



Lease Review  
Well Name: RAZOR 330-2812

API Number 051233930500		WPC ID 1CO0761134		Well Permit Number 400575416		Field Name DJ Horizontal Niobrara		County Weld		State CO										
Well Configuration Type Lateral/Horizontal		Orig KB Elv (ft) 4,736.00		Ground Elevation (ft) 4,715.00		Casing Flange Elevation (ft)		Tubing Head Elevation (ft)		Total Depth (ftKB) 13,233.0										
Original Spud Date 11/30/2014		Completion Date 3/5/2015		Asset Group Retail		Responsible Engineer Charles Ohlson		N/S Dist (ft) 330.0		N/S Ref FSL	E/W Dist (ft) 1,862.0	E/W Ref FEL								
Lot		Quarter 1 SW		Quarter 2 SE		Quarter 3		Quarter 4		Section 33		Section Suffix	Section Type	Township 10 N		Township N/S Dir	Range 58	Range E/W Dir W	Meridian	
Lateral/Horizontal - Original Hole, 4/24/2015 2:20:01 PM						Wellbore Sections														
MD (ftKB)	<div><div>D (ft KB)</div><div>n ( ft)</div><div>c ( ft)</div><div>l ( ft)</div></div>	<div><div>Vertical schematic (actual)</div><div>Logs</div></div>	Wellbore Name		Start Date		Size (in)		Act Top (ftKB)		Act Btm (ftKB)									
			Original Hole		11/22/2014		24		21.0		90.0									
			Original Hole		11/30/2014		13 1/2		90.0		1,570.0									
			Original Hole		12/4/2014		8 3/4		1,570.0		6,075.0									
			Original Hole		12/7/2014		6		6,075.0		13,233.0									
Conductor Pipe, 90.0ftKB																				
OD (in)			Wt (lb/ft)		Grade		Top (ftKB)		Btm (ftKB)		Len (ft)		Item Des							
16			75.00		J-55		21.0		90.0		69.00		Casing Joints							
Surface Csg, 1,557.1ftKB																				
OD (in)			Wt (lb/ft)		Grade		Top (ftKB)		Btm (ftKB)		Len (ft)		Item Des							
9 5/8			36.00		J-55		21.0		21.0		0.00		Landing Joint							
9 5/8			36.00		J-55		21.0		24.5		3.50		Wellhead							
9 5/8			36.00		J-55		24.5		34.7		10.20		Pup Joint							
9 5/8			36.00		J-55		34.7		1,513.0		1,478.33		Casing Joints							
9 5/8			36.00		J-55		1,513.0		1,514.5		1.50		Float Collar							
9 5/8			36.00		J-55		1,514.5		1,555.6		41.07		Casing Joints							
9 5/8			36.00		J-55		1,555.6		1,557.1		1.50		Float Shoe							
Frac String, 5,021.6ftKB																				
OD (in)			Wt (lb/ft)		Grade		Top (ftKB)		Btm (ftKB)		Len (ft)		Item Des							
Intermediate Csg, 6,060.8ftKB																				
OD (in)			Wt (lb/ft)		Grade		Top (ftKB)		Btm (ftKB)		Len (ft)		Item Des							
7			29.00		P-110		21.0		21.0		0.00		Landing Joint							
7			29.00		P-110		21.0		22.2		1.15		Casing Hanger							
7			29.00		P-110		22.2		25.8		3.65		Casing PUP Joint							
7			29.00		P-110		25.8		6,013.8		5,987.95		Casing Joints							
7			29.00		P-110		6,013.8		6,015.3		1.50		Float Collar							
7			29.00		P-110		6,015.3		6,059.3		44.01		Casing Joints							
7			29.00		P-110		6,059.3		6,060.8		1.50		Float Shoe							
Liner, 13,177.4ftKB																				
OD (in)			Wt (lb/ft)		Grade		Top (ftKB)		Btm (ftKB)		Len (ft)		Item Des							
4 1/2			11.60		HCP-110		4,973.7		4,990.1		16.34		PBR tie back sleeve							
4 1/2			11.60		HCP-110		4,990.1		4,993.5		3.40		TSP Liner Top Packer							
4 1/2			11.60		HCP-110		4,993.5		4,999.2		5.71		Liner Hanger							
4 1/2			11.60		HCP-110		4,999.2		4,999.8		0.67		VTHT x TXP X/O							
4 1/2			11.60		HCP-110		4,999.8		13,161.8		8,162.00		Casing Joints							
4 1/2			11.60		HCP-110		13,161.8		13,166.9		5.10		Pup Joint							
4 1/2							13,166.9		13,171.9		5.01		Wet Shoe Sub							
4 1/2							13,171.9		13,173.5		1.58		Landing Collar							
4 1/2							13,173.5		13,175.8		2.30		Float Collar							
4 1/2							13,175.8		13,177.4		1.58		Float Shoe							
Cement Stages																				
Des			Pump Start Date		Drill Out Date		Top (ftKB)		Btm (ftKB)		Top Meas Meth									
Conductor Cement			11/22/2014				21.0		90.0		Returns to Surface									
Surface Casing Cement			12/2/2014				21.0		1,557.1		Returns to Surface									
Intermediate Casing Cement			12/6/2014				21.0		6,060.8		Returns to Surface									
Liner Cement			12/12/2014				4,975.3		13,177.4											
Perforations																				
Type of Hole			Date		Top (ftKB)		Btm (ftKB)		Zone											
