

Cement Verification Report - Cementer's Well Service, Inc.

P.O. BOX 336220 • GREELEY, CO 80633 • (970) 353-7299 • FAX (970) 353-7712

COGCC Operator Guidance **RULE #308.A.B(2)A.ii**



| | | |
|--------------------------|------------------------------|----------|
| CLIENT: Verdad Resources | Cementer's FIELD TICKET # | 334103-D |
|--------------------------|------------------------------|----------|

Requested Operator Guidance:

| | | | | |
|---------------------------|--|-----------------|----------------------------|------------|
| Well Name & Number | Lease | Helen 2536 | Well No. | 11H |
| Well API Number | 05-123-46824 | | | |
| Job Date | 5/18/22 | Time on | 4:45 | 24 hr time |
| Job Type | New Well Surface | | | |
| Cementing Company | Cementer's Well Service, Inc | Contact | Nate Kvamme - 303-324-4296 | |
| Ambient conditions | clear | 65 | temp deg F | |
| Slurry Description | | | | |
| a) Purpose | Surface - 9 5/8" 36# CSG, 13 1/2" hole | | | |
| b) Cement Class | Type I / II | | | |
| c) Cement Yield | 1.61 | cuft / sk | | |
| d) Cement Density | 13.9 | PPG | | |
| e) Number of sks | 1081 | sks (94# equiv) | | |
| f) Mix Fluid Type | | | | |
| | Water / Cement | 8.5 | Gal / sk | |
| g) Slurry mixed | 309.7 | BBLs slurry | | |
| h) Additives used | 1.50% | CaCl2 | 3.00% | Bentonite |
| Total Water Used | 414.6 | BBLs H2O | | |
| i) Displacement Fluid Vol | 175.9 | BBLs H2O | | |
| j) Method of Placement | | | | |
| k) Set Depth | 2,303 | feet (ft) | | |
| l) Stage tool depth | n/a | | | |
| m) Float Collar Depth | 2,275 | feet (ft) | | |
| n) Designed Top of Cement | n/a | to surface | | |
| o) Centralizer depths | 0 | feet (ft) | | |

Charts - (pressure, density, pump rate)

Landed Plug @ 1660 psi Final Lift Pressure @ 575 psi

Cement Density (as weighed during job) @ 13.9 PPG

Job notes

| | | | | |
|---------------------------|--|------------------|--|------------|
| a) Plug down | <input checked="" type="radio"/> Y / <input type="radio"/> N | Time | 8:16 | 24 hr time |
| b) Floats held | <input checked="" type="radio"/> Y / <input type="radio"/> N | | 5/18/22 | |
| c) Full Returns | <input checked="" type="radio"/> Y / <input type="radio"/> N | Lost Circulation | <input checked="" type="radio"/> Y / <input type="radio"/> N | |
| d) Cement to surface | <input checked="" type="radio"/> Y / <input type="radio"/> N | 45.0 | BBLs to surface | |
| e) If no returns, top off | n/a | BBLs | | |
| f) Top off detail | | | | |
| g) Additional Detail | 0 | | | |
| | 0 | | | |

Surface Cement Job Report - Cementer's Well Service, Inc.

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DATE: 5/18/22



Verdad Resources

Lease: Helen 2536

Well: 11H

API# 05-123-46824

| | |
|----------------|-----------------|
| Date & Time On | 5/18/22 4:45 |
|----------------|-----------------|

