



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 4/24/2017

Invoice # 666116

API# 05-123-43802

Foreman: Nick Vigil

Customer: Anadarko Petroleum Corporation

Well Name: Babcock 14C-33HZ

County: Weld

State: Colorado

Sec: 4

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: 5:30

Time Arrived On Location: 4:30

Time Left Location:

WELL DATA

Casing Size OD (in) : 9.625

Casing Weight (lb) : 36.00

Casing Depth (ft.) : 1,874

Total Depth (ft) : 1883

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 1008.30 cuft

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

Total Slurry Volume 1088.45 cuft

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

bbls of Slurry 193.85 bbls

(Total Slurry Volume) X (.1781)

Sacks Needed 731 sk

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

Mix Water 130.10 bbls

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

Displacement: 142.25 bbls

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

Pressure of cement in annulus

Hydrostatic Pressure: 1382.45 PSI

Pressure of the fluids inside casing

Displacement: 789.06 psi

Shoe Joint: 32.46 psi

Total 821.52 psi

Differential Pressure: 560.93 psi

Collapse PSI: 2020.00 psi

Burst PSI: 3520.00 psi

Total Water Needed: 322.35 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.

x 4.24.17.

Babcock 14C-33HZ

