



Caerus

## Surface Post Job Report

NPR 24D-10-596 05-045-23770

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

---

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

---

# Cementing Treatment



<b>Start Date</b>	4/27/2018	<b>Well</b>	NPR 24D-10-596
<b>End Date</b>	4/27/2018	<b>County</b>	GARFIELD
<b>Client</b>	CAERUS OPERATING, LLC	<b>State/Province</b>	CO
<b>Client Field Rep</b>	Bud Wenzel	<b>API</b>	05-045-23770
<b>Service Supervisor</b>	Shaun Clark	<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			2,400.00			
Casing	8.92	9.63	36.00	2,394.00		J-55	LTC

**Shoe Length (ft):** 45

## HARDWARE

<b>Bottom Plug Used?</b>	No	<b>Tool Type</b>	Float Collar
<b>Bottom Plug Provided By</b>	-	<b>Tool Depth (ft)</b>	2,349.50
<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>	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>	10.00	<b>Job Pumped Through</b>	No Manifold
<b>Centralizers Type</b>	Bow	<b>Top Connection Thread</b>	8RD
<b>Landing Collar Depth (ft)</b>	2,350	<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	8.00
Circulation Time (min)	60.00	10 min SGS	12.00
Circulation Rate (bpm)	6.00	30 min SGS	26.00
Circulation Volume (bbls)	360.00	Flare Prior to/during the Cement Job	No
Lost Circulation Prior to Cement Job	No	Gas Present	No
Mud Density In (ppg)	9.70	Gas Units	0
Mud Density Out (ppg)	-		
PV Mud In	23		
PV Mud Out	-		
YP Mud In	19		
YP Mud Out	-		

## TEMPERATURE

Ambient Temperature (°F)	54.00	Slurry Cement Temperature (°F)	75.00
Mix Water Temperature (°F)	65.00	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 / Flush	Water 1	8.33			0.00				20.00
Spacer / Flush	Sodium Silicate	10.00			0.00				20.00
Spacer / Flush	Water 2	8.33			0.00				20.00
Lead Slurry	BJCem S100.3.01D	12.00	2.5298	14.86	0.00	1,900.00	410	1,036	184.40
Tail Slurry	BJCem S100.3.01D	12.50	2.2256	12.59	1,900.00	500.00	118	262	46.60
Displacement	Displacement	8.33			0.00			0	182.50

# Cementing Treatment



Fluid Type	Fluid Name	Component	Concentration	UOM
Spacer / 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	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	Foam Preventer, FP-25	0.3000	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	Foam Preventer, FP-25	0.3000	BWOB
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
Tail 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)
4/27/2018 9:39 PM	Water 1	5.00	20.00	220.00
4/27/2018 9:48 PM	Sodium Silicate	5.00	20.00	222.00
4/27/2018 9:57 PM	Water 2	5.00	20.00	210.00
4/27/2018 10:02 PM	BJCem S100.3.01D	5.00	184.40	268.00
4/27/2018 10:42 PM	BJCem S100.3.01D	5.00	46.60	148.00
4/27/2018 10:50 PM	Displacement	7.00	182.50	800.00

	Min	Max	Avg
Pressure (psi)	0.00	3,000.00	400.00
Rate (bpm)	0.00	8.00	5.00

# Cementing Treatment



## DISPLACEMENT AND END OF JOB SUMMARY

---

Displaced By	BJ	Amount of Cement Returned/Reversed	25.00
Calculated Displacement Volume (bbls)	182.00	Method Used to Verify Returns	Visual
Actual Displacement Volume (bbls)	182.00	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	1.20
Bump Plug Pressure (psi)	1,800.00	Total Volume Pumped (bbls)	292.00
Were Returns Planned at Surface	Yes	Top Out Cement Spotted	No
Cement returns During Job	Full	Lost Circulation During Cement Job	No

**Service Line**      Cementing  
**Client**              CAERUS OPERATING, LLC  
**District**             Rifle, CO



**Well:**                NPR 24D-10                **Quotes:**                QUO-10008-G1M2L4  
**Job Type:**        Surface                    **Plans:**                ORD-06176-K6G3P6  
**Supervisor:**    Shaun Clark              **Executions:**        EXC-06176-K6G3P602  
**Engineer:**        Gage Putnam

