

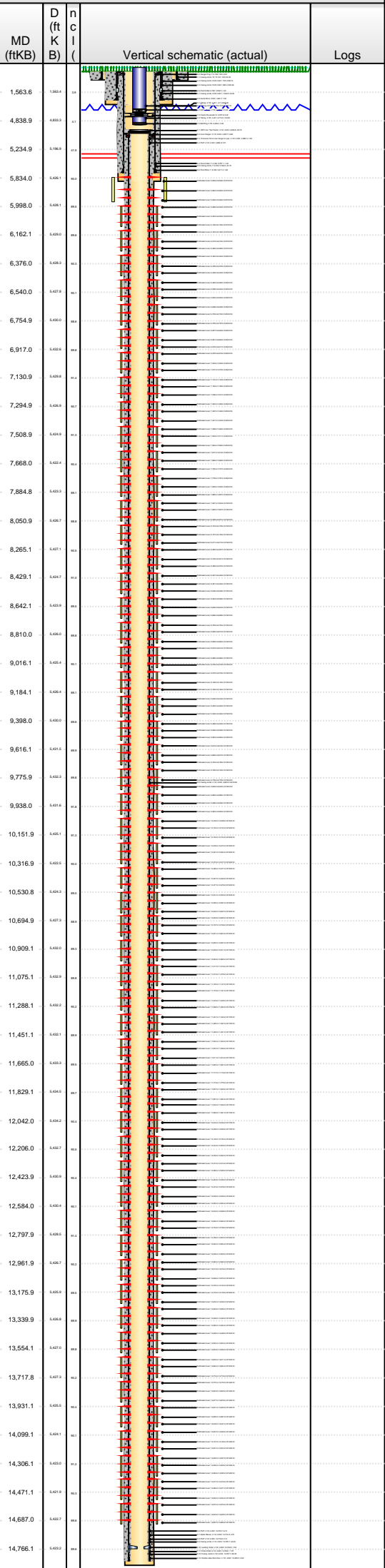


Lease Review All - Frac Summary

Well Name: HORSETAIL 33M-2804

API Number 051233924000		WPC ID 1CO0761083		Well Permit Number		Field Name DJ Horizontal Niobrara		County Weld		State CO	
Well Configuration Type Lateral/Horizontal		Orig KB Elv (ft) 4,637.50		Ground Elevation (ft) 4,619.00		Casing Flange Elevation (ft)		Tubing Head Elevation (ft)		Total Depth (ftKB) 14,936.0	
Original Spud Date 7/15/2014		Completion Date 8/22/2014		Asset Group Redtail		Responsible Engineer Charles Ohlson		N/S Dist (ft) 380.0	N/S Ref FSL	E/W Dist (ft) 750.0	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 57 W	Meridian

Lateral/Horizontal - Original Hole, 11/19/2014 1:28:46 PM



Wellbore Sections

Wellbore Name	Start Date	Size (in)	Act Top (ftKB)	Act Btm (ftKB)
Original Hole	7/11/2014	20	18.5	108.5
Original Hole	7/15/2014	13 1/2	108.5	1,625.0
Original Hole	7/17/2014	8 3/4	1,625.0	5,835.0
Original Hole	7/20/2014	6	5,835.0	14,936.0

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, 1,606.7ftKB						
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	Well head
9 5/8	36.00	J-55	18.5	18.5	0.00	Pup Joint
9 5/8	36.00	J-55	18.5	18.5	0.00	Landing joint
9 5/8	36.00	J-55	18.5	958.2	939.74	Casing Joints
9 5/8	36.00	J-55	958.2	1,562.5	604.26	Casing Joints
9 5/8	36.00	J-55	1,562.5	1,563.5	1.00	Float Collar
9 5/8	36.00	J-55	1,563.5	1,605.7	42.20	Casing Joints
9 5/8	36.00	J-55	1,605.7	1,606.7	1.00	Guide Shoe

Frac String, 4,860.9ftKB						
OD (in)	Wt (lb/ft)	Grade	Top (ftKB)	Btm (ftKB)	Len (ft)	Item Des
		P-110	-2.6	-1.1	1.48	Casing Hanger
4 1/2	11.60	HCP-110	-1.1	41.7	42.89	Casing Joints
4 1/2	11.60	HCP-110	41.7	84.6	42.89	Pup Joints 5.5', 2'
4 1/2	11.60	HCP-110	84.6	4,855.5	4,770.82	Casing Joints
4 1/2	11.60	HCP-110	4,855.5	4,860.9	5.43	Pup Joint
4 1/2			4,860.9	4,860.9		PBR seal assembly

Intermediate Csg, 5,812.8ftKB						
OD (in)	Wt (lb/ft)	Grade	Top (ftKB)	Btm (ftKB)	Len (ft)	Item Des
7	29.00	HCL-80	18.5	18.5	0.00	Landing Joint
7	29.00	HCL-80	18.5	23.0	4.50	Hanger/ Pup
7	29.00	HCL-80	23.0	5,767.1	5,744.10	Casing Joints
7	29.00	HCL-80	5,767.1	5,768.5	1.40	Float Collar
7	29.00	HCL-80	5,768.5	5,811.2	42.70	Casing Joints
7	29.00	HCL-80	5,811.2	5,812.8	1.60	Float Shoe

Liner, 14,858.0ftKB						
OD (in)	Wt (lb/ft)	Grade	Top (ftKB)	Btm (ftKB)	Len (ft)	Item Des
4 1/2	11.60	L-80	4,860.9	4,881.7	20.79	ZXP Liner Top Packer
4 1/2	11.60	L-80	4,881.7	4,888.3	6.65	Liner Hanger
4 1/2	11.60	L-80	4,888.3	4,889.8	1.49	Crossover from Liner hanger to pup
4 1/2	11.60	L-80	4,889.8	4,895.3	5.51	PUP
4 1/2	11.60	L-80	4,895.3	14,708.2	9,812.83	Casing Joints
4 1/2	11.60	L-80	14,708.2	14,714.3	6.10	PUP
4 1/2	11.60	L-80	14,714.3	14,718.0	3.75	Alpha Sleeve
4 1/2	11.60	L-80	14,718.0	14,720.1	2.10	PUP
4 1/2	11.60	L-80	14,720.1	14,764.5	44.40	Casing Joints
4 1/2	11.60	L-80	14,764.5	14,766.1	1.56	Landing Collar
4 1/2	11.60	L-80	14,766.1	14,767.1	1.07	Float Collar
4 1/2	11.60	L-80	14,767.1	14,855.5	88.35	Casing Joints
4 1/2	11.60	L-80	14,855.5	14,858.0	2.52	Double valve float shoe

Cement Stages					
Des	Pump Start Date	Drill Out Date	Top (ftKB)	Btm (ftKB)	Top Meas Meth
Conductor Cement	7/11/2014	7/14/2014	18.5	108.5	Returns to Surface
Surface Casing Cement	7/16/2014		18.5	1,606.7	Returns to Surface
Intermediate Casing Cement	7/19/2014	7/20/2014	18.5	5,812.8	Returns to Surface
Liner Casing Cement	7/28/2014		4,860.9	14,858.0	Volume Calculations

Perforations				
Type of Hole	Date	Top (ftKB)	Btm (ftKB)	Zone
Perforated Liner	8/21/2014	5,834.0	5,836.0	Niobrara, Original Hole
Perforated Liner	8/21/2014	5,890.0	5,892.0	Niobrara, Original Hole
Perforated Liner	8/21/2014	5,944.0	5,946.0	Niobrara, Original Hole
Perforated Liner	8/21/2014	5,998.0	6,000.0	Niobrara, Original Hole
Perforated Liner	8/21/2014	6,050.0	6,052.0	Niobrara, Original Hole
Perforated Liner	8/21/2014	6,106.0	6,108.0	Niobrara, Original Hole
Perforated Liner	8/21/2014	6,160.0	6,162.0	Niobrara, Original Hole
Perforated Liner	8/21/2014	6,214.0	6,216.0	Niobrara, Original Hole
Perforated Liner	8/21/2014	6,266.0	6,268.0	Niobrara, Original Hole
Perforated Liner	8/20/2014	6,322.0	6,324.0	Niobrara, Original Hole
Perforated Liner	8/20/2014	6,376.0	6,378.0	Niobrara, Original Hole
Perforated Liner	8/20/2014	6,430.0	6,432.0	Niobrara, Original Hole



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Well Configuration Type Lateral/Horizontal	Orig KB Elv (ft) 4,637.50	Ground Elevation (ft) 4,619.00	Casing Flange Elevation (ft)	Tubing Head Elevation (ft)	Total Depth (ftKB) 14,936.0
Original Spud Date 7/15/2014	Completion Date 8/22/2014	Asset Group Redtail	Responsible Engineer Charles Ohlson	N/S Dist (ft) 380.0	N/S Ref FSL
				E/W Dist (ft) 750.0	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 57 W
					Range E/W Dir
					Meridian

