



# Bison Oil Well Cementing Single Cement Surface Pipe

Date: 4/23/2017  
Invoice #: 666115  
API#: 05-123-43803  
Foreman: Nick Vigil

Customer: Anadarko Petroleum Corporation

Well Name: Babcock 11N-33HZ

County: Weld  
State: Colorado

Sec: 4  
Twp: 2N  
Range: 67W

Consultant: Lane/Sean  
Rig Name & Number: WMO 252  
Distance To Location: 26 Miles  
Units On Location: 4023/4024/4033  
Time Requested: 10:30  
Time Arrived On Location: 10:00  
Time Left Location:

## WELL DATA

Casing Size OD (in) : 9.625  
Casing Weight (lb) : 36.00  
Casing Depth (ft.) : 1,865  
Total Depth (ft) : 1875  
Open Hole Diameter (in.) : 13.50  
Conductor Length (ft) : 80  
Conductor ID : 15.25  
Shoe Joint Length (ft) : 44  
Landing Joint (ft) : 10

Max Rate:  
Max Pressure:

## Cement Data

Cement Name: BFN III  
Cement Density (lb/gal) : 14.2  
Cement Yield (cuft) : 1.49  
Gallons Per Sack: 7.48  
% Excess: 15%  
Displacement Fluid lb/gal: 8.3  
BBL to Pit:  
Fluid Ahead (bbls): 30.0  
H2O Wash Up (bbls): 20.0

Spacer Ahead Makeup

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** 1003.24 cuft  
(Open Hole Squared) - (Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)

**Total Slurry Volume** 1083.39 cuft  
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)

**bbls of Slurry** 192.95 bbls  
(Total Slurry Volume) X (.1781)

**Sacks Needed** 727 sk  
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)

**Mix Water** 129.49 bbls  
(Sacks Needed) X (Gallons Per Sack) ÷ 42

**Displacement:** 141.55 bbls

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

## Pressure of cement in annulus

**Hydrostatic Pressure:** 1375.81 PSI

## Pressure of the fluids inside casing

**Displacement:** 785.18 psi

**Shoe Joint:** 32.46 psi

**Total** 817.64 psi

**Differential Pressure:** 558.17 psi

**Collapse PSI:** 2020.00 psi

**Burst PSI:** 3520.00 psi

**Total Water Needed:** 321.05 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.

X 4.23.17  
Date

# Babcock 11N-33HZ

