



# Caerus

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## Surface Post Job Report

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NPR 15D-10-596 05-045-23762

S:10 T:5S R:96W Garfield CO

Quote #:

I Execution #:



# Caerus

Attention: Mr. Steve Schmitz | (720) 880-6412 | [sschmitz@caerusoilandgas.com](mailto:sschmitz@caerusoilandgas.com)

Caerus | 1001 17th Street, Suite 1600 | Denver, CO 80202

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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](mailto: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

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# Cementing Treatment



<b>Start Date</b>	3/10/2018	<b>Well</b>	NPR 15D-10-596
<b>End Date</b>	3/10/2018	<b>County</b>	GARFIELD
<b>Client</b>	CAERUS OPERATING, LLC	<b>State/Province</b>	CO
<b>Client Field Rep</b>	Whitey	<b>API</b>	05-045-23762
<b>Service Supervisor</b>	Andrew Linn	<b>Formation</b>	
<b>Field Ticket No.</b>	Surface	<b>Rig</b>	H&P 273
<b>District</b>	Rifle, CO	<b>Type of Job</b>	Surface

## WELL GEOMETRY

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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			2,030.00			
Casing	8.92	9.63	36.00	2,008.60		J-55	LTC

**Shoe Length (ft):** 45

## HARDWARE

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<b>Bottom Plug Used?</b>	No	<b>Tool Type</b>	Float Collar
<b>Top Plug Used?</b>	Yes	<b>Tool Depth (ft)</b>	2,008.60
<b>Top Plug Provided By</b>	Non BJ	<b>Pipe Movement</b>	None
<b>Top Plug Size</b>	9.625	<b>Job Pumped Through</b>	No Manifold
<b>Centralizers Used</b>	Yes	<b>Top Connection Thread</b>	8 rnd.
<b>Centralizers Quantity</b>	7.00	<b>Top Connection Size</b>	9.625
<b>Centralizers Type</b>	Bow		
<b>Landing Collar Depth (ft)</b>	1,966		

# Cementing Treatment



## CIRCULATION PRIOR TO JOB

Well Circulated By	BJ	Solids Present at End of Circulation	No
Circulation Prior to Job	Yes	Flare Prior to/during the Cement Job	No
Circulation Time (min)	45.00	Gas Present	No
Circulation Rate (bpm)	3.00		
Circulation Volume (bbls)	135.00		
Lost Circulation Prior to Cement Job	No		
Mud Density In (ppg)	9.40		
Mud Density Out (ppg)	9.40		

## TEMPERATURE

Ambient Temperature (°F)	36.00	Slurry Cement Temperature (°F)	93.70
Mix Water Temperature (°F)	78.40	Flow Line Temperature (°F)	

## 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	Water 1	8.3300			0.00				20.0000
Spacer / Pre Flush / Flush	Sodium Silicate	10.0000			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	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	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	IntegraSeal CELLO	0.1300	LBS/SK
Tail Slurry	BJCem S100.3.01D	CEMENT, ASTM TYPE III	100.0000	PCT
Tail Slurry	BJCem S100.3.01D	Foam Preventer, FP-25	0.3000	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 EXTENDER, GYPSUM, A-10	5.0000	BWOB
Tail Slurry	BJCem S100.3.01D	CEMENT EXTENDER, SODIUM METASILICATE, A-2	2.0000	LBS/SK

## TREATMENT SUMMARY

Time	Fluid	Rate (bpm)	Fluid Vol. (bbls)	Pipe Pressure (psi)
3/10/2018 4:49 AM	Water 1	4.00	20.00	196.00
3/10/2018 4:54 AM	Sodium Silicate	3.00	20.00	274.00
3/10/2018 5:04 AM	Water 2	3.00	20.00	258.00
3/10/2018 5:09 AM	BJCem S100.3.01D	3.00	161.21	276.00
3/10/2018 6:12 AM	BJCem S100.3.01D	4.00	46.87	89.00
3/10/2018 6:28 AM	Displacement	4.00	151.93	156.00