Lateral/Horizontal - Original Hole, 11/19/2014 1:28:48 PM

MD (ftKB)	D (ft K B)	nc l ()	Vertical schematic (actual)	Logs	Perforations				
					Type of Hole	Date	Top (ftKB)	Btm (ftKB)	Zone
1,563.6	1.000	0.000			Perforated Liner	8/20/2014	6,480.0	6,482.0	Niobrara, Original Hole
4,838.9	4.000	0.000			Perforated Liner	8/20/2014	6,538.0	6,540.0	Niobrara, Original Hole
5,234.9	5.200	0.000			Perforated Liner	8/20/2014	6,592.0	6,594.0	Niobrara, Original Hole
5,834.0	5.800	0.000			Perforated Liner	8/20/2014	6,646.0	6,648.0	Niobrara, Original Hole
5,998.0	5.998	0.000			Perforated Liner	8/20/2014	6,700.0	6,702.0	Niobrara, Original Hole
6,162.1	6.162	0.000			Perforated Liner	8/20/2014	6,755.0	6,757.0	Niobrara, Original Hole
6,376.0	6.376	0.000			Perforated Liner	8/20/2014	6,807.0	6,809.0	Niobrara, Original Hole
6,540.0	6.540	0.000			Perforated Liner	8/20/2014	6,861.0	6,863.0	Niobrara, Original Hole
6,754.9	6.754	0.000			Perforated Liner	8/20/2014	6,915.0	6,917.0	Niobrara, Original Hole
6,917.0	6.917	0.000			Perforated Liner	8/20/2014	6,972.0	6,974.0	Niobrara, Original Hole
7,130.9	7.130	0.000			Perforated Liner	8/20/2014	7,023.0	7,025.0	Niobrara, Original Hole
7,294.9	7.294	0.000			Perforated Liner	8/20/2014	7,077.0	7,079.0	Niobrara, Original Hole
7,508.9	7.508	0.000			Perforated Liner	8/20/2014	7,131.0	7,133.0	Niobrara, Original Hole
7,668.0	7.668	0.000			Perforated Liner	8/20/2014	7,183.0	7,185.0	Niobrara, Original Hole
7,884.8	7.884	0.000			Perforated Liner	8/20/2014	7,239.0	7,241.0	Niobrara, Original Hole
8,050.9	8.050	0.000			Perforated Liner	8/20/2014	7,293.0	7,295.0	Niobrara, Original Hole
8,265.1	8.265	0.000			Perforated Liner	8/20/2014	7,347.0	7,349.0	Niobrara, Original Hole
8,429.1	8.429	0.000			Perforated Liner	8/20/2014	7,401.0	7,403.0	Niobrara, Original Hole
8,642.1	8.642	0.000			Perforated Liner	8/20/2014	7,458.0	7,460.0	Niobrara, Original Hole
8,810.0	8.810	0.000			Perforated Liner	8/20/2014	7,509.0	7,511.0	Niobrara, Original Hole
9,016.1	9.016	0.000			Perforated Liner	8/20/2014	7,563.0	7,565.0	Niobrara, Original Hole
9,184.1	9.184	0.000			Perforated Liner	8/20/2014	7,617.0	7,619.0	Niobrara, Original Hole
9,398.0	9.398	0.000			Perforated Liner	8/20/2014	7,666.0	7,668.0	Niobrara, Original Hole
9,616.1	9.616	0.000			Perforated Liner	8/20/2014	7,725.0	7,727.0	Niobrara, Original Hole
9,775.9	9.775	0.000			Perforated Liner	8/20/2014	7,779.0	7,781.0	Niobrara, Original Hole
9,938.0	9.938	0.000			Perforated Liner	8/20/2014	7,833.0	7,835.0	Niobrara, Original Hole
10,151.9	10.151	0.000			Perforated Liner	8/20/2014	7,885.0	7,887.0	Niobrara, Original Hole
10,316.9	10.316	0.000			Perforated Liner	8/20/2014	7,941.0	7,943.0	Niobrara, Original Hole
10,530.8	10.530	0.000			Perforated Liner	8/20/2014	7,995.0	7,997.0	Niobrara, Original Hole
10,694.9	10.694	0.000			Perforated Liner	8/20/2014	8,049.0	8,051.0	Niobrara, Original Hole
10,909.1	10.909	0.000			Perforated Liner	8/20/2014	8,103.0	8,105.0	Niobrara, Original Hole
11,075.1	11.075	0.000			Perforated Liner	8/20/2014	8,157.0	8,159.0	Niobrara, Original Hole
11,288.1	11.288	0.000			Perforated Liner	8/20/2014	8,211.0	8,213.0	Niobrara, Original Hole
11,451.1	11.451	0.000			Perforated Liner	8/20/2014	8,265.0	8,267.0	Niobrara, Original Hole
11,665.0	11.665	0.000			Perforated Liner	8/20/2014	8,319.0	8,321.0	Niobrara, Original Hole
11,829.1	11.829	0.000			Perforated Liner	8/20/2014	8,368.0	8,370.0	Niobrara, Original Hole
12,042.0	12.042	0.000			Perforated Liner	8/20/2014	8,427.0	8,429.0	Niobrara, Original Hole
12,206.0	12.206	0.000			Perforated Liner	8/20/2014	8,481.0	8,483.0	Niobrara, Original Hole
12,423.9	12.423	0.000			Perforated Liner	8/20/2014	8,534.0	8,536.0	Niobrara, Original Hole
12,584.0	12.584	0.000			Perforated Liner	8/20/2014	8,594.0	8,596.0	Niobrara, Original Hole
12,797.9	12.797	0.000			Perforated Liner	8/20/2014	8,642.0	8,644.0	Niobrara, Original Hole
12,961.9	12.961	0.000			Perforated Liner	8/20/2014	8,696.0	8,698.0	Niobrara, Original Hole
13,175.9	13.175	0.000			Perforated Liner	8/20/2014	8,750.0	8,752.0	Niobrara, Original Hole
13,339.9	13.339	0.000			Perforated Liner	8/20/2014	8,808.0	8,810.0	Niobrara, Original Hole
13,554.1	13.554	0.000			Perforated Liner	8/20/2014	8,858.0	8,860.0	Niobrara, Original Hole
13,717.8	13.717	0.000	Perforated Liner	8/20/2014	8,912.0	8,914.0	Niobrara, Original Hole		
13,931.1	13.931	0.000	Perforated Liner	8/20/2014	8,966.0	8,968.0	Niobrara, Original Hole		
14,099.1	14.099	0.000	Perforated Liner	8/20/2014	9,016.0	9,018.0	Niobrara, Original Hole		
14,306.1	14.306	0.000	Perforated Liner	8/20/2014	9,074.0	9,076.0	Niobrara, Original Hole		
14,471.1	14.471	0.000	Perforated Liner	8/20/2014	9,128.0	9,130.0	Niobrara, Original Hole		
14,687.0	14.687	0.000	Perforated Liner	8/20/2014	9,182.0	9,184.0	Niobrara, Original Hole		
14,766.1	14.766	0.000	Perforated Liner	8/20/2014	9,232.0	9,234.0	Niobrara, Original Hole		
			Perforated Liner	8/19/2014	9,290.0	9,292.0	Niobrara, Original Hole		
			Perforated Liner	8/19/2014	9,344.0	9,346.0	Niobrara, Original Hole		
			Perforated Liner	8/19/2014	9,398.0	9,400.0	Niobrara, Original Hole		
			Perforated Liner	8/19/2014	9,506.0	9,508.0	Niobrara, Original Hole		
			Perforated Liner	8/18/2014	9,560.0	9,562.0	Niobrara, Original Hole		
			Perforated Liner	8/18/2014	9,614.0	9,616.0	Niobrara, Original Hole		
			Perforated Liner	8/18/2014	9,668.0	9,670.0	Niobrara, Original Hole		
			Perforated Liner	8/18/2014	9,724.0	9,726.0	Niobrara, Original Hole		
			Perforated Liner	8/19/2014	9,740.0	9,742.0	Niobrara, Original Hole		
			Perforated Liner	8/18/2014	9,776.0	9,778.0	Niobrara, Original Hole		
			Perforated Liner	8/18/2014	9,830.0	9,832.0	Niobrara, Original Hole		
			Perforated Liner	8/18/2014	9,884.0	9,886.0	Niobrara, Original Hole		
			Perforated Liner	8/18/2014	9,936.0	9,938.0	Niobrara, Original Hole		
			Perforated Liner	8/18/2014	9,992.0	9,994.0	Niobrara, Original Hole		
			Perforated Liner	8/18/2014	10,046.0	10,048.0	Niobrara, Original Hole		
			Perforated Liner	8/18/2014	10,100.0	10,102.0	Niobrara, Original Hole		
			Perforated Liner	8/18/2014	10,152.0	10,154.0	Niobrara, Original Hole		
			Perforated Liner	8/18/2014	10,208.0	10,210.0	Niobrara, Original Hole		



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				E/W Dist (ft) 750.0	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 57 W
					Range E/W Dir
					Meridian

