



COGCC doc # 2597513

# Caerus

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## Surface Post Job Report

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**NPR 23D-10-596 05-045-23769**

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 II | (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>	5/23/2018	<b>Field Ticket#</b>	FT-07026-V1T2T30202-22250
<b>End Date</b>	5/24/2018	<b>Well</b>	NPR 23D-10-596
<b>Client</b>	CAERUS OPERATING, LLC	<b>API#</b>	05-045-23769
<b>Client Field Rep.</b>	BUD WENZEL	<b>Well Classification</b>	
<b>Service Sup.</b>	Shaun Clark	<b>County</b>	GARFIELD
<b>District</b>	Rifle, CO	<b>State/Province</b>	CO
<b>Type of Job</b>	Surface	<b>Formation</b>	
<b>Execution ID</b>	EXC-07026-V1T2T302	<b>Rig</b>	H&P 273
<b>Project ID</b>	PRJ1007034		

## 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	14.75			2,988.00			
Casing	8.92	9.63	36.00	2,973.00		J-55	LTC

**Shoe Length (ft):** 45

## HARDWARE

<b>Bottom Plug Used?</b>	No	<b>Tool Type</b>	Float Collar
<b>Top Plug Used?</b>	Yes	<b>Tool Depth (ft)</b>	2,928.00
<b>Top Plug Provided By</b>	Non BJ	<b>Max Casing Pressure - Rated (psi)</b>	6,080.00
<b>Top Plug Size</b>	9.625	<b>Max Casing Pressure - Operated (psi)</b>	2,000.00
<b>Centralizers Used</b>	Yes	<b>Pipe Movement</b>	None
<b>Centralizers Quantity</b>	5.00	<b>Job Pumped Through</b>	Manifold
<b>Centralizers Type</b>	Bow	<b>Top Connection Thread</b>	8RD
<b>Landing Collar Depth (ft)</b>	2,928	<b>Top Connection Size</b>	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	4.00
Circulation Time (min)	60.00	10 min SGS	13.00
Circulation Rate (bpm)	6.00	30 min SGS	22.00
Circulation Volume (bbls)	360.00	Flare Prior to/during the Cement Job	No
Lost Circulation Prior to Cement Job	Yes	Gas Present	No
Mud Density In (ppg)	9.20	Gas Units	
PV Mud In	12		
YP Mud In	10		

## TEMPERATURE

Ambient Temperature (°F)	43.00	Slurry Cement Temperature (°F)	70.00
Mix Water Temperature (°F)	60.00	Flow Line Temperature (°F)	98.00

## 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	Fresh Water	8.3300			0.00				20.0000
Spacer / Pre Flush / Flush	Sodium Silicate	10.0000			0.00				20.0000
Spacer / Pre Flush / Flush	Fresh Water	8.3300			0.00				20.0000
Lead Slurry	BJCem S100.3.01D	12.0000	2.5298	14.86	0.00	2,500.00	708	1,791.0000	318.9000
Tail Slurry	BJCem S100.3.01D	12.5000	2.2256	12.59	2,500.00	500.00	161	358.0000	63.7000
Displacement Final	Displacement	8.3300			0.00			0.0000	228.8000
Top Out Slurry	BJCem S100.3.01D	12.5000	2.2256	12.59			25	55.6000	10.0000

