



Caerus

# Surface Post Job Report

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Puckett 11D-26-697 05-045-23410

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

Quote #:

| Execution #:

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# Caerus

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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** 3/22/2018 **Well** Puckett 11D-26-697  
**End Date** 3/22/2018 **County** GARFIELD  
**Client** CAERUS OPERATING, LLC **State/Province** CO  
**Client Field Rep** DOUG MCADAM **API** 05-045-23410  
**Service Supervisor** Shuan Clark **Formation**  
**Field Ticket No.** Surface **Rig** H&P 330  
**District** Rifle, CO **Type of Job** Surface

## WELL GEOMETRY

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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			2,542.00	0.00		
Casing	8.92	9.63	36.00	2,526.50			

**Shoe Length (ft):** 44

## HARDWARE

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**Bottom Plug Used?** No **Tool Type** Float Collar  
**Top Plug Used?** Yes **Tool Depth (ft)** 2,482.00  
**Top Plug Provided By** Non BJ **Max Casing Pressure - Rated (psi)** 6,080.00  
**Top Plug Size** 9.625 **Max Casing Pressure - Operated (psi)** 3,000.00  
**Centralizers Used** Yes **Pipe Movement** None  
**Centralizers Quantity** 4.00 **Job Pumped Through** No Manifold  
**Centralizers Type** Bow **Top Connection Thread** 8rd  
**Landing Collar Depth (ft)** 2,526 **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	No	10 sec SGS	6.00
Circulation Time (min)	60.00	10 min SGS	23.00
Circulation Rate (bpm)	6.00	30 min SGS	46.00
Circulation Volume (bbls)	360.00	Flare Prior to/during the Cement Job	No
Lost Circulation Prior to Cement Job	No	Gas Present	No
Mud Density In (ppg)	9.00	Gas Units	
PV Mud In	17		
YP Mud In	12		

## TEMPERATURE

Ambient Temperature (°F)	48.00	Slurry Cement Temperature (°F)	90.00
Mix Water Temperature (°F)	80.00	Flow Line Temperature (°F)	

## BJ FLUID DETAILS

Fluid Type	Fluid Name	Density (ppg)	Yield (Cu Ft/sk)	H2O Req. (gals/sk)	Planned Top of Fluid (Ft)	Length (Ft)	Vol (sk)	Vol (Cu Ft)	Vol (bbls)
Spacer / Pre Flush / Flush	Water 1	8.3300			0.00				20.0000
Spacer / Pre Flush / Flush	Sodium Silicate	10.0000			0.00				20.0000
Spacer / Pre Flush / Flush	Water 2	8.3300			0.00				20.0000
Lead Slurry	BJCem S100.3.01D	12.0000	2.5329	14.89	0.00		704	1,774.0000	315.9000
Tail Slurry	BJCem S100.3.01D	12.5000	2.2282	12.62	2,000.00		162	358.0000	63.7000
Displacement Final	Displacement	8.3300			0.00			0.0000	190.2000

# Cementing Treatment



Fluid Type	Fluid Name	Component	Concentration	UOM
Spacer / Pre Flush / Flush	Sodium Silicate	SILICATE, SODIUM, A-3L	21.0000	GPB
Lead Slurry	BJCem S100.3.01D	CEMENT, ASTM TYPE III	100.0000	PCT
Lead Slurry	BJCem S100.3.01D	ACCELERATOR, SALT, CHLORIDE, CALCIUM, A-7P, PELLETS	2.0000	LBS/SK
Lead Slurry	BJCem S100.3.01D	Foam Preventer, FP-25	0.3000	BWOB
Lead Slurry	BJCem S100.3.01D	CEMENT EXTENDER,SODIUM METASILICATE A-2 ANHYDROUS	2.0000	LBS/SK
Lead Slurry	BJCem S100.3.01D	CEMENT EXTENDER, GYPSUM, A-10	5.0000	BWOB
Lead Slurry	BJCem S100.3.01D	IntegraSeal CELLO	0.1300	LBS/SK
Tail Slurry	BJCem S100.3.01D	Foam Preventer, FP-25	0.3000	BWOB
Tail Slurry	BJCem S100.3.01D	ACCELERATOR, SALT, CHLORIDE, CALCIUM, A-7P, PELLETS	2.0000	LBS/SK
Tail Slurry	BJCem S100.3.01D	CEMENT EXTENDER, GYPSUM, A-10	5.0000	BWOB
Tail Slurry	BJCem S100.3.01D	CEMENT, ASTM TYPE III	100.0000	PCT
Tail Slurry	BJCem S100.3.01D	IntegraSeal CELLO	0.1300	LBS/SK
Tail Slurry	BJCem S100.3.01D	CEMENT EXTENDER,SODIUM METASILICATE A-2 ANHYDROUS	2.0000	LBS/SK

