



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 4/10/2015

Invoice # 80071

API#

Foreman: Kirk Kallhoff

Customer: Anadarko Petroleum Corporation

Well Name: bane 27n2-9hz

County: Weld

State: Colorado

Sec: 9

Twp: 1n

Range: 65w

Consultant: tim

Rig Name & Number: advanced 10

Distance To Location: 26

Units On Location: 4038-3103/4030-3103

Time Requested: 1200 am

Time Arrived On Location: 1000 pm

Time Left Location: 3:00 pm

WELL DATA

Casing Size OD (in) : 9.625
Casing Weight (lb) : 36.00
Casing Depth (ft) : 1,577
Total Depth (ft) : 1595
Open Hole Diameter (in.) : 13.50
Conductor Length (ft) : 40
Conductor ID : 16
Shoe Joint Length (ft) : 42
Landing Joint (ft) : 8

Max Rate:

Max Pressure:

Cement Data

Cement Name: BFN III
Cement Density (lb/gal) : 14.2
Cement Yield (cuft) : 1.49
Gallons Per Sack: 7.48
% Excess: 20%
Displacement Fluid lb/gal: 8.3
BBL to Pit:
Fluid Ahead (bbls): 30.0
H2O Wash Up (bbls): 10.0

Spacer Ahead Makeup

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 35.64 cuft

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

cuft of Casing 901.41 cuft

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

Total Slurry Volume 955.28 cuft

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

bbls of Slurry 170.14 bbls

(Total Slurry Volume) X (.1781)

Sacks Needed 641 sk

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

Mix Water 114.18 bbls

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

Displacement: 119.29 bbls

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

Pressure of cement in annulus

Hydrostatic Pressure: 1163.35 PSI

Pressure of the fluids inside casing

Displacement: 661.86 psi

Shoe Joint: 30.98 psi

Total 692.85 psi

Differential Pressure: 470.51 psi

Collapse PSI: 2020.00 psi

Burst PSI: 3520.00 psi

Total Water Needed: 273.47 bbls

Bryan Brown
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 4-11-15
Date

M/D TOTCO 2000 SERIES

— PSI — Barrels / Minute — Barrels — Lbs / Gallon — Stage Volume

