



Caerus

Surface Post Job Report

Puckett 13B-19 05-045-23187

S:24 T:6S R:97W Garfield CO

Quote #:

03978

I Execution #:

02473



Caerus

Attention: Mr. Steve Schmitz | (720) 880-6412 | sschmitz@caerusoilandgas.com

Caerus | 1001 17th Street, Suite 1600 | Denver, CO 80202

Dear Mr. Schmitz,

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,

Gage Putnam
Field Engineer I | (970) 632-2006 | Gage.Putnam@BJServices.com

Field Office 28730 US-6, Rifle, CO 81650
Phone: (970) 632-2412

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

Cementing Treatment



Start Date	1/6/2018	Well	Puckett 13B-19
End Date	1/7/2018	County	GARFIELD
Client	CAERUS OPERATING, LLC	State/Province	CO
Client Field Rep	Kim Gritz	API	05-045-23187
Service Supervisor	Javier Castillo	Formation	-
Field Ticket No.	Surface	Rig	H&P 329
District	Rifle, CO	Type of Job	Surface

WELL GEOMETRY

Type	ID (in)	OD (in)	Wt. (lb/ft)	MD (ft)	TVD (ft)	Excess(%)	Grade	Thread
Previous Casing	19.50	20.00	52.73	100.00	100.00	0.00		
Open Hole	14.75			2,000.00	2,000.00	25.00		
Open Hole	14.75			2,558.00	2,558.00	0.00		
Casing	8.92	9.63	36.00	2,502.00	2,502.00		J-55	

Shoe Length (ft): 40

HARDWARE

Bottom Plug Used?	No	Tool Type	Float Collar
Bottom Plug Provided By	-	Tool Depth (ft)	2,462.00
Bottom Plug Size	-	Max Tubing Pressure - Rated (psi)	-
Top Plug Used?	Yes	Max Tubing Pressure - Operated (psi)	-
Top Plug Provided By	Non BJ	Max Casing Pressure - Rated (psi)	10,690.00
Top Plug Size	9.625	Max Casing Pressure - Operated (psi)	8,552.00
Centralizers Used	Yes	Pipe Movement	None
Centralizers Quantity	-	Job Pumped Through	No Manifold
Centralizers Type	Bow	Top Connection Thread	8RD
Landing Collar Depth (ft)	2,460	Top Connection Size	9.625

Cementing Treatment



CIRCULATION PRIOR TO JOB

Well Circulated By	Rig	Solids Present at End of Circulation	No
Circulation Prior to Job	Yes	10 sec SGS	1.00
Circulation Time (min)	30.00	10 min SGS	2.00
Circulation Rate (bpm)	5.00	30 min SGS	2.00
Circulation Volume (bbls)	150.00	Flare Prior to/during the Cement Job	No
Lost Circulation Prior to Cement Job	Yes	Gas Present	No
Mud Density In (ppg)	8.50	Gas Units	0
Mud Density Out (ppg)	8.50		
PV Mud In	2		
PV Mud Out	2		
YP Mud In	1		
YP Mud Out	1		

TEMPERATURE

Ambient Temperature (°F)	28.00	Slurry Cement Temperature (°F)	60.00
Mix Water Temperature (°F)	80.00	Flow Line Temperature (°F)	58.00

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	8.33					20.00
Spacer / Pre Flush / Flush	Sodium Silicate Spacer	10.00					20.00
Spacer / Pre Flush / Flush	Water	8.33					20.00
Lead Slurry	S100-12	12.00	2.5329	14.89	704	1,774.00	317.00
Tail Slurry	S100-12	12.50	2.2282	12.62	162	358.00	64.00
Displacement Final	Displacement	8.33				0.00	190.20
Top Out Slurry	S100-12	12.50	2.2282	12.62	476	1060.60	188.00

