

# HALLIBURTON

iCem<sup>®</sup> Service

## **EXTRACTION OIL & GAS**

Date: Tuesday, December 26, 2017

### **Trott 8E-10-1C Surface**

Job Date: Sunday, December 10, 2017

Sincerely,

**Bryce Hinsch**

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## Table of Contents

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1.0	Cementing Job Summary .....	4
1.1	Executive Summary .....	4
2.0	Real-Time Job Summary .....	7
2.1	Job Event Log .....	7
3.0	Attachments.....	10
3.1	Extraction Trott 8E-10-1C Surface Job Chart.....	10

## 1.0 Cementing Job Summary

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### 1.1 Executive Summary

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Halliburton appreciates the opportunity to perform the cementing services on the **Trott 8E-10-1C 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 25 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]**

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**Cementing Job Summary**

*The Road to Excellence Starts with Safety*

Sold To #: 369404		Ship To #: 3833886		Quote #:		Sales Order #: 0904492415					
Customer: EXTRACTION OIL & GAS -				Customer Rep: Sean Macentire							
Well Name: TROTT			Well #: 8E-10-1C			API/UWI #: 05-123-45716-00					
Field: WATTENBERG		City (SAP): MEAD		County/Parish: WELD		State: COLORADO					
Legal Description: NE SE-7-4N-68W-1549FSL-1038FEL											
Contractor:					Rig/Platform Name/Num: Cartel 41						
Job BOM: 7521 7521											
Well Type: HORIZONTAL OIL											
Sales Person: HALAMERICA\HX38199					Srvc Supervisor: Ryan Stevens						
<b>Job</b>											
Formation Name											
Formation Depth (MD)		Top		0		Bottom					
Form Type											
BHST											
Job depth MD		1533ft		Job Depth TVD		1533					
Water Depth											
Wk Ht Above Floor 5											
Perforation Depth (MD)		From		To							
<b>Well Data</b>											
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	new	9.625	8.921	36	8 RD	J-55	0	1533	0	1533	
Open Hole Section			13.5				0	1533	0	1533	
<b>Tools and Accessories</b>											
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make		
Guide Shoe	9.625	1	N/A	1533		Top Plug	9.625	1	HES		
Float Shoe	9.625					Bottom Plug					
Float Collar	9.625	1	N/A	1491		SSR plug set					
Insert Float	9.625					Plug Container	9.625	1	HES		
Stage Tool	9.625					Centralizers					
<b>Fluid Data</b>											
Stage/Plug #: 1											
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft <sup>3</sup> /sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal		
1	Red Dye Spacer	Red Dye Spacer	10	bbl	8.33		42	5	420		
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft <sup>3</sup> /sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal		
2	Fresh water	spacer	10	bbl	8.33		42	5	420		

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*Cementing Job Summary*

Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft <sup>3</sup> /sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
3	SwiftCem	SWIFTCEM (TM) SYSTEM	525	sack	13.5	1.74	9.2	5	4,830
9.20 Gal		FRESH WATER							
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft <sup>3</sup> /sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
4	Fresh Water	Fresh Water	115	bbl	8.33		42	8	4,830
<b>Cement Left In Pipe</b>	<b>Amount</b>	42 ft			<b>Reason</b>			Shoe Joint	
<b>Mix Water:</b>	pH 7	<b>Mix Water Chloride:</b>	200 ppm		<b>Mix Water Temperature:</b>				
<b>Cement Temperature:</b>		<b>Plug Displaced by:</b>	8.34 Lb/Bbl		<b>Disp. Temperature:</b>				
<b>Plug Bumped?</b>	Yes	<b>Bump Pressure:</b>	1,048		<b>Floats Held?</b> Yes/				
<b>Cement Returns:</b>	26 bbl	<b>Returns Density:</b>	13.5 lb/gal		<b>Returns Temperature:</b>				
<b>Comment</b> 25 BBLS of cement to surface									

