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# Caerus

## SURFACE POST JOB REPORT

Puckett 35A-23-697 05-045-23356  
S:26 T:6S R:97W Garfield CO

CallSheet #: 675  
Proposal #: 13113



**SURFACE Post Job Report**

**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,

**Oscar Medrano**

Technical Specialist-II | (307) 996-6222 | [Oscar.Medrano@bjservices.com](mailto:Oscar.Medrano@bjservices.com)

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## 1 Job Details & Summary

### 1.1 Geometry

Type	Function	OD (in)	ID (in)	Weight (lb/ft)	Thread	Top (ft)	Bottom (ft)	Excess (%)
Casing	Inner	9.625	8.835	40	LTC	0	2520	0
Open Hole	Outer	n/a	14.75	n/a	n/a	100	2000	25
Open Hole	Outer	n/a	14.75	n/a	n/a	2000	2530	0
Casing	Outer	20	19.5	53	n/a	0	100	0

### 1.2 Equipment / People

Unit Type	Unit	Employee #1	Mileage
Cement Pump	104	Kresge, Adam	670
Light Duty Pickups	5	Johnson, Chad	670
Silo	650		
Silo	651		
Cement Chemical	401	Hamilton, Daniel	670
Plug Container	150519		
Swage	150540		

### 1.3 Timing

Event	Date/Time
Call Out	3/27/2017 12:00
Depart Facility	3/27/2017 13:00
On Location	3/27/2017 14:00
Rig Up Iron	3/27/2017 14:30
Job Started	3/27/2017 18:30
Job Completed	3/28/2017 02:30
Rig Down Iron	3/28/2017 02:45
Depart Location	3/28/2017 04:30

### 1.4 General Job Information

Metrics	Value
Well Fluid Density	9.4 lb/gal
Well Fluid Type	WBM
Rig Circulation Vol	200 bbls
Rig Circulation Time	1 hours
Calculated Displacement	191 bbls
Actual Displacement	191 bbls
Total Spacer to Surface	0 bbls
Total CMT to Surface	0 bbls
Well Topped Out	Yes
Top Out Volume	16 bbls

### 1.5 Well Fluid Details

Metrics	Value
Plastic Viscosity	20
Yield Point	14
10 sec. SGS	11
10 min. SGS	30
30 min. SGS	58
Filtrate	12.8
Flow Line Temp.	78

### 1.6 Job Details

Metrics	Value
Flare Prior to Job	No
Flare During Job	No
Flare at End of Job	No
Well Full Prior to Job	Yes
Well Fluid Density Into Well	9.4 lb/gal
Well Fluid Density Out of Well	9.4 lb/gal

### 1.7 Job Details (cont.)

Metrics	Value
BHCT	94 °F
BHST	128 °F

### 1.8 Circulation

Lost Circulation Experienced	Losses into Spacer
Yes	10

#### Circulation Details:

Had returns at start of job. Lost returns 10 bbls into spacer. Regained returns at 10 bbls in to tail cement. After dropping the plug, we had no returns for the remainder of displacement.

### 1.9 Job Execution Information

Job	Fluid	Product	Function	Density (lb/gal)	Yield (ft <sup>3</sup> /sk)	Water Rq. (gal/sk)	Water Rq. (gal/bbl)	Volume (sk)	Volume (bbl)	Top (ft)
1	1	Water	Flush	8.33			42.00		20.00	0
1	2	Sodium Silicate	Flush	10.00			21.00		20.00	0
1	3	Water	Flush	8.33			42.00		20.00	0
1	4	ALTCem S100-12	Lead	12.00	2.53	14.85		703.00	316.33	0
1	5	ALTCem S100-12	Tail	12.50	2.22	12.58		161.00	63.76	2000
1	6	Water	Displacement	8.33			42.00		10.00	2328
1	7	Mud	Displacement	8.33			42.00		160.00	218
1	8	Water	DisplacementFinal	8.33			42.00		17.00	0
1	9	ALTCem S100-12	Topout	12.50	2.22	12.58		40.00	16.00	0



