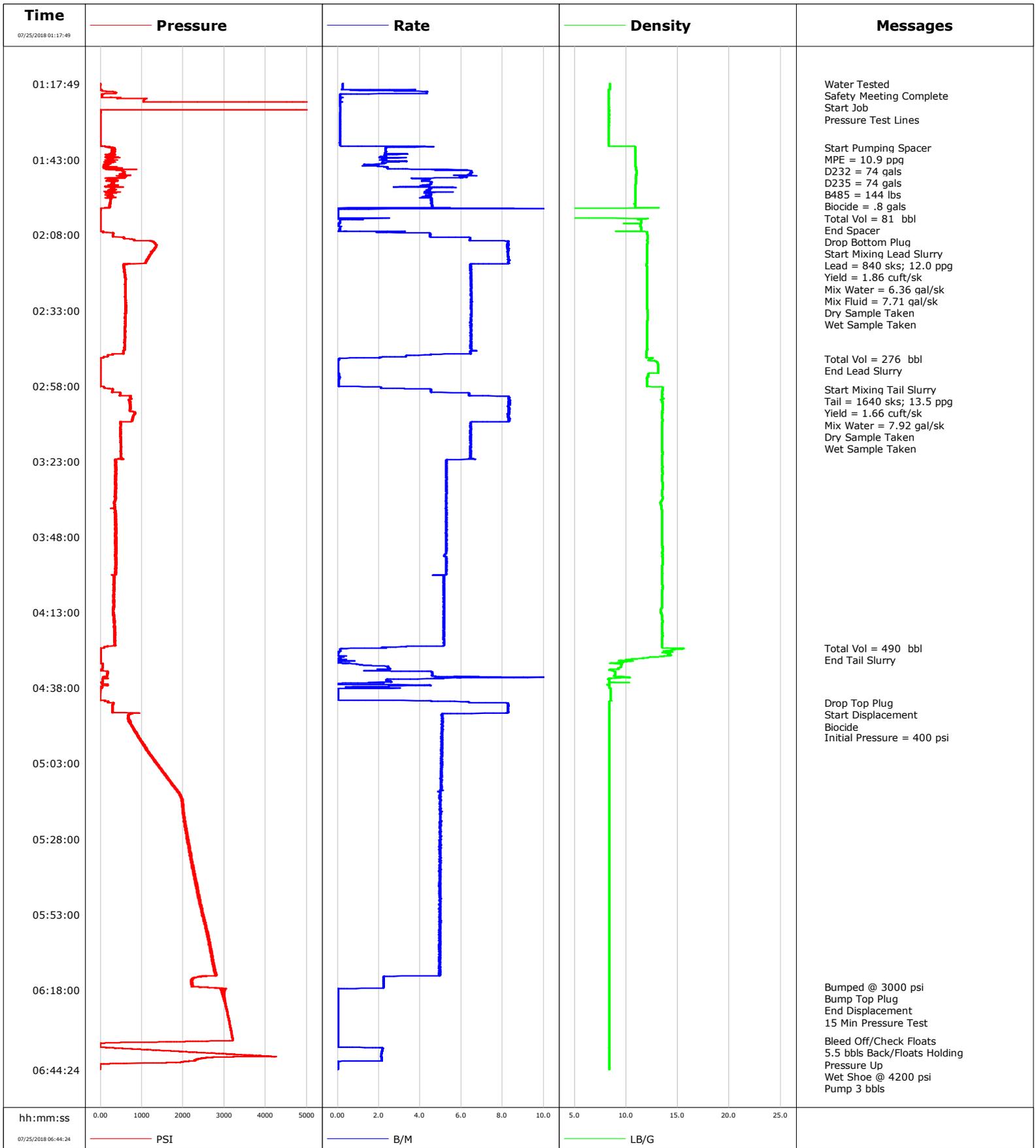


| | | | |
|-----------------|---------------------|-----------------|---------------------------------|
| Well | English Farms 8-8HZ | Client | ANADARKO PETROLEUM COMPANY (ED) |
| Field | Wattenberg | SIR No. | E0ZP-00405 |
| Engineer | Michael Lopez | Job Type | 5.5 Production |
| Country | United States | Job Date | 07-24-2018 |



| | | | | Customer | | | Job Number | | | |
|---|------------------|--|-------------------|---------------------------------|------------------------|--------------------------|-----------------|----------------------|----------------|--------|
| | | | | ANADARKO PETROLEUM COMPANY (ED) | | | E0ZP-00405 | | | |
| Well | | Location (legal) | | | Schlumberger Location | | Job Start | | | |
| English Farms 8-8HZ 0631769079 | | | | | CWY | | Jul/24/2018 | | | |
| Field | | Formation Name/Type | | | Deviation | Bit Size | Well MD | Well TVD | | |
| Wattenberg | | | | | deg | 8.5 in | 20364.0 ft | ft | | |
| County | | State/Province | | | BHP | BHST | BHCT | Pore Press. Gradient | | |
| Weld | | Colorado | | | psi | 230 degF | 230 degF | lb/gal | | |
| Well Master | | API/UWI | | | | | | | | |
| 0631769079 | | 05123465890000 | | | | | | | | |
| Rig Name | | Drilled For | Service Via | | Casing/Liner | | | | | |
| PD 564 | | Oil & Gas | Land | | Depth, ft | Size, in | Weight, lb/ft | Grade | Thread | |
| Offshore Zone | | Well Class | Well Type | | 1881.0 | 9.6 | 36.0 | J55 | N/A | |
| | | New | Exploration | | 20353.0 | 5.5 | 17.0 | P110 | 8RD | |
| Drilling Fluid Type | | Max. Density | Plastic Viscosity | | Tubing/Drill Pipe | | | | | |
| OBM | | 9.10 lb/gal | cP | | T/D | Depth, ft | Size, in | Weight, lb/ft | Grade | Thread |
| Service Line | | Job Type | | | | | | | | |
| Cementing | | 5.5 Production | | | | | | | | |
| Max. Allowed Tub. Press | | Max. Allowed Ann. Press | WH Connection | | Perforations/Open Hole | | | | | |
| psi | | psi | 5.5 8 RND | | Top, ft | Bottom, ft | shot/ft | No. of Shots | Total Interval | |
| Service Instructions 9 5/8" 36# Previous Casing: 1,881' 8 1/2" OH to TD OH Excess: 4% Top of Lead Cement: 2,500' Top of Tail Cement: 9,000' TD: 20,364' (7,161') | | | | | ft | ft | | | ft | |
