



# Bison Oil Well Cementing Single Cement Surface Pipe

Date: 11/29/2015  
Invoice #: 80473  
API#: 05-123-40757  
Foreman: Calvin Reimers

Customer: Noble Energy Inc.

Well Name: Moser H22-711

County: Weld  
State: Colorado  
Sec: 27  
Twp: 3N  
Range: 65W

Consultant: John  
Rig Name & Number: H&P 343  
Distance To Location: 24 Miles  
Units On Location: 4023-3104/4034-3213  
Time Requested: 400pm  
Time Arrived On Location: 155pm  
Time Left Location: 730pm

## WELL DATA

Casing Size OD (in) : 9.625  
Casing Weight (lb) : 36.00  
Casing Depth (ft.) : 864  
Total Depth (ft) : 898  
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: 17.0  
Fluid Ahead (bbls): 60.0  
H2O Wash Up (bbls): 10.0

Spacer Ahead Makeup

60 bbls H2O+Dye in 2nd 10 bbls

Casing ID

8.921

Casing Grade

J-55 only used

## Calculated Results

**cuft of Shoe** 19.72 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** 448.22 cuft  
(Open Hole Squared) - (Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)

**Total Slurry Volume** 557.03 cuft  
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)

**bbls of Slurry** 99.21 bbls  
(Total Slurry Volume) X (.1781)

**Sacks Needed** 374 sk  
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)

**Mix Water** 66.58 bbls  
(Sacks Needed) X (Gallons Per Sack) ÷ 42

**Displacement:** 65.51 bbls

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

## Pressure of cement in annulus

**Hydrostatic Pressure:** 637.56 PSI

## Pressure of the fluids inside casing

**Displacement:** 353.06 psi

**Shoe Joint:** 33.51 psi

**Total** 386.58 psi

**Differential Pressure:** 250.99 psi

**Collapse PSI:** 2020.00 psi

**Burst PSI:** 3520.00 psi

**Total Water Needed:** 202.09 bbls

X John Drabota

Authorization To Proceed



## Bison Oil Well Cementing Single Cement Surface Pipe

Customer  
Well Name

Noble Energy Inc.  
Moser H22-711

INVOICE #  
LOCATION  
FOREMAN  
Date

80473
Weld
Calvin Reimers
11/29/2015

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## DESCRIPTION OF JOB EVENTS

[illegible]

**X**

John Krahota

X

Co-Man

X

11/29/15

Work Preformed