



Terra Energy Partners, LLC

LONG STRING POST JOB REPORT

WMC 412-19-793 05-045-24540
S:19 T:7S R:93W Garfield CO

CallSheet #: 86027
Proposal #: 67377



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,

Krystal Schell

Field Engineer I | (719) 992-1830 | krystal.schell@americacementing.com

Field Office 28730 US-6, Rifle, CO 81650
Phone: (970) 657-1187

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 | 1142 | 0 |
| Open Hole | Outer | n/a | 8.75 | n/a | n/a | 1142 | 7363 | 85 |
| Open Hole | Outer | n/a | 8.75 | n/a | n/a | 7363 | 10593 | 50 |
| Casing | Inner | 4.5 | 4 | 11.6 | n/a | 0 | 10593 | 0 |

Equipment / People

| Unit Type | Unit | Power Unit | Employee #1 |
|----------------------|---------|------------|---------------------|
| Cement Trailer Float | CTF-522 | TRC-201 | Morales, Adrian |
| Field Storage Silo | FSS-470 | | |
| Light Duty Vehicles | LDV-061 | | Woronovitch, Collin |
| Light Duty Vehicles | LDV-082 | | Kelsey, John |
| Cement Pump Float | CPF-136 | TRH-855 | Bradbrook, Jeremy |

Timing

| Event | Date/Time |
|-----------------|------------------|
| ERTS | 00/06/2023 00:00 |
| Call Out | 3/7/2023 01:00 |
| Depart Facility | 3/7/2023 05:15 |
| On Location | 3/7/2023 06:45 |
| Rig Up Iron | 3/7/2023 07:00 |
| Job Started | 3/7/2023 09:00 |
| Job Completed | 3/7/2023 11:53 |
| Rig Down Iron | 3/7/2023 12:15 |
| Depart Location | 3/7/2023 13:30 |

General Job Information

| Metrics | Value |
|-------------------------|------------|
| Well Fluid Density | 9.2 lb/gal |
| Well Fluid Type | WBM |
| Rig Circulation Vol | 285 bbls |
| Rig Circulation Time | 0.5 hours |
| Calculated Displacement | 164 bbls |
| Actual Displacement | 164 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 | No |
| Flare Prior to Job | 0 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 | 9.2 lb/gal |
| Well Fluid Density Out of Well | 9.2 lb/gal |

Job Details (cont.)

| Metrics | Value |
|---------|--------|
| BHCT | 178 °F |
| BHST | 236 °F |

Water Analysis

| Metrics | Value | Recommended |
|------------------|------------------|-------------|
| Water Source | Upright Rig Tank | |
| Temperature | 65 °F | 50-80 °F |
| pH Level | 7 | 5.5-8.5 |
| Chlorides | 300 mg/L | 0-3000 mg/L |
| Total Alkalinity | 140 | 0-1000 |
| Total Hardness | 100 mg/L | 0-500 mg/L |
| Carbonates | NA mg/L | 0-100 mg/L |
| Sulfates | 140 mg/L | 0-1500 mg/L |
| Potassium | 260 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

