



# Cement Summary

Well Name: RAZOR 33N-2807

## Well Information

API Number 051233925900				WPC ID 1CO0761127			Field Name Wildcat			KB-Grd (ft) 17.00		Original Spud Date 12/23/2014	
Lot	Quarter 1 SE	Quarter 2 SW	Quarter 3	Quarter 4	Section 33	Township 10	Twshp... N	Range 58	Rng E... W	County Weld	State CO	Well Configuration Type Lateral/Horizontal	
Section		Township			Block		Survey					Abstract	

## Wellbores

Wellbore Name		Profile Type		Kick Off Depth (ftKB)	
Original Hole		Lateral/Horizontal		5,100.0	
Section Des		Size (in)	Act Top (ftKB)		Act Btm (ftKB)
Conductor		20	17.0		97.0
Surface		13 1/2	97.0		1,575.0
Intermediate		8 3/4	1,575.0		6,045.0
Lateral		6	6,045.0		13,166.0

## Wellheads

Type	Install Date
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## Surface Casing Cement

Cementing Start Date 12/24/2014 09:04		Cementing End Date 12/24/2014 11:02		Wellbore Original Hole	
Evaluation Method Returns to Surface			Cement Evaluation Results 48 Bbls of Cement To Surface		
Comment					

## Stage #1

Top Depth (ftKB) 17.0	Bottom Depth (ftKB) 1,569.8	Full Return? Yes	Vol Cement Ret (bbl) 48.0	Top Plug? Yes	Bottom Plug? No
Initial Pump Rate (bbl/min) 3	Final Pump Rate (bbl/min) 8	Avg Pump Rate (bbl/min) 5		Final Pump Pressure (psi) 394.0	Plug Bump Pressure (psi) 1,197.0
Pipe Reciprocated? No	Reciprocation Stroke Length (ft)	Reciprocation Rate (spm)		Pipe Rotated? No	Pipe RPM (rpm)
Tagged Depth (ftKB)	Tag Method	Depth Plug Drilled Out To (ftKB)		Drill Out Diameter (in)	Drill Out Date

## Spacer

Fluid Type Spacer	Fluid Description Spacer	Amount (sacks) 0	Class	Volume Pumped (bbl) 20.0
Estimated Top (ftKB)	Estimated Bottom Depth (ftKB)	Percent Excess Pumped (%)	Yield (ft <sup>3</sup> /sack)	Mix H2O Ratio (gal/sack)
Free Water (%)	Density (lb/gal) 8.30	Plastic Viscosity (cp)	Thickening Time (hr)	1st Compressive Strength (psi)

## Lead Cement

Fluid Type Lead Cement	Fluid Description 11.5 ppg Cement	Amount (sacks) 215	Class G	Volume Pumped (bbl) 112.0
Estimated Top (ftKB) 17.0	Estimated Bottom Depth (ftKB)	Percent Excess Pumped (%) 25.0	Yield (ft <sup>3</sup> /sack) 2.92	Mix H2O Ratio (gal/sack)
Free Water (%)	Density (lb/gal) 11.50	Plastic Viscosity (cp)	Thickening Time (hr)	1st Compressive Strength (psi)

## Cement Fluid Additives

Add	Type	Amount	Amount Units	Conc	Conc Unit
Cellophane Flakes		50.0	lb		
Chemical Extender		1,057.0	lb		
Sodium Chloride		436.0	lb		
Suger		150.0	lb		
Calcium Chloride	77pct concentration	606.0	lb		
Cement	Class G	440.74	lb		

## Tail Cement

Fluid Type Tail Cement	Fluid Description 14.2 ppg Cement	Amount (sacks) 225	Class G	Volume Pumped (bbl) 61.0
Estimated Top (ftKB)	Estimated Bottom Depth (ftKB)	Percent Excess Pumped (%) 25.0	Yield (ft <sup>3</sup> /sack) 7.75	Mix H2O Ratio (gal/sack)
Free Water (%)	Density (lb/gal) 14.20	Plastic Viscosity (cp)	Thickening Time (hr)	1st Compressive Strength (psi)

## Cement Fluid Additives

Add	Type	Amount	Amount Units	Conc	Conc Unit
Cellophane Flakes		50.0	lb		
Chemical Extender		1,057.0	lb		
Sodium Chloride		436.0	lb		
Suger		150.0	lb		
Calcium Chloride	77pct concentration	606.0	lb		



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Section		Township		Block		Survey						Abstract			

## Cement Fluid Additives

Add	Type	Amount	Amount Units	Conc	Conc Unit
Cement	Class G	440.74	lb		

## Displacement

Fluid Type	Fluid Description	Amount (sacks)	Class	Volume Pumped (bbl)
Displacement		0		118.0
Estimated Top (ftKB)	Estimated Bottom Depth (ftKB)	Percent Excess Pumped (%)	Yield (ft³/sack)	Mix H2O Ratio (gal/sack)
Free Water (%)	Density (lb/gal) 8.30	Plastic Viscosity (cp)	Thickening Time (hr)	1st Compressive Strength (psi)



