

Submit 1 Copy To Appropriate District Office
District I – (575) 393-6161
1625 N. French Dr., Hobbs, NM 88240
District II – (575) 748-1283
811 S. First St., Artesia, NM 88210
District III – (505) 334-6178
1000 Rio Brazos Rd., Aztec, NM 87410
District IV – (505) 476-3460
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources

Form C-103
Revised July 18, 2013

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

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.)		WELL API NO. 30-025-34193
1. Type of Well: Oil Well <input type="checkbox"/> Gas Well <input checked="" type="checkbox"/> Other INJECTION		5. Indicate Type of Lease STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>
2. Name of Operator LINN OPERATING, INC.		6. State Oil & Gas Lease No.
3. Address of Operator 600 TRAVIS, SUITE 5100, HOUSTON, TEXAS 77002		7. Lease Name or Unit Agreement Name CAPROCK MALJAMAR UNIT
4. Well Location Unit Letter O : 1033 feet from the S line and 1975 feet from the E line Section 28 Township 17S Range 33E NMPM LEA County		8. Well Number 283
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 4170		9. OGRID Number 269324
		10. Pool name or Wildcat MALJAMAR; GRAYBURG-SAN ANDRES

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 ☐
DOWNHOLE COMMINGLE ☐
CLOSED-LOOP SYSTEM ☐

OTHER: ☐

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐
COMMENCE DRILLING OPNS. ☐ P AND A ☐
CASING/CEMENT JOB ☐

OTHER: **REQUEST MASIP OF 2894 PSIA** ☒

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

LINN received a violation for exceeding the max tubing pressure of 2082 psi., which resulted in a performed step rate test in 100-1000 bpd increasing increments at 30 minutes for each step. Intercept at 2,227 bwpd, 4812 BH psi with a surface intercept at 2944 psi. The intent was to increase the MASIP for the CMU #283 to 2894 psi. Attached is the Cardinal Survey Company Step Rate Test and Well Bore Diagram for reference.

LINN was granted authorization to inject at the max surface tubing pressure of 2894 psi per attached Administrative Order IPI-471 dated 9/24/14.

Spud Date:

Rig Release Date:

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

SIGNATURE Laura A. Moreno TITLE REG COMPLIANCE ADVISOR DATE 10-03-2014

Type or print name LAURA A. MORENO E-mail address: lmoreno@linnenergy.com PHONE: 713-904-6657

For State Use Only

APPROVED BY: Mary S Brown TITLE Dist. Supervisor DATE 10/9/2014

Conditions of Approval (if any):

OCT 17 2014

OCT 08 2014

State of New Mexico
Energy, Minerals and Natural Resources Department

Susana Martinez
Governor

David Martin
Cabinet Secretary

Brett F. Woods, Ph.D.
Deputy Cabinet Secretary

JamI Bailey, Division Director
Oil Conservation Division



RECEIVED

Administrative Order IPI-471
September 24, 2014

Linn Operating, Inc.
600 Travis, Suite 5100
Houston, Texas 77002
Attn: Ms. Laura Moreno

RE: Injection Pressure Increase

Injection Authority: Division Order No. 10094 and Administrative Order WFX-742;
Caprock Maljamar Unit Waterflood Project
Pool: Maljamar; Grayburg-San Andres (Pool Code: 43329)
Caprock Maljamar Unit No. 283 API 30-025-34193
Unit letter O, Sec 28, T17S, R33E, NMPM, Lea County, New Mexico

Dear Ms. Moreno:

Reference is made to your request on behalf of Linn Operating, Incorporated (OGRID 269324) received by the Division on September 5, 2014, to increase the maximum allowed surface tubing pressure on the above named well.

This well was permitted by the Division for water injection for enhanced oil recovery in the Grayburg and San Andres formations by Administrative Order WFX-742 approved September 6, 1994. That order allowed injection through perforations from 4415 feet to 4652 feet at a maximum surface injection pressure of 883 psi. An increase in injection pressure was approved by Administrative Order IPI-436 based on a step-rate test conducted on adjacent well (Caprock Maljamar Unit No. 98). Order IPI-436 permitted a surface injection pressure increase to 2082 psi.

