State of New Mexico
Energy, Minerals and Natural Resources Department

Administrative Order IPI-484-A
June 13, 2015

Ms. Robbie Grigg
Cross Timbers Energy, LLC
400 West Seventh Street
Fort Worth, TX 76102

RE: **Injection Pressure Increase**
Injection Authority: Division Order No. R-3134, as amended, and Order WFX-927
Pool: Maljamar; Grayburg-San Andres (Pool code 43329)
Two injection wells in the Southeast Maljamar Grayburg-San Andres Waterflood Project

Dear Ms. Grigg:

Reference is made to your request on behalf of Cross Timbers Energy, LLC (OGRID 298299) received by the Division on July 1, 2015 to increase the maximum allowed surface tubing pressure on the two referenced wells.

These wells were permitted by the Division for injection of produced water through perforations in the Grayburg-San Andres formations by Administrative Order WFX-927 approved August 20, 2014. The maximum surface tubing pressure approved by the administrative order was based on the gradient of 0.2 pounds per square inch (psi) per foot and calculated based on the depth of the shallowest perforation in each well.

It is our understanding that the operator proposes to increase the efficiency of the waterflood and consequently, a higher pressure limit is needed. It is also understood that an increase will not result in the fracturing of the formation and confining strata.

Based on step-rate tests for these wells through 2⅜-inch tubing, you are hereby authorized to inject at the following maximum surface tubing pressure:

API No.	Well No.	ULSTR	SRT Test Date	Maximum Injection Pressure	Pressure Gradient (in psi/ft)
30-025-26512	Southeast Maljamar GB/SA Unit Well No. 105	J-30-17S-33E	6/15/2015	2560 psi	0.6
30-025-31444	Southeast Maljamar GB/SA Unit Well No. 906	A-32-17S-33E	6/15/2015	2445 psi	0.63

This approval is based on the provision that the tubing size, packer setting depth and completion interval for these wells 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 these wells. 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.

This Administrative Order supersedes Order 484, issued on February 18, 2015 for the Southeast Maljamar GB/SA Unit Well No. 105, and Southeast Maljamar GB/SA Unit Well No. 906 only.

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,

David R. Catanach

DAVID R. CATANACH
Director

DRC/mam

cc: Oil Conservation Division – Hobbs District Office
New Mexico state Land Office – Oil, Gas, and Minerals
WFX-927
Well Files 30-025-26512 and 30-025-31444

7/01/2015 DATE IN	SUSPENSE	PRG ENGINEER	7/01/2015 LOGGED IN	IPI TYPE	PMAM1518257436 APP NO.

ABOVE THIS LINE FOR DIVISION USE ONLY

-check IPI w/ Pool requested now data.

NEW MEXICO OIL CONSERVATION DIVISION

- Engineering Bureau -

1220 South St. Francis Drive, Santa Fe, NM 87505

105=?
906 = 24455 = .43

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

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]

IPI-484-A
- Cross Timbers Energy, LLC 298299
- WEH

[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 - Southeast MALJamAr GB/SA #105 30-025-26512

[C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery
☐ WFX ☐ PMX ☐ SWD ☒ IPI ☐ EOR ☐ PPR - Southeast MALJamAr GB/SA #906 30-025-31444

[D] Other: Specify _____

RECEIVED OCD 2015 JUL -1 A 11:02

[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

Pool - MALJamAr Graybung - San Andres 43229

[E] ☐ For all of the above, Proof of Notification or Publication is Attached, and/or,

[F] ☐ Waivers are Attached

325 / 42370

[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.

Robbie Grigg	Robbie A. Grigg	Regulatory Compliance	6/24/15
Print or Type Name	Signature	Title	Date

rgrigg@mspartners.com
e-mail Address

CROSS TIMBERS ENERGY, LLC

June 24, 2015

New Mexico EMNRD
Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Re. Request for Maximum Injection Pressure Increase
Southeast Maljamar GB/SA Unit #105
API No. 30-025-26512
Pool No. 43329 Maljamar;Grayburg-San Andres
Lea County, New Mexico

Cross Timbers Energy, LLC respectfully requests a maximum surface pressure increase for the above referenced water injection well to 3,140 psi. 3140/3897 = .88
(50PSI) 3090/3897 .79
See attached step rate test results and wellbore schematic.

Sincerely,

Robbie Grigg
Cross Timbers Energy, LLC
817-334-7842
rgrigg@mspartners.com

Step Rate Test

Cardinal Surveys Company

15-Jun-15

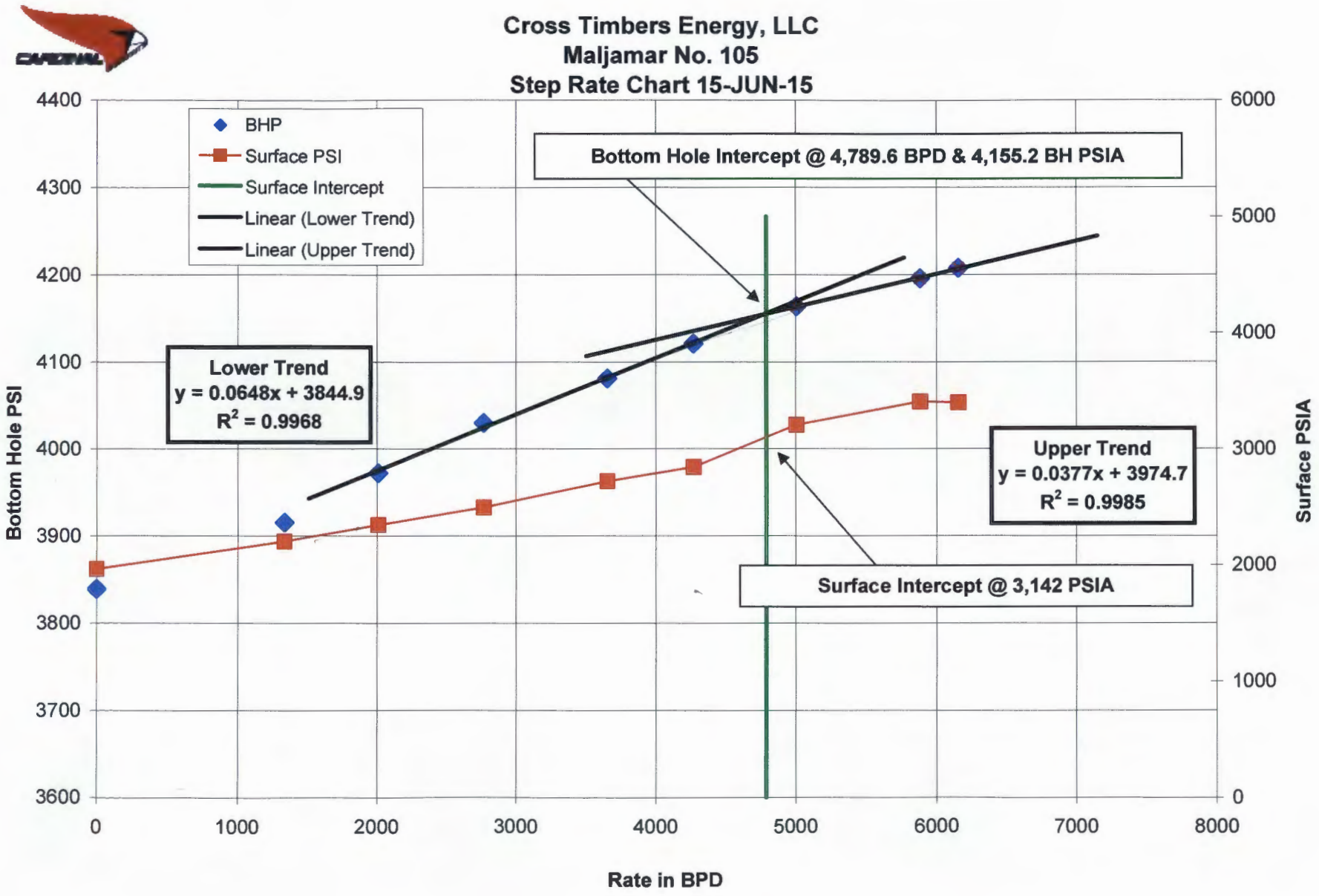
Cross Timbers Energy, LLC
Well: Maljamar No. 105
Field;
County: Lea County, New Mexico

SC70406
File No. 22225

Intercept @ 4,789.6 BPD, 3974.7 BH PSIA & Surface Intercept @ 3,142 PSIA

Downhole PSI Tool Ser. No. CSC2604
Surface PSI Gauge Ser. No. CSC 2701
Tool @ 4,100'

	Start	End	Rate	
1	11:22 AM	11:30 AM	0	4,100'
2	11:30 AM	12:00 PM	1440	
3	12:00 PM	12:30 PM	2160	
4	12:30 PM	1:00 PM	2880	
5	1:00 PM	1:30 PM	3600	
6	1:30 PM	2:00 PM	4320	
7	2:00 PM	2:30 PM	5040	
8	2:30 PM	3:00 PM	5760	
9	3:00 PM	3:30 PM	6480	
10	3:30 PM	3:45 PM	0	15 MIN. FALL OFF
11				
12				
13				
14				
15				
16				
17				
18				


Cross Timbers Energy, LLC
Maljamar No. 105
Step Rate Chart 15-JUN-15
BHP
Surface PSI
Surface Intercept
Linear (Lower Trend)
Linear (Upper Trend)
Bottom Hole Intercept @ 4,789.6 BPD & 4,155.2 BH PSIA
Lower Trend
y = 0.0648x + 3844.9
R² = 0.9968
Upper Trend
y = 0.0377x + 3974.7
R² = 0.9985
Surface Intercept @ 3,142 PSIA
Bottom Hole PSI
Surface PSIA
Rate in BPD
4400
4300
4200
4100
4000
3900
3800
3700
3600
6000
5000
4000
3000
2000
1000
0
0
1000
2000
3000
4000
5000
6000
7000
8000

