



Great Western Operating Company, LLC

Surface Post Job Report

B Farm LD 18-036HN (API 05-001-10092)

S:7 T:1S R:67W Adams 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@bjservices.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

Start Date	12/30/2017	Well	B-FARM LD 18-036HN
End Date	12/31/2017	County	ADAMS
Client	GREAT WESTERN OPERATING COMPANY, LLC	State/Province	CO
Service Supervisor	Zach Hyde	API	05-001-10092
District	Cheyenne, WY	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			1,721.00	1,721.00	25.00		
Casing	8.92	9.63	36.00	1,721.00	1,702.00		J-55	LTC

Shoe Length (ft.): 42

HARDWARE

Bottom Plug Used?	No	Landing Collar Depth (ft)	1,660
Top Plug Used?	Yes	Job Pumped Through	Iron
Top Plug Provided By	Customer	Top Connection Thread	LTC
Top Plug Size	9.625	Top Connection Size	9.625
Centralizers Used	Yes		

CIRCULATION PRIOR TO JOB

Well Circulated By	Rig	Solids Present at End of Circulation	No
Circulation Prior to Job	Yes		
Circulation Time (min)	20		
Circulation Rate (bpm)	6		
Circulation Volume (bbls)	120	Flare Prior to/during the Cement Job	No
Lost Circulation Prior to Cement Job	No	Gas Present	No

TEMPERATURE

Ambient Temperature (°F) 27 Slurry Cement Temperature (°F) 70
 Mix Water Temperature (°F) 80

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	760	1,056.0000	188.0000
Displacement Final	Water	8.3300				0.0000	128.2000

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)	Annulus Pressure (psi)	Comments
6:25	Water	5.00	20.00	50		
6:29	S100-22	5.00	188.00	150		
7:04	Water	5.00	128.20	150		

DISPLACEMENT AND END OF JOB SUMMARY

Displaced By	BJ	Cement returns During Job	Yes
Calculated Displacement Volume (bbls)	128	Amount of Cement Returned/Reversed	23
Actual Displacement Volume (bbls)	128	Amount of Spacer to Surface	20
Did Float Hold?	Yes	Pressure Left on Casing (psi)	0
Bump Plug	Yes	Amount Bled Back After Job	2400
Bump Plug Pressure (psi)	600	Top Out Cement Spotted	No
Were Returns Planned at Surface	Yes	Lost Circulation During Cement Job	No



