



COGCC doc #2597397

Caerus

Surface Post Job Report

Puckett 11B-26 697 05-045-23395

S:23 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,

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	11/26/2017	Well	Puckett 11B-26 697
End Date	11/27/2017	County	GARFIELD
Client	CAERUS OPERATING, LLC	State/Province	CO
Client Field Rep	Doug McAdams	API	05-045-23395
Service Supervisor	James Roush	Formation	-
Field Ticket No.	FT-01286-M5G4K30202-68900	Rig	H&P 330
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			
Open Hole	14.75			2,000.00	2,000.00	25.00		
Open Hole	14.75			2,558.00	2,558.00			
Casing	8.92	9.63	36.00	2,521.00	2,521.00			

Shoe Length (ft): 43

HARDWARE

Bottom Plug Used?	No	Tool Type	Float Collar
Bottom Plug Provided By	-	Tool Depth (ft)	2,477.00
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)	3,520.00
Top Plug Size	9.625	Max Casing Pressure - Operated (psi)	2,000.00
Centralizers Used	Yes	Pipe Movement	None
Centralizers Quantity		Job Pumped Through	No Manifold
Centralizers Type	Bow	Top Connection Thread	8rd
Landing Collar Depth (ft)	2,477	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	4.00
Circulation Time (min)	60.00	10 min SGS	6.00
Circulation Rate (bpm)	7.00	30 min SGS	10.00
Circulation Volume (bbls)	192.00	Flare Prior to/during the Cement Job	Yes
Lost Circulation Prior to Cement Job	Yes	Gas Present	No
Mud Density In (ppg)	8.34	Gas Units	0
Mud Density Out (ppg)	-		
PV Mud In	9		
PV Mud Out	-		
YP Mud In	6		
YP Mud Out	-		

TEMPERATURE

Ambient Temperature (°F)	60.00	Slurry Cement Temperature (°F)	76.00
Mix Water Temperature (°F)	70.00	Flow Line Temperature (°F)	64.00

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	Water	8.3300					20.0000
Spacer / Pre Flush / Flush	Sodium Silicate	10.0000					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
Top-Out / Scavenger Slurry	S100-12	12.5000	2.2282		81	179.6700	32.0000
Displacement Final	Displacement	8.3300				0.0000	190.2000

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, ASTM TYPE III	100.00	PCT
Lead Slurry	S100-12	CEMENT EXTENDER, GYPSUM, A-10	5.00	BWOB
Lead Slurry	S100-12	ACCELERATOR, SALT, CHLORIDE, CALCIUM, A-7P, PELLETS	2.00	LBS/SK
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	IntegraSeal CELLO	0.13	LBS/SK
Tail Slurry	S100-12	CEMENT EXTENDER, GYPSUM, A-10	5.00	BWOB
Tail Slurry	S100-12	CEMENT, ASTM TYPE III	100.00	PCT
Tail Slurry	S100-12	CEMENT EXTENDER, SODIUM METASILICATE, A-2	2.00	LBS/SK
Tail Slurry	S100-12	IntegraSeal CELLO	0.13	LBS/SK
Tail Slurry	S100-12	ACCELERATOR, SALT, CHLORIDE, CALCIUM, A-7P, PELLETS	2.00	LBS/SK
Tail Slurry	S100-12	FP-25, Dry Foam Preventer (BJS Only)	0.30	BWOB
Top-Out / Scavenger Slurry	S100-12	CEMENT, ASTM TYPE III	100.00	PCT
Top-Out / Scavenger Slurry	S100-12	CEMENT EXTENDER, GYPSUM, A-10	5.00	BWOB
Top-Out / Scavenger Slurry	S100-12	CEMENT EXTENDER, SODIUM METASILICATE, A-2	2.00	LBS/SK
Top-Out / Scavenger Slurry	S100-12	IntegraSeal CELLO	0.13	LBS/SK
Top-Out / Scavenger Slurry	S100-12	ACCELERATOR, SALT, CHLORIDE, CALCIUM, A-7P, PELLETS	2.00	LBS/SK
Top-Out / Scavenger 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)	Comments
11/26/2017 5:41 PM	Water	5.00	20.00	102.00	
11/26/2017 5:44 PM	Sodium Silicate	5.00	20.00	146.00	
11/26/2017 5:48 PM	Water	5.00	20.00	136.00	
11/26/2017 5:53 PM	S100-12	5.50	315.90	116.00	
11/26/2017 6:50 PM	S100-12	5.00	63.70	76.00	
11/26/2017 7:01 PM	Displacement	5.00	190.20	65.00	
11/27/2017 1:42 AM	S100-12	3.50	32.00	87.00	Topout Cement