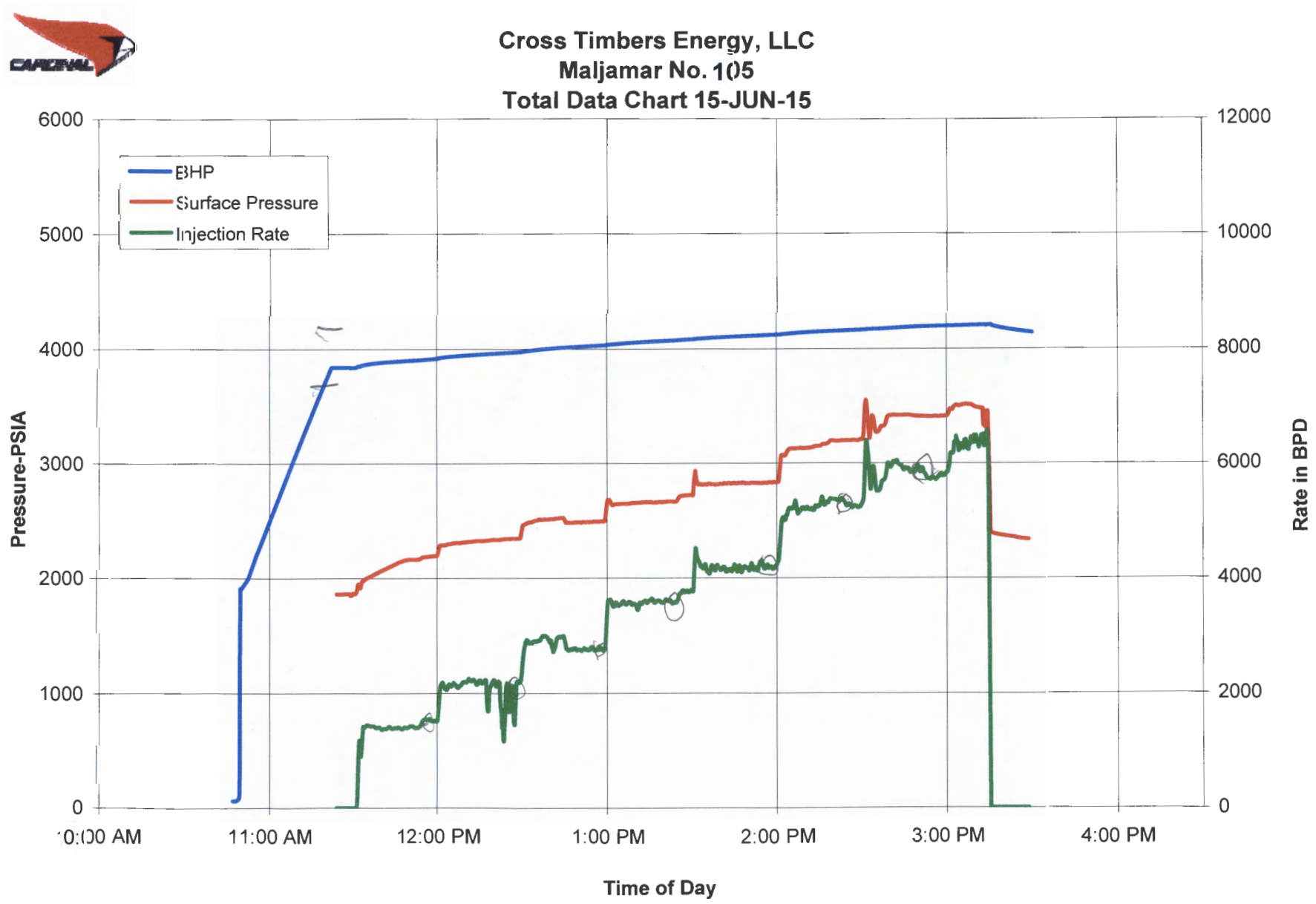
Step Rate Test
15-Jun-15

Cross Timbers Energy, LLC
Well: Maljamar No. 105
Field:
Location: Lea County, New Mexico

	S Time	E Time	D Time Min	Last Rate BPD	Step BPD	BHP PSIA	Surf PSIA	Cum BBL	Delta BBL	Avg. BPD	Lower Trend	Upper Trend
1	11:22 AM	11:30 AM	8	0	0	3839	1963	0	0	0		
2	11:30 AM	12:00 PM	30	1440	1440	3915.3	2200	27.9	27.9	1339		
3	12:00 PM	12:30 PM	30	2160	720	3972.1	2343	69.8	41.9	2011		
4	12:30 PM	1:00 PM	30	2880	720	4029.8	2495	127.5	57.7	2770	4029.8	
5	1:00 PM	1:30 PM	30	3600	720	4081.1	2721	203.7	76.2	3658	4081.1	
6	1:30 PM	2:00 PM	30	4320	720	4120.9	2840	292.7	89	4272	4120.9	
7	2:00 PM	2:30 PM	30	5040	720	4163.5	3205	397	104.3	5006		4163.5
8	2:30 PM	3:00 PM	30	5760	720	4195.4	3405	519.6	122.6	5885		4195.4
9	3:00 PM	3:30 PM	30	6480	720	4207.3	3397	588	68.4	6156		4207.3
10	3:30 PM	3:45 PM	15	0		4141.6	2325					
11												
12												
13												
14												
15												
16												

Ask for new date.

upper trend	0.0377	3974.7
lower trend	0.0648	3844.9
intersect	4789.6679	BPD
BHP PSI	4155.27048	PSIA


Cross Timbers Energy, LLC
Maljamar No. 105
Total Data Chart 15-JUN-15
BHP
Surface Pressure
Injection Rate
Pressure-PSIA
Rate in BPD
Time of Day
6000
5000
4000
3000
2000
1000
0
12000
10000
8000
6000
4000
2000
0
10:00 AM
11:00 AM
12:00 PM
1:00 PM
2:00 PM
3:00 PM
4:00 PM

Injector Schematic & History

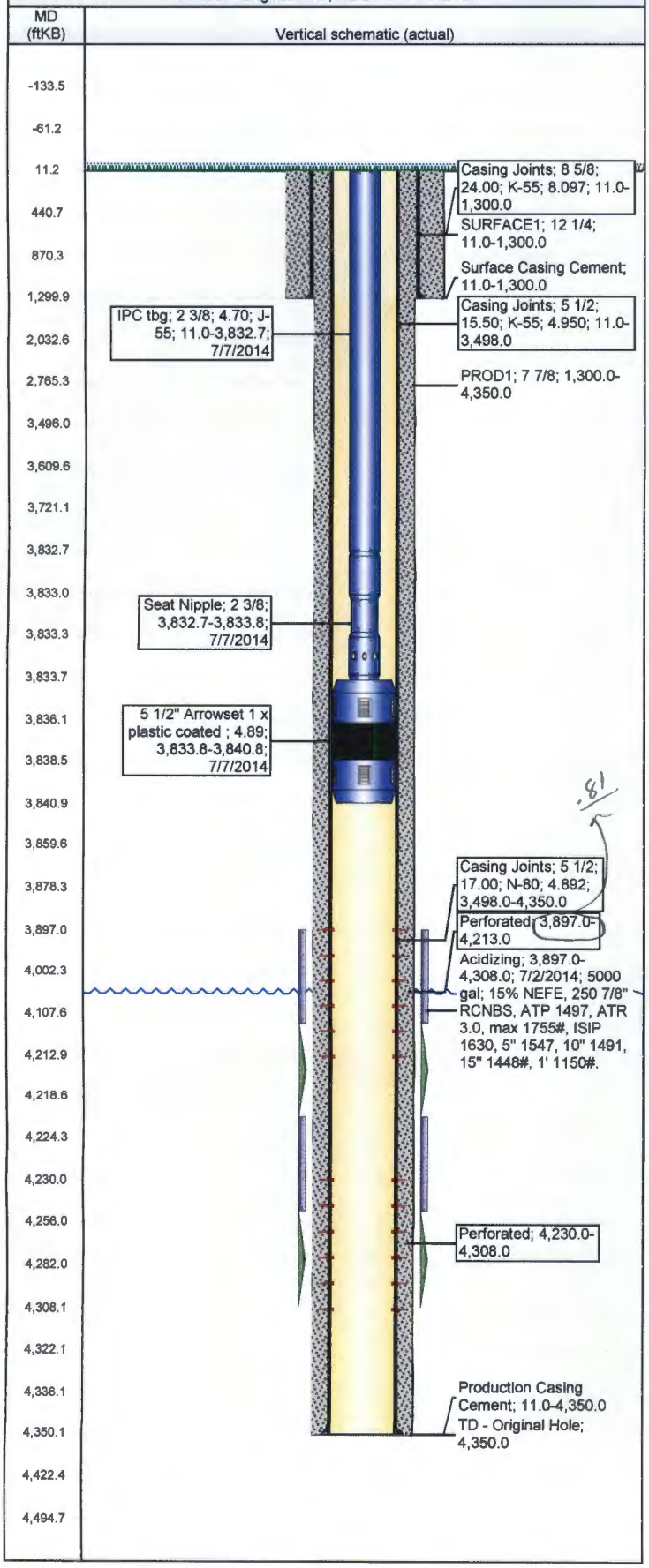
Well Name	API/UWI	County	State/Province	Field Name
SOUTHEAST MALJAMAR GB/SA UNIT 105	3002526512	Lea	New Mexico	MALJAMAR

Location	Township	Range	Section	Latitude (°)	Longitude (°)
2490 FSL & 1595 FEL	17S	33E	30	32° 48' 18.202" N	103° 41' 56.408" W

Section	Survey	Block	Township	Abstract

Original KB Elevation (ft)	Ground/Corrected Ground Elevation (ft)	KB-Ground Distance (ft)	Spud Date
4,061.00	4,050.00	11.00	

Vertical - Original Hole, 6/2/2015 1:41:42 AM



Jobs

Type	Start Date	Summary
Lift Optimization	7/1/2009	
Lift Optimization	4/21/2011	
Replace Equipment	11/8/2013	
Convert To Injection	6/30/2014	POOH rods & pmp, LD. POOh tbg, RIH bit & scrpr, acidize existing perfs, install inj equip, SI & wait for OCD permit.
Step-Rate Injection Test	9/29/2014	Perform step-rate inj test. Fracture pressure 2060# surf.

Wellbore Sections

Section Des	Wellbore Name	Size (in)	Act Top (ftKB)	Act Btm (ftKB)	Start Date
SURFACE1	Original Hole	12 1/4	11.0	1,300.0	
PROD1	Original Hole	7 7/8	1,300.0	4,350.0	

Surface 1,300.0 ftKB <Run Date?>

Comment

OD (in)	Wt (lb/ft)	Grade	Top (ftKB)	Btm (ftKB)	Len (ft)	Item Des
8 5/8	24.00	K-55	11.0	1,300.0	1289	Casing Joints

Production 4,350.0 ftKB <Run Date?>

Comment

OD (in)	Wt (lb/ft)	Grade	Top (ftKB)	Btm (ftKB)	Len (ft)	Item Des
5 1/2	15.50	K-55	11.0	3,498.0	3487	Casing Joints
5 1/2	17.00	N-80	3,498.0	4,350.0	852	Casing Joints

Cement Stages

Description	Top (ftKB)	Btm (ftKB)	Top Meas Meth	Comment
Surface Casing Cement	11.0	1,300.0	Cement Returns	CMTD W/460 SX HLC W/2% CaCl2 & 1/4#/SX CF & 200 SX CL "C" CMT W/2% Cacl2. CIRC 125 SX CMT TO SURF.
Production Casing Cement	11.0	4,350.0	Cement Returns	CMT'D 1ST STG W/160 SX CL "H" CMT w/3#/SX SALT, 3#/SX GILSONITE & 3#/SX SD. CMT'd 2ND STG w/1,600 SX HLC w/15#/SX SALT & ¼#/SX CF & 200 SX CL "C" w/2% CaCl2. CIRC 200 SX TO SURF. NO FLOW FR/8-5/8" X 5-1/2" ANNULUS.

Perforations

Top (ftKB)	Btm (ftKB)	Shot Dens (shot s/ft)	Date	Zone	Calculated Shot Total
3,897.0	4,213.0			PREMIER, Original Hole	1
4,230.0	4,308.0			SAN ANDRES, Original Hole	1

Stim/Treat Stages

Type	Start Date	Top (ftKB)	Btm (ftKB)	Com
Acidizing	7/2/2014	3,897.0	4,308.0	5000 gal; 15% NEFE, 250 7/8" RCNBS, ATP 1497, ATR 3.0, max 1755#, ISIP 1630, 5" 1547, 10" 1491, 15" 1448#, 1' 1150#.

