DATE IN	SUSPENSE	ENGINEER	LOGGED IN	TYPE	APP NO
7/20/16	—	WJ	7/20/16	IPI 507	pWVJ1620257323

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 X Does Not Apply

[A] ☐ Working, Royalty or Overriding Royalty Interest Owners

[B] ☐ Offset Operators, Leaseholders or Surface Owner

1327 PSI

[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.

Linda Good	Linda Good	Regulatory Compliance Specialist	7/18/2016
Print or Type Name	Signature	Title	Date

linda.good@dvn.com
e-mail Address

devon

Devon Energy Corporation
333 West Sheridan Avenue
Oklahoma City, OK 73102-5015

405 235 3611 Phone
www.devonenergy.com

July 19, 2016

Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, NM 87505

Re: Ross Ranch 10 Fed 1; 30-015-29605; Admin Order SWD-1298; Approved 9/7/2011
Application to increase injection pressure
Eddy County, Section 10, T26S, R31E

Dear Sir or Madam:

Based on the results of the accompanying step-rate test conducted on 2/20/2016 Devon requests that the current approved surface injection pressure of 1024 psi be increased to 1300 psi. The test indicates the increase in surface pressure is primarily due to the friction pressure in the 2-7/8" lined tubing at requested injection pressure and we do not see a resulting break in the formation from the downhole gauge at this requested pressure.

The purpose for the requested increase to 1300 psi is to better utilize the disposal capacity of the well.

If you have any questions, please contact Brent Bartlett at (405) 228-7233. Thank you for consideration on this request.

Sincerely,

Brent Bartlett
Production Engineer

Jones, William V, EMNRD

From: Good, Linda <Linda.Good@dvn.com>
Sent: Wednesday, July 20, 2016 6:28 AM
To: Jones, William V, EMNRD
Cc: Bartlett, Brent
Subject: Ross Ranch 10 Fed 1 - Administrative Application Checklist
Attachments: *Administrative Application Checklist_Ross Ranch 10 Fed 1.pdf; Step Rate Test Data.pdf; C-103_NOI Sundry_Increase Pressure_Ross* Ranch 10 Fed 1_Revised_7-18-16.pdf; Ross Ranch 10 fed 1 SWD Step Rate Test Data.pdf; Ross Ranch 10 Fed 1 SWD wellbore schematic.pdf; Ross Ranch 10 fed 1 SWD IPI request cover letter_signed.pdf

Good morning Will,

I believe we have everything you are needing now. Please let me know if you need anything else.

Thank you and have a great day!

Linda Good
Regulatory Compliance Specialist
Devon Energy Corporation
Devon Energy Center-Tower - OKDEC 18.522
333 West Sheridan Avenue Oklahoma City OK 73102-5015
405-552-6558
linda.good@dvn.com

devon

Confidentiality Warning: This message and any attachments are intended only for the use of the intended recipient(s), are confidential, and may be privileged. If you are not the intended recipient, you are hereby notified that any review, retransmission, conversion to hard copy, copying, circulation or other use of all or any portion of this message and any attachments is strictly prohibited. If you are not the intended recipient, please notify the sender immediately by return e-mail, and delete this message and any attachments from your system.

