

# HALLIBURTON

iCem<sup>®</sup> Service

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

**Jesser 3E-10-3N 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 Jesser 3E-10-3N 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.

57 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**

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## Cementing Job Summary

The Road to Excellence Starts with Safety

Sold To #: 369404	Ship To #: 3830617	Quote #:	Sales Order #: 0904481973							
Customer: EXTRACTION OIL & GAS		Customer Rep: GARY								
Well Name: JESSER	Well #: 3E-10-3N	API/UWI #: 05-123-45666-00								
Field: WATTENBERG	City (SAP): BERTHOUD	County/Parish: WELD	State: COLORADO							
Legal Description: NW SW-3-4N-68W-2314FSL-396FWL										
Contractor:		Rig/Platform Name/Num: Patterson 901								
Job BOM: 7523 7523										
Well Type: HORIZONTAL OIL										
Sales Person: HALAMERICA\HX38199		Srcv Supervisor: Robert Davis								
<b>Job</b>										
Formation Name										
Formation Depth (MD)	Top	1600	Bottom 12055							
Form Type	BHST									
Job depth MD	12038ft	Job Depth TVD	7012							
Water Depth	Wk Ht Above Floor 4									
Perforation Depth (MD)	From	To								
<b>Well Data</b>										
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	1600	0	0
Casing	0	5.5	4.778	20		P-110	0	12038	0	0
Open Hole Section			8.5				1600	12055	0	0
<b>Tools and Accessories</b>										
Type	Size in	Qty	Make	Depth ft	Type	Size in	Qty	Make		
Guide Shoe	5.5			12038	Top Plug	5.5		HES		
Float Shoe	5.5				Bottom Plug	5.5		HES		
Float Collar	5.5				SSR plug set	5.5		HES		
Insert Float	5.5				Plug Container	5.5	1	HES		
Stage Tool	5.5				Centralizers	5.5		HES		
<b>Fluid Data</b>										
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)								

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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/mi n	Total Mix Fluid Gal
2	ElastiCem	ELASTICEM (TM) SYSTEM	2000	sack	13.2	1.57		8	7.53
0.40 %		SCR-100 (100003749)							
7.50 Gal		FRESH WATER							
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft <sup>3</sup> /sack	Mix Fluid Gal	Rate bbl/mi n	Total Mix Fluid Gal
3	Displacement	Displacement	266	bbl	8.34			10	
Cement Left In Pipe		Amount	5 ft		Reason			Shoe Joint	
Mix Water:pH		7	Mix Water Chloride:		100 ppm		Mix Water Temperature:60 °F °C		
Cement Temperature:## °F °C		Plug Displaced by:		8.33 lb/gal kg/m3 XXXX		Disp. Temperature:## °F °C			
Plug Bumped?Yes		Bump Pressure:		2510-3010 psi MPa		Floats Held?Yes			
Cement Returns:57 bbl m3		Returns Density:## lb/gal kg/m3		Returns Temperature:## °F °C					
Comment BUMPED PLUG @ CALCULATED DISPLACEMENT, FULL RETURNS THOUGHOUT THE JOB, 50 BBLS OF SPACER AND 57 BBLS OF CEMENT RETURNS TO SURFACE, RUPTURED PLUG @ 3255 PSI PUMPED 5 BBLS FOR WET SHOE SUB, FLOATS HELD 2 BBLS BACK TO THE TRUCK.									

## 2.0 Real-Time Job Summary

### 2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	Comb Pump Rate <i>(bbl/min)</i>	DH Density <i>(ppg)</i>	DS Pump Press <i>(psi)</i>	Comments
Event	1	Call Out	Call Out	12/3/2017	04:00:00	USER				CALLED OUT FROM FT. LUPTON COLORADO
Event	2	Depart from Service Center or Other Site	Depart from Service Center or Other Site	12/3/2017	06:00:00	USER				LEAVE YARD AFTER SAFTEY MEETING
Event	3	Arrive at Location from Service Center	Arrive at Location from Service Center	12/3/2017	07:00:00	USER				ARRIVED ON LOCATION AND TALKED TO COMPANY MAN ABOUT JOB FIGURES AND THE SPOTTING OF OUR EQUIPMENT
Event	4	Assessment Of Location Safety Meeting	Assessment Of Location Safety Meeting	12/3/2017	07:10:00	USER				ASSESSED LOCATION AN TOOK WATER SAMPLE
Event	5	Rig-Up Equipment	Rig-Up Equipment	12/3/2017	07:30:00	USER				SPOTTED EQUIPMENT AND RIGGED UP TO FLOOR RIG IS RUNNING CASING
Event	6	Other	Other	12/3/2017	07:40:00	USER				Water test=pH: __7__, Cl: __100__, temp __60__degrees Tannin-Lignin: _NEG.____; Sulfate: __200__
Event	7	Other	Other	12/3/2017	08:00:00	USER				Rig Circulation: ____ bbls Circulation Rate: ____ bbl/min Mud Density __8.3__ lb/gal Mud YP/PV: _____
Event	8	Other	Other	12/3/2017	08:30:00	USER				Spacer: __50__ bbl TOS __0__ Lead Cement: __559__ bbl, __2000__ sks, TOC __0__ Tail Cement:

Event	Seq	Event Description	Activity	Date	Time	User	Volume	Rate	Cost	Notes
										____ bbl, ____ sks, TOC ____ Displacement: __266__ bblCMT left in Pipe__5 FT ____ Reason __WET SHOE ____
Event	9	Other	Other	12/3/2017	09:00:00	USER				TD: __12055__, TP __12038__, SJ: __5 FT__, OH: __8.5__, Casing: Size/Weight/Grade: __5.5/20#/P110____ , Previous Casing Shoe: __16--____
Event	10	Rig-Up Completed	Rig-Up Completed	12/3/2017	12:10:00	USER	0.00	7.96	3.00	RIG UP COMPLETE SAFETY MEETING WITH RIG HANDS AND HALLIBURTON ABOUT THE DANGERS OF OUR EQUIPMENT AND WENT OVER JOB FIGURES. READY TO TEST LINES
Event	11	Test Lines	Test Lines	12/3/2017	12:30:32	COM4	0.00	8.29	5500.00	LOW TEST TO 500 PSI, HIGH TEST TO 5500 PSI
Event	12	Pump Spacer 1	Pump Spacer 1	12/3/2017	12:34:29	COM4	4.00	9.25	77.00	TUNED SPACER, 50 BBLS, @ 11.5 PPG, YEILD @ 3.73, 23.4 GAL/SK 42 BBLS TO MIX, PUMPED @ 4 BPM @ 172 PSI
Event	13	Pump Lead Cement	Pump Lead Cement	12/3/2017	12:44:58	COM4	6.00	12.47	251.00	ELASTICEM, 2000 SKS @ 13.2 PPG, YEILD @ 1.57, GAL/SK @ 7.53, 3140 FT3, 559 BBLS, 358 BBLS OF WATER TO MIX, HOC-12038, TOC-0, PUMPED @ 8 BPM @ 591 PSI
Event	14	Drop Top Plug	Drop Top Plug	12/3/2017	14:01:40	COM4	0.00	14.01	11.00	KLX TOP PLUG WET SHOE
Event	15	Pump Displacement	Pump Displacement	12/3/2017	14:01:42	COM4	0.00	14.01	11.00	FRESH WATER, 266 BBLS, PUMPED @ 10 BPM @ 2800

							PSI, SLOWED RATE @ 245 BBLS GONE TO 5 BPM @ 2350 PSI FULL RETURNS THROUGHOUT THE JOB, 50 BBLS OF SPACER AND 57 BBLS OF CEMENT RETURNS TO SURFACE
Event	16	Bump Plug	Bump Plug	12/3/2017	14:33:59	COM4	BUMPED PLUG 500 OVER, BUMPED @ 2510 PSI TOOK TO 3010 PSI
Event	17	Other	Other	12/3/2017	14:35:27	COM4	RUPTURED PLUG @ 3255 PSI, PUMPED 5 BBLS @ 5 BPM @ 2340 PSI, CHECK FLOATS, FLOATS HELD 2 BBLS BACK TO THE TRUCK.
Event	18	Safety Meeting - Pre Rig-Down	Safety Meeting - Pre Rig- Down	12/3/2017	14:45:00	USER	SAFETY MEETING OVER RIGGING DOWN
Event	19	Rig-Down Equipment	Rig-Down Equipment	12/3/2017	15:00:00	USER	RIG DOWN EQUIPMENT AND HOSES
Event	20	Rig-Down Completed	Rig-Down Completed	12/3/2017	16:00:00	USER	RIG DOWN COMPLETE
Event	21	Safety Meeting - Departing Location	Safety Meeting - Departing Location	12/3/2017	16:15:00	USER	SAFETY MEETING OVER DEPARTURE AND JOURNEY HOME
Event	22	Depart Location for Home	Depart Location for Home	12/3/2017	16:30:00	USER	LEAVE LOCATION

3.0 Job Chart

3.1 Job Chart

