



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 11/28/2014

Invoice # 45081

API# 05-123-39776

Foreman: JASON

Customer: EnCana Oil & Gas (USA) Inc.

Well Name: NEWNAM 2E-32H-C264

County: Weld

State: Colorado

Sec: 32

Twp: 2N

Range: 64W

Consultant: MIKE

Rig Name & Number: ENSIGN 124

Distance To Location: 23

Units On Location: 4031-3106, 4022-3213

Time Requested: 730

Time Arrived On Location: 600

Time Left Location: 1200

WELL DATA

Casing Size OD (in) : 9.625
 Casing Weight (lb) : 40.00
 Casing Depth (ft.) : 1,012
 Total Depth (ft) : 1040
 Open Hole Diameter (in.) : 12.25
 Conductor Length (ft) : 135
 Conductor ID : 15.25
 Shoe Joint Length (ft) : 46
 Landing Joint (ft) : 17

Max Rate: 7
 Max Pressure: 1500

Cement Data

Cement Name: BFN III
 Cement Density (lb/gal) : 15.2
 Cement Yield (cuft) : 1.27
 Gallons Per Sack: 5.89
 % Excess: 40%
 Displacement Fluid lb/gal: 8.3
 BBL to Pit: 24.0
 Fluid Ahead (bbbls): 30.0
 H2O Wash Up (bbbls): 20.0

Spacer Ahead Makeup
 30 BBL W/ KCL, DYE IN 2ND 10

Casing ID

8.835

Casing Grade

J-55 only used

Calculated Results

cuft of Shoe 19.73 cuft
 (Casing ID Squared) X (.005454) X (Shoe Joint ft)

cuft of Conductor 103.02 cuft
 (Conductor Width Squared) -(Casing Size OD Squared) X (.005454) X (Conductor Length ft)

cuft of Casing 383.71 cuft
 (Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)

Total Slurry Volume 506.47 cuft
 (cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)

bbbls of Slurry 90.20 bbbls
 (Total Slurry Volume) X (.1781)

Sacks Needed 399 sk
 (Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)

Mix Water 55.93 bbbls
 (Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 74.51 bbbls

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

Pressure of cement in annulus

Hydrostatic Pressure: 799.10 PSI

Pressure of the fluids inside casing

Displacement: 416.38 psi

Shoe Joint: 36.60 psi

Total 452.98 psi

Differential Pressure: 346.12 psi

Collapse PSI: 2570.00 psi

Burst PSI: 3950.00 psi

Total Water Needed: 180.44 bbbls

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.



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DESCRIPTION OF JOB EVENTS

		Displace 1			Displace 2			Displace 3			Displace 4			Displace 5		
		BBLs	Time	PSI												
Safety Meeting	930															
MIRU	800															
CIRCULATE	1015	0	1043	0	0			0			0			0		
Drop Plug		10	1046	20	10			10			10			10		
1043		20	1048	20	20			20			20			20		
		30	1051	180	30			30			30			30		
		40	1053	250	40			40			40			40		
M & P		50	1055	300	50			50			50			50		
Time	Sacks	60	1057	360	60			60			60			60		
1023-1040	399	70	1100	330	70			70			70			70		
		80	1103	320	80			80			80			80		
		90	BUMP	750	90			90			90			90		
		100			100			100			100			100		
		110			110			110			110			110		
% Excess	40%	120			120			120			120			120		
Mixed bbls	55.9	130			130			130			130			130		
Total Sacks	399	140			140			140			140			140		
bbl Returns	24	150			150			150			150			150		
Water Temp	59															

Notes:

PRESSURE TEST TO 2000 PSI AT 1012, PUMPED 30 BBL WATER WITH DYE IN THE 2ND 10 AT 1015, MIXED AND PUMPED 399 SKS AT 15.2, 90.2 BBL AT 1023, SHUT DOWN AT 1040, STARTED DISPLACEMENT AT 1043, PLUG LANDED AT 320 PSI AT 1103 AND PRESSURED UP TO 750 PSI, HELD FOR 2 MINUTES AND PRESSURED UP TO 1500 PSI FOR 15 MINUTES FOR CASING TEST, RELEASED PRESSURE, FLOATS HELD, GOT .75 BBL BACK

X Michael R...
Work Performed

X Co. man
Title

X 11-28-14
Date