



Caerus

SURFACE POST JOB REPORT

Puckett 32C-26-697 05-045-23366
S:26 T:6S R:97W Garfield CO

CallSheet #: 595
Proposal #: 12992



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,

Nick Stille

Technical Specialist - I | (307) 286-0815 | nick.stille@bjservices.com

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

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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	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	2533	0
Casing	Outer	20	19.5	53	n/a	0	100	0

1.2 Equipment / People

Unit Type	Unit	Employee #1	Employee #2	Mileage
Silo	650			
Silo	651			
Cement Pump	104	Kresge, Adam	Hamilton, Daniel	650
Light Duty Pickups	3	Johnson, Chad	Cook, John	650

1.3 Timing

Event	Date/Time
Call Out	3/3/2017 17:30
Depart Facility	3/3/2017 19:00
On Location	3/3/2017 20:00
Rig Up Iron	3/3/2017 20:30
Job Started	3/4/2017 03:30
Job Completed	3/4/2017 12:30
Rig Down Iron	3/4/2017 13:00
Depart Location	3/4/2017 16:00

1.4 General Job Information

Metrics	Value
Well Fluid Density	9.2 lb/gal
Well Fluid Type	WBM
Rig Circulation Vol	190 bbls
Rig Circulation Time	0.5 hours
Calculated Displacement	191 bbls
Actual Displacement	191 bbls
Total Spacer to Surface	0 bbls
Total CMT to Surface	1 bbls
Well Topped Out	Yes
Top Out Volume	11.8 bbls

1.5 Well Fluid Details

Metrics	Value
Plastic Viscosity	23
Yield Point	21
10 sec. SGS	6
10 min. SGS	15
30 min. SGS	41
Filtrate	12
Flow Line Temp.	76

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	9.2 lb/gal
Well Fluid Density Out of Well	9.2 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	No	Yes	Yes

Circulation Details:

Lost returns 30 bbls into lead cement.

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 (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		30.00	11.80	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	3/3/2017	18:00					Crew called out for job requested on location at 22:30
2	Depart For Location	3/3/2017	20:00					Crew departed for location
3	Arrive On Location	3/3/2017	21:00					Crew arrived on location
4	Safety Meeting	3/3/2017	21:15					Pre rig up safety meeting
5	Rig Up Iron	3/3/2017	21:30					Crew spotted and rigged up all equipment and iron
6	Waiting	3/3/2017	22:30					Crew waiting on rig to finish running casing and circulate the well
7	Safety Meeting	3/4/2017	03:00					Pre job safety meeting
8	Fill Lines	3/4/2017	03:28	8.33	2	2	150	Filled lines with 2 bbls fresh water
9	Pressure Test Lines	3/4/2017	03:31					Pressure tested lines to 2500 psi
10	Pump Spacer	3/4/2017	03:35	8.33	2	20	100	Pump 20 bbls water spacer
11	Pump Spacer	3/4/2017	03:45	10	2	20	100	Pump 20 bbls SMS spacer
12	Pump Spacer	3/4/2017	04:02	8.33	3	20	100	Pump 20 bbls water spacer
13	Pump Lead Cement	3/4/2017	04:10	12	5	317	250	Pump 317 bbls lead cement @ 12 ppg (703 sks, 2.53 Yield, 14.85 gal/sk) Lost circulation 30 bbls into lead cement
14	Pump Tail Cement	3/4/2017	05:25	12.5	5	64	100	Pump 64 bbls tail cement @ 12.5 ppg (161 sks, 2.22 Yield, 12.58 gal/sk)
15	Shutdown	3/4/2017	05:43					Shutdown to drop top plug
16	Drop Top Plug	3/4/2017	05:47					Drop top plug
17	Pump Displacement	3/4/2017	05:48	9.2	6	50	100	Pump 10 bbls fresh water displacement followed by 40 bbls WBM displacement
18	Pump Displacement	3/4/2017	06:08	9.2	8	100	300	Pump 50 bbls WBM displacement
19	Pump Displacement	3/4/2017	06:12	9.2	8	150	400	Pump 50 bbls WBM displacement
20	Slow Pump Rate	3/4/2017	06:12	8.33	2	170	600	Slowed pump rate to 2 bmp at 170 bbls away
21	Land Plug	3/4/2017	06:31	8.33	2	191	300	Landed plug at 300 psi took up to 1500 psi pressure
22	Pressure Test Casing	3/4/2017	06:41				1500	Held pressure for 15 mins