It is our understanding that this well will not take a sufficient volume of fluid at the current pressure limit and a higher pressure limit is needed for improving the effectiveness of the waterflood operation. It is also understood that an increase will not result in the fracturing of the formation and confining strata.

Based on a step-rate test for this well conducted on July 17, 2014, through 2 3/8-inch tubing, you are hereby authorized to inject at the following maximum surface tubing pressure:

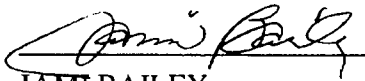
Caprock Maljamar Unit Well No. 283 API 30-025-34193 2894 psi

This Order supersedes the maximum surface tubing pressure approved for the Caprock Maljamar Unit Well No. 283 under Administrative Order IPI-436. Order IPI-436 remains in full effect for the five remaining injection wells listed in the Order.

This approval is based on the provision that the tubing size, packer setting depth and completion interval for this well does not change. Any future requested pressure increase will require resubmission of additional data and a new step-rate test. The Division Director retains the right to require at any time wireline verification of completion and packer setting depths in this well. This approval is subject to your being in compliance with all other Division rules, including but not limited to Division Rule 19.15.5.9 NMAC.

The Division Director may rescind this permitted injection pressure increase if it becomes apparent that the injected fluid is not being confined to the permitted disposal interval or is endangering any fresh water aquifer.

Sincerely,



JAMI BAILEY
Director

JB/prg

cc: Oil Conservation Division – Hobbs District Office
Administrative Order WFX-742
Well file 30-025-34193



9/05/2014 DATE IN	SUSPENSE	PNG ENGINEER	9/05/2014 LOGGED IN	IPI TYPE	PMH1424847423 APP NO
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ABOVE THIS LINE FOR DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION
- Engineering Bureau -
1220 South St. Francis Drive, Santa Fe, NM 87505



HOBS OCD

OCT 08 2014

ADMINISTRATIVE APPLICATION CHECKLIST

THIS CHECKLIST IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE

RECEIVED

Application Acronyms:

[NSL-Non-Standard Location] [NSP-Non-Standard Proration Unit] [SD-Simultaneous Dedication]
[DHC-Downhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling]
[PC-Pool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement]
[WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion]
[SWD-Salt Water Disposal] [IPI-Injection Pressure Increase]
[EOR-Qualified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]

[1] TYPE OF APPLICATION - Check Those Which Apply for [A]

- [A] Location - Spacing Unit - Simultaneous Dedication
☐ NSL ☐ NSP ☐ SD

Check One Only for [B] or [C]

- [B] Commingling - Storage - Measurement
☐ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM

- [C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery Caprock Maljamar Unit #283
☐ WFX ☐ PMX ☐ SWD ☒ IPI ☐ EOR ☐ PPR

- [D] Other: Specify Existing Orders WFX-742/IPI-436

[2] NOTIFICATION REQUIRED TO: - Check Those Which Apply, or Does Not Apply

- [A] ☐ Working, Royalty or Overriding Royalty Interest Owners
[B] ☐ Offset Operators, Leaseholders or Surface Owner
[C] ☐ Application is One Which Requires Published Legal Notice
[D] ☐ Notification and/or Concurrent Approval by BLM or SLO
U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office
[E] ☐ For all of the above, Proof of Notification or Publication is Attached, and/or,
[F] ☐ Waivers are Attached

[3] SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED ABOVE.

[4] **CERTIFICATION:** I hereby certify that the information submitted with this application for administrative approval is accurate and complete to the best of my knowledge. I also understand that no action will be taken on this application until the required information and notifications are submitted to the Division.

Note: Statement must be completed by an individual with managerial and/or supervisory capacity.

