAS YATES SEVEN RIVERS UNIT No. 941 3002532217 A-9-20S-33E 330 FNL & 990 FEL ✓
WEST TEAS YATES SEVEN RIVERS UNIT No. 945 3002536079 H-9-20S-33E 2612 FNL & 330 FEL ✓I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that any pit or below-grade tank has been/will be constructed or closed according to NMOC guidelines ☐, a general permit ☐ or an (attached) alternative OCD-approved plan ☐.SIGNATURE Doug Rubick

TITLE Field Engineer

DATE 07/08/2008

Type or print name Doug Rubick

E-mail address: doug.rubick@chk.com

Telephone No. (575)391-1462

For State Use Only

APPROVED BY: Chris Williams

OC DISTRICT SUPERVISOR/GENERAL MANAGER

Conditions of Approval (if any):

need approval of Santa Fe Office! CW

JUL 17 2008

June 27, 2008

Will Jones
NMOCD
1220 South St. Francis Drive
Santa Fe, NM 87505

Dear Mr. Jones,

Chesapeake Energy respectfully requests to increase the injection pressure on eight wells in the West Teas Unit (WTU) waterflood. This waterflood has been active since 2003 and step rate tests have not been performed since 2004. Please see the table below for a summary of the current pressure limitations for the injection wells at the WTU waterflood.

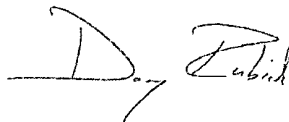
Well	API	Inj Press Limit	Order	Order Date	Comments
WTU 433	3002532032	968	IPI-244	10/19/2004	Division Order for increased injection pressure after SRT.
WTU 443	3002535976	631	WFX-791	7/24/2003	Administrative Order based on 0.2 psi/ft
WTU 641	3002533144	632	WFX-791	7/24/2003	Administrative Order based on 0.2 psi/ft
WTU 912	3002529971	1,200	IPI-244	10/19/2004	Division Order for increased injection pressure after SRT.
WTU 913	3002529972	903	IPI-244	10/19/2004	Division Order for increased injection pressure after SRT.
WTU 921	3002531896	998	IPI-244	10/19/2004	Division Order for increased injection pressure after SRT.
WTU 924	3002536073	1,197	IPI-244	10/19/2004	Division Order for increased injection pressure after SRT.
WTU 941	3002532217	615	WFX-791	7/24/2003	Administrative Order based on 0.2 psi/ft. The SRT for this well was inconclusive from IPI-244 and increase request denied.
WTU 945	3002536079	1,200	IPI-244	10/19/2004	Division Order for increased injection pressure after SRT.

Step rate tests were performed on all nine of the injectors between May 22nd and June 4th, 2008. Eight of the nine test results indicate there is room for an increase in maximum injection pressure. Results from each step rate test are attached and summarized in the table below.

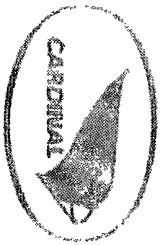
Well	API	Fracture Pressure	Requested Inj Press Limit	Date SRT Ran
WTU 443	3002535976	1,520	1,470	5/29/2008
WTU 641	3002533144	1,854	1,804	6/4/2008
WTU 912	3002529971	1,802	1,752	6/2/2008
WTU 913	3002529972	1,802	1,752	6/3/2008
WTU 921	3002531896	1,572	1,522	5/28/2008
WTU 924	3002536073	1,720	1,670	5/27/2008
WTU 941	3002532217	1,360	1,310	5/23/2008
WTU 945	3002536079	1,845	1,795	5/22/2008

Should you require further information or have any questions, please call Doug Rubick at 505-391-1462.

