

Lease Review All CR													
Well Name: RAZOR 271-3415A													
API Number		WPC ID		Well Permit Number		Field Name		County		State			
051233789800		1CO076904				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		4,773.00		4,756.50						12,525.0			
Original Spud Date		Completion Date		Asset Group		Responsible Engineer		N/S Dist (ft)		N/S Ref		E/W Dist (ft)	
12/16/2013		4/18/2014		Redtail Asset Group		Andrew Fish		2,394.0		FSL		692.0	
Lot		Quarter 1	Quarter 2	Quarter 3	Quarter 4	Section	Section Suffix	Section Type	Township	Township N/S Dir	Range	Range E/W Dir	Meridian
		NE	SE			27			10	N	58	W	
Lateral/Horizontal - Original Hole, 5/20/2014 1:58:03 PM													
Wellbore Sections													
Wellbore Name		Start Date		Size (in)		Act Top (ftKB)		Act Btm (ftKB)					
Original Hole		9/13/2013		20		16.8		96.8					
Original Hole		12/16/2013		13 1/2		96.8		1,635.0					
Original Hole		12/17/2013		8 3/4		1,635.0		6,305.0					
Original Hole		12/19/2013		6		6,305.0		12,525.0					
Conductor Pipe, 96.8ftKB													
OD (in)		Wt (lb/ft)		Grade		Top (ftKB)		Btm (ftKB)		Len (ft)		Item Des	
16		75.00		J-55		16.8		96.8		80.00		Casing Joints	
Surface Csg, 1,620.9ftKB													
OD (in)		Wt (lb/ft)		Grade		Top (ftKB)		Btm (ftKB)		Len (ft)		Item Des	
9 5/8						16.8		16.8		0.00		Landing Joint	
9 5/8		36.00		J-55		16.8		21.8		5.00		Pup joint and Well head	
9 5/8		36.00		J-55		21.8		1,573.8		1,552.01		Casing Joints	
9 5/8		36.00		J-55		1,573.8		1,575.3		1.50		Float collar	
9 5/8		36.00		J-55		1,575.3		1,619.4		44.07		Casing Joints	
9 5/8		36.00		J-55		1,619.4		1,620.9		1.50		Float shoe	
Intermediate Csg, 6,283.1ftKB													
OD (in)		Wt (lb/ft)		Grade		Top (ftKB)		Btm (ftKB)		Len (ft)		Item Des	
7		29.00		L-80		16.8		16.8		0.00		Landing Joint	
7		29.00		L-80		16.8		21.8		5.00		Pup joint	
7		29.00		L-80		21.8		6,236.1		6,214.30		Casing Joints	
7		29.00		L-80		6,236.1		6,237.6		1.50		Float Collar	
7		29.00		L-80		6,237.6		6,281.6		44.00		Casing Joints	
7		29.00		L-80		6,281.6		6,283.1		1.50		Float Shoe	
Liner, 12,515.0ftKB													
OD (in)		Wt (lb/ft)		Grade		Top (ftKB)		Btm (ftKB)		Len (ft)		Item Des	
4 1/2		11.60		SeAH-90		4,832.2		4,853.2		20.98		ZXP LINER TOP PACKER	
4 1/2		11.60		SeAH-90		4,853.2		4,859.9		6.65		HMC HANGER	
4 1/2		11.60		SeAH-90		4,859.9		4,861.4		1.49		CROSSOVER	
4 1/2		11.60		SeAH-90		4,861.4		4,866.8		5.46		4.50" Pup Joint	
4 1/2		11.60		SeAH-90		4,866.8		12,362.4		7,495.62		167 JOINT 4.5" Liner LTC	
4 1/2		11.60		SeAH-90		12,362.4		12,368.4		6.00		Pup Joint	
4 1/2		11.60		SeAH-90		12,368.4		12,372.2		3.75		Alpha Sleeve	
4 1/2		11.60		SeAH-90		12,372.2		12,375.3		3.07		Pup Joint	
4 1/2		11.60		SeAH-90		12,375.3		12,420.2		44.92		1 JOINT 4.5" Liner LTC	
4 1/2		11.60		SeAH-90		12,420.2		12,421.6		1.41		Ladning Collar	
4 1/2		11.60		SeAH-90		12,421.6		12,422.5		0.92		Float Collar	
4 1/2		11.60		SeAH-90		12,422.5		12,512.5		89.96		1 JOINT 4.5" Liner LTC	
4 1/2		11.60		SeAH-90		12,512.5		12,515.0		2.54		Casing Joints	
Cement Stages													
Des		Pump Start Date		Drill Out Date		Top (ftKB)		Btm (ftKB)		Top Meas Meth			
Conductor Cement		9/13/2013				16.8		96.8		Returns to Surface			
Surface Casing Cement		12/16/2013				16.8		1,620.9		Returns to Surface			
Intermediate Casing Cement		12/19/2013				16.8		6,283.0		Returns to Surface			
Liner Cement		12/22/2013				4,823.3		12,515.0		Volume Calculations			
Perforations													
Type of Hole		Date		Top (ftKB)		Btm (ftKB)		Zone					
Perforated Liner		3/29/2014		6,310.0		6,312.0		Niobrara, Original Hole					
Perforated Liner		3/29/2014		6,341.0		6,343.0		Niobrara, Original Hole					
Perforated Liner		3/29/2014		6,379.0		6,381.0		Niobrara, Original Hole					
Perforated Liner		3/29/2014		6,456.0		6,458.0		Niobrara, Original Hole					
Perforated Liner		3/29/2014		6,494.0		6,496.0		Niobrara, Original Hole					
Perforated Liner		3/29/2014		6,536.0		6,538.0		Niobrara, Original Hole					
