

# HALLIBURTON

iCem<sup>®</sup> Service

## **SRC ENERGY INC-EBUS**

Date: Thursday, September 05, 2019

## **Bost Farm 32N-11B-L Production**

Job Date: Wednesday, September 04, 2019

Sincerely,

**Prince A. Perez**

## 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 **Bost Farm 32N-11B-L 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.

**Approximately 40 bbls 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 Ft. Lupton**

*The Road to Excellence Starts with Safety*

<b>Sold To #:</b> 359915		<b>Ship To #:</b> 3982068		<b>Quote #:</b> 0022621082		<b>Sales Order #:</b> 0905943728					
<b>Customer:</b> SRC ENERGY INC-EBUS				<b>Customer Rep:</b> John Myers							
<b>Well Name:</b> BOST FARM			<b>Well #:</b> 32N-11B-L			<b>API/UWI #:</b> 05-123-50258-00					
<b>Field:</b> WATTENBERG		<b>City (SAP):</b> MILLIKEN		<b>County/Parish:</b> WELD			<b>State:</b> COLORADO				
<b>Legal Description:</b> NW SW-7-5N-66W-2666FSL-1054FWL											
<b>Contractor:</b> PRECISION DRLG				<b>Rig/Platform Name/Num:</b> PRECISION 462							
<b>Job BOM:</b> 7523 7523											
<b>Well Type:</b> HORIZONTAL OIL											
<b>Sales Person:</b> HALAMERICA\HB41307				<b>Srvc Supervisor:</b> Prince Perez							
<b>Job</b>											
<b>Formation Depth (MD)</b>		<b>Top</b> 0'		<b>Bottom</b>		17,668'					
<b>Job depth MD</b>		17653ft		<b>Job Depth TVD</b>		6,964'					
<b>Water Depth</b>				<b>Wk Ht Above Floor</b>		5'					
<b>Well Data</b>											
<b>Description</b>	<b>New / Used</b>	<b>Size in</b>	<b>ID in</b>	<b>Weight lbm/ft</b>	<b>Thread</b>	<b>Grade</b>	<b>Top MD ft</b>	<b>Bottom MD ft</b>	<b>Top TVD ft</b>	<b>Bottom TVD ft</b>	
Casing		9.625	8.921	36	LTC	J-55	0	1776	0	1776	
Casing		5.5	4.778	20	TXP-BTC	P110IC	0	17653	0	6964	
Open Hole Section			8.5				1776	17668	1776	6964	
<b>Tools and Accessories</b>											
<b>Type</b>	<b>Size in</b>	<b>Qty</b>	<b>Make</b>	<b>Depth ft</b>		<b>Type</b>	<b>Size in</b>	<b>Qty</b>	<b>Make</b>		
Guide Shoe	5.5	1		17,653		Top Plug	5.5	1			
Float Shoe	5.5					Bottom Plug	5.5	1			
Float Collar	5.5	1		17,547		SSR plug set	5.5				
Insert Float	5.5					Plug Container	5.5	1	HES		
Stage Tool	5.5					Centralizers	5.5	251			
<b>Fluid Data</b>											
<b>Stage/Plug #:</b> 1											
<b>Fluid #</b>	<b>Stage Type</b>	<b>Fluid Name</b>			<b>Qty</b>	<b>Qty UoM</b>	<b>Mixing Density lbm/gal</b>	<b>Yield ft/sack</b>	<b>Mix Fluid Gal</b>	<b>Rate bbl/min</b>	<b>Total Mix Fluid Gal</b>
1	Spacer	TUNED PRIME			80	bbl	12.5	2.79	16.6	4	2,673

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	Lead	ELASTICEM (TM) SYSTEM	1,185	sack	13.2	1.57	7.52	8	8,911	
3	Tail	NeoCem TM	1,155	sack	13.2	2.04	9.79	8	11,308	
4	Displacement	MMCR Displacement	20	bbl	8.34			8		
5	Displacement	Water	300	bbl	8.33			8		
6	Displacement	MMCR Displacement	70	bbl	8.34			8		
<b>Cement Left In Pipe</b>										
<b>Amount</b>		40 ft			<b>Reason</b>			<b>Shoe Joint</b>		
Mix Water:		pH 7			Mix Water Chloride: <300 ppm			Mix Water Temperature: 70 °F		
Cement Temperature:		## °F			Plug Displaced by: 8.33 lb/gal			Disp. Temperature: 70 °F		
Plug Bumped?		Yes			Bump Pressure: 2,800 psi			Floats Held? Yes		
Cement Returns:		40 bbl			Returns Density: ## lb/gal			Returns Temperature: ## °F		
<b>Comment</b>										
Pumped 80 bbls of Tuned Prime spacer with 40 gallons of Dual B and 40 gallons of Musol A.										
Pumped 331 bbls of Elasticem.										
Pumped 420 bbls of Neocem.										
Pumped 389.5 bbls of fresh water displacement with 5 gallons of MMCR in the first 20 bbls, 20 gallons of Clayweb throughout, 3 lbs of BE3 throughout, and 15 gallons of MMCR in the last 70 bbls.										
3 bbls back on the floats.										



