



Bison Oil Well Cementing Single Cement Surface Pipe

Invoice # 12732
API# 445564
Foreman: monte

Customer: bill barrett
Well Name: 70ranch 4-63-3-4956cdh

County: weld
State: colorado
Sec: 3
Twp: 4n
Range: 63w
Consultant: casey
Rig Name & Number: major
Distance To Location: 26.4
Units On Location: 3104-2313
Time Requested: 430am
Time Arrived On Location: 400am
Time Left Location:

WELL DATA	Cement Data
Casing Size OD (in) : 9.6250	Cement Name: BFN III
Casing Weight (lb) : 36	Cement Density (lb/gal) : 15.2
Casing Depth (ft.) : 820	Cement Yield (cuft) : 1.27
Total Depth (ft) : 820	Gallons Per Sack: 5.89
Open Hole Diameter (in.) : 13.50	% Excess: 10%
Conductor Length (ft) :	Displacement Fluid lb/gal:
Conductor ID :	BBL to Pit:
Shoe Joint Length (ft) : 43	Fluid Ahead (bbls):
Landing Joint (ft) : 6	H2O Wash Up (bbls): 20.0
Max Rate:	Spacer Ahead Makeup
Max Pressure:	10 fresh 10 dye 40 fresh

Calculated Results	Pressure of cement in annulus
Displacement: 60.49 bbls (Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)	Hydrostatic Pressure: 647.16 PSI
cuft of Shoe 18.75 cuft (Casing ID Squared) X (.005454) X (Shoe Joint ft)	
cuft of Conductor 0.00 cuft (Conductor Width Squared) -(Casing Size OD Squared) X (.005454) X (Conductor Length ft)	Pressure of the fluids inside casing Displacement: #N/A psi Shoe Joint: 34.11 psi Total #N/A psi Differential Pressure: #N/A psi
cuft of Casing 400.56 cuft (Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)	
Total Slurry Volume 419.31 cuft (cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)	
bbls of Slurry 82.15 bbls (Total Slurry Volume) X (.1781) X (% Excess Cement)	Collapse PSI: 2020.00 psi Burst PSI: 3520.00 psi
Sacks Needed 363 sk (Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)	
Mix Water 50.93 bbls (Sacks Needed) X (Gallons Per Sack) ÷ 42	Total Water Needed: 70.93 bbls

x Casey
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.