



# Bison Oil Well Cementing Single Cement Surface Pipe

Date: 10/20/2014  
 Invoice #: 65018  
 API#: 05-123-97750  
 Foreman: Lee Sharp

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

County: Weld  
 State: Colorado  
 Sec: \_\_\_\_\_  
 Twp: \_\_\_\_\_  
 Range: \_\_\_\_\_

Consultant: Kirby  
 Rig Name & Number: Ensign 124  
 Distance To Location: 26  
 Units On Location: 4023-3104;4017-  
 Time Requested: 7:00  
 Time Arrived On Location: 5:30PM  
 Time Left Location: 10:45

## WELL DATA

Casing Size OD (in) : 9.625  
 Casing Weight (lb) : 40.66  
 Casing Depth (ft.) : 1,031  
 Total Depth (ft) : 1040  
 Open Hole Diameter (in.) : 12.25  
 Conductor Length (ft) : 135  
 Conductor ID : 15.5  
 Shoe Joint Length (ft) : 46  
 Landing Joint (ft) : 0

Max Rate: \_\_\_\_\_  
 Max Pressure: \_\_\_\_\_

## 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: 29.0  
 Fluid Ahead (bbls): 30.0  
 H2O Wash Up (bbls): 20.0

Spacer Ahead Makeup  
 10+10D+10=30

Casing ID 8.835 Casing Grade J-55 only used

## Calculated Results

**cuft of Shoe** 19.77 cuft  
 (Casing ID Squared) X (.005454) X (Shoe Joint ft)

**cuft of Conductor** 108.68 cuft  
 (Conductor Width Squared) -(Casing Size OD Squared) X (.005454) X (Conductor Length ft)

**cuft of Casing** 420.80 cuft  
 (Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length )

**Total Slurry Volume** 549.24 cuft  
 (cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)

**bbls of Slurry** 97.82 bbls  
 (Total Slurry Volume) X (.1781)

**Sacks Needed** 432 sk  
 (Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)

**Mix Water** 60.65 bbls  
 (Sacks Needed) X (Gallons Per Sack) ÷ 42

**Displacement:** 74.64 bbls  
 (Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)

**Pressure of cement in annulus**

**Hydrostatic Pressure:** 813.88 PSI

**Pressure of the fluids inside casing**

**Displacement:** 424.42 psi  
**Shoe Joint:** 36.66 psi  
**Total:** 461.08 psi

**Differential Pressure:** 352.80 psi

**Collapse PSI:** 2570.00 psi  
**Burst PSI:** 3950.00 psi

**Total Water Needed:** 185.29 bbls

X Kirby Bucklett  
 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 2A 32H C264

INVOICE #  
LOCATION  
FOREMAN  
Date

65018  
Weld  
Lee Sharp  
10/20/2014

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**DESCRIPTION OF JOB EVENTS**

	Time	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	8:20															
MIRU	6:15				0			0			0			0		
CIRCULATE	8:45	0	9:24		10			10			10			10		
Drop Plug		10	9:27	10	10			20			20			20		
9:24		20	9:30	30	20			30			30			30		
		30	9:34	120	30			40			40			40		
		40	9:36	320	40			50			50			50		
M & P		50	9:38	380	50			60			60			60		
Time	Sacks	60	9:40	360	60			70			70			70		
9:00-9:21	432	70	9:45	420	70			80			80			80		
		80	9:47	Landed	80			90			90			90		
		90			90			100			100			100		
		100			100			110			110			110		
		110			110			120			120			120		
% Excess	50%	120			120			130			130			130		
Mixed bbls	60.64	130			130			140			140			140		
Total Sacks	432	140			140			150			150			150		
bbl Returns	29	150			150											
Water Temp	67															

Notes:

Job went well no issues plug landed on calculate. Final lift@ 330 psi Land 850  
 Casing Test 9:50 @1480  
 End casing 10:05 1490  
 10:11 Kriby did not like flow back from floats preassured up to 800 psi holding.....10:19 still not holding  
 10:21 pressured up to 900 shut in at head.

X Kuby Bucklett  
 Work Performed

X Supervisor  
 Title

X 10/20/14  
 Date