



Lease Review All - Frac Summary

Well Name: RAZOR 11E-1403A

API Number 051233853500		WPC ID 1CO0761007		Well Permit Number		Field Name DJ Horizontal Niobrara		County Weld		State CO															
Well Configuration Type Lateral/Horizontal		Orig KB Elv (ft) 5,018.60		Ground Elevation (ft) 5,001.80		Casing Flange Elevation (ft)		Tubing Head Elevation (ft)		Total Depth (ftKB) 13,390.0															
Original Spud Date 1/28/2014		Completion Date 6/20/2014		Asset Group Redtail		Responsible Engineer Andrew Fish		N/S Dist (ft) 2,397.0		N/S Ref FNL		E/W Dist (ft) 855.0	E/W Ref FWL												
Lot		Quarter 1 SW		Quarter 2 NW		Quarter 3		Quarter 4		Section 11		Section Suffix		Section Type		Township 10 N		Township N/S Dir		Range 58 W		Range E/W Dir		Meridian	
Lateral/Horizontal - Original Hole, 10/14/2014 7:28:30 AM												Wellbore Sections													
MD (ftKB)		D (ft K B)		n (C B)		Vertical schematic (actual)		Logs		Wellbore Name				Start Date		Size (in)		Act Top (ftKB)		Act Btm (ftKB)					
										Original Hole				1/1/2014		20		16.8		96.8					
										Original Hole				1/28/2014		13 1/2		96.8		1,862.0					
										Original Hole				1/30/2014		8 3/4		1,862.0		6,336.0					
										Original Hole				2/2/2014		6		6,336.0		13,390.0					
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, 1,851.6ftKB																									
		OD (in)		Wt (lb/ft)		Grade		Top (ftKB)		Btm (ftKB)		Len (ft)		Item Des											
		9 5/8						16.8		16.8				Landing Joint											
		9 5/8						16.8		21.8		5.00		Well Head											
		9 5/8		36.00		J-55		21.8		1,804.8		1,782.96		Casing Joints											
		9 5/8		36.00		J-55		1,804.8		1,806.3		1.50		Float Collar											
		9 5/8		36.00		J-55		1,806.3		1,850.1		43.80		Casing Joints											
		9 5/8		36.00		J-55		1,850.1		1,851.6		1.50		Float Shoe											
Frac String, 5,149.1ftKB																									
		OD (in)		Wt (lb/ft)		Grade		Top (ftKB)		Btm (ftKB)		Len (ft)		Item Des											
								13.0		15.0		2.00		Liner Hanger											
		4 1/2		15.10		P-110		15.0		46.4		31.34		Casing Joints											
		4 1/2		15.10		P-110		46.4		50.1		3.73		Pup Joint											
		4 1/2		15.10		P-110		50.1		5,139.1		5,088.99		Casing Joints											
		5 1/4						5,139.1		5,149.1		10.00		PBR Seal assembly											
Intermediate Csg, 6,321.0ftKB																									
		OD (in)		Wt (lb/ft)		Grade		Top (ftKB)		Btm (ftKB)		Len (ft)		Item Des											
		7		29.00		L-80		16.6		16.6		0.00		Landing Joint											
		7		29.00		L-80		16.6		21.6		5.00		Pup Joint											
		7		29.00		L-80		21.6		6,276.8		6,255.23		Casing Joints											
		7		29.00		L-80		6,276.8		6,278.3		1.50		Float Collar											
		7		29.00		L-80		6,278.3		6,319.5		41.17		Casing Joints											
		7		29.00		L-80		6,319.5		6,321.0		1.50		Float Shoe											
Liner, 13,385.0ftKB																									
		OD (in)		Wt (lb/ft)		Grade		Top (ftKB)		Btm (ftKB)		Len (ft)		Item Des											
		4 1/2		11.60		L-80		5,161.6		5,170.2		8.55		ZXP Liner Top Packer											
		4 1/2		11.60		L-80		5,170.2		5,176.8		6.65		HMC Liner Hanger											
		4 1/2		11.60		L-80		5,176.8		5,178.3		1.49		Combo Collar											
		4 1/2		11.60		L-80		5,178.3		5,183.8		5.46		Casing Pup											
		4 1/2		11.60		L-80		5,183.8		13,236.4		8,052.61		JT 4.5" 11.6# LTC CSG											
		4 1/2		11.60		L-80		13,236.4		13,242.4		6.04		4-1/2" 11.6# Pup Joint											
		4 1/2		11.60		L-80		13,242.4		13,246.1		3.74		Alpha Sleeve											
		4 1/2		11.60		L-80		13,246.1		13,248.2		2.07		4-1/2" 11.6# Pup Joint											
		4 1/2		11.60		L-80		13,248.2		13,291.8		43.60		JT 4.5" 11.6# LTC CSG											
		4 1/2		11.60		L-80		13,291.8		13,293.2		1.41		TYPE II LANDING COLLAR											
		4 1/2		11.60		L-80		13,293.2		13,294.2		0.98		SINGLE VALVE FLOAT COLLAR											
		4 1/2		11.60		L-80		13,294.2		13,338.1		43.86		JT 4.5" 11.6# LTC CSG											
		4 1/2		11.60		L-80		13,338.1		13,382.5		44.41		Casing Joints											
		4 1/2		11.60		L-80		13,382.5		13,385.0		2.53		FLOAT SHOE											
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		1/29/2014				16.8		1,851.6		Returns to Surface													
		Intermediate Casing Cement		2/1/2014				16.8		6,321.0		Returns to Surface													
		Liner Cement		2/6/2014				5,149.0		13,385.0		Volume Calculations													
Perforations																									
		Type of Hole		Date		Top (ftKB)		Btm (ftKB)		Zone															
		Perforated Liner		5/22/2014		6,370.0		6,372.0		Niobrara, Original Hole															
		Perforated Liner		5/22/2014		6,400.0		6,402.0		Niobrara, Original Hole															
		Perforated Liner		5/22/2014		6,438.0		6,440.0		Niobrara, Original Hole															
		Perforated Liner		5/22/2014		6,536.0		6,538.0		Niobrara, Original Hole															
		Perforated Liner		5/22/2014		6,579.0		6,581.0		Niobrara, Original Hole															
		Perforated Liner		5/22/2014		6,610.0		6,612.0		Niobrara, Original Hole															
		Perforated Liner		5/22/2014		6,709.0		6,711.0		Niobrara, Original Hole															
		Perforated Liner		5/22/2014		6,752.0		6,754.0		Niobrara, Original Hole															
		Perforated Liner		5/22/2014		6,784.0		6,786.0		Niobrara, Original Hole															
		Perforated Liner		5/22/2014		6,883.0		6,885.0		Niobrara, Original Hole															
		Perforated Liner		5/22/2014		6,928.0		6,930.0		Niobrara, Original Hole															
		Perforated Liner		5/22/2014		6,959.0		6,961.0		Niobrara, Original Hole															
		Perforated Liner		5/22/2014		7,059.0		7,061.0		Niobrara, Original Hole															
		Perforated Liner		5/22/2014		7,104.0		7,106.0		Niobrara, Original Hole															



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Well Configuration Type Lateral/Horizontal			Orig KB Elv (ft) 5,018.60		Ground Elevation (ft) 5,001.80		Casing Flange Elevation (ft)		Tubing Head Elevation (ft)		Total Depth (ft)KB 13,390.0	
Original Spud Date 1/28/2014		Completion Date 6/20/2014		Asset Group Redtail		Responsible Engineer Andrew Fish		N/S Dist (ft) 2,397.0		N/S Ref FNL	E/W Dist (ft) 855.0	E/W Ref FWL
Lot	Quarter 1 SW	Quarter 2 NW	Quarter 3	Quarter 4	Section 11	Section Suffix	Section Type	Township 10	Township N/S Dir N	Range 58	Range E/W Dir W	Meridian

