

# HALLIBURTON

iCem<sup>®</sup> Service

## **EXTRACTION OIL & GAS**

Date: Monday, May 20, 2019

### **AD FED LIBRARY 20W-25-17 Surface**

Job Date: Friday, April 26, 2019

Sincerely,

**Bryce Hinsch**

## Legal Notice

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### Disclaimer:

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## 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 **AD FED Library 20W-25-17** 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 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**

*The Road to Excellence Starts with Safety*

<b>Sold To #:</b> 369404		<b>Ship To #:</b> 3809213		<b>Quote #:</b>		<b>Sales Order #:</b> 0905638656					
<b>Customer:</b> EXTRACTION OIL & GAS -				<b>Customer Rep:</b> JUSTIN HUMPHRIES							
<b>Well Name:</b> AD FED LIBRARY			<b>Well #:</b> 20W-25-17		<b>API/UWI #:</b> 05-123-45033-00						
<b>Field:</b> WATTENBERG		<b>City (SAP):</b> GREELEY		<b>County/Parish:</b> WELD		<b>State:</b> COLORADO					
<b>Legal Description:</b> NW SW-21-5N-65W-1852FSL-367FWL											
<b>Contractor:</b>				<b>Rig/Platform Name/Num:</b> Cartel 15							
<b>Job BOM:</b> 7521 7521											
<b>Well Type:</b> HORIZONTAL OIL											
<b>Sales Person:</b> HALAMERICA\HX38199				<b>Srvc Supervisor:</b> Jerald Watson							
<b>Job</b>											
<b>Formation Name</b>											
<b>Formation Depth (MD)</b>		<b>Top</b>		<b>Bottom</b>							
<b>Form Type</b>				<b>BHST</b>							
<b>Job depth MD</b>		1620ft		<b>Job Depth TVD</b>							
<b>Water Depth</b>				<b>Wk Ht Above Floor</b>							
<b>Perforation Depth (MD)</b>		<b>From</b>		<b>To</b>							
<b>Well Data</b>											
<b>Description</b>	<b>New / Used</b>	<b>Size in</b>	<b>ID in</b>	<b>Weight lbm/ft</b>	<b>Thread</b>	<b>Grade</b>	<b>Top MD ft</b>	<b>Bottom MD ft</b>	<b>Top TVD ft</b>	<b>Bottom TVD ft</b>	
Open Hole Section			13.5					1604			
Casing		9.625	8.921	36				1603			
<b>Tools and Accessories</b>											
<b>Type</b>	<b>Size in</b>	<b>Qty</b>	<b>Make</b>	<b>Depth ft</b>		<b>Type</b>	<b>Size in</b>	<b>Qty</b>	<b>Make</b>		
Guide Shoe	9.625					Top Plug	9.625	1	HES		
Float Shoe	9.625	1	HES	1603		Bottom Plug	9.625		HES		
Float Collar	9.625	1	HES	1559		SSR plug set	9.625		HES		
Insert Float	9.625					Plug Container	9.625	1	HES		
Stage Tool	9.625					Centralizers	9.625	4	HES		
<b>Fluid Data</b>											
<b>Stage/Plug #: 1</b>											
<b>Fluid #</b>	<b>Stage Type</b>	<b>Fluid Name</b>			<b>Qty</b>	<b>Qty UoM</b>	<b>Mixing Density lbm/gal</b>	<b>Yield ft3/sack</b>	<b>Mix Fluid Gal</b>	<b>Rate bbl/min</b>	<b>Total Mix Fluid Gal</b>
1	Red Dye Spacer	Red Dye Spacer			10	bbl	8.33			4	

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	SwiftCem	SWIFTCEM (TM) SYSTEM	515	sack	13.5	1.74		8	9.2
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
3	Fresh Water	Fresh Water	121	bbl	8.33			8	
Cement Left In Pipe		Amount	44 ft		Reason			Shoe Joint	

