

# HALLIBURTON

iCem® Service

## EXTRACTION OIL & GAS-EBUS

**Frye Vic 20W-20-01**

Production Casing

Job Date: Saturday, May 15, 2021

Sincerely,

**Vaughn Oteri and Crew**

## Legal Notice

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### Disclaimer:

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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 Frye Vic 20W-20-01 production casing. 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.

Approximately 50 bbl. of cement were returned 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*

<b>Sold To #:</b> 369404		<b>Ship To #:</b> 3644977		<b>Quote #:</b>		<b>Sales Order #:</b> 0907144800				
<b>Customer:</b> EXTRACTION OIL & GAS-EBUS						<b>Customer Rep:</b> Danny Herrera				
<b>Well Name:</b> FRYE VIC				<b>Well #:</b> 20W-20-01		<b>API/UWI #:</b> 05-123-41081-00				
<b>Field:</b> WATTENBERG		<b>City (SAP):</b> WINDSOR		<b>County/Parish:</b> WELD		<b>State:</b> COLORADO				
<b>Legal Description:</b> 29-7N-67W										
<b>Contractor:</b> PATTERSON-UTI ENERGY					<b>Rig/Platform Name/Num:</b> PATTERSON 901					
<b>Job BOM:</b> 7523										
<b>Well Type:</b> HORIZONTAL OIL										
<b>Sales Person:</b> HALAMERICA\HX41066					<b>Srvc Supervisor:</b> Vaughn Oteri					
<b>Job</b>										
<b>Job depth MD</b>		18717 ft		<b>Job Depth TVD</b>		7149 ft				
<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		9.625	8.921	36			0	1712	0	1712
Casing	0	5.5	4.892	17			0	18717	0	7149
Open Hole Section			8.5				1712	18720	1712	7149
<b>Tools and Accessories</b>										
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make	
Float Shoe	5.5			18717		Top Plug	5.5	1		
Float Collar	5.5			18712		Bottom Plug	5.5	1		
						Plug Container	5.5	1	HES	

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	Spacer	Tuned Prime Spacer	50	bbl	12.5	2.74		6	
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	Cap Cement	ElastiCem™ Cement	555	sack	13	1.66	8.3	9	4607
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	Lead Cement	GasStop™ Cement	920	sack	13.2	1.54	7.17	9	6596
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	Tail Cement	ElastiCem™ Cement	1453	sack	13.2	1.59	7.75	9	11261
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
5	Displacement	Fresh Water	434	bbl	8.33			8	
Cement Left In Pipe		Amount	5 ft		Reason			Shoe Joint	
Mix Water:		pH 7	Mix Water Chloride:		0 ppm		Mix Water Temperature:		70 °F
Cement Temperature:			Plug Displaced by:		8.33 lb/gal Fresh Water		Disp. Temperature:		
Plug Bumped?		Yes	Bump Pressure:		2471 psi		Floats Held?		Yes
Comment 50bbls of cement returned to surface.									

## 2.0 Real-Time Job Summary

## 2.1 Job Event Log

Seq. No.	Activity	Date	Time	Pump A Pressure (psi)	Dwnhole Density (ppg)	Cmb Pump Rate (bbl/min)	Comments
1	Call Out	5/14/2021	19:00:00				Call out from ARC hub.
2	Pre-Convoy Safety Meeting	5/15/2021	01:00:00				Held pre-Convoy meeting with all HES drivers to discuss driving direction sand hazards.
3	Depart from Service Center or Other Site	5/15/2021	02:00:00				Depart from Ft. Lupton co HES yard.
4	Arrive At Loc	5/15/2021	03:00:00				Arrived on location met with company rep to discuss job process and concerns.
5	Start Job	5/15/2021	06:58:41	4.46	7.95	0.00	Held pre-job safety meeting with all hands on location to discuss job process and hazards.
6	Test Lines	5/15/2021	07:00:18	95.12	7.97	0.00	Pressure tested pumps and lines with fresh water, 4317psi found a leak at 2in iron. Replaced gasket and retested.
7	Drop Bottom Plug	5/15/2021	07:16:42	37.94	7.96	0.00	Released plug witnessed by company rep.
8	Pump Spacer 1	5/15/2021	07:16:48	35.24	7.96	0.00	Mixed and pumped 50bbbls of 12.5ppg Tuned prime spacer at 6.0bpm 1000psi
9	Pump Lead Cement	5/15/2021	07:25:16	467.36	12.61	6.46	Mixed and pumped 555sks or 164bbbls of 13.0ppg Y-1.66 G/sk-8.3 of ElastiCem at 9.0bpm 1200psi
10	Pump Lead Cement	5/15/2021	07:47:52	1125.45	13.22	9.21	Mixed and pumped 920sks or 252bbbls of 13.2ppg Y-1.54 G/sk-7.12 GasStop at 9.0bpm 1200psi
11	Check Weight	5/15/2021	07:56:19	1149.11	13.17	8.93	Confirmed weight on scales.
12	Pump Tail Cement	5/15/2021	08:18:02	958.73	12.99	9.21	Mixed and pumped 1453sks or 411bbbls of 13.2ppg Y-1.59 G/sk-7.75 of ElastiCem at 9.0bpm 912psi
13	Shutdown	5/15/2021	09:09:44	149.32	3.28	0.65	
14	Clean Lines	5/15/2021	09:11:21	45.91	0.95	0.82	Washed pumps and lines with fresh water
15	Drop Top Plug	5/15/2021	09:15:08	6.87	8.54	0.00	Released plug witnessed by company rep
16	Pump Displacement	5/15/2021	09:15:13	6.85	8.48	0.00	Pumped 434bbbls of fresh water to displace cement.
17	Bump Plug	5/15/2021	10:10:31	3165.56	8.34	0.00	Bumped plug 500psi over final pump pressure.
18	Other	5/15/2021	10:12:23	3271.20	8.34	0.00	Released pressure back to the pump truck to check floats, floats held good 5bbbls back
19	End Job	5/15/2021	10:13:58	56.66	8.09	0.00	50bbbls of cement back to surface

## 3.0 Attachments

### 3.1 Job Chart