Lateral/Horizontal - Original Hole, 10/14/2014 7:28:31 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	5/22/2014	7,133.0	7,135.0	Niobrara, Original Hole
							Perforated Liner	5/21/2014	7,226.0	7,228.0	Niobrara, Original Hole
							Perforated Liner	5/21/2014	7,268.0	7,270.0	Niobrara, Original Hole
							Perforated Liner	5/21/2014	7,307.0	7,309.0	Niobrara, Original Hole
1,804.8	1.802	1	1	1			Perforated Liner	5/21/2014	7,395.0	7,397.0	Niobrara, Original Hole
4,875.0	4.864	1	1	1			Perforated Liner	5/21/2014	7,438.0	7,440.0	Niobrara, Original Hole
5,170.3	5.164	1	1	1			Perforated Liner	5/21/2014	7,480.0	7,482.0	Niobrara, Original Hole
6,278.2	6.264	1	1	1			Perforated Liner	5/21/2014	7,568.0	7,570.0	Niobrara, Original Hole
6,372.0	6.267	1	1	1			Perforated Liner	5/21/2014	7,611.0	7,613.0	Niobrara, Original Hole
6,536.1	6.301	1	1	1			Perforated Liner	5/21/2014	7,654.0	7,656.0	Niobrara, Original Hole
6,611.9	6.303	1	1	1			Perforated Liner	5/21/2014	7,742.0	7,744.0	Niobrara, Original Hole
6,784.1	6.361	1	1	1			Perforated Liner	5/21/2014	7,790.0	7,792.0	Niobrara, Original Hole
6,930.1	6.363	1	1	1			Perforated Liner	5/21/2014	7,820.0	7,822.0	Niobrara, Original Hole
7,104.0	6.367	1	1	1			Perforated Liner	5/21/2014	7,940.0	7,942.0	Niobrara, Original Hole
7,228.0	6.369	1	1	1			Perforated Liner	5/21/2014	7,969.0	7,971.0	Niobrara, Original Hole
7,395.0	6.371	1	1	1			Perforated Liner	5/21/2014	8,016.0	8,018.0	Niobrara, Original Hole
7,482.0	6.373	1	1	1			Perforated Liner	5/20/2014	8,100.0	8,102.0	Niobrara, Original Hole
7,653.9	6.375	1	1	1			Perforated Liner	5/20/2014	8,143.0	8,145.0	Niobrara, Original Hole
7,792.0	6.377	1	1	1			Perforated Liner	5/20/2014	8,184.0	8,186.0	Niobrara, Original Hole
7,969.2	6.379	1	1	1			Perforated Liner	5/20/2014	8,274.0	8,276.0	Niobrara, Original Hole
8,102.0	6.381	1	1	1			Perforated Liner	5/20/2014	8,316.0	8,318.0	Niobrara, Original Hole
8,273.9	6.383	1	1	1			Perforated Liner	5/20/2014	8,361.0	8,363.0	Niobrara, Original Hole
8,348.1	6.385	1	1	1			Perforated Liner	5/20/2014	8,447.0	8,449.0	Niobrara, Original Hole
8,520.0	6.387	1	1	1			Perforated Liner	5/20/2014	8,490.0	8,492.0	Niobrara, Original Hole
8,654.9	6.389	1	1	1			Perforated Liner	5/20/2014	8,520.0	8,522.0	Niobrara, Original Hole
8,871.1	6.391	1	1	1			Perforated Liner	5/20/2014	8,611.0	8,613.0	Niobrara, Original Hole
9,007.9	6.393	1	1	1			Perforated Liner	5/20/2014	8,653.0	8,655.0	Niobrara, Original Hole
9,185.0	6.395	1	1	1			Perforated Liner	5/20/2014	8,681.0	8,683.0	Niobrara, Original Hole
9,317.9	6.397	1	1	1			Perforated Liner	5/20/2014	8,840.0	8,842.0	Niobrara, Original Hole
9,476.0	6.399	1	1	1			Perforated Liner	5/20/2014	8,871.0	8,873.0	Niobrara, Original Hole
9,567.9	6.401	1	1	1			Perforated Liner	5/20/2014	8,974.0	8,976.0	Niobrara, Original Hole
9,740.2	6.403	1	1	1			Perforated Liner	5/20/2014	9,006.0	9,008.0	Niobrara, Original Hole
9,882.9	6.405	1	1	1			Perforated Liner	5/20/2014	9,045.0	9,047.0	Niobrara, Original Hole
10,054.1	6.407	1	1	1			Perforated Liner	5/19/2014	9,142.0	9,144.0	Niobrara, Original Hole
10,187.0	6.409	1	1	1			Perforated Liner	5/19/2014	9,185.0	9,187.0	Niobrara, Original Hole
10,358.9	6.411	1	1	1			Perforated Liner	5/19/2014	9,230.0	9,232.0	Niobrara, Original Hole
10,437.0	6.413	1	1	1			Perforated Liner	5/19/2014	9,316.0	9,318.0	Niobrara, Original Hole
10,608.9	6.415	1	1	1			Perforated Liner	5/19/2014	9,359.0	9,361.0	Niobrara, Original Hole
10,751.0	6.417	1	1	1			Perforated Liner	5/19/2014	9,392.0	9,394.0	Niobrara, Original Hole
10,922.9	6.419	1	1	1			Perforated Liner	5/19/2014	9,476.0	9,478.0	Niobrara, Original Hole
11,056.1	6.421	1	1	1			Perforated Liner	5/19/2014	9,522.0	9,524.0	Niobrara, Original Hole
11,228.0	6.423	1	1	1			Perforated Liner	5/19/2014	9,566.0	9,568.0	Niobrara, Original Hole
11,306.1	6.425	1	1	1			Perforated Liner	5/19/2014	9,654.0	9,656.0	Niobrara, Original Hole
11,478.0	6.427	1	1	1			Perforated Liner	5/19/2014	9,700.0	9,702.0	Niobrara, Original Hole
11,620.1	6.429	1	1	1			Perforated Liner	5/19/2014	9,740.0	9,742.0	Niobrara, Original Hole
11,792.0	6.431	1	1	1			Perforated Liner	5/19/2014	9,838.0	9,840.0	Niobrara, Original Hole
11,924.9	6.433	1	1	1			Perforated Liner	5/19/2014	9,881.0	9,883.0	Niobrara, Original Hole
12,097.1	6.435	1	1	1			Perforated Liner	5/19/2014	9,913.0	9,915.0	Niobrara, Original Hole
12,182.1	6.437	1	1	1			Perforated Liner	5/18/2014	10,008.0	10,010.0	Niobrara, Original Hole
12,352.0	6.439	1	1	1			Perforated Liner	5/18/2014	10,054.0	10,056.0	Niobrara, Original Hole
12,488.8	6.441	1	1	1			Perforated Liner	5/18/2014	10,087.0	10,089.0	Niobrara, Original Hole
12,661.1	6.443	1	1	1			Perforated Liner	5/18/2014	10,185.0	10,187.0	Niobrara, Original Hole
12,794.0	6.445	1	1	1			Perforated Liner	5/18/2014	10,228.0	10,230.0	Niobrara, Original Hole
12,965.9	6.447	1	1	1			Perforated Liner	5/18/2014	10,261.0	10,263.0	Niobrara, Original Hole
13,040.0	6.449	1	1	1			Perforated Liner	5/18/2014	10,359.0	10,361.0	Niobrara, Original Hole
13,205.1	6.451	1	1	1			Perforated Liner	5/18/2014	10,402.0	10,404.0	Niobrara, Original Hole
13,248.4	6.453	1	1	1			Perforated Liner	5/18/2014	10,435.0	10,437.0	Niobrara, Original Hole
13,382.5	6.455	1	1	1			Perforated Liner	5/18/2014	10,533.0	10,535.0	Niobrara, Original Hole
							Perforated Liner	5/18/2014	10,576.0	10,578.0	Niobrara, Original Hole
							Perforated Liner	5/18/2014	10,609.0	10,611.0	Niobrara, Original Hole
							Perforated Liner	5/17/2014	10,707.0	10,709.0	Niobrara, Original Hole
							Perforated Liner	5/17/2014	10,749.0	10,751.0	Niobrara, Original Hole
							Perforated Liner	5/17/2014	10,782.0	10,784.0	Niobrara, Original Hole
							Perforated Liner	5/17/2014	10,880.0	10,882.0	Niobrara, Original Hole
							Perforated Liner	5/17/2014	10,923.0	10,925.0	Niobrara, Original Hole
							Perforated Liner	5/17/2014	10,956.0	10,958.0	Niobrara, Original Hole
							Perforated Liner	5/17/2014	11,054.0	11,056.0	Niobrara, Original Hole
							Perforated Liner	5/17/2014	11,097.0	11,099.0	Niobrara, Original Hole
							Perforated Liner	5/17/2014	11,130.0	11,132.0	Niobrara, Original Hole
							Perforated Liner	5/17/2014	11,228.0	11,230.0	Niobrara, Original Hole



