



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 10/21/2019

Invoice # 900425

API# 05-069-50492

Foreman: Corey Barras

Customer: Anadarko Petroleum Corporation

Well Name: Cleland 15-5HZ

County: Weld

State: Colorado

Sec: 20

Twp: 3n

Range: 66w

Consultant: Tyler

Rig Name & Number: CARTEL 88

Distance To Location: 40

Units On Location: 4028/3103-4024/3214-4044/3205

Time Requested: 630

Time Arrived On Location: 615

Time Left Location:

WELL DATA

Casing Size OD (in) : 9.625
 Casing Weight (lb) : 36.00
 Casing Depth (ft.) : 1,854
 Total Depth (ft) : 1890
 Open Hole Diameter (in.) : 13.50
 Conductor Length (ft) : 80
 Conductor ID : 15.25
 Shoe Joint Length (ft) : 42
 Landing Joint (ft) : 8

Max Rate: 8
 Max Pressure: 2000

Cement Data

Cement Name: BFN III
 Cement Density (lb/gal) : 14.2
 Cement Yield (cuft) : 1.48
 Gallons Per Sack: 7.48
 % Excess: 50%
 Displacement Fluid lb/gal: 8.3
 BBL to Pit:
 Fluid Ahead (bbls): 30.0
 H2O Wash Up (bbls): 20.0

Spacer Ahead Makeup
 30 BBL WATER, DYE IN 2ND 10

Casing ID

8.921

Casing Grade

J-55 only used

Calculated Results

cuft of Shoe 18.23 cuft
 (Casing ID Squared) X (.005454) X (Shoe Joint ft)

cuft of Conductor 61.05 cuft
 (Conductor Width Squared) -(Casing Size OD Squared) X (.005454) X (Conductor Length ft)

cuft of Casing 1300.51 cuft
 (Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)

Total Slurry Volume 1379.79 cuft
 (cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)

bbls of Slurry 245.74 bbls
 (Total Slurry Volume) X (.1781)

Sacks Needed 932 sk
 (Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)

Mix Water 166.04 bbls
 (Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 140.70 bbls

(Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)

Pressure of cement in annulus

Hydrostatic Pressure: 1367.70 PSI

Pressure of the fluids inside casing

Displacement: 781.30 psi

Shoe Joint: 30.98 psi

Total 812.28 psi

Differential Pressure: 555.41 psi

Collapse PSI: 2020.00 psi

Burst PSI: 3520.00 psi

Total Water Needed: 356.74 bbls

X *Tyler H. H. H.*
 Authorization To Proceed

Cleland 15-5HZ

