Cement Post Job Report

GRMR Oil & Gas, LLC
370 Interlocken Blvd, Suite 550
Broomfield, CO 80021

Hamill #19-16D
05-081-07820
S:19 T:5N R:90W
Moffat, CO

Prepared For:

Mike Griffis
mike.griffis@grmroilandgas.com
(303) 515-5921

Job Completion Data:

10/19/2015
CallSheet #: 43
Proposal #: 10104

Submitted by:

Herron Kennedy
(720) 417-3459
herronkennedy@altcem.com

ALTCEM

Dear Mike Griffis,

Thank you for the opportunity to provide cementing services on this well. ALTCem strives to achieve complete customer satisfaction. If you have any questions regarding the services or data provided, please contact ALTCem at any time.

Sincerely,

Herron Kennedy

Field Office

1808 East Allison Rd., Cheyenne Wy., 82007
Phone: (307) 638-5585

Sales Office

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

Contents

Job Details & Summary

Geometry

Type	Function	OD (in)	ID (in)	Weight (lb/ft)	Thread	Top (ft)	Bottom (ft)	Excess (%)	New	Burst	Collapse
Open Hole	Outer	n/a	12.25	n/a	n/a	0	815	100			
Casing	Inner	9.625	8.921	36	LTC	0	815.17	0			

Equipment / People

Unit Type	Unit	Power Unit	Employee #1	Employee #2
Cement Pump	102	302	Hyde, Zack	
Light Duty Pickups	5		Fuentes, Orlando	Green, Scott
Bulk Trailer	503	203	Moore, Mike	Orner, Lance

Timing

Event	Date/Time
Call Out	10/18/2015 08:00
Depart Facility	10/18/2015 10:30
On Location	10/18/2015 16:30
Rig Up Iron	10/18/2015 20:00
Job Started	10/18/2015 22:00
Job Completed	10/19/2015 01:35
Rig Down Iron	10/19/2015 01:45
Depart Location	10/19/2015 04:30

General Job Information

Metrics	Value
Well Fluid Density	8.34 lb/gal
Well Fluid Type	Water
Rig Circulation Vol	1800 bbls
Rig Circulation Time	2 hours
Calculated Displacement	59.64 bbls
Actual Displacement	57 bbls
Total Spacer to Surface	0 bbls
Total CMT to Surface	0 bbls
Well Topped Out	Yes
Top Out Volume	15 bbls

Job Details

Metrics	Value
Flare Prior to Job	No
Flare Prior to Job	units
Flare During Job	No
Flare During Job	units
Flare at End of Job	No
Flare at End of Job	units
Well Full Prior to Job	
Well Fluid Density Into Well	lb/gal
Well Fluid Density Out of Well	lb/gal

Job Details (cont.)

Metrics	Value
BHCT	80 °F
BHST	90 °F

Circulation

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

Job Fluid Details

Job	Fluid	Type	Fluid	Product	Function	Conc.	Uom	Start (gal)	End (gal)	Used (gal)
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-10	Defoamer	0.50	%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-10	Defoamer	0.50	%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-10	Defoamer	0.50	%BWOB			
1	5	Topout	ALTCem S100-12	AXE-30	Extender	2.00	lb/sk			

