



# Bison Oil Well Cementing Single Cement Surface Pipe

Date: 2/9/2017  
 Invoice #: 900045  
 API#: 05-123-42454  
 Foreman: JASON

**Customer:** Anadarko Petroleum Corporation  
**Well Name:** GUEST 28N-25HZ

County: Weld  
 State: Colorado  
 Sec: 13  
 Twp: 2N  
 Range: 65W

Consultant: BRYAN  
 Rig Name & Number: WM 252  
 Distance To Location: 35  
 Units On Location: 4027-3103,4024-3205,4019-3214  
 Time Requested: 700  
 Time Arrived On Location: 600  
 Time Left Location: 1200

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.) :	1,842	Cement Yield (cuft) :	1.48
Total Depth (ft) :	1852	Gallons Per Sack:	7.49
Open Hole Diameter (in.) :	13.50	% Excess:	15%
Conductor Length (ft) :	80	Displacement Fluid lb/gal:	8.3
Conductor ID :	15.25	BBL to Pit:	24.0
Shoe Joint Length (ft) :	45	Fluid Ahead (bbls):	30.0
Landing Joint (ft) :	33	H2O Wash Up (bbls):	20.0
Max Rate:	8	<b>Spacer Ahead Makeup</b>	
Max Pressure:	2000	<b>30 BBL WATER DYE IN 2ND 10</b>	

Calculated Results			Displacement: 141.49 bbls	
<b>cuft of Shoe</b>	19.32	cuft	(Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)	
(Casing ID Squared) X (.005454) X (Shoe Joint ft)			<b>Pressure of cement in annulus</b>	
<b>cuft of Conductor</b>	61.05	cuft	<b>Hydrostatic Pressure: 1358.65 PSI</b>	
(Conductor Width Squared) -(Casing Size OD Squared) X (.005454) X (Conductor Length ft)			<b>Pressure of the fluids inside casing</b>	
<b>cuft of Casing</b>	990.17	cuft	<b>Displacement: 774.94 psi</b>	
(Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)			<b>Shoe Joint: 32.83 psi</b>	
<b>Total Slurry Volume</b>	1070.53	cuft	<b>Total 807.76 psi</b>	
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)			<b>Differential Pressure: 550.89 psi</b>	
<b>bbls of Slurry</b>	190.66	bbls	<b>Collapse PSI: 2020.00 psi</b>	
(Total Slurry Volume) X (.1781)			<b>Burst PSI: 3520.00 psi</b>	
<b>Sacks Needed</b>	723	sk	<b>Total Water Needed: 320.49 bbls</b>	
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)				
<b>Mix Water</b>	128.99	bbls		
(Sacks Needed) X (Gallons Per Sack) ÷ 42				

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.



# GUEST 28N-25HZ SURFACE

