

HALLIBURTON

iCem[®] Service

EXTRACTION OIL & GAS

Date: Saturday, September 30, 2017

MLD 9 PRODUCTION

Job Date: Monday, September 18, 2017

Sincerely,
Julia Nichols

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Table of Contents

1.0 Cementing Job Summary 4

 1.1 Executive Summary4

2.0 Real-Time Job Summary 7

 2.1 Job Event Log7

3.0 Attachments..... 8

 3.1 Custom Results – Job Chart with Events8

 3.2 Custom Results – Job Chart without Events.....9

1.0 Cementing Job Summary

1.1 Executive Summary

Halliburton appreciates the opportunity to perform the cementing services on the **MLD 9** cement **Production** casing job. A pre-job safety meeting was held before the job where details of the job were discussed, potential safety hazards were reviewed, and environmental compliance procedures were outlined.

Approximately 44 bbls of cement were returned to surface.

Halliburton maintains a continuous quality improvement process and appreciates any comments or suggestions that you may have. Halliburton again thanks you for the opportunity to perform service work on this well. We hope to be your solutions provider for future projects.

Respectfully,

Halliburton [Fort Lupton]

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Cementing Job Summary

The Road to Excellence Starts with Safety

Sold To #: 389404		Ship To #: 3800304		Quote #:		Sales Order #: 0904306970				
Customer: EXTRACTION OIL & GAS				Customer Rep: Todd Stephens						
Well Name: MLD			Well #: 9		API/UWI #: 05-123-44810-00					
Field: WATTENBERG		City (SAP): BERTHOUD		County/Parish: WELD		State: COLORADO				
Legal Description: NW NW-22-4N-88W-802FNL-576FWL										
Contractor: PATTERSON-UTI ENERGY				Rig/Platform Name/Num: PATTERSON 346						
Job BOM: 7523 7523										
Well Type: HORIZONTAL OIL										
Sales Person: HALAMERICA\HX38199				Srvc Supervisor: Vaughn Oteri						
Job										
Formation Name										
Formation Depth (MD)		Top		Bottom						
Form Type				BHST						
Job depth MD		11172ft		Job Depth TVD						
Water Depth				Wk Ht Above Floor						
Perforation Depth (MD)		From		To						
Well Data										
Description	New / Used	Size in	ID in	Weight lbm/ft	Thread	Grade	Top MD ft	Bottom MD ft	Top TVD ft	Bottom TVD ft
Casing	3	9.625	8.921	36		J-55	0	1598	0	1598
Casing		5.5	4.778	20		P-110	0	11165	0	6230
Open Hole Section			8.5				1598	11172	1598	6230
Tools and Accessories										
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make	
Guide Shoe	5.5					Top Plug	5.5	1	KLX	
Float Shoe	5.5			11165		Bottom Plug	5.5			
Float Collar	5.5			11160		SSR plug set	5.5			
Insert Float	5.5					Plug Container	5.5	1	HES	
Stage Tool	5.5					Centralizers	5.5			
Fluid Data										
Stage/Plug #: 1										
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft ³ /sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal	
1	11.5 lb/gal Tuned Spacer III	Tuned Spacer III	50	bbl	11.5	3.73		6		
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft ³ /sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal	
2	ElastiCem	ELASTICEM (TM) SYSTEM	1827	sack	13.2	1.57		8	7.54	

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Cementing Job Summary

Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
3	Displacement	Displacement	246	bbl	8.34			8	
Cement Left In Pipe		Amount	5 ft		Reason			Shoe Joint	
Comment 44bbl of cement back to surface									

