



Lease Review All - Frac Summary

Well Name: RAZOR 33M-2801

API Number 051233925600		WPC ID 1CO0761111		Well Permit Number		Field Name DJ Horizontal Niobrara		County Weld		State CO										
Well Configuration Type Lateral/Horizontal		Orig KB Elv (ft) 4,747.50		Ground Elevation (ft) 4,729.00		Casing Flange Elevation (ft)		Tubing Head Elevation (ft)		Total Depth (ftKB) 13,182.0										
Original Spud Date 1/10/2015		Completion Date 2/25/2015		Asset Group Redtail		Responsible Engineer Charles Ohlson		N/S Dist (ft) 565.0		N/S Ref FSL	E/W Dist (ft) 711.0	E/W Ref FWL								
Lot		Quarter 1 SW	Quarter 2 SW	Quarter 3	Quarter 4	Section 33	Section Suffix	Section Type	Township 10 N	Township N/S Dir	Range 58 W	Range E/W Dir	Meridian							
Lateral/Horizontal - Original Hole, 6/16/2015 3:32:11 PM						Wellbore Sections														
MD (ftKB)	D (ft K B)	n (in)	c (in)	l (in)	Vertical schematic (actual)	Logs	Wellbore Name						Start Date	Size (in)	Act Top (ftKB)	Act Btm (ftKB)				
							Original Hole						12/11/2014	24	18.5	108.5				
							Original Hole						1/10/2015	13 1/2	108.5	1,600.0				
							Original Hole						1/11/2015	8 3/4	1,600.0	6,195.0				
							Original Hole						1/15/2015	6	6,195.0	13,182.0				
							Conductor Pipe, 108.5ftKB													
							OD (in)		Wt (lb/ft)		Grade		Top (ftKB)		Btm (ftKB)		Len (ft)		Item Des	
							16		42.09		J-55		18.5		108.5		90.00		Casing joints	
							Surface Csg, 1,583.7ftKB													
							OD (in)		Wt (lb/ft)		Grade		Top (ftKB)		Btm (ftKB)		Len (ft)		Item Des	
							9 5/8		36.00		J-55		18.5		18.5		0.00		Landing joint	
							9 5/8		36.00		J-55		18.5		23.5		5.00		Pup joint, wellhead	
							9 5/8		36.00		J-55		23.5		1,540.1		1,516.63		Casing Joints	
							9 5/8		36.00		J-55		1,540.1		1,541.1		1.00		Float Collar	
							9 5/8		36.00		J-55		1,541.1		1,582.2		41.07		Casing Joints	
							9 5/8		36.00		J-55		1,582.2		1,583.7		1.50		Guide Shoe	
							Frac String, 5,016.8ftKB													
							OD (in)		Wt (lb/ft)		Grade		Top (ftKB)		Btm (ftKB)		Len (ft)		Item Des	
							7						12.0		14.1		2.10		Casing Hanger	
							4 1/2		11.60		P-110		14.1		57.4		43.29		Casing Joints	
4 1/2		11.60		P-110		57.4		66.9		9.48		Pup Joint 3.24ft, 6.24ft								
4 1/2		11.60		P-110		66.9		5,001.8		4,934.93		Casing Joints								
4 1/2						5,001.8		5,005.9		4.14		Handling Pup								
4 1/2						5,005.9		5,016.8		10.90		Seal Assembly								
Intermediate Csg, 6,174.8ftKB																				
OD (in)		Wt (lb/ft)		Grade		Top (ftKB)		Btm (ftKB)		Len (ft)		Item Des								
7		29.00		P-110		18.5		18.5		0.00		Landing joint								
7		29.00		P-110		18.5		23.5		5.00		Casing hangert								
7		29.00		P-110		23.5		25.5		2.00		Pup joint								
7		29.00		P-110		25.5		6,131.0		6,105.49		Casing Joints								
7		29.00		P-110		6,131.0		6,132.5		1.50		Float collar								
7		29.00		P-110		6,132.5		6,173.3		40.81		Casing Joints								
7		29.00		P-110		6,173.3		6,174.8		1.50		Guide shoe								
Liner, 13,174.0ftKB																				
OD (in)		Wt (lb/ft)		Grade		Top (ftKB)		Btm (ftKB)		Len (ft)		Item Des								
5 1/4		11.60		P-110		5,011.9		5,032.7		20.78		Packer assembly								
5 1/4		11.60		P-110		5,032.7		5,033.6		0.87		Collar								
5 1/4		11.60		P-110		5,033.6		5,040.1		6.47		Schlumberger Collosus hanger.								
4 1/2		11.60		P-110		5,040.1		5,041.8		1.70		Cross over								
4 1/2		11.60		P-110		5,041.8		13,125.7		8,083.94		Casing Joints								
4 1/2		11.60		P-110		13,125.7		13,127.2		1.50		Ball catch landing collar								
4 1/2		11.60		P-110		13,127.2		13,128.8		1.61		Float Collar								
4 1/2		11.60		P-110		13,128.8		13,172.3		43.50		Casing Joints								
4 1/2		11.60		P-110		13,172.3		13,174.0		1.69		Guide shoe (wet)								
Cement Stages																				
Des		Pump Start Date		Drill Out Date		Top (ftKB)		Btm (ftKB)		Top Meas Meth										
Conductor Cement		12/11/2014				18.5		108.5		Returns to Surface										
Surface Casing Cement		1/10/2015				18.5		1,583.7		Returns to Surface										
Intermediate Casing Cement		1/15/2015				18.5		6,174.8		Returns to Surface										
Liner Cement		1/18/2015				5,011.9		13,174.0		Volume Calculations										
Perforations																				
Type of Hole		Date		Top (ftKB)		Btm (ftKB)		Zone												
Perforated Liner		2/26/2015		6,197.0		6,199.0		Niobrara, Original Hole												
Perforated Liner		2/26/2015		6,263.0		6,265.0		Niobrara, Original Hole												
Perforated Liner		2/26/2015		6,330.0		6,332.0		Niobrara, Original Hole												
Perforated Liner		2/25/2015		6,396.0		6,398.0		Niobrara, Original Hole												
Perforated Liner		2/25/2015		6,462.0		6,464.0		Niobrara, Original Hole												
Perforated Liner		2/25/2015		6,529.0		6,531.0		Niobrara, Original Hole												
Perforated Liner		2/25/2015		6,595.0		6,597.0		Niobrara, Original Hole												
Perforated Liner		2/25/2015		6,661.0		6,663.0		Niobrara, Original Hole												
Perforated Liner		2/25/2015		6,728.0		6,730.0		Niobrara, Original Hole												
Perforated Liner		2/25/2015		6,794.0		6,796.0		Niobrara, Original Hole												
Perforated Liner		2/25/2015		6,861.0		6,863.0		Niobrara, Original Hole												
Perforated Liner		2/25/2015		6,927.0		6,929.0		Niobrara, Original Hole												
Perforated Liner		2/25/2015		6,993.0		6,995.0		Niobrara, Original Hole												
Perforated Liner		2/25/2015		7,060.0		7,062.0		Niobrara, Original Hole												
Perforated Liner		2/25/2015		7,126.0		7,128.0		Niobrara, Original Hole												
Perforated Liner		2/25/2015		7,192.0		7,194.0		Niobrara, Original Hole												
Perforated Liner		2/25/2015		7,259.0		7,261.0		Niobrara, Original Hole												



