

# HALLIBURTON

iCem<sup>®</sup> Service

**SRC ENERGY CORPORATION**

**Harvesters State 30C-16-M Production**

Sincerely,  
**Meghan Jacobs**

## Legal Notice

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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 **Harvesters State 30C-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 10bbls of cement 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 [Ft. Lupton]**

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*Cementing Job Summary*

*The Road to Excellence Starts with Safety*

Sold To #: 359915		Ship To #: 3858847		Quote #:		Sales Order #: 0904774627				
Customer: SRC ENERGY INC-EBUS				Customer Rep: Buddy Davis						
Well Name: HARVESTERS STATE			Well #: 30C-16-M		API/UWI #: 05-123-46363-00					
Field: WATTENBERG		City (SAP): LUCERNE		County/Parish: WELD		State: COLORADO				
Legal Description: SW NE-15-6N-66W-1593FNL-2332FEL										
Contractor: Precision				Rig/Platform Name/Num: Precision 462						
Job BOM: 7523 7523										
Well Type: HORIZONTAL OIL										
Sales Person: HALAMERICA/HB41307					Srvc Supervisor: Adam Covington					
<b>Job</b>										
Formation Name										
Formation Depth (MD)		Top			Bottom					
Form Type										
BHST										
Job depth MD		15290ft			Job Depth TVD					
Water Depth										
Wk Ht Above Floor										
Perforation Depth (MD)		From			To					
<b>Well Data</b>										
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	1830	0	1830
Casing	0	5.5	4.778	20	BTC	P-110	0	15278	0	0
Open Hole Section			8.5				1830	15290	0	0
<b>Tools and Accessories</b>										
Type	Size in	Qty	Make	Depth ft	Type	Size in	Qty	Make		
Guide Shoe	5.5			15278	Top Plug	5.5	1	WTF		
Float Shoe	5.5				Bottom Plug	5.5	1	WTF		
Float Collar	5.5				SSR plug set	5.5		HES		
Insert Float	5.5				Plug Container	5.5	1	HES		
Stage Tool	5.5				Centralizers	5.5	227			
<b>Fluid Data</b>										
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 Spacer III	Tuned Spacer III	40	bbl	11.5	3.8		6		
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	ElastiCem LEAD	ELASTICEM (TM) SYSTEM	1074	sack	13.2	1.57		6	7.54	

last updated on 4/16/2018 10:18:51 AM

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*Cementing Job Summary*

Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft <sup>3</sup> /sack	Mix Fluid Gal	Rate bbl/mi n	Total Mix Fluid Gal	
3	NeoCem	NeoCem TM	992	sack	13.2	2.04		4	9.77	
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft <sup>3</sup> /sack	Mix Fluid Gal	Rate bbl/mi n	Total Mix Fluid Gal	
4	MMCR Displacement	MMCR Displacement	70	bbl	8.34					
0.2850 gal/bbl		MICRO MATRIX CEMENT RETARDER, 5 GAL PAIL (100003781)								
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft <sup>3</sup> /sack	Mix Fluid Gal	Rate bbl/mi n	Total Mix Fluid Gal	
5	Water	Water	268	bbl	8.33					
0.0655 gal/bbl		CLA-WEB - BULK (101985043)								
Cement Left In Pipe		Amount	50 ft		Reason			Shoe Joint		
<p>Comment Got 10 BBLS of Cement back to surface. Top of tail is at 7,777.16 ft. Bumped Plug at 3050 PSI took to 3500 PSI. Opened wet shoe sub at 4650 psi. pumped a 6 bbl wet shoe at 3 bpm 2345 psi.</p>										

## 2.0 Real-Time Job Summary

### 2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	DS Pump Press <i>(psi)</i>	DH Density <i>(ppg)</i>	Comb Pump Rate <i>(bbl/min)</i>	Comments
Event	1	Call Out	Call Out	4/15/2018	00:30:00	USER				CALLED OUT BY SERVICE COORDINATOR FOR O/L AT 0600
Event	2	Depart Yard Safety Meeting	Depart Yard Safety Meeting	4/15/2018	04:43:00	USER				HELD MEETING WITH ALL PERSONNEL IN CONVOY TO DISCUSS DIRECTIONS AND HAZARDS ASSOCIATED WITH DRIVING, ALL FIT TO DRIVE.
Event	3	Depart Shop for Location	Depart Shop for Location	4/15/2018	04:50:00	USER				JOURNEY MANAGEMENT PRIOR TO DEPARTURE
Event	4	Arrive At Loc	Arrive At Loc	4/15/2018	05:45:00	USER				UPON ARRIVAL MET WITH COMPANY MAN TO DISCUSS JOB DETAILS AND CALCULATIONS, PERFORMED HAZARD HUNT AND SITE ASSESSMENT.
Event	5	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	4/15/2018	05:55:00	USER				DISCUSSED RIGGING UP HAZARDS AND PROCEDURE ACCORDING TO HMS.
Event	6	Pre-Job Safety Meeting	Pre-Job Safety Meeting	4/15/2018	08:35:00	USER				HELD SAFETY MEETING WITH ALL JOB ASSOCIATED PERSONNEL TO DISCUSS JOB PROCEDURE, HAZARDS AND STOP WORK AUTHORITY.
Event	7	Start Job	Start Job	4/15/2018	09:00:00	USER				Water test- PH-6, Chlor-0, Temp-45.
Event	15	Other	Other	4/15/2018	09:10:32	USER	26.60	8.29	1.59	FILLED LINES WITH 3 BBLs OF FRESH WATER. 3 BPM 21 PSI
Event	16	Test Lines	Test Lines	4/15/2018	09:14:46	RTD Import	19.96	8.28	0.00	PRESSURE TESTED TO 5000 PSI. AFTER PERFORMING A 500 KICK OUT TEST AND A 5TH GEAR STALL. HELD FOR 3 MINUTES. NO LEAKS.
Event	56	Pump Spacer 1	Pump Spacer 1*	4/15/2018	09:32:52	RTD Import	139.36	11.40	1.94	PUMPED 40 BBLs OF 11.5#, 3.8y, 23.8 WR TUNED SPACER. 3 BPM
Event	119	Drop Bottom Plug	Drop Top Plug	4/15/2018	09:55:42	USER	1.01	11.03	0.02	ADAM COVINGTON DROPPED THE 5.5" NON HALLIBURTON BOTTOM PLUG. WITNESSED BY DRILLER.

Event	126	Pump Lead Cement	Pump Lead Cement*	4/15/2018	09:57:50	RTD Import	111.88	13.37	3.49	PUMPED 300 BBLs (1074 SKS) OF 13.2#, 1.57y, 7.54 WR. ELASTICEM AT 6 BPM 370 PSI.
Event	164	Catch Sample	Mud Cup Sample Pulled	4/15/2018	10:29:30	RTD Import	79.66	13.30	6.99	USED PRESSURIZED MUD SCALES TO WEIGH UP CEMENT. WEIGHED UP AT 13.2#
Event	192	Pump Tail Cement	Pump Tail Cement*	4/15/2018	10:49:01	RTD Import	206.64	13.17	6.90	PUMPED 360 BBLs (992 SKS) OF 13.2#, 2.04y, 9.77wr NEOCEM AT 7 BPM. 450 PSI.
Event	215	Catch Sample	Mud Cup Sample Pulled	4/15/2018	10:56:55	RTD Import	317.51	13.09	5.79	USED PRESSURIZED MUD SCALES TO WEIGH UP CEMENT. CEMENT WEIGHED UP AT 13.2#
Event	280	Shutdown	Shutdown	4/15/2018	11:50:12	RTD Import	2.91	13.39	0.00	SHUTDOWN TO WASH PUMPS AND LINES.
Event	304	Drop Top Plug	Drop Top Plug	4/15/2018	12:03:52	RTD Import	55.02	8.06	1.74	ADAM COVINGTON DROPPED NON HALLIBURTON 5.5" TOP PLUG. WITNESSED BY CO. MAN.
Event	305	Pump Displacement	Pump Displacement*	4/15/2018	12:03:57	RTD Import	40.81	8.01	1.76	PUMPED 338 BBLs OF CLAYWEB AND BE 3 WATER DISPLACEMENT WITH THE FIRST 20 BBLs HAVING MMCR AND THE LAST 70 BBLs HAVING MMCR ADDED. 10 BPM 1200 PSI.
Event	335	Bump Plug	Bump Plug	4/15/2018	12:52:16	USER	3293.86	8.02	0.00	PLUG BUMPED. FCP 3050 PSI BUMP PRESSURE WAS 3500 PSI.
Event	338	Other	Other	4/15/2018	13:01:08	USER	3199.11	8.05	0.91	GOING ONE BBL A MINUTE, PRESSURED UP AND OPENED WET SHOE SUB. OPENED UP AT 4650 PSI. THEN WENT STRAIGHT INTO PUMPING A 6 BBL WET SHOE AT 3 BPM 2353 PSI.
Event	339	Check Floats	Other	4/15/2018	13:04:17	RTD Import	2073.38	7.99	0.00	CHECKED FLOATS. GOT 2.5 BBLs OF WATER BACK TO THE TRUCK. FLOATS HELD.
Event	340	End Job	End Job	4/15/2018	13:11:04	USER	-2.78	7.96	0.87	END JOB. TOT CEMENT 7,777.16' GOT 10 BBLs OF CEMENT BACK TO SURFACE.
Event	346	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	4/15/2018	13:20:00	USER	7.65	0.41	3.19	DISCUSSED RIGGING DOWN HAZARDS AND PROCEDURE ACCORDING TO HMS.
Event	347	Depart Location Safety Meeting	Depart Location Safety Meeting	4/15/2018	14:10:00	USER				HELD MEETING WITH ALL HES EMPLOYEES IN CONVOY TO DISCUSS DIRECTIONS AND HAZARDS ASSOCIATED WITH DRIVING, ALL FIT TO DRIVE.
Event	348	Depart Location	Depart Location	4/15/2018	14:30:00	USER				PRE JOURNEY MANAGEMENT PRIOR TO DEPARTURE.

3.0 Attachments

3.1 Harvesters State 30C-16-M Production – Job Chart with Events



3.2 Harvesters State 30C-16-M Production – Job Chart without Events

