



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 7/10/2015

Invoice # 80611

API# 05-123-4170

Foreman: JASON KELEHER

Customer: Anadarko Petroleum Corporation

Well Name: TEDFORD 3N-28HZ

County: Weld

State: Colorado

Sec: 28

Twp: 2N

Range: 66W

Consultant: SEAN

Rig Name & Number: NOBLE 2

Distance To Location: 19

Units On Location: 4031-3106/ 4019-3205

Time Requested: 800

Time Arrived On Location: 645

Time Left Location: 1130

WELL DATA

Casing Size OD (in) : 9.625
Casing Weight (lb) : 36.00
Casing Depth (ft) : 1,858
Total Depth (ft) : 1884
Open Hole Diameter (in.) : 13.50
Conductor Length (ft) : 47
Conductor ID : 15.25
Shoe Joint Length (ft) : 43
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: 14.0
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 18.66 **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 1062.11 **cuft**
(Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)

Total Slurry Volume 1116.64 **cuft**
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)

bbls of Slurry 198.87 **bbls**
(Total Slurry Volume) X (.1781)

Sacks Needed 749 **sk**
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)

Mix Water 133.47 **bbls**
(Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 140.86 **bbls**
(Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)

Pressure of cement in annulus

Hydrostatic Pressure: 1370.65 **PSI**

Pressure of the fluids inside casing

Displacement: 782.59 **psi**

Shoe Joint: 31.72 **psi**

Total 814.31 **psi**

Differential Pressure: 556.33 **psi**

Collapse PSI: 2020.00 **psi**

Burst PSI: 3520.00 **psi**

Total Water Needed: 324.32 **bbls**

X *Sam Yeldi*
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.

X
Date

TEDFORD 3N-28HZ SURFACE

