

# HALLIBURTON

iCem<sup>®</sup> Service

**SRC ENERGY INC-EBUS**

**BOST FARM 34C-11-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 34C-11-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 78 bbls of spacer 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> 3982037		<b>Quote #:</b>		<b>Sales Order #:</b> 0906074565					
<b>Customer:</b> SRC ENERGY INC-EBUS						<b>Customer Rep:</b>					
<b>Well Name:</b> BOST FARM				<b>Well #:</b> 34C-11-L		<b>API/UWI #:</b> 05-123-50257-00					
<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-1274FWL											
<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>Srv Supervisor:</b> Lance Carpenter						
<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>		18073ft			<b>Job Depth TVD</b>		7070				
<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	1640			
Casing		5.5	4.778	20	TXP-BTC	P110IC	0	18073			
Open Hole Section			8.5				1640	18093			
<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			18073		Top Plug	5.5	1	HES		
Float Shoe	5.5					Bottom Plug	5.5	1	HES		
Float Collar	5.5			18025		SSR plug set	5.5		HES		
Insert Float	5.5			17966		Plug Container	5.5		HES		
Stage Tool	5.5					Centralizers	5.5		HES		
<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<sup>3</sup>/sack</b>	<b>Mix Fluid Gal</b>	<b>Rate bbl/min</b>	<b>Total Mix Fluid Gal</b>

1	Tuned Prime Cement Spacer Base - RKS/SE	TUNED PRIME CEMENT SPACER SYS	80	bbl	12.5	2.72			
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	1281	sack	13.2	1.57		8	7.52
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	NeoCem	NeoCem TM	1117	sack	13.2	2.04		8	9.79
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	MMCR Displacement	MMCR Displacement	200	bbl	8.34			8	
0.20 gal/bbl		MICRO MATRIX CEMENT RETARDER, 5 GAL PAIL (100003781)							
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	Water	Water	308	bbl	8.33			8	
1 gal/Mgal		CLA-WEB - TOTE (101985045)							
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
6	MMCR Displacement	MMCR Displacement	70	bbl	8.34			8	
0.20 gal/bbl		MICRO MATRIX CEMENT RETARDER, 5 GAL PAIL (100003781)							
Cement Left In Pipe		Amount	107 ft		Reason			Shoe Joint	
Mix Water:		pH 7	Mix Water Chloride:		500 ppm		Mix Water Temperature:		64 °F
Cement Temperature:		## °F °C	Plug Displaced by:		8.4 lb/gal Water		Disp. Temperature:		## °F °C
Plug Bumped?		Yes	Bump Pressure:		2700 psi		Floats Held?		Yes
Cement Returns:		## bbl m3	Returns Density:		## lb/gal kg/m3		Returns Temperature:		## °F °C

## Comment

JOB WENT WELL. NO ACCIDENT, INJURY OR SPILL. JOB PERFORMED AS DESIGNED. BOTTOM PLUG DROPPED BEFORE SPACER. ALL SLURRIES VERIFIED BY PRESSURIZED MUD BALANCE AND MIX WATER. DOWNHOLE DENSITY NOT READING CORRECTLY SO CHART INCLUDES RECIRCULATION (MIX) DENSITY. TOP PLUG DROPPED BEFORE DISPLACEMENT. DISPLACED WITH 398 BBL WATER UNEXPECTEDLY LOSING RETURNS AND SURFACE PRESSURE DROP 3 TIMES BUT WERE ABLE TO REGAIN THEM EACH TIME. BUMPED PLUG AT 3 BPM AT 2700 PSI, TOOK TO 3150 PSI AND HELD FOR 10 MINUTES. PRESSURED UP TO 4950 PSI TO OPEN WET SHOE SUB THEN PUMPED 6 BBL WET SHOE. BLED OFF PRESSURE, FLOATS HELD, 2 BBL BACK. 78 BBL SPACER TO SURFACE.

TOP OF CEMENT – 45'

TOP OF SPACER – SURFACE WITH 78 BBL BACK

## 2.0 Real-Time Job Summary

## 2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	PS Pump Press (psi)	DH Density (ppg)	Comb Pump Rate (bbl/min)	Comments
Event	1	Comment	Call Out	11/3/2019	23:00:00	USER				CREW CALLED OUT. ON LOCATION TIME 0500
Event	2	Depart Shop for Location	Depart Shop for Location	11/4/2019	03:00:00	USER				CREW HAS VERIFIED EQUIPMENT AND MATERIALS FOR JOB. CREW HAS JOURNEY MANAGEMENT SAFETY MEETING DISCUSSING ROUTES, STOPS, CONVOY ORDER, FOLLOWING DISTANCE, DRIVING TO CONDITIONS, TRAFFIC AND THEN DEPART FOR LOCATION
Event	3	Arrive At Loc	Arrive At Loc	11/4/2019	04:00:00	USER				CREW ARRIVES AT LOCATION. RIG RIH CASING 16000'. CREW HAS SITE ASSESSMENT SAFETY MEETING DISCUSSING LOCATION HAZARDS AND PRE RIG UP SAFETY MEETING DISCUSSING OPERATIONS, RED ZONES, MUSTER AREAS, PINCH POINTS, LINE OF FIRE, EQUIPMENT LAYOUT, SLIPS TRIPS FALLS, SPILLS AND BEGIN RIGGING UP
Event	4	Casing on Bottom	Casing on Bottom	11/4/2019	06:00:00	USER				CASING ON BOTTOM. RIG BEGINS FILLING CASING THROUGH CRT AND RIGGING DOWN CASING CREW
Event	5	Safety Meeting	Safety Meeting	11/4/2019	08:00:00	USER	56.00	0.78	0.00	CREW, RIG CREW AND CUSTOMER REP HAVE PRE JOB SAFETY MEETING DISCUSSING HAZARDS, RED ZONES, MUSTER AREAS, STOP WORK, LIFTING OPERATIONS, COMMANDER HEAD SPECIFIC HAZARDS, COMMUNICATION, SLIPS TRIPS FALLS, HAND PLACEMENT, LINE OF FIRE AND THE JOB PROCEEDURE
Event	6	Start Job	Start Job	11/4/2019	09:28:38	COM6	41.00	6.95	0.00	START JOB
Event	7	Test Lines	Test Lines	11/4/2019	09:48:29	COM6	3850.00	8.27	0.00	FILL HES LINES WITH 3 BBL AND PRESSURE TEST TO 6500 PSI. HELD TEST FOR A FEW MINUTES TO ENSURE NO LEAKS. TEST GOOD
Event	8	Drop Bottom Plug	Drop Bottom Plug	11/4/2019	09:53:03	USER	153.00	8.31	0.00	DROP BOTTOM PLUG
Event	9	Pump Spacer 1	Pump Spacer 1	11/4/2019	09:54:18	COM6	150.00	8.30	0.00	PUMP 80 BBL TUNED PRIME SPACER 12.5# 2.72 YIELD 16 GAL



