



Great Western Operating Company, LLC

Surface Post Job Report

B Farm LD 18-037HC (API 05-001-10091)

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@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	10/18/2017	Well	B-FARM LD 18-037HC
End Date	10/22/2017	County	ADAMS
Client	GREAT WESTERN OPERATING COMPANY, LLC	State/Province	CO
Service Supervisor	Zach Hyde	API	05-001-10091
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	1,721.00		J-55	LTC

Shoe Length (ft.): 42

HARDWARE

Bottom Plug Used?	No	Landing Collar Depth (ft)	1,658
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	Lost Circulation Prior to Cement Job	No
Circulation Prior to Job	Yes	Solids Present at End of Circulation	No
Circulation Time (min)	30	Flare Prior to/during the Cement Job	No
Circulation Rate (bpm)	7	Gas Present	No
Circulation Volume (bbls)	120		

Cementing Treatment



TEMPERATURE

Ambient Temperature (°F)	5	Slurry Cement Temperature (°F)	50
Mix Water Temperature (°F)	50		

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					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

Fluid	Rate (bpm)	Fluid Vol. (bbls)
Water	5.00	20.00
S100-22	5.00	188.00
Water	5.00	128.20

Cementing Treatment



DISPLACEMENT AND END OF JOB SUMMARY

Displaced By	BJ	Amount of Cement Returned/Reversed	25
Calculated Displacement Volume (bbls)	128	Amount of Spacer to Surface	20
Actual Displacement Volume (bbls)	128	Pressure Left on Casing (psi)	0
Did Float Hold?	Yes	Casing Pressure Test	2400
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		



