

**ANADARKO PETROLEUM CORP - EBUS  
DO NOT MAIL - PO BOX 4995  
THE WOODLANDS, Texas**

Paragon 9N-31HZ

**Majors 29**

## **Post Job Summary** **Cement Surface Casing**

Date Prepared: 3/18/2014  
Version: 1

Service Supervisor: BULINSKI, MATTHEW

Submitted by: PRUDHOMME, JOSHUA

**HALLIBURTON**

# HALLIBURTON

## Wellbore Geometry

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| Job Tubulars      |                           |            |          |              | MD        |              | Shoe Joint Length<br>ft |
|-------------------|---------------------------|------------|----------|--------------|-----------|--------------|-------------------------|
| Type              | Description               | Size<br>in | ID<br>in | Wt<br>lbm/ft | Top<br>ft | Bottom<br>ft |                         |
| Casing            | 9 5/8" Surface Casing     | 9.63       | 8.921    | 36.00        | 0.00      | 1,096.00     | 45.00                   |
| Open Hole Section | 13 1/2" Open Hole Section |            | 13.500   |              | 0.00      | 1,096.00     | 0.00                    |

# HALLIBURTON

## ***Pumping Schedule***

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| Stage /Plug # | Fluid # | Fluid Type    | Fluid Name         | Surface Density lbm/gal | Avg Rate bbl/min | Surface Volume | Downhole Volume |
|---------------|---------|---------------|--------------------|-------------------------|------------------|----------------|-----------------|
| 1             | 1       | Spacer        | Fresh Water Spacer | 8.33                    | 2.0              | 10.0 bbl       | 10.0 bbl        |
| 1             | 2       | Spacer        | Mud Flush          | 8.40                    | 2.0              | 12.0 bbl       | 12.0 bbl        |
| 1             | 1       | Spacer        | Fresh Water Spacer | 8.33                    | 2.0              | 10.0 bbl       | 10.0 bbl        |
| 1             | 3       | Cement Slurry | SwiftCem B2        | 14.2                    | 5.0              | 412 sacks      | 412 sacks       |

# HALLIBURTON

## Service Supervisor Reports

### Job Log

| Date/Time        | Chart # | Activity Code                          | Pump Rate | Cum Vol | Pump | Pressure (psig) | Comments  |
|------------------|---------|--|-----------|---------|------|-----------------|---|
| 12/10/2013 18:30 |         | Call Out                               |           |         |      |                 |   |
| 12/10/2013 20:00 |         | Depart Yard Safety Meeting             |           |         |      |                 | JSA on job materials, pre-tripping trucks and driving to location   |
| 12/10/2013 21:00 |         | Arrive at Location from Service Center |           |         |      |                 | Arrived 30mins late and rig   |
| 12/10/2013 21:05 |         | Assessment Of Location Safety Meeting  |           |         |      |                 | Hazard Hunt on location before spotting in trucks   |
| 12/10/2013 21:10 |         | Safety Meeting - Pre Rig-Up            |           |         |      |                 | JSA on rigging up bulk trucks and iron to rig   |
| 12/10/2013 21:30 |         | Rig-Up Equipment                       |           |         |      |                 |   |
| 12/10/2013 22:30 |         | Rig-Up Completed                       |           |         |      |                 |   |
| 12/10/2013 23:00 |         | Safety Meeting - Pre Job               |           |         |      |                 | JSA with company man, Rig hands, and HES hands on pump schedule   |
| 12/10/2013 23:20 |         | Start Job                              |           |         |      |                 |   |
| 12/10/2013 23:23 |         | Test Lines                             |           |         |      |                 | 3000psi Pressure Test Lines to rig floor  |
| 12/10/2013 23:25 |         | Pump Spacer 1                          | 2         | 10      |      | 66.0            | 10bbls H2Ospacer  |
| 12/10/2013 23:32 |         | Pump Spacer 2                          | 2         | 12      |      | 65.0            | 12bbls Mud flush spacer   |
| 12/10/2013 23:35 |         | Pump Spacer 1                          | 2         | 10      |      | 64.0            | 10bbls H2Ospacer  |
| 12/10/2013 23:38 |         | Pump Cement                            | 5         | 113     |      | 111.0           | 412sks Swiftcem, 14.2ppg, 1.54yield, 7.66gal/sk, Mixed with rig water and # verify 3x's by pressurized mud scales |
| 12/11/2013 00:04 |         | Shutdown                               |           |         |      |                 |   |
| 12/11/2013 00:06 |         | Drop Top Plug                          |           |         |      |                 | Pre-Loaded  |
| 12/11/2013 00:08 |         | Pump Displacement                      | 5         | 81      |      | 340.0           | H2O displacement, Good returns throughout. Cmt to surface at 60bbls away with a total of 21bbls Cmt to surface    |
| 12/11/2013 00:32 |         | Bump Plug                              | 3         |         |      | 433.0           | Slowed down last 20bbls 3bbl/min to bump. Plug landed at 433psi and brought to 939psi for 2mins                   |
| 12/11/2013 00:34 |         | Check Floats                           |           |         |      |                 | Floats held   |
| 12/11/2013 00:35 |         | End Job                                |           |         |      |                 |   |
| 12/11/2013 00:36 |         | Safety Meeting - Pre Rig-Down          |           |         |      |                 | JSA on rigging down bulk trucks and iron from rig   |
| 12/11/2013 00:40 |         | Rig-Down Equipment                     |           |         |      |                 |   |
| 12/11/2013 01:20 |         | Rig-Down Completed                     |           |         |      |                 |   |
| 12/11/2013 01:25 |         | Safety Meeting - Departing Location    |           |         |      |                 | JSA on location walk around, pre-tripping trucks and driving back to Brighton Yard                                |

