

# HALLIBURTON

iCem<sup>®</sup> Service

**SRC ENERGY INC-EBUS**

**Bost Farm 33C-11-L**

Sincerely,

**Alexandria Dionigi**

## 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 33C-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 12 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*

Sold To #: 359915	Ship To #: 3982122	Quote #:	Sales Order #: 0906040051
Customer: SRC ENERGY INC-EBUS		Customer Rep: John Myers	
Well Name: BOST FARM		Well #: 33C-11-L	API/UWI #: 05-123-50255-00
Field: WATTENBERG	City (SAP): MILLIKEN	County/Parish: WELD	State: COLORADO
Legal Description: NW SW-7-5N-66W-2666FSL-1194FWL			
Contractor: PRECISION DRLG		Rig/Platform Name/Num: PRECISION 462	
Job BOM: 7523 7523			
Well Type: HORIZONTAL OIL			
Sales Person: HALAMERICA/HB41307		Srvc Supervisor: Michael Loughran	

**Job**

Formation Name			
Formation Depth (MD)	Top		Bottom
Form Type	BHST		
Job depth MD	18090		
Water Depth	Job Depth TVD		
Perforation Depth (MD)	From		To

**Well Data**

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	LTC	J-55	0	1853	0	1853
Casing		5.5	4.778	20	TXP-BTC	P110IC	0	18090	0	7111
Open Hole Section			8.5				1853	18090	1853	7111

**Tools and Accessories**

Type	Size in	Qty	Make	Depth ft	Type	Size in	Qty	Make
Guide Shoe	5.5				Top Plug	5.5	1	HES
Float Shoe	5.5			18090	Bottom Plug	5.5	1	HES
WSS	5.5			17982	SSR plug set	5.5		HES
Insert Float	5.5				Plug Container	5.5	1	HES
Stage Tool	5.5				Centralizers	5.5		HES

**Fluid Data**

Stage/Plug #: 1

Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
1	Tuned Prime Cement Spacer Base - RKS/SE	TUNED PRIME CEMENT SPACER SYS	80	bbl	11.5	3.81		6	
	1 lbm/bbl	<b>FE-2, 2000 LB BAG - (1005549)</b>							
	147.47 lbm/bbl	<b>BARITE, BULK (100003681)</b>							
	42 gal/bbl	<b>FRESH WATER</b>							

0.75 gal/bbl		<b>DUAL SPACER SURFACTANT B, 5 GAL PAIL (100003665)</b>							
0.75 gal/bbl		<b>MUSOL(R) A, 5 GAL PAIL (100064220)</b>							
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
2	ElastiCem	ELASTICEM (TM) SYSTEM	1243	sack	13.2	1.57		8	7.52
0.40 %		<b>SCR-100, 2000 LB BAG - (1005967)</b>							
7.52 Gal		<b>FRESH WATER</b>							
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
3	NeoCem	NeoCem TM	1151	sack	13.2	2.04		8	9.79
0.09 %		<b>SCR-100, 2000 LB BAG - (1005967)</b>							
9.79 Gal		<b>FRESH WATER</b>							
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
4	MMCR Displacement	MMCR Displacement	20	bbl	8.34			10	
0.25 gal/bbl		<b>MICRO MATRIX CEMENT RETARDER, 5 GAL PAIL (100003781)</b>							
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
5	Water	Water	309	bbl	8.33			8	
1.6020 gal/Mgal		<b>CLA-WEB - BULK (101985043)</b>							
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
6	MMCR Displacement	MMCR Displacement	70	bbl	8.34			8	
0.2140 gal/bbl		<b>MICRO MATRIX CEMENT RETARDER, 5 GAL PAIL (100003781)</b>							
<b>Cement Left In Pipe</b>	<b>Amount</b>	0 ft			<b>Reason</b>			<b>Wet Shoe Joint</b>	
Mix Water:	pH 7	Mix Water Chloride:	Less 200 ppm		Mix Water Temperature:	50 °F			
Cement Temperature:		Plug Displaced by:	8.33 lb/gal		Disp. Temperature:				
Plug Bumped?	Yes	Bump Pressure:	3260 psi		Floats Held?	Yes			
Cement Returns:		Returns Density:			Returns Temperature:				
<b>Comment</b> Plug bumped, floats held, 6 bbl wet shoe. 12 bbl cement to surface. Calculated TOLC = 0', TOTC = 7899'									