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API Number 051233853500		WPC ID 1CO0761007		Well Permit Number		Field Name DJ Horizontal Niobrara		County Weld		State CO															
Well Configuration Type Lateral/Horizontal		Orig KB Elv (ft) 5,018.60		Ground Elevation (ft) 5,001.80		Casing Flange Elevation (ft)		Tubing Head Elevation (ft)		Total Depth (ftKB) 13,390.0															
Original Spud Date 1/28/2014		Completion Date 6/20/2014		Asset Group Redtail		Responsible Engineer Andrew Fish		N/S Dist (ft) 2,397.0		N/S Ref FNL		E/W Dist (ft) 855.0		E/W Ref FWL											
Lot		Quarter 1 SW		Quarter 2 NW		Quarter 3		Quarter 4		Section 11		Section Suffix		Section Type		Township 10 N		Township N/S Dir N		Range 58		Range E/W Dir W		Meridian	
Lateral/Horizontal - Original Hole, 10/14/2014 7:28:33 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		5/17/2014		11,271.0		11,273.0		Niobrara, Original Hole			
														Perforated Liner		5/17/2014		11,304.0		11,306.0		Niobrara, Original Hole			
														Perforated Liner		5/17/2014		11,402.0		11,404.0		Niobrara, Original Hole			
														Perforated Liner		5/17/2014		11,445.0		11,447.0		Niobrara, Original Hole			
1,804.8		1.8002		3.1										Perforated Liner		5/17/2014		11,478.0		11,480.0		Niobrara, Original Hole			
4,875.0		4.8646		3.1										Perforated Liner		5/17/2014		11,575.0		11,577.0		Niobrara, Original Hole			
5,170.3		5.1084		3.1										Perforated Liner		5/17/2014		11,618.0		11,620.0		Niobrara, Original Hole			
6,278.2		6.2688		3.1										Perforated Liner		5/17/2014		11,651.0		11,653.0		Niobrara, Original Hole			
6,372.0		6.3607		3.1										Perforated Liner		5/16/2014		11,749.0		11,751.0		Niobrara, Original Hole			
6,536.1		6.5010		3.1										Perforated Liner		5/16/2014		11,792.0		11,794.0		Niobrara, Original Hole			
6,611.9		6.5803		3.1										Perforated Liner		5/16/2014		11,825.0		11,827.0		Niobrara, Original Hole			
6,784.1		6.7661		3.1										Perforated Liner		5/16/2014		11,923.0		11,925.0		Niobrara, Original Hole			
6,930.1		6.9069		3.1										Perforated Liner		5/16/2014		11,966.0		11,968.0		Niobrara, Original Hole			
7,104.0		7.0807		3.1										Perforated Liner		5/16/2014		12,010.0		12,012.0		Niobrara, Original Hole			
7,228.0		7.2080		3.1										Perforated Liner		5/16/2014		12,097.0		12,099.0		Niobrara, Original Hole			
7,395.0		7.3694		3.1										Perforated Liner		5/16/2014		12,140.0		12,142.0		Niobrara, Original Hole			
7,482.0		7.4603		3.1										Perforated Liner		5/16/2014		12,180.0		12,182.0		Niobrara, Original Hole			
7,653.9		7.6318		3.1										Perforated Liner		5/16/2014		12,271.0		12,273.0		Niobrara, Original Hole			
7,792.0		7.7688		3.1										Perforated Liner		5/16/2014		12,314.0		12,316.0		Niobrara, Original Hole			
7,969.2		7.9422		3.1										Perforated Liner		5/16/2014		12,352.0		12,354.0		Niobrara, Original Hole			
8,102.0		8.0803		3.1										Perforated Liner		5/16/2014		12,448.0		12,450.0		Niobrara, Original Hole			
8,273.9		8.2541		3.1										Perforated Liner		5/16/2014		12,487.0		12,489.0		Niobrara, Original Hole			
8,348.1		8.3267		3.1										Perforated Liner		5/16/2014		12,530.0		12,532.0		Niobrara, Original Hole			
8,520.0		8.5072		3.1										Perforated Liner		5/15/2014		12,620.0		12,622.0		Niobrara, Original Hole			
8,654.9		8.6361		3.1										Perforated Liner		5/15/2014		12,661.0		12,663.0		Niobrara, Original Hole			
8,871.1		8.8427		3.1										Perforated Liner		5/15/2014		12,684.0		12,686.0		Niobrara, Original Hole			
9,007.9		8.9809		3.1										Perforated Liner		5/15/2014		12,792.0		12,794.0		Niobrara, Original Hole			
9,185.0		9.1618		3.1										Perforated Liner		5/15/2014		12,835.0		12,837.0		Niobrara, Original Hole			
9,317.9		9.2912		3.1										Perforated Liner		5/15/2014		12,858.0		12,860.0		Niobrara, Original Hole			
9,476.0		9.4505		3.1										Perforated Liner		5/15/2014		12,966.0		12,968.0		Niobrara, Original Hole			
9,567.9		9.5405		3.1										Perforated Liner		5/15/2014		13,009.0		13,011.0		Niobrara, Original Hole			
9,740.2		9.7167		3.1										Perforated Liner		5/15/2014		13,038.0		13,040.0		Niobrara, Original Hole			
9,882.9		9.8589		3.1										Perforated Liner		5/14/2014		13,170.0		13,172.0		Niobrara, Original Hole			
10,054.1		10.0310		3.1										Perforated Liner		5/14/2014		13,182.0		13,184.0		Niobrara, Original Hole			
10,187.0		10.1613		3.1										Perforated Liner		5/14/2014		13,205.0		13,207.0		Niobrara, Original Hole			
10,358.9		10.3360		3.1												Stimulations & Treatments									
10,437.0		10.4164		3.1												Sand Frac on 5/14/2014 06:00									
10,608.9		10.5864		3.1												Comment									
10,751.0		10.7302		3.1												Treatment End Date:5/22/2014; Number of staged intervals: 40;									
10,922.9		10.9005		3.1												Total 15% HCL used: 747bbl; Min frac gradient: 0.799 psi/ft;									
11,056.1		11.0320		3.1												Number of perfs: 1428; Slickwater 26832bbl; QuadraFrac Crosslink									
11,228.0		11.2044		3.1												Gel 70824bbl; Linear Gel 20407bbl.									
11,306.1		11.2804		3.1												Total Clean Volu... 118237.00									
11,478.0		11.4540		3.1												Vol Slurry Tot (bbl) 123404.00									
11,620.1		11.5981		3.1												Proppant Desig... 5,357,600.0									
11,792.0		11.7681		3.1												Proppant Frm (lb) 4,801,235.0									
11,924.9		11.9009		3.1												P Max (psi) 9,322.0									
12,097.1		12.0753		3.1												Avg Treat... 4,529.0									
12,182.1		12.1603		3.1												Avg Treat... 46.10									
12,352.0		12.3301		3.1												Max Tre... 75.70									
12,488.8		12.4669		3.1												Frac Gr... 0.93									
12,661.1		12.6386		3.1												Total Add Amount									
12,794.0		12.7703		3.1												Proppant 16/30 WS 4643567 lb; Proppant 40/70 WS 157671 lb									
12,965.9		12.9425		3.1												Stim/Treat Fluids									
13,040.0		13.0176		3.1												Fluid Name									
13,205.1		13.1841		3.1												QuadraFrac XL Gel; Linear Gel; 15% HCl									
																Stim/Treat Stages									
																Interval 1									
																Stg #									
																Start Date									
																Top (ftKB)									
																Btm (ftKB)									
																Vol Clean...									
																Vol Slurry...									
																Comment									
																1									
																5/14/2014									
																13,170.0									
																13,207.0									
																2724.00									
																2728.00									
																QuadraFrac XL Gel:1200 bbl; Linear Gel:483 bbl; Slickwater:1339 bbl; 15% HCl:24bbl									
																Stim/Treat Additives									
																Stg #									
																Add									
																Type									
																Amount									
																Units									
																Sand Size									
																1									
																Proppant									
																16/30 WS									
																1,013.0									
																lb									
																16/30									
																1									
																Proppant									
																40/70 WS									
																2,593.0									
																lb									
																40/70									
																Interval 2									
																Stg #									
																Start Date									
																Top (ftKB)									
																Btm (ftKB)									
																Vol Clean...									
																Vol Slurry...									
																Comment									
																2									
																5/15/2014									
																12,966.0									
																13,040.0									
																3243.00									
																3317.00									
																QuadraFrac XL Gel:1766 bbl; Linear Gel:616 bbl; Slickwater:1090 bbl; 15% HCl:24bbl									
																Stim/Treat Additives									
																Stg #									
																Add									
																Type									
																Amount									
																Units									
																Sand Size									
																2									



