



COGCC doc # 2597414

# Caerus

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## Surface Post Job Report

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**Puckett 12B-26 697 05-045-23404**

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	12/3/2017	Well	Puckett 12B-26-697
End Date	12/16/2017	County	GARFIELD
Client	CAERUS OPERATING, LLC	State/Province	CO
Client Field Rep		API	05-045-23404
Service Supervisor		Formation	
Field Ticket No.	Puckett 12B-26 Surface	Rig	
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			2,030.00	25.00		
Open Hole	14.75			2,530.00	0.00		
Casing	8.92	9.63	36.00	2,519.00			

Shoe Length (ft): 43

## HARDWARE

Bottom Plug Used?	No	Tool Type	Float Collar
Bottom Plug Provided By		Tool Depth (ft)	2,476.00
Bottom Plug Size		Max Tubing Pressure - Rated (psi)	0.00
Top Plug Used?	Yes	Max Tubing Pressure - Operated (psi)	0.00
Top Plug Provided By	Non BJ	Max Casing Pressure - Rated (psi)	3,520.00
Top Plug Size	9.625	Max Casing Pressure - Operated (psi)	2,000.00
Centralizers Used	Yes	Pipe Movement	None
Centralizers Quantity	5.00	Job Pumped Through	No Manifold
Centralizers Type	Bow	Top Connection Thread	8 ROUND
Landing Collar Depth (ft)	2,476	Top Connection Size	9.625

# Cementing Treatment



## CIRCULATION PRIOR TO JOB

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Well Circulated By	Rig	Solids Present at End of Circulation	No
Circulation Prior to Job	Yes	10 sec SGS	6.00
Circulation Time (min)	1.00	10 min SGS	17.00
Circulation Rate (bpm)	7.45	30 min SGS	32.00
Circulation Volume (bbls)	340.00	Flare Prior to/during the Cement Job	No
Lost Circulation Prior to Cement Job	Yes	Gas Present	No
Mud Density In (ppg)	8.75	Gas Units	0
Mud Density Out (ppg)	8.75		
PV Mud In	12		
PV Mud Out	12		
YP Mud In	11		
YP Mud Out	11		

## TEMPERATURE

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Ambient Temperature (°F)	34.00	Slurry Cement Temperature (°F)	
Mix Water Temperature (°F)	78.00	Flow Line Temperature (°F)	55.00

# Cementing Treatment



## 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	Sodium Silicate	10.0000					20.0000
Spacer / Pre Flush / Flush	Water	8.3300					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	190.2000
Top Out Slurry	S100-12	12.5000	2.2282	12.62	140	311.95	56.0000

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, ASTM TYPE III	100.00	PCT
Lead Slurry	S100-12	CEMENT EXTENDER, SODIUM METASILICATE, A-2	2.00	LBS/SK
Lead Slurry	S100-12	IntegraSeal CELLO	0.13	LBS/SK
Lead Slurry	S100-12	ACCELERATOR, SALT, CHLORIDE, CALCIUM, A-7P, PELLETS	2.00	LBS/SK
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	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, SODIUM METASILICATE, A-2	2.00	LBS/SK
Tail Slurry	S100-12	ACCELERATOR, SALT, CHLORIDE, CALCIUM, A-7P, PELLETS	2.00	LBS/SK

# Cementing Treatment



Tail Slurry	S100-12	CEMENT, ASTM TYPE III	100.00	PCT
Tail Slurry	S100-12	CEMENT EXTENDER, GYPSUM, A-10	5.00	BWOB
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, SODIUM METASILICATE, A-2	2.00	LBS/SK
Top Out Slurry	S100-12	ACCELERATOR, SALT, CHLORIDE, CALCIUM, A-7P, PELLETS	2.00	LBS/SK
Top Out Slurry	S100-12	CEMENT, ASTM TYPE III	100.00	PCT
Top Out Slurry	S100-12	CEMENT EXTENDER, GYPSUM, A-10	5.00	BWOB

