

HALLIBURTON

iCem® Service

EXTRACTION OIL & GAS-EBUS

United States of America, COLORADO

Date: Thursday, May 28, 2020

United B S16-20-17N

Surface Casing

Sincerely,

Thomas Haas and Crew

Legal Notice

Disclaimer:

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1.0 Cementing Job Summary

1.1 Executive Summary

Halliburton appreciates the opportunity to perform the cementing services on the United B S16-20-17N surface casing. 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 20 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 #: 3909281		Quote #:		Sales Order #: 0906525208					
Customer: EXTRACTION OIL & GAS-EBUS					Customer Rep: Blaine Dunlavy						
Well Name: UNITED B			Well #: S16-20-17N			API/UWI #: 05-014-20809-00					
Field: WATTENBERG		City (SAP): BROOMFIELD		County/Parish: BROOMFIELD			State: COLORADO				
Legal Description: NE NE-9-1S-68W-436FNL-916FEL											
Contractor: ENSIGN DRLG					Rig/Platform Name/Num: ENSIGN 147						
Job BOM: 7521 7521											
Well Type: HORIZONTAL OIL											
Sales Person: HALAMERICA\HX41066					Srvc Supervisor: Thomas Haas						
Job											
Formation Name											
Formation Depth (MD)		Top			Bottom						
Form Type					BHST						
Job depth MD		1622ft			Job Depth TVD			1622			
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			0	1622	0	1622	
Open Hole Section			13.5				0	1625	0	1629	
Tools and Accessories											
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make		
Float Shoe	9.625	1	TOPCO	1622		Top Plug	9.625	1	HES		
Float Collar	9.625	1	TOPCO	1578		Bottom Plug					
						SSR plug set					
						Plug Container	9.625	1	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	Water with dye	Water with dye			10	bbl	8.34				

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	550	sack	13.5	1.74	9.17	8	5032
9.17 Gal		FRESH WATER							
0.1250 lbm		POLY-E-FLAKE (101216940)							
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	Displacement	Displacement	122	bbl	8.34			10	
Cement Left In Pipe		Amount	44 ft		Reason			Shoe Joint	
Mix Water:		pH 7	Mix Water Chloride:		<300 ppm		Mix Water Temperature:		66 °F
Cement Temperature:			Plug Displaced by:		8.33 lb/gal Fresh Water		Disp. Temperature:		66 °F
Plug Bumped?		Yes	Bump Pressure:		580 psi		Floats Held?		Yes
Cement Returns:		20 bbl	Returns Density:				Returns Temperature:		
Comment Plug bumped at calculated displacement, final circulation pressure of 580 psi, floats held .5 bbl back. 20 bbl of cement to surface.									