Lease Review All - Frac Summary

Well Name: RAZOR 11E-1403A

API Number 051233853500		WPC ID 1CO0761007		Well Permit Number		Field Name DJ Horizontal Niobrara			County Weld		State CO			
Well Configuration Type Lateral/Horizontal				Orig KB Elv (ft) 5,018.60		Ground Elevation (ft) 5,001.80		Casing Flange Elevation (ft)		Tubing Head Elevation (ft)		Total Depth (ftKB) 13,390.0		
Original Spud Date 1/28/2014		Completion Date 6/20/2014		Asset Group Redtail			Responsible Engineer Andrew Fish		N/S Dist (ft) 2,397.0		N/S Ref FNL		E/W Dist (ft) 855.0	E/W Ref FWL
Lot		Quarter 1 SW	Quarter 2 NW	Quarter 3	Quarter 4	Section 11	Section Suffix	Section Type	Township 10	Township N/S Dir N	Range 58	Range E/W Dir W	Meridian	

Lateral/Horizontal - Original Hole, 10/14/2014 7:28:34 AM					Stim/Treat Stages							
MD (ftKB)	D (ft K B)	n (K B)	l (K B)	Vertical schematic (actual)	Logs	Interval 4						
						Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment
						4	5/15/2014	12,620.0	12,686.0	2695.00	2783.00	QuadraFrac XL Gel:1499 bbl; Linear Gel:504 bbl; Slickwater:668 bbl; 15% HCl:24bbl
Stim/Treat Additives												
Stg #		Add		Type		Amount		Units		Sand Size		
4		Proppant		16/30 WS		78,232.0		lb		16/30		
4		Proppant		40/70 WS		3,475.0		lb		40/70		
Interval 5												
Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment						
5	5/16/2014	12,448.0	12,532.0	2555.00	2629.00	QuadraFrac XL Gel:1371 bbl; Linear Gel:507 bbl; Slickwater:652 bbl; 15% HCl:25bbl						
Stim/Treat Additives												
Stg #		Add		Type		Amount		Units		Sand Size		
5		Proppant		16/30 WS		65,800.0		lb		16/30		
5		Proppant		40/70 WS		3,697.0		lb		40/70		
Interval 6												
Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment						
6	5/16/2014	12,271.0	12,354.0	3004.00	3161.00	QuadraFrac XL Gel:1849 bbl; Linear Gel:501 bbl; Slickwater:631 bbl; 15% HCl:23bbl						
Stim/Treat Additives												
Stg #		Add		Type		Amount		Units		Sand Size		
6		Proppant		16/30 WS		142,147.0		lb		16/30		
6		Proppant		40/70 WS		3,887.0		lb		40/70		
Interval 7												
Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment						
7	5/16/2014	12,097.0	12,182.0	3023.00	3186.00	QuadraFrac XL Gel:1834 bbl; Linear Gel:501 bbl; Slickwater:667 bbl; 15% HCl:21bbl						
Stim/Treat Additives												
Stg #		Add		Type		Amount		Units		Sand Size		
7		Proppant		16/30 WS		147,560.0		lb		16/30		
7		Proppant		40/70 WS		3,409.0		lb		40/70		
Interval 8												
Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment						
8	5/16/2014	11,923.0	12,012.0	2926.00	3087.00	QuadraFrac XL Gel:1800 bbl; Linear Gel:496 bbl; Slickwater:606 bbl; 15% HCl:24bbl						
Stim/Treat Additives												
Stg #		Add		Type		Amount		Units		Sand Size		
8		Proppant		16/30 WS		147,101.0		lb		16/30		
8		Proppant		40/70 WS		2,556.0		lb		40/70		
Interval 9												
Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment						
9	5/16/2014	11,749.0	11,827.0	2892.00	3024.00	QuadraFrac XL Gel:1696 bbl; Linear Gel:497 bbl; Slickwater:680 bbl; 15% HCl:20bbl						
Stim/Treat Additives												
Stg #		Add		Type		Amount		Units		Sand Size		
9		Proppant		16/30 WS		118,639.0		lb		16/30		
9		Proppant		40/70 WS		4,147.0		lb		40/70		
Interval 10												
Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment						
10	5/16/2014	11,575.0	11,653.0	2675.00	2769.00	QuadraFrac XL Gel:1505 bbl; Linear Gel:503 bbl; Slickwater:645 bbl; 15% HCl:22bbl						
Stim/Treat Additives												
Stg #		Add		Type		Amount		Units		Sand Size		
10		Proppant		16/30 WS		83,487.0		lb		16/30		
10		Proppant		40/70 WS		3,550.0		lb		40/70		
Interval 11												
Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment						
11	5/17/2014	11,402.0	11,480.0	2580.00	2664.00	QuadraFrac XL Gel:1443 bbl; Linear Gel:510 bbl; Slickwater:602 bbl; 15% HCl:27bbl						
Stim/Treat Additives												
Stg #		Add		Type		Amount		Units		Sand Size		
11		Proppant		16/30 WS		74,945.0		lb		16/30		
11		Proppant		40/70 WS		3,247.0		lb		40/70		
Interval 12												
Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment						
12	5/17/2014	11,228.0	11,306.0	3006.00	3163.00	QuadraFrac XL Gel:1875 bbl; Linear Gel:516 bbl; Slickwater:591 bbl; 15% HCl:24bbl						
Stim/Treat Additives												
Stg #		Add		Type		Amount		Units		Sand Size		
12		Proppant		16/30 WS		140,684.0		lb		16/30		
12		Proppant		40/70 WS		4,657.0		lb		40/70		



