



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 5/17/2015

Invoice # 80076

API#

Foreman: Kirk Kallhoff

Customer: Anadarko Petroleum Corporation

Well Name: iceman state 5n-c16hz

County: Weld

State: Colorado

Sec: 15

Twp: 3n

Range: 67w

Consultant: brian

Rig Name & Number: pinnergy 4

Distance To Location: 26

Units On Location: 4038-3103/4032-3103

Time Requested: 900 pm

Time Arrived On Location: 700 pm

Time Left Location: 7:00 pm

WELL DATA

Casing Size OD (in) : 9.625

Casing Weight (lb) : 36.00

Casing Depth (ft.) : 1,632

Total Depth (ft) : 1652

Open Hole Diameter (in.) : 13.50

Conductor Length (ft) : 60

Conductor ID : 16

Shoe Joint Length (ft) : 41

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: 25%

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 17.80 cuft

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

cuft of Conductor 53.46 cuft

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

cuft of Casing 960.35 cuft

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

Total Slurry Volume 1031.61 cuft

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

bbls of Slurry 183.73 bbls

(Total Slurry Volume) X (.1781)

Sacks Needed 692 sk

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

Mix Water 123.30 bbls

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

Displacement: 123.77 bbls

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

Pressure of cement in annulus

Hydrostatic Pressure: 1203.93 PSI

Pressure of the fluids inside casing

Displacement: 686.01 psi

Shoe Joint: 30.25 psi

Total 716.25 psi

Differential Pressure: 487.67 psi

Collapse PSI: 2020.00 psi

Burst PSI: 3520.00 psi

Total Water Needed: 287.08 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

M/D TOTCO 2000 SERIES