Seq.	Start Dt./Time	End Dt./Time	Duration	Category	Event	Pump Rate (bpm)	Pump Vol (bbls)	Pipe Pressure (psi)	Comments
1	4/27/18 07:00	4/27/18 09:30	2.50	Operational	Callout				Call out 07:00 for RTS 12:00
2	4/27/18 09:30	4/27/18 09:40	0.17	Operational	Safety Meeting				JM for travel to H&P 273
3	4/27/18 09:40	4/27/18 10:15	0.58	Mobilization	Leave Location				Travel to H&P 273
4	4/27/18 10:15	4/27/18 10:16	0.02	Mobilization	Arrive on Location				Arrive at rig
5	4/27/18 10:16	4/27/18 10:25	0.15	Operational	Safety Meeting				Rig up STEACS
6	4/27/18 10:25	4/27/18 11:00	0.58	Operational	Rig Up				Rig up for Surface Job
7	4/27/18 11:00	4/27/18 19:30	8.50	StandBy	Customer				Wait on Casing
8	4/27/18 19:30	4/27/18 20:00	0.50	Operational	Safety Meeting				Hold Pre-job safety meeting
9	4/27/18 20:00	4/27/18 20:01	0.02	StandBy	Customer				Wait on Circ. bottoms up
10	4/27/18 20:01	4/27/18 21:38	1.62	Operational	Rig Up				Rig up cement head in Cellar
11	4/27/18 21:39	4/27/18 21:45	0.10	Operational	Pump Spacer	2.00	5.00	160.00	Break Circulation
12	4/27/18 21:45	4/27/18 21:48	0.05	Operational	Pressure Test	1.00	1.00	3,000.00	Test lines 3000 psi
13	4/27/18 21:48	4/27/18 21:53	0.08	Operational	Pump Spacer	5.00	20.00	210.00	Pump 20 bbl water

**Service Line**      Cementing  
**Client**                CAERUS OPERATING, LLC  
**District**              Rifle, CO



14	4/27/18 21:53	4/27/18 21:57	0.07	Operational	Pump Spacer	5.00	20.00	222.00	Pump 20 bbl S.S.
15	4/27/18 21:57	4/27/18 22:02	0.08	Operational	Pump Spacer	5.00	20.00	222.00	Pump 20 bbl water
16	4/27/18 22:02	4/27/18 22:05	0.05	Operational	Pump Lead Cement	5.00	10.00	222.00	Pump 10 BBl Lead Cement scaled @12ppg
17	4/27/18 22:05	4/27/18 22:13	0.13	Operational	Pump Lead Cement	5.00	50.00	222.00	Pump 50 BBl Lead Cement
18	4/27/18 22:13	4/27/18 22:21	0.13	Operational	Pump Lead Cement	5.00	100.00	222.00	Pump 100 BBl Lead Cement
19	4/27/18 22:21	4/27/18 22:31	0.17	Operational	Pump Lead Cement	4.00	150.00	160.00	Pump 150 BBl Lead Cement
20	4/27/18 22:36	4/27/18 22:38	0.03	Operational	Pump Lead Cement	4.00	182.00	107.00	Pump 182 BBl Lead Cement
21	4/27/18 22:38	4/27/18 22:42	0.07	Operational	Pump Tail Cement	5.00	10.00	210.00	Pump 10 BBl Tail Cement Scaled @12.5 ppg
22	4/27/18 22:42	4/27/18 22:50	0.13	Operational	Pump Tail Cement	5.00	42.00	210.00	Pump 42 BBl Tail Cement
23	4/27/18 22:50	4/27/18 22:52	0.03	Operational	Drop Closing Plug		0.00	0.00	Drop Plug / Start displacement
24	4/27/18 22:52	4/27/18 22:54	0.03	Operational	Pump Displacement	4.00	10.00	50.00	Pump (10) BBl Disp
25	4/27/18 22:54	4/27/18 23:01	0.12	Operational	Pump Displacement	4.00	50.00	290.00	Pump (50) BBl Disp
26	4/27/18 23:01	4/27/18 23:09	0.13	Operational	Pump Displacement	7.00	100.00	540.00	Pump (100) BBl Disp
27	4/27/18 23:09	4/27/18 23:17	0.13	Operational	Pump Displacement	7.00	155.00	800.00	Pump (155) BBl Disp (Cement to SFC)
28	4/27/18 23:17	4/27/18 23:22	0.08	Operational	Land Plug	4.00	178.00	2,000.00	Bump Plug (178) bbl Displacement
29	4/27/18 23:22	4/27/18 23:26	0.07	Operational	Check Floats	0.00	178.00	0.00	Floats holding 1.25 Back to truck.
30	4/27/18 23:26	4/27/18 23:28	0.03	Operational	Other (See comment)	0.00	178.00	0.00	FCP 1000 psi / 25 bbl Cement to SFC



**Service Line**      Cementing

**Client**              CAERUS OPERATING, LLC

**District**             Rifle, CO



31	4/27/18 23:28	4/27/18 23:51	0.38	Operational	Safety Meeting				Rig out Safety meeting // AAR
32	4/27/18 23:51	4/28/18 01:00	1.15	Operational	Rig Down				Rig down
33	4/28/18 01:00	4/28/18 01:30	0.50	Operational	Safety Meeting				JM travel back to yard.
34	4/28/18 01:30	4/28/18 01:40	0.17	Mobilization	Leave Location				JM travel back to yard.



JobMaster Program Version 4.02C1

Job Number:

Customer: CAERUS

Well Name: NPR 24D-10 24D-10

