

HALLIBURTON

iCem[®] Service

EXTRACTION OIL & GAS-EBUS

Date: Wednesday, January 03, 2018

Trott 8E-10-7C Surface

Job Date: Wednesday, December 06, 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-10-7C 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 26 barrels 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 #: 369404	Ship To #: 3833804	Quote #:	Sales Order #: 0904490159							
Customer: EXTRACTION OIL & GAS -		Customer Rep: Shawn McIntyre								
Well Name: TROTT	Well #: 8E-10-7C	API/UWI #: 05-123-45731-00								
Field: WATTENBERG	City (SAP): MEAD	County/Parish: WELD	State: COLORADO							
Legal Description: NE SE-7-4N-88W-1551FSL-1146FEL										
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			5	420	
Stage/Plug #: 2										
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			5	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:		400 psi		Floats Held?			Yes
Cement Returns:		26 bbl	Returns Density:		N/A		Returns Temperature:			N/A
<p>Comment The plug bumped @ calculated displacement @ 400 PSI. Shutdown for 1 minute @ 1000 PSI. The floats held and received 0.5 BBLS back to the truck. Cement returned to surface @ 90 BBLS into displacement. Total of 26 BBL of cement to surface.</p>										

2.0 Real-Time Job Summary

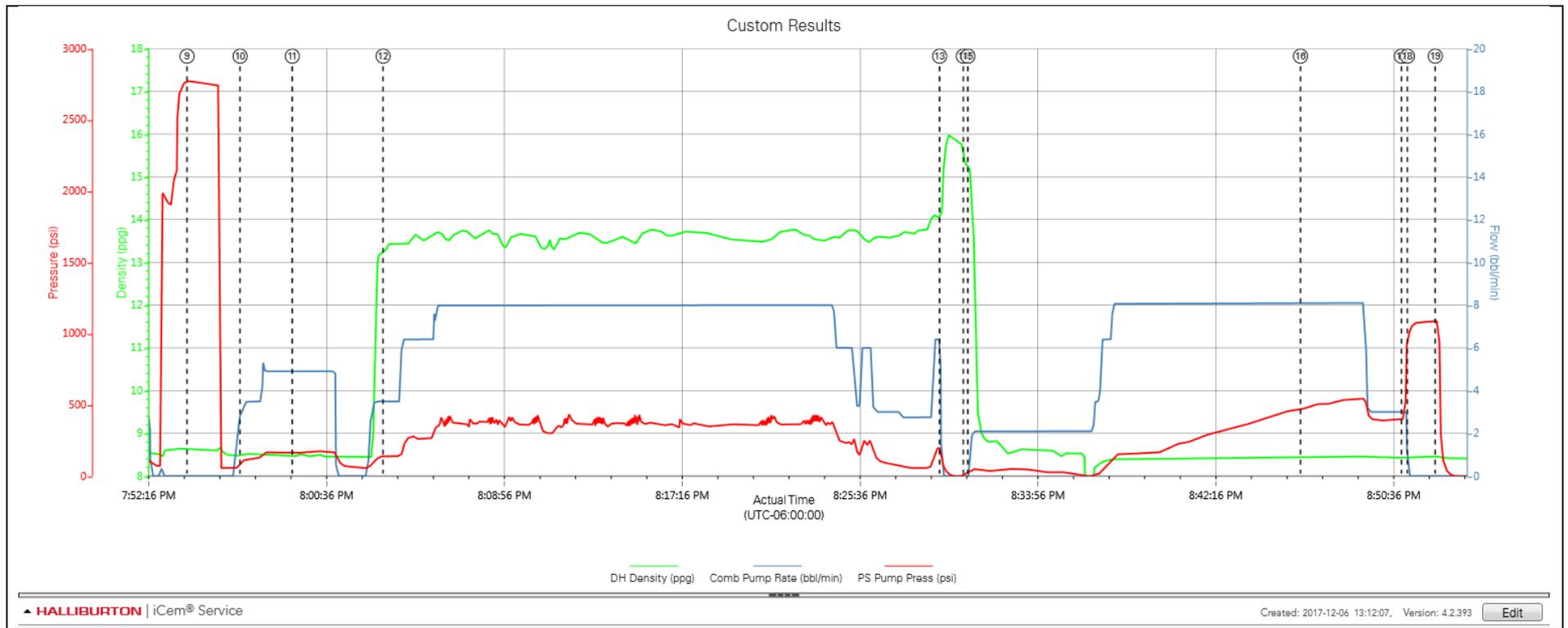
2.1 Job Event Log

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	12/6/2017	08:00:00	USER				CREW CALLED OUT AT 8:00 12/6/2017, REQUESTED ON LOCATION 14:00 12/6/2017. 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	12/6/2017	09:45:00	USER				DISCUSSED ROUTES, HAZARDS, AND COMMUNICATION WITH CREW.
Event	3	Crew Leave Yard	Crew Leave Yard	12/6/2017	10:00:00	USER				STARTED JOURNEY MANAGEMENT.
Event	4	Arrive At Loc	Arrive At Loc	12/6/2017	11:00:00	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	12/6/2017	18:00:00	USER				HAZARD HUNT. DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH LOCATION, RIG UP AND WEATHER.
Event	6	Rig-Up Equipment	Rig-Up Equipment	12/6/2017	18:10:00	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	19:30:00	USER	0.02	0.00	-87.00	MEETING WITH HALLIBURTON PERSONNEL. COMMUNICATED POTENTIAL SAFETY HAZARDS AND JOB DETAILS.
Event	8	Start Job	Start Job	12/6/2017	19:44:00	COM5	8.37	0.00	17.00	BEGIN RECORDING JOB DATA.
