

Chappell, Michelle

From: Katrina Boyd <kboyd@forgenergy.com>
Sent: Thursday, April 27, 2017 10:47 AM
To: OGRregulatory
Subject: RE: UL 18 Dyk 1H Well Setup/ API 42-475-37122
Attachments: Forge UL 18 DYK 1H Svy_01 21 2017 final.pdf; Forge UL 18 DYK 1H Final Svy_WFT_01 26 2017.xlsx; UL 18 Dyk 1H P-8, Approved.pdf; Perforation Report - UL 18 DYK 1H.pdf


Prior to W-2 filing, please use the attached documents to set the well up in your system for royalty payments.

Directional Survey (PDF & Excel Format) – Attached
Perf Intervals – 11659 – 18552 (report attached)
Date of 1st Production: 03/30/2017
Products Reported: Oil, Gas
Oil Completion
P-8: Attached
P-4: Attached

Please let me know if you need additional information.

Thank You,



		Perforation Report				Spud Date (Original): 09/12/2016	
		Well Name: UL 18 Dyk 1H					
Division: Delaware Basin County: Ward State: Texas		Field Name: Phantom (Wolfcamp) API Number: 42-475-37122				KB-GL: 25.0 Ground Elevation: 2,716.0 KB Elevation: 2,741.0	
Perf Cluster Description Stage 1 18,451 - 18,552		Cluster Type 3 1/8" 3 Cluster Perf Assembly					
Date/Time 02/17/2017 21:00:00	WellBore ORIGINAL HOLE	Reservoir	Related Project Original Completion (Feb 1 2017 2:30PM)	Perf Inside Of PRODUCTION CASING (Jan 25 2017 7:00PM)			
Comment 19 gram charge							
Description Gun 3				Perf Type Scalloped			
Perf Top MD 18451.0	Perf Bottom MD 18452.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 9	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment 19 gram charge							
Description Gun 2				Perf Type Scalloped			
Perf Top MD 18501.0	Perf Bottom MD 18502.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 10	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment 19 gram charge							
Description Gun 1				Perf Type Scalloped			
Perf Top MD 18551.0	Perf Bottom MD 18552.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 11	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment 19 gram charge							
Perf Cluster Description Stage 2 18,245 - 18,402		Cluster Type 3 1/8" 4 Cluster Perf Assembly					
Date/Time 02/18/2017 08:30:00	WellBore ORIGINAL HOLE	Reservoir	Related Project Original Completion (Feb 1 2017 2:30PM)	Perf Inside Of PRODUCTION CASING (Jan 25 2017 7:00PM)			
Comment 19 gram charge							
Description Gun #4				Perf Type Scalloped			
Perf Top MD 18245.0	Perf Bottom MD 18246.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 9	Shot Size 0.420	Shot Density 6	Phasing 60.0
Comment 19 gram charge							
Description Gun #3				Perf Type Scalloped			
Perf Top MD 18301.0	Perf Bottom MD 18302.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 0	Shot Size 0.000	Shot Density 0	Phasing 0.0
Comment							
Description Gun #2				Perf Type Scalloped			
Perf Top MD 18351.0	Perf Bottom MD 18352.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 0	Shot Size 0.000	Shot Density 0	Phasing 0.0
Comment							
Description Gun #1				Perf Type Scalloped			
Perf Top MD 18401.0	Perf Bottom MD 18402.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 11	Shot Size 0.420	Shot Density 6	Phasing 60.0
Comment							
Perf Cluster Description Stage 3 18,051 - 18,202		Cluster Type 3 1/8" 4 Cluster Perf Assembly					
Date/Time 02/18/2017 21:30:00	WellBore ORIGINAL HOLE	Reservoir	Related Project Original Completion (Feb 1	Perf Inside Of PRODUCTION CASING (Jan 25 2017 7:00PM)			