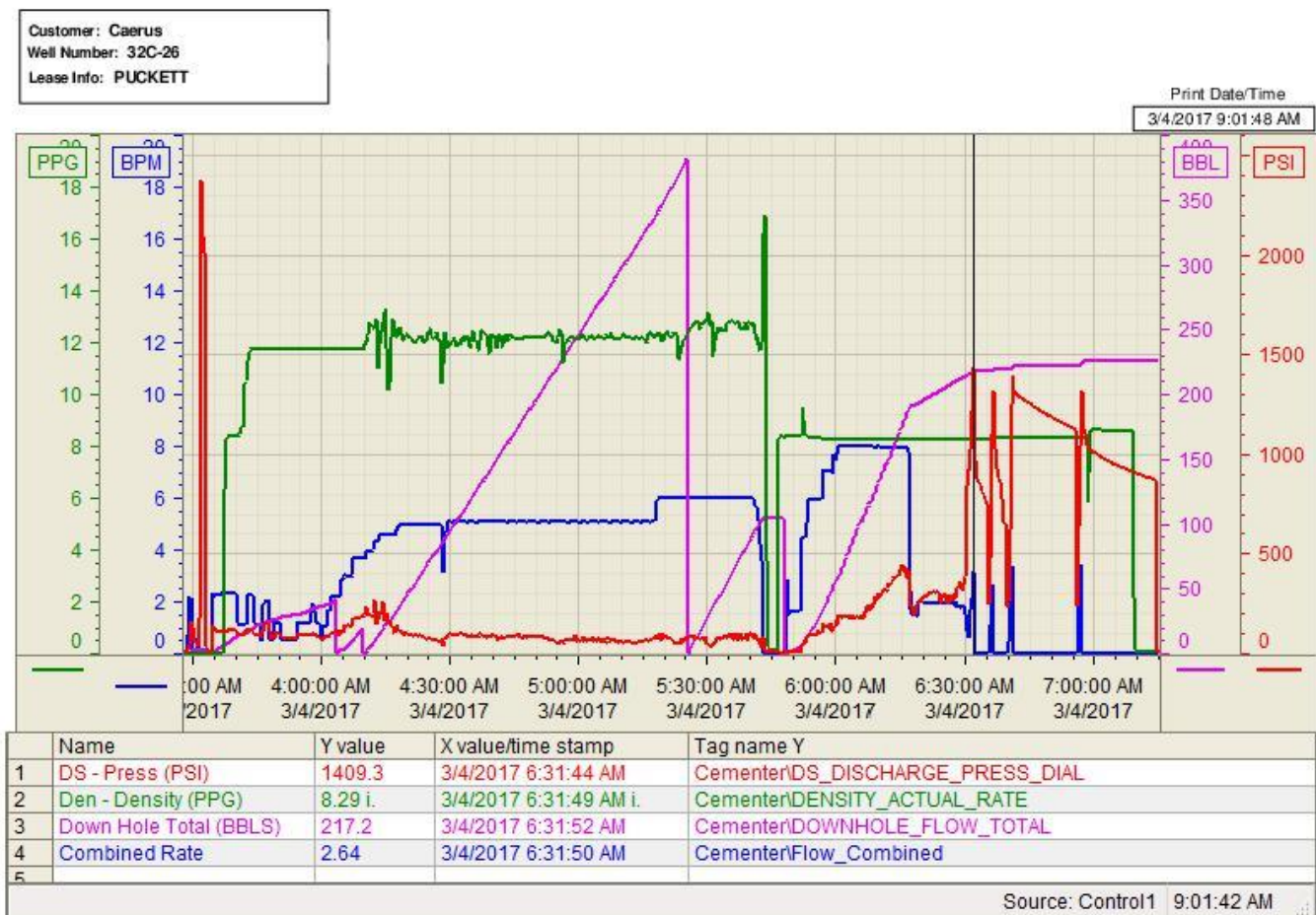


23	Check Floats	3/4/2017	07:14					Checked floats, floats holding, 0.5 bbls back
24	Waiting	3/4/2017	08:00					Crew waiting for rig to finish nipping up and testing BOP'S
25	Safety Meeting	3/4/2017	11:30					Safety meeting
26	Top Out Well	3/4/2017	11:45	12.5	1	11.8	50	Pump 11.8 bbls of cement at 12.5 ppg to top off well, 1 bbl of cement back to surface (30 sks, 2.22 Yield, 12.58 gal/sk)
27	Shutdown	3/4/2017	12:00					Shutdown, monitor cement for 20 mins, cement did not fall
28	Safety Meeting	3/4/2017	12:30					Pre rig down safety meeting
29	Rig Down Iron	3/4/2017	13:00					Crew rig down all equipment and iron
30	Depart Location	3/4/2017	16:00					Crew departed location

3 Water Analysis

Metrics	Value	Recommended
Water Source	Flat Tank	
Temperature	70 °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





Top Out

