



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 11/22/2014
Invoice #: 55037
API#:
Foreman: Monte Bedeaux

Customer: EnCana Oil & Gas (USA) Inc.
Well Name: Minch 3B-4H-L368

County: Weld
State: Colorado
Sec: 4
Twp: 3n
Range: 68W

Consultant: Dave/Roy
Rig Name & Number: H&P 522
Distance To Location: 27.2
Units On Location: 4028-3102 4022-3213
Time Requested: 5:00pm
Time Arrived On Location: 4:00pm
Time Left Location: 1030

WELL DATA

Casing Size OD (in) : 9.625
Casing Weight (lb) : 40.00
Casing Depth (ft.) : 832
Total Depth (ft) : 888
Open Hole Diameter (in.) : 12.25
Conductor Length (ft) : 154
Conductor ID : 15.6
Shoe Joint Length (ft) : 48
Landing Joint (ft) : 38

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: 30%
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 20.43 cuft
(Casing ID Squared) X (.005454) X (Shoe Joint ft)
cuft of Conductor 126.59 cuft
(Conductor Width Squared) - (Casing Size OD Squared) X (.005454) X (Conductor Length ft)
cuft of Casing 276.04 cuft
(Open Hole Squared) - (Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)
Total Slurry Volume 423.06 cuft
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)
bbls of Slurry 75.35 bbls
(Total Slurry Volume) X (.1781)
Sacks Needed 333 sk
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)
Mix Water 46.72 bbls
(Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 62.33 bbls

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

Pressure of cement in annulus

Hydrostatic Pressure: 656.95 PSI

Pressure of the fluids inside casing

Displacement: 338.05 psi

Shoe Joint: 37.90 psi

Total 375.95 psi

Differential Pressure: 281.00 psi

Collapse PSI: 2570.00 psi

Burst PSI: 3950.00 psi

Total Water Needed: 159.04 bbls

X Roy
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.



EnCana Oil Well Cementing
Single Cement Surface Pipe

Customer
Well Name

EnCana Oil & Gas (USA) Inc.
Minch 3B-4H-L368

INVOICE #
LOCATION
FOREMAN
Date

55057
Weld
Monte Bedeaux
11/22/2014

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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	7:45pm															
MIRU	6:50															
CIRCULATE	8:25	0	8:52	0	0			0			0			0		
Drop Plug		10	8:57	70	10			10			10			10		
8:52		20	9:00	140	20			20			20			20		
		30	9:02	260	30			30			30			30		
		40	9:04	330	40			40			40			40		
M & P		50	9:07	360	50			50			50			50		
Time	Sacks	60	9:10	350	60			60			60			60		
8:30-8:46	333	70	9:12	710	70			70			70			70		
		80			80			80			80			80		
		90			90			90			90			90		
		100			100			100			100			100		
		110			110			110			110			110		
% Excess	30%	120			120			120			120			120		
Mixed bbls	46.72	130			130			130			130			130		
Total Sacks	333	140			140			140			140			140		
bbl Returns	13	150			150			150			150			150		
Water Temp	58.5															

Notes:

safty meeting, miru, pressure test per company man, circulate 30 bbls ahead with dye in last 10, mix and pump 333 sks cement, drop plug and
displace 62.33 bbls h2o, bump plug at 9:12 pm at 710 psi, raise pressure to 1500 psi hold 15 min. release pressure, rash up rig down

X

Work Preformed

X

Title

X

Date