

HALLIBURTON

iCem[®] Service

EXTRACTION OIL & GAS

Date: Tuesday, November 28, 2017

Launer 11 Production

Job Date: Friday, November 03, 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 **Launer 11** 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 33 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 #: 3818113		Quote #:		Sales Order #: 0904416544					
Customer: EXTRACTION OIL & GAS -				Customer Rep: Sean McIntyre							
Well Name: LAUNER			Well #: 11		API/UWI #: 05-123-45180-00						
Field: WATTENBERG		City (SAP): WINDSOR		County/Parish: WELD		State: COLORADO					
Legal Description: SE SE-26-7N-67W-676FSL-428FEL											
Contractor:				Rig/Platform Name/Num: Cartel 41							
Job BOM: 7521 7521											
Well Type: HORIZONTAL OIL											
Sales Person: HALAMERICA\HX38199				Srv Supervisor: Steve Cardos							
Job											
Formation Name											
Formation Depth (MD)		Top		Bottom							
Form Type				BHST							
Job depth MD		1542ft		Job Depth TVD		1542ft					
Water Depth				Wk Ht Above Floor		3ft					
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	1542	0	1542	
Open Hole Section			13.5				0	1552	0	1552	
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	HES	1542		Bottom Plug					
Float Collar	9.625	1	HES	1502		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			2	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	Cement	SWIFTCEM (TM) SYSTEM	550	sack	13.5	1.74	9.2	8	5040
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	Displacement	Fresh Water	116	bbl	8.33			8	4872
Cement Left In Pipe		Amount	40 ft		Reason			Shoe Joint	
Mix Water:	pH 7	Mix Water Chloride:	<300 ppm			Mix Water Temperature:	40 °F		
Cement Temperature:	N/A	Plug Displaced by:	8.3 lb/gal Fresh Water			Disp. Temperature:	40 °F		
Plug Bumped?	Yes	Bump Pressure:	400 psi MPa			Floats Held?	Yes		
Cement Returns:	33 bbl	Returns Density:	N/A			Returns Temperature:	N/A		
Comment The plug bumped @ calculated displacement @ 400 PSI, shutdown @ 900 PSI. The floats held and received 0.5 BBLS back to the truck. Cement returned to surface @ 83 BBLS into displacement. Total of 33 BBLS of cement returned 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	11/3/2017	01:00:00	USER				CREW CALLED OUT AT 12:00 11/3/2017, REQUESTED ON LOCATION 4:00 11/3/2017. CREW PICKED UP CEMENT, TOP PLUG, RED DYE, PLUG CONTAINER AND MANIFOLD FROM FORT LUPTON, CO. BULK 660: 11562570/11764054, BULK 660: 11592293/11764052, PUMP 11897034/11645460.
Event	2	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	11/3/2017	01:55:00	USER				DISCUSSED ROUTES, HAZARDS, AND COMMUNICATION WITH CREW.
Event	3	Crew Leave Yard	Crew Leave Yard	11/3/2017	02:00:00	USER				STARTED JOURNEY MANAGEMENT.
Event	4	Arrive At Loc	Arrive At Loc	11/3/2017	04:00:00	USER	0.00	0.00	302.00	E
Event	5	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	11/3/2017	04:05:00	USER	0.00	0.00	299.00	HAZARD HUNT. DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH LOCATION, RIG UP AND WEATHER.
Event	6	Safety Meeting	Safety Meeting	11/3/2017	07:15:21	USER	0.00	0.00	293.00	MEETING WITH HALLIBURTON PERSONNEL. COMMUNICATED POTENTIAL SAFETY HAZARDS AND JOB DETAILS.
Event	7	Start Job	Start Job	11/3/2017	07:19:45	COM6				START RECORDING JOB DATA.

Event	8	Pressure Test	Pressure Test	11/3/2017	07:26:36	USER	8.45	0.00	2958.00	PRESSURE TESTED IRON TO 2743 PSI. KICKOUTS SET @ 500 PSI, KICKED OUT @ 1401 PSI, 5TH GEAR STALL OUT @1762 PSI.
Event	9	Pump Spacer	Fresh Water Spacer	11/3/2017	07:30:14	USER	8.47	1.90	84.00	PUMP 10 BBLS FRESH WATER SPACER.
Event	10	Pump Spacer	Pump Dyed Fresh Water	11/3/2017	07:37:07	USER	8.46	1.90	79.00	PUMP 10 BBLS OF RED DYED FRESH WATER SPACER.
Event	11	Pump Cement	Pump 13.5 Lb SwiftCem	11/3/2017	07:42:56	USER	13.50	3.90	188.00	PUMP 550 SKS OF SWIFTCem @ 13.5 LB/GAL, 1.74 YIELD, 9.2 GAL/SK, 170 BBLS, TOL @ SURFACE, DENSITY VERIFIED BY PRESSURIZED MUD SCALES.
Event	12	Shutdown	Shutdown	11/3/2017	08:10:30	USER	16.19	0.00	15.00	SHUTDOWN TO DROP TOP PLUG.
Event	13	Drop Plug	Drop Plug	11/3/2017	08:11:56	USER	15.49	0.00	5.00	PLUG LEFT CONTAINER.
Event	14	Pump Displacement	Pump Displacement	11/3/2017	08:13:39	USER	8.66	2.60	16.00	BEGIN CALCULATED DISPLACEMENT OF 116 BBLS WITH FRESH WATER.
Event	15	Cement Returns to Surface	Cement Returns to Surface	11/3/2017	08:27:12	USER	8.47	8.00	406.00	CEMENT TO SURFACE @ 83 BBLS INTO DISPLACEMENT, TOTAL AMOUNT OF 33 BBLS LEAD TO SURFACE.
Event	16	Bump Plug	Bump Plug	11/3/2017	08:36:54	USER	8.53	0.00	1251.00	PLUG BUMPED AT CALCULATED DISPLACEMENT. PRESSURED 500 PSI OVER FINAL CIRCULATING PRESSURE OF 405 PSI.
Event	17	Check Floats	Check Floats	11/3/2017	08:39:02	USER	8.47	0.00	337.00	RELEASED PRESSURE, FLOATS HELD, 0.5 BBL BACK.

Event	18	End Job	End Job	11/3/2017	08:42:00	COM6	8.44	0.00	28.00	STOP RECORDING JOB DATA.
Event	19	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	11/3/2017	09:45:00	USER				DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH WEATHER, LOCATION AND RIGGING DOWN IRON AND HOSES.
Event	20	Rig-Down Completed	Rig-Down Completed	11/3/2017	09:50:00	USER				ALL HALLIBURTON ITEMS WERE STOWED FOR TRAVEL, AND LOCATION WAS CLEAN.
Event	21	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	11/3/2017	09:55:00	USER				DISCUSSED ROUTES HAZARDS AND COMMUNICATION WITH CREW.
Event	22	Crew Leave Location	Leave from House	11/3/2017	10:00:00	USER				THANK YOU FOR USING HALLIBURTON - STEVE CARDOS AND CREW.

3.0 Attachments

3.1 Extraction Launder 11 Surface Job Chart

