



# Bison Oil Well Cementing Single Cement Surface Pipe

Date: 7/1/2015

Invoice # 80100

API#

Foreman: Kirk Kallhoff

Customer: Anadarko Petroleum Corporation

Well Name: merlin 9n-15hz

County: Weld

State: Colorado

Sec: 15

Twp: 3n

Range: 67w

Consultant: toby

Rig Name & Number: pinn 4

Distance To Location: 28

Units On Location: 4038-3103/4019-3205-3212

Time Requested: 1230 am

Time Arrived On Location: 1030 pm

Time Left Location: 7:30 am

## WELL DATA

Casing Size OD (in) : 9.625  
Casing Weight (lb) : 36.00  
Casing Depth (ft) : 1,840  
Total Depth (ft) : 1860  
Open Hole Diameter (in.) : 13.50  
Conductor Length (ft) : 60  
Conductor ID : 16  
Shoe Joint Length (ft) : 41  
Landing Joint (ft) : 10

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: 20%  
Displacement Fluid lb/gal: 8.3  
BBL to Pit:  
Fluid Ahead (bbls): 30.0  
H2O Wash Up (bbls): 10.0

Spacer Ahead Makeup

Casing ID

8.921

Casing Grade

J-55 only used

## Calculated Results

**cuft of Shoe** 17.80 cuft  
(Casing ID Squared) X (.005454) X (Shoe Joint ft)

**cuft of Conductor** 53.46 cuft  
(Conductor Width Squared) - (Casing Size OD Squared) X (.005454) X (Conductor Length ft)

**cuft of Casing** 1043.93 cuft  
(Open Hole Squared) - (Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)

**Total Slurry Volume** 1115.18 cuft  
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)

**bbls of Slurry** 198.61 bbls  
(Total Slurry Volume) X (.1781)

**Sacks Needed** 748 sk  
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)

**Mix Water** 133.29 bbls  
(Sacks Needed) X (Gallons Per Sack) ÷ 42

**Displacement:** 139.85 bbls

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

## Pressure of cement in annulus

**Hydrostatic Pressure:** 1357.37 PSI

## Pressure of the fluids inside casing

**Displacement:** 775.69 psi

**Shoe Joint:** 30.25 psi

**Total** 805.94 psi

**Differential Pressure:** 551.43 psi

**Collapse PSI:** 2020.00 psi

**Burst PSI:** 3520.00 psi

**Total Water Needed:** 313.14 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.



INVOICE #  
LOCATION  
FOREMAN  
Date

80100	Weld	Kirk Kallh	7/2/2015
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Customer  
Well Name

Petroleum Corporation  
merlin 9n-15hz

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Samuel J. Taylor

X Company Mon

X 7-2-15

Work Preformed



# M/D TOTCO 2000 SERIES

