



Great Western Operating Company, LLC

Surface Post Job Report

B-Farm LD 11-388HC 05-001-10099

S:7 T:1S R:67W Weld CO



Great Western Operating Company, LLC

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

Dear Great Western Operating Company,

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,
Jacob Ojeda
Field Engineer I | (763) 516-3012 | jacob.ojeda@bjsservices.com

Field Office 1716 East Allison Rd., Cheyenne WY, 82007
Phone: (307) 638-5585

Sales Office 999 18th St. Suite 1200 Denver, CO 80202
Phone: (281) 408-2361

Cementing Treatment



Start Date	12/28/2017	Well	B-FARM LD 18-388HC
End Date	12/22/2017	County	ADAMS
Client	GREAT WESTERN OPERATING COMPANY, LLC	State/Province	CO
Service Supervisor	Zach Hyde	API	05-001-10099
District	Cheyenne, WY	Formation	
		Type of Job	Surface

WELL GEOMETRY

Type	ID (in)	OD (in)	Wt. (lb/ft)	MD (ft)	TVD (ft)	Excess(%)	Grade	Thread
Open Hole	13.50			1,720.00	1,720.00	25.00		
Casing	8.92	9.63	36.00	1,720.00	1,720.00		J-55	LTC

Shoe Length (ft): 42

HARDWARE

Bottom Plug Used?	No
Top Plug Used?	Yes
Top Plug Provided By	Customer
Top Plug Size	9.625
Centralizers Used	No
Landing Collar Depth (ft)	1,678

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	Gas Present	No
Circulation Rate (bpm)	6		
Circulation Volume (bbls)	200		
Lost Circulation Prior to Cement Job	No		

Cementing Treatment



TEMPERATURE

Ambient Temperature (°F)	36	Slurry Cement Temperature (°F)	50
Mix Water Temperature (°F)	50	Flow Line Temperature (°F)	N/A

BJ FLUID DETAILS

Fluid Type	Fluid Name	Density (ppg)	Yield (Cu Ft/sk)	H2O Req. (gals/sk)	Vol (sk)	Vol (Cu Ft)	Vol (bbls)
Spacer / Pre Flush / Flush	Water	8.3300					20.0000
Tail Slurry	S100-22	14.5000	1.3901	6.78	773	1,074.0000	191.3000
Displacement Final	Water	8.3300				0.0000	130.5000

Fluid Type	Fluid Name	Component	Concentration	UOM
Tail Slurry	S100-22	FOAM PREVENTER, FP-13L	0.03	GALS/SK
Tail Slurry	S100-22	CEMENT, ASTM TYPE III	100.00	PCT

TREATMENT SUMMARY

Time	Fluid	Rate (bpm)	Fluid Vol. (bbls)	Pipe Pressure (psi)
14:28	Water	5.00	20.00	50
14:36	S100-22	5.00	191.30	150
15:18	Water	5.00	130.50	600

Cementing Treatment



DISPLACEMENT AND END OF JOB SUMMARY

Displaced By	BJ	Amount of Cement Returned/Reversed	20 bbls
Calculated Displacement Volume (bbls)	128.8	Amount of Spacer to Surface	20
Actual Displacement Volume (bbls)	128.8	Pressure Left on Casing (psi)	0
Did Float Hold?	Yes	Amount Bled Back After Job	1000
Bump Plug	Yes	Top Out Cement Spotted	No
Bump Plug Pressure (psi)	600	Lost Circulation During Cement Job	No
Were Returns Planned at Surface	Yes		
Cement returns During Job	Yes		