			2017 2:30PM)						
Comment 19 gram charge									
Description Gun #4					Perf Type Scalloped				
Perf Top MD 18051.0	Perf Bottom MD 18052.0		Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 9	Shot Size 0.420	Shot Density 6	Phasing 60.0	
Comment 19 gram charge									
Description Gun #3					Perf Type Scalloped				
Perf Top MD 18101.0	Perf Bottom MD 18102.0		Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 10	Shot Size 0.420	Shot Density 6	Phasing 60.0	
Comment 19 gram charge									
Description Gun #2					Perf Type Scalloped				
Perf Top MD 18151.0	Perf Bottom MD 18152.0		Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 10	Shot Size 0.420	Shot Density 6	Phasing 60.0	
Comment 19 gram charge									
Description Gun #1					Perf Type Scalloped				
Perf Top MD 18201.0	Perf Bottom MD 18202.0		Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 11	Shot Size 0.420	Shot Density 6	Phasing 60.0	
Comment 19 gram charge									
Perf Cluster Description Stage 4 17,851 - 18,002			Cluster Type 3 1/8" 4 Cluster Perf Assembly						
Date/Time 02/19/2017 05:15:00	WellBore ORIGINAL HOLE	Reservoir	Related Project Original Completion (Feb 1 2017 2:30PM)	Perf Inside Of PRODUCTION CASING (Jan 25 2017 7:00PM)					
Comment 19 gram charge									
Description Gun 4					Perf Type Scalloped				
Perf Top MD 17851.0	Perf Bottom MD 17852.0		Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 9	Shot Size 0.380	Shot Density 6	Phasing 60.0	
Comment									
Description Gun 3					Perf Type Scalloped				
Perf Top MD 17901.0	Perf Bottom MD 17902.0		Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 10	Shot Size 0.380	Shot Density 6	Phasing 60.0	
Comment									
Description Gun 2					Perf Type Scalloped				
Perf Top MD 17951.0	Perf Bottom MD 17952.0		Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 10	Shot Size 0.380	Shot Density 6	Phasing 60.0	
Comment									
Description Gun 1					Perf Type Scalloped				
Perf Top MD 18001.0	Perf Bottom MD 18002.0		Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 11	Shot Size 0.380	Shot Density 6	Phasing 60.0	
Comment									
Perf Cluster Description Stage 5 17,651 - 17,802			Cluster Type 3 1/8" 4 Cluster Perf Assembly						
Date/Time 02/20/2017 10:30:00	WellBore ORIGINAL HOLE	Reservoir	Related Project Original Completion (Feb 1 2017 2:30PM)	Perf Inside Of PRODUCTION CASING (Jan 25 2017 7:00PM)					
Comment 19 gram charge									
Description Gun 4					Perf Type Scalloped				
Perf Top MD 17651.0	Perf Bottom MD 17652.0		Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 9	Shot Size 0.380	Shot Density 6	Phasing 60.0	
Comment									
Description Gun 3					Perf Type Scalloped				
Perf Top MD 17701.0	Perf Bottom MD 17702.0		Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 10	Shot Size 0.380	Shot Density 6	Phasing 60.0	

Comment							
Description Gun 2				Perf Type Scalloped			
Perf Top MD 17751.0	Perf Bottom MD 17752.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 10	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Description Gun 1				Perf Type Scalloped			
Perf Top MD 17801.0	Perf Bottom MD 17802.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 11	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Perf Cluster Description Stage 6 17,451 - 17,602		Cluster Type 3 1/8" 4 Cluster Perf Assembly					
Date/Time 02/20/2017 18:30:00	WellBore ORIGINAL HOLE	Reservoir	Related Project Original Completion (Feb 1 2017 2:30PM)	Perf Inside Of PRODUCTION CASING (Jan 25 2017 7:00PM)			
Comment 19 gram charge							
Description Gun 4				Perf Type Scalloped			
Perf Top MD 17451.0	Perf Bottom MD 17452.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 9	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Description Gun 3				Perf Type Scalloped			
Perf Top MD 17501.0	Perf Bottom MD 17502.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 10	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Description Gun 2				Perf Type Scalloped			
Perf Top MD 17551.0	Perf Bottom MD 17552.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 10	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Description Gun 1				Perf Type Scalloped			
Perf Top MD 17601.0	Perf Bottom MD 17602.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 11	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Perf Cluster Description Stage 7 17,254 - 17,402		Cluster Type 3 1/8" 4 Cluster Perf Assembly					
Date/Time 02/21/2017 03:00:00	WellBore ORIGINAL HOLE	Reservoir	Related Project Original Completion (Feb 1 2017 2:30PM)	Perf Inside Of PRODUCTION CASING (Jan 25 2017 7:00PM)			
Comment 19 gram charge							
Description Gun 4				Perf Type Scalloped			
Perf Top MD 17254.0	Perf Bottom MD 17255.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 9	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Description Gun 3				Perf Type Scalloped			
Perf Top MD 17301.0	Perf Bottom MD 17302.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 10	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Description Gun 2				Perf Type Scalloped			
Perf Top MD 17351.0	Perf Bottom MD 17352.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 10	Shot Size 0.038	Shot Density 6	Phasing 60.0
Comment							
Description Gun 1				Perf Type Scalloped			
Perf Top MD 17401.0	Perf Bottom MD 17402.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 11	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Perf Cluster Description Stage 8 17,051 - 17,202		Cluster Type 3 1/8" 4 Cluster Perf Assembly					
Date/Time 02/21/2017 08:30:00	WellBore ORIGINAL HOLE	Reservoir	Related Project Original Completion	Perf Inside Of PRODUCTION CASING (Jan 25 2017 7:00PM)			