### 1.10 Job Fluid Details

Job	Fluid	Type	Fluid	Product	Function	Conc.	Uom
1	2	Flush	Sodium Silicate	ASF-10	Extender	21.00	gal/bbl
1	4	Lead	ALTCem S100-12	AC3-10	Cement	100.00	%
1	4	Lead	ALTCem S100-12	ACL-10	Accelerator	2.00	lb/sk
1	4	Lead	ALTCem S100-12	ACL-20	Accelerator	5.00	%BWOB
1	4	Lead	ALTCem S100-12	ADF-11	Defoamer	0.30	%BWOB
1	4	Lead	ALTCem S100-12	ALC-10	LostCirculation	0.13	lb/sk
1	4	Lead	ALTCem S100-12	AXE-30	Extender	2.00	lb/sk
1	5	Tail	ALTCem S100-12	AC3-10	Cement	100.00	%
1	5	Tail	ALTCem S100-12	ACL-10	Accelerator	2.00	lb/sk
1	5	Tail	ALTCem S100-12	ACL-20	Accelerator	5.00	%BWOB
1	5	Tail	ALTCem S100-12	ADF-11	Defoamer	0.30	%BWOB
1	5	Tail	ALTCem S100-12	ALC-10	LostCirculation	0.13	lb/sk
1	5	Tail	ALTCem S100-12	AXE-30	Extender	2.00	lb/sk
1	9	Topout	ALTCem S100-12	AC3-10	Cement	100.00	%
1	9	Topout	ALTCem S100-12	ACL-10	Accelerator	2.00	lb/sk
1	9	Topout	ALTCem S100-12	ACL-20	Accelerator	5.00	%BWOB
1	9	Topout	ALTCem S100-12	ADF-11	Defoamer	0.30	%BWOB
1	9	Topout	ALTCem S100-12	ALC-10	LostCirculation	0.13	lb/sk
1	9	Topout	ALTCem S100-12	AXE-30	Extender	2.00	lb/sk

## 2 Job Logs

Line	Event	Date (MM/DD/YY)	Time (HH:MM)	Density (lb/gal)	Pump Rate (bpm)	Pump Volume (bbls)	Pipe Pressure (psi)	Comment
1	Callout	3/27/2017	12:00					Crew called out for job request on location for 16:00
2	Depart For Location	3/27/2017	13:00					crew departed for location
3	Arrive On Location	3/27/2017	14:00					Arrived on location
4	Safety Meeting	3/27/2017	14:15					Pre rig up safety meeting
5	Rig Up Iron	3/27/2017	14:30					Crew spotted and rigged up all iron and equipment
6	Waiting	3/27/2017	15:30					Crew waiting on rig to finish running casing and to circulate
7	Safety Meeting	3/27/2017	18:00					Pre job safety meeting
8	Fill Lines	3/27/2017	18:33	8.3	2	3	100	Filled lines with 3 bbls fresh water
9	Pressure Test Lines	3/27/2017	18:37					Pressure test lines to 3000 psi
10	Pump Spacer	3/27/2017	18:41	8.3	2	20	100	Pump 20 bbls water spacer
11	Pump Spacer	3/27/2017	18:47	10	2	20	100	Pump 20 bbls SMS spacer
12	Pump Spacer	3/27/2017	18:53	8.3	5	20	100	Pump 20 bbls water spacer
13	Pump Lead Cement	3/27/2017	18:59	12	5	317	100	Pump 317 bbls lead cement @ 12 ppg (703sks, 2.53 Y, 14.83 gal/sk)
14	Pump Tail Cement	3/27/2017	20:26	12.5	5	64	100	Pump 64 bbls tail cement @ 12.5 ppg (161sks, 2.22 Y, 12.58 gal/sk)
15	Shutdown	3/27/2017	20:48					Shutdown
16	Drop Top Plug	3/27/2017	20:51	8.3	5	50	100	Drop top plug, Pump 50 bbls water displacement
17	Pump Displacement	3/27/2017	21:09	8.3	5	100	200	Pump 50 bbls water displacement
18	Pump Displacement	3/27/2017	21:22	8.3	5	150	400	Pump 50 bbls water displacement
19	Slow Pump Rate	3/27/2017	21:30	8.3	2	180	500	Slow pump rate at 180 bbls away
20	Land Plug	3/27/2017	21:36	8.3	2	191	500	Land plug at 500 psi took to 1500 psi
21	Casing test	3/27/2017	21:37				1500	Hold 1500 psi for 15 mins
22	Release Pressure	3/27/2017	21:52					Release casing pressure
23	Other	3/27/2017	22:00					Pump 10 bbls sugar water down parasite line
24	Waiting	3/27/2017	22:15					Wait for rig to nipple up
25	Safety Meeting	3/28/2017	01:00					Safety meeting
26	Pump Cement	3/28/2017	01:31	12.5	1	16	50	Pump 16 bbls of top out cement @ 12.5 ppg (40 sks, 2.22 Y, 12.58 gal/sk)



27	Shutdown	3/28/2017	02:20					Shutdown watch cement, cement did not fall
28	Safety Meeting	3/28/2017	02:30					Pre rig down safety meeting
29	Rig Down Iron	3/28/2017	02:45					Crew rigged down all equipment and iron
30	Depart Location	3/28/2017	04:30					Crew departed location