Lease Review All - Frac Summary

Well Name: RAZOR 11E-1403A

API Number 051233853500		WPC ID 1CO0761007		Well Permit Number		Field Name DJ Horizontal Niobrara		County Weld		State CO					
Well Configuration Type Lateral/Horizontal		Orig KB Elv (ft) 5,018.60		Ground Elevation (ft) 5,001.80		Casing Flange Elevation (ft)		Tubing Head Elevation (ft)		Total Depth (ftKB) 13,390.0					
Original Spud Date 1/28/2014		Completion Date 6/20/2014		Asset Group Redtail		Responsible Engineer Andrew Fish		N/S Dist (ft) 2,397.0		N/S Ref FNL		E/W Dist (ft) 855.0		E/W Ref FWL	
Lot		Quarter 1 SW	Quarter 2 NW	Quarter 3	Quarter 4	Section 11	Section Suffix	Section Type	Township 10	Township N/S Dir N	Range 58	Range E/W Dir W	Meridian		
Lateral/Horizontal - Original Hole, 10/14/2014 7:28:36 AM						Stim/Treat Stages									
MD (ftKB)	D (ft K B)	n (C B)	Vertical schematic (actual)	Logs	Interval 13										
					Stg # 13	Start Date 5/17/2014	Top (ftKB) 11,054.0	Btm (ftKB) 11,132.0	Vol Clean... 2940.00	Vol Slurry... 3091.00	Comment QuadraFrac XL Gel:1822 bbl; Linear Gel:498 bbl; Slickwater:594 bbl; 15% HCl:27bbl				
Stim/Treat Additives															
Stg #		Add		Type		Amount		Units		Sand Size					
13		Proppant		16/30 WS		136,838.0		lb		16/30					
13		Proppant		40/70 WS		3,398.0		lb		40/70					
Interval 14															
Stg # 14		Start Date 5/17/2014		Top (ftKB) 10,880.0	Btm (ftKB) 10,958.0	Vol Clean... 2954.00	Vol Slurry... 3099.00	Comment QuadraFrac XL Gel:1830 bbl; Linear Gel:495 bbl; Slickwater:605 bbl; 15% HCl:24bbl							
Stim/Treat Additives															
Stg #		Add		Type		Amount		Units		Sand Size					
14		Proppant		16/30 WS		130,656.0		lb		16/30					
14		Proppant		40/70 WS		3,991.0		lb		40/70					
Interval 15															
Stg # 15		Start Date 5/17/2014		Top (ftKB) 10,707.0	Btm (ftKB) 10,784.0	Vol Clean... 2931.00	Vol Slurry... 3080.00	Comment QuadraFrac XL Gel:1815 bbl; Linear Gel:496 bbl; Slickwater:594 bbl; 15% HCl:25bbl							
Stim/Treat Additives															
Stg #		Add		Type		Amount		Units		Sand Size					
15		Proppant		16/30 WS		134,707.0		lb		16/30					
15		Proppant		40/70 WS		3,710.0		lb		40/70					
Interval 16															
Stg # 16		Start Date 5/17/2014		Top (ftKB) 10,533.0	Btm (ftKB) 10,611.0	Vol Clean... 2921.00	Vol Slurry... 3064.00	Comment QuadraFrac XL Gel:1770 bbl; Linear Gel:494 bbl; Slickwater:631 bbl; 15% HCl:25bbl							
Stim/Treat Additives															
Stg #		Add		Type		Amount		Units		Sand Size					
16		Proppant		16/30 WS		130,459.0		lb		16/30					
16		Proppant		40/70 WS		3,075.0		lb		40/70					
Interval 17															
Stg # 17		Start Date 5/18/2014		Top (ftKB) 10,359.0	Btm (ftKB) 10,437.0	Vol Clean... 3452.00	Vol Slurry... 3596.00	Comment QuadraFrac XL Gel:1953 bbl; Linear Gel:510 bbl; Slickwater:966 bbl; 15% HCl:24bbl							
Stim/Treat Additives															
Stg #		Add		Type		Amount		Units		Sand Size					
17		Proppant		16/30 WS		130,267.0		lb		16/30					
17		Proppant		40/70 WS		3,195.0		lb		40/70					
Interval 18															
Stg # 18		Start Date 5/18/2014		Top (ftKB) 10,185.0	Btm (ftKB) 10,263.0	Vol Clean... 3201.00	Vol Slurry... 3350.00	Comment QuadraFrac XL Gel:2099 bbl; Linear Gel:509 bbl; Slickwater:555 bbl; 15% HCl:39bbl							
Stim/Treat Additives															
Stg #		Add		Type		Amount		Units		Sand Size					
18		Proppant		16/30 WS		134,681.0		lb		16/30					
18		Proppant		40/70 WS		3,980.0		lb		40/70					
Interval 19															
Stg # 19		Start Date 5/18/2014		Top (ftKB) 10,008.0	Btm (ftKB) 10,089.0	Vol Clean... 3518.00	Vol Slurry... 3618.00	Comment QuadraFrac XL Gel:1768 bbl; Linear Gel:642 bbl; Slickwater:1082 bbl; 15% HCl:25bbl							
Stim/Treat Additives															
Stg #		Add		Type		Amount		Units		Sand Size					
19		Proppant		16/30 WS		90,586.0		lb		16/30					
19		Proppant		40/70 WS		2,643.0		lb		40/70					
Interval 20															
Stg # 20		Start Date 5/19/2014		Top (ftKB) 9,838.0	Btm (ftKB) 9,915.0	Vol Clean... 2556.00	Vol Slurry... 2633.00	Comment QuadraFrac XL Gel:1471 bbl; Linear Gel:500 bbl; Slickwater:561 bbl; 15% HCl:24bbl							
Stim/Treat Additives															
Stg #		Add		Type		Amount		Units		Sand Size					
20		Proppant		16/30 WS		69,070.0		lb		16/30					
20		Proppant		40/70 WS		2,774.0		lb		40/70					
Interval 21															
Stg # 21		Start Date 5/19/2014		Top (ftKB) 9,654.0	Btm (ftKB) 9,742.0	Vol Clean... 3059.00	Vol Slurry... 3212.00	Comment QuadraFrac XL Gel:1848 bbl; Linear Gel:508 bbl; Slickwater:665 bbl; 15% HCl:38bbl							
Stim/Treat Additives															
Stg #		Add		Type		Amount		Units		Sand Size					
21		Proppant		16/30 WS		136,119.0		lb		16/30					
21		Proppant		40/70 WS		5,990.0		lb		40/70					



