



Caerus

Surface Post Job Report

Puckett 23B-19 05-045-23195

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,

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	1/28/2018	Well	Puckett 23B-19
End Date	1/29/2018	County	GARFIELD
Client	CAERUS OPERATING, LLC	State/Province	CO
Client Field Rep		API	05-045-23195
Service Supervisor		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	Thread
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			2,522.00	0.00		
Casing	8.92	9.63	36.00	2,510.00		J-55	

Shoe Length (ft): 41

HARDWARE

Bottom Plug Used?	No	Tool Type	Float Collar
Bottom Plug Provided By		Tool Depth (ft)	2,465.00
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	5.00	Job Pumped Through	No Manifold
Centralizers Type	Bow	Top Connection Thread	8rd
Landing Collar Depth (ft)	2,465	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	11.00
Circulation Time (min)	120.00	10 min SGS	19.00
Circulation Rate (bpm)	7.00	30 min SGS	32.00
Circulation Volume (bbls)	950.00	Flare Prior to/during the Cement Job	No
Lost Circulation Prior to Cement Job	Yes	Gas Present	No
Mud Density In (ppg)	9.65		
PV Mud In	17		
YP Mud In	14		

TEMPERATURE

Ambient Temperature (°F)	27.00	Slurry Cement Temperature (°F)	85.00
Mix Water Temperature (°F)	78.00	Flow Line Temperature (°F)	88.00

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 Spacer	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
Displacement Final	Displacement	8.3300				0.0000	190.2000
Top Out Slurry	S100-12	12.5000	2.2282	12.62	133	296.3506	52.7800

Cementing Treatment



Fluid Type	Fluid Name	Component	Concentration	UOM
Spacer / Pre Flush / Flush	Water	Fresh Water	100.0000	PCT
Spacer / Pre Flush / Flush	Water	Fresh Water	100.0000	PCT
Spacer / Pre Flush / Flush	Sodium Silicate Spacer	SILICATE, SODIUM, A-3L	21.0000	GPB
Lead Slurry	S100-12	CEMENT EXTENDER, GYPSUM, A-10	5.0000	BWOB
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	IntegraSeal CELLO	0.1300	LBS/SK
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	CEMENT EXTENDER, SODIUM METASILICATE, A-2	2.0000	LBS/SK
Tail Slurry	S100-12	IntegraSeal CELLO	0.1300	LBS/SK
Tail Slurry	S100-12	Foam Preventer, FP-25	0.3000	BWOB
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	CEMENT EXTENDER, SODIUM METASILICATE, A-2	2.0000	LBS/SK
Top Out Slurry	S100-12	IntegraSeal CELLO	0.1300	LBS/SK
Top Out Slurry	S100-12	Foam Preventer, FP-25	0.3000	BWOB
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)	Annulus Pressure (psi)	Comments
1/29/2018 6:56	Water	5.50	20.00	389.00		
1/29/2018 7:03	Sodium Silicate Spacer	5.50	20.00	380.00		
1/29/2018 7:07	Water	5.50	20.00	386.00		
1/29/2018 7:15	S100-12	7.50	315.90	626.00		
1/29/2018 8:05	S100-12	4.50	63.70	227.00		
1/29/2018 8:22	Displacement	7.00	190.20	641.00		
1/29/2018 9:19	S100-12	3.00	52.78	119.00		

	Min	Max	Avg
Pressure (psi)	0.00	858.00	400.00
Rate (bpm)	0.00	7.50	5.50

DISPLACEMENT AND END OF JOB SUMMARY

Displaced By	BJ	Amount of Cement Returned/Reversed	1.00
Calculated Displacement Volume (bbls)	191.00	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)	858.00	Total Volume Pumped (bbls)	691.00
Were Returns Planned at Surface	Yes	Top Out Cement Spotted	No
Cement returns During Job	None	Lost Circulation During Cement Job	No



Customer Name CAERUS
Well Name PUCKETT 23B-19
Job Type Surface

District Rifle
Supervisor JAMES ROUSH
Engineer GAGE PUTNAM

Start Date	Start Time	Category	Event	Equipment	Event ID	Density (lb/gal)	Pump Rate (bpm)	Pump Vol (bbls)	Pipe Pressure (psi)	Comments
12/28/2018	16:00	Mobilization	Callout		1					BJ CREW CALLED OUT WITH A RTS OF 01:00 AM 1/29/18
1/28/2018	17:00	Mobilization								JOURNEY MANAGEMENT WITH BJ CREW
1/28/2018	17:30	Mobilization	Leave Location		74					LEAVE DISTRICT
1/28/2018	19:30	Mobilization	Arrive on Location		48					ARRIVE ON LOCATION
1/28/2018	19:40	Operational								STEACS BREIFING WITH BJ CREW
1/28/2018	19:50	Operational	Spot Units		49					SPOT TRUCKS
1/28/2018	20:00	Operational	Rig Up		50					RIG UP ALL EQUIPMENT
1/28/2018	21:30	StandBy	Customer							BJ ON STANDBY, RIG RUNNING CASING
1/29/2018	5:45	Operational	Prime Up		52					PIPE ON BOTTOM, RIG TO CIRCULATE
1/29/2018	6:10	Operational	Safety Meeting		53					SAFETY MEETING WITH BJ CREW, COMPANY, AND RIG CREW
1/29/2018	6:50	Operational	Rig Up		50					RIG UP CEMENT HEAD TO CASING
1/29/2018	6:56	Operational	Start Pumping		55	8.34	4	5	250	BREAK CIRCULATION
1/29/2018	6:58	Operational	Pressure Test		54					TEST LINES 3000
1/29/2018	7:01	Operational	Pump Spacer		56	8.34	5.5	15	389	FRESH WATER SPACER
1/29/2018	7:03	Operational	Pump Spacer		56	10	5.5	20	380	SODIUM SILICATE SPACER
1/29/2018	7:07	Operational	Pump Spacer		56	8.34	5.5	20	386	FRESH WATER SPACER
1/29/2018	7:15	Operational	Pump Lead Cement		58					BATCH UP LEAD CEMENT @ 12.0 PPG (704 SXS Y- 2.53 MW- 14.89)
1/29/2018	7:17	Operational	Pump Lead Cement		58	12	6	317	459	LEAD CEMENT @ 12.0 PPG DOWNHOLE
1/29/2018	7:24	Operational	Pump Lead Cement		58	12	7.5		626	50 BBLS GONE LEAD SLURRY
1/29/2018	7:31	Operational	Pump Lead Cement		58	12	7.5		596	100 BBLS GONE LEAD SLURRY
1/29/2018	7:37	Operational	Pump Lead Cement		58	12	7.5		587	150 BBLS GONE LEAD SLURRY
1/29/2018	7:44	Operational	Pump Lead Cement		58	12	7.5		586	200 BBLS GONE LEAD SLURRY



