



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 8/9/2016
Invoice # 80518
API# 05-123-42819
Foreman: Matthew Rosales

Customer: Noble Energy Inc.

Well Name: Lapp A15-620

County: Weld

State: Colorado

Sec: SWSW

Twp: 136N

Range: 64W

Consultant: dave

Rig Name & Number: H&P524

Distance To Location: 14miles

Units On Location:

Time Requested: 8/9/16 9:00am

Time Arrived On Location: 8/9/16 8:00am

Time Left Location:

WELL DATA

Casing Size OD (in) : 9.625
Casing Weight (lb) : 36.00
Casing Depth (ft.) : 1,928
Total Depth (ft) : 1922
Open Hole Diameter (in.) : 1938.00
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: 8.7
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 887.00 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: 1422.29 PSI

Pressure of the fluids inside casing

Displacement: 851.83 psi

Shoe Joint: 31.72 psi

Total 883.55 psi

Differential Pressure: 538.73 psi

Collapse PSI: 2020.00 psi

Burst PSI: 3520.00 psi

Total Water Needed: 200.00 bbls

X

Authorization To Proceed

