



# Bison Oil Well Cementing Single Cement Surface Pipe

Date: 5/4/2015  
Invoice #: 80036  
API#: 05-123-40688  
Foreman: Calvin Reimers

Customer: Noble Energy Inc.  
Well Name: Gleason LC 35-725

County: Weld  
State: Colorado  
Sec: 26  
Twp: 9N  
Range: 59W  
Consultant: Dave / Shane  
Rig Name & Number: H&P 273  
Distance To Location: 67 Miles  
Units On Location: 4023-3104/3105-3210  
Time Requested: 430am  
Time Arrived On Location: 300am  
Time Left Location: 700am

## WELL DATA

Casing Size OD (in) : 9.625  
Casing Weight (lb) : 36.00  
Casing Depth (ft.) : 652  
Total Depth (ft) : 685  
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: 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: 13.0  
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** 19.52 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** 296.49 cuft  
(Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length )

**Total Slurry Volume** 405.11 cuft  
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)

**bbls of Slurry** 72.15 bbls  
(Total Slurry Volume) X (.1781)

**Sacks Needed** 272 sk  
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)

**Mix Water** 48.42 bbls  
(Sacks Needed) X (Gallons Per Sack) ÷ 42

**Displacement:** 49.15 bbls

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

## Pressure of cement in annulus

**Hydrostatic Pressure:** 480.62 PSI

## Pressure of the fluids inside casing

**Displacement:** 261.52 psi

**Shoe Joint:** 33.18 psi

**Total** 294.71 psi

**Differential Pressure:** 185.91 psi

**Collapse PSI:** 2020.00 psi

**Burst PSI:** 3520.00 psi

**Total Water Needed:** 167.57 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.





Customer  
Well Name

Noble Energy Inc.

Gleason LC 35-725

INVOICE #

80036

LOCATION

Weld

FOREMAN

Calvin Reimers

Date \_\_\_\_\_

5/4/2015

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## DESCRIPTION OF JOB EVENTS

[illegible]

**X**

Work Preformed

DAVE NIELSEN

X

Title

COMAN

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Date \_\_\_\_\_

5-4-15