

# HALLIBURTON

iCem<sup>®</sup> Service

**SRC ENERGY INC - EBUS**

**Bost Farm 4N-11C-L Production**

Sincerely,  
**Meghan Jacobs**

## 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 4N-11C-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 11 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 Fort Lupton**

*The Road to Excellence Starts with Safety*

<b>Sold To #:</b> 359915		<b>Ship To #:</b> 3901237		<b>Quote #:</b>		<b>Sales Order #:</b> 0905885091				
<b>Customer:</b> SRC ENERGY INC-EBUS					<b>Customer Rep:</b> TONY PERSHALL					
<b>Well Name:</b> BOST FARM			<b>Well #:</b> 4N-11C-L			<b>API/UWI #:</b> 05-123-47658-00				
<b>Field:</b> WATTENBERG		<b>City (SAP):</b> WINDSOR		<b>County/Parish:</b> WELD			<b>State:</b> COLORADO			
<b>Legal Description:</b> NW NW-7-5N-66W-1335FNL-1121FWL										
<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> Nikolaus Kornafel					
<b>Job</b>										
<b>Formation Name</b>										
<b>Formation Depth (MD)</b>		<b>Top</b>			<b>Bottom</b>					
<b>Form Type</b>					<b>BHST</b>					
<b>Job depth MD</b>		17206ft			<b>Job Depth TVD</b>					
<b>Water Depth</b>					<b>Wk Ht Above Floor</b>					
<b>Perforation Depth (MD)</b>		<b>From</b>			<b>To</b>					
<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	1811	0	0
Casing		5.5	4.778	20	TXP-BTC	P110IC	0	17206	0	0
Open Hole Section			8.5				1811	17222	0	7027
<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		17206		Top Plug	5.5	1		
Float Shoe	5.5					Bottom Plug	5.5	1		
Float Collar	5.5	1		17160						
Insert Float	5.5					Plug Container	5.5	1	HES	
Stage Tool	5.5	1		17103		Centralizers	5.5			
<b>Fluid Data</b>										
<b>Stage/Plug #:</b> 1										

Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft <sup>3</sup> /sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal	
1	SPACER	SBM FDP-C1337-18 CEMENT SPACER SYS	80	bbl	11.5	3.84	23.9	5	2,795	
2	LEAD CEMENT	ELASTICEM (TM) SYSTEM	1167	sack	13.2	1.6	7.8	8	9,102	
3	TAIL CEMENT	NeoCem TM		sack	13.2	2.08	10.18	8	10,811	
4	MMCR Displacement	MMCR Displacement	20	bbl	8.34			8		
5	Water	Water	290	bbl	8.33			8		
6	MMCR Displacement	MMCR Displacement	70	bbl	8.34			8		
<b>Cement Left In Pipe</b>		<b>Amount</b>	103 ft		<b>Reason</b>			Shoe Joint		
Mix Water:		pH 7	Mix Water Chloride:		0 ppm		Mix Water Temperature:			69 °F
Cement Temperature:		N/A	Plug Displaced by:		8.33 lb/gal		Disp. Temperature:			69 °F
Plug Bumped?		Yes	Bump Pressure:		2800 psi		Floats Held?			Yes
Cement Returns:		11 bbl	Returns Density:		N/A		Returns Temperature:			N/A
<p><b>Comment</b> DROPPED THE BOTTOM PLUG THEN PUMPED 80 BBLs OF SPACER FOLLOWED BY 333 BBLs OF LEAD CEMENT FOLLOWED BY 393 BBLs OF TAIL CEMENT. SHUTDOWN TO WASH LINES AND DROP THE TOP PLUG. DISPLACED WITH 380 BBLs OF FRESH WATER WITH MMCR IN THE FIRST 20 BBLs AND WITH BIOCIDES AND CLA-WEB IN 20-310 BBLs, 10 GAL OF MMCR IN THE LAST 70 BBLs OF DISPLACEMENT. BUMPED THE PLUG AT 2,800 PSI AND BROUGHT PRESSURE 500 PSI OVER FINAL CIRCULATING PRESSURE AND THEN PRESSURED UP TO 5,799 PSI TO SHIFT THE WET SHOE SUB. PUMPED A 6 BBL WET SHOE AND THEN RELEASED PRESSURE TO CHECK FLOATS. FLOATS HELD AND GOT 3.0 BBLs BACK TO THE TRUCK. ALL 80 BBLs OF SPACER RETURNED TO SURFACE AND 11 BBLs OF LEAD CEMENT.</p>										

