



# Bison Oil Well Cementing Single Cement Surface Pipe

Date: 2/7/2017  
Invoice #: 900044  
API#: 05-123-42991  
Foreman: JASON

Customer: Anadarko Petroleum Corporation

Well Name: KEOWN STATE 33N-34HZ

County: Weld  
State: Colorado  
Sec: 15  
Twp: 2N  
Range: 68W

Consultant: LANCE  
Rig Name & Number: SW 105  
Distance To Location: 33  
Units On Location: 4027-3103,4024-3205,4031-320  
Time Requested: 430  
Time Arrived On Location: 330  
Time Left Location: 1300

## WELL DATA

Casing Size OD (in) : 9.625  
Casing Weight (lb) : 36.00  
Casing Depth (ft.) : 2,331  
Total Depth (ft) : 2343  
Open Hole Diameter (in.) : 13.50  
Conductor Length (ft) : 80  
Conductor ID : 15.25  
Shoe Joint Length (ft) : 45  
Landing Joint (ft) : 33  
Max Rate: 8  
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: 12%  
Displacement Fluid lb/gal: 8.3  
BBL to Pit: 25.0  
Fluid Ahead (bbls): 30.0  
H2O Wash Up (bbls): 20.0  
Spacer Ahead Makeup  
30 BBL WATER DYE IN 2ND 10

Casing ID

8.921

Casing Grade

J-55 only used

## Calculated Results

cuft of Shoe 19.33 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 1232.06 cuft  
(Open Hole Squared) -(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length )  
Total Slurry Volume 1312.44 cuft  
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)  
bbls of Slurry 233.75 bbls  
(Total Slurry Volume) X (.1781)  
Sacks Needed 887 sk  
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)  
Mix Water 158.14 bbls  
(Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 179.30 bbls

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

## Pressure of cement in annulus

Hydrostatic Pressure: 1719.46 PSI

## Pressure of the fluids inside casing

Displacement: 985.81 psi

Shoe Joint: 32.85 psi

Total 1018.66 psi

Differential Pressure: 700.80 psi

Collapse PSI: 2020.00 psi

Burst PSI: 3520.00 psi

Total Water Needed: 387.44 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

Anadarko Petroleum Corporation  
KEOWN STATE 33N-34HZ

INVOICE #  
LOCATION  
FOREMAN  
Date

900044

Weld

JASON

2/7/2017

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### DESCRIPTION OF JOB EVENTS

[illegible]

X

Work Preformed	
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X

Title

X

Date \_\_\_\_\_

# KEOWN STATE 33N-34HZ SURFACE

