



Caerus

Surface Post Job Report

Puckett 12C-26-697 05-045-23398

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,

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	12/23/2017	Well	Puckett 12C-26-697
End Date	12/23/2017	County	GARFIELD
Client	CAERUS OPERATING, LLC	State/Province	CO
Client Field Rep	Doug McAdams	API	05-045-23398
Service Supervisor	James Roush	Formation	-
Field Ticket No.	Puckett 12C-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)	TVD (ft)	Excess(%)
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			2,552.00	2,552.00	0.00
Casing	8.92	9.63	36.00	2,500.00	2,500.00	

Shoe Length (ft): 43

HARDWARE

Bottom Plug Used?	No	Tool Type	Float Collar
Bottom Plug Provided By	-	Tool Depth (ft)	2,490.00
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	No	Pipe Movement	None
Centralizers Quantity	-	Job Pumped Through	No Manifold
Centralizers Type	Bow	Top Connection Thread	BUTT
Landing Collar Depth (ft)	2,490	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	2.00
Circulation Time (min)	60.00	10 min SGS	3.00
Circulation Rate (bpm)	6.00	30 min SGS	4.00
Circulation Volume (bbls)	193.00	Flare Prior to/during the Cement Job	No
Lost Circulation Prior to Cement Job	Yes	Gas Present	No
Mud Density In (ppg)	8.32	Gas Units	0
Mud Density Out (ppg)	0.00		
PV Mud In	6		
PV Mud Out	0		
YP Mud In	5		
YP Mud Out	0		

TEMPERATURE

Ambient Temperature (°F)	20.00	Slurry Cement Temperature (°F)	82.00
Mix Water Temperature (°F)	78.00	Flow Line Temperature (°F)	70.00

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	190.2000
Top Out Slurry	S100-12	12.5000	2.2282	12.62	253	564.0000	100

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	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, SODIUM METASILICATE, A-2	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	CEMENT, ASTM TYPE III	100.00	PCT
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	CEMENT EXTENDER, SODIUM METASILICATE, A-2	2.00	LBS/SK
Tail Slurry	S100-12	IntegraSeal CELLO	0.13	LBS/SK
Tail Slurry	S100-12	FP-25, Dry Foam Preventer (BJS Only)	0.30	BWOB
Top Out Slurry	S100-12	CEMENT, ASTM TYPE III	100.00	PCT
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	CEMENT EXTENDER, SODIUM METASILICATE, A-2	2.00	LBS/SK
Top Out Slurry	S100-12	IntegraSeal CELLO	0.13	LBS/SK
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)	Comments
12/23/2017 11:08 AM	Water	4.00	20.00	210.00	
12/23/2017 11:11 AM	Sodium Silicate	4.00	20.00	196.00	
12/23/2017 11:16 AM	Water	5.00	20.00	184.00	
12/23/2017 11:22 AM	S100-12	6.00	315.90	348.00	Lead
12/23/2017 12:23 PM	S100-12	4.50	63.70	184.00	Tail
12/23/2017 12:44 PM	Displacement	6.00	190.20	234.00	
12/23/2017 7:17 PM	S100-12	3.00	100.00	130.00	Top Out

	Min	Max	Avg
Pressure (psi)	0.00	1,122.00	350.00
Rate (bpm)	0.00	6.00	5.00

DISPLACEMENT AND END OF JOB SUMMARY

Displaced By	BJ	Amount of Cement Returned/Reversed	1.00
Calculated Displacement Volume (bbls)	192.50	Method Used to Verify Returns	Visual
Actual Displacement Volume (bbls)	192.50	Amount of Spacer to Surface	0.00
Did Float Hold?	Yes	Pressure Left on Casing (psi)	0.00
Bump Plug	No	Amount Bled Back After Job	1.00
Bump Plug Pressure (psi)	1,122.00	Total Volume Pumped (bbls)	743.50
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
Well Name PUCKETT 12C-26
Job Type Surface

