



Caerus

SURFACE POST JOB REPORT

Puckett 33C-26-697 05-045-23355
S:26 T:6S R:97W Garfield CO

CallSheet #: 559
Proposal #: 12948



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,

Oscar Medrano

Technical Specialist-II | (307) 996-6222 | OscarMedrano@altcem.com

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

Sales Office 475 17th St. Suite 460 Denver Co., 80202
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Table of Contents

1 Job Details & Summary 3

 1.1 Geometry 3

 1.2 Equipment / People 3

 1.3 Timing 3

 1.4 General Job Information 3

 1.5 Well Fluid Details 4

 1.6 Job Details 4

 1.7 Job Details (cont.) 4

 1.8 Circulation 4

 1.10 Job Execution Information 4

 1.11 Job Fluid Details 5

2 Job Logs 6

3 Water Analysis 8

4 Pump Diagrams 8

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	2521	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	2555	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	Casciato, Luke		800
Pneumatic Trailer	703			800
Pneumatic Trailer	705			800
Bulk Trailer	502	Nepgen, AJ	Vasquez, Mike	800
Light Duty Pickups	4	Dent, Jerod		800

1.3 Timing

Event	Date/Time
Call Out	2/19/2017 09:30
Depart Facility	2/19/2017 10:00
On Location	2/19/2017 12:00
Rig Up Iron	2/19/2017 12:30
Job Started	2/19/2017 16:40
Job Completed	2/20/2017 01:45
Rig Down Iron	2/20/2017 01:50
Depart Location	2/20/2017 06:00

1.4 General Job Information

Metrics	Value
Well Fluid Density	9.6 lb/gal
Well Fluid Type	WBM
Rig Circulation Vol	300 bbls
Rig Circulation Time	1 hours
Calculated Displacement	191.4 bbls
Actual Displacement	192 bbls
Total Spacer to Surface	0 bbls
Total CMT to Surface	0 bbls
Well Topped Out	Yes
Top Out Volume	13.4 bbls

1.5 Well Fluid Details

Metrics	Value
Plastic Viscosity	15
Yield Point	13
10 sec. SGS	6
10 min. SGS	9
30 min. SGS	16
Filtrate	6.2
Flow Line Temp.	74

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	9.6 lb/gal
Well Fluid Density Out of Well	9.6 lb/gal

1.7 Job Details (cont.)

Metrics	Value
BHCT	94 °F
BHST	128 °F
Initial ISIP	psi
Final ISIP	psi
Sks in Formation	sks
Injection #1	bpm
Injection #1	psi
Injection #2	bpm
Injection #2	psi

1.8 Circulation

Lost Circulation Experienced	Losses into Spacer	Losses into Cement	Losses into Displacement
Yes	0	250	0

Circulation Details:

We had returns until 250 bbls into lead cement and returns were lost and never got them back.

1.10 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		17.00	0
1	9	ALTCem S100-12	Topout	12.50	2.22	12.58		250.00	99.00	0



1.11 Job Fluid Details

Job	Fluid	Type	Fluid	Product	Function	Conc.	Uom	Start (gal)	End (gal)	Used (gal)
1	2	Flush	Sodium Silicate	ASF-10	Extender	21.00	gal/bbl			0
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			
1	9	Topout	ALTCem S100-12	ASF-10	Accelerator	15.00	gal/bbl	250	50	200

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	2/19/2017	09:30					BJ crew called to Caerus Puckett 33C-26-697 surface cement job.
2	Pre convoy meeting	2/19/2017	09:45					BJ crew discuss route and hazards of driving to location.
3	Depart facility	2/19/2017	10:00					BJ crew depart for Caerus location.
4	Arrive on location	2/19/2017	12:00					BJ crew arrive at Caerus location.
5	Assess location	2/19/2017	12:05					BJ crew assess location to identify hazards of spotting in equipment.
6	Spot in equipment	2/19/2017	12:10					BJ crew spot in all equipment
7	Safety meeting	2/19/2017	12:25					BJ crew discuss rig up of ground fittings and equipment and identify hazards such as congested location, lifting/lowering, pinch points, slips/falls etc;
8	Rig up ground	2/19/2017	12:30					BJ crew rig up all ground fittings and equipment.
9	Other	2/19/2017	17:00					9.625", 36 lb, J-55 casing set at 2,521' on bottom at 14:00 hrs, circulating at 5 bbl/min with 110 psi for a total volume of 300 bbls.
10	Safety meeting	2/19/2017	15:20					BJ crew, customer representative and rig crew discuss job procedure and hazards of cement job such as overhead loads, pinch points, communication, first aid, fire extinguisher, muster area, emergency evacuation plan, trapped pressure, slips/falls etc;
11	Start job	2/19/2017	16:40					BJ crew begins cement job.
12	Fill lines	2/19/2017	16:41	8.33	2	2	25	Fill lines with 2 bbls water ahead at 2 bbl/min.
13	Shutdown	2/19/2017	16:42					Shutdown to pressure test lines.
14	Pressure test	2/19/2017	16:50					Pressure test lines to 3,000 psi.
15	Release pressure	2/19/2017	16:54					Release pressure back to truck.
16	Pump spacer	2/19/2017	16:55	8.33	5	22	250	Pump 20 bbls of water ahead at 5 bbl/min.
17	Pump spacer	2/19/2017	16:59	10.5	5	42	250	Pump 20 bbls of 50/50 sodium silicate and fresh water spacer at 5 bbl/min.
18	Pump spacer	2/19/2017	17:03	8.33	2	62	192	Pump 20 bbls of water spacer behind at 2 bbl/min.