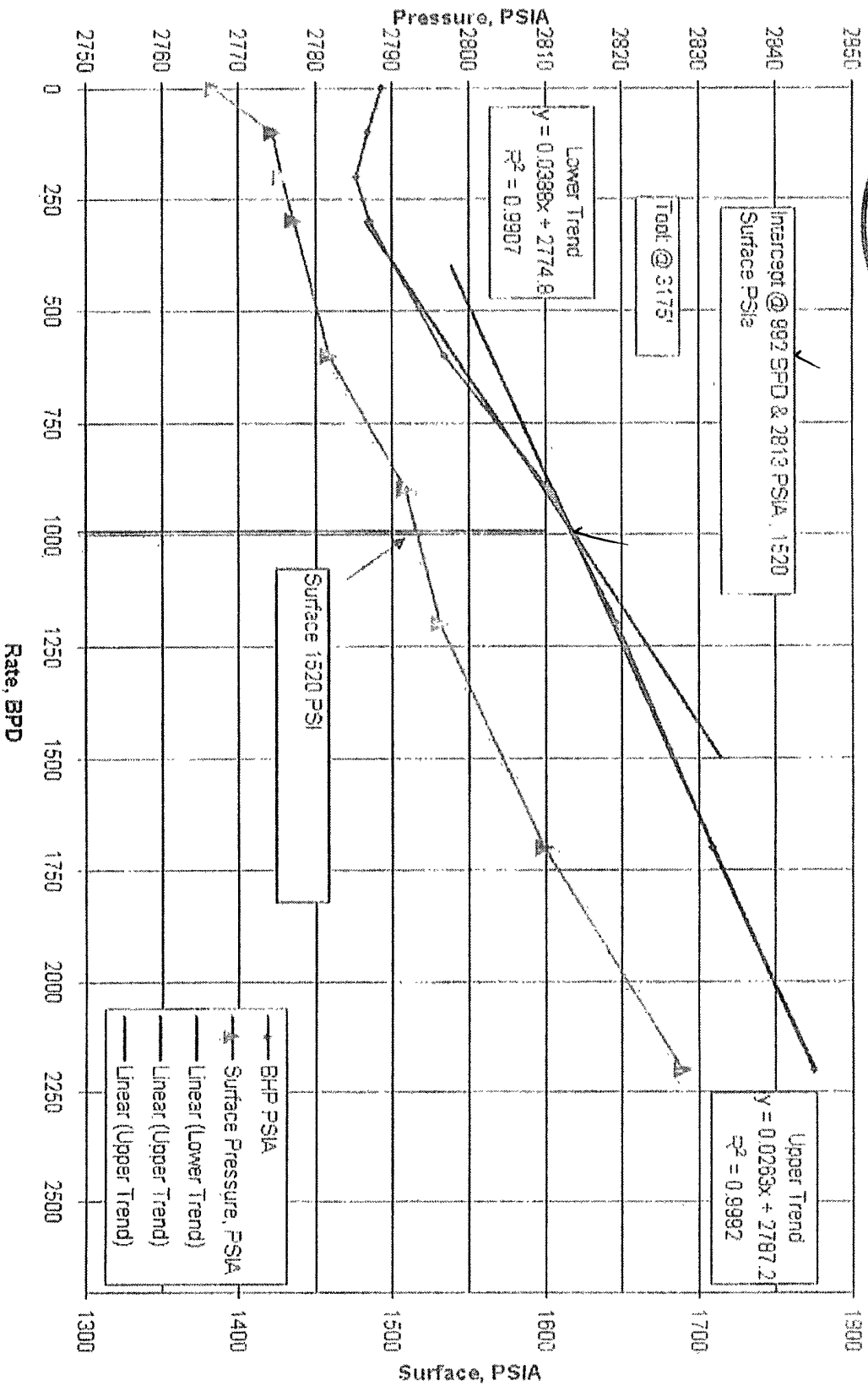
Sincerely,



Doug Rubick
Field Engineer



Chesapeake Energy Corp. WTLU # 443
Step Rate Test 05-29-2008



Step Rate Test

Chesapeake Energy
WFO # 443
Field:
Lea County, NM

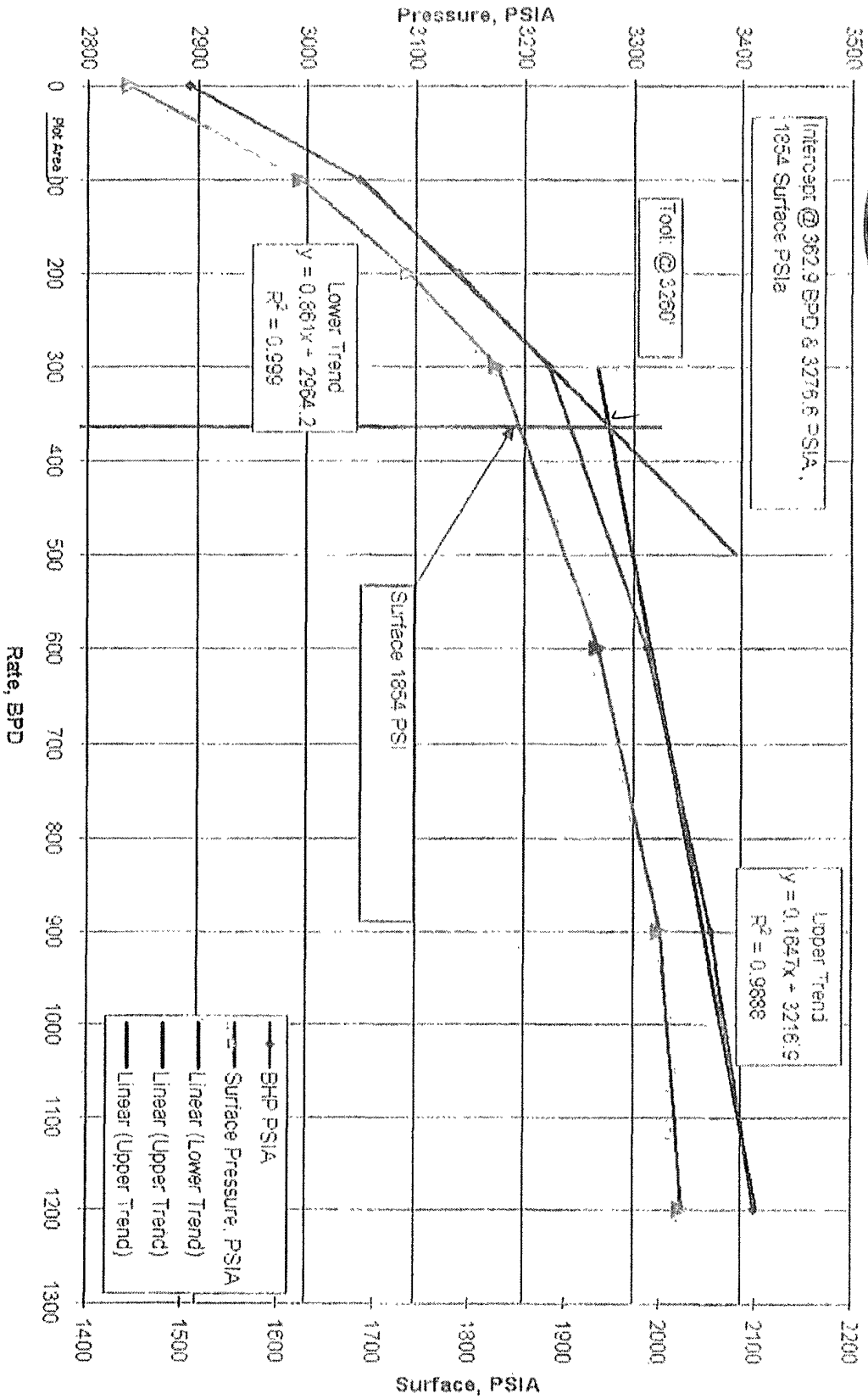


	S Time	E Time	C Time		Last Rate	Step B. H. Pressure		Surf		Cum	Delta		Avg.	Lower	Upper
			Min	BPD		PSIA	PSIA	PSIA	BBL		BBL	BPD			
1	8:51 AM	8:45 AM	14	0	0	2786.6	1584	1421.9	7.8	0	0	175			
2	8:45 AM	8:45 AM	60	100	100	2786.6	1428.3	1428.3	16.3	7.8	7.3	216	2787.1		
3	9:45 AM	10:45 AM	60	200	200	2786.6	1435.4	1435.4	28.6	16.3	15.3	315	2796.8		
4	10:45 AM	11:45 AM	30	300	300	2787.1	1456.8	1456.8	64.4	28.6	24.8	595	2810.4		
5	11:45 AM	12:45 PM	30	300	300	2795.8	1509.2	1509.2	43	64.4	-11.4	-274			
6	12:45 PM	1:45 PM	30	900	900	2810.4	1581.3	1581.3	142.8	43	98.3	2863			
7	1:45 PM	2:45 PM	30	1200	1200	2816.3	1599.3	1599.3	214.6	142.8	72.3	1735			
8	2:45 PM	3:45 PM	30	1700	1700	2831.9	1689.3	1689.3	306.2	214.6	91.6	2156			
9	3:45 PM	4:45 PM	30	2200	2200	2844.9									
10	4:45 PM	5:45 PM	30	2700	2700										

