



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 1/14/2015
Invoice #: 25127
API#: 05-123-40276
Foreman: Calvin Reimers

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

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

Consultant: Dennis E / Dennis Z
Rig Name & Number: Ensign 135
Distance To Location: 23 Miles
Units On Location: 4023-3104/4034-3211
Time Requested: 900pm
Time Arrived On Location: 700pm
Time Left Location: 4:15 AM

WELL DATA

Casing Size OD (in) : 9.625
Casing Weight (lb) : 40.00
Casing Depth (ft.) : 1,134
Total Depth (ft) : 1159
Open Hole Diameter (in.) : 12.25
Conductor Length (ft) : 124
Conductor ID : 16
Shoe Joint Length (ft) : 46
Landing Joint (ft) : 18

Max Rate: 7
Max Pressure: 2500

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
30bbls H2O+Dye in 3rd 10bbls

Casing ID

8.835

Casing Grade

J-55 only used

Calculated Results

cuft of Shoe 19.64 cuft
(Casing ID Squared) X (.005454) X (Shoe Joint ft)
cuft of Conductor 110.48 cuft
(Conductor Width Squared) -(Casing Size OD Squared) X (.005454) X (Conductor Length ft)
cuft of Casing 474.57 cuft
(Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)
Total Slurry Volume 604.69 cuft
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)
bbls of Slurry 107.70 bbls
(Total Slurry Volume) X (.1781)
Sacks Needed 476 sk
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)
Mix Water 66.77 bbls
(Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 83.87 bbls

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

Pressure of cement in annulus

Hydrostatic Pressure: 895.59 PSI

Pressure of the fluids inside casing

Displacement: 469.17 psi

Shoe Joint: 36.42 psi

Total 505.59 psi

Differential Pressure: 390.00 psi

Collapse PSI: 2570.00 psi

Burst PSI: 3950.00 psi

Total Water Needed: 200.65 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.



DISCON ON WELL CEMENTING
Single Cement Surface Pipe

Customer
Well Name

EnCana Oil & Gas (USA) Inc.
Ruhl 1J-32H-B264

INVOICE #
LOCATION
FOREMAN
Date

25127
Weld
Calvin Reimers
1/14/2015

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	147am															
MIRU	1230am															
CIRCULATE	227am	0	300am	50	0			0			0			0		
Drop Plug		10	303am	40	10			10			10			10		
259am		20	305am	50	20			20			20			20		
		30	307am	150	30			30			30			30		
		40	309am	390	40			40			40			40		
M & P		50	311am	530	50			50			50			50		
Time	Sacks	60	312am	590	60			60			60			60		
234am	476	70	314am	590	70			70			70			70		
256am		80	316am	440	80			80			80			80		
		90	319am	420	90			90			90			90		
		100	Bump	950	100			100			100			100		
		110			110			110			110			110		
% Excess	50%	120			120			120			120			120		
Mixed bbls	66.77	130			130			130			130			130		
Total Sacks	476	140			140			140			140			140		
bbl Returns	11	150			150			150			150			150		
Water Temp	65.1															

Notes:

The day

1/2 bbl Back on Bleed Off

Casing PSI Tset 321am 1510psi to 336am 1500psi

X Dennis J. [Signature]
Work Performed

X Wellsite Supv.
Title

X 1/14/15
Date