



# Bison Oil Well Cementing Single Cement Surface Pipe

Date: 7/13/2015  
Invoice # 80613  
API# 05-123-41792  
Foreman: JASON KELEHER

Customer: Anadarko Petroleum Corporation

Well Name: TEDFORD 4N-28HZ

County: Weld  
State: Colorado  
Sec: 28  
Twp: 2N  
Range: 66W

Consultant: CHRIS  
Rig Name & Number: NOBLE 2  
Distance To Location: 19  
Units On Location: 4031-3106/ 4034-3203  
Time Requested: 2100  
Time Arrived On Location: 1900  
Time Left Location: 215

## WELL DATA

Casing Size OD (in) : 9.625  
Casing Weight (lb) : 36.00  
Casing Depth (ft) : 1,867  
Total Depth (ft) : 1885  
Open Hole Diameter (in.) : 13.50  
Conductor Length (ft) : 47  
Conductor ID : 15.25  
Shoe Joint Length (ft) : 40  
Landing Joint (ft) : 7

Max Rate: 6  
Max Pressure: 1250

## Cement Data

Cement Name: BFN III  
Cement Density (lb/gal) : 14.2  
Cement Yield (cuft) : 1.49  
Gallons Per Sack: 7.48  
% Excess: 20%  
Displacement Fluid lb/gal: 8.3  
BBL to Pit: 16.0  
Fluid Ahead (bbls): 30.0  
H2O Wash Up (bbls): 20.0

Spacer Ahead Makeup  
30BBL WATER/ DYE IN 2ND 10

Casing ID

8.921

Casing Grade

J-55 only used

## Calculated Results

**cuft of Shoe** 17.42 cuft  
(Casing ID Squared) X (.005454) X (Shoe Joint ft)

**cuft of Conductor** 35.87 cuft  
(Conductor Width Squared) -(Casing Size OD Squared) X (.005454) X (Conductor Length ft)

**cuft of Casing** 1067.39 cuft  
(Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)

**Total Slurry Volume** 1120.68 cuft  
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)

**bbls of Slurry** 199.59 bbls  
(Total Slurry Volume) X (.1781)

**Sacks Needed** 752 sk  
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)

**Mix Water** 133.95 bbls  
(Sacks Needed) X (Gallons Per Sack) ÷ 42

**Displacement:** 141.77 bbls

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

## Pressure of cement in annulus

**Hydrostatic Pressure:** 1377.29 PSI

## Pressure of the fluids inside casing

**Displacement:** 787.71 psi

**Shoe Joint:** 29.61 psi

**Total** 817.32 psi

**Differential Pressure:** 559.97 psi

**Collapse PSI:** 2020.00 psi

**Burst PSI:** 3520.00 psi

**Total Water Needed:** 325.72 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.

Date \_\_\_\_\_

# TEDFORD 4N-28HZ SURFACE

