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

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

Form C-103
Revised August 1, 2011

WELL API NO.
30-015-21449

5. Indicate Type of Lease
STATE ☒ FEE ☐

6. State Oil & Gas Lease No.
K-1020

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.)

7. Lease Name or Unit Agreement Name
ARTESIA STATE UNIT

1. Type of Well: Oil Well ☐ Gas Well ☐ Other Injection Well ☒

8. Well Number 902

2. Name of Operator
Alamo Permian Resources. LLC

9. OGRID Number
274841

3. Address of Operator
415 W. Wall Street, Suite 500, Midland, TX 79701

10. Pool name or Wildcat
Artesia; Queen-Grayburg-San Andres

4. Well Location
Unit Letter A : 1310 feet from the N line and 1310 feet from the E line
Section 23 Township 18S Range 27E NMPM County EDDY

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

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK ☐	PLUG AND ABANDON ☐	REMEDIAL WORK ☐	ALTERING CASING ☐
TEMPORARILY ABANDON ☐	CHANGE PLANS ☐	COMMENCE DRILLING OPNS. ☐	P AND A ☐
PULL OR ALTER CASING ☐	MULTIPLE COMPL ☐	CASING/CEMENT JOB ☐	
DOWNHOLE COMMINGLE ☐			
OTHER: ☐		OTHER: CLEAN OUT, ADD PERFS, ACIDIZE ☒	

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.

SEE ATTACHED

NM OIL CONSERVATION
ARTESIA DISTRICT
OCT 27 2014
RECEIVED

NM OIL CONSERVATION
ARTESIA DISTRICT
OCT 27 2014
RECEIVED

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

SIGNATURE Carie Stoker TITLE **Regulatory Affairs Coordinator** DATE 10/18/2014

Type or print name **CARIE STOKER** E-mail address: **carie@stokeroilfield.com** PHONE: **432.664.7659**

APPROVED BY: JR Dade TITLE Dist II Supervisor DATE 10/28/2014

Conditions of Approval (if any):

* Notify State for MIT witness before Injection

ARTESIA STATE UNIT #902 WIW (formerly #002D)		
		Perfs: 1764 – 1949' OA
API: 30-015-21449	Lease: B-10715	Spud: 03/02/75
A-23-18S-27E	1310 FNL & 1310 FEL	P&A: n/a
Eddy Co., NM	Pool: 3230 - ARTESIA; Queen-Grayburg-SA	

OBJECTIVE: Clean out, add perfs, acidize.

09/10/11
MIRU PU. ND WH, NU BOP. Unset 4-1/2"x10.50#x2-3/8" Watson packer & POOH w/52 jts 2-3/8" J55 IPC tbg. Tbg BHA:

	Description		Length	Depth
Tubing		KB	5.00'	5.00'
	47	jts 2-3/8" J55 10rd Tubing (Good)	1430.32'	1435.32'
	1	10rd x 8rd Crossover	.40	1435.72'
	5	jts 2-3/8" J55 8rd Tubing (Good)	148.28'	1584.00'
	1	4-1/2"x10.50#x2-3/8" Watson Packer (Junk)	6.50'	1590.05'

PU 3-7/8" mill tooth bit, (6) 3-1/8" DCs, Crossover on 2-3/8" L80 WS. Tag @ 1609' (solid). RU swivel & stripperhead & set 2,000 lbs on bottom. Rotated & circulated 30 mins. Could not make hole. RD swivel & POOH w/bit & tubing. Bit tracking on outside cones. Remainder of Watson packer left in the hole from CBS. SWI. SDFN.
Note: Plan to RIH w/center spear & jars to fish packer debris out of the hole.

09/11/14
PU & RIH w/center spear with 1.992" grapple, bumper sub, hydraulic jars, (6) 3-1/8" DCs on 2-3/8" L-80 WS. Circ last 30' to fish. Tag fish, rotated & latched fish. Work & jar until fish started moving. ND swivel & POOH w/fish. POOH with cup-type pkr & 4-1/2 jts of 2-3/8" J55 IPC tbg. Tbg badly pitted & thin. POOH w/147' of fish. Top of fish now 1756' (8' above top perforation). Wait on 3-3/4" overshot. PU overshot on same BHA to 1650'. Could not go any deeper due to scale on csg. POOH w/8 jts. SWI. SDFN due to storm blowing in.
Note: Plan to RIH 3-7/8" bit to top of fish to clean out for overshot.