Perforated Liner			3/5/2015		6,084.0		6,086.0		Niobrara, Original Hole											
Perforated Liner			3/5/2015		6,153.0		6,155.0		Niobrara, Original Hole											
Perforated Liner			3/5/2015		6,220.0		6,222.0		Niobrara, Original Hole											
Perforated Liner			3/5/2015		6,288.0		6,290.0		Niobrara, Original Hole											
Perforated Liner			3/5/2015		6,352.0		6,354.0		Niobrara, Original Hole											
Perforated Liner			3/5/2015		6,423.0		6,425.0		Niobrara, Original Hole											
Perforated Liner			3/5/2015		6,491.0		6,493.0		Niobrara, Original Hole											
Perforated Liner			3/5/2015		6,559.0		6,561.0		Niobrara, Original Hole											
Perforated Liner			3/5/2015		6,627.0		6,629.0		Niobrara, Original Hole											
Perforated Liner			3/4/2015		6,704.0		6,706.0		Niobrara, Original Hole											
Perforated Liner			3/4/2015		6,763.0		6,765.0		Niobrara, Original Hole											
Perforated Liner			3/4/2015		6,830.0		6,832.0		Niobrara, Original Hole											
Perforated Liner			3/4/2015		6,898.0		6,900.0		Niobrara, Original Hole											
Perforated Liner			3/4/2015		6,966.0		6,968.0		Niobrara, Original Hole											
Perforated Liner			3/4/2015		7,031.0		7,033.0		Niobrara, Original Hole											
Perforated Liner			3/4/2015		7,102.0		7,104.0		Niobrara, Original Hole											
Perforated Liner		3/4/2015		7,170.0		7,172.0		Niobrara, Original Hole												



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Well Configuration Type Lateral/Horizontal		Orig KB Elv (ft) 4,736.00		Ground Elevation (ft) 4,715.00		Casing Flange Elevation (ft)		Tubing Head Elevation (ft)		Total Depth (ftKB) 13,233.0	
Original Spud Date 11/30/2014		Completion Date 3/5/2015		Asset Group Retail		Responsible Engineer Charles Ohlson		N/S Dist (ft) 330.0		N/S Ref FSL	
								E/W Dist (ft) 1,862.0		E/W Ref FEL	
Lot		Quarter 1 SW	Quarter 2 SE	Quarter 3	Quarter 4	Section 33	Section Suffix	Section Type	Township 10 N	Township N/S Dir	Range 58 W
Lateral/Horizontal - Original Hole, 4/24/2015 2:20:01 PM						Perforations					
MD (ftKB)	D (ft KB)	n ( )	c ( )	l ( )		Logs	Type of Hole	Date	Top (ftKB)	Btm (ftKB)	Zone
							Vertical schematic (actual)				
25.9	25.9	4.5					Perforated Liner	3/4/2015	7,238.0	7,240.0	Niobrara, Original Hole
1,429.1	1,424.8	4.5					Perforated Liner	3/4/2015	7,305.0	7,307.0	Niobrara, Original Hole
							Perforated Liner	3/4/2015	7,368.0	7,370.0	Niobrara, Original Hole
							Perforated Liner	3/4/2015	7,441.0	7,443.0	Niobrara, Original Hole
							Perforated Liner	3/4/2015	7,509.0	7,511.0	Niobrara, Original Hole
							Perforated Liner	3/4/2015	7,577.0	7,579.0	Niobrara, Original Hole
							Perforated Liner	3/4/2015	7,645.0	7,647.0	Niobrara, Original Hole
							Perforated Liner	3/4/2015	7,718.0	7,720.0	Niobrara, Original Hole
							Perforated Liner	3/4/2015	7,781.0	7,783.0	Niobrara, Original Hole
							Perforated Liner	3/4/2015	7,848.0	7,850.0	Niobrara, Original Hole
							Perforated Liner	3/4/2015	7,914.0	7,916.0	Niobrara, Original Hole
							Perforated Liner	3/4/2015	7,984.0	7,986.0	Niobrara, Original Hole
							Perforated Liner	3/4/2015	8,052.0	8,054.0	Niobrara, Original Hole
							Perforated Liner	3/3/2015	8,120.0	8,122.0	Niobrara, Original Hole
							Perforated Liner	3/3/2015	8,188.0	8,190.0	Niobrara, Original Hole
							Perforated Liner	3/3/2015	8,250.0	8,252.0	Niobrara, Original Hole
							Perforated Liner	3/3/2015	8,323.0	8,325.0	Niobrara, Original Hole
							Perforated Liner	3/3/2015	8,391.0	8,393.0	Niobrara, Original Hole
							Perforated Liner	3/3/2015	8,459.0	8,461.0	Niobrara, Original Hole
							Perforated Liner	3/3/2015	8,527.0	8,529.0	Niobrara, Original Hole
							Perforated Liner	3/3/2015	8,597.0	8,599.0	Niobrara, Original Hole
							Perforated Liner	3/3/2015	8,663.0	8,665.0	Niobrara, Original Hole
							Perforated Liner	3/3/2015	8,731.0	8,733.0	Niobrara, Original Hole
							Perforated Liner	3/3/2015	8,798.0	8,800.0	Niobrara, Original Hole
							Perforated Liner	3/3/2015	8,866.0	8,868.0	Niobrara, Original Hole
