



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 3/4/2018
Invoice #: 900274
API#: 05-123-46257
Foreman: Corey Barras

Customer: Anadarko Petroleum Corporation

Well Name: Verde 13-16HZ

County: Weld
State: Colorado

Sec: 13
Twp: 1N
Range: 66W

Consultant: Matt
Rig Name & Number: Cartel 88
Distance To Location: 37
Units On Location: 4027-3103/4030-3213/4024-3201
Time Requested: 430
Time Arrived On Location: 340
Time Left Location:

WELL DATA

Casing Size OD (in) : 9.625
Casing Weight (lb) : 36.00
Casing Depth (ft) : 1,862
Total Depth (ft) : 1872
Open Hole Diameter (in.) : 13.50
Conductor Length (ft) : 80
Conductor ID : 15.25
Shoe Joint Length (ft) : 44
Landing Joint (ft) : 15

Max Rate: 8
Max Pressure: 2000

Cement Data

Cement Name: BFN III
Cement Density (lb/gal) : 14.2
Cement Yield (cuft) : 1.48
Gallons Per Sack: 7.40
% Excess: 5%
Displacement Fluid lb/gal: 8.3
BBL to Pit:
Fluid Ahead (bbls): 30.0
H2O Wash Up (bbls): 20.0

Spacer Ahead Makeup
30 bbl with Die in 2nd 10

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 914.46 cuft
(Open Hole Squared) - (Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)
Total Slurry Volume 994.61 cuft
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)
bbls of Slurry 177.14 bbls
(Total Slurry Volume) X (.1781)
Sacks Needed 672 sk
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)
Mix Water 118.41 bbls
(Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 141.71 bbls

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

Pressure of cement in annulus

Hydrostatic Pressure: 1373.60 PSI

Pressure of the fluids inside casing

Displacement: 783.89 psi

Shoe Joint: 32.46 PSI

Total 816.35 psi

Differential Pressure: 557.25 psi

Collapse PSI: 2020.00 psi

Burst PSI: 3520.00 psi

Total Water Needed: 310.11 bbls

X *Y Kull*
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.

Verde 13-16HZ

