



# Bison Oil Well Cementing Single Cement Surface Pipe

Date: 8/8/2014

Invoice # 25030

API# 05-123-39623

Foreman: Calvin Reimers

Customer: Anadarko Petroleum Corporation

Well Name: Sack 16N-6HZ

County: Weld

State: Colorado

Sec: 31

Twp: 1N

Range: 67W

Consultant: Allen

Rig Name & Number: Major 42

Distance To Location: 42

Units On Location: 4032-3104/4018-3203

Time Requested: 700pm

Time Arrived On Location: 545pm

Time Left Location: 12:15 pm

## WELL DATA

Casing Size OD (in) : 9.625  
Casing Weight (lb) : 36.00  
Casing Depth (ft) : 1,296  
Total Depth (ft) : 1306  
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: 25%  
Displacement Fluid lb/gal: 8.3  
BBL to Pit: 17  
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 18.26 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 792.17 cuft  
(Open Hole Squared) - (Casing Size Squared) X (.005454) X (Casing  
Depth - Conductor Length)  
Total Slurry Volume 810.43 cuft  
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)  
bbls of Slurry 144.34 bbls  
(Total Slurry Volume) X (.1781)  
Sacks Needed 544 sk  
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)  
Mix Water 96.87 bbls  
(Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 97.53 bbls  
(Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe  
Joint)

## Pressure of cement in annulus

Hydrostatic Pressure: 955.82 PSI

## Pressure of the fluids inside casing

Displacement: 540.53 psi

Shoe Joint: 31.04 psi

Total 571.56 psi

Differential Pressure: 384.25 psi

Collapse PSI: 2020.00 psi

Burst PSI: 3520.00 psi

Total Water Needed: 244.40 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  
Sack 16N-6HZ

INVOICE #  
LOCATION  
FOREMAN  
Date

25030  
Weld  
Calvin Reimers  
8/8/2014

Treatment Report Page 2

**DESCRIPTION OF JOB EVENTS**

Safety Meeting	950pm	Displace 1			Displace 2			Displace 3			Displace 4			Displace 5		
MIRU	830pm	BBLS	Time	PSI	BBLS	Time	PSI	BBLS	Time	PSI	BBLS	Time	PSI	BBLS	Time	PSI
CIRCULATE	1029pm	0	1107pm	70	0			0			0			0		
Drop Plug		10	1110pm	30	10			10			10			10		
1106pm		20	1112pm	40	20			20			20			20		
		30	1114pm	130	30			30			30			30		
		40	1116pm	200	40			40			40			40		
M & P		50	1118pm	260	50			50			50			50		
Time	Sacks	60	1119pm	340	60			60			60			60		
1035pm	544	70	1121pm	400	70			70			70			70		
1103pm		80	1123pm	430	80			80			80			80		
		90	1125pm	460	90			90			90			90		
		100	1128pm	430	100			100			100			100		
		110	Bump	1460	110	1130pm		110			110			110		
% Excess	25%	120	Bump	1000	120	1132pm		120			120			120		
Mixed bbls	96.87	130			130			130			130			130		
Total Sacks	544	140			140			140			140			140		
bbl Returns	17	150			150			150			150			150		
Water Temp	77.2															

Notes:

The day

1/2 bbl back on bleed off

X Alta Sant  
Work Performed

X Consultant  
Title

X  
Date

# SERIES 2000

