

HALLIBURTON

iCem[®] Service

EXTRACTION OIL & GAS

Date: Saturday, August 05, 2017

HFE #2 Surface

Job Date: Monday, July 24, 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 **HFE #2** 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.

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 #: 369404		Ship To #: 3800432		Quote #:		Sales Order #: 0904182593					
Customer: EXTRACTION OIL & GAS -				Customer Rep: Shawn McIntyre							
Well Name: HFE			Well #: 2		API/UWI #: 05-123-44770-00						
Field: WATTENBERG		City (SAP): MEAD		County/Parish: WELD		State: COLORADO					
Legal Description: SW SW-22-4N-68W-1126FSL-907FWL											
Contractor: UNKNOWN				Rig/Platform Name/Num: WORKOVER RIG							
Job BOM: 7521 7521											
Well Type: HORIZONTAL OIL											
Sales Person: HALAMERICA\HX38199				Srvc Supervisor: Bradley Hinkle							
Job											
Formation Name											
Formation Depth (MD)		Top		Bottom							
Form Type				BHST							
Job depth MD		1579ft		Job Depth TVD		1579ft					
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	0	9.625	8.921	36	8 RD	J-55	0	1579	0	0	
Open Hole Section			13.5				0	1580	0	0	
Tools and Accessories											
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make		
Guide Shoe	9.625					Top Plug	9.625	1	HES		
Float Shoe	9.625	1		1579		Bottom Plug	9.625		HES		
Float Collar	9.625	1		1536		SSR plug set	9.625		HES		
Insert Float	9.625					Plug Container	9.625	1	HES		
Stage Tool	9.625					Centralizers	9.625		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	Spacer	Red Dye Water			10	bbl	8.33			3	

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	Primary Cement	SWIFTCM	550	sack	13.5	1.74		8	9.2		
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	119	bbl	8.33			8			
Cement Left In Pipe		Amount	42 ft		Reason			Shoe Joint			
Mix Water:		pH 6	Mix Water Chloride:			0 ppm		Mix Water Temperature:		77 °F	
Cement Temperature:		## °F °C		Plug Displaced by:			## lb/gal kg/m3 XXXX		Disp. Temperature:		## °F °C
Plug Bumped?		Yes		Bump Pressure:			#### psi MPa		Floats Held?		Yes
Cement Returns:		25 bbl		Returns Density:			## lb/gal kg/m3		Returns Temperature:		## °F °C
Comment 25 bbls cement to surface.											

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	7/23/2017	11:00:00	USER	Crew called for an on location of 1700. Crew was Bradley Hinkle, Prince Perez, Kendall Broom and Alaa Almallallah.
Event	2	Depart Yard Safety Meeting	Depart Yard Safety Meeting	7/23/2017	13:00:00	USER	Pre-journey safety meeting.
Event	3	Arrive at Location from Service Center	Arrive at Location from Service Center	7/23/2017	14:00:00	USER	Sign in, perform a site assessment and pre rig-up safety meeting.
Event	4	Other	Job Numbers	7/23/2017	21:25:01	USER	TD: 1580 TP: 1579. FC: 1536. 9.625" 36# casing inside a 13.5" OH.
Event	5	Safety Meeting - Pre Job	Safety Meeting - Pre Job	7/23/2017	21:25:06	USER	Pre-job safety meeting with HES personnel. Rig crew did not participate.
Event	6	Start Job	Start Job	7/23/2017	23:20:10	COM4	
Event	7	Test Lines	Test Lines	7/23/2017	23:22:07	COM4	Pressure test lines with a 500 PSI electronic kick-out test.
Event	8	Pump Spacer 1	Pump Spacer 1	7/23/2017	23:27:07	COM4	Pump 10 bbls red dye water.
Event	9	Pump Cement	Pump Cement	7/23/2017	23:40:02	COM4	Pump 170 bbls (550 sacks) SwiftCem mixed at 13.5 ppg. Density verified by pressurized scales.
Event	10	Check Weight	Check Weight	7/23/2017	23:44:51	COM4	Cement weighed at 13.6 ppg.
Event	11	Shutdown	Shutdown	7/24/2017	00:05:43	COM4	
Event	12	Drop Top Plug	Drop Top Plug	7/24/2017	00:07:41	COM4	Top plug preloaded. Witnessed by customer.
Event	13	Pump Displacement	Pump Displacement	7/24/2017	00:07:45	COM4	Pump 119 bbls fresh water. Good returns throughout. 25 bbls cement to surface.

Event	14	Bump Plug	Bump Plug	7/24/2017	00:29:07	COM4	Bump plug at 480 PSI and increase 500 PSI over. Increase pressure to 1500 PSI for a 5 minute casing test.
Event	15	Check Floats	Check Floats	7/24/2017	00:34:29	USER	Floats held. 1 bbl back.
Event	16	End Job	End Job	7/24/2017	00:34:57	COM4	
Event	17	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	7/24/2017	00:35:00	USER	Pre-rig down safety meeting.
Event	18	Depart Location for Service Center or Other Site	Depart Location for Service Center or Other Site	7/24/2017	01:00:00	USER	Pre-journey safety meeting. Bulk trucks left location for yard to get loaded for next job.

3.0 Attachments

3.1 Job Chart



