



Caerus

Surface Post Job Report

Puckett 13A-19 05-045-23198

S:24 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	12/31/2017	Well	Puckett 13A-19
End Date	1/31/2018	County	GARFIELD
Client	CAERUS OPERATING, LLC	State/Province	CO
Client Field Rep	PAT BLACKMER	API	05-045-23198
Service Supervisor	James Roush	Formation	-
Field Ticket No.	Surface	Rig	H&P 329
District	Rifle, CO	Type of Job	Surface

WELL GEOMETRY

Type	ID (in)	OD (in)	Wt. (lb/ft)	MD (ft)	Excess(%)	Grade
Previous Casing	19.50	20.00	52.73	100.00	0.00	
Open Hole	14.75			2,000.00	25.00	
Open Hole	14.75			2,550.00	0.00	
Casing	8.92	9.63	36.00	2,501.00		J-55

Shoe Length (ft): 44

HARDWARE

Bottom Plug Used?	No	Tool Type	Float Collar
Bottom Plug Provided By	-	Tool Depth (ft)	2,484.00
Bottom Plug Size	-	Max Tubing Pressure - Rated (psi)	-
Top Plug Used?	No	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	8.00	Job Pumped Through	No Manifold
Centralizers Type	Bow	Top Connection Thread	BUTT
Landing Collar Depth (ft)	2,484	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	2.00
Circulation Rate (bpm)	7.00	30 min SGS	4.00
Circulation Volume (bbls)	192.00	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	3		
PV Mud Out	0		
YP Mud In	2		
YP Mud Out	0		

TEMPERATURE

Ambient Temperature (°F)	32.00	Slurry Cement Temperature (°F)	73.00
Mix Water Temperature (°F)	55.00	Flow Line Temperature (°F)	78.00

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	Sodium Silicate Spacer	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	252	559.0000	99.6000

Cementing Treatment



Fluid Type	Fluid Name	Component	Concentration	UOM
Spacer / Pre Flush / Flush	Sodium Silicate Spacer	SILICATE, SODIUM, A-3L	21.00	GPB
Spacer / Pre Flush / Flush	Water	Fresh Water	100.00	PCT
Spacer / Pre Flush / Flush	Water	Fresh Water	100.00	PCT
Lead Slurry	S100-12	CEMENT, ASTM TYPE III	100.00	PCT
Lead Slurry	S100-12	ACCELERATOR, SALT, CHLORIDE, CALCIUM, A-7P, PELLETS	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
Lead Slurry	S100-12	CEMENT EXTENDER, GYPSUM, A-10	5.00	BWOB
Lead Slurry	S100-12	CEMENT EXTENDER, SODIUM METASILICATE, A-2	2.00	LBS/SK
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	FP-25, Dry Foam Preventer (BJS Only)	0.30	BWOB
Tail Slurry	S100-12	CEMENT EXTENDER, GYPSUM, A-10	5.00	BWOB
Tail Slurry	S100-12	ACCELERATOR, SALT, CHLORIDE, CALCIUM, A-7P, PELLETS	2.00	LBS/SK
Tail Slurry	S100-12	IntegraSeal CELLO	0.13	LBS/SK
Top Out Slurry	S100-12	CEMENT, ASTM TYPE III	100.00	PCT
Top Out Slurry	S100-12	CEMENT EXTENDER, SODIUM METASILICATE, A-2	2.00	LBS/SK
Top Out Slurry	S100-12	FP-25, Dry Foam Preventer (BJS Only)	0.30	BWOB
Top Out Slurry	S100-12	CEMENT EXTENDER, GYPSUM, A-10	5.00	BWOB
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Top Out Slurry	S100-12	IntegraSeal CELLO	0.13	LBS/SK

Cementing Treatment



TREATMENT SUMMARY

Time	Fluid	Rate (bpm)	Fluid Vol. (bbls)	Pipe Pressure (psi)	Comments
12/31/2017 6:06 PM	Water	6.00	20.00	281.00	
12/31/2017 6:10 PM	Sodium Silicate Spacer	6.00	20.00	280.00	
12/31/2017 6:15 PM	Water	6.00	20.00	290.00	
12/31/2017 6:26 PM	S100-12	6.00	315.90	330.00	Lead
12/31/2017 7:35 PM	S100-12	4.50	63.70	203.00	Tail
12/31/2017 8:00 PM	Displacement	5.00	190.20	219.00	
12/31/2017 9:32 PM	S100-12	3.00	99.60	90.00	Top Out

