

HALLIBURTON

iCem[®] Service

SRC ENERGY INC-EBUS

United States of America, COLORADO

Date: Wednesday, May 30, 2018

Harvesters State 5C-16-M Production

Job Date: Thursday, May 17, 2018

Sincerely,

Bryce Hinsch

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 **Harvesters State 5C-16-M** 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 24 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 #: 3858946	Quote #:	Sales Order #: 0904850432
Customer: SRC ENERGY INC-EBUS		Customer Rep: Tony	
Well Name: HARVESTERS STATE		Well #: 5C-16-M	API/UWI #: 05-123-46371-00
Field: WATTENBERG	City (SAP): LUCERNE	County/Parish: WELD	State: COLORADO
Legal Description: SW NE-15-6N-66W-1733FNL-2334FEL			
Contractor: Precision		Rig/Platform Name/Num: Precision 462	
Job BOM: 7523 7523			
Well Type: HORIZONTAL OIL			
Sales Person: HALAMERICA\HB41307		Srvc Supervisor: Bryan Kraft	

Job

Formation Name			
Formation Depth (MD)	Top	Bottom	
Form Type		BHST	
Job depth MD	15094ft	Job Depth TVD	7247ft
Water Depth		Wk Ht Above Floor	4ft
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	1836	0	1836
Casing	0	5.5	4.778	20	BTC	P-110	0	15094	0	7247
Open Hole Section			8.5				1836	15108	1836	7247

Tools and Accessories									
Type	Size in	Qty	Make	Depth ft	Type	Size in	Qty	Make	
Guide Shoe					Top Plug	5.5	1	WF	
Float Shoe	5.5	1	WF	15094	Bottom Plug	5.5	1	WF	
Float Collar	5.5	1	WF	15045	SSR plug set				
Insert Float					Plug Container	5.5	1	HES	
Stage Tool					Centralizers				

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	Spacer	TUNED SPACER III	40	bbl	11.5	3.8	23.8	4	1407	
		147.42 lbm/bbl	BARITE, BULK (100003681)							
		35.10 gal/bbl	FRESH WATER							
		0.50 gal/bbl	MUSOL A, 330 GAL TOTE - (790828)							

0.50 gal/bbl		DUAL SPACER SURFACTANT B, 5 GAL PAIL (100003665)							
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	Lead	ELASTICEM (TM) SYSTEM	1052	sack	13.2	1.57	7.54	8	7932
0.15 %		FE-2 (100001615)							
0.30 %		SCR-100 (100003749)							
7.54 Gal		FRESH WATER							
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	Tail	NEOCEM TM	986	sack	13.2	2.04	9.75	8	9614
9.71 Gal		FRESH WATER							
0.08 %		SCR-100 (100003749)							
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	Displacement	FRESH WATER	334	bbl	8.33			6	14028
Cement Left In Pipe		Amount	0 ft		Reason			Wet Shoe Joint	
Mix Water:	pH 7	Mix Water Chloride:	<300 ppm		Mix Water Temperature:			75 °F	
Cement Temperature:	N/A	Plug Displaced by:	8.33lb/gal Fresh Water		Disp. Temperature:			75 °F	
Plug Bumped?:	Yes	Bump Pressure:	2600 psi		Floats Held?:			Yes	
Cement Returns:	24 bbl	Returns Density:	N/A		Returns Temperature:			N/A	
Comment: The plug bumped @ calculated displacement @ 2600 PSI, shutdown for 1 minute @ 3100 PSI. The sleeve opened @ 5112 PSI and pumped a 6 BBL wet shoe. The floats held and received 2.5 BBLS back to the truck. Total of 24 BBLS cement returned to surface.									

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>	Comments
Event	1	Call Out	Call Out	5/17/2018	10:00:00	USER				CREW CALLED OUT AT 10:00 5/17/2018, REQUESTED ON LOCATION 12:00 5/17/2018. CREW PICKED UP CEMENT, CHEMICALS (20 GAL MUSOL A, 20 GAL DUAL SPACER B, 10 GAL D-AIR, 20 GAL CLA-WEB, 20 GAL MICROMATRIX, 3LBS BE-3), 200 LBS OF SUGAR, AND PLUG CONTAINER FROM FORT LUPTON, CO. BULK 660: 10897881/11764052, BULK 660 BACK UP AIR: 10867098/11338213, PUMP 12644845/11826999.
Event	2	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	5/17/2018	10:15:00	USER				DISCUSSED ROUTES, HAZARDS, AND COMMUNICATION WITH CREW.
Event	3	Summit Crew Leave Location	Crew Leave Location	5/17/2018	10:30:00	USER				STARTED JOURNEY MANAGEMENT FROM PREVIOUS JOBS LOCATION.
Event	4	Arrive at Location from Service Center	Arrive at Location	5/17/2018	11:45:00	USER				END JOURNEY MANAGEMENT. MEET WITH CO. MAN TO DISCUSS JOB; SURFACE CASING: 36# 9.625" @ 1836', 5.5" CASING: 20# @ 15094', 49' SHOE JOINT, 8.5" OPEN HOLE, TVD @ 7247', 9.8 PPG WELL FLUID, FRESH WATER

