

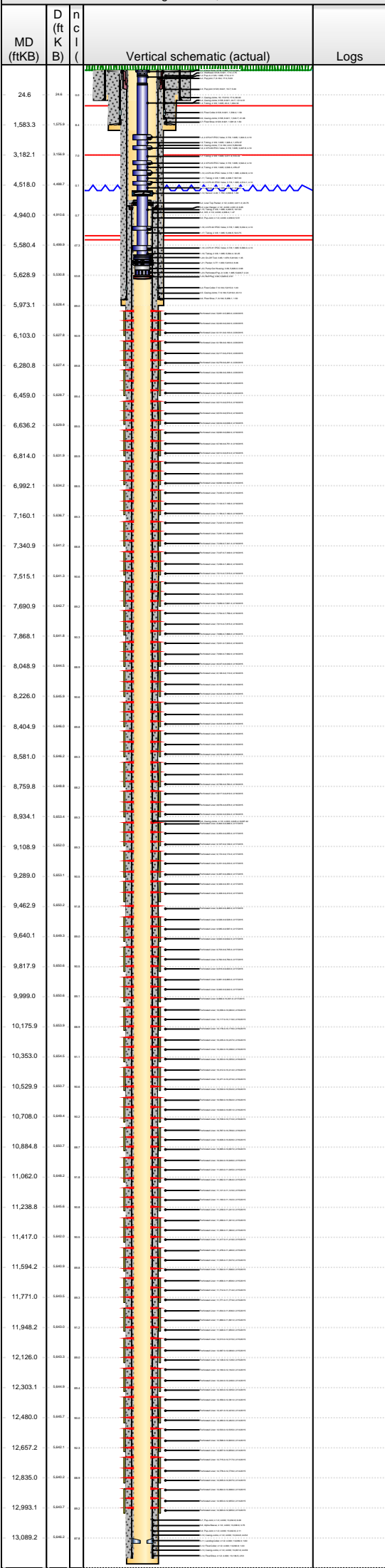


Lease Review All - Frac Summary

Well Name: HORSETAIL 30F-1948

API Number 051233874300		WPC ID 1CO0761011		Well Permit Number		Field Name DJ Horizontal Niobrara			County Weld		State CO			
Well Configuration Type Lateral/Horizontal				Orig KB Elv (ft) 4,800.00		Ground Elevation (ft) 4,783.00		Casing Flange Elevation (ft)		Tubing Head Elevation (ft)		Total Depth (ftKB) 13,158.0		
Original Spud Date 8/2/2014		Completion Date 2/20/2015		Asset Group Redtail			Responsible Engineer Charles Ohlson		N/S Dist (ft) 2,323.0		N/S Ref FNL	E/W Dist (ft) 2,070.0		E/W Ref FWL
Lot	Quarter 1 SE	Quarter 2 NW	Quarter 3	Quarter 4	Section 30	Section Suffix	Section Type	Township 10	Township N/S Dir N	Range 57	Range E/W Dir W	Meridian		

Lateral/Horizontal - Original Hole, 8/19/2015 11:07:59 AM



Wellbore Sections						
Wellbore Name		Start Date	Size (in)	Act Top (ftKB)	Act Btm (ftKB)	
Original Hole		4/23/2014	20	17.0	97.0	
Original Hole		8/2/2014	13 1/2	97.0	1,600.0	
Original Hole		8/4/2014	8 3/4	1,600.0	5,973.0	
Original Hole		8/7/2014	6 1/8	5,973.0	13,158.0	
Conductor Pipe, 97.0ftKB						
OD (in)	Wt (lb/ft)	Grade	Top (ftKB)	Btm (ftKB)	Len (ft)	Item Des
16	84.00	K-55	17.0	97.0	80.00	Casing Joints
Surface Csg, 1,583.3ftKB						
OD (in)	Wt (lb/ft)	Grade	Top (ftKB)	Btm (ftKB)	Len (ft)	Item Des
9 5/8	36.00	J-55	17.0	17.0	0.00	Landing Joint
9 5/8	36.00	J-55	17.0	19.7	2.75	Wellhead
9 5/8	36.00	J-55	19.7	24.7	5.00	Pup joint
9 5/8	36.00	J-55	24.7	1,539.2	1,514.51	Casing Joints
9 5/8	36.00	J-55	1,539.2	1,540.7	1.50	Float Collar
9 5/8	36.00	J-55	1,540.7	1,581.8	41.08	Casing Joints
9 5/8	36.00	J-55	1,581.8	1,583.3	1.50	Float Shoe
Frac String, 4,911.0ftKB						
OD (in)	Wt (lb/ft)	Grade	Top (ftKB)	Btm (ftKB)	Len (ft)	Item Des
7			17.0	17.6	0.60	Casing Hanger
4 1/2			17.6	18.7	1.10	BTC x LTC crossover
4 1/2		11.60	18.7	56.9	38.20	4.5# P-110 BTC-TXP 11.6# casing
4 1/2			56.9	76.2	19.24	4.5" BTC-TXP spaceout pup jt 8.25', 3.55', 1.55
4 1/2		11.60	76.2	4,900.5	4,824.36	4.5# P-110 BTC-TXP 11.6# casing
4 1/2			4,900.5	4,906.7	6.17	Pup Joint
5 1/4			4,906.7	4,911.0	4.34	Baker Hughes seal assembly
Intermediate Csg, 5,957.6ftKB						