09/12/14
Finish POOH w/overshot. PU & RIH w/3-7/8" bit, bit sub, (6) 3-1/8" DCs on 2-3/8" WS to 1650'. RU swivel & stripperhead & drill out hard scale 1650-1756'. Tag fish, PUH 1.00' & circ clean (returns were hard scale, rust & iron sulphide). RD swivel & stripperhead. POOH until heavy rain & strong wind hit. Stopped pulling tubing. SWI. SDFWE.

09/13-14/14 SDFWE.

09/15/14
No well pressure. Finished POOH w/bit & DCs. PU & RIH w/3-3/4" center spear. Latched fish, pulled 30,000 lbs tension & set off jars. Pulled fish up the hole dragging for 60'. Lost fish. POOH w/fishing BHA. RIH w/3-3/4" overshot to fish. Could not get over 2-3/8" body break. Circ & try to work fishing tool over fish without success. POOH w/overshot. PU center spear with next size larger grapple (1.983" Min – 2.063 Max). RIH to top of fish. SWI. SDFN.

09/16/14
Finish RIH w/center spear. Caught fish. Start jarring operations. Try to jar tbg & pkr free without success. Try to release pkr, no success. Continue to jar fish free, grapple slipped out of fish. POOH w/center spear. No fish. Lost grapple in the hole. Discuss options. Getting shoe dressed to wash over fish. SWI. SDFN.
Note: Getting shoe dressed to wash over top of fish & clean out debri. Will be ready tomorrow AM.

09/17/14
No SI well pressure. PU 3-3/4" shoe w/cut-rite on bottom & wire in ID, 1 jt 3-3/4" wash pipe, hydraulic jars, (6) 3-1/8" DCs on 2-3/8" L-80 WS. Tag top of fish @ 1756'. RU stripperhead & swivel. Break circ & clean off top of fish. Continue to wash over 2-3/8" IPC tbg to 1770'. Quit making hole, circulate well. Clean & POOH w/cut-rite shoe. Shoe worn out. No cut-rite left & no wire inside. Cleaned down to 1770'. SWI. SDFN.
Note: Rebuild 3-3/4" shoe overnight & increase wash pipe to 4 jts.
Note: Returns were iron sulphide, sand, rust, scale & salt; some metal shaving from well debris from grapple.

ARTESIA STATE UNIT #902 WIW (formerly #002D)		
		Perfs: 1764 – 1949' OA
API: 30-015-21449	Lease: B-10715	Spud: 03/02/75
A-23-18S-27E	1310 FNL & 1310 FEL	P&A: n/a
Eddy Co., NM	Pool: 3230 - ARTESIA; Queen-Grayburg-SA	

09/22/14
RIH w/3-3/4" shoe w/cutrite on bottom, hydraulic jars, 3 jts 3-3/4" wash pipe, (6) 3-1/8" DCs on 2-3/8" L-80 WS. RU swivel, NU stripperhead. Broke circ w/FW & wash dwn to 1770'. Washed over 1.00', hard milling, made 3.00'. First 1.00' sand, iron sulphide, salt & scale in returns. Next 3.00' heavy metal shaving. Appears to be top of pkr. Circ btms up 3 times. RD swivel & stripperhead. Halfway out of the hole, SWI & SDFN due to heavy rain & lightning.
Note: Plan to finish out of the hole tomorrow; RIH w/overshot, latch, try to unset pkr or jar free.

09/23/14
Finish POOH w/washover BHA. LD wash pipe & PU 3-3/4" overshot w/2-3/8" grapple, DCs on 2-3/8" L-80 WS. Latch fish, try to release pkr without success. Set 3-3/4" Basic hydraulic jars, & jar pkr free (jarring to 40,000 lbs over string weight). POOH slowly due to pkr dragging OOH. PU 14,00' of 2-3/8" tbg & Watson pkr (pkr came OOH w/everything but packing elements). RD Basic fishing tools & release fisherman. RIH w/3-7/8" bit on (6) 3-1/8" DCs on 2-3/8" L-80 WS. Tag fill @ 1777'. RU swivel & NU stripperhead. Break circ & wash dwn to 1830'. Returns were sand, salt, iron sulphide, scale, pkr debris & pkr rubber. Plugged bit @ 1830'. POOH to unplug tbg. Tbg plugged w/pkr rubber & metal shavings from washover. RIH to 1650'. SWI. SDFN.
Note: Plan to finish cleaning out to PBTD. Test csg integrity & log tomorrow.

