



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 6/4/2015

Invoice # 80084

API#

Foreman: Kirk Kallhoff

Customer: Anadarko Petroleum Corporation

Well Name: Viper Pyro State 16N2-10HZ

County: Weld
State: Colorado

Sec: 15
Twp: 3n
Range: 67w

Consultant: sam

Rig Name & Number: pinnergy 4

Distance To Location: 26

Units On Location: 4038-3103/4034-3103

Time Requested: 1200 pm

Time Arrived On Location: 1000 pm

Time Left Location: 4:15 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.) : 1,887	Cement Yield (cuft) : 1.49
Total Depth (ft) : 1907	Gallons Per Sack: 7.48
Open Hole Diameter (in.) : 13.50	% Excess: 20%
Conductor Length (ft) : 60	Displacement Fluid lb/gal: 8.3
Conductor ID : 16	BBL to Pit:
Shoe Joint Length (ft) : 40	Fluid Ahead (bbls): 30.0
Landing Joint (ft) : 10	H2O Wash Up (bbls): 10.0
Max Rate:	Spacer Ahead Makeup
Max Pressure:	

Casing ID

8.921

Casing Grade

J-55 only used

Calculated Results	Pressure of cement in annulus
cuft of Shoe 17.36 cuft (Casing ID Squared) X (.005454) X (Shoe Joint ft)	Displacement: 143.56 bbls (Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)
cuft of Conductor 53.46 cuft (Conductor Width Squared) -(Casing Size OD Squared) X (.005454) X (Conductor Length ft)	Hydrostatic Pressure: 1392.04 PSI
cuft of Casing 1071.49 cuft (Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)	Pressure of the fluids inside casing
Total Slurry Volume 1142.31 cuft (cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)	Displacement: 796.39 psi
bbls of Slurry 203.45 bbls (Total Slurry Volume) X (.1781)	Shoe Joint: 29.51 psi
Sacks Needed 767 sk (Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)	Total 825.90 psi
Mix Water 136.54 bbls (Sacks Needed) X (Gallons Per Sack) ÷ 42	Differential Pressure: 566.14 psi
	Collapse PSI: 2020.00 psi
	Burst PSI: 3520.00 psi
	Total Water Needed: 320.10 bbls

X *Sumner J. Kelly*
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.

M/D TOTCO 2000 SERIES

