



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 11/12/2017
Invoice #: 900208
API#: 05-123-45493
Foreman: Corey Barras

Customer: Anadarko Petroleum Corporation
Well Name: Yellowhammer 34N-17HZ

County: Weld
State: Colorado
Sec: 8
Twp: 1N
Range: 68W
Consultant: Matt
Rig Name & Number: Cartel 88
Distance To Location: 42
Units On Location: 4
Time Requested: 230
Time Arrived On Location: 210
Time Left Location:

WELL DATA

Casing Size OD (in) : 9.625
Casing Weight (lb) : 36.00
Casing Depth (ft.) : 1,860
Total Depth (ft) : 1870
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: 10%
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 956.93 cuft
(Open Hole Squared) - (Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)

Total Slurry Volume 1037.08 cuft
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)

bbls of Slurry 184.70 bbls
(Total Slurry Volume) X (.1781)

Sacks Needed 701 sk
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)

Mix Water 123.46 bbls
(Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 141.55 bbls

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

Pressure of cement in annulus

Hydrostatic Pressure: 1372.12 PSI

Pressure of the fluids inside casing

Displacement: 783.02 psi

Shoe Joint: 32.46 psi

Total 815.48 psi

Differential Pressure: 556.64 psi

Collapse PSI: 2020.00 psi

Burst PSI: 3520.00 psi

Total Water Needed: 315.01 bbls

X *Sam M. [Signature]*
Authorization To Proceed

X 11/12/17
Date

Yellowhammer 34N-17HZ