							Perforated Liner	3/3/2015	8,934.0	8,936.0	Niobrara, Original Hole
							Perforated Liner	3/3/2015	9,002.0	9,004.0	Niobrara, Original Hole
							Perforated Liner	3/3/2015	9,070.0	9,072.0	Niobrara, Original Hole
							Perforated Liner	3/3/2015	9,135.0	9,137.0	Niobrara, Original Hole
							Perforated Liner	3/3/2015	9,206.0	9,208.0	Niobrara, Original Hole
							Perforated Liner	3/3/2015	9,273.0	9,275.0	Niobrara, Original Hole
							Perforated Liner	3/3/2015	9,341.0	9,343.0	Niobrara, Original Hole
							Perforated Liner	3/3/2015	9,409.0	9,411.0	Niobrara, Original Hole
							Perforated Liner	3/3/2015	9,480.0	9,482.0	Niobrara, Original Hole
							Perforated Liner	3/2/2015	9,545.0	9,547.0	Niobrara, Original Hole
							Perforated Liner	3/2/2015	9,613.0	9,615.0	Niobrara, Original Hole
							Perforated Liner	3/2/2015	9,681.0	9,683.0	Niobrara, Original Hole
							Perforated Liner	3/2/2015	9,748.0	9,750.0	Niobrara, Original Hole
							Perforated Liner	3/2/2015	9,819.0	9,821.0	Niobrara, Original Hole
							Perforated Liner	3/2/2015	9,884.0	9,886.0	Niobrara, Original Hole
							Perforated Liner	3/2/2015	9,952.0	9,954.0	Niobrara, Original Hole
							Perforated Liner	3/2/2015	10,015.0	10,017.0	Niobrara, Original Hole
							Perforated Liner	3/2/2015	10,088.0	10,090.0	Niobrara, Original Hole
							Perforated Liner	3/2/2015	10,156.0	10,158.0	Niobrara, Original Hole
							Perforated Liner	3/2/2015	10,223.0	10,225.0	Niobrara, Original Hole
							Perforated Liner	3/2/2015	10,291.0	10,293.0	Niobrara, Original Hole
							Perforated Liner	3/2/2015	10,361.0	10,363.0	Niobrara, Original Hole
							Perforated Liner	3/2/2015	10,427.0	10,429.0	Niobrara, Original Hole
							Perforated Liner	3/2/2015	10,495.0	10,497.0	Niobrara, Original Hole
							Perforated Liner	3/2/2015	10,563.0	10,565.0	Niobrara, Original Hole
							Perforated Liner	3/2/2015	10,631.0	10,633.0	Niobrara, Original Hole
							Perforated Liner	3/2/2015	10,700.0	10,702.0	Niobrara, Original Hole
							Perforated Liner	3/2/2015	10,766.0	10,768.0	Niobrara, Original Hole
							Perforated Liner	3/2/2015	10,834.0	10,836.0	Niobrara, Original Hole
							Perforated Liner	3/2/2015	10,896.0	10,898.0	Niobrara, Original Hole
							Perforated Liner	3/1/2015	10,970.0	10,972.0	Niobrara, Original Hole
							Perforated Liner	3/1/2015	11,038.0	11,040.0	Niobrara, Original Hole
							Perforated Liner	3/1/2015	11,106.0	11,108.0	Niobrara, Original Hole
							Perforated Liner	3/1/2015	11,174.0	11,176.0	Niobrara, Original Hole
							Perforated Liner	3/1/2015	11,241.0	11,243.0	Niobrara, Original Hole
							Perforated Liner	3/1/2015	11,309.0	11,311.0	Niobrara, Original Hole
							Perforated Liner	3/1/2015	11,377.0	11,379.0	Niobrara, Original Hole
							Perforated Liner	3/1/2015	11,442.0	11,444.0	Niobrara, Original Hole
							Perforated Liner	3/1/2015	11,513.0	11,515.0	Niobrara, Original Hole
							Perforated Liner	3/1/2015	11,581.0	11,583.0	Niobrara, Original Hole
							Perforated Liner	3/1/2015	11,647.0	11,649.0	Niobrara, Original Hole
							Perforated Liner	3/1/2015	11,716.0	11,718.0	Niobrara, Original Hole
							Perforated Liner	3/1/2015	11,784.0	11,786.0	Niobrara, Original Hole
							Perforated Liner	3/1/2015	11,852.0	11,854.0	Niobrara, Original Hole
							Perforated Liner	3/1/2015	11,920.0	11,922.0	Niobrara, Original Hole
							Perforated Liner	3/1/2015	11,994.0	11,996.0	Niobrara, Original Hole



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Original Spud Date 11/30/2014	Completion Date 3/5/2015	Asset Group Retail	Responsible Engineer Charles Ohlson	N/S Dist (ft) 330.0 N/S Ref FSL	E/W Dist (ft) 1,862.0 E/W Ref FEL
Lot	Quarter 1 SW	Quarter 2 SE	Quarter 3	Quarter 4	Section 33
			Section Suffix	Section Type	Township 10 N
					Township N/S Dir Range 58 W

Lateral/Horizontal - Original Hole, 4/24/2015 2:20:01 PM						Perforations				
MD (ftKB)	D (ft KB)	n c l ( )	Vertical schematic (actual)	Logs		Type of Hole	Date	Top (ftKB)	Btm (ftKB)	Zone