## TREATMENT SUMMARY

Time	Fluid	Rate (bpm)	Fluid Vol. (bbls)	Pipe Pressure (psi)	Annulus Pressure (psi)	Comments
12/16/2017 2:41 PM	Water	3.00	20.00	22.00		
12/16/2017 2:44 PM	Sodium Silicate	5.50	20.00	195.00		
12/16/2017 2:48 PM	Water	5.50	20.00	110.00		
12/16/2017 2:55 PM	S100-12	2.50	315.90	74.00		
12/16/2017 3:51 PM	S100-12	2.00	63.70	74.00		
12/16/2017 4:14 PM	Displacement	3.00	190.20	125.00		
12/16/2017 9:21 PM	S100-12	3.50	56.00	101.00		140 SACKS

	Min	Max	Avg
Pressure (psi)	1.00	3,000.00	400.00
Rate (bpm)	1.00	8.20	5.50

# Cementing Treatment



## DISPLACEMENT AND END OF JOB SUMMARY

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Displaced By	BJ	Amount of Cement Returned/Reversed	0.00
Calculated Displacement Volume (bbls)	191.00	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)	474.00	Total Volume Pumped (bbls)	190.00
Were Returns Planned at Surface	Yes	Top Out Cement Spotted	No
Cement returns During Job	None	Lost Circulation During Cement Job	Yes