# 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	IntegraSeal CELLO	0.1300	LBS/SK
Lead Slurry	BJCem S100.3.01D	ACCELERATOR, SALT, CHLORIDE, CALCIUM, A-7P, PELLETS	2.0000	LBS/SK
Lead Slurry	BJCem S100.3.01D	FOAM PREVENTER, FP-25	0.3000	BWOB
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 ANHYDROUS	2.0000	LBS/SK
Tail Slurry	BJCem S100.3.01D	CEMENT, ASTM TYPE III	100.0000	PCT
Tail Slurry	BJCem S100.3.01D	ACCELERATOR, SALT, CHLORIDE, CALCIUM, A-7P, PELLETS	2.0000	LBS/SK
Tail Slurry	BJCem S100.3.01D	IntegraSeal CELLO	0.1300	LBS/SK
Tail Slurry	BJCem S100.3.01D	CEMENT EXTENDER, GYPSUM, A-10	5.0000	BWOB
Tail Slurry	BJCem S100.3.01D	FOAM PREVENTER, FP-25	0.3000	BWOB
Tail Slurry	BJCem S100.3.01D	CEMENT EXTENDER,SODIUM METASILICATE A-2 ANHYDROUS	2.0000	LBS/SK
Top Out Slurry	BJCem S100.3.01D	CEMENT, ASTM TYPE III	100.0000	PCT
Top Out Slurry	BJCem S100.3.01D	ACCELERATOR, SALT, CHLORIDE, CALCIUM, A-7P, PELLETS	2.0000	LBS/SK
Top Out Slurry	BJCem S100.3.01D	IntegraSeal CELLO	0.1300	LBS/SK
Top Out Slurry	BJCem S100.3.01D	CEMENT EXTENDER, GYPSUM, A-10	5.0000	BWOB
Top Out Slurry	BJCem S100.3.01D	FOAM PREVENTER, FP-25	0.3000	BWOB
Top Out Slurry	BJCem S100.3.01D	CEMENT EXTENDER,SODIUM METASILICATE A-2 ANHYDROUS	2.0000	LBS/SK

## TREATMENT SUMMARY

Time	Fluid	Rate (bpm)	Fluid Vol. (bbls)	Pipe Pressure (psi)	Annulus Pressure (psi)	Comments
5/24/2018 4:50 AM	Fresh Water	2.60	20.00	408.00		
5/24/2018 4:52 AM	Sodium Silicate	4.00	20.00	770.00		
5/24/2018 4:54 AM	Fresh Water	4.00	20.00	700.00		
5/24/2018 5:05 AM	BJCem S100.3.01D	4.00	318.90	633.00		
5/24/2018 6:28 AM	BJCem S100.3.01D	4.00	63.70	650.00		
5/24/2018 6:43 AM	Displacement	6.00	228.80	1,200.00		
5/24/2018 8:00 PM	BJCem S100.3.01D	1.00	10.00	60.00		Top Out Cement

# Cementing Treatment



	Min	Max	Avg
Pressure (psi)	0.00	3,500.00	800.00
Rate (bpm)	0.00	6.00	6.00

## DISPLACEMENT AND END OF JOB SUMMARY

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Displaced By	BJ	Amount of Cement Returned/Reversed	0.50
Calculated Displacement Volume (bbls)	124.40	Method Used to Verify Returns	Visual
Actual Displacement Volume (bbls)	125.00	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	1.50
Bump Plug Pressure (psi)	2,000.00	Total Volume Pumped (bbls)	667.00
Were Returns Planned at Surface	Yes	Top Out Cement Spotted	Yes
Cement returns During Job	None	Lost Circulation During Cement Job	Yes

