

# HALLIBURTON

iCem<sup>®</sup> Service

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

Date: Wednesday, November 15, 2017

### **Launer #9 Surface**

Job Date: Friday, November 03, 2017

Sincerely,

**Justin Lansdale**

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Table of Contents

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1.0    Cementing Job Summary ..... 4

    1.1    Executive Summary .....4

2.0    Real-Time Job Summary ..... 7

    2.1    Job Event Log .....7

3.0    Attachments..... 10

    3.1    Job Chart.....10

## 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 #9** 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 #: 3818060	Quote #:	Sales Order #: 0904417416							
Customer: EXTRACTION OIL & GAS -		Customer Rep: Sean Macentire								
Well Name: LAUNER	Well #: 9	API/UWI #: 05-123-45179-00								
Field: WATTENBERG	City (SAP): WINDSOR	County/Parish: WELD	State: COLORADO							
Legal Description: SE SE-26-7N-67W-722FSL-396FEL										
Contractor:		Rig/Platform Name/Num: Cartel 41								
Job BOM: 7521 7521										
Well Type: HORIZONTAL OIL										
Sales Person: HALAMERICA\HX38199		Srvc Supervisor: Nicholas Peterson								
Job										
Formation Name										
Formation Depth (MD)	Top	Bottom								
Form Type		BHST								
Job depth MD	1554 ft	Job Depth TVD	1554 ft							
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	1554	0	1554
Open Hole Section			13.5				0	1554	0	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										
Stage/Plug #: 1										
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	6	840	
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	6	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/mi n	Total Mix Fluid Gal
3	Cement	SWIFCEM (TM) SYSTEM	550	sack	13.5	1.74	9.2	6	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/mi n	Total Mix Fluid Gal
4	Displacement	Fresh Water	118	bbl	8.33		42	6	420
Cement Left In Pipe		Amount	40 ft		Reason			Shoe Joint	
Mix Water: pH 7		Mix Water Chloride:		0 ppm		Mix Water Temperature:		60 °F	
Cement Temperature: °F		Plug Displaced by:		8.34 lb/gal		Disp. Temperature:		60	
Plug Bumped? Yes		Bump Pressure:		530 psi		Floats Held?		Yes	
Cement Returns: 22 bbl		Returns Density:		13.5 lb/gal		Returns Temperature:			
Comment: 22 bbls Cement 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	11/3/2017	12:00:00	USER	CREW CALLED OUT AT 12:00, REQUESTED ON LOCATION 18:00. CREW PICKED UP CEMENT, 100 LBS OF SUGAR, AND 2 LBS RED DYE FROM FT. LUPTON, CO. BULK 660, 11764052, BULK 660 11764054, ELITE PUMP 11189145.
Event	2	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	11/3/2017	16:15:00	USER	DISCUSSED ROUTES, HAZARDS, AND COMMUNICATION WITH CREW.
Event	3	Crew Leave Yard	Crew Leave Yard	11/3/2017	16:30:00	USER	STARTED JOURNEY MANAGEMENT.
Event	4	Arrive At Loc	Arrive At Loc	11/3/2017	18:00:00	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 @ 11:35 11/03/2017.
Event	5	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	11/3/2017	18:20:00	USER	HAZARD HUNT. DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH LOCATION, RIG UP AND WEATHER.
Event	6	Rig-Up Equipment	Rig-Up Equipment	11/3/2017	18:30:00	USER	CREW STAGED EQUIPMENT AND RIGGED UP BULK, IRON AND WATER HOSES TO PERFORM JOB.
Event	7	Rig-Up Completed	Rig-Up Completed	11/3/2017	19:00:00	USER	EQUIPMENT RIGGED UP AND READY TO PERFORM JOB.
Event	8	Pre-Job Safety Meeting	Pre-Job Safety Meeting	11/3/2017	23:30:00	USER	MEETING WITH HALLIBURTON AND RIG PERSONNEL. COMMUNICATED POTENTIAL SAFETY HAZARDS AND JOB DETAILS.
Event	9	Start Job	Start Job	11/4/2017	00:04:31	COM5	BEGIN RECORDING JOB DATA.
Event	10	Test Lines	Test Lines	11/4/2017	00:08:06	COM5	PRESSURE TESTED IRON TO 2,405 PSI. KICKOUTS SET @ 500 PSI, KICKED OUT @ 820 PSI, 5TH GEAR STALL OUT @ 1,851 PSI.

Event	11	Pump Spacer 1	Pump Spacer 1	11/4/2017	00:17:37	COM5	PUMP 20 BBLS OF FRESH WATER.
Event	12	Pump Spacer	Pump Spacer	11/4/2017	00:25:11	USER	PUMP 10 BBLS OF FRESH WATER WITH 2 LBS RED DYE.
Event	13	Pump Cement	Pump Cement	11/4/2017	00:29:59	COM5	PUMP 550 SKS OF SWIFTCEM @ 13.5 LB/GAL, 1.74 FT3/SK, 9.2 GAL/SKS, 170.4 BBLS. TOC CALCULATED @ SURFACE. 22 BBLS BACK TO SURFACE. DENSITY VERIFIED BY PRESSURIZED MUD SCALES.
Event	14	Drop Top Plug	Drop Top Plug	11/4/2017	00:59:29	COM5	PLUG LEFT CONTAINER, VERIFIED BY COMPANY REP.
Event	15	Pump Displacement	Pump Displacement	11/4/2017	01:01:32	COM5	BEGIN CALCULATED DISPLACEMENT OF 117 BBLS WITH FRESH WATER.
Event	16	Bump Plug	Bump Plug	11/4/2017	01:24:04	COM5	PLUG BUMPED AT CALCULATED DISPLACEMENT. PRESSURED UP 2,000 PSI FOR 5 MINUTE CSG TEST.
Event	17	Check Floats	Check Floats	11/4/2017	01:30:28	USER	RELEASED PRESSURE, FLOATS HELD, 0.5 BBLS BACK.
Event	18	End Job	End Job	11/4/2017	01:31:22	COM5	STOP RECORDING JOB DATA
Event	19	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	11/4/2017	01:45:00	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	02:00:00	USER	CREW RIGGED DOWN EQUIPMENT AND BULK EQUIPMENT
Event	21	Rig-Down Completed	Rig-Down Completed	11/4/2017	02:10:00	USER	EQUIPMENT RIGGED DOWN AND READY FOR NEXT JOB



Event	22	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	11/4/2017	02:15:00	USER	DISCUSSED ROUTES HAZARDS AND COMMUNICATION WITH CREW.
Event	23	Crew Leave Location	Crew Leave Location	11/4/2017	02:30:00	USER	BULK TRUCKS LEFT LOCATION

## 3.0 Attachments

### 3.1 Job Chart



