

# HALLIBURTON

iCem<sup>®</sup> Service

**SRC ENERGY INC-EBUS**

**BOST FARM 32C-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 32C-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 6 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 #: 3901236		Quote #:		Sales Order #: 0905781086	
Customer: SRC ENERGY INC-EBUS				Customer Rep: BUDDY			
Well Name: BOST FARM			Well #: 32C-11-L			API/UWI #: 05-123-47663-00	
Field: WATTENBERG		City (SAP): WINDSOR		County/Parish: WELD		State: COLORADO	
Legal Description: SW NW-7-5N-66W-1515FNL-1119FWL							
Contractor: PRECISION DRLG				Rig/Platform Name/Num: PRECISION 462			
Job BOM: 7523 7523							
Well Type: HORIZONTAL OIL							
Sales Person: HALAMERICA\HB41307				Srcv Supervisor: Lance Carpenter			

**Job**

Formation Name			
Formation Depth (MD)	Top		Bottom
Form Type			BHST
Job depth MD	17534ft	Job Depth TVD	7161
Water Depth		Wk Ht Above Floor	4
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	1825	0	1825
Casing		5.5	4.778	20	TXP-BTC	P110IC	0	17534	0	7161
Open Hole Section			8.5				1825	17557	1825	7151

**Tools and Accessories**

Type	Size in	Qty	Make	Depth ft	Type	Size in	Qty	Make
Guide Shoe	5.5	1		17534	Top Plug	5.5	1	
Float Shoe	5.5				Bottom Plug	5.5	1	
Float Collar	5.5	1		17491	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 ft3/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal	
1	Tuned Prime Cement Spacer	SBM FDP-C1337-18 CEMENT SPACER SYS	80	bbl	12.5	2.72				

206.19 lbm/bbl	<b>BARITE, BULK (100003681)</b>
0.50 gal/bbl	<b>DUAL SPACER SURFACTANT B, 5 GAL PAIL (100003665)</b>
0.25 gal/bbl	<b>D-AIR 3000L, 5 GAL PAIL (101007444)</b>
1 lbm/bbl	<b>FE-2 (100001615)</b>
0.50 gal/bbl	<b>MUSOL(R) A, 5 GAL PAIL (100064220)</b>

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	1207	sack	13.2	1.57		8	7.54
0.15 %		<b>FE-2 (100001615)</b>							
0.25 %		<b>SCR-100 (100003749)</b>							
7.54 Gal		<b>FRESH WATER</b>							

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	405	BBL	13.2	2.04		8	9.75
9.71 Gal		<b>FRESH WATER</b>							
0.08 %		<b>SCR-100 (100003749)</b>							

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	20	bbl	8.34			8	
0.20 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 ft3/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
5	Water	Water	296	bbl	8.33			8	
1 gal/Mgal		<b>CLA-WEB - BULK (101985043)</b>							

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		<b>MICRO MATRIX CEMENT RETARDER, 5 GAL PAIL (100003781)</b>							

Cement Left In Pipe	Amount	100 ft	Reason	Shoe Joint
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Mix Water:	pH 7	Mix Water Chloride:	100 ppm	Mix Water Temperature:	63 °F
Cement Temperature:	## °F °C	Plug Displaced by:	8.4 lb/gal Water	Disp. Temperature:	## °F °C
Plug Bumped?	Yes	Bump Pressure:	2420 psi	Floats Held?	Yes
Cement Returns:	10 bbl	Returns Density:	## lb/gal kg/m3	Returns Temperature:	## °F °C

