



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 2/18/2018
Invoice #: 200247
API#:
Foreman: Kirk Kallhoff

Customer: Anadarko Petroleum Corporation
Well Name: azul 13-20hz

County: Weld
State: Colorado
Sec: 13
Twp: 1n
Range: 66w

Consultant: bryan
Rig Name & Number: CARTEL 88
Distance To Location: 37
Units On Location: 4028/4039/4035
Time Requested: 1200 pm
Time Arrived On Location: 1100 am
Time Left Location: 3:30 pm

WELL DATA

Casing Size OD (in) : 9.625
Casing Weight (lb) : 36.00
Casing Depth (ft.) : 1,862
Total Depth (ft) : 1872
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 914.46 cuft

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

Total Slurry Volume 997.10 cuft

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

bbls of Slurry 177.58 bbls

(Total Slurry Volume) X (.1781)

Sacks Needed 674 sk

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

Mix Water 119.99 bbls

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

Displacement: 141.32 bbls

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

Pressure of cement in annulus

Hydrostatic Pressure: 1373.60 PSI

Pressure of the fluids inside casing

Displacement: 784.75 psi

Shoe Joint: 30.98 psi

Total 815.73 psi

Differential Pressure: 557.86 psi

Collapse PSI: 2020.00 psi

Burst PSI: 3520.00 psi

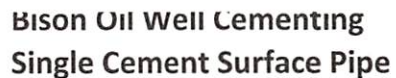
Total Water Needed: 301.30 bbls

X

[Signature]

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
azul 13-20hz

200247
Weld
Kirk Kallhoff
2/18/2018

Treatment Report Page 2

DESCRIPTION OF JOB EVENTS

X 
Authorized signature

X 2-18-17
Date

SERIES 2000