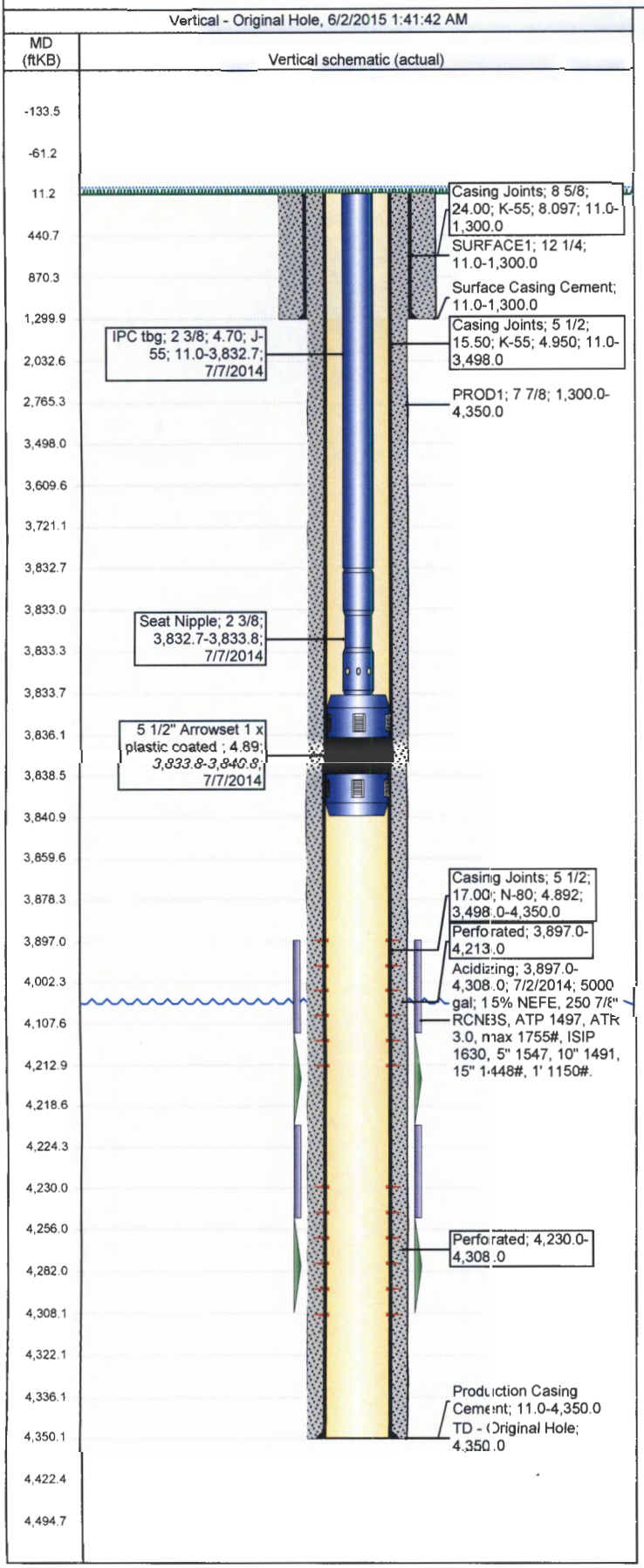
Other In Hole

Des	Com	OD (in)	Run Date	Top (ftKB)	Btm (ftKB)

Tubing - Water Injection set at 3841ftKB on 7/7/2014 07:09

Set Depth (ftKB)	Comment	Run Date	Pull Date
3841		7/7/2014	

Injector Schematic & History



Item Des	OD (in)	Wt (lb/ft)	Grade	Len (ft)	Jts	Top (ftKB)	Btm (ftKB)
IPC tbg	2 3/8	4.70	J-55	3821.7	118	11	3833
Seat Nipple	2 3/8			1.1	1	3833	3834
5 1/2" Arrowset 1 x plastic coated	4.89 2			7	1	3834	3841

CROSS TIMBERS ENERGY, LLC

June 24, 2015

New Mexico EMNRD
Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Re. Request for Maximum Injection Pressure Increase
Southeast Maljamar GB/SA Unit #906
API No. 30-025-31444
Pool No. 43329 Maljamar;Grayburg-San Andres
Lea County, New Mexico

Cross Timbers Energy, LLC respectfully requests a maximum surface pressure increase for the above referenced water injection well to 3,250 psi. 3250/4270 = .76

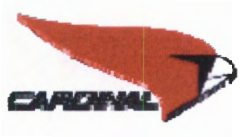
(50PSI) 3200/4270 = .75

See attached step rate test results and wellbore schematic.

Sincerely,

Robbie Grigg
Cross Timbers Energy, LLC
817-334-7842
rgrigg@mspartners.com

Step Rate Test



Cardinal Surveys Company

16-Jun-15

Cross Timbers Energy, LLC
Well: Maljamar No. 906
Field;
County: Lea County, New Mexico

SC70428
File No. 22226

Intercept @ 4,699 BPD, 4,319 BH PSIA & Surface Intercept @ 3,258 PSIA

Downhole PSI Tool Ser. No. CSC2604
Surface PSI Gauge Ser. No. CSC 2701
Tool @ 4,350'

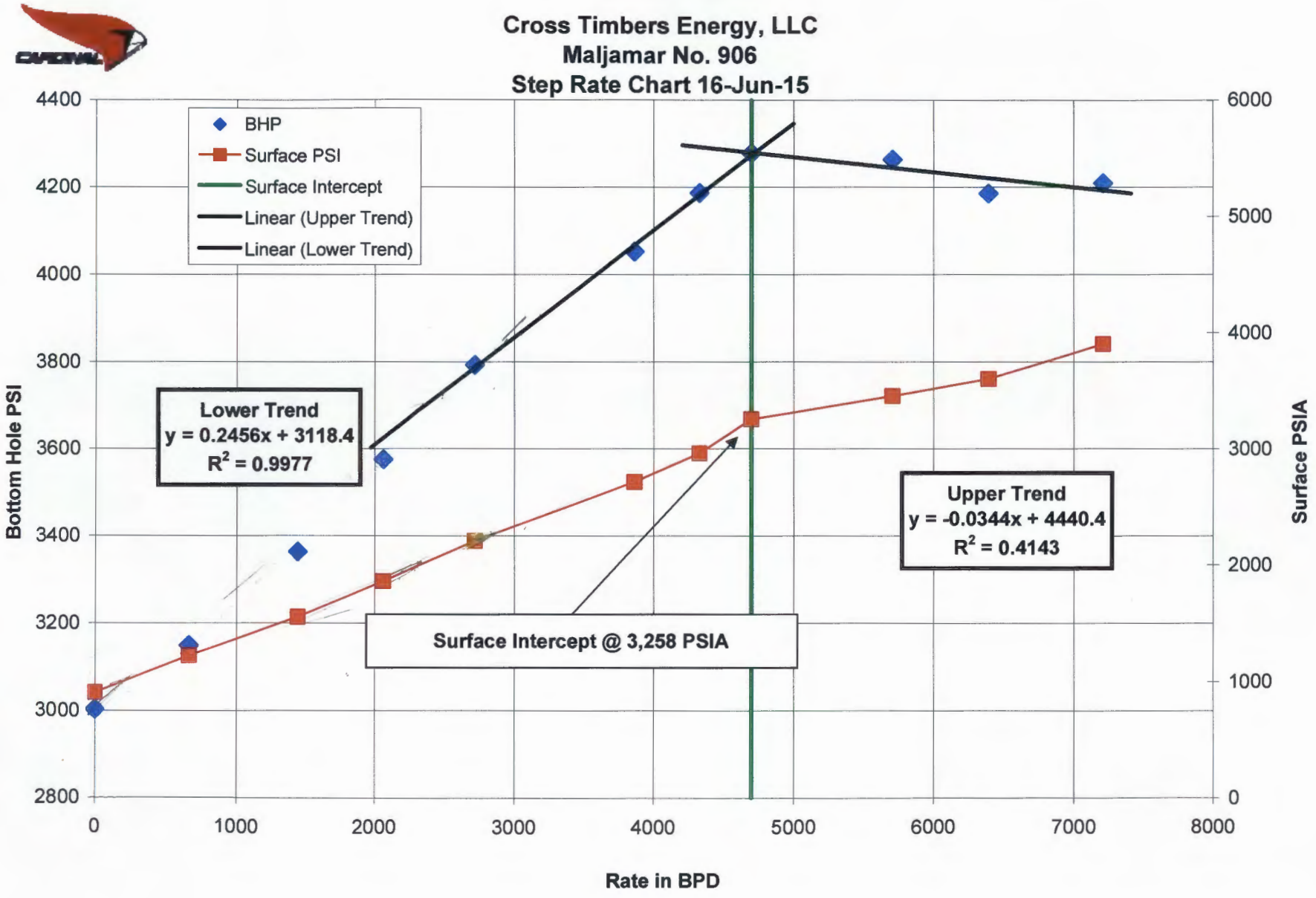
	Start	End	Rate	
1	8:39 AM	9:00 AM	0	4,350'
2	9:00 AM	9:30 AM	720	
3	9:30 AM	10:00 AM	1440	
4	10:00 AM	10:30 AM	2160	
5	10:30 AM	11:00 AM	2880	
6	11:00 AM	11:30 AM	3600	
7	11:30 AM	12:00 PM	4320	
8	12:00 PM	12:30 PM	5040	
9	12:30 PM	1:00 PM	5760	
10	1:00 PM	1:30 PM	6480	
11	1:30 PM	2:00 PM	7200	
12	2:00 PM	2:15 PM	0	15 MIN. FALL OFF
13				
14				
15				
16				
17				
18				

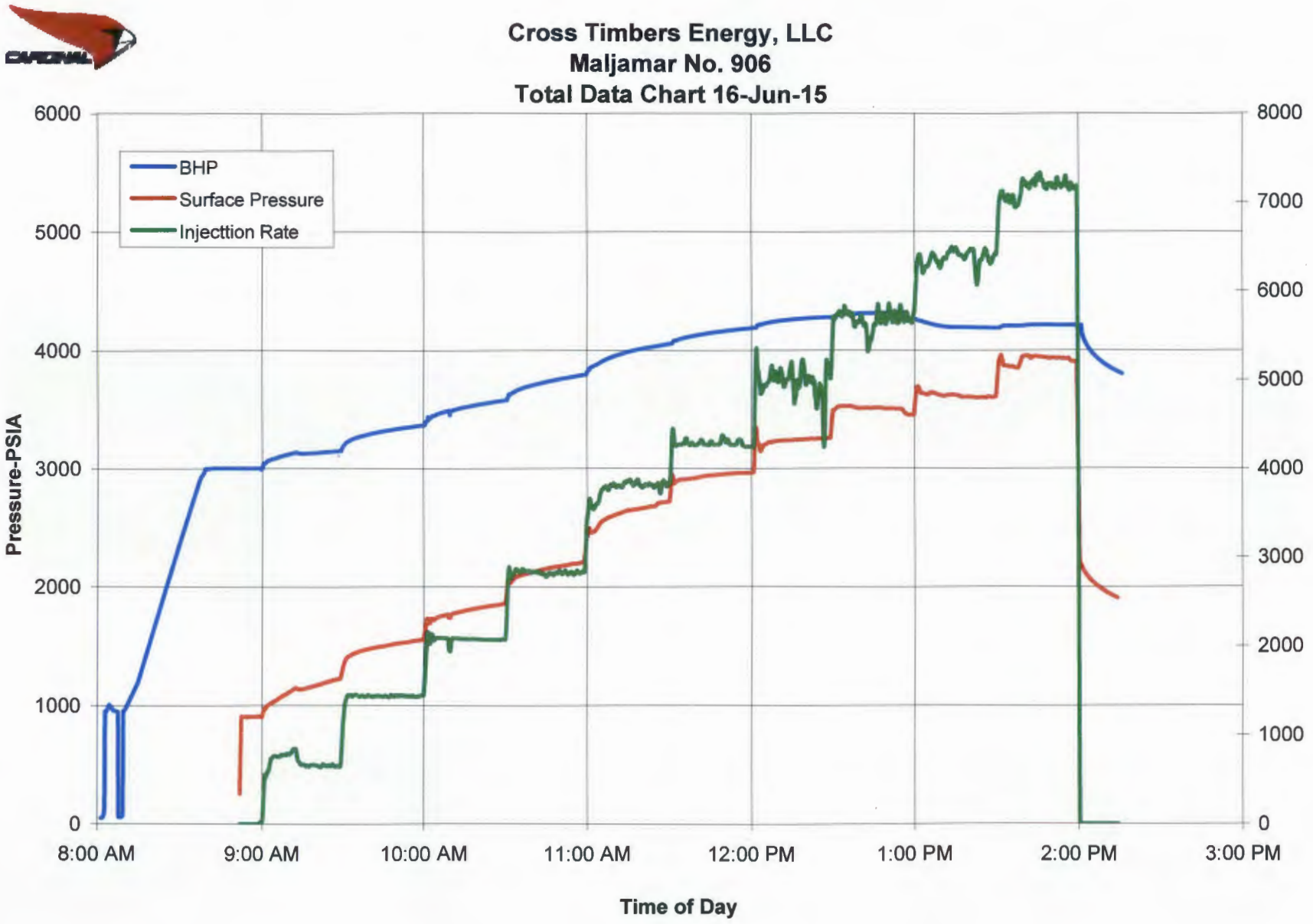
Step Rate Test
16-Jun-15

Cross Timbers Energy, LLC
Well: Maljamar No. 906
Field:
Location: Lea County, New Mexico

