



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 8/15/2017
 Invoice # 900154
 API# 05-123-42727
 Foreman: Corey B.

Customer: Bill Barrett Corp.
Well Name: Anschutz Equss Farms 4148C

County: Weld Consultant: Matt
 State: Colorado Rig Name & Number: WM 344
 Distance To Location: 25
 Sec: 4 Units On Location: 4024/3103 -
 Twp: 62N Time Requested: 500
 Range: 29W Time Arrived On Location: 400
 Time Left Location: _____

WELL DATA	Cement Data
Casing Size OD (in) : <u>9.625</u>	Cement Name: <u>BFN III</u>
Casing Weight (lb) : <u>36.00</u>	Cement Density (lb/gal) : <u>14.2</u>
Casing Depth (ft.) : <u>800</u>	Cement Yield (cuft) : <u>1.48</u>
Total Depth (ft) : <u>802</u>	Gallons Per Sack: <u>7.40</u>
Open Hole Diameter (in.) : <u>12.25</u>	% Excess: <u>30%</u>
Conductor Length (ft) : <u>0</u>	Displacement Fluid lb/gal: <u>8.3</u>
Conductor ID : _____	BBL to Pit: _____
Shoe Joint Length (ft) : <u>43</u>	Fluid Ahead (bbls): <u>20.0</u>
Landing Joint (ft) : <u>0</u>	H2O Wash Up (bbls): <u>20.0</u>
Max Rate: _____	Spacer Ahead Makeup
Max Pressure: _____	<u>20 BBL with die in 2nd 10</u>

Calculated Results	Pressure of cement in annulus
Displacement: <u>58.52 bbls</u>	(Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)
cuft of Shoe <u>18.66</u> cuft	Pressure of cement in annulus
(Casing ID Squared) X (.005454) X (Shoe Joint ft)	Hydrostatic Pressure: <u>590.16 PSI</u>
cuft of Conductor <u>0.00</u> cuft	Pressure of the fluids inside casing
(Conductor Width Squared) -(Casing Size OD Squared) X (.005454) X (Conductor Length ft)	Displacement: <u>326.40 psi</u>
cuft of Casing <u>325.71</u> cuft	Shoe Joint: <u>31.72 psi</u>
(Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)	Total <u>358.13 psi</u>
Total Slurry Volume <u>344.37</u> cuft	Differential Pressure: <u>232.03 psi</u>
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)	Collapse PSI: <u>2020.00 psi</u>
bbls of Slurry <u>61.33</u> bbls	Burst PSI: <u>3520.00 psi</u>
(Total Slurry Volume) X (.1781)	Total Water Needed: <u>139.52 bbls</u>
Sacks Needed <u>233</u> sk	
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)	
Mix Water <u>41.00</u> bbls	
(Sacks Needed) X (Gallons Per Sack) ÷ 42	

X Casey
 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

Bill Barrett Corp.
Anschutz Equus Farms 4148C

INVOICE #
LOCATION
FOREMAN
Date

900154
Weld
Corey B.
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DESCRIPTION OF JOB EVENTS

Amount Pumped	Time/Date	Event	Description	Rate	BBLs	Pressure
% Excess 30%	400	Arrive to Location				
Mixed bbls 41	410	Rig up				
Total Sacks 233						
bbl Returns 8	430	Safety Meeting				
Water Temp 68	445	Start Job				
Notes:	447	Test Lines				
	450	Spacer	20 BBI OF H2o	5	20	40
	455	Cement	14.2 PPG	5	61	70
	505	Shut Down				
	507	Drop Plug	loaded in Plug Container			
	510	Start Displacement	H2o	6	25	90
	520	bump plug	500 over Final Pressure (800 psi)	2	58.6	190
	522	Check Floats				
	530	end Job				
	600	Leave Location				

X Casey Jan
Work Performed

X CO man
Title

X 8/15/17
Date