

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

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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 pressured 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



