



# Bison Oil Well Cementing Single Cement Surface Pipe

Date: 3/29/2015  
 Invoice # 80118  
 API# 05-123-41288  
 Foreman: JASON KELEHER

**Customer:** Anadarko Petroleum Corporation  
**Well Name:** BAT 29N2-9HZ

County: Weld Consultant: VIVIAN  
 State: Colorado Rig Name & Number: ADVANCED 10  
 Distance To Location: 26  
 Sec: 9 Units On Location: 4031-3107, 4022-3213  
 Twp: 1N Time Requested: 30  
 Range: 65W Time Arrived On Location: 230  
 Time Left Location: 930

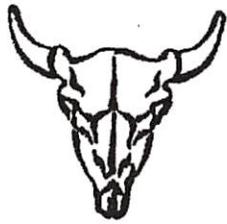
WELL DATA	
Casing Size OD (in) :	<u>9.625</u>
Casing Weight (lb) :	<u>36.00</u>
Casing Depth (ft.) :	<u>1,537</u>
Total Depth (ft) :	<u>1550</u>
Open Hole Diameter (in.) :	<u>13.50</u>
Conductor Length (ft) :	<u>40</u>
Conductor ID :	<u>15.25</u>
Shoe Joint Length (ft) :	<u>43</u>
Landing Joint (ft) :	<u>5</u>
Max Rate:	<u>6</u>
Max Pressure:	<u>1500</u>

Cement Data	
Cement Name:	<u>BFN III</u>
Cement Density (lb/gal) :	<u>14.2</u>
Cement Yield (cuft) :	<u>1.49</u>
Gallons Per Sack:	<u>7.48</u>
% Excess:	<u>20%</u>
Displacement Fluid lb/gal:	<u>8.3</u>
BBL to Pit:	<u>14.0</u>
Fluid Ahead (bbls):	<u>30.0</u>
H2O Wash Up (bbls):	<u>20.0</u>
Spacer Ahead Makeup	<u>30 BBL WATER W/ DYE IN 2ND 10</u>

Calculated Results	Displacement: <b>115.89 bbls</b> (Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)
<b>cuft of Shoe</b> <u>18.55</u> <b>cuft</b> (Casing ID Squared) X (.005454) X (Shoe Joint ft)	<b>Pressure of cement in annulus</b>
<b>cuft of Conductor</b> <u>30.53</u> <b>cuft</b> (Conductor Width Squared) -(Casing Size OD Squared) X (.005454) X (Conductor Length ft)	<b>Hydrostatic Pressure:</b> <u>1133.73 PSI</u>
<b>cuft of Casing</b> <u>877.86</u> <b>cuft</b> (Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length )	<b>Pressure of the fluids inside casing</b>
<b>Total Slurry Volume</b> <u>926.94</u> <b>cuft</b> (cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)	<b>Displacement:</b> <u>644.23 psi</u>
<b>bbls of Slurry</b> <u>165.09</u> <b>bbls</b> (Total Slurry Volume) X (.1781)	<b>Shoe Joint:</b> <u>31.53 psi</u>
<b>Sacks Needed</b> <u>622</u> <b>sk</b> (Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)	<b>Total</b> <u>675.76 psi</u>
<b>Mix Water</b> <u>110.79</u> <b>bbls</b> (Sacks Needed) X (Gallons Per Sack) ÷ 42	<b>Differential Pressure:</b> <u>457.97 psi</u>
	<b>Collapse PSI:</b> <u>2020.00 psi</u>
	<b>Burst PSI:</b> <u>3520.00 psi</u>
	<b>Total Water Needed:</b> <u>276.69 bbls</u>

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  
BAT 29N2-9HZ

INVOICE #  
LOCATION  
FOREMAN  
Date

80118
Weld
JASON KELEHER
3/29/2015

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**DESCRIPTION OF JOB EVENTS**

		Displace 1			Displace 2			Displace 3			Displace 4			Displace 5		
		BBLS	Time	PSI												
Safety Meeting	715															
MIRU	230															
CIRCULATE	740	0	817	0	0			0			0			0		
Drop Plug		10	818	120	10			10			10			10		
817		20	820	100	20			20			20			20		
		30	823	100	30			30			30			30		
		40	825	120	40			40			40			40		
M & P		50	827	190	50			50			50			50		
Time	Sacks	60	829	260	60			60			60			60		
0746-0815	622	70	830	300	70			70			70			70		
		80	832	370	80			80			80			80		
		90	834	450	90			90			90			90		
		100	836	480	100			100			100			100		
		110	839	430	110			110			110			110		
% Excess	20%	120	841	440	120			120			120			120		
Mixed bbls	110.7	130	BUMP	820	130			130			130			130		
Total Sacks	622	140			140			140			140			140		
bbl Returns	14	150			150			150			150			150		
Water Temp	54															

Notes:

PERFORMED PRESSURE TEST TO 1500 PSI AT 0738, PUMPED 30 BBL WATER WITH DYE IN 2ND 10 AT 0740, MIXED AND PUMPED 622 SKS AT 14.2, 165 BBL AT 0746, SHUT DOWN AT 0815, STARTED DISPLACEMENT AT 0817, PLUG LANDED AT 440 PSI AT 0841 AND PRESSURED UP TO 820, HELD FOR 5 MINUTES AND RELEASED TO CHECK FLOATS, GOT .5 BBL WATER BACK, FLOATS HELD.

X   
Signature

X  
Title

X  
Date

# BAT 29N2-9HZ SURFACE

