

# HALLIBURTON

iCem<sup>®</sup> Service

## **SYNERGY RESOURCES CORPORATION**

Date: Sunday, July 09, 2017

**Beebe 23C-26-M Production**

Job Date: Saturday, July 01, 2017

Sincerely,  
**Bryce Hinsch**

## 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 **Beebe 23C-26-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 20 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 [Ft. Lupton]**

Sold To #: 359915		Ship To #: 3798967		Quote #:		Sales Order #: 0904133701	
Customer: SYNERGY RESOURCES CORPORATION				Customer Rep: Steve Wilson			
Well Name: BEEBE			Well #: 23C-26-M		API/UWI #: 05-123-44762-00		
Field: WATTENBERG		City (SAP): GREELEY		County/Parish: WELD		State: COLORADO	
Legal Description: NE NW-34-6N-66W-362FNL-2275FWL							
Contractor: Synergy				Rig/Platform Name/Num: Precision 462			
Job BOM: 7523 7523							
Well Type: HORIZONTAL OIL							
Sales Person: HALAMERICA\HB41307				Srcv Supervisor: Nicholas Roles			

**Job**

Formation Name			
Formation Depth (MD)	Top		Bottom
Form Type			BHST
Job depth MD	14425ft		Job Depth TVD
Water Depth			Wk Ht Above Floor
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	1783	0	1783
Casing		5.5	4.778	20		P-110	0	14425	0	6719
Open Hole Section			8.5				1783	14435	1783	6719

**Tools and Accessories**

Type	Size in	Qty	Make	Depth ft	Type	Size in	Qty	Make
Guide Shoe	5.5				Top Plug	5.5		HES
Float Shoe	5.5			14425	Bottom Plug	5.5		HES
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		HES

**Fluid Data**

Stage/Plug #: 1										
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal	
1	Tuned Spacer III	Tuned Spacer III	40	bbl	11.5	3.8		4		
	35.10 gal/bbl	<b>FRESH WATER</b>								
	0.50 gal/bbl	<b>DUAL SPACER SURFACTANT B, 5 GAL PAIL (100003665)</b>								
	0.50 gal/bbl	<b>MUSOL A, 330 GAL TOTE - (790828)</b>								
	147.42 lbm/bbl	<b>BARITE, BULK (100003681)</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	1061	sack	13.2	1.57		8	7.52	
7.52 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	892	sack	13.2	2.09		8	10.08	
10.08 Gal		<b>FRESH WATER</b>								
0.35 %		<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	10	bbl	8.34			10		
0.50 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	Cla Web Displacement	Cla Web Displacement	308	bbl	8.33			10		
1 gal/bbl		<b>CLA-WEB - TOTE (101985045)</b>								
Cement Left In Pipe		Amount	105 ft		Reason			Shoe Joint		
<b>Comment</b> Got 20bbls cement to surface. Estimated TOT-5797'.										

## 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>	Pump Stg Tot <i>(bbl)</i>	Comments
Event	1	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	6/30/2017	20:45:00	USER					All crew aware of hazards and directions. All fit to drive.
Event	2	Call Out	Call Out	6/30/2017	21:00:00	USER					Crew call out for o/l at 0300
Event	3	Depart from Service Center or Other Site	Depart from Service Center or Other Site	6/30/2017	21:05:00	USER					Started journey management.
Event	4	Arrive at Location from Service Center	Arrive at Location from Service Center	6/30/2017	22:00:00	USER					Met with company man to discuss job details and procedure. Performed hazard hunt and site assessment.
Event	5	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	6/30/2017	22:15:00	USER					All hse present. Discussed bulk and iron placement and all red zone areas. Caution taped high pressure zones.
Event	6	Other	Other	6/30/2017	22:30:00	USER					Water Test- PH-6 Chlo-0 Temp-60 Cement temp-70
Event	7	Safety Meeting - Pre Job	Safety Meeting - Pre Job	7/1/2017	05:30:00	USER	8.43	0.00	3.00	21.50	Discussed job associated hazards, contingencies and job procedure with all job associated personel.
Event	8	Start Job	Start Job	7/1/2017	06:33:44	COM4					TD-14435', TP-14425' 5.5" 20#, FC-14377', TVD-6719', OH-8.5", SURF-1783' 9.625" 36#, MUD-9.6#
Event	9	Test Lines	Test Lines	7/1/2017	06:38:27	COM4	8.33	0.00	1255.00	5.10	Pumped 5bbls fresh water to fill lines, closed manifold and performed 500psi k/o