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Original Spud Date 1/10/2015		Completion Date 2/25/2015		Asset Group Redtail				Responsible Engineer Charles Ohlson			N/S Dist (ft) 565.0		N/S Ref FSL		E/W Dist (ft) 711.0		E/W Ref FWL	
Lot		Quarter 1 SW	Quarter 2 SW	Quarter 3	Quarter 4	Section 33	Section Suffix	Section Type		Township 10 N		Township N/S Dir		Range 58	Range E/W Dir W		Meridian	

Lateral/Horizontal - Original Hole, 6/16/2015 3:32:13 PM				Perforations							
MD (ftKB)	D (ft K B)	n (C B)	Vertical schematic (actual)	Logs	Type of Hole	Date	Top (ftKB)	Btm (ftKB)	Zone		
49.9	1.541.0	1.541.0			Perforated Liner	2/25/2015	7,325.0	7,327.0	Niobrara, Original Hole		
					Perforated Liner	2/25/2015	7,391.0	7,393.0	Niobrara, Original Hole		
					Perforated Liner	2/25/2015	7,458.0	7,460.0	Niobrara, Original Hole		
					Perforated Liner	2/25/2015	7,524.0	7,526.0	Niobrara, Original Hole		
1,541.0	1.759.5	1.759.5			Perforated Liner	2/24/2015	7,590.0	7,592.0	Niobrara, Original Hole		
					Perforated Liner	2/24/2015	7,652.0	7,654.0	Niobrara, Original Hole		
					Perforated Liner	2/24/2015	7,723.0	7,725.0	Niobrara, Original Hole		
					Perforated Liner	2/24/2015	7,790.0	7,792.0	Niobrara, Original Hole		
1,759.5	3.500.0	3.500.0			Perforated Liner	2/24/2015	7,856.0	7,858.0	Niobrara, Original Hole		
					Perforated Liner	2/24/2015	7,922.0	7,924.0	Niobrara, Original Hole		
					Perforated Liner	2/24/2015	7,989.0	7,991.0	Niobrara, Original Hole		
					Perforated Liner	2/24/2015	8,052.0	8,054.0	Niobrara, Original Hole		
3,500.0	5,011.8	5,011.8			Perforated Liner	2/24/2015	8,121.0	8,123.0	Niobrara, Original Hole		
					Perforated Liner	2/24/2015	8,188.0	8,190.0	Niobrara, Original Hole		
					Perforated Liner	2/24/2015	8,254.0	8,256.0	Niobrara, Original Hole		
					Perforated Liner	2/24/2015	8,320.0	8,322.0	Niobrara, Original Hole		
5,011.8	5,047.9	5,047.9			Perforated Liner	2/24/2015	8,384.0	8,386.0	Niobrara, Original Hole		
					Perforated Liner	2/24/2015	8,453.0	8,455.0	Niobrara, Original Hole		
					Perforated Liner	2/24/2015	8,519.0	8,521.0	Niobrara, Original Hole		
					Perforated Liner	2/24/2015	8,586.0	8,588.0	Niobrara, Original Hole		
5,047.9	5,628.0	5,628.0			Perforated Liner	2/24/2015	8,652.0	8,654.0	Niobrara, Original Hole		
					Perforated Liner	2/24/2015	8,719.0	8,721.0	Niobrara, Original Hole		
					Perforated Liner	2/23/2015	8,785.0	8,787.0	Niobrara, Original Hole		
					Perforated Liner	2/23/2015	8,856.0	8,858.0	Niobrara, Original Hole		
5,628.0	5,656.2	5,656.2			Perforated Liner	2/23/2015	8,918.0	8,920.0	Niobrara, Original Hole		
					Perforated Liner	2/23/2015	8,984.0	8,986.0	Niobrara, Original Hole		
					Perforated Liner	2/23/2015	9,050.0	9,052.0	Niobrara, Original Hole		
					Perforated Liner	2/23/2015	9,117.0	9,119.0	Niobrara, Original Hole		
5,656.2	6,174.9	6,174.9			Perforated Liner	2/23/2015	9,183.0	9,185.0	Niobrara, Original Hole		
					Perforated Liner	2/23/2015	9,249.0	9,251.0	Niobrara, Original Hole		
					Perforated Liner	2/23/2015	9,316.0	9,318.0	Niobrara, Original Hole		
					Perforated Liner	2/20/2015	9,384.0	9,386.0	Niobrara, Original Hole		
6,174.9	6,265.1	6,265.1			Perforated Liner	2/20/2015	9,448.0	9,450.0	Niobrara, Original Hole		
					Perforated Liner	2/20/2015	9,515.0	9,517.0	Niobrara, Original Hole		
					Perforated Liner	2/20/2015	9,581.0	9,583.0	Niobrara, Original Hole		
					Perforated Liner	2/20/2015	9,647.0	9,649.0	Niobrara, Original Hole		
6,265.1	6,461.9	6,461.9			Perforated Liner	2/20/2015	9,714.0	9,716.0	Niobrara, Original Hole		
					Perforated Liner	2/20/2015	9,780.0	9,782.0	Niobrara, Original Hole		
					Perforated Liner	2/20/2015	9,847.0	9,849.0	Niobrara, Original Hole		
					Perforated Liner	2/20/2015	9,913.0	9,915.0	Niobrara, Original Hole		
6,461.9	6,597.1	6,597.1			Perforated Liner	2/19/2015	9,979.0	9,981.0	Niobrara, Original Hole		
					Perforated Liner	2/19/2015	10,042.0	10,044.0	Niobrara, Original Hole		
					Perforated Liner	2/19/2015	10,112.0	10,114.0	Niobrara, Original Hole		
					Perforated Liner	2/19/2015	10,178.0	10,180.0	Niobrara, Original Hole		
6,597.1	6,794.0	6,794.0			Perforated Liner	2/19/2015	10,245.0	10,247.0	Niobrara, Original Hole		
					Perforated Liner	2/19/2015	10,311.0	10,313.0	Niobrara, Original Hole		
					Perforated Liner	2/19/2015	10,377.0	10,379.0	Niobrara, Original Hole		
					Perforated Liner	2/19/2015	10,444.0	10,446.0	Niobrara, Original Hole		
6,794.0	6,929.1	6,929.1			Perforated Liner	2/19/2015	10,510.0	10,512.0	Niobrara, Original Hole		
					Perforated Liner	2/19/2015	10,576.0	10,578.0	Niobrara, Original Hole		
					Perforated Liner	2/19/2015	10,643.0	10,645.0	Niobrara, Original Hole		
					Perforated Liner	2/19/2015	10,709.0	10,711.0	Niobrara, Original Hole		
6,929.1	7,126.0	7,126.0			Perforated Liner	2/19/2015	10,776.0	10,778.0	Niobrara, Original Hole		
					Perforated Liner	2/19/2015	10,842.0	10,844.0	Niobrara, Original Hole		
					Perforated Liner	2/19/2015	10,908.0	10,910.0	Niobrara, Original Hole		
					Perforated Liner	2/18/2015	10,975.0	10,977.0	Niobrara, Original Hole		
7,126.0	7,261.2	7,261.2			Perforated Liner	2/18/2015	11,041.0	11,043.0	Niobrara, Original Hole		
					Perforated Liner	2/18/2015	11,107.0	11,109.0	Niobrara, Original Hole		
					Perforated Liner	2/18/2015	11,176.0	11,178.0	Niobrara, Original Hole		
					Perforated Liner	2/18/2015	11,240.0	11,242.0	Niobrara, Original Hole		
7,261.2	7,458.0	7,458.0			Perforated Liner	2/18/2015	11,306.0	11,308.0	Niobrara, Original Hole		
					Perforated Liner	2/18/2015	11,373.0	11,375.0	Niobrara, Original Hole		
					Perforated Liner	2/18/2015	11,439.0	11,441.0	Niobrara, Original Hole		
					Perforated Liner	2/18/2015	11,502.0	11,504.0	Niobrara, Original Hole		
7,458.0	7,591.9	7,591.9			Perforated Liner	2/18/2015	11,572.0	11,574.0	Niobrara, Original Hole		
					Perforated Liner	2/18/2015	11,638.0	11,640.0	Niobrara, Original Hole		
					Perforated Liner	2/18/2015	11,705.0	11,707.0	Niobrara, Original Hole		
					Perforated Liner	2/18/2015	11,771.0	11,773.0	Niobrara, Original Hole		
7,591.9	7,790.0	7,790.0			Perforated Liner	2/18/2015	11,840.0	11,842.0	Niobrara, Original Hole		
					Perforated Liner	2/18/2015	11,904.0	11,906.0	Niobrara, Original Hole		
7,790.0	7,923.9	7,923.9									
7,923.9	8,121.1	8,121.1									
8,121.1	8,255.9	8,255.9									
8,255.9	8,453.1	8,453.1									
8,453.1	8,587.9	8,587.9									
8,587.9	8,785.1	8,785.1									
8,785.1	8,919.9	8,919.9									
8,919.9	9,117.1	9,117.1									
9,117.1	9,251.0	9,251.0									



