



Caerus

SURFACE POST JOB REPORT

Chevron 11A-17 05-045-23245
S:17 T:6S R:96W Garfield CO

CallSheet #: 950
Proposal #: 13435



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

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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	700	10
Open Hole	Outer	n/a	13.5	n/a	n/a	700	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	Mileage
Bulk Trailer	501	Linn, Andrew	60
Cement Pump	104	Groneman, Josh	60
Light Duty Pickups	3	Casciato, Luke	60
Bulk Trailer	E949		

1.3 Timing

Event	Date/Time
Call Out	6/26/2017 21:00
Depart Facility	6/26/2017 23:00
On Location	6/26/2017 23:45
Rig Up Iron	6/27/2017 00:45
Job Started	6/27/2017 06:42
Job Completed	6/27/2017 08:10
Rig Down Iron	6/27/2017 08:30
Depart Location	6/27/2017 09:00

1.4 General Job Information

Metrics	Value
Well Fluid Density	9.4 lb/gal
Well Fluid Type	WBM
Rig Circulation Vol	100 bbls
Rig Circulation Time	0.5 hours
Calculated Displacement	74 bbls
Actual Displacement	74 bbls
Total Spacer to Surface	20 bbls
Total CMT to Surface	15 bbls
Well Topped Out	No

1.5 Well Fluid Details

Metrics	Value
Plastic Viscosity	16
Yield Point	13
10 sec. SGS	4
10 min. SGS	11
30 min. SGS	31
Filtrate	16
Flow Line Temp.	90

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	9.4 lb/gal
Well Fluid Density Out of Well	9.4 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 (sk)	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		108.00	49.00	0
1	3	ALTCem S100-12	Tail	12.50	2.22	12.58		118.00	46.73	507
1	4	Water	DisplacementFinal	8.33			42.00		90.00	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

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	6/26/2017	21:00					Crew was called out to Caerus 11A-17 Surface.
2	STEACS Briefing	6/26/2017	22:45					Crew Conducted STEACS Journey Management.
3	Depart Facility	6/26/2017	23:00					Crew departs facility, heads to Caerus location.
4	Arrive on Location	6/26/2017	23:45					Crew arrives on location.
5	Assess Location	6/26/2017	23:50					Crew conducted walk around of location, to discuss spotting equipment.
6	Spot Equipment	6/27/2017	00:00					Crew spots in equipment.
7	STEACS Briefing	6/27/2017	00:30					Crew discussed Rig up and conducted STEACS briefing.
8	Rig Up	6/27/2017	00:45					Crew rigs up all iron and fittings
9	Other	6/27/2017	06:00					Rig landed J55 36# 9.625" casing at 06:00 circulated bottoms up (100bbl) of WBM for 30 min. 100psi
10	STEACS Briefing	6/27/2017	06:15					BJ Crew, Rig Crew, Costumer Representative discussed job procedure, as well as STEACS briefing.
11	Start Job	6/27/2017	06:42					Crew begins job
12	Fill Lines	6/27/2017	06:46	8.33	2	2	50	Pumped 2bbl of h2o in order to fill lines for pressure test.
13	Pressure Test	6/27/2017	06:51				3000	Pressure tested lines to 3000, no leaks.
14	Pump Spacer	6/27/2017	06:55	8.33	2	15	50	Pumped 15bbl of h2o spacer at 2bpm 50psi, in order to mix lead cmt.
15	Increase Rate	6/27/2017	07:01	8.33	5	5	150	Increased rate to 5bpm after cmt tub was up to weight 150psi
16	Pump Lead	6/27/2017	07:03	12	5	49	150	Mix and Pump 49bbl (108sk, 2.53yld, 14.85gl/sk) of lead cmt at 12.0ppg, 5bpm 150psi. Full return
17	Pump Tail	6/27/2017	07:12	12.5	5	47	250	Mix and pump 47bbl of tail cmt at 12.5ppg (118sk, 2.22yld, 12.58gl/sk) 5bpm, 250psi. Full returns.
18	Shutdown	6/27/2017	07:25					Shutdown in order to wash pumps and lines.
19	Drop Top Plug	6/27/2017	07:27					Dropped top plug
20	Pump Displacement	6/27/2017	07:28	8.33	6	60	250	Pumped 60bbl of h2o at 6bm 250psi. Full returns.



21	Slow Rate	6/27/2017	07:38	8.33	4	4	250	Received cmt to surface, slowed rate to 4bpm.
22	Slow Rate	6/27/2017	07:40	8.33	2	10	250	Slow rate to 2bpm in order to land plug, 250psi. Full returns
23	Shutdown	6/27/2017	07:45				1600	Land plug at calculated displacement (74bbl), FSP 250, landed at 400psi, bumped to 1600psi for casing test. 15bbl of cmt to surface.
24	Casing test	6/27/2017	00:00				1600	held pressure for 15 minutes for casing test.
25	Check Floats	6/27/2017	08:00					Floats held, 0.5bbl back.
26	STEACS Briefing	6/27/2017	08:10					Crew conducted STEACS briefing prior to rig down.
27	Rig Down	6/27/2017	08:15					Crew rigged down all iron and fittings
28	STEACS Journey Management	6/27/2017	08:45					Crew conducted journey management.
29	Depart Location	6/27/2017	09:00					Crew departs location, heads to facility.

3 Water Analysis

Metrics	Value	Recommended
Water Source	Upright Rig Tank	
Temperature	60 °F	50-80 °F
pH Level	7	5.5-8.5
Chlorides	0 mg/L	0-3000 mg/L
Total Alkalinity	250	0-1000
Total Hardness	250 mg/L	0-500 mg/L
Carbonates	0 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

