

HALLIBURTON

iCem[®] Service

EXTRACTION OIL & GAS

Date: Tuesday, December 26, 2017

Trott 8E-10-3N Surface

Job Date: Thursday, December 07, 2017

Sincerely,

Bryce Hinsch

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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-10-3N** 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 bbls of cement were brought 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]

The Road to Excellence Starts with Safety

Sold To #: 369404		Ship To #: 3833831		Quote #:		Sales Order #: 0904490591					
Customer: EXTRACTION OIL & GAS -				Customer Rep: Shawn McIntyre							
Well Name: TROTT			Well #: 8E-10-3N		API/UWI #: 05-123-45709-00						
Field: WATTENBERG		City (SAP): MEAD		County/Parish: WELD		State: COLORADO					
Legal Description: NE SE-7-4N-68W-1550FSL-1110FEL											
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 ft3/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
1	Spacer	FRESH WATER			10	bbl	8.33			5	420

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
2	Spacer	RED DYED FRESH WATER	10	bbl	8.33			5	420
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	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 ft3/sack	Mix Fluid Gal	Rate bbl/min	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:	425 psi			Floats Held?	Yes		
Cement Returns:	26 bbl	Returns Density:	N/A			Returns Temperature:	N/A		
Comment The plug bumped @ calculated displacement @ 425 PSI. Shutdown for 1 minute @ 1050 PSI. The floats held and received 1 BBL back to the truck. Cement returned to surface @ 90 BBLS into displacement. Total of 26 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 (ppg)	Comb Pump Rate (bbl/min)	PS Pump Press (psi)	Comments
Event	1	Call Out	Call Out	12/7/2017	02:00:00	USER				CREW CALLED OUT AT 2:00 12/7/2017, REQUESTED ON LOCATION 8:00 12/7/2017. 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	12/7/2017	04:45:00	USER				DISCUSSED ROUTES, HAZARDS, AND COMMUNICATION WITH CREW.
Event	3	Crew Leave Yard	Crew Leave Yard	12/7/2017	05:00:00	USER				STARTED JOURNEY MANAGEMENT.
Event	4	Arrive At Loc	Arrive At Loc	12/7/2017	06:00:00	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	12/7/2017	11:00:00	USER				HAZARD HUNT. DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH LOCATION, RIG UP AND WEATHER.

Event	6	Rig-Up Equipment	Rig-Up Equipment	12/7/2017	11:10:00	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	12/7/2017	13:00:00	USER	0.05	0.00	-3.00	MEETING WITH HALLIBURTON PERSONNEL. COMMUNICATED POTENTIAL SAFETY HAZARDS AND JOB DETAILS.
Event	8	Start Job	Start Job	12/7/2017	13:44:10	COM5	8.37	0.00	10.00	BEGIN RECORDING JOB DATA.
Event	9	Test Lines	Test Lines	12/7/2017	13:48:36	USER	8.39	0.00	1593.00	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	12/7/2017	13:52:30	USER	8.41	2.10	54.00	PUMP 10 BBLS FRESH WATER SPACER.
Event	11	Pump Spacer 2	Pump Red Dyed Spacer	12/7/2017	13:54:46	USER	8.44	5.00	164.00	PUMP 10 BBLS OF RED DYED FRESH WATER SPACER.
Event	12	Pump Cement	Pump Cement @ 13.5 ppg	12/7/2017	13:58:35	USER	13.41	3.50	109.00	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	12/7/2017	14:24:27	USER	14.10	0.00	90.00	SHUTDOWN TO DROP TOP PLUG.
Event	14	Drop Top Plug	Drop Top Plug	12/7/2017	14:25:19	USER	-0.09	0.00	-7.00	PLUG LEFT CONTAINER.
Event	15	Pump Displacement	Pump Fresh Water Displacement	12/7/2017	14:25:45	USER	5.25	1.60	38.00	BEGIN CALCULATED DISPLACEMENT OF 116 BBLS WITH FRESH WATER.
Event	16	Cement Returns to Surface	Cement Returns to Surface	12/7/2017	14:40:33	USER	8.33	8.10	505.00	CEMENT TO SURFACE @ 90 BBLS INTO DISPLACEMENT,

										TOTAL AMOUNT OF 26 BBL LEAD TO SURFACE.
Event	17	Bump Plug	Bump Plug	12/7/2017	14:45:42	USER	8.33	3.00	425.00	PLUG BUMPED AT CALCULATED DISPLACEMENT. PRESSURED 575 PSI OVER FINAL CIRCULATING PRESSURE OF 425 PSI.
Event	18	Shutdown	Shutdown	12/7/2017	14:46:00	USER	8.36	0.00	1068.00	SHUTDOWN FOR 1 MINUTE @ 1050 PSI
Event	19	Check Floats	Check Floats	12/7/2017	14:47:18	USER	8.36	0.00	1146.00	RELEASED PRESSURE, FLOATS HELD, 1 BBL BACK.
Event	20	End Job	End Job	12/7/2017	14:48:22	COM5				STOP RECORDING JOB DATA.
Event	21	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	12/7/2017	14:55:00	USER	8.31	0.00	-3.00	DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH WEATHER, LOCATION AND RIGGING DOWN IRON AND HOSES.
Event	22	Rig-Down Completed	Rig-Down Completed	12/7/2017	15:30:00	USER				ALL HALLIBURTON ITEMS WERE STOWED FOR TRAVEL, AND LOCATION WAS CLEAN.
Event	23	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	12/7/2017	15:45:00	USER				DISCUSSED ROUTES HAZARDS AND COMMUNICATION WITH CREW.
Event	24	Crew Leave Location	Crew Leave Location	12/7/2017	16:00:00	USER				THANK YOU FOR USING HALLIBURTON - BRYAN KRAFT AND CREW.

3.0 Attachments

3.1 Extraction Trott 8E-10-3N Surface Job Chart