District Rifle
Supervisor JAMES ROUSH
Engineer GAGE PUTNAM

Seq No.	Start Date	Start Time	Category	Event	Equipment	Event ID	Density (lb/gal)	Pump Rate (bpm)	Pump Vol (bbls)	Pipe Pressure (psi)	Comments
1	12/23/2017	1:00	Mobilization	Callout		1					BJ CREW CALLED OUT WITH A RTS OF 03:00 AM 12/23/17
2	12/23/2017	2:00	Mobilization								JOURNEY MANAGEMENT WITH BJ CREW
3	12/23/2017	2:15	Mobilization	Leave Location		74					LEAVE DISTRICT
4	12/23/2017	3:00	Mobilization	Arrive on Location		48					ARRIVE ON LOCATION
5	12/23/2017	3:10	Operational								STEACS BREIFING WITH BJ CREW
6	12/23/2017	3:25	Operational	Spot Units		49					SPOT TRUCKS
7	12/23/2017	3:40	Operational	Rig Up		50					RIG UP ALL EQUIPMENT
8	12/23/2017	5:00	StandBy	Customer		85					BJ ON STANDBY, RIG RUNNING CASING
9	12/23/2017	8:45	Operational	Prime Up		52					PIPE ON BOTTOM, RIG TO CIRCULATE
10	12/23/2017	9:20	Operational	Safety Meeting		53					SAFETY MEETING WITH BJ CREW, COMPANY, AND RIG CREW
11	12/23/2017	10:45	Operational	Rig Up		50					RIG UP CEMENT HEAD TO CASING
12	12/23/2017	11:02	Operational	Start Pumping		55	8.34	4	5	202	BREAK CIRCULATION
13	12/23/2017	11:04	Operational	Pressure Test		54					TEST LINES 3000
14	12/23/2017	11:08	Operational	Pump Spacer		56	8.34	4	15	210	FRESH WATER SPACER
15	12/23/2017	11:11	Operational	Pump Spacer		56	10	4	20	196	SODIUM SILICATE SPACER
16	12/23/2017	11:16	Operational	Pump Spacer		56	8.34	5	20	184	FRESH WATER SPACER
17	12/23/2017	11:21	Operational	Pump Lead Cement		58					BATCH UP LEAD CEMENT @ 12.0 PPG (704 SXS Y- 2.59 MW- 14.89)
18	12/23/2017	11:22	Operational	Pump Lead Cement		58	12	6	317	348	LEAD CEMENT @ 12.0 PPG DOWNHOLE
19	12/23/2017	11:32	Operational	Pump Lead Cement		58	12	6		360	50 BBLS GONE LEAD SLURRY
20	12/23/2017	11:40	Operational	Pump Lead Cement		58	12	6		380	100 BBLS GONE LEAD SLURRY
21	12/23/2017	11:49	Operational	Pump Lead Cement		58	12	6		335	150 BBLS GONE LEAD SLURRY
22	12/23/2017	11:57	Operational	Pump Lead Cement		58	12	6		310	200 BBLS GONE LEAD SLURRY
23	12/23/2017	12:06	Operational	Pump Lead Cement		58	12	6		354	250 BBLS GONE LEAD SLURRY
24	12/23/2017	12:17	Operational	Pump Lead Cement		58	12	3.5		95	300 BBLS GONE LEAD SLURRY
25	12/23/2017	12:22	Operational	Pump Tail Cement		60	12.5				BATCH UP TAIL SLURRY @ 12.5 PPG (162 SXS Y- 2.22 MW-12.62)
26	12/23/2017	12:23	Operational	Pump Tail Cement		60	12.5	4.5	64	184	TAIL CEMENT @ 12.5 PPG DOWN HOLE
27	12/23/2017	12:35	Operational	Pump Tail Cement		60	12.5	3.5		109	50 BBLS GONE TAIL SLURRY
28	12/23/2017	12:42	Operational	Pump Displacement		64			188.5		DROP TOP PLUG START DISPLACEMENT
29	12/23/2017	12:44	Operational	Pump Displacement		64	12.5	3.5	4	133	4 BBLS @ 12.5 PPG ON TOP OF PLUG
30	12/23/2017	12:54	Operational	Pump Displacement		64	8.34	6		234	50 BBLS GONE DISPLACEMENT
31	12/23/2017	13:03	Operational	Pump Displacement		64	8.34	6		287	100 BBLS GONE DISPLACEMENT
32	12/23/2017	13:12	Operational	Pump Displacement		64	8.34	6		447	150 BBLS GONE DISPLACEMENT
33	12/23/2017	13:19	Operational	Pump Displacement		64	8.34	2.5	10	330	SLOW RATE TO BUMP PLUG
34	12/23/2017	13:25	Operational	Land Plug		67				1122	BUMP PLUG 1122 PSI
35	12/23/2017	13:30	Operational	Check Floats		68					BLEED PRESSURE, CHECK FLOATS 1 BBLS BACK
36	12/23/2017	13:34									RIG UP TO PUMP PARASITE LINE
37	12/23/2017	13:38	Operational	Start Pumping		55	8.34	1	10	194	PUMP 10 BBLS SUGAR WATER
38	12/23/2017	14:00	Operational								SHUTDOWN START WASH UP
39	12/23/2017	14:30	Operational								BJ ON STANDBY, WAIT 4 HOURS TO DO TOP OUT JOB
41	12/23/2017	18:35	Operational								BJ RIG UP TO DO TOPOUT JOB
42	12/23/2017	19:14	Operational	Pump Spacer		56	9	2	3	45	PUMP CACL WATER AHEAD
43	12/23/2017	19:16	StandBy								START INJECTING SODIUM SILICATE
44	12/23/2017	19:17	Operational	Pumping Cement		61					BATCH UP CEMENT @ 12.5 PPG
45	12/23/2017	19:22	Operational	Pumping Cement		61	12.5	3	100	130	PUMP CEMENT DOWNHOLE @ 12.5 PPG