09/24/14
Tag fill & RU to clean out. Made 3.00', bit plugged. POOH w/bit (bit sub packed w/rubber & metal shavings). RIH w/new bit to 1833'. RU swivel & NU stripperhead. Broke circ & cleaned out to PBTD @ 1970'. Cleaning out was slow due to the amount of rubber & metal shavings in well. Circ for 45 mins until clean. POOH w/WS, LD DCs. SWI. SDFN.
Note: Plan to run MIT test in the morning. POOH & log well.

09/25/14
No overnight pressure. PU & RIH w/4-1/2"x10.50#x2-3/8" Baker AD-1 tension pkr to 1512'. Set pkr, pressure to 500 psi for 30 mins, no leaks. Release pressure & pkr. POOH. MIRU Warrior Wireline to run CCL/GR/GRN logs from 1970' up to surface showing sandstone matrix, dolomite matrix & limestone matrix. RD Warrior Wireline. Sent logs to Houston. SWI. SDFN.

09/26/14
RIH w/3-7/8" bit, 4-1/2" casing scraper on 2-3/8" WS to 1965'. Circ well clean w/7 BFW. POOH w/bit & scraper. SWI. SDFWE.

09/29/14
MIRU Warrior Wireline & perf 1510 – 1952', 2 SPF, 82', 164 holes as follows:
1510-34'
1762-80'
1840-45'
1874-93'
1898 – 1903'
1941-52'
All shots fired. No change after perfing. RD Warrior.
PU, RIH with 4-1/2"x10.50#x2-3/8" Arrow-Set 32-A pkr to 1960'. Spot 130 gals 15% NeFe acid w/acid booster, antisludge, paraffin solvent, scale inhibitor & demulsifiers. PUH to 1698', reverse 3 BFW & set pkr @ 1698' w/18,000 lbs tension. Tie onto tubing & monitor annulus. Pump 10,000 gals 15% NeFe acid w/additives in 4 stages & (3) 400 lbs rock salt block stages, acidized 1762 – 1952'.
Max Pressure: 2255 PSI Avg Pressure: 1985 PSI Rated: 5.5 BPM
1st Block Stage: 156 PSI increase
2nd Block Stage: 75 PSI increase
3rd Block Stage: 110 PSI increase
ISIP: 1382 PSI
5 mins: 1381 PSI
10 mins: 1381 PSI
15 mins: 1358 PSI
SWI. SDFN for acid to spend.

ARTESIA STATE UNIT #902 WIW (formerly #002D)		
		Perfs: 1764 – 1949' OA
API: 30-015-21449	Lease: B-10715	Spud: 03/02/75
A-23-18S-27E	1310 FNL & 1310 FEL	P&A: n/a
Eddy Co., NM	Pool: 3230 - ARTESIA; Queen-Grayburg-SA	

09/30/14

Open well to vac truck w/1200 psi. Flowed back 94 bbls acid water & gas. Gas = 48 ppm H2S. Well died. Release pkr & POOH. PU & RIH w/4-1/2"x10.50#x2-3/8" Arrowset RBP. Set RBP @ 1611'. POOH w/setting tool. RIH w/4-1/2"x10.50#x2-3/8" Arrowset 32-A tension pkr w/unloader. Set pkr @ 1585'. Test RBP to 2500 psi, ok. Release pkr & PUH to 1470'. Set pkr w/18,000 lbs tension. RU Pacesetter, tie on to tbg & broke perfs 1510 – 1534' w/4000 psi. Increased rate to 5.8 BPM w/2076 psi. Acidize Penrose w/3300 gals 15% NeFe HCl acid w/acid booster, anti-sludge, paraffin solvent, scale inhibitor & demulsifers.

