

HALLIBURTON

iCem[®] Service

EXTRACTION OIL & GAS-EBUS

Date: Friday, September 08, 2017

HFE 2 Production

Job Date: Monday, September 04, 2017

Sincerely,
Bryce Hinsch

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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 **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 59 bbls 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 [Fort Lupton]

The Road to Excellence Starts with Safety

Sold To #: 369404		Ship To #: 3800432		Quote #:		Sales Order #: 0904279636				
Customer: EXTRACTION OIL & GAS				Customer Rep:						
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: CYCLONE				Rig/Platform Name/Num: CYCLONE 37						
Job BOM: 7523 7523										
Well Type: HORIZONTAL OIL										
Sales Person: HALAMERICA\HX38199				Srvc Supervisor: Luke Kosakewich						
Job										
Formation Name										
Formation Depth (MD)		Top		Bottom						
Form Type				BHST						
Job depth MD		11995ft		Job Depth TVD		7133ft				
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			0	1590	0	1590
Casing		5.5	4.778	20			0	11984	0	7133
Open Hole Section			8.5				1590	11995	0	7133
Tools and Accessories										
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make	
Guide Shoe						Top Plug	5.5	1	KLX	
Float Shoe	5.5			11984		Bottom Plug				
Float Collar	5.5			11980		SSR plug set				
Insert Float						Plug Container				
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	11.5 lb/gal Tuned Spacer III	Tuned Spacer III	50	bbl	11.5	3.73		5		

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	2000	sack	13.2	1.57		8	7.54
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	Displacement	265.6	bbl	8.33			10	
Cement Left In Pipe		Amount	0 ft		Reason			Wet Shoe	
Comment Full returns throughout the job. Got 59 bbls. of cement to surface. Floats held and got 2 bbls of fluid back to the truck.									

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)	DS Pump Press (psi)	DH Density (ppg)	Comments
Event	1	Call Out	Call Out	9/3/2017	19:00:00	USER				Crew was called out at 19:00 for an on location time of 23:00.
Event	2	Depart Location Safety Meeting	Depart Location Safety Meeting	9/3/2017	22:00:00	USER				Held pre journey safety meeting and JSA.
Event	3	Arrive at Location from Service Center	Arrive at Location from Service Center	9/3/2017	22:40:00	USER				Preformed a site assesment and hazard hunt on location. Checked in with the customer and disscused job procedures and well bore scamatics to calculate the job.
Event	4	Other	Other	9/3/2017	22:55:00	USER				MD: 1,995', TP: 5.5" 20# set at 11,984', FC: 11,980', TVD: 7,133', SC: 9.625" 36# set at 1,590', OH: 8.5", Mud: 10 ppg. Water test: PH: 7.0 Chlorides 0, Temp: 75 degrees.
Event	5	Safety Meeting	Safety Meeting	9/4/2017	01:45:00	USER	0.00	92.00	8.48	Held safety meeting and JSA with all personnel on location.
Event	6	Start Job	Start Job	9/4/2017	02:09:31	COM4	0.00	92.00	8.48	Pumped 3 bbls. of fresh water to fill lines.
Event	7	Test Lines	Test Lines	9/4/2017	02:12:17	COM4	0.00	325.00	8.51	Pressure tested lines to 5,000 psi. with a 500 psi. electronic kick out test.
Event	8	Pump Spacer 1	Pump Spacer 1	9/4/2017	02:19:15	COM4	0.00	293.00	8.49	Pumped 50 bbls. of Tuned Spacer III mixed at 11.5 ppg.

										Yeild 3.73 ft3/sack, Gal/sack 23.4.
Event	9	Pump Cement	Pump Cement	9/4/2017	02:33:19	COM4	4.70	407.00	12.33	Pumped 559 bbls. (2000 sks) of Elasticem mixed at 13.2 ppg. Yeild 1.57 ft3/sack, 7.54 gal/sack.
Event	10	Check Weight	Check weight	9/4/2017	02:43:13	COM4	8.10	448.00	13.12	Cement weight up at 13.2 ppg.
Event	11	Shutdown	Shutdown	9/4/2017	03:49:18	COM4	0.00	148.00	14.12	Rig blew iron down to the wash up tank and also washed pumps and lines until clean.
Event	12	Drop Top Plug	Drop Top Plug	9/4/2017	03:58:06	COM4	0.00	140.00	8.18	Realesed the top plug witnessed by the customer.
Event	13	Pump Displacement	Pump Displacement	9/4/2017	03:58:10	COM4	0.00	132.00	8.19	Pumped 265.6 bbls. of fresh water for displacment.
Event	14	Bump Plug	Bump Plug	9/4/2017	04:36:05	COM4	0.00	3042.00	8.22	Bumed the 500 psi. over 2,450 psi. at 4 bpm. Finale pressure was 2,950 psi.
Event	15	Pressure Up Well	Pressure Up Well	9/4/2017	04:37:28	COM4	1.40	3799.00	8.24	Pressured up the well to 4,000 psi. to burst the plug. Pumped 5 bbls. of fresh water for a wet shoe.
Event	16	Other	Other	9/4/2017	04:40:56	COM4	0.00	102.00	8.21	Bled off pressure to check flaots. Floats held. Got 2 bbls. back to the truck.
Event	17	End Job	End Job	9/4/2017	04:47:06	COM4	0.00	96.00	8.20	Washed pumps and lines until clean. Held JSA and rigged down iron.

3.0 Attachments

3.1 Extraction HFE 2 Production Job Chart