OD (in)	Wt (lb/ft)	Grade	Top (ftKB)	Btm (ftKB)	Len (ft)	Item Des
7	29.00	HCL-80	17.0	17.0	0.00	Landing Joint
7	29.00	HCL-80	17.0	22.0	5.00	Pup joint
7	29.00	HCL-80	22.0	5,915.0	5,892.96	Casing Joints
7	29.00	HCL-80	5,915.0	5,916.0	1.00	Float Collar
7	29.00	HCL-80	5,916.0	5,956.1	40.10	Casing Joints
7	29.00	HCL-80	5,956.1	5,957.6	1.50	Float Shoe
Liner, 13,139.0ftKB						
OD (in)	Wt (lb/ft)	Grade	Top (ftKB)	Btm (ftKB)	Len (ft)	Item Des
4 1/2	11.60	HCL-80	4,911.0	4,911.0	0.00	Casing Joints
4 1/2	11.60	HCL-80	4,911.0	4,931.8	20.75	Liner Top Packer
4 1/2	11.60	HCL-80	4,931.8	4,938.4	6.65	Liner Hanger
4 1/2	11.60	HCL-80	4,938.4	4,939.9	1.47	X/O
4 1/2	11.60	HCL-80	4,939.9	4,945.4	5.51	Pup Joint
4 1/2	11.60	HCL-80	4,945.4	13,032.8	8,087.42	Casing Joints
4 1/2	11.60	HCL-80	13,032.8	13,038.9	6.08	Pup Joint
4 1/2	11.60	HCL-80	13,038.9	13,042.7	3.75	Alpha Sleeve
4 1/2	11.60	HCL-80	13,042.7	13,044.8	2.11	Pup Joint
4 1/2	11.60	HCL-80	13,044.8	13,089.3	44.52	Casing Joints
4 1/2	11.60	HCL-80	13,089.3	13,090.9	1.60	Landing Collar
4 1/2	11.60	HCL-80	13,090.9	13,091.9	1.00	Float Collar
4 1/2	11.60	HCL-80	13,091.9	13,136.5	44.59	Casing Joints
4 1/2	11.60	HCL-80	13,136.5	13,139.0	2.53	Float Shoe
Cement Stages						
Des		Pump Start Date	Drill Out Date	Top (ftKB)	Btm (ftKB)	Top Meas Meth
Conductor Cement		4/23/2014		17.0	97.0	Returns to Surface
Surface Casing Cement		8/3/2014		17.0	1,583.3	Returns to Surface
Intermediate Casing Cement		8/7/2014		17.0	5,957.6	Returns to Surface
Liner Cement		8/13/2014		4,911.0	13,139.0	Returns to Surface
Perforations						
Type of Hole		Date	Top (ftKB)	Btm (ftKB)	Zone	
Perforated Liner		2/20/2015	5,981.0	5,983.0	Niobrara, Original Hole	
Perforated Liner		2/20/2015	6,040.0	6,042.0	Niobrara, Original Hole	
Perforated Liner		2/20/2015	6,101.0	6,103.0	Niobrara, Original Hole	
Perforated Liner		2/20/2015	6,158.0	6,160.0	Niobrara, Original Hole	
Perforated Liner		2/20/2015	6,217.0	6,219.0	Niobrara, Original Hole	
Perforated Liner		2/20/2015	6,279.0	6,281.0	Niobrara, Original Hole	
Perforated Liner		2/20/2015	6,336.0	6,338.0	Niobrara, Original Hole	
Perforated Liner		2/20/2015	6,395.0	6,397.0	Niobrara, Original Hole	
Perforated Liner		2/20/2015	6,457.0	6,459.0	Niobrara, Original Hole	



