



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 10/11/2019
 Invoice # 200522
 API# _____
 Foreman: Kirk Kallhoff

Customer: Anadarko Petroleum Corporation
Well Name: mae j 8-10hz

County: Weld Consultant: tyler
 State: Colorado Rig Name & Number: Cartel 88
 Distance To Location: 39
 Sec: 12 Units On Location: 4047/403 /4044
 Twp: 1n Time Requested: 1000 am
 Range: 68w Time Arrived On Location: 800 am
 Time Left Location: 2:00 pm

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>1,921</u>	Cement Yield (cuft) : <u>1.48</u>
Total Depth (ft) : <u>1931</u>	Gallons Per Sack: <u>7.40</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:
Shoe Joint Length (ft) : <u>41</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 with Die in 2nd 10</u>

Calculated Results	Pressure of cement in annulus
Displacement: <u>145.96 bbls</u>	(Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)
cuft of Shoe <u>17.80</u> cuft	Pressure of cement in annulus
(Casing ID Squared) X (.005454) X (Shoe Joint ft)	Hydrostatic Pressure: <u>1417.12 PSI</u>
cuft of Conductor <u>61.05</u> cuft	Pressure of the fluids inside casing
(Conductor Width Squared) -(Casing Size OD Squared) X (.005454) X (Conductor Length ft)	Displacement: <u>810.62 psi</u>
cuft of Casing <u>989.73</u> cuft	Shoe Joint: <u>30.25 PSI</u>
(Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)	Total <u>840.87 psi</u>
Total Slurry Volume <u>1068.57</u> cuft	Differential Pressure: <u>576.26 psi</u>
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)	Collapse PSI: <u>2020.00 psi</u>
bbls of Slurry <u>190.31</u> bbls	Burst PSI: <u>3520.00 psi</u>
(Total Slurry Volume) X (.1781)	Total Water Needed: <u>313.17 bbls</u>
Sacks Needed <u>722</u> sk	
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)	
Mix Water <u>127.21</u> bbls	
(Sacks Needed) X (Gallons Per Sack) ÷ 42	

X Tyler Heston
 Authorization To Proceed

SERIES 2000

