



# Bison Oil Well Cementing Single Cement Surface Pipe

Date: 1/31/2016  
Invoice #: 80567  
API#:   
Foreman: Kirk Kallhoff

Customer: Noble Energy Inc.  
Well Name: remora lc 34-745

County: Weld  
State: Colorado  
Sec: 26  
Twp: 9n  
Range: 59 w  
Consultant: justin  
Rig Name & Number: H&P 273  
Distance To Location: 57  
Units On Location: 4028 3102/4032 3215  
Time Requested: 230 pm  
Time Arrived On Location: 200 pm  
Time Left Location: 5:00 pm

## WELL DATA

Casing Size OD (in) : 9.625  
Casing Weight (lb) : 36.00  
Casing Depth (ft) : 587  
Total Depth (ft) : 618  
Open Hole Diameter (in.) : 13.50  
Conductor Length (ft) : 100  
Conductor ID : 16  
Shoe Joint Length (ft) : 40  
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: 22%  
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** 17.36 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** 290.37 cuft  
(Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)

**Total Slurry Volume** 396.83 cuft  
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)

**bbls of Slurry** 70.68 bbls  
(Total Slurry Volume) X (.1781)

**Sacks Needed** 266 sk  
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)

**Mix Water** 47.43 bbls  
(Sacks Needed) X (Gallons Per Sack) ÷ 42

**Displacement:** 44.99 bbls  
(Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)

## Pressure of cement in annulus

**Hydrostatic Pressure:** 433.03 PSI

## Pressure of the fluids inside casing

**Displacement:** 235.86 psi

**Shoe Joint:** 29.51 psi

**Total** 265.36 psi

**Differential Pressure:** 167.67 psi

**Collapse PSI:** 2020.00 psi

**Burst PSI:** 3520.00 psi

**Total Water Needed:** 142.43 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.



