



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 5/26/2018
 Invoice # 200292
 API# _____
 Foreman: Kirk Kallhoff

Customer: Anadarko Petroleum Corporation

Well Name: gracie 24-3hz

County: Weld
 State: Colorado
 Sec: 24
 Twp: 2n
 Range: 66w

Consultant: levi
 Rig Name & Number: CARTEL 88
 Distance To Location: 30
 Units On Location: 1
 Time Requested: 930 am
 Time Arrived On Location: 800 am
 Time Left Location: 1:00pm

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>1,875</u>	Cement Yield (cuft) :	<u>1.48</u>
Total Depth (ft) :	<u>1885</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>15.5</u>	BBL to Pit:	<u>30.0</u>
Shoe Joint Length (ft) :	<u>40</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>	30 BBL WATER, DYE IN 2ND 10	

Calculated Results	Displacement:	142.48 bbls
cuft of Shoe <u>17.36</u> cuft (Casing ID Squared) X (.005454) X (Shoe Joint ft)	(Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)	
cuft of Conductor <u>64.40</u> cuft (Conductor Width Squared) -(Casing Size OD Squared) X (.005454) X (Conductor Length ft)	Pressure of cement in annulus	
cuft of Casing <u>965.00</u> cuft (Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)	Hydrostatic Pressure:	<u>1383.19 PSI</u>
Total Slurry Volume <u>1046.76</u> cuft (cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)	Pressure of the fluids inside casing	
bbls of Slurry <u>186.43</u> bbls (Total Slurry Volume) X (.1781)	Displacement:	<u>791.22 psi</u>
Sacks Needed <u>707</u> sk (Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)	Shoe Joint:	<u>29.51 psi</u>
Mix Water <u>125.96</u> bbls (Sacks Needed) X (Gallons Per Sack) ÷ 42	Total	<u>820.73 psi</u>
	Differential Pressure:	<u>562.46 psi</u>
	Collapse PSI:	<u>2020.00 psi</u>
	Burst PSI:	<u>3520.00 psi</u>
	Total Water Needed:	<u>308.44 bbls</u>

X [Signature]
 Authorization To Proceed

SERIES 2000

