



# Bison Oil Well Cementing Single Cement Surface Pipe

Date: 10/16/2014  
Invoice #: 25071  
API#: 05-123-38980  
Foreman: Calvin Reimers

Customer: Anadarko Petroleum Corporation

Well Name: Kerr 36C-25HZ

County: Weld  
State: Colorado  
Sec: 13  
Twp: 2N  
Range: 67W

Consultant: Ellis  
Rig Name & Number: Major 29  
Distance To Location: 21 Miles  
Units On Location: 4023-3104/4018-3204  
Time Requested: 800pm  
Time Arrived On Location: 630pm  
Time Left Location: 12:00pm

## WELL DATA

Casing Size OD (in) : 9.625  
Casing Weight (lb) : 36.00  
Casing Depth (ft) : 1,049  
Total Depth (ft) : 1065  
Open Hole Diameter (in.) : 13.50  
Conductor Length (ft) :  
Conductor ID :  
Shoe Joint Length (ft) : 43  
Landing Joint (ft) : 8  
Max Rate: 7  
Max Pressure: 2500

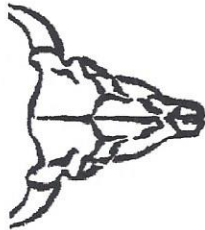
## Cement Data

Cement Name: BFN III  
Cement Density (lb/gal) : 14.2  
Cement Yield (cuft) : 1.49  
Gallons Per Sack: 7.48  
% Excess: 33%  
Displacement Fluid lb/gal: 8.3  
BBL to Pit: 12  
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    |
| <b>Calculated Results</b>  |       | <b>Displacement:</b>   | <b>78.36 bbls</b> |
| <b>cuft of Shoe</b> 18.63 cuft<br>(Casing ID Squared) X (.005454) X (Shoe Joint ft)  |       | (Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint) |                   |
| <b>cuft of Conductor</b> 0.00 cuft<br>(Conductor Width Squared) - (Casing Size OD Squared) X (.005454) X (Conductor Length ft)   |       | <b>Pressure of cement in annulus</b>   |                   |
| <b>cuft of Casing</b> 681.64 cuft<br>(Open Hole Squared) - (Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length) |       | <b>Hydrostatic Pressure:</b> 773.54 PSI  |                   |
| <b>Total Slurry Volume</b> 700.27 cuft<br>(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)                                |       | <b>Pressure of the fluids inside casing</b>                                    |                   |
| <b>bbls of Slurry</b> 124.72 bbls<br>(Total Slurry Volume) X (.1781)   |       | <b>Displacement:</b> 433.62 psi  |                   |
| <b>Sacks Needed</b> 470 sk<br>(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)   |       | <b>Shoe Joint:</b> 31.67 psi   |                   |
| <b>Mix Water</b> 83.70 bbls<br>(Sacks Needed) X (Gallons Per Sack) ÷ 42  |       | <b>Total</b> 465.29 psi  |                   |
|  |       | <b>Differential Pressure:</b> 308.25 psi                                       |                   |
|  |       | <b>Collapse PSI:</b> 2020.00 psi   |                   |
|  |       | <b>Burst PSI:</b> 3520.00 psi  |                   |
|  |       | <b>Total Water Needed:</b> 212.06 bbls   |                   |

