



Terra Energy Partners, LLC

LONG STRING POST JOB REPORT

CHEVRON GM 332-19 05-045-24362
S:20 T:6S R:96W Garfield CO

CallSheet #: 75759
Proposal #: 50967



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 | 1029 | 0 |
| Open Hole | Outer | n/a | 8.75 | n/a | n/a | 1000 | 7777 | 45 |
| Casing | Inner | 4.5 | 4 | 11.6 | n/a | 0 | 7777 | 0 |

Equipment / People

| Unit Type | Unit | Employee #1 | Mileage |
|--------------------|----------|---------------------|---------|
| Silo | Silo #25 | | |
| Bulk Trailer | CTF-555 | Richey, Steven | 56 |
| Cement Pump | CPF-011 | Mcneal, Lawrence | 56 |
| Light Duty Pickups | LDV-5429 | Castillo, Francisco | 56 |

Timing

| Event | Date/Time |
|-----------------|------------------|
| Call Out | 12/28/2020 11:00 |
| Depart Facility | 12/28/2020 12:45 |
| On Location | 12/28/2020 15:00 |
| Rig Up Iron | 12/28/2020 15:15 |
| Job Started | 12/28/2020 17:44 |
| Job Completed | 12/28/2020 19:02 |
| Rig Down Iron | 12/28/2020 19:25 |
| Depart Location | 12/28/2020 20:30 |

General Job Information

| Metrics | Value |
|-------------------------|------------|
| Well Fluid Density | 9.5 lb/gal |
| Well Fluid Type | WBM |
| Rig Circulation Vol | 600 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 | 9 |
| 10 min. SGS | 19 |
| 30 min. SGS | 27 |
| Filtrate | 8.8 |
| Flow Line Temp. | 119 |

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 | 9.5 lb/gal |
| Well Fluid Density Out of Well | 9.5 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 | 4009 |
| 1 | 2 | Mud Flush | Flush | 8.45 | | | 40.86 | | 20.00 | 4135 |
| 1 | 3 | Water | Flush | 8.34 | | | 42.00 | | 10.00 | 4387 |
| 1 | 4 | Lead Cement | Lead | 12.50 | 2.16 | 12.18 | | 230.00 | 88.52 | 4513 |
| 1 | 5 | Tail Cement | Tail | 13.00 | 1.99 | 10.08 | | 506.00 | 179.00 | 5628 |
| 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 | CALL OUT | 12/28/2020 | 11:00 | | | | | ON LOC AT 15:00 HRS, CREW TEMPS, JAVI-98.1, LONNY-98.3, STEVE-97.5 |
| 2 | LEAVE THE YARD | 12/28/2020 | 12:45 | | | | | LEAVE THE YARD |
| 3 | ON LOCATION | 12/28/2020 | 15:00 | | | | | ON LOCATION, RIG RUNNING CASING |
| 4 | RIG UP | 12/28/2020 | 15:15 | | | | | RIG UP MEETING, RIG UP |
| 5 | SAFETY MEETING | 12/28/2020 | 17:30 | | | | | PRE-JOB SAFETY MEETING |
| 6 | PRESSURE TEST | 12/28/2020 | 17:41 | | | | 5000 | PRESSURE TEST LINES |
| 7 | PUMP SPACER | 12/28/2020 | 17:44 | 8.34 | 6 | 10 | 883 | WATER SPACER |
| 8 | PUMP SPACER | 12/28/2020 | 17:46 | 8.4 | 6 | 20 | 1047 | MUD FLUSH SPACER |
| 9 | PUMP SPACER | 12/28/2020 | 17:49 | 8.34 | 6 | 10 | 1043 | WATER SPACER |
| 10 | LEAD CEMENT | 12/28/2020 | 17:54 | 12.5 | 7 | 89 | 1407 | LEAD 230 SKS / 89 BBLS AT 12.5 PPG, CALCULATED TOP OF LEAD 2,879' |
| 11 | TAIL CEMENT | 12/28/2020 | 18:09 | 13 | 7 | 60 | 961 | TAIL 506 SKS / 179 BBLS AT 13 PPG, CALCULATED TOP OF TAIL 4,506' |
| 12 | TAIL CEMENT | 12/28/2020 | 18:18 | 13 | 7 | 60 | 971 | 120 BBLS TAIL CEMENT PUMPED |
| 13 | TAIL CEMENT | 12/28/2020 | 18:25 | 13 | 7 | 59 | 933 | 179 BBLS TAIL CEMENT PUMPED |
| 14 | SHUTDOWN | 12/28/2020 | 18:40 | | | | | SHUTDOWN, WASH LINES, DROP PLUG |
| 15 | DISPLACEMENT | 12/28/2020 | 18:48 | 8.4 | 10 | 50 | 2013 | DISPLACEMENT WATER + KCL |
| 16 | DISPLACEMENT | 12/28/2020 | 18:53 | 8.4 | 10 | 60 | 2733 | 110 BBLS DISPLACEMENT PUMPED |
| 17 | SLOW RATE | 12/28/2020 | 18:59 | 8.4 | 4 | 10 | 1815 | SLOW RATE LAST 10 BBLS |
| 18 | LAND PLUG | 12/28/2020 | 19:02 | | | | 2911 | LAND PLUG, FULL RETURNS |
| 19 | CHECK FLOATS | 12/28/2020 | 19:05 | | | | | FLOATS HELD, 1 BBL FLOW BACK |
| 20 | RIG DOWN | 12/28/2020 | 19:25 | | | | | RIG DOWN MEETING, RIG DOWN |
| 21 | LEAVE LOCATION | 12/28/2020 | 20:30 | | | | | CREW LEAVE LOCATION |

3 Water Analysis

| Metrics | Value | Recommended |
|------------------|-----------|-------------|
| Water Source | Flat Tank | |
| Temperature | 75 °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: 75759
Customer: TERRA
Well Name: GM 332-19