Lease Review All - Frac Summary
Well Name: HORSETAIL 30F-1948

API Number 051233874300		WPC ID 1CO0761011		Well Permit Number		Field Name DJ Horizontal Niobrara			County Weld			State CO			
Well Configuration Type Lateral/Horizontal				Orig KB Elv (ft) 4,800.00		Ground Elevation (ft) 4,783.00		Casing Flange Elevation (ft)		Tubing Head Elevation (ft)		Total Depth (ft)KB 13,158.0			
Original Spud Date 8/2/2014		Completion Date 2/20/2015		Asset Group Redtail			Responsible Engineer Charles Ohlson			N/S Dist (ft) 2,323.0		N/S Ref FNL	E/W Dist (ft) 2,070.0		E/W Ref FWL
Lot	Quarter 1 SE	Quarter 2 NW	Quarter 3	Quarter 4	Section 30	Section Suffix	Section Type	Township 10	Township N/S Dir N	Range 57	Range E/W Dir W	Meridian			

Lateral/Horizontal - Original Hole, 8/19/2015 11:08:02 AM						Perforations						
MD (ftKB)	D (ft K B)	n (K B)	c (K B)	l (K B)	Vertical schematic (actual)	Logs	Type of Hole	Date	Top (ftKB)	Btm (ftKB)	Zone	
							Perforated Liner	2/19/2015	6,513.0	6,515.0	Niobrara, Original Hole	
							Perforated Liner	2/19/2015	6,572.0	6,574.0	Niobrara, Original Hole	
							Perforated Liner	2/19/2015	6,634.0	6,636.0	Niobrara, Original Hole	
							Perforated Liner	2/19/2015	6,690.0	6,692.0	Niobrara, Original Hole	
							Perforated Liner	2/19/2015	6,749.0	6,751.0	Niobrara, Original Hole	
							Perforated Liner	2/19/2015	6,812.0	6,814.0	Niobrara, Original Hole	
							Perforated Liner	2/19/2015	6,867.0	6,869.0	Niobrara, Original Hole	
							Perforated Liner	2/19/2015	6,926.0	6,928.0	Niobrara, Original Hole	
							Perforated Liner	2/19/2015	6,990.0	6,992.0	Niobrara, Original Hole	
							Perforated Liner	2/19/2015	7,045.0	7,047.0	Niobrara, Original Hole	
							Perforated Liner	2/19/2015	7,104.0	7,106.0	Niobrara, Original Hole	
							Perforated Liner	2/19/2015	7,158.0	7,160.0	Niobrara, Original Hole	
							Perforated Liner	2/19/2015	7,222.0	7,224.0	Niobrara, Original Hole	
							Perforated Liner	2/19/2015	7,281.0	7,283.0	Niobrara, Original Hole	
							Perforated Liner	2/19/2015	7,339.0	7,341.0	Niobrara, Original Hole	
							Perforated Liner	2/19/2015	7,347.0	7,349.0	Niobrara, Original Hole	
							Perforated Liner	2/19/2015	7,458.0	7,460.0	Niobrara, Original Hole	
							Perforated Liner	2/19/2015	7,513.0	7,515.0	Niobrara, Original Hole	
							Perforated Liner	2/19/2015	7,576.0	7,578.0	Niobrara, Original Hole	
							Perforated Liner	2/19/2015	7,635.0	7,637.0	Niobrara, Original Hole	
							Perforated Liner	2/19/2015	7,689.0	7,691.0	Niobrara, Original Hole	
							Perforated Liner	2/19/2015	7,754.0	7,756.0	Niobrara, Original Hole	
							Perforated Liner	2/18/2015	7,813.0	7,815.0	Niobrara, Original Hole	
							Perforated Liner	2/18/2015	7,866.0	7,868.0	Niobrara, Original Hole	
							Perforated Liner	2/18/2015	7,931.0	7,933.0	Niobrara, Original Hole	
							Perforated Liner	2/18/2015	7,990.0	7,992.0	Niobrara, Original Hole	
							Perforated Liner	2/18/2015	8,047.0	8,049.0	Niobrara, Original Hole	
							Perforated Liner	2/18/2015	8,108.0	8,110.0	Niobrara, Original Hole	
							Perforated Liner	2/18/2015	8,167.0	8,169.0	Niobrara, Original Hole	
							Perforated Liner	2/18/2015	8,224.0	8,226.0	Niobrara, Original Hole	
							Perforated Liner	2/18/2015	8,285.0	8,287.0	Niobrara, Original Hole	
							Perforated Liner	2/18/2015	8,344.0	8,346.0	Niobrara, Original Hole	
							Perforated Liner	2/18/2015	8,403.0	8,405.0	Niobrara, Original Hole	
							Perforated Liner	2/18/2015	8,463.0	8,465.0	Niobrara, Original Hole	
							Perforated Liner	2/18/2015	8,522.0	8,524.0	Niobrara, Original Hole	
							Perforated Liner	2/18/2015	8,579.0	8,581.0	Niobrara, Original Hole	
							Perforated Liner	2/18/2015	8,640.0	8,642.0	Niobrara, Original Hole	
							Perforated Liner	2/18/2015	8,699.0	8,701.0	Niobrara, Original Hole	
							Perforated Liner	2/18/2015	8,758.0	8,760.0	Niobrara, Original Hole	
							Perforated Liner	2/18/2015	8,817.0	8,819.0	Niobrara, Original Hole	
							Perforated Liner	2/18/2015	8,876.0	8,878.0	Niobrara, Original Hole	
							Perforated Liner	2/18/2015	8,932.0	8,934.0	Niobrara, Original Hole	
							Perforated Liner	2/17/2015	8,994.0	8,996.0	Niobrara, Original Hole	
							Perforated Liner	2/17/2015	9,053.0	9,055.0	Niobrara, Original Hole	
							Perforated Liner	2/17/2015	9,107.0	9,109.0	Niobrara, Original Hole	
							Perforated Liner	2/17/2015	9,172.0	9,174.0	Niobrara, Original Hole	
							Perforated Liner	2/17/2015	9,231.0	9,233.0	Niobrara, Original Hole	
							Perforated Liner	2/17/2015	9,287.0	9,289.0	Niobrara, Original Hole	
							Perforated Liner	2/17/2015	9,349.0	9,351.0	Niobrara, Original Hole	
							Perforated Liner	2/17/2015	9,408.0	9,410.0	Niobrara, Original Hole	
							Perforated Liner	2/17/2015	9,463.0	9,465.0	Niobrara, Original Hole	
							Perforated Liner	2/17/2015	9,526.0	9,528.0	Niobrara, Original Hole	
							Perforated Liner	2/17/2015	9,585.0	9,587.0	Niobrara, Original Hole	
							Perforated Liner	2/17/2015	9,640.0	9,642.0	Niobrara, Original Hole	
							Perforated Liner	2/17/2015	9,703.0	9,705.0	Niobrara, Original Hole	
							Perforated Liner	2/17/2015	9,762.0	9,764.0	Niobrara, Original Hole	
							Perforated Liner	2/17/2015	9,818.0	9,820.0	Niobrara, Original Hole	
							Perforated Liner	2/17/2015	9,881.0	9,883.0	Niobrara, Original Hole	
							Perforated Liner	2/17/2015	9,940.0	9,942.0	Niobrara, Original Hole	
							Perforated Liner	2/17/2015	9,999.0	10,001.0	Niobrara, Original Hole	
							Perforated Liner	2/16/2015	10,058.0	10,060.0	Niobrara, Original Hole	
							Perforated Liner	2/16/2015	10,117.0	10,119.0	Niobrara, Original Hole	
							Perforated Liner	2/16/2015	10,176.0	10,178.0	Niobrara, Original Hole	
							Perforated Liner	2/16/2015	10,235.0	10,237.0	Niobrara, Original Hole	
							Perforated Liner	2/16/2015	10,294.0	10,296.0	Niobrara, Original Hole	
							Perforated Liner	2/16/2015	10,353.0	10,355.0	Niobrara, Original Hole	
							Perforated Liner	2/16/2015	10,412.0	10,414.0	Niobrara, Original Hole	
							Perforated Liner	2/16/2015	10,471.0	10,473.0	Niobrara, Original Hole	
							Perforated Liner	2/16/2015	10,530.0	10,532.0	Niobrara, Original Hole	
							Perforated Liner	2/16/2015	10,590.0	10,592.0	Niobrara, Original Hole	



