

HALLIBURTON

iCem[®] Service

EXTRACTION OIL & GAS-EBUS

Date: Tuesday, January 02, 2018

Trott 8E-10-9N Surface

Job Date: Tuesday, December 05, 2017

Sincerely,

Julia Nichols

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1.0 Cementing Job Summary

1.1 Executive Summary

Halliburton appreciates the opportunity to perform the cementing services on the **Trott 8E-10-9N cement Surface** 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 1 barrel of cement was 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 #: 369404		Ship To #: 3833932		Quote #:		Sales Order #: 0904488389					
Customer: EXTRACTION OIL & GAS -				Customer Rep: Sean McIntyre							
Well Name: TROTT			Well #: 8E-10-9N			API/UWI #: 05-123-45723-00					
Field: WATTENBERG		City (SAP): MEAD		County/Parish: WELD		State: COLORADO					
Legal Description: NE SE-7-4N-88W-1552FSL-1182FEL											
Contractor:					Rig/Platform Name/Num: Cartel 41						
Job BOM: 7521 7521											
Well Type: HORIZONTAL OIL											
Sales Person: HALAMERICA\HX38199					Srvc Supervisor: Bryan Kraft						
Job											
Formation Name											
Formation Depth (MD)		Top			Bottom						
Form Type					BHST						
Job depth MD		1533ft			Job Depth TVD		1533ft				
Water Depth					Wk Ht Above Floor		4ft				
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	0	9.625	8.921	36	8 RD	J-55	0	1533	0	1533	
Open Hole Section			13.5				0	1533	0	1533	
Tools and Accessories											
Type	Size in	Qty	Make	Depth ft	Type	Size in	Qty	Make			
Guide Shoe					Top Plug	9.625	1	HES			
Float Shoe	9.625	1	HES	1533	Bottom Plug						
Float Collar	9.625	1	HES	1494	SSR plug set						
Insert Float					Plug Container	9.625	1	HES			
Stage Tool					Centralizers		0				
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	Spacer	FRESH WATER	10	bbl	8.33			3	420		
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	Spacer	RED DYED FRESH WATER	10	bbl	8.33			3	420		

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Cementing Job Summary

Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft ³ /sack	Mix Fluid Gal	Rate bbl/mi n	Total Mix Fluid Gal
3	Cement	SWIFTCEM (TM) SYSTEM	525	sack	13.5	1.74	9.2	8	4830
9.20 Gal		FRESH WATER							
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft ³ /sack	Mix Fluid Gal	Rate bbl/mi n	Total Mix Fluid Gal
4	Displacement	FRESH WATER	116	bbl	8.33			8	4872
Cement Left In Pipe		Amount	39 ft		Reason			Shoe Joint	
Mix Water:		pH 6.0	Mix Water Chloride:		< 300 ppm		Mix Water Temperature:		50 °F
Cement Temperature:		N/A	Plug Displaced by:		8.3 lb/gal Fresh Water		Disp. Temperature:		50 °F
Plug Bumped?:		Yes	Bump Pressure:		405 psi		Floats Held?:		Yes
Cement Returns:		1 bbl	Returns Density:		N/A		Returns Temperature:		N/A
Comment The plug bumped @ calculated displacement @ 405 PSI. Shutdown for 1 minute @ 900 PSI. The floats held and received 0.5 BBLS back to the truck. Cement returned to surface @ 115 BBLS into displacement. Total of 1 BBL of cement to surface.									

