



Terra Energy Partners, LLC

LONG STRING POST JOB REPORT

FEDERAL WMC 312-20 05-045-24486
S:17 T:7S R:93W Garfield CO

CallSheet #: 83856
Proposal #: 63877



LONG STRING Post Job Report

Attention: Mr. Dustin Childers | (936) 524-8828 | dchilders@terraep.com
Terra Energy Partners, LLC
4828 Loop Central Dr., Suite 900 | Houston, TX 77081

Dear Mr. Dustin Childers,

Thank you for the opportunity to provide cementing services on this well. American Cementing strives to achieve complete customer satisfaction. If you have any questions regarding the services or data provided, please contact American Cementing at any time.

Sincerely,

Holly Mbugua

Field Engineer II | (720) 505-1300 | holly.mbugua@americacementing.com

Field Office 28730 US-6, Rifle, CO 81650
Phone: (970) 657-1157

Job Details & Summary

Geometry

| Type | Function | OD (in) | ID (in) | Weight (lb/ft) | Thread | Top (ft) | Bottom (ft) | Excess (%) |
|-----------|----------|---------|---------|----------------|--------|----------|-------------|------------|
| Casing | Outer | 9.625 | 8.921 | 36 | n/a | 0 | 1145 | 0 |
| Open Hole | Outer | n/a | 8.75 | n/a | n/a | 1145 | 8946 | 60 |
| Open Hole | Outer | n/a | 8.75 | n/a | n/a | 8946 | 11258 | 50 |
| Casing | Inner | 4.5 | 4 | 11.6 | n/a | 0 | 11268 | 0 |

Equipment / People

| Unit Type | Unit | Power Unit | Employee #1 |
|-------------------------|----------|------------|-------------------|
| AS Cement Trailer Float | CTF-048 | TRC-115 | Wall, Lynn |
| AS Cement Trailer Float | CTF-9299 | TRC-115 | Wall, Lynn |
| Field Storage Silo | FSS-470 | | |
| Field Storage Silo | FSS-438 | | |
| Cement Trailer Float | CTF-161 | TRB-421 | Schweitzer, Casey |
| Cement Pump Float | CPF-091 | TRH-082 | Carrasco, Joel |
| Light Duty Vehicles | LDV-082 | | Kelsey, John |

Timing

| Event | Date/Time |
|-----------------|-----------------|
| Call Out | 10/6/2022 15:00 |
| Depart Facility | 10/6/2022 21:30 |
| On Location | 10/6/2022 22:30 |
| Rig Up Iron | 10/6/2022 23:00 |
| Job Started | 10/7/2022 06:33 |
| Job Completed | 10/7/2022 09:13 |
| Rig Down Iron | 10/7/2022 09:30 |
| Depart Location | 10/7/2022 10:30 |

General Job Information

| Metrics | Value |
|-------------------------|------------|
| Well Fluid Density | 9 lb/gal |
| Well Fluid Type | WBM |
| Rig Circulation Vol | 800 bbls |
| Rig Circulation Time | 1 hours |
| Calculated Displacement | 174.5 bbls |
| Actual Displacement | 174.5 bbls |
| Total Spacer to Surface | 0 bbls |
| Total CMT to Surface | 0 bbls |
| Well Topped Out | N/A |

Job Details

| Metrics | Value |
|--------------------------------|----------|
| Flare Prior to Job | Yes |
| Flare Prior to Job | 45 units |
| Flare During Job | No |
| Flare During Job | 0 units |
| Flare at End of Job | No |
| Flare at End of Job | 0 units |
| Well Full Prior to Job | Yes |
| Well Fluid Density Into Well | 9 lb/gal |
| Well Fluid Density Out of Well | 9 lb/gal |

Job Details (cont.)

| Metrics | Value |
|---------|--------|
| BHCT | 206 °F |
| BHST | 270 °F |

Water Analysis

| Metrics | Value | Recommended |
|------------------|------------------|-------------|
| Water Source | Upright Rig Tank | |
| Temperature | 60 °F | 50-80 °F |
| pH Level | 7 | 5.5-8.5 |
| Chlorides | 0 mg/L | 0-3000 mg/L |
| Total Alkalinity | 180 | 0-1000 |
| Total Hardness | 450 mg/L | 0-500 mg/L |
| Carbonates | 0 mg/L | 0-100 mg/L |
| Sulfates | 200 mg/L | 0-1500 mg/L |
| Potassium | 0 mg/L | 0-3000 mg/L |
| Iron | 0 mg/L | 0-300 mg/L |

Circulation

| Lost Circulation Experienced | Losses into Spacer | Losses into Cement | Losses into Displacement |
|------------------------------|--------------------|--------------------|--------------------------|
| yes | 0 | 0 | 0 |

