



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 3/8/2014
 Invoice #: 12100
 API#: 05-123-
 Foreman: monte

Customer: encana
 Well Name: volg mccooy 23-5h-e267

County: weld
 State: Colorado
 Sec: 5
 Twp: 2n
 Range: 67w

Consultant: sandy
 Rig Name & Number: h ? P 522
 Distance To Location: 28.3
 Units On Location: 4018-3104 4019-3211
 Time Requested: 330pm
 Time Arrived On Location: 240pm
 Time Left Location:

WELL DATA	Cement Data
Casing Size OD (in) : 9.625	Cement Name: BFN III
Casing Weight (lb) : 40.00	Cement Density (lb/gal) : 15.2
Casing Depth (ft.) : 863	Cement Yield (cuft) : 1.27
Total Depth (ft) : 869	Gallons Per Sack: 5.89
Open Hole Diameter (in.) : 12.25	% Excess: 40%
Conductor Length (ft) : 114	Displacement Fluid lb/gal: 8.3
Conductor ID : 15.5	BBL to Pit:
Shoe Joint Length (ft) : 45	Fluid Ahead (bbls): 20.0
Landing Joint (ft) : 37	H2O Wash Up (bbls): 20.0
Max Rate: 4	Spacer Ahead Makeup
Max Pressure: 1000	10 dye 10 fresh

Calculated Results	Pressure of cement in annulus
cuft of Shoe 19.15 cuft (Casing ID Squared) X (.005454) X (Shoe Joint ft)	Displacement: 64.84 bbls (Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)
cuft of Conductor 91.78 cuft (Conductor Width Squared) - (Casing Size OD Squared) X (.005454) X (Conductor Length ft)	Hydrostatic Pressure: 681.51 PSI
cuft of Casing 234.61 cuft (Open Hole Squared) - (Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)	Pressure of the fluids inside casing
Total Slurry Volume 345.53 cuft (cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)	Displacement: 352.76 psi Shoe Joint: 35.52 psi Total 388.28 psi
bbls of Slurry 86.15 bbls (Total Slurry Volume) X (.1781) X (% Excess Cement)	Differential Pressure: 293.23 psi
Sacks Needed 381 sk (Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)	Collapse PSI: #N/A psi Burst PSI: #N/A psi
Mix Water 53.42 bbls (Sacks Needed) X (Gallons Per Sack) ÷ 42	Total Water Needed: 158.26 bbls

X *Walter C. Long*
 Authorization To Proceed



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

Customer
Well Name

encana
volg mccooy 23-5h-e267

INVOICE #
LOCATION
FOREMAN
Date

12100
weld
monte
3/8/2014

Treatment Report Page 2

DESCRIPTION OF JOB EVENTS

		Displace 1			Displace 2			Displace 3			Displace 4			Displace 5		
Safety Meeting	6:30pm	BBLS	Time	PSI	BBLS	Time	PSI	BBLS	Time	PSI	BBLS	Time	PSI	BBLS	Time	PSI
MIRU	6:30															
CIRCULATE	7:25	0	8:00	30	0			0			0			0		
Drop Plug		10	8:02	1160	10			10			10			10		
8:00		20	8:04	160	20			20			20			20		
		30	8:06	190	30			30			30			30		
		40	8:08	280	40			40			40			40		
M & P		50	8:10	300	50			50			50			50		
Time	Sacks	60	8:12	350	60			60			60			60		
7:30-7:55	381	63 70	8:14	820	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	40%	120			120			120			120			120		
Mixed bbls	53.42	130			130			130			130			130		
Total Sacks	381	140			140			140			140			140		
bbl Returns	27	150			150			150			150			150		
Water Temp	47															

Notes:

safty meeting, miru, pressure test per company man, circulate 20 bbls ahead with dye in 1st 10, m & p 381 sks cement, displace 63 bbls h2o. 27 back to pit

X Note Curran
Work Performed

X Well Site Super V16506
Title

X 3/8/14
Date