



# Bison Oil Well Cementing Single Cement Surface Pipe

Date: 8/14/2017  
 Invoice #: 900153  
 API#: 05-123-42733  
 Foreman: Corey B.

Customer: Bill Barrett Corp.

Well Name: 4033C

County: Weld  
 State: Colorado  
 Sec: 28  
 Twp: 3N  
 Range: 68W

Consultant: Matt  
 Rig Name & Number: WM 344  
 Distance To Location: 25  
 Units On Location: 4024/3103 -  
 Time Requested: 1030  
 Time Arrived On Location: 930  
 Time Left Location:

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.) : <del>800</del> 801	Cement Yield (cuft) : 1.48
Total Depth (ft.) : <del>801</del> 800	Gallons Per Sack: 7.40
Open Hole Diameter (in.) : 12.25	% Excess: 30%
Conductor Length (ft) : 0	Displacement Fluid lb/gal: 8.3
Conductor ID :	BBL to Pit:
Shoe Joint Length (ft) : 42.5	Fluid Ahead (bbls): 20.0
Landing Joint (ft) : 0	H2O Wash Up (bbls): 20.0
Max Rate:	Spacer Ahead Makeup
Max Pressure:	20 BBL with die in 2nd 10

Casing ID: 8.921 Casing Grade: J-55 only used

Calculated Results	Displacement: 58.60 bbls
<b>cuft of Shoe</b> 18.23 cuft (Casing ID Squared) X (.005454) X (Shoe Joint ft)	(Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)
<b>cuft of Conductor</b> 0.00 cuft (Conductor Width Squared) - (Casing Size OD Squared) X (.005454) X (Conductor Length ft)	<b>Pressure of cement in annulus</b>
<b>cuft of Casing</b> 325.71 cuft (Open Hole Squared) - (Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)	<b>Hydrostatic Pressure: 590.16 PSI</b>
<b>Total Slurry Volume</b> 343.94 cuft (cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)	<b>Pressure of the fluids inside casing</b>
<b>bbls of Slurry</b> 61.26 bbls (Total Slurry Volume) X (.1781)	<b>Displacement: 326.84 psi</b>
<b>Sacks Needed</b> 232 sk (Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)	<b>Shoe Joint: 30.98 psi</b>
<b>Mix Water</b> 40.94 bbls (Sacks Needed) X (Gallons Per Sack) ÷ 42	<b>Total 357.82 psi</b>
	<b>Differential Pressure: 232.34 psi</b>
	<b>Collapse PSI: 2020.00 psi</b>
	<b>Burst PSI: 3520.00 psi</b>
	<b>Total Water Needed: 139.54 bbls</b>

X Corey B. Barrett  
 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.  
4033C

*AEF 4-62-29*

INVOICE #  
LOCATION  
FOREMAN  
Date

900153  
Weld  
Corey B.  
8/14/2017

Treatment Report Page 2

**DESCRIPTION OF JOB EVENTS**

Amount Pumped	Time/Date	Event	Description	Rate	BBLs	Pressure
% Excess 30%	930	Arrive to Location				
Mixed bbls 40.94	945	Rig up				
Total Sacks 232						
bbl Returns 5	1030	Safety Meeting				
Water Temp 68	1150	Start Job				
Notes:	1152	Test Lines				
	1155	Spacer	20 BBL OF H2o	4	20	40
	1200	Cement	14.2 PPG	5	61.2	60
	1210	Shut Down				
	1212	Drop Plug	loaded in Plug Container			
	1215	Start Displacement	H2o	6	25	90
	1222	bump plug	500 over Final Pressure (730 psi )	2	58.6	210
	1225	Check Floats				
	1230	end Job				
	1300	Leave Location				

X *Casey*  
Work Performed

X *Comar*  
Title

X *8/14/17*  
Date