

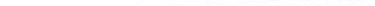


Anadarko Petroleum Corporation
jodster north 25-4hz

200504
Weld
Kirk Kallhoff
8/22/2019

Treatment Report Page 2

DESCRIPTION OF JOB EVENTS

X <u></u> Work Performed	X _____ Title	X <u>8-22-14</u> Date
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Bison Oil Well Cementing Single Cement Surface Pipe

Date: 8/21/2019

Invoice # 200504

API#

Foreman: Kirk Kallhoff

Customer: Anadarko Petroleum Corporation

Well Name: jodster north 25-4hz

County: Weld

State: Colorado

Sec: 12

Twp: 1n

Range: 68w

Consultant: josh

Rig Name & Number: Cartel 88

Distance To Location: 17

Units On Location: 4047/4030/4044

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.) : 1,907

Total Depth (ft) : 1917

Open Hole Diameter (in.) : 13.50

Conductor Length (ft) : 80

Conductor ID : 15.25

Shoe Joint Length (ft) : 40

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: 7.40

% 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 with Die in 2nd 10

Casing ID

8.921

Casing Grade

J-55 only used

Calculated Results

cuft of Shoe 17.36 cuft

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

cuft of Conductor 61.05 cuft

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

cuft of Casing 937.55 cuft

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

Total Slurry Volume 1015.97 cuft

(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)

bbls of Slurry 180.94 bbls

(Total Slurry Volume) X (.1781)

Sacks Needed 686 sk

(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)

Mix Water 120.95 bbls

(Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 144.95 bbls

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

Pressure of cement in annulus

Hydrostatic Pressure: 1406.79 PSI

Pressure of the fluids inside casing

Displacement: 805.02 psi

Shoe Joint: 29.51 PSI

Total 834.52 psi

Differential Pressure: 572.27 psi

Collapse PSI: 2020.00 psi

Burst PSI: 3520.00 psi

Total Water Needed: 305.90 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.

SERIES 2000