| | | | | | ft | ft | | | Diameter | |
| | | | | | ft | ft | | | in | |
| | | Treat Down | Displacement | Packer Type | Packer Depth | | | | | |
| | | Casing | 472.0 bbl | | ft | | | | | |
| | | Tubing Vol. | Casing Vol. | Annular Vol. | Openhole Vol. | | | | | |
| | | bbl | 472.0 bbl | 844.0 bbl | 754.0 bbl | | | | | |
| Casing/Tubing Secured | | 1 Hole Vol. Circulated prior to Cement | | | Casing Tools | | | Squeeze Job | | |
| <input checked="" type="checkbox"/> | | <input checked="" type="checkbox"/> | | | | | | | | |
| Lift Pressure | | Shoe Type | | | Shoe Depth | Tool Type | Squeeze Job | | | |
| psi | | Float | | | 20353.0 ft | | | | | |
| Pipe Rotated | | Pipe Reciprocated | | | Stage Tool Type | Tool Depth | | | | |
| <input type="checkbox"/> | | <input type="checkbox"/> | | | | ft | | | | |
| No. Centralizers | | Top Plugs | Bottom Plugs | | | Stage Tool Depth | Tail Pipe Size | | | |
| | | 1 | 1 | | | ft | in | | | |
| Cement Head Type | | Job Scheduled For | | | Arrived on Location | Leave Location | Collar Type | Tail Pipe Depth | | |
| Double | | Jul/24/2018 16:00 | Jul/24/2018 16:00 | Jul/25/2018 08:00 | Float | ft | ft | | | |
| | | | | | Collar Depth | 20340.0 ft | Sqz. Total Vol. | bbl | | |
| Date | Time 24-hr clock | Treating Pressure PSI | Flow Rate B/M | Density LB/G | Volume BBL | Message | | | | |
| 07/25/2018 | 01:17:49 | -10 | 0.2 | 8.43 | 0.0 | Started Acquisition | | | | |
| 07/25/2018 | 01:17:56 | -10 | 0.2 | 8.43 | 0.0 | Water Tested | | | | |
| 07/25/2018 | 01:17:57 | -10 | 0.2 | 8.43 | 0.0 | Safety Meeting Complete | | | | |
| 07/25/2018 | 01:18:00 | -9 | 0.2 | 8.43 | 0.0 | Start Job | | | | |
| 07/25/2018 | 01:18:11 | -11 | 0.2 | 8.43 | 0.1 | Pressure Test Lines | | | | |
| 07/25/2018 | 01:38:52 | 152 | 3.7 | 10.88 | 8.6 | Start Pumping Spacer | | | | |
| 07/25/2018 | 01:38:53 | 202 | 3.4 | 10.88 | 8.6 | MPE = 10.9 ppg | | | | |
| 07/25/2018 | 01:38:54 | 287 | 3.0 | 10.88 | 8.7 | D232 = 74 gals | | | | |
| 07/25/2018 | 01:38:55 | 231 | 2.7 | 10.88 | 8.7 | D235 = 74 gals | | | | |