Event	10	Pump Lead Cement	Pump Lead Cement	11/4/2019	10:13:42	COM6	155.00	11.54	4.00	PUMP 358 BBL ELASTICEM LEAD 13.2# 1.57 YIELD 7.52 GAL 1281 SACKS
Event	11	Pump Tail Cement	Pump Tail Cement	11/4/2019	11:02:41	USER	651.00	11.99	8.00	PUMP 406 BBL NEOCEM TAIL 13.2# 2.04 YIELD 9.79 GAL 1117 SACKS
Event	12	Shutdown	Shutdown	11/4/2019	11:58:15	COM6	43.00	12.09	0.00	SHUTDOWN. WASH PUMPS AND LINES TO THE PIT
Event	13	Drop Top Plug	Drop Top Plug	11/4/2019	12:06:40	COM6	29.00	8.48	0.00	DROP TOP PLUG
Event	14	Pump Displacement	Pump Displacement	11/4/2019	12:07:49	COM6	16.00	8.33	0.00	PUMP 398 BBL WATER DISPLACEMENT WITH FIRST 20 BBL MMCR, LAST 70 BBL MMCR AND CLAYWEB THROUGHOUT
Event	15	Comment	Comment	11/4/2019	12:48:24	USER	2931.00	8.33	5.40	PUMPING DISPLACEMENT AND SUDDENLY LOST PRESSURE AS WELL AS RETURNS. SLOWED RATE UNTIL PRESSURE LEVELED OUT AND WE WERE ABLE TO BUILD LIFT PRESSURE AGAIN AND RETURNS CAME BACK
Event	16	Comment	Comment	11/4/2019	13:03:51	USER	2727.00	8.33	4.00	PRESSURE DROPPED AGAIN RAPIDLY AND RETURNS WERE LOST. AGAIN CREW WAS ABLE TO CONTROL DROP WITH RATE AND BEGIN LIFTING ONCE MORE AS RETURNS CAME BACK
Event	17	Comment	Comment	11/4/2019	13:12:37	USER	2614.00	8.32	3.50	PRESSURE DROPPED AGAIN COMBINED WITH RETURNS STOPPING. RATE WAS ADJUSTED TO CONTROL DROP AND ONCE MORE ESTABLISH CIRCULATION
Event	18	Bump Plug	Bump Plug	11/4/2019	13:23:44	COM6	3115.00	8.32	0.00	BUMPED PLUG. FINAL CIRCULATING PRESSURE 2700 PSI. TOOK TO 3100 PSI AND HELD FOR 10 MINUTES
Event	19	Comment	Comment	11/4/2019	13:31:16	USER	3294.00	8.32	0.90	PRESSURE UP TO 4950 PSI TO OPEN WET SHOE SUB THEN PUMPED 6 BBL WET SHOE. FULL RETURNS ONCE WET SHOE OPENED
Event	20	Check Floats	Check Floats	11/4/2019	13:34:57	USER	1705.00	8.31	0.00	bled off pressure, floats held, 2 BBL BACK
Event	21	End Job	End Job	11/4/2019	13:36:37	COM6	19.00	8.30	0.00	END JOB
Event	22	Safety Meeting	Safety Meeting	11/4/2019	13:40:00	USER	15.00	8.30	0.00	CREW HAS PRE RIG DOWN SAFETY MEETING DISCUSSING SLIPS TRIPS FALLS, LIFTING OPERATIONS, LINE OF FIRE, TEAM LIFTING, PROPER PPE, COMMUNICATION AND BEGIN RIGGING DOWN EQUIPMENT
Event	23	Depart Location	Depart Location	11/4/2019	16:00:00	USER				CREW IS RIGGED DOWN AND READY TO DEPART. CREW HAS JOURNEY MANAGEMENT SAFETY MEETING

DISCUSSING HOURS OF SERVICE, FIT FOR DUTY,  
DIRECTIONS, CONVOY ORDER, FOLLOWING DISTANCE,  
WALK AROUNDS AND DEPART FROM LOCATION

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## 3.0 Attachments

### 3.1 Bost Farm 34C-11-L Production – Job Chart