Perforated Liner		3/29/2014		6,606.0		6,608.0		Niobrara, Original Hole					
Perforated Liner		3/29/2014		6,647.0		6,649.0		Niobrara, Original Hole					
Perforated Liner		3/29/2014		6,685.0		6,687.0		Niobrara, Original Hole					
Perforated Liner		3/29/2014		6,762.0		6,764.0		Niobrara, Original Hole					
Perforated Liner		3/29/2014		6,802.0		6,804.0		Niobrara, Original Hole					
Perforated Liner		3/29/2014		6,826.0		6,828.0		Niobrara, Original Hole					



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API Number 051233789800	WPC ID 1CO076904	Well Permit Number	Field Name DJ Horizontal Niobrara	County Weld	State CO
Well Configuration Type Lateral/Horizontal	Orig KB Elv (ft) 4,773.00	Ground Elevation (ft) 4,756.50	Casing Flange Elevation (ft)	Tubing Head Elevation (ft)	Total Depth (ftKB) 12,525.0
Original Spud Date 12/16/2013	Completion Date 4/18/2014	Asset Group Redtail Asset Group	Responsible Engineer Andrew Fish	N/S Dist (ft) 2,394.0	N/S Ref FSL
				E/W Dist (ft) 692.0	E/W Ref FEL
Lot	Quarter 1 NE	Quarter 2 SE	Quarter 3	Quarter 4	Section 27
			Section Suffix	Section Type	Township 10 N
					Township N/S Dir N
					Range 58
					Range E/W Dir W
					Meridian

Lateral/Horizontal - Original Hole, 5/20/2014 1:58:04 PM						Perforations				
MD (ftKB)	TV D (ftK B)	n cl (°)	Vertical schematic (actual)	Logs	Type of Hole	Date	Top (ftKB)	Btm (ftKB)	Zone	
					Perforated Liner	3/29/2014	6,915.0	6,917.0	Niobrara, Original Hole	
					Perforated Liner	3/29/2014	6,953.0	6,955.0	Niobrara, Original Hole	
					Perforated Liner	3/29/2014	6,990.0	6,992.0	Niobrara, Original Hole	
					Perforated Liner	3/29/2014	7,072.0	7,074.0	Niobrara, Original Hole	
					Perforated Liner	3/29/2014	7,106.0	7,108.0	Niobrara, Original Hole	
					Perforated Liner	3/29/2014	7,143.0	7,145.0	Niobrara, Original Hole	
					Perforated Liner	3/28/2014	7,221.0	7,223.0	Niobrara, Original Hole	
					Perforated Liner	3/28/2014	7,258.0	7,260.0	Niobrara, Original Hole	
					Perforated Liner	3/28/2014	7,298.0	7,300.0	Niobrara, Original Hole	
					Perforated Liner	3/28/2014	7,372.0	7,374.0	Niobrara, Original Hole	
					Perforated Liner	3/28/2014	7,411.0	7,413.0	Niobrara, Original Hole	
					Perforated Liner	3/28/2014	7,449.0	7,451.0	Niobrara, Original Hole	
					Perforated Liner	3/28/2014	7,526.0	7,528.0	Niobrara, Original Hole	
					Perforated Liner	3/28/2014	7,569.0	7,571.0	Niobrara, Original Hole	
					Perforated Liner	3/28/2014	7,596.0	7,598.0	Niobrara, Original Hole	
					Perforated Liner	3/28/2014	7,679.0	7,681.0	Niobrara, Original Hole	
					Perforated Liner	3/28/2014	7,717.0	7,719.0	Niobrara, Original Hole	
					Perforated Liner	3/28/2014	7,755.0	7,757.0	Niobrara, Original Hole	
					Perforated Liner	3/28/2014	7,840.0	7,842.0	Niobrara, Original Hole	
					Perforated Liner	3/28/2014	7,866.0	7,868.0	Niobrara, Original Hole	
					Perforated Liner	3/28/2014	7,908.0	7,910.0	Niobrara, Original Hole	
					Perforated Liner	3/28/2014	7,985.0	7,987.0	Niobrara, Original Hole	
					Perforated Liner	3/28/2014	8,023.0	8,025.0	Niobrara, Original Hole	
					Perforated Liner	3/28/2014	8,066.0	8,068.0	Niobrara, Original Hole	
					Perforated Liner	3/28/2014	8,138.0	8,140.0	Niobrara, Original Hole	
					Perforated Liner	3/28/2014	8,184.0	8,186.0	Niobrara, Original Hole	
					Perforated Liner	3/28/2014	8,213.0	8,215.0	Niobrara, Original Hole	
					Perforated Liner	3/27/2014	8,291.0	8,293.0	Niobrara, Original Hole	
					Perforated Liner	3/27/2014	8,330.0	8,332.0	Niobrara, Original Hole	
					Perforated Liner	3/27/2014	8,362.0	8,364.0	Niobrara, Original Hole	
					Perforated Liner	3/27/2014	8,444.0	8,446.0	Niobrara, Original Hole	
					Perforated Liner	3/27/2014	8,481.0	8,483.0	Niobrara, Original Hole	
					Perforated Liner	3/27/2014	8,519.0	8,521.0	Niobrara, Original Hole	
					Perforated Liner	3/27/2014	8,600.0	8,602.0	Niobrara, Original Hole	
					Perforated Liner	3/27/2014	8,634.0	8,636.0	Niobrara, Original Hole	
