

HALLIBURTON

iCem® Service

SRC ENERGY INC-EBUS

SRC Energy Bost Farm 13N-11A-L

Sincerely,

Alexandria Dionigi

Legal Notice

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1.0 Cementing Job Summary

1.1 Executive Summary

Halliburton appreciates the opportunity to perform the cementing services on the **Bost Farm 13N-11A-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.

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 #: 3982979	Quote #: 0022645423	Sales Order #: 0906068357
Customer: SRC ENERGY INC-EBUS		Customer Rep: Lovell	
Well Name: BOST FARM		Well #: 13N-11A-L	API/UWI #: 05-123-50259-00
Field: WATTENBERG	City (SAP): MILLIKEN	County/Parish: WELD	State: COLORADO
Legal Description: NW SW 7-5N-66W-2666FSL-1234FWL			
Contractor: PRECISION DRLG		Rig/Platform Name/Num: PRECISION 462	
Job BOM: 7523 7523			
Well Type: HORIZONTAL OIL			
Sales Person: HALAMERICA\HB41307		Srvc Supervisor: Prince Perez	

Job			
Formation Depth (MD)	Top 0'	Bottom	18,028'
Job depth MD	18013ft	Job Depth TVD	6,814'
Water Depth		Wk Ht Above Floor	20'

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	1834	0	1834
Casing		5.5	4.778	20	TXP-BTC	P110IC	0	18013	0	6814
Open Hole Section			8.5				1834	18028	1834	6814

Tools and Accessories									
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make
Guide Shoe	5.5	1		18013		Top Plug	5.5	1	
Float Shoe	5.5					Bottom Plug	5.5	1	
Float Collar	5.5	1		17,906		SSR plug set	5.5		
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 ³ /sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
1	Spacer	TUNED PRIME CEMENT SPACER SYS	80	bbl	11.5	3.81	23.3	4	2,747
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft ³ /sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
2	Lead	ELASTICEM (TM) SYSTEM	1,234	sack	13.2	1.57	7.52	8	7.52

Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft ³ /sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
3	Tail	NeoCem TM	1,152	sack	13.2	2.04	9.79	8	11,278
4	Displacement	MMCR Displacement	20	bbl	8.34			8	
5	Displacement	Water	307.5	bbl	8.33			8	
6	MMCR Displacement	MMCR Displacement	70	bbl	8.34			8	

Cement Left In Pipe	Amount	Reason	Wet Shoe
Mix Water:	pH 7	Mix Water Chloride: <300 ppm	Mix Water Temperature: 68 °F
Cement Temperature:	## °F	Plug Displaced by: 8.33 lb/gal	Disp. Temperature: 68 °F
Plug Bumped?	Yes	Bump Pressure: 3,000 psi	Floats Held? Yes
Cement Returns:	1 bbl	Returns Density: ## lb/gal	Returns Temperature: ## °F

Comment

Pumped 80 bbls of Tuned Prime Spacer with 60 gallons of Dual B, 60 gallons of Musol A, and 30 gallons of D Air.

Pumped 345.1 bbls of Elasticem.

Pumped 418.6 bbls of NeoCem.

Pumped a 6 bbl wet shoe.

Checked floats, 3 bbls back.