## 2.0 Real-Time Job Summary

### 2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	DH Density <i>(ppg)</i>	Comb Pump Rate <i>(bbl/min)</i>	PS Pump Press <i>(psi)</i>	Comments
Event	1	Call Out	Call Out	9/3/2019	17:00:00	USER				CREW CALLED OUT AT 17:00, REQUESTED ON LOCATION 23:00. CREW PICKED UP CEMENT, CHEMICALS, AND PLUG CONTAINER FROM FT. LUPTON, CO. BULK 660, 10867098, AND PUMP 11189145.
Event	2	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	9/3/2019	21:00:00	USER				CREW DISCUSSED ROUTES, HAZARDS, AND COMMUNICATION WITH CREW.
Event	3	Crew Leave Shop	Crew Leave Shop	9/3/2019	21:10:00	USER				STARTED JOURNEY MANAGEMENT.
Event	4	Arrive at Location from Service Center	Arrive at Location from Service Center	9/3/2019	22:00:00	USER				END JOURNEY MANAGEMENT. MEET WITH CO. MAN TO DISCUSS JOB; SURFACE CASING- 9/58" 36 LB/FT @ 1,776', 5.5" CASING: 20 LB/FT TOTAL 17,653.1', 8 1/2" HOLE, TD 17,668', 106.2' SHOE TRAC, TVD- 6,964'. PUMP FRESH WATER DISPLACEMENT. CASING LANDED @ 12:30 9/3/2019.
Event	5	Safety Meeting - Assessment of Location	Safety Meeting - Assessment of Location	9/3/2019	22:10:00	USER				HAZARD HUNT. DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH

										LOCATION, RIG UP AND WEATHER.
Event	6	Rig-Up Equipment	Rig-Up Equipment	9/3/2019	22:20:00	USER				RIG UP BULK AND MIXING EQUIPMENT.
Event	7	Rig-Up Completed	Rig-Up Completed	9/4/2019	03:20:00	USER	8.45	0.00	-21.00	
Event	8	Pre-Job Safety Meeting	Pre-Job Safety Meeting	9/4/2019	03:30:00	USER	8.45	0.00	2.00	MEETING WITH HALLIBURTON AND RIG PERSONNEL. COMMUNICATED POTENTIAL SAFETY HAZARDS AND JOB DETAILS.
Event	9	Start Job	Start Job	9/4/2019	04:55:11	COM4	8.54	0.00	0.00	BEGIN RECORDING JOB DATA.
Event	10	Drop Bottom Plug	Drop Bottom Plug	9/4/2019	04:55:57	COM4	8.53	0.00	1.00	PLUG LEFT CONTAINER, VERIFIED BY CO. MAN.
Event	11	Test Lines	Test Lines	9/4/2019	05:03:19	COM4	8.71	0.00	6703.00	PRESSURE TESTED IRON TO 6,500 PSI. KICKOUTS SET @ 500 PSI, KICKED OUT @ 2,500 PSI, 5TH GEAR STALL OUT @ 2,300 PSI. 6,500 PRESSURE TEST KICKED OUT @ 6,600 PSI
Event	12	Pump Spacer 1	Pump Spacer 1	9/4/2019	05:06:22	COM4	8.52	0.00	-1.00	PUMP 80 BBLS OF TUNED PRIME SPACER @ 12.5 LB/GAL, 2.79 CUFT/SK, 16.6 GALL/SK. 20 GALS D-AIR, 40 GALLONS OF DUAL B, 40 GALLONS OF MUSOL A. 20 GALLONS OF D-AIR. 80 BBLS CALCULATED TO RETURN TO SURFACE. DENSITY VERIFIED BY PRESSURIZED MUD SCALES. PUMP RATE 4 BBLS/MIN @ 300 PSI.
Event	13	Check Weight	Check Weight	9/4/2019	05:23:27	COM4	12.63	6.10	288.00	

