



# Bison Oil Well Cementing Single Cement Surface Pipe

Date: 4/7/2017  
Invoice #: 900076  
API#: 05-123-44406  
Foreman: Corey B.

Customer: Anadarko Petroleum Corporation  
Well Name: BUTTERBALL 22C-34HZ

County: Weld  
State: Colorado  
Sec: 10  
Twp: 2N  
Range: 67W  
Consultant: Matt  
Rig Name & Number: 252  
Distance To Location: 36  
Units On Location: 1027-3103/4020-3212/4019-321  
Time Requested: 1500  
Time Arrived On Location: 1425  
Time Left Location:

## WELL DATA

Casing Size OD (in) : 9.625  
Casing Weight (lb) : 36.00  
Casing Depth (ft.) : 1,831  
Total Depth (ft) : 1841  
Open Hole Diameter (in.) : 13.50  
Conductor Length (ft) : 80  
Conductor ID : 15.25  
Shoe Joint Length (ft) : 44  
Landing Joint (ft) : 15

Max Rate: 8bm  
Max Pressure: 2000

## Cement Data

Cement Name: BFN III  
Cement Density (lb/gal) : 14.2  
Cement Yield (cuft) : 1.48  
Gallons Per Sack: 7.49  
% Excess: 15%  
Displacement Fluid lb/gal: 8.3  
BBL to Pit:  
Fluid Ahead (bbls): 30.0  
H2O Wash Up (bbls): 20.0  
Spacer Ahead Makeup  
30 bbl /2nd 10 BBL with Die

Casing ID 8.921 Casing Grade J-55 only used

## Calculated Results

**cuft of Shoe 19.10 cuft**  
(Casing ID Squared) X (.005454) X (Shoe Joint ft)  
**cuft of Conductor 61.05 cuft**  
(Conductor Width Squared) - (Casing Size OD Squared) X (.005454) X (Conductor Length ft)  
**cuft of Casing 984.13 cuft**  
(Open Hole Squared) - (Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)  
**Total Slurry Volume 1064.28 cuft**  
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)  
**bbls of Slurry 189.55 bbls**  
(Total Slurry Volume) X (.1781)  
**Sacks Needed 719 sk**  
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)  
**Mix Water 128.24 bbls**  
(Sacks Needed) X (Gallons Per Sack) ÷ 42

**Displacement: 139.31 bbls**

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

## Pressure of cement in annulus

**Hydrostatic Pressure: 1350.73 PSI**

## Pressure of the fluids inside casing

**Displacement: 770.52 psi**

**Shoe Joint: 32.46 psi**

**Total 802.98 psi**

**Differential Pressure: 547.75 psi**

**Collapse PSI: 2020.00 psi**

**Burst PSI: 3520.00 psi**

**Total Water Needed: 317.55 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.



**Bison Oil Well Cementing  
Single Cement Surface Pipe**

Customer  
Well Name

Anadarko Petroleum Corporation  
BUTTERBALL 22C-34HZ

INVOICE #  
LOCATION  
FOREMAN  
Date

900076  
Weld  
Corey B.  
4/7/2017

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**DESCRIPTION OF JOB EVENTS**

Amount Pumped	Time/Date	Event	Description	Rate	BBLs	Pressure
% Excess 15%						
Mixed bbls 128.24						
Total Sacks 719	1425	What rig is doing upon Bison Arrival	Running Casing			
bbl Returns 29	1430	JSA	Bison Crew			
Water Temp 62	1440	Rig up				
	1620	Safety Meeting	Bison and Rig crew			
Notes:	1650	Start Job				
	1654	Pressure Test				
	1656	Spacer Ahead	2nd 10 with die	5	30	110
	1700	Lead Cement	14.2 ppg	6	190	150
	1732	Shutdown				
	1735	Drop Plug	Preloaded in plug container			
	1736	Start Displacement		7	90	440
	1758	Bump Plug	500 psi over final lift (1120psi)	2	139	550
	1801	Floats Held	Held for 3 min			
	1805	End Job				
	1810	Rig Down				
	1845	Leave Location				

Work Preformed

Title

Date

# BATTERBALL 22C-34HZ

