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# Caerus

## SURFACE POST JOB REPORT

Puckett 13D-23 697 05-045-23373  
S:23 T:6S R:97W Garfield CO

CallSheet #: 1409  
Proposal #: 14024



**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,

**Zen Keith**

Technical Specialist-II | (307) 757-7178 | [Zen.Keith@bjservices.com](mailto:Zen.Keith@bjservices.com)

**Field Office**      28730 US-6, Rifle, CO 81650  
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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 (%)
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	2547	0
Casing	Outer	20	19.5	53	n/a	0	100	0
Casing	Inner	9.625	8.921	36	LTC	0	2535	0

### 1.2 Equipment / People

Unit Type	Unit	Employee #1	Employee #2	Mileage
Silo	25 Silo			
Silo	11			
Cement Chemical	401	Johnson, Brandon	Velazquez, Damien	35
Cement Pump	PPC11250	Estep, Ken	McNeal, Lawrence	35
Light Duty Pickups	2	Gilliam, Glen		35

### 1.3 Timing

Event	Date/Time
Call Out	9/26/2017 09:00
Depart Facility	9/26/2017 13:45
On Location	9/26/2017 15:15
Rig Up Iron	9/26/2017 15:35
Job Started	9/26/2017 23:45
Job Completed	9/27/2017 06:25
Rig Down Iron	9/27/2017 06:35
Depart Location	9/27/2017 08:00

### 1.4 General Job Information

Metrics	Value
Well Fluid Density	9.6 lb/gal
Well Fluid Type	WBM
Rig Circulation Vol	1500 bbls
Rig Circulation Time	2 hours
Calculated Displacement	191 bbls
Actual Displacement	190 bbls
Total Spacer to Surface	0 bbls
Total CMT to Surface	0 bbls
Well Topped Out	Yes
Top Out Volume	7.5 bbls

### 1.5 Well Fluid Details

Metrics	Value
Plastic Viscosity	24
Yield Point	23
10 sec. SGS	18
10 min. SGS	52
30 min. SGS	86
Filtrate	10
Flow Line Temp.	87

### 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	9.6 lb/gal
Well Fluid Density Out of Well	9.6 lb/gal

### 1.7 Job Details (cont.)

Metrics	Value
BHCT	94 °F
BHST	128 °F

## 1.8 Circulation

Lost Circulation Experienced	Losses into Spacer	Losses into Cement	Losses into Displacement
Yes	0	0	81