					Perforated Liner	3/27/2014	8,672.0	8,674.0	Niobrara, Original Hole	
					Perforated Liner	3/27/2014	8,749.0	8,751.0	Niobrara, Original Hole	
					Perforated Liner	3/27/2014	8,787.0	8,789.0	Niobrara, Original Hole	
					Perforated Liner	3/27/2014	8,825.0	8,827.0	Niobrara, Original Hole	



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Well Configuration Type Lateral/Horizontal		Orig KB Elv (ft) 4,773.00		Ground Elevation (ft) 4,756.50		Casing Flange Elevation (ft)		Tubing Head Elevation (ft)		Total Depth (ftKB) 12,525.0	
Original Spud Date 12/16/2013		Completion Date 4/18/2014		Asset Group Redtail Asset Group		Responsible Engineer Andrew Fish		N/S Dist (ft) 2,394.0		N/S Ref FSL	
								E/W Dist (ft) 692.0		E/W Ref FEL	
Lot		Quarter 1 NE	Quarter 2 SE	Quarter 3	Quarter 4	Section 27	Section Suffix	Section Type	Township 10 N	Township N/S Dir	Range 58 W
											Meridian

Lateral/Horizontal - Original Hole, 5/20/2014 1:58:05 PM						Perforations				
MD (ftKB)	TV D (ftKB)	n cl (°)	Vertical schematic (actual)		Logs	Type of Hole	Date	Top (ftKB)	Btm (ftKB)	Zone
49.2	49.2	1.0				Perforated Liner	3/27/2014	8,902.0	8,904.0	Niobrara, Original Hole
1,573.8	1,573.8	1.3				Perforated Liner	3/27/2014	8,940.0	8,942.0	Niobrara, Original Hole
1,963.3	1,963.3	1.2				Perforated Liner	3/27/2014	8,978.0	8,980.0	Niobrara, Original Hole
3,035.4	3,035.4	1.8				Perforated Liner	3/26/2014	9,055.0	9,057.0	Niobrara, Original Hole
4,543.6	4,543.6	1.7				Perforated Liner	3/26/2014	9,096.0	9,098.0	Niobrara, Original Hole
4,823.2	4,823.2	1.2				Perforated Liner	3/26/2014	9,126.0	9,128.0	Niobrara, Original Hole
4,866.8	4,866.8	0.9				Perforated Liner	3/26/2014	9,208.0	9,210.0	Niobrara, Original Hole
5,619.1	5,619.1	0.5				Perforated Liner	3/26/2014	9,246.0	9,248.0	Niobrara, Original Hole
6,281.5	6,281.5	0.0				Perforated Liner	3/26/2014	9,284.0	9,286.0	Niobrara, Original Hole
6,340.9	6,340.9	0.0				Perforated Liner	3/26/2014	9,369.0	9,371.0	Niobrara, Original Hole
6,458.0	6,458.0	0.0				Perforated Liner	3/26/2014	9,394.0	9,396.0	Niobrara, Original Hole
6,606.0	6,606.0	0.0				Perforated Liner	3/26/2014	9,436.0	9,438.0	Niobrara, Original Hole
6,687.0	6,687.0	0.0				Perforated Liner	3/26/2014	9,514.0	9,516.0	Niobrara, Original Hole
6,826.1	6,826.1	0.0				Perforated Liner	3/26/2014	9,552.0	9,554.0	Niobrara, Original Hole
6,955.1	6,955.1	0.0				Perforated Liner	3/26/2014	9,589.0	9,591.0	Niobrara, Original Hole
7,106.0	7,106.0	0.0				Perforated Liner	3/26/2014	9,662.0	9,664.0	Niobrara, Original Hole
7,223.1	7,223.1	0.0				Perforated Liner	3/26/2014	9,704.0	9,706.0	Niobrara, Original Hole
7,372.0	7,372.0	0.0				Perforated Liner	3/26/2014	9,742.0	9,744.0	Niobrara, Original Hole
7,451.1	7,451.1	0.0				Perforated Liner	3/26/2014	9,820.0	9,822.0	Niobrara, Original Hole
7,596.1	7,596.1	0.0				Perforated Liner	3/26/2014	9,857.0	9,859.0	Niobrara, Original Hole
7,719.2	7,719.2	0.0				Perforated Liner	3/26/2014	9,888.0	9,890.0	Niobrara, Original Hole
7,866.1	7,866.1	0.0				Perforated Liner	3/25/2014	9,972.0	9,974.0	Niobrara, Original Hole
7,986.9	7,986.9	0.0				Perforated Liner	3/25/2014	10,010.0	10,012.0	Niobrara, Original Hole
8,138.1	8,138.1	0.0				Perforated Liner	3/25/2014	10,048.0	10,050.0	Niobrara, Original Hole
8,214.9	8,214.9	0.0				Perforated Liner	3/25/2014	10,125.0	10,127.0	Niobrara, Original Hole
8,361.9	8,361.9	0.0				Perforated Liner	3/25/2014	10,170.0	10,172.0	Niobrara, Original Hole
8,482.9	8,482.9	0.0				Perforated Liner	3/25/2014	10,201.0	10,203.0	Niobrara, Original Hole
8,633.9	8,633.9	0.0				Perforated Liner	3/25/2014	10,278.0	10,280.0	Niobrara, Original Hole
8,751.0	8,751.0	0.0				Perforated Liner	3/25/2014	10,316.0	10,318.0	Niobrara, Original Hole
8,901.9	8,901.9	0.0				Perforated Liner	3/25/2014	10,354.0	10,356.0	Niobrara, Original Hole
8,980.0	8,980.0	0.0				Perforated Liner	3/25/2014	10,440.0	10,442.0	Niobrara, Original Hole
9,126.0	9,126.0	0.0				Perforated Liner	3/25/2014	10,469.0	10,471.0	Niobrara, Original Hole