Lateral/Horizontal - Original Hole, 11/19/2014 1:28:50 PM

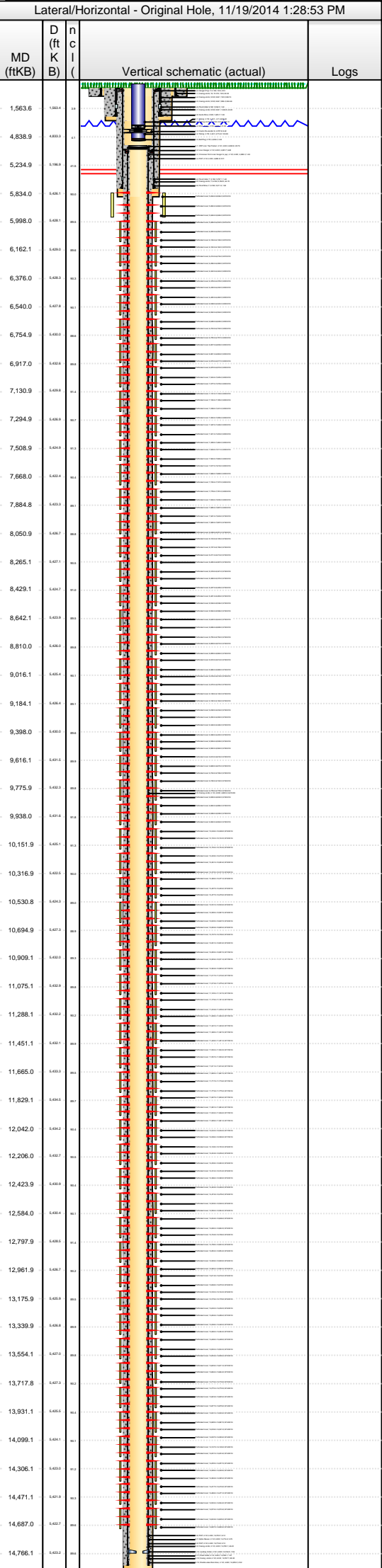
MD (ftKB)	D (ft K B)	n c l ()	Vertical schematic (actual)	Logs	Perforations				
					Type of Hole	Date	Top (ftKB)	Btm (ftKB)	Zone
					Perforated Liner	8/18/2014	10,261.0	10,263.0	Niobrara, Original Hole
					Perforated Liner	8/18/2014	10,315.0	10,317.0	Niobrara, Original Hole
					Perforated Liner	8/18/2014	10,369.0	10,371.0	Niobrara, Original Hole
					Perforated Liner	8/18/2014	10,427.0	10,429.0	Niobrara, Original Hole
					Perforated Liner	8/18/2014	10,477.0	10,479.0	Niobrara, Original Hole
					Perforated Liner	8/18/2014	10,531.0	10,533.0	Niobrara, Original Hole
					Perforated Liner	8/18/2014	10,585.0	10,587.0	Niobrara, Original Hole
					Perforated Liner	8/18/2014	10,635.0	10,637.0	Niobrara, Original Hole
					Perforated Liner	8/18/2014	10,693.0	10,695.0	Niobrara, Original Hole
					Perforated Liner	8/18/2014	10,747.0	10,749.0	Niobrara, Original Hole
					Perforated Liner	8/18/2014	10,801.0	10,803.0	Niobrara, Original Hole
					Perforated Liner	8/17/2014	10,855.0	10,857.0	Niobrara, Original Hole
					Perforated Liner	8/17/2014	10,909.0	10,911.0	Niobrara, Original Hole
					Perforated Liner	8/17/2014	10,963.0	10,965.0	Niobrara, Original Hole
					Perforated Liner	8/17/2014	11,017.0	11,019.0	Niobrara, Original Hole
					Perforated Liner	8/17/2014	11,073.0	11,075.0	Niobrara, Original Hole
					Perforated Liner	8/17/2014	11,125.0	11,127.0	Niobrara, Original Hole
					Perforated Liner	8/17/2014	11,179.0	11,181.0	Niobrara, Original Hole
					Perforated Liner	8/17/2014	11,233.0	11,235.0	Niobrara, Original Hole
					Perforated Liner	8/17/2014	11,288.0	11,290.0	Niobrara, Original Hole
					Perforated Liner	8/17/2014	11,341.0	11,343.0	Niobrara, Original Hole
					Perforated Liner	8/17/2014	11,395.0	11,397.0	Niobrara, Original Hole
					Perforated Liner	8/17/2014	11,449.0	11,451.0	Niobrara, Original Hole
					Perforated Liner	8/17/2014	11,500.0	11,502.0	Niobrara, Original Hole
					Perforated Liner	8/17/2014	11,557.0	11,559.0	Niobrara, Original Hole
					Perforated Liner	8/17/2014	11,611.0	11,613.0	Niobrara, Original Hole
					Perforated Liner	8/17/2014	11,665.0	11,667.0	Niobrara, Original Hole
					Perforated Liner	8/17/2014	11,717.0	11,719.0	Niobrara, Original Hole
					Perforated Liner	8/17/2014	11,773.0	11,775.0	Niobrara, Original Hole
					Perforated Liner	8/17/2014	11,827.0	11,829.0	Niobrara, Original Hole
					Perforated Liner	8/17/2014	11,881.0	11,883.0	Niobrara, Original Hole
					Perforated Liner	8/17/2014	11,932.0	11,934.0	Niobrara, Original Hole
					Perforated Liner	8/17/2014	11,989.0	11,991.0	Niobrara, Original Hole
					Perforated Liner	8/17/2014	12,042.0	12,044.0	Niobrara, Original Hole
					Perforated Liner	8/17/2014	12,096.0	12,098.0	Niobrara, Original Hole
					Perforated Liner	8/16/2014	12,148.0	12,150.0	Niobrara, Original Hole
					Perforated Liner	8/16/2014	12,204.0	12,206.0	Niobrara, Original Hole
					Perforated Liner	8/16/2014	12,258.0	12,260.0	Niobrara, Original Hole
					Perforated Liner	8/16/2014	12,312.0	12,314.0	Niobrara, Original Hole
					Perforated Liner	8/16/2014	12,366.0	12,368.0	Niobrara, Original Hole
					Perforated Liner	8/16/2014	12,424.0	12,426.0	Niobrara, Original Hole
					Perforated Liner	8/16/2014	12,474.0	12,476.0	Niobrara, Original Hole
					Perforated Liner	8/16/2014	12,528.0	12,530.0	Niobrara, Original Hole
					Perforated Liner	8/16/2014	12,582.0	12,584.0	Niobrara, Original Hole
					Perforated Liner	8/16/2014	12,634.0	12,636.0	Niobrara, Original Hole
					Perforated Liner	8/16/2014	12,690.0	12,692.0	Niobrara, Original Hole
					Perforated Liner	8/16/2014	12,744.0	12,746.0	Niobrara, Original Hole
					Perforated Liner	8/16/2014	12,798.0	12,800.0	Niobrara, Original Hole
					Perforated Liner	8/16/2014	12,852.0	12,854.0	Niobrara, Original Hole
					Perforated Liner	8/16/2014	12,906.0	12,908.0	Niobrara, Original Hole
					Perforated Liner	8/16/2014	12,960.0	12,962.0	Niobrara, Original Hole
					Perforated Liner	8/16/2014	13,014.0	13,016.0	Niobrara, Original Hole
					Perforated Liner	8/16/2014	13,068.0	13,070.0	Niobrara, Original Hole
					Perforated Liner	8/16/2014	13,120.0	13,122.0	Niobrara, Original Hole
					Perforated Liner	8/16/2014	13,176.0	13,178.0	Niobrara, Original Hole
					Perforated Liner	8/16/2014	13,230.0	13,232.0	Niobrara, Original Hole
					Perforated Liner	8/15/2014	13,284.0	13,286.0	Niobrara, Original Hole
					Perforated Liner	8/15/2014	13,338.0	13,340.0	Niobrara, Original Hole
					Perforated Liner	8/15/2014	13,392.0	13,394.0	Niobrara, Original Hole
					Perforated Liner	8/15/2014	13,446.0	13,448.0	Niobrara, Original Hole
					Perforated Liner	8/15/2014	13,500.0	13,502.0	Niobrara, Original Hole
					Perforated Liner	8/15/2014	13,554.0	13,556.0	Niobrara, Original Hole
					Perforated Liner	8/15/2014	13,609.0	13,611.0	Niobrara, Original Hole
					Perforated Liner	8/15/2014	13,662.0	13,664.0	Niobrara, Original Hole
					Perforated Liner	8/15/2014	13,716.0	13,718.0	Niobrara, Original Hole
					Perforated Liner	8/14/2014	13,770.0	13,772.0	Niobrara, Original Hole
					Perforated Liner	8/14/2014	13,823.0	13,825.0	Niobrara, Original Hole
					Perforated Liner	8/14/2014	13,877.0	13,879.0	Niobrara, Original Hole
					Perforated Liner	8/14/2014	13,931.0	13,933.0	Niobrara, Original Hole
					Perforated Liner	8/14/2014	13,985.0	13,987.0	Niobrara, Original Hole



Lease Review All - Frac Summary

Well Name: HORSETAIL 33M-2804

API Number 051233924000	WPC ID 1CO0761083	Well Permit Number	Field Name DJ Horizontal Niobrara	County Weld	State CO
Well Configuration Type Lateral/Horizontal	Orig KB Elv (ft) 4,637.50	Ground Elevation (ft) 4,619.00	Casing Flange Elevation (ft)	Tubing Head Elevation (ft)	Total Depth (ftKB) 14,936.0
Original Spud Date 7/15/2014	Completion Date 8/22/2014	Asset Group Redtail	Responsible Engineer Charles Ohlson	N/S Dist (ft) 380.0	N/S Ref FSL
Lot	Quarter 1 SW	Quarter 2 SW	Quarter 3	Quarter 4	E/W Dist (ft) 750.0
			Section 33	Section Suffix	E/W Ref FWL
			Section Type	Township 10 N	Township N/S Dir
				Range 57 W	Range E/W Dir
					Meridian



Perforations					
Type of Hole	Date	Top (ftKB)	Btm (ftKB)	Zone	
Perforated Liner	8/14/2014	14,039.0	14,041.0	Niobrara, Original Hole	
Perforated Liner	8/14/2014	14,097.0	14,099.0	Niobrara, Original Hole	
Perforated Liner	8/14/2014	14,147.0	14,149.0	Niobrara, Original Hole	
Perforated Liner	8/14/2014	14,201.0	14,203.0	Niobrara, Original Hole	
Perforated Liner	8/14/2014	14,255.0	14,257.0	Niobrara, Original Hole	
Perforated Liner	8/14/2014	14,306.0	14,308.0	Niobrara, Original Hole	
Perforated Liner	8/14/2014	14,363.0	14,365.0	Niobrara, Original Hole	
Perforated Liner	8/13/2014	14,417.0	14,419.0	Niobrara, Original Hole	
Perforated Liner	8/13/2014	14,469.0	14,471.0	Niobrara, Original Hole	
Perforated Liner	8/13/2014	14,522.0	14,524.0	Niobrara, Original Hole	
Perforated Liner	8/13/2014	14,572.0	14,574.0	Niobrara, Original Hole	
Perforated Liner	8/13/2014	14,633.0	14,635.0	Niobrara, Original Hole	
Perforated Liner	8/13/2014	14,687.0	14,689.0	Niobrara, Original Hole	