0.0028 2774.8
0.0283 2787.2
Point: 992 BPD
2613.2856 Rate



Chesapeake Energy Corp. WTU # 641
Step Rate Test 06-04-2008



Step Rate Test

Chesapeake Energy
WTL # 641
Field: West Texas
Lee County, NM

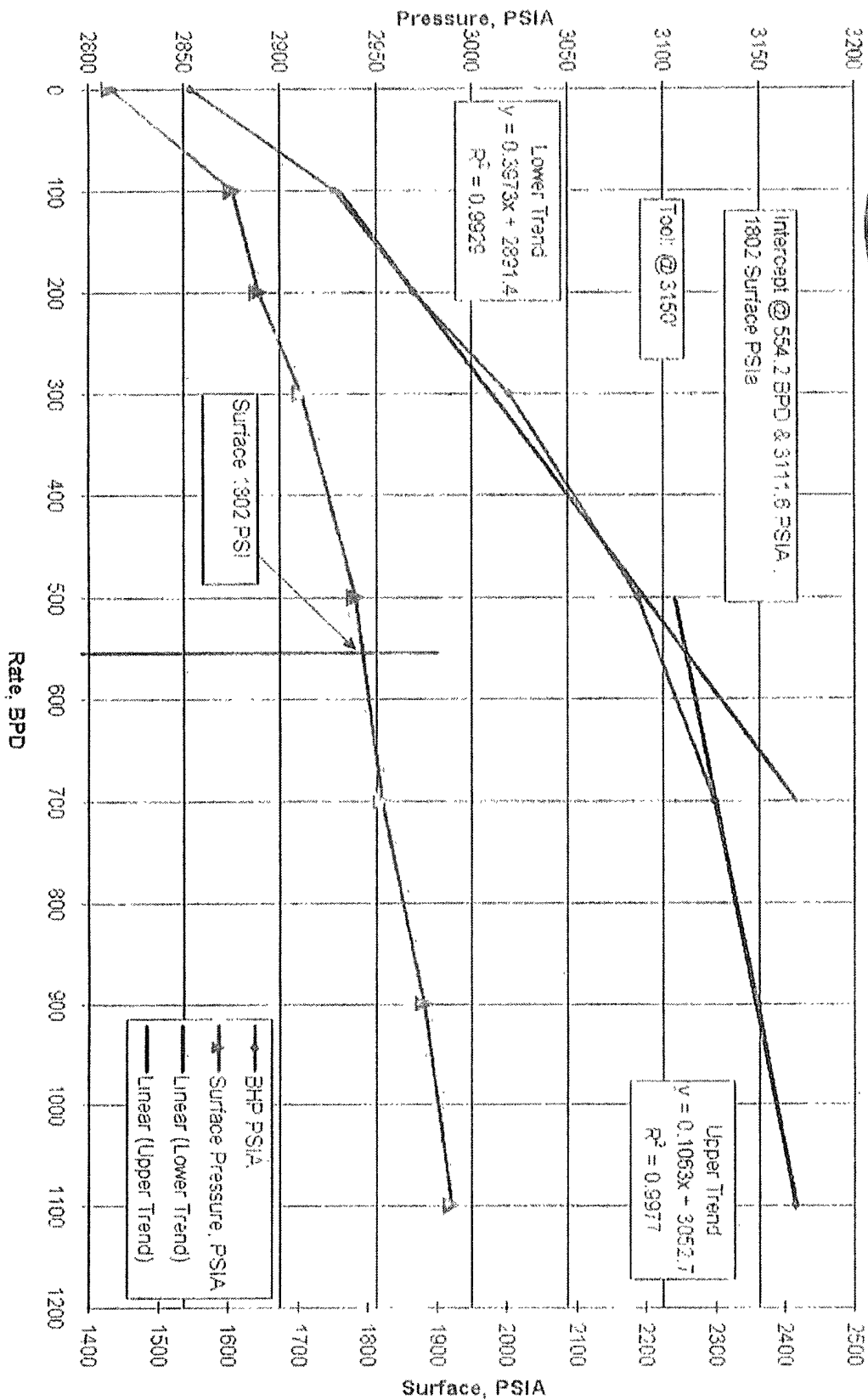


	S Time	E Time	D Time	Last Rate	Step E. h.	Pressure	Surf	Cum	Delta	Avg.	Lower	Upper
			Min	SPD	SPD	PSIA	PSIA	GBL	GBL	SPD	Trend	Trend
1	8:29 AM	8:45 AM	15	0	0	2891.9	1444.6	0	0	0		
2	9:45 AM	9:45 AM	50	100	100	3048.8	1522.5	5.1	5.1	146	3048.8	
3	9:45 AM	10:45 AM	50	200	400	3139.5	1736.2	15	8.5	214	3139.5	
4	10:45 AM	11:45 AM	50	300	100	3221	1826.5	26.4	13.4	322	3221	
5	11:45 AM	12:45 PM	50	600	300	3312.7	1934.7	51.5	23.2	557	3312.7	
6	12:45 PM	1:45 PM	50	900	300	3371.2	1993.4	85	37.4	888	3371.2	
7	1:45 PM	2:45 PM	50	1200	300	3411.5	2022.4	139	50	1200	3411.5	
8	2:45 PM	3:00 PM	15	0	-1200	3534	1940	139	0	0		

