

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

3D 37N-21HZ

Major 41

Post Job Summary

Cement Surface Casing

Date Prepared: 10/31/2013
Version: 1

Service Supervisor: VIGIL, NICHOLAS

Submitted by: TRIER, DEREK

HALLIBURTON

HALLIBURTON

Wellbore Geometry

| Job Tubulars | | | | | MD | | Shoe Joint Length ft |
|-------------------|---------------------------|------------|----------|--------------|-----------|--------------|-------------------------|
| Type | Description | Size in | ID in | Wt lbm/ft | Top ft | Bottom ft | |
| Casing | 9 5/8" Surface Casing | 9.63 | 8.921 | 36.00 | 0.00 | 1,010.00 | 40.00 |
| Open Hole Section | 13 1/2" Open Hole Section | | 13.500 | | 0.00 | 1,030.00 | 0.00 |

HALLIBURTON

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 Spacer | 8.33 | 2.00 | 10.0 bbl | 10.0 bbl |
| 1 | 2 | Spacer | Mud Flush | 8.40 | 2.50 | 12.0 bbl | 12.0 bbl |
| 1 | 1 | Spacer | Fresh Water Spacer | 8.33 | 4.00 | 10.0 bbl | 10.0 bbl |
| 1 | 3 | Cement Slurry | SwiftCem B2 | 14.20 | 6.00 | 393.0 sacks | 393.0 sacks |

Fluids Pumped

Stage/Plug # 1 Fluid 1: Fresh Water Spacer
DUMMY MUD / FLUSH / SPACER SBC MATERIAL

Fluid Density: 8.33 lbm/gal
Pump Rate: 2.00 bbl/min

Stage/Plug # 1 Fluid 2: Mud Flush
DUMMY MUD / FLUSH / SPACER SBC MATERIAL
3.5 lbm/bbl Mud Flush III
42 gal/bbl Mud Flush III

Fluid Density: 8.40 lbm/gal
Fluid Volume: 12.00 bbl
Pump Rate: 2.50 bbl/min

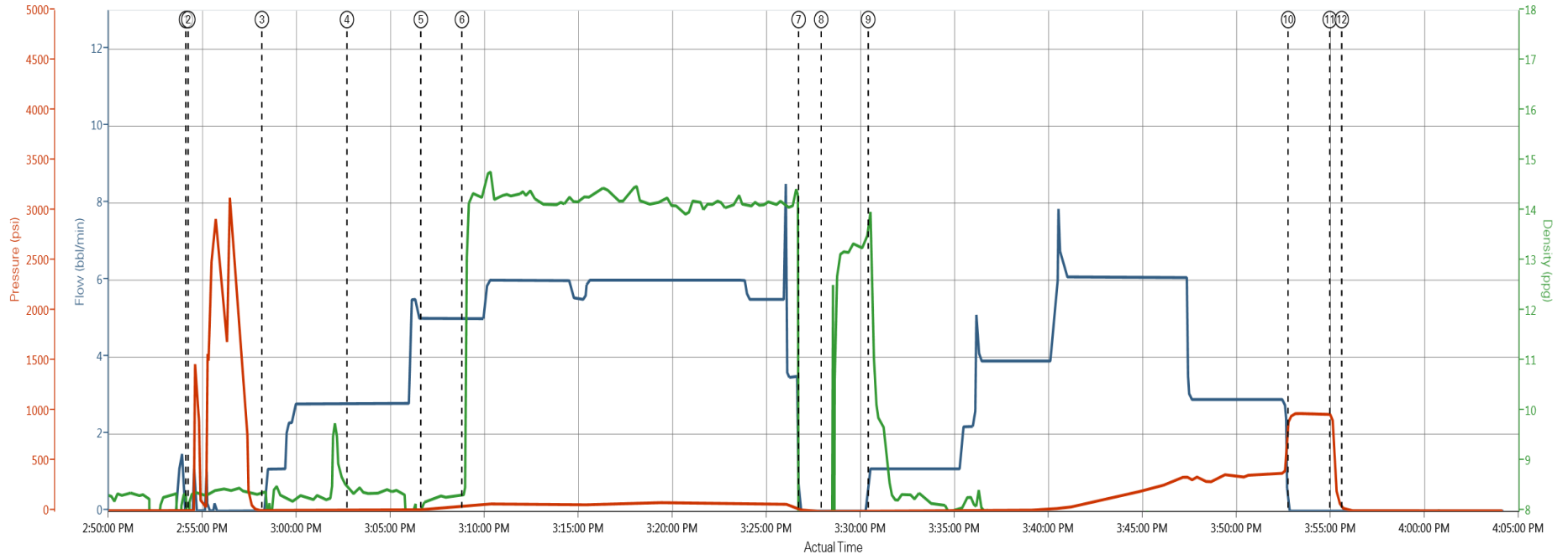
Stage/Plug # 1 Fluid 3: SwiftCem B2
SWIFTCEM (TM) SYSTEM