Lateral/Horizontal - Original Hole - 6/16/2015 3:32:16 PM

MD (ftKB)	D (ft K B)	n (K B)	c (K B)	l (K B)	Vertical schematic (actual)	Logs
49.9	88.9	10				
1,541.0	1,541.0	10				
1,759.5	1,759.5	10				
3,500.0	3,500.0	10				
5,011.8	5,011.8	10				
5,047.9	5,047.9	10				
5,628.0	5,628.0	10				
5,656.2	5,656.2	10				
6,174.9	6,174.9	10				
6,265.1	6,265.1	10				
6,461.9	6,461.9	10				
6,597.1	6,597.1	10				
6,794.0	6,794.0	10				
6,929.1	6,929.1	10				
7,126.0	7,126.0	10				
7,261.2	7,261.2	10				
7,458.0	7,458.0	10				
7,591.9	7,591.9	10				
7,790.0	7,790.0	10				
7,923.9	7,923.9	10				
8,121.1	8,121.1	10				
8,255.9	8,255.9	10				
8,453.1	8,453.1	10				
8,587.9	8,587.9	10				
8,785.1	8,785.1	10				
8,919.9	8,919.9	10				
9,117.1	9,117.1	10				
9,251.0	9,251.0	10				
9,448.2	9,448.2	10				
9,583.0	9,583.0	10				
9,779.9	9,779.9	10				
9,915.0	9,915.0	10				
10,111.9	10,111.9	10				
10,247.0	10,247.0	10				
10,443.9	10,443.9	10				
10,578.1	10,578.1	10				
10,775.9	10,775.9	10				
10,910.1	10,910.1	10				
11,107.0	11,107.0	10				
11,242.1	11,242.1	10				
11,439.0	11,439.0	10				
11,574.1	11,574.1	10				
11,771.0	11,771.0	10				
11,905.8	11,905.8	10				
12,103.0	12,103.0	10				
12,235.9	12,235.9	10				
12,434.1	12,434.1	10				
12,568.9	12,568.9	10				
12,766.1	12,766.1	10				
12,898.0	12,898.0	10				
13,089.9	13,089.9	10				
13,172.2	13,172.2	10				