2.0 Real-Time Job Summary

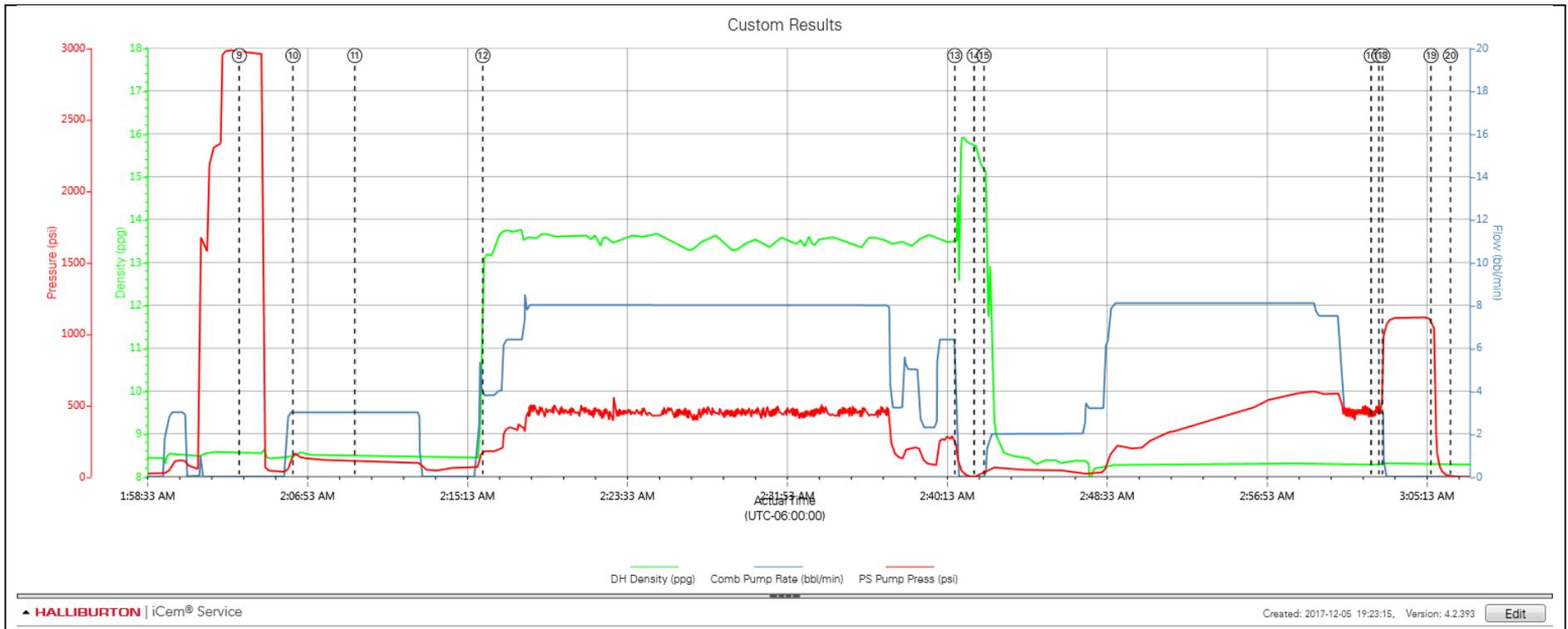
2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	DH Density <i>(ppg)</i>	Comb Pump Rate <i>(bbl/min)</i>	PS Pump Press <i>(psi)</i>	Comments
Event	1	Call Out	Call Out	12/5/2017	14:00:00	USER				CREW CALLED OUT AT 14:00 12/5/2017, REQUESTED ON LOCATION 20:00 12/5/2017. CREW PICKED UP CEMENT, TOP PLUG, RED DYE, PLUG CONTAINER AND MANIFOLD FROM FORT LUPTON, CO. BULK 660: 12154546/10866489, BULK 660: 11027125/10867098, PUMP RED TIGER: 12645760.
Event	2	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	12/5/2017	18:45:00	USER				DISCUSSED ROUTES, HAZARDS, AND COMMUNICATION WITH CREW.
Event	3	Crew Leave Yard	Crew Leave Yard	12/5/2017	19:00:00	USER				STARTED JOURNEY MANAGEMENT.
Event	4	Arrive At Loc	Arrive At Loc	12/5/2017	20:00:00	USER				END JOURNEY MANAGEMENT. MEET WITH CO. MAN TO DISCUSS JOB; SURFACE CASING: 36# 9.625" J-55 @ 1533', 39" SHOE JOINT, 13.5" OPEN HOLE, 8.4 PPG WELL FLUID, FRESH WATER DISPLACEMENT
Event	5	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	12/5/2017	20:10:00	USER				HAZARD HUNT. DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH LOCATION, RIG UP AND WEATHER.
Event	6	Rig-Up Equipment	Rig-Up Equipment	12/5/2017	20:15:00	USER				CREW STAGED EQUIPMENT AND RIGGED UP BULK, IRON, AND WATER HOSES TO PERFORM JOB.
Event	7	Pre-Job Safety Meeting	Pre-Job Safety Meeting	12/6/2017	00:00:00	USER	0.04	0.00	-86.00	MEETING WITH HALLIBURTON PERSONNEL. COMMUNICATED POTENTIAL SAFETY HAZARDS AND JOB DETAILS.
Event	8	Start Job	Start Job	12/6/2017	01:58:00	COM5	8.45	0.00	20.00	BEGIN RECORDING JOB DATA.
Event	9	Test Lines	Test Lines	12/6/2017	02:03:27	USER	8.57	0.00	2976.00	PRESSURE TESTED IRON TO 2500 PSI. KICKOUTS SET @ 500 PSI, KICKED OUT @ 700 PSI, 5TH GEAR STALL OUT @ 2350 PSI.
Event	10	Pump Spacer 1	Pump Fresh Water Spacer	12/6/2017	02:06:15	USER	8.48	3.00	162.00	PUMP 10 BBLS FRESH WATER SPACER.
Event	11	Pump Spacer 2	Pump Red Dyed Spacer	12/6/2017	02:09:28	USER	8.49	3.00	106.00	PUMP 10 BBLS OF RED DYED FRESH WATER SPACER.

