



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 7/17/2017
Invoice #: 666165
API#: 05-123-44754
Foreman: Nick Vigil

Customer: Anadarko Petroleum Corporation

Well Name: RW 15N-32HZ

County: Weld
State: Colorado

Sec: 29
Twp: 3N
Range: 65W

Consultant: Sean
Rig Name & Number: Cartel 88
Distance To Location: 28 Miles
Units On Location: 4023/4030/4035
Time Requested: 21:30
Time Arrived On Location: 20:30
Time Left Location:

WELL DATA

Casing Size OD (in) : 9.625
Casing Weight (lb) : 36.00
Casing Depth (ft.) : 1,843
Total Depth (ft) : 1852
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: 8
Max Pressure: 2000

Cement Data

Cement Name: BFN III
Cement Density (lb/gal) : 14.2
Cement Yield (cuft) : 1.49
Gallons Per Sack: 7.48
% Excess: 2%
Displacement Fluid lb/gal: 8.3
BBL to Pit:
Fluid Ahead (bbls): 30.0
H2O Wash Up (bbls): 20.0

Spacer Ahead Makeup
Dye in second 10 bbl

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

Total Slurry Volume 959.01 cuft
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)

bbls of Slurry 170.80 bbls
(Total Slurry Volume) X (.1781)

Sacks Needed 644 sk
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)

Mix Water 114.63 bbls
(Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 139.85 bbls

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

Pressure of cement in annulus

Hydrostatic Pressure: 1359.58 PSI

Pressure of the fluids inside casing

Displacement: 775.69 psi

Shoe Joint: 32.46 psi

Total 808.15 psi

Differential Pressure: 551.43 psi

Collapse PSI: 2020.00 psi

Burst PSI: 3520.00 psi

Total Water Needed: 304.48 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 7/18/17
Date

RW 15N-32HZ