Job Logs

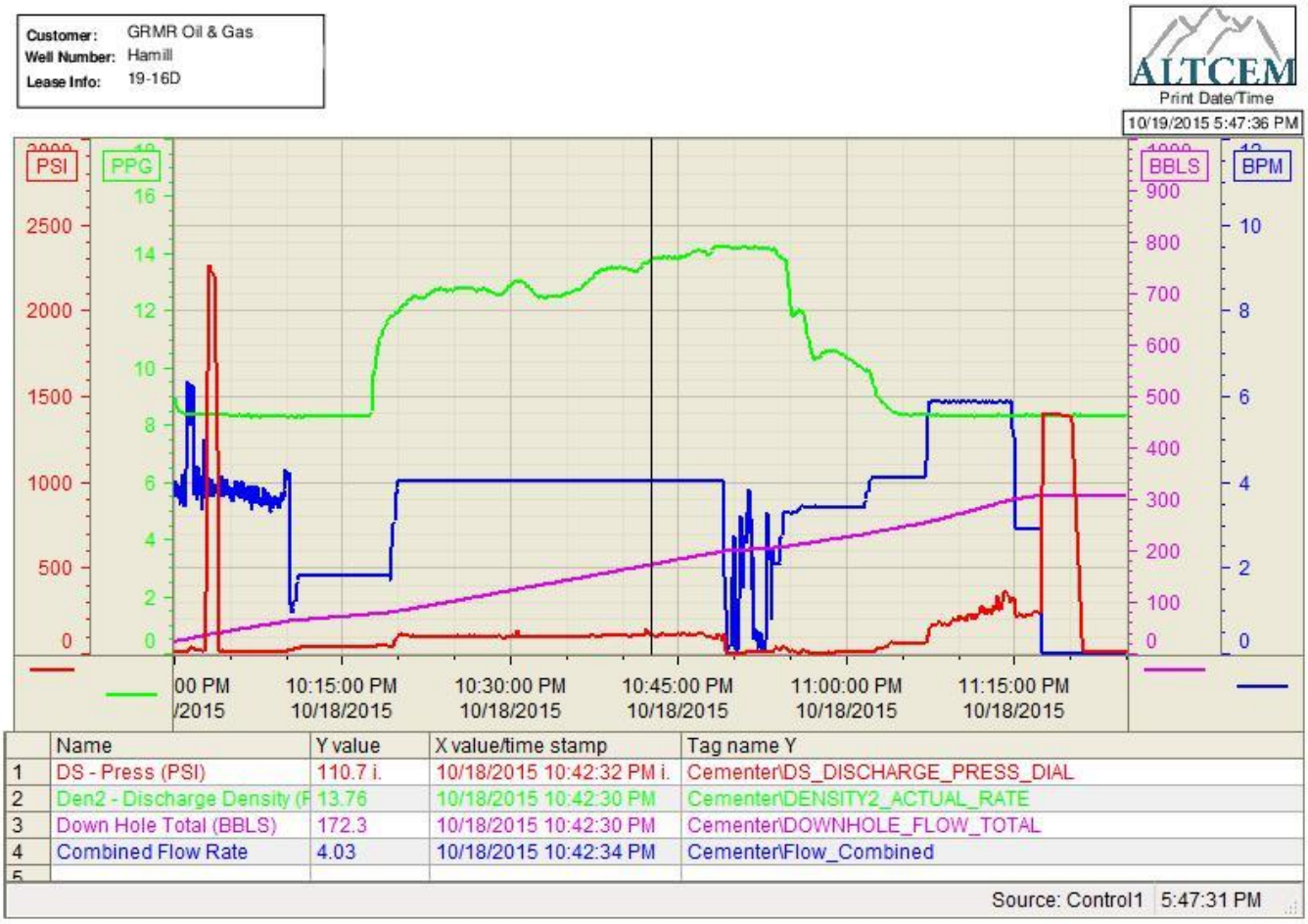
Line	#	Event	Date (MM/DD/YY)	Time (HH:MM)	Density (lb/gal)	Pump Rate (bpm)	Pump Volume (bbls)	Pipe Pressure (psi)	Annular Pressure (psi)	Comment
1		Callout	10/18/2015	08:00						
2		Depart Facility	10/18/2015	10:30						
3		Arrive On Location	10/18/2015	16:30						Rig POOH w/ driling assy
4		Check In	10/18/2015	16:45						Check in w/ co-man & go over job.
5		Waiting	10/18/2015	17:00						Rig-up casing crew
6		Other	10/18/2015	18:00						RIH w/ csg to 815''
7		Other	10/18/2015	19:00						M/U swedge & wash down f/ 785' to 815'
8		Circulate Well	10/18/2015	19:35	8.34	15	1800	235		Csg on btm, circ. w/ rig
9		Other	10/18/2015	19:40						Rig down csg crew
10		Rig Up Iron	10/18/2015	20:00						Spot & rig-up equipment
11		Safety Meeting	10/18/2015	21:35						Pre-job safety mtg w/ all personell
12		Other	10/18/2015	21:45						Rig-up cement head
13		Start Job	10/18/2015	22:00						Fill lines
14		Test Lines	10/18/2015	22:02				2000		Perform pressure test
15	1	Pump Spacer	10/18/2015	22:05	8.33	2	10	40		Pump water spacer ahead
