

Cement Post Job Report

Client: PDC Energy

Well Name: George 11N

API #: 05-123-51786

Job Date: April 6, 2024

Job Type: New Well - 5.5" Production String

Cement Company & Contact: EXERO Well Integrity -
Cheve Meyer 720-239-3819

EXERO

TREATMENT REPORT

| CLIENT | WELL | RIG | JOB TYPE | THREAD TYPE | WELLHEAD CONNECTION |
|------------|------------|---------|------------|-------------|-----------------------|
| PDC Energy | George 11N | True 41 | Production | Buttress | 5 1/2" HP Cement Head |

| WELL MD (FT) | WELL TVD (FT) | DEVIATION (DEG) | NUMBER OF STAGES | BHST (DEG) | BHCT (DEG) |
|--------------|---------------|-----------------|------------------|------------|------------|
| 17992' | 6830' | 90 | 1 | 230 | 230 |

| PACKER/RETAINER/CIBP/DV TOOL DEPTHS (FT) | TOOL TYPE | TOP OF PERFS (FT) | BOTTOM OF PERFS (FT) | NUMBER OF HOLES |
|--|-----------|-------------------|----------------------|-----------------|
| | | | | |

| CASING/TUBING/DP DETAILS | | | | | | | | |
|------------------------------|-------|-------|-------|-------|---------------------|---------------|---------------|------------------|
| STRING TYPE | GRADE | OD" | WT/FT | ID" | OH SIZE" | % EXCESS LEAD | % EXCESS TAIL | TOTAL DEPTH (FT) |
| Surface | K55 | 9.625 | 36 | 8.921 | 12.25 | | | 1957' |
| Production | P110 | 5.5 | 20 | 4.778 | 8.5 | 0 | 0 | 17984' |
| MAXIMUM CASING/TUBING/DP PSI | | | | | MAXIMUM ANNULAR PSI | | | |

| Mud Type | OBM | Rotate Y,N | Yes | Circulation Data | | | | Water Requirements (bbls) | | |
|-------------|------|--------------------|-------|----------------------------|--|-------------------|---------|---------------------------|--------------|-----|
| Mud ppg | 10.4 | Rate (rpm) | 30 | Circulate Time (hrs) | | 2 | Spacers | | 160 | |
| Flow Temp | 150 | Torque Val. | 20000 | Circulation Rate (bpm) | | 10 | PSI | 1650 | Stage 1 Lead | 148 |
| Vis. Sec/qt | 65 | Time (hr) | | Full Circulation ? (Y,N,P) | | Yes | | Stage 1 Tail | 244 | |
| PV (cP) | 20 | Pipe Reciprocation | | Gas Present (Y,N) | | Yes | Units | 1200 | Stage 2 Lead | |
| Yield Pt | 15 | Recip Y,N | | Centralizers/Plugs | | | | Stage 2 Tail | | |
| 10 sec gel | 7 | Stroke (ft) | | Quantity & Type | | Customer Provided | | Displacement | 398 | |
| 10 min gel | 12 | Recip time | | Top Plug/Type | | Customer Provided | | Wash up | 20 | |
| 30 min gel | 15 | Stuck ? | | Bottom Plug/Type | | Customer Provided | | Total + 10% Safety | 1067 | |