Laura Moreno

Laura E. Moreno
Signature

Regulatory Compliance Advisor

Sept. 4, 2014

Print or Type Name

Title

Date

lmoreno@linenergy.com
e-mail Address



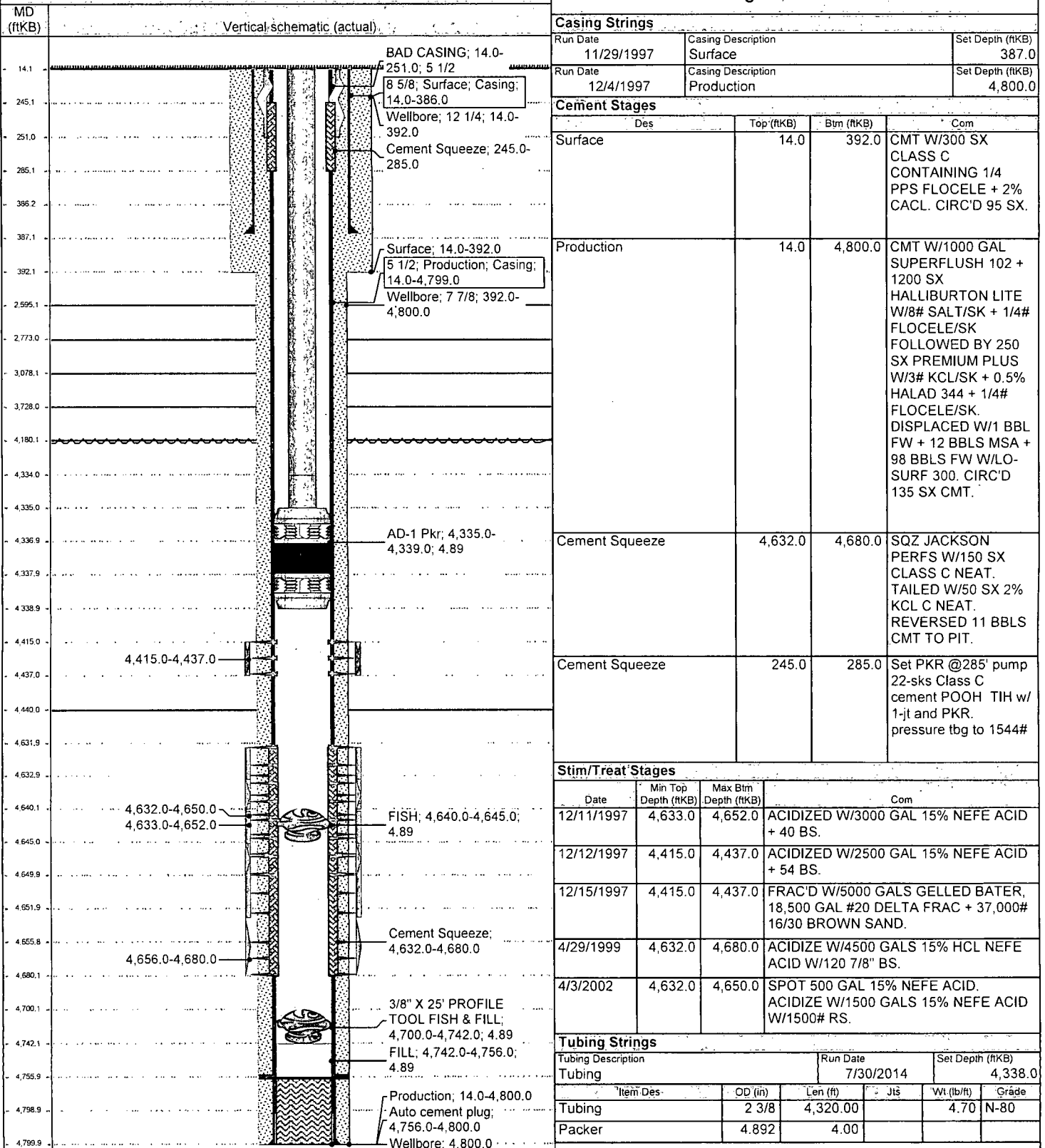
NM Sundry Schematic

Well Name: CAPROCK MALJAMAR UNIT 283

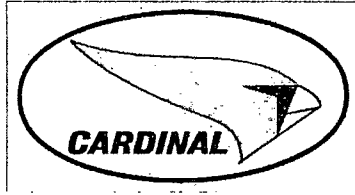
API/UWI 3002534193	Field Name PB - Caprock Maljamar	County Lea	State/Prov NM	Section 28	Township 017-S	Range 033-E	Survey	Block
