

# Bison Oil Well Cementing Single Cement Surface Pipe

Date: 2/27/2018  
 Invoice # 900269  
 API# 05-123-46082  
 Foreman: Corey Barras

Customer: Bill Barrett Corp.  
 Well Name: Anschutz State 5-62-26 6457CN

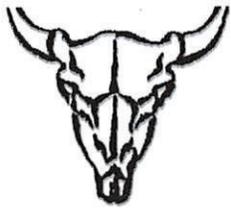
County: Weld Consultant: Matt  
 State: Colorado Rig Name & Number: WM 344  
 Distance To Location: 42  
 Units On Location: 4024/3103 -4024/3201  
 Sec: 27 Time Requested: 430  
 Twp: 5N Time Arrived On Location: 330  
 Range: 62W Time Left Location: \_\_\_\_\_

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>817</u>	Cement Yield (cuft) : <u>1.48</u>
Total Depth (ft) : <u>817</u>	Gallons Per Sack: <u>7.49</u>
Open Hole Diameter (in.) : <u>13.50</u>	% Excess: <u>10%</u>
Conductor Length (ft) : <u>0</u>	Displacement Fluid lb/gal: <u>8.3</u>
Conductor ID : <u>0</u>	BBL to Pit:
Shoe Joint Length (ft) : <u>42</u>	Fluid Ahead (bbls): <u>20.0</u>
Landing Joint (ft) : <u>0</u>	H2O Wash Up (bbls): <u>20.0</u>
Max Rate: <u>8</u>	Spacer Ahead Makeup
Max Pressure: <u>2500</u>	<u>20 BBL with die in 1st 10</u>

Calculated Results	Pressure of cement in annulus
<b>Displacement:</b> <u>58.68</u> <b>bbls</b>	(Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)
<b>cuft of Shoe</b> <u>18.23</u> <b>cuft</b>	<b>Pressure of cement in annulus</b>
(Casing ID Squared) X (.005454) X (Shoe Joint ft)	<b>Hydrostatic Pressure:</b> <u>590.90</u> <b>PSI</b>
<b>cuft of Conductor</b> <u>0.00</u> <b>cuft</b>	<b>Pressure of the fluids inside casing</b>
(Conductor Width Squared) -(Casing Size OD Squared) X (.005454) X (Conductor Length ft)	<b>Displacement:</b> <u>327.27</u> <b>psi</b>
<b>cuft of Casing</b> <u>430.62</u> <b>cuft</b>	<b>Shoe Joint:</b> <u>30.98</u> <b>psi</b>
(Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length )	<b>Total</b> <u>358.25</u> <b>psi</b>
<b>Total Slurry Volume</b> <u>448.85</u> <b>cuft</b>	<b>Differential Pressure:</b> <u>232.65</u> <b>psi</b>
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)	<b>Collapse PSI:</b> <u>2020.00</u> <b>psi</b>
<b>bbls of Slurry</b> <u>79.94</u> <b>bbls</b>	<b>Burst PSI:</b> <u>3520.00</u> <b>psi</b>
(Total Slurry Volume) X (.1781)	<b>Total Water Needed:</b> <u>152.76</u> <b>bbls</b>
<b>Sacks Needed</b> <u>303</u> <b>sk</b>	
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)	
<b>Mix Water</b> <u>54.08</u> <b>bbls</b>	
(Sacks Needed) X (Gallons Per Sack) ÷ 42	

X Corey Barras  
 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 State 5-62-26 6457CN

INVOICE #  
LOCATION  
FOREMAN  
Date

900269
Weld
Corey Barras
2/27/2018

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**DESCRIPTION OF JOB EVENTS**

Amount Pumped	Time/Date	Event	Description	Rate	BBLs	Pressure
% Excess 10%	330	Arrive to Location				
Mixed bbls 54.08	335	Rig up				
Total Sacks 303						
bbl Returns 17 ✓	400	Safety Meeting				
Water Temp 52	414	Start Job				
Notes:	415	Test Lines				
	417	Spacer	20 BBL OF H2o	6	20	100
	421	Cement	14.2 PPG	7	79	130
	432	Shut Down				
	434	Drop Plug	loaded in Plug Container			
	435	Start Displacement	H2o	6	30	250
	448	bump plug	500 over Final Pressure (1100 psi )	2	58	230
	450	Check Floats				
	455	end Job	With 17 BBL of cement back to surface			
	520	Leave Location				

X

Work Performed

*Corey Barras*

X

Title

*CO-MAN*

X

Date

*2/27/18*