



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 11/9/2017

Invoice # 666228

API# 05-123-44206

Foreman: Nick Vigil

Customer: Anadarko Petroleum Corporation

Well Name: LEINWEBER FED 31N-8HZ

County: Weld

State: Colorado

Sec: 11

Twp: 1N

Range: 67W

Consultant: Sean/Levi

Rig Name & Number: Cartel 88

Distance To Location: 30 Miles

Units On Location: 4023/4040/4039

Time Requested: 1:30

Time Arrived On Location: 1:15

Time Left Location:

WELL DATA

Casing Size OD (in) : 9.625

Casing Weight (lb) : 36.00

Casing Depth (ft.) : 1,854

Total Depth (ft) : 1863

Open Hole Diameter (in.) : 13.50

Conductor Length (ft) : 80

Conductor ID : 15.25

Shoe Joint Length (ft) : 42

Landing Joint (ft) : 10

Max Rate: 8

Max Pressure: 2000

Cement Data

Cement Name: BFN III

Cement Density (lb/gal) : 14.2

Cement Yield (cuft) : 1.49

Gallons Per Sack: 7.48

% Excess: 10%

Displacement Fluid lb/gal: 8.3

BBL to Pit:

Fluid Ahead (bbls): 30.0

H2O Wash Up (bbls): 20.0

Spacer Ahead Makeup

Dye in second 10 bbl

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 953.71 cuft

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

Total Slurry Volume 1032.99 cuft

(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)

bbls of Slurry 183.98 bbls

(Total Slurry Volume) X (.1781)

Sacks Needed 693 sk

(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)

Mix Water 123.47 bbls

(Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 140.86 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: 314.33 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.

X 11/9/17
Date

Leinweber Fed 31N-8HZ

