

HALLIBURTON

iCem[®] Service

CRESTONE PEAK RESOURCES-EBUS

For: Sam Mares

Date: Tuesday, March 21, 2023

COSSLETT EAST 1L-22H-H168

COSSLETT EAST 1L-22H-H168

Job Date: Tuesday, March 21, 2023

Sincerely,

Nick Roles and Crew

Legal Notice

Disclaimer:

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1.0 Cementing Job Summary

1.1 Executive Summary

Halliburton appreciates the opportunity to perform the cementing services on the COSSLETT EAST 1L-22H-H168 2 STAGE CONDUCTOR. A pre-job safety meeting was held before the job where details of the job were discussed, potential safety hazards were reviewed, and environmental compliance procedures were outlined.

Approximately 25bbls of cement were returned to surface.

Halliburton maintains a continuous quality improvement process and appreciates any comments or suggestions that you may have. Halliburton again thanks you for the opportunity to perform service work on this well. We hope to be your solutions provider for future projects.

Respectfully,

Halliburton Rockies Cement Team

1.2 Job Overview

| Job Details | |
|--------------------|----------------------------------|
| API #: | 05-123-51952 |
| County: | Weld |
| Field: | Wattenberg |
| Legal Discription: | SENE SEC 22 TOWN 1N RANGE 68W |

| Job Times | | | |
|-----------------------------|-------------------|--------------|-----------|
| | Date (mm/dd/yyyy) | Time (hh:mm) | Time Zone |
| Requested Time On Location: | 03/21/2023 | 03:15 | MTN |
| Called Out Time: | 03/20/2023 | 21:00 | MTN |
| Arrived On Location: | 03/21/2023 | 02:00 | MTN |
| Job Started: | 03/21/2023 | 05:00 | MTN |
| Job Completed: | 03/21/2023 | 8:20 | MTN |
| Departed Location: | 03/21/2023 | 9:00 | MTN |

| | Description | Units | Value |
|---|--|----------|-------|
| 1 | Surface temperature at the time of the job | degree F | 55 |
| 2 | Mud type (OBM, WBM, Synthetic, Water, Brine) | - | WBM |
| 3 | Mud density | ppg | 8.8 |
| 4 | Casing set depth (shoe) | ft | 607 |
| 5 | TVD | ft | 607 |
| 6 | Float collar depth | ft | 561 |
| 7 | Length of rate hole | ft | 10 |
| 8 | Previous casing shoe depth | ft | 145 |
| 9 | Pre-job mud circulation time | hh:mm | 00:15 |

| | | | |
|----|---|---------------------|--------|
| 10 | Pre-job mud circulation rate | bpm | 5 |
| 11 | Pre-job mud circulation volume | bbls | 40 |
| 12 | Pre-job mud circulation pressure | psi | 50 |
| 13 | Annual flow before the start of job | Y/N | N |
| 14 | Pipe movement during cement job | Y/N | N |
| 15 | Calculated displacement | bbls | 85 |
| 16 | Job displaced by | Rig/HES | HES |
| 17 | Estimated returns % during job | % | 50 |
| 18 | Fluid returns to surface | Spacer/Cement, bbls | Cement |
| 19 | Final circulation pressure, rate prior to plug bump | psi @ bpm | 110 |
| 20 | Number of Centralizers | - | 15 |
| 21 | Number of plugs | - | 2 |

1.3 Water Field Test

| | Recorded Value | Unit | Acceptable Limit | Potential Problems if Values Exceed the Limit |
|--------------------|----------------|------|------------------|---|
| pH | 7 | | 6.0 - 8.0 | Chemicals in water can cause severe retardation |
| Temperature | 65 | F | 60 - 80 F | |
| Chlorides | <3000 | ppm | 3000 ppm | Can shorten thickening time |

1.4 Actual Pump Schedule

| | Density (ppg) | Volume (bbls) | Yield (ft ³ /sk) | Water Requirement (gal/sk) | Bulk Sacks (sks) | Total Water (gals) |
|--|---------------|---------------|-----------------------------|----------------------------|------------------|--------------------|
| 1st stage Cement | 14.2 | 116 | 1.15 | 5.74 | 567 | 3254 |
| 2nd stage Cement | 14.2 | 72.4 | 1.15 | 5.74 | 353 | 2026 |
| Tail Cement | NA | | | | | |
| Top Plug | 2 | | | | | |
| 1st stage Displacement Fluid | 8.33 | 87 | | | | 3654 |
| 2nd stage Displacement Fluid | 8.33 | 50 | | | | 2100 |

