



Caerus

SURFACE POST JOB REPORT

Chevron 11C-17 05-045-23236
S:17 T:6S R:96W Garfield CO

CallSheet #: 892
Proposal #: 13366



SURFACE Post Job Report

Attention: Mr. Steve Schmitz | (720) 880-6412 | sschmitz@caerusoilandgas.com
Caerus
600 17th Street Suite 1600N | 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

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

Sales Office 475 17th St. Suite 460 Denver Co., 80202
Phone: (303) 296-1158



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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	13.5	n/a	n/a	100	504	10
Open Hole	Outer	n/a	13.5	n/a	n/a	504	1021	0
Open Hole	Outer	n/a	15.5	n/a	n/a	0	100	0
Casing	Inner	9.625	8.921	36	LTC	0	1004	0

1.2 Equipment / People

Unit Type	Unit	Employee #1	Employee #2	Mileage
Cement Pump	104	Chaparro, Hector		30
Cement Chemical	401	Youngberg, Wendell	Turek, Chad	30
Bulk Trailer	501	Luff, Aaron		30
Light Duty Pickups	3	Boyd, Brian	Roush, James	30

1.3 Timing

Event	Date/Time
Call Out	6/9/2017 14:30
Depart Facility	6/9/2017 16:30
On Location	6/9/2017 17:30
Rig Up Iron	6/9/2017 18:00
Job Started	6/9/2017 21:15
Job Completed	6/9/2017 22:55
Rig Down Iron	6/9/2017 23:15
Depart Location	6/10/2017 00:00

1.4 General Job Information

Metrics	Value
Well Fluid Density	9 lb/gal
Well Fluid Type	WBM
Rig Circulation Vol	250 bbls
Rig Circulation Time	7 hours
Calculated Displacement	74 bbls
Actual Displacement	74 bbls
Total Spacer to Surface	20 bbls
Total CMT to Surface	3 bbls
Well Topped Out	Yes
Top Out Volume	7 bbls

1.5 Well Fluid Details

Metrics	Value
Plastic Viscosity	8
Yield Point	1.4
10 sec. SGS	3
10 min. SGS	9
30 min. SGS	26
Filtrate	0.9
Flow Line Temp.	84

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 lb/gal
Well Fluid Density Out of Well	9 lb/gal

1.7 Job Details (cont.)

Metrics	Value
BHCT	86 °F
BHST	109 °F



1.8 Circulation

Lost Circulation Experienced
No

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	ALTCem S100-12	Lead	12.00	2.53	14.85		160.00	72.00	0
1	3	ALTCem S100-12	Tail	12.50	2.22	12.58		118.00	46.73	504
1	4	Water	DisplacementFinal	8.33			42.00		90.00	0
1	5	ALTCem S100-12	Topout	12.50	2.22	12.58		100.00	39.60	0

