



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 1/5/2017
 Invoice #: 200014
 API#
 Foreman: Kirk Kallhoff

Customer: Anadarko Petroleum Corporation

Well Name: garfield 27c-14hz

County: Weld
 State: Colorado
 Sec: 23
 Twp: 1n
 Range: 67w

Consultant: brian
 Rig Name & Number: wmo 252
 Distance To Location: 35
 Units On Location: 4028/4030/4032
 Time Requested: 400 pm
 Time Arrived On Location: 300 pm
 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.) : 2,232	Cement Yield (cuft) : 1.48
Total Depth (ft) : 2257	Gallons Per Sack: 7.40
Open Hole Diameter (in.) : 13.50	% Excess: 15%
Conductor Length (ft) : 80	Displacement Fluid lb/gal: 8.3
Conductor ID : 15.5	Fluid Ahead (bbls): 30.0
Shoe Joint Length (ft) : 42	H2O Wash Up (bbls): 10.0
Landing Joint (ft) : 15	Spacer Ahead Makeup
Max Rate: 7	h2o
Max Pressure: 1500	

Casing ID 8.921 Casing Grade J-55 only used

Calculated Results	Pressure of cement in annulus
Displacement: 170.46 bbls (Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)	Hydrostatic Pressure: 1646.55 PSI
cuft of Shoe 18.23 cuft (Casing ID Squared) X (.005454) X (Shoe Joint ft)	Pressure of the fluids inside casing
cuft of Conductor 64.40 cuft (Conductor Width Squared) -(Casing Size OD Squared) X (.005454) X (Conductor Length ft)	Displacement: 944.29 psi
cuft of Casing 1209.51 cuft (Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)	Shoe Joint: 30.98 psi
Total Slurry Volume 1292.14 cuft (cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)	Total 975.27 psi
bbls of Slurry 230.13 bbls (Total Slurry Volume) X (.1781)	Differential Pressure: 671.28 psi
Sacks Needed 873 sk (Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)	Collapse PSI: 2020.00 psi
Mix Water 153.83 bbls (Sacks Needed) X (Gallons Per Sack) ÷ 42	Burst PSI: 3520.00 psi
	Total Water Needed: 364.29 bbls

X
 Authorization To Proceed

SERIES 2000