	Min	Max	Avg
Pressure (psi)	0.00	1,500.00	350.00
Rate (bpm)	0.00	6.00	4.00

DISPLACEMENT AND END OF JOB SUMMARY

Displaced By	BJ	Amount of Cement Returned/Reversed	1.00
Calculated Displacement Volume (bbls)	192.00	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)	906.00	Total Volume Pumped (bbls)	751.00
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 13A-19
Job Type Surface

District Rifle
Supervisor JAMES ROUSH
Engineer GAGE PUTNAM

Seq No.	Start Date	Start Time	Category	Event	Density (lb/gal)	Pump Rate (bpm)	Pump Vol (bbls)	Pipe Pressure (psi)	Comments
1	12/31/2017	10:00	Mobilization	Callout					BJ CREW CALLED OUT WITH A RTS OF 17:00 PM 12/31/17
2	12/31/2017	12:00	Mobilization						JOURNEY MANAGEMENT WITH BJ CREW
3	12/31/2017	12:30	Mobilization	Leave Location					LEAVE DISTRICT
4	12/31/2017	14:30	Mobilization	Arrive on Location					ARRIVE ON LOCATION
5	12/31/2017	14:45	Operational						STEACS BRIEFING WITH BJ CREW
6	12/31/2017	15:00	Operational	Spot Units					SPOT TRUCKS
7	12/31/2017	15:15	Operational	Rig Up					RIG UP ALL EQUIPMENT
8	12/31/2017	16:30	StandBy	Customer					BJ ON STANDBY, RIG RUNNING CASING
9	12/31/2017	16:45	Operational	Prime Up					PIPE ON BOTTOM, RIG TO CIRCULATE
10	12/31/2017	17:11	Operational	Safety Meeting					SAFETY MEETING WITH BJ CREW, COMPANY, AND RIG CREW
11	12/31/2017	17:45	Operational	Rig Up					RIG UP CEMENT HEAD TO CASING
12	12/31/2017	18:02	Operational	Start Pumping	8.34	3	5	85	BREAK CIRCULATION
13	12/31/2017	18:04	Operational	Pressure Test					TEST LINES 3000
14	12/31/2017	18:06	Operational	Pump Spacer	8.34	6	15	281	FRESH WATER SPACER
15	12/31/2017	18:10	Operational	Pump Spacer	10	6	20	280	SODIUM SILICATE SPACER
16	12/31/2017	18:15	Operational	Pump Spacer	8.34	6	20	290	FRESH WATER SPACER
17	12/31/2017	18:22	Operational	Pump Lead Cement					BATCH UP LEAD CEMENT @ 12.0 PPG (704 SXS Y- 2.53 MW- 14.89)
18	12/31/2017	18:26	Operational	Pump Lead Cement	12	6	317	330	LEAD CEMENT @ 12.0 PPG DOWNHOLE
19	12/31/2017	18:33	Operational	Pump Lead Cement	12	6		400	50 BBLS GONE LEAD SLURRY
20	12/31/2017	18:42	Operational	Pump Lead Cement	12	6		400	100 BBLS GONE LEAD SLURRY
21	12/31/2017	18:51	Operational	Pump Lead Cement	12	6		400	150 BBLS GONE LEAD SLURRY
22	12/31/2017	18:59	Operational	Pump Lead Cement	12	6		389	200 BBLS GONE LEAD SLURRY
23	12/31/2017	19:08	Operational	Pump Lead Cement	12	6		420	250 BBLS GONE LEAD SLURRY
24	12/31/2017	19:25	Operational	Pump Lead Cement	12	4		198	300 BBLS GONE LEAD SLURRY
25	12/31/2017	19:34	Operational	Pump Tail Cement	12.5				BATCH UP TAIL SLURRY @ 12.5 PPG (162 SXS Y- 2.22 MW-12.62)
26	12/31/2017	19:35	Operational	Pump Tail Cement	12.5	4.5	64	203	TAIL CEMENT @ 12.5 PPG DOWN HOLE
27	12/31/2017	19:43	Operational	Pump Tail Cement	12.5	4		180	50 BBLS GONE TAIL SLURRY
28	12/31/2017	19:50	Operational	Pump Displacement			180		DROP TOP PLUG START DISPLACEMENT
29	12/31/2017	19:51	Operational	Pump Displacement	12.5	3	2	53	2 BBLS @ 12.5 PPG ON TOP OF PLUG
30	12/31/2017	20:00	Operational	Pump Displacement	8.34	5		219	50 BBLS GONE DISPLACEMENT
31	12/31/2017	20:11	Operational	Pump Displacement	8.34	5		185	100 BBLS GONE DISPLACEMENT
32	12/31/2017	20:20	Operational	Pump Displacement	8.34	5		249	150 BBLS GONE DISPLACEMENT
33	12/31/2017	20:28	Operational	Pump Displacement	8.34	2.5	10	335	SLOW RATE TO BUMP PLUG
34	12/31/2017	20:32	Operational	Land Plug				906	BUMP PLUG 906 PSI
35	12/31/2017	20:38	Operational	Check Floats					BLEED PRESSURE, CHECK FLOATS 0.5 BBLS BACK
36	12/31/2017	20:48							RIG UP TO PUMP PARASITE LINE
37	12/31/2017	20:54	Operational	Start Pumping	8.34	1	10	230	PUMP 10 BBLS SUGAR WATER