Maximum Pressure: 4000 PSI Average Pressure: 2076 PBS Rate: 5.8 BPM

ISIP: 1331 PSI
5 mins: 1222 PSI
10 mins: 1207 PSI
15 mins: 1197 PSI

SWI. RD Pacesetters. SDFN for acid to spend.

10/01/14

Open well to vac truck w/950 psi. Flowed back 49 bbls acid water & fines. Release pkr & equalized well. POOH w/Arrowset 32-A pkr. RIH w/retrieving tool on 2-3/8" WS. Latch & release RBP & POOH. RIH w/2-3/8" MS on 2-3/8" WS to 1980'. Circ well clean w/75 BFW. POOH laying down WS. RIH w/2-3/8" J55 EUE 8rd IPC tbg w/bullplug. LD 5 jts IPC tbg & test to 2000 psi, ok. Release pressure & POOH w/IPC tbg. SWI. SDFN.

10/02/14

Overnight SI pressure 120 psi. PU 4-1/2"x10.50#x2-3/8" IPC Baker AD-1 tension pkr on 2-3/8" J55 IPC tbg to 1439.00'. Circ 80 BFW w/pkr fluid until well was clean. ND BOP. Set pkr w/20,000# tension @ 1439.17'. Pressure csg to 500 psi & charted pressure for 30 mins. Pressure dropped 50 psi, ok. RD kill truck. Release all rentals. Clean location & RDMO. Well ready for State MIT test & injection.

1	KB	5.00'	5.00'
42	jts 2-3/8" J55 EUE 10rd IPC Tbg	1282.04'	1287.04'
5	jts 2-3/8" J55 EUE 8rd IPC Tbg	148.28'	1435.32'
1	4-1/2"x10.50#x2-3/8" IPC Baker AD-1 Packer	3.85'	1439.17'

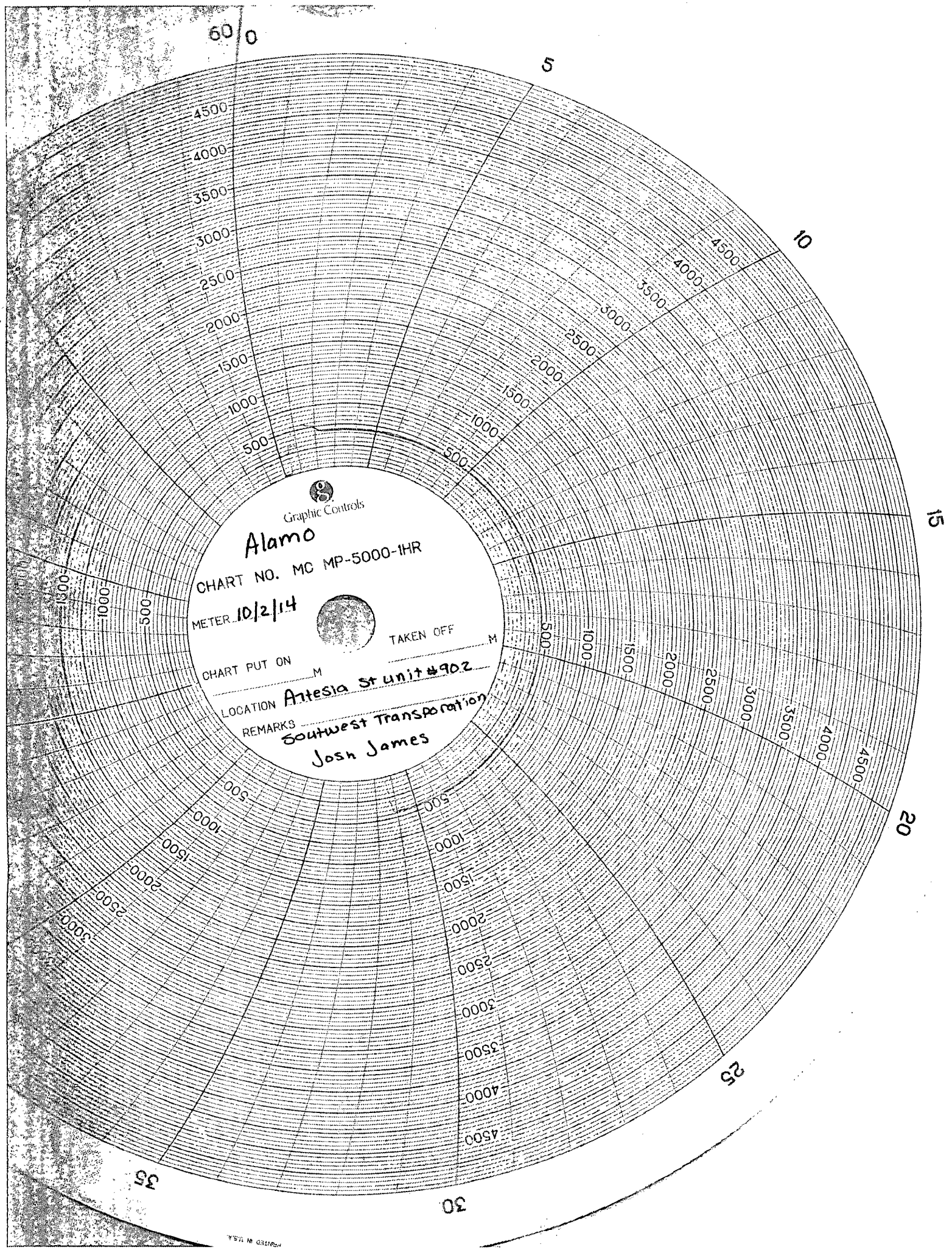
10/03-09/14 SDFWE and wait on State MIT test & injection.

