

# CEMENT JOB REPORT



|  |                 |                                |   |  |                           |   |                                   |                                  |   |                         |                   |                      |             |
|--|-----------------|--------------------------------|---|--|---------------------------|---|-----------------------------------|----------------------------------|---|-------------------------|-------------------|----------------------|-------------|
| <b>CUSTOMER</b> CARRIZO OIL & GAS INC XML  |                 |                                | <b>DATE</b> 12-DEC-13                               |  | <b>F.R. #</b> 10011033029 |   | <b>SERV. SUPV.</b> RYAN R STEVENS |                                  |   |                         |                   |                      |             |
| <b>LEASE &amp; WELL NAME</b><br>CASTOR #7-36-9-59 - API 05123385770000   |                 |                                | <b>LOCATION</b><br>36-9N-59W                        |  |                           | <b>COUNTY-PARISH-BLOCK</b><br>Weld Colorado   |                                   |                                  |   |                         |                   |                      |             |
| <b>DISTRICT</b><br>Brighton  |                 |                                | <b>DRILLING CONTRACTOR RIG #</b><br>Xtreme Coil #19 |  |                           | <b>TYPE OF JOB</b><br>Intermediate  |                                   |                                  |   |                         |                   |                      |             |
| <b>SIZE &amp; TYPE OF PLUGS</b>  |                 | <b>LIST-CSG-HARDWARE</b>       |   | <b>MECHANICAL BARRIERS</b>                     |                           | <b>MD</b>   | <b>TVD</b>                        | <b>HANGER TYPES</b>              |   | <b>MD</b>               | <b>TVD</b>        |                      |             |
| Cement Plug, Rubber, Bottom 7 in   |                 | Float Collar, Al Flap, 7 - 8rd |   | None   |                           | 0   | 0                                 | None                             |   | 0                       | 0                 |                      |             |
| Cement Plug, Rubber, Top 7 in  |                 | Float Shoe 7 - 8rd             |   |  |                           |   |                                   |                                  |   |                         |                   |                      |             |
|  |                 | Centralizer, with Pins, 7 in   |   |  |                           |   |                                   |                                  |   |                         |                   |                      |             |
| <b>MATERIALS FURNISHED BY BJ</b>   |                 |                                |   | <b>LAB REPORT NO.</b>                          |                           | <b>PHYSICAL SLURRY PROPERTIES</b>   |                                   |                                  |   |                         |                   |                      |             |
|  |                 |                                |   |  |                           | <b>SACKS OF CEMENT</b>  | <b>SLURRY WGT PPG</b>             | <b>SLURRY YLD FT<sup>3</sup></b> | <b>WATER GPS</b>  | <b>PUMP TIME HR:MIN</b> | <b>Bbl SLURRY</b> | <b>Bbl MIX WATER</b> |             |
| Drilling Mud   |                 |                                |   | N/A  |                           | 0   | 0                                 | 0                                | 0   | 00:00                   | 0                 |                      |             |
| Fresh Water  |                 |                                |   | N/A  |                           | 0   | 8.34                              | 0                                | 0   | 00:00                   | 10                |                      |             |
| SealBond + SB Plus   |                 |                                |   | N/A  |                           | 0   | 8.4                               | 0                                | 0   | 00:00                   | 40                |                      |             |
| Premium Lite Cmt + adds  |                 |                                |   |  |                           | 362   | 12.5                              | 1.94                             | 10.65   | 03:30                   | 125.11            | 91.78                |             |
| 50:50 (Poz:Class G) + adds   |                 |                                |   |  |                           | 173   | 13.5                              | 1.45                             | 7.07  | 02:45                   | 44.61             | 29.11                |             |
| Drilling Mud   |                 |                                |   |  |                           | 173   | 9.6                               | 0                                | 0   | 00:00                   | 234.67            |                      |             |
| <b>Available Mix Water</b> 400 <b>Bbl.</b>   |                 |                                |   | <b>Available Displ. Fluid</b> 1000 <b>Bbl.</b> |                           |   |                                   | <b>TOTAL</b>                     |   | 454.39                  | 120.88            |                      |             |