Event	12	Pump Cement	Pump Cement @ 13.5 ppg	12/6/2017	02:16:09	USER	13.18	3.80	173.00	PUMP 525 SKS OF SWIFTCEM @ 13.5 LB/GAL, 1.74 YIELD, 9.2 GAL/SK, 163 BBLS, TOL @ SURFACE, DENSITY VERIFIED BY PRESSURIZED MUD SCALES.
Event	13	Shutdown	Shutdown	12/6/2017	02:40:44	USER	13.85	0.00	137.00	SHUTDOWN TO DROP TOP PLUG.
Event	14	Drop Top Plug	Drop Top Plug	12/6/2017	02:41:45	USER	15.72	0.00	1.00	PLUG LEFT CONTAINER.
Event	15	Pump Displacement	Pump Fresh Water Displacement	12/6/2017	02:42:16	USER	15.02	1.30	40.00	BEGIN CALCULATED DISPLACEMENT OF 116 BBLS WITH FRESH WATER.
Event	16	Cement Returns to Surface	Cement Returns to Surface	12/6/2017	03:02:26	USER	8.28	3.00	423.00	CEMENT TO SURFACE @ 83 BBLS INTO DISPLACEMENT, TOTAL AMOUNT OF 33 BBLS LEAD TO SURFACE.
Event	17	Bump Plug	Bump Plug	12/6/2017	03:02:50	USER	8.28	3.00	491.00	PLUG BUMPED AT CALCULATED DISPLACEMENT. PRESSURED 500 PSI OVER FINAL CIRCULATING PRESSURE OF 405 PSI.
Event	18	Shutdown	Shutdown	12/6/2017	03:03:02	USER	8.32	0.00	1039.00	SHUTDOWN FOR 1 MINUTE @ PSI
Event	19	Check Floats	Check Floats	12/6/2017	03:05:33	USER	8.31	0.00	1057.00	RELEASED PRESSURE, FLOATS HELD, 0.5 BBL BACK.
Event	20	End Job	End Job	12/6/2017	03:06:34	USER	8.28	0.00	3.00	STOP RECORDING JOB DATA.
Event	21	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	12/6/2017	03:10:00	USER	8.25	8.50	188.00	DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH WEATHER, LOCATION AND RIGGING DOWN IRON AND HOSES.
Event	22	Rig-Down Completed	Rig-Down Completed	12/6/2017	03:45:00	USER	-0.09	0.00	-4.00	ALL HALLIBURTON ITEMS WERE STOWED FOR TRAVEL, AND LOCATION WAS CLEAN.
Event	23	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	12/6/2017	03:55:00	USER				DISCUSSED ROUTES HAZARDS AND COMMUNICATION WITH CREW.
Event	24	Crew Leave Location	Crew Leave Location	12/6/2017	04:00:00	USER				THANK YOU FOR USING HALLIBURTON - BRYAN KRAFT AND CREW.

3.0 Attachments

3.1 Custom Results – Job Chart with Events



3.2 Custom Results – Job Chart without Events