	Min	Max	Avg
Pressure (psi)	65.00	146.00	104.00
Rate (bpm)	3.50	5.50	4.86

DISPLACEMENT AND END OF JOB SUMMARY

Displaced By	BJ	Amount of Cement Returned/Reversed	1.00
Calculated Displacement Volume (bbls)	191.50	Method Used to Verify Returns	Visual
Actual Displacement Volume (bbls)	191.50	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)	678.00	Total Volume Pumped (bbls)	632.50
Were Returns Planned at Surface	No	Top Out Cement Spotted	Yes
Cement returns During Job	None	Lost Circulation During Cement Job	Yes

Customer Name CAERUS District Rifle
 Well Name PUCKETT 11B-26 Supervisor JAMES ROUSH
 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	11/26/2017	10:00	CREW CALLOUT						BJ CREW CALLED WITH A RTS OF 17:00 11/26/17
2	11/26/2017	11:15	J.M.						JOURNEY MANAGEMENT MEETING WITH BJ CREW
3	11/26/2017	13:00	ARRIVE LOCATION						ARRIVE ON LOCATION
4	11/26/2017	13:10	STEACS						STEACS BRIEFNG WITH CREW, SPOT PUMP TRUCK
5	11/26/2017	13:25	RIG UP						RIG UP EQUIPMENT
6	11/26/2017	14:30	ON STANDBY						BJ ON STANDBY RIG RUNNING PIPE
7	11/26/2017	16:30	PIPE ON BOTTOM						PIPE ON BOTTOM
8	11/26/2017	17:00	SAFETY MEETING						SAFETY MEETING WITH RIG CREW AND COMPANY MAN
9	11/26/2017	17:28	RIG UP						RIG UP CEMENT HEAD TO CASING
10	11/26/2017	17:36	FILL LINES		8.34	4	5	48	BREAK CIRCULATION
11	11/26/2017	17:38	TEST LINES						TEST LINES 3000 PSI
12	11/26/2017	17:41	FW SPACER		8.34	5	15	102	FW SPACER
13	11/26/2017	17:44	SODIUM SILICATE		8.55	5	20	146	SODIUM SILICATE SPACER
14	11/26/2017	17:48	FW SPACER		8.34	5	20	136	FW SPACER
15	11/26/2017	17:52	LEAD CEMENT		12				BATCH UP LEAD CEMENT @ 12.0 PPG
16	11/26/2017	17:53	LEAD CEMENT		12	5.5	317	116	LEAD CEMENT DOWNHOLE (704 SXS Y-2.53 MW-14.89)
17	11/26/2017	18:04	LEAD CEMENT		12	5.5		111	50 BBLs GONE LEAD SLURRY
18	11/26/2017	18:12	LEAD CEMENT		12	6		143	100 BBLs GONE LEAD SLURRY
19	11/26/2017	18:21	LEAD CEMENT		12	6		117	150 BBLs GONE LEAD SLURRY
20	11/26/2017	18:29	LEAD CEMENT		12	6		126	200 BBLs GONE LEAD SLURRY
21	11/26/2017	18:38	LEAD CEMENT		12	6		130	250 BBLs GONE LEAD SLURRY
22	11/26/2017	18:47	LEAD CEMENT		12	6		115	300 BBLs GONE LEAD SLURRY
