



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 6/14/2014

Invoice # 12041

API#

Foreman: Kirk Kallhoff

Customer: encana

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

County: weld

State: Colorado

Sec: 36

Twp: 2n

Range: 66w

Consultant: roy

Rig Name & Number: h&p522

Distance To Location: 20

Units On Location: 3103-3205

Time Requested: 1030 pm

Time Arrived On Location: 900 pm

Time Left Location: 3:30 am

WELL DATA

Casing Size OD (in) : 9.625
Casing Weight (lb) : 40.00
Casing Depth (ft) : 1,089
Total Depth (ft) : 1133
Open Hole Diameter (in.) : 12.25
Conductor Length (ft) : 100
Conductor ID : 16
Shoe Joint Length (ft) : 44
Landing Joint (ft) : 33

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:
Fluid Ahead (bbls): 30.0
H2O Wash Up (bbls): 20.0

Spacer Ahead Makeup

Casing ID

8.835

Casing Grade

J-55 only used

Calculated Results

cuft of Shoe 18.73 cuft
(Casing ID Squared) X (.005454) X (Shoe Joint ft)

cuft of Conductor 89.10 cuft
(Conductor Width Squared) - (Casing Size OD Squared) X (.005454) X (Conductor Length ft)

cuft of Casing 464.60 cuft
(Open Hole Squared) - (Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)

Total Slurry Volume 572.43 cuft
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)

bbls of Slurry 101.95 bbls
(Total Slurry Volume) X (.1781)

Sacks Needed 451 sk
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)

Mix Water 63.21 bbls
(Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 81.74 bbls
(Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)

Pressure of cement in annulus

Hydrostatic Pressure: 859.87 PSI

Pressure of the fluids inside casing

Displacement: 450.58 psi

Shoe Joint: 34.74 psi


Total 485.33 psi

Differential Pressure: 374.55 psi

Collapse PSI: 2570.00 psi

Burst PSI: 3950.00 psi

Total Water Needed: 194.95 bbls

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.



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

Customer
Well Name

encana
mumby state 4c-36h-p266

INVOICE #
LOCATION
FOREMAN
Date

12041
weld
Kirk Kallhoff
6/15/2014

Treatment Report Page 2

DESCRIPTION OF JOB EVENTS

Safety Meeting		Displace 1			Displace 2			Displace 3			Displace 4			Displace 5		
MIRU	116am	BBLS	Time	PSI	BBLS	Time	PSI	BBLS	Time	PSI	BBLS	Time	PSI	BBLS	Time	PSI
CIRCULATE	1230am	0	217am	10	0			0			0			0		
Drop Plug	143am	10	220am	50	10			10			10			10		
217 am		20	222am	220	20			20			20			20		
		30	224am	230	30			30			30			30		
		40	226am	380	40			40			40			40		
M & P		50	228am	450	50			50			50			50		
Time	Sacks	60	232am	540	60			60			60			60		
150 am	451	70	235am	600	70			70			70			70		
214 am stop		80	239am	440	80			80			80			80		
		90			90			90			90			90		
		100			100			100			100			100		
		110			110			110			110			110		
% Excess	0%	120			120			120			120			120		
Mixed bbls	63.2	130			130			130			130			130		
Total Sacks	451	140			140			140			140			140		
bbl Returns	16	150			150			150			150			150		
Water Temp																

Notes:

bumped plug at 241 am 590 psi 101.9 bbls slurry

casing test 1500 psi for 15 min

X

Work Performed

X

Title

X

Date

6-15-14