

HALLIBURTON

iCem[®] Service

EXTRACTION OIL & GAS-EBUS

Date: Sunday, June 03, 2018

VT-LDS 1-16-18 Surface

Job Date: Wednesday, May 23, 2018

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 **VT-LDS 1-16-18** 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 37 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 #: 3787026		Quote #:		Sales Order #: 0904871305					
Customer: EXTRACTION OIL & GAS -				Customer Rep: Shawn McIntyre							
Well Name: VT-LDS			Well #: 1-16-18		API/UWI #: 05-123-44421-00						
Field: WATTENBERG		City (SAP): GREELEY		County/Parish: WELD		State: COLORADO					
Legal Description: SW NW-15-5N-65W-1882FNL-650FWL											
Contractor: Shawn McIntyre				Rig/Platform Name/Num: Cartel 11							
Job BOM: 7521 7521											
Well Type: HORIZONTAL OIL											
Sales Person: HALAMERICA\HX38199				Srvc Supervisor: Adam Covington							
Job											
Formation Name											
Formation Depth (MD)		Top		Bottom							
Form Type					BHST						
Job depth MD		1555ft			Job Depth TVD						
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	0	9.625	8.921	36	8 RD	J-55	0	1555	0	0	
Open Hole Section			13.5				0	1556	0	0	
Tools and Accessories											
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make		
Guide Shoe	9.625					Top Plug	9.625	1	HES		
Float Shoe	9.625			1555		Bottom Plug	9.625		HES		
Float Collar	9.625					SSR plug set	9.625		HES		
Insert Float	9.625					Plug Container	9.625	1	HES		
Stage Tool	9.625					Centralizers	9.625		HES		
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			50	bbl	8.33			5.5	

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	675	sack	13.5	1.75		5	9.2	
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	117	bbl	8.33			5		
Cement Left In Pipe		Amount	43 ft		Reason			Shoe Joint		
Mix Water:		pH 7	Mix Water Chloride:			0 ppm		Mix Water Temperature:		63°F
Cement Temperature:		62 °F	Plug Displaced by:			8.33 lb/gal		Disp. Temperature:		63 °F
Plug Bumped?		Yes	Bump Pressure:			580 psi		Floats Held?		Yes
Cement Returns:		37 bbl	Returns Density:			9.2lb/gal		Returns Temperature:		63 °F
Comment TD-1556', OH-13.5", TP-1555' 9 5/8" 36#, SHOE-43' 37 BBLS OF CEMENT BACK TO SURFACE. WATER--63 DEGREES, SULFATES-0, CHLORIDES-0, PH-7 . FCP 580 PSI, BUMP PRESSURE WAS 1150 PSI. FLOATS HELD, 1 BBL BACK.										

2.0 Real-Time Job Summary

2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	PS Pump Press (psi)	DH Density (ppg)	Comb Pump Rate (bbl/min)	Comments
Event	1	Call Out	Call Out	5/22/2018	11:00:00	USER				CALLED OUT BY SERVICE COORDINATOR FOR O/L AT 1800
Event	2	Pre-Convoy Safety Meeting	Depart Shop for Location	5/22/2018	11:50:00	USER				HELD MEETING WITH ALL PERSONNEL IN CONVOY TO DISCUSS DIRECTIONS AND HAZARDS ASSOCIATED WITH DRIVING, ALL FIT TO DRIVE.
Event	3	Depart Shop for Location	Depart Shop for Location	5/22/2018	12:00:00	USER				JOURNEY MANAGEMENT PRIOR TO DEPARTURE
Event	4	Arrive At Loc	Arrive At Loc	5/22/2018	13:30:00	USER				UPON ARRIVAL MET WITH COMPANY MAN TO DISCUSS JOB DETAILS AND CALCULATIONS, PERFORMED HAZARD HUNT AND SITE ASSESSMENT.
Event	5	Safety Meeting - Pre Rig-Up	Safety Meeting - Pre Rig-Up	5/22/2018	20:00:00	USER				DISCUSSED RIGGING UP HAZARDS AND PROCEDURE ACCORDING TO HMS.
Event	6	Safety Meeting - Pre Job	Safety Meeting - Pre Job	5/23/2018	02:50:00	USER	-1.00	8.40	0.00	HELD SAFETY MEETING WITH ALL JOB ASSOCIATED PERSONNEL TO DISCUSS JOB PROCEDURE, HAZARDS AND STOP WORK AUTHORITY. Water test-PH-6, Chlor-0, Temp-65. Cement temp-70.
Event	7	Start Job	Start Job	5/23/2018	03:04:19	COM4	-2.00	8.40	0.00	FILLED LINES WITH 3 BBLS OF FRESH WATER. 2.5 BPM,