9,248.0	9,248.0	0.0				Perforated Liner	3/25/2014	10,507.0	10,509.0	Niobrara, Original Hole
9,394.0	9,394.0	0.0				Perforated Liner	3/25/2014	10,584.0	10,586.0	Niobrara, Original Hole
9,516.1	9,516.1	0.0				Perforated Liner	3/25/2014	10,622.0	10,624.0	Niobrara, Original Hole
9,662.1	9,662.1	0.0				Perforated Liner	3/25/2014	10,668.0	10,670.0	Niobrara, Original Hole
9,744.1	9,744.1	0.0				Perforated Liner	3/25/2014	10,737.0	10,739.0	Niobrara, Original Hole
9,888.1	9,888.1	0.0				Perforated Liner	3/25/2014	10,775.0	10,777.0	Niobrara, Original Hole
10,012.1	10,012.1	0.0				Perforated Liner	3/25/2014	10,812.0	10,814.0	Niobrara, Original Hole
10,169.9	10,169.9	0.0				Perforated Liner				
10,279.9	10,279.9	0.0				Perforated Liner				
10,440.0	10,440.0	0.0				Perforated Liner				
10,508.9	10,508.9	0.0				Perforated Liner				
10,668.0	10,668.0	0.0				Perforated Liner				
10,776.9	10,776.9	0.0				Perforated Liner				
10,916.0	10,916.0	0.0				Perforated Liner				
11,044.9	11,044.9	0.0				Perforated Liner				
11,206.0	11,206.0	0.0				Perforated Liner				
11,273.0	11,273.0	0.0				Perforated Liner				
11,430.1	11,430.1	0.0				Perforated Liner				
11,541.0	11,541.0	0.0				Perforated Liner				
11,682.1	11,682.1	0.0				Perforated Liner				
11,809.1	11,809.1	0.0				Perforated Liner				
11,963.9	11,963.9	0.0				Perforated Liner				
12,037.1	12,037.1	0.0				Perforated Liner				
12,188.0	12,188.0	0.0				Perforated Liner				
12,282.2	12,282.2	0.0				Perforated Liner				
12,372.0	12,372.0	0.0				Perforated Liner				
12,512.5	12,512.5	0.0				Perforated Liner				



Lateral/Horizontal - Original Hole, 5/20/2014 1:58:06 PM				Perforations					
MD (ftKB)	TV D (ftKB B)	n cl (°)		Type of Hole	Date	Top (ftKB)	Btm (ftKB)	Zone	
			Vertical schematic (actual)	Perforated Liner	3/25/2014	10,890.0	10,892.0	Niobrara, Original Hole	
				Perforated Liner	3/25/2014	10,916.0	10,918.0	Niobrara, Original Hole	
49.2	49.2	1.0		Perforated Liner	3/25/2014	10,960.0	10,962.0	Niobrara, Original Hole	
1,573.8	1,573.6	1.3		Perforated Liner	3/24/2014	11,043.0	11,045.0	Niobrara, Original Hole	
1,963.3	1,963.0	1.2		Perforated Liner	3/24/2014	11,080.0	11,082.0	Niobrara, Original Hole	
3,035.4	3,035.0	0.8		Perforated Liner	3/24/2014	11,118.0	11,120.0	Niobrara, Original Hole	
4,543.6	4,542.5	0.7		Perforated Liner	3/24/2014	11,206.0	11,208.0	Niobrara, Original Hole	
4,823.2	4,822.3	1.2		Perforated Liner	3/24/2014	11,228.0	11,230.0	Niobrara, Original Hole	
4,866.8	4,865.9	0.8		Perforated Liner	3/24/2014	11,271.0	11,273.0	Niobrara, Original Hole	
5,613.1	5,612.6	0.1		Perforated Liner	3/24/2014	11,348.0	11,350.0	Niobrara, Original Hole	
6,281.5	5,623.2	0.0		Perforated Liner	3/24/2014	11,386.0	11,388.0	Niobrara, Original Hole	
6,340.9	5,622.0	0.0		Perforated Liner	3/24/2014	11,430.0	11,432.0	Niobrara, Original Hole	
6,458.0	5,620.7	0.3		Perforated Liner	3/23/2014	11,501.0	11,503.0	Niobrara, Original Hole	
6,606.0	5,620.2	0.0		Perforated Liner	3/23/2014	11,539.0	11,541.0	Niobrara, Original Hole	
6,687.0	5,620.0	0.4		Perforated Liner	3/23/2014	11,577.0	11,579.0	Niobrara, Original Hole	
6,826.1	5,620.2	0.9		Perforated Liner	3/23/2014	11,654.0	11,656.0	Niobrara, Original Hole	
6,955.1	5,619.5	0.6		Perforated Liner	3/23/2014	11,682.0	11,684.0	Niobrara, Original Hole	
7,106.0	5,616.7	0.1		Perforated Liner	3/23/2014	11,726.0	11,728.0	Niobrara, Original Hole	
7,223.1	5,615.4	0.8		Perforated Liner	3/23/2014	11,807.0	11,809.0	Niobrara, Original Hole	
7,372.0	5,611.6	0.6		Perforated Liner	3/23/2014	11,845.0	11,847.0	Niobrara, Original Hole	
7,451.1	5,616.6	0.6		Perforated Liner	3/23/2014	11,882.0	11,884.0	Niobrara, Original Hole	
7,596.1	5,622.3	0.4		Perforated Liner	3/23/2014	11,964.0	11,966.0	Niobrara, Original Hole	
7,719.2	5,623.5	0.5		Perforated Liner	3/23/2014	11,995.0	11,997.0	Niobrara, Original Hole	
7,866.1	5,624.3	0.0		Perforated Liner	3/23/2014	12,035.0	12,037.0	Niobrara, Original Hole	