devon

Production Schematic

ROSS RANCH 10 FED 1 — **DELAWARE BASIN WEST UNRESTRICTED**

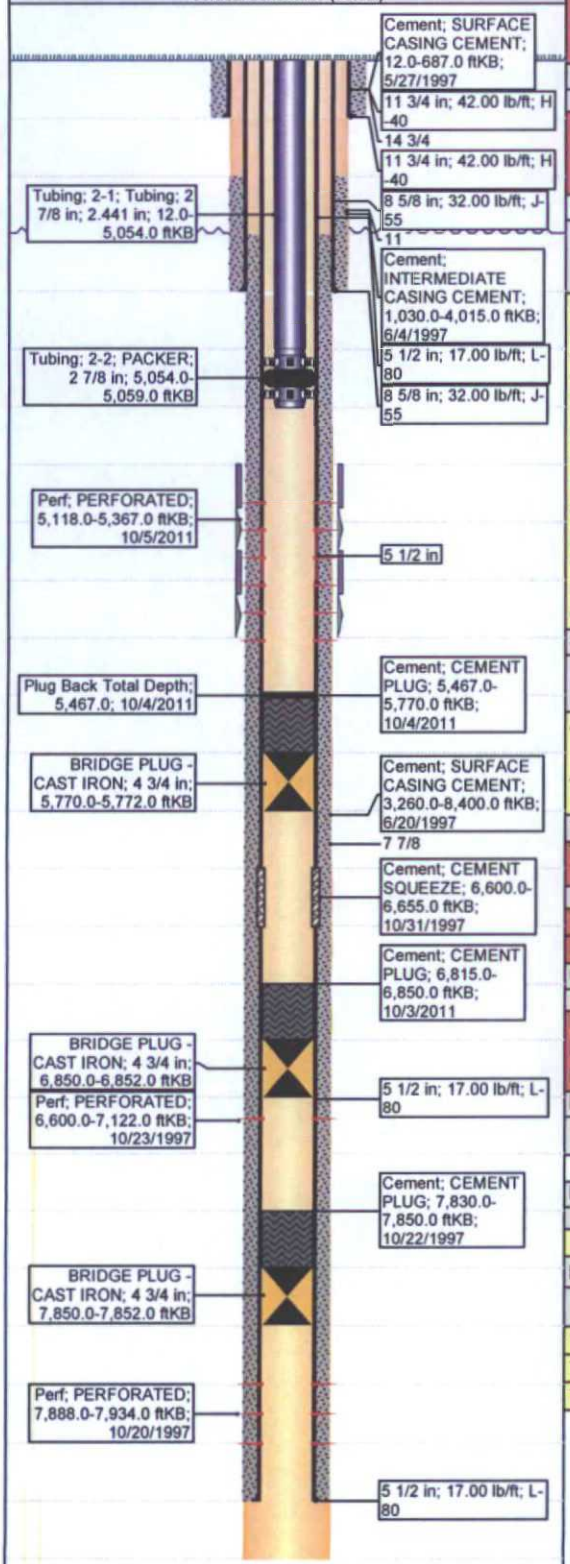
State/Province	County	API/UWI	Surface Legal Location	Well Configuration Type
NM	EDDY	3001529605	1980' FNL & 660' FEL	VERTICAL

KB - Ground Level (ft)	CF Elev (ft)	Ground Elev MSL (ft)	KB - Casing Flange (ft)	Original Drlg Spud Date	Original Drlg Rig Release Date	On Production Date
12.00		3,216.00		5/25/1997		6/20/1997

********************WASHAKIE SCHEMATIC********************

VERTICAL - OH, 7/19/2016 2:05:57 PM

Vertical schematic (actual)



Wellbore Sections

Wellbore Name	Section Des	Start Date	Act Top (ftKB)	Act Btm (ftKB)	Hole Size (in)
OH	SURFACE 1	5/25/1997	12.0	687.0	14 3/4
OH	INTERMEDIATE 1	5/27/1997	687.0	4,015.0	11
OH	PRODUCTION 1	6/4/1997	4,015.0	8,500.0	7 7/8

Casing Strings

Csg Des	OD (in)	Wt/Len (lb/ft)	Grade	Top (ftKB)	Set Depth (ftKB)
SURFACE 1	11 3/4	42.00	H-40	12.0	687.0
INTERMEDIATE 1	8 5/8	32.00	J-55	12.0	4,015.0
PRODUCTION 1	5 1/2	17.00	L-80	12.0	8,400.0

Cement Fluids

String	Cement Class	Fluid	Fluid Des	Amount of Cement (sacks)	Yield (ft³/sack)	Dens (lb/gal)	Vol Pumped (bbl)
SURFACE 1, 687.0ftKB	C			550			
INTERMEDIATE 1, 4,015.0ftKB	C			950			
PRODUCTION 1, 8,400.0ftKB	H			1,600			
PRODUCTION 1, 8,400.0ftKB	H			2			
PRODUCTION 1, 8,400.0ftKB	H			200			
PRODUCTION 1, 8,400.0ftKB	H			4			
PRODUCTION 1, 8,400.0ftKB	C			25			

Stimulation Intervals

Type	Start Date	Vol Clean Total (bbl)	Proppant In Formation (lb)	Frac Gradient (psi/ft)	Top (ftKB)	Btm (ftKB)	Zone
ACID FRAC	10/29/2015	185.90	0.0	0.00	5,118.0	5,367.0	DELAWARE, OH
ACID FRAC	2/18/2016	201.00	0.0	0.00	5,118.0	5,367.0	DELAWARE, OH

TUBING - PRODUCTION set at 5,059.0ftKB on 11/8/2014 13:00

Tubing Description	Run Date	String Length (ft)	Set Depth / EOT (ftKB)
TUBING - PRODUCTION	11/8/2014	5,047.00	5,059.0