Stimulations & Treatments									
Sand Frac on 8/13/2014 10:32									
Comment Treatment End Date:8/21/2014; Total number of staged intervals: 56 (from 0 thru 55); Total 15% HCl used: 848 bbl; Min frac gradient: 0.785 psi/ft; Number of perms: 1980; Slickwater: 44620 bbl; QuadraFrac Crosslink Gel: 12873 bbl; Linear Gel: 19914 bbl							Min Top De...	Max Btm De...	Frac Length (ft)
							5,834.0	14,689.0	9,123.00
Total Clean Volu...	Vol Slurry Tot (bbl)	Proppant Desig...	Proppant Frm (lb)	P Max (psi)	Avg Treat...	Avg Treat...	Max Tre...	Frac Gr...	
192254.80	203312.30	10,313,000.0	10,270,680.2	7,768.0	4,610.0	50.50	67.10	0.80	
Total Add Amount Proppant 20/40 WS 10108540.1 lb; Proppant 40/70 WS 162140.1 lb									
Stim/Treat Fluids									
Fluid Name QuadraFrac 20 XL Gel; 20# Linear Gel; 15% HCl									
Stim/Treat Stages									
Interval 0									
Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment			
0	8/13/2014	14,572.0	14,689.0	2039.80	2042.60	QuadraFrac XL Gel:323 bbl; Linear Gel:489 bbl; Slickwater:1205 bbl; 15% HCl:23bbl			
Stim/Treat Additives									
Stg #	Add	Type	Amount	Units	Sand Size				
0	Proppant	40/70 WS	2,587.7	lb	20/40				
Interval 1									
Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment			
1	8/13/2014	14,417.0	14,524.0	3869.90	3969.40	QuadraFrac XL Gel:2026 bbl; Linear Gel:801 bbl; Slickwater:1019 bbl; 15% HCl:23bbl			
Stim/Treat Additives									
Stg #	Add	Type	Amount	Units	Sand Size				
1	Proppant	20/40 WS	88,515.0	lb	20/40				
1	Proppant	40/70 WS	3,906.0	lb	40/70				
Interval 2									
Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment			
2	8/13/2014	14,255.0	14,365.0	3207.60	3344.00	QuadraFrac XL Gel:1995 bbl; Linear Gel:286 bbl; Slickwater:901 bbl; 15% HCl:26bbl			
Stim/Treat Additives									
Stg #	Add	Type	Amount	Units	Sand Size				
2	Proppant	20/40 WS	123,674.3	lb	20/40				
2	Proppant	40/70 WS	3,035.8	lb	40/70				
Interval 3									
Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment			
3	8/13/2014	14,097.0	14,203.0	3227.60	3363.20	QuadraFrac XL Gel:1984 bbl; Linear Gel:285 bbl; Slickwater:935 bbl; 15% HCl:24bbl			
Stim/Treat Additives									
Stg #	Add	Type	Amount	Units	Sand Size				
3	Proppant	20/40 WS	122,673.8	lb	20/40				
3	Proppant	40/70 WS	3,300.3	lb	40/70				
Interval 4									
Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment			
4	8/14/2014	13,931.0	14,041.0	3578.70	3784.50	QuadraFrac XL Gel:2368 bbl; Linear Gel:289 bbl; Slickwater:899 bbl; 15% HCl:23bbl			
Stim/Treat Additives									
Stg #	Add	Type	Amount	Units	Sand Size				
4	Proppant	20/40 WS	188,121.2	lb	20/40				
4	Proppant	40/70 WS	3,026.4	lb	40/70				
Interval 5									
Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment			
5	8/14/2014	13,770.0	13,879.0	3529.50	3736.50	QuadraFrac XL Gel:2314 bbl; Linear Gel:287 bbl; Slickwater:904 bbl; 15% HCl:24bbl			
Stim/Treat Additives									
Stg #	Add	Type	Amount	Units	Sand Size				
5	Proppant	20/40 WS	189,183.6	lb	20/40				
5	Proppant	40/70 WS	3,088.7	lb	40/70				

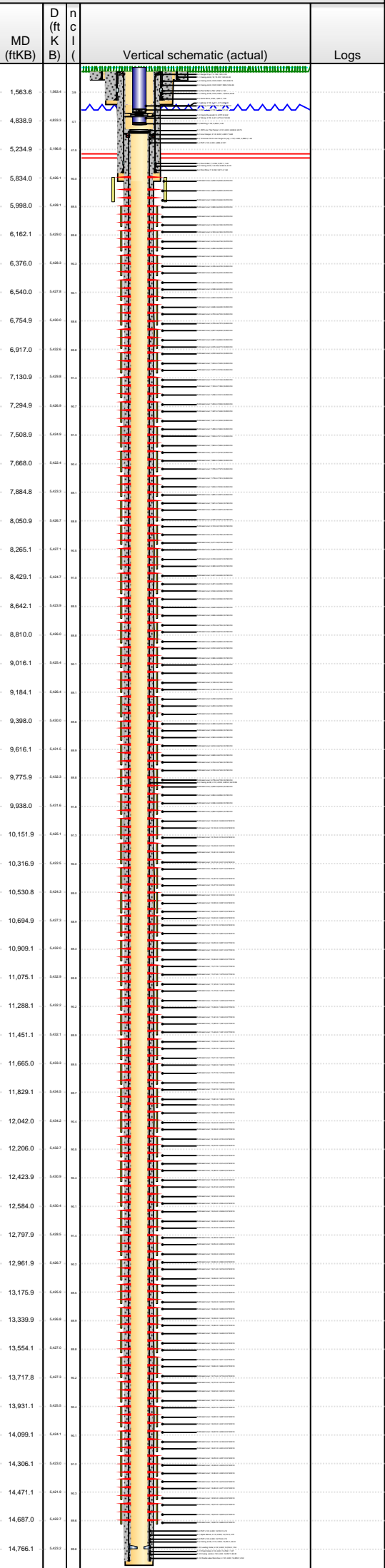


Lease Review All - Frac Summary

Well Name: HORSETAIL 33M-2804

API Number 051233924000	WPC ID 1CO0761083	Well Permit Number	Field Name DJ Horizontal Niobrara	County Weld	State CO
Well Configuration Type Lateral/Horizontal	Orig KB Elv (ft) 4,637.50	Ground Elevation (ft) 4,619.00	Casing Flange Elevation (ft)	Tubing Head Elevation (ft)	Total Depth (ftKB) 14,936.0
Original Spud Date 7/15/2014	Completion Date 8/22/2014	Asset Group Redtail	Responsible Engineer Charles Ohlson	N/S Dist (ft) 380.0	N/S Ref FSL
Lot	Quarter 1 SW	Quarter 2 SW	Quarter 3	Quarter 4	E/W Dist (ft) 750.0
			Section 33	Section Suffix	E/W Ref FWL
			Section Type	Township 10 N	Township N/S Dir
				Range 57	Range E/W Dir W
					Meridian

Lateral/Horizontal - Original Hole, 11/19/2014 1:28:55 PM



Stim/Treat Stages

Interval 6						
Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment
6	8/14/2014	13,609.0	13,718.0	3951.90	4151.30	QuadraFrac XL Gel:2537 bbl; Linear Gel:306 bbl; Slickwater:1073 bbl; 15% HCl:36bbl

Stim/Treat Additives						
Stg #	Add	Type	Amount	Units	Sand Size	
6	Proppant	20/40 WS	182,100.8	lb	20/40	
6	Proppant	40/70 WS	3,146.8	lb	40/70	

Interval 7						
Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment
7	8/15/2014	13,446.0	13,556.0	3725.50	3931.60	QuadraFrac XL Gel:2499 bbl; Linear Gel:349 bbl; Slickwater:852 bbl; 15% HCl:25bbl

Stim/Treat Additives						
Stg #	Add	Type	Amount	Units	Sand Size	
7	Proppant	20/40 WS	188,992.0	lb	20/40	
7	Proppant	40/70 WS	2,397.9	lb	40/70	

Interval 8						
Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment
8	8/15/2014	13,284.0	13,394.0	3547.30	3755.00	QuadraFrac XL Gel:2377 bbl; Linear Gel:288 bbl; Slickwater:854 bbl; 15% HCl:28bbl

Stim/Treat Additives						
Stg #	Add	Type	Amount	Units	Sand Size	
8	Proppant	20/40 WS	190,171.9	lb	20/40	
8	Proppant	40/70 WS	2,791.0	lb	40/70	

Interval 9						
Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment
9	8/15/2014	13,120.0	13,232.0	3448.80	3633.80	QuadraFrac XL Gel:2268 bbl; Linear Gel:287 bbl; Slickwater:869 bbl; 15% HCl:25bbl

Stim/Treat Additives						
Stg #	Add	Type	Amount	Units	Sand Size	
9	Proppant	20/40 WS	169,021.4	lb	20/40	
9	Proppant	40/70 WS	2,795.2	lb	40/70	