10/10/14

Perform MIT test. Pumped 5 bbls clean produced water each stage. Opened well w/200 psi.

.25 BPM - 500 PSI
.50 BPM - 900 PSI
.75 BPM - 1000 PSI
1.00 BPM - 1100 PSI
1.25 BPM - 1220 PSI
1.50 BPM - 1250 PSI
1.75 BPM - 1300 PSI
2.00 BPM - 1350 PSI

ISIP: 1150 PSI
5 mins: 1100 PSI
10 mins: 1090 PSI
15 mins: 1080 PSI


Graphic Controls
Alamo
CHART NO. MC MP-5000-1HR
METER 10/2/14
TAKEN OFF
M
CHART PUT ON
M
LOCATION Artesia St unit #902
REMARKS Southwest Transportation
Josh James
0
5
10
15
20
25
30
35
60
500
1000
1500
2000
2500
3000
3500
4000
4500

DATE IN	SUSPENSE	ENGINEER	LOGGED IN	TYPE	APP NO.

ABOVE THIS LINE FOR DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION

- Engineering Bureau -

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

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]

[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
☐ WFX ☐ PMX ☐ SWD ☒ IPI ☐ EOR ☐ PPR

[D] Other: Specify _____

[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.

Tyler Woodruff		Senior Landman	10/24/14
Print or Type Name	Signature	Title	Date

twoodruff@alamoresources.com
e-mail Address

ALAMO
PERMIAN RESOURCES, LLC

October 24, 2014

Energy, Minerals and Natural Resources Department
Oil Conservation Division
1220 South St. Francis drive
Santa Fe, New Mexico 87505

Attention: Ms. Jami Bailey, CPG
Division Director

Re: **Injection Pressure Increase Application**
Alamo Permian Resources, LLC
West Artesia Grayburg Unit Well No. 6
Pool: Artesia-Queen-Grayburg-San Andres Pool (3230)
Eddy County, New Mexico

Dear Ms. Bailey,

Alamo Permian Resources, LLC ("Alamo"; OGRID No. 274841), as current operator of the West Artesia Grayburg Unit Waterflood Project, located in portions of Sections 7, 8, & 17, Township 18 South, Range 28 East, NMPM, Eddy County, New Mexico, hereby requests administrative approval to increase the surface injection pressure for the West Artesia Grayburg Unit Well No. 6, API # 30-015-10328 ("WAGU Well No. 6").

The WAGU Well No. 6 was approved for injection under Ordering Paragraph (1) of Division Order No. R-3357-C dated March 17, 2011. Pursuant to Ordering Paragraph (12) of Division Order No. R-3357-C, Alamo was approved a maximum surface injection pressure of 423 psi for the abovementioned well.

On October 15, 2014, Alamo conducted a step rate injection test on the WAGU Well No. 6. The performed step rate test indicates a surface fracture pressure of 1284 psi for the abovementioned well. Attached for your use and review is the Cardinal Surveys Company report on the step rate test performed on the WAGU Well No. 6.

