



Bison Oil Well Cementing Single Cement Surface Pipe

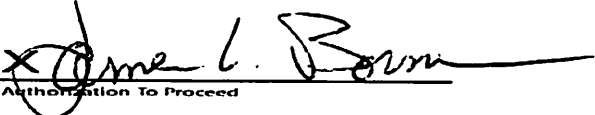
Date: 1/10/2015
Invoice # 45108
API# 05-123-39780
Foreman: JASON

Customer: EnCana Oil & Gas (USA) Inc.
Well Name: NEWNAM2I-32H-C264

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

Consultant: RICH
Rig Name & Number: ENSIGN 124
Distance To Location: 23
Units On Location: 4031-3107, 4032-3210
Time Requested: 1000
Time Arrived On Location: 830
Time Left Location: 1400

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.) : 1,017	Cement Yield (cuft) : 1.27
Total Depth (ft) : 1040	Gallons Per Sack: 5.89
Open Hole Diameter (in.) : 12.25	% Excess: 50%
Conductor Length (ft) : 120	Displacement Fluid lb/gal: 8.3
Conductor ID : 15.25	BBL to Pit: 25.0
Shoe Joint Length (ft) : 44	Fluid Ahead (bbls): 30.0
Landing Joint (ft) : 17	H2O Wash Up (bbls): 20.0
Max Rate: 6	Spacer Ahead Makeup
Max Pressure: 1500	30 BBL W/ KCL, DYE IN 2ND 10

Casing ID	8.835	Casing Grade	J-55 only used
Calculated Results		Displacement: 75.05 bbls (Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)	
cuft of Shoe	18.83	cuft	Pressure of cement in annulus
(Casing ID Squared) X (.005454) X (Shoe Joint ft)			
cuft of Conductor	91.58	cuft	Hydrostatic Pressure: 802.88 PSI
(Conductor Width Squared) -(Casing Size OD Squared) X (.005454) X (Conductor Length ft)			
cuft of Casing	421.30	cuft	Pressure of the fluids inside casing
(Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)			
Total Slurry Volume	531.71	cuft	
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)			
bbls of Slurry	94.70	bbls	Displacement: 419.36 psi
(Total Slurry Volume) X (.1781)			Shoe Joint: 34.93 psi
Sacks Needed	419	sk	Total 454.29 psi
(Total Slurry Volume) + (Cement Yield) X (% Excess Cement)			Differential Pressure: 348.59 psi
Mix Water	58.71	bbls	Collapse PSI: 2570.00 psi
(Sacks Needed) X (Gallons Per Sack) + 42			
			Burst PSI: 3950.00 psi
			Total Water Needed: 183.77 bbls
<div><div></div><div>Authorization To Proceed</div></div>			
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.
NEWNAM2I-32H-C264

INVOICE #
LOCATION
FOREMAN
Date

45108
Weld
JASON
1/10/2015

Treatment Report Page 2

DESCRIPTION OF JOB EVENTS

Safety Meeting MIRU CIRCULATE Drop Plug 1238 M & P Time 1201-1236 % Excess Mixed bbls Total Sacks bbl Returns Water Temp	1100	Displace 1			Displace 2			Displace 3			Displace 4			Displace 5		
	945	BBLs	Time	PSI	BBLs	Time	PSI	BBLs	Time	PSI	BBLs	Time	PSI	BBLs	Time	PSI
	1150	0	1238	0	0			0			0			0		
		10	1241	60	10			10			10			10		
		20	1243	80	20			20			20			20		
		30	1245	160	30			30			30			30		
		40	1255	280	40			40			40			40		
		50	1305	360	50			50			50			50		
		60	1309	420	60			60			60			60		
		70	1313	450	70			70			70			70		
		80	1315	460	80			80			80			80		
		90	BUMP	1040	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:

PRESSURE TEST TO 2000 PSI AT 1147, PUMPED 30 BBL WATER WITH DYE IN THE 2ND 10 AT 1150, MIXED AND PUMPED 419 SKS AT 15.2, 94.7 BBL

AT 1201, SHUT DOWN AT 1236, STARTED DISPLACEMENT AT 1238, PLUG LANDED AT 460 PSI AT 1315 AND PRESSURED UP TO 1040 PSI, HELD FOR 2

MINUTES, RELEASED PRESSURE AND GOT .5 BBL BACK AND FLOATS HELD

James L. Boen
Work Performed

X *Co Man*
Title

X *10 Jan 15*
Date