

HALLIBURTON

iCem[®] Service

EXTRACTION OIL & GAS-EBUS

Date: Saturday, July 06, 2019

Lind 26W-30-6N Production

Job Date: Friday, July 05, 2019

Sincerely,
Tyler Hill

Legal Notice

Disclaimer:

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Table of Contents

1.0 Cementing Job Summary 4

 1.1 Executive Summary4

2.0 Real-Time Job Summary 8

 2.1 Job Event Log8

3.0 Attachments..... 13

 3.1 Lind 26W-30-6N Production.png13

1.0 Cementing Job Summary

1.1 Executive Summary

Halliburton appreciates the opportunity to perform the cementing services on the **Lind 26W-30-6N** 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 55 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 Ft. Lupton

The Road to Excellence Starts with Safety

Sold To #: 369404		Ship To #: 3912487		Quote #:		Sales Order #: 0905798416					
Customer: EXTRACTION OIL & GAS-EBUS						Customer Rep:					
Well Name: LIND			Well #: 26W-30-6N			API/UWI #: 05-123-48231-00					
Field: WATTENBERG		City (SAP): WINDSOR		County/Parish: WELD			State: COLORADO				
Legal Description: NE NE-26-7N-67W-393FNL-821FEL											
Contractor: PATTERSON-UTI ENERGY					Rig/Platform Name/Num: PATTERSON 340						
Job BOM: 7523 7523											
Well Type: HORIZONTAL OIL											
Sales Person: HALAMERICA\HX38199					Srv Supervisor: Prince Perez						
Job											
Formation Depth (MD)		Top 0'		Bottom		22,639'					
Job depth MD		22,624'		Job Depth TVD		7,047'					
Water Depth				Wk Ht Above Floor		5'					
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	1659	0	1659	
Casing	0	5.5	4.892	17	BTC	P-110	0	22624	0	7047	
Open Hole Section			8.75				8050	22639	0	0	
Tools and Accessories											
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make		
Guide Shoe	5.5	1		22,624		Top Plug	5.5	1			
Float Shoe	5.5					Bottom Plug	5.5	1			
Float Collar	5.5	1		22,619		SSR plug set	5.5				
Insert Float	5.5					Plug Container	5.5	1	HES		
Stage Tool	5.5					Centralizers	5.5				
Fluid Data											
Stage/Plug #: 1											
Fluid #	Stage Type	Fluid Name			Qty	Qty UoM	Mixing Density lbm/gal	Yield ft/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
1	Spacer	SBM FDP-C1337-18 CEMENT SPACER SYS			50	bbl	12.5	2.74	16.6	6	1,701

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	Cap	ELASTICEM (TM) SYSTEM	585	sack	13.2	1.57	7.66	8	4,481
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	Lead	ELASTICEM (TM) SYSTEM	615	sack	13.2	1.56	7.69	8	4,729
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	Tail	ELASTICEM (TM) SYSTEM	2,440	sack	13.2	1.57	7.66	8	18,690
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	Displacement	MMCR Fresh Water	20	bbl	8.33			8	
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	Fresh Water	504.8	bbl	8.33			8	
Cement Left In Pipe		Amount	0 ft		Reason			Wet Shoe	

Mix Water:	pH 7	Mix Water Chloride:	<300 ppm	Mix Water Temperature:	77 °F
Cement Temperature:	## °F	Plug Displaced by:	8.33 lb/gal	Disp. Temperature:	77 °F
Plug Bumped?	No	Bump Pressure:	#### psi	Floats Held?	Yes
Cement Returns:	55 bbl	Returns Density:	## lb/gal	Returns Temperature:	## °F
Comment <p>Pumped 50 bbls of FDP Spacer.</p> <p>Pumped 163.58 bbls of Cap Cement.</p> <p>Pumped 170.87 bbls of Gasstop cement with 1538 gallons of latex and 50 gallons of D Air.</p> <p>Pumped 682.27 bbls of Elasticem.</p> <p>Pumped 524.8 bbls fresh water displacement with 10 gallons of MMCR in the first 20 bbls.</p> <p>Pumped a 5 bbl wet shoe.</p> <p>3.5 bbls back on the floats.</p>					

