



Caerus

SURFACE POST JOB REPORT

Puckett 34C-23-697 05-045-23353
S:26 T:6S R:97W Garfield CO

CallSheet #: 696
Proposal #: 13144



SURFACE Post Job Report

Attention: Mr. Steve Schmitz | (720) 880-6412 | 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,

Oscar Medrano

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

Field Office 1716 East Allison Rd., Cheyenne WY, 82007
Phone: (307) 638-5585

Sales Office 475 17th St. Suite 460 Denver Co., 80202
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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	2518	0
Open Hole	Outer	n/a	14.75	n/a	n/a	100	2024.2	25
Open Hole	Outer	n/a	14.75	n/a	n/a	2024.2	2518	0
Casing	Outer	20	19.5	53	n/a	0	100	0

1.2 Equipment / People

Unit Type	Unit	Employee #1	Mileage
Light Duty Pickups	5	Fuentes, Orlando	50
Cement Pump	104	Chaparro, Hector	
Silo	650	Creel, Jason	
Silo	651	Cornett, Jesse	
Bulk Trailer	503		
Pneumatic Trailer	704		
Pneumatic Trailer	705		

1.3 Timing

Event	Date/Time
Call Out	4/8/2017 09:00
Depart Facility	4/8/2017 10:00
On Location	4/8/2017 11:00
Rig Up Iron	4/8/2017 11:30
Job Started	4/8/2017 17:30
Job Completed	4/9/2017 01:15
Rig Down Iron	4/9/2017 01:30
Depart Location	4/9/2017 02:30

1.4 General Job Information

Metrics	Value
Well Fluid Density	9.3 lb/gal
Well Fluid Type	WBM
Rig Circulation Vol	540 bbls
Rig Circulation Time	1 hours
Calculated Displacement	187.6 bbls
Actual Displacement	189 bbls
Total Spacer to Surface	0 bbls
Total CMT to Surface	0 bbls
Well Topped Out	Yes
Top Out Volume	28 bbls

1.5 Well Fluid Details

Metrics	Value
Plastic Viscosity	28
Yield Point	22
10 sec. SGS	13
10 min. SGS	32
30 min. SGS	58
Filtrate	11.2
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	9.3 lb/gal
Well Fluid Density Out of Well	9.3 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	Yes	Yes	Yes

Circulation Details:

We Never Had Return Throghout The Entire job

1.9 Job Execution Information

Job	Fluid	Product	Function	Density (lb/gal)	Yield (ft ³ /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	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	2024
1	6	Water	Displacement	8.33			42.00		187.60	0
1	9	ALTCem S100-12	Topout	12.50	2.22	12.58		70.00	28.00	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	4/8/2017	08:00					BJ Services Crew Gets Called Out
2	Depart Hotel	4/8/2017	10:00					BJ Services Crew Departs Hotel
3	Arrive On Location	4/8/2017	11:00					BJ Services Crew Arrives On Location
4	Pre Rig Up Meeting	4/8/2017	11:29					BJ Services Crew Had a Pre Rig Up Safety Meeting
5	Rig Up	4/8/2017	11:30					BJ Services Crew Rigs Up Pump And Iron
6	Casing On Bottom	4/8/2017	16:30					Rig Landed Casing On Bottom
7	Safety Meeting	4/8/2017	17:30					BJ Services Crew Had A Safety Meeting With Rig Hands And Company Man - Went Over Job Procedure
8	Pressure Test	4/8/2017	17:47				3000	Pressure Test Lines To 3000 Psi
9	Pump Spacer	4/8/2017	17:50	8.33	6	20	95	Pumped 20 BBL Of H2o Spacer At 6 Bpm W/95 Psi
10	Pump Sodium Silicate	4/8/2017	17:54	10	6	20	70	Pumped 20 BBL Of 50/50 Sodium Silicate W/ Water At 6 BPM W/70 Psi
11	Pump Flush	4/8/2017	17:58	8.33	6	20	85	Pumped 20 BBL Of H2o Flush At 6 Bpm W/85 Psi
12	Pump Lead Cement	4/8/2017	18:02	12	6	317	121	Pumped 317 BBL (703 sks 12 ppg 2.53 yld 14.85 g/sk) Of Lead Cement At 6 Bpm W/121 Psi
13	Pump Tail Cement	4/8/2017	19:18	12.5	4	64	45	Pumped 64 BBL (161 sks 12.5 ppg 2.22 yld 12.58 g/sk) Of Tail Cement At 4 Bpm W/45 psi * Had A 10 Min Shut Down We Packed of At mixing Head And Having Delivery Issues *
14	Shut Down	4/8/2017	19:39					Shut Down Pumping cement
15	Drop Top Plug	4/8/2017	19:41					Drop Top Plug With Company Man
16	Start Displacement	4/8/2017	19:42	8.33	6		63	Start Pumping H2o Displacement At 6 Bpm W/63 Psi
17	Slow Down Rate	4/8/2017	20:16	8.33	3	178	422	At 178 BBL Away Into Displacement Slow Down Rate To 3 Bpm W/422 Psi
18	Land Plug	4/8/2017	20:22	8.33		189	468	Land Plug At 189 BBL Away Final Circ. Pressure Was 468 Psi . Bumped Plug To 1079 Psi
19	Casing Test	4/8/2017	20:24				1536	Pressure Up Well To 1536 Psi For Casing Test
20	Check Floats	4/8/2017	20:40					Check Floats Got 1 BBL Back
21	Pump Sugar Water	4/8/2017	20:52	8.33	2		0	Pump Sugar Water Through Paracite Line At 2 Bpm W/ 0 psi



