



# Bison Oil Well Cementing Single Cement Surface Pipe

Date: 12/8/2014  
Invoice #: 35083  
API#  
Foreman: Kirk Kallhoff

Customer: EnCana Oil & Gas (USA) Inc.  
Well Name: newnam 2f-32h-c264

County: Weld  
State: Colorado  
Sec: 32  
Twp: 2n  
Range: 64w

Consultant: rich  
Rig Name & Number: ensign 124  
Distance To Location: 30  
Units On Location: 4030-3103/4018-3204  
Time Requested: 1200 pm  
Time Arrived On Location: 1030 am  
Time Left Location: 6:30 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) : 1,013	Cement Yield (cuft) : 1.27
Total Depth (ft) : 1037	Gallons Per Sack: 5.89
Open Hole Diameter (in.) : 12.25	% Excess: 50%
Conductor Length (ft) : 100	Displacement Fluid lb/gal: 8.3
Conductor ID : 16	BBL to Pit:
Shoe Joint Length (ft) : 43	Fluid Ahead (bbls): 30.0
Landing Joint (ft) : 20	H2O Wash Up (bbls): 20.0
Max Rate:	Spacer Ahead Makeup
Max Pressure:	

Casing ID	8.835	Casing Grade	J-55 only used
<b>Calculated Results</b>		<b>Displacement:</b>	75.07 bbls
cuft of Shoe	18.31 cuft	(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>	
cuft of Conductor	89.10 cuft	Hydrostatic Pressure:	799.86 PSI
(Conductor Width Squared) - (Casing Size OD Squared) X (.005454) X (Conductor Length ft)		<b>Pressure of the fluids inside casing</b>	
cuft of Casing	428.90 cuft	Displacement:	418.25 psi
(Open Hole Squared) - (Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)		Shoe Joint:	33.95 psi
Total Slurry Volume	536.30 cuft	Total	452.20 psi
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)		Differential Pressure:	347.67 psi
bbls of Slurry	95.52 bbls		
(Total Slurry Volume) X (.1781)		Collaps PSI:	2570.00 psi
Sacks Needed	422 ck	Burst PSI:	3950.00 psi
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)		Total Water Needed:	184.29 bbls
Mix Water	59.22 bbls		
(Sacks Needed) X (Gallons Per Sack) ÷ 42			

x   
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.



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

Customer  
Well Name

EnCana Oil & Gas (USA) Inc.  
newnam 2f-32h-c264

INVOICE #  
LOCATION  
FOREMAN  
Date

35083  
Weld  
Kirk Kallhoff  
12/8/2014

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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	347pm															
MIRU	310pm															
CIRCULATE	441pm	0	512pm	10	0			0			0			0		
Drop Plug		10	515pm	80	10			10			10			10		
512 pm		20	517pm	120	20			20			20			20		
		30	519pm	200	30			30			30			30		
		40	521pm	310	40			40			40			40		
M & P		50	523pm	370	50			50			50			50		
Time	Sacks	60	525pm	440	60			60			60			60		
448 pm	422	70	528pm	440	70			70			70			70		
509 pm stop		80			80			80			80			80		
		90			90			90			90			90		
		100			100			100			100			100		
		110			110			110			110			110		
% Excess	50%	120			120			120			120			120		
Mixed bbls	59.2	130			130			130			130			130		
Total Sacks	422	140			140			140			140			140		
bbl Returns	25	150			150			150			150			150		
Water Temp																

Notes:

bumped plug at 531 pm 670 psi

casing test 1500 psi 15 min

X

Work Performed

X

Title

X

Date

12-8-14