

HALLIBURTON

iCem[®] Service

EXTRACTION OIL & GAS-EBUS

Date: Tuesday, December 19, 2017

Berthoud Farms 8E-10-9N Surface

Job Date: Tuesday, December 12, 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-10-9N** 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 #: 3833880	Quote #:	Sales Order #: 0904496755
Customer: EXTRACTION OIL & GAS -		Customer Rep: Sean M	
Well Name: BERTHOUD FARMS		Well #: 8E-10-9N	API/UWI #: 05-123-45732-00
Field: WATTENBERG	City (SAP): MEAD	County/Parish: WELD	State: COLORADO
Legal Description: NE SE-7-4N-68W-1547FSL-966FEL			
Contractor:		Rig/Platform Name/Num: Cartel 41	
Job BOM: 7521 7521			
Well Type: HORIZONTAL OIL			
Sales Person: HALAMERICA\HX38199		Srv Supervisor: Ryan Stevens	

Job

Formation Name			
Formation Depth (MD)	Top		Bottom
Form Type	BHST		
Job depth MD	1533ft	Job Depth TVD	1533
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
Open Hole Section			13.5				0	1533	0	0
Casing	New	9.625	8.921	36	8 RD	J-55	0	1533	0	1533

Tools and Accessories

Type	Size in	Qty	Make	Depth ft	Type	Size in	Qty	Make
Guide Shoe	9.625	1	N/A	1533	Top Plug	9.625	1	HES
Float Shoe					Bottom Plug			
Float Collar	9.625	1	N/A	1491	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		42	5	420
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	Spacer	Fresh Water Spacer	10	bbl	8.33		42	5	420

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	SwiftCem	SWIFTCEM (TM) SYSTEM	525	sack	13.5	1.74	9.2	5	4830
9.20 Gal		FRESH WATER							
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	Dispalcement	Fresh Water	155	bbl	8.33		42	8	4830
Cement Left In Pipe		Amount	41 ft		Reason			Shoe Joint	
Mix Water:	pH 7	Mix Water Chloride:				Mix Water Temperature:			
Cement Temperature:		Plug Displaced by:	8.33 lb/gal			Disp. Temperature:			
Plug Bumped?	Yes	Bump Pressure:	1048 psi			Floats Held?	Yes		
Cement Returns:	25 bbl	Returns Density:	13.5 lb/gal			Returns Temperature:			
Comment 25 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	12/12/2017	06:00:00	USER	CREW PICKED UP EQUIPMET, CEMENT AND CHEMICALS FRO THE FORT LUPTON YARD. ON LOCATIN TIME 09:00
Event	2	Pre-Convoy Safety Meeting	Pre Convoy Safety Meeting	12/12/2017	07:30:00	USER	CREW DISSCUSSED HAZARDS AND COMMUNICATION
Event	3	Crew Leave Yard	Crew Leave Yard	12/12/2017	07:45:00	USER	START JOURNEY MANAGEMENT
Event	4	Arrive At Loc	Arrive At Loc	12/12/2017	08:45:00	USER	ARRIVED ON LOCATION, MEET WITH CO-MAN AND DISSCUSS JOB PROCEDURES.
Event	5	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	12/12/2017	09:00:00	USER	CREW DISSCUSSED HAZARDS ASSOCIATED WITH RIG UP.
Event	6	Rig-Up Equipment	Rig-Up Equipment	12/12/2017	09:10:00	USER	CREW RIGGED UP PUMP AND BULK EQUIPMENT
Event	7	Rig-Up Completed	Rig-Up Completed	12/12/2017	09:40:00	USER	EQUIPMENT WAS RIGGED UP AND READY TO PERFORM JOB.
Event	8	Pre-Job Safety Meeting	Pre-Job Safety Meeting	12/12/2017	18:45:00	USER	DISSCUSSED JOB PROCEDURE AND HAZARDS TO DO JOB.
Event	9	Start Job	Start Job	12/12/2017	19:16:24	COM4	START RECORDING JOB DATA
Event	10	Test Lines	Test Lines	12/12/2017	19:19:10	COM4	PRESSURE TEST LINES TO 3400. SET EKO TO 500 PSI KICKED OUT @ 1740 PSI. PRESSURE TEST TO 3408.
Event	11	Pump Spacer 1	Pump Spacer 1	12/12/2017	19:28:31	COM4	PUMP 10 BBLS OF FRESH WATER SPACER
Event	12	Pump Spacer 2	Pump Spacer 2	12/12/2017	19:32:42	COM4	PUMP 10 BBLS OF DYED WATER
Event	13	Check Weight	Check weight	12/12/2017	19:36:09	COM4	CHECK WEIGHT OF CEMENT WITH PRESSURIZED MUD SCALES

Event	14	Pump Cement	Pump Cement	12/12/2017	19:41:57	COM4	PUMP 525 SKS OF SWIFTCEM @ 13.5 LB/GAL, 1.74 FT3/SK, 9.2 GAL/SK 162 BBLS. 25 BBLS OF CEMENT BACK TO SURFACE. DENSITY VERIFIED BY PRESSURIZED MUD SCALES.
Event	15	Pump Displacement	Pump Displacement	12/12/2017	20:17:20	COM4	PUMP 115 BBLS OF FRESH WATER DISPLACEMENT.
Event	16	Bump Plug	Bump Plug	12/12/2017	20:39:06	COM4	BUMP PLUG @ 1027 PSI.
Event	17	Other	Casing Test	12/12/2017	20:40:12	COM4	CASING TEST TO 1500 FOR 5 MIN
Event	18	Check Floats	Check Floats	12/12/2017	20:41:00	USER	CHECK FLOATS/ 1.5 BBLS BACK, FLOATS HELD
Event	19	End Job	End Job	12/12/2017	20:48:03	COM4	STOP RECORDING JOB DATA
Event	20	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	12/12/2017	20:50:00	USER	CREW DISCUSSED HAZARDS FOR RIG DOWN.
Event	21	Rig-Down Equipment	Rig-Down Equipment	12/12/2017	20:55:00	USER	CREW RIGGED DOWN PUMP AND BULK EQUIPMENT AND STORED ALL HOSES AND IRON ON TRUCKS FOR TRAVEL.
Event	22	Pre-Convoy Safety Meeting	Pre-Convoy Safety meeting	12/12/2017	21:30:00	USER	CREW DISCUSSED HAZARDS ALONG ROUTE
Event	23	Crew Leave Location	Crew Leave Location	12/12/2017	21:45:00	USER	THANKS RYAN STEVENS AND CREW.

3.0 Attachments

3.1 Job Chart