25.9	25.9	4.0				Perforated Liner	3/1/2015	12,056.0	12,058.0	Niobrara, Original Hole
1,429.1	1,429.1	4.0				Perforated Liner	3/1/2015	12,124.0	12,126.0	Niobrara, Original Hole
1,513.1	1,513.1	4.0				Perforated Liner	2/28/2015	12,191.0	12,193.0	Niobrara, Original Hole
1,557.1	1,557.1	4.0				Perforated Liner	2/28/2015	12,259.0	12,261.0	Niobrara, Original Hole
2,646.7	2,646.7	4.0				Perforated Liner	2/28/2015	12,327.0	12,329.0	Niobrara, Original Hole
3,804.8	3,804.8	4.0				Perforated Liner	2/28/2015	12,395.0	12,397.0	Niobrara, Original Hole
4,973.8	4,973.8	4.0				Perforated Liner	2/28/2015	12,463.0	12,465.0	Niobrara, Original Hole
4,999.7	4,999.7	4.0				Perforated Liner	2/28/2015	12,532.0	12,534.0	Niobrara, Original Hole
5,586.9	5,586.9	4.0				Perforated Liner	2/28/2015	12,599.0	12,601.0	Niobrara, Original Hole
6,013.8	6,013.8	4.0				Perforated Liner	2/28/2015	12,666.0	12,668.0	Niobrara, Original Hole
6,084.0	6,084.0	4.0				Perforated Liner	2/28/2015	12,730.0	12,732.0	Niobrara, Original Hole
6,222.1	6,222.1	4.0				Perforated Liner	2/28/2015	12,802.0	12,804.0	Niobrara, Original Hole
6,422.9	6,422.9	4.0				Perforated Liner	2/28/2015	12,870.0	12,872.0	Niobrara, Original Hole
6,561.0	6,561.0	4.0				Perforated Liner	2/28/2015	12,937.0	12,939.0	Niobrara, Original Hole
6,763.1	6,763.1	4.0				Perforated Liner	2/27/2015	13,006.0	13,008.0	Niobrara, Original Hole
6,899.9	6,899.9	4.0				Perforated Liner	2/27/2015	13,074.0	13,076.0	Niobrara, Original Hole
7,102.0	7,102.0	4.0				Perforated Liner	2/27/2015	13,130.0	13,132.0	Niobrara, Original Hole
7,240.2	7,240.2	4.0				Sand Frac on 2/27/2015 06:00				
7,440.9	7,440.9	4.0				Comment				
7,579.1	7,579.1	4.0				Treatment End Date: 3/5/2015; Number of staged intervals: 35; Min Frac Gradient: .79; # of Perfs: 1260; 24 pHaserFrac XL Gel: 24339 bbl; 22 pHaserFrac XL Gel: 1595 bbl; 20 pHaserFrac XL Gel: 30911 bbl; 24 Linear Gel: 4139 bbl; 22 Linear Gel: 309 bbl; 20 Linear Gel: 5405 bbl; 15% HCl: 815bbl; Slick Water: 22513 bbl; Fresh Water: 6287 bbl				
7,780.8	7,780.8	4.0				Min Top De... 6,084.0				
7,916.0	7,916.0	4.0				Max Btm D... 13,132.0				
8,120.1	8,120.1	4.0				Frac Length (ft)				
8,252.0	8,252.0	4.0				Stim/Treat Fluids				
8,459.0	8,459.0	4.0				pHaserFrac 20 XL Gel, 20 Linear Gel, 15% HCL, <fluidtyp>				
8,599.1	8,599.1	4.0				Proppant Frm (lb) Total Clean Vol... Avg Treat Rate... Max Treat Rate... Avg Treat Press... P Max (psi) Frac Gradient (p...)				
8,797.9	8,797.9	4.0				3,909,253.0 96312.60 50.60 55.30 4,371.0 8,645.0 0.79				
8,936.0	8,936.0	4.0				pHaserFrac 22 XL Gel, 22 Linear Gel, 15% HCL, <fluidtyp>				
9,134.8	9,134.8	4.0				Proppant Frm (lb) Total Clean Vol... Avg Treat Rate... Max Treat Rate... Avg Treat Press... P Max (psi) Frac Gradient (p...)				
9,274.9	9,274.9	4.0				3,909,253.0 96312.60 50.60 55.30 4,371.0 8,645.0 0.79				
9,480.0	9,480.0	4.0				pHaserFrac 24 XL Gel, 24 Linear Gel, 15% HCL, <fluidtyp>				
9,615.2	9,615.2	4.0				Proppant Frm (lb) Total Clean Vol... Avg Treat Rate... Max Treat Rate... Avg Treat Press... P Max (psi) Frac Gradient (p...)				
9,818.9	9,818.9	4.0				3,909,253.0 96312.60 50.60 55.30 4,371.0 8,645.0 0.79				
9,954.1	9,954.1	4.0				Stim/Treat Stages				
10,155.8	10,155.8	4.0				Stg # Start Date Top Depth (ftKB) Bottom Depth (ftKB) Vol Clean Pump (bbl) Vol Slurry (bbl)				
10,293.0	10,293.0	4.0				1 2/27/2015 13,006.0 13,132.0 3187.60				
10,495.1	10,495.1	4.0				Additive Type Amount Units Sand Size				
10,632.9	10,632.9	4.0				Proppant 20/40 WS 76,747.0 lb 20/40				
10,834.0	10,834.0	4.0				Additive Type Amount Units Sand Size				
10,972.1	10,972.1	4.0				Proppant 40/70 WS 2,310.0 lb 40/70				
11,173.9	11,173.9	4.0				Stg # Start Date Top Depth (ftKB) Bottom Depth (ftKB) Vol Clean Pump (bbl) Vol Slurry (bbl)				
11,311.0	11,311.0	4.0				2 2/27/2015 12,802.0 12,939.0 2726.30				
11,513.1	11,513.1	4.0				Additive Type Amount Units Sand Size				
11,649.0	11,649.0	4.0				Proppant 20/40 WS 71,988.0 lb 20/40				
11,852.0	11,852.0	4.0				Additive Type Amount Units Sand Size				