	S Time	E Time	D Time Min	Last Rate BPD	Step BPD	BHP PSIA	Surf PSIA	Cum BBL	Delta BBL	Avg. BPD	Lower Trend	Upper Trend
1	8:39 AM	9:00 AM	21	0	0	3003.2	903	0	0	0		
2	9:00 AM	9:30 AM	30	720	720	3148.7	1220	13.8	13.8	662		
3	9:30 AM	10:00 AM	30	1440	720	3363.3	1552	43.8	30	1440		
4	10:00 AM	10:30 AM	30	2160	720	3575.5	1858	86.8	43	2064		
5	10:30 AM	11:00 AM	30	2880	720	3792.4	2205	143.5	56.7	2722	3792.4	
6	11:00 AM	11:30 AM	30	3600	720	4052.2	2713.9	224	80.5	3864	4052.2	
7	11:30 AM	12:00 PM	30	4320	720	4186.2	2960	314.2	90.2	4330	4186.2	
8	12:00 PM	12:30 PM	30	5040	720	4277.7	3253	412.1	97.9	4699	4277.7	
9	12:30 PM	1:00 PM	30	5760	720	4263.5	3453	531	118.9	5707		4263.5
10	1:00 PM	1:30 PM	30	6480	720	4185.2	3599	664.2	133.2	6394		4185.2
11	1:30 PM	2:00 PM	30	7200	720	4208.8	3901	814.4	150.2	7210		4208.8
12	2:00 PM	2:15 PM	15	0	0	3802.6	1899	814.4	0	0		
13												
14												
15												
16												

upper trend	0.4143	4440.4
lower trend	0.9977	3118.4
intersect	2266.02674	BPD
BHP PSI	5379.21488	PSIA


Cross Timbers Energy, LLC
Maljamar No. 906
Step Rate Chart 16-Jun-15
BHP
Surface PSI
Surface Intercept
Linear (Upper Trend)
Linear (Lower Trend)
Lower Trend
y = 0.2456x + 3118.4
R2 = 0.9977
Upper Trend
y = -0.0344x + 4440.4
R2 = 0.4143
Surface Intercept @ 3,258 PSIA
Bottom Hole PSI
Surface PSIA
Rate in BPD
4400
4200
4000
3800
3600
3400
3200
3000
2800
6000
5000
4000
3000
2000
1000
0
0
1000
2000
3000
4000
5000
6000
7000
8000


Cross Timbers Energy, LLC
Maljamar No. 906
Total Data Chart 16-Jun-15
BHP
Surface Pressure
Injecttion Rate
Pressure-PSIA
Time of Day
6000
5000
4000
3000
2000
1000
0
8000
7000
6000
5000
4000
3000
2000
1000
0
8:00 AM
9:00 AM
10:00 AM
11:00 AM
12:00 PM
1:00 PM
2:00 PM
3:00 PM

Injector Schematic & History

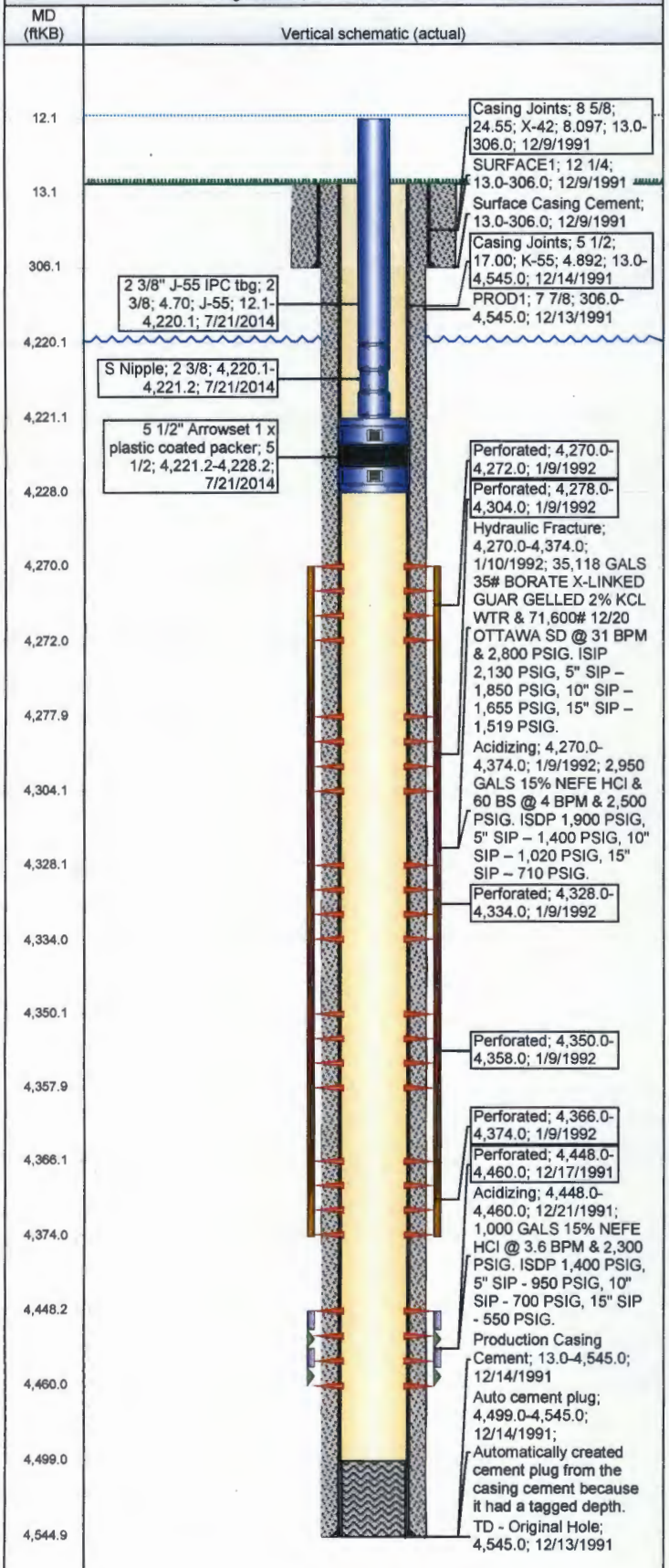
Well Name	API/UWI	County	State/Province	Field Name
SOUTHEAST MALJAMAR GB/SA UNIT 906	3002531444	Lea	New Mexico	MALJAMAR

Location	Township	Range	Section	Latitude (°)	Longitude (°)
1200 FNL & 950 FEL	17S	33E	32	32° 47' 41.915" N	103° 40' 47.285" W

Section	Survey	Block	Township	Abstract

Original KB Elevation (ft)	Ground/Corrected Ground Elevation (ft)	KB-Ground Distance (ft)	Spud Date
4,064.00	4,051.00	13.00	

Original Hole, 6/2/2015 1:42:30 AM



Jobs

Type	Start Date	Summary
Drilling Original & Initial Completion	12/9/1991	D&C San Andres producer. Perf, acidize, S. 7.5 BFPH 20% OC, POP, IP 7 BOPD, 31 BW, 5 MCF. Perf GB, A. S. 0.5 BFPH 10% OC, Frac GB, POP, IP 20 BOPD, 321 BW (SA still isolated).
Downhole Commingle	8/7/1992	Pull RBP over SA perfs, commingle, RTP.
Repair Tbg Failure	5/12/2009	
Repair Parted Rods	8/26/2009	
Repair Tbg Failure	7/29/2011	
Repair Parted Rods	9/30/2011	
Repair Parted Rods	11/7/2012	
Replace Equipment	6/4/2013	
Convert To Injection	7/15/2014	
Step-Rate Injection Test	10/28/2014	

Wellbore Sections

Section Des	Wellbore Name	Size (in)	Act Top (ftKB)	Act Btm (ftKB)	Start Date
SURFACE1	Original Hole	12 1/4	13.0	306.0	12/9/1991
PROD1	Original Hole	7 7/8	306.0	4,545.0	12/10/1991

Surface 306.0 ftKB 12/9/1991

Comment

OD (in)	Wt (lb/ft)	Grade	Top (ftKB)	Btm (ftKB)	Len (ft)	Item Des
8 5/8	24.55	X-42	13.0	306.0	293	Casing Joints

Production 4,545.0 ftKB 12/14/1991

Comment

OD (in)	Wt (lb/ft)	Grade	Top (ftKB)	Btm (ftKB)	Len (ft)	Item Des
5 1/2	17.00	K-55	13.0	4,545.0	4532	Casing Joints

Cement Stages

Description	Top (ftKB)	Btm (ftKB)	Top Meas Meth	Comment
Surface Casing Cement	13.0	306.0	Cement Returns	250 SX CL "C" CMT w/2% CaCl2 (14.8 PPG, 1.32 FT3/SX). CIRC 48 SX TO SURF.
Production Casing Cement	13.0	4,545.0	Cement Returns	1,050 SX 35/65 POZ/C w/8% GEL & 5# SALT/SX (12.7 PPG, 2.04 FT3/SX) & 250 SX CLASS "C" w/5# SALT/SX & 3# SD/SX (14.8 PPG, 1.33 FT3/SX). CIRC 52 SX CMT TO SURF.

