

HALLIBURTON

iCem[®] Service

EXTRACTION OIL & GAS

Date: Tuesday, April 25, 2017

RBF 4 Surface

Job Date: Friday, April 07, 2017

Sincerely,

Julia Nichols

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1.0 Cementing Job Summary

1.1 Executive Summary

Halliburton appreciates the opportunity to perform the cementing services on the **RBF 4** cement **Surface** 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 61 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 #: 369404	Ship To #: 3788390	Quote #:	Sales Order #: 0903945041							
Customer: EXTRACTION OIL & GAS -		Customer Rep: Sean McIntyre								
Well Name: RBF	Well #: 4	API/UWI #: 05-123-44447-00								
Field: WATTENBERG	City (SAP): WINDSOR	County/Parish: WELD	State: COLORADO							
Legal Description: SE NE-22-6N-67W-1993FNL-300FEL										
Contractor:		Rig/Platform Name/Num: Spud Rig								
Job BOM: 7521										
Well Type: HORIZONTAL OIL										
Sales Person: HALAMERICA\HX38199		Srv Supervisor: Michael Loughran								
Job										
Formation Name										
Formation Depth (MD)	Top	Bottom								
Form Type	BHST									
Job depth MD	1538ft	Job Depth TVD	1538ft							
Water Depth		Wk Ht Above Floor	3ft							
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		J-55	0	1538	0	1538
Open Hole Section			13.5				0	1541	0	1541
Tools and Accessories										
Type	Size in	Qty	Make	Depth ft	Type	Size in	Qty	Make		
Guide Shoe					Top Plug	9.625	1	HES		
Float Shoe	9.625	1		1538	Bottom Plug					
Float Collar	9.625	1		1495	SSR plug set					
Insert Float					Plug Container	9.625	1	HES		
Stage Tool					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	Spacer	Red Dye Spacer	10	bbl	8.33			2	420	
Fluid #										
2	Cement	SWIFTCEN (TM) SYSTEM	625	sack	13.5	1.74	9.2	7	5750	
9.20 Gal		FRESH WATER								

last updated on 4/25/2017 1:05:47 PM

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ICem Service

(v. 4.4.18)

Created: Tuesday, April 25, 2017

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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	
3	Displacement	Fresh Water	116	bbl	8.33			8	4872	
Cement Left In Pipe		Amount	43 ft		Reason			Shoe Joint		
Mix Water:		pH 7.0	Mix Water Chloride:			0 ppm		Mix Water Temperature:		49 °F
Cement Temperature:		N/A	Plug Displaced by:			8.3 lb/gal Fresh Water		Disp. Temperature:		49 °F
Plug Bumped?		Yes	Bump Pressure:			800 psi		Floats Held?		Yes
Cement Returns:		61 bbl	Returns Density:			N/A		Returns Temperature:		N/A
Comment										

2.0 Real-Time Job Summary

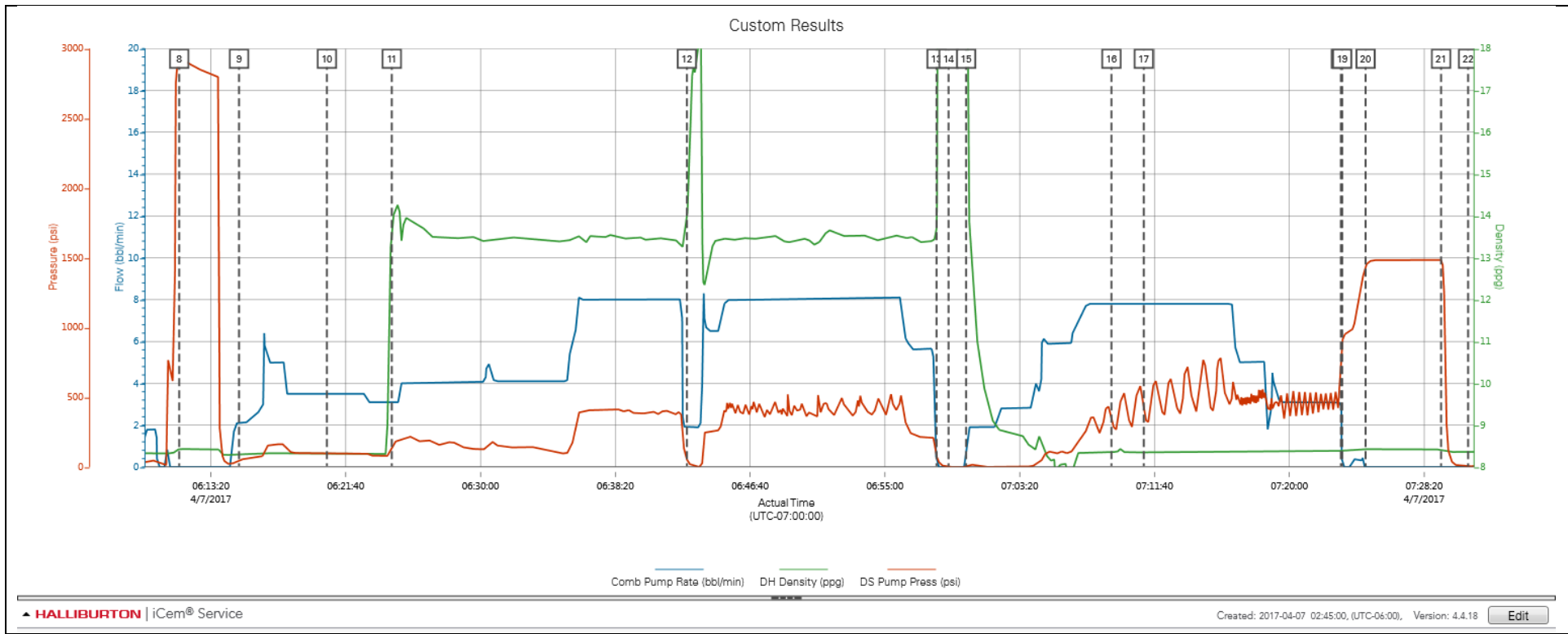
2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	Comb Pump Rate (bbl/min)	DH Density (ppg)	DS Pump Press (psi)	Comments
Event	1	Call Out	Call Out	4/7/2017	00:00:00	USER				Crew called out, on location time of 4:00 4/7/2017.
Event	2	Crew Leave Yard	Crew Leave Yard	4/7/2017	02:00:00	USER				Started journey management. Crew left Fort Lupton, CO.
Event	3	Arrive At Loc	Arrive At Loc	4/7/2017	03:00:00	USER				Meet with customer to discuss job. Rig was drilling the surface when crew arrived on location.
Event	4	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	4/7/2017	05:00:00	USER				JSA and identify hazards of rigging up to well head. Discuss Iron, bulk, and water hoses to be rigged up.
Event	5	Rig-Up Equipment	Rig-Up Equipment	4/7/2017	05:05:00	USER				Rig up iron, bulk, and water hoses.
Event	6	Pre-Job Safety Meeting	Pre-Job Safety Meeting	4/7/2017	05:50:00	USER				With all associated personnel, discuss hazards of job and safety related material.
Event	7	Start Job	Start Job	4/7/2017	06:06:16	COM1				Fill lines and establish circulation with well.
Event	8	Test Lines	Test Lines	4/7/2017	06:11:22	USER	0.00	8.43	2908.00	Pressure test line to 2500 psi. Kickouts set at 500 psi, kicked out at 1200 psi, 5th gear stall at 1800 psi.
Event	9	Pump Spacer 1	Pump Fresh Water Spacer	4/7/2017	06:15:04	COM1	2.10	8.31	50.00	Pump 20bbls fresh water spacer.
Event	10	Pump Spacer 1	Pump Fresh Water Spacer	4/7/2017	06:20:30	USER	3.50	8.32	101.00	Pump 10 bbls of red dyed fresh water spacer.
Event	11	Pump Cement	Pump Cement	4/7/2017	06:24:31	USER	3.10	13.65	140.00	Pump 625 sack Swiftcem Cement. 194 bbls, Density: 13.5 ppg, Yield: 1.74 ft3/sack, Water Req: 9.2 gal/sack.
Event	12	Slow Rate	Slow Rate	4/7/2017	06:42:45	USER	1.90	13.95	55.00	Slow rate due to bulk equipment issue. Resolved issue and kept pumping as scheduled.
Event	13	Shutdown	Shutdown	4/7/2017	06:58:11	USER	0.00	13.68	82.00	Shutdown to drop top plug.
Event	14	Drop Top Plug	Drop Top Plug	4/7/2017	06:58:56	USER	0.00	30.82	0.00	Drop top plug.
Event	15	Pump Displacement	Pump Displacement	4/7/2017	07:00:01	USER	0.10	28.67	0.00	Pump 116 bbls fresh water displacement
Event	16	Spacer Returns to Surface	Spacer to Surface	4/7/2017	07:09:00	USER	7.80	8.36	373.00	Red dyed spacer to surface at 35 bbls into displacement.

Event	17	Cement Returns to Surface	Cement to Surface	4/7/2017	07:11:00	USER	7.80	8.36	428.00	Good cement returns to surface at 55 bbls into displacement. 61 bbls cement to surface.
Event	18	Bump Plug	Bump Plug	4/7/2017	07:23:11	USER	3.00	8.38	637.00	Plug bumped at calculated displacement. Bumped at 6psi, brought up to 1100 psi and shutdown.
Event	19	Shutdown	Shutdown	4/7/2017	07:23:16	USER	0.00	8.39	904.00	Shutdown for casing pressure test.
Event	20	Pressure Test	Casing Pressure Test	4/7/2017	07:24:42	USER	0.00	8.43	1438.00	Casing pressure test, 1500 psi for 5 minutes.
Event	21	Check Floats	Check Floats	4/7/2017	07:29:22	USER	0.00	8.42	1488.00	Release pressure.
Event	22	End Job	End Job	4/7/2017	07:31:03	COM1				Floats held, 1 bbls back.
Event	23	Post-Job Safety Meeting (Pre Rig-Down)	Post-Job Safety Meeting (Pre Rig-Down)	4/7/2017	07:40:00	USER				JSA and discuss rigging down iron, bulk, and water hoses.
Event	24	Rig Down Lines	Rig Down Lines	4/7/2017	07:45:00	USER				Rig down bulk, water hoses, and iron.
Event	25	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	4/7/2017	08:25:00	USER				Plan route, hazards of journey, and complete pre-trip inspections.
Event	26	Crew Leave Location	Crew Leave Location	4/7/2017	08:30:00	USER				Start Journey management. Thank you for choosing Halliburton, Mike Loughran and crew.

3.0 Attachments

3.1 Custom Results – Job Chart with Events



3.2 Custom Results – Job Chart without Events

