

HALLIBURTON

iCem[®] Service

EXTRACTION OIL & GAS-EBUS

Date: Wednesday, February 20, 2019

Coyote Trails 33S-20-4N Surface

Job Date: Tuesday, February 05, 2019

Sincerely,

Bryce Hinsch

Legal Notice

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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 33S-20-4N** 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.

Approximately 40 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 #: 3843096	Quote #:	Sales Order #: 0905467996
Customer: EXTRACTION OIL & GAS -		Customer Rep: Todd/Hans	
Well Name: COYOTE TRAILS		Well #: 33S-20-4N	API/UWI #: 05-123-45992-00
Field: WATTENBERG	City (SAP): ERIE	County/Parish: WELD	State: COLORADO
Legal Description: SW SE-28-1N-68W-1148FSL-2247FEL			
Contractor: ENSIGN DRLG		Rig/Platform Name/Num: ENSIGN 147	
Job BOM: 7521 7521			
Well Type: HORIZONTAL OIL			
Sales Person: HALAMERICA\HX38199		Srvc Supervisor: Thomas Haas	

Job

Formation Name			
Formation Depth (MD)	Top		Bottom
Form Type	BHST		
Job depth MD	1605ft	Job Depth TVD	1605
Water Depth		Wk Ht Above Floor	5
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	1605	0	1605
Open Hole Section			13.5				0	1625	0	1625

Tools and Accessories

Type	Size in	Qty	Make	Depth ft	Type	Size in	Qty	Make
Guide Shoe					Top Plug	9.625	1	HES
Float Shoe	9.625	1	TOPCO	1605	Bottom Plug			
Float Collar	9.625	1	TOPCO	1565	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	Red Dye Spacer	Red Dye Spacer	20	bbl	8.33					

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	SWIFTCEM (TM) SYSTEM	625	sack	13.5	1.74	9.2	5	5750	
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	
3	Fresh Water	Fresh Water	121	bbl	8.33					
Cement Left In Pipe		Amount	N/A		Reason Wet Shoe			Shoe Joint		
Mix Water:		pH 7	Mix Water Chloride: <300 ppm			Mix Water Temperature: 49 °F				
Cement Temperature:		N/A	Plug Displaced by: 8.33 lb/gal F.W.			Disp. Temperature: 48 °F				
Plug Bumped?		Yes	Bump Pressure: 460 psi			Floats Held? Yes				
Cement Returns:		40 bbl	Returns Density: N/A			Returns Temperature: N/A				
Comment Plug bumped at calculated displacement, final circulating pressure of 460 psi, released pressure back to the pump, floats held, 1 bbl back, 40 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 <i>(ppg)</i>	Comb Pump Rate <i>(bbl/min)</i>	DS Pump Press <i>(psi)</i>	Pump Stg Tot <i>(bbl)</i>	Comments
Event	1	Call Out	Call Out	2/4/2019	22:30:00	USER					CREW CALLED OUT AT 22:50 2/4/2019 REQUESTED ON LOCATION 2:00 2/5/2019. CREW PICKED UP CEMENT, 100 LBS SUGAR, AND PLUG CONTAINER FROM FORT LUPTON, CO. BULK 660: 11019273/11566182 Bulk 660: 11338213/11633846 PUMP ELITE: 11897034/11645460
Event	2	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	2/5/2019	01:15:00	USER					DISCUSSED ROUTES, HAZARDS, AND COMMUNICATION WITH CREW
Event	3	Crew Leave Yard	Crew Leave Yard	2/5/2019	01:30:00	USER					STARTED JOURNEY MANAGEMENT.
Event	4	Arrive At Loc	Arrive At Loc	2/5/2019	02:00:00	USER					END JOURNEY MANAGEMENT. MEET WITH CO. MAN TO DISCUSS JOB; SURFACE CASING: 36# 9.625" J-55 @ 1605', 40' SHOE JOINT, 13.5" OPEN HOLE, 8.4 PPG WELL FLUID, FRESH WATER DISPLACEMENT.
Event	5	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	2/5/2019	04:15:00	USER					HAZARD HUNT. DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH LOCATION, RIG UP AND WEATHER.