2.0 Real-Time Job Summary

2.1 Job Event Log

| Type | Seq No. | Activity | Graph Label | Date | Time | Source | Dwnhole Density (ppg) | Cmb Pump Rate (bbl/mi n) | Pump B Pressure (psi) | Mix Wtr Stg Tot (gal) | Cmb Stg Total (bbl) | Comments |
|-------|---------|--|--|-----------|----------|--------|-----------------------|--------------------------|-----------------------|-----------------------|---------------------|---|
| Event | 1 | Call Out | Call Out | 3/20/2023 | 21:00:00 | USER | | | | | | Called out by service coordinator for OL time of 0800. |
| Event | 2 | Other | Other | 3/20/2023 | 21:20:00 | USER | | | | | | Mix water test results- PH-7, Chlo-0, Temp-65F. |
| Event | 3 | Pre-Convoy Safety Meeting | Pre-Convoy Safety Meeting | 3/21/2023 | 01:15:00 | USER | | | | | | Discuss all hazards associated with journey, directions to destination, complete journey management if needed, and ensure all convoy is fit for duty. |
| Event | 4 | Depart from Service Center or Other Site | Depart from Service Center or Other Site | 3/21/2023 | 01:30:00 | USER | | | | | | Depart from service center or other job site. |
| Event | 5 | Arrive at Location from Service Center | Arrive at Location from Service Center | 3/21/2023 | 02:00:00 | USER | | | | | | Upon arrival to location, signed in with onsite safety personnel. Met with |

| | | | | | | | | | | | | |
|-------|----|---------------------------|---------------------------|-----------|----------|------|-------|------|--------|-----|--|---|
| | | | | | | | | | | | company man and discussed job specific requirements and specifications. | |
| Event | 6 | Pre-Rig Up Safety Meeting | Pre-Rig Up Safety Meeting | 3/21/2023 | 03:30:00 | USER | | | | | Held pre rig up JSA for hazards, hazard hunt with crew, and discussed plan for spotting equipment and rigging up lines for job. Discussed muster points and closest emergency location as well as coordinates. | |
| Event | 7 | Rig-Up Equipment | Rig-Up Equipment | 3/21/2023 | 03:45:00 | USER | | | | | Begin rig up with crew. | |
| Event | 8 | Rig-Up Completed | Rig-Up Completed | 3/21/2023 | 04:00:00 | USER | -1.14 | 0.00 | -25.28 | 0.0 | 0.00 | Complete rig up for job to nearest point before red zone. |
| Event | 9 | Safety Meeting - Pre Job | Safety Meeting - Pre Job | 3/21/2023 | 04:15:00 | USER | -1.14 | 0.00 | -24.92 | 0.0 | 0.00 | Held job specific hazards as well as confirming job procedure with co man and rest of crew associated with job. |
| Event | 10 | Start Job | Start Job | 3/21/2023 | 04:59:27 | NONE | 8.43 | 0.00 | -5.37 | 0.0 | 0.00 | TD-617', TP-607' 13.375" 54.5#, FC-561', OH-17.5", Cond.- |

| | | | | | | | | | | | | |
|-------|----|--------------|--------------|---------------|--------------|------|-------|------|--------|--------|--------|---|
| | | | | | | | | | | | | 145' 20# 19.5" ID, MUD-8.8# |
| Event | 11 | Test Lines | Test Lines | 3/21/20 23 | 05:01:1 3 | NONE | 8.32 | 0.00 | 41.06 | 0.0 | 3.52 | Pumped 5bbls fresh water to fill lines, shutdown, closed manifold, performed 500psi k/o function test, continued with 5th gear stall at 1350psi, proceeded to bring pressure to 3500psi. Held well, no leaks. |
| Event | 12 | Check Weight | Check Weight | 3/21/20 23 | 05:12:0 4 | NONE | 8.27 | 0.00 | 3.09 | 96.3 | 3.59 | Weight verified with pressurized mud scales. |
| Event | 13 | Pump Cement | Pump Cement | 3/21/20 23 | 05:12:0 8 | NONE | 8.27 | 0.00 | 2.85 | 0.0 | 0.00 | Pumped 567sks or 116bbls of 14.2# 1.15y 5.74g/s SwiftCem at 6bpm 300psi. |
| Event | 14 | Check Weight | Check Weight | 3/21/20 23 | 05:17:5 6 | NONE | 14.93 | 4.19 | 268.40 | 872.6 | 13.89 | Weight verified with pressurized mud scales. |
| Event | 15 | Shutdown | Shutdown | 3/21/20 23 | 05:35:2 2 | NONE | 15.25 | 0.00 | 113.64 | 3075.8 | 104.52 | Cement head was suspended 10ft in air, unable to land out. Worked on getting cap off and ready to drop plug. |