												function test, proceeded to perform 5th gear stall at 1470psi, continued to bring pressure up to 6500psi. Pressure stabilized and held with no leaks
Event	10	Pump Spacer 1	Pump Spacer 1	7/1/2017	06:49:35	COM4	8.27	0.00	6.00	5.10		Pumped 40bbls 11.5# 3.75y 23.5g/s Tuned Spacer III with 20g Musol A, 20g Dual Spacer B and 10g D-air at 4bpm 141psi.
Event	11	Check Weight	Check Weight	7/1/2017	06:52:08	USER	11.56	2.50	101.00	5.30		Weight verified with pressurized mud scales.
Event	12	Drop Bottom Plug	Drop Bottom Plug	7/1/2017	07:01:00	USER	11.38	0.00	65.00	38.40		Dropped by HES supervisor, witnessed by company man.
Event	13	Pump Lead Cement	Pump Lead Cement	7/1/2017	07:07:01	COM4	11.58	0.00	4.00	38.40		Pumped 1061sks or 269.7bbls 13.2# 1.57y 7.52g/s Elasticem at 8bpm 475psi.
Event	14	Check Weight	Check Weight	7/1/2017	07:14:32	COM4	13.37	8.10	508.00	40.40		Weight verified with pressurized mud scales.
Event	15	Check Weight	Check Weight	7/1/2017	07:31:22	USER	13.33	7.90	518.00	173.70		Weight verified with pressurized mud scales.
Event	16	Pump Tail Cement	Pump Tail Cement	7/1/2017	07:47:14	COM4	13.38	7.90	513.00	299.60		
Event	17	Check Weight	Check Weight	7/1/2017	07:51:50	COM4	13.13	7.90	569.00	36.00		
Event	18	Check Weight	Check Weight	7/1/2017	08:05:46	USER	13.09	7.90	568.00	145.80		Weight verified with pressurized mud scales.
Event	19	Clean Lines	Clean Lines	7/1/2017	08:32:04	COM4	14.09	0.00	12.00	333.60		Shutdown, pumped 5bbls fresh water through pumps and lines to wash up.
Event	20	Drop Top Plug	Drop Top Plug	7/1/2017	08:38:11	COM4	8.18	0.00	3.00	14.10		Dropped by HES supervisor, witnessed by company man.
Event	21	Pump Displacement	Pump Displacement	7/1/2017	08:38:34	COM4	8.18	0.00	4.00	14.10		Pumped 318bbls fresh water with 5g MMCR in first

												10bbls, 20g clayweb and 15g biocide throughout at 10bpm 2430psi.
Event	22	Bump Plug	Bump Plug	7/1/2017	09:16:16	COM4	8.41	0.00	2244.00	311.30		Slowed down to 3bpm at 295bbls away, final circulating pressure-1980psi. Bump pressure-2490psi.
Event	23	Other	Other	7/1/2017	09:21:26	COM4	8.42	1.40	2415.00	311.40		Pressured up well to 4600psi to burst plug, continued to pump 6bbls at 3bpm 1818psi for wet shoe.
Event	24	Check Floats	Check Floats	7/1/2017	09:25:20	USER	8.39	0.00	1488.00	319.50		Released pressure and got 2bbls back. Floats held .
Event	25	End Job	End Job	7/1/2017	09:26:41	COM4						Got 20bbls cement to surface. Estimated TOT-5797'.
Event	26	Safety Meeting - Pre Rig-Down	Safety Meeting - Pre Rig-Down	7/1/2017	09:45:00	USER	-0.01	0.00	156.00	0.00		All HSE present. Discussed red zone areas and trapped pressure hazards. Watch for suspended loads and rig down procedures, including hand placement, lifting techniques, and swing radius.
Event	27	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	7/1/2017	11:45:00	USER						All HSE present and fit to drive. Aware of directions and hazards.
Event	28	Depart Location for Service Center or Other Site	Depart Location for Service Center or Other Site	7/1/2017	12:00:00	USER						Pre journey management prior to departure.

3.0 Attachments

3.1 Synergy Beebe 23C-26-M Production Job Chart

