

# HALLIBURTON

iCem<sup>®</sup> Service

**SRC ENERGY CORPORATION**

**Harvesters State 30N-16B-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 30N-16B-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 #: 3858717		Quote #:		Sales Order #: 0904791010					
Customer: SRC ENERGY INC-EBUS				Customer Rep: Lovell Young							
Well Name: HARVESTERS STATE			Well #: 30N-16B-M			API/UWI #: 05-123-46354-00					
Field: WATTENBERG		City (SAP): LUCERNE		County/Parish: WELD			State: COLORADO				
Legal Description: SW NE-15-6N-66W-1613FNL-2333FEL											
Contractor: Precision					Rig/Platform Name/Num: Precision 462						
Job BOM: 7523 7523											
Well Type: HORIZONTAL OIL											
Sales Person: HALAMERICA\HB41307					Srv Supervisor: Adam Covington						
<b>Job</b>											
Formation Name											
Formation Depth (MD)		Top			Bottom						
Form Type				BHST							
Job depth MD			14986ft		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	1822	0	1822	
Casing	0	5.5	4.778	20	BTC	P-110	0	14986	0	0	
Open Hole Section			8.5				1822	14995			
<b>Tools and Accessories</b>											
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make		
Guide Shoe	5.5			14986		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	222	WTF		
<b>Fluid Data</b>											
Stage/Plug #: 1											
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		
1	Tuned Spacer III	Tuned Spacer III	40	bbl	11.5	3.8	23.8	6			
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 LEAD	ELASTICEM (TM) SYSTEM	1042	sack	13.2	1.57	7.54	8	7.54		

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*Cementing Job Summary*

Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/mi n	Total Mix Fluid Gal	
3	NeoCem	NeoCem TM	983	sack	13.2	2.04	9.77	8	9.77	
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/mi n	Total Mix Fluid Gal	
4	MMCR Displacement	MMCR Displacement	0	bbl	8.34			10		
		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 ft3/sack	Mix Fluid Gal	Rate bbl/mi n	Total Mix Fluid Gal	
5	Water	Water	0	bbl	8.33			8		
		0.0655 gal/bbl CLA-WEB - BULK (101985043)								
<b>Cement Left In Pipe</b>			<b>Amount</b>	50 ft				<b>Reason</b>	Shoe Joint	
<b>Comment</b> Estimated top of tail is at 6,259.65. 10 bbls of cement back to surface.										

