



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 1/10/2018
Invoice #: 900233
API#: 05-123-45864
Foreman: Corey Barras

Customer: Anadarko Petroleum Corporation

Well Name: Hergenreder 22N1-4HZ

County: Weld
State: Colorado
Sec: 33
Twp: 3N
Range: 68W

Consultant: Matt
Rig Name & Number: Cartel 88
Distance To Location: 30
Units On Location: 1027-3103/4020-3214/4024-320
Time Requested: 1200
Time Arrived On Location: 1100
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.) : 2,262	Cement Yield (cuft) : 1.48
Total Depth (ft) : 2272	Gallons Per Sack: 7.40
Open Hole Diameter (in.) : 13.50	% Excess: 5%
Conductor Length (ft) : 80	Displacement Fluid lb/gal: 8.3
Conductor ID : 15.25	BBL to Pit:
Shoe Joint Length (ft) : 44	Fluid Ahead (bbls): 30.0
Landing Joint (ft) : 15	H2O Wash Up (bbls): 20.0
Max Rate: 8	Spacer Ahead Makeup
Max Pressure: 2000	30 bbl with Die in 2nd 10

Casing ID	8.921	Casing Grade	J-55 only used
Calculated Results	Displacement:	172.63	bbls
cuft of Shoe 19.10 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 61.05 cuft (Conductor Width Squared) -(Casing Size OD Squared) X (.005454) X (Conductor Length ft)	Pressure of cement in annulus	Hydrostatic Pressure: 1668.68 PSI	
cuft of Casing 1119.73 cuft (Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)	Pressure of the fluids inside casing	Displacement: 956.36 psi	
Total Slurry Volume 1199.88 cuft (cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)	Shoe Joint: 32.46 psi		Total 988.82 psi
bbls of Slurry 213.70 bbls (Total Slurry Volume) X (.1781)	Differential Pressure:		679.86 psi
Sacks Needed 811 sk (Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)	Collapse PSI:		2020.00 psi
Mix Water 142.84 bbls (Sacks Needed) X (Gallons Per Sack) ÷ 42	Burst PSI:		3520.00 psi
	Total Water Needed:		365.47 bbls

X 
Authorization To Proceed

Date _____

Hergenreder 22N 1-4HZ

