

X 9-21-15
Date



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 9/21/2015

Invoice # 80533

API#

Foreman: Kirk Kallhoff

Customer: Anadarko Petroleum Corporation

Well Name: thermo 15c-33hz

County: Weld

State: Colorado

Sec: 33

Twp: 2n

Range: 66w

Consultant: hayden

Rig Name & Number: noble 2

Distance To Location: 28

Units On Location: 4029-3106/4024-3203

Time Requested: 730 am

Time Arrived On Location: 530 am

Time Left Location: 10:30 am

WELL DATA

Casing Size OD (in) : 9.625
Casing Weight (lb) : 36.00
Casing Depth (ft.) : 1,921
Total Depth (ft) : 1931
Open Hole Diameter (in.) : 13.50
Conductor Length (ft) : 40
Conductor ID : 15.25
Shoe Joint Length (ft) : 43
Landing Joint (ft) : 10

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: 15%
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 18.66 cuft

(Casing ID Squared) X (.005454) X (Shoe Joint ft)

cuft of Conductor 30.53 cuft

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

cuft of Casing 1057.20 cuft

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

Total Slurry Volume 1106.38 cuft

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

bbls of Slurry 197.05 bbls

(Total Slurry Volume) X (.1781)

Sacks Needed 743 sk

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

Mix Water 132.24 bbls

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

Displacement: 145.96 bbls
(Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)

Pressure of cement in annulus

Hydrostatic Pressure: 1417.12 PSI

Pressure of the fluids inside casing

Displacement: 809.76 psi

Shoe Joint: 31.72 psi


Total 841.48 psi

Differential Pressure: 575.64 psi

Collapse PSI: 2020.00 psi

Burst PSI: 3520.00 psi

Total Water Needed: 318.20 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.

M/D TOTCO 2000 SERIES

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

