



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 4/16/2015
Invoice #: 80031
API#: 05-123-40690
Foreman: Calvin Reimers

Customer: Noble Energy Inc.

Well Name: Gleason LC 26-713

County: Weld
State: Colorado
Sec: 26
Twp: 9N
Range: 58W

Consultant: Justin/Martin
Rig Name & Number: H&P 273
Distance To Location: 67 Miles
Units On Location: 4023-3104/4020-3212
Time Requested: 1030pm
Time Arrived On Location: 830pm
Time Left Location: 230am

WELL DATA

Casing Size OD (in) : 9.625
Casing Weight (lb) : 36.00
Casing Depth (ft.) : 664
Total Depth (ft) : 698
Open Hole Diameter (in.) : 13.50
Conductor Length (ft) : 100
Conductor ID : 16
Shoe Joint Length (ft) : 40
Landing Joint (ft) : 29

Max Rate: 7
Max Pressure: 2500

Cement Data

Cement Name: BFN III
Cement Density (lb/gal) : 14.2
Cement Yield (cuft) : 1.49
Gallons Per Sack: 7.48
% Excess: 10%
Displacement Fluid lb/gal: 8.3
BBL to Pit: 15.0
Fluid Ahead (bbls): 50.0
H2O Wash Up (bbls): 20.0

Spacer Ahead Makeup

50bbls With Dye in 2nd 10bbls

Casing ID

8.921

Casing Grade

J-55 only used

Calculated Results

cuft of Shoe 17.53 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 303.31 cuft

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

Total Slurry Volume 409.94 cuft

(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)

bbls of Slurry 73.01 bbls

(Total Slurry Volume) X (.1781)

Sacks Needed 275 sk

(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)

Mix Water 49.00 bbls

(Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 50.48 bbls

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

Pressure of cement in annulus

Hydrostatic Pressure: 489.97 PSI

Pressure of the fluids inside casing

Displacement: 268.97 psi

Shoe Joint: 29.80 psi

Total 298.77 psi

Differential Pressure: 191.21 psi

Collapse PSI: 2020.00 psi

Burst PSI: 3520.00 psi

Total Water Needed: 169.48 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.



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Customer
Well Name

Noble Energy Inc.

Gleason LC 26-713

INVOICE #

80031

LOCATION

Weld

FOREMAN

Calvin Reimers

Date _____

4/16/2015

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DESCRIPTION OF JOB EVENTS

[illegible]

X

Work Performed

X

Title

x

Date _____