11,996.1	11,996.1	4.0				Proppant 40/70 WS 2,397.0 lb 40/70				
12,190.9	12,190.9	4.0				Stg # Start Date Top Depth (ftKB) Bottom Depth (ftKB) Vol Clean Pump (bbl) Vol Slurry (bbl)				
12,329.1	12,329.1	4.0				3 2/28/2015 12,599.0 12,732.0 3159.50				
12,532.2	12,532.2	4.0				Additive Type Amount Units Sand Size				
12,668.0	12,668.0	4.0				Proppant 20/40 WS 75,123.0 lb 20/40				
12,870.1	12,870.1	4.0				Additive Type Amount Units Sand Size				
13,007.9	13,007.9	4.0				Proppant 40/70 WS 2,914.0 lb 40/70				
13,161.7	13,161.7	4.0				Stg # Start Date Top Depth (ftKB) Bottom Depth (ftKB) Vol Clean Pump (bbl) Vol Slurry (bbl)				
13,177.5	13,177.5	4.0				4 2/28/2015 12,395.0 12,534.0 2858.70				
						Additive Type Amount Units Sand Size				
						Proppant 20/40 WS 101,562.0 lb 20/40				
						Additive Type Amount Units Sand Size				
						Proppant 40/70 WS 2,452.0 lb 40/70				
						Stg # Start Date Top Depth (ftKB) Bottom Depth (ftKB) Vol Clean Pump (bbl) Vol Slurry (bbl)				
						5 2/28/2015 12,191.0 12,329.0 2772.60				
						Additive Type Amount Units Sand Size				
						Proppant 20/40 WS 100,367.0 lb 20/40				
						Additive Type Amount Units Sand Size				
						Proppant 40/70 WS 2,857.0 lb 40/70				
						Stg # Start Date Top Depth (ftKB) Bottom Depth (ftKB) Vol Clean Pump (bbl) Vol Slurry (bbl)				
						6 3/1/2015 11,994.0 12,126.0 3097.70				
						Additive Type Amount Units Sand Size				
						Proppant 20/40 WS 112,948.0 lb 20/40				
						Additive Type Amount Units Sand Size				
						Proppant 40/70 WS 2,653.0 lb 40/70				
						Stg # Start Date Top Depth (ftKB) Bottom Depth (ftKB) Vol Clean Pump (bbl) Vol Slurry (bbl)				
						7 3/1/2015 11,784.0 11,922.0 3067.40				
						Additive Type Amount Units Sand Size				
						Proppant 20/40 WS 110,627.0 lb 20/40				
						Additive Type Amount Units Sand Size				
						Proppant 40/70 WS 3,101.0 lb 40/70				
						Stg # Start Date Top Depth (ftKB) Bottom Depth (ftKB) Vol Clean Pump (bbl) Vol Slurry (bbl)				
						8 3/1/2015 11,581.0 11,718.0 3005.60				
						Additive Type Amount Units Sand Size				
						Proppant 20/40 WS 103,677.0 lb 20/40				
						Additive Type Amount Units Sand Size				
						Proppant 40/70 WS 2,796.0 lb 40/70				
						Stg # Start Date Top Depth (ftKB) Bottom Depth (ftKB) Vol Clean Pump (bbl) Vol Slurry (bbl)				
						9 3/1/2015 11,377.0 11,515.0 2885.60				





Lease Review  
Well Name: RAZOR 330-2812

API Number 051233930500			WPC ID 1CO0761134			Well Permit Number 400575416			Field Name DJ Horizontal Niobrara			County Weld			State CO								
Well Configuration Type Lateral/Horizontal						Orig KB Elv (ft) 4,736.00			Ground Elevation (ft) 4,715.00			Casing Flange Elevation (ft)			Tubing Head Elevation (ft)			Total Depth (ftKB) 13,233.0					
Original Spud Date 11/30/2014			Completion Date 3/5/2015			Asset Group Redtail			Responsible Engineer Charles Ohlson			N/S Dist (ft) 330.0			N/S Ref FSL			E/W Dist (ft) 1,862.0			E/W Ref FEL		
Lot		Quarter 1 SW		Quarter 2 SE		Quarter 3		Quarter 4		Section 33		Section Suffix		Section Type		Township 10 N		Township N/S Dir		Range 58 W		Meridian	
Lateral/Horizontal - Original Hole, 4/24/2015 2:20:01 PM										Additive Proppant		Type 20/40 WS		Amount 107,199.0		Units lb		Sand Size 20/40					
Vertical schematic (actual)										Additive Proppant		Type 40/70 WS		Amount 2,400.0		Units lb		Sand Size 40/70					
Logs										Stg # 10		Start Date 3/1/2015		Top Depth (ftKB) 11,174.0		Bottom Depth (ftKB) 11,311.0		Vol Clean Pump (bbl) 2872.00		Vol Slurry (bbl)			
25.9										Additive Proppant		Type 20/40 WS		Amount 111,133.0		Units lb		Sand Size 20/40					
1,429.1										Additive Proppant		Type 40/70 WS		Amount 2,352.0		Units lb		Sand Size 40/70					
1,513.1										Stg # 11		Start Date 3/1/2015		Top Depth (ftKB) 10,970.0		Bottom Depth (ftKB) 11,108.0		Vol Clean Pump (bbl) 2758.70		Vol Slurry (bbl)			
1,557.1										Additive Proppant		Type 20/40 WS		Amount 110,921.0		Units lb		Sand Size 20/40					