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

District Rifle
Supervisor JAMES ROUSH
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Seq No.	Start Date	Start Time	Category	Event	Equipment	Event ID	Density (lb/gal)	Pump Rate (bpm)	Pump Vol (bbls)	Pipe Pressure (psi)	Comments
46	12/23/2017	19:37	Operational	Pumping Cement		61	12.5	3		103	50 BBLS GONE TOP OUT CEMENT
47	12/23/2017	20:12	Operational	Pumping Cement		61	12.5	3		101	100 BBLS GONE TOP OUT CEMENT
48	12/23/2017	20:14	Operational	Cement Back to Surface		66					CEMENT TO SURFACE
49	12/23/2017	20:16	Operational	Pumping Cement		61	12.5	2	3	50	PUMP PREVIOUS PARASITE LINE
50	12/23/2017	20:22	Operational	Clean Pumps and Lines		62					START WASHING UP PUMP TRUCK
51	12/23/2017	20:28	Operational								RIG DOWN MEETING WITH BJ CREW
52	12/23/2017	20:40	Operational	Rig Down		73					START RIG DOWN
53	12/23/2017	21:50	Operational								JOURNEY MANAGEMENT WITH BJ CREW
54	12/23/2017	22:05	Operational								LEAVE LOCATION
55											
56	12/23/2017										FCP-362 PSI, BUMP PLUG- 1122 PSI, BLEED PRESSURE FLOATS HOLDING- 1 BBL BACK
57											
58	12/23/2017										CALCULATED CEMENT TOPS- LEAD - 0' TAIL- 2070'
59											
60	12/23/2017										TOPOUT- 253 SXS Y-2.22 MW-12.62 (100 BBLS) 1 BBL TO SURFACE 80 BBLS FW USED



