



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 2/24/2018
 Invoice #: 200253
 API#
 Foreman: Kirk Kallhoff

Customer: Anadarko Petroleum Corporation
 Well Name: marrs 3n-10hz

County: Weld
 State: Colorado
 Sec: 22
 Twp: 1n
 Range: 67w

Consultant: luke
 Rig Name & Number: CARTEL 88
 Distance To Location: 34
 Units On Location: 4028/4041/4039
 Time Requested: 600 pm
 Time Arrived On Location: 500 pm
 Time Left Location: 10:00 pm

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.) : 1,868	Cement Yield (cuft) : 1.48
Total Depth (ft) : 1878	Gallons Per Sack: 7.48
Open Hole Diameter (in.) : 13.50	% Excess: 5%
Conductor Length (ft) : 80	Displacement Fluid lb/gal: 8.3
Conductor ID : 15.5	BBL to Pit:
Shoe Joint Length (ft) : 41	Fluid Ahead (bbls): 30.0
Landing Joint (ft) : 8	H2O Wash Up (bbls): 10.0
Max Rate: 8	Spacer Ahead Makeup
Max Pressure: 2000	30 BBL WATER, DYE IN 2ND 10

Calculated Results	Pressure of cement in annulus
Displacement: 141.86 bbls (Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)	Hydrostatic Pressure: 1378.02 PSI
cuft of Shoe 17.80 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: 787.77 psi Shoe Joint: 30.25 psi Total: 818.01 psi
cuft of Casing 917.54 cuft (Open Hole Squared) - (Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)	Differential Pressure: 560.01 psi
Total Slurry Volume 999.74 cuft (cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)	Collapse PSI: 2020.00 psi Burst PSI: 3520.00 psi
bbls of Slurry 178.05 bbls (Total Slurry Volume) X (.1781)	Total Water Needed: 302.16 bbls
Sacks Needed 676 sk (Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)	
Mix Water 120.30 bbls (Sacks Needed) X (Gallons Per Sack) ÷ 42	

X
 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.

SERIES 2000