Type of Hole	Date	Top (ftKB)	Btm (ftKB)	Zone				
Perforated Liner	2/18/2015	11,970.0	11,972.0	Niobrara, Original Hole				
Perforated Liner	2/18/2015	12,036.0	12,038.0	Niobrara, Original Hole				
Perforated Liner	2/18/2015	12,103.0	12,105.0	Niobrara, Original Hole				
Perforated Liner	2/17/2015	12,169.0	12,171.0	Niobrara, Original Hole				
Perforated Liner	2/17/2015	12,234.0	12,236.0	Niobrara, Original Hole				
Perforated Liner	2/17/2015	12,302.0	12,304.0	Niobrara, Original Hole				
Perforated Liner	2/17/2015	12,368.0	12,370.0	Niobrara, Original Hole				
Perforated Liner	2/17/2015	12,434.0	12,436.0	Niobrara, Original Hole				
Perforated Liner	2/17/2015	12,534.0	12,536.0	Niobrara, Original Hole				
Perforated Liner	2/17/2015	12,567.0	12,569.0	Niobrara, Original Hole				
Perforated Liner	2/17/2015	12,634.0	12,636.0	Niobrara, Original Hole				
Perforated Liner	2/17/2015	12,700.0	12,702.0	Niobrara, Original Hole				
Perforated Liner	2/16/2015	12,766.0	12,768.0	Niobrara, Original Hole				
Perforated Liner	2/16/2015	12,833.0	12,835.0	Niobrara, Original Hole				
Perforated Liner	2/16/2015	12,896.0	12,898.0	Niobrara, Original Hole				
Perforated Liner	2/16/2015	13,011.0	13,013.0	Niobrara, Original Hole				
Perforated Liner	2/16/2015	13,078.0	13,080.0	Niobrara, Original Hole				
Perforated Liner	2/16/2015	13,090.0	13,092.0	Niobrara, Original Hole				
Stimulations & Treatments								
Sand Frac on 2/16/2015 06:00								
Comment								
Treatment End Date:2/25/2015; Number of staged intervals: 35; Min frac gradient: 0.769 psi/ft; Number of perfs: 1260; XL Gel: 61862 bbl; Linear Gel: 13163 bbl; 15% HCL: 768 bbl; Slickwater: 31932 bbl; Freshwater: 910 bbl								
Total Clean Volu...	Vol Slurry Tot (bbl)	Proppant Desig...	Proppant Frm (lb)	P Max (psi)	Avg Treat...	Avg Treat...	Max Tre...	Frac Gr...
108634.00	113411.10	4,985,300.0	4,477,303.0	9,768.0	4,717.0	54.10	63.60	0.78
Total Add Amount								
Proppant Ottawa 20/40 4362607 lb; Proppant Ottawa 40/70 114696 lb								
Stim/Treat Fluids								
Fluid Name								
Trident XL Gel; CMHPG Linear Gel; 15% HCL								
Stim/Treat Stages								
Interval 1								
Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment		
1	2/16/2015	13,011.0	13,092.0	4090.00	4314.00	XL Gel:1392 bbl;Linear Gel:397 bbl; 15% HCL:12 bbl; Slickwater:2279bbl;Freshwater:10bbl		
Stim/Treat Additives								
Stg #	Add	Type	Amount	Units	Sand Size			
1	Proppant	Ottawa 20/40	85,993.0	lb	20/40			
1	Proppant	Ottawa 40/70	3,020.0	lb	40/70			
Interval 2								
Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment		
2	2/17/2015	12,766.0	12,898.0	2789.90	2920.00	XL Gel:1463 bbl;Linear Gel:309 bbl; 15% HCL:18 bbl; Slickwater:990bbl;Freshwater:10bbl		
Stim/Treat Additives								
Stg #	Add	Type	Amount	Units	Sand Size			
2	Proppant	Ottawa 20/40	71,761.0	lb	20/40			
2	Proppant	Ottawa 40/70	3,000.0	lb	40/70			
Interval 3								
Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment		
3	2/17/2015	12,567.0	12,702.0	2860.20	2988.30	XL Gel:1502 bbl;Linear Gel:314 bbl; 15% HCL:12 bbl; Slickwater:1023bbl;Freshwater:10bbl		
Stim/Treat Additives								
Stg #	Add	Type	Amount	Units	Sand Size			
3	Proppant	Ottawa 20/40	90,024.0	lb	20/40			
3	Proppant	Ottawa 40/70	3,167.0	lb	40/70			
Interval 4								
Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment		
4	2/17/2015	12,368.0	12,536.0	3057.50	3159.50	XL Gel:1568 bbl;Linear Gel:312 bbl; 15% HCL:12 bbl; Slickwater:1146bbl;Freshwater:20bbl		
Stim/Treat Additives								
Stg #	Add	Type	Amount	Units	Sand Size			
4	Proppant	Ottawa 20/40	97,710.0	lb	20/40			
4	Proppant	Ottawa 40/70	3,319.0	lb	40/70			
Interval 5								
Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment		
5	2/17/2015	12,169.0	12,304.0	3139.80	3270.10	XL Gel:1792 bbl;Linear Gel:272 bbl; 15% HCL:12 bbl; Slickwater:1054bbl;Freshwater:10bbl		
Stim/Treat Additives								
Stg #	Add	Type	Amount	Units	Sand Size			
5	Proppant	Ottawa 20/40	124,877.0	lb	20/40			
5	Proppant	Ottawa 40/70	3,328.0	lb	40/70			