Circulation Details

After shutting down parasite while rig was circulating the well there were no returns

Job Execution Information

| Fluid | Product | Function | Density (lb/gal) | Yield (ft ³ /sk) | Water Rq. (gal/sk) | Water Rq. (gal/bbl) | Volume (sks) | Volume (bbl) | Designed Top (ft) |
|-------|--------------|-------------------|------------------|-----------------------------|--------------------|---------------------|--------------|--------------|-------------------|
| 1 | Water | Flush | 8.34 | | | 42.00 | | 10.00 | 3379 |
| 2 | Mud Flush | Flush | 8.45 | | | 40.86 | | 20.00 | 3561 |
| 3 | Water | Flush | 8.34 | | | 42.00 | | 10.00 | 3826 |
| 4 | Lead Cement | Lead | 12.70 | 2.00 | 10.99 | | 571.00 | 203.63 | 4009 |
| 5 | Tail Cement | Tail | 13.50 | 1.85 | 8.97 | | 589.00 | 193.58 | 7731 |
| 6 | Displacement | DisplacementFinal | 8.34 | | | 42.00 | | 175.00 | 0 |

Job Fluid Details

| Fluid | Type | Fluid | Product | Function | Conc. | Uom |
|-------|-------|-------------|--------------------|-----------------------|--------|---------|
| 2 | Flush | Mud Flush | SAPP | Surfactant | 10.00 | lb/bbl |
| 2 | Flush | Mud Flush | SS-201 | Surfactant | 0.50 | gal/bbl |
| 4 | Lead | Lead Cement | ASTM TYPE I/II | Cement | 100.00 | % |
| 4 | Lead | Lead Cement | BA-90 | BondEnhancer | 3.00 | lb/sk |
| 4 | Lead | Lead Cement | FL-66 | FluidLoss | 0.50 | %BWOB |
| 4 | Lead | Lead Cement | FP-24 | Defoamer | 0.30 | %BWOB |
| 4 | Lead | Lead Cement | GW-86 | Viscosifier | 0.10 | %BWOB |
| 4 | Lead | Lead Cement | IntegraSeal POLI | LostCirculation | 0.25 | lb/sk |
| 4 | Lead | Lead Cement | R-3 | Retarder | 0.45 | %BWOB |
| 4 | Lead | Lead Cement | STATIC FREE | Other | 0.01 | lb/sk |
| 5 | Tail | Tail Cement | BA-90 | BondEnhancer | 10.00 | % |
| 5 | Tail | Tail Cement | CLASS G | Cement | 70.00 | % |
| 5 | Tail | Tail Cement | FLY ASH (POZZOLAN) | Extender | 20.00 | % |
| 5 | Tail | Tail Cement | BENTONITE | Viscosifier | 6.00 | %BWOB |
| 5 | Tail | Tail Cement | FL-24 | FluidLoss | 0.40 | %BWOB |
| 5 | Tail | Tail Cement | FP-24 | Defoamer | 0.30 | %BWOB |
| 5 | Tail | Tail Cement | IntegraSeal PHENO | LostCirculation | 3.00 | lb/sk |
| 5 | Tail | Tail Cement | R-3 | Retarder | 0.30 | %BWOB |
| 5 | Tail | Tail Cement | S-8 | StrengthRetrogression | 25.00 | %BWOB |

