

The Road to Excellence Starts with Safety

| | | | | | | | | | | |
|---|-------------------|---------------------------|------------------------|---|-----------------------------------|----------------------------------|----------------------|---------------------|----------------------------|----------------------|
| Sold To #: 300466 | | Ship To #: 3751863 | | Quote #: 0022378258 | | Sales Order #: 0904470709 | | | | |
| Customer: ANADARKO PETROLEUM CORP-EBUS | | | | Customer Rep: Jackie Mckinley | | | | | | |
| Well Name: WAGNER | | | Well #: 2N-10HZ | | API/UWI #: 05-123-43471-00 | | | | | |
| Field: WATTENBERG | | City (SAP): IONE | | County/Parish: WELD | | State: COLORADO | | | | |
| Legal Description: SW NE-22-1N-67W-1722FNL-1559FEL | | | | | | | | | | |
| Contractor: PRECISION DRLG | | | | Rig/Platform Name/Num: PRECISION 464 | | | | | | |
| Job BOM: 7525 7525 | | | | | | | | | | |
| Well Type: HORIZONTAL GAS | | | | | | | | | | |
| Sales Person: HALAMERICA\HX41066 | | | | Srv Supervisor: Luke Kosakewich | | | | | | |
| Job | | | | | | | | | | |
| | | | | | | | | | | |
| Formation Name | | | | | | | | | | |
| Formation Depth (MD) | | Top | | Bottom | | | | | | |
| Form Type | | | | BHST | | | | | | |
| Job depth MD | | 15590ft | | Job Depth TVD | | 7369ft | | | | |
| Water Depth | | | | Wk Ht Above Floor | | | | | | |
| Perforation Depth (MD) | | From | | To | | | | | | |
| | | | | | | | | | | |
| Well Data | | | | | | | | | | |
| Description | New / Used | Size in | ID in | Weight lbm/ft | Thread | Grade | Top MD ft | Bottom MD ft | Top TVD ft | Bottom TVD ft |
| Drill Pipe | | 4 | 3.34 | 14 | | | 0 | 5772 | 0 | 5772 |
| Casing | | 7 | 6.276 | 26 | LTC | HCP110 | 0 | 6013 | 0 | 6013 |
| Casing | | 4.5 | 4 | 11.6 | LTC | HCP110 | 5772 | 15585 | 5772 | 7369 |
| Open Hole Section | | | 6.125 | | | | 6013 | 15590 | 6013 | 7369 |
| | | | | | | | | | | |
| Tools and Accessories | | | | | | | | | | |
| Type | Size in | Qty | Make | Depth ft | | Type | Size in | Qty | Make | |
| Guide Shoe | | | | | | Top Plug | 4.5 | 1 | Weatherford | |
| Float Shoe | 4.5 | | | 15585 | | Bottom Plug | | | | |
| Float Collar | 4.5 | | | 15536 | | SSR plug set | | | | |
| Insert Float | | | | | | Plug Container | | | | |
| Stage Tool | | | | | | Centralizers | | | | |
| | | | | | | | | | | |
| Fluid Data | | | | | | | | | | |
| Stage/Plug #: 1 | | | | | | | | | | |
| Fluid # | Stage Type | Fluid Name | Qty | Qty UoM | Mixing Density lbm/gal | Yield ft3/sack | Mix Fluid Gal | Rate bbl/min | Total Mix Fluid Gal | |
| 1 | Tuned Spacer III | Tuned Spacer III | 60 | bbl | 10.5 | 6.25 | | 4 | | |