0.261 2954.2
0.1647 3216.9
in point 352.91828 SPD
3276.5726 Psia



Chesapeake Energy Corp. WTU # 912
Step Rate Test 06-02-2008



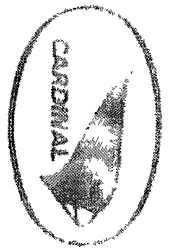
Step Rate Test

Orosapeake Energy
 WTU # 912
 Field:
 Lee County, NM

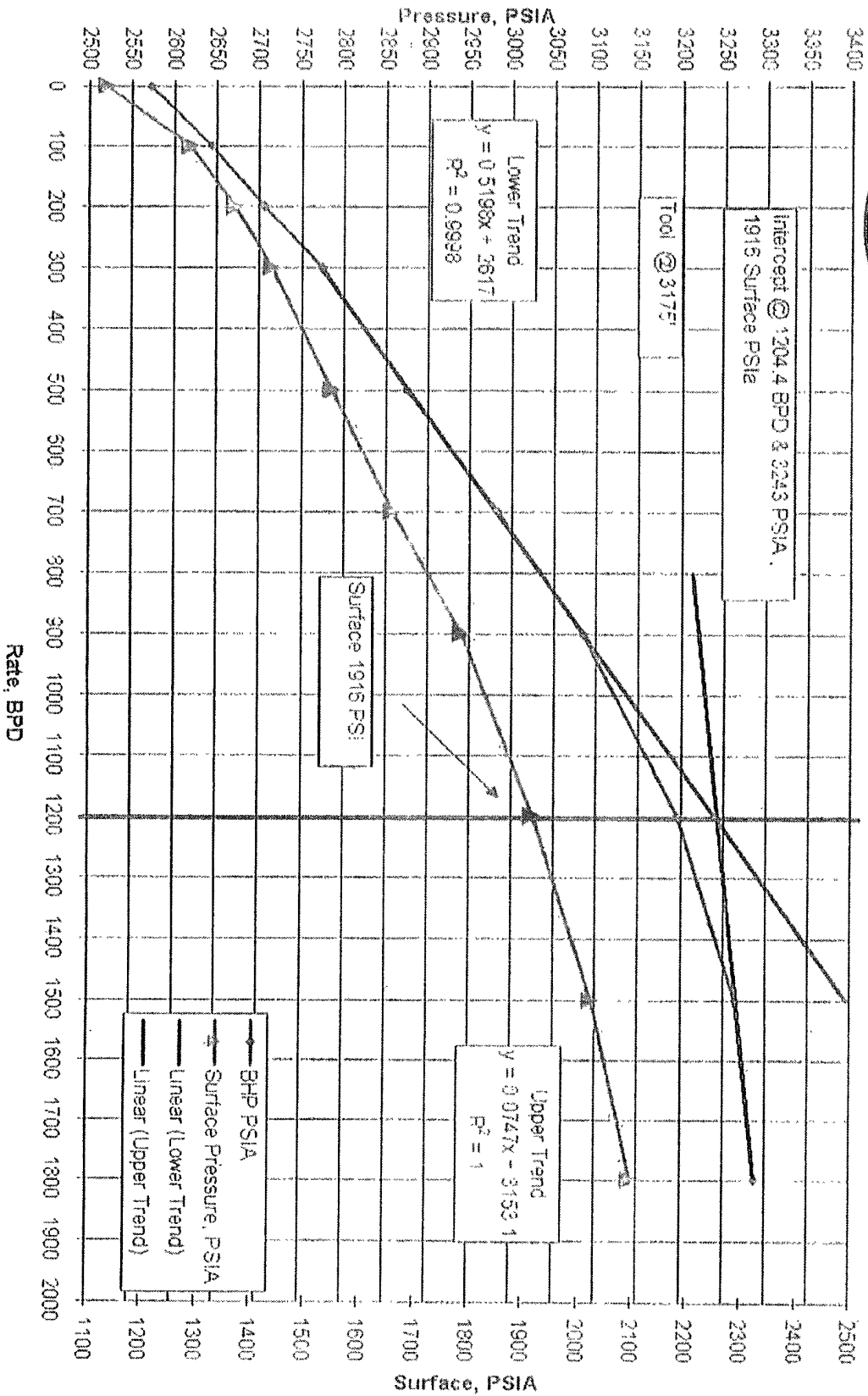


	S Time	E Time	D Time	Last Rate	Step S. H.	Pressure	Surf	Cum	Delta	Avg	Lower	Upper
			Mt	SPD	SPD	PSIA	PSIA	BSL	BSL	SPD	Trend	Trend
1	8:49 AM	9:00 AM	12	0	0	2853.6	1432.6	0	0	0	2922	
2	9:00 AM	10:00 AM	60	100	100	2926	1507	8.5	9.5	204	2969.4	
3	10:00 AM	11:00 AM	60	200	100	2969.4	1542.5	17.4	29	214	3019.1	
4	11:00 AM	12:00 PM	60	300	100	3019.1	1704.1	30.3	12.9	310	3086.2	
5	12:00 PM	1:00 PM	60	500	200	3086.2	1782.5	52.3	22	523		
6	1:00 PM	2:00 PM	60	700	200	3126.5	1821.1	81.2	38.9	594		
7	2:00 PM	3:00 PM	60	900	200	3149.5	1880.5	120.1	46.4	594		
8	3:00 PM	4:00 PM	60	1100	200	3159	1922.1	165.5	0	1090		
9	4:00 PM	5:00 PM	60	0	-1100	3126	1797	165.5	0	0		