7,986.9	5,623.5	0.4		Perforated Liner	3/22/2014	12,113.0	12,115.0	Niobrara, Original Hole	
8,138.1	5,622.5	0.0		Perforated Liner	3/22/2014	12,150.0	12,152.0	Niobrara, Original Hole	
8,214.9	5,623.5	0.5		Perforated Liner	3/22/2014	12,188.0	12,190.0	Niobrara, Original Hole	
8,361.9	5,626.6	0.0		Perforated Liner	2/15/2014	12,260.0	12,262.0	Niobrara, Original Hole	
8,482.9	5,623.3	0.4		Perforated Liner	2/15/2014	12,280.0	12,282.0	Niobrara, Original Hole	
8,633.9	5,626.4	0.5		Perforated Liner	2/15/2014	12,300.0	12,302.0	Niobrara, Original Hole	
8,751.0	5,626.2	0.6		Stim/Treat Stages					
8,901.9	5,626.8	0.0		Stage Type	Start Date	Top (ftKB)	Btm (ftKB)	Stim/Treat Fluid	Vol Clean Pump (bbl)
8,980.0	5,626.1	0.4		Sand	3/29/2014	6,310.0	6,381.0	40/70# 9004, 20/40# 156996, 15%HCl# 24bls, Slick Water	3011.00
9,126.0	5,623.0	0.5		Sand	3/29/2014	6,456.0	6,538.0	40/70# 9003, 20/40# 165787, 15%HCl# 24bls, Slick Water	3012.00
9,248.0	5,627.3	0.7		Sand	3/29/2014	6,606.0	6,687.0	40/70# 9050, 20/40# 164800, Slick Water	2988.00
9,394.0	5,623.3	0.7		Sand	3/29/2014	6,762.0	6,828.0	40/70# 8954, 20/40# 170600, Slick Water	3084.00
9,516.1	5,622.5	0.8		Sand	3/29/2014	6,915.0	6,992.0	40/70# 9100, 20/40# 162390, Slick Water	3071.00
9,662.1	5,622.9	0.0		Sand	3/28/2014	7,072.0	7,145.0	40/70# 9032, 20/40# 164968, Slick Water	3023.00
9,744.1	5,622.1	0.3							
9,888.1	5,622.7	0.2							
10,012.1	5,622.5	0.8							
10,169.9	5,623.3	0.0							
10,279.9	5,623.0	0.9							
10,440.0	5,620.3	0.2							
10,508.9	5,619.9	0.5							
10,668.0	5,621.4	0.3							
10,776.9	5,624.2	0.8							
10,916.0	5,626.4	0.4							
11,044.9	5,626.4	0.5							
11,206.0	5,624.0	0.1							
11,273.0	5,623.8	0.0							
11,430.1	5,623.9	0.8							
11,541.0	5,618.3	0.9							
11,682.1	5,616.5	0.5							
11,809.1	5,619.0	0.7							
11,963.9	5,621.9	0.1							
12,037.1	5,622.6	0.6							
12,188.0	5,621.3	0.3							
12,282.2	5,620.5	0.7							
12,372.0	5,621.2	0.4							
12,512.5	5,621.6	0.1							

Lease Review All CR																			
Well Name: RAZOR 271-3415A																			
API Number 051233789800				WPC ID 1CO076904				Well Permit Number				Field Name DJ Horizontal Niobrara				County Weld		State CO	
Well Configuration Type Lateral/Horizontal				Orig KB Elv (ft) 4,773.00				Ground Elevation (ft) 4,756.50				Casing Flange Elevation (ft)		Tubing Head Elevation (ft)		Total Depth (ftKB) 12,525.0			
Original Spud Date 12/16/2013		Completion Date 4/18/2014		Asset Group Redtail Asset Group				Responsible Engineer Andrew Fish				N/S Dist (ft) 2,394.0		N/S Ref FSL		E/W Dist (ft) 692.0		E/W Ref FEL	
Lot		Quarter 1 NE	Quarter 2 SE	Quarter 3	Quarter 4	Section 27	Section Suffix	Section Type		Township 10	Township N/S Dir N		Range 58	Range E/W Dir W		Meridian			
Lateral/Horizontal - Original Hole, 5/20/2014 1:58:08 PM										Stim/Treat Stages									
MD (ftKB)	TV D (ftKB)	n (°)	Vertical schematic (actual)				Logs				Stage Type	Start Date	Top (ftKB)	Btm (ftKB)	Stim/Treat Fluid		Vol Clean Pump (bbl)		
											Sand	3/28/2014	7,221.0	7,300.0	40/70# 9002, 20/40# 164498, Slick Water		3028.00		
49.2	49.2	1.0									Sand	3/28/2014	7,372.0	7,451.0	40/70# 9001, 20/40# 164699, Slick Water		3039.00		
1,573.8	1,573.6	1.3									Sand	3/28/2014	7,526.0	7,598.0	40/70# 9008, 20/40# 164792, Slick Water		3065.00		
1,963.3	1,963.0	1.2									Sand	3/28/2014	7,679.0	7,757.0	40/70# 8999, 20/40# 164806, Slick Water		3035.00		
3,035.4	3,035.0	1.8									Sand	3/28/2014	7,840.0	7,910.0	40/70# 9084, 20/40# 163100, Slick Water		3101.00		
4,543.6	4,542.8	0.7									Sand	3/28/2014	7,985.0	8,068.0	40/70# 9642, 20/40# 163545, Slick Water		3122.00		
4,823.2	4,822.3	1.2									Sand	3/27/2014	8,138.0	8,215.0	40/70# 9016, 20/40# 165084, Slick Water		3058.00		
4,866.8	4,865.9	0.8									Sand	3/27/2014	8,291.0	8,364.0	40/70# 9000, 20/40# 166100, 15%HCl# 24bls, Slick Water		3137.00		
5,619.1	5,618.8	61.5									Sand	3/27/2014	8,444.0	8,521.0	40/70# 9001, 20/40# 165199, 15%HCl# 24bls, Slick Water		3200.00		