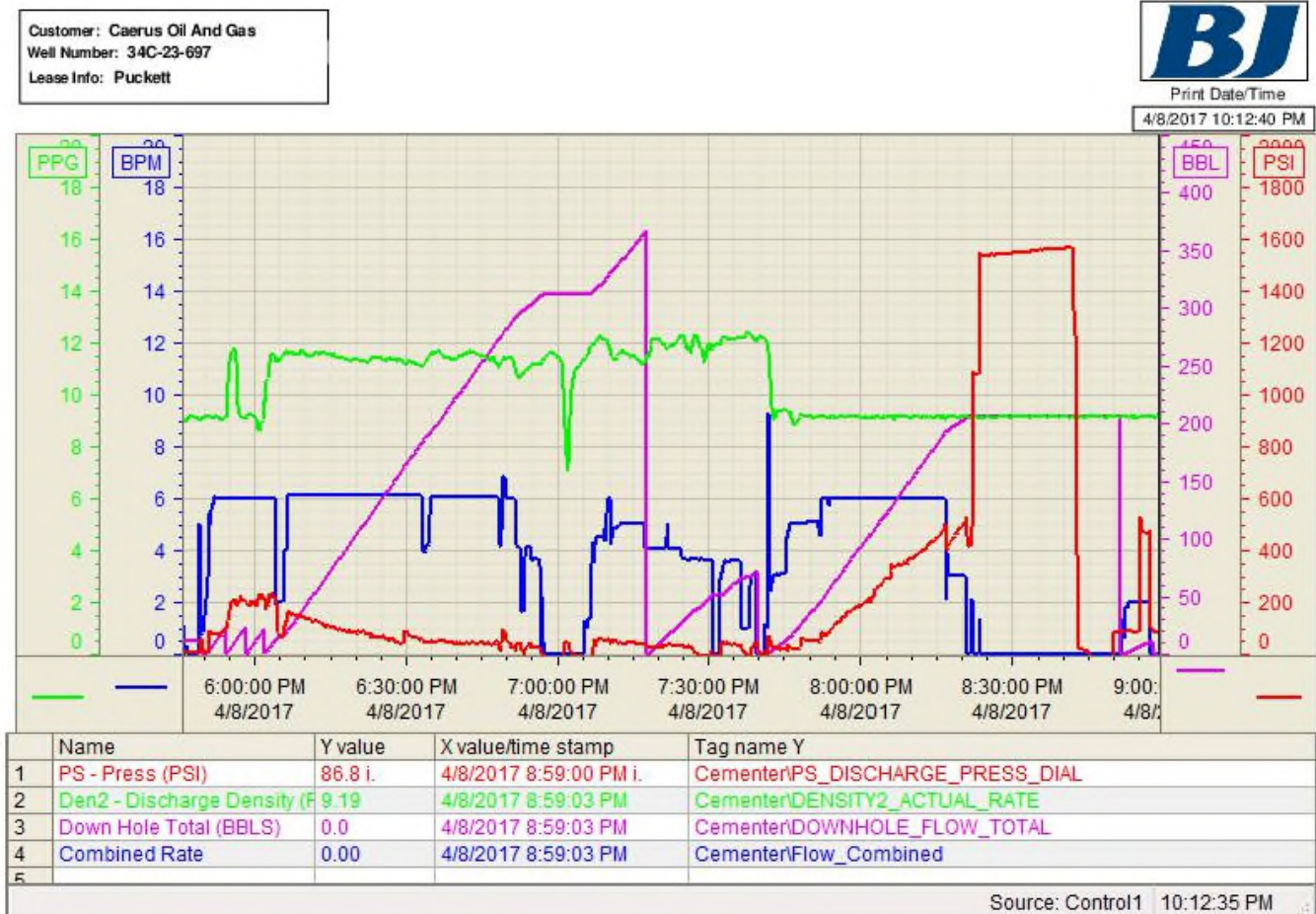
22	Parasite Opened	4/8/2017	20:55	8.33	2	6	964	At 6 BBL Away Valve Opened At 964 Psi
23	Shut Down	4/8/2017	20:58	8.33		10		Pumped Total Of 10 BBL of Sugar Water
24	Pre Rig Down Meeting	4/8/2017	21:29					BJ Services Crew Had A Pre Rig Down Meeting
25	Rig Down	4/8/2017	21:30					BJ Services Crew Rigs Down Cement Head And Gets Ready For Top Out
26	Waiting	4/8/2017	22:00					Waiting To Top Out Well
27	Top Out	4/9/2017	00:01	12.5	3	28	0	Pumped 28 BBL (70 sks 12.5 ppg 2.22 yld 12.58 g/sk) Of Top Out Cement
28	Pre Rig Down Meeting	4/9/2017	01:29					BJ Services Crew Had A Pre Rig down Meeting
29	Rig Down	4/9/2017	01:30					BJ Services Crew Rigs Down Pump And Iron
30	Depart Location	4/9/2017	02:30					BJ Services Crew Departs Location
31	Other	4/9/2017	00:00					Never Had Full Returns Throughout The Entire Job
32	Other	4/9/2017	00:00					Calculated Top Of Tail Cement - 2024.2'

3 Water Analysis

Metrics	Value	Recommended
Water Source	Flat Tank	
Temperature	50 °F	50-80 °F
pH Level	8	5.5-8.5
Chlorides	0 mg/L	0-3000 mg/L
Total Alkalinity	240	0-1000
Total Hardness	250 mg/L	0-500 mg/L
Carbonates	8 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