**Comment**

JOB WENT WELL. CREW ARRIVED 6/25 AT 1300 AND WAS RELEASED AT 1500. CREW ARRIVED ON 6/26 AND PERFORMED JOB. VOLUMES AND WEIGHTS OF SLURRIES WERE VERIFIED AS PUMPED. FULL RETURNS THROUGHOUT. DROPPED PLUG AND CAUGHT IT 10 BBL AWAY. GOOD PRESSURE AND RETURNS THROUGHOUT DISPLACEMENT. SPACER RETURNS TO SURFACE AT 300 BBL AWAY, STILL CONTAMINATED BUT SPACER. CEMENT RETURNS TO SURFACE AT 380 BBL AWAY. BUMPED PLUG AT 3.5 BPM AT 2420 PSI. HELD FOR A FEW MINUTES. PRESSURED UP TO 5125 TO OPEN WET SHOE SUB AND PUMPED 6 BBL WET SHOE. CHECKED FLOATS, FLOATS HELD WITH 3 BBL BACK.

TOP OF TAIL CEMENT 7682'

TOP OF LEAD CEMENT – SURFACE WITH 6 BBL BACK

SPACER – ALL 80 BBL BACK TO SURFACE

## 2.0 Real-Time Job Summary

### 2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	PS Pump Press <i>(psi)</i>	DH Density <i>(ppg)</i>	Comb Pump Rate <i>(bbl/min)</i>	Pump Stg Tot <i>(bbl)</i>	Comments
Event	1	Slow Rate	Call Out	6/25/2019	08:00:00	USER					CREW CALLED OUT. ON LOCATION TIME 1400
Event	2	Depart Shop for Location	Depart Shop for Location	6/25/2019	12:00:00	USER					CREW HAS VERIFIED EQUIPMENT AND MATERIALS FOR JOB. CREW HAS JOURNEY MANAGEMENT SAFETY MEETING DISCUSSING ROUTES, FOLLOWING DISTANCE, CONVOY ORDER, HAZARDS AND DEPARTS FOR LOCATION
Event	3	Arrive At Loc	Arrive At Loc	6/25/2019	13:00:00	USER					CREW ARRIVES AT LOCATION. RIG RIH CASING ABOUT 2000' FROM BOTTOM BUT WASHING DOWN. CREW HAS PRE RIG UP SAFETY MEETING ASSESSING LOCATION FOR HAZARDS, EQUIPMENT LAYOUT, RIG OPERATIONS, RED ZONES AND DISCUSS TEAM LIFTING, SLIPS TRIPS AND FALLS
Event	4	Comment	Comment	6/25/2019	15:00:00	USER					CREW IS RELEASED FROM LOCATION. CREW CONFIRMS THAT PUMP AND BULK CAN BE LEFT RIGGED UP AND DEPARTS FROM LOCATION
Event	5	Call Out	Call Out	6/26/2019	02:00:00	USER					CREW CALLED OUT. ON LOCATION 0500
Event	6	Depart Shop for Location	Depart Shop for Location	6/26/2019	04:00:00	USER					CREW IS READY TO DEPART FOR LOCATION. CREW HAS JOURNEY MANAGEMENT SAFETY MEETING DISCUSSING FIT FOR DUTY, HAZARDS, ROUTE, CONVOY ORDER, FOLLOWING DISTANCE AND DEPARTS FOR LOCATION

