



Great Western Operating Company

B-FARM LD #18-389HN

API # 05-001-10262

Surface

11/27/2018

Quote #: 23249

Execution #: 13454



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	11/27/2018	Well	B-FARM LD #18-389HN
End Date	11/27/2018	API#	05-001-10262
Client	Great Western Operating Company LLC	County	ADAMS
Client Field Rep.	Great Western	State/Province	CO
Service Sup.	Hector Montoya	Rig	Spud
District	Cheyenne, WY	Project ID	PRJ1012987
Type of Job	Surface	Execution ID	EXC-13454-R3N5G802

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	1,783.00	1,782.00	25.00		
Casing	8.92	9.63	36.00	1,783.00	1,782.00		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)	2,816.00
Top Plug Provided By	BJ	Job Pumped Through	Manifold
Top Plug Size	9.625	Top Connection Thread	LTC
Centralizers Used	Yes	Top Connection Size	9.625 H
Centralizers Quantity	18.00	Landing Collar Depth (ft)	1,739
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	Lost Circulation Prior to Cement Job	No
Circulation Volume (bbls)	150.00	Mud Density In (ppg)	8.33

Cementing Treatment



TEMPERATURE

Ambient Temperature (°F)	50.00	Slurry Cement Temperature (°F)	66.00
Mix Water Temperature (°F)	60.00	Flow Line Temperature (°F)	67.00

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	133.0000

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	40.00
Calculated Displacement Volume (bbls)	133.00	Method Used to Verify Returns	Visual
Actual Displacement Volume (bbls)	133.00	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)	1,230.00	Total Volume Pumped (bbls)	341.00
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 #18-389HN

Job Type: Surface

Quote ID: QUO-23249-F2X5B3

Plan ID: ORD-13454-R3N5G8

Execution ID: EXC-13454-R3N5G802

District: Cheyenne, WY

BJ Supervisor: Hector Montoya

Seq.	Start Dt./Time	Event	Density (ppg)	Pump Rate (bpm)	Pump Vol(bbls)	Pipe Pressure(psi)	Comments
1	11/27/2018 09:47	Callout					BJ Crew gets called out
2	11/27/2018 10:30	STEACS Briefing					BJ Crew talks about hazards of driving to location
3	11/27/2018 11:00	Arrive on Location					BJ Crew arrives safely to location
4	11/27/2018 13:00	STEACS Briefing					BJ Crew talks about hazards of rigging up
5	11/27/2018 13:30	Rig Up					Rig Up
6	11/27/2018 14:30	Other (See comment)					Wait on rig to finish running casing
7	11/27/2018 16:30	STEACS Briefing					BJ Crew and rig crew talk about hazards of pumping the job and job procedure
8	11/27/2018 16:40	Prime Up	8.3300	2.00	3.00	150.00	Fill Lines
9	11/27/2018 16:42	Pressure Test					Pressure test to 3000psi
10	11/27/2018 16:45	Pump Spacer	8.3300	3.00	20.00	150.00	Pump 20bbl spacer
11	11/27/2018 17:03	Pump Tail Cement	14.5000	3.50	188.00	130.00	Pump 188bbl at 14.5ppg, 760sks of BJ Cem S100.3.XC, yield 1.39, GPS 6.81, Mix Water 120bbl
12	11/27/2018 18:02	Drop Top Plug					Customer witnesses plug leave
13	11/27/2018 18:06	Pump Displacement	8.3300	7.00	123.00	670.00	Pump total of 133bbl
14	11/27/2018 18:28	Pump Displacement	8.3300	3.00	10.00	1,230.00	Slow rate last 10bbl to 3bpm
15	11/27/2018 18:31	Land Plug					Land Plug at 650psi took to 1230psi

EVENT LOG



16	11/27/2018 18:32	Other (See comment)				1,230.00	Casing Test for 15min, start 1230 psi, end 1240 psi.
17	11/27/2018 18:45	Check Floats					Floats held, .5bbl back
18	11/27/2018 18:47	Rig Down					Rig Down
19	11/27/2018 19:30	Leave Location					Leave Location

GREAT WESTERN
B-FARM LD 18-389HN - - Surface

