



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 8/27/2015
Invoice # 80631
API# 05-123-41590
Foreman: JASON KELEHER

Customer: Noble Energy Inc.

Well Name: KIDD LD22-770

County: Weld

State: Colorado

Sec: 22

Twp: 9N

Range: 58W

Consultant: JOHN

Rig Name & Number: H&P 326

Distance To Location: 66

Units On Location: 4031-3103/ 4034-3213

Time Requested: 800

Time Arrived On Location: 630

Time Left Location: 1230

WELL DATA

Casing Size OD (in) : 9.625
Casing Weight (lb) : 36.00
Casing Depth (ft.) : 758
Total Depth (ft) : 768
Open Hole Diameter (in.) : 13.50
Conductor Length (ft) : 80
Conductor ID : 15.25
Shoe Joint Length (ft) : 42
Landing Joint (ft) : 35

Max Rate: 6
Max Pressure: 1000

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: 23.0
Fluid Ahead (bbls): 50.0
H2O Wash Up (bbls): 20.0

Spacer Ahead Makeup
50 BBL WATER DYE IN 2ND 10

Casing ID

8.921

Casing Grade

J-55 only used

Calculated Results

cuft of Shoe 18.34 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 397.63 cuft
(Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)

Total Slurry Volume 477.02 cuft
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)

bbls of Slurry 84.96 bbls
(Total Slurry Volume) X (.1781)

Sacks Needed 320 sk
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)

Mix Water 57.02 bbls
(Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 58.04 bbls
(Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)

Pressure of cement in annulus

Hydrostatic Pressure: 559.18 PSI

Pressure of the fluids inside casing

Displacement: 308.61 psi

Shoe Joint: 31.18 psi

Total 339.79 psi

Differential Pressure: 219.39 psi

Collapse PSI: 2020.00 psi

Burst PSI: 3520.00 psi

Total Water Needed: 185.06 bbls

Authorization To Proceed

X 8/27/15
Date