Event	7	Arrive At Loc	Arrive At Loc	6/26/2019	05:00:00	USER					CREW ARRIVES AT LOCATION. CREW CHECKS EQUIPMENT AND BEGIN GETTING READY FOR JOB. RIG RIH LAST TWO JOINTS OF CASING
Event	8	Casing on Bottom	Casing on Bottom	6/26/2019	07:00:00	USER	0.00	8.29	0.00	19.20	CASING ON BOTTOM. RIG LANDS CASING AND RIGS DOWN CASING CREW WHILE CIRCULATING THROUGH CRT
Event	9	Pre-Job Safety Meeting	Pre-Job Safety Meeting	6/26/2019	07:30:00	USER	0.00	8.28	0.00	19.20	CREW, RIG CREW AND CUSTOMER REP HAVE PRE JOB SAFETY MEETING DISCUSSING MUSTER AREAS, RED ZONES, CONTINGENCIES, JOB PROCEDURES, ROLES, OPERATIONS, HAZARDS AND STOP WORK
Event	10	Comment	Start Job	6/26/2019	07:56:33	COM6	3.00	8.27	0.00	19.20	START JOB
Event	11	Test Lines	Test Lines	6/26/2019	08:20:42	COM6	6528.00	8.50	0.00	21.80	FILL LINES WITH 3 BBL WATER. PRESSURE TEST HES LINES TO 6500 PSI. HOLD FOR A FEW MINUTES FOR GOOD TEST.
Event	12	Pump Spacer 1	Pump Spacer 1	6/26/2019	08:27:17	COM6	-2.00	8.31	0.00	0.00	PUMP 80 BBL TUNED PRIMER SPACER 12.5# 2.72 YIELD 16.3 GAL
Event	13	Drop Bottom Plug	Drop Bottom Plug	6/26/2019	08:41:00	USER	242.00	12.50	5.50	68.60	DROP BOTTOM PLUG WITNESSED BY CUSTOMER REP
Event	14	Pump Lead Cement	Pump Lead Cement	6/26/2019	08:42:07	COM6	247.00	12.38	5.50	74.60	PUMP 337 BBL ELASTICEM LEAD 13.2# 1.57 YIELD 7.54 GAL 1207 SACKS
Event	15	Pump Tail Cement	Pump Tail Cement	6/26/2019	09:26:48	COM6	411.00	13.14	7.90	347.90	PUMP 404 BBL NEOCEM TAIL 13.2# 2.04 YIELD 9.75 GAL 1114 SACKS
Event	16	Shutdown	Shutdown	6/26/2019	10:20:21	USER	14.00	13.14	0.00	420.10	SHUTDOWN
Event	17	Clean Lines	Clean Lines	6/26/2019	10:24:02	COM6	15.00	12.38	0.90	420.20	WASH PUMPS AND LINES TO THE PIT
Event	18	Drop Top Plug	Drop Top Plug	6/26/2019	10:37:37	COM6	-6.00	8.11	0.00	455.50	DROP TOP PLUG WITNESSED BY CUSTOMER REP
Event	19	Pump Displacement	Pump Displacement	6/26/2019	10:37:40	COM6	-6.00	8.11	0.00	0.00	PUMP 386 BBL DISPLACEMENT WATER WITH FIRST 20 BBL MMCR, LAST 70 BBL MMCR AND CLAYWEB

											THROUGHOUT
Event	20	Slow Rate	Slow Rate	6/26/2019	11:32:42	USER	2713.00	8.45	6.00	381.70	SLOW RATE TO 3.5 BPM TO BUMP PLUG
Event	21	Bump Plug	Bump Plug	6/26/2019	11:37:16	COM6	2858.00	8.46	0.00	396.60	BUMP PLUG AT 3.5 BPM AT 2420 PSI. TOOK TO 2857 PSI AND HELD FOR A FEW MINUTES
Event	22	Comment	Comment	6/26/2019	11:40:01	USER	5136.00	8.52	2.00	399.70	PRESSURED UP TO OPEN WET SHOE SUB AT 5125 PSI. THEN PUMP 6 BBL WET SHOE
Event	23	End Job	End Job	6/26/2019	11:53:12	COM6	145.00	8.39	5.10	433.20	END JOB
Event	24	Comment	Comment	6/26/2019	12:00:00	USER					CREW HAS PRE RIG DOWN SAFETY MEETING DISCUSSING HAZARDS, RIG OPERATIONS, RED ZONES, PROPER SPOTTERS AND TAGLINE OPERATIONS
Event	25	Depart Location	Depart Location	6/26/2019	13:00:00	USER					CREW IS FINISHED UP AND READY TO DEPART. CREW HAS JOURNEY MANAGEMENT SAFETY MEETING DISCUSSING ROUTE, FIT FOR DUTY, CONVOY ORDER, FOLLOWING DISTANCE, HAZARDS AND DEPARTS LOCATION

3.0 Custom Graphs

3.1 Custom Graph