Event	6	Rig-Up Equipment	Rig-Up Equipment	2/5/2019	04:30:00	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	2/5/2019	05:30:00	USER						MEETING WITH HALLIBURTON AND RIG PERSONNEL. COMMUNICATED POTENTIAL SAFETY HAZARDS AND JOB DETAILS.
Event	8	Start Job	Start Job	2/5/2019	06:19:46	COM4	8.46	0.00	-15.00	0.00		START JOB DATA RECORDING.
Event	9	Test Lines	Test Lines	2/5/2019	06:25:37	COM4	8.66	0.00	-9.00	0.80		PRESSURE TESTED IRON TO 3200 PSI. KICKOUTS SET @ 500 PSI, KICKED OUT @ 1130 PSI, 5TH GEAR STALL OUT @ 1740 PSI.
Event	10	Pump Spacer 1	Fresh Water	2/5/2019	06:29:23	COM4	8.60	0.00	-9.00	0.00		PUMP 10 BBL FRESH WATER.
Event	11	Pump Spacer 2	Red Dye	2/5/2019	06:33:38	COM4	8.68	2.90	27.00	0.00		PUMP 10 BBL FRESH WATER WITH RED DYE.
Event	12	Pump Cement	Pump Cement	2/5/2019	06:42:47	COM4	8.58	0.00	-19.00	9.20		PUMP 625 SKS OF SWIFTCEM @ 13.5 LB/GAL, 1.74 YIELD, 9.2 GAL/SK, 193,6 BBLS, TOL @ SURFACE, DENSITY VERIFIED BY PRESSURIZED MUD SCALES.
Event	13	Shutdown	Shutdown	2/5/2019	07:13:49	USER	12.90	1.30	135.00	209.30		SHUTDOWN TO DROP TOP PLUG.
Event	14	Drop Top Plug	Drop Top Plug	2/5/2019	07:15:25	COM4	14.87	0.00	-14.00	209.30		PLUG LEFT PLUG CONTAINER, VERIFIED BY COMPANY MAN.
Event	15	Pump Displacement	Pump Displacement	2/5/2019	07:15:31	COM4	14.86	0.00	-14.00	0.00		BEGIN CALCULATED DISPLACEMENT OF 121 BBLS WITH FRESH WATER.

Event	16	Cement Returns to Surface	Cement Returns to Surface	2/5/2019	07:32:39	USER	7.79	3.00	451.00	104.00	CEMENT RETURNED TO SURFACE 81 BBL INTO DISPLACEMENT, 40 BBL CEMENT TO SURFACE.
Event	17	Bump Plug	Bump Plug	2/5/2019	07:38:46	COM4	7.80	0.00	849.00	121.10	PLUG BUMPED AT CALCULATED DISPLACEMENT, FINAL CIRCULATING PRESSURE OF 460 PSI.
Event	18	Check Floats	Check Floats	2/5/2019	07:39:07	USER	7.77	0.00	98.00	121.10	RELEASED PRESSURE BACK TO THE TRUCK, FLOATS HELD, 1 BBL BACK TO SURFACE.
Event	19	End Job	End Job	2/5/2019	07:40:07	COM4	7.76	0.00	-17.00	121.10	END JOB DATA RECORDING.
Event	20	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	2/5/2019	07:45:00	USER	-0.75	0.00	-25.00	121.10	DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH WEATHER, LOCATION AND RIGGING DOWN IRON AND HOSES.
Event	21	Rig-Down Completed	Rig-Down Completed	2/5/2019	08:15:00	USER	-0.75	0.00	-23.00	189.80	ALL HALLIBURTON ITEMS WERE STOWED FOR TRAVEL.
Event	22	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	2/5/2019	08:20:00	USER					DISCUSSED ROUTES HAZARDS AND COMMUNICATION WITH CREW.
Event	23	Crew Leave Location	Crew Leave Location	2/5/2019	08:30:00	USER					THANK YOU FOR USING HALLIBURTON - THOMAS HAAS AND CREW.

3.0 Attachments

3.1 Extraction Coyote Trails 33S-20-4N Surface Job Chart

