



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 8/14/2016
 Invoice #: 80518
 API#: 05-123-42818
 Foreman: Matthew Rosales

Customer: Noble Energy Inc.
Well Name: Lapp A15-625

County: Weld
 State: Colorado
 Sec: SWSW
 Twp: 136N
 Range: 64W

Consultant: Glenn
 Rig Name & Number: H&P524
 Distance To Location: 14miles
 Units On Location:
 Time Requested: 8/14/16 7:30pm
 Time Arrived On Location: 8/14/2016 6:00
 Time Left Location:

WELL DATA

Casing Size OD (in) : 9.625
 Casing Weight (lb) : 36.00
 Casing Depth (ft.) : 1,912
 Total Depth (ft) : 1940
 Open Hole Diameter (in.) : 13.50
 Conductor Length (ft) : 80
 Conductor ID : 15.25
 Shoe Joint Length (ft) : 43
 Landing Joint (ft) : 3

Max Rate: 8
 Max Pressure: 1700

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
 Fluid Ahead (bbls): 50.0
 H2O Wash Up (bbls): 20.0

Spacer Ahead Makeup
 10H2O, 10dye H2O, 30H2O

Casing ID

8.921

Casing Grade

J-55 only used

Calculated Results

cuft of Shoe 19.00 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 888.00 cuft
 (Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)

Total Slurry Volume 1100.00 cuft
 (cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)

bbls of Slurry 196.00 bbls
 (Total Slurry Volume) X (.1781)

Sacks Needed 739 sk
 (Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)

Mix Water 132.00 bbls
 (Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 143.60 bbls
 (Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)

Pressure of cement in annulus

Hydrostatic Pressure: 1410.48 PSI

Pressure of the fluids inside casing

Displacement: 806.09 psi

Shoe Joint: 31.35 psi

Total 837.45 psi

Differential Pressure: 573.04 psi

Collapse PSI: 2020.00 psi

Burst PSI: 3520.00 psi

Total Water Needed: 300.00 bbls

X
 Authorization To Proceed