Cementing Treatment



Fluid Type	Fluid Name	Component	Concentration	UOM
Spacer / Pre Flush / Flush	Water	Fresh Water	100.00	PCT
Spacer / Pre Flush / Flush	Water	Fresh Water	100.00	PCT
Spacer / Pre Flush / Flush	Sodium Silicate Spacer	SILICATE, SODIUM, A-3L	21.00	GPB
Lead Slurry	S100-12	CEMENT EXTENDER, SODIUM METASILICATE, A-2	2.00	LBS/SK
Lead Slurry	S100-12	ACCELERATOR, SALT, CHLORIDE, CALCIUM, A-7P, PELLETS	2.00	LBS/SK
Lead Slurry	S100-12	IntegraSeal CELLO	0.13	LBS/SK
Lead Slurry	S100-12	CEMENT, ASTM TYPE III	100.00	PCT
Lead Slurry	S100-12	CEMENT EXTENDER, GYPSUM, A-10	5.00	BWOB
Lead Slurry	S100-12	FP-25, Dry Foam Preventer (BJS Only)	0.30	BWOB
Tail Slurry	S100-12	ACCELERATOR, SALT, CHLORIDE, CALCIUM, A-7P, PELLETS	2.00	LBS/SK
Tail Slurry	S100-12	CEMENT EXTENDER, SODIUM METASILICATE, A-2	2.00	LBS/SK
Tail Slurry	S100-12	CEMENT, ASTM TYPE III	100.00	PCT
Tail Slurry	S100-12	FP-25, Dry Foam Preventer (BJS Only)	0.30	BWOB
Tail Slurry	S100-12	IntegraSeal CELLO	0.13	LBS/SK
Tail Slurry	S100-12	CEMENT EXTENDER, GYPSUM, A-10	5.00	BWOB
Top Out Slurry	S100-12	ACCELERATOR, SALT, CHLORIDE, CALCIUM, A-7P, PELLETS	2.00	LBS/SK
Top Out Slurry	S100-12	CEMENT EXTENDER, SODIUM METASILICATE, A-2	2.00	LBS/SK
Top Out Slurry	S100-12	CEMENT, ASTM TYPE III	100.00	PCT
Top Out Slurry	S100-12	FP-25, Dry Foam Preventer (BJS Only)	0.30	BWOB
Top Out Slurry	S100-12	IntegraSeal CELLO	0.13	LBS/SK
Top Out Slurry	S100-12	CEMENT EXTENDER, GYPSUM, A-10	5.00	BWOB

Cementing Treatment



TREATMENT SUMMARY

Time	Fluid	Rate (bpm)	Fluid Vol. (bbls)	Pipe Pressure (psi)	Comments
1/7/2018 1:35 AM	Water	4.50	20.00	330.00	
1/7/2018 1:37 AM	Sodium Silicate Spacer	4.50	20.00	303.00	
1/7/2018 1:41 AM	Water	4.50	20.00	87.00	
1/7/2018 1:58 AM	S100-12	5.00	317.00	63.00	Lead Slurry
1/7/2018 2:46 AM	S100-12	5.00	63.70	150.00	Tail Slurry
1/7/2018 2:58 AM	Displacement	6.00	190.20	376.00	
1/7/2018 3:45 AM	S100-12	3.00	188.00	65.00	Top Out Slurry

	Min	Max	Avg
Pressure (psi)	32.00	1,480.00	172.00
Rate (bpm)	4.50	6.00	4.92

DISPLACEMENT AND END OF JOB SUMMARY

Displaced By	BJ	Amount of Cement Returned/Reversed	0.00
Calculated Displacement Volume (bbls)	190.00	Method Used to Verify Returns	Visual
Actual Displacement Volume (bbls)	190.00	Amount of Spacer to Surface	0.00
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)	479.00	Total Volume Pumped (bbls)	631.00
Were Returns Planned at Surface	Yes	Top Out Cement Spotted	Yes
Cement returns During Job	None	Lost Circulation During Cement Job	Yes

