



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 4/18/2021
 Invoice # 900511
 API# 512351409
 Foreman: kirt/Terry Richey

Customer: Occidental Petroleum

Well Name: SHAKE 11-11HZ

County: Weld
 State: Colorado
 Sec: 11
 Twp: 4N
 Range: 6SW

Consultant: David
 Rig Name & Number: Icon 12
 Distance To Location: 36
 Units On Location: 4045/3103-4039/3205-4033/3201
 Time Requested: 100AM
 Time Arrived On Location: 1130pm
 Time Left Location: _____

WELL DATA

Casing Size OD (in) : 9.625
 Casing Weight (lb) : 36.00
 Casing Depth (ft.) : 1,888
 Total Depth (ft) : 1898
 Open Hole Diameter (in.) : 13.50
 Conductor Length (ft) : 80
 Conductor ID : 15.5
 Shoe Joint Length (ft) : 41
 Landing Joint (ft) : 8

Max Rate: 7
 Max Pressure: 1500

Cement Data

Cement Name: BFN III
 Cement Density (lb/gal) : 14.2
 Cement Yield (cuft) : 1.48
 Gallons Per Sack: 7.40
 % Excess: 10%
 Displacement Fluid lb/gal: 8.3
 BBL to Pit: _____
 Fluid Ahead (bbls): 30.0
 H2O Wash Up (bbls): 30.0

Spacer Ahead Makeup
10 BBL H2O 10BBL DIE 10BBL H2O

Casing ID 8.921 Casing Grade J-55 only used

Calculated Results

cuft of Shoe 17.80 **cuft**
 (Casing ID Squared) X (.005454) X (Shoe Joint ft)

cuft of Conductor 64.40 **cuft**
 (Conductor Width Squared) -(Casing Size OD Squared) X (.005454) X (Conductor Length ft)

cuft of Casing 971.99 **cuft**
 (Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)

Total Slurry Volume 1054.19 **cuft**
 (cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)

bbls of Slurry 187.75 **bbls**
 (Total Slurry Volume) X (.1781)

Sacks Needed 712 **sk**
 (Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)

Mix Water 125.50 **bbls**
 (Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 143.41 **bbls**

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

Pressure of cement in annulus

Hydrostatic Pressure: 1392.78 **PSI**

Pressure of the fluids inside casing

Displacement: 796.39 **psi**

Shoe Joint: 30.25 **psi**

Total 826.64 **psi**

Differential Pressure: 566.14 **psi**

Collapse PSI: 2020.00 **psi**

Burst PSI: 3520.00 **psi**

Total Water Needed: 328.90 **bbls**

X

Authorization To Proceed