



# Bison Oil Well Cementing Single Cement Surface Pipe

Date: 11/18/2014  
Invoice #: 25086  
API#: 05-123-39777  
Foreman: Calvin Reimers

Customer: EnCana Oil & Gas (USA) Inc.  
Well Name: Newnam 2D-32H-C264

County: Weld  
State: Colorado  
Sec: 32  
Twp: 2N  
Range: 64W

Consultant: Rich  
Rig Name & Number: Ensign 124  
Distance To Location: 21 Miles  
Units On Location: 4023-3104/4020-3212  
Time Requested: 100pm  
Time Arrived On Location: 1235pm  
Time Left Location: 7:30 pm

## WELL DATA

Casing Size OD (in) : 9.625  
Casing Weight (lb) : 40.00  
Casing Depth (ft) : 1,006  
Total Depth (ft) : 1032  
Open Hole Diameter (in.) : 12.25  
Conductor Length (ft) : 93  
Conductor ID : 16  
Shoe Joint Length (ft) : 46  
Landing Joint (ft) : 17

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: 40%  
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

8.835

Casing Grade

J-55 only used

## Calculated Results

cuft of Shoe 19.50 cuft  
(Casing ID Squared) X (.005454) X (Shoe Joint ft)  
cuft of Conductor 82.86 cuft  
(Conductor Width Squared) - (Casing Size OD Squared) X (.005454) X (Conductor Length ft)  
cuft of Casing 400.39 cuft  
(Open Hole Squared) - (Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)  
Total Slurry Volume 502.75 cuft  
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)  
bbls of Slurry 89.54 bbls  
(Total Slurry Volume) X (.1781)  
Sacks Needed 396 sk  
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)  
Mix Water 55.52 bbls  
(Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 74.13 bbls

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

## Pressure of cement in annulus

Hydrostatic Pressure: 794.49 PSI

## Pressure of the fluids inside casing

Displacement: 414.10 psi

Shoe Joint: 36.16 psi

Total 450.27 psi

Differential Pressure: 344.22 psi

Collapse PSI: 2570.00 psi

Burst PSI: 3950.00 psi

Total Water Needed: 179.65 bbls

X *James L. Borne*  
Authorization To Proceed

Customers hereby acknowledges and specifically agrees to the terms and condition on this work order, including, without limitation, the provisions on this work order.



Single Cement Surface Pipe

Customer  
Well Name

EnCana Oil & Gas (USA) Inc.  
Newnam 2D-32H-C264

INVOICE #  
LOCATION  
FOREMAN  
Date

23000  
Weld  
Calvin Reimers  
11/18/2014

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DESCRIPTION OF JOB EVENTS

		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
Safety Meeting	440pm															
MIRU	340pm															
CIRCULATE	548pm	0	611pm	60	0			0			0			0		
Drop Plug		10	613pm	50	10			10			10			10		
610pm		20	615pm	100	20			20			20			20		
		30	617pm	230	30			30			30			30		
		40	619pm	300	40			40			40			40		
M & P		50	621pm	430	50			50			50			50		
Time	Sacks	60	623pm	480	60			60			60			60		
554pm	396	70	625pm	380	70			70			70			70		
608pm		80	628pm	350	80			80			80			80		
		90	Bump	890	90			90			90			90		
		100			100			100			100			100		
		110			110			110			110			110		
% Excess	40%	120			120			120			120			120		
Mixed bbls	55.52	130			130			130			130			130		
Total Sacks	396	140			140			140			140			140		
bbl Returns	23	150			150			150			150			150		
Water Temp	65.8															

Notes:

The day

1/2 bbl Back on Bleed Off

Casing PSI Test 628pm 1520psi to 643pm 1540psi

x Kirby Buckner  
Work Performed

x Supervisor  
Title

x 11/18/14  
Date