Imp Point: 554.29553 SPD
 3111.6215 Psia
 0.3975 2891.4
 0.1063 3052.7



Chesapeake Energy Corp. WTU # 913
Step Rate Test 06-03-2008



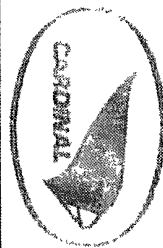
Step Rate Test

Chesapeake Energy
WTLU # 513
Field:
Lea County, NM

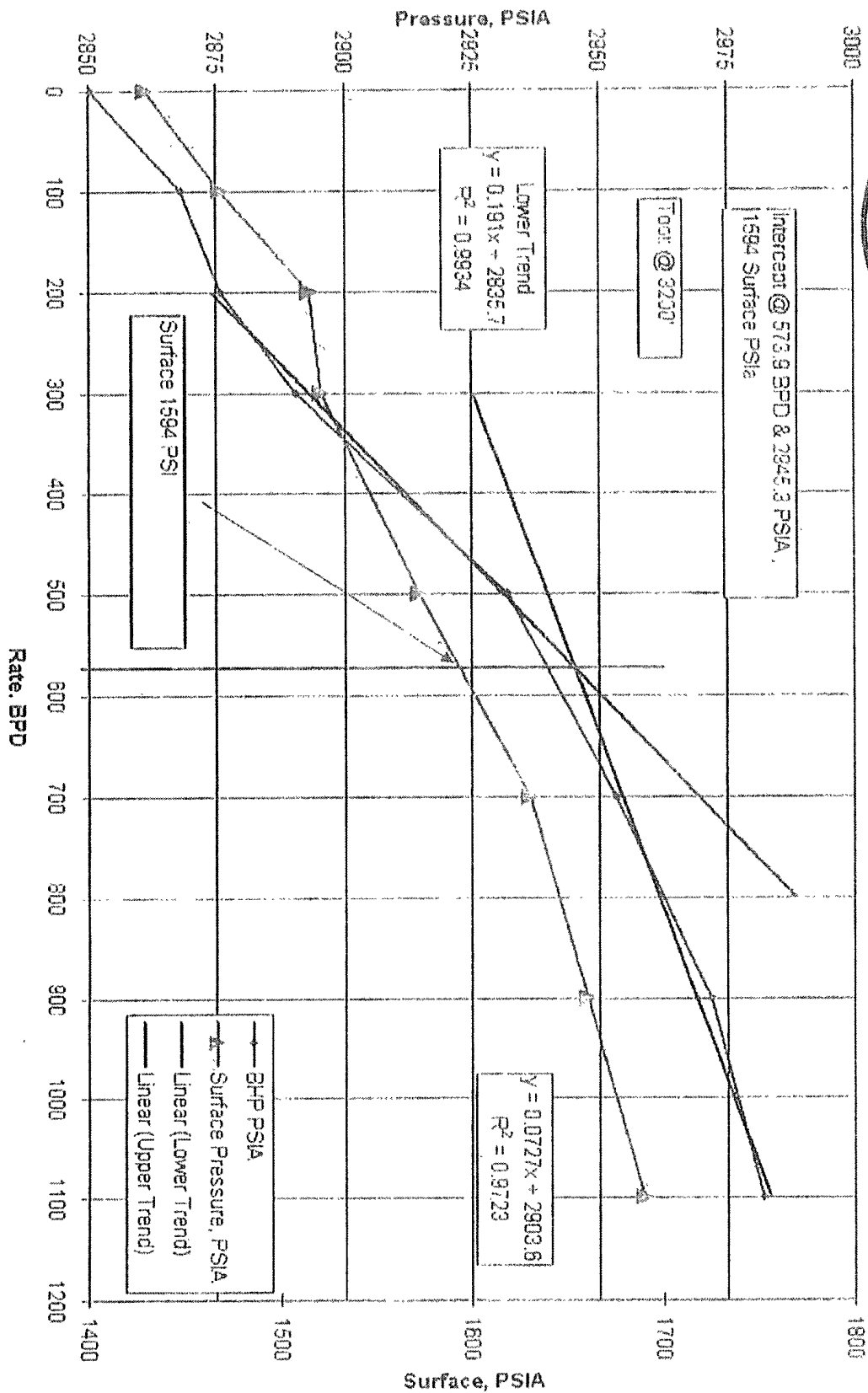


	S Time	E Time	D Time	Last Rate	Step E. H. Pressure	Surf	Out	Delta	Avg.	Lower	Upper
			Min	BPD	PSIA	FSIA	BBL	BBL	BPD	Trend	Trend
1	8:51 AM	9:00 AM	3	0	2571.9	1131.4	0	0	0		
2	9:00 AM	10:00 AM	30	100	2643.1	1283	5.7	5.7	137		
3	10:00 AM	11:00 AM	30	200	2773.8	1433.3	14.7	9	216		
4	11:00 AM	12:00 PM	30	300	2874.8	1545.5	28	16.3	315	2773.6	
5	12:00 PM	1:00 PM	30	500	2983	1657.5	45.4	21.4	514	2874.6	
6	1:00 PM	2:00 PM	30	700	2983	1657.9	73.5	26.2	701	2983	
7	2:00 PM	3:00 PM	30	900	3084.2	1759.6	115.5	38	912	3084.2	
8	3:00 PM	4:00 PM	30	1200	3195.7	1818.3	169.5	51.9	1246		
9	4:00 PM	5:00 PM	30	1500	3265.1	2026.1	231.1	62.6	1502		
10	5:00 PM	6:00 PM	30	1800	3287.5	2088.1	308.5	77.4	1556		
11	6:00 PM	6:15 PM	15	0	-1200	1319	308.5	0	0		

