



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 2/4/2015
 Invoice # 25142
 API# 05-123-40923
 Foreman: Calvin Reimers

Customer: Anadarko Petroleum Corporation

Well Name: Griswold 26N-11HZ

County: Weld
 State: Colorado
 Sec: 11
 Twp: 4N
 Range: 65W

Consultant: Toby/Ellis
 Rig Name & Number: Advanced 10
 Distance To Location: 26 Miles
 Units On Location: 4023-3104/4024-3203
 Time Requested: 500pm
 Time Arrived On Location: 245pm
 Time Left Location: 7:15 pm

WELL DATA

Casing Size OD (in) : 9.625
 Casing Weight (lb) : 36.00
 Casing Depth (ft.) : 1,729
 Total Depth (ft) : 1743
 Open Hole Diameter (in.) : 13.50
 Conductor Length (ft) : 47
 Conductor ID : 16
 Shoe Joint Length (ft) : 44
 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: 15%
 Displacement Fluid lb/gal: 8.3
 BBL to Pit: 20
 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 18.96 **cuft**
 (Casing ID Squared) X (.005454) X (Shoe Joint ft)

cuft of Conductor 41.88 **cuft**
 (Conductor Width Squared) -(Casing Size OD Squared) X (.005454) X (Conductor Length ft)

cuft of Casing 945.28 **cuft**
 (Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)

Total Slurry Volume 1006.12 **cuft**
 (cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)

bbls of Slurry 179.19 **bbls**
 (Total Slurry Volume) X (.1781)

Sacks Needed 675 **sk**
 (Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)

Mix Water 120.26 **bbls**
 (Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 130.90 **bbls**

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

Pressure of cement in annulus

Hydrostatic Pressure: 1275.39 **PSI**

Pressure of the fluids inside casing

Displacement: 726.62 **psi**

Shoe Joint: 32.23 **psi**

Total 758.85 **psi**

Differential Pressure: 516.54 **psi**

Collapse PSI: 2020.00 **psi**

Burst PSI: 3520.00 **psi**

Total Water Needed: 301.16 **bbls**

X

Calvin Reimers
 AE-10

Authorization To Proceed



DISON Oil Well Cementing
Single Cement Surface Pipe

Customer
 Well Name

Anadarko Petroleum Corporation
 Griswold 26N-11HZ

INVOICE #
 LOCATION
 FOREMAN
 Date

20172
 Weld
 Calvin Reimers
 2/4/2015

Treatment Report Page 2

DESCRIPTION OF JOB EVENTS

| | | 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 |
| Safety Meeting | 440pm | | | | | | | | | | | | | | | |
| MIRU | 300pm | | | | | | | | | | | | | | | |
| CIRCULATE | 512pm | 0 | 555pm | 50 | 0 | | | 0 | | | 0 | | | 0 | | |
| Drop Plug | | 10 | 557pm | 30 | 10 | | | 10 | | | 10 | | | 10 | | |
| 554pm | | 20 | 559pm | 90 | 20 | | | 20 | | | 20 | | | 20 | | |
| | | 30 | 601pm | 90 | 30 | | | 30 | | | 30 | | | 30 | | |
| | | 40 | 602pm | 90 | 40 | | | 40 | | | 40 | | | 40 | | |
| M & P | | 50 | 604pm | 170 | 50 | | | 50 | | | 50 | | | 50 | | |
| Time | Sacks | 60 | 606pm | 220 | 60 | | | 60 | | | 60 | | | 60 | | |
| 518pm | 675 | 70 | 607pm | 280 | 70 | | | 70 | | | 70 | | | 70 | | |
| 551pm | | 80 | 609pm | 340 | 80 | | | 80 | | | 80 | | | 80 | | |
| | | 90 | 611pm | 380 | 90 | | | 90 | | | 90 | | | 90 | | |
| | | 100 | 612pm | 440 | 100 | | | 100 | | | 100 | | | 100 | | |
| | | 110 | 614pm | 500 | 110 | | | 110 | | | 110 | | | 110 | | |
| % Excess | 15% | 120 | 616pm | 530 | 120 | | | 120 | | | 120 | | | 120 | | |
| Mixed bbls | 120.26 | 130 | 619pm | 490 | 130 | | | 130 | | | 130 | | | 130 | | |
| Total Sacks | 675 | 140 | Bump | 1490 | 140 | 621pm | | 140 | | | 140 | | | 140 | | |
| bbl Returns | 20 | 150 | Bump | 1000 | 150 | 623pm | | 150 | | | 150 | | | 150 | | |
| Water Temp | 45.9 | | | | | | | | | | | | | | | |

Notes:

The day
 1/2 bbl Back on Bleed Off

X Ellie Romo AEID
 Work Performed

X _____
 Title

X _____
 Date

SERIES 2000

