



# Bison Oil Well Cementing Single Cement Surface Pipe

Date: 1/30/2018  
Invoice #: 200236  
API#  
Foreman: Kirk Kallhoff

Customer: Anadarko Petroleum Corporation  
Well Name: azul 13-7hz

County: Weld  
State: Colorado  
Sec: 3  
Twp: 1n  
Range: 68w

Consultant: levi  
Rig Name & Number: CARTEL 88  
Distance To Location: 37  
Units On Location: 4028/4030/4035  
Time Requested: 1200 am  
Time Arrived On Location: 1130 pm  
Time Left Location: 6:00 am

## WELL DATA

Casing Size OD (in) : 9.625  
Casing Weight (lb) : 36.00  
Casing Depth (ft.) : 1,861  
Total Depth (ft) : 1871  
Open Hole Diameter (in.) : 13.50  
Conductor Length (ft) : 80  
Conductor ID : 15.5  
Shoe Joint Length (ft) : 36  
Landing Joint (ft) : 8

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: 7.48  
% Excess: 5%  
Displacement Fluid lb/gal: 8.3  
BBL to Pit:  
Fluid Ahead (bbls): 30.0  
H2O Wash Up (bbls): 10.0

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 15.63 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 913.95 cuft  
(Open Hole Squared) - (Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)

Total Slurry Volume 993.98 cuft  
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)

bbls of Slurry 177.03 bbls  
(Total Slurry Volume) X (.1781)

Sacks Needed 672 sk  
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)

Mix Water 119.61 bbls  
(Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 141.71 bbls

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

## Pressure of cement in annulus

Hydrostatic Pressure: 1372.86 PSI

## Pressure of the fluids inside casing

Displacement: 786.91 psi

Shoe Joint: 26.56 psi

Total 813.46 psi

Differential Pressure: 559.40 psi

Collapse PSI: 2020.00 psi

Burst PSI: 3520.00 psi

Total Water Needed: 301.32 bbls

X *Kirk Kallhoff*  
Authorization To Proceed



## Bison Oil Well Cementing Single Cement Surface Pipe

Customer  
Well Name

Anadarko Petroleum Corporation  
azul 13-7hz

INVOICE #  
LOCATION  
FOREMAN  
Date

200236

Weld

Kirk Kallhoff

1/31/2018

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### DESCRIPTION OF JOB EVENTS

[illegible]

**X**

Authorized signature

x

Title

•

Date \_\_\_\_\_



# SERIES 2000

