



COGCC doc # 2597346

Caerus

Surface Post Job Report

Puckett 13D-26-697 05-045-23418

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

Quote #:

I Execution #:



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,

Zen Keith
Field Engineer III | (307) 757-7178 | 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

Cementing Treatment



Start Date	1/16/2018	Well	Puckett 13D-26-697
End Date	1/17/2018	County	GARFIELD
Client	CAERUS OPERATING, LLC	State/Province	CO
Client Field Rep		API	05-045-23418
Service Supervisor	Paul Linn III	Formation	
Field Ticket No.	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			2,565.00	0.00		
Casing	8.92	9.63	36.00	2,548.00			

Shoe Length (ft): 40

HARDWARE

Bottom Plug Used?	Yes	Tool Type	Float Collar
Bottom Plug Provided By	Non BJ	Tool Depth (ft)	2,506.00
Bottom Plug Size	9.625	Max Tubing Pressure - Rated (psi)	
Top Plug Used?	No	Max Tubing Pressure - Operated (psi)	
Top Plug Provided By		Max Casing Pressure - Rated (psi)	
Top Plug Size		Max Casing Pressure - Operated (psi)	
Centralizers Used	Yes	Pipe Movement	None
Centralizers Quantity	7.00	Job Pumped Through	Manifold
Centralizers Type	Bow	Top Connection Thread	8 RND.
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	11.00
Circulation Time (min)	45.00	10 min SGS	19.00
Circulation Rate (bpm)	8.50	30 min SGS	28.00
Circulation Volume (bbls)	382.50	Flare Prior to/during the Cement Job	No
Lost Circulation Prior to Cement Job	Yes	Gas Present	No
Mud Density In (ppg)	9.10	Gas Units	0
PV Mud In	19		
YP Mud In	13		

TEMPERATURE

Ambient Temperature (°F)	13.00	Slurry Cement Temperature (°F)	56.00
Mix Water Temperature (°F)	58.00	Flow Line Temperature (°F)	76.00

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 Flush	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	190.2000
Top Out Slurry	S100-12	12.5000	2.2282	12.62	125	278.525	49.6053

Cementing Treatment



Fluid Type	Fluid Name	Component	Concentration	UOM
Spacer / Pre Flush / Flush	Sodium Silicate Flush	SILICATE, SODIUM, A-3L	21.0000	GPB
Lead Slurry	S100-12	IntegraSeal CELLO	0.1300	LBS/SK
Lead Slurry	S100-12	CEMENT EXTENDER, SODIUM METASILICATE, A-2	2.0000	LBS/SK
Lead Slurry	S100-12	CEMENT, ASTM TYPE III	100.0000	PCT
Lead Slurry	S100-12	ACCELERATOR, SALT, CHLORIDE, CALCIUM, A-7P, PELLETS	2.0000	LBS/SK
Lead Slurry	S100-12	CEMENT EXTENDER, GYPSUM, A-10	5.0000	BWOB
Lead Slurry	S100-12	Foam Preventer, FP-25	0.3000	BWOB
Tail Slurry	S100-12	CEMENT, ASTM TYPE III	100.0000	PCT
Tail Slurry	S100-12	ACCELERATOR, SALT, CHLORIDE, CALCIUM, A-7P, PELLETS	2.0000	LBS/SK
Tail Slurry	S100-12	Foam Preventer, FP-25	0.3000	BWOB
Tail Slurry	S100-12	IntegraSeal CELLO	0.1300	LBS/SK
Tail Slurry	S100-12	CEMENT EXTENDER, SODIUM METASILICATE, A-2	2.0000	LBS/SK
Tail Slurry	S100-12	CEMENT EXTENDER, GYPSUM, A-10	5.0000	BWOB
Top Out Slurry	S100-12	CEMENT, ASTM TYPE III	100.0000	PCT
Top Out Slurry	S100-12	ACCELERATOR, SALT, CHLORIDE, CALCIUM, A-7P, PELLETS	2.0000	LBS/SK
Top Out Slurry	S100-12	Foam Preventer, FP-25	0.3000	BWOB
Top Out Slurry	S100-12	IntegraSeal CELLO	0.1300	LBS/SK
Top Out Slurry	S100-12	CEMENT EXTENDER, SODIUM METASILICATE, A-2	2.0000	LBS/SK
Top Out Slurry	S100-12	CEMENT EXTENDER, GYPSUM, A-10	5.0000	BWOB

