

# HALLIBURTON

iCem<sup>®</sup> Service

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

Date: Sunday, August 20, 2017

### **MLD 2 Surface**

Job Date: Saturday, August 12, 2017

Sincerely,

**Julia Nichols**

## Legal Notice

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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 **MLD 2** 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 barrels 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]**

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*Cementing Job Summary**The Road to Excellence Starts with Safety*

Sold To #: 389404		Ship To #: 3800448		Quote #:		Sales Order #: 0904219918				
Customer: EXTRACTION OIL & GAS -				Customer Rep: Shawn McIntyre						
Well Name: MLD		Well #: 2		API/UWI #: 05-123-44812-00						
Field: WATTENBERG		City (SAP): MEAD		County/Parish: WELD		State: COLORADO				
Legal Description: NW NW-22-4N-88W-806FNL-772FWL										
Contractor: UNKNOWN				Rig/Platform Name/Num: WORKOVER RIG						
Job BOM: 7521 7521										
Well Type: HORIZONTAL OIL										
Sales Person: HALAMERICA\HX38199				Srvc Supervisor: Bradley Hinkle						
Job										
Formation Name										
Formation Depth (MD)		Top		Bottom						
Form Type				BHST						
Job depth MD		1579ft		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	1579	0	0
Open Hole Section			13.5				0	1580	0	0
Tools and Accessories										
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make	
Guide Shoe	9.625					Top Plug	9.625	1	HES	
Float Shoe	9.625			1579		Bottom Plug	9.625		HES	
Float Collar	9.625			1544		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	Spacer	Red Dye Water	10	bbl	8.33			3		
Stage/Plug #: 2										
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	Primary Cement	SWIFTCM	550	sack	13.5	1.74		7	9.2	

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*Cementing Job Summary*

Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft <sup>3</sup> /sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
3	Displacement	Fresh Water	118	bbl	8.33			7	
Cement Left In Pipe		Amount	43 ft			Reason		Shoe Joint	
Mix Water:		pH 7	Mix Water Chloride: 0 ppm			Mix Water Temperature:		85 °F	
Cement Temperature:		## °F °C	Plug Displaced by: ## lb/gal kg/m3 XXXX			Disp. Temperature:		## °F °C	
Plug Bumped?		Yes/No	Bump Pressure: 800 psi			Floats Held?		Yes	
Cement Returns:		25 bbl	Returns Density: ## lb/gal kg/m3			Returns Temperature:		## °F °C	
Comment 25 bbls cement to surface.									