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>	Pump Stg Tot <i>(bbl)</i>	DS Pump Press <i>(psi)</i>	Comments
Event	1	Call Out	Call Out	10/28/2019	17:30:00	USER					CREW CALLED OUT AT 17:30, REQUESTED ON LOCATION 00:00. CREW PICKED UP CEMENT, CHEMICALS, AND PLUG CONTAINER FROM FT. LUPTON, CO. BULK 660, 11633846, AND PUMP 11189145.
Event	2	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	10/28/2019	23:05:00	USER					CREW DISCUSSED ROUTES, HAZARDS, AND COMMUNICATION WITH CREW.
Event	3	Crew Leave Shop	Crew Leave Shop	10/28/2019	23:15:00	USER					STARTED JOURNEY MANAGEMENT.
Event	4	Arrive at Location from Service Center	Arrive at Location from Service Center	10/29/2019	00:00:00	USER					END JOURNEY MANAGEMENT. MEET WITH CO. MAN TO DISCUSS JOB; SURFACE CASING- 9/58" 36 LB/FT @ 1,834', 5.5" CASING: 20 LB/FT TOTAL 18,013', 8 1/2" HOLE, TD 18,028', 107' SHOE TRAC, TVD- 6,814'. PUMP FRESH WATER DISPLACEMENT. CASING LANDED @ 01:45 10/29/2019.
Event	5	Safety Meeting - Assessment of Location	Safety Meeting - Assessment of Location	10/29/2019	00:10:00	USER					HAZARD HUNT. DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH LOCATION, RIG UP AND WEATHER.
Event	6	Rig-Up Equipment	Rig-Up Equipment	10/29/2019	00:20:00	USER					RIG UP BULK AND MIXING EQUIPMENT.
Event	7	Rig-Up Completed	Rig-Up Completed	10/29/2019	02:50:00	USER					RIG UP COMMANDER HEAD @ 03:40. HEAD WAS TORQUED UP AND RIG CIRCULATING @ 04:52. WHEN ESTABLISHING CIRCULATION TORQUE WAS 14K @ 20 RPM.
Event	8	Pre-Job Safety Meeting	Pre-Job Safety Meeting	10/29/2019	03:00:00	USER					MEETING WITH HALLIBURTON AND RIG PERSONNEL. COMMUNICATED POTENTIAL SAFETY HAZARDS AND JOB DETAILS.
Event	9	Start Job	Start Job	10/29/2019	05:20:01	COM4					BEGIN RECORDING JOB DATA.

Event	10	Test Lines	Test Lines	10/29/2019	05:47:04	COM4				6931.00	PRESSURE TESTED IRON TO 6,500 PSI. KICKOUTS SET @ 500 PSI, KICKED OUT @ 893 PSI, 5TH GEAR STALL OUT @ 2,119 PSI. 6,500 PRESSURE TEST KICKED OUT @ 6,700 PSI. DROPPED BOTTOM PLUG PER DRILLING ENGINEER AND CUSTOMER REP.
Event	11	Pump Spacer 1	Pump Spacer 1	10/29/2019	05:56:51	COM4	11.5	4	80	360	PUMP 80 BBLS OF TUNED PRIME SPACER @ 11.5 LB/GAL, 3.81 CUFT/SK, 23.3 GALL/SK. 30 GALS D-AIR, 60 GALLONS OF DUAL B, 60 GALLONS OF MUSOL A. 80 BBLS CALCULATED TO RETURN TO SURFACE. DENSITY VERIFIED BY PRESSURIZED MUD SCALES. PUMP RATE 4 BBLS/MIN @ 360 PSI. CALCULATED MIX WATER WAS 2,747 GALLONS. ACTUAL MIX WATER USED WAS 2,650 GALLONS. BBL COUNTER WAS OFF BY A CONSIDERABLE MARGIN AND SHOULD BE IGNORED. ROTATION TORQUE DURING SPACER 11K @ 30 RPM's.
Event	12	Check Weight	Check Weight	10/29/2019	06:19:30	COM4	11.45				
Event	14	Pump Lead Cement	Pump Lead Cement	10/29/2019	06:30:41	COM4	13.2	8	345.1	533.00	PUMPED 1,234 SKS OF ELASTICEM @ 13.2 LB/GAL, 1.57 FT3/SK, 7.52 GAL/SK. 345.1 BBLS. HOL CALCULATED @ 7,754.4', 15.7 BBLS CALCULATED TO RETURN TO SURFACE. DENSITY VERIFIED BY PRESSURIZED MUD SCALES. PUMP RATE 8 BBLS/MIN @ 700 PSI. CALCULATED MIX WATER FOR LEAD WAS 9,280 GALLONS. ACTUAL MIX WATER USED WAS 8,430 GALLONS. ROTATION TORQUE 10.8K @ 30 RPM's.
Event	15	Check Weight	Check Weight	10/29/2019	06:34:11	COM4	12.99				
Event	16	Check Weight	Check Weight	10/29/2019	06:56:54	COM4	13.21				
Event	17	Pump Tail Cement	Pump Tail Cement	10/29/2019	07:33:00	COM4	13.2	8	418.6	820	PUMP 1,152 SKS OF NEOCEM @ 13.2 LB/GAL, 2.04 FT3/SK, 9.79 GAL/SK, 418.6 BBLS. HOT CALCULATED @ 10,258.6', TOT CALCULATED @ 7,754.4'. DENSITY VERIFIED BY PRESSURIZED MUD SCALES. PUMP RATE 8 BBLS/MIN @ 820 PSI. CALCULATED MIX WATER FOR THE JOB WAS 11,278 GALLONS. ACTUAL MIX WATER USED WAS 9,708 GALLONS. ROTATION TORQUE 18K @ 30 RPM's.
Event	18	Check Weight	Check Weight	10/29/2019	07:47:36	COM4	13.37				