| <b>HOLE</b>  |                 |                                | <b>TBG-CSG-D.P.</b>                                 |  |                           |   |                                   |                                  | <b>COLLAR DEPTHS</b>  |                         |                   |                      |             |
| <b>SIZE</b>  | <b>% EXCESS</b> | <b>DEPTH</b>                   | <b>ID</b>   | <b>OD</b>                                      | <b>WGT.</b>               | <b>TYPE</b>   | <b>MD</b>                         | <b>TVD</b>                       | <b>GRADE</b>  | <b>SHOE</b>             | <b>FLOAT</b>      | <b>STAGE</b>         |             |
| 8.75   | 0               | 6075                           | 6.366   | 7  | 23                        | CSG   | 6052                              | 5920                             |   | 6052                    | 5964              | 0                    |             |
| <b>LAST CASING</b>   |                 |                                | <b>PKR-CMT RET-BR PL-LINER</b>                      |  |                           | <b>PERF. DEPTH</b>  |                                   |                                  | <b>TOP CONN</b>   |                         | <b>WELL FLUID</b> |                      |             |
| <b>ID</b>  | <b>OD</b>       | <b>WGT</b>                     | <b>TYPE</b>   | <b>MD</b>                                      | <b>TVD</b>                | <b>BRAND &amp; TYPE</b>   | <b>DEPTH</b>                      | <b>TOP</b>                       | <b>BTM</b>  | <b>SIZE</b>             | <b>THREAD</b>     | <b>TYPE</b>          | <b>WGT.</b> |
| 8.9  | 9.63            | 36                             | CSG   | 1403   | 1403                      | No Liner  | 0                                 | 0                                | 0   | 7                       | 8RD               | WATER BASED          | 9.6         |
| <b>DISPL. VOLUME</b>   |                 | <b>DISPL. FLUID</b>            |   | <b>CAL. PSI</b>                                | <b>CAL. MAX PSI</b>       | <b>OP. MAX</b>  | <b>MAX TBG PSI</b>                |                                  | <b>MAX CSG PSI</b>  |                         | <b>MIX WATER</b>  |                      |             |
| <b>VOLUME</b>  | <b>UOM</b>      | <b>TYPE</b>                    | <b>WGT.</b>   | <b>BUMP PLUG</b>                               | <b>TO REV.</b>            | <b>SQ. PSI</b>  | <b>RATED</b>                      | <b>Operator</b>                  | <b>RATED</b>  | <b>Operator</b>         |                   |                      |             |
| 234.7  | BBLS            | Drilling Mud                   | 9.6   | 1044   | 0                         | 0   | 0                                 | 0                                | 3488  | 3000                    | Rig Tank          |                      |             |
| <b>Circulation Prior to Job</b>  |                 |                                |   |  |                           |   |                                   |                                  |   |                         |                   |                      |             |
| Circulated Well: Rig <input checked="" type="checkbox"/> BJ <input type="checkbox"/>   |                 |                                |   |  |                           | Circulation Time: 1.5   |                                   |                                  | Circulation Rate: 6 BPM   |                         |                   |                      |             |
| Mud Density In: 9.6 LBS/GAL Mud Density Out: 9.6 LBS/GAL   |                 |                                |   |  |                           | PV & YP Mud In: 12  |                                   |                                  | PV & YP Mud Out: 12   |                         |                   |                      |             |
| Gas Present: NO <input checked="" type="checkbox"/> YES <input type="checkbox"/> Units:  |                 |                                |   |  |                           | Solids Present at End of Circulation: NO <input checked="" type="checkbox"/> YES <input type="checkbox"/> |                                   |                                  |   |                         |                   |                      |             |
| <b>Displacement And Mud Removal</b>  |                 |                                |   |  |                           |   |                                   |                                  |   |                         |                   |                      |             |
| Displaced By: Rig <input type="checkbox"/> BJ <input checked="" type="checkbox"/>  |                 |                                |   |  |                           | Amount Bled Back After Job: 2 BBLS  |                                   |                                  |   |                         |                   |                      |             |