## The Road to Excellence Starts with Safety

|  |                      |                                    |                          |
|--|----------------------|------------------------------------|--------------------------|
| Sold To #: 300466                        | Ship To #: 3209413   | Quote #:                           | Sales Order #: 900959425 |
| Customer: ANADARKO PETROLEUM CORP - EBUS |                      | Customer Rep: Case, Randy          |                          |
| Well Name: Paragon                       |                      | Well #: 9N-31HZ                    | API/UWI #:               |
| Field: WATTENBURG                        | City (SAP): BRIGHTON | County/Parish: Weld                | State: Colorado          |
| Contractor: Majors                       |                      | Rig/Platform Name/Num: Majors 29   |                          |
| Job Purpose: Cement Surface Casing       |                      |                                    |                          |
| Well Type: Development Well              |                      | Job Type: Cement Surface Casing    |                          |
| Sales Person: PLIENESS, RYAN             |                      | Srvc Supervisor: BULINSKI, MATTHEW | MBU ID Emp #: 483865     |

## Job Personnel

| HES Emp Name          | Exp Hrs | Emp #  | HES Emp Name        | Exp Hrs | Emp #  | HES Emp Name        | Exp Hrs | Emp #  |
|-----------------------|---------|--------|---------------------|---------|--------|---------------------|---------|--------|
| ALVAREZ, BRANDON Paul | 0.0     | 555850 | BULINSKI, MATTHEW J | 0.0     | 483865 | LANGE, TIMOTHY Paul | 0.0     | 520811 |
| TOWNSON, JUSTIN T     | 0.0     | 555407 |                     |         |        |                     |         |        |

## Equipment

| HES Unit # | Distance-1 way | HES Unit # | Distance-1 way | HES Unit # | Distance-1 way | HES Unit # | Distance-1 way |
|------------|----------------|------------|----------------|------------|----------------|------------|----------------|
| 10248053C  | 20 mile        | 11542778   | 20 mile        | 11605598   | 20 mile        | 11764054C  | 20 mile        |
| 11764737   | 20 mile        |            |                |            |                |            |                |

## Job

## Job Times

| Formation Name         |          |  |  |                   |          |               | Date            | Time  | Time Zone |
|------------------------|----------|--|--|-------------------|----------|---------------|-----------------|-------|-----------|
| Formation Depth (MD)   | Top      |  |  | Bottom            |          | Called Out    | 10 - Dec - 2013 | 18:30 | MST       |
| Form Type              |          |  |  | BHST              |          | On Location   | 10 - Dec - 2013 | 21:00 | MST       |
| Job depth MD           | 1096. ft |  |  | Job Depth TVD     | 1096. ft | Job Started   | 10 - Dec - 2013 | 11:20 | MST       |
| Water Depth            |          |  |  | Wk Ht Above Floor |          | Job Completed | 10 - Dec - 2013 | 00:35 | MST       |
| Perforation Depth (MD) | From     |  |  | To                |          | Departed Loc  | 11 - Dec - 2013 | 01:30 | MST       |