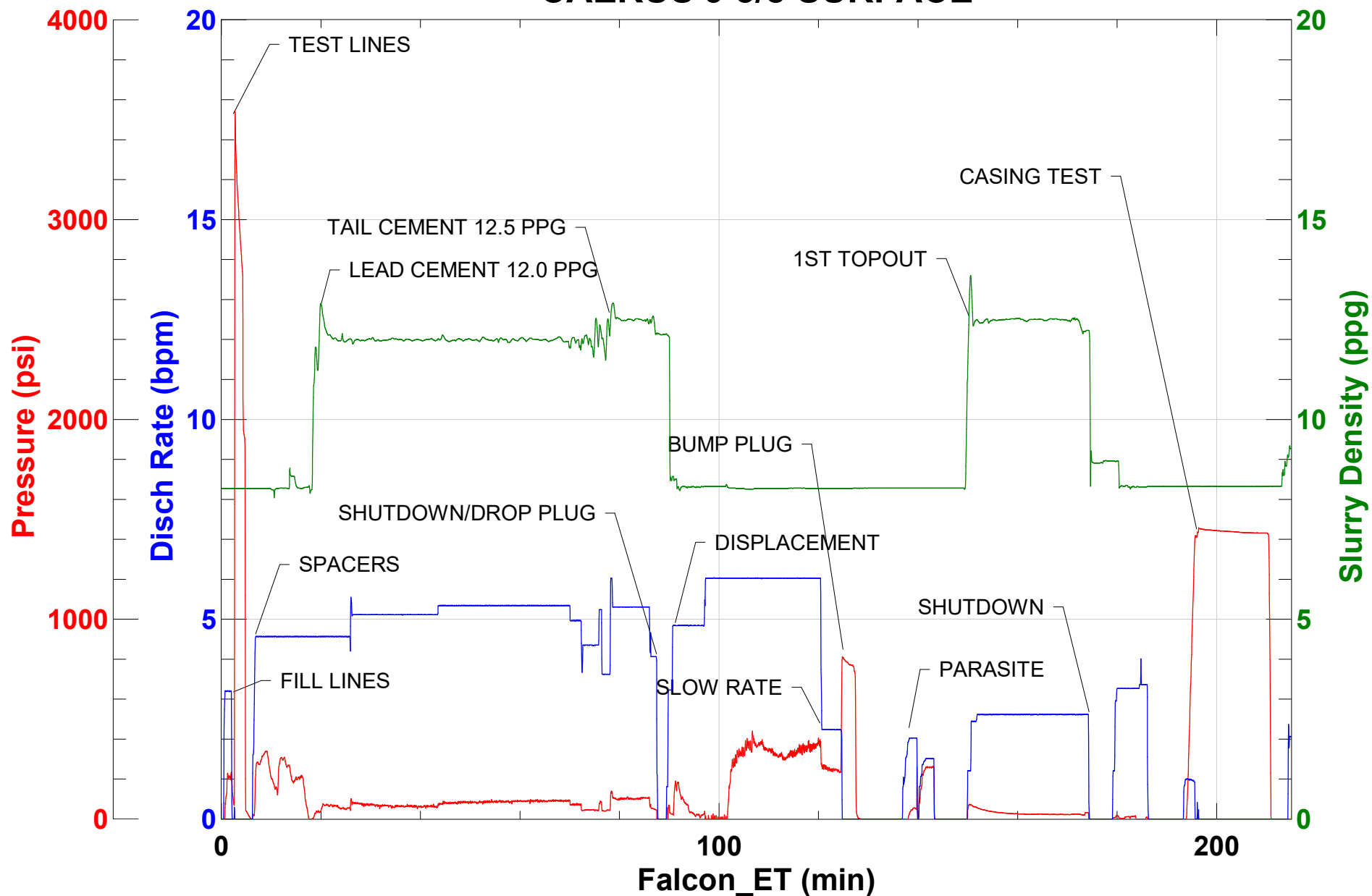
Customer Name CAERUS District RIFLE
 Well Name PUCKETT 13B-19 Supervisor JAVIER CASTILLO
 Job Type SURFACE Engineer GAGE PUTNAM