Lease Review All - Frac Summary

Well Name: RAZOR 33M-2801

API Number 051233925600		WPC ID 1CO0761111		Well Permit Number		Field Name DJ Horizontal Niobrara		County Weld		State CO								
Well Configuration Type Lateral/Horizontal				Orig KB Elv (ft) 4,747.50		Ground Elevation (ft) 4,729.00		Casing Flange Elevation (ft)		Tubing Head Elevation (ft)		Total Depth (ftKB) 13,182.0						
Original Spud Date 1/10/2015		Completion Date 2/25/2015		Asset Group Redtail		Responsible Engineer Charles Ohlson			N/S Dist (ft) 565.0		N/S Ref FSL		E/W Dist (ft) 711.0		E/W Ref FWL			
Lot		Quarter 1 SW	Quarter 2 SW	Quarter 3	Quarter 4	Section 33		Section Suffix	Section Type		Township 10 N		Township N/S Dir N		Range 58 W		Range E/W Dir Meridian	
Lateral/Horizontal - Original Hole, 6/16/2015 3:32:18 PM						Stim/Treat Stages												
<div>MD (ftKB) 49.9 1,541.0 1,759.5 3,500.0 5,011.8 5,047.9 5,628.0 5,656.2 6,174.9 6,265.1 6,461.9 6,597.1 6,794.0 6,929.1 7,126.0 7,261.2 7,458.0 7,591.9 7,790.0 7,923.9 8,121.1 8,255.9 8,453.1 8,587.9 8,785.1 8,919.9 9,117.1 9,251.0 9,448.2 9,583.0 9,779.9 9,915.0 10,111.9 10,247.0 10,443.9 10,578.1 10,775.9 10,910.1 11,107.0 11,242.1 11,439.0 11,574.1 11,771.0 11,905.8 12,103.0 12,235.9 12,434.1 12,568.9 12,766.1 12,898.0 13,089.9 13,172.2</div>	<div>D (ftKB) 49.9 1,541.0 1,759.5 3,500.0 5,011.8 5,047.9 5,628.0 5,656.2 6,174.9 6,265.1 6,461.9 6,597.1 6,794.0 6,929.1 7,126.0 7,261.2 7,458.0 7,591.9 7,790.0 7,923.9 8,121.1 8,255.9 8,453.1 8,587.9 8,785.1 8,919.9 9,117.1 9,251.0 9,448.2 9,583.0 9,779.9 9,915.0 10,111.9 10,247.0 10,443.9 10,578.1 10,775.9 10,910.1 11,107.0 11,242.1 11,439.0 11,574.1 11,771.0 11,905.8 12,103.0 12,235.9 12,434.1 12,568.9 12,766.1 12,898.0 13,089.9 13,172.2</div>	<div>Vertical schematic (actual)</div>	Logs	Interval 6														
				Stg # 6	Start Date 2/17/2015	Top (ftKB) 11,970.0	Btm (ftKB) 12,105.0	Vol Clean... 3217.40	Vol Slurry... 3360.90	Comment XL Gel:1901 bbl;Linear Gel:290 bbl; 15% HCL:12 bbl; Slickwater:1005bbl;Freshwater:10bbl								
				Stim/Treat Additives														
				Stg #	Add	Type		Amount	Units	Sand Size								
				6	Proppant	Ottawa 20/40		141,791.0	lb	20/40								
				6	Proppant	Ottawa 40/70		3,290.0	lb	40/70								
				Interval 7														
				Stg # 7	Start Date 2/18/2015	Top (ftKB) 11,771.0	Btm (ftKB) 11,906.0	Vol Clean... 2947.70	Vol Slurry... 3056.70	Comment XL Gel:1626 bbl;Linear Gel:299 bbl; 15% HCL:24 bbl; Slickwater:963bbl;Freshwater:36bbl								
				Stim/Treat Additives														
				Stg #	Add	Type		Amount	Units	Sand Size								
				7	Proppant	Ottawa 20/40		110,125.0	lb	20/40								
				7	Proppant	Ottawa 40/70		3,432.0	lb	40/70								
				Interval 8														
				Stg # 8	Start Date 2/18/2015	Top (ftKB) 11,572.0	Btm (ftKB) 11,707.0	Vol Clean... 2981.70	Vol Slurry... 3098.30	Comment XL Gel:1669 bbl;Linear Gel:297 bbl; 15% HCL:24 bbl; Slickwater:957bbl;Freshwater:36bbl								
				Stim/Treat Additives														
				Stg #	Add	Type		Amount	Units	Sand Size								
				8	Proppant	Ottawa 20/40		113,732.0	lb	20/40								
				8	Proppant	Ottawa 40/70		3,249.0	lb	40/70								
				Interval 9														
				Stg # 9	Start Date 2/18/2015	Top (ftKB) 11,373.0	Btm (ftKB) 11,504.0	Vol Clean... 3390.90	Vol Slurry... 3525.10	Comment XL Gel:2188 bbl;Linear Gel:206 bbl; 15% HCL:24 bbl; Slickwater:923bbl;Freshwater:50bbl								
				Stim/Treat Additives														
				Stg #	Add	Type		Amount	Units	Sand Size								
				9	Proppant	Ottawa 20/40		141,853.0	lb	20/40								
				9	Proppant	Ottawa 40/70		3,246.0	lb	40/70								
				Interval 10														
				Stg # 10	Start Date 2/18/2015	Top (ftKB) 11,176.0	Btm (ftKB) 11,308.0	Vol Clean... 3387.80	Vol Slurry... 3529.30	Comment XL Gel:1912 bbl;Linear Gel:393 bbl; 15% HCL:24 bbl; Slickwater:1039bbl;Freshwater:20bbl								
				Stim/Treat Additives														
				Stg #	Add	Type		Amount	Units	Sand Size								
				10	Proppant	Ottawa 20/40		137,946.0	lb	20/40								
				10	Proppant	Ottawa 40/70		3,416.0	lb	40/70								
				Interval 11														
				Stg # 11	Start Date 2/18/2015	Top (ftKB) 10,975.0	Btm (ftKB) 11,109.0	Vol Clean... 3303.90	Vol Slurry... 3442.60	Comment XL Gel:1911 bbl;Linear Gel:393 bbl; 15% HCL:24 bbl; Slickwater:956bbl;Freshwater:20bbl								
				Stim/Treat Additives														
				Stg #	Add	Type		Amount	Units	Sand Size								
				11	Proppant	Ottawa 20/40		142,278.0	lb	20/40								
				11	Proppant	Ottawa 40/70		3,405.0	lb	40/70								
				Interval 12														
				Stg # 12	Start Date 2/19/2015	Top (ftKB) 10,776.0	Btm (ftKB) 10,910.0	Vol Clean... 3380.30	Vol Slurry... 3511.60	Comment XL Gel:1912 bbl;Linear Gel:387 bbl; 15% HCL:24 bbl; Slickwater:1032bbl;Freshwater:25bbl								
				Stim/Treat Additives														
				Stg #	Add	Type		Amount	Units	Sand Size								
				12	Proppant	Ottawa 20/40		141,901.0	lb	20/40								
				12	Proppant	Ottawa 40/70		3,250.0	lb	40/70								
				Interval 13														
				Stg # 13	Start Date 2/19/2015	Top (ftKB) 10,576.0	Btm (ftKB) 10,711.0	Vol Clean... 3265.20	Vol Slurry... 3457.00	Comment XL Gel:1882 bbl;Linear Gel:389 bbl; 15% HCL:24 bbl; Slickwater:936bbl;Freshwater:34bbl								
				Stim/Treat Additives														
				Stg #	Add	Type		Amount	Units	Sand Size								
				13	Proppant	Ottawa 20/40		140,404.0	lb	20/40								
				13	Proppant	Ottawa 40/70		3,532.0	lb	40/70								
				Interval 14														
				Stg # 14	Start Date 2/19/2015	Top (ftKB) 10,377.0	Btm (ftKB) 10,512.0	Vol Clean... 3268.00	Vol Slurry... 3524.20	Comment XL Gel:1907 bbl;Linear Gel:345 bbl; 15% HCL:24 bbl; Slickwater:965bbl;Freshwater:28bbl								
				Stim/Treat Additives														
				Stg #	Add	Type		Amount	Units	Sand Size								
				14	Proppant	Ottawa 20/40		140,760.0	lb	20/40								
				14	Proppant	Ottawa 40/70		3,234.0	lb	40/70								



Lease Review All - Frac Summary

Well Name: RAZOR 33M-2801

API Number 051233925600		WPC ID 1CO0761111		Well Permit Number		Field Name DJ Horizontal Niobrara			County Weld		State CO		
Well Configuration Type Lateral/Horizontal				Orig KB Elv (ft) 4,747.50		Ground Elevation (ft) 4,729.00		Casing Flange Elevation (ft)		Tubing Head Elevation (ft)		Total Depth (ftKB) 13,182.0	
Original Spud Date 1/10/2015		Completion Date 2/25/2015		Asset Group Redtail			Responsible Engineer Charles Ohlson			N/S Dist (ft) 565.0		N/S Ref FSL	
										E/W Dist (ft) 711.0		E/W Ref FWL	
Lot		Quarter 1 SW	Quarter 2 SW	Quarter 3	Quarter 4	Section 33	Section Suffix	Section Type	Township 10	Township N/S Dir N	Range 58	Range E/W Dir W	Meridian