| Item | Event | Date | Time (24 hr) | Density (PPG) | Pump Rate (BPM) | Incremental (Line Item) Volume (BBLs) | Cumulative Volume (BBLs) | Pressure (PSI) | Comment |
|----------------------|---------------------------|---------|--------------|---------------|-----------------|---------------------------------------|--------------------------|----------------|---|
| Pre-job | 1 Call Out | 5/18/22 | 1:00 | | | | | | Verdad Resources call out w/ 4 hr notice |
| | 2 Leave Yard | 5/18/22 | 4:02 | | | | | | Cementer's leaves yard to travel to location |
| On Location: Pre-job | 3 Arrive On Location | 5/18/22 | 4:45 | | | | | | Arrive on location |
| | 4 Spot Trucks | 5/18/22 | 4:50 | | | | | | Spot trucks on location |
| | 5 Rig Up | 5/18/22 | 4:52 | | | | | | Rig up water & Cementer's Bulk Truck, prep pump and mixing operation |
| | 6 Safety Meeting | 5/18/22 | 4:57 | | | | | | Pre-job safety meeting with lkon12 rig crew, Verdad company man & Cementer's crew |
| | 7 Rig Up | 5/18/22 | 5:02 | | | | | | Rig up cement head w/plug |
| | 8 Fill Lines | 5/18/22 | 5:04 | 8.34 | 2.00 | | | | Fill lines with up to 5 bbls of fresh water |
| Initial Job Start | 9 Pressure Test | 5/18/22 | 5:06 | 8.34 | - | | | - | Pressure test pumps and lines |
| | 10 Pump Spacer | 5/18/22 | 6:02 | 8.34 | 4.00 | 20 | 20 | - | Pump dye fresh water @ 20 BBLs |
| Cementing | 11 Pump Cement | 5/18/22 | 6:07 | 13.90 | 4.00 | 309.74 | 329.74 | 45 | Pump Cement @ 1,081 SKS |
| | | | | | | | | | Type I/II cement with 1.5% CaCl2 & 3.0% Bentonite @ 1.61 cuft/sk & 13.9 PPG |
| Displacement | 12 Drop Plug | 5/18/22 | 7:30 | | | n/a | | | Shut down cementing operation & release top plug |
| | 13 Initial Displacement | 5/18/22 | 7:32 | 8.34 | 2.00 | 4.00 | 333.74 | - | Send plug with 4.0 BBLs H2O @ 2.0 BPM |
| | 14 Plug Drop Verification | 5/18/22 | 7:36 | | | n/a | | | Visual verification plug released from head |
| | 15 Displacement | 5/18/22 | 7:38 | 8.34 | 5.00 | 116.86 | 446.60 | 80-450 | Continued Displacement with total fresh water @ 175.86 BBLs H2O |
| | 16 Spacer To Surface | 5/18/22 | 8:07 | 8.34 | 5.00 | 120.86 | 450.60 | 385 | Identified Spacer, looking for Cement / green water |
| | 17 Cement To Surface | 5/18/22 | 8:09 | 8.34 | 5.00 | 130.86 | 460.60 | 390 | Identify Cement to surface w/ 45 BBLs back |
| | 18 Drop Rate | 5/18/22 | 8:14 | 8.34 | 2.50 | 165.86 | 495.60 | 400 | Drop rate to 2.5 BPM for last 10 BBLs of Displacement to land plug |
| Casing Test | 19 Land Plug | 5/18/22 | 8:16 | 8.34 | 2.50 | 175.86 | 505.60 | 1,660 | Land Plug @ 1,660 PSI |
| | | | | | | | | | with final lift pressure @ 575 PSI |
| Casing Test | 20 Casing Test | 5/18/22 | 8:16 | n/a | 0 | 0 | 0 | 1,660 | Start 30 min casing test w/ pressure @ 1,660 PSI |
| | | | 8:26 | n/a | 0 | 0 | 0 | 1,668 | 10 min into casing test, pressure @ 1,668 PSI |
| | | | 8:36 | n/a | 0 | 0 | 0 | 1,661 | 20 min into casing test, pressure @ 1,661 PSI |
| | | | 8:46 | n/a | 0 | 0 | 0 | 1,661 | 30 min into casing test, pressure @ 1,661 PSI |
| Post Job & Testing | 24 Check Floats | 5/18/22 | 8:47 | n/a | 0 | 0 | 0 | 1 | BBLs back (.25-1BBL expected) |
| | 25 End Job | 5/18/22 | 8:49 | | | | | | Bleed off pressure, job complete |
| | 26 Safety Meeting | 5/18/22 | 8:51 | | | | | | Pre-rig down safety meeting, wash up equipment |
| | 27 Rig Down | 5/18/22 | 8:54 | | | | | | Rig down Cementer's Equipment, leave location |

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Verdad Resources

Surface Casing Pressure Test - Cement Job Graph

COMPANY DETAILS

| | | | | | |
|--------|---------|-------|--------------|----------|------------|
| Date | 5/18/22 | API # | 05-123-46824 | Well No. | 11H |
| County | Weld | State | CO | Lease | Helen 2536 |

Client Verdad Resources

Contact / email _____

JOB DETAILS

| | | | | | | | | |
|------------|------|---------|-------------------|-------|-------|-----------------|-------|-----|
| TIME ON | 4:45 | 24 hr | Depth | 2,319 | ft. | Pressure Test @ | 1,660 | psi |
| START TIME | 6:00 | 5/18/22 | Bottom of Surface | 2,303 | ft. | 10 min | 1,668 | psi |
| END TIME | 9:00 | 5/18/22 | Plug Landed @ | 2,275 | ft. | 20 min | 1,661 | psi |
| | | | Plug Landed @ | 8:16 | 24 hr | 30 min | 1,661 | psi |

SUMMARY GRAPH