			(Feb 1 2017 2:30PM)				
Comment 19 gram charge							
Description Gun 4				Perf Type Scalloped			
Perf Top MD 17051.0	Perf Bottom MD 17052.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 9	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Description Gun 3				Perf Type Scalloped			
Perf Top MD 17111.0	Perf Bottom MD 17112.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 10	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Description Gun 2				Perf Type Scalloped			
Perf Top MD 17161.0	Perf Bottom MD 17162.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 10	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Description Gun 1				Perf Type Scalloped			
Perf Top MD 17201.0	Perf Bottom MD 17202.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 11	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Perf Cluster Description Stage 9 16,851 - 17,002		Cluster Type 3 1/8" 4 Cluster Perf Assembly					
Date/Time 02/21/2017 17:30:00	WellBore ORIGINAL HOLE	Reservoir	Related Project Original Completion (Feb 1 2017 2:30PM)	Perf Inside Of PRODUCTION CASING (Jan 25 2017 7:00PM)			
Comment 19 gram charge							
Description Gun 4				Perf Type Scalloped			
Perf Top MD 16851.0	Perf Bottom MD 16852.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 9	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Description Gun 3				Perf Type Scalloped			
Perf Top MD 16901.0	Perf Bottom MD 16902.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 10	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Description Gun 2				Perf Type Scalloped			
Perf Top MD 16951.0	Perf Bottom MD 16952.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 10	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Description Gun 1				Perf Type Scalloped			
Perf Top MD 17001.0	Perf Bottom MD 17002.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 11	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Perf Cluster Description Stage 10 16,802 - 16,651		Cluster Type 3 1/8" 4 Cluster Perf Assembly					
Date/Time 02/21/2017 23:30:00	WellBore ORIGINAL HOLE	Reservoir	Related Project Original Completion (Feb 1 2017 2:30PM)	Perf Inside Of PRODUCTION CASING (Jan 25 2017 7:00PM)			
Comment 19 gram charge							
Description Gun 4				Perf Type Scalloped			
Perf Top MD 16651.0	Perf Bottom MD 16652.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 9	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Description Gun 3				Perf Type Scalloped			
Perf Top MD 16701.0	Perf Bottom MD 16702.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 10	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Description				Perf Type			

Gun 2				Scalloped			
Perf Top MD 16751.0	Perf Bottom MD 16752.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 10	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Description Gun 1				Perf Type Scalloped			
Perf Top MD 16801.0	Perf Bottom MD 16802.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 11	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Perf Cluster Description Stage 11 16,602 - 16,451		Cluster Type 3 1/8" 4 Cluster Perf Assembly					
Date/Time 02/22/2017 05:30:00	WellBore ORIGINAL HOLE	Reservoir	Related Project Original Completion (Feb 1 2017 2:30PM)	Perf Inside Of PRODUCTION CASING (Jan 25 2017 7:00PM)			
Comment 19 gram charge							
Description Gun 4				Perf Type Scalloped			
Perf Top MD 16451.0	Perf Bottom MD 16452.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 9	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Description Gun 3				Perf Type Scalloped			
Perf Top MD 16504.0	Perf Bottom MD 16505.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 10	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Description Gun 2				Perf Type Scalloped			
Perf Top MD 16561.0	Perf Bottom MD 16562.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 10	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Description Gun 1				Perf Type Scalloped			
Perf Top MD 16601.0	Perf Bottom MD 16602.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 11	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Perf Cluster Description Stage 12 16,251 - 16,403		Cluster Type 3 1/8" 4 Cluster Perf Assembly					
Date/Time 02/22/2017 12:29:00	WellBore ORIGINAL HOLE	Reservoir	Related Project Original Completion (Feb 1 2017 2:30PM)	Perf Inside Of PRODUCTION CASING (Jan 25 2017 7:00PM)			
Comment 19 gram charge							
Description Gun 4				Perf Type Scalloped			
Perf Top MD 16251.0	Perf Bottom MD 16252.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 9	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Description Gun 3				Perf Type Scalloped			
Perf Top MD 16308.0	Perf Bottom MD 16309.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 10	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Description Gun 2				Perf Type Scalloped			
Perf Top MD 16351.0	Perf Bottom MD 16352.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 10	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Description Gun 1				Perf Type Scalloped			
Perf Top MD 16402.0	Perf Bottom MD 16403.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 11	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Perf Cluster Description Stage 13 16,051 - 16,202		Cluster Type 3 1/8" 4 Cluster Perf Assembly					
Date/Time 02/22/2017 18:00:00	WellBore ORIGINAL HOLE	Reservoir	Related Project Original Completion (Feb 1 2017	Perf Inside Of PRODUCTION CASING (Jan 25 2017 7:00PM)			

