



# Bison Oil Well Cementing Single Cement Surface Pipe

Date: 6/5/2015

Invoice # 80086

API#

Foreman: Kirk Kallhoff

**Customer:** Anadarko Petroleum Corporation

**Well Name:** viper pyro 26n-14hz

County: Weld  
State: Colorado

Sec: 15  
Twp: 3n  
Range: 67w

Consultant: toby

Rig Name & Number: pinnergy 4

Distance To Location: 17

Units On Location: 4038-3103/4024-3210

Time Requested: 1200 am

Time Arrived On Location: 930 pm

Time Left Location: 2:45pm

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.) : 812	Cement Yield (cuft) : 1.49
Total Depth (ft) : 832	Gallons Per Sack: 7.48
Open Hole Diameter (in.) : 13.50	% Excess: 20%
Conductor Length (ft) : 60	Displacement Fluid lb/gal: 8.3
Conductor ID : 16	BBL to Pit:
Shoe Joint Length (ft) : 38	Fluid Ahead (bbls): 30.0
Landing Joint (ft) : 10	H2O Wash Up (bbls): 10.0
Max Rate:	Spacer Ahead Makeup
Max Pressure:	

Calculated Results	Pressure of cement in annulus
<b>cuft of Shoe</b> 16.49 cuft (Casing ID Squared) X (.005454) X (Shoe Joint ft)	<b>Displacement:</b> 60.61 bbls (Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)
<b>cuft of Conductor</b> 53.46 cuft (Conductor Width Squared) -(Casing Size OD Squared) X (.005454) X (Conductor Length ft)	<b>Pressure of cement in annulus</b> <b>Hydrostatic Pressure:</b> 599.01 PSI
<b>cuft of Casing</b> 441.03 cuft (Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length )	<b>Pressure of the fluids inside casing</b> <b>Displacement:</b> 333.73 psi
<b>Total Slurry Volume</b> 510.98 cuft (cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)	<b>Shoe Joint:</b> 28.03 psi
<b>bbls of Slurry</b> 91.01 bbls (Total Slurry Volume) X (.1781)	<b>Total</b> 361.77 psi
<b>Sacks Needed</b> 343 sk (Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)	<b>Differential Pressure:</b> 237.25 psi
<b>Mix Water</b> 61.08 bbls (Sacks Needed) X (Gallons Per Sack) ÷ 42	<b>Collapse PSI:</b> 2020.00 psi
	<b>Burst PSI:</b> 3520.00 psi
	<b>Total Water Needed:</b> 161.69 bbls

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.



# M/D TOTCO 2000 SERIES

— PSI — Barrels / Minute — Barrels — Lbs / Gallon — Stage Volume