	Min	Max	Avg
Pressure (psi)	56.00	511.00	258.00
Rate (bpm)	2.00	4.00	3.00

# Cementing Treatment



## DISPLACEMENT AND END OF JOB SUMMARY

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Displaced By	BJ	Amount of Cement Returned/Reversed	15.00
Calculated Displacement Volume (bbls)	151.93	Method Used to Verify Returns	Visual
Did Float Hold?	Yes	Amount of Spacer to Surface	60.00
Bump Plug	No	Pressure Left on Casing (psi)	0.00
Were Returns Planned at Surface	No	Amount Bled Back After Job	0.25
Cement returns During Job	Partial	Total Volume Pumped (bbls)	427.00
		Top Out Cement Spotted	No
		Lost Circulation During Cement Job	No

Customer Name CAERUS District Rifle  
 Well Name NPR 15D-10 Supervisor ANDREW LINN  
 Job Type Surface Engineer ZEN KIETH



Seq No.	Start Date	Start Time	Event	Density (lb/gal)	Pump Rate (bpm)	Pump Vol (bbls)	Pipe Pressure (psi)	Comments
1	3/9/2018	16:47	CALL OUT					CALL OUT ON LOCATION TIME OF 02:30 ON 3/10/2018
2	3/9/2018	17:58	STEACS					PRE CONVOY SAFETY MEETING
3	3/9/2018	18:18	LEAVE RIFLE YARD					LEAVE RIFLE YARD FOR H&P 273.
4	3/9/2018	19:30	ARRIVE ON LOCATION					ARRIVE ON LOCATION. RIG CREW WAS PULLING DRILL PIPE.
5	3/9/2018	19:35	SITE ASSESSMENT					DID ROCK DRILL WITH CREW AND WALKED LOCATION
6	3/9/2018	19:47	SPOT EQUIPMENT					SPOT IN EQUIPMENT AND RIG UP ALL GROUND EQUIPMENT
7	3/9/2018	20:00	STEACS					PRE RIG UP SAFETY MEETING
8	3/9/2018	20:10	RIG UP					RIGGED IN ALL GROUND EQUIPMENT
9	3/10/2018	3:42	STEACS					PRE JOB SAFETY MEETING WITH RIG CREW AND ALL BJ SERVICES CEMENT CREW
10	3/10/2018	4:22	RIG UP					STAB PLUG CONTAINER, LOADE PLUG IN PLUG CONTAINER, AND HOOK UP LINES TO PLUG CONTAINER
11	3/10/2018	4:39	FILL LINES	8.33	2	5	268	FILL LINES WITH 5 BBLs. OF FRESH WATER AT 2 BBLs./MIN.
12	3/10/2018	4:43	PRESSURE TEST				4237	PRESSURE TEST TO 4237 PSI. PRESSURE HELD
13	3/10/2018	4:49	FRESH WATER SPACER	8.33	4	20	202	REMAINING 15 BBLs. OF FRESH WATER FOR A TOTAL OF 20 BBLs. OF FRESH WATER
14	3/10/2018	4:54	SODIUM SILICATE SPACER	10.5	3	20	383	SODIUM SILICATE SPACER 50/50
15	3/10/2018	4:54	SHUTDOWN					SHUTDOWN DUE TO CELLAR BEING FULL AND RIG PUMP NOT KEEPING UP.
16	3/10/2018	5:04	FRESH WATER SPACER	8.33	3	5	258	FRESH WATER SPACER
17	3/10/2018	5:08	FRESH WATER SPACER	8.33	3	20	308	FRESH WATER SPACER
18	3/10/2018	5:09	LEAD CEMENT	12	3	5	276	LEAD CEMENT 12 PPG. 360 SKS. 2.53 CUFT./SK. 14.86 GAL./SK. FOR 162.21 BBLs OF LEAD REQUIRING A TOTAL OF 127.37 BBLs. OF MIX WATER. WEIGHT VERIFIED WITH MUD SCALES.
19	3/10/2018	5:26	LEAD CEMENT	12	3	50	262	PUMPED LEAD CEMENT
20	3/10/2018	5:42	LEAD CEMENT	12	3	100	53	PUMPED LEAD CEMENT
