

HALLIBURTON

iCem[®] Service

EXTRACTION OIL & GAS

Coyote Trails 33W-15-6C Production

Sincerely,
Meghan Jacobs

Legal Notice

Disclaimer:

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1.0 Cementing Job Summary

1.1 Executive Summary

Halliburton appreciates the opportunity to perform the cementing services on the **Coyote Trails 33W-15-6C** 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 90 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 #: 3912708		Quote #:		Sales Order #: 0905606575				
Customer: EXTRACTION OIL & GAS-EBUS				Customer Rep: Colby Hansen						
Well Name: COYOTE TRAILS			Well #: 33W-15-6C		API/UWI #: 05-123-48255-00					
Field: WATTENBERG		City (SAP): ERIE		County/Parish: WELD		State: COLORADO				
Legal Description: SW SE-28-1N-68W-1199FSL-2319FEL										
Contractor: ENSIGN DRLG				Rig/Platform Name/Num: ENSIGN 147						
Job BOM: 7523 7523										
Well Type: HORIZONTAL OIL										
Sales Person: HALAMERICA\HX38199				Srv Supervisor: Thomas Haas						
Job										
Formation Name										
Formation Depth (MD)		Top		Bottom						
Form Type					BHST					
Job depth MD		16154ft			Job Depth TVD		8154			
Water Depth					Wk Ht Above Floor		6			
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			0	1580	0	1580
Casing	0	5.5	4.892	17			0	16154	0	8154
Open Hole Section			8.5				1620	16174	1580	8154
Tools and Accessories										
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make	
						Top Plug	5.5	1	NCS	
Float Shoe	5.5	1	NCS	16154		Bottom Plug	5.5	1	NCS	
Toe Sleeve	5.5	1	NCS	16142						
						Plug Container	5.5	1	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	FDP-C1337-18	SBM FDP-C1337-18 CEMENT SPACER SYS	50	bbl	12.5	2.73	16.6	7	1707	
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	685	sack	13.2	1.6	7.75	8	5306	
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	GasStop	ELASTICEM (TM) SYSTEM	615	sack	13.2	1.6	7.7	8	4735	
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	13.2# ElastiCem	ELASTICEM (TM) SYSTEM	1400	sack	13.2	1.57	7.66	8	10724	
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	
5	MMCR Displacement	MMCR Displacement	20	bbl	8.33			8		
0.50 gal/bbl		MICRO MATRIX CEMENT RETARDER, 5 GAL PAIL (100003781)								
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	
6	Displacement	Displacement	355	bbl	8.33			8		
Cement Left In Pipe		Amount	N/A		Reason			Shoe Joint		
Mix Water:		pH 7	Mix Water Chloride:			<300 ppm		Mix Water Temperature:		61 °F
Cement Temperature:		N/A	Plug Displaced by:			8.33 lb/gal F.W.		Disp. Temperature:		58 °F
Plug Bumped?		Yes	Bump Pressure:			2400 psi		Floats Held?		Yes
Cement Returns:		90 bbl	Returns Density:			N/A		Returns Temperature:		N/A
Comment Plug bumped at calculated displacement, final circulating pressure of 2400 psi, wet shoe disk burst at 3000 psi, floats held, 2.5 bbl back to the truck. 90 bbl cement to surface.										