| Preflush & Spacers | | Stage 1 Lead - Class G | | Stage 1 Tail - Class G | | Stage 2 Lead | | Stage 2 Tail | | Displacement | |
|--------------------|--------|------------------------|-------|------------------------|-------|--------------|-----|--------------|-----|--------------|-------|
| Spacer 1 | Spacer | Density | 12.9 | Density | 13.7 | Density | | Density | | Fluid Type | Water |
| Density | 12 | Sacks | 1643 | Sacks | 1529 | Sacks | | Sacks | | Dens. ppg | 8.33 |
| Volume | 160 | Vol/bbls | 319.0 | Vol/bbls | 373.1 | Vol/bbls | 0.0 | Vol/bbls | 0.0 | Vol. bbl | 399 |
| Rate | 10 | Rate | 10 | Rate | 10 | Rate | | Rate | | Rate bpm | 9 |
| Spacer 2 | | Yield | 1.09 | Yield | 1.37 | Yield | | Yield | | Clay Stay? | No |
| Density | | Gal/Sk | 3.77 | Gal/Sk | 6.63 | Gal/Sk | | Gal/Sk | | Biocide ? | Yes |
| Volume | | % Excess | 0 | % Excess | 0 | % Excess | | % Excess | | Slow @ bbl | 379 |
| Rate | | TOL (ft) | 997' | TOT (ft) | 8650' | TOL (ft) | | TOT (ft) | | Bump PSI | 3000 |

| | |
|--------------------------------------|------|
| Final Displacement (bbls) | 399 |
| Bump Plug? | Yes |
| Final Bump Pressure (psi) | 3500 |
| Full Returns throughout job? | Full |
| Vol. away/Time when returns lost | |
| Vol. away when returns were regained | |
| Spacer to Surface? | Yes |
| Spacer volume returned (bbls) | 112 |
| Cement to surface? | Yes |
| Cement volume to surface stage 1 | |
| Cement volume to surface stage 2 | |

| Surface Top Out Details-Pumped | | Job Summary & Chems Used | |
|--------------------------------|--|--------------------------|-----|
| Cement Type | | MFC 47 (gal) | 112 |
| Dens. ppg | | MFC 67 (gal) | 160 |
| Sacks qty | | Defoamer (gal) | 35 |
| Gal/sk | | Biocide (gal) | 20 |
| Yield | | Corr. Inhib (gal) | |
| Lbs. of chloride used | | Fiber (lbs) | 290 |
| Top out pipe used ? | | Chloride (lbs) | |
| Feet of top out pipe | | Retarder (lbs) | |
| Annulus holding? | | Clay Stay (gal) | |
| Sodium Silicate Used | | Other | |

JOB LOG

| CLIENT | WELL | RIG | JOB TYPE | START DATE | Ambient Conditions |
|-------------------|-------------------|----------------|-------------------|-----------------|---|
| PDC Energy | George 11N | True 41 | Production | 4/6/2024 | Temp / Hum / Air Press 47 Deg F / 23% / 24.47 in |

