

HALLIBURTON

iCem[®] Service

EXTRACTION OIL & GAS-EBUS

Date: Wednesday, November 15, 2017

Launer 8C Surface

Job Date: Saturday, November 04, 2017

Sincerely,

Justin Lansdale

Legal Notice

Warning Disclaimer

Although the information contained in this report is based on sound engineering practices, the copyright owner(s) does (do) not accept any responsibility whatsoever, in negligence or otherwise, for any loss or damage arising from the possession or use of the report whether in terms of correctness or otherwise. The application, therefore, by the user of this report or any part thereof, is solely at the user's own risk.

Limitations of Liability

Except as expressly set forth herein, there are no representations or warranties by Halliburton, express or implied, including implied warranties of merchantability and/or fitness for a particular purpose. In no event will Halliburton or its suppliers be liable for consequential, incidental, special, punitive or exemplary damages (including, without limitation, loss of data, profits, use of hardware, or software). Customer accepts full responsibility for any investment made based on results from the Software. Any interpretations, analyses or modeling of any data, including, but not limited to Customer data, and any recommendation or decisions based upon such interpretations, analyses or modeling are opinions based upon inferences from measurements and empirical relationships and assumptions, which inferences and assumptions are not infallible, and with respect to which professional may differ. Accordingly, Halliburton cannot and does not warrant the accuracy, correctness or completeness of any such interpretation, recommendation, modeling or other products of the Software Product. As such, any interpretation, recommendation or modeling resulting from the Software for the purpose of any drilling, well treatment, production or financial decision will be at the sole risk of Customer. Under no circumstances will Halliburton or its suppliers be liable for any damages.

Table of Contents

1.0	Cementing Job Summary	4
1.1	Executive Summary	4
2.0	Real-Time Job Summary	7
2.1	Job Event Log	7
3.0	Attachments.....	9
3.1	Job Chart.....	9

1.0 Cementing Job Summary

1.1 Executive Summary

Halliburton appreciates the opportunity to perform the cementing services on the **Launer 8C** 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]

HALLIBURTON

Cementing Job Summary

The Road to Excellence Starts with Safety

Sold To #: 369404	Ship To #: 3818160	Quote #:	Sales Order #: 0904416730							
Customer: EXTRACTION OIL & GAS -		Customer Rep: Sean Macentire								
Well Name: LAUNER	Well #: 8C	API/UWI #: 05-123-45176-00								
Field: WATTENBERG	City (SAP): WINDSOR	County/Parish: WELD	State: COLORADO							
Legal Description: SE SE-26-7N-67W-745FSL-380FEL										
Contractor:		Rig/Platform Name/Num: Cartel 41								
Job BOM: 7521 7521										
Well Type: HORIZONTAL OIL										
Sales Person: HALAMERICA/HX38199		Srvc Supervisor: Nicholas Peterson								
Job										
Formation Name										
Formation Depth (MD)	Top	Bottom								
Form Type		BHST								
Job depth MD	1554ft	Job Depth TVD	1554							
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	New	9.625	8.921	36	8 RD	J-55	0	1554	1554	1554
Open Hole Section			13.5				0	1554	1554	1554
Tools and Accessories										
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make	
Guide Shoe	9.625	1	HES	1554		Top Plug	9.625	1	HES	
Float Shoe	9.625	1	HES	1514		Bottom Plug				
Float Collar						SSR plug set				
Insert Float						Plug Container	9.625	1	HES	
Stage Tool						Centralizers				
Fluid Data										
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft ³ /sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal	
1	Spacer	Fresh Water	20	bbl	8.33		42		840	
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft ³ /sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal	
2	Red Dye Spacer	Red Dye Spacer	10	bbl	8.33		42		420	

