



Caerus

SURFACE POST JOB REPORT

Puckett 32A-26-697 05-045-23358
S:26 T:6S R:97W Garfield CO

CallSheet #: 484
Proposal #: 12829



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 | zenkeith@altcem.com

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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	2504	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	2525	0
Casing	Outer	20	19.5	53	n/a	0	100	0

1.2 Equipment / People

Unit Type	Unit	Employee #1	Employee #2	Mileage
Cement Pump	105	Draney, Chance		677
Pneumatic Trailer	703			677
Pneumatic Trailer	704			677
Cement Chemical	401	Hamilton, Daniel		677
Light Duty Pickups	3	Johnson, Chad	Scott, Matthew	677
Pneumatic Trailer	705			677

1.3 Timing

Event	Date/Time
Call Out	1/25/2017 09:00
Depart Facility	1/25/2017 13:00
On Location	1/25/2017 15:00
Rig Up Iron	1/25/2017 15:30
Job Started	1/25/2017 22:00
Job Completed	1/26/2017 11:00
Rig Down Iron	1/26/2017 11:20
Depart Location	1/26/2017 13:00

1.4 General Job Information

Metrics	Value
Well Fluid Density	9.1 lb/gal
Well Fluid Type	WBM
Rig Circulation Vol	194 bbls
Rig Circulation Time	0.5 hours
Calculated Displacement	190 bbls
Actual Displacement	190 bbls
Total Spacer to Surface	0 bbls
Total CMT to Surface	0 bbls
Well Topped Out	Yes
Top Out Volume	58.5 bbls

1.5 Well Fluid Details

Metrics	Value
Plastic Viscosity	20
Yield Point	18
10 sec. SGS	6
10 min. SGS	13
30 min. SGS	42
Filtrate	12
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	9.1 lb/gal
Well Fluid Density Out of Well	9.1 lb/gal

1.7 Job Details (cont.)

Metrics	Value
BHCT	94 °F
BHST	128 °F

1.8 Circulation

Lost Circulation Experienced
Yes

Circulation Details:

no returns throughout 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	2000
1	6	Water	DisplacementFinal	8.33			42.00		187.00	0
1	7	ALTCem S100-12	Topout	12.50	2.22	12.58		250.00	99.00	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	7	Topout	ALTCem S100-12	AC3-10	Cement	100.00	%
1	7	Topout	ALTCem S100-12	ACL-10	Accelerator	2.00	lb/sk
1	7	Topout	ALTCem S100-12	ACL-20	Accelerator	5.00	%BWOB
1	7	Topout	ALTCem S100-12	ADF-11	Defoamer	0.30	%BWOB
1	7	Topout	ALTCem S100-12	ALC-10	LostCirculation	0.13	lb/sk
1	7	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	1/25/2017	09:00					Crew called out for job requested on location at 17:00
2	Safety Meeting	1/25/2017	12:45					Pre convoy safety meeting
3	Depart For Location	1/25/2017	13:00					Crew departed for location
4	Arrive On Location	1/25/2017	15:00					Crew arrived on location
5	Safety Meeting	1/25/2017	15:15					Pre rig up safety meeting
6	Rig Up Iron	1/25/2017	15:30					Crew spotted and rigged up all equipment and iron
7	Waiting	1/25/2017	17:00					Crew waiting for rig to finish running casing and circulate well. Casing on bottom at 20:00, rig circulated at 8.5 bpm and 100 psi for 30 mins.
8	Safety Meeting	1/25/2017	21:00					Pre job safety meeting
9	Fill Lines	1/25/2017	22:00	8.33	2	2	50	Filled lines with 2 bbls fresh water
10	Pressure Test Lines	1/25/2017	22:04					Pressure test lines to 3000 psi
11	Pump Spacer	1/25/2017	22:06	8.33	2	20	50	Pumped 20 bbls water spacer
12	Pump Spacer	1/25/2017	22:13	9	2	20	50	Pumped 20 bbls ASF-10 spacer
13	Pump Spacer	1/25/2017	22:19	8.33	2	20	150	Pumped 20 bbls water spacer
14	Pump Lead Cement	1/25/2017	22:23	12	5	317	150	Pumped 317 bbls lead cement at 12 ppg, (703sks, 2.53Y, 14.85 gal/sk)
15	Pump Tail Cement	1/25/2017	23:32	12.5	5	64	150	Pumped 64 bbls tail cement at 12.5 ppg, (161sks, 2.22Y, 12.53 gal/sk) EST top 2006
16	Shutdown	1/25/2017	23:48					Shutdown
17	Drop Top Plug	1/25/2017	23:50					Dropped top plug, tattle tail indicated, plug gone
18	Pump Displacement	1/25/2017	23:52	8.33	5	50	100	Pump 50 bbls water displacement
19	Pump Displacement	1/26/2017	00:03	8.33	5	100	100	Pump 50 bbls water displacement
20	Pump Displacement	1/26/2017	00:12	8.33	5	150	250	Pump 50 bbls water displacement
21	Slow Pump Rate	1/26/2017	00:28	8.33	2	180	250	Slow pump rate to 2 bpm at 180 bbls away
22	Land Plug	1/26/2017	00:35	8.33	2	190	250	Land plug at 250 psi and took to 750 psi