## 2.0 Real-Time Job Summary

## 2.1 Job Event Log

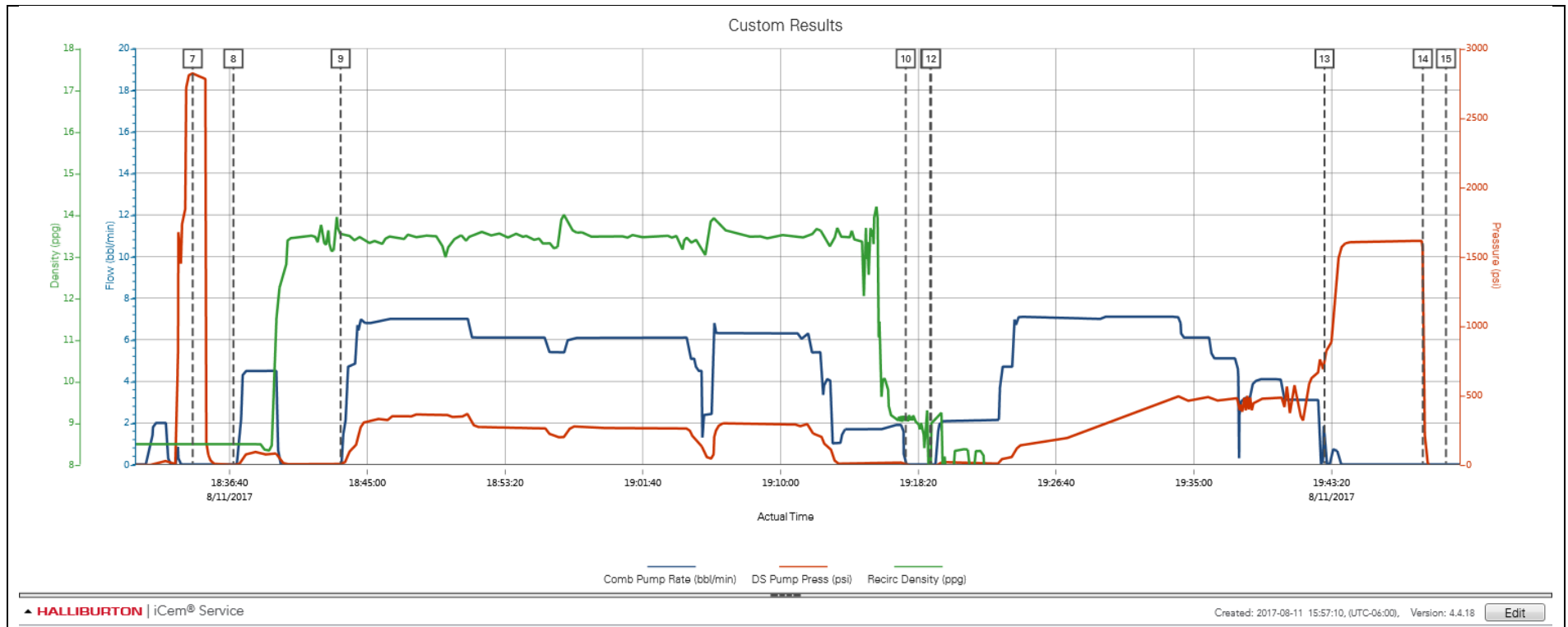
Type	Seq. No.	Activity	Graph Label	Date	Time	Source	Comb Pump Rate (bbl/min)	DS Pump Press (psi)	Recirc Density (ppg)	Comments
Event	1	Call Out	Call Out	8/11/2017	08:00:00	USER				Crew called for an on location of 1400. Crew was Bradley Hinkle, Todd Porter, Edgar Diaz and Alfred Montes.
Event	2	Depart Yard Safety Meeting	Depart Yard Safety Meeting	8/11/2017	16:00:00	USER				Pre-journey safety meeting.
Event	3	Arrive at Location from Service Center	Arrive at Location from Service Center	8/11/2017	18:00:00	USER				Sign in, perform a site assessment and pre rig-up safety meeting. Crew arrived 4 hours late due to being tied up on another job.
Event	4	Other	Job Numbers	8/11/2017	18:05:00	USER				TD: 1580 TP: 1579 FC: 1544. 9.625" casing inside a 13.5" OH.
Event	5	Safety Meeting - Pre Job	Safety Meeting - Pre Job	8/11/2017	18:15:00	USER				Pre-job safety meeting with HES personnel. Rig crew did not participate.
Event	6	Start Job	Start Job	8/11/2017	18:30:19	COM4	0.00	-15.00	8.49	
Event	7	Test Lines	Test Lines	8/11/2017	18:34:26	COM4	0.00	2821.00	8.49	
Event	8	Pump Spacer 1	Pump Spacer 1	8/11/2017	18:36:54	COM4	0.00	-3.00	8.49	
Event	9	Pump Cement	Pump Cement	8/11/2017	18:43:23	COM4	0.00	3.00	13.53	Pump 170 bbls (550 sacks) SwiftCem mixed at 13.5 ppg. Density verified by pressurized scales. Downhole density not reading. Had to chart recirculation density. Scales taken throughout to verify recirc was still accurate.
Event	10	Shutdown	Shutdown	8/11/2017	19:17:34	COM4	0.00	0.00	9.02	
Event	11	Drop Top Plug	Drop Top Plug	8/11/2017	19:19:03	COM4	0.00	-11.00	4.92	
Event	12	Pump Displacement	Pump Displacement	8/11/2017	19:19:06	COM4	0.00	-11.00	8.92	Pump 118 bbls fresh water. Good returns throughout. 25 bbls cement to surface.
Event	13	Bump Plug	Bump Plug	8/11/2017	19:42:54	COM4	0.00	766.00	0.73	Bump plug at 600 PSI and increase 500 PSI over. Increase pressure to 1500 PSI for a 5 minute casing test.
Event	14	Check Floats	Check Floats	8/11/2017	19:48:51	USER	0.00	1442.00	0.73	Floats held. Half bbl back.

Event	15	End Job	End Job	8/11/2017	19:50:15	COM4	0.00	-13.00	0.73	
Event	16	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	8/11/2017	19:55:00	USER	2.00	22.00	0.73	Pre rig-down safety meeting.
Event	17	Depart Location for Service Center or Other Site	Depart Location for Service Center or Other Site	8/11/2017	21:00:00	USER				Pre-journey safety meeting.



## 3.0 Attachments

### 3.1 Custom Results – Job Chart with Events



3.2 Custom Results – Job Chart without Events

