



# Great Western Operating Company

B-Farm LD 18-392HN

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API # 05-001-10097

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## Surface

11/30/2018

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Quote #: 23596

Execution #: 13561



# 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

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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# Cementing Treatment



<b>Start Date</b>	11/30/2018	<b>Well</b>	B-Farm LD 18-392HN
<b>End Date</b>	11/30/2018	<b>API#</b>	05-001-10097
<b>Client</b>	Great Western Operating Company LLC	<b>County</b>	ADAMS
<b>Service Sup.</b>	Hector Montoya	<b>State/Province</b>	CO
<b>District</b>	Cheyenne, WY	<b>Formation</b>	
<b>Type of Job</b>	Surface	<b>Rig</b>	Ikon 12
<b>Execution ID</b>	EXC-13561-W8S4T902	<b>Project ID</b>	PRJ1013071

## WELL GEOMETRY

Type	ID (in)	OD (in)	Wt. (lb/ft)	MD (ft)	TVD (ft)	Excess(%)	Grade	Thread
Open Hole	13.50	0.00	0.00	1,750.00	1,750.00	25.00		
Casing	8.92	9.63	36.00	1,750.00	1,750.00		J-55	LTC

**Shoe Length (ft):** 42.00

## HARDWARE

<b>Bottom Plug Used?</b>	No	<b>Max Casing Pressure - Rated (psi)</b>	3,520.00
<b>Top Plug Used?</b>	Yes	<b>Max Casing Pressure - Operated (psi)</b>	2,580.00
<b>Top Plug Provided By</b>	Non BJ	<b>Job Pumped Through</b>	Manifold
<b>Top Plug Size</b>	9.625	<b>Top Connection Thread</b>	LTC
<b>Centralizers Used</b>	Yes	<b>Top Connection Size</b>	9.625
<b>Centralizers Quantity</b>	18.00	<b>Landing Collar Depth (ft)</b>	1,706
<b>Centralizers Type</b>	Bow		

## CIRCULATION PRIOR TO JOB

<b>Well Circulated By</b>	Rig	<b>Solids Present at End of Circulation</b>	No
<b>Circulation Prior to Job</b>	Yes	<b>Flare Prior to/during the Cement Job</b>	No
<b>Circulation Time (min)</b>	30.00	<b>Gas Present</b>	No
<b>Circulation Rate (bpm)</b>	5.00	<b>Mud Density In (ppg)</b>	8.33

# Cementing Treatment



## TEMPERATURE

Ambient Temperature (°F)	35.00	Slurry Cement Temperature (°F)	60.00
Mix Water Temperature (°F)	55.00	Flow Line Temperature (°F)	61.00

## BJ FLUID DETAILS

Fluid Type	Fluid Name	Density (ppg)	Yield (Cu Ft/sk)	H2O Req. (gals/sk)	Planned Top of Fluid (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	1700	760	1,056.0000	188.0000
Displacement Final	Water	8.3300			0.00			0.0000	130.2000

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	Amount of Cement Returned/Reversed	25.00
Calculated Displacement Volume (bbls)	130.00	Method Used to Verify Returns	Visual
Actual Displacement Volume (bbls)	130.00	Amount of Spacer to Surface	20.00
Did Float Hold?	Yes	Pressure Left on Casing (psi)	0.00
Bump Plug	Yes	Amount Bled Back After Job	0.50
Bump Plug Pressure (psi)	1,150.00	Total Volume Pumped (bbls)	390
Were Returns Planned at Surface	Yes	Top Out Cement Spotted	No
Cement returns During Job	Yes	Lost Circulation During Cement Job	No

# EVENT LOG



**Customer Name:** Great Western Operating  
Company LLC

**Well Name:** B-Farm LD 18-392HN

**Job Type:** Surface

**Quote ID:** QUO-23596-J7H8J4

**Plan ID:** ORD-13561-W8S4T9

**District:** Cheyenne, WY

**Execution ID:** EXC-13561-W8S4T902

**BJ Supervisor:** Hector Montoya

Seq.	Start Dt./Time	Event	Density (ppg)	Pump Rate (bpm)	Pump Vol(bbls)	Pipe Pressure(psi)	Comments
1	11/30/2018 07:00	Callout					BJ Crew gets called out
2	11/30/2018 08:00	STEACS Briefing					BJ crew talks about hazards of driving to location
3	11/30/2018 08:30	Arrive on Location					BJ crew arrives safely to location
4	11/30/2018 09:30	STEACS Briefing					BJ Crew talks about the hazards of rigging up
5	11/30/2018 10:00	Rig Up					Rig up
6	11/30/2018 11:00	STEACS Briefing					BJ Crew and Rig crew talks about the hazards of pumping the job
7	11/30/2018 14:52	Prime Up	8.3300	2.00	3.00		Fill lines
8	11/30/2018 14:55	Pressure Test					Pressure test 3000psi
9	11/30/2018 14:58	Pump Spacer	8.3300		20.00		Pump 20bbl of Red Dye Spacer
10	11/30/2018 15:05	Pump Tail Cement	14.5000	5.00	188.00	163.00	pump 188 bbls of 14.5 cement, 760sk of bjcem s100.3.xc, mix water 123bbls, yield 1.39, gps 6.81
11	11/30/2018 15:31	Drop Top Plug					Customer witnesses Top Plug leave
12	11/30/2018 15:32	Pump Displacement	8.3300	8.00	120.00	610.00	Pump 130 bbls of Fresh Water displacement
13	11/30/2018 16:01	Pump Displacement	8.3300	3.00	10.00	1,150.00	Slow rate last 10bbl to 3bpm
14	11/30/2018 16:10	Land Plug				1,150.00	land Plug, final circulating pressure was 610psi took to 1150psi
15	11/30/2018 16:11	Other (See comment)				1,150.00	15 min casing test: 1160 psi start 1190 psi end.

# EVENT LOG



16	11/30/2018 16:24	Check Floats					Floats held, .5bbl back to the truck, Total cement to surface was 25bbl
17	11/30/2018 16:25	STEACS Briefing					BJ Crew talks about the hazards of rigging down
18	11/30/2018 16:40	Rig Down					Rig down
19	11/30/2018 17:30	Leave Location					BJ Crew leaves location

GREAT WESTERN  
18-392HN - 05-001-10097 - Surface