21	3/10/2018	5:46	SHUTDOWN					SHUT DOWN RIG BLACKED OUT AND DAY TANK RAN OUT OF WATER DUE TO NOT BEING ABLE TO TRANSFER WATER FROM FRAC TANK
22	3/10/2018	5:59	LEAD CEMENT	12	3	119	56	PUMPED LEAD CEMENT
23	3/10/2018	6:04	LEAD CEMENT	12	3	150	61	PUMPED LEAD CEMENT
24	3/10/2018	6:11	LEAD CEMENT	12	3	164	82	FINISHED PUMPING LEAD CEMENT WITH 177 BBLs. AWAY.
25	3/10/2018	6:12	TAIL CEMENT	12.5	4	5	89	TAIL CEMENT 12.5 PPG. 118 SKS. 2.23 CUFT./SK. 12.59 GAL./SK. FOR 46.87 BBLs OF TAIL REQUIRING A TOTAL OF 35.37BBLs. OF MIX WATER. WEIGHT VERIFIED WITH MUD SCALES.
26	3/10/2018	6:15	SHUTDOWN					SHUTDOWN DUE TO NOT GETTING WATER.
27	3/10/2018	6:21	TAIL CEMENT	12.5	4	30	188	PUMPED TAIL CEMENT
28	3/10/2018	6:23	TAIL CEMENT	12.5	4	47.6	203	FINISHED PUMPING TAIL CEMENT WITH 47.6 BBLs. AWAY.
29	3/10/2018	6:24	SHUT DOWN					SHUT DOWN
30	3/10/2018	6:26	DROP PLUG					DROP TOP PLUG VERIFIED BY COMPANY MAN
31	3/10/2018	6:28	DISPLACEMENT	8.33	4	10	156	FRESH WATER DISPLACEMENT WITH THE FIRST 2 BBLs. OF DISPLACEMENT BEING TAIL CEMENT AT 12.5 PPG.
32	3/10/2018	6:35	DISPLACEMENT	8.33	3.5	30	257	FRESH WATER DISPLACEMENT
33	3/10/2018	6:42	DISPLACEMENT	8.33	3.5	50	242	FRESH WATER DISPLACEMENT
34	3/10/2018	7:00	DISPLACEMENT	8.33	3.5	100	455	FRESH WATER DISPLACEMENT
35	3/10/2018	7:10	DISPLACEMENT	8.33	3.5	130	511	FRESH WATER DISPLACEMENT
36	3/10/2018	7:10	CEMENT TO SURFACE					CEMENT TO SURFACE WITH 30 BBLs. LEFT
37	3/10/2018	7:11	DISPLACEMENT	8.33	2	131	429	FRESH WATER DISPLACEMENT
38	3/10/2018	7:18	LOST RETURNS					LOST RETURNS WITH 15 BBLs. TO GO ON DISPLACEMENT
39	3/10/2018	7:22	DISPLACEMENT	8.33	2	152	475	FRESH WATER DISPLACEMENT
40	3/10/2018	7:23	OVER DISPACE	8.33	2	155	481	OVER DISPAED BY 3 BBLs. AS PER COMPANY MAN.
41	3/10/2018	7:25	DIDN'T LAND PLUG				481	DIDN'T LAND PLUG @ 481
42	3/10/2018	7:30	CHECK FLOATS					CHECK FLOATS FLOATS HELD 1/4 BBL. BACK
43	3/10/2018	7:30	WAIT 1 HOUR					WAIT 1 HOUR, CEMENT DIDN'T FALL RELEASED BY COMPANY MAN
44	3/10/2018	7:45	WASH PUMPS AND LINES					WASH PUMPS AND LINES TO CELLAR TO CLEAN CEMENT OUT OF RIG PUMPM
45	3/10/2018	8:30	STEACS					PRE RIG DOWN SAFETY MEETING WITH ALL BJ SERVICES CEMENT CREW.
46	3/10/2018	8:51	BLOW DOWN SILO					BLOW DOWN SILO #6 INTO BULK TRUCK
47	3/10/2018	9:18	RIG DOWN					RIG DOWN ALL EQUIPMENT
48	3/10/2018	9:33	AAR					AFTER ACTION REVIEW
49	3/10/2018	9:40	STEACS					PRE CONVOY SAFETY MEETING
50	3/10/2018	10:00	DEPART LOCATION					DEPART FROM H&P 273 FOR RIFLE YARD. THANK YOU FOR USING BJ SERVICES, ANDREW LINN AND CREW.



JobMaster Program Version 4.02C1  
Job Number: 3740  
Customer: CAERUS  
Well Name: NPR 15D-10

