



# Great Western Operating Company, LLC

B-Farm LD 18-387HN

API # 05-001-10269

Surface

April 12, 2020

Quote #: QUO-43759-L7Y3Y0

Execution #: EXC-25744-Z1X9B902



# Great Western Operating Company, LLC

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

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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](mailto: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

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# BJ Cementing Treatment Report

SERVICE SUPERVISOR	Lenny Baeza	RIG	Ikon 12
DISTRICT	Cheyenne, WY	COUNTY	ADAMS
SERVICE	Cementing	STATE / PROVINCE	CO

## WELL GEOMETRY

TYPE	ID (in)	OD (in)	WEIGHT (lbs/ft)	MD (ft)	TVD (ft)	EXCESS (%)	GRADE	THREAD
Open Hole	13.50	0.00	0.00	2,021.00	2,020.00	30.00		
Casing	8.92	9.63	36.00	2,021.00	2,020.00		J-55	LTC

## HARDWARE

Bottom Plug Used?	No	Centralizers Type	Bow
Top Plug Used?	Yes	Landing Collar Depth (ft)	1,976.24
Top Plug Provided By	Non BJ	Max Casing Pressure - Rated (psi)	3,520.00
Top Plug Size	9.630	Max Casing Pressure - Operated (psi)	2,816.00
Centralizers Used	Yes	Top Connection Thread	LTC
Centralizers Quantity	20.00	Top Connection Size	9.63

## CIRCULATION PRIOR TO JOB

Well Circulated By	Rig	Lost Circulation Prior to Cement Job	No
Circulation Prior to Job	Yes	Solids Present at End of Circulation	No
Circulation Time (min)	20.00	Flare Prior to / during the Cement Job	No
Circulation Rate (bpm)	8.00	Gas Present	No
Circulation Volume (bbls)	160.00		

## TEMPERATURE

Ambient Temperature (°F)	26.00	Slurry Cement Temperature (°F)	50.00
Mix Water Temperature (°F)	46.00		

## FLUID DETAILS

FLUID TYPE	FLUID NAME	DENSITY (ppg)	YIELD (Cu Ft/sk)	H <sub>2</sub> O REQ. (gals/sk)	PLN TOP FLD (ft)	LENGTH (ft)	VOL (sk)	VOL (Cu Ft)	VOL (bbls)
Spacer / Pre Flush / Flush	Water	8.3300			0.00				20.0000
Tail Slurry	BJCem S100.3.XC	14.5000	1.3902	6.81	0.00	2,000.00	930	1,293.0000	230.3000
Displacement Final	Water	8.3300			0.00			0.0000	151.4000

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

## DISPLACEMENT AND END OF JOB SUMMARY

Displaced By	BJ	Amt of Cement Returned / Reversed	22.00
Calculated Displacement Vol (bbls)	152.80	Method Used to Verify Returns	Visual
Actual Displacement Vol (bbls)	152.80	Amt of Spacer to Surface	20.00
Did Float Hold?	Yes	Pressure Left on Casing (psi)	0.00
Bump Plug	Yes	Amt Bled Back After Job	0.50
Bump Plug Pressure (psi)	1,500.00	Total Volume Pumped (bbls)	405.00
Were Returns Planned at Surface	Yes	Top Out Cement Spotted	No
Cement Returns During Job	Yes	Lost Circulation During Cement Job	No

