



# Bison Oil Well Cementing Single Cement Surface Pipe

Date: 11/2/2015  
 Invoice # 90054  
 API# 05-123-41322  
 Supervisor Nick

**Customer:** Anadarko Petroleum Corporation  
**Well Name:** Wilson Ranch 4C-27HZ

County: Weld Consultant: Chris/Sean  
 State: Colorado Rig Name & Number: Noble 2  
 Distance To Location: 35  
 Sec: 26 Units On Location: 024/3210/4007/3106/3105/320  
 Twp: 4N Time Requested: 19:30  
 Range: 68W Time Arrived On Location: 17:40  
 Time Left Location: 22:15

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>1,855</u>	Cement Yield (cuft) : <u>1.49</u>
Total Depth (ft) : <u>1865</u>	Gallons Per Sack: <u>7.48</u>
Open Hole Diameter (in.) : <u>13.50</u>	% Excess: <u>15%</u>
Conductor Length (ft) : <u>40</u>	Displacement Fluid lb/gal: <u>8.3</u>
Conductor ID : <u>15.25</u>	BBL to Pit: <u>21.0</u>
Shoe Joint Length (ft) : <u>45</u>	Fluid Ahead (bbls): <u>30.0</u>
Landing Joint (ft) : <u>10</u>	H2O Wash Up (bbls): <u>20.0</u>
Max Rate: <u>7</u>	Spacer Ahead Makeup
Max Pressure: <u>1250</u>	<u>30 bbl dye in second 10</u>

Calculated Results	Pressure of cement in annulus
<b>cuft of Shoe</b> <u>19.53</u> <b>cuft</b> (Casing ID Squared) X (.005454) X (Shoe Joint ft)	<b>Displacement:</b> <u>140.70</u> <b>bbls</b> (Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)
<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>1368.43</u> <b>PSI</b>
<b>cuft of Casing</b> <u>1020.10</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>1070.16</u> <b>cuft</b> (cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)	<b>Displacement:</b> <u>780.44</u> <b>psi</b>
<b>bbls of Slurry</b> <u>190.60</u> <b>bbls</b> (Total Slurry Volume) X (.1781)	<b>Shoe Joint:</b> <u>33.20</u> <b>psi</b>
<b>Sacks Needed</b> <u>718</u> <b>sk</b> (Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)	<b>Total</b> <u>813.63</u> <b>psi</b>
<b>Mix Water</b> <u>127.91</u> <b>bbls</b> (Sacks Needed) X (Gallons Per Sack) ÷ 42	<b>Differential Pressure:</b> <u>554.80</u> <b>psi</b>
	<b>Collapse PSI:</b> <u>2020.00</u> <b>psi</b>
	<b>Burst PSI:</b> <u>3520.00</u> <b>psi</b>
	<b>Total Water Needed:</b> <u>318.61</u> <b>bbls</b>

  
 Authorization To Proceed



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