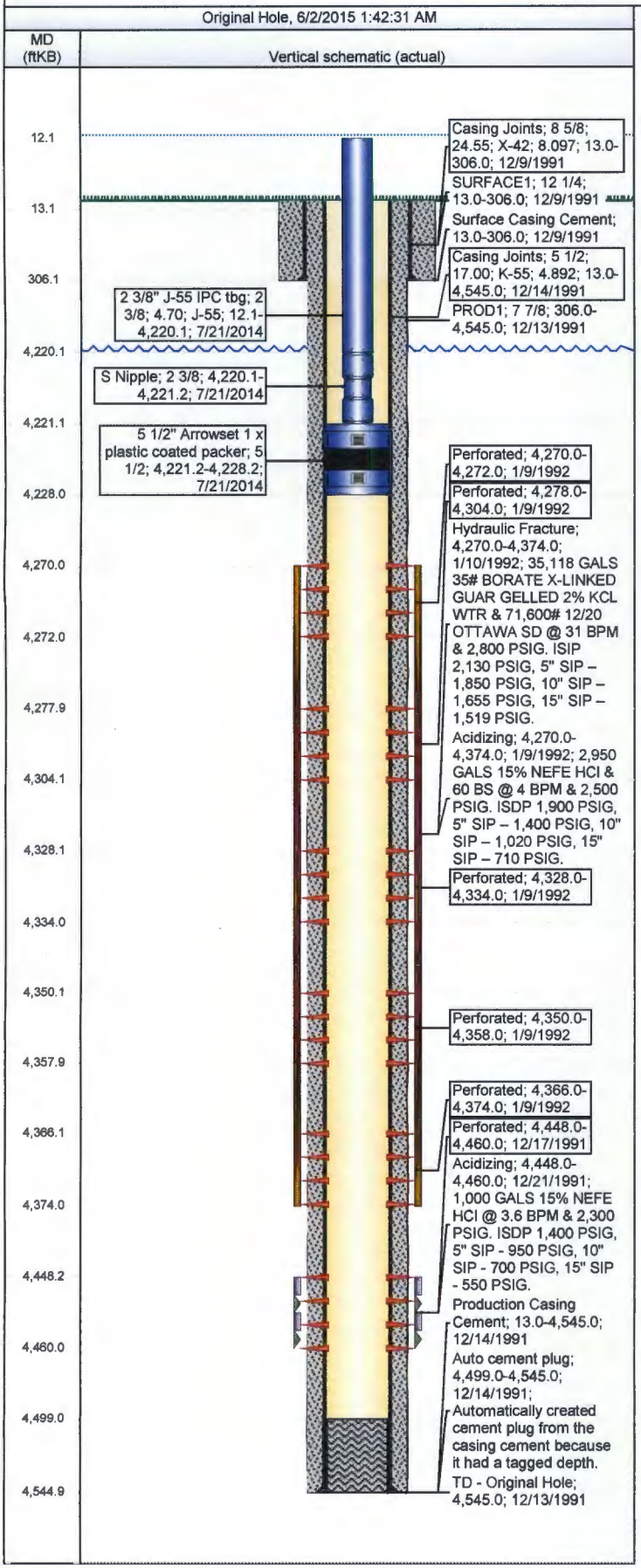
Perforations

Top (ftKB)	Btm (ftKB)	Shot Dens (shot s/ft)	Date	Zone	Calculated Shot Total
4,270.0	4,272.0	1.0	1/9/1992	GRAYBURG, Original Hole	3
4,278.0	4,304.0	1.0	1/9/1992	GRAYBURG, Original Hole	27
4,328.0	4,334.0	1.0	1/9/1992	GRAYBURG, Original Hole	7
4,350.0	4,358.0	1.0	1/9/1992	GRAYBURG, Original Hole	9
4,366.0	4,374.0	1.0	1/9/1992	GRAYBURG, Original Hole	9
4,448.0	4,460.0	1.0	12/17/1991	SAN ANDRES, Original Hole	13

Stim/Treat Stages

Type	Start Date	Top (ftKB)	Btm (ftKB)	Com
Acidizing	12/21/1991	4,448.0	4,460.0	1,000 GALS 15% NEFE HCl @ 3.6 BPM & 2,300 PSIG. ISDP 1,400 PSIG, 5" SIP - 950 PSIG, 10" SIP - 700 PSIG, 15" SIP - 550 PSIG.

Injector Schematic & History



Stim/Treat Stages

Type	Start Date	Top (ftKB)	Btm (ftKB)	Com
Acidizing	1/9/1992	4,270.0	4,374.0	2,950 GALS 15% NEFE HCl & 60 BS @ 4 BPM & 2,500 PSIG. ISDP 1,900 PSIG, 5" SIP – 1,400 PSIG, 10" SIP – 1,020 PSIG, 15" SIP – 710 PSIG.
Hydraulic Fracture	1/10/1992	4,270.0	4,374.0	35,118 GALS 35# BORATE X-LINKED GUAR GELLED 2% KCL WTR & 71,600# 12/20 OTTAWA SD @ 31 BPM & 2,800 PSIG. ISIP 2,130 PSIG, 5" SIP – 1,850 PSIG, 10" SIP – 1,655 PSIG, 15" SIP – 1,519 PSIG.

Other In Hole

Des	Com	OD (in)	Run Date	Top (ftKB)	Btm (ftKB)

Tubing - Injection (IPC) set at 4228ftKB on 7/21/2014 07:11

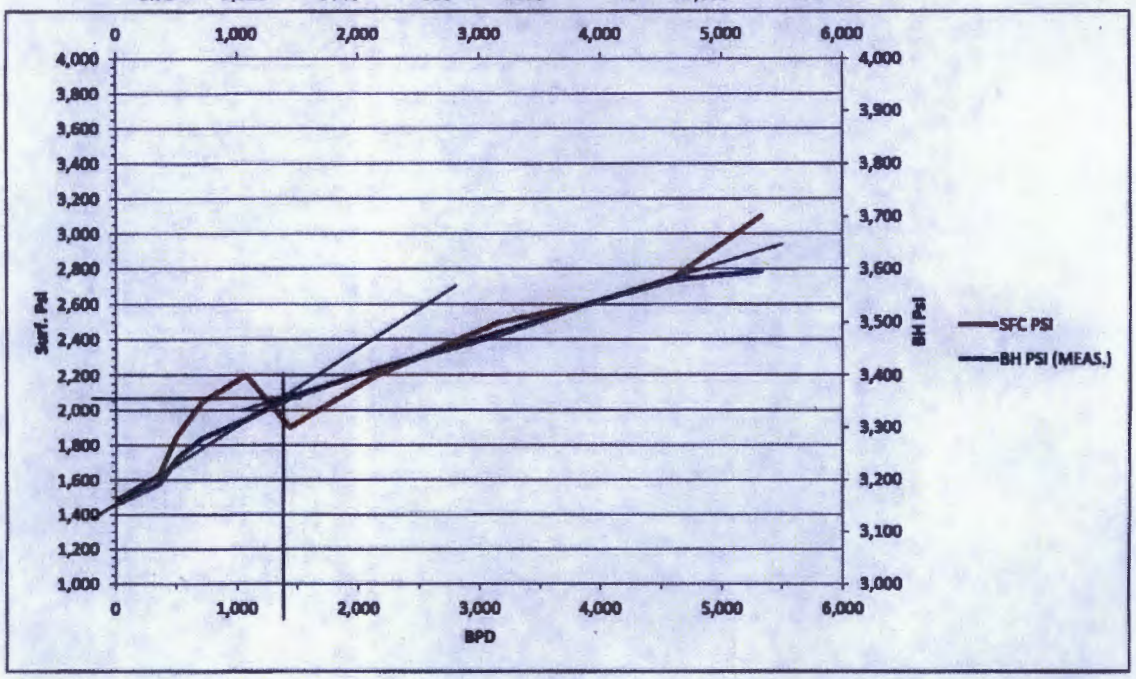
Set Depth (ftKB)	Comment	Run Date	Pull Date
4228		7/21/2014	

Item Des	OD (in)	Wt (lb/ft)	Grade	Len (ft)	Jts	Top (ftKB)	Btm (ftKB)
2 3/8" J-55 IPC tbg	2 3/8	4.70	J-55	4208	130	12	4220
S Nipple	2 3/8			1.1	1	4220	4221
5 1/2" Arrowset 1 x plastic coated packer	5 1/2			7	1	4221	4228

WELL:	SEMGSAU #105
DATE:	9/31/2014
WATER SG	1.07
WATER GRADIENT	0.463
DEPTH, MID-PERF	4,103
DEPTH, BOMB	3,870

DO NOT EXCEED 3600 PSI INJECTION PRESSURE

BPM	BPD	SFC PSI	dPSI	BH PSI (MEAS.)	dPSI	BH PSI (CALC.)	dPSI	REMARKS	d(PSI/BPM)
0.00	0	1,480		3,154		3,273			
0.25	360	1,625	145	3,192	38	3,411	138		
0.35	504	1,850	225	3,240	48	3,630	218		480
0.50	720	2,050	200	3,280	40	3,815	185		267
0.75	1,080	2,200	150	3,315	35	3,943	128		140
1.00	1,440	1,900	-300	3,357	42	3,609	-334	FRACTURE PSI @ 2060#, SURFACE	168
1.50	2,160	2,200	300	3,412	55	3,825	216		110
2.20	3,168	2,500	300	3,476	64	3,924	99		91
2.70	3,888	2,600	100	3,534	58	3,874	-51		116
3.20	4,608	2,750	150	3,580	46	3,772	-101		92
3.70	5,328	3100	350	3596	16	3,888	115		32



RENEGADE SERVICES

STEP RATE TEST

SEMGSAU #105

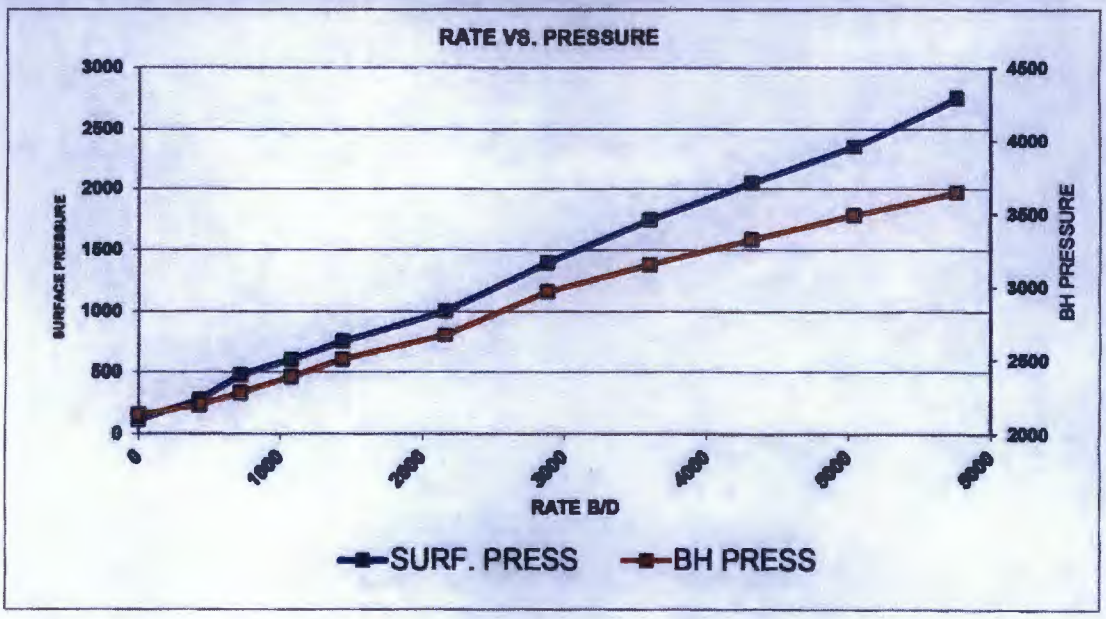
September 29, 2014

RENEGADE SERVICES

STEP RATE TEST

RATE B/D	Date	Time	BH PRESS	SURF. PRESS	Comments
0	10/29/2015	7:47 AM	2127	113	
432	10/29/2015	8:17 AM	2194	275	
720	10/29/2015	8:43 AM	2277	475	
1080	10/29/2015	9:10 AM	2384	600	
1440	10/29/2015	9:36 AM	2503	750	
2160	10/29/2015	10:04 AM	2670	1000	
2880	10/29/2015	10:57 AM	2967	1400	
3600	10/29/2015	11:25 AM	3152	1750	
4320	10/29/2015	11:51 AM	3325	2050	
5040	10/29/2015	2:06 AM	3490	2350	
5760	10/29/2015	2:32 AM	3644	2750	
Fall Off	10/29/2015	2:52 AM	3072	1325	

Company:	Cross Timbers	Recorded By:	M. Flores
Well:	Southeast Maljamar Unit #905	Witnessed By:	
Field:	Southeast Maljamar	Truck Number:	33
County:		District:	Levelland
State:	New Mexico	Tool Number:	
Injector:	WATER	Test Type:	STEP RATE TESTS
Shut In Time:	7:47am		
Total Shut In Time:	7hr 5min		
Tubing Size:	2 3/8"		
Seat Nipple Depth:	N/A		
Perforations:	4270'-4460'		
Plug Back Depth	N/A		

