



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 1/18/2016
Invoice #: 80477
API#: 05-123-40602
Foreman: Calvin Reimers

Customer: Noble Energy Inc.
Well Name: Remoral LC 34-725

County: Weld
State: Colorado
Sec: 34
Twp: 9N
Range: 59W

Consultant:
Rig Name & Number: H&P 273
Distance To Location: 56 Miles
Units On Location: 4023-3104/4032-3214
Time Requested: 1100pm
Time Arrived On Location: 900pm
Time Left Location: 500am

WELL DATA

Casing Size OD (in) : 9.625
Casing Weight (lb) : 36.00
Casing Depth (ft.) : 609
Total Depth (ft) : 642
Open Hole Diameter (in.) : 13.50
Conductor Length (ft) : 100
Conductor ID : 16
Shoe Joint Length (ft) : 45
Landing Joint (ft) : 29

Max Rate: 7
Max Pressure: 1750

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: 8.0
Fluid Ahead (bbls): 40.0
H2O Wash Up (bbls): 10.0

Spacer Ahead Makeup
40 bbl H2O+Dye in 2nd 10 bbls

Casing ID 8.921 Casing Grade J-55 only used

Calculated Results

cuft of Shoe 19.53 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 298.45 cuft
(Open Hole Squared) - (Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)

Total Slurry Volume 407.07 cuft
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)

bbls of Slurry 72.50 bbls
(Total Slurry Volume) X (.1781)

Sacks Needed 273 sk
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)

Mix Water 48.66 bbls
(Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 45.85 bbls

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

Pressure of cement in annulus

Hydrostatic Pressure: 449.17 PSI

Pressure of the fluids inside casing

Displacement: 243.14 psi

Shoe Joint: 33.19 psi

Total 276.33 psi

Differential Pressure: 172.84 psi

Collapse PSI: 2020.00 psi

Burst PSI: 3520.00 psi

Total Water Needed: 144.51 bbls

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.



Customer
Well Name

Noble Energy Inc.
Remoral LC 34-725

INVOICE #
LOCATION
FOREMAN
Date

80477
Weld
Calvin Reimers
1/18/2016

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DESCRIPTION OF JOB EVENTS

X 
Work Performed

X WSS
Title

X 1-18-16
Date