

CEMENT JOB REPORT



| | | | | | | | | | | | | | | |
|---|-----------------|--------------------------------------|---|--|----------------------------|---|-----------------------|---|----------------------|-------------------------|-------------------|----------------------------------|------------------------------------|-------------|
| CUSTOMER CARRIZO OIL & GAS INC XML | | | DATE 09-DEC-13 | | F.R. # 10011031749 | | | SERV. SUPV. JOHN R WUDARCZYK | | | | | | |
| LEASE & WELL NAME CASTOR 7-36-9-59 | | | LOCATION 36-9N-59W | | | COUNTY-PARISH-BLOCK Weld Colorado | | | | | | | | |
| DISTRICT Brighton | | | DRILLING CONTRACTOR RIG # Xtreme Coil #19 | | | TYPE OF JOB Surface | | | | | | | | |
| SIZE & TYPE OF PLUGS | | LIST-CSG-HARDWARE | | | MECHANICAL BARRIERS | | MD | TVD | HANGER TYPES | | MD | TVD | | |
| Cement Plug, Rubber, Top 9-5/8 in | | Float Shoe 9-5/8 - 8rd | | | | | | | | | | | | |
| | | Float Collar, Pop Valve, 9-5/8 - 8rd | | | | | | | | | | | | |
| | | Centralizer, with Pins, 9-5/8 in | | | | | | | | | | | | |
| MATERIALS FURNISHED BY BJ | | | | LAB REPORT NO. | | PHYSICAL SLURRY PROPERTIES | | | | | | | | |
| | | | | | | SACKS OF CEMENT | SLURRY WGT PPG | SLURRY YLD FT³ | WATER GPS | PUMP TIME HR:MIN | Bbl SLURRY | Bbl MIX WATER | | |
| Fresh Water + 2 lbs Red Dye | | | | | | 0 | 8.34 | 0 | 0 | 00:00 | 15 | | | |
| Type III Cmt + adds | | | | | | 146 | 14.5 | 1.41 | 6.82 | 02:30 | 36.58 | 23.69 | | |
| Premium Lite Cmt + adds | | | | | | 400 | 13 | 1.81 | 9.46 | 03:00 | 129.24 | 90.10 | | |
| Fresh Water | | | | | | 0 | 8.34 | 0 | 0 | 00:00 | 104.7 | | | |
| Available Mix Water 300 Bbl. | | | | Available Displ. Fluid 300 Bbl. | | | | TOTAL | | 285.51 | | 113.79 | | |
| HOLE | | | TBG-CSG-D.P. | | | | | | COLLAR DEPTHS | | | | | |
| SIZE | % EXCESS | DEPTH | ID | OD | WGT. | TYPE | MD | TVD | GRADE | SHOE | FLOAT | STAGE | | |
| 12.25 | 100 | 1421 | 8.921 | 9.625 | 36 | CSG | 1400 | 1400 | J-55 | 1400 | 1355 | 0 | | |
| LAST CASING | | | PKR-CMT RET-BR PL-LINER | | | PERF. DEPTH | | TOP CONN | | WELL FLUID | | | | |
| ID | OD | WGT | TYPE | MD | TVD | BRAND & TYPE | | DEPTH | TOP | BTM | SIZE | THREAD | TYPE | WGT. |
| 15. | 16 | 65 | CSG | 70 | 70 | NO PACKER | | 0 | 0 | 0 | 9.625 | 8RND | WATER BASED | 8.4 |
| DISPL. VOLUME | | DISPL. FLUID | | CAL. PSI | CAL. MAX PSI | OP. MAX | MAX TBG PSI | | MAX CSG PSI | | MIX WATER | | | |
| VOLUME | UOM | TYPE | | WGT. | BUMP PLUG | TO REV. | SQ. PSI | RATED | Operator | RATED | Operator | | | |
| 104.7 | BBLS | Fresh Water | | 8.34 | 398 | 0 | 0 | 0 | 0 | 2816 | 2000 | RIG | | |
| Circulation Prior to Job | | | | | | | | | | | | | | |
| Circulated Well: Rig <input checked="" type="checkbox"/> BJ <input type="checkbox"/> | | | | Circulation Time: 1 | | | | Circulation Rate: 5 BPM | | | | | | |
| Mud Density In: 8.4 LBS/GAL | | | | Mud Density Out: 8.4 LBS/GAL | | | | PV & YP Mud In: 0 | | PV & YP Mud Out: 0 | | | | |
| 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"/> | | | | | | |
| Displacement And Mud Removal | | | | | | | | | | | | | | |
| Displaced By: Rig <input type="checkbox"/> BJ <input checked="" type="checkbox"/> | | | | Amount Bled Back After Job: .5 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 checked="" type="checkbox"/> YES <input type="checkbox"/> NO | | | | Were Returns Planned at Surface: <input type="checkbox"/> NO <input checked="" type="checkbox"/> YES | | | | | | | | | | |
| Pipe Movement: <input type="checkbox"/> ROTATION <input type="checkbox"/> RECIPROICATION <input checked="" type="checkbox"/> NONE <input type="checkbox"/> UNABLE DUE TO STUCK PIPE | | | | | | | | | | | | | | |
| Centralizers: <input type="checkbox"/> NO <input checked="" type="checkbox"/> YES | | | | Quantity: 14 | | | | 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 | | | | | | | | | | | | | | |
| Plugs | | | | | | | | | | | | | | |
| 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 | | | | | | |
| Squeezes (Update Original Treatment Report for Primary Job) | | | | | | | | | | | | | | |
| 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 | | | | |
| Casing Test (Update Original Treatment Report for Primary Job) | | | | | | | | | | | | | | |
| Casing Test Pressure: 0 PSI | | | | With 0 LBS/GAL Mud | | | | Time Held: 00 Hours 00 Minutes | | | | | | |
| EXPLANATION: TROUBLE SETTING TOOL, RUNNING CSG, ETC. PRIOR TO CEMENTING: NONE | | | | | | | | | | | | | | |