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## Wellbores

Wellbore Name		Profile Type		Kick Off Depth (ftKB)	
Original Hole		Lateral/Horizontal		5,100.0	
Section Des		Size (in)		Act Top (ftKB)	
				Act Btm (ftKB)	
Conductor		20		17.0	
Surface		13 1/2		97.0	
Intermediate		8 3/4		1,575.0	
Lateral		6		6,045.0	
				13,166.0	

## Wellheads

Type	Install Date
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## Intermediate Casing Cement

Cementing Start Date 12/27/2014 13:00		Cementing End Date 12/27/2014 16:00		Wellbore Original Hole	
Evaluation Method Returns to Surface			Cement Evaluation Results 78 bbls To Surface		
Comment					

## Stage #1

Top Depth (ftKB) 17.0	Bottom Depth (ftKB) 6,030.1	Full Return? No	Vol Cement Ret (bbl) 78.0	Top Plug? Yes	Bottom Plug? No
Initial Pump Rate (bbl/min) 5	Final Pump Rate (bbl/min) 3	Avg Pump Rate (bbl/min) 4		Final Pump Pressure (psi) 1,250.0	Plug Bump Pressure (psi) 1,316.0
Pipe Reciprocated? No	Reciprocation Stroke Length (ft)	Reciprocation Rate (spm)		Pipe Rotated? No	Pipe RPM (rpm)
Tagged Depth (ftKB)	Tag Method	Depth Plug Drilled Out To (ftKB)		Drill Out Diameter (in)	Drill Out Date

## Spacer

Fluid Type Spacer	Fluid Description Mud Push Express	Amount (sacks)	Class	Volume Pumped (bbl) 20.0
Estimated Top (ftKB) 0.0	Estimated Bottom Depth (ftKB) 0.0	Percent Excess Pumped (%)	Yield (ft³/sack)	Mix H2O Ratio (gal/sack)
Free Water (%)	Density (lb/gal) 10.50	Plastic Viscosity (cp)	Thickening Time (hr)	1st Compressive Strength (psi)

## Cement Fluid Additives

Add	Type	Amount	Amount Units	Conc	Conc Unit
B389	Mudpush Express	14.0	PPB-#/Bbl		
D066	Silica	2,920.0	lb		

## Lead Cement

Fluid Type Lead Cement	Fluid Description 149 bbls 12.5ppg Lead Cmt Txiliteweight 530sx	Amount (sacks) 530	Class TXI Lightweight	Volume Pumped (bbl) 149.0
Estimated Top (ftKB) 17.0	Estimated Bottom Depth (ftKB) 3,683.0	Percent Excess Pumped (%) 30.0	Yield (ft³/sack) 1.58	Mix H2O Ratio (gal/sack) 8.45
Free Water (%)	Density (lb/gal) 12.50	Plastic Viscosity (cp)	Thickening Time (hr)	1st Compressive Strength (psi)

## Cement Fluid Additives

Add	Type	Amount	Amount Units	Conc	Conc Unit
D046	Anti-Foam	309.0	lb	0.5	%
D065	Dispersant	217.0	lb	0.3	%
D079	Extender	510.0	lb	1.0	%
D207	General Purpose FLAC Fluid loss	161.0	lb	0.4	%
D013	Retarder	392.0	lb	0.65	%
D049	TXI Liteweight	530.0	sacks		

## Tail Cement

Fluid Type Tail Cement	Fluid Description 61 bbls 13.8ppg Tail Cmt Txiliteweight 285sx	Amount (sacks) 285	Class TXI Lightweight	Volume Pumped (bbl) 61.0
Estimated Top (ftKB) 3,683.0	Estimated Bottom Depth (ftKB) 6,030.0	Percent Excess Pumped (%) 35.0	Yield (ft³/sack) 1.20	Mix H2O Ratio (gal/sack) 5.63
Free Water (%)	Density (lb/gal) 13.80	Plastic Viscosity (cp)	Thickening Time (hr)	1st Compressive Strength (psi)



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Section		Township			Block		Survey					Abstract			

## Cement Fluid Additives

Add	Type	Amount	Amount Units	Conc	Conc Unit
D046	Anti Foam			0.5	%
D029	Cellophane Flake LCM	0.25	lbs/sk		%
D065	Dispersant			0.3	%
D079	Extender			0.2	%
D013	Retarder			0.5	%
D049	TXI Liteweight	290.0	sacks		
D167	UNIFLAC-S fluid loss			0.2	%

## Displacement W/Drilling Mud

Fluid Type Displacement W/Drilling Mud	Fluid Description 223.66 BBLS Drilling Mud	Amount (sacks)	Class	Volume Pumped (bbl) 223.7
Estimated Top (ftKB) 0.0	Estimated Bottom Depth (ftKB) 5,983.0	Percent Excess Pumped (%)	Yield (ft³/sack)	Mix H2O Ratio (gal/sack)
Free Water (%)	Density (lb/gal) 10.50	Plastic Viscosity (cp)	Thickening Time (hr)	1st Compressive Strength (psi)

## Cement Fluid Additives

Add	Type	Amount	Amount Units	Conc	Conc Unit
Drilling Mud		223.66	BBLS		