

# HALLIBURTON

iCem<sup>®</sup> Service

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

Date: Wednesday, November 15, 2017

### **Launer 8C Surface**

Job Date: Saturday, November 04, 2017

Sincerely,

**Justin Lansdale**

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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 **Launer 8C** 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.

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]**

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

Sold To #: 369404		Ship To #: 3818160		Quote #:		Sales Order #: 0904416730				
Customer: EXTRACTION OIL & GAS -				Customer Rep: Sean Macentire						
Well Name: LAUNER		Well #: 8C		API/UWI #: 05-123-45176-00						
Field: WATTENBERG		City (SAP): WINDSOR		County/Parish: WELD		State: COLORADO				
Legal Description: SE SE-26-7N-67W-745FSL-380FEL										
Contractor:				Rig/Platform Name/Num: Cartel 41						
Job BOM: 7521 7521										
Well Type: HORIZONTAL OIL										
Sales Person: HALAMERICA\HX38199				Srv Supervisor: Nicholas Peterson						
Job										
Formation Name										
Formation Depth (MD)		Top		Bottom						
Form Type				BHST						
Job depth MD		1554ft		Job Depth TVD		1554				
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	New	9.625	8.921	36	8 RD	J-55	0	1554	1554	1554
Open Hole Section			13.5				0	1554	1554	1554
Tools and Accessories										
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make	
Guide Shoe	9.625	1	HES	1554		Top Plug	9.625	1	HES	
Float Shoe	9.625	1	HES	1514		Bottom Plug				
Float Collar						SSR plug set				
Insert Float						Plug Container	9.625	1	HES	
Stage Tool						Centralizers				
Fluid Data										
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	
1	Spacer	Fresh Water	20	bbl	8.33		42		840	
Fluid Data										
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	
2	Red Dye Spacer	Red Dye Spacer	10	bbl	8.33		42		420	

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*Cementing Job Summary*

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	SwiftCem	SWIFTCM (TM) SYSTEM	550	sack	13.5	1.74	9.2	5	5,060
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
4	Displacement	Fresh Water	117	bbl	8.33		42	6	4914
Cement Left in Pipe		Amount	40 ft		Reason			Shoe Joint	
Mix Water:		pH 7	Mix Water Chloride: 0 ppm			Mix Water Temperature:		70°F °C	
Cement Temperature:			Plug Displaced by: Halliburton			Disp. Temperature:		70 °F °C	
Plug Bumped?		Yes	Bump Pressure: 530 psi			Floats Held?		Yes	
Cement Returns:		20 bbl	Returns Density: 13.5 lb/gal			Returns Temperature:		70	
Comment 20 BBLS of cement Back to surface.									