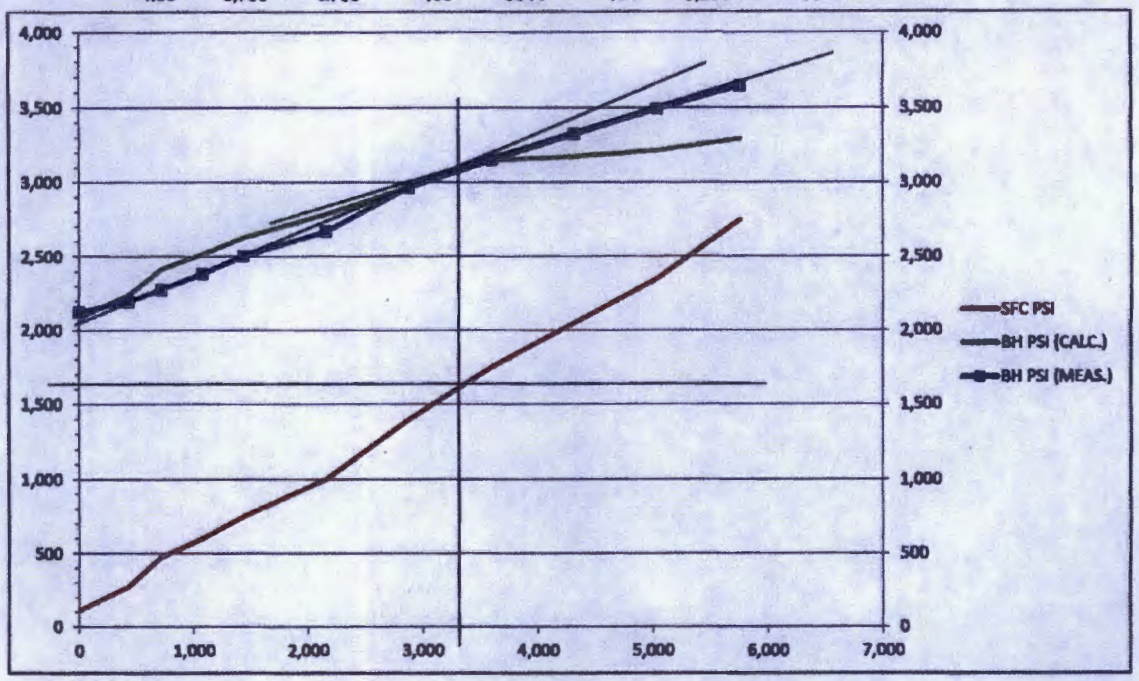


WELL: SEMGSAU #906
DATE:
WATER SG 1.07
WATER GRADIENT 0.463
DEPTH, MID-PERF 4,365
DEPTH, BOMB 4,255

"DO NOT EXCEED 3600 PSI INJECTION PRESSURE"
**"EACH STEP WILL LAST AS LONG AS IT TAKES TO STABILIZE PRESSURE FOR 5 MIN.*

CALL IAN PETERSEN (ENGINEER) WITH QUESTIONS/CONCERNS @ 432-634-4922

BPM	BPD	SFC PSI	dPSI	BH PSI (MEAS.)	dPSI	BH PSI (CALC.)	dPSI	REMARKS	d(PSI/BPM)
0.00	0	113		2,127		2,084			
0.30	432	275	162	2,194	67	2,239	155		
0.50	720	475	200	2,277	83	2,415	176		1000
0.75	1,080	600	125	2,384	107	2,516	101		500
1.00	1,440	750	150	2,503	119	2,629	113		600
1.50	2,160	1,000	250	2,670	167	2,787	158		500
2.00	2,880	1,400	400	2,987	297	2,966	179		800
2.50	3,600	1,750	350	3,152	185	3,150	184	FRACTURE @ 1615 PSI, SURF.	700
3.00	4,320	2,050	300	3,325	173	3,174	24		600
3.50	5,040	2,350	300	3,490	165	3,216	42		600
4.00	5,760	2750	400	3644	154	3,294	78		800



February 18, 2015 IPI-484 approval

API WellNo	Well name	InjFmtn	Top	Bot	PkrDpth	TbgSz	PrsGrdnt	Inj Prs	CO2 Prs	DtMod
30-025-26512	**SMGSA#105**	MALJAMAR;GRAYBURG-SAN ANDRES	3897	0	3844	2.375	0.49	1950	0	02/19/2015
30-025-31444	**SMGSA#906**	MALJAMAR;GRAYBURG-SAN ANDRES	4270	0	4221	2.375	0.54	2320	0	02/19/2015
30-025-37897	SMGSA#617	MALJAMAR;GRAYBURG-SAN ANDRES	0	0	0	2.375	0.33	1420	0	02/19/2015

Bold=July 1, 2015 application wells

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

David R. Catanach, Division Director
Oil Conservation Division

Administrative Order IPI-484
February 18, 2015

Mr. Robbie Grigg
Cross Timbers Energy, LLC
400 West Seventh Street
Fort Worth, TX 76102

RE: Injection Pressure Increase
Injection Authority: Division Order No. R-3134, as amended, and Order WFX-927
Pool: Maljamar; Grayburg-San Andres (Pool code 43329)
Three injection wells in the Southeast Maljamar Grayburg-San Andres Waterflood Project

Dear Mr. Grigg:

Reference is made to your request on behalf of Cross Timbers Energy, LLC (OGRID 298299) received by the Division on November 24, 2014, to increase the maximum allowed surface tubing pressure on the three referenced wells.

These wells were permitted by the Division for injection of produced water through perforations in the Grayburg-San Andres formations by Administrative Order WFX-927 approved August 20, 2014. The maximum surface tubing pressure approved by the administrative order was based on the gradient of 0.2 pounds per square inch (psi) per foot and calculated based on the depth of the shallowest perforation in each well.

It is our understanding that the operator proposes to increase the efficiency of the waterflood and consequently, a higher pressure limit is needed. It is also understood that an increase will not result in the fracturing of the formation and confining strata.

Based on step-rate tests for these wells through 2⅜-inch tubing, you are hereby authorized to inject at the following maximum surface tubing pressure:

API No.	Well No.	ULSTR	SRT Test Date	Maximum Injection Pressure	Pressure Gradient (in psi/ft)
30-025-26512	Southeast Maljamar GB/SA Unit No. 105	J-30-17S-33E	9/29/2014	1950 psi	0.49
30-025-37897	Southeast Maljamar GB/SA Unit No. 617	K-29-17S-33E	10/27/2014	2320 psi	0.54
30-025-31444	Southeast Maljamar GB/SA Unit No. 906	A-32-17S-33E	10/28/2014	1420 psi	0.33

This approval is based on the provision that the tubing size, packer setting depth and completion interval for these wells 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 these wells. 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.

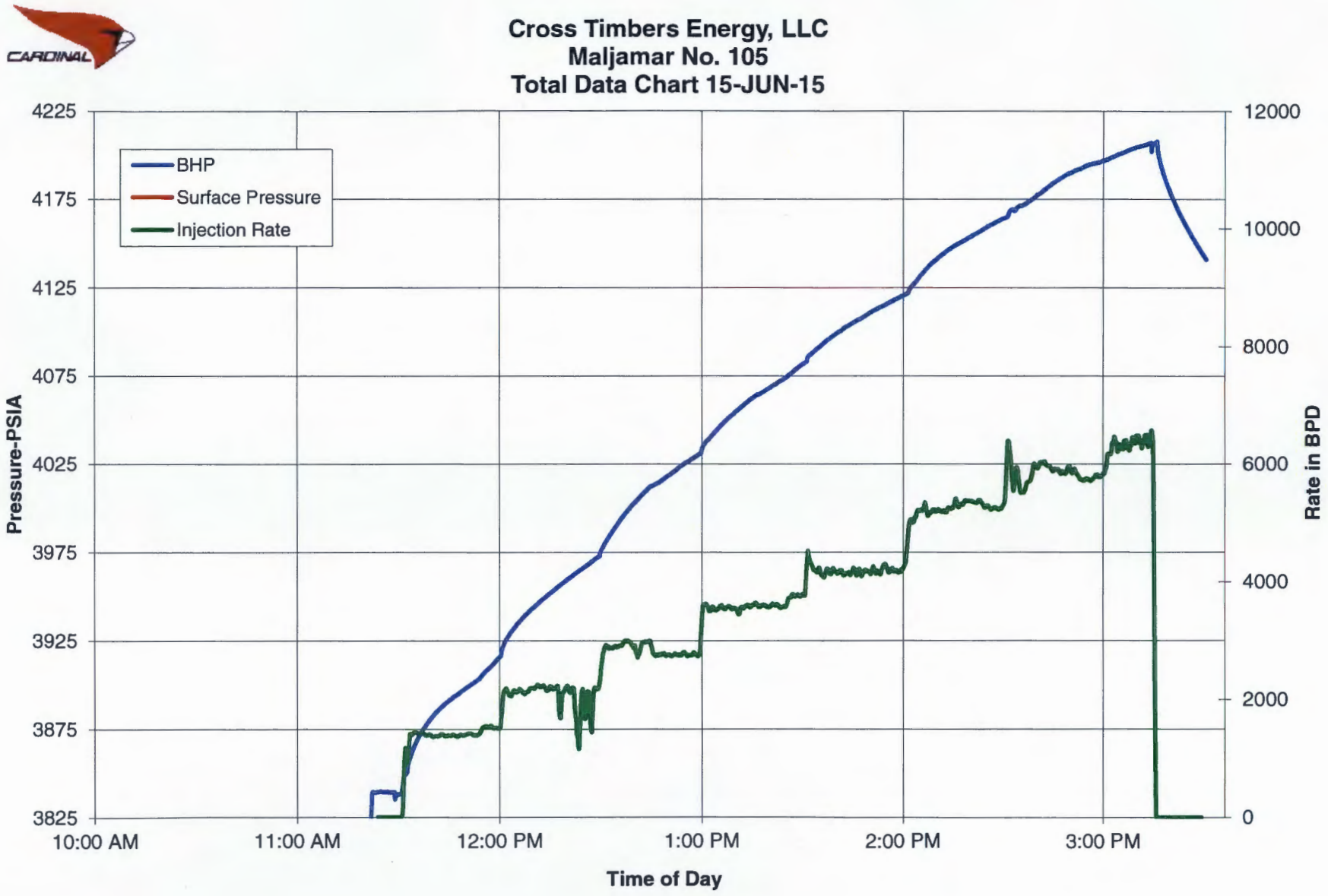
Sincerely,

David R. Catanach

DAVID R. CATANACH
Director

DRC/prg

cc: Oil Conservation Division – Hobbs District Office
WFX-927
Well Files 30-025-26512, 30-025-37897, and 30-025-31444


Cross Timbers Energy, LLC
Maljamar No. 105
Total Data Chart 15-JUN-15
BHP
Surface Pressure
Injection Rate
Pressure-PSIA
Rate in BPD
Time of Day
4225
4175
4125
4075
4025
3975
3925
3875
3825
12000
10000
8000
6000
4000
2000
0
10:00 AM
11:00 AM
12:00 PM
1:00 PM
2:00 PM
3:00 PM

