



Great Western Operating Company, LLC

Ottesen LE 09-362HN

API # 05-123-49306

Top Out

April 08, 2020

Quote #: QUO-44516-S2N7S9

Execution #: EXC-25633-N3J7S802



Great Western Operating Company, LLC

Great Western Operating Company, LLC | 1801 Broadway, Suite 500 | Denver, CO 80202

Dear Great Western Operating Company, LLC,

Thank you for the opportunity to provide cementing services on this well. BJ Services strives to achieve complete customer satisfaction. If you have any questions regarding the services or data provided, please contact BJ Services at any time.

Sincerely,
Jason Creel
Field Engineer I | (307) 256-0306 | Jason.Creel@BJServices.com

Field Office
1716 East Allison Rd., Cheyenne WY. 82007 | (307) 638-5585

Sales Office
999 18th St. Suite 1200, Denver, CO. 80202 | (281) 408-2361

BJ Cementing Treatment Report

| | | | |
|-----------------------------|--------------|------------------|--------|
| SERVICE SUPERVISOR | Eric Dewit | RIG | WM 454 |
| CLIENT FIELD REPRESENTATIVE | Shane | COUNTY | WELD |
| DISTRICT | Cheyenne, WY | STATE / PROVINCE | CO |
| SERVICE | Cementing | | |

WELL GEOMETRY

| TYPE | ID (in) | OD (in) | WEIGHT (lbs/ft) | MD (ft) | TVD (ft) | GRADE | THREAD |
|------------|---------|---------|-----------------|---------|----------|-------|--------|
| Open Hole | 13.50 | 0.00 | 0.00 | 370.00 | 370.00 | | |
| Drill Pipe | 0.74 | 1.05 | 1.50 | 370.00 | 370.00 | J-55 | LTC |

HARDWARE

| | | | |
|----------------------------|-----|-----------------------|-------------|
| Bottom Plug Used? | No | Pipe Movement | None |
| Top Plug Used? | No | Job Pumped Through | No Manifold |
| Centralizers Used | No | Top Connection Thread | LTC |
| Cement top in annulus (ft) | 370 | Top Connection Size | 1 |

CIRCULATION PRIOR TO JOB

| | | | |
|--------------------------------------|------|--|------|
| Well Circulated By | Rig | Mud Density Out (ppg) | 8.40 |
| Circulation Prior to Job | Yes | Solids Present at End of Circulation | No |
| Lost Circulation Prior to Cement Job | No | Flare Prior to / during the Cement Job | No |
| Mud Density In (ppg) | 8.40 | Gas Present | No |

FLUID DETAILS

| FLUID TYPE | FLUID NAME | DENSITY (ppg) | YIELD (Cu Ft/sk) | H ₂ O REQ. (gals/sk) | PLN TOP FLD (ft) | LENGTH (ft) | VOL (sk) | VOL (Cu Ft) | VOL (bbls) |
|-------------|-----------------|---------------|------------------|---------------------------------|------------------|-------------|----------|-------------|------------|
| Tail Slurry | BJCem S100.3.XC | 14.5000 | 1.3902 | 6.81 | 0.00 | 200.00 | 100 | 140.0000 | 24.8000 |



| FLUID TYPE | FLUID NAME | COMPONENT | CONCENTRATION | UOM |
|-------------|-----------------|-----------------------|---------------|-----|
| Tail Slurry | BJCem S100.3.XC | CEMENT, ASTM TYPE III | 100.0000 | PCT |

Client: Great Western Operating Company, LLC

Well: OTTESEN LE #09-362HN

Well API: 05-123-49306

Start Date: 4/8/2020

End Date: 4/8/2020

Field Ticket #: FT-25633-N3J7S80201-1009583874



DISPLACEMENT AND END OF JOB SUMMARY

| | | | |
|---------------------------------|--------|--|------|
| Did Float Hold? | Yes | Pressure Left on Casing (psi) | 0.00 |
| Were Returns Planned at Surface | Yes | Amt Bled Back After Job | 0.00 |
| Cement Returns During Job | Yes | Top Out Cement Spotted | No |
| Method Used to Verify Returns | Visual | Lost Circulation During Cement Job | No |
| | | Amt of Cement Returned / Reversed (bbls) | 17.5 |
| | | Amt of Spacer to Surface | 5.00 |

Comments

TREATMENT REPORT

Cement 10' from ground level after completion of the job.

JOB SUMMARY

CBL run after the primary cement job showed good cement at 370'. Rig used drill pipe to wash down 13.5" x 9-5/8" annulus to cement top at 370', tagged solid cement Cemented through drillpipe. Had good cement returns to well cellar. Cellar depth was 15' below GL and final top of cement was 10' below GL - 17.5 bbl cement returns to surface.

BJ Cementing Event Log

Top Out - Cheyenne, WY - Eric Dewit

| SEQ | START DATE / TIME | EVENT | DENSITY (ppg) | PUMP RATE (bpm) | PUMP VOL (bbls) | PIPE PRESSURE (psi) | COMMENTS |
|-----|-------------------|---------------------|---------------|-----------------|-----------------|---------------------|---|
| 1 | 04/07/2020 16:30 | Rig | | | | | Finished with the Ottesen LE 09-379HN Surface, waiting on rig to move and run in the hole on the Ottesen LE 09-362HN so we can top out |
| 2 | 04/07/2020 19:30 | Spot Units | | | | | Pre-rig up safety meeting, and spot trucks |
| 3 | 04/07/2020 19:45 | Rig Up | | | | | Rig up everything |
| 4 | 04/07/2020 20:15 | Rig | | | | | Waiting on rig to RIH with drill pipe |
| 5 | 04/07/2020 23:00 | Rig | | | | | Customer decides not to cement through the drill pipe. They decide to pull the drill pipe, and cement using the 1" tubing. Rig was unable to get below 260' with 1" so they went back in with drill pipe to 370'. |
| 6 | 04/08/2020 04:00 | STEACS Briefing | | | | | Pre-job safety meeting with, BJ crew, Rig crew, and Company man |
| 7 | 04/08/2020 04:27 | Other (See comment) | 8.3400 | 3.40 | 5.00 | 91.00 | Pump fresh water ahead |
| 8 | 04/08/2020 04:30 | Pressure Test | 8.3400 | 0.00 | 0.00 | 2081.00 | Test pumps and lines |
| 9 | 04/08/2020 04:35 | Pumping Cement | 14.5000 | 3.00 | 76.00 | 107.00 | Pump 300 sks of cement @14.5 ppg, Shutdown a few times at the end to make sure we got all the cement out of the bulk trucks |
| 10 | 04/08/2020 05:10 | End Pumping | 14.5000 | 0.00 | 0.00 | 0.00 | Vac truck sucked the water out of the cellar and had good cement 10' from ground level - 17.5 bbl cmt returns. |
| 11 | 04/08/2020 05:20 | STEACS Briefing | | | | | Pre-rig down safety meeting |
| 12 | 04/08/2020 05:25 | Rig Down | | | | | Rig everything down |
| 13 | 04/08/2020 05:45 | Leave Location | | | | | leave location to head back to the yard |



JobMaster Program Version 5.00C1
Job Number: 22102
Customer: Great Western
Well Name: Ottesen LC 09-362HN

