



Caerus

Surface Post Job Report

NPR 15A-10-596 05-045-23780

S:10 T:5S R:96W 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	2/24/2018	Well	NPR 15A-10-596
End Date	2/24/2018	County	GARFIELD
Client	CAERUS OPERATING, LLC	State/Province	CO
Client Field Rep	Whitey	API	05-045-23780
Service Supervisor	Mark Rust	Formation	
Field Ticket No.	Surface	Rig	H&P 273
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	13.50			1,500.00	10.00		
Open Hole	13.50			2,051.00			
Casing	8.92	9.63	36.00	2,045.00		J-55	LTC

Shoe Length (ft): 45

Cementing Treatment



HARDWARE

Bottom Plug Used?	No	Tool Type	Float Collar
Top Plug Used?	Yes	Tool Depth (ft)	1,970.00
Top Plug Provided By	Non BJ	Max Casing Pressure - Rated (psi)	3,520.00
Top Plug Size	9.625	Max Casing Pressure - Operated (psi)	2,816.00
Centralizers Used	No	Pipe Movement	None
Landing Collar Depth (ft)	1,971	Job Pumped Through	No Manifold
		Top Connection Thread	BUTT
		Top Connection Size	9.625

CIRCULATION PRIOR TO JOB

Well Circulated By	Rig	Solids Present at End of Circulation	No
Circulation Prior to Job	Yes	10 sec SGS	4.00
Circulation Time (min)	60.00	10 min SGS	7.00
Lost Circulation Prior to Cement Job	No	30 min SGS	23.00
Mud Density In (ppg)	9.80	Flare Prior to/during the Cement Job	No
PV Mud In	11	Gas Present	No
YP Mud In	20	Gas Units	0

Cementing Treatment



TEMPERATURE

Ambient Temperature (°F)	16.00	Slurry Cement Temperature (°F)	98.00
Mix Water Temperature (°F)	60.00	Flow Line Temperature (°F)	92.00

BJ FLUID DETAILS

Fluid Type	Fluid Name	Density (ppg)	Yield (Cu Ft/sk)	H2O Req. (gals/sk)	Planned Top of Fluid (Ft)	Length (Ft)	Vol (sk)	Vol (Cu Ft)	Vol (bbls)
Spacer / Pre Flush / Flush	Sodium Silicate	10.0000			0.00				20.0000
Spacer / Pre Flush / Flush	Water 1	8.3300			0.00				20.0000
Spacer / Pre Flush / Flush	Water 2	8.3300			0.00				20.0000
Lead Slurry	BJCem S100.3.01D	12.0000	2.5298	14.86	0.00	1,500.00	360	909.0000	161.8000
Tail Slurry	BJCem S100.3.01D	12.5000	2.2256	12.59	1,500.00	500.00	118	262.0000	46.6000
Displacement Final	Displacement	8.3300			0.00			0.0000	151.5000

Cementing Treatment



Fluid Type	Fluid Name	Component	Concentration	UOM
Spacer / Pre Flush / Flush	Sodium Silicate	SILICATE, SODIUM, A-3L	21.0000	GPB
Lead Slurry	BJCem S100.3.01D	CEMENT, ASTM TYPE III	100.0000	PCT
Lead Slurry	BJCem S100.3.01D	CEMENT EXTENDER, GYPSUM, A-10	5.0000	BWOB
Lead Slurry	BJCem S100.3.01D	CEMENT EXTENDER, SODIUM METASILICATE, A-2	2.0000	LBS/SK
Lead Slurry	BJCem S100.3.01D	Foam Preventer, FP-25	0.3000	BWOB
Lead Slurry	BJCem S100.3.01D	ACCELERATOR, SALT, CHLORIDE, CALCIUM, A- 7P, PELLETS	2.0000	LBS/SK
Lead Slurry	BJCem S100.3.01D	IntegraSeal CELLO	0.1300	LBS/SK
Tail Slurry	BJCem S100.3.01D	Foam Preventer, FP-25	0.3000	BWOB
Tail Slurry	BJCem S100.3.01D	CEMENT EXTENDER, GYPSUM, A-10	5.0000	BWOB
Tail Slurry	BJCem S100.3.01D	IntegraSeal CELLO	0.1300	LBS/SK
Tail Slurry	BJCem S100.3.01D	ACCELERATOR, SALT, CHLORIDE, CALCIUM, A- 7P, PELLETS	2.0000	LBS/SK
Tail Slurry	BJCem S100.3.01D	CEMENT, ASTM TYPE III	100.0000	PCT
Tail Slurry	BJCem S100.3.01D	CEMENT EXTENDER, SODIUM METASILICATE, A-2	2.0000	LBS/SK