										DISPLACEMENT. CASING LANDED @ 13:30 5/17/2018.
Event	5	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	5/17/2018	12:00:00	USER				HAZARD HUNT. DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH LOCATION, RIG UP AND WEATHER.
Event	6	Rig-Up Equipment	Rig-Up Equipment	5/17/2018	12:15:00	USER				CREW STAGED EQUIPMENT AND RIGGED UP BULK, IRON, AND WATER HOSES TO PERFORM JOB.
Event	7	Safety Meeting - Pre Job	Safety Meeting - Pre Job	5/17/2018	15:00:00	USER	8.29	0.00	0.00	MEETING WITH HALLIBURTON AND RIG PERSONNEL. COMMUNICATED POTENTIAL SAFETY HAZARDS AND JOB DETAILS.
Event	8	Start Job	Start Job	5/17/2018	15:42:30	COM5	0.00	0.00	-9.00	BEGIN RECORDING JOB DATA.
Event	9	Test Lines	Test Lines	5/17/2018	15:45:26	COM5	8.05	0.20	8.00	PRESSURE TESTED IRON TO 6000 PSI. KICKOUTS SET @ 500 PSI, KICKED OUT @ 1800 PSI, 5TH GEAR STALL OUT @ 1850 PSI.
Event	10	Pump Spacer 1	Pump Tuned Spacer @ 11.5 ppg	5/17/2018	15:56:15	COM5	10.14	3.10	147.00	PUMP 40 BBLS OF TUNED SPACER @ 11.5 LB/GAL, 3.8 YIELD, 23.8 GAL/SKS, ADDED 20 GAL MUSOL A, 20 GAL DUAL SPACER B, 10 GAL D-AIR, DENSITY VERIFIED BY PRESSURIZED MUD SCALES.
Event	11	Drop Bottom Plug	Drop Bottom Plug	5/17/2018	16:07:33	USER	11.87	3.30	104.00	PLUG LEFT CONTAINER.
Event	12	Pump Lead Cement	Pump Lead Cement @ 13.2 ppg	5/17/2018	16:09:06	COM5	13.12	3.30	114.00	PUMP 1052 SKS OF ELASTICEM @ 13.2 LB/GAL, 1.57 YIELD, 7.54 GAL/SK,

										294 BBLS, CALCULATED TOL @ SURFACE, DENSITY VERIFIED BY PRESSURIZED MUD SCALES.
Event	13	Pump Tail Cement	Pump Tail Cement @ 13.2 ppg	5/17/2018	16:52:44	COM5	13.25	8.00	295.00	PUMP 986 SKS OF NEOCEM @ 13.2 LB/GAL, 2.04 YIELD, 9.75 GAL/SK, 358 BBLS, CALCULATED TOT @ 6344', DENSITY VERIFIED BY PRESSURIZED MUD SCALES.
Event	14	Shutdown	Shutdown	5/17/2018	17:44:58	USER	1.11	0.70	37.00	SHUTDOWN TO WASH PUMPS AND LINES / DROP TOP PLUG.
Event	15	Drop Top Plug	Drop Top Plug	5/17/2018	17:55:32	USER	8.13	0.00	3.00	DROP TOP PLUG, VERIFIED BY COMPANY MAN.
Event	16	Pump Displacement	Pump Fresh Water Displacement	5/17/2018	17:56:48	COM5	8.36	0.00	-1.00	BEGIN CALCULATED DISPLACEMENT OF 334 BBLS WITH FRESH WATER. FIRST 10 BBLS WITH 5 GAL MICROMATRIX, CLA-WEB, AND BE-3, REST OF DISPLACEMENT WITH 20 GAL CLA-WEB AND 3 LBS BE-3. LAST 70 BBLS ADDED 15 GAL MMCR.
Event	17	Cement Returns to Surface	Cement Returns to Surface	5/17/2018	18:34:06	USER	8.43	7.80	2990.00	CEMENT RETURNS TO SURFACE @ 310 BBLS INTO DISPLACEMENT. TOTAL OF 24 BBLS CEMENT TO SURFACE.
Event	18	Bump Plug	Bump Plug	5/17/2018	18:38:39	USER	8.42	5.50	2636.00	PLUG BUMPED AT CALCULATED DISPLACEMENT. FINAL CIRCULATING PRESSURE OF 2600 PSI.
Event	19	Shutdown	Shutdown	5/17/2018	18:38:51	USER	8.44	0.00	3167.00	SHUTDOWN FOR 1 MINUTE @ 3100 PSI

Event	20	Other	Open Sleeve	5/17/2018	18:41:13	USER	8.50	1.50	5030.00	SLEEVE OPENED @ 5112 PSI.
Event	21	Pump Displacement	Pump Wet Shoe	5/17/2018	18:41:21	USER	8.52	4.10	3065.00	PUMP 6 BBLS FRESH WATER FOR WET SHOE.
Event	22	Check Floats	Check Floats	5/17/2018	18:43:55	USER	8.43	0.00	2005.00	RELEASED PRESSURE, FLOATS HELD, 2.5 BBLS BACK.
Event	23	End Job	End Job	5/17/2018	18:45:21	COM5	8.42	0.00	9.00	STOP RECORDING JOB DATA.
Event	24	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	5/17/2018	18:50:00	USER	8.41	0.00	11.00	DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH WEATHER, LOCATION AND RIGGING DOWN IRON AND HOSES.
Event	25	Rig-Down Completed	Rig-Down Completed	5/17/2018	20:00:00	USER				ALL HALLIBURTON ITEMS WERE STOWED FOR TRAVEL, AND LOCATION WAS CLEAN.
Event	26	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	5/17/2018	20:15:00	USER				DISCUSSED ROUTES HAZARDS AND COMMUNICATION WITH CREW.
Event	27	Depart Location	Depart Location	5/17/2018	20:30:00	USER				THANK YOU FOR USING HALLIBURTON - BRYAN KRAFT AND CREW.

3.0 Attachments

3.1 SRC Energy Harvesters State 5C-16-M Production Job Chart