Event	19	Check Weight	Check Weight	10/29/2019	08:37:13	COM4	13.20						
Event	20	Shutdown	Shutdown	10/29/2019	08:47:14	COM4							SHUTDOWN TO WASH LINES.
Event	21	Drop Top Plug	Drop Top Plug	10/29/2019	09:02:36	COM4							WITNESSED BY DRILLING ENGINEER AND CUSTOMER REP.
Event	22	Pump Displacement	Pump Displacement	10/29/2019	09:06:58	COM4	8.33	8	397.5	3200			BEGIN CALCULATED DISPLACEMENT OF 397.5 BBLS WITH FRESH WATER. MMCR IN THE FIRST 20 BBLS AND CLAYWEB THROUGHOUT. MMCR IN THE LAST 70 BBLS OF DISPLACEMENT. PUMP RATE 8 BPM @ 3,200 PSI. CAUGHT CEMENT @ 20 BBLS INTO DISPLACEMENT. CEMENT TO SURFACE @ 396 BBLS INTO DISPLACEMENT. 1 BBL OF CEMENT BACK TO SURFACE. SLOW RATE TO 4 BPM @ 380 BBLS INTO DISPLACEMENT. ROTATION TORQUE FROM START TO 300 BBLS INTO DISPLACEMENT WAS 23K @ 30 RPM'S.
Event	23	Shutdown	Shutdown	10/29/2019	09:40:38	USER					3998.00		SHUTDOWN @ 231 BBLS INTO DISPLACEMENT BECAUSE OF ABNORMALLY HIGH PRESSURE. DISCUSSED THE NEXT COURSE OF ACTION THEN PRESSURED UP TO 6,000 PSI WHEN PRESSURE DROPPED BACK TO NORMAL CIRCULATING PRESSURE. PROCEEDED TO PUMP THE REST OF DISPLACEMENT. AIRLOCK SUB WAS SET @ 10,487.04' 232.81 BBLS FOR TOP PLUG TO REACH AIRLOCK SUB DURING DISPLACE. 350 AWAY TORQUE WAS 19K @ 30 RPM'S. STARTED RELEASING TORQUE @ 360 BBLS AWAY DURING DISPLACEMENT PER CUSTOMER REP.
Event	24	Bump Plug	Bump Plug	10/29/2019	10:19:07	COM4						3525.00	PLUG BUMPED AT CALCULATED DISPLACEMENT. 3,071 PSI PRESSURED 500 PSI OVER BUMP. ALL TORQUE FROM ROTATION WAS OFF AT THIS POINT.
Event	25	Shift Tool - Lower	Shift Tool - Lower	10/29/2019	10:21:52	USER						5780.00	SHEARED @ 5,780 PSI FOLLOWED BY A 6 BBL WET SHOE.
Event	26	Check Floats	Check Floats	10/29/2019	10:25:05	USER							RELEASED PRESSURE, FLOATS HELD, 3 BBLS BACK.
Event	27	End Job	End Job	10/29/2019	10:26:22	USER							STOP RECORDING JOB DATA.

Event	28	Post-Job Safety Meeting (Pre Rig-Down)	Post-Job Safety Meeting (Pre Rig-Down)	10/29/2019	10:30:00	USER	DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH WEATHER, LOCATION AND RIGGING DOWN IRON AND HOSES.
Event	29	Rig-Down Equipment	Rig-Down Equipment	10/29/2019	10:40:00	USER	RIG DOWN BULK AND MIXING EQUIPMENT.
Event	30	Rig-Down Completed	Rig-Down Completed	10/29/2019	13:10:00	USER	STARTED RIG DOWN OF COMMANDER HEAD @ 10:45. HEAD WAS RIGGED DOWN AND LOADED ONTO TRAILER @ 12:37.
Event	31	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	10/29/2019	13:20:00	USER	CREW DISCUSSED ROUTES HAZARDS AND COMMUNICATION WITH CREW.
Event	32	Crew Leave Location	Crew Leave Location	10/29/2019	13:30:00	USER	THANK YOU FOR USING HALLIBURTON – PRINCE PEREZ AND CREW.

3.0 Attachments

3.1 SRC Energy Bost Farm 13N-11A-L-Custom Results (1).png

