



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 8/16/2015
Invoice #: 80431
API#: 05-123-41903
Foreman: Calvin Reimers

Customer: Anadarko Petroleum Corporation
Well Name: Powers 34G-22HZ

County: Weld
State: Colorado
Sec: 22
Twp: 2N
Range: 65W

Consultant: Bryan / Hayden
Rig Name & Number: Noble 2
Distance To Location: 40 Miles
Units On Location: 4023-3104/4033-3203
Time Requested: 430am
Time Arrived On Location: 330am
Time Left Location: 6:45pm

WELL DATA

Casing Size OD (in) : 9.625
Casing Weight (lb) : 36.00
Casing Depth (ft.) : 1,858
Total Depth (ft) : 1874
Open Hole Diameter (in.) : 13.50
Conductor Length (ft) : 60
Conductor ID : 15.5
Shoe Joint Length (ft) : 43
Landing Joint (ft) : 10

Max Rate: 6
Max Pressure: 1750

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: 30
Fluid Ahead (bbls): 30.0
H2O Wash Up (bbls): 15.0

Spacer Ahead Makeup

30 bbls With Dye in 2nd 10 bbls

Casing ID

8.921

Casing Grade

J-55 only used

Calculated Results

cuft of Shoe 18.61 cuft

(Casing ID Squared) X (.005454) X (Shoe Joint ft)

cuft of Conductor 48.30 cuft

(Conductor Width Squared) - (Casing Size OD Squared) X (.005454) X (Conductor Length ft)

cuft of Casing 1010.38 cuft

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

Total Slurry Volume 1077.29 cuft

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

bbls of Slurry 191.87 bbls

(Total Slurry Volume) X (.1781)

Sacks Needed 723 sk

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

Mix Water 128.77 bbls

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

Displacement: 141.07 bbls

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

Pressure of cement in annulus

Hydrostatic Pressure: 1370.43 PSI

Pressure of the fluids inside casing

Displacement: 782.52 psi

Shoe Joint: 31.63 psi

Total 814.15 psi

Differential Pressure: 556.28 psi

Collapse PSI: 2020.00 psi

Burst PSI: 3520.00 psi

Total Water Needed: 314.84 bbls

X *Hayden*
Authorization To Proceed

Date _____

SERIES 2000