CEMENT PLUG

Bottom of Cement Plug?	No	Wiper Balls Used?	No
		Plug Catcher	No

Customer Name Great Western

Well Name B-FARM LD 18-388HC

Job Type Surface

District Cheyenne

Supervisor Zach Hyde

Engineer



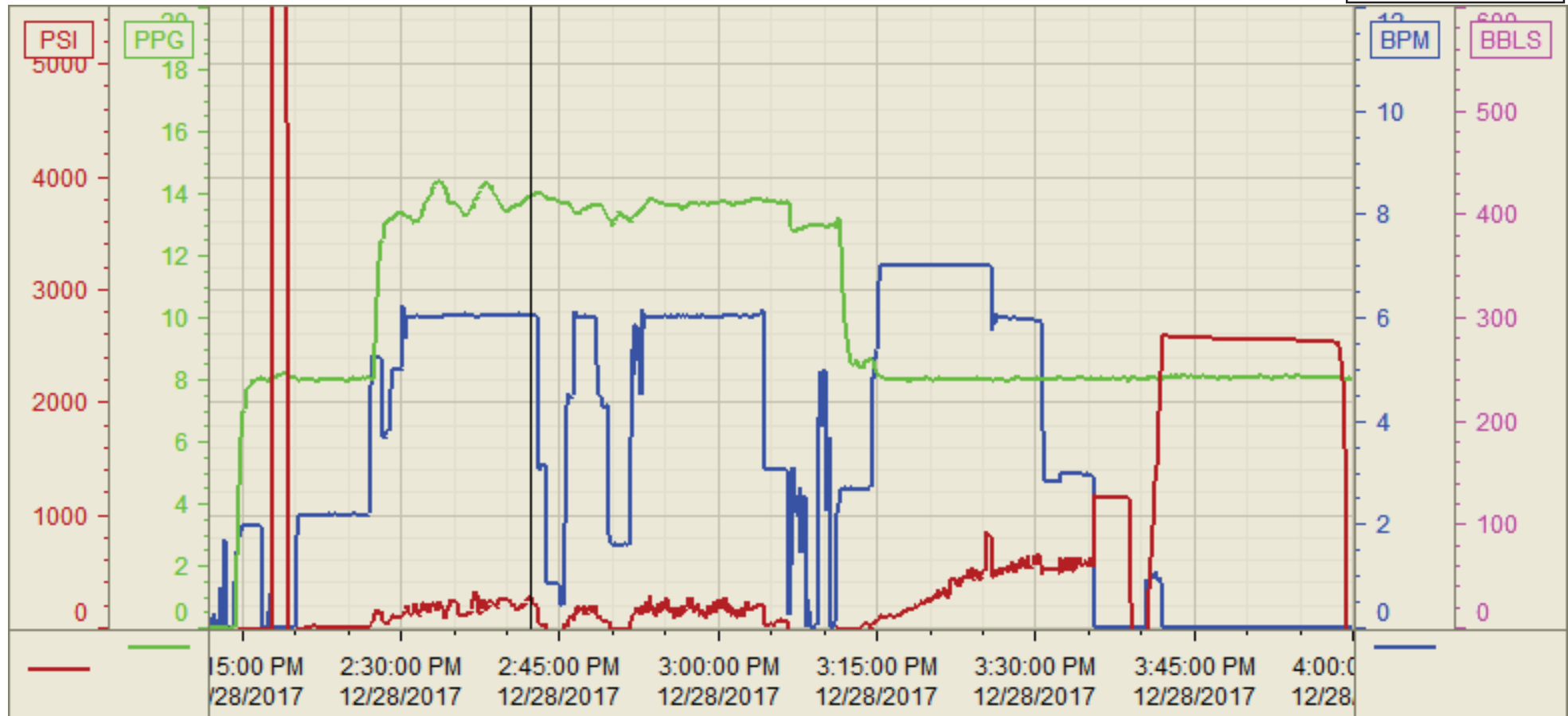
Seq No.	Start Date/Time	Category	Event	Equipment	Event ID	Density (lb/gal)	Pump Rate (bpm)	Pump Vol (bbls)	Pipe Pressure (psi)	Comments
1	12/28/2017 3:00		Call Out							Crew gets called out. Requested time on location was 7:00
2	12/28/2017 5:00		Depart Facility							Crew leaves facility
3	12/28/2017 7:00		On Location							Crew arrives on location. I went and talked to customer about the job and got numbers
4	12/28/2017 7:00		Wait							Crew waits for rig to start running casing in order to spot equipment
5	12/28/2017 10:00		Rig Up							Crew rigs up iron and hoses needed for job
6	12/18/2017 10:30		Wait							Crew waits for rig to finish running casing
7	12/28/2017 14:00		Safety Meeting		53					Crew has safety meeting with rig crew and company man discussing the job
8	12/28/2017 14:21		Fill Lines			8.33	2	5	50	Fill lines 5 bbls ahead at 2 bpm with 50 psi
9	12/28/2017 14:25		Pressure Test		54					Pressure test 3500psi
10	12/28/2017 14:28		Water Spacer			8.33	4	15	150	15 bbls of water spacer at 4 bpm with 150 psi
11	12/28/2017 14:36		Primary			14.5	6	191	150	191 bbls of Primary at 14.5 ppg at (773sks, 1.39 yld, 6.78gal/sk) at 6 bpm with 150 psi
12	12/28/2017 15:14		Shutdown							Shutdown
13	12/28/2017 15:18		Drop Plug							Drop top plug. Wash up on top of plug
14	12/28/2017 15:18		Displacement			8.33	4	10	50	10 bbls away of displacement. Washed up on top of plug at 4 bpm with 50 psi
15	12/28/2017 15:21		Displacement			8.33	7	108	500	118 bbls away of fresh water displacement at 7 bpm with 500 psi. Got 20 bbls of cement to surface
16	12/28/2017 15:37		Slow Rate			8.33	3	10	600	Slow rate last 10 bbls of displacement to 3 bpm to land plug
17	12/28/2017 15:46		Land Plug		67					Landed plug went 500 psi over FCP which was 600 psi brought it up to 1150 psi
18	12/28/2017 15:50		Check Floats		68					Check Floats
	12/28/2017 15:50		Casing Test						2400	2400 psi casing test for 15 minutes
19	12/28/2017 16:05		Rig Down		73					Crew rigs down iron and hoses
20	12/28/2017 17:00		Depart Location							Crew leaves location
21										
22										
23										
24										
25										
26										
27										
28										
29										
30										
31										

Customer: Great Western
Well Number: 18-388-HC B-FARM
Lease Info: LD 18-388HC



Print Date/Time

12/28/2017 4:07:08 PM



	Name	Y value	X value/time stamp	Tag name Y
1	PS - Press (PSI)	260.4 i.	12/28/2017 2:42:11 PM i.	Cementer\PS_DISCHARGE_PRESS_DIAL
2	DH - Density (PPG)	13.93 i.	12/28/2017 2:42:11 PM i.	Cementer\DENSITY2_ACTUAL_RATE
3	Combined Rate (BPM)	6.05 i.	12/28/2017 2:42:11 PM i.	Cementer\Flow_Combined
4				
5				

Source: Control1 4:07:02 PM