



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 5/9/2017
Invoice #: 200086
API#
Foreman: Kirk Kallhoff

Customer: Anadarko Petroleum Corporation
Well Name: hilgers 12n-22hz

County: Weld
State: Colorado
Sec: 22
Twp: 3n
Range: 68w

Consultant: bryon
Rig Name & Number: wmo 252
Distance To Location: 28
Units On Location: 4028/4030/4033
Time Requested: 100 am
Time Arrived On Location: 1100 pm
Time Left Location: 4:30 pm

WELL DATA

Casing Size OD (in) : 9.625
Casing Weight (lb) : 36.00
Casing Depth (ft.) : 1,852
Total Depth (ft) : 1877
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 995.93 cuft
(Open Hole Squared) - (Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)

Total Slurry Volume 1080.79 cuft
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)

bbls of Slurry 192.49 bbls
(Total Slurry Volume) X (.1781)

Sacks Needed 725 sk
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)

Mix Water 127.80 bbls
(Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 140.93 bbls

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

Pressure of cement in annulus

Hydrostatic Pressure: 1366.22 PSI

Pressure of the fluids inside casing

Displacement: 779.58 psi

Shoe Joint: 32.46 psi

Total 812.03 psi

Differential Pressure: 554.19 psi

Collapse PSI: 2020.00 psi

Burst PSI: 3520.00 psi

Total Water Needed: 308.74 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.



Anadarko Petroleum Corporation
hilgers 12n-22hz

INVOICE #
LOCATION
FOREMAN
Date

200086
Weld
Kirk Kallhoff
5/10/2017

Treatment Report Page 2

DESCRIPTION OF JOB EVENTS

X  / Bryan Brown
Work Preformed

X Co. Man
Title

X 6-10-17
Date

SERIES 2000