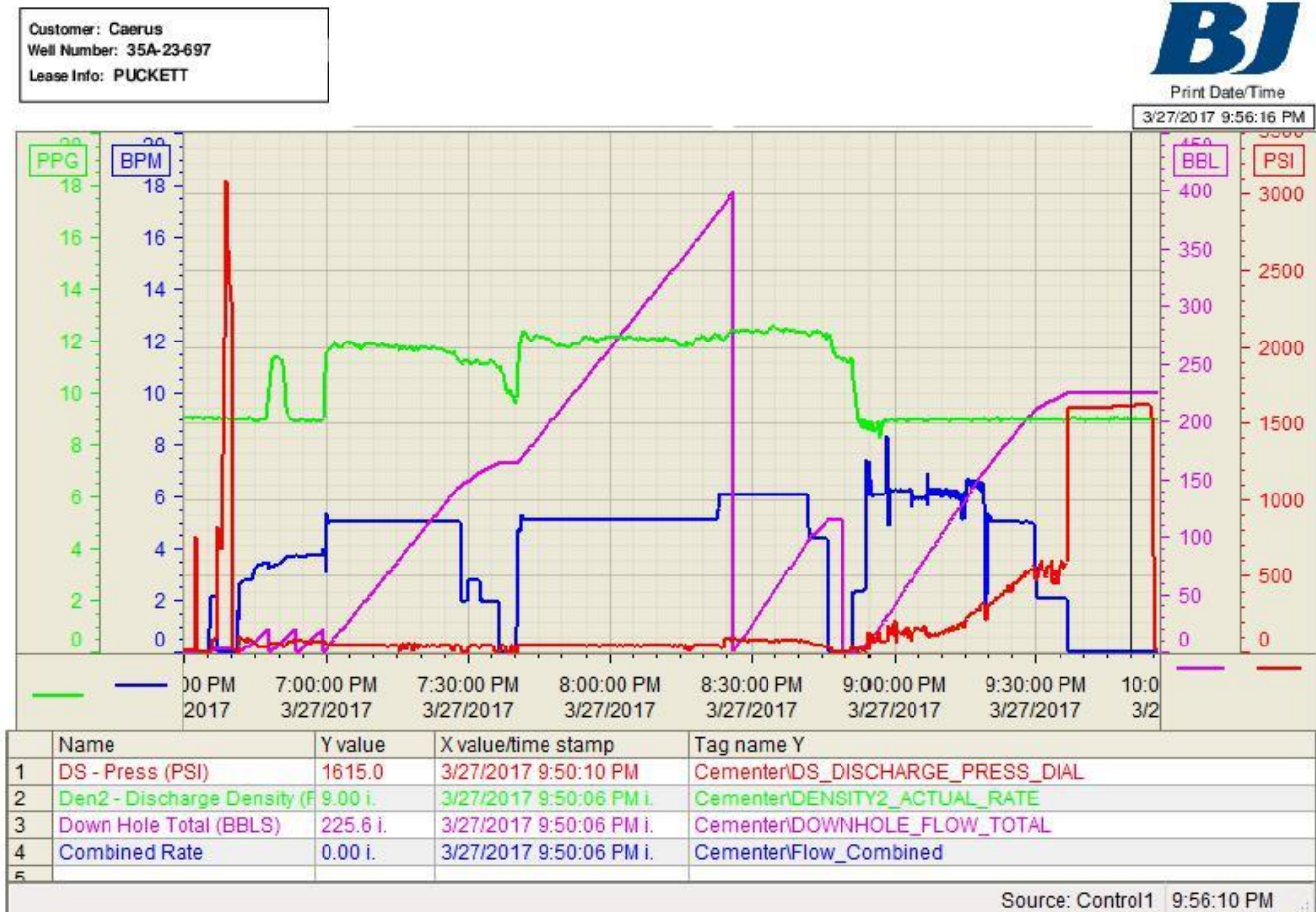


### 3 Water Analysis

Metrics	Value	Recommended
Water Source	Upright Rig Tank	
Temperature	75 °F	50-80 °F
pH Level	6	5.5-8.5
Chlorides	0 mg/L	0-3000 mg/L
Total Alkalinity	0	0-1000
Total Hardness	250 mg/L	0-500 mg/L
Carbonates	50 mg/L	0-100 mg/L
Sulfates	<200 mg/L	0-1500 mg/L
Potassium	0 mg/L	0-3000 mg/L
Iron	0 mg/L	0-300 mg/L

### 4 Pump Diagrams

Job Chart





Top-Out Chart