Seq No.	Start Date	Start Time	Event	Equipment	Density (lb/gal)	Pump Rate (bpm)	Pump Vol (bbls)	Pipe Pressure (psi)	Comments
1	1/6/2018	16:00	CALL OUT						ON LOCATION AT 22:00HRS
2	1/6/2018	17:15	MEETING						STEACS JOURNEY MANAGEMENT MEETING WITH BJ CREW
3	1/6/2018	17:30	LEAVE YARD						BJ CREW LEAVE YARD
4	1/6/2018	19:00	ARRIVE ON LOC.						ARRIVE ON LOCATION, RIG WAS RUNNING CASING
5	1/6/2018	19:30	MEETING						STEACS RIG UP SAFETY MEETING
6	1/6/2018	19:40	RIG UP						PUT UP TARPS AND HEAT ON CEMENT PUMP, RIG UP PUMPING IRON STAYING AWAY FROM RED ZONE, RIG UP WATER HOSES, RIG UP BULK HOSES
7	1/6/2018	21:30	COMPLETE						RIG UP COMPLETE UNTIL RIG LANDS CASING
8	1/7/2018	0:01	LAND CASING						RIG LANDED CASING
9	1/7/2018	0:30	MEETING						PRE-JOB SAFETY MEETING WITH RIG CREW
10	1/7/2018	1:29	SPACER		8.34	3.5	5	32	FILL LINES
11	1/7/2018	1:31	TEST LINES					3000	PRESSURE TEST PUMPING IRON
12	1/7/2018	1:35	SPACER		8.34	4.5	15	330	WATER SPACER
13	1/7/2018	1:37	SPACER		9	4.5	20	303	SODIUM SILICATE SPACER
14	1/7/2018	1:41	SPACER		8.34	4.5	20	87	WATER SPACER
15	1/7/2018	1:48	LEAD CEMENT		12				BEGIN LEAD CEMENT, 12.0 PPG, 2.53, 14.89
16	1/7/2018	1:58	LEAD CEMENT		12	5	50	63	50 BBLs PUMPED LEAD CEMENT
17	1/7/2018	2:07	LEAD CEMENT		12	5	50	110	100 BBLs PUMPED LEAD CEMENT
18	1/7/2018	2:17	LEAD CEMENT		12	5	50	130	150 BBLs PUMPED LEAD CEMENT
19	1/7/2018	2:26	LEAD CEMENT		12	5	50	133	200 BBLs PUMPED LEAD CEMENT
20	1/7/2018	2:35	LEAD CEMENT		12	5	50	129	250 BBLs PUMPED LEAD CEMENT
21	1/7/2018	2:45	LEAD CEMENT		12	4	67	73	317 BBLs PUMPED LEAD CEMENT
22	1/7/2018	2:46	TAIL CEMENT		12.5	5	64	150	TAIL CEMENT 64 BBLs/162 SKS, 12.5 PPG, 2.22, 12.62
23	1/7/2018	2:56	SHUTDOWN						SHUTDOWN, DROP PLUG, NO RETURNS THROUGHOUT CEMENT JOB
24	1/7/2018	2:58	DISPLACEMENT		8.34				PUMP DISPLACEMENT, 4 BBLs CEMENT ON TOP OF PLUG
25	1/7/2018	3:08	DISPLACEMENT		8.34	5.9	50	376	50 BBLs PUMPED DISPLACEMENT, CAUGHT CMT AT 60 BBLs
26	1/7/2018	3:16	DISPLACEMENT		8.34	5.9	50	343	100 BBLs PUMPED DISPLACEMENT
27	1/7/2018	3:25	DISPLACEMENT		8.34	5.9	50	393	150 BBLs PUMPED DISPLACEMENT
28	1/7/2018	3:29	DISPLACEMENT		8.34	5.9	40	260	180 BBLs PUMPED DISPLACEMENT
29	1/7/2018	3:30	SLOW RATE		8.34	2	10	190	SLOW RATE
30	1/7/2018	3:34	LAND PLUG					800	BUMP PLUG, NO RETURNS THROUGHOUT DISPLACEMENT
31	1/7/2018	3:39	CHECK FLOATS						FLOATS HELD, 0.5 BBL FLOW BACK
32	1/7/2018	3:45	PARASITE		8.34	2	10	260	PUMP SUGAR WATER THROUGH PARASITE LINE, BROKE AT 260 PSI AT 6 BBLs
33	1/7/2018	3:52	SHUTDOWN						GET READY FOR THE FIRST 200 SKS OF TOP OUT
34	1/7/2018	3:54	TOPOUT		12.5	3	79	65	PUMPED 200 SKS OF TOPOUT
35	1/7/2018	4:24	SHUTDOWN						NO RETURNS, SWITCH BACK TO CASING
36	1/7/2018	4:45	TEST CASING		8.34	1	2	1500	TEST CASING TO 1,500 PSI, HOLD FOR 15 MINUTES
37	1/7/2018	5:00	RELEASE PRESSURE					1480	PRESSURE DROPPED 20 PSI IN 15 MINUTES, GET READY FOR TOPOUT #2
38	1/7/2018	9:12	SPACER		8.9	1.5	2	65	PUMP 200 LBS CACL2
39	1/7/2018	9:13	SPACER		8.34	1.5	2	63	PUMP WATER BEHIND CACL2
40	1/7/2018	9:14	TOPOUT		12.5				BATCH TOPOUT CEMENT WHILE PUMPING SODIUM SILICATE
41	1/7/2018	9:16	TOPOUT		12.5	2	79	97	200 SKS/79 BBLs WITH SODIUM SILICATE
42	1/7/2018	9:51	SHUTDOWN						NO CEMENT TO SURFACE
43	1/7/2018	10:00							WENT TO HP 330 FOR MORE TOPOUT CEMENT
44	1/7/2018	11:51	TOPOUT		12.5	2.5	30	97	PUMPED 30 BBLs/76 SKS OF TOP OUT AND GOT CEMENT TO SURFACE
45	1/7/2018	11:57	SHUTDOWN						TOTAL TOPOUT CEMENT USED 476 SKS/188 BBLs WITH 420 GAL SODIUM SILICATE
46	1/7/2018	12:01	MEETING						RIG DOWN MEETING
47	1/7/2018	12:07	RIG DOWN						WASH LINES, PUMP AND PICKLE PUMP, RIG DOWN
48	1/7/2018	14:30	RIG DOWN						RIG DOWN COMPLETE
49	1/7/2018	14:40	MEETING						AAR AND JOURNEY MANAGEMENT MEETING WITH BJ CREW
50	1/7/2018	14:50	LEAVE LOCATION						CREW LEAVES LOCATION
51	1/7/2018	14:55							THANK YOU FOR YOUR BUSINESS FROM JAVIER AND CREW