Cementing Treatment



TREATMENT SUMMARY

Time	Fluid	Rate (bpm)	Fluid Vol. (bbls)	Pipe Pressure (psi)
1/16/2018 5:58 AM	Water	4.50	20.00	250.00
1/16/2018 6:05 AM	Sodium Silicate Flush	4.50	20.00	226.00
1/16/2018 6:11 AM	Water	4.50	20.00	184.00
1/16/2018 6:17 AM	S100-12	4.00	317.22	101.00
1/16/2018 7:26 AM	S100-12	4.50	64.34	172.00
1/16/2018 7:42 AM	Displacement	3.50	193.71	36.00
1/17/2018 12:28 PM	S100-12	2.50	49.61	67.00

	Min	Max	Avg
Pressure (psi)	36.00	949.00	202.00
Rate (bpm)	2.00	6.00	5.00

DISPLACEMENT AND END OF JOB SUMMARY

Displaced By	BJ	Amount of Cement Returned/Reversed	0.00
Calculated Displacement Volume (bbls)	193.71	Method Used to Verify Returns	Visual
Actual Displacement Volume (bbls)	194.00	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)	387.00	Total Volume Pumped (bbls)	621.20
Were Returns Planned at Surface	Yes	Top Out Cement Spotted	Yes
Cement returns During Job	None	Lost Circulation During Cement Job	No

Customer Name CAERUS
 Well Name PUCKETT 13D-26
 Job Type Surface

District Rifle
 Supervisor ANDREW LINN
 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	1/16/2018	16:45	CALL OUT						CALL OUT ON LOCATION TIME OF 06:00
2	1/16/2018	19:00	STEACS						PRE CONVOY SAFETY MEETING
3	1/16/2018	19:25	LEAVE RIFLE YARD						LEAVE RIFLE YARD FOR H&P 330. PUMP ON LOCATION.
4	1/16/2018	21:23	ARRIVE ON LOCATION						ARRIVE ON LOCATION. RIG CREW JUST FINISHED PULLING DRILL PIPE
5	1/16/2018	21:27	SITE ASSESEMENT						SITE ASSESEMENT
6	1/16/2018	21:33	STEACS						PRE RIG UP SAFETY MEETING
7	1/16/2018	21:40	RIG UP						SPOT IN EQUIPMENT AND RIG UP ALL GROUND EQUIPMENT
8	1/17/2018	5:12	STEACS						PRE JOB SAFETY MEETING WITH RIG CREW AND ALL BJ SERVICES CEMENT CREW
9	1/17/2018	5:28	RIG UP						LOAD PLUG IN PLUG CONTAINER, STAB PLUG CONTAINER, AND HOOK UP LINES TO PLUG CONTAINER
10	1/17/2018	5:48	FILL LINES		8.33	2	5	126	FILL LINES WITH 5 BBLS. OF FRESH WATER AT 2 BBLS./MIN.
11	1/17/2018	5:52	PRESSURE TEST					3631	PRESSURE TEST TO 3631 PSI. PRESSURE HELD
12	1/17/2018	5:58	FRESH WATER SPACER		8.33	4.5	20	242	REMAINING 15 BBLS. OF FRESH WATER FOR A TOTAL OF 20 BBLS. OF FRESH WATER
13	1/17/2018	6:04	SODIUM SILICATE SPACER			4.5	20	226	SODIUM SILICATE SPACER 50/50
14	1/17/2018	6:10	FRESH WATER SPACER		8.33	4.5	20	164	FRESH WATER SPACER
15	1/17/2018	6:17	LEAD CEMENT		12	4	5	101	LEAD CEMENT 12 PPG. 704 SKS. 2.53 CUFT./SK. 14.89 GAL./SK. FOR 317.22 BBLS OF LEAD REQUIRING A TOTAL OF 249.58 BBLS. OF MIX WATER. WEIGHT VERIFIED WITH MUD SCALES. CALCULATED TOP OF LEAD IS 0 FT. CALCULATED HEIGHT OF LEAD IS 2044.05 FT.
16	1/17/2018	6:19	LEAD CEMENT		12	5	10	176	PUMPED LEAD CEMENT
17	1/17/2018	6:27	LEAD CEMENT		12	5	50	156	PUMPED LEAD CEMENT
18	1/17/2018	6:37	LEAD CEMENT		12	5	100	162	PUMPED LEAD CEMENT
19	1/17/2018	6:47	LEAD CEMENT		12	5	150	156	PUMPED LEAD CEMENT
20	1/17/2018	6:57	LEAD CEMENT		12	5	200	141	PUMPED LEAD CEMENT
21	1/17/2018	7:08	LEAD CEMENT		12	5	250	147	PUMPED LEAD CEMENT
22	1/17/2018	7:10	LEAD CEMENT		12	2.5	255	54	PUMPED LEAD CEMENT
23	1/17/2018	7:24	LEAD CEMENT		12	2.5	297	61	FINISHED PUMPING LEAD CEMENT WITH 297 BBLS. AWAY.

