



# Bison Oil Well Cementing Single Cement Surface Pipe

Date: 1/10/2015  
Invoice # 25124  
API# 05-123-38075  
Foreman: Calvin Reimers

Customer: EnCana Oil & Gas (USA) Inc.  
Well Name: File 3K-32H-K268

County: Weld  
State: Colorado  
Sec: 32  
Twp: 2N  
Range: 68W  
Consultant: Norm/Robert  
Rig Name & Number: Patterson 326  
Distance To Location: 29 Miles  
Units On Location: 4023-3104/4030-3211  
Time Requested: 100pm  
Time Arrived On Location: 715am  
Time Left Location: 3:15 pm

## WELL DATA

Casing Size OD (in) : 9.625  
Casing Weight (lb) : 36.00  
Casing Depth (ft.) : 823  
Total Depth (ft) : 870  
Open Hole Diameter (in.) : 12.25  
Conductor Length (ft) : 120  
Conductor ID : 16  
Shoe Joint Length (ft) : 44  
Landing Joint (ft) : 35  
Max Rate: 7  
Max Pressure: 2500

## Cement Data

Cement Name: BFN III  
Cement Density (lb/gal) : 15.2  
Cement Yield (cuft) : 1.27  
Gallons Per Sack: 5.89  
% Excess: 50%  
Displacement Fluid lb/gal: 8.3  
BBL to Pit: 23  
Fluid Ahead (bbls): 30.0  
H2O Wash Up (bbls): 20.0  
Spacer Ahead Makeup  
30bbls H2O+Dye in 2nd 10bbls

Casing ID

8.921

Casing Grade

J-55 only used

## Calculated Results

cuft of Shoe 19.13 cuft  
(Casing ID Squared) X (.005454) X (Shoe Joint ft)  
cuft of Conductor 106.92 cuft  
(Conductor Width Squared) -(Casing Size OD Squared) X (.005454) X (Conductor Length ft)  
cuft of Casing 330.09 cuft  
(Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length ft)  
Total Slurry Volume 456.13 cuft  
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)  
bbls of Slurry 81.24 bbls  
(Total Slurry Volume) X (.1781)  
Sacks Needed 359 sk  
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)  
Mix Water 50.37 bbls  
(Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 62.90 bbls

(Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)

## Pressure of cement in annulus

Hydrostatic Pressure: 649.57 PSI

## Pressure of the fluids inside casing

Displacement: 335.71 psi

Shoe Joint: 34.80 psi

Total 370.51 psi

Differential Pressure: 279.06 psi

Collapse PSI: 2020.00 psi

Burst PSI: 3520.00 psi

Total Water Needed: 163.26 bbls

X   
Authorization To Proceed



Displacement Cementing  
Single Cement Surface Pipe

Customer  
Well Name

EnCana Oil & Gas (USA) Inc.  
File 3K-32H-K268

INVOICE #  
LOCATION  
FOREMAN  
Date

20124  
Weld  
Calvin Reimers  
1/10/2015

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DESCRIPTION OF JOB EVENTS

Safety Meeting MIRU CIRCULATE Drop Plug 213pm M & P Time 151pm 210pm % Excess Mixed bbls Total Sacks bbl Returns Water Temp	132pm 1230pm 144pm 213pm M & P Time 151pm 210pm % Excess Mixed bbls Total Sacks bbl Returns Water Temp	Displace 1			Displace 2			Displace 3			Displace 4			Displace 5		
		BBLS	Time	PSI	BBLS	Time	PSI	BBLS	Time	PSI	BBLS	Time	PSI	BBLS	Time	PSI
		0	214pm	100	0			0			0			0		
		10	217pm	60	10			10			10			10		
		20	219pm	140	20			20			20			20		
		30	221pm	200	30			30			30			30		
		40	223pm	360	40			40			40			40		
		50	225pm	400	50			50			50			50		
		60	228pm	320	60			60			60			60		
		70	229pm	300	70			70			70			70		
		80	Bump	1020	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

1/2 bbl Back on Bleed Off

X

Work Performed

X

Title

X

Date