## 2.0 Real-Time Job Summary

### 2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	Downhole Density <i>(ppg)</i>	Pass-Side Pump Pressure <i>(psi)</i>	Pass-Side Pump Rate <i>(bbl/min)</i>	Comments
Event	1	Crew Leave Location	Crew Leave Location	12/9/2017	01:15:00	USER				CREW LEAVE LOCATION, THANKS RYAN STEVENS AND CREW
Event	2	Call Out	Call Out	12/9/2017	18:00:00	USER				CREW CALLED OUT AT 18:00 REQUESTED ON LOCATION 23:00.
Event	3	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	12/9/2017	20:00:00	USER				CREW DISCUSSED HAZARDS ALONG ROUTTE OF TRAVEL
Event	4	Crew Leave Yard	Crew Leave Yard	12/9/2017	20:15:00	USER				START JOURNEY MANAGEMENT
Event	5	Arrive At Loc	Arrive At Loc	12/9/2017	21:00:00	USER				CREW ARRIVED AT LOCATION. MEET WITH CO-MAN AND DISCUSED JOB PROCEDURE. TD 1533, TP 1533 FC 1492, FRESH WATER DISPLACEMENT. JOURNEY MANAGEMENT WAS ENDED
Event	6	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	12/9/2017	21:30:00	USER				CREW DISCUSED HAZARDS ALONG WITH RIG UP
Event	7	Rig-Up Equipment	Rig-Up Equipment	12/9/2017	22:00:00	USER				CREW RIGGED UP EQUIPMENT AND BULK TRUCKS TO PERFORM JOB
Event	8	Rig-Up Completed	Rig-Up Completed	12/9/2017	22:57:21	USER				EQUIPMENT RIGGED UP AND READY TO PERFORM JOB
Event	9	Pre-Job Safety Meeting	Pre-Job Safety Meeting	12/9/2017	23:30:00	USER				HAD SAFETY MEETING WITH HALLIBURTON PERSONNEL TO DISCUSS HAZARDS WITH

										JOB AND JOB PROCEDURE.
Event	10	Start Job	Start Job	12/10/2017	01:44:04	COM4	8.38	2.00	0.00	START RECORDING JOB DATA
Event	11	Pump Spacer 1	Pump Spacer 1	12/10/2017	01:58:25	COM4	1.26	-5.00	0.00	PUMP 10 BBLS OF FRESH WATER SPACER
Event	12	Pump Spacer 2	Pump Spacer 2	12/10/2017	02:05:50	COM4	8.26	132.00	2.90	PUMP 10 BBLS OF FRESH WATER SPACER PLUS DYE
Event	13	Check Weight	Check weight	12/10/2017	02:10:48	COM4	8.23	88.00	0.00	CHECK CEMENT WEIGHT WITHPRESSURIZED MUD SCALE
Event	14	Pump Cement	Pump Cement	12/10/2017	02:14:18	COM4	8.21	83.00	0.00	PUMP 525 SKS OF SWIFTCEM @ 13.5 LB/GAL, 1.74 FT3/SK, 9.2 GAL/SK 162 BBLS. 25 BBLS OF CEMENT BACK TO SURFACE. DENSITY VERIFIED BY PRESSURIZED MUD SCALES.
Event	15	Drop Top Plug	Drop Top Plug	12/10/2017	02:49:43	COM4	20.69	45.00	0.00	DROP TOP PLUG
Event	16	Pump Displacement	Pump Displacement	12/10/2017	02:51:03	COM4	10.55	161.00	6.40	PUMP 115 BBLS OF FRESH WATER DISPLACEMENT, 25 BBLS OF CEMENT BACK TO SURFACE
Event	17	Bump Plug	Bump Plug	12/10/2017	03:12:15	COM4	8.41	1590.00	0.00	PLUG BUMPED AT CALCULATED DISPLACEMENT. PRESSURED 500 PSI OVER BUMP TO 1048 PSI. BRING PRESURE UP TO 1,540 PSI FOR CASING TEST
Event	18	End Job	End Job	12/10/2017	03:18:11	COM4				STOP RECORDING JOB DATA
Event	19	Check Floats	Check Floats	12/10/2017	03:25:00	USER	8.32	18.00	2.10	CHECK FLOATS 1 BBL BACK, FLOATS HELD

Event	20	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	12/10/2017	03:30:00	USER	0.00	-6.00	0.00	CREW DISSCUSSED HAZARDS WITH RIGGING DOWN
Event	21	Rig-Down Equipment	Rig-Down Equipment	12/10/2017	03:35:00	USER	0.00	-5.00	0.00	CREW RIGGED DOWN PUMPAND BULK EQUIPMENT.
Event	22	Crew Leave Location	Crew Leave Location	12/10/2017	03:47:02	USER				START JOURNEY MANAGMENT. THANKS RYAN AND CREW.

3.0 Attachments

3.1 Extraction Trott 8E-10-1C Surface Job Chart