X *Ellis* Major 29  
Authorization To Proceed





**BISON OIL WELL CEMENTING**  
**Single Cement Surface Pipe**

INVOICE #  
LOCATION  
FOREMAN  
Date

250 / 1  
Weld  
Calvin Reimers  
10/16/2014

Customer  
Well Name

Anadarko Petroleum Corporation  
Kerr 36C-25HZ

**Treatment Report Page 2**

**DESCRIPTION OF JOB EVENTS**

|                |        | Displace 1 |        |      | Displace 2 |        |     | Displace 3 |      |     | Displace 4 |      |     | Displace 5 |      |     |
|----------------|--------|------------|--------|------|------------|--------|-----|------------|------|-----|------------|------|-----|------------|------|-----|
|                |        | BBS        | Time   | PSI  | BBS        | Time   | PSI | BBS        | Time | PSI | BBS        | Time | PSI | BBS        | Time | PSI |
| Safety Meeting | 958pm  | 0          | 1054pm | 50   | 0          |        |     | 0          |      |     | 0          |      |     | 0          |      |     |
| MIRU           | 925pm  | 10         | 1056pm | 20   | 10         |        |     | 10         |      |     | 10         |      |     | 10         |      |     |
| CIRCULATE      | 1022pm | 20         | 1058pm | 70   | 20         |        |     | 20         |      |     | 20         |      |     | 20         |      |     |
| Drop Plug      |        | 30         | 1100pm | 140  | 30         |        |     | 30         |      |     | 30         |      |     | 30         |      |     |
| 1053pm         |        | 40         | 1101pm | 210  | 40         |        |     | 40         |      |     | 40         |      |     | 40         |      |     |
|                |        | 50         | 1103pm | 270  | 50         |        |     | 50         |      |     | 50         |      |     | 50         |      |     |
| M & P          |        | 60         | 1105pm | 310  | 60         |        |     | 60         |      |     | 60         |      |     | 60         |      |     |
| Time           | Sacks  | 70         | 1107pm | 300  | 70         |        |     | 70         |      |     | 70         |      |     | 70         |      |     |
| 1028pm         | 470    | 80         | 1110pm | 300  | 80         |        |     | 80         |      |     | 80         |      |     | 80         |      |     |
| 1048pm         |        | 90         | Bump   | 1250 | 90         | 1112pm |     | 90         |      |     | 90         |      |     | 90         |      |     |
|                |        | 100        | Bump   | 970  | 100        | 1114pm |     | 100        |      |     | 100        |      |     | 100        |      |     |
|                |        | 110        |        |      | 110        |        |     | 110        |      |     | 110        |      |     | 110        |      |     |
| % Excess       | 33%    | 120        |        |      | 120        |        |     | 120        |      |     | 120        |      |     | 120        |      |     |
| Mixed bbls     | 83.7   | 130        |        |      | 130        |        |     | 130        |      |     | 130        |      |     | 130        |      |     |
| Total Sacks    | 470    | 140        |        |      | 140        |        |     | 140        |      |     | 140        |      |     | 140        |      |     |
| bbl Returns    | 12     | 150        |        |      | 150        |        |     | 150        |      |     | 150        |      |     | 150        |      |     |
| Water Temp     | 59.4   |            |        |      |            |        |     |            |      |     |            |      |     |            |      |     |

Notes:

The day

1/2 bbl back on bleed off

*Edwin J. Williams* Major 29

X

X

X

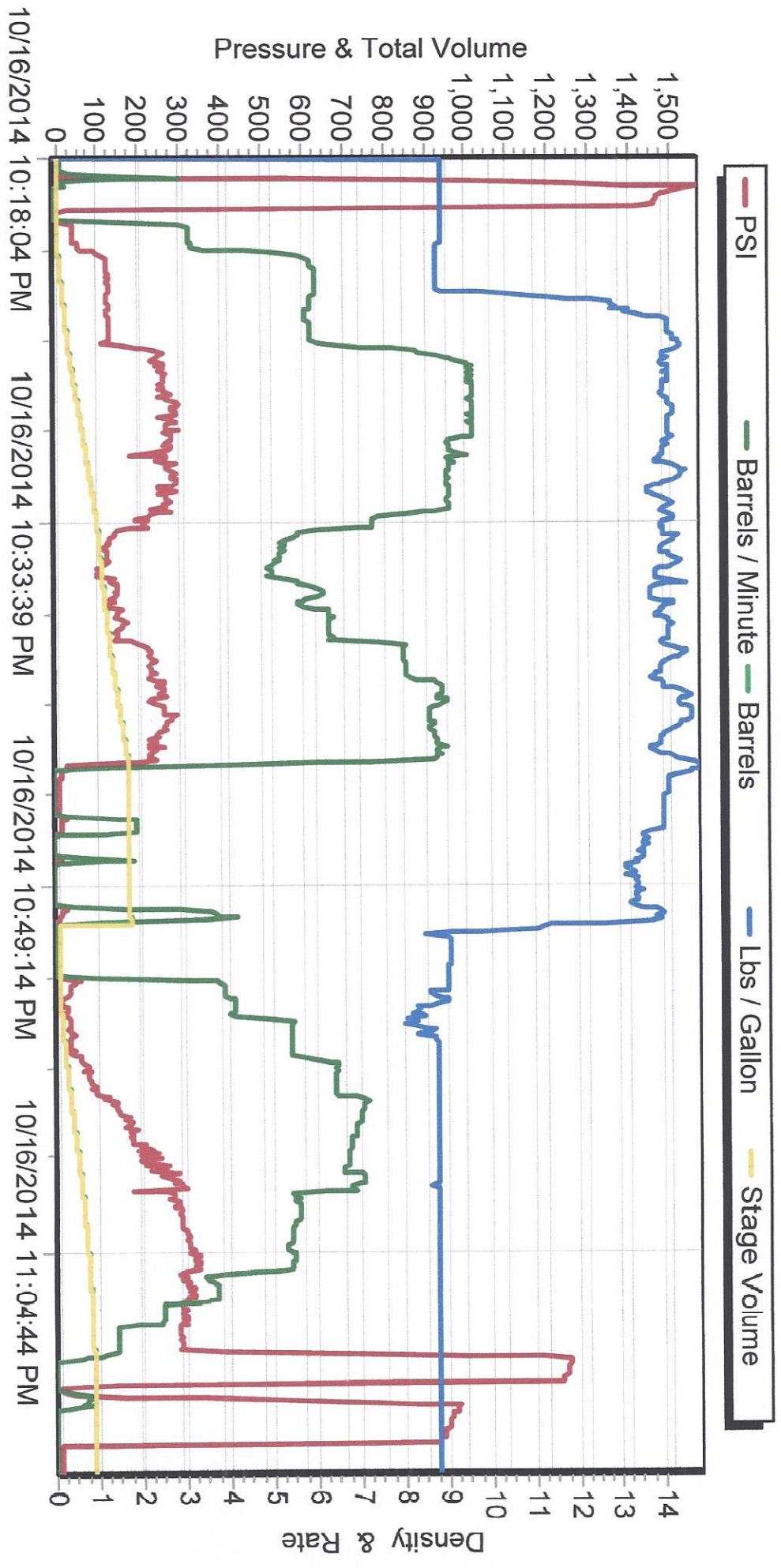
Work Performed

Title

Date



# SERIES 2000



## Release and Indemnification

Customer acknowledges and assumes the risks associated with oil well drilling, cementing and acidizing, including, without limitation, destabilization, loss of production, contamination, fracturing and loss of well control. Customer agrees to release Bison Oil Well Cementing, Inc., Bison Energy Services, Inc., its agents, employees and assigns, from any and all liability for any and all damages whatsoever to property of any kind owned by, in the possession of, or leased by customer and those persons or entities customer has the ability to bind by contract. Customer also agrees to indemnify and hold harmless Bison Oil Well Cementing, Inc., Bison Energy Services, Inc., its agents, employees and assigns, from and against any and all liability, claims, costs, expenses, attorneys fees and damages whatsoever for claims, costs, expenses, attorneys fees and damages whatsoever for personal injury, illness, death, property damage and loss resulting from: loss or reduction of production, destabilization loss of oil well control, failure of or contamination by acid stimulation, hydraulic fracturing, cementing, pumping services, incompatible fluid or other processes to stimulate, complete or end production, and/or any other condition. Customer's release, indemnity and hold harmless obligation shall apply even if the liability and claims are caused by the sole, concurrent, active or passive negligence, fault, or strict liability of Bison Oil Well Cementing, Inc. and/or Bison Energy Services, Inc. or any defect in the data, products, supplies, materials or equipment furnished by Bison Oil Well Cementing, Inc. whether in the design, manufacturing, maintenance, or marketing thereof or from failure to warn of such defect. In the event that any portion of this release and indemnity is found by a court of competent jurisdiction to be inoperable or unenforceable, the remaining portions and provisions shall apply, and customer agrees that the contract price herein shall be the limit of Bison Oil Well Cementing, Inc.'s liability, if any.