

HALLIBURTON

iCem[®] Service

EXTRACTION

Date: Tuesday, December 19, 2017

Berthoud Farms 8E-10-11N Surface

Job Date: Sunday, December 10, 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 **Berthoud Farms 8E-10-11N** 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]

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Cementing Job Summary

The Road to Excellence Starts with Safety

Sold To #: 369404		Ship To #: 3833879		Quote #:		Sales Order #: 0304457118				
Customer: EXTRACTION OIL & GAS -				Customer Rep: Sean McIntyre						
Well Name: BERTHOUD FARMS		Well #: 8E-10-11N		API/UWI #: 05-123-45724-00						
Field: WATTENBERG		City (SAP): MEAD		County/Parish: WELD		State: COLORADO				
Legal Description: NE SE-7-4N-68W-1548FSL-1002FEL										
Contractor:				Rig/Platform Name/Num: Cartel 41						
Job BOM: 7521 7521										
Well Type: HORIZONTAL OIL										
Sales Person: HALAMERICA\HX38199				Srvc Supervisor: Adam Covington						
Job										
Formation Name										
Formation Depth (MD)		Top		Bottom						
Form Type				BHST						
Job depth MD		1533ft		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	0	9.625	8.921	36	8 RD	J-55	0	1533	0	0
Open Hole Section			13.5				0	1533	0	1533
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			1533		Bottom Plug	9.625		HES	
Float Collar	9.625					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	Red Dye Spacer	Red Dye Spacer	10	bbl	8.33			4.5		
Stage/Plug #: 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	
2	SwiftCem	SWIFTCM (TM) SYSTEM	525	sack	13.5	1.74		6	9.2	
9.20 Gal		FRESH WATER								

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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	Fresh Water	Fresh Water	115	bbl	8.33			6	
Cement Left In Pipe		Amount	44 ft		Reason			Shoe Joint	
Comment 27 BBLS of Cement back 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	12/10/2017	04:00:00	USER	Called out by Service Coordinator for O/L at 08:00
Event	2	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	12/10/2017	06:00:00	USER	Held meeting with all personnel in convoy to discuss directions and hazards associated with drive, all fit to drive.
Event	3	Depart Yard Safety Meeting	Depart Yard Safety Meeting	12/10/2017	06:10:00	USER	Journey Management prior to departure
Event	4	Arrive At Loc	Arrive At Loc	12/10/2017	07:00:00	USER	Upon arrival met with company man to discuss job details and calculations, performed hazard hunt and site assessment.
Event	5	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	12/10/2017	17:00:00	USER	Discussed rigging up hazards and procedure according to HMS.
Event	6	Pre-Job Safety Meeting	Pre-Job Safety Meeting	12/10/2017	17:30:00	USER	Held safety meeting with all job associated personnel to discuss job procedure, hazards and stop work authority.
Event	7	Start Job	Start Job	12/10/2017	18:04:38	COM4	Fill Lines with 3 BBLS of fresh water. 3 bpm. 85 PSI
Event	8	Test Lines	Test Lines	12/10/2017	18:07:27	COM4	500 PSI Kick out test. Kick outs worked. 5th Gear stall to 1900 PSI. Took to 3500 PSI and held for 3 minutes. No leaks.
Event	9	Pump Spacer 1	Pump Spacer 1	12/10/2017	18:11:48	COM4	Pumped 10 BBLS of fresh water spacer. 4.5 BPM, 85 PSI.
Event	10	Pump Spacer 2	Pump Spacer 2	12/10/2017	18:14:51	COM4	Pumped 10 BBLS of dyed spacer. 4.5 BPM, 80 PSI
Event	11	Pump Cement	Pump Cement	12/10/2017	18:18:54	COM4	Pumped 163 BBLS (525 SKS) of 13.5#, 1.74 y, 9.2 wr. Cement at 6.5 BPM 220 PSI.

Event	12	Shutdown	Shutdown	12/10/2017	18:53:58	COM4	Shutdown to wash up on the plug.
Event	13	Drop Top Plug	Drop Top Plug	12/10/2017	18:55:50	COM4	Dropped Halliburton 9 5/8" Top Plug. Co. Man witnessed.
Event	14	Pump Displacement	Pump Displacement	12/10/2017	18:55:58	COM4	Pumped 115 BBLS of fresh water displacement.
Event	15	Bump Plug	Bump Plug	12/10/2017	19:21:29	COM4	Bumped plug. FCP 380 PSI took up to 900 PSI. Held for a minute.
Event	16	Other	Other	12/10/2017	19:23:38	USER	Took pressure up to 1500 PSI for a casing test. Held for 5 mins. As per Co. Man. Checked floats. Floats held, 1 BBL back to the truck.
Event	17	End Job	End Job	12/10/2017	19:30:46	COM4	Got 27 BBLS of Cement back to surface.
Event	18	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	12/10/2017	19:40:00	USER	Discussed rigging down hazards and procedure according to HMS.
Event	19	Depart Location Safety Meeting	Depart Location Safety Meeting	12/10/2017	20:30:00	USER	Held meeting with all personnel in convoy to discuss directions and hazards associated with drive, all fit to drive.
Event	20	Depart Location for Service Center or Other Site	Depart Location for Service Center or Other Site	12/10/2017	20:40:00	USER	Pre journey management prior to departure.

3.0 Attachments

3.1 Job Chart