2.0 Real-Time Job Summary

2.1 Job Event Log

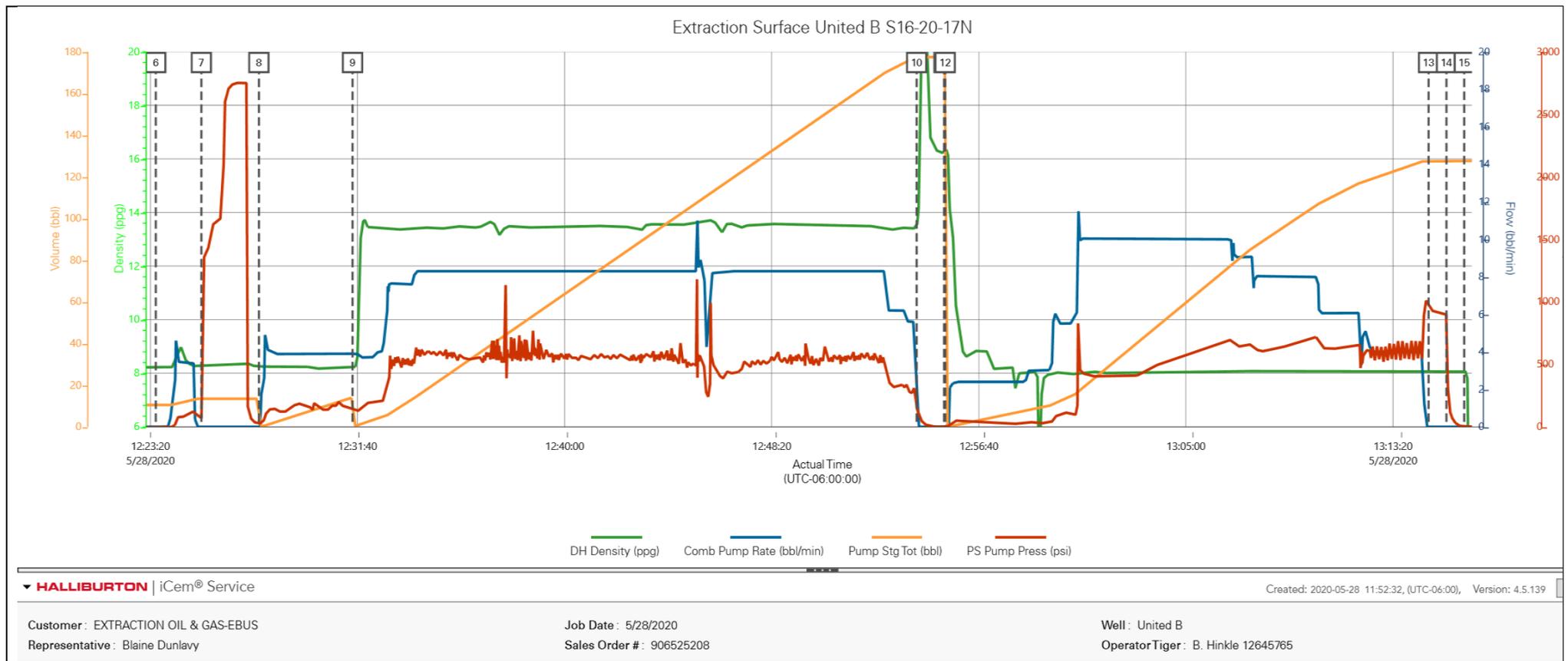
Type	Seq. No.	Activity	Graph Label	Date	Time	Source	DH Density <i>(ppg)</i>	Comb Pump Rate <i>(bbl/min)</i>	Pump Stg Tot <i>(bbl)</i>	PS Pump Press <i>(psi)</i>	Comments
Event	1	Call Out	Call Out	5/28/2020	05:00:00	USER					CREW CALLED OUT AT 05:00 5/28/2020, REQUESTED ON LOCATION 12:00 5/28/2020. CREW PICKED UP CEMENT, 100 LBS SUGAR, AND PLUG CONTAINER FROM FORT LUPTON, CO. BULK 660: 11562546/11633848 PUMP RED TIGER: 12645765.
Event	2	Arrive At Loc	Arrive At Loc	5/28/2020	06:00:00	USER					CREW HAULED CEMENT IN BETWEEN JOBS. MEET WITH CO. MAN TO DISCUSS JOB; SURFACE CASING: 9.625" 36# @ 1629', 44' SHOE TRACK, OH 13.5", 8.7 PPG WELL FLUID, FRESH WATER DISPLACEMENT.
Event	3	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	5/28/2020	10:00:00	USER					HAZARD HUNT. DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH LOCATION, RIG UP AND WEATHER.
Event	4	Rig-Up Equipment	Rig-Up Equipment	5/28/2020	10:10:00	USER					CREW STAGED EQUIPMENT AND RIGGED UP BULK, IRON, AND WATER HOSES TO PERFORM JOB.