Ground Elevation (ft) 4,170.00	Orig KB Elev (ft) 4,184.00	KB-Grd (ft) 14.00	Initial Spud Date 11/28/1997	Rig Release Date	TD Date	Latitude (°)	Longitude (°)	Operated? Yes

Original Hole, 8/28/2014 1:26:21 PM

Original Hole Data



Step Rate Test



Cardinal Surveys Company

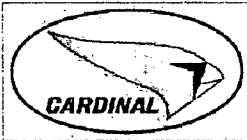
7/17/2014

Fracture @ 2227 BPD
4812 BHPSIA,
2944 Surf PSIA

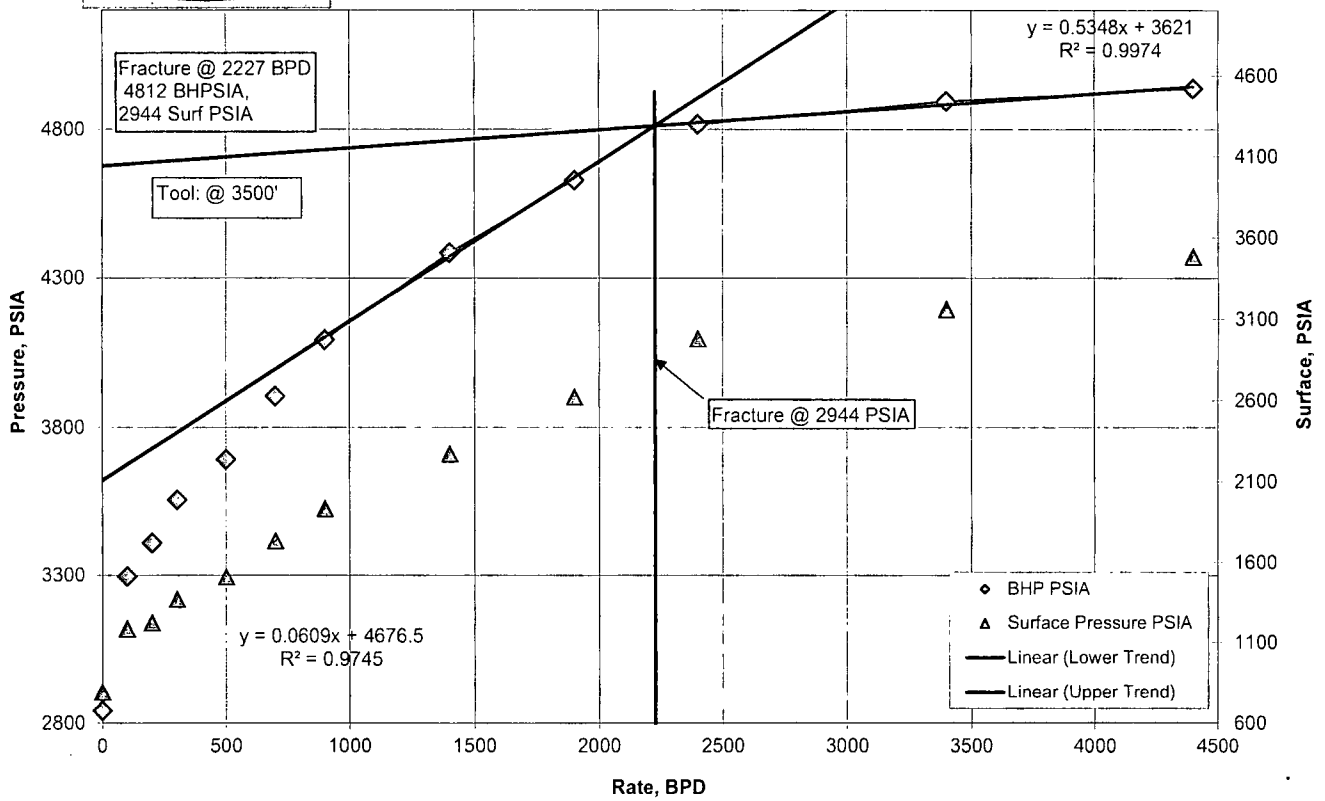
Linn Energy
CMU # 283
CMU
LEA County, New Mexico
SC 60795
Tool # CSC2001
File# 21,818

