



# Bison Oil Well Cementing Single Cement Surface Pipe

Date: 4/2/2015  
Invoice # 80121  
API# 05-123-41289  
Foreman: JASON KELEHER

Customer: Anadarko Petroleum Corporation  
Well Name: BAT 28C-9HZ

County: Weld  
State: Colorado  
Sec: 9  
Twp: 1N  
Range: 65W  
Consultant: VIVIAN  
Rig Name & Number: ADVANCED 10  
Distance To Location: 26  
Units On Location: 4031-3107, 4030-3203  
Time Requested: 1200  
Time Arrived On Location: 2300  
Time Left Location: 400

## WELL DATA

Casing Size OD (in) : 9.625  
Casing Weight (lb) : 36.00  
Casing Depth (ft) : 1,532  
Total Depth (ft) : 1547  
Open Hole Diameter (in.) : 13.50  
Conductor Length (ft) : 40  
Conductor ID : 15.25  
Shoe Joint Length (ft) : 43  
Landing Joint (ft) : 5

Max Rate: 6  
Max Pressure: 1500

## Cement Data

Cement Name: BFN III  
Cement Density (lb/gal) : 14.2  
Cement Yield (cuft) : 1.49  
Gallons Per Sack: 7.48  
% Excess: 20%  
Displacement Fluid lb/gal: 8.3  
BBL to Pit: 19.0  
Fluid Ahead (bbls): 30.0  
H2O Wash Up (bbls): 20.0

Spacer Ahead Makeup  
30 BBL WATER W/ DYE IN 2ND 10

Casing ID

8.921

Casing Grade

J-55 only used

## Calculated Results

**cuft of Shoe** 18.85 cuft  
(Casing ID Squared) X (.005454) X (Shoe Joint ft)

**cuft of Conductor** 30.53 cuft  
(Conductor Width Squared) - (Casing Size OD Squared) X (.005454) X (Conductor Length ft)

**cuft of Casing** 875.03 cuft  
(Open Hole Squared) - (Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)

**Total Slurry Volume** 924.40 cuft  
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)

**bbls of Slurry** 164.64 bbls  
(Total Slurry Volume) X (.1781)

**Sacks Needed** 620 sk  
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)

**Mix Water** 110.49 bbls  
(Sacks Needed) X (Gallons Per Sack) ÷ 42

**Displacement:** 115.47 bbls  
(Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)

## Pressure of cement in annulus

**Hydrostatic Pressure:** 1130.16 PSI

## Pressure of the fluids inside casing

**Displacement:** 641.85 psi

**Shoe Joint:** 32.04 psi

**Total** 673.89 psi

**Differential Pressure:** 456.28 psi

**Collapse PSI:** 2020.00 psi

**Burst PSI:** 3520.00 psi

**Total Water Needed:** 275.96 bbls

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  
BAT 28C-9HZ

INVOICE #  
LOCATION  
FOREMAN  
Date

80121  
Weld  
JASON KELEHER  
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**DESCRIPTION OF JOB EVENTS**

Safety Meeting MIRU CIRCULATE Drop Plug 220 M & P Time Sacks 0147-0219 % Excess Mixed bbls Total Sacks bbl Returns Water Temp	115 2300 141    20% 110.4 620 19 51	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
		0	220	0	0			0			0			0		
		10	222	90	10			10			10			10		
		20	224	40	20			20			20			20		
		30	227	40	30			30			30			30		
		40	230	70	40			40			40			40		
		50	232	170	50			50			50			50		
		60	234	220	60			60			60			60		
		70	236	280	70			70			70			70		
		80	238	260	80			80			80			80		
		90	240	400	90			90			90			90		
		100	242	440	100			100			100			100		
		110	244	480	110			110			110			110		
		120	246	450	120			120			120			120		
		130	BUMP	900	130			130			130			130		
		140			140			140			140			140		
		150			150			150			150			150		

Notes:

PERFORMED PRESSURE TEST TO 1500 PSI AT 0139, PUMPED 30 BBL WATER WITH DYE IN 2ND 10 AT 0141, MIXED AND PUMPED 620 SKS AT 14.2, 164.5 BBL AT 0147, SHUT DOWN AT 0219, STARTED DISPLACEMENT AT 0220, PLUG LANDED AT 450 PSI AT 0246 AND PRESSURED UP TO 900, HELD FOR 5 MINUTES AND RELEASED TO CHECK FLOATS, GOT .5 BBL WATER BACK, FLOATS HELD.

x Jason Keleher  
Signature

x Daryl Foreman  
Title

x 4/2/15  
Date

# BAT 28C-9HZ SURFACE

