



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 1/9/2015
Invoice #: 72062
API#: 05-123-385100
Foreman: AARON CARRASCO

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

County: WELD
State: Colorado
Sec: 32
Twp: 2N
Range: 68W
Consultant: ROBERT
Rig Name & Number: PATTERSON #326
Distance To Location: 28 MILES
Units On Location: 3101 4029-
Time Requested: 6:30PM
Time Arrived On Location: 5PM
Time Left Location:

WELL DATA

Casing Size OD (in) : 9.625
Casing Weight (lb) : 36.00
Casing Depth (ft.) : 823
Total Depth (ft) : 866
Open Hole Diameter (in.) : 12.25
Conductor Length (ft) : 110
Conductor ID : 15.6
Shoe Joint Length (ft) : 44
Landing Joint (ft) : 35

Max Rate: 5
Max Pressure: 1000

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: 5.0
BBL to Pit:
Fluid Ahead (bbls): 30.0
H2O Wash Up (bbls): 20.0

Spacer Ahead Makeup
10 FRESH-10DYE-10 FRESH

Casing ID

8.921

Casing Grade

J-55 only used

Calculated Results

cuft of Shoe 19.10 cuft
(Casing ID Squared) X (.005454) X (Shoe Joint ft)

cuft of Conductor 90.42 cuft
(Conductor Width Squared) -(Casing Size OD Squared) X (.005454) X (Conductor Length ft)

cuft of Casing 334.94 cuft
(Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)

Total Slurry Volume 444.47 cuft
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)

bbls of Slurry 79.16 bbls
(Total Slurry Volume) X (.1781)

Sacks Needed 350 sk
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)

Mix Water 49.08 bbls
(Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 62.93 bbls

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

Pressure of cement in annulus

Hydrostatic Pressure: 649.84 PSI

Pressure of the fluids inside casing

Displacement: #N/A psi

Shoe Joint: 34.74 psi

Total #N/A psi

Differential Pressure: #N/A psi

Collapse PSI: 2020.00 psi

Burst PSI: 3520.00 psi

Total Water Needed: 162.01 bbls

X *Robert Torgis*
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 ON WELL CEMENTING
Single Cement Surface Pipe

Customer
 Well Name

EnCana Oil & Gas (USA) Inc.

FILE 3F-32H

INVOICE #
 LOCATION
 FOREMAN
 Date

72002
 WELD
 AARON CARRASCO
 1/9/2015

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DESCRIPTION OF JOB EVENTS

Safety Meeting		Displace 1			Displace 2			Displace 3			Displace 4			Displace 5		
MIRU		BBLS	Time	PSI	BBLS	Time	PSI	BBLS	Time	PSI	BBLS	Time	PSI	BBLS	Time	PSI
CIRCULATE		0	7:39PM	0	0			0			0			0		
Drop Plug		10	7:42PM	70	10			10			10			10		
7:39PM		20	7:45	70	20			20			20			20		
		30	7:48	180	30			30			30			30		
		40	7:52PM	260	40			40			40			40		
M & P		50	7:55PM	320	50			50			50			50		
Time Sacks		60	8PM	370	60			60			60			60		
7:07PM 350		63	8:03PM	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 49.1		130			130			130			130			130		
Total Sacks 350		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 350 SKS OF CEMENT @ 15.2 LBS/GAL DROPED PLUG DISP 63.63 BLS BUMPED PLUG @1000 PSI & HELD IT

FOR 5 MINS

X Robert Carrasco
 Work Performed

X Co-man
 Title

X 1/9/15
 Date