6,281.5	6,282.3	82.9									Sand	3/27/2014	8,600.0	8,674.0	40/70# 8998, 20/40# 165302, Slick Water		3067.00		
6,340.9	6,322.0	80.9									Sand	3/27/2014	8,749.0	8,827.0	40/70# 9366, 20/40# 169500, 15%HCl# 24bls, Slick Water		3163.00		
6,458.0	6,500.7	90.3									Sand	3/26/2014	8,902.0	8,980.0	40/70# 9000, 20/40# 166500, 15%HCl# 24bls, Slick Water		3109.00		
6,606.0	6,620.2	90.0									Sand	3/26/2014	9,055.0	9,128.0	40/70# 8872, 20/40# 165228, 15%HCl# 24bls, Slick Water		3171.00		
6,687.0	6,620.0	80.4									Sand	3/26/2014	9,208.0	9,286.0	40/70# 8997, 20/40# 95503, 15%HCl# 24bls, Slick Water		2877.00		
6,826.1	6,620.2	88.9									Sand	3/26/2014	9,369.0	9,438.0	40/70# 9020, 20/40# 163736, Slick Water		3094.00		
6,955.1	6,619.5	86.6									Sand	3/26/2014	9,514.0	9,591.0	40/70# 9003, 20/40# 164486, Slick Water		3059.00		
7,106.0	6,616.7	91.2									Sand	3/26/2014	9,662.0	9,744.0	40/70# 9200, 20/40# 163590, Slick Water		3112.00		
7,223.1	6,615.4	88.9									Sand	3/26/2014	9,820.0	9,890.0	40/70# 9200, 20/40# 169800, 15%HCl# 24bls, Slick Water		3389.00		
7,372.0	6,617.6	88.5									Sand	3/25/2014	9,972.0	10,050.0	40/70# 8800, 20/40# 164500, Slick Water		3225.00		
7,451.1	6,616.6	88.5									Sand	3/25/2014	10,125.0	10,203.0	40/70# 8997, 20/40# 163503, Slick Water		3087.00		
7,596.1	6,622.3	88.4									Sand	3/25/2014	10,278.0	10,356.0	40/70# 9002, 20/40# 165198, Slick Water		3090.00		
7,719.2	6,623.5	88.5									Sand	3/25/2014	10,440.0	10,509.0	40/70# 8995, 20/40# 166725, 15%HCl# 24bls, Slick Water		3133.00		
7,866.1	6,624.3	90.0									Sand	3/25/2014	10,584.0	10,670.0	40/70# 9002, 20/40# 164998, 15%HCl# 24bls, Slick Water		3134.00		
7,986.9	6,623.0	90.4									Sand	3/25/2014	10,737.0	10,814.0	40/70# 8904, 20/40# 165396, 15%HCl# 24bls, Slick Water		3135.00		
8,138.1	6,622.5	88.9									Sand	3/24/2014	10,890.0	10,962.0	40/70# 9200, 20/40# 164100, 15%HCl# 24bls, Slick Water		3214.00		
8,214.9	6,623.5	88.5									Sand	3/24/2014	11,043.0	11,120.0	40/70# 9064, 20/40# 163436, 15%HCl# 24bls, Slick Water		3149.00		
8,361.9	6,626.6	88.0									Sand	3/24/2014	11,206.0	11,273.0	40/70# 9015, 20/40# 167185, 15%HCl# 24bls, Slick Water		3151.00		
8,482.9	6,623.2	88.4									Sand	3/24/2014	11,348.0	11,432.0	40/70# 9022, 20/40# 164725, 15%HCl# 24bls, Slick Water		3232.00		
8,633.9	6,626.4	88.5	Sand	3/23/2014	11,501.0	11,579.0	40/70# 9156, 20/40# 164544, 15%HCl# 24bls, Slick Water		3119.00										
8,751.0	6,638.2	88.6	Sand	3/23/2014	11,654.0	11,728.0	40/70# 9111, 20/40# 166089, 15%HCl# 24bls, Slick Water		3123.00										
8,901.9	6,638.9	88.5	Sand	3/23/2014	11,807.0	11,884.0	40/70# 9012, 20/40# 164888, 15%HCl# 24bls, Slick Water		3170.00										
8,980.0	6,638.1	91.4																	
9,126.0	6,633.0	92.5																	
9,248.0	6,627.3	92.7																	
9,394.0	6,623.3	92.7																	
9,516.1	6,622.5	88.9																	
9,662.1	6,622.5	90.3																	
9,744.1	6,622.1	90.3																	
9,888.1	6,622.7	88.2																	
10,012.1	6,622.5	88.9																	
10,169.9	6,622.3	90.5																	
10,279.9	6,620.9	88.9																	
10,440.0	6,620.3	90.2																	
10,508.9	6,619.9	88.5																	
10,668.0	6,621.4	88.3																	
10,776.9	6,624.2	88.8																	
10,916.0	6,626.4	88.4																	
11,044.9	6,626.4	88.5																	
11,206.0	6,624.0	91.1																	
11,273.0	6,622.8	91.0																	
11,430.1	6,620.9	88.8																	
11,541.0	6,618.3	91.9																	
11,682.1	6,616.5	88.5																	
11,809.1	6,619.0	88.7																	
11,963.9	6,621.9	88.1																	
12,037.1	6,622.6	88.8																	
12,188.0	6,621.3	91.3																	
12,282.2	6,620.5	88.7																	
12,372.0	6,621.2	88.4																	
12,512.5	6,621.6	90.1																	

<div><div><div><div></div><div>WHITING</div></div></div><div><div>Lease Review All CR</div><div>Well Name: RAZOR 271-3415A</div></div></div>																							