			2:30PM)				
Comment 19 gram charge							
Description Gun 4				Perf Type Scalloped			
Perf Top MD 16051.0	Perf Bottom MD 16052.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 9	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Description Gun 3				Perf Type Scalloped			
Perf Top MD 16101.0	Perf Bottom MD 16102.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 10	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Description Gun 2				Perf Type Scalloped			
Perf Top MD 16151.0	Perf Bottom MD 16152.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 10	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Description Gun 1				Perf Type Scalloped			
Perf Top MD 16201.0	Perf Bottom MD 16202.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 11	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Perf Cluster Description Stage 14 15,851 - 16,002		Cluster Type 3 1/8" 4 Cluster Perf Assembly					
Date/Time 02/23/2017 00:30:00	WellBore ORIGINAL HOLE	Reservoir	Related Project Original Completion (Feb 1 2017 2:30PM)	Perf Inside Of PRODUCTION CASING (Jan 25 2017 7:00PM)			
Comment 19 gram charge.							
Description Gun 4				Perf Type Scalloped			
Perf Top MD 15851.0	Perf Bottom MD 15852.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 9	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Description Gun 3				Perf Type Scalloped			
Perf Top MD 15891.0	Perf Bottom MD 15892.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 10	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Description Gun 2				Perf Type Scalloped			
Perf Top MD 15956.0	Perf Bottom MD 15957.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 10	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Description Gun 1				Perf Type Scalloped			
Perf Top MD 16001.0	Perf Bottom MD 16002.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 11	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Perf Cluster Description Stage 15 15,651 - 15,802		Cluster Type 3 1/8" 4 Cluster Perf Assembly					
Date/Time 02/23/2017 05:30:00	WellBore ORIGINAL HOLE	Reservoir	Related Project Original Completion (Feb 1 2017 2:30PM)	Perf Inside Of PRODUCTION CASING (Jan 25 2017 7:00PM)			
Comment 19 gram charge.							
Description Gun 4				Perf Type Scalloped			
Perf Top MD 15651.0	Perf Bottom MD 15652.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 9	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Description Gun 3				Perf Type Scalloped			
Perf Top MD 15703.0	Perf Bottom MD 15704.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 10	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Description Gun 2				Perf Type Scalloped			
Perf Top MD	Perf Bottom MD	Perf Top VD	Perf Bottom VD	Shot Count	Shot Size	Shot Density	Phasing

15751.0	15752.0	0.0	0.0	10	0.380	6	60.0
Comment							
Description Gun 1				Perf Type Scalloped			
Perf Top MD 15801.0	Perf Bottom MD 15802.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 11	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Perf Cluster Description Stage 16 15,451 - 15,602		Cluster Type 3 1/8" 4 Cluster Perf Assembly					
Date/Time 02/23/2017 12:00:00	WellBore ORIGINAL HOLE	Reservoir	Related Project Original Completion (Feb 1 2017 2:30PM)	Perf Inside Of PRODUCTION CASING (Jan 25 2017 7:00PM)			
Comment 19 gram charge							
Description Gun 4				Perf Type Scalloped			
Perf Top MD 15451.0	Perf Bottom MD 15452.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 9	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Description Gun 3				Perf Type Scalloped			
Perf Top MD 15501.0	Perf Bottom MD 15502.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 10	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Description Gun 2				Perf Type Scalloped			
Perf Top MD 15551.0	Perf Bottom MD 15552.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 10	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Description Gun 1				Perf Type Scalloped			
Perf Top MD 15601.0	Perf Bottom MD 15602.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 11	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Perf Cluster Description Stage 17 15,251 - 15,402		Cluster Type 3 1/8" 4 Cluster Perf Assembly					
Date/Time 02/23/2017 20:00:00	WellBore ORIGINAL HOLE	Reservoir	Related Project Original Completion (Feb 1 2017 2:30PM)	Perf Inside Of PRODUCTION CASING (Jan 25 2017 7:00PM)			
Comment 19 gram charge							
Description Gun 4				Perf Type Scalloped			
Perf Top MD 15251.0	Perf Bottom MD 15252.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 9	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Description Gun 3				Perf Type Scalloped			
Perf Top MD 15301.0	Perf Bottom MD 15302.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 10	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Description Gun 2				Perf Type Scalloped			
Perf Top MD 15351.0	Perf Bottom MD 15352.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 10	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Description Gun 1				Perf Type Scalloped			
Perf Top MD 15401.0	Perf Bottom MD 15402.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 11	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Perf Cluster Description Stage 18 15,051 - 15,202		Cluster Type 3 1/8" 4 Cluster Perf Assembly					
Date/Time 02/24/2017 00:45:00	WellBore ORIGINAL HOLE	Reservoir	Related Project Original Completion (Feb 1 2017 2:30PM)	Perf Inside Of PRODUCTION CASING (Jan 25 2017 7:00PM)			
Comment							

19 gram charge.