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

| PRESSURE/RATE DETAIL | | | | | | EXPLANATION | |
|----------------------|----------------|---------|----------|-------------------|------------|--|----------|
| TIME HR:MIN. | PRESSURE - PSI | | RATE BPM | Bbl. FLUID PUMPED | FLUID TYPE | SAFETY MEETING: BJ CREW <input checked="" type="checkbox"/> CO. REP. <input checked="" type="checkbox"/> | |
| | PIPE | ANNULUS | | | | TEST LINES | 3256 PSI |
| | | | | | | CIRCULATING WELL - RIG <input checked="" type="checkbox"/> BJ <input type="checkbox"/> | |
| 00:07 | 0 | 0 | 0 | 0 | 0 | ARRIVE ON LOCATION (91 MILES) RIGGING UP CASING CREW / RUNNING CASING | |
| 00:15 | 0 | 0 | 0 | 0 | 0 | PRE RIG UP SAFETY MEETING | |
| 06:45 | 0 | 0 | 0 | 0 | 0 | PRE JOB MEETING | |
| 08:00 | 3256 | 0 | 0 | 0 | H2O | PRESSURE TEST PUMPS AND LINES | |
| 08:07 | 160 | 0 | 4.1 | 10 | H2O | FRESH WATER | |
| 08:11 | 111 | 0 | 4.1 | 15 | H2O | DYE WATER | |
| 08:20 | 179 | 0 | 4 | 128 | LEAD | BATCH UP AND PUMP 400 SKS PLC+.08%STATIC FREE+3%CACL+3%NACL+.25#/SACK CELLO FLAKE+6%BENTONITE @ 13# | |
| 08:52 | 74 | 0 | 2.2 | 35 | TAIL | MIX AND PUMP 146 SKS TYPE III+.08%STATIC FREE+1.5%CACL+.25#/SACK CELLO FLAKE @ 14.5# | |
| 09:13 | 0 | 0 | 0 | 0 | H2O | DROP PLUG | |
| 09:14 | 300 | 0 | 5.6 | 50 | H2O | START DISPLACEMENT | |
| 09:26 | 401 | 0 | 4.1 | 40 | H2O | SLOW RATE | |
| 09:36 | 422 | 0 | 2 | 15.5 | H2O | SLOW RATE | |
| 09:43 | 937 | 0 | 0 | 0 | H2O | BUMP PLUG @ 125.5 BBLs | |
| 09:50 | 0 | 0 | 0 | 0 | H2O | CHECK FLOATS, 1/2 BBL BACK NOT HOLDING | |
| 09:52 | 187 | 0 | .8 | .5 | H2O | PRESSURE UP/SHUT IN HEAD | |
| 09:53 | 0 | 0 | 0 | 0 | 0 | WAITING TO SEE IF TOP OUT NEEDED | |
| 12:00 | 0 | 0 | 0 | 0 | 0 | RIG UP TO TOP OUT | |
| 12:34 | 15 | 0 | 1 | 6 | CMT | BATCH UP AND PUMP 20 SKS TYPE III @ 13# | |
| 12:45 | 0 | 0 | 0 | 0 | 0 | SHUT DOWN / WASH UP | |
| 13:00 | 0 | 0 | 0 | 0 | 0 | POST JOB RIG DOWN SAFETY MEETING | |

