

HALLIBURTON

iCem[®] Service

SRC ENERGY INC-EBUS

Date: Sunday, November 12, 2017

Falken 9C-9-L Production

Job Date: Wednesday, October 18, 2017

Sincerely,

Justin Lansdale

Legal Notice

Disclaimer:

All information in this report is provided subject to the terms and conditions which govern the services provided by Halliburton. Halliburton personnel use their best efforts in gathering information and their best judgment in interpreting it, but any interpretation, research, analysis or recommendation furnished by Halliburton are opinions based upon inferences from measurements and empirical relationships and assumptions, which inferences and empirical relationships and assumptions are not infallible, and with respect to which professionals in the industry may differ. Accordingly, HALLIBURTON IS UNABLE TO GUARANTEE THE ACCURACY OF ANY CHART INTERPRETATION, RESEARCH ANALYSIS, OR JOB RECOMMENDATION and any interpretation or recommendation is not for use of or reliance upon by any third party. The customer has full responsibility for any of its decisions which are based on the information provided in this report.

Table of Contents

1.0	Cementing Job Summary	4
1.1	Executive Summary	4
2.0	Real-Time Job Summary	7
2.1	Job Event Log	7
3.0	Attachments.....	9
3.1	Job Chart.....	9

1.0 Cementing Job Summary

1.1 Executive Summary

Halliburton appreciates the opportunity to perform the cementing services on the **Falken 9C-9-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.

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 #: 3815858	Quote #:	Sales Order #: 0904359309
Customer: SRC ENERGY INC-EBUS		Customer Rep: Tim Jones	
Well Name: FALKEN		Well #: 9C-9-L	API/UWI #: 05-123-45117-00
Field: WATTENBERG	City (SAP): GREELEY	County/Parish: WELD	State: COLORADO
Legal Description: NE SE-11-6N-66W-1859FSL-276FEL			
Contractor: PRECISION DRLG		Rig/Platform Name/Num: PRECISION 562	
Job BOM: 7523 7523			
Well Type: HORIZONTAL OIL			
Sales Person: HALAMERICA\HB41307		Srvc Supervisor: Steven Markovich	

Job

Formation Name			
Formation Depth (MD)	Top		Bottom
Form Type			BHST 230 degF
Job depth MD	19100 ft		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	1808	0	1808
Casing		5.5	4.778	20		P-110	0	19100	0	0
Open Hole Section			8.5				1808	19120	0	0

Tools and Accessories

Type	Size in	Qty	Make	Depth ft	Type	Size in	Qty	Make
Guide Shoe	5.5			19100	Top Plug	5.5		HES
Float Shoe	5.5				Bottom Plug	5.5		HES
Float Collar	5.5				SSR plug set	5.5		HES
Insert Float	5.5				Plug Container	5.5		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 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		
	147.42 lbm/bbl	BARITE, BULK (100003681)								
	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)								
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	1040	sack	13.2	1.57		6	7.54	
7.54 Gal		FRESH WATER								
0.30 %		SCR-100 (100003749)								
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	1445	sack	13.2	2.04		4	9.77	
9.77 Gal		FRESH WATER								
0.08 %		SCR-100 (100003749)								
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	20	bbl	8.34					
0.50 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/min	Total Mix Fluid Gal	
5	Clay-Web Water	Clay-Web Water	392	bbl	8.33					
0.0493 gal/bbl		CLA-WEB - TOTE (101985045)								
Cement Left In Pipe		Amount	42 ft			Reason			Shoe Joint	
Mix Water:		pH ##	Mix Water Chloride:## ppm			Mix Water Temperature:## °F °C				
Cement Temperature:## °F °C		Plug Displaced by:## lb/gal kg/m3 XXXX				Disp. Temperature:## °F °C				
Plug Bumped?Yes/No		Bump Pressure:#### psi MPa				Floats Held?Yes/No				
Cement Returns:## bbl m3		Returns Density:## lb/gal kg/m3				Returns Temperature:## °F °C				
Comment Spacer to surface at 340bbbls away, cement to surface at 385bbbls away bringing 27bbbls to surface. Estimated top of Tail Cement 6259'										