API Number 051233789800				WPC ID 1CO076904				Well Permit Number				Field Name DJ Horizontal Niobrara				County Weld		State CO					
Well Configuration Type Lateral/Horizontal				Orig KB Elv (ft) 4,773.00				Ground Elevation (ft) 4,756.50				Casing Flange Elevation (ft)				Tubing Head Elevation (ft)		Total Depth (ftKB) 12,525.0					
Original Spud Date 12/16/2013				Completion Date 4/18/2014				Asset Group Redtail Asset Group				Responsible Engineer Andrew Fish				N/S Dist (ft) 2,394.0		N/S Ref FSL		E/W Dist (ft) 692.0		E/W Ref FEL	
Lot		Quarter 1 NE	Quarter 2 SE	Quarter 3	Quarter 4	Section 27	Section Suffix	Section Type	Township 10 N	Township N/S Dir	Range 58	Range E/W Dir W	Meridian										
Lateral/Horizontal - Original Hole, 5/20/2014 1:58:09 PM										Stim/Treat Stages													
MD (ftKB)	TV D (ftKB B)	n cl (°)	<div><div>Vertical schematic (actual)</div><div>Logs</div></div>				Stage Type	Start Date	Top (ftKB)	Btm (ftKB)	Stim/Treat Fluid		Vol Clean Pump (bbl)										
							Sand	3/23/2014	11,964.0	12,037.0	40/70# 9001, 20/40# 165200, 15%HCl# 24bls, Slick Water		3218.00										
							Sand	3/23/2014	12,113.0	12,190.0	40/70# 9014, 20/40# 133890, 15%HCl# 24bls, Slick Water		3235.00										
							Sand	3/22/2014	12,260.0	12,302.0	40/70# 9149, 20/40# 164951, 15%HCl# 24bls, Slick Water		3188.00										
Tubing - Production set at 5,630.3ftKB on 4/18/2014 07:28																							
Set Depth (ftKB) 5,630.3		Comment				Run Date 4/18/2014		Pull Date															
Item Des		OD (in)		ID (in)		Len (ft)		Top (ftKB)		Btm (ftKB)													
Tubing		2 7/8		2.441		31.42		17.8		49.3													
Tubing Sub		2 7/8				2.00		49.3		51.3													
Tubing		2 7/8		2.441		1,157.87		51.3		1,209.1													
Gas Lift Mandrel		2 7/8				4.05		1,209.1		1,213.2													
Tubing		2 7/8		2.441		749.94		1,213.2		1,963.1													
Gas Lift Mandrel		2 7/8				4.05		1,963.1		1,967.2													
Tubing		2 7/8		2.441		561.60		1,967.2		2,528.8													
Gas Lift Mandrel		2 7/8				4.05		2,528.8		2,532.8													
Tubing		2 7/8		2.441		498.69		2,532.8		3,031.5													
Gas Lift Mandrel		2 7/8				4.05		3,031.5		3,035.6													
Tubing		2 7/8		2.441		499.13		3,035.6		3,534.7													
Gas Lift Mandrel		2 7/8				4.05		3,534.7		3,538.7													
Tubing		2 7/8		2.441		499.46		3,538.7		4,038.2													
Gas Lift Mandrel		2 7/8				4.05		4,038.2		4,042.3													
Tubing		2 7/8		2.441		501.38		4,042.3		4,543.6													
Gas Lift Mandrel		2 7/8				4.05		4,543.6		4,547.7													
Tubing		2 7/8		2.441		216.05		4,547.7		4,763.7													
Cup Seating Nipple		2 7/8				1.10		4,763.7		4,764.8													
Cross Over 2-2/8" x 2-3/8"		2 7/8				0.50		4,764.8		4,765.3													
Tubing		2 3/8		1.995		271.45		4,765.3		5,036.8													
Gas Lift Mandrel		2 3/8				4.05		5,036.8		5,040.8													
Tubing		2 3/8		1.995		513.93		5,040.8		5,554.8													
Gas Lift Mandrel		2 3/8				4.05		5,554.8		5,558.8													
Tubing		2 3/8		1.995		60.18		5,558.8		5,619.0													
On-Off Tool		2 3/8				1.34		5,619.0		5,620.3													
Packer AS-1 Seal assembly Pkr		4 1/2				10.00		5,620.3		5,630.3													
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		3/29/2014		4/17/2014		6,419.0			6,421.0								
CFP						4		3/29/2014		4/17/2014		6,566.0			6,568.0								
CFP						4		3/29/2014		4/17/2014		6,724.0			6,726.0								
CFP						4		3/29/2014		4/17/2014		6,872.0			6,874.0								
CFP						4		3/29/2014		4/17/2014		7,032.0			7,034.0								
CFP						4		3/29/2014		4/17/2014		7,183.0			7,185.0								
CFP						4		3/28/2014		4/17/2014		7,326.0			7,328.0								
CFP						4		3/28/2014		4/17/2014		7,489.0			7,491.0								
CFP						4		3/28/2014		4/17/2014		7,640.0			7,642.0								
CFP						4		3/28/2014		4/17/2014		7,798.0			7,800.0								
CFP						4		3/28/2014		4/17/2014		7,947.0		7,949.0									
