

# HALLIBURTON

iCem<sup>®</sup> Service

## **EXTRACTION OIL & GAS-EBUS**

Date: Thursday, January 10, 2019

### **MT FED Maplewood 8W-20-7 Surface**

Job Date: Monday, December 24, 2018

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 **MT FED Maplewood 8W-20-7** 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 33 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*

Sold To #: 369404	Ship To #: 3691199	Quote #:	Sales Order #: 0905363730
Customer: EXTRACTION OIL & GAS -		Customer Rep: Chad Kelly	
Well Name: MT FED MAPLEWOOD		Well #: 8W-20-7	API/UWI #: 05-123-42163-00
Field: WATTENBERG	City (SAP): GREELEY	County/Parish: WELD	State: COLORADO
Legal Description: NE NW-9-5N-65W-924FNL-1752FWL			
Contractor:		Rig/Platform Name/Num: Cartel 41	
Job BOM: 7521 7521			
Well Type: HORIZONTAL OIL			
Sales Person: HALAMERICA\HX38199		Srvc Supervisor: Adam Covington	

**Job**

Formation Name			
Formation Depth (MD)	Top		Bottom
Form Type	BHST		
Job depth MD	1584ft		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	1584	0	0
Open Hole Section			13.5				0	1584	0	0

**Tools and Accessories**

Type	Size in	Qty	Make	Depth ft	Type	Size in	Qty	Make
Guide Shoe	9.625			1584	Top Plug	9.625	1	HES
Float Shoe	9.625				Bottom Plug	9.625		HES
Float Collar	9.625			1539	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	30	bbl	8.33			3		

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	575	sack	13.5	1.74		7.5	9.2
9.17 Gal		<b>FRESH WATER</b>							
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			8.5	
Cement Left In Pipe	Amount	45 ft			Reason			Shoe Joint	
Mix Water:	pH 7	Mix Water Chloride:	0 ppm			Mix Water Temperature:	70°F °C		
Cement Temperature:	70 °F °C	Plug Displaced by:	8.33 lb/gal			Disp. Temperature:	70°F °C		
Plug Bumped?	Yes	Bump Pressure:	557 psi			Floats Held?	Yes		
Cement Returns:	34 bbl m3	Returns Density:	13.5 lb/gal			Returns Temperature:	## °F °C		
<b>Comment</b> 1584' 13.5" OH, TP-1584' 9 5/8" 36#. FLOAT COLLAR IS AT 1539'. WATER--70 DEGREES, CHLORIDES-0, SULFATES-0, PH-7. . FCP-557 PSI, TOOK TO 1145 PSI. 33 BBLS TO SURFACE.									

## 2.0 Real-Time Job Summary

### 2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	PS Pump Press <i>(psi)</i>	DH Density <i>(ppg)</i>	Comb Pump Rate <i>(bbl/min)</i>	Comb Pump Total <i>(bbl)</i>	Comments
Event	1	Call Out	Call Out	12/23/2018	20:00:00	USER					CREW WAS CALLED OUT BY SERVICE COORDINATOR FOR AN ON LOCATION TIME OF 2330.
Event	2	Depart Yard Safety Meeting	Depart Yard Safety Meeting	12/23/2018	20:50:00	USER					MET WITH HES CREW AND DISCUSSED DIRECTIONS, SPEED LIMITS AND FOLLOWING DISTANCES.
Event	3	Depart Shop for Location	Depart Shop for Location	12/23/2018	21:00:00	USER					LEAVE YARD FOR LOCATION.
Event	4	Arrive At Loc	Arrive At Loc	12/23/2018	22:00:00	USER					CREW ARRIVED AT LOCATION. TALKED TO CO. MAN, GOT NUMBERS AND PERFORMED A HAZARD HUNT. TD-1584' OH-13.5", TP-1584' 9 5/8" 36#, FLOAT COLLAR-1539'. WATER-- 70 DEGREES, CHLORIDES-0, SULFATES-0, PH-7
Event	5	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	12/24/2018	00:00:00	USER					MET WITH HES CREW MEMBERS AND DISCUSSED SWINGS, PINCH POINTS AND TEAM LIFTS.
Event	6	Safety Meeting - Pre Job	Safety Meeting - Pre Job	12/24/2018	01:30:00	USER	9.00	0.00	0.00	0.00	MET WITH HES AND RIG CREW MEMBERS. DISCUSSED PRESSURES, JOB PROCEDURE AND SAFETY PROCESSES.
Event	7	Start Job	Start Job	12/24/2018	02:28:24	COM4	8.00	8.74	0.00	0.00	FILLED LINES WITH 3 BBLS OF FRESH WATER. 2 BPM,