2.0 Real-Time Job Summary

2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	Comments
Event	1	Call Out	Call Out	10/18/2017	03:30:00	USER	Job called out at 03:30 with an on location time of 9:00
Event	2	Arrive at Location from Service Center	Arrive at Location from Service Center	10/18/2017	09:00:00	USER	Arrived on location, rig still running casing. approx 1800'
Event	3	Assessment Of Location Safety Meeting	Assessment Of Location Safety Meeting	10/18/2017	10:00:00	USER	JSA and Hazard hunt with HES crew
Event	4	Rig-Up Equipment	Rig-Up Equipment	10/18/2017	10:15:00	USER	Rigged up HES lines and equipment
Event	5	Pre-Job Safety Meeting	Pre-Job Safety Meeting	10/18/2017	14:30:00	USER	JSA with HES and rig crew on job procedure.
Event	6	Start Job	Start Job	10/18/2017	14:52:01	COM4	TD 19120' TP 19100' FC 19051' 5 1/2" 20# Production casing 8 1/2" Open Hole Surface casing 9 5/8 36# 1808'
Event	7	Test Lines	Test Lines	10/18/2017	14:55:36	COM4	500psi kick out test then bring up to 4500psi and hold. 1" lo torque was leaking by so replaced valve.
Event	8	Test Lines	Test Lines	10/18/2017	15:29:16	COM4	Re pressurized back up and held pressure.
Event	9	Check Weight	Check weight	10/18/2017	15:34:33	COM4	Weight verified by pressurized scales.
Event	10	Pump Spacer 1	Pump Spacer 1	10/18/2017	15:36:07	COM4	Pump 40bbls of 11.5ppg 3.8yield Tuned spacer. Added 20 gallons of Musol A and Dual spacer B on the fly. Pumped at 3bbl/min 255psi.
Event	11	Drop Top Plug	Drop Bottom Plug	10/18/2017	15:46:44	COM4	Plug pre loaded into HES head, witnessed by company rep. Plug dropped in front of company rep.
Event	12	Pump Lead Cement	Pump Lead Cement	10/18/2017	15:47:16	COM4	Pump 290bbls (1040sks) of 13.2ppg 1.57yield Lead Cement. Pumped at 8bbl/min 520psi.

Event	13	Check Weight	Check weight	10/18/2017	16:02:52	COM4	Weight verified by pressurized scales.
Event	14	Pump Tail Cement	Pump Tail Cement	10/18/2017	16:24:47	COM4	Pump 525bbls (1445sks) of 13.2ppg 2.04yield Lead Cement. Pumped at 8bbl/min 930psi.
Event	15	Check Weight	Check weight	10/18/2017	16:27:09	COM4	Weight verified by pressurized scales.
Event	16	Shutdown	Shutdown	10/18/2017	17:47:35	COM4	Shutdown
Event	17	Clean Lines	Clean Lines	10/18/2017	18:02:01	COM4	Clean pumps and lines
Event	18	Drop Top Plug	Drop Top Plug	10/18/2017	18:02:39	COM4	Plug pre loaded into HES head, witnessed by company rep. Plug dropped in front of company rep.
Event	19	Pump Displacement	Pump Displacement	10/18/2017	18:02:43	COM4	Calculated displacement was 425bbls. Pumed at 10bbls a min and slowed down with pressure increase. First 20bbls with MMCR and then the rest with biocide and clayweb.
Event	20	Bump Plug	Bump Plug	10/18/2017	19:00:04	COM4	Bumped plug at 412bbls away, fina lift pressure was 2531psi. brought pressure 500psi over and held. pressure was at 3060ps when checking floats. After 4.5bbls back the floats held.
Event	21	Other	Other	10/18/2017	19:05:05	COM4	Kicked in pumps to burst wet shoe sub. Truck kicked out at 4300psi, re set kick outs and truck kicked out at 4500psi. Company rep went to make a phone call with us being at 4500psi. Pressure broke over at 4624psi and we re gained flow. As pumping the 6bbl wet shoe the pressure continued to climb back up to 4500psi+. while pumping the 6 bbls we had flow the entire time.
Event	22	End Job	End Job	10/18/2017	19:24:34	COM4	Thank you Steve Markovich and crew

3.0 Attachments

3.1 Job Chart



