

HALLIBURTON

iCem[®] Service

EXTRACTION OIL & GAS-EBUS

Date: Tuesday, March 05, 2019

MT FED HEATH 8W-20-13 Surface

Job Date: Thursday, February 14, 2019

Sincerely,
Tyler Hill

Legal Notice

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1.0 Cementing Job Summary

1.1 Executive Summary

Halliburton appreciates the opportunity to perform the cementing services on the **MT FED HEATH 8W-20-13** 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 32 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 Ft. Lupton

The Road to Excellence Starts with Safety

Sold To #: 369404		Ship To #: 3691211		Quote #:		Sales Order #: 0905488455					
Customer: EXTRACTION OIL & GAS -				Customer Rep: Mike Torres							
Well Name: MT FED HEATH			Well #: 8W-20-13		API/UWI #: 05-123-42173-00						
Field: WATTENBERG		City (SAP): GREELEY		County/Parish: WELD		State: COLORADO					
Legal Description: NE NW-9-5N-65W-1020FNL-1753FWL											
Contractor:				Rig/Platform Name/Num: Cartel 41							
Job BOM: 7521 7521											
Well Type: HORIZONTAL OIL											
Sales Person: HALAMERICA\HX38199				Srv Supervisor: Kendall Broom - H194727							
Job											
Formation Name											
Formation Depth (MD)		Top		Bottom							
Form Type				BHST							
Job depth MD		1588ft		Job Depth TVD							
Water Depth				Wk Ht Above Floor							
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	1588	0	0	
Open Hole Section			13.5				0	1588	0	0	
Tools and Accessories											
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make		
Guide Shoe	9.625			1588		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		
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	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	SWIFTCEM (TM) SYSTEM	560	sack	13.5	1.74		5	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	120	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:		32 bbl							
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	2/14/2019	00:30:00	USER				Called out the crew to be on location by 0600
Event	2	Depart Shop for Location	Depart shop forLocation	2/14/2019	04:00:00	USER				Held a safety huddle before leaving for location
Event	3	Arrive At Loc	Arrive At Loc	2/14/2019	05:00:00	USER				Held a Hazard Hunt before spotting in the trucks
Event	4	Safety Meeting	Safety Meeting	2/14/2019	14:30:00	USER				Held a safety meeting with the rig crew to discuss the operation and safety.
Event	5	Rig-up Lines	Rig-up Lines	2/14/2019	15:00:00	USER				Held a safety meeting before rigging up lines
Event	6	Start Job	Start Job	2/14/2019	15:47:23	COM5	0.00	8.53	47.00	Filled lines with 2 bbls water
Event	7	Pump Spacer 1	Pump Spacer 1	2/14/2019	15:49:31	COM5	0.00	0.18	14.00	Pumped 10 bbls water spacer
Event	8	Pump Spacer 2	Pump Spacer 2	2/14/2019	15:52:15	COM5	5.80	8.57	120.00	Pumped 10 bbls water spacer with red dye
Event	9	Pump Cement	Pump Cement	2/14/2019	15:55:21	COM5	0.00	8.55	58.00	Pumped 173 bbls Swiftcem. 560 sks, 13.5#, 1.74 yield, 9.2 gal/sks. Pumpe at 7 bpm and 230 psi.
Event	10	Shutdown	Shutdown	2/14/2019	16:21:53	COM5	0.00	10.68	44.00	Shut down and washed up on the cement head.
Event	11	Drop Top Plug	Drop Top Plug	2/14/2019	16:25:06	COM5	0.00	17.34	9.00	Dropped plug preloaded and witnessed by the company man
Event	12	Pump Displacement	Pump Displacement	2/14/2019	16:25:11	COM5	0.00	17.33	9.00	Pumped 120 bbls

										displacement. Got all the red dye back and 32 bbls cement back to surface.
Event	13	Bump Plug	Bump Plug	2/14/2019	16:48:10	COM5	0.00	8.35	1088.00	Bumped the plug at 500 psi and kicked out at 1000 psi. Held the pressure and it climbed to 1200 psi. Checked floats and got 1.5 bbls back on the truck. Floats held.
Event	14	End Job	End Job	2/14/2019	16:49:05	COM5	0.00	8.34	1184.00	
Event	15	Rig Down Lines	Rig Down Lines	2/14/2019	17:00:00	USER				Held a safety meeting before rigging down lines
Event	16	Depart Location	Depart Location	2/14/2019	18:00:00	USER				Held a safety huddle before leaving location

3.0 Attachments

3.1 MT FED HEATH 8W-20-13 Surface.png