## Well Data

| Description               | New / Used | Max pressure psig | Size in | ID in | Weight lbf/ft | Thread | Grade | Top MD ft | Bottom MD ft | Top TVD ft | Bottom TVD ft |
|---------------------------|------------|-------------------|---------|-------|---------------|--------|-------|-----------|--------------|------------|---------------|
| 13 1/2" Open Hole Section |            |                   |         | 13.5  |               |        |       | .         | 1096.        |            |               |
| 9 5/8" Surface Casing     | Unknown    |                   | 9.625   | 8.921 | 36.           |        | J-55  | .         | 1096.        |            |               |

Sales/Rental/3<sup>rd</sup> Party (HES)

| Description                              | Qty | Qty uom | Depth | Supplier |
|--|-----|---------|-------|----------|
| CMT CASING EQUIPMENT BOM                 | 1   | JOB     |       |          |
| MILEAGE FOR CEMENTING CREW,ZI            | 20  | MI      |       |          |
| ZI FUEL SURCHG-CARS/PICKUPS<1 1/2TON     | 20  | MI      |       |          |
| KIT,HALL WELD-A                          | 1   | EA      |       |          |
| Description                              | Qty | Qty uom | Depth | Supplier |
| CNTRLZR, 9 5/8"x13 3/4',#500-0963-1375   | 8   | EA      |       |          |
| BASKET - CEMENT - 9-5/8 CSG X 12-1/4     | 1   | EA      |       |          |
| PLUG,CMTG,TOP,9 5/8,HWE,8.16 MIN/9.06 MA | 1   | EA      |       |          |
| COLLAR-STOP-9 5/8"-FRICTION-HINGED       | 2   | EA      |       |          |

## Fluid Data

| Stage/Plug #: 1                          |                    |                                       |        |                                   |                        |                           |                  |              |                        |
|--|--------------------|---------------------------------------|--------|-----------------------------------|------------------------|---------------------------|------------------|--------------|------------------------|
| Fluid #                                  | Stage Type         | Fluid Name                            | Qty    | Qty uom                           | Mixing Density lbm/gal | Yield ft <sup>3</sup> /sk | Mix Fluid Gal/sk | Rate bbl/min | Total Mix Fluid Gal/sk |
| 1  | Fresh Water Spacer |                                       | 10.0   | bbl                               | 8.33                   |                           |                  | 2.0          |                        |
| 2  | Mud Flush          |                                       | 12.0   | bbl                               | 8.4                    |                           |                  | 2.0          |                        |
| 3.5 lbm/bbl                              |                    | MUD FLUSH III, 40 LB SACK (101633304) |        |                                   |                        |                           |                  |              |                        |
| 42 gal/bbl                               |                    | MUD FLUSH III - SBM (528788)          |        |                                   |                        |                           |                  |              |                        |
| 1  | Fresh Water Spacer |                                       | 10.0   | bbl                               | 8.33                   |                           |                  | 2.0          |                        |
| 3  | SwiftCem B2        | SWIFTCem (TM) SYSTEM (452990)         | 412    | sacks                             | 14.2                   | 1.54                      | 7.66             | 5.0          | 7.66                   |
| 7.66 Gal                                 |                    | FRESH WATER                           |        |                                   |                        |                           |                  |              |                        |
| Calculated Values                        |                    | Pressures                             |        | Volumes                           |                        |                           |                  |              |                        |
| Displacement                             |                    | Shut In: Instant                      |        | Lost Returns                      |                        | Cement Slurry             |                  | Pad          |                        |
| Top Of Cement                            |                    | 5 Min                                 |        | Cement Returns                    | 21.0                   | Actual Displacement       | 81.0             | Treatment    |                        |
| Frac Gradient                            |                    | 15 Min                                |        | Spacers                           | 32.0                   | Load and Breakdown        |                  | Total Job    |                        |
| Rates                                    |                    |                                       |        |                                   |                        |                           |                  |              |                        |
| Circulating                              |                    | Mixing                                |        | Displacement                      |                        | Avg. Job                  |                  |              |                        |
| Cement Left In Pipe                      | Amount             | 45 ft                                 | Reason | Shoe Joint                        |                        |                           |                  |              |                        |
| Frac Ring # 1 @                          | ID                 | Frac ring # 2 @                       | ID     | Frac Ring # 3 @                   | ID                     | Frac Ring # 4 @           | ID               |              |                        |
| The Information Stated Herein Is Correct |                    |                                       |        | Customer Representative Signature |                        |                           |                  |              |                        |