Interval 10						
Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment
10	8/15/2014	12,960.0	13,070.0	3548.20	3756.00	QuadraFrac XL Gel:2384 bbl; Linear Gel:287 bbl; Slickwater:862 bbl; 15% HCl:15bbl

Stim/Treat Additives						
Stg #	Add	Type	Amount	Units	Sand Size	
10	Proppant	20/40 WS	190,180.9	lb	20/40	
10	Proppant	40/70 WS	2,843.9	lb	40/70	

Interval 11						
Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment
11	8/16/2014	12,798.0	12,908.0	3572.80	3779.70	QuadraFrac XL Gel:2394 bbl; Linear Gel:286 bbl; Slickwater:869 bbl; 15% HCl:23bbl

Stim/Treat Additives						
Stg #	Add	Type	Amount	Units	Sand Size	
11	Proppant	20/40 WS	189,278.2	lb	20/40	
11	Proppant	40/70 WS	2,885.4	lb	40/70	

Interval 12						
Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment
12	8/16/2014	12,634.0	12,746.0	3626.80	3838.90	QuadraFrac XL Gel:2401 bbl; Linear Gel:314 bbl; Slickwater:887 bbl; 15% HCl:25bbl

Stim/Treat Additives						
Stg #	Add	Type	Amount	Units	Sand Size	
12	Proppant	20/40 WS	194,237.5	lb	20/40	
12	Proppant	40/70 WS	2,796.2	lb	40/70	

Interval 13						
Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment
13	8/16/2014	12,474.0	12,584.0	3573.00	3779.60	QuadraFrac XL Gel:2370 bbl; Linear Gel:310 bbl; Slickwater:863 bbl; 15% HCl:30bbl

Stim/Treat Additives						
Stg #	Add	Type	Amount	Units	Sand Size	
13	Proppant	20/40 WS	189,303.2	lb	20/40	
13	Proppant	40/70 WS	2,587.7	lb	40/70	

Interval 14						
Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment
14	8/16/2014	12,312.0	12,426.0	3544.20	3757.70	QuadraFrac XL Gel:2352 bbl; Linear Gel:305 bbl; Slickwater:854 bbl; 15% HCl:33bbl

Stim/Treat Additives						
Stg #	Add	Type	Amount	Units	Sand Size	
14	Proppant	20/40 WS	195,761.5	lb	20/40	
14	Proppant	40/70 WS	2,540.0	lb	40/70	

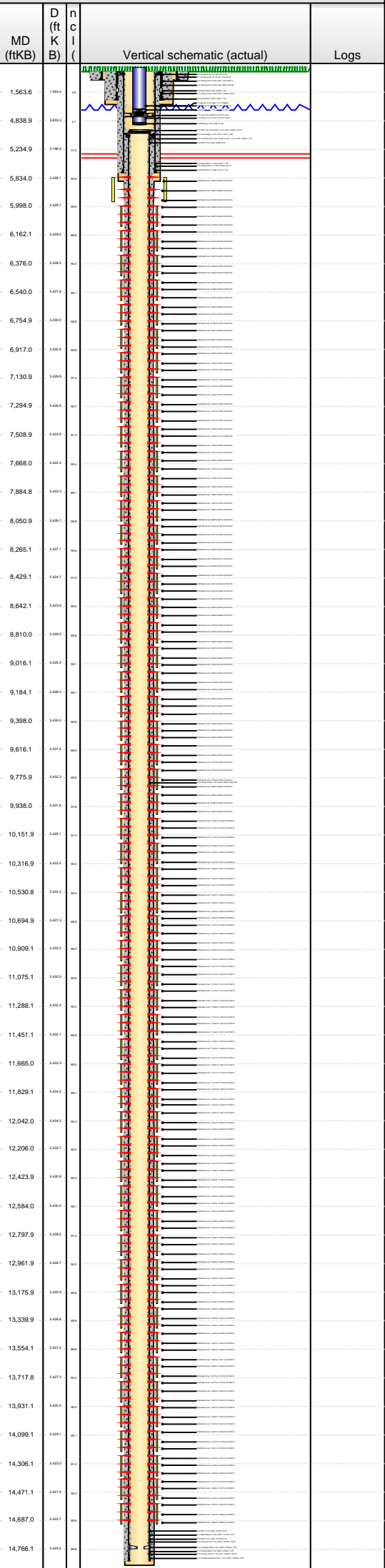


Lease Review All - Frac Summary

Well Name: HORSETAIL 33M-2804

API Number 051233924000	WPC ID 1CO0761083	Well Permit Number	Field Name DJ Horizontal Niobrara	County Weld	State CO
Well Configuration Type Lateral/Horizontal	Orig KB Elv (ft) 4,637.50	Ground Elevation (ft) 4,619.00	Casing Flange Elevation (ft)	Tubing Head Elevation (ft)	Total Depth (ftKB) 14,936.0
Original Spud Date 7/15/2014	Completion Date 8/22/2014	Asset Group Redtail	Responsible Engineer Charles Ohlson	N/S Dist (ft) 380.0	N/S Ref FSL
Lot	Quarter 1 SW	Quarter 2 SW	Quarter 3	Quarter 4	E/W Dist (ft) 750.0
			Section 33	Section Suffix	E/W Ref FWL
			Section Type	Township 10 N	Township N/S Dir
				Range 57	Range E/W Dir W
					Meridian

Lateral/Horizontal - Original Hole, 11/19/2014 1:28:57 PM



Stim/Treat Stages

Interval 15						
Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment
15	8/16/2014	12,148.0	12,260.0	3546.20	3754.30	QuadraFrac XL Gel:2381 bbl; Linear Gel:294 bbl; Slickwater:844 bbl; 15% HCl:27bbl
Stim/Treat Additives						
Stg #	Add	Type	Amount	Units	Sand Size	
15	Proppant	20/40 WS	190,334.5	lb	20/40	
15	Proppant	40/70 WS	2,995.3	lb	40/70	
Interval 16						
Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment
16	8/16/2014	11,989.0	12,098.0	3537.00	3743.50	QuadraFrac XL Gel:2362 bbl; Linear Gel:285 bbl; Slickwater:868 bbl; 15% HCl:22bbl
Stim/Treat Additives						
Stg #	Add	Type	Amount	Units	Sand Size	
16	Proppant	20/40 WS	189,285.2	lb	20/40	
16	Proppant	40/70 WS	2,502.7	lb	40/70	
Interval 17						
Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment
17	8/16/2014	11,827.0	11,934.0	3515.30	3719.00	QuadraFrac XL Gel:2371 bbl; Linear Gel:285 bbl; Slickwater:829 bbl; 15% HCl:30bbl
Stim/Treat Additives						
Stg #	Add	Type	Amount	Units	Sand Size	
17	Proppant	20/40 WS	186,435.5	lb	20/40	
17	Proppant	40/70 WS	2,756.8	lb	40/70	
Interval 18						
Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment
18	8/17/2014	11,665.0	11,775.0	3492.00	3700.60	QuadraFrac XL Gel:2348 bbl; Linear Gel:286 bbl; Slickwater:835 bbl; 15% HCl:23bbl
Stim/Treat Additives						
Stg #	Add	Type	Amount	Units	Sand Size	
18	Proppant	20/40 WS	190,804.1	lb	20/40	
18	Proppant	40/70 WS	2,987.0	lb	40/70	
Interval 19						
Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment
19	8/17/2014	11,665.0	11,775.0	3495.40	3700.00	QuadraFrac XL Gel:2344 bbl; Linear Gel:286 bbl; Slickwater:844 bbl; 15% HCl:22bbl
Stim/Treat Additives						
Stg #	Add	Type	Amount	Units	Sand Size	
19	Proppant	20/40 WS	187,168.6	lb	20/40	
19	Proppant	40/70 WS	2,901.0	lb	40/70	
Interval 20						
Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment
20	8/17/2014	11,500.0	11,613.0	3521.50	3727.70	QuadraFrac XL Gel:2354 bbl; Linear Gel:286 bbl; Slickwater:861 bbl; 15% HCl:21bbl
Stim/Treat Additives						
Stg #	Add	Type	Amount	Units	Sand Size	
20	Proppant	20/40 WS	188,654.9	lb	20/40	
20	Proppant	40/70 WS	2,910.3	lb	40/70	
Interval 21						
Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment
21	8/17/2014	11,341.0	11,451.0	3523.10	3729.30	QuadraFrac XL Gel:2336 bbl; Linear Gel:287 bbl; Slickwater:876 bbl; 15% HCl:24bbl
Stim/Treat Additives						
Stg #	Add	Type	Amount	Units	Sand Size	
21	Proppant	20/40 WS	188,651.8	lb	20/40	
21	Proppant	40/70 WS	2,912.4	lb	40/70	
Interval 22						
Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment
22	8/17/2014	11,179.0	11,290.0	3507.20	3726.20	QuadraFrac XL Gel:2384 bbl; Linear Gel:270 bbl; Slickwater:830 bbl; 15% HCl:23bbl
Stim/Treat Additives						
Stg #	Add	Type	Amount	Units	Sand Size	
22	Proppant	20/40 WS	200,680.9	lb	20/40	
22	Proppant	40/70 WS	2,775.5	lb	40/70	
Interval 23						
Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment
23	8/17/2014	11,017.0	11,127.0	3501.00	3707.50	QuadraFrac XL Gel:2375 bbl; Linear Gel:286 bbl; Slickwater:816 bbl; 15% HCl:24bbl
Stim/Treat Additives						
Stg #	Add	Type	Amount	Units	Sand Size	
23	Proppant	20/40 WS	189,083.7	lb	20/40	
23	Proppant	40/70 WS	2,716.3	lb	40/70	