NO RETURNS THROUGHOUT ENTIRE JOB

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 | 5697 |
| 2 | Mud Flush | Flush | 8.45 | | | 40.86 | | 20.00 | 5796 |
| 3 | Water | Flush | 8.34 | | | 42.00 | | 10.00 | 5994 |
| 4 | Lead | Lead | 12.50 | 2.26 | 12.59 | | 320.00 | 128.61 | 6093 |
| 5 | Tail | Tail | 13.00 | 2.05 | 10.26 | | 784.00 | 285.96 | 7363 |
| 6 | Displacement | DisplacementFinal | 8.34 | | | 42.00 | | 164.00 | 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 | ASTM TYPE I/II | Cement | 100.00 | % |
| 4 | Lead | Lead | ATHX-1102 | Thixotropic | 0.10 | %BWOB |
| 4 | Lead | Lead | FL-66 | FluidLoss | 0.30 | %BWOB |
| 4 | Lead | Lead | FP-24 | Defoamer | 0.30 | %BWOB |
| 4 | Lead | Lead | GW-86 | Viscosifier | 0.10 | %BWOB |
| 4 | Lead | Lead | IntegraSeal PHENO | LostCirculation | 0.50 | lb/sk |
| 4 | Lead | Lead | IntegraSeal POLI | LostCirculation | 0.25 | lb/sk |
| 4 | Lead | Lead | R-7C | Retarder | 0.10 | %BWOB |
| 4 | Lead | Lead | STATIC FREE | Other | 0.01 | lb/sk |
| 4 | Lead | Lead | XCem-1009 | Extender | 10.00 | lb/sk |
| 4 | Lead | Lead | XCem-916 | Retarder | 0.45 | %BWOB |
| 5 | Tail | Tail | CLASS G | Cement | 50.00 | % |
| 5 | Tail | Tail | FLY ASH (POZZOLAN) | Extender | 50.00 | % |
| 5 | Tail | Tail | BENTONITE | Viscosifier | 6.00 | %BWOB |
| 5 | Tail | Tail | FL-66 | FluidLoss | 0.40 | %BWOB |
| 5 | Tail | Tail | FP-24 | Defoamer | 0.30 | %BWOB |
| 5 | Tail | Tail | GW-86 | Viscosifier | 0.10 | %BWOB |
| 5 | Tail | Tail | IntegraSeal PHENO | LostCirculation | 0.50 | lb/sk |
| 5 | Tail | Tail | IntegraSeal POLI | LostCirculation | 0.25 | lb/sk |
| 5 | Tail | Tail | S-8 | StrengthRetrogression | 20.00 | %BWOB |
| 5 | Tail | Tail | XCem-1009 | Extender | 6.00 | lb/sk |
| 5 | Tail | Tail | XCem-916 | Retarder | 0.40 | %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 | 3/7/2023 | 01:00 | | | | | CREW CALLED OUT FOR ON LOCATION TIME OF 9:00 |
| 2 | Depart Location | 3/7/2023 | 05:15 | | | | | CREW DEPARTS RCO YARD FOR RIG LOCATION |
| 3 | Arrive On Location | 3/7/2023 | 06:45 | | | | | CREW AND EQUIPMENT ARRIVES ON LOCATION. RIG STILL RUNNING CASING |
| 4 | Safety Meeting | 3/7/2023 | 06:50 | | | | | PRE RIG UP SAFETY MEETING |
| 5 | Rig Up Iron | 3/7/2023 | 07:00 | | | | | RIG UP IRON HOSES AND EQUIPMENT |
| 6 | Other | 3/7/2023 | 08:00 | | | | | RIG LANDED CASING @ 8:30. RIG CIRCULATED FOR .5 HOURS. TOTAL VOLUME 285 BBLS. FINISH RIGGING UP GROUND MANIFOLD |
| 7 | Safety Meeting | 3/7/2023 | 09:00 | | | | | PRE JOB SAFETY MEETING WITH RIG CREW AND COMPANY MAN. RIG UP HEAD AND FLOOR. |
| 8 | Fill Lines | 3/7/2023 | 09:28 | 8.34 | 5.5 | 10 | 609 | FILL LINES WITH 10 BBLS OF FRESHWATER. NO RETURNS |
| 9 | Pressure Test Lines | 3/7/2023 | 09:31 | 8.34 | | | 5214 | PRESSURE TEST PUMP AND IRON TO 5000 PSI |
| 10 | Pump Spacer | 3/7/2023 | 09:35 | 8.45 | 5.2 | 0 | 578 | BEGIN PUMPING MUD FLUSH + SURFACTANT. |
| 11 | Pump Spacer | 3/7/2023 | 09:39 | 8.45 | 5.2 | 20 | 625 | PUMP 20 BBLS MUD FLUSH + SURFACTANT PUMPED. NO RETURNS |
| 12 | Pump Spacer | 3/7/2023 | 09:39 | 8.34 | 5.2 | 10 | 633 | PUMP 10 BBLS FRESHWATER FLUSH |
| 13 | Shutdown | 3/7/2023 | 09:41 | | | | | SHUTDOWN AND BATCH UP LEAD CEMENT |
| 14 | Pump Lead Cement | 3/7/2023 | 09:43 | 12.5 | 5.4 | 0 | 830 | BEGIN PUMPING 12.5 PPG LEAD CEMENT, WEIGHT VERIFIED BY MUD SCALE |
| 15 | Pump Lead Cement | 3/7/2023 | 09:53 | 12.5 | 5.4 | 50 | 422 | 50 BBLS LEAD CEMENT PUMPED |
| 16 | Pump Lead Cement | 3/7/2023 | 10:02 | 12.5 | 5.3 | 50 | 453 | 100 BBLS LEAD CEMENT PUMPED.NO RETURNS |
| 17 | Pump Lead Cement | 3/7/2023 | 10:08 | 12.5 | 5.3 | 30 | 426 | 129 BBLS (320 SKS) TOTAL LEAD CEMENT PUMPED. |
| 18 | Pump Tail Cement | 3/7/2023 | 10:08 | 13 | 5.3 | 0 | 509 | BEGIN PUMPING 13 PPG TAIL CEMENT. WEIGHT VERIFIED BY MUD SCALE. |
| 19 | Pump Tail Cement | 3/7/2023 | 10:18 | 13 | 5.3 | 50 | 647 | 50 BBLS TAIL CEMENT PUMPED |
| 20 | Pump Tail Cement | 3/7/2023 | 10:27 | 13 | 5.3 | 50 | 617 | 100 BBLS TAIL CEMENT PUMPED |
| 21 | Pump Tail Cement | 3/7/2023 | 10:37 | 13 | 5.3 | 50 | 603 | 150 BBLS TAIL CEMENT PUMPED. NO RETURNS |
| 22 | Pump Tail Cement | 3/7/2023 | 10:48 | 13 | 4 | 50 | 393 | 200 BBLS TAIL CEMENT PUMPED |
| 23 | Pump Tail Cement | 3/7/2023 | 11:00 | 13 | 4 | 50 | 348 | 250 BBLS TAIL CEMENT PUMPED |
| 24 | Pump Tail Cement | 3/7/2023 | 11:14 | 13 | 4 | 36 | 350 | 286 BBLS (784 SKS) TOTAL TAIL CEMENT PUMPED. |
| 25 | Clean Pumps and Lines | 3/7/2023 | 11:15 | | | | | BLOW RIG AIR TO CLEAR LINES, VALVE MANIFOLD TO WASH UP PUMP AND LINES TO PIT |
| 26 | Drop Top Plug | 3/7/2023 | 11:26 | 8.34 | 5.5 | 2 | 329 | DROP PLUG, WITNESSED BY CUSTOMER REP. BEGIN KCL DISPLACEMENT. |
| 27 | Pump Displacement | 3/7/2023 | 11:33 | 8.34 | 7.5 | 50 | 855 | 50 BBLS DISPLACEMENT PUMPED. CAUGHT PRESSURE @ 45 BBLS DISPLACED. NO RETURNS. |

