



# Caerus

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## Surface Post Job Report

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Puckett 12D-26-697 05-045-23421

S:26 T:6S R:97W Garfield CO

Quote #:

I Execution #:



# Caerus

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

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

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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,

Zen Keith  
Field Engineer III | (307) 757-7178 | [Zen.Keith@BJServices.com](mailto:Zen.Keith@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

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# Cementing Treatment



Start Date	12/29/2017	Well	Puckett 12D-26-697
End Date	12/30/2017	County	GARFIELD
Client	CAERUS OPERATING, LLC	State/Province	CO
Client Field Rep		API	05-045-23421
Service Supervisor		Formation	
Field Ticket No.	Puckett 12B-26 Surface	Rig	H&P 330
District	Rifle, CO	Type of Job	Surface

## WELL GEOMETRY

Type	ID (in)	OD (in)	Wt. (lb/ft)	MD (ft)	Excess(%)	Grade	Thread
Previous Casing	19.50	20.00	52.73	100.00			
Open Hole	14.75			2,000.00	25.00		
Open Hole	14.75			2,545.00	0.00		
Casing	8.92	9.63	36.00	2,527.67			

Shoe Length (ft): 40

## HARDWARE

Bottom Plug Used?	No	Tool Type	
Bottom Plug Provided By		Tool Depth (ft)	
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)	3,520.00
Top Plug Size	9.625	Max Casing Pressure - Operated (psi)	2,816.00
Centralizers Used	Yes	Pipe Movement	None
Centralizers Quantity		Job Pumped Through	Manifold
Centralizers Type		Top Connection Thread	8rd
Landing Collar Depth (ft)	2,460	Top Connection Size	9 5/8

# 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	
Circulation Time (min)	2.00	10 min SGS	
Circulation Rate (bpm)	5.00	30 min SGS	
Circulation Volume (bbls)	600.00	Flare Prior to/during the Cement Job	No
Lost Circulation Prior to Cement Job	No	Gas Present	No
Mud Density In (ppg)	9.30	Gas Units	
Mud Density Out (ppg)	9.30		
PV Mud In	17		
YP Mud In	21		

## TEMPERATURE

Ambient Temperature (°F)	28.00	Slurry Cement Temperature (°F)	75.00
Mix Water Temperature (°F)	75.00	Flow Line Temperature (°F)	75.00

## 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	8.3300					20.0000
Spacer / Pre Flush / Flush	Sodium Silicate	10.0000					20.0000
Spacer / Pre Flush / Flush	Water	8.3300					20.0000
Lead Slurry	S100-12	12.0000	2.5329	14.89	704	1,774.0000	315.9000
Tail Slurry	S100-12	12.5000	2.2282	12.62	162	358.0000	63.7000
Displacement Final	Displacement	8.3300				0.0000	192.0000
Top Out Slurry	S100-12	12.5000	2.2282	12.62	21	45.0000	8.0000

# Cementing Treatment



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

# Cementing Treatment



## TREATMENT SUMMARY

Time	Fluid	Rate (bpm)	Fluid Vol. (bbls)	Pipe Pressure (psi)	Annulus Pressure (psi)	Comments
12/30/2017 8:36 AM	Water	4.00	20.00	150.00		
12/30/2017 8:45 AM	Sodium Silicate	4.00	20.00	153.00		
12/30/2017 8:49 AM	Water	4.00	20.00	151.00		
12/30/2017 8:54 AM	S100-12	4.00	315.90	65.00		
12/30/2017 10:04 AM	S100-12	3.00	63.70	64.00		
12/30/2017 10:24 AM	Displacement	5.50	190.20	620.00		
12/30/2017 3:25 PM	S100-12	2.00	8.00	11.00		Top Out Cement