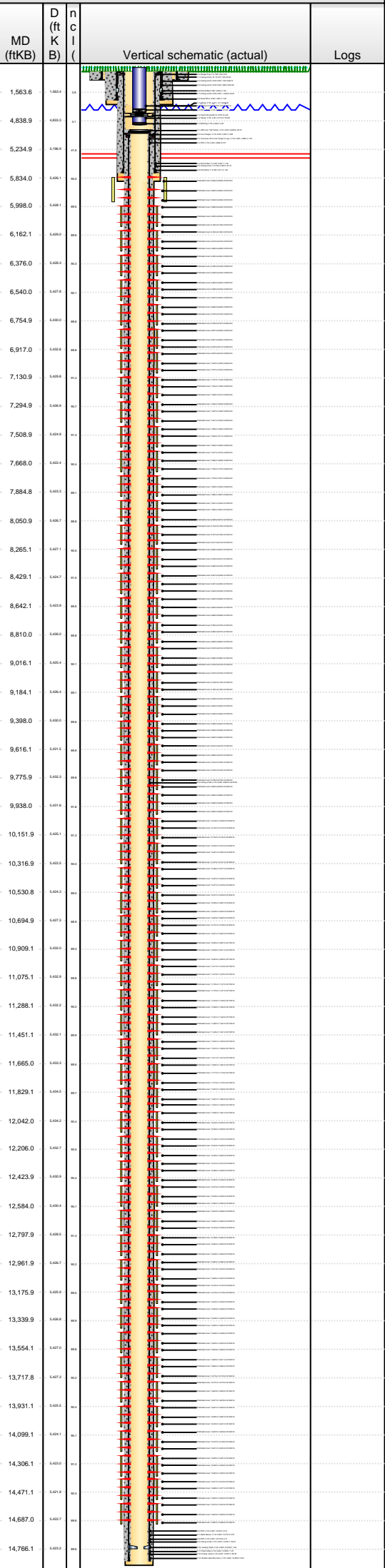


Lease Review All - Frac Summary

Well Name: HORSETAIL 33M-2804

API Number 051233924000	WPC ID 1CO0761083	Well Permit Number	Field Name DJ Horizontal Niobrara	County Weld	State CO
Well Configuration Type Lateral/Horizontal	Orig KB Elv (ft) 4,637.50	Ground Elevation (ft) 4,619.00	Casing Flange Elevation (ft)	Tubing Head Elevation (ft)	Total Depth (ftKB) 14,936.0
Original Spud Date 7/15/2014	Completion Date 8/22/2014	Asset Group Redtail	Responsible Engineer Charles Ohlson	N/S Dist (ft) 380.0	N/S Ref FSL
Lot	Quarter 1 SW	Quarter 2 SW	Quarter 3	Quarter 4	E/W Dist (ft) 750.0
			Section 33	Section Suffix	E/W Ref FWL
			Section Type	Township 10 N	Township N/S Dir
				Range 57	Range E/W Dir W
					Meridian

Lateral/Horizontal - Original Hole, 11/19/2014 1:28:59 PM



Stim/Treat Stages

Interval	Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment
Interval 24	24	8/17/2014	10,855.0	10,965.0	3522.70	3727.50	QuadraFrac XL Gel:2384 bbl; Linear Gel:277 bbl; Slickwater:839 bbl; 15% HCl:23bbl
Stim/Treat Additives							
Stg #	Add	Type	Amount	Units	Sand Size		
24	Proppant	20/40 WS	187,862.9	lb	20/40		
24	Proppant	40/70 WS	2,400.0	lb	40/70		
Interval 25	25	8/17/2014	10,693.0	10,803.0	3490.90	3684.40	QuadraFrac XL Gel:2344 bbl; Linear Gel:279 bbl; Slickwater:845 bbl; 15% HCl:23bbl
Stim/Treat Additives							
Stg #	Add	Type	Amount	Units	Sand Size		
25	Proppant	20/40 WS	176,822.4	lb	20/40		
25	Proppant	40/70 WS	2,887.5	lb	40/70		
Interval 26	26	8/18/2014	10,531.0	10,637.0	3475.00	3675.20	QuadraFrac XL Gel:2357 bbl; Linear Gel:278 bbl; Slickwater:817 bbl; 15% HCl:23bbl
Stim/Treat Additives							
Stg #	Add	Type	Amount	Units	Sand Size		
26	Proppant	20/40 WS	183,394.5	lb	20/40		
26	Proppant	40/70 WS	2,585.7	lb	40/70		
Interval 27	27	8/18/2014	10,369.0	10,479.0	3399.50	3594.40	QuadraFrac XL Gel:2337 bbl; Linear Gel:288 bbl; Slickwater:753 bbl; 15% HCl:22bbl
Stim/Treat Additives							
Stg #	Add	Type	Amount	Units	Sand Size		
27	Proppant	20/40 WS	178,102.0	lb	20/40		
27	Proppant	40/70 WS	2,901.0	lb	40/70		
Interval 28	28	8/18/2014	10,208.0	10,317.0	3419.80	3632.50	QuadraFrac XL Gel:2357 bbl; Linear Gel:285 bbl; Slickwater:756 bbl; 15% HCl:23bbl
Stim/Treat Additives							
Stg #	Add	Type	Amount	Units	Sand Size		
28	Proppant	20/40 WS	194,525.7	lb	20/40		
28	Proppant	40/70 WS	3,063.8	lb	40/70		
Interval 29	29	8/18/2014	10,046.0	10,154.0	3446.80	3656.10	QuadraFrac XL Gel:2387 bbl; Linear Gel:288 bbl; Slickwater:744 bbl; 15% HCl:28bbl
Stim/Treat Additives							
Stg #	Add	Type	Amount	Units	Sand Size		
29	Proppant	20/40 WS	191,333.0	lb	20/40		
29	Proppant	40/70 WS	3,052.4	lb	40/70		
Interval 30	30	8/18/2014	9,884.0	9,994.0	3413.30	3620.20	QuadraFrac XL Gel:2372 bbl; Linear Gel:287 bbl; Slickwater:727 bbl; 15% HCl:28bbl
Stim/Treat Additives							
Stg #	Add	Type	Amount	Units	Sand Size		
30	Proppant	20/40 WS	189,128.6	lb	20/40		
30	Proppant	40/70 WS	3,069.0	lb	40/70		
Interval 31	31	8/18/2014	9,740.0	9,832.0	3405.70	3609.50	QuadraFrac XL Gel:2364 bbl; Linear Gel:287 bbl; Slickwater:728 bbl; 15% HCl:27bbl
Stim/Treat Additives							
Stg #	Add	Type	Amount	Units	Sand Size		
31	Proppant	20/40 WS	186,295.8	lb	20/40		
31	Proppant	40/70 WS	2,967.3	lb	40/70		
Interval 32	32	8/18/2014	9,614.0	9,726.0	3413.30	3619.70	QuadraFrac XL Gel:2423 bbl; Linear Gel:285 bbl; Slickwater:705 bbl; 15% HCl:0bbl
Stim/Treat Additives							
Stg #	Add	Type	Amount	Units	Sand Size		
32	Proppant	20/40 WS	188,733.6	lb	20/40		
32	Proppant	40/70 WS	2,934.1	lb	40/70		

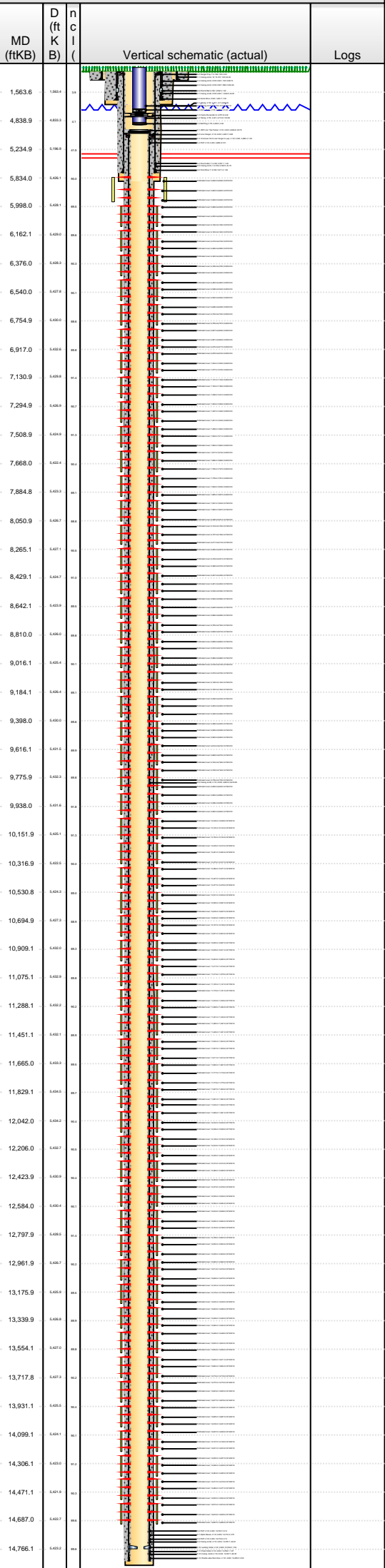


Lease Review All - Frac Summary

Well Name: HORSETAIL 33M-2804

API Number 051233924000	WPC ID 1CO0761083	Well Permit Number	Field Name DJ Horizontal Niobrara	County Weld	State CO
Well Configuration Type Lateral/Horizontal	Orig KB Elv (ft) 4,637.50	Ground Elevation (ft) 4,619.00	Casing Flange Elevation (ft)	Tubing Head Elevation (ft)	Total Depth (ftKB) 14,936.0
Original Spud Date 7/15/2014	Completion Date 8/22/2014	Asset Group Redtail	Responsible Engineer Charles Ohlson	N/S Dist (ft) 380.0	N/S Ref FSL
Lot	Quarter 1 SW	Quarter 2 SW	Quarter 3	Quarter 4	E/W Dist (ft) 750.0
			Section 33	Section Suffix	E/W Ref FWL
			Section Type	Township 10 N	Township N/S Dir
				Range 57	Range E/W Dir W
					Meridian