Lease Review All - Frac Summary
Well Name: HORSETAIL 30F-1948

API Number 051233874300			WPC ID 1CO0761011			Well Permit Number			Field Name DJ Horizontal Niobrara			County Weld		State CO		
Well Configuration Type Lateral/Horizontal					Orig KB Elv (ft) 4,800.00		Ground Elevation (ft) 4,783.00		Casing Flange Elevation (ft)			Tubing Head Elevation (ft)		Total Depth (ftKB) 13,158.0		
Original Spud Date 8/2/2014			Completion Date 2/20/2015		Asset Group Redtail			Responsible Engineer Charles Ohlson			N/S Dist (ft) 2,323.0		N/S Ref FNL	E/W Dist (ft) 2,070.0		E/W Ref FWL
Lot		Quarter 1 SE	Quarter 2 NW	Quarter 3	Quarter 4	Section 30		Section Suffix	Section Type	Township 10 N		Township N/S Dir	Range 57	Range E/W Dir W	Meridian	
Lateral/Horizontal - Original Hole, 8/19/2015 11:08:04 AM						Perforations										
MD (ftKB)	D (ft K B)	n (K B)	c (K B)	l (K B)	Vertical schematic (actual)	Logs	Type of Hole	Date	Top (ftKB)	Btm (ftKB)	Zone					
							Perforated Liner	2/16/2015	10,649.0	10,651.0	Niobrara, Original Hole					
							Perforated Liner	2/16/2015	10,708.0	10,710.0	Niobrara, Original Hole					
							Perforated Liner	2/16/2015	10,767.0	10,769.0	Niobrara, Original Hole					
							Perforated Liner	2/16/2015	10,826.0	10,828.0	Niobrara, Original Hole					
							Perforated Liner	2/16/2015	10,885.0	10,887.0	Niobrara, Original Hole					
							Perforated Liner	2/15/2015	10,944.0	10,946.0	Niobrara, Original Hole					
							Perforated Liner	2/15/2015	11,003.0	11,005.0	Niobrara, Original Hole					
							Perforated Liner	2/15/2015	11,062.0	11,064.0	Niobrara, Original Hole					
							Perforated Liner	2/15/2015	11,121.0	11,123.0	Niobrara, Original Hole					
							Perforated Liner	2/15/2015	11,180.0	11,182.0	Niobrara, Original Hole					
							Perforated Liner	2/15/2015	11,239.0	11,241.0	Niobrara, Original Hole					
							Perforated Liner	2/15/2015	11,299.0	11,301.0	Niobrara, Original Hole					
							Perforated Liner	2/15/2015	11,358.0	11,360.0	Niobrara, Original Hole					
							Perforated Liner	2/15/2015	11,417.0	11,419.0	Niobrara, Original Hole					
							Perforated Liner	2/15/2015	11,478.0	11,480.0	Niobrara, Original Hole					
							Perforated Liner	2/15/2015	11,535.0	11,537.0	Niobrara, Original Hole					
							Perforated Liner	2/15/2015	11,594.0	11,596.0	Niobrara, Original Hole					
							Perforated Liner	2/15/2015	11,656.0	11,658.0	Niobrara, Original Hole					
							Perforated Liner	2/15/2015	11,712.0	11,714.0	Niobrara, Original Hole					
							Perforated Liner	2/15/2015	11,771.0	11,773.0	Niobrara, Original Hole					
							Perforated Liner	2/15/2015	11,834.0	11,836.0	Niobrara, Original Hole					
							Perforated Liner	2/15/2015	11,889.0	11,891.0	Niobrara, Original Hole					
							Perforated Liner	2/15/2015	11,948.0	11,950.0	Niobrara, Original Hole					
							Perforated Liner	2/15/2015	12,013.0	12,015.0	Niobrara, Original Hole					
							Perforated Liner	2/15/2015	12,067.0	12,069.0	Niobrara, Original Hole					
							Perforated Liner	2/15/2015	12,126.0	12,128.0	Niobrara, Original Hole					
							Perforated Liner	2/14/2015	12,180.0	12,182.0	Niobrara, Original Hole					
							Perforated Liner	2/14/2015	12,244.0	12,246.0	Niobrara, Original Hole					
							Perforated Liner	2/14/2015	12,303.0	12,305.0	Niobrara, Original Hole					
							Perforated Liner	2/14/2015	12,359.0	12,361.0	Niobrara, Original Hole					
							Perforated Liner	2/14/2015	12,421.0	12,423.0	Niobrara, Original Hole					
							Perforated Liner	2/14/2015	12,480.0	12,482.0	Niobrara, Original Hole					
							Perforated Liner	2/14/2015	12,533.0	12,535.0	Niobrara, Original Hole					
							Perforated Liner	2/14/2015	12,598.0	12,600.0	Niobrara, Original Hole					
							Perforated Liner	2/14/2015	12,657.0	12,659.0	Niobrara, Original Hole					
							Perforated Liner	2/14/2015	12,715.0	12,717.0	Niobrara, Original Hole					
							Perforated Liner	2/14/2015	12,776.0	12,778.0	Niobrara, Original Hole					
							Perforated Liner	2/14/2015	12,835.0	12,837.0	Niobrara, Original Hole					
							Perforated Liner	2/13/2015	12,894.0	12,896.0	Niobrara, Original Hole					
							Perforated Liner	2/13/2015	12,953.0	12,955.0	Niobrara, Original Hole					
							Perforated Liner	2/13/2015	12,993.0	12,995.0	Niobrara, Original Hole					
Stimulations & Treatments																
Sand Frac on 2/14/2015 06:00																
Comment																
Treatment End Date: 2/20/2015; Number of staged intervals: 40; Min Frac Gradient: 0.80; # of Perfs: 1440; SlickWater: 25757 bbl; pHaserFrac 22 XL Gel: 84824 bbl; 22 Linear Gel: 11962 bbl; 15% HCl: 476 bbl; Fresh Water: 6914 bbl																
Total Clean Volu...		Vol Slurry Tot (bbl)		Proppant Desig...		Proppant Frm (lb)		P Max (psi)		Avg Treat...		Avg Treat...		Max Tre... Frac Gr...		
129933.90				6,920,000.0		6,878,477.0		6,147.0		4,000.0		50.10		51.70 0.80		
Total Add Amount																
Proppant Ottawa 20/40 6762267 lb; Proppant Ottawa 40/70 116211 lb																
Stim/Treat Fluids																
Fluid Name																
pHaserFrac 22 XL Gel; 22 Linear Gel; 15% HCl																
Stim/Treat Stages																
Interval 1																
Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment										
1	2/14/2015	12,894.0	12,995.0	3295.80		SlickWater:791 bbl; pHaserFrac 22 XL Gel:1869 bbl; 22 Linear Gel:298 bbl; 15% HCl:24bbl; Fresh Water:314bbl										
Stim/Treat Additives																
Stg #	Add			Type		Amount		Units		Sand Size						
1	Proppant			Ottawa 20/40		108,422.0		lb		20/40						
1	Proppant			Ottawa 40/70		3,000.0		lb		40/70						
Interval 2																
Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment										
2	2/14/2015	12,715.0	12,837.0	3044.50		SlickWater:691 bbl; pHaserFrac 22 XL Gel:1748 bbl; 22 Linear Gel:297 bbl; 15% HCl:24bbl; Fresh Water:286bbl										
Stim/Treat Additives																
Stg #	Add			Type		Amount		Units		Sand Size						
2	Proppant			Ottawa 20/40		104,208.0		lb		20/40						
2	Proppant			Ottawa 40/70		2,379.0		lb		40/70						