Lateral/Horizontal - Original Hole, 6/16/2015 3:32:20 PM					Stim/Treat Stages							
MD (ftKB)	D (ft K B)	n (K B)	c (K B)	Vertical schematic (actual)	Logs	Interval 15						
						Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment
49.9	49.9	49.9	49.9			15	2/19/2015	10,178.0	10,313.0	3284.00	3438.80	XL Gel:1904 bbl;Linear Gel:400 bbl; 15% HCL:24 bbl; Slickwater:929bbl;Freshwater:28bbl
Stim/Treat Additives												
Stg #		Add				Type		Amount	Units	Sand Size		
15		Proppant				Ottawa 20/40		141,728.0	lb	20/40		
15		Proppant				Ottawa 40/70		3,333.0	lb	40/70		
Interval 16												
1,541.0	1,541.0	1,541.0	1,541.0			16	2/19/2015	9,979.0	10,114.0	3251.60	3405.00	XL Gel:1905 bbl;Linear Gel:401 bbl; 15% HCL:24 bbl; Slickwater:897bbl;Freshwater:25bbl
Stim/Treat Additives												
Stg #		Add				Type		Amount	Units	Sand Size		
16		Proppant				Ottawa 20/40		139,120.0	lb	20/40		
16		Proppant				Ottawa 40/70		3,743.0	lb	40/70		
Interval 17												
1,759.5	1,759.5	1,759.5	1,759.5			17	2/19/2015	9,780.0	9,915.0	3260.10	3395.00	XL Gel:1908 bbl;Linear Gel:413 bbl; 15% HCL:24 bbl; Slickwater:890bbl;Freshwater:25bbl
Stim/Treat Additives												
Stg #		Add				Type		Amount	Units	Sand Size		
17		Proppant				Ottawa 20/40		141,970.0	lb	20/40		
17		Proppant				Ottawa 40/70		3,347.0	lb	40/70		
Interval 18												
3,500.0	3,500.0	3,500.0	3,500.0			18	2/20/2015	9,581.0	9,716.0	3299.70	3421.00	XL Gel:1861 bbl;Linear Gel:435 bbl; 15% HCL:24 bbl; Slickwater:953bbl;Freshwater:27bbl
Stim/Treat Additives												
Stg #		Add				Type		Amount	Units	Sand Size		
18		Proppant				Ottawa 20/40		138,184.0	lb	20/40		
18		Proppant				Ottawa 40/70		3,057.0	lb	40/70		
Interval 19												
5,011.8	5,011.8	5,011.8	5,011.8			19	2/20/2015	9,384.0	9,517.0	3285.00	3428.00	XL Gel:1961 bbl;Linear Gel:412 bbl; 15% HCL:24 bbl; Slickwater:869bbl;Freshwater:20bbl
Stim/Treat Additives												
Stg #		Add				Type		Amount	Units	Sand Size		
19		Proppant				Ottawa 20/40		141,716.0	lb	20/40		
19		Proppant				Ottawa 40/70		3,229.0	lb	40/70		
Interval 20												
5,047.9	5,047.9	5,047.9	5,047.9			20	2/23/2015	9,183.0	9,318.0	2787.70	2827.20	XL Gel:1573 bbl;Linear Gel:283 bbl; 15% HCL:24 bbl; Slickwater:883bbl;Freshwater:25bbl
Stim/Treat Additives												
Stg #		Add				Type		Amount	Units	Sand Size		
20		Proppant				Ottawa 20/40		59,871.0	lb	20/40		
20		Proppant				Ottawa 40/70		3,256.0	lb	40/70		
Interval 21												
5,628.0	5,628.0	5,628.0	5,628.0			21	2/23/2015	8,984.0	9,119.0	3119.50	3260.00	XL Gel:1911 bbl;Linear Gel:307 bbl; 15% HCL:24 bbl; Slickwater:840bbl;Freshwater:38bbl
Stim/Treat Additives												
Stg #		Add				Type		Amount	Units	Sand Size		
21		Proppant				Ottawa 20/40		141,730.0	lb	20/40		
21		Proppant				Ottawa 40/70		3,218.0	lb	40/70		
Interval 22												
5,656.2	5,656.2	5,656.2	5,656.2			22	2/23/2015	8,785.0	8,920.0	3222.10	3371.40	XL Gel:1916 bbl;Linear Gel:400 bbl; 15% HCL:24 bbl; Slickwater:866bbl;Freshwater:17bbl
Stim/Treat Additives												
Stg #		Add				Type		Amount	Units	Sand Size		
22		Proppant				Ottawa 20/40		141,112.0	lb	20/40		
22		Proppant				Ottawa 40/70		3,366.0	lb	40/70		
Interval 23												
6,174.9	6,174.9	6,174.9	6,174.9			23	2/23/2015	8,586.0	8,721.0	3080.60	3200.40	XL Gel:1806 bbl;Linear Gel:413 bbl; 15% HCL:24 bbl; Slickwater:808bbl;Freshwater:30bbl
Stim/Treat Additives												
Stg #		Add				Type		Amount	Units	Sand Size		
23		Proppant				Ottawa 20/40		118,630.0	lb	20/40		
23		Proppant				Ottawa 40/70		3,255.0	lb	40/70		



Lease Review All - Frac Summary

Well Name: RAZOR 33M-2801

WPI Number 051233925600		WPC ID 1CO0761111		Well Permit Number		Field Name DJ Horizontal Niobrara		County Weld		State CO				
Well Configuration Type Lateral/Horizontal				Orig KB Elv (ft) 4,747.50		Ground Elevation (ft) 4,729.00		Casing Flange Elevation (ft)		Tubing Head Elevation (ft)		Total Depth (ft)KB 13,182.0		
Original Spud Date 1/10/2015		Completion Date 2/25/2015		Asset Group Redtail		Responsible Engineer Charles Ohlson			N/S Dist (ft) 565.0		N/S Ref FSL	E/W Dist (ft) 711.0	E/W Ref FWL	
Lot		Quarter 1 SW	Quarter 2 SW	Quarter 3	Quarter 4	Section 33	Section Suffix	Section Type	Township 10 N		Township N/S Dir	Range 58	Range E/W Dir W	Meridian
Lateral/Horizontal - Original Hole, 6/16/2015 3:32:23 PM						Stim/Treat Stages								
<div><div>MD (ft)KB</div><div>D (ft)KB</div><div>n (ft)KB</div><div>c (ft)KB</div><div>i (ft)KB</div><div>l (ft)KB</div><div>l (ft)KB</div><div>l (ft)KB</div><div>l (ft)KB</div><div>l (ft)KB</div><div>l (ft)KB</div><div>l (ft)KB</div><div>l (ft)KB</div><div>l (ft)KB</div><div>l (ft)KB</div><div>l (ft)KB</div><div>l (ft)KB</div><div>l (ft)KB</div><div>l (ft)KB</div><div>l (ft)KB</div><div>l (ft)KB</div><div>l (ft)KB</div><div>l (ft)KB</div><div>l (ft)KB</div><div>l (ft)KB</div><div>l (ft)KB</div><div>l (ft)KB</div><div>l (ft)KB</div><div>l (ft)KB</div><div>l (ft)KB</div><div>l (ft)KB</div><div>l (ft)KB</div><div>l (ft)KB</div><div>l (ft)KB</div><div>l (ft)KB</div><div>l (ft)KB</div><div>l (ft)KB</div><div>l (ft)KB</div><div>l (ft)KB</div><div>l (ft)KB</div><div>l (ft)KB</div><div>l (ft)KB</div><div>l (ft)KB</div><div>l (ft)KB</div><div>l (ft)KB</div><div>l (ft)KB</div><div>l (ft)KB</div><div>l (ft)KB</div><div>l (ft)KB</div><div>l (ft)KB</div><div>l (ft)KB</div><div>l (ft)KB</div><div>l 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Lease Review All - Frac Summary