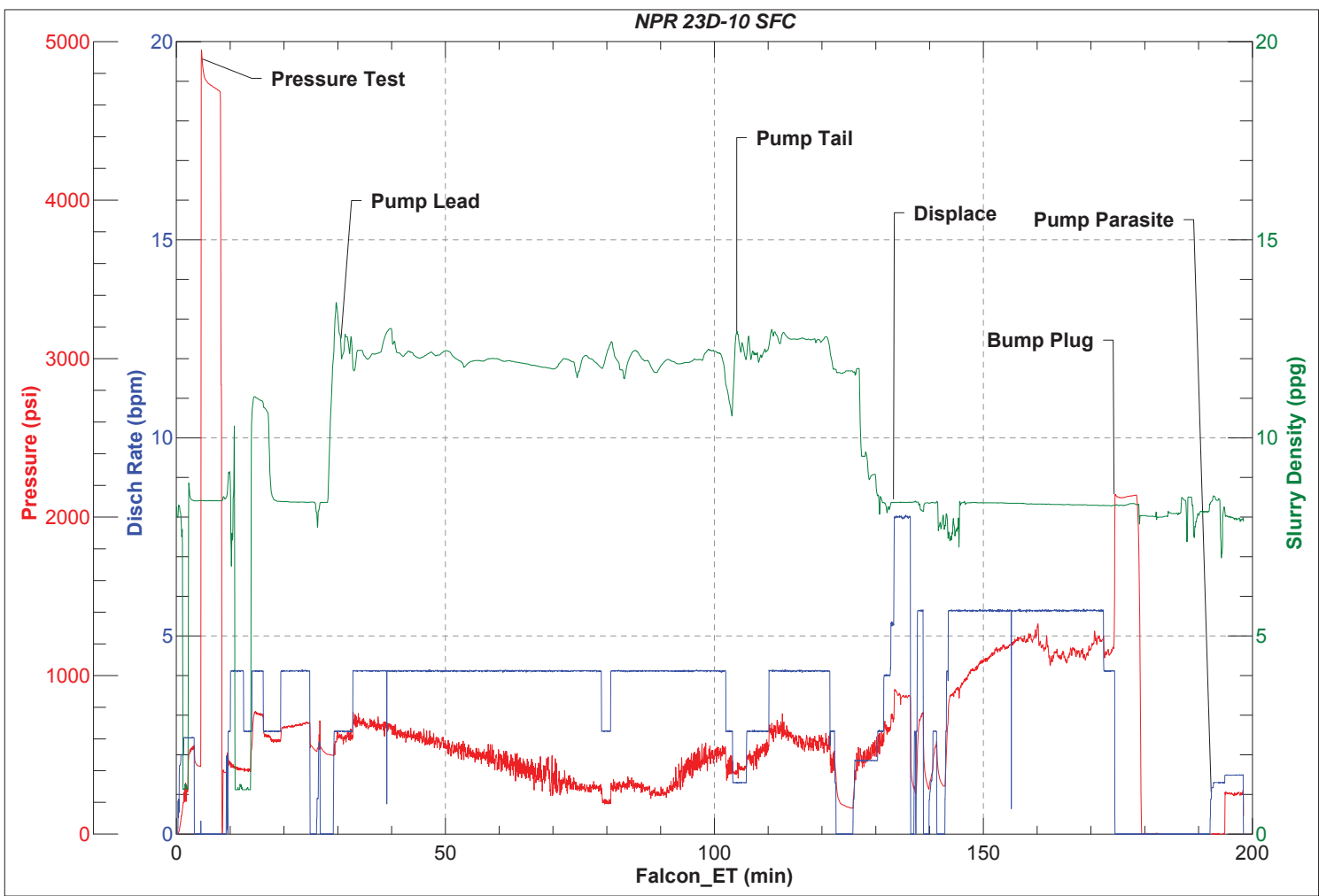
Customer Name CAERUS District RIFLE  
 Well Name NPR 23D-10 Supervisor SHAUN CLARK  
 Job Type SURFACE Engineer ZEN KEITH