	Min	Max	Avg
Pressure (psi)	50.00	600.00	100.00
Rate (bpm)	5.00	5.00	5.00

## DISPLACEMENT AND END OF JOB SUMMARY

Displaced By	BJ	Amount of Cement Returned/Reversed	0.00
Calculated Displacement Volume (bbls)	192.00	Method Used to Verify Returns	Visual
Actual Displacement Volume (bbls)	192.00	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	0.75
Bump Plug Pressure (psi)	580.00	Total Volume Pumped (bbls)	632.00
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 12D-26 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	Comments
1	12/29/2017	15:00	CALL OUT						ON LOCATION AT 03:00HRS 12/30/17
2	12/29/2017	15:45	MEETING						STEACS JOURNEY MANAGEMENT MEETING WITH BJ CREW
3	12/29/2017	16:00	LEAVE YARD						BJ CREW LEAVE YARD
4	12/29/2017	18:00	ARRIVE ON LOC.						ARRIVE ON LOCATION, RIG GETTING READY TO RUN CASING
5	12/29/2017	18:15	SPOT TRUCKS						SPOT TRUCKS ON LOCATION
6	12/29/2017	18:30	MEETING						STEACS RIG UP SAFETY MEETING WITH BJ CREW
7	12/29/2017	18:35	RIG UP						TARP AND HEAT CMT PUMP, RIG UP PUMPING IRON, BULK HOSES, AIR HOSES, WATER HOSES
8	12/29/2017	19:25	RIG UP						RIG UP COMPLETE TILL RIG LANDS CASING
9	12/29/2017	20:30	CASING						RIG STARTS RUNNING CASING
10	12/30/2017	5:30	CASING						RIG LANDED CASING
11	12/30/2017	5:45	CIRCULATE						RIG CIRCULATED WELL FOR 2HRS AT 5BPM
12	12/30/2017	8:15	MEETING						PRE-JOB SAFETY MEETING WITH RIG CREW
13	12/30/2017	8:36	SPACER		8.34	4	5	55	FILL LINES
14	12/30/2017	8:38	TEST LINES					3000	PRESSURE TEST PUMPING IRON
15	12/30/2017	8:40	SPACER		8.34	4	15	150	WATER SPACER
16	12/30/2017	8:45	SPACER		9	4	20	153	SODIUM SILICATE SPACER
17	12/30/2017	8:49	SPACER		8.34	4	20	151	WATER SPACER
18	12/30/2017	8:54	LEAD SLURRY		12	4	50	65	50BBLS PUMPED OF LEAD CEMENT/LEAD SLURRY 704SKS-316BBLS AT 12.0PPG, 2.53, 14.89
19	12/30/2017	9:19	LEAD SLURRY		12	4	50	59	100BBLS LEAD CEMENT PUMPED
20	12/30/2017	9:32	LEAD SLURRY		12	4	50	59	150BBLS LEAD CEMENT PUMPED
21	12/30/2017	9:45	LEAD SLURRY		12	4	50	57	200BBLS LEAD CEMENT PUMPED
22	12/30/2017	9:57	LEAD SLURRY		12	4	50	53	250BBLS LEAD CEMENT PUMPED
23	12/30/2017	10:04	LEAD SLURRY		12	3	66	36	316BBLS LEAD CEMENT PUMPED
24	12/30/2017	10:04	TAIL SLURRY		12.5	3	64	64	TAIL CEMENT 162SKS/64BBLS AT 12.5PPG, 2.22, 12.58
25	12/30/2017	10:22	SHUTDOWN						SHUTDOWN/DROP TOP PLUG, LOST RETURNS ON THE LAST 20BBLS OF TAIL CEMENT
26	12/30/2017	10:24	DISPLACEMENT		8.34	5	50	100	50BBLS PUMPED OF DISPLACEMENT
27	12/30/2017	10:47	DISPLACEMENT		8.34	5.5	50	358	100BBLS PUMPED OF DISPLACEMENT
28	12/30/2017	10:56	DISPLACEMENT		8.34	5.5	50	500	150BBLS PUMPED OF DISPLACEMENT
29	12/30/2017	11:01	DISPLACEMENT		8.34	5.5	32	620	182BBLS PUMPED OF DISPLACEMENT
30	12/30/2017	11:02	SLOW RATE		8.34	2	10	580	SLOW RATE
31	12/30/2017	11:06	LAND PLUG					1103	LAND TOP PLUG, NO RETURNS THROUGH OUT DISPLACEMENT
32	12/30/2017	11:11	CHECK FLOATS						FLOATS HELD WITH .75BBLS FLOW BACK
33	12/30/2017	11:15	PARASITE						SWITCH TO PARASITE LINE



