



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 1/15/2015
Invoice #: 55061
API#:
Foreman: Monte Bedeaux

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

County: Weld
State: Colorado
Sec: 32
Twp: 211
Range: 64w

Consultant: Dennis
Rig Name & Number: Ensign 135
Distance To Location: 28.2
Units On Location: 4027-3106 4022-3213
Time Requested: 11:00 PM
Time Arrived On Location: 9:40 PM
Time Left Location: 1:30 AM

WELL DATA

Casing Size OD (in) : 9.625
Casing Weight (lb) : 40.00
Casing Depth (ft) : 1,118
Total Depth (ft) : 1152
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 460.84 cuft
(Open Hole Squared) - (Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)
Total Slurry Volume 592.62 cuft
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)
bbls of Slurry 105.55 bbls
(Total Slurry Volume) X (.1781)
Sacks Needed 467 sk
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)
Mix Water 65.44 bbls
(Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 83.03 bbls

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

Pressure of cement in annulus

Hydrostatic Pressure: 882.77 PSI

Pressure of the fluids inside casing

Displacement: 462.66 psi

Shoe Joint: 35.53 psi

Total 498.19 psi

Differential Pressure: 384.58 psi

Collapse PSI: 2570.00 psi

Burst PSI: 3950.00 psi

Total Water Needed: 198.47 bbls

Dennis Zarochy
Authorization To Proceed



Displacement Cementing
Single Cement Surface Pipe

Customer
Well Name

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

INVOICE #
LOCATION
FOREMAN
Date

35001
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	11:15															
MIRU	10:30															
CIRCULATE	11:45	0	12:15	0	0			0			0			0		
Drop Plug		10	12:20	30	10			10			10			10		
12:15		20	12:23	130	20			20			20			20		
		30	12:25	230	30			30			30			30		
		40	12:27	290	40			40			40			40		
M & P		50	12:29	350	50			50			50			50		
Time	Sacks	60	12:31	420	60			60			60			60		
11:48-12:12	467	70	12:33	450	70			70			70			70		
		80	12:36	450	80			80			80			80		
		90	12:38	790	90			90			90			90		
		100			100			100			100			100		
		110			110			110			110			110		
% Excess	50%	120			120			120			120			120		
Mixed bbls	65.44	130			130			130			130			130		
Total Sacks	467	140			140			140			140			140		
bbl Returns	20	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 467 sks cement, drop plug and
displace 85.64 bbls h2o, bump plug at 12:38 pm at 790 psi, bleed off and raise to raise to 1500 psi hold 15 min. release pressure, rash up rig down

X

Work Performed

Dennis J. Smith

X

Title

Wellsite Supervisor

X

Date

1/16/15