Lease Review All - Frac Summary

Well Name: HORSETAIL 30F-1948

API Number 051233874300		WPC ID 1CO0761011			Well Permit Number			Field Name DJ Horizontal Niobrara			County Weld			State CO	
Well Configuration Type Lateral/Horizontal				Orig KB Elv (ft) 4,800.00		Ground Elevation (ft) 4,783.00		Casing Flange Elevation (ft)		Tubing Head Elevation (ft)		Total Depth (ftKB) 13,158.0			
Original Spud Date 8/2/2014		Completion Date 2/20/2015		Asset Group Redtail			Responsible Engineer Charles Ohlson			N/S Dist (ft) 2,323.0		N/S Ref FNL	E/W Dist (ft) 2,070.0		E/W Ref FWL
Lot	Quarter 1 SE	Quarter 2 NW	Quarter 3	Quarter 4	Section 30	Section Suffix	Section Type	Township 10	Township N/S Dir N	Range 57	Range E/W Dir W	Meridian			

Lateral/Horizontal - Original Hole, 8/19/2015 11:08:07 AM							Stim/Treat Stages						
MD (ftKB)	D (ft K B)	n (K B)	c (K B)	l (K B)	Vertical schematic (actual)	Logs	Interval 3						
							Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment
							3	2/14/2015	12,533.0	12,659.0	3050.50		SlickWater:687 bbl; pHaserFrac 22 XL Gel:1758 bbl; 22 Linear Gel:301 bbl; 15% HCl:24bbl;Fresh Water:281bbl
Stim/Treat Additives													
Stg #		Add			Type			Amount		Units	Sand Size		
3		Proppant			Ottawa 20/40			108,407.0		lb	20/40		
3		Proppant			Ottawa 40/70			3,469.0		lb	40/70		
Interval 4													
Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment							
4	2/14/2015	12,359.0	12,482.0	3462.00		SlickWater:685 bbl; pHaserFrac 22 XL Gel:2141 bbl; 22 Linear Gel:297 bbl; 15% HCl:24bbl;Fresh Water:314bbl							
Stim/Treat Additives													
Stg #		Add			Type			Amount		Units	Sand Size		
4		Proppant			Ottawa 20/40			178,945.0		lb	20/40		
4		Proppant			Ottawa 40/70			2,844.0		lb	40/70		
Interval 5													
Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment							
5	2/14/2015	12,180.0	12,305.0	3480.70		SlickWater:692 bbl; pHaserFrac 22 XL Gel:2190 bbl; 22 Linear Gel:297 bbl; 15% HCl:24bbl;Fresh Water:277bbl							
Stim/Treat Additives													
Stg #		Add			Type			Amount		Units	Sand Size		
5		Proppant			Ottawa 20/40			180,642.0		lb	20/40		
5		Proppant			Ottawa 40/70			2,179.0		lb	40/70		
Interval 6													
Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment							
6	2/14/2015	12,013.0	12,128.0	3451.50		SlickWater:677 bbl; pHaserFrac 22 XL Gel:2162 bbl; 22 Linear Gel:299 bbl; 15% HCl:24bbl;Fresh Water:290bbl							
Stim/Treat Additives													
Stg #		Add			Type			Amount		Units	Sand Size		
6		Proppant			Ottawa 20/40			179,027.0		lb	20/40		
6		Proppant			Ottawa 40/70			2,954.0		lb	40/70		
Interval 7													
Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment							
7	2/15/2015	11,834.0	11,950.0	3400.70		SlickWater:675 bbl; pHaserFrac 22 XL Gel:2132 bbl; 22 Linear Gel:298 bbl; 15% HCl:24bbl;Fresh Water:272bbl							
Stim/Treat Additives													
Stg #		Add			Type			Amount		Units	Sand Size		
7		Proppant			Ottawa 20/40			168,743.0		lb	20/40		
7		Proppant			Ottawa 40/70			3,250.0		lb	40/70		
Interval 8													
Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment							
8	2/15/2015	11,656.0	11,773.0	3400.20		SlickWater:701 bbl; pHaserFrac 22 XL Gel:2140 bbl; 22 Linear Gel:299 bbl; 15% HCl:24bbl;Fresh Water:236bbl							
Stim/Treat Additives													
Stg #		Add			Type			Amount		Units	Sand Size		
8		Proppant			Ottawa 20/40			173,424.0		lb	20/40		
8		Proppant			Ottawa 40/70			3,219.0		lb	40/70		
Interval 9													
Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment							
9	2/15/2015	11,478.0	11,596.0	3378.50		SlickWater:703 bbl; pHaserFrac 22 XL Gel:2123 bbl; 22 Linear Gel:297 bbl; 15% HCl:24bbl;Fresh Water:231bbl							
Stim/Treat Additives													
Stg #		Add			Type			Amount		Units	Sand Size		
9		Proppant			Ottawa 20/40			173,461.0		lb	20/40		
9		Proppant			Ottawa 40/70			2,679.0		lb	40/70		
Interval 10													
Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment							
10	2/15/2015	11,299.0	11,419.0	3359.90		SlickWater:668 bbl; pHaserFrac 22 XL Gel:2133 bbl; 22 Linear Gel:297 bbl; 15% HCl:24bbl;Fresh Water:238bbl							
Stim/Treat Additives													
Stg #		Add			Type			Amount		Units	Sand Size		
10		Proppant			Ottawa 20/40			173,051.0		lb	20/40		
10		Proppant			Ottawa 40/70			2,892.0		lb	40/70		
Interval 11													
Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment							
11	2/15/2015	11,121.0	11,241.0	3388.70		SlickWater:664 bbl; pHaserFrac 22 XL Gel:2143 bbl; 22 Linear Gel:298 bbl; 15% HCl:24bbl;Fresh Water:259bbl							
Stim/Treat Additives													
Stg #		Add			Type			Amount		Units	Sand Size		
11		Proppant			Ottawa 20/40			175,658.0		lb	20/40		
11		Proppant			Ottawa 40/70			3,028.0		lb	40/70		



