



Caerus

# Surface Post Job Report

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NPR 12B-10-596 05-045-23768

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,

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>	8/5/2018	<b>Field Ticket#</b>	FT-09554-W1Y1W50202-82093
<b>End Date</b>	8/5/2018	<b>Well</b>	NPR 12B-10-596
<b>Client</b>	CAERUS OPERATING, LLC	<b>API#</b>	05-045-23768
<b>Client Field Rep.</b>	Lenny Stomley	<b>Well Classification</b>	
<b>Service Sup.</b>	Wendell Youngberg	<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-09554-W1Y1W502	<b>Rig</b>	H&P 273
<b>Project ID</b>	PRJ1009372		

## WELL GEOMETRY

Type	ID (in)	OD (in)	Wt. (lb/ft)	MD (ft)	Excess(%)	Grade	Thread
Previous Casing	15.50	16.00	42.05	100.00			
Open Hole	14.75	0.00	0.00	2,414.00			
Casing	8.92	9.63	36.00	2,398.00		J-55	LTC

**Shoe Length (ft):** 43.00

## HARDWARE

<b>Bottom Plug Used?</b>	No	<b>Tool Type</b>	Float Collar
<b>Top Plug Used?</b>	Yes	<b>Tool Depth (ft)</b>	2,355.00
<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>	1,616.00
<b>Centralizers Used</b>	No	<b>Pipe Movement</b>	None
<b>Centralizers Quantity</b>	0.00	<b>Job Pumped Through</b>	Manifold
<b>Centralizers Type</b>	Bow	<b>Top Connection Thread</b>	8 RD
<b>Landing Collar Depth (ft)</b>	2,355	<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	Yes	Flare Prior to/during the Cement Job	No
Circulation Time (min)	60.00	Gas Present	No
Circulation Rate (bpm)	7.00	Gas Units	
Circulation Volume (bbls)	420.00		
Lost Circulation Prior to Cement Job	No		
Mud Density In (ppg)	8.8		
Mud Density Out (ppg)	8.8		

## TEMPERATURE

Ambient Temperature (°F)	62.00	Slurry Cement Temperature (°F)	65.00
Mix Water Temperature (°F)	65.00	Flow Line Temperature (°F)	75.00

## 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	1900	517	1,306.0000	232.6000
Tail Slurry	BJCem S100.3.01D	12.5000	2.2256	12.59	1,900.00	500	161	358.0000	63.7000
Displacement Final	Displacement	8.3300			0.00			0.0000	182.5000

# 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	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 Additive, Sodium Metasilicate A-2	2.0000	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
Tail Slurry	BJCem S100.3.01D	IntegraSeal CELLO	0.1300	LBS/SK
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	FOAM PREVENTER, FP-25	0.3000	BWOB
Tail Slurry	BJCem S100.3.01D	Cement Additive, Sodium Metasilicate A-2	2.0000	LBS/SK
Tail Slurry	BJCem S100.3.01D	ACCELERATOR, SALT, CHLORIDE, CALCIUM, A-7P, PELLETS	2.0000	LBS/SK

## TREATMENT SUMMARY

Time	Fluid	Rate (bpm)	Fluid Vol. (bbls)	Pipe Pressure (psi)	Annulus Pressure (psi)	Comments
08/05/2018 06:38 AM	Water 1	5.00	20.00	149.00		
08/05/2018 06:41 AM	Sodium Silicate	5.00	20.00	223.00		
08/05/2018 06:46 AM	Water 2	5.00	20.00	172.00		
08/05/2018 06:56 AM	BJCem S100.3.01D	5.00	232.60	335.00		
08/05/2018 07:44 AM	BJCem S100.3.01D	5.00	63.70	241.00		
08/05/2018 07:57 AM	Displacement	10.00	182.50	597.00		
			<b>Min</b>	<b>Max</b>	<b>Avg</b>	
<b>Pressure (psi)</b>			1.00	1,120.00	450.00	
<b>Rate (bpm)</b>			5.00	10.00	5.83	

# Cementing Treatment



## DISPLACEMENT AND END OF JOB SUMMARY

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<b>Displaced By</b>	BJ	<b>Amount of Cement Returned/Reversed</b>	60.00
<b>Calculated Displacement Volume (bbls)</b>	182.00	<b>Method Used to Verify Returns</b>	Visual
<b>Actual Displacement Volume (bbls)</b>	182.00	<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>	0.75
<b>Bump Plug Pressure (psi)</b>	600.00	<b>Total Volume Pumped (bbls)</b>	559.00
<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