Lease Review All - Frac Summary

Well Name: RAZOR 11E-1403A

API Number 051233853500		WPC ID 1CO0761007		Well Permit Number		Field Name DJ Horizontal Niobrara		County Weld		State CO								
Well Configuration Type Lateral/Horizontal		Orig KB Elv (ft) 5,018.60		Ground Elevation (ft) 5,001.80		Casing Flange Elevation (ft)		Tubing Head Elevation (ft)		Total Depth (ftKB) 13,390.0								
Original Spud Date 1/28/2014		Completion Date 6/20/2014		Asset Group Redtail		Responsible Engineer Andrew Fish		N/S Dist (ft) 2,397.0		N/S Ref FNL	E/W Dist (ft) 855.0	E/W Ref FWL						
Lot		Quarter 1 SW	Quarter 2 NW	Quarter 3	Quarter 4	Section 11	Section Suffix	Section Type	Township 10 N	Township N/S Dir	Range 58	Range E/W Dir W	Meridian					
Lateral/Horizontal - Original Hole, 10/14/2014 7:28:38 AM						Stim/Treat Stages												
<div>MD (ftKB)</div> <div>21.7</div> <div>1,804.8</div> <div>4,875.0</div> <div>5,170.3</div> <div>6,278.2</div> <div>6,372.0</div> <div>6,536.1</div> <div>6,611.9</div> <div>6,784.1</div> <div>6,930.1</div> <div>7,104.0</div> <div>7,228.0</div> <div>7,395.0</div> <div>7,482.0</div> <div>7,653.9</div> <div>7,792.0</div> <div>7,969.2</div> <div>8,102.0</div> <div>8,273.9</div> <div>8,348.1</div> <div>8,520.0</div> <div>8,654.9</div> <div>8,871.1</div> <div>9,007.9</div> <div>9,185.0</div> <div>9,317.9</div> <div>9,476.0</div> <div>9,567.9</div> <div>9,740.2</div> <div>9,882.9</div> <div>10,054.1</div> <div>10,187.0</div> <div>10,358.9</div> <div>10,437.0</div> <div>10,608.9</div> <div>10,751.0</div> <div>10,922.9</div> <div>11,056.1</div> <div>11,228.0</div> <div>11,306.1</div> <div>11,478.0</div> <div>11,620.1</div> <div>11,792.0</div> <div>11,924.9</div> <div>12,097.1</div> <div>12,182.1</div> <div>12,352.0</div> <div>12,488.8</div> <div>12,661.1</div> <div>12,794.0</div> <div>12,965.9</div> <div>13,040.0</div> <div>13,205.1</div> <div>13,248.4</div> <div>13,382.5</div>	<div>D (ft K B)</div> <div>21.7</div> <div>1,802.0</div> <div>4,864.0</div> <div>5,168.0</div> <div>6,272.0</div> <div>6,368.0</div> <div>6,532.0</div> <div>6,608.0</div> <div>6,780.0</div> <div>6,926.0</div> <div>7,100.0</div> <div>7,224.0</div> <div>7,391.0</div> <div>7,478.0</div> <div>7,649.0</div> <div>7,788.0</div> <div>7,965.0</div> <div>8,098.0</div> <div>8,270.0</div> <div>8,346.0</div> <div>8,518.0</div> <div>8,653.0</div> <div>8,869.0</div> <div>8,996.0</div> <div>9,174.0</div> <div>9,307.0</div> <div>9,474.0</div> <div>9,565.0</div> <div>9,737.0</div> <div>9,878.0</div> <div>10,055.0</div> <div>10,188.0</div> <div>10,360.0</div> <div>10,439.0</div> <div>10,611.0</div> <div>10,752.0</div> <div>10,929.0</div> <div>11,062.0</div> <div>11,234.0</div> <div>11,312.0</div> <div>11,484.0</div> <div>11,626.0</div> <div>11,799.0</div> <div>11,932.0</div> <div>12,105.0</div> <div>12,184.0</div> <div>12,356.0</div> <div>12,490.0</div> <div>12,663.0</div> <div>12,796.0</div> <div>12,969.0</div> <div>13,048.0</div> <div>13,220.0</div> <div>13,263.0</div>	<div>n (ft K B)</div> <div>21.7</div> <div>1,802.0</div> <div>4,864.0</div> <div>5,168.0</div> <div>6,272.0</div> <div>6,368.0</div> <div>6,532.0</div> <div>6,608.0</div> <div>6,780.0</div> <div>6,926.0</div> <div>7,100.0</div> <div>7,224.0</div> <div>7,391.0</div> <div>7,478.0</div> <div>7,649.0</div> <div>7,788.0</div> <div>7,965.0</div> <div>8,098.0</div> <div>8,270.0</div> <div>8,346.0</div> <div>8,518.0</div> <div>8,653.0</div> <div>8,869.0</div> <div>8,996.0</div> <div>9,174.0</div> <div>9,307.0</div> <div>9,474.0</div> <div>9,565.0</div> <div>9,737.0</div> <div>9,878.0</div> <div>10,055.0</div> <div>10,188.0</div> <div>10,360.0</div> <div>10,439.0</div> <div>10,611.0</div> <div>10,752.0</div> <div>10,929.0</div> <div>11,062.0</div> <div>11,234.0</div> <div>11,312.0</div> <div>11,484.0</div> <div>11,626.0</div> <div>11,799.0</div> <div>11,932.0</div> <div>12,105.0</div> <div>12,184.0</div> <div>12,356.0</div> <div>12,490.0</div> <div>12,663.0</div> <div>12,796.0</div> <div>12,969.0</div> <div>13,048.0</div> <div>13,220.0</div> <div>13,263.0</div>	<div>Vertical schematic (actual)</div> <div></div>	<div>Logs</div> <div></div>	Interval 22						Stg # 22	Start Date 5/19/2014	Top (ftKB) 9,476.0	Btm (ftKB) 9,568.0	Vol Clean... 2837.00	Vol Slurry... 2985.00	Comment QuadraFrac XL Gel:1778 bbl; Linear Gel:543 bbl; Slickwater:517 bbl; 15% HCl:0bbl	
					Stim/Treat Additives													
					Stg #	Add	Type		Amount		Units	Sand Size						
					22	Proppant	16/30 WS		134,600.0		lb	16/30						
					22	Proppant	40/70 WS		2,800.0		lb	40/70						
					Interval 23													
					Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment							
					23	5/19/2014	9,316.0	9,394.0	2987.00	3139.00	QuadraFrac XL Gel:1926 bbl; Linear Gel:504 bbl; Slickwater:556 bbl; 15% HCl:0bbl							
					Stim/Treat Additives													
					Stg #	Add	Type		Amount		Units	Sand Size						
					23	Proppant	16/30 WS		137,927.0		lb	16/30						
					23	Proppant	40/70 WS		3,763.0		lb	40/70						
					Interval 24													
					Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment							
					24	5/19/2014	9,142.0	9,232.0	2847.00	2994.00	QuadraFrac XL Gel:1835 bbl; Linear Gel:499 bbl; Slickwater:513 bbl; 15% HCl:0bbl							
					Stim/Treat Additives													
					Stg #	Add	Type		Amount		Units	Sand Size						
					24	Proppant	16/30 WS		132,745.0		lb	16/30						
					24	Proppant	40/70 WS		3,491.0		lb	40/70						
					Interval 25													
					Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment							
					25	5/20/2014	8,974.0	9,047.0	2688.00	2796.00	QuadraFrac XL Gel:1562 bbl; Linear Gel:502 bbl; Slickwater:600 bbl; 15% HCl:24bbl							
					Stim/Treat Additives													
					Stg #	Add	Type		Amount		Units	Sand Size						
					25	Proppant	16/30 WS		96,755.0		lb	16/30						
					25	Proppant	40/70 WS		3,783.0		lb	40/70						
					Interval 26													
					Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment							
					26	5/20/2014	8,681.0	8,873.0	2798.00	2910.00	QuadraFrac XL Gel:1602 bbl; Linear Gel:501 bbl; Slickwater:671 bbl; 15% HCl:25bbl							
					Stim/Treat Additives													
					Stg #	Add	Type		Amount		Units	Sand Size						
					26	Proppant	16/30 WS		98,538.0		lb	16/30						
					26	Proppant	40/70 WS		4,722.0		lb	40/70						
					Interval 27													
					Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment							
					27	5/20/2014	8,520.0	8,655.0	2967.00	3120.00	QuadraFrac XL Gel:1841 bbl; Linear Gel:503 bbl; Slickwater:601 bbl; 15% HCl:23bbl							
					Stim/Treat Additives													
					Stg #	Add	Type		Amount		Units	Sand Size						
					27	Proppant	16/30 WS		137,497.0		lb	16/30						
					27	Proppant	40/70 WS		4,088.0		lb	40/70						
					Interval 28													
					Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment							
					28	5/20/2014	8,346.0	8,492.0	2920.00	3073.00	QuadraFrac XL Gel:1808 bbl; Linear Gel:500 bbl; Slickwater:581 bbl; 15% HCl:31bbl							
					Stim/Treat Additives													
					Stg #	Add	Type		Amount		Units	Sand Size						
					28	Proppant	16/30 WS		138,375.0		lb	16/30						
					28	Proppant	40/70 WS		4,229.0		lb	40/70						
					Interval 29													
					Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment							
					29	5/20/2014	8,184.0	8,318.0	3188.00	3340.00	QuadraFrac XL Gel:2172 bbl; Linear Gel:450 bbl; Slickwater:566 bbl; 15% HCl:0bbl							
					Stim/Treat Additives													
					Stg #	Add	Type		Amount		Units	Sand Size						
					29	Proppant	16/30 WS		138,008.0		lb	16/30						
					29	Proppant	40/70 WS		3,644.0		lb	40/70						
					Interval 30													
					Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment							
					30	5/20/2014	8,016.0	8,145.0	3275.00	3432.00	QuadraFrac XL Gel:2216 bbl; Linear Gel:504 bbl; Slickwater:555 bbl; 15% HCl:0bbl							
Stim/Treat Additives																		
Stg #	Add	Type		Amount		Units	Sand Size											
30	Proppant	16/30 WS		142,744.0		lb	16/30											
30	Proppant	40/70 WS		3,117.0		lb	40/70											