Well Name: RAZOR 33M-2801

API Number 051233925600		WPC ID 1CO0761111		Well Permit Number		Field Name DJ Horizontal Niobrara		County Weld		State CO											
Well Configuration Type Lateral/Horizontal		Orig KB Elv (ft) 4,747.50		Ground Elevation (ft) 4,729.00		Casing Flange Elevation (ft)		Tubing Head Elevation (ft)		Total Depth (ftKB) 13,182.0											
Original Spud Date 1/10/2015		Completion Date 2/25/2015		Asset Group Redtail		Responsible Engineer Charles Ohlson		N/S Dist (ft) 565.0		N/S Ref FSL											
E/W Dist (ft) 711.0		E/W Ref FWL		Lot		Quarter 1 SW		Quarter 2 SW		Quarter 3											
Quarter 4		Section 33		Section Suffix		Section Type		Township 10 N		Township N/S Dir Range											
Range 58		Range E/W Dir W		Meridian																	
Lateral/Horizontal - Original Hole, 6/16/2015 3:32:25 PM				Stim/Treat Stages																	
MD (ftKB)	D (ft K B)	n (C L)	Vertical schematic (actual)	Logs	Interval 33																
					Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment										
49.9	1541.0	1759.5	3500.0	5011.8	33	2/25/2015	6,595.0	6,730.0	2953.70	3098.50	XL Gel:1798 bbl;Linear Gel:487 bbl; 15% HCL:24 bbl; Slickwater:621bbl;Freshwater:25bbl										
5047.9	5628.0	5656.2	6174.9	6265.1	Stim/Treat Additives																
6461.9	6597.1	6794.0	6929.1	7126.0	Stg #	Add	Type		Amount	Units	Sand Size										
7261.2	7458.0	7591.9	7790.0	7923.9	33	Proppant	Ottawa 20/40		145,128.0	lb	20/40										
8121.1	8255.9	8453.1	8587.9	8785.1	33	Proppant	Ottawa 40/70		3,243.0	lb	40/70										
9117.1	9251.0	9448.2	9583.0	9779.9	Interval 34																
10111.9	10247.0	10443.9	10578.1	10775.9	Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment										
11107.0	11177.0	11305.8	11495.9	11695.9	34	2/25/2015	6,396.0	6,531.0	2930.00	3068.20	XL Gel:1774 bbl;Linear Gel:414 bbl; 15% HCL:24 bbl; Slickwater:670bbl;Freshwater:48bbl										
12235.9	12434.1	12568.9	12766.1	12998.0	Stim/Treat Additives																
13089.9	13172.2	Tubing - Production set at 5,656.8ftKB on 3/16/2015 06:00																			
Set Depth (ftKB)		Comment		Run Date		Pull Date															
5,656.8				3/16/2015																	
Item Des		OD (in)		ID (in)		Len (ft)		Top (ftKB)		Btm (ftKB)											
Tubing Hanger		7		1.995		0.50		18.5		19.0											
Tubing		2 3/8		1.995		30.98		19.0		50.0											
Pup Jt		2 3/8		1.995		9.63		50.0		59.6											
Tubing		2 3/8		1.995		1,696.00		59.6		1,755.6											
Gas Lift Mandrel #7		2 3/8		1.995		4.04		1,755.6		1,759.7											
Tubing		2 3/8		1.995		1,020.22		1,759.7		2,779.9											
Gas Lift Mandrel #6		2 3/8		1.995		4.06		2,779.9		2,783.9											
Tubing		2 3/8		1.995		557.69		2,783.9		3,341.6											
Gas Lift Mandrel #5		2 3/8		1.995		4.04		3,341.6		3,345.7											
Tubing		2 3/8		1.995		587.39		3,345.7		3,933.1											
Gas Lift Mandrel #4		2 3/8		1.995		4.06		3,933.1		3,937.1											
Tubing		2 3/8		1.995		552.68		3,937.1		4,489.8											
Gas Lift Mandrel #3		2 3/8		1.995		4.05		4,489.8		4,493.8											
Tubing		2 3/8		1.995		554.03		4,493.8		5,047.9											
Gas Lift Mandrel #2		2 3/8		1.995		4.06		5,047.9		5,051.9											
Tubing		2 3/8		1.995		556.69		5,051.9		5,608.6											
Gas Lift Mandrel #1		2 3/8		1.995		4.05		5,608.6		5,612.7											
Tubing		2 3/8		1.995		29.48		5,612.7		5,642.2											
On-Off Tool		3 3/4		1.995		1.35		5,642.2		5,643.5											
Packer		3.766		1.922		8.06		5,643.5		5,651.6											
Pump Off Plug		2.622		1.500		0.51		5,651.6		5,652.1											
Perf Sub		2 3/8		1.995		4.03		5,652.1		5,656.1											
Bull Plug		3.1				0.68		5,656.1		5,656.8											
Rod Strings																					
<des> on <dtmrun>																					
Rod Description								Run Date		Pull Date											
Item Des						OD (in)		Len (ft)		Top (ftKB)											
										Btm (ftKB)											
Other Strings																					
Set Depth (ftKB)		Comment		Run Date		Pull Date															
Item Des				OD (in)				Len (ft)													
								Top (ftKB)													
								Btm (ftKB)													
Other In Hole																					
Des		OD (in)		Run Date		Pull Date		Top (ftKB)		Btm (ftKB)											
CFP		4		2/26/2015		3/13/2015		6,363.0		6,365.0											
CFP		4		2/25/2015		3/13/2015		6,570.0		6,572.0											
CFP		4		2/25/2015		3/13/2015		6,745.0		6,747.0											
CFP		4		2/25/2015		3/13/2015		6,950.0		6,952.0											
CFP		4		2/25/2015		3/13/2015		7,153.0		7,155.0											
CFP		4		2/25/2015		3/13/2015		7,353.0		7,355.0											
CFP		4		2/25/2015		3/13/2015		7,557.0		7,559.0											
CFP		4		2/24/2015		3/13/2015		7,752.0		7,754.0											
CFP		4		2/24/2015		3/13/2015		7,954.0		7,956.0											
CFP		4		2/24/2015		3/13/2015		8,150.0		8,152.0											
CFP		4		2/24/2015		3/13/2015		8,354.0		8,356.0											