0.5196 2617
0.0747 3153.1
Injection 1304.4484 BPD
3243.0723 Psi

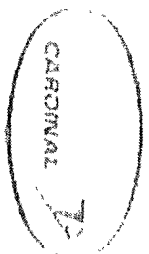


Chesapeake Energy Corp. WTL #921
Step Rate Test 05-28-2008



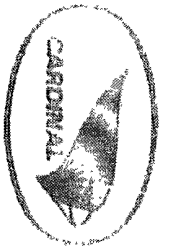
Step Rate Test

Chesapeake Energy
2870 492
Felic
Lea County NM

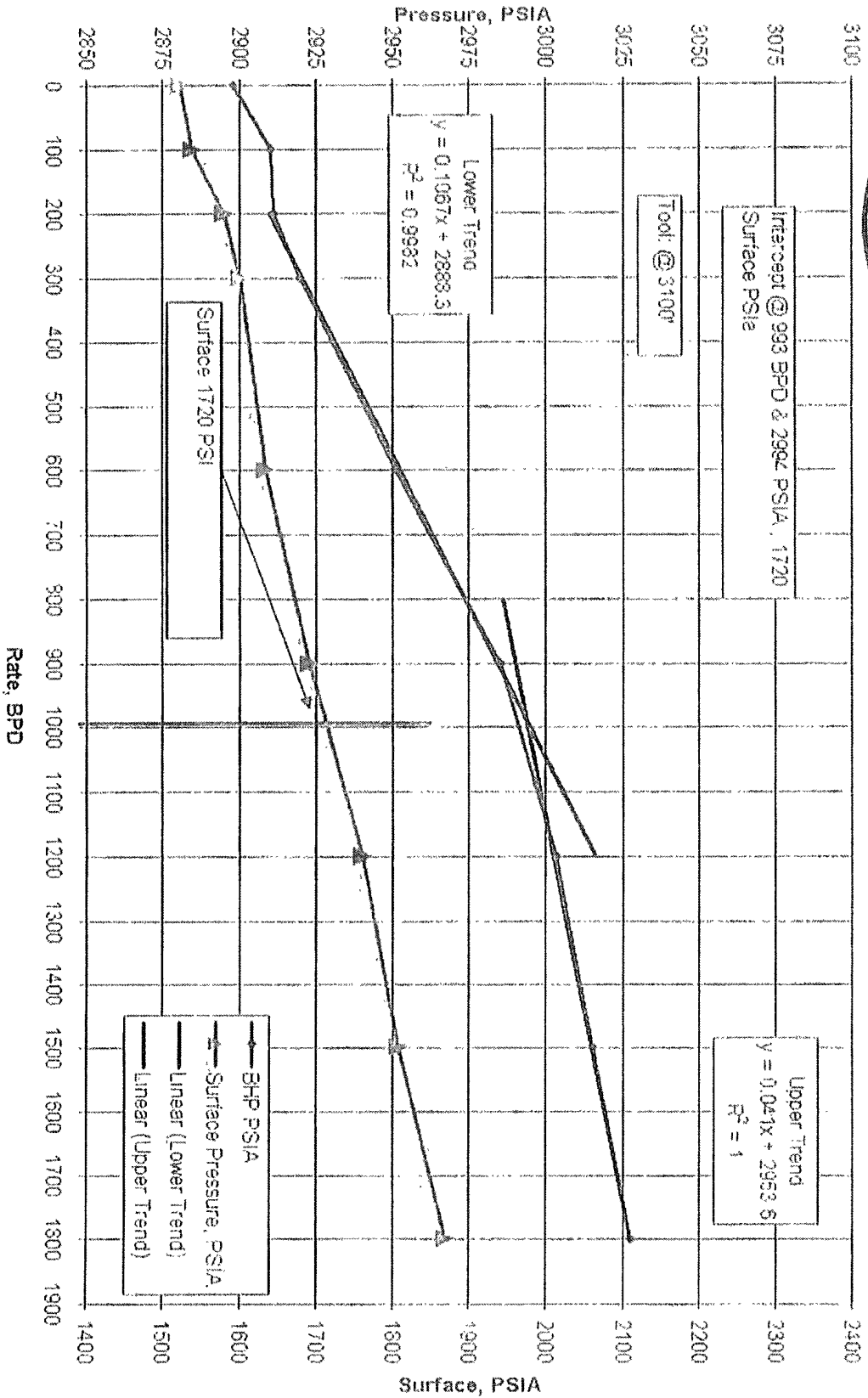


	S Time	E Time	D Time		Last Rate	Step B	Pressure		Surf	Cum	Delta	Avg	Lower	Upper
			Min	Max			PSIA	PSIA						
1	8:28 AM	8:30 AM	2	3	0	0	2850.4	1430	0	0	0	0		
2	8:30 AM	8:30 AM	30	30	100	100	2855.2	1468.5	5.2	5.2	5.2	155	2875.7	
3	8:30 AM	8:30 AM	30	30	200	100	2875.7	1515	15.7	15.7	9.2	221	2890.3	
4	10:30 AM	11:30 AM	60	60	300	100	2890.3	1521.3	23.7	23.7	13	312	2932.1	
5	11:30 AM	12:30 PM	60	60	500	200	2932.1	1572.9	49.8	60.2	21.1	506	2953.1	
6	12:30 PM	1:30 PM	60	60	700	200	2953.1	1600.6	60.2	60.2	30.4	730	2971.9	
7	1:30 PM	2:30 PM	60	60	900	200	2971.9	1660	117.8	117.8	37.7	905	2982.2	
8	2:30 PM	3:30 PM	60	60	1100	200	2982.2	1699.6	165.5	165.5	47.5	1142	2993.6	
9	3:30 PM	3:45 PM	15	15	0	-100	2875	1498	-65.5	-65.5	0	0		

