

# HALLIBURTON

iCem<sup>®</sup> Service

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

Date: Wednesday, December 20, 2017

### **Launer #3 Production**

Job Date: Thursday, December 14, 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 #3** cement **Production** 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]**

The Road to Excellence Starts with Safety

Sold To #: 369404		Ship To #: 3818090		Quote #:		Sales Order #: 0904497103				
Customer: EXTRACTION OIL & GAS				Customer Rep: TODD STEPHENS						
Well Name: LAUNER			Well #: 3		API/UWI #: 05-123-45175-00					
Field: WATTENBERG		City (SAP): WINDSOR		County/Parish: WELD		State: COLORADO				
Legal Description: SE SE-26-7N-67W-861FSL-301FEL										
Contractor: PATTERSON-UTI ENERGY				Rig/Platform Name/Num: PATTERSON 346						
Job BOM: 7523 7523										
Well Type: HORIZONTAL OIL										
Sales Person: HALAMERICA\HX38199				Srv Supervisor: Vitali Neverdasov						
Job										
Formation Name										
Formation Depth (MD)		Top		Bottom						
Form Type				BHST						
Job depth MD		14786ft		Job Depth TVD		6900				
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		J-55	0	1567	0	1567
Casing	0	5.5	4.778	20		P-110	0	14786	0	6900
Open Hole Section			8.5				1567	14800	1567	6900
Tools and Accessories										
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make	
Guide Shoe	5.5					Top Plug	5.5	1	KLX	
Float Shoe	5.5	1	KLX	14786		Bottom Plug	5.5	0	NA	
Float Collar	5.5	1	KLX	14782		SSR plug set	5.5			
Insert Float	5.5					Plug Container	5.5	1	HES	
Stage Tool	5.5					Centralizers	5.5	190	KLX	
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	11.5 lb/gal Tuned Spacer III	Tuned Spacer III	50	bbl	11.5	3.73		4		
149.34 lbm/bbl		BARITE, BULK (100003681)								
35 gal/bbl		FRESH WATER								
0.50 gal/bbl		MUSOL A, 330 GAL TOTE - (790828)								
0.50 gal/bbl		DUAL SPACER SURFACTANT B, 5 GAL PAIL (100003665)								

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	ElastiCem	ELASTICEM (TM) SYSTEM	2330	sack	13.2	1.57		8	7.53
0.40 %		SCR-100 (100003749)							
7.53 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
3	Displacement	Displacement	327	bbl	8.34			10	
Cement Left In Pipe		Amount	0 ft		Reason			WET SHOE	
Comment: 37 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	Depart Yard Safety Meeting	Depart Yard Safety Meeting	12/13/2017	16:15:00	USER	HELD JSA PRIOR LEAVING THE YARD
Event	2	Depart Shop for Location	Depart Shop for Location	12/13/2017	16:30:00	USER	LEFT THE YARD TO STAGE UP NEXT TO LOCATION UNTILL JOB CALL
Event	3	Call Out	Call Out	12/13/2017	18:00:00	USER	ON LOCATION @ 00:00
Event	4	Arrive at Location from Service Center	Arrive at Location from Service Center	12/13/2017	23:10:00	USER	ARRIVED TO LOCATION, 46 MILES. DISCUSS NUMBERS AND JOB PROCEDURE WITH CUSTOMER. RIG IS RUNNING CASING.
Event	5	Other	Other	12/13/2017	23:20:00	USER	SPOT TRUCKS
Event	6	Safety Meeting - Pre Rig-Up	Safety Meeting - Pre Rig-Up	12/13/2017	23:30:00	USER	HELD PRE RIG UP SAFETY MEETING
Event	7	Rig-up Lines	Rig-up Lines	12/13/2017	23:35:00	USER	RIG UP ALL SURFACE LINES TO THE BUFFER ZONE.
Event	8	Casing on Bottom	Casing on Bottom	12/14/2017	04:47:00	USER	RIG START CIRCULATING/ CASING CREW RIGGING DOWN
Event	9	Other	Other	12/14/2017	05:05:00	USER	FINISH RIG UP
Event	10	Safety Meeting - Pre Job	Safety Meeting - Pre Job	12/14/2017	06:04:00	USER	PRE JOB SAFETY MEETING WITH ALL PERSONEL INVOLVED
Event	11	Start Job	Start Job	12/14/2017	06:26:40	COM4	
Event	12	Pressure Test	Pressure Test	12/14/2017	06:55:00	USER	LOAD LINE AND PRESSURE TEST TO 5045 PSI
Event	13	Pump Spacer	Pump Spacer	12/14/2017	07:00:44	USER	BATCH/ WEIGH/ PUMP 50 BBLS OF TUNED III SPACER WITH SURFACTANS
Event	14	Pump Cement	Pump Cement	12/14/2017	07:15:55	USER	BATCH/ WEIGH/ PUMP 2330 SKS (651.5 BBLS) OF ELASTICEM @ 13.2 PPG

Event	15	Shutdown	Shutdown	12/14/2017	08:53:00	USER	LOAD AND DROP TOP PLUG
Event	16	Other	Other	12/14/2017	08:59:33	USER	WASH PUMPS AND LINES
Event	17	Pump Displacement	Pump Displacement	12/14/2017	09:08:00	USER	FRESH WATER DISPLACEMENT
Event	18	Slow Rate	Slow Rate	12/14/2017	09:42:00	USER	SLOW RATE TO 5 BPM
Event	19	Bump Plug	Bump Plug	12/14/2017	09:45:00	USER	FINAL CIRCULATING PRESSURE 2603 @ 5 BPM
Event	20	Other	Other	12/14/2017	09:46:00	USER	BURST DISC @ 3570 PSI AND PUMP 5 BBLs WET SHOE
Event	21	Shutdown	Shutdown	12/14/2017	09:47:00	USER	
Event	22	Check Floats	Check Floats	12/14/2017	09:48:00	USER	FLOATS HELD
Event	23	End Job	End Job	12/14/2017	09:49:53	COM4	
Event	24	Safety Meeting - Pre Rig-Down	Safety Meeting - Pre Rig-Down	12/14/2017	09:55:00	USER	RIG DOWN SAFETY MEETING
Event	25	Depart Location Safety Meeting	Depart Location Safety Meeting	12/14/2017	10:45:00	USER	HELD JSA PRIOR LEAVING LOCATION
Event	26	Depart Location for Service Center or Other Site	Depart Location for Service Center or Other Site	12/14/2017	11:00:00	USER	



3.0 Attachments

3.1 Job Chart



