

# HALLIBURTON

iCem<sup>®</sup> Service

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

### **Launer 6 Production**

Job Date: Sunday, December 03, 2017

Sincerely,  
**Ryan Keeran**

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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 6 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.

40 bbls of cement circulated 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#: 3818129	Quote#:	Sales Order#: 0904472443
Customer: EXTRACTION OIL & GAS		CustomerRep: Shayne Hackford	
Well Name: LAUNER		Well#: 6	IAPI/UWI#: 05-123-45173-00
Field: WATTENBERG	City (SAP): WINDSOR	County/Parish: WELD	State: COLORADO
Legal Description: SE SE-26-7N-67W-792FSL-349FEL			
Contractor: PATTERSON-UTI ENERGY		Rig/Platform Name/Num: PATTERSON 346	
Job BOM: 7523 7523			
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	14697ft	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		J-55	0	1564	0	1564
Casing	0	5.5	4.778	20		P-110	0	14697	0	7015
Open Hole Section			8.5				1564	14710	1564	7015

Tools and Accessories									
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make
Guide Shoe	5.5					Top Plug	5.5		HES
Float Shoe	5.5			14697		Bottom Plug	5.5		HES
Float Collar	5.5					SR plug set	5.5		HES
Insert Float	5.5					Plug Container	5.5	1	HES
Tag Tool	5.5					Centralizers	5.5		HES

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/mi	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									FRESHWATER
	0.50 gal/bbl									MUSOLA 330 GAL TOTE - (790828)
	0.50 gal/bbl									Dual Spacer Surfactant B, 5 Gal Pail, (100003665)

## HALLIBURTON

## 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
2	ElastiCem	ELASTICEM (TM) SYSTEM	2370	sack	132	1.57		8	7.53
0.40%		SCR-100 (100003749)							
7.53 Gal		FRESHWATER							
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	325	bbl	8.34			10	
Cement	Left In Pipe	Amount	10	!Reason	WetShoe	!Shoe Joint			
Comment 40 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	Driv-Side Pump Pressure (psi)	Combined Pump Rate (bbl/min)	Downhole Density (ppg)	Comments
Event	1	Call Out	Call Out	12/3/2017	02:00:00	USER				Called out by Service Coordinator for O/L at 0700
Event	2	Depart Yard Safety Meeting	Depart Yard Safety Meeting	12/3/2017	05:15:00	USER				Held meeting with all personnel in convoy to discuss directions and hazards associated with drive, all fit to drive.
Event	3	Depart Shop for Location	Depart Shop for Location	12/3/2017	05:25:00	USER				Journey Management prior to departure
Event	4	Arrive at Rig	Arrive at Rig	12/3/2017	06:30:00	USER				Upon arrival met with company man to discuss job details and calculations, performed hazard hunt and site assessment.
Event	5	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	12/3/2017	06:50:00	USER				Discussed rigging up hazards and procedure according to HMS.
Event	6	Start Job	Start Job	12/3/2017	10:18:27	COM4	7.00	0.00	8.32	
Event	7	Pre-Job Safety Meeting	Pre-Job Safety Meeting	12/3/2017	11:30:00	USER	8.00	0.00	8.33	Held safety meeting with all job associated personnel to discuss job procedure, hazards and stop work authority.
Event	8	Start Job	Start Job	12/3/2017	12:02:00	COM4	7.00	0.00	8.33	
Event	9	Test Lines	Test Lines	12/3/2017	12:06:04	COM4	4968.00	0.00	8.47	Performed a 500psi kick out test, 5th gear stall, then took it up to 5000 psi and held. Had to pump a few more bbls then pressure up

										again. Held with no leaks.
Event	10	Pump Spacer 1	Pump Spacer 1	12/3/2017	12:08:21	COM4	12.00	0.00	8.32	Pumped 50 bbls of 11.5#, 3.73 Y, 23.4 WR, and Tuned Spacer III. 4 bpm, 370 PSI.
Event	11	Pump Cement	Pump Cement	12/3/2017	12:17:18	COM4	388.00	5.80	13.11	Pumped 662.7 BBLS of 13.2 #, 1.57 Y, 7.53 WR. Elasticem Cement at 8 BPM 580 PSI.
Event	12	Check Weight	Check weight	12/3/2017	12:25:28	COM4	569.00	8.10	13.25	Weighed Cement up at 13.2#
Event	13	Check Weight	Check weight	12/3/2017	13:28:07	COM4	557.00	8.00	13.15	Weighed Cement up at 13.2#
Event	14	Shutdown	Shutdown	12/3/2017	13:48:08	COM4	108.00	0.00	13.64	Shutdown to Drop Plug and wash up truck.
Event	15	Drop Top Plug	Drop Top Plug	12/3/2017	13:55:55	COM4	25.00	0.00	5.90	Dropped 5.5" Top Plug. Co. Man witnessed.
Event	16	Pump Displacement	Pump Displacement	12/3/2017	13:55:58	COM4	20.00	0.00	6.66	Pumped 325 BBLS of fresh water displacement at 10 BPM, Got 40 bbls of cement back to surface. Full circulation throughout.
Event	17	Bump Plug	Bump Plug	12/3/2017	14:36:47	COM4	3123.00	0.00	7.86	Bumped Plug at 5 BPM. FCP 2540 PSI. Took up to 3025 PSI. Pressured up to burst at 4050. Then pumped a 5 bbl wet shoe at 5 BPM, 2600 PSI.
Event	18	Check Floats	Check Floats	12/3/2017	14:38:52	USER	2161.00	0.00	7.84	Check Floats. Got 2 BBLS back to the truck. Floats Held.
Event	19	End Job	End Job	12/3/2017	14:40:54	COM4	2.00	0.00	7.79	
Event	20	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	12/3/2017	14:45:00	USER	1.00	0.00	7.79	Discussed rigging down hazards and procedure according to HMS.



Event	21	Depart Location Safety Meeting	Depart Location Safety Meeting	12/3/2017	16:10:00	USER	Held meeting with all personnel in convoy to discuss directions and hazards associated with drive, all fit to drive.
Event	22	Depart Location for Service Center or Other Site	Depart Location for Service Center or Other Site	12/3/2017	16:25:00	USER	Pre journey management prior to departure.

## 3.0 Job Chart

### 3.1 Job Chart