Lateral/Horizontal - Original Hole, 11/19/2014 1:29:01 PM



Stim/Treat Stages

Interval	Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment
Interval 33	33	8/18/2014	9,398.0	9,562.0	3438.90	3646.80	QuadraFrac XL Gel:2363 bbl; Linear Gel:291 bbl; Slickwater:785 bbl; 15% HCl:0bbl
Stim/Treat Additives							
Stg #	Add	Type	Amount	Units	Sand Size		
33	Proppant	20/40 WS	190,048.1	lb	20/40		
33	Proppant	40/70 WS	3,075.2	lb	40/70		
Interval 34	34	8/19/2014	9,232.0	9,346.0	3340.40	3550.30	QuadraFrac XL Gel:2345 bbl; Linear Gel:278 bbl; Slickwater:717 bbl; 15% HCl:0bbl
Stim/Treat Additives							
Stg #	Add	Type	Amount	Units	Sand Size		
34	Proppant	20/40 WS	191,973.3	lb	20/40		
34	Proppant	40/70 WS	2,964.2	lb	40/70		
Interval 35	35	8/19/2014	9,074.0	9,184.0	3373.40	3575.60	QuadraFrac XL Gel:2384 bbl; Linear Gel:285 bbl; Slickwater:705 bbl; 15% HCl:0bbl
Stim/Treat Additives							
Stg #	Add	Type	Amount	Units	Sand Size		
35	Proppant	20/40 WS	184,904.5	lb	20/40		
35	Proppant	40/70 WS	2,870.9	lb	40/70		
Interval 36	36	8/19/2014	8,912.0	9,018.0	3355.90	3558.90	QuadraFrac XL Gel:2367 bbl; Linear Gel:279 bbl; Slickwater:710 bbl; 15% HCl:0bbl
Stim/Treat Additives							
Stg #	Add	Type	Amount	Units	Sand Size		
36	Proppant	20/40 WS	186,014.6	lb	20/40		
36	Proppant	40/70 WS	2,573.2	lb	40/70		
Interval 37	37	8/19/2014	8,750.0	8,860.0	3378.90	3582.70	QuadraFrac XL Gel:2360 bbl; Linear Gel:302 bbl; Slickwater:717 bbl; 15% HCl:0bbl
Stim/Treat Additives							
Stg #	Add	Type	Amount	Units	Sand Size		
37	Proppant	20/40 WS	186,582.2	lb	20/40		
37	Proppant	40/70 WS	2,757.8	lb	40/70		
Interval 38	38	8/19/2014	8,594.0	8,698.0	3355.30	3556.30	QuadraFrac XL Gel:2368 bbl; Linear Gel:276 bbl; Slickwater:711 bbl; 15% HCl:0bbl
Stim/Treat Additives							
Stg #	Add	Type	Amount	Units	Sand Size		
38	Proppant	20/40 WS	184,148.5	lb	20/40		
38	Proppant	40/70 WS	2,559.7	lb	40/70		
Interval 39	39	8/19/2014	8,427.0	8,536.0	3377.20	3585.20	QuadraFrac XL Gel:2341 bbl; Linear Gel:288 bbl; Slickwater:749 bbl; 15% HCl:0bbl
Stim/Treat Additives							
Stg #	Add	Type	Amount	Units	Sand Size		
39	Proppant	20/40 WS	190,196.0	lb	20/40		
39	Proppant	40/70 WS	3,008.8	lb	40/70		
Interval 40	40	8/19/2014	8,265.0	8,370.0	3374.20	3579.20	QuadraFrac XL Gel:2387 bbl; Linear Gel:313 bbl; Slickwater:675 bbl; 15% HCl:0bbl
Stim/Treat Additives							
Stg #	Add	Type	Amount	Units	Sand Size		
40	Proppant	20/40 WS	187,355.2	lb	20/40		
40	Proppant	40/70 WS	3,051.3	lb	40/70		
Interval 41	41	8/19/2014	8,103.0	8,213.0	3356.30	3562.00	QuadraFrac XL Gel:2375 bbl; Linear Gel:291 bbl; Slickwater:691 bbl; 15% HCl:0bbl
Stim/Treat Additives							
Stg #	Add	Type	Amount	Units	Sand Size		
41	Proppant	20/40 WS	187,982.5	lb	20/40		
41	Proppant	40/70 WS	3,080.4	lb	40/70		

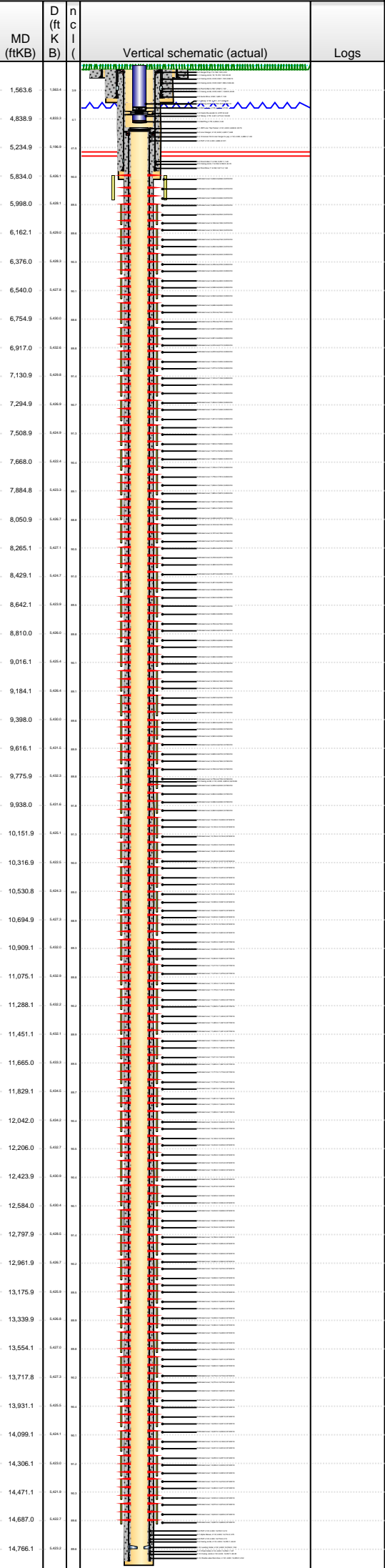


Lease Review All - Frac Summary

Well Name: HORSETAIL 33M-2804

API Number 051233924000	WPC ID 1CO0761083	Well Permit Number	Field Name DJ Horizontal Niobrara	County Weld	State CO
Well Configuration Type Lateral/Horizontal	Orig KB Elv (ft) 4,637.50	Ground Elevation (ft) 4,619.00	Casing Flange Elevation (ft)	Tubing Head Elevation (ft)	Total Depth (ftKB) 14,936.0
Original Spud Date 7/15/2014	Completion Date 8/22/2014	Asset Group Redtail	Responsible Engineer Charles Ohlson	N/S Dist (ft) 380.0	N/S Ref FSL
Lot	Quarter 1 SW	Quarter 2 SW	Quarter 3	Quarter 4	E/W Dist (ft) 750.0
			Section 33	Section Suffix	E/W Ref FWL
			Section Type	Township 10 N	Township N/S Dir
				Range 57	Range E/W Dir W
					Meridian