| Fluid # | Stage Type | Fluid Name | Qty | Qty UoM | Mixing Density lbm/gal | Yield ft3/sack | Mix Fluid Gal | Rate bbl/min | Total Mix Fluid Gal |
|--|--------------------|--------------------|-------|---------|---------------------------|-------------------|------------------|-----------------|---------------------------|
| 2 | EconoCem | ECONOCCEM | 590 | sack | 13.5 | 1.68 | | 7 | 7.98 |
| | | | | | | | | | |
| Fluid # | Stage Type | Fluid Name | Qty | Qty UoM | Mixing Density lbm/gal | Yield ft3/sack | Mix Fluid Gal | Rate bbl/min | Total Mix Fluid Gal |
| 3 | Displacement Fluid | Displacement Fluid | 208.5 | bbl | 8.34 | | | 6 | |
| | | | | | | | | | |
| | | | | | | | | | |
| Cement Left In Pipe | | Amount | 49 ft | | Reason | | | Shoe Joint | |
| | | | | | | | | | |
| Comment There were full returns throughout the job. Got 57 bbls. of spacer to surface fallowed by 17 bbls. of fresh water. There was no cement to surface. Estimated TOC is 5,933'. Floats held. Got 1.75 bbls. of fluid back to truck. Back side pressure test held at 3,030 psi. for 15 minutes, Finale pressure was 3,060 psi. | | | | | | | | | |

2.0 Real-Time Job Summary

2.1 Job Event Log

| Type | Seq. No. | Activity | Graph Label | Date | Time | Source | Comb Pump Rate (bbl/min) | DS Pump Press (psi) | DH Density (ppg) | Comments |
|-------|----------|--|--|-----------|----------|--------|-----------------------------|------------------------|---------------------|---|
| Event | 1 | Call Out | Call Out | 12/2/2017 | 04:40:00 | USER | | | | Crew was called out at 04:40 for an on location time of 10:30. |
| Event | 2 | Depart Location Safety Meeting | Depart Location Safety Meeting | 12/2/2017 | 08:50:00 | USER | | | | Crew held a pre journey safety meeting and JSA. |
| Event | 3 | Depart Shop for Location | Depart Shop for Location | 12/2/2017 | 09:00:00 | USER | | | | Started journey management with dispatch and left location. |
| Event | 4 | Arrive at Location from Service Center | Arrive at Location from Service Center | 12/2/2017 | 09:30:00 | USER | | | | Crew performed a site assessment and hazard hunt on location. Checked in with the customer and discussed the job procedures, rig up and well bore schematics to calculate the job. The rig was circulating. |
| Event | 5 | Other | Other | 12/2/2017 | 09:40:00 | USER | | | | W |
| Event | 6 | Pre-Rig Up Safety Meeting | Pre-Rig Up Safety Meeting | 12/2/2017 | 09:45:00 | USER | | | | The crew held a pre rig up safety meeting and JSA. |
| Event | 7 | Rig-Up Equipment | Rig-Up Equipment | 12/2/2017 | 09:50:00 | USER | | | | The crew rigged up all lines, hoses and equipment for the job. |
| Event | 8 | Safety Meeting | Safety Meeting | 12/2/2017 | 11:30:00 | USER | | | | All personnel on location held a pre job safety meeting and JSA. |
| Event | 9 | Start Job | Start Job | 12/2/2017 | 19:55:10 | COM4 | 0.00 | -4.00 | 8.40 | Pumped 3 bbls. of fresh water to fill lines and establish circulation. |

iCem® Service

(v. 4.2.393)

