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# **Terra Energy Partners, LLC**

## **LONG STRING POST JOB REPORT**

**FED RG 13-18-297 05-103-12579**  
**S:13 T:2S R:98W Rio Blanco CO**

CallSheet #: 91109  
Proposal #: 75750



**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

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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,

**Addison Kneale**

Field Engineer I | (904) 228-9560 | addison.kneale@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        | 3117        | 0          |
| Open Hole | Outer    | n/a     | 8.75    | n/a            | n/a    | 3117     | 8305        | 45         |
| Open Hole | Outer    | n/a     | 8.75    | n/a            | n/a    | 8305     | 11875       | 45         |
| Casing    | Inner    | 4.5     | 4       | 11.6           | n/a    | 0        | 11874       | 0          |

### Equipment / People

| Unit Type            | Unit    | Power Unit | Employee #1   |
|----------------------|---------|------------|---------------|
| Cement Trailer Float | CTF-182 | TRC-202    | Daniel Balint |
| Field Storage Silo   | FSS-438 |            |               |
| Field Storage Silo   | FSS-470 |            |               |
| Light Duty Vehicles  | LDV-146 |            | Eric Brown    |
| Cement Pump Float    | CPF-012 | TRH-964    | Ryan Bonin    |

### Timing

| Event           | Date/Time        |
|-----------------|------------------|
| ERTS            | 04/22/2024 00:00 |
| Call Out        | 4/21/2024 15:00  |
| Depart Facility | 4/21/2024 20:00  |
| On Location     | 4/21/2024 22:00  |
| Rig Up Iron     | 4/21/2024 22:30  |
| Job Started     | 4/22/2024 03:05  |
| Job Completed   | 4/22/2024 06:25  |
| Rig Down Iron   | 4/22/2024 06:30  |
| Depart Location | 4/22/2024 08:00  |

### General Job Information

| Metrics                 | Value      |
|-------------------------|------------|
| Well Fluid Density      | 9.8 lb/gal |
| Well Fluid Type         | WBM        |
| Rig Circulation Vol     | 400 bbls   |
| Rig Circulation Time    | 1 hours    |
| Calculated Displacement | 184 bbls   |
| Actual Displacement     | 184 bbls   |
| Total Spacer to Surface | 0 bbls     |
| Total CMT to Surface    | 0 bbls     |
| Well Topped Out         | No         |
| Top Out Volume          | N/A bbls   |

### Job Details

| Metrics                        | Value      |
|--------------------------------|------------|
| Well Full Prior to Job         | Yes        |
| Well Fluid Density Into Well   | 9.8 lb/gal |
| Well Fluid Density Out of Well | 9.8 lb/gal |

### Job Details (cont.)

| Metrics | Value  |
|---------|--------|
| BHCT    | 206 °F |
| BHST    | 271 °F |

### Water Analysis

| Metrics          | Value    | Recommended |
|------------------|----------|-------------|
| Water Source     | None     |             |
| Temperature      | 60 °F    | 50-80 °F    |
| pH Level         | 6        | 5.5-8.5     |
| Chlorides        | 300 mg/L | 0-3000 mg/L |
| Total Alkalinity | 100      | 0-1000      |
| Total Hardness   | 150 mg/L | 0-500 mg/L  |
| Carbonates       | 20 mg/L  | 0-100 mg/L  |
| Sulfates         | 100 mg/L | 0-1500 mg/L |
| Potassium        | 200 mg/L | 0-3000 mg/L |
| Iron             | 30 mg/L  | 0-300 mg/L  |

### Circulation

| Lost Circulation Experienced |
|------------------------------|
| No                           |

### Job Execution Information

| Fluid | Product      | Function          | Density (lb/gal) | Yield (ft <sup>3</sup> /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        | 6618              |
| 2     | Lead         | Lead              | 12.70            | 2.13                        | 11.42              |                     | 772.00       | 292.62       | 6744              |
| 3     | Tail         | Tail              | 13.50            | 2.01                        | 9.72               |                     | 885.00       | 316.68       | 8305              |
| 4     | Displacement | DisplacementFinal | 8.34             |                             |                    | 42.00               |              | 184.00       | 0                 |

