



# Caerus

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## Surface Post Job Report

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NPR 25B-15-596 05-045-11346

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,

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>	4/11/2018	<b>Well</b>	NPR 25B-10-596
<b>End Date</b>	4/11/2018	<b>County</b>	GARFIELD
<b>Client</b>	CAERUS OPERATING, LLC	<b>State/Province</b>	CO
<b>Client Field Rep</b>	Boyd Cottam	<b>API</b>	05-045-11346
<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

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	0.00		
Open Hole	13.50			2,012.00			
Casing	8.92	9.63	36.00	2,002.00		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>	1,959.00
<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>	None
<b>Centralizers Quantity</b>	7.00	<b>Job Pumped Through</b>	Manifold
<b>Centralizers Type</b>	Bow	<b>Top Connection Thread</b>	8 RND
<b>Landing Collar Depth (ft)</b>	1,959	<b>Top Connection Size</b>	9.625

# Cementing Treatment



## CIRCULATION PRIOR TO JOB

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Well Circulated By	Rig	Solids Present at End of Circulation	No
Circulation Prior to Job	Yes	10 sec SGS	15.00
Circulation Time (min)	30.00	10 min SGS	26.00
Circulation Rate (bpm)	6.00	30 min SGS	45.00
Circulation Volume (bbls)	180.00	Flare Prior to/during the Cement Job	No
Lost Circulation Prior to Cement Job	No	Gas Present	No
Mud Density In (ppg)	9.80	Gas Units	0
Mud Density Out (ppg)	-		
PV Mud In	14		
PV Mud Out	-		
YP Mud In	22		
YP Mud Out	-		

## TEMPERATURE

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Ambient Temperature (°F)	76.00	Slurry Cement Temperature (°F)	76.30
Mix Water Temperature (°F)	59.00	Flow Line Temperature (°F)	-

# Cementing Treatment



## 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	1,500.00	333	841.00	149.70
Tail Slurry	BJCem S100.3.01D	12.50	2.2256	12.59	1,500.00	500.00	118	262.00	46.60
Displacement Final	Displacement	8.33			0.00			0.00	151.50

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	IntegraSeal CELLO	0.1300	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	Foam Preventer, FP-25	0.3000	BWOB
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,SODIUM METASILICATE A-2 ANHYDROUS	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

# Cementing Treatment



## TREATMENT SUMMARY

Time	Fluid	Rate (bpm)	Fluid Vol. (bbls)	Pipe Pressure (psi)
4/11/2018 6:00 PM	Water 1	4.00	20.00	134.00
4/11/2018 6:13 PM	Sodium Silicate	4.00	20.00	242.00
4/11/2018 6:23 PM	Water 2	2.50	20.00	118.00
4/11/2018 6:33 PM	BJCem S100.3.01D	2.50	150.05	131.00
4/11/2018 7:05 PM	BJCem S100.3.01D	5.00	46.87	116.00
4/11/2018 7:19 PM	Displacement	6.50	151.43	68.00

	Min	Max	Avg
Pressure (psi)	68.00	471.00	117.00
Rate (bpm)	2.00	6.50	4.00

## DISPLACEMENT AND END OF JOB SUMMARY

Displaced By	BJ	Amount of Cement Returned/Reversed	35.00
Calculated Displacement Volume (bbls)	151.43	Method Used to Verify Returns	Visual
Actual Displacement Volume (bbls)	150.00	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	1.00
Bump Plug Pressure (psi)	430.00	Total Volume Pumped (bbls)	401.00
Were Returns Planned at Surface	Yes	Top Out Cement Spotted	No
Cement returns During Job	Full	Lost Circulation During Cement Job	No

