

# HALLIBURTON

iCem<sup>®</sup> Service

## **SRC ENERGY INC-EBUS**

Date: Sunday, February 11, 2018

### **Boomerang 13C-6-M Production**

Job Date: Monday, February 05, 2018

Sincerely,

**Bryce Hinsch**

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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 **Boomerang 13C-6-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 39 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 #: 3823600	Quote #:	Sales Order #: 0904615583
Customer: SRC ENERGY INC-EBUS		Customer Rep: Tony Pershall	
Well Name: BOOMERANG		Well #: 13C-6-M	API/UWI #: 05-123-45398-00
Field: WATTENBERG	City (SAP): GREELEY	County/Parish: WELD	State: COLORADO
Legal Description: NE NW-5-5N-66W-1466FNL-2327FWL			
Contractor: Precision		Rig/Platform Name/Num: Precision 462	
Job BOM: 7523 7523			
Well Type: HORIZONTAL OIL			
Sales Person: HALAMERICA\HB41307		Srvc Supervisor: Luke Kosakewich	

**Job**

Formation Name			
Formation Depth (MD)	Top		Bottom
Form Type	BHST		
Job depth MD	15677ft	Job Depth TVD	7081
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	1824		1824
Casing		5.5	4.778	20		P-110	0	15662	0	7081
Open Hole Section			8.5				1824	15677	1824	7081

**Tools and Accessories**

Type	Size in	Qty	Make	Depth ft	Type	Size in	Qty	Make
Guide Shoe	5.5				Top Plug	5.5	1	Weatherford
Float Shoe	5.5			15662	Bottom Plug	5.5	1	Weatherford
Float Collar	5.5			15553	SSR plug set			
Insert Float	5.5				Plug Container	5.5	1	HES
Stage Tool	5.5				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	Tuned Spacer III	Tuned Spacer III W/ Surfactants	40	bbl	11.5	3.8		5		

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	1030	sack	13.2	1.57		8	7.54	
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	1078	sack	13.2	2.04		8	9.77	
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 W/ BE3 & Cayweb	10	bbl	8.34			8		
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	Water	Fresh Water W/ BE3 & Clayweb	334.9	bbl	8.33			9		
Cement Left In Pipe		<b>Amount</b>	0 ft		<b>Reason</b>			<b>Wet Shoe</b>		
<p><b>Comment</b> There were full returns throughout the job. Bumped the plug 500 psi. over 2,300 psi. at 3 bpm and held for 5 minutes. Got 39 bbls. of Cement to surface. Pressured up to 4,670 psi. to burst the plug. Pumped 6 bbls. for a wet shoe. Floats held. Got 2.5 bbls. of fluid back to the truck. Estimated TOT 5,786.</p>										

## 2.0 Real-Time Job Summary

### 2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	Comb Pump Rate <i>(bbl/min)</i>	DS Pump Press <i>(psi)</i>	Pump Stg Tot <i>(bbl)</i>	DH Density <i>(ppg)</i>	Combined Pump Rate <b>(1)</b> <i>(bbl/min)</i>	Comments
Event	1	Call Out	Call Out	2/4/2018	15:45:00	USER						Crew was called out at 15:45 for an on location time of 22:00.
Event	2	Depart Location Safety Meeting	Depart Location Safety Meeting	2/4/2018	20:05:00	USER						Crew held a pre journey safety meeting and JSA.
Event	3	Depart Shop for Location	Depart Shop for Location	2/4/2018	20:15:00	USER						Started journey management with dispatch and left location.
Event	4	Arrive at Location from Service Center	Arrive at Location from Service Center	2/4/2018	21:15:00	USER						Crew performed a site assessment and hazard hunt on location. Checked in with the customer and discussed the job procedures, rig up and well bore schematics to calculate the job. The rig was running casing.
Event	5	Other	Other	2/4/2018	21:30:00	USER						
Event	6	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	2/4/2018	21:35:00	USER						The crew held a pre rig up safety meeting and JSA.
Event	7	Rig-Up Equipment	Rig-Up Equipment	2/4/2018	21:40:00	USER						The crew rigged up all lines, hoses and equipment for the job.
Event	8	Safety Meeting	Safety Meeting	2/5/2018	02:30:00	USER						All personnel on location held a pre cement job safety meeting and JSA.
Event	401	Start Job	Start Job	2/5/2018	03:05:17	USER					0.00	Attempted to fill lines and pressured up to 2,000 psi. Bled off pressure. Recheck

											valve alinment. Attemeted to fills lines and pressuered up again. Bled off pressure and determined that there was a ice or cement plug in the line.	
Event	510	Shutdown	Shutdown	2/5/2018	03:10:01	USER				0.00	Shutdown to trouble shoot the where the blockage was at in the line.	
Event	514	Resolving Safety Issues - Start Time	Resolving Safety Issues - Start Time	2/5/2018	03:11:12	USER					Bled off pressure.	
Event	525	Resolving Safety Issues - End Time	Resolving Safety Issues - End Time	2/5/2018	03:25:55	USER				0.00	Found an ice plug in the 2" iron half bell on the back of the truck. Removed the ice plug and pumped water through the line with the 6X5 centripghugal pump to verify flow.	
Event	535	Pump Water	Pump Water	2/5/2018	03:29:44	USER				0.85	Pumped 3 bbls. of fresh water to fill lines and establish circulation.	
Event	540	Test Lines	Test Lines	2/5/2018	03:32:16	COM4				0.00	Pressure tested lines to 6,000 psi. with a 500 psi. electronic kick out test.	
Event	546	Drop Bottom Plug	Drop Bottom Plug	2/5/2018	03:35:00	USER				0.00	Dropped the bottom plug which, was witnessed by the customer.	
Event	549	Pump Spacer 1	Pump Spacer 1	2/5/2018	03:36:05	COM4				2.46	Pumped 40 bbls. of Tuned Spacer III with surfactants mixed at 11.5 ppg.,Yield: 3.8 ft3/sks, 23.8 gal/sks. Density was verified by pressurized scales.	
Event	809	Check Weight	Check weight	2/5/2018	03:45:38	COM4	3.50	429.00	19.6	11.73	4.01	Cement weight up at 13.2 ppg.
Event	813	Pump Lead Cement	Pump Lead Cement	2/5/2018	03:46:28	COM4	3.50	371.00	22.4	11.72		Pumped 288 bbls. (1030

												sk.) of Elasticem mixed at 13.2 ppg., Yield: 1.57 ft <sup>3</sup> /sk, 7.54 gal/sks. Density was verified by pressurized scales.
Event	1494	Pump Tail Cement	Pump Tail Cement*	2/5/2018	04:28:28	RTD Import	6.00	373.00	267.1	13.25	6.97	Pumped 392 bbls. (1078 sks.) of Neocem mixed at 13.2 ppg. Yield: 2.04 ft <sup>3</sup> /sks, 9.77 gal/sks. Density was verified by pressurized scales.
Event	1501	Mud Cup Sample	Mud Cup Sample Pulled	2/5/2018	04:30:26	RTD Import					7.52	Cement weight up at 13.2 ppg.
Event	1690	Shutdown	Shutdown	2/5/2018	05:19:27	COM4	5.60	582.00	369.8	13.06		Shutdown
Event	1702	Clean Lines	Clean Lines	2/5/2018	05:23:35	COM4	0.00	-10.00	385.4	13.50	1.07	Washed pumps and lines until clean.
Event	1712	Drop Top Plug	Drop Top Plug	2/5/2018	05:33:00	COM4	2.20	23.00	397.0	8.19	0.00	Dropped the top plug, which was witnessed by the customer.
Event	1713	Pump Displacement	Pump Displacement	2/5/2018	05:33:11	COM4	2.20	27.00	397.4	8.08	1.00	Pumped 344.9 bbls. of fresh water with MMCR in the first 10 bbls. and Biocide & Clayweb throughout the rest of displacement.
Event	1728	Bump Plug	Bump Plug	2/5/2018	06:23:35	COM4	3.00	2272.00	330.3	8.08	0.00	Bumped the plug 500 psi. over 2,300 psi. at 3 bpm. Finale pressure was 2,800 psi. Held pressure a minutes. Pressure held. Got 39 bbls. of cement to surface. Estimated TOT 5,786,.
Event	1729	Pressure Up Well	Pressure Up Well	2/5/2018	06:24:35	USER	3.00	2365.00	333.3	8.08	1.85	Pressured up the well to 4,670 psi. to burst the plug. Pumped 6 bbls. for a wet shoe.

Event	1730	Check Floats	Check Floats	2/5/2018	06:26:25	USER	0.00	2748.00	336.1	8.08	0.00	Bled off pressure to check floats. Floats held. Got 2.5 bbls. of fluid back to the truck.
Event	1731	End Job	End Job	2/5/2018	06:33:37	COM4	0.00	-28.00	344.2	8.03		Washed and blew down pumps and lines until clean and dry.
Event	1732	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	2/5/2018	10:00:00	USER						Halliburton cement crew held a pre rig down safety meeting and JSA.
Event	1733	Rig-Down Equipment	Rig-Down Equipment	2/5/2018	10:10:00	USER						Rigged down all lines, hoses and equipment.
Event	1734	Depart Location Safety Meeting	Depart Location Safety Meeting	2/5/2018	11:00:00	USER						Held a pre journey safety meeting with the crew.
Event	1735	Depart Location for Service Center or Other Site	Depart Location for Service Center or Other Site	2/5/2018	11:15:00	USER						Started journey management with dispatch and left location.

3.0 Attachments

3.1 SRC Energy Boomerang 13C-6-M Production Job Chart