# EVENT LOG



**Customer Name:** CAERUS OPERATING, LLC

**Well Name:** NPR 12B-10-596

**Job Type:** Surface

**Quote ID:** QUO-14091-P7L4N6

**Plan ID:** ORD-09554-W1Y1W5

**Execution ID:** EXC-09554-W1Y1W502

**District:** Rifle, CO

**BJ Supervisor:** Wendell Youngberg

Seq.	Start Dt./Time	Event	Density (ppg)	Pump Rate(bpm)	Pump Vol(bbbls)	Pipe Pressure(psi)	Comments
1	08/05/2018 00:01:00	Callout					Yard Time 12:00 am With Ready To Service 5:00am
2	08/05/2018 01:30:00	Leave Location					Travel STEACS and Leave Yard Rifle
3	08/05/2018 03:00:00	Rig Up					Rig Up STEACS and Rig In Lines
4	08/05/2018 04:00:00	Customer					Standby Rig Running Casing
5	08/05/2018 06:00:00	Safety Meeting					Safety Meeting With Rig
6	08/05/2018 06:20:00	Open Wellhead					Stab Head
7	08/05/2018 06:30:00	Prime Up	8.3400	2.50	5.00	107.00	fill lines
8	08/05/2018 06:32:00	Pressure Test				3000.00	PSI Test Lines
9	08/05/2018 06:34:00	Pump Spacer	8.3400	4.00	15.00	149.00	fresh water spacer
10	08/05/2018 06:38:00	Pump Spacer	10.0000	4.00	20.00	223.00	fresh water S.S. mix
11	08/05/2018 06:41:00	Pump Spacer	8.3400	4.00	20.00	172.00	Fresh Water Spacer
12	08/05/2018 06:46:00	Pump Lead Cement	12.0000		244.00		Batch up lead cement
13	08/05/2018 06:51:00	Pump Lead Cement	12.0000	5.50		335.00	5 BBLS Gone
14	08/05/2018 06:56:00	Pump Lead Cement	12.0000	5.50		283.00	50 BBLS Gone
15	08/05/2018 07:04:00	Pump Lead Cement	12.0000	5.50		252.00	100 BBLS Gone

# EVENT LOG



**Customer Name:** CAERUS OPERATING, LLC

**Well Name:** NPR 12B-10-596

**Job Type:** Surface

**Quote ID:** QUO-14091-P7L4N6

**Plan ID:** ORD-09554-W1Y1W5

**Execution ID:** EXC-09554-W1Y1W502

**District:** Rifle, CO

**BJ Supervisor:** Wendell Youngberg

Seq.	Start Dt./Time	Event	Density (ppg)	Pump Rate(bpm)	Pump Vol(bbls)	Pipe Pressure(psi)	Comments
16	08/05/2018 07:12:00	Pump Lead Cement	12.0000	3.00		178.00	150 BBLS Gone
17	08/05/2018 07:23:00	Pump Lead Cement	12.0000	5.50		223.00	200 BBLS Gone
18	08/05/2018 07:39:00	Pump Lead Cement	12.0000	5.50		240.00	finish lead start tail
19	08/05/2018 07:44:00	Pump Tail Cement	12.5000	5.50	59.00	241.00	5 BBLS Gone
20	08/05/2018 07:48:00	Pump Tail Cement	12.5000	4.00		164.00	finish tail cement
21	08/05/2018 07:57:00	Pump Displacement	8.3000		182.00		first 4 bbls cement on top plug
22	08/05/2018 08:00:00	Pump Displacement	8.3000	5.50		337.00	60 bbls gone
23	08/05/2018 08:10:00	Pump Displacement	8.3000	5.50		507.00	120 bbls gone
24	08/05/2018 08:20:00	Pump Displacement	8.3000	2.50		597.00	180 bbls gone
25	08/05/2018 08:28:00	Land Plug	8.3000	2.50		600.00	land plug final circ. PSI 600 Go to 1120
26	08/05/2018 08:30:00	Pressure Test				1120.00	hold floats for 5 min.
27	08/05/2018 08:35:00	Check Floats					floats held .75 bbls back
28	08/05/2018 08:37:00	Pump Spacer					sugar water down parasite line. Line PSI up Kick out @ 1100 PSI. Reset kick outs to 1500 then 2000 then 2700 never popped the parasite line.
29	08/05/2018 10:00:00	Rig Down					Rig down STEACS and rig out all the iron

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**Well Name:** NPR 12B-10-596

**Job Type:** Surface

**Quote ID:** QUO-14091-P7L4N6

**Plan ID:** ORD-09554-W1Y1W5

**Execution ID:** EXC-09554-W1Y1W502

**District:** Rifle, CO

**BJ Supervisor:** Wendell Youngberg

Seq.	Start Dt./Time	Event	Density (ppg)	Pump Rate(bpm)	Pump Vol(bbls)	Pipe Pressure(psi)	Comments
30	08/05/2018 11:00:00	Leave Location					travel STEACS and leave location



Caerus NPR 12B-10 Surface

