



# Bison Oil Well Cementing Single Cement Surface Pipe

Date: 10/16/2017  
 Invoice #: 900192  
 API#: 05-123-45224  
 Foreman: Corey B.

**Customer:** Anadarko Petroleum Corporation  
**Well Name:** Burough 2C-17HZ

County: Weld  
 State: Colorado  
 Consultant: Matt  
 Rig Name & Number: Cartel 88  
 Distance To Location: 32  
 Units On Location: 027/3103-4033/3212-4020/321  
 Time Requested: 1730  
 Time Arrived On Location: 1630  
 Time Left Location:

WELL DATA	Cement Data
Casing Size OD (in) : 9.625	Cement Name: BFN III
Casing Weight (lb) : 36.00	Cement Density (lb/gal) : 14.2
Casing Depth (ft.) : 1,863	Cement Yield (cuft) : 1.48
Total Depth (ft) : 1873	Gallons Per Sack: 7.40
Open Hole Diameter (in.) : 13.50	% Excess: 20%
Conductor Length (ft) : 80	Displacement Fluid lb/gal: 8.3
Conductor ID : 15.25	BBL to Pit: 30.0
Shoe Joint Length (ft) : 44	Fluid Ahead (bbls):
Landing Joint (ft) : 15	H2O Wash Up (bbls): 20.0
Max Rate: 8	Spacer Ahead Makeup
Max Pressure: 2000	30 bbl with Die in @nd 10

Calculated Results	Displacement: 141.78 bbls
<b>cuft of Shoe 19.10 cuft</b> (Casing ID Squared) X (.005454) X (Shoe Joint ft)	(Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)
<b>cuft of Conductor 61.05 cuft</b> (Conductor Width Squared) - (Casing Size OD Squared) X (.005454) X (Conductor Length ft)	Pressure of cement in annulus
<b>cuft of Casing 1045.69 cuft</b> (Open Hole Squared) - (Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)	Hydrostatic Pressure: 1374.34 PSI
<b>Total Slurry Volume 1125.83 cuft</b> (cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)	Pressure of the fluids inside casing
<b>bbls of Slurry 200.51 bbls</b> (Total Slurry Volume) X (.1781)	Displacement: 784.32 psi
<b>Sacks Needed 761 sk</b> (Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)	Shoe Joint: 32.46 psi
<b>Mix Water 134.03 bbls</b> (Sacks Needed) X (Gallons Per Sack) ÷ 42	Total 816.78 psi
	Differential Pressure: 557.56 psi
	Collapse PSI: 2020.00 psi
	Burst PSI: 3520.00 psi
	<b>Total Water Needed: 295.81 bbls</b>

X   
 Authorization To Proceed



**Bison Oil Well Cementing  
Single Cement Surface Pipe**

Customer  
Well Name

Anadarko Petroleum Corporation  
Borough 2C-17HZ

INVOICE #  
LOCATION  
FOREMAN  
Date

900192  
Weld  
Corey B.  
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Treatment Report Page 2

**DESCRIPTION OF JOB EVENTS**

Amount Pumped		Time	Event	Description	Rate	BBLs	Pressure
% Excess	20%	1630	What rig is doing upon Bison Arrival	Running Casing			
Mixed bbls	134.03	1640	JSA	Bison Crew			
Total Sacks	761	1655	Rig up				
bbl Returns	8	1900	Safety Meeting	Bison and Rig crew			
Water Temp	63	2004	Start Job				
		2006	Pressure Test				
Notes:							
		2009	Spacer Ahead	2nd 10 with die	5	30	60
		2015	Lead Cement	14.2 ppg	5	200	50
		2054	Shutdown				
		2056	Drop Plug	Preloaded in plug container			
		2058	Start Displacement		7	90	350
		2125	Bump Plug	500 over final lift 1150 psi	2	141	520
		2127	Floats Held	Held for 2 MIN with 1.5 bll back			
		2130	End Job				
		2135	Rig Down				
		2200	Leave Location				

X *[Signature]*  
Work Performed

X CONSULTANT  
Title

X 10-16-17  
Date

# Borough 2C-17HZ