											32 PSI. FULL RETURNS.
Event	8	Test Lines	Test Lines	12/24/2018	02:31:32	COM4	18.00	8.68	0.00	3.20	PRESSURE TESTED LINES TO 3000 PSI AFTER PERFORMING A 500 KICKOUT TEST AND A 5TH GEAR STALL. NO LEAKS.
Event	9	Pump Spacer 1	Pump Spacer 1	12/24/2018	02:33:35	COM4	27.00	8.62	0.00	3.20	PUMPED 20 BBLS OF FRESH WATER SPACER. 3 BPM, 32 PSI. FULL RETURNS.
Event	10	Pump Spacer 2	Pump Spacer 2	12/24/2018	02:42:21	COM4	51.00	8.64	2.30	22.70	PUMPED 10 BBLS OF DYE WATER SPACER AT 3 BPM, 52 PSI. FULL RETURNS.
Event	11	Pump Cement	Pump Cement	12/24/2018	02:46:59	COM4	55.00	8.52	2.60	34.20	PUMPED 178 BBLS (575 SKS) OF 13.5#, 1.74y, 9.2wr CEMENT AT 7,5 BPM, 200 PSI. FULL RETURNS.
Event	12	Check Weight	Check Weight	12/24/2018	02:56:56	COM4	202.00	13.56	7.40	104.90	USED PRESSURIZED MUD SCALES TO WEIGH UP CEMENT. CEMENT WEIGHED UP AT 13.5#.
Event	13	Check Weight	Check Weight	12/24/2018	03:09:22	COM4	196.00	13.54	7.40	197.40	USED PRESSURIZED MUD SCALES TO WEIGH UP CEMENT. CEMENT WEIGHED UP AT 13.5#.
Event	14	Shutdown	Shutdown	12/24/2018	03:14:45	COM4	43.00	-0.62	0.00	228.10	SHUTDOWN TO WASH UP ON AND DROP TOP PLUG.
Event	15	Drop Top Plug	Drop Top Plug	12/24/2018	03:17:27	COM4	9.00	-0.77	0.00	228.10	ADAM COVINGTON DROPPED 9 5/8" HALLIBURTON TOP PLUG. CO MAN WITNESSED.
Event	16	Pump Displacement	Pump Displacement	12/24/2018	03:17:30	COM4	9.00	-0.77	0.00	228.10	PUMPED 119 BBLS OF FRESH WATER DISPLACEMENT AT 8 BPM, 200 PSI TO START PRESSURE CLIMBED UP TO 540 PSI. SLOWED DOWN

Event	ID	Description	Category	Date	Time	Code	Cost	Rate	Volume	Weight	Notes
											TO 4 BPM THE LAST 10 BBLs.
Event	17	Bump Plug	Bump Plug	12/24/2018	03:38:17	COM4	1299.00	7.83	0.00	359.00	FCP 557 PSI. TOOK PRESSURE UP TO 1145 PSI AND HELD FOR A MINUTE AS PER COMPANY MAN.
Event	18	Other	Other	12/24/2018	03:40:33	COM4	741.00	7.79	0.00	359.00	bled pressure back to the truck. GOT .5 BBL BACK WHEN FLOW STOPPED INDICATING THAT THE FLOATS HELD.
Event	19	End Job	End Job	12/24/2018	03:41:45	COM4	25.00	7.83	0.00	359.00	GOT 33 BBLs OF CEMENT BACK TO SURFACE.
Event	20	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	12/24/2018	03:55:00	USER	32.00	7.64	0.00	19.40	MET WITH HES CREW MEMBERS DISCUSSED BLOW DOWN PROCEDURES, OVER HEAD LOADS, SWINGS AND TEAM LIFTING.
Event	21	Safety Meeting - Departing Location	Safety Meeting - Departing Location	12/24/2018	04:50:00	USER					MET WITH CREW AND DISCUSSED DRIVING HOURS, DIRECTIONS TO YARD AND KEEPING GOOD FOLLOWING DISTANCES.
Event	22	Depart Location	Depart Location	12/24/2018	05:10:00	USER					JOB COMPLETED BY ADAM COVINGTON AND CREW. THANK YOU FOR CHOOSING HALLIBURTON.

3.0 Attachments

3.1 Extraction MT FED Maplewood 8W-20-7 Surface Job Chart