| | | | | | | | |
|--|------------------|--|---------------------------|-------------------|-----------------|--|-------------------------------|
| BUMPED PLUG | PSI TO BUMP PLUG | TEST FLOAT EQUIP. | BBL.CMT RETURNS/ REVERSED | TOTAL BBL. PUMPED | PSI LEFT ON CSG | SPOT TOP OUT CEMENT | Service Supervisor Signature: |
| <input checked="" type="checkbox"/> Y <input type="checkbox"/> N | 937 | <input checked="" type="checkbox"/> Y <input type="checkbox"/> N | 65 | 293.5 | 0 | <input checked="" type="checkbox"/> Y <input type="checkbox"/> N | |



CEMENTING LABORATORY REPORT
 Lab Report #C12-020-13

| | | | |
|------------------------|-------------------|-------------------|-----------------------|
| COMPANY : | Carrizo Oil & Gas | DATE: | December 7, 2013 |
| WELL NAME: | Castor 7-36-9-59 | LOCATION: | Weld County, Colorado |
| DISTRICT: | Brighton | TYPE JOB: | Surface |
| API # | NA | TOC(md): | |
| DEPTH MD(ft): | 1,440 ft | BHST(°F): | 109 °F |
| CASING SIZE("): | 9 5/8 in | BHCT(°F): | 85 °F |
| TUBING SIZE("): | | BHSqT(°F): | 94 °F |
| HOLE SIZE("): | 12 1/4 in | TOL (°F): | Static Circ |

SLURRY DESIGN DATA

| | |
|----|--|
| #1 | Lead Slurry : Premium Lite Cement + 6% Bentonite + 3% Sodium Chloride + 3% Calcium Chloride + 0.25 pps Cello Flake |
| #2 | Tail Slurry : Type III Cement + 1.5% Calcium Chloride + 0.25 pps Cello Flake |
| #3 | |

| SLURRY PROPERTIES | | #1 | #2 | #3 |
|----------------------------|---------|-------|-------|----|
| Density : ppg | | 13.00 | 14.50 | |
| Yield :cu.ft./sk. | | 1.81 | 1.41 | |
| Mixing Water: gal/sk. | | 9.46 | 6.82 | |
| Water Type: | | Fresh | Fresh | |
| Testing Temperature : | | 85 °F | 85 °F | |
| Thickening Time: hrs:mins. | | 4:08 | 1:43 | |
| 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 :

COMMENTS : The above data is supplied solely for informational purposes and BHI makes no guarantees or warranties, either express or implied, with respect to the accuracy or use of this data. All product warranties and guarantees shall be governed by the standard contract terms at the time of sale.



FLOW 1+2 (bpm)

0.0

Target Density (ppg)

8.34

C156