1.10 Job Fluid Details

Job	Fluid	Type	Fluid	Product	Function	Conc.	Uom
1	2	Lead	ALTCem S100-12	AC3-10	Cement	100.00	%
1	2	Lead	ALTCem S100-12	ACL-10	Accelerator	2.00	lb/sk
1	2	Lead	ALTCem S100-12	ACL-20	Accelerator	5.00	%BWOB
1	2	Lead	ALTCem S100-12	ADF-11	Defoamer	0.30	%BWOB
1	2	Lead	ALTCem S100-12	ALC-10	LostCirculation	0.13	lb/sk
1	2	Lead	ALTCem S100-12	AXE-30	Extender	2.00	lb/sk
1	3	Tail	ALTCem S100-12	AC3-10	Cement	100.00	%
1	3	Tail	ALTCem S100-12	ACL-10	Accelerator	2.00	lb/sk
1	3	Tail	ALTCem S100-12	ACL-20	Accelerator	5.00	%BWOB
1	3	Tail	ALTCem S100-12	ADF-11	Defoamer	0.30	%BWOB
1	3	Tail	ALTCem S100-12	ALC-10	LostCirculation	0.13	lb/sk
1	3	Tail	ALTCem S100-12	AXE-30	Extender	2.00	lb/sk
1	5	Topout	ALTCem S100-12	AC3-10	Cement	100.00	%
1	5	Topout	ALTCem S100-12	ACL-10	Accelerator	2.00	lb/sk
1	5	Topout	ALTCem S100-12	ACL-20	Accelerator	5.00	%BWOB
1	5	Topout	ALTCem S100-12	ADF-11	Defoamer	0.30	%BWOB
1	5	Topout	ALTCem S100-12	ALC-10	LostCirculation	0.13	lb/sk
1	5	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	Call Out	6/9/2017	14:30					Customer requested crew to be on location at 20:30
2	Depart Shop	6/9/2017	16:30					Crew departs shop and has journey management briefing
3	Arrive On Location	6/9/2017	17:30					Crew arrives on location and meet with customer
4	STEACS Briefing	6/9/2017	17:45					Crew preforms STEACS briefing over spotting equipment, rigging up and hazards
5	Rig Up Iron	6/9/2017	18:00					Rig up equipment and iron
6	Waiting	6/9/2017	18:45					Waiting on rig to run casing
7	Lands Casing	6/9/2017	20:55					Rig land casing and recirculate well
8	STEACS Briefing	6/9/2017	21:05					STEACS briefing with crew, rig crew and company over job and hazards
9	Fill Lines	6/9/2017	21:15	8.33	3	3	30	Fill pumps and lines
10	Pressure Test	6/9/2017	21:19	8.33	0.5	0.5	3000	Pressure test iron to 3000 PSI
11	Pump Water	6/9/2017	21:22	8.33	0.5	20	120	Pump 20 bbls of fresh water ahead
12	Pump Lead Cement	6/9/2017	21:26	12		48	170	Pump 48 bbls of Lead cement 12 PPG (107 sks, 2.53 Yield, 14.85 Gals/Sks, 39 bbls Mix Water)
13	Pump Tail Cement	6/9/2017	21:36	12.5		46.7	113	Pump 46 bbls Tail 12.5 PPG (118 Sks, 2.22 Yield, 12.58 Gals/Sks, 35 bbls Mix Water)
14	Shut Down	6/9/2017	21:51					Shut down pumping
15	Drop Top Plug	6/9/2017	21:53	8.33	2			Drop top plug with company man to verify plug goes down hole
16	Displacement	6/9/2017	21:54	8.33		74		Pump 74 bbls FW displacement
17	Slow Rate	6/9/2017	22:08	8.33	2	10	150	Last 10 bbls slow rate to 2 bpm
18	Land Plug	6/9/2017	22:13	8.33			1500	Land plug and bump to 1500 PSI
19	Casing Test	6/9/2017	22:13	8.33	0.5		1500	Hold pressure for 15 mins
20	Check Floats	6/9/2017	22:28					Check floats and got .5 bbls back
21	Top Out	6/9/2017	22:51	12.5	0.5	7	98	Pump 7 bbls of top out cement (17 sks, 12.5PPG, 2.22 Yield, 12.58 Gals/Sks)
22	Cement To Surface	6/9/2017	22:53	12.5				Got 3 bbls cement to surface
23	Shut Down	6/9/2017	22:55					Shut down pumping
24	STEACS Briefing	6/9/2017	23:00					Crew has briefing over rig down
25	Rig Down Iron	6/9/2017	23:15					Crew rigs down iron
26	Depart Location	6/10/2017	00:00					Crew departs location

3 Water Analysis

Metrics	Value	Recommended
Water Source	Upright Rig Tank	
Temperature	62 °F	50-80 °F
pH Level	6	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	140 mg/L	0-100 mg/L
Sulfates	<200 mg/L	0-1500 mg/L
Potassium	450 mg/L	0-3000 mg/L
Iron	0 mg/L	0-300 mg/L

