



# Bison Oil Well Cementing Single Cement Surface Pipe

Date: 8/9/2019  
 Invoice # 900390  
 API# 05-123-50195  
 Foreman: Corey Barras

**Customer:** Anadarko Petroleum Corporation  
**Well Name:** Farley 23-1HZ

County: Weld Consultant: Josh  
 State: Colorado Rig Name & Number: CARTEL 88  
 Sec: 23 Distance To Location: 28  
 Twp: 3n Units On Location: 4028/3103-404024/3214-4039/3212  
 Range: 66w Time Requested: 2100  
 Time Arrived On Location: 2015  
 Time Left Location: 1230

WELL DATA	Cement Data
Casing Size OD (in) : <u>9.625</u>	Cement Name: <u>BFN III</u>
Casing Weight (lb) : <u>36.00</u>	Cement Density (lb/gal) : <u>14.2</u>
Casing Depth (ft.) : <u>1,850</u>	Cement Yield (cuft) : <u>1.48</u>
Total Depth (ft) : <u>1860</u>	Gallons Per Sack: <u>7.48</u>
Open Hole Diameter (in.) : <u>13.50</u>	% Excess: <u>10%</u>
Conductor Length (ft) : <u>80</u>	Displacement Fluid lb/gal: <u>8.3</u>
Conductor ID : <u>15.25</u>	BBL to Pit: <u>17.0</u>
Shoe Joint Length (ft) : <u>42</u>	Fluid Ahead (bbls): <u>30.0</u>
Landing Joint (ft) : <u>8</u>	H2O Wash Up (bbls): <u>20.0</u>
Max Rate: <u>8</u>	Spacer Ahead Makeup
Max Pressure: <u>2000</u>	<u>30 BBL WATER, DYE IN 2ND 10</u>

Calculated Results	Pressure of cement in annulus
Casing ID <u>8.921</u> Casing Grade <u>J-55 only used</u>	<b>Displacement: <u>140.39 bbls</u></b>
<b>cuft of Shoe <u>18.23 cuft</u></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 <u>61.05 cuft</u></b> (Conductor Width Squared) -(Casing Size OD Squared) X (.005454) X (Conductor Length ft)	<b>Pressure of cement in annulus</b>
<b>cuft of Casing <u>951.56 cuft</u></b> (Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length )	<b>Hydrostatic Pressure: <u>1364.75 PSI</u></b>
<b>Total Slurry Volume <u>1030.84 cuft</u></b> (cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)	<b>Pressure of the fluids inside casing</b>
<b>bbls of Slurry <u>183.59 bbls</u></b> (Total Slurry Volume) X (.1781)	<b>Displacement: <u>779.58 psi</u></b>
<b>Sacks Needed <u>697 sk</u></b> (Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)	<b>Shoe Joint: <u>30.98 psi</u></b>
<b>Mix Water <u>124.05 bbls</u></b> (Sacks Needed) X (Gallons Per Sack) ÷ 42	<b>Total <u>810.56 psi</u></b>
	<b>Differential Pressure: <u>554.19 psi</u></b>
	<b>Collapse PSI: <u>2020.00 psi</u></b>
	<b>Burst PSI: <u>3520.00 psi</u></b>
	<b>Total Water Needed: <u>314.44 bbls</u></b>

X  
 Authorization to Proceed



# Farley 23-1HZ

