



# Bison Oil Well Cementing Single Cement Surface Pipe

Date: 10/27/2014  
Invoice #: 25076  
API#: 05-123-36449  
Foreman: Calvin Reimers

Customer: Anadarko Petroleum Corporation  
Well Name: Badger 22N-3HZ

County: Weld  
State: Colorado  
Sec: 6  
Twp: 1N  
Range: 68W

Consultant: Allen  
Rig Name & Number: Major 42  
Distance To Location: 29 Miles  
Units On Location: 4023-3104/4024-3203  
Time Requested: 100am  
Time Arrived On Location: 1130pm  
Time Left Location: 7:30am

## WELL DATA

Casing Size OD (in) : 9.625  
Casing Weight (lb) : 36.00  
Casing Depth (ft.) : 1,287  
Total Depth (ft) : 1302  
Open Hole Diameter (in.) : 13.50  
Conductor Length (ft) :  
Conductor ID :  
Shoe Joint Length (ft) : 42  
Landing Joint (ft) : 8

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: 16%  
Displacement Fluid lb/gal: 8.3  
BBL to Pit: 10.0  
Fluid Ahead (bbls): 30.0  
H2O Wash Up (bbls): 20.0

Spacer Ahead Makeup  
30bbls H2O+Dye in 2nd 10bbls

Casing ID

8.921

Casing Grade

J-55 only used

## Calculated Results

**cuft of Shoe** 18.27 cuft  
(Casing ID Squared) X (.005454) X (Shoe Joint ft)  
**cuft of Conductor** 0.00 cuft  
(Conductor Width Squared) - (Casing Size OD Squared) X (.005454) X (Conductor Length ft)  
**cuft of Casing** 726.63 cuft  
(Open Hole Squared) - (Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)  
**Total Slurry Volume** 744.90 cuft  
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)  
**bbls of Slurry** 132.67 bbls  
(Total Slurry Volume) X (.1781)  
**Sacks Needed** 500 sk  
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)  
**Mix Water** 89.04 bbls  
(Sacks Needed) X (Gallons Per Sack) ÷ 42

**Displacement:** 96.83 bbls

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

## Pressure of cement in annulus

**Hydrostatic Pressure:** 949.11 PSI

## Pressure of the fluids inside casing

**Displacement:** 536.60 psi

**Shoe Joint:** 31.05 psi


**Total** 567.65 psi

**Differential Pressure:** 381.46 psi

**Collapse PSI:** 2020.00 psi

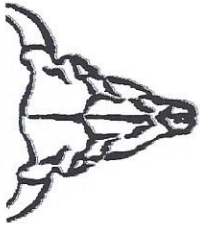
**Burst PSI:** 3520.00 psi

**Total Water Needed:** 235.86 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.





DISPATCH WORK COMMENCING  
**Single Cement Surface Pipe**

INVOICE # 20070  
LOCATION Weld  
FOREMAN Calvin Reimers  
Date 10/27/2014

Customer  
Anadarko Petroleum Corporation  
Well Name  
Badger 22N-3HZ

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**DESCRIPTION OF JOB EVENTS**

	Displace 1			Displace 2			Displace 3			Displace 4			Displace 5		
	BBS	Time	PSI	BBS	Time	PSI	BBS	Time	PSI	BBS	Time	PSI	BBS	Time	PSI
Safety Meeting	104am														
MIRU	1220am														
CIRCULATE	157am														
Drop Plug															
226am															
M & P															
Time	Sacks														
205am	500														
223am															
Top Job															
617am	104														
631am															
% Excess	16%														
Mixed bbls	89.04														
Total Sacks	500														
bbl Returns	0														
Water Temp	59.1														

Notes:

The day

1/2 bbl back on bleed off

Top Job 104 sacks 27.59 bbls Slurry

Total Sacks 604 160.26 bbls Slurry

X

X

X

Work Performed

Title

Date

# SERIES 2000

