



# Bison Oil Well Cementing Single Cement Surface Pipe

Date: 1/9/2015  
Invoice #: 72061  
API#: 05-123-380800000  
Foreman: AARON CARRASCO

Customer: EnCana Oil & Gas (USA) Inc.

Well Name: FILE 3M-32H

County: WELD

State: Colorado

Sec: 32

Twp: 2N

Range: 68W

Consultant: NORMAN

Rig Name & Number: PATTERSON #326

Distance To Location: 28 MILES

Units On Location: 3101 4029-

Time Requested: 8AM

Time Arrived On Location: 7AM

Time Left Location:

## WELL DATA

Casing Size OD (in) : 9.625  
Casing Weight (lb) : 36.00  
Casing Depth (ft.) : 814  
Total Depth (ft) : 854  
Open Hole Diameter (in.) : 12.25  
Conductor Length (ft) : 110  
Conductor ID : 15.6  
Shoe Joint Length (ft) : 44  
Landing Joint (ft) : 35

Max Rate: 5  
Max Pressure: 1000

## 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: 5.0  
BBL to Pit:  
Fluid Ahead (bbls): 30.0  
H2O Wash Up (bbls): 20.0

Spacer Ahead Makeup  
10 FRESH-10DYE-10 FRESH

Casing ID

8.921

Casing Grade

J-55 only used

## Calculated Results

**cuft of Shoe** 19.10 cuft  
(Casing ID Squared) X (.005454) X (Shoe Joint ft)

**cuft of Conductor** 90.42 cuft  
(Conductor Width Squared) -(Casing Size OD Squared) X (.005454) X (Conductor Length ft)

**cuft of Casing** 330.72 cuft  
(Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)

**Total Slurry Volume** 440.24 cuft  
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)

**bbls of Slurry** 78.41 bbls  
(Total Slurry Volume) X (.1781)

**Sacks Needed** 347 sk  
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)

**Mix Water** 48.61 bbls  
(Sacks Needed) X (Gallons Per Sack) ÷ 42

**Displacement:** 62.23 bbls

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

## Pressure of cement in annulus

**Hydrostatic Pressure:** 642.73 PSI

## Pressure of the fluids inside casing

**Displacement:** #N/A psi

**Shoe Joint:** 34.74 psi

**Total** #N/A psi

**Differential Pressure:** #N/A psi

**Collapse PSI:** 2020.00 psi

**Burst PSI:** 3520.00 psi

**Total Water Needed:** 160.85 bbls

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.



DISON Oil Well Cementing  
Single Cement Surface Pipe

Customer  
Well Name

EnCana Oil & Gas (USA) Inc.  
FILE 3M-32H

INVOICE #  
LOCATION  
FOREMAN  
Date

7/2001  
WELD  
AARON CARRASCO  
1/9/2015

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DESCRIPTION OF JOB EVENTS

Safety Meeting MIRU CIRCULATE Drop Plug 9:59AM M & P Time Sacks 9:37AM	9:07AM 7:2AM 9:21AM	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	9:59AM	0	0			0			0			0		
		10	10:02AM	50	10			10			10			10		
		20	10:05AM	50	20			20			20			20		
		30	10:08AM	80	30			30			30			30		
		40	10:10AM	160	40			40			40			40		
		50	10:14AM	240	50			50			50			50		
		60	10:18AM	270	60			60			60			60		
		63	10:20AM	290	70			70			70			70		
		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	48.6	130			130			130			130			130		
Total Sacks	347	140			140			140			140			140		
bbl Returns		150			150			150			150			150		
Water Temp	47															

Notes:

MIRU HAD SAFETY MEETING PRESS TESTED TO 1000 PSI THEN PUMPED SPACER 10BLS FRESH H2O 10 BLS OF H2O WITH BLUE DYE

WENT IN TO MIX MIXED & PUMPED 349 SKS OF CEMENT @ 15.2 LBS/GAL DROPE D PLUG PLUG DID NOT BUMP

X

Work Preformed

X

Title

X

Date