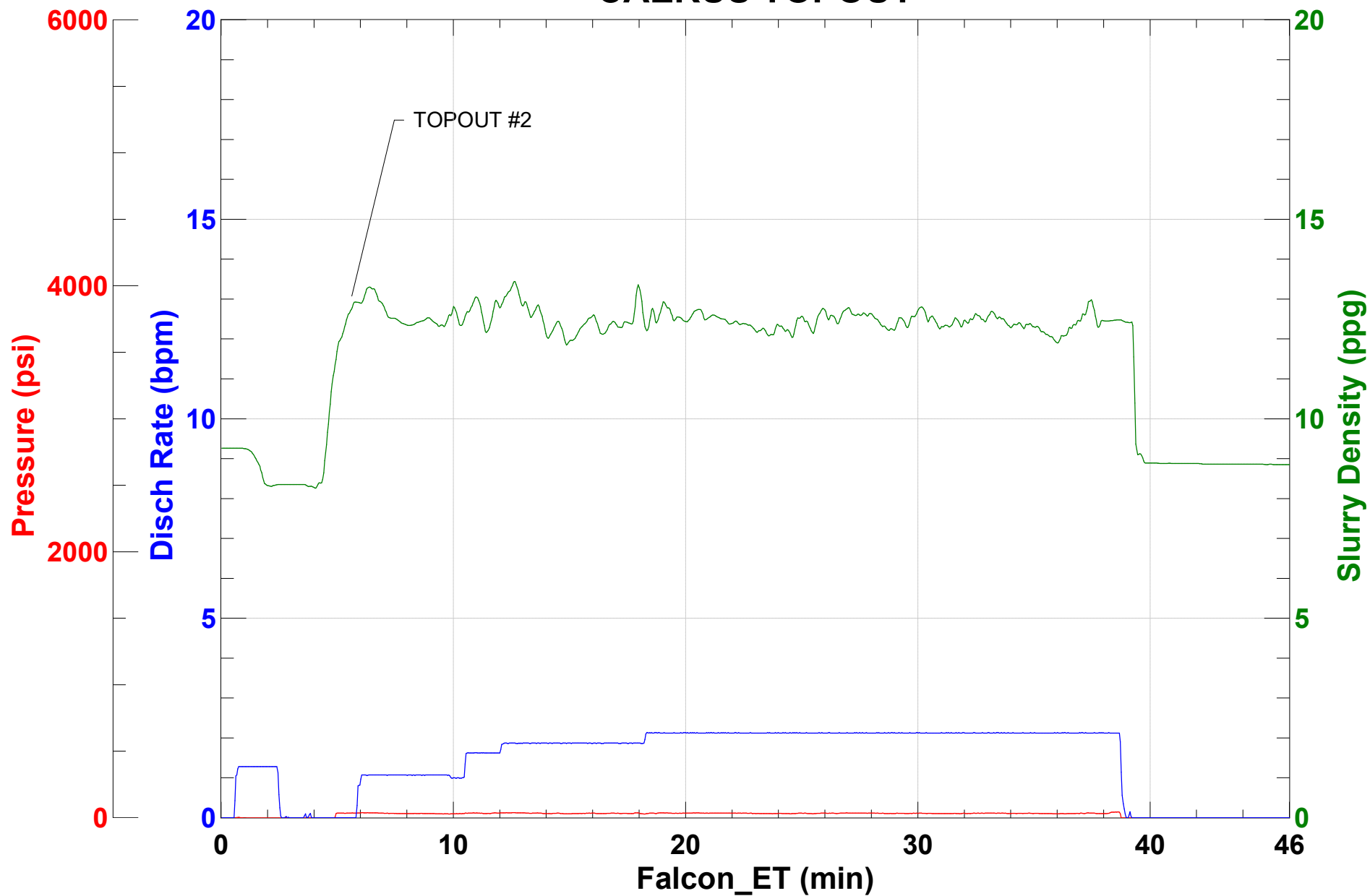


CAERUS 9 5/8 SURFACE





CAERUS TOPOUT





CAERUS TOPOUT

