



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 9/15/2014

Invoice # 35040

API#

Foreman: Kirk Kallhoff

Customer: EnCana Oil & Gas (USA) Inc.

Well Name: grant salisbury 2e-14h-c268

County: Weld

State: Colorado

Sec: 14

Twp: 2n

Range: 68w

Consultant: chris

Rig Name & Number: patterson 272

Distance To Location: 22

Units On Location: 4030-3103/4017-3210

Time Requested: 300 pm

Time Arrived On Location: 200 pm

Time Left Location: 7:00 pm

WELL DATA

Casing Size OD (in) : 9.625
Casing Weight (lb) : 36.00
Casing Depth (ft.) : 865
Total Depth (ft) : 910
Open Hole Diameter (in.) : 12.25
Conductor Length (ft) :
Conductor ID :
Shoe Joint Length (ft) : 42
Landing Joint (ft) : 35

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: 60%
Displacement Fluid lb/gal: 8.3
BBL to Pit:
Fluid Ahead (bbls): 30.0
H2O Wash Up (bbls): 20.0

Spacer Ahead Makeup

Casing ID

8.921

Casing Grade

J-55 only used

Calculated Results

cuft of Shoe 18.23 cuft
(Casing ID Squared) X (.005454) X (Shoe Joint ft)

cuft of Conductor 0.00 cuft
(Conductor Width Squared) -(Casing Size OD Squared) X (.005454) X (Conductor Length ft)

cuft of Casing 433.44 cuft
(Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)

Total Slurry Volume 451.67 cuft
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)

bbls of Slurry 80.44 bbls
(Total Slurry Volume) X (.1781)

Sacks Needed 356 sk
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)

Mix Water 49.88 bbls
(Sacks Needed) X (Gallons Per Sack) ÷ 24

Displacement: 66.33 bbls

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

Pressure of cement in annulus

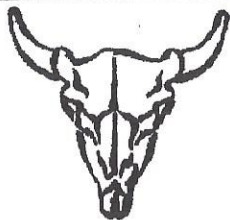
Hydrostatic Pressure: 683.00 PSI

Pressure of the fluids inside casing

Displacement: 354.86 psi**Shoe Joint:** 33.16 psi**Total** 388.03 psi**Differential Pressure:** 294.98 psi**Collapse PSI:** 2020.00 psi**Burst PSI:** 3520.00 psi**Total Water Needed:** 166.21 bbls

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.
grant salisbury 2e-14h-c268

INVOICE #
LOCATION
FOREMAN
Date

35040
Weld
Kirk Kallhoff
9/15/2014

Treatment Report Page 2

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	446pm															
MIRU	335pm															
CIRCULATE	518pm	0	548pm	10	0			0			0			0		
Drop Plug		10	551pm	80	10			10			10			10		
548 pm		20	553pm	120	20			20			20			20		
		30	554pm	240	30			30			30			30		
		40	557pm	330	40			40			40			40		
M & P		50	559pm	370	50			50			50			50		
Time	Sacks	60	602pm	420	60			60			60			60		
524 pm	360	70			70			70			70			70		
544 pm stop		80			80			80			80			80		
		90			90			90			90			90		
		100			100			100			100			100		
		110			110			110			110			110		
% Excess	62%	120			120			120			120			120		
Mixed bbls	50.5	130			130			130			130			130		
Total Sacks	360	140			140			140			140			140		
bbl Returns	22	150			150			150			150			150		
Water Temp																

Notes:

bumped plug at 604 pm 660 psi

81.5 bbls slurry

floats held

X

Work Preformed

X

Title

X

Date