Lease Review All - Frac Summary

Well Name: RAZOR 11E-1403A

API Number 051233853500		WPC ID 1CO0761007		Well Permit Number		Field Name DJ Horizontal Niobrara			County Weld		State CO			
Well Configuration Type Lateral/Horizontal				Orig KB Elv (ft) 5,018.60		Ground Elevation (ft) 5,001.80		Casing Flange Elevation (ft)		Tubing Head Elevation (ft)		Total Depth (ft)KB 13,390.0		
Original Spud Date 1/28/2014		Completion Date 6/20/2014		Asset Group Redtail			Responsible Engineer Andrew Fish		N/S Dist (ft) 2,397.0		N/S Ref FNL	E/W Dist (ft) 855.0		E/W Ref FWL
Lot	Quarter 1 SW	Quarter 2 NW	Quarter 3	Quarter 4	Section 11	Section Suffix	Section Type	Township 10	Township N/S Dir N	Range 58	Range E/W Dir W	Meridian		

Lateral/Horizontal - Original Hole, 10/14/2014 7:28:39 AM										Stim/Treat Stages									
MD (ftKB)	D (ft K B)	n (B)	c (B)	l (B)	Vertical schematic (actual)	Logs	Interval 31												
							Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment						
21.7	21.7	51					31	5/21/2014	7,820.0	7,971.0	3199.00	3351.00	QuadraFrac XL Gel:2064 bbl; Linear Gel:500 bbl; Slickwater:612 bbl; 15% HCl:23bbl						
1,804.8	1,802.2	52					Stim/Treat Additives												
4,875.0	4,866.5	53					Stg #	Add	Type	Amount	Units	Sand Size							
5,170.3	5,168.4	54					31	Proppant	16/30 WS	136,528.0	lb	16/30							
6,278.2	6,269.9	55					31	Proppant	40/70 WS	4,416.0	lb	40/70							
6,372.0	6,360.7	56					Interval 32												
6,536.1	6,527.0	57					Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment						
6,611.9	6,603.3	58					32	5/21/2014	7,654.0	7,792.0	3599.00	3750.00	QuadraFrac XL Gel:2496 bbl; Linear Gel:525 bbl; Slickwater:577 bbl; 15% HCl:0bbl						
6,784.1	6,775.1	59					Stim/Treat Additives												
6,930.1	6,920.9	60					Stg #	Add	Type	Amount	Units	Sand Size							
7,104.0	7,095.7	61					32	Proppant	16/30 WS	136,725.0	lb	16/30							
7,228.0	7,219.7	62					32	Proppant	40/70 WS	3,697.0	lb	40/70							
7,395.0	7,386.7	63					Interval 33												
7,482.0	7,473.7	64					Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment						
7,653.9	7,645.6	65					33	5/21/2014	7,480.0	7,613.0	3258.00	3414.00	QuadraFrac XL Gel:1864 bbl; Linear Gel:505 bbl; Slickwater:865 bbl; 15% HCl:23bbl						
7,792.0	7,783.7	66					Stim/Treat Additives												
7,969.2	7,960.9	67					Stg #	Add	Type	Amount	Units	Sand Size							
8,102.0	8,093.7	68					33	Proppant	16/30 WS	138,353.0	lb	16/30							
8,273.9	8,265.6	69					33	Proppant	40/70 WS	6,404.0	lb	40/70							
8,348.1	8,339.8	70					Interval 34												
8,520.0	8,511.7	71					Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment						
8,654.9	8,646.6	72					34	5/21/2014	7,307.0	7,440.0	2886.00	3041.00	QuadraFrac XL Gel:1847 bbl; Linear Gel:509 bbl; Slickwater:531 bbl; 15% HCl:0bbl						
8,871.1	8,862.8	73					Stim/Treat Additives												
9,007.9	8,999.6	74					Stg #	Add	Type	Amount	Units	Sand Size							
9,185.0	9,176.7	75					34	Proppant	16/30 WS	138,904.0	lb	16/30							
9,317.9	9,309.6	76					34	Proppant	40/70 WS	4,252.0	lb	40/70							
9,476.0	9,467.7	77					Interval 35												
9,567.9	9,559.6	78					Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment						
9,740.2	9,731.9	79					35	5/21/2014	7,133.0	7,270.0	2891.00	3044.00	QuadraFrac XL Gel:1836 bbl; Linear Gel:500 bbl; Slickwater:554 bbl; 15% HCl:0bbl						
9,882.9	9,874.6	80					Stim/Treat Additives												
10,054.1	10,045.8	81					Stg #	Add	Type	Amount	Units	Sand Size							
10,187.0	10,178.7	82					35	Proppant	16/30 WS	138,431.0	lb	16/30							
10,358.9	10,350.6	83					35	Proppant	40/70 WS	4,374.0	lb	40/70							
10,437.0	10,428.7	84					Interval 36												
10,608.9	10,600.6	85					Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment						
10,751.0	10,742.7	86					36	5/21/2014	6,959.0	7,106.0	2794.00	2945.00	QuadraFrac XL Gel:1791 bbl; Linear Gel:499 bbl; Slickwater:504 bbl; 15% HCl:0bbl						
10,922.9	10,914.6	87					Stim/Treat Additives												
11,056.1	11,047.8	88					Stg #	Add	Type	Amount	Units	Sand Size							
11,228.0	11,219.7	89					36	Proppant	16/30 WS	137,316.0	lb	16/30							
11,306.1	11,297.8	90					36	Proppant	40/70 WS	2,540.0	lb	40/70							
11,478.0	11,469.7	91					Interval 37												
11,620.1	11,611.8	92					Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment						
11,792.0	11,783.7	93					37	5/22/2014	6,784.0	6,930.0	2454.00	2517.00	QuadraFrac XL Gel:1239 bbl; Linear Gel:649 bbl; Slickwater:566 bbl; 15% HCl:0bbl						
11,924.9	11,916.6	94					Stim/Treat Additives												
12,097.1	12,088.8	95					Stg #	Add	Type	Amount	Units	Sand Size							
12,182.1	12,173.8	96					37	Proppant	16/30 WS	54,552.0	lb	16/30							
12,352.0	12,343.7	97					37	Proppant	40/70 WS	3,678.0	lb	40/70							
12,488.8	12,480.5	98					Interval 38												
12,661.1	12,652.8	99					Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment						
12,794.0	12,785.7	100					38	5/22/2014	6,610.0	6,754.0	2709.00	2820.00	QuadraFrac XL Gel:1610 bbl; Linear Gel:501 bbl; Slickwater:573 bbl; 15% HCl:24bbl						
12,965.9	12,957.6	101					Stim/Treat Additives												
13,040.0	13,031.7	102					Stg #	Add	Type	Amount	Units	Sand Size							
13,205.1	13,196.8	103					38	Proppant	16/30 WS	99,524.0	lb	16/30							
13,248.4	13,240.1	104					38	Proppant	40/70 WS	4,114.0	lb	40/70							
13,382.5	13,374.2	105					Interval 39												
							Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment						
							39	5/22/2014	6,438.0	6,581.0	2806.00	2936.00	QuadraFrac XL Gel:1735 bbl; Linear Gel:472 bbl; Slickwater:580 bbl; 15% HCl:19bbl						
							Stim/Treat Additives												
							Stg #	Add	Type	Amount	Units	Sand Size							
							39	Proppant	16/30 WS	117,350.0	lb	16/30							
							39	Proppant	40/70 WS	3,630.0	lb	40/70							