| Returns During Job: <input type="checkbox"/> NONE <input type="checkbox"/> PARTIAL <input checked="" type="checkbox"/> FULL  |                 |                                |   |  |                           | Method Used to Verify Returns: Visual   |                                   |                                  |   |                         |                   |                      |             |
| Cement Returns at Surface: <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO   |                 |                                |   |  |                           | Were Returns Planned at Surface: <input checked="" type="checkbox"/> NO <input type="checkbox"/> YES      |                                   |                                  |   |                         |                   |                      |             |
| Pipe Movement: <input type="checkbox"/> ROTATION <input type="checkbox"/> RECIPROCATION <input checked="" type="checkbox"/> NONE <input type="checkbox"/> UNABLE DUE TO STUCK PIPE             |                 |                                |   |  |                           |   |                                   |                                  |   |                         |                   |                      |             |
| Centralizers: <input type="checkbox"/> NO <input checked="" type="checkbox"/> YES  |                 |                                |   |  |                           | Quantity: 46  |                                   |                                  | Type: <input type="checkbox"/> BOW <input type="checkbox"/> RIGID |                         |                   |                      |             |
| Job Pumped Through: <input type="checkbox"/> CHOKE MANIFOLD <input type="checkbox"/> SQUEEZE MANIFOLD <input checked="" type="checkbox"/> MANIFOLD <input type="checkbox"/> NO MANIFOLD        |                 |                                |   |  |                           |   |                                   |                                  |   |                         |                   |                      |             |
| <b>Plugs</b>   |                 |                                |   |  |                           |   |                                   |                                  |   |                         |                   |                      |             |
| Number of Attempts by BJ: 0 Competition: 0   |                 |                                |   |  |                           | Wiper Balls Used: <input checked="" type="checkbox"/> NO <input type="checkbox"/> YES Quantity:           |                                   |                                  |   |                         |                   |                      |             |
| Plug Catcher Used: <input checked="" type="checkbox"/> NO <input type="checkbox"/> YES   |                 |                                |   |  |                           | Parabow Used: <input checked="" type="checkbox"/> NO <input type="checkbox"/> YES                         |                                   |                                  |   |                         |                   |                      |             |
| Was There a Bottom: <input checked="" type="checkbox"/> NO <input type="checkbox"/> YES  |                 |                                |   |  |                           | Top of Plug: 0 FT   |                                   |                                  | Bottom of Plug: 0 FT  |                         |                   |                      |             |
| <b>Squeezes (Update Original Treatment Report for Primary Job)</b>   |                 |                                |   |  |                           |   |                                   |                                  |   |                         |                   |                      |             |
| BLOCK SQUEEZE <input type="checkbox"/> SHOE SQUEEZE <input type="checkbox"/> TOP OF LINER SQUEEZE <input type="checkbox"/> PLANNED <input type="checkbox"/> UNPLANNED <input type="checkbox"/> |                 |                                |   |  |                           |   |                                   |                                  |   |                         |                   |                      |             |
| Liner Packer: <input checked="" type="checkbox"/> NO <input type="checkbox"/> YES  |                 |                                |   |  |                           | Bond Log: <input checked="" type="checkbox"/> NO <input type="checkbox"/> YES                             |                                   |                                  | PSI Applied: 0 Fluid Weight: 0 LBS/GAL                            |                         |                   |                      |             |
| <b>Casing Test (Update Original Treatment Report for Primary Job)</b>  |                 |                                |   |  |                           |   |                                   |                                  |   |                         |                   |                      |             |
| Casing Test Pressure: 1507 PSI With 8.35 LBS/GAL Mud   |                 |                                |   |  |                           | Time Held: 00 Hours 15 Minutes  |                                   |                                  |   |                         |                   |                      |             |