HALLIBURTON

Cementing Job Summary

Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft ³ /sack	Mix Fluid Gal	Rate bbl/mi n	Total Mix Fluid Gal
3	SwiftCem	SWIFTCEM (TM) SYSTEM	550	sack	13.5	1.74	9.2	5	5,060
9.20 Gal		FRESH WATER							
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft ³ /sack	Mix Fluid Gal	Rate bbl/mi n	Total Mix Fluid Gal
4	Displacement	Fresh Water	117	bbl	8.33		42	6	4914
Cement Left In Pipe	Amount	40 ft			Reason			Shoe Joint	
Mix Water:	pH 7	Mix Water Chloride: 0 ppm			Mix Water Temperature: 70°F °C				
Cement Temperature:		Plug Displaced by: Halliburton			Disp. Temperature: 70°F °C				
Plug Bumped?	Yes	Bump Pressure: 530 psi			Floats Held? Yes				
Cement Returns:	20 bbl	Returns Density: 13.5 lb/gal			Returns Temperature: 70				
Comment 20 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	11/4/2017	06:00:00	USER	CREW CALLED OUT AT 06:00, REQUESTED ON LOCATION 12:00. CREW PICKED UP CEMENT, 2 LBS RED DYE, AND TOP PLUG FROM FT. LUPTON, CO. BULK 660, 11764052, BULK 660 11764054, ELITE PUMP 11189145.
Event	2	Crew Leave Yard	Crew Leave Yard	11/4/2017	08:30:00	USER	STARTED JOURNEY MANAGEMENT.
Event	3	Arrive At Loc	Arrive At Loc	11/4/2017	10:00:00	USER	END JOURNEY MANAGEMENT. MEET WITH CO. MAN TO DISCUSS JOB; CASING- 9.625 36# @ 1,554', 13.5" HOLE 1,554' SHOE 42', FW DISPLACEMENT, CASING LANDED @ 15:15 11/04/2017.
Event	4	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	11/4/2017	10:05:00	USER	HAZARD HUNT. DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH LOCATION, RIG UP AND WEATHER.
Event	5	Rig-Up Equipment	Rig-Up Equipment	11/4/2017	10:15:00	USER	CREW STAGED EQUIPMENT AND RIGGED UP BULK, IRON AND WATER HOSES TO PERFORM JOB.
Event	6	Rig-Up Completed	Rig-Up Completed	11/4/2017	10:30:00	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	11/4/2017	15:30:00	USER	MEETING WITH HALLIBURTON AND RIG PERSONNEL. COMMUNICATED POTENTIAL SAFETY HAZARDS AND JOB DETAILS.
Event	8	Start Job	Start Job	11/4/2017	15:57:09	COM5	BEGIN RECORDING JOB DATA.
Event	9	Test Lines	Test Lines	11/4/2017	16:01:12	COM5	PRESSURE TESTED IRON TO 2,402 PSI. KICKOUTS SET @ 500 PSI, KICKED OUT @ 800 PSI, 5TH GEAR STALL OUT @ 2,000 PSI.
Event	10	Pump Spacer 1	Pump Spacer 1	11/4/2017	16:08:45	COM5	PUMP 20 BBLs OF FRESH WATER.

Event	11	Pump Spacer 1	Pump Spacer 1	11/4/2017	16:15:11	COM5	PUMP 10 BBLS OF FRESH WATER WITH 2 LBS RED DYE.
Event	12	Pump Cement	Pump Cement	11/4/2017	16:18:45	COM5	PUMP 550 SKS OF SWIFTCEM @ 13.5 LB/GAL, 1.74 FT3/SK, 9.2 GAL/SKS, 170.4 BBLS. TOC CALCULATED @ SURFACE. 20 BBLS BACK TO SURFACE. DENSITY VERIFIED BY PRESSURIZED MUD SCALES
Event	13	Shutdown	Shutdown	11/4/2017	16:47:18	COM5	SHUTDOWN TO DROP TOP PLUG.
Event	14	Drop Plug	Drop Plug	11/4/2017	16:49:11	COM5	PLUG LEFT CONTAINER, VERIFIED BY COMPANY REP.
Event	15	Pump Displacement	Pump Displacement	11/4/2017	16:50:08	COM5	BEGIN CALCULATED DISPLACEMENT OF 117 BBLS WITH FRESH WATER.
Event	16	Bump Plug	Bump Plug	11/4/2017	17:13:53	COM5	PLUG BUMPED AT CALCULATED DISPLACEMENT. PRESSURED 500 PSI OVER BUMP TO 1,020 PSI.
Event	17	Check Floats	Check Floats	11/4/2017	17:19:43	USER	RELEASED PRESSURE, FLOATS HELD, 0.5 BBLS BACK
Event	18	End Job	End Job	11/4/2017	17:21:00	COM5	STOP RECORDING JOB DATA.
Event	19	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	11/4/2017	17:30:00	USER	DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH WEATHER, LOCATION AND RIGGING DOWN IRON AND HOSES.
Event	20	Rig-Down Equipment	Rig-Down Equipment	11/4/2017	17:45:00	USER	CREW RIGGED DOWN EQUIPMENT AND BULK TRUCKS
Event	21	Rig-Down Completed	Rig-Down Completed	11/4/2017	18:15:00	USER	ALL HALLIBURTON ITEMS WERE STOWED FOR TRAVEL, AND LOCATION WAS CLEAN.
Event	22	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	11/4/2017	18:20:00	USER	DISCUSSED ROUTES HAZARDS AND COMMUNICATION WITH CREW.
Event	23	Crew Leave Location	Crew Leave Location	11/4/2017	18:30:00	USER	THANK YOU FOR USING HALLIBURTON – NICK PETERSON AND CREW.

3.0 Attachments

3.1 Job Chart