16	2	Pump Lead Cement	10/18/2015	22:12	12	4	52.5	90		Pump 149sx lead slurry. Y - 2.53cuft/sk
17	3	Pump Tail Cement	10/18/2015	22:35	13	4	26.7	100		Pump 104sx tail slurry. Y - 1.98cuft/sk
18		Shutdown	10/18/2015	22:48						
19		Release top plug	10/18/2015	22:50						
20	4	Pump Displacement	10/18/2015	22:53	8.33	4		60		Pump displacement w/ water. Plug gone
21		Other	10/18/2015	23:08		6	20	150		Increase rate, no returns at shakers
22		Other	10/18/2015	23:14		2.5	50	250		Slow rate
23		Land Plug	10/18/2015	23:17		2.5	57	1700		Bump plug. Final circ pressure - 300psi
24		Check Floats	10/18/2015	23:20						Floats held. 0.5bbl back to truck
25		Waiting	10/18/2015	23:25						WOC to do top-out
26		Other	10/19/2015	00:30						M/U 100' of 1" pipe for top-out
27	5	Pump Spacer	10/19/2015	01:05	8.33	2	10	150		Pump water spacer ahead
28	6	Pump Cement	10/19/2015	01:13	13.5	2	15	150		Pump 45sx cement
29		Shutdown	10/19/2015	01:30						Good cement to surface
30		Rig Down Iron	10/19/2015	01:45						Rig down equipment
31		Other	10/19/2015	03:30						Complete paperwork
32		Depart Location	10/19/2015	04:30						

