

# HALLIBURTON

iCem<sup>®</sup> Service

## Post Job Report

**ANADARKO PETROLEUM CORP - EBUS**

Date: Wednesday, June 18, 2014

**Berry Farms 32N-8HZ Surface**

Sincerely,  
**Derek Trier**

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2.0 Custom Graphs **Error! Bookmark not defined.**

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3.0 Appendix **Error! Bookmark not defined.**

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**1.1 Executive Summary**

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Halliburton appreciates the opportunity to perform the cementing services on the **Berry Farms 32N-8HZ** cement **Surface** casing job. A pre-job safety meeting was held before the job where details of the job were discussed, potential safety hazards were reviewed, and environmental compliance procedures were outlined.

Halliburton maintains a continuous quality improvement process and appreciates any comments or suggestions that you may have. Halliburton again thanks you for the opportunity to perform service work on this well. We hope to be your solutions provider for future projects.

Respectfully,

**Halliburton [Brighton]**

**Job Times**

|                                   | <b>Date</b> | <b>Time</b> | <b>Time Zone</b> |
|-----------------------------------|-------------|-------------|------------------|
| <b>Requested Time On Location</b> | 4/3         | 1400        | MST              |
| <b>Called Out</b>                 | 4/3         | 1000        |                  |
| <b>On Location</b>                | 4/3         | 1355        |                  |
| <b>Job Started</b>                | 4/3         | 1617        |                  |
| <b>Job Completed</b>              | 4/3         | 1730        |                  |
| <b>Departed Location</b>          | 4/3         | 1830        |                  |

**1.2 Cementing Job Summary**

| <i>The Road to Excellence Starts with Safety</i>   |                       |                                      |   |  |                                   |
|--|-----------------------|--------------------------------------|---|--|-----------------------------------|
| Sold To #: <b>300466</b>   |                       | Ship To #: <b>3286269</b>            |   | Primary Sales Order #: <b>0901247147</b>     |                                   |
| Customer: <b>ANADARKO PETROLEUM</b> CORP - EBUS  |                       |                                      | Job Purpose: <b>7521 CMT</b> SURFACE CASING BOM |  |                                   |
| Well Name: <b>BERRY FARMS</b>  |                       |                                      | Well #: <b>32N-8 HZ</b>                         |  | API/UWI #: <b>05-123-38894-00</b> |
| Field: <b>WATTENBERG</b>   |                       | City: <b>PLA</b>                     |   | Country/Parish: <b>WELD</b>                  | State/Prov: <b>COLORADO</b>       |
| Legal Description:   |                       |                                      |   |  |                                   |
| Rig Name & Number / Phone Number: <b>Majors 29 / 307-660-1292</b>  |                       |                                      |   |  | Location: <b>LAND</b>             |
| myCem id# :  |                       | Job Criticality Status: <b>GREEN</b> |   | iFacts Request id #:                         |                                   |
| <b>Contacts</b>  |                       |                                      |   |  |                                   |
|  |                       |                                      |   |  |                                   |
| Type   | Name                  | Email                                |   | Phone  |                                   |
| <b>Service Coordinator</b>   | <b>Jared Whipple</b>  | <b>Jared.Whipple@Halliburton.com</b> |   | <b>+17206068049</b>                          |                                   |
| <b>Account Rep</b>   | <b>Jon Gregory</b>    | <b>Jon.Gregory@Halliburton.com</b>   |   | <b>+19702104722</b>                          |                                   |
| <b>Company Man</b>   |                       |                                      |   |  |                                   |
|  |                       |                                      |   |  |                                   |
| <i>PPE, Safety Huddles, JSA's, HOC &amp; Near Miss Reporting, BBP Observations</i>   |                       |                                      |   |  |                                   |
| Distance/Mileage(1 way)  |                       | <b>30 mile</b>                       |   | Distance/Mileage(1 way) Mtls: <b>30 mile</b> |                                   |
| Srvcs:   |                       |                                      |   |  |                                   |
|  |                       |                                      |   | Rqstd Job Start Date/Time: <b>04/03/2014</b> |                                   |
| <b>HSE Information</b>   |                       |                                      |   |  |                                   |
| H2S Present:   |                       | <b>Unknown</b>                       |   | CO2 Present: <b>Unknown</b>                  |                                   |
| <b>Drive Safely. Lights On for Safety. Wear Seat Belts. Observe all HES / Customer Safety Policies.</b>  |                       |                                      |   |  |                                   |
| Directions:<br>CR 8 WEST TO HWY 85, NORTH TO HWY 66, WEST TO CR 21, NORTH TO CR34, WEST TO CR 17, NORTH 0.7 MILES AND LOCATION IS ON THE LEFT. |                       |                                      |   |  |                                   |
| <b>Instruction</b>   |                       |                                      |   |  |                                   |
|  |                       |                                      |   |  |                                   |
| <b>Job Info / Well Data</b>  |                       |                                      |   |  |                                   |
| Job Depth (MD)<br>ft   | Job Depth (TVD)<br>ft | Well Fluid Type                      | Well Fluid Weight<br>lbm/gal                    | Displacement<br>Fluid                        | Displ Fluid Weight<br>lbm/gal     |
| <b>850</b>   |                       |                                      |   | <b>Displacement</b>                          | <b>8.33</b>                       |
| BHST<br>degF   | BHCT<br>degF          | Log Temp<br>degF                     |   | Time Since Circ Stopped<br><b>HH:MM:SS</b>   |                                   |