| Line | Event | Date (MM/DD/YY) | Time (HH:MM) | Density (lb/gal) | Pump Rate (bpm) | Pump Volume (bbls) | Pipe Pressure (psi) | Comment |
|------|-------------------|-----------------|--------------|------------------|-----------------|--------------------|---------------------|---|
| 28 | Pump Displacement | 3/7/2023 | 11:40 | 8.34 | 7.5 | 50 | 1640 | 100 BBLS DISPLACEMENT PUMPED |
| 29 | Pump Displacement | 3/7/2023 | 11:47 | 8.34 | 7.5 | 50 | 2305 | 150 BBLS DISPLACEMENT PUMPED. FCP-2305 PSI @ 7 BPM BEFORE SLOW DOWN. |
| 30 | Pump Displacement | 3/7/2023 | 11:50 | 8.34 | 4 | 14 | 2006 | 164 BBLS (CALCULATED) DISPLACEMENT PUMPED |
| 31 | Land Plug | 3/7/2023 | 11:50 | | | | 3056 | PLUG LANDED FCP-2006 PSI BUMPED TO 3056 PSI |
| 32 | Check Floats | 3/7/2023 | 11:53 | | | | | BLEED PRESSURE OFF AND CHECK FLOATS, FLOATS HELD 2 BBLS BACK |
| 33 | Rig Down Iron | 3/7/2023 | 12:15 | | | | | PRE RIG DOWN SAFETY MEETING. PICKLE/ BLOW DOWN IRON, RIG DOWN EQUIPMENT, IRON AND HOSES |
| 34 | Depart Location | 3/7/2023 | 13:30 | | | | | CREW DEPARTS LOCATION |

