



# Caerus

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## Surface Post Job Report

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**NPR 11B-15-596 05-045-23754**

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>	3/23/2018	<b>Well</b>	NPR 11B-15-596
<b>End Date</b>	3/23/2018	<b>County</b>	GARFIELD
<b>Client</b>	CAERUS OPERATING, LLC	<b>State/Province</b>	CO
<b>Client Field Rep</b>	Whitey Cottam	<b>API</b>	05-045-23754
<b>Service Supervisor</b>	Francisco Castillo	<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

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			1,568.00	10.00		
Open Hole	13.50			2,068.00			
Casing	8.92	9.63	36.00	2,051.00		J-55	LTC

**Shoe Length (ft):** 43

## HARDWARE

<b>Bottom Plug Used?</b>	No	<b>Max Casing Pressure - Rated (psi)</b>	3,520.00
<b>Top Plug Used?</b>	Yes	<b>Max Casing Pressure - Operated (psi)</b>	2,816.00
<b>Top Plug Provided By</b>	Non BJ	<b>Pipe Movement</b>	None
<b>Top Plug Size</b>	9.625	<b>Top Connection Thread</b>	8RD
<b>Centralizers Used</b>	Yes	<b>Top Connection Size</b>	9.625
<b>Centralizers Type</b>	Bow		
<b>Landing Collar Depth (ft)</b>	2,008		

# Cementing Treatment



## CIRCULATION PRIOR TO JOB

Well Circulated By	Rig	Solids Present at End of Circulation	No
Circulation Prior to Job	Yes	10 sec SGS	12.00
Circulation Time (min)	30.00	10 min SGS	26.00
Circulation Rate (bpm)	5.00	30 min SGS	39.00
Circulation Volume (bbls)	150.00	Flare Prior to/during the Cement Job	No
Lost Circulation Prior to Cement Job	No	Gas Present	No
Mud Density In (ppg)	10.00	Gas Units	
Mud Density Out (ppg)	10.00		
PV Mud In	18		
PV Mud Out	18		
YP Mud In	26		
YP Mud Out	26		

## TEMPERATURE

Ambient Temperature (°F)	39.00	Slurry Cement Temperature (°F)	57.00
Mix Water Temperature (°F)	48.00	Flow Line Temperature (°F)	112.00

## 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	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	155.0000

# 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	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	IntegraSeal CELLO	0.1300	LBS/SK
Lead Slurry	BJCem S100.3.01D	CEMENT, ASTM TYPE III	100.0000	PCT
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,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	Foam Preventer, FP-25	0.3000	BWOB
Tail Slurry	BJCem S100.3.01D	CEMENT EXTENDER,SODIUM METASILICATE A-2 ANHYDROUS	2.0000	LBS/SK
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

## TREATMENT SUMMARY

Time	Fluid	Rate (bpm)	Fluid Vol. (bbls)	Pipe Pressure (psi)	Annulus Pressure (psi)	Comments
3/23/2018 7:16 AM	Water 1	5.00	20.00	160.00		SPACER
3/23/2018 7:19 AM	Sodium Silicate	4.00	20.00	158.00		SPACER
3/23/2018 7:24 AM	Water 2	4.00	20.00	155.00		SPACER
3/23/2018 7:35 AM	BJCem S100.3.01D	5.00	161.80	97.00		LEAD CMT
3/23/2018 8:15 AM	BJCem S100.3.01D	5.00	46.60	93.00		TAIL CMT
3/23/2018 8:26 AM	Displacement	4.50	155.00	535.00		DISPLACEMENT

	Min	Max	Avg
Pressure (psi)	75.00	535.00	305.00
Rate (bpm)	2.00	5.00	3.50

# Cementing Treatment



## DISPLACEMENT AND END OF JOB SUMMARY

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Displaced By	BJ	Amount of Cement Returned/Reversed	50.00
Calculated Displacement Volume (bbls)	155.00	Method Used to Verify Returns	Visual
Actual Displacement Volume (bbls)	155.00	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)	1,140.00	Total Volume Pumped (bbls)	423.00
Were Returns Planned at Surface	No	Top Out Cement Spotted	No
Cement returns During Job	Full	Lost Circulation During Cement Job	No

Customer Name CAERUS District RIFLE  
 Well Name NPR 11B-15 Supervisor JAVIER CASTILLO  
 Job Type SURFACE Engineer GAGE PUTNAM