Customer Name CAERUS
 Well Name PUCKETT 13D-26
 Job Type Surface

District Rifle
 Supervisor ANDREW LINN
 Engineer GAGE PUTNAM



Seq No.	Start Date	Start Time	Event	Equipment	Density (lb/gal)	Pump Rate (bpm)	Pump Vol (bbls)	Pipe Pressure (psi)	Comments
24	1/17/2018	7:26	TAIL CEMENT		12.5	2.5	15	57	TAIL CEMENT 12.5 PPG. 162 SKS. 2.23 CUFT./SK. 12.62 GAL./SK. FOR 64.34 BBLS OF TAIL REQUIRING A TOTAL OF 48.68 BBLS. OF MIX WATER. WEIGHT VERIFIED WITH MUD SCALES. CALCULATED TOP OF TAIL IS 2044.05 FT. CALCULATED HEIGHT OF TAIL IS 503.95 FT.
25	1/17/2018	7:32	TAIL CEMENT		12.5	3.5	20	61	PUMPED TAIL CEMENT
26	1/17/2018	7:37	TAIL CEMENT		12.5	3.5	50	89	PUMPED TAIL CEMENT
27	1/17/2018	7:40	TAIL CEMENT		12.5	3.5	54	78	FINISHED PUMPING TAIL CEMENT WITH 54 BBLS. AWAY.
28	1/17/2018	7:40	SHUT DOWN						SHUT DOWN
29	1/17/2018	7:41	DROP PLUG						DROP TOP PLUG VERIFIED BY COMPANY MAN
30	1/17/2018	7:43	DISPLACEMENT		8.33	6	10	54	FRESH WATER DISPLACEMENT WITH THE FIRST 4 BBLS. OF DISPLACEMENT BEING TAIL CEMENT AT 12.5 PPG.
31	1/17/2018	7:48	DISPLACEMENT		8.33	5	20	112	FRESH WATER DISPLACEMENT
32	1/17/2018	7:52	DISPLACEMENT		8.33	6	40	123	FRESH WATER DISPLACEMENT
33	1/17/2018	7:54	DISPLACEMENT		8.33	6	50	113	FRESH WATER DISPLACEMENT
34	1/17/2018	8:02	DISPLACEMENT		8.33	6	100	156	FRESH WATER DISPLACEMENT
35	1/17/2018	8:12	DISPLACEMENT		8.33	6	150	425	FRESH WATER DISPLACEMENT
36	1/17/2018	8:19	DISPLACEMENT		8.33	6	183	591	FRESH WATER DISPLACEMENT
37	1/17/2018	8:20	DISPLACEMENT		8.33	2	184	367	FRESH WATER DISPLACEMENT
38	1/17/2018	8:21	DISPLACEMENT		8.33	2	193	387	FRESH WATER DISPLACEMENT
39	1/17/2018	8:21	LAND PLUG					949	LANDED PLUG AT 387 PSI. TOOK TO 949 PSI.
40	1/17/2018	8:25	CHECK FLOATS						CHECK FLOATS FLOATS HELD 1/2 BBL. BACK
41	1/17/2018	8:27	RIG UP TO PARASITE STRING						BREAK OFF OF PLUG CONTAINER AND RIG UP TO PARASITE STRING
42	1/17/2018	8:31	PUMP ON PARASITE STRING		8.33	2	1	0	PUMP ON PARASITE STRING
43	1/17/2018	8:34	BREAK CIRCULATION		8.33	2	6.5	396	BREAK CIRCULATION ON PARASITE STING WITH 6.5 BBLS. AWAY AT 396 PSI.
44	1/17/2018	8:36	SHUT DOWN						SHUT DOWN
45	1/17/2018	8:36	WAIT 4 HOURS						WAIT 4 HOUR TO TOP OUT
46	1/17/2018	12:00	STEACS						PRE TOP OUT SAFETY MEETING WITH RIG CREW AND ALL BJ SERVICES CEMENT CREW
47	1/17/2018	12:15	RIG UP						RIG UP TO TOP OUT
48	1/17/2018	12:18	CALCIUM CHLORIDE						200 LBS. OF CALCIUM CHLORIDE IN 2.5 BBLS. OF FRESH WATER

Customer Name CAERUS
 Well Name PUCKETT 13D-26
 Job Type Surface

District Rifle
 Supervisor ANDREW LINN
 Engineer GAGE PUTNAM



Seq No.	Start Date	Start Time	Event	Equipment	Density (lb/gal)	Pump Rate (bpm)	Pump Vol (bbls)	Pipe Pressure (psi)	Comments
49	1/17/2018	12:22	SODIUM SILICATE SPACER						SODIUM SILICATE SPACER
50	1/17/2018	12:28	TOP OUT		12.5	2.5	10	67	PUMP TOP OUT CEMENT 125 SKS. 2.23 CUFT./SK. 12.62 GAL./SK. FOR 49.65 BBLs OF TOP OUT REQUIRING A TOTAL OF 37.56 BBLs. OF MIX WATER. WEIGHT VERIFIED WITH MUD SCALES.
51	1/17/2018	12:58	TOP OUT		12.5	2.5	44	55	FINISHED PUMPING TOP OUT CEMENT WITH 48 BBLs. AWAY.
52	1/17/2018	12:58	CEMENT TO SURFACE						CEMENT TO SURFSCE VERIFIED BY COMPANY MAN
53	1/17/2018	12:59	SHUT DOWN						SHUT DOWN
54	1/17/2018	13:08	PUMPED ON LAST PARASITE		12.5	2	4	25	PUMPED 4 BBLs. OF 12.5 PPG. TOP OUT DOWN LAST PARASITE STING
55	1/17/2018	13:12	STEACS						PRE RIG DOWN SAFETY MEETING WITH ALL BJ SERVICES CEMENT CREW.
56	1/17/2018	13:22	WASH PUMPS AND LINES						WASH PUMPS AND LINES TO 3- SIDED TANK
57	1/17/2018	13:22	BLOW DOWN SILO						BLEW DOWN SILO 652 INTO SILO 11 AND UNLOADED THE REST OF TOP OUT FROM BULK TRUCK
58	1/17/2018	13:45	RIG DOWN						RIG DOWN ALL EQUIPMENT
59	1/17/2018	14:10	AAR						AFTER ACTION REVIEW
60	1/17/2018	14:17	STEACS						PRE CONVOY SAFETY MEETING
61	1/17/2018	14:30	DEPART LOCATION						DEPART FROM H&P 330 FOR RIFLE YARD. THANK YOU FOR USING BJ SERVICES, ANDREW LINN AND CREW.