### Circulation Details:

LOST RETURNS 81 BBLS INTO DISPLACEMENT, NO RETURNS FOR REST 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 (sks)	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	S100-12	Lead	12.00	2.53	14.85		703.00	316.33	0
1	5	S100-12	Tail	12.50	2.22	12.58		162.00	64.15	2000
1	6	Water	DisplacementFinal	8.33			42.00		191.00	0
1	7	S100-12	Topout	12.50	2.22	12.58		19.10	7.50	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	S100-12	AC3-10	Cement	100.00	%
1	4	Lead	S100-12	ACL-10	Accelerator	2.00	lb/sk
1	4	Lead	S100-12	ACL-20	Accelerator	5.00	%BWOB
1	4	Lead	S100-12	ADF-11	Defoamer	0.30	%BWOB
1	4	Lead	S100-12	ALC-10	LostCirculation	0.13	lb/sk
1	4	Lead	S100-12	AXE-30	Extender	2.00	lb/sk
1	5	Tail	S100-12	AC3-10	Cement	100.00	%
1	5	Tail	S100-12	ACL-10	Accelerator	2.00	lb/sk
1	5	Tail	S100-12	ACL-20	Accelerator	5.00	%BWOB
1	5	Tail	S100-12	ADF-11	Defoamer	0.30	%BWOB
1	5	Tail	S100-12	ALC-10	LostCirculation	0.13	lb/sk
1	5	Tail	S100-12	AXE-30	Extender	2.00	lb/sk
1	7	Topout	S100-12	AC3-10	Cement	100.00	%
1	7	Topout	S100-12	ACL-10	Accelerator	2.00	lb/sk
1	7	Topout	S100-12	ACL-20	Accelerator	5.00	%BWOB
1	7	Topout	S100-12	ADF-11	Defoamer	0.30	%BWOB
1	7	Topout	S100-12	ALC-10	LostCirculation	0.13	lb/sk
1	7	Topout	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	BJ CREW CALLED OUT	9/26/2017	09:00					RTS- 16:00
2	STEACS/JOURNEY	9/26/2017	13:30					STEACS/ JOURNEY WITH BJ CREW
3	BJ DEPARTS YARD	9/26/2017	13:45					BJ CREW DEPARTS YARD
4	BJ ARRIVES ON LOCATION	9/26/2017	15:15					BJ ARRIVES ON LOCATION
5	RIG UP MEETING	9/26/2017	15:30					RIG UP MEETING WITH BJ CREW
6	RIG UP EQUIPMENT	9/26/2017	15:35					BJ CREW RIGS UP EQUIPMENT
7	BJ CREW DOWN	9/26/2017	16:00					RIG RUNNING CASING
8	PIPE ON BOTTOM	9/26/2017	21:20					PIPE ON BOTTOM, RIG CIRCULATING
9	SAFETY MEETING	9/26/2017	23:10					SAFETY MEETING WITH RIG CREW
10	BJ STABS HEAD	9/26/2017	23:40					BJ CREW STABS HEAD
11	BROKE CIRCULATION	9/26/2017	23:45	8.34	4	5	128	BROKE CIRCULATION FROM RIG
12	TEST LINES	9/26/2017	23:47					TEST LINES AT 3000 PSI
13	FRESH WATER SPACER	9/26/2017	23:51	8.34	4.5	15	200	15 BBLS FRESH WATER
14	SODIUM SILICATE	9/26/2017	23:53	9	4.5	20	350	20 BBLS SODIUM SILICATE SPACER
15	FRESH WATER SPACER	9/26/2017	23:57	8.34	5	20	230	20 BBLS FRESH WATER
16	BATCH UP LEAD	9/27/2017	00:02	12				BATCH UP LEAD CEMENT
17	LEAD DOWN HOLE	9/27/2017	00:05	12	6		300	LEAD CEMENT DOWN HOLE 12 PPG
18	50 BBLS GONE	9/27/2017	00:15	12	6	50	370	50 BBLS LEAD CEMENT GONE
19	100 BBLS GONE	9/27/2017	00:22	12	6.2	100	262	100 BBLS LEAD CEMENT GONE
20	150 BBLS GONE	9/27/2017	00:30	12	6.2	150	248	150 BBLS LEAD CEMENT GONE
21	200 BBLS GONE	9/27/2017	00:38	12	6.2	200	240	200 BBLS LEAD CEMENT GONE
22	250 BBLS GONE	9/27/2017	00:47	12	6.2	250	265	250 BBLS LEAD CEMENT GONE
23	300 BBLS GONE	9/27/2017	00:55	12	6.2	300	270	300 BBLS LEAD CEMENT GONE
24	BATCH UP TAIL	9/27/2017	00:57	12.5				BATCH UP TAIL CEMENT AT 12.5 PPG
25	TAIL DOWN HOLE	9/27/2017	00:58	12.5	4.5		165	TAIL CEMENT DOWN HOLE
26	SHUT DOWN	9/27/2017	01:08					SHUT DOWN DROP TOP PLUG
27	START DISPLACEMENT	9/27/2017	01:10	8.34	6		125	START DISPLACEMENT
28	50 BBLS GONE	9/27/2017	01:20	8.34	6.5	50	270	50 BBLS GONE
29	100 BBLS GONE	9/27/2017	01:29	8.34	6.5	100	316	100 BBLS GONE
30	150 BBLS GONE	9/27/2017	01:38	8.34	6.5	150	480	150 BBLS GONE



31	BUMP PLUG	9/27/2017	01:46				475	BUMP PLUG FCP-475 PSI
32	BLED PRESSURE	9/27/2017	01:50					BLED PRESSURE CHECKED FLOATS- .5 BBLS BACK, FLOATS HELD
33	PUMP PARASITE LINE	9/27/2017	01:55					PUMPED 10 BBLS SUGAR WATER DOWN PARASITE LINE, BROKE PRESSURE 435 PSI
34	SHUT DOWN	9/27/2017	02:00					BJ CREW SHUT DOWN UNTIL RIG DONE WITH TESTING
35	RIG UP MEETING	9/27/2017	05:30					RIG UP TOPOUT MEETING
36	RIG UP TOPOUT	9/27/2017	05:35					BJ CREW RIGS UP TOPOUT
37	START PUMPING	9/27/2017	05:53	9	1.5	2	20	START PUMPING CALCIUM CHLORIDE
38	CEMENT DOWN HOLE	9/27/2017	06:09	12.5	1.5		20	CEMENT DOWN HOLE 12.5 PPG
39	CEMENT TO SURFACE	9/27/2017	06:17	12.5	1.5	7.5	25	CEMENT TO SURFACER 7.5 BBLS TOTAL
40	RIG DOWN MEETING	9/27/2017	06:30					RIG DOWN MEETING WITH BJ CREW
41	RIG DOWN EQUIPMENT	9/27/2017	06:35					BJ CREW RIGS DOWN EQUIPMENT
42	STEACS/ JOURNEY	9/27/2017	07:30					JOURNEY STEACS WITH BJ CREW
43	BJ DEPARTS LOCATION	9/27/2017	08:00					BJ DEPARTS LOCATION