2,646.7										Additive Proppant		Type 40/70 WS		Amount 2,468.0		Units lb		Sand Size 40/70					
3,804.8										Stg # 12		Start Date 3/2/2015		Top Depth (ftKB) 10,766.0		Bottom Depth (ftKB) 10,898.0		Vol Clean Pump (bbl) 2760.60		Vol Slurry (bbl)			
4,973.8										Additive Proppant		Type 20/40 WS		Amount 112,018.0		Units lb		Sand Size 20/40					
4,999.7										Additive Proppant		Type 40/70 WS		Amount 2,206.0		Units lb		Sand Size 40/70					
5,586.9										Stg # 13		Start Date 3/2/2015		Top Depth (ftKB) 10,563.0		Bottom Depth (ftKB) 10,702.0		Vol Clean Pump (bbl) 2791.60		Vol Slurry (bbl)			
6,013.8										Additive Proppant		Type 20/40 WS		Amount 113,928.0		Units lb		Sand Size 20/40					
6,084.0										Additive Proppant		Type 40/70 WS		Amount 2,654.0		Units lb		Sand Size 40/70					
6,222.1										Stg # 14		Start Date 3/2/2015		Top Depth (ftKB) 10,361.0		Bottom Depth (ftKB) 10,497.0		Vol Clean Pump (bbl) 2775.00		Vol Slurry (bbl)			
6,422.9										Additive Proppant		Type 20/40 WS		Amount 112,091.0		Units lb		Sand Size 20/40					
6,561.0										Additive Proppant		Type 40/70 WS		Amount 2,387.0		Units lb		Sand Size 40/70					
6,763.1										Stg # 15		Start Date 3/2/2015		Top Depth (ftKB) 10,156.0		Bottom Depth (ftKB) 10,293.0		Vol Clean Pump (bbl) 2899.50		Vol Slurry (bbl)			
6,899.9										Additive Proppant		Type 20/40 WS		Amount 112,865.0		Units lb		Sand Size 20/40					
7,102.0										Additive Proppant		Type 40/70 WS		Amount 2,268.0		Units lb		Sand Size 40/70					
7,240.2										Stg # 16		Start Date 3/2/2015		Top Depth (ftKB) 9,952.0		Bottom Depth (ftKB) 10,090.0		Vol Clean Pump (bbl) 2738.30		Vol Slurry (bbl)			
7,440.9										Additive Proppant		Type 20/40 WS		Amount 115,470.0		Units lb		Sand Size 20/40					
7,579.1										Additive Proppant		Type 40/70 WS		Amount 2,266.0		Units lb		Sand Size 40/70					
7,780.8										Stg # 17		Start Date 3/2/2015		Top Depth (ftKB) 9,748.0		Bottom Depth (ftKB) 9,886.0		Vol Clean Pump (bbl) 2742.10		Vol Slurry (bbl)			
7,916.0										Additive Proppant		Type 20/40 WS		Amount 117,388.0		Units lb		Sand Size 20/40					
8,120.1										Additive Proppant		Type 40/70 WS		Amount 2,480.0		Units lb		Sand Size 40/70					
8,252.0										Stg # 18		Start Date 3/2/2015		Top Depth (ftKB) 9,545.0		Bottom Depth (ftKB) 9,683.0		Vol Clean Pump (bbl) 2674.50		Vol Slurry (bbl)			
8,459.0										Additive Proppant		Type 20/40 WS		Amount 110,886.0		Units lb		Sand Size 20/40					
8,599.1										Additive Proppant		Type 40/70 WS		Amount 2,358.0		Units lb		Sand Size 40/70					
8,797.9										Stg # 19		Start Date 3/3/2015		Top Depth (ftKB) 9,341.0		Bottom Depth (ftKB) 9,482.0		Vol Clean Pump (bbl) 2688.70		Vol Slurry (bbl)			
8,936.0										Additive Proppant		Type 20/40 WS		Amount 110,255.0		Units lb		Sand Size 20/40					
9,134.8										Additive Proppant		Type 40/70 WS		Amount 2,567.0		Units lb		Sand Size 40/70					
9,274.9										Stg # 20		Start Date 3/3/2015		Top Depth (ftKB) 9,135.0		Bottom Depth (ftKB) 9,275.0		Vol Clean Pump (bbl) 2685.00		Vol Slurry (bbl)			
9,480.0										Additive Proppant		Type 20/40 WS		Amount 112,019.0		Units lb		Sand Size 20/40					
9,615.2										Additive Proppant		Type 40/70 WS		Amount 2,986.0		Units lb		Sand Size 40/70					
9,818.9										Stg # 21		Start Date 3/3/2015		Top Depth (ftKB) 8,934.0		Bottom Depth (ftKB) 9,072.0		Vol Clean Pump (bbl) 2660.20		Vol Slurry (bbl)			
9,954.1										Additive Proppant		Type 20/40 WS		Amount 115,914.0		Units lb		Sand Size 20/40					
10,155.8										Additive Proppant		Type 40/70 WS		Amount 3,439.0		Units lb		Sand Size 40/70					
10,293.0										Stg # 22		Start Date 3/3/2015		Top Depth (ftKB) 8,731.0		Bottom Depth (ftKB) 8,868.0		Vol Clean Pump (bbl) 2659.80		Vol Slurry (bbl)			
10,495.1										Additive Proppant		Type 20/40 WS		Amount 114,946.0		Units lb		Sand Size 20/40					
10,632.9										Additive Proppant		Type 40/70 WS		Amount 2,710.0		Units lb		Sand Size 40/70					
