



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 2/25/2018
 Invoice #: 900266
 API#: 05-123-46084
 Foreman: Corey Barras

Customer: Bill Barrett Corp.

Well Name: Anschutz State 5-62-26 3340 C

County: Weld
 State: Colorado
 Sec: 27
 Twp: 5N
 Range: 62W

Consultant: Matt
 Rig Name & Number: WM 344
 Distance To Location: 25
 Units On Location: 4024/3103 -4030/3213
 Time Requested: 1430
 Time Arrived On Location: 1430
 Time Left Location:

WELL DATA	Cement Data
Casing Size OD (in) : 9.625	Cement Name: BFN III
Casing Weight (lb) : 36.00	Cement Density (lb/gal) : 14.2
Casing Depth (ft.) : 817	Cement Yield (cuft) : 1.48
Total Depth (ft) : 817	Gallons Per Sack: 7.49
Open Hole Diameter (in.) : 13.50	% Excess: 10%
Conductor Length (ft) : 0	Displacement Fluid lb/gal: 8.3
Conductor ID : 0	BBL to Pit:
Shoe Joint Length (ft) : 42	Fluid Ahead (bbls): 20.0
Landing Joint (ft) : 0	H2O Wash Up (bbls): 20.0
Max Rate: 8	Spacer Ahead Makeup
Max Pressure: 2500	20 BBL with die in 1st 10

Calculated Results	Displacement: 58.68 bbls
cuft of Shoe 18.23 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 0.00 cuft (Conductor Width Squared) -(Casing Size OD Squared) X (.005454) X (Conductor Length ft)	Pressure of cement in annulus Hydrostatic Pressure: 590.90 PSI
cuft of Casing 430.62 cuft (Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)	Pressure of the fluids inside casing Displacement: 327.27 psi Shoe Joint: 30.98 psi Total 358.25 psi
Total Slurry Volume 448.85 cuft (cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)	Differential Pressure: 232.65 psi
bbls of Slurry 79.94 bbls (Total Slurry Volume) X (.1781)	Collapse PSI: 2020.00 psi Burst PSI: 3520.00 psi
Sacks Needed 303 sk (Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)	Total Water Needed: 152.76 bbls
Mix Water 54.08 bbls (Sacks Needed) X (Gallons Per Sack) ÷ 42	

X *Corey Barras*
 Authorization To Proceed

