



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 8/27/2015
Invoice #: 80437
API#: 05-123-42019
Foreman: Calvin Reimers

Customer: Anadarko Petroleum Corporation
Well Name: Powers 28C-34HZ

County: Weld
State: Colorado
Sec: 27
Twp: 2N
Range: 65W
Consultant: Sean / Chris
Rig Name & Number: Noble 2
Distance To Location: 40 Miles
Units On Location: 4023-3104/4007-3203
Time Requested: 1100am
Time Arrived On Location: 935am
Time Left Location: 3:15pm

WELL DATA

Casing Size OD (in) : 9.625
Casing Weight (lb) : 36.00
Casing Depth (ft.) : 1,842
Total Depth (ft) : 1859
Open Hole Diameter (in.) : 13.50
Conductor Length (ft) : 60
Conductor ID : 15.25
Shoe Joint Length (ft) : 42
Landing Joint (ft) : 10

Max Rate: 6
Max Pressure: 1250

Cement Data

Cement Name: BFN III
Cement Density (lb/gal) : 14.2
Cement Yield (cuft) : 1.49
Gallons Per Sack: 7.48
% Excess: 20%
Displacement Fluid lb/gal: 8.3
BBL to Pit: 2 /
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 18.10 cuft
(Casing ID Squared) X (.005454) X (Shoe Joint ft)
cuft of Conductor 45.79 cuft
(Conductor Width Squared) -(Casing Size OD Squared) X (.005454) X (Conductor Length ft)
cuft of Casing 1044.96 cuft
(Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)
Total Slurry Volume 1108.85 cuft
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)
bbls of Slurry 197.49 bbls
(Total Slurry Volume) X (.1781)
Sacks Needed 744 sk
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)
Mix Water 132.54 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: 1358.67 PSI

Pressure of the fluids inside casing

Displacement: 776.16 psi

Shoe Joint: 30.75 psi

Total 806.92 psi

Differential Pressure: 551.76 psi

Collapse PSI: 2020.00 psi

Burst PSI: 3520.00 psi

Total Water Needed: 317.47 bbls

X *Sean P. G.*
Authorization To Proceed



Bison Oil Well Cementing Single Cement Surface Pipe

Customer
Well Name

Anadarko Petroleum Corporation
Powers 28C-34HZ

INVOICE #
LOCATION
FOREMAN
Date

80437
Weld
Calvin Reimers
8/27/2015

Treatment Report Page 2

DESCRIPTION OF JOB EVENTS

[illegible]

X San Mills
Work Preformed

X Co Man
Title

X 8/27/15
Date

SERIES 2000

