



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 6/17/2015

Invoice # 80148

API# 05-123-41331

Foreman: JASON KELEHER

Customer: Anadarko Petroleum Corporation

Well Name: JOKER 26N1-9HZ

County: Weld

State: Colorado

Sec: 9

Twp: 1N

Range: 65W

Consultant: LUKE

Rig Name & Number: NOBLE 2

Distance To Location: 22

Units On Location: 4031-3106/ 3105-3204

Time Requested: 1800

Time Arrived On Location: 1700

Time Left Location: 2300

WELL DATA

Casing Size OD (in) : 9.625
Casing Weight (lb) : 36.00
Casing Depth (ft.) : 1,845
Total Depth (ft) : 1881
Open Hole Diameter (in.) : 13.50
Conductor Length (ft) : 47
Conductor ID : 15.25
Shoe Joint Length (ft) : 39
Landing Joint (ft) : 10

Max Rate: 6
Max Pressure: 1000

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: 22.0
Fluid Ahead (bbls): 30.0
H2O Wash Up (bbls): 20.0

Spacer Ahead Makeup
30BBL WATER/ DYE IN 2ND 10

Casing ID

8.921

Casing Grade

J-55 only used

Calculated Results

cuft of Shoe 17.01 cuft
(Casing ID Squared) X (.005454) X (Shoe Joint ft)

cuft of Conductor 35.87 cuft
(Conductor Width Squared) -(Casing Size OD Squared) X (.005454) X (Conductor Length ft)

cuft of Casing 966.43 cuft
(Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)

Total Slurry Volume 1019.30 cuft
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)

bbls of Slurry 181.54 bbls
(Total Slurry Volume) X (.1781)

Sacks Needed 684 sk
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)

Mix Water 121.83 bbls
(Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 140.35 bbls

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

Pressure of cement in annulus

Hydrostatic Pressure: 1360.81 PSI

Pressure of the fluids inside casing

Displacement: 778.49 psi

Shoe Joint: 28.90 psi

Total 807.39 psi

Differential Pressure: 553.41 psi

Collapse PSI: 2020.00 psi

Burst PSI: 3520.00 psi

Total Water Needed: 312.19 bbls

X

Authorization is Granted

APC/Noble²

Customers hereby acknowledges and specifically agrees to the terms and condition on this work order, including, without limitation, the provisions on this work order.

Date _____

JOKER 26N1-9HZ SURFACE