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)	PS Pump Press (psi)	Comments
Event	1	Call Out	Call Out	7/4/2019	07:00:00	USER				CREW CALLED OUT AT 07:00, REQUESTED ON LOCATION 15:00. CREW PICKED UP CEMENT, CHEMICALS, AND PLUG CONTAINER FROM FT. LUPTON, CO. BULK 660, 10866484, 10867096, 11633848, AND PUMP 11189145.
Event	2	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	7/4/2019	11:20:00	USER				CREW DISCUSSED ROUTES, HAZARDS, AND COMMUNICATION WITH CREW.
Event	3	Crew Leave Shop	Crew Leave Shop	7/4/2019	11:30:00	USER				STARTED JOURNEY MANAGEMENT.
Event	4	Arrive at Location from Service Center	Arrive at Location from Service Center	7/4/2019	16:20:00	USER				END JOURNEY MANAGEMENT. MEET WITH CO. MAN TO DISCUSS JOB; SURFACE CASING- 9/58" 36 LB/FT @ 1,659', 5.5" CASING: 17 LB/FT TOTAL 22,624', 8 1/2" HOLE, TD 22,639', 8 3/4" OH @ 8,050', 5' SHOE TRAC, TVD- 7,047'. PUMP FRESH WATER DISPLACEMENT. CASING LANDED @ 0130 7/5/2019.
Event	5	Safety Meeting - Assessment of Location	Safety Meeting - Assessment of Location	7/4/2019	16:30:00	USER				HAZARD HUNT. DISCUSSED POSSIBLE HAZARDS

										ASSOCIATED WITH LOCATION, RIG UP AND WEATHER.
Event	6	Rig-Up Equipment	Rig-Up Equipment	7/4/2019	16:40:00	USER				RIG UP BULK AND MIXING EQUIPMENT.
Event	7	Rig-Up Completed	Rig-Up Completed	7/5/2019	03:40:00	USER	8.28	0.00	0.00	
Event	8	Pre-Job Safety Meeting	Pre-Job Safety Meeting	7/5/2019	03:50:00	USER	8.28	0.00	1.00	MEETING WITH HALLIBURTON AND RIG PERSONNEL. COMMUNICATED POTENTIAL SAFETY HAZARDS AND JOB DETAILS.
Event	9	Start Job	Start Job	7/5/2019	04:17:20	COM4	6.09	0.00	4.00	BEGIN RECORDING JOB DATA.
Event	10	Drop Bottom Plug	Drop Bottom Plug	7/5/2019	04:17:42	COM4	8.33	0.00	5.00	PLUG LEFT CONTAINER, VERIFIED BY CO. MAN.
Event	11	Test Lines	Test Lines	7/5/2019	04:22:31	COM4	8.46	0.00	4751.00	PRESSURE TESTED IRON TO 4,700 PSI. KICKOUTS SET @ 500 PSI, KICKED OUT @ 850 PSI, 5TH GEAR STALL OUT @ 1,645 PSI. 4,700 PRESSURE TEST KICKED OUT @ 4,600 PSI
Event	12	Pump Spacer 1	Pump Spacer 1	7/5/2019	04:25:44	COM4	8.33	0.00	1.00	PUMP 50 BBLS OF FDP SPACER @ 12.5 LB/GAL, 2.74 CUFT/SK, 16.6 GALL/SK. 50 GALS D-AIR. 50 BBLS CALCULATED TO RETURN TO SURFACE. DENSITY VERIFIED BY PRESSURIZED MUD SCALES. PUMP RATE 5 BBLS/MIN @ 570 PSI.
Event	13	Check Weight	Check Weight	7/5/2019	04:31:10	COM4	12.72	5.70	613.00	
Event	14	Pump Cap Cement	Pump Cap Cement	7/5/2019	04:38:12	COM4	11.74	3.70	351.00	PUMPED 585 SKS OF ELASTICEM @ 13.2 LB/GAL,

1.57 FT3/SK, 7.66 GAL/SK.
163.58 BBLS. HOC
CALCULATED @ 2,305.1'.
55.03 BBLS CALCULATED TO
RETURN TO SURFACE.
DENSITY VERIFIED BY
PRESSURIZED MUD SCALES.
PUMP RATE 8 BBLS/MIN @
620 PSI

