



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 5/1/2017
Invoice #: 900091
API#: 05-123-44296
Foreman: Corey B.

Customer: Bill Barrett Corp.

Well Name: Kunesmiller 5-61-22/0801B2B

County: Weld
State: Colorado
Sec: 5N
Twp: 61W
Range: 21

Consultant:
Rig Name & Number: White Mountain 344
Distance To Location:
Units On Location: 4027/3103-4031/4201
Time Requested: 100
Time Arrived On Location: 2400
Time Left Location:

WELL DATA

Casing Size OD (in) : 9.625
Casing Weight (lb) : 36.00
Casing Depth (ft.) : 814
Total Depth (ft) : 812
Open Hole Diameter (in.) : 13.50
Conductor Length (ft) : 0
Conductor ID : 19.166
Shoe Joint Length (ft) : 44
Landing Joint (ft) : 0
Max Rate: 6
Max Pressure: 1000

Cement Data

Cement Name: BFN III
Cement Density (lb/gal) : 14.2
Cement Yield (cuft) : 1.48
Gallons Per Sack: 7.40
% Excess: 30%
Displacement Fluid lb/gal: 8.3
BBL to Pit:
Fluid Ahead (bbls): 20.0
H2O Wash Up (bbls): 20.0
Spacer Ahead Makeup
20 bbl with die in 1st 10

Casing ID

8.921

Casing Grade

J-55 only used

Calculated Results

cuft of Shoe 18.88 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 517.17 cuft
(Open Hole Squared) - (Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)
Total Slurry Volume 536.05 cuft
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)
bbls of Slurry 95.47 bbls
(Total Slurry Volume) X (.1781)
Sacks Needed 362 sk
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)
Mix Water 63.82 bbls
(Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 59.57 bbls

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

Pressure of cement in annulus

Hydrostatic Pressure: 600.49 PSI

Pressure of the fluids inside casing

Displacement: 332.23 psi

Shoe Joint: 32.09 psi

Total 364.31 psi

Differential Pressure: 236.17 psi

Collapse PSI: 2020.00 psi

Burst PSI: 3520.00 psi

Total Water Needed: 163.38 bbls

X

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

Bill Barrett Corp.
Kunesmiller 5-61-22/0801B2B

INVOICE #
LOCATION
FOREMAN
Date

900091
Weld
Corey B.
5/1/2017

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DESCRIPTION OF JOB EVENTS

| Amount Pumped | Time/Date | Event | Description | Rate | BBLs | Pressure |
|------------------|-----------|--------------------------|--|------|------|----------|
| % Excess 30% | | | | | | |
| Mixed bbls 63.83 | 1200AM | Arrive on location | Running Casing | | | |
| Total Sacks 362 | 1205AM | Bison Safety Meeting | | | | |
| bbl Returns 18 | 1210AM | Rig up | | | | |
| Water Temp 57 | | | | | | |
| | 100 | Safety Meeting for Job | Bison and Rig Crew | | | |
| Notes: | 114 | Start Job | | | | |
| | 116 | Test Lines | | | | |
| | | | | | | |
| | 118 | Spacer | Water with die in 1st ten | 4.5 | 20 | 20 |
| | 122 | Cement | 14.2ppg | 5 | 96 | 40 |
| | | | | | | |
| | 142 | ShutDown | | | | |
| | 143 | Drop Plug | Preloaded in Plug Container | | | |
| | | | | | | |
| | 145 | Start Displacement | | 5 | 40 | 200 |
| | 200 | Bump Plug | 400 over Final lift pressure (760 PSI) | 2 | 60 | 190 |
| | | | | | | |
| | 202 | Check Floats | with 1/2 bbl back | | | |
| | | | | | | |
| | 205 | End Job | | | | |
| | 210 | Rig Down | | | | |
| | 245 | Leave Location | | | | |
| | | | | | | |
| | | 18 bbl cement to surface | | | | |
| | | | | | | |
| | | | | | | |

X

Work Preformed

X

Title

X

Date