



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 7/1/2015
Invoice #: 80413
API#: 05-690-6471
Foreman: Calvin Reimers

Customer: Anadarko Petroleum Corporation
Well Name: Miracle 9C-11HZ

County: Larimer
State: Colorado
Sec: 12
Twp: 5N
Range: 68W

Consultant:
Rig Name & Number: Noble 2
Distance To Location: 23 Miles
Units On Location: 4023-3104/3205/3211
Time Requested: 100am
Time Arrived On Location: 1130pm
Time Left Location: 4:00 AM

WELL DATA

Casing Size OD (in) : 9.625
Casing Weight (lb) : 36.00
Casing Depth (ft.) : 1,865
Total Depth (ft) : 1866
Open Hole Diameter (in.) : 13.50
Conductor Length (ft) : 40
Conductor ID : 16
Shoe Joint Length (ft) : 43
Landing Joint (ft) : 10

Max Rate: 6
Max Pressure: 1750

Cement Data

Cement Name: BFN III
Cement Density (lb/gal) : 14.2
Cement Yield (cuft) : 1.49
Gallons Per Sack: 7.48
% Excess: 15%
Displacement Fluid lb/gal: 8.3
BBL to Pit: 28
Fluid Ahead (bbls): 30.0
H2O Wash Up (bbls): 10.0

Spacer Ahead Makeup

30 bbls With Dye in 2nd 10 bbls

Casing ID

8.921

Casing Grade

J-55 only used

Calculated Results

cuft of Shoe 18.66 cuft

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

cuft of Conductor 35.64 cuft
(Conductor Width Squared) -(Casing Size OD Squared) X (.005454) X
(Conductor Length ft)

cuft of Casing 1025.72 cuft
(Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing
Depth - Conductor Length)

Total Slurry Volume 1080.02 cuft
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)

bbls of Slurry 192.35 bbls
(Total Slurry Volume) X (.1781)

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

Mix Water 129.09 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: 1375.81 PSI

Pressure of the fluids inside casing

Displacement: 785.61 psi

Shoe Joint: 31.72 psi

Total 817.33 psi

Differential Pressure: 558.48 psi

Collapse PSI: 2020.00 psi

Burst PSI: 3520.00 psi

Total Water Needed: 310.72 bbls

X

Authorization To Proceed

Bison Oil Well Cementing Single Cement Surface Pipe

Customer
Well Name

Anadarko Petroleum Corporation

Miracle 9C-11HZ

INVOICE #

80413

LOCATION

Larimer

FOREMAN

Calvin Reimers

Date _____

7/1/2015

Treatment Report Page 2

DESCRIPTION OF JOB EVENTS

[illegible]

X

Work Performed

X

Title

2

Date _____

SERIES 2000