# CEMENT JOB REPORT



## Shoe Test (Update Original Treatment Report for Primary Job)

Depth Drilled out of Shoe: 0 FT Target EMW: 0 LBS/GAL Actual EMW: 0 LBS/GAL  
 Number of Times Tests Conducted: 0 Mud Weight When Test was Conducted: 0 LBS/GAL

Problems Before Job (I.E. Running Casing, Circulating Well, ETC)  
 None

Problems During Job (I.E. Lost Returns, Equipment Failure, Bulk Delivery, Foaming, ETC)  
 None

Problems After Job (I.E. Gas at Surface, Float Equipment Failed, ETC)  
 None

EXPLANATION: TROUBLE SETTING TOOL, RUNNING CSG, ETC. PRIOR TO CEMENTING: None

| PRESSURE/RATE DETAIL |                |         |             |                      |               | EXPLANATION  |
|----------------------|----------------|---------|-------------|----------------------|---------------|--|
| TIME<br>HR:MIN.      | PRESSURE - PSI |         | RATE<br>BPM | Bbl. FLUID<br>PUMPED | FLUID<br>TYPE | SAFETY MEETING: BJ CREW <input checked="" type="checkbox"/> CO. REP. <input checked="" type="checkbox"/>   |
|                      | PIPE           | ANNULUS |             |                      |               | TEST LINES 4090 PSI  |
|                      |                |         |             |                      |               | CIRCULATING WELL - RIG <input checked="" type="checkbox"/> BJ <input type="checkbox"/>                     |
| 22:30                | 0              | 0       | 0           | 0                    | N/A           | Yatrd call   |
| 22:40                | 0              | 0       | 0           | 0                    | N/A           | Time left dsitRICT   |
| 00:13                | 0              | 0       | 0           | 0                    | N/A           | Tim arrived on location ( 94 Mlles to location) Rig Running CSG  |
| 01:00                | 0              | 0       | 0           | 0                    | N/A           | Spot trucks  |
| 01:15                | 0              | 0       | 0           | 0                    | N/A           | Pre rig up safety meeting  |
| 04:00                | 0              | 0       | 0           | 0                    | N/A           | Pre job safety meeting   |
| 04:19                | 0              | 0       | .8          | 2                    | WATER         | Load lines   |
| 04:21                | 4090           | 0       | 0           | 0                    | WATER         | Pressuer test  |
| 04:26                | 244            | 0       | 3.6         | 10                   | WATER         | Fresh water spacer   |
| 04:30                | 244            | 0       | 3.6         | 40                   | SPACER        | Seal bond Spacer   |
| 04:50                | 532            | 0       | 6           | 120                  | CEMENT        | Batch up weigh and pump 362 SXS of PLC + 0.25 Lbs/ Sack Cello Flake + 0.2% FL-52 + 6% Bentonite @ 12.5 PPG |
| 05:16                | 122            | 0       | 4           | 42                   | CEMENT        | Batch up, weigh and pump 173 SXS of (50:50) POZ/G + 0.4% FL-52 + 0.5% SMS + 3% Bentonite @ 13.5 PPG        |
| 05:27                | 0              | 0       | 0           | 0                    | N/A           | Release plug   |
| 05:33                | 943            | 0       | 6.8         | 190                  | MUD           | Start displacemet  |
| 06:00                | 1016           | 0       | 6           | 10                   | MUD           | Drop rate  |
| 06:02                | 1206           | 0       | 4.8         | 20                   | MUD           | Drop rate  |
| 06:08                | 1212           | 0       | 3.6         | 15                   | MUD           | Drop rate  |
| 06:10                | 1836           | 0       | 3.6         | 135                  | MUD           | Bump plug  |
| 06:13                | 0              | 0       | 0           | 0                    | N/A           | Check flaots   |
| 06:18                | 1507           | 0       | 0           | 0                    | WATER         | Casing test 15 Min   |
| 06:37                | 0              | 0       | 0           | 0                    | N/A           | Pre rig down safety meeting  |
|                      | 0              | 0       | 0           | 0                    | N/A           | Time off location  |