| DATE (dd/mm) | TIME (hh:mm) | DENSITY (ppg) | RATE (bpm) | VOL. (bbl) | TOTAL VOL. | PRESSURE | TREATMENT COMMENTS |
|--------------|--------------|---------------|------------|------------|------------|-----------|--|
| 4/5/2024 | 6:00:00 PM | | | | | | Arrived on location/ Wait for rig to finish running casing |
| 4/6/2024 | 3:00:00 AM | | | | | | Spot equipment |
| 4/6/2024 | 3:15:00 AM | | | | | | Rig up/ Wait for rig to finish circulation |
| 4/6/2024 | 4:30:00 AM | | | | | | Safety meeting |
| 4/6/2024 | 4:50:00 AM | | | | | | Rig up floor/ Load 1st BOTTOM plug |
| 4/6/2024 | 4:56:00 AM | 8.33 | 6.2 | 3 | 3 | 950 | Fill surface lines |
| 4/6/2024 | 4:57:00 AM | 8.33 | | | | 8100 | Pressure test |
| 4/6/2024 | 4:59:00 AM | 12 | 10.0 | 17 | 17 | 2000 | Pump 160bbl SPACER @ 12# with surfactant |
| 4/6/2024 | 5:00:00 AM | 12 | | | | | Shutdown/ Internal CRT leaking |
| 4/6/2024 | 5:12:00 AM | 8.33 | 5.0 | 5 | 5 | 1400 | Pump Freshwater to clear lines |
| 4/6/2024 | 5:13:00 AM | | | | | | Shutdown/ Rig up External CRT |
| 4/6/2024 | 5:25:00 AM | 12 | 10.0 | 143 | 143 | 1650 | Pump remaining 143 bbl SPACER @ 12# with surfactant and fiber |
| 4/6/2024 | 5:40:00 AM | | | | | | Shutdown/ Drop 2nd BOTTOM plug |
| 4/6/2024 | 5:43:00 AM | 12.9 | 10.0 | 319 | 319 | 1550 | Pump 319bbl (1643sks) LEAD cement @ 12.9#, 1.09Y, 3.77gal/sk TOL- 997' |
| 4/6/2024 | 6:18:00 AM | 13.7 | 10.0 | 373 | 373 | 1900 | Pump 373 bbl (1529sks) TAIL cement @ 13.7#, 1.37Y, 6.63 gal/sk TOT- 8650' |
| 4/6/2024 | 6:56:00 AM | 8.33 | 10.0 | 8 | 8 | 1300 | Pump 8 bbl SUGAR water |
| 4/6/2024 | 6:57:00 AM | 8.33 | | | | | Shutdown/ Wash pumps and lines/ Drop TOP plug |
| 4/6/2024 | 7:06:00 AM | 8.33 | | | | | Pump 399 bbl Freshwater Displacement with biocide in all, First 2 bbl SUGAR water |
| 4/6/2024 | 7:07:00 AM | 8.33 | 10.0 | 10 | 10 | 2000 | Pump Freshwater Displacement |
| 4/6/2024 | 7:12:00 AM | 8.33 | 10.0 | 50 | 50 | 2300 | Pump Freshwater Displacement |
| 4/6/2024 | 7:17:00 AM | 8.33 | 10.0 | 100 | 100 | 2900 | Pump Freshwater Displacement |
| 4/6/2024 | 7:22:00 AM | 8.33 | 10.0 | 150 | 150 | 3600 | Pump Freshwater Displacement |
| 4/6/2024 | 7:27:00 AM | 8.33 | 10.0 | 200 | 200 | 3900 | Pump Freshwater Displacement |
| 4/6/2024 | 7:32:00 AM | 8.33 | 10.0 | 250 | 250 | 4100 | Pump Freshwater Displacement, Spacer to surface @ 287, circulate 112 bbl Spacer to surface |
| 4/6/2024 | 7:38:00 AM | 8.33 | 10.0 | 300 | 300 | 4200 | Pump Freshwater Displacement |
| 4/6/2024 | 7:43:00 AM | 8.33 | 9.9 | 350 | 350 | 4300 | Pump Freshwater Displacement |
| 4/6/2024 | 7:46:00 AM | 8.33 | 4.0 | 379 | 379 | 3000 | Pump Freshwater Displacement, Slow rate to 4 bbl/min to bump plug |
| 4/6/2024 | 7:51:00 AM | 8.33 | BUMP | 399 | 399 | 3000-3500 | Bump plug / Shutdown FCP-3000psi, bumped to 3500psi |
| 4/6/2024 | 7:54:00 AM | 8.33 | 3.0 | | | 5100 | Shift/burst wet shoe per company man, Shifted at 5100 psi |
| 4/6/2024 | 7:56:00 AM | 8.33 | 3.0 | 5 | 5 | 3000 | Pump 5 bbl wet shoe FCP-3000psi |
| 4/6/2024 | 7:59:00 AM | 8.33 | | | | | Check float, float held 5 bbl back to truck |
| 4/6/2024 | 8:10:00 AM | 8.33 | 10.0 | 30 | 30 | 450 | Rig up and flush stack clean/ Begin 30 min inflow test |
| 4/6/2024 | 8:25:00 AM | | | | | | Rig down |
| 4/6/2024 | 9:30:00 AM | | | | | | End 30 min inflow test, 30 gal freshwater to surface |

George 11N Production Pump Chart – Pressure / Rate / Density

— pressure1 psi — density backup lbs/gal — Combined Rate