## 2.0 Real-Time Job Summary

### 2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	DH Density (ppg)	Comb Pump Rate (bbl/min)	DS Pump Press (psi)	Comments
Event	1	Call Out	Call Out	8/6/2019	04:30:00	USER				CREW CALLED OUT AT 04:30, REQUESTED ON LOCATION 10:30. CREW PICKED UP CEMENT, CHEMICALS, AND PLUG CONTAINER FROM FT. LUPTON, CO. BULK 660 11273333, AND PUMP 11189145.
Event	2	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	8/6/2019	08:15:00	USER				CREW DISCUSSED ROUTES, HAZARDS, AND COMMUNICATION WITH CREW.
Event	3	Crew Leave Yard	Crew Leave Yard	8/6/2019	08:30:00	USER				STARTED JOURNEY MANAGEMENT.
Event	4	Arrive at Location from Service Center	Arrive at Location from Service Center	8/6/2019	09:30:00	USER				END JOURNEY MANAGEMENT. MEET WITH CO. MAN TO DISCUSS JOB; SURFACE CASING- 9.625" 36 LB/FT @ 1,811, 5.5" CASING: 20 LB/FT TOTAL 17,206', 8.5" HOLE, TD 17,222', SHOE TRAC- 103', TVD- 7,027'. PUMP FRESH WATER DISPLACEMENT 380 BBLs. CASING LANDED @ 10:30 08/6/2019. RIG CIRCULATED BOTTOMS UP.
Event	5	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	8/6/2019	10:00:00	USER				HAZARD HUNT. DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH LOCATION, RIG UP, AND WEATHER.
Event	6	Rig-Up Equipment	Rig-Up Equipment	8/6/2019	10:15:00	USER				CREW STAGED EQUIPMENT AND RIGGED UP BULK, IRON AND WATER HOSES TO PERFORM JOB.
Event	7	Pre-Job Safety Meeting	Pre-Job Safety Meeting	8/6/2019	13:30:00	USER	8.55	0.00	55.00	SAFETY MEETING WITH HALLIBURTON, AND RIG PERSONNEL. CREW COMMUNICATED POTENTIAL SAFETY HAZARDS, AND JOB DETAILS.
Event	8	Start Job	Start Job	8/6/2019	13:34:46	COM5	8.55	0.00	55.00	BEGIN RECORDING JOB DATA
Event	9	Test Lines	Test Lines	8/6/2019	13:47:38	COM5	8.29	0.00	70.00	PRESSURE TESTED IRON TO 6,500 PSI. KICKOUTS SET @ 500 PSI, KICKED OUT @ 900 PSI, 5TH GEAR STALL OUT @ 2,100 PSI. PRESSURE HELD WITH NO LEAKS.
Event	10	Pump Spacer 1	Pump Spacer 1	8/6/2019	13:50:16	COM5	8.55	0.00	6420.00	PUMP 80 BBLs OF TUNED PRIMED SPACER @ 11.5 LB/GAL, 3.84 FT3/SK, 23.9 GAL/SK 10 GALLONS D-AIR.

DENSITY VERIFIED BY PRESSURIZED MUD SCALES. PUMP RATE 5 BBL/MIN @ 540 PSI.

