



Occidental Petroleum
SHAKE 11-3HZ

900505
Weld
kirt/Terry Richey
4/12/2021

Date _____



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 4/12/2021
Invoice #: 900505
API#: 512351419
Foreman: kirt/Terry Richey

Customer: Occidental Petroleum

Well Name: SHAKE 11-3HZ

County: Weld
State: Colorado

Sec: 11
Twp: 4N
Range: 68W

Consultant: David
Rig Name & Number: Icon 12
Distance To Location: 36
Units On Location: 4045/3103-4039/3205-4033/3201
Time Requested: 500pm
Time Arrived On Location: 340pm
Time Left Location:

WELL DATA

Casing Size OD (in) : 9.625
Casing Weight (lb) : 36.00
Casing Depth (ft.) : 1,898
Total Depth (ft) : 1908
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: 7.0
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 977.36 cuft
(Open Hole Squared) - (Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)

Total Slurry Volume 1059.56 cuft
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)

bbls of Slurry 188.71 bbls
(Total Slurry Volume) X (.1781)

Sacks Needed 716 sk
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)

Mix Water 126.14 bbls
(Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 144.18 bbls

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

Pressure of cement in annulus

Hydrostatic Pressure: 1400.15 PSI

Pressure of the fluids inside casing

Displacement: 800.70 psi

Shoe Joint: 30.25 psi

Total 830.95 psi

Differential Pressure: 569.21 psi

Collapse PSI: 2020.00 psi

Burst PSI: 3520.00 psi

Total Water Needed: 330.32 bbls

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.