



# Bison Oil Well Cementing Single Cement Surface Pipe

Date: 2/28/2015  
Invoice #: 25153  
API#: 05-123-40983  
Foreman: Calvin Reimers

Customer: Anadarko Petroleum Corporation  
Well Name: Skim State 4N-21HZ

County: Weld  
State: Colorado  
Sec: 21  
Twp: 3N  
Range: 65W  
Consultant: Toby/Ellis  
Rig Name & Number: Advanced 10  
Distance To Location: 10 Miles  
Units On Location: 4023-3104/4032-3210  
Time Requested: 700am  
Time Arrived On Location: 530am  
Time Left Location: 11:30am

## WELL DATA

Casing Size OD (in) : 9.625  
Casing Weight (lb) : 36.00  
Casing Depth (ft.) : 1,206  
Total Depth (ft) : 1220  
Open Hole Diameter (in.) : 13.50  
Conductor Length (ft) : 45  
Conductor ID : 16  
Shoe Joint Length (ft) : 41  
Landing Joint (ft) : 8

Max Rate: 5  
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: 15%  
Displacement Fluid lb/gal: 8.3  
BBL to Pit: 10  
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 17.76 cuft  
(Casing ID Squared) X (.005454) X (Shoe Joint ft)  
cuft of Conductor 40.09 cuft  
(Conductor Width Squared) - (Casing Size OD Squared) X (.005454) X (Conductor Length ft)  
cuft of Casing 652.30 cuft  
(Open Hole Squared) - (Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)  
Total Slurry Volume 710.15 cuft  
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)  
bbls of Slurry 126.48 bbls  
(Total Slurry Volume) X (.1781)  
Sacks Needed 477 sk  
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)  
Mix Water 84.88 bbls  
(Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 90.66 bbls

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

## Pressure of cement in annulus

Hydrostatic Pressure: 889.37 PSI

## Pressure of the fluids inside casing

Displacement: 502.19 psi

Shoe Joint: 30.18 psi

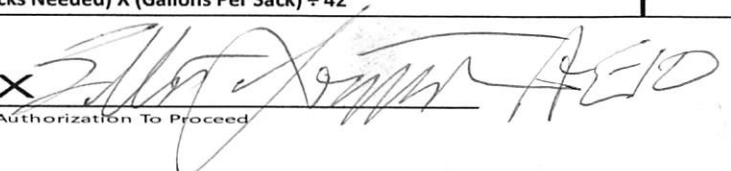
Total 532.37 psi

Differential Pressure: 357.00 psi

Collapse PSI: 2020.00 psi

Burst PSI: 3520.00 psi

Total Water Needed: 225.54 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.





DISCON ON WELL CEMENTING  
Single Cement Surface Pipe

Customer  
Well Name

Anadarko Petroleum Corporation  
Skim State 4N-21HZ

INVOICE #  
LOCATION  
FOREMAN  
Date

2015  
Weld  
Calvin Reimers  
2/28/2015

Treatment Report Page 2

DESCRIPTION OF JOB EVENTS

		Displace 1			Displace 2			Displace 3			Displace 4			Displace 5		
		BBLS	Time	PSI	BBLS	Time	PSI	BBLS	Time	PSI	BBLS	Time	PSI	BBLS	Time	PSI
Safety Meeting	900am															
MIRU	600am															
CIRCULATE	938am	0	1015am	60	0			0			0			0		
Drop Plug		10	1018am	80	10			10			10			10		
1014am		20	1020am	90	20			20			20			20		
		30	1022am	110	30			30			30			30		
		40	1023am	190	40			40			40			40		
M & P		50	1025am	240	50			50			50			50		
Time	Sacks	60	1027am	300	60			60			60			60		
944am	477	70	1028am	360	70			70			70			70		
1011am		80	1030am	370	80			80			80			80		
		90	1034am	320	90			90			90			90		
		100	Bump	840	100			100			100			100		
		110			110			110			110			110		
% Excess	15%	120			120			120			120			120		
Mixed bbls	84.88	130			130			130			130			130		
Total Sacks	477	140			140			140			140			140		
bbl Returns	10	150			150			150			150			150		
Water Temp	36.1															

Notes:

The day

1/2 bbl Back on Bleed Off

X

Work Performed

X

Title

X

Date

## SERIES 2000