2.0 Real-Time Job Summary

2.1 Job Event Log

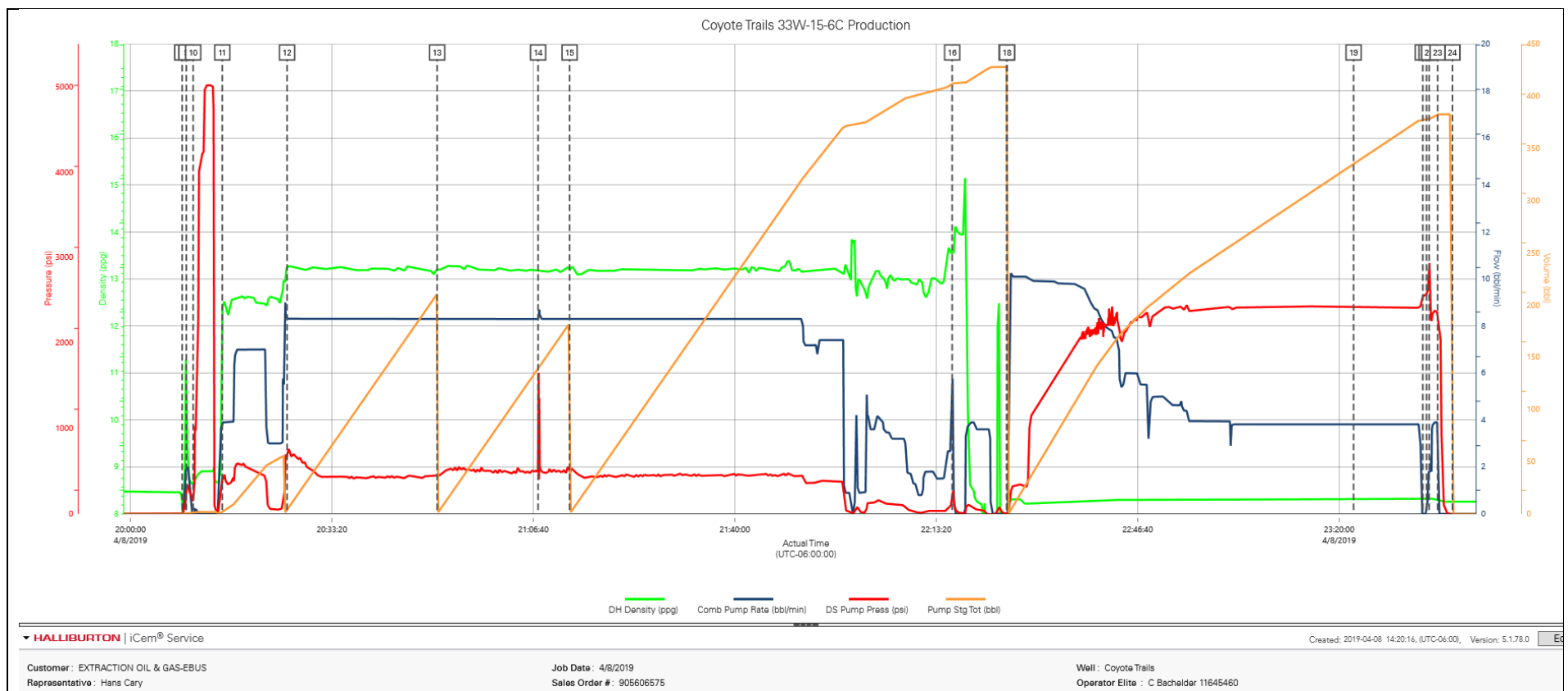
Type	Seq. No.	Activity	Graph Label	Date	Time	Source	DH Density (ppg)	Comb Pump Rate (bbl/min)	DS Pump Press (psi)	Comments
Event	1	Call Out	Call Out	4/8/2019	07:00:00	USER				CREW CALLED OUT AT 7:00 4/8/2019, REQUESTED ON LOCATION 13:00 4/8/2019. CREW PICKED UP CEMENT, CHEMICALS (20 GAL D-AIR, 1538 GAL FDP LATEX, 10 GAL MMCR), 100 LBS SUGAR, AND PLUG CONTAINER FROM FORT LUPTON, CO. BULK 660: 11360541/10246780 Bulk 660: 11027111/10866799 SOFT SIDE: 12113644/12051659 PUMP ELITE: 11897034/11645460.
Event	2	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	4/8/2019	11:45:00	USER				DISCUSSED ROUTES, HAZARDS, AND COMMUNICATION WITH CREW
Event	3	Crew Leave Yard	Crew Leave Yard	4/8/2019	12:00:00	USER				STARTED JOURNEY MANAGEMENT.
Event	4	Arrive At Loc	Arrive At Loc	4/8/2019	12:30:00	USER				END JOURNEY MANAGEMENT. MEET WITH CO. MAN TO DISCUSS JOB; SURFACE CASING: 9.625" 36# @ 1580', CASING: 5.5" 17# @ 16154', 12' SHOE JOINT, 8.75" OPEN HOLE, TVD @ 8154', 9.9 PPG WELL FLUID, FRESH WATER DISPLACEMENT.
Event	5	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	4/8/2019	12:40:00	USER				HAZARD HUNT. DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH LOCATION, RIG UP AND WEATHER.
Event	6	Rig-Up Equipment	Rig-Up Equipment	4/8/2019	12:50:00	USER				CREW STAGED EQUIPMENT AND RIGGED UP BULK, IRON, AND WATER HOSES TO PERFORM JOB.
Event	7	Pre-Job Safety Meeting	Pre-Job Safety Meeting	4/8/2019	19:30:00	USER	8.49	0.00	8.00	MEETING WITH HALLIBURTON AND RIG PERSONNEL. COMMUNICATED POTENTIAL SAFETY HAZARDS AND JOB DETAILS.
Event	8	Start Job	Start Job	4/8/2019	20:08:33	COM4				START JOB DATA RECORDING.
Event	9	Drop Plug	Drop Bottom Plug	4/8/2019	20:09:14	USER	10.99	2.00	304.00	PLUG LEFT PLUG CONTAINER, VERIFIED BY COMPANY MAN.
Event	10	Test Lines	Test Lines	4/8/2019	20:10:22	COM4	8.66	0.00	148.00	PRESSURE TESTED LINES TO 5000 PSI, 500 PSI KICK OUT AT 1000 PSI, 5TH GEAR STALL AT 2030 PSI.

