



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 1/12/2015
 Invoice #: 72064
 API#: 05-123-3805300
 Foreman: AARON CARRASCO

Customer: EnCana Oil & Gas (USA) Inc.
Well Name: FILE 3C-32H

County: WELD
 State: Colorado
 Sec: 32
 Twp: 2N
 Range: 68W

Consultant: NORMAN
 Rig Name & Number: PATTERSON #326
 Distance To Location: 28 MILES
 Units On Location: 3101 4029-
 Time Requested: 8:00 AM
 Time Arrived On Location: 7:30AM
 Time Left Location:

WELL DATA	Cement Data
Casing Size OD (in) : 9.625	Cement Name: BFN III
Casing Weight (lb) : 36.00	Cement Density (lb/gal) : 15.2
Casing Depth (ft.) : 817	Cement Yield (cuft) : 1.27
Total Depth (ft) : 857	Gallons Per Sack: 5.89
Open Hole Diameter (in.) : 12.25	% Excess: 50%
Conductor Length (ft) : 110	Displacement Fluid lb/gal: 5.0
Conductor ID : 15.6	BBL to Pit:
Shoe Joint Length (ft) : 44	Fluid Ahead (bbls): 30.0
Landing Joint (ft) : 35	H2O Wash Up (bbls): 20.0
Max Rate: 5	Spacer Ahead Makeup
Max Pressure: 1000	10 FRESH-10DYE-10 FRESH

Calculated Results	Displacement: 62.46 bbls
cuft of Shoe 19.10 cuft (Casing ID Squared) X (.005454) X (Shoe Joint ft)	(Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)
cuft of Conductor 90.42 cuft (Conductor Width Squared) -(Casing Size OD Squared) X (.005454) X (Conductor Length ft)	
cuft of Casing 332.13 cuft (Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)	Pressure of cement in annulus Hydrostatic Pressure: 645.10 PSI
Total Slurry Volume 441.65 cuft (cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)	Pressure of the fluids inside casing Displacement: #N/A psi Shoe Joint: 34.74 psi Total: #N/A psi Differential Pressure: #N/A psi
bbls of Slurry 78.66 bbls (Total Slurry Volume) X (.1781)	
Sacks Needed 348 sk (Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)	Collapse PSI: 2020.00 psi Burst PSI: 3520.00 psi
Mix Water 48.77 bbls (Sacks Needed) X (Gallons Per Sack) ÷ 42	Total Water Needed: 161.23 bbls

X *Aaron Carrasco*
 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.
 FILE 3C-32H

INVOICE #
 LOCATION
 FOREMAN
 Date

72004
 WELD
 AARON CARRASCO
 1/12/2015

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	8:20AM															
MIRU	7:30AM															
CIRCULATE	8:46AM	0	9:18AM	0	0			0			0			0		
Drop Plug		10	9:21AM	40	10			10			10			10		
9:18AM		20	9:23AM	100	20			20			20			20		
		30	:25AM	180	30			30			30			30		
		40	9:27AM	220	40			40			40			40		
M & P		50	9:30AM	300	50			50			50			50		
Time	Sacks	60	9:33AM	370	60			60			60			60		
8:58AM	348	63	9:34AM	1000	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	50%	120			120			120			120			120		
Mixed bbls	48.8	130			130			130			130			130		
Total Sacks	348	140			140			140			140			140		
bbl Returns		150			150			150			150			150		
Water Temp	47															

Notes:

MIRU HAD SAFETY MEETING PRESS TESTED TO 1000 PSI THEN PUMPED SPACER 10BLS FRESH H2O 10 BLS OF H2O WITH BLUE DYE
 WENT IN TO MIX MIXED & PUMPED 348 SKS OF CEMENT @ 15.2 LBS/GAL DROPED PLUG DISP 63 BLS BUMPED PLUG @1000 PSI & HELD IT
 FOR 5 MINS

X

Work Performed

X

Title

X

Date