23	11/26/2017	18:49	BATCH UP TAIL CEMENT		12.5				BATCH UP TAIL SLURRY @ 12.5 PPG
24	11/26/2017	18:50	TAIL CEMENT		12.5	5		76	TAIL SLURRY @ 12.5 PPG (162 SXS Y-2.22 MW-12.58)
25	11/26/2017	18:57	TAIL CEMENT		12.5	4.5		59	50 BBLs GONE TAIL SLURRY
26	11/26/2017	18:59	SHUTDOWN						SHUTDOWN DROP TOP PLUG
27	11/26/2017	19:01	DISPLACEMENT		12.5	2	4	65	PUMP 4 BBLs TAIL CEMENT ON TOP OF PLUG
28	11/26/2017	19:02	DISPLACEMENT		8.34	6	177.5	110	START FW DISPLACEMENT
29	11/26/2017	19:11	DISPLACEMENT		8.34	6		53	50 BBLs GONE DISPLACEMENT
30	11/26/2017	19:21	DISPLACEMENT		8.34	6		224	100 BBLs GONE DISPLACEMENT
31	11/26/2017	19:30	DISPLACEMENT		8.34	6		321	150 BBLs GONE DISPLACEMENT
32	11/26/2017	19:36	SLOW RATE		8.34	2		144	SLOW RATE TO BUMP PLUG
33	11/26/2017	19:41	BUMP PLUG		8.34			678	BUMP PLUG TO 678 PSI
34	11/26/2017	19:45	BLEED PRESSURE						BLEED PRESSURE CHECK FLOATS 0.5 BBLs BACK
35	11/26/2017	19:52	PUMP PARASITE		8.34	1	10	151	PUMP 10 BBLs SUGAR WATER DOWN PARASITE LINE
36	11/26/2017	20:15	WASH PUMP						WASH PUMP AND BJ ON STANDBY
37	11/27/2017	1:00	RIG UP						RIG UP IN CELLAR TO DO TOP OUT JOB
38	11/27/2017	1:36	CACL		9.2	3	3	44	PUMP CACL WATER AHEAD
39	11/27/2017	1:37	FW SPACER		8.34	2	3	36	FW SPACER
40	11/27/2017	1:38	SODIUM SILICATE						START INJECTING SODIUM SILICATE INTO ANNULUS
41	11/27/2017	1:40	BATCH UP CEMENT		12.5				BATCH UP SLURRY @ 12.5 PPG
42	11/27/2017	1:42	TOP OUT SLURRY		12.5	3.5	32	87	TOP OUT CEMENT DOWNHOLE (81 SXS Y-2.22 MW- 12.58)
43	11/27/2017	1:52	CEMENT TO SURFACE						CEMENT TO SURFACE
44	11/27/2017	1:54	PUMP PARASITE		12.5	2	3	39	PUMP 3 BBLs CEMENT DOWN PREVIOUS WELL PARASITE LINE
45	11/27/2017	2:05	RIG DOWN MEETING						RIG DOWN MEETING WITH CREW, WASH UP PUMP TRUCK
46	11/27/2017	2:30	RIG DOWN						START RIG DOWN
47	11/27/2017	3:30	JOURNEY MANAGEMENT						JOURNEY MANAGEMENT MEETING WITH BJ CREW
48	11/27/2017	3:45	LEAVE LOCATION						LEAVE LOCATION
49									
50									
51	11/27/2017		*MISC*						FCP- 202 PSI BUMP PLUG- 678 PSI FLOATS HELD 0.5 BBLs BACK
52									CALCUATED CEMENT TOPS- LEAD 0' TAIL 2054'
53									TOP OUT- 81 SXS 32 BBLs PUMPED 1 BBL TO SURFACE PUMPED 3 BBLs DOWN PREVIOUS WELL PARASITE LINE



