

HALLIBURTON

iCem[®] Service

EXTRACTION OIL & GAS-EBUS

Date: Sunday, March 10, 2019

MT FED Glenfair 8W-20-23 Surface

Job Date: Friday, February 22, 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 Glenfair 8W-20-23** 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 10 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 #: 3691148	Quote #:	Sales Order #: 0905492113
Customer: EXTRACTION OIL & GAS -		Customer Rep: Mike Torres	
Well Name: MT FED GLENFAIR		Well #: 8W-20-23	API/UWI #: 05-123-42176-00
Field: WATTENBERG	City (SAP): GREELEY	County/Parish: WELD	State: COLORADO
Legal Description: NE NW-9-5N-65W-1180FNL-1755FWL			
Contractor:		Rig/Platform Name/Num: Cartel 41	
Job BOM: 7521 7521			
Well Type: HORIZONTAL OIL			
Sales Person: HALAMERICA\HX38199		Srvc Supervisor: Kendall Broom - H194727	

Job

Formation Name			
Formation Depth (MD)	Top		Bottom
Form Type	BHST		
Job depth MD	1628ft		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	1628	0	0
Open Hole Section			13.5				0	1628	0	0

Tools and Accessories

Type	Size in	Qty	Make	Depth ft	Type	Size in	Qty	Make
Guide Shoe	9.625			1628	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 ft ³ /sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
2	SwiftCem	SWIFTCEM (TM) SYSTEM	500	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 ft ³ /sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
3	Fresh Water	Fresh Water	122	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:	76 °F °C		
Plug Bumped?	Yes	Bump Pressure:	522 psi MPa			Floats Held?	Yes		
Cement Returns:	10 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	2/22/2019	11:00:00	USER				Called out the crew to be on location by 0830
Event	2	Depart Shop for Location	Depart shop forLocation	2/22/2019	12:00:00	USER				Held a safety huddle before leaving for location
Event	3	Arrive At Loc	Arrive At Loc	2/22/2019	13:00:00	USER				Held a Hazard Hunt before spotting in the trucks
Event	4	Safety Meeting	Safety Meeting	2/22/2019	13:30:00	USER				Held a safety meeting with the rig crew to discuss the operation and safety.
Event	5	Rig-up Lines	Rig-up Lines	2/22/2019	15:45:00	USER				Held a safety meeting before rigging up lines
Event	6	Start Job	Start Job	2/22/2019	16:22:19	COM5	0.00	8.42	19.00	Filled lines with 1 bbl water
Event	7	Test Lines	Test Lines	2/22/2019	16:22:23	COM5	0.00	8.42	17.00	Test lines to 3000 psi
Event	8	Pump Spacer 1	Pump Spacer 1	2/22/2019	16:24:01	COM5	0.00	1.50	-4.00	Pumped 10 bbls water spacer
Event	9	Pump Spacer 2	Pump Spacer 2	2/22/2019	16:28:47	COM5	2.40	8.44	49.00	Pumped 10 bbls water spacer with Red Dye
Event	10	Pump Cement	Pump Cement	2/22/2019	16:31:22	COM5	2.40	8.35	49.00	Pumped 154 bbls Swiftcem, 500 sks,13.5#, 1.74 yield, 9.2 gal/sks. Pumped at 8 bpm and 315 psi.
Event	11	Shutdown	Shutdown	2/22/2019	16:53:52	COM5	0.00	17.18	84.00	Shut down and washed the cement head
Event	12	Drop Top Plug	Drop Top Plug	2/22/2019	16:56:06	COM5	0.00	16.39	-12.00	Dropped the top plug and preloaded and witnessed by the company man

Event	13	Pump Displacement	Pump Displacement	2/22/2019	16:56:10	COM5	0.00	16.09	-12.00	Pumped 122 bbls water displacement. Got 10 bbls cement back to surface.
Event	14	Bump Plug	Bump Plug	2/22/2019	17:17:51	COM5	0.00	8.37	1170.00	Bumped the plug at 522 psi and kicked out at 1100 psi. released the pressure and checked the float. Got .5 bbl back on the truck and the float held.
Event	15	End Job	End Job	2/22/2019	17:19:22	COM5	0.00	8.33	-11.00	
Event	16	Rig Down Lines	Rig Down Lines	2/22/2019	17:34:00	USER				
Event	17	Depart Location	Depart Location	2/22/2019	18:30:00	USER				

3.0 Attachments

3.1 MT FED Glenfair 8W-20-23 Surface.png