Description Gun 4				Perf Type Scalloped			
Perf Top MD 15051.0	Perf Bottom MD 15052.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 10	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Description Gun 3				Perf Type Scalloped			
Perf Top MD 15101.0	Perf Bottom MD 15102.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 10	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Description Gun 2				Perf Type Scalloped			
Perf Top MD 15151.0	Perf Bottom MD 15152.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 10	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Description Gun 1				Perf Type Scalloped			
Perf Top MD 15201.0	Perf Bottom MD 15202.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 11	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							

Perf Cluster Description Stage 19 14,851 - 15,002			Cluster Type 3 1/8" 4 Cluster Perf Assembly	
Date/Time 02/24/2017 05:30:00	WellBore ORIGINAL HOLE	Reservoir	Related Project Original Completion (Feb 1 2017 2:30PM)	Perf Inside Of PRODUCTION CASING (Jan 25 2017 7:00PM)

Comment
19 gram charge.

Description Gun 4				Perf Type Scalloped			
Perf Top MD 14851.0	Perf Bottom MD 14852.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 9	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Description Gun 3				Perf Type Scalloped			
Perf Top MD 14901.0	Perf Bottom MD 14902.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 10	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Description Gun 2				Perf Type Scalloped			
Perf Top MD 14951.0	Perf Bottom MD 14952.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 10	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Description Gun 1				Perf Type Scalloped			
Perf Top MD 15001.0	Perf Bottom MD 15002.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 11	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							

Perf Cluster Description			Cluster Type	
Stage 20 14,651 - 14,802			3 1/8" 4 Cluster Perf Assembly	
Date/Time 02/24/2017 11:15:00	WellBore ORIGINAL HOLE	Reservoir	Related Project Original Completion (Feb 1 2017 2:30PM)	Perf Inside Of PRODUCTION CASING (Jan 25 2017 7:00PM)

Comment
19 gram charge

Description Gun 4				Perf Type Scalloped			
Perf Top MD 14651.0	Perf Bottom MD 14652.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 9	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Description Gun 3				Perf Type Scalloped			
Perf Top MD 14701.0	Perf Bottom MD 14702.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 10	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Description Gun 2				Perf Type Scalloped			
Perf Top MD 14751.0	Perf Bottom MD 14752.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 10	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							

Description Gun 1				Perf Type Scalloped			
Perf Top MD 14801.0	Perf Bottom MD 14802.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 11	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Perf Cluster Description Stage 21 14,451 - 14,602		Cluster Type 3 1/8" 4 Cluster Perf Assembly					
Date/Time 02/24/2017 17:15:00	WellBore ORIGINAL HOLE	Reservoir	Related Project Original Completion (Feb 1 2017 2:30PM)	Perf Inside Of PRODUCTION CASING (Jan 25 2017 7:00PM)			
Comment 19 gram charge							
Description Gun 4				Perf Type Scalloped			
Perf Top MD 14451.0	Perf Bottom MD 14452.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 9	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Description Gun 3				Perf Type Scalloped			
Perf Top MD 14506.0	Perf Bottom MD 14507.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 10	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Description Gun 2				Perf Type Scalloped			
Perf Top MD 14551.0	Perf Bottom MD 14552.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 10	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Description Gun 1				Perf Type Scalloped			
Perf Top MD 14601.0	Perf Bottom MD 14602.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 11	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Perf Cluster Description Stage 22 14,251 - 14,402		Cluster Type 3 1/8" 4 Cluster Perf Assembly					
Date/Time 02/24/2017 22:00:00	WellBore ORIGINAL HOLE	Reservoir	Related Project Original Completion (Feb 1 2017 2:30PM)	Perf Inside Of PRODUCTION CASING (Jan 25 2017 7:00PM)			
Comment 19 gram charge							
Description Gun 4				Perf Type Scalloped			
Perf Top MD 14251.0	Perf Bottom MD 14252.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 9	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Description Gun 3				Perf Type Scalloped			
Perf Top MD 14296.0	Perf Bottom MD 14297.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 10	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Description Gun 2				Perf Type Scalloped			
Perf Top MD 14351.0	Perf Bottom MD 14352.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 10	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Description Gun 1				Perf Type Scalloped			
Perf Top MD 14401.0	Perf Bottom MD 14402.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 11	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Perf Cluster Description Stage 23 14,051 - 14,202		Cluster Type 3 1/8" 4 Cluster Perf Assembly					
Date/Time 02/25/2017 01:00:00	WellBore ORIGINAL HOLE	Reservoir	Related Project Original Completion (Feb 1 2017 2:30PM)	Perf Inside Of PRODUCTION CASING (Jan 25 2017 7:00PM)			
Comment 19 gram charge.							
Description				Perf Type			