| | | | | | | | | | | |
|-------|----|-------------------|-------------------|-----------|----------|------|------|--------|-------|--|
| Event | 10 | Test Lines | Test Lines | 12/2/2017 | 19:57:42 | COM4 | 0.00 | 432.00 | 8.48 | Pressure tested lines to 4,500 psi. with a 500 psi. electronic kick out test. |
| Event | 11 | Pump Spacer 1 | Pump Spacer 1 | 12/2/2017 | 20:03:31 | COM4 | 0.00 | 215.00 | 8.37 | Pumped 60 bbls. of Tuned Spacer III with surfactants mixed at 10.5 ppg., Yield: 6.25 ft3/sks, 40.2 gal/sks. Density was verified by pressurized scales. |
| Event | 12 | Pump Cement | Pump Cement | 12/2/2017 | 20:20:24 | COM4 | 3.00 | 672.00 | 11.17 | Pumped 176.5 bbls. (590 sks.) of Econocem mixed at 13.5 ppg. Yield: 1.68 ft3/sk, 7.98 gal/sk. Density was verified by pressurized scales. |
| Event | 13 | Shutdown | Shutdown | 12/2/2017 | 21:02:26 | COM4 | 0.00 | 2.00 | 13.61 | Broke off the iron and loaded the dart into the drill pipe, which was witnessed by the customer. |
| Event | 14 | Clean Lines | Clean Lines | 12/2/2017 | 21:04:43 | COM4 | 0.00 | 0.00 | 13.61 | Washed pumps and lines until clean. |
| Event | 15 | Drop Top Plug | Drop Top Plug | 12/2/2017 | 21:11:09 | COM4 | 0.00 | 71.00 | 7.96 | Dropped the top plug, which was witnessed by the customer. |
| Event | 16 | Pump Displacement | Pump Displacement | 12/2/2017 | 21:13:37 | COM4 | 0.00 | -1.00 | 7.47 | Pumped 208.5 bbls. of fresh water with MMCR in the first 20 bbls. and Biocide throughout the rest of displacement. Picked up the dart 56 bbls. away pumping 3 bpm. at 750 psi. Pressuered up to 1,759 psi to pick up the latch plug. |
| Event | 17 | Bump Plug | Bump Plug | 12/2/2017 | 22:00:48 | COM4 | | | | Bumped the plug 500 psi. over 1,750 psi. at 3 bpm. Held pressure for 5 minutes. |
| Event | 18 | Check Floats | Check Floats | 12/2/2017 | 22:02:40 | USER | 0.00 | 63.00 | 7.18 | Bled off pressure to check |

| | | | | | | | | | | |
|-------|----|--|--|-----------|----------|------|------|--------|------|--|
| | | | | | | | | | | floats. Floats held. Got 1.75 bbls. of fluid back to the truck. |
| Event | 19 | Set Packer | Set Packer | 12/2/2017 | 22:08:12 | COM4 | 0.00 | -4.00 | 7.93 | The rig set the packer. |
| Event | 20 | Pressure Up Well | Pressure Up Well | 12/2/2017 | 22:21:19 | COM4 | 2.00 | 91.00 | 7.95 | Pressured up the well to 3,000 psi. for a 15 minute back side test. Pressure was monitored with the rig. Pressure held at 3,030 psi. Finale pressure was 3,060 psi. Bled off pressure. |
| Event | 21 | Sting out | Sting out | 12/2/2017 | 22:44:56 | USER | 0.90 | 17.00 | 7.92 | Pressured up to 1,000 psi. on the drill pipe to sting out. |
| Event | 22 | Clean Hole | Clean Hole | 12/2/2017 | 22:48:07 | COM4 | 0.00 | 390.00 | 7.97 | Pumped 150 bbls. of fresh water to clean out the 7" casing. Got 57 bbls. of spacer to surface. There was no cement to surface. Estimated TOC is 5,933' |
| Event | 23 | End Job | End Job | 12/2/2017 | 23:17:16 | COM4 | | | | Washed pumps and lines until clean. Blew down all lines and pumps until dry. |
| Event | 24 | Pre-Rig Down Safety Meeting | Pre-Rig Down Safety Meeting | 12/2/2017 | 23:30:00 | USER | 0.00 | 7.00 | 7.92 | Halliburton cement crew held a pre rig down safety meeting and JSA. |
| Event | 25 | Rig-Down Equipment | Rig-Down Equipment | 12/2/2017 | 23:35:00 | USER | 2.50 | 17.00 | 7.96 | Rigged down all lines, hoses and equipment. |
| Event | 26 | Depart Location Safety Meeting | Depart Location Safety Meeting | 12/3/2017 | 00:50:00 | USER | | | | Held a pre journey safety meeting with the crew. |
| Event | 27 | Depart Location for Service Center or Other Site | Depart Location for Service Center or Other Site | 12/3/2017 | 01:00:00 | USER | | | | Started journey management with dispatch and left location. |

3.0 Attachments

3.1 Anadarko Wagner 2N-10HZ Production Liner Job Chart