Customer Name Great Western
 Well Name 18-036HN
 Job Type Surface

District Cheyenne
 Supervisor Zach Hyde
 Engineer _____

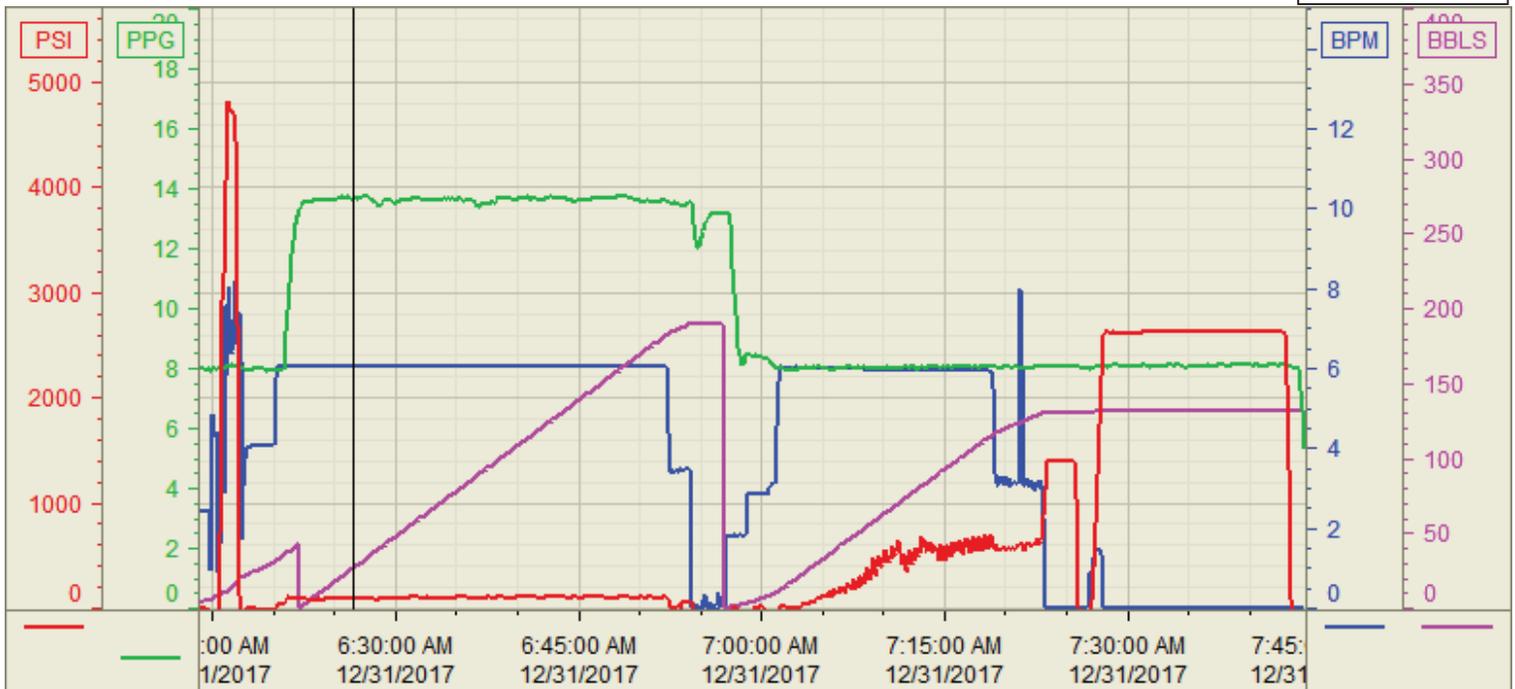
Seq No.	Start Date/Time	Category	Event	Equipment	Event ID	Density (lb/gal)	Pump Rate (bpm)	Pump Vol (bbls)	Pipe Pressure (psi)	Comments
1	12/30/2017 23:30		Call Out							Crew gets called out at 2330. Requested time 600
2	12/31/2017 2:00		Depart Facility							Crew leaves facility
3	12/31/2017 3:30		On Location							Crew arrives on location. I went to talked to the customer about numbers
4	12/31/2017 4:00		Rig Up							Crew rigs up iron and hoses
5	12/31/2017 5:00		Wait							Crew waits for rig to finish running casing
	12/31/2017 6:00		Safety Meeting							Crew has a safety meeting with rig crew and company man about the job
6	12/31/2017 6:19		Fill Lines			8.33	2	5	50	Fill lines 5 bbls at 2 bpm
7	12/31/2017 6:23		Pressure Test							Pressure test lines to 3500psi
8	12/31/2017 6:25		Water Spacer			8.33	4	15	150	15 bbls of water spacer at 4 bpm
9	12/31/2017 6:29		Primary			14.5	6	190	150	190 bbls of Primary of 14.5 ppg at 6 bpm (760sks, 1.39yld, 6.78gal/sk)
10	12/31/2017 7:00		Shutdown							Shutdown
11	12/31/2017 7:04		Drop Plug							Drop Top Plug
12	12/31/2017 7:04		Displacement			8.33	4	10	50	10 bbls away of displacement away at 4 bpm with 50 psi
13	12/31/2017 7:09		Displacement			8.33	6	108	600	108 bbls of away displacement away at 6 bpm with 600 psi
14	12/31/2017 7:26		Slow Rate							Slow rate to 3 bpm to land plug
15	12/31/2017 7:30		Displacement			8.33	3	10	600	128 bbls of displacement away
16	12/31/2017 7:30		Land Plug							Landed plug with 600 psi brought it up to 1100 psi for 3 min
17	12/31/2017 7:33		Check Floats							Floats held got .5 bbls back
18	12/31/2017 7:35		Casing Test							2400 psi casing test held for 15 minutes
19	12/31/2017 7:50		Release Pressure							Released pressure
20	12/31/2017 7:50		Job Complete							Job complete
21	12/31/2017 8:30		Rig Down		73					Rig down iron and hoses
22	12/31/2017 9:00		Depart Location							Crew leaves location
23										
24										
25										
26										
27										
28										
29										
30										
31										
32										
33										
34										

Customer: Great Western
 Well Number: 18-036HN
 Lease Info: B-FARM



Print Date/Time

12/31/2017 7:51:10 AM



	Name	Y value	X value/time stamp	Tag name Y
1	DS - Press (PSI)	85.4	12/31/2017 6:26:31 AM	Cementer\DS_DISCHARGE_PRESS_DIAL
2	Den2 - Discharge Density (PPG)	13.73 i.	12/31/2017 6:26:32 AM i.	Cementer\DENSITY2_ACTUAL_RATE
3	Down Hole Total (BBLs)	27.3	12/31/2017 6:26:35 AM	Cementer\DOWNHOLE_FLOW_TOTAL
4	Combined Rate (BPM)	6.06 i.	12/31/2017 6:26:32 AM i.	Cementer\Flow_Combined
5				

Source: Control1 7:51:05 AM