Based on the results of the step rate test, Alamo, hereby requests authority to increase the maximum surface injection pressure to 1250 psi for the WAGU Well No. 6. The WAGU Well No. 6 will not take a sufficient volume of fluid at the current pressure limit and an approval of the proposed pressure increase will allow Alamo to effectively and efficiently conduct secondary recovery operations within the West Artesia Grayburg Unit Waterflood Project, thereby increasing the recovery of hydrocarbons from the Artesia-Queen-Grayburg-San Andres Pool (3230).

Should you have any questions or need any additional data, please do not hesitate to contact me.

Sincerely,

Tyler Woodruff
Senior Landman

CC: Randy Dade, OCD District II Supervisor

820 GESSNER RD, SUITE 1650 • HOUSTON, TEXAS • 77024
PHONE: 713.224.2500 • FAX: 713.224.6096

Step Rate Test

Cardinal Surveys Company

15-Oct-14

Alamo Permian Resources
Well: WAGU No. 6
Field;
County: Eddy County, New Mexico

SC70531
File No. 21928

Intercept @ 2,667.9 BPD, 2,168.6 BH PSIA & Surface Intercept @ 1,284 PSIA

Downhole PSI Tool Ser. No. CSC2601
Surface PSI Gauge Ser. No. CSC 2701
Tool @ 2,150'

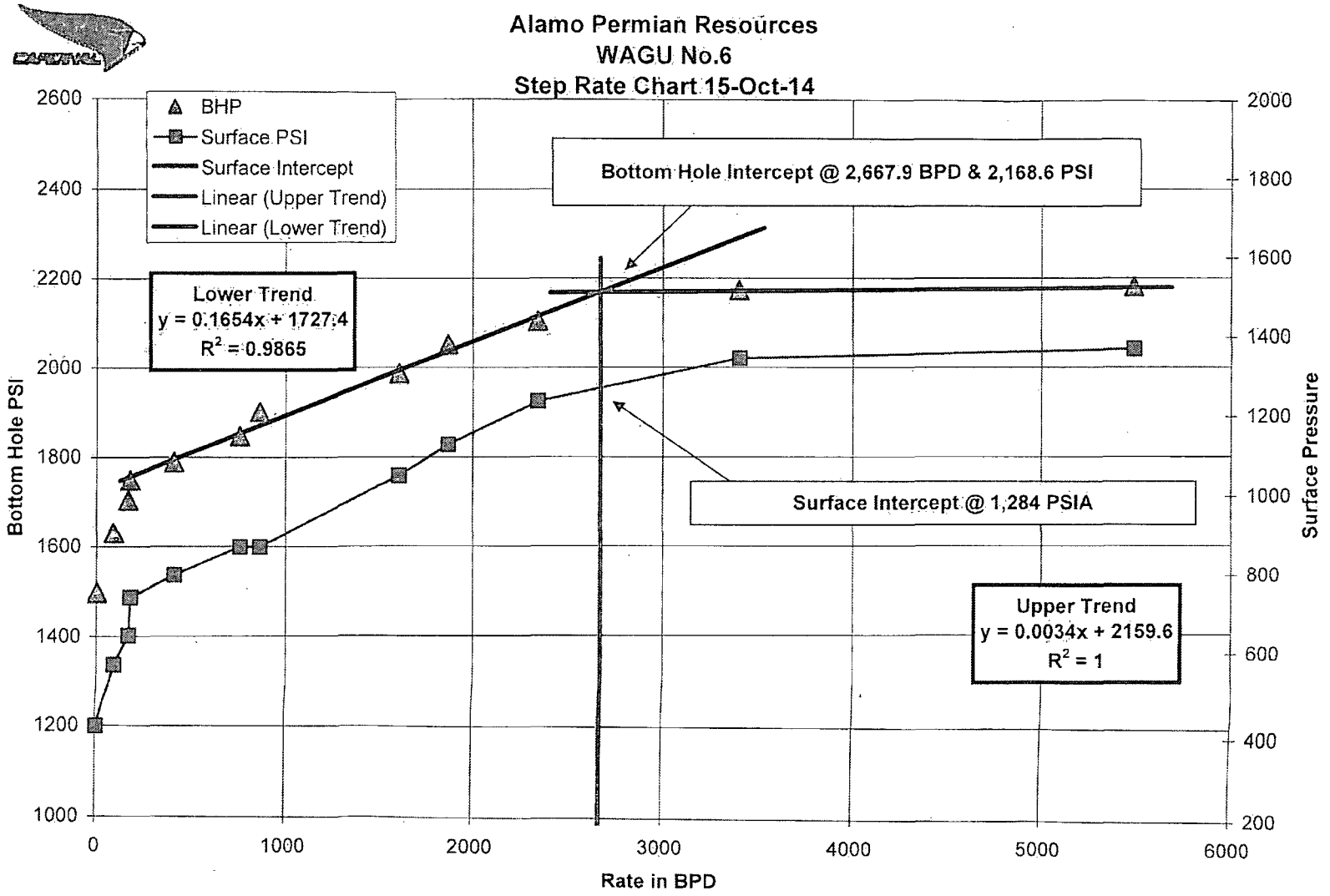
	Start	End	Rate	
1	8:46 AM	9:45 AM	0	2,150'
2	9:45 AM	10:15 AM	100	
3	10:15 AM	10:45 AM	200	
4	10:45 AM	11:15 AM	300	
5	11:15 AM	11:45 AM	500	
6	11:45 AM	12:15 PM	700	
7	12:15 PM	12:45 PM	900	
8	12:45 PM	1:15 PM	1400	
9	1:15 PM	1:45 PM	1900	
10	1:45 PM	2:15 PM	2400	
11	2:49 PM	3:19 PM	3400	Resestablished Rate
12	4:49 PM	5:19 PM	5400	Resestablished Rate
13	5:19 PM	5:34 PM	0	15 Minute Fall Off
14				
15				
16				
17				
18				