Fluid Weight: 14.20 lbm/gal
Slurry Yield: 1.53 ft³/sack
Total Mixing Fluid: 7.63 Gal
Surface Volume: 393.0 sacks
Sacks: 393.0 sacks

HALLIBURTON

Data Acquisition

Anadarko 3D 37N-21HZ



Comb Pump Rate (bbl/min) DH Density (ppg) PS Pump Press (psi)

① Start Job 0,6.29,4 ② Test Lines 0,8.34,4 ③ Pump Spacer 1 0,8.37,5 ④ Pump Spacer 2 2,8,8.46,19 ⑤ Pump Spacer 1 5,8.24,15 ⑥ Pump Cement 5,8.33,43 ⑦ Shutdown 0,-0.02,11 ⑧ Drop Top Plug 0,-0.15,-4 ⑨ Pump Displacement 1,1,14,5 ⑩ Bump Plug 0,7.94,942 ⑪ Other 0,7.94,950 ⑫ End Job 0,-0.47,22

HALLIBURTON | iCem® Service

Created: 2013-10-27 13:26:00, Version: 2.0.606

Edit

Customer: ANADARKO PETROLEUM CORP - EBUS

Job Date: 10/27/2013 1:27:21 PM

Well: 3D 37N-21HZ

Representative: Nicholas Vigil

Sales Order #: 900848544

HALLIBURTON

Service Supervisor Reports

Job Log

| Date/Time | Chart # | Activity Code | Pump Rate | Cum Vol | Pump | Pressure (psig) | Comments |
|------------------|---------|---|-----------|---------|------|-----------------|---|
| 10/27/2013 05:26 | | Shutdown | | | | | |
| 10/27/2013 12:30 | | Arrive At Loc | | | | | On location time was 1300, Rig had about 5 joints of casing left to run |
| 10/27/2013 12:35 | | Assessment Of Location Safety Meeting | | | | | Hazard hunt, Water test, When we arrived on location I noticed there was no spill containment on location, I called Rain for Rent to get one out here ASAP, |
| 10/27/2013 12:40 | | Rig-Up Equipment | | | | | We rigged up what we could with out having the containment on site. |
| 10/27/2013 13:30 | | Rig-Up Completed | | | | | |
| 10/27/2013 13:30 | | Wait on HES or HES Sub-Contractor Equipment - End | | | | | I called Rain for Rent @ 12:46 p.m. |
| 10/27/2013 14:00 | | Wait on HES or HES Sub-Contractor Equipment - End | | | | | We got spill containment set up and finished rigging up |
| 10/27/2013 14:40 | | Pre-Job Safety Meeting | | | | | Held safety meeting with all personell on location |
| 10/27/2013 14:54 | | Start Job | | | | | |
| 10/27/2013 14:54 | | Test Lines | | | | 3000.0 | Pressure tested lines to 3000 psi |
| 10/27/2013 14:58 | | Pump Spacer 1 | 2.0 | 10.0 | | 20.0 | Water Spcaer |
| 10/27/2013 15:02 | | Pump Spacer 2 | 2.5 | 12.0 | | 20.0 | Mud Flush |
| 10/27/2013 15:06 | | Pump Spacer 1 | 4.0 | 10.0 | | 40.0 | Water Spcaer |
| 10/27/2013 15:08 | | Pump Cement | 6.0 | 107.1 | | 75.0 | 14.2 ppg SwiftCem (393 sks), weight was verified by scale |
| 10/27/2013 15:28 | | Drop Top Plug | | | | | Plug was pre loaded |
| 10/27/2013 15:30 | | Pump Displacement | 6.0 | 82.0 | | 200 | Displaced using frsh water |
| 10/27/2013 15:52 | | Bump Plug | 3.0 | 82.0 | | 450.0 | Bumped plug 500 psi over final lift bringing our final pressure to 950 psi |
| 10/27/2013 15:55 | | End Job | | | | | Rig down saftey meeting |
| 10/27/2013 15:55 | | Check Floats | | | | | Floats held |
| 10/27/2013 16:00 | | Rig-Down Equipment | | | | | Wash up pump and rig down |
| 10/27/2013 16:30 | | Rig-Down Completed | | | | | |