### Job Fluid Details

| Fluid | Type | Fluid | Product            | Function            | Conc.  | Uom   |
|-------|------|-------|--------------------|---------------------|--------|-------|
| 2     | Lead | Lead  | ASTM TYPE IL       | Cement              | 100.00 | %     |
| 2     | Lead | Lead  | A-2                | Accelerator         | 0.10   | %BWOB |
| 2     | Lead | Lead  | FL-66              | FluidLoss           | 0.20   | %BWOB |
| 2     | Lead | Lead  | GW-86              | Viscosifier         | 0.10   | %BWOB |
| 2     | Lead | Lead  | IntegraSeal PHENO  | LostCirculation     | 3.00   | lb/sk |
| 2     | Lead | Lead  | IntegraSeal POLI   | LostCirculation     | 0.25   | lb/sk |
| 2     | Lead | Lead  | R-3                | Retarder            | 0.60   | %BWOB |
| 2     | Lead | Lead  | STATIC FREE        | Other               | 0.01   | lb/sk |
| 2     | Lead | Lead  | XCem-1009          | Extender            | 10.00  | lb/sk |
| 2     | Lead | Lead  | XCem-308           | Defoamer            | 0.30   | %BWOB |
| 3     | Tail | Tail  | CLASS G            | Cement              | 70.00  | %     |
| 3     | Tail | Tail  | FLY ASH (POZZOLAN) | Extender            | 30.00  | %     |
| 3     | Tail | Tail  | BENTONITE          | Viscosifier         | 8.00   | %BWOB |
| 3     | Tail | Tail  | FL-24              | FluidLoss           | 0.40   | %BWOB |
| 3     | Tail | Tail  | IntegraSeal PHENO  | LostCirculation     | 3.00   | lb/sk |
| 3     | Tail | Tail  | S-8                | StrengthRetgression | 26.00  | %BWOB |
| 3     | Tail | Tail  | XCem-308           | Defoamer            | 0.30   | %BWOB |
| 3     | Tail | Tail  | XCem-916           | Retarder            | 0.30   | %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             | 4/21/2024       | 15:00        |                  |                 |                    |                     | CREW CALLED IN TO INSPECT AND PRE-TRIP EQUIPMENT  |
| 2    | Safety Meeting      | 4/21/2024       | 19:30        |                  |                 |                    |                     | PRE-CONVOY SAFETY MEETING   |
| 3    | Depart Location     | 4/21/2024       | 20:00        |                  |                 |                    |                     | DEPART RCO YARD   |
| 4    | Arrive On Location  | 4/21/2024       | 22:00        |                  |                 |                    |                     | ARRIVED ON LOCATION PER CUSTOMER REQUEST  |
| 5    | Safety Meeting      | 4/21/2024       | 22:10        |                  |                 |                    |                     | PRE-RIG UP SAFETY MEETING   |
| 6    | Rig Up Iron         | 4/21/2024       | 22:30        |                  |                 |                    |                     | RIG UP IRON AND HOSES   |
| 7    | Safety Meeting      | 4/22/2024       | 03:05        |                  |                 |                    |                     | PRE JOB-SAFETY MEETING WITH RIG CREW AND COMPANY MAN  |
| 8    | Start Job           | 4/22/2024       | 03:34        |                  |                 |                    |                     | START JOB   |
| 9    | Fill Lines          | 4/22/2024       | 03:35        | 8.34             | 4               | 5                  | 449                 | FILL LINES WITH 5 BBLS OF FRESH WATER   |
| 10   | Pressure Test Lines | 4/22/2024       | 03:37        | 8.34             | 1               | 1                  | 5126                | PRESSURE TEST LINES TO 5126   |