Item Des	Jts	OD (in)	Wt (lb/ft)	Grade	Len (ft)	Top (ftKB)	Btm (ftKB)
Tubing		2 7/8	6.50	J-55	5,042.00	12.0	5,054.0
PACKER		2 7/8			5.00	5,054.0	5,059.0

Other In Hole

Des	Run Date	Pull Date	OD (in)	ID (in)	Top (ftKB)	Btm (ftKB)
BRIDGE PLUG - CAST IRON	10/3/2011		4 3/4		5,770.0	5,772.0
BRIDGE PLUG - CAST IRON	10/3/2011		4 3/4		6,850.0	6,852.0
BRIDGE PLUG - CAST IRON	10/22/1997		4 3/4		7,850.0	7,852.0

Production Tests & Emissions

Date	Q Oil (bbl/day)	Rate Gas (MCF/day)	Q Water (bbl/day)	Tub Pres (psi)	Cas Pres (psi)

Production Settings

Method	Method Detail	Start Date	End Date

Perforation Intervals

Date	Top (ftKB)	Btm (ftKB)	Shot Dens (shots/ft)	Phasing (°)	Linked Zone
10/5/2011	5,118.0	5,367.0	4.0		DELAWARE, OH
10/23/1997	6,600.0	7,122.0	4.0		DELAWARE, OH
10/20/1997	7,888.0	7,934.0	4.0		DELAWARE, OH

Report Printed: 7/19/2016

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 July 18, 2013

WELL API NO.
30-015-29605

5. Indicate Type of Lease
Fed X STATE ☐ FEE ☐

6. State Oil & Gas Lease No.

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.)

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

7. Lease Name or Unit Agreement Name
Ross Ranch 10

8. Well Number
1

2. Name of Operator
Devon Energy Production Company, LP

9. OGRID Number
6137

3. Address of Operator
333 West. Sheridan Avenue
Oklahoma City, OK 73102-5015 405-552-6558

10. Pool name or Wildcat
Delaware

4. Well Location
Unit Letter H : 1980 feet from the N line and 660 feet from the E line
Section 10 Township 26S Range 31E NMPM County Eddy

11. Elevation *(Show whether DR, RKB, RT, GR, etc.)*
3216'

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	☐						
CLOSED-LOOP SYSTEM	☐						
OTHER: Step Rate Test	☒			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 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

In reference to BLM approved Electronic Submission #323618 on November 17, 2015, Devon Energy Production Company, L.P. requests adjustments to previously submitted procedure. Due to inconclusive data results received during initial Step Rate Test procedure, Devon Energy requests to perform well intervention operations in attempt to clean up wellbore and perform a Step Rate Test as per below schedule. All work performed will follow and reference previously approved Conditions of Approval.

1. Wait on NMOCD sundry review and approval of sundry.
2. Perform well intervention operations, flow well back to clean up.
3. Notify NMOCD 24 hours before beginning test.
4. Discontinue injection for minimum 48 hours prior to test. Document pressures.
5. MIRU pumps, iron and stage injection fluid.
6. Initiate injection at a rate of 18 GPM. Step up rates in 7 stages, each for 30 minutes, to maximum of 150 GPM. Hold final rate for 45 minutes.
7. Shut in and record pressures.
8. Conclude test and RDMO pumps.
9. Run MIT test and chart. File MIT w/NMOCD office.
10. Return well to injection.

Step Rate Test Attached.

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

SIGNATURE Linda Good TITLE: Regulatory Specialist DATE 7/18/2016

Type or print name: Linda Good E-mail address: linda.good@dvn.com PHONE: 405-552-6558

For State Use Only

APPROVED BY: _____ TITLE _____ DATE _____

Conditions of Approval (if any):

STEP RATE TEST DATA for BLM, CFO

Operator: Devon Energy Production Company, LP Well: ROSS RANCH 10 FEDERAL-1
API#: 3001529605 Lease: NM89057
Data Collection Date: Sfc Loc: T26S-R31E;10,1980n660e
< Input cell(s)

Tbg O.D.: Tbg Wt.: Grade: Coupling: Packer at:
Top Injection Depth: **5118** X 0.20psig/ft = Expected Surface Fracture psig: **1023.6**
With Mud Wt Scale: lbs/gal Msrd No Flow Formation psig: at Depth: **5118**
Injection fluid lbs/gal: Hydrostatic Pressure of fluid at top depth of injection:
Beginning Wellhead psig: Target Maximum Rate: bpd(barrels per day): **5150**

1. *Take a charted record of shut in psig for no less than 48 hours. If the wellhead shut in psig is not less than* the approved injection pressure, bled the wellhead pressure below that approved injection pressure before beginning the Step Rate Test.
2. *Preform a minimum of seven steps, recording rate to ±0.1bpm and surface pressures to ±10psig in five* minute intervals. The first two step rate pressures must be below 0.2psig/ft x depth at top of injection.