Lease Review All - Frac Summary

Well Name: RAZOR 11E-1403A

API Number 051233853500		WPC ID 1CO0761007		Well Permit Number		Field Name DJ Horizontal Niobrara			County Weld			State CO	
Well Configuration Type Lateral/Horizontal				Orig KB Elv (ft) 5,018.60	Ground Elevation (ft) 5,001.80	Casing Flange Elevation (ft)		Tubing Head Elevation (ft)		Total Depth (ftKB) 13,390.0			
Original Spud Date 1/28/2014		Completion Date 6/20/2014		Asset Group Redtail		Responsible Engineer Andrew Fish			N/S Dist (ft) 2,397.0		N/S Ref FNL	E/W Dist (ft) 855.0	E/W Ref FWL
Lot	Quarter 1 SW	Quarter 2 NW	Quarter 3	Quarter 4	Section 11	Section Suffix	Section Type	Township 10	Township N/S Dir N	Range 58	Range E/W Dir W	Meridian	

Lateral/Horizontal - Original Hole, 10/14/2014 7:28:41 AM					Stim/Treat Stages							
MD (ftKB)	D (ft K B)	n (K B)	c (K B)	Vertical schematic (actual)	Logs	Interval 40						
						Stg #	Start Date	Top (ftKB)	Btm (ftKB)	Vol Clean...	Vol Slurry...	Comment
						40	5/22/2014	6,370.0	6,402.0	3471.00	3635.00	QuadraFrac XL Gel:1906 bbl; Linear Gel:452 bbl; Slickwater:1092 bbl; 15% HCl:21bbl
Stim/Treat Additives												
Stg #		Add		Type		Amount		Units		Sand Size		
40		Proppant		16/30 WS		141,481.0		lb		16/30		
40		Proppant		40/70 WS		11,306.0		lb		40/70		
Tubing - Production set at 4,962.4ftKB on 8/5/2014 08:00												
Set Depth (ftKB)		Comment							Run Date		Pull Date	
4,962.4									8/5/2014			
Item Des			OD (in)		ID (in)		Len (ft)		Top (ftKB)		Btm (ftKB)	
Tubing			2 7/8		2.441		4,875.44		-0.3		4,875.1	
ESP Pump / Schlumberger			2 7/8				87.24		4,875.1		4,962.4	
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		5/22/2014		6/17/2014		6,476.0		6,478.0	
CFP			4		5/22/2014		6/17/2014		6,670.0		6,672.0	
CFP			4		5/22/2014		6/17/2014		6,820.0		6,822.0	
CFP			4		5/22/2014		6/17/2014		6,990.0		6,992.0	
CFP			4		5/22/2014		6/17/2014		7,170.0		7,172.0	
CFP			4		5/21/2014		6/17/2014		7,342.0		7,344.0	
CFP			4		5/21/2014		6/17/2014		7,520.0		7,522.0	
CFP			4		5/21/2014		6/17/2014		7,695.0		7,697.0	
CFP			4		5/21/2014		6/17/2014		7,860.0		7,862.0	
CFP			4		5/21/2014		6/17/2014		8,060.0		8,062.0	
CFP			4		5/20/2014		6/17/2014		8,230.0		8,232.0	
CFP			4		5/20/2014		6/17/2014		8,380.0		8,382.0	
CFP			4		5/20/2014		6/17/2014		8,550.0		8,552.0	
CFP			4		5/20/2014		6/17/2014		8,730.0		8,732.0	
CFP			4		5/20/2014		6/17/2014		8,916.0		8,918.0	
CFP			4		5/20/2014		6/17/2014		9,085.0		9,087.0	
CFP			4		5/19/2014		6/17/2014		9,280.0		9,282.0	
CFP			4		5/19/2014		6/17/2014		9,425.0		9,427.0	
CFP			4		5/19/2014		6/17/2014		9,600.0		9,602.0	
CFP			4		5/19/2014		6/17/2014		9,785.0		9,787.0	
CFP			4		5/19/2014		6/18/2014		9,958.0		9,960.0	
CFP			4		5/18/2014		6/18/2014		10,132.0		10,134.0	
CFP			4		5/18/2014		6/18/2014		10,306.0		10,308.0	
CFP			4		5/18/2014		6/18/2014		10,480.0		10,482.0	
CFP			4		5/18/2014		6/18/2014		10,654.0		10,656.0	
CFP			4		5/17/2014		6/18/2014		10,827.0		10,829.0	
CFP			4		5/17/2014		6/18/2014		11,001.0		11,003.0	
CFP			4		5/17/2014		6/18/2014		11,175.0		11,177.0	
CFP			4		5/17/2014		6/18/2014		11,349.0		11,351.0	
CFP			4		5/17/2014		6/18/2014		11,522.0		11,524.0	
CFP			4		5/17/2014		6/18/2014		11,700.0		11,702.0	
CFP			4		5/16/2014		6/18/2014		11,880.0		11,882.0	
CFP			4		5/16/2014		6/18/2014		12,060.0		12,062.0	
CFP			4		5/16/2014		6/18/2014		12,226.0		12,228.0	
CFP			4		5/16/2014		6/18/2014		12,404.0		12,406.0	
CFP			4		5/16/2014		6/18/2014		12,574.0		12,576.0	
CFP			4		5/15/2014		6/18/2014		12,746.0		12,748.0	
CFP			4		5/15/2014		6/18/2014		12,930.0		12,932.0	
CFP			4		5/15/2014		6/18/2014		13,096.0		13,098.0	
Bottom Hole Cores												
Date		Core #		Top (ftKB)		Btm (ftKB)		Recov (ft)				