Pump Diagrams

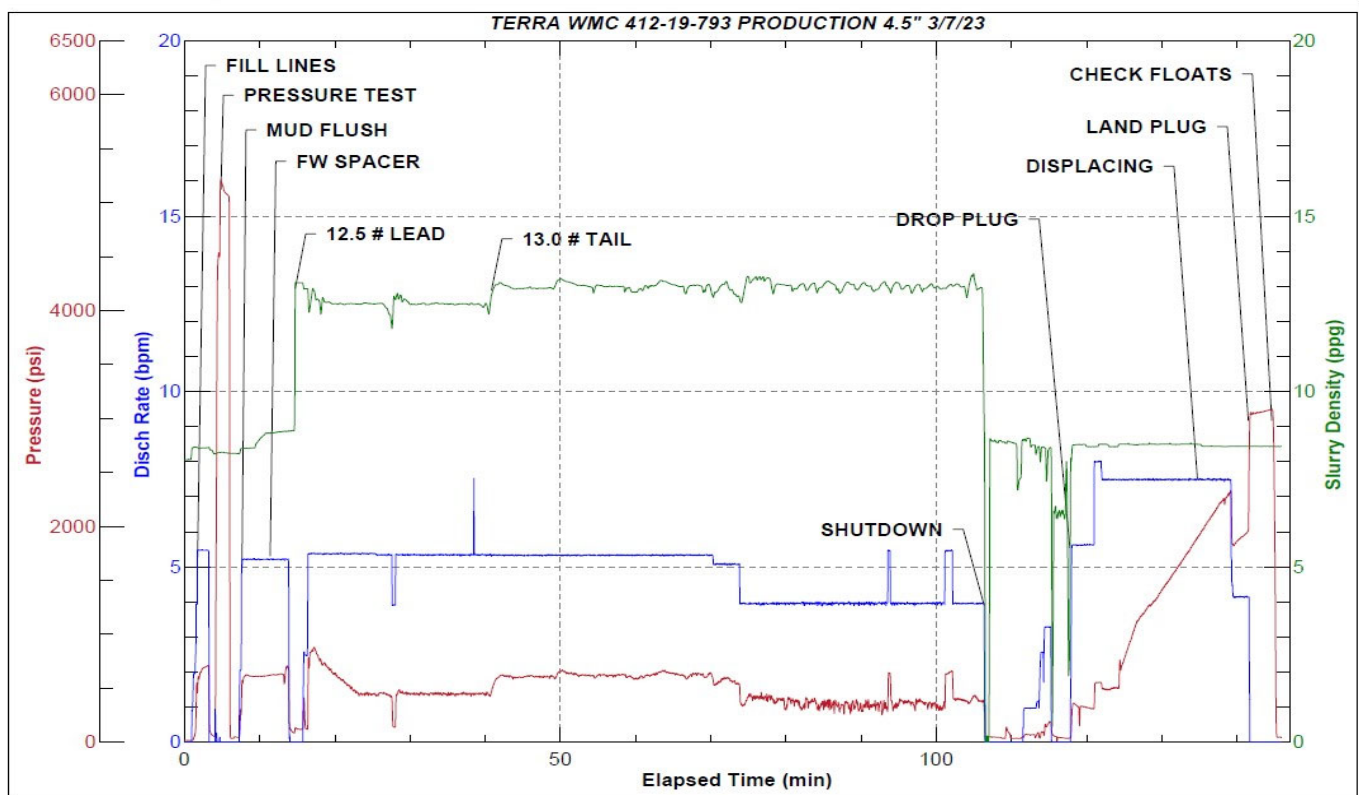


JobMaster Program Version 5.01C1

Job Number: 86027

Customer: TERRA

Well Name: WMC 412-19-793



Job Start: Tuesday, March 07, 2023