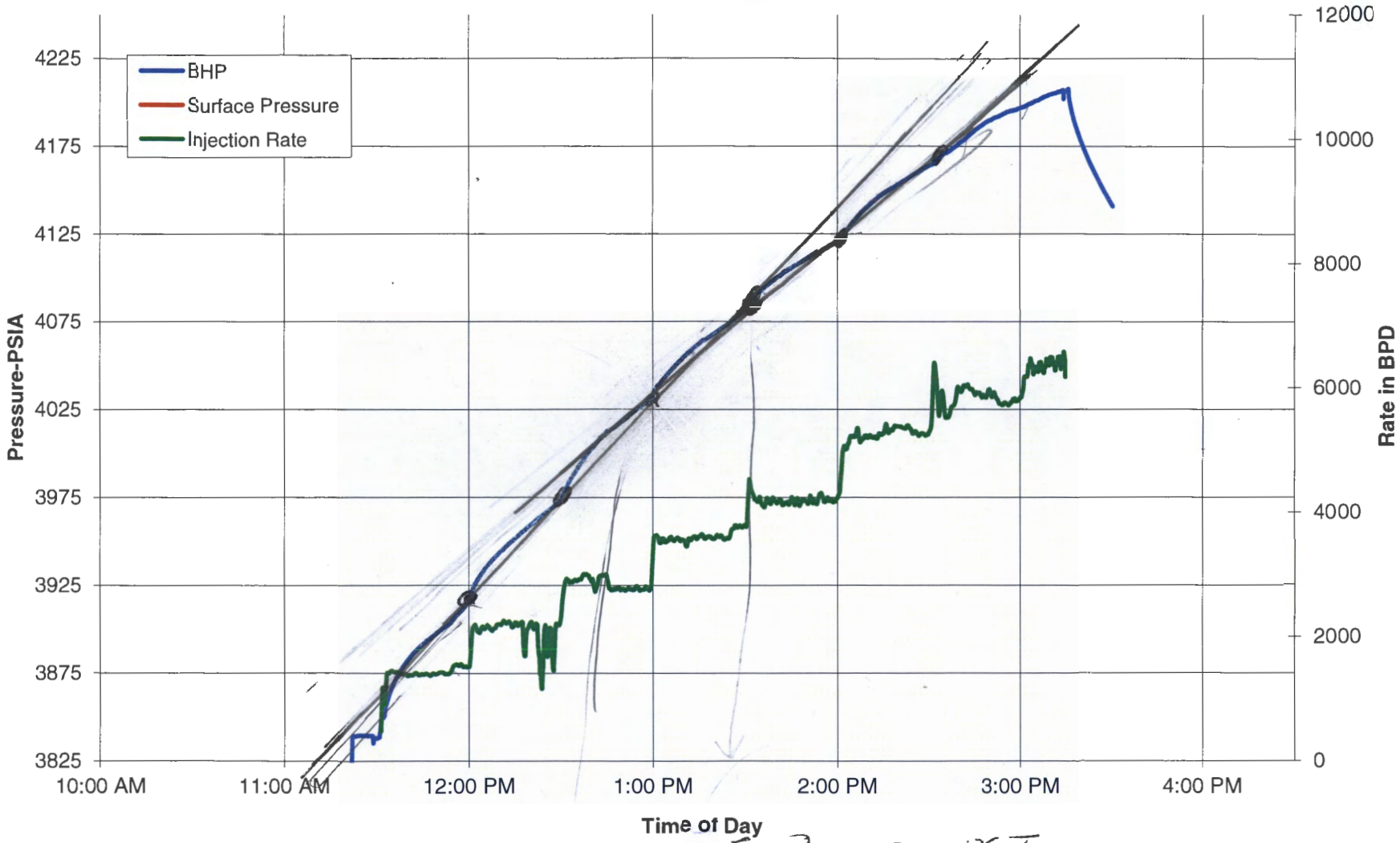
2445/4270 = .57

Pmi = 2447

MAKE Pmi = .671

CARDINAL

Cross Timbers Energy, LLC
Maljamar No. 105
Total Data Chart 15-JUN-15



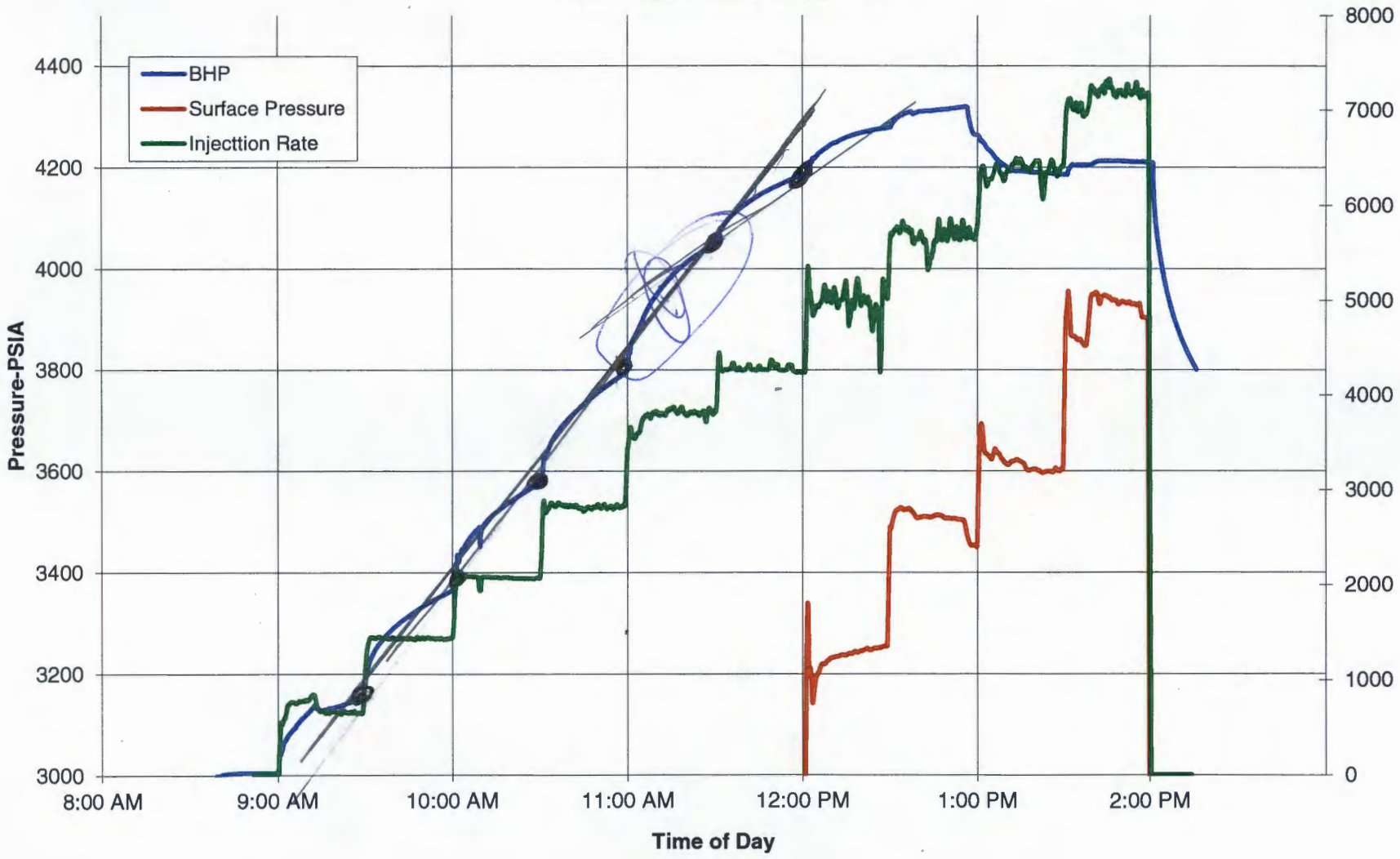
[2445] surf. psi

.6 = 2562

.6

CARDINAL

Cross Timbers Energy, LLC
Maljamar No. 906
Total Data Chart 16-Jun-15



Step Rate Test
15-Jun-15

Cross Timbers Energy, LLC
Well: Maljamar No. 105
Field:
Location: Lea County, New Mexico

	S Time	E Time	D Time Min	Last Rate BPD	Step BPD	BHP PSIA	Surf PSIA	Cum BBL	Delta BBL	Avg. BPD	Lower Trend	Upper Trend
1	11:22 AM	11:30 AM	8	0	0	3839	1963	0	0	0		
2	11:30 AM	12:00 PM	30	1440	1440	3915.3	2200	27.9	27.9	1339		
3	12:00 PM	12:30 PM	30	2160	720	3972.1	2343	69.8	41.9	2011		
4	12:30 PM	1:00 PM	30	2880	720	4029.8	2495	127.5	57.7	2770	4029.8	
5	1:00 PM	1:30 PM	30	3600	720	4081.1	2721	203.7	76.2	3658	4081.1	
6	1:30 PM	2:00 PM	30	4320	720	4120.9	2840	292.7	89	4272	4120.9	
7	2:00 PM	2:30 PM	30	5040	720	4163.5	3205	397	104.3	5006		4163.5
8	2:30 PM	3:00 PM	30	5760	720	4195.4	3405	519.6	122.6	5885		4195.4
9	3:00 PM	3:30 PM	30	6480	720	4207.3	3397	588	68.4	6156		4207.3
10	3:30 PM	3:45 PM	15	0		4141.6	2325					
11												
12												
13												
14												
15												
16												

upper trend	0.0377	3974.7
lower trend	0.0648	3844.9
intersect	4789.6679	BPD
BHP PSI	4155.27048	PSIA

Step Rate Test
16-Jun-15

Cross Timbers Energy, LLC
Well: Maljamar No. 906
Field:
Location: Lea County, New Mexico

	S Time	E Time	D Time Min	Last Rate BPD	Step BPD	BHP PSIA	Surf PSIA	Cum BBL	Delta BBL	Avg. BPD	Lower Trend	Upper Trend
1	8:39 AM	9:00 AM	21	0	0	3003.2	903	0	0	0		
2	9:00 AM	9:30 AM	30	720	720	3148.7	1220	13.8	13.8	662		
3	9:30 AM	10:00 AM	30	1440	720	3363.3	1552	43.8	30	1440		
4	10:00 AM	10:30 AM	30	2160	720	3575.5	1858	86.8	43	2064		
5	10:30 AM	11:00 AM	30	2880	720	3792.4	2205	143.5	56.7	2722	3792.4	
6	11:00 AM	11:30 AM	30	3600	720	4052.2	2713.9	224	80.5	3864	4052.2	
7	11:30 AM	12:00 PM	30	4320	720	4186.2	2960	314.2	90.2	4330	4186.2	
8	12:00 PM	12:30 PM	30	5040	720	4277.7	3253	412.1	97.9	4699	4277.7	
9	12:30 PM	1:00 PM	30	5760	720	4263.5	3453	531	118.9	5707		4263.5
10	1:00 PM	1:30 PM	30	6480	720	4185.2	3599	664.2	133.2	6394		4185.2
11	1:30 PM	2:00 PM	30	7200	720	4208.8	3901	814.4	150.2	7210		4208.8
12	2:00 PM	2:15 PM	15	0	0	3802.6	1899	814.4	0	0		
13												
14												
15												
16												

upper trend	-0.0344	4440.4
lower trend	0.256	3118.4
intersect:	4552.3416	BPD
BHP PSI	4283.79945	PSIA