10,834.0										Stg # 23		Start Date 3/3/2015		Top Depth (ftKB) 8,527.0		Bottom Depth (ftKB) 8,665.0		Vol Clean Pump (bbl) 2672.90		Vol Slurry (bbl)			
10,972.1										Additive Proppant		Type 20/40 WS		Amount 118,754.0		Units lb		Sand Size 20/40					
11,173.9										Additive Proppant		Type 40/70 WS		Amount 2,772.0		Units lb		Sand Size 40/70					
11,311.0										Stg # 24		Start Date 3/3/2015		Top Depth (ftKB) 8,323.0		Bottom Depth (ftKB) 8,461.0		Vol Clean Pump (bbl) 2657.50		Vol Slurry (bbl)			
11,513.1										Additive Proppant		Type 20/40 WS		Amount 112,962.0		Units lb		Sand Size 20/40					
11,649.0										Additive Proppant		Type 40/70 WS		Amount 2,636.0		Units lb		Sand Size 40/70					
11,852.0										Stg # 25		Start Date 3/3/2015		Top Depth (ftKB) 8,120.0		Bottom Depth (ftKB) 8,252.0		Vol Clean Pump (bbl) 2692.30		Vol Slurry (bbl)			
11,996.1										Additive Proppant		Type 20/40 WS		Amount 112,962.0		Units lb		Sand Size 20/40					
12,190.9										Additive Proppant		Type 40/70 WS		Amount 2,636.0		Units lb		Sand Size 40/70					
12,329.1										Stg # 26		Start Date 3/3/2015		Top Depth (ftKB) 7,915.0		Bottom Depth (ftKB) 8,053.0		Vol Clean Pump (bbl) 2680.20		Vol Slurry (bbl)			
12,532.2										Additive Proppant		Type 20/40 WS		Amount 112,962.0		Units lb		Sand Size 20/40					
12,668.0										Additive Proppant		Type 40/70 WS		Amount 2,636.0		Units lb		Sand Size 40/70					
12,870.1										Stg # 27		Start Date 3/3/2015		Top Depth (ftKB) 7,710.0		Bottom Depth (ftKB) 7,848.0		Vol Clean Pump (bbl) 2670.30		Vol Slurry (bbl)			
13,007.9										Additive Proppant		Type 20/40 WS		Amount 112,962.0		Units lb		Sand Size 20/40					
13,161.7										Additive Proppant		Type 40/70 WS		Amount 2,636.0		Units lb		Sand Size 40/70					
13,177.5										Stg # 28		Start Date 3/3/2015		Top Depth (ftKB) 7,505.0		Bottom Depth (ftKB) 7,643.0		Vol Clean Pump (bbl) 2660.30		Vol Slurry (bbl)			



Lease Review  
Well Name: RAZOR 330-2812

API Number 051233930500		WPC ID 1CO0761134		Well Permit Number 400575416		Field Name DJ Horizontal Niobrara		County Weld		State CO					
Well Configuration Type Lateral/Horizontal		Orig KB Elv (ft) 4,736.00		Ground Elevation (ft) 4,715.00		Casing Flange Elevation (ft)		Tubing Head Elevation (ft)		Total Depth (ftKB) 13,233.0					
Original Spud Date 11/30/2014		Completion Date 3/5/2015		Asset Group Retail		Responsible Engineer Charles Ohlson		N/S Dist (ft) 330.0		N/S Ref FSL					
								E/W Dist (ft) 1,862.0		E/W Ref FEL					
Lot		Quarter 1 SW	Quarter 2 SE	Quarter 3	Quarter 4	Section 33	Section Suffix	Section Type	Township 10 N	Township N/S Dir	Range 58 W				
Lateral/Horizontal - Original Hole, 4/24/2015 2:20:02 PM						Additive Proppant		Type 20/40 WS	Amount 111,375.0	Units lb	Sand Size 20/40				
MD (ftKB)	D (ft)	n (in)	<div>Vertical schematic (actual)</div>			Logs	Additive Proppant		Type 40/70 WS	Amount 2,592.0	Units lb	Sand Size 40/70			
							Stg #		Start Date	Top Depth (ftKB)	Bottom Depth (ftKB)	Vol Clean Pump (bbl)	Vol Slurry (bbl)		
25.9	25.9	4.0					26	3/3/2015	7,914.0	8,054.0	2645.40				
1,429.1	1,424.8	4.0					Additive Proppant		Type 20/40 WS	Amount 114,192.0	Units lb	Sand Size 20/40			
1,513.1	1,508.3	4.0					Additive Proppant		Type 40/70 WS	Amount 2,672.0	Units lb	Sand Size 40/70			
1,557.1	1,552.2	4.0					Stg #		Start Date	Top Depth (ftKB)	Bottom Depth (ftKB)	Vol Clean Pump (bbl)	Vol Slurry (bbl)		
2,646.7	2,637.4	4.0					27	3/4/2015	7,718.0	7,850.0	2627.00				
3,804.8	3,789.7	4.0					Additive Proppant		Type 20/40 WS	Amount 118,265.0	Units lb	Sand Size 20/40			
4,973.8	4,955.2	3.6					Additive Proppant		Type 40/70 WS	Amount 2,951.0	Units lb	Sand Size 40/70			
4,999.7	4,979.1	3.5					Stg #		Start Date	Top Depth (ftKB)	Bottom Depth (ftKB)	Vol Clean Pump (bbl)	Vol Slurry (bbl)		
5,586.9	5,550.8	3.2					28	3/4/2015	7,509.0	7,647.0	2602.90				
6,013.8	6,002.3	3.0					Additive Proppant		Type 20/40 WS	Amount 114,368.0	Units lb	Sand Size 20/40			
6,084.0	6,072.4	3.0					Additive Proppant		Type 40/70 WS	Amount 2,981.0	Units lb	Sand Size 40/70			
