

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

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COGCC Operator Guidance

RULE #308.A.B(2)A.ii



|  |                              |        |
|--|------------------------------|--------|
| CLIENT: PDC - Petroleum Development Corp | Cementor's<br>FIELD TICKET # | 210068 |
|--|------------------------------|--------|

## Requested Operator Guidance:

|  |  |                  |  |            |
|--|--|------------------|--|------------|
| 1) Well Name & Number                      | Lease  | Vega             | Well No.   | 4N         |
| 2) Well API Number                         | 05-1234-8461-0000  |                  |  |            |
| 3) Job Date                                | 8/30/20  | Time on          | 18:00  | 24 hr time |
| 4) Job Type                                | New Well Surface   |                  |  |            |
| 5) Cementing Company                       | Cementor's Well Service, Inc                                 | Contact          | Nate Kvamme - 303-324-4296                                   |            |
| 6) Ambient conditions                      | clear / rain / snow / other                                  |                  | temp deg F   |            |
| 7) Slurry Description                      |  |                  |  |            |
| a) Purpose                                 | Surface - 9 5/8" CSG, 12 1/4" hole                           |                  |  |            |
| b) Cement Class                            | Type I / II  |                  |  |            |
| c) Cement Yield                            | 1.61   | cuft / sk        |  |            |
| d) Cement Density                          | 13.9   | PPG              |  |            |
| e) Number of sks                           | 530  | sks (94# equiv)  |  |            |
| f) Cement Volume (dry)                     | 530  | cuft (ft^3)      |  |            |
| g) Mix Fluid Type                          |  |                  |  |            |
| Water / Cement                             | 8.5  | Gal / sk         |  |            |
| h) Slurry mixed                            | 151.9  | BBLs slurry      |  |            |
| i) Additives used                          | 1.50%  | CaCl2            |  |            |
|  | 3.00%  | Bentonite        |  |            |
| j) Displacement Fluid Vol                  | 127  | BBLs H2O         |  |            |
| k) Method of Placement                     |  |                  |  |            |
| l) Set Depth                               | 1,681  | feet (ft)        |  |            |
| m) Stage tool depth                        | n/a  |                  |  |            |
| n) Float Collar Depth                      | 1,644  | feet (ft)        |  |            |
| o) Designed Top of Cement                  | n/a  | to surface       |  |            |
| p) Centralizer depths                      | 77 / 275 / 471 / 663 / 858 / 1,056 / 1,257 / 1,459           |                  |  | feet (ft)  |
| 8) Charts - (pressure, density, pump rate) |  |                  |  |            |
| Landed Plug @                              | 900  | psi              | Final Lift Pressure @  | 650 psi    |
| Cement Density (as weighed during job) @   | 13.8   | PPG              |  |            |
| 9) Job notes                               |  |                  |  |            |
| a) Plug down                               | <input checked="" type="radio"/> Y / <input type="radio"/> N | Time             | 21:00  | 24 hr time |
| b) Floats held                             | <input checked="" type="radio"/> Y / <input type="radio"/> N |                  |  |            |
| 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 | 15               | BBLs to surface  |            |
| e) If no returns, top off                  | BBLs   |                  |  |            |
| f) Top off detail                          |  |                  |  |            |