| Job Tubulars/Tools    |                        |                           |               |        |                 |                             |                    |              |                          |                              |          |
|-----------------------|------------------------|---------------------------|---------------|--------|-----------------|-----------------------------|--------------------|--------------|--------------------------|------------------------------|----------|
| Description           | Size in                | Weight lbf/ft             | ID in         | Thread | Grade           | Top MD ft                   | Btm MD ft          | Top TVD ft   | Btm TVD ft               | Shoe Jnt ft                  | % Excess |
| 13.5" Open Hole       |                        |                           | 13.5          |        |                 | 0                           | 850                |              |                          |                              | 0        |
| 9.625" Surface Casing | 9.625                  | 36                        | 8.921         |        | J-55            | 0                           | 817                |              |                          | 42                           |          |
| Materials             |                        |                           |               |        |                 |                             |                    |              |                          |                              |          |
| Stage/Plug #: 1       |                        |                           |               |        |                 |                             |                    |              |                          |                              |          |
| Fluid #               | Fluid Name             | Package/SBM/Material Name | Rqstd Del Qty | UOM    | Density lbf/gal | Yield ft <sup>3</sup> /sack | Water Req Gal/sack | Rate bbl/min | Total Mix Fluid Gal/sack | Surface Batch Mixing Time    |          |
|                       | Mud Flush III (Powder) |                           | 12            | bbl    | 8.4             |                             |                    |              |                          |                              |          |
| Facts Test id #       |                        |                           |               |        |                 |                             |                    |              |                          |                              |          |
| Fluid #               | Fluid Name             | Package/SBM/Material Name | Rqstd Del Qty | UOM    | Density lbf/gal | Yield ft <sup>3</sup> /sack | Water Req Gal/sack | Rate bbl/min | Total Mix Fluid Gal/sack | Surface Batch Mixing Time hr |          |
|                       | Lead Cement            | SWIFTCEM (TM) SYSTEM      | 310           | sack   | 14.2            | 1.537                       | 7.63               | 6            | 7.63                     |                              |          |
| Fluid #               | Fluid Name             | Package/SBM/Material Name | Rqstd Del Qty | UOM    | Density lbf/gal | Yield ft <sup>3</sup> /sack | Water Req Gal/sack | Rate bbl/min | Total Mix Fluid Gal/sack | Surface Batch Mixing Time    |          |
|                       | Displacement           |                           | 60            | bbl    | 8.33            |                             |                    |              |                          |                              |          |
| Facts Test id #       |                        |                           |               |        |                 |                             |                    |              |                          |                              |          |
| Packaged Materials    |                        |                           |               |        |                 |                             |                    |              |                          |                              |          |

| SAP # | Material           | Qty           | UOM        | Comments |
|-------|--------------------|---------------|------------|----------|
|       | <b>FRESH WATER</b> | <b>2869.4</b> | <b>Gal</b> |          |
|       |                    |               |            |          |

**1.3 Planned Pumping Schedule**

| Stage /Plug # | Fluid # | Fluid Type    | Fluid Name    | Surface Density lbm/gal | Avg Rate bbl/min | Surface Volume | Downhole Volume |
|---------------|---------|---------------|---------------|-------------------------|------------------|----------------|-----------------|
| 1             | 1       | Spacer        | Fresh Water   | 8.33                    | 5.00             | 10.0 bbl       | 10.0 bbl        |
| 1             | 2       | Spacer        | Mud Flush III | 8.40                    | 5.00             | 12.0 bbl       | 12.0 bbl        |
| 1             | 3       | Spacer        | Fresh Water   | 8.33                    | 5.00             | 10.0 bbl       | 10.0 bbl        |
| 1             | 4       | Cement Slurry | SwiftCem      | 14.20                   | 5.00             | 310.0 sacks    | 310.0 sacks     |