Lease Review All - Frac Summary
Well Name: HORSETAIL 30F-1948

API Number 051233874300		WPC ID 1CO0761011		Well Permit Number		Field Name DJ Horizontal Niobrara			County Weld		State CO			
Well Configuration Type Lateral/Horizontal				Orig KB Elv (ft) 4,800.00		Ground Elevation (ft) 4,783.00		Casing Flange Elevation (ft)		Tubing Head Elevation (ft)		Total Depth (ft)KB 13,158.0		
Original Spud Date 8/2/2014		Completion Date 2/20/2015		Asset Group Redtail			Responsible Engineer Charles Ohlson		N/S Dist (ft) 2,323.0		N/S Ref FNL	E/W Dist (ft) 2,070.0		E/W Ref FWL
Lot	Quarter 1 SE	Quarter 2 NW	Quarter 3	Quarter 4	Section 30	Section Suffix	Section Type	Township 10	Township N/S Dir N	Range 57	Range E/W Dir W	Meridian		

Lateral/Horizontal - Original Hole, 8/19/2015 11:08:10 AM										Stim/Treat Stages				
MD (ftKB)	D (ft K B)	n (K B)	c (K B)	l (K B)	Vertical schematic (actual)	Logs	Interval 12							
							Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment	
							12	2/15/2015	10,944.0	11,064.0	3405.30		SlickWater:672 bbl; pHaserFrac 22 XL Gel:2164 bbl; 22 Linear Gel:298 bbl; 15% HCl:24bbl;Fresh Water:248bbl	
Stim/Treat Additives														
Stg #		Add		Type		Amount		Units		Sand Size				
12		Proppant		Ottawa 20/40		180,573.0		lb		20/40				
12		Proppant		Ottawa 40/70		3,023.0		lb		40/70				
Interval 13														
Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment								
13	2/16/2015	10,767.0	10,887.0	3359.00		SlickWater:659 bbl; pHaserFrac 22 XL Gel:2138 bbl; 22 Linear Gel:298 bbl; 15% HCl:24bbl;Fresh Water:240bbl								
Stim/Treat Additives														
Stg #		Add		Type		Amount		Units		Sand Size				
13		Proppant		Ottawa 20/40		182,875.0		lb		20/40				
13		Proppant		Ottawa 40/70		3,033.0		lb		40/70				
Interval 14														
Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment								
14	2/16/2015	10,590.0	10,710.0	3331.80		SlickWater:660 bbl; pHaserFrac 22 XL Gel:2118 bbl; 22 Linear Gel:298 bbl; 15% HCl:24bbl;Fresh Water:232bbl								
Stim/Treat Additives														
Stg #		Add		Type		Amount		Units		Sand Size				
14		Proppant		Ottawa 20/40		175,508.0		lb		20/40				
14		Proppant		Ottawa 40/70		3,207.0		lb		40/70				
Interval 15														
Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment								
15	2/16/2015	10,412.0	10,532.0	3356.00		SlickWater:669 bbl; pHaserFrac 22 XL Gel:2139 bbl; 22 Linear Gel:298 bbl; 15% HCl:24bbl;Fresh Water:226bbl								
Stim/Treat Additives														
Stg #		Add		Type		Amount		Units		Sand Size				
15		Proppant		Ottawa 20/40		167,601.0		lb		20/40				
15		Proppant		Ottawa 40/70		2,960.0		lb		40/70				
Interval 16														
Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment								
16	2/16/2015	10,235.0	10,355.0	3332.00		SlickWater:651 bbl; pHaserFrac 22 XL Gel:2132 bbl; 22 Linear Gel:298 bbl; 15% HCl:24bbl;Fresh Water:228bbl								
Stim/Treat Additives														
Stg #		Add		Type		Amount		Units		Sand Size				
16		Proppant		Ottawa 20/40		172,224.0		lb		20/40				
16		Proppant		Ottawa 40/70		2,960.0		lb		40/70				
Interval 17														
Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment								
17	2/16/2015	10,058.0	10,178.0	3344.40		SlickWater:674 bbl; pHaserFrac 22 XL Gel:2154 bbl; 22 Linear Gel:298 bbl; 15% HCl:24bbl;Fresh Water:195bbl								
Stim/Treat Additives														
Stg #		Add		Type		Amount		Units		Sand Size				
17		Proppant		Ottawa 20/40		171,236.0		lb		20/40				
17		Proppant		Ottawa 40/70		2,741.0		lb		40/70				
Interval 18														
Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment								
18	2/16/2015	9,881.0	10,001.0	3463.00		SlickWater:660 bbl; pHaserFrac 22 XL Gel:2166 bbl; 22 Linear Gel:297 bbl; 15% HCl:24bbl;Fresh Water:316bbl								
Stim/Treat Additives														
Stg #		Add		Type		Amount		Units		Sand Size				
18		Proppant		Ottawa 20/40		176,851.0		lb		20/40				
18		Proppant		Ottawa 40/70		2,759.0		lb		40/70				
Interval 19														
Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment								
19	2/17/2015	9,703.0	9,820.0	3279.50		SlickWater:642 bbl; pHaserFrac 22 XL Gel:2126 bbl; 22 Linear Gel:298 bbl; 15% HCl:24bbl;Fresh Water:189bbl								
Stim/Treat Additives														
Stg #		Add		Type		Amount		Units		Sand Size				
19		Proppant		Ottawa 20/40		167,682.0		lb		20/40				
19		Proppant		Ottawa 40/70		3,016.0		lb		40/70				
Interval 20														
Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment								
20	2/17/2015	9,526.0	9,642.0	3329.20		SlickWater:640 bbl; pHaserFrac 22 XL Gel:2138 bbl; 22 Linear Gel:297 bbl; 15% HCl:24bbl;Fresh Water:229bbl								
Stim/Treat Additives														
Stg #		Add		Type		Amount		Units		Sand Size				
20		Proppant		Ottawa 20/40		189,844.0		lb		20/40				
20		Proppant		Ottawa 40/70		3,226.0		lb		40/70				