Event	11	Drop Bottom Plug	Drop Bottom Plug	8/6/2019	13:51:26	COM5	8.38	0.00	-25.00	BOTTOM PLUG LEFT THE PLUG CONTAINER. WITNESSED BY COMPANY MAN.
Event	12	Check Weight	Check Weight	8/6/2019	13:53:31	COM5	11.38	4.00	281.00	DENSITY VERIFIED BY PRESSURIZED MUD SCALES.
Event	13	Pump Lead Cement	Pump Lead Cement	8/6/2019	14:05:59	COM5	11.57	6.10	414.00	PUMPED 1167 SKS OF ELASTICEM LEAD CEMENT @ 13.2 LB/GAL, 1.6 FT3/SK, 7.8 GAL/SK. 333 BBL, TOL @ SURFACE. 11 BBL OF LEAD CEMENT BACK TO SURFACE. DENSITY VERIFIED BY PRESSURIZED MUD SCALES. PUMP RATE 8 BBL/MIN @ 712 PSI.
Event	14	Check Weight	Check Weight	8/6/2019	14:09:27	COM5	13.55	8.10	675.00	DENSITY VERIFIED BY PRESSURIZED MUD SCALES.
Event	15	Check Weight	Check Weight	8/6/2019	14:15:45	COM5	13.21	8.10	976.00	DENSITY VERIFIED BY PRESSURIZED MUD SCALES.
Event	16	Pump Tail Cement	Pump Tail Cement	8/6/2019	14:56:48	COM5	13.23	7.60	427.00	PUMP 1062 SKS OF NEOCEM @ 13.2 LB/GAL, 2.08 FT3/SK, 10.18 GAL/SK, 394 BBL. TOP OF TAIL CALCULATED @ 7,563.35'. DENSITY VERIFIED BY PRESSURIZED MUD SCALES. PUMP RATE 8 BBL/MIN @ 650 PSI.
Event	17	Check Weight	Check Weight	8/6/2019	15:00:28	COM5	13.36	8.00	690.00	DENSITY VERIFIED BY PRESSURIZED MUD SCALES.
Event	18	Check Weight	Check Weight	8/6/2019	15:30:53	COM5	13.18	8.10	828.00	DENSITY VERIFIED BY PRESSURIZED MUD SCALES.
Event	19	Shutdown	Shutdown	8/6/2019	15:47:40	COM5	13.35	0.00	76.00	SHUT DOWN TO WASH PUMPS AND LINES
Event	20	Drop Top Plug	Drop Top Plug	8/6/2019	15:54:12	COM5	5.06	0.00	17.00	TOP PLUG LEFT PLUG CONTAINER WITNESSED BY COMPANY MAN.
Event	21	Pump Displacement	Pump Displacement	8/6/2019	15:54:15	COM5	3.41	0.00	11.00	BEGIN CALCULATED DISPLACEMENT OF 380 BBL WITH FRESH WATER. 280 BBL INTO DISPLACEMENT SPACER BACK TO SURFACE.
Event	22	Bump Plug	Bump Plug	8/6/2019	16:51:24	COM5	8.20	0.00	2692.00	PLUG BUMPED AT CALCULATED DISPLACEMENT. 2,800 PSI PRESSURED UP 500 PSI OVER FINAL CIRCULATING PRESSURE.
Event	23	Pressure Up Well	Pressure Up Well	8/6/2019	16:52:02	COM5	8.20	0.00	2711.00	PRESSURED UP WELL TO 5,799 PSI TO SHIFT THE WET SHOE SUB AND PUMPED A 6 BBL WETSHOE.
Event	24	Other	Other	8/6/2019	16:56:54	COM5	8.18	0.00	2149.00	RELEASED PRESSURE, FLOATS HELD, 3.0 BBL BACK.

Event	25	End Job	End Job	8/6/2019	16:58:04	COM5	7.76	0.00	-10.00	END RECORDING JOB DATA
Event	26	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	8/6/2019	17:00:00	USER	8.16	0.00	-14.00	DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH WEATHER, LOCATION AND RIGGING DOWN IRON AND HOSES.
Event	27	Rig-Down Completed	Rig-Down Completed	8/6/2019	18:30:00	USER				ALL HALLIBURTON ITEMS WERE STOWED FOR TRAVEL, AND LOCATION WAS CLEAN.
Event	28	Safety Meeting - Departing Location	Safety Meeting - Departing Location	8/6/2019	19:00:00	USER				CREW DISCUSSED ROUTES HAZARDS AND COMMUNICATION WITH CREW.

## 3.0 Attachments

### 3.1 BOST FARM 4N-11C-L PRODUCTION – Job Chart