### 3 Water Analysis

Metrics	Value	Recommended
Water Source	None	
Temperature	57 °F	50-80 °F
pH Level	7	5.5-8.5
Chlorides	0 mg/L	0-3000 mg/L
Total Alkalinity	80	0-1000
Total Hardness	70 mg/L	0-500 mg/L
Carbonates	145 mg/L	0-100 mg/L
Sulfates	<250 mg/L	0-1500 mg/L
Potassium	450 mg/L	0-3000 mg/L
Iron	0 mg/L	0-300 mg/L





## 4 Pump Diagrams

Job Chart

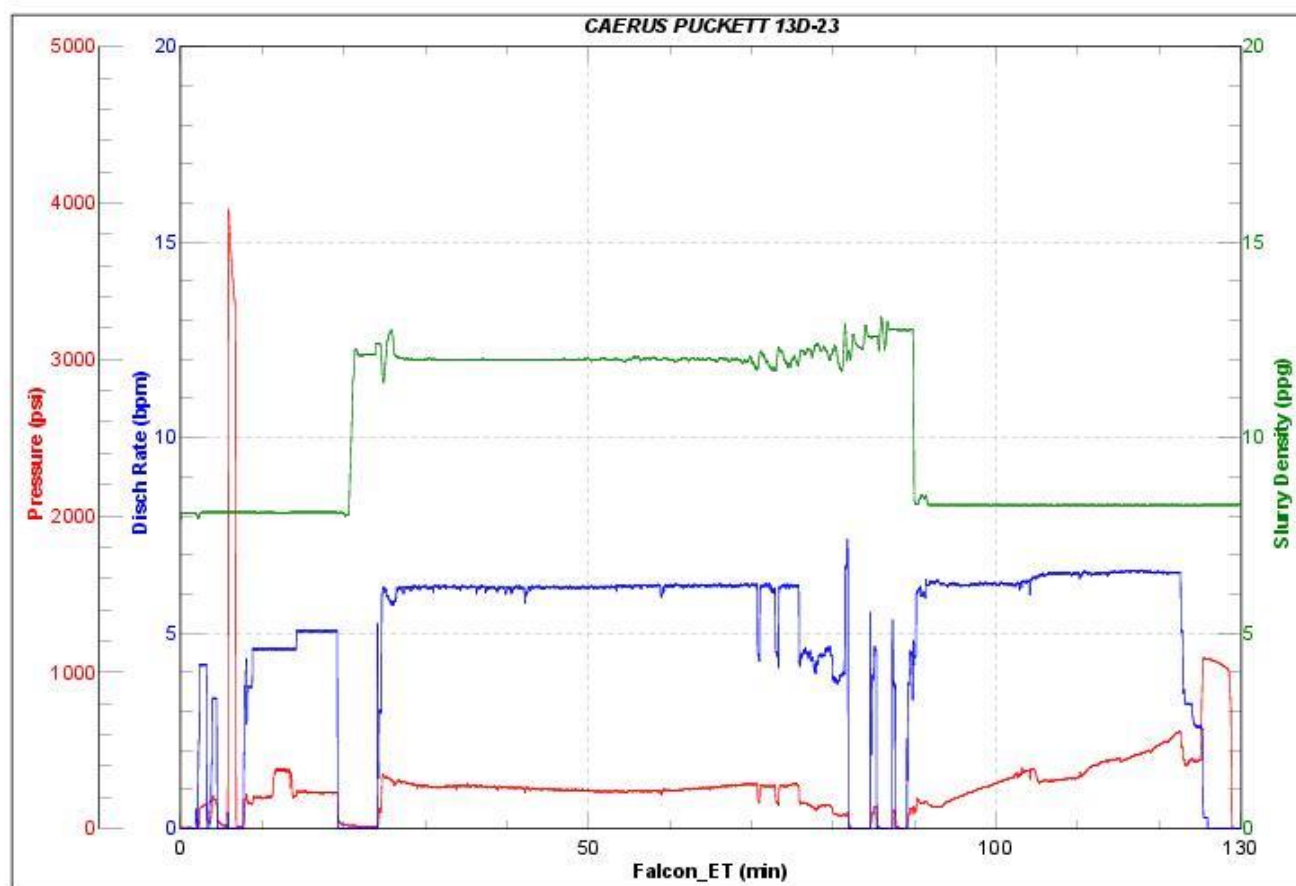


