

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

Pettinger 1N-18HZ

Majors 42

Post Job Summary

Cement Surface Casing

Date Prepared: 11/30/2013
Version: 1

Service Supervisor: SMITH, KC

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 | 1,189.76 | 42.50 |
| Open Hole Section | 13 1/2" Open Hole Section | | 13.500 | | 0.00 | 1,192.00 | 0.00 |

HALLIBURTON

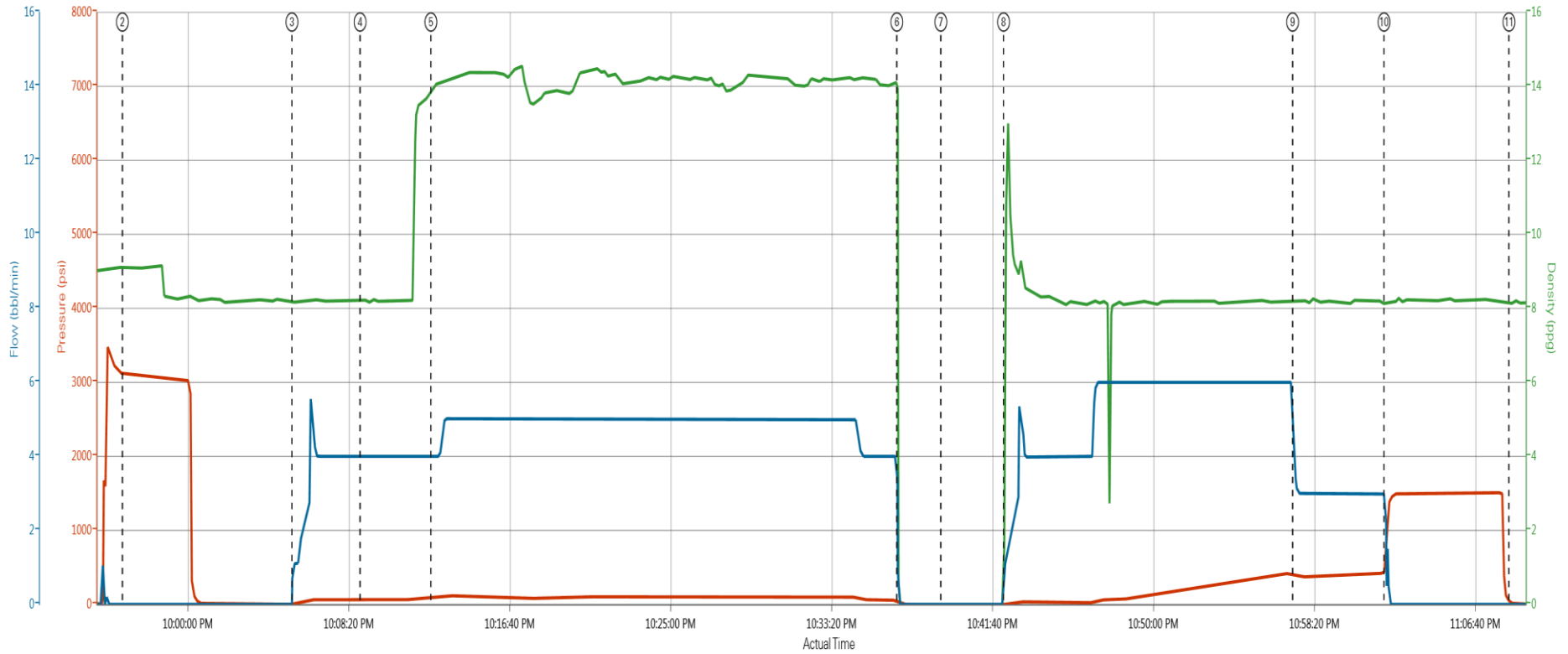
Pumping Schedule

| 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 | 4.00 | 10.0 bbl | 10.0 bbl |
| 1 | 2 | Spacer | Mud Flush | 8.40 | 4.00 | 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 | 5.00 | 447.0 sacks | 447.0 sacks |

HALLIBURTON

Data Acquisition

Custom Results



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

- ① Prime Pumps 430;8.97;11.9 ④ Pump Spacer 61;8.2;4 ⑦ Drop Top Plug -6;-0.12;0 ⑩ Bump Plug 880;8.16;2.2
- ② Test Lines 3119;9.12;0 ⑤ Pump Cement 93;13.93;4 ⑧ Pump Displacement -1;9.38;1.1 ⑪ Check Floats 22;8.13;0
- ③ Pump Water - End 5;8.17;1.1 ⑥ Shutdown 32;0.39;0 ⑨ Slow Rate 415;8.15;4