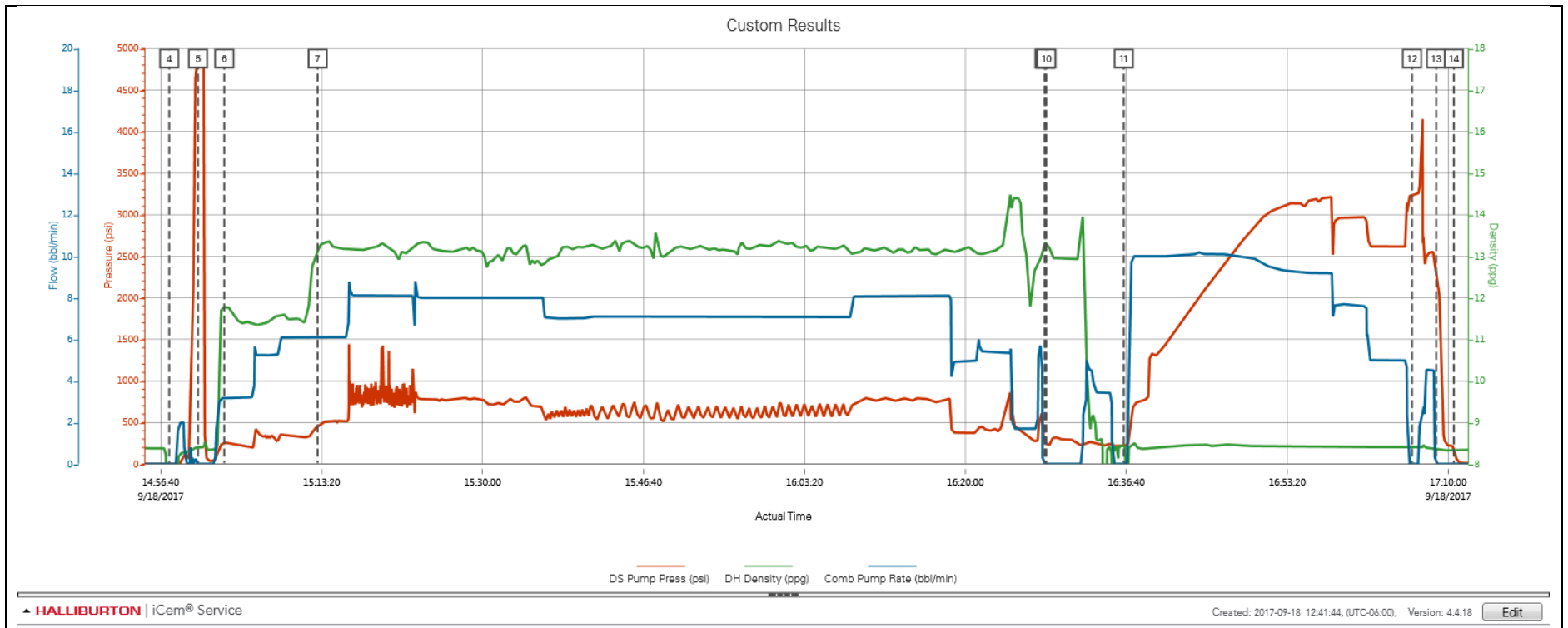
2.0 Real-Time Job Summary

2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	DS Pump Press (psi)	DH Density (ppg)	Comb Pump Rate (bbl/min)	Comments
Event	1	Call Out	Call Out	9/18/2017	09:00:00	USER				Call out from ARC hub
Event	2	Arrive At Loc	Arrive At Loc	9/18/2017	12:00:00	USER				Arrived on location met with company rep to discuss job process and concerns
Event	3	Other	Other	9/18/2017	12:01:01	USER				TD-11172 TP-11165 FC11160 Surf-1598 Mud-9.4 Casing 5.5 20# OH-8.5
Event	4	Start Job	Start Job	9/18/2017	14:57:33	COM4	0.00	0.08	0.00	Held pre-job safety meeting with all hands on location to discuss job process and hazards
Event	5	Test Lines	Test Lines	9/18/2017	15:00:32	COM4	4834.00	8.41	0.00	Pressure tested pumps and lines with fresh water
Event	6	Pump Spacer 1	Pump Spacer 1	9/18/2017	15:03:15	COM4	239.00	11.78	3.20	Mixed 50bbl of 11.5ppg tuned spacer III at 6.0bpm 320psi
Event	7	Pump Cement	Pump Cement	9/18/2017	15:12:55	COM4	442.00	13.12	6.10	Mixed 510bbl of 13.2ppg Y1.57 G/sk-7.53 Elasticem at 8.0bpm 615psi
Event	8	Shutdown	Shutdown	9/18/2017	16:28:11	COM4	280.00	13.32	0.00	
Event	9	Clean Lines	Clean Lines	9/18/2017	16:28:16	COM4	258.00	13.33	0.00	Washed pumps and lines with fresh water
Event	10	Drop Top Plug	Drop Top Plug	9/18/2017	16:28:23	COM4	241.00	13.32	0.00	KLX tool hand released plug witnessed by company rep and HES supervisor
Event	11	Pump Displacement	Pump Displacement	9/18/2017	16:36:24	COM4	220.00	8.43	0.00	Pumped 246bbl of fresh water to displace cement
Event	12	Bump Plug	Bump Plug	9/18/2017	17:06:15	COM4	3229.00	8.40	0.00	Bumped plug 500psi over final pump pressure
Event	13	Other	Other	9/18/2017	17:08:45	COM4	2247.00	8.38	0.00	Pressure up well to rupture disc and pump 5bbl of water for wet shoe
Event	14	End Job	End Job	9/18/2017	17:10:35	COM4	218.00	8.32	0.00	44bbl of cement back to surface

3.0 Attachments

3.1 Custom Results – Job Chart with Events



3.2 Custom Results – Job Chart without Events