## TREATMENT SUMMARY

Time	Fluid	Rate (bpm)	Fluid Vol. (bbls)	Pipe Pressure (psi)	Annulus Pressure (psi)	Comments
3/22/2018 2:49 PM	Water 1	5.00	20.00	250.00		
3/22/2018 2:53 AM	Sodium Silicate	5.00	20.00	200.00		
3/22/2018 2:56 PM	Water 2	5.00	20.00	190.00		
3/22/2018 3:00 PM	BJCem S100.3.01D	5.00	315.90	150.00		
3/22/2018 4:00 PM	BJCem S100.3.01D	5.00	63.70	300.00		
3/22/2018 4:25 PM	Displacement	5.00	190.20	700.00		

	Min	Max	Avg
Pressure (psi)	0.00	3,000.00	500.00
Rate (bpm)	0.00	5.00	5.00

# Cementing Treatment



## DISPLACEMENT AND END OF JOB SUMMARY

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<b>Displaced By</b>	BJ	<b>Amount of Cement Returned/Reversed</b>	5.00
<b>Calculated Displacement Volume (bbls)</b>	192.00	<b>Method Used to Verify Returns</b>	Visual
<b>Actual Displacement Volume (bbls)</b>	190.00	<b>Amount of Spacer to Surface</b>	60.00
<b>Did Float Hold?</b>	Yes	<b>Pressure Left on Casing (psi)</b>	0.00
<b>Bump Plug</b>	Yes	<b>Amount Bled Back After Job</b>	2.00
<b>Bump Plug Pressure (psi)</b>	1,300.00	<b>Total Volume Pumped (bbls)</b>	633.00
<b>Were Returns Planned at Surface</b>	Yes	<b>Top Out Cement Spotted</b>	No
<b>Cement returns During Job</b>	Partial	<b>Lost Circulation During Cement Job</b>	Yes

## COMMENTS

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### Treatment Report

No returns at beginning of job, then full returns during spacer. Began to lose returns towards end of job, so picked up rate to 4.5 bpm to regain circulation and landed plug. 5 bbls of cement to surface, no fall back.

Customer Name CAERUS  
 Well Name PUCKETT 11D-26  
 Job Type SURFACE

District RIFLE  
 Supervisor SHAUN CLARK  
 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	3/22/2018	10:00	CALL OUT						BJ CREW CALLED OUT WITH A RTS OF 17:00 PM 12/31/17
2	3/22/2018	10:45							JOURNEY MANAGEMENT WITH BJ CREW
3	3/22/2018	11:00	LEAVE YARD						LEAVE DISTRICT
4	3/22/2018	13:00	ARRIVE ON LOC						ARRIVE ON LOCATION
5	3/22/2018	13:10							STEACS BREIFING WITH BJ CREW
6	3/22/2018	13:15	SPOT UNITS						SPOT TRUCKS
7	3/22/2018	13:30	RIG UP						RIG UP ALL EQUIPMENT
9	3/22/2018	13:00	PRIME UP						PIPE ON BOTTOM, RIG TO CIRCULATE
10	3/22/2018	14:00	SAFTEY MEETING						SAFTEY MEETING WITH BJ CREW, COMPANY, AND RIG CREW
11	3/22/2018	14:30	RIG UP						RIG UP CEMENT HEAD TO CASING
12	3/22/2018	14:45	BREAK CIRQLATION	Cement Pump Truck	8.33	2.5	5	200	BREAK CIRCULATION
13	3/22/2018	14:46	PRESSURE TEST	Cement Pump Truck	8.33			3000	TEST LINES 3000
14	3/22/2018	14:50	PUMP SPACER	Cement Pump Truck	8.33	4.5	20	245	FRESH WATER SPACER
15	3/22/2018	14:53	PUMP SPACER	Cement Pump Truck	10	4.5	20	280	SODIUM SILICATE SPACER
16	3/22/2018	14:55	PUMP SPACER	Cement Pump Truck	8.33	4.5	20	260	FRESH WATER SPACER
17	3/22/2018	15:00	PUMP LEAD	Cement Pump Truck	12		317		BATCH UP LEAD CEMENT @ 12.0 PPG ( 704 SXS Y- 2.53 MW-14.89)
18	3/22/2018	15:01	PUMP LEAD	Cement Pump Truck	12	4.5	10	234	LEAD CEMENT @ 12.0 PPG DOWNHOLE
19	3/22/2018	15:10	PUMP LEAD	Cement Pump Truck	12	4.5	50	110	50 BBLs GONE LEAD SLURRY
20	3/22/2018	15:21	PUMP LEAD	Cement Pump Truck	12	4.5	100	100	100 BBLs GONE LEAD SLURRY
21	3/22/2018	15:31	PUMP LEAD	Cement Pump Truck	12	4.5	150	103	150 BBLs GONE LEAD SLURRY
22	3/22/2018	15:41	PUMP LEAD	Cement Pump Truck	12	4.5	200	95	200 BBLs GONE LEAD SLURRY
23	3/22/2018	15:51	PUMP LEAD	Cement Pump Truck	12	4.5	250	200	250 BBLs GONE LEAD SLURRY
24	3/22/2018	16:00	PUMP LEAD	Cement Pump Truck	12	2.5	300	300	300 BBLs GONE LEAD SLURRY
25	3/22/2018	16:00	PUMP TAIL	Cement Pump Truck	12.5	4.5	64		BATCH UP TAIL SLURRY @ 12.5 PPG ( 162 SXS Y- 2.22 MW-12.62)
26	3/22/2018	16:01	PUMP TAIL	Cement Pump Truck	12.5	4.5	10	300	TAIL CEMENT @ 12.5 PPG DOWN HOLE
27	3/22/2018	16:14	PUMP TAIL	Cement Pump Truck	12.5	2.5	50	95	50 BBLs GONE TAIL SLURRY
28	3/22/2018	16:25	PUMP DISPLACEMENT	Cement Pump Truck	12.5	4.5	192		DROP TOP PLUG START DISPLACEMENT
29	3/22/2018	16:26	PUMP DISPLACEMENT	Cement Pump Truck	12.5	4.5	4	185	4 BBL 12.5 WASH UP ON PLUG
30	3/22/2018	16:34	PUMP DISPLACEMENT	Cement Pump Truck	8.33	3	50	200	50 BBLs GONE DISPLACEMENT
31	3/22/2018	16:51	PUMP DISPLACEMENT	Cement Pump Truck	8.33	3	100	450	100 BBLs GONE DISPLACEMENT
32	3/22/2018	17:06	PUMP DISPLACEMENT	Cement Pump Truck	8.33	3	150	733	150 BBLs GONE DISPLACEMENT
33	3/22/2018	17:11	PUMP DISPLACEMENT	Cement Pump Truck	8.33	4.5	180	900	RAISE RATE TO BUMP PLUG
34	3/22/2018	17:23	BUMP PLUG	Cement Pump Truck	8.33	4.5	190	1800	BUMP PLUG 1800 PSI FCP 1000
35	3/22/2018	17:25	CHECK FLOATS	Cement Pump Truck	8.33				BLEED PRESSURE / CHECK FLOATS 2 BBL BACK
36	3/22/2018	17:27	PUMP DOWN PARASITE		8.33				RIG UP PUMP TO PARASITE LINE
49	3/22/2018	17:30	END TREATMENT						CEMENT TO SFC 5 BBL
50	3/22/2018	18:13	WASH PUMP N LINES						SAFTEY MEETING WITH BJ CREW FOR RIG DOWN AND WASH UP
51	3/22/2018	18:45	SAFTEY MEETING						**END JOB **AAR W CM AND PRE-JOURNEY SAFTEY MEETING FOR RETURN TO BASE
52	3/22/2018	19:00	LEAVE LOCATION						LEAVE LOCATION



JobMaster Program Version 4.02C1

Job Number: 4057

Customer: Caerus

Well Name: Puckett 11D-26-697

