



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 12/18/2014
Invoice #: 55048
API#:
Foreman: monte

Customer: Bill Barrett
Well Name: Mahaldo State AA09-79-1HNB

County: Weld
State: Colorado
Sec: 4
Twp: 6n
Range: 63w

Consultant: Charles
Rig Name & Number: H&P 322
Distance To Location: 32.2
Units On Location: 4028-3202 4032-3210
Time Requested: 12:00pm
Time Arrived On Location: 10:45
Time Left Location: 1:45

WELL DATA	Cement Data
Casing Size OD (in) : 9.625	Cement Name: BFN III
Casing Weight (lb) : 36.00	Cement Density (lb/gal) : 14.2
Casing Depth (ft) : 826	Cement Yield (cuft) : 1.48
Total Depth (ft) : 868	Gallons Per Sack: 7.48
Open Hole Diameter (in.) : 13.50	% Excess: 10%
Conductor Length (ft) : 124	Displacement Fluid lb/gal: 8.6
Conductor ID : 15.6	BBL to Pit:
Shoe Joint Length (ft) : 43	Fluid Ahead (bbls): 60.0
Landing Joint (ft) : 30	H2O Wash Up (bbls): 20.0
Max Rate: 5	Spacer Ahead Makeup
Max Pressure: 2000	10 fresh 10 dye 40 fresh

Casing ID 8.921	Casing Grade	J-55 only used
Calculated Results	Displacement: 62.85 bbls (Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)	
cuft of Shoe 18.66 cuft (Casing ID Squared) X (.005454) X (Shoe Joint ft)	Pressure of cement in annulus	
cuft of Conductor 101.93 cuft (Conductor Width Squared) - (Casing Size OD Squared) X (.005454) X (Conductor Length ft)	Hydrostatic Pressure: 609.34 PSI	
cuft of Casing 377.40 cuft (Open Hole Squared) - (Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)	Pressure of the fluids inside casing	
Total Slurry Volume 497.99 cuft (cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)	Displacement: 349.84 psi	
bbls of Slurry 88.69 bbls (Total Slurry Volume) X (.1781)	Shoe Joint: 31.72 psi	
Sacks Needed 336 sk (Total Slurry Volume) + (Cement Yield) X (% Excess Cement)	Total 381.57 psi	
Mix Water 59.93 bbls (Sacks Needed) X (Gallons Per Sack) ÷ 42	Differential Pressure: 227.77 psi	
	Collapse PSI: 2020.00 psi	
	Burst PSI: 3520.00 psi	
	Total Water Needed: 202.78 bbls	
<div><div><div></div><div>Charles</div><div>Authorization To Proceed</div></div></div>		
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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Single Cement Surface Pipe**

Customer
Well Name

Bill Barrett
Mahaldo State AA09-79-1HNB

INVOICE #
LOCATION
FOREMAN
Date

55048
Weld
monte
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DESCRIPTION OF JOB EVENTS

	12:30	Displace 1			Displace 2			Displace 3			Displace 4			Displace 5		
		BBLs	Time	PSI	BBLs	Time	PSI	BBLs	Time	PSI	BBLs	Time	PSI	BBLs	Time	PSI
Safety Meeting	12:00													0		
MIRU	12:52	0	1:26	0	0			0			0			10		
CIRCULATE		10	1:30	30	10			10			10			20		
Drop Plug		20	1:32	30	20			20			20			30		
1:26		30	1:34	130	30			30			30			40		
		40	1:36	190	40			40			40			50		
M & P		50	1:38	260	50			50			50			60		
Time		60	1:41	210	60			60			60			70		
Sacks		70	1:43	590	70			70			70			80		
1:04-1:22	336	80			80			80			80			90		
		90			90			90			90			100		
		100			100			100			100			110		
		110			110			110			110			120		
% Excess	10%	120			120			120			120			130		
Mixed bbls	59.93	130			130			130			130			140		
Total Sacks	337	140			140			140			140			150		
bbl Returns	13	150			150			150			150					
Water Temp	57															

Notes:

Safety Meeting, miru, pressure test per company man circulate 60 bbls ahead with dye in 2nd 10, mix and pump 336 sks, drop plug and displace 62.85 bbls h2o
bump plug at 1:43 Pm at 590 psi, raise to 1000 psi hold 15 min, release pressure
called back out to top off, cement fell 32 ft from surface.30 sack top off

x Chad R
Work Performed

x WSS
Title

x 12/18/14
Date