



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 5/8/2017
Invoice #: 200085
API#:
Foreman: Kirk Kallhoff

Customer: Anadarko Petroleum Corporation
Well Name: hilgers 33 n1-22hz

County: Weld
State: Colorado
Sec: 22
Twp: 3n
Range: 68w
Consultant: matt
Rig Name & Number: wmo 252
Distance To Location: 28
Units On Location: 4028/4030/4035
Time Requested: 500 pm
Time Arrived On Location: 330 pm
Time Left Location: 12:45 pm

WELL DATA

Casing Size OD (in) : 9.625
Casing Weight (lb) : 36.00
Casing Depth (ft) : 1,853
Total Depth (ft) : 1878
Open Hole Diameter (in.) : 13.50
Conductor Length (ft) : 80
Conductor ID : 15.6
Shoe Joint Length (ft) : 44
Landing Joint (ft) : 15

Max Rate: 8
Max Pressure: 2000

Cement Data

Cement Name: BFN III
Cement Density (lb/gal) : 14.2
Cement Yield (cuft) : 1.49
Gallons Per Sack: 7.40
% 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 19.10 cuft
(Casing ID Squared) X (.005454) X (Shoe Joint ft)

cuft of Conductor 65.76 cuft
(Conductor Width Squared) - (Casing Size OD Squared) X (.005454) X (Conductor Length ft)

cuft of Casing 996.50 cuft
(Open Hole Squared) - (Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)

Total Slurry Volume 1081.36 cuft
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)

bbls of Slurry 192.59 bbls
(Total Slurry Volume) X (.1781)

Sacks Needed 726 sk
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)

Mix Water 127.87 bbls
(Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 141.01 bbls

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

Pressure of cement in annulus

Hydrostatic Pressure: 1366.96 PSI

Pressure of the fluids inside casing

Displacement: 780.01 psi

Shoe Joint: 32.46 psi

Total 812.47 psi

Differential Pressure: 554.49 psi

Collapse PSI: 2020.00 psi

Burst PSI: 3520.00 psi

Total Water Needed: 308.88 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.



Customer
Well Name

Anadarko Petroleum Corporation
hilgers 33 n1-22hz

INVOICE #
LOCATION
FOREMAN
Date

200085

Weld

Kirk Kallhoff

5/9/2017

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DESCRIPTION OF JOB EVENTS

X Bryan Brown / BB
Work Performed

X Co-man
Title

X 5-9-17
Date

MOORE

SERIES 2000