Event	11	Pump Spacer 1	Pump Spacer 1	4/8/2019	20:15:11	COM4	12.31	3.90	396.00	PUMP 50 BBLs OF FDP SPACER @ 12.5 LB/GAL, ADDED 5 GAL D-AIR, DENSITY VERIFIED BY PRESSURIZED MUD SCALES.
Event	12	Pump Lead Cement	Pump Cap Cement	4/8/2019	20:25:54	COM4	13.28	8.30	669.00	PUMP 685 SKS OF ELASTICEM @ 13.2 LB/GAL, 1.6 YIELD, 7.75 GAL/SK, 195.2 BBLs, CALCULATED TOC @ SURFACE, DENSITY VERIFIED BY PRESSURIZED MUD SCALES.
Event	13	Pump Lead Cement	Pump Lead Cement	4/8/2019	20:50:44	COM4	13.20	8.30	453.00	PUMP 615 SKS OF GASSTOP @ 13.2 LB/GAL, 1.6 YIELD, 7.7 GAL/SK, 175.3 BBLs, CALCULATED TOL 2261', MIX WATER MIXED WITH 1538 GAL OF LATEX AND 20 GAL D-AIR, DENSITY VERIFIED BY PRESSURIZED MUD SCALES.
Event	14	Cement At Bottom	Cement At Bottom	4/8/2019	21:07:27	USER	13.17	8.30	494.00	BOTTOM PLUG LANDED, RUPTURED AT 1600 PSI.
Event	15	Pump Tail Cement	Pump Tail Cement	4/8/2019	21:12:40	COM4	13.19	8.30	471.00	PUMP 1400 SKS OF ELASTICEM @ 13.2 LB/GAL, 1.57 YIELD, 7.66 GAL/SK, 391.5 BBLs, CALCULATED TOT @ 6558', DENSITY VERIFIED BY PRESSURIZED MUD SCALES.
Event	16	Shutdown	Shutdown	4/8/2019	22:15:58	USER	13.55	5.80	247.00	SHUTDOWN TO CLEAN PUMPS/LINES AND DROP TOP PLUG.
Event	17	Drop Top Plug	Drop Top Plug	4/8/2019	22:24:59	COM4	-0.15	0.00	-1.00	PLUG LEFT PLUG CONTAINER, VERIFIED BY COMPANY MAN.
Event	18	Pump Displacement	Pump Displacement	4/8/2019	22:25:03	COM4	-0.15	0.00	-1.00	BEGIN PUMPING CALCULATED DISPLACEMENT OF 378 BBL FRESH WATER, 10 GAL OF MMCR ADDED TO THE FIRST 20 BBL.
Event	19	Cement Returns to Surface	Cement Returns to Surface	4/8/2019	23:22:23	USER	8.30	3.90	2414.00	CEMENT RETURNED TO SURFACE 285 BBL INTO DISPLACEMENT, 90 BBL OF CEMENT TO SURFACE.
Event	20	Bump Plug	Bump Plug	4/8/2019	23:33:50	COM4	8.31	0.00	2556.00	PLUG BUMPED AT CALCULATED DISPLACEMENT, FINAL CIRCULATING PRESSURE OF 2400 PSI.
Event	21	Pressure Up	Rupture Disk	4/8/2019	23:34:27	USER	8.31	0.00	2564.00	PRESSURE UP TO RUPTURE WET SHOE DISK, DISK RUPTURED AT 3000 PSI.
Event	22	Pump Displacement	Wet Shoe	4/8/2019	23:34:53	USER	8.33	1.80	2872.00	PUMP A 5 BBL WET SHOE.
Event	23	Check Floats	Check Floats	4/8/2019	23:36:17	USER	8.31	0.00	2274.00	RELEASED PRESSURE BACK TO THE TRUCK, FLOATS HELD, 2.5 BBL BACK.
Event	24	End Job	End Job	4/8/2019	23:38:44	COM4	8.26	0.00	-5.00	END JOB DATA RECORDING.
Event	25	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	4/9/2019	00:00:00	USER	-0.03	0.00	-5.00	DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH WEATHER, LOCATION AND RIGGING DOWN IRON AND HOSES.

Event	26	Rig-Down Completed	Rig-Down Completed	4/9/2019	01:10:00	USER	ALL HALLIBURTON ITEMS WERE STOWED FOR TRAVEL.
Event	27	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	4/9/2019	01:20:00	USER	DISCUSSED ROUTES HAZARDS AND COMMUNICATION WITH CREW.
Event	28	Crew Leave Location	Crew Leave Location	4/9/2019	01:30:00	USER	THANK YOU FOR USING HALLIBURTON - THOMAS HAAS AND CREW.

3.0 Attachments

3.1 Coyote Trails 33W-15-6C Production – Job Chart with Events



3.2 Coyote Trails 33W-15-6C Production – Job Chart without Events