Event	14	Pump Lead Cement	Pump Lead Cement	9/4/2019	05:25:58	COM4	12.40	6.10	257.00	PUMPED 1,185 SKS OF ELASTICEM @ 13.2 LB/GAL, 1.57 FT3/SK, 7.52 GAL/SK. 331.4 BBLs. HOL CALCULATED @ 7,367', 18 BBLs CALCULATED TO RETURN TO SURFACE. DENSITY VERIFIED BY PRESSURIZED MUD SCALES. PUMP RATE 8 BBLs/MIN @ 500 PSI
Event	15	Check Weight	Check Weight	9/4/2019	05:27:02	COM4	13.44	6.10	249.00	
Event	16	Check Weight	Check Weight	9/4/2019	05:35:54	COM4	13.36	6.10	222.00	
Event	17	Check Weight	Check Weight	9/4/2019	05:37:55	COM4	13.27	6.10	211.00	
Event	18	Pump Tail Cement	Pump Tail Cement	9/4/2019	06:10:47	COM4	13.04	8.00	538.00	PUMP 1,155 SKS OF NEOCEM @ 13.2 LB/GAL, 2.04 FT3/SK, 9.79 GAL/SK, 419.6 BBLs. HOT CALCULATED @ 10,285.3', TOT CALCULATED @ 7,367.8'. DENSITY VERIFIED BY PRESSURIZED MUD SCALES. PUMP RATE 8 BBLs/MIN @ 800 PSI.
Event	19	Check Weight	Check Weight	9/4/2019	06:12:10	COM4	13.18	8.00	661.00	
Event	20	Check Weight	Check Weight	9/4/2019	06:36:03	COM4	13.22	8.00	800.00	
Event	21	Check Weight	Check Weight	9/4/2019	06:50:08	COM4	13.25	8.00	991.00	
Event	22	Shutdown	Shutdown	9/4/2019	07:07:34	COM4	13.27	0.00	153.00	SHUTDOWN TO WASH LINES.
Event	23	Clean Lines	Clean Lines	9/4/2019	07:12:52	COM4	7.01	5.20	102.00	
Event	24	Drop Top Plug	Drop Top Plug	9/4/2019	07:15:43	COM4	8.01	0.00	7.00	PLUG LEFT CONTAINER, VERIFIED BY CO. MAN.
Event	25	Pump Displacement	Pump Displacement	9/4/2019	07:15:46	COM4	8.01	0.00	7.00	BEGIN CALCULATED DISPLACEMENT OF 389.5

BBLs WITH FRESH WATER. 5 GALLONS MMCR IN THE FIRST 20 BBLs, 20 GALLONS OF CLAYWEB THROUGHOUT, 3 LBS OF BE3 THROUGHOUT, 15 GALLONS OF MMCR IN THE LAST 70 BBLs OF DISPLACEMENT. PUMP RATE 7 BPM @ 3,070 PSI. CAUGHT CEMENT @ 10 BBLs INTO DISPLACEMENT. SPACER TO SURFACE @ 270 BBLs INTO DISPLACEMENT. 80 BBLs OF SPACER TO SURFACE. CEMENT TO SURFACE @ 350 BBLs INTO DISPLACEMENT. 40 BBLs OF CEMENT TO SURFACE. SLOW RATE TO 3 BPM @ 370 BBLs INTO DISPLACEMENT.

Event	26	Bump Plug	Bump Plug	9/4/2019	08:21:30	COM4	8.10	0.00	3297.00	PLUG BUMPED AT CALCULATED DISPLACEMENT. 2,800 PSI PRESSURED 500 PSI OVER BUMP. SHUTDOWN FOR 10 MINUTES.
Event	27	Shift Tool - Lower	Shift Tool - Lower	9/4/2019	08:32:51	USER	8.18	2.30	5874.00	SHEARED @ 5,874 PSI FOLLOWED BY A 6 BBL WET SHOE.
Event	28	Check Floats	Check Floats	9/4/2019	08:35:36	USER	8.05	0.00	1089.00	RELEASED PRESSURE, FLOATS HELD, 3 BBLs BACK.
Event	29	End Job	End Job	9/4/2019	08:36:33	COM4	8.00	0.00	0.00	STOP RECORDING JOB DATA.
Event	30	Post-Job Safety Meeting (Pre Rig-Down)	Post-Job Safety Meeting (Pre Rig-Down)	9/4/2019	08:40:00	USER	8.01	0.00	3.00	DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH WEATHER, LOCATION

							AND RIGGING DOWN IRON AND HOSES.
Event	31	Rig-Down Equipment	Rig-Down Equipment	9/4/2019	08:50:00	USER	RIG DOWN BULK AND MIXING EQUIPMENT.
Event	32	Rig-Down Completed	Rig-Down Completed	9/4/2019	11:10:00	USER	
Event	33	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	9/4/2019	11:20:00	USER	CREW DISCUSSED ROUTES HAZARDS AND COMMUNICATION WITH CREW.
Event	34	Crew Leave Location	Crew Leave Location	9/4/2019	11:30:00	USER	THANK YOU FOR USING HALLIBURTON – PRINCE PEREZ AND CREW.

## 3.0 Attachments

### 3.1 Bost Farm 32N-11B-L Production.png

