

HALLIBURTON

iCem[®] Service

EXTRACTION OIL & GAS

United States of America, COLORADO

Date: Wednesday, June 06, 2018

VT-LDS C4-16-18 Surface

Job Date: Wednesday, May 30, 2018

Sincerely,

Bryce Hinsch

Legal Notice

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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.....	10
3.1	Extraction VT-LDS C4-16-18 Surface Job Chart	10

1.0 Cementing Job Summary

1.1 Executive Summary

Halliburton appreciates the opportunity to perform the cementing services on the **VT-LDS C4-16-18** 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 60 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 #: 3786959	Quote #:	Sales Order #: 0904877699
Customer: EXTRACTION OIL & GAS -		Customer Rep: Sean McIntyre	
Well Name: VT-LDS		Well #: C4-16-18	API/UWI #: 05-123-44414-00
Field: WATTENBERG	City (SAP): GREELEY	County/Parish: WELD	State: COLORADO
Legal Description: SW NW-15-5N-65W-1904FNL-483FWL			
Contractor: Shawn McIntyre		Rig/Platform Name/Num: Cartel 11	
Job BOM: 7521 7521			
Well Type: HORIZONTAL OIL			
Sales Person: HALAMERICA\HX38199		Srvc Supervisor: Thomas Haas	

Job

Formation Name			
Formation Depth (MD)	Top		Bottom
Form Type	BHST		
Job depth MD	1658ft	Job Depth TVD	1658
Water Depth		Wk Ht Above Floor	4'
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
Open Hole Section			13.5				0	1658	0	1658
Casing	0	9.625	8.921	36	8 RD	J-55	0	1658	0	1658

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	1		1658	Bottom Plug	9.625		
Float Collar	9.625	1		1616	SSR plug set	9.625		
Insert Float	9.625				Plug Container	9.625	1	HES
Stage Tool	9.625				Centralizers	9.625		

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				2100	

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	1.74	9.2	5	6210
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	125	bbl	8.33				5250
Cement Left In Pipe									
Amount		42 ft			Reason			Shoe Joint	
Mix Water: pH 7		Mix Water Chloride: <300 ppm			Mix Water Temperature: 74 °F				
Cement Temperature: N/A		Plug Displaced by: 8.33 lb/gal F.W.			Disp. Temperature: N/A				
Plug Bumped? Yes		Bump Pressure: ##### psi MPa			Floats Held? Yes				
Cement Returns: 60 bbl		Returns Density: N/A			Returns Temperature: N/A				
Comment Plug bumped at calculated displacement, final circulating pressure of 500 psi, held 5 min casing test at 1200 psi, released pressure back to truck, floats held, 1bbl back to the truck. 60 bbl cement back to surface.									

2.0 Real-Time Job Summary

2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	DH Density <i>(ppg)</i>	Comb Pump Rate <i>(bbl/min)</i>	PS Pump Press <i>(psi)</i>	Comments
Event	1	Call Out	Call Out	5/29/2018	15:00:00	USER				CREW CALLED OUT AT 15:00 5/28/2018, REQUESTED ON LOCATION 21:00 5/26/2018. CREW PICKED UP CEMENT, 100 LBS SUGAR, AND PLUG CONTAINER FROM FORT LUPTON, CO. BULK 660: 12350112/10866484 Bulk 660: 12154546/10991603 PUMP RED TIGER: 11542778
Event	2	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	5/29/2018	19:15:00	USER				DISCUSSED ROUTES, HAZARDS, AND COMMUNICATION WITH CREW
Event	3	Crew Leave Yard	Crew Leave Yard	5/29/2018	19:30:00	USER				STARTED JOURNEY MANAGEMENT.
Event	4	Arrive At Loc	Arrive At Loc	5/29/2018	20:30:00	USER				END JOURNEY MANAGEMENT. MEET WITH CO. MAN TO DISCUSS JOB; SURFACE CASING: 36# 9.625" J-55 @ 1658', 42' SHOE JOINT, 13.5" OPEN HOLE, 9.0 PPG WELL FLUID, FRESH WATER DISPLACEMENT.
Event	5	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	5/29/2018	20:45:00	USER				HAZARD HUNT. DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH LOCATION, RIG UP AND WEATHER.