The Road to Excellence Starts with Safety

| | | | | | | | | | | | |
|---|-----------------------|---|-----------------------|--|-----------------------------|------------------------------------|-------------------------------|--------------------------------|-------------------------|---------------------|-------------------------------|
| Sold To #: 300466 | | Ship To #: 3182342 | | Quote #: | | Sales Order #: 900848544 | | | | | |
| Customer: ANADARKO PETROLEUM CORP - EBUS | | | | Customer Rep: Strong, Brett | | | | | | | |
| Well Name: 3D | | Well #: 37N-21HZ | | API/UWI #: 05-123-38101 | | | | | | | |
| Field: WATTENBURG | | City (SAP): FORT LUPTON | | County/Parish: Weld | | State: Colorado | | | | | |
| Lat: N 40.13 deg. OR N 40 deg. 7 min. 48.738 secs. | | | | Long: W 104.776 deg. OR W -105 deg. 13 min. 25.23 secs. | | | | | | | |
| Contractor: | | Rig/Platform Name/Num: Major 41 | | | | | | | | | |
| Job Purpose: Cement Surface Casing | | | | | | | | | | | |
| Well Type: Development Well | | | | Job Type: Cement Surface Casing | | | | | | | |
| Sales Person: FLING, MATTHEW | | Srvc Supervisor: VIGIL, NICHOLAS | | | MBU ID Emp #: 443481 | | | | | | |
| Job Personnel | | | | | | | | | | | |
| HES Emp Name | Exp Hrs | Emp # | HES Emp Name | Exp Hrs | Emp # | HES Emp Name | Exp Hrs | Emp # | | | |
| HARRAH, THADDEUS Gregory | 0.0 | 552592 | ROMERO, JOSEPH M | 0.0 | 512137 | VIGIL, NICHOLAS Joseph | 0.0 | 443481 | | | |
| Equipment | | | | | | | | | | | |
| HES Unit # | <i>Distance-1 way</i> | HES Unit # | <i>Distance-1 way</i> | HES Unit # | <i>Distance-1 way</i> | HES Unit # | <i>Distance-1 way</i> | | | | |
| 10866493C | 10 mile | 11398490 | 10 mile | 11645065 | 10 mile | 12010168 | 10 mile | | | | |
| Job | | | | Job Times | | | | | | | |
| Formation Name | | | | | | Date | Time | Time Zone | | | |
| Formation Depth (MD) | | Top | Bottom | Called Out | | 27 - Oct - 2013 | 09:00 | MST | | | |
| Form Type | | BHST | | On Location | | 27 - Oct - 2013 | 12:30 | MST | | | |
| Job depth MD | | 1033. ft | Job Depth TVD | 1033. ft | Job Started | | 27 - Oct - 2013 | 14:58 | MST | | |
| Water Depth | | Wk Ht Above Floor | | Job Completed | | 27 - Oct - 2013 | 15:55 | MST | | | |
| Perforation Depth (MD) | | <i>From</i> | <i>To</i> | Departed Loc | | 27 - Oct - 2013 | 17:30 | MST | | | |
| Well Data | | | | | | | | | | | |
| <i>Description</i> | New / Used | Max pressure psig | Size in | ID in | Weight lbm/ft | Thread | Grade | Top MD ft | Bottom MD ft | Top TVD ft | Bottom TVD ft |
| 13 1/2" Open Hole Section | | | | 13.5 | | | | . | 1030. | | |
| 9 5/8" Surface Casing | Unknown | | 9.625 | 8.921 | 36. | | J-55 | . | 1010. | | |
| Fluid Data | | | | | | | | | | | |
| Stage/Plug #: 1 | | | | | | | | | | | |
| Fluid # | Stage Type | Fluid Name | | | Qty | Qty uom | Mixing Density lbm/gal | Yield ft³/sk | Mix Fluid Gal/sk | Rate bbl/min | Total Mix Fluid Gal/sk |

| | | | | | | | | | |
|--|--------------------|---------------------------------------|--------|--|------|-----------------|------|-----|------|
| 1 | Fresh Water Spacer | | 10.0 | bbbl | 8.33 | | | 2.0 | |
| 2 | Mud Flush | | 12.00 | bbbl | 8.4 | | | 2.5 | |
| | 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 | bbbl | 8.33 | | | 4.0 | |
| 3 | SwiftCem B2 | SWIFTCEM (TM) SYSTEM (452990) | 393.0 | sacks | 14.2 | 1.53 | 7.63 | 6.0 | 7.63 |
| | 7.63 Gal | FRESH WATER | | | | | | | |
| Rates | | | | | | | | | |
| Circulating | | Mixing | | Displacement | | Avg. Job | | | |
| Cement Left In Pipe | Amount | 40 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 | | | | | |