## 2.0 Real-Time Job Summary

## 2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	Comments
Event	1	Call Out	Call Out	11/4/2017	06:00:00	USER	CREW CALLED OUT AT 06:00, REQUESTED ON LOCATION 12:00. CREW PICKED UP CEMENT, 2 LBS RED DYE, AND TOP PLUG FROM FT. LUPTON, CO. BULK 660, 11764052, BULK 660 11764054, ELITE PUMP 11189145.
Event	2	Crew Leave Yard	Crew Leave Yard	11/4/2017	08:30:00	USER	STARTED JOURNEY MANAGEMENT.
Event	3	Arrive At Loc	Arrive At Loc	11/4/2017	10:00:00	USER	END JOURNEY MANAGEMENT. MEET WITH CO. MAN TO DISCUSS JOB; CASING- 9.625 36# @ 1,554', 13.5" HOLE 1,554' SHOE 42', FW DISPLACEMENT, CASING LANDED @ 15:15 11/04/2017.
Event	4	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	11/4/2017	10:05:00	USER	HAZARD HUNT. DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH LOCATION, RIG UP AND WEATHER.
Event	5	Rig-Up Equipment	Rig-Up Equipment	11/4/2017	10:15:00	USER	CREW STAGED EQUIPMENT AND RIGGED UP BULK, IRON AND WATER HOSES TO PERFORM JOB.
Event	6	Rig-Up Completed	Rig-Up Completed	11/4/2017	10:30:00	USER	CREW STAGED EQUIPMENT AND RIGGED UP BULK, IRON AND WATER HOSES TO PERFORM JOB.
Event	7	Pre-Job Safety Meeting	Pre-Job Safety Meeting	11/4/2017	15:30:00	USER	MEETING WITH HALLIBURTON AND RIG PERSONNEL. COMMUNICATED POTENTIAL SAFETY HAZARDS AND JOB DETAILS.
Event	8	Start Job	Start Job	11/4/2017	15:57:09	COM5	BEGIN RECORDING JOB DATA.
Event	9	Test Lines	Test Lines	11/4/2017	16:01:12	COM5	PRESSURE TESTED IRON TO 2,402 PSI. KICKOUTS SET @ 500 PSI, KICKED OUT @ 800 PSI, 5TH GEAR STALL OUT @ 2,000 PSI.
Event	10	Pump Spacer 1	Pump Spacer 1	11/4/2017	16:08:45	COM5	PUMP 20 BBLs OF FRESH WATER.