CFP						4		3/28/2014		4/17/2014		8,088.0		8,090.0									
CFP						4		3/28/2014		4/17/2014		8,253.0		8,255.0									
CFP						4		3/27/2014		4/17/2014		8,406.0		8,408.0									
CFP						4		3/27/2014		4/17/2014		8,560.0		8,562.0									
CFP						4		3/27/2014		4/17/2014		8,712.0		8,714.0									
CFP						4		3/27/2014		4/17/2014		8,855.0		8,857.0									
CFP						4		3/27/2014		4/17/2014		9,017.0		9,019.0									
CFP						4		3/26/2014		4/17/2014		9,168.0		9,170.0									
CFP						4		3/26/2014		4/17/2014		9,325.0		9,327.0									
CFP						4		3/26/2014		4/17/2014		9,476.0		9,478.0									



Lease Review All CR
Well Name: RAZOR 271-3415A

API Number 051233789800	WPC ID 1CO076904	Well Permit Number	Field Name DJ Horizontal Niobrara	County Weld	State CO
Well Configuration Type Lateral/Horizontal	Orig KB Elv (ft) 4,773.00	Ground Elevation (ft) 4,756.50	Casing Flange Elevation (ft)	Tubing Head Elevation (ft)	Total Depth (ftKB) 12,525.0
Original Spud Date 12/16/2013	Completion Date 4/18/2014	Asset Group Redtail Asset Group	Responsible Engineer Andrew Fish	N/S Dist (ft) 2,394.0	N/S Ref FSL
				E/W Dist (ft) 692.0	E/W Ref FEL
Lot	Quarter 1 NE	Quarter 2 SE	Quarter 3	Quarter 4	Section 27
			Section Suffix	Section Type	Township 10 N
					Township N/S Dir N
					Range 58 W
					Range E/W Dir W
					Meridian

Lateral/Horizontal - Original Hole, 5/20/2014 1:58:10 PM				Other In Hole						
MD (ftKB)	TV D (ftKB B)	n cl (°)		Des	OD (in)	Run Date	Pull Date	Top (ftKB)	Btm (ftKB)	
49.2	49.2	1.0	<div>Vertical schematic (actual)</div> <div>Logs</div>	CFP	4	3/26/2014	4/17/2014	9,616.0	9,618.0	
1,573.8	1,573.6	1.3		CFP	4	3/26/2014	4/17/2014	9,769.0	9,771.0	
1,963.3	1,963.0	1.2		CFP	4	3/26/2014	4/17/2014	9,930.0	9,932.0	
3,035.4	3,035.0	1.8		CFP	4	3/25/2014	4/17/2014	10,088.0	10,090.0	
4,543.6	4,542.8	1.7		CFP	4	3/25/2014	4/17/2014	10,240.0	10,242.0	
4,823.2	4,823.3	1.2		CFP	4	3/25/2014	4/17/2014	10,398.0	10,400.0	
4,866.8	4,865.5	0.9		CFP	4	3/25/2014	4/17/2014	10,546.0	10,548.0	
5,619.1	5,618.6	0.5		CFP	4	3/25/2014	4/17/2014	10,692.0	10,694.0	
6,281.5	6,282.2	0.0		CFP	4	3/25/2014	4/17/2014	10,852.0	10,854.0	
6,340.9	6,340.0	0.0		CFP	4	3/25/2014	4/17/2014	11,005.0	11,007.0	
6,458.0	6,458.7	0.0		CFP	4	3/24/2014	4/17/2014	11,163.0	11,165.0	
6,606.0	6,606.2	0.0		CFP	4	3/24/2014	4/17/2014	11,311.0	11,313.0	
6,687.0	6,687.0	0.0		CFP	4	3/24/2014	4/17/2014	11,454.0	11,456.0	
6,826.1	6,826.2	0.0		CFP	4	3/23/2014	4/17/2014	11,616.0	11,618.0	
6,955.1	6,955.5	0.0		CFP	4	3/23/2014	4/17/2014	11,769.0	11,771.0	
7,106.0	7,106.7	0.0		CFP	4	3/23/2014	4/17/2014	11,924.0	11,926.0	
7,223.1	7,223.4	0.0		CFP	4	3/23/2014	4/17/2014	12,075.0	12,077.0	
7,372.0	7,372.6	0.0		CFP	4	3/22/2014	4/17/2014	12,218.0	12,220.0	
7,451.1	7,451.6	0.0		Bottom Hole Cores						
7,596.1	7,596.3	0.0		Date	Core #	Top (ftKB)	Btm (ftKB)	Recov (ft)		
7,719.2	7,719.5	0.0								
7,866.1	7,866.4	0.0								
7,986.9	7,987.3	0.0								
8,138.1	8,138.5	0.0								
8,214.9	8,215.5	0.0								
8,361.9	8,362.6	0.0								
8,482.9	8,483.3	0.0								
8,633.9	8,634.4	0.0								
8,751.0	8,751.2	0.0								
8,901.9	8,902.0	0.0								
8,980.0	8,980.1	0.0								
9,126.0	9,126.0	0.0								
9,248.0	9,248.3	0.0								
9,394.0	9,394.3	0.0								
9,516.1	9,516.5	0.0								
9,662.1	9,662.5	0.0								
9,744.1	9,744.1	0.0								
9,888.1	9,888.7	0.0								
10,012.1	10,012.5	0.0								
10,169.9	10,169.9	0.0								
10,279.9	10,279.9	0.0								
10,440.0	10,440.3	0.0								
10,508.9	10,508.9	0.0								
10,668.0	10,668.4	0.0								
10,776.9	10,776.9	0.0								
10,916.0	10,916.4	0.0								
11,044.9	11,044.9	0.0								
11,206.0	11,206.0	0.0								
11,273.0	11,273.0	0.0								
11,430.1	11,430.1	0.0								
11,541.0	11,541.3	0.0								
11,682.1	11,682.5	0.0								
11,809.1	11,809.5	0.0								
11,963.9	11,963.9	0.0								
12,037.1	12,037.6	0.0								
12,188.0	12,188.3	0.0								
12,282.2	12,282.5	0.0								
12,372.0	12,372.2	0.0								
12,512.5	12,512.6	0.0								