



Terra Energy Partners, LLC

LONG STRING POST JOB REPORT

CHEVRON GM 543-19 05-045-24356
S:20 T:6S R:96W Garfield CO

CallSheet #: 75974
Proposal #: 50952



LONG STRING Post Job Report

Attention: Mr. Lynn Cass | (970) 263-2716 | lcass@terraep.com
Terra Energy Partners, LLC
4828 Loop Central Dr., Suite 900 | Houston, TX 77081

Dear Mr. Lynn Cass,

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,

Zen Keith

Field Engineer | (307) 757-7178 | zen.keith@americancementing.com

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

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1 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 | 1040 | 0 |
| Open Hole | Outer | n/a | 8.75 | n/a | n/a | 1000 | 7787 | 45 |
| Casing | Inner | 4.5 | 4 | 11.6 | n/a | 0 | 7780.5 | 0 |

Equipment / People

| Unit Type | Unit | Power Unit | Employee #1 | Mileage |
|--------------------|----------|------------|---------------------|---------|
| Field Storage Silo | CTS-471 | | | |
| Bulk Trailer | CTF-340 | TRB-190 | Richey, Steven | 56 |
| Cement Pump | CPF-011 | TRH-957 | Mcneal, Lawrence | 56 |
| Light Duty Pickups | LDV-5429 | | Castillo, Francisco | 56 |

Timing

| Event | Date/Time |
|-----------------|-----------------|
| Call Out | 1/27/2021 08:30 |
| Depart Facility | 1/27/2021 09:20 |
| On Location | 1/27/2021 10:30 |
| Rig Up Iron | 1/27/2021 12:30 |
| Job Started | 1/27/2021 14:38 |
| Job Completed | 1/27/2021 15:58 |
| Rig Down Iron | 1/27/2021 16:15 |
| Depart Location | 1/27/2021 17:30 |

General Job Information

| Metrics | Value |
|-------------------------|-------------|
| Well Fluid Density | 10.8 lb/gal |
| Well Fluid Type | WBM |
| Rig Circulation Vol | 1200 bbls |
| Rig Circulation Time | 1 hours |
| Calculated Displacement | 120 bbls |
| Actual Displacement | 120 bbls |
| Total Spacer to Surface | 0 bbls |
| Total CMT to Surface | 0 bbls |
| Well Topped Out | N/A |

Well Fluid Details

| Metrics | Value |
|-------------------|-------|
| Plastic Viscosity | 16 |
| Yield Point | 16 |
| 10 sec. SGS | 7 |
| 10 min. SGS | 14 |
| 30 min. SGS | 27 |
| Filtrate | 9.2 |
| Flow Line Temp. | 0 |

Job Details

| Metrics | Value |
|--------------------------------|-------------|
| Flare Prior to Job | No |
| Flare During Job | No |
| Flare at End of Job | No |
| Well Full Prior to Job | Yes |
| Well Fluid Density Into Well | 10.8 lb/gal |
| Well Fluid Density Out of Well | 10.8 lb/gal |

Job Details (cont.)

| Metrics | Value |
|---------|--------|
| BHCT | 170 °F |
| BHST | 230 °F |

Circulation

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

Job Execution Information

| Job | Fluid | Product | Function | Density (lb/gal) | Yield (ft ³ /sk) | Water Rq. (gal/sk) | Water Rq. (gal/bbl) | Volume (sks) | Volume (bbl) | Top (ft) |
|-----|-------|--------------|-------------------|------------------|-----------------------------|--------------------|---------------------|--------------|--------------|----------|
| 1 | 1 | Water | Flush | 8.34 | | | 42.00 | | 10.00 | 3908 |
| 1 | 2 | Mud Flush | Flush | 8.45 | | | 40.86 | | 20.00 | 4034 |
| 1 | 3 | Water | Flush | 8.34 | | | 42.00 | | 10.00 | 4286 |
| 1 | 4 | Lead Cement | Lead | 12.50 | 2.16 | 12.18 | | 228.00 | 87.75 | 4412 |
| 1 | 5 | Tail Cement | Tail | 13.00 | 1.99 | 10.08 | | 487.00 | 172.96 | 5518 |
| 1 | 6 | Displacement | DisplacementFinal | 8.34 | | | 42.00 | | 120.00 | 0 |