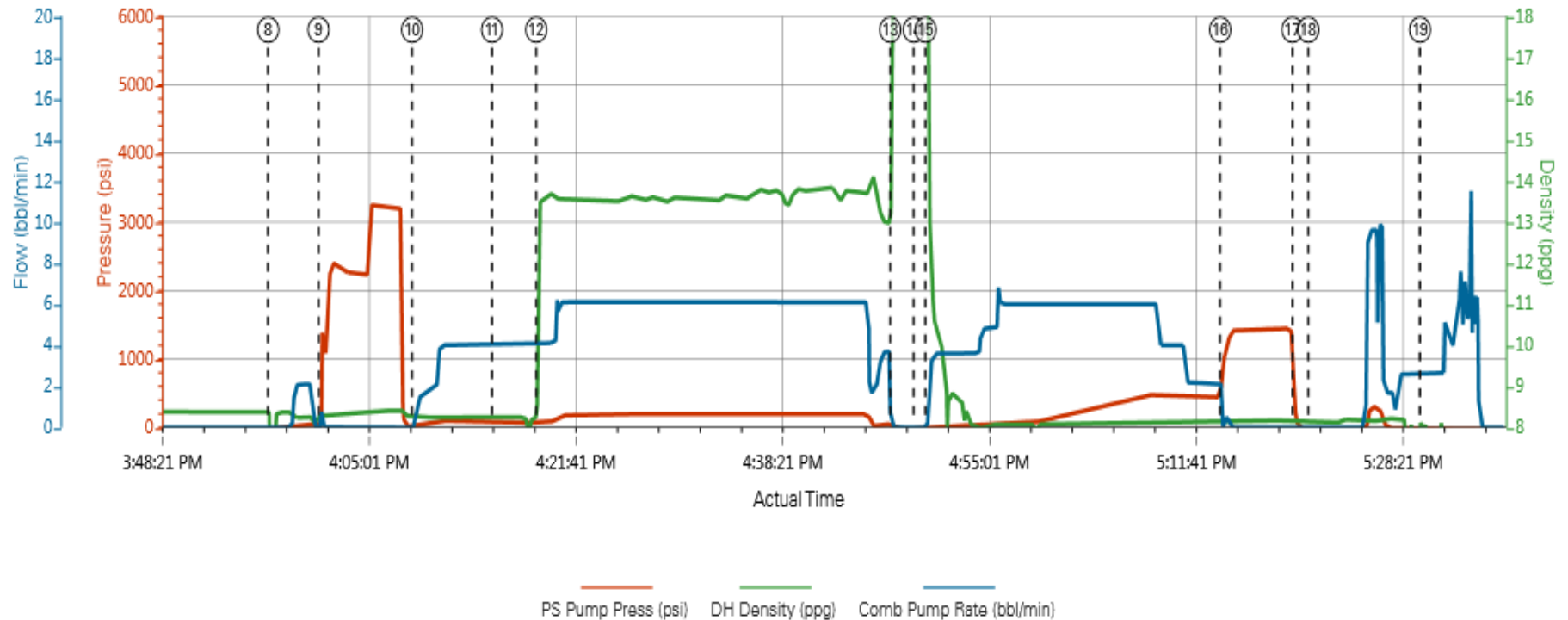
Event	11	Pump Spacer 1	Pump Spacer 1	11/4/2017	16:15:11	COM5	PUMP 10 BBLS OF FRESH WATER WITH 2 LBS RED DYE.
Event	12	Pump Cement	Pump Cement	11/4/2017	16:18:45	COM5	PUMP 550 SKS OF SWIFTCEM @ 13.5 LB/GAL, 1.74 FT3/SK, 9.2 GAL/SKS, 170.4 BBLS. TOC CALCULATED @ SURFACE. 20 BBLS BACK TO SURFACE. DENSITY VERIFIED BY PRESSURIZED MUD SCALES
Event	13	Shutdown	Shutdown	11/4/2017	16:47:18	COM5	SHUTDOWN TO DROP TOP PLUG.
Event	14	Drop Plug	Drop Plug	11/4/2017	16:49:11	COM5	PLUG LEFT CONTAINER, VERIFIED BY COMPANY REP.
Event	15	Pump Displacement	Pump Displacement	11/4/2017	16:50:08	COM5	BEGIN CALCULATED DISPLACEMENT OF 117 BBLS WITH FRESH WATER.
Event	16	Bump Plug	Bump Plug	11/4/2017	17:13:53	COM5	PLUG BUMPED AT CALCULATED DISPLACEMENT. PRESSURED 500 PSI OVER BUMP TO 1,020 PSI.
Event	17	Check Floats	Check Floats	11/4/2017	17:19:43	USER	RELEASED PRESSURE, FLOATS HELD, 0.5 BBLS BACK
Event	18	End Job	End Job	11/4/2017	17:21:00	COM5	STOP RECORDING JOB DATA.
Event	19	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	11/4/2017	17:30:00	USER	DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH WEATHER, LOCATION AND RIGGING DOWN IRON AND HOSES.
Event	20	Rig-Down Equipment	Rig-Down Equipment	11/4/2017	17:45:00	USER	CREW RIGGED DOWN EQUIPMENT AND BULK TRUCKS
Event	21	Rig-Down Completed	Rig-Down Completed	11/4/2017	18:15:00	USER	ALL HALLIBURTON ITEMS WERE STOWED FOR TRAVEL, AND LOCATION WAS CLEAN.
Event	22	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	11/4/2017	18:20:00	USER	DISCUSSED ROUTES HAZARDS AND COMMUNICATION WITH CREW.
Event	23	Crew Leave Location	Crew Leave Location	11/4/2017	18:30:00	USER	THANK YOU FOR USING HALLIBURTON – NICK PETERSON AND CREW.



## 3.0 Attachments

### 3.1 Job Chart

#### Custom Results



① Call Out n/a;n/a;n/a ③ Arrive At Loc n/a;n/a;n/a ⑤ Rig-Up Equipment n/a;n/a;n/a ⑦ Pre-Job Safety Meeting -20;8.38;0 ⑨ Test Lines 1408;8.25;0 ⑪ Pump Spacer 1 94;8.25;4 ⑬ St  
 ② Crew Leave Yard n/a;n/a;n/a ④ Pre-Rig Up Safety Meeting n/a;n/a;n/a ⑥ Rig-Up Completed n/a;n/a;n/a ⑧ Start Job 0;1.41;0 ⑩ Pump Spacer 1 19;8.25;0.8 ⑫ Pump Cement 104;13.48;4.1 ⑭ Dr

