



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 1/15/2016

Invoice # 80565

API#

Foreman: Kirk Kallhoff

Customer: Noble Energy Inc.

Well Name: lynn lc 35-760

County: Weld
State: ColoradoSec: 26
Twp: 9n
Range: 59 wConsultant: cliff
Rig Name & Number: H&P 343

Distance To Location:

Units On Location: 4023-3104/4020-3212

Time Requested: 200 pm

Time Arrived On Location: 130 pm

Time Left Location: 9:00 pm

WELL DATA

Casing Size OD (in) : 9.625
Casing Weight (lb) : 36.00
Casing Depth (ft) : 599
Total Depth (ft) : 640
Open Hole Diameter (in.) : 13.50
Conductor Length (ft) : 100
Conductor ID : 16
Shoe Joint Length (ft) : 43
Landing Joint (ft) : 35

Max Rate:

Max Pressure:

Cement Data

Cement Name: BFN III
Cement Density (lb/gal) : 14.2
Cement Yield (cuft) : 1.49
Gallons Per Sack: 7.48
% Excess: 30%
Displacement Fluid lb/gal: 8.3
BBL to Pit:
Fluid Ahead (bbls): 40.0
H2O Wash Up (bbls): 10.0

Spacer Ahead Makeup

Casing ID

8.921

Casing Grade

J-55 only used

Calculated Results

cuft of Shoe 18.66 cuft
(Casing ID Squared) X (.005454) X (Shoe Joint ft)

cuft of Conductor 89.10 cuft
(Conductor Width Squared) - (Casing Size OD Squared) X (.005454) X (Conductor Length ft)

cuft of Casing 317.04 cuft
(Open Hole Squared) - (Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)

Total Slurry Volume 424.80 cuft
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)

bbls of Slurry 75.66 bbls
(Total Slurry Volume) X (.1781)

Sacks Needed 285 sk
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)

Mix Water 50.77 bbls
(Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 45.69 bbls

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

Pressure of cement in annulus

Hydrostatic Pressure: 441.88 PSI

Pressure of the fluids inside casing

Displacement: 239.74 psi**Shoe Joint:** 31.72 psi**Total** 271.46 psi**Differential Pressure:** 170.42 psi**Collapse PSI:** 2020.00 psi**Burst PSI:** 3520.00 psi**Total Water Needed:** 146.46 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.



lynn lc 35-760

1/15/2016

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DESCRIPTION OF JOB EVENTS

Work Performed	
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