Lease Review All - Frac Summary

Well Name: RAZOR 33M-2801

API Number	WPC ID	Well Permit Number	Field Name	County	State
051233925600	1CO0761111		DJ Horizontal Niobrara	Weld	CO
Well Configuration Type	Orig KB Elv (ft)	Ground Elevation (ft)	Casing Flange Elevation (ft)	Tubing Head Elevation (ft)	Total Depth (ftKB)
Lateral/Horizontal	4,747.50	4,729.00			13,182.0
Original Spud Date	Completion Date	Asset Group	Responsible Engineer	N/S Dist (ft)	N/S Ref
1/10/2015	2/25/2015	Redtail	Charles Ohlson	565.0	FSL
E/W Dist (ft)	E/W Ref				
711.0	FWL				
Lot	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Section
	SW	SW			33
Section Suffix	Section Type	Township	Township N/S Dir	Range	Range E/W Dir
		10	N	58	W
Meridian					

Lateral/Horizontal - Original Hole, 6/16/2015 3:32:27 PM					Other In Hole					
MD (ftKB)	D (ft K B)	n c l (Vertical schematic (actual)	Logs	Des	OD (in)	Run Date	Pull Date	Top (ftKB)	Btm (ftKB)
49.9	49.9	512			CFP	4	2/24/2015	3/13/2015	8,543.0	8,545.0
1,541.0	1,541.0	514			CFP	4	2/24/2015	3/13/2015	8,747.0	8,749.0
1,759.5	1,759.5	515			CFP	4	2/23/2015	3/13/2015	8,953.0	8,955.0
3,500.0	3,500.0	517			CFP	4	2/23/2015	3/13/2015	9,150.0	9,152.0
5,011.8	5,011.8	517			CFP	4	2/23/2015	3/13/2015	9,350.0	9,352.0
5,047.9	5,047.9	518			CFP	4	2/20/2015	3/13/2015	9,530.0	9,532.0
5,628.0	5,628.0	518			CFP	4	2/20/2015	3/13/2015	9,740.0	9,742.0
5,656.2	5,656.2	519			CFP	4	2/20/2015	3/13/2015	9,946.0	9,948.0
6,174.9	6,174.9	520			CFP	4	2/19/2015	3/13/2015	10,145.0	10,147.0
6,265.1	6,265.1	520			CFP	4	2/19/2015	3/13/2015	10,334.0	10,336.0
6,461.9	6,461.9	520			CFP	4	2/19/2015	3/13/2015	10,527.0	10,529.0
6,597.1	6,597.1	520			CFP	4	2/19/2015	3/13/2015	10,737.0	10,739.0
6,794.0	6,794.0	520			CFP	4	2/19/2015	3/13/2015	10,938.0	10,940.0
6,929.1	6,929.1	520			CFP	4	2/18/2015	3/13/2015	11,151.0	11,153.0
7,126.0	7,126.0	520			CFP	4	2/18/2015	3/14/2015	11,345.0	11,347.0
7,261.2	7,261.2	520			CFP	4	2/18/2015	3/14/2015	11,528.0	11,530.0
7,458.0	7,458.0	520			CFP	4	2/18/2015	3/14/2015	11,736.0	11,738.0
7,591.9	7,591.9	520			CFP	4	2/18/2015	3/14/2015	11,943.0	11,945.0
7,790.0	7,790.0	520			CFP	4	2/18/2015	3/14/2015	12,137.0	12,139.0
7,923.9	7,923.9	520			CFP	4	2/17/2015	3/14/2015	12,335.0	12,337.0
8,121.1	8,121.1	520			CFP	4	2/17/2015	3/14/2015	12,534.0	12,536.0
8,255.9	8,255.9	520			CFP	4	2/17/2015	3/14/2015	12,726.0	12,728.0
8,453.1	8,453.1	520			CFP	4	2/16/2015	3/14/2015	12,921.0	12,923.0
8,587.9	8,587.9	520			CFP	4	2/16/2015	3/14/2015	13,100.0	13,102.0
8,785.1	8,785.1	520			CFP	4	2/16/2015	3/14/2015	13,100.0	13,102.0
8,919.9	8,919.9	520			CFP	4	2/16/2015	3/14/2015	13,100.0	13,102.0
9,117.1	9,117.1	520			CFP	4	2/16/2015	3/14/2015	13,100.0	13,102.0
9,251.0	9,251.0	520			CFP	4	2/16/2015	3/14/2015	13,100.0	13,102.0
9,448.2	9,448.2	520			CFP	4	2/16/2015	3/14/2015	13,100.0	13,102.0
9,583.0	9,583.0	520			CFP	4	2/16/2015	3/14/2015	13,100.0	13,102.0
9,779.9	9,779.9	520			CFP	4	2/16/2015	3/14/2015	13,100.0	13,102.0
9,915.0	9,915.0	520			CFP	4	2/16/2015	3/14/2015	13,100.0	13,102.0
10,111.9	10,111.9	520			CFP	4	2/16/2015	3/14/2015	13,100.0	13,102.0
10,247.0	10,247.0	520			CFP	4	2/16/2015	3/14/2015	13,100.0	13,102.0
10,443.9	10,443.9	520		CFP	4	2/16/2015	3/14/2015	13,100.0	13,102.0	
10,578.1	10,578.1	520		CFP	4	2/16/2015	3/14/2015	13,100.0	13,102.0	
10,775.9	10,775.9	520		CFP	4	2/16/2015	3/14/2015	13,100.0	13,102.0	
10,910.1	10,910.1	520		CFP	4	2/16/2015	3/14/2015	13,100.0	13,102.0	
11,107.0	11,107.0	520		CFP	4	2/16/2015	3/14/2015	13,100.0	13,102.0	
11,242.1	11,242.1	520		CFP	4	2/16/2015	3/14/2015	13,100.0	13,102.0	
11,439.0	11,439.0	520		CFP	4	2/16/2015	3/14/2015	13,100.0	13,102.0	
11,574.1	11,574.1	520		CFP	4	2/16/2015	3/14/2015	13,100.0	13,102.0	
11,771.0	11,771.0	520		CFP	4	2/16/2015	3/14/2015	13,100.0	13,102.0	
11,905.8	11,905.8	520		CFP	4	2/16/2015	3/14/2015	13,100.0	13,102.0	
12,103.0	12,103.0	520		CFP	4	2/16/2015	3/14/2015	13,100.0	13,102.0	
12,235.9	12,235.9	520		CFP	4	2/16/2015	3/14/2015	13,100.0	13,102.0	
12,434.1	12,434.1	520		CFP	4	2/16/2015	3/14/2015	13,100.0	13,102.0	
12,568.9	12,568.9	520		CFP	4	2/16/2015	3/14/2015	13,100.0	13,102.0	
12,766.1	12,766.1	520		CFP	4	2/16/2015	3/14/2015	13,100.0	13,102.0	
12,898.0	12,898.0	520		CFP	4	2/16/2015	3/14/2015	13,100.0	13,102.0	
13,089.9	13,089.9	520		CFP	4	2/16/2015	3/14/2015	13,100.0	13,102.0	
13,172.2	13,172.2	520		CFP	4	2/16/2015	3/14/2015	13,100.0	13,102.0	
					Bottom Hole Cores					
					Date	Core #	Top (ftKB)	Btm (ftKB)	Recov (ft)	