



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 1/15/2015
Invoice #: 55062
API#
Foreman: Monte Bedeaux

Customer: EnCana Oil & Gas (USA) Inc.
Well Name: Ruhl 1G-32H-B264

County: Weld
State: Colorado
Sec: 32
Twp: 2n
Range: 64w
Consultant: Dennis
Rig Name & Number: Ensign 135
Distance To Location: 28.2
Units On Location: 4027-3106 4034-3211
Time Requested: 6:00 PM
Time Arrived On Location: 4:45 PM
Time Left Location: 12:00

WELL DATA

Casing Size OD (in) : 9.625
Casing Weight (lb) : 40.00
Casing Depth (ft) : 1,136
Total Depth (ft) : 1170
Open Hole Diameter (in.) : 12.25
Conductor Length (ft) : 137
Conductor ID : 15.6
Shoe Joint Length (ft) : 45
Landing Joint (ft) : 22

Max Rate: 5
Max Pressure: 2000

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

Spacer Ahead Makeup
20 fresh 10 dye

Casing ID 8.835 Casing Grade J-55 only used

Calculated Results

cuft of Shoe 19.16 cuft
(Casing ID Squared) X (.005454) X (Shoe Joint ft)
cuft of Conductor 112.62 cuft
(Conductor Width Squared) - (Casing Size OD Squared) X (.005454) X (Conductor Length ft)
cuft of Casing 469.30 cuft
(Open Hole Squared) - (Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)
Total Slurry Volume 601.07 cuft
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)
bbls of Slurry 107.05 bbls
(Total Slurry Volume) X (.1781)
Sacks Needed 473 sk
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)
Mix Water 66.37 bbls
(Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 84.39 bbls

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

Pressure of cement in annulus

Hydrostatic Pressure: 896.99 PSI

Pressure of the fluids inside casing

Displacement: 470.42 psi

Shoe Joint: 35.53 psi

Total 505.95 psi

Differential Pressure: 391.04 psi

Collapse PSI: 2570.00 psi

Burst PSI: 3950.00 psi

Total Water Needed: 200.77 bbls

X *Dennis J. Jandy*
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.
Ruhl 1G-32H-B264

INVOICE #
LOCATION
FOREMAN
Date

33002
Weld
Monte Bedeaux
1/15/2015

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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	6:30															
MIRU	7:00															
CIRCULATE	7:30	0	10:43	0	0			0			0			0		
Drop Plug		10	10:46	90	10			10			10			10		
10:43		20	10:48	80	20			20			20			20		
		30	10:50	260	30			30			30			30		
		40	10:52	260	40			40			40			40		
M & P		50	10:54	350	50			50			50			50		
Time	Sacks	60	10:56	420	60			60			60			60		
10:20-10:41	473	70	10:58	530	70			70			70			70		
		80	11:00	480	80			80			80			80		
		90	11:02	500	90			90			90			90		
		100		970	100			100			100			100		
		110			110			110			110			110		
% Excess	50%	120			120			120			120			120		
Mixed bbls	66.37	130			130			130			130			130		
Total Sacks	473	140			140			140			140			140		
bbl Returns	26	150			150			150			150			150		
Water Temp	67															

Notes:

safty meeting, miru, pressure test per company man, circulate 30 bbls ahead with dye last 10, mix and pump 473 sks cement, drop plug and
displace 84.39 bbls h2o, bump plug at 11:02 pm at 970 psi, hold 2 min release pressure, raise presure to 1500 psi, hold 15 min, release pressure, wash up rig down

X

Work Preformed

X

Title

Wellsite Supv.

X

Date

1/16/15