Lease Review All - Frac Summary

Well Name: HORSETAIL 30F-1948

API Number 051233874300		WPC ID 1CO0761011			Well Permit Number			Field Name DJ Horizontal Niobrara			County Weld			State CO	
Well Configuration Type Lateral/Horizontal				Orig KB Elv (ft) 4,800.00		Ground Elevation (ft) 4,783.00		Casing Flange Elevation (ft)		Tubing Head Elevation (ft)		Total Depth (ftKB) 13,158.0			
Original Spud Date 8/2/2014		Completion Date 2/20/2015		Asset Group Redtail			Responsible Engineer Charles Ohlson			N/S Dist (ft) 2,323.0		N/S Ref FNL	E/W Dist (ft) 2,070.0		E/W Ref FWL
Lot	Quarter 1 SE	Quarter 2 NW	Quarter 3	Quarter 4	Section 30	Section Suffix	Section Type	Township 10	Township N/S Dir N	Range 57	Range E/W Dir W	Meridian			

Lateral/Horizontal - Original Hole, 8/19/2015 11:08:12 AM										Stim/Treat Stages					
MD (ftKB)	D (ft K B)	n (K B)	c (K B)	l (K B)	Vertical schematic (actual)	Logs	Interval 21								
							Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment		
							21	2/17/2015	9,349.0	9,456.0	3228.00		SlickWater:609 bbl; pHaserFrac 22 XL Gel:2129 bbl; 22 Linear Gel:298 bbl; 15% HCl:0bbl;Fresh Water:192bbl		
Stim/Treat Additives															
Stg #		Add			Type			Amount			Units		Sand Size		
21		Proppant			Ottawa 20/40			173,710.0			lb		20/40		
21		Proppant			Ottawa 40/70			2,136.0			lb		40/70		
Interval 22															
Stg #	Start Date		Top (ftKB)		Btm (ftKB)		Vol Clean...		Vol Slurry...		Comment				
22	2/17/2015		9,172.0		9,289.0		3276.00				SlickWater:681 bbl; pHaserFrac 22 XL Gel:2147 bbl; 22 Linear Gel:298 bbl; 15% HCl:0bbl;Fresh Water:151bbl				
Stim/Treat Additives															
Stg #		Add			Type			Amount			Units		Sand Size		
22		Proppant			Ottawa 20/40			171,893.0			lb		20/40		
22		Proppant			Ottawa 40/70			2,949.0			lb		40/70		
Interval 23															
Stg #	Start Date		Top (ftKB)		Btm (ftKB)		Vol Clean...		Vol Slurry...		Comment				
23	2/17/2015		8,994.0		9,109.0		3238.50				SlickWater:657 bbl; pHaserFrac 22 XL Gel:2140 bbl; 22 Linear Gel:298 bbl; 15% HCl:0bbl;Fresh Water:144bbl				
Stim/Treat Additives															
Stg #		Add			Type			Amount			Units		Sand Size		
23		Proppant			Ottawa 20/40			170,426.0			lb		20/40		
23		Proppant			Ottawa 40/70			2,378.0			lb		40/70		
Interval 24															
Stg #	Start Date		Top (ftKB)		Btm (ftKB)		Vol Clean...		Vol Slurry...		Comment				
24	2/17/2015		8,817.0		8,934.0		3289.80				SlickWater:646 bbl; pHaserFrac 22 XL Gel:2218 bbl; 22 Linear Gel:297 bbl; 15% HCl:0bbl;Fresh Water:129bbl				
Stim/Treat Additives															
Stg #		Add			Type			Amount			Units		Sand Size		
24		Proppant			Ottawa 20/40			173,381.0			lb		20/40		
24		Proppant			Ottawa 40/70			2,562.0			lb		40/70		
Interval 25															
Stg #	Start Date		Top (ftKB)		Btm (ftKB)		Vol Clean...		Vol Slurry...		Comment				
25	2/18/2015		8,640.0		8,760.0		3174.60				SlickWater:624 bbl; pHaserFrac 22 XL Gel:2133 bbl; 22 Linear Gel:298 bbl; 15% HCl:0bbl;Fresh Water:119bbl				
Stim/Treat Additives															
Stg #		Add			Type			Amount			Units		Sand Size		
25		Proppant			Ottawa 20/40			175,919.0			lb		20/40		
25		Proppant			Ottawa 40/70			2,951.0			lb		40/70		
Interval 26															
Stg #	Start Date		Top (ftKB)		Btm (ftKB)		Vol Clean...		Vol Slurry...		Comment				
26	2/18/2015		8,463.0		8,581.0		3173.60				SlickWater:623 bbl; pHaserFrac 22 XL Gel:2132 bbl; 22 Linear Gel:297 bbl; 15% HCl:0bbl;Fresh Water:121bbl				
Stim/Treat Additives															
Stg #		Add			Type			Amount			Units		Sand Size		
26		Proppant			Ottawa 20/40			175,808.0			lb		20/40		
26		Proppant			Ottawa 40/70			2,851.0			lb		40/70		
Interval 27															
Stg #	Start Date		Top (ftKB)		Btm (ftKB)		Vol Clean...		Vol Slurry...		Comment				
27	2/18/2015		8,285.0		8,405.0		3161.80				SlickWater:621 bbl; pHaserFrac 22 XL Gel:2126 bbl; 22 Linear Gel:298 bbl; 15% HCl:0bbl;Fresh Water:117bbl				
Stim/Treat Additives															
Stg #		Add			Type			Amount			Units		Sand Size		
27		Proppant			Ottawa 20/40			172,162.0			lb		20/40		
27		Proppant			Ottawa 40/70			2,890.0			lb		40/70		
Interval 28															
Stg #	Start Date		Top (ftKB)		Btm (ftKB)		Vol Clean...		Vol Slurry...		Comment				
28	2/18/2015		8,108.0		8,226.0		3168.50				SlickWater:618 bbl; pHaserFrac 22 XL Gel:2150 bbl; 22 Linear Gel:298 bbl; 15% HCl:0bbl;Fresh Water:102bbl				
Stim/Treat Additives															
Stg #		Add			Type			Amount			Units		Sand Size		
28		Proppant			Ottawa 20/40			172,758.0			lb		20/40		
28		Proppant			Ottawa 40/70			3,029.0			lb		40/70		
Interval 29															
Stg #	Start Date		Top (ftKB)		Btm (ftKB)		Vol Clean...		Vol Slurry...		Comment				
29	2/18/2015		7,931.0		8,049.0		3172.40				SlickWater:630 bbl; pHaserFrac 22 XL Gel:2149 bbl; 22 Linear Gel:296 bbl; 15% HCl:0bbl;Fresh Water:97bbl				
Stim/Treat Additives															
Stg #		Add			Type			Amount			Units		Sand Size		
29		Proppant			Ottawa 20/40			171,012.0			lb		20/40		
29		Proppant			Ottawa 40/70			3,181.0			lb		40/70		

