



Caerus

SURFACE POST JOB REPORT

Puckett 25C-23-697 05-045-23365
S:26 T:6S R:97W Garfield CO

CallSheet #: 713
Proposal #: 13169



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,

Zen Keith

Technical Specialist-II | (307) 757-7178 | Zen.Keith@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	36	LTC	0	2517	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	2532	0
Casing	Outer	20	19.5	53	n/a	0	100	0

1.2 Equipment / People

Unit Type	Unit	Employee #1	Mileage
Silo	651	Orner, Lance	660
Silo	650	Cornett, Jesse	660
Bulk Trailer	E-527		
Cement Pump	104	Chaparro, Hector	660
Light Duty Pickups	5	Bell, Wesley	660

1.3 Timing

Event	Date/Time
Call Out	4/13/2017 20:00
Depart Facility	4/13/2017 20:30
On Location	4/13/2017 21:30
Rig Up Iron	4/14/2017 00:30
Job Started	4/14/2017 03:40
Job Completed	4/14/2017 10:30
Rig Down Iron	4/14/2017 11:00
Depart Location	4/14/2017 12:15

1.4 General Job Information

Metrics	Value
Well Fluid Density	9.3 lb/gal
Well Fluid Type	WBM
Rig Circulation Time	0.5 hours
Calculated Displacement	191 bbls
Actual Displacement	192 bbls
Total Spacer to Surface	0 bbls
Total CMT to Surface	0 bbls
Well Topped Out	Yes
Top Out Volume	30 bbls

1.5 Well Fluid Details

Metrics	Value
Plastic Viscosity	25
Yield Point	20
10 sec. SGS	6
10 min. SGS	12
30 min. SGS	36
Filtrate	2

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	40	0	0

Circulation Details:

Rig had returns while running in hole with casing and while filling casing and pumping after landing on bottom. For the first 40bbls of pumping there were partial returns that then stopped and the fluid level in the wellbore dropped for the remainder of the cementing and displacing

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	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		21.00	0
1	9	ALTCem S100-12	Topout	12.50	2.22	12.58		75.00	30.00	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	4	Lead	ALTCem S100-12	ADF-20	Defoamer	0.00	
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	5	Tail	ALTCem S100-12	ADF-20	Defoamer	0.00	
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

