



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 5/7/2019

Invoice # 900340

API# 05-123-48124

Foreman: Corey Barras

Customer: Anadarko Petroleum Corporation

Well Name: Carson 1-13HZ

County: Weld

State: Colorado

Sec: 9

Twp: 1n

Range: 68w

Consultant: David

Rig Name & Number: CARTEL 88

Distance To Location: 38

Units On Location: 4046/3104-4030/3215-4033/3201

Time Requested: 800

Time Arrived On Location: 730

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) : 1,923	Cement Yield (cuft) : 1.48
Total Depth (ft) : 1933	Gallons Per Sack: 7.48
Open Hole Diameter (in.) : 13.50	% Excess: 30%
Conductor Length (ft) : 80	Displacement Fluid lb/gal: 8.3
Conductor ID : 19.124	BBL to Pit:
Shoe Joint Length (ft) : 42	Fluid Ahead (bbls): 30.0
Landing Joint (ft) : 8	H2O Wash Up (bbls): 20.0
Max Rate: 8	Spacer Ahead Makeup
Max Pressure: 2000	30 BBL WATER, DYE IN 2ND 10

Casing ID 8.921 Casing Grade J-55 only used

Calculated Results	Pressure of cement in annulus
cuft of Shoe 18.23 cuft (Casing ID Squared) X (.005454) X (Shoe Joint ft)	Displacement: 146.04 bbls (Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)
cuft of Conductor 119.15 cuft (Conductor Width Squared) -(Casing Size OD Squared) X (.005454) X (Conductor Length ft)	Hydrostatic Pressure: 1418.60 PSI
cuft of Casing 1170.95 cuft (Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)	Pressure of the fluids inside casing
Total Slurry Volume 1308.33 cuft (cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)	Displacement: 811.05 psi
bbls of Slurry 233.01 bbls (Total Slurry Volume) X (.1781)	Shoe Joint: 30.98 psi
Sacks Needed 884 sk (Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)	Total 842.04 psi
Mix Water 157.44 bbls (Sacks Needed) X (Gallons Per Sack) ÷ 42	Differential Pressure: 576.56 psi
	Collapse PSI: 2020.00 psi
	Burst PSI: 3520.00 psi
	Total Water Needed: 353.47 bbls

X
Authorization To Proceed

Carson1-13HZ

— PSI — Barrels / Minute — Lbs / Gallon

