



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 6/12/2015
Invoice #: 80146
API#: 05-123-41483
Foreman: JASON KELEHER

Customer: Anadarko Petroleum Corporation

Well Name: FEHRN 37C-32HZ

County: Weld
State: Colorado

Sec: 32
Twp: 2N
Range: 66W

Consultant: BRYAN
Rig Name & Number: PINN 4
Distance To Location: 19
Units On Location: 4031-3106/ 4034-3203
Time Requested: 2330
Time Arrived On Location: 2130
Time Left Location: 600

WELL DATA

Casing Size OD (in) : 9.625
Casing Weight (lb) : 36.00
Casing Depth (ft.) : 1,858
Total Depth (ft) : 1875
Open Hole Diameter (in.) : 13.50
Conductor Length (ft) : 60
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: 20%
Displacement Fluid lb/gal: 8.3
BBL to Pit: 25.0
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 16.92 cuft

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

cuft of Conductor 45.79 cuft
(Conductor Width Squared) -(Casing Size OD Squared) X (.005454) X (Conductor Length ft)

cuft of Casing 1054.39 cuft
(Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)

Total Slurry Volume 1117.10 cuft
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)

bbls of Slurry 198.95 bbls
(Total Slurry Volume) X (.1781)

Sacks Needed 750 sk
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)

Mix Water 133.52 bbls
(Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 141.39 bbls

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

Pressure of cement in annulus

Hydrostatic Pressure: 1370.53 PSI

Pressure of the fluids inside casing

Displacement: 784.26 psi

Shoe Joint: 28.76 psi

Total 813.01 psi

Differential Pressure: 557.51 psi

Collapse PSI: 2020.00 psi

Burst PSI: 3520.00 psi

Total Water Needed: 324.91 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.

Date _____

FEHRN 37C-32HZ SURFACE