Lateral/Horizontal - Original Hole, 11/19/2014 1:29:04 PM



Stim/Treat Stages							
Interval	Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment
Interval 42	42	8/19/2014	7,941.0	8,051.0	3399.30	3603.80	QuadraFrac XL Gel:2371 bbl; Linear Gel:291 bbl; Slickwater:737 bbl; 15% HCl:0bbl
Stim/Treat Additives							
Stg #	Add	Type	Amount	Units	Sand Size		
42	Proppant	20/40 WS	186,907.3	lb	20/40		
42	Proppant	40/70 WS	3,007.8	lb	40/70		
Interval 43	43	8/19/2014	7,779.0	7,887.0	3340.30	3544.80	QuadraFrac XL Gel:2370 bbl; Linear Gel:288 bbl; Slickwater:682 bbl; 15% HCl:0bbl
Stim/Treat Additives							
Stg #	Add	Type	Amount	Units	Sand Size		
43	Proppant	20/40 WS	186,791.6	lb	20/40		
43	Proppant	40/70 WS	3,125.0	lb	40/70		
Interval 44	44	8/20/2014	7,617.0	7,727.0	3316.50	3522.70	QuadraFrac XL Gel:2350 bbl; Linear Gel:286 bbl; Slickwater:680 bbl; 15% HCl:0bbl
Stim/Treat Additives							
Stg #	Add	Type	Amount	Units	Sand Size		
44	Proppant	20/40 WS	188,497.2	lb	20/40		
44	Proppant	40/70 WS	2,987.0	lb	40/70		
Interval 45	45	8/20/2014	7,458.0	7,565.0	3567.00	3777.10	QuadraFrac XL Gel:2362 bbl; Linear Gel:288 bbl; Slickwater:888 bbl; 15% HCl:29bbl
Stim/Treat Additives							
Stg #	Add	Type	Amount	Units	Sand Size		
45	Proppant	20/40 WS	192,299.4	lb	20/40		
45	Proppant	40/70 WS	2,813.8	lb	40/70		
Interval 46	46	8/20/2014	7,293.0	7,403.0	3504.10	3711.20	QuadraFrac XL Gel:2440 bbl; Linear Gel:286 bbl; Slickwater:755 bbl; 15% HCl:23bbl
Stim/Treat Additives							
Stg #	Add	Type	Amount	Units	Sand Size		
46	Proppant	20/40 WS	189,047.8	lb	20/40		
46	Proppant	40/70 WS	3,289.9	lb	40/70		
Interval 47	47	8/20/2014	7,131.0	7,241.0	3366.80	3568.60	QuadraFrac XL Gel:2367 bbl; Linear Gel:283 bbl; Slickwater:717 bbl; 15% HCl:0bbl
Stim/Treat Additives							
Stg #	Add	Type	Amount	Units	Sand Size		
47	Proppant	20/40 WS	185,518.9	lb	20/40		
47	Proppant	40/70 WS	1,963.4	lb	40/70		
Interval 48	48	8/20/2014	6,972.0	7,079.0	3367.00	3572.40	QuadraFrac XL Gel:2384 bbl; Linear Gel:288 bbl; Slickwater:695 bbl; 15% HCl:0bbl
Stim/Treat Additives							
Stg #	Add	Type	Amount	Units	Sand Size		
48	Proppant	20/40 WS	187,857.9	lb	20/40		
48	Proppant	40/70 WS	2,883.3	lb	40/70		
Interval 49	49	8/20/2014	6,807.0	6,917.0	3347.60	3551.40	QuadraFrac XL Gel:2382 bbl; Linear Gel:287 bbl; Slickwater:678 bbl; 15% HCl:0bbl
Stim/Treat Additives							
Stg #	Add	Type	Amount	Units	Sand Size		
49	Proppant	20/40 WS	186,404.7	lb	20/40		
49	Proppant	40/70 WS	2,878.1	lb	40/70		
Interval 50	50	8/20/2014	6,646.0	6,757.0	3448.00	3658.30	QuadraFrac XL Gel:2487 bbl; Linear Gel:285 bbl; Slickwater:676 bbl; 15% HCl:0bbl
Stim/Treat Additives							
Stg #	Add	Type	Amount	Units	Sand Size		
50	Proppant	20/40 WS	192,047.2	lb	20/40		
50	Proppant	40/70 WS	3,246.3	lb	40/70		

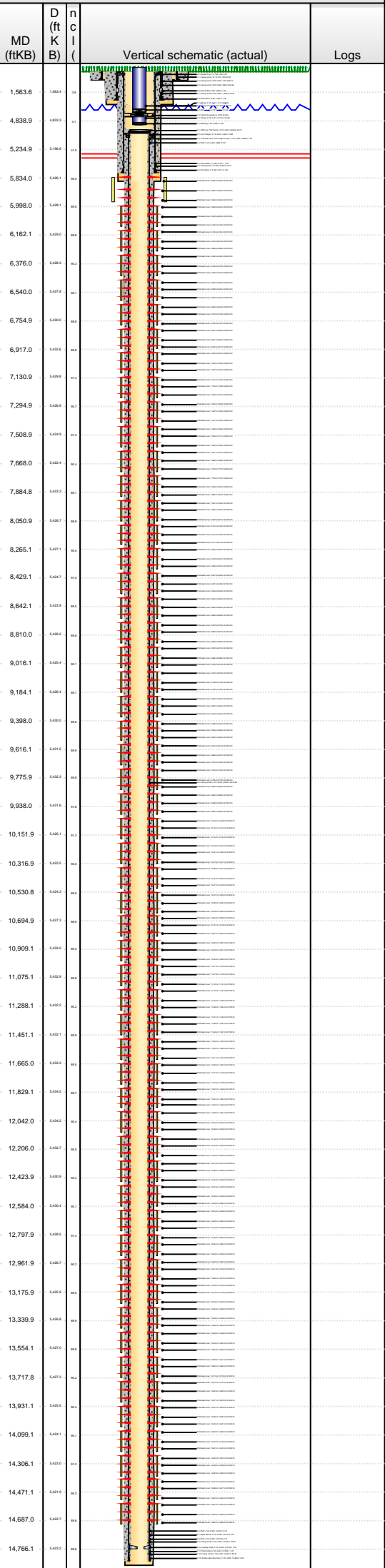


Lease Review All - Frac Summary

Well Name: HORSETAIL 33M-2804

API Number 051233924000		WPC ID 1CO0761083		Well Permit Number		Field Name DJ Horizontal Niobrara		County Weld		State CO	
Well Configuration Type Lateral/Horizontal		Orig KB Elv (ft) 4,637.50		Ground Elevation (ft) 4,619.00		Casing Flange Elevation (ft)		Tubing Head Elevation (ft)		Total Depth (ftKB) 14,936.0	
Original Spud Date 7/15/2014		Completion Date 8/22/2014		Asset Group Redtail		Responsible Engineer Charles Ohlson		N/S Dist (ft) 380.0		E/W Dist (ft) 750.0	
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 57 W

Lateral/Horizontal - Original Hole, 11/19/2014 1:29:06 PM



Stim/Treat Stages

Interval 51						
Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment
51	8/20/2014	6,480.0	6,594.0	3357.40	3563.60	QuadraFrac XL Gel:2416 bbl; Linear Gel:287 bbl; Slickwater:654 bbl; 15% HCl:0bbl

Stim/Treat Additives					
Stg #	Add	Type	Amount	Units	Sand Size
51	Proppant	20/40 WS	188,556.0	lb	20/40
51	Proppant	40/70 WS	2,946.6	lb	40/70

Interval 52						
Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment
52	8/20/2014	6,322.0	6,432.0	3388.40	3595.50	QuadraFrac XL Gel:2417 bbl; Linear Gel:297 bbl; Slickwater:675 bbl; 15% HCl:0bbl

Stim/Treat Additives					
Stg #	Add	Type	Amount	Units	Sand Size
52	Proppant	20/40 WS	189,383.0	lb	20/40
52	Proppant	40/70 WS	3,022.3	lb	40/70

Interval 53						
Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment
53	8/20/2014	6,160.0	6,268.0	3322.30	3528.50	QuadraFrac XL Gel:2393 bbl; Linear Gel:286 bbl; Slickwater:644 bbl; 15% HCl:0bbl

Stim/Treat Additives					
Stg #	Add	Type	Amount	Units	Sand Size
53	Proppant	20/40 WS	188,534.1	lb	20/40
53	Proppant	40/70 WS	3,005.7	lb	40/70

Interval 54						
Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment
54	8/20/2014	5,998.0	6,108.0	3317.40	3522.60	QuadraFrac XL Gel:2375 bbl; Linear Gel:287 bbl; Slickwater:655 bbl; 15% HCl:0bbl

Stim/Treat Additives					
Stg #	Add	Type	Amount	Units	Sand Size
54	Proppant	20/40 WS	187,608.5	lb	20/40
54	Proppant	40/70 WS	3,006.7	lb	40/70

Interval 55						
Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment
55	8/21/2014	5,834.0	5,946.0	3244.90	3443.40	QuadraFrac XL Gel:2301 bbl; Linear Gel:288 bbl; Slickwater:657 bbl; 15% HCl:0bbl

Stim/Treat Additives					
Stg #	Add	Type	Amount	Units	Sand Size
55	Proppant	20/40 WS	181,368.6	lb	20/40
55	Proppant	40/70 WS	2,975.6	lb	40/70

Tubing - Production set at 4,839.4ftKB on 9/3/2014 13:00

Item Des	OD (in)	ID (in)	Len (ft)	Top (ftKB)	Btm (ftKB)
Tubing	2 7/8	2.441	4,626.40	-0.7	4,625.8
ESP - Pump	2 7/8		81.88	4,625.8	4,707.6
Cavins De-sander	6		6.42	4,707.6	4,714.1
Tubing	2 7/8	2.441	124.93	4,714.1	4,839.0
Bull Plug	2 7/8		0.40	4,839.0	4,839.4

Rod Strings

Item Des	OD (in)	Len (ft)	Top (ftKB)	Btm (ftKB)	
BRIDGE PLUG	4	8/21/2014	8/27/2014	5,424.0	5,426.0

Other Strings

Item Des	OD (in)	Len (ft)	Top (ftKB)	Btm (ftKB)	
CFP	4	8/21/2014	8/27/2014	5,974.0	5,976.0

Other In Hole

Des	OD (in)	Run Date	Pull Date	Top (ftKB)	Btm (ftKB)
CFP	4	8/21/2014	8/27/2014	6,133.0	6,135.0
CFP	4	8/21/2014	8/27/2014	6,295.0	6,297.0
CFP	4	8/20/2014	8/27/2014	6,457.0	6,459.0
CFP	4	8/20/2014	8/27/2014	6,614.0	6,616.0
CFP	4	8/20/2014	8/27/2014	6,780.0	6,782.0
CFP	4	8/20/2014	8/27/2014	6,942.0	6,944.0
CFP	4	8/20/2014	8/27/2014	7,106.0	7,108.0
CFP	4	8/20/2014	8/27/2014	7,266.0	7,268.0
CFP	4	8/20/2014	8/27/2014	7,428.0	7,430.0
CFP	4	8/20/2014	8/27/2014	7,590.0	7,592.0
CFP	4	8/20/2014	8/27/2014	7,752.0	7,754.0

