



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 4/26/2017

Invoice # 666118

API# 05-123-44315

Foreman: Nick Vigil

Customer: Anadarko Petroleum Corporation

Well Name: Butterball 24N-34HZ

County: Weld

State: Colorado

Sec: 10

Twp: 2N

Range: 67W

Consultant: Lane/Sean

Rig Name & Number: WMO 252

Distance To Location: 26 Miles

Units On Location: 4023/4024/4033

Time Requested: 13:30

Time Arrived On Location: 12:55

Time Left Location:

WELL DATA

Casing Size OD (in) : 9.625
 Casing Weight (lb) : 36.00
 Casing Depth (ft.) : 1,844
 Total Depth (ft) : 1854
 Open Hole Diameter (in.) : 13.50
 Conductor Length (ft) : 80
 Conductor ID : 15.25
 Shoe Joint Length (ft) : 44
 Landing Joint (ft) : 10

Max Rate:

Max Pressure:

Cement Data

Cement Name: BFN III
 Cement Density (lb/gal) : 14.2
 Cement Yield (cuft) : 1.49
 Gallons Per Sack: 7.48
 % Excess: 15%
 Displacement Fluid lb/gal: 8.3
 BBL to Pit:
 Fluid Ahead (bbls): 30.0
 H2O Wash Up (bbls): 20.0

Spacer Ahead Makeup

Casing ID

8.921

Casing Grade

J-55 only used

Calculated Results

cuft of Shoe 19.10 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 991.44 cuft

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

Total Slurry Volume 1071.59 cuft

(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)

bbls of Slurry 190.85 bbls

(Total Slurry Volume) X (.1781)

Sacks Needed 719 sk

(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)

Mix Water 128.08 bbls

(Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 139.93 bbls

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

Pressure of cement in annulus

Hydrostatic Pressure: 1360.32 PSI

Pressure of the fluids inside casing

Displacement: 776.13 psi

Shoe Joint: 32.46 psi

Total 808.58 psi

Differential Pressure: 551.73 psi

Collapse PSI: 2020.00 psi

Burst PSI: 3520.00 psi

Total Water Needed: 318.01 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.

Butterball 24N-34HZ