Seq No.	Start Date	Start Time	Event	Equipment	Density (lb/gal)	Pump Rate (bpm)	Pump Vol (bbls)	Pipe Pressure (psi)	Comments
1	3/22/2018	18:00	CALL OUT						ON LOCATION AT 00:30HRS
2	3/22/2018	20:50	MEETING						STEACS JOURNEY MANAGEMENT MEETING WITH BJ CREW
3	3/22/2018	21:00	LEAVE YARD						BJ CREW LEAVE YARD
4	3/22/2018	23:00	ARRIVE ON LOC.						ARRIVE ON LOCATION, RIG WAS RUNNING CASING
5	3/22/2018	23:30	MEETING						STEACS RIG UP SAFETY MEETING
6	3/22/2018	23:35	RIG UP						PUT UP TARPS AND HEAT ON CEMENT PUMP, RIG UP PUMPING IRON
7	3/23/2018	0:30	COMPLETE						STAYING AWAY FROM RED ZONE, RIG UP WATER HOSES, RIG UP BULK HOSES
8	3/23/2018	5:45	LAND CASING						RIG UP COMPLETE TILL RIG LANDS CASING
9	3/23/2018	6:15	MEETING						RIG LANDED CASING
10	3/23/2018	7:07	SPACER		8.34	2	5	75	PRE-JOB SAFETY MEETING WITH RIG CREW
11	3/23/2018	7:10	TEST LINES					3300	FILL LINES
12	3/23/2018	7:16	SPACER		8.34	5	15	160	PRESSURE TEST PUMPING IRON
13	3/23/2018	7:19	SPACER		9	4	20	158	WATER SPACER
14	3/23/2018	7:24	SPACER		8.34	4	20	155	SODIUM SILICATE SPACER
15	3/23/2018	7:35	LEAD CEMENT		12				WATER SPACER
16	3/23/2018	7:48	LEAD CEMENT		12	2.5	50	97	BEGIN LEAD CEMENT, 360SKS/161.5BBLs AT 12.0 PPG, 2.53, 14.89
17	3/23/2018	8:01	LEAD CEMENT		12	5	50	95	50BBLs PUMPED LEAD CEMENT
18	3/23/2018	8:13	LEAD CEMENT		12	4.5	61.5	79	100BBLs PUMPED LEAD CEMENT
19	3/23/2018	8:15	TAIL CEMENT		12.5	5	46.6	93	161.5 BBLs PUMPED LEAD CEMENT
20	3/23/2018	8:24	SHUTDOWN						TAIL CEMENT 118SKS/46.6BBLs AT 12.5, 2.22, 12.59
21	3/23/2018	8:26	DISPLACEMENT		8.34				SHUTDOWN WITH 3 BBLs OF CEMENT LEFT IN MIXING TUB
22	3/23/2018	8:36	DISPLACEMENT		8.34	5	50	229	BEGIN DISPLACEMENT WITH 3 BBLs CMT ON TOP OF PLUG
23	3/23/2018	8:45	DISPLACEMENT		8.34	4.5	50	430	50BBLs PUMPED OF DISPLACEMENT
24	3/23/2018	8:56	DISPLACEMENT		8.34	4.5	45	535	100BBLs PUMPED OF DISPLACEMENT
25	3/23/2018	8:57	SLOW RATE		8.34	2.5	10	515	145BBLs PUMPED OF DISPLACEMENT
26	3/23/2018	9:01	BUMP PLUG					1140	SLOW RATE, FULL RETURNS
27	3/23/2018	9:06	FLOATS						155BBLs TOTAL PUMPED OF DISPLACEMENT
28	3/23/2018	9:20	MEETING						CHECK FLOATS, FLOATS HELD, 0.5 BBLs FLOW BACK
29	3/23/2018	9:25	RIG DOWN						RIG DOWN STEACS MEETING
30	3/23/2018	10:10	COMPLETE						PICKLE, RIG DOWN BJ EQUIPMENT
31	3/23/2018	10:15	MEETING						RIG DOWN COMPLETE
32	3/23/2018	10:25	LEAVE LOCATION						JM STEACS MEETING
33	3/23/2018	10:26							BJ CREW LEAVE LOCATION
34	3/23/2018	10:27							CALCULATED TOP OF TAIL 1557 FT
35	3/23/2018	10:28							CIRCULATED 50 BBLs OF CEMENT TO SURFACE
									THANK YOU FOR YOUR BUSINESS FROM JAVIER AND CREW



JobMaster Program Version 4.02C1  
Job Number: 4096  
Customer: CAERUS  
Well Name: NPR 11B-15

## CAERUS 9 5/8 SURFACE