Customer Name CAERUS
Well Name PUCKETT 13A-19
Job Type Surface

District Rifle
Supervisor JAMES ROUSH
Engineer GAGE PUTNAM

Seq No.	Start Date	Start Time	Category	Event	Density (lb/gal)	Pump Rate (bpm)	Pump Vol (bbls)	Pipe Pressure (psi)	Comments
	12/31/2017	21:06	Operational	Pressure Test					ATTEMPT TO DO 1500 PSI CASING TEST, PRESSURED UP TO 1500 PSI, PRESSURE THEN BLED BACK TO 650 PSI, BJ BLED PRESSURE, FLOATS STILL HOLDING
38	12/31/2017	21:25	Operational	Pumping Cement					RIG UP TO PUMP 200 SXS DOWN BACKSIDE
39	12/31/2017	21:30	Operational	Pumping Cement	12.5				BATCH UP 12.5 PPG CEMENT
40	12/31/2017	21:32	Operational	Pumping Cement	12.5	3	79	90	CEMENT DOWNHOLE
41	12/31/2017	21:49	Operational	Pumping Cement	12.5	3		80	50 BBLs GONE TOPOUT SLURRY
42	12/31/2017	21:58	Operational	Clean Pumps and Lines					SHUTDOWN START WASH UP
43	12/31/2017	22:00	StandBy	Customer					BJ ON STANDBY, WAIT 4 HOURS TO DO TOP OUT JOB
44	1/1/2018	2:45	Operational	Rig Up					BJ RIG UP TO DO TOPOUT JOB
45	1/1/2018	3:40	Operational	Pump Spacer	8.6	2.5	3	50	PUMP CACL WATER AHEAD
46	1/1/2018	3:42	Operational						START INJECTING SODIUM SILICATE
47	1/1/2018	3:45	Operational	Pumping Cement	12.5				BATCH UP CEMENT @ 12.5 PPG
48	1/1/2018	3:48	Operational	Pumping Cement	12.5	3		100	PUMP CEMENT DOWNHOLE @ 12.5 PPG
49	1/1/2018	4:04	Operational	Pumping Cement	12.5	3		91	50 BBLs GONE TOPOUT SLURRY
50	1/1/2018	4:22	Operational	Pumping Cement	12.5	1.5		52	100 BBLs GONE TOPOUT SLURRY
	1/1/2018	4:28	Operational	Cement Back to Surface					CEMENT TO SURFACE
53	1/1/2018	4:32	Operational	End Pumping					SHUT DOWN BLEED PRESSURE
54	1/1/2018	4:45	Operational	Safety Meeting					RIG DOWN MEETING WITH BJ CREW
55	1/1/2018	4:55	Operational	Clean Pumps and Lines					START WASH UP OF PUMP AND RIG DOWN EQUIPMENT
56	1/1/2018	6:40	Operational	Safety Meeting					JOURNEY MANAGEMENT WITH BJ CREW
57	1/1/2018	7:00	Mobilization	Leave Location					LEAVE LOCATION
58									
59	1/1/2018								FCP-350 PSI, BUMP PLUG- 906 PSI, BLEED PRESSURE FLOATS HOLDING- 0.5 BBLs
60									
61									CALCULATED CEMENT TOPS- LEAD - 0' TAIL- 2044'
62									
63									TOPOUT- 252 SXS Y-2.22 MW-12.62 (100 BBLs) 1 BBL TO SURFACE



Caerus Puckett 13A-19 12/31/17 Surface