Gun 4				Scalloped			
Perf Top MD 14051.0	Perf Bottom MD 14052.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 9	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Description Gun 3				Perf Type Scalloped			
Perf Top MD 14101.0	Perf Bottom MD 14102.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 10	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Description Gun 2				Perf Type Scalloped			
Perf Top MD 14151.0	Perf Bottom MD 14152.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 10	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Description Gun 1				Perf Type Scalloped			
Perf Top MD 14201.0	Perf Bottom MD 14202.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 11	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Perf Cluster Description Stage 24 13,851 - 14,002		Cluster Type 3 1/8" 4 Cluster Perf Assembly					
Date/Time 02/25/2017 07:45:00	WellBore ORIGINAL HOLE	Reservoir	Related Project Original Completion (Feb 1 2017 2:30PM)	Perf Inside Of PRODUCTION CASING (Jan 25 2017 7:00PM)			
Comment 19 gram charge							
Description Gun 4				Perf Type Scalloped			
Perf Top MD 13851.0	Perf Bottom MD 13852.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 9	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Description Gun 3				Perf Type Scalloped			
Perf Top MD 13901.0	Perf Bottom MD 13902.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 10	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Description Gun 2				Perf Type Scalloped			
Perf Top MD 13951.0	Perf Bottom MD 13952.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 10	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Description Gun 1				Perf Type Scalloped			
Perf Top MD 14001.0	Perf Bottom MD 14002.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 11	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Perf Cluster Description Stage 25 13,659 - 13,802		Cluster Type 3 1/8" 4 Cluster Perf Assembly					
Date/Time 02/25/2017 12:29:00	WellBore ORIGINAL HOLE	Reservoir	Related Project Original Completion (Feb 1 2017 2:30PM)	Perf Inside Of PRODUCTION CASING (Jan 25 2017 7:00PM)			
Comment 19 gram charge							
Description Gun 4				Perf Type Scalloped			
Perf Top MD 13659.0	Perf Bottom MD 13660.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 9	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Description Gun 3				Perf Type Scalloped			
Perf Top MD 13709.0	Perf Bottom MD 13710.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 10	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Description Gun 2				Perf Type Scalloped			
Perf Top MD 13751.0	Perf Bottom MD 13752.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 10	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Description Gun 1				Perf Type Scalloped			

Perf Top MD 13801.0	Perf Bottom MD 13802.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 11	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Perf Cluster Description Stage 26 13,451 - 13,602		Cluster Type 3 1/8" 4 Cluster Perf Assembly					
Date/Time 02/25/2017 19:30:00	WellBore ORIGINAL HOLE	Reservoir	Related Project Original Completion (Feb 1 2017 2:30PM)	Perf Inside Of PRODUCTION CASING (Jan 25 2017 7:00PM)			
Comment							
19 gram charge							
Description Gun 4				Perf Type Scalloped			
Perf Top MD 13451.0	Perf Bottom MD 13452.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 9	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Description Gun 3				Perf Type Scalloped			
Perf Top MD 13501.0	Perf Bottom MD 13502.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 10	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Description Gun 2				Perf Type Scalloped			
Perf Top MD 13551.0	Perf Bottom MD 13552.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 10	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Description Gun 1				Perf Type Scalloped			
Perf Top MD 13601.0	Perf Bottom MD 13602.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 11	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Perf Cluster Description Stage 27 13,251 - 13,402		Cluster Type 3 1/8" 4 Cluster Perf Assembly					
Date/Time 03/07/2017 15:00:00	WellBore ORIGINAL HOLE	Reservoir	Related Project Original Completion (Feb 1 2017 2:30PM)	Perf Inside Of PRODUCTION CASING (Jan 25 2017 7:00PM)			
Comment							
19 gram charge							
Description Gun 4				Perf Type Scalloped			
Perf Top MD 13251.0	Perf Bottom MD 13252.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 9	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Description Gun 3				Perf Type Scalloped			
Perf Top MD 13301.0	Perf Bottom MD 13302.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 10	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Description Gun 2				Perf Type Scalloped			
Perf Top MD 13351.0	Perf Bottom MD 13352.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 10	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Description Gun 1				Perf Type Scalloped			
Perf Top MD 13401.0	Perf Bottom MD 13402.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 11	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Perf Cluster Description Stage 28 13,046 - 13,202		Cluster Type 3 1/8" 4 Cluster Perf Assembly					
Date/Time 03/16/2017 10:00:00	WellBore ORIGINAL HOLE	Reservoir	Related Project Original Completion (Feb 1 2017 2:30PM)	Perf Inside Of PRODUCTION CASING (Jan 25 2017 7:00PM)			
Comment							
19 gram charge							
Description Gun 4				Perf Type Scalloped			
Perf Top MD	Perf Bottom MD	Perf Top VD	Perf Bottom VD	Shot Count	Shot Size	Shot Density	Phasing

