HALLIBURTON

iCem® Service

EXTRACTION OIL & GAS

United States of America, COLORADO

Date: Thursday, June 14, 2018

VT-Alles 1-16-18 Surface

Job Date: Thursday, May 31, 2018

Sincerely,

Tyler Hill

Legal Notice

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Table of Contents

1.0 Cementing Job Summary

1.1 Executive Summary

Halliburton appreciates the opportunity to perform the cementing services on the **VT Alles 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 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 Ft. Lupton

The Road to Excellence Starts with Safety

Sold To #: 369404	**Ship To #:** 3787025	**Quote #:**	**Sales Order #:** 0904878789
Customer: EXTRACTION OIL & GAS -		**Customer Rep:** Sean McIntyre	
Well Name: VT-ALLES	**Well #:** 1-16-18		**API/UWI #:** 05-123-44415-00
Field: WATTENBERG	**City (SAP):** GREELEY	**County/Parish:** WELD	**State:** COLORADO
Legal Description: SW NW-15-5N-65W-1907FNL-459FWL			
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	1621ft		**Job Depth TVD**	1621
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
Casing	0	9.625	8.921	36	8 RD	J-55	0	1621	0	1621
Open Hole Section			13.5				0	1641	0	1641

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		1621		**Bottom Plug**	9.625		
Float Collar	9.625	1		1579		**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	122	bbl	8.33				5124

Cement Left In Pipe	**Amount**	42 ft	**Reason**		Shoe Joint
Mix Water:	pH 7	**Mix Water Chloride:**	<300 ppm	**Mix Water Temperature:**	63 °F
Cement Temperature:	N/A	**Plug Displaced by:**	8.33 lb/gal F.W.	**Disp. Temperature:**	NA
Plug Bumped?	Yes	**Bump Pressure:**	500 psi	**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 1050 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 (ppg)	Comb Pump Rate (bbl/min)	PS Pump Press (psi)	Comments
Event	1	Call Out	Call Out	5/30/2018	16:00:00	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	5/30/2018	20:45:00	USER				DISCUSSED ROUTES, HAZARDS, AND COMMUNICATION WITH CREW
Event	3	Crew Leave Yard	Crew Leave Yard	5/30/2018	21:00:00	USER				STARTED JOURNEY MANAGEMENT.
Event	4	Arrive At Loc	Arrive At Loc	5/30/2018	22:00:00	USER				END JOURNEY MANAGEMENT. MEET WITH CO. MAN TO DISCUSS JOB; SURFACE CASING: 36# 9.625” J-55 @ 1621', 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	5/30/2018	22:15:00	USER				HAZARD HUNT. DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH LOCATION, RIG UP AND WEATHER.

Event	6	Rig-Up Equipment	Rig-Up Equipment	5/30/2018	22:20:00	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	5/31/2018	00:00:00	USER	8.39	0.00	0.00	MEETING WITH HALLIBURTON AND RIG PERSONNEL. COMMUNICATED POTENTIAL SAFETY HAZARDS AND JOB DETAILS.
Event	8	Start Job	Start Job	5/31/2018	00:57:50	COM4	8.51	0.00	-5.00	
Event	9	Test Lines	Test Lines	5/31/2018	00:59:32	COM4	8.41	0.00	6.00	PRESSURE TESTED IRON TO 2950 PSI. KICKOUTS SET @ 500 PSI, KICKED OUT @ 1800 PSI, 5TH GEAR STALL OUT @1970 PSI.
Event	10	Pump Spacer 1	Pump Spacer 1	5/31/2018	01:04:08	COM4	8.41	2.20	14.00	PUMP 40 BBL FRESH WATER SPACER.
Event	11	Pump Spacer 2	Pump Spacer 2	5/31/2018	01:15:11	COM4	8.39	4.30	76.00	PUMP 10 BBL FRESH WATER WITH RED DYE.
Event	12	Pump Cement	Pump Cement	5/31/2018	01:16:47	COM4	8.28	4.30	85.00	PUMP 675 SKS OF SWIFTCEM @ 13.5 LB/GAL, 1.74 YIELD, 9.2 GAL/SK, 209 BBLS, TOL @ SURFACE, DENSITY VERIFIED BY PRESSURIZED MUD SCALES.
Event	13	Shutdown	Shutdown	5/31/2018	02:00:59	COM4	1.21	2.00	17.00	SHUTDOWN TO DROP TOP PLUG.
Event	14	Drop Top Plug	Drop Top Plug	5/31/2018	02:04:44	COM4	0.06	0.00	0.00	PLUG LEFT PLUG CONTAINER.
Event	15	Pump Displacement	Pump Displacement	5/31/2018	02:04:54	COM4	0.06	0.00	1.00	BEGIN CALCULATED DISPLACEMENT OF 123 BBL.
Event	16	Cement Returns to Surface	Cement Returns to Surface	5/31/2018	02:25:00	USER	8.24	5.90	471.00	CEMENT RETURNED TO SURFACE AT 63 BBL INTO DISPLACEMENT.

Event	17	Bump Plug	Bump Plug	5/31/2018	02:35:04	COM4	8.27	0.00	998.00	PLUG BUMPED AT CALCULATED DISPLACEMENT. FINAL CIRCULATING PRESSURE OF 500 PSI.
Event	18	Other	Casing Test	5/31/2018	02:35:12	COM4	8.27	0.00	1034.00	5 MIN CASING TEST FOR 5 MIN AT 1050 PSI.
Event	19	Other	Check Floats	5/31/2018	02:39:48	COM4	8.27	0.00	1059.00	RELEASE PRESSURE, FLOATS HELD, 1 BBL BACK TO TRUCK.
Event	20	End Job	End Job	5/31/2018	02:40:49	COM4	8.25	0.00	1.00	
Event	21	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	5/31/2018	02:45:00	USER	8.35	11.50	379.00	DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH WEATHER, LOCATION AND RIGGING DOWN IRON AND HOSES.
Event	22	Rig-Down Completed	Rig-Down Completed	5/31/2018	03:20:00	USER				ALL HALLIBURTON ITEMS WERE STOWED FOR TRAVEL.
Event	23	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	5/31/2018	03:25:00	USER				DISCUSSED ROUTES HAZARDS AND COMMUNICATION WITH CREW.
Event	24	Crew Leave Location	Crew Leave Location	5/31/2018	03:30:00	USER				THANK YOU FOR USING HALLIBURTON - THOMAS HAAS AND CREW.

3.0 Attachments

3.1 Extraction VT-Alles 1-16-18 Surface.png