HALLIBURTON

Service Supervisor Reports

Job Log

| Date/Time | Chart # | Activity Code | Pump Rate | Cum Vol | Pump | Pressure (psig) | Comments |
|------------------|---------|--|-----------|---------|------|-----------------|--|
| 11/27/2013 15:00 | | Call Out | | | | | Crew Called out for Job. Requested on location @ 19:00. |
| 11/27/2013 16:55 | | Pre-Convoy Safety Meeting | | | | | Met w/crew to discuss safety and hazards of travel to location |
| 11/27/2013 17:00 | | Depart from Service Center or Other Site | | | | | Entered into Journey Management. |
| 11/27/2013 17:30 | | Arrive At Loc | | | | | Ended Journey Management. Rig crew running casing. |
| 11/27/2013 17:35 | | Assessment Of Location Safety Meeting | | | | | Met w/crew to discuss hazards of site, location of materials and safety precautions. Met with Company rep to get numbers and discuss when and where to spot equipment. |
| 11/27/2013 18:15 | | Comment | | | | | Spot Equipment into position. |
| 11/27/2013 18:25 | | Pre-Rig Up Safety Meeting | | | | | Met w/crew to discuss the best way to rig up, safety and hazards involved. |
| 11/27/2013 18:30 | | Rig-Up Equipment | | | | | Rig up water, product, and iron as far as we can go. |
| 11/27/2013 19:00 | | Comment | | | | | Waiting for rig to finish running casing. |
| 11/27/2013 21:30 | | Pre-Job Safety Meeting | | | | | Met w/Rig Crew, Co. Rep, and our crew to discuss job procedres, contingencies, and safety measures. |
| 11/27/2013 21:40 | | Rig-Up Equipment | | | | | Stab cmt head and finish rigging up the iron. |
| 11/27/2013 21:50 | | Other | | | | | Fill lines with fresh water for pressure test |
| 11/27/2013 21:56 | | Test Lines | | | | | Pressure test iron to 3000 psi |
| 11/27/2013 22:05 | | Pump Water | 4 | 10 | | 5.0 | Pump Fresh Water Spacer |
| 11/27/2013 22:09 | | Pump Spacer | 4 | 12 | | 61.0 | Pump Mud flush. |
| 11/27/2013 22:10 | | Pump Water | 4 | 10 | | 5.0 | Pump Fresh Water Spacer |
| 11/27/2013 22:12 | | Pump Cement | 5 | 123 | | 93.0 | Pumped 95 sks BondCem Cement @ 14.2 lb/gal, 1.54 cuft/sk, 7.66 gal/sk. |
| 11/27/2013 22:36 | | Shutdown | | | | 29.0 | Shutdown. |
| 11/27/2013 22:39 | | Drop Top Plug | | | | | Drop top plug. Wash pumps and lines on top of the plug. |
| 11/27/2013 22:42 | | Pump Displacement | 6 | | | .0 | Pump Displacement 88.7 bbls of Fresh Water.. |
| 11/27/2013 22:57 | | Slow Rate | 3 | 75 | | 413.0 | Slow displacement rate to 3 barrels per minute after 75 barrels displacement gone. |
| 11/27/2013 23:02 | | Bump Plug | 3 | 89 | | 430.0 | Bump plug after 89 barrels displacement gone. Over pressure to 1500 psi. |
| 11/27/2013 23:08 | | Check Floats | | | | | Held for 5 min, check floats per Company Rep. Floats held. 1/2 bbl back. |
| 11/27/2013 23:15 | | End Job | | | | | Job Complete |
| 11/27/2013 23:25 | | Post-Job Safety Meeting (Pre Rig-Down) | | | | | Met w/crew to discuss rigging down safely. |
| 11/27/2013 23:30 | | Rig-Down Equipment | | | | | Rig everything down. |
| 11/28/2013 00:15 | | Pre-Convoy Safety Meeting | | | | | Met w/crew to discuss fit-for-duty, safety and hazards of travel back. |
| 11/28/2013 00:30 | | Depart Location for Service Center or Other Site | | | | | Entered into Journey Management. |

