



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 2/15/2018
Invoice #: 900259
API#: 05-123-46117
Foreman: Corey Barras

Customer: Anadarko Petroleum Corporation

Well Name: Azul 13-16HZ

County: Weld
State: Colorado
Sec: 13
Twp: 1N
Range: 66W
Consultant: Matt
Rig Name & Number: Cartel 88
Distance To Location: 37
Units On Location: 1027-3103/4030-3213/4024-320
Time Requested: 1030
Time Arrived On Location: 1000
Time Left Location:

WELL DATA

Casing Size OD (in) : 9.625
Casing Weight (lb) : 36.00
Casing Depth (ft.) : 1,861
Total Depth (ft) : 1871
Open Hole Diameter (in.) : 13.50
Conductor Length (ft) : 80
Conductor ID : 15.25
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) : 1.48
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): 20.0
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 19.10 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 913.95 cuft
(Open Hole Squared) - (Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)
Total Slurry Volume 994.10 cuft
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)
bbls of Slurry 177.05 bbls
(Total Slurry Volume) X (.1781)
Sacks Needed 672 sk
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)
Mix Water 118.34 bbls
(Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 141.63 bbls

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

Pressure of cement in annulus

Hydrostatic Pressure: 1372.86 PSI

Pressure of the fluids inside casing

Displacement: 783.46 psi

Shoe Joint: 32.46 PSI

Total 815.91 psi

Differential Pressure: 556.94 psi

Collapse PSI: 2020.00 psi

Burst PSI: 3520.00 psi

Total Water Needed: 309.97 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 13-16HZ

INVOICE #
LOCATION
FOREMAN
Date

900259
Weld
Corey Barras
2/15/2018

Treatment Report Page 2

DESCRIPTION OF JOB EVENTS

X 
Work Performed

X G. Man
Title

X 2-15-18
Date

Azul 13-16HZ

