



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 6/13/2014

Invoice # 12266

API#

Foreman: monte

Customer: encana

Well Name: mumby state 4e-36h-p266

County: weld

State: colorado

Sec: 36

Twp: 2n

Range: 66w

Consultant: kevin

Rig Name & Number: h&p 522

Distance To Location: 21.4

Units On Location: 4027-3106/4022-3210

Time Requested: 12:30

Time Arrived On Location: 11:30

Time Left Location: 5:30

WELL DATA

Casing Size OD (in) : 9.625
 Casing Weight (lb) : 40.00
 Casing Depth (ft.) : 1,090
 Total Depth (ft) : 1142
 Open Hole Diameter (in.) : 12.25
 Conductor Length (ft) : 120
 Conductor ID : 15.6
 Shoe Joint Length (ft) : 45
 Landing Joint (ft) : 38

Max Rate:
 Max Pressure:

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: 0.0
 Fluid Ahead (bbls): 20.0
 H2O Wash Up (bbls): 20.0

Spacer Ahead Makeup

10 dye 10 fresh

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

cuft of Casing 455.68 cuft
 (Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)

Total Slurry Volume 573.48 cuft
 (cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)

bbls of Slurry 102.14 bbls
 (Total Slurry Volume) X (.1781)

Sacks Needed 452 sk
 (Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)

Mix Water 63.33 bbls
 (Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 82.12 bbls
 (Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)

Pressure of cement in annulus

Hydrostatic Pressure: 860.66 PSI

Pressure of the fluids inside casing

Displacement: 450.58 psi

Shoe Joint: 35.53 psi

Total 486.12 psi

Differential Pressure: 374.55 psi

Collapse PSI: 2570.00 psi

Burst PSI: 3950.00 psi

Total Water Needed: 185.44 bbls

X *Kevin Beyron*
 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.



**Bison Oil Well Cementing
Single Cement Surface Pipe**

Customer
Well Name

encana
mumby state 4e-36h-p266

INVOICE #
LOCATION
FOREMAN
Date

12266
weld
monte
6/13/2014

Treatment Report Page 2

DESCRIPTION OF JOB EVENTS

		Displace 1			Displace 2			Displace 3			Displace 4			Displace 5		
		BBLS	Time	PSI												
Safety Meeting	2:50															
MIRU	2:00															
CIRCULATE	3:04	0	3:55	20	0			0			0			0		
Drop Plug		10	3:58	70	10			10			10			10		
9:05		20	4:02	190	20			20			20			20		
		30	4:04	290	30			30			30			30		
		40	4:06	400	40			40			40			40		
M & P		50	4:08	550	50			50			50			50		
Time	Sacks	60	4:10	580	60			60			60			60		
3:10-3:54	452	70	4:12	540	70			70			70			70		
		80	4:14	380	80			80			80			80		
		90	4:18	610	90			90			90			90		
		100			100			100			100			100		
		110			110			110			110			110		
% Excess	0%	120			120			120			120			120		
Mixed bbls	63.33	130			130			130			130			130		
Total Sacks	452	140			140			140			140			140		
bbl Returns	19	150			150			150			150			150		
Water Temp	78															

Notes:

safty meeting. Miru, pressure test per company man. Circulate 20 bbls ahead with dye in 1st 10, mix and pump 452 bbls at 15.2 lb at 50 excess, drop plug and displac

bump plug at 9:20 pm at 630 psi 16 bbls back

Bleed down 200 PSI In 15 min casing test

X *Kor Berger*
Work Performed

X _____
Title

X 6-13-14
Date