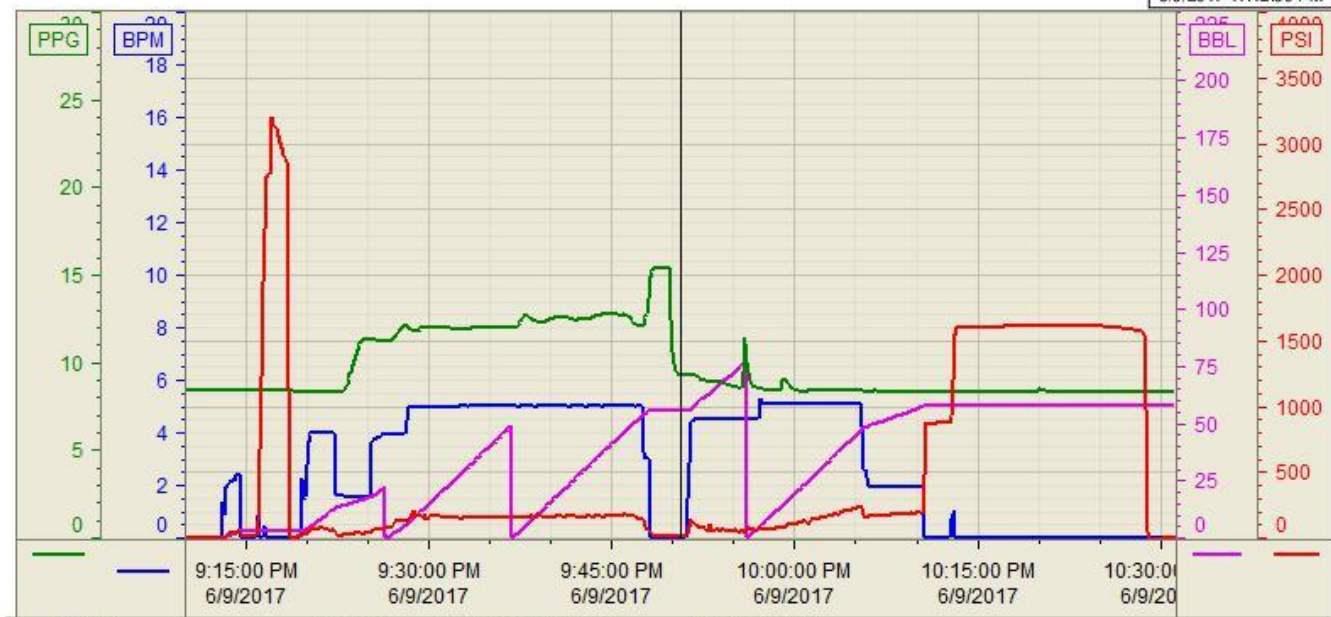
4 Pump Diagrams

Job Chart

Customer: Caerus
Well Number: 11C-17
Lease Info: Chevron



Print Date/Time
6/9/2017 11:12:30 PM



	Name	Y value	X value/time stamp	Tag name Y
1	DS - Press (PSI)	13.0 i.	6/9/2017 9:50:37 PM i.	CementerDS_DISCHARGE_PRESS_DIAL
2	Den - Density (PPG)	9.28	6/9/2017 9:50:37 PM	CementerDENSITY_ACTUAL_RATE
3	Down Hole Total (BBLs)	55.5 i.	6/9/2017 9:50:37 PM i.	CementerDOWNHOLE_FLOW_TOTAL
4	Combined Rate	0.00 i.	6/9/2017 9:50:37 PM i.	CementerFlow_Combined
5				

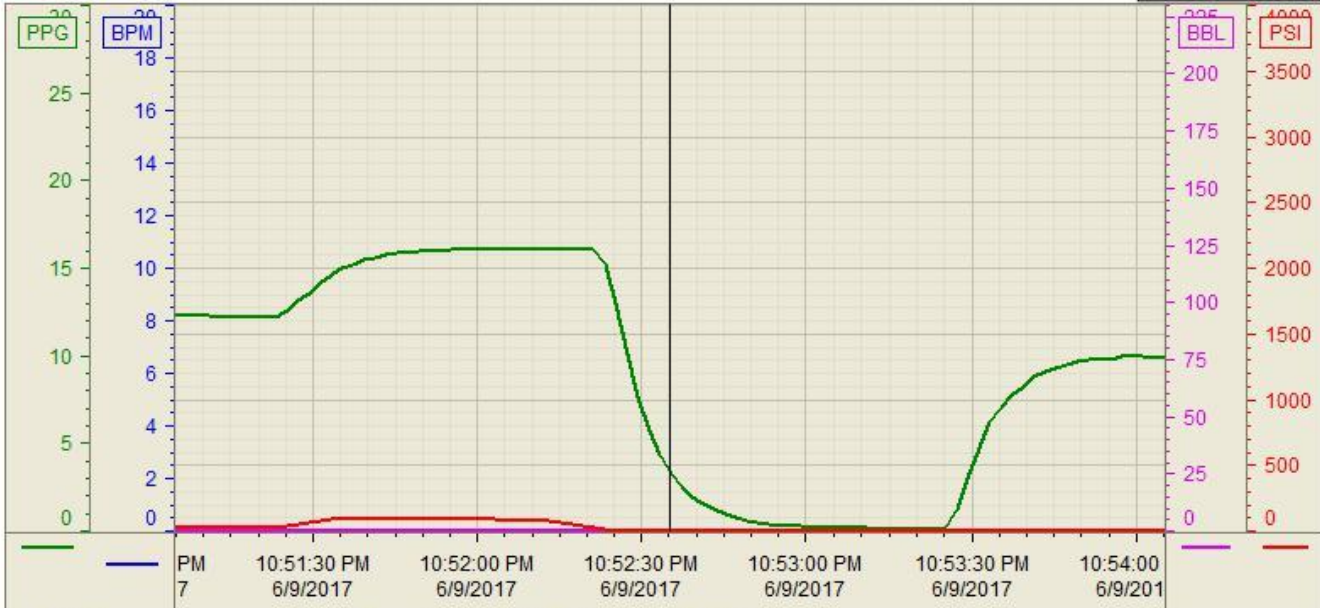
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Top Out Chart

Customer: Caerus
Well Number: 11C-17
Lease Info: Chevron



Print Date/Time
6/9/2017 11:14:12 PM



	Name	Y value	X value/time stamp	Tag name Y
1	DS - Press (PSI)	0.0 i.	6/9/2017 10:52:35.083 PM	Cementer\DS_DISCHARGE_PRESS_DIAL
2	Den - Density (PPG)	3.38 i.	6/9/2017 10:52:35.083 PM	Cementer\DENSITY_ACTUAL_RATE
3	Down Hole Total (BBLs)	0.0 i.	6/9/2017 10:52:35.083 PM	Cementer\DOWNHOLE_FLOW_TOTAL
4	Combined Rate	0.00 i.	6/9/2017 10:52:35.083 PM	Cementer\Flow_Combined
5				

Source: Control1 11:14:07 PM