



# Bison Oil Well Cementing Single Cement Surface Pipe

Date: 3/11/2014  
Invoice #: 12075  
API#: 05-123-37820  
Foreman: Calvin Reimers

Customer: Encana  
Well Name: Vogl McCoy 2D-5H-E267

County: Weld  
State: Colorado  
Sec: 5  
Twp: 2N  
Range: 67W  
Consultant: Sandy / Nate  
Rig Name & Number: H&P 522  
Distance To Location: 20 Miles  
Units On Location: 3104/3211  
Time Requested: 1030am  
Time Arrived On Location: 1000am  
Time Left Location: 5:45 pm

WELL DATA		Cement Data	
Casing Size OD (in) :	9.625	Cement Name:	BFN III
Casing Weight (lb) :	40.00	Cement Density (lb/gal) :	15.2
Casing Depth (ft) :	829	Cement Yield (cuft) :	1.27
Total Depth (ft) :	868	Gallons Per Sack:	5.89
Open Hole Diameter (in.) :	12.25	% Excess:	30%
Conductor Length (ft) :	84	Displacement Fluid lb/gal:	8.3
Conductor ID :	16	BBL to Pit:	25
Shoe Joint Length (ft) :	40	Fluid Ahead (bbls):	20.0
Landing Joint (ft) :	38	H2O Wash Up (bbls):	20.0
Max Rate:	7	Spacer Ahead Makeup	
Max Pressure:	2500	0bbls H2O+KCL+Dye in 2nd 10bbls	

Casing ID	8.835	Casing Grade	J-55 only used
<b>Calculated Results</b>		<b>Displacement: 62.64 bbls</b>	
<b>cuft of Shoe 17.23 cuft</b>		(Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)	
(Casing ID Squared) X (.005454) X (Shoe Joint ft)		<b>Pressure of cement in annulus</b>	
<b>cuft of Conductor 74.84 cuft</b>		<b>Hydrostatic Pressure: 654.60 PSI</b>	
(Conductor Width Squared) - (Casing Size OD Squared) X (.005454) X (Conductor Length ft)		<b>Pressure of the fluids inside casing</b>	
<b>cuft of Casing 233.33 cuft</b>		<b>Displacement: 340.01 psi</b>	
(Open Hole Squared) - (Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)		<b>Shoe Joint: 31.96 psi</b>	
<b>Total Slurry Volume 325.40 cuft</b>		<b>Total 371.97 psi</b>	
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)		<b>Differential Pressure: 282.63 psi</b>	
<b>bbls of Slurry 75.34 bbls</b>		<b>Collapse PSI: #N/A psi</b>	
(Total Slurry Volume) X (.1781) X (% Excess Cement)		<b>Burst PSI: #N/A psi</b>	
<b>Sacks Needed 333 sk</b>		<b>Total Water Needed: 149.35 bbls</b>	
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)			
<b>Mix Water 46.71 bbls</b>			
(Sacks Needed) X (Gallons Per Sack) ÷ 42			

Authorization To Proceed



**Bison Oil Well Cementing**  
**Single Cement Surface Pipe**

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Well Name

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Vogl McCoy 2D-5H-E267

INVOICE #  
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FOREMAN  
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12075  
Weld  
Calvin Reimers  
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**DESCRIPTION OF JOB EVENTS**

Safety Meeting MIRU CIRCULATE Drop Plug 416pm M & P Time Sacks 356pm 413pm % Excess Mixed bbls Total Sacks bbl Returns Water Temp	310pm	Displace 1			Displace 2			Displace 3			Displace 4			Displace 5		
	200pm	BBLS	Time	PSI	BBLS	Time	PSI	BBLS	Time	PSI	BBLS	Time	PSI	BBLS	Time	PSI
	351pm	0	417pm	90	0			0			0			0		
		10	420pm	140	10			10			10			10		
		20	421pm	170	20			20			20			20		
		30	423pm	270	30			30			30			30		
		40	425pm	360	40			40			40			40		
		50	426pm	400	50			50			50			50		
		60	429pm	350	60			60			60			60		
		70	432pm	320	70			70			70			70		
		80	Bump	810	80			80			80			80		
		90			90			90			90			90		
		100			100			100			100			100		
		110			110			110			110			110		
		120			120			120			120			120		
		130			130			130			130			130		
		140			140			140			140			140		
		150			150			150			150			150		

Notes:

The day

Float Held

1/2 bbl back on bleed off

X   
Work Performed

X  
Title

X   
Date