

# HALLIBURTON

iCem<sup>®</sup> Service

**EXTRACTION OIL & GAS**

**MT FED Glenfair 8W-20-17 Surface**

Sincerely,  
**Meghan Jacobs**

## 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 **Mt FED Glenfair 8W-20-17** 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 14 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> 3691143		<b>Quote #:</b>		<b>Sales Order #:</b> 0905491469					
<b>Customer:</b> EXTRACTION OIL & GAS -				<b>Customer Rep:</b> Mike Torres							
<b>Well Name:</b> MT FED GLENFAIR			<b>Well #:</b> 8W-20-17		<b>API/UWI #:</b> 05-123-42183-00						
<b>Field:</b> WATTENBERG		<b>City (SAP):</b> GREELEY		<b>County/Parish:</b> WELD		<b>State:</b> COLORADO					
<b>Legal Description:</b> NE NW-9-5N-65W-1084FNL-1754FWL											
<b>Contractor:</b>				<b>Rig/Platform Name/Num:</b> Cartel 41							
<b>Job BOM:</b> 7521 7521											
<b>Well Type:</b> HORIZONTAL OIL											
<b>Sales Person:</b> HALAMERICA\HX38199				<b>Srv Supervisor:</b> Kendall Broom - H194727							
<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>		1584ft		<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>	
Casing	0	9.625	8.921	36	8 RD	J-55	0	1582	0	0	
Open Hole Section			13.5				0	1584	0	0	
<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			1582		Top Plug	9.625	1	HES		
Float Shoe	9.625					Bottom Plug	9.625		HES		
Float Collar	9.625					SSR plug set	9.625		HES		
Insert Float	9.625					Plug Container	9.625	1	HES		
Stage Tool	9.625					Centralizers	9.625		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				

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	SWIFTCCEM (TM) SYSTEM	500	sack	13.5	1.74		5	9.2
3	Fresh Water	Fresh Water	119	bbl	8.33				

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	119	bbl	8.33				

Cement Left In Pipe	Amount	41 ft	Reason				Shoe Joint		
Mix Water:	pH 7	Mix Water Chloride:	0 ppm	Mix Water Temperature:			71°F °C		
Plug Bumped?	Yes			Floats Held?			Yes		
Cement Returns:	14 bbl m3								
Comment									

