

# Bison Oil Well Cementing Single Cement Surface Pipe

Date: 11/21/2014  
Invoice #: 25088  
API#: 05-123-37922  
Foreman: Calvin Reimers

Customer: Anadarko Petroleum Corporation  
Well Name: Greenleaf 37C-15HZ

County: Weld  
State: Colorado  
Sec: 15  
Twp: 2N  
Range: 65W

Consultant: Lester  
Rig Name & Number: Major 42  
Distance To Location: 16 Miles  
Units On Location: 4023-3104/4020-3212  
Time Requested: 300pm  
Time Arrived On Location: 125pm  
Time Left Location: 5:15pm

## WELL DATA

Casing Size OD (in) : 9.625  
Casing Weight (lb) : 36.00  
Casing Depth (ft.) : 815  
Total Depth (ft) : 830  
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: 15%  
Displacement Fluid lb/gal: 8.3  
BBL to Pit: 1.5  
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 18.17 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 458.65 cuft  
(Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)

Total Slurry Volume 476.81 cuft  
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)

bbls of Slurry 84.92 bbls  
(Total Slurry Volume) X (.1781)

Sacks Needed 320 sk  
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)

Mix Water 56.99 bbls  
(Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 60.37 bbls

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

## Pressure of cement in annulus

Hydrostatic Pressure: 601.00 PSI

## Pressure of the fluids inside casing

Displacement: 333.24 psi

Shoe Joint: 30.87 psi

Total 364.11 psi

Differential Pressure: 236.89 psi

Collapse PSI: 2020.00 psi

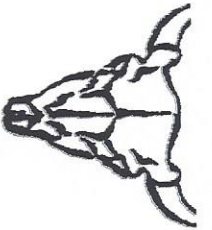
Burst PSI: 3520.00 psi

Total Water Needed: 167.36 bbls

X *J E Case*  
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  
Single Cement Surface Pipe

Customer  
Well Name

Anadarko Petroleum Corporation  
Greenleaf 37C-15HZ

INVOICE #  
LOCATION  
FOREMAN  
Date

2000  
Weld  
Calvin Reimers  
11/21/2014

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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	327pm															
MIRU	130pm															
CIRCULATE	348pm	0	408pm	50	0			0			0			0		
Drop Plug		10	411pm	30	10			10			10			10		
		20	413pm	80	20			20			20			20		
		30	415pm	160	30			30			30			30		
		40	417pm	300	40			40			40			40		
		50	418pm	340	50			50			50			50		
M & P		60	422pm	240	60			60			60			60		
		70	Bump	1260	70			70			70			70		
354pm	320	80			80			80			80			80		
404pm		90			90			90			90			90		
		100			100			100			100			100		
		110			110			110			110			110		
		120			120			120			120			120		
% Excess	15%	130			130			130			130			130		
Mixed bbls	56.99	140			140			140			140			140		
Total Sacks	320	150			150			150			150			150		
bbl Returns	15															
Water Temp	63															

Notes:

The day

1/2 bbl Back on Bleed Off

X 2 E Car

X  
Title

X  
Date

Work Performed

# SERIES 2000