Page 8/9



Lease Review All - Frac Summary

Well Name: HORSETAIL 30F-1948

API Number	WPC ID	Well Permit Number	Field Name	County	State
051233874300	1CO0761011		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	4,800.00	4,783.00			13,158.0
Original Spud Date	Completion Date	Asset Group	Responsible Engineer	N/S Dist (ft)	N/S Ref
8/2/2014	2/20/2015	Redtail	Charles Ohlson	2,323.0	FNL
				E/W Dist (ft)	E/W Ref
				2,070.0	FWL
Lot	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Section
	SE	NW			30
			Section Suffix	Section Type	Township
					10 N
				Township N/S Dir	Range
					57 W
				Range E/W Dir	Meridian

Lateral/Horizontal - Original Hole, 8/19/2015 11:08:20 AM					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)
					CFP	4	2/17/2015	3/18/2015	9,142.0	9,144.0
					CFP	4	2/17/2015	3/18/2015	9,319.0	9,321.0
					CFP	4	2/17/2015	3/18/2015	9,496.0	9,498.0
24.6	24.6	24.6			CFP	4	2/17/2015	3/18/2015	9,674.0	9,676.0
1,583.3	1,575.4	1,575.4			CFP	4	2/17/2015	3/18/2015	9,851.0	9,853.0
3,182.1	3,156.4	3,156.4			CFP	4	2/17/2015	3/18/2015	10,028.0	10,030.0
4,518.0	4,489.7	4,489.7			CFP	4	2/16/2015	3/18/2015	10,206.0	10,208.0
4,940.0	4,915.4	4,915.4			CFP	4	2/16/2015	3/18/2015	10,383.0	10,385.0
5,580.4	5,558.4	5,558.4			CFP	4	2/16/2015	3/18/2015	10,560.0	10,562.0
5,628.9	5,608.9	5,608.9			CFP	4	2/16/2015	3/18/2015	10,737.0	10,739.0
5,973.1	5,953.1	5,953.1			CFP	4	2/16/2015	3/18/2015	10,915.0	10,917.0
6,103.0	6,083.0	6,083.0			CFP	4	2/15/2015	3/18/2015	11,092.0	11,094.0
6,280.8	6,260.8	6,260.8			CFP	4	2/15/2015	3/18/2015	11,269.0	11,271.0
6,459.0	6,439.0	6,439.0			CFP	4	2/15/2015	3/18/2015	11,446.0	11,448.0
6,636.2	6,616.2	6,616.2			CFP	4	2/15/2015	3/18/2015	11,624.0	11,626.0
6,814.0	6,794.0	6,794.0			CFP	4	2/15/2015	3/18/2015	11,801.0	11,803.0
6,992.1	6,972.1	6,972.1			CFP	4	2/15/2015	3/18/2015	11,978.0	11,980.0
7,160.1	7,140.1	7,140.1			CFP	4	2/15/2015	3/18/2015	12,155.0	12,157.0
7,340.9	7,320.9	7,320.9			CFP	4	2/14/2015	3/18/2015	12,333.0	12,335.0
7,515.1	7,495.1	7,495.1			CFP	4	2/14/2015	3/18/2015	12,510.0	12,512.0
7,690.9	7,670.9	7,670.9			CFP	4	2/14/2015	3/18/2015	12,687.0	12,689.0
7,868.1	7,848.1	7,848.1			CFP	4	2/14/2015	3/18/2015	12,864.0	12,866.0
8,048.9	8,028.9	8,028.9			CFP	4	2/13/2015	3/18/2015	13,010.0	13,012.0
8,226.0	8,206.0	8,206.0			Bottom Hole Cores					
8,404.9	8,384.9	8,384.9			Date	Core #	Top (ftKB)	Btm (ftKB)	Recov (ft)	
8,581.0	8,561.0	8,561.0								
8,759.8	8,739.8	8,739.8								
8,934.1	8,914.1	8,914.1								
9,108.9	9,088.9	9,088.9								
9,289.0	9,269.0	9,269.0								
9,462.9	9,442.9	9,442.9								
9,640.1	9,620.1	9,620.1								
9,817.9	9,797.9	9,797.9								
9,999.0	9,979.0	9,979.0								
10,175.9	10,155.9	10,155.9								
10,353.0	10,333.0	10,333.0								
10,529.9	10,509.9	10,509.9								
10,708.0	10,688.0	10,688.0								
10,884.8	10,864.8	10,864.8								
11,062.0	11,042.0	11,042.0								
11,238.8	11,218.8	11,218.8								
11,417.0	11,397.0	11,397.0								
11,594.2	11,574.2	11,574.2								
11,771.0	11,751.0	11,751.0								
11,948.2	11,928.2	11,928.2								
12,126.0	12,106.0	12,106.0								
12,303.1	12,283.1	12,283.1								
12,480.0	12,460.0	12,460.0								
12,657.2	12,637.2	12,637.2								
12,835.0	12,815.0	12,815.0								
12,993.1	12,973.1	12,973.1								
13,089.2	13,069.2	13,069.2								