



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 4/28/2018
 Invoice # 200270
 API# _____
 Foreman: Kirk Kallhoff

Customer: Anadarko Petroleum Corporation

Well Name: george 25-5hz

County: Weld
 State: Colorado
 Sec: 25
 Twp: 2n
 Range: 65w

Consultant: bryan
 Rig Name & Number: CARTEL 88
 Distance To Location: 34
 Units On Location: 4028/4040/4035
 Time Requested: 400 pm
 Time Arrived On Location: 230 pm
 Time Left Location: 8:00 pm

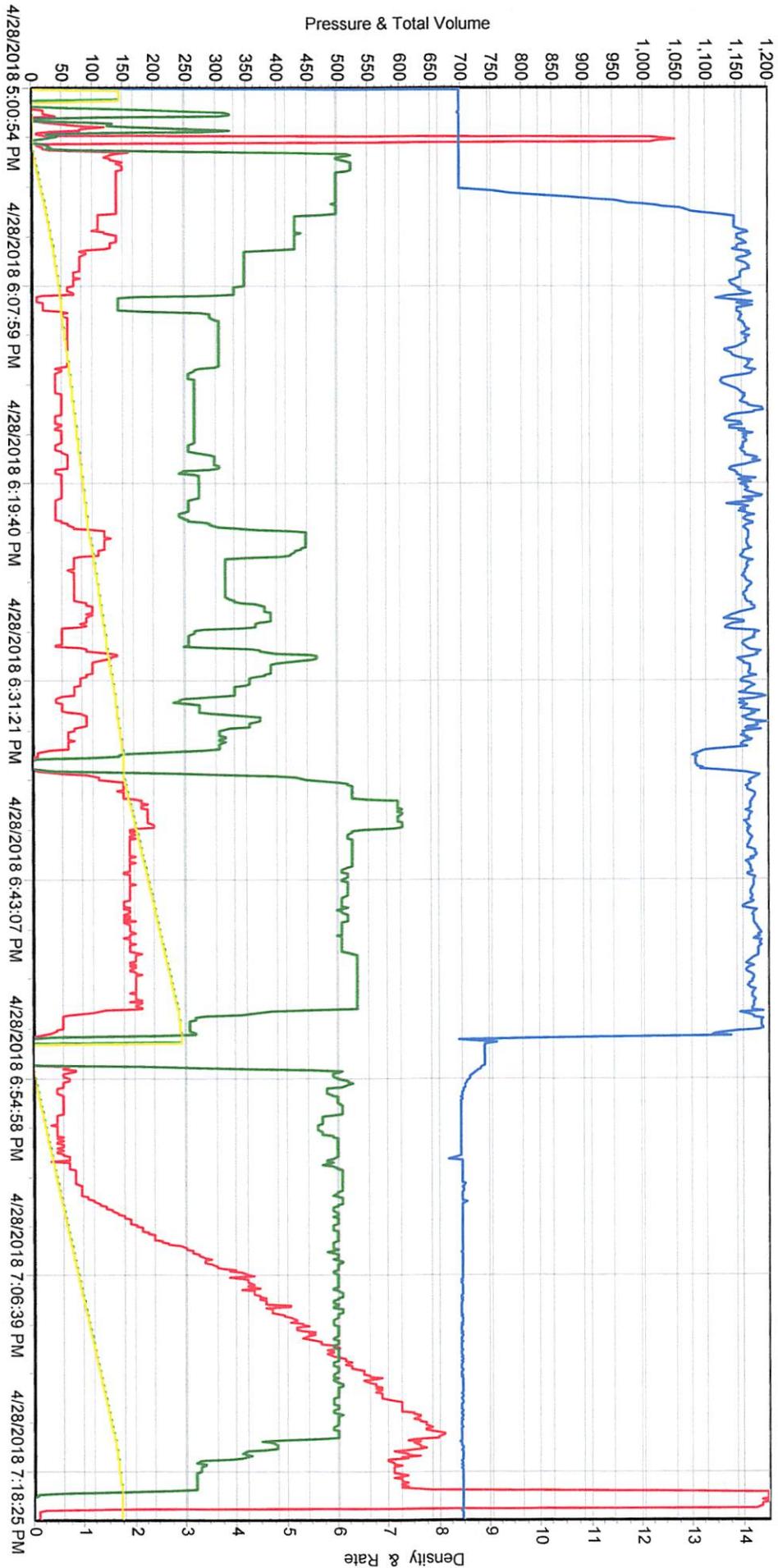
WELL DATA		Cement Data	
Casing Size OD (in) :	<u>9.625</u>	Cement Name:	<u>BFN III</u>
Casing Weight (lb) :	<u>36.00</u>	Cement Density (lb/gal) :	<u>14.2</u>
Casing Depth (ft.) :	<u>1,871</u>	Cement Yield (cuft) :	<u>1.48</u>
Total Depth (ft) :	<u>1881</u>	Gallons Per Sack:	<u>7.48</u>
Open Hole Diameter (in.) :	<u>13.50</u>	% Excess:	<u>20%</u>
Conductor Length (ft) :	<u>80</u>	Displacement Fluid lb/gal:	<u>8.3</u>
Conductor ID :	<u>15.5</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>	30 BBL WATER, DYE IN 2ND 10	

Calculated Results		Displacement: 142.09 bbls	
cuft of Shoe 17.80 cuft (Casing ID Squared) X (.005454) X (Shoe Joint ft)	8.921	(Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)	J-55 only used
cuft of Conductor 64.40 cuft (Conductor Width Squared) -(Casing Size OD Squared) X (.005454) X (Conductor Length ft)		Pressure of cement in annulus	
cuft of Casing 1050.38 cuft (Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)		Hydrostatic Pressure: 1380.24 PSI	
Total Slurry Volume 1132.58 cuft (cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)		Pressure of the fluids inside casing	
bbls of Slurry 201.71 bbls (Total Slurry Volume) X (.1781)		Displacement: 789.06 psi	
Sacks Needed 765 sk (Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)		Shoe Joint: 30.25 psi	
Mix Water 136.29 bbls (Sacks Needed) X (Gallons Per Sack) ÷ 42		Total 819.31 psi	
		Differential Pressure: 560.93 psi	
		Collapse PSI: 2020.00 psi	
		Burst PSI: 3520.00 psi	
		Total Water Needed: 318.38 bbls	

X
 Authorization To Proceed

Customers hereby acknowledges and specifically agrees to the terms and condition on this work order, including, without limitation, the provisions on this work order.

SERIES 2000



Pressure & Total Volume

— PSI — Barrels / Minute — Barrels — Lbs / Gallon — Stage Volume

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