



# Bison Oil Well Cementing Single Cement Surface Pipe

Date: 1/30/2017  
Invoice #: 200026  
API#:   
Foreman: Kirk Kallhoff

Customer: Anadarko Petroleum Corporation  
Well Name: whiston 16n-33hz

County: Weld  
State: Colorado  
Sec: 4  
Twp: 2n  
Range: 67w  
Consultant: sean  
Rig Name & Number: wmo 252  
Distance To Location: 35  
Units On Location: 4028/4020/4033  
Time Requested: 1000 am  
Time Arrived On Location: 900 am  
Time Left Location: 1:00 pm

## WELL DATA

Casing Size OD (in) : 9.625  
Casing Weight (lb) : 36.00  
Casing Depth (ft) : 1,852  
Total Depth (ft) : 1862  
Open Hole Diameter (in.) : 13.50  
Conductor Length (ft) : 80  
Conductor ID : 15.5  
Shoe Joint Length (ft) : 42  
Landing Joint (ft) : 15

Max Rate: 7  
Max Pressure: 1500

## Cement Data

Cement Name: BFN III  
Cement Density (lb/gal) : 14.2  
Cement Yield (cuft) : 1.48  
Gallons Per Sack: 7.40  
% Excess: 15%  
Displacement Fluid lb/gal: 8.3  
Fluid Ahead (bbls): 30.0  
H2O Wash Up (bbls): 10.0

Spacer Ahead Makeup  
h2o

Casing ID

8.921

Casing Grade

J-55 only used

## Calculated Results

**cuft of Shoe** 18.23 cuft  
(Casing ID Squared) X (.005454) X (Shoe Joint ft)

**cuft of Conductor** 64.40 cuft  
(Conductor Width Squared) - (Casing Size OD Squared) X (.005454) X (Conductor Length ft)

**cuft of Casing** 995.93 cuft  
(Open Hole Squared) - (Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)

**Total Slurry Volume** 1078.57 cuft  
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)

**bbls of Slurry** 192.09 bbls  
(Total Slurry Volume) X (.1781)

**Sacks Needed** 729 sk  
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)

**Mix Water** 128.40 bbls  
(Sacks Needed) X (Gallons Per Sack) ÷ 42

**Displacement:** 141.09 bbls

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

## Pressure of cement in annulus

**Hydrostatic Pressure:** 1366.22 PSI

## Pressure of the fluids inside casing

**Displacement:** 780.44 psi

**Shoe Joint:** 30.98 psi

**Total** 811.42 psi

**Differential Pressure:** 554.80 psi

**Collapse PSI:** 2020.00 psi

**Burst PSI:** 3520.00 psi

**Total Water Needed:** 309.49 bbls

X *Sean*  
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.



Anadarko Petroleum Corporation  
whiston 16n-33hz

INVOICE #  
LOCATION  
FOREMAN  
Date

200026  
Weld  
Kirk Kallhoff  
1/30/2017

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## DESCRIPTION OF JOB EVENTS

X San Diego  
Work Performed

X Company Man  
Title

X 1-30-17  
Date

# SERIES 2000