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Start Date	Start Time	Category	Event	Equipment	Event ID	Density (lb/gal)	Pump Rate (bpm)	Pump Vol (bbls)	Pipe Pressure (psi)	Comments
1/29/2018	7:53	Operational	Pump Lead Cement		58	12	6		317	250 BBLS GONE LEAD SLURRY
1/29/2018	8:03	Operational	Pump Lead Cement		58	12	3		127	300 BBLS GONE LEAD SLURRY
1/29/2018	8:05	Operational	Pump Tail Cement		60	12.5				BATCH UP TAIL SLURRY @ 12.5 PPG (162 SXS Y- 2.22 MW-12.62)
1/29/2018	8:07	Operational	Pump Tail Cement		60	12.5	4.5	60	227	TAIL CEMENT @ 12.5 PPG DOWN HOLE
1/29/2018	8:17	Operational	Pump Tail Cement		60	12.5	3		126	50 BBLS GONE TAIL SLURRY
1/29/2018	8:22	Operational	Pump Displacement		64			187		DROP TOP PLUG START DISPLACEMENT
1/29/2018	8:25	Operational	Pump Displacement		64	12.5	3	4	207	4 BBLS @ 12.5 PPG ON TOP OF PLUG
1/29/2018	8:33	Operational	Pump Displacement		64	8.34	7		375	50 BBLS GONE DISPLACEMENT
1/29/2018	8:41	Operational	Pump Displacement		64	8.34	7		411	100 BBLS GONE DISPLACEMENT
1/29/2018	8:48	Operational	Pump Displacement		64	8.34	7		641	150 BBLS GONE DISPLACEMENT
1/29/2018	8:56	Operational	Pump Displacement		64	8.34	2.5	10	389	SLOW RATE TO BUMP PLUG
1/29/2018	8:58	Operational	Land Plug		67					BUMP PLUG 858 PSI
1/29/2018		Operational	Check Floats		68					BLEED PRESSURE, CHECK FLOATS 0.5 BBLS BACK
1/29/2018	9:06									RIG UP TO PUMP PARASITE LINE
1/29/2018	9:11	Operational	Start Pumping		55	8.34	1	10	233	PUMP 10 BBLS SUGAR WATER DOWN PARASITE LINE
1/29/2018	9:15	Operational	Pumping Cement		61					RIG UP TO PUMP 200 SXS DOWN BACKSIDE
1/29/2018	9:18	Operational	Pumping Cement		61	12.5				BATCH UP 12.5 PPG CEMENT
1/29/2018	9:19	Operational	Pumping Cement		61	12.5	3		118	CEMENT DOWNHOLE
1/29/2018	9:36	Operational	Pumping Cement		61	12.5	3		119	50 BBLS GONE TOPOUT SLURRY
1/29/2018	9:37	Operational	Cement Back to Surface					50		CEMENT TO SURFACE 1 BBL
1/29/2018	10:00	Operational	End Pumping		69					SHUT DOWN BLEED PRESSURE
1/29/2018	10:15	Operational	Safety Meeting		53					RIG DOWN MEETING WITH BJ CREW



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 Engineer GAGE PUTNAM

Start Date	Start Time	Category	Event	Equipment	Event ID	Density (lb/gal)	Pump Rate (bpm)	Pump Vol (bbls)	Pipe Pressure (psi)	Comments
1/29/2018	10:25	Operational	Clean Pumps and Lines		62					START WASH UP OF PUMP AND RIG DOWN EQUIPMENT
1/29/2018	12:00	Operational	Safety Meeting		53					JOURNEY MANAGEMENT WITH BJ CREW
1/29/2018	12:20	Mobilization	Leave Location		74					LEAVE LOCATION
1/29/2018										
1/29/2018										FCP-405 PSI, BUMP PLUG- 858 PSI PRESSURE FELL TO 340 PSI, BLEED PRESSURE FLOATS HOLDING- 0.5 BBLS BACK
										TOPOUT- 133 SXS Y-2.23 MW-12.62 (53 BBLS) 1 BBL TO SURFACE