The Road to Excellence Starts with Safety

| | | | |
|---|--------------------------------|---|------------------------------------|
| Sold To #: 300466 | Ship To #: 3117346 | Quote #: | Sales Order #: 900924223 |
| Customer: ANADARKO PETROLEUM CORP - EBUS | | Customer Rep: Heresh, Larry | |
| Well Name: Pettinger | | Well #: 1N-18HZ | API/UWI #: 05-123-38017 |
| Field: WATTENBERG | City (SAP): BRIGHTON | County/Parish: Weld | State: Colorado |
| Contractor: Majors | | Rig/Platform Name/Num: Majors 42 | |
| Job Purpose: Cement Surface Casing | | | |
| Well Type: Development Well | | Job Type: Cement Surface Casing | |
| Sales Person: PLIENESS, RYAN | | Srvc Supervisor: SMITH, KC | MBU ID Emp #: 462378 |

Job Personnel

| HES Emp Name | Exp Hrs | Emp # | HES Emp Name | Exp Hrs | Emp # | HES Emp Name | Exp Hrs | Emp # |
|-----------------|---------|--------|---------------------|---------|--------|--------------------------|---------|--------|
| EAVES, WESTON | 7.0 | 539193 | KAISA, BRADLEY Mike | 7.0 | 528102 | SCOTT, BRANDON Weston | 7.0 | 534182 |
| SMITH, KC Hyrum | 7.0 | 462378 | | | | | | |

Equipment

| HES Unit # | Distance-1 way | HES Unit # | Distance-1 way | HES Unit # | Distance-1 way | HES Unit # | Distance-1 way |
|------------|----------------|------------|----------------|------------|----------------|------------|----------------|
| 10951248 | 10 mile | 11064046 | 10 mile | 11501021 | 10 mile | 11566182 | 10 mile |
| 11645065 | 10 mile | | | | | | |

Job

Job Times

| Formation Name | Formation Depth (MD) | Top | Bottom | Called Out | Date | Time | Time Zone |
|-------------------------------|----------------------|-----|--------------------------|---------------------|----------------------|-----------------|-----------|
| | | | | | 27 - Nov - 2013 | 15:00 | MST |
| Form Type | | | BHST | On Location | 27 - Nov - 2013 | 17:30 | MST |
| Job depth MD | 1190. ft | | Job Depth TVD | 1190. ft | Job Started | 27 - Nov - 2013 | 21:30 |
| Water Depth | | | Wk Ht Above Floor | 3. ft | Job Completed | 27 - Nov - 2013 | 23:15 |
| Perforation Depth (MD) | <i>From</i> | | <i>To</i> | Departed Loc | 28 - Nov - 2013 | 00:30 | MST |

Well Data

| Description | 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 | | | | . | 1192. | | |
| 9 5/8" Surface Casing | Unknown | | 9.625 | 8.921 | 36. | | J-55 | . | 1189.8 | | |

Sales/Rental/3rd 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 | | |
| CNTRLZR, 9 5/8"x13 3/4',#500-0963-1375 | 9 | EA | | |
| BASKET - CEMENT - 9-5/8 CSG X 12-1/4 | 1 | EA | | |
| Description | Qty | Qty uom | Depth | Supplier |
| 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 ³ /sk | Mix Fluid Gal/sk | Rate bbl/min | Total Mix Fluid Gal/sk |
|--|--------------------|---------------------------------------|--------|-----------------------------------|------------------------|---------------------------|------------------|--------------|------------------------|
| 1 | Fresh Water Spacer | | 10.00 | bbl | 8.33 | | | 4.0 | |
| 2 | Mud Flush | | 12.00 | bbl | 8.4 | | | 4.0 | |
| 3.5 lbm/bbl | | MUD FLUSH III, 40 LB SACK (101633304) | | | | | | | |
| 42 gal/bbl | | MUD FLUSH III - SBM (528788) | | | | | | | |
| 1 | Fresh Water Spacer | | 10.00 | bbl | 8.33 | | | 4.0 | |
| 3 | SwiftCem B2 | SWIFTCEM (TM) SYSTEM (452990) | 447.0 | sacks | 14.2 | 1.54 | 7.66 | 5.0 | 7.66 |
| 7.66 Gal | | FRESH WATER | | | | | | | |
| Calculated Values | | Pressures | | Volumes | | | | | |
| Displacement | 89 | Shut In: Instant | | Lost Returns | 0 | Cement Slurry | | Pad | |
| Top Of Cement | | 5 Min | | Cement Returns | | Actual Displacement | 89 | Treatment | |
| Frac Gradient | | 15 Min | | Spacers | | Load and Breakdown | | Total Job | |
| Rates | | | | | | | | | |
| Circulating | | Mixing | | Displacement | | Avg. Job | | | |
| Cement Left In Pipe | Amount | 42.5 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 | | | | | |