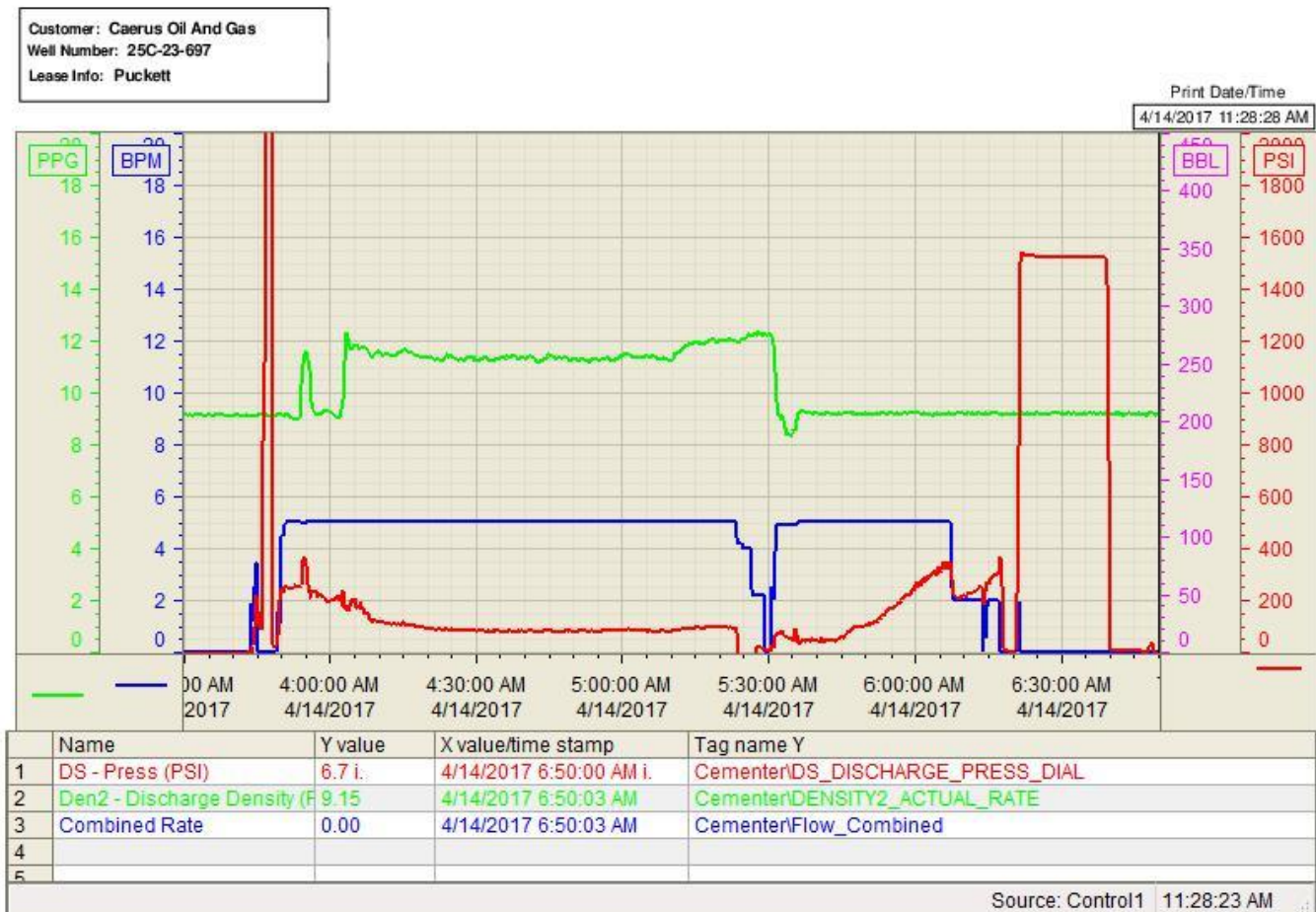
Line	Event	Date (MM/DD/YY)	Time (HH:MM)	Density (lb/gal)	Pump Rate (bpm)	Pump Volume (bbls)	Pipe Pressure (psi)	Comment
1	Arrive on location	4/13/2017	21:30					Arrive on location, requested ready to pump by 23:00
2	Waiting	4/13/2017	21:10					Wait on rig to finish running casing
3	Rig In	4/14/2017	00:30					Spot/rig bulk, water, and pump lines
4	Safety Meeting	4/14/2017	02:00					Review job procedure and job hazards with rig crew and pump crew.
5	Fill Lines	4/14/2017	03:40	8.34	2	3	50	Fill lines with fresh water
6	Pressure Test	4/14/2017	03:46	8.34			3700	Test all surface lines, no leaks
7	Pump	4/14/2017	03:48	8.34	5	20	50	Pump 20bbls Fresh water ahead
8	Pump	4/14/2017	03:53	11	5	20	50	Pump 20bbls ASF-10, lose returns.
9	Pump	4/14/2017	03:57	8.34	5	20	50	Pump 20bbls Fresh water spacer
10	Pump Lead Cement	4/14/2017	04:01	12	5	317	100	Mix and pump 317bbls of lead cement at 12ppg, Y: 2.53, WR: 14.85, 703sks
11	Pump Tail Cement	4/14/2017	05:11	12.5	5	64	100	Mix and pump 64 bbls of Tail Cement, Y: 2.22, WR: 12.58, 161sks, top of Tail cement at 1949'
12	Shut down	4/14/2007	05:27					finish mixing cement,
13	Drop Plug	4/14/2017	05:30	8.34				Drop 9 5/8 Top rubber plug, begin displacement
14	Pump	4/14/2017	05:41	8.34	5	50	50	50bbls of displacement, no returns
15	Pump	4/14/2017	05:51	8.34	5	50	70	100bbls of displacement away. No returns
16	Pump	4/14/2017	06:01	8.34	5	50	250	150bbls of displacement, no returns
17	Decrease pump rate	4/14/2017	06:09	8.34	5	31	300	181bbls of displacement away
18	Land plug	4/14/2017	06:19	8.34	2	12	320	192bbls of displacement, land plug
19	Casing test	4/14/2017	06:21	8.34			1520	15minutes casing test
20	Check Floats	4/14/2017	06:36	8.34				Floats held, 1bbl back to truck.
21	Waiting	4/14/2017	06:40					wait 4hrs before beginning top off
22	Pump	4/14/2017	10:00	10	2	5	0	Pump 5bbls with 300lbs CaCl2
23	Pump Tail Cement	4/14/2017	10:07	12.5	2	30	0	Mix and pump 30bbls of cement at 12.5ppg, Y: 2.22, WR: 12.58, 75sks,
24	Shut down	4/14/2017	10:36	12.5				0.5bbl cement to surface, watch for fall back, held level for 20minutes
25	Rig Out	4/14/2017	11:00					
26	Job Complete	4/14/2017	11:45					
27	Leave Location	4/14/2017	12:15					

3 Water Analysis

Metrics	Value	Recommended
Water Source	Upright Rig Tank	
Temperature	50 °F	50-80 °F
pH Level	7	5.5-8.5
Chlorides	0 mg/L	0-3000 mg/L
Total Alkalinity	400	0-1000
Total Hardness	<250 mg/L	0-500 mg/L
Carbonates	0 mg/L	0-100 mg/L
Sulfates	<500 mg/L	0-1500 mg/L
Potassium	200 mg/L	0-3000 mg/L
Iron	0 mg/L	0-300 mg/L

4 Pump Diagrams

Job Chart





Top Out Chart

