



Great Western Operating Company, LLC

B-Farm LD 18-385HN

API # 05-001-10261

Surface

April 15, 2020

Quote #: QUO-43763-N3W1Y6

Execution #: EXC-25789-C1G0D202



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	Richard White	RIG	Ikon 12
DISTRICT	Cheyenne, WY	COUNTY	ADAMS
SERVICE	Cementing	STATE / PROVINCE	CO

TYPE	ID (in)	OD (in)	WEIGHT (lb/ft)	MD (ft)	EXCESS (%)	GRADE	THREAD
Casing	8.92	9.63	36.00	2,023.00		J-55	LTC
Open Hole	13.50	0.00	0.00	2,023.00	30.00		

HARDWARE

Bottom Plug Used?	No	Tool Type	Float Collar
Top Plug Used?	Yes	Tool Depth (ft)	1,978.24
Top Plug Provided By	Non BJ	Max Casing Pressure - Rated (psi)	3520.00
Top Plug Size	9.625	Max Casing Pressure - Operated (psi)	1506.00
Centralizers Used	Yes	Pipe Movement	None
Centralizers Quantity	20.00	Job Pumped Through	Manifold
Centralizers Type	Rigid	Top Connection Thread	8rd
Landing Collar Depth (ft)	1,978.24	Top Connection Size	9.625

CIRCULATION PRIOR TO JOB

Well Circulated By	Rig	Mud Density In (ppg)	8.40
Circulation Prior to Job	Yes	Mud Density Out (ppg)	8.40
Circulation Time (min)	30.00	Solids Present at End of Circulation	No
Circulation Rate (bpm)	6.00	Flare Prior to / during the Cement Job	No
Circulation Volume (bbls)	180.00	Gas Present	No
Lost Circulation Prior to Cement Job	No		

TEMPERATURE

Ambient Temperature (°F)	30.00	Slurry Cement Temperature (°F)	65.00
Mix Water Temperature (°F)	70.00	Flow Line Temperature (°F)	65.00

Client: Great Western Operating Company, LLC

Well: B-FARM LD #18-385HN

Well API: 05-001-10261

Start Date: 4/15/2020

End Date: 4/16/2020



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)
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	1293.0000	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	23.00
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	1.00
Bump Plug Pressure (psi)	832.00	Total Volume Pumped (bbls)	403.00
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 - Richard White

SEQ	START DATE / TIME	EVENT	DENSITY (ppg)	PUMP RATE (bpm)	PUMP VOL (bbls)	PIPE PRESSURE (psi)	COMMENTS
1	04/15/2020 04:08	Callout					Crew called out for job checked and verified equip and material
2	04/15/2020 05:00	Depart for Location					Steacs briefing and depart for location
3	04/15/2020 06:30	Arrive on Location					Arrived on location pre- rig up steacs
4	04/15/2020 06:45	Rig Up					Rig up all treating equipment
5	04/15/2020 07:30	Other (See comment)					Wait for rig to finish running casing and circulating
6	04/15/2020 09:00	STEACS Briefing					Safety meeting with rig crew and customer
7	04/15/2020 09:25	Prime Up	8.3300	3.00	5.00	227.00	Fill lines with 5 bbl water
8	04/15/2020 09:28	Pressure Test	8.3300				Pressure test to 3000 psi
9	04/15/2020 09:30	Pump Spacer	8.3300	4.50	15.00	470.00	Pump 15 bbl fresh water spacer
10	04/15/2020 09:35	Pump Tail Cement	14.5000	7.00	78.00	336.00	Pump 78 bbl cmt@14.5ppg 1.3902y 315 sks 6.81gps from tier 1 of ctf-14 wet and dry samples taken and verified
11	04/15/2020 09:47	Pump Tail Cement	14.5000	6.80	78.00	580.00	Pump 78 bbl cmt@14.5ppg 1.3902y 315 sks 6.81gps from tier 2 of ctf-14 wet and dry samples taken and verified
12	04/15/2020 09:58	Pump Tail Cement	14.5000	5.70	37.00	214.00	Pump 37 bbl cmt@14.5ppg 1.3902y 150 sks 6.81gps from tier 1 of CTF-338 wet and dry samples taken and verified
13	04/15/2020 10:06	Pump Tail Cement	14.5000	5.70	37.00	301.00	Pump 37 bbl cmt@14.5ppg 1.3902y 150 sks 6.81gps from tier 2 of CTF-338 wet and dry samples taken and verified
14	04/15/2020 10:15	Pump Tail Cement	14.5000		230.00		Pump a total of 230 bbl cmt@14.5ppg 1.3902y 930 sks 6.81gps wet and dry samples taken and verified
15	04/15/2020 10:16	Drop Top Plug					Drop top plug
16	04/15/2020 10:20	Pump Displacement	8.3300	8.00	130.00	900.00	Pump 140 bbl fresh water with biocide
17	04/15/2020 10:28	Pump Displacement	8.3300	6.50	130.00	900.00	Slowed rates for pressure
18	04/15/2020 10:35	Pump Displacement	8.3300	5.60	130.00	1006.00	Dropped rates again for pressure
19	04/15/2020 10:41	Pump Displacement	8.3300	3.00	23.00	800.00	Pump 13 bbl fresh water with bio cide
20	04/15/2020 10:45	Pump Displacement					Pump a total of 153 bbl fresh water disp with biocide/ got 23 bbl cmt to surface

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Quote #: QUO-43763-N3W1Y6

Plan #: ORD-25789-C1G0D2

Execution #: EXC-25789-C1G0D202

21	04/15/2020 10:46	Land Plug				1506.00	Land plug @832 psi took to 1506 psi and start 30 min casing test
22	04/15/2020 10:56	Other (See comment)				1480.00	@ 10 min 1480 psi
23	04/15/2020 11:06	Other (See comment)				1485.00	@ 20 min 1485 psi
24	04/15/2020 11:16	Check Floats				1496.00	1496psi before bleed off @ 30 min. Floats held 1 bbl back
25	04/15/2020 11:18	STEACS Briefing					Pre rig down safety meeting
26	04/15/2020 11:25	Rig Down					Rig down treating equipment
27	04/15/2020 11:59	Leave Location					Depart location



JobMaster Program Version 5.00C1

Job Number: 22228

Customer: Great Western

Well Name: B-Farms LD 18-385HN

