



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 1/25/2015
Invoice #: 25134
API#: 05-123-40836
Foreman: Calvin Reimers

Customer: Anadarko Petroleum Corporation
Well Name: Green 4N-8HZ

County: Weld
State: Colorado
Sec: 8
Twp: 1N
Range: 65W

Consultant: Lester/Don
Rig Name & Number: Major 42
Distance To Location: 22 Miles
Units On Location: 4023-3104/4024-3203
Time Requested: 1030pm
Time Arrived On Location: 930pm
Time Left Location: 3:20 PM

WELL DATA

Casing Size OD (in) : 9.625
Casing Weight (lb) : 36.00
Casing Depth (ft.) : 1,547
Total Depth (ft) : 1563
Open Hole Diameter (in.) : 13.50
Conductor Length (ft) : 85
Conductor ID : 16
Shoe Joint Length (ft) : 40
Landing Joint (ft) : 8

Max Rate: 5
Max Pressure: 2500

Cement Data

Cement Name: BFN III
Cement Density (lb/gal) : 14.2
Cement Yield (cuft) : 1.49
Gallons Per Sack: 7.48
% Excess: 10%
Displacement Fluid lb/gal: 8.3
BBL to Pit: 1.5
Fluid Ahead (bbls): 30.0
H2O Wash Up (bbls): 20.0

Spacer Ahead Makeup
30bbls H2O+Dye in 2nd 10bbls

Casing ID

8.921

Casing Grade

J-55 only used

Calculated Results

cuft of Shoe 17.38 cuft
(Casing ID Squared) X (.005454) X (Shoe Joint ft)

cuft of Conductor 75.73 cuft
(Conductor Width Squared) - (Casing Size OD Squared) X (.005454) X (Conductor Length ft)

cuft of Casing 786.08 cuft
(Open Hole Squared) - (Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)

Total Slurry Volume 879.19 cuft
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)

bbls of Slurry 156.58 bbls
(Total Slurry Volume) X (.1781)

Sacks Needed 590 sk
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)

Mix Water 105.09 bbls
(Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 117.13 bbls

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

Pressure of cement in annulus

Hydrostatic Pressure: 1141.36 PSI

Pressure of the fluids inside casing

Displacement: 649.85 psi

Shoe Joint: 29.54 psi

Total 679.39 psi

Differential Pressure: 461.97 psi

Collapse PSI: 2020.00 psi

Burst PSI: 3520.00 psi

Total Water Needed: 272.22 bbls

X *[Signature]*
Authorization To Proceed



DISCON ON WELL CEMENTING
Single Cement Surface Pipe

Customer
Well Name

Anadarko Petroleum Corporation
Green 4N-8HZ

INVOICE #
LOCATION
FOREMAN
Date

25134
Weld
Calvin Reimers
1/25/2015

Treatment Report Page 2

DESCRIPTION OF JOB EVENTS

| Safety Meeting MIRU CIRCULATE Drop Plug 144am M & P Time Sacks 119am 142am % Excess Mixed bbls Total Sacks bbl Returns Water Temp | 1249am 1000pm 113am 119am 142am 10% 105.09 590 15 46.7 | Displace 1 | | | Displace 2 | | | Displace 3 | | | Displace 4 | | | Displace 5 | | |
|---|---|------------|-------|------|------------|------|-----|------------|------|-----|------------|------|-----|------------|------|-----|
| | | BBLS | Time | PSI | BBLS | Time | PSI | BBLS | Time | PSI | BBLS | Time | PSI | BBLS | Time | PSI |
| | | 0 | 145am | 50 | 0 | | | 0 | | | 0 | | | 0 | | |
| | | 10 | 148am | 50 | 10 | | | 10 | | | 10 | | | 10 | | |
| | | 20 | 149am | 80 | 20 | | | 20 | | | 20 | | | 20 | | |
| | | 30 | 151am | 80 | 30 | | | 30 | | | 30 | | | 30 | | |
| | | 40 | 153am | 160 | 40 | | | 40 | | | 40 | | | 40 | | |
| | | 50 | 155am | 260 | 50 | | | 50 | | | 50 | | | 50 | | |
| | | 60 | 156am | 310 | 60 | | | 60 | | | 60 | | | 60 | | |
| | | 70 | 158am | 360 | 70 | | | 70 | | | 70 | | | 70 | | |
| | | 80 | 200am | 420 | 80 | | | 80 | | | 80 | | | 80 | | |
| | | 90 | 202am | 510 | 90 | | | 90 | | | 90 | | | 90 | | |
| | | 100 | 203am | 570 | 100 | | | 100 | | | 100 | | | 100 | | |
| | | 110 | 205am | 540 | 110 | | | 110 | | | 110 | | | 110 | | |
| | | 120 | 208am | 430 | 120 | | | 120 | | | 120 | | | 120 | | |
| | | 130 | Bump | 1420 | 130 | | | 130 | | | 130 | | | 130 | | |
| | | 140 | | | 140 | | | 140 | | | 140 | | | 140 | | |
| | | 150 | | | 150 | | | 150 | | | 150 | | | 150 | | |

Notes:

The day

1/2 bbl Back on Bleed Off

X

Work Preformed

X

Title

X

Date

SERIES 2000