| BUMPED<br>PLUG   | PSI TO<br>BUMP<br>PLUG | TEST<br>FLOAT<br>EQUIP.  | BBL.CMT<br>RETURNS/<br>REVERSED | TOTAL<br>BBL.<br>PUMPED | PSI<br>LEFT ON<br>CSG | SPOT<br>TOP OUT<br>CEMENT  | Service Supervisor Signature: |
|--|------------------------|--|---------------------------------|-------------------------|-----------------------|--|-------------------------------|
| <input checked="" type="checkbox"/> Y <input type="checkbox"/> N | 1836                   | <input checked="" type="checkbox"/> Y <input type="checkbox"/> N | 30                              | 449                     | 0                     | <input checked="" type="checkbox"/> Y <input type="checkbox"/> N |                               |



# CEMENTING LABORATORY REPORT

## Lab Report #C12-033-13

|                 |                        |            |                       |
|-----------------|------------------------|------------|-----------------------|
| COMPANY :       | Carrizo Oil & Gas Inc. | DATE:      | December 12, 2013     |
| WELL NAME:      | Castor #7-36-9-59      | LOCATION:  | Weld County, Colorado |
| DISTRICT:       | Brighton               | TYPE JOB:  | Intermediate          |
| API #           | 05-123-38577-0000      | TOC(md):   |                       |
| DEPTH MD(ft):   | 6,041 ft               | BHST(°F):  | 176 °F                |
| CASING SIZE("): | 7 in                   | BHCT(°F):  | 119 °F                |
| TUBING SIZE("): |                        | BHSqT(°F): | 149 °F                |
| HOLE SIZE("):   | 8 3/4 in               | TOL (°F):  | Static Circ           |

### SLURRY DESIGN DATA

|    |   |
|----|---|
| #1 | Lead Slurry : Premium Lite Cement + 6% Bentonite + 0.2% FL-52 + 0.25 pps Cello Flake            |
| #2 | Tail Slurry : (50:50) Poz:Class G Cement + 3% Bentonite + 0.5% Sodium Metasilicate + 0.4% FL-52 |
| #3 |   |

| SLURRY PROPERTIES          |  |  | #1      | #2     | #3 |
|----------------------------|--|--|---------|--------|----|
| Density : ppg              |  |  | 12.50   | 13.50  |    |
| Yield :cu.ft./sk.          |  |  | 1.94    | 1.45   |    |
| Mixing Water: gal/sk.      |  |  | 10.65   | 7.07   |    |
| Water Type:                |  |  | Fresh   | Fresh  |    |
| Testing Temperature :      |  |  | 118 °F  | 119 °F |    |
| Thickening Time: hrs:mins. |  |  | 3:51    | 6:54   |    |
| Free Water: mls.           |  |  |         |        |    |
| Fluid Loss:ml/30min        |  |  |         |        |    |
| Compressive Strength:      |  |  |         |        |    |
|                            |  |  | hrs.    |        |    |
|                            |  |  | hrs.    |        |    |
| Rheologies                 |  |  | RPM     |        |    |
|                            |  |  | 300     |        |    |
|                            |  |  | 200     |        |    |
|                            |  |  | 100     |        |    |
|                            |  |  | 6       |        |    |
|                            |  |  | 3       |        |    |
|                            |  |  | 600     |        |    |
|                            |  |  | PV      |        |    |
|                            |  |  | YP      |        |    |
| Gel Strength : #/100sq.ft. |  |  | 10 sec. |        |    |
|                            |  |  | 10 min. |        |    |

|           |  |
|-----------|--|
| REMARKS : |  |
|-----------|--|

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