

HALLIBURTON

iCem[®] Service

EXTRACTION OIL & GAS-EBUS

Date: Wednesday, November 15, 2017

Launer #6 Surface

Job Date: Sunday, November 05, 2017

Sincerely,

Justin Lansdale

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Table of Contents

1.0 Cementing Job Summary 4

 1.1 Executive Summary4

2.0 Real-Time Job Summary 7

 2.1 Job Event Log7

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 #6** 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]

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Cementing Job Summary

The Road to Excellence Starts with Safety

Sold To #: 369404	Ship To #: 3818129	Quote #:	Sales Order #: 0904417494							
Customer: EXTRACTION OIL & GAS -		Customer Rep: Sean Macentire								
Well Name: LAUNER	Well #: 6	API/UWI #: 05-123-45173-00								
Field: WATTENBERG	City (SAP): WINDSOR	County/Parish: WELD	State: COLORADO							
Legal Description: SE SE-26-7N-67W-792FSL-349FEL										
Contractor:		Rig/Platform Name/Num: Cartel 41								
Job BOM: 7521 7521										
Well Type: HORIZONTAL OIL										
Sales Person: HALAMERICA\HX38199		Srv Supervisor: Nicholas Peterson								
Job										
Formation Name										
Formation Depth (MD)	Top	Bottom								
Form Type		BHST								
Job depth MD	1,554'	Job Depth TVD	1,554'							
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	1554	0	0
Open Hole Section			13.5				0	1554	0	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		Plug Container	9.625	1	HES	
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 Spacer	20	bbl	8.33		42	6	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	6	420	
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	
3	Cement	SWIFCEM (TM) SYSTEM	550	sack	13.5	1.74	9.2	6	5,060	
9.20 Gal		FRESH WATER								

last updated on 11/5/2017 10:58:48 AM

Page 1 of 3

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(v. 4.2.393)

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Cementing Job Summary

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	Displacement	Fresh Water	117	bbl	8.33			6	
Cement Left in Pipe		Amount	40 ft		Reason			Shoe Joint	
Mix Water:		pH 7.0	Mix Water		0 ppm	Mix Water Temperature:		50 °F	
			Chloride:						
Cement Temperature:## °F		Plug Displaced by:		8.33 lb/gal		Disp. Temperature:		50 °F	
Plug Bumped?Yes		Bump Pressure:		530 psi		Floats Held?		Yes	
Cement Returns:22 bbl		Returns Density:		13.5 lb/gal		Returns Temperature:## °F			
Comment: Cement to surface 95 bbls into displacement, 22 bbls back.									

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	21:00:00	USER	CREW CALLED OUT AT 21:00, REQUESTED ON LOCATION 03:00 11/05/2017. CREW PICKED UP CEMENT, 2 LBS RED DYE, AND TOP PLUG FROM FT. LUPTON, CO. BULK 660, 11764052, BULK 660 11764054, ELITE PUMP 12645760.
Event	2	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	11/4/2017	22:45:00	USER	DISCUSSED ROUTES, HAZARDS, AND COMMUNICATION WITH CREW.
Event	3	Crew Leave Yard	Crew Leave Yard	11/4/2017	23:00:00	USER	STARTED JOURNEY MANAGEMENT.
Event	4	Arrive At Loc	Arrive At Loc	11/5/2017	00:30:00	USER	END JOURNEY MANAGEMENT. MEET WITH CO. MAN TO DISCUSS JOB; CASING- 9.625 36# @ 1,554', 13.5" OH 1,554' SHOE 40', FW DISPLACEMENT, CASING LANDED @ 08:45 11/05/2017.
Event	5	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	11/5/2017	04:15:00	USER	HAZARD HUNT. DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH LOCATION, RIG UP AND WEATHER.
Event	6	Rig-Up Equipment	Rig-Up Equipment	11/5/2017	04:30:00	USER	CREW STAGED EQUIPMENT AND RIGGED UP BULK, IRON AND WATER HOSES TO PERFORM JOB.
Event	7	Rig-Up Completed	Rig-Up Completed	11/5/2017	05:15:00	USER	WAITED ON RIG TO FINISH RUNNING CASING.
Event	8	Pre-Job Safety Meeting	Pre-Job Safety Meeting	11/5/2017	07:00:00	USER	MEETING WITH HALLIBURTON AND RIG PERSONNEL. COMMUNICATED POTENTIAL SAFETY HAZARDS AND JOB DETAILS.
Event	9	Start Job	Start Job	11/5/2017	07:37:25	COM5	BEGIN RECORDING JOB DATA.
Event	10	Test Lines	Test Lines	11/5/2017	07:39:44	COM5	PRESSURE TESTED IRON TO 3,000 PSI. KICKOUTS SET @ 500 PSI, KICKED OUT @ 1,340 PSI, 5TH GEAR STALL OUT @ 2,000 PSI.

Event	11	Pump Spacer 1	Pump Spacer 1	11/5/2017	07:43:39	COM5	PUMP 20 BBLS OF FRESH WATER.
Event	12	Pump Spacer 2	Pump Spacer 2	11/5/2017	07:54:15	COM5	PUMP 10 BBLS OF FRESH WATER WITH 2 LBS RED DYE.
Event	13	Pump Cement	Pump Cement	11/5/2017	07:58:10	USER	PUMP 550 SKS OF SWIFTCEM @ 13.5 LB/GAL, 1.74 FT3/SK, 9.2 GAL/SKS, 170.4 BBLS. TOC CALCULATED @ SURFACE. 22 BBLS BACK TO SURFACE. DENSITY VERIFIED BY PRESSURIZED MUD SCALES.
Event	14	Shutdown	Shutdown	11/5/2017	08:37:36	COM5	SHUTDOWN TO DROP TOP PLUG.
Event	15	Drop Top Plug	Drop Top Plug	11/5/2017	08:38:17	COM5	PLUG LEFT CONTAINER, VERIFIED BY COMPANY REP.
Event	16	Pump Displacement	Pump Displacement	11/5/2017	08:38:47	COM5	BEGIN CALCULATED DISPLACEMENT OF 117 BBLS WITH FRESH WATER.
Event	17	Other	Other	11/5/2017	08:54:53	COM5	CEMENT TO SURFACE 95 BBLS AWAY. 22 BBLS BACK.
Event	18	Bump Plug	Bump Plug	11/5/2017	08:59:11	COM5	PLUG BUMPED AT CALCULATED DISPLACEMENT. BUMP PRESSURE 530 PSI TOOK UP TO 1,500 FOR 5 MIN CASING PRESSURE TEST.
Event	19	End Job	End Job	11/5/2017	09:05:37	COM5	STOP RECORDING JOB DATA.
Event	20	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	11/5/2017	09:15:00	USER	DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH WEATHER, LOCATION AND RIGGING DOWN IRON AND HOSES.
Event	21	Rig-Down Equipment	Rig-Down Equipment	11/5/2017	09:30:00	USER	RIG DOWN BULK AND MIXING EQUIPMENT.
Event	22	Rig-Down Completed	Rig-Down Completed	11/5/2017	10:00:00	USER	ALL HALLIBURTON ITEMS WERE STOWED FOR TRAVEL, AND LOCATION WAS CLEAN.
Event	23	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	11/5/2017	10:10:00	USER	DISCUSSED ROUTES HAZARDS AND COMMUNICATION WITH CREW.
Event	24	Crew Leave Location	Crew Leave Location	11/5/2017	10:15:00	USER	THANK YOU FOR USING HALLIBURTON – NICK PETERSON AND CREW.

3.0 Attachments

3.1 Job Chart



