



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 7/5/2019
 Invoice # 200468
 API# _____
 Foreman: Kirk Kallhoff

Customer: Anadarko Petroleum Corporation
Well Name: sarchet 21-6hz

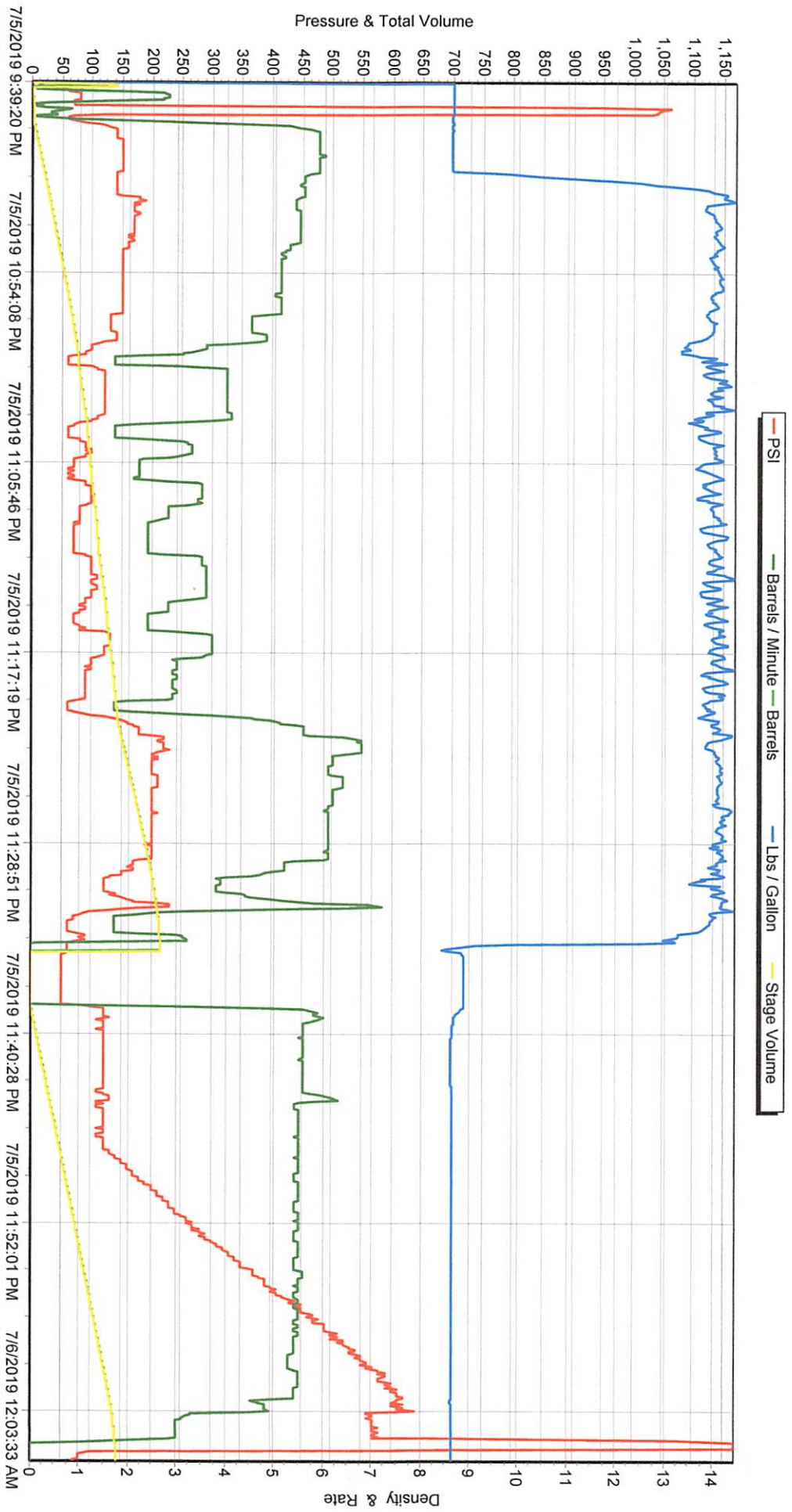
County: Weld Consultant: bryan
 State: Colorado Rig Name & Number: Cartel 88
 Distance To Location: 21
 Sec: 8 Units On Location: 4047/4033/4044
 Twp: 1n Time Requested: 830 pm
 Range: 65w Time Arrived On Location: 630 pm
 Time Left Location: 12:30pm

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>1,895</u>	Cement Yield (cuft) : <u>1.48</u>
Total Depth (ft) : <u>1905</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>39</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: 144.10 bbls	(Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)
cuft of Shoe 16.93 cuft	Pressure of cement in annulus
(Casing ID Squared) X (.005454) X (Shoe Joint ft)	Hydrostatic Pressure: 1397.94 PSI
cuft of Conductor 61.05 cuft	Pressure of the fluids inside casing
(Conductor Width Squared) - (Casing Size OD Squared) X (.005454) X (Conductor Length ft)	Displacement: 800.27 psi
cuft of Casing 975.75 cuft	Shoe Joint: 28.77 PSI
(Open Hole Squared) - (Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)	Total 829.04 psi
Total Slurry Volume 1053.73 cuft	Differential Pressure: 568.90 psi
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)	Collapse PSI: 2020.00 psi
bbls of Slurry 187.67 bbls	Burst PSI: 3520.00 psi
(Total Slurry Volume) X (.1781)	Total Water Needed: 309.55 bbls
Sacks Needed 712 sk	
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)	
Mix Water 125.44 bbls	
(Sacks Needed) X (Gallons Per Sack) ÷ 42	

X
 Authorization To Proceed

SERIES 2000



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