



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 9/3/2014
 Invoice #: 12085
 API#: 05-123-18394
 Foreman: JASON

Customer: NOBLE

Well Name: SCHISSLER 1-11

County: Weld County
 State: Colorado
 Sec: 1
 Twp: 4N
 Range: 65W

Consultant: CHUCK
 Rig Name & Number: LEED
 Distance To Location: 11
 Units On Location: 4031-3106
 Time Requested: 800
 Time Arrived On Location: 730
 Time Left Location: 1200

WELL DATA	Cement Data
Casing Size OD (in) : 4.5	Cement Name: BFN III
Casing Weight (lb) : 11.60	Cement Density (lb/gal) : 15.2
Casing Depth (ft.) : 595	Cement Yield (cuft) : 1.27
Total Depth (ft) : 1000	Gallons Per Sack: 5.89
Open Hole Diameter (in.) : 8.10	% Excess:
Conductor Length (ft) :	Displacement Fluid lb/gal: 8.3
Conductor ID :	BBL to Pit: 2.0
Shoe Joint Length (ft) : 0	Fluid Ahead (bbls): 4.0
Landing Joint (ft) : 0	H2O Wash Up (bbls): 20.0
Max Rate: 3	Spacer Ahead Makeup
Max Pressure: 1500	4 BBL WATER

Casing ID 4 Casing Grade J-55 only used

Calculated Results	Pressure of cement in annulus
Displacement: 9.25 bbls	(Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)
cuft of Shoe 0.00 cuft (Casing ID Squared) X (.005454) X (Shoe Joint ft)	Pressure of the fluids inside casing
cuft of Conductor 0.00 cuft (Conductor Width Squared) -(Casing Size OD Squared) X (.005454) X (Conductor Length ft)	Hydrostatic Pressure: 469.81 PSI
cuft of Casing 147.04 cuft (Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)	Displacement: 256.55 psi
Total Slurry Volume 147.04 cuft (cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)	Shoe Joint: 0.00 psi
bbls of Slurry 26.19 bbls (Total Slurry Volume) X (.1781) X (% Excess Cement)	Total 256.55 psi
Sacks Needed 116 sk (Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)	Differential Pressure: 213.26 psi
Mix Water 16.24 bbls (Sacks Needed) X (Gallons Per Sack) ÷ 42	Collapse PSI: #N/A psi
	Burst PSI: #N/A psi
	Total Water Needed: 49.48 bbls



Authorization To Proceed