19	Pump lead cement	2/19/2017	17:10	12	5	342	230	Mix and pump 703 sks of S100-12 lead cement at 12 ppg, 2.53 yld, 14.85 gal/sk at 5 bbl/min (Total 316.8 bbls).
20	Slow rate	2/19/2017	18:07	12	3	354	60	Slow rate to 3 bbl/min due to rig cellar pump not functioning correctly.
21	Increase rate	2/19/2017	18:11	12	5	378.8	200	Increase rate and pump remaining 24.8 bbls lead cement at 5 bbl/min.
22	Pump tail cement	2/19/2017	18:17	12.5	5	442.5	230	Mix and pump 161 sks of S100-12 lead cement at 12.5 ppg, 2.22 yld, 12.58 gal/sk at 5 bbl/min (Total 63.7 bbls).
23	Shutdown	2/19/2017	18:35					Shutdown to drop top plug.
24	Drop top plug	2/19/2017	18:36					Drop top plug and line out back to well.
25	Pump displacement	2/19/2017	18:37	8.33	3	10	120	Pump 10 bbls water displacement at 3 bbl/min while pulling on WBM.
26	Pump displacement	2/19/2017	18:40	9.6	5	171.4	150	Pump 161.4 bbls of WBM at 9.6 ppg at 5 bbl/min.
27	Pump displacement	2/19/2017	19:15	8.33	5	181.4	329	Pump 10 bbls water displacement at 5 bbl/min.
28	Pump displacement	2/19/2017	19:17	8.33	2	192	218	Pump remaining 10.6 bbls pf water displacement at 2 bbl/min.
29	Land plug	2/19/2017	19:23				328	Land plug at 328 psi and bring pressure to 860 psi. Hold for 5 minutes.
30	Pressure test	2/19/2017	19:29	8.33	2	2	850	Pressure up on casing to 1,500 psi for 10 minute casing test.
34	Check floats	2/19/2017	19:45					Floats held with .25 bbl back to truck.
35	Pump displacement	2/19/2017	19:50	8.33	2	10	450	Pump 10 bbls of sugar retarded water into parasite line. At 6 bbls pressured up to 450 psi and established circulation on well.
36	Shutdown	2/19/2017	19:55					Shutdown and rig up to pump top out.
37	Pump cement	2/20/2017	01:29	12.5	1	13.4		Mix and pump 34 sacks of S100-12 top out cement at 12.5 ppg, 2.22 Yield, 12.58 gal/sk (total of 13.4 bbls slurry)
38	Other	2/20/2017	01:42					Received cement to surface. Well was topped out.
39	End job	2/20/2017	01:45					BJ crew ends surface cement job.
40	Rig down	2/20/2017	01:50					BJ crew rigs down all ground fittings and equipment.
41	Pre convoy meeting	2/20/2017	05:45					BJ crew discuss route and hazards of driving to facility.
42	Depart location	2/20/2017	06:00					BJ crew depart location for facility.

3 Water Analysis

Metrics	Value	Recommended
Water Source	Upright Rig Tank	
Temperature	55 °F	50-80 °F
pH Level	7	5.5-8.5
Chlorides	0 mg/L	0-3000 mg/L
Total Alkalinity	180	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	0 mg/L	0-3000 mg/L
Iron	0.15 mg/L	0-300 mg/L

4 Pump Diagrams

Customer: Caerus
Well Number: 33C-26-697
Lease Info: PUCKETT