| 07/25/2018 | 01:46:59 | 549 | 6.5 | 11.00 | 30.3 | Biocide = .8 gals | | | | |
| 07/25/2018 | 01:59:24 | 2 | 1.5 | 0.59 | 90.4 | Total Vol = 81 bbl | | | | |
| 07/25/2018 | 01:59:40 | 0 | 0.0 | 0.51 | 90.4 | End Spacer | | | | |
| 07/25/2018 | 01:59:42 | -0 | 0.0 | 0.51 | 90.4 | Drop Bottom Plug | | | | |
| 07/25/2018 | 02:06:39 | -4 | 0.1 | 11.42 | 91.1 | Start Mixing Lead Slurry | | | | |
| 07/25/2018 | 02:09:49 | 821 | 6.4 | 12.03 | 105.8 | Lead = 840 sks; 12.0 ppg | | | | |
| 07/25/2018 | 02:09:50 | 812 | 6.4 | 12.03 | 105.9 | Yield = 1.86 cuft/sk | | | | |
| 07/25/2018 | 02:09:51 | 989 | 6.4 | 12.03 | 106.0 | Mix Water = 6.36 gal/sk | | | | |
| 07/25/2018 | 02:09:53 | 1212 | 6.6 | 12.04 | 106.2 | Mix Fluid = 7.71 gal/sk | | | | |
| 07/25/2018 | 02:10:12 | 1271 | 8.3 | 12.05 | 108.8 | Dry Sample Taken | | | | |
| 07/25/2018 | 02:10:15 | 1282 | 8.2 | 12.05 | 109.2 | Wet Sample Taken | | | | |
| 07/25/2018 | 02:48:58 | -1 | 0.1 | 12.46 | 367.1 | Total Vol = 276 bbl | | | | |

| Well | | Field | | Job Start | | Customer | | Job Number | |
|--------------------------------|------------------|-----------------------|---------------|--------------|------------|--------------------------------|--|------------|--|
| English Farms 8-8HZ 0631769079 | | Wattenberg | | Jul/24/2018 | | ANADARKO PETROLEUM COMPANY (ED | | E0ZP-00405 | |
| Date | Time 24-hr clock | Treating Pressure PSI | Flow Rate B/M | Density LB/G | Volume BBL | Message | | | |
| 07/25/2018 | 02:59:06 | 310 | 4.5 | 13.53 | 369.8 | Start Mixing Tail Slurry | | | |
| 07/25/2018 | 02:59:09 | 295 | 4.5 | 13.52 | 370.0 | Tail = 1640 sks; 13.5 ppg | | | |
| 07/25/2018 | 02:59:10 | 306 | 4.5 | 13.52 | 370.1 | Yield = 1.66 cuft/sk | | | |
| 07/25/2018 | 02:59:11 | 288 | 4.5 | 13.52 | 370.2 | Mix Water = 7.92 gal/sk | | | |
| 07/25/2018 | 02:59:12 | 293 | 4.5 | 13.52 | 370.3 | Dry Sample Taken | | | |
| 07/25/2018 | 02:59:54 | 283 | 4.5 | 13.50 | 373.4 | Wet Sample Taken | | | |
| 07/25/2018 | 04:24:51 | 5 | 2.3 | 15.29 | 857.6 | Total Vol = 490 bbl | | | |
| 07/25/2018 | 04:25:12 | 5 | 0.1 | 14.93 | 857.8 | End Tail Slurry | | | |
| 07/25/2018 | 04:42:56 | 314 | 7.7 | 8.37 | 887.1 | Drop Top Plug | | | |
