



# Bison Oil Well Cementing Single Cement Surface Pipe

Date: 10/21/2019

Invoice # 900425

API# 05-069-50492

Foreman: Corey Barras

Customer: Anadarko Petroleum Corporation

Well Name: Cleland 15-5HZ

County: Weld

State: Colorado

Sec: 20

Twp: 3n

Range: 66w

Consultant: Tyler

Rig Name & Number: CARTEL 88

Distance To Location: 40

Units On Location: 4028/3103-4024/3214-4044/3205

Time Requested: 630

Time Arrived On Location: 615

Time Left Location:

## WELL DATA

Casing Size OD (in) : 9.625  
Casing Weight (lb) : 36.00  
Casing Depth (ft) : 1,854  
Total Depth (ft) : 1890  
Open Hole Diameter (in.) : 13.50  
Conductor Length (ft) : 80  
Conductor ID : 15.25  
Shoe Joint Length (ft) : 42  
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: 50%  
Displacement Fluid lb/gal: 8.3  
BBL to Pit:  
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** 18.23 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** 1300.51 cuft  
(Open Hole Squared) - (Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)

**Total Slurry Volume** 1379.79 cuft  
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)

**bbls of Slurry** 245.74 bbls  
(Total Slurry Volume) X (.1781)

**Sacks Needed** 932 sk  
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)

**Mix Water** 166.04 bbls  
(Sacks Needed) X (Gallons Per Sack) ÷ 42

**Displacement:** 140.70 bbls

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

## Pressure of cement in annulus

**Hydrostatic Pressure:** 1367.70 PSI

## Pressure of the fluids inside casing

**Displacement:** 781.30 psi

**Shoe Joint:** 30.98 psi

**Total** 812.28 psi

**Differential Pressure:** 555.41 psi

**Collapse PSI:** 2020.00 psi

**Burst PSI:** 3520.00 psi

**Total Water Needed:** 356.74 bbls

X

Authorization To Proceed

2



# Cleland 15-5HZ