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

GARY E. JOHNSON
Governor
Jennifer A. Salisbury
Cabinet Secretary

Lori Wrotenbery
Director
Oil Conservation Division

March 5, 2001

ADMINISTRATIVE ORDER IPI-149-0

R-10894

WISER OIL CO (THE)
8115 PRESTON RD
STE 400
DALLAS, TX 75225-

Attention: Matt Eagleston

RE: Injection Pressure Increase

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

TProf

API Well No	*Well Name and Number*	*ULSTR*	*Authorized Pressure (PSIG)*	
30-025-32044-00-00	CAPROCK MALJAMAR UNIT - 20	H-20-17S-33E	2970	4182'
30-025-01450-00-00	CAPROCK MALJAMAR UNIT - 30	N-17-17S-33E	2970	
30-025-00666-00-00	CAPROCK MALJAMAR UNIT - 48	G-24-17S-32E	3090	4135'
30-025-00662-00-00	CAPROCK MALJAMAR UNIT - 49	H-24-17S-32E	3090	4135'
30-025-01479-00-00	CAPROCK MALJAMAR UNIT - 39	B-19-17S-33E	2980	
30-025-01480-00-00	CAPROCK MALJAMAR UNIT - 52	G-19-17S-33E	2980	
30-025-01499-00-00	CAPROCK MALJAMAR UNIT - 42	C-20-17S-33E	2855	
30-025-01500-00-00	CAPROCK MALJAMAR UNIT - 55	F-20-17S-33E	2855	
30-025-01490-00-00	CAPROCK MALJAMAR UNIT - 70	J-20-17S-33E	2675	
30-025-01492-00-00	CAPROCK MALJAMAR UNIT - 71	I-20-17S-33E	2675	
30-025-01504-00-00	CAPROCK MALJAMAR UNIT - 44	A-20-17S-33E	2965	
30-025-01511-00-00	CAPROCK MALJAMAR UNIT - 45	D-21-17S-33E	2965	
30-025-01530-00-00	CAPROCK MALJAMAR UNIT - 91	F-28-17S-33E	2930	
30-025-01531-00-00	CAPROCK MALJAMAR UNIT - 94	K-28-17S-33E	2930	
30-025-01475-00-00	CAPROCK MALJAMAR UNIT - 80	P-19-17S-33E	3240	
30-025-00664-00-00	CAPROCK MALJAMAR UNIT - 36	A-24-17S-32E	3090	4015'
30-025-01455-00-00	CAPROCK MALJAMAR UNIT - 19	L-17-17S-33E	2970	
30-025-01485-00-00	CAPROCK MALJAMAR UNIT - 38	C-19-17S-33E	2980	
30-025-01505-00-00	CAPROCK MALJAMAR UNIT - 54	E-20-17S-33E	2855	
30-025-01506-00-00	CAPROCK MALJAMAR UNIT - 56	G-20-17S-33E	2675	
30-025-01509-00-00	CAPROCK MALJAMAR UNIT - 58	E-21-17S-33E	2965	
30-025-01526-00-00	CAPROCK MALJAMAR UNIT - 93	L-28-17S-33E	2930	

30-025-33621-00-00	CAPROCK MALJAMAR UNIT - 263	M-20-17S-33E	3240

.79 / 422

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 by DRC

Lori Wrotenbery,
Director

LW/DRC
cc: Oil Conservation Division - Hobbs
Case File 10932, WFX-666, WFX-696, WFX-698, WFX-694

30-025-33621-00-00	CAPROCK MALJAMAR UNIT - 263	M-20-17S-33E	3240

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 by DR

Lori Wrotenbery,
Director

LW/DRC
cc: Oil Conservation Division - Hobbs
Case File 10932, WFX-666, WFX-696, WFX-698, WFX-694

The Wiser Oil Company
CMU #263 30-025-33621

Field	Maljamar
County	Lea
State	New Mexico
Test date	May 5, 2000

Real Time	Delta Time (hours)	Wellhead Press (psig)	Injection Rate (BPD)
08:40 AM	0.500	2050	50
09:10 AM	1.000	2350	200
09:40 AM	1.500	2600	350
10:10 AM	2.000	3000	520
10:40 AM	2.500	3200	650
11:10 AM	3.000	3300	800
11.40 AM	3.500	3350	960
12:10 PM	4.000	3400	1100
12:40 PM	4.500	3388	1260
01:10 PM	5.000	3400	1410

NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT

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

February 9, 2000

The Wiser Oil Company
8115 Preston Road, Suite 400
Dallas, Texas 75225

Attn: Mr. Matt Eagleston

RE: ***Injection Pressure Increase,*** -129 pDEV0019965240
Maljamar Grayburg Unit,
Lea County, New Mexico

Reference is made to your request dated November 22, 1999, December 20, 1999 and January 24, 2000 to increase the surface injection pressure on 18 wells in the above referenced waterflood project. This request is based on step rate tests conducted between November 1 and December 29, 1999. 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:

Recently Tested Well Name and Number	*Adjacent Well Name and Number*	*ULSTR*	*Authorized Pressure*
MGBU Well No. 11		N-3-17S-32E	2485 PSIG
	MGBU Well No. 10	M-3-17S-32E	2485 PSIG
	MGBU Well No. 12	O-3-17S-32E	2485 PSIG
MGBU Well No. 19		I-4-17S-32E	2487 PSIG
	MGBU Well No. 18	H-4-17S-32E	2487 PSIG
MGBU Well No. 53		E-10-17S-32E	1975 PSIG
	MGBU Well No. 59	K-10-17S-32E	1975 PSIG
MGBU Well No. 150		J-3-17S-32E	2477 PSIG
	MGBU Well No. 6	I-3-17S-32E	2477 PSIG
	MGBU Well No. 13	P-3-17S-32E	2477 PSIG
MGBU Well No. 152		F-4-17S-32E	2748 PSIG
	MGBU Well No. 17	G-4-17S-32E	2748 PSIG
	MGBU Well No. 20	J-4-17S-32E	2748 PSIG
MGBU Well No. 155		F-10-17S-32E	2590 PSIG
	MGBU Well No. 51	C-10-17S-32E	2590 PSIG
	MGBU Well No. 151	B-10-17S-32E	2590 PSIG
MGBU Well No. 28		P-4-17S-32E	2835 PSIG
	MGBU Well No. 27	P-4-17S-32E	2835 PSIG
All wells located in Lea County, New Mexico.			

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

GARY E. JOHNSON
Governor
Jennifer A. Salisbury
Cabinet Secretary

Lori Wrotenbery
Director
Oil Conservation Division

March 5, 2001

ADMINISTRATIVE ORDER IPI-149-0

WISER OIL CO (THE)
8115 PRESTON RD
STE 400
DALLAS, TX 75225-

Attention: Matt Eagleston

RE: Injection Pressure Increase

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

API Well No	*Well Name and Number*	*ULSTR*	*Authorized Pressure (PSIG)*
30-025-32044-00-00	CAPROCK MALJAMAR UNIT - 20	H-20-17S-33E	2970
30-025-01450-00-00	CAPROCK MALJAMAR UNIT - 30	N-17-17S-33E	2970
30-025-00666-00-00	CAPROCK MALJAMAR UNIT - 48	G-24-17S-32E	3090
30-025-00662-00-00	CAPROCK MALJAMAR UNIT - 49	H-24-17S-32E	3090
30-025-01479-00-00	CAPROCK MALJAMAR UNIT - 39	B-19-17S-33E	2980
30-025-01480-00-00	CAPROCK MALJAMAR UNIT - 52	G-19-17S-33E	2980
30-025-01499-00-00	CAPROCK MALJAMAR UNIT - 42	C-20-17S-33E	2855
30-025-01500-00-00	CAPROCK MALJAMAR UNIT - 55	F-20-17S-33E	2855
30-025-01490-00-00	CAPROCK MALJAMAR UNIT - 70	J-20-17S-33E	2675
30-025-01492-00-00	CAPROCK MALJAMAR UNIT - 71	I-20-17S-33E	2675
30-025-01504-00-00	CAPROCK MALJAMAR UNIT - 44	A-20-17S-33E	2965
30-025-01511-00-00	CAPROCK MALJAMAR UNIT - 45	D-21-17S-33E	2965
30-025-01530-00-00	CAPROCK MALJAMAR UNIT - 91	F-28-17S-33E	2930
30-025-01531-00-00	CAPROCK MALJAMAR UNIT - 94	K-28-17S-33E	2930
30-025-01475-00-00	CAPROCK MALJAMAR UNIT - 80	P-19-17S-33E	3240
30-025-00664-00-00	CAPROCK MALJAMAR UNIT - 36	A-24-17S-32E	3090
30-025-01455-00-00	CAPROCK MALJAMAR UNIT - 19	L-17-17S-33E	2970
30-025-01485-00-00	CAPROCK MALJAMAR UNIT - 38	C-19-17S-33E	2980
30-025-01505-00-00	CAPROCK MALJAMAR UNIT - 54	E-20-17S-33E	2855
30-025-01506-00-00	CAPROCK MALJAMAR UNIT - 56	G-20-17S-33E	2675
30-025-01509-00-00	CAPROCK MALJAMAR UNIT - 58	E-21-17S-33E	2965
30-025-01526-00-00	CAPROCK MALJAMAR UNIT - 93	L-28-17S-33E	2930

State of New Mexico
Energy, Minerals and Natural Resources Department

Administrative Order IPI-436
July 26, 2013

Linn Operating, Inc.
600 Travis, Suite 5100
Houston, Texas 77002
Attn: Terry Callahan

RE: **Injection Pressure Increase**
Caprock Maljamar Unit Waterflood Project
Pool: Maljamar; Grayburg-San Andres (Pool Code: 43329)
Six Injection Wells in Sec 28, T17S, R33E, NMPM, Lea County, New Mexico

Dear Terry Callahan:

Reference is made to your request on behalf of Linn Operating, Incorporated (OGRID 1269324) received by the Division on May 6, 2013, to increase the maximum allowed surface tubing pressure for six injection wells within the Caprock Maljamar Unit project area.

These wells were permitted by the Division as part of a waterflood project in the Maljamar; Grayburg-San Andres pool under Division Order R-10094 approved April 5, 1994. That order authorized expansion of the waterflood project area and provides the Director with the ability to administratively permit an increase in pressure limitations based on results of formation testing.

It is our understanding that these wells will not take a sufficient volume of fluid at the current pressure limit and a higher pressure limit is needed. 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 the Caprock Maljamar Unit Well No. 98 completed on April 26, 2013, through 2-3/8 inch tubing, you are hereby authorized to inject at the following **maximum surface tubing pressure (in psig) for the following unit wells:**

API Number	Well Name and Number	Letter Unit	Sec	Township	Range	Approved Max Pressure
30-025-01525	Caprock Maljamar Unit No. 98	M	28	17S	33E	2082
30-025-01527	Caprock Maljamar Unit No. 90	E	28	17S	33E	2082
30-025-01532	Caprock Maljamar Unit No. 99	N	28	17S	33E	2082
30-025-01537	Caprock Maljamar Unit No. 101	P	28	17S	33E	2082
30-025-01538	Caprock Maljamar Unit No. 100	O	28	17S	33E	2082
30-025-34193	Caprock Maljamar Unit No. 283	O	28	17S	33E	2082

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NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT

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

April 12, 2000

The Wiser Oil Company
8115 Preston Road, Suite 400
Dallas, Texas 75225

Attn: Mr. Matt Eagleston

RE: Injection Pressure Increase, -132
Maljamar Grayburg Unit (MGBU),
Lea County, New Mexico

Reference is made to your request dated April 12, 2000 to increase the surface injection pressure on two wells in the above referenced waterflood project. This request is based on step rate tests conducted on March 13, 2000 and March 26, 2000. 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:

Recently Tested Well Name and Number	*Adjacent Well Name and Number*	*ULSTR*	*Authorized Pressure*
MGBU Well No. 8		H-3-17S-32E	2625 PSIG
	MGBU Well No. 5	K-3-17S-32E	2625 PSIG
MGBU Well No. 154		L-4-17S-32E	3025 PSIG
	MGBU Well No. 15	E-4-17S-32E	3025 PSIG
	MGBU Well No. 21	K-4-17S-32E	3025 PSIG
All wells located in Lea County, New Mexico.			

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 by DC

Lori Wrotenbery
Director

LW/MWA/kv

cc: Oil Conservation Division - Hobbs
Files: Case No. 3178, Order No. R-3178; WFXs-650, 660, 677, 696, 715; IPI 2nd QTR-2000 -132