Job Logs

| Line | Event | Date (MM/DD/YY) | Time (HH:MM) | Density (lb/gal) | Pump Rate (bpm) | Pump Volume (bbls) | Pipe Pressure (psi) | Comment |
|------|--------------------|-----------------|--------------|------------------|-----------------|--------------------|---------------------|--|
| 1 | CALLOUT | 10/6/2022 | 15:00 | | | | | CREW CALLED TO PREPARE FOR A 4.5" PRODUCTION CEMENT JOB. RTS IS 03:00 ON 10-7-22 |
| 2 | SAFETY MEETING | 10/6/2022 | 21:15 | | | | | JOURNEY MANAGEMENT MEETING |
| 3 | DEPART YARD | 10/6/2022 | 21:30 | | | | | CREW DEPARTS RIFLE, CO YARD FOR LOCATION |
| 4 | ARRIVE ON LOCATION | 10/6/2022 | 22:30 | | | | | CREW ARRIVES ON LOCATION, VERIFY ALL PROPER PRODUCTS, EQUIPMENT AND JOB PROCEDURES WITH THE CUSTOMER |
| 5 | SAFETY MEETING | 10/6/2022 | 22:40 | | | | | PRE-RIG UP MEETING |
| 6 | SPOT UNITS | 10/6/2022 | 22:50 | | | | | SPOT ALL EQUIPMENT FOR RIG UP |
| 7 | RIG UP | 10/7/2022 | 23:00 | | | | | RIG UP ALL EQUIPMENT |
| 8 | STANDBY | 10/7/2022 | 00:00 | | | | | CREW ON STANDBY WHILE RIG RUNS CASING |
| 9 | SAFETY MEETING | 10/7/2022 | 04:00 | | | | | PRE JOB-MEETING WITH ALL CREWS INVOLVED, RIG CIRCULATING WELL AT 7 BPM STAGED UP TO 12 BPM WITH 1200 CFM PARASITE AND RECEIVING RETURNS AND MINOR GAS FLOW, AFTER SHUTTING DOWN PARASITE RETURNS WERE LOST |
| 10 | LOAD LINES | 10/7/2022 | 06:30 | 8.34 | 4 | 3 | 100 | LOAD PUMP AND LINES FOR PRESSURE TEST |
| 11 | PRESSURE TEST | 10/7/2022 | 06:40 | 8.34 | 1 | 1 | 6681 | PRESSURE TEST PUMP AND LINES TO CEMENT HEAD |
| 12 | FRESH FLUSH | 10/7/2022 | 06:43 | 8.34 | 4 | 10 | 134 | 10 BBLS FRESH SPACER |
| 13 | MUD FLUSH | 10/7/2022 | 06:48 | 8.4 | 4 | 20 | 150 | 20 BBLS MUD FLUSH SPACER |
| 14 | FRESH FLUSH | 10/7/2022 | 06:51 | 8.34 | 4 | 10 | 148 | 10 BBLS FRESH SPACER |
| 15 | LEAD CEMENT | 10/7/2022 | 06:54 | 12.7 | 5.5 | 10 | 445 | 203.6 BBLS Lead CMT – 12.7 # 2.00 Y 11 MW 571 sks (BBLS H20) 10 BBLS AWAY |
| 16 | LEAD CEMENT | 10/7/2022 | 07:03 | 12.7 | 6.2 | 40 | 530 | 50 BBLS AWAY |
| 17 | LEAD CEMENT | 10/7/2022 | 07:10 | 12.7 | 6.3 | 50 | 538 | 100 BBLS AWAY |
| 18 | LEAD CEMENT | 10/7/2022 | 07:20 | 12.7 | 5 | 50 | 390 | 150 BBLS AWAY |
| 19 | LEAD CEMENT | 10/7/2022 | 07:33 | 12.7 | 3.5 | 53.6 | 231 | 203.6 BBLS AWAY SWAP TO TAIL CEMENT |
| 20 | TAIL CEMENT | 10/7/2022 | 07:34 | 13.5 | 5.3 | 10 | 548 | 193.6 BBLS Tail CMT – 13.5 # 1.85 Y 9.0 MW 589 sks (24 BBLS H20) 10 BBLS AWAY |
| 21 | TAIL CEMENT | 10/7/2022 | 07:45 | 13.5 | 5 | 40 | 557 | 50 BBLS AWAY |
| 22 | TAIL CEMENT | 10/7/2022 | 07:54 | 13.5 | 5 | 50 | 499 | 100 BBLS AWAY |
| 23 | TAIL CEMENT | 10/7/2022 | 08:03 | 13.5 | 5 | 50 | 500 | 150 BBLS AWAY |
| 24 | TAIL CEMENT | 10/7/2022 | 08:29 | 13.5 | 3 | 43.6 | 118 | 193.6 BBLS AWAY SHUTDOWN FOR WASHUP |
| 25 | WASHUP | 10/7/2022 | 08:30 | | | | | WASH PUMP TO PIT |
| 26 | DISPLACEMENT | 10/7/2022 | 08:46 | 8.34 | 7.7 | 10 | 43 | DROP PLUG AND BEGIN FRESH WATER DISPLACEMENT 10 BBLS AWAY |
| 27 | DISPLACEMENT | 10/7/2022 | 08:52 | 8.34 | 7.7 | 40 | 396 | 50 BBLS AWAY |
| 28 | DISPLACEMENT | 10/7/2022 | 08:59 | 8.34 | 7.7 | 50 | 1201 | 100 BBLS AWAY |
| 29 | DISPLACEMENT | 10/7/2022 | 09:06 | 8.34 | 7.7 | 50 | 1845 | 150 BBLS AWAY SLOW RATE FOR BUMP |
| 30 | LAND PLUG | 10/7/2022 | 09:10 | 8.34 | 4 | 24.5 | 1608 | 174.5 BBLS AWAY LAND PLUG AND SHUTDOWN AT 2775 psi |
| 31 | CHECK FLOATS | 10/7/2022 | 09:13 | | | | | CHECK FLOATS, FLOATS HELD WITH 2 BBLS BACK |
| 32 | SAFETY MEETING | 10/7/2022 | 09:15 | | | | | RIG DOWN SAFETY MEETING |
| 33 | RIG DOWN | 10/7/2022 | 09:30 | | | | | RIG DOWN EQUIPMENT |