Event	6	Rig-Up Equipment	Rig-Up Equipment	5/29/2018	20:55:00	USER	8.38	0.00	3.00	CREW STAGED EQUIPMENT AND RIGGED UP BULK, IRON, AND WATER HOSES TO PERFORM JOB.
Event	7	Pre-Job Safety Meeting	Pre-Job Safety Meeting	5/29/2018	22:00:00	USER	8.40	0.00	2.00	MEETING WITH HALLIBURTON AND RIG PERSONNEL. COMMUNICATED POTENTIAL SAFETY HAZARDS AND JOB DETAILS.
Event	8	Start Job	Start Job	5/29/2018	22:42:10	COM4	7.41	1.10	3.00	START JOB DATA RECORDING.
Event	9	Test Lines	Test Lines	5/29/2018	22:43:53	COM4	8.39	0.00	44.00	PRESSURE TESTED IRON TO 2570 PSI. KICKOUTS SET @ 500 PSI, KICKED OUT @ 1200 PSI, 5TH GEAR STALL OUT @1470 PSI.
Event	10	Pump Spacer 1	Pump Spacer 1	5/29/2018	23:01:36	COM4	0.03	0.00	1.00	PUMP 40 BBL FRESH WATER SPACER.
Event	11	Pump Spacer 2	Pump Spacer 2	5/29/2018	23:13:49	COM4	8.40	3.30	119.00	PUMP 10 BB FRESH WATER WITH RED DYE.
Event	12	Pump Cement	Pump Cement	5/29/2018	23:17:42	COM4	8.40	3.30	124.00	PUMP 675 SKS OF SWIFTCEM @ 13.5 LB/GAL, 1.74 YIELD, 9.2 GAL/SK, 209 BBL, TOL @ SURFACE, DENSITY VERIFIED BY PRESSURIZED MUD SCALES.
Event	13	Shutdown	Shutdown	5/30/2018	00:08:36	USER	0.33	6.10	13.00	SHUTDOWN TO DROP TOP PLUG.
Event	14	Drop Top Plug	Drop Top Plug	5/30/2018	00:09:41	USER	0.20	0.00	2.00	PLUG LEFT PLUG CONTAINER.
Event	15	Pump Displacement	Pump Displacement	5/30/2018	00:10:19	COM4	0.21	1.10	2.00	BEGIN CALCULATED DISPLACEMENT OF 125 BBL
Event	16	Cement Returns to Surface	Cement Returns to Surface	5/30/2018	00:30:00	USER	8.28	6.10	365.00	CEMENT TO SURFACE 65 BBL INTO DISPLACEMENT.

										60 BBL BACK TO SURFACE.
Event	17	Bump Plug	Bump Plug	5/30/2018	00:42:13	COM4	8.30	0.00	1147.00	PLUG BUMPED AT CALCULATED DISPLACEMENT. FINAL CIRCULATING PRESSURE OF 500 PSI.
Event	18	Other	Casing Test	5/30/2018	00:42:24	COM4	8.31	0.00	1183.00	5 MIN CASING TEST AT 1200 PSI.
Event	19	Other	Check Floats.	5/30/2018	00:47:32	COM4	8.31	0.00	1206.00	TRELEASE PRESSURE BACK TO THE TRUCK. 1 BBL BACK.
Event	20	End Job	End Job	5/30/2018	00:48:54	COM4	8.29	0.00	4.00	STOP JOB DATA RECORDING.
Event	21	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	5/30/2018	01:00:00	USER	2.09	0.30	3.00	DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH WEATHER, LOCATION AND RIGGING DOWN IRON AND HOSES.
Event	22	Rig-Down Completed	Rig-Down Completed	5/30/2018	01:30:00	USER				ALL HALLIBURTON ITEMS WERE STOWED FOR TRAVEL.
Event	23	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	5/30/2018	01:35:00	USER				DISCUSSED ROUTES HAZARDS AND COMMUNICATION WITH CREW.
Event	24	Crew Leave Location	Crew Leave Location	5/30/2018	01:45:00	USER				THANK YOU FOR USING HALLIBURTON - THOMAS HAAS AND CREW.

3.0 Attachments

3.1 Extraction VT-LDS C4-16-18 Surface Job Chart