## 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>	DS Pump Press <i>(psi)</i>	Pump Stg Tot <i>(bbl)</i>	Comments
Event	1	Call Out	Call Out	10/18/2019	18:00:00	USER					Crew called out for on location time of 0001 hrs. 10/19/2019
Event	2	Crew Leave Yard	Crew Leave Yard	10/18/2019	21:45:00	USER					Crew Leaves Yard
Event	3	Arrive At Loc	Arrive At Loc	10/18/2019	22:20:00	USER					Arrive at location, Rig running casing, Meet with customer, TP 18090 20# P-110, TD 18105, 8.50 Hole, WSS 17982, TVD 6530, PC 1853' 9.625 J-55 36#, WF 10.6 OBM, Top and Bottom plug provided by customer, Water 50 Deg., PH 7, Chlorides and sulfates less than 200 ppm
Event	4	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	10/18/2019	22:30:00	USER					Pre rig up safety meeting
Event	5	Rig-Up Equipment	Rig-Up Equipment	10/18/2019	22:35:00	USER					Rig up all service lines and iron to buffer zone
Event	6	Pre-Job Safety Meeting	Pre-Job Safety Meeting	10/19/2019	06:05:00	USER	8.32	0.00	-40.00	0.00	Discuss job procedures, Discuss job hazards and hazards of Halliburton Equipment.
Event	7	Start Job	Start Job	10/19/2019	06:34:20	COM4	8.28	0.00	3.00	0.00	Begin recording data
Event	8	Test Lines	Test Lines	10/19/2019	06:36:12	COM4	8.42	0.00	128.00	2.80	Test lines to 6500 psi
Event	9	Drop Bottom Plug	Drop Bottom Plug	10/19/2019	06:41:45	COM4	8.40	0.00	5.00	2.80	Verified by Lovel
Event	10	Pump Spacer 1	Pump Spacer 1	10/19/2019	06:42:09	COM4	8.40	0.00	4.00	0.00	80 bbl., 11.5#, 4.81 yield, 23.4 gal/sack. 60 Musol, 60 Dual Spacer B, D-Air

Event	11	Pump Lead Cement	Pump Lead Cement	10/19/2019	06:59:06	COM4	13.03	8.10	724.00	0.10	1243 sacks Elasticem Lead, 347.56 bbl., 13.2#, 1.57 yield, 7.52 gal/sack
Event	12	Pump Tail Cement	Pump Tail Cement	10/19/2019	07:48:17	COM4	13.39	8.00	424.00	378.30	1151 sacks NeoCem, 418.19 bbl., 13.2#, 2.04 yield, 9.79 gal/sack
Event	13	Shutdown	Shutdown	10/19/2019	08:47:25	COM4	12.48	0.00	25.00	444.70	Shutdown to wash pumps and lines
Event	14	Drop Top Plug	Drop Top Plug	10/19/2019	08:56:27	COM4	7.67	0.00	37.00	22.20	Verified by Lovel
Event	15	Pump Displacement	Pump Displacement	10/19/2019	08:56:34	COM4	8.16	0.00	25.00	0.00	399 bbl. fresh water displace. Add 5 bbl. Micro first 20 bbl. and last 70 bbl. add 15 gal Micro Matrix. Clay web and BE-3 throughout
Event	16	Shutdown	Shutdown	10/19/2019	09:46:27	USER	8.27	6.90	3060.00	387.20	Shutdown due to Valve breaking on 400 BBL. upright
Event	17	Bump Plug	Bump Plug	10/19/2019	09:53:01	COM4	8.28	0.00	3261.00	407.60	Bump pressure 3260. Final Circ pressure was 2730 psi. See spacer at approx. 307 into displace. See cement at approx. 387 into displace. Calculated TOLC = 0', TOTC = 7899' Calculated with 0 Excess
Event	18	Other	Other	10/19/2019	09:55:49	COM4	8.28	0.00	3897.00	408.30	Pressure up to shift sleeve at 5600 psi. Pump 6 bbl. wet shoe
Event	19	Shutdown	Shutdown	10/19/2019	09:58:33	COM4	8.26	4.10	2704.00	416.30	Shutdown to check floats. Floats hold, 3.5 bbl. back to pump truck
Event	20	End Job	End Job	10/19/2019	10:01:21	COM4					Stop recording data
Event	21	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	10/19/2019	10:05:00	USER					JSA safe Rig-Down
Event	22	Rig-Down Equipment	Rig-Down Equipment	10/19/2019	10:10:00	USER					Rig down equipment
Event	23	Crew Leave Location	Crew Leave Location	10/19/2019	11:45:00	USER					Thanks for choosing Halliburton Energy Services!

## 3.0 Attachments

### 3.1 Bost Farm 33C-11-L Chart.png

