



# Bison Oil Well Cementing Single Cement Surface Pipe

Date: 8/31/2014  
Invoice #: 55017  
API#  
Foreman: monte

Customer: Bill Barrett Corp.  
Well Name: anschutz equus farms 4-62-16 0560ch

County: Weld  
State: Colorado  
Sec: 16  
Twp: 4n  
Range: 62w  
Consultant: casey  
Rig Name & Number: major 43  
Distance To Location: 46  
Units On Location: 4028-3201 40217-3211  
Time Requested: 6:00pm  
Time Arrived On Location: 5:00pm  
Time Left Location: 1100 pm

## WELL DATA

Casing Size OD (in) : 9.625  
Casing Weight (lb) : 36.00  
Casing Depth (ft.) : 751  
Total Depth (ft) : 800  
Open Hole Diameter (in.) : 13.50  
Conductor Length (ft) :  
Conductor ID : 15.6  
Shoe Joint Length (ft) : 44  
Landing Joint (ft) : 8

Max Rate: 5  
Max Pressure: 2000

## Cement Data

Cement Name: BFN III  
Cement Density (lb/gal) : 15.2  
Cement Yield (cuft) : 1.27  
Gallons Per Sack: 5.89  
% Excess: 20%  
Displacement Fluid lb/gal: 8.3  
BBL to Pit:  
Fluid Ahead (bbls): 60.0  
H2O Wash Up (bbls): 20.0

Spacer Ahead Makeup  
10 fresh 10 dye 40 fresh

Casing ID 8.921 Casing Grade J-55 only used

## Calculated Results

**cuft of Shoe** 19.10 cuft  
(Casing ID Squared) X (.005454) X (Shoe Joint ft)

**cuft of Conductor** 0.00 cuft  
(Conductor Width Squared) -(Casing Size OD Squared) X (.005454) X (Conductor Length ft)

**cuft of Casing** 440.44 cuft  
(Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length )

**Total Slurry Volume** 459.54 cuft  
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)

**bbls of Slurry** 81.84 bbls  
(Total Slurry Volume) X (.1781)

**Sacks Needed** 362 sk  
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)

**Mix Water** 50.74 bbls  
(Sacks Needed) X (Gallons Per Sack) ÷ 42

**Displacement:** 55.28 bbls  
(Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)

## Pressure of cement in annulus

**Hydrostatic Pressure:** 592.99 PSI

## Pressure of the fluids inside casing

**Displacement:** 304.85 psi

**Shoe Joint:** 34.74 psi

**Total** 339.59 psi

**Differential Pressure:** 253.40 psi

**Collapse PSI:** 2020.00 psi

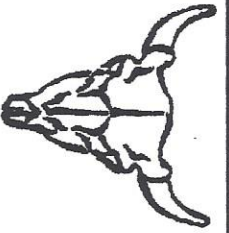
**Burst PSI:** 3520.00 psi

**Total Water Needed:** 186.02 bbls

X

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 4-62-16 0560cf

INVOICE #  
LOCATION  
FOREMAN  
Date

55019  
Weld  
monte  
8/31/2014



**DESCRIPTION OF JOB EVENTS**

Treatment Report Page 2

Safety Meeting	7:10	Displace 1			Displace 2			Displace 3			Displace 4			Displace 5		
	6:25	BBLS	Time	PSI	BBLS	Time	PSI	BBLS	Time	PSI	BBLS	Time	PSI	BBLS	Time	PSI
MIRU	7:25	0	8:10	180	0			0			0			0		
CIRCULATE		10	8:12	200	10			10			10			10		
Drop Plug		20	8:14	250	20			20			20			20		
8:18		30	8:16	360	30			30			30			30		
		40	8:18	410	40			40			40			40		
M & P		50	8:21	500	50			50			50			50		
Time	Sacks	5560	8:23	730	60			60			60			60		
7:40-8:00	362	70			70			70			70			70		
		80			80			80			80			80		
		90			90			90			90			90		
		100			100			100			100			100		
		110			110			110			110			110		
% Excess	20%	120			120			120			120			120		
Mixed bbls	50.74	130			130			130			130			130		
Total Sacks	362	140			140			140			140			140		
bbl Returns	3	150			150			150			150			150		
Water Temp	66															

Notes:

Safety Meeting, miru, pressure test per company man circulate 60 bbls ahead with dye in 2nd 10,  
mix and pump 362 sks at 20 % excess. drop plug and displace 55.28 bbls h2o

X  Title  Date

Work Performed