| Line | Event | Date (MM/DD/YY) | Time (HH:MM) | Density (lb/gal) | Pump Rate (bpm) | Pump Volume (bbls) | Pipe Pressure (psi) | Comment |
|------|-----------------|-----------------|--------------|------------------|-----------------|--------------------|---------------------|----------------------------|
| 34 | SAFETY MEETING | 10/7/2022 | 10:15 | | | | | JOURNEY MANAGEMENT MEETING |
| 35 | DEPART LOCATION | 10/7/2022 | 10:30 | | | | | CREW DEPARTS LOCATION |

Pump Diagrams

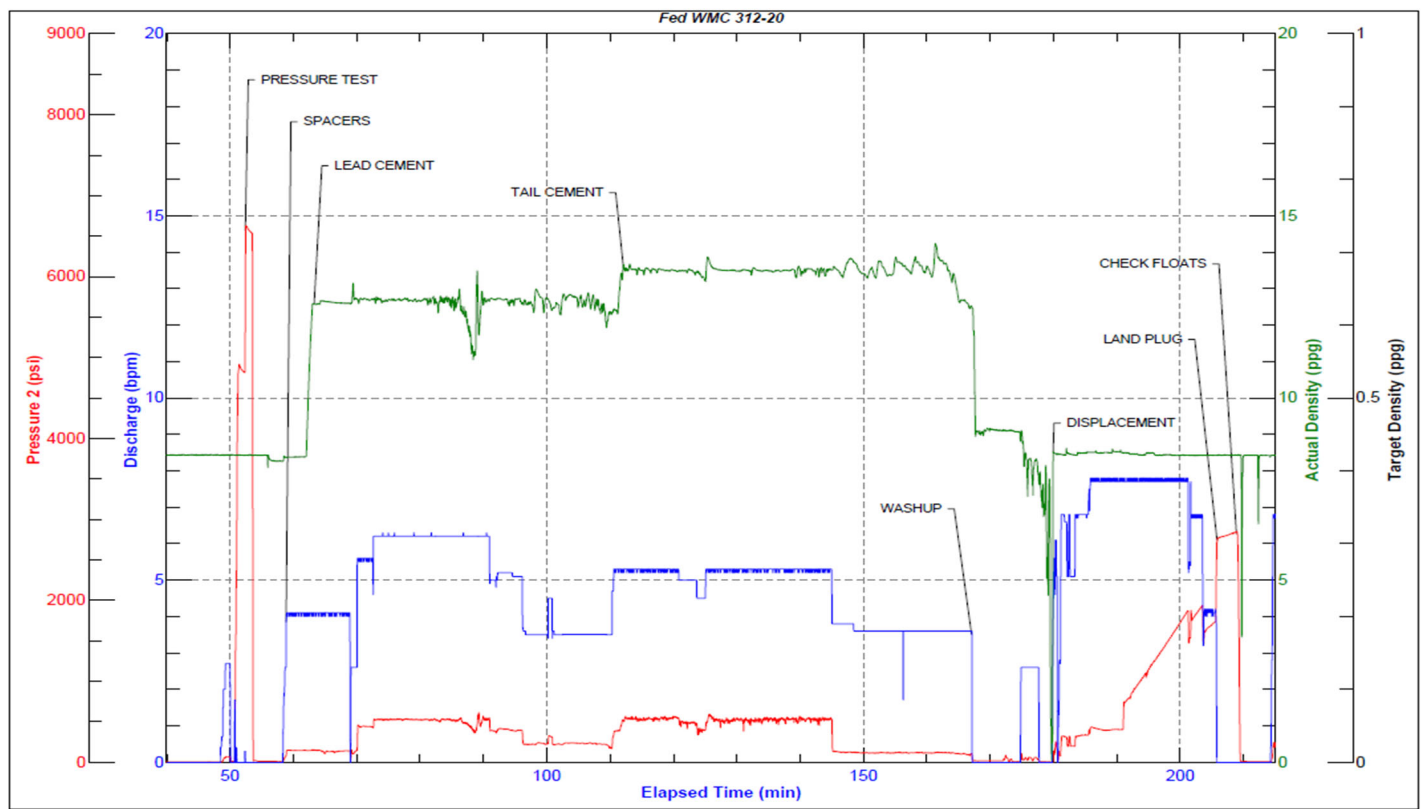


JobMaster Program Version 5.01C1

Job Number: 83856

Customer: Terra

Well Name: FED WMC 312-20



Job Start: Friday, October 07, 2022