Seq No.	Start Date	Start Time	Event	Equipment	Density (lb/gal)	Pump Rate (bpm)	Pump Vol (bbls)	Pipe Pressure (psi)	Comments
1	5/23/2018	21:30	CALL OUT						CALLED OUT WITH RTS OF 02:00
2	5/23/2018	21:35	JM						JOURNEY MANAGEMENT WITH BJ CREW
3	5/23/2018	22:30	LEAVE YARD						LEAVE DISTRICT
4	5/23/2018	23:30	ARRIVE ON LOC						ARRIVE ON LOCATION
5	5/23/2018	23:35	STEACS						STEACS BREIFING WITH BJ CREW
6	5/23/2018	0:00	SPOT UNITS						SPOT TRUCKS
7	5/24/2018	1:00	RIG UP						RIG UP ALL EQUIPMENT
8	5/24/2018	4:00	CUSTOMER						BJ ON STANDBY, RIG RUNNING CASING
9	5/24/2018	4:00	PIPE ON BOTTOM						PIPE ON BOTTOM, RIG TO CIRCULATE
10	5/24/2018	4:05	SAFETY MEETING						SAFETY MEETING WITH BJ CREW, COMPANY, AND RIG CREW
11	5/24/2018	4:25	RIG UP						RIG UP CEMENT HEAD TO CASING
12	5/24/2018	4:32	BREAK CIRCULATION		8.33	2.5	5	510	BREAK CIRCULATION
13	5/24/2018	4:41	PRESSURE TEST		8.33			3000	TEST LINES 3000
14	5/24/2018	4:50	PUMP SPACER		8.33	2.5	20	408	FRESH WATER SPACER
15	5/24/2018	4:54	PUMP SPACER		11	4	20	770	SODIUM SILICATE SPACER
16	5/24/2018	5:02	PUMP SPACER		8.33	4	20	700	FRESH WATER SPACER
17	5/24/2018	5:03	PUMP LEAD						BATCH UP LEAD TO 12 PPG / SCALED @ 12 PPG
18	5/24/2018	5:03	PUMP LEAD		12	4	10	650	LEAD CEMENT @ 12.0 PPG DOWNHOLE
19	5/24/2018	5:21	PUMP LEAD		12	4	50	633	50 BBL GONE LEAD SLURRY
20	5/24/2018	5:32	PUMP LEAD		12	4	100	520	100 BBL GONE LEAD SLURRY
21	5/24/2018	5:43	PUMP LEAD		12	4	150	361	150 BBL GONE LEAD SLURRY
22	5/24/2018	5:58	PUMP LEAD		12	4	200	303	200 BBL GONE LEAD SLURRY
23	5/24/2018	6:10	PUMP LEAD		12	4	250	435	250 BBL GONE LEAD SLURRY
24	5/24/2018	6:27	PUMP LEAD		12	3	305	507	317 BBL GONE LEAD SLURRY
25	5/24/2018	6:28	PUMP TAIL		12.5				BRING UP TO TAIL WEIGHT / SCALED @ 12.5 PPG
26	5/24/2018	6:33	PUMP TAIL		12.5	4	10	530	TAIL CEMENT @ 12.5 PPG DOWN HOLE
27	5/24/2018	6:43	PUMP TAIL		12.5	2.5	63	460	63 BBL GONE TAIL SLURRY
28	5/24/2018	6:45	PUMP DISPLACEMENT		8.4	2			DROP PLUG / PUMP 2 BBL CMT ON TOP DISPLACE 224.4
29	5/24/2018	7:07	PUMP DISPLACEMENT		8.4	5.6	50	1000	50 BBL GONE DISPLACEMENT
30	5/24/2018	7:14	PUMP DISPLACEMENT		8.4	5.6	100	1200	100 BBL GONE DISPLACEMENT
31	5/24/2018	7:23	PUMP DISPLACEMENT		8.4	5.6	150	1114	150 BBL GONE DISPLACEMENT
32	5/24/2018	7:33	PUMP DISPLACEMENT		8.4	5.6	200	1200	200 BBL GONE DISP.
33	5/24/2018	7:40	PUMP DISPLACEMENT		8.4	5.6	210	1280	210 BBL GONE DISP.
34	5/24/2018	7:41	PUMP DISPLACEMENT		8.4	4	220	1460	SLOW RATE TO BUMP PLUG
35	5/24/2018	7:42	BUMP PLUG		8.4	4	225	2000	BUMP PLUG FCP- 1460
36	5/24/2018	7:50	CHECK FLOATS		8.4				BLEED PRESSURE / CHECK FLOATS / 1.5 BBL BACK TO TRUCK
37	5/24/2018	8:00	PUMP DOWN PARASITE		8.4		OLOO		RIG UP PUMP TO PARASITE LINE
38	5/24/2018	8:10	Sugar water		8.4	2	10	300	PUMP 10 BBL SUGAR WATER
39	5/24/2018	8:30	STDBY						WAIT ON BOP TESTING TO CONCLUDE
40	5/24/2018	20:00	PUMP TOP OUT		12.5	1	10	60	RIG UP TO PUMP 25 SKS TOP OUT IN ANULAS
41	5/24/2018	20:30	PUMP TOP OUT						CEMENT TO SFC
42	5/24/2018	21:00	WASH PUMP N LINES						SAFETY MEETING WITH BJ CREW FOR RIG DOWN AND WASH UP
43	5/24/2018	21:05	SAFETY MEETING						**END JOB **PRE-JOURNEY SAFETY MEETING FOR RETURN TO BASE
44	5/24/2018	22:30	LEAVE LOCATION						LEAVE LOCATION



JobMaster Program Version 4.02C1  
Job Number: 5711  
Customer: CAERUS  
Well Name: NPR 23D-10 23D-10







JobMaster Program Version 4.02C1  
Job Number: 5711  
Customer: Caerus  
Well Name: NPR 23D10