13046.0	13047.0	0.0	0.0	9	0.380	6	60.0
Comment							
Description Gun 3				Perf Type Scalloped			
Perf Top MD 13101.0	Perf Bottom MD 13102.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 10	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Description Gun 2				Perf Type Scalloped			
Perf Top MD 13151.0	Perf Bottom MD 13152.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 10	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Description Gun 1				Perf Type Scalloped			
Perf Top MD 13201.0	Perf Bottom MD 13202.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 10	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Perf Cluster Description Stage 29 12,858 - 13,010		Cluster Type 3 1/8" 4 Cluster Perf Assembly					
Date/Time 03/16/2017 21:00:00	WellBore ORIGINAL HOLE	Reservoir	Related Project Original Completion (Feb 1 2017 2:30PM)	Perf Inside Of PRODUCTION CASING (Jan 25 2017 7:00PM)			
Comment 19 gram charge.							
Description Gun 4				Perf Type Scalloped			
Perf Top MD 12858.0	Perf Bottom MD 12859.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 9	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Description Gun 3				Perf Type Scalloped			
Perf Top MD 12905.0	Perf Bottom MD 12906.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 10	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Description Gun 2				Perf Type Scalloped			
Perf Top MD 12959.0	Perf Bottom MD 12960.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 10	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Description Gun 1				Perf Type Scalloped			
Perf Top MD 13009.0	Perf Bottom MD 13010.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 11	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Perf Cluster Description Stage 30 12,651 - 12,802		Cluster Type 3 1/8" 4 Cluster Perf Assembly					
Date/Time 03/17/2017 02:30:00	WellBore ORIGINAL HOLE	Reservoir	Related Project Original Completion (Feb 1 2017 2:30PM)	Perf Inside Of PRODUCTION CASING (Jan 25 2017 7:00PM)			
Comment 19 gram charge							
Description Gun 4				Perf Type Scalloped			
Perf Top MD 12651.0	Perf Bottom MD 12652.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 9	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Description Gun 3				Perf Type Scalloped			
Perf Top MD 12701.0	Perf Bottom MD 12702.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 10	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Description Gun 2				Perf Type Scalloped			
Perf Top MD 12751.0	Perf Bottom MD 12752.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 10	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Description Gun 1				Perf Type Scalloped			
Perf Top MD 12801.0	Perf Bottom MD 12802.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 11	Shot Size 0.380	Shot Density 6	Phasing 60.0