6,222.1	6,214.8	3.0					Stg #		Start Date	Top Depth (ftKB)	Bottom Depth (ftKB)	Vol Clean Pump (bbl)	Vol Slurry (bbl)		
6,422.9	6,412.0	3.0					29	3/4/2015	7,305.0	7,443.0	2565.70				
6,561.0	6,551.0	3.0					Additive Proppant		Type 20/40 WS	Amount 109,096.0	Units lb	Sand Size 20/40			
6,763.1	6,752.0	3.0					Additive Proppant		Type 40/70 WS	Amount 2,313.0	Units lb	Sand Size 40/70			
6,899.9	6,892.0	3.0					Stg #		Start Date	Top Depth (ftKB)	Bottom Depth (ftKB)	Vol Clean Pump (bbl)	Vol Slurry (bbl)		
7,102.0	7,092.0	3.0					30	3/4/2015	7,102.0	7,240.0	2623.30				
7,240.2	7,235.0	3.0					Additive Proppant		Type 20/40 WS	Amount 114,531.0	Units lb	Sand Size 20/40			
7,440.9	7,434.0	3.0					Additive Proppant		Type 40/70 WS	Amount 2,858.0	Units lb	Sand Size 40/70			
7,579.1	7,574.0	3.0					Stg #		Start Date	Top Depth (ftKB)	Bottom Depth (ftKB)	Vol Clean Pump (bbl)	Vol Slurry (bbl)		
7,780.8	7,775.0	3.0					31	3/4/2015	6,898.0	7,033.0	2580.20				
7,916.0	7,904.0	3.0					Additive Proppant		Type 20/40 WS	Amount 113,213.0	Units lb	Sand Size 20/40			
8,120.1	8,105.0	3.0					Additive Proppant		Type 40/70 WS	Amount 2,877.0	Units lb	Sand Size 40/70			
8,252.0	8,242.0	3.0					Stg #		Start Date	Top Depth (ftKB)	Bottom Depth (ftKB)	Vol Clean Pump (bbl)	Vol Slurry (bbl)		
8,459.0	8,447.0	3.0					32	3/4/2015	6,704.0	6,832.0	2553.80				
8,599.1	8,586.0	3.0					Additive Proppant		Type 20/40 WS	Amount 112,299.0	Units lb	Sand Size 20/40			
8,797.9	8,785.0	3.0					Additive Proppant		Type 40/70 WS	Amount 2,592.0	Units lb	Sand Size 40/70			
8,936.0	8,923.0	3.0					Stg #		Start Date	Top Depth (ftKB)	Bottom Depth (ftKB)	Vol Clean Pump (bbl)	Vol Slurry (bbl)		
9,134.8	9,123.0	3.0					33	3/4/2015	6,491.0	6,629.0	2567.70				
9,274.9	9,262.0	3.0					Additive Proppant		Type 20/40 WS	Amount 124,451.0	Units lb	Sand Size 20/40			
9,480.0	9,469.0	3.0					Additive Proppant		Type 40/70 WS	Amount 2,912.0	Units lb	Sand Size 40/70			
9,615.2	9,599.0	3.0					Stg #		Start Date	Top Depth (ftKB)	Bottom Depth (ftKB)	Vol Clean Pump (bbl)	Vol Slurry (bbl)		
9,818.9	9,807.0	3.0					34	3/5/2015	6,288.0	6,425.0	2564.10				
9,954.1	9,947.0	3.0					Additive Proppant		Type 20/40 WS	Amount 118,229.0	Units lb	Sand Size 20/40			
10,155.8	10,143.0	3.0					Additive Proppant		Type 40/70 WS	Amount 2,599.0	Units lb	Sand Size 40/70			
10,293.0	10,284.0	3.0					Stg #		Start Date	Top Depth (ftKB)	Bottom Depth (ftKB)	Vol Clean Pump (bbl)	Vol Slurry (bbl)		
10,495.1	10,485.0	3.0					35	3/5/2015	6,084.0	6,222.0	2492.80				
10,632.9	10,620.0	3.0					Additive Proppant		Type 20/40 WS	Amount 104,247.0	Units lb	Sand Size 20/40			
10,834.0	10,823.0	3.0					Additive Proppant		Type 40/70 WS	Amount 3,424.0	Units lb	Sand Size 40/70			
Tubing - Production set at 5,593.3ftKB on 3/19/2015 06:00															
Set Depth (ftKB)		Comment						Run Date		Pull Date					
5,593.3								3/19/2015							
		Item Des					OD (in)		ID (in)		Len (ft)		Top (ftKB)		
		Tubing Hanger					7		1.995		0.50		21.0		
		Tubing					2 3/8		1.995		31.00		21.5		
		Pup Jt					2 3/8		1.995		21.13		52.5		
		Tubing					2 3/8		1.995		1,611.05		73.6		
		Gas Lift Mandrel #7					2 3/8		1.995		4.09		1,684.7		
		Tubing					2 3/8		1.995		957.98		1,688.8		
		Gas Lift Mandrel #6					2 3/8		1.995		4.04		2,646.8		
		Tubing					2 3/8		1.995		590.72		2,650.8		
		Gas Lift Mandrel #5					2 3/8		1.995		4.05		3,241.5		
		Tubing					2 3/8		1.995		555.03		3,245.6		
		Gas Lift Mandrel #4					2 3/8		1.995		4.07		3,800.6		
		Tubing					2 3/8		1.995		526.10		3,804.7		
		Gas Lift Mandrel #3					2 3/8		1.995		4.07		4,330.8		
		Tubing					2 3/8		1.995		557.02		4,334.8		
		Gas Lift Mandrel #2					2 3/8		1.995		4.09		4,891.9		
		Tubing					2 3/8		1.995		646.84		4,895.9		
		Gas Lift Mandrel #1					2 3/8		1.995		4.05		5,428.8		
		Tubing					2 3/8		1.995		30.93		5,546.8		
		On-Off Tool					3 3/4		1.875		1.35		5,577.8		
		Packer					3.766		1.922		7.68		5,579.1		
		Pump Off Plug					2 3/8		1.995		0.79		5,586.8		

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