JobMaster Program Version 4.02C1

Job Number: 1409

Customer: Caerus

Well Name: Puckett 13D-23



BJ Services

Job Start: Tuesday, September 26, 2017



Top Out Chart

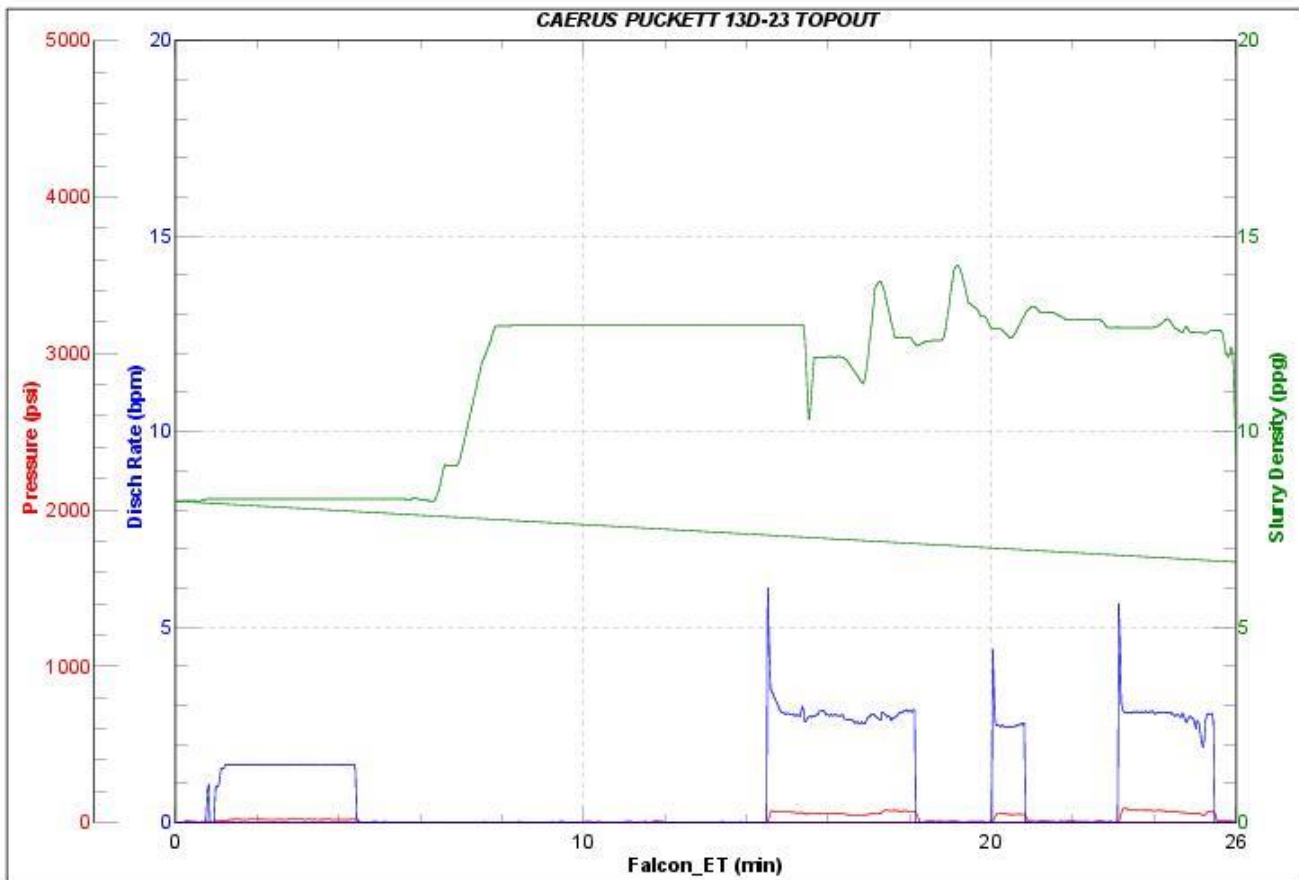


JobMaster Program Version 4.02C1

Job Number: 1409

Customer: Caerus

Well Name: Puckett 13D-23



BJ Services

Job Start: Wednesday, September 27, 2017