| | | | | | | | | | | | | |
|-------|----|-------------------|-------------------|---------------|--------------|------|-------|------|--------|--------|--------|---|
| Event | 16 | Drop Top Plug | Drop Top Plug | 3/21/20 23 | 05:52:0 6 | NONE | 14.95 | 0.00 | 19.62 | 3184.0 | 104.52 | Dropped by tool hand witnessed by HES supervisor and company man. |
| Event | 17 | Pump Displacement | Pump Displacement | 3/21/20 23 | 05:52:0 8 | NONE | 14.95 | 0.00 | 19.52 | 0.0 | 0.00 | Displaced first 10bbls with cement water, followed by 77bbls fresh water, total 87bbl displacement. |
| Event | 18 | Other | Other | 3/21/20 23 | 06:03:1 2 | NONE | 8.31 | 3.00 | 75.87 | 1722.7 | 42.46 | Slowed down at 40bbl away to 3bpm, plug passing shear pins on tool. |
| Event | 19 | Bump Plug | Bump Plug | 3/21/20 23 | 06:14:5 9 | NONE | 8.36 | 0.00 | 511.41 | 3726.9 | 85.36 | Slowed down to 3bpm at 77bbls away, final circulating pressure-40psi, Bump Pressure 550psi. |
| Event | 20 | Other | Other | 3/21/20 23 | 06:15:3 4 | NONE | 8.35 | 0.00 | 449.80 | 3726.9 | 85.36 | Release pressure due to leak at cement head. |
| Event | 21 | Other | Other | 3/21/20 23 | 06:26:3 7 | NONE | 8.30 | 0.00 | 3.93 | 0.0 | 0.11 | Repressure up. |
| Event | 22 | Other | Other | 3/21/20 23 | 06:44:4 5 | NONE | 8.35 | 0.52 | 302.60 | 0.0 | 0.33 | Inflate packer until opened at 1050psi and fell to 600psi. |
| Event | 23 | Other | Other | 3/21/20 23 | 06:47:4 2 | NONE | 8.35 | 0.00 | 435.45 | 0.0 | 0.75 | Released pressure to 650psi, took 3/4bbl. |

| | | | | | | | | | | | | |
|-------|----|---------------|---------------|---------------|--------------|------|-------|------|---------|--------|-------|--|
| Event | 24 | Other | Other | 3/21/20 23 | 06:54:4 5 | NONE | 8.45 | 0.00 | 1539.29 | 38.2 | 2.17 | Brought pressure up to 1200psi to inflate second packer. took 3/4bbl. Released pressure and got 1bbls back, floats held. |
| Event | 25 | Drop Ball | Drop Ball | 3/21/20 23 | 07:01:3 1 | NONE | 8.30 | 0.00 | 3.86 | 290.8 | 0.00 | Dropped Bomb Opened Tool at 1bpm to 580psi, 1bbl to open. Pumped additional 50bbls fresh water at 5bpm to ensure circulation and circulate bottoms up. |
| Event | 26 | Other | Other | 3/21/20 23 | 07:33:4 9 | NONE | 8.27 | 0.00 | 4.05 | 290.8 | 0.00 | |
| Event | 27 | Pump Cement | Pump Cement | 3/21/20 23 | 07:41:4 6 | NONE | 8.37 | 5.97 | 211.82 | 0.0 | 0.05 | Pumped 353sks or 72.4bbl of 14.2# 1.15y 5.74g/s SwiftCem at 5bpm 110psi. |
| Event | 28 | Check Weight | Check Weight | 3/21/20 23 | 07:50:3 2 | NONE | 15.06 | 3.27 | 159.66 | 416.8 | 8.96 | Weight verified with pressurized mud scales. |
| Event | 29 | Shutdown | Shutdown | 3/21/20 23 | 08:03:4 9 | NONE | 14.95 | 0.00 | 79.98 | 2022.0 | 77.35 | |
| Event | 30 | Drop Top Plug | Drop Top Plug | 3/21/20 23 | 08:07:2 4 | NONE | 14.77 | 0.00 | 17.03 | 2179.4 | 77.35 | Dropped by tool hand witnessed by HES |

| | | | | | | | | | | | | supervisor and company man. |
|-------|----|-----------|-----------|---------------|--------------|------|------|------|---------|--------|-------|---|
| Event | 31 | Bump Plug | Bump Plug | 3/21/20 23 | 08:20:1 8 | NONE | 8.46 | 0.00 | 1481.58 | 2034.4 | 49.29 | Slowed down to 3bpm at 36bbbls away, final circulating pressure-110psi, Bump Pressure 620psi. |
| Event | 32 | Other | Other | 3/21/20 23 | 08:22:1 3 | NONE | 8.46 | 0.00 | 1677.46 | 2040.9 | 49.29 | Released pressure and got 1.5bbbls back, floats held. |
| Event | 33 | End Job | End Job | 3/21/20 23 | 08:23:4 6 | NONE | 8.31 | 0.00 | 8.31 | 0.0 | 0.00 | Got 25bbbls cement to surface. |

3.0 Attachments

3.1 COSSLETT EAST 1L-22H-H168-Custom Results (1).png