Job Fluid Details

| Job | Fluid | Type | Fluid | Product | Function | Conc. | Uom |
|-----|-------|-------|-------------|--------------------|-----------------------|--------|---------|
| 1 | 2 | Flush | Mud Flush | SAPP | Surfactant | 10.00 | lb/bbl |
| 1 | 2 | Flush | Mud Flush | SS-201 | Surfactant | 0.50 | gal/bbl |
| 1 | 4 | Lead | Lead Cement | ASTM TYPE III | Cement | 100.00 | % |
| 1 | 4 | Lead | Lead Cement | BA-90 | BondEnhancer | 5.00 | lb/sk |
| 1 | 4 | Lead | Lead Cement | FL-66 | FluidLoss | 0.30 | %BWOB |
| 1 | 4 | Lead | Lead Cement | FP-24 | Defoamer | 0.30 | %BWOB |
| 1 | 4 | Lead | Lead Cement | GW-86 | Viscosifier | 0.10 | %BWOB |
| 1 | 4 | Lead | Lead Cement | IntegraSeal POLI | LostCirculation | 0.25 | lb/sk |
| 1 | 4 | Lead | Lead Cement | R-3 | Retarder | 0.60 | %BWOB |
| 1 | 5 | Tail | Tail Cement | CLASS G | Cement | 50.00 | % |
| 1 | 5 | Tail | Tail Cement | FLY ASH (POZZOLAN) | Extender | 50.00 | % |
| 1 | 5 | Tail | Tail Cement | BA-90 | BondEnhancer | 3.00 | lb/sk |
| 1 | 5 | Tail | Tail Cement | BENTONITE | Viscosifier | 6.00 | %BWOB |
| 1 | 5 | Tail | Tail Cement | FL-66 | FluidLoss | 0.40 | %BWOB |
| 1 | 5 | Tail | Tail Cement | FP-24 | Defoamer | 0.30 | %BWOB |
| 1 | 5 | Tail | Tail Cement | GW-86 | Viscosifier | 0.10 | %BWOB |
| 1 | 5 | Tail | Tail Cement | IntegraSeal POLI | LostCirculation | 0.25 | lb/sk |
| 1 | 5 | Tail | Tail Cement | R-3 | Retarder | 0.10 | %BWOB |
| 1 | 5 | Tail | Tail Cement | S-8 | StrengthRetrogression | 20.00 | %BWOB |


2 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 | 1/27/2021 | 08:30 | | | | | ON LOC 11:00, CREW TEMPS, JAVI-97.1, LONNY-98.3, STEVE-98.7 |
| 2 | LEAVE YARD | 1/27/2021 | 09:20 | | | | | CREW LEAVE THE YARD |
| 3 | ON LOCATION | 1/27/2021 | 10:30 | | | | | ON LOCATION, RIG RUNNING CASING |
| 4 | RIG UP | 1/27/2021 | 12:30 | | | | | RIG UP MEETING, RIG UP |
| 5 | SAFETY MEETING | 1/27/2021 | 14:20 | | | | | PRE-JOB SAFETY MEETING |
| 6 | PRESSURE TEST | 1/27/2021 | 14:36 | | | | 5300 | PRESSURE TEST LINES |
| 7 | PUMP SPACER | 1/27/2021 | 14:38 | 8.34 | 7 | 10 | 1117 | WATER SPACER |
| 8 | PUMP SPACER | 1/27/2021 | 14:40 | 8.5 | 7 | 20 | 1097 | MUD FLUSH SPACER |
| 9 | PUMP SPACER | 1/27/2021 | 14:42 | 8.34 | 7 | 10 | 1131 | WATER SPACER |
| 10 | LEAD CEMENT | 1/27/2021 | 14:47 | 12.5 | 7 | 88 | 1387 | 228 SKS/88 BBLS AT 12.5 PPG |
| 11 | TAIL CEMENT | 1/27/2021 | 15:01 | 13 | 7 | 50 | 955 | 487 SKS/173 BBLS AT 13 PPG |
| 12 | TAIL CEMENT | 1/27/2021 | 15:08 | 13 | 7 | 50 | 915 | 100 BBLS TAIL CEMENT PUMPED |
| 13 | TAIL CEMENT | 1/27/2021 | 15:15 | 13 | 7 | 73 | 873 | 173 BBLS TAIL CEMENT PUMPED |
| 14 | SHUTDOWN | 1/27/2021 | 15:35 | | | | | SHUTDOWN, WASH LINES, DROP PLUG |
| 15 | DISPLACEMENT | 1/27/2021 | 15:43 | 8.4 | 9.5 | 50 | 1773 | DISPLACEMENT KCL WATER |
| 16 | DISPLACEMENT | 1/27/2021 | 15:49 | 8.4 | 9.5 | 60 | 2537 | 110 BBLS DISPLACEMENT PUMPED |
| 17 | DISPLACEMENT | 1/27/2021 | 15:55 | 8.4 | 4 | 10 | 1849 | SLOW RATE |
| 18 | LAND PLUG | 1/27/2021 | 15:58 | | | | 3003 | LAND PLUG, FULL RETURNS |
| 19 | CHECK FLOATS | 1/27/2021 | 16:01 | | | | | FLOATS HELD, 1 BBL FLOW BACK |
| 20 | RIG DOWN | 1/27/2021 | 16:15 | | | | | RIG DOWN MEETING, RIG DOWN |
| 21 | LEAVE LOCATION | 1/27/2021 | 17:30 | | | | | CREW LEAVE LOCATION |

3 Water Analysis

| Metrics | Value | Recommended |
|------------------|-----------|-------------|
| Water Source | Flat Tank | |
| Temperature | 80 °F | 50-80 °F |
| pH Level | 7 | 5.5-8.5 |
| Chlorides | 0 mg/L | 0-3000 mg/L |
| Total Alkalinity | 240 | 0-1000 |
| Total Hardness | 250 mg/L | 0-500 mg/L |
| Carbonates | 0 mg/L | 0-100 mg/L |
| Sulfates | 200 mg/L | 0-1500 mg/L |
| Potassium | 250 mg/L | 0-3000 mg/L |
| Iron | 0 mg/L | 0-300 mg/L |

4 Pump Diagrams

 **JobMaster Program Version 5.01C1**
Job Number: 75974
Customer: TERRA
Well Name: GM 543-19

