



# Bison Oil Well Cementing Single Cement Surface Pipe

Date: 3/20/2014  
 Invoice # 12342  
 API# \_\_\_\_\_  
 Foreman: kirk

**Customer:** bill barrett  
**Well Name:** anschutz state 4-62-2-3228 bh2

County: weld Consultant: casey  
 State: Colorado Rig Name & Number: majbr 43  
 Distance To Location: \_\_\_\_\_  
 Sec: 2 Units On Location: 3103-3210  
 Twp: 4n Time Requested: 530 pm  
 Range: 62w Time Arrived On Location: 330 pm  
 Time Left Location: \_\_\_\_\_

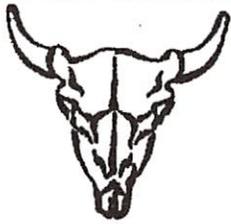
WELL DATA	Cement Data
Casing Size OD (in) : <u>9.625</u>	Cement Name: <u>BFN III</u>
Casing Weight (lb) : <u>36.00</u>	Cement Density (lb/gal) : <u>15.2</u>
Casing Depth (ft.) : <u>791</u>	Cement Yield (cuft) : <u>1.27</u>
Total Depth (ft) : <u>800</u>	Gallons Per Sack: <u>5.89</u>
Open Hole Diameter (in.) : <u>13.50</u>	% Excess: <u>30%</u>
Conductor Length (ft) : _____	Displacement Fluid lb/gal: <u>8.3</u>
Conductor ID : _____	BBL to Pit: _____
Shoe Joint Length (ft) : <u>43</u>	Fluid Ahead (bbls): _____
Landing Joint (ft) : <u>8</u>	H2O Wash Up (bbls): <u>20.0</u>
Max Rate: _____	Spacer Ahead Makeup _____
Max Pressure: _____	

Casing ID 8.921 Casing Grade \_\_\_\_\_ J-55 only used

Calculated Results	Pressure of cement in annulus
<b>cuft of Shoe</b> <u>18.66</u> <b>cuft</b> (Casing ID Squared) X (.005454) X (Shoe Joint ft)	<b>Displacement:</b> <u>58.44</u> <b>bbls</b> (Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)
<b>cuft of Conductor</b> <u>0.00</u> <b>cuft</b> (Conductor Width Squared) -(Casing Size OD Squared) X (.005454) X (Conductor Length ft)	<b>Hydrostatic Pressure:</b> <u>624.57</u> <b>PSI</b>
<b>cuft of Casing</b> <u>386.59</u> <b>cuft</b> (Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length )	<b>Pressure of the fluids inside casing</b>
<b>Total Slurry Volume</b> <u>405.25</u> <b>cuft</b> (cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)	<b>Displacement:</b> <u>322.52</u> <b>psi</b>
<b>bbls of Slurry</b> <u>93.83</u> <b>bbls</b> (Total Slurry Volume) X (.1781) X (% Excess Cement)	<b>Shoe Joint:</b> <u>33.95</u> <b>psi</b>
<b>Sacks Needed</b> <u>415</u> <b>sk</b> (Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)	<b>Total</b> <u>356.48</u> <b>psi</b>
<b>Mix Water</b> <u>58.17</u> <b>bbls</b> (Sacks Needed) X (Gallons Per Sack) ÷ 42	<b>Differential Pressure:</b> <u>268.10</u> <b>psi</b>
	<b>Collapse PSI:</b> <u>#N/A</u> <b>psi</b>
	<b>Burst PSI:</b> <u>#N/A</u> <b>psi</b>
	<b>Total Water Needed:</b> <u>136.62</u> <b>bbls</b>

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  
anschutz state 4-62-2-3228 bh2

INVOICE #	12342
LOCATION	weld
FOREMAN	kirk
Date	3/20/2014

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**DESCRIPTION OF JOB EVENTS**

		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	545pm															
MIRU	500pm															
CIRCULATE	557pm	0	628pm	10	0			0			0			0		
Drop Plug		10	630pm	50	10			10			10			10		
628 pm		20	632pm	70	20			20			20			20		
		30	634pm	150	30			30			30			30		
		40	636pm	230	40			40			40			40		
M & P		50	638pm	280	50			50			50			50		
Time	Sacks	60			60			60			60			60		
608 pm	352	70			70			70			70			70		
626 pm stop		80			80			80			80			80		
		90			90			90			90			90		
		100			100			100			100			100		
		110			110			110			110			110		
% Excess	10%	120			120			120			120			120		
Mixed bbls	49.4	130			130			130			130			130		
Total Sacks	352	140			140			140			140			140		
bbl Returns	14	150			150			150			150			150		
Water Temp																

Notes:

bumped plug at 642 pm 450 psi 79.6 bbls slurry

X Casey Jan  
Work Performed

X Co-man  
Title

X 3-20-14  
Date