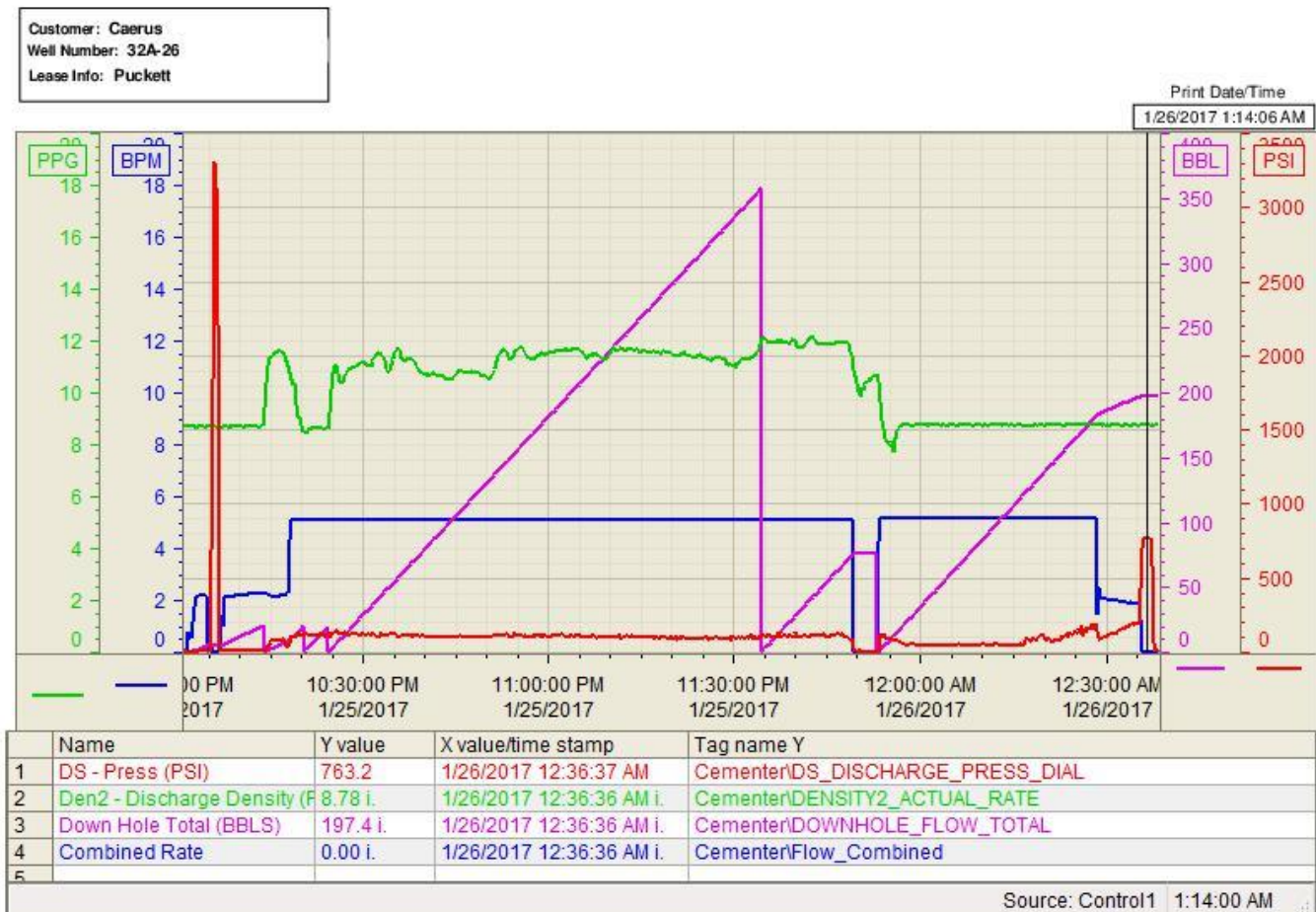
23	Check Floats	1/26/2017	00:37					Check floats, floats holding, 0.5 bbls back
24	Other	1/26/2017	00:40				250	Pump 10 bbls sugar water down parasite line
25	Waiting	1/26/2017	01:30					Crew waiting for rig to nipple up and test bop's to start topping out well.
26	Safety Meeting	1/26/2017	09:15					Safety meeting
27	Pump Top Out Cement	1/26/2017	10:16	12.5	2	58.5	50	Pumped 5 bbls Calcium Chloride water, and 158 sks (58.5 bbls) of top out cement. 1 bbl of cement to surface, waited 10 mins and cement did not fall
28	Shutdown	1/26/2017	10:42					Shutdown
29	Safety Meeting	1/26/2017	11:00					Pre rig down safety meeting
30	Rig Down Iron	1/26/2017	11:20					Crew rigged all equipment and iron
31	Depart Location	1/26/2017	13:00					Crew departed from location

3 Water Analysis

Metrics	Value	Recommended
Water Source	Upright Rig Tank	
Temperature	70 °F	50-80 °F
pH Level	6	5.5-8.5
Chlorides	0 mg/L	0-3000 mg/L
Total Alkalinity	120	0-1000
Total Hardness	250 mg/L	0-500 mg/L
Carbonates	70 mg/L	0-100 mg/L
Sulfates	<250 mg/L	0-1500 mg/L
Potassium	250 mg/L	0-3000 mg/L
Iron	1 mg/L	0-300 mg/L

4 Pump Diagrams

Job Chart





Top Out