## 2.0 Real-Time Job Summary

## 2.1 Job Event Log

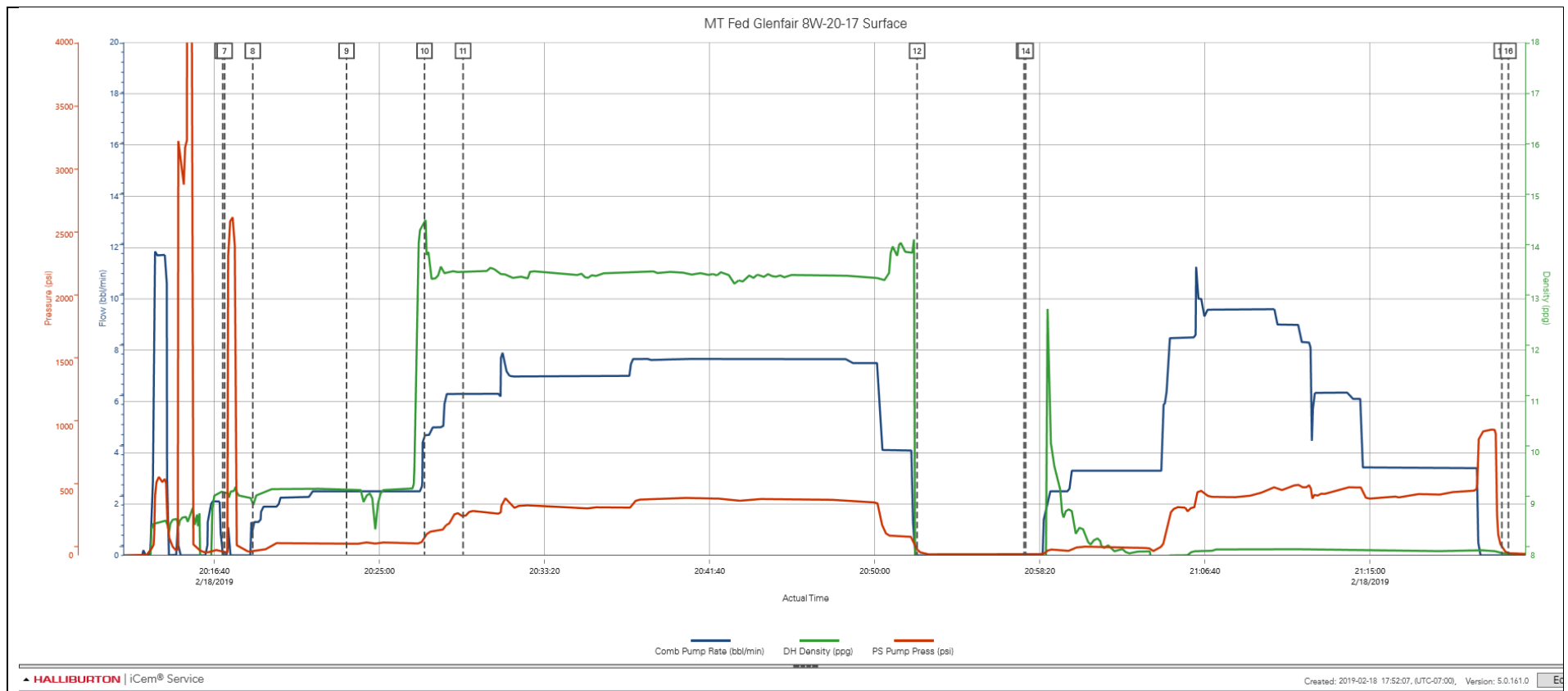
Type	Seq. No.	Activity	Graph Label	Date	Time	Source	Comb Pump Rate (bbl/min)	DH Density (ppg)	PS Pump Press (psi)	Comments
Event	1	Call Out	Call Out	2/18/2019	12:00:00	USER				Called out the crew to be on location by 1800
Event	2	Depart Shop for Location	Depart shop forLocation	2/18/2019	16:00:00	USER				Held a safety huddle before leaving for location
Event	3	Arrive At Loc	Arrive At Loc	2/18/2019	17:00:00	USER				Held a Hazard Hunt before spotting in the trucks
Event	4	Rig-up Lines	Rig-up Lines	2/18/2019	18:00:00	USER				Held a safety meeting before rigging up lines
Event	5	Safety Meeting	Safety Meeting	2/18/2019	18:30:00	USER	0.00	0.00	-134.00	Held a safety meeting with the rig crew to discuss the operation and safety.
Event	6	Start Job	Start Job	2/18/2019	20:17:05	COM5	0.00	9.24	31.00	Filled lines with 1 bbl water
Event	7	Test Lines	Test Lines	2/18/2019	20:17:11	COM5	0.00	9.23	26.00	Test lines to 2000 psi and released quickly because of the cold temps.
Event	8	Pump Spacer 1	Pump Spacer 1	2/18/2019	20:18:36	COM5	1.30	8.97	29.00	Pumped 10 bbls water spacer
Event	9	Pump Spacer 2	Pump Spacer 2	2/18/2019	20:23:20	COM5	2.50	9.28	91.00	Pumped 10 bbls water spacer with Red Dye
Event	10	Pump Cement	Pump Cement	2/18/2019	20:27:16	COM5	4.70	14.47	143.00	Pumped 154 bbls Swiftcem. 500 sks, 13.5#, 1.74 yield, 9.2 gal/sks. Pumped at 8 bpm and 370 psi.
Event	11	Check Weight	Check Weight	2/18/2019	20:29:13	COM5	6.30	13.54	313.00	Verified weight with the pressurized scale.
Event	12	Shutdown	Shutdown	2/18/2019	20:52:08	COM5	0.00	0.54	47.00	Shut down and washed up the cement head
Event	13	Drop Top Plug	Drop Top Plug	2/18/2019	20:57:32	COM5	0.00	0.08	10.00	Dropped the plug and witnessed by the company man
Event	14	Pump Displacement	Pump Displacement	2/18/2019	20:57:37	COM5	0.00	0.08	10.00	Pumped 119 bbls water displacement. Got 14 bbls cement back to surface
Event	15	Bump Plug	Bump Plug	2/18/2019	21:21:39	COM5	0.00	8.04	63.00	Bumped the plug at 540 psi and kicked out at 1000 psi.
Event	16	End Job	End Job	2/18/2019	21:21:59	COM5	0.00	8.04	18.00	
Event	17	Rig Down Lines	Rig Down Lines	2/18/2019	21:30:00	USER	5.00	7.57	83.00	Held a safety meeting before rigging down lines

Event	18	Depart Location	Depart Location	2/18/2019	22:00:00	USER	Held a safety huddle before leaving location
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## 3.0 Attachments

### 3.1 Mt FED Glenfair 8W-20-17 Surface – Job Chart with Events



## 3.2 Mt FED Glenfair 8W-20-17 Surface – Job Chart without Events

