



# Caerus

## Surface Post Job Report

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NPR 14A-10-596 05-045-23777

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

Quote #:

Execution #:

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# 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,

Gage Putnam  
Field Engineer I | (970) 632-2006 | [Gage.Putnam@BJServices.com](mailto:Gage.Putnam@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>	6/25/2018	<b>Field Ticket#</b>	FT-07988-H1D9C70202-16593
<b>End Date</b>	6/25/2018	<b>Well</b>	NPR 14A-10-596
<b>Client</b>	CAERUS OPERATING, LLC	<b>API#</b>	05-045-23777
<b>Client Field Rep.</b>	Whitey Cottam	<b>Well Classification</b>	-
<b>Service Sup.</b>	Francisco Castillo	<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-07988-H1D9C702	<b>Rig</b>	H&P 273
<b>Project ID</b>	PRJ1007950		

## 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			3,004.00			
Casing	8.92	9.63	36.00	2,950.50		J-55	LTC

**Shoe Length (ft):** 44

## HARDWARE

<b>Bottom Plug Used?</b>	No	<b>Tool Type</b>	Float Collar
<b>Bottom Plug Provided By</b>	-	<b>Tool Depth (ft)</b>	2,907.00
<b>Bottom Plug Size</b>	-	<b>Max Tubing Pressure - Rated (psi)</b>	-
<b>Top Plug Used?</b>	Yes	<b>Max Tubing Pressure - Operated (psi)</b>	-
<b>Top Plug Provided By</b>	Non BJ	<b>Max Casing Pressure - Rated (psi)</b>	3,520.00
<b>Top Plug Size</b>	9.625	<b>Max Casing Pressure - Operated (psi)</b>	2,816.00
<b>Centralizers Used</b>	Yes	<b>Pipe Movement</b>	Unable Due to Stuck Pipe
<b>Centralizers Quantity</b>	-	<b>Job Pumped Through</b>	Manifold
<b>Centralizers Type</b>	Bow	<b>Top Connection Thread</b>	8RD
<b>Landing Collar Depth (ft)</b>	2,907	<b>Top Connection Size</b>	9.625

# Cementing Treatment



## CIRCULATION PRIOR TO JOB

<b>Well Circulated By</b>	Rig	<b>Solids Present at End of Circulation</b>	No
<b>Circulation Prior to Job</b>	Yes	<b>10 sec SGS</b>	18.00
<b>Circulation Time (min)</b>	40.00	<b>10 min SGS</b>	42.00
<b>Circulation Rate (bpm)</b>	5.00	<b>30 min SGS</b>	62.00
<b>Circulation Volume (bbls)</b>	200.00	<b>Flare Prior to/during the Cement Job</b>	No
<b>Lost Circulation Prior to Cement Job</b>	No	<b>Gas Present</b>	No
<b>Mud Density In (ppg)</b>	9.80	<b>Gas Units</b>	0
<b>Mud Density Out (ppg)</b>	-		
<b>PV Mud In</b>	21		
<b>PV Mud Out</b>	-		
<b>YP Mud In</b>	24		
<b>YP Mud Out</b>	-		

## TEMPERATURE

<b>Ambient Temperature (°F)</b>	53.00	<b>Slurry Cement Temperature (°F)</b>	75.00
<b>Mix Water Temperature (°F)</b>	70.00	<b>Flow Line Temperature (°F)</b>	160.00

## 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	8.33			0.00				20.00
Spacer / Pre Flush / Flush	Sodium Silicate	10.00			0.00				20.00
Spacer / Pre Flush / Flush	Water 2	8.33			0.00				20.00
Lead Slurry	BJCem S100.3.01D	12.00	2.5298	14.86	0.00	2,500.00	526	1,329.00	236.60
Tail Slurry	BJCem S100.3.01D	12.50	2.2256	12.59	2,500.00	500.00	118	262.00	46.60
Displacement Final	Displacement	8.33			0.00			0.00	225.00

# 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 EXTENDER,SODIUM METASILICATE A-2 ANHYDROUS	2.0000	LBS/SK
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	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	CEMENT EXTENDER, GYPSUM, A-10	5.0000	BWOB
Tail Slurry	BJCem S100.3.01D	CEMENT, ASTM TYPE III	100.0000	PCT
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 ANHYDROUS	2.0000	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	FOAM PREVENTER, FP-25	0.3000	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)	Comments
6/25/2018 12:25 AM	Water 1	4.00	20.00	253.00	SPACER
6/25/2018 12:29 AM	Sodium Silicate	4.00	20.00	245.00	SPACER
6/25/2018 12:33 AM	Water 2	4.00	20.00	259.00	SPACER
6/25/2018 12:37 AM	BJCem S100.3.01D	4.00	236.60	237.00	LEAD CEMENT
6/25/2018 1:34 AM	BJCem S100.3.01D	4.00	46.60	115.00	TAIL CEMENT
6/25/2018 1:48 AM	Displacement	5.70	225.00	1,137.00	DISPLACEMENT
		<b>Min</b>		<b>Max</b>	<b>Avg</b>
<b>Pressure (psi)</b>		107.00		1,137.00	622.00
<b>Rate (bpm)</b>		3.70		5.70	4.70

