



# Bison Oil Well Cementing Single Cement Surface Pipe

Date: 4/17/2017  
Invoice #: 900082  
API#: 05-123-43809  
Foreman: Corey B.

Customer: Anadarko Petroleum Corporation

Well Name: Babcock 33C-33HZ

County: Weld  
State: Colorado  
Sec: 4  
Twp: 2N  
Range: 67W

Consultant: Matt  
Rig Name & Number: 252  
Distance To Location: 36  
Units On Location: 1027-3103/4020-3212/4019-321  
Time Requested: 2100  
Time Arrived On Location: 1930  
Time Left Location:

## WELL DATA

Casing Size OD (in) : 9.625  
Casing Weight (lb) : 36.00  
Casing Depth (ft.) : 1,832  
Total Depth (ft) : 1842  
Open Hole Diameter (in.) : 13.50  
Conductor Length (ft) : 80  
Conductor ID : 15.25  
Shoe Joint Length (ft) : 44  
Landing Joint (ft) : 15

Max Rate: 8bm  
Max Pressure: 2000

## Cement Data

Cement Name: BFN III  
Cement Density (lb/gal) : 14.2  
Cement Yield (cuft) : 1.48  
Gallons Per Sack: 7.49  
% Excess: 15%  
Displacement Fluid lb/gal: 8.3  
BBL to Pit: 21  
Fluid Ahead (bbls): 30.0  
H2O Wash Up (bbls): 20.0

Spacer Ahead Makeup  
30 bbl /2nd 10 BBL with Die

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

**cuft of Casing** 984.69 cuft  
(Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)

**Total Slurry Volume** 1064.84 cuft  
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)

**bbls of Slurry** 189.65 bbls  
(Total Slurry Volume) X (.1781)

**Sacks Needed** 719 sk  
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)

**Mix Water** 128.31 bbls  
(Sacks Needed) X (Gallons Per Sack) ÷ 42

**Displacement:** 139.39 bbls

(Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)

## Pressure of cement in annulus

**Hydrostatic Pressure:** 1351.47 PSI

## Pressure of the fluids inside casing

**Displacement:** 770.95 psi

**Shoe Joint:** 32.46 psi

**Total** 803.41 psi

**Differential Pressure:** 548.06 psi

**Collapse PSI:** 2020.00 psi

**Burst PSI:** 3520.00 psi

**Total Water Needed:** 317.70 bbls

X *Bryan Brown*  
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.

Date \_\_\_\_\_

# Butterball33C-33HZ