Customer Name CAERUS  
Well Name NPR 25B-10  
Job Type Surface

District Rifle  
Supervisor ANDREW LINN  
Engineer ZEN KEITH



Seq No.	Start Date	Start Time	Event	Density (lb/gal)	Pump Rate (bpm)	Pump Vol (bbls)	Pipe Pressure (psi)	Comments
1	4/11/2018	8:00	CALL OUT					CALL OUT ON LOCATION TIME OF 12:00
2	4/11/2018	9:45	STEACS					PRE CONVOY SAFETY MEETING
3	4/11/2018	10:20	LEAVE RIFLE YARD					LEAVE RIFLE YARD FOR H&P 273.
4	4/11/2018	11:50	ARRIVE ON LOCATION					ARRIVE ON LOCATION. RIG WAS OUT OF THE HOLE WITH DRILL PIPE WAITING TO RUN CASING.
5	4/11/2018	11:55	SITE ASSESMENT					DID ROCK DRILL WITH CREW AND WALKED LOCATION
6	4/11/2018	12:02	SPOT EQUIPMENT					SPOT IN EQUIPMENT AND RIG UP ALL GROUND EQUIPMENT
7	4/11/2018	12:10	STEACS					PRE RIG UP SAFETY MEETING
8	4/11/2018	12:18	RIG UP					RIGGED IN ALL GROUND EQUIPMENT
9	4/11/2018	14:00	STEACS					PRE JOB SAFETY MEETING WITH RIG CREW AND ALL BJ SERVICES CEMENT CREW
10	4/11/2018	17:40	RIG UP					STAB PLUG CONTAINER, LOAD PLUG IN PLUG CONTAINER, AND HOOK UP LINES TO PLUG CONTAINER
11	4/11/2018	18:00	FILL LINES	8.33	2	5	108	FILL LINES WITH 5 BBLS. OF FRESH WATER AT 2 BBLS./MIN.
12	4/11/2018	18:03	PRESSURE TEST				6003	PRESSURE TEST TO 6003 PSI. PRESSURE HELD
13	4/11/2018	18:12	FRESH WATER SPACER	8.33	4	20	134	REMAINING 15 BBLS. OF FRESH WATER FOR A TOTAL OF 20 BBLS. OF FRESH WATER
14	4/11/2018	18:23	SODIUM SILICATE SPACER	10.5	2	20	105	SODIUM SILICATE SPACER 50/50
15	4/11/2018	18:31	FRESH WATER SPACER	8.33	2.5	20	124	FRESH WATER SPACER
16	4/11/2018	18:33	LEAD CEMENT	12	2.5	5	131	LEAD CEMENT 12 PPG 333 SKS 2.53 CUFT/SK 14.86 GAL/SK FOR 150.05 BBLS OF LEAD REQUIRING A TOTAL OF 117.82 BBLS OF MIX WATER. WEIGHT VERIFIED WITH MUD SCALES. CALCULATED TOP OF LEAD IS 0 FT CALCULATED HEIGHT OF LEAD IS 1502.23 FT.
17	4/11/2018	18:42	LEAD CEMENT	12	3.5	25	152	PUMPED LEAD CEMENT
18	4/11/2018	18:44	LEAD CEMENT	12	5	35	236	PUMPED LEAD CEMENT
19	4/11/2018	18:49	LEAD CEMENT	12	5.25	50	232	PUMPED LEAD CEMENT
20	4/11/2018	18:56	LEAD CEMENT	12	5.5	100	146	PUMPED LEAD CEMENT
21	4/11/2018	19:00	LEAD CEMENT	12	4	115	70	PUMPED LEAD CEMENT
22	4/11/2018	19:03	LEAD CEMENT	12	4.5	139	117	FINISHED PUMPING LEAD CEMENT WITH 139 BBLS. AWAY.
23	4/11/2018	19:05	TAIL CEMENT	12.5	5	10	116	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 35.37 BBLS OF MIX WATER. WEIGHT VERIFIED WITH MUD SCALES. CALCULATED TOP OF TAIL IS 1502.23 FT CALCULATED HEIGHT OF TAIL IS 499.77 FT.
24	4/11/2018	19:13	TAIL CEMENT	12.5	2	45	119	PUMPED TAIL CEMENT
25	4/11/2018	19:16	TAIL CEMENT	12.5	2	52	105	FINISHED PUMPING TAIL CEMENT WITH 52 BBLS. AWAY.
26	4/11/2018	19:16	SHUT DOWN					SHUT DOWN
27	4/11/2018	19:17	DROP PLUG					DROP TOP PLUG VERIFIED BY COMPANY MAN
28	4/11/2018	19:19	DISPLACEMENT	9.8	6.5	10	68	WATER BASED MUD DISPLACEMENT WITH THE FIRST 4 BBLS. OF DISPLACEMENT BEING TAIL CEMENT AT 12.5 PPG.
29	4/11/2018	19:25	DISPLACEMENT	9.8	6.5	50	299	WATER BASED MUD DISPLACEMENT
30	4/11/2018	19:32	DISPLACEMENT	9.8	4	90	324	WATER BASED MUD DISPLACEMENT
31	4/11/2018	19:35	DISPLACEMENT	9.8	3.5	100	319	WATER BASED MUD DISPLACEMENT
32	4/11/2018	19:44	DISPLACEMENT	9.8	2	141	384	WATER BASED MUD DISPLACEMENT
33	4/11/2018	19:38	CEMENT TO SURFACE					35 BBLS OF CEMENT TO SURFACE
34	4/11/2018	19:47	DISPLACEMENT	9.8	2	151	430	WATER BASED MUD DISPLACEMENT
35	4/11/2018	19:47	LAND PLUG				1528	LAND PLUG AT 430 PSI. TOOK TO 1528 PSI.
36	4/11/2018	19:50	CHECK FLOATS					CHECK FLOATS, FLOATS HELD 1 BBL. BACK
37	4/11/2018	19:51	SHUT DOWN					SHUT DOWN
38	4/11/2018	20:00	PUMP SUGAR WATER					PUMPED 20 BBLS. OF SUGAR WATER INTO CELLAR TO WASH OUT CEMENT IN CELLAR PUMP
39	4/11/2018	20:08	WASH PUMPS AND LINES					WASH PUMPS AND LINES TO CELLAR
40	4/11/2018	20:28	BLOW DOWN SILO					BLOW DOWN SILO 3 INTO BULK TRUCK
41	4/11/2018	20:39	RIG DOWN					RIG DOWN ALL EQUIPMENT
42	4/11/2018	20:52	AAR					AFTER ACTION REVIEW
43	4/11/2018	20:58	STEACS					PRE CONVOY SAFETY MEETING
44	4/11/2018	21:08	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:

Customer:

Well Name:

