

# HALLIBURTON

iCem<sup>®</sup> Service

## **SYNERGY RESOURCES CORP-EBUS**

Date: Sunday, July 16, 2017

### **Leffler 41C-23-L Production**

Job Date: Friday, July 14, 2017

Sincerely,

**Julia Nichols**

## 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 **Leffler 41C-23-L** 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 barrels 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]**

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*Cementing Job Summary**The Road to Excellence Starts with Safety*

Sold To #: 359915	Ship To #: 3800225	Quote #:	Sales Order #: 0904152849							
Customer: SYNERGY RESOURCES CORPORATION		Customer Rep: Kent Priddy								
Well Name: LEFFLER	Well #: 41C-23-L	API/UWI #: 05-123-44828-00								
Field: WATTENBERG	City (SAP): GREELEY	County/Parish: WELD	State: COLORADO							
Legal Description: SE NE-21-6N-66W-1921FNL-275FEL										
Contractor: PRECISION DRLG		Rig/Platform Name/Num: PRECISION 562								
Job BOM: 7523 7523										
Well Type: HORIZONTAL OIL										
Sales Person: HALAMERICA\HB41307		Srv Supervisor: Vitali Neverdasov								
<b>Job</b>										
Formation Name										
Formation Depth (MD)	Top	Bottom								
Form Type	BHST									
Job depth MD	17837ft	Job Depth TVD	7148 ft							
Water Depth		Wk Ht Above Floor								
Perforation Depth (MD)	From	To								
<b>Well Data</b>										
Description	New / Used	Size in	ID in	Weight lbn/ft	Thread	Grade	Top MD ft	Bottom MD ft	Top TVD ft	Bottom TVD ft
Casing	N/A	9.625	8.921	36	LTC	J-55	0	1790	0	0
Casing	new	5.5	4.778	20	BTC	P-110	0	17807	0	7148
Open Hole Section			8.5				1783	17883	0	7148
<b>Tools and Accessories</b>										
Type	Size in	Qty	Make	Depth ft	Type	Size in	Qty	Make		
Guide Shoe	5.5				Top Plug	5.5	1	wdf		
Float Shoe	5.5			17807	Bottom Plug	5.5	1	wdf		
Float Collar	5.5			17759	SSR plug set					
Insert Float	5.5				Plug Container	5.5	1	hes		
Stage Tool	5.5				Centralizers	5.5	176	wdf		
<b>Fluid Data</b>										
Stage/Plug #: 1										
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbn/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		6		
35.10 gal/bbl		FRESH WATER								
0.50 gal/bbl		DUAL SPACER SURFACTANT B, 5 GAL PAIL (100003665)								
0.50 gal/bbl		MUSOL A, 330 GAL TOTE - (790828)								
147.42 lbn/bbl		BARITE, BULK (100003681)								

## HALLIBURTON

## Cementing Job Summary

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	1023	sack	13.2	1.57		6	7.52
7.52 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	NeoCem	NeoCem TM	1270	sack	13.2	2.09		4	10.08
10.08 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
4	MMCR Displacement	MMCR Displacement	0	bbl	8.34				
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	0	bbl	8.33				
Cement Left In Pipe		Amount	0		Reason			Wet shoe	
Comment TOTC 6221'. TOLC 0'. 20 BBLS OF CEMENT BACK TO SURFACE									

## 2.0 Real-Time Job Summary

## 2.1 Job Event Log

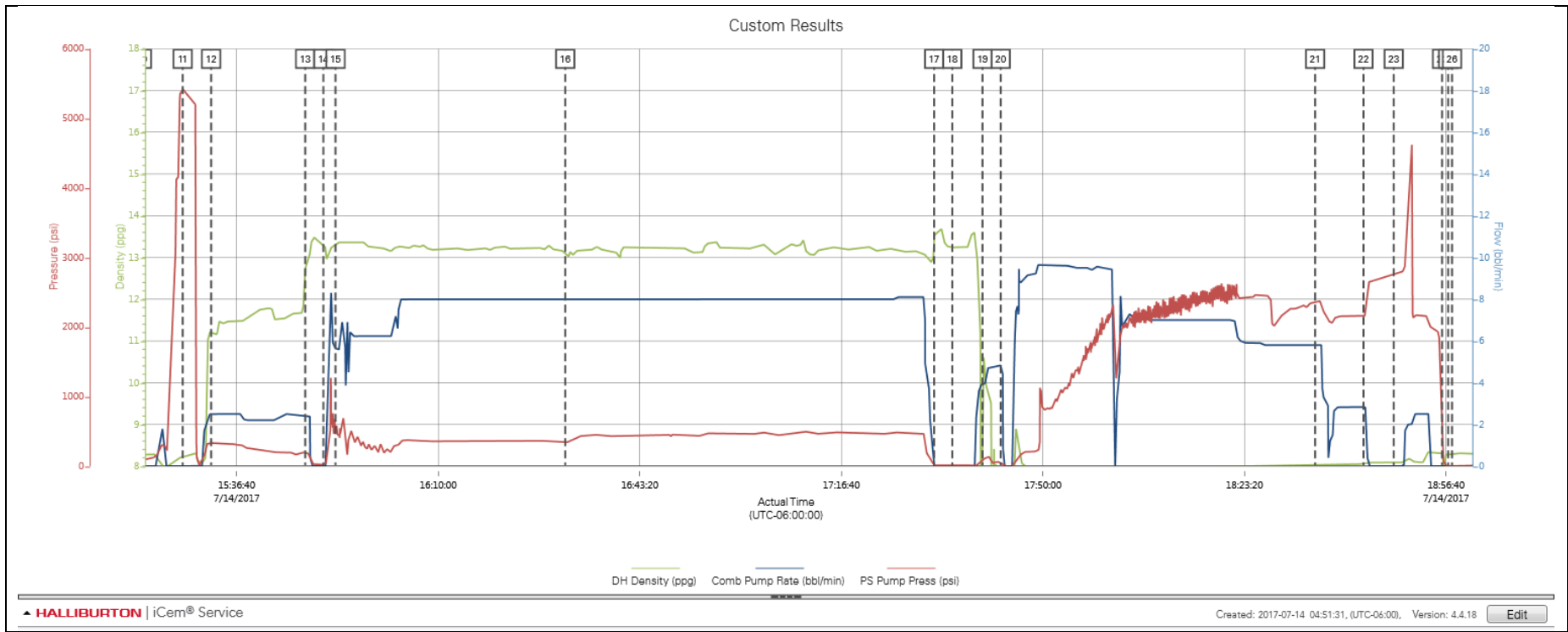
Type	Seq. No.	Activity	Graph Label	Date	Time	Source	DH Density (ppg)	Comb Pump Rate (bbl/min)	PS Pump Press (psi)	Comments
Event	1	Call Out	Call Out	7/14/2017	01:00:00	USER				For Location @ 07:00
Event	2	Depart Yard Safety Meeting	Depart Yard Safety Meeting	7/14/2017	05:15:00	USER				Journey management meeting held prior to departure
Event	3	Depart from Service Center or Other Site	Depart from Service Center or Other Site	7/14/2017	05:31:00	USER				Called Journey
Event	4	Arrive at Location from Service Center	Arrive at Location from Service Center	7/14/2017	06:35:00	USER				38 miles/Discussed numbers and job procedures with Customer/ Rig is running casing.
Event	5	Safety Meeting - Pre Rig-Up	Safety Meeting - Pre Rig-Up	7/14/2017	06:43:00	USER				JSA to discuss the hazards of rig-up
Event	6	Rig-Up Equipment	Rig-Up Equipment	7/14/2017	06:51:00	USER				Spot trucks/ Rig-up all surface lines and equipment up to the Buffer zone.
Event	7	Casing on Bottom	Casing on Bottom	7/14/2017	11:53:00	USER				Landing joint brought to floor and landed/ Casing crew is rigging down.
Event	8	Circulate Well	Circulate Well	7/14/2017	12:51:00	USER				RIG IS CIRCULATING AT 6 BPM, 350 psi. MW 9.7 PV17, YP 6
Event	9	Pre-Job Safety Meeting	Pre-Job Safety Meeting	7/14/2017	14:48:00	USER	8.30	0.00	5.00	With all essential personnel, to discuss the hazards of pumping the job, and pump schedule.
Event	10	Start Job	Start Job	7/14/2017	15:21:00	USER	8.27	0.00	103.00	With water supplied from uprights, water tested good to mix cement, PH 7, Cl 0, Temp 77
Event	11	Test Lines	Test Lines	7/14/2017	15:27:45	USER	8.24	0.00	5428.00	Load line with 2 bbls of water. Test lines @ 5220 psi
Event	12	Pump Spacer	Pump Spacer	7/14/2017	15:32:27	USER	11.21	2.50	338.00	40bbls tuned spacer @11.5 ppg with 20 gallons dual spacer B, 20 gallons musol A, 5 gallons de-air. verified with pressurized scales.
Event	13	Shutdown	Shutdown	7/14/2017	15:48:00	USER	12.74	2.40	195.00	Finished pumping spacer
Event	14	Drop Bottom Plug	Drop Bottom Plug	7/14/2017	15:51:00	USER	13.29	0.00	22.00	Pre-loaded bottom plug in plug container, verified by customer rep.

Event	15	Pump Lead Cement	Pump Lead Cement	7/14/2017	15:53:00	USER	13.37	5.70	472.00	1023 sks(286 bbls) Elasticem @ 13.2 ppg, verified with pressurized scales
Event	16	Pump Tail Cement	Pump Tail Cement	7/14/2017	16:31:00	USER	13.10	8.00	351.00	1270 sks(472.7 bbls) NeoCem @ 13.2 ppg, verified with pressurized scales.
Event	17	Shutdown	Shutdown	7/14/2017	17:32:00	USER	13.51	0.00	10.00	Finished pumping cement
Event	18	Clean Lines	Clean Lines	7/14/2017	17:35:00	USER	13.24	0.00	6.00	Wash pumps and lines
Event	19	Drop Top Plug	Drop Top Plug	7/14/2017	17:40:00	USER	10.16	3.90	87.00	Pre-loaded top plug in plug container verified by customer rep.
Event	20	Pump Displacement - Start	Pump Displacement - Start	7/14/2017	17:43:00	USER	0.86	4.80	18.00	393.8 bbls of water. Per customer request first 40 bbls with MMCR + CLAWEB and BIOCIDe thruout displacement. Last 10 bbls @ 2.7 bpm.
Event	21	Cement Returns to Surface	Cement Returns to Surface	7/14/2017	18:35:00	USER				@373 bbls Displacement. 20 bbls cement to surface, TOTC 6221' TOLC 0'
Event	22	Bump Plug	Bump Plug	7/14/2017	18:43:00	USER	8.05	2.90	2161.00	@500 psi over final circulating pressure of 2678 psi/ Hold pressure for 5 min for casing test.
Event	23	Pump Water	Pump Water	7/14/2017	18:48:00	USER				Open wet shoe sub @ 4680 psi, and pump 6 bbl wet shoe.
Event	24	Shutdown	Shutdown	7/14/2017	18:56:00	USER	8.31	0.00	330.00	Check floats/ floats held. Job is complete.
Event	25	Check Floats	Check Floats	7/14/2017	18:57:00	USER	8.31	0.00	2.00	Floats held. 2.5 bbls back
Event	26	End Job	End Job	7/14/2017	18:57:38	COM4				
Event	27	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	7/14/2017	19:05:00	USER	8.30	0.00	5.00	JSA to discuss the hazards of rig-down
Event	28	Depart Location Safety Meeting	Depart Location Safety Meeting	7/14/2017	20:48:00	USER				Journey management meeting held prior to departure
Event	29	Depart Location for Service Center or Other Site	Depart Location for Service Center or Other Site	7/14/2017	21:33:00	USER				Called Journey



3.0 Attachments

3.1 Custom Results – Job Chart with Events



3.2 Custom Results – Job Chart with Events