Customer Name CAERUS  
 Well Name PUCKETT 12B-26  
 Job Type Surface

District Rifle  
 Supervisor GLEN GILLIAM  
 Engineer ZEN KEITH



Seq No.	Start Date	Start Time	Event	Equipment	Density (lb/gal)	Pump Rate (bpm)	Pump Vol (bbls)	Pipe Pressure (psi)	Comments
1	12/15/2017	18:30	STEACS/ JOURNEY						STEACS MEETING WITH BJ CREW
2	12/15/2017	18:45	DEPART YARD						BJ CREW LEAVES YARD- RTS TIME OF 06:00 12-16-17, STAGE UP ON PREVIOUS PAD
3	12/16/2017	5:00	ARRIVE ON LOCATION						BJ CREW ARRIVES ON LOCATION WITH RTS OF 06:00
4	12/16/2017	5:15	STEACS MEETING						STEACS RIG UP WITH BJ CREW
5	12/16/2017	5:30	RIG UP						BJ CREW RIGS UP EQUIPMENT
6	12/16/2017	6:00	DOWN TIME						BJ CREW DOWN WHILE RIG RUNNING CASING
7	12/16/2017	12:45	PIPE ON BOTTOM						PIPE ON BOTTOM, RIG CIRCULATED 340 BBLs 7.45 BPM
8	12/16/2017	13:45	SAFETY MEETING						SAFETY MEETING WITH RIG CREW
9	12/16/2017	14:15	STAB HEAD						BJ CREW STABS HEAD
10	12/16/2017	14:20	BROKE CIRCULATION		8.33	3	5	22	FILL LINES WITH WATER
11	12/16/2017	14:25	TEST LINES						TEST LINES AT 3000 PSI
12	12/16/2017	14:41	FRESH WATER		8.33	3	15	20	FRESH WATER SPACER
13	12/16/2017	14:44	SODIUM SILICATE		11	5.5	20	195	SODIUM SILICATE SPACER 20 BBLs
14	12/16/2017	14:48	FRESH WATER		8.33	5.5	20	110	FRESH WATER SPACER 20 BBLs
15	12/16/2017	14:51	BATCH UP LEAD		12				BATCH UP LEAD CEMENT AT 12 PPG
16	12/16/2017	14:55	LEAD DOWN HOLE		12	2.5		74	LEAD CEMENT DOWN HOLE AT 12 PPG
17	12/16/2017	15:06	50 BBLs GONE		12	5.5	50	140	50 BBLs LEAD CEMENT GONE
18	12/16/2017	15:15	100 BBLs GONE		12	5.5	100	130	100 BBLs LEAD CEMENT GONE
19	12/16/2017	15:24	150 BBLs GONE		12	5.5	150	133	150 BBLs LEAD CEMENT GONE
20	12/16/2017	15:34	200 BBLs GONE		12	5.5	200	130	200 BBLs LEAD CEMENT GONE
21	12/16/2017	15:44	250 BBLs GONE		12	2	250	75	250 BBLs LEAD CEMENT GONE, 285 TOTAL
22	12/16/2017	15:50	BATCH UP TAIL		12.5				BATCH UP TAIL CEMENT AT 12.5 PPG
23	12/16/2017	15:51	TAIL DOWN HOLE		12.5	2		68	TAIL CEMENT DOWN HOLE AT 12.5 PPG
24	12/16/2017	16:05	50 BBLs GONE		12.5	4	50	100	50 BBLs TAIL CEMENT GONE, 64 BBLs TOTAL
25	12/16/2017	16:14	DROP PLUG						SHUT DOWN DROP TOP PLUG
26	12/16/2017	16:15	START DISPLACEMENT		12.5	3	2	125	START DISPLACEMENT 2 BBLs OF TAIL CEMENT ON TOP OF PLUG
27	12/16/2017	16:23	50 BBLs GONE		8.33	8	50	153	50 BBLs GONE DISPLACEMENT
28	12/16/2017	16:30	100 BBLs GONE		8.33	8	100	308	100 BBLs GONE DISPLACEMENT
29	12/16/2017	16:38	150 BBLs GONE		8.33	8	150	475	150 BBLs GONE DISPLACEMENT
30	12/16/2017	16:44	BUMP PLUG		8.33	2	188	474	190 BBLs GONE DISPLACEMENT BUMP PLUG FCP-474 PSI TOOK TO 1000 PSI
31	12/16/2017	16:46	CHECK FLOATS						FLOATS HELD .5 BBLs BACK
32	12/16/2017	16:55	PARASITE LINE		8.4	2	10	96	PUMPED 10 BBLs OF SUGAR WATER DOWN PARASITE LINE, BREAKOVER WAS 96 PSI
33	12/16/2017	17:00	WASH PUMP						BJ CREW WASHES PUMP AND LINES, DOWN FOR 4 HRS UNTIL 21:00
34	12/16/2017	18:00	DOWN TIME						BJ CREW DOWN WAITING UNTIL 21:00 TO START TOPOUT JOB
35	12/16/2017	20:30	STEACS						STEACS ON TOPOUT JOB
36	12/16/2017	20:45	RIG UP						BJ CREW RIGS UP EQUIPMENT
37	12/16/2017	21:15	CALCIUM CHLORIDE		8.5	2	2	20	PUMPED 2 BBLs OF 200IBS OF CALCIUM CHLORIDE WHILE PUMPING SODIUM SILICATE
38	12/16/2017	21:20	BATCH UP TOPOUT		12.5				BATCH UP TOPOUT CEMENT AT 12.5 PPG
39	12/16/2017	21:22	CEMENT DOWN HOLE		12.5	3.6		104	CEMENT DOWN HOLE AT 12.5 PPG
40	12/16/2017	21:35	50 BBLs GONE		12.5	3.5	50	101	50 BBLs CEMENT GONE
41	12/16/2017	21:40	CEMENT TO SURFACE				56		140 SKS, 56 BBLs OF CEMENT PUMPED FOR TOPOUT/ JOB COMPLETE
42	12/16/2017	21:50	RIG DOWN MEETING						STEACS WITH BJ CREW ON RIGGING DOWN
43	12/16/2017	21:55	RIG DOWN						BJ CREW RIGS DOWN EQUIPMENT
44	12/16/2017	23:00	AAR MEETING						AAR MEETING WITH BJ CREW
45	12/16/2017	23:15	STEACS/ JOURNEY						STEACS JOURNEY WITH BJ CREW
46	12/16/2017	23:30	DEPART LOCATION						BJ CREW DEPARTS LOCATION