Event	9	Test Lines	Test Lines	12/6/2017	19:54:11	USER	8.63	0.00	2773.00	PRESSURE TESTED IRON TO 2500 PSI. KICKOUTS SET @ 500 PSI, KICKED OUT @ 900 PSI, 5TH GEAR STALL OUT @ 2200 PSI.
Event	10	Pump Spacer 1	Pump Fresh Water Spacer	12/6/2017	19:56:40	USER	8.51	3.00	108.00	PUMP 10 BBLS FRESH WATER SPACER.
Event	11	Pump Spacer 2	Pump Red Dyed Spacer	12/6/2017	19:59:07	USER	8.47	4.90	167.00	PUMP 10 BBLS OF RED DYED FRESH WATER SPACER.

Event	12	Pump Cement	Pump Cement @ 13.5 ppg	12/6/2017	20:03:22	USER	13.29	3.50	143.00	PUMP 525 SKS OF SWIFTCEM @ 13.5 LB/GAL, 1.74 YIELD, 9.2 GAL/SK, 163 BBL, TOL @ SURFACE, DENSITY VERIFIED BY PRESSURIZED MUD SCALES.
Event	13	Shutdown	Shutdown	12/6/2017	20:29:27	USER	14.24	0.00	104.00	SHUTDOWN TO DROP TOP PLUG.
Event	14	Drop Top Plug	Drop Top Plug	12/6/2017	20:30:33	USER	15.30	0.00	18.00	PLUG LEFT CONTAINER.
Event	15	Pump Displacement	Pump Fresh Water Displacement	12/6/2017	20:30:46	USER	15.00	1.30	32.00	BEGIN CALCULATED DISPLACEMENT OF 116 BBL WITH FRESH WATER.
Event	16	Cement Returns to Surface	Cement Returns to Surface	12/6/2017	20:46:21	USER	8.44	8.10	476.00	CEMENT TO SURFACE @ 90 BBL INTO DISPLACEMENT, TOTAL AMOUNT OF 26 BBL LEAD TO SURFACE.
Event	17	Bump Plug	Bump Plug	12/6/2017	20:51:05	USER	8.43	3.00	399.00	PLUG BUMPED AT CALCULATED DISPLACEMENT. PRESSURED 600 PSI OVER FINAL CIRCULATING PRESSURE OF 400 PSI.
Event	18	Shutdown	Shutdown	12/6/2017	20:51:21	USER				SHUTDOWN FOR 1 MINUTE @ 1000 PSI
Event	19	Check Floats	Check Floats	12/6/2017	20:52:40	USER	8.46	0.00	1089.00	RELEASED PRESSURE, FLOATS HELD, 0.5 BBL BACK.
Event	20	End Job	End Job	12/6/2017	20:55:00	COM5	8.41	0.00	2.00	STOP RECORDING JOB DATA.
Event	21	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	12/6/2017	21:00:00	USER	8.44	3.00	17.00	DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH WEATHER, LOCATION AND RIGGING DOWN IRON AND HOSES.
Event	22	Rig-Down Completed	Rig-Down Completed	12/6/2017	21:45:00	USER				ALL HALLIBURTON ITEMS WERE STOWED FOR TRAVEL, AND LOCATION WAS CLEAN.
Event	23	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	12/6/2017	21:55:00	USER				DISCUSSED ROUTES HAZARDS AND COMMUNICATION WITH CREW.
Event	24	Crew Leave Location	Crew Leave Location	12/6/2017	22:00:00	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