| 07/25/2018 | 04:42:57 | 313 | 7.9 | 8.37 | 887.2 | Start Displacement | | | |
| 07/25/2018 | 04:48:06 | 666 | 5.1 | 8.36 | 924.5 | Biocide | | | |
| 07/25/2018 | 04:54:22 | 953 | 5.0 | 8.36 | 956.2 | Initial Pressure = 400 psi | | | |
| 07/25/2018 | 06:17:00 | 2368 | 2.2 | 8.36 | 1357.8 | Bumped @ 3000 psi | | | |
| 07/25/2018 | 06:17:41 | 2965 | 0.0 | 8.36 | 1359.0 | Bump Top Plug | | | |
| 07/25/2018 | 06:17:42 | 2998 | 0.0 | 8.36 | 1359.0 | End Displacement | | | |
| 07/25/2018 | 06:18:58 | 2982 | 0.0 | 8.36 | 1359.0 | 15 Min Pressure Test | | | |
| 07/25/2018 | 06:34:50 | 3129 | 0.0 | 8.36 | 1359.0 | Bleed Off/Check Floats | | | |
| 07/25/2018 | 06:35:52 | -17 | 0.0 | 8.36 | 1359.0 | 5.5 bbls Back/Floats Holding | | | |
| 07/25/2018 | 06:37:00 | 21 | 0.4 | 8.36 | 1359.0 | Pressure Up | | | |
| 07/25/2018 | 06:40:41 | 2413 | 2.1 | 8.35 | 1366.8 | Wet Shoe @ 4200 psi | | | |
| 07/25/2018 | 06:41:41 | 2065 | 0.0 | 8.36 | 1368.7 | Pump 3 bbls | | | |
| 07/25/2018 | 06:42:21 | 551 | 0.0 | 8.36 | 1368.7 | Bleed Off/ 3 bbls Back | | | |

Post Job Summary

| Average Pump Rates, bbl/min | | | | Volume of Fluid Injected, bbl | | | |
|---------------------------------------|-------------------------|--------------|----------------|-------------------------------|--------------------------|---------------|-------------------------------------|
| Slurry | N2 | Mud | Maximum Rate | Total Slurry | Mud | Spacer | N2 |
| 4.6 | | | 18.5 | 766.0 | 0.0 | 80.0 | |
| Treating Pressure Summary, psi | | | | Breakdown Fluid | | | |
| Maximum | Final | Average | Bump Plug to | Breakdown | Type | Volume | Density |
| 6020 | -14 | 1171 | 3000 | | | bbl | lb/gal |
| Avg. N2 Percent | Designed Slurry Volume | Displacement | Mix Water Temp | Cement Circulated to Surface? | <input type="checkbox"/> | Volume | bbl |
| % | 759.0 bbl | 472.0 bbl | 65 degF | Washed Thru Perfs | <input type="checkbox"/> | To | ft |
| Customer or Authorized Representative | Schlumberger Supervisor | | | Circulation Lost | <input type="checkbox"/> | Job Completed | <input checked="" type="checkbox"/> |
| John Truett | Michael Lopez | | | - | | - | |