| 11   | Pump Spacer         | 4/22/2024       | 03:40        | 8.34             | 4               | 10                 | 556                 | PUMP 10 BBLS OF FRESH WATER SPACER  |
| 12   | Pump Lead Cement    | 4/22/2024       | 03:51        | 12.7             | 5.5             | 50                 | 479                 | START MIXING AND PUMPING 292 BBLS OF LEAD CEMENT @ 12.7 PPG (2.13 YLD, 11.42 GPS) PUMP 50 BBLS OF LEAD CEMENT |
| 13   | Pump Lead Cement    | 4/22/2024       | 04:00        | 12.7             | 5.5             | 50                 | 486                 | PUMP 100 BBLS OF LEAD CEMENT  |
| 14   | Pump Lead Cement    | 4/22/2024       | 04:09        | 12.7             | 5.5             | 50                 | 475                 | PUMP 150 BBLS OF LEAD CEMENT  |
| 15   | Pump Lead Cement    | 4/22/2024       | 04:18        | 12.7             | 5.5             | 50                 | 483                 | PUMP 200 BBLS OF LEAD CEMENT  |
| 16   | Pump Lead Cement    | 4/22/2024       | 04:27        | 12.7             | 5.5             | 50                 | 501                 | PUMP 250 BBLS OF LEAD CEMENT  |
| 17   | Pump Lead Cement    | 4/22/2024       | 04:37        | 12.7             | 5.5             | 42                 | 492                 | PUMP 292 BBLS OF LEAD CEMENT  |
| 18   | Pump Tail Cement    | 4/22/2024       | 04:50        | 13.5             | 5.5             | 50                 | 721                 | START MIXING AND PUMPING 316 BBLS OF TAIL CEMENT @ 13.5 PPG (2.01 YLD, 9.72 GPS) PUMP 50 BBLS OF TAIL CEMENT  |
| 19   | Pump Tail Cement    | 4/22/2024       | 04:58        | 13.5             | 5.5             | 50                 | 697                 | PUMP 100 BBLS OF TAIL CEMENT  |
| 20   | Pump Tail Cement    | 4/22/2024       | 05:07        | 13.5             | 5.5             | 50                 | 685                 | PUMP 150 BBLS OF TAIL CEMENT  |
| 21   | Pump Tail Cement    | 4/22/2024       | 05:16        | 13.5             | 5.5             | 50                 | 669                 | PUMP 200 BBLS OF TAIL CEMENT  |
| 22   | Pump Tail Cement    | 4/22/2024       | 05:28        | 13.5             | 5.5             | 50                 | 723                 | PUMP 250 BBLS OF TAIL CEMENT  |
| 23   | Pump Tail Cement    | 4/22/2024       | 05:45        | 13.5             | 4               | 66                 | 241                 | PUMP 316 BBLS OF TAIL CEMENT  |
| 24   | Shutdown            | 4/22/2024       | 05:46        |                  |                 |                    |                     | SHUT DOWN/ WASH PUMP AND LINES TO 3-SIDED TANK  |
| 25   | Drop Top Plug       | 4/22/2024       | 06:00        |                  |                 |                    |                     | DROP TOP PLUG   |
| 26   | Pump Displacement   | 4/22/2024       | 06:07        | 8.34             | 10              | 50                 | 1723                | START 184 BBL DISPLACEMENT WITH WITH FRESH WATER AND KCL/ PUMP 50 BBLS OF DISPLACEMENT                        |
| 27   | Pump Displacement   | 4/22/2024       | 06:12        | 8.34             | 10              | 50                 | 2196                | PUMP 100 BBLS OF DISPLACEMENT   |
| 28   | Pump Displacement   | 4/22/2024       | 06:17        | 8.34             | 10              | 70                 | 2923                | PUMP 150 BBLS OF DISPLACEMENT   |