Downhole PSI Tool Ser. No.
Surface PSI Gauge Ser. No.
Tool @ 4500'

	Start Time	End Time	Rate BPD	Comments
1	9:48 AM	12:00 PM		0 On Bottom
2	12:00 PM	12:30 PM	100	
3	12:30 PM	1:00 PM	200	
4	1:00 PM	1:30 PM	300	
5	1:30 PM	2:00 PM	500	
6	2:00 PM	2:30 PM	700	
7	2:30 PM	3:00 PM	900	
8	3:00 PM	3:30 PM	1400	
9	3:30 PM	4:00 PM	1900	
10	4:00 PM	4:30 PM	2400	
11	4:30 PM	5:00 PM	3400	
12	5:00 PM	5:30 PM	4400	
13	5:30 PM	5:45 PM		0 Fall Off



Linn Energy CMU # 283
Step Rate Test 07-17-2014



Step Rate Test

Linn Energy

CMU # 283

CMU

LEA County , New Mexico



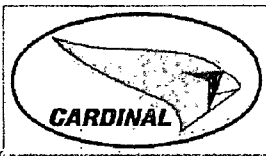
	S Time	E Time	D Time	Last Rate	Step I. Pressure		Surf	Cum	Delta	Avg.	Avg From	Lower	Upper
			Min	BPD	BPD	PSIA	PSIA	BBL	BBL	BPD	Raw Data	Trend	Trend
1	9:48 AM	12:00 PM	132	0	0	2842.8	794	0	0	0			
2	12:00 PM	12:30 PM	30	100	100	3296.4	1185	5.5	5.5	56880			
3	12:30 PM	1:00 PM	30	200	100	3410	1222	11.8	6.3	58656			
4	1:00 PM	1:30 PM	30	300	200	3556.1	1367	19.6	13.3	65616			
5	1:30 PM	2:00 PM	30	500	300	3692	1509	29.3	16	72432			
6	2:00 PM	2:30 PM	30	700	400	3906.2	1734	44.9	28.9	83232			
7	2:30 PM	3:00 PM	30	900	500	4094.5	1934	63.1	34.2	92832			4094.5
8	3:00 PM	3:30 PM	30	1400	900	4385.4	2271	93.4	59.2	109008			4385.4
9	3:30 PM	4:00 PM	30	1900	1000	4629.3	2624	133.8	74.6	125952			4629.3
10	4:00 PM	4:30 PM	30	2400	1400	4816.9	2981	192.9	118.3	143088		4816.9	
11	4:30 PM	5:00 PM	30	3400	2000	4894.8	3160	260.3	142	151680		4894.8	
12	5:00 PM	5:30 PM	30	4400	2400	4938.6	3484	352.5	210.5	167232		4938.6	
13	5:30 PM	5:45 PM	15		-2400				-210.5	0			

0.0609 4676.543

0.5348 3621.013

int point: 2227.091 BPD

4812.062 Psia



Linn Energy CMU # 283
Step Rate Test 07-17-2014

