



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 8/27/2014

Invoice # 35026

API#

Foreman: Kirk Kallhoff

Customer: Anadarko Petroleum Corporation

Well Name: douthit 39n-27hz

County: Weld

State: Colorado

Sec: 26

Twp: 3n

Range: 68w

Consultant: toby

Rig Name & Number: major 29

Distance To Location: 20

Units On Location: 4030-3103/4017-3211

Time Requested: 1200 pm

Time Arrived On Location: 1030 am

Time Left Location: 3:30 pm

WELL DATA

Casing Size OD (in) : 9.625
Casing Weight (lb) : 36.00
Casing Depth (ft.) : 1,230
Total Depth (ft) : 1240
Open Hole Diameter (in.) : 13.50
Conductor Length (ft) :
Conductor ID :
Shoe Joint Length (ft) : 40
Landing Joint (ft) : 8

Max Rate:

Max Pressure:

Cement Data

Cement Name: BFN III
Cement Density (lb/gal) : 14.2
Cement Yield (cuft) : 1.49
Gallons Per Sack: 7.48
% Excess: 26%
Displacement Fluid lb/gal: 8.3
BBL to Pit:
Fluid Ahead (bbls): 30.0
H2O Wash Up (bbls): 20.0

Spacer Ahead Makeup

Casing ID

8.921

Casing Grade

J-55 only used

Calculated Results

cuft of Shoe 17.36 **cuft**
(Casing ID Squared) X (.005454) X (Shoe Joint ft)

cuft of Conductor 0.00 **cuft**
(Conductor Width Squared) -(Casing Size OD Squared) X (.005454) X (Conductor Length ft)

cuft of Casing 757.43 **cuft**
(Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)

Total Slurry Volume 774.80 **cuft**
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)

bbls of Slurry 137.99 **bbls**
(Total Slurry Volume) X (.1781)

Sacks Needed 520 **sk**
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)

Mix Water 92.61 **bbls**
(Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 92.62 **bbls**

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

Pressure of cement in annulus

Hydrostatic Pressure: 907.37 **PSI**

Pressure of the fluids inside casing

Displacement: 513.11 **psi****Shoe Joint:** 29.51 **psi****Total** 542.61 **psi****Differential Pressure:** 364.76 **psi****Collapse PSI:** 2020.00 **psi****Burst PSI:** 3520.00 **psi****Total Water Needed:** 235.22 **bbls**


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.



**Bison Oil Well Cementing
Single Cement Surface Pipe**

Customer
Well Name

Anadarko Petroleum Corporation
douthit 39n-27hz

INVOICE #
LOCATION
FOREMAN
Date

35026
Weld
Kirk Kallhoff
8/27/2014

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DESCRIPTION OF JOB EVENTS

| Safety Meeting | | Displace 1 | | | Displace 2 | | | Displace 3 | | | Displace 4 | | | Displace 5 | | |
|----------------|--------|------------|-------|-----|------------|------|-----|------------|------|-----|------------|------|-----|------------|------|-----|
| MIRU | 147pm | BBLS | Time | PSI | BBLS | Time | PSI | BBLS | Time | PSI | BBLS | Time | PSI | BBLS | Time | PSI |
| CIRCULATE | 1245pm | 0 | 243pm | 10 | 0 | | | 0 | | | 0 | | | 0 | | |
| Drop Plug | 201pm | 10 | 246pm | 30 | 10 | | | 10 | | | 10 | | | 10 | | |
| 243 pm | | 20 | 249pm | 40 | 20 | | | 20 | | | 20 | | | 20 | | |
| | | 30 | 251pm | 70 | 30 | | | 30 | | | 30 | | | 30 | | |
| | | 40 | 253pm | 140 | 40 | | | 40 | | | 40 | | | 40 | | |
| M & P | | 50 | 255pm | 220 | 50 | | | 50 | | | 50 | | | 50 | | |
| Time | Sacks | 60 | 258pm | 280 | 60 | | | 60 | | | 60 | | | 60 | | |
| 208 pm | 520 | 70 | 300pm | 350 | 70 | | | 70 | | | 70 | | | 70 | | |
| 240 pm stop | | 80 | 302pm | 410 | 80 | | | 80 | | | 80 | | | 80 | | |
| | | 90 | 306pm | 400 | 90 | | | 90 | | | 90 | | | 90 | | |
| | | 100 | | | 100 | | | 100 | | | 100 | | | 100 | | |
| | | 110 | | | 110 | | | 110 | | | 110 | | | 110 | | |
| % Excess | 26% | 120 | | | 120 | | | 120 | | | 120 | | | 120 | | |
| Mixed bbls | 92.6 | 130 | | | 130 | | | 130 | | | 130 | | | 130 | | |
| Total Sacks | 520 | 140 | | | 140 | | | 140 | | | 140 | | | 140 | | |
| bbl Returns | 17 | 150 | | | 150 | | | 150 | | | 150 | | | 150 | | |
| Water Temp | | | | | | | | | | | | | | | | |

Notes:

bumped plug at 308 pm 1460 psi 137.9 bbls slurry

floats held

X Randy Case
Work Performed

X APC Consultant
Title

X 8-27-14
Date

M/D TOTCO 2000 SERIES