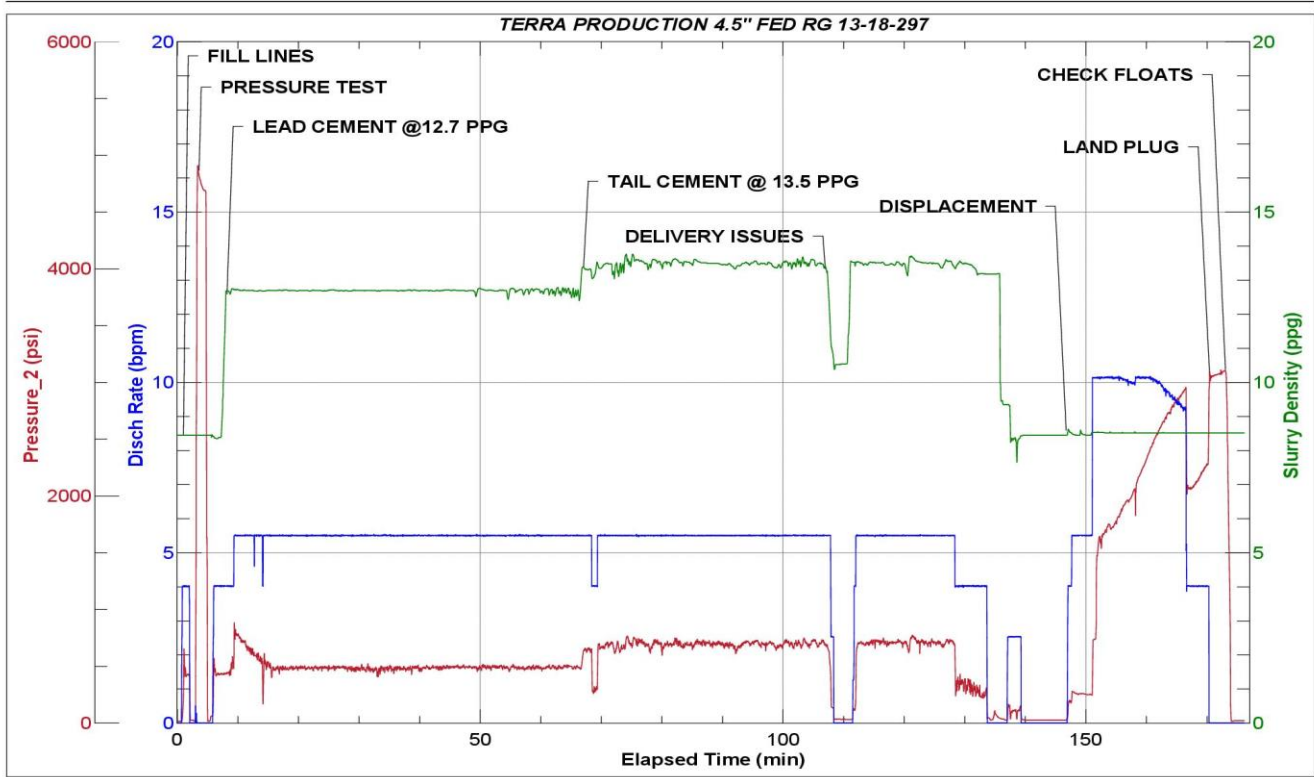


| Line | Event           | Date (MM/DD/YY) | Time (HH:MM) | Density (lb/gal) | Pump Rate (bpm) | Pump Volume (bbls) | Pipe Pressure (psi) | Comment   |
|------|-----------------|-----------------|--------------|------------------|-----------------|--------------------|---------------------|---|
| 29   | Slow Pump Rate  | 4/22/2024       | 06:19        | 8.34             | 4               | 14                 | 2246                | SLOW RATE TO 4 BBLS TO LAND THE PLUG                |
| 30   | Land Plug       | 4/22/2024       | 06:22        |                  |                 |                    | 3090                | PLUG LANDED FCP 2246 PSI/ LANDING PRESSURE 3090 PSI |
| 31   | Check Floats    | 4/22/2024       | 06:25        |                  |                 |                    |                     | 2 BBLS BACK UPON FLOAT CHECK                        |
| 32   | Safety Meeting  | 4/22/2024       |              |                  |                 |                    |                     | PRE-RIG DOWN SAFETY MEETING                         |
| 33   | Rig Down Iron   | 4/22/2024       | 06:30        |                  |                 |                    |                     | RIG DOWN IRON AND HOSES                             |
| 34   | Safety Meeting  | 4/22/2024       |              |                  |                 |                    |                     | PRE-CONVOY SAFETY MEETING                           |
| 35   | Depart Location | 4/22/2024       | 08:00        |                  |                 |                    |                     | DEPART CUSTOMER LOCATION TO RETURN TO RCO YARD      |
| 36   | End Job         | 4/22/2024       | 08:00        |                  |                 |                    |                     | END JOB   |

# Pump Diagrams



JobMaster Program Version 5.01C1  
Job Number: 91109  
Customer: TERRA  
Well Name: FED RG 13-18-297



Job Start: Monday, April 22, 2024