Event	5	Pre-Job Safety Meeting	Pre-Job Safety Meeting	5/28/2020	12:00:00	USER						MEETING WITH HALLIBURTON AND RIG PERSONNEL. COMMUNICATED POTENTIAL SAFETY HAZARDS AND JOB DETAILS.
Event	6	Start Job	Start Job	5/28/2020	12:23:33	COM10	8.23	0.00	10.50	-8.00		START JOB DATA RECORDING.
Event	7	Test Lines	Test Lines	5/28/2020	12:25:23	COM10	8.27	0.00	13.50	68.00		PRESSURE TESTED IRON TO 2700 PSI. KICKOUTS SET @ 500 PSI, KICKED OUT @ 1280 PSI, 5TH GEAR STALL OUT @1650 PSI.
Event	8	Pump Spacer 1	Pump Spacer 1	5/28/2020	12:27:42	COM10	8.28	0.00	0.00	26.00		PUMP 10 BBL OF RED DYE SPACER.
Event	9	Pump Cement	Pump Cement	5/28/2020	12:31:28	COM10	8.21	3.90	14.10	148.00		PUMP 550 SKS OF SWIFTCEM @ 13.5 LB/GAL, 1.74 YIELD, 9.17 GAL/SK, 170 BBLs, TOL @ SURFACE, DENSITY VERIFIED BY PRESSURIZED MUD SCALES.
Event	10	Shutdown	Shutdown	5/28/2020	12:54:10	COM10	13.41	0.00	177.60	187.00		SHUTDOWN TO DROP TOP PLUG.
Event	11	Drop Top Plug	Drop Top Plug	5/28/2020	12:55:16	COM10	16.28	0.00	177.60	-4.00		PLUG LEFT PLUG CONTAINER, VERIFIED BY COMPANY MAN.
Event	12	Pump Displacement	Pump Displacement	5/28/2020	12:55:19	COM10	16.36	0.00	0.00	-3.00		BEGIN PUMPING 122 BBL OF FRESH WATER DISPLACEMENT.
Event	13	Bump Plug	Bump Plug	5/28/2020	13:14:46	COM10	8.09	0.00	127.70	967.00		PLUG BUMPED AT CALCULATED DISPLACEMENT, FINAL CIRCULATING PRESSURE OF 580 PSI. 20 BBL OF CEMENT BACK TO SURFACE.

Event	14	Check Floats	Check Floats	5/28/2020	13:15:29	USER	8.10	0.00	127.70	886.00	RELEASED PRESSURE BACK TO THE TRUCK, FLOATS HELD, .5 BB BACK.
Event	15	End Job	End Job	5/28/2020	13:16:12	COM10	8.07	0.00	127.70	-1.00	END JOB DATA RECORDING.
Event	16	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	5/28/2020	13:30:00	USER	2.05	0.00	151.80	-5.00	DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH WEATHER, LOCATION AND RIGGING DOWN IRON AND HOSES.
Event	17	Rig-Down Completed	Rig-Down Completed	5/28/2020	14:00:00	USER					ALL HALLIBURTON ITEMS WERE STOWED FOR TRAVEL.

3.0 Attachments

3.1 Extraction Surface United B S16-20-17N-Job Chart.png



3.2 Extraction Surface United B S16-20-17N-Events.png

Extraction Surface United B S16-20-17N						
Description	Actual Time (UTC-06:00:00)	DH Density (ppg)	Comb Pump Rate (bbl/min)	Pump Stg Tot (bbl)	PS Pump Press (psi)	
6 Start Job	12:23:33	8.23	0.00	10.50	-8.00	
7 Test Line:	12:25:23	8.27	0.00	13.50	68.00	
8 Pump Sp	12:27:42	8.28	0.00	0.00	26.00	
9 Pump Ce	12:31:28	8.21	3.90	14.10	148.00	
10 Shutdow	12:54:10	13.41	0.00	177.60	187.00	
11 Drop Top	12:55:16	16.28	0.00	177.60	-4.00	
12 Pump Di:	12:55:19	16.36	0.00	0.00	-3.00	
13 Bump Plt	13:14:46	8.09	0.00	127.70	967.00	
14 Check Flc	13:15:29	8.10	0.00	127.70	886.00	
15 End Job	13:16:12	8.07	0.00	127.70	-1.00	

HALLIBURTON | iCem® Service Created: 2020-05-28 11:52:32, (UTC-06:00), Version: 4.5.139 [Edit](#)

Customer: EXTRACTION OIL & GAS-EBUS Job Date: 5/28/2020 Well: United B
 Representative: Blaine Dunlavy Sales Order #: 906525208 Operator/Tiger: B. Hinkle 12645765