## 2.0 Real-Time Job Summary

## 2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	Comb Pump Rate (bbl/min)	DH Density (ppg)	DS Pump Press (psi)	Pump Stg Tot (bbl)	Comments
Event	1	Arrive at Location from Other Job or Site	Arrive at Location from Other Job or Site	4/25/2019	21:00:00	USER					REQUESTED O/L 2230, RIG PULLING DRILL PIPE UPON ARRIVAL
Event	2	Assessment Of Location Safety Meeting	Assessment Of Location Safety Meeting	4/25/2019	21:15:00	USER					TEST WATER, CHECK MATERIALS, GET NUMBERS FROM THE COMPANY MAN AND TALK ABOUT SPOTTING EQUIPMENT.
Event	3	Safety Meeting - Pre Rig-Up	Safety Meeting - Pre Rig-Up	4/25/2019	21:30:00	USER					DISCUSS HAZARDS ASSOCIATED WITH TASK
Event	4	Rig-Up Equipment	Rig-Up Equipment	4/25/2019	21:45:00	USER					RIG UP ALL EQUIPMENT
Event	5	Pre-Job Safety Meeting	Pre-Job Safety Meeting	4/26/2019	03:30:00	USER	0.10	0.00	2.00	2.70	DISCUSS HAZARDS ASSOCIATED WITH THE JOB WITH EVERYONE INVOLVED WITH THE JOB AS WELL AS WHAT NEEDS TO BE DONE IN CASE OF EMERGENCY OR IF WE NEED TO EVACUATE LOCATION.
Event	6	Test Lines	Test Lines	4/26/2019	03:43:45	COM4	0.10	8.24	42.00	2.60	TEST LINES TO 2500 PSI
Event	7	Pump Spacer 1	Pump Spacer 1	4/26/2019	03:47:36	COM4	0.10	8.19	22.00	3.10	10 DYED H2O, 3 BPM, 62 PSI, 8.33 PPG
Event	8	Pump Cement	Pump Cement	4/26/2019	03:51:54	COM4	3.00	8.24	43.00	11.50	160 CEMENT, 8 BPM, 209 PSI, 515 SKS, 13.5 PPG, 1.74 YIELD, 9.2 GAL/SK
Event	9	Drop Top Plug	Drop Top Plug	4/26/2019	04:18:48	COM4	0.00	16.48	7.00	163.40	HES PLUG
Event	10	Pump Displacement	Pump Displacement	4/26/2019	04:18:51	COM4	0.00	16.50	7.00	0.00	121 H2O, 10 BPM, 178 PSI, 8.33 PPG, 25 BBL CEMENT

TO SURFACE											
Event	11	Bump Plug	Bump Plug	4/26/2019	04:38:40	COM4	0.10	8.15	1067.00	122.50	BUMP AT 500 PSI, TOOK TO 1075 PSI
Event	12	Other	CHECK FLOATS	4/26/2019	04:41:05	COM4	0.10	8.18	1081.00	122.70	.5 BBL BACK
Event	13	Post-Job Safety Meeting (Pre Rig-Down)	Post-Job Safety Meeting (Pre Rig-Down)	4/26/2019	04:45:00	USER					DISCUSS HAZARDS INVOLVED AND IF ANYTHING IS STAYING ON LOCATION
Event	14	Rig-Down Equipment	Rig-Down Equipment	4/26/2019	05:00:00	USER					RIG DOWN ALL EQUIPMENT
Event	15	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	4/26/2019	05:45:00	USER					CHECK WITH EVERYONE TO SEE IF THEY ARE FIT TO DRIVE AND LEGAL TO DRIVE AND SEE WHAT THEIR PLANS ARE AS WELL AS DISCUSS ANY OTHER JOB THAT MAY NEED TO BE COVERED AFTER LEAVING LOCATION.
Event	16	Crew Leave Location	Crew Leave Location	4/26/2019	06:00:00	USER					EVERYONE LEAVES LOCATION



## 3.0 Attachments

### 3.1 Extraction AD FED LIBRARY 20W-25-17 Surface Chart