Comment							
Perf Cluster Description		Cluster Type					
Stage 31 12,451 - 12,607		3 1/8" 4 Cluster Perf Assembly					
Date/Time	WellBore	Reservoir	Related Project	Perf Inside Of			
03/17/2017 08:30:00	ORIGINAL HOLE		Original Completion (Feb 1 2017 2:30PM)	PRODUCTION CASING (Jan 25 2017 7:00PM)			
Comment							
19 gram charge							
Description			Perf Type				
Gun 4			Scalloped				
Perf Top MD	Perf Bottom MD	Perf Top VD	Perf Bottom VD	Shot Count	Shot Size	Shot Density	Phasing
12451.0	12452.0	0.0	0.0	9	0.380	6	60.0
Comment							
Description			Perf Type				
Gun 3			Scalloped				
Perf Top MD	Perf Bottom MD	Perf Top VD	Perf Bottom VD	Shot Count	Shot Size	Shot Density	Phasing
12501.0	12502.0	0.0	0.0	10	0.380	6	60.0
Comment							
Description			Perf Type				
Gun 2			Scalloped				
Perf Top MD	Perf Bottom MD	Perf Top VD	Perf Bottom VD	Shot Count	Shot Size	Shot Density	Phasing
12551.0	12552.0	0.0	0.0	10	0.380	6	60.0
Comment							
Description			Perf Type				
Gun 1			Scalloped				
Perf Top MD	Perf Bottom MD	Perf Top VD	Perf Bottom VD	Shot Count	Shot Size	Shot Density	Phasing
12606.0	12607.0	0.0	0.0	11	0.380	6	60.0
Comment							
Perf Cluster Description		Cluster Type					
Stage 32 12,251 - 12,402		3 1/8" 4 Cluster Perf Assembly					
Date/Time	WellBore	Reservoir	Related Project	Perf Inside Of			
03/17/2017 15:45:00	ORIGINAL HOLE		Original Completion (Feb 1 2017 2:30PM)	PRODUCTION CASING (Jan 25 2017 7:00PM)			
Comment							
19 gram charge							
Description			Perf Type				
Gun 4			Scalloped				
Perf Top MD	Perf Bottom MD	Perf Top VD	Perf Bottom VD	Shot Count	Shot Size	Shot Density	Phasing
12251.0	12252.0	0.0	0.0	9	0.380	6	60.0
Comment							
Description			Perf Type				
Gun 3			Scalloped				
Perf Top MD	Perf Bottom MD	Perf Top VD	Perf Bottom VD	Shot Count	Shot Size	Shot Density	Phasing
12301.0	12302.0	0.0	0.0	10	0.380	6	60.0
Comment							
Description			Perf Type				
Gun 2			Scalloped				
Perf Top MD	Perf Bottom MD	Perf Top VD	Perf Bottom VD	Shot Count	Shot Size	Shot Density	Phasing
12351.0	12352.0	0.0	0.0	10	0.380	6	60.0
Comment							
Description			Perf Type				
Gun 1			Scalloped				
Perf Top MD	Perf Bottom MD	Perf Top VD	Perf Bottom VD	Shot Count	Shot Size	Shot Density	Phasing
12401.0	12402.0	0.0	0.0	11	0.380	6	60.0
Comment							
Perf Cluster Description		Cluster Type					
Stage 33 12,051 - 12,202		3 1/8" 4 Cluster Perf Assembly					
Date/Time	WellBore	Reservoir	Related Project	Perf Inside Of			
03/17/2017 21:00:00	ORIGINAL HOLE		Original Completion (Feb 1 2017 2:30PM)	PRODUCTION CASING (Jan 25 2017 7:00PM)			
Comment							
19 gram charge.							
Description			Perf Type				
Gun 4			Scalloped				
Perf Top MD	Perf Bottom MD	Perf Top VD	Perf Bottom VD	Shot Count	Shot Size	Shot Density	Phasing
12051.0	12052.0	0.0	0.0	9	0.380	6	60.0
Comment							

Description Gun 3				Perf Type Scalloped			
Perf Top MD 12101.0	Perf Bottom MD 12102.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 10	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Description Gun 2				Perf Type Scalloped			
Perf Top MD 12145.0	Perf Bottom MD 12146.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 10	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Description Gun 1				Perf Type Scalloped			
Perf Top MD 12201.0	Perf Bottom MD 12202.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 11	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Perf Cluster Description Stage 34 11,851 - 12,002		Cluster Type 3 1/8" 4 Cluster Perf Assembly					
Date/Time 03/18/2017 01:45:00	WellBore ORIGINAL HOLE	Reservoir	Related Project Original Completion (Feb 1 2017 2:30PM)	Perf Inside Of PRODUCTION CASING (Jan 25 2017 7:00PM)			
Comment 19 gram charge.							
Description Gun 4				Perf Type Scalloped			
Perf Top MD 11851.0	Perf Bottom MD 11852.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 9	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Description Gun 3				Perf Type Scalloped			
Perf Top MD 11906.0	Perf Bottom MD 11907.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 10	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Description Gun 2				Perf Type Scalloped			
Perf Top MD 11951.0	Perf Bottom MD 11952.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 10	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Description Gun 1				Perf Type Scalloped			
Perf Top MD 12001.0	Perf Bottom MD 12002.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 11	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Perf Cluster Description Stage 35 11,659 - 11,802		Cluster Type 3 1/8" 4 Cluster Perf Assembly					
Date/Time 03/18/2017 06:00:00	WellBore ORIGINAL HOLE	Reservoir	Related Project Original Completion (Feb 1 2017 2:30PM)	Perf Inside Of PRODUCTION CASING (Jan 25 2017 7:00PM)			
Comment 19 gram charge.							
Description Gun 4				Perf Type Scalloped			
Perf Top MD 11659.0	Perf Bottom MD 11660.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 9	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Description Gun 3				Perf Type Scalloped			
Perf Top MD 11701.0	Perf Bottom MD 11702.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 10	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Description Gun 2				Perf Type Scalloped			
Perf Top MD 11759.0	Perf Bottom MD 11760.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 10	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							
Description Gun 1				Perf Type Scalloped			
Perf Top MD 11801.0	Perf Bottom MD 11802.0	Perf Top VD 0.0	Perf Bottom VD 0.0	Shot Count 11	Shot Size 0.380	Shot Density 6	Phasing 60.0
Comment							