# BJ Cementing Event Log

Surface - Cheyenne, WY - Lenny Baeza

SEQ	START DATE / TIME	EVENT	DENSITY (ppg)	PUMP RATE (bpm)	PUMP VOL (bbls)	PIPE PRESSURE (psi)	COMMENTS
1	04/12/2020 03:00	Callout					Called out and heading to the yard.
2	04/12/2020 04:10	Depart for Location					Depart for location.
3	04/12/2020 05:30	Arrive on Location					Arrived on location rig is still running casing.
4	04/12/2020 07:30	Rig Up					Made a plan of how to spot equipment and started rigging up.
5	04/12/2020 08:45	Client					Rig is running casing have about 20 joints left of casing.
6	04/12/2020 09:15	STEACS Briefing					Safety meeting with company man and rig crew.
7	04/12/2020 10:30	Rig Up					Rigging up Head to casing.
8	04/12/2020 11:00	Pump Spacer	8.3000	4.00	5.00	420.00	Pumping 5 bbls of flush ahead to fill lines.
9	04/12/2020 11:03	Pressure Test	8.3000	0.25		3200.00	Closed Valves and Pressured Test to 3000 and holding
10	04/12/2020 11:05	Pump Spacer	8.3000	5.60	20.00	560.00	Pumping 20 bbls of Fresh Water with Blue Dye.
11	04/12/2020 11:10	Pumping Cement	14.5000	5.60		520.00	Pumping Tail Cement out of CTF-014 Pot #4 315 sk and 78 bbls Slurry.
12	04/12/2020 11:25	Pumping Cement	14.5000	5.60	78.00	320.00	Pot #4 of CTF-014 is empty swapping to Pot#3 with 315 sk and 78 bbls Slurry
13	04/12/2020 11:37	Pumping Cement	14.5000	5.60	156.00	210.00	Pot #3 of CTF-014 is empty swapping to CTF-210 Pot #2 with 150sk and 37 bbls of Slurry
14	04/12/2020 11:42	Pumping Cement	14.5000	5.60	193.00	185.00	Pot #2 is empty swapping to Pot #1 of CTF-210 with 150sk and 37 bbls of slurry.
15	04/12/2020 11:49	Pumping Cement	14.5000	4.00	220.00	120.00	Slowing down rate to finish the rest of the bulk truck.
16	04/12/2020 11:52	Pumping Cement	14.5000	5.60	220.00	180.00	Finished Pot #1 of CTF-210 Shut down to release plug.
17	04/12/2020 11:55	Pumping Cement	14.5000		230.00		Shut down to release the plug.
18	04/12/2020 11:59	Pump Displacement	8.3000	3.00		60.00	Started pumping plug left the head.
19	04/12/2020 12:00	Pump Displacement	8.3000	8.00	30.00	720.00	30 bbls gone 8bpm @720 psi
20	04/12/2020 12:04	Pump Displacement	8.3000	8.00	60.00	775.00	60 bbls gone 8bpm @775 psi
21	04/12/2020 12:06	Pump Displacement	8.3000	8.00	90.00	810.00	90 bbls gone and we got spacer up the surface.

Client Name: Great Western Operating Company, LLC

Well Name / API : B-FARM LD  
#18-387HN / 05-001-10269

Quote #: QUO-43759-L7Y3Y0

Plan #: ORD-25744-Z1X9B9

Execution #: EXC-25744-Z1X9B902



22	04/12/2020 12:10	Pump Displacement	8.3000	5.50	115.00	790.00	115 bbls gone and we slowed down to 5.5 bpm
23	04/12/2020 12:14	Cement Back-to-Surface	8.3000	5.50	130.00	810.00	130 bbls gone and we have cement to surface.
24	04/12/2020 12:16	Pump Displacement	8.3000	3.00	140.00	750.00	140 bbls gone and slowed down to 3bpm to land the plug.
25	04/12/2020 12:18	Land Plug	8.3000		152.80	797.00	152 bbls gone and landed the plug 797psi to 1540 psi. 22 bbls cmt to surface.
26	04/12/2020 12:21	Pressure Test	8.3000		152.80	1542.00	Pressure testing for 10 mins 1542 psi
27	04/12/2020 12:31	Pressure Test	8.3000		152.80	1479.00	20 mins Test 1479 psi
28	04/12/2020 12:41	Pressure Test	8.3000		152.80	1463.00	30 mins Test 1463 psi Test Completed.
29	04/12/2020 12:51	Check Floats	8.3000		152.80		Release the Pressure and float are holding.
30	04/12/2020 12:53	Rig Down	8.3000		152.80		Pumping 15 bbls of H2O to wash the rigs pump.
31	04/12/2020 13:10	Leave Location					Leaving location.



JobMaster Program Version 5.01C1  
Job Number: 27250  
Customer: Great Western Operating  
Well Name: B-Farm LD 18-387HN