Step Rate Test
15-Oct-14

Alamo Permian Resources, LLC
Well: WAGU No. 6
Field:
Location: Eddy 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	8:46 AM	9:45 AM	59	0	0	1496	423	0	0	0		
2	9:45 AM	10:15 AM	30	100	100	1629	578	1.8	1.8	86		
3	10:15 AM	10:45 AM	30	200	100	1701	651	5.2	3.4	163		
4	10:45 AM	11:15 AM	30	300	100	1747	746	8.8	3.6	173	1747	
5	11:15 AM	11:45 AM	30	500	200	1787	802	17.2	8.4	403	1787	
6	11:45 AM	12:15 PM	30	700	200	1845	873	32.9	15.7	754	1845	
7	12:15 PM	12:45 PM	30	900	200	1899	873	50.8	17.9	859	1899	
8	12:45 PM	1:15 PM	30	1400	500	1985	1052	84.3	33.5	1608	1985	
9	1:15 PM	1:45 PM	30	1900	500	2050	1130	123.2	38.9	1867	2050	
10	1:45 PM	2:15 PM	30	2400	500	2102	1239	171.9	48.7	2338	2102	
11	2:49 PM	3:19 PM	30	3400	1000	2171	1347	242.8	70.9	3403		2171
12	4:49 PM	5:19 PM	30	5400	2000	2178	1370	357.1	114.3	5486		2178
13	5:19 PM	5:34 PM	15			2150	1080	357.1	0	0		
14												
15												
16												

upper trend	0.1654	1727.4
lower trend	0.0034	2159.6
intersect	2667.90123	BPD
BHP PSI	2168.67086	PSIA


Alamo Permian Resources
WAGU No.6
Step Rate Chart 15-Oct-14
BHP
Surface PSI
Surface Intercept
Linear (Upper Trend)
Linear (Lower Trend)
Bottom Hole Intercept @ 2,667.9 BPD & 2,168.6 PSI
Lower Trend
y = 0.1654x + 1727.4
R2 = 0.9865
Surface Intercept @ 1,284 PSIA
Upper Trend
y = 0.0034x + 2159.6
R2 = 1
Bottom Hole PSI
Surface Pressure
Rate in BPD
2600
2400
2200
2000
1800
1600
1400
1200
1000
2000
1800
1600
1400
1200
1000
800
600
400
200
0
1000
2000
3000
4000
5000
6000