



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 1/24/2018
Invoice #: 200232
API#
Foreman: Kirk Kallhoff

Customer: Anadarko Petroleum Corporation
Well Name: verde 13-3hz

County: Weld
State: Colorado
Sec: 3
Twp: 1n
Range: 68w

Consultant: bryon
Rig Name & Number: CARTEL 88
Distance To Location: 37
Units On Location: 4028/4024/4041
Time Requested: 1000 am
Time Arrived On Location: 930 am
Time Left Location: 2:00 pm

WELL DATA

Casing Size OD (in): 9.625
Casing Weight (lb): 36.00
Casing Depth (ft): 1,838
Total Depth (ft): 1848
Open Hole Diameter (in.): 13.50
Conductor Length (ft): 80
Conductor ID: 15.5
Shoe Joint Length (ft): 42
Landing Joint (ft): 8

Max Rate: 8
Max Pressure: 2000

Cement Data

Cement Name: BFN III
Cement Density (lb/gal): 14.2
Cement Yield (cuft): 1.48
Gallons Per Sack: 7.48
% Excess: 5%
Displacement Fluid lb/gal: 8.3
BBL to Pit:
Fluid Ahead (bbls): 30.0
H2O Wash Up (bbls): 10.0

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

Casing ID

8.921

Casing Grade

J-55 only used

Calculated Results

cuft of Shoe 18.23 cuft
(Casing ID Squared) X (.005454) X (Shoe Joint ft)

cuft of Conductor 64.40 cuft
(Conductor Width Squared) - (Casing Size OD Squared) X (.005454) X (Conductor Length ft)

cuft of Casing 902.15 cuft
(Open Hole Squared) - (Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)

Total Slurry Volume 984.78 cuft
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)

bbls of Slurry 175.39 bbls
(Total Slurry Volume) X (.1781)

Sacks Needed 665 sk
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)

Mix Water 118.50 bbls
(Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 139.46 bbls

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

Pressure of cement in annulus

Hydrostatic Pressure: 1355.89 PSI

Pressure of the fluids inside casing

Displacement: 774.40 psi

Shoe Joint: 30.98 psi

Total 805.38 psi

Differential Pressure: 550.51 psi

Collapse PSI: 2020.00 psi

Burst PSI: 3520.00 psi

Total Water Needed: 297.97 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.

Bison Oil Well Cementing Single Cement Surface Pipe

Customer
Well Name

Anadarko Petroleum Corporation
verde 13-3hz

INVOICE #
LOCATION
FOREMAN
Date

200232
Weld
Kirk Kallhoff
1/24/2018

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DESCRIPTION OF JOB EVENTS

[illegible]

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Authorized signature

x

Title

Date _____

SERIES 2000