Event	15	Check Weight	Check Weight	7/5/2019	04:41:47	COM4	13.22	5.90	596.00	
Event	16	Check Weight	Check Weight	7/5/2019	04:59:13	COM4	13.28	8.60	639.00	
Event	17	Pump Lead Cement	Pump Lead Cement	7/5/2019	05:01:49	COM4	13.19	8.60	586.00	PUMPED 615 SKS OF GASSTOP @ 13.2 LB/GAL, 1.56 FT3/SK, 7.69 GAL/SK. 170.87 BBLS WITH 1,538 GALLONS OF FDP LATEX. HOL CALCULATED @ 3,797.1', TOL CALCULATED @ 2,305.1'. DENSITY VERIFIED BY PRESSURIZED MUD SCALES. PUMP RATE 8 BBLS/MIN @ 810 PSI
Event	18	Check Weight	Check Weight	7/5/2019	05:03:24	COM4	13.24	8.60	540.00	
Event	19	Check Weight	Check Weight	7/5/2019	05:14:32	COM4	13.17	8.50	724.00	
Event	20	Pump Tail Cement	Pump Tail Cement	7/5/2019	05:24:31	COM4	13.21	8.50	805.00	PUMP 2,440 SKS OF ELASTICEM @ 13.2 LB/GAL, 1.57 FT3/SK, 7.66 GAL/SK, 682.27 BBLS. HOT CALCULATED @ 16,521.8', TOT CALCULATED @ 6,102.2'. DENSITY VERIFIED BY PRESSURIZED MUD SCALES. PUMP RATE 8 BBLS/MIN @ 640 PSI.
Event	21	Check Weight	Check Weight	7/5/2019	05:30:40	COM4	13.07	8.50	660.00	

Event	22	Cement At Bottom	Cement At Bottom	7/5/2019	05:44:33	USER	13.26	6.10	985.00	BOTTOM PLUG LANDED AND BURST @ 985 PSI GOING 6 BBLS/MIN.
Event	23	Check Weight	Check Weight	7/5/2019	06:10:16	COM4	13.29	8.80	543.00	
Event	24	Check Weight	Check Weight	7/5/2019	06:14:02	COM4	13.14	8.80	565.00	
Event	25	Shutdown	Shutdown	7/5/2019	06:48:56	COM4	14.90	0.00	37.00	SHUTDOWN TO WASH LINES.
Event	26	Drop Top Plug	Drop Top Plug	7/5/2019	06:58:48	COM4	8.15	0.00	0.00	PLUG LEFT CONTAINER, VERIFIED BY CO. MAN.
Event	27	Pump Displacement	Pump Displacement	7/5/2019	06:58:51	COM4	8.13	0.00	0.00	BEGIN CALCULATED DISPLACEMENT OF 524.8 BBLS WITH FRESH WATER. MMCR IN THE FIRST 20 BBLS. PUMP RATE 8.5 BPM @ 2,850 PSI. CAUGHT CEMENT @ 50 BBLS INTO DISPLACEMENT. SPACER TO SURFACE @ 420 BBLS INTO DISPLACEMENT. 50 BBLS OF FDP SPACER TO SURFACE. SLOW RATE TO 3 BPM @ 500 BBLS INTO DISPLACEMENT.
Event	28	Other	Wet Shoe	7/5/2019	08:33:19	USER	7.97	2.00	1917.00	PUMPED CALCULATED DISPLACEMENT, SHUT DOWN, AND PUMPED A 5 BBL WET SHOE. DID NOT BUMP THE PLUG.
Event	29	Check Floats	Check Floats	7/5/2019	08:36:34	USER	7.94	0.00	570.00	RELEASED PRESSURE, FLOATS HELD, 3.5 BBLS BACK.
Event	30	End Job	End Job	7/5/2019	08:41:31	COM4				STOP RECORDING JOB DATA.
Event	31	Post-Job Safety Meeting (Pre Rig-Down)	Post-Job Safety Meeting (Pre Rig-Down)	7/5/2019	09:00:00	USER				DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH WEATHER, LOCATION

							AND RIGGING DOWN IRON AND HOSES.
Event	32	Rig-Down Equipment	Rig-Down Equipment	7/5/2019	09:10:00	USER	RIG DOWN BULK AND MIXING EQUIPMENT.
Event	33	Rig-Down Completed	Rig-Down Completed	7/5/2019	11:10:00	USER	
Event	34	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	7/5/2019	11:20:00	USER	CREW DISCUSSED ROUTES HAZARDS AND COMMUNICATION WITH CREW.
Event	35	Crew Leave Location	Crew Leave Location	7/5/2019	11:30:00	USER	THANK YOU FOR USING HALLIBURTON – PRINCE PEREZ AND CREW.

3.0 Attachments

3.1 Lind 26W-30-6N Production.png

