



Great Western Operating Company

B-Farm LD 18-392HN

API # 05-001-10097

Surface

11/30/2018

Quote #: 23596

Execution #: 13561



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

Cementing Treatment



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

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

CIRCULATION PRIOR TO JOB

Well Circulated By	Rig	Solids Present at End of Circulation	No
Circulation Prior to Job	Yes	Flare Prior to/during the Cement Job	No
Circulation Time (min)	30.00	Gas Present	No
Circulation Rate (bpm)	5.00	Mud Density In (ppg)	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, 760sks 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
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