Customer Name Great Western
 Well Name 18-037HC
 Job Type Surface

District Cheyenne
 Supervisor Zach Hyde
 Engineer _____

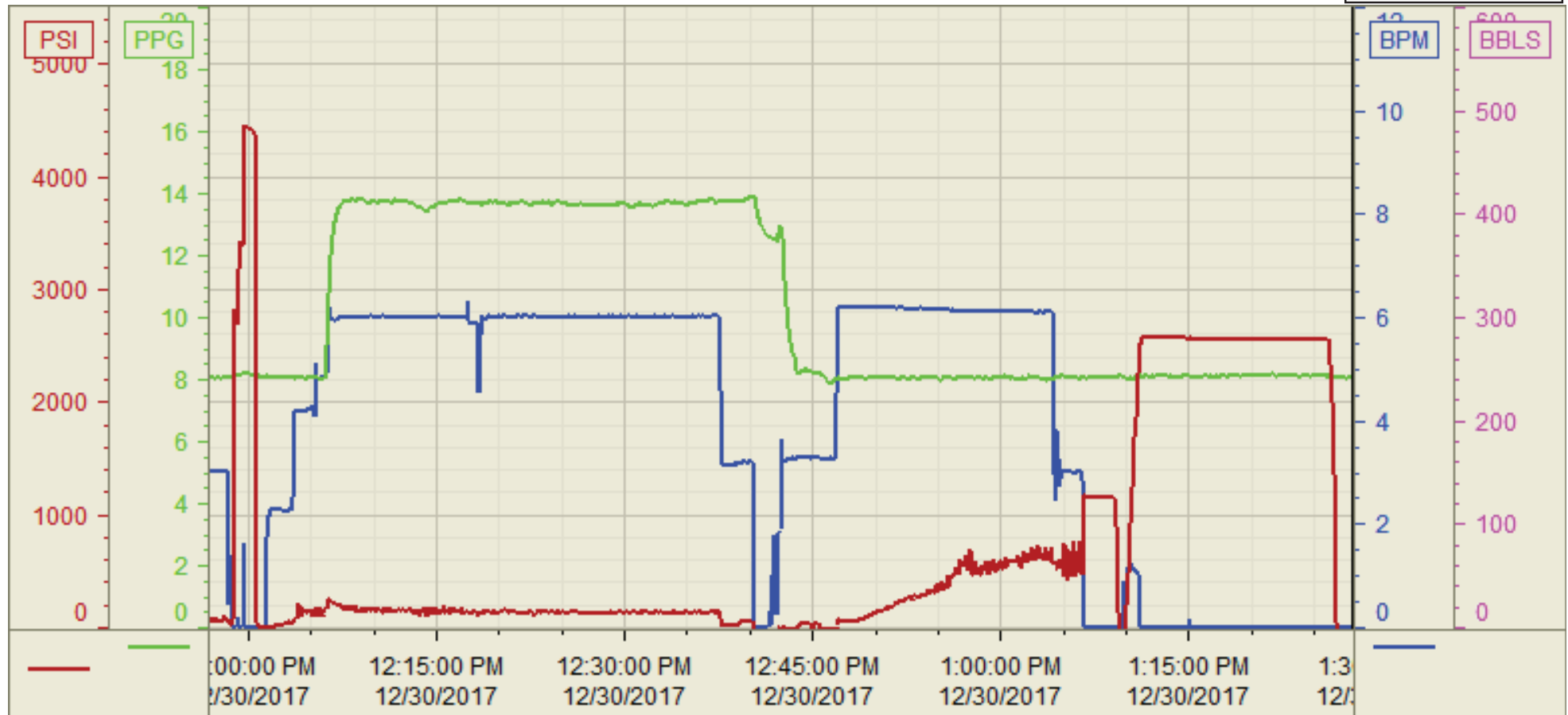
Seq No.	Start Date/Time	Category	Event	Equipment	Event ID	Density (lb/gal)	Pump Rate (bpm)	Pump Vol (bbls)	Pipe Pressure (psi)	Comments
1	12/30/2017 3:00		Call Out							Crew gets called out. Requested time 900
2	12/30/2017 5:00		Depart Facility							Crew leaves facility
3	12/30/2017 7:00		On Location							Crew arrives on location. I went and got numbers from customer
4	12/30/2017 9:00		Rig Up							Crew rigs up iron and hoses needed for job
5	12/30/2017 10:00		Wait							Crew waits for rig to finish running casing and to circulate
6	12/30/2017 11:30		Safety Meeting							Crew has safety meeting with rig crew and company discussing job
7	12/30/2017 12:06		Fill Lines			8.33	2	5	0	Fill lines 5 bbls at 2bpm with 0 psi
8	12/30/2017 12:08		Pressure Test		54					Pressure test 3500 psi
9	12/30/2017 12:10		Water Spacer			8.33	4	15	150	15 bbls of water spacer with dye
10	12/30/2017 12:15		Primary			14.5	6	191	150	191 bbls of Primary at 14.5 ppg(770sk,1.39yld,6.78gal/sk) at 6 bpm with 150 psi
11	12/30/2017 12:47		Shutdown							Shutdown
12	12/30/2017 12:50		Drop Plug							Drop top plug
13	12/30/2017 12:50		Displacement			8.33	4	10	50	10 bbls of displacement away at 4 bpm with 50 psi. Washed up on top of plug
14	12/30/2017 13:12		Displacement			8.33	6	118	600	118 bbls of displacement away at 6 bpm with 600 psi
15	12/30/2017 13:12		Slow Rate							Slow rate last 10 bbls
16	12/30/2017 13:13		Displacement			8.33	3	10	600	128 bbls away at 3 bpm 600 psi
17	12/30/2017 13:13		Land Plug		67					Landed plug FCP was 600 psi brought it up to 1100 psi for 3 minutes
18	12/30/2017 13:16		Check Floats		68					Checked floats .5 bbls back
19	12/30/2017 13:18		Casing Test							15 minute casing at 2400psi pressure held
20	12/30/2017 13:33		Release Pressure							Release pressure
21	12/30/2017 13:33		Job Complete							Job Complete got 25 bbls of cement to surface
22	12/30/2017 14:00		Rig Down							Crew rigs down iron and hoses
23	12/30/2017 14:30		Depart Location							Crew leaves location
24										

Customer: Great Western
Well Number: 18-037HC
Lease Info: B-FARM



Print Date/Time

12/30/2017 1:36:24 PM



	Name	Y value	X value/time stamp	Tag name Y
1	PS - Press (PSI)	-38.0 i.	12/30/2017 1:28:00 PM i.	Cementer\PS_DISCHARGE_PRESS_DIAL
2	DH - Density (PPG)	8.06	12/30/2017 1:28:02 PM	Cementer\DENSITY2_ACTUAL_RATE
3	Combined Rate (BPM)	0.00	12/30/2017 1:28:02 PM	Cementer\Flow_Combined
4				
5				

Source: Control1 1:36:18 PM