



# Bison Oil Well Cementing Single Cement Surface Pipe

Date: 7/2/2015  
Invoice #: 80414  
API#: 05-069-06481  
Foreman: Calvin Reimers

Customer: Anadarko Petroleum Corporation  
Well Name: Encore 26N-12HZ

County: Larimer  
State: Colorado  
Sec: 12  
Twp: 5N  
Range: 68W

Consultant: Sean  
Rig Name & Number: Noble 2  
Distance To Location: 23 Miles  
Units On Location: 4023-3104/3210/3211  
Time Requested: 300pm  
Time Arrived On Location: 1215pm  
Time Left Location: 5:45 pm

## WELL DATA

Casing Size OD (in): 9.625  
Casing Weight (lb): 36.00  
Casing Depth (ft.): 1,851  
Total Depth (ft): 1868.26  
Open Hole Diameter (in.): 13.50  
Conductor Length (ft): 40  
Conductor ID: 16  
Shoe Joint Length (ft): 42  
Landing Joint (ft): 10

Max Rate: 6  
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: 15%  
Displacement Fluid lb/gal: 8.3  
BBL to Pit: 29  
Fluid Ahead (bbls): 30.0  
H2O Wash Up (bbls): 15.0

Spacer Ahead Makeup  
30 bbls With Dye in 2nd 10 bbls

Casing ID

8.921

Casing Grade

J-55 only used

## Calculated Results

**cuft of Shoe** 18.04 cuft  
(Casing ID Squared) X (.005454) X (Shoe Joint ft)

**cuft of Conductor** 35.64 cuft  
(Conductor Width Squared) - (Casing Size OD Squared) X (.005454) X (Conductor Length ft)

**cuft of Casing** 1018.00 cuft  
(Open Hole Squared) - (Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)

**Total Slurry Volume** 1071.68 cuft  
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)

**bbls of Slurry** 190.87 bbls  
(Total Slurry Volume) X (.1781)

**Sacks Needed** 719 sk  
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)

**Mix Water** 128.09 bbls  
(Sacks Needed) X (Gallons Per Sack) ÷ 42

**Displacement:** 140.68 bbls

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

## Pressure of cement in annulus

**Hydrostatic Pressure:** 1365.67 PSI

## Pressure of the fluids inside casing

**Displacement:** 780.30 psi

**Shoe Joint:** 30.67 psi

**Total** 810.97 psi

**Differential Pressure:** 554.70 psi

**Collapse PSI:** 2020.00 psi

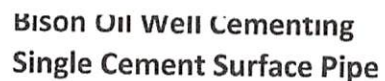
**Burst PSI:** 3520.00 psi

**Total Water Needed:** 313.77 bbls

x *Sam M. J. P.*  
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

Anadarko Petroleum Corporation  
Encore 26N-12HZ

INVOICE #  
LOCATION  
FOREMAN  
Date

80414
Larimer
Calvin Reimers
7/2/2015

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### DESCRIPTION OF JOB EVENTS

X Sam Miller  
Work Performed

X Company Man  
Title

X 07/02/15  
Date

# SERIES 2000