Int Point: 573.9645 BPD
2945.3272 Psia
0.191 2835.7
0.0727 2903.6

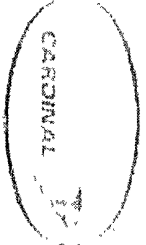


Chesapeake Energy Corp. WTU # 924
Step Rate Test 05-27-2008



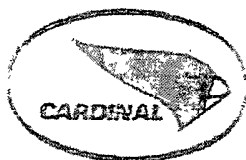
Step Rate Test

Chesapeake Energy
WTTU #924
Field:
Lea County NM

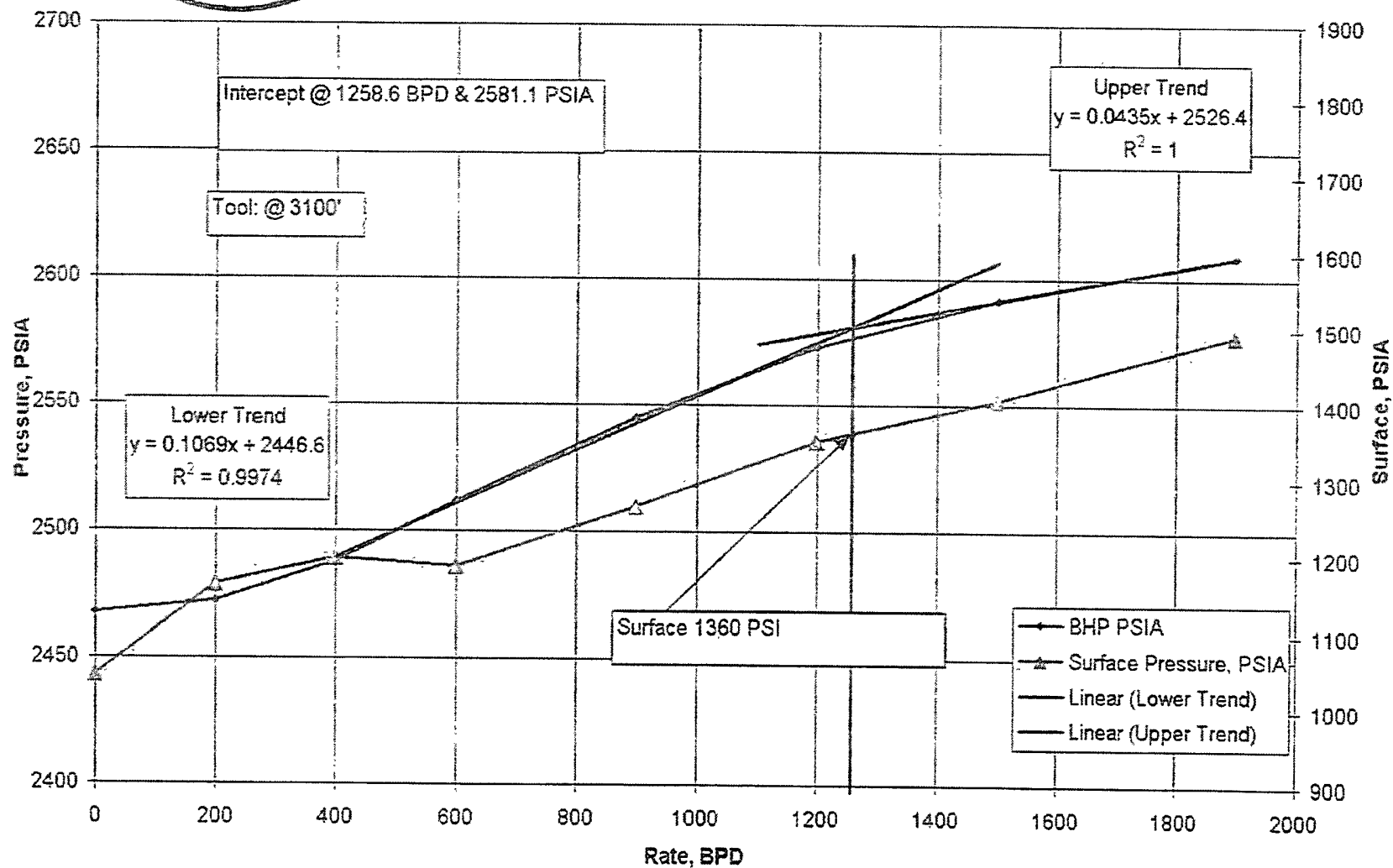


	S Time	E Time	D Time	Last Rate	Step B H	Pressure	Surf	Qurt	Delta	Avg.	Lower	Upper
			Min	BPD	SPD	PSIA	PSIA	BEL	BEL	SPD	Trend	Trend
1	8:00 AM	10:00 AM	60	0	0	2896.1	1522.4	0	0	0		
2	10:00 AM	11:00 AM	60	100	100	2910.3	1537.8	6.7	6.7	161		
3	11:00 AM	12:00 PM	60	200	100	2911	1579.1	15.5	8.5	211	2911	
4	12:00 PM	1:00 PM	60	300	100	2919.9	1604.1	28.6	13.1	314	2919.9	
5	1:00 PM	2:00 PM	60	500	300	2950.7	1634.9	64.2	25.7	617	2950.7	
6	2:00 PM	3:00 PM	60	900	300	2985.4	1651.1	93.2	39.5	934	2985.4	
7	3:00 PM	4:00 PM	60	1200	300	3003.7	1759.4	144.1	50.9	1222		
8	4:00 PM	5:00 PM	60	1500	200	3015.1	1907.2	208.7	64.8	1550		3015.1
9	5:00 PM	6:00 PM	60	1800	300	3027.4	1868.7	265.2	76.5	1535		3027.4
10	6:00 PM	6:15 PM	15	0	-1800	2957.2	1626.9	285.2	0	0		