Water Analysis

Metrics	Value	Recommended
Water Source	Upright Rig Tank	
Temperature	60 °F	50-80 °F
pH Level	7	5.5-8.5
Chlorides	302 mg/L	0-3000 mg/L
Total Alkalinity	120	0-1000
Total Hardness	250 mg/L	0-500 mg/L
Carbonates	8 mg/L	0-100 mg/L
Sulfates	<200 mg/L	0-1500 mg/L
Potassium	250 mg/L	0-3000 mg/L
Iron	0.6 mg/L	0-300 mg/L

Pump Diagrams

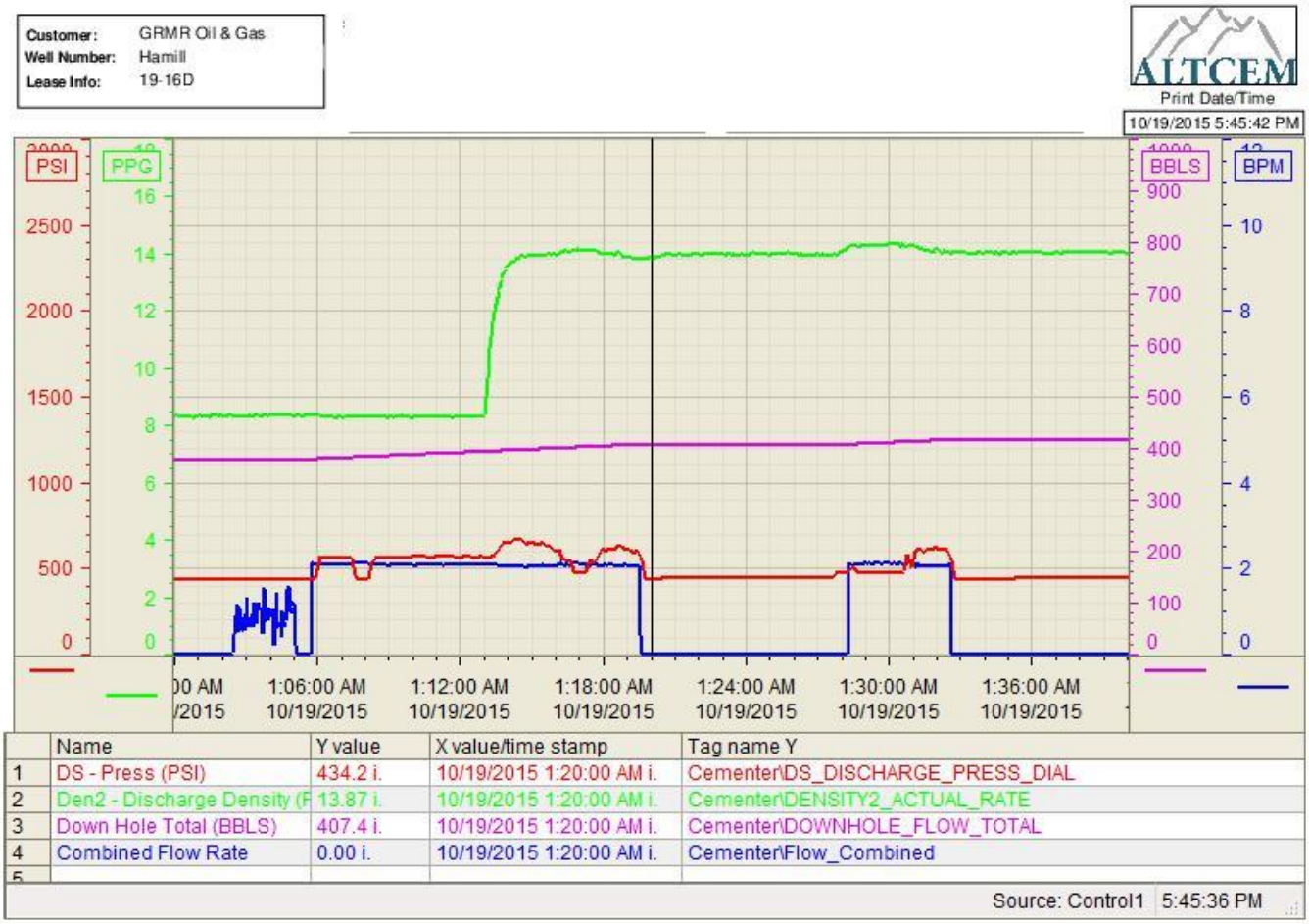
Job Chart



	Name	Y value	X value/time stamp	Tag name Y
1	DS - Press (PSI)	110.7 i.	10/18/2015 10:42:32 PM i.	Cementer\DS_DISCHARGE_PRESS_DIAL
2	Den2 - Discharge Density (F	13.76	10/18/2015 10:42:30 PM	Cementer\DENSITY2_ACTUAL_RATE
3	Down Hole Total (BBLS)	172.3	10/18/2015 10:42:30 PM	Cementer\DOWNHOLE_FLOW_TOTAL
4	Combined Flow Rate	4.03	10/18/2015 10:42:34 PM	Cementer\Flow_Combined
5				

Source: Control1 5:47:31 PM

Top Out Chart



	Name	Y value	X value/time stamp	Tag name Y
1	DS - Press (PSI)	434.2 i.	10/19/2015 1:20:00 AM i.	Cementer\DS_DISCHARGE_PRESS_DIAL
2	Den2 - Discharge Density (F	13.87 i.	10/19/2015 1:20:00 AM i.	Cementer\DENSITY2_ACTUAL_RATE
3	Down Hole Total (BBLS)	407.4 i.	10/19/2015 1:20:00 AM i.	Cementer\DOWNHOLE_FLOW_TOTAL
4	Combined Flow Rate	0.00 i.	10/19/2015 1:20:00 AM i.	Cementer\Flow_Combined
5				

Source: Control1 5:45:36 PM