										16 PSI AND CLIMBING.
Event	8	Test Lines	Test Lines	5/23/2018	03:10:03	COM4	3317.00	8.45	0.00	PERFORMED A 3000 PSI PRESSURE TEST AFTER A 500 PSI KICKOUT TEST AND A 5TH GEAR STALL. HELD FOR A FEW MINUTES. NO LEAKS.
Event	9	Pump Spacer 1	Pump Spacer 1	5/23/2018	03:14:05	COM4	15.00	8.38	0.00	PUMPED 10 BBLS OF FRESH WATER SPACER AT 5.5 BPM, 165 PSI.
Event	10	Pump Spacer 2	Pump Spacer 2	5/23/2018	03:18:15	COM4	220.00	8.41	2.50	PUMPED 10 BBLS OF DYED WATER SPACER AT 5.5 BPM, 200 PSI.
Event	11	Pump Cement	Pump Cement	5/23/2018	03:20:25	COM4	142.00	8.40	0.00	PUMPED 209 BBLS (675 SKS) OF 13.5#, 1.74y, 9.2wr CEMENT. 5 BPM 150 PSI.
Event	12	Shutdown	Shutdown	5/23/2018	04:10:01	COM4	23.00	14.65	0.00	
Event	13	Drop Top Plug	Drop Top Plug	5/23/2018	04:13:22	COM4	3.00	14.43	0.00	
Event	14	Pump Displacement	Pump Displacement	5/23/2018	04:13:28	COM4	2.00	14.43	0.00	
Event	15	Bump Plug	Bump Plug	5/23/2018	04:47:35	COM4	1187.00	8.00	0.00	
Event	16	Test Lines	Test Lines	5/23/2018	04:48:04	COM4	1385.00	8.01	0.60	
Event	17	Check Floats	Check Floats	5/23/2018	04:52:46	USER	1601.00	8.01	0.00	GOT 1 BBL BACK TO THE TRUCK. FLOATS HELD.
Event	18	End Job	End Job	5/23/2018	04:54:36	COM4	-2.00	8.00	0.00	TD-1556', OH-13.5", TP-1555' 9 5/8" 36#, SHOE-43' 37 BBLS OF CEMENT BACK TO SURFACE. WATER--63 DEGREES, SULFATES-0, CHLORIDES-0, PH-7
Event	19	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	5/23/2018	05:00:00	USER	-3.00	-0.37	0.00	DISCUSSED RIGGING DOWN HAZARDS AND PROCEDURE ACCORDING TO HMS.
Event	20	Pre-Convoy Safety	Pre-Convoy Safety	5/23/2018	05:50:00	USER				HELD MEETING WITH ALL

Meeting		Meeting					HES EMPLOYEES IN CONVOY TO DISCUSS DIRECTIONS AND HAZARDS ASSOCIATED WITH DRIVING, ALL FIT TO DRIVE.	
Event	21	Depart Location	Depart Location	5/23/2018	06:00:00	USER	PRE JOURNEY MANAGEMENT PRIOR TO DEPARTURE.	

3.0 Attachments

3.1 Extraction VT-LDS 1-16-18 Surface Job Chart