Cementing Treatment



TREATMENT SUMMARY

Time	Fluid	Rate (bpm)	Fluid Vol. (bbls)	Pipe Pressure (psi)	Annulus Pressure (psi)	Comments
2/24/2018 4:53 AM	Water 1	5.00	20.00	182.00		
2/24/2018 4:56 AM	Sodium Silicate	5.50	20.00	357.00		
2/24/2018 5:00 AM	Water 2	5.50	20.00	314.00		
2/24/2018 5:08 AM	BJCem S100.3.01D	5.50	161.80	398.00		
2/24/2018 5:37 AM	BJCem S100.3.01D	4.00	46.60	119.00		
2/24/2018 5:51 AM	Displacement	5.50	151.50	692.00		

	Min	Max	Avg
Pressure (psi)	119.00	692.00	343.67
Rate (bpm)	4.00	5.50	5.17

Cementing Treatment



DISPLACEMENT AND END OF JOB SUMMARY

Displaced By	BJ	Amount of Cement Returned/Reversed	10.00
Calculated Displacement Volume (bbls)	149.00	Method Used to Verify Returns	Visual
Actual Displacement Volume (bbls)	149.00	Amount of Spacer to Surface	60.00
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)	1,216.00	Total Volume Pumped (bbls)	420.00
Were Returns Planned at Surface	Yes	Top Out Cement Spotted	No
Cement returns During Job	Full	Lost Circulation During Cement Job	Yes

Customer Name Caerus Operating

Well Name NPR 15A-10-596

Job Type Surface

District Rifle

Supervisor Mark W. Rust

Engineer Gage Putnam



Seq No.	Start Date/Time	Category	Event	Equipment	Event ID	Density (lb/gal)	Pump Rate (bpm)	Pump Vol (bbls)	Pipe Pressure (psi)	Comments
1	2/23/2018 18:00	Mobilization	Callout		1					Leave Rifle District
2	2/23/2018 23:00	Mobilization	Arrive on Location							Arrive on Location
3	2/23/2018 0:00	Operational	Spot Units		49					Spot Pump and Bulk Truck
4	2/24/2018 0:30	Operational	Safety Meeting		53					Safety Meeting
5	2/24/2018 1:00	Operational	Rig Up		50					Start rig up
6	2/24/2018 3:00	Operational	Safety Meeting		53					Safety meeting with Rig Crew & Customer
7	2/24/2018 3:40	Operational	Other (See comments)		76					Rig up cement head
8	2/24/2018 3:47	Operational	Prime Up		52	8.34	3	5	209	Load lines with 5bbls water
9	2/24/2018 3:49	Operational	Pressure Test		54	8.34			3000	Test Lines
10	2/24/2018 3:53	Operational	Pump Spacer		56	8.34	4	15	182	Start water Spacer
11	2/24/2018 3:56	Operational	Pump Spacer		56	8.4	5.5	20	357	Pump SS spacer
12	2/24/2018 4:00	Operational	Pump Spacer		56	8.34	5.5	20	314	Pump water Spacer
13	2/24/2018 4:05	Operational	Other (See comments)		76	12				Batch up first tub of lead
14	2/24/2018 4:08	Operational	Pump Lead Cement		58	12	5.5	0	398	Start pumping lead cement
15	2/24/2018 4:17	Operational	Pump Lead Cement		58	12	5.5	50	261	Pumping Lead
16	2/24/2018 4:27	Operational	Pump Lead Cement		58	12	5.5	100	201	Pumping Lead
17	2/24/2018 4:36	Operational	Pump Lead Cement		58	12	2.5	150	95	Pumping Lead
18	2/24/2018 4:37	Operational	Pump Tail Cement		60	12.5	4	1	90	Start pumping Tail Cement
19	2/24/2018 4:42	Operational	Pump Tail Cement		60	12.5	4	20	119	Pumping Tail Cement
20	2/24/2018 4:49	Operational	Drop Top Plug		63	8.34				Shut down/Drop top plug
21	2/24/2018 4:51	Operational	Pump Displacement		64	8.34	2.5		88	Start displacement
22	2/24/2018 5:01	Operational	Pump Displacement		64	8.34	4	50	300	Pumping Displacement
23	2/24/2018 5:11	Operational	Pump Displacement		64	8.34	5.5	100	589	Pumping Displacement
24	2/24/2018 5:15	Operational	Cement Back to Surface		66	8.34	5.5	130	671	Cement to Surface
25	2/24/2018 5:19	Operational	Other (See comments)			8.34	5.5	140	625	Lose returns
26	2/24/2018 5:19	Operational	Pump Displacement		64	8.34	4	140	625	Pumping Displacement
27	2/24/2018 5:22	Operational	Land Plug		67	8.34	2	149	1216	Land top plug/Final Circ. Psi 565psi
28	2/24/2018 5:28	Operational	Check Floats		68					Bleed psi/Check Floats 0.5bbls back
29	2/24/2018 5:35	Operational	Other (See comments)		76					Prepare pump for rig down
30	2/24/2018 6:15	Operational	Safety Meeting		53					Perform rig down Steacs
31	2/24/2018 6:30	Operational	Rig Down		73					Start rig down
32	2/24/2018 7:30	Operational	Safety Meeting		53					Perform JM brief for journey home
33	2/24/2018 8:00	Mobilization	Leave Location		74					Leave Location