3. The last two five minute surface pressure readings of each (minimum 30 minute) step are to be within 15psig of each other. If not, hold that step injection rate past the 30 minute step until two consecutive pressure *readings are within 15psig. Record the average of those two readings as the Data Point for that Step #.*

Step 1 *bpm pmp'd for Step 1*
Target Test Rate (5% of maximum bpd/1440 = **0.2** bpm (barrels per minute) for **Step 1**

Time:	5 min	10 min	15 min	20 min	25 min	30 min
Surface (psig):						
Formation (psig)						
bpm:						
Time:	35 min	40 min	45 min	50 min	25 min	60 min
Surface (psig):						
Formation (psig):						
bpm:						

Start Time:
End Time:
Point #1
Sfc psig:
F psig:
bpm:
bpd: 0
target bpd: 258

Step 2 bpm pmp'd for Step 2
Target Test Rate (10% of maximum bpd/1440 = **0.4** *bpm for* **Step 2**

Time:	5 min	10 min	15 min	20 min	25 min	30 min
Surface (psig):						
Formation (psig):						
bpm:						
Time:	35 min	40 min	45 min	50 min	25 min	60 min
Surface (psig):						
Formation (psig):						
bpm:						

Start Time:
End Time:
Point #2
Sfc psig:
F psig:
bpm:
bpd: 0
target bpd: 515

Step 3 bpm pmp'd for Step 3
Target Test Rate (20% of maximum bpd/1440 = **0.7** bpm for **Step 3**

Time:	5 min	10 min	15 min	20 min	25 min	30 min
Surface (psig):						
Formation (psig):						
bpm:						
Time:	35 min	40 min	45 min	50 min	25 min	60 min
Surface (psig):						
Formation (psig)						
bpm:						

Start Time:
End Time:
Point #3
Sfc psig:
F psig:
bpm:
bpd: 0
target bpd: 1030

STEP RATE TEST DATA for BLM, CFO

Operator: Devon Energy Production Company, LP Well: ROSS RANCH 10 FEDERAL-1
API#: 3001529605 Lease: NM89057
Data Collection Date: Sfc Loc: T26S-R31E,10:1980n660e

Step 4							bpm pmp'd for Step 4	
Target Test Rate (40% of maximum bpd/1440 =				**1.4**			bpm for **Step 4**	
Time:	5 min	10 min	15 min	20 min	25 min	30 min	Start Time:	
Surface (psig):							End Time:	
Formation (psig):							**Point #4**	
Rate bbl/min:							Sfc psig:	
Time:	35 min	40 min	45 min	50 min	25 min	60 min	F psig:	
Surface (psig):							bpm:	
Formation (psig):							bpd:	0
bpm:							target bpd:	2060

Step 5							bpm pmp'd for Step 5	
Target Test Rate (60% of maximum bpd/1440 =				**2.1**			bpm for **Step 5**	
Time:	5 min	10 min	15 min	20 min	25 min	30 min	Start Time:	
Surface (psig):							End Time:	
Formation (psig)							**Point #5**	
bpm:							Sfc psig:	
Time:	35 min	40 min	45 min	50 min	25 min	60 min	F psig:	
Surface (psig):							bpm:	
Formation (psig):							bpd:	0
bpm:							target bpd:	3090

Step 6							bpm pmp'd for Step 6	
Target Test Rate (80% of maximum bpd/1440 =				**2.9**			bpm for **Step 6**	
Time:	5 min	10 min	15 min	20 min	25 min	30 min	Start Time:	
Surface (psig):							End Time:	
Formation (psig)							**Point #6**	
Rate bbl/min:							Sfc psig:	
Time:	35 min	40 min	45 min	50 min	25 min	60 min	F psig:	
Surface (psig):							bpm:	
Formation (psig):							bpd:	0
bpm:							target bpd:	4120