# Cementing Treatment



## DISPLACEMENT AND END OF JOB SUMMARY

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<b>Displaced By</b>	BJ	<b>Amount of Cement Returned/Reversed</b>	30.00
<b>Calculated Displacement Volume (bbls)</b>	225.00	<b>Method Used to Verify Returns</b>	Visual
<b>Actual Displacement Volume (bbls)</b>	225.00	<b>Amount of Spacer to Surface</b>	60.00
<b>Did Float Hold?</b>	Yes	<b>Pressure Left on Casing (psi)</b>	0.00
<b>Bump Plug</b>	Yes	<b>Amount Bled Back After Job</b>	1.00
<b>Bump Plug Pressure (psi)</b>	1,517.00	<b>Total Volume Pumped (bbls)</b>	569.00
<b>Were Returns Planned at Surface</b>	Yes	<b>Top Out Cement Spotted</b>	No
<b>Cement returns During Job</b>	Full	<b>Lost Circulation During Cement Job</b>	No

Customer Name CAERUS District RIFLE  
 Well Name NPR 14A-10 Supervisor JAVIER CASTILLO  
 Job Type SURFACE Engineer GAGE PUTNAM



Seq No.	Start Date	Start Time	Event	Density (lb/gal)	Pump Rate (bpm)	Pump Vol (bbls)	Pipe Pressure (psi)	Comments
1	6/24/2018	12:30	YARD CALL					ON LOCATION AT 18:00 HRS
2	6/24/2018	14:50	MEETING					STEACS JOURNEY MANAGEMENT MEETING WITH BJ CREW
3	6/24/2018	15:00	LEAVE YARD					BJ CREW LEAVE YARD
4	6/24/2018	16:00	ARRIVE ON LOC.					ARRIVE ON LOCATION, RIG WAS RUNNING CASING
5	6/24/2018	16:45	MEETING					STEACS RIG UP SAFETY MEETING
6	6/24/2018	16:50	RIG UP					RIG UP PUMPING IRON STAYING AWAY FROM RED ZONE, RIG UP WATER HOSES, RIG UP BULK HOSES
7	6/24/2018	17:45	COMPLETE					RIG UP COMPLETE TILL RIG LANDS CASING
8	6/24/2018	22:45	LAND CASING					RIG LANDED CASING
9	6/25/2018	0:05	MEETING					PRE-JOB SAFETY MEETING WITH RIG CREW
10	6/25/2018	0:19	SPACER	8.34	2.5	5	201	FILL LINES
11	6/25/2018	0:21	TEST LINES				4100	PRESSURE TEST PUMPING IRON
12	6/25/2018	0:25	SPACER	8.34	4	15	253	WATER SPACER
13	6/25/2018	0:29	SPACER	11	4	20	245	SODIUM SILICATE SPACER
14	6/25/2018	0:33	SPACER	8.34	4	20	259	WATER SPACER
15	6/25/2018	0:37	LEAD CEMENT	12				LEAD CEMENT 526SKS/237BBLS, AT 12.0PPG, 2.53, 14.89
16	6/25/2018	0:50	LEAD CEMENT	12	4	50	237	50 BBLS LEAD CEMENT PUMPED
17	6/25/2018	1:02	LEAD CEMENT	12	4	50	153	100 BBLS LEAD CEMENT PUMPED
18	6/25/2018	1:14	LEAD CEMENT	12	3.7	50	107	150 BBLS LEAD CEMENT PUMPED
19	6/25/2018	1:28	LEAD CEMENT	12	3.7	87	107	237 BBLS LEAD CEMENT PUMPED
20	6/25/2018	1:34	TAIL CEMENT	12.5	3.7	47	115	TAIL CEMENT 118SKS/47BBLS, AT 12.5PPG, 2.23, 12.59
21	6/25/2018	1:46	SHUTDOWN					SHUTDOWN, DROP TOP PLUG
22	6/25/2018	1:48	DISPLACEMENT	8.34				DISPLACEMENT FRESH WATER
23	6/25/2018	1:59	DISPLACEMENT	8.34	5.7	50	325	50 BBLS DISPLACEMENT PUMPED
24	6/25/2018	2:07	DISPLACEMENT	8.34	5.7	50	597	100 BBLS DISPLACEMENT PUMPED
25	6/25/2018	2:17	DISPLACEMENT	8.34	5.7	50	880	150 BBLS DISPLACEMENT PUMPED
26	6/25/2018	2:25	DISPLACEMENT	8.34	5.7	65	1137	215 BBLS DISPLACEMENT PUMPED
27	6/25/2018	2:27	SLOW RATE	8.34	2.5	10	970	SLOW RATE
28	6/25/2018	2:30	LAND PLUG				1517	BUMP TOP PLUG, 225 BBLS PUMPED DISPLACEMENT
29	6/25/2018	2:35	FLOATS					FLOATS HELD, 1 BBL FLOW BACK
30	6/25/2018	2:45	MEETING					RIG DOWN SAFETY MEETING
31	6/25/2018	2:50	RIG DOWN					RIG DOWN BJ EQUIPMENT
32	6/25/2018	3:45	COMPLETE					RIG DOWN COMPLETE
33	6/25/2018	3:50	MEETING					AAR JM SAFETY MEETING WITH BJ CREW
34	6/25/2018	4:00	LEAVE LOCATION					BJ CREW LEAVE LOCATION
35	6/25/2018	4:01						CALCULATED TOP OF TAIL 2,450'
36	6/25/2018	4:01						THANK YOU FOR YOUR BUSINESS FROM JAVIER AND CREW
								30 bbls cement to surface



JobMaster Program Version 4.02C1

Job Number: 6583

Customer: CAERUS

Well Name: NPR 14A-10

### CAERUS 9 5/8 SURFACE