**1.4 Job Overview**

|    |   | Units                               | Description |
|----|---|-------------------------------------|-------------|
| 1  | Surface temperature at time of job            | °F                                  |             |
| 2  | Mud type (OBM, WBM, SBM, Water, Brine)        | -                                   | WBM         |
| 3  | Actual mud density                            | lb/gal                              |             |
| 4  | Actual mud Plastic Viscosity (PV)             | cP                                  |             |
| 5  | Actual mud Yield Point (YP)                   | lb <sub>f</sub> /100ft <sup>2</sup> |             |
| 6  | Actual mud 30 min Gel Strength                | lb <sub>f</sub> /100ft <sup>2</sup> |             |
| 7  | Time circulated before job                    | HH:MM                               |             |
| 8  | Mud volume circulated                         | Bbls                                |             |
| 9  | Rate at which well was circulated             | Bpm                                 |             |
| 10 | Pipe movement during hole circulation         | Y/N                                 | N           |
| 11 | Rig pressure while circulating                | Psi                                 |             |
| 12 | Time from end mud circulation to start of job | HH:MM                               |             |
| 13 | Pipe movement during cementing                | Y/N                                 | N           |
| 14 | Calculated displacement                       | Bbls                                | 60          |
| 15 | Job displaced by                              | Rig/HES                             | HES         |
| 16 | Annular flow before job                       | Y/N                                 | N           |
| 17 | Annular flow after job                        | Y/N                                 | N           |
| 18 | Length of rat hole                            | Ft                                  |             |
| 19 | Units of gas detected while circulating       | Units                               |             |
| 20 | Was lost circulation experienced at any time? | Y/N                                 | N           |

1.5 Job Event Log



Cementing Job Log

The Road to Excellence Starts with Safety

|  |                                  |                            |                           |
|--|----------------------------------|----------------------------|---------------------------|
| Sold To #: 300466                        | Ship To #: 3368087               | Quote #:                   | Sales Order #: 0901247147 |
| Customer: ANADARKO PETROLEUM CORP - EBUS |                                  | Customer Rep: Case, Randy  |                           |
| Well Name: Berry Farms                   | Well #: 32N-8 HZ                 | API/UWI #: 05-123-38894-00 |                           |
| Field: Wattenberg                        | City (SAP): Mead                 | County/Parish: Weld        | State: Colorado           |
| Lat: .                                   | Long:                            |                            |                           |
| Contractor: Majors                       | Rig/Platform Name/Num: Majors 29 |                            |                           |
| Job Purpose: Cement Surface Casing       | Ticket Amount:                   |                            |                           |
| Well Type: Development Well              | Job Type: Cement Surface Casing  |                            |                           |
| Sales Person: GREGORY, JON               | Srvc Supervisor: GIBBS, JASON    | MBU ID Emp #: 300487       |                           |

| Activity Description                   | Date/Time   | Cht # | Rate bbl/min | Volume bbl |       | Pressure psig |        | Comments   |
|--|-------------|-------|--------------|------------|-------|---------------|--------|--|
|  |             |       |              | Stage      | Total | Tubing        | Casing |  |
| Arrive at Location from Service Center | 4/3/14 1355 |       |              |            |       |               |        | Rig still running pipe in hole                                     |
| Assessment Of Location Safety Meeting  | 4/3/14 1400 |       |              |            |       |               |        | Hazard Hunt and Discuss 3rd party activities                       |
| Pre-Rig Up Safety Meeting              | 4/3/14 1410 |       |              |            |       |               |        | Review JSA and Discuss Rig up layout                               |
| Rig-Up Equipment                       | 4/3/14 1425 |       |              |            |       |               |        |  |
| Rig-Up Completed                       | 4/3/14 1445 |       |              |            |       |               |        |  |
| Pre-Job Safety Meeting                 | 4/3/14 1600 |       |              |            |       |               |        | With Customer and 3rd Parties involved                             |
| Start Job                              | 4/3/14 1617 |       |              |            |       |               |        |  |
| Pump Water                             | 4/3/14 1620 |       |              |            |       |               |        | Fill Lines   |
| Test Lines                             | 4/3/14 1622 |       |              |            |       |               | 2500   |  |
| Pump Water                             | 4/3/14 1626 |       | 5            | 10         |       |               | 0      | Fresh Water  |
| Pump Spacer                            | 4/3/14 1629 |       | 5            | 12         |       |               | 0      | Mud Flush  |
| Pump Water                             | 4/3/14 1631 |       | 5            | 10         |       |               | 70     | Fresh Water  |
| Pump Cement                            | 4/3/14 1647 |       | 5            | 85         |       |               | 57     | 310sk @ 14.2ppg, 1.54yield, 7.66gal/sk                             |
| Shutdown                               | 4/3/14 1650 |       |              |            |       |               | 0      |  |
| Drop Top Plug                          | 4/3/14 1650 |       |              |            |       |               | 565    |  |
| Pump Displacement                      | 4/3/14 1709 |       | 5            | 60         |       |               |        | Fresh Water  |
| Cement Returns to Surface              | 4/3/14 1719 |       |              |            |       |               |        | 60 bbls Displaced 0 bbls to Pit                                    |
| Bump Plug                              | 4/3/14 1722 |       |              |            |       |               | 1203   |  |
| Check Floats                           | 4/3/14 1728 |       |              |            |       |               | 1117   | Floats Good, Bump pressure back up to check floats per Company man |
| End Job                                | 4/3/14 1730 |       |              |            |       |               |        | Thanks Jason and Crew  |