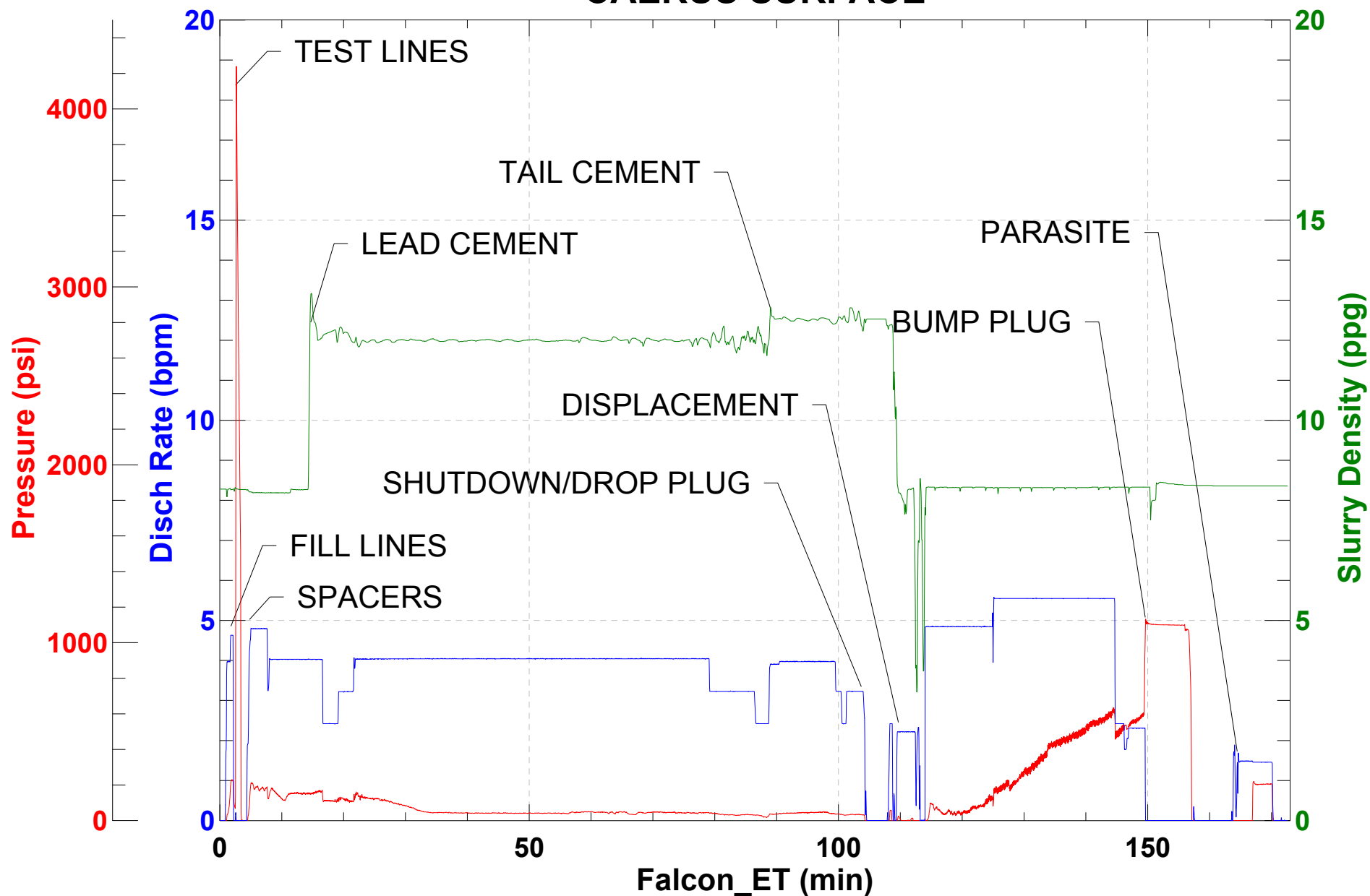
Customer Name	CAERUS	District	RIFLE
Well Name	PUCKETT 12D-26	Supervisor	JAVIER CASTILLO
Job Type	SURFACE	Engineer	GAGE PUTNAM

Seq No.	Start Date	Start Time	Event	Equipment	Density (lb/gal)	Pump Rate (bpm)	Pump Vol (bbls)	Pipe Pressure	Comments
34	12/30/2017	11:19	PARASITE		8.35	1.5	10	240	PUMP SUGAR WATER THROUGH PARASITE LINE, 6BBLs TO BREAK AT 240PSI
35	12/30/2017	11:26	SHUTDOWN						SHUTDOWN, GET READY FOR TOPOUT
36	12/30/2017	15:15	CaCl2		8.5	2	2	9	CaCl2 SPACER AHEAD
37	12/30/2017	15:17	SPACER		8.34	2	2	11	WATER SPACER
38	12/30/2017	15:25	TOPOUT		12.5	2	6	15	TOPOUT CEMENT WITH 50 GAL OF SODIUM SILICATE
39	12/30/2017	15:40	SHUTDOWN						SWITCH TO PARASITE LINE ON WELL PUCKETT 12C-26
40	12/30/2017	15:45	PARASITE		12.5	2	2	17	PUMPED 2 BBLs THROUGH PARASITE ON PUCKETT 12C-26
41	12/30/2017	15:55	SHUTDOWN						SHUTDOWN, WASH PUMP TO THE PIT
42	12/30/2017	16:00							TOTAL TOPOUT CEMENT USED 21 SKS/8 BBLs AT 12.5PPG AND 50 GAL OF SODIUM SILICATE
43	12/30/2017	16:15	MEETING						RIG DOWN MEETING
44	12/30/2017	16:20	RIG DOWN						RIG DOWN ALL BJ EQUIPMENT
45	12/30/2017	17:15							RIG DOWN COMPLETE
46	12/30/2017	17:20	MEETING						AAR MEETING WITH BJ CREW
47	12/30/2017	17:30	LEAVE LOCATION						BJ CREW LEAVE LOCATION
48	12/30/2017	17:31							THANK YOU FOR YOUR BUSINESS FROM JAVIER AND CREW





## CAERUS SURFACE





CAERUS TOPOUT

