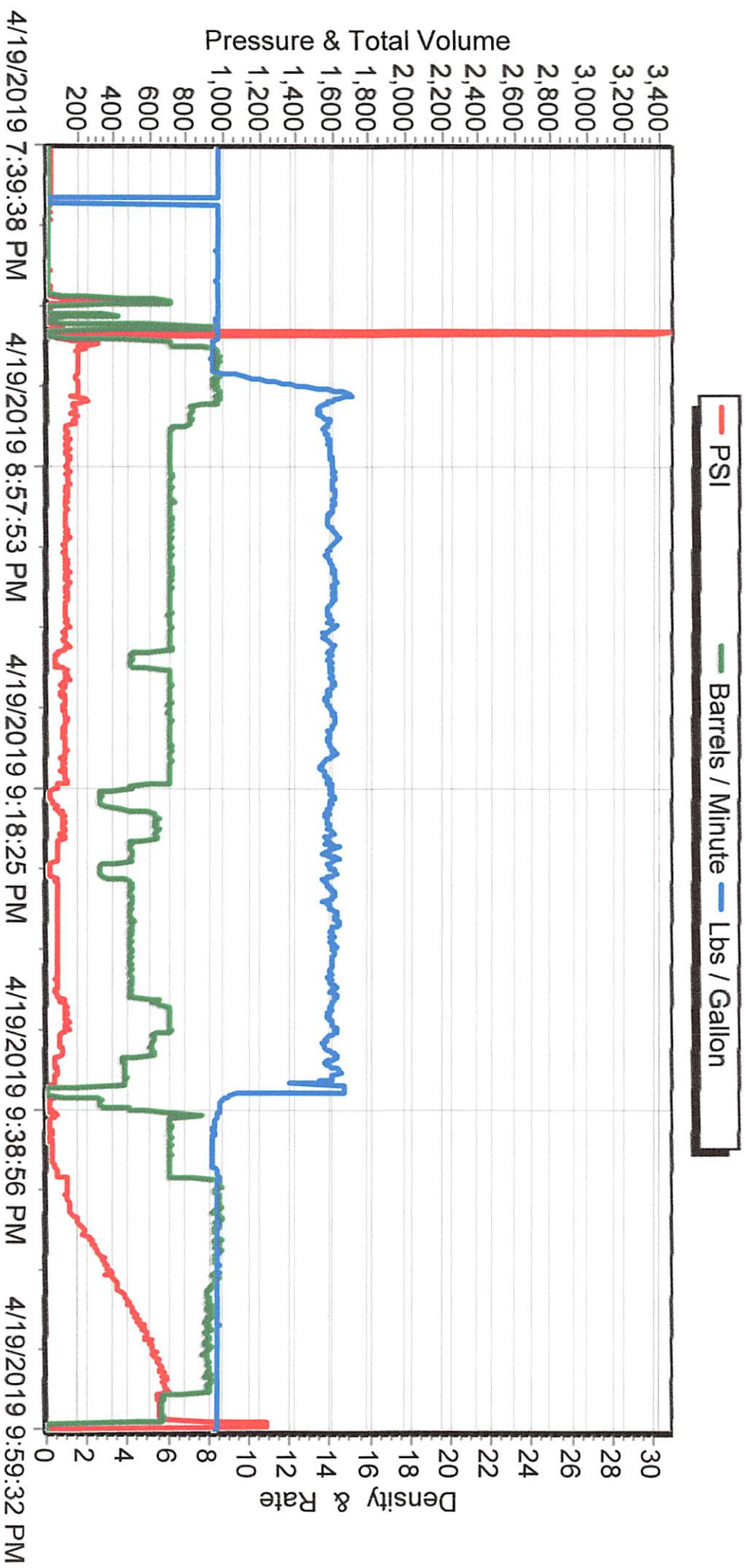


MC 3-2HZ





Bison Oil Well Cementing Single Cement Surface Pipe

Date: 4/19/2019
Invoice #: 606470
API#: 05-123-49759
Foreman: Nick Vigil

Customer: Anadarko Petroleum Corporation

Well Name: MC 3-2HZ

County: Weld
State: Colorado
Sec: 8
Twp: 1N
Range: 65W

Consultant: Brian
Rig Name & Number: Cartel 88
Distance To Location: 38 Miles
Units On Location: 4045/4044/4030/4023
Time Requested: ~~21:00~~ 19:00
Time Arrived On Location: ~~20:00~~ 18:00
Time Left Location:

WELL DATA

Casing Size OD (in) : 9.625
Casing Weight (lb) : 36.00
Casing Depth (ft.) : 1,849
Total Depth (ft) : 1859
Open Hole Diameter (in.) : 13.50
Conductor Length (ft) : 80
Conductor ID : 19.125
Shoe Joint Length (ft) : 40
Landing Joint (ft) : 10

Max Rate: 8
Max Pressure: 2000

Cement Data

Cement Name: BFN III
Cement Density (lb/gal) : 14.2
Cement Yield (cuft) : 1.49
Gallons Per Sack: 7.48
% Excess: 15%
Displacement Fluid lb/gal: 8.3
BBL to Pit:
Fluid Ahead (bbls): 30.0
H2O Wash Up (bbls): 10.0

Spacer Ahead Makeup
Dye in second 10 bbl

Casing ID

8.921

Casing Grade

J-55 only used

Calculated Results

cuft of Shoe 17.36 cuft
(Casing ID Squared) X (.005454) X (Shoe Joint ft)
cuft of Conductor 119.17 cuft
(Conductor Width Squared) - (Casing Size OD Squared) X (.005454) X (Conductor Length ft)
cuft of Casing 994.25 cuft
(Open Hole Squared) - (Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)
Total Slurry Volume 1130.78 cuft
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)
bbls of Slurry 201.39 bbls
(Total Slurry Volume) X (.1781)
Sacks Needed 759 sk
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)
Mix Water 135.16 bbls
(Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 140.62 bbls

(Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)

Pressure of cement in annulus

Hydrostatic Pressure: 1364.01 PSI

Pressure of the fluids inside casing

Displacement: 780.01 psi

Shoe Joint: 29.51 psi

Total 809.51 psi

Differential Pressure: 554.49 psi

Collapse PSI: 2020.00 psi

Burst PSI: 3520.00 psi

Total Water Needed: 315.78 bbls

X

Authorization To Proceed