Step 7							bpm pmp'd for Step 7	
Target Test Rate (100% of maximum bpd/1440 =				**3.6**			bpm for **Step 7**	
Time:	5 min	10 min	15 min	20 min	25 min	30 min	Start Time:	
Surface (psig):							End Time:	
Formation (psig):							**Point #7**	
bpm:							Sfc psig:	
Time:	35 min	40 min	45 min	50 min	25 min	60 min	F psig:	
Surface (psig):							bpm:	
Formation (psig):							bpd:	0
bpm:							target bpd:	5150

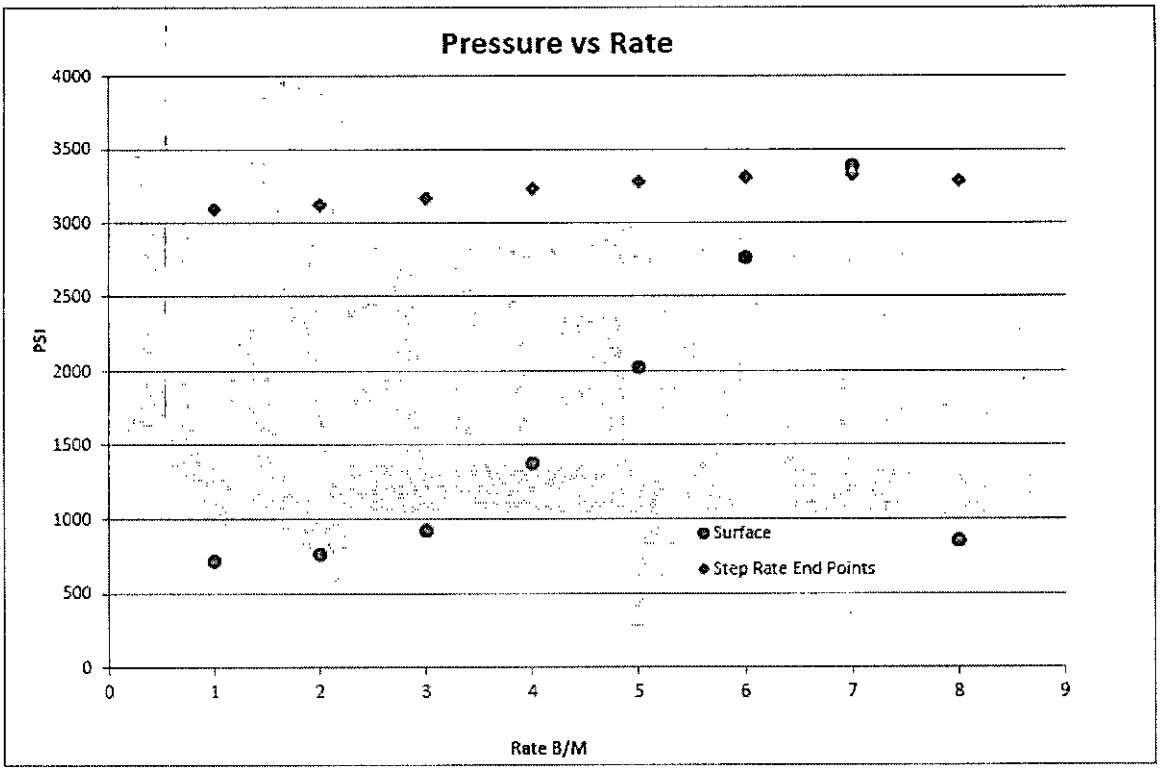
Instant Shut In Pressure:
5 minute Shut In Pressure:
10 minute Shut In Pressure:
15 minute Shut In Pressure:

