



Bison Oil Well Cementing Single Cement Surface Pipe

Invoice # 12731
API# 445564
Foreman: monte

Customer: bill barrett
Well Name: 70 Ranch 4-63-3-4856CDH

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: 100am
Time Arrived On Location: 1200am
Time Left Location: 5:30

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.) : 818	Cement Yield (cuft) : 1.27
Total Depth (ft) : 820	Gallons Per Sack: 5.89
Open Hole Diameter (in.) : 13.50	% Excess: 20%
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

Casing ID 8.921 Casing Grade J-55 only used

Calculated Results	Pressure of cement in annulus
cuft of Shoe 18.62 cuft (Casing ID Squared) X (.005454) X (Shoe Joint ft)	Displacement: 60.39 bbls (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)	Hydrostatic Pressure: 645.89 PSI
cuft of Casing 399.78 cuft (Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)	Pressure of the fluids inside casing
Total Slurry Volume 418.40 cuft (cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)	Displacement: #N/A psi
bbls of Slurry 89.42 bbls (Total Slurry Volume) X (.1781) X (% Excess Cement)	Shoe Joint: 33.87 psi
Sacks Needed 395 sk (Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)	Total #N/A psi
Mix Water 55.44 bbls (Sacks Needed) X (Gallons Per Sack) ÷ 42	Differential Pressure: #N/A psi
	Collapse PSI: 2020.00 psi
	Burst PSI: 3520.00 psi
	Total Water Needed: 75.44 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.