



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 5/4/2018
 Invoice # 300123
 API# 05-123-46390
 Foreman: JASON KELEHER

Customer: Anadarko Petroleum Corporation

Well Name: ZELDA 25-4HZ

County: Weld Consultant: BRYAN
 State: Colorado Rig Name & Number: CARTEL 88
 Distance To Location: 34
 Sec: 25 Units On Location: 1044-3106,4024-3201,4030-3211
 Twp: 2N Time Requested: 500
 Range: 65W Time Arrived On Location: 400
 Time Left Location: 1000

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>1,829</u>	Cement Yield (cuft) : <u>1.48</u>
Total Depth (ft) : <u>1838</u>	Gallons Per Sack: <u>7.48</u>
Open Hole Diameter (in.) : <u>12.25</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>2.0</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>10.0</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
cuft of Shoe <u>18.34</u> cuft (Casing ID Squared) X (.005454) X (Shoe Joint ft)	Displacement: <u>138.71</u> bbls (Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)
cuft of Conductor <u>61.05</u> cuft (Conductor Width Squared) -(Casing Size OD Squared) X (.005454) X (Conductor Length ft)	Hydrostatic Pressure: <u>1348.89</u> PSI
cuft of Casing <u>602.36</u> cuft (Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)	Pressure of the fluids inside casing
Total Slurry Volume <u>681.75</u> cuft (cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)	Displacement: <u>770.20</u> psi
bbls of Slurry <u>121.42</u> bbls (Total Slurry Volume) X (.1781)	Shoe Joint: <u>31.18</u> psi
Sacks Needed <u>461</u> sk (Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)	Total <u>801.37</u> psi
Mix Water <u>82.04</u> bbls (Sacks Needed) X (Gallons Per Sack) ÷ 42	Differential Pressure: <u>547.52</u> psi
	Collapse PSI: <u>2020.00</u> psi
	Burst PSI: <u>3520.00</u> psi
	Total Water Needed: <u>260.75</u> bbls

X 
 Authorization To Proceed

ZELDA 25-4HZ SURFACE