RENEGADE SERVICES

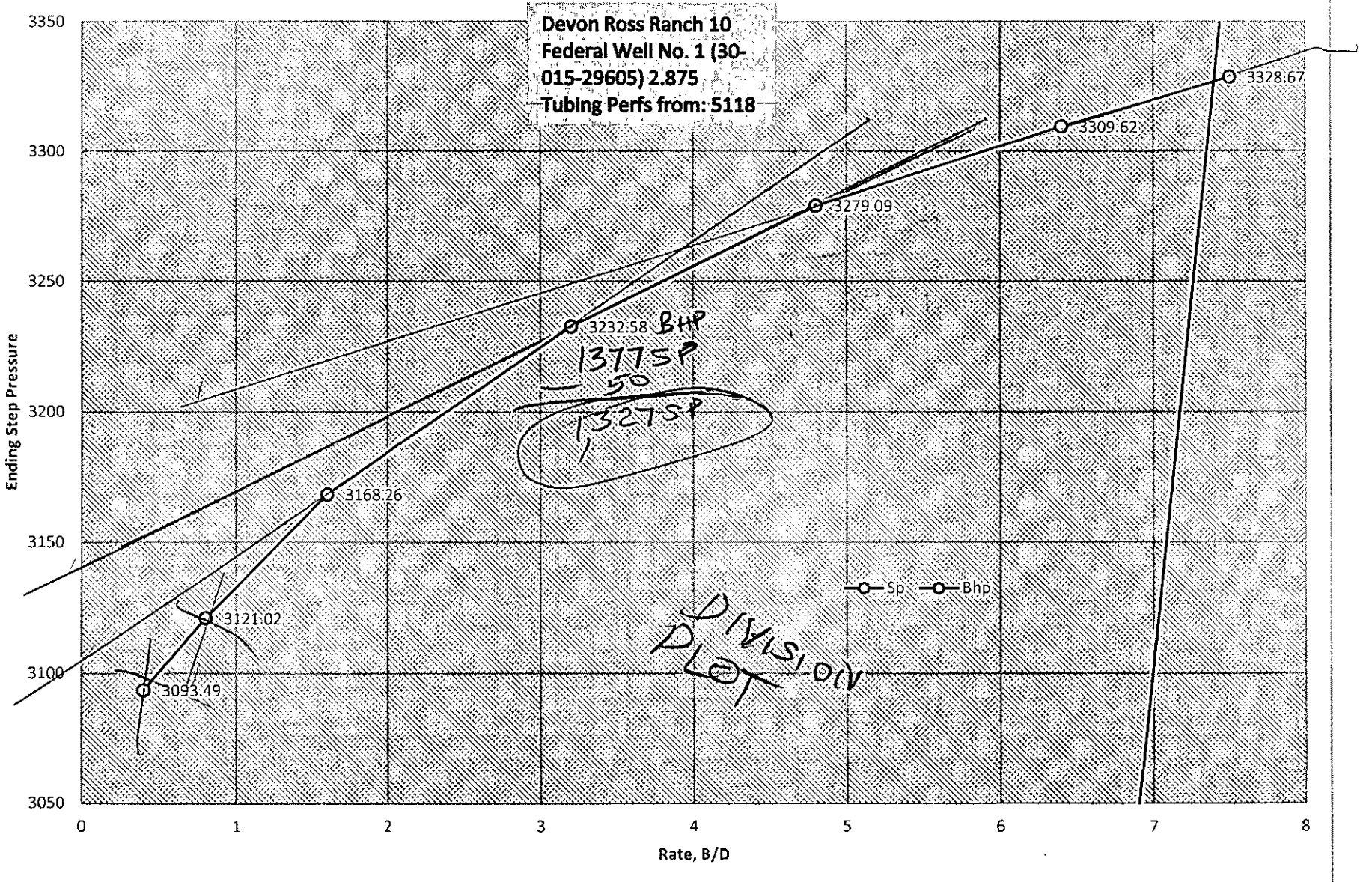
STEP RATE TEST

	RATE B/D	Date	Time	BH PRESS	SURF. PRESS	Comments
Step 1	0.4	2/20/2016	10:29 AM	3093.49	715.05	
Step 2	0.8	2/20/2016	11:00 AM	3121.02	760.28	
Step 3	1.6	2/20/2016	11:32 AM	3168.26	918.96	
Step 4	3.2	2/20/2016	12:03 PM	3232.58	1377.35	
Step 5	4.8	2/20/2016	12:34 PM	3279.09	2026.98	
Step 6	6.4	2/20/2016	1:39 PM	3309.62	2765.85	
Step 7	7.5	2/20/2016	2:21 PM	3328.67	3385.54	
Fall Off	Fall Off	2/20/2016		3286.38	854.09	

Company:	Devon Envery	Recorded By:	M. Flores
Well:	Ross Ranch 10 Federal 001		
Field:	Ross Ranch	Truck Number:	95
County:	Loving	District:	Levelland
State:	New Mexico		
		Test Type:	STEP RATE TESTS
Tubing Size:	2 7/8		
Seat Nipple Depth:	N/A		
Perforations:			
Plug Back Depth	N/A		


Pressure vs Rate
4000
3500
3000
2500
2000
1500
1000
500
0
PSI
0
1
2
3
4
5
6
7
8
9
Rate B/M
Surface
Step Rate End Points

Step Rate Test Results



Step Rate Test Results