in point: 893.51172 BPD
2994.3504 Psia
0.1067 2985.5
0.041 2953.5

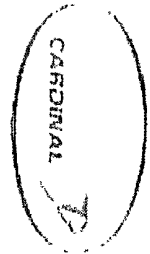


Chesapeake Energy Corp. WTU # 941
Step Rate Test 05-23-2008



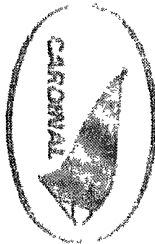
Step Rate Test

Cresapeake Energy
W/TU # 941
Field:
Lea County, NM

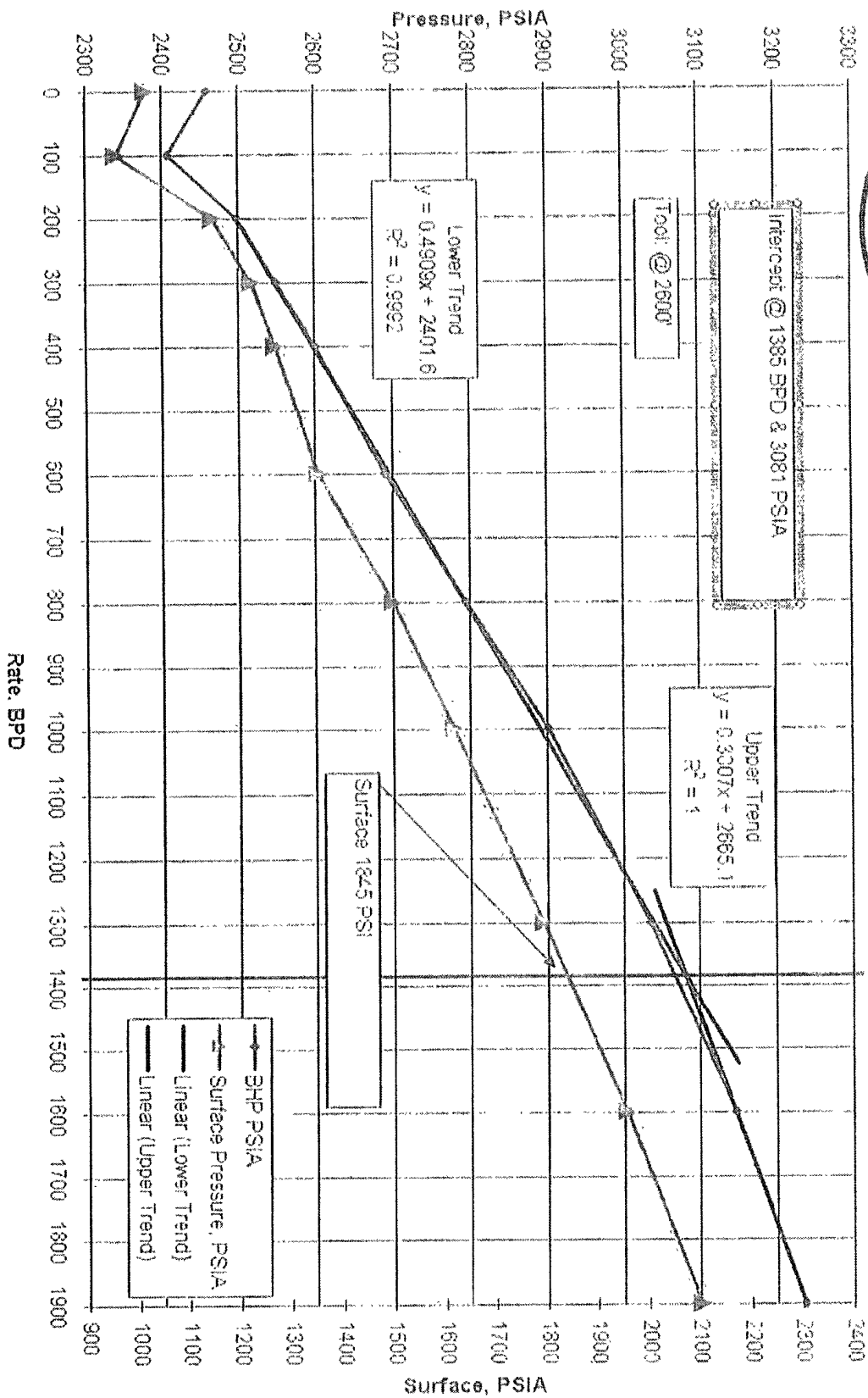


	S Time	E Time	D Time	Last Rate	Step B. H.	Pressure	Surf	Cum	Delta	Avg.	Lower	Upper
			Min	BPD	BPD	PSIA	PSIA	BBL	BBL	BPD	Trend	Trend
1	10:23 AM	10:30 AM	7	0	0	2468	1044.7	0	0	0		
2	10:30 AM	11:30 AM	60	200	200	2472.9	1182.6	9.8	9.8	235	2487.8	
3	11:30 AM	12:30 PM	60	400	200	2487.8	1198.7	25.9	18.1	388	2511.6	
4	12:30 PM	1:30 PM	60	600	200	2511.6	1185.7	51.7	25.3	619	2573.2	
5	1:30 PM	2:30 PM	60	900	300	2545	1265.9	39.2	37.5	500	2645	
6	2:30 PM	3:30 PM	60	1200	300	2573.2	1332	140.6	51.4	1234		
7	3:30 PM	4:30 PM	60	1500	300	2591.7	1406.7	203.1	62.5	1500		2591.7
8	4:30 PM	5:30 PM	60	1900	400	2609.1	1483.5	284.9	81.8	1963		2609.1
9	5:30 PM	5:45 PM	15	0	-1900	2575.2	1251.4	284.9	0	0		

Int point: 1258.6751 BPD
2581.1524 Psia
0.1066 2446.6
0.0465 2526.4

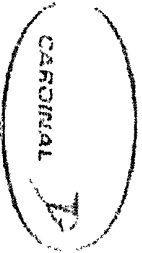


Chesapeake Energy Corp. WTLU # 945
Step Rate Test 05-22-2008



Step Rate Test

Marrosa Operating
W/TU #345
Field:
Lee County, NM



	S Time	E Time	D Time	Last Rate	Step E H	Pressure	Surf	Cum	Delta	Avg.	Lower	Upper
1	9:04 AM	9:30 AM	26	0	2	2459.5	1016.1	0	0	0	Trend	Trend
2	9:30 AM	10:30 AM	50	100	100	2407.1	958.6	5.3	5.3	127	2499.2	
3	10:30 AM	11:30 AM	50	200	100	2499.2	1149.8	13.8	8.5	204	2549.8	
4	11:30 AM	12:30 PM	50	300	100	2549.8	1223.1	26.5	12.7	306	2599.4	
5	12:30 PM	1:30 PM	50	400	100	2599.4	1271.5	42.5	16	364	2689.8	
6	1:30 PM	2:30 PM	50	500	200	2689.8	1353.3	63.4	25.9	522	2794.1	
7	2:30 PM	3:30 PM	50	600	200	2794.1	1489.9	102	33.6	806	2902.6	
8	3:30 PM	4:30 PM	50	1000	200	2902.6	1619	144.6	42.6	1022	3034.5	
9	4:30 PM	5:30 PM	50	1300	300	3034.5	1794	204.5	59.9	1438		
10	5:30 PM	6:30 PM	50	1600	300	3146.2	1967.3	263.4	60.9	1462		
11	6:30 PM	7:30 PM	50	1900	300	3236.4	2102.7	346	30.6	1934		
12	7:30 PM	7:45 PM	15									

0.4909 2401.6
0.3007 2635.1
int point: 1365.3838 BPD
3081.6849 Psie