## 2.0 Real-Time Job Summary

### 2.1 Job Event Log

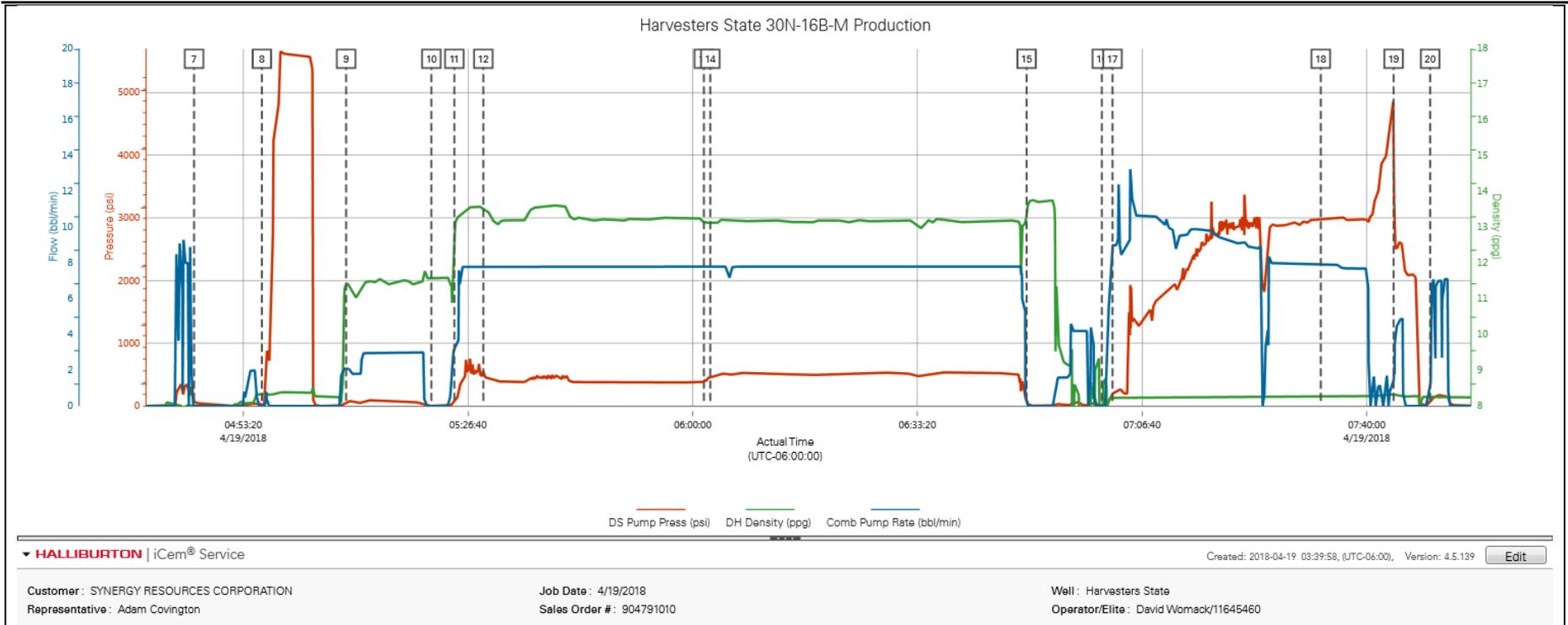
Type	Seq. No.	Activity	Graph Label	Date	Time	Source	DS Pump Press (psi)	DH Density (ppg)	Comb Pump Rate (bbl/min)	Comments
Event	1	Call Out	Call Out	4/18/2018	09:30:00	USER				CALLED OUT BY SERVICE COORDINATOR FOR O/L AT 0230
Event	2	Pre-Convoy Safety Meeting	Depart Shop for Location	4/19/2018	00:00:00	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	4/19/2018	00:20:00	USER				JOURNEY MANAGEMENT PRIOR TO DEPARTURE
Event	4	Arrive At Loc	Arrive At Loc	4/19/2018	02:00:00	USER				UPON ARRIVAL MET WITH COMPANY MAN TO DISCUSS JOB DETAILS AND CALCULATIONS, PERFORMED HAZARD HUNT AND SITE ASSESSMENT.
Event	5	Safety Meeting - Pre Rig-Up	Safety Meeting - Pre Rig-Up	4/19/2018	02:15:00	USER				DISCUSSED RIGGING UP HAZARDS AND PROCEDURE ACCORDING TO HMS.
Event	6	Safety Meeting - Pre Job	Safety Meeting - Pre Job	4/19/2018	04:30:00	USER	-2.00	0.35	0.00	HELD SAFETY MEETING WITH ALL JOB ASSOCIATED PERSONNEL TO DISCUSS JOB PROCEDURE, HAZARDS AND STOP WORK AUTHORITY. Water test- PH-6, Chlor-0, Temp-65. Cement temp-70.
Event	7	Start Job	Start Job	4/19/2018	04:46:01	COM4	64.00	8.00	0.00	FILLED LINES WITH 3 BBLS OF FRESH WATER. 2 BPM 15 PSI.
Event	8	Test Lines	Test Lines	4/19/2018	04:56:05	COM4	22.00	8.32	0.00	PERFORMED A 5,000 PSI PRESSURE TEST AFTER PERFORMING A 500 PSI KICK OUT TEST AND A 5TH GEAR STALL. HELD FOR 3 MINUTES. NO LEAKS.
Event	9	Pump Spacer 1	Pump Spacer 1	4/19/2018	05:08:35	COM4	59.00	11.45	2.10	PUMPED 40 BBLS OF TUNED SPACER AT 11.5#, 3.8y, 23.8wr. ADDED 20 GALLONS OF DUEL SPACER B, MUSOL A AND 10 GALLONS OF D-AIR. 2 BPM 50 PSI.
Event	10	Drop Bottom Plug	Drop Bottom Plug	4/19/2018	05:21:14	COM4	2.00	11.59	0.00	ADAM COVINGTON DROPPED NON HALLIBURTON 5.5" BOTTOM PLUG. CO. MAN WITNESSED.
Event	11	Pump Lead Cement	Pump Lead Cement	4/19/2018	05:24:38	COM4	94.00	12.44	3.40	PUMPED 291 BBLS (1042 SKS) OF 13.2#, 1.57y, 7.54wr.

ELASTICEM CEMENT AT 8 BPM, 350 PSI.

Event	12	Check Weight	Check Weight	4/19/2018	05:28:56	COM4	464.00	13.48	7.80	WEIGHED UP CEMENT WITH PRESSURIZED MUD SCALES. CEMENT WEIGHED UP AT 13.2#
Event	13	Pump Tail Cement	Pump Tail Cement	4/19/2018	06:01:39	COM4	385.00	13.15	7.80	PUMPED 357 BBLs (983 SKS) OF 13.2#, 2.04y, 9,77wr, NEOCEM CEMENT AT 8 BPM, 530 PSI.
Event	14	Check Weight	Check Weight	4/19/2018	06:02:36	COM4	428.00	13.11	7.80	WEIGHED UP CEMENT WITH PRESSURIZED MUD SCALES. CEMENT WEIGHED UP AT 13.2#
Event	15	Shutdown	Shutdown	4/19/2018	06:49:32	COM4	66.00	13.43	0.00	SHUTDOWN TO WASH PUMPS AND LINES
Event	16	Pump Displacement	Pump Displacement	4/19/2018	07:00:41	COM4	2.00	4.11	0.00	PUMPED 330 BBLs OF WATER DISPLACEMENT. FIRST 20 AND LAST 70 BBLs WITH MMCR. THE REST WITH BE-3 AND CLA WEB. GOT 10 BBLs OF CEMENT BACK TO SURFACE. 10 BPM, 1500 PSI.
Event	17	Drop Top Plug	Drop Top Plug	4/19/2018	07:02:16	COM4	200.00	8.23	9.00	DROPPED NON HALLIBURTON 5.5" TOP PLUG. CO MAN WITNESSED, ADAM COVINGTON DROPPED.
Event	18	Bump Plug	Bump Plug	4/19/2018	07:33:10	COM4	2962.00	8.29	7.90	BUMPED PLUG AT 5 BPM 3000 PSI, TOOK TO 3450 PSI. CO. MAN WAS ON TRUCK.
Event	19	Other	Other	4/19/2018	07:43:58	USER	3679.00	8.34	1.40	PRESSURED UP ON SUB TO SHIFT TOOL. WENT AT 4850 PSI. TOOK 1.5 BBL TO SHIFT. THEN DROPPED 2450 PSI. PUMPED 6 BBL WET SHOE AT 3 BPM.
Event	20	End Job	End Job	4/19/2018	07:49:24	COM4	57.00	8.26	0.90	ESTIMATED TOP OF TAIL AT 6,259.65FT 10 BBLs OF CEMENT TO SURFACE.
Event	21	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	4/19/2018	08:00:00	USER	5.00	8.24	0.00	DISCUSSED RIGGING DOWN HAZARDS AND PROCEDURE ACCORDING TO HMS.
Event	22	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	4/19/2018	09:00:00	USER				HELD MEETING WITH ALL HES EMPLOYEES IN CONVOY TO DISCUSS DIRECTIONS AND HAZARDS ASSOCIATED WITH DRIVING, ALL FIT TO DRIVE.
Event	23	Depart Location	Depart Location	4/19/2018	09:45:00	USER				PRE JOURNEY MANAGEMENT PRIOR TO DEPARTURE.

3.0 Attachments

Harvesters State 30N-16B-M